

## ECU: EML, Engine: M73, from 01.01.95 till 31.08.95

PCode	BMW-FC	PCode text
P0600	82	Serial Communication Link
P0600	83	Serial Communication Link
P0600	125	Serial Communication Link
P0601	9	Internal Control Module Memory Check Sum Error
P0601	10	Internal Control Module Memory Check Sum Error
P0601	90	Internal Control Module Memory Check Sum Error
P0601	91	Internal Control Module Memory Check Sum Error
P0601	92	Internal Control Module Memory Check Sum Error
P0601	93	Internal Control Module Memory Check Sum Error
P0601	100	Internal Control Module Memory Check Sum Error
P0601	101	Internal Control Module Memory Check Sum Error
P0601	106	Internal Control Module Memory Check Sum Error
P0601	108	Internal Control Module Memory Check Sum Error
P0601	109	Internal Control Module Memory Check Sum Error
P0601	110	Internal Control Module Memory Check Sum Error
P0601	134	Internal Control Module Memory Check Sum Error
P0601	135	Internal Control Module Memory Check Sum Error
P0601	142	Internal Control Module Memory Check Sum Error
P0601	143	Internal Control Module Memory Check Sum Error
P1543	1	Throttle Valve 1 Potentiometer 1/2 - Low Input
P1543	3	Throttle Valve 1 Potentiometer 1/2 - Low Input
P1544	2	Throttle Valve 1 Potentiometer 1/2 - High Input
P1544	4	Throttle Valve 1 Potentiometer 1/2 - High Input
P1545	11	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1545	12	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1545	86	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1545	89	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1545	128	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1545	137	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1558	152	Throttle Valve Microchip Controller 1/2
P1558	153	Throttle Valve Microchip Controller 1/2
P1558	154	Throttle Valve Microchip Controller 1/2
P1558	155	Throttle Valve Microchip Controller 1/2
P1558	156	Throttle Valve Microchip Controller 1/2
P1558	157	Throttle Valve Microchip Controller 1/2
P1558	158	Throttle Valve Microchip Controller 1/2
P1558	159	Throttle Valve Microchip Controller 1/2
P1580	130	Throttle Valve Mechanically Stuck (M73: Throttle Valve 1 Spring Test)
P1580	132	Throttle Valve Mechanically Stuck (M73: Throttle Valve 1 Spring Test)
P1580	139	Throttle Valve Mechanically Stuck (M73: Throttle Valve 1 Spring Test)
P1580	141	Throttle Valve Mechanically Stuck (M73: Throttle Valve 1 Spring Test)
P1581	131	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (M73: Throttle Valve 2 Spring Test)
P1581	133	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (M73: Throttle Valve 2 Spring Test)
P1581	138	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (M73: Throttle Valve 2 Spring Test)
P1581	140	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (M73: Throttle Valve 2 Spring Test)
P1590	5	Throttle Valve 2 Potentiometer 1/2 - Low Input
P1590	7	Throttle Valve 2 Potentiometer 1/2 - Low Input
P1591	6	Throttle Valve 2 Potentiometer 1/2 - High Input
P1591	8	Throttle Valve 2 Potentiometer 1/2 - High Input

P1592	13	Throttle Valve 2 Potentiometer 1/2 - Plausibility
P1592	14	Throttle Valve 2 Potentiometer 1/2 - Plausibility
P1592	87	Throttle Valve 2 Potentiometer 1/2 - Plausibility
P1592	88	Throttle Valve 2 Potentiometer 1/2 - Plausibility
P1592	129	Throttle Valve 2 Potentiometer 1/2 - Plausibility
P1592	136	Throttle Valve 2 Potentiometer 1/2 - Plausibility

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## ECU: EML, Engine: M73, from 01.09.95 till 30.04.96

PCode BMW-FC PCode text

P0600	82	Serial Communication Link
P0600	83	Serial Communication Link
P0600	125	Serial Communication Link
P0601	9	Internal Control Module Memory Check Sum Error
P0601	10	Internal Control Module Memory Check Sum Error
P0601	90	Internal Control Module Memory Check Sum Error
P0601	91	Internal Control Module Memory Check Sum Error
P0601	92	Internal Control Module Memory Check Sum Error
P0601	93	Internal Control Module Memory Check Sum Error
P0601	100	Internal Control Module Memory Check Sum Error
P0601	101	Internal Control Module Memory Check Sum Error
P0601	106	Internal Control Module Memory Check Sum Error
P0601	108	Internal Control Module Memory Check Sum Error
P0601	109	Internal Control Module Memory Check Sum Error
P0601	110	Internal Control Module Memory Check Sum Error
P0601	134	Internal Control Module Memory Check Sum Error
P0601	135	Internal Control Module Memory Check Sum Error
P0601	142	Internal Control Module Memory Check Sum Error
P0601	143	Internal Control Module Memory Check Sum Error
P1543	1	Throttle Valve 1 Potentiometer 1/2 - Low Input
P1543	3	Throttle Valve 1 Potentiometer 1/2 - Low Input
P1544	2	Throttle Valve 1 Potentiometer 1/2 - High Input
P1544	4	Throttle Valve 1 Potentiometer 1/2 - High Input
P1545	11	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1545	12	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1545	86	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1545	89	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1545	128	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1545	137	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1558	152	Throttle Valve Microchip Controller 1/2
P1558	153	Throttle Valve Microchip Controller 1/2
P1558	154	Throttle Valve Microchip Controller 1/2
P1558	155	Throttle Valve Microchip Controller 1/2
P1558	156	Throttle Valve Microchip Controller 1/2
P1558	157	Throttle Valve Microchip Controller 1/2
P1558	158	Throttle Valve Microchip Controller 1/2
P1558	159	Throttle Valve Microchip Controller 1/2
P1580	130	Throttle Valve Mechanically Stuck (M73: Throttle Valve 1 Spring Test)
P1580	132	Throttle Valve Mechanically Stuck (M73: Throttle Valve 1 Spring Test)
P1580	139	Throttle Valve Mechanically Stuck (M73: Throttle Valve 1 Spring Test)
P1580	141	Throttle Valve Mechanically Stuck (M73: Throttle Valve 1 Spring Test)
P1581	131	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (M73: Throttle Valve 2 Spring Test)

P1581	133	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (M73: Throttle Valve 2 Spring Test)
P1581	138	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (M73: Throttle Valve 2 Spring Test)
P1581	140	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (M73: Throttle Valve 2 Spring Test)
P1590	5	Throttle Valve 2 Potentiometer 1/2 - Low Input
P1590	7	Throttle Valve 2 Potentiometer 1/2 - Low Input
P1591	6	Throttle Valve 2 Potentiometer 1/2 - High Input
P1591	8	Throttle Valve 2 Potentiometer 1/2 - High Input
P1592	13	Throttle Valve 2 Potentiometer 1/2 - Plausibility
P1592	14	Throttle Valve 2 Potentiometer 1/2 - Plausibility
P1592	87	Throttle Valve 2 Potentiometer 1/2 - Plausibility
P1592	88	Throttle Valve 2 Potentiometer 1/2 - Plausibility
P1592	129	Throttle Valve 2 Potentiometer 1/2 - Plausibility
P1592	136	Throttle Valve 2 Potentiometer 1/2 - Plausibility

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## ECU: EML, Engine: M73, from 01.05.96 till 30.04.97

PCode BMW-FC PCode text

P0600	82	Serial Communication Link
P0600	83	Serial Communication Link
P0600	125	Serial Communication Link
P0601	9	Internal Control Module Memory Check Sum Error
P0601	10	Internal Control Module Memory Check Sum Error
P0601	90	Internal Control Module Memory Check Sum Error
P0601	91	Internal Control Module Memory Check Sum Error
P0601	92	Internal Control Module Memory Check Sum Error
P0601	93	Internal Control Module Memory Check Sum Error
P0601	100	Internal Control Module Memory Check Sum Error
P0601	101	Internal Control Module Memory Check Sum Error
P0601	106	Internal Control Module Memory Check Sum Error
P0601	108	Internal Control Module Memory Check Sum Error
P0601	109	Internal Control Module Memory Check Sum Error
P0601	110	Internal Control Module Memory Check Sum Error
P0601	134	Internal Control Module Memory Check Sum Error
P0601	135	Internal Control Module Memory Check Sum Error
P0601	142	Internal Control Module Memory Check Sum Error
P0601	143	Internal Control Module Memory Check Sum Error
P1543	1	Throttle Valve 1 Potentiometer 1/2 - Low Input
P1543	3	Throttle Valve 1 Potentiometer 1/2 - Low Input
P1544	2	Throttle Valve 1 Potentiometer 1/2 - High Input
P1544	4	Throttle Valve 1 Potentiometer 1/2 - High Input
P1545	11	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1545	12	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1545	86	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1545	89	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1545	128	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1545	137	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1558	152	Throttle Valve Microchip Controller 1/2
P1558	153	Throttle Valve Microchip Controller 1/2
P1558	154	Throttle Valve Microchip Controller 1/2
P1558	155	Throttle Valve Microchip Controller 1/2
P1558	156	Throttle Valve Microchip Controller 1/2
P1558	157	Throttle Valve Microchip Controller 1/2

P1558	158	Throttle Valve Microchip Controller 1/2
P1558	159	Throttle Valve Microchip Controller 1/2
P1580	130	Throttle Valve Mechanically Stuck (M73: Throttle Valve 1 Spring Test)
P1580	132	Throttle Valve Mechanically Stuck (M73: Throttle Valve 1 Spring Test)
P1580	139	Throttle Valve Mechanically Stuck (M73: Throttle Valve 1 Spring Test)
P1580	141	Throttle Valve Mechanically Stuck (M73: Throttle Valve 1 Spring Test)
P1581	131	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (M73: Throttle Valve 2 Spring Test)
P1581	133	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (M73: Throttle Valve 2 Spring Test)
P1581	138	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (M73: Throttle Valve 2 Spring Test)
P1581	140	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (M73: Throttle Valve 2 Spring Test)
P1590	5	Throttle Valve 2 Potentiometer 1/2 - Low Input
P1590	7	Throttle Valve 2 Potentiometer 1/2 - Low Input
P1591	6	Throttle Valve 2 Potentiometer 1/2 - High Input
P1591	8	Throttle Valve 2 Potentiometer 1/2 - High Input
P1592	13	Throttle Valve 2 Potentiometer 1/2 - Plausibility
P1592	14	Throttle Valve 2 Potentiometer 1/2 - Plausibility
P1592	87	Throttle Valve 2 Potentiometer 1/2 - Plausibility
P1592	88	Throttle Valve 2 Potentiometer 1/2 - Plausibility
P1592	129	Throttle Valve 2 Potentiometer 1/2 - Plausibility
P1592	136	Throttle Valve 2 Potentiometer 1/2 - Plausibility

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## ECU: EML, Engine: M73, from 01.05.97 till 31.08.98

PCode	BMW-FC	PCode text
P0600	82	Serial Communication Link
P0600	83	Serial Communication Link
P0600	125	Serial Communication Link
P0601	9	Internal Control Module Memory Check Sum Error
P0601	10	Internal Control Module Memory Check Sum Error
P0601	90	Internal Control Module Memory Check Sum Error
P0601	91	Internal Control Module Memory Check Sum Error
P0601	92	Internal Control Module Memory Check Sum Error
P0601	93	Internal Control Module Memory Check Sum Error
P0601	100	Internal Control Module Memory Check Sum Error
P0601	101	Internal Control Module Memory Check Sum Error
P0601	106	Internal Control Module Memory Check Sum Error
P0601	108	Internal Control Module Memory Check Sum Error
P0601	109	Internal Control Module Memory Check Sum Error
P0601	110	Internal Control Module Memory Check Sum Error
P0601	134	Internal Control Module Memory Check Sum Error
P0601	135	Internal Control Module Memory Check Sum Error
P0601	142	Internal Control Module Memory Check Sum Error
P0601	143	Internal Control Module Memory Check Sum Error
P1543	1	Throttle Valve 1 Potentiometer 1/2 - Low Input
P1543	3	Throttle Valve 1 Potentiometer 1/2 - Low Input
P1544	2	Throttle Valve 1 Potentiometer 1/2 - High Input
P1544	4	Throttle Valve 1 Potentiometer 1/2 - High Input
P1545	11	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1545	12	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1545	86	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1545	89	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1545	128	Throttle Valve 1 Potentiometer 1/2 - Plausibility

P1545	137	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1558	152	Throttle Valve Microchip Controller 1/2
P1558	153	Throttle Valve Microchip Controller 1/2
P1558	154	Throttle Valve Microchip Controller 1/2
P1558	155	Throttle Valve Microchip Controller 1/2
P1558	156	Throttle Valve Microchip Controller 1/2
P1558	157	Throttle Valve Microchip Controller 1/2
P1558	158	Throttle Valve Microchip Controller 1/2
P1558	159	Throttle Valve Microchip Controller 1/2
P1580	130	Throttle Valve Mechanically Stuck (M73: Throttle Valve 1 Spring Test)
P1580	132	Throttle Valve Mechanically Stuck (M73: Throttle Valve 1 Spring Test)
P1580	139	Throttle Valve Mechanically Stuck (M73: Throttle Valve 1 Spring Test)
P1580	141	Throttle Valve Mechanically Stuck (M73: Throttle Valve 1 Spring Test)
P1581	131	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (M73: Throttle Valve 2 Spring Test)
P1581	133	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (M73: Throttle Valve 2 Spring Test)
P1581	138	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (M73: Throttle Valve 2 Spring Test)
P1581	140	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (M73: Throttle Valve 2 Spring Test)
P1590	5	Throttle Valve 2 Potentiometer 1/2 - Low Input
P1590	7	Throttle Valve 2 Potentiometer 1/2 - Low Input
P1591	6	Throttle Valve 2 Potentiometer 1/2 - High Input
P1591	8	Throttle Valve 2 Potentiometer 1/2 - High Input
P1592	13	Throttle Valve 2 Potentiometer 1/2 - Plausibility
P1592	14	Throttle Valve 2 Potentiometer 1/2 - Plausibility
P1592	87	Throttle Valve 2 Potentiometer 1/2 - Plausibility
P1592	88	Throttle Valve 2 Potentiometer 1/2 - Plausibility
P1592	129	Throttle Valve 2 Potentiometer 1/2 - Plausibility
P1592	136	Throttle Valve 2 Potentiometer 1/2 - Plausibility

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## ECU: EML, Engine: M73, from 01.09.98 till 28.02.99

PCode	BMW-FC	PCode text
P0600	82	Serial Communication Link
P0600	83	Serial Communication Link
P0600	125	Serial Communication Link
P0601	9	Internal Control Module Memory Check Sum Error
P0601	10	Internal Control Module Memory Check Sum Error
P0601	90	Internal Control Module Memory Check Sum Error
P0601	91	Internal Control Module Memory Check Sum Error
P0601	92	Internal Control Module Memory Check Sum Error
P0601	93	Internal Control Module Memory Check Sum Error
P0601	100	Internal Control Module Memory Check Sum Error
P0601	101	Internal Control Module Memory Check Sum Error
P0601	106	Internal Control Module Memory Check Sum Error
P0601	108	Internal Control Module Memory Check Sum Error
P0601	109	Internal Control Module Memory Check Sum Error
P0601	110	Internal Control Module Memory Check Sum Error
P0601	134	Internal Control Module Memory Check Sum Error
P0601	135	Internal Control Module Memory Check Sum Error
P0601	142	Internal Control Module Memory Check Sum Error
P0601	143	Internal Control Module Memory Check Sum Error
P1543	1	Throttle Valve 1 Potentiometer 1/2 - Low Input
P1543	3	Throttle Valve 1 Potentiometer 1/2 - Low Input

P1544	2	Throttle Valve 1 Potentiometer 1/2 - High Input
P1544	4	Throttle Valve 1 Potentiometer 1/2 - High Input
P1545	11	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1545	12	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1545	86	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1545	89	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1545	128	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1545	137	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1558	152	Throttle Valve Microchip Controller 1/2
P1558	153	Throttle Valve Microchip Controller 1/2
P1558	154	Throttle Valve Microchip Controller 1/2
P1558	155	Throttle Valve Microchip Controller 1/2
P1558	156	Throttle Valve Microchip Controller 1/2
P1558	157	Throttle Valve Microchip Controller 1/2
P1558	158	Throttle Valve Microchip Controller 1/2
P1558	159	Throttle Valve Microchip Controller 1/2
P1580	130	Throttle Valve Mechanically Stuck (M73: Throttle Valve 1 Spring Test)
P1580	132	Throttle Valve Mechanically Stuck (M73: Throttle Valve 1 Spring Test)
P1580	139	Throttle Valve Mechanically Stuck (M73: Throttle Valve 1 Spring Test)
P1580	141	Throttle Valve Mechanically Stuck (M73: Throttle Valve 1 Spring Test)
P1581	131	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (M73: Throttle Valve 2 Spring Test)
P1581	133	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (M73: Throttle Valve 2 Spring Test)
P1581	138	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (M73: Throttle Valve 2 Spring Test)
P1581	140	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (M73: Throttle Valve 2 Spring Test)
P1590	5	Throttle Valve 2 Potentiometer 1/2 - Low Input
P1590	7	Throttle Valve 2 Potentiometer 1/2 - Low Input
P1591	6	Throttle Valve 2 Potentiometer 1/2 - High Input
P1591	8	Throttle Valve 2 Potentiometer 1/2 - High Input
P1592	13	Throttle Valve 2 Potentiometer 1/2 - Plausibility
P1592	14	Throttle Valve 2 Potentiometer 1/2 - Plausibility
P1592	87	Throttle Valve 2 Potentiometer 1/2 - Plausibility
P1592	88	Throttle Valve 2 Potentiometer 1/2 - Plausibility
P1592	129	Throttle Valve 2 Potentiometer 1/2 - Plausibility
P1592	136	Throttle Valve 2 Potentiometer 1/2 - Plausibility

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## ECU: EML, Engine: M73, from 01.03.99 till 29.02.00

PCode	BMW-FC	PCode	text
P0600	82	82	Serial Communication Link
P0600	83	83	Serial Communication Link
P0600	125	125	Serial Communication Link
P0601	9	9	Internal Control Module Memory Check Sum Error
P0601	10	10	Internal Control Module Memory Check Sum Error
P0601	90	90	Internal Control Module Memory Check Sum Error
P0601	91	91	Internal Control Module Memory Check Sum Error
P0601	92	92	Internal Control Module Memory Check Sum Error
P0601	93	93	Internal Control Module Memory Check Sum Error
P0601	100	100	Internal Control Module Memory Check Sum Error
P0601	101	101	Internal Control Module Memory Check Sum Error
P0601	106	106	Internal Control Module Memory Check Sum Error
P0601	108	108	Internal Control Module Memory Check Sum Error
P0601	109	109	Internal Control Module Memory Check Sum Error

P0601	110	Internal Control Module Memory Check Sum Error
P0601	134	Internal Control Module Memory Check Sum Error
P0601	135	Internal Control Module Memory Check Sum Error
P0601	142	Internal Control Module Memory Check Sum Error
P0601	143	Internal Control Module Memory Check Sum Error
P1543	1	Throttle Valve 1 Potentiometer 1/2 - Low Input
P1543	3	Throttle Valve 1 Potentiometer 1/2 - Low Input
P1544	2	Throttle Valve 1 Potentiometer 1/2 - High Input
P1544	4	Throttle Valve 1 Potentiometer 1/2 - High Input
P1545	11	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1545	12	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1545	86	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1545	89	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1545	128	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1545	137	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1558	152	Throttle Valve Microchip Controller 1/2
P1558	153	Throttle Valve Microchip Controller 1/2
P1558	154	Throttle Valve Microchip Controller 1/2
P1558	155	Throttle Valve Microchip Controller 1/2
P1558	156	Throttle Valve Microchip Controller 1/2
P1558	157	Throttle Valve Microchip Controller 1/2
P1558	158	Throttle Valve Microchip Controller 1/2
P1558	159	Throttle Valve Microchip Controller 1/2
P1580	130	Throttle Valve Mechanically Stuck (M73: Throttle Valve 1 Spring Test)
P1580	132	Throttle Valve Mechanically Stuck (M73: Throttle Valve 1 Spring Test)
P1580	139	Throttle Valve Mechanically Stuck (M73: Throttle Valve 1 Spring Test)
P1580	141	Throttle Valve Mechanically Stuck (M73: Throttle Valve 1 Spring Test)
P1581	131	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (M73: Throttle Valve 2 Spring Test)
P1581	133	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (M73: Throttle Valve 2 Spring Test)
P1581	138	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (M73: Throttle Valve 2 Spring Test)
P1581	140	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (M73: Throttle Valve 2 Spring Test)
P1590	5	Throttle Valve 2 Potentiometer 1/2 - Low Input
P1590	7	Throttle Valve 2 Potentiometer 1/2 - Low Input
P1591	6	Throttle Valve 2 Potentiometer 1/2 - High Input
P1591	8	Throttle Valve 2 Potentiometer 1/2 - High Input
P1592	13	Throttle Valve 2 Potentiometer 1/2 - Plausibility
P1592	14	Throttle Valve 2 Potentiometer 1/2 - Plausibility
P1592	87	Throttle Valve 2 Potentiometer 1/2 - Plausibility
P1592	88	Throttle Valve 2 Potentiometer 1/2 - Plausibility
P1592	129	Throttle Valve 2 Potentiometer 1/2 - Plausibility
P1592	136	Throttle Valve 2 Potentiometer 1/2 - Plausibility

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## ECU: EML, Engine: M73, from 01.03.00 till 31.08.01

PCode BMW-FC PCode text

P0600	82	Serial Communication Link
P0600	83	Serial Communication Link
P0600	125	Serial Communication Link
P0601	9	Internal Control Module Memory Check Sum Error
P0601	10	Internal Control Module Memory Check Sum Error
P0601	90	Internal Control Module Memory Check Sum Error
P0601	91	Internal Control Module Memory Check Sum Error

P0601	92	Internal Control Module Memory Check Sum Error
P0601	93	Internal Control Module Memory Check Sum Error
P0601	100	Internal Control Module Memory Check Sum Error
P0601	101	Internal Control Module Memory Check Sum Error
P0601	106	Internal Control Module Memory Check Sum Error
P0601	108	Internal Control Module Memory Check Sum Error
P0601	109	Internal Control Module Memory Check Sum Error
P0601	110	Internal Control Module Memory Check Sum Error
P0601	134	Internal Control Module Memory Check Sum Error
P0601	135	Internal Control Module Memory Check Sum Error
P0601	142	Internal Control Module Memory Check Sum Error
P0601	143	Internal Control Module Memory Check Sum Error
P1543	1	Throttle Valve 1 Potentiometer 1/2 - Low Input
P1543	3	Throttle Valve 1 Potentiometer 1/2 - Low Input
P1544	2	Throttle Valve 1 Potentiometer 1/2 - High Input
P1544	4	Throttle Valve 1 Potentiometer 1/2 - High Input
P1545	11	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1545	12	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1545	86	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1545	89	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1545	128	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1545	137	Throttle Valve 1 Potentiometer 1/2 - Plausibility
P1558	152	Throttle Valve Microchip Controller 1/2
P1558	153	Throttle Valve Microchip Controller 1/2
P1558	154	Throttle Valve Microchip Controller 1/2
P1558	155	Throttle Valve Microchip Controller 1/2
P1558	156	Throttle Valve Microchip Controller 1/2
P1558	157	Throttle Valve Microchip Controller 1/2
P1558	158	Throttle Valve Microchip Controller 1/2
P1558	159	Throttle Valve Microchip Controller 1/2
P1580	130	Throttle Valve Mechanically Stuck (M73: Throttle Valve 1 Spring Test)
P1580	132	Throttle Valve Mechanically Stuck (M73: Throttle Valve 1 Spring Test)
P1580	139	Throttle Valve Mechanically Stuck (M73: Throttle Valve 1 Spring Test)
P1580	141	Throttle Valve Mechanically Stuck (M73: Throttle Valve 1 Spring Test)
P1581	131	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (M73: Throttle Valve 2 Spring Test)
P1581	133	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (M73: Throttle Valve 2 Spring Test)
P1581	138	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (M73: Throttle Valve 2 Spring Test)
P1581	140	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (M73: Throttle Valve 2 Spring Test)
P1590	5	Throttle Valve 2 Potentiometer 1/2 - Low Input
P1590	7	Throttle Valve 2 Potentiometer 1/2 - Low Input
P1591	6	Throttle Valve 2 Potentiometer 1/2 - High Input
P1591	8	Throttle Valve 2 Potentiometer 1/2 - High Input
P1592	13	Throttle Valve 2 Potentiometer 1/2 - Plausibility
P1592	14	Throttle Valve 2 Potentiometer 1/2 - Plausibility
P1592	87	Throttle Valve 2 Potentiometer 1/2 - Plausibility
P1592	88	Throttle Valve 2 Potentiometer 1/2 - Plausibility
P1592	129	Throttle Valve 2 Potentiometer 1/2 - Plausibility
P1592	136	Throttle Valve 2 Potentiometer 1/2 - Plausibility

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## ECU: GS 19.02, Engine: N62, Transmission: 6HP26, from 01.11.01 till 31.08.02

PCode	BMW-FC	PCode text
P0715	20200	Input/Turbine Speed Sensor 'A' Circuit
P0720	20201	Output Speed Sensor Circuit
P0731	20301	Gear 1 Incorrect Ratio
P0732	20302	Gear 2 Incorrect Ratio
P0733	20303	Gear 3 Incorrect Ratio
P0734	20304	Gear 4 Incorrect Ratio
P0735	20305	Gear 5 Incorrect Ratio
P0740	20005	Torque Converter Clutch Circuit/Open
P0741	20307	Torque Converter Clutch Circuit Performance or Stuck Off
P0743	20005	Torque Converter Clutch Circuit Electrical
P0745	20000	Pressure Control Solenoid 'A'
P0748	20000	Pressure Control Solenoid 'A' Electrical
P0751	20100	Shift Solenoid 'A' Performance or Stuck Off
P0753	20100	Shift Solenoid 'A' Electrical
P0756	20101	Shift Solenoid 'B' Performance or Stuck Off
P0758	20101	Shift Solenoid 'B' Electrical
P0761	20102	Shift Solenoid 'C' Performance or Stuck Off
P0763	20102	Shift Solenoid 'C' Electrical
P0775	20001	Pressure Control Solenoid 'B'
P0778	20001	Pressure Control Solenoid 'B' Electrical
P0781	20311	1-2 Shift
P0782	20312	2-3 Shift
P0783	20313	3-4 Shift
P0784	20314	4-5 Shift
P0795	20002	Pressure Control Solenoid 'C'
P0798	20002	Pressure Control Solenoid 'C' Electrical
P1701	20700	Double Error Position Information CAN / Serial Line
P1702	20701	Combination Substitute Function
P1720	20800	CAN Timeout Control Module
P1721	20801	CAN Timeout ASC/DSC
P1727	20903	CAN Engine Speed
P1728	20336	Engine Overspeed Condition
P1736	20306	Gear 6 Incorrect Ratio
P1743	20004	Pressure Control Solenoid 'E' Electrical (M44/M52: Brake Band Electrical)
P1745	20004	Pressure Control Solenoid 'E'
P1747	52999	CAN-Bus Monitoring
P1753	20003	Pressure Control Solenoid 'D' Electrical
P1755	20003	Pressure Control Solenoid 'D'
P1771	20901	CAN Torque Interface Plausibility
P1790	20400	Internal Transmission Control Module Memory Checksum/EPROM Error
P1791	20401	Internal Transmission Control Module Memory Checksum/EEPROM Error
P1792	20402	Internal Transmission Control Module Watchdog Error
P1793	20330	ETC Cut-Off due to Overtemperature Condition
P1801	20100	Shift Solenoid 'A' Low Input
P1802	20101	Shift Solenoid 'B' Low Input
P1803	20102	Shift Solenoid 'C' Low Input
P1806	20105	Shift Solenoid 'A' or 'B' Mechanically Stuck
P1810	20200	Input/Turbine Speed Sensor Circuit High

P1811	20200	Input/Turbine Speed Sensor Circuit Low
P1812	20201	Output Speed Sensor Circuit High Input
P1813	20201	Output Speed Sensor Circuit Low Input
P1814	20203	Output Speed Sensor Gradient Too High
P1830	20006	Pressure Control Solenoid Current Error in P/R/N
P1831	20000	Pressure Control Solenoid 'A' Circuit High
P1832	20001	Pressure Control Solenoid 'B' Circuit High
P1833	20002	Pressure Control Solenoid 'C' Circuit High
P1834	20003	Pressure Control Solenoid 'D' Circuit High
P1835	20004	Pressure Control Solenoid 'E' Circuit High
P1836	20005	Torque Converter Clutch Circuit High
P1841	20000	Pressure Control Solenoid 'A' Circuit Low
P1842	20001	Pressure Control Solenoid 'B' Circuit Low
P1843	20002	Pressure Control Solenoid 'C' Circuit Low
P1844	20003	Pressure Control Solenoid 'D' Circuit Low
P1845	20004	Pressure Control Solenoid 'E' Circuit Low
P1846	20005	Torque Converter Clutch Circuit Low
P1861	20316	2-1 Shift
P1862	20317	3-2 Shift
P1863	20318	4-3 Shift
P1864	20319	5-4 Shift
P1865	20320	6-5 Shift
P1871	20316	2-1 Shift Circuit High
P1872	20317	3-2 Shift Circuit High
P1873	20318	4-3 Shift Circuit High
P1874	20319	5-4 Shift Circuit High
P1875	20320	6-5 Shift Circuit High
P1881	20311	1-2 Shift Circuit High
P1882	20312	2-3 Shift Circuit High
P1883	20313	3-4 Shift Circuit High
P1884	20314	4-5 Shift Circuit High
P1885	20315	5-6 Shift Circuit High
P1886	20315	5-6 Shift
P1888	20337	CAN Timeout Instrument Pack during Operation Parking Interlock Emergency Release
P1890	20500	System Voltage
P1891	20500	System Voltage High Input
P1892	20500	System Voltage Low Input
P1893	20501	Supply Voltage Pressure Control Solenoid/Shift Solenoid Circuit High
P1894	20501	Supply Voltage Pressure Control Solenoid/Shift Solenoid Circuit Low
P1895	20501	Supply Voltage Pressure Control Solenoid/Shift Solenoid No Signal
P1896	20501	Supply Voltage Pressure Control Solenoid/Shift Solenoid
P1897	20502	Supply Voltage Sensors High Input
P1898	20502	Supply Voltage Sensors Low Input

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## ECU: GS 19.02, Engine: N62, Transmission: 6HP26, from 01.09.02 till

PCode	BMW-FC	PCode text
P0715	20200	Input/Turbine Speed Sensor 'A' Circuit
P0720	20201	Output Speed Sensor Circuit
P0729	20306	Gear 6 Incorrect Ratio
P0731	20301	Gear 1 Incorrect Ratio
P0732	20302	Gear 2 Incorrect Ratio

P0733	20303	Gear 3 Incorrect Ratio
P0734	20304	Gear 4 Incorrect Ratio
P0735	20305	Gear 5 Incorrect Ratio
P0741	20307	Torque Converter Clutch Circuit Performance or Stuck Off
P0745	20000	Pressure Control Solenoid 'A'
P0748	20000	Pressure Control Solenoid 'A' Electrical
P0751	20100	Shift Solenoid 'A' Performance or Stuck Off
P0753	20100	Shift Solenoid 'A' Electrical
P0756	20101	Shift Solenoid 'B' Performance or Stuck Off
P0758	20101	Shift Solenoid 'B' Electrical
P0761	20102	Shift Solenoid 'C' Performance or Stuck Off
P0763	20102	Shift Solenoid 'C' Electrical
P0775	20001	Pressure Control Solenoid 'B'
P0778	20001	Pressure Control Solenoid 'B' Electrical
P0781	20311	1-2 Shift
P0782	20312	2-3 Shift
P0783	20313	3-4 Shift
P0784	20314	4-5 Shift
P0795	20002	Pressure Control Solenoid 'C'
P0798	20002	Pressure Control Solenoid 'C' Electrical
P0829	20315	5-6 Shift
P0962	20000	Pressure Control Solenoid 'A' Control Circuit Low
P0963	20000	Pressure Control Solenoid 'A' Control Circuit High
P0966	20001	Pressure Control Solenoid 'B' Control Circuit Low
P0967	20001	Pressure Control Solenoid 'B' Control Circuit High
P0970	20002	Pressure Control Solenoid 'C' Control Circuit Low
P0971	20002	Pressure Control Solenoid 'C' Control Circuit High
P0973	20100	Shift Solenoid 'A' Control Circuit Low
P0976	20101	Shift Solenoid 'B' Control Circuit Low
P0979	20102	Shift Solenoid 'C' Control Circuit Low
P1701	20700	Double Error Position Information CAN / Serial Line
P1702	20701	Combination Substitute Function
P1720	20800	CAN Timeout Control Module
P1721	20801	CAN Timeout ASC/DSC
P1727	20903	CAN Engine Speed
P1728	20336	Engine Overspeed Condition
P1747	52999	CAN-Bus Monitoring
P1771	20901	CAN Torque Interface Plausibility
P1790	20400	Internal Transmission Control Module Memory Checksum/EPROM Error
P1791	20401	Internal Transmission Control Module Memory Checksum/EEPROM Error
P1792	20402	Internal Transmission Control Module Watchdog Error
P1793	20330	ETC Cut-Off due to Overtemperature Condition
P1806	20105	Shift Solenoid 'A' or 'B' Mechanically Stuck
P1810	20200	Input/Turbine Speed Sensor Circuit High
P1811	20200	Input/Turbine Speed Sensor Circuit Low
P1812	20201	Output Speed Sensor Circuit High Input
P1813	20201	Output Speed Sensor Circuit Low Input
P1814	20203	Output Speed Sensor Gradient Too High
P1830	20006	Pressure Control Solenoid Current Error in P/R/N
P1836	20005	Torque Converter Clutch Circuit High
P1846	20005	Torque Converter Clutch Circuit Low
P1861	20316	2-1 Shift
P1862	20317	3-2 Shift

P1863	20318	4-3 Shift
P1864	20319	5-4 Shift
P1865	20320	6-5 Shift
P1871	20316	2-1 Shift Circuit High
P1872	20317	3-2 Shift Circuit High
P1873	20318	4-3 Shift Circuit High
P1874	20319	5-4 Shift Circuit High
P1875	20320	6-5 Shift Circuit High
P1881	20311	1-2 Shift Circuit High
P1882	20312	2-3 Shift Circuit High
P1883	20313	3-4 Shift Circuit High
P1884	20314	4-5 Shift Circuit High
P1885	20315	5-6 Shift Circuit High
P1888	20337	CAN Timeout Instrument Pack during Operation Parking Interlock Emergency Release
P1890	20500	System Voltage
P1891	20500	System Voltage High Input
P1892	20500	System Voltage Low Input
P1893	20501	Supply Voltage Pressure Control Solenoid/Shift Solenoid Circuit High
P1894	20501	Supply Voltage Pressure Control Solenoid/Shift Solenoid Circuit Low
P1895	20501	Supply Voltage Pressure Control Solenoid/Shift Solenoid No Signal
P1896	20501	Supply Voltage Pressure Control Solenoid/Shift Solenoid
P1897	20502	Supply Voltage Sensors High Input
P1898	20502	Supply Voltage Sensors Low Input
P2713	20003	Pressure Control Solenoid 'D'
P2716	20003	Pressure Control Solenoid 'D' Electrical
P2720	20003	Pressure Control Solenoid 'D' Circuit Low
P2721	20003	Pressure Control Solenoid 'D' Control Circuit High
P2722	20004	Pressure Control Solenoid 'E'
P2725	20004	Pressure Control Solenoid 'E' Electrical
P2729	20004	Pressure Control Solenoid 'E' Control Circuit Low
P2730	20004	Pressure Control Solenoid 'E' Control Circuit High
P2759	20005	Torque Converter Clutch Pressure Control Solenoid Control Circuit Electrical
P2761	20005	Torque Converter Clutch Pressure Control Solenoid Control Circuit/Open

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## ECU: GS 19.02, Engine: N73, Transmission: 6HP26, from 01.01.03 till

PCode	BMW-FC	PCode text
P0715	20200	Input/Turbine Speed Sensor 'A' Circuit
P0720	20201	Output Speed Sensor Circuit
P0729	20306	Gear 6 Incorrect Ratio
P0731	20301	Gear 1 Incorrect Ratio
P0732	20302	Gear 2 Incorrect Ratio
P0733	20303	Gear 3 Incorrect Ratio
P0734	20304	Gear 4 Incorrect Ratio
P0735	20305	Gear 5 Incorrect Ratio
P0741	20307	Torque Converter Clutch Circuit Performance or Stuck Off
P0745	20000	Pressure Control Solenoid 'A'
P0748	20000	Pressure Control Solenoid 'A' Electrical
P0751	20100	Shift Solenoid 'A' Performance or Stuck Off
P0753	20100	Shift Solenoid 'A' Electrical
P0756	20101	Shift Solenoid 'B' Performance or Stuck Off
P0758	20101	Shift Solenoid 'B' Electrical

P0761	20102	Shift Solenoid 'C' Performance or Stuck Off
P0763	20102	Shift Solenoid 'C' Electrical
P0775	20001	Pressure Control Solenoid 'B'
P0778	20001	Pressure Control Solenoid 'B' Electrical
P0781	20311	1-2 Shift
P0782	20312	2-3 Shift
P0783	20313	3-4 Shift
P0784	20314	4-5 Shift
P0795	20002	Pressure Control Solenoid 'C'
P0798	20002	Pressure Control Solenoid 'C' Electrical
P0829	20315	5-6 Shift
P0962	20000	Pressure Control Solenoid 'A' Control Circuit Low
P0963	20000	Pressure Control Solenoid 'A' Control Circuit High
P0966	20001	Pressure Control Solenoid 'B' Control Circuit Low
P0967	20001	Pressure Control Solenoid 'B' Control Circuit High
P0970	20002	Pressure Control Solenoid 'C' Control Circuit Low
P0971	20002	Pressure Control Solenoid 'C' Control Circuit High
P0973	20100	Shift Solenoid 'A' Control Circuit Low
P0976	20101	Shift Solenoid 'B' Control Circuit Low
P0979	20102	Shift Solenoid 'C' Control Circuit Low
P1701	20700	Double Error Position Information CAN / Serial Line
P1702	20701	Combination Substitute Function
P1720	20800	CAN Timeout Control Module
P1721	20801	CAN Timeout ASC/DSC
P1727	20903	CAN Engine Speed
P1728	20336	Engine Overspeed Condition
P1747	52999	CAN-Bus Monitoring
P1771	20901	CAN Torque Interface Plausibility
P1790	20400	Internal Transmission Control Module Memory Checksum/EPROM Error
P1791	20401	Internal Transmission Control Module Memory Checksum/EEPROM Error
P1792	20402	Internal Transmission Control Module Watchdog Error
P1793	20330	ETC Cut-Off due to Overtemperature Condition
P1806	20105	Shift Solenoid 'A' or 'B' Mechanically Stuck
P1810	20200	Input/Turbine Speed Sensor Circuit High
P1811	20200	Input/Turbine Speed Sensor Circuit Low
P1812	20201	Output Speed Sensor Circuit High Input
P1813	20201	Output Speed Sensor Circuit Low Input
P1814	20203	Output Speed Sensor Gradient Too High
P1830	20006	Pressure Control Solenoid Current Error in P/R/N
P1836	20005	Torque Converter Clutch Circuit High
P1846	20005	Torque Converter Clutch Circuit Low
P1861	20316	2-1 Shift
P1862	20317	3-2 Shift
P1863	20318	4-3 Shift
P1864	20319	5-4 Shift
P1865	20320	6-5 Shift
P1871	20316	2-1 Shift Circuit High
P1872	20317	3-2 Shift Circuit High
P1873	20318	4-3 Shift Circuit High
P1874	20319	5-4 Shift Circuit High
P1875	20320	6-5 Shift Circuit High
P1881	20311	1-2 Shift Circuit High
P1882	20312	2-3 Shift Circuit High

P1883	20313	3-4 Shift Circuit High
P1884	20314	4-5 Shift Circuit High
P1885	20315	5-6 Shift Circuit High
P1888	20337	CAN Timeout Instrument Pack during Operation Parking Interlock Emergency Release
P1890	20500	System Voltage
P1891	20500	System Voltage High Input
P1892	20500	System Voltage Low Input
P1893	20501	Supply Voltage Pressure Control Solenoid/Shift Solenoid Circuit High
P1894	20501	Supply Voltage Pressure Control Solenoid/Shift Solenoid Circuit Low
P1895	20501	Supply Voltage Pressure Control Solenoid/Shift Solenoid No Signal
P1896	20501	Supply Voltage Pressure Control Solenoid/Shift Solenoid
P1897	20502	Supply Voltage Sensors High Input
P1898	20502	Supply Voltage Sensors Low Input
P2713	20003	Pressure Control Solenoid 'D'
P2716	20003	Pressure Control Solenoid 'D' Electrical
P2720	20003	Pressure Control Solenoid 'D' Circuit Low
P2721	20003	Pressure Control Solenoid 'D' Control Circuit High
P2722	20004	Pressure Control Solenoid 'E'
P2725	20004	Pressure Control Solenoid 'E' Electrical
P2729	20004	Pressure Control Solenoid 'E' Control Circuit Low
P2730	20004	Pressure Control Solenoid 'E' Control Circuit High
P2759	20005	Torque Converter Clutch Pressure Control Solenoid Control Circuit Electrical
P2761	20005	Torque Converter Clutch Pressure Control Solenoid Control Circuit/Open

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## **ECU: GS 20, Engine: M52, Transmission: GM5, from 01.06.98 till 31.05.99**

PCode	BMW-FC	PCode text
P0705	60	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0715	33	Input/Turbine Speed Sensor 'A' Circuit
P0720	32	Output Speed Sensor Circuit
P0727	150	Engine Speed Input Circuit No Signal
P0731	50	Gear 1 Incorrect Ratio
P0732	52	Gear 2 Incorrect Ratio
P0733	53	Gear 3 Incorrect Ratio
P0734	54	Gear 4 Incorrect Ratio
P0735	55	Gear 5 Incorrect Ratio
P0740	48	Torque Converter Clutch Circuit/Open
P0743	4	Torque Converter Clutch Circuit Electrical
P0753	16	Shift Solenoid 'A' Electrical
P0758	17	Shift Solenoid 'B' Electrical
P0763	18	Shift Solenoid 'C' Electrical
P1747	129	CAN-Bus Monitoring
P1747	144	CAN-Bus Monitoring
P1748	81	Transmission Control Module Self-Test
P1749	80	Secondary Pressure Solenoid Communication Error (M52: Internal Transmission Control Module Memory Error)
P1750	96	Secondary Pressure Solenoid Circuit Range/Performance (M44/M52/S52/M62/M73: System Voltage Input Low)
P1765	147	CAN Throttle Valve
P1770	146	CAN Torque Interface

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## **ECU: GS 20, Engine: M52, Transmission: GM5, from 01.06.99 till 31.10.00**

PCode	BMW-FC	PCode text
P0705	60	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0715	33	Input/Turbine Speed Sensor 'A' Circuit
P0720	32	Output Speed Sensor Circuit
P0727	150	Engine Speed Input Circuit No Signal
P0731	50	Gear 1 Incorrect Ratio
P0732	52	Gear 2 Incorrect Ratio
P0733	53	Gear 3 Incorrect Ratio
P0734	54	Gear 4 Incorrect Ratio
P0735	55	Gear 5 Incorrect Ratio
P0740	48	Torque Converter Clutch Circuit/Open
P0743	4	Torque Converter Clutch Circuit Electrical
P0753	16	Shift Solenoid 'A' Electrical
P0758	17	Shift Solenoid 'B' Electrical
P0763	18	Shift Solenoid 'C' Electrical
P1747	129	CAN-Bus Monitoring
P1747	144	CAN-Bus Monitoring
P1748	81	Transmission Control Module Self-Test
P1749	80	Secondary Pressure Solenoid Communication Error (M52: Internal Transmission Control Module Memory Error)
P1750	96	Secondary Pressure Solenoid Circuit Range/Performance (M44/M52/S52/M62/M73: System Voltage Input Low)
P1765	147	CAN Throttle Valve
P1770	146	CAN Torque Interface

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## **ECU: GS20, Engine: M54, Transmission: GM5, from 01.04.00 till 31.08.01**

PCode	BMW-FC	PCode text
P0560	96	System Voltage
P0600	129	Serial Communication Link
P0600	144	Serial Communication Link
P0601	80	Internal Control Module Memory Check Sum Error
P0603	81	Internal Control Module Keep Alive Memory (KAM) Error
P0705	60	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0715	33	Input/Turbine Speed Sensor 'A' Circuit
P0720	32	Output Speed Sensor Circuit
P0727	150	Engine Speed Input Circuit No Signal
P0731	50	Gear 1 Incorrect Ratio
P0732	52	Gear 2 Incorrect Ratio
P0733	53	Gear 3 Incorrect Ratio
P0734	54	Gear 4 Incorrect Ratio
P0735	55	Gear 5 Incorrect Ratio
P0740	48	Torque Converter Clutch Circuit/Open
P0743	4	Torque Converter Clutch Circuit Electrical
P0753	16	Shift Solenoid 'A' Electrical
P0758	17	Shift Solenoid 'B' Electrical
P0763	18	Shift Solenoid 'C' Electrical

P1765	147	CAN Throttle Valve
P1770	146	CAN Torque Interface

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## **ECU: GS20, Engine: M54, Transmission: GM5, from 01.09.01 till 31.08.02**

PCode BMW-FC PCode text

P0705	60	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0709	60	Transmission Range Sensor 'A' Circuit Intermittent
P0715	33	Input/Turbine Speed Sensor 'A' Circuit
P0717	33	Input/Turbine Speed Sensor 'A' Circuit No Signal
P0720	32	Output Speed Sensor Circuit
P0722	32	Output Speed Sensor Circuit No Signal
P0727	150	Engine Speed Input Circuit No Signal
P0731	50	Gear 1 Incorrect Ratio
P0732	52	Gear 2 Incorrect Ratio
P0733	53	Gear 3 Incorrect Ratio
P0734	54	Gear 4 Incorrect Ratio
P0735	55	Gear 5 Incorrect Ratio
P0741	48	Torque Converter Clutch Circuit Performance or Stuck Off
P0742	48	Torque Converter Clutch Circuit Stuck On
P0743	4	Torque Converter Clutch Circuit Electrical
P0753	16	Shift Solenoid 'A' Electrical
P0758	17	Shift Solenoid 'B' Electrical
P0763	18	Shift Solenoid 'C' Electrical
P1719	144	CAN Version Error
P1720	129	CAN Timeout Control Module
P1765	147	CAN Throttle Valve
P1790	80	Internal Transmission Control Module Memory Checksum/EPROM Error
P1791	81	Internal Transmission Control Module Memory Checksum/EEPROM Error
P1794	80	Internal Transmission Control Module Memory Checksum Error
P1801	16	Shift Solenoid 'A' Low Input
P1802	17	Shift Solenoid 'B' Low Input
P1803	18	Shift Solenoid 'C' Low Input
P1891	96	System Voltage High Input
P1892	96	System Voltage Low Input

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## **ECU: GS 20, Engine: M54, Transmission: GM5, from 01.09.02 till**

PCode BMW-FC PCode text

P0705	60	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0709	60	Transmission Range Sensor 'A' Circuit Intermittent
P0715	33	Input/Turbine Speed Sensor 'A' Circuit
P0717	33	Input/Turbine Speed Sensor 'A' Circuit No Signal
P0720	32	Output Speed Sensor Circuit
P0722	32	Output Speed Sensor Circuit No Signal
P0727	150	Engine Speed Input Circuit No Signal
P0731	50	Gear 1 Incorrect Ratio
P0732	52	Gear 2 Incorrect Ratio
P0733	53	Gear 3 Incorrect Ratio
P0734	54	Gear 4 Incorrect Ratio



P0735	55	Gear 5 Incorrect Ratio
P0741	48	Torque Converter Clutch Circuit Performance or Stuck Off
P0742	48	Torque Converter Clutch Circuit Stuck On
P0753	16	Shift Solenoid 'A' Electrical
P0758	17	Shift Solenoid 'B' Electrical
P0763	18	Shift Solenoid 'C' Electrical
P0973	16	Shift Solenoid 'A' Control Circuit Low
P0976	17	Shift Solenoid 'B' Control Circuit Low
P0979	18	Shift Solenoid 'C' Control Circuit Low
P1719	144	CAN Version Error
P1720	129	CAN Timeout Control Module
P1765	147	CAN Throttle Valve
P1790	80	Internal Transmission Control Module Memory Checksum/EPROM Error
P1791	81	Internal Transmission Control Module Memory Checksum/EEPROM Error
P1794	80	Internal Transmission Control Module Memory Checksum Error
P1891	96	System Voltage High Input
P1892	96	System Voltage Low Input
P2759	4	Torque Converter Clutch Pressure Control Solenoid Control Circuit Electrical

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## ECU: GS30, Engine: M54, Transmission: H-SMG, from 01.03.03 till

PCode BMW-FC PCode text

P0932	20215	Hydraulic Pressure Sensor Circuit
P0934	20215	Hydraulic Pressure Sensor Circuit Low
P0935	20215	Hydraulic Pressure Sensor Circuit High
P1720	20800	CAN Timeout Control Module
P1721	20801	CAN Timeout ASC/DSC
P1747	52999	CAN-Bus Monitoring
P1765	20904	CAN Throttle Valve
P1766	20702	Double Error Engine Speed CAN / Direct Wiring
P1767	20913	CAN Wheel Speeds Rear Axle
P1771	20901	CAN Torque Interface Plausibility
P1782	20910	CAN Brake Signal
P1791	20401	Internal Transmission Control Module Memory Checksum/EEPROM Error
P1796	20406	Internal Transmission Control Module Error 7 (High Side Driver)
P1817	20606	Gear Selector Lever GSL0 Cable High Input
P1818	20606	Gear Selector Lever GSL0 Cable Low Input
P1819	20606	Gear Selector Lever GSL0 Cable Plausibility
P1820	20607	Gear Selector Lever GSL1 Cable High Input
P1821	20607	Gear Selector Lever GSL1 Cable Low Input
P1822	20607	Gear Selector Lever GSL1 Cable Plausibility
P1823	20611	Gear Selector Lever Digital Cable Plausibility
P1850	20213	Shift Angle Sensor High Input
P1851	20213	Shift Angle Sensor Low Input
P1852	20213	Shift Angle Sensor Plausibility
P1859	20217	Clutch Speed Sensor Plausibility
P1860	20612	Gear Selector Lever Hall Sensor Error 1
P1866	20608	Gear Selector Lever GSL2 Cable High Input
P1867	20608	Gear Selector Lever GSL2 Cable Low Input
P1868	20608	Gear Selector Lever GSL2 Cable Plausibility
P1869	20609	Gear Selector Lever GSL3 Cable High Input
P1870	20609	Gear Selector Lever GSL3 Cable Low Input

P1876 20609 Gear Selector Lever GSL3 Cable Plausibility  
P1887 20335 Hydraulic Pump

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## **ECU: GS 6SDG, Engine: S54, Transmission: GDSMG2, from 01.09.01 till 31.08.02**

PCode BMW-FC PCode text

P0701	180	Transmission Control System Range/Performance
P0750	16	Shift Solenoid 'A'
P0753	100	Shift Solenoid 'A' Electrical
P0755	17	Shift Solenoid 'B'
P0760	18	Shift Solenoid 'C'
P0763	101	Shift Solenoid 'C' Electrical
P1707	176	ETC Safety Concept Transmission
P1708	177	ETC Safety Concept Clutch
P1709	178	ETC Safety Concept
P1715	53	Hydraulic Unit Pressure Monitoring
P1716	55	Hydraulic Unit Switch-On Frequency
P1717	56	Hydraulic Unit Switch-On Period
P1720	129	CAN Timeout Control Module
P1740	23	Clutch Solenoid Circuit Range/Performance
P1747	128	CAN-Bus Monitoring
P1756	48	Shift X-Position Gear Cannot Be Engaged
P1757	49	Shift Gear Stepper
P1758	50	Shift Y-Position Not Adjustable
P1759	58	Shift X-Position Gear Cannot Be Disengaged
P1790	80	Internal Transmission Control Module Memory Checksum/EPROM Error
P1797	179	Internal Transmission Control Module Random Access Memory (RAM) Error
P1848	37	Transmission Range Sensor
P1850	36	Shift Angle Sensor High Input

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## **ECU: GS 6SDG, Engine: S54, Transmission: GDSMG2, from 01.09.02 till**

PCode BMW-FC PCode text

P0701	180	Transmission Control System Range/Performance
P0750	16	Shift Solenoid 'A'
P0753	100	Shift Solenoid 'A' Electrical
P0755	17	Shift Solenoid 'B'
P0760	18	Shift Solenoid 'C'
P0763	101	Shift Solenoid 'C' Electrical
P1707	176	ETC Safety Concept Transmission
P1708	177	ETC Safety Concept Clutch
P1709	178	ETC Safety Concept
P1715	53	Hydraulic Unit Pressure Monitoring
P1716	55	Hydraulic Unit Switch-On Frequency
P1717	56	Hydraulic Unit Switch-On Period
P1720	129	CAN Timeout Control Module
P1740	23	Clutch Solenoid Circuit Range/Performance
P1747	128	CAN-Bus Monitoring
P1756	48	Shift X-Position Gear Cannot Be Engaged

P1757	49	Shift Gear Stepper
P1758	50	Shift Y-Position Not Adjustable
P1759	58	Shift X-Position Gear Cannot Be Disengaged
P1790	80	Internal Transmission Control Module Memory Checksum/EPROM Error
P1797	179	Internal Transmission Control Module Random Access Memory (RAM) Error
P1848	37	Transmission Range Sensor
P1850	36	Shift Angle Sensor High Input

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**ECU: GS 8.32 (M), Engine: S52, Transmission: 5HP18, from 01.04.96  
till 31.08.96**

PCode	BMW-FC	PCode text
P0705	8	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0705	9	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0705	36	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0715	16	Input/Turbine Speed Sensor 'A' Circuit
P0720	42	Output Speed Sensor Circuit
P0720	106	Output Speed Sensor Circuit
P0732	100	Gear 2 Incorrect Ratio
P0740	111	Torque Converter Clutch Circuit/Open
P0743	4	Torque Converter Clutch Circuit Electrical
P0748	5	Pressure Control Solenoid 'A' Electrical
P0753	30	Shift Solenoid 'A' Electrical
P0758	33	Shift Solenoid 'B' Electrical
P0763	32	Shift Solenoid 'C' Electrical
P0768	31	Shift Solenoid 'D' Electrical
P0773	3	Shift Solenoid 'E' Electrical
P1746	104	Transmission Control Module Output Stage
P1747	150	CAN-Bus Monitoring
P1747	151	CAN-Bus Monitoring
P1747	156	CAN-Bus Monitoring
P1748	103	Transmission Control Module Self-Test
P1748	105	Transmission Control Module Self-Test
P1748	110	Transmission Control Module Self-Test
P1750	54	Secondary Pressure Solenoid Circuit Range/Performance (M44/M52/S52/M62/M73: System Voltage Input Low)
P1761	2	Shiftlock Solenoid
P1765	154	CAN Throttle Valve
P1765	158	CAN Throttle Valve
P1780	152	CAN Torque Reduction

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**ECU: GS 8.32 (M), Engine: S52, Transmission: 5HP18, from 01.09.96  
till 31.08.97**

PCode	BMW-FC	PCode text
P0705	8	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0705	9	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0705	36	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0715	16	Input/Turbine Speed Sensor 'A' Circuit
P0720	42	Output Speed Sensor Circuit
P0720	106	Output Speed Sensor Circuit

P0732	100	Gear 2 Incorrect Ratio
P0740	111	Torque Converter Clutch Circuit/Open
P0743	4	Torque Converter Clutch Circuit Electrical
P0748	5	Pressure Control Solenoid 'A' Electrical
P0753	30	Shift Solenoid 'A' Electrical
P0758	33	Shift Solenoid 'B' Electrical
P0763	32	Shift Solenoid 'C' Electrical
P0768	31	Shift Solenoid 'D' Electrical
P0773	3	Shift Solenoid 'E' Electrical
P1746	104	Transmission Control Module Output Stage
P1747	150	CAN-Bus Monitoring
P1747	151	CAN-Bus Monitoring
P1747	156	CAN-Bus Monitoring
P1748	103	Transmission Control Module Self-Test
P1748	105	Transmission Control Module Self-Test
P1748	110	Transmission Control Module Self-Test
P1750	54	Secondary Pressure Solenoid Circuit Range/Performance (M44/M52/S52/M62/M73: System Voltage Input Low)
P1761	2	Shiftlock Solenoid
P1765	154	CAN Throttle Valve
P1765	158	CAN Throttle Valve
P1780	152	CAN Torque Reduction

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## **ECU: GS 8.32 (M), Engine: S52, Transmission: 5HP18, from 01.09.97 till 31.08.98**

PCode BMW-FC PCode text

P0705	8	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0705	9	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0705	36	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0715	16	Input/Turbine Speed Sensor 'A' Circuit
P0720	42	Output Speed Sensor Circuit
P0720	106	Output Speed Sensor Circuit
P0732	100	Gear 2 Incorrect Ratio
P0740	111	Torque Converter Clutch Circuit/Open
P0743	4	Torque Converter Clutch Circuit Electrical
P0748	5	Pressure Control Solenoid 'A' Electrical
P0753	30	Shift Solenoid 'A' Electrical
P0758	33	Shift Solenoid 'B' Electrical
P0763	32	Shift Solenoid 'C' Electrical
P0768	31	Shift Solenoid 'D' Electrical
P0773	3	Shift Solenoid 'E' Electrical
P1746	104	Transmission Control Module Output Stage
P1747	150	CAN-Bus Monitoring
P1747	151	CAN-Bus Monitoring
P1747	156	CAN-Bus Monitoring
P1748	103	Transmission Control Module Self-Test
P1748	105	Transmission Control Module Self-Test
P1748	110	Transmission Control Module Self-Test
P1750	54	Secondary Pressure Solenoid Circuit Range/Performance (M44/M52/S52/M62/M73: System Voltage Input Low)
P1761	2	Shiftlock Solenoid

P1765	154	CAN Throttle Valve
P1765	158	CAN Throttle Valve
P1780	152	CAN Torque Reduction

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## **ECU: GS 8.32 (M), Engine: S52, Transmission: 5HP18, from 01.09.98 till 30.04.99**

PCode BMW-FC PCode text

P0705	8	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0705	9	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0705	36	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0715	16	Input/Turbine Speed Sensor 'A' Circuit
P0720	42	Output Speed Sensor Circuit
P0720	106	Output Speed Sensor Circuit
P0732	100	Gear 2 Incorrect Ratio
P0740	111	Torque Converter Clutch Circuit/Open
P0743	4	Torque Converter Clutch Circuit Electrical
P0748	5	Pressure Control Solenoid 'A' Electrical
P0753	30	Shift Solenoid 'A' Electrical
P0758	33	Shift Solenoid 'B' Electrical
P0763	32	Shift Solenoid 'C' Electrical
P0768	31	Shift Solenoid 'D' Electrical
P0773	3	Shift Solenoid 'E' Electrical
P1746	104	Transmission Control Module Output Stage
P1747	150	CAN-Bus Monitoring
P1747	151	CAN-Bus Monitoring
P1747	156	CAN-Bus Monitoring
P1748	103	Transmission Control Module Self-Test
P1748	105	Transmission Control Module Self-Test
P1748	110	Transmission Control Module Self-Test
P1750	54	Secondary Pressure Solenoid Circuit Range/Performance (M44/M52/S52/M62/M73: System Voltage Input Low)
P1761	2	Shiftlock Solenoid
P1765	154	CAN Throttle Valve
P1765	158	CAN Throttle Valve
P1780	152	CAN Torque Reduction

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## **EMU: GS 8.32 (M), Engine: S52, Transmission: 5HP18, from 01.05.99 till 31.08.00**

PCode BMW-FC PCode text

P0705	8	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0705	9	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0705	36	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0715	16	Input/Turbine Speed Sensor 'A' Circuit
P0720	42	Output Speed Sensor Circuit
P0720	106	Output Speed Sensor Circuit
P0732	100	Gear 2 Incorrect Ratio
P0740	111	Torque Converter Clutch Circuit/Open
P0743	4	Torque Converter Clutch Circuit Electrical
P0748	5	Pressure Control Solenoid 'A' Electrical

P0753	30	Shift Solenoid 'A' Electrical
P0758	33	Shift Solenoid 'B' Electrical
P0763	32	Shift Solenoid 'C' Electrical
P0768	31	Shift Solenoid 'D' Electrical
P0773	3	Shift Solenoid 'E' Electrical
P1746	104	Transmission Control Module Output Stage
P1747	150	CAN-Bus Monitoring
P1747	151	CAN-Bus Monitoring
P1747	156	CAN-Bus Monitoring
P1748	103	Transmission Control Module Self-Test
P1748	105	Transmission Control Module Self-Test
P1748	110	Transmission Control Module Self-Test
P1750	54	Secondary Pressure Solenoid Circuit Range/Performance (M44/M52/S52/M62/M73: System Voltage Input Low)
P1761	2	Shiftlock Solenoid
P1765	154	CAN Throttle Valve
P1765	158	CAN Throttle Valve
P1780	152	CAN Torque Reduction

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## **ECU: GS 8.34, Engine: M44, Transmission: THM-R1, from 01.10.95 till 31.08.96**

PCode BMW-FC PCode text

P0705	8	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0720	42	Output Speed Sensor Circuit
P0730	100	Incorrect Gear Ratio
P0740	111	Torque Converter Clutch Circuit/Open
P0743	32	Torque Converter Clutch Circuit Electrical
P0748	5	Pressure Control Solenoid 'A' Electrical
P0753	30	Shift Solenoid 'A' Electrical
P0758	33	Shift Solenoid 'B' Electrical
P1743	4	Pressure Control Solenoid 'E' Electrical (M44/M52: Brake Band Electrical)
P1746	104	Transmission Control Module Output Stage
P1747	150	CAN-Bus Monitoring
P1747	151	CAN-Bus Monitoring
P1747	156	CAN-Bus Monitoring
P1748	103	Transmission Control Module Self-Test
P1748	105	Transmission Control Module Self-Test
P1748	110	Transmission Control Module Self-Test
P1749	108	Secondary Pressure Solenoid Communication Error (M52: Internal Transmission Control Module Memory Error)
P1750	54	Secondary Pressure Solenoid Circuit Range/Performance (M44/M52/S52/M62/M73: System Voltage Input Low)
P1761	2	Shiftlock Solenoid
P1765	154	CAN Throttle Valve
P1765	158	CAN Throttle Valve
P1780	152	CAN Torque Reduction
P1780	163	CAN Torque Reduction

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## **ECU: GS 8.34, Engine: M44, Transmission: THM-R1, from 01.09.96 till 31.08.97**

PCode	BMW-FC	PCode text
P0705	8	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0720	42	Output Speed Sensor Circuit
P0731	100	Gear 1 Incorrect Ratio
P0740	111	Torque Converter Clutch Circuit/Open
P0743	32	Torque Converter Clutch Circuit Electrical
P0748	5	Pressure Control Solenoid 'A' Electrical
P0753	30	Shift Solenoid 'A' Electrical
P0758	33	Shift Solenoid 'B' Electrical
P1743	4	Pressure Control Solenoid 'E' Electrical (M44/M52: Brake Band Electrical)
P1746	104	Transmission Control Module Output Stage
P1747	150	CAN-Bus Monitoring
P1747	151	CAN-Bus Monitoring
P1747	156	CAN-Bus Monitoring
P1748	103	Transmission Control Module Self-Test
P1748	105	Transmission Control Module Self-Test
P1748	110	Transmission Control Module Self-Test
P1749	108	Secondary Pressure Solenoid Communication Error (M52: Internal Transmission Control Module Memory Error)
P1750	54	Secondary Pressure Solenoid Circuit Range/Performance (M44/M52/S52/M62/M73: System Voltage Input Low)
P1761	2	Shiftlock Solenoid
P1765	154	CAN Throttle Valve
P1765	158	CAN Throttle Valve
P1780	152	CAN Torque Reduction
P1780	163	CAN Torque Reduction

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## **ECU: GS 8.34, Engine: M44, Transmission: THM-R1, from 01.09.97 till 31.08.98**

PCode	BMW-FC	PCode text
P0705	8	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0720	42	Output Speed Sensor Circuit
P0731	100	Gear 1 Incorrect Ratio
P0740	111	Torque Converter Clutch Circuit/Open
P0743	32	Torque Converter Clutch Circuit Electrical
P0748	5	Pressure Control Solenoid 'A' Electrical
P0753	30	Shift Solenoid 'A' Electrical
P0758	33	Shift Solenoid 'B' Electrical
P1743	4	Pressure Control Solenoid 'E' Electrical (M44/M52: Brake Band Electrical)
P1746	104	Transmission Control Module Output Stage
P1747	150	CAN-Bus Monitoring
P1747	151	CAN-Bus Monitoring
P1747	156	CAN-Bus Monitoring
P1748	103	Transmission Control Module Self-Test
P1748	105	Transmission Control Module Self-Test
P1748	110	Transmission Control Module Self-Test

P1749	108	Secondary Pressure Solenoid Communication Error (M52: Internal Transmission Control Module Memory Error)
P1750	54	Secondary Pressure Solenoid Circuit Range/Performance (M44/M52/S52/M62/M73: System Voltage Input Low)
P1761	2	Shiftlock Solenoid
P1765	154	CAN Throttle Valve
P1765	158	CAN Throttle Valve
P1780	152	CAN Torque Reduction
P1780	163	CAN Torque Reduction

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## **ECU: GS 8.34, Engine: M44, Transmission: THM-R1, from 01.09.98 till 30.06.99**

PCode	BMW-FC	PCode text
P0705	8	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0720	42	Output Speed Sensor Circuit
P0731	100	Gear 1 Incorrect Ratio
P0740	111	Torque Converter Clutch Circuit/Open
P0743	32	Torque Converter Clutch Circuit Electrical
P0748	5	Pressure Control Solenoid 'A' Electrical
P0753	30	Shift Solenoid 'A' Electrical
P0758	33	Shift Solenoid 'B' Electrical
P1743	4	Pressure Control Solenoid 'E' Electrical (M44/M52: Brake Band Electrical)
P1746	104	Transmission Control Module Output Stage
P1747	150	CAN-Bus Monitoring
P1747	151	CAN-Bus Monitoring
P1747	156	CAN-Bus Monitoring
P1748	103	Transmission Control Module Self-Test
P1748	105	Transmission Control Module Self-Test
P1748	110	Transmission Control Module Self-Test
P1749	108	Secondary Pressure Solenoid Communication Error (M52: Internal Transmission Control Module Memory Error)
P1750	54	Secondary Pressure Solenoid Circuit Range/Performance (M44/M52/S52/M62/M73: System Voltage Input Low)
P1761	2	Shiftlock Solenoid
P1765	154	CAN Throttle Valve
P1765	158	CAN Throttle Valve
P1780	152	CAN Torque Reduction
P1780	163	CAN Torque Reduction

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## **ECU: GS 8.34, Engine: M52, Transmission: THM-R1, from 01.11.95 till 31.08.96**

PCode	BMW-FC	PCode text
P0705	8	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0720	42	Output Speed Sensor Circuit
P0730	100	Incorrect Gear Ratio
P0740	111	Torque Converter Clutch Circuit/Open
P0743	32	Torque Converter Clutch Circuit Electrical
P0748	5	Pressure Control Solenoid 'A' Electrical
P0753	30	Shift Solenoid 'A' Electrical



P0758	33	Shift Solenoid 'B' Electrical
P1743	4	Pressure Control Solenoid 'E' Electrical (M44/M52: Brake Band Electrical)
P1746	104	Transmission Control Module Output Stage
P1747	150	CAN-Bus Monitoring
P1747	151	CAN-Bus Monitoring
P1747	156	CAN-Bus Monitoring
P1748	103	Transmission Control Module Self-Test
P1748	105	Transmission Control Module Self-Test
P1748	110	Transmission Control Module Self-Test
P1749	108	Secondary Pressure Solenoid Communication Error (M52: Internal Transmission Control Module Memory Error)
P1750	54	Secondary Pressure Solenoid Circuit Range/Performance (M44/M52/S52/M62/M73: System Voltage Input Low)
P1761	2	Shiftlock Solenoid
P1765	154	CAN Throttle Valve
P1765	158	CAN Throttle Valve
P1780	152	CAN Torque Reduction
P1780	163	CAN Torque Reduction

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## **ECU: GS 8.34, Engine: M52, Transmission: THM-R1, from 01.09.96 till 31.08.97**

PCode BMW-FC PCode text

P0705	8	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0720	42	Output Speed Sensor Circuit
P0731	100	Gear 1 Incorrect Ratio
P0740	111	Torque Converter Clutch Circuit/Open
P0743	32	Torque Converter Clutch Circuit Electrical
P0748	5	Pressure Control Solenoid 'A' Electrical
P0753	30	Shift Solenoid 'A' Electrical
P0758	33	Shift Solenoid 'B' Electrical
P1743	4	Pressure Control Solenoid 'E' Electrical (M44/M52: Brake Band Electrical)
P1746	104	Transmission Control Module Output Stage
P1747	150	CAN-Bus Monitoring
P1747	151	CAN-Bus Monitoring
P1747	156	CAN-Bus Monitoring
P1748	103	Transmission Control Module Self-Test
P1748	105	Transmission Control Module Self-Test
P1748	110	Transmission Control Module Self-Test
P1749	108	Secondary Pressure Solenoid Communication Error (M52: Internal Transmission Control Module Memory Error)
P1750	54	Secondary Pressure Solenoid Circuit Range/Performance (M44/M52/S52/M62/M73: System Voltage Input Low)
P1761	2	Shiftlock Solenoid
P1765	154	CAN Throttle Valve
P1765	158	CAN Throttle Valve
P1780	152	CAN Torque Reduction
P1780	163	CAN Torque Reduction

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## **ECU: GS 8.34, Engine: M52, Transmission: THM-R1, from 01.09.97 till 31.08.98**

PCode	BMW-FC	PCode text
P0705	8	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0720	42	Output Speed Sensor Circuit
P0731	100	Gear 1 Incorrect Ratio
P0740	111	Torque Converter Clutch Circuit/Open
P0743	32	Torque Converter Clutch Circuit Electrical
P0748	5	Pressure Control Solenoid 'A' Electrical
P0753	30	Shift Solenoid 'A' Electrical
P0758	33	Shift Solenoid 'B' Electrical
P1743	4	Pressure Control Solenoid 'E' Electrical (M44/M52: Brake Band Electrical)
P1746	104	Transmission Control Module Output Stage
P1747	150	CAN-Bus Monitoring
P1747	151	CAN-Bus Monitoring
P1747	156	CAN-Bus Monitoring
P1748	103	Transmission Control Module Self-Test
P1748	105	Transmission Control Module Self-Test
P1748	110	Transmission Control Module Self-Test
P1749	108	Secondary Pressure Solenoid Communication Error (M52: Internal Transmission Control Module Memory Error)
P1750	54	Secondary Pressure Solenoid Circuit Range/Performance (M44/M52/S52/M62/M73: System Voltage Input Low)
P1761	2	Shiftlock Solenoid
P1765	154	CAN Throttle Valve
P1765	158	CAN Throttle Valve
P1780	152	CAN Torque Reduction
P1780	163	CAN Torque Reduction

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## **ECU: GS 8.34, Engine: M52, Transmission: THM-R1, from 01.09.98 till 31.05.99**

PCode	BMW-FC	PCode text
P0705	8	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0720	42	Output Speed Sensor Circuit
P0731	100	Gear 1 Incorrect Ratio
P0740	111	Torque Converter Clutch Circuit/Open
P0743	32	Torque Converter Clutch Circuit Electrical
P0748	5	Pressure Control Solenoid 'A' Electrical
P0753	30	Shift Solenoid 'A' Electrical
P0758	33	Shift Solenoid 'B' Electrical
P1743	4	Pressure Control Solenoid 'E' Electrical (M44/M52: Brake Band Electrical)
P1746	104	Transmission Control Module Output Stage
P1747	150	CAN-Bus Monitoring
P1747	151	CAN-Bus Monitoring
P1747	156	CAN-Bus Monitoring
P1748	103	Transmission Control Module Self-Test
P1748	105	Transmission Control Module Self-Test
P1748	110	Transmission Control Module Self-Test

P1749	108	Secondary Pressure Solenoid Communication Error (M52: Internal Transmission Control Module Memory Error)
P1750	54	Secondary Pressure Solenoid Circuit Range/Performance (M44/M52/S52/M62/M73: System Voltage Input Low)
P1761	2	Shiftlock Solenoid
P1765	154	CAN Throttle Valve
P1765	158	CAN Throttle Valve
P1780	152	CAN Torque Reduction
P1780	163	CAN Torque Reduction

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## **ECU: GS 8.34, Engine: M52, Transmission: THM-R1, from 01.06.99 till 31.10.00**

PCode	BMW-FC	PCode text
P0705	8	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0720	42	Output Speed Sensor Circuit
P0731	100	Gear 1 Incorrect Ratio
P0740	111	Torque Converter Clutch Circuit/Open
P0743	32	Torque Converter Clutch Circuit Electrical
P0748	5	Pressure Control Solenoid 'A' Electrical
P0753	30	Shift Solenoid 'A' Electrical
P0758	33	Shift Solenoid 'B' Electrical
P1743	4	Pressure Control Solenoid 'E' Electrical (M44/M52: Brake Band Electrical)
P1746	104	Transmission Control Module Output Stage
P1747	150	CAN-Bus Monitoring
P1747	151	CAN-Bus Monitoring
P1747	156	CAN-Bus Monitoring
P1748	103	Transmission Control Module Self-Test
P1748	105	Transmission Control Module Self-Test
P1748	110	Transmission Control Module Self-Test
P1749	108	Secondary Pressure Solenoid Communication Error (M52: Internal Transmission Control Module Memory Error)
P1750	54	Secondary Pressure Solenoid Circuit Range/Performance (M44/M52/S52/M62/M73: System Voltage Input Low)
P1761	2	Shiftlock Solenoid
P1765	154	CAN Throttle Valve
P1765	158	CAN Throttle Valve
P1780	152	CAN Torque Reduction
P1780	163	CAN Torque Reduction

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## **ECU: GS 8.55, Engine: M62, Transmission: 5HP24, from 01.09.96 till 30.04.97**

PCode	BMW-FC	PCode text
P0705	8	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0715	16	Input/Turbine Speed Sensor 'A' Circuit
P0720	42	Output Speed Sensor Circuit
P0720	106	Output Speed Sensor Circuit
P0731	131	Gear 1 Incorrect Ratio
P0732	132	Gear 2 Incorrect Ratio
P0733	122	Gear 3 Incorrect Ratio

P0733	133	Gear 3 Incorrect Ratio
P0734	123	Gear 4 Incorrect Ratio
P0734	134	Gear 4 Incorrect Ratio
P0735	135	Gear 5 Incorrect Ratio
P0740	111	Torque Converter Clutch Circuit/Open
P0743	4	Torque Converter Clutch Circuit Electrical
P0748	5	Pressure Control Solenoid 'A' Electrical
P0753	30	Shift Solenoid 'A' Electrical
P0758	33	Shift Solenoid 'B' Electrical
P0763	32	Shift Solenoid 'C' Electrical
P1734	1	Pressure Control Solenoid 'B' Electrical
P1738	29	Pressure Control Solenoid 'C' Electrical
P1743	51	Pressure Control Solenoid 'E' Electrical (M44/M52: Brake Band Electrical)
P1746	104	Transmission Control Module Output Stage
P1747	150	CAN-Bus Monitoring
P1747	151	CAN-Bus Monitoring
P1747	156	CAN-Bus Monitoring
P1748	103	Transmission Control Module Self-Test
P1748	105	Transmission Control Module Self-Test
P1748	110	Transmission Control Module Self-Test
P1750	54	Secondary Pressure Solenoid Circuit Range/Performance (M44/M52/S52/M62/M73: System Voltage Input Low)
P1761	2	Shiftlock Solenoid
P1765	154	CAN Throttle Valve

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## **ECU: GS 8.55, Engine: M62, Transmission: 5HP24, from 01.05.97 till 31.08.97**

PCode	BMW-FC	PCode text
P0705	8	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0715	16	Input/Turbine Speed Sensor 'A' Circuit
P0720	42	Output Speed Sensor Circuit
P0720	106	Output Speed Sensor Circuit
P0731	131	Gear 1 Incorrect Ratio
P0732	132	Gear 2 Incorrect Ratio
P0733	122	Gear 3 Incorrect Ratio
P0733	133	Gear 3 Incorrect Ratio
P0734	123	Gear 4 Incorrect Ratio
P0734	134	Gear 4 Incorrect Ratio
P0735	135	Gear 5 Incorrect Ratio
P0740	111	Torque Converter Clutch Circuit/Open
P0743	4	Torque Converter Clutch Circuit Electrical
P0748	5	Pressure Control Solenoid 'A' Electrical
P0753	30	Shift Solenoid 'A' Electrical
P0758	33	Shift Solenoid 'B' Electrical
P0763	32	Shift Solenoid 'C' Electrical
P1734	1	Pressure Control Solenoid 'B' Electrical
P1738	29	Pressure Control Solenoid 'C' Electrical
P1743	51	Pressure Control Solenoid 'E' Electrical (M44/M52: Brake Band Electrical)
P1746	104	Transmission Control Module Output Stage
P1747	150	CAN-Bus Monitoring
P1747	151	CAN-Bus Monitoring

P1747	156	CAN-Bus Monitoring
P1748	103	Transmission Control Module Self-Test
P1748	105	Transmission Control Module Self-Test
P1748	110	Transmission Control Module Self-Test
P1750	54	Secondary Pressure Solenoid Circuit Range/Performance (M44/M52/S52/M62/M73: System Voltage Input Low)
P1761	2	Shiftlock Solenoid
P1765	154	CAN Throttle Valve

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## **ECU: GS 8.60.2, Engine: M62-E38, Transmission: 5HP24, from 01.09.98 till 28.02.99**

PCode	BMW-FC	PCode text
P0705	60	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0715	33	Input/Turbine Speed Sensor 'A' Circuit
P0720	32	Output Speed Sensor Circuit
P0720	59	Output Speed Sensor Circuit
P0731	50	Gear 1 Incorrect Ratio
P0731	51	Gear 1 Incorrect Ratio
P0732	52	Gear 2 Incorrect Ratio
P0733	53	Gear 3 Incorrect Ratio
P0733	57	Gear 3 Incorrect Ratio
P0734	54	Gear 4 Incorrect Ratio
P0734	58	Gear 4 Incorrect Ratio
P0735	55	Gear 5 Incorrect Ratio
P0740	48	Torque Converter Clutch Circuit/Open
P0743	4	Torque Converter Clutch Circuit Electrical
P0748	1	Pressure Control Solenoid 'A' Electrical
P0753	16	Shift Solenoid 'A' Electrical
P0758	17	Shift Solenoid 'B' Electrical
P0763	18	Shift Solenoid 'C' Electrical
P1734	2	Pressure Control Solenoid 'B' Electrical
P1738	3	Pressure Control Solenoid 'C' Electrical
P1743	5	Pressure Control Solenoid 'E' Electrical (M44/M52: Brake Band Electrical)
P1746	83	Transmission Control Module Output Stage
P1747	128	CAN-Bus Monitoring
P1747	129	CAN-Bus Monitoring
P1747	144	CAN-Bus Monitoring
P1748	15	Transmission Control Module Self-Test
P1748	80	Transmission Control Module Self-Test
P1748	81	Transmission Control Module Self-Test
P1748	82	Transmission Control Module Self-Test
P1750	96	Secondary Pressure Solenoid Circuit Range/Performance (M44/M52/S52/M62/M73: System Voltage Input Low)
P1761	19	Shiftlock Solenoid
P1765	147	CAN Throttle Valve

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## **ECU: GS 8.60.2, Engine: M62-E38, Transmission: 5HP24, from 01.03.99 till 29.02.00**

PCode BMW-FC PCode text

P0705	60	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0715	33	Input/Turbine Speed Sensor 'A' Circuit
P0720	32	Output Speed Sensor Circuit
P0720	59	Output Speed Sensor Circuit
P0731	50	Gear 1 Incorrect Ratio
P0731	51	Gear 1 Incorrect Ratio
P0732	52	Gear 2 Incorrect Ratio
P0733	53	Gear 3 Incorrect Ratio
P0733	57	Gear 3 Incorrect Ratio
P0734	54	Gear 4 Incorrect Ratio
P0734	58	Gear 4 Incorrect Ratio
P0735	55	Gear 5 Incorrect Ratio
P0740	48	Torque Converter Clutch Circuit/Open
P0743	4	Torque Converter Clutch Circuit Electrical
P0748	1	Pressure Control Solenoid 'A' Electrical
P0753	16	Shift Solenoid 'A' Electrical
P0758	17	Shift Solenoid 'B' Electrical
P0763	18	Shift Solenoid 'C' Electrical
P1734	2	Pressure Control Solenoid 'B' Electrical
P1738	3	Pressure Control Solenoid 'C' Electrical
P1743	5	Pressure Control Solenoid 'E' Electrical (M44/M52: Brake Band Electrical)
P1746	83	Transmission Control Module Output Stage
P1747	128	CAN-Bus Monitoring
P1747	129	CAN-Bus Monitoring
P1747	144	CAN-Bus Monitoring
P1748	15	Transmission Control Module Self-Test
P1748	80	Transmission Control Module Self-Test
P1748	81	Transmission Control Module Self-Test
P1748	82	Transmission Control Module Self-Test
P1750	96	Secondary Pressure Solenoid Circuit Range/Performance (M44/M52/S52/M62/M73: System Voltage Input Low)
P1761	19	Shiftlock Solenoid
P1765	147	CAN Throttle Valve

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## **ECU: GS 8.60.2, Engine: M62-E38, Transmission: 5HP24, from 01.03.00 till 31.08.01**

PCode	BMW-FC	PCode	text
P0560	96		System Voltage
P0600	129		Serial Communication Link
P0600	144		Serial Communication Link
P0601	80		Internal Control Module Memory Check Sum Error
P0603	81		Internal Control Module Keep Alive Memory (KAM) Error
P0606	82		ECM/PCM Processor
P0705	60		Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0715	33		Input/Turbine Speed Sensor 'A' Circuit
P0720	32		Output Speed Sensor Circuit
P0720	59		Output Speed Sensor Circuit
P0731	50		Gear 1 Incorrect Ratio
P0731	51		Gear 1 Incorrect Ratio
P0732	52		Gear 2 Incorrect Ratio
P0733	53		Gear 3 Incorrect Ratio

P0733	57	Gear 3 Incorrect Ratio
P0734	54	Gear 4 Incorrect Ratio
P0734	58	Gear 4 Incorrect Ratio
P0735	55	Gear 5 Incorrect Ratio
P0741	48	Torque Converter Clutch Circuit Performance or Stuck Off
P0743	4	Torque Converter Clutch Circuit Electrical
P0748	1	Pressure Control Solenoid 'A' Electrical
P0753	16	Shift Solenoid 'A' Electrical
P0758	17	Shift Solenoid 'B' Electrical
P0763	18	Shift Solenoid 'C' Electrical
P0778	2	Pressure Control Solenoid 'B' Electrical
P0798	3	Pressure Control Solenoid 'C' Electrical
P1743	5	Pressure Control Solenoid 'E' Electrical (M44/M52: Brake Band Electrical)
P1746	83	Transmission Control Module Output Stage
P1747	128	CAN-Bus Monitoring
P1748	15	Transmission Control Module Self-Test
P1761	19	Shiftlock Solenoid
P1765	147	CAN Throttle Valve

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## **ECU: GS 8.60.2, Engine: M62-E39, Transmission: 5HP24, from 01.09.98 till 31.05.99**

PCode	BMW-FC	PCode text
P0705	60	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0715	33	Input/Turbine Speed Sensor 'A' Circuit
P0720	32	Output Speed Sensor Circuit
P0720	59	Output Speed Sensor Circuit
P0731	50	Gear 1 Incorrect Ratio
P0731	51	Gear 1 Incorrect Ratio
P0732	52	Gear 2 Incorrect Ratio
P0733	53	Gear 3 Incorrect Ratio
P0733	57	Gear 3 Incorrect Ratio
P0734	54	Gear 4 Incorrect Ratio
P0734	58	Gear 4 Incorrect Ratio
P0735	55	Gear 5 Incorrect Ratio
P0740	48	Torque Converter Clutch Circuit/Open
P0743	4	Torque Converter Clutch Circuit Electrical
P0748	1	Pressure Control Solenoid 'A' Electrical
P0753	16	Shift Solenoid 'A' Electrical
P0758	17	Shift Solenoid 'B' Electrical
P0763	18	Shift Solenoid 'C' Electrical
P1734	2	Pressure Control Solenoid 'B' Electrical
P1738	3	Pressure Control Solenoid 'C' Electrical
P1743	5	Pressure Control Solenoid 'E' Electrical (M44/M52: Brake Band Electrical)
P1746	83	Transmission Control Module Output Stage
P1747	128	CAN-Bus Monitoring
P1747	129	CAN-Bus Monitoring
P1747	144	CAN-Bus Monitoring
P1748	15	Transmission Control Module Self-Test
P1748	80	Transmission Control Module Self-Test
P1748	81	Transmission Control Module Self-Test
P1748	82	Transmission Control Module Self-Test

P1750	96	Secondary Pressure Solenoid Circuit Range/Performance (M44/M52/S52/M62/M73: System Voltage Input Low)
P1761	19	Shiftlock Solenoid
P1765	147	CAN Throttle Valve

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## **ECU: GS 8.60.2, Engine: M62-E39, Transmission: 5HP24, from 01.06.99 till 31.08.00**

PCode	BMW-FC	PCode text
P0705	60	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0715	33	Input/Turbine Speed Sensor 'A' Circuit
P0720	32	Output Speed Sensor Circuit
P0720	59	Output Speed Sensor Circuit
P0731	50	Gear 1 Incorrect Ratio
P0731	51	Gear 1 Incorrect Ratio
P0732	52	Gear 2 Incorrect Ratio
P0733	53	Gear 3 Incorrect Ratio
P0733	57	Gear 3 Incorrect Ratio
P0734	54	Gear 4 Incorrect Ratio
P0734	58	Gear 4 Incorrect Ratio
P0735	55	Gear 5 Incorrect Ratio
P0740	48	Torque Converter Clutch Circuit/Open
P0743	4	Torque Converter Clutch Circuit Electrical
P0748	1	Pressure Control Solenoid 'A' Electrical
P0753	16	Shift Solenoid 'A' Electrical
P0758	17	Shift Solenoid 'B' Electrical
P0763	18	Shift Solenoid 'C' Electrical
P1734	2	Pressure Control Solenoid 'B' Electrical
P1738	3	Pressure Control Solenoid 'C' Electrical
P1743	5	Pressure Control Solenoid 'E' Electrical (M44/M52: Brake Band Electrical)
P1746	83	Transmission Control Module Output Stage
P1747	128	CAN-Bus Monitoring
P1747	129	CAN-Bus Monitoring
P1747	144	CAN-Bus Monitoring
P1748	15	Transmission Control Module Self-Test
P1748	80	Transmission Control Module Self-Test
P1748	81	Transmission Control Module Self-Test
P1748	82	Transmission Control Module Self-Test
P1750	96	Secondary Pressure Solenoid Circuit Range/Performance (M44/M52/S52/M62/M73: System Voltage Input Low)
P1761	19	Shiftlock Solenoid
P1765	147	CAN Throttle Valve

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## **ECU: GS 8.60.2, Engine: M62-E39, Transmission: 5HP24, from 01.09.00 till 31.08.01**

PCode	BMW-FC	PCode text
P0560	96	System Voltage
P0600	129	Serial Communication Link
P0600	144	Serial Communication Link
P0601	80	Internal Control Module Memory Check Sum Error



P0603	81	Internal Control Module Keep Alive Memory (KAM) Error
P0606	82	ECM/PCM Processor
P0705	60	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0715	33	Input/Turbine Speed Sensor 'A' Circuit
P0720	32	Output Speed Sensor Circuit
P0720	59	Output Speed Sensor Circuit
P0731	50	Gear 1 Incorrect Ratio
P0731	51	Gear 1 Incorrect Ratio
P0732	52	Gear 2 Incorrect Ratio
P0733	53	Gear 3 Incorrect Ratio
P0733	57	Gear 3 Incorrect Ratio
P0734	54	Gear 4 Incorrect Ratio
P0734	58	Gear 4 Incorrect Ratio
P0735	55	Gear 5 Incorrect Ratio
P0741	48	Torque Converter Clutch Circuit Performance or Stuck Off
P0743	4	Torque Converter Clutch Circuit Electrical
P0748	1	Pressure Control Solenoid 'A' Electrical
P0753	16	Shift Solenoid 'A' Electrical
P0758	17	Shift Solenoid 'B' Electrical
P0763	18	Shift Solenoid 'C' Electrical
P0778	2	Pressure Control Solenoid 'B' Electrical
P0798	3	Pressure Control Solenoid 'C' Electrical
P1743	5	Pressure Control Solenoid 'E' Electrical (M44/M52: Brake Band Electrical)
P1746	83	Transmission Control Module Output Stage
P1747	128	CAN-Bus Monitoring
P1748	15	Transmission Control Module Self-Test
P1761	19	Shiftlock Solenoid
P1765	147	CAN Throttle Valve

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## **ECU: GS 8.60.2, Engine: M62-E39, Transmission: 5HP24, from 01.09.01 till 31.08.02**

PCode BMW-FC PCode text

P0709	60	Transmission Range Sensor 'A' Circuit Intermittent
P0715	33	Input/Turbine Speed Sensor 'A' Circuit
P0716	33	Input/Turbine Speed Sensor 'A' Circuit Range/Performance
P0720	32	Output Speed Sensor Circuit
P0721	59	Output Speed Sensor Circuit Range/Performance
P0731	50	Gear 1 Incorrect Ratio
P0732	52	Gear 2 Incorrect Ratio
P0733	53	Gear 3 Incorrect Ratio
P0734	54	Gear 4 Incorrect Ratio
P0735	55	Gear 5 Incorrect Ratio
P0740	4	Torque Converter Clutch Circuit/Open
P0741	48	Torque Converter Clutch Circuit Performance or Stuck Off
P0745	1	Pressure Control Solenoid 'A'
P0750	16	Shift Solenoid 'A'
P0751	16	Shift Solenoid 'A' Performance or Stuck Off
P0752	16	Shift Solenoid 'A' Stuck On
P0753	16	Shift Solenoid 'A' Electrical
P0755	17	Shift Solenoid 'B'
P0756	17	Shift Solenoid 'B' Performance or Stuck Off

P0757	17	Shift Solenoid 'B' Stuck On
P0758	17	Shift Solenoid 'B' Electrical
P0760	18	Shift Solenoid 'C'
P0761	18	Shift Solenoid 'C' Performance or Stuck Off
P0762	18	Shift Solenoid 'C' Stuck On
P0763	18	Shift Solenoid 'C' Electrical
P0775	2	Pressure Control Solenoid 'B'
P0782	57	2-3 Shift
P0783	58	3-4 Shift
P0795	3	Pressure Control Solenoid 'C'
P1719	144	CAN Version Error
P1720	129	CAN Timeout Control Module
P1731	51	Gear 1 manual Incorrect Ratio
P1745	5	Pressure Control Solenoid 'E'
P1747	128	CAN-Bus Monitoring
P1748	15	Transmission Control Module Self-Test
P1761	19	Shiftlock Solenoid
P1762	19	Shiftlock Solenoid High Input
P1763	19	Shiftlock Solenoid Low Input
P1764	19	Shiftlock Solenoid Open Circuit
P1765	147	CAN Throttle Valve
P1791	81	Internal Transmission Control Module Memory Checksum/EEPROM Error
P1792	82	Internal Transmission Control Module Watchdog Error
P1794	80	Internal Transmission Control Module Memory Checksum Error
P1831	1	Pressure Control Solenoid 'A' Circuit High
P1832	2	Pressure Control Solenoid 'B' Circuit High
P1833	3	Pressure Control Solenoid 'C' Circuit High
P1834	4	Pressure Control Solenoid 'D' Circuit High
P1835	5	Pressure Control Solenoid 'E' Circuit High
P1841	1	Pressure Control Solenoid 'A' Circuit Low
P1842	2	Pressure Control Solenoid 'B' Circuit Low
P1843	3	Pressure Control Solenoid 'C' Circuit Low
P1844	4	Pressure Control Solenoid 'D' Circuit Low
P1845	5	Pressure Control Solenoid 'E' Circuit Low
P1882	57	2-3 Shift Circuit High
P1883	58	3-4 Shift Circuit High
P1889	96	System Voltage - Electrical
P1892	96	System Voltage Low Input
P1893	83	Supply Voltage Pressure Control Solenoid/Shift Solenoid Circuit High
P1894	83	Supply Voltage Pressure Control Solenoid/Shift Solenoid Circuit Low
P1895	83	Supply Voltage Pressure Control Solenoid/Shift Solenoid No Signal

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## **ECU: GS 8.60.2, Engine: M62-E39, Transmission: 5HP24, from 01.09.02 till**

PCode BMW-FC PCode text

P0709	60	Transmission Range Sensor 'A' Circuit Intermittent
P0715	33	Input/Turbine Speed Sensor 'A' Circuit
P0716	33	Input/Turbine Speed Sensor 'A' Circuit Range/Performance
P0720	32	Output Speed Sensor Circuit
P0721	59	Output Speed Sensor Circuit Range/Performance
P0731	50	Gear 1 Incorrect Ratio

P0732	52	Gear 2 Incorrect Ratio
P0733	53	Gear 3 Incorrect Ratio
P0734	54	Gear 4 Incorrect Ratio
P0735	55	Gear 5 Incorrect Ratio
P0741	48	Torque Converter Clutch Circuit Performance or Stuck Off
P0745	1	Pressure Control Solenoid 'A'
P0750	16	Shift Solenoid 'A'
P0751	16	Shift Solenoid 'A' Performance or Stuck Off
P0752	16	Shift Solenoid 'A' Stuck On
P0753	16	Shift Solenoid 'A' Electrical
P0755	17	Shift Solenoid 'B'
P0756	17	Shift Solenoid 'B' Performance or Stuck Off
P0757	17	Shift Solenoid 'B' Stuck On
P0758	17	Shift Solenoid 'B' Electrical
P0760	18	Shift Solenoid 'C'
P0761	18	Shift Solenoid 'C' Performance or Stuck Off
P0762	18	Shift Solenoid 'C' Stuck On
P0763	18	Shift Solenoid 'C' Electrical
P0775	2	Pressure Control Solenoid 'B'
P0782	57	2-3 Shift
P0783	58	3-4 Shift
P0795	3	Pressure Control Solenoid 'C'
P0962	1	Pressure Control Solenoid 'A' Control Circuit Low
P0963	1	Pressure Control Solenoid 'A' Control Circuit High
P0966	2	Pressure Control Solenoid 'B' Control Circuit Low
P0967	2	Pressure Control Solenoid 'B' Control Circuit High
P0970	3	Pressure Control Solenoid 'C' Control Circuit Low
P0971	3	Pressure Control Solenoid 'C' Control Circuit High
P1719	144	CAN Version Error
P1720	129	CAN Timeout Control Module
P1731	51	Gear 1 manual Incorrect Ratio
P1747	128	CAN-Bus Monitoring
P1748	15	Transmission Control Module Self-Test
P1761	19	Shiftlock Solenoid
P1762	19	Shiftlock Solenoid High Input
P1763	19	Shiftlock Solenoid Low Input
P1764	19	Shiftlock Solenoid Open Circuit
P1765	147	CAN Throttle Valve
P1791	81	Internal Transmission Control Module Memory Checksum/EEPROM Error
P1792	82	Internal Transmission Control Module Watchdog Error
P1794	80	Internal Transmission Control Module Memory Checksum Error
P1882	57	2-3 Shift Circuit High
P1883	58	3-4 Shift Circuit High
P1889	96	System Voltage - Electrical
P1892	96	System Voltage Low Input
P1893	83	Supply Voltage Pressure Control Solenoid/Shift Solenoid Circuit High
P1894	83	Supply Voltage Pressure Control Solenoid/Shift Solenoid Circuit Low
P1895	83	Supply Voltage Pressure Control Solenoid/Shift Solenoid No Signal
P2722	5	Pressure Control Solenoid 'E'
P2729	5	Pressure Control Solenoid 'E' Control Circuit Low
P2730	5	Pressure Control Solenoid 'E' Control Circuit High
P2761	4	Torque Converter Clutch Pressure Control Solenoid Control Circuit/Open
P2763	4	Torque Converter Clutch Pressure Control Solenoid Control Circuit High

**ECU: GS 8.60.2, Engine: M62-E53, Transmission: 5HP24, from 01.09.99 till 31.03.00**

PCode	BMW-FC	PCode text
P0705	60	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0715	33	Input/Turbine Speed Sensor 'A' Circuit
P0720	32	Output Speed Sensor Circuit
P0720	59	Output Speed Sensor Circuit
P0731	50	Gear 1 Incorrect Ratio
P0731	51	Gear 1 Incorrect Ratio
P0732	52	Gear 2 Incorrect Ratio
P0733	53	Gear 3 Incorrect Ratio
P0733	57	Gear 3 Incorrect Ratio
P0734	54	Gear 4 Incorrect Ratio
P0734	58	Gear 4 Incorrect Ratio
P0735	55	Gear 5 Incorrect Ratio
P0740	48	Torque Converter Clutch Circuit/Open
P0743	4	Torque Converter Clutch Circuit Electrical
P0748	1	Pressure Control Solenoid 'A' Electrical
P0753	16	Shift Solenoid 'A' Electrical
P0758	17	Shift Solenoid 'B' Electrical
P0763	18	Shift Solenoid 'C' Electrical
P1734	2	Pressure Control Solenoid 'B' Electrical
P1738	3	Pressure Control Solenoid 'C' Electrical
P1743	5	Pressure Control Solenoid 'E' Electrical (M44/M52: Brake Band Electrical)
P1746	83	Transmission Control Module Output Stage
P1747	128	CAN-Bus Monitoring
P1747	129	CAN-Bus Monitoring
P1747	144	CAN-Bus Monitoring
P1748	15	Transmission Control Module Self-Test
P1748	80	Transmission Control Module Self-Test
P1748	81	Transmission Control Module Self-Test
P1748	82	Transmission Control Module Self-Test
P1750	96	Secondary Pressure Solenoid Circuit Range/Performance (M44/M52/S52/M62/M73: System Voltage Input Low)
P1761	19	Shiftlock Solenoid
P1765	147	CAN Throttle Valve

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**ECU: GS 8.60.2, Engine: M62-E53, Transmission: 5HP24, from 01.04.00 till 30.09.01**

PCode	BMW-FC	PCode text
P0560	96	System Voltage
P0600	129	Serial Communication Link
P0600	144	Serial Communication Link
P0601	80	Internal Control Module Memory Check Sum Error
P0603	81	Internal Control Module Keep Alive Memory (KAM) Error
P0606	82	ECM/PCM Processor
P0705	60	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)

P0715	33	Input/Turbine Speed Sensor 'A' Circuit
P0720	32	Output Speed Sensor Circuit
P0720	59	Output Speed Sensor Circuit
P0731	50	Gear 1 Incorrect Ratio
P0731	51	Gear 1 Incorrect Ratio
P0732	52	Gear 2 Incorrect Ratio
P0733	53	Gear 3 Incorrect Ratio
P0733	57	Gear 3 Incorrect Ratio
P0734	54	Gear 4 Incorrect Ratio
P0734	58	Gear 4 Incorrect Ratio
P0735	55	Gear 5 Incorrect Ratio
P0741	48	Torque Converter Clutch Circuit Performance or Stuck Off
P0743	4	Torque Converter Clutch Circuit Electrical
P0748	1	Pressure Control Solenoid 'A' Electrical
P0753	16	Shift Solenoid 'A' Electrical
P0758	17	Shift Solenoid 'B' Electrical
P0763	18	Shift Solenoid 'C' Electrical
P0778	2	Pressure Control Solenoid 'B' Electrical
P0798	3	Pressure Control Solenoid 'C' Electrical
P1743	5	Pressure Control Solenoid 'E' Electrical (M44/M52: Brake Band Electrical)
P1746	83	Transmission Control Module Output Stage
P1747	128	CAN-Bus Monitoring
P1748	15	Transmission Control Module Self-Test
P1761	19	Shiftlock Solenoid
P1765	147	CAN Throttle Valve

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## **ECU: GS 8.60.2, Engine: M62-E53, Transmission: 5HP24, from 01.10.01 till 30.09.02**

PCode	BMW-FC	PCode text
P0709	60	Transmission Range Sensor 'A' Circuit Intermittent
P0715	33	Input/Turbine Speed Sensor 'A' Circuit
P0716	33	Input/Turbine Speed Sensor 'A' Circuit Range/Performance
P0720	32	Output Speed Sensor Circuit
P0721	59	Output Speed Sensor Circuit Range/Performance
P0731	50	Gear 1 Incorrect Ratio
P0732	52	Gear 2 Incorrect Ratio
P0733	53	Gear 3 Incorrect Ratio
P0734	54	Gear 4 Incorrect Ratio
P0735	55	Gear 5 Incorrect Ratio
P0740	4	Torque Converter Clutch Circuit/Open
P0741	48	Torque Converter Clutch Circuit Performance or Stuck Off
P0745	1	Pressure Control Solenoid 'A'
P0750	16	Shift Solenoid 'A'
P0751	16	Shift Solenoid 'A' Performance or Stuck Off
P0752	16	Shift Solenoid 'A' Stuck On
P0753	16	Shift Solenoid 'A' Electrical
P0755	17	Shift Solenoid 'B'
P0756	17	Shift Solenoid 'B' Performance or Stuck Off
P0757	17	Shift Solenoid 'B' Stuck On
P0758	17	Shift Solenoid 'B' Electrical
P0760	18	Shift Solenoid 'C'

P0761	18	Shift Solenoid 'C' Performance or Stuck Off
P0762	18	Shift Solenoid 'C' Stuck On
P0763	18	Shift Solenoid 'C' Electrical
P0775	2	Pressure Control Solenoid 'B'
P0782	57	2-3 Shift
P0783	58	3-4 Shift
P0795	3	Pressure Control Solenoid 'C'
P1719	144	CAN Version Error
P1720	129	CAN Timeout Control Module
P1731	51	Gear 1 manual Incorrect Ratio
P1745	5	Pressure Control Solenoid 'E'
P1747	128	CAN-Bus Monitoring
P1748	15	Transmission Control Module Self-Test
P1761	19	Shiftlock Solenoid
P1762	19	Shiftlock Solenoid High Input
P1763	19	Shiftlock Solenoid Low Input
P1764	19	Shiftlock Solenoid Open Circuit
P1765	147	CAN Throttle Valve
P1791	81	Internal Transmission Control Module Memory Checksum/EEPROM Error
P1792	82	Internal Transmission Control Module Watchdog Error
P1794	80	Internal Transmission Control Module Memory Checksum Error
P1831	1	Pressure Control Solenoid 'A' Circuit High
P1832	2	Pressure Control Solenoid 'B' Circuit High
P1833	3	Pressure Control Solenoid 'C' Circuit High
P1834	4	Pressure Control Solenoid 'D' Circuit High
P1835	5	Pressure Control Solenoid 'E' Circuit High
P1841	1	Pressure Control Solenoid 'A' Circuit Low
P1842	2	Pressure Control Solenoid 'B' Circuit Low
P1843	3	Pressure Control Solenoid 'C' Circuit Low
P1844	4	Pressure Control Solenoid 'D' Circuit Low
P1845	5	Pressure Control Solenoid 'E' Circuit Low
P1882	57	2-3 Shift Circuit High
P1883	58	3-4 Shift Circuit High
P1889	96	System Voltage - Electrical
P1892	96	System Voltage Low Input
P1893	83	Supply Voltage Pressure Control Solenoid/Shift Solenoid Circuit High
P1894	83	Supply Voltage Pressure Control Solenoid/Shift Solenoid Circuit Low
P1895	83	Supply Voltage Pressure Control Solenoid/Shift Solenoid No Signal

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## **ECU: GS 8.60.2, Engine: M62-E53, Transmission: 5HP24, from 01.10.02 till**

PCode	BMW-FC	PCode text
P0709	60	Transmission Range Sensor 'A' Circuit Intermittent
P0715	33	Input/Turbine Speed Sensor 'A' Circuit
P0716	33	Input/Turbine Speed Sensor 'A' Circuit Range/Performance
P0720	32	Output Speed Sensor Circuit
P0721	59	Output Speed Sensor Circuit Range/Performance
P0731	50	Gear 1 Incorrect Ratio
P0732	52	Gear 2 Incorrect Ratio
P0733	53	Gear 3 Incorrect Ratio
P0734	54	Gear 4 Incorrect Ratio

P0735	55	Gear 5 Incorrect Ratio
P0741	48	Torque Converter Clutch Circuit Performance or Stuck Off
P0745	1	Pressure Control Solenoid 'A'
P0750	16	Shift Solenoid 'A'
P0751	16	Shift Solenoid 'A' Performance or Stuck Off
P0752	16	Shift Solenoid 'A' Stuck On
P0753	16	Shift Solenoid 'A' Electrical
P0755	17	Shift Solenoid 'B'
P0756	17	Shift Solenoid 'B' Performance or Stuck Off
P0757	17	Shift Solenoid 'B' Stuck On
P0758	17	Shift Solenoid 'B' Electrical
P0760	18	Shift Solenoid 'C'
P0761	18	Shift Solenoid 'C' Performance or Stuck Off
P0762	18	Shift Solenoid 'C' Stuck On
P0763	18	Shift Solenoid 'C' Electrical
P0775	2	Pressure Control Solenoid 'B'
P0782	57	2-3 Shift
P0783	58	3-4 Shift
P0795	3	Pressure Control Solenoid 'C'
P0962	1	Pressure Control Solenoid 'A' Control Circuit Low
P0963	1	Pressure Control Solenoid 'A' Control Circuit High
P0966	2	Pressure Control Solenoid 'B' Control Circuit Low
P0967	2	Pressure Control Solenoid 'B' Control Circuit High
P0970	3	Pressure Control Solenoid 'C' Control Circuit Low
P0971	3	Pressure Control Solenoid 'C' Control Circuit High
P1719	144	CAN Version Error
P1720	129	CAN Timeout Control Module
P1731	51	Gear 1 manual Incorrect Ratio
P1747	128	CAN-Bus Monitoring
P1748	15	Transmission Control Module Self-Test
P1761	19	Shiftlock Solenoid
P1762	19	Shiftlock Solenoid High Input
P1763	19	Shiftlock Solenoid Low Input
P1764	19	Shiftlock Solenoid Open Circuit
P1765	147	CAN Throttle Valve
P1791	81	Internal Transmission Control Module Memory Checksum/EEPROM Error
P1792	82	Internal Transmission Control Module Watchdog Error
P1794	80	Internal Transmission Control Module Memory Checksum Error
P1882	57	2-3 Shift Circuit High
P1883	58	3-4 Shift Circuit High
P1889	96	System Voltage - Electrical
P1892	96	System Voltage Low Input
P1893	83	Supply Voltage Pressure Control Solenoid/Shift Solenoid Circuit High
P1894	83	Supply Voltage Pressure Control Solenoid/Shift Solenoid Circuit Low
P1895	83	Supply Voltage Pressure Control Solenoid/Shift Solenoid No Signal
P2722	5	Pressure Control Solenoid 'E'
P2729	5	Pressure Control Solenoid 'E' Control Circuit Low
P2730	5	Pressure Control Solenoid 'E' Control Circuit High
P2761	4	Torque Converter Clutch Pressure Control Solenoid Control Circuit/Open
P2763	4	Torque Converter Clutch Pressure Control Solenoid Control Circuit High
P2764	4	Torque Converter Clutch Pressure Control Solenoid Control Circuit Low

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## **ECU: GS 8.60.3, Engine: M73, Transmission: 5HP30, from 01.09.98 till 28.02.99**

PCode	BMW-FC	PCode text
P0705	60	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0715	33	Input/Turbine Speed Sensor 'A' Circuit
P0720	32	Output Speed Sensor Circuit
P0720	59	Output Speed Sensor Circuit
P0731	50	Gear 1 Incorrect Ratio
P0731	51	Gear 1 Incorrect Ratio
P0732	52	Gear 2 Incorrect Ratio
P0733	53	Gear 3 Incorrect Ratio
P0734	54	Gear 4 Incorrect Ratio
P0735	55	Gear 5 Incorrect Ratio
P0735	64	Gear 5 Incorrect Ratio
P0740	48	Torque Converter Clutch Circuit/Open
P0743	4	Torque Converter Clutch Circuit Electrical
P0748	1	Pressure Control Solenoid 'A' Electrical
P0753	16	Shift Solenoid 'A' Electrical
P0758	17	Shift Solenoid 'B' Electrical
P0763	18	Shift Solenoid 'C' Electrical
P1734	2	Pressure Control Solenoid 'B' Electrical
P1738	3	Pressure Control Solenoid 'C' Electrical
P1743	5	Pressure Control Solenoid 'E' Electrical (M44/M52: Brake Band Electrical)
P1746	83	Transmission Control Module Output Stage
P1747	128	CAN-Bus Monitoring
P1747	129	CAN-Bus Monitoring
P1747	132	CAN-Bus Monitoring
P1747	144	CAN-Bus Monitoring
P1748	15	Transmission Control Module Self-Test
P1748	80	Transmission Control Module Self-Test
P1748	81	Transmission Control Module Self-Test
P1748	82	Transmission Control Module Self-Test
P1750	96	Secondary Pressure Solenoid Circuit Range/Performance (M44/M52/S52/M62/M73: System Voltage Input Low)
P1761	19	Shiftlock Solenoid
P1765	147	CAN Throttle Valve

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## **ECU: GS 8.60.3, Engine: M73, Transmission: 5HP30, from 01.03.99 till 29.02.00**

PCode	BMW-FC	PCode text
P0705	60	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0715	33	Input/Turbine Speed Sensor 'A' Circuit
P0720	32	Output Speed Sensor Circuit
P0720	59	Output Speed Sensor Circuit
P0731	50	Gear 1 Incorrect Ratio
P0731	51	Gear 1 Incorrect Ratio
P0732	52	Gear 2 Incorrect Ratio
P0733	53	Gear 3 Incorrect Ratio
P0734	54	Gear 4 Incorrect Ratio



P0735	55	Gear 5 Incorrect Ratio
P0735	64	Gear 5 Incorrect Ratio
P0740	48	Torque Converter Clutch Circuit/Open
P0743	4	Torque Converter Clutch Circuit Electrical
P0748	1	Pressure Control Solenoid 'A' Electrical
P0753	16	Shift Solenoid 'A' Electrical
P0758	17	Shift Solenoid 'B' Electrical
P0763	18	Shift Solenoid 'C' Electrical
P1734	2	Pressure Control Solenoid 'B' Electrical
P1738	3	Pressure Control Solenoid 'C' Electrical
P1743	5	Pressure Control Solenoid 'E' Electrical (M44/M52: Brake Band Electrical)
P1746	83	Transmission Control Module Output Stage
P1747	128	CAN-Bus Monitoring
P1747	129	CAN-Bus Monitoring
P1747	132	CAN-Bus Monitoring
P1747	144	CAN-Bus Monitoring
P1748	15	Transmission Control Module Self-Test
P1748	80	Transmission Control Module Self-Test
P1748	81	Transmission Control Module Self-Test
P1748	82	Transmission Control Module Self-Test
P1750	96	Secondary Pressure Solenoid Circuit Range/Performance (M44/M52/S52/M62/M73: System Voltage Input Low)
P1761	19	Shiftlock Solenoid
P1765	147	CAN Throttle Valve

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## **ECU: GS 8.60.3, Engine: M73, Transmission: 5HP30, from 01.03.00 till 31.08.01**

PCode	BMW-FC	PCode text
P0560	96	System Voltage
P0600	129	Serial Communication Link
P0600	132	Serial Communication Link
P0600	144	Serial Communication Link
P0601	80	Internal Control Module Memory Check Sum Error
P0603	81	Internal Control Module Keep Alive Memory (KAM) Error
P0606	82	ECM/PCM Processor
P0705	60	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0715	33	Input/Turbine Speed Sensor 'A' Circuit
P0720	32	Output Speed Sensor Circuit
P0720	59	Output Speed Sensor Circuit
P0731	50	Gear 1 Incorrect Ratio
P0731	51	Gear 1 Incorrect Ratio
P0732	52	Gear 2 Incorrect Ratio
P0733	53	Gear 3 Incorrect Ratio
P0734	54	Gear 4 Incorrect Ratio
P0735	55	Gear 5 Incorrect Ratio
P0735	64	Gear 5 Incorrect Ratio
P0741	48	Torque Converter Clutch Circuit Performance or Stuck Off
P0743	4	Torque Converter Clutch Circuit Electrical
P0748	1	Pressure Control Solenoid 'A' Electrical
P0753	16	Shift Solenoid 'A' Electrical
P0758	17	Shift Solenoid 'B' Electrical

P0763	18	Shift Solenoid 'C' Electrical
P0778	2	Pressure Control Solenoid 'B' Electrical
P0798	3	Pressure Control Solenoid 'C' Electrical
P1743	5	Pressure Control Solenoid 'E' Electrical (M44/M52: Brake Band Electrical)
P1746	83	Transmission Control Module Output Stage
P1747	128	CAN-Bus Monitoring
P1748	15	Transmission Control Module Self-Test
P1761	19	Shiftlock Solenoid
P1765	147	CAN Throttle Valve

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## **ECU: GS 8.60.4, Engine: M54, Transmission: 5HP19, from 01.03.01 till 31.08.01**

PCode	BMW-FC	PCode text
P0560	96	System Voltage
P0600	129	Serial Communication Link
P0600	144	Serial Communication Link
P0601	80	Internal Control Module Memory Check Sum Error
P0603	81	Internal Control Module Keep Alive Memory (KAM) Error
P0606	82	ECM/PCM Processor
P0705	60	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0715	33	Input/Turbine Speed Sensor 'A' Circuit
P0720	32	Output Speed Sensor Circuit
P0720	59	Output Speed Sensor Circuit
P0720	62	Output Speed Sensor Circuit
P0731	50	Gear 1 Incorrect Ratio
P0731	51	Gear 1 Incorrect Ratio
P0732	52	Gear 2 Incorrect Ratio
P0733	53	Gear 3 Incorrect Ratio
P0733	57	Gear 3 Incorrect Ratio
P0734	54	Gear 4 Incorrect Ratio
P0734	58	Gear 4 Incorrect Ratio
P0735	55	Gear 5 Incorrect Ratio
P0741	48	Torque Converter Clutch Circuit Performance or Stuck Off
P0743	4	Torque Converter Clutch Circuit Electrical
P0748	1	Pressure Control Solenoid 'A' Electrical
P0753	16	Shift Solenoid 'A' Electrical
P0758	17	Shift Solenoid 'B' Electrical
P0763	18	Shift Solenoid 'C' Electrical
P0778	2	Pressure Control Solenoid 'B' Electrical
P0798	3	Pressure Control Solenoid 'C' Electrical
P1746	83	Transmission Control Module Output Stage
P1747	128	CAN-Bus Monitoring
P1761	19	Shiftlock Solenoid
P1765	147	CAN Throttle Valve

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## **ECU: GS 8.60.4, Engine: M54, Transmission: 5HP19, from 01.09.01 till 31.08.02**

PCode	BMW-FC	PCode text
P0709	60	Transmission Range Sensor 'A' Circuit Intermittent

P0715	33	Input/Turbine Speed Sensor 'A' Circuit
P0716	33	Input/Turbine Speed Sensor 'A' Circuit Range/Performance
P0720	32	Output Speed Sensor Circuit
P0721	59	Output Speed Sensor Circuit Range/Performance
P0731	50	Gear 1 Incorrect Ratio
P0732	52	Gear 2 Incorrect Ratio
P0733	53	Gear 3 Incorrect Ratio
P0734	54	Gear 4 Incorrect Ratio
P0735	55	Gear 5 Incorrect Ratio
P0740	4	Torque Converter Clutch Circuit/Open
P0741	48	Torque Converter Clutch Circuit Performance or Stuck Off
P0745	1	Pressure Control Solenoid 'A'
P0750	16	Shift Solenoid 'A'
P0751	16	Shift Solenoid 'A' Performance or Stuck Off
P0752	16	Shift Solenoid 'A' Stuck On
P0753	16	Shift Solenoid 'A' Electrical
P0755	17	Shift Solenoid 'B'
P0756	17	Shift Solenoid 'B' Performance or Stuck Off
P0757	17	Shift Solenoid 'B' Stuck On
P0758	17	Shift Solenoid 'B' Electrical
P0760	18	Shift Solenoid 'C'
P0761	18	Shift Solenoid 'C' Performance or Stuck Off
P0762	18	Shift Solenoid 'C' Stuck On
P0763	18	Shift Solenoid 'C' Electrical
P0775	2	Pressure Control Solenoid 'B'
P0782	57	2-3 Shift
P0783	58	3-4 Shift
P0795	3	Pressure Control Solenoid 'C'
P1700	62	Double Error Output Speed and Inpu/Turbine Speed
P1719	144	CAN Version Error
P1720	129	CAN Timeout Control Module
P1731	51	Gear 1 manual Incorrect Ratio
P1747	128	CAN-Bus Monitoring
P1761	19	Shiftlock Solenoid
P1762	19	Shiftlock Solenoid High Input
P1763	19	Shiftlock Solenoid Low Input
P1764	19	Shiftlock Solenoid Open Circuit
P1765	147	CAN Throttle Valve
P1791	81	Internal Transmission Control Module Memory Checksum/EEPROM Error
P1792	82	Internal Transmission Control Module Watchdog Error
P1794	80	Internal Transmission Control Module Memory Checksum Error
P1831	1	Pressure Control Solenoid 'A' Circuit High
P1832	2	Pressure Control Solenoid 'B' Circuit High
P1833	3	Pressure Control Solenoid 'C' Circuit High
P1834	4	Pressure Control Solenoid 'D' Circuit High
P1841	1	Pressure Control Solenoid 'A' Circuit Low
P1842	2	Pressure Control Solenoid 'B' Circuit Low
P1843	3	Pressure Control Solenoid 'C' Circuit Low
P1844	4	Pressure Control Solenoid 'D' Circuit Low
P1882	57	2-3 Shift Circuit High
P1883	58	3-4 Shift Circuit High
P1889	96	System Voltage - Electrical
P1892	96	System Voltage Low Input

P1893	83	Supply Voltage Pressure Control Solenoid/Shift Solenoid Circuit High
P1894	83	Supply Voltage Pressure Control Solenoid/Shift Solenoid Circuit Low
P1895	83	Supply Voltage Pressure Control Solenoid/Shift Solenoid No Signal

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## ECU: GS 8.60.4, Engine: M54, Transmission: 5HP19, from 01.09.02 till

PCode	BMW-FC	PCode text
P0709	60	Transmission Range Sensor 'A' Circuit Intermittent
P0715	33	Input/Turbine Speed Sensor 'A' Circuit
P0716	33	Input/Turbine Speed Sensor 'A' Circuit Range/Performance
P0720	32	Output Speed Sensor Circuit
P0721	59	Output Speed Sensor Circuit Range/Performance
P0731	50	Gear 1 Incorrect Ratio
P0732	52	Gear 2 Incorrect Ratio
P0733	53	Gear 3 Incorrect Ratio
P0734	54	Gear 4 Incorrect Ratio
P0735	55	Gear 5 Incorrect Ratio
P0741	48	Torque Converter Clutch Circuit Performance or Stuck Off
P0745	1	Pressure Control Solenoid 'A'
P0750	16	Shift Solenoid 'A'
P0751	16	Shift Solenoid 'A' Performance or Stuck Off
P0752	16	Shift Solenoid 'A' Stuck On
P0753	16	Shift Solenoid 'A' Electrical
P0755	17	Shift Solenoid 'B'
P0756	17	Shift Solenoid 'B' Performance or Stuck Off
P0757	17	Shift Solenoid 'B' Stuck On
P0758	17	Shift Solenoid 'B' Electrical
P0760	18	Shift Solenoid 'C'
P0761	18	Shift Solenoid 'C' Performance or Stuck Off
P0762	18	Shift Solenoid 'C' Stuck On
P0763	18	Shift Solenoid 'C' Electrical
P0775	2	Pressure Control Solenoid 'B'
P0782	57	2-3 Shift
P0783	58	3-4 Shift
P0795	3	Pressure Control Solenoid 'C'
P0962	1	Pressure Control Solenoid 'A' Control Circuit Low
P0963	1	Pressure Control Solenoid 'A' Control Circuit High
P0966	2	Pressure Control Solenoid 'B' Control Circuit Low
P0967	2	Pressure Control Solenoid 'B' Control Circuit High
P0970	3	Pressure Control Solenoid 'C' Control Circuit Low
P0971	3	Pressure Control Solenoid 'C' Control Circuit High
P1700	62	Double Error Output Speed and Inpu/Turbine Speed
P1719	144	CAN Version Error
P1720	129	CAN Timeout Control Module
P1731	51	Gear 1 manual Incorrect Ratio
P1732	65	Gear Monitoring 4 at Electrical Substitute Program
P1747	128	CAN-Bus Monitoring
P1761	19	Shiftlock Solenoid
P1762	19	Shiftlock Solenoid High Input
P1763	19	Shiftlock Solenoid Low Input
P1764	19	Shiftlock Solenoid Open Circuit
P1765	147	CAN Throttle Valve

P1791	81	Internal Transmission Control Module Memory Checksum/EEPROM Error
P1792	82	Internal Transmission Control Module Watchdog Error
P1794	80	Internal Transmission Control Module Memory Checksum Error
P1882	57	2-3 Shift Circuit High
P1883	58	3-4 Shift Circuit High
P1889	96	System Voltage - Electrical
P1892	96	System Voltage Low Input
P1893	83	Supply Voltage Pressure Control Solenoid/Shift Solenoid Circuit High
P1894	83	Supply Voltage Pressure Control Solenoid/Shift Solenoid Circuit Low
P1895	83	Supply Voltage Pressure Control Solenoid/Shift Solenoid No Signal
P2761	4	Torque Converter Clutch Pressure Control Solenoid Control Circuit/Open
P2763	4	Torque Converter Clutch Pressure Control Solenoid Control Circuit High
P2764	4	Torque Converter Clutch Pressure Control Solenoid Control Circuit Low

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## ECU: GS 8.60.4, Engine: M56, Transmission: 5HP19, from 01.09.02 till

PCode	BMW-FC	PCode text
P0709	60	Transmission Range Sensor 'A' Circuit Intermittent
P0715	33	Input/Turbine Speed Sensor 'A' Circuit
P0716	33	Input/Turbine Speed Sensor 'A' Circuit Range/Performance
P0720	32	Output Speed Sensor Circuit
P0721	59	Output Speed Sensor Circuit Range/Performance
P0731	50	Gear 1 Incorrect Ratio
P0732	52	Gear 2 Incorrect Ratio
P0733	53	Gear 3 Incorrect Ratio
P0734	54	Gear 4 Incorrect Ratio
P0735	55	Gear 5 Incorrect Ratio
P0741	48	Torque Converter Clutch Circuit Performance or Stuck Off
P0745	1	Pressure Control Solenoid 'A'
P0750	16	Shift Solenoid 'A'
P0751	16	Shift Solenoid 'A' Performance or Stuck Off
P0752	16	Shift Solenoid 'A' Stuck On
P0753	16	Shift Solenoid 'A' Electrical
P0755	17	Shift Solenoid 'B'
P0756	17	Shift Solenoid 'B' Performance or Stuck Off
P0757	17	Shift Solenoid 'B' Stuck On
P0758	17	Shift Solenoid 'B' Electrical
P0760	18	Shift Solenoid 'C'
P0761	18	Shift Solenoid 'C' Performance or Stuck Off
P0762	18	Shift Solenoid 'C' Stuck On
P0763	18	Shift Solenoid 'C' Electrical
P0775	2	Pressure Control Solenoid 'B'
P0782	57	2-3 Shift
P0783	58	3-4 Shift
P0795	3	Pressure Control Solenoid 'C'
P0962	1	Pressure Control Solenoid 'A' Control Circuit Low
P0963	1	Pressure Control Solenoid 'A' Control Circuit High
P0966	2	Pressure Control Solenoid 'B' Control Circuit Low
P0967	2	Pressure Control Solenoid 'B' Control Circuit High
P0970	3	Pressure Control Solenoid 'C' Control Circuit Low
P0971	3	Pressure Control Solenoid 'C' Control Circuit High
P1700	62	Double Error Output Speed and Inpu/Turbine Speed

P1719	144	CAN Version Error
P1720	129	CAN Timeout Control Module
P1731	51	Gear 1 manual Incorrect Ratio
P1732	65	Gear Monitoring 4 at Electrical Substitute Program
P1747	128	CAN-Bus Monitoring
P1761	19	Shiftlock Solenoid
P1762	19	Shiftlock Solenoid High Input
P1763	19	Shiftlock Solenoid Low Input
P1764	19	Shiftlock Solenoid Open Circuit
P1765	147	CAN Throttle Valve
P1791	81	Internal Transmission Control Module Memory Checksum/EEPROM Error
P1792	82	Internal Transmission Control Module Watchdog Error
P1794	80	Internal Transmission Control Module Memory Checksum Error
P1882	57	2-3 Shift Circuit High
P1883	58	3-4 Shift Circuit High
P1889	96	System Voltage - Electrical
P1892	96	System Voltage Low Input
P1893	83	Supply Voltage Pressure Control Solenoid/Shift Solenoid Circuit High
P1894	83	Supply Voltage Pressure Control Solenoid/Shift Solenoid Circuit Low
P1895	83	Supply Voltage Pressure Control Solenoid/Shift Solenoid No Signal
P2761	4	Torque Converter Clutch Pressure Control Solenoid Control Circuit/Open
P2763	4	Torque Converter Clutch Pressure Control Solenoid Control Circuit High
P2764	4	Torque Converter Clutch Pressure Control Solenoid Control Circuit Low

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## **ECU: GS 9.22, Engine: M62, Transmission: 5HP30, from 01.12.95 till 30.04.96**

PCode	BMW-FC	PCode text
P0705	8	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0715	16	Input/Turbine Speed Sensor 'A' Circuit
P0720	42	Output Speed Sensor Circuit
P0730	100	Incorrect Gear Ratio
P0730	102	Incorrect Gear Ratio
P0735	101	Gear 5 Incorrect Ratio
P0740	111	Torque Converter Clutch Circuit/Open
P0743	4	Torque Converter Clutch Circuit Electrical
P0748	5	Pressure Control Solenoid 'A' Electrical
P0753	30	Shift Solenoid 'A' Electrical
P0758	33	Shift Solenoid 'B' Electrical
P0763	32	Shift Solenoid 'C' Electrical
P1734	1	Pressure Control Solenoid 'B' Electrical
P1738	29	Pressure Control Solenoid 'C' Electrical
P1743	51	Pressure Control Solenoid 'E' Electrical (M44/M52: Brake Band Electrical)
P1746	104	Transmission Control Module Output Stage
P1747	150	CAN-Bus Monitoring
P1747	151	CAN-Bus Monitoring
P1747	156	CAN-Bus Monitoring
P1748	103	Transmission Control Module Self-Test
P1748	105	Transmission Control Module Self-Test
P1748	110	Transmission Control Module Self-Test
P1750	54	Secondary Pressure Solenoid Circuit Range/Performance (M44/M52/S52/M62/M73: System Voltage Input Low)

**ECU: GS 9.22, Engine: M62, Transmission: 5HP30, from 01.05.96 till 31.12.96**

PCode	BMW-FC	PCode text
P0705	8	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0715	16	Input/Turbine Speed Sensor 'A' Circuit
P0720	42	Output Speed Sensor Circuit
P0730	102	Incorrect Gear Ratio
P0732	100	Gear 2 Incorrect Ratio
P0735	101	Gear 5 Incorrect Ratio
P0740	111	Torque Converter Clutch Circuit/Open
P0743	4	Torque Converter Clutch Circuit Electrical
P0748	5	Pressure Control Solenoid 'A' Electrical
P0753	30	Shift Solenoid 'A' Electrical
P0758	33	Shift Solenoid 'B' Electrical
P0763	32	Shift Solenoid 'C' Electrical
P1734	1	Pressure Control Solenoid 'B' Electrical
P1738	29	Pressure Control Solenoid 'C' Electrical
P1743	51	Pressure Control Solenoid 'E' Electrical (M44/M52: Brake Band Electrical)
P1746	104	Transmission Control Module Output Stage
P1747	150	CAN-Bus Monitoring
P1747	151	CAN-Bus Monitoring
P1747	156	CAN-Bus Monitoring
P1748	103	Transmission Control Module Self-Test
P1748	105	Transmission Control Module Self-Test
P1748	110	Transmission Control Module Self-Test
P1750	54	Secondary Pressure Solenoid Circuit Range/Performance (M44/M52/S52/M62/M73: System Voltage Input Low)
P1761	2	Shiftlock Solenoid

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**ECU: GS 9.22, Engine: M73, Transmission: 5HP30, from 01.01.95 till 31.08.95**

PCode	BMW-FC	PCode text
P0705	8	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0715	16	Input/Turbine Speed Sensor 'A' Circuit
P0720	42	Output Speed Sensor Circuit
P0730	100	Incorrect Gear Ratio
P0730	102	Incorrect Gear Ratio
P0735	101	Gear 5 Incorrect Ratio
P0740	111	Torque Converter Clutch Circuit/Open
P0743	4	Torque Converter Clutch Circuit Electrical
P0748	5	Pressure Control Solenoid 'A' Electrical
P0753	30	Shift Solenoid 'A' Electrical
P0758	33	Shift Solenoid 'B' Electrical
P0763	32	Shift Solenoid 'C' Electrical
P1734	1	Pressure Control Solenoid 'B' Electrical
P1738	29	Pressure Control Solenoid 'C' Electrical
P1743	51	Pressure Control Solenoid 'E' Electrical (M44/M52: Brake Band Electrical)

P1746	104	Transmission Control Module Output Stage
P1747	150	CAN-Bus Monitoring
P1747	151	CAN-Bus Monitoring
P1747	156	CAN-Bus Monitoring
P1748	103	Transmission Control Module Self-Test
P1748	105	Transmission Control Module Self-Test
P1748	110	Transmission Control Module Self-Test
P1750	54	Secondary Pressure Solenoid Circuit Range/Performance (M44/M52/S52/M62/M73: System Voltage Input Low)
P1761	2	Shiftlock Solenoid

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## **ECU: GS 9.22, Engine: M73, Transmission: 5HP30, from 01.09.95 till 30.04.96**

PCode BMW-FC PCode text

P0705	8	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0715	16	Input/Turbine Speed Sensor 'A' Circuit
P0720	42	Output Speed Sensor Circuit
P0730	100	Incorrect Gear Ratio
P0730	102	Incorrect Gear Ratio
P0735	101	Gear 5 Incorrect Ratio
P0740	111	Torque Converter Clutch Circuit/Open
P0743	4	Torque Converter Clutch Circuit Electrical
P0748	5	Pressure Control Solenoid 'A' Electrical
P0753	30	Shift Solenoid 'A' Electrical
P0758	33	Shift Solenoid 'B' Electrical
P0763	32	Shift Solenoid 'C' Electrical
P1734	1	Pressure Control Solenoid 'B' Electrical
P1738	29	Pressure Control Solenoid 'C' Electrical
P1743	51	Pressure Control Solenoid 'E' Electrical (M44/M52: Brake Band Electrical)
P1746	104	Transmission Control Module Output Stage
P1747	150	CAN-Bus Monitoring
P1747	151	CAN-Bus Monitoring
P1747	156	CAN-Bus Monitoring
P1748	103	Transmission Control Module Self-Test
P1748	105	Transmission Control Module Self-Test
P1748	110	Transmission Control Module Self-Test
P1750	54	Secondary Pressure Solenoid Circuit Range/Performance (M44/M52/S52/M62/M73: System Voltage Input Low)
P1761	2	Shiftlock Solenoid

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## **ECU: GS 9.22, Engine: M73, Transmission: 5HP30, from 01.05.96 till 31.08.97**

PCode BMW-FC PCode text

P0705	8	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0715	16	Input/Turbine Speed Sensor 'A' Circuit
P0720	42	Output Speed Sensor Circuit
P0730	102	Incorrect Gear Ratio
P0732	100	Gear 2 Incorrect Ratio
P0735	101	Gear 5 Incorrect Ratio



P0740	111	Torque Converter Clutch Circuit/Open
P0743	4	Torque Converter Clutch Circuit Electrical
P0748	5	Pressure Control Solenoid 'A' Electrical
P0753	30	Shift Solenoid 'A' Electrical
P0758	33	Shift Solenoid 'B' Electrical
P0763	32	Shift Solenoid 'C' Electrical
P1734	1	Pressure Control Solenoid 'B' Electrical
P1738	29	Pressure Control Solenoid 'C' Electrical
P1743	51	Pressure Control Solenoid 'E' Electrical (M44/M52: Brake Band Electrical)
P1746	104	Transmission Control Module Output Stage
P1747	150	CAN-Bus Monitoring
P1747	151	CAN-Bus Monitoring
P1747	156	CAN-Bus Monitoring
P1748	103	Transmission Control Module Self-Test
P1748	105	Transmission Control Module Self-Test
P1748	110	Transmission Control Module Self-Test
P1750	54	Secondary Pressure Solenoid Circuit Range/Performance (M44/M52/S52/M62/M73: System Voltage Input Low)
P1761	2	Shiftlock Solenoid

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## **ECU: GS 9.22, Engine: M73, Transmission: 5HP30, from 01.09.97 till 31.08.98**

PCode	BMW-FC	PCode text
P0705	8	Transmission Range Sensor 'A' Circuit Malfunction (PRNDL Input)
P0715	16	Input/Turbine Speed Sensor 'A' Circuit
P0720	42	Output Speed Sensor Circuit
P0730	102	Incorrect Gear Ratio
P0732	100	Gear 2 Incorrect Ratio
P0735	101	Gear 5 Incorrect Ratio
P0740	111	Torque Converter Clutch Circuit/Open
P0743	4	Torque Converter Clutch Circuit Electrical
P0748	5	Pressure Control Solenoid 'A' Electrical
P0753	30	Shift Solenoid 'A' Electrical
P0758	33	Shift Solenoid 'B' Electrical
P0763	32	Shift Solenoid 'C' Electrical
P1734	1	Pressure Control Solenoid 'B' Electrical
P1738	29	Pressure Control Solenoid 'C' Electrical
P1743	51	Pressure Control Solenoid 'E' Electrical (M44/M52: Brake Band Electrical)
P1746	104	Transmission Control Module Output Stage
P1747	150	CAN-Bus Monitoring
P1747	151	CAN-Bus Monitoring
P1747	156	CAN-Bus Monitoring
P1748	103	Transmission Control Module Self-Test
P1748	105	Transmission Control Module Self-Test
P1748	110	Transmission Control Module Self-Test
P1750	54	Secondary Pressure Solenoid Circuit Range/Performance (M44/M52/S52/M62/M73: System Voltage Input Low)
P1761	2	Shiftlock Solenoid

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## ECU: M5.2, Engine: M44, from 01.10.95 till 31.12.95

PCode	BMW-FC	PCode	text
P0100	115		Mass or Volume Air Flow Circuit
P0101	121		Mass or Volume Air Flow Circuit Range/Performance
P0111	124		Intake Air Temperature Sensor 1 Circuit Range/Performance
P0116	123		Engine Coolant Temperature Circuit Range/Performance
P0120	117		Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0130	10		O2 Sensor Circuit (Bank 1 Sensor 1)
P0133	15		O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0134	13		O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0136	12		O2 Sensor Circuit (Bank 1 Sensor 2)
P0139	17		O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0170	26		Fuel Trim (Bank 1)
P0201	150		Injector Circuit/Open - Cylinder 1
P0202	151		Injector Circuit/Open - Cylinder 2
P0203	152		Injector Circuit/Open - Cylinder 3
P0204	153		Injector Circuit/Open - Cylinder 4
P0300	62		Random/Multiple Cylinder Misfire Detected
P0300	75		Random/Multiple Cylinder Misfire Detected
P0301	50		Cylinder 1 Misfire Detected
P0301	63		Cylinder 1 Misfire Detected
P0302	51		Cylinder 2 Misfire Detected
P0302	64		Cylinder 2 Misfire Detected
P0303	52		Cylinder 3 Misfire Detected
P0303	65		Cylinder 3 Misfire Detected
P0304	53		Cylinder 4 Misfire Detected
P0304	66		Cylinder 4 Misfire Detected
P0325	210		Knock Sensor 1 Circuit (Bank 1 or Single Sensor)
P0330	211		Knock Sensor 2 Circuit (Bank 2)
P0335	111		Crankshaft Position Sensor 'A' Circuit
P0340	112		Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0420	40		Catalyst System Efficiency Below Threshold (Bank 1)
P0440	93		Evaporative Emission System
P0443	98		Evaporative Emission System Purge Control Valve Circuit
P0500	120		Vehicle Speed Sensor 'A'
P0505	32		Idle Air Control System
P0600	236		Serial Communication Link
P0601	103		Internal Control Module Memory Check Sum Error
P0603	102		Internal Control Module Keep Alive Memory (KAM) Error
P0604	101		Internal Control Module Random Access Memory (RAM) Error
P0604	104		Internal Control Module Random Access Memory (RAM) Error
P1174	27		Fuel Trim Adaptation Malfunction (Bank 1)
P1176	16		O2 Sensor Slow Response (Bank 1)
P1186	14		O2 Sensor Heater Control Circuit (Bank 1 Sensor 2)
P1509	168		Idle-Speed Control Valve Opening Solenoid Control Circuit Signal Electrical
P1511	175		DISA (Differentiated Intake Manifold) Control Circuit Electrical
P1550	169		Idle-Speed Control Valve Closing Coil Electrical
P1585	8		Misfire Detected with Low Fuel
P1589	222		Control Module Self-Test, Knock Control Test Pulse (Bank 1)
P1690	165		Malfunction Indicator Lamp (MIL) Control Circuit Electrical

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## ECU: M5.2, Engine: M44, from 01.01.96 till 31.08.96

PCode	BMW-FC	PCode text
P0100	115	Mass or Volume Air Flow Circuit
P0111	124	Intake Air Temperature Sensor 1 Circuit Range/Performance
P0116	123	Engine Coolant Temperature Circuit Range/Performance
P0120	117	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0130	10	O2 Sensor Circuit (Bank 1 Sensor 1)
P0133	15	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0135	13	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	12	O2 Sensor Circuit (Bank 1 Sensor 2)
P0139	17	O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0170	26	Fuel Trim (Bank 1)
P0201	150	Injector Circuit/Open - Cylinder 1
P0202	151	Injector Circuit/Open - Cylinder 2
P0203	152	Injector Circuit/Open - Cylinder 3
P0204	153	Injector Circuit/Open - Cylinder 4
P0300	62	Random/Multiple Cylinder Misfire Detected
P0300	75	Random/Multiple Cylinder Misfire Detected
P0301	50	Cylinder 1 Misfire Detected
P0301	63	Cylinder 1 Misfire Detected
P0302	51	Cylinder 2 Misfire Detected
P0302	64	Cylinder 2 Misfire Detected
P0303	52	Cylinder 3 Misfire Detected
P0303	65	Cylinder 3 Misfire Detected
P0304	53	Cylinder 4 Misfire Detected
P0304	66	Cylinder 4 Misfire Detected
P0325	210	Knock Sensor 1 Circuit (Bank 1 or Single Sensor)
P0330	211	Knock Sensor 2 Circuit (Bank 2)
P0335	111	Crankshaft Position Sensor 'A' Circuit
P0340	112	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0420	40	Catalyst System Efficiency Below Threshold (Bank 1)
P0440	93	Evaporative Emission System
P0443	98	Evaporative Emission System Purge Control Valve Circuit
P0500	120	Vehicle Speed Sensor 'A'
P0505	32	Idle Air Control System
P0600	236	Serial Communication Link
P0601	103	Internal Control Module Memory Check Sum Error
P0603	102	Internal Control Module Keep Alive Memory (KAM) Error
P0604	101	Internal Control Module Random Access Memory (RAM) Error
P0604	104	Internal Control Module Random Access Memory (RAM) Error
P1140	121	Mass or Volume Air Flow Circuit Range/Performance Problem
P1174	27	Fuel Trim Adaptation Malfunction (Bank 1)
P1176	16	O2 Sensor Slow Response (Bank 1)
P1186	14	O2 Sensor Heater Control Circuit (Bank 1 Sensor 2)
P1386	220	Control Module Self-Test, Knock Control Circuit Baseline Test (Bank 1)
P1509	168	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal Electrical
P1511	175	DISA (Differentiated Intake Manifold) Control Circuit Electrical
P1550	169	Idle-Speed Control Valve Closing Coil Electrical
P1585	8	Misfire Detected with Low Fuel
P1589	222	Control Module Self-Test, Knock Control Test Pulse (Bank 1)
P1690	165	Malfunction Indicator Lamp (MIL) Control Circuit Electrical

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## ECU: M5.2, Engine: M44, from 01.09.96 till 31.12.96

PCode	BMW-FC	PCode text
P0100	115	Mass or Volume Air Flow Circuit
P0111	124	Intake Air Temperature Sensor 1 Circuit Range/Performance
P0116	123	Engine Coolant Temperature Circuit Range/Performance
P0120	117	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0130	10	O2 Sensor Circuit (Bank 1 Sensor 1)
P0133	15	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0135	13	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	12	O2 Sensor Circuit (Bank 1 Sensor 2)
P0139	17	O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0170	26	Fuel Trim (Bank 1)
P0201	150	Injector Circuit/Open - Cylinder 1
P0202	151	Injector Circuit/Open - Cylinder 2
P0203	152	Injector Circuit/Open - Cylinder 3
P0204	153	Injector Circuit/Open - Cylinder 4
P0300	62	Random/Multiple Cylinder Misfire Detected
P0300	75	Random/Multiple Cylinder Misfire Detected
P0301	50	Cylinder 1 Misfire Detected
P0301	63	Cylinder 1 Misfire Detected
P0302	51	Cylinder 2 Misfire Detected
P0302	64	Cylinder 2 Misfire Detected
P0303	52	Cylinder 3 Misfire Detected
P0303	65	Cylinder 3 Misfire Detected
P0304	53	Cylinder 4 Misfire Detected
P0304	66	Cylinder 4 Misfire Detected
P0325	210	Knock Sensor 1 Circuit (Bank 1 or Single Sensor)
P0330	211	Knock Sensor 2 Circuit (Bank 2)
P0335	111	Crankshaft Position Sensor 'A' Circuit
P0340	112	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0420	40	Catalyst System Efficiency Below Threshold (Bank 1)
P0440	93	Evaporative Emission System
P0443	98	Evaporative Emission System Purge Control Valve Circuit
P0500	120	Vehicle Speed Sensor 'A'
P0505	32	Idle Air Control System
P0600	236	Serial Communication Link
P0601	103	Internal Control Module Memory Check Sum Error
P0603	102	Internal Control Module Keep Alive Memory (KAM) Error
P0604	101	Internal Control Module Random Access Memory (RAM) Error
P0604	104	Internal Control Module Random Access Memory (RAM) Error
P1140	121	Mass or Volume Air Flow Circuit Range/Performance Problem
P1174	27	Fuel Trim Adaptation Malfunction (Bank 1)
P1176	16	O2 Sensor Slow Response (Bank 1)
P1186	14	O2 Sensor Heater Control Circuit (Bank 1 Sensor 2)
P1386	220	Control Module Self-Test, Knock Control Circuit Baseline Test (Bank 1)
P1509	168	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal Electrical
P1511	175	DISA (Differentiated Intake Manifold) Control Circuit Electrical
P1550	169	Idle-Speed Control Valve Closing Coil Electrical
P1585	8	Misfire Detected with Low Fuel

P1589	222	Control Module Self-Test, Knock Control Test Pulse (Bank 1)
P1690	165	Malfunction Indicator Lamp (MIL) Control Circuit Electrical

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## ECU: M5.2, Engine: M44, from 01.01.97 till 31.08.97

PCode	BMW-FC	PCode text
P0100	115	Mass or Volume Air Flow Circuit
P0111	124	Intake Air Temperature Sensor 1 Circuit Range/Performance
P0116	123	Engine Coolant Temperature Circuit Range/Performance
P0120	117	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0130	10	O2 Sensor Circuit (Bank 1 Sensor 1)
P0133	15	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0135	13	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	12	O2 Sensor Circuit (Bank 1 Sensor 2)
P0170	26	Fuel Trim (Bank 1)
P0201	150	Injector Circuit/Open - Cylinder 1
P0202	151	Injector Circuit/Open - Cylinder 2
P0203	152	Injector Circuit/Open - Cylinder 3
P0204	153	Injector Circuit/Open - Cylinder 4
P0300	62	Random/Multiple Cylinder Misfire Detected
P0300	75	Random/Multiple Cylinder Misfire Detected
P0301	50	Cylinder 1 Misfire Detected
P0301	63	Cylinder 1 Misfire Detected
P0302	51	Cylinder 2 Misfire Detected
P0302	64	Cylinder 2 Misfire Detected
P0303	52	Cylinder 3 Misfire Detected
P0303	65	Cylinder 3 Misfire Detected
P0304	53	Cylinder 4 Misfire Detected
P0304	66	Cylinder 4 Misfire Detected
P0325	210	Knock Sensor 1 Circuit (Bank 1 or Single Sensor)
P0330	211	Knock Sensor 2 Circuit (Bank 2)
P0335	111	Crankshaft Position Sensor 'A' Circuit
P0340	112	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0420	40	Catalyst System Efficiency Below Threshold (Bank 1)
P0440	93	Evaporative Emission System
P0442	97	Evaporative Emission System Leak Detected (small leak)
P0443	98	Evaporative Emission System Purge Control Valve Circuit
P0451	99	Evaporative Emission System Pressure Sensor/Switch Range/Performance
P0455	94	Evaporative Emission System Leak Detected (large leak)
P0500	120	Vehicle Speed Sensor 'A'
P0505	32	Idle Air Control System
P0600	236	Serial Communication Link
P0601	103	Internal Control Module Memory Check Sum Error
P0603	102	Internal Control Module Keep Alive Memory (KAM) Error
P0604	101	Internal Control Module Random Access Memory (RAM) Error
P0604	104	Internal Control Module Random Access Memory (RAM) Error
P1140	121	Mass or Volume Air Flow Circuit Range/Performance Problem
P1145	2	Solenoid Valve Running Losses Control Circuit Electrical
P1174	27	Fuel Trim Adaptation Malfunction (Bank 1)
P1186	14	O2 Sensor Heater Control Circuit (Bank 1 Sensor 2)
P1386	220	Control Module Self-Test, Knock Control Circuit Baseline Test (Bank 1)
P1423	80	Secondary Air System (Bank 1)

P1453	84	Secondary Air Injection Pump Relay Control Circuit Electrical
P1509	168	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal Electrical
P1511	175	DISA (Differentiated Intake Manifold) Control Circuit Electrical
P1550	169	Idle-Speed Control Valve Closing Coil Electrical
P1585	8	Misfire Detected with Low Fuel
P1589	222	Control Module Self-Test, Knock Control Test Pulse (Bank 1)
P1690	165	Malfunction Indicator Lamp (MIL) Control Circuit Electrical

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## **ECU: M5.2, Engine: M44, from 01.09.97 till 31.08.98**

PCode	BMW-FC	PCode text
P0100	115	Mass or Volume Air Flow Circuit
P0111	124	Intake Air Temperature Sensor 1 Circuit Range/Performance
P0116	123	Engine Coolant Temperature Circuit Range/Performance
P0120	117	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0130	10	O2 Sensor Circuit (Bank 1 Sensor 1)
P0133	15	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0135	13	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	12	O2 Sensor Circuit (Bank 1 Sensor 2)
P0170	26	Fuel Trim (Bank 1)
P0201	150	Injector Circuit/Open - Cylinder 1
P0202	151	Injector Circuit/Open - Cylinder 2
P0203	152	Injector Circuit/Open - Cylinder 3
P0204	153	Injector Circuit/Open - Cylinder 4
P0300	62	Random/Multiple Cylinder Misfire Detected
P0300	75	Random/Multiple Cylinder Misfire Detected
P0301	50	Cylinder 1 Misfire Detected
P0301	63	Cylinder 1 Misfire Detected
P0302	51	Cylinder 2 Misfire Detected
P0302	64	Cylinder 2 Misfire Detected
P0303	52	Cylinder 3 Misfire Detected
P0303	65	Cylinder 3 Misfire Detected
P0304	53	Cylinder 4 Misfire Detected
P0304	66	Cylinder 4 Misfire Detected
P0325	210	Knock Sensor 1 Circuit (Bank 1 or Single Sensor)
P0330	211	Knock Sensor 2 Circuit (Bank 2)
P0335	111	Crankshaft Position Sensor 'A' Circuit
P0340	112	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0420	40	Catalyst System Efficiency Below Threshold (Bank 1)
P0440	93	Evaporative Emission System
P0442	97	Evaporative Emission System Leak Detected (small leak)
P0443	98	Evaporative Emission System Purge Control Valve Circuit
P0451	99	Evaporative Emission System Pressure Sensor/Switch Range/Performance
P0455	94	Evaporative Emission System Leak Detected (large leak)
P0500	120	Vehicle Speed Sensor 'A'
P0505	32	Idle Air Control System
P0600	236	Serial Communication Link
P0601	103	Internal Control Module Memory Check Sum Error
P0603	102	Internal Control Module Keep Alive Memory (KAM) Error
P0604	101	Internal Control Module Random Access Memory (RAM) Error
P0604	104	Internal Control Module Random Access Memory (RAM) Error
P1140	121	Mass or Volume Air Flow Circuit Range/Performance Problem

P1145	2	Solenoid Valve Running Losses Control Circuit Electrical
P1174	27	Fuel Trim Adaptation Malfunction (Bank 1)
P1186	14	O2 Sensor Heater Control Circuit (Bank 1 Sensor 2)
P1386	220	Control Module Self-Test, Knock Control Circuit Baseline Test (Bank 1)
P1423	80	Secondary Air System (Bank 1)
P1453	84	Secondary Air Injection Pump Relay Control Circuit Electrical
P1509	168	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal Electrical
P1511	175	DISA (Differentiated Intake Manifold) Control Circuit Electrical
P1550	169	Idle-Speed Control Valve Closing Coil Electrical
P1585	8	Misfire Detected with Low Fuel
P1589	222	Control Module Self-Test, Knock Control Test Pulse (Bank 1)
P1690	165	Malfunction Indicator Lamp (MIL) Control Circuit Electrical

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## ECU: M5.2, Engine: M44, from 01.09.98 till 30.06.99

PCode	BMW-FC	PCode text
P0100	115	Mass or Volume Air Flow Circuit
P0111	124	Intake Air Temperature Sensor 1 Circuit Range/Performance
P0116	123	Engine Coolant Temperature Circuit Range/Performance
P0120	117	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0130	10	O2 Sensor Circuit (Bank 1 Sensor 1)
P0133	15	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0135	13	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	12	O2 Sensor Circuit (Bank 1 Sensor 2)
P0170	26	Fuel Trim (Bank 1)
P0201	150	Injector Circuit/Open - Cylinder 1
P0202	151	Injector Circuit/Open - Cylinder 2
P0203	152	Injector Circuit/Open - Cylinder 3
P0204	153	Injector Circuit/Open - Cylinder 4
P0300	62	Random/Multiple Cylinder Misfire Detected
P0300	75	Random/Multiple Cylinder Misfire Detected
P0301	50	Cylinder 1 Misfire Detected
P0301	63	Cylinder 1 Misfire Detected
P0302	51	Cylinder 2 Misfire Detected
P0302	64	Cylinder 2 Misfire Detected
P0303	52	Cylinder 3 Misfire Detected
P0303	65	Cylinder 3 Misfire Detected
P0304	53	Cylinder 4 Misfire Detected
P0304	66	Cylinder 4 Misfire Detected
P0325	210	Knock Sensor 1 Circuit (Bank 1 or Single Sensor)
P0330	211	Knock Sensor 2 Circuit (Bank 2)
P0335	111	Crankshaft Position Sensor 'A' Circuit
P0340	112	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0420	40	Catalyst System Efficiency Below Threshold (Bank 1)
P0440	93	Evaporative Emission System
P0442	97	Evaporative Emission System Leak Detected (small leak)
P0443	98	Evaporative Emission System Purge Control Valve Circuit
P0451	99	Evaporative Emission System Pressure Sensor/Switch Range/Performance
P0455	94	Evaporative Emission System Leak Detected (large leak)
P0500	120	Vehicle Speed Sensor 'A'
P0505	32	Idle Air Control System
P0600	236	Serial Communication Link

P0601	103	Internal Control Module Memory Check Sum Error
P0603	102	Internal Control Module Keep Alive Memory (KAM) Error
P0604	101	Internal Control Module Random Access Memory (RAM) Error
P0604	104	Internal Control Module Random Access Memory (RAM) Error
P1140	121	Mass or Volume Air Flow Circuit Range/Performance Problem
P1145	2	Solenoid Valve Running Losses Control Circuit Electrical
P1174	27	Fuel Trim Adaptation Malfunction (Bank 1)
P1186	14	O2 Sensor Heater Control Circuit (Bank 1 Sensor 2)
P1386	220	Control Module Self-Test, Knock Control Circuit Baseline Test (Bank 1)
P1423	80	Secondary Air System (Bank 1)
P1453	84	Secondary Air Injection Pump Relay Control Circuit Electrical
P1509	168	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal Electrical
P1511	175	DISA (Differentiated Intake Manifold) Control Circuit Electrical
P1550	169	Idle-Speed Control Valve Closing Coil Electrical
P1585	8	Misfire Detected with Low Fuel
P1589	222	Control Module Self-Test, Knock Control Test Pulse (Bank 1)
P1690	165	Malfunction Indicator Lamp (MIL) Control Circuit Electrical

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## ECU:M5.2, Engine: M62, from 01.12.95 till 30.04.96

PCode BMW-FC PCode text

P0100	115	Mass or Volume Air Flow Circuit
P0111	124	Intake Air Temperature Sensor 1 Circuit Range/Performance
P0116	123	Engine Coolant Temperature Circuit Range/Performance
P0120	117	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0130	10	O2 Sensor Circuit (Bank 1 Sensor 1)
P0133	15	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0135	13	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	12	O2 Sensor Circuit (Bank 1 Sensor 2)
P0139	17	O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0150	18	O2 Sensor Circuit (Bank 2 Sensor 1)
P0153	21	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0155	5	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0156	20	O2 Sensor Circuit (Bank 2 Sensor 2)
P0159	23	O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0170	26	Fuel Trim (Bank 1)
P0173	34	Fuel Trim (Bank 2)
P0201	150	Injector Circuit/Open - Cylinder 1
P0202	151	Injector Circuit/Open - Cylinder 2
P0203	152	Injector Circuit/Open - Cylinder 3
P0204	153	Injector Circuit/Open - Cylinder 4
P0205	154	Injector Circuit/Open - Cylinder 5
P0206	155	Injector Circuit/Open - Cylinder 6
P0207	156	Injector Circuit/Open - Cylinder 7
P0208	157	Injector Circuit/Open - Cylinder 8
P0300	62	Random/Multiple Cylinder Misfire Detected
P0300	75	Random/Multiple Cylinder Misfire Detected
P0301	50	Cylinder 1 Misfire Detected
P0301	63	Cylinder 1 Misfire Detected
P0302	51	Cylinder 2 Misfire Detected
P0302	64	Cylinder 2 Misfire Detected
P0303	52	Cylinder 3 Misfire Detected



P0303	65	Cylinder 3 Misfire Detected
P0304	53	Cylinder 4 Misfire Detected
P0304	66	Cylinder 4 Misfire Detected
P0305	54	Cylinder 5 Misfire Detected
P0305	67	Cylinder 5 Misfire Detected
P0306	55	Cylinder 6 Misfire Detected
P0306	68	Cylinder 6 Misfire Detected
P0307	56	Cylinder 7 Misfire Detected
P0307	69	Cylinder 7 Misfire Detected
P0308	57	Cylinder 8 Misfire Detected
P0308	70	Cylinder 8 Misfire Detected
P0325	210	Knock Sensor 1 Circuit (Bank 1 or Single Sensor)
P0330	211	Knock Sensor 2 Circuit (Bank 2)
P0335	111	Crankshaft Position Sensor 'A' Circuit
P0340	112	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0420	40	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	45	Catalyst System Efficiency Below Threshold (Bank 2)
P0440	93	Evaporative Emission System
P0443	98	Evaporative Emission System Purge Control Valve Circuit
P0500	120	Vehicle Speed Sensor 'A'
P0505	32	Idle Air Control System
P0600	6	Serial Communication Link
P0600	236	Serial Communication Link
P0601	103	Internal Control Module Memory Check Sum Error
P0603	102	Internal Control Module Keep Alive Memory (KAM) Error
P0604	101	Internal Control Module Random Access Memory (RAM) Error
P0604	104	Internal Control Module Random Access Memory (RAM) Error
P1140	121	Mass or Volume Air Flow Circuit Range/Performance Problem
P1166	130	Oxygen Sensors Swapped
P1174	27	Fuel Trim Adaptation Malfunction (Bank 1)
P1175	35	Fuel Trim Adaptation Additive Malfunction (Bank 2)
P1186	14	O2 Sensor Heater Control Circuit (Bank 1 Sensor 2)
P1187	4	O2 Sensor Heater Control Circuit (Bank 2 Sensor 2)
P1384	212	Knock Sensor 3 Circuit
P1385	213	Knock Sensor 4 Circuit
P1386	220	Control Module Self-Test, Knock Control Circuit Baseline Test (Bank 1)
P1509	168	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal Electrical
P1550	169	Idle-Speed Control Valve Closing Coil Electrical
P1585	8	Misfire Detected with Low Fuel
P1589	222	Control Module Self-Test, Knock Control Test Pulse (Bank 1)
P1690	165	Malfunction Indicator Lamp (MIL) Control Circuit Electrical

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## ECU: M5.2, Engine: M62, from 01.05.96 till 30.04.97

PCode BMW-FC PCode text

P0100	115	Mass or Volume Air Flow Circuit
P0111	124	Intake Air Temperature Sensor 1 Circuit Range/Performance
P0116	123	Engine Coolant Temperature Circuit Range/Performance
P0120	117	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0130	10	O2 Sensor Circuit (Bank 1 Sensor 1)
P0133	15	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0135	13	O2 Sensor Heater Circuit (Bank 1 Sensor 1)

P0136	12	O2 Sensor Circuit (Bank 1 Sensor 2)
P0139	17	O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0150	18	O2 Sensor Circuit (Bank 2 Sensor 1)
P0153	21	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0155	5	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0156	20	O2 Sensor Circuit (Bank 2 Sensor 2)
P0159	23	O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0170	26	Fuel Trim (Bank 1)
P0173	34	Fuel Trim (Bank 2)
P0201	150	Injector Circuit/Open - Cylinder 1
P0202	151	Injector Circuit/Open - Cylinder 2
P0203	152	Injector Circuit/Open - Cylinder 3
P0204	153	Injector Circuit/Open - Cylinder 4
P0205	154	Injector Circuit/Open - Cylinder 5
P0206	155	Injector Circuit/Open - Cylinder 6
P0207	156	Injector Circuit/Open - Cylinder 7
P0208	157	Injector Circuit/Open - Cylinder 8
P0300	62	Random/Multiple Cylinder Misfire Detected
P0300	75	Random/Multiple Cylinder Misfire Detected
P0301	50	Cylinder 1 Misfire Detected
P0301	63	Cylinder 1 Misfire Detected
P0302	51	Cylinder 2 Misfire Detected
P0302	64	Cylinder 2 Misfire Detected
P0303	52	Cylinder 3 Misfire Detected
P0303	65	Cylinder 3 Misfire Detected
P0304	53	Cylinder 4 Misfire Detected
P0304	66	Cylinder 4 Misfire Detected
P0305	54	Cylinder 5 Misfire Detected
P0305	67	Cylinder 5 Misfire Detected
P0306	55	Cylinder 6 Misfire Detected
P0306	68	Cylinder 6 Misfire Detected
P0307	56	Cylinder 7 Misfire Detected
P0307	69	Cylinder 7 Misfire Detected
P0308	57	Cylinder 8 Misfire Detected
P0308	70	Cylinder 8 Misfire Detected
P0325	210	Knock Sensor 1 Circuit (Bank 1 or Single Sensor)
P0330	211	Knock Sensor 2 Circuit (Bank 2)
P0335	111	Crankshaft Position Sensor 'A' Circuit
P0340	112	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0420	40	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	45	Catalyst System Efficiency Below Threshold (Bank 2)
P0440	93	Evaporative Emission System
P0443	98	Evaporative Emission System Purge Control Valve Circuit
P0500	120	Vehicle Speed Sensor 'A'
P0505	32	Idle Air Control System
P0600	6	Serial Communication Link
P0600	236	Serial Communication Link
P0601	103	Internal Control Module Memory Check Sum Error
P0603	102	Internal Control Module Keep Alive Memory (KAM) Error
P0604	101	Internal Control Module Random Access Memory (RAM) Error
P0604	104	Internal Control Module Random Access Memory (RAM) Error
P1140	121	Mass or Volume Air Flow Circuit Range/Performance Problem
P1166	130	Oxygen Sensors Swapped

P1174	27	Fuel Trim Adaptation Malfunction (Bank 1)
P1175	35	Fuel Trim Adaptation Additive Malfunction (Bank 2)
P1186	14	O2 Sensor Heater Control Circuit (Bank 1 Sensor 2)
P1187	4	O2 Sensor Heater Control Circuit (Bank 2 Sensor 2)
P1384	212	Knock Sensor 3 Circuit
P1385	213	Knock Sensor 4 Circuit
P1386	220	Control Module Self-Test, Knock Control Circuit Baseline Test (Bank 1)
P1509	168	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal Electrical
P1550	169	Idle-Speed Control Valve Closing Coil Electrical
P1585	8	Misfire Detected with Low Fuel
P1589	222	Control Module Self-Test, Knock Control Test Pulse (Bank 1)
P1690	165	Malfunction Indicator Lamp (MIL) Control Circuit Electrical

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## ECU: M5.2, Engine: M62, from 01.05.97 till 31.08.98

PCode	BMW-FC	PCode text
P0100	115	Mass or Volume Air Flow Circuit
P0111	124	Intake Air Temperature Sensor 1 Circuit Range/Performance
P0116	123	Engine Coolant Temperature Circuit Range/Performance
P0120	117	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0130	10	O2 Sensor Circuit (Bank 1 Sensor 1)
P0133	15	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0135	13	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	12	O2 Sensor Circuit (Bank 1 Sensor 2)
P0139	17	O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0141	14	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0150	18	O2 Sensor Circuit (Bank 2 Sensor 1)
P0153	21	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0155	5	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0156	20	O2 Sensor Circuit (Bank 2 Sensor 2)
P0159	23	O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0161	4	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0170	26	Fuel Trim (Bank 1)
P0170	27	Fuel Trim (Bank 1)
P0173	34	Fuel Trim (Bank 2)
P0173	35	Fuel Trim (Bank 2)
P0201	150	Injector Circuit/Open - Cylinder 1
P0202	151	Injector Circuit/Open - Cylinder 2
P0203	152	Injector Circuit/Open - Cylinder 3
P0204	153	Injector Circuit/Open - Cylinder 4
P0205	154	Injector Circuit/Open - Cylinder 5
P0206	155	Injector Circuit/Open - Cylinder 6
P0207	156	Injector Circuit/Open - Cylinder 7
P0208	157	Injector Circuit/Open - Cylinder 8
P0300	62	Random/Multiple Cylinder Misfire Detected
P0300	75	Random/Multiple Cylinder Misfire Detected
P0301	50	Cylinder 1 Misfire Detected
P0301	63	Cylinder 1 Misfire Detected
P0302	51	Cylinder 2 Misfire Detected
P0302	64	Cylinder 2 Misfire Detected
P0303	52	Cylinder 3 Misfire Detected
P0303	65	Cylinder 3 Misfire Detected

P0304	53	Cylinder 4 Misfire Detected
P0304	66	Cylinder 4 Misfire Detected
P0305	54	Cylinder 5 Misfire Detected
P0305	67	Cylinder 5 Misfire Detected
P0306	55	Cylinder 6 Misfire Detected
P0306	68	Cylinder 6 Misfire Detected
P0307	56	Cylinder 7 Misfire Detected
P0307	69	Cylinder 7 Misfire Detected
P0308	57	Cylinder 8 Misfire Detected
P0308	70	Cylinder 8 Misfire Detected
P0325	210	Knock Sensor 1 Circuit (Bank 1 or Single Sensor)
P0330	211	Knock Sensor 2 Circuit (Bank 2)
P0335	111	Crankshaft Position Sensor 'A' Circuit
P0340	112	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0420	40	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	45	Catalyst System Efficiency Below Threshold (Bank 2)
P0440	93	Evaporative Emission System
P0442	183	Evaporative Emission System Leak Detected (small leak)
P0443	98	Evaporative Emission System Purge Control Valve Circuit
P0500	120	Vehicle Speed Sensor 'A'
P0505	32	Idle Air Control System
P0600	6	Serial Communication Link
P0601	103	Internal Control Module Memory Check Sum Error
P0603	102	Internal Control Module Keep Alive Memory (KAM) Error
P0604	101	Internal Control Module Random Access Memory (RAM) Error
P0604	104	Internal Control Module Random Access Memory (RAM) Error
P1140	121	Mass or Volume Air Flow Circuit Range/Performance Problem
P1145	2	Solenoid Valve Running Losses Control Circuit Electrical
P1166	130	Oxygen Sensors Swapped
P1176	16	O2 Sensor Slow Response (Bank 1)
P1177	22	O2 Sensor Slow Response (Bank 2)
P1384	212	Knock Sensor 3 Circuit
P1385	213	Knock Sensor 4 Circuit
P1386	220	Control Module Self-Test, Knock Control Circuit Baseline Test (Bank 1)
P1396	78	Crankshaft Position Sensor Segment Timing Plausibility
P1470	1	Leakage Diagnostic Pump Control Circuit Electrical
P1476	184	Leakage Diagnostic Pump Clamped Tube (M52 MY99/00: Leakage Diagnostic Pump Reed Switch Circuit)
P1509	168	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal Electrical
P1550	169	Idle-Speed Control Valve Closing Coil Electrical
P1585	8	Misfire Detected with Low Fuel
P1589	222	Control Module Self-Test, Knock Control Test Pulse (Bank 1)
P1622	139	Map Cooling Thermostat Control Circuit Electrical

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## ECU: M5.2, Engine: M73, from 01.01.95 till 31.08.95

PCode	BMW-FC	PCode text
P0100	115	Mass or Volume Air Flow Circuit
P0111	124	Intake Air Temperature Sensor 1 Circuit Range/Performance
P0116	123	Engine Coolant Temperature Circuit Range/Performance
P0130	10	O2 Sensor Circuit (Bank 1 Sensor 1)
P0133	15	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)

P0135	13	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	12	O2 Sensor Circuit (Bank 1 Sensor 2)
P0141	14	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0150	18	O2 Sensor Circuit (Bank 2 Sensor 1)
P0153	21	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0155	5	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0156	20	O2 Sensor Circuit (Bank 2 Sensor 2)
P0161	4	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0170	26	Fuel Trim (Bank 1)
P0170	27	Fuel Trim (Bank 1)
P0173	34	Fuel Trim (Bank 2)
P0173	35	Fuel Trim (Bank 2)
P0201	150	Injector Circuit/Open - Cylinder 1
P0202	151	Injector Circuit/Open - Cylinder 2
P0203	152	Injector Circuit/Open - Cylinder 3
P0204	153	Injector Circuit/Open - Cylinder 4
P0205	154	Injector Circuit/Open - Cylinder 5
P0206	155	Injector Circuit/Open - Cylinder 6
P0207	156	Injector Circuit/Open - Cylinder 7
P0208	157	Injector Circuit/Open - Cylinder 8
P0209	158	Injector Circuit/Open - Cylinder 9
P0210	159	Injector Circuit/Open - Cylinder 10
P0211	160	Injector Circuit/Open - Cylinder 11
P0212	161	Injector Circuit/Open - Cylinder 12
P0300	62	Random/Multiple Cylinder Misfire Detected
P0300	75	Random/Multiple Cylinder Misfire Detected
P0301	50	Cylinder 1 Misfire Detected
P0301	63	Cylinder 1 Misfire Detected
P0302	51	Cylinder 2 Misfire Detected
P0302	64	Cylinder 2 Misfire Detected
P0303	52	Cylinder 3 Misfire Detected
P0303	65	Cylinder 3 Misfire Detected
P0304	53	Cylinder 4 Misfire Detected
P0304	66	Cylinder 4 Misfire Detected
P0305	54	Cylinder 5 Misfire Detected
P0305	67	Cylinder 5 Misfire Detected
P0306	55	Cylinder 6 Misfire Detected
P0306	68	Cylinder 6 Misfire Detected
P0307	56	Cylinder 7 Misfire Detected
P0307	69	Cylinder 7 Misfire Detected
P0308	57	Cylinder 8 Misfire Detected
P0308	70	Cylinder 8 Misfire Detected
P0309	58	Cylinder 9 Misfire Detected
P0309	71	Cylinder 9 Misfire Detected
P0310	59	Cylinder 10 Misfire Detected
P0310	72	Cylinder 10 Misfire Detected
P0311	60	Cylinder 11 Misfire Detected
P0311	73	Cylinder 11 Misfire Detected
P0312	61	Cylinder 12 Misfire Detected
P0312	74	Cylinder 12 Misfire Detected
P0335	111	Crankshaft Position Sensor 'A' Circuit
P0340	112	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0422	40	Main Catalyst Efficiency Below Threshold (Bank 1)

P0432	45	Main Catalyst Efficiency Below Threshold (Bank 2)
P0440	93	Evaporative Emission System
P0443	98	Evaporative Emission System Purge Control Valve Circuit
P0467	91	EVAP Purge Flow Sensor Circuit Low
P0500	120	Vehicle Speed Sensor 'A'
P0600	214	Serial Communication Link
P0600	215	Serial Communication Link
P0600	217	Serial Communication Link
P0600	236	Serial Communication Link
P0601	101	Internal Control Module Memory Check Sum Error
P0601	102	Internal Control Module Memory Check Sum Error
P0601	103	Internal Control Module Memory Check Sum Error
P0601	107	Internal Control Module Memory Check Sum Error
P0604	104	Internal Control Module Random Access Memory (RAM) Error
P1270	140	Control Module Self-Test, Torque Monitoring (M73: Mass Air Flow Sensor Bank Comparison Plausibility)
P1383	203	Ignition Monitoring Malfunction
P1396	78	Crankshaft Position Sensor Segment Timing Plausibility
P1423	80	Secondary Air System (Bank 1)
P1453	84	Secondary Air Injection Pump Relay Control Circuit Electrical
P1453	85	Secondary Air Injection Pump Relay Control Circuit Electrical

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## ECU: M5.2, Engine: M73, from 01.09.95 till 30.04.96

PCode	BMW-FC	PCode text
P0100	115	Mass or Volume Air Flow Circuit
P0111	124	Intake Air Temperature Sensor 1 Circuit Range/Performance
P0116	123	Engine Coolant Temperature Circuit Range/Performance
P0130	10	O2 Sensor Circuit (Bank 1 Sensor 1)
P0133	15	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0133	16	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0135	13	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	12	O2 Sensor Circuit (Bank 1 Sensor 2)
P0139	17	O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0141	14	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0150	18	O2 Sensor Circuit (Bank 2 Sensor 1)
P0153	21	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0153	22	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0155	5	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0156	20	O2 Sensor Circuit (Bank 2 Sensor 2)
P0159	23	O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0161	4	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0170	26	Fuel Trim (Bank 1)
P0170	27	Fuel Trim (Bank 1)
P0170	28	Fuel Trim (Bank 1)
P0173	34	Fuel Trim (Bank 2)
P0173	35	Fuel Trim (Bank 2)
P0173	36	Fuel Trim (Bank 2)
P0201	150	Injector Circuit/Open - Cylinder 1
P0202	151	Injector Circuit/Open - Cylinder 2
P0203	152	Injector Circuit/Open - Cylinder 3
P0204	153	Injector Circuit/Open - Cylinder 4
P0205	154	Injector Circuit/Open - Cylinder 5

P0206	155	Injector Circuit/Open - Cylinder 6
P0207	156	Injector Circuit/Open - Cylinder 7
P0208	157	Injector Circuit/Open - Cylinder 8
P0209	158	Injector Circuit/Open - Cylinder 9
P0210	159	Injector Circuit/Open - Cylinder 10
P0211	160	Injector Circuit/Open - Cylinder 11
P0212	161	Injector Circuit/Open - Cylinder 12
P0300	62	Random/Multiple Cylinder Misfire Detected
P0300	75	Random/Multiple Cylinder Misfire Detected
P0301	50	Cylinder 1 Misfire Detected
P0301	63	Cylinder 1 Misfire Detected
P0302	51	Cylinder 2 Misfire Detected
P0302	64	Cylinder 2 Misfire Detected
P0303	52	Cylinder 3 Misfire Detected
P0303	65	Cylinder 3 Misfire Detected
P0304	53	Cylinder 4 Misfire Detected
P0304	66	Cylinder 4 Misfire Detected
P0305	54	Cylinder 5 Misfire Detected
P0305	67	Cylinder 5 Misfire Detected
P0306	55	Cylinder 6 Misfire Detected
P0306	68	Cylinder 6 Misfire Detected
P0307	56	Cylinder 7 Misfire Detected
P0307	69	Cylinder 7 Misfire Detected
P0308	57	Cylinder 8 Misfire Detected
P0308	70	Cylinder 8 Misfire Detected
P0309	58	Cylinder 9 Misfire Detected
P0309	71	Cylinder 9 Misfire Detected
P0310	59	Cylinder 10 Misfire Detected
P0310	72	Cylinder 10 Misfire Detected
P0311	60	Cylinder 11 Misfire Detected
P0311	73	Cylinder 11 Misfire Detected
P0312	61	Cylinder 12 Misfire Detected
P0312	74	Cylinder 12 Misfire Detected
P0325	210	Knock Sensor 1 Circuit (Bank 1 or Single Sensor)
P0330	211	Knock Sensor 2 Circuit (Bank 2)
P0335	111	Crankshaft Position Sensor 'A' Circuit
P0340	112	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0410	208	Secondary Air Injection System
P0422	40	Main Catalyst Efficiency Below Threshold (Bank 1)
P0432	45	Main Catalyst Efficiency Below Threshold (Bank 2)
P0440	93	Evaporative Emission System
P0443	91	Evaporative Emission System Purge Control Valve Circuit
P0443	98	Evaporative Emission System Purge Control Valve Circuit
P0500	120	Vehicle Speed Sensor 'A'
P0505	32	Idle Air Control System
P0600	214	Serial Communication Link
P0600	215	Serial Communication Link
P0600	217	Serial Communication Link
P0600	236	Serial Communication Link
P0601	101	Internal Control Module Memory Check Sum Error
P0601	102	Internal Control Module Memory Check Sum Error
P0601	103	Internal Control Module Memory Check Sum Error
P0604	104	Internal Control Module Random Access Memory (RAM) Error

P1166	130	Oxygen Sensors Swapped
P1270	140	Control Module Self-Test, Torque Monitoring (M73: Mass Air Flow Sensor Bank Comparison Plausibility)
P1383	203	Ignition Monitoring Malfunction
P1384	212	Knock Sensor 3 Circuit
P1385	213	Knock Sensor 4 Circuit
P1386	220	Control Module Self-Test, Knock Control Circuit Baseline Test (Bank 1)
P1386	222	Control Module Self-Test, Knock Control Circuit Baseline Test (Bank 1)
P1423	80	Secondary Air System (Bank 1)
P1453	84	Secondary Air Injection Pump Relay Control Circuit Electrical
P1453	85	Secondary Air Injection Pump Relay Control Circuit Electrical

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## ECU: M5.2, Engine: M73, from 01.05.96 till 30.04.97

PCode BMW-FC PCode text

P0100	115	Mass or Volume Air Flow Circuit
P0111	124	Intake Air Temperature Sensor 1 Circuit Range/Performance
P0116	123	Engine Coolant Temperature Circuit Range/Performance
P0130	10	O2 Sensor Circuit (Bank 1 Sensor 1)
P0133	15	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0133	16	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0135	13	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	12	O2 Sensor Circuit (Bank 1 Sensor 2)
P0139	17	O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0141	14	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0150	18	O2 Sensor Circuit (Bank 2 Sensor 1)
P0153	21	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0153	22	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0155	5	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0156	20	O2 Sensor Circuit (Bank 2 Sensor 2)
P0159	23	O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0161	4	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0170	26	Fuel Trim (Bank 1)
P0170	27	Fuel Trim (Bank 1)
P0170	28	Fuel Trim (Bank 1)
P0173	34	Fuel Trim (Bank 2)
P0173	35	Fuel Trim (Bank 2)
P0173	36	Fuel Trim (Bank 2)
P0201	150	Injector Circuit/Open - Cylinder 1
P0202	151	Injector Circuit/Open - Cylinder 2
P0203	152	Injector Circuit/Open - Cylinder 3
P0204	153	Injector Circuit/Open - Cylinder 4
P0205	154	Injector Circuit/Open - Cylinder 5
P0206	155	Injector Circuit/Open - Cylinder 6
P0207	156	Injector Circuit/Open - Cylinder 7
P0208	157	Injector Circuit/Open - Cylinder 8
P0209	158	Injector Circuit/Open - Cylinder 9
P0210	159	Injector Circuit/Open - Cylinder 10
P0211	160	Injector Circuit/Open - Cylinder 11
P0212	161	Injector Circuit/Open - Cylinder 12
P0300	62	Random/Multiple Cylinder Misfire Detected
P0300	75	Random/Multiple Cylinder Misfire Detected
P0301	50	Cylinder 1 Misfire Detected



P0301	63	Cylinder 1 Misfire Detected
P0302	51	Cylinder 2 Misfire Detected
P0302	64	Cylinder 2 Misfire Detected
P0303	52	Cylinder 3 Misfire Detected
P0303	65	Cylinder 3 Misfire Detected
P0304	53	Cylinder 4 Misfire Detected
P0304	66	Cylinder 4 Misfire Detected
P0305	54	Cylinder 5 Misfire Detected
P0305	67	Cylinder 5 Misfire Detected
P0306	55	Cylinder 6 Misfire Detected
P0306	68	Cylinder 6 Misfire Detected
P0307	56	Cylinder 7 Misfire Detected
P0307	69	Cylinder 7 Misfire Detected
P0308	57	Cylinder 8 Misfire Detected
P0308	70	Cylinder 8 Misfire Detected
P0309	58	Cylinder 9 Misfire Detected
P0309	71	Cylinder 9 Misfire Detected
P0310	59	Cylinder 10 Misfire Detected
P0310	72	Cylinder 10 Misfire Detected
P0311	60	Cylinder 11 Misfire Detected
P0311	73	Cylinder 11 Misfire Detected
P0312	61	Cylinder 12 Misfire Detected
P0312	74	Cylinder 12 Misfire Detected
P0325	210	Knock Sensor 1 Circuit (Bank 1 or Single Sensor)
P0330	211	Knock Sensor 2 Circuit (Bank 2)
P0335	111	Crankshaft Position Sensor 'A' Circuit
P0340	112	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0410	208	Secondary Air Injection System
P0422	40	Main Catalyst Efficiency Below Threshold (Bank 1)
P0432	45	Main Catalyst Efficiency Below Threshold (Bank 2)
P0440	93	Evaporative Emission System
P0443	91	Evaporative Emission System Purge Control Valve Circuit
P0443	98	Evaporative Emission System Purge Control Valve Circuit
P0500	120	Vehicle Speed Sensor 'A'
P0505	32	Idle Air Control System
P0600	214	Serial Communication Link
P0600	215	Serial Communication Link
P0600	217	Serial Communication Link
P0600	236	Serial Communication Link
P0601	101	Internal Control Module Memory Check Sum Error
P0601	102	Internal Control Module Memory Check Sum Error
P0601	103	Internal Control Module Memory Check Sum Error
P0604	104	Internal Control Module Random Access Memory (RAM) Error
P1166	130	Oxygen Sensors Swapped
P1270	140	Control Module Self-Test, Torque Monitoring (M73: Mass Air Flow Sensor Bank Comparison Plausibility)
P1383	203	Ignition Monitoring Malfunction
P1384	212	Knock Sensor 3 Circuit
P1385	213	Knock Sensor 4 Circuit
P1386	220	Control Module Self-Test, Knock Control Circuit Baseline Test (Bank 1)
P1386	222	Control Module Self-Test, Knock Control Circuit Baseline Test (Bank 1)
P1423	80	Secondary Air System (Bank 1)
P1453	84	Secondary Air Injection Pump Relay Control Circuit Electrical

**ECU: M5.2, Engine: M73, from 01.05.97 till 31.08.97**

PCode BMW-FC PCode text

P0100	115	Mass or Volume Air Flow Circuit
P0111	124	Intake Air Temperature Sensor 1 Circuit Range/Performance
P0116	123	Engine Coolant Temperature Circuit Range/Performance
P0130	10	O2 Sensor Circuit (Bank 1 Sensor 1)
P0133	15	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0135	13	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	12	O2 Sensor Circuit (Bank 1 Sensor 2)
P0139	17	O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0141	14	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0150	18	O2 Sensor Circuit (Bank 2 Sensor 1)
P0153	21	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0155	5	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0156	20	O2 Sensor Circuit (Bank 2 Sensor 2)
P0159	23	O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0161	4	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0170	26	Fuel Trim (Bank 1)
P0170	27	Fuel Trim (Bank 1)
P0173	34	Fuel Trim (Bank 2)
P0173	35	Fuel Trim (Bank 2)
P0201	150	Injector Circuit/Open - Cylinder 1
P0202	151	Injector Circuit/Open - Cylinder 2
P0203	152	Injector Circuit/Open - Cylinder 3
P0204	153	Injector Circuit/Open - Cylinder 4
P0205	154	Injector Circuit/Open - Cylinder 5
P0206	155	Injector Circuit/Open - Cylinder 6
P0207	156	Injector Circuit/Open - Cylinder 7
P0208	157	Injector Circuit/Open - Cylinder 8
P0209	158	Injector Circuit/Open - Cylinder 9
P0210	159	Injector Circuit/Open - Cylinder 10
P0211	160	Injector Circuit/Open - Cylinder 11
P0212	161	Injector Circuit/Open - Cylinder 12
P0300	62	Random/Multiple Cylinder Misfire Detected
P0300	75	Random/Multiple Cylinder Misfire Detected
P0301	50	Cylinder 1 Misfire Detected
P0301	63	Cylinder 1 Misfire Detected
P0302	51	Cylinder 2 Misfire Detected
P0302	64	Cylinder 2 Misfire Detected
P0303	52	Cylinder 3 Misfire Detected
P0303	65	Cylinder 3 Misfire Detected
P0304	53	Cylinder 4 Misfire Detected
P0304	66	Cylinder 4 Misfire Detected
P0305	54	Cylinder 5 Misfire Detected
P0305	67	Cylinder 5 Misfire Detected
P0306	55	Cylinder 6 Misfire Detected
P0306	68	Cylinder 6 Misfire Detected
P0307	56	Cylinder 7 Misfire Detected
P0307	69	Cylinder 7 Misfire Detected

P0308	57	Cylinder 8 Misfire Detected
P0308	70	Cylinder 8 Misfire Detected
P0309	58	Cylinder 9 Misfire Detected
P0309	71	Cylinder 9 Misfire Detected
P0310	59	Cylinder 10 Misfire Detected
P0310	72	Cylinder 10 Misfire Detected
P0311	60	Cylinder 11 Misfire Detected
P0311	73	Cylinder 11 Misfire Detected
P0312	61	Cylinder 12 Misfire Detected
P0312	74	Cylinder 12 Misfire Detected
P0325	210	Knock Sensor 1 Circuit (Bank 1 or Single Sensor)
P0330	211	Knock Sensor 2 Circuit (Bank 2)
P0335	111	Crankshaft Position Sensor 'A' Circuit
P0340	112	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0410	80	Secondary Air Injection System
P0410	208	Secondary Air Injection System
P0420	40	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	45	Catalyst System Efficiency Below Threshold (Bank 2)
P0440	93	Evaporative Emission System
P0442	183	Evaporative Emission System Leak Detected (small leak)
P0443	91	Evaporative Emission System Purge Control Valve Circuit
P0443	98	Evaporative Emission System Purge Control Valve Circuit
P0500	120	Vehicle Speed Sensor 'A'
P0505	32	Idle Air Control System
P0600	6	Serial Communication Link
P0600	214	Serial Communication Link
P0600	215	Serial Communication Link
P0600	217	Serial Communication Link
P0600	236	Serial Communication Link
P0601	103	Internal Control Module Memory Check Sum Error
P0603	102	Internal Control Module Keep Alive Memory (KAM) Error
P0604	101	Internal Control Module Random Access Memory (RAM) Error
P0604	104	Internal Control Module Random Access Memory (RAM) Error
P1145	2	Solenoid Valve Running Losses Control Circuit Electrical
P1166	130	Oxygen Sensors Swapped
P1176	16	O2 Sensor Slow Response (Bank 1)
P1177	22	O2 Sensor Slow Response (Bank 2)
P1188	28	Fuel Control (Bank 1 Sensor 1)
P1189	36	Fuel Control (Bank 2 Sensor 1)
P1270	140	Control Module Self-Test, Torque Monitoring (M73: Mass Air Flow Sensor Bank Comparison Plausibility)
P1280	250	Ais Assisted Injection System Circuit (Bank 1)
P1283	29	Switching Solenoid for Air Assisted Injection Valves Control Circuit Electrical (Bank 1)
P1287	77	Switching Solenoid for Air Assisted Injection Valves Control Circuit Electrical (Bank 2)
P1301	190	Ignition Monitoring Cylinder 1 Spark Duration Too Short
P1302	191	Ignition Monitoring Cylinder 2 Spark Duration Too Short
P1303	192	Ignition Monitoring Cylinder 3 Spark Duration Too Short
P1304	193	Ignition Monitoring Cylinder 4 Spark Duration Too Short
P1305	194	Ignition Monitoring Cylinder 5 Spark Duration Too Short
P1306	195	Ignition Monitoring Cylinder 6 Spark Duration Too Short
P1307	196	Ignition Monitoring Cylinder 7 Spark Duration Too Short
P1308	197	Ignition Monitoring Cylinder 8 Spark Duration Too Short
P1309	198	Ignition Monitoring Cylinder 9 Spark Duration Too Short

P1310	199	Ignition Monitoring Cylinder 10 Spark Duration Too Short
P1311	200	Ignition Monitoring Cylinder 11 Spark Duration Too Short
P1312	201	Ignition Monitoring Cylinder 12 Spark Duration Too Short
P1384	212	Knock Sensor 3 Circuit
P1385	213	Knock Sensor 4 Circuit
P1386	220	Control Module Self-Test, Knock Control Circuit Baseline Test (Bank 1)
P1386	222	Control Module Self-Test, Knock Control Circuit Baseline Test (Bank 1)
P1396	78	Crankshaft Position Sensor Segment Timing Plausibility
P1453	84	Secondary Air Injection Pump Relay Control Circuit Electrical
P1453	85	Secondary Air Injection Pump Relay Control Circuit Electrical
P1470	1	Leakage Diagnostic Pump Control Circuit Electrical
P1475	3	Leakage Diagnostic Pump Reed Switch Did not Close
P1476	184	Leakage Diagnostic Pump Clamped Tube (M52 MY99/00: Leakage Diagnostic Pump Reed Switch Circuit)
P1585	8	Misfire Detected with Low Fuel

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## ECU: M5.2, Engine: M73, from 01.09.97 till 31.08.98

PCode	BMW-FC	PCode text
P0100	115	Mass or Volume Air Flow Circuit
P0111	124	Intake Air Temperature Sensor 1 Circuit Range/Performance
P0116	123	Engine Coolant Temperature Circuit Range/Performance
P0130	10	O2 Sensor Circuit (Bank 1 Sensor 1)
P0133	15	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0135	13	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	12	O2 Sensor Circuit (Bank 1 Sensor 2)
P0139	17	O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0141	14	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0150	18	O2 Sensor Circuit (Bank 2 Sensor 1)
P0153	21	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0155	5	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0156	20	O2 Sensor Circuit (Bank 2 Sensor 2)
P0159	23	O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0161	4	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0170	26	Fuel Trim (Bank 1)
P0170	27	Fuel Trim (Bank 1)
P0173	34	Fuel Trim (Bank 2)
P0173	35	Fuel Trim (Bank 2)
P0201	150	Injector Circuit/Open - Cylinder 1
P0202	151	Injector Circuit/Open - Cylinder 2
P0203	152	Injector Circuit/Open - Cylinder 3
P0204	153	Injector Circuit/Open - Cylinder 4
P0205	154	Injector Circuit/Open - Cylinder 5
P0206	155	Injector Circuit/Open - Cylinder 6
P0207	156	Injector Circuit/Open - Cylinder 7
P0208	157	Injector Circuit/Open - Cylinder 8
P0209	158	Injector Circuit/Open - Cylinder 9
P0210	159	Injector Circuit/Open - Cylinder 10
P0211	160	Injector Circuit/Open - Cylinder 11
P0212	161	Injector Circuit/Open - Cylinder 12
P0300	62	Random/Multiple Cylinder Misfire Detected
P0300	75	Random/Multiple Cylinder Misfire Detected

P0301	50	Cylinder 1 Misfire Detected
P0301	63	Cylinder 1 Misfire Detected
P0302	51	Cylinder 2 Misfire Detected
P0302	64	Cylinder 2 Misfire Detected
P0303	52	Cylinder 3 Misfire Detected
P0303	65	Cylinder 3 Misfire Detected
P0304	53	Cylinder 4 Misfire Detected
P0304	66	Cylinder 4 Misfire Detected
P0305	54	Cylinder 5 Misfire Detected
P0305	67	Cylinder 5 Misfire Detected
P0306	55	Cylinder 6 Misfire Detected
P0306	68	Cylinder 6 Misfire Detected
P0307	56	Cylinder 7 Misfire Detected
P0307	69	Cylinder 7 Misfire Detected
P0308	57	Cylinder 8 Misfire Detected
P0308	70	Cylinder 8 Misfire Detected
P0309	58	Cylinder 9 Misfire Detected
P0309	71	Cylinder 9 Misfire Detected
P0310	59	Cylinder 10 Misfire Detected
P0310	72	Cylinder 10 Misfire Detected
P0311	60	Cylinder 11 Misfire Detected
P0311	73	Cylinder 11 Misfire Detected
P0312	61	Cylinder 12 Misfire Detected
P0312	74	Cylinder 12 Misfire Detected
P0325	210	Knock Sensor 1 Circuit (Bank 1 or Single Sensor)
P0330	211	Knock Sensor 2 Circuit (Bank 2)
P0335	111	Crankshaft Position Sensor 'A' Circuit
P0340	112	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0410	80	Secondary Air Injection System
P0410	208	Secondary Air Injection System
P0420	40	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	45	Catalyst System Efficiency Below Threshold (Bank 2)
P0440	93	Evaporative Emission System
P0442	183	Evaporative Emission System Leak Detected (small leak)
P0443	91	Evaporative Emission System Purge Control Valve Circuit
P0443	98	Evaporative Emission System Purge Control Valve Circuit
P0500	120	Vehicle Speed Sensor 'A'
P0505	32	Idle Air Control System
P0600	6	Serial Communication Link
P0600	19	Serial Communication Link
P0600	214	Serial Communication Link
P0600	215	Serial Communication Link
P0600	217	Serial Communication Link
P0600	236	Serial Communication Link
P0601	103	Internal Control Module Memory Check Sum Error
P0603	102	Internal Control Module Keep Alive Memory (KAM) Error
P0604	101	Internal Control Module Random Access Memory (RAM) Error
P0604	104	Internal Control Module Random Access Memory (RAM) Error
P1145	2	Solenoid Valve Running Losses Control Circuit Electrical
P1166	130	Oxygen Sensors Swapped
P1176	16	O2 Sensor Slow Response (Bank 1)
P1177	22	O2 Sensor Slow Response (Bank 2)
P1188	28	Fuel Control (Bank 1 Sensor 1)

P1189	36	Fuel Control (Bank 2 Sensor 1)
P1270	140	Control Module Self-Test, Torque Monitoring (M73: Mass Air Flow Sensor Bank Comparison Plausibility)
P1280	250	Ais Assisted Injection System Circuit (Bank 1)
P1283	29	Switching Solenoid for Air Assisted Injection Valves Control Circuit Electrical (Bank 1)
P1287	77	Switching Solenoid for Air Assisted Injection Valves Control Circuit Electrical (Bank 2)
P1384	212	Knock Sensor 3 Circuit
P1385	213	Knock Sensor 4 Circuit
P1386	220	Control Module Self-Test, Knock Control Circuit Baseline Test (Bank 1)
P1386	222	Control Module Self-Test, Knock Control Circuit Baseline Test (Bank 1)
P1396	78	Crankshaft Position Sensor Segment Timing Plausibility
P1453	84	Secondary Air Injection Pump Relay Control Circuit Electrical
P1453	85	Secondary Air Injection Pump Relay Control Circuit Electrical
P1470	1	Leakage Diagnostic Pump Control Circuit Electrical
P1475	3	Leakage Diagnostic Pump Reed Switch Did not Close
P1476	184	Leakage Diagnostic Pump Clamped Tube (M52 MY99/00: Leakage Diagnostic Pump Reed Switch Circuit)
P1585	8	Misfire Detected with Low Fuel

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## **ECU: M5.2, Engine: M73, from 01.09.98 till 28.02.99**

PCode	BMW-FC	PCode	text
P0100	115		Mass or Volume Air Flow Circuit
P0111	124		Intake Air Temperature Sensor 1 Circuit Range/Performance
P0116	123		Engine Coolant Temperature Circuit Range/Performance
P0130	10		O2 Sensor Circuit (Bank 1 Sensor 1)
P0133	15		O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0135	13		O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	12		O2 Sensor Circuit (Bank 1 Sensor 2)
P0139	17		O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0141	14		O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0150	18		O2 Sensor Circuit (Bank 2 Sensor 1)
P0153	21		O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0155	5		O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0156	20		O2 Sensor Circuit (Bank 2 Sensor 2)
P0159	23		O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0161	4		O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0170	26		Fuel Trim (Bank 1)
P0170	27		Fuel Trim (Bank 1)
P0173	34		Fuel Trim (Bank 2)
P0173	35		Fuel Trim (Bank 2)
P0201	150		Injector Circuit/Open - Cylinder 1
P0202	151		Injector Circuit/Open - Cylinder 2
P0203	152		Injector Circuit/Open - Cylinder 3
P0204	153		Injector Circuit/Open - Cylinder 4
P0205	154		Injector Circuit/Open - Cylinder 5
P0206	155		Injector Circuit/Open - Cylinder 6
P0207	156		Injector Circuit/Open - Cylinder 7
P0208	157		Injector Circuit/Open - Cylinder 8
P0209	158		Injector Circuit/Open - Cylinder 9
P0210	159		Injector Circuit/Open - Cylinder 10
P0211	160		Injector Circuit/Open - Cylinder 11
P0212	161		Injector Circuit/Open - Cylinder 12

P0300	62	Random/Multiple Cylinder Misfire Detected
P0300	75	Random/Multiple Cylinder Misfire Detected
P0301	50	Cylinder 1 Misfire Detected
P0301	63	Cylinder 1 Misfire Detected
P0302	51	Cylinder 2 Misfire Detected
P0302	64	Cylinder 2 Misfire Detected
P0303	52	Cylinder 3 Misfire Detected
P0303	65	Cylinder 3 Misfire Detected
P0304	53	Cylinder 4 Misfire Detected
P0304	66	Cylinder 4 Misfire Detected
P0305	54	Cylinder 5 Misfire Detected
P0305	67	Cylinder 5 Misfire Detected
P0306	55	Cylinder 6 Misfire Detected
P0306	68	Cylinder 6 Misfire Detected
P0307	56	Cylinder 7 Misfire Detected
P0307	69	Cylinder 7 Misfire Detected
P0308	57	Cylinder 8 Misfire Detected
P0308	70	Cylinder 8 Misfire Detected
P0309	58	Cylinder 9 Misfire Detected
P0309	71	Cylinder 9 Misfire Detected
P0310	59	Cylinder 10 Misfire Detected
P0310	72	Cylinder 10 Misfire Detected
P0311	60	Cylinder 11 Misfire Detected
P0311	73	Cylinder 11 Misfire Detected
P0312	61	Cylinder 12 Misfire Detected
P0312	74	Cylinder 12 Misfire Detected
P0325	210	Knock Sensor 1 Circuit (Bank 1 or Single Sensor)
P0330	211	Knock Sensor 2 Circuit (Bank 2)
P0335	111	Crankshaft Position Sensor 'A' Circuit
P0340	112	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0410	80	Secondary Air Injection System
P0410	208	Secondary Air Injection System
P0420	40	Catalyst System Efficiency Below Threshold (Bank 1)
P0423	43	Heated Catalyst Efficiency Below Threshold (Bank 1 )
P0430	45	Catalyst System Efficiency Below Threshold (Bank 2)
P0433	47	Heated Catalyst Efficiency Below Threshold (Bank 2)
P0440	93	Evaporative Emission System
P0442	183	Evaporative Emission System Leak Detected (small leak)
P0443	91	Evaporative Emission System Purge Control Valve Circuit
P0443	98	Evaporative Emission System Purge Control Valve Circuit
P0500	120	Vehicle Speed Sensor 'A'
P0505	32	Idle Air Control System
P0600	6	Serial Communication Link
P0600	19	Serial Communication Link
P0600	214	Serial Communication Link
P0600	215	Serial Communication Link
P0600	217	Serial Communication Link
P0600	236	Serial Communication Link
P0601	103	Internal Control Module Memory Check Sum Error
P0603	102	Internal Control Module Keep Alive Memory (KAM) Error
P1145	2	Solenoid Valve Running Losses Control Circuit Electrical
P1166	130	Oxygen Sensors Swapped
P1177	22	O2 Sensor Slow Response (Bank 2)

P1188	28	Fuel Control (Bank 1 Sensor 1)
P1189	36	Fuel Control (Bank 2 Sensor 1)
P1270	140	Control Module Self-Test, Torque Monitoring (M73: Mass Air Flow Sensor Bank Comparison Plausibility)
P1280	250	Ais Assisted Injection System Circuit (Bank 1)
P1283	29	Switching Solenoid for Air Assisted Injection Valves Control Circuit Electrical (Bank 1)
P1287	77	Switching Solenoid for Air Assisted Injection Valves Control Circuit Electrical (Bank 2)
P1384	212	Knock Sensor 3 Circuit
P1385	213	Knock Sensor 4 Circuit
P1386	220	Control Module Self-Test, Knock Control Circuit Baseline Test (Bank 1)
P1386	222	Control Module Self-Test, Knock Control Circuit Baseline Test (Bank 1)
P1396	78	Crankshaft Position Sensor Segment Timing Plausibility
P1420	85	Secondary Air Injection Valve Control Circuit Electrical
P1453	84	Secondary Air Injection Pump Relay Control Circuit Electrical
P1454	79	Secondary Air Injection Pump with Series Resistor Control Circuit Electrical
P1456	42	Heated Catalyst Heater Power Supply Open Circuit (Bank 1)
P1457	44	Heated Catalyst Power Switch Temperature Sensor Electrical (Bank 1)
P1459	46	Heated Catalyst Heater Power Supply Open Circuit (Bank 2)
P1460	48	Heated Catalyst Power Switch Temperature Sensor Electrical (Bank 2)
P1461	30	Heated Catalyst Gate Voltage Signal Low
P1462	33	Heated Catalyst Internal Control Module Checksum/EEPROM Error
P1463	81	Heated Catalyst Battery Temperature Sensor 1 Electrical
P1464	82	Heated Catalyst Battery Temperature Sensor 2 Electrical
P1465	83	Heated Catalyst Battery Temperature Sensor 1 or 2 Plausibility
P1466	225	Heated Catalyst Power Switch Temperature Sensor Plausibility
P1467	226	Heated Catalyst Comparison Battery Voltages of Power Switches Plausibility
P1470	1	Leakage Diagnostic Pump Control Circuit Electrical
P1475	3	Leakage Diagnostic Pump Reed Switch Did not Close
P1476	184	Leakage Diagnostic Pump Clamped Tube (M52 MY99/00: Leakage Diagnostic Pump Reed Switch Circuit)
P1585	8	Misfire Detected with Low Fuel
P1622	139	Map Cooling Thermostat Control Circuit Electrical
P1640	105	Internal Control Module RAM/ROM Error

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## ECU: M5.2, Engine: M73, from 01.03.99 till 31.08.99

PCode	BMW-FC	PCode	text
P0100	115		Mass or Volume Air Flow Circuit
P0111	124		Intake Air Temperature Sensor 1 Circuit Range/Performance
P0116	123		Engine Coolant Temperature Circuit Range/Performance
P0130	10		O2 Sensor Circuit (Bank 1 Sensor 1)
P0133	15		O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0135	13		O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	12		O2 Sensor Circuit (Bank 1 Sensor 2)
P0139	17		O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0141	14		O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0150	18		O2 Sensor Circuit (Bank 2 Sensor 1)
P0153	21		O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0155	5		O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0156	20		O2 Sensor Circuit (Bank 2 Sensor 2)
P0159	23		O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0161	4		O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0170	26		Fuel Trim (Bank 1)
P0170	27		Fuel Trim (Bank 1)
P0173	34		Fuel Trim (Bank 2)
P0173	35		Fuel Trim (Bank 2)
P0201	150		Injector Circuit/Open - Cylinder 1
P0202	151		Injector Circuit/Open - Cylinder 2
P0203	152		Injector Circuit/Open - Cylinder 3
P0204	153		Injector Circuit/Open - Cylinder 4
P0205	154		Injector Circuit/Open - Cylinder 5
P0206	155		Injector Circuit/Open - Cylinder 6
P0207	156		Injector Circuit/Open - Cylinder 7
P0208	157		Injector Circuit/Open - Cylinder 8
P0209	158		Injector Circuit/Open - Cylinder 9
P0210	159		Injector Circuit/Open - Cylinder 10
P0211	160		Injector Circuit/Open - Cylinder 11
P0212	161		Injector Circuit/Open - Cylinder 12
P0300	62		Random/Multiple Cylinder Misfire Detected
P0300	75		Random/Multiple Cylinder Misfire Detected
P0301	50		Cylinder 1 Misfire Detected
P0301	63		Cylinder 1 Misfire Detected
P0302	51		Cylinder 2 Misfire Detected
P0302	64		Cylinder 2 Misfire Detected
P0303	52		Cylinder 3 Misfire Detected
P0303	65		Cylinder 3 Misfire Detected
P0304	53		Cylinder 4 Misfire Detected
P0304	66		Cylinder 4 Misfire Detected
P0305	54		Cylinder 5 Misfire Detected
P0305	67		Cylinder 5 Misfire Detected
P0306	55		Cylinder 6 Misfire Detected
P0306	68		Cylinder 6 Misfire Detected
P0307	56		Cylinder 7 Misfire Detected
P0307	69		Cylinder 7 Misfire Detected
P0308	57		Cylinder 8 Misfire Detected

P0308	70	Cylinder 8 Misfire Detected
P0309	58	Cylinder 9 Misfire Detected
P0309	71	Cylinder 9 Misfire Detected
P0310	59	Cylinder 10 Misfire Detected
P0310	72	Cylinder 10 Misfire Detected
P0311	60	Cylinder 11 Misfire Detected
P0311	73	Cylinder 11 Misfire Detected
P0312	61	Cylinder 12 Misfire Detected
P0312	74	Cylinder 12 Misfire Detected
P0325	210	Knock Sensor 1 Circuit (Bank 1 or Single Sensor)
P0330	211	Knock Sensor 2 Circuit (Bank 2)
P0335	111	Crankshaft Position Sensor 'A' Circuit
P0340	112	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0410	80	Secondary Air Injection System
P0410	208	Secondary Air Injection System
P0420	40	Catalyst System Efficiency Below Threshold (Bank 1)
P0423	43	Heated Catalyst Efficiency Below Threshold (Bank 1 )
P0430	45	Catalyst System Efficiency Below Threshold (Bank 2)
P0433	47	Heated Catalyst Efficiency Below Threshold (Bank 2)
P0440	93	Evaporative Emission System
P0442	183	Evaporative Emission System Leak Detected (small leak)
P0443	91	Evaporative Emission System Purge Control Valve Circuit
P0443	98	Evaporative Emission System Purge Control Valve Circuit
P0500	120	Vehicle Speed Sensor 'A'
P0505	32	Idle Air Control System
P0600	6	Serial Communication Link
P0600	19	Serial Communication Link
P0600	214	Serial Communication Link
P0600	215	Serial Communication Link
P0600	217	Serial Communication Link
P0600	236	Serial Communication Link
P0601	103	Internal Control Module Memory Check Sum Error
P0603	102	Internal Control Module Keep Alive Memory (KAM) Error
P1145	2	Solenoid Valve Running Losses Control Circuit Electrical
P1166	130	Oxygen Sensors Swapped
P1177	22	O2 Sensor Slow Response (Bank 2)
P1188	28	Fuel Control (Bank 1 Sensor 1)
P1189	36	Fuel Control (Bank 2 Sensor 1)
P1270	140	Control Module Self-Test, Torque Monitoring (M73: Mass Air Flow Sensor Bank Comparison Plausibility)
P1280	250	Ais Assisted Injection System Circuit (Bank 1)
P1283	29	Switching Solenoid for Air Assisted Injection Valves Control Circuit Electrical (Bank 1)
P1287	77	Switching Solenoid for Air Assisted Injection Valves Control Circuit Electrical (Bank 2)
P1384	212	Knock Sensor 3 Circuit
P1385	213	Knock Sensor 4 Circuit
P1386	220	Control Module Self-Test, Knock Control Circuit Baseline Test (Bank 1)
P1386	222	Control Module Self-Test, Knock Control Circuit Baseline Test (Bank 1)
P1396	78	Crankshaft Position Sensor Segment Timing Plausibility
P1420	85	Secondary Air Injection Valve Control Circuit Electrical
P1453	84	Secondary Air Injection Pump Relay Control Circuit Electrical
P1454	79	Secondary Air Injection Pump with Series Resistor Control Circuit Electrical
P1456	42	Heated Catalyst Heater Power Supply Open Circuit (Bank 1)
P1457	44	Heated Catalyst Power Switch Temperature Sensor Electrical (Bank 1)

P1459	46	Heated Catalyst Heater Power Supply Open Circuit (Bank 2)
P1460	48	Heated Catalyst Power Switch Temperature Sensor Electrical (Bank 2)
P1461	30	Heated Catalyst Gate Voltage Signal Low
P1462	33	Heated Catalyst Internal Control Module Checksum/EEPROM Error
P1463	81	Heated Catalyst Battery Temperature Sensor 1 Electrical
P1464	82	Heated Catalyst Battery Temperature Sensor 2 Electrical
P1465	83	Heated Catalyst Battery Temperature Sensor 1 or 2 Plausibility
P1466	225	Heated Catalyst Power Switch Temperature Sensor Plausibility
P1467	226	Heated Catalyst Comparison Battery Voltages of Power Switches Plausibility
P1470	1	Leakage Diagnostic Pump Control Circuit Electrical
P1475	3	Leakage Diagnostic Pump Reed Switch Did not Close
P1476	184	Leakage Diagnostic Pump Clamped Tube (M52 MY99/00: Leakage Diagnostic Pump Reed Switch Circuit)
P1585	8	Misfire Detected with Low Fuel
P1622	139	Map Cooling Thermostat Control Circuit Electrical
P1640	105	Internal Control Module RAM/ROM Error

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## ECU: M5.2, Engine: M73, from 01.09.99 till 29.02.00

PCode	BMW-FC	PCode text
P0100	115	Mass or Volume Air Flow Circuit
P0111	124	Intake Air Temperature Sensor 1 Circuit Range/Performance
P0116	123	Engine Coolant Temperature Circuit Range/Performance
P0130	10	O2 Sensor Circuit (Bank 1 Sensor 1)
P0133	15	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0135	13	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	12	O2 Sensor Circuit (Bank 1 Sensor 2)
P0139	17	O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0141	14	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0150	18	O2 Sensor Circuit (Bank 2 Sensor 1)
P0153	21	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0155	5	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0156	20	O2 Sensor Circuit (Bank 2 Sensor 2)
P0159	23	O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0161	4	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0170	26	Fuel Trim (Bank 1)
P0170	27	Fuel Trim (Bank 1)
P0173	34	Fuel Trim (Bank 2)
P0173	35	Fuel Trim (Bank 2)
P0201	150	Injector Circuit/Open - Cylinder 1
P0202	151	Injector Circuit/Open - Cylinder 2
P0203	152	Injector Circuit/Open - Cylinder 3
P0204	153	Injector Circuit/Open - Cylinder 4
P0205	154	Injector Circuit/Open - Cylinder 5
P0206	155	Injector Circuit/Open - Cylinder 6
P0207	156	Injector Circuit/Open - Cylinder 7
P0208	157	Injector Circuit/Open - Cylinder 8
P0209	158	Injector Circuit/Open - Cylinder 9
P0210	159	Injector Circuit/Open - Cylinder 10
P0211	160	Injector Circuit/Open - Cylinder 11
P0212	161	Injector Circuit/Open - Cylinder 12
P0300	62	Random/Multiple Cylinder Misfire Detected

P0300	75	Random/Multiple Cylinder Misfire Detected
P0301	50	Cylinder 1 Misfire Detected
P0301	63	Cylinder 1 Misfire Detected
P0302	51	Cylinder 2 Misfire Detected
P0302	64	Cylinder 2 Misfire Detected
P0303	52	Cylinder 3 Misfire Detected
P0303	65	Cylinder 3 Misfire Detected
P0304	53	Cylinder 4 Misfire Detected
P0304	66	Cylinder 4 Misfire Detected
P0305	54	Cylinder 5 Misfire Detected
P0305	67	Cylinder 5 Misfire Detected
P0306	55	Cylinder 6 Misfire Detected
P0306	68	Cylinder 6 Misfire Detected
P0307	56	Cylinder 7 Misfire Detected
P0307	69	Cylinder 7 Misfire Detected
P0308	57	Cylinder 8 Misfire Detected
P0308	70	Cylinder 8 Misfire Detected
P0309	58	Cylinder 9 Misfire Detected
P0309	71	Cylinder 9 Misfire Detected
P0310	59	Cylinder 10 Misfire Detected
P0310	72	Cylinder 10 Misfire Detected
P0311	60	Cylinder 11 Misfire Detected
P0311	73	Cylinder 11 Misfire Detected
P0312	61	Cylinder 12 Misfire Detected
P0312	74	Cylinder 12 Misfire Detected
P0325	210	Knock Sensor 1 Circuit (Bank 1 or Single Sensor)
P0330	211	Knock Sensor 2 Circuit (Bank 2)
P0335	111	Crankshaft Position Sensor 'A' Circuit
P0340	112	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0410	80	Secondary Air Injection System
P0410	208	Secondary Air Injection System
P0420	40	Catalyst System Efficiency Below Threshold (Bank 1)
P0423	43	Heated Catalyst Efficiency Below Threshold (Bank 1 )
P0430	45	Catalyst System Efficiency Below Threshold (Bank 2)
P0433	47	Heated Catalyst Efficiency Below Threshold (Bank 2)
P0440	93	Evaporative Emission System
P0442	183	Evaporative Emission System Leak Detected (small leak)
P0443	91	Evaporative Emission System Purge Control Valve Circuit
P0443	98	Evaporative Emission System Purge Control Valve Circuit
P0500	120	Vehicle Speed Sensor 'A'
P0505	32	Idle Air Control System
P0600	6	Serial Communication Link
P0600	19	Serial Communication Link
P0600	214	Serial Communication Link
P0600	215	Serial Communication Link
P0600	217	Serial Communication Link
P0600	236	Serial Communication Link
P0601	103	Internal Control Module Memory Check Sum Error
P0603	102	Internal Control Module Keep Alive Memory (KAM) Error
P1145	2	Solenoid Valve Running Losses Control Circuit Electrical
P1166	130	Oxygen Sensors Swapped
P1177	22	O2 Sensor Slow Response (Bank 2)
P1188	28	Fuel Control (Bank 1 Sensor 1)

P1189	36	Fuel Control (Bank 2 Sensor 1)
P1270	140	Control Module Self-Test, Torque Monitoring (M73: Mass Air Flow Sensor Bank Comparison Plausibility)
P1280	250	Ais Assisted Injection System Circuit (Bank 1)
P1283	29	Switching Solenoid for Air Assisted Injection Valves Control Circuit Electrical (Bank 1)
P1287	77	Switching Solenoid for Air Assisted Injection Valves Control Circuit Electrical (Bank 2)
P1384	212	Knock Sensor 3 Circuit
P1385	213	Knock Sensor 4 Circuit
P1386	220	Control Module Self-Test, Knock Control Circuit Baseline Test (Bank 1)
P1386	222	Control Module Self-Test, Knock Control Circuit Baseline Test (Bank 1)
P1396	78	Crankshaft Position Sensor Segment Timing Plausibility
P1420	85	Secondary Air Injection Valve Control Circuit Electrical
P1453	84	Secondary Air Injection Pump Relay Control Circuit Electrical
P1454	79	Secondary Air Injection Pump with Series Resistor Control Circuit Electrical
P1456	42	Heated Catalyst Heater Power Supply Open Circuit (Bank 1)
P1457	44	Heated Catalyst Power Switch Temperature Sensor Electrical (Bank 1)
P1459	46	Heated Catalyst Heater Power Supply Open Circuit (Bank 2)
P1460	48	Heated Catalyst Power Switch Temperature Sensor Electrical (Bank 2)
P1461	30	Heated Catalyst Gate Voltage Signal Low
P1462	33	Heated Catalyst Internal Control Module Checksum/EEPROM Error
P1463	81	Heated Catalyst Battery Temperature Sensor 1 Electrical
P1464	82	Heated Catalyst Battery Temperature Sensor 2 Electrical
P1465	83	Heated Catalyst Battery Temperature Sensor 1 or 2 Plausibility
P1466	225	Heated Catalyst Power Switch Temperature Sensor Plausibility
P1467	226	Heated Catalyst Comparison Battery Voltages of Power Switches Plausibility
P1470	1	Leakage Diagnostic Pump Control Circuit Electrical
P1475	3	Leakage Diagnostic Pump Reed Switch Did not Close
P1476	184	Leakage Diagnostic Pump Clamped Tube (M52 MY99/00: Leakage Diagnostic Pump Reed Switch Circuit)
P1585	8	Misfire Detected with Low Fuel
P1640	105	Internal Control Module RAM/ROM Error

## ECU: M5.2, Engine: M73, from 01.03.00 till 31.08.00

PCode	BMW-FC	PCode text
P0100	115	Mass or Volume Air Flow Circuit
P0111	124	Intake Air Temperature Sensor 1 Circuit Range/Performance
P0116	123	Engine Coolant Temperature Circuit Range/Performance
P0130	10	O2 Sensor Circuit (Bank 1 Sensor 1)
P0133	15	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0135	13	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	12	O2 Sensor Circuit (Bank 1 Sensor 2)
P0139	17	O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0141	14	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0150	18	O2 Sensor Circuit (Bank 2 Sensor 1)
P0153	21	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0155	5	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0156	20	O2 Sensor Circuit (Bank 2 Sensor 2)
P0159	23	O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0161	4	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0170	26	Fuel Trim (Bank 1)
P0170	27	Fuel Trim (Bank 1)
P0173	34	Fuel Trim (Bank 2)

P0173	35	Fuel Trim (Bank 2)
P0201	150	Injector Circuit/Open - Cylinder 1
P0202	151	Injector Circuit/Open - Cylinder 2
P0203	152	Injector Circuit/Open - Cylinder 3
P0204	153	Injector Circuit/Open - Cylinder 4
P0205	154	Injector Circuit/Open - Cylinder 5
P0206	155	Injector Circuit/Open - Cylinder 6
P0207	156	Injector Circuit/Open - Cylinder 7
P0208	157	Injector Circuit/Open - Cylinder 8
P0209	158	Injector Circuit/Open - Cylinder 9
P0210	159	Injector Circuit/Open - Cylinder 10
P0211	160	Injector Circuit/Open - Cylinder 11
P0212	161	Injector Circuit/Open - Cylinder 12
P0300	62	Random/Multiple Cylinder Misfire Detected
P0300	75	Random/Multiple Cylinder Misfire Detected
P0301	50	Cylinder 1 Misfire Detected
P0301	63	Cylinder 1 Misfire Detected
P0302	51	Cylinder 2 Misfire Detected
P0302	64	Cylinder 2 Misfire Detected
P0303	52	Cylinder 3 Misfire Detected
P0303	65	Cylinder 3 Misfire Detected
P0304	53	Cylinder 4 Misfire Detected
P0304	66	Cylinder 4 Misfire Detected
P0305	54	Cylinder 5 Misfire Detected
P0305	67	Cylinder 5 Misfire Detected
P0306	55	Cylinder 6 Misfire Detected
P0306	68	Cylinder 6 Misfire Detected
P0307	56	Cylinder 7 Misfire Detected
P0307	69	Cylinder 7 Misfire Detected
P0308	57	Cylinder 8 Misfire Detected
P0308	70	Cylinder 8 Misfire Detected
P0309	58	Cylinder 9 Misfire Detected
P0309	71	Cylinder 9 Misfire Detected
P0310	59	Cylinder 10 Misfire Detected
P0310	72	Cylinder 10 Misfire Detected
P0311	60	Cylinder 11 Misfire Detected
P0311	73	Cylinder 11 Misfire Detected
P0312	61	Cylinder 12 Misfire Detected
P0312	74	Cylinder 12 Misfire Detected
P0325	210	Knock Sensor 1 Circuit (Bank 1 or Single Sensor)
P0330	211	Knock Sensor 2 Circuit (Bank 2)
P0335	111	Crankshaft Position Sensor 'A' Circuit
P0340	112	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0410	80	Secondary Air Injection System
P0410	208	Secondary Air Injection System
P0420	40	Catalyst System Efficiency Below Threshold (Bank 1)
P0423	43	Heated Catalyst Efficiency Below Threshold (Bank 1 )
P0430	45	Catalyst System Efficiency Below Threshold (Bank 2)
P0433	47	Heated Catalyst Efficiency Below Threshold (Bank 2)
P0440	93	Evaporative Emission System
P0442	183	Evaporative Emission System Leak Detected (small leak)
P0443	91	Evaporative Emission System Purge Control Valve Circuit
P0443	98	Evaporative Emission System Purge Control Valve Circuit

P0500	120	Vehicle Speed Sensor 'A'
P0505	32	Idle Air Control System
P0600	6	Serial Communication Link
P0600	19	Serial Communication Link
P0600	214	Serial Communication Link
P0600	215	Serial Communication Link
P0600	217	Serial Communication Link
P0600	236	Serial Communication Link
P0601	103	Internal Control Module Memory Check Sum Error
P0603	102	Internal Control Module Keep Alive Memory (KAM) Error
P1145	2	Solenoid Valve Running Losses Control Circuit Electrical
P1166	130	Oxygen Sensors Swapped
P1177	22	O2 Sensor Slow Response (Bank 2)
P1188	28	Fuel Control (Bank 1 Sensor 1)
P1189	36	Fuel Control (Bank 2 Sensor 1)
P1270	140	Control Module Self-Test, Torque Monitoring (M73: Mass Air Flow Sensor Bank Comparison Plausibility)
P1280	250	Ais Assisted Injection System Circuit (Bank 1)
P1283	29	Switching Solenoid for Air Assisted Injection Valves Control Circuit Electrical (Bank 1)
P1287	77	Switching Solenoid for Air Assisted Injection Valves Control Circuit Electrical (Bank 2)
P1384	212	Knock Sensor 3 Circuit
P1385	213	Knock Sensor 4 Circuit
P1386	220	Control Module Self-Test, Knock Control Circuit Baseline Test (Bank 1)
P1386	222	Control Module Self-Test, Knock Control Circuit Baseline Test (Bank 1)
P1396	78	Crankshaft Position Sensor Segment Timing Plausibility
P1420	85	Secondary Air Injection Valve Control Circuit Electrical
P1453	84	Secondary Air Injection Pump Relay Control Circuit Electrical
P1454	79	Secondary Air Injection Pump with Series Resistor Control Circuit Electrical
P1456	42	Heated Catalyst Heater Power Supply Open Circuit (Bank 1)
P1457	44	Heated Catalyst Power Switch Temperature Sensor Electrical (Bank 1)
P1459	46	Heated Catalyst Heater Power Supply Open Circuit (Bank 2)
P1460	48	Heated Catalyst Power Switch Temperature Sensor Electrical (Bank 2)
P1461	30	Heated Catalyst Gate Voltage Signal Low
P1462	33	Heated Catalyst Internal Control Module Checksum/EEPROM Error
P1463	81	Heated Catalyst Battery Temperature Sensor 1 Electrical
P1464	82	Heated Catalyst Battery Temperature Sensor 2 Electrical
P1465	83	Heated Catalyst Battery Temperature Sensor 1 or 2 Plausibility
P1466	225	Heated Catalyst Power Switch Temperature Sensor Plausibility
P1467	226	Heated Catalyst Comparison Battery Voltages of Power Switches Plausibility
P1470	1	Leakage Diagnostic Pump Control Circuit Electrical
P1475	3	Leakage Diagnostic Pump Reed Switch Did not Close
P1476	184	Leakage Diagnostic Pump Clamped Tube (M52 MY99/00: Leakage Diagnostic Pump Reed Switch Circuit)
P1585	8	Misfire Detected with Low Fuel
P1640	105	Internal Control Module RAM/ROM Error

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## ECU: M5.2, Engine: M73, from 01.09.00 till 31.08.01

PCode	BMW-FC	PCode text
P0102	115	Mass or Volume Air Flow Circuit Low Input
P0112	124	Intake Air Temperature Sensor 1 Circuit Low
P0117	123	Engine Coolant Temperature Circuit Low
P0130	10	O2 Sensor Circuit (Bank 1 Sensor 1)

P0133	15	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0136	12	O2 Sensor Circuit (Bank 1 Sensor 2)
P0139	17	O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0150	18	O2 Sensor Circuit (Bank 2 Sensor 1)
P0153	21	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0156	20	O2 Sensor Circuit (Bank 2 Sensor 2)
P0159	23	O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0172	26	System Too Rich (Bank 1)
P0172	27	System Too Rich (Bank 1)
P0172	28	System Too Rich (Bank 1)
P0175	34	System Too Rich (Bank 2)
P0175	35	System Too Rich (Bank 2)
P0175	36	System Too Rich (Bank 2)
P0201	150	Injector Circuit/Open - Cylinder 1
P0202	151	Injector Circuit/Open - Cylinder 2
P0203	152	Injector Circuit/Open - Cylinder 3
P0204	153	Injector Circuit/Open - Cylinder 4
P0205	154	Injector Circuit/Open - Cylinder 5
P0206	155	Injector Circuit/Open - Cylinder 6
P0207	156	Injector Circuit/Open - Cylinder 7
P0208	157	Injector Circuit/Open - Cylinder 8
P0209	158	Injector Circuit/Open - Cylinder 9
P0210	159	Injector Circuit/Open - Cylinder 10
P0211	160	Injector Circuit/Open - Cylinder 11
P0212	161	Injector Circuit/Open - Cylinder 12
P0300	62	Random/Multiple Cylinder Misfire Detected
P0301	50	Cylinder 1 Misfire Detected
P0302	51	Cylinder 2 Misfire Detected
P0303	52	Cylinder 3 Misfire Detected
P0304	53	Cylinder 4 Misfire Detected
P0305	54	Cylinder 5 Misfire Detected
P0306	55	Cylinder 6 Misfire Detected
P0307	56	Cylinder 7 Misfire Detected
P0308	57	Cylinder 8 Misfire Detected
P0309	58	Cylinder 9 Misfire Detected
P0310	59	Cylinder 10 Misfire Detected
P0311	60	Cylinder 11 Misfire Detected
P0312	61	Cylinder 12 Misfire Detected
P0324	220	Knock Control System Error
P0324	222	Knock Control System Error
P0327	210	Knock Sensor 1 Circuit Low (Bank 1 or Single Sensor)
P0332	212	Knock Sensor 2 Circuit Low (Bank 2)
P0340	112	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0350	203	Ignition Coil Primary/Secondary Circuit
P0370	111	Timing Reference High Resolution Signal 'A'
P0412	85	Secondary Air Injection System Switching Valve A Circuit
P0418	84	Secondary Air Injection System Control 'A' Circuit
P0420	40	Catalyst System Efficiency Below Threshold (Bank 1)
P0423	43	Heated Catalyst Efficiency Below Threshold (Bank 1 )
P0430	45	Catalyst System Efficiency Below Threshold (Bank 2)
P0433	47	Heated Catalyst Efficiency Below Threshold (Bank 2)
P0440	93	Evaporative Emission System
P0442	183	Evaporative Emission System Leak Detected (small leak)



P0444	98	Evaporative Emission System Purge Control Valve Circuit Open
P0450	3	Evaporative Emission System Pressure Sensor/Switch
P0491	80	Secondary Air Injection System Insufficient Flow (Bank 1)
P0492	208	Secondary Air Injection System Insufficient Flow (Bank 2)
P0501	120	Vehicle Speed Sensor 'A' Range/Performance
P0600	236	Serial Communication Link
P0601	103	Internal Control Module Memory Check Sum Error
P0603	102	Internal Control Module Keep Alive Memory (KAM) Error
P0604	101	Internal Control Module Random Access Memory (RAM) Error
P1133	16	O2 Sensor Heater Control Circuit (Bank 2 Sensor 1)
P1135	13	O2 Sensor Heater Circuit Low Voltage (Bank 1 Sensor 1)
P1138	14	O2 Sensor Heater Circuit Low Voltage (Bank 1 Sensor 2)
P1146	2	Solenoid Valve Running Losses Control Open Circuit
P1152	5	O2 Sensor Heater Circuit Low Voltage (Bank 2 Sensor 1)
P1156	4	O2 Sensor Heater Circuit Low Voltage (Bank 2 Sensor 2)
P1166	130	Oxygen Sensors Swapped
P1177	22	O2 Sensor Slow Response (Bank 2)
P1270	140	Control Module Self-Test, Torque Monitoring (M73: Mass Air Flow Sensor Bank Comparison Plausibility)
P1280	250	Air Assisted Injection System Circuit (Bank 1)
P1283	29	Switching Solenoid for Air Assisted Injection Valves Control Circuit Electrical (Bank 1)
P1287	77	Switching Solenoid for Air Assisted Injection Valves Control Circuit Electrical (Bank 2)
P1327	211	Knock Sensor 2 Circuit Low Input (Bank 1)
P1332	213	Knock Sensor 4 Circuit Low Input
P1341	75	Multiple Cylinder Misfire with Fuel Cut-Off
P1343	63	Misfire Cylinder 1 with Fuel Cut-Off
P1345	64	Misfire Cylinder 2 with Fuel Cut-Off
P1347	65	Misfire Cylinder 3 with Fuel Cut-Off
P1349	66	Misfire Cylinder 4 with Fuel Cut-Off
P1351	67	Misfire Cylinder 5 with Fuel Cut-Off
P1353	68	Misfire Cylinder 6 with Fuel Cut-Off
P1355	69	Misfire Cylinder 7 with Fuel Cut-Off
P1357	70	Misfire Cylinder 8 with Fuel Cut-Off
P1359	71	Misfire Cylinder 9 with Fuel Cut-Off
P1361	72	Misfire Cylinder 10 with Fuel Cut-Off
P1363	73	Misfire Cylinder 11 with Fuel Cut-Off
P1365	74	Misfire Cylinder 12 with Fuel Cut-Off
P1396	78	Crankshaft Position Sensor Segment Timing Plausibility
P1438	91	Purge Control Valve Control Open Circuit
P1454	79	Secondary Air Injection Pump with Series Resistor Control Circuit Electrical
P1456	42	Heated Catalyst Heater Power Supply Open Circuit (Bank 1)
P1457	44	Heated Catalyst Power Switch Temperature Sensor Electrical (Bank 1)
P1459	46	Heated Catalyst Heater Power Supply Open Circuit (Bank 2)
P1460	48	Heated Catalyst Power Switch Temperature Sensor Electrical (Bank 2)
P1461	30	Heated Catalyst Gate Voltage Signal Low
P1462	33	Heated Catalyst Internal Control Module Checksum/EEPROM Error
P1463	81	Heated Catalyst Battery Temperature Sensor 1 Electrical
P1464	82	Heated Catalyst Battery Temperature Sensor 2 Electrical
P1465	83	Heated Catalyst Battery Temperature Sensor 1 or 2 Plausibility
P1466	225	Heated Catalyst Power Switch Temperature Sensor Plausibility
P1467	226	Heated Catalyst Comparison Battery Voltages of Power Switches Plausibility
P1471	1	Leakage Diagnostic Pump Open Circuit

P1476	184	Leakage Diagnostic Pump Clamped Tube (M52 MY99/00: Leakage Diagnostic Pump Reed Switch Circuit)
P1501	32	Idle-Speed Control Valve Stuck Closed
P1585	8	Misfire Detected with Low Fuel
P1606	104	Fault Memory Plausibility
P1607	214	CAN-Version
P1608	215	Serial Communication Link Control Module
P1609	217	Serial Communication Link EML (Electronical Engine-Power Regulation)
P1610	19	Serial Communication Link Heated Catalyst
P1612	6	Serial Communication Link Instrument Pack
P1640	105	Internal Control Module RAM/ROM Error

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## ECU: ME7.2, Engine: M62-E38, from 01.09.98 till 28.02.99

PCode	BMW-FC	PCode	text
P0100	115		Mass or Volume Air Flow Circuit
P0111	124		Intake Air Temperature Sensor 1 Circuit Range/Performance
P0116	123		Engine Coolant Temperature Circuit Range/Performance
P0120	117		Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0120	118		Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0120	119		Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0130	10		O2 Sensor Circuit (Bank 1 Sensor 1)
P0133	15		O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0135	13		O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	12		O2 Sensor Circuit (Bank 1 Sensor 2)
P0139	17		O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0141	14		O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0150	18		O2 Sensor Circuit (Bank 2 Sensor 1)
P0153	21		O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0155	5		O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0156	20		O2 Sensor Circuit (Bank 2 Sensor 2)
P0159	23		O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0161	4		O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0170	24		Fuel Trim (Bank 1)
P0170	26		Fuel Trim (Bank 1)
P0173	25		Fuel Trim (Bank 2)
P0173	27		Fuel Trim (Bank 2)
P0201	150		Injector Circuit/Open - Cylinder 1
P0202	154		Injector Circuit/Open - Cylinder 2
P0203	153		Injector Circuit/Open - Cylinder 3
P0204	157		Injector Circuit/Open - Cylinder 4
P0205	155		Injector Circuit/Open - Cylinder 5
P0206	152		Injector Circuit/Open - Cylinder 6
P0207	156		Injector Circuit/Open - Cylinder 7
P0208	151		Injector Circuit/Open - Cylinder 8
P0300	62		Random/Multiple Cylinder Misfire Detected
P0301	50		Cylinder 1 Misfire Detected
P0302	54		Cylinder 2 Misfire Detected
P0303	53		Cylinder 3 Misfire Detected
P0304	57		Cylinder 4 Misfire Detected
P0305	55		Cylinder 5 Misfire Detected
P0306	52		Cylinder 6 Misfire Detected

P0307	56	Cylinder 7 Misfire Detected
P0308	51	Cylinder 8 Misfire Detected
P0325	210	Knock Sensor 1 Circuit (Bank 1 or Single Sensor)
P0330	211	Knock Sensor 2 Circuit (Bank 2)
P0335	111	Crankshaft Position Sensor 'A' Circuit
P0340	113	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0420	40	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	45	Catalyst System Efficiency Below Threshold (Bank 2)
P0440	93	Evaporative Emission System
P0442	182	Evaporative Emission System Leak Detected (small leak)
P0442	183	Evaporative Emission System Leak Detected (small leak)
P0443	98	Evaporative Emission System Purge Control Valve Circuit
P0500	120	Vehicle Speed Sensor 'A'
P0505	32	Idle Air Control System
P0600	220	Serial Communication Link
P0601	105	Internal Control Module Memory Check Sum Error
P0605	101	Internal Control Module Read Only Memory (ROM) Error
P0605	103	Internal Control Module Read Only Memory (ROM) Error
P0605	107	Internal Control Module Read Only Memory (ROM) Error
P0605	108	Internal Control Module Read Only Memory (ROM) Error
P1140	163	Mass or Volume Air Flow Circuit Range/Performance Problem
P1174	28	Fuel Trim Adaptation Malfunction (Bank 1)
P1175	29	Fuel Trim Adaptation Additive Malfunction (Bank 2)
P1340	114	Multiple Cylinder Misfire During Start
P1384	212	Knock Sensor 3 Circuit
P1385	213	Knock Sensor 4 Circuit
P1386	214	Control Module Self-Test, Knock Control Circuit Baseline Test (Bank 1)
P1386	215	Control Module Self-Test, Knock Control Circuit Baseline Test (Bank 1)
P1386	216	Control Module Self-Test, Knock Control Circuit Baseline Test (Bank 1)
P1396	112	Crankshaft Position Sensor Segment Timing Plausibility
P1420	85	Secondary Air Injection Valve Control Circuit Electrical
P1421	81	Secondary Air System (Bank 2)
P1423	80	Secondary Air System (Bank 1)
P1453	84	Secondary Air Injection Pump Relay Control Circuit Electrical
P1470	1	Leakage Diagnostic Pump Control Circuit Electrical
P1475	185	Leakage Diagnostic Pump Reed Switch Did not Close
P1476	184	Leakage Diagnostic Pump Clamped Tube (M52 MY99/00: Leakage Diagnostic Pump Reed Switch Circuit)
P1519	33	Oil-Condition Sensor Temperature Measurement (M62/M52/S52: 'A' Camshaft Position Actuator Bank 1)
P1522	34	Oil-Condition Sensor Permeability Measurement (M62: 'A' Camshaft Position Actuator Bank 2; M52: 'A' Camshaft Position Actuator Tight or Jammed)
P1525	165	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1526	166	'A' Camshaft Position Actuator Control Open Circuit (Bank 2)
P1530	130	'B' Camshaft Position Actuator Control Circuit Signal High (Bank 1) (S54 to 09/00: Throttle Valve Position Control, Control Deviation)
P1531	131	'B' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1532	132	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (S54 to 09/00: Throttle Valve Control Circuit)
P1622	140	Map Cooling Thermostat Control Circuit Electrical

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## ECU: ME7.2, Engine: M62-E38, from 01.03.99 till 29.02.00

PCode BMW-FC PCode text

P0010	33	'A' Camshaft Position Actuator Circuit (Bank 1)
P0011	33	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)
P0012	33	'A' Camshaft Position Timing Over-Retarded (Bank 1)
P0020	34	'A' Camshaft Position Actuator Circuit (Bank 2)
P0021	34	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 2)
P0022	34	'A' Camshaft Position Timing Over-Retarded (Bank 2)
P0102	115	Mass or Volume Air Flow Circuit Low Input
P0103	115	Mass or Volume Air Flow Circuit High Input
P0112	124	Intake Air Temperature Sensor 1 Circuit Low
P0113	124	Intake Air Temperature Sensor 1 Circuit High
P0116	123	Engine Coolant Temperature Circuit Range/Performance
P0117	123	Engine Coolant Temperature Circuit Low
P0118	123	Engine Coolant Temperature Circuit High
P0119	123	Engine Coolant Temperature Circuit Intermittent
P0120	117	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0121	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0122	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Low
P0123	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit High
P0130	10	O2 Sensor Circuit (Bank 1 Sensor 1)
P0131	10	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 1)
P0132	10	O2 Sensor Circuit High Voltage (Bank 1 Sensor 1)
P0133	15	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0134	10	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0135	13	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	12	O2 Sensor Circuit (Bank 1 Sensor 2)
P0137	12	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 2)
P0138	12	O2 Sensor Circuit High Voltage (Bank 1 Sensor 2)
P0139	17	O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0140	12	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 2)
P0141	14	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0150	18	O2 Sensor Circuit (Bank 2 Sensor 1)
P0151	18	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 1)
P0152	18	O2 Sensor Circuit High Voltage (Bank 2 Sensor 1)
P0153	21	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0154	18	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0155	5	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0156	20	O2 Sensor Circuit (Bank 2 Sensor 2)
P0157	20	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 2)
P0158	20	O2 Sensor Circuit High Voltage (Bank 2 Sensor 2)
P0159	23	O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0160	20	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 2)
P0161	4	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0171	24	System Too Lean (Bank 1)
P0171	26	System Too Lean (Bank 1)
P0172	24	System Too Rich (Bank 1)
P0172	26	System Too Rich (Bank 1)
P0174	25	System Too Lean (Bank 2)
P0174	27	System Too Lean (Bank 2)
P0175	25	System Too Rich (Bank 2)

P0175	27	System Too Rich (Bank 2)
P0201	150	Injector Circuit/Open - Cylinder 1
P0202	157	Injector Circuit/Open - Cylinder 2
P0203	155	Injector Circuit/Open - Cylinder 3
P0204	152	Injector Circuit/Open - Cylinder 4
P0205	151	Injector Circuit/Open - Cylinder 5
P0206	154	Injector Circuit/Open - Cylinder 6
P0207	156	Injector Circuit/Open - Cylinder 7
P0208	153	Injector Circuit/Open - Cylinder 8
P0221	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Range/Performance
P0222	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Low
P0223	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit High
P0261	150	Cylinder 1 Injector Circuit Low
P0262	150	Cylinder 1 Injector Circuit High
P0264	157	Cylinder 2 Injector Circuit Low
P0265	157	Cylinder 2 Injector Circuit High
P0267	155	Cylinder 3 Injector Circuit Low
P0268	155	Cylinder 3 Injector Circuit High
P0270	152	Cylinder 4 Injector Circuit Low
P0271	152	Cylinder 4 Injector Circuit High
P0273	151	Cylinder 5 Injector Circuit Low
P0274	151	Cylinder 5 Injector Circuit High
P0276	154	Cylinder 6 Injector Circuit Low
P0277	154	Cylinder 6 Injector Circuit High
P0279	156	Cylinder 7 Injector Circuit Low
P0280	156	Cylinder 7 Injector Circuit High
P0282	153	Cylinder 8 Injector Circuit Low
P0283	153	Cylinder 8 Injector Circuit High
P0300	62	Random/Multiple Cylinder Misfire Detected
P0301	50	Cylinder 1 Misfire Detected
P0302	57	Cylinder 2 Misfire Detected
P0303	55	Cylinder 3 Misfire Detected
P0304	52	Cylinder 4 Misfire Detected
P0305	51	Cylinder 5 Misfire Detected
P0306	54	Cylinder 6 Misfire Detected
P0307	56	Cylinder 7 Misfire Detected
P0308	53	Cylinder 8 Misfire Detected
P0324	214	Knock Control System Error
P0324	215	Knock Control System Error
P0324	216	Knock Control System Error
P0327	210	Knock Sensor 1 Circuit Low (Bank 1 or Single Sensor)
P0328	210	Knock Sensor 1 Circuit High (Bank 1 or Single Sensor)
P0332	212	Knock Sensor 2 Circuit Low (Bank 2)
P0333	212	Knock Sensor 2 Circuit High Input (Bank 2)
P0335	111	Crankshaft Position Sensor 'A' Circuit
P0340	113	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0342	113	Camshaft Position Sensor 'A' Circuit Low (Bank 1 or Single Sensor)
P0343	113	Camshaft Position Sensor 'A' Circuit High (Bank 1 or Single Sensor)
P0345	114	Camshaft Position Sensor 'A' Circuit (Bank 2)
P0347	114	Camshaft Position Sensor 'A' Circuit Low (Bank 2)
P0348	114	Camshaft Position Sensor 'A' Circuit High (Bank 2)
P0370	112	Timing Reference High Resolution Signal 'A'
P0412	85	Secondary Air Injection System Switching Valve A Circuit

P0413	85	Secondary Air Injection System Switching Valve A Circuit Open
P0414	85	Secondary Air Injection System Switching Valve A Circuit Shorted
P0418	84	Secondary Air Injection System Control 'A' Circuit
P0420	40	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	45	Catalyst System Efficiency Below Threshold (Bank 2)
P0440	93	Evaporative Emission System
P0442	183	Evaporative Emission System Leak Detected (small leak)
P0442	188	Evaporative Emission System Leak Detected (small leak)
P0443	98	Evaporative Emission System Purge Control Valve Circuit
P0444	98	Evaporative Emission System Purge Control Valve Circuit Open
P0445	98	Evaporative Emission System Purge Control Valve Circuit Shorted
P0450	185	Evaporative Emission System Pressure Sensor/Switch
P0452	185	Evaporative Emission System Pressure Sensor/Switch Low
P0453	185	Evaporative Emission System Pressure Sensor/Switch High
P0455	183	Evaporative Emission System Leak Detected (large leak)
P0455	188	Evaporative Emission System Leak Detected (large leak)
P0491	80	Secondary Air Injection System Insufficient Flow (Bank 1)
P0492	81	Secondary Air Injection System Insufficient Flow (Bank 2)
P0500	120	Vehicle Speed Sensor 'A'
P0506	32	Idle Air Control System RPM Lower Than Expected
P0507	32	Idle Air Control System RPM Higher Than Expected
P0600	220	Serial Communication Link
P1102	163	Idle Control System, Adaptation of Unmetered Air Mass Too Low
P1103	163	Idle Control System, Adaptation of Unmetered Air Mass Too Large
P1134	13	O2 Sensor Heater Circuit Signal Intermittent (Bank 1 Sensor 1)
P1135	13	O2 Sensor Heater Circuit Low Voltage (Bank 1 Sensor 1)
P1136	13	O2 Sensor Heater Circuit High Voltage (Bank 1 Sensor 1)
P1137	14	O2 Sensor Heater Circuit Signal Intermittent (Bank 1 Sensor 2)
P1138	14	O2 Sensor Heater Circuit Low Voltage (Bank 1 Sensor 2)
P1139	14	O2 Sensor Heater Circuit High Voltage (Bank 1 Sensor 2)
P1151	5	O2 Sensor Heater Circuit Signal Intermittent (Bank 2 Sensor 1)
P1152	5	O2 Sensor Heater Circuit Low Voltage (Bank 2 Sensor 1)
P1153	5	O2 Sensor Heater Circuit High Voltage (Bank 2 Sensor 1)
P1155	4	O2 Sensor Heater Circuit Signal Intermittent (Bank 2 Sensor 2)
P1156	4	O2 Sensor Heater Circuit Low Voltage (Bank 2 Sensor 2)
P1157	4	O2 Sensor Heater Circuit High Voltage (Bank 2 Sensor 2)
P1158	28	Fuel Trim Adaptation Additive Low (Bank 1)
P1159	28	Fuel Trim Adaptation Additive High (Bank 1)
P1160	29	Fuel Trim Adaptation Additive Low (Bank 2)
P1161	29	Fuel Trim Adaptation Additive High (Bank 2) (M52: Engine Oil Temperature Sensor Circuit)
P1327	211	Knock Sensor 2 Circuit Low Input (Bank 1)
P1328	211	Knock Sensor 2 Circuit High Input (Bank 1)
P1332	213	Knock Sensor 4 Circuit Low Input
P1333	213	Knock Sensor 4 Circuit High Input
P1340	62	Multiple Cylinder Misfire During Start
P1341	62	Multiple Cylinder Misfire with Fuel Cut-Off
P1342	50	Misfire During Start Cylinder 1
P1343	50	Misfire Cylinder 1 with Fuel Cut-Off
P1344	57	Misfire During Start Cylinder 2
P1345	57	Misfire Cylinder 2 with Fuel Cut-Off
P1346	55	Misfire During Start Cylinder 3
P1347	55	Misfire Cylinder 3 with Fuel Cut-Off
P1348	52	Misfire During Start Cylinder 4

P1349	52	Misfire Cylinder 4 with Fuel Cut-Off
P1350	51	Misfire during Start Cylinder 5
P1351	51	Misfire Cylinder 5 with Fuel Cut-Off
P1352	54	Misfire during Start Cylinder 6
P1353	54	Misfire Cylinder 6 with Fuel Cut-Off
P1354	56	Misfire during Start Cylinder 7
P1355	56	Misfire Cylinder 7 with Fuel Cut-Off
P1356	53	Misfire during Start Cylinder 8
P1357	53	Misfire Cylinder 8 with Fuel Cut-Off
P1413	84	Secondary Air Injection Pump Relay Control Circuit Signal Low
P1414	84	Secondary Air Injection Pump Relay Control Circuit Signal High
P1441	1	Leakage Diagnostic Pump Control Open Circuit
P1442	1	Leakage Diagnostic Pump Control Circuit Signal Low
P1443	1	Leakage Diagnostic Pump Control Circuit Signal High
P1444	186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Open Circuit
P1445	186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Circuit Signal Low
P1446	186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Circuit Signal High
P1447	189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High during Switching Solenoid Test
P1448	189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too Low
P1449	189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High
P1450	2	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Open Circuit
P1451	2	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal Low
P1452	2	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal High
P1476	184	Leakage Diagnostic Pump Clamped Tube (M52 MY99/00: Leakage Diagnostic Pump Reed Switch Circuit)
P1523	165	'A' Camshaft Position Actuator Signal Low (Bank 1) (M52: 'B' Camshaft Position Actuator Tight or Jammed)
P1524	165	'A' Camshaft Position Actuator Control Circuit Signal High (Bank 1)
P1525	165	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1526	166	'A' Camshaft Position Actuator Control Open Circuit (Bank 2)
P1527	166	'A' Camshaft Position Actuator Control Circuit Signal Low (Bank 2)
P1528	166	'A' Camshaft Position Actuator Control Circuit Signal High (Bank 2)
P1633	136	Throttle Valve Adaptation Limp-Home Position Unknown
P1634	133	Throttle Valve Adaptation Spring Test Failed
P1635	134	Throttle Valve Adaptation Lower Mechanical Stop not Adapted
P1636	132	Throttle Valve Control Circuit
P1637	130	Throttle Valve Position Control, Control Deviation
P1638	131	Throttle Valve Position Control Throttle Stuck Temporarily
P1639	131	Throttle Valve Position Control Throttle Stuck Permanently
P1643	135	Throttle Valve Actuator Start Test Amplifier Balancing Plausibility

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## ECU: ME7.2, Engine: M62-E38, from 01.03.00 till 31.08.01

PCode	BMW-FC	PCode text
P0010	33	'A' Camshaft Position Actuator Circuit (Bank 1)
P0011	33	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)
P0012	33	'A' Camshaft Position Timing Over-Retarded (Bank 1)
P0020	34	'A' Camshaft Position Actuator Circuit (Bank 2)
P0021	34	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 2)
P0022	34	'A' Camshaft Position Timing Over-Retarded (Bank 2)
P0102	115	Mass or Volume Air Flow Circuit Low Input
P0103	115	Mass or Volume Air Flow Circuit High Input

P0112	124	Intake Air Temperature Sensor 1 Circuit Low
P0113	124	Intake Air Temperature Sensor 1 Circuit High
P0116	123	Engine Coolant Temperature Circuit Range/Performance
P0117	123	Engine Coolant Temperature Circuit Low
P0118	123	Engine Coolant Temperature Circuit High
P0119	123	Engine Coolant Temperature Circuit Intermittent
P0120	117	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0121	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0122	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Low
P0123	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit High
P0130	10	O2 Sensor Circuit (Bank 1 Sensor 1)
P0131	10	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 1)
P0132	10	O2 Sensor Circuit High Voltage (Bank 1 Sensor 1)
P0133	15	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0134	10	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0135	13	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	12	O2 Sensor Circuit (Bank 1 Sensor 2)
P0137	12	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 2)
P0138	12	O2 Sensor Circuit High Voltage (Bank 1 Sensor 2)
P0139	17	O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0140	12	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 2)
P0141	14	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0150	18	O2 Sensor Circuit (Bank 2 Sensor 1)
P0151	18	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 1)
P0152	18	O2 Sensor Circuit High Voltage (Bank 2 Sensor 1)
P0153	21	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0154	18	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0155	5	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0156	20	O2 Sensor Circuit (Bank 2 Sensor 2)
P0157	20	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 2)
P0158	20	O2 Sensor Circuit High Voltage (Bank 2 Sensor 2)
P0159	23	O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0160	20	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 2)
P0161	4	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0171	24	System Too Lean (Bank 1)
P0171	26	System Too Lean (Bank 1)
P0172	24	System Too Rich (Bank 1)
P0172	26	System Too Rich (Bank 1)
P0174	25	System Too Lean (Bank 2)
P0174	27	System Too Lean (Bank 2)
P0175	25	System Too Rich (Bank 2)
P0175	27	System Too Rich (Bank 2)
P0201	150	Injector Circuit/Open - Cylinder 1
P0202	157	Injector Circuit/Open - Cylinder 2
P0203	155	Injector Circuit/Open - Cylinder 3
P0204	152	Injector Circuit/Open - Cylinder 4
P0205	151	Injector Circuit/Open - Cylinder 5
P0206	154	Injector Circuit/Open - Cylinder 6
P0207	156	Injector Circuit/Open - Cylinder 7
P0208	153	Injector Circuit/Open - Cylinder 8
P0221	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Range/Performance
P0222	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Low
P0223	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit High



P0261	150	Cylinder 1 Injector Circuit Low
P0262	150	Cylinder 1 Injector Circuit High
P0264	157	Cylinder 2 Injector Circuit Low
P0265	157	Cylinder 2 Injector Circuit High
P0267	155	Cylinder 3 Injector Circuit Low
P0268	155	Cylinder 3 Injector Circuit High
P0270	152	Cylinder 4 Injector Circuit Low
P0271	152	Cylinder 4 Injector Circuit High
P0273	151	Cylinder 5 Injector Circuit Low
P0274	151	Cylinder 5 Injector Circuit High
P0276	154	Cylinder 6 Injector Circuit Low
P0277	154	Cylinder 6 Injector Circuit High
P0279	156	Cylinder 7 Injector Circuit Low
P0280	156	Cylinder 7 Injector Circuit High
P0282	153	Cylinder 8 Injector Circuit Low
P0283	153	Cylinder 8 Injector Circuit High
P0300	62	Random/Multiple Cylinder Misfire Detected
P0301	50	Cylinder 1 Misfire Detected
P0302	57	Cylinder 2 Misfire Detected
P0303	55	Cylinder 3 Misfire Detected
P0304	52	Cylinder 4 Misfire Detected
P0305	51	Cylinder 5 Misfire Detected
P0306	54	Cylinder 6 Misfire Detected
P0307	56	Cylinder 7 Misfire Detected
P0308	53	Cylinder 8 Misfire Detected
P0324	214	Knock Control System Error
P0324	215	Knock Control System Error
P0324	216	Knock Control System Error
P0327	210	Knock Sensor 1 Circuit Low (Bank 1 or Single Sensor)
P0328	210	Knock Sensor 1 Circuit High (Bank 1 or Single Sensor)
P0332	212	Knock Sensor 2 Circuit Low (Bank 2)
P0333	212	Knock Sensor 2 Circuit High Input (Bank 2)
P0335	111	Crankshaft Position Sensor 'A' Circuit
P0340	113	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0342	113	Camshaft Position Sensor 'A' Circuit Low (Bank 1 or Single Sensor)
P0343	113	Camshaft Position Sensor 'A' Circuit High (Bank 1 or Single Sensor)
P0345	114	Camshaft Position Sensor 'A' Circuit (Bank 2)
P0347	114	Camshaft Position Sensor 'A' Circuit Low (Bank 2)
P0348	114	Camshaft Position Sensor 'A' Circuit High (Bank 2)
P0370	112	Timing Reference High Resolution Signal 'A'
P0412	85	Secondary Air Injection System Switching Valve A Circuit
P0413	85	Secondary Air Injection System Switching Valve A Circuit Open
P0414	85	Secondary Air Injection System Switching Valve A Circuit Shorted
P0418	84	Secondary Air Injection System Control 'A' Circuit
P0420	40	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	45	Catalyst System Efficiency Below Threshold (Bank 2)
P0440	93	Evaporative Emission System
P0442	183	Evaporative Emission System Leak Detected (small leak)
P0442	188	Evaporative Emission System Leak Detected (small leak)
P0443	98	Evaporative Emission System Purge Control Valve Circuit
P0444	98	Evaporative Emission System Purge Control Valve Circuit Open
P0445	98	Evaporative Emission System Purge Control Valve Circuit Shorted
P0450	185	Evaporative Emission System Pressure Sensor/Switch

P0452	185	Evaporative Emission System Pressure Sensor/Switch Low
P0453	185	Evaporative Emission System Pressure Sensor/Switch High
P0455	183	Evaporative Emission System Leak Detected (large leak)
P0455	188	Evaporative Emission System Leak Detected (large leak)
P0491	80	Secondary Air Injection System Insufficient Flow (Bank 1)
P0492	81	Secondary Air Injection System Insufficient Flow (Bank 2)
P0500	120	Vehicle Speed Sensor 'A'
P0506	32	Idle Air Control System RPM Lower Than Expected
P0507	32	Idle Air Control System RPM Higher Than Expected
P0600	220	Serial Communication Link
P1102	163	Idle Control System, Adaptation of Unmetered Air Mass Too Low
P1103	163	Idle Control System, Adaptation of Unmetered Air Mass Too Large
P1134	13	O2 Sensor Heater Circuit Signal Intermittent (Bank 1 Sensor 1)
P1135	13	O2 Sensor Heater Circuit Low Voltage (Bank 1 Sensor 1)
P1136	13	O2 Sensor Heater Circuit High Voltage (Bank 1 Sensor 1)
P1137	14	O2 Sensor Heater Circuit Signal Intermittent (Bank 1 Sensor 2)
P1138	14	O2 Sensor Heater Circuit Low Voltage (Bank 1 Sensor 2)
P1139	14	O2 Sensor Heater Circuit High Voltage (Bank 1 Sensor 2)
P1151	5	O2 Sensor Heater Circuit Signal Intermittent (Bank 2 Sensor 1)
P1152	5	O2 Sensor Heater Circuit Low Voltage (Bank 2 Sensor 1)
P1153	5	O2 Sensor Heater Circuit High Voltage (Bank 2 Sensor 1)
P1155	4	O2 Sensor Heater Circuit Signal Intermittent (Bank 2 Sensor 2)
P1156	4	O2 Sensor Heater Circuit Low Voltage (Bank 2 Sensor 2)
P1157	4	O2 Sensor Heater Circuit High Voltage (Bank 2 Sensor 2)
P1158	28	Fuel Trim Adaptation Additive Low (Bank 1)
P1159	28	Fuel Trim Adaptation Additive High (Bank 1)
P1160	29	Fuel Trim Adaptation Additive Low (Bank 2)
P1161	29	Fuel Trim Adaptation Additive High (Bank 2) (M52: Engine Oil Temperature Sensor Circuit)
P1327	211	Knock Sensor 2 Circuit Low Input (Bank 1)
P1328	211	Knock Sensor 2 Circuit High Input (Bank 1)
P1332	213	Knock Sensor 4 Circuit Low Input
P1333	213	Knock Sensor 4 Circuit High Input
P1340	62	Multiple Cylinder Misfire During Start
P1341	62	Multiple Cylinder Misfire with Fuel Cut-Off
P1342	50	Misfire During Start Cylinder 1
P1343	50	Misfire Cylinder 1 with Fuel Cut-Off
P1344	57	Misfire During Start Cylinder 2
P1345	57	Misfire Cylinder 2 with Fuel Cut-Off
P1346	55	Misfire During Start Cylinder 3
P1347	55	Misfire Cylinder 3 with Fuel Cut-Off
P1348	52	Misfire During Start Cylinder 4
P1349	52	Misfire Cylinder 4 with Fuel Cut-Off
P1350	51	Misfire during Start Cylinder 5
P1351	51	Misfire Cylinder 5 with Fuel Cut-Off
P1352	54	Misfire during Start Cylinder 6
P1353	54	Misfire Cylinder 6 with Fuel Cut-Off
P1354	56	Misfire during Start Cylinder 7
P1355	56	Misfire Cylinder 7 with Fuel Cut-Off
P1356	53	Misfire during Start Cylinder 8
P1357	53	Misfire Cylinder 8 with Fuel Cut-Off
P1413	84	Secondary Air Injection Pump Relay Control Circuit Signal Low
P1414	84	Secondary Air Injection Pump Relay Control Circuit Signal High
P1441	1	Leakage Diagnostic Pump Control Open Circuit

P1442	1	Leakage Diagnostic Pump Control Circuit Signal Low
P1443	1	Leakage Diagnostic Pump Control Circuit Signal High
P1444	186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Open Circuit
P1445	186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Circuit Signal Low
P1446	186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Circuit Signal High
P1447	189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High during Switching Solenoid Test
P1448	189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too Low
P1449	189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High
P1450	2	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Open Circuit
P1451	2	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal Low
P1452	2	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal High
P1476	184	Leakage Diagnostic Pump Clamped Tube (M52 MY99/00: Leakage Diagnostic Pump Reed Switch Circuit)
P1523	165	'A' Camshaft Position Actuator Signal Low (Bank 1) (M52: 'B' Camshaft Position Actuator Tight or Jammed)
P1524	165	'A' Camshaft Position Actuator Control Circuit Signal High (Bank 1)
P1525	165	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1526	166	'A' Camshaft Position Actuator Control Open Circuit (Bank 2)
P1527	166	'A' Camshaft Position Actuator Control Circuit Signal Low (Bank 2)
P1528	166	'A' Camshaft Position Actuator Control Circuit Signal High (Bank 2)
P1633	136	Throttle Valve Adaptation Limp-Home Position Unknown
P1634	133	Throttle Valve Adaptation Spring Test Failed
P1635	134	Throttle Valve Adaptation Lower Mechanical Stop not Adapted
P1636	132	Throttle Valve Control Circuit
P1637	130	Throttle Valve Position Control, Control Deviation
P1638	131	Throttle Valve Position Control Throttle Stuck Temporarily
P1639	131	Throttle Valve Position Control Throttle Stuck Permanently
P1643	135	Throttle Valve Actuator Start Test Amplifier Balancing Plausibility

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## ECU: ME7.2, Engine: M62-E39, from 01.09.98 till 31.05.99

PCode	BMW-FC	PCode text
P0100	115	Mass or Volume Air Flow Circuit
P0111	124	Intake Air Temperature Sensor 1 Circuit Range/Performance
P0116	123	Engine Coolant Temperature Circuit Range/Performance
P0120	117	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0120	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0120	119	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0130	10	O2 Sensor Circuit (Bank 1 Sensor 1)
P0133	15	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0135	13	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	12	O2 Sensor Circuit (Bank 1 Sensor 2)
P0139	17	O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0141	14	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0150	18	O2 Sensor Circuit (Bank 2 Sensor 1)
P0153	21	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0155	5	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0156	20	O2 Sensor Circuit (Bank 2 Sensor 2)
P0159	23	O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0161	4	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0170	24	Fuel Trim (Bank 1)
P0170	26	Fuel Trim (Bank 1)

P0173	25	Fuel Trim (Bank 2)
P0173	27	Fuel Trim (Bank 2)
P0201	150	Injector Circuit/Open - Cylinder 1
P0202	154	Injector Circuit/Open - Cylinder 2
P0203	153	Injector Circuit/Open - Cylinder 3
P0204	157	Injector Circuit/Open - Cylinder 4
P0205	155	Injector Circuit/Open - Cylinder 5
P0206	152	Injector Circuit/Open - Cylinder 6
P0207	156	Injector Circuit/Open - Cylinder 7
P0208	151	Injector Circuit/Open - Cylinder 8
P0300	62	Random/Multiple Cylinder Misfire Detected
P0301	50	Cylinder 1 Misfire Detected
P0302	54	Cylinder 2 Misfire Detected
P0303	53	Cylinder 3 Misfire Detected
P0304	57	Cylinder 4 Misfire Detected
P0305	55	Cylinder 5 Misfire Detected
P0306	52	Cylinder 6 Misfire Detected
P0307	56	Cylinder 7 Misfire Detected
P0308	51	Cylinder 8 Misfire Detected
P0325	210	Knock Sensor 1 Circuit (Bank 1 or Single Sensor)
P0330	211	Knock Sensor 2 Circuit (Bank 2)
P0335	111	Crankshaft Position Sensor 'A' Circuit
P0340	113	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0420	40	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	45	Catalyst System Efficiency Below Threshold (Bank 2)
P0440	93	Evaporative Emission System
P0442	182	Evaporative Emission System Leak Detected (small leak)
P0442	183	Evaporative Emission System Leak Detected (small leak)
P0443	98	Evaporative Emission System Purge Control Valve Circuit
P0500	120	Vehicle Speed Sensor 'A'
P0505	32	Idle Air Control System
P0600	220	Serial Communication Link
P0601	105	Internal Control Module Memory Check Sum Error
P0605	101	Internal Control Module Read Only Memory (ROM) Error
P0605	103	Internal Control Module Read Only Memory (ROM) Error
P0605	107	Internal Control Module Read Only Memory (ROM) Error
P0605	108	Internal Control Module Read Only Memory (ROM) Error
P1140	163	Mass or Volume Air Flow Circuit Range/Performance Problem
P1174	28	Fuel Trim Adaptation Malfunction (Bank 1)
P1175	29	Fuel Trim Adaptation Additive Malfunction (Bank 2)
P1340	114	Multiple Cylinder Misfire During Start
P1384	212	Knock Sensor 3 Circuit
P1385	213	Knock Sensor 4 Circuit
P1386	214	Control Module Self-Test, Knock Control Circuit Baseline Test (Bank 1)
P1386	215	Control Module Self-Test, Knock Control Circuit Baseline Test (Bank 1)
P1386	216	Control Module Self-Test, Knock Control Circuit Baseline Test (Bank 1)
P1396	112	Crankshaft Position Sensor Segment Timing Plausibility
P1420	85	Secondary Air Injection Valve Control Circuit Electrical
P1421	81	Secondary Air System (Bank 2)
P1423	80	Secondary Air System (Bank 1)
P1453	84	Secondary Air Injection Pump Relay Control Circuit Electrical
P1470	1	Leakage Diagnostic Pump Control Circuit Electrical
P1475	185	Leakage Diagnostic Pump Reed Switch Did not Close

P1476	184	Leakage Diagnostic Pump Clamped Tube (M52 MY99/00: Leakage Diagnostic Pump Reed Switch Circuit)
P1519	33	Oil-Condition Sensor Temperature Measurement (M62/M52/S52: 'A' Camshaft Position Actuator Bank 1)
P1522	34	Oil-Condition Sensor Permeability Measurement (M62: 'A' Camshaft Position Actuator Bank 2; M52: 'A' Camshaft Position Actuator Tight or Jammed)
P1525	165	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1526	166	'A' Camshaft Position Actuator Control Open Circuit (Bank 2)
P1530	130	'B' Camshaft Position Actuator Control Circuit Signal High (Bank 1) (S54 to 09/00: Throttle Valve Position Control, Control Deviation)
P1531	131	'B' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1532	132	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (S54 to 09/00: Throttle Valve Control Circuit)
P1622	140	Map Cooling Thermostat Control Circuit Electrical

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## ECU: ME7.2, Engine: M62-E39, from 01.06.99 till 31.08.00

PCode BMW-FC PCode text

P0010	33	'A' Camshaft Position Actuator Circuit (Bank 1)
P0011	33	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)
P0012	33	'A' Camshaft Position Timing Over-Retarded (Bank 1)
P0020	34	'A' Camshaft Position Actuator Circuit (Bank 2)
P0021	34	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 2)
P0022	34	'A' Camshaft Position Timing Over-Retarded (Bank 2)
P0102	115	Mass or Volume Air Flow Circuit Low Input
P0103	115	Mass or Volume Air Flow Circuit High Input
P0112	124	Intake Air Temperature Sensor 1 Circuit Low
P0113	124	Intake Air Temperature Sensor 1 Circuit High
P0116	123	Engine Coolant Temperature Circuit Range/Performance
P0117	123	Engine Coolant Temperature Circuit Low
P0118	123	Engine Coolant Temperature Circuit High
P0119	123	Engine Coolant Temperature Circuit Intermittent
P0120	117	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0121	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0122	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Low
P0123	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit High
P0130	10	O2 Sensor Circuit (Bank 1 Sensor 1)
P0131	10	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 1)
P0132	10	O2 Sensor Circuit High Voltage (Bank 1 Sensor 1)
P0133	15	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0134	10	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0135	13	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	12	O2 Sensor Circuit (Bank 1 Sensor 2)
P0137	12	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 2)
P0138	12	O2 Sensor Circuit High Voltage (Bank 1 Sensor 2)
P0139	17	O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0140	12	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 2)
P0141	14	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0150	18	O2 Sensor Circuit (Bank 2 Sensor 1)
P0151	18	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 1)
P0152	18	O2 Sensor Circuit High Voltage (Bank 2 Sensor 1)
P0153	21	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0154	18	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)

P0155	5	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0156	20	O2 Sensor Circuit (Bank 2 Sensor 2)
P0157	20	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 2)
P0158	20	O2 Sensor Circuit High Voltage (Bank 2 Sensor 2)
P0159	23	O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0160	20	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 2)
P0161	4	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0171	24	System Too Lean (Bank 1)
P0171	26	System Too Lean (Bank 1)
P0172	24	System Too Rich (Bank 1)
P0172	26	System Too Rich (Bank 1)
P0174	25	System Too Lean (Bank 2)
P0174	27	System Too Lean (Bank 2)
P0175	25	System Too Rich (Bank 2)
P0175	27	System Too Rich (Bank 2)
P0201	150	Injector Circuit/Open - Cylinder 1
P0202	157	Injector Circuit/Open - Cylinder 2
P0203	155	Injector Circuit/Open - Cylinder 3
P0204	152	Injector Circuit/Open - Cylinder 4
P0205	151	Injector Circuit/Open - Cylinder 5
P0206	154	Injector Circuit/Open - Cylinder 6
P0207	156	Injector Circuit/Open - Cylinder 7
P0208	153	Injector Circuit/Open - Cylinder 8
P0221	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Range/Performance
P0222	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Low
P0223	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit High
P0261	150	Cylinder 1 Injector Circuit Low
P0262	150	Cylinder 1 Injector Circuit High
P0264	157	Cylinder 2 Injector Circuit Low
P0265	157	Cylinder 2 Injector Circuit High
P0267	155	Cylinder 3 Injector Circuit Low
P0268	155	Cylinder 3 Injector Circuit High
P0270	152	Cylinder 4 Injector Circuit Low
P0271	152	Cylinder 4 Injector Circuit High
P0273	151	Cylinder 5 Injector Circuit Low
P0274	151	Cylinder 5 Injector Circuit High
P0276	154	Cylinder 6 Injector Circuit Low
P0277	154	Cylinder 6 Injector Circuit High
P0279	156	Cylinder 7 Injector Circuit Low
P0280	156	Cylinder 7 Injector Circuit High
P0282	153	Cylinder 8 Injector Circuit Low
P0283	153	Cylinder 8 Injector Circuit High
P0300	62	Random/Multiple Cylinder Misfire Detected
P0301	50	Cylinder 1 Misfire Detected
P0302	57	Cylinder 2 Misfire Detected
P0303	55	Cylinder 3 Misfire Detected
P0304	52	Cylinder 4 Misfire Detected
P0305	51	Cylinder 5 Misfire Detected
P0306	54	Cylinder 6 Misfire Detected
P0307	56	Cylinder 7 Misfire Detected
P0308	53	Cylinder 8 Misfire Detected
P0324	214	Knock Control System Error
P0324	215	Knock Control System Error

P0324	216	Knock Control System Error
P0327	210	Knock Sensor 1 Circuit Low (Bank 1 or Single Sensor)
P0328	210	Knock Sensor 1 Circuit High (Bank 1 or Single Sensor)
P0332	212	Knock Sensor 2 Circuit Low (Bank 2)
P0333	212	Knock Sensor 2 Circuit High Input (Bank 2)
P0335	111	Crankshaft Position Sensor 'A' Circuit
P0340	113	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0342	113	Camshaft Position Sensor 'A' Circuit Low (Bank 1 or Single Sensor)
P0343	113	Camshaft Position Sensor 'A' Circuit High (Bank 1 or Single Sensor)
P0345	114	Camshaft Position Sensor 'A' Circuit (Bank 2)
P0347	114	Camshaft Position Sensor 'A' Circuit Low (Bank 2)
P0348	114	Camshaft Position Sensor 'A' Circuit High (Bank 2)
P0370	112	Timing Reference High Resolution Signal 'A'
P0412	85	Secondary Air Injection System Switching Valve A Circuit
P0413	85	Secondary Air Injection System Switching Valve A Circuit Open
P0414	85	Secondary Air Injection System Switching Valve A Circuit Shorted
P0418	84	Secondary Air Injection System Control 'A' Circuit
P0420	40	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	45	Catalyst System Efficiency Below Threshold (Bank 2)
P0440	93	Evaporative Emission System
P0442	183	Evaporative Emission System Leak Detected (small leak)
P0442	188	Evaporative Emission System Leak Detected (small leak)
P0443	98	Evaporative Emission System Purge Control Valve Circuit
P0444	98	Evaporative Emission System Purge Control Valve Circuit Open
P0445	98	Evaporative Emission System Purge Control Valve Circuit Shorted
P0450	185	Evaporative Emission System Pressure Sensor/Switch
P0452	185	Evaporative Emission System Pressure Sensor/Switch Low
P0453	185	Evaporative Emission System Pressure Sensor/Switch High
P0455	183	Evaporative Emission System Leak Detected (large leak)
P0455	188	Evaporative Emission System Leak Detected (large leak)
P0491	80	Secondary Air Injection System Insufficient Flow (Bank 1)
P0492	81	Secondary Air Injection System Insufficient Flow (Bank 2)
P0500	120	Vehicle Speed Sensor 'A'
P0506	32	Idle Air Control System RPM Lower Than Expected
P0507	32	Idle Air Control System RPM Higher Than Expected
P0600	220	Serial Communication Link
P1102	163	Idle Control System, Adaptation of Unmetered Air Mass Too Low
P1103	163	Idle Control System, Adaptation of Unmetered Air Mass Too Large
P1134	13	O2 Sensor Heater Circuit Signal Intermittent (Bank 1 Sensor 1)
P1135	13	O2 Sensor Heater Circuit Low Voltage (Bank 1 Sensor 1)
P1136	13	O2 Sensor Heater Circuit High Voltage (Bank 1 Sensor 1)
P1137	14	O2 Sensor Heater Circuit Signal Intermittent (Bank 1 Sensor 2)
P1138	14	O2 Sensor Heater Circuit Low Voltage (Bank 1 Sensor 2)
P1139	14	O2 Sensor Heater Circuit High Voltage (Bank 1 Sensor 2)
P1151	5	O2 Sensor Heater Circuit Signal Intermittent (Bank 2 Sensor 1)
P1152	5	O2 Sensor Heater Circuit Low Voltage (Bank 2 Sensor 1)
P1153	5	O2 Sensor Heater Circuit High Voltage (Bank 2 Sensor 1)
P1155	4	O2 Sensor Heater Circuit Signal Intermittent (Bank 2 Sensor 2)
P1156	4	O2 Sensor Heater Circuit Low Voltage (Bank 2 Sensor 2)
P1157	4	O2 Sensor Heater Circuit High Voltage (Bank 2 Sensor 2)
P1158	28	Fuel Trim Adaptation Additive Low (Bank 1)
P1159	28	Fuel Trim Adaptation Additive High (Bank 1)
P1160	29	Fuel Trim Adaptation Additive Low (Bank 2)

P1161	29	Fuel Trim Adaptation Additive High (Bank 2) (M52: Engine Oil Temperature Sensor Circuit)
P1327	211	Knock Sensor 2 Circuit Low Input (Bank 1)
P1328	211	Knock Sensor 2 Circuit High Input (Bank 1)
P1332	213	Knock Sensor 4 Circuit Low Input
P1333	213	Knock Sensor 4 Circuit High Input
P1340	62	Multiple Cylinder Misfire During Start
P1341	62	Multiple Cylinder Misfire with Fuel Cut-Off
P1342	50	Misfire During Start Cylinder 1
P1343	50	Misfire Cylinder 1 with Fuel Cut-Off
P1344	57	Misfire During Start Cylinder 2
P1345	57	Misfire Cylinder 2 with Fuel Cut-Off
P1346	55	Misfire During Start Cylinder 3
P1347	55	Misfire Cylinder 3 with Fuel Cut-Off
P1348	52	Misfire During Start Cylinder 4
P1349	52	Misfire Cylinder 4 with Fuel Cut-Off
P1350	51	Misfire during Start Cylinder 5
P1351	51	Misfire Cylinder 5 with Fuel Cut-Off
P1352	54	Misfire during Start Cylinder 6
P1353	54	Misfire Cylinder 6 with Fuel Cut-Off
P1354	56	Misfire during Start Cylinder 7
P1355	56	Misfire Cylinder 7 with Fuel Cut-Off
P1356	53	Misfire during Start Cylinder 8
P1357	53	Misfire Cylinder 8 with Fuel Cut-Off
P1413	84	Secondary Air Injection Pump Relay Control Sircuit Signal Low
P1414	84	Secondary Air Injection Pump Relay Control Circuit Signal High
P1441	1	Leakage Diagnostic Pump Control Open Circuit
P1442	1	Leakage Diagnostic Pump Control Circuit Signal Low
P1443	1	Leakage Diagnostic Pump Control Circuit Signal High
P1444	186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Open Circuit
P1445	186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Circuit Signal Low
P1446	186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Circuit Signal High
P1447	189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High during Switching Solenoid Test
P1448	189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too Low
P1449	189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High
P1450	2	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Open Circuit
P1451	2	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal Low
P1452	2	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal High
P1476	184	Leakage Diagnostic Pump Clamped Tube (M52 MY99/00: Leakage Diagnostic Pump Reed Switch Circuit)
P1523	165	'A' Camshaft Position Actuator Signal Low (Bank 1) (M52: 'B' Camshaft Position Actuator Tight or Jammed)
P1524	165	'A' Camshaft Position Actuator Control Circuit Signal High (Bank 1)
P1525	165	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1526	166	'A' Camshaft Position Actuator Control Open Circuit (Bank 2)
P1527	166	'A' Camshaft Position Actuator Control Circuit Signal Low (Bank 2)
P1528	166	'A' Camshaft Position Actuator Control Circuit Signal High (Bank 2)
P1633	136	Throttle Valve Adaptation Limp-Home Position Unknown
P1634	133	Throttle Valve Adaptation Spring Test Failed
P1635	134	Throttle Valve Adaptation Lower Mechanical Stop not Adapted
P1636	132	Throttle Valve Control Circuit
P1637	130	Throttle Valve Position Control, Control Deviation
P1638	131	Throttle Valve Position Control Throttle Stuck Temporarily
P1639	131	Throttle Valve Position Control Throttle Stuck Permanently



**ECU: ME7.2, Engine: M62-E39, from 01.09.00 till 31.08.01**

PCode BMW-FC PCode text

P0010	33	'A' Camshaft Position Actuator Circuit (Bank 1)
P0011	33	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)
P0012	33	'A' Camshaft Position Timing Over-Retarded (Bank 1)
P0020	34	'A' Camshaft Position Actuator Circuit (Bank 2)
P0021	34	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 2)
P0022	34	'A' Camshaft Position Timing Over-Retarded (Bank 2)
P0102	115	Mass or Volume Air Flow Circuit Low Input
P0103	115	Mass or Volume Air Flow Circuit High Input
P0112	124	Intake Air Temperature Sensor 1 Circuit Low
P0113	124	Intake Air Temperature Sensor 1 Circuit High
P0116	123	Engine Coolant Temperature Circuit Range/Performance
P0117	123	Engine Coolant Temperature Circuit Low
P0118	123	Engine Coolant Temperature Circuit High
P0119	123	Engine Coolant Temperature Circuit Intermittent
P0120	117	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0121	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0122	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Low
P0123	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit High
P0130	10	O2 Sensor Circuit (Bank 1 Sensor 1)
P0131	10	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 1)
P0132	10	O2 Sensor Circuit High Voltage (Bank 1 Sensor 1)
P0133	15	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0134	10	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0135	13	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	12	O2 Sensor Circuit (Bank 1 Sensor 2)
P0137	12	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 2)
P0138	12	O2 Sensor Circuit High Voltage (Bank 1 Sensor 2)
P0139	17	O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0140	12	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 2)
P0141	14	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0150	18	O2 Sensor Circuit (Bank 2 Sensor 1)
P0151	18	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 1)
P0152	18	O2 Sensor Circuit High Voltage (Bank 2 Sensor 1)
P0153	21	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0154	18	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0155	5	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0156	20	O2 Sensor Circuit (Bank 2 Sensor 2)
P0157	20	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 2)
P0158	20	O2 Sensor Circuit High Voltage (Bank 2 Sensor 2)
P0159	23	O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0160	20	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 2)
P0161	4	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0171	24	System Too Lean (Bank 1)
P0171	26	System Too Lean (Bank 1)
P0172	24	System Too Rich (Bank 1)
P0172	26	System Too Rich (Bank 1)
P0174	25	System Too Lean (Bank 2)

P0174	27	System Too Lean (Bank 2)
P0175	25	System Too Rich (Bank 2)
P0175	27	System Too Rich (Bank 2)
P0201	150	Injector Circuit/Open - Cylinder 1
P0202	157	Injector Circuit/Open - Cylinder 2
P0203	155	Injector Circuit/Open - Cylinder 3
P0204	152	Injector Circuit/Open - Cylinder 4
P0205	151	Injector Circuit/Open - Cylinder 5
P0206	154	Injector Circuit/Open - Cylinder 6
P0207	156	Injector Circuit/Open - Cylinder 7
P0208	153	Injector Circuit/Open - Cylinder 8
P0221	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Range/Performance
P0222	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Low
P0223	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit High
P0261	150	Cylinder 1 Injector Circuit Low
P0262	150	Cylinder 1 Injector Circuit High
P0264	157	Cylinder 2 Injector Circuit Low
P0265	157	Cylinder 2 Injector Circuit High
P0267	155	Cylinder 3 Injector Circuit Low
P0268	155	Cylinder 3 Injector Circuit High
P0270	152	Cylinder 4 Injector Circuit Low
P0271	152	Cylinder 4 Injector Circuit High
P0273	151	Cylinder 5 Injector Circuit Low
P0274	151	Cylinder 5 Injector Circuit High
P0276	154	Cylinder 6 Injector Circuit Low
P0277	154	Cylinder 6 Injector Circuit High
P0279	156	Cylinder 7 Injector Circuit Low
P0280	156	Cylinder 7 Injector Circuit High
P0282	153	Cylinder 8 Injector Circuit Low
P0283	153	Cylinder 8 Injector Circuit High
P0300	62	Random/Multiple Cylinder Misfire Detected
P0301	50	Cylinder 1 Misfire Detected
P0302	57	Cylinder 2 Misfire Detected
P0303	55	Cylinder 3 Misfire Detected
P0304	52	Cylinder 4 Misfire Detected
P0305	51	Cylinder 5 Misfire Detected
P0306	54	Cylinder 6 Misfire Detected
P0307	56	Cylinder 7 Misfire Detected
P0308	53	Cylinder 8 Misfire Detected
P0324	214	Knock Control System Error
P0324	215	Knock Control System Error
P0324	216	Knock Control System Error
P0327	210	Knock Sensor 1 Circuit Low (Bank 1 or Single Sensor)
P0328	210	Knock Sensor 1 Circuit High (Bank 1 or Single Sensor)
P0332	212	Knock Sensor 2 Circuit Low (Bank 2)
P0333	212	Knock Sensor 2 Circuit High Input (Bank 2)
P0335	111	Crankshaft Position Sensor 'A' Circuit
P0340	113	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0342	113	Camshaft Position Sensor 'A' Circuit Low (Bank 1 or Single Sensor)
P0343	113	Camshaft Position Sensor 'A' Circuit High (Bank 1 or Single Sensor)
P0345	114	Camshaft Position Sensor 'A' Circuit (Bank 2)
P0347	114	Camshaft Position Sensor 'A' Circuit Low (Bank 2)
P0348	114	Camshaft Position Sensor 'A' Circuit High (Bank 2)

P0370	112	Timing Reference High Resolution Signal 'A'
P0412	85	Secondary Air Injection System Switching Valve A Circuit
P0413	85	Secondary Air Injection System Switching Valve A Circuit Open
P0414	85	Secondary Air Injection System Switching Valve A Circuit Shorted
P0418	84	Secondary Air Injection System Control 'A' Circuit
P0420	40	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	45	Catalyst System Efficiency Below Threshold (Bank 2)
P0440	93	Evaporative Emission System
P0442	183	Evaporative Emission System Leak Detected (small leak)
P0442	188	Evaporative Emission System Leak Detected (small leak)
P0443	98	Evaporative Emission System Purge Control Valve Circuit
P0444	98	Evaporative Emission System Purge Control Valve Circuit Open
P0445	98	Evaporative Emission System Purge Control Valve Circuit Shorted
P0450	185	Evaporative Emission System Pressure Sensor/Switch
P0452	185	Evaporative Emission System Pressure Sensor/Switch Low
P0453	185	Evaporative Emission System Pressure Sensor/Switch High
P0455	183	Evaporative Emission System Leak Detected (large leak)
P0455	188	Evaporative Emission System Leak Detected (large leak)
P0491	80	Secondary Air Injection System Insufficient Flow (Bank 1)
P0492	81	Secondary Air Injection System Insufficient Flow (Bank 2)
P0500	120	Vehicle Speed Sensor 'A'
P0506	32	Idle Air Control System RPM Lower Than Expected
P0507	32	Idle Air Control System RPM Higher Than Expected
P0600	220	Serial Communication Link
P1102	163	Idle Control System, Adaptation of Unmetered Air Mass Too Low
P1103	163	Idle Control System, Adaptation of Unmetered Air Mass Too Large
P1134	13	O2 Sensor Heater Circuit Signal Intermittent (Bank 1 Sensor 1)
P1135	13	O2 Sensor Heater Circuit Low Voltage (Bank 1 Sensor 1)
P1136	13	O2 Sensor Heater Circuit High Voltage (Bank 1 Sensor 1)
P1137	14	O2 Sensor Heater Circuit Signal Intermittent (Bank 1 Sensor 2)
P1138	14	O2 Sensor Heater Circuit Low Voltage (Bank 1 Sensor 2)
P1139	14	O2 Sensor Heater Circuit High Voltage (Bank 1 Sensor 2)
P1151	5	O2 Sensor Heater Circuit Signal Intermittent (Bank 2 Sensor 1)
P1152	5	O2 Sensor Heater Circuit Low Voltage (Bank 2 Sensor 1)
P1153	5	O2 Sensor Heater Circuit High Voltage (Bank 2 Sensor 1)
P1155	4	O2 Sensor Heater Circuit Signal Intermittent (Bank 2 Sensor 2)
P1156	4	O2 Sensor Heater Circuit Low Voltage (Bank 2 Sensor 2)
P1157	4	O2 Sensor Heater Circuit High Voltage (Bank 2 Sensor 2)
P1158	28	Fuel Trim Adaptation Additive Low (Bank 1)
P1159	28	Fuel Trim Adaptation Additive High (Bank 1)
P1160	29	Fuel Trim Adaptation Additive Low (Bank 2)
P1161	29	Fuel Trim Adaptation Additive High (Bank 2) (M52: Engine Oil Temperature Sensor Circuit)
P1327	211	Knock Sensor 2 Circuit Low Input (Bank 1)
P1328	211	Knock Sensor 2 Circuit High Input (Bank 1)
P1332	213	Knock Sensor 4 Circuit Low Input
P1333	213	Knock Sensor 4 Circuit High Input
P1340	62	Multiple Cylinder Misfire During Start
P1341	62	Multiple Cylinder Misfire with Fuel Cut-Off
P1342	50	Misfire During Start Cylinder 1
P1343	50	Misfire Cylinder 1 with Fuel Cut-Off
P1344	57	Misfire During Start Cylinder 2
P1345	57	Misfire Cylinder 2 with Fuel Cut-Off
P1346	55	Misfire During Start Cylinder 3

P1347	55	Misfire Cylinder 3 with Fuel Cut-Off
P1348	52	Misfire During Start Cylinder 4
P1349	52	Misfire Cylinder 4 with Fuel Cut-Off
P1350	51	Misfire during Start Cylinder 5
P1351	51	Misfire Cylinder 5 with Fuel Cut-Off
P1352	54	Misfire during Start Cylinder 6
P1353	54	Misfire Cylinder 6 with Fuel Cut-Off
P1354	56	Misfire during Start Cylinder 7
P1355	56	Misfire Cylinder 7 with Fuel Cut-Off
P1356	53	Misfire during Start Cylinder 8
P1357	53	Misfire Cylinder 8 with Fuel Cut-Off
P1413	84	Secondary Air Injection Pump Relay Control Circuit Signal Low
P1414	84	Secondary Air Injection Pump Relay Control Circuit Signal High
P1441	1	Leakage Diagnostic Pump Control Open Circuit
P1442	1	Leakage Diagnostic Pump Control Circuit Signal Low
P1443	1	Leakage Diagnostic Pump Control Circuit Signal High
P1444	186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Open Circuit
P1445	186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Circuit Signal Low
P1446	186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Circuit Signal High
P1447	189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High during Switching Solenoid Test
P1448	189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too Low
P1449	189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High
P1450	2	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Open Circuit
P1451	2	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal Low
P1452	2	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal High
P1476	184	Leakage Diagnostic Pump Clamped Tube (M52 MY99/00: Leakage Diagnostic Pump Reed Switch Circuit)
P1523	165	'A' Camshaft Position Actuator Signal Low (Bank 1) (M52: 'B' Camshaft Position Actuator Tight or Jammed)
P1524	165	'A' Camshaft Position Actuator Control Circuit Signal High (Bank 1)
P1525	165	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1526	166	'A' Camshaft Position Actuator Control Open Circuit (Bank 2)
P1527	166	'A' Camshaft Position Actuator Control Circuit Signal Low (Bank 2)
P1528	166	'A' Camshaft Position Actuator Control Circuit Signal High (Bank 2)
P1633	136	Throttle Valve Adaptation Limp-Home Position Unknown
P1634	133	Throttle Valve Adaptation Spring Test Failed
P1635	134	Throttle Valve Adaptation Lower Mechanical Stop not Adapted
P1636	132	Throttle Valve Control Circuit
P1637	130	Throttle Valve Position Control, Control Deviation
P1638	131	Throttle Valve Position Control Throttle Stuck Temporarily
P1639	131	Throttle Valve Position Control Throttle Stuck Permanently
P1643	135	Throttle Valve Actuator Start Test Amplifier Balancing Plausibility

## ECU: ME7.2, Engine: M62-E39, from 01.09.01 till 31.08.02

PCode BMW-FC PCode text

P0010	33	'A' Camshaft Position Actuator Circuit (Bank 1)
P0011	33	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)
P0012	33	'A' Camshaft Position Timing Over-Retarded (Bank 1)
P0020	34	'A' Camshaft Position Actuator Circuit (Bank 2)
P0021	34	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 2)
P0022	34	'A' Camshaft Position Timing Over-Retarded (Bank 2)

P0102	115	Mass or Volume Air Flow Circuit Low Input
P0103	115	Mass or Volume Air Flow Circuit High Input
P0112	124	Intake Air Temperature Sensor 1 Circuit Low
P0113	124	Intake Air Temperature Sensor 1 Circuit High
P0116	123	Engine Coolant Temperature Circuit Range/Performance
P0117	123	Engine Coolant Temperature Circuit Low
P0118	123	Engine Coolant Temperature Circuit High
P0119	123	Engine Coolant Temperature Circuit Intermittent
P0120	117	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0121	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0122	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Low
P0123	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit High
P0130	10	O2 Sensor Circuit (Bank 1 Sensor 1)
P0131	10	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 1)
P0132	10	O2 Sensor Circuit High Voltage (Bank 1 Sensor 1)
P0133	15	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0134	10	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0135	13	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	12	O2 Sensor Circuit (Bank 1 Sensor 2)
P0137	12	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 2)
P0138	12	O2 Sensor Circuit High Voltage (Bank 1 Sensor 2)
P0139	17	O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0140	12	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 2)
P0141	14	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0150	18	O2 Sensor Circuit (Bank 2 Sensor 1)
P0151	18	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 1)
P0152	18	O2 Sensor Circuit High Voltage (Bank 2 Sensor 1)
P0153	21	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0154	18	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0155	5	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0156	20	O2 Sensor Circuit (Bank 2 Sensor 2)
P0157	20	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 2)
P0158	20	O2 Sensor Circuit High Voltage (Bank 2 Sensor 2)
P0159	23	O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0160	20	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 2)
P0161	4	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0171	24	System Too Lean (Bank 1)
P0171	26	System Too Lean (Bank 1)
P0172	24	System Too Rich (Bank 1)
P0172	26	System Too Rich (Bank 1)
P0174	25	System Too Lean (Bank 2)
P0174	27	System Too Lean (Bank 2)
P0175	25	System Too Rich (Bank 2)
P0175	27	System Too Rich (Bank 2)
P0201	150	Injector Circuit/Open - Cylinder 1
P0202	157	Injector Circuit/Open - Cylinder 2
P0203	155	Injector Circuit/Open - Cylinder 3
P0204	152	Injector Circuit/Open - Cylinder 4
P0205	151	Injector Circuit/Open - Cylinder 5
P0206	154	Injector Circuit/Open - Cylinder 6
P0207	156	Injector Circuit/Open - Cylinder 7
P0208	153	Injector Circuit/Open - Cylinder 8
P0221	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Range/Performance

P0222	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Low
P0223	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit High
P0261	150	Cylinder 1 Injector Circuit Low
P0262	150	Cylinder 1 Injector Circuit High
P0264	157	Cylinder 2 Injector Circuit Low
P0265	157	Cylinder 2 Injector Circuit High
P0267	155	Cylinder 3 Injector Circuit Low
P0268	155	Cylinder 3 Injector Circuit High
P0270	152	Cylinder 4 Injector Circuit Low
P0271	152	Cylinder 4 Injector Circuit High
P0273	151	Cylinder 5 Injector Circuit Low
P0274	151	Cylinder 5 Injector Circuit High
P0276	154	Cylinder 6 Injector Circuit Low
P0277	154	Cylinder 6 Injector Circuit High
P0279	156	Cylinder 7 Injector Circuit Low
P0280	156	Cylinder 7 Injector Circuit High
P0282	153	Cylinder 8 Injector Circuit Low
P0283	153	Cylinder 8 Injector Circuit High
P0300	62	Random/Multiple Cylinder Misfire Detected
P0301	50	Cylinder 1 Misfire Detected
P0302	57	Cylinder 2 Misfire Detected
P0303	55	Cylinder 3 Misfire Detected
P0304	52	Cylinder 4 Misfire Detected
P0305	51	Cylinder 5 Misfire Detected
P0306	54	Cylinder 6 Misfire Detected
P0307	56	Cylinder 7 Misfire Detected
P0308	53	Cylinder 8 Misfire Detected
P0324	214	Knock Control System Error
P0324	215	Knock Control System Error
P0324	216	Knock Control System Error
P0327	210	Knock Sensor 1 Circuit Low (Bank 1 or Single Sensor)
P0328	210	Knock Sensor 1 Circuit High (Bank 1 or Single Sensor)
P0332	212	Knock Sensor 2 Circuit Low (Bank 2)
P0333	212	Knock Sensor 2 Circuit High Input (Bank 2)
P0335	111	Crankshaft Position Sensor 'A' Circuit
P0340	113	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0342	113	Camshaft Position Sensor 'A' Circuit Low (Bank 1 or Single Sensor)
P0343	113	Camshaft Position Sensor 'A' Circuit High (Bank 1 or Single Sensor)
P0345	114	Camshaft Position Sensor 'A' Circuit (Bank 2)
P0347	114	Camshaft Position Sensor 'A' Circuit Low (Bank 2)
P0348	114	Camshaft Position Sensor 'A' Circuit High (Bank 2)
P0370	112	Timing Reference High Resolution Signal 'A'
P0412	85	Secondary Air Injection System Switching Valve A Circuit
P0413	85	Secondary Air Injection System Switching Valve A Circuit Open
P0414	85	Secondary Air Injection System Switching Valve A Circuit Shorted
P0418	84	Secondary Air Injection System Control 'A' Circuit
P0420	40	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	45	Catalyst System Efficiency Below Threshold (Bank 2)
P0440	93	Evaporative Emission System
P0442	183	Evaporative Emission System Leak Detected (small leak)
P0442	188	Evaporative Emission System Leak Detected (small leak)
P0443	98	Evaporative Emission System Purge Control Valve Circuit
P0444	98	Evaporative Emission System Purge Control Valve Circuit Open

P0445	98	Evaporative Emission System Purge Control Valve Circuit Shorted
P0450	185	Evaporative Emission System Pressure Sensor/Switch
P0452	185	Evaporative Emission System Pressure Sensor/Switch Low
P0453	185	Evaporative Emission System Pressure Sensor/Switch High
P0455	183	Evaporative Emission System Leak Detected (large leak)
P0455	188	Evaporative Emission System Leak Detected (large leak)
P0456	187	Evaporative Emission System Leak Detected (very small leak)
P0491	80	Secondary Air Injection System Insufficient Flow (Bank 1)
P0492	81	Secondary Air Injection System Insufficient Flow (Bank 2)
P0500	120	Vehicle Speed Sensor 'A'
P0506	32	Idle Air Control System RPM Lower Than Expected
P0507	32	Idle Air Control System RPM Higher Than Expected
P0600	220	Serial Communication Link
P1134	13	O2 Sensor Heater Circuit Signal Intermittent (Bank 1 Sensor 1)
P1135	13	O2 Sensor Heater Circuit Low Voltage (Bank 1 Sensor 1)
P1136	13	O2 Sensor Heater Circuit High Voltage (Bank 1 Sensor 1)
P1137	14	O2 Sensor Heater Circuit Signal Intermittent (Bank 1 Sensor 2)
P1138	14	O2 Sensor Heater Circuit Low Voltage (Bank 1 Sensor 2)
P1139	14	O2 Sensor Heater Circuit High Voltage (Bank 1 Sensor 2)
P1151	5	O2 Sensor Heater Circuit Signal Intermittent (Bank 2 Sensor 1)
P1152	5	O2 Sensor Heater Circuit Low Voltage (Bank 2 Sensor 1)
P1153	5	O2 Sensor Heater Circuit High Voltage (Bank 2 Sensor 1)
P1155	4	O2 Sensor Heater Circuit Signal Intermittent (Bank 2 Sensor 2)
P1156	4	O2 Sensor Heater Circuit Low Voltage (Bank 2 Sensor 2)
P1157	4	O2 Sensor Heater Circuit High Voltage (Bank 2 Sensor 2)
P1158	28	Fuel Trim Adaptation Additive Low (Bank 1)
P1159	28	Fuel Trim Adaptation Additive High (Bank 1)
P1160	29	Fuel Trim Adaptation Additive Low (Bank 2)
P1161	29	Fuel Trim Adaptation Additive High (Bank 2) (M52: Engine Oil Temperature Sensor Circuit)
P1327	211	Knock Sensor 2 Circuit Low Input (Bank 1)
P1328	211	Knock Sensor 2 Circuit High Input (Bank 1)
P1332	213	Knock Sensor 4 Circuit Low Input
P1333	213	Knock Sensor 4 Circuit High Input
P1340	62	Multiple Cylinder Misfire During Start
P1341	62	Multiple Cylinder Misfire with Fuel Cut-Off
P1342	50	Misfire During Start Cylinder 1
P1343	50	Misfire Cylinder 1 with Fuel Cut-Off
P1344	57	Misfire During Start Cylinder 2
P1345	57	Misfire Cylinder 2 with Fuel Cut-Off
P1346	55	Misfire During Start Cylinder 3
P1347	55	Misfire Cylinder 3 with Fuel Cut-Off
P1348	52	Misfire During Start Cylinder 4
P1349	52	Misfire Cylinder 4 with Fuel Cut-Off
P1350	51	Misfire during Start Cylinder 5
P1351	51	Misfire Cylinder 5 with Fuel Cut-Off
P1352	54	Misfire during Start Cylinder 6
P1353	54	Misfire Cylinder 6 with Fuel Cut-Off
P1354	56	Misfire during Start Cylinder 7
P1355	56	Misfire Cylinder 7 with Fuel Cut-Off
P1356	53	Misfire during Start Cylinder 8
P1357	53	Misfire Cylinder 8 with Fuel Cut-Off
P1413	84	Secondary Air Injection Pump Relay Control Circuit Signal Low
P1414	84	Secondary Air Injection Pump Relay Control Circuit Signal High

P1441	1	Leakage Diagnostic Pump Control Open Circuit
P1442	1	Leakage Diagnostic Pump Control Circuit Signal Low
P1443	1	Leakage Diagnostic Pump Control Circuit Signal High
P1444	186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Open Circuit
P1445	186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Circuit Signal Low
P1446	186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Circuit Signal High
P1447	189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High during Switching Solenoid Test
P1448	189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too Low
P1449	189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High
P1450	2	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Open Circuit
P1451	2	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal Low
P1452	2	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal High
P1476	184	Leakage Diagnostic Pump Clamped Tube (M52 MY99/00: Leakage Diagnostic Pump Reed Switch Circuit)
P1523	165	'A' Camshaft Position Actuator Signal Low (Bank 1) (M52: 'B' Camshaft Position Actuator Tight or Jammed)
P1524	165	'A' Camshaft Position Actuator Control Circuit Signal High (Bank 1)
P1525	165	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1526	166	'A' Camshaft Position Actuator Control Open Circuit (Bank 2)
P1527	166	'A' Camshaft Position Actuator Control Circuit Signal Low (Bank 2)
P1528	166	'A' Camshaft Position Actuator Control Circuit Signal High (Bank 2)
P1636	132	Throttle Valve Control Circuit
P1637	130	Throttle Valve Position Control, Control Deviation
P1638	131	Throttle Valve Position Control Throttle Stuck Temporarily
P1639	131	Throttle Valve Position Control Throttle Stuck Permanently

## ECU: ME7.2, Engine: M62-E39, from 01.09.02 till

PCode	BMW-FC	PCode text
P0010	33	'A' Camshaft Position Actuator Circuit (Bank 1)
P0011	33	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)
P0012	33	'A' Camshaft Position Timing Over-Retarded (Bank 1)
P0020	34	'A' Camshaft Position Actuator Circuit (Bank 2)
P0021	34	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 2)
P0022	34	'A' Camshaft Position Timing Over-Retarded (Bank 2)
P0030	13	HO2S Heater Control Circuit (Bank 1 Sensor 1)
P0031	13	HO2S Heater Control Circuit Low (Bank 1 Sensor 1)
P0032	13	HO2S Heater Control Circuit High (Bank 1 Sensor 1)
P0036	14	HO2S Heater Control Circuit (Bank 1 Sensor 2)
P0037	14	HO2S Heater Control Circuit Low (Bank 1 Sensor 2)
P0038	14	HO2S Heater Control Circuit High (Bank 1 Sensor 2)
P0050	5	HO2S Heater Control Circuit (Bank 2 Sensor 1)
P0051	5	HO2S Heater Control Circuit Low (Bank 2 Sensor 1)
P0052	5	HO2S Heater Control Circuit High (Bank 2 Sensor 1)
P0056	4	HO2S Heater Control Circuit (Bank 2 Sensor 2)
P0057	4	HO2S Heater Control Circuit Low (Bank 2 Sensor 2)
P0058	4	HO2S Heater Control Circuit High (Bank 2 Sensor 2)
P0102	115	Mass or Volume Air Flow Circuit Low Input
P0103	115	Mass or Volume Air Flow Circuit High Input
P0112	124	Intake Air Temperature Sensor 1 Circuit Low
P0113	124	Intake Air Temperature Sensor 1 Circuit High
P0116	123	Engine Coolant Temperature Circuit Range/Performance



P0117	123	Engine Coolant Temperature Circuit Low
P0118	123	Engine Coolant Temperature Circuit High
P0120	117	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0121	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0122	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Low
P0123	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit High
P0125	123	Insufficient Coolant Temperature for Closed Loop Fuel Control
P0128	139	Coolant Thermostat (Coolant Temperature Below Thermostat Regulating Temperature)
P0130	10	O2 Sensor Circuit (Bank 1 Sensor 1)
P0131	10	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 1)
P0132	10	O2 Sensor Circuit High Voltage (Bank 1 Sensor 1)
P0133	15	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0134	10	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0135	13	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	12	O2 Sensor Circuit (Bank 1 Sensor 2)
P0137	12	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 2)
P0138	12	O2 Sensor Circuit High Voltage (Bank 1 Sensor 2)
P0140	12	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 2)
P0141	14	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0150	18	O2 Sensor Circuit (Bank 2 Sensor 1)
P0151	18	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 1)
P0152	18	O2 Sensor Circuit High Voltage (Bank 2 Sensor 1)
P0153	21	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0154	18	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0155	5	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0156	20	O2 Sensor Circuit (Bank 2 Sensor 2)
P0157	20	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 2)
P0158	20	O2 Sensor Circuit High Voltage (Bank 2 Sensor 2)
P0160	20	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 2)
P0161	4	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0201	150	Injector Circuit/Open - Cylinder 1
P0202	157	Injector Circuit/Open - Cylinder 2
P0203	155	Injector Circuit/Open - Cylinder 3
P0204	152	Injector Circuit/Open - Cylinder 4
P0205	151	Injector Circuit/Open - Cylinder 5
P0206	154	Injector Circuit/Open - Cylinder 6
P0207	156	Injector Circuit/Open - Cylinder 7
P0208	153	Injector Circuit/Open - Cylinder 8
P0221	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Range/Performance
P0222	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Low
P0223	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit High
P0261	150	Cylinder 1 Injector Circuit Low
P0262	150	Cylinder 1 Injector Circuit High
P0264	157	Cylinder 2 Injector Circuit Low
P0265	157	Cylinder 2 Injector Circuit High
P0267	155	Cylinder 3 Injector Circuit Low
P0268	155	Cylinder 3 Injector Circuit High
P0270	152	Cylinder 4 Injector Circuit Low
P0271	152	Cylinder 4 Injector Circuit High
P0273	151	Cylinder 5 Injector Circuit Low
P0274	151	Cylinder 5 Injector Circuit High
P0276	154	Cylinder 6 Injector Circuit Low
P0277	154	Cylinder 6 Injector Circuit High

P0279	156	Cylinder 7 Injector Circuit Low
P0280	156	Cylinder 7 Injector Circuit High
P0282	153	Cylinder 8 Injector Circuit Low
P0283	153	Cylinder 8 Injector Circuit High
P0300	62	Random/Multiple Cylinder Misfire Detected
P0301	50	Cylinder 1 Misfire Detected
P0302	57	Cylinder 2 Misfire Detected
P0303	55	Cylinder 3 Misfire Detected
P0304	52	Cylinder 4 Misfire Detected
P0305	51	Cylinder 5 Misfire Detected
P0306	54	Cylinder 6 Misfire Detected
P0307	56	Cylinder 7 Misfire Detected
P0308	53	Cylinder 8 Misfire Detected
P0316	62	Engine Misfire Detected on Startup (First 1000 Revolutions)
P0327	210	Knock Sensor 1 Circuit Low (Bank 1 or Single Sensor)
P0328	210	Knock Sensor 1 Circuit High (Bank 1 or Single Sensor)
P0332	212	Knock Sensor 2 Circuit Low (Bank 2)
P0333	212	Knock Sensor 2 Circuit High Input (Bank 2)
P0335	111	Crankshaft Position Sensor 'A' Circuit
P0340	113	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0342	113	Camshaft Position Sensor 'A' Circuit Low (Bank 1 or Single Sensor)
P0343	113	Camshaft Position Sensor 'A' Circuit High (Bank 1 or Single Sensor)
P0345	114	Camshaft Position Sensor 'A' Circuit (Bank 2)
P0347	114	Camshaft Position Sensor 'A' Circuit Low (Bank 2)
P0348	114	Camshaft Position Sensor 'A' Circuit High (Bank 2)
P0363	62	Misfire Detected - Fueling Disabled
P0370	112	Timing Reference High Resolution Signal 'A'
P0412	85	Secondary Air Injection System Switching Valve A Circuit
P0413	85	Secondary Air Injection System Switching Valve A Circuit Open
P0414	85	Secondary Air Injection System Switching Valve A Circuit Shorted
P0418	84	Secondary Air Injection System Control 'A' Circuit
P0420	40	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	45	Catalyst System Efficiency Below Threshold (Bank 2)
P0440	93	Evaporative Emission System
P0442	183	Evaporative Emission System Leak Detected (small leak)
P0442	188	Evaporative Emission System Leak Detected (small leak)
P0443	98	Evaporative Emission System Purge Control Valve Circuit
P0444	98	Evaporative Emission System Purge Control Valve Circuit Open
P0445	98	Evaporative Emission System Purge Control Valve Circuit Shorted
P0450	185	Evaporative Emission System Pressure Sensor/Switch
P0452	185	Evaporative Emission System Pressure Sensor/Switch Low
P0453	185	Evaporative Emission System Pressure Sensor/Switch High
P0455	183	Evaporative Emission System Leak Detected (large leak)
P0455	188	Evaporative Emission System Leak Detected (large leak)
P0456	187	Evaporative Emission System Leak Detected (very small leak)
P0491	80	Secondary Air Injection System Insufficient Flow (Bank 1)
P0492	81	Secondary Air Injection System Insufficient Flow (Bank 2)
P0500	120	Vehicle Speed Sensor 'A'
P0506	32	Idle Air Control System RPM Lower Than Expected
P0507	32	Idle Air Control System RPM Higher Than Expected
P0600	220	Serial Communication Link
P1102	163	Idle Control System, Adaptation of Unmetered Air Mass Too Low
P1103	163	Idle Control System, Adaptation of Unmetered Air Mass Too Large

P1130	17	O2 Sensor Circuit Dynamic Test (Bank 1 Sensor 2)
P1131	23	O2 Sensor Circuit Dynamic Test (Bank 2 Sensor 2)
P1327	211	Knock Sensor 2 Circuit Low Input (Bank 1)
P1328	211	Knock Sensor 2 Circuit High Input (Bank 1)
P1332	213	Knock Sensor 4 Circuit Low Input
P1333	213	Knock Sensor 4 Circuit High Input
P1342	50	Misfire During Start Cylinder 1
P1343	50	Misfire Cylinder 1 with Fuel Cut-Off
P1344	57	Misfire During Start Cylinder 2
P1345	57	Misfire Cylinder 2 with Fuel Cut-Off
P1346	55	Misfire During Start Cylinder 3
P1347	55	Misfire Cylinder 3 with Fuel Cut-Off
P1348	52	Misfire During Start Cylinder 4
P1349	52	Misfire Cylinder 4 with Fuel Cut-Off
P1350	51	Misfire during Start Cylinder 5
P1351	51	Misfire Cylinder 5 with Fuel Cut-Off
P1352	54	Misfire during Start Cylinder 6
P1353	54	Misfire Cylinder 6 with Fuel Cut-Off
P1354	56	Misfire during Start Cylinder 7
P1355	56	Misfire Cylinder 7 with Fuel Cut-Off
P1356	53	Misfire during Start Cylinder 8
P1357	53	Misfire Cylinder 8 with Fuel Cut-Off
P1381	215	Control Module Self-Test, Knock Control Offset (Bank 1)
P1382	216	Control Module Self-Test, Knock Control Test Pulse (Bank 1)
P1386	214	Control Module Self-Test, Knock Control Circuit Baseline Test (Bank 1)
P1413	84	Secondary Air Injection Pump Relay Control Circuit Signal Low
P1414	84	Secondary Air Injection Pump Relay Control Circuit Signal High
P1441	1	Leakage Diagnostic Pump Control Open Circuit
P1442	1	Leakage Diagnostic Pump Control Circuit Signal Low
P1443	1	Leakage Diagnostic Pump Control Circuit Signal High
P1444	186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Open Circuit
P1445	186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Circuit Signal Low
P1446	186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Circuit Signal High
P1447	189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High during Switching Solenoid Test
P1448	189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too Low
P1449	189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High
P1450	2	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Open Circuit
P1451	2	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal Low
P1452	2	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal High
P1476	184	Leakage Diagnostic Pump Clamped Tube (M52 MY99/00: Leakage Diagnostic Pump Reed Switch Circuit)
P1525	165	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1526	166	'A' Camshaft Position Actuator Control Open Circuit (Bank 2)
P1636	132	Throttle Valve Control Circuit
P1637	130	Throttle Valve Position Control, Control Deviation
P1638	131	Throttle Valve Position Control Throttle Stuck Temporarily
P1639	131	Throttle Valve Position Control Throttle Stuck Permanently
P2088	165	'A' Camshaft Position Actuator Control Circuit Low (Bank 1)
P2089	165	'A' Camshaft Position Actuator Control Circuit High (Bank 1)
P2092	166	'A' Camshaft Position Actuator Control Circuit Low (Bank 2)
P2093	166	'A' Camshaft Position Actuator Control Circuit High (Bank 2)
P2177	26	System Too Lean Off Idle (Bank 1)
P2178	26	System Too Rich Off Idle (Bank 1)

P2179	27	System Too Lean Off Idle (Bank 2)
P2180	27	System Too Rich Off Idle (Bank 2)
P2187	28	System Too Lean at Idle (Bank 1)
P2188	28	System Too Rich at Idle (Bank 1)
P2189	29	System Too Lean at Idle (Bank 2)
P2190	29	System Too Rich at Idle (Bank 2)
P2191	24	System Too Lean at Higher Load (Bank 1)
P2192	24	System Too Rich at Higher Load (Bank 1)
P2193	25	System Too Lean at Higher Load (Bank 2)
P2194	25	System Too Rich at Higher Load (Bank 2)
P2270	17	O2 Sensor Signal Stuck Lean (Bank 1 Sensor 2)
P2271	17	O2 Sensor Signal Stuck Rich (Bank 1 Sensor 2)
P2272	23	O2 Sensor Signal Stuck Lean (Bank 2 Sensor 2)
P2273	23	O2 Sensor Signal Stuck Rich (Bank 2 Sensor 2)

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## ECU: ME7.2, Engine: M62-E53, from 01.09.99 till 31.03.00

PCode BMW-FC PCode text

P0010	33	'A' Camshaft Position Actuator Circuit (Bank 1)
P0011	33	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)
P0012	33	'A' Camshaft Position Timing Over-Retarded (Bank 1)
P0020	34	'A' Camshaft Position Actuator Circuit (Bank 2)
P0021	34	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 2)
P0022	34	'A' Camshaft Position Timing Over-Retarded (Bank 2)
P0102	115	Mass or Volume Air Flow Circuit Low Input
P0103	115	Mass or Volume Air Flow Circuit High Input
P0112	124	Intake Air Temperature Sensor 1 Circuit Low
P0113	124	Intake Air Temperature Sensor 1 Circuit High
P0116	123	Engine Coolant Temperature Circuit Range/Performance
P0117	123	Engine Coolant Temperature Circuit Low
P0118	123	Engine Coolant Temperature Circuit High
P0119	123	Engine Coolant Temperature Circuit Intermittent
P0120	117	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0121	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0122	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Low
P0123	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit High
P0130	10	O2 Sensor Circuit (Bank 1 Sensor 1)
P0131	10	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 1)
P0132	10	O2 Sensor Circuit High Voltage (Bank 1 Sensor 1)
P0133	15	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0134	10	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0135	13	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	12	O2 Sensor Circuit (Bank 1 Sensor 2)
P0137	12	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 2)
P0138	12	O2 Sensor Circuit High Voltage (Bank 1 Sensor 2)
P0139	17	O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0140	12	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 2)
P0141	14	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0150	18	O2 Sensor Circuit (Bank 2 Sensor 1)
P0151	18	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 1)
P0152	18	O2 Sensor Circuit High Voltage (Bank 2 Sensor 1)
P0153	21	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)

P0154	18	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0155	5	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0156	20	O2 Sensor Circuit (Bank 2 Sensor 2)
P0157	20	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 2)
P0158	20	O2 Sensor Circuit High Voltage (Bank 2 Sensor 2)
P0159	23	O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0160	20	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 2)
P0161	4	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0171	24	System Too Lean (Bank 1)
P0171	26	System Too Lean (Bank 1)
P0172	24	System Too Rich (Bank 1)
P0172	26	System Too Rich (Bank 1)
P0174	25	System Too Lean (Bank 2)
P0174	27	System Too Lean (Bank 2)
P0175	25	System Too Rich (Bank 2)
P0175	27	System Too Rich (Bank 2)
P0201	150	Injector Circuit/Open - Cylinder 1
P0202	157	Injector Circuit/Open - Cylinder 2
P0203	155	Injector Circuit/Open - Cylinder 3
P0204	152	Injector Circuit/Open - Cylinder 4
P0205	151	Injector Circuit/Open - Cylinder 5
P0206	154	Injector Circuit/Open - Cylinder 6
P0207	156	Injector Circuit/Open - Cylinder 7
P0208	153	Injector Circuit/Open - Cylinder 8
P0221	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Range/Performance
P0222	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Low
P0223	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit High
P0261	150	Cylinder 1 Injector Circuit Low
P0262	150	Cylinder 1 Injector Circuit High
P0264	157	Cylinder 2 Injector Circuit Low
P0265	157	Cylinder 2 Injector Circuit High
P0267	155	Cylinder 3 Injector Circuit Low
P0268	155	Cylinder 3 Injector Circuit High
P0270	152	Cylinder 4 Injector Circuit Low
P0271	152	Cylinder 4 Injector Circuit High
P0273	151	Cylinder 5 Injector Circuit Low
P0274	151	Cylinder 5 Injector Circuit High
P0276	154	Cylinder 6 Injector Circuit Low
P0277	154	Cylinder 6 Injector Circuit High
P0279	156	Cylinder 7 Injector Circuit Low
P0280	156	Cylinder 7 Injector Circuit High
P0282	153	Cylinder 8 Injector Circuit Low
P0283	153	Cylinder 8 Injector Circuit High
P0300	62	Random/Multiple Cylinder Misfire Detected
P0301	50	Cylinder 1 Misfire Detected
P0302	57	Cylinder 2 Misfire Detected
P0303	55	Cylinder 3 Misfire Detected
P0304	52	Cylinder 4 Misfire Detected
P0305	51	Cylinder 5 Misfire Detected
P0306	54	Cylinder 6 Misfire Detected
P0307	56	Cylinder 7 Misfire Detected
P0308	53	Cylinder 8 Misfire Detected
P0324	214	Knock Control System Error

P0324	215	Knock Control System Error
P0324	216	Knock Control System Error
P0327	210	Knock Sensor 1 Circuit Low (Bank 1 or Single Sensor)
P0328	210	Knock Sensor 1 Circuit High (Bank 1 or Single Sensor)
P0332	212	Knock Sensor 2 Circuit Low (Bank 2)
P0333	212	Knock Sensor 2 Circuit High Input (Bank 2)
P0335	111	Crankshaft Position Sensor 'A' Circuit
P0340	113	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0342	113	Camshaft Position Sensor 'A' Circuit Low (Bank 1 or Single Sensor)
P0343	113	Camshaft Position Sensor 'A' Circuit High (Bank 1 or Single Sensor)
P0345	114	Camshaft Position Sensor 'A' Circuit (Bank 2)
P0347	114	Camshaft Position Sensor 'A' Circuit Low (Bank 2)
P0348	114	Camshaft Position Sensor 'A' Circuit High (Bank 2)
P0370	112	Timing Reference High Resolution Signal 'A'
P0412	85	Secondary Air Injection System Switching Valve A Circuit
P0413	85	Secondary Air Injection System Switching Valve A Circuit Open
P0414	85	Secondary Air Injection System Switching Valve A Circuit Shorted
P0418	84	Secondary Air Injection System Control 'A' Circuit
P0420	40	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	45	Catalyst System Efficiency Below Threshold (Bank 2)
P0440	93	Evaporative Emission System
P0442	183	Evaporative Emission System Leak Detected (small leak)
P0442	188	Evaporative Emission System Leak Detected (small leak)
P0443	98	Evaporative Emission System Purge Control Valve Circuit
P0444	98	Evaporative Emission System Purge Control Valve Circuit Open
P0445	98	Evaporative Emission System Purge Control Valve Circuit Shorted
P0450	185	Evaporative Emission System Pressure Sensor/Switch
P0452	185	Evaporative Emission System Pressure Sensor/Switch Low
P0453	185	Evaporative Emission System Pressure Sensor/Switch High
P0455	183	Evaporative Emission System Leak Detected (large leak)
P0455	188	Evaporative Emission System Leak Detected (large leak)
P0491	80	Secondary Air Injection System Insufficient Flow (Bank 1)
P0492	81	Secondary Air Injection System Insufficient Flow (Bank 2)
P0500	120	Vehicle Speed Sensor 'A'
P0506	32	Idle Air Control System RPM Lower Than Expected
P0507	32	Idle Air Control System RPM Higher Than Expected
P0600	220	Serial Communication Link
P1102	163	Idle Control System, Adaptation of Unmetered Air Mass Too Low
P1103	163	Idle Control System, Adaptation of Unmetered Air Mass Too Large
P1134	13	O2 Sensor Heater Circuit Signal Intermittent (Bank 1 Sensor 1)
P1135	13	O2 Sensor Heater Circuit Low Voltage (Bank 1 Sensor 1)
P1136	13	O2 Sensor Heater Circuit High Voltage (Bank 1 Sensor 1)
P1137	14	O2 Sensor Heater Circuit Signal Intermittent (Bank 1 Sensor 2)
P1138	14	O2 Sensor Heater Circuit Low Voltage (Bank 1 Sensor 2)
P1139	14	O2 Sensor Heater Circuit High Voltage (Bank 1 Sensor 2)
P1151	5	O2 Sensor Heater Circuit Signal Intermittent (Bank 2 Sensor 1)
P1152	5	O2 Sensor Heater Circuit Low Voltage (Bank 2 Sensor 1)
P1153	5	O2 Sensor Heater Circuit High Voltage (Bank 2 Sensor 1)
P1155	4	O2 Sensor Heater Circuit Signal Intermittent (Bank 2 Sensor 2)
P1156	4	O2 Sensor Heater Circuit Low Voltage (Bank 2 Sensor 2)
P1157	4	O2 Sensor Heater Circuit High Voltage (Bank 2 Sensor 2)
P1158	28	Fuel Trim Adaptation Additive Low (Bank 1)
P1159	28	Fuel Trim Adaptation Additive High (Bank 1)

P1160	29	Fuel Trim Adaptation Additive Low (Bank 2)
P1161	29	Fuel Trim Adaptation Additive High (Bank 2) (M52: Engine Oil Temperature Sensor Circuit)
P1327	211	Knock Sensor 2 Circuit Low Input (Bank 1)
P1328	211	Knock Sensor 2 Circuit High Input (Bank 1)
P1332	213	Knock Sensor 4 Circuit Low Input
P1333	213	Knock Sensor 4 Circuit High Input
P1340	62	Multiple Cylinder Misfire During Start
P1341	62	Multiple Cylinder Misfire with Fuel Cut-Off
P1342	50	Misfire During Start Cylinder 1
P1343	50	Misfire Cylinder 1 with Fuel Cut-Off
P1344	57	Misfire During Start Cylinder 2
P1345	57	Misfire Cylinder 2 with Fuel Cut-Off
P1346	55	Misfire During Start Cylinder 3
P1347	55	Misfire Cylinder 3 with Fuel Cut-Off
P1348	52	Misfire During Start Cylinder 4
P1349	52	Misfire Cylinder 4 with Fuel Cut-Off
P1350	51	Misfire during Start Cylinder 5
P1351	51	Misfire Cylinder 5 with Fuel Cut-Off
P1352	54	Misfire during Start Cylinder 6
P1353	54	Misfire Cylinder 6 with Fuel Cut-Off
P1354	56	Misfire during Start Cylinder 7
P1355	56	Misfire Cylinder 7 with Fuel Cut-Off
P1356	53	Misfire during Start Cylinder 8
P1357	53	Misfire Cylinder 8 with Fuel Cut-Off
P1413	84	Secondary Air Injection Pump Relay Control Sircuit Signal Low
P1414	84	Secondary Air Injection Pump Relay Control Circuit Signal High
P1441	1	Leakage Diagnostic Pump Control Open Circuit
P1442	1	Leakage Diagnostic Pump Control Circuit Signal Low
P1443	1	Leakage Diagnostic Pump Control Circuit Signal High
P1444	186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Open Circuit
P1445	186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Circuit Signal Low
P1446	186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Circuit Signal High
P1447	189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High during Switching Solenoid Test
P1448	189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too Low
P1449	189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High
P1450	2	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Open Circuit
P1451	2	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal Low
P1452	2	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal High
P1476	184	Leakage Diagnostic Pump Clamped Tube (M52 MY99/00: Leakage Diagnostic Pump Reed Switch Circuit)
P1523	165	'A' Camshaft Position Actuator Signal Low (Bank 1) (M52: 'B' Camshaft Position Actuator Tight or Jammed)
P1524	165	'A' Camshaft Position Actuator Control Circuit Signal High (Bank 1)
P1525	165	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1526	166	'A' Camshaft Position Actuator Control Open Circuit (Bank 2)
P1527	166	'A' Camshaft Position Actuator Control Circuit Signal Low (Bank 2)
P1528	166	'A' Camshaft Position Actuator Control Circuit Signal High (Bank 2)
P1633	136	Throttle Valve Adaptation Limp-Home Position Unknown
P1634	133	Throttle Valve Adaptation Spring Test Failed
P1635	134	Throttle Valve Adaptation Lower Mechanical Stop not Adapted
P1636	132	Throttle Valve Control Circuit
P1637	130	Throttle Valve Position Control, Control Deviation
P1638	131	Throttle Valve Position Control Throttle Stuck Temporarily

P1639	131	Throttle Valve Position Control Throttle Stuck Permanently
P1643	135	Throttle Valve Actuator Start Test Amplifier Balancing Plausibility

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## ECU: ME7.2, Engine: M62-E53, from 01.04.00 till 30.09.01

PCode BMW-FC PCode text

P0010	33	'A' Camshaft Position Actuator Circuit (Bank 1)
P0011	33	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)
P0012	33	'A' Camshaft Position Timing Over-Retarded (Bank 1)
P0020	34	'A' Camshaft Position Actuator Circuit (Bank 2)
P0021	34	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 2)
P0022	34	'A' Camshaft Position Timing Over-Retarded (Bank 2)
P0102	115	Mass or Volume Air Flow Circuit Low Input
P0103	115	Mass or Volume Air Flow Circuit High Input
P0112	124	Intake Air Temperature Sensor 1 Circuit Low
P0113	124	Intake Air Temperature Sensor 1 Circuit High
P0116	123	Engine Coolant Temperature Circuit Range/Performance
P0117	123	Engine Coolant Temperature Circuit Low
P0118	123	Engine Coolant Temperature Circuit High
P0119	123	Engine Coolant Temperature Circuit Intermittent
P0120	117	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0121	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0122	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Low
P0123	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit High
P0130	10	O2 Sensor Circuit (Bank 1 Sensor 1)
P0131	10	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 1)
P0132	10	O2 Sensor Circuit High Voltage (Bank 1 Sensor 1)
P0133	15	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0134	10	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0135	13	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	12	O2 Sensor Circuit (Bank 1 Sensor 2)
P0137	12	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 2)
P0138	12	O2 Sensor Circuit High Voltage (Bank 1 Sensor 2)
P0139	17	O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0140	12	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 2)
P0141	14	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0150	18	O2 Sensor Circuit (Bank 2 Sensor 1)
P0151	18	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 1)
P0152	18	O2 Sensor Circuit High Voltage (Bank 2 Sensor 1)
P0153	21	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0154	18	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0155	5	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0156	20	O2 Sensor Circuit (Bank 2 Sensor 2)
P0157	20	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 2)
P0158	20	O2 Sensor Circuit High Voltage (Bank 2 Sensor 2)
P0159	23	O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0160	20	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 2)
P0161	4	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0171	24	System Too Lean (Bank 1)
P0171	26	System Too Lean (Bank 1)
P0172	24	System Too Rich (Bank 1)
P0172	26	System Too Rich (Bank 1)



P0174	25	System Too Lean (Bank 2)
P0174	27	System Too Lean (Bank 2)
P0175	25	System Too Rich (Bank 2)
P0175	27	System Too Rich (Bank 2)
P0201	150	Injector Circuit/Open - Cylinder 1
P0202	157	Injector Circuit/Open - Cylinder 2
P0203	155	Injector Circuit/Open - Cylinder 3
P0204	152	Injector Circuit/Open - Cylinder 4
P0205	151	Injector Circuit/Open - Cylinder 5
P0206	154	Injector Circuit/Open - Cylinder 6
P0207	156	Injector Circuit/Open - Cylinder 7
P0208	153	Injector Circuit/Open - Cylinder 8
P0221	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Range/Performance
P0222	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Low
P0223	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit High
P0261	150	Cylinder 1 Injector Circuit Low
P0262	150	Cylinder 1 Injector Circuit High
P0264	157	Cylinder 2 Injector Circuit Low
P0265	157	Cylinder 2 Injector Circuit High
P0267	155	Cylinder 3 Injector Circuit Low
P0268	155	Cylinder 3 Injector Circuit High
P0270	152	Cylinder 4 Injector Circuit Low
P0271	152	Cylinder 4 Injector Circuit High
P0273	151	Cylinder 5 Injector Circuit Low
P0274	151	Cylinder 5 Injector Circuit High
P0276	154	Cylinder 6 Injector Circuit Low
P0277	154	Cylinder 6 Injector Circuit High
P0279	156	Cylinder 7 Injector Circuit Low
P0280	156	Cylinder 7 Injector Circuit High
P0282	153	Cylinder 8 Injector Circuit Low
P0283	153	Cylinder 8 Injector Circuit High
P0300	62	Random/Multiple Cylinder Misfire Detected
P0301	50	Cylinder 1 Misfire Detected
P0302	57	Cylinder 2 Misfire Detected
P0303	55	Cylinder 3 Misfire Detected
P0304	52	Cylinder 4 Misfire Detected
P0305	51	Cylinder 5 Misfire Detected
P0306	54	Cylinder 6 Misfire Detected
P0307	56	Cylinder 7 Misfire Detected
P0308	53	Cylinder 8 Misfire Detected
P0324	214	Knock Control System Error
P0324	215	Knock Control System Error
P0324	216	Knock Control System Error
P0327	210	Knock Sensor 1 Circuit Low (Bank 1 or Single Sensor)
P0328	210	Knock Sensor 1 Circuit High (Bank 1 or Single Sensor)
P0332	212	Knock Sensor 2 Circuit Low (Bank 2)
P0333	212	Knock Sensor 2 Circuit High Input (Bank 2)
P0335	111	Crankshaft Position Sensor 'A' Circuit
P0340	113	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0342	113	Camshaft Position Sensor 'A' Circuit Low (Bank 1 or Single Sensor)
P0343	113	Camshaft Position Sensor 'A' Circuit High (Bank 1 or Single Sensor)
P0345	114	Camshaft Position Sensor 'A' Circuit (Bank 2)
P0347	114	Camshaft Position Sensor 'A' Circuit Low (Bank 2)

P0348	114	Camshaft Position Sensor 'A' Circuit High (Bank 2)
P0370	112	Timing Reference High Resolution Signal 'A'
P0412	85	Secondary Air Injection System Switching Valve A Circuit
P0413	85	Secondary Air Injection System Switching Valve A Circuit Open
P0414	85	Secondary Air Injection System Switching Valve A Circuit Shorted
P0418	84	Secondary Air Injection System Control 'A' Circuit
P0420	40	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	45	Catalyst System Efficiency Below Threshold (Bank 2)
P0440	93	Evaporative Emission System
P0442	183	Evaporative Emission System Leak Detected (small leak)
P0442	188	Evaporative Emission System Leak Detected (small leak)
P0443	98	Evaporative Emission System Purge Control Valve Circuit
P0444	98	Evaporative Emission System Purge Control Valve Circuit Open
P0445	98	Evaporative Emission System Purge Control Valve Circuit Shorted
P0450	185	Evaporative Emission System Pressure Sensor/Switch
P0452	185	Evaporative Emission System Pressure Sensor/Switch Low
P0453	185	Evaporative Emission System Pressure Sensor/Switch High
P0455	183	Evaporative Emission System Leak Detected (large leak)
P0455	188	Evaporative Emission System Leak Detected (large leak)
P0491	80	Secondary Air Injection System Insufficient Flow (Bank 1)
P0492	81	Secondary Air Injection System Insufficient Flow (Bank 2)
P0500	120	Vehicle Speed Sensor 'A'
P0506	32	Idle Air Control System RPM Lower Than Expected
P0507	32	Idle Air Control System RPM Higher Than Expected
P0600	220	Serial Communication Link
P1102	163	Idle Control System, Adaptation of Unmetered Air Mass Too Low
P1103	163	Idle Control System, Adaptation of Unmetered Air Mass Too Large
P1134	13	O2 Sensor Heater Circuit Signal Intermittent (Bank 1 Sensor 1)
P1135	13	O2 Sensor Heater Circuit Low Voltage (Bank 1 Sensor 1)
P1136	13	O2 Sensor Heater Circuit High Voltage (Bank 1 Sensor 1)
P1137	14	O2 Sensor Heater Circuit Signal Intermittent (Bank 1 Sensor 2)
P1138	14	O2 Sensor Heater Circuit Low Voltage (Bank 1 Sensor 2)
P1139	14	O2 Sensor Heater Circuit High Voltage (Bank 1 Sensor 2)
P1151	5	O2 Sensor Heater Circuit Signal Intermittent (Bank 2 Sensor 1)
P1152	5	O2 Sensor Heater Circuit Low Voltage (Bank 2 Sensor 1)
P1153	5	O2 Sensor Heater Circuit High Voltage (Bank 2 Sensor 1)
P1155	4	O2 Sensor Heater Circuit Signal Intermittent (Bank 2 Sensor 2)
P1156	4	O2 Sensor Heater Circuit Low Voltage (Bank 2 Sensor 2)
P1157	4	O2 Sensor Heater Circuit High Voltage (Bank 2 Sensor 2)
P1158	28	Fuel Trim Adaptation Additive Low (Bank 1)
P1159	28	Fuel Trim Adaptation Additive High (Bank 1)
P1160	29	Fuel Trim Adaptation Additive Low (Bank 2)
P1161	29	Fuel Trim Adaptation Additive High (Bank 2) (M52: Engine Oil Temperature Sensor Circuit)
P1327	211	Knock Sensor 2 Circuit Low Input (Bank 1)
P1328	211	Knock Sensor 2 Circuit High Input (Bank 1)
P1332	213	Knock Sensor 4 Circuit Low Input
P1333	213	Knock Sensor 4 Circuit High Input
P1340	62	Multiple Cylinder Misfire During Start
P1341	62	Multiple Cylinder Misfire with Fuel Cut-Off
P1342	50	Misfire During Start Cylinder 1
P1343	50	Misfire Cylinder 1 with Fuel Cut-Off
P1344	57	Misfire During Start Cylinder 2
P1345	57	Misfire Cylinder 2 with Fuel Cut-Off

P1346	55	Misfire During Start Cylinder 3
P1347	55	Misfire Cylinder 3 with Fuel Cut-Off
P1348	52	Misfire During Start Cylinder 4
P1349	52	Misfire Cylinder 4 with Fuel Cut-Off
P1350	51	Misfire during Start Cylinder 5
P1351	51	Misfire Cylinder 5 with Fuel Cut-Off
P1352	54	Misfire during Start Cylinder 6
P1353	54	Misfire Cylinder 6 with Fuel Cut-Off
P1354	56	Misfire during Start Cylinder 7
P1355	56	Misfire Cylinder 7 with Fuel Cut-Off
P1356	53	Misfire during Start Cylinder 8
P1357	53	Misfire Cylinder 8 with Fuel Cut-Off
P1413	84	Secondary Air Injection Pump Relay Control Sircuit Signal Low
P1414	84	Secondary Air Injection Pump Relay Control Circuit Signal High
P1441	1	Leakage Diagnostic Pump Control Open Circuit
P1442	1	Leakage Diagnostic Pump Control Circuit Signal Low
P1443	1	Leakage Diagnostic Pump Control Circuit Signal High
P1444	186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Open Circuit
P1445	186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Circuit Signal Low
P1446	186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Circuit Signal High
P1447	189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High during Switching Solenoid Test
P1448	189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too Low
P1449	189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High
P1450	2	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Open Circuit
P1451	2	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal Low
P1452	2	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal High
P1476	184	Leakage Diagnostic Pump Clamped Tube (M52 MY99/00: Leakage Diagnostic Pump Reed Switch Circuit)
P1523	165	'A' Camshaft Position Actuator Signal Low (Bank 1) (M52: 'B' Camshaft Position Actuator Tight or Jammed)
P1524	165	'A' Camshaft Position Actuator Control Circuit Signal High (Bank 1)
P1525	165	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1526	166	'A' Camshaft Position Actuator Control Open Circuit (Bank 2)
P1527	166	'A' Camshaft Position Actuator Control Circuit Signal Low (Bank 2)
P1528	166	'A' Camshaft Position Actuator Control Circuit Signal High (Bank 2)
P1633	136	Throttle Valve Adaptation Limp-Home Position Unknown
P1634	133	Throttle Valve Adaptation Spring Test Failed
P1635	134	Throttle Valve Adaptation Lower Mechanical Stop not Adapted
P1636	132	Throttle Valve Control Circuit
P1637	130	Throttle Valve Position Control, Control Deviation
P1638	131	Throttle Valve Position Control Throttle Stuck Temporarily
P1639	131	Throttle Valve Position Control Throttle Stuck Permanently
P1643	135	Throttle Valve Actuator Start Test Amplifier Balancing Plausibility

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## ECU: ME7.2, Engine: M62-E53, from 01.10.01 till 30.09.02

PCode BMW-FC PCode text

P0010	33	'A' Camshaft Position Actuator Circuit (Bank 1)
P0011	33	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)
P0012	33	'A' Camshaft Position Timing Over-Retarded (Bank 1)
P0020	34	'A' Camshaft Position Actuator Circuit (Bank 2)
P0021	34	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 2)

P0022	34	'A' Camshaft Position Timing Over-Retarded (Bank 2)
P0030	13	HO2S Heater Control Circuit (Bank 1 Sensor 1)
P0031	13	HO2S Heater Control Circuit Low (Bank 1 Sensor 1)
P0032	13	HO2S Heater Control Circuit High (Bank 1 Sensor 1)
P0036	14	HO2S Heater Control Circuit (Bank 1 Sensor 2)
P0037	14	HO2S Heater Control Circuit Low (Bank 1 Sensor 2)
P0038	14	HO2S Heater Control Circuit High (Bank 1 Sensor 2)
P0050	5	HO2S Heater Control Circuit (Bank 2 Sensor 1)
P0051	5	HO2S Heater Control Circuit Low (Bank 2 Sensor 1)
P0052	5	HO2S Heater Control Circuit High (Bank 2 Sensor 1)
P0056	4	HO2S Heater Control Circuit (Bank 2 Sensor 2)
P0057	4	HO2S Heater Control Circuit Low (Bank 2 Sensor 2)
P0058	4	HO2S Heater Control Circuit High (Bank 2 Sensor 2)
P0102	115	Mass or Volume Air Flow Circuit Low Input
P0103	115	Mass or Volume Air Flow Circuit High Input
P0112	124	Intake Air Temperature Sensor 1 Circuit Low
P0113	124	Intake Air Temperature Sensor 1 Circuit High
P0116	123	Engine Coolant Temperature Circuit Range/Performance
P0117	123	Engine Coolant Temperature Circuit Low
P0118	123	Engine Coolant Temperature Circuit High
P0119	123	Engine Coolant Temperature Circuit Intermittent
P0120	117	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0121	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0122	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Low
P0123	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit High
P0130	10	O2 Sensor Circuit (Bank 1 Sensor 1)
P0131	10	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 1)
P0132	10	O2 Sensor Circuit High Voltage (Bank 1 Sensor 1)
P0133	15	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0134	10	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0135	13	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	12	O2 Sensor Circuit (Bank 1 Sensor 2)
P0137	12	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 2)
P0138	12	O2 Sensor Circuit High Voltage (Bank 1 Sensor 2)
P0139	17	O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0140	12	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 2)
P0141	14	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0150	18	O2 Sensor Circuit (Bank 2 Sensor 1)
P0151	18	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 1)
P0152	18	O2 Sensor Circuit High Voltage (Bank 2 Sensor 1)
P0153	21	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0154	18	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0155	5	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0156	20	O2 Sensor Circuit (Bank 2 Sensor 2)
P0157	20	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 2)
P0158	20	O2 Sensor Circuit High Voltage (Bank 2 Sensor 2)
P0159	23	O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0160	20	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 2)
P0161	4	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0171	26	System Too Lean (Bank 1)
P0172	26	System Too Rich (Bank 1)
P0174	27	System Too Lean (Bank 2)
P0175	27	System Too Rich (Bank 2)

P0201	150	Injector Circuit/Open - Cylinder 1
P0202	157	Injector Circuit/Open - Cylinder 2
P0203	155	Injector Circuit/Open - Cylinder 3
P0204	152	Injector Circuit/Open - Cylinder 4
P0205	151	Injector Circuit/Open - Cylinder 5
P0206	154	Injector Circuit/Open - Cylinder 6
P0207	156	Injector Circuit/Open - Cylinder 7
P0208	153	Injector Circuit/Open - Cylinder 8
P0221	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Range/Performance
P0222	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Low
P0223	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit High
P0261	150	Cylinder 1 Injector Circuit Low
P0262	150	Cylinder 1 Injector Circuit High
P0264	157	Cylinder 2 Injector Circuit Low
P0265	157	Cylinder 2 Injector Circuit High
P0267	155	Cylinder 3 Injector Circuit Low
P0268	155	Cylinder 3 Injector Circuit High
P0270	152	Cylinder 4 Injector Circuit Low
P0271	152	Cylinder 4 Injector Circuit High
P0273	151	Cylinder 5 Injector Circuit Low
P0274	151	Cylinder 5 Injector Circuit High
P0276	154	Cylinder 6 Injector Circuit Low
P0277	154	Cylinder 6 Injector Circuit High
P0279	156	Cylinder 7 Injector Circuit Low
P0280	156	Cylinder 7 Injector Circuit High
P0282	153	Cylinder 8 Injector Circuit Low
P0283	153	Cylinder 8 Injector Circuit High
P0300	62	Random/Multiple Cylinder Misfire Detected
P0301	50	Cylinder 1 Misfire Detected
P0302	57	Cylinder 2 Misfire Detected
P0303	55	Cylinder 3 Misfire Detected
P0304	52	Cylinder 4 Misfire Detected
P0305	51	Cylinder 5 Misfire Detected
P0306	54	Cylinder 6 Misfire Detected
P0307	56	Cylinder 7 Misfire Detected
P0308	53	Cylinder 8 Misfire Detected
P0324	214	Knock Control System Error
P0327	210	Knock Sensor 1 Circuit Low (Bank 1 or Single Sensor)
P0328	210	Knock Sensor 1 Circuit High (Bank 1 or Single Sensor)
P0332	212	Knock Sensor 2 Circuit Low (Bank 2)
P0333	212	Knock Sensor 2 Circuit High Input (Bank 2)
P0335	111	Crankshaft Position Sensor 'A' Circuit
P0340	113	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0342	113	Camshaft Position Sensor 'A' Circuit Low (Bank 1 or Single Sensor)
P0343	113	Camshaft Position Sensor 'A' Circuit High (Bank 1 or Single Sensor)
P0345	114	Camshaft Position Sensor 'A' Circuit (Bank 2)
P0347	114	Camshaft Position Sensor 'A' Circuit Low (Bank 2)
P0348	114	Camshaft Position Sensor 'A' Circuit High (Bank 2)
P0370	112	Timing Reference High Resolution Signal 'A'
P0412	85	Secondary Air Injection System Switching Valve A Circuit
P0413	85	Secondary Air Injection System Switching Valve A Circuit Open
P0414	85	Secondary Air Injection System Switching Valve A Circuit Shorted
P0418	84	Secondary Air Injection System Control 'A' Circuit

P0420	40	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	45	Catalyst System Efficiency Below Threshold (Bank 2)
P0440	93	Evaporative Emission System
P0442	183	Evaporative Emission System Leak Detected (small leak)
P0442	188	Evaporative Emission System Leak Detected (small leak)
P0443	98	Evaporative Emission System Purge Control Valve Circuit
P0444	98	Evaporative Emission System Purge Control Valve Circuit Open
P0445	98	Evaporative Emission System Purge Control Valve Circuit Shorted
P0450	185	Evaporative Emission System Pressure Sensor/Switch
P0452	185	Evaporative Emission System Pressure Sensor/Switch Low
P0453	185	Evaporative Emission System Pressure Sensor/Switch High
P0455	183	Evaporative Emission System Leak Detected (large leak)
P0455	188	Evaporative Emission System Leak Detected (large leak)
P0456	187	Evaporative Emission System Leak Detected (very small leak)
P0491	80	Secondary Air Injection System Insufficient Flow (Bank 1)
P0492	81	Secondary Air Injection System Insufficient Flow (Bank 2)
P0500	120	Vehicle Speed Sensor 'A'
P0506	32	Idle Air Control System RPM Lower Than Expected
P0507	32	Idle Air Control System RPM Higher Than Expected
P0600	220	Serial Communication Link
P1143	17	O2 Sensor Activity Check Signal Too High (Bank 1 Sensor 2)
P1144	17	O2 Sensor Activity Check Signal Too Low (Bank 1 Sensor 2)
P1149	23	O2 Sensor Activity Check Signal Too High (Bank 2 Sensor 2)
P1150	23	O2 Sensor Activity Check Signal Too Low (Bank 2 Sensor 2)
P1158	28	Fuel Trim Adaptation Additive Low (Bank 1)
P1159	28	Fuel Trim Adaptation Additive High (Bank 1)
P1160	29	Fuel Trim Adaptation Additive Low (Bank 2)
P1161	29	Fuel Trim Adaptation Additive High (Bank 2) (M52: Engine Oil Temperature Sensor Circuit)
P1168	15	Post Catalyst Fuel Trim System Correction Value above Threshold (Bank 1)
P1170	21	Post Catalyst Fuel Trim System Correction Value above Threshold (Bank 2)
P1200	24	Fuel Trim Upper Adaptation Range System Too Lean (Bank 1)
P1201	24	Fuel Trim Upper Adaptation Range System Too Rich (Bank 1)
P1202	25	Fuel Trim Upper Adaptation Range System Too Lean (Bank 2)
P1203	25	Fuel Trim Upper Adaptation Range System Too Rich (Bank 2)
P1327	211	Knock Sensor 2 Circuit Low Input (Bank 1)
P1328	211	Knock Sensor 2 Circuit High Input (Bank 1)
P1332	213	Knock Sensor 4 Circuit Low Input
P1333	213	Knock Sensor 4 Circuit High Input
P1340	62	Multiple Cylinder Misfire During Start
P1341	62	Multiple Cylinder Misfire with Fuel Cut-Off
P1342	50	Misfire During Start Cylinder 1
P1343	50	Misfire Cylinder 1 with Fuel Cut-Off
P1344	57	Misfire During Start Cylinder 2
P1345	57	Misfire Cylinder 2 with Fuel Cut-Off
P1346	55	Misfire During Start Cylinder 3
P1347	55	Misfire Cylinder 3 with Fuel Cut-Off
P1348	52	Misfire During Start Cylinder 4
P1349	52	Misfire Cylinder 4 with Fuel Cut-Off
P1350	51	Misfire during Start Cylinder 5
P1351	51	Misfire Cylinder 5 with Fuel Cut-Off
P1352	54	Misfire during Start Cylinder 6
P1353	54	Misfire Cylinder 6 with Fuel Cut-Off
P1354	56	Misfire during Start Cylinder 7

P1355	56	Misfire Cylinder 7 with Fuel Cut-Off
P1356	53	Misfire during Start Cylinder 8
P1357	53	Misfire Cylinder 8 with Fuel Cut-Off
P1381	215	Control Module Self-Test, Knock Control Offset (Bank 1)
P1382	216	Control Module Self-Test, Knock Control Test Pulse (Bank 1)
P1413	84	Secondary Air Injection Pump Relay Control Circuit Signal Low
P1414	84	Secondary Air Injection Pump Relay Control Circuit Signal High
P1441	1	Leakage Diagnostic Pump Control Open Circuit
P1442	1	Leakage Diagnostic Pump Control Circuit Signal Low
P1443	1	Leakage Diagnostic Pump Control Circuit Signal High
P1444	186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Open Circuit
P1445	186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Circuit Signal Low
P1446	186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Circuit Signal High
P1447	189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High during Switching Solenoid Test
P1448	189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too Low
P1449	189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High
P1450	2	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Open Circuit
P1451	2	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal Low
P1452	2	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal High
P1476	184	Leakage Diagnostic Pump Clamped Tube (M52 MY99/00: Leakage Diagnostic Pump Reed Switch Circuit)
P1523	165	'A' Camshaft Position Actuator Signal Low (Bank 1) (M52: 'B' Camshaft Position Actuator Tight or Jammed)
P1524	165	'A' Camshaft Position Actuator Control Circuit Signal High (Bank 1)
P1525	165	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1526	166	'A' Camshaft Position Actuator Control Open Circuit (Bank 2)
P1527	166	'A' Camshaft Position Actuator Control Circuit Signal Low (Bank 2)
P1528	166	'A' Camshaft Position Actuator Control Circuit Signal High (Bank 2)
P1636	132	Throttle Valve Control Circuit
P1637	130	Throttle Valve Position Control, Control Deviation
P1638	131	Throttle Valve Position Control Throttle Stuck Temporarily
P1639	131	Throttle Valve Position Control Throttle Stuck Permanently

## ECU: ME7.2, Engine: M62-E53, from 01.10.02 till

PCode	BMW-FC	PCode text
P0010	33	'A' Camshaft Position Actuator Circuit (Bank 1)
P0011	33	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)
P0012	33	'A' Camshaft Position Timing Over-Retarded (Bank 1)
P0020	34	'A' Camshaft Position Actuator Circuit (Bank 2)
P0021	34	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 2)
P0022	34	'A' Camshaft Position Timing Over-Retarded (Bank 2)
P0030	13	HO2S Heater Control Circuit (Bank 1 Sensor 1)
P0031	13	HO2S Heater Control Circuit Low (Bank 1 Sensor 1)
P0032	13	HO2S Heater Control Circuit High (Bank 1 Sensor 1)
P0036	14	HO2S Heater Control Circuit (Bank 1 Sensor 2)
P0037	14	HO2S Heater Control Circuit Low (Bank 1 Sensor 2)
P0038	14	HO2S Heater Control Circuit High (Bank 1 Sensor 2)
P0050	5	HO2S Heater Control Circuit (Bank 2 Sensor 1)
P0051	5	HO2S Heater Control Circuit Low (Bank 2 Sensor 1)
P0052	5	HO2S Heater Control Circuit High (Bank 2 Sensor 1)
P0056	4	HO2S Heater Control Circuit (Bank 2 Sensor 2)

P0057	4	HO2S Heater Control Circuit Low (Bank 2 Sensor 2)
P0058	4	HO2S Heater Control Circuit High (Bank 2 Sensor 2)
P0102	115	Mass or Volume Air Flow Circuit Low Input
P0103	115	Mass or Volume Air Flow Circuit High Input
P0112	124	Intake Air Temperature Sensor 1 Circuit Low
P0113	124	Intake Air Temperature Sensor 1 Circuit High
P0116	123	Engine Coolant Temperature Circuit Range/Performance
P0117	123	Engine Coolant Temperature Circuit Low
P0118	123	Engine Coolant Temperature Circuit High
P0120	117	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0121	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0122	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Low
P0123	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit High
P0125	123	Insufficient Coolant Temperature for Closed Loop Fuel Control
P0128	139	Coolant Thermostat (Coolant Temperature Below Thermostat Regulating Temperature)
P0130	10	O2 Sensor Circuit (Bank 1 Sensor 1)
P0131	10	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 1)
P0132	10	O2 Sensor Circuit High Voltage (Bank 1 Sensor 1)
P0133	15	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0134	10	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0135	13	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	12	O2 Sensor Circuit (Bank 1 Sensor 2)
P0137	12	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 2)
P0138	12	O2 Sensor Circuit High Voltage (Bank 1 Sensor 2)
P0140	12	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 2)
P0141	14	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0150	18	O2 Sensor Circuit (Bank 2 Sensor 1)
P0151	18	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 1)
P0152	18	O2 Sensor Circuit High Voltage (Bank 2 Sensor 1)
P0153	21	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0154	18	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0155	5	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0156	20	O2 Sensor Circuit (Bank 2 Sensor 2)
P0157	20	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 2)
P0158	20	O2 Sensor Circuit High Voltage (Bank 2 Sensor 2)
P0160	20	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 2)
P0161	4	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0201	150	Injector Circuit/Open - Cylinder 1
P0202	157	Injector Circuit/Open - Cylinder 2
P0203	155	Injector Circuit/Open - Cylinder 3
P0204	152	Injector Circuit/Open - Cylinder 4
P0205	151	Injector Circuit/Open - Cylinder 5
P0206	154	Injector Circuit/Open - Cylinder 6
P0207	156	Injector Circuit/Open - Cylinder 7
P0208	153	Injector Circuit/Open - Cylinder 8
P0221	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Range/Performance
P0222	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Low
P0223	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit High
P0261	150	Cylinder 1 Injector Circuit Low
P0262	150	Cylinder 1 Injector Circuit High
P0264	157	Cylinder 2 Injector Circuit Low
P0265	157	Cylinder 2 Injector Circuit High
P0267	155	Cylinder 3 Injector Circuit Low



P0268	155	Cylinder 3 Injector Circuit High
P0270	152	Cylinder 4 Injector Circuit Low
P0271	152	Cylinder 4 Injector Circuit High
P0273	151	Cylinder 5 Injector Circuit Low
P0274	151	Cylinder 5 Injector Circuit High
P0276	154	Cylinder 6 Injector Circuit Low
P0277	154	Cylinder 6 Injector Circuit High
P0279	156	Cylinder 7 Injector Circuit Low
P0280	156	Cylinder 7 Injector Circuit High
P0282	153	Cylinder 8 Injector Circuit Low
P0283	153	Cylinder 8 Injector Circuit High
P0300	62	Random/Multiple Cylinder Misfire Detected
P0301	50	Cylinder 1 Misfire Detected
P0302	57	Cylinder 2 Misfire Detected
P0303	55	Cylinder 3 Misfire Detected
P0304	52	Cylinder 4 Misfire Detected
P0305	51	Cylinder 5 Misfire Detected
P0306	54	Cylinder 6 Misfire Detected
P0307	56	Cylinder 7 Misfire Detected
P0308	53	Cylinder 8 Misfire Detected
P0316	62	Engine Misfire Detected on Startup (First 1000 Revolutions)
P0327	210	Knock Sensor 1 Circuit Low (Bank 1 or Single Sensor)
P0328	210	Knock Sensor 1 Circuit High (Bank 1 or Single Sensor)
P0332	212	Knock Sensor 2 Circuit Low (Bank 2)
P0333	212	Knock Sensor 2 Circuit High Input (Bank 2)
P0335	111	Crankshaft Position Sensor 'A' Circuit
P0340	113	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0342	113	Camshaft Position Sensor 'A' Circuit Low (Bank 1 or Single Sensor)
P0343	113	Camshaft Position Sensor 'A' Circuit High (Bank 1 or Single Sensor)
P0345	114	Camshaft Position Sensor 'A' Circuit (Bank 2)
P0347	114	Camshaft Position Sensor 'A' Circuit Low (Bank 2)
P0348	114	Camshaft Position Sensor 'A' Circuit High (Bank 2)
P0363	62	Misfire Detected - Fueling Disabled
P0370	112	Timing Reference High Resolution Signal 'A'
P0412	85	Secondary Air Injection System Switching Valve A Circuit
P0413	85	Secondary Air Injection System Switching Valve A Circuit Open
P0414	85	Secondary Air Injection System Switching Valve A Circuit Shorted
P0418	84	Secondary Air Injection System Control 'A' Circuit
P0420	40	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	45	Catalyst System Efficiency Below Threshold (Bank 2)
P0440	93	Evaporative Emission System
P0442	183	Evaporative Emission System Leak Detected (small leak)
P0442	188	Evaporative Emission System Leak Detected (small leak)
P0443	98	Evaporative Emission System Purge Control Valve Circuit
P0444	98	Evaporative Emission System Purge Control Valve Circuit Open
P0445	98	Evaporative Emission System Purge Control Valve Circuit Shorted
P0450	185	Evaporative Emission System Pressure Sensor/Switch
P0452	185	Evaporative Emission System Pressure Sensor/Switch Low
P0453	185	Evaporative Emission System Pressure Sensor/Switch High
P0455	183	Evaporative Emission System Leak Detected (large leak)
P0455	188	Evaporative Emission System Leak Detected (large leak)
P0456	187	Evaporative Emission System Leak Detected (very small leak)
P0491	80	Secondary Air Injection System Insufficient Flow (Bank 1)

P0492	81	Secondary Air Injection System Insufficient Flow (Bank 2)
P0500	120	Vehicle Speed Sensor 'A'
P0506	32	Idle Air Control System RPM Lower Than Expected
P0507	32	Idle Air Control System RPM Higher Than Expected
P0600	220	Serial Communication Link
P1102	163	Idle Control System, Adaptation of Unmetered Air Mass Too Low
P1103	163	Idle Control System, Adaptation of Unmetered Air Mass Too Large
P1130	17	O2 Sensor Circuit Dynamic Test (Bank 1 Sensor 2)
P1131	23	O2 Sensor Circuit Dynamic Test (Bank 2 Sensor 2)
P1327	211	Knock Sensor 2 Circuit Low Input (Bank 1)
P1328	211	Knock Sensor 2 Circuit High Input (Bank 1)
P1332	213	Knock Sensor 4 Circuit Low Input
P1333	213	Knock Sensor 4 Circuit High Input
P1342	50	Misfire During Start Cylinder 1
P1343	50	Misfire Cylinder 1 with Fuel Cut-Off
P1344	57	Misfire During Start Cylinder 2
P1345	57	Misfire Cylinder 2 with Fuel Cut-Off
P1346	55	Misfire During Start Cylinder 3
P1347	55	Misfire Cylinder 3 with Fuel Cut-Off
P1348	52	Misfire During Start Cylinder 4
P1349	52	Misfire Cylinder 4 with Fuel Cut-Off
P1350	51	Misfire during Start Cylinder 5
P1351	51	Misfire Cylinder 5 with Fuel Cut-Off
P1352	54	Misfire during Start Cylinder 6
P1353	54	Misfire Cylinder 6 with Fuel Cut-Off
P1354	56	Misfire during Start Cylinder 7
P1355	56	Misfire Cylinder 7 with Fuel Cut-Off
P1356	53	Misfire during Start Cylinder 8
P1357	53	Misfire Cylinder 8 with Fuel Cut-Off
P1381	215	Control Module Self-Test, Knock Control Offset (Bank 1)
P1382	216	Control Module Self-Test, Knock Control Test Pulse (Bank 1)
P1386	214	Control Module Self-Test, Knock Control Circuit Baseline Test (Bank 1)
P1413	84	Secondary Air Injection Pump Relay Control Sircuit Signal Low
P1414	84	Secondary Air Injection Pump Relay Control Circuit Signal High
P1441	1	Leakage Diagnostic Pump Control Open Circuit
P1442	1	Leakage Diagnostic Pump Control Circuit Signal Low
P1443	1	Leakage Diagnostic Pump Control Circuit Signal High
P1444	186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Open Circuit
P1445	186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Circuit Signal Low
P1446	186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Circuit Signal High
P1447	189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High during Switching Solenoid Test
P1448	189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too Low
P1449	189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High
P1450	2	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Open Circuit
P1451	2	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal Low
P1452	2	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal High
P1476	184	Leakage Diagnostic Pump Clamped Tube (M52 MY99/00: Leakage Diagnostic Pump Reed Switch Circuit)
P1525	165	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1526	166	'A' Camshaft Position Actuator Control Open Circuit (Bank 2)
P1636	132	Throttle Valve Control Circuit
P1637	130	Throttle Valve Position Control, Control Deviation
P1638	131	Throttle Valve Position Control Throttle Stuck Temporarily

P1639	131	Throttle Valve Position Control Throttle Stuck Permanently
P2088	165	'A' Camshaft Position Actuator Control Circuit Low (Bank 1)
P2089	165	'A' Camshaft Position Actuator Control Circuit High (Bank 1)
P2092	166	'A' Camshaft Position Actuator Control Circuit Low (Bank 2)
P2093	166	'A' Camshaft Position Actuator Control Circuit High (Bank 2)
P2177	26	System Too Lean Off Idle (Bank 1)
P2178	26	System Too Rich Off Idle (Bank 1)
P2179	27	System Too Lean Off Idle (Bank 2)
P2180	27	System Too Rich Off Idle (Bank 2)
P2187	28	System Too Lean at Idle (Bank 1)
P2188	28	System Too Rich at Idle (Bank 1)
P2189	29	System Too Lean at Idle (Bank 2)
P2190	29	System Too Rich at Idle (Bank 2)
P2191	24	System Too Lean at Higher Load (Bank 1)
P2192	24	System Too Rich at Higher Load (Bank 1)
P2193	25	System Too Lean at Higher Load (Bank 2)
P2194	25	System Too Rich at Higher Load (Bank 2)
P2270	17	O2 Sensor Signal Stuck Lean (Bank 1 Sensor 2)
P2271	17	O2 Sensor Signal Stuck Rich (Bank 1 Sensor 2)
P2272	23	O2 Sensor Signal Stuck Lean (Bank 2 Sensor 2)
P2273	23	O2 Sensor Signal Stuck Rich (Bank 2 Sensor 2)

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## ECU: ME9.2, Engine: N62, from 01.11.01 till 31.08.02

PCode BMW-FC PCode text

P0011	10033	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)
P0012	10033	'A' Camshaft Position Timing Over-Retarded (Bank 1)
P0014	10171	'B' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)
P0015	10171	'B' Camshaft Position Timing Over-Retarded (Bank 1)
P0021	10034	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 2)
P0022	10034	'A' Camshaft Position Timing Over-Retarded (Bank 2)
P0024	10172	'B' Camshaft Position Timing Over-Advanced or System Performance (Bank 2)
P0025	10172	'B' Camshaft Position Timing Over-Retarded (Bank 2)
P0030	10013	HO2S Heater Control Circuit (Bank 1 Sensor 1)
P0031	10013	HO2S Heater Control Circuit Low (Bank 1 Sensor 1)
P0032	10013	HO2S Heater Control Circuit High (Bank 1 Sensor 1)
P0036	10014	HO2S Heater Control Circuit (Bank 1 Sensor 2)
P0037	10014	HO2S Heater Control Circuit Low (Bank 1 Sensor 2)
P0038	10014	HO2S Heater Control Circuit High (Bank 1 Sensor 2)
P0040	10003	O2 Sensor Signals Swapped Bank 1 Sensor 1 / Bank 2 Sensor 1
P0050	10005	HO2S Heater Control Circuit (Bank 2 Sensor 1)
P0051	10005	HO2S Heater Control Circuit Low (Bank 2 Sensor 1)
P0052	10005	HO2S Heater Control Circuit High (Bank 2 Sensor 1)
P0056	10004	HO2S Heater Control Circuit (Bank 2 Sensor 2)
P0057	10004	HO2S Heater Control Circuit Low (Bank 2 Sensor 2)
P0058	10004	HO2S Heater Control Circuit High (Bank 2 Sensor 2)
P0102	10115	Mass or Volume Air Flow Circuit Low Input
P0103	10115	Mass or Volume Air Flow Circuit High Input
P0112	10124	Intake Air Temperature Sensor 1 Circuit Low
P0113	10124	Intake Air Temperature Sensor 1 Circuit High
P0115	10123	Engine Coolant Temperature Circuit
P0116	10123	Engine Coolant Temperature Circuit Range/Performance

P0117	10123	Engine Coolant Temperature Circuit Low
P0118	10123	Engine Coolant Temperature Circuit High
P0120	10117	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0121	10118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0122	10118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Low
P0123	10118	Throttle/Pedal Position Sensor/Switch 'A' Circuit High
P0128	10139	Coolant Thermostat (Coolant Temperature Below Thermostat Regulating Temperature)
P0130	10010	O2 Sensor Circuit (Bank 1 Sensor 1)
P0133	10010	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0135	10013	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	10012	O2 Sensor Circuit (Bank 1 Sensor 2)
P0137	10012	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 2)
P0138	10012	O2 Sensor Circuit High Voltage (Bank 1 Sensor 2)
P0139	10017	O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0140	10012	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 2)
P0141	10014	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0150	10018	O2 Sensor Circuit (Bank 2 Sensor 1)
P0153	10018	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0155	10005	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0156	10020	O2 Sensor Circuit (Bank 2 Sensor 2)
P0157	10020	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 2)
P0158	10020	O2 Sensor Circuit High Voltage (Bank 2 Sensor 2)
P0159	10023	O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0160	10020	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 2)
P0161	10004	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0171	10026	System Too Lean (Bank 1)
P0172	10026	System Too Rich (Bank 1)
P0174	10027	System Too Lean (Bank 2)
P0175	10027	System Too Rich (Bank 2)
P0201	10150	Injector Circuit/Open - Cylinder 1
P0202	10157	Injector Circuit/Open - Cylinder 2
P0203	10155	Injector Circuit/Open - Cylinder 3
P0204	10152	Injector Circuit/Open - Cylinder 4
P0205	10151	Injector Circuit/Open - Cylinder 5
P0206	10154	Injector Circuit/Open - Cylinder 6
P0207	10156	Injector Circuit/Open - Cylinder 7
P0208	10153	Injector Circuit/Open - Cylinder 8
P0221	10119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Range/Performance
P0222	10119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Low
P0223	10119	Throttle/Pedal Position Sensor/Switch 'B' Circuit High
P0261	10150	Cylinder 1 Injector Circuit Low
P0262	10150	Cylinder 1 Injector Circuit High
P0264	10157	Cylinder 2 Injector Circuit Low
P0265	10157	Cylinder 2 Injector Circuit High
P0267	10155	Cylinder 3 Injector Circuit Low
P0268	10155	Cylinder 3 Injector Circuit High
P0270	10152	Cylinder 4 Injector Circuit Low
P0271	10152	Cylinder 4 Injector Circuit High
P0273	10151	Cylinder 5 Injector Circuit Low
P0274	10151	Cylinder 5 Injector Circuit High
P0276	10154	Cylinder 6 Injector Circuit Low
P0277	10154	Cylinder 6 Injector Circuit High
P0279	10156	Cylinder 7 Injector Circuit Low

P0280	10156	Cylinder 7 Injector Circuit High
P0282	10153	Cylinder 8 Injector Circuit Low
P0283	10153	Cylinder 8 Injector Circuit High
P0300	10062	Random/Multiple Cylinder Misfire Detected
P0301	10050	Cylinder 1 Misfire Detected
P0302	10057	Cylinder 2 Misfire Detected
P0303	10055	Cylinder 3 Misfire Detected
P0304	10052	Cylinder 4 Misfire Detected
P0305	10051	Cylinder 5 Misfire Detected
P0306	10054	Cylinder 6 Misfire Detected
P0307	10056	Cylinder 7 Misfire Detected
P0308	10053	Cylinder 8 Misfire Detected
P0327	10210	Knock Sensor 1 Circuit Low (Bank 1 or Single Sensor)
P0328	10210	Knock Sensor 1 Circuit High (Bank 1 or Single Sensor)
P0332	10212	Knock Sensor 2 Circuit Low (Bank 2)
P0333	10212	Knock Sensor 2 Circuit High Input (Bank 2)
P0335	10111	Crankshaft Position Sensor 'A' Circuit
P0340	10113	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0341	10113	Camshaft Position Sensor 'A' Circuit Range/Performance (Bank 1 or Single Sensor)
P0342	10113	Camshaft Position Sensor 'A' Circuit Low (Bank 1 or Single Sensor)
P0343	10113	Camshaft Position Sensor 'A' Circuit High (Bank 1 or Single Sensor)
P0345	10175	Camshaft Position Sensor 'A' Circuit (Bank 2)
P0346	10175	Camshaft Position Sensor 'A' Circuit Range/Performance (Bank 2)
P0347	10175	Camshaft Position Sensor 'A' Circuit Low (Bank 2)
P0348	10175	Camshaft Position Sensor 'A' Circuit High (Bank 2)
P0365	10114	Camshaft Position Sensor 'B' Circuit (Bank 1)
P0366	10114	Camshaft Position Sensor 'B' Circuit Range/Performance (Bank 1)
P0367	10114	Camshaft Position Sensor 'B' Circuit Low (Bank 1)
P0368	10114	Camshaft Position Sensor 'B' Circuit High (Bank 1)
P0370	10112	Timing Reference High Resolution Signal 'A'
P0390	10176	Camshaft Position Sensor 'B' Circuit (Bank 2)
P0391	10176	Camshaft Position Sensor 'B' Circuit Range/Performance (Bank 2)
P0392	10176	Camshaft Position Sensor 'B' Circuit Low Input (Bank 2)
P0393	10176	Camshaft Position Sensor 'B' Circuit High Input (Bank 2)
P0418	10084	Secondary Air Injection System Control 'A' Circuit
P0420	10040	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	10045	Catalyst System Efficiency Below Threshold (Bank 2)
P0441	10093	Evaporative Emission System Incorrect Purge Flow
P0442	10188	Evaporative Emission System Leak Detected (small leak)
P0443	10098	Evaporative Emission System Purge Control Valve Circuit
P0444	10098	Evaporative Emission System Purge Control Valve Circuit Open
P0445	10098	Evaporative Emission System Purge Control Valve Circuit Shorted
P0455	10188	Evaporative Emission System Leak Detected (large leak)
P0491	10080	Secondary Air Injection System Insufficient Flow (Bank 1)
P0492	10081	Secondary Air Injection System Insufficient Flow (Bank 2)
P0500	10120	Vehicle Speed Sensor 'A'
P0506	10197	Idle Air Control System RPM Lower Than Expected
P0507	10197	Idle Air Control System RPM Higher Than Expected
P1041	10334	Internal VVT-Control Module EEPROM Error (Bank 1)
P1042	10334	Internal VVT-Control Module Random Access Memory (RAM) Error (Bank 1)
P1043	10334	Internal VVT-Control Module Read Only Memory (ROM) Error (Bank 1)
P1044	10335	Internal VVT-Control Module EEPROM Error (Bank 2)
P1045	10335	Internal VVT-Control Module Random Access Memory (RAM) Error (Bank 2)

P1046	10335	Internal VVT-Control Module Read Only Memory (ROM) Error (Bank 2)
P1047	10336	VVT-Control Circuit High Input (Bank 1)
P1048	10336	VVT-Control Circuit Low Input (Bank 1)
P1049	10336	VVT-Control Circuit Engine Cables Low Input (Bank 1)
P1050	10336	VVT-Control Circuit (Bank 1)
P1051	10337	VVT-Control Circuit High Input (Bank 2)
P1052	10337	VVT-Control Circuit Low Input (Bank 2)
P1053	10337	VVT-Control Circuit Engine Cables Low Input (Bank 2)
P1054	10337	VVT-Control Circuit (Bank 2)
P1055	10338	VVT-Supply Voltage Control Motor High Input (Bank 1)
P1056	10338	VVT-Supply Voltage Control Motor Low Input (Bank 1)
P1057	10338	VVT-Supply Voltage Control Motor Electrical (Bank 1)
P1058	10339	VVT-Supply Voltage Control Motor High Input (Bank 2)
P1059	10339	VVT-Supply Voltage Control Motor Low Input (Bank 2)
P1060	10339	VVT-Supply Voltage Control Motor Electrical (Bank 2)
P1061	10341	VVT-Limp Home Request RPM and Air Mass Limitation
P1062	10341	VVT-Limp Home Request Full Stroke Position not Reached
P1063	10341	VVT-Limp Home Request Air Mass Plausibility
P1065	10227	VVT-CAN-Timeout No Signal
P1066	10227	VVT-CAN-Message Monitoring Faulty Actual Message
P1071	10334	Internal VVT-Control Module Watchdog or Temperature Sensor Error (Bank 1)
P1072	10335	Internal VVT-Control Module Watchdog or Temperature Sensor Error (Bank 2)
P1100	10275	O2 Sensor Circuit Slow Response after Coast Down Fuel Cut-Off (Bank 1 Sensor 1) (S62: Air Mass Flow Sensor High Input)
P1101	10276	O2 Sensor Circuit Slow Response after Coast Down Fuel Cut-Off (Bank 2 Sensor 1)
P1111	10125	Engine Coolant Temperature Sensor Radiator Outlet Low Input
P1112	10125	Engine Coolant Temperature Sensor Radiator Outlet High Input
P1130	10017	O2 Sensor Circuit Dynamic Test (Bank 1 Sensor 2)
P1131	10023	O2 Sensor Circuit Dynamic Test (Bank 2 Sensor 2)
P1143	10017	O2 Sensor Activity Check Signal Too High (Bank 1 Sensor 2)
P1144	10017	O2 Sensor Activity Check Signal Too Low (Bank 1 Sensor 2)
P1149	10023	O2 Sensor Activity Check Signal Too High (Bank 2 Sensor 2)
P1150	10023	O2 Sensor Activity Check Signal Too Low (Bank 2 Sensor 2)
P1158	10028	Fuel Trim Adaptation Additive Low (Bank 1)
P1159	10028	Fuel Trim Adaptation Additive High (Bank 1)
P1160	10029	Fuel Trim Adaptation Additive Low (Bank 2)
P1161	10029	Fuel Trim Adaptation Additive High (Bank 2) (M52: Engine Oil Temperature Sensor Circuit)
P1167	10010	HO2S Heater Coupling Signal Too High (Bank 1 Sensor 1)
P1168	10010	Post Catalyst Fuel Trim System Correction Value above Threshold (Bank 1)
P1169	10018	HO2S Heater Coupling Signal Too High (Bank 2 Sensor 1)
P1170	10018	Post Catalyst Fuel Trim System Correction Value above Threshold (Bank 2)
P1200	10024	Fuel Trim Upper Adaptation Range System Too Lean (Bank 1)
P1201	10024	Fuel Trim Upper Adaptation Range System Too Rich (Bank 1)
P1202	10025	Fuel Trim Upper Adaptation Range System Too Lean (Bank 2)
P1203	10025	Fuel Trim Upper Adaptation Range System Too Rich (Bank 2)
P1327	10211	Knock Sensor 2 Circuit Low Input (Bank 1)
P1328	10211	Knock Sensor 2 Circuit High Input (Bank 1)
P1332	10213	Knock Sensor 4 Circuit Low Input
P1333	10213	Knock Sensor 4 Circuit High Input
P1340	10062	Multiple Cylinder Misfire During Start
P1341	10062	Multiple Cylinder Misfire with Fuel Cut-Off
P1342	10050	Misfire During Start Cylinder 1
P1343	10050	Misfire Cylinder 1 with Fuel Cut-Off

P1344	10057	Misfire During Start Cylinder 2
P1345	10057	Misfire Cylinder 2 with Fuel Cut-Off
P1346	10055	Misfire During Start Cylinder 3
P1347	10055	Misfire Cylinder 3 with Fuel Cut-Off
P1348	10052	Misfire During Start Cylinder 4
P1349	10052	Misfire Cylinder 4 with Fuel Cut-Off
P1350	10051	Misfire during Start Cylinder 5
P1351	10051	Misfire Cylinder 5 with Fuel Cut-Off
P1352	10054	Misfire during Start Cylinder 6
P1353	10054	Misfire Cylinder 6 with Fuel Cut-Off
P1354	10056	Misfire during Start Cylinder 7
P1355	10056	Misfire Cylinder 7 with Fuel Cut-Off
P1356	10053	Misfire during Start Cylinder 8
P1357	10053	Misfire Cylinder 8 with Fuel Cut-Off
P1378	10238	Control Module Self-Test, Knock Control Offset (Bank 2)
P1379	10239	Control Module Self-Test, Knock Control Test Pulse (Bank 2)
P1380	10217	Control Module Self-Test, Knock Control Circuit Baseline Test (Bank 2)
P1381	10215	Control Module Self-Test, Knock Control Offset (Bank 1)
P1382	10216	Control Module Self-Test, Knock Control Test Pulse (Bank 1)
P1386	10214	Control Module Self-Test, Knock Control Circuit Baseline Test (Bank 1)
P1413	10084	Secondary Air Injection Pump Relay Control Sircuit Signal Low
P1414	10084	Secondary Air Injection Pump Relay Control Circuit Signal High
P1434	10189	Diagnostic Module Tank Leakage (DM-TL)
P1444	10186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Open Circuit
P1445	10186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Circuit Signal Low
P1446	10186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Circuit Signal High
P1447	10189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High during Switching Solenoid Test
P1448	10189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too Low
P1449	10189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High
P1450	10002	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Open Circuit
P1451	10002	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal Low
P1452	10002	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal High
P1523	10165	'A' Camshaft Position Actuator Signal Low (Bank 1) (M52: 'B' Camshaft Position Actuator Tight or Jammed)
P1524	10165	'A' Camshaft Position Actuator Control Circuit Signal High (Bank 1)
P1525	10165	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1526	10166	'A' Camshaft Position Actuator Control Open Circuit (Bank 2)
P1527	10166	'A' Camshaft Position Actuator Control Circuit Signal Low (Bank 2)
P1528	10166	'A' Camshaft Position Actuator Control Circuit Signal High (Bank 2)
P1529	10173	'B' Camshaft Position Actuator Control Circuit Signal Low (Bank 1)
P1530	10173	'B' Camshaft Position Actuator Control Circuit Signal High (Bank 1) (S54 to 09/00: Throttle Valve Position Control, Control Deviation)
P1531	10173	'B' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1532	10174	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (S54 to 09/00: Throttle Valve Control Circuit)
P1533	10174	'B' Camshaft Position Actuator Control Circuit Signal Low (Bank 2) (S54 to 09/00: ECM Prozessor)
P1534	10174	'B' Camshaft Position Actuator Control Circuit Signal High (Bank 2)
P1611	10220	Serial Communication Link Transmission Control Module
P1628	10089	Throttle Valve Actuator Spring Test Malfunction during Opening
P1629	10089	Throttle Valve Actuator Spring Test Stop, Spring does not Open
P1631	10133	Throttle Valve Actuator Spring Test
P1634	10133	Throttle Valve Adaptation Spring Test Failed
P1636	10132	Throttle Valve Control Circuit

P1637	10130	Throttle Valve Position Control, Control Deviation
P1638	10131	Throttle Valve Position Control Throttle Stuck Temporarily
P1639	10131	Throttle Valve Position Control Throttle Stuck Permanently
P3213	10220	CAN Message Monitoring ETC Alive Check
P3214	10220	CAN Message Monitoring ETC Plausibility
P3240	10140	Map Cooling Thermostat Control Circuit Open Circuit
P3241	10140	Map Cooling Thermostat Control Circuit Low Input
P3242	10140	Map Cooling Thermostat Control Circuit High Input

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## ECU: ME9.2, Engine: N62, from 01.09.02 till

PCode	BMW-FC	PCode text
P0011	10033	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)
P0012	10033	'A' Camshaft Position Timing Over-Retarded (Bank 1)
P0014	10171	'B' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)
P0015	10171	'B' Camshaft Position Timing Over-Retarded (Bank 1)
P0021	10034	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 2)
P0022	10034	'A' Camshaft Position Timing Over-Retarded (Bank 2)
P0024	10172	'B' Camshaft Position Timing Over-Advanced or System Performance (Bank 2)
P0025	10172	'B' Camshaft Position Timing Over-Retarded (Bank 2)
P0025	10291	'B' Camshaft Position Timing Over-Retarded (Bank 2)
P0030	10011	HO2S Heater Control Circuit (Bank 1 Sensor 1)
P0031	10011	HO2S Heater Control Circuit Low (Bank 1 Sensor 1)
P0032	10011	HO2S Heater Control Circuit High (Bank 1 Sensor 1)
P0036	10014	HO2S Heater Control Circuit (Bank 1 Sensor 2)
P0037	10014	HO2S Heater Control Circuit Low (Bank 1 Sensor 2)
P0038	10014	HO2S Heater Control Circuit High (Bank 1 Sensor 2)
P0040	10003	O2 Sensor Signals Swapped Bank 1 Sensor 1 / Bank 2 Sensor 1
P0050	10019	HO2S Heater Control Circuit (Bank 2 Sensor 1)
P0051	10019	HO2S Heater Control Circuit Low (Bank 2 Sensor 1)
P0052	10019	HO2S Heater Control Circuit High (Bank 2 Sensor 1)
P0056	10004	HO2S Heater Control Circuit (Bank 2 Sensor 2)
P0057	10004	HO2S Heater Control Circuit Low (Bank 2 Sensor 2)
P0058	10004	HO2S Heater Control Circuit High (Bank 2 Sensor 2)
P0102	10115	Mass or Volume Air Flow Circuit Low Input
P0103	10115	Mass or Volume Air Flow Circuit High Input
P0112	10124	Intake Air Temperature Sensor 1 Circuit Low
P0113	10124	Intake Air Temperature Sensor 1 Circuit High
P0115	10123	Engine Coolant Temperature Circuit
P0116	10123	Engine Coolant Temperature Circuit Range/Performance
P0117	10123	Engine Coolant Temperature Circuit Low
P0118	10123	Engine Coolant Temperature Circuit High
P0120	10117	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0121	10118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0122	10118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Low
P0123	10118	Throttle/Pedal Position Sensor/Switch 'A' Circuit High
P0128	10139	Coolant Thermostat (Coolant Temperature Below Thermostat Regulating Temperature)
P0131	10314	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 1)
P0132	10314	O2 Sensor Circuit High Voltage (Bank 1 Sensor 1)
P0133	10316	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0135	10013	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	10012	O2 Sensor Circuit (Bank 1 Sensor 2)



P0137	10012	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 2)
P0138	10012	O2 Sensor Circuit High Voltage (Bank 1 Sensor 2)
P0139	10017	O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0140	10012	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 2)
P0141	10014	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0151	10293	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 1)
P0152	10293	O2 Sensor Circuit High Voltage (Bank 2 Sensor 1)
P0153	10294	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0155	10005	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0156	10020	O2 Sensor Circuit (Bank 2 Sensor 2)
P0157	10020	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 2)
P0158	10020	O2 Sensor Circuit High Voltage (Bank 2 Sensor 2)
P0159	10023	O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0160	10020	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 2)
P0161	10004	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0201	10150	Injector Circuit/Open - Cylinder 1
P0202	10157	Injector Circuit/Open - Cylinder 2
P0203	10155	Injector Circuit/Open - Cylinder 3
P0204	10152	Injector Circuit/Open - Cylinder 4
P0205	10151	Injector Circuit/Open - Cylinder 5
P0206	10154	Injector Circuit/Open - Cylinder 6
P0207	10156	Injector Circuit/Open - Cylinder 7
P0208	10153	Injector Circuit/Open - Cylinder 8
P0221	10119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Range/Performance
P0222	10119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Low
P0223	10119	Throttle/Pedal Position Sensor/Switch 'B' Circuit High
P0261	10150	Cylinder 1 Injector Circuit Low
P0262	10150	Cylinder 1 Injector Circuit High
P0264	10157	Cylinder 2 Injector Circuit Low
P0265	10157	Cylinder 2 Injector Circuit High
P0267	10155	Cylinder 3 Injector Circuit Low
P0268	10155	Cylinder 3 Injector Circuit High
P0270	10152	Cylinder 4 Injector Circuit Low
P0271	10152	Cylinder 4 Injector Circuit High
P0273	10151	Cylinder 5 Injector Circuit Low
P0274	10151	Cylinder 5 Injector Circuit High
P0276	10154	Cylinder 6 Injector Circuit Low
P0277	10154	Cylinder 6 Injector Circuit High
P0279	10156	Cylinder 7 Injector Circuit Low
P0280	10156	Cylinder 7 Injector Circuit High
P0282	10153	Cylinder 8 Injector Circuit Low
P0283	10153	Cylinder 8 Injector Circuit High
P0300	10062	Random/Multiple Cylinder Misfire Detected
P0301	10050	Cylinder 1 Misfire Detected
P0302	10057	Cylinder 2 Misfire Detected
P0303	10055	Cylinder 3 Misfire Detected
P0304	10052	Cylinder 4 Misfire Detected
P0305	10051	Cylinder 5 Misfire Detected
P0306	10054	Cylinder 6 Misfire Detected
P0307	10056	Cylinder 7 Misfire Detected
P0308	10053	Cylinder 8 Misfire Detected
P0316	10062	Engine Misfire Detected on Startup (First 1000 Revolutions)
P0327	10210	Knock Sensor 1 Circuit Low (Bank 1 or Single Sensor)

P0328	10210	Knock Sensor 1 Circuit High (Bank 1 or Single Sensor)
P0332	10212	Knock Sensor 2 Circuit Low (Bank 2)
P0333	10212	Knock Sensor 2 Circuit High Input (Bank 2)
P0335	10111	Crankshaft Position Sensor 'A' Circuit
P0340	10113	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0341	10113	Camshaft Position Sensor 'A' Circuit Range/Performance (Bank 1 or Single Sensor)
P0342	10113	Camshaft Position Sensor 'A' Circuit Low (Bank 1 or Single Sensor)
P0343	10113	Camshaft Position Sensor 'A' Circuit High (Bank 1 or Single Sensor)
P0345	10175	Camshaft Position Sensor 'A' Circuit (Bank 2)
P0346	10175	Camshaft Position Sensor 'A' Circuit Range/Performance (Bank 2)
P0347	10175	Camshaft Position Sensor 'A' Circuit Low (Bank 2)
P0348	10175	Camshaft Position Sensor 'A' Circuit High (Bank 2)
P0363	10062	Misfire Detected - Fueling Disabled
P0365	10114	Camshaft Position Sensor 'B' Circuit (Bank 1)
P0366	10114	Camshaft Position Sensor 'B' Circuit Range/Performance (Bank 1)
P0367	10114	Camshaft Position Sensor 'B' Circuit Low (Bank 1)
P0368	10114	Camshaft Position Sensor 'B' Circuit High (Bank 1)
P0370	10112	Timing Reference High Resolution Signal 'A'
P0390	10176	Camshaft Position Sensor 'B' Circuit (Bank 2)
P0391	10176	Camshaft Position Sensor 'B' Circuit Range/Performance (Bank 2)
P0392	10176	Camshaft Position Sensor 'B' Circuit Low Input (Bank 2)
P0393	10176	Camshaft Position Sensor 'B' Circuit High Input (Bank 2)
P0418	10084	Secondary Air Injection System Control 'A' Circuit
P0420	10040	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	10045	Catalyst System Efficiency Below Threshold (Bank 2)
P0441	10093	Evaporative Emission System Incorrect Purge Flow
P0442	10188	Evaporative Emission System Leak Detected (small leak)
P0443	10098	Evaporative Emission System Purge Control Valve Circuit
P0444	10098	Evaporative Emission System Purge Control Valve Circuit Open
P0445	10098	Evaporative Emission System Purge Control Valve Circuit Shorted
P0455	10188	Evaporative Emission System Leak Detected (large leak)
P0491	10080	Secondary Air Injection System Insufficient Flow (Bank 1)
P0492	10081	Secondary Air Injection System Insufficient Flow (Bank 2)
P0500	10120	Vehicle Speed Sensor 'A'
P0506	10197	Idle Air Control System RPM Lower Than Expected
P0507	10197	Idle Air Control System RPM Higher Than Expected
P1041	10334	Internal VVT-Control Module EEPROM Error (Bank 1)
P1042	10334	Internal VVT-Control Module Random Access Memory (RAM) Error (Bank 1)
P1043	10334	Internal VVT-Control Module Read Only Memory (ROM) Error (Bank 1)
P1044	10335	Internal VVT-Control Module EEPROM Error (Bank 2)
P1045	10335	Internal VVT-Control Module Random Access Memory (RAM) Error (Bank 2)
P1046	10335	Internal VVT-Control Module Read Only Memory (ROM) Error (Bank 2)
P1047	10336	VVT-Control Circuit High Input (Bank 1)
P1048	10336	VVT-Control Circuit Low Input (Bank 1)
P1049	10336	VVT-Control Circuit Engine Cables Low Input (Bank 1)
P1050	10336	VVT-Control Circuit (Bank 1)
P1051	10337	VVT-Control Circuit High Input (Bank 2)
P1052	10337	VVT-Control Circuit Low Input (Bank 2)
P1053	10337	VVT-Control Circuit Engine Cables Low Input (Bank 2)
P1054	10337	VVT-Control Circuit (Bank 2)
P1055	10338	VVT-Supply Voltage Control Motor High Input (Bank 1)
P1056	10338	VVT-Supply Voltage Control Motor Low Input (Bank 1)
P1057	10338	VVT-Supply Voltage Control Motor Electrical (Bank 1)

P1058	10339	VVT-Supply Voltage Control Motor High Input (Bank 2)
P1059	10339	VVT-Supply Voltage Control Motor Low Input (Bank 2)
P1060	10339	VVT-Supply Voltage Control Motor Electrical (Bank 2)
P1061	10341	VVT-Limp Home Request RPM and Air Mass Limitation
P1062	10341	VVT-Limp Home Request Full Stroke Position not Reached
P1063	10341	VVT-Limp Home Request Air Mass Plausibility
P1065	10227	VVT-CAN-Timeout No Signal
P1066	10227	VVT-CAN-Message Monitoring Faulty Actual Message
P1071	10334	Internal VVT-Control Module Watchdog or Temperature Sensor Error (Bank 1)
P1072	10335	Internal VVT-Control Module Watchdog or Temperature Sensor Error (Bank 2)
P1100	10275	O2 Sensor Circuit Slow Response after Coast Down Fuel Cut-Off (Bank 1 Sensor 1) (S62: Air Mass Flow Sensor High Input)
P1101	10276	O2 Sensor Circuit Slow Response after Coast Down Fuel Cut-Off (Bank 2 Sensor 1)
P1111	10125	Engine Coolant Temperature Sensor Radiator Outlet Low Input
P1112	10125	Engine Coolant Temperature Sensor Radiator Outlet High Input
P1130	10017	O2 Sensor Circuit Dynamic Test (Bank 1 Sensor 2)
P1131	10023	O2 Sensor Circuit Dynamic Test (Bank 2 Sensor 2)
P1327	10211	Knock Sensor 2 Circuit Low Input (Bank 1)
P1328	10211	Knock Sensor 2 Circuit High Input (Bank 1)
P1332	10213	Knock Sensor 4 Circuit Low Input
P1333	10213	Knock Sensor 4 Circuit High Input
P1342	10050	Misfire During Start Cylinder 1
P1343	10050	Misfire Cylinder 1 with Fuel Cut-Off
P1344	10057	Misfire During Start Cylinder 2
P1345	10057	Misfire Cylinder 2 with Fuel Cut-Off
P1346	10055	Misfire During Start Cylinder 3
P1347	10055	Misfire Cylinder 3 with Fuel Cut-Off
P1348	10052	Misfire During Start Cylinder 4
P1349	10052	Misfire Cylinder 4 with Fuel Cut-Off
P1350	10051	Misfire during Start Cylinder 5
P1351	10051	Misfire Cylinder 5 with Fuel Cut-Off
P1352	10054	Misfire during Start Cylinder 6
P1353	10054	Misfire Cylinder 6 with Fuel Cut-Off
P1354	10056	Misfire during Start Cylinder 7
P1355	10056	Misfire Cylinder 7 with Fuel Cut-Off
P1356	10053	Misfire during Start Cylinder 8
P1357	10053	Misfire Cylinder 8 with Fuel Cut-Off
P1378	10238	Control Module Self-Test, Knock Control Offset (Bank 2)
P1379	10239	Control Module Self-Test, Knock Control Test Pulse (Bank 2)
P1380	10217	Control Module Self-Test, Knock Control Circuit Baseline Test (Bank 2)
P1381	10215	Control Module Self-Test, Knock Control Offset (Bank 1)
P1382	10216	Control Module Self-Test, Knock Control Test Pulse (Bank 1)
P1386	10214	Control Module Self-Test, Knock Control Circuit Baseline Test (Bank 1)
P1413	10084	Secondary Air Injection Pump Relay Control Circuit Signal Low
P1414	10084	Secondary Air Injection Pump Relay Control Circuit Signal High
P1434	10189	Diagnostic Module Tank Leakage (DM-TL)
P1444	10186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Open Circuit
P1445	10186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Circuit Signal Low
P1446	10186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Circuit Signal High
P1447	10189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High during Switching Solenoid Test
P1448	10189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too Low
P1449	10189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High
P1450	10002	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Open Circuit

P1451	10002	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal Low
P1452	10002	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal High
P1525	10165	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1526	10166	'A' Camshaft Position Actuator Control Open Circuit (Bank 2)
P1531	10173	'B' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1532	10174	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (S54 to 09/00: Throttle Valve Control Circuit)
P1611	10220	Serial Communication Link Transmission Control Module
P1628	10089	Throttle Valve Actuator Spring Test Malfunction during Opening
P1629	10089	Throttle Valve Actuator Spring Test Stop, Spring does not Open
P1631	10133	Throttle Valve Actuator Spring Test
P1634	10133	Throttle Valve Adaptation Spring Test Failed
P1636	10132	Throttle Valve Control Circuit
P1637	10130	Throttle Valve Position Control, Control Deviation
P1638	10131	Throttle Valve Position Control Throttle Stuck Temporarily
P1639	10131	Throttle Valve Position Control Throttle Stuck Permanently
P2088	10165	'A' Camshaft Position Actuator Control Circuit Low (Bank 1)
P2089	10165	'A' Camshaft Position Actuator Control Circuit High (Bank 1)
P2090	10173	'B' Camshaft Position Actuator Control Circuit Low (Bank 1)
P2091	10173	'B' Camshaft Position Actuator Control Circuit High (Bank 1)
P2092	10166	'A' Camshaft Position Actuator Control Circuit Low (Bank 2)
P2093	10166	'A' Camshaft Position Actuator Control Circuit High (Bank 2)
P2094	10174	'B' Camshaft Position Actuator Control Circuit Low (Bank 2)
P2095	10174	'B' Camshaft Position Actuator Control Circuit High (Bank 2)
P2096	10307	Post Catalyst Fuel Trim System Too Lean (Bank 1)
P2097	10307	Post Catalyst Fuel Trim System Too Rich (Bank 1)
P2098	10290	Post Catalyst Fuel Trim System Too Lean (Bank 2)
P2099	10290	Post Catalyst Fuel Trim System Too Rich (Bank 2)
P2177	10026	System Too Lean Off Idle (Bank 1)
P2178	10026	System Too Rich Off Idle (Bank 1)
P2179	10027	System Too Lean Off Idle (Bank 2)
P2180	10027	System Too Rich Off Idle (Bank 2)
P2187	10028	System Too Lean at Idle (Bank 1)
P2188	10028	System Too Rich at Idle (Bank 1)
P2189	10029	System Too Lean at Idle (Bank 2)
P2190	10029	System Too Rich at Idle (Bank 2)
P2191	10024	System Too Lean at Higher Load (Bank 1)
P2192	10024	System Too Rich at Higher Load (Bank 1)
P2193	10025	System Too Lean at Higher Load (Bank 2)
P2194	10025	System Too Rich at Higher Load (Bank 2)
P2195	10307	O2 Sensor Signal Stuck Lean (Bank 1 Sensor 1)
P2196	10307	O2 Sensor Signal Stuck Rich (Bank 1 Sensor 1)
P2197	10290	O2 Sensor Signal Stuck Lean (Bank 2 Sensor 1)
P2198	10290	O2 Sensor Signal Stuck Rich (Bank 2 Sensor 1)
P2231	10279	O2 Sensor Signal Circuit Shorted to Heater Circuit (Bank 1 Sensor 1)
P2234	10285	O2 Sensor Signal Circuit Shorted to Heater Circuit (Bank 2 Sensor 1)
P2237	10313	O2 Sensor Positive Current Control Circuit/Open (Bank 1 Sensor 1)
P2240	10292	O2 Sensor Positive Current Control Circuit/Open (Bank 2 Sensor 1)
P2243	10541	O2 Sensor Reference Voltage Circuit/Open (Bank 1 Sensor 1)
P2247	10542	O2 Sensor Reference Voltage Circuit/Open (Bank 2 Sensor 1)
P2251	10544	O2 Sensor Negative Current Control Circuit/Open (Bank 1 Sensor 1)
P2254	10545	O2 Sensor Negative Current Control Circuit/Open (Bank 2 Sensor 1)
P2270	10017	O2 Sensor Signal Stuck Lean (Bank 1 Sensor 2)

P2271	10017	O2 Sensor Signal Stuck Rich (Bank 1 Sensor 2)
P2272	10023	O2 Sensor Signal Stuck Lean (Bank 2 Sensor 2)
P2273	10023	O2 Sensor Signal Stuck Rich (Bank 2 Sensor 2)
P2414	10264	O2 Sensor Exhaust Sample Error (Bank 1 Sensor 1)
P2415	10271	O2 Sensor Exhaust Sample Error (Bank 2 Sensor 1)
P2626	10539	O2 Sensor Pumping Current Trim Circuit/Open (Bank 1 Sensor 1)
P2629	10540	O2 Sensor Pumping Current Trim Circuit/Open (Bank 2 Sensor 1)
P3012	10308	O2 Sensor Signal Circuit Adaptation Value Too High (Bank 1 Sensor 1)
P3013	10291	O2 Sensor Signal Circuit Adaptation Value Too High (Bank 2 Sensor 1)
P3014	10308	O2 Sensor WRAF-IC Supply Voltage Too Low (Bank 1 Sensor 1)
P3015	10291	O2 Sensor IC Supply Voltage Too Low (Bank 2 Sensor 1)
P3016	10013	O2 Sensor Calibration Resistance at WRAF-IC Plausibility (Bank 1 Sensor 1)
P3017	10005	O2 Sensor Calibration Resistance at WRAF-IC Plausibility (Bank 2 Sensor 1)
P3018	10313	O2 Sensor Lambda Controller Value Above Threshold due to Open Pumping Current Circuit (Bank 1 Sensor 1)
P3019	10292	O2 Sensor Lambda Controller Value Above Threshold due to Open Pumping Current Circuit (Bank 2 Sensor 1)
P3020	10313	O2 Sensor Signal Voltage Too Low during Coast Down Fuel Cut-Off due to Open Pumping Current Circuit (Bank 1 Sensor 1)
P3021	10292	O2 Sensor Signal Voltage Too Low during Coast Down Fuel Cut-Off due to Open Pumping Current Circuit (Bank 2 Sensor 1)
P3022	10308	O2 Sensor Disturbed SPI Communication to WRAF-IC (Bank 1 Sensor 1)
P3023	10291	O2 Sensor Disturbed SPI Communication to WRAF-IC (Bank 2 Sensor 1)
P3024	10308	O2 Sensor Initialization Error WRAF-IC (Bank 1 Sensor 1)
P3026	10013	O2 Sensor Operating Temperature not Reached (Bank 1 Sensor 1)
P3027	10005	O2 Sensor Operating Temperature not Reached (Bank 2 Sensor 1)
P3028	10013	O2 Sensor Heater Control No Activity Detected (Bank 1 Sensor 1)
P3029	10005	O2 Sensor Heater Control No Activity Detected (Bank 2 Sensor 1)
P3200	52615	Powertrain CAN, CAN Chip Defective
P3201	52615	Powertrain CAN, DPRAM-CAN Chip Defective
P3202	52615	Powertrain CAN, CAN Chip Cut-Off
P3203	52619	Local CAN, LoCAN Chip Defective
P3204	52619	Local CAN, DPRAM-LoCAN Chip Defective
P3205	52619	Local CAN, CAN Chip Cut-Off
P3213	10220	CAN Message Monitoring ETC Alive Check
P3214	10220	CAN Message Monitoring ETC Plausibility
P3240	10140	Map Cooling Thermostat Control Circuit Open Circuit
P3241	10140	Map Cooling Thermostat Control Circuit Low Input
P3242	10140	Map Cooling Thermostat Control Circuit High Input

## ECU: MED9.2.1, Engine: N73, from 01.01.03 till

PCode BMW-FC PCode text

P0001	10546	Fuel Volume Regulator Control Circuit/Open
P0003	10546	Fuel Volume Regulator Control Circuit Low
P0004	10546	Fuel Volume Regulator Control Circuit High
P0010	10165	'A' Camshaft Position Actuator Circuit (Bank 1)
P0011	10033	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)
P0012	10033	'A' Camshaft Position Timing Over-Retarded (Bank 1)
P0013	10173	'B' Camshaft Position Actuator Circuit (Bank 1)
P0014	10171	'B' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)
P0015	10171	'B' Camshaft Position Timing Over-Retarded (Bank 1)
P0020	10165	'A' Camshaft Position Actuator Circuit (Bank 2)

P0021	10033	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 2)
P0022	10033	'A' Camshaft Position Timing Over-Retarded (Bank 2)
P0023	10173	'B' Camshaft Position Actuator Circuit (Bank 2)
P0024	10171	'B' Camshaft Position Timing Over-Advanced or System Performance (Bank 2)
P0025	10171	'B' Camshaft Position Timing Over-Retarded (Bank 2)
P0030	10011	HO2S Heater Control Circuit (Bank 1 Sensor 1)
P0031	10011	HO2S Heater Control Circuit Low (Bank 1 Sensor 1)
P0032	10011	HO2S Heater Control Circuit High (Bank 1 Sensor 1)
P0036	10006	HO2S Heater Control Circuit (Bank 1 Sensor 2)
P0037	10006	HO2S Heater Control Circuit Low (Bank 1 Sensor 2)
P0038	10006	HO2S Heater Control Circuit High (Bank 1 Sensor 2)
P0040	10003	O2 Sensor Signals Swapped Bank 1 Sensor 1 / Bank 2 Sensor 1
P0041	10093	O2 Sensor Signals Swapped Bank 1 Sensor 2 / Bank 2 Sensor 2
P0050	10011	HO2S Heater Control Circuit (Bank 2 Sensor 1)
P0051	10011	HO2S Heater Control Circuit Low (Bank 2 Sensor 1)
P0052	10011	HO2S Heater Control Circuit High (Bank 2 Sensor 1)
P0056	10006	HO2S Heater Control Circuit (Bank 2 Sensor 2)
P0057	10006	HO2S Heater Control Circuit Low (Bank 2 Sensor 2)
P0058	10006	HO2S Heater Control Circuit High (Bank 2 Sensor 2)
P0089	10532	Fuel Pressure Regulator 1 Performance
P0090	10532	Fuel Pressure Regulator 1 Control Circuit
P0091	10532	Fuel Pressure Regulator 1 Control Circuit Low
P0092	10532	Fuel Pressure Regulator 1 Control Circuit High
P0102	10115	Mass or Volume Air Flow Circuit Low Input
P0103	10115	Mass or Volume Air Flow Circuit High Input
P0112	10124	Intake Air Temperature Sensor 1 Circuit Low
P0113	10124	Intake Air Temperature Sensor 1 Circuit High
P0116	10123	Engine Coolant Temperature Circuit Range/Performance
P0117	10123	Engine Coolant Temperature Circuit Low
P0118	10123	Engine Coolant Temperature Circuit High
P0120	10117	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0121	10118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0122	10118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Low
P0123	10118	Throttle/Pedal Position Sensor/Switch 'A' Circuit High
P0125	10123	Insufficient Coolant Temperature for Closed Loop Fuel Control
P0128	10139	Coolant Thermostat (Coolant Temperature Below Thermostat Regulating Temperature)
P0131	10314	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 1)
P0132	10314	O2 Sensor Circuit High Voltage (Bank 1 Sensor 1)
P0133	10316	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0135	10013	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	10012	O2 Sensor Circuit (Bank 1 Sensor 2)
P0137	10012	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 2)
P0138	10012	O2 Sensor Circuit High Voltage (Bank 1 Sensor 2)
P0139	10017	O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0140	10012	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 2)
P0141	10014	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0151	10314	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 1)
P0152	10314	O2 Sensor Circuit High Voltage (Bank 2 Sensor 1)
P0153	10316	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0155	10013	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0156	10012	O2 Sensor Circuit (Bank 2 Sensor 2)
P0157	10012	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 2)
P0158	10012	O2 Sensor Circuit High Voltage (Bank 2 Sensor 2)

P0159	10017	O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0160	10012	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 2)
P0161	10014	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0190	10511	Fuel Rail Pressure Sensor Circuit
P0192	10511	Fuel Rail Pressure Sensor Circuit Low
P0193	10511	Fuel Rail Pressure Sensor Circuit High
P0201	10515	Injector Circuit/Open - Cylinder 1
P0202	10519	Injector Circuit/Open - Cylinder 2
P0203	10517	Injector Circuit/Open - Cylinder 3
P0204	10520	Injector Circuit/Open - Cylinder 4
P0205	10516	Injector Circuit/Open - Cylinder 5
P0206	10518	Injector Circuit/Open - Cylinder 6
P0207	10521	Injector Circuit/Open - Cylinder 7
P0208	10351	Injector Circuit/Open - Cylinder 8
P0209	10349	Injector Circuit/Open - Cylinder 9
P0210	10352	Injector Circuit/Open - Cylinder 10
P0211	10522	Injector Circuit/Open - Cylinder 11
P0212	10350	Injector Circuit/Open - Cylinder 12
P0221	10119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Range/Performance
P0222	10119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Low
P0223	10119	Throttle/Pedal Position Sensor/Switch 'B' Circuit High
P0261	10515	Cylinder 1 Injector Circuit Low
P0262	10515	Cylinder 1 Injector Circuit High
P0264	10519	Cylinder 2 Injector Circuit Low
P0265	10519	Cylinder 2 Injector Circuit High
P0267	10517	Cylinder 3 Injector Circuit Low
P0268	10517	Cylinder 3 Injector Circuit High
P0270	10520	Cylinder 4 Injector Circuit Low
P0271	10520	Cylinder 4 Injector Circuit High
P0273	10516	Cylinder 5 Injector Circuit Low
P0274	10516	Cylinder 5 Injector Circuit High
P0276	10518	Cylinder 6 Injector Circuit Low
P0277	10518	Cylinder 6 Injector Circuit High
P0279	10521	Cylinder 7 Injector Circuit Low
P0280	10521	Cylinder 7 Injector Circuit High
P0282	10351	Cylinder 8 Injector Circuit Low
P0283	10351	Cylinder 8 Injector Circuit High
P0285	10349	Cylinder 9 Injector Circuit Low
P0286	10349	Cylinder 9 Injector Circuit High
P0288	10352	Cylinder 10 Injector Circuit Low
P0289	10352	Cylinder 10 Injector Circuit High
P0291	10522	Cylinder 11 Injector Circuit Low
P0292	10522	Cylinder 11 Injector Circuit High
P0294	10350	Cylinder 12 Injector Circuit Low
P0295	10350	Cylinder 12 Injector Circuit High
P0300	10062	Random/Multiple Cylinder Misfire Detected
P0301	10050	Cylinder 1 Misfire Detected
P0302	10058	Cylinder 2 Misfire Detected
P0303	10054	Cylinder 3 Misfire Detected
P0304	10060	Cylinder 4 Misfire Detected
P0305	10052	Cylinder 5 Misfire Detected
P0306	10056	Cylinder 6 Misfire Detected
P0307	10051	Cylinder 7 Misfire Detected

P0308	10059	Cylinder 8 Misfire Detected
P0309	10055	Cylinder 9 Misfire Detected
P0310	10061	Cylinder 10 Misfire Detected
P0311	10053	Cylinder 11 Misfire Detected
P0312	10057	Cylinder 12 Misfire Detected
P0327	10210	Knock Sensor 1 Circuit Low (Bank 1 or Single Sensor)
P0328	10210	Knock Sensor 1 Circuit High (Bank 1 or Single Sensor)
P0335	10111	Crankshaft Position Sensor 'A' Circuit
P0340	10113	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0341	10113	Camshaft Position Sensor 'A' Circuit Range/Performance (Bank 1 or Single Sensor)
P0342	10113	Camshaft Position Sensor 'A' Circuit Low (Bank 1 or Single Sensor)
P0343	10113	Camshaft Position Sensor 'A' Circuit High (Bank 1 or Single Sensor)
P0345	10113	Camshaft Position Sensor 'A' Circuit (Bank 2)
P0346	10113	Camshaft Position Sensor 'A' Circuit Range/Performance (Bank 2)
P0347	10113	Camshaft Position Sensor 'A' Circuit Low (Bank 2)
P0348	10113	Camshaft Position Sensor 'A' Circuit High (Bank 2)
P0365	10114	Camshaft Position Sensor 'B' Circuit (Bank 1)
P0366	10114	Camshaft Position Sensor 'B' Circuit Range/Performance (Bank 1)
P0367	10114	Camshaft Position Sensor 'B' Circuit Low (Bank 1)
P0368	10114	Camshaft Position Sensor 'B' Circuit High (Bank 1)
P0370	10112	Timing Reference High Resolution Signal 'A'
P0372	10112	Timing Reference High Resolution Signal 'A' Too Few Pulses
P0373	10112	Timing Reference High Resolution Signal 'A' Intermittent/Erratic Pulses
P0390	10114	Camshaft Position Sensor 'B' Circuit (Bank 2)
P0391	10114	Camshaft Position Sensor 'B' Circuit Range/Performance (Bank 2)
P0392	10114	Camshaft Position Sensor 'B' Circuit Low Input (Bank 2)
P0393	10114	Camshaft Position Sensor 'B' Circuit High Input (Bank 2)
P0418	10084	Secondary Air Injection System Control 'A' Circuit
P0420	10040	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	10040	Catalyst System Efficiency Below Threshold (Bank 2)
P0442	10188	Evaporative Emission System Leak Detected (small leak)
P0443	10098	Evaporative Emission System Purge Control Valve Circuit
P0444	10098	Evaporative Emission System Purge Control Valve Circuit Open
P0445	10098	Evaporative Emission System Purge Control Valve Circuit Shorted
P0455	10188	Evaporative Emission System Leak Detected (large leak)
P0491	10080	Secondary Air Injection System Insufficient Flow (Bank 1)
P0492	10080	Secondary Air Injection System Insufficient Flow (Bank 2)
P0500	10120	Vehicle Speed Sensor 'A'
P0506	10197	Idle Air Control System RPM Lower Than Expected
P0507	10197	Idle Air Control System RPM Higher Than Expected
P1041	10334	Internal VVT-Control Module EEPROM Error (Bank 1)
P1042	10334	Internal VVT-Control Module Random Access Memory (RAM) Error (Bank 1)
P1043	10334	Internal VVT-Control Module Read Only Memory (ROM) Error (Bank 1)
P1044	10334	Internal VVT-Control Module EEPROM Error (Bank 2)
P1045	10334	Internal VVT-Control Module Random Access Memory (RAM) Error (Bank 2)
P1046	10334	Internal VVT-Control Module Read Only Memory (ROM) Error (Bank 2)
P1047	10336	VVT-Control Circuit High Input (Bank 1)
P1048	10336	VVT-Control Circuit Low Input (Bank 1)
P1049	10336	VVT-Control Circuit Engine Cables Low Input (Bank 1)
P1050	10336	VVT-Control Circuit (Bank 1)
P1051	10336	VVT-Control Circuit High Input (Bank 2)
P1052	10336	VVT-Control Circuit Low Input (Bank 2)
P1053	10336	VVT-Control Circuit Engine Cables Low Input (Bank 2)



P1054	10336	VVT-Control Circuit (Bank 2)
P1055	10338	VVT-Supply Voltage Control Motor High Input (Bank 1)
P1056	10338	VVT-Supply Voltage Control Motor Low Input (Bank 1)
P1057	10338	VVT-Supply Voltage Control Motor Electrical (Bank 1)
P1058	10338	VVT-Supply Voltage Control Motor High Input (Bank 2)
P1059	10338	VVT-Supply Voltage Control Motor Low Input (Bank 2)
P1060	10338	VVT-Supply Voltage Control Motor Electrical (Bank 2)
P1061	10341	VVT-Limp Home Request RPM and Air Mass Limitation
P1062	10341	VVT-Limp Home Request Full Stroke Position not Reached
P1064	10342	VVT-Value Comparison Starting Position/Parking Position Plausibility
P1065	10227	VVT-CAN-Timeout No Signal
P1066	10227	VVT-CAN-Message Monitoring Faulty Actual Message
P1071	10334	Internal VVT-Control Module Watchdog or Temperature Sensor Error (Bank 1)
P1072	10334	Internal VVT-Control Module Watchdog or Temperature Sensor Error (Bank 2)
P1100	10275	O2 Sensor Circuit Slow Response after Coast Down Fuel Cut-Off (Bank 1 Sensor 1) (S62: Air Mass Flow Sensor High Input)
P1101	10275	O2 Sensor Circuit Slow Response after Coast Down Fuel Cut-Off (Bank 2 Sensor 1)
P1104	10168	Differential-Pressure Sensor Intake Manifold Pressure Too Low
P1105	10168	Differential-Pressure Sensor Intake Manifold Pressure Too High
P1111	10125	Engine Coolant Temperature Sensor Radiator Outlet Low Input
P1112	10125	Engine Coolant Temperature Sensor Radiator Outlet High Input
P1117	10115	Mass or Volume Air Flow Circuit Low Input (Bank 2)
P1118	10115	Mass or Volume Air Flow Circuit High Input (Bank 2)
P1130	10017	O2 Sensor Circuit Dynamic Test (Bank 1 Sensor 2)
P1131	10017	O2 Sensor Circuit Dynamic Test (Bank 2 Sensor 2)
P1218	10117	Throttle/Pedal Position Sensor/Switch 'A' Circuit (Bank 2)
P1219	10118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance (Bank 2)
P1220	10118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Low Input (Bank 2)
P1225	10118	Throttle/Pedal Position Sensor/Switch 'A' Circuit High Input (Bank 2)
P1227	10119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Range/Performance (Bank 2)
P1228	10119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Low Input (Bank 2)
P1243	10119	Throttle/Pedal Position Sensor/Switch 'B' Circuit High Input (Bank 2)
P1249	10546	Fuel Volume Regulator Control Circuit Open (Bank 2)
P1281	10546	Fuel Volume Regulator Control Circuit Low (Bank 2)
P1282	10546	Fuel Volume Regulator Control Circuit High (Bank 2)
P1327	10211	Knock Sensor 2 Circuit Low Input (Bank 1)
P1328	10211	Knock Sensor 2 Circuit High Input (Bank 1)
P1329	10212	Knock Sensor 3 Circuit Low Input
P1330	10212	Knock Sensor 3 Circuit High Input
P1332	10210	Knock Sensor 4 Circuit Low Input
P1333	10210	Knock Sensor 4 Circuit High Input
P1334	10211	Knock Sensor 5 Circuit Low Input
P1335	10211	Knock Sensor 5 Circuit High Input
P1336	10212	Knock Sensor 6 Circuit Low Input
P1337	10212	Knock Sensor 6 Circuit High Input
P1340	10062	Multiple Cylinder Misfire During Start
P1341	10062	Multiple Cylinder Misfire with Fuel Cut-Off
P1342	10050	Misfire During Start Cylinder 1
P1343	10050	Misfire Cylinder 1 with Fuel Cut-Off
P1344	10058	Misfire During Start Cylinder 2
P1345	10058	Misfire Cylinder 2 with Fuel Cut-Off
P1346	10054	Misfire During Start Cylinder 3
P1347	10054	Misfire Cylinder 3 with Fuel Cut-Off

P1348	10060	Misfire During Start Cylinder 4
P1349	10060	Misfire Cylinder 4 with Fuel Cut-Off
P1350	10052	Misfire during Start Cylinder 5
P1351	10052	Misfire Cylinder 5 with Fuel Cut-Off
P1352	10056	Misfire during Start Cylinder 6
P1353	10056	Misfire Cylinder 6 with Fuel Cut-Off
P1354	10051	Misfire during Start Cylinder 7
P1355	10051	Misfire Cylinder 7 with Fuel Cut-Off
P1356	10059	Misfire during Start Cylinder 8
P1357	10059	Misfire Cylinder 8 with Fuel Cut-Off
P1358	10055	Misfire during Start Cylinder 9
P1359	10055	Misfire Cylinder 9 with Fuel Cut-Off
P1360	10061	Misfire during Start Cylinder 10
P1361	10061	Misfire Cylinder 10 with Fuel Cut-Off
P1362	10053	Misfire during Start Cylinder 11
P1363	10053	Misfire Cylinder 11 with Fuel Cut-Off
P1364	10057	Misfire during Start Cylinder 12
P1365	10057	Misfire Cylinder 12 with Fuel Cut-Off
P1378	10215	Control Module Self-Test, Knock Control Offset (Bank 2)
P1379	10216	Control Module Self-Test, Knock Control Test Pulse (Bank 2)
P1380	10214	Control Module Self-Test, Knock Control Circuit Baseline Test (Bank 2)
P1381	10215	Control Module Self-Test, Knock Control Offset (Bank 1)
P1382	10216	Control Module Self-Test, Knock Control Test Pulse (Bank 1)
P1386	10214	Control Module Self-Test, Knock Control Circuit Baseline Test (Bank 1)
P140A	10080	Secondary Air Injection System Insufficient Total Flow (Bank 1 and Bank 2)
P140B	10080	Secondary Air Injection System Insufficient Total Flow (Bank 1 and Bank 2) and Insufficient Flow (Bank 1)
P140C	10080	Secondary Air Injection System Insufficient Total Flow (Bank 1 and Bank 2) and Insufficient Flow (Bank 2)
P1413	10084	Secondary Air Injection Pump Relay Control Circuit Signal Low
P1414	10084	Secondary Air Injection Pump Relay Control Circuit Signal High
P1434	10189	Diagnostic Module Tank Leakage (DM-TL)
P1447	10189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High during Switching Solenoid Test
P1448	10189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too Low
P1449	10189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High
P1595	10265	Internal Control Module Interconnection Checksum Error
P1596	10265	Control Module Interconnection CAN Timeout
P1611	10220	Serial Communication Link Transmission Control Module
P1619	10140	Map Cooling Thermostat Control Circuit Signal Low
P1620	10140	Map Cooling Thermostat Control Circuit Signal High
P1622	10140	Map Cooling Thermostat Control Circuit Electrical
P1628	10089	Throttle Valve Actuator Spring Test Malfunction during Opening
P1629	10089	Throttle Valve Actuator Spring Test Stop, Spring does not Open
P1631	10133	Throttle Valve Actuator Spring Test
P1634	10133	Throttle Valve Adaptation Spring Test Failed
P1636	10132	Throttle Valve Control Circuit
P1637	10130	Throttle Valve Position Control, Control Deviation
P1638	10131	Throttle Valve Position Control Throttle Stuck Temporarily
P1639	10131	Throttle Valve Position Control Throttle Stuck Permanently
P2088	10165	'A' Camshaft Position Actuator Control Circuit Low (Bank 1)
P2089	10165	'A' Camshaft Position Actuator Control Circuit High (Bank 1)
P2090	10173	'B' Camshaft Position Actuator Control Circuit Low (Bank 1)
P2091	10173	'B' Camshaft Position Actuator Control Circuit High (Bank 1)

P2092	10165	'A' Camshaft Position Actuator Control Circuit Low (Bank 2)
P2093	10165	'A' Camshaft Position Actuator Control Circuit High (Bank 2)
P2094	10173	'B' Camshaft Position Actuator Control Circuit Low (Bank 2)
P2095	10173	'B' Camshaft Position Actuator Control Circuit High (Bank 2)
P2096	10307	Post Catalyst Fuel Trim System Too Lean (Bank 1)
P2097	10307	Post Catalyst Fuel Trim System Too Rich (Bank 1)
P2098	10307	Post Catalyst Fuel Trim System Too Lean (Bank 2)
P2099	10307	Post Catalyst Fuel Trim System Too Rich (Bank 2)
P2177	10026	System Too Lean Off Idle (Bank 1)
P2178	10026	System Too Rich Off Idle (Bank 1)
P2179	10026	System Too Lean Off Idle (Bank 2)
P2180	10026	System Too Rich Off Idle (Bank 2)
P2187	10028	System Too Lean at Idle (Bank 1)
P2188	10028	System Too Rich at Idle (Bank 1)
P2189	10028	System Too Lean at Idle (Bank 2)
P2190	10028	System Too Rich at Idle (Bank 2)
P2191	10024	System Too Lean at Higher Load (Bank 1)
P2192	10024	System Too Rich at Higher Load (Bank 1)
P2193	10024	System Too Lean at Higher Load (Bank 2)
P2194	10024	System Too Rich at Higher Load (Bank 2)
P2195	10307	O2 Sensor Signal Stuck Lean (Bank 1 Sensor 1)
P2196	10307	O2 Sensor Signal Stuck Rich (Bank 1 Sensor 1)
P2197	10307	O2 Sensor Signal Stuck Lean (Bank 2 Sensor 1)
P2198	10307	O2 Sensor Signal Stuck Rich (Bank 2 Sensor 1)
P2231	10279	O2 Sensor Signal Circuit Shorted to Heater Circuit (Bank 1 Sensor 1)
P2234	10279	O2 Sensor Signal Circuit Shorted to Heater Circuit (Bank 2 Sensor 1)
P2237	10313	O2 Sensor Positive Current Control Circuit/Open (Bank 1 Sensor 1)
P2240	10313	O2 Sensor Positive Current Control Circuit/Open (Bank 2 Sensor 1)
P2243	10541	O2 Sensor Reference Voltage Circuit/Open (Bank 1 Sensor 1)
P2247	10541	O2 Sensor Reference Voltage Circuit/Open (Bank 2 Sensor 1)
P2251	10544	O2 Sensor Negative Current Control Circuit/Open (Bank 1 Sensor 1)
P2254	10544	O2 Sensor Negative Current Control Circuit/Open (Bank 2 Sensor 1)
P2270	10017	O2 Sensor Signal Stuck Lean (Bank 1 Sensor 2)
P2271	10017	O2 Sensor Signal Stuck Rich (Bank 1 Sensor 2)
P2272	10017	O2 Sensor Signal Stuck Lean (Bank 2 Sensor 2)
P2273	10017	O2 Sensor Signal Stuck Rich (Bank 2 Sensor 2)
P2400	10186	Evaporative Emission System Leak Detection Pump Control Circuit/Open
P2401	10186	Evaporative Emission System Leak Detection Pump Control Circuit Low
P2402	10186	Evaporative Emission System Leak Detection Pump Control Circuit High
P2414	10264	O2 Sensor Exhaust Sample Error (Bank 1 Sensor 1)
P2415	10264	O2 Sensor Exhaust Sample Error (Bank 2 Sensor 1)
P2418	10002	Evaporative Emission System Switching Valve Control Circuit/Open
P2419	10002	Evaporative Emission System Switching Valve Control Circuit Low
P2420	10002	Evaporative Emission System Switching Valve Control Circuit High
P2626	10539	O2 Sensor Pumping Current Trim Circuit/Open (Bank 1 Sensor 1)
P2629	10539	O2 Sensor Pumping Current Trim Circuit/Open (Bank 2 Sensor 1)
P3012	10308	O2 Sensor Signal Circuit Adaptation Value Too High (Bank 1 Sensor 1)
P3013	10308	O2 Sensor Signal Circuit Adaptation Value Too High (Bank 2 Sensor 1)
P3014	10308	O2 Sensor WRAF-IC Supply Voltage Too Low (Bank 1 Sensor 1)
P3015	10308	O2 Sensor IC Supply Voltage Too Low (Bank 2 Sensor 1)
P3016	10013	O2 Sensor Calibration Resistance at WRAF-IC Plausibility (Bank 1 Sensor 1)
P3017	10013	O2 Sensor Calibration Resistance at WRAF-IC Plausibility (Bank 2 Sensor 1)

P3018	10313	O2 Sensor Lambda Controller Value Above Threshold due to Open Pumping Current Circuit (Bank 1 Sensor 1)
P3019	10313	O2 Sensor Lambda Controller Value Above Threshold due to Open Pumping Current Circuit (Bank 2 Sensor 1)
P3020	10313	O2 Sensor Signal Voltage Too Low during Coast Down Fuel Cut-Off due to Open Pumping Current Circuit (Bank 1 Sensor 1)
P3021	10313	O2 Sensor Signal Voltage Too Low during Coast Down Fuel Cut-Off due to Open Pumping Current Circuit (Bank 2 Sensor 1)
P3022	10308	O2 Sensor Disturbed SPI Communication to WRAF-IC (Bank 1 Sensor 1)
P3023	10308	O2 Sensor Disturbed SPI Communication to WRAF-IC (Bank 2 Sensor 1)
P3024	10308	O2 Sensor Initialization Error WRAF-IC (Bank 1 Sensor 1)
P3025	10308	O2 Sensor Initialization Error WRAF-IC (Bank 2 Sensor 1)
P3026	10013	O2 Sensor Operating Temperature not Reached (Bank 1 Sensor 1)
P3027	10013	O2 Sensor Operating Temperature not Reached (Bank 2 Sensor 1)
P3028	10013	O2 Sensor Heater Control No Activity Detected (Bank 1 Sensor 1)
P3029	10013	O2 Sensor Heater Control No Activity Detected (Bank 2 Sensor 1)
P3100	10528	Cylinder 1 High Pressure Injector Low Side Circuit Open
P3101	10528	Cylinder 1 High Pressure Injector Low Side Circuit Low
P3102	10528	Cylinder 1 High Pressure Injector Low Side Circuit High
P3103	10528	Cylinder 1 High Pressure Injector Low Side Booster Time Error
P3104	10562	Cylinder 2 High Pressure Injector Low Side Circuit Open
P3105	10562	Cylinder 2 High Pressure Injector Low Side Circuit Low
P3106	10562	Cylinder 2 High Pressure Injector Low Side Circuit High
P3107	10562	Cylinder 2 High Pressure Injector Low Side Booster Time Error
P3108	10530	Cylinder 3 High Pressure Injector Low Side Circuit Open
P3109	10530	Cylinder 3 High Pressure Injector Low Side Circuit Low
P3110	10530	Cylinder 3 High Pressure Injector Low Side Circuit High
P3111	10530	Cylinder 3 High Pressure Injector Low Side Booster Time Error
P3112	10563	Cylinder 4 High Pressure Injector Low Side Circuit Open
P3113	10563	Cylinder 4 High Pressure Injector Low Side Circuit Low
P3114	10563	Cylinder 4 High Pressure Injector Low Side Circuit High
P3115	10563	Cylinder 4 High Pressure Injector Low Side Booster Time Error
P3116	10529	Cylinder 5 High Pressure Injector Low Side Circuit Open
P3117	10529	Cylinder 5 High Pressure Injector Low Side Circuit Low
P3118	10529	Cylinder 5 High Pressure Injector Low Side Circuit High
P3119	10529	Cylinder 5 High Pressure Injector Low Side Booster Time Error
P3120	10531	Cylinder 6 High Pressure Injector Low Side Circuit Open
P3121	10531	Cylinder 6 High Pressure Injector Low Side Circuit Low
P3122	10531	Cylinder 6 High Pressure Injector Low Side Circuit High
P3123	10531	Cylinder 6 High Pressure Injector Low Side Booster Time Error
P3124	10359	Cylinder 7 High Pressure Injector Low Side Circuit Open
P3125	10359	Cylinder 7 High Pressure Injector Low Side Circuit Low
P3126	10359	Cylinder 7 High Pressure Injector Low Side Circuit High
P3127	10359	Cylinder 7 High Pressure Injector Low Side Booster Time Error
P3128	10366	Cylinder 8 High Pressure Injector Low Side Circuit Open
P3129	10366	Cylinder 8 High Pressure Injector Low Side Circuit Low
P3130	10366	Cylinder 8 High Pressure Injector Low Side Circuit High
P3131	10366	Cylinder 8 High Pressure Injector Low Side Booster Time Error
P3132	10362	Cylinder 9 High Pressure Injector Low Side Circuit Open
P3133	10362	Cylinder 9 High Pressure Injector Low Side Circuit Low
P3134	10362	Cylinder 9 High Pressure Injector Low Side Circuit High
P3135	10362	Cylinder 9 High Pressure Injector Low Side Booster Time Error
P3136	10367	Cylinder 10 High Pressure Injector Low Side Circuit Open

P3137	10367	Cylinder 10 High Pressure Injector Low Side Circuit Low
P3138	10367	Cylinder 10 High Pressure Injector Low Side Circuit High
P3139	10367	Cylinder 10 High Pressure Injector Low Side Booster Time Error
P3140	10360	Cylinder 11 High Pressure Injector Low Side Circuit Open
P3141	10360	Cylinder 11 High Pressure Injector Low Side Circuit Low
P3142	10360	Cylinder 11 High Pressure Injector Low Side Circuit High
P3143	10360	Cylinder 11 High Pressure Injector Low Side Booster Time Error
P3144	10365	Cylinder 12 High Pressure Injector Low Side Circuit Open
P3145	10365	Cylinder 12 High Pressure Injector Low Side Circuit Low
P3146	10365	Cylinder 12 High Pressure Injector Low Side Circuit High
P3147	10365	Cylinder 12 High Pressure Injector Low Side Booster Time Error
P3148	10523	Cylinder 1 High Pressure Injector High Side Shorted to Coil
P3149	10523	Cylinder 1 High Pressure Injector High Side Circuit Low
P3150	10523	Cylinder 1 High Pressure Injector High Side Circuit High
P3151	10560	Cylinder 2 High Pressure Injector High Side Shorted to Coil
P3152	10560	Cylinder 2 High Pressure Injector High Side Circuit Low
P3153	10560	Cylinder 2 High Pressure Injector High Side Circuit High
P3154	10525	Cylinder 3 High Pressure Injector High Side Shorted to Coil
P3155	10525	Cylinder 3 High Pressure Injector High Side Circuit Low
P3156	10525	Cylinder 3 High Pressure Injector High Side Circuit High
P3157	10561	Cylinder 4 High Pressure Injector High Side Shorted to Coil
P3158	10561	Cylinder 4 High Pressure Injector High Side Circuit Low
P3159	10561	Cylinder 4 High Pressure Injector High Side Circuit High
P3160	10524	Cylinder 5 High Pressure Injector High Side Shorted to Coil
P3161	10524	Cylinder 5 High Pressure Injector High Side Circuit Low
P3162	10524	Cylinder 5 High Pressure Injector High Side Circuit High
P3163	10526	Cylinder 6 High Pressure Injector High Side Shorted to Coil
P3164	10526	Cylinder 6 High Pressure Injector High Side Circuit Low
P3165	10526	Cylinder 6 High Pressure Injector High Side Circuit High
P3166	10353	Cylinder 7 High Pressure Injector High Side Shorted to Coil
P3167	10353	Cylinder 7 High Pressure Injector High Side Circuit Low
P3168	10353	Cylinder 7 High Pressure Injector High Side Circuit High
P3169	10357	Cylinder 8 High Pressure Injector High Side Shorted to Coil
P3170	10357	Cylinder 8 High Pressure Injector High Side Circuit Low
P3171	10357	Cylinder 8 High Pressure Injector High Side Circuit High
P3172	10355	Cylinder 9 High Pressure Injector High Side Shorted to Coil
P3173	10355	Cylinder 9 High Pressure Injector High Side Circuit Low
P3174	10355	Cylinder 9 High Pressure Injector High Side Circuit High
P3175	10358	Cylinder 10 High Pressure Injector High Side Shorted to Coil
P3176	10358	Cylinder 10 High Pressure Injector High Side Circuit Low
P3177	10358	Cylinder 10 High Pressure Injector High Side Circuit High
P3178	10354	Cylinder 11 High Pressure Injector High Side Shorted to Coil
P3179	10354	Cylinder 11 High Pressure Injector High Side Circuit Low
P3180	10354	Cylinder 11 High Pressure Injector High Side Circuit High
P3181	10356	Cylinder 12 High Pressure Injector High Side Shorted to Coil
P3182	10356	Cylinder 12 High Pressure Injector High Side Circuit Low
P3183	10356	Cylinder 12 High Pressure Injector High Side Circuit High
P3184	10527	High Pressure Injector Control Module Communication Error (Bank 1)
P3185	10527	High Pressure Injector Control Module Communication Error (Bank 2)
P3186	10124	Intake Air Temperature Sensor Circuit Low Input (Bank 2)
P3187	10124	Intake Air Temperature Sensor Circuit High Input (Bank 2)
P3200	52615	Powertrain CAN, CAN Chip Defective
P3200	52679	Powertrain CAN, CAN Chip Defective

P3201	52615	Powertrain CAN, DPRAM-CAN Chip Defective
P3201	52679	Powertrain CAN, DPRAM-CAN Chip Defective
P3202	52615	Powertrain CAN, CAN Chip Cut-Off
P3202	52679	Powertrain CAN, CAN Chip Cut-Off
P3203	52619	Local CAN, LoCAN Chip Defective
P3203	52683	Local CAN, LoCAN Chip Defective
P3204	52619	Local CAN, DPRAM-LoCAN Chip Defective
P3204	52683	Local CAN, DPRAM-LoCAN Chip Defective
P3205	52619	Local CAN, CAN Chip Cut-Off
P3205	52683	Local CAN, CAN Chip Cut-Off
P3213	10220	CAN Message Monitoring ETC Alive Check
P3214	10220	CAN Message Monitoring ETC Plausibility
P3248	10605	Torque Comparison Bank Deviation Too Large
P3249	10511	Fuel Rail Pressure Sensor Circuit (Bank 2)
P3250	10511	Fuel Rail Pressure Sensor Circuit Low Input (Bank 2)
P3251	10511	Fuel Rail Pressure Sensor Circuit High Input (Bank 2)
P3252	10098	Evaporative Emission System Purge Control Valve Circuit (Bank 2)
P3253	10098	Evaporative Emission System Purge Control Valve Circuit Open (Bank 2)
P3254	10098	Evaporative Emission System Purge Control Valve Circuit Shorted (Bank 2)

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## ECU: MS41.1, Engine: M52TLEV, from 01.11.95 till 31.08.96

PCode	BMW-FC	PCode text
P0101	8	Mass or Volume Air Flow Circuit Range/Performance
P0111	14	Intake Air Temperature Sensor 1 Circuit Range/Performance
P0116	10	Engine Coolant Temperature Circuit Range/Performance
P0120	112	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0120	113	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0120	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0120	173	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0120	174	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0125	222	Insufficient Coolant Temperature for Closed Loop Fuel Control
P0130	150	O2 Sensor Circuit (Bank 1 Sensor 1)
P0130	151	O2 Sensor Circuit (Bank 1 Sensor 1)
P0130	152	O2 Sensor Circuit (Bank 1 Sensor 1)
P0133	229	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0134	186	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0135	25	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	156	O2 Sensor Circuit (Bank 1 Sensor 2)
P0136	157	O2 Sensor Circuit (Bank 1 Sensor 2)
P0136	215	O2 Sensor Circuit (Bank 1 Sensor 2)
P0141	61	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0150	153	O2 Sensor Circuit (Bank 2 Sensor 1)
P0150	154	O2 Sensor Circuit (Bank 2 Sensor 1)
P0150	155	O2 Sensor Circuit (Bank 2 Sensor 1)
P0153	230	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0154	187	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0155	55	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0156	159	O2 Sensor Circuit (Bank 2 Sensor 2)
P0156	160	O2 Sensor Circuit (Bank 2 Sensor 2)
P0156	216	O2 Sensor Circuit (Bank 2 Sensor 2)
P0161	79	O2 Sensor Heater Circuit (Bank 2 Sensor 2)

P0170	202	Fuel Trim (Bank 1)
P0173	203	Fuel Trim (Bank 2)
P0201	6	Injector Circuit/Open - Cylinder 1
P0202	5	Injector Circuit/Open - Cylinder 2
P0203	22	Injector Circuit/Open - Cylinder 3
P0204	24	Injector Circuit/Open - Cylinder 4
P0205	33	Injector Circuit/Open - Cylinder 5
P0206	23	Injector Circuit/Open - Cylinder 6
P0301	238	Cylinder 1 Misfire Detected
P0302	239	Cylinder 2 Misfire Detected
P0303	240	Cylinder 3 Misfire Detected
P0304	241	Cylinder 4 Misfire Detected
P0305	242	Cylinder 5 Misfire Detected
P0306	243	Cylinder 6 Misfire Detected
P0325	57	Knock Sensor 1 Circuit (Bank 1 or Single Sensor)
P0330	59	Knock Sensor 2 Circuit (Bank 2)
P0335	83	Crankshaft Position Sensor 'A' Circuit
P0340	65	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0412	62	Secondary Air Injection System Switching Valve A Circuit
P0420	233	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	234	Catalyst System Efficiency Below Threshold (Bank 2)
P0440	250	Evaporative Emission System
P0441	144	Evaporative Emission System Incorrect Purge Flow
P0442	145	Evaporative Emission System Leak Detected (small leak)
P0443	68	Evaporative Emission System Purge Control Valve Circuit
P0500	214	Vehicle Speed Sensor 'A'
P0505	204	Idle Air Control System
P0600	217	Serial Communication Link
P0601	100	Internal Control Module Memory Check Sum Error
P0601	170	Internal Control Module Memory Check Sum Error
P0601	171	Internal Control Module Memory Check Sum Error
P1140	149	Mass or Volume Air Flow Circuit Range/Performance Problem
P1145	50	Solenoid Valve Running Losses Control Circuit Electrical
P1161	122	Fuel Trim Adaptation Additive High (Bank 2) (M52: Engine Oil Temperature Sensor Circuit)
P1178	231	O2 Sensor Signal Circuit Slow Switching from Rich to Lean (Bank 1 Sensor 1)
P1179	232	O2 Sensor Signal Circuit Slow Switching from Rich to Lean (Bank 2 Sensor 1)
P1186	190	O2 Sensor Heater Control Circuit (Bank 1 Sensor 2)
P1187	191	O2 Sensor Heater Control Circuit (Bank 2 Sensor 2)
P1188	227	Fuel Control (Bank 1 Sensor 1)
P1189	228	Fuel Control (Bank 2 Sensor 1)
P1190	235	Pre Catalyst Fuel Trim System (Bank 1)
P1191	236	Pre Catalyst Fuel Trim System (Bank 2)
P1192	225	Post Catalyst Fuel Trim System (Bank 1)
P1193	226	Post Catalyst Fuel Trim System (Bank 2)
P1397	18	Camshaft Position Sensor 'B' Circuit (Bank 1)
P1421	246	Secondary Air System (Bank 2)
P1423	245	Secondary Air System (Bank 1)
P1432	247	Secondary Air Injection System Incorrect Flow Detected
P1453	35	Secondary Air Injection Pump Relay Control Circuit Electrical
P1509	53	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal Electrical
P1519	103	Oil-Condition Sensor Temperature Measurement (M62/M52/S52: 'A' Camshaft Position Actuator Bank 1)
P1525	21	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)

P1550	27	Idle-Speed Control Valve Closing Coil Electrical
P1593	124	DISA (Differentiated Intake Manifold) Control Circuit Electrical
P1622	123	Map Cooling Thermostat Control Circuit Electrical
P1624	168	Pedal Position Sensor Potentiometer Supply Channel 1 Electrical (M52: Coolant Thermostat (Coolant Temperature Below Thermostat Regulating Temperature))

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## ECU: MS41.1, Engine: M52TLEV, from 01.09.96 till 31.08.97

PCode	BMW-FC	PCode text
P0101	8	Mass or Volume Air Flow Circuit Range/Performance
P0111	14	Intake Air Temperature Sensor 1 Circuit Range/Performance
P0116	10	Engine Coolant Temperature Circuit Range/Performance
P0120	112	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0120	113	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0120	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0120	173	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0120	174	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0125	222	Insufficient Coolant Temperature for Closed Loop Fuel Control
P0130	150	O2 Sensor Circuit (Bank 1 Sensor 1)
P0130	151	O2 Sensor Circuit (Bank 1 Sensor 1)
P0130	152	O2 Sensor Circuit (Bank 1 Sensor 1)
P0133	229	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0134	186	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0135	25	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	156	O2 Sensor Circuit (Bank 1 Sensor 2)
P0136	157	O2 Sensor Circuit (Bank 1 Sensor 2)
P0136	215	O2 Sensor Circuit (Bank 1 Sensor 2)
P0141	61	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0150	153	O2 Sensor Circuit (Bank 2 Sensor 1)
P0150	154	O2 Sensor Circuit (Bank 2 Sensor 1)
P0150	155	O2 Sensor Circuit (Bank 2 Sensor 1)
P0153	230	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0154	187	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0155	55	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0156	159	O2 Sensor Circuit (Bank 2 Sensor 2)
P0156	160	O2 Sensor Circuit (Bank 2 Sensor 2)
P0156	216	O2 Sensor Circuit (Bank 2 Sensor 2)
P0161	79	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0170	202	Fuel Trim (Bank 1)
P0173	203	Fuel Trim (Bank 2)
P0201	6	Injector Circuit/Open - Cylinder 1
P0202	5	Injector Circuit/Open - Cylinder 2
P0203	22	Injector Circuit/Open - Cylinder 3
P0204	24	Injector Circuit/Open - Cylinder 4
P0205	33	Injector Circuit/Open - Cylinder 5
P0206	23	Injector Circuit/Open - Cylinder 6
P0301	238	Cylinder 1 Misfire Detected
P0302	239	Cylinder 2 Misfire Detected
P0303	240	Cylinder 3 Misfire Detected
P0304	241	Cylinder 4 Misfire Detected
P0305	242	Cylinder 5 Misfire Detected
P0306	243	Cylinder 6 Misfire Detected



P0325	57	Knock Sensor 1 Circuit (Bank 1 or Single Sensor)
P0330	59	Knock Sensor 2 Circuit (Bank 2)
P0335	83	Crankshaft Position Sensor 'A' Circuit
P0340	65	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0412	62	Secondary Air Injection System Switching Valve A Circuit
P0420	233	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	234	Catalyst System Efficiency Below Threshold (Bank 2)
P0440	250	Evaporative Emission System
P0441	144	Evaporative Emission System Incorrect Purge Flow
P0442	145	Evaporative Emission System Leak Detected (small leak)
P0443	68	Evaporative Emission System Purge Control Valve Circuit
P0500	214	Vehicle Speed Sensor 'A'
P0505	204	Idle Air Control System
P0600	217	Serial Communication Link
P0601	100	Internal Control Module Memory Check Sum Error
P0601	170	Internal Control Module Memory Check Sum Error
P0601	171	Internal Control Module Memory Check Sum Error
P1140	149	Mass or Volume Air Flow Circuit Range/Performance Problem
P1145	50	Solenoid Valve Running Losses Control Circuit Electrical
P1161	122	Fuel Trim Adaptation Additive High (Bank 2) (M52: Engine Oil Temperature Sensor Circuit)
P1178	231	O2 Sensor Signal Circuit Slow Switching from Rich to Lean (Bank 1 Sensor 1)
P1179	232	O2 Sensor Signal Circuit Slow Switching from Rich to Lean (Bank 2 Sensor 1)
P1186	190	O2 Sensor Heater Control Circuit (Bank 1 Sensor 2)
P1187	191	O2 Sensor Heater Control Circuit (Bank 2 Sensor 2)
P1188	227	Fuel Control (Bank 1 Sensor 1)
P1189	228	Fuel Control (Bank 2 Sensor 1)
P1190	235	Pre Catalyst Fuel Trim System (Bank 1)
P1191	236	Pre Catalyst Fuel Trim System (Bank 2)
P1192	225	Post Catalyst Fuel Trim System (Bank 1)
P1193	226	Post Catalyst Fuel Trim System (Bank 2)
P1397	18	Camshaft Position Sensor 'B' Circuit (Bank 1)
P1421	246	Secondary Air System (Bank 2)
P1423	245	Secondary Air System (Bank 1)
P1432	247	Secondary Air Injection System Incorrect Flow Detected
P1453	35	Secondary Air Injection Pump Relay Control Circuit Electrical
P1509	53	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal Electrical
P1519	103	Oil-Condition Sensor Temperature Measurement (M62/M52/S52: 'A' Camshaft Position Actuator Bank 1)
P1525	21	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1550	27	Idle-Speed Control Valve Closing Coil Electrical
P1593	124	DISA (Differentiated Intake Manifold) Control Circuit Electrical
P1622	123	Map Cooling Thermostat Control Circuit Electrical
P1624	168	Pedal Position Sensor Potentiometer Supply Channel 1 Electrical (M52: Coolant Thermostat (Coolant Temperature Below Thermostat Regulating Temperature))

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## ECU: MS41.1, Engine: M52TLEV, from 01.09.97 till 31.08.98

PCode BMW-FC PCode text

P0101	8	Mass or Volume Air Flow Circuit Range/Performance
P0111	14	Intake Air Temperature Sensor 1 Circuit Range/Performance
P0116	10	Engine Coolant Temperature Circuit Range/Performance
P0120	112	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0120	113	Throttle/Pedal Position Sensor/Switch 'A' Circuit

P0120	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0120	173	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0120	174	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0125	222	Insufficient Coolant Temperature for Closed Loop Fuel Control
P0130	150	O2 Sensor Circuit (Bank 1 Sensor 1)
P0130	151	O2 Sensor Circuit (Bank 1 Sensor 1)
P0130	152	O2 Sensor Circuit (Bank 1 Sensor 1)
P0133	229	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0134	186	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0135	25	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	156	O2 Sensor Circuit (Bank 1 Sensor 2)
P0136	157	O2 Sensor Circuit (Bank 1 Sensor 2)
P0136	215	O2 Sensor Circuit (Bank 1 Sensor 2)
P0141	61	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0150	153	O2 Sensor Circuit (Bank 2 Sensor 1)
P0150	154	O2 Sensor Circuit (Bank 2 Sensor 1)
P0150	155	O2 Sensor Circuit (Bank 2 Sensor 1)
P0153	230	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0154	187	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0155	55	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0156	159	O2 Sensor Circuit (Bank 2 Sensor 2)
P0156	160	O2 Sensor Circuit (Bank 2 Sensor 2)
P0156	216	O2 Sensor Circuit (Bank 2 Sensor 2)
P0161	79	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0170	202	Fuel Trim (Bank 1)
P0173	203	Fuel Trim (Bank 2)
P0201	6	Injector Circuit/Open - Cylinder 1
P0202	5	Injector Circuit/Open - Cylinder 2
P0203	22	Injector Circuit/Open - Cylinder 3
P0204	24	Injector Circuit/Open - Cylinder 4
P0205	33	Injector Circuit/Open - Cylinder 5
P0206	23	Injector Circuit/Open - Cylinder 6
P0301	238	Cylinder 1 Misfire Detected
P0302	239	Cylinder 2 Misfire Detected
P0303	240	Cylinder 3 Misfire Detected
P0304	241	Cylinder 4 Misfire Detected
P0305	242	Cylinder 5 Misfire Detected
P0306	243	Cylinder 6 Misfire Detected
P0325	57	Knock Sensor 1 Circuit (Bank 1 or Single Sensor)
P0330	59	Knock Sensor 2 Circuit (Bank 2)
P0335	83	Crankshaft Position Sensor 'A' Circuit
P0340	65	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0412	62	Secondary Air Injection System Switching Valve A Circuit
P0420	233	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	234	Catalyst System Efficiency Below Threshold (Bank 2)
P0440	250	Evaporative Emission System
P0441	144	Evaporative Emission System Incorrect Purge Flow
P0442	145	Evaporative Emission System Leak Detected (small leak)
P0443	68	Evaporative Emission System Purge Control Valve Circuit
P0500	214	Vehicle Speed Sensor 'A'
P0505	204	Idle Air Control System
P0600	217	Serial Communication Link
P0601	100	Internal Control Module Memory Check Sum Error

P0601	170	Internal Control Module Memory Check Sum Error
P0601	171	Internal Control Module Memory Check Sum Error
P1140	149	Mass or Volume Air Flow Circuit Range/Performance Problem
P1145	50	Solenoid Valve Running Losses Control Circuit Electrical
P1161	122	Fuel Trim Adaptation Additive High (Bank 2) (M52: Engine Oil Temperature Sensor Circuit)
P1178	231	O2 Sensor Signal Circuit Slow Switching from Rich to Lean (Bank 1 Sensor 1)
P1179	232	O2 Sensor Signal Circuit Slow Switching from Rich to Lean (Bank 2 Sensor 1)
P1186	190	O2 Sensor Heater Control Circuit (Bank 1 Sensor 2)
P1187	191	O2 Sensor Heater Control Circuit (Bank 2 Sensor 2)
P1188	227	Fuel Control (Bank 1 Sensor 1)
P1189	228	Fuel Control (Bank 2 Sensor 1)
P1190	235	Pre Catalyst Fuel Trim System (Bank 1)
P1191	236	Pre Catalyst Fuel Trim System (Bank 2)
P1192	225	Post Catalyst Fuel Trim System (Bank 1)
P1193	226	Post Catalyst Fuel Trim System (Bank 2)
P1421	246	Secondary Air System (Bank 2)
P1423	245	Secondary Air System (Bank 1)
P1432	247	Secondary Air Injection System Incorrect Flow Detected
P1453	35	Secondary Air Injection Pump Relay Control Circuit Electrical
P1470	126	Leakage Diagnostic Pump Control Circuit Electrical
P1475	140	Leakage Diagnostic Pump Reed Switch Did not Close
P1476	143	Leakage Diagnostic Pump Clamped Tube (M52 MY99/00: Leakage Diagnostic Pump Reed Switch Circuit)
P1509	53	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal Electrical
P1519	103	Oil-Condition Sensor Temperature Measurement (M62/M52/S52: 'A' Camshaft Position Actuator Bank 1)
P1525	21	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1550	27	Idle-Speed Control Valve Closing Coil Electrical
P1593	124	DISA (Differentiated Intake Manifold) Control Circuit Electrical
P1622	123	Map Cooling Thermostat Control Circuit Electrical
P1624	168	Pedal Position Sensor Potentiometer Supply Channel 1 Electrical (M52: Coolant Thermostat (Coolant Temperature Below Thermostat Regulating Temperature))

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## ECU: MS41.1, Engine: M52TLEV, from 01.09.98 till 30.09.99

PCode BMW-FC PCode text

P0101	8	Mass or Volume Air Flow Circuit Range/Performance
P0111	14	Intake Air Temperature Sensor 1 Circuit Range/Performance
P0116	10	Engine Coolant Temperature Circuit Range/Performance
P0120	112	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0120	113	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0120	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0120	173	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0120	174	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0125	222	Insufficient Coolant Temperature for Closed Loop Fuel Control
P0128	168	Coolant Thermostat (Coolant Temperature Below Thermostat Regulating Temperature)
P0130	150	O2 Sensor Circuit (Bank 1 Sensor 1)
P0130	151	O2 Sensor Circuit (Bank 1 Sensor 1)
P0130	152	O2 Sensor Circuit (Bank 1 Sensor 1)
P0133	229	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0134	186	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0135	25	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	156	O2 Sensor Circuit (Bank 1 Sensor 2)

P0136	157	O2 Sensor Circuit (Bank 1 Sensor 2)
P0136	215	O2 Sensor Circuit (Bank 1 Sensor 2)
P0141	61	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0150	153	O2 Sensor Circuit (Bank 2 Sensor 1)
P0150	154	O2 Sensor Circuit (Bank 2 Sensor 1)
P0150	155	O2 Sensor Circuit (Bank 2 Sensor 1)
P0153	230	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0154	187	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0155	55	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0156	159	O2 Sensor Circuit (Bank 2 Sensor 2)
P0156	160	O2 Sensor Circuit (Bank 2 Sensor 2)
P0156	216	O2 Sensor Circuit (Bank 2 Sensor 2)
P0161	79	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0170	202	Fuel Trim (Bank 1)
P0173	203	Fuel Trim (Bank 2)
P0201	6	Injector Circuit/Open - Cylinder 1
P0202	5	Injector Circuit/Open - Cylinder 2
P0203	22	Injector Circuit/Open - Cylinder 3
P0204	24	Injector Circuit/Open - Cylinder 4
P0205	33	Injector Circuit/Open - Cylinder 5
P0206	23	Injector Circuit/Open - Cylinder 6
P0301	238	Cylinder 1 Misfire Detected
P0302	239	Cylinder 2 Misfire Detected
P0303	240	Cylinder 3 Misfire Detected
P0304	241	Cylinder 4 Misfire Detected
P0305	242	Cylinder 5 Misfire Detected
P0306	243	Cylinder 6 Misfire Detected
P0325	57	Knock Sensor 1 Circuit (Bank 1 or Single Sensor)
P0330	59	Knock Sensor 2 Circuit (Bank 2)
P0335	83	Crankshaft Position Sensor 'A' Circuit
P0340	65	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0412	62	Secondary Air Injection System Switching Valve A Circuit
P0420	233	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	234	Catalyst System Efficiency Below Threshold (Bank 2)
P0440	250	Evaporative Emission System
P0441	144	Evaporative Emission System Incorrect Purge Flow
P0442	145	Evaporative Emission System Leak Detected (small leak)
P0443	68	Evaporative Emission System Purge Control Valve Circuit
P0500	214	Vehicle Speed Sensor 'A'
P0505	204	Idle Air Control System
P0600	217	Serial Communication Link
P0601	100	Internal Control Module Memory Check Sum Error
P0601	170	Internal Control Module Memory Check Sum Error
P0601	171	Internal Control Module Memory Check Sum Error
P1140	149	Mass or Volume Air Flow Circuit Range/Performance Problem
P1145	50	Solenoid Valve Running Losses Control Circuit Electrical
P1161	122	Fuel Trim Adaptation Additive High (Bank 2) (M52: Engine Oil Temperature Sensor Circuit)
P1178	231	O2 Sensor Signal Circuit Slow Switching from Rich to Lean (Bank 1 Sensor 1)
P1179	232	O2 Sensor Signal Circuit Slow Switching from Rich to Lean (Bank 2 Sensor 1)
P1186	190	O2 Sensor Heater Control Circuit (Bank 1 Sensor 2)
P1187	191	O2 Sensor Heater Control Circuit (Bank 2 Sensor 2)
P1188	227	Fuel Control (Bank 1 Sensor 1)
P1189	228	Fuel Control (Bank 2 Sensor 1)

P1190	235	Pre Catalyst Fuel Trim System (Bank 1)
P1191	236	Pre Catalyst Fuel Trim System (Bank 2)
P1192	225	Post Catalyst Fuel Trim System (Bank 1)
P1193	226	Post Catalyst Fuel Trim System (Bank 2)
P1397	18	Camshaft Position Sensor 'B' Circuit (Bank 1)
P1421	246	Secondary Air System (Bank 2)
P1423	245	Secondary Air System (Bank 1)
P1432	247	Secondary Air Injection System Incorrect Flow Detected
P1453	35	Secondary Air Injection Pump Relay Control Circuit Electrical
P1470	126	Leakage Diagnostic Pump Control Circuit Electrical
P1475	140	Leakage Diagnostic Pump Reed Switch Did not Close
P1476	143	Leakage Diagnostic Pump Clamped Tube (M52 MY99/00: Leakage Diagnostic Pump Reed Switch Circuit)
P1509	53	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal Electrical
P1519	103	Oil-Condition Sensor Temperature Measurement (M62/M52/S52: 'A' Camshaft Position Actuator Bank 1)
P1525	21	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1550	27	Idle-Speed Control Valve Closing Coil Electrical
P1580	109	Throttle Valve Mechanically Stuck (M73: Throttle Valve 1 Spring Test)
P1580	114	Throttle Valve Mechanically Stuck (M73: Throttle Valve 1 Spring Test)
P1580	119	Throttle Valve Mechanically Stuck (M73: Throttle Valve 1 Spring Test)
P1593	124	DISA (Differentiated Intake Manifold) Control Circuit Electrical
P1622	123	Map Cooling Thermostat Control Circuit Electrical

## ECU: MS41.2, Engine: S52, from 01.04.96 till 31.08.96

PCode	BMW-FC	PCode text
P0101	8	Mass or Volume Air Flow Circuit Range/Performance
P0111	14	Intake Air Temperature Sensor 1 Circuit Range/Performance
P0116	10	Engine Coolant Temperature Circuit Range/Performance
P0121	12	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0125	222	Insufficient Coolant Temperature for Closed Loop Fuel Control
P0130	75	O2 Sensor Circuit (Bank 1 Sensor 1)
P0133	229	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0134	200	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0135	25	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	77	O2 Sensor Circuit (Bank 1 Sensor 2)
P0141	79	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0150	76	O2 Sensor Circuit (Bank 2 Sensor 1)
P0153	230	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0154	201	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0155	55	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0156	78	O2 Sensor Circuit (Bank 2 Sensor 2)
P0161	61	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0170	202	Fuel Trim (Bank 1)
P0173	203	Fuel Trim (Bank 2)
P0201	6	Injector Circuit/Open - Cylinder 1
P0202	5	Injector Circuit/Open - Cylinder 2
P0203	22	Injector Circuit/Open - Cylinder 3
P0204	24	Injector Circuit/Open - Cylinder 4
P0205	33	Injector Circuit/Open - Cylinder 5
P0206	23	Injector Circuit/Open - Cylinder 6
P0300	0	Random/Multiple Cylinder Misfire Detected

P0301	238	Cylinder 1 Misfire Detected
P0302	239	Cylinder 2 Misfire Detected
P0303	240	Cylinder 3 Misfire Detected
P0304	241	Cylinder 4 Misfire Detected
P0305	242	Cylinder 5 Misfire Detected
P0306	243	Cylinder 6 Misfire Detected
P0325	57	Knock Sensor 1 Circuit (Bank 1 or Single Sensor)
P0330	59	Knock Sensor 2 Circuit (Bank 2)
P0335	83	Crankshaft Position Sensor 'A' Circuit
P0340	65	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0412	62	Secondary Air Injection System Switching Valve A Circuit
P0420	233	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	234	Catalyst System Efficiency Below Threshold (Bank 2)
P0440	250	Evaporative Emission System
P0440	255	Evaporative Emission System
P0441	194	Evaporative Emission System Incorrect Purge Flow
P0441	252	Evaporative Emission System Incorrect Purge Flow
P0442	195	Evaporative Emission System Leak Detected (small leak)
P0442	251	Evaporative Emission System Leak Detected (small leak)
P0443	68	Evaporative Emission System Purge Control Valve Circuit
P0446	253	Evaporative Emission System Vent Control Circuit
P0455	254	Evaporative Emission System Leak Detected (large leak)
P0500	214	Vehicle Speed Sensor 'A'
P0505	204	Idle Air Control System
P0600	217	Serial Communication Link
P0601	100	Internal Control Module Memory Check Sum Error
P1145	50	Solenoid Valve Running Losses Control Circuit Electrical
P1178	231	O2 Sensor Signal Circuit Slow Switching from Rich to Lean (Bank 1 Sensor 1)
P1179	232	O2 Sensor Signal Circuit Slow Switching from Rich to Lean (Bank 2 Sensor 1)
P1186	235	O2 Sensor Heater Control Circuit (Bank 1 Sensor 2)
P1187	236	O2 Sensor Heater Control Circuit (Bank 2 Sensor 2)
P1188	227	Fuel Control (Bank 1 Sensor 1)
P1189	228	Fuel Control (Bank 2 Sensor 1)
P1396	244	Crankshaft Position Sensor Segment Timing Plausibility
P1403	51	Carbon Canister Shutoff Valve Control Circuit Electrical (M73: Heated Catalyst Battery Voltage or Current Too Low during Heating (Bank 2))
P1421	246	Secondary Air System (Bank 2)
P1423	245	Secondary Air System (Bank 1)
P1432	247	Secondary Air Injection System Incorrect Flow Detected
P1453	35	Secondary Air Injection Pump Relay Control Circuit Electrical
P1470	196	Leakage Diagnostic Pump Control Circuit Electrical
P1475	191	Leakage Diagnostic Pump Reed Switch Did not Close
P1476	193	Leakage Diagnostic Pump Clamped Tube (M52 MY99/00: Leakage Diagnostic Pump Reed Switch Circuit)
P1477	190	Leakage Diagnostic Pump Reed Switch Did Not Open
P1509	53	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal Electrical
P1519	212	Oil-Condition Sensor Temperature Measurement (M62/M52/S52: 'A' Camshaft Position Actuator Bank 1)
P1525	21	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1550	27	Idle-Speed Control Valve Closing Coil Electrical

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## ECU: MS41.2, Engine: S52, from 01.09.96 till 31.08.97

PCode	BMW-FC	PCode	text
P0101	8		Mass or Volume Air Flow Circuit Range/Performance
P0111	14		Intake Air Temperature Sensor 1 Circuit Range/Performance
P0116	10		Engine Coolant Temperature Circuit Range/Performance
P0121	12		Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0125	222		Insufficient Coolant Temperature for Closed Loop Fuel Control
P0130	75		O2 Sensor Circuit (Bank 1 Sensor 1)
P0133	229		O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0134	200		O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0135	25		O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	77		O2 Sensor Circuit (Bank 1 Sensor 2)
P0141	79		O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0150	76		O2 Sensor Circuit (Bank 2 Sensor 1)
P0153	230		O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0154	201		O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0155	55		O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0156	78		O2 Sensor Circuit (Bank 2 Sensor 2)
P0161	61		O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0170	202		Fuel Trim (Bank 1)
P0173	203		Fuel Trim (Bank 2)
P0201	6		Injector Circuit/Open - Cylinder 1
P0202	5		Injector Circuit/Open - Cylinder 2
P0203	22		Injector Circuit/Open - Cylinder 3
P0204	24		Injector Circuit/Open - Cylinder 4
P0205	33		Injector Circuit/Open - Cylinder 5
P0206	23		Injector Circuit/Open - Cylinder 6
P0300	0		Random/Multiple Cylinder Misfire Detected
P0301	238		Cylinder 1 Misfire Detected
P0302	239		Cylinder 2 Misfire Detected
P0303	240		Cylinder 3 Misfire Detected
P0304	241		Cylinder 4 Misfire Detected
P0305	242		Cylinder 5 Misfire Detected
P0306	243		Cylinder 6 Misfire Detected
P0325	57		Knock Sensor 1 Circuit (Bank 1 or Single Sensor)
P0330	59		Knock Sensor 2 Circuit (Bank 2)
P0335	83		Crankshaft Position Sensor 'A' Circuit
P0340	65		Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0412	62		Secondary Air Injection System Switching Valve A Circuit
P0420	233		Catalyst System Efficiency Below Threshold (Bank 1)
P0430	234		Catalyst System Efficiency Below Threshold (Bank 2)
P0440	250		Evaporative Emission System
P0440	255		Evaporative Emission System
P0441	194		Evaporative Emission System Incorrect Purge Flow
P0441	252		Evaporative Emission System Incorrect Purge Flow
P0442	195		Evaporative Emission System Leak Detected (small leak)
P0442	251		Evaporative Emission System Leak Detected (small leak)
P0443	68		Evaporative Emission System Purge Control Valve Circuit
P0446	253		Evaporative Emission System Vent Control Circuit
P0455	254		Evaporative Emission System Leak Detected (large leak)
P0500	214		Vehicle Speed Sensor 'A'

P0505	204	Idle Air Control System
P0600	217	Serial Communication Link
P0601	100	Internal Control Module Memory Check Sum Error
P1145	50	Solenoid Valve Running Losses Control Circuit Electrical
P1178	231	O2 Sensor Signal Circuit Slow Switching from Rich to Lean (Bank 1 Sensor 1)
P1179	232	O2 Sensor Signal Circuit Slow Switching from Rich to Lean (Bank 2 Sensor 1)
P1186	235	O2 Sensor Heater Control Circuit (Bank 1 Sensor 2)
P1187	236	O2 Sensor Heater Control Circuit (Bank 2 Sensor 2)
P1188	227	Fuel Control (Bank 1 Sensor 1)
P1189	228	Fuel Control (Bank 2 Sensor 1)
P1396	244	Crankshaft Position Sensor Segment Timing Plausibility
P1403	51	Carbon Canister Shutoff Valve Control Circuit Electrical (M73: Heated Catalyst Battery Voltage or Current Too Low during Heating (Bank 2))
P1421	246	Secondary Air System (Bank 2)
P1423	245	Secondary Air System (Bank 1)
P1432	247	Secondary Air Injection System Incorrect Flow Detected
P1453	35	Secondary Air Injection Pump Relay Control Circuit Electrical
P1470	196	Leakage Diagnostic Pump Control Circuit Electrical
P1475	191	Leakage Diagnostic Pump Reed Switch Did not Close
P1476	193	Leakage Diagnostic Pump Clamped Tube (M52 MY99/00: Leakage Diagnostic Pump Reed Switch Circuit)
P1477	190	Leakage Diagnostic Pump Reed Switch Did Not Open
P1509	53	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal Electrical
P1519	212	Oil-Condition Sensor Temperature Measurement (M62/M52/S52: 'A' Camshaft Position Actuator Bank 1)
P1525	21	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1550	27	Idle-Speed Control Valve Closing Coil Electrical

## ECU: MS41.2, Engine: S52, from 01.09.97 till 31.08.98

PCode	BMW-FC	PCode text
P0101	8	Mass or Volume Air Flow Circuit Range/Performance
P0111	14	Intake Air Temperature Sensor 1 Circuit Range/Performance
P0116	10	Engine Coolant Temperature Circuit Range/Performance
P0121	12	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0125	222	Insufficient Coolant Temperature for Closed Loop Fuel Control
P0130	75	O2 Sensor Circuit (Bank 1 Sensor 1)
P0133	229	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0134	200	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0135	25	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	77	O2 Sensor Circuit (Bank 1 Sensor 2)
P0141	79	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0150	76	O2 Sensor Circuit (Bank 2 Sensor 1)
P0153	230	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0154	201	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0155	55	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0156	78	O2 Sensor Circuit (Bank 2 Sensor 2)
P0161	61	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0170	202	Fuel Trim (Bank 1)
P0173	203	Fuel Trim (Bank 2)
P0201	6	Injector Circuit/Open - Cylinder 1
P0202	5	Injector Circuit/Open - Cylinder 2
P0203	22	Injector Circuit/Open - Cylinder 3



P0204	24	Injector Circuit/Open - Cylinder 4
P0205	33	Injector Circuit/Open - Cylinder 5
P0206	23	Injector Circuit/Open - Cylinder 6
P0300	0	Random/Multiple Cylinder Misfire Detected
P0301	238	Cylinder 1 Misfire Detected
P0302	239	Cylinder 2 Misfire Detected
P0303	240	Cylinder 3 Misfire Detected
P0304	241	Cylinder 4 Misfire Detected
P0305	242	Cylinder 5 Misfire Detected
P0306	243	Cylinder 6 Misfire Detected
P0325	57	Knock Sensor 1 Circuit (Bank 1 or Single Sensor)
P0330	59	Knock Sensor 2 Circuit (Bank 2)
P0335	83	Crankshaft Position Sensor 'A' Circuit
P0340	65	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0412	62	Secondary Air Injection System Switching Valve A Circuit
P0420	233	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	234	Catalyst System Efficiency Below Threshold (Bank 2)
P0440	250	Evaporative Emission System
P0440	255	Evaporative Emission System
P0441	194	Evaporative Emission System Incorrect Purge Flow
P0441	252	Evaporative Emission System Incorrect Purge Flow
P0442	195	Evaporative Emission System Leak Detected (small leak)
P0442	251	Evaporative Emission System Leak Detected (small leak)
P0443	68	Evaporative Emission System Purge Control Valve Circuit
P0446	253	Evaporative Emission System Vent Control Circuit
P0455	254	Evaporative Emission System Leak Detected (large leak)
P0500	214	Vehicle Speed Sensor 'A'
P0505	204	Idle Air Control System
P0600	217	Serial Communication Link
P0601	100	Internal Control Module Memory Check Sum Error
P1145	50	Solenoid Valve Running Losses Control Circuit Electrical
P1178	231	O2 Sensor Signal Circuit Slow Switching from Rich to Lean (Bank 1 Sensor 1)
P1179	232	O2 Sensor Signal Circuit Slow Switching from Rich to Lean (Bank 2 Sensor 1)
P1186	235	O2 Sensor Heater Control Circuit (Bank 1 Sensor 2)
P1187	236	O2 Sensor Heater Control Circuit (Bank 2 Sensor 2)
P1188	227	Fuel Control (Bank 1 Sensor 1)
P1189	228	Fuel Control (Bank 2 Sensor 1)
P1396	244	Crankshaft Position Sensor Segment Timing Plausibility
P1403	51	Carbon Canister Shutoff Valve Control Circuit Electrical (M73: Heated Catalyst Battery Voltage or Current Too Low during Heating (Bank 2))
P1421	246	Secondary Air System (Bank 2)
P1423	245	Secondary Air System (Bank 1)
P1432	247	Secondary Air Injection System Incorrect Flow Detected
P1453	35	Secondary Air Injection Pump Relay Control Circuit Electrical
P1470	196	Leakage Diagnostic Pump Control Circuit Electrical
P1475	191	Leakage Diagnostic Pump Reed Switch Did not Close
P1476	193	Leakage Diagnostic Pump Clamped Tube (M52 MY99/00: Leakage Diagnostic Pump Reed Switch Circuit)
P1477	190	Leakage Diagnostic Pump Reed Switch Did Not Open
P1509	53	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal Electrical
P1519	212	Oil-Condition Sensor Temperature Measurement (M62/M52/S52: 'A' Camshaft Position Actuator Bank 1)
P1525	21	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)

**ECU: MS41.2, Engine: S52, from 01.09.98 till 30.04.99**

PCode BMW-FC PCode text

P0101	8	Mass or Volume Air Flow Circuit Range/Performance
P0111	14	Intake Air Temperature Sensor 1 Circuit Range/Performance
P0116	10	Engine Coolant Temperature Circuit Range/Performance
P0121	12	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0125	222	Insufficient Coolant Temperature for Closed Loop Fuel Control
P0130	75	O2 Sensor Circuit (Bank 1 Sensor 1)
P0133	229	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0134	200	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0135	25	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	77	O2 Sensor Circuit (Bank 1 Sensor 2)
P0141	79	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0150	76	O2 Sensor Circuit (Bank 2 Sensor 1)
P0153	230	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0154	201	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0155	55	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0156	78	O2 Sensor Circuit (Bank 2 Sensor 2)
P0161	61	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0170	202	Fuel Trim (Bank 1)
P0173	203	Fuel Trim (Bank 2)
P0201	6	Injector Circuit/Open - Cylinder 1
P0202	5	Injector Circuit/Open - Cylinder 2
P0203	22	Injector Circuit/Open - Cylinder 3
P0204	24	Injector Circuit/Open - Cylinder 4
P0205	33	Injector Circuit/Open - Cylinder 5
P0206	23	Injector Circuit/Open - Cylinder 6
P0300	0	Random/Multiple Cylinder Misfire Detected
P0301	238	Cylinder 1 Misfire Detected
P0302	239	Cylinder 2 Misfire Detected
P0303	240	Cylinder 3 Misfire Detected
P0304	241	Cylinder 4 Misfire Detected
P0305	242	Cylinder 5 Misfire Detected
P0306	243	Cylinder 6 Misfire Detected
P0325	57	Knock Sensor 1 Circuit (Bank 1 or Single Sensor)
P0330	59	Knock Sensor 2 Circuit (Bank 2)
P0335	83	Crankshaft Position Sensor 'A' Circuit
P0340	65	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0412	62	Secondary Air Injection System Switching Valve A Circuit
P0420	233	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	234	Catalyst System Efficiency Below Threshold (Bank 2)
P0440	250	Evaporative Emission System
P0440	255	Evaporative Emission System
P0441	194	Evaporative Emission System Incorrect Purge Flow
P0441	252	Evaporative Emission System Incorrect Purge Flow
P0442	195	Evaporative Emission System Leak Detected (small leak)
P0442	251	Evaporative Emission System Leak Detected (small leak)
P0443	68	Evaporative Emission System Purge Control Valve Circuit
P0446	253	Evaporative Emission System Vent Control Circuit

P0455	254	Evaporative Emission System Leak Detected (large leak)
P0500	214	Vehicle Speed Sensor 'A'
P0505	204	Idle Air Control System
P0600	217	Serial Communication Link
P0601	100	Internal Control Module Memory Check Sum Error
P1145	50	Solenoid Valve Running Losses Control Circuit Electrical
P1178	231	O2 Sensor Signal Circuit Slow Switching from Rich to Lean (Bank 1 Sensor 1)
P1179	232	O2 Sensor Signal Circuit Slow Switching from Rich to Lean (Bank 2 Sensor 1)
P1186	235	O2 Sensor Heater Control Circuit (Bank 1 Sensor 2)
P1187	236	O2 Sensor Heater Control Circuit (Bank 2 Sensor 2)
P1188	227	Fuel Control (Bank 1 Sensor 1)
P1189	228	Fuel Control (Bank 2 Sensor 1)
P1396	244	Crankshaft Position Sensor Segment Timing Plausibility
P1403	51	Carbon Canister Shutoff Valve Control Circuit Electrical (M73: Heated Catalyst Battery Voltage or Current Too Low during Heating (Bank 2))
P1421	246	Secondary Air System (Bank 2)
P1423	245	Secondary Air System (Bank 1)
P1432	247	Secondary Air Injection System Incorrect Flow Detected
P1453	35	Secondary Air Injection Pump Relay Control Circuit Electrical
P1470	196	Leakage Diagnostic Pump Control Circuit Electrical
P1475	191	Leakage Diagnostic Pump Reed Switch Did not Close
P1476	193	Leakage Diagnostic Pump Clamped Tube (M52 MY99/00: Leakage Diagnostic Pump Reed Switch Circuit)
P1477	190	Leakage Diagnostic Pump Reed Switch Did Not Open
P1509	53	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal Electrical
P1519	212	Oil-Condition Sensor Temperature Measurement (M62/M52/S52: 'A' Camshaft Position Actuator Bank 1)
P1525	21	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1550	27	Idle-Speed Control Valve Closing Coil Electrical

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## ECU: MS41.2, Engine: S52, from 01.05.99 till 31.08.00

PCode	BMW-FC	PCode	text
P0101	8		Mass or Volume Air Flow Circuit Range/Performance
P0111	14		Intake Air Temperature Sensor 1 Circuit Range/Performance
P0116	10		Engine Coolant Temperature Circuit Range/Performance
P0121	12		Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0125	222		Insufficient Coolant Temperature for Closed Loop Fuel Control
P0130	75		O2 Sensor Circuit (Bank 1 Sensor 1)
P0133	229		O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0134	200		O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0135	25		O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	77		O2 Sensor Circuit (Bank 1 Sensor 2)
P0141	79		O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0150	76		O2 Sensor Circuit (Bank 2 Sensor 1)
P0153	230		O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0154	201		O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0155	55		O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0156	78		O2 Sensor Circuit (Bank 2 Sensor 2)
P0161	61		O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0170	202		Fuel Trim (Bank 1)
P0173	203		Fuel Trim (Bank 2)
P0201	6		Injector Circuit/Open - Cylinder 1

P0202	5	Injector Circuit/Open - Cylinder 2
P0203	22	Injector Circuit/Open - Cylinder 3
P0204	24	Injector Circuit/Open - Cylinder 4
P0205	33	Injector Circuit/Open - Cylinder 5
P0206	23	Injector Circuit/Open - Cylinder 6
P0300	0	Random/Multiple Cylinder Misfire Detected
P0301	238	Cylinder 1 Misfire Detected
P0302	239	Cylinder 2 Misfire Detected
P0303	240	Cylinder 3 Misfire Detected
P0304	241	Cylinder 4 Misfire Detected
P0305	242	Cylinder 5 Misfire Detected
P0306	243	Cylinder 6 Misfire Detected
P0325	57	Knock Sensor 1 Circuit (Bank 1 or Single Sensor)
P0330	59	Knock Sensor 2 Circuit (Bank 2)
P0335	83	Crankshaft Position Sensor 'A' Circuit
P0340	65	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0412	62	Secondary Air Injection System Switching Valve A Circuit
P0420	233	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	234	Catalyst System Efficiency Below Threshold (Bank 2)
P0440	250	Evaporative Emission System
P0440	255	Evaporative Emission System
P0441	194	Evaporative Emission System Incorrect Purge Flow
P0441	252	Evaporative Emission System Incorrect Purge Flow
P0442	195	Evaporative Emission System Leak Detected (small leak)
P0442	251	Evaporative Emission System Leak Detected (small leak)
P0443	68	Evaporative Emission System Purge Control Valve Circuit
P0446	253	Evaporative Emission System Vent Control Circuit
P0455	254	Evaporative Emission System Leak Detected (large leak)
P0500	214	Vehicle Speed Sensor 'A'
P0505	204	Idle Air Control System
P0600	217	Serial Communication Link
P0601	100	Internal Control Module Memory Check Sum Error
P1145	50	Solenoid Valve Running Losses Control Circuit Electrical
P1178	231	O2 Sensor Signal Circuit Slow Switching from Rich to Lean (Bank 1 Sensor 1)
P1179	232	O2 Sensor Signal Circuit Slow Switching from Rich to Lean (Bank 2 Sensor 1)
P1186	235	O2 Sensor Heater Control Circuit (Bank 1 Sensor 2)
P1187	236	O2 Sensor Heater Control Circuit (Bank 2 Sensor 2)
P1188	227	Fuel Control (Bank 1 Sensor 1)
P1189	228	Fuel Control (Bank 2 Sensor 1)
P1396	244	Crankshaft Position Sensor Segment Timing Plausibility
P1403	51	Carbon Canister Shutoff Valve Control Circuit Electrical (M73: Heated Catalyst Battery Voltage or Current Too Low during Heating (Bank 2))
P1421	246	Secondary Air System (Bank 2)
P1423	245	Secondary Air System (Bank 1)
P1432	247	Secondary Air Injection System Incorrect Flow Detected
P1453	35	Secondary Air Injection Pump Relay Control Circuit Electrical
P1470	196	Leakage Diagnostic Pump Control Circuit Electrical
P1475	191	Leakage Diagnostic Pump Reed Switch Did not Close
P1476	193	Leakage Diagnostic Pump Clamped Tube (M52 MY99/00: Leakage Diagnostic Pump Reed Switch Circuit)
P1477	190	Leakage Diagnostic Pump Reed Switch Did Not Open
P1509	53	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal Electrical
P1519	212	Oil-Condition Sensor Temperature Measurement (M62/M52/S52: 'A' Camshaft Position Actuator

Bank 1)

P1525 21 'A' Camshaft Position Actuator Control Open Circuit (Bank 1)  
P1550 27 Idle-Speed Control Valve Closing Coil Electrical

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## ECU: MS42, Engine: M52LEV, from 01.06.98 till 31.05.99

PCode BMW-FC PCode text

P0101 8 Mass or Volume Air Flow Circuit Range/Performance  
P0111 14 Intake Air Temperature Sensor 1 Circuit Range/Performance  
P0116 10 Engine Coolant Temperature Circuit Range/Performance  
P0120 112 Throttle/Pedal Position Sensor/Switch 'A' Circuit  
P0120 113 Throttle/Pedal Position Sensor/Switch 'A' Circuit  
P0120 118 Throttle/Pedal Position Sensor/Switch 'A' Circuit  
P0120 173 Throttle/Pedal Position Sensor/Switch 'A' Circuit  
P0120 174 Throttle/Pedal Position Sensor/Switch 'A' Circuit  
P0125 222 Insufficient Coolant Temperature for Closed Loop Fuel Control  
P0128 168 Coolant Thermostat (Coolant Temperature Below Thermostat Regulating Temperature)  
P0130 150 O2 Sensor Circuit (Bank 1 Sensor 1)  
P0130 151 O2 Sensor Circuit (Bank 1 Sensor 1)  
P0130 152 O2 Sensor Circuit (Bank 1 Sensor 1)  
P0133 229 O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)  
P0134 186 O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)  
P0135 25 O2 Sensor Heater Circuit (Bank 1 Sensor 1)  
P0136 156 O2 Sensor Circuit (Bank 1 Sensor 2)  
P0136 157 O2 Sensor Circuit (Bank 1 Sensor 2)  
P0136 215 O2 Sensor Circuit (Bank 1 Sensor 2)  
P0139 220 O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)  
P0141 61 O2 Sensor Heater Circuit (Bank 1 Sensor 2)  
P0150 153 O2 Sensor Circuit (Bank 2 Sensor 1)  
P0150 154 O2 Sensor Circuit (Bank 2 Sensor 1)  
P0150 155 O2 Sensor Circuit (Bank 2 Sensor 1)  
P0153 230 O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)  
P0154 187 O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)  
P0155 55 O2 Sensor Heater Circuit (Bank 2 Sensor 1)  
P0156 159 O2 Sensor Circuit (Bank 2 Sensor 2)  
P0156 160 O2 Sensor Circuit (Bank 2 Sensor 2)  
P0156 216 O2 Sensor Circuit (Bank 2 Sensor 2)  
P0159 221 O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)  
P0161 79 O2 Sensor Heater Circuit (Bank 2 Sensor 2)  
P0170 202 Fuel Trim (Bank 1)  
P0173 203 Fuel Trim (Bank 2)  
P0201 6 Injector Circuit/Open - Cylinder 1  
P0202 5 Injector Circuit/Open - Cylinder 2  
P0203 22 Injector Circuit/Open - Cylinder 3  
P0204 24 Injector Circuit/Open - Cylinder 4  
P0205 33 Injector Circuit/Open - Cylinder 5  
P0206 23 Injector Circuit/Open - Cylinder 6  
P0301 238 Cylinder 1 Misfire Detected  
P0302 239 Cylinder 2 Misfire Detected  
P0303 240 Cylinder 3 Misfire Detected  
P0304 241 Cylinder 4 Misfire Detected  
P0305 242 Cylinder 5 Misfire Detected

P0306	243	Cylinder 6 Misfire Detected
P0325	57	Knock Sensor 1 Circuit (Bank 1 or Single Sensor)
P0330	59	Knock Sensor 2 Circuit (Bank 2)
P0335	83	Crankshaft Position Sensor 'A' Circuit
P0340	65	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0412	62	Secondary Air Injection System Switching Valve A Circuit
P0420	233	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	234	Catalyst System Efficiency Below Threshold (Bank 2)
P0440	250	Evaporative Emission System
P0442	145	Evaporative Emission System Leak Detected (small leak)
P0443	68	Evaporative Emission System Purge Control Valve Circuit
P0500	214	Vehicle Speed Sensor 'A'
P0505	204	Idle Air Control System
P0600	217	Serial Communication Link
P0601	100	Internal Control Module Memory Check Sum Error
P0601	170	Internal Control Module Memory Check Sum Error
P0601	171	Internal Control Module Memory Check Sum Error
P1132	188	O2 Sensor Heater Control Circuit (Bank 1 Sensor 1)
P1133	189	O2 Sensor Heater Control Circuit (Bank 2 Sensor 1)
P1140	149	Mass or Volume Air Flow Circuit Range/Performance Problem
P1145	50	Solenoid Valve Running Losses Control Circuit Electrical
P1161	122	Fuel Trim Adaptation Additive High (Bank 2) (M52: Engine Oil Temperature Sensor Circuit)
P1180	223	O2 Sensor Signal Circuit Slow Switching from Rich to Lean (Bank 1 Sensor 2)
P1181	224	O2 Sensor Signal Circuit Slow Switching from Rich to Lean (Bank 2 Sensor 2)
P1186	190	O2 Sensor Heater Control Circuit (Bank 1 Sensor 2)
P1187	191	O2 Sensor Heater Control Circuit (Bank 2 Sensor 2)
P1188	227	Fuel Control (Bank 1 Sensor 1)
P1189	228	Fuel Control (Bank 2 Sensor 1)
P1190	235	Pre Catalyst Fuel Trim System (Bank 1)
P1191	236	Pre Catalyst Fuel Trim System (Bank 2)
P1192	225	Post Catalyst Fuel Trim System (Bank 1)
P1193	226	Post Catalyst Fuel Trim System (Bank 2)
P1397	18	Camshaft Position Sensor 'B' Circuit (Bank 1)
P1421	246	Secondary Air System (Bank 2)
P1423	245	Secondary Air System (Bank 1)
P1432	247	Secondary Air Injection System Incorrect Flow Detected
P1453	35	Secondary Air Injection Pump Relay Control Circuit Electrical
P1470	126	Leakage Diagnostic Pump Control Circuit Electrical
P1475	140	Leakage Diagnostic Pump Reed Switch Did not Close
P1476	143	Leakage Diagnostic Pump Clamped Tube (M52 MY99/00: Leakage Diagnostic Pump Reed Switch Circuit)
P1478	146	Evaporative Emission System Leak Detected (very small leak)
P1509	53	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal Electrical
P1519	103	Oil-Condition Sensor Temperature Measurement (M62/M52/S52: 'A' Camshaft Position Actuator Bank 1)
P1520	104	Oil-Condition Sensor Level Measurement (M52: 'B' Camshaft Position Actuator Bank 1)
P1522	105	Oil-Condition Sensor Permeability Measurement (M62: 'A' Camshaft Position Actuator Bank 2; M52: 'A' Camshaft Position Actuator Tight or Jammed)
P1523	106	'A' Camshaft Position Actuator Signal Low (Bank 1) (M52: 'B' Camshaft Position Actuator Tight or Jammed)
P1525	21	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1529	19	'B' Camshaft Position Actuator Control Circuit Signal Low (Bank 1)
P1542	110	Pedal Position Sensor Electrical

P1542	111	Pedal Position Sensor Electrical
P1542	117	Pedal Position Sensor Electrical
P1542	120	Pedal Position Sensor Electrical
P1542	172	Pedal Position Sensor Electrical
P1542	175	Pedal Position Sensor Electrical
P1542	176	Pedal Position Sensor Electrical
P1550	27	Idle-Speed Control Valve Closing Coil Electrical
P1580	109	Throttle Valve Mechanically Stuck (M73: Throttle Valve 1 Spring Test)
P1580	114	Throttle Valve Mechanically Stuck (M73: Throttle Valve 1 Spring Test)
P1580	119	Throttle Valve Mechanically Stuck (M73: Throttle Valve 1 Spring Test)
P1593	124	DISA (Differentiated Intake Manifold) Control Circuit Electrical
P1622	123	Map Cooling Thermostat Control Circuit Electrical
P1623	115	Pedal Position Sensor Potentiometer Supply
P1623	116	Pedal Position Sensor Potentiometer Supply

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## ECU: MS42, Engine: M52LEV, from 01.06.99 till 31.10.00

PCode BMW-FC PCode text

P0101	8	Mass or Volume Air Flow Circuit Range/Performance
P0111	14	Intake Air Temperature Sensor 1 Circuit Range/Performance
P0116	10	Engine Coolant Temperature Circuit Range/Performance
P0120	112	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0120	113	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0120	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0120	173	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0120	174	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0125	222	Insufficient Coolant Temperature for Closed Loop Fuel Control
P0128	168	Coolant Thermostat (Coolant Temperature Below Thermostat Regulating Temperature)
P0130	150	O2 Sensor Circuit (Bank 1 Sensor 1)
P0130	151	O2 Sensor Circuit (Bank 1 Sensor 1)
P0130	152	O2 Sensor Circuit (Bank 1 Sensor 1)
P0133	229	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0134	186	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0135	25	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	156	O2 Sensor Circuit (Bank 1 Sensor 2)
P0136	157	O2 Sensor Circuit (Bank 1 Sensor 2)
P0136	215	O2 Sensor Circuit (Bank 1 Sensor 2)
P0141	61	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0150	153	O2 Sensor Circuit (Bank 2 Sensor 1)
P0150	154	O2 Sensor Circuit (Bank 2 Sensor 1)
P0150	155	O2 Sensor Circuit (Bank 2 Sensor 1)
P0153	230	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0154	187	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0155	55	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0156	159	O2 Sensor Circuit (Bank 2 Sensor 2)
P0156	160	O2 Sensor Circuit (Bank 2 Sensor 2)
P0156	216	O2 Sensor Circuit (Bank 2 Sensor 2)
P0161	79	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0170	202	Fuel Trim (Bank 1)
P0173	203	Fuel Trim (Bank 2)
P0201	6	Injector Circuit/Open - Cylinder 1
P0202	5	Injector Circuit/Open - Cylinder 2
P0203	22	Injector Circuit/Open - Cylinder 3
P0204	24	Injector Circuit/Open - Cylinder 4
P0205	33	Injector Circuit/Open - Cylinder 5
P0206	23	Injector Circuit/Open - Cylinder 6
P0301	238	Cylinder 1 Misfire Detected
P0302	239	Cylinder 2 Misfire Detected
P0303	240	Cylinder 3 Misfire Detected
P0304	241	Cylinder 4 Misfire Detected
P0305	242	Cylinder 5 Misfire Detected
P0306	243	Cylinder 6 Misfire Detected
P0325	57	Knock Sensor 1 Circuit (Bank 1 or Single Sensor)
P0330	59	Knock Sensor 2 Circuit (Bank 2)
P0335	83	Crankshaft Position Sensor 'A' Circuit
P0340	65	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)



P0412	62	Secondary Air Injection System Switching Valve A Circuit
P0420	233	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	234	Catalyst System Efficiency Below Threshold (Bank 2)
P0440	250	Evaporative Emission System
P0442	145	Evaporative Emission System Leak Detected (small leak)
P0443	68	Evaporative Emission System Purge Control Valve Circuit
P0500	214	Vehicle Speed Sensor 'A'
P0505	204	Idle Air Control System
P0600	217	Serial Communication Link
P0601	100	Internal Control Module Memory Check Sum Error
P0601	170	Internal Control Module Memory Check Sum Error
P0601	171	Internal Control Module Memory Check Sum Error
P1132	188	O2 Sensor Heater Control Circuit (Bank 1 Sensor 1)
P1133	189	O2 Sensor Heater Control Circuit (Bank 2 Sensor 1)
P1140	149	Mass or Volume Air Flow Circuit Range/Performance Problem
P1145	50	Solenoid Valve Running Losses Control Circuit Electrical
P1161	122	Fuel Trim Adaptation Additive High (Bank 2) (M52: Engine Oil Temperature Sensor Circuit)
P1180	223	O2 Sensor Signal Circuit Slow Switching from Rich to Lean (Bank 1 Sensor 2)
P1181	224	O2 Sensor Signal Circuit Slow Switching from Rich to Lean (Bank 2 Sensor 2)
P1184	220	HO2S Sensor Voltage Excursion Electrical (Bank 1 Sensor 1)
P1185	221	HO2S Sensor Voltage Excursion Electrical (Bank 2 Sensor 1)
P1186	190	O2 Sensor Heater Control Circuit (Bank 1 Sensor 2)
P1187	191	O2 Sensor Heater Control Circuit (Bank 2 Sensor 2)
P1188	227	Fuel Control (Bank 1 Sensor 1)
P1189	228	Fuel Control (Bank 2 Sensor 1)
P1190	235	Pre Catalyst Fuel Trim System (Bank 1)
P1191	236	Pre Catalyst Fuel Trim System (Bank 2)
P1192	225	Post Catalyst Fuel Trim System (Bank 1)
P1193	226	Post Catalyst Fuel Trim System (Bank 2)
P1397	18	Camshaft Position Sensor 'B' Circuit (Bank 1)
P1421	246	Secondary Air System (Bank 2)
P1423	245	Secondary Air System (Bank 1)
P1432	247	Secondary Air Injection System Incorrect Flow Detected
P1453	35	Secondary Air Injection Pump Relay Control Circuit Electrical
P1470	126	Leakage Diagnostic Pump Control Circuit Electrical
P1475	140	Leakage Diagnostic Pump Reed Switch Did not Close
P1476	143	Leakage Diagnostic Pump Clamped Tube (M52 MY99/00: Leakage Diagnostic Pump Reed Switch Circuit)
P1478	146	Evaporative Emission System Leak Detected (very small leak)
P1509	53	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal Electrical
P1519	103	Oil-Condition Sensor Temperature Measurement (M62/M52/S52: 'A' Camshaft Position Actuator Bank 1)
P1520	104	Oil-Condition Sensor Level Measurement (M52: 'B' Camshaft Position Actuator Bank 1)
P1522	105	Oil-Condition Sensor Permeability Measurement (M62: 'A' Camshaft Position Actuator Bank 2; M52: 'A' Camshaft Position Actuator Tight or Jammed)
P1523	106	'A' Camshaft Position Actuator Signal Low (Bank 1) (M52: 'B' Camshaft Position Actuator Tight or Jammed)
P1525	21	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1529	19	'B' Camshaft Position Actuator Control Circuit Signal Low (Bank 1)
P1542	110	Pedal Position Sensor Electrical
P1542	111	Pedal Position Sensor Electrical
P1542	117	Pedal Position Sensor Electrical
P1542	120	Pedal Position Sensor Electrical

P1542	172	Pedal Position Sensor Electrical
P1542	175	Pedal Position Sensor Electrical
P1542	176	Pedal Position Sensor Electrical
P1550	27	Idle-Speed Control Valve Closing Coil Electrical
P1580	109	Throttle Valve Mechanically Stuck (M73: Throttle Valve 1 Spring Test)
P1580	114	Throttle Valve Mechanically Stuck (M73: Throttle Valve 1 Spring Test)
P1580	119	Throttle Valve Mechanically Stuck (M73: Throttle Valve 1 Spring Test)
P1593	124	DISA (Differentiated Intake Manifold) Control Circuit Electrical
P1622	123	Map Cooling Thermostat Control Circuit Electrical
P1623	115	Pedal Position Sensor Potentiometer Supply
P1623	116	Pedal Position Sensor Potentiometer Supply

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## ECU: MS43, Engine: M54, from 01.04.00 till 31.08.01

PCode	BMW-FC	PCode text
P0011	103	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)
P0012	105	'A' Camshaft Position Timing Over-Retarded (Bank 1)
P0014	104	'B' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)
P0015	106	'B' Camshaft Position Timing Over-Retarded (Bank 1)
P0101	149	Mass or Volume Air Flow Circuit Range/Performance
P0102	8	Mass or Volume Air Flow Circuit Low Input
P0103	8	Mass or Volume Air Flow Circuit High Input
P0107	197	Manifold Absolute Pressure/Barometric Pressure Circuit Low Input
P0108	197	Manifold Absolute Pressure/Barometric Pressure Circuit High Input
P0112	14	Intake Air Temperature Sensor 1 Circuit Low
P0113	14	Intake Air Temperature Sensor 1 Circuit High
P0117	10	Engine Coolant Temperature Circuit Low
P0118	10	Engine Coolant Temperature Circuit High
P0121	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0122	112	Throttle/Pedal Position Sensor/Switch 'A' Circuit Low
P0123	112	Throttle/Pedal Position Sensor/Switch 'A' Circuit High
P0125	222	Insufficient Coolant Temperature for Closed Loop Fuel Control
P0128	168	Coolant Thermostat (Coolant Temperature Below Thermostat Regulating Temperature)
P0131	150	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 1)
P0132	150	O2 Sensor Circuit High Voltage (Bank 1 Sensor 1)
P0133	229	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0133	231	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0134	150	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0135	188	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0137	152	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 2)
P0138	152	O2 Sensor Circuit High Voltage (Bank 1 Sensor 2)
P0139	215	O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0139	248	O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0140	152	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 2)
P0141	190	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0151	151	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 1)
P0152	151	O2 Sensor Circuit High Voltage (Bank 2 Sensor 1)
P0153	230	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0153	232	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0154	151	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0155	189	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0157	153	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 2)

P0158	153	O2 Sensor Circuit High Voltage (Bank 2 Sensor 2)
P0159	216	O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0159	249	O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0160	153	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 2)
P0161	191	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0171	202	System Too Lean (Bank 1)
P0171	227	System Too Lean (Bank 1)
P0172	202	System Too Rich (Bank 1)
P0172	227	System Too Rich (Bank 1)
P0174	203	System Too Lean (Bank 2)
P0174	228	System Too Lean (Bank 2)
P0175	203	System Too Rich (Bank 2)
P0175	228	System Too Rich (Bank 2)
P0197	122	Engine Oil Temperature Sensor Low
P0198	122	Engine Oil Temperature Sensor High
P0201	6	Injector Circuit/Open - Cylinder 1
P0202	5	Injector Circuit/Open - Cylinder 2
P0203	22	Injector Circuit/Open - Cylinder 3
P0204	24	Injector Circuit/Open - Cylinder 4
P0205	33	Injector Circuit/Open - Cylinder 5
P0206	23	Injector Circuit/Open - Cylinder 6
P0221	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Range/Performance
P0222	113	Throttle/Pedal Position Sensor/Switch 'B' Circuit Low
P0223	113	Throttle/Pedal Position Sensor/Switch 'B' Circuit High
P0261	6	Cylinder 1 Injector Circuit Low
P0262	6	Cylinder 1 Injector Circuit High
P0264	5	Cylinder 2 Injector Circuit Low
P0265	5	Cylinder 2 Injector Circuit High
P0267	22	Cylinder 3 Injector Circuit Low
P0268	22	Cylinder 3 Injector Circuit High
P0270	24	Cylinder 4 Injector Circuit Low
P0271	24	Cylinder 4 Injector Circuit High
P0273	33	Cylinder 5 Injector Circuit Low
P0274	33	Cylinder 5 Injector Circuit High
P0276	23	Cylinder 6 Injector Circuit Low
P0277	23	Cylinder 6 Injector Circuit High
P0301	238	Cylinder 1 Misfire Detected
P0302	239	Cylinder 2 Misfire Detected
P0303	240	Cylinder 3 Misfire Detected
P0304	241	Cylinder 4 Misfire Detected
P0305	242	Cylinder 5 Misfire Detected
P0306	243	Cylinder 6 Misfire Detected
P0313	238	Misfire Detected with Low Fuel
P0313	239	Misfire Detected with Low Fuel
P0313	240	Misfire Detected with Low Fuel
P0313	241	Misfire Detected with Low Fuel
P0313	242	Misfire Detected with Low Fuel
P0313	243	Misfire Detected with Low Fuel
P0327	57	Knock Sensor 1 Circuit Low (Bank 1 or Single Sensor)
P0332	59	Knock Sensor 2 Circuit Low (Bank 2)
P0335	83	Crankshaft Position Sensor 'A' Circuit
P0339	83	Crankshaft Position Sensor 'A' Circuit Intermittent
P0340	65	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)

P0344	65	Camshaft Position Sensor 'A' Circuit Intermittent (Bank 1 or Single Sensor)
P0365	18	Camshaft Position Sensor 'B' Circuit (Bank 1)
P0369	18	Camshaft Position Sensor 'B' Circuit Intermittent (Bank 1)
P0413	62	Secondary Air Injection System Switching Valve A Circuit Open
P0414	62	Secondary Air Injection System Switching Valve A Circuit Shorted
P0420	233	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	234	Catalyst System Efficiency Below Threshold (Bank 2)
P0441	250	Evaporative Emission System Incorrect Purge Flow
P0443	68	Evaporative Emission System Purge Control Valve Circuit
P0444	68	Evaporative Emission System Purge Control Valve Circuit Open
P0445	68	Evaporative Emission System Purge Control Valve Circuit Shorted
P0455	143	Evaporative Emission System Leak Detected (large leak)
P0456	143	Evaporative Emission System Leak Detected (very small leak)
P0491	245	Secondary Air Injection System Insufficient Flow (Bank 1)
P0500	214	Vehicle Speed Sensor 'A'
P0505	204	Idle Air Control System
P0600	217	Serial Communication Link
P0604	100	Internal Control Module Random Access Memory (RAM) Error
P1111	11	Engine Coolant Temperature Sensor Radiator Outlet Low Input
P1112	11	Engine Coolant Temperature Sensor Radiator Outlet High Input
P1120	114	Pedal Position Sensor Circuit
P1121	117	Pedal Position Sensor 1 Range/Performance Problem
P1122	110	Pedal Position Sensor 1 Low Input
P1123	110	Pedal Position Sensor 1 High Input
P1134	25	O2 Sensor Heater Circuit Signal Intermittent (Bank 1 Sensor 1)
P1135	25	O2 Sensor Heater Circuit Low Voltage (Bank 1 Sensor 1)
P1136	25	O2 Sensor Heater Circuit High Voltage (Bank 1 Sensor 1)
P1137	79	O2 Sensor Heater Circuit Signal Intermittent (Bank 1 Sensor 2)
P1138	79	O2 Sensor Heater Circuit Low Voltage (Bank 1 Sensor 2)
P1139	79	O2 Sensor Heater Circuit High Voltage (Bank 1 Sensor 2)
P1151	55	O2 Sensor Heater Circuit Signal Intermittent (Bank 2 Sensor 1)
P1152	55	O2 Sensor Heater Circuit Low Voltage (Bank 2 Sensor 1)
P1153	55	O2 Sensor Heater Circuit High Voltage (Bank 2 Sensor 1)
P1155	61	O2 Sensor Heater Circuit Signal Intermittent (Bank 2 Sensor 2)
P1156	61	O2 Sensor Heater Circuit Low Voltage (Bank 2 Sensor 2)
P1157	61	O2 Sensor Heater Circuit High Voltage (Bank 2 Sensor 2)
P1190	235	Pre Catalyst Fuel Trim System (Bank 1)
P1191	236	Pre Catalyst Fuel Trim System (Bank 2)
P1192	225	Post Catalyst Fuel Trim System (Bank 1)
P1193	226	Post Catalyst Fuel Trim System (Bank 2)
P1222	111	Pedal Position Sensor 2 Low Input
P1223	111	Pedal Position Sensor 2 High Input
P1342	238	Misfire During Start Cylinder 1
P1343	238	Misfire Cylinder 1 with Fuel Cut-Off
P1344	239	Misfire During Start Cylinder 2
P1345	239	Misfire Cylinder 2 with Fuel Cut-Off
P1346	240	Misfire During Start Cylinder 3
P1347	240	Misfire Cylinder 3 with Fuel Cut-Off
P1348	241	Misfire During Start Cylinder 4
P1349	241	Misfire Cylinder 4 with Fuel Cut-Off
P1350	242	Misfire during Start Cylinder 5
P1351	242	Misfire Cylinder 5 with Fuel Cut-Off
P1352	243	Misfire during Start Cylinder 6

P1353	243	Misfire Cylinder 6 with Fuel Cut-Off
P1413	35	Secondary Air Injection Pump Relay Control Circuit Signal Low
P1414	35	Secondary Air Injection Pump Relay Control Circuit Signal High
P1444	142	Diagnostic Module Tank Leakage (DM-TL) Pump Control Open Circuit
P1445	140	Diagnostic Module Tank Leakage (DM-TL) Pump Control Circuit Signal Low
P1446	140	Diagnostic Module Tank Leakage (DM-TL) Pump Control Circuit Signal High
P1447	142	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High during Switching Solenoid Test
P1448	142	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too Low
P1449	142	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High
P1451	126	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal Low
P1452	126	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal High
P1500	211	Idle-Speed Control Valve Stuck Open
P1501	211	Idle-Speed Control Valve Stuck Closed
P1502	27	Idle-Speed Control Valve Closing Solenoid Control Circuit Signal High
P1503	27	Idle-Speed Control Valve Closing Solenoid Control Circuit Signal Low
P1504	27	Idle-Speed Control Valve Closing Solenoid Control Open Circuit
P1506	53	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal High
P1507	53	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal Low
P1508	53	Idle-Speed Control Valve Opening Solenoid Control Open Circuit
P1512	124	DISA (Differentiated Intake Manifold) Control Circuit Signal Low
P1513	124	DISA (Differentiated Intake Manifold) Control Circuit Signal High
P1523	21	'A' Camshaft Position Actuator Signal Low (Bank 1) (M52: 'B' Camshaft Position Actuator Tight or Jammed)
P1524	21	'A' Camshaft Position Actuator Control Circuit Signal High (Bank 1)
P1525	21	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1529	19	'B' Camshaft Position Actuator Control Circuit Signal Low (Bank 1)
P1530	19	'B' Camshaft Position Actuator Control Circuit Signal High (Bank 1) (S54 to 09/00: Throttle Valve Position Control, Control Deviation)
P1531	19	'B' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1602	48	Control Module Self-Test, Control Module Defective
P1602	58	Control Module Self-Test, Control Module Defective
P1602	63	Control Module Self-Test, Control Module Defective
P1602	66	Control Module Self-Test, Control Module Defective
P1602	67	Control Module Self-Test, Control Module Defective
P1602	70	Control Module Self-Test, Control Module Defective
P1602	71	Control Module Self-Test, Control Module Defective
P1602	72	Control Module Self-Test, Control Module Defective
P1603	49	Control Module Self-Test, Torque Monitoring
P1604	50	Control Module Self-Test, Speed Monitoring
P1604	51	Control Module Self-Test, Speed Monitoring
P1619	123	Map Cooling Thermostat Control Circuit Signal Low
P1620	123	Map Cooling Thermostat Control Circuit Signal High
P1624	146	Pedal Position Sensor Potentiometer Supply Channel 1 Electrical (M52: Coolant Thermostat (Coolant Temperature Below Thermostat Regulating Temperature))
P1625	147	Pedal Position Sensor Potentiometer Supply Channel 2 Electrical
P1632	115	Throttle Valve Adaptation Conditions Not Met
P1633	115	Throttle Valve Adaptation Limp-Home Position Unknown
P1634	115	Throttle Valve Adaptation Spring Test Failed
P1634	135	Throttle Valve Adaptation Spring Test Failed
P1634	136	Throttle Valve Adaptation Spring Test Failed
P1635	115	Throttle Valve Adaptation Lower Mechanical Stop not Adapted
P1636	109	Throttle Valve Control Circuit
P1637	162	Throttle Valve Position Control, Control Deviation

P1638 160 Throttle Valve Position Control Throttle Stuck Temporarily  
P1639 161 Throttle Valve Position Control Throttle Stuck Permanently

## ECU: MS43, Engine: M54, from 01.09.01 till 31.08.02

PCode BMW-FC PCode text

P0011 103 'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)  
P0012 105 'A' Camshaft Position Timing Over-Retarded (Bank 1)  
P0014 104 'B' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)  
P0015 106 'B' Camshaft Position Timing Over-Retarded (Bank 1)  
P0030 25 HO2S Heater Control Circuit (Bank 1 Sensor 1)  
P0031 25 HO2S Heater Control Circuit Low (Bank 1 Sensor 1)  
P0032 25 HO2S Heater Control Circuit High (Bank 1 Sensor 1)  
P0036 79 HO2S Heater Control Circuit (Bank 1 Sensor 2)  
P0037 79 HO2S Heater Control Circuit Low (Bank 1 Sensor 2)  
P0038 79 HO2S Heater Control Circuit High (Bank 1 Sensor 2)  
P0050 55 HO2S Heater Control Circuit (Bank 2 Sensor 1)  
P0051 55 HO2S Heater Control Circuit Low (Bank 2 Sensor 1)  
P0052 55 HO2S Heater Control Circuit High (Bank 2 Sensor 1)  
P0056 61 HO2S Heater Control Circuit (Bank 2 Sensor 2)  
P0057 61 HO2S Heater Control Circuit Low (Bank 2 Sensor 2)  
P0058 61 HO2S Heater Control Circuit High (Bank 2 Sensor 2)  
P0101 149 Mass or Volume Air Flow Circuit Range/Performance  
P0102 8 Mass or Volume Air Flow Circuit Low Input  
P0103 8 Mass or Volume Air Flow Circuit High Input  
P0107 197 Manifold Absolute Pressure/Barometric Pressure Circuit Low Input  
P0108 197 Manifold Absolute Pressure/Barometric Pressure Circuit High Input  
P0112 14 Intake Air Temperature Sensor 1 Circuit Low  
P0113 14 Intake Air Temperature Sensor 1 Circuit High  
P0117 10 Engine Coolant Temperature Circuit Low  
P0118 10 Engine Coolant Temperature Circuit High  
P0121 118 Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance  
P0122 112 Throttle/Pedal Position Sensor/Switch 'A' Circuit Low  
P0123 112 Throttle/Pedal Position Sensor/Switch 'A' Circuit High  
P0125 222 Insufficient Coolant Temperature for Closed Loop Fuel Control  
P0128 168 Coolant Thermostat (Coolant Temperature Below Thermostat Regulating Temperature)  
P0131 150 O2 Sensor Circuit Low Voltage (Bank 1 Sensor 1)  
P0132 150 O2 Sensor Circuit High Voltage (Bank 1 Sensor 1)  
P0133 229 O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)  
P0134 150 O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)  
P0135 188 O2 Sensor Heater Circuit (Bank 1 Sensor 1)  
P0137 152 O2 Sensor Circuit Low Voltage (Bank 1 Sensor 2)  
P0138 152 O2 Sensor Circuit High Voltage (Bank 1 Sensor 2)  
P0140 152 O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 2)  
P0141 190 O2 Sensor Heater Circuit (Bank 1 Sensor 2)  
P0151 151 O2 Sensor Circuit Low Voltage (Bank 2 Sensor 1)  
P0152 151 O2 Sensor Circuit High Voltage (Bank 2 Sensor 1)  
P0153 230 O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)  
P0154 151 O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)  
P0155 189 O2 Sensor Heater Circuit (Bank 2 Sensor 1)  
P0157 153 O2 Sensor Circuit Low Voltage (Bank 2 Sensor 2)  
P0158 153 O2 Sensor Circuit High Voltage (Bank 2 Sensor 2)

P0160	153	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 2)
P0161	191	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0171	227	System Too Lean (Bank 1)
P0172	227	System Too Rich (Bank 1)
P0174	228	System Too Lean (Bank 2)
P0175	228	System Too Rich (Bank 2)
P0197	122	Engine Oil Temperature Sensor Low
P0198	122	Engine Oil Temperature Sensor High
P0201	6	Injector Circuit/Open - Cylinder 1
P0202	5	Injector Circuit/Open - Cylinder 2
P0203	22	Injector Circuit/Open - Cylinder 3
P0204	24	Injector Circuit/Open - Cylinder 4
P0205	33	Injector Circuit/Open - Cylinder 5
P0206	23	Injector Circuit/Open - Cylinder 6
P0221	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Range/Performance
P0222	113	Throttle/Pedal Position Sensor/Switch 'B' Circuit Low
P0223	113	Throttle/Pedal Position Sensor/Switch 'B' Circuit High
P0261	6	Cylinder 1 Injector Circuit Low
P0262	6	Cylinder 1 Injector Circuit High
P0264	5	Cylinder 2 Injector Circuit Low
P0265	5	Cylinder 2 Injector Circuit High
P0267	22	Cylinder 3 Injector Circuit Low
P0268	22	Cylinder 3 Injector Circuit High
P0270	24	Cylinder 4 Injector Circuit Low
P0271	24	Cylinder 4 Injector Circuit High
P0273	33	Cylinder 5 Injector Circuit Low
P0274	33	Cylinder 5 Injector Circuit High
P0276	23	Cylinder 6 Injector Circuit Low
P0277	23	Cylinder 6 Injector Circuit High
P0301	238	Cylinder 1 Misfire Detected
P0302	239	Cylinder 2 Misfire Detected
P0303	240	Cylinder 3 Misfire Detected
P0304	241	Cylinder 4 Misfire Detected
P0305	242	Cylinder 5 Misfire Detected
P0306	243	Cylinder 6 Misfire Detected
P0313	238	Misfire Detected with Low Fuel
P0313	239	Misfire Detected with Low Fuel
P0313	240	Misfire Detected with Low Fuel
P0313	241	Misfire Detected with Low Fuel
P0313	242	Misfire Detected with Low Fuel
P0313	243	Misfire Detected with Low Fuel
P0327	57	Knock Sensor 1 Circuit Low (Bank 1 or Single Sensor)
P0332	59	Knock Sensor 2 Circuit Low (Bank 2)
P0335	83	Crankshaft Position Sensor 'A' Circuit
P0339	83	Crankshaft Position Sensor 'A' Circuit Intermittent
P0340	65	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0344	65	Camshaft Position Sensor 'A' Circuit Intermittent (Bank 1 or Single Sensor)
P0365	18	Camshaft Position Sensor 'B' Circuit (Bank 1)
P0369	18	Camshaft Position Sensor 'B' Circuit Intermittent (Bank 1)
P0413	62	Secondary Air Injection System Switching Valve A Circuit Open
P0414	62	Secondary Air Injection System Switching Valve A Circuit Shorted
P0420	233	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	234	Catalyst System Efficiency Below Threshold (Bank 2)

P0441	250	Evaporative Emission System Incorrect Purge Flow
P0443	68	Evaporative Emission System Purge Control Valve Circuit
P0444	68	Evaporative Emission System Purge Control Valve Circuit Open
P0445	68	Evaporative Emission System Purge Control Valve Circuit Shorted
P0455	143	Evaporative Emission System Leak Detected (large leak)
P0456	143	Evaporative Emission System Leak Detected (very small leak)
P0491	245	Secondary Air Injection System Insufficient Flow (Bank 1)
P0492	246	Secondary Air Injection System Insufficient Flow (Bank 2)
P0500	214	Vehicle Speed Sensor 'A'
P0505	204	Idle Air Control System
P0600	217	Serial Communication Link
P0604	100	Internal Control Module Random Access Memory (RAM) Error
P1083	202	Fuel Control Limit Mixture Too Lean (Bank 1 Sensor 1)
P1084	202	Fuel Control Limit Mixture Too Rich (Bank 1 Sensor 1)
P1085	203	Fuel Control Limit Mixture Too Lean (Bank 2 Sensor 1)
P1086	203	Fuel Control Limit Mixture Too Rich (Bank 2 Sensor 1)
P1087	229	O2 Sensor Circuit Slow Response in Lean Control Range (Bank 1 Sensor 1)
P1088	229	O2 Sensor Circuit Slow Response in Rich Control Range (Bank 1 Sensor 1)
P1089	230	O2 Sensor Circuit Slow Response in Lean Control Range (Bank 1 Sensor 2)
P1090	235	Pre Catalyst Fuel Trim System Too Lean (Bank 1)
P1091	236	Pre Catalyst Fuel Trim System Too Lean (Bank 2)
P1092	235	Pre Catalyst Fuel Trim System Too Rich (Bank 1)
P1093	236	Pre Catalyst Fuel Trim System Too Rich (Bank 2)
P1094	230	O2 Sensor Circuit Slow Response in Rich Control Range (Bank 2 Sensor 1)
P1111	11	Engine Coolant Temperature Sensor Radiator Outlet Low Input
P1112	11	Engine Coolant Temperature Sensor Radiator Outlet High Input
P1120	114	Pedal Position Sensor Circuit
P1121	117	Pedal Position Sensor 1 Range/Performance Problem
P1122	110	Pedal Position Sensor 1 Low Input
P1123	110	Pedal Position Sensor 1 High Input
P1143	215	O2 Sensor Activity Check Signal Too High (Bank 1 Sensor 2)
P1144	215	O2 Sensor Activity Check Signal Too Low (Bank 1 Sensor 2)
P1149	216	O2 Sensor Activity Check Signal Too High (Bank 2 Sensor 2)
P1150	216	O2 Sensor Activity Check Signal Too Low (Bank 2 Sensor 2)
P1171	196	Ambient Pressure Sensor Variant Recognition Value in Boot Range Implausible
P1172	196	Ambient Pressure Sensor Variant Recognition Error Value Stored in Boot Range
P1173	196	Ambient Pressure Sensor Variant Recognition Learning Failed
P1222	111	Pedal Position Sensor 2 Low Input
P1223	111	Pedal Position Sensor 2 High Input
P1314	202	Fuel Mixture Deviation Detected with Low Fuel
P1314	203	Fuel Mixture Deviation Detected with Low Fuel
P1314	227	Fuel Mixture Deviation Detected with Low Fuel
P1314	228	Fuel Mixture Deviation Detected with Low Fuel
P1342	238	Misfire During Start Cylinder 1
P1343	238	Misfire Cylinder 1 with Fuel Cut-Off
P1344	239	Misfire During Start Cylinder 2
P1345	239	Misfire Cylinder 2 with Fuel Cut-Off
P1346	240	Misfire During Start Cylinder 3
P1347	240	Misfire Cylinder 3 with Fuel Cut-Off
P1348	241	Misfire During Start Cylinder 4
P1349	241	Misfire Cylinder 4 with Fuel Cut-Off
P1350	242	Misfire during Start Cylinder 5
P1351	242	Misfire Cylinder 5 with Fuel Cut-Off



P1352	243	Misfire during Start Cylinder 6
P1353	243	Misfire Cylinder 6 with Fuel Cut-Off
P1413	35	Secondary Air Injection Pump Relay Control Circuit Signal Low
P1414	35	Secondary Air Injection Pump Relay Control Circuit Signal High
P1445	140	Diagnostic Module Tank Leakage (DM-TL) Pump Control Circuit Signal Low
P1446	140	Diagnostic Module Tank Leakage (DM-TL) Pump Control Circuit Signal High
P1447	142	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High during Switching Solenoid Test
P1448	142	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too Low
P1449	142	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High
P1451	126	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal Low
P1452	126	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal High
P1500	211	Idle-Speed Control Valve Stuck Open
P1501	211	Idle-Speed Control Valve Stuck Closed
P1502	27	Idle-Speed Control Valve Closing Solenoid Control Circuit Signal High
P1503	27	Idle-Speed Control Valve Closing Solenoid Control Circuit Signal Low
P1504	27	Idle-Speed Control Valve Closing Solenoid Control Open Circuit
P1506	53	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal High
P1507	53	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal Low
P1508	53	Idle-Speed Control Valve Opening Solenoid Control Open Circuit
P1512	124	DISA (Differentiated Intake Manifold) Control Circuit Signal Low
P1513	124	DISA (Differentiated Intake Manifold) Control Circuit Signal High
P1523	21	'A' Camshaft Position Actuator Signal Low (Bank 1) (M52: 'B' Camshaft Position Actuator Tight or Jammed)
P1524	21	'A' Camshaft Position Actuator Control Circuit Signal High (Bank 1)
P1525	21	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1529	19	'B' Camshaft Position Actuator Control Circuit Signal Low (Bank 1)
P1530	19	'B' Camshaft Position Actuator Control Circuit Signal High (Bank 1) (S54 to 09/00: Throttle Valve Position Control, Control Deviation)
P1531	19	'B' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1602	48	Control Module Self-Test, Control Module Defective
P1602	58	Control Module Self-Test, Control Module Defective
P1602	63	Control Module Self-Test, Control Module Defective
P1602	66	Control Module Self-Test, Control Module Defective
P1602	67	Control Module Self-Test, Control Module Defective
P1602	70	Control Module Self-Test, Control Module Defective
P1602	71	Control Module Self-Test, Control Module Defective
P1602	72	Control Module Self-Test, Control Module Defective
P1603	49	Control Module Self-Test, Torque Monitoring
P1604	50	Control Module Self-Test, Speed Monitoring
P1619	123	Map Cooling Thermostat Control Circuit Signal Low
P1620	123	Map Cooling Thermostat Control Circuit Signal High
P1624	146	Pedal Position Sensor Potentiometer Supply Channel 1 Electrical (M52: Coolant Thermostat (Coolant Temperature Below Thermostat Regulating Temperature))
P1625	147	Pedal Position Sensor Potentiometer Supply Channel 2 Electrical
P1632	115	Throttle Valve Adaptation Conditions Not Met
P1633	115	Throttle Valve Adaptation Limp-Home Position Unknown
P1634	115	Throttle Valve Adaptation Spring Test Failed
P1635	115	Throttle Valve Adaptation Lower Mechanical Stop not Adapted
P1636	109	Throttle Valve Control Circuit
P1637	162	Throttle Valve Position Control, Control Deviation
P1638	160	Throttle Valve Position Control Throttle Stuck Temporarily
P1639	161	Throttle Valve Position Control Throttle Stuck Permanently
P1675	135	Throttle Valve Actuator Start Test Re-Adaptation Required

P1694	136	Throttle Valve Actuator Start Test Spring Test and Limp-Home Position Failed
P2096	225	Post Catalyst Fuel Trim System Too Lean (Bank 1)
P2098	226	Post Catalyst Fuel Trim System Too Lean (Bank 2)

## ECU: MS43, Engine: M54, from 01.09.02 till 28.02.03

PCode	BMW-FC	PCode text
P0011	103	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)
P0012	105	'A' Camshaft Position Timing Over-Retarded (Bank 1)
P0014	104	'B' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)
P0015	106	'B' Camshaft Position Timing Over-Retarded (Bank 1)
P0030	25	HO2S Heater Control Circuit (Bank 1 Sensor 1)
P0031	25	HO2S Heater Control Circuit Low (Bank 1 Sensor 1)
P0032	25	HO2S Heater Control Circuit High (Bank 1 Sensor 1)
P0036	79	HO2S Heater Control Circuit (Bank 1 Sensor 2)
P0037	79	HO2S Heater Control Circuit Low (Bank 1 Sensor 2)
P0038	79	HO2S Heater Control Circuit High (Bank 1 Sensor 2)
P0050	55	HO2S Heater Control Circuit (Bank 2 Sensor 1)
P0051	55	HO2S Heater Control Circuit Low (Bank 2 Sensor 1)
P0052	55	HO2S Heater Control Circuit High (Bank 2 Sensor 1)
P0056	61	HO2S Heater Control Circuit (Bank 2 Sensor 2)
P0057	61	HO2S Heater Control Circuit Low (Bank 2 Sensor 2)
P0058	61	HO2S Heater Control Circuit High (Bank 2 Sensor 2)
P0101	149	Mass or Volume Air Flow Circuit Range/Performance
P0102	8	Mass or Volume Air Flow Circuit Low Input
P0103	8	Mass or Volume Air Flow Circuit High Input
P0107	197	Manifold Absolute Pressure/Barometric Pressure Circuit Low Input
P0108	197	Manifold Absolute Pressure/Barometric Pressure Circuit High Input
P0112	14	Intake Air Temperature Sensor 1 Circuit Low
P0113	14	Intake Air Temperature Sensor 1 Circuit High
P0117	10	Engine Coolant Temperature Circuit Low
P0118	10	Engine Coolant Temperature Circuit High
P0121	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0122	112	Throttle/Pedal Position Sensor/Switch 'A' Circuit Low
P0123	112	Throttle/Pedal Position Sensor/Switch 'A' Circuit High
P0125	222	Insufficient Coolant Temperature for Closed Loop Fuel Control
P0128	168	Coolant Thermostat (Coolant Temperature Below Thermostat Regulating Temperature)
P0131	150	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 1)
P0132	150	O2 Sensor Circuit High Voltage (Bank 1 Sensor 1)
P0133	229	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0134	150	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0135	188	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0137	152	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 2)
P0138	152	O2 Sensor Circuit High Voltage (Bank 1 Sensor 2)
P0140	152	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 2)
P0141	190	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0151	151	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 1)
P0152	151	O2 Sensor Circuit High Voltage (Bank 2 Sensor 1)
P0153	230	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0154	151	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0155	189	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0157	153	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 2)

P0158	153	O2 Sensor Circuit High Voltage (Bank 2 Sensor 2)
P0160	153	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 2)
P0161	191	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0171	227	System Too Lean (Bank 1)
P0172	227	System Too Rich (Bank 1)
P0174	228	System Too Lean (Bank 2)
P0175	228	System Too Rich (Bank 2)
P0197	122	Engine Oil Temperature Sensor Low
P0198	122	Engine Oil Temperature Sensor High
P0201	6	Injector Circuit/Open - Cylinder 1
P0202	5	Injector Circuit/Open - Cylinder 2
P0203	22	Injector Circuit/Open - Cylinder 3
P0204	24	Injector Circuit/Open - Cylinder 4
P0205	33	Injector Circuit/Open - Cylinder 5
P0206	23	Injector Circuit/Open - Cylinder 6
P0221	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Range/Performance
P0222	113	Throttle/Pedal Position Sensor/Switch 'B' Circuit Low
P0223	113	Throttle/Pedal Position Sensor/Switch 'B' Circuit High
P0261	6	Cylinder 1 Injector Circuit Low
P0262	6	Cylinder 1 Injector Circuit High
P0264	5	Cylinder 2 Injector Circuit Low
P0265	5	Cylinder 2 Injector Circuit High
P0267	22	Cylinder 3 Injector Circuit Low
P0268	22	Cylinder 3 Injector Circuit High
P0270	24	Cylinder 4 Injector Circuit Low
P0271	24	Cylinder 4 Injector Circuit High
P0273	33	Cylinder 5 Injector Circuit Low
P0274	33	Cylinder 5 Injector Circuit High
P0276	23	Cylinder 6 Injector Circuit Low
P0277	23	Cylinder 6 Injector Circuit High
P0301	238	Cylinder 1 Misfire Detected
P0302	239	Cylinder 2 Misfire Detected
P0303	240	Cylinder 3 Misfire Detected
P0304	241	Cylinder 4 Misfire Detected
P0305	242	Cylinder 5 Misfire Detected
P0306	243	Cylinder 6 Misfire Detected
P0313	238	Misfire Detected with Low Fuel
P0313	239	Misfire Detected with Low Fuel
P0313	240	Misfire Detected with Low Fuel
P0313	241	Misfire Detected with Low Fuel
P0313	242	Misfire Detected with Low Fuel
P0313	243	Misfire Detected with Low Fuel
P0327	57	Knock Sensor 1 Circuit Low (Bank 1 or Single Sensor)
P0332	59	Knock Sensor 2 Circuit Low (Bank 2)
P0335	83	Crankshaft Position Sensor 'A' Circuit
P0339	83	Crankshaft Position Sensor 'A' Circuit Intermittent
P0340	65	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0344	65	Camshaft Position Sensor 'A' Circuit Intermittent (Bank 1 or Single Sensor)
P0365	18	Camshaft Position Sensor 'B' Circuit (Bank 1)
P0369	18	Camshaft Position Sensor 'B' Circuit Intermittent (Bank 1)
P0413	62	Secondary Air Injection System Switching Valve A Circuit Open
P0414	62	Secondary Air Injection System Switching Valve A Circuit Shorted
P0420	233	Catalyst System Efficiency Below Threshold (Bank 1)

P0430	234	Catalyst System Efficiency Below Threshold (Bank 2)
P0441	250	Evaporative Emission System Incorrect Purge Flow
P0443	68	Evaporative Emission System Purge Control Valve Circuit
P0444	68	Evaporative Emission System Purge Control Valve Circuit Open
P0445	68	Evaporative Emission System Purge Control Valve Circuit Shorted
P0455	143	Evaporative Emission System Leak Detected (large leak)
P0456	143	Evaporative Emission System Leak Detected (very small leak)
P0491	245	Secondary Air Injection System Insufficient Flow (Bank 1)
P0492	246	Secondary Air Injection System Insufficient Flow (Bank 2)
P0500	214	Vehicle Speed Sensor 'A'
P0505	204	Idle Air Control System
P0600	217	Serial Communication Link
P0604	100	Internal Control Module Random Access Memory (RAM) Error
P1083	202	Fuel Control Limit Mixture Too Lean (Bank 1 Sensor 1)
P1084	202	Fuel Control Limit Mixture Too Rich (Bank 1 Sensor 1)
P1085	203	Fuel Control Limit Mixture Too Lean (Bank 2 Sensor 1)
P1086	203	Fuel Control Limit Mixture Too Rich (Bank 2 Sensor 1)
P1087	229	O2 Sensor Circuit Slow Response in Lean Control Range (Bank 1 Sensor 1)
P1088	229	O2 Sensor Circuit Slow Response in Rich Control Range (Bank 1 Sensor 1)
P1089	230	O2 Sensor Circuit Slow Response in Lean Control Range (Bank 1 Sensor 2)
P1090	235	Pre Catalyst Fuel Trim System Too Lean (Bank 1)
P1091	236	Pre Catalyst Fuel Trim System Too Lean (Bank 2)
P1092	235	Pre Catalyst Fuel Trim System Too Rich (Bank 1)
P1093	236	Pre Catalyst Fuel Trim System Too Rich (Bank 2)
P1094	230	O2 Sensor Circuit Slow Response in Rich Control Range (Bank 2 Sensor 1)
P1111	11	Engine Coolant Temperature Sensor Radiator Outlet Low Input
P1112	11	Engine Coolant Temperature Sensor Radiator Outlet High Input
P1120	114	Pedal Position Sensor Circuit
P1121	117	Pedal Position Sensor 1 Range/Performance Problem
P1122	110	Pedal Position Sensor 1 Low Input
P1123	110	Pedal Position Sensor 1 High Input
P1143	215	O2 Sensor Activity Check Signal Too High (Bank 1 Sensor 2)
P1144	215	O2 Sensor Activity Check Signal Too Low (Bank 1 Sensor 2)
P1149	216	O2 Sensor Activity Check Signal Too High (Bank 2 Sensor 2)
P1150	216	O2 Sensor Activity Check Signal Too Low (Bank 2 Sensor 2)
P1171	196	Ambient Pressure Sensor Variant Recognition Value in Boot Range Implausible
P1172	196	Ambient Pressure Sensor Variant Recognition Error Value Stored in Boot Range
P1173	196	Ambient Pressure Sensor Variant Recognition Learning Failed
P1222	111	Pedal Position Sensor 2 Low Input
P1223	111	Pedal Position Sensor 2 High Input
P1314	202	Fuel Mixture Deviation Detected with Low Fuel
P1314	203	Fuel Mixture Deviation Detected with Low Fuel
P1314	227	Fuel Mixture Deviation Detected with Low Fuel
P1314	228	Fuel Mixture Deviation Detected with Low Fuel
P1342	238	Misfire During Start Cylinder 1
P1343	238	Misfire Cylinder 1 with Fuel Cut-Off
P1344	239	Misfire During Start Cylinder 2
P1345	239	Misfire Cylinder 2 with Fuel Cut-Off
P1346	240	Misfire During Start Cylinder 3
P1347	240	Misfire Cylinder 3 with Fuel Cut-Off
P1348	241	Misfire During Start Cylinder 4
P1349	241	Misfire Cylinder 4 with Fuel Cut-Off
P1350	242	Misfire during Start Cylinder 5

P1351	242	Misfire Cylinder 5 with Fuel Cut-Off
P1352	243	Misfire during Start Cylinder 6
P1353	243	Misfire Cylinder 6 with Fuel Cut-Off
P1413	35	Secondary Air Injection Pump Relay Control Circuit Signal Low
P1414	35	Secondary Air Injection Pump Relay Control Circuit Signal High
P1445	140	Diagnostic Module Tank Leakage (DM-TL) Pump Control Circuit Signal Low
P1446	140	Diagnostic Module Tank Leakage (DM-TL) Pump Control Circuit Signal High
P1447	142	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High during Switching Solenoid Test
P1448	142	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too Low
P1449	142	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High
P1451	126	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal Low
P1452	126	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal High
P1500	211	Idle-Speed Control Valve Stuck Open
P1501	211	Idle-Speed Control Valve Stuck Closed
P1502	27	Idle-Speed Control Valve Closing Solenoid Control Circuit Signal High
P1503	27	Idle-Speed Control Valve Closing Solenoid Control Circuit Signal Low
P1504	27	Idle-Speed Control Valve Closing Solenoid Control Open Circuit
P1506	53	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal High
P1507	53	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal Low
P1508	53	Idle-Speed Control Valve Opening Solenoid Control Open Circuit
P1512	124	DISA (Differentiated Intake Manifold) Control Circuit Signal Low
P1513	124	DISA (Differentiated Intake Manifold) Control Circuit Signal High
P1523	21	'A' Camshaft Position Actuator Signal Low (Bank 1) (M52: 'B' Camshaft Position Actuator Tight or Jammed)
P1524	21	'A' Camshaft Position Actuator Control Circuit Signal High (Bank 1)
P1525	21	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1529	19	'B' Camshaft Position Actuator Control Circuit Signal Low (Bank 1)
P1530	19	'B' Camshaft Position Actuator Control Circuit Signal High (Bank 1) (S54 to 09/00: Throttle Valve Position Control, Control Deviation)
P1531	19	'B' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1602	48	Control Module Self-Test, Control Module Defective
P1602	58	Control Module Self-Test, Control Module Defective
P1602	63	Control Module Self-Test, Control Module Defective
P1602	66	Control Module Self-Test, Control Module Defective
P1602	67	Control Module Self-Test, Control Module Defective
P1602	70	Control Module Self-Test, Control Module Defective
P1602	71	Control Module Self-Test, Control Module Defective
P1602	72	Control Module Self-Test, Control Module Defective
P1603	49	Control Module Self-Test, Torque Monitoring
P1604	50	Control Module Self-Test, Speed Monitoring
P1619	123	Map Cooling Thermostat Control Circuit Signal Low
P1620	123	Map Cooling Thermostat Control Circuit Signal High
P1624	146	Pedal Position Sensor Potentiometer Supply Channel 1 Electrical (M52: Coolant Thermostat (Coolant Temperature Below Thermostat Regulating Temperature))
P1625	147	Pedal Position Sensor Potentiometer Supply Channel 2 Electrical
P1632	115	Throttle Valve Adaptation Conditions Not Met
P1633	115	Throttle Valve Adaptation Limp-Home Position Unknown
P1634	115	Throttle Valve Adaptation Spring Test Failed
P1635	115	Throttle Valve Adaptation Lower Mechanical Stop not Adapted
P1636	109	Throttle Valve Control Circuit
P1637	162	Throttle Valve Position Control, Control Deviation
P1638	160	Throttle Valve Position Control Throttle Stuck Temporarily
P1639	161	Throttle Valve Position Control Throttle Stuck Permanently

P1675	135	Throttle Valve Actuator Start Test Re-Adaptation Required
P1694	136	Throttle Valve Actuator Start Test Spring Test and Limp-Home Position Failed
P2096	225	Post Catalyst Fuel Trim System Too Lean (Bank 1)
P2098	226	Post Catalyst Fuel Trim System Too Lean (Bank 2)

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## ECU: MS43, Engine: M54, from 01.03.03 till

PCode	BMW-FC	PCode text
P0011	103	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)
P0012	105	'A' Camshaft Position Timing Over-Retarded (Bank 1)
P0014	104	'B' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)
P0015	106	'B' Camshaft Position Timing Over-Retarded (Bank 1)
P0030	25	HO2S Heater Control Circuit (Bank 1 Sensor 1)
P0031	25	HO2S Heater Control Circuit Low (Bank 1 Sensor 1)
P0032	25	HO2S Heater Control Circuit High (Bank 1 Sensor 1)
P0036	79	HO2S Heater Control Circuit (Bank 1 Sensor 2)
P0037	79	HO2S Heater Control Circuit Low (Bank 1 Sensor 2)
P0038	79	HO2S Heater Control Circuit High (Bank 1 Sensor 2)
P0050	55	HO2S Heater Control Circuit (Bank 2 Sensor 1)
P0051	55	HO2S Heater Control Circuit Low (Bank 2 Sensor 1)
P0052	55	HO2S Heater Control Circuit High (Bank 2 Sensor 1)
P0056	61	HO2S Heater Control Circuit (Bank 2 Sensor 2)
P0057	61	HO2S Heater Control Circuit Low (Bank 2 Sensor 2)
P0058	61	HO2S Heater Control Circuit High (Bank 2 Sensor 2)
P0101	149	Mass or Volume Air Flow Circuit Range/Performance
P0102	8	Mass or Volume Air Flow Circuit Low Input
P0103	8	Mass or Volume Air Flow Circuit High Input
P0112	14	Intake Air Temperature Sensor 1 Circuit Low
P0113	14	Intake Air Temperature Sensor 1 Circuit High
P0117	10	Engine Coolant Temperature Circuit Low
P0118	10	Engine Coolant Temperature Circuit High
P0121	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0122	112	Throttle/Pedal Position Sensor/Switch 'A' Circuit Low
P0123	112	Throttle/Pedal Position Sensor/Switch 'A' Circuit High
P0125	222	Insufficient Coolant Temperature for Closed Loop Fuel Control
P0128	168	Coolant Thermostat (Coolant Temperature Below Thermostat Regulating Temperature)
P0131	150	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 1)
P0132	150	O2 Sensor Circuit High Voltage (Bank 1 Sensor 1)
P0133	229	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0134	150	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0135	188	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0137	152	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 2)
P0138	152	O2 Sensor Circuit High Voltage (Bank 1 Sensor 2)
P0140	152	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 2)
P0141	190	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0151	151	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 1)
P0152	151	O2 Sensor Circuit High Voltage (Bank 2 Sensor 1)
P0153	230	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0154	151	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0155	189	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0157	153	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 2)
P0158	153	O2 Sensor Circuit High Voltage (Bank 2 Sensor 2)

P0160	153	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 2)
P0161	191	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0171	227	System Too Lean (Bank 1)
P0172	227	System Too Rich (Bank 1)
P0174	228	System Too Lean (Bank 2)
P0175	228	System Too Rich (Bank 2)
P0197	122	Engine Oil Temperature Sensor Low
P0198	122	Engine Oil Temperature Sensor High
P0201	6	Injector Circuit/Open - Cylinder 1
P0202	5	Injector Circuit/Open - Cylinder 2
P0203	22	Injector Circuit/Open - Cylinder 3
P0204	24	Injector Circuit/Open - Cylinder 4
P0205	33	Injector Circuit/Open - Cylinder 5
P0206	23	Injector Circuit/Open - Cylinder 6
P0221	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Range/Performance
P0222	113	Throttle/Pedal Position Sensor/Switch 'B' Circuit Low
P0223	113	Throttle/Pedal Position Sensor/Switch 'B' Circuit High
P0261	6	Cylinder 1 Injector Circuit Low
P0262	6	Cylinder 1 Injector Circuit High
P0264	5	Cylinder 2 Injector Circuit Low
P0265	5	Cylinder 2 Injector Circuit High
P0267	22	Cylinder 3 Injector Circuit Low
P0268	22	Cylinder 3 Injector Circuit High
P0270	24	Cylinder 4 Injector Circuit Low
P0271	24	Cylinder 4 Injector Circuit High
P0273	33	Cylinder 5 Injector Circuit Low
P0274	33	Cylinder 5 Injector Circuit High
P0276	23	Cylinder 6 Injector Circuit Low
P0277	23	Cylinder 6 Injector Circuit High
P0301	238	Cylinder 1 Misfire Detected
P0302	239	Cylinder 2 Misfire Detected
P0303	240	Cylinder 3 Misfire Detected
P0304	241	Cylinder 4 Misfire Detected
P0305	242	Cylinder 5 Misfire Detected
P0306	243	Cylinder 6 Misfire Detected
P0313	238	Misfire Detected with Low Fuel
P0313	239	Misfire Detected with Low Fuel
P0313	240	Misfire Detected with Low Fuel
P0313	241	Misfire Detected with Low Fuel
P0313	242	Misfire Detected with Low Fuel
P0313	243	Misfire Detected with Low Fuel
P0327	57	Knock Sensor 1 Circuit Low (Bank 1 or Single Sensor)
P0332	59	Knock Sensor 2 Circuit Low (Bank 2)
P0335	83	Crankshaft Position Sensor 'A' Circuit
P0339	83	Crankshaft Position Sensor 'A' Circuit Intermittent
P0340	65	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0344	65	Camshaft Position Sensor 'A' Circuit Intermittent (Bank 1 or Single Sensor)
P0365	18	Camshaft Position Sensor 'B' Circuit (Bank 1)
P0369	18	Camshaft Position Sensor 'B' Circuit Intermittent (Bank 1)
P0413	62	Secondary Air Injection System Switching Valve A Circuit Open
P0414	62	Secondary Air Injection System Switching Valve A Circuit Shorted
P0420	233	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	234	Catalyst System Efficiency Below Threshold (Bank 2)

P0441	250	Evaporative Emission System Incorrect Purge Flow
P0443	68	Evaporative Emission System Purge Control Valve Circuit
P0444	68	Evaporative Emission System Purge Control Valve Circuit Open
P0445	68	Evaporative Emission System Purge Control Valve Circuit Shorted
P0455	143	Evaporative Emission System Leak Detected (large leak)
P0456	143	Evaporative Emission System Leak Detected (very small leak)
P0491	245	Secondary Air Injection System Insufficient Flow (Bank 1)
P0492	246	Secondary Air Injection System Insufficient Flow (Bank 2)
P0500	214	Vehicle Speed Sensor 'A'
P0505	204	Idle Air Control System
P0600	217	Serial Communication Link
P0604	100	Internal Control Module Random Access Memory (RAM) Error
P1083	202	Fuel Control Limit Mixture Too Lean (Bank 1 Sensor 1)
P1084	202	Fuel Control Limit Mixture Too Rich (Bank 1 Sensor 1)
P1085	203	Fuel Control Limit Mixture Too Lean (Bank 2 Sensor 1)
P1086	203	Fuel Control Limit Mixture Too Rich (Bank 2 Sensor 1)
P1087	229	O2 Sensor Circuit Slow Response in Lean Control Range (Bank 1 Sensor 1)
P1088	229	O2 Sensor Circuit Slow Response in Rich Control Range (Bank 1 Sensor 1)
P1089	230	O2 Sensor Circuit Slow Response in Lean Control Range (Bank 1 Sensor 2)
P1090	235	Pre Catalyst Fuel Trim System Too Lean (Bank 1)
P1091	236	Pre Catalyst Fuel Trim System Too Lean (Bank 2)
P1092	235	Pre Catalyst Fuel Trim System Too Rich (Bank 1)
P1093	236	Pre Catalyst Fuel Trim System Too Rich (Bank 2)
P1094	230	O2 Sensor Circuit Slow Response in Rich Control Range (Bank 2 Sensor 1)
P1111	11	Engine Coolant Temperature Sensor Radiator Outlet Low Input
P1112	11	Engine Coolant Temperature Sensor Radiator Outlet High Input
P1120	114	Pedal Position Sensor Circuit
P1121	117	Pedal Position Sensor 1 Range/Performance Problem
P1122	110	Pedal Position Sensor 1 Low Input
P1123	110	Pedal Position Sensor 1 High Input
P1171	196	Ambient Pressure Sensor Variant Recognition Value in Boot Range Implausible
P1172	196	Ambient Pressure Sensor Variant Recognition Error Value Stored in Boot Range
P1173	196	Ambient Pressure Sensor Variant Recognition Learning Failed
P1222	111	Pedal Position Sensor 2 Low Input
P1223	111	Pedal Position Sensor 2 High Input
P1314	202	Fuel Mixture Deviation Detected with Low Fuel
P1314	203	Fuel Mixture Deviation Detected with Low Fuel
P1314	227	Fuel Mixture Deviation Detected with Low Fuel
P1314	228	Fuel Mixture Deviation Detected with Low Fuel
P1342	238	Misfire During Start Cylinder 1
P1343	238	Misfire Cylinder 1 with Fuel Cut-Off
P1344	239	Misfire During Start Cylinder 2
P1345	239	Misfire Cylinder 2 with Fuel Cut-Off
P1346	240	Misfire During Start Cylinder 3
P1347	240	Misfire Cylinder 3 with Fuel Cut-Off
P1348	241	Misfire During Start Cylinder 4
P1349	241	Misfire Cylinder 4 with Fuel Cut-Off
P1350	242	Misfire during Start Cylinder 5
P1351	242	Misfire Cylinder 5 with Fuel Cut-Off
P1352	243	Misfire during Start Cylinder 6
P1353	243	Misfire Cylinder 6 with Fuel Cut-Off
P1413	35	Secondary Air Injection Pump Relay Control Circuit Signal Low
P1414	35	Secondary Air Injection Pump Relay Control Circuit Signal High



P1445	140	Diagnostic Module Tank Leakage (DM-TL) Pump Control Circuit Signal Low
P1446	140	Diagnostic Module Tank Leakage (DM-TL) Pump Control Circuit Signal High
P1447	142	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High during Switching Solenoid Test
P1448	142	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too Low
P1449	142	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High
P1451	126	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal Low
P1452	126	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal High
P1500	211	Idle-Speed Control Valve Stuck Open
P1501	211	Idle-Speed Control Valve Stuck Closed
P1502	27	Idle-Speed Control Valve Closing Solenoid Control Circuit Signal High
P1503	27	Idle-Speed Control Valve Closing Solenoid Control Circuit Signal Low
P1504	27	Idle-Speed Control Valve Closing Solenoid Control Open Circuit
P1506	53	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal High
P1507	53	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal Low
P1508	53	Idle-Speed Control Valve Opening Solenoid Control Open Circuit
P1512	124	DISA (Differentiated Intake Manifold) Control Circuit Signal Low
P1513	124	DISA (Differentiated Intake Manifold) Control Circuit Signal High
P1525	21	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1531	19	'B' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1602	48	Control Module Self-Test, Control Module Defective
P1602	58	Control Module Self-Test, Control Module Defective
P1602	63	Control Module Self-Test, Control Module Defective
P1602	66	Control Module Self-Test, Control Module Defective
P1602	67	Control Module Self-Test, Control Module Defective
P1602	70	Control Module Self-Test, Control Module Defective
P1602	71	Control Module Self-Test, Control Module Defective
P1602	72	Control Module Self-Test, Control Module Defective
P1603	49	Control Module Self-Test, Torque Monitoring
P1604	50	Control Module Self-Test, Speed Monitoring
P1619	123	Map Cooling Thermostat Control Circuit Signal Low
P1620	123	Map Cooling Thermostat Control Circuit Signal High
P1624	146	Pedal Position Sensor Potentiometer Supply Channel 1 Electrical (M52: Coolant Thermostat (Coolant Temperature Below Thermostat Regulating Temperature))
P1625	147	Pedal Position Sensor Potentiometer Supply Channel 2 Electrical
P1632	115	Throttle Valve Adaptation Conditions Not Met
P1633	115	Throttle Valve Adaptation Limp-Home Position Unknown
P1634	115	Throttle Valve Adaptation Spring Test Failed
P1635	115	Throttle Valve Adaptation Lower Mechanical Stop not Adapted
P1636	109	Throttle Valve Control Circuit
P1637	162	Throttle Valve Position Control, Control Deviation
P1638	160	Throttle Valve Position Control Throttle Stuck Temporarily
P1639	161	Throttle Valve Position Control Throttle Stuck Permanently
P1675	135	Throttle Valve Actuator Start Test Re-Adaptation Required
P1694	136	Throttle Valve Actuator Start Test Spring Test and Limp-Home Position Failed
P2088	21	'A' Camshaft Position Actuator Control Circuit Low (Bank 1)
P2089	21	'A' Camshaft Position Actuator Control Circuit High (Bank 1)
P2090	19	'B' Camshaft Position Actuator Control Circuit Low (Bank 1)
P2091	19	'B' Camshaft Position Actuator Control Circuit High (Bank 1)
P2096	225	Post Catalyst Fuel Trim System Too Lean (Bank 1)
P2098	226	Post Catalyst Fuel Trim System Too Lean (Bank 2)
P2228	197	Barometric Pressure Circuit Low
P2229	197	Barometric Pressure Circuit High
P2270	215	O2 Sensor Signal Stuck Lean (Bank 1 Sensor 2)

P2271	215	O2 Sensor Signal Stuck Rich (Bank 1 Sensor 2)
P2272	216	O2 Sensor Signal Stuck Lean (Bank 2 Sensor 2)
P2273	216	O2 Sensor Signal Stuck Rich (Bank 2 Sensor 2)

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## ECU: MS45, Engine: M54bin, from 01.09.02 till

PCode	BMW-FC	PCode text
P0012	10426	'A' Camshaft Position Timing Over-Retarded (Bank 1)
P0015	10428	'B' Camshaft Position Timing Over-Retarded (Bank 1)
P0030	10013	HO2S Heater Control Circuit (Bank 1 Sensor 1)
P0031	10013	HO2S Heater Control Circuit Low (Bank 1 Sensor 1)
P0032	10013	HO2S Heater Control Circuit High (Bank 1 Sensor 1)
P0036	10006	HO2S Heater Control Circuit (Bank 1 Sensor 2)
P0037	10006	HO2S Heater Control Circuit Low (Bank 1 Sensor 2)
P0038	10006	HO2S Heater Control Circuit High (Bank 1 Sensor 2)
P0040	10602	O2 Sensor Signals Swapped Bank 1 Sensor 1 / Bank 2 Sensor 1
P0041	10603	O2 Sensor Signals Swapped Bank 1 Sensor 2 / Bank 2 Sensor 2
P0050	10005	HO2S Heater Control Circuit (Bank 2 Sensor 1)
P0051	10005	HO2S Heater Control Circuit Low (Bank 2 Sensor 1)
P0052	10005	HO2S Heater Control Circuit High (Bank 2 Sensor 1)
P0056	10007	HO2S Heater Control Circuit (Bank 2 Sensor 2)
P0057	10007	HO2S Heater Control Circuit Low (Bank 2 Sensor 2)
P0058	10007	HO2S Heater Control Circuit High (Bank 2 Sensor 2)
P0101	10461	Mass or Volume Air Flow Circuit Range/Performance
P0102	10115	Mass or Volume Air Flow Circuit Low Input
P0103	10115	Mass or Volume Air Flow Circuit High Input
P0112	10124	Intake Air Temperature Sensor 1 Circuit Low
P0113	10124	Intake Air Temperature Sensor 1 Circuit High
P0117	10123	Engine Coolant Temperature Circuit Low
P0118	10123	Engine Coolant Temperature Circuit High
P0121	10036	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0121	10118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0122	10118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Low
P0123	10118	Throttle/Pedal Position Sensor/Switch 'A' Circuit High
P0125	10206	Insufficient Coolant Temperature for Closed Loop Fuel Control
P0128	10139	Coolant Thermostat (Coolant Temperature Below Thermostat Regulating Temperature)
P0131	10662	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 1)
P0132	10010	O2 Sensor Circuit High Voltage (Bank 1 Sensor 1)
P0133	10015	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0134	10663	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0135	10394	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0137	10654	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 2)
P0138	10012	O2 Sensor Circuit High Voltage (Bank 1 Sensor 2)
P0140	10655	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 2)
P0141	10396	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0151	10658	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 1)
P0152	10018	O2 Sensor Circuit High Voltage (Bank 2 Sensor 1)
P0153	10021	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0154	10659	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0155	10395	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0157	10656	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 2)
P0158	10020	O2 Sensor Circuit High Voltage (Bank 2 Sensor 2)

P0160	10657	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 2)
P0161	10397	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0171	10370	System Too Lean (Bank 1)
P0172	10370	System Too Rich (Bank 1)
P0174	10371	System Too Lean (Bank 2)
P0175	10371	System Too Rich (Bank 2)
P0197	10258	Engine Oil Temperature Sensor Low
P0198	10258	Engine Oil Temperature Sensor High
P0201	10150	Injector Circuit/Open - Cylinder 1
P0202	10154	Injector Circuit/Open - Cylinder 2
P0203	10152	Injector Circuit/Open - Cylinder 3
P0204	10155	Injector Circuit/Open - Cylinder 4
P0205	10151	Injector Circuit/Open - Cylinder 5
P0206	10153	Injector Circuit/Open - Cylinder 6
P0221	10037	Throttle/Pedal Position Sensor/Switch 'B' Circuit Range/Performance
P0221	10119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Range/Performance
P0222	10119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Low
P0223	10119	Throttle/Pedal Position Sensor/Switch 'B' Circuit High
P0261	10150	Cylinder 1 Injector Circuit Low
P0262	10150	Cylinder 1 Injector Circuit High
P0264	10154	Cylinder 2 Injector Circuit Low
P0265	10154	Cylinder 2 Injector Circuit High
P0267	10152	Cylinder 3 Injector Circuit Low
P0268	10152	Cylinder 3 Injector Circuit High
P0270	10155	Cylinder 4 Injector Circuit Low
P0271	10155	Cylinder 4 Injector Circuit High
P0273	10151	Cylinder 5 Injector Circuit Low
P0274	10151	Cylinder 5 Injector Circuit High
P0276	10153	Cylinder 6 Injector Circuit Low
P0277	10153	Cylinder 6 Injector Circuit High
P0300	10062	Random/Multiple Cylinder Misfire Detected
P0301	10050	Cylinder 1 Misfire Detected
P0302	10054	Cylinder 2 Misfire Detected
P0303	10052	Cylinder 3 Misfire Detected
P0304	10055	Cylinder 4 Misfire Detected
P0305	10051	Cylinder 5 Misfire Detected
P0306	10053	Cylinder 6 Misfire Detected
P0313	10386	Misfire Detected with Low Fuel
P0316	10062	Engine Misfire Detected on Startup (First 1000 Revolutions)
P0328	10210	Knock Sensor 1 Circuit High (Bank 1 or Single Sensor)
P0335	10389	Crankshaft Position Sensor 'A' Circuit
P0340	10390	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0363	10062	Misfire Detected - Fueling Disabled
P0365	10391	Camshaft Position Sensor 'B' Circuit (Bank 1)
P0370	10008	Timing Reference High Resolution Signal 'A'
P0420	10040	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	10045	Catalyst System Efficiency Below Threshold (Bank 2)
P0440	10093	Evaporative Emission System
P0442	10188	Evaporative Emission System Leak Detected (small leak)
P0443	10098	Evaporative Emission System Purge Control Valve Circuit
P0444	10098	Evaporative Emission System Purge Control Valve Circuit Open
P0445	10098	Evaporative Emission System Purge Control Valve Circuit Shorted
P0455	10188	Evaporative Emission System Leak Detected (large leak)

P0491	10080	Secondary Air Injection System Insufficient Flow (Bank 1)
P0492	10080	Secondary Air Injection System Insufficient Flow (Bank 2)
P0500	10120	Vehicle Speed Sensor 'A'
P0505	10241	Idle Air Control System
P0604	10105	Internal Control Module Random Access Memory (RAM) Error
P0700	10650	Transmission Control System (MIL Request)
P1087	10015	O2 Sensor Circuit Slow Response in Lean Control Range (Bank 1 Sensor 1)
P1088	10015	O2 Sensor Circuit Slow Response in Rich Control Range (Bank 1 Sensor 1)
P1089	10021	O2 Sensor Circuit Slow Response in Lean Control Range (Bank 1 Sensor 2)
P1094	10021	O2 Sensor Circuit Slow Response in Rich Control Range (Bank 2 Sensor 1)
P1111	10125	Engine Coolant Temperature Sensor Radiator Outlet Low Input
P1112	10125	Engine Coolant Temperature Sensor Radiator Outlet High Input
P1120	10247	Pedal Position Sensor Circuit
P1121	10248	Pedal Position Sensor 1 Range/Performance Problem
P1122	10231	Pedal Position Sensor 1 Low Input
P1123	10231	Pedal Position Sensor 1 High Input
P1222	10232	Pedal Position Sensor 2 Low Input
P1223	10232	Pedal Position Sensor 2 High Input
P1247	10461	Barometric Pressure Plausibility
P1315	10086	Camshaft Position Sensor 'A' Circuit Signal Duration after Initialization (Bank 1)
P1316	10086	Camshaft Position Sensor 'A' Signal Duration during Initialization (Bank 1)
P1318	10087	Camshaft Position Sensor 'B' Circuit Signal Duration after Initialization (Bank 1)
P1319	10087	Camshaft Position Sensor 'B' Signal Duration during Initialization (Bank 1)
P1326	10422	'A' Camshaft Position Timing Reference Position out of Range (Bank 1)
P1328	10211	Knock Sensor 2 Circuit High Input (Bank 1)
P1331	10424	'B' Camshaft Position Timing Reference Position out of Range (Bank 1)
P1338	10088	Camshaft Position Sensor 'A' Faulty Phase Position (Bank 1)
P1339	10092	Camshaft Position Sensor 'B' Faulty Phase Position (Bank 1)
P1342	10050	Misfire During Start Cylinder 1
P1343	10050	Misfire Cylinder 1 with Fuel Cut-Off
P1344	10054	Misfire During Start Cylinder 2
P1345	10054	Misfire Cylinder 2 with Fuel Cut-Off
P1346	10052	Misfire During Start Cylinder 3
P1347	10052	Misfire Cylinder 3 with Fuel Cut-Off
P1348	10055	Misfire During Start Cylinder 4
P1349	10055	Misfire Cylinder 4 with Fuel Cut-Off
P1350	10051	Misfire during Start Cylinder 5
P1351	10051	Misfire Cylinder 5 with Fuel Cut-Off
P1352	10053	Misfire during Start Cylinder 6
P1353	10053	Misfire Cylinder 6 with Fuel Cut-Off
P1413	10084	Secondary Air Injection Pump Relay Control Sircuit Signal Low
P1414	10084	Secondary Air Injection Pump Relay Control Circuit Signal High
P1415	10080	Mass or Volume Air Flow Too Low
P1429	10201	Diagnostic Module Tank Leakage (DM-TL) Heater
P1430	10201	Diagnostic Module Tank Leakage (DM-TL) Heater Low
P1431	10201	Diagnostic Module Tank Leakage (DM-TL) Heater High
P1434	10189	Diagnostic Module Tank Leakage (DM-TL)
P1444	10186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Open Circuit
P1445	10186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Circuit Signal Low
P1446	10186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Circuit Signal High
P1447	10189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High during Switching Solenoid Test
P1448	10189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too Low
P1449	10189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High

P1450	10002	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Open Circuit
P1451	10002	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal Low
P1452	10002	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal High
P1453	10084	Secondary Air Injection Pump Relay Control Circuit Electrical
P1502	10198	Idle-Speed Control Valve Closing Solenoid Control Circuit Signal High
P1503	10198	Idle-Speed Control Valve Closing Solenoid Control Circuit Signal Low
P1504	10198	Idle-Speed Control Valve Closing Solenoid Control Open Circuit
P1506	10199	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal High
P1507	10199	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal Low
P1508	10199	Idle-Speed Control Valve Opening Solenoid Control Open Circuit
P1510	10461	Idle-Speed Control Valve Stuck
P1511	10270	DISA (Differentiated Intake Manifold) Control Circuit Electrical
P1512	10270	DISA (Differentiated Intake Manifold) Control Circuit Signal Low
P1513	10270	DISA (Differentiated Intake Manifold) Control Circuit Signal High
P1525	10165	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1531	10173	'B' Camshaft Position Actuator Control Open Circuit (Bank 1)
P16A9	10404	Control Module Self-Test, Speed Monitoring Reset
P1611	10220	Serial Communication Link Transmission Control Module
P1618	10103	Control Module Self-Test, AD-Converter Monitoring
P1619	10140	Map Cooling Thermostat Control Circuit Signal Low
P1620	10140	Map Cooling Thermostat Control Circuit Signal High
P1622	10140	Map Cooling Thermostat Control Circuit Electrical
P1624	10048	Pedal Position Sensor Potentiometer Supply Channel 1 Electrical (M52: Coolant Thermostat (Coolant Temperature Below Thermostat Regulating Temperature))
P1625	10049	Pedal Position Sensor Potentiometer Supply Channel 2 Electrical
P1632	10134	Throttle Valve Adaptation Conditions Not Met
P1633	10134	Throttle Valve Adaptation Limp-Home Position Unknown
P1634	10134	Throttle Valve Adaptation Spring Test Failed
P1634	10145	Throttle Valve Adaptation Spring Test Failed
P1635	10134	Throttle Valve Adaptation Lower Mechanical Stop not Adapted
P1635	10419	Throttle Valve Adaptation Lower Mechanical Stop not Adapted
P1636	10132	Throttle Valve Control Circuit
P1637	10066	Throttle Valve Position Control, Control Deviation
P1638	10064	Throttle Valve Position Control Throttle Stuck Temporarily
P1639	10065	Throttle Valve Position Control Throttle Stuck Permanently
P1675	10149	Throttle Valve Actuator Start Test Re-Adaptation Required
P1694	10145	Throttle Valve Actuator Start Test Spring Test and Limp-Home Position Failed
P16A0	10288	Internal Control Module Memory Checksum Error in Boot Software
P16A1	10288	Internal Control Module Memory Checksum Error in Application Software
P16A2	10288	Internal Control Module Memory Checksum Error in Data
P16A3	10345	Internal Control Module Non-Volatile Memory (NVMY) Error
P16A4	10346	Timeout Control Module Knock Sensor SPI-Bus
P16A5	10347	Timeout Control Module Multiple Output Stage SPI-Bus
P16A6	10401	Control Module Self-Test, Cruise Control Monitoring
P16A7	10402	Control Module Self-Test, Hot Film Air Mass Meter Monitoring
P16A8	10402	Control Module Self-Test, Throttle Position Monitoring
P16B0	10405	Control Module Self-Test, Pedal Position Sensor Monitoring
P16B1	10410	Control Module Self-Test, Idle Air Control System Integrated Component Plausibility
P16B2	10410	Control Module Self-Test, Idle Air Control System PD-Component Plausibility
P16B3	10411	Control Module Self-Test, MSR (Engine-Drag-Torque Control) Monitoring
P16B4	10411	Control Module Self-Test, DCC (Distance Cruise Control) Monitoring
P16B5	10411	Control Module Self-Test, AMT (Automatic Manual Transmission) Monitoring
P16B6	10411	Control Module Self-Test, ETC Monitoring

P16B7	10412	Control Module Self-Test, Clutch Torque Monitoring Maximum Value Plausibility
P16B8	10412	Control Module Self-Test, Clutch Torque Monitoring Minimum Value Plausibility
P16B9	10412	Control Module Self-Test, Torque Loss Monitoring
P16C0	10412	Control Module Self-Test, Driving Dynamics Control Switch Monitoring
P16C1	10413	Control Module Self-Test, Torque Monitoring Current Indicated Value Plausibility
P16C2	10417	Control Module Self-Test, Speed Limitation Monitoring
P16C3	10418	Control Module Self-Test, Speed Limitation Reset
P2088	10165	'A' Camshaft Position Actuator Control Circuit Low (Bank 1)
P2089	10165	'A' Camshaft Position Actuator Control Circuit High (Bank 1)
P2090	10173	'B' Camshaft Position Actuator Control Circuit Low (Bank 1)
P2091	10173	'B' Camshaft Position Actuator Control Circuit High (Bank 1)
P2096	10472	Post Catalyst Fuel Trim System Too Lean (Bank 1)
P2097	10472	Post Catalyst Fuel Trim System Too Rich (Bank 1)
P2098	10473	Post Catalyst Fuel Trim System Too Lean (Bank 2)
P2099	10473	Post Catalyst Fuel Trim System Too Rich (Bank 2)
P2228	10164	Barometric Pressure Circuit Low
P2229	10164	Barometric Pressure Circuit High
P2270	10480	O2 Sensor Signal Stuck Lean (Bank 1 Sensor 2)
P2271	10480	O2 Sensor Signal Stuck Rich (Bank 1 Sensor 2)
P2272	10481	O2 Sensor Signal Stuck Lean (Bank 2 Sensor 2)
P2273	10481	O2 Sensor Signal Stuck Rich (Bank 2 Sensor 2)
P3010	10486	O2 Sensor Low Input after Cold Start (Bank 1 Sensor 2)
P3011	10487	O2 Sensor Low Input after Cold Start (Bank 2 Sensor 2)
P3040	10480	O2 Sensor Lean and Rich Voltage Thresholds not Reached (Bank 1 Sensor 2)
P3041	10481	O2 Sensor Lean and Rich Voltage Thresholds not Reached (Bank 2 Sensor 2)
P3198	10205	Engine Coolant Temperature Gradient Too High
P3199	10207	Engine Coolant Temperature Signal Stuck
P3238	10289	Control Module Monitoring TPU Chip Defective

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## ECU: MS45, Engine: M56, from 01.09.02 till

PCode	BMW-FC	PCode	text
P0012	10426	'A' Camshaft Position Timing Over-Retarded (Bank 1)	
P0015	10428	'B' Camshaft Position Timing Over-Retarded (Bank 1)	
P0030	10660	HO2S Heater Control Circuit (Bank 1 Sensor 1)	
P0031	10660	HO2S Heater Control Circuit Low (Bank 1 Sensor 1)	
P0032	10660	HO2S Heater Control Circuit High (Bank 1 Sensor 1)	
P0036	10006	HO2S Heater Control Circuit (Bank 1 Sensor 2)	
P0037	10006	HO2S Heater Control Circuit Low (Bank 1 Sensor 2)	
P0038	10006	HO2S Heater Control Circuit High (Bank 1 Sensor 2)	
P0040	10602	O2 Sensor Signals Swapped Bank 1 Sensor 1 / Bank 2 Sensor 1	
P0041	10603	O2 Sensor Signals Swapped Bank 1 Sensor 2 / Bank 2 Sensor 2	
P0050	10661	HO2S Heater Control Circuit (Bank 2 Sensor 1)	
P0051	10661	HO2S Heater Control Circuit Low (Bank 2 Sensor 1)	
P0052	10661	HO2S Heater Control Circuit High (Bank 2 Sensor 1)	
P0056	10007	HO2S Heater Control Circuit (Bank 2 Sensor 2)	
P0057	10007	HO2S Heater Control Circuit Low (Bank 2 Sensor 2)	
P0058	10007	HO2S Heater Control Circuit High (Bank 2 Sensor 2)	
P0101	10461	Mass or Volume Air Flow Circuit Range/Performance	
P0102	10115	Mass or Volume Air Flow Circuit Low Input	
P0103	10115	Mass or Volume Air Flow Circuit High Input	
P0112	10124	Intake Air Temperature Sensor 1 Circuit Low	

P0113	10124	Intake Air Temperature Sensor 1 Circuit High
P0117	10123	Engine Coolant Temperature Circuit Low
P0118	10123	Engine Coolant Temperature Circuit High
P0121	10036	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0121	10118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0122	10118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Low
P0123	10118	Throttle/Pedal Position Sensor/Switch 'A' Circuit High
P0125	10206	Insufficient Coolant Temperature for Closed Loop Fuel Control
P0128	10139	Coolant Thermostat (Coolant Temperature Below Thermostat Regulating Temperature)
P0131	10470	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 1)
P0132	10470	O2 Sensor Circuit High Voltage (Bank 1 Sensor 1)
P0133	10594	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0135	10394	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0135	10435	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0137	10654	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 2)
P0138	10012	O2 Sensor Circuit High Voltage (Bank 1 Sensor 2)
P0140	10655	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 2)
P0141	10396	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0151	10471	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 1)
P0152	10471	O2 Sensor Circuit High Voltage (Bank 2 Sensor 1)
P0153	10595	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0155	10395	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0155	10436	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0157	10656	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 2)
P0158	10020	O2 Sensor Circuit High Voltage (Bank 2 Sensor 2)
P0160	10657	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 2)
P0161	10397	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0171	10370	System Too Lean (Bank 1)
P0172	10370	System Too Rich (Bank 1)
P0174	10371	System Too Lean (Bank 2)
P0175	10371	System Too Rich (Bank 2)
P0197	10258	Engine Oil Temperature Sensor Low
P0198	10258	Engine Oil Temperature Sensor High
P0201	10150	Injector Circuit/Open - Cylinder 1
P0202	10154	Injector Circuit/Open - Cylinder 2
P0203	10152	Injector Circuit/Open - Cylinder 3
P0204	10155	Injector Circuit/Open - Cylinder 4
P0205	10151	Injector Circuit/Open - Cylinder 5
P0206	10153	Injector Circuit/Open - Cylinder 6
P0221	10037	Throttle/Pedal Position Sensor/Switch 'B' Circuit Range/Performance
P0221	10119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Range/Performance
P0222	10119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Low
P0223	10119	Throttle/Pedal Position Sensor/Switch 'B' Circuit High
P0261	10150	Cylinder 1 Injector Circuit Low
P0262	10150	Cylinder 1 Injector Circuit High
P0264	10154	Cylinder 2 Injector Circuit Low
P0265	10154	Cylinder 2 Injector Circuit High
P0267	10152	Cylinder 3 Injector Circuit Low
P0268	10152	Cylinder 3 Injector Circuit High
P0270	10155	Cylinder 4 Injector Circuit Low
P0271	10155	Cylinder 4 Injector Circuit High
P0273	10151	Cylinder 5 Injector Circuit Low
P0274	10151	Cylinder 5 Injector Circuit High

P0276	10153	Cylinder 6 Injector Circuit Low
P0277	10153	Cylinder 6 Injector Circuit High
P0300	10062	Random/Multiple Cylinder Misfire Detected
P0301	10050	Cylinder 1 Misfire Detected
P0302	10054	Cylinder 2 Misfire Detected
P0303	10052	Cylinder 3 Misfire Detected
P0304	10055	Cylinder 4 Misfire Detected
P0305	10051	Cylinder 5 Misfire Detected
P0306	10053	Cylinder 6 Misfire Detected
P0313	10386	Misfire Detected with Low Fuel
P0316	10062	Engine Misfire Detected on Startup (First 1000 Revolutions)
P0328	10210	Knock Sensor 1 Circuit High (Bank 1 or Single Sensor)
P0335	10389	Crankshaft Position Sensor 'A' Circuit
P0363	10062	Misfire Detected - Fueling Disabled
P0370	10008	Timing Reference High Resolution Signal 'A'
P0411	10081	Secondary Air Injection System Incorrect Flow Detected
P0412	10085	Secondary Air Injection System Switching Valve A Circuit
P0413	10085	Secondary Air Injection System Switching Valve A Circuit Open
P0414	10085	Secondary Air Injection System Switching Valve A Circuit Shorted
P0420	10040	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	10045	Catalyst System Efficiency Below Threshold (Bank 2)
P0440	10093	Evaporative Emission System
P0442	10188	Evaporative Emission System Leak Detected (small leak)
P0443	10098	Evaporative Emission System Purge Control Valve Circuit
P0444	10098	Evaporative Emission System Purge Control Valve Circuit Open
P0445	10098	Evaporative Emission System Purge Control Valve Circuit Shorted
P0455	10188	Evaporative Emission System Leak Detected (large leak)
P0500	10120	Vehicle Speed Sensor 'A'
P0505	10241	Idle Air Control System
P0604	10105	Internal Control Module Random Access Memory (RAM) Error
P0700	10650	Transmission Control System (MIL Request)
P1111	10125	Engine Coolant Temperature Sensor Radiator Outlet Low Input
P1112	10125	Engine Coolant Temperature Sensor Radiator Outlet High Input
P1120	10247	Pedal Position Sensor Circuit
P1121	10248	Pedal Position Sensor 1 Range/Performance Problem
P1122	10231	Pedal Position Sensor 1 Low Input
P1123	10231	Pedal Position Sensor 1 High Input
P1222	10232	Pedal Position Sensor 2 Low Input
P1223	10232	Pedal Position Sensor 2 High Input
P1247	10461	Barometric Pressure Plausibility
P1315	10086	Camshaft Position Sensor 'A' Circuit Signal Duration after Initialization (Bank 1)
P1316	10086	Camshaft Position Sensor 'A' Signal Duration during Initialization (Bank 1)
P1318	10087	Camshaft Position Sensor 'B' Circuit Signal Duration after Initialization (Bank 1)
P1319	10087	Camshaft Position Sensor 'B' Signal Duration during Initialization (Bank 1)
P1326	10422	'A' Camshaft Position Timing Reference Position out of Range (Bank 1)
P1328	10211	Knock Sensor 2 Circuit High Input (Bank 1)
P1331	10424	'B' Camshaft Position Timing Reference Position out of Range (Bank 1)
P1338	10088	Camshaft Position Sensor 'A' Faulty Phase Position (Bank 1)
P1339	10092	Camshaft Position Sensor 'B' Faulty Phase Position (Bank 1)
P1342	10050	Misfire During Start Cylinder 1
P1343	10050	Misfire Cylinder 1 with Fuel Cut-Off
P1344	10054	Misfire During Start Cylinder 2
P1345	10054	Misfire Cylinder 2 with Fuel Cut-Off



P1346	10052	Misfire During Start Cylinder 3
P1347	10052	Misfire Cylinder 3 with Fuel Cut-Off
P1348	10055	Misfire During Start Cylinder 4
P1349	10055	Misfire Cylinder 4 with Fuel Cut-Off
P1350	10051	Misfire during Start Cylinder 5
P1351	10051	Misfire Cylinder 5 with Fuel Cut-Off
P1352	10053	Misfire during Start Cylinder 6
P1353	10053	Misfire Cylinder 6 with Fuel Cut-Off
P1411	10081	Secondary Air Pump No Activity Detected
P1412	10081	Secondary Air Pump/Secondary Air Valve Large Leak
P1413	10084	Secondary Air Injection Pump Relay Control Sircuit Signal Low
P1414	10084	Secondary Air Injection Pump Relay Control Circuit Signal High
P1416	10082	Secondary Air Injection Valve Stuck Off
P1418	10081	Secondary Air Injection Valve/Secondary Air Hose Clamped
P1419	10096	Secondary Air Mass Flow Sensor Circuit
P1429	10201	Diagnostic Module Tank Leakage (DM-TL) Heater
P1430	10201	Diagnostic Module Tank Leakage (DM-TL) Heater Low
P1431	10201	Diagnostic Module Tank Leakage (DM-TL) Heater High
P1434	10189	Diagnostic Module Tank Leakage (DM-TL)
P1444	10186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Open Circuit
P1445	10186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Circuit Signal Low
P1446	10186	Diagnostic Module Tank Leakage (DM-TL) Pump Control Circuit Signal High
P1447	10189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High during Switching Solenoid Test
P1448	10189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too Low
P1449	10189	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High
P1450	10002	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Open Circuit
P1451	10002	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal Low
P1452	10002	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal High
P1453	10084	Secondary Air Injection Pump Relay Control Circuit Electrical
P1502	10198	Idle-Speed Control Valve Closing Solenoid Control Circuit Signal High
P1503	10198	Idle-Speed Control Valve Closing Solenoid Control Circuit Signal Low
P1504	10198	Idle-Speed Control Valve Closing Solenoid Control Open Circuit
P1506	10199	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal High
P1507	10199	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal Low
P1508	10199	Idle-Speed Control Valve Opening Solenoid Control Open Circuit
P1510	10461	Idle-Speed Control Valve Stuck
P1511	10270	DISA (Differentiated Intake Manifold) Control Circuit Electrical
P1512	10270	DISA (Differentiated Intake Manifold) Control Circuit Signal Low
P1513	10270	DISA (Differentiated Intake Manifold) Control Circuit Signal High
P1525	10165	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1531	10173	'B' Camshaft Position Actuator Control Open Circuit (Bank 1)
P16A9	10404	Control Module Self-Test, Speed Monitoring Reset
P1611	10220	Serial Communication Link Transmission Control Module
P1618	10103	Control Module Self-Test, AD-Converter Monitoring
P1619	10140	Map Cooling Thermostat Control Circuit Signal Low
P1620	10140	Map Cooling Thermostat Control Circuit Signal High
P1622	10140	Map Cooling Thermostat Control Circuit Electrical
P1624	10048	Pedal Position Sensor Potentiometer Supply Channel 1 Electrical (M52: Coolant Thermostat (Coolant Temperature Below Thermostat Regulating Temperature))
P1625	10049	Pedal Position Sensor Potentiometer Supply Channel 2 Electrical
P1632	10134	Throttle Valve Adaptation Conditions Not Met
P1633	10134	Throttle Valve Adaptation Limp-Home Position Unknown
P1634	10134	Throttle Valve Adaptation Spring Test Failed

P1634	10145	Throttle Valve Adaptation Spring Test Failed
P1635	10134	Throttle Valve Adaptation Lower Mechanical Stop not Adapted
P1635	10419	Throttle Valve Adaptation Lower Mechanical Stop not Adapted
P1636	10132	Throttle Valve Control Circuit
P1637	10066	Throttle Valve Position Control, Control Deviation
P1638	10064	Throttle Valve Position Control Throttle Stuck Temporarily
P1639	10065	Throttle Valve Position Control Throttle Stuck Permanently
P1675	10149	Throttle Valve Actuator Start Test Re-Adaptation Required
P1694	10145	Throttle Valve Actuator Start Test Spring Test and Limp-Home Position Failed
P16A0	10288	Internal Control Module Memory Checksum Error in Boot Software
P16A1	10288	Internal Control Module Memory Checksum Error in Application Software
P16A2	10288	Internal Control Module Memory Checksum Error in Data
P16A3	10345	Internal Control Module Non-Volatile Memory (NVMY) Error
P16A4	10346	Timeout Control Module Knock Sensor SPI-Bus
P16A5	10347	Timeout Control Module Multiple Output Stage SPI-Bus
P16A6	10401	Control Module Self-Test, Cruise Control Monitoring
P16A7	10402	Control Module Self-Test, Hot Film Air Mass Meter Monitoring
P16A8	10402	Control Module Self-Test, Throttle Position Monitoring
P16B0	10405	Control Module Self-Test, Pedal Position Sensor Monitoring
P16B1	10410	Control Module Self-Test, Idle Air Control System Integrated Component Plausibility
P16B2	10410	Control Module Self-Test, Idle Air Control System PD-Component Plausibility
P16B3	10411	Control Module Self-Test, MSR (Engine-Drag-Torque Control) Monitoring
P16B4	10411	Control Module Self-Test, DCC (Distance Cruise Control) Monitoring
P16B5	10411	Control Module Self-Test, AMT (Automatic Manual Transmission) Monitoring
P16B6	10411	Control Module Self-Test, ETC Monitoring
P16B7	10412	Control Module Self-Test, Clutch Torque Monitoring Maximum Value Plausibility
P16B8	10412	Control Module Self-Test, Clutch Torque Monitoring Minimum Value Plausibility
P16B9	10412	Control Module Self-Test, Torque Loss Monitoring
P16C0	10412	Control Module Self-Test, Driving Dynamics Control Switch Monitoring
P16C1	10413	Control Module Self-Test, Torque Monitoring Current Indicated Value Plausibility
P16C2	10417	Control Module Self-Test, Speed Limitation Monitoring
P16C3	10418	Control Module Self-Test, Speed Limitation Reset
P2088	10165	'A' Camshaft Position Actuator Control Circuit Low (Bank 1)
P2089	10165	'A' Camshaft Position Actuator Control Circuit High (Bank 1)
P2090	10173	'B' Camshaft Position Actuator Control Circuit Low (Bank 1)
P2091	10173	'B' Camshaft Position Actuator Control Circuit High (Bank 1)
P2096	10482	Post Catalyst Fuel Trim System Too Lean (Bank 1)
P2097	10482	Post Catalyst Fuel Trim System Too Rich (Bank 1)
P2098	10483	Post Catalyst Fuel Trim System Too Lean (Bank 2)
P2099	10483	Post Catalyst Fuel Trim System Too Rich (Bank 2)
P2195	10630	O2 Sensor Signal Stuck Lean (Bank 1 Sensor 1)
P2196	10632	O2 Sensor Signal Stuck Rich (Bank 1 Sensor 1)
P2197	10631	O2 Sensor Signal Stuck Lean (Bank 2 Sensor 1)
P2198	10633	O2 Sensor Signal Stuck Rich (Bank 2 Sensor 1)
P2228	10164	Barometric Pressure Circuit Low
P2229	10164	Barometric Pressure Circuit High
P2231	10592	O2 Sensor Signal Circuit Shorted to Heater Circuit (Bank 1 Sensor 1)
P2234	10593	O2 Sensor Signal Circuit Shorted to Heater Circuit (Bank 2 Sensor 1)
P2237	10611	O2 Sensor Positive Current Control Circuit/Open (Bank 1 Sensor 1)
P2240	10612	O2 Sensor Positive Current Control Circuit/Open (Bank 2 Sensor 1)
P2243	10611	O2 Sensor Reference Voltage Circuit/Open (Bank 1 Sensor 1)
P2247	10612	O2 Sensor Reference Voltage Circuit/Open (Bank 2 Sensor 1)
P2251	10611	O2 Sensor Negative Current Control Circuit/Open (Bank 1 Sensor 1)

P2254	10612	O2 Sensor Negative Current Control Circuit/Open (Bank 2 Sensor 1)
P2270	10437	O2 Sensor Signal Stuck Lean (Bank 1 Sensor 2)
P2271	10437	O2 Sensor Signal Stuck Rich (Bank 1 Sensor 2)
P2272	10438	O2 Sensor Signal Stuck Lean (Bank 2 Sensor 2)
P2273	10438	O2 Sensor Signal Stuck Rich (Bank 2 Sensor 2)
P2297	10433	O2 Sensor Out of Range During Deceleration (Bank 1 Sensor 1)
P2298	10434	O2 Sensor Out of Range During Deceleration (Bank 2 Sensor 1)
P2414	10598	O2 Sensor Exhaust Sample Error (Bank 1 Sensor 1)
P2415	10599	O2 Sensor Exhaust Sample Error (Bank 2 Sensor 1)
P2626	10611	O2 Sensor Pumping Current Trim Circuit/Open (Bank 1 Sensor 1)
P2629	10612	O2 Sensor Pumping Current Trim Circuit/Open (Bank 2 Sensor 1)
P3010	10486	O2 Sensor Low Input after Cold Start (Bank 1 Sensor 2)
P3011	10487	O2 Sensor Low Input after Cold Start (Bank 2 Sensor 2)
P3014	10470	O2 Sensor WRAF-IC Supply Voltage Too Low (Bank 1 Sensor 1)
P3015	10471	O2 Sensor IC Supply Voltage Too Low (Bank 2 Sensor 1)
P3022	10495	O2 Sensor Disturbed SPI Communication to WRAF-IC (Bank 1 Sensor 1)
P3023	10496	O2 Sensor Disturbed SPI Communication to WRAF-IC (Bank 2 Sensor 1)
P3024	10495	O2 Sensor Initialization Error WRAF-IC (Bank 1 Sensor 1)
P3025	10496	O2 Sensor Initialization Error WRAF-IC (Bank 2 Sensor 1)
P3026	10435	O2 Sensor Operating Temperature not Reached (Bank 1 Sensor 1)
P3027	10436	O2 Sensor Operating Temperature not Reached (Bank 2 Sensor 1)
P3034	10433	O2 Sensor Characteristic Curve Gradient Too Low (Bank 1 Sensor 1)
P3035	10434	O2 Sensor Characteristic Curve Gradient Too Low (Bank 2 Sensor 1)
P3198	10205	Engine Coolant Temperature Gradient Too High
P3199	10207	Engine Coolant Temperature Signal Stuck
P3238	10289	Control Module Monitoring TPU Chip Defective

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## ECU: MSS52, Engine: S62, from 01.07.99 till 30.11.99

PCode BMW-FC PCode text

P0011	184	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)
P0013	185	'B' Camshaft Position Actuator Circuit (Bank 1)
P0020	113	'A' Camshaft Position Actuator Circuit (Bank 2)
P0023	114	'B' Camshaft Position Actuator Circuit (Bank 2)
P0100	41	Mass or Volume Air Flow Circuit
P0111	77	Intake Air Temperature Sensor 1 Circuit Range/Performance
P0115	105	Engine Coolant Temperature Circuit
P0117	78	Engine Coolant Temperature Circuit Low
P0118	78	Engine Coolant Temperature Circuit High
P0130	13	O2 Sensor Circuit (Bank 1 Sensor 1)
P0133	214	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0133	216	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0134	218	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0135	37	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	87	O2 Sensor Circuit (Bank 1 Sensor 2)
P0139	92	O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0141	39	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0150	12	O2 Sensor Circuit (Bank 2 Sensor 1)
P0153	215	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0153	217	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0154	219	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0155	38	O2 Sensor Heater Circuit (Bank 2 Sensor 1)

P0156	88	O2 Sensor Circuit (Bank 2 Sensor 2)
P0159	93	O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0161	40	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0170	144	Fuel Trim (Bank 1)
P0173	145	Fuel Trim (Bank 2)
P0201	3	Injector Circuit/Open - Cylinder 1
P0202	5	Injector Circuit/Open - Cylinder 2
P0203	4	Injector Circuit/Open - Cylinder 3
P0204	33	Injector Circuit/Open - Cylinder 4
P0205	31	Injector Circuit/Open - Cylinder 5
P0206	32	Injector Circuit/Open - Cylinder 6
P0207	34	Injector Circuit/Open - Cylinder 7
P0208	35	Injector Circuit/Open - Cylinder 8
P0300	204	Random/Multiple Cylinder Misfire Detected
P0300	213	Random/Multiple Cylinder Misfire Detected
P0301	196	Cylinder 1 Misfire Detected
P0301	205	Cylinder 1 Misfire Detected
P0302	197	Cylinder 2 Misfire Detected
P0302	206	Cylinder 2 Misfire Detected
P0303	198	Cylinder 3 Misfire Detected
P0303	207	Cylinder 3 Misfire Detected
P0304	199	Cylinder 4 Misfire Detected
P0304	208	Cylinder 4 Misfire Detected
P0305	200	Cylinder 5 Misfire Detected
P0305	209	Cylinder 5 Misfire Detected
P0306	201	Cylinder 6 Misfire Detected
P0306	210	Cylinder 6 Misfire Detected
P0307	202	Cylinder 7 Misfire Detected
P0307	211	Cylinder 7 Misfire Detected
P0308	203	Cylinder 8 Misfire Detected
P0308	212	Cylinder 8 Misfire Detected
P0335	16	Crankshaft Position Sensor 'A' Circuit
P0340	7	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0345	8	Camshaft Position Sensor 'A' Circuit (Bank 2)
P0385	10	Crankshaft Position Sensor 'B' Circuit
P0390	11	Camshaft Position Sensor 'B' Circuit (Bank 2)
P0411	170	Secondary Air Injection System Incorrect Flow Detected
P0411	171	Secondary Air Injection System Incorrect Flow Detected
P0412	63	Secondary Air Injection System Switching Valve A Circuit
P0418	19	Secondary Air Injection System Control 'A' Circuit
P0420	178	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	179	Catalyst System Efficiency Below Threshold (Bank 2)
P0440	232	Evaporative Emission System
P0442	180	Evaporative Emission System Leak Detected (small leak)
P0443	36	Evaporative Emission System Purge Control Valve Circuit
P0500	135	Vehicle Speed Sensor 'A'
P0505	128	Idle Air Control System
P0601	150	Internal Control Module Memory Check Sum Error
P0601	157	Internal Control Module Memory Check Sum Error
P0605	30	Internal Control Module Read Only Memory (ROM) Error
P0605	122	Internal Control Module Read Only Memory (ROM) Error
P0605	158	Internal Control Module Read Only Memory (ROM) Error
P0605	163	Internal Control Module Read Only Memory (ROM) Error

P0605	231	Internal Control Module Read Only Memory (ROM) Error
P1100	57	O2 Sensor Circuit Slow Response after Coast Down Fuel Cut-Off (Bank 1 Sensor 1) (S62: Air Mass Flow Sensor High Input)
P1115	105	Ambient Air Temperature Sensor Error Value Received (M52LEV, S54 to 09/00: Coolant Temperature Sensor Plausibility)
P1140	73	Mass or Volume Air Flow Circuit Range/Performance Problem
P1188	174	Fuel Control (Bank 1 Sensor 1)
P1189	175	Fuel Control (Bank 2 Sensor 1)
P1317	15	'B' Camshaft Position Actuator Plausibility
P1472	27	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Electrical
P1473	127	Diagnostic Module Tank Leakage (DM-TL) Pump Current Plausibility
P1509	29	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal Electrical
P1550	2	Idle-Speed Control Valve Closing Coil Electrical
P1552	67	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1556	72	Air Conditioning Compressor Signal Low (S54 to 09/00: 'A' Camshaft Position Actuator Control Open Circuit (Bank 1))
P1560	22	'B' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1565	21	Multifunction Steering Wheel (MFL) Interface, Bit Error or Buttons '+' and '-' Pressed Simultaneously (S54 to 09/00: 'B' Camshaft Position Actuator Control Open Circuit (Bank 1))
P1569	74	'A' Camshaft Position Actuator Control Open Circuit (Bank 2)
P1573	75	Electronic Control Module Sensor Supply B Low Output (S54/S62: 'A' Camshaft Position Actuator Control Circuit Signal Low (Bank 2))
P1581	83	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (M73: Throttle Valve 2 Spring Test)
P1585	149	Misfire Detected with Low Fuel
P1594	84	'B' Camshaft Position Actuator Control Open Circuit (Bank 2)
P1640	155	Internal Control Module RAM/ROM Error
P1640	156	Internal Control Module RAM/ROM Error
P1663	156	EWS (Electronic Immobilizer) Rolling Code Faulty Storage in EEPROM

## ECU: MSS52, Engine: S62, from 01.12.99 till 31.05.00

PCode BMW-FC PCode text

P0011	184	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)
P0013	185	'B' Camshaft Position Actuator Circuit (Bank 1)
P0020	113	'A' Camshaft Position Actuator Circuit (Bank 2)
P0023	114	'B' Camshaft Position Actuator Circuit (Bank 2)
P0100	41	Mass or Volume Air Flow Circuit
P0111	77	Intake Air Temperature Sensor 1 Circuit Range/Performance
P0115	105	Engine Coolant Temperature Circuit
P0117	78	Engine Coolant Temperature Circuit Low
P0118	78	Engine Coolant Temperature Circuit High
P0130	13	O2 Sensor Circuit (Bank 1 Sensor 1)
P0133	214	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0133	216	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0134	218	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0135	37	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	87	O2 Sensor Circuit (Bank 1 Sensor 2)
P0139	92	O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0141	39	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0150	12	O2 Sensor Circuit (Bank 2 Sensor 1)
P0153	215	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0153	217	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0154	219	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)

P0155	38	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0156	88	O2 Sensor Circuit (Bank 2 Sensor 2)
P0159	93	O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0161	40	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0170	144	Fuel Trim (Bank 1)
P0173	145	Fuel Trim (Bank 2)
P0201	3	Injector Circuit/Open - Cylinder 1
P0202	5	Injector Circuit/Open - Cylinder 2
P0203	4	Injector Circuit/Open - Cylinder 3
P0204	33	Injector Circuit/Open - Cylinder 4
P0205	31	Injector Circuit/Open - Cylinder 5
P0206	32	Injector Circuit/Open - Cylinder 6
P0207	34	Injector Circuit/Open - Cylinder 7
P0208	35	Injector Circuit/Open - Cylinder 8
P0300	204	Random/Multiple Cylinder Misfire Detected
P0300	213	Random/Multiple Cylinder Misfire Detected
P0301	196	Cylinder 1 Misfire Detected
P0301	205	Cylinder 1 Misfire Detected
P0302	197	Cylinder 2 Misfire Detected
P0302	206	Cylinder 2 Misfire Detected
P0303	198	Cylinder 3 Misfire Detected
P0303	207	Cylinder 3 Misfire Detected
P0304	199	Cylinder 4 Misfire Detected
P0304	208	Cylinder 4 Misfire Detected
P0305	200	Cylinder 5 Misfire Detected
P0305	209	Cylinder 5 Misfire Detected
P0306	201	Cylinder 6 Misfire Detected
P0306	210	Cylinder 6 Misfire Detected
P0307	202	Cylinder 7 Misfire Detected
P0307	211	Cylinder 7 Misfire Detected
P0308	203	Cylinder 8 Misfire Detected
P0308	212	Cylinder 8 Misfire Detected
P0335	16	Crankshaft Position Sensor 'A' Circuit
P0340	7	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0345	8	Camshaft Position Sensor 'A' Circuit (Bank 2)
P0385	10	Crankshaft Position Sensor 'B' Circuit
P0390	11	Camshaft Position Sensor 'B' Circuit (Bank 2)
P0411	170	Secondary Air Injection System Incorrect Flow Detected
P0411	171	Secondary Air Injection System Incorrect Flow Detected
P0412	63	Secondary Air Injection System Switching Valve A Circuit
P0418	19	Secondary Air Injection System Control 'A' Circuit
P0420	178	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	179	Catalyst System Efficiency Below Threshold (Bank 2)
P0440	232	Evaporative Emission System
P0442	180	Evaporative Emission System Leak Detected (small leak)
P0443	36	Evaporative Emission System Purge Control Valve Circuit
P0500	135	Vehicle Speed Sensor 'A'
P0505	128	Idle Air Control System
P0601	150	Internal Control Module Memory Check Sum Error
P0601	157	Internal Control Module Memory Check Sum Error
P0605	30	Internal Control Module Read Only Memory (ROM) Error
P0605	122	Internal Control Module Read Only Memory (ROM) Error
P0605	158	Internal Control Module Read Only Memory (ROM) Error

P0605	163	Internal Control Module Read Only Memory (ROM) Error
P0605	231	Internal Control Module Read Only Memory (ROM) Error
P1100	57	O2 Sensor Circuit Slow Response after Coast Down Fuel Cut-Off (Bank 1 Sensor 1) (S62: Air Mass Flow Sensor High Input)
P1115	105	Ambient Air Temperature Sensor Error Value Received (M52LEV, S54 to 09/00: Coolant Temperature Sensor Plausibility)
P1140	73	Mass or Volume Air Flow Circuit Range/Performance Problem
P1188	174	Fuel Control (Bank 1 Sensor 1)
P1189	175	Fuel Control (Bank 2 Sensor 1)
P1317	15	'B' Camshaft Position Actuator Plausibility
P1472	27	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Electrical
P1473	127	Diagnostic Module Tank Leakage (DM-TL) Pump Current Plausibility
P1509	29	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal Electrical
P1550	2	Idle-Speed Control Valve Closing Coil Electrical
P1552	67	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1556	72	Air Conditioning Compressor Signal Low (S54 to 09/00: 'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1560	22	'B' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1565	21	Multifunction Steering Wheel (MFL) Interface, Bit Error or Buttons '+' and '-' Pressed Simultaneously (S54 to 09/00: 'B' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1569	74	'A' Camshaft Position Actuator Control Open Circuit (Bank 2)
P1573	75	Electronic Control Module Sensor Supply B Low Output (S54/S62: 'A' Camshaft Position Actuator Control Circuit Signal Low (Bank 2))
P1581	83	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (M73: Throttle Valve 2 Spring Test)
P1585	149	Misfire Detected with Low Fuel
P1594	84	'B' Camshaft Position Actuator Control Open Circuit (Bank 2)
P1640	155	Internal Control Module RAM/ROM Error
P1640	156	Internal Control Module RAM/ROM Error
P1663	156	EWS (Electronic Immobilizer) Rolling Code Faulty Storage in EEPROM

## ECU: MSS52, Engine: S62, from 01.06.00 till 30.11.00

PCode	BMW-FC	PCode	text
P0011	184	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)	
P0013	185	'B' Camshaft Position Actuator Circuit (Bank 1)	
P0020	113	'A' Camshaft Position Actuator Circuit (Bank 2)	
P0023	114	'B' Camshaft Position Actuator Circuit (Bank 2)	
P0100	41	Mass or Volume Air Flow Circuit	
P0111	77	Intake Air Temperature Sensor 1 Circuit Range/Performance	
P0115	43	Engine Coolant Temperature Circuit	
P0115	105	Engine Coolant Temperature Circuit	
P0117	78	Engine Coolant Temperature Circuit Low	
P0118	78	Engine Coolant Temperature Circuit High	
P0120	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit	
P0120	119	Throttle/Pedal Position Sensor/Switch 'A' Circuit	
P0120	120	Throttle/Pedal Position Sensor/Switch 'A' Circuit	
P0120	121	Throttle/Pedal Position Sensor/Switch 'A' Circuit	
P0130	13	O2 Sensor Circuit (Bank 1 Sensor 1)	
P0133	214	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)	
P0133	216	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)	
P0134	218	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)	
P0135	37	O2 Sensor Heater Circuit (Bank 1 Sensor 1)	
P0136	87	O2 Sensor Circuit (Bank 1 Sensor 2)	

P0139	92	O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0141	39	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0150	12	O2 Sensor Circuit (Bank 2 Sensor 1)
P0153	215	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0153	217	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0154	219	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0155	38	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0156	88	O2 Sensor Circuit (Bank 2 Sensor 2)
P0159	93	O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0161	40	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0170	144	Fuel Trim (Bank 1)
P0173	145	Fuel Trim (Bank 2)
P0201	3	Injector Circuit/Open - Cylinder 1
P0202	5	Injector Circuit/Open - Cylinder 2
P0203	4	Injector Circuit/Open - Cylinder 3
P0204	33	Injector Circuit/Open - Cylinder 4
P0205	31	Injector Circuit/Open - Cylinder 5
P0206	32	Injector Circuit/Open - Cylinder 6
P0207	34	Injector Circuit/Open - Cylinder 7
P0208	35	Injector Circuit/Open - Cylinder 8
P0300	204	Random/Multiple Cylinder Misfire Detected
P0300	213	Random/Multiple Cylinder Misfire Detected
P0301	196	Cylinder 1 Misfire Detected
P0301	205	Cylinder 1 Misfire Detected
P0302	197	Cylinder 2 Misfire Detected
P0302	206	Cylinder 2 Misfire Detected
P0303	198	Cylinder 3 Misfire Detected
P0303	207	Cylinder 3 Misfire Detected
P0304	199	Cylinder 4 Misfire Detected
P0304	208	Cylinder 4 Misfire Detected
P0305	200	Cylinder 5 Misfire Detected
P0305	209	Cylinder 5 Misfire Detected
P0306	201	Cylinder 6 Misfire Detected
P0306	210	Cylinder 6 Misfire Detected
P0307	202	Cylinder 7 Misfire Detected
P0307	211	Cylinder 7 Misfire Detected
P0308	203	Cylinder 8 Misfire Detected
P0308	212	Cylinder 8 Misfire Detected
P0335	16	Crankshaft Position Sensor 'A' Circuit
P0340	7	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0345	8	Camshaft Position Sensor 'A' Circuit (Bank 2)
P0385	10	Crankshaft Position Sensor 'B' Circuit
P0390	11	Camshaft Position Sensor 'B' Circuit (Bank 2)
P0411	170	Secondary Air Injection System Incorrect Flow Detected
P0411	171	Secondary Air Injection System Incorrect Flow Detected
P0412	63	Secondary Air Injection System Switching Valve A Circuit
P0418	19	Secondary Air Injection System Control 'A' Circuit
P0420	178	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	179	Catalyst System Efficiency Below Threshold (Bank 2)
P0440	232	Evaporative Emission System
P0442	180	Evaporative Emission System Leak Detected (small leak)
P0443	36	Evaporative Emission System Purge Control Valve Circuit
P0500	135	Vehicle Speed Sensor 'A'



P0505	128	Idle Air Control System
P0601	150	Internal Control Module Memory Check Sum Error
P0601	157	Internal Control Module Memory Check Sum Error
P0605	30	Internal Control Module Read Only Memory (ROM) Error
P0605	122	Internal Control Module Read Only Memory (ROM) Error
P0605	158	Internal Control Module Read Only Memory (ROM) Error
P0605	163	Internal Control Module Read Only Memory (ROM) Error
P0605	231	Internal Control Module Read Only Memory (ROM) Error
P1100	57	O2 Sensor Circuit Slow Response after Coast Down Fuel Cut-Off (Bank 1 Sensor 1) (S62: Air Mass Flow Sensor High Input)
P1115	105	Ambient Air Temperature Sensor Error Value Received (M52LEV, S54 to 09/00: Coolant Temperature Sensor Plausibility)
P1140	73	Mass or Volume Air Flow Circuit Range/Performance Problem
P1188	174	Fuel Control (Bank 1 Sensor 1)
P1189	175	Fuel Control (Bank 2 Sensor 1)
P1313	162	'A' Camshaft Position Actuator Plausibility (S54 to 09/00: 'B' Camshaft Position Sensor Circuit Intermittent Bank 1)
P1317	15	'B' Camshaft Position Actuator Plausibility
P1472	27	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Electrical
P1473	127	Diagnostic Module Tank Leakage (DM-TL) Pump Current Plausibility
P1509	29	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal Electrical
P1530	230	'B' Camshaft Position Actuator Control Circuit Signal High (Bank 1) (S54 to 09/00: Throttle Valve Position Control, Control Deviation)
P1532	45	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (S54 to 09/00: Throttle Valve Control Circuit)
P1533	107	'B' Camshaft Position Actuator Control Circuit Signal Low (Bank 2) (S54 to 09/00: ECM Prozessor)
P1542	60	Pedal Position Sensor Electrical
P1542	61	Pedal Position Sensor Electrical
P1542	111	Pedal Position Sensor Electrical
P1542	112	Pedal Position Sensor Electrical
P1550	2	Idle-Speed Control Valve Closing Coil Electrical
P1552	67	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1556	72	Air Conditioning Compressor Signal Low (S54 to 09/00: 'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1560	22	'B' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1565	21	Multifunction Steering Wheel (MFL) Interface, Bit Error or Buttons '+' and '-' Pressed Simultaneously (S54 to 09/00: 'B' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1569	74	'A' Camshaft Position Actuator Control Open Circuit (Bank 2)
P1573	75	Electronic Control Module Sensor Supply B Low Output (S54/S62: 'A' Camshaft Position Actuator Control Circuit Signal Low (Bank 2))
P1581	83	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (M73: Throttle Valve 2 Spring Test)
P1585	149	Misfire Detected with Low Fuel
P1594	84	'B' Camshaft Position Actuator Control Open Circuit (Bank 2)
P1640	155	Internal Control Module RAM/ROM Error
P1640	156	Internal Control Module RAM/ROM Error
P1663	156	EWS (Electronic Immobilizer) Rolling Code Faulty Storage in EEPROM

## ECU: MSS52, Engine: S62, from 01.12.00 till 31.08.01

PCode BMW-FC PCode text

P0011	184	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)
P0012	184	'A' Camshaft Position Timing Over-Retarded (Bank 1)
P0014	185	'B' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)

P0015	185	'B' Camshaft Position Timing Over-Retarded (Bank 1)
P0021	113	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 2)
P0022	113	'A' Camshaft Position Timing Over-Retarded (Bank 2)
P0024	114	'B' Camshaft Position Timing Over-Advanced or System Performance (Bank 2)
P0025	114	'B' Camshaft Position Timing Over-Retarded (Bank 2)
P0101	73	Mass or Volume Air Flow Circuit Range/Performance
P0102	41	Mass or Volume Air Flow Circuit Low Input
P0102	57	Mass or Volume Air Flow Circuit Low Input
P0103	41	Mass or Volume Air Flow Circuit High Input
P0103	57	Mass or Volume Air Flow Circuit High Input
P0111	77	Intake Air Temperature Sensor 1 Circuit Range/Performance
P0112	77	Intake Air Temperature Sensor 1 Circuit Low
P0113	77	Intake Air Temperature Sensor 1 Circuit High
P0116	105	Engine Coolant Temperature Circuit Range/Performance
P0117	78	Engine Coolant Temperature Circuit Low
P0118	78	Engine Coolant Temperature Circuit High
P0121	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0121	120	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0121	121	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0122	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Low
P0123	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit High
P0128	105	Coolant Thermostat (Coolant Temperature Below Thermostat Regulating Temperature)
P0131	13	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 1)
P0132	13	O2 Sensor Circuit High Voltage (Bank 1 Sensor 1)
P0133	214	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0134	13	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0134	218	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0135	37	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0137	87	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 2)
P0138	87	O2 Sensor Circuit High Voltage (Bank 1 Sensor 2)
P0139	92	O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0140	87	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 2)
P0141	39	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0151	12	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 1)
P0152	12	O2 Sensor Circuit High Voltage (Bank 2 Sensor 1)
P0153	215	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0154	12	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0154	219	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0155	38	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0157	88	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 2)
P0158	88	O2 Sensor Circuit High Voltage (Bank 2 Sensor 2)
P0159	93	O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0160	88	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 2)
P0161	40	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0171	144	System Too Lean (Bank 1)
P0171	174	System Too Lean (Bank 1)
P0172	144	System Too Rich (Bank 1)
P0172	174	System Too Rich (Bank 1)
P0174	145	System Too Lean (Bank 2)
P0174	175	System Too Lean (Bank 2)
P0175	145	System Too Rich (Bank 2)
P0175	175	System Too Rich (Bank 2)
P0201	3	Injector Circuit/Open - Cylinder 1

P0202	5	Injector Circuit/Open - Cylinder 2
P0203	4	Injector Circuit/Open - Cylinder 3
P0204	33	Injector Circuit/Open - Cylinder 4
P0205	31	Injector Circuit/Open - Cylinder 5
P0206	32	Injector Circuit/Open - Cylinder 6
P0207	34	Injector Circuit/Open - Cylinder 7
P0208	35	Injector Circuit/Open - Cylinder 8
P0221	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Range/Performance
P0222	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Low
P0223	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit High
P0261	3	Cylinder 1 Injector Circuit Low
P0262	3	Cylinder 1 Injector Circuit High
P0264	5	Cylinder 2 Injector Circuit Low
P0265	5	Cylinder 2 Injector Circuit High
P0267	4	Cylinder 3 Injector Circuit Low
P0268	4	Cylinder 3 Injector Circuit High
P0270	33	Cylinder 4 Injector Circuit Low
P0271	33	Cylinder 4 Injector Circuit High
P0273	31	Cylinder 5 Injector Circuit Low
P0274	31	Cylinder 5 Injector Circuit High
P0276	32	Cylinder 6 Injector Circuit Low
P0277	32	Cylinder 6 Injector Circuit High
P0279	34	Cylinder 7 Injector Circuit Low
P0280	34	Cylinder 7 Injector Circuit High
P0282	35	Cylinder 8 Injector Circuit Low
P0283	35	Cylinder 8 Injector Circuit High
P0300	213	Random/Multiple Cylinder Misfire Detected
P0301	205	Cylinder 1 Misfire Detected
P0302	206	Cylinder 2 Misfire Detected
P0303	207	Cylinder 3 Misfire Detected
P0304	208	Cylinder 4 Misfire Detected
P0305	209	Cylinder 5 Misfire Detected
P0306	210	Cylinder 6 Misfire Detected
P0307	211	Cylinder 7 Misfire Detected
P0308	212	Cylinder 8 Misfire Detected
P0335	16	Crankshaft Position Sensor 'A' Circuit
P0340	7	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0345	8	Camshaft Position Sensor 'A' Circuit (Bank 2)
P0365	10	Camshaft Position Sensor 'B' Circuit (Bank 1)
P0369	162	Camshaft Position Sensor 'B' Circuit Intermittent (Bank 1)
P0390	11	Camshaft Position Sensor 'B' Circuit (Bank 2)
P0394	15	Camshaft Position Sensor 'B' Circuit Intermittent (Bank 2)
P0411	170	Secondary Air Injection System Incorrect Flow Detected
P0413	63	Secondary Air Injection System Switching Valve A Circuit Open
P0414	63	Secondary Air Injection System Switching Valve A Circuit Shorted
P0418	19	Secondary Air Injection System Control 'A' Circuit
P0420	178	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	179	Catalyst System Efficiency Below Threshold (Bank 2)
P0440	232	Evaporative Emission System
P0442	180	Evaporative Emission System Leak Detected (small leak)
P0443	36	Evaporative Emission System Purge Control Valve Circuit
P0444	36	Evaporative Emission System Purge Control Valve Circuit Open
P0445	36	Evaporative Emission System Purge Control Valve Circuit Shorted

P0491	170	Secondary Air Injection System Insufficient Flow (Bank 1)
P0492	170	Secondary Air Injection System Insufficient Flow (Bank 2)
P0500	135	Vehicle Speed Sensor 'A'
P0506	128	Idle Air Control System RPM Lower Than Expected
P0507	128	Idle Air Control System RPM Higher Than Expected
P0601	150	Internal Control Module Memory Check Sum Error
P0601	157	Internal Control Module Memory Check Sum Error
P0604	150	Internal Control Module Random Access Memory (RAM) Error
P0604	157	Internal Control Module Random Access Memory (RAM) Error
P0605	150	Internal Control Module Read Only Memory (ROM) Error
P0605	157	Internal Control Module Read Only Memory (ROM) Error
P0606	30	ECM/PCM Processor
P0606	107	ECM/PCM Processor
P0606	158	ECM/PCM Processor
P0606	163	ECM/PCM Processor
P1121	111	Pedal Position Sensor 1 Range/Performance Problem
P1122	60	Pedal Position Sensor 1 Low Input
P1123	60	Pedal Position Sensor 1 High Input
P1134	37	O2 Sensor Heater Circuit Signal Intermittent (Bank 1 Sensor 1)
P1135	37	O2 Sensor Heater Circuit Low Voltage (Bank 1 Sensor 1)
P1136	37	O2 Sensor Heater Circuit High Voltage (Bank 1 Sensor 1)
P1137	39	O2 Sensor Heater Circuit Signal Intermittent (Bank 1 Sensor 2)
P1138	39	O2 Sensor Heater Circuit Low Voltage (Bank 1 Sensor 2)
P1139	39	O2 Sensor Heater Circuit High Voltage (Bank 1 Sensor 2)
P1151	38	O2 Sensor Heater Circuit Signal Intermittent (Bank 2 Sensor 1)
P1152	38	O2 Sensor Heater Circuit Low Voltage (Bank 2 Sensor 1)
P1153	38	O2 Sensor Heater Circuit High Voltage (Bank 2 Sensor 1)
P1155	40	O2 Sensor Heater Circuit Signal Intermittent (Bank 2 Sensor 2)
P1156	40	O2 Sensor Heater Circuit Low Voltage (Bank 2 Sensor 2)
P1157	40	O2 Sensor Heater Circuit High Voltage (Bank 2 Sensor 2)
P1178	216	O2 Sensor Signal Circuit Slow Switching from Rich to Lean (Bank 1 Sensor 1)
P1179	217	O2 Sensor Signal Circuit Slow Switching from Rich to Lean (Bank 2 Sensor 1)
P1221	112	Pedal Position Sensor 2 Range/Performance Problem
P1222	61	Pedal Position Sensor 2 Low Input
P1223	61	Pedal Position Sensor 2 High Input
P1340	213	Multiple Cylinder Misfire During Start
P1341	204	Multiple Cylinder Misfire with Fuel Cut-Off
P1342	205	Misfire During Start Cylinder 1
P1343	196	Misfire Cylinder 1 with Fuel Cut-Off
P1344	206	Misfire During Start Cylinder 2
P1345	197	Misfire Cylinder 2 with Fuel Cut-Off
P1346	207	Misfire During Start Cylinder 3
P1347	198	Misfire Cylinder 3 with Fuel Cut-Off
P1348	208	Misfire During Start Cylinder 4
P1349	199	Misfire Cylinder 4 with Fuel Cut-Off
P1350	209	Misfire during Start Cylinder 5
P1351	200	Misfire Cylinder 5 with Fuel Cut-Off
P1352	210	Misfire during Start Cylinder 6
P1353	201	Misfire Cylinder 6 with Fuel Cut-Off
P1354	211	Misfire during Start Cylinder 7
P1355	202	Misfire Cylinder 7 with Fuel Cut-Off
P1356	212	Misfire during Start Cylinder 8
P1357	203	Misfire Cylinder 8 with Fuel Cut-Off

P1432	171	Secondary Air Injection System Incorrect Flow Detected
P1447	127	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High during Switching Solenoid Test
P1448	127	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too Low
P1449	127	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High
P1450	27	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Open Circuit
P1451	27	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal Low
P1452	27	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal High
P1502	2	Idle-Speed Control Valve Closing Solenoid Control Circuit Signal High
P1503	2	Idle-Speed Control Valve Closing Solenoid Control Circuit Signal Low
P1504	2	Idle-Speed Control Valve Closing Solenoid Control Open Circuit
P1506	29	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal High
P1507	29	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal Low
P1508	29	Idle-Speed Control Valve Opening Solenoid Control Open Circuit
P1525	67	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1525	72	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1526	74	'A' Camshaft Position Actuator Control Open Circuit (Bank 2)
P1526	75	'A' Camshaft Position Actuator Control Open Circuit (Bank 2)
P1531	21	'B' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1531	22	'B' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1532	83	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (S54 to 09/00: Throttle Valve Control Circuit)
P1532	84	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (S54 to 09/00: Throttle Valve Control Circuit)
P1585	149	Misfire Detected with Low Fuel
P1602	122	Control Module Self-Test, Control Module Defective
P1602	231	Control Module Self-Test, Control Module Defective
P1603	195	Control Module Self-Test, Torque Monitoring
P1634	107	Throttle Valve Adaptation Spring Test Failed
P1636	45	Throttle Valve Control Circuit
P1637	107	Throttle Valve Position Control, Control Deviation
P1637	230	Throttle Valve Position Control, Control Deviation
P1639	107	Throttle Valve Position Control Throttle Stuck Permanently
P1640	155	Internal Control Module RAM/ROM Error
P1640	156	Internal Control Module RAM/ROM Error
P1663	155	EWS (Electronic Immobilizer) Rolling Code Faulty Storage in EEPROM
P1663	156	EWS (Electronic Immobilizer) Rolling Code Faulty Storage in EEPROM

## ECU: MSS52, Engine: S62, from 01.09.01 till 31.08.02

PCode	BMW-FC	PCode text
P0011	184	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)
P0012	184	'A' Camshaft Position Timing Over-Retarded (Bank 1)
P0014	185	'B' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)
P0015	185	'B' Camshaft Position Timing Over-Retarded (Bank 1)
P0021	113	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 2)
P0022	113	'A' Camshaft Position Timing Over-Retarded (Bank 2)
P0024	114	'B' Camshaft Position Timing Over-Advanced or System Performance (Bank 2)
P0025	114	'B' Camshaft Position Timing Over-Retarded (Bank 2)
P0030	37	HO2S Heater Control Circuit (Bank 1 Sensor 1)
P0031	37	HO2S Heater Control Circuit Low (Bank 1 Sensor 1)
P0032	37	HO2S Heater Control Circuit High (Bank 1 Sensor 1)
P0036	39	HO2S Heater Control Circuit (Bank 1 Sensor 2)

P0037	39	HO2S Heater Control Circuit Low (Bank 1 Sensor 2)
P0038	39	HO2S Heater Control Circuit High (Bank 1 Sensor 2)
P0050	38	HO2S Heater Control Circuit (Bank 2 Sensor 1)
P0051	38	HO2S Heater Control Circuit Low (Bank 2 Sensor 1)
P0052	38	HO2S Heater Control Circuit High (Bank 2 Sensor 1)
P0056	40	HO2S Heater Control Circuit (Bank 2 Sensor 2)
P0057	40	HO2S Heater Control Circuit Low (Bank 2 Sensor 2)
P0058	40	HO2S Heater Control Circuit High (Bank 2 Sensor 2)
P0101	73	Mass or Volume Air Flow Circuit Range/Performance
P0102	41	Mass or Volume Air Flow Circuit Low Input
P0103	41	Mass or Volume Air Flow Circuit High Input
P0111	77	Intake Air Temperature Sensor 1 Circuit Range/Performance
P0112	77	Intake Air Temperature Sensor 1 Circuit Low
P0113	77	Intake Air Temperature Sensor 1 Circuit High
P0116	105	Engine Coolant Temperature Circuit Range/Performance
P0117	78	Engine Coolant Temperature Circuit Low
P0118	78	Engine Coolant Temperature Circuit High
P0121	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0121	120	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0121	121	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0122	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Low
P0123	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit High
P0128	105	Coolant Thermostat (Coolant Temperature Below Thermostat Regulating Temperature)
P0131	13	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 1)
P0132	13	O2 Sensor Circuit High Voltage (Bank 1 Sensor 1)
P0133	214	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0134	13	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0134	218	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0135	37	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0137	87	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 2)
P0138	87	O2 Sensor Circuit High Voltage (Bank 1 Sensor 2)
P0139	92	O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0140	87	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 2)
P0141	39	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0151	12	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 1)
P0152	12	O2 Sensor Circuit High Voltage (Bank 2 Sensor 1)
P0153	215	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0154	12	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0154	219	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0155	38	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0157	88	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 2)
P0158	88	O2 Sensor Circuit High Voltage (Bank 2 Sensor 2)
P0159	93	O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0160	88	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 2)
P0161	40	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0171	144	System Too Lean (Bank 1)
P0171	174	System Too Lean (Bank 1)
P0172	144	System Too Rich (Bank 1)
P0172	174	System Too Rich (Bank 1)
P0174	145	System Too Lean (Bank 2)
P0174	175	System Too Lean (Bank 2)
P0175	145	System Too Rich (Bank 2)
P0175	175	System Too Rich (Bank 2)

P0201	3	Injector Circuit/Open - Cylinder 1
P0202	5	Injector Circuit/Open - Cylinder 2
P0203	4	Injector Circuit/Open - Cylinder 3
P0204	33	Injector Circuit/Open - Cylinder 4
P0205	31	Injector Circuit/Open - Cylinder 5
P0206	32	Injector Circuit/Open - Cylinder 6
P0207	34	Injector Circuit/Open - Cylinder 7
P0208	35	Injector Circuit/Open - Cylinder 8
P0221	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Range/Performance
P0222	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Low
P0223	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit High
P0261	3	Cylinder 1 Injector Circuit Low
P0262	3	Cylinder 1 Injector Circuit High
P0264	5	Cylinder 2 Injector Circuit Low
P0265	5	Cylinder 2 Injector Circuit High
P0267	4	Cylinder 3 Injector Circuit Low
P0268	4	Cylinder 3 Injector Circuit High
P0270	33	Cylinder 4 Injector Circuit Low
P0271	33	Cylinder 4 Injector Circuit High
P0273	31	Cylinder 5 Injector Circuit Low
P0274	31	Cylinder 5 Injector Circuit High
P0276	32	Cylinder 6 Injector Circuit Low
P0277	32	Cylinder 6 Injector Circuit High
P0279	34	Cylinder 7 Injector Circuit Low
P0280	34	Cylinder 7 Injector Circuit High
P0282	35	Cylinder 8 Injector Circuit Low
P0283	35	Cylinder 8 Injector Circuit High
P0300	213	Random/Multiple Cylinder Misfire Detected
P0301	205	Cylinder 1 Misfire Detected
P0302	206	Cylinder 2 Misfire Detected
P0303	207	Cylinder 3 Misfire Detected
P0304	208	Cylinder 4 Misfire Detected
P0305	209	Cylinder 5 Misfire Detected
P0306	210	Cylinder 6 Misfire Detected
P0307	211	Cylinder 7 Misfire Detected
P0308	212	Cylinder 8 Misfire Detected
P0335	16	Crankshaft Position Sensor 'A' Circuit
P0340	7	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0345	8	Camshaft Position Sensor 'A' Circuit (Bank 2)
P0365	10	Camshaft Position Sensor 'B' Circuit (Bank 1)
P0369	162	Camshaft Position Sensor 'B' Circuit Intermittent (Bank 1)
P0390	11	Camshaft Position Sensor 'B' Circuit (Bank 2)
P0394	15	Camshaft Position Sensor 'B' Circuit Intermittent (Bank 2)
P0411	170	Secondary Air Injection System Incorrect Flow Detected
P0413	63	Secondary Air Injection System Switching Valve A Circuit Open
P0414	63	Secondary Air Injection System Switching Valve A Circuit Shorted
P0418	19	Secondary Air Injection System Control 'A' Circuit
P0420	178	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	179	Catalyst System Efficiency Below Threshold (Bank 2)
P0441	232	Evaporative Emission System Incorrect Purge Flow
P0442	180	Evaporative Emission System Leak Detected (small leak)
P0443	36	Evaporative Emission System Purge Control Valve Circuit
P0444	36	Evaporative Emission System Purge Control Valve Circuit Open

P0445	36	Evaporative Emission System Purge Control Valve Circuit Shorted
P0491	170	Secondary Air Injection System Insufficient Flow (Bank 1)
P0492	170	Secondary Air Injection System Insufficient Flow (Bank 2)
P0500	135	Vehicle Speed Sensor 'A'
P0506	128	Idle Air Control System RPM Lower Than Expected
P0507	128	Idle Air Control System RPM Higher Than Expected
P0601	150	Internal Control Module Memory Check Sum Error
P0601	157	Internal Control Module Memory Check Sum Error
P0604	150	Internal Control Module Random Access Memory (RAM) Error
P0604	157	Internal Control Module Random Access Memory (RAM) Error
P0605	150	Internal Control Module Read Only Memory (ROM) Error
P0605	157	Internal Control Module Read Only Memory (ROM) Error
P0606	30	ECM/PCM Processor
P0606	107	ECM/PCM Processor
P0606	158	ECM/PCM Processor
P0606	163	ECM/PCM Processor
P1117	57	Mass or Volume Air Flow Circuit Low Input (Bank 2)
P1118	57	Mass or Volume Air Flow Circuit High Input (Bank 2)
P1121	111	Pedal Position Sensor 1 Range/Performance Problem
P1122	60	Pedal Position Sensor 1 Low Input
P1123	60	Pedal Position Sensor 1 High Input
P1178	216	O2 Sensor Signal Circuit Slow Switching from Rich to Lean (Bank 1 Sensor 1)
P1179	217	O2 Sensor Signal Circuit Slow Switching from Rich to Lean (Bank 2 Sensor 1)
P1221	112	Pedal Position Sensor 2 Range/Performance Problem
P1222	61	Pedal Position Sensor 2 Low Input
P1223	61	Pedal Position Sensor 2 High Input
P1340	213	Multiple Cylinder Misfire During Start
P1341	204	Multiple Cylinder Misfire with Fuel Cut-Off
P1342	205	Misfire During Start Cylinder 1
P1343	196	Misfire Cylinder 1 with Fuel Cut-Off
P1344	206	Misfire During Start Cylinder 2
P1345	197	Misfire Cylinder 2 with Fuel Cut-Off
P1346	207	Misfire During Start Cylinder 3
P1347	198	Misfire Cylinder 3 with Fuel Cut-Off
P1348	208	Misfire During Start Cylinder 4
P1349	199	Misfire Cylinder 4 with Fuel Cut-Off
P1350	209	Misfire during Start Cylinder 5
P1351	200	Misfire Cylinder 5 with Fuel Cut-Off
P1352	210	Misfire during Start Cylinder 6
P1353	201	Misfire Cylinder 6 with Fuel Cut-Off
P1354	211	Misfire during Start Cylinder 7
P1355	202	Misfire Cylinder 7 with Fuel Cut-Off
P1356	212	Misfire during Start Cylinder 8
P1357	203	Misfire Cylinder 8 with Fuel Cut-Off
P1432	171	Secondary Air Injection System Incorrect Flow Detected
P1434	176	Diagnostic Module Tank Leakage (DM-TL)
P1447	127	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High during Switching Solenoid Test
P1448	127	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too Low
P1449	127	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High
P1450	27	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Open Circuit
P1451	27	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal Low
P1452	27	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal High
P1502	2	Idle-Speed Control Valve Closing Solenoid Control Circuit Signal High



P1503	2	Idle-Speed Control Valve Closing Solenoid Control Circuit Signal Low
P1504	2	Idle-Speed Control Valve Closing Solenoid Control Open Circuit
P1506	29	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal High
P1507	29	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal Low
P1508	29	Idle-Speed Control Valve Opening Solenoid Control Open Circuit
P1525	67	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1525	72	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1526	74	'A' Camshaft Position Actuator Control Open Circuit (Bank 2)
P1526	75	'A' Camshaft Position Actuator Control Open Circuit (Bank 2)
P1531	21	'B' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1531	22	'B' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1532	83	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (S54 to 09/00: Throttle Valve Control Circuit)
P1532	84	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (S54 to 09/00: Throttle Valve Control Circuit)
P1585	149	Misfire Detected with Low Fuel
P1602	122	Control Module Self-Test, Control Module Defective
P1602	231	Control Module Self-Test, Control Module Defective
P1603	195	Control Module Self-Test, Torque Monitoring
P1634	107	Throttle Valve Adaptation Spring Test Failed
P1636	45	Throttle Valve Control Circuit
P1637	107	Throttle Valve Position Control, Control Deviation
P1637	230	Throttle Valve Position Control, Control Deviation
P1639	107	Throttle Valve Position Control Throttle Stuck Permanently
P1640	155	Internal Control Module RAM/ROM Error
P1640	156	Internal Control Module RAM/ROM Error
P1663	155	EWS (Electronic Immobilizer) Rolling Code Faulty Storage in EEPROM
P1663	156	EWS (Electronic Immobilizer) Rolling Code Faulty Storage in EEPROM

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## ECU: MSS52, Engine: S62, from 01.09.02 till 01.08.03

PCode	BMW-FC	PCode text
P0011	184	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)
P0012	184	'A' Camshaft Position Timing Over-Retarded (Bank 1)
P0014	185	'B' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)
P0015	185	'B' Camshaft Position Timing Over-Retarded (Bank 1)
P0017	162	Crankshaft Position - Camshaft Position Correlation (Bank 1 Sensor B)
P0019	15	Crankshaft Position - Camshaft Position Correlation (Bank 2 Sensor B)
P0021	113	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 2)
P0022	113	'A' Camshaft Position Timing Over-Retarded (Bank 2)
P0024	114	'B' Camshaft Position Timing Over-Advanced or System Performance (Bank 2)
P0025	114	'B' Camshaft Position Timing Over-Retarded (Bank 2)
P0030	37	HO2S Heater Control Circuit (Bank 1 Sensor 1)
P0031	37	HO2S Heater Control Circuit Low (Bank 1 Sensor 1)
P0032	37	HO2S Heater Control Circuit High (Bank 1 Sensor 1)
P0036	39	HO2S Heater Control Circuit (Bank 1 Sensor 2)
P0037	39	HO2S Heater Control Circuit Low (Bank 1 Sensor 2)
P0038	39	HO2S Heater Control Circuit High (Bank 1 Sensor 2)
P0050	38	HO2S Heater Control Circuit (Bank 2 Sensor 1)
P0051	38	HO2S Heater Control Circuit Low (Bank 2 Sensor 1)
P0052	38	HO2S Heater Control Circuit High (Bank 2 Sensor 1)
P0056	40	HO2S Heater Control Circuit (Bank 2 Sensor 2)

P0057	40	HO2S Heater Control Circuit Low (Bank 2 Sensor 2)
P0058	40	HO2S Heater Control Circuit High (Bank 2 Sensor 2)
P0101	73	Mass or Volume Air Flow Circuit Range/Performance
P0102	41	Mass or Volume Air Flow Circuit Low Input
P0103	41	Mass or Volume Air Flow Circuit High Input
P0111	77	Intake Air Temperature Sensor 1 Circuit Range/Performance
P0112	77	Intake Air Temperature Sensor 1 Circuit Low
P0113	77	Intake Air Temperature Sensor 1 Circuit High
P0116	105	Engine Coolant Temperature Circuit Range/Performance
P0117	78	Engine Coolant Temperature Circuit Low
P0118	78	Engine Coolant Temperature Circuit High
P0121	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0121	120	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0121	121	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0122	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Low
P0123	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit High
P0125	105	Insufficient Coolant Temperature for Closed Loop Fuel Control
P0128	105	Coolant Thermostat (Coolant Temperature Below Thermostat Regulating Temperature)
P0131	13	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 1)
P0132	13	O2 Sensor Circuit High Voltage (Bank 1 Sensor 1)
P0133	214	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0134	13	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0135	37	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0137	87	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 2)
P0138	87	O2 Sensor Circuit High Voltage (Bank 1 Sensor 2)
P0139	92	O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0140	87	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 2)
P0141	39	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0151	12	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 1)
P0152	12	O2 Sensor Circuit High Voltage (Bank 2 Sensor 1)
P0153	215	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0154	12	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0155	38	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0157	88	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 2)
P0158	88	O2 Sensor Circuit High Voltage (Bank 2 Sensor 2)
P0159	93	O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0160	88	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 2)
P0161	40	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0171	144	System Too Lean (Bank 1)
P0171	174	System Too Lean (Bank 1)
P0172	144	System Too Rich (Bank 1)
P0172	174	System Too Rich (Bank 1)
P0174	145	System Too Lean (Bank 2)
P0174	175	System Too Lean (Bank 2)
P0175	145	System Too Rich (Bank 2)
P0175	175	System Too Rich (Bank 2)
P0200	183	Injector Circuit/Open
P0201	3	Injector Circuit/Open - Cylinder 1
P0202	5	Injector Circuit/Open - Cylinder 2
P0203	4	Injector Circuit/Open - Cylinder 3
P0204	33	Injector Circuit/Open - Cylinder 4
P0205	31	Injector Circuit/Open - Cylinder 5
P0206	32	Injector Circuit/Open - Cylinder 6

P0207	34	Injector Circuit/Open - Cylinder 7
P0208	35	Injector Circuit/Open - Cylinder 8
P0216	182	Injector/Injection Timing Control Circuit
P0221	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Range/Performance
P0222	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Low
P0223	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit High
P0261	3	Cylinder 1 Injector Circuit Low
P0262	3	Cylinder 1 Injector Circuit High
P0264	5	Cylinder 2 Injector Circuit Low
P0265	5	Cylinder 2 Injector Circuit High
P0267	4	Cylinder 3 Injector Circuit Low
P0268	4	Cylinder 3 Injector Circuit High
P0270	33	Cylinder 4 Injector Circuit Low
P0271	33	Cylinder 4 Injector Circuit High
P0273	31	Cylinder 5 Injector Circuit Low
P0274	31	Cylinder 5 Injector Circuit High
P0276	32	Cylinder 6 Injector Circuit Low
P0277	32	Cylinder 6 Injector Circuit High
P0279	34	Cylinder 7 Injector Circuit Low
P0280	34	Cylinder 7 Injector Circuit High
P0282	35	Cylinder 8 Injector Circuit Low
P0283	35	Cylinder 8 Injector Circuit High
P0300	213	Random/Multiple Cylinder Misfire Detected
P0301	205	Cylinder 1 Misfire Detected
P0302	206	Cylinder 2 Misfire Detected
P0303	207	Cylinder 3 Misfire Detected
P0304	208	Cylinder 4 Misfire Detected
P0305	209	Cylinder 5 Misfire Detected
P0306	210	Cylinder 6 Misfire Detected
P0307	211	Cylinder 7 Misfire Detected
P0308	212	Cylinder 8 Misfire Detected
P0313	149	Misfire Detected with Low Fuel
P0316	213	Engine Misfire Detected on Startup (First 1000 Revolutions)
P0335	16	Crankshaft Position Sensor 'A' Circuit
P0340	7	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0345	8	Camshaft Position Sensor 'A' Circuit (Bank 2)
P0365	10	Camshaft Position Sensor 'B' Circuit (Bank 1)
P0390	11	Camshaft Position Sensor 'B' Circuit (Bank 2)
P0411	170	Secondary Air Injection System Incorrect Flow Detected
P0412	63	Secondary Air Injection System Switching Valve A Circuit
P0413	63	Secondary Air Injection System Switching Valve A Circuit Open
P0414	63	Secondary Air Injection System Switching Valve A Circuit Shorted
P0418	19	Secondary Air Injection System Control 'A' Circuit
P0420	178	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	179	Catalyst System Efficiency Below Threshold (Bank 2)
P0441	232	Evaporative Emission System Incorrect Purge Flow
P0442	180	Evaporative Emission System Leak Detected (small leak)
P0443	36	Evaporative Emission System Purge Control Valve Circuit
P0444	36	Evaporative Emission System Purge Control Valve Circuit Open
P0445	36	Evaporative Emission System Purge Control Valve Circuit Shorted
P0491	170	Secondary Air Injection System Insufficient Flow (Bank 1)
P0492	170	Secondary Air Injection System Insufficient Flow (Bank 2)
P0500	135	Vehicle Speed Sensor 'A'

P0505	136	Idle Air Control System
P0506	128	Idle Air Control System RPM Lower Than Expected
P0507	128	Idle Air Control System RPM Higher Than Expected
P0601	150	Internal Control Module Memory Check Sum Error
P0601	157	Internal Control Module Memory Check Sum Error
P0604	150	Internal Control Module Random Access Memory (RAM) Error
P0604	157	Internal Control Module Random Access Memory (RAM) Error
P0605	150	Internal Control Module Read Only Memory (ROM) Error
P0605	157	Internal Control Module Read Only Memory (ROM) Error
P0606	30	ECM/PCM Processor
P0606	107	ECM/PCM Processor
P0606	158	ECM/PCM Processor
P0606	163	ECM/PCM Processor
P1117	57	Mass or Volume Air Flow Circuit Low Input (Bank 2)
P1118	57	Mass or Volume Air Flow Circuit High Input (Bank 2)
P1121	111	Pedal Position Sensor 1 Range/Performance Problem
P1122	60	Pedal Position Sensor 1 Low Input
P1123	60	Pedal Position Sensor 1 High Input
P1178	216	O2 Sensor Signal Circuit Slow Switching from Rich to Lean (Bank 1 Sensor 1)
P1179	217	O2 Sensor Signal Circuit Slow Switching from Rich to Lean (Bank 2 Sensor 1)
P1184	218	HO2S Sensor Voltage Excursion Electrical (Bank 1 Sensor 1)
P1185	219	HO2S Sensor Voltage Excursion Electrical (Bank 2 Sensor 1)
P1221	112	Pedal Position Sensor 2 Range/Performance Problem
P1222	61	Pedal Position Sensor 2 Low Input
P1223	61	Pedal Position Sensor 2 High Input
P1341	204	Multiple Cylinder Misfire with Fuel Cut-Off
P1342	205	Misfire During Start Cylinder 1
P1343	196	Misfire Cylinder 1 with Fuel Cut-Off
P1344	206	Misfire During Start Cylinder 2
P1345	197	Misfire Cylinder 2 with Fuel Cut-Off
P1346	207	Misfire During Start Cylinder 3
P1347	198	Misfire Cylinder 3 with Fuel Cut-Off
P1348	208	Misfire During Start Cylinder 4
P1349	199	Misfire Cylinder 4 with Fuel Cut-Off
P1350	209	Misfire during Start Cylinder 5
P1351	200	Misfire Cylinder 5 with Fuel Cut-Off
P1352	210	Misfire during Start Cylinder 6
P1353	201	Misfire Cylinder 6 with Fuel Cut-Off
P1354	211	Misfire during Start Cylinder 7
P1355	202	Misfire Cylinder 7 with Fuel Cut-Off
P1356	212	Misfire during Start Cylinder 8
P1357	203	Misfire Cylinder 8 with Fuel Cut-Off
P1432	171	Secondary Air Injection System Incorrect Flow Detected
P1434	176	Diagnostic Module Tank Leakage (DM-TL)
P1446	127	Diagnostic Module Tank Leakage (DM-TL) Pump Control Circuit Signal High
P1447	127	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High during Switching Solenoid Test
P1448	127	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too Low
P1449	127	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High
P1450	27	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Open Circuit
P1451	27	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal Low
P1452	27	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal High
P1500	136	Idle-Speed Control Valve Stuck Open
P1501	136	Idle-Speed Control Valve Stuck Closed

P1502	2	Idle-Speed Control Valve Closing Solenoid Control Circuit Signal High
P1503	2	Idle-Speed Control Valve Closing Solenoid Control Circuit Signal Low
P1504	2	Idle-Speed Control Valve Closing Solenoid Control Open Circuit
P1506	29	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal High
P1507	29	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal Low
P1508	29	Idle-Speed Control Valve Opening Solenoid Control Open Circuit
P1525	67	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1525	72	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1526	74	'A' Camshaft Position Actuator Control Open Circuit (Bank 2)
P1526	75	'A' Camshaft Position Actuator Control Open Circuit (Bank 2)
P1531	21	'B' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1531	22	'B' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1532	83	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (S54 to 09/00: Throttle Valve Control Circuit)
P1532	84	'B' Camshaft Position Actuator Control Open Circuit (Bank 2) (S54 to 09/00: Throttle Valve Control Circuit)
P1602	122	Control Module Self-Test, Control Module Defective
P1603	195	Control Module Self-Test, Torque Monitoring
P1634	107	Throttle Valve Adaptation Spring Test Failed
P1636	45	Throttle Valve Control Circuit
P1637	107	Throttle Valve Position Control, Control Deviation
P1637	230	Throttle Valve Position Control, Control Deviation
P1639	107	Throttle Valve Position Control Throttle Stuck Permanently
P1640	155	Internal Control Module RAM/ROM Error
P1640	156	Internal Control Module RAM/ROM Error
P1663	155	EWS (Electronic Immobilizer) Rolling Code Faulty Storage in EEPROM
P1663	156	EWS (Electronic Immobilizer) Rolling Code Faulty Storage in EEPROM

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## ECU: MSS54, Engine: S54, from 01.05.00 till 31.08.00

PCode BMW-FC PCode text

P0011	184	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)
P0013	185	'B' Camshaft Position Actuator Circuit (Bank 1)
P0100	41	Mass or Volume Air Flow Circuit
P0111	77	Intake Air Temperature Sensor 1 Circuit Range/Performance
P0115	105	Engine Coolant Temperature Circuit
P0116	78	Engine Coolant Temperature Circuit Range/Performance
P0120	120	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0120	121	Throttle/Pedal Position Sensor/Switch 'A' Circuit
P0130	13	O2 Sensor Circuit (Bank 1 Sensor 1)
P0133	214	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0133	216	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0134	218	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0135	37	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0136	87	O2 Sensor Circuit (Bank 1 Sensor 2)
P0139	92	O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0141	39	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0150	12	O2 Sensor Circuit (Bank 2 Sensor 1)
P0153	215	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0153	217	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0154	219	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0155	38	O2 Sensor Heater Circuit (Bank 2 Sensor 1)

P0156	88	O2 Sensor Circuit (Bank 2 Sensor 2)
P0159	93	O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0161	40	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0170	144	Fuel Trim (Bank 1)
P0173	145	Fuel Trim (Bank 2)
P0201	3	Injector Circuit/Open - Cylinder 1
P0202	5	Injector Circuit/Open - Cylinder 2
P0203	4	Injector Circuit/Open - Cylinder 3
P0204	33	Injector Circuit/Open - Cylinder 4
P0205	31	Injector Circuit/Open - Cylinder 5
P0206	32	Injector Circuit/Open - Cylinder 6
P0300	204	Random/Multiple Cylinder Misfire Detected
P0300	213	Random/Multiple Cylinder Misfire Detected
P0301	196	Cylinder 1 Misfire Detected
P0301	205	Cylinder 1 Misfire Detected
P0302	197	Cylinder 2 Misfire Detected
P0302	206	Cylinder 2 Misfire Detected
P0303	198	Cylinder 3 Misfire Detected
P0303	207	Cylinder 3 Misfire Detected
P0304	199	Cylinder 4 Misfire Detected
P0304	208	Cylinder 4 Misfire Detected
P0305	200	Cylinder 5 Misfire Detected
P0305	209	Cylinder 5 Misfire Detected
P0306	201	Cylinder 6 Misfire Detected
P0306	210	Cylinder 6 Misfire Detected
P0335	16	Crankshaft Position Sensor 'A' Circuit
P0340	7	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0385	10	Crankshaft Position Sensor 'B' Circuit
P0411	170	Secondary Air Injection System Incorrect Flow Detected
P0412	63	Secondary Air Injection System Switching Valve A Circuit
P0418	19	Secondary Air Injection System Control 'A' Circuit
P0420	178	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	179	Catalyst System Efficiency Below Threshold (Bank 2)
P0440	232	Evaporative Emission System
P0442	180	Evaporative Emission System Leak Detected (small leak)
P0443	36	Evaporative Emission System Purge Control Valve Circuit
P0500	135	Vehicle Speed Sensor 'A'
P0505	128	Idle Air Control System
P0601	150	Internal Control Module Memory Check Sum Error
P0601	157	Internal Control Module Memory Check Sum Error
P0605	30	Internal Control Module Read Only Memory (ROM) Error
P0605	122	Internal Control Module Read Only Memory (ROM) Error
P0605	158	Internal Control Module Read Only Memory (ROM) Error
P0605	163	Internal Control Module Read Only Memory (ROM) Error
P0605	231	Internal Control Module Read Only Memory (ROM) Error
P1115	105	Ambient Air Temperature Sensor Error Value Received (M52LEV, S54 to 09/00: Coolant Temperature Sensor Plausibility)
P1140	73	Mass or Volume Air Flow Circuit Range/Performance Problem
P1188	174	Fuel Control (Bank 1 Sensor 1)
P1189	175	Fuel Control (Bank 2 Sensor 1)
P1317	15	'B' Camshaft Position Actuator Plausibility
P1472	27	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Electrical
P1473	127	Diagnostic Module Tank Leakage (DM-TL) Pump Current Plausibility

P1509	29	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal Electrical
P1550	2	Idle-Speed Control Valve Closing Coil Electrical
P1552	67	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1556	72	Air Conditioning Compressor Signal Low (S54 to 09/00: 'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1560	22	'B' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1565	21	Multifunction Steering Wheel (MFL) Interface, Bit Error or Buttons '+' and '-' Pressed Simultaneously (S54 to 09/00: 'B' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1585	149	Misfire Detected with Low Fuel
P1640	155	Internal Control Module RAM/ROM Error
P1640	156	Internal Control Module RAM/ROM Error

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## ECU: MSS54, Engine: S54, from 01.09.00 till 28.02.01

PCode BMW-FC PCode text

P0011	184	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)
P0012	184	'A' Camshaft Position Timing Over-Retarded (Bank 1)
P0014	185	'B' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)
P0015	185	'B' Camshaft Position Timing Over-Retarded (Bank 1)
P0101	73	Mass or Volume Air Flow Circuit Range/Performance
P0102	41	Mass or Volume Air Flow Circuit Low Input
P0103	41	Mass or Volume Air Flow Circuit High Input
P0111	77	Intake Air Temperature Sensor 1 Circuit Range/Performance
P0112	77	Intake Air Temperature Sensor 1 Circuit Low
P0113	77	Intake Air Temperature Sensor 1 Circuit High
P0115	105	Engine Coolant Temperature Circuit
P0117	78	Engine Coolant Temperature Circuit Low
P0118	78	Engine Coolant Temperature Circuit High
P0121	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0121	120	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0121	121	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0122	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Low
P0123	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit High
P0128	105	Coolant Thermostat (Coolant Temperature Below Thermostat Regulating Temperature)
P0131	13	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 1)
P0132	13	O2 Sensor Circuit High Voltage (Bank 1 Sensor 1)
P0133	214	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0134	13	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0134	218	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0135	37	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0137	87	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 2)
P0138	87	O2 Sensor Circuit High Voltage (Bank 1 Sensor 2)
P0139	92	O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0140	87	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 2)
P0141	39	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0151	12	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 1)
P0152	12	O2 Sensor Circuit High Voltage (Bank 2 Sensor 1)
P0153	215	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0154	12	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0154	219	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0155	38	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0157	88	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 2)

P0158	88	O2 Sensor Circuit High Voltage (Bank 2 Sensor 2)
P0159	93	O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0160	88	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 2)
P0161	40	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0171	144	System Too Lean (Bank 1)
P0171	174	System Too Lean (Bank 1)
P0172	144	System Too Rich (Bank 1)
P0172	174	System Too Rich (Bank 1)
P0174	145	System Too Lean (Bank 2)
P0174	175	System Too Lean (Bank 2)
P0175	145	System Too Rich (Bank 2)
P0175	175	System Too Rich (Bank 2)
P0201	3	Injector Circuit/Open - Cylinder 1
P0202	5	Injector Circuit/Open - Cylinder 2
P0203	4	Injector Circuit/Open - Cylinder 3
P0204	33	Injector Circuit/Open - Cylinder 4
P0205	31	Injector Circuit/Open - Cylinder 5
P0206	32	Injector Circuit/Open - Cylinder 6
P0221	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Range/Performance
P0222	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Low
P0223	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit High
P0261	3	Cylinder 1 Injector Circuit Low
P0262	3	Cylinder 1 Injector Circuit High
P0264	5	Cylinder 2 Injector Circuit Low
P0265	5	Cylinder 2 Injector Circuit High
P0267	4	Cylinder 3 Injector Circuit Low
P0268	4	Cylinder 3 Injector Circuit High
P0270	33	Cylinder 4 Injector Circuit Low
P0271	33	Cylinder 4 Injector Circuit High
P0273	31	Cylinder 5 Injector Circuit Low
P0274	31	Cylinder 5 Injector Circuit High
P0276	32	Cylinder 6 Injector Circuit Low
P0277	32	Cylinder 6 Injector Circuit High
P0300	213	Random/Multiple Cylinder Misfire Detected
P0301	205	Cylinder 1 Misfire Detected
P0302	206	Cylinder 2 Misfire Detected
P0303	207	Cylinder 3 Misfire Detected
P0304	208	Cylinder 4 Misfire Detected
P0305	209	Cylinder 5 Misfire Detected
P0306	210	Cylinder 6 Misfire Detected
P0335	16	Crankshaft Position Sensor 'A' Circuit
P0340	7	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0365	10	Camshaft Position Sensor 'B' Circuit (Bank 1)
P0369	162	Camshaft Position Sensor 'B' Circuit Intermittent (Bank 1)
P0394	15	Camshaft Position Sensor 'B' Circuit Intermittent (Bank 2)
P0411	170	Secondary Air Injection System Incorrect Flow Detected
P0413	63	Secondary Air Injection System Switching Valve A Circuit Open
P0414	63	Secondary Air Injection System Switching Valve A Circuit Shorted
P0418	19	Secondary Air Injection System Control 'A' Circuit
P0420	178	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	179	Catalyst System Efficiency Below Threshold (Bank 2)
P0440	232	Evaporative Emission System
P0442	180	Evaporative Emission System Leak Detected (small leak)



P0443	36	Evaporative Emission System Purge Control Valve Circuit
P0444	36	Evaporative Emission System Purge Control Valve Circuit Open
P0445	36	Evaporative Emission System Purge Control Valve Circuit Shorted
P0491	170	Secondary Air Injection System Insufficient Flow (Bank 1)
P0492	170	Secondary Air Injection System Insufficient Flow (Bank 2)
P0500	135	Vehicle Speed Sensor 'A'
P0506	128	Idle Air Control System RPM Lower Than Expected
P0507	128	Idle Air Control System RPM Higher Than Expected
P0601	150	Internal Control Module Memory Check Sum Error
P0601	157	Internal Control Module Memory Check Sum Error
P0604	157	Internal Control Module Random Access Memory (RAM) Error
P0605	150	Internal Control Module Read Only Memory (ROM) Error
P0605	157	Internal Control Module Read Only Memory (ROM) Error
P0606	30	ECM/PCM Processor
P0606	107	ECM/PCM Processor
P0606	158	ECM/PCM Processor
P0606	163	ECM/PCM Processor
P1121	111	Pedal Position Sensor 1 Range/Performance Problem
P1122	60	Pedal Position Sensor 1 Low Input
P1123	60	Pedal Position Sensor 1 High Input
P1134	37	O2 Sensor Heater Circuit Signal Intermittent (Bank 1 Sensor 1)
P1135	37	O2 Sensor Heater Circuit Low Voltage (Bank 1 Sensor 1)
P1136	37	O2 Sensor Heater Circuit High Voltage (Bank 1 Sensor 1)
P1137	39	O2 Sensor Heater Circuit Signal Intermittent (Bank 1 Sensor 2)
P1138	39	O2 Sensor Heater Circuit Low Voltage (Bank 1 Sensor 2)
P1139	39	O2 Sensor Heater Circuit High Voltage (Bank 1 Sensor 2)
P1151	38	O2 Sensor Heater Circuit Signal Intermittent (Bank 2 Sensor 1)
P1152	38	O2 Sensor Heater Circuit Low Voltage (Bank 2 Sensor 1)
P1153	38	O2 Sensor Heater Circuit High Voltage (Bank 2 Sensor 1)
P1155	40	O2 Sensor Heater Circuit Signal Intermittent (Bank 2 Sensor 2)
P1156	40	O2 Sensor Heater Circuit Low Voltage (Bank 2 Sensor 2)
P1157	40	O2 Sensor Heater Circuit High Voltage (Bank 2 Sensor 2)
P1178	216	O2 Sensor Signal Circuit Slow Switching from Rich to Lean (Bank 1 Sensor 1)
P1179	217	O2 Sensor Signal Circuit Slow Switching from Rich to Lean (Bank 2 Sensor 1)
P1221	112	Pedal Position Sensor 2 Range/Performance Problem
P1222	61	Pedal Position Sensor 2 Low Input
P1223	61	Pedal Position Sensor 2 High Input
P1340	213	Multiple Cylinder Misfire During Start
P1341	204	Multiple Cylinder Misfire with Fuel Cut-Off
P1342	205	Misfire During Start Cylinder 1
P1343	196	Misfire Cylinder 1 with Fuel Cut-Off
P1344	206	Misfire During Start Cylinder 2
P1345	197	Misfire Cylinder 2 with Fuel Cut-Off
P1346	207	Misfire During Start Cylinder 3
P1347	198	Misfire Cylinder 3 with Fuel Cut-Off
P1348	208	Misfire During Start Cylinder 4
P1349	199	Misfire Cylinder 4 with Fuel Cut-Off
P1350	209	Misfire during Start Cylinder 5
P1351	200	Misfire Cylinder 5 with Fuel Cut-Off
P1352	210	Misfire during Start Cylinder 6
P1353	201	Misfire Cylinder 6 with Fuel Cut-Off
P1447	127	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High during Switching Solenoid Test
P1448	127	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too Low

P1449	127	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High
P1450	27	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Open Circuit
P1451	27	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal Low
P1452	27	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal High
P1504	2	Idle-Speed Control Valve Closing Solenoid Control Open Circuit
P1507	29	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal Low
P1508	29	Idle-Speed Control Valve Opening Solenoid Control Open Circuit
P1509	29	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal Electrical
P1525	67	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1525	72	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1531	21	'B' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1531	22	'B' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1550	2	Idle-Speed Control Valve Closing Coil Electrical
P1585	149	Misfire Detected with Low Fuel
P1602	122	Control Module Self-Test, Control Module Defective
P1602	231	Control Module Self-Test, Control Module Defective
P1634	107	Throttle Valve Adaptation Spring Test Failed
P1636	45	Throttle Valve Control Circuit
P1637	107	Throttle Valve Position Control, Control Deviation
P1637	230	Throttle Valve Position Control, Control Deviation
P1639	107	Throttle Valve Position Control Throttle Stuck Permanently
P1640	155	Internal Control Module RAM/ROM Error
P1640	156	Internal Control Module RAM/ROM Error
P1663	156	EWS (Electronic Immobilizer) Rolling Code Faulty Storage in EEPROM

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## ECU: MSS54, Engine: S54, from 01.03.01 till 31.08.01

PCode BMW-FC PCode text

P0011	184	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)
P0012	184	'A' Camshaft Position Timing Over-Retarded (Bank 1)
P0014	185	'B' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)
P0015	185	'B' Camshaft Position Timing Over-Retarded (Bank 1)
P0101	73	Mass or Volume Air Flow Circuit Range/Performance
P0102	41	Mass or Volume Air Flow Circuit Low Input
P0103	41	Mass or Volume Air Flow Circuit High Input
P0111	77	Intake Air Temperature Sensor 1 Circuit Range/Performance
P0112	77	Intake Air Temperature Sensor 1 Circuit Low
P0113	77	Intake Air Temperature Sensor 1 Circuit High
P0116	105	Engine Coolant Temperature Circuit Range/Performance
P0117	78	Engine Coolant Temperature Circuit Low
P0118	78	Engine Coolant Temperature Circuit High
P0121	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0121	120	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0121	121	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0122	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Low
P0123	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit High
P0128	105	Coolant Thermostat (Coolant Temperature Below Thermostat Regulating Temperature)
P0131	13	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 1)
P0132	13	O2 Sensor Circuit High Voltage (Bank 1 Sensor 1)
P0133	214	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0134	13	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0134	218	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)

P0135	37	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0137	87	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 2)
P0138	87	O2 Sensor Circuit High Voltage (Bank 1 Sensor 2)
P0139	92	O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0140	87	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 2)
P0141	39	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0151	12	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 1)
P0152	12	O2 Sensor Circuit High Voltage (Bank 2 Sensor 1)
P0153	215	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0154	12	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0154	219	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0155	38	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0157	88	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 2)
P0158	88	O2 Sensor Circuit High Voltage (Bank 2 Sensor 2)
P0159	93	O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0160	88	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 2)
P0161	40	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0171	144	System Too Lean (Bank 1)
P0171	174	System Too Lean (Bank 1)
P0172	144	System Too Rich (Bank 1)
P0172	174	System Too Rich (Bank 1)
P0174	145	System Too Lean (Bank 2)
P0174	175	System Too Lean (Bank 2)
P0175	145	System Too Rich (Bank 2)
P0175	175	System Too Rich (Bank 2)
P0201	3	Injector Circuit/Open - Cylinder 1
P0202	5	Injector Circuit/Open - Cylinder 2
P0203	4	Injector Circuit/Open - Cylinder 3
P0204	33	Injector Circuit/Open - Cylinder 4
P0205	31	Injector Circuit/Open - Cylinder 5
P0206	32	Injector Circuit/Open - Cylinder 6
P0221	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Range/Performance
P0222	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Low
P0223	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit High
P0261	3	Cylinder 1 Injector Circuit Low
P0262	3	Cylinder 1 Injector Circuit High
P0264	5	Cylinder 2 Injector Circuit Low
P0265	5	Cylinder 2 Injector Circuit High
P0267	4	Cylinder 3 Injector Circuit Low
P0268	4	Cylinder 3 Injector Circuit High
P0270	33	Cylinder 4 Injector Circuit Low
P0271	33	Cylinder 4 Injector Circuit High
P0273	31	Cylinder 5 Injector Circuit Low
P0274	31	Cylinder 5 Injector Circuit High
P0276	32	Cylinder 6 Injector Circuit Low
P0277	32	Cylinder 6 Injector Circuit High
P0300	213	Random/Multiple Cylinder Misfire Detected
P0301	205	Cylinder 1 Misfire Detected
P0302	206	Cylinder 2 Misfire Detected
P0303	207	Cylinder 3 Misfire Detected
P0304	208	Cylinder 4 Misfire Detected
P0305	209	Cylinder 5 Misfire Detected
P0306	210	Cylinder 6 Misfire Detected

P0335	16	Crankshaft Position Sensor 'A' Circuit
P0340	7	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0365	10	Camshaft Position Sensor 'B' Circuit (Bank 1)
P0369	162	Camshaft Position Sensor 'B' Circuit Intermittent (Bank 1)
P0394	15	Camshaft Position Sensor 'B' Circuit Intermittent (Bank 2)
P0411	170	Secondary Air Injection System Incorrect Flow Detected
P0413	63	Secondary Air Injection System Switching Valve A Circuit Open
P0414	63	Secondary Air Injection System Switching Valve A Circuit Shorted
P0418	19	Secondary Air Injection System Control 'A' Circuit
P0420	178	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	179	Catalyst System Efficiency Below Threshold (Bank 2)
P0440	232	Evaporative Emission System
P0442	180	Evaporative Emission System Leak Detected (small leak)
P0443	36	Evaporative Emission System Purge Control Valve Circuit
P0444	36	Evaporative Emission System Purge Control Valve Circuit Open
P0445	36	Evaporative Emission System Purge Control Valve Circuit Shorted
P0491	170	Secondary Air Injection System Insufficient Flow (Bank 1)
P0492	170	Secondary Air Injection System Insufficient Flow (Bank 2)
P0500	135	Vehicle Speed Sensor 'A'
P0506	128	Idle Air Control System RPM Lower Than Expected
P0507	128	Idle Air Control System RPM Higher Than Expected
P0601	150	Internal Control Module Memory Check Sum Error
P0601	157	Internal Control Module Memory Check Sum Error
P0604	157	Internal Control Module Random Access Memory (RAM) Error
P0605	150	Internal Control Module Read Only Memory (ROM) Error
P0605	157	Internal Control Module Read Only Memory (ROM) Error
P0606	30	ECM/PCM Processor
P0606	107	ECM/PCM Processor
P0606	158	ECM/PCM Processor
P0606	163	ECM/PCM Processor
P1121	111	Pedal Position Sensor 1 Range/Performance Problem
P1122	60	Pedal Position Sensor 1 Low Input
P1123	60	Pedal Position Sensor 1 High Input
P1134	37	O2 Sensor Heater Circuit Signal Intermittent (Bank 1 Sensor 1)
P1135	37	O2 Sensor Heater Circuit Low Voltage (Bank 1 Sensor 1)
P1136	37	O2 Sensor Heater Circuit High Voltage (Bank 1 Sensor 1)
P1137	39	O2 Sensor Heater Circuit Signal Intermittent (Bank 1 Sensor 2)
P1138	39	O2 Sensor Heater Circuit Low Voltage (Bank 1 Sensor 2)
P1139	39	O2 Sensor Heater Circuit High Voltage (Bank 1 Sensor 2)
P1151	38	O2 Sensor Heater Circuit Signal Intermittent (Bank 2 Sensor 1)
P1152	38	O2 Sensor Heater Circuit Low Voltage (Bank 2 Sensor 1)
P1153	38	O2 Sensor Heater Circuit High Voltage (Bank 2 Sensor 1)
P1155	40	O2 Sensor Heater Circuit Signal Intermittent (Bank 2 Sensor 2)
P1156	40	O2 Sensor Heater Circuit Low Voltage (Bank 2 Sensor 2)
P1157	40	O2 Sensor Heater Circuit High Voltage (Bank 2 Sensor 2)
P1178	216	O2 Sensor Signal Circuit Slow Switching from Rich to Lean (Bank 1 Sensor 1)
P1179	217	O2 Sensor Signal Circuit Slow Switching from Rich to Lean (Bank 2 Sensor 1)
P1221	112	Pedal Position Sensor 2 Range/Performance Problem
P1222	61	Pedal Position Sensor 2 Low Input
P1223	61	Pedal Position Sensor 2 High Input
P1340	213	Multiple Cylinder Misfire During Start
P1341	204	Multiple Cylinder Misfire with Fuel Cut-Off
P1342	205	Misfire During Start Cylinder 1

P1343	196	Misfire Cylinder 1 with Fuel Cut-Off
P1344	206	Misfire During Start Cylinder 2
P1345	197	Misfire Cylinder 2 with Fuel Cut-Off
P1346	207	Misfire During Start Cylinder 3
P1347	198	Misfire Cylinder 3 with Fuel Cut-Off
P1348	208	Misfire During Start Cylinder 4
P1349	199	Misfire Cylinder 4 with Fuel Cut-Off
P1350	209	Misfire during Start Cylinder 5
P1351	200	Misfire Cylinder 5 with Fuel Cut-Off
P1352	210	Misfire during Start Cylinder 6
P1353	201	Misfire Cylinder 6 with Fuel Cut-Off
P1447	127	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High during Switching Solenoid Test
P1448	127	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too Low
P1449	127	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High
P1450	27	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Open Circuit
P1451	27	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal Low
P1452	27	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal High
P1503	2	Idle-Speed Control Valve Closing Solenoid Control Circuit Signal Low
P1504	2	Idle-Speed Control Valve Closing Solenoid Control Open Circuit
P1507	29	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal Low
P1508	29	Idle-Speed Control Valve Opening Solenoid Control Open Circuit
P1509	29	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal Electrical
P1525	67	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1525	72	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1531	21	'B' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1531	22	'B' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1550	2	Idle-Speed Control Valve Closing Coil Electrical
P1585	149	Misfire Detected with Low Fuel
P1602	122	Control Module Self-Test, Control Module Defective
P1602	231	Control Module Self-Test, Control Module Defective
P1634	107	Throttle Valve Adaptation Spring Test Failed
P1636	45	Throttle Valve Control Circuit
P1637	107	Throttle Valve Position Control, Control Deviation
P1637	230	Throttle Valve Position Control, Control Deviation
P1639	107	Throttle Valve Position Control Throttle Stuck Permanently
P1640	155	Internal Control Module RAM/ROM Error
P1640	156	Internal Control Module RAM/ROM Error
P1663	156	EWS (Electronic Immobilizer) Rolling Code Faulty Storage in EEPROM

## ECU: MSS54, Engine: S54, from 01.09.01 till 31.08.02

PCode BMW-FC PCode text

P0011	184	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)
P0012	184	'A' Camshaft Position Timing Over-Retarded (Bank 1)
P0014	185	'B' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)
P0015	185	'B' Camshaft Position Timing Over-Retarded (Bank 1)
P0030	37	HO2S Heater Control Circuit (Bank 1 Sensor 1)
P0031	37	HO2S Heater Control Circuit Low (Bank 1 Sensor 1)
P0032	37	HO2S Heater Control Circuit High (Bank 1 Sensor 1)
P0036	39	HO2S Heater Control Circuit (Bank 1 Sensor 2)
P0037	39	HO2S Heater Control Circuit Low (Bank 1 Sensor 2)
P0038	39	HO2S Heater Control Circuit High (Bank 1 Sensor 2)

P0050	38	HO2S Heater Control Circuit (Bank 2 Sensor 1)
P0051	38	HO2S Heater Control Circuit Low (Bank 2 Sensor 1)
P0052	38	HO2S Heater Control Circuit High (Bank 2 Sensor 1)
P0056	40	HO2S Heater Control Circuit (Bank 2 Sensor 2)
P0057	40	HO2S Heater Control Circuit Low (Bank 2 Sensor 2)
P0058	40	HO2S Heater Control Circuit High (Bank 2 Sensor 2)
P0101	73	Mass or Volume Air Flow Circuit Range/Performance
P0102	41	Mass or Volume Air Flow Circuit Low Input
P0103	41	Mass or Volume Air Flow Circuit High Input
P0111	77	Intake Air Temperature Sensor 1 Circuit Range/Performance
P0112	77	Intake Air Temperature Sensor 1 Circuit Low
P0113	77	Intake Air Temperature Sensor 1 Circuit High
P0116	105	Engine Coolant Temperature Circuit Range/Performance
P0117	78	Engine Coolant Temperature Circuit Low
P0118	78	Engine Coolant Temperature Circuit High
P0121	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0121	120	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0121	121	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0122	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Low
P0123	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit High
P0128	105	Coolant Thermostat (Coolant Temperature Below Thermostat Regulating Temperature)
P0131	13	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 1)
P0132	13	O2 Sensor Circuit High Voltage (Bank 1 Sensor 1)
P0133	214	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0134	13	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0134	218	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0135	37	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0137	87	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 2)
P0138	87	O2 Sensor Circuit High Voltage (Bank 1 Sensor 2)
P0139	92	O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0140	87	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 2)
P0141	39	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0151	12	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 1)
P0152	12	O2 Sensor Circuit High Voltage (Bank 2 Sensor 1)
P0153	215	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)
P0154	12	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0154	219	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0155	38	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0157	88	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 2)
P0158	88	O2 Sensor Circuit High Voltage (Bank 2 Sensor 2)
P0159	93	O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0160	88	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 2)
P0161	40	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0171	144	System Too Lean (Bank 1)
P0171	174	System Too Lean (Bank 1)
P0172	144	System Too Rich (Bank 1)
P0172	174	System Too Rich (Bank 1)
P0174	145	System Too Lean (Bank 2)
P0174	175	System Too Lean (Bank 2)
P0175	145	System Too Rich (Bank 2)
P0175	175	System Too Rich (Bank 2)
P0201	3	Injector Circuit/Open - Cylinder 1
P0202	5	Injector Circuit/Open - Cylinder 2

P0203	4	Injector Circuit/Open - Cylinder 3
P0204	33	Injector Circuit/Open - Cylinder 4
P0205	31	Injector Circuit/Open - Cylinder 5
P0206	32	Injector Circuit/Open - Cylinder 6
P0221	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Range/Performance
P0222	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Low
P0223	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit High
P0261	3	Cylinder 1 Injector Circuit Low
P0262	3	Cylinder 1 Injector Circuit High
P0264	5	Cylinder 2 Injector Circuit Low
P0265	5	Cylinder 2 Injector Circuit High
P0267	4	Cylinder 3 Injector Circuit Low
P0268	4	Cylinder 3 Injector Circuit High
P0270	33	Cylinder 4 Injector Circuit Low
P0271	33	Cylinder 4 Injector Circuit High
P0273	31	Cylinder 5 Injector Circuit Low
P0274	31	Cylinder 5 Injector Circuit High
P0276	32	Cylinder 6 Injector Circuit Low
P0277	32	Cylinder 6 Injector Circuit High
P0300	213	Random/Multiple Cylinder Misfire Detected
P0301	205	Cylinder 1 Misfire Detected
P0302	206	Cylinder 2 Misfire Detected
P0303	207	Cylinder 3 Misfire Detected
P0304	208	Cylinder 4 Misfire Detected
P0305	209	Cylinder 5 Misfire Detected
P0306	210	Cylinder 6 Misfire Detected
P0335	16	Crankshaft Position Sensor 'A' Circuit
P0340	7	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0365	10	Camshaft Position Sensor 'B' Circuit (Bank 1)
P0369	162	Camshaft Position Sensor 'B' Circuit Intermittent (Bank 1)
P0394	15	Camshaft Position Sensor 'B' Circuit Intermittent (Bank 2)
P0411	170	Secondary Air Injection System Incorrect Flow Detected
P0413	63	Secondary Air Injection System Switching Valve A Circuit Open
P0414	63	Secondary Air Injection System Switching Valve A Circuit Shorted
P0418	19	Secondary Air Injection System Control 'A' Circuit
P0420	178	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	179	Catalyst System Efficiency Below Threshold (Bank 2)
P0441	232	Evaporative Emission System Incorrect Purge Flow
P0442	180	Evaporative Emission System Leak Detected (small leak)
P0443	36	Evaporative Emission System Purge Control Valve Circuit
P0444	36	Evaporative Emission System Purge Control Valve Circuit Open
P0445	36	Evaporative Emission System Purge Control Valve Circuit Shorted
P0491	170	Secondary Air Injection System Insufficient Flow (Bank 1)
P0492	170	Secondary Air Injection System Insufficient Flow (Bank 2)
P0500	135	Vehicle Speed Sensor 'A'
P0506	128	Idle Air Control System RPM Lower Than Expected
P0507	128	Idle Air Control System RPM Higher Than Expected
P0601	150	Internal Control Module Memory Check Sum Error
P0601	157	Internal Control Module Memory Check Sum Error
P0604	150	Internal Control Module Random Access Memory (RAM) Error
P0604	157	Internal Control Module Random Access Memory (RAM) Error
P0605	150	Internal Control Module Read Only Memory (ROM) Error
P0605	157	Internal Control Module Read Only Memory (ROM) Error

P0606	30	ECM/PCM Processor
P0606	107	ECM/PCM Processor
P0606	158	ECM/PCM Processor
P0606	163	ECM/PCM Processor
P1121	111	Pedal Position Sensor 1 Range/Performance Problem
P1122	60	Pedal Position Sensor 1 Low Input
P1123	60	Pedal Position Sensor 1 High Input
P1178	216	O2 Sensor Signal Circuit Slow Switching from Rich to Lean (Bank 1 Sensor 1)
P1179	217	O2 Sensor Signal Circuit Slow Switching from Rich to Lean (Bank 2 Sensor 1)
P1221	112	Pedal Position Sensor 2 Range/Performance Problem
P1222	61	Pedal Position Sensor 2 Low Input
P1223	61	Pedal Position Sensor 2 High Input
P1340	213	Multiple Cylinder Misfire During Start
P1341	204	Multiple Cylinder Misfire with Fuel Cut-Off
P1342	205	Misfire During Start Cylinder 1
P1343	196	Misfire Cylinder 1 with Fuel Cut-Off
P1344	206	Misfire During Start Cylinder 2
P1345	197	Misfire Cylinder 2 with Fuel Cut-Off
P1346	207	Misfire During Start Cylinder 3
P1347	198	Misfire Cylinder 3 with Fuel Cut-Off
P1348	208	Misfire During Start Cylinder 4
P1349	199	Misfire Cylinder 4 with Fuel Cut-Off
P1350	209	Misfire during Start Cylinder 5
P1351	200	Misfire Cylinder 5 with Fuel Cut-Off
P1352	210	Misfire during Start Cylinder 6
P1353	201	Misfire Cylinder 6 with Fuel Cut-Off
P1434	176	Diagnostic Module Tank Leakage (DM-TL)
P1447	127	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High during Switching Solenoid Test
P1448	127	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too Low
P1449	127	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High
P1450	27	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Open Circuit
P1451	27	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal Low
P1452	27	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal High
P1502	2	Idle-Speed Control Valve Closing Solenoid Control Circuit Signal High
P1503	2	Idle-Speed Control Valve Closing Solenoid Control Circuit Signal Low
P1504	2	Idle-Speed Control Valve Closing Solenoid Control Open Circuit
P1506	29	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal High
P1507	29	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal Low
P1508	29	Idle-Speed Control Valve Opening Solenoid Control Open Circuit
P1525	67	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1525	72	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1531	21	'B' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1531	22	'B' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1585	149	Misfire Detected with Low Fuel
P1602	122	Control Module Self-Test, Control Module Defective
P1602	231	Control Module Self-Test, Control Module Defective
P1634	107	Throttle Valve Adaptation Spring Test Failed
P1636	45	Throttle Valve Control Circuit
P1637	107	Throttle Valve Position Control, Control Deviation
P1637	230	Throttle Valve Position Control, Control Deviation
P1639	107	Throttle Valve Position Control Throttle Stuck Permanently
P1640	155	Internal Control Module RAM/ROM Error
P1640	156	Internal Control Module RAM/ROM Error



P1663	155	EWS (Electronic Immobilizer) Rolling Code Faulty Storage in EEPROM
P1663	156	EWS (Electronic Immobilizer) Rolling Code Faulty Storage in EEPROM

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## ECU: MSS54, Engine: S54, from 01.09.02 till

PCode BMW-FC PCode text

P0011	184	'A' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)
P0012	184	'A' Camshaft Position Timing Over-Retarded (Bank 1)
P0014	185	'B' Camshaft Position Timing Over-Advanced or System Performance (Bank 1)
P0015	185	'B' Camshaft Position Timing Over-Retarded (Bank 1)
P0017	162	Crankshaft Position - Camshaft Position Correlation (Bank 1 Sensor B)
P0030	37	HO2S Heater Control Circuit (Bank 1 Sensor 1)
P0031	37	HO2S Heater Control Circuit Low (Bank 1 Sensor 1)
P0032	37	HO2S Heater Control Circuit High (Bank 1 Sensor 1)
P0036	39	HO2S Heater Control Circuit (Bank 1 Sensor 2)
P0037	39	HO2S Heater Control Circuit Low (Bank 1 Sensor 2)
P0038	39	HO2S Heater Control Circuit High (Bank 1 Sensor 2)
P0050	38	HO2S Heater Control Circuit (Bank 2 Sensor 1)
P0051	38	HO2S Heater Control Circuit Low (Bank 2 Sensor 1)
P0052	38	HO2S Heater Control Circuit High (Bank 2 Sensor 1)
P0056	40	HO2S Heater Control Circuit (Bank 2 Sensor 2)
P0057	40	HO2S Heater Control Circuit Low (Bank 2 Sensor 2)
P0058	40	HO2S Heater Control Circuit High (Bank 2 Sensor 2)
P0101	73	Mass or Volume Air Flow Circuit Range/Performance
P0102	41	Mass or Volume Air Flow Circuit Low Input
P0103	41	Mass or Volume Air Flow Circuit High Input
P0111	77	Intake Air Temperature Sensor 1 Circuit Range/Performance
P0112	77	Intake Air Temperature Sensor 1 Circuit Low
P0113	77	Intake Air Temperature Sensor 1 Circuit High
P0116	105	Engine Coolant Temperature Circuit Range/Performance
P0117	78	Engine Coolant Temperature Circuit Low
P0118	78	Engine Coolant Temperature Circuit High
P0121	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0121	120	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0121	121	Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance
P0122	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit Low
P0123	118	Throttle/Pedal Position Sensor/Switch 'A' Circuit High
P0125	105	Insufficient Coolant Temperature for Closed Loop Fuel Control
P0128	105	Coolant Thermostat (Coolant Temperature Below Thermostat Regulating Temperature)
P0131	13	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 1)
P0132	13	O2 Sensor Circuit High Voltage (Bank 1 Sensor 1)
P0133	214	O2 Sensor Circuit Slow Response (Bank 1 Sensor 1)
P0134	13	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)
P0135	37	O2 Sensor Heater Circuit (Bank 1 Sensor 1)
P0137	87	O2 Sensor Circuit Low Voltage (Bank 1 Sensor 2)
P0138	87	O2 Sensor Circuit High Voltage (Bank 1 Sensor 2)
P0139	92	O2 Sensor Circuit Slow Response (Bank 1 Sensor 2)
P0140	87	O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 2)
P0141	39	O2 Sensor Heater Circuit (Bank 1 Sensor 2)
P0151	12	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 1)
P0152	12	O2 Sensor Circuit High Voltage (Bank 2 Sensor 1)
P0153	215	O2 Sensor Circuit Slow Response (Bank 2 Sensor 1)

P0154	12	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 1)
P0155	38	O2 Sensor Heater Circuit (Bank 2 Sensor 1)
P0157	88	O2 Sensor Circuit Low Voltage (Bank 2 Sensor 2)
P0158	88	O2 Sensor Circuit High Voltage (Bank 2 Sensor 2)
P0159	93	O2 Sensor Circuit Slow Response (Bank 2 Sensor 2)
P0160	88	O2 Sensor Circuit No Activity Detected (Bank 2 Sensor 2)
P0161	40	O2 Sensor Heater Circuit (Bank 2 Sensor 2)
P0171	144	System Too Lean (Bank 1)
P0171	174	System Too Lean (Bank 1)
P0172	144	System Too Rich (Bank 1)
P0172	174	System Too Rich (Bank 1)
P0174	145	System Too Lean (Bank 2)
P0174	175	System Too Lean (Bank 2)
P0175	145	System Too Rich (Bank 2)
P0175	175	System Too Rich (Bank 2)
P0200	183	Injector Circuit/Open
P0201	3	Injector Circuit/Open - Cylinder 1
P0202	5	Injector Circuit/Open - Cylinder 2
P0203	4	Injector Circuit/Open - Cylinder 3
P0204	33	Injector Circuit/Open - Cylinder 4
P0205	31	Injector Circuit/Open - Cylinder 5
P0206	32	Injector Circuit/Open - Cylinder 6
P0216	182	Injector/Injection Timing Control Circuit
P0221	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Range/Performance
P0222	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit Low
P0223	119	Throttle/Pedal Position Sensor/Switch 'B' Circuit High
P0261	3	Cylinder 1 Injector Circuit Low
P0262	3	Cylinder 1 Injector Circuit High
P0264	5	Cylinder 2 Injector Circuit Low
P0265	5	Cylinder 2 Injector Circuit High
P0267	4	Cylinder 3 Injector Circuit Low
P0268	4	Cylinder 3 Injector Circuit High
P0270	33	Cylinder 4 Injector Circuit Low
P0271	33	Cylinder 4 Injector Circuit High
P0273	31	Cylinder 5 Injector Circuit Low
P0274	31	Cylinder 5 Injector Circuit High
P0276	32	Cylinder 6 Injector Circuit Low
P0277	32	Cylinder 6 Injector Circuit High
P0300	213	Random/Multiple Cylinder Misfire Detected
P0301	205	Cylinder 1 Misfire Detected
P0302	206	Cylinder 2 Misfire Detected
P0303	207	Cylinder 3 Misfire Detected
P0304	208	Cylinder 4 Misfire Detected
P0305	209	Cylinder 5 Misfire Detected
P0306	210	Cylinder 6 Misfire Detected
P0313	149	Misfire Detected with Low Fuel
P0316	213	Engine Misfire Detected on Startup (First 1000 Revolutions)
P0335	16	Crankshaft Position Sensor 'A' Circuit
P0340	7	Camshaft Position Sensor 'A' Circuit (Bank 1 or Single Sensor)
P0363	204	Misfire Detected - Fueling Disabled
P0365	10	Camshaft Position Sensor 'B' Circuit (Bank 1)
P0394	15	Camshaft Position Sensor 'B' Circuit Intermittent (Bank 2)
P0411	170	Secondary Air Injection System Incorrect Flow Detected

P0413	63	Secondary Air Injection System Switching Valve A Circuit Open
P0414	63	Secondary Air Injection System Switching Valve A Circuit Shorted
P0418	19	Secondary Air Injection System Control 'A' Circuit
P0420	178	Catalyst System Efficiency Below Threshold (Bank 1)
P0430	179	Catalyst System Efficiency Below Threshold (Bank 2)
P0441	232	Evaporative Emission System Incorrect Purge Flow
P0442	180	Evaporative Emission System Leak Detected (small leak)
P0443	36	Evaporative Emission System Purge Control Valve Circuit
P0444	36	Evaporative Emission System Purge Control Valve Circuit Open
P0445	36	Evaporative Emission System Purge Control Valve Circuit Shorted
P0491	170	Secondary Air Injection System Insufficient Flow (Bank 1)
P0492	170	Secondary Air Injection System Insufficient Flow (Bank 2)
P0500	135	Vehicle Speed Sensor 'A'
P0505	136	Idle Air Control System
P0506	128	Idle Air Control System RPM Lower Than Expected
P0507	128	Idle Air Control System RPM Higher Than Expected
P0601	150	Internal Control Module Memory Check Sum Error
P0601	157	Internal Control Module Memory Check Sum Error
P0604	150	Internal Control Module Random Access Memory (RAM) Error
P0604	157	Internal Control Module Random Access Memory (RAM) Error
P0605	150	Internal Control Module Read Only Memory (ROM) Error
P0605	157	Internal Control Module Read Only Memory (ROM) Error
P0606	30	ECM/PCM Processor
P0606	107	ECM/PCM Processor
P0606	158	ECM/PCM Processor
P0606	163	ECM/PCM Processor
P1121	111	Pedal Position Sensor 1 Range/Performance Problem
P1122	60	Pedal Position Sensor 1 Low Input
P1123	60	Pedal Position Sensor 1 High Input
P1178	216	O2 Sensor Signal Circuit Slow Switching from Rich to Lean (Bank 1 Sensor 1)
P1179	217	O2 Sensor Signal Circuit Slow Switching from Rich to Lean (Bank 2 Sensor 1)
P1185	219	HO2S Sensor Voltage Excursion Electrical (Bank 2 Sensor 1)
P1221	112	Pedal Position Sensor 2 Range/Performance Problem
P1222	61	Pedal Position Sensor 2 Low Input
P1223	61	Pedal Position Sensor 2 High Input
P1342	205	Misfire During Start Cylinder 1
P1343	196	Misfire Cylinder 1 with Fuel Cut-Off
P1344	206	Misfire During Start Cylinder 2
P1345	197	Misfire Cylinder 2 with Fuel Cut-Off
P1346	207	Misfire During Start Cylinder 3
P1347	198	Misfire Cylinder 3 with Fuel Cut-Off
P1348	208	Misfire During Start Cylinder 4
P1349	199	Misfire Cylinder 4 with Fuel Cut-Off
P1350	209	Misfire during Start Cylinder 5
P1351	200	Misfire Cylinder 5 with Fuel Cut-Off
P1352	210	Misfire during Start Cylinder 6
P1353	201	Misfire Cylinder 6 with Fuel Cut-Off
P1434	176	Diagnostic Module Tank Leakage (DM-TL)
P1446	127	Diagnostic Module Tank Leakage (DM-TL) Pump Control Circuit Signal High
P1447	127	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High during Switching Solenoid Test
P1448	127	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too Low
P1449	127	Diagnostic Module Tank Leakage (DM-TL) Pump Current Too High
P1450	27	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Open Circuit

P1451	27	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal Low
P1452	27	Diagnostic Module Tank Leakage (DM-TL) Switching Solenoid Control Circuit Signal High
P1500	136	Idle-Speed Control Valve Stuck Open
P1501	136	Idle-Speed Control Valve Stuck Closed
P1502	2	Idle-Speed Control Valve Closing Solenoid Control Circuit Signal High
P1503	2	Idle-Speed Control Valve Closing Solenoid Control Circuit Signal Low
P1504	2	Idle-Speed Control Valve Closing Solenoid Control Open Circuit
P1506	29	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal High
P1507	29	Idle-Speed Control Valve Opening Solenoid Control Circuit Signal Low
P1508	29	Idle-Speed Control Valve Opening Solenoid Control Open Circuit
P1525	67	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1525	72	'A' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1531	21	'B' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1531	22	'B' Camshaft Position Actuator Control Open Circuit (Bank 1)
P1602	122	Control Module Self-Test, Control Module Defective
P1603	195	Control Module Self-Test, Torque Monitoring
P1634	107	Throttle Valve Adaptation Spring Test Failed
P1636	45	Throttle Valve Control Circuit
P1637	107	Throttle Valve Position Control, Control Deviation
P1637	230	Throttle Valve Position Control, Control Deviation
P1639	107	Throttle Valve Position Control Throttle Stuck Permanently
P1640	155	Internal Control Module RAM/ROM Error
P1640	156	Internal Control Module RAM/ROM Error
P1663	155	EWS (Electronic Immobilizer) Rolling Code Faulty Storage in EEPROM
P1663	156	EWS (Electronic Immobilizer) Rolling Code Faulty Storage in EEPROM

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