DIORM-16

## DIAGNOSTIC TROUBLE CODE CHART

HINT:

Parameters listed in the chart may not be exactly the same as your reading due to the type of instrument or other factors.

If a malfunction code is displayed during the DTC check in check mode, check the circuit for the codes listed in the table below. For details of each code, turn to the page referred to under the "See page" for the respective "DTC No." in the DTC chart. 🕗

## **SAE CONTROLLED**

DTC No. (See page)	Detection Item	Trouble Area	MIL* <sup>1</sup>	Memory
P0100 (DI-21)	Mass Air Flow Circuit Malfunction	Open or short in mass air flow meter circuit  Mass air flow meter  ECM	0	0
P0101 (DI-25)	Mass Air Flow Circuit Range/ Performance Problem	Mass air flow meter	0	0
P0110 (DI-26)	Intake Air Temp. Circuit Malfunction	Open or short in intake air temp. sensor circuit Intake air temp. sensor (built into mass air flow meter)  ECM	0	0
P0115 (DI-30)	Engine Coolant Temp. Circuit Malfunction	Open or short in engine coolant temp. sensor circuit Engine coolant temp. sensor  ECM	0	0
P0116 (DI-34)	Engine Coolant Temp. Circuit Range/Performance Problem	Cooling system     Engine coolant temp. sensor	0	0
P0120 (DI-36)	Throttle/Pedal Position Sensor/ Switch "A" Circuit Malfunction	Open or short in throttle position sensor circuit Throttle position sensor  ECM	0	0
P0121 (DI-41)	Throttle/Pedal Position Sensor/ Switch "A" Circuit Range/Perfor- mance Problem	Throttle position sensor	0	0
P0125 (DI-42)	Insufficient Coolant Temp. for Closed Loop Fuel Control	Open or short in A/F sensor (bank 1 sensor 1) circuit A/F sensor (bank 1 sensor 1) Air induction system Fuel pressure Injector Gas leakage on exhaust system PCV valve and hose ECM	0	0
P0128 (DI-47)	Thermostat Malfunction	Thermostat Cooling system Engine Coolant temp. sensor ECM	0	0
P0136 (DI-48)	Oxygen Sensor Circuit Malfunction (Bank 1 Sensor 2)	Open or short in heated oxygen sensor circuit     Heated oxygen sensor	0	0
P0141 (DI-50)	Oxygen Sensor Heater Circuit Malfunction (Bank 1 Sensor 2)	Same as DTC No. P0135	0	0

Author: Date: 189

P0171 (DI-52)  System too Lean (Fuel Trim)  P0172 (DI-52)  P0172 (DI-52)  P0172 (DI-52)  System too Rich (Fuel Trim)  P0173 (DI-52)  P0174 (DI-52)  P0175 (DI-52)  System too Rich (Fuel Trim)  P0177 (DI-52)  P0177 (DI-52)  P0178 (DI-57)  P0179 (DI-57)  P0179					
P0172 (DI-52) System too Rich (Fuel Trim) P0300 Random/Multiple Cylinder Misfire P0301 (DI-57) P0301 (DI-57) P0302 (DI-57) P0303 (DI-57) P0303 (DI-57) P0304 (DI-57) Cylinder 3 Misfire Detected P0305 (DI-57) P0305		System too Lean (Fuel Trim)	<ul> <li>Injector blockage</li> <li>Mass air flow meter</li> <li>Engine coolant temp. sensor</li> <li>Fuel pressure</li> <li>Gas leakage on exhaust system</li> <li>Open or short in A/F sensor (bank 1 sensor 1) circuit</li> <li>A/F sensor (bank 1 sensor 1)</li> <li>PCV valve and hose</li> </ul>	0	0
CDI-57   Detected		System too Rich (Fuel Trim)	Mass air flow meter     Engine coolant temp. sensor     Ignition system     Fuel pressure     Gas leakage on exhaust system     Open or short in A/F sensor (bank 1 sensor 1) circuit     A/F sensor (bank 1 sensor 1)	0	0
CDI-57   Detected	P0300	Random/Multiple Cylinder Misfire			
P0301 (DI-57) Cylinder 1 Misfire Detected  P0302 (DI-57) Cylinder 2 Misfire Detected  P0303 (DI-57) Cylinder 3 Misfire Detected  P0304 (DI-57) Cylinder 4 Misfire Detected  (DI-57) Cylinder 4 Misfire Detected  (DI-57) Cylinder 5 Misfire Detected  (DI-57) Cylinder 5 Misfire Detected  (DI-57) Cylinder 5 Misfire Detected  (DI-57) Cylinder 6 Misfire Detected  (DI-57) Cylinder 6 Misfire Detected  (DI-57) Cylinder 6 Misfire Detected  (DI-63) Cylinder 6 Misfire Detected  (DI-63) Cylinder 6 Misfire Detected  P0325 Knock Sensor 1 Circuit Malfunction (Bank 1)  P0330 Knock Sensor 2 Circuit Malfunction (Bank 2)  P0331 Crankshaft Position Sensor "A"  (DI-68) Crankshaft Position Sensor "A"  (DI-66) Crankshaft Position Sensor Circuit (DI-68) Malfunction  P0340 Carahshaft Position Sensor Circuit (DI-68) Malfunction  P0420 Catalyst System Efficiency Below Threshold (Bank 1)  - Connector connector  - (Inpictor  - (Inpict		· · ·	• Onen or short in engine wire		
Cylinder 2 Misfire Detected   Injector		Cylinder 1 Misfire Detected	Connector connection		
P0303		Cylinder 2 Misfire Detected	• Injector		
P0304 (DI-57)  P0305 (DI-57)  P0306 (DI-57)  P0325 (DI-63)  Experimental position Sensor 1 Circuit Malfunction  P0330 (DI-63)  Experimental position Sensor 2 Circuit Malfunction  P0335 (DI-66)  P0335 (DI-66)  Experimental position Sensor 2 Circuit Malfunction  P0340 (DI-68)  P0340 (DI-68)  Experimental position Sensor Circuit Malfunction  Experimental position Sensor Circuit Company All position Sensor Circ		Cylinder 3 Misfire Detected	Mass air flow meter	<b>○*2</b>	0
PCV valve and hose   PCV valve and hose   PCV valve and hose   PCV valve and hose   PCM val		Cylinder 4 Misfire Detected	Compression pressure		
P0306 (DI-57) Cylinder 6 Misfire Detected  P0325 Knock Sensor 1 Circuit Malfunction (Bank 1)  P0330 Knock Sensor 2 Circuit Malfunction (DI-63)  P0330 Corankshaft Position Sensor "A" (DI-66) Circuit Malfunction  P0340 Camshaft Position Sensor Circuit (DI-68) Malfunction  P0340 Catalyst System Efficiency Be- (DI-70) Corankshaft Sensor (Bank 2)  P0420 Catalyst System Efficiency Be- (DI-70) Corankshaft (DI-68) Cylinder 6 Misfire Detected  P0325 Knock Sensor 1 Circuit Malfunction  P0420 Catalyst System Efficiency Be- (DI-70) Cylinder 6 Misfire Detected  P0420 Catalyst System Efficiency Be- (DI-70) Cylinder 6 Misfire Detected  P0420 Cylinder 6 Misfire Detected  P0420 Catalyst System Efficiency Be- (DI-70) Cylinder 6 Misfire Detected  P0420 Cylinder 6 Misfire Detected  P0420 Catalyst System Efficiency Be- (DI-70) Cylinder 6 Misfire Detected  P0420 Cylinder 6 Misfire Detected  P0420 Cylinder 6 Misfire Detected  P0420 Catalyst System Efficiency Be- (DI-70) Cylinder 6 Misfire Detected  P0420 Cylinder 6 Misfire Detected  P0420 Catalyst System Efficiency Be- (DI-70) Cylinder 6 Misfire Detected  P0420 Cylinder 6 Misfire Detected  P0420 Catalyst System Efficiency Be- (DI-70) Cylinder 6 Misfire Detected  P0420 Catalyst System Efficiency Be- (DI-70) Cylinder 6 Misfire Detected  P0420 Catalyst System Efficiency Be- (DI-70) Cylinder 6 Misfire Detector  P0420 Catalyst System Efficiency Be- (DI-70) Catalyst System Efficiency Be- (DI-70) Catalyst System Efficiency Be- (DI-70) Cylinder 6 Misfire Detector  P0420 Catalyst System Efficiency Be- (DI-70) Catalyst System Efficien		Cylinder 5 Misfire Detected	PCV valve and hose		
Knock Sensor 1 Circuit Malfunction   Knock Sensor 2 Circuit Malfunction (DI-63)   Knock Sensor 2 Circuit Malfunction   Copen or short in knock sensor 2 circuit   Crankshaft position sensor circuit   Crankshaft position sensor circuit   Crankshaft position sensor   Crankshaft timing pulley   ECM		Cylinder 6 Misfire Detected	• ECM		
P0330 Knock Sensor 2 Circuit Malfunction    P0335 Crankshaft Position Sensor "A"   (DI-66) Circuit Malfunction    P0340 Camshaft Position Sensor Circuit (DI-68) Malfunction    P0420 Catalyst System Efficiency Be-(DI-70) low Threshold (Bank 1)    P0420 Knock Sensor 2 Circuit Malfunction    • Knock sensor 2 (looseness)   • Crankshaft position sensor circuit   • Crankshaft position sensor circuit   • Crankshaft timing pulley   • Camshaft position sensor circuit   • Camshaft position sensor			Knock sensor 1 (looseness)	0	0
P0335 Crankshaft Position Sensor "A" Circuit Malfunction  • Crankshaft position sensor • Crankshaft timing pulley • ECM  • Open or short in camshaft position sensor circuit • Camshaft position sensor circuit • Camshaft position sensor • RH camshaft timing pulley • ECM  • Ogen or short in camshaft position sensor circuit • Camshaft position sensor • RH camshaft timing pulley • ECM  • Gas leakage on exhaust system • A/F sensor (bank 1 sensor 1) • Heated oxygen sensor (bank 1 sensor 2)			Knock sensor 2 (looseness)	0	0
P0340 Camshaft Position Sensor Circuit (DI-68) Malfunction PA420 Catalyst System Efficiency Below Threshold (Bank 1) Camshaft to position sensor RH camshaft timing pulley ECM  • Camshaft position sensor RH camshaft timing pulley • ECM  • Gas leakage on exhaust system • A/F sensor (bank 1 sensor 1) • Heated oxygen sensor (bank 1 sensor 2)			Crankshaft position sensor     Crankshaft timing pulley	0	0
P0420 Catalyst System Efficiency Be-   (DI-70)			Camshaft position sensor     RH camshaft timing pulley	0	0
			A/F sensor (bank 1 sensor 1)	0	0

Author: Date: 190

P0440 (DI-73)	Evaporative Emission Control System Malfunction	Hose or tube cracked, holed, damaged or loose seal ((3) in Fig. 1)  Fuel tank cap incorrectly installed  Fuel tank cap cracked or damaged  Vacuum hose cracked, holed, blocked, damaged or disconnected ((1) or (2) in Fig. 1)  Fuel tank cracked, holed or damaged  Charcoal canister cracked, holed or damaged  Open or short in vapor pressure sensor circuit  Vapor pressure sensor  ECM	0	0
P0441 (DI-83)	Evaporative Emission Control System Incorrect Purge Flow	Vacuum hose cracks, holed, damaged or disconnected ((1), (4), (5), (6) and (7) in Fig. 1)  Open or short in vapor pressure sensor circuit  Vapor pressure sensor  Open or short in VSV circuit for EVAP  VSV for EVAP  Open or short in VSV circuit for vapor pressure sensor  VSV for vapor pressure sensor  Charcoal canister cracks, holed or damaged  ECM	0	0
P0442 (DI-73)	Evaporative Emission Control System Leak detected (Small Leak)	• Same as DTC No. P0440	0	0
P0446 (DI-83)	Evaporative Emission Control System Vent Control Malfunction	Vacuum hose cracks, holed, damaged or disconnected ((1), (4), (5), (6) and (7) in Fig. 1)  Open or short in vapor pressure sensor circuit  Vapor pressure sensor  Open or short in VSV circuit for EVAP  VSV for EVAP  Open or short in VSV circuit for vapor pressure sensor  VSV for vapor pressure sensor  Charcoal canister cracks, holed or damaged  ECM	0	0
P0450 (DI-101)	Evaporative Emission Control System Pressure Sensor Mal- function Evaporative Emission Control System Pressure Sensor Range/	Open or short in vapor pressure sensor circuit  Vapor pressure sensor  ECM	0	0
(DI-101) P0500 (DI-103)	Performance  Vehicle Speed Sensor Malfunction	Speedometer cable     Open or short in speed signal circuit     ECM	0	0
P0505 (DI-105)	Idle Control System Malfunction	Air induction system     Electric throttle control system     PCV valve and hose	0	0

## MANUFACTURER CONTROLLED

DTC No. (See page)	Detection Item	Trouble Area	MIL*	Memory
P1120 (DI-107)	Accelerator Pedal Position Sensor Circuit Malfunction	Open or short in accelerator pedal position sensor circuit     Accelerator pedal position sensor     ECM	0	0

2002 4RUNNER (RM887U)

191 Author: Date:

<sup>\*1:</sup> MIL lights up.
\*2: MIL lights up or blinking.

P1121	Accelerator Pedal Position Sen-	A Application podel position appear		
(DI-112)	sor Range/Performance Problem	Accelerator pedal position sensor	0	0
P1125 (DI-113)	Throttle Control Motor Circuit Malfunction	Open or short in throttle control motor circuit     Throttle control motor     ECM	0	0
P1126 (DI-115)	Magnetic Clutch Circuit Malfunction	Open or short in magnetic clutch circuit  Magnetic clutch  ECM	0	0
P1127 (DI-118)	ETCS Actuator Power Source Circuit Malfunction	Open in ETCS power source circuit  ECM	0	0
P1128 (DI-121)	Throttle Control Motor Lock Mal- function	Throttle control motor Throttle body assembly	0	0
P1129 (DI-121)	Electric Throttle Control System Malfunction	Electric throttle control system     ECM	0	0
P1130 (DI-122)	A/F Sensor Circuit Range/Performance Malfunction (Bank 1 Sensor 1)	Open or short in A/F sensor circuit  A/F sensor  Air induction system  Fuel pressure  Injector  ECM	0	0
P1133 (DI-126)	A/F Sensor Circuit Response Malfunction (Bank 1 Sensor 1)	Open or short in A/F sensor circuit  A/F sensor  Air induction system  Fuel pressure  Injector  ECM	0	0
P1135 (DI-130)	A/F Sensor Heater Circuit Mal- function (Bank1 Sensor 1)	Open or short in heater circuit of A/F sensor A/F sensor heater  ECM	0	0
P1300 (DI-132)	Igniter Circuit Malfunction	<ul> <li>Ignition system</li> <li>Open or short in IGF and IGT circuits from igniter to ECM</li> <li>Igniter</li> <li>Ignition coil</li> <li>ECM</li> </ul>	0	0
P1335 (DI-137)	Crankshaft Position Sensor Circuit Malfunction (During engine running)	Open or short in crankshaft position sensor circuit Crankshaft position sensor Signal plate ECM	-	0
P1520 (DI-138)	Stop Light Switch Signal Mal- function	Short in stop light switch signal circuit     Stop light switch     ECM	0	0
P1600 (DI-141)	ECM BATT Malfunction	Open in back up power source circuit  ECM	0	0
P1633 (DI-143)	ECM Malfunction (ETCS Circuit)	•ECM	0	0
P1780 (DI-144)	Park/Neutral Position Switch Malfunction (Only for A/T)	Short in park/neutral position switch circuit     Park/neutral position switch     ECM	0	0

<sup>\*:</sup> O ... MIL lights up. - ... MIL does not light up.

2002 4RUNNER (RM887U)

Author: Date: 192