

ON-BOARD DIAGNOSIS [DSC (DYNAMIC STABILITY CONTROL)]

B3E040243000W12

On-Board Diagnostic (OBD) Test Description

- The OBD test inspects the integrity and function of the DSC and outputs the results when requested by the specific tests.
- On-board diagnostic test also:
 - Provides a quick inspection of the DSC usually performed at the start of each diagnostic procedure.
 - Provides verification after repairs to ensure that no other faults occurred during service.
- The OBD test is divided into 3 tests:
 - Read/clear diagnostic results, PID monitor and record and active command modes.

Read/clear diagnostic results

- This function allows you to read or clear DTCs in the DSC HU/CM memory.

PID/Data monitor and record

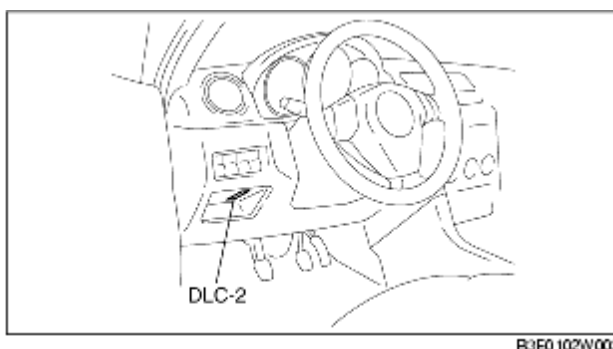
- This function allows you to access certain data values, input signals, calculated values, and system status information.

Active command modes

- This function allows you to control devices through the WDS or equivalent.

Reading DTCs Procedure

1. Connect the WDS or equivalent to the vehicle DLC-2 connector.



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2. Retrieve DTC using the WDS or equivalent.

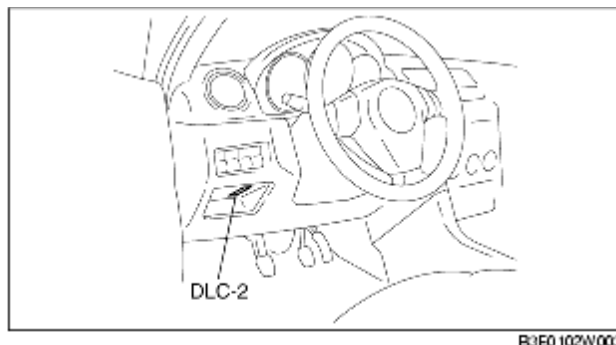
Clearing DTCs Procedures

1. After repairs have been made, perform the **DTCs reading procedure**.

2. Erase DTC using the WDS or equivalent.
3. Ensure that the customer's concern has been resolved.

PID/Data Monitor and Record Procedure

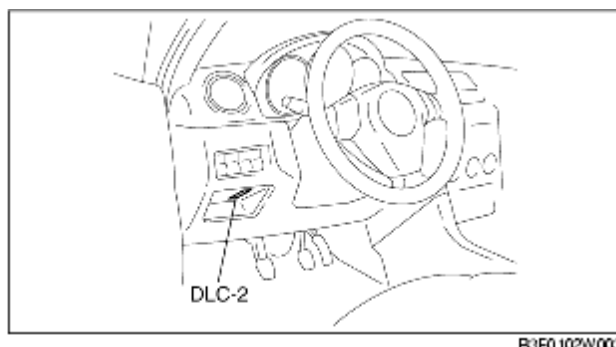
1. Connect the WDS or equivalent to the vehicle DLC-2 connector.



2. Access and monitor PIDs using the WDS or equivalent.

Active Command Modes Procedure

1. Connect the WDS or equivalent to the vehicle DLC-2 16-pin connector.



2. Turn the ignition switch to the ON position (engine off) or start the engine.
3. Activate active command modes using the WDS or equivalent.

DTC Table

DTC	System malfunction location	Page
WDS or equivalent		
B1317	Power supply system	(See DTC B1317, B1318 [DSC].)
B1318	Power supply system	(See DTC B1317, B1318 [DSC].)
B1342	DSC HU/CM (internal malfunction)	(See DTC B1342, C1267, C1730 [DSC].)
B2141	Vehicle data not recorded	(See DTC B2141 [DSC].)
B2741	Combined sensor (internal malfunction)	(See DTC B2741 [DSC].)
C1093	DSC OFF switch	(See DTC C1093 [DSC].)
C1095	Pump motor, motor relay	(See DTC C1095 [DSC].)

C1141	LF ABS sensor rotor	(See DTC C1141, C1142, C1143, C1144, C1233, C1234, C1235, C1236 [DSC].)
C1142	RF ABS sensor rotor	(See DTC C1141, C1142, C1143, C1144, C1233, C1234, C1235, C1236 [DSC].)
C1143	LR ABS sensor rotor	(See DTC C1141, C1142, C1143, C1144, C1233, C1234, C1235, C1236 [DSC].)
C1144	RR ABS sensor rotor	(See DTC C1141, C1142, C1143, C1144, C1233, C1234, C1235, C1236 [DSC].)
C1145	RF ABS wheel-speed sensor	(See DTC C1145, C1155, C1165, C1175 [DSC].)
C1155	LF ABS wheel-speed sensor	(See DTC C1145, C1155, C1165, C1175 [DSC].)
C1165	RR ABS wheel-speed sensor	(See DTC C1145, C1155, C1165, C1175 [DSC].)
C1175	LR ABS wheel-speed sensor	(See DTC C1145, C1155, C1165, C1175 [DSC].)
C1233	LF ABS wheel-speed sensor/ABS sensor rotor	(See DTC C1141, C1142, C1143, C1144, C1233, C1234, C1235, C1236 [DSC].)
C1234	RF ABS wheel-speed sensor/ABS sensor rotor	(See DTC C1141, C1142, C1143, C1144, C1233, C1234, C1235, C1236 [DSC].)
C1235	RR ABS wheel-speed sensor/ABS sensor rotor	(See DTC C1141, C1142, C1143, C1144, C1233, C1234, C1235, C1236 [DSC].)
C1236	LR ABS wheel-speed sensor/ABS sensor rotor	(See DTC C1141, C1142, C1143, C1144, C1233, C1234, C1235, C1236 [DSC].)
C1267	DSC HU/CM (internal malfunction)	(See DTC B1342, C1267, C1730 [DSC].)
C1277	Steering angle sensor	(See DTC C1277, C1295, C1306, C1307 [DSC].)
C1279	Combined sensor system	(See DTC C1279, C1280, C1281, C1282, C2778 [DSC].)
C1280	Combined sensor system	(See DTC C1279, C1280, C1281, C1282, C2778 [DSC].)
C1281	Combined sensor system	(See DTC C1279, C1280, C1281, C1282, C2778 [DSC].)
C1282	Combined sensor system	(See DTC C1279, C1280, C1281, C1282, C2778 [DSC].)
C1288	Brake fluid pressure sensor	(See DTC C1288, C1440 [DSC].)
C1295	Steering angle sensor	(See DTC C1277, C1295, C1306, C1307 [DSC].)
C1306	Steering angle sensor	(See DTC C1277, C1295, C1306, C1307 [DSC].)
C1307	Steering angle sensor	(See DTC C1277, C1295, C1306, C1307 [DSC].)
C1440	Brake fluid pressure sensor	(See DTC C1288, C1440 [DSC].)
C1446	Brake switch	(See DTC C1446 [DSC].)
C1470	TCS control system	(See DTC C1470, C1994 [DSC].)
C1730	Brake fluid pressure sensor power supply system	(See DTC B1342, C1267, C1730 [DSC].)
C1994	TCS/DSC control system	(See DTC C1470, C1994 [DSC].)
C2778	Combined sensor system	(See DTC C1279, C1280, C1281, C1282, C2778 [DSC].)
C2785	Combined sensor system (unperformed initialization procedure)	(See DTC C2785 [DSC].)
U1900	CAN line	(See DTC U1900, U2012, U2023, U2202, U2523 [DSC].)
U1901	Combined sensor system (CAN2 line malfunction)	(See DTC U1901, U2527 [DSC].)
U2012	CAN line	(See DTC U1900, U2012, U2023, U2202, U2523 [DSC].)
U2023	CAN line	(See DTC U1900, U2012, U2023, U2202, U2523 [DSC].)

U2202	CAN line	(See DTC U1900, U2012, U2023, U2202, U2523 [DSC].)
U2523	CAN line	(See DTC U1900, U2012, U2023, U2202, U2523 [DSC].)
U2527	Combined sensor system (CAN2 line malfunction)	(See DTC U1901, U2527 [DSC].)

PID/DATA Monitor Table

PID name (definition)	Unit/Condition	Operation condition (reference)	Action	DSC HU/CM terminal
BOO_ABS (Brake pedal switch input)	On/Off	<ul style="list-style-type: none"> Brake pedal depressed: On Brake pedal released: Off 	Inspect the brake switch.	-
CCNTABS (Number of continuous codes)	-	<ul style="list-style-type: none"> DTCs detected: 1-255 No DTCs detected: 0 	Perform the DTC inspection.	-
ESP_VOLT	V	<ul style="list-style-type: none"> Ignition switch at ON: Approx. 12.2 V Idling: Approx. 14.1 V 	Inspect the battery.	-
LAT_ACCL	G	<ul style="list-style-type: none"> Vehicle stopped or driving at constant speed: 0 G Cornering to right: Changes 0 G-positive Cornering to left: Changes 0 G-negative 	Inspect the combined sensor.	-
LF_WSPD (Left front ABS wheel-speed sensor input)	KPH, MPH	<ul style="list-style-type: none"> Vehicle stopped: 0 KPH, 0 MPH Vehicle running: vehicle speed 	Inspect the ABS wheel-speed sensor.	I, F
LR_WSPD (Left rear ABS wheel-speed sensor input)	KPH, MPH	<ul style="list-style-type: none"> Vehicle stopped: 0 KPH, 0 MPH Vehicle running: vehicle speed 	Inspect the ABS wheel-speed sensor.	AJ, AG
MPRETDR	kPa, psi, Bar	<ul style="list-style-type: none"> Brake pedal released: 0 kPa, 0 psi, 0 Bar Brake pedal depressed: Changes according to the brake fluid pressure 	Inspect the DSC HU/CM. (See DSC HU/CM INSPECTION.)	-
RF_WSPD (Right front ABS wheel-speed sensor input)	KPH, MPH	<ul style="list-style-type: none"> Vehicle stopped: 0 KPH, 0 MPH Vehicle running: vehicle speed 	Inspect the ABS wheel-speed sensor.	AP, AS
RR_WSPD (Right rear ABS wheel-speed sensor input)	KPH, MPH	<ul style="list-style-type: none"> Vehicle stopped: 0 KPH, 0 MPH Vehicle running: vehicle speed 	Inspect the ABS wheel-speed sensor.	O, R
SWA_POS	°	<ul style="list-style-type: none"> Steering wheel in neutral position (not turned): 0° Steering wheel turned to left: Changes 0°-negative Steering wheel turned to right: Changes 0°-positive 	Inspect the steering angle sensor.	AE, AN
TCYC_FS	On/Off	<ul style="list-style-type: none"> Solenoid valve activated: On Solenoid valve not 	Inspect the DSC HU/CM. (See DSC HU/CM	-

		activated: Off	INSPECTION.)	
TCYC_SW	Depressed/Not_Depressed	<ul style="list-style-type: none"> • DSC OFF switch depressed: Depressed • DSC OFF switch not depressed: Not_Depressed 	Inspect the DSC OFF switch.	AD
YAW_RATE	°/s	<ul style="list-style-type: none"> • Vehicle stopped or driving straight: 0 °/s • Cornering to left: Changes 0 °/s-negative • Cornering to right: Changes 0 °/s-positive 	Inspect the combined sensor.	-

Active Command Modes Table

Command name	Output part	Operation	Operating condition
LATACCEL	Combined sensor (lateral acceleration) initialization start-up	True/False	Ignition switch at ON
LF_INLET	LF inlet solenoid valve	On/Off	
LF_OUTLET	LF outlet solenoid valve		
LF_TC_PRV	LF stability control solenoid valve		
LF_TC_SWV	LF traction control solenoid valve		
LR_INLET	LR inlet solenoid valve		
LR_OUTLET	LR outlet solenoid valve		
MCYL_S_CAL	Brake fluid pressure sensor initialization start-up	True/False	
PMP_MOTOR	Pump motor	On/Off	
RF_INLET	RF inlet solenoid valve		
RF_OUTLET	RF outlet solenoid valve		
RF_TC_PRV	RF stability control solenoid valve		
RF_TC_SWV	RF traction control solenoid valve		
RR_INLET	RR inlet solenoid valve		
RR_OUTLET	RR outlet solenoid valve		