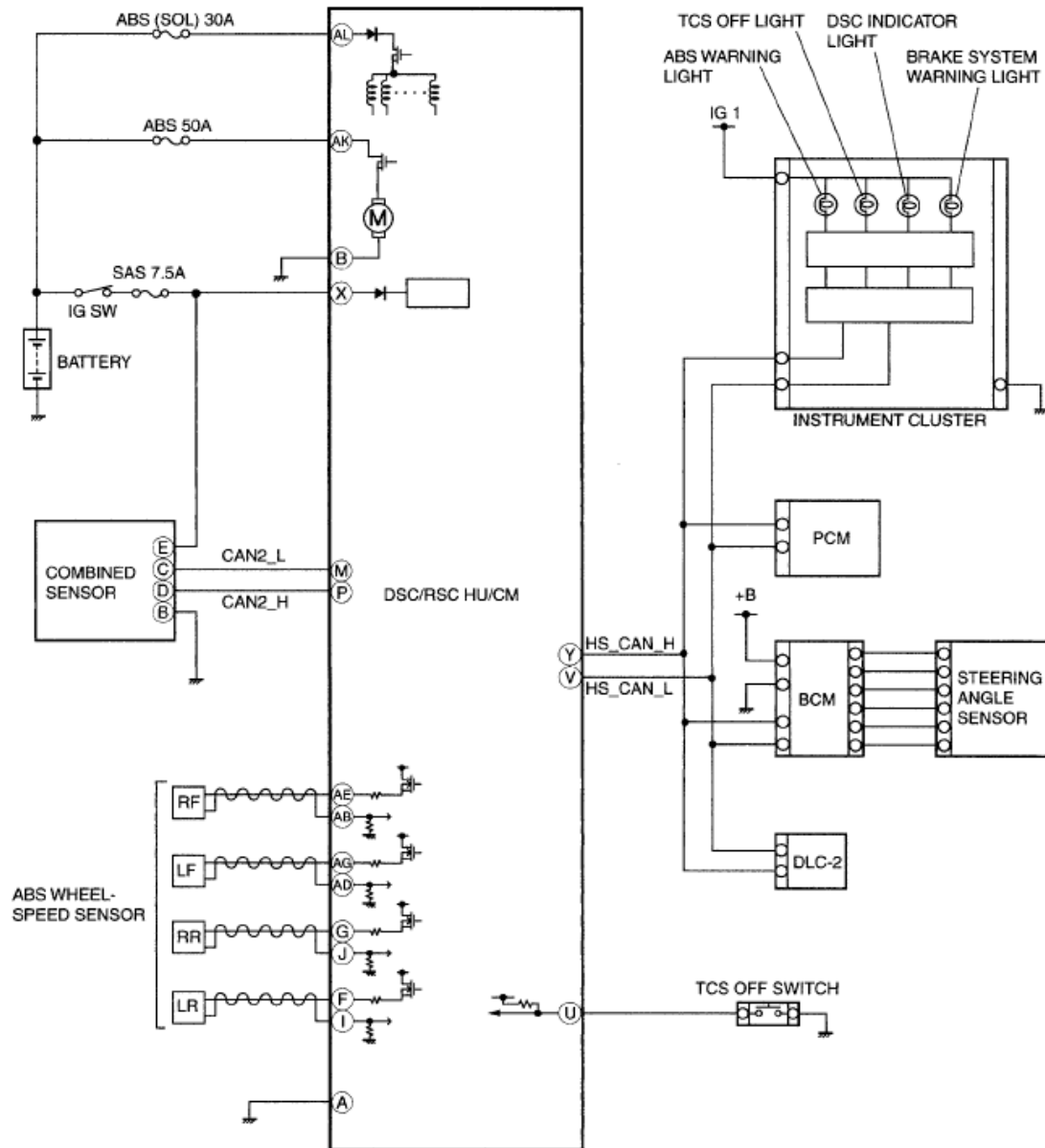


2008 BRAKES

On-Board Diagnostic (DSC/RSC) - Mazda CX-9

SYSTEM WIRING DIAGRAM [DSC/RSC]



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Fig. 1: Brakes - System Wiring Diagram (DSC/RSC)
 Courtesy of MAZDA MOTORS CORP.

ON-BOARD DIAGNOSTIC [DSC/RSC]

ON-BOARD DIAGNOSTIC (OBD) TEST DESCRIPTION

- The OBD test inspects the integrity and function of the DSC/RSC and outputs the results when requested by the specific tests.
- On-board diagnostic test also:
 - Provides a quick inspection of the DSC/RSC 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/RSC HU/CM memory.

PID/DATA MONITOR & 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 M-MDS.

READING DTCS PROCEDURE

1. Connect the M-MDS to the DLC-2.
2. After the vehicle is identified, select the following items from the initialization screen of the M-MDS.
 - When using the IDS (laptop PC)
 1. Select "Self Test".
 2. Select "Modules".
 3. Select "ABS".
 - When using the PDS (Pocket PC)
 1. Select "Module Tests".
 2. Select "ABS".
 3. Select "Self Test".
3. Verify the DTC according to the directions on the screen.

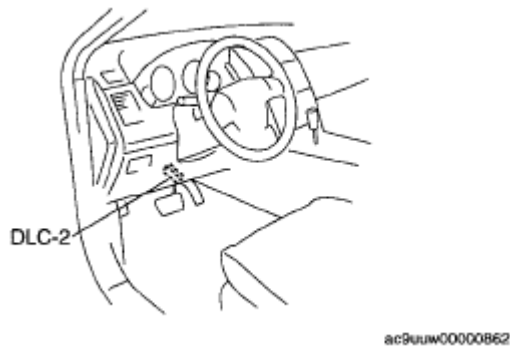
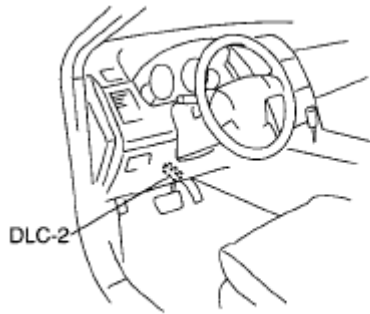


Fig. 2: Identifying DLC-2 Connector
Courtesy of MAZDA MOTORS CORP.

- If any DTCs are displayed, perform troubleshooting according to the corresponding DTC inspection.
4. After completion of repairs, clear all DTCs stored in the DSC/RSC. (See **CLEARING DTCS PROCEDURES.**)

CLEARING DTCS PROCEDURES

1. Connect the M-MDS to the DLC-2.
2. After the vehicle is identified, select the following items from the initialization screen of the M-MDS.
 - When using the IDS (laptop PC)
 1. Select "Self Test".
 2. Select "Modules".
 3. Select "ABS".
 - When using the PDS (Pocket PC)
 1. Select "Module Tests".
 2. Select "ABS".
 3. Select "Self Test".
3. Verify the DTC according to the directions on the screen.
4. Press the clear button on the DTC screen to clear the DTC.
5. Verify that no DTCs are displayed.

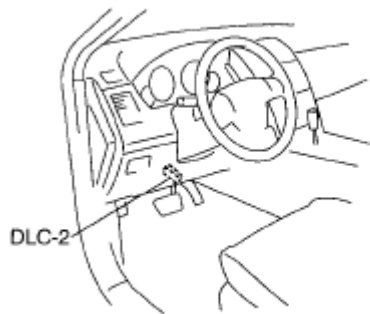


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Fig. 3: Identifying DLC-2 Connector
Courtesy of MAZDA MOTORS CORP.

PID/DATA MONITOR AND RECORD PROCEDURE

1. Connect the M-MDS to the DLC-2.
2. After the vehicle is identified, select the following items from the initialization screen of the M-MDS.
 - When using the IDS (laptop PC)
 1. Select "DataLogger".
 2. Select "Modules".
 3. Select "ABS".
 - When using the PDS (Pocket PC)
 1. Select "Module Tests".
 2. Select "ABS".
 3. Select "DataLogger".
3. Select the applicable PID from the PID table.
4. Verify the PID data according to the directions on the screen.



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Fig. 4: Identifying DLC-2 Connector
Courtesy of MAZDA MOTORS CORP.

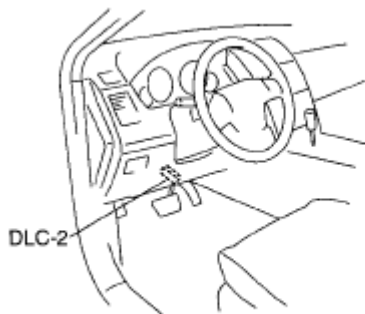
NOTE:

- The PID data screen function is used for monitoring the calculated

value of input/output signals in the module. Therefore, if the monitored value of the output parts is not within the specification, it is necessary to inspect the monitored value of input parts corresponding to the applicable output part control. In addition, because the system does not display an output part malfunction as an abnormality in the monitored value, it is necessary to inspect the output parts individually.

ACTIVE COMMAND MODES PROCEDURE

1. Connect the M-MDS to the DLC-2.
2. After the vehicle is identified, select the following items from the initialization screen of the M-MDS.
 - When using the IDS (laptop PC)
 1. Select "DataLogger".
 2. Select "Modules".
 3. Select "ABS".
 - When using the PDS (Pocket PC)
 1. Select "Module Tests".
 2. Select "ABS".
 3. Select "DataLogger".
3. Select the active command modes from the PID table.



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Fig. 5: Identifying DLC-2 Connector
Courtesy of MAZDA MOTORS CORP.

4. Perform the active command modes, inspect the operations for each parts.
 - If the operation of output parts cannot be verified after the active command mode inspection is performed, this could indicate the possibility of an open or short circuit, sticking, or operation malfunction in the output parts.

DTC TABLE

DTC CHART

2008 Mazda CX-9 Grand Touring

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DTC	System malfunction location	Page
B1317	Power supply system	(See <u>DTC B1317, B1318 [DSC/RSC].</u>)
B1318	Power supply system	(See <u>DTC B1317, B1318 [DSC/RSC].</u>)
B1342	DSC/RSC HU/CM system	(See <u>DTC B1342, C1730 [DSC/RSC].</u>)
B211B	Combined sensor system	(See <u>DTC B211B, C1279, C1280, C1281, C1282, C1516, C1517, C2769, C2770 [DSC/RSC].</u>)
C1095	Pump motor, motor relay system	(See <u>DTC C1095, C1096 [DSC/RSC].</u>)
C1096	Pump motor, motor relay system	(See <u>DTC C1095, C1096 [DSC/RSC].</u>)
C1115	Valve relay system	(See <u>DTC C1115, C1185 [DSC/RSC].</u>)
C1145	RF ABS wheel-speed sensor (open circuit) system	(See <u>DTC C1145, C1155, C1165, C1175 [DSC/RSC].</u>)
C1155	LF ABS wheel-speed sensor (open circuit) system	(See <u>DTC C1145, C1155, C1165, C1175 [DSC/RSC].</u>)
C1165	RR ABS wheel-speed sensor (open circuit) system	(See <u>DTC C1145, C1155, C1165, C1175 [DSC/RSC].</u>)
C1175	LR ABS wheel-speed sensor (open circuit) system	(See <u>DTC C1145, C1155, C1165, C1175 [DSC/RSC].</u>)
C1185	Valve relay system	(See <u>DTC C1115, C1185 [DSC/RSC].</u>)
C1194	LF outlet solenoid valve system	(See <u>DTC C1194, C1198, C1210, C1214, C1242, C1246, C1250, C1254, C1404, C1410, C1957, C1958 [DSC/RSC].</u>)
C1198	LF inlet solenoid valve system	(See <u>DTC C1194, C1198, C1210, C1214, C1242, C1246, C1250, C1254, C1404, C1410, C1957, C1958 [DSC/RSC].</u>)
C1210	RF outlet solenoid valve system	(See <u>DTC C1194, C1198, C1210, C1214, C1242, C1246, C1250, C1254, C1404, C1410, C1957, C1958 [DSC/RSC].</u>)
C1214	RF inlet solenoid valve system	(See <u>DTC C1194, C1198, C1210, C1214, C1242, C1246, C1250, C1254, C1404, C1410, C1957, C1958 [DSC/RSC].</u>)
C1222	ABS wheel-speed sensor system	(See <u>DTC C1222 [DSC/RSC].</u>)
C1233	LF ABS wheel-speed sensor/ABS sensor rotor system	(See <u>DTC C1233, C1234, C1235, C1236 [DSC/RSC].</u>)
C1234	RF ABS wheel-speed sensor/ABS sensor rotor system	(See <u>DTC C1233, C1234, C1235, C1236 [DSC/RSC].</u>)
C1235	RR ABS wheel-speed sensor/ABS sensor rotor system	(See <u>DTC C1233, C1234, C1235, C1236 [DSC/RSC].</u>)
C1236	LR ABS wheel-speed sensor/ABS sensor rotor system	(See <u>DTC C1233, C1234, C1235, C1236 [DSC/RSC].</u>)
C1242	LR outlet solenoid valve system	(See <u>DTC C1194, C1198, C1210, C1214, C1242, C1246, C1250, C1254, C1404, C1410, C1957, C1958 [DSC/RSC].</u>)

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C1246	RR outlet solenoid valve system	(See <u>DTC C1194, C1198, C1210, C1214, C1242, C1246, C1250, C1254, C1404, C1410, C1957, C1958 [DSC/RSC].</u>)
C1250	LR inlet solenoid valve system	(See <u>DTC C1194, C1198, C1210, C1214, C1242, C1246, C1250, C1254, C1404, C1410, C1957, C1958 [DSC/RSC].</u>)
C1254	RR inlet solenoid valve system	(See <u>DTC C1194, C1198, C1210, C1214, C1242, C1246, C1250, C1254, C1404, C1410, C1957, C1958 [DSC/RSC].</u>)
C1278	Steering angle sensor system	(See <u>DTC C1278, C1295, U2023 [DSC/RSC].</u>)
C1279	Combined sensor system	(See <u>DTC B211B, C1279, C1280, C1281, C1282, C1516, C1517, C2769, C2770 [DSC/RSC].</u>)
C1280	Combined sensor system	(See <u>DTC B211B, C1279, C1280, C1281, C1282, C1516, C1517, C2769, C2770 [DSC/RSC].</u>)
C1281	Combined sensor system	(See <u>DTC B211B, C1279, C1280, C1281, C1282, C1516, C1517, C2769, C2770 [DSC/RSC].</u>)
C1282	Combined sensor system	(See <u>DTC B211B, C1279, C1280, C1281, C1282, C1516, C1517, C2769, C2770 [DSC/RSC].</u>)
C1288	Brake fluid pressure sensor system	(See <u>DTC C1288 [DSC/RSC].</u>)
C1295	Steering angle sensor system	(See <u>DTC C1278, C1295, U2023 [DSC/RSC].</u>)
C1327	Brake fluid level sensor system	(See <u>DTC C1327 [DSC/RSC].</u>)
C1329	RF outlet solenoid valve coil system	(See <u>DTC C1329, C1330, C1331, C1332, C1333, C1334, C1335, C1336, C1527, C1528, C1530, C1531 [DSC/RSC].</u>)
C1330	LR outlet solenoid valve coil system	(See <u>DTC C1329, C1330, C1331, C1332, C1333, C1334, C1335, C1336, C1527, C1528, C1530, C1531 [DSC/RSC].</u>)
C1331	RR outlet solenoid valve coil system	(See <u>DTC C1329, C1330, C1331, C1332, C1333, C1334, C1335, C1336, C1527, C1528, C1530, C1531 [DSC/RSC].</u>)
C1332	LF outlet solenoid valve coil system	(See <u>DTC C1329, C1330, C1331, C1332, C1333, C1334, C1335, C1336, C1527, C1528, C1530, C1531 [DSC/RSC].</u>)
C1333	LR inlet solenoid valve coil system	(See <u>DTC C1329, C1330, C1331, C1332, C1333, C1334, C1335, C1336, C1527, C1528, C1530, C1531 [DSC/RSC].</u>)
C1334	LF inlet solenoid valve coil system	(See <u>DTC C1329, C1330, C1331, C1332, C1333, C1334, C1335, C1336, C1527, C1528, C1530, C1531 [DSC/RSC].</u>)
C1335	RF inlet solenoid valve coil system	(See <u>DTC C1329, C1330, C1331, C1332, C1333, C1334, C1335, C1336, C1527, C1528, C1530, C1531 [DSC/RSC].</u>)
C1336	RR inlet solenoid valve coil system	(See <u>DTC C1329, C1330, C1331, C1332, C1333, C1334, C1335, C1336, C1527, C1528, C1530, C1531 [DSC/RSC].</u>)

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		[DSC/RSC.]
C1404	RH traction control solenoid valve system	(See <u>DTC C1194, C1198, C1210, C1214, C1242, C1246, C1250, C1254, C1404, C1410, C1957, C1958</u> [DSC/RSC.])
C1410	LH traction control solenoid valve system	(See <u>DTC C1194, C1198, C1210, C1214, C1242, C1246, C1250, C1254, C1404, C1410, C1957, C1958</u> [DSC/RSC.])
C1446	Brake switch system	(See <u>DTC C1446</u> [DSC/RSC.])
C1516	Combined sensor system	(See <u>DTC B211B, C1279, C1280, C1281, C1282, C1516, C1517, C2769, C2770</u> [DSC/RSC.])
C1517	Combined sensor system	(See <u>DTC B211B, C1279, C1280, C1281, C1282, C1516, C1517, C2769, C2770</u> [DSC/RSC.])
C1527	RH traction control solenoid valve coil system	(See <u>DTC C1329, C1330, C1331, C1332, C1333, C1334, C1335, C1336, C1527, C1528, C1530, C1531</u> [DSC/RSC.])
C1528	LH traction control solenoid valve coil system	(See <u>DTC C1329, C1330, C1331, C1332, C1333, C1334, C1335, C1336, C1527, C1528, C1530, C1531</u> [DSC/RSC.])
C1530	RH stability control solenoid valve coil system	(See <u>DTC C1329, C1330, C1331, C1332, C1333, C1334, C1335, C1336, C1527, C1528, C1530, C1531</u> [DSC/RSC.])
C1531	LH stability control solenoid valve coil system	(See <u>DTC C1329, C1330, C1331, C1332, C1333, C1334, C1335, C1336, C1527, C1528, C1530, C1531</u> [DSC/RSC.])
C1730	DSC/RSC HU/CM system	(See <u>DTC B1342, C1730</u> [DSC/RSC.])
C1957	RH stability control solenoid valve system	(See <u>DTC C1194, C1198, C1210, C1214, C1242, C1246, C1250, C1254, C1404, C1410, C1957, C1958</u> [DSC/RSC.])
C1958	LH stability control solenoid valve system	(See <u>DTC C1194, C1198, C1210, C1214, C1242, C1246, C1250, C1254, C1404, C1410, C1957, C1958</u> [DSC/RSC.])
C1963	Combined sensor (Yaw rate sensor part) initial point correction error	(See <u>DTC C1963</u> [DSC/RSC.])
C1991	DSC/RSC sensor (abnormal initialization) system	(See <u>DTC C1991</u> [DSC/RSC.])
C2769	Combined sensor system	(See <u>DTC B211B, C1279, C1280, C1281, C1282, C1516, C1517, C2769, C2770</u> [DSC/RSC.])
C2770	Combined sensor system	(See <u>DTC B211B, C1279, C1280, C1281, C1282, C1516, C1517, C2769, C2770</u> [DSC/RSC.])
U0073	CAN system communication error	(See <u>DTC TABLE [MULTIPLEX COMMUNICATION SYSTEM]</u> .)
U0100	Communication error to PCM	(See <u>DTC TABLE [MULTIPLEX COMMUNICATION SYSTEM]</u> .)
U0140	Communication error to BCM	(See <u>DTC TABLE [MULTIPLEX COMMUNICATION</u>

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		SYSTEM] .)
U0155	Communication error to instrument cluster	(See DTC TABLE [MULTIPLEX COMMUNICATION SYSTEM] .)
U1901	Combined sensor system (CAN2 line malfunction)	(See DTC U1901 [DSC/RSC].)
U2023	Steering angle sensor system	(See DTC C1278, C1295, U2023 [DSC/RSC].)

PID/DATA MONITOR TABLE

PID/DATA MONITOR CHART

PID name (definition)	Unit/Condition	Operation condition (reference)	Action	DSC/RSC HU/CM terminal
ACCLMTR	G	<ul style="list-style-type: none"> Vehicle stopped or driving at constant speed: 0 G Vehicle is driving at a acceleration: changes 0 G-positive Vehicle is driving at a deceleration: changes 0 G-negative 	Inspect the combined sensor. (See COMBINED SENSOR INSPECTION .)	-
BOO_ABS (Brake pedal switch input)	Off/On	<ul style="list-style-type: none"> Brake pedal depressed: On Brake pedal released: Off 	Inspect the brake switch. (See BRAKE SWITCH INSPECTION .)	-
CCNTABS (Number of continuous codes)	-	Indicates number of DTC	Perform the DTC inspection. (See DTC TABLE.)	-
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. (See COMBINED SENSOR INSPECTION .)	-
		<ul style="list-style-type: none"> Brake pedal 		

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MCYLIP	Pa, psi	<p>released: 0 Pa, 0 psi</p> <ul style="list-style-type: none"> • Brake pedal depressed: Changes according to the brake fluid pressure 	<p>Inspect the brake fluid pressure sensor. (See <u>BRAKE FLUID PRESSURE SENSOR INSPECTION</u> .)</p>	-
PMP_MOTOR (Pump motor output state)	Off/On	<ul style="list-style-type: none"> • Pump motor activated: On • Pump motor not activated: Off 	<p>Inspect the DSC/RSC HU/CM. (See <u>DSC/RSC SYSTEM INSPECTION</u> .)</p>	-
SHIFT_P (Transaxle gear position input)	Off/On	<ul style="list-style-type: none"> • Selector lever position P: On • Other than those above: Off 	<p>Inspect the TCM. (See <u>TCM INSPECTION [AW6A-EL, AW6AX-EL]</u> .)</p>	-
PWR_RLY (Valve relay output state)	Off/On	<ul style="list-style-type: none"> • Valve relay activated: On • Valve relay not activated: Off 	<p>Inspect the DSC/RSC HU/CM. (See <u>DSC/RSC SYSTEM INSPECTION</u> .)</p>	-
ROLL_RATE (Roll rate sensor input)	°/s	<ul style="list-style-type: none"> • Vehicle stopped or driving straight: 0 c/s • Cornering to left: 0 °/s-positive • Cornering to right: 0 °/s-negative 	<p>Inspect the combined sensor. (See <u>COMBINED SENSOR INSPECTION</u> .)</p>	-
SWA_POS (Steering angle sensor input)	°	<ul style="list-style-type: none"> • Steering wheel neutral position (not turned): 0° • Steering wheel turned to left: Changes 0 °-negative • Steering wheel turned to right: Changes 0 °-positive 	<p>Inspect the steering angle sensor. (See <u>STEERING ANGLE SENSOR INSPECTION</u> .)</p>	-
TCS_OFF_SW (TCS OFF switch input)	Off/On	<ul style="list-style-type: none"> • TCS OFF switch is depressed: On • TCS OFF switch 	<p>Inspect the TCS OFF switch. (See <u>TCS OFF SWITCH INSPECTION</u> .)</p>	U

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		is released* Off		
V_LF_INL (Left front inlet solenoid valve output state)	Off/On	<ul style="list-style-type: none"> • Solenoid valve activated: On • Solenoid valve not activated: Off 	Inspect the DSC/RSC HU/CM. (See <u>DSC/RSC SYSTEM INSPECTION</u> .)	-
V_LF_OTL (Left front outlet solenoid valve output state)	Off/On	<ul style="list-style-type: none"> • Solenoid valve activated: On • Solenoid valve not activated: Off 	Inspect the DSC/RSC HU/CM. (See <u>DSC/RSC SYSTEM INSPECTION</u> .)	-
V_LR_INL (Left rear inlet solenoid valve output state)	Off/On	<ul style="list-style-type: none"> • Solenoid valve activated: On • Solenoid valve not activated: Off 	Inspect the DSC/RSC HU/CM. (See <u>DSC/RSC SYSTEM INSPECTION</u> .)	-
V_LR_OTL (Left rear outlet solenoid valve output state)	Off/On	<ul style="list-style-type: none"> • Solenoid valve activated: On • Solenoid valve not activated: Off 	Inspect the DSC/RSC HU/CM. (See <u>DSC/RSC SYSTEM INSPECTION</u> .)	-
V_RF_INL (Right front inlet solenoid valve output state)	Off/On	<ul style="list-style-type: none"> • Solenoid valve activated: On • Solenoid valve not activated: Off 	Inspect the DSC/RSC HU/CM. (See <u>DSC/RSC SYSTEM INSPECTION</u> .)	-
V_RF_OTL (Right front outlet solenoid valve output state)	Off/On	<ul style="list-style-type: none"> • Solenoid valve activated: On • Solenoid valve not activated: Off 	Inspect the DSC/RSC HU/CM. (See <u>DSC/RSC SYSTEM INSPECTION</u> .)	-
V_RR_INL (Right rear inlet solenoid valve output state)	Off/On	<ul style="list-style-type: none"> • Solenoid valve activated: On • Solenoid valve not activated: Off 	Inspect the DSC/RSC HU/CM. (See <u>DSC/RSC SYSTEM INSPECTION</u> .)	-
V_RR_OTL (Right rear outlet solenoid valve output state)	Off/On	<ul style="list-style-type: none"> • Solenoid valve activated: On • Solenoid valve not activated: Off 	Inspect the DSC/RSC HU/CM. (See <u>DSC/RSC SYSTEM INSPECTION</u> .)	-
V_STB_L (LH stability control solenoid valve output state)	Off/On	<ul style="list-style-type: none"> • Solenoid valve activated: On • Solenoid valve not activated: Off 	Inspect the DSC/RSC HU/CM. (See <u>DSC/RSC SYSTEM INSPECTION</u> .)	-
V_STB_R (RH stability control solenoid valve output state)	Off/On	<ul style="list-style-type: none"> • Solenoid valve activated: On • Solenoid valve not activated: Off 	Inspect the DSC/RSC HU/CM. (See <u>DSC/RSC SYSTEM INSPECTION</u> .)	-

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output state)		not activated: Off	<u>INSPECTION .)</u>	
V_TRC_L (LH traction control solenoid valve output state)	Off/On	<ul style="list-style-type: none"> • Solenoid valve activated: On • Solenoid valve not activated: Off 	Inspect the DSC/RSC HU/CM. (See <u>DSC/RSC SYSTEM INSPECTION .)</u>)	-
V_TRC_R (RH traction control solenoid valve output state)	Off/On	<ul style="list-style-type: none"> • Solenoid valve activated: On • Solenoid valve not activated: Off 	Inspect the DSC/RSC HU/CM. (See <u>DSC/RSC SYSTEM INSPECTION .)</u>)	-
WSPD_LF (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. (See <u>FRONT ABS WHEEL-SPEED SENSOR INSPECTION .)</u>)	AG, AD
WSPD_LR (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. (See <u>REAR ABS WHEEL-SPEED SENSOR INSPECTION [2WD] .)</u> (See <u>REAR ABS WHEEL-SPEED SENSOR INSPECTION [AWD] .)</u>)	F, I
WSPD_RF (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. (See <u>FRONT ABS WHEEL-SPEED SENSOR INSPECTION .)</u>)	AE, AB
WSPD_RR (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. (See <u>REAR ABS WHEEL-SPEED SENSOR INSPECTION [2WD] .)</u> (See <u>REAR ABS WHEEL-SPEED SENSOR INSPECTION [AWD] .)</u>)	G, J
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. (See <u>COMBINED SENSOR INSPECTION .)</u>)	-

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ACTIVE COMMAND MODES TABLE

ACTIVE COMMAND MODES CHART

Command name	Output part	Operation	Operating condition
PMP_MOTOR	Pump motor	Off/On	Ignition switch at ON
PWR_RLY	Valve relay		
SSR_INTL	DSC/RSC sensor initialization		
V_LF_INL	LF inlet solenoid valve		
V_LF_OTL	LF outlet solenoid valve		
V_LR_INL	LR inlet solenoid valve		
V_LR_OTL	LR outlet solenoid valve		
V_RF_INL	RF inlet solenoid valve		
V_RF_OTL	RF outlet solenoid valve		
V_RR_INL	RR inlet solenoid valve		
V_RR_OTL	RR outlet solenoid valve		
V_STB_L	LH stability control solenoid valve		
V_STB_R	RH stability control solenoid valve		
V_TRC_L	LH traction control solenoid valve		
V_TRC_R	RH traction control solenoid valve		

DTC B1317, B1318 [DSC/RSC]

NOTE:

- DTC B1317 is output when the battery voltage is 16 V or more. If DTC B1317 is output, inspect the battery and charging system for a malfunction before performing the malfunction diagnosis.

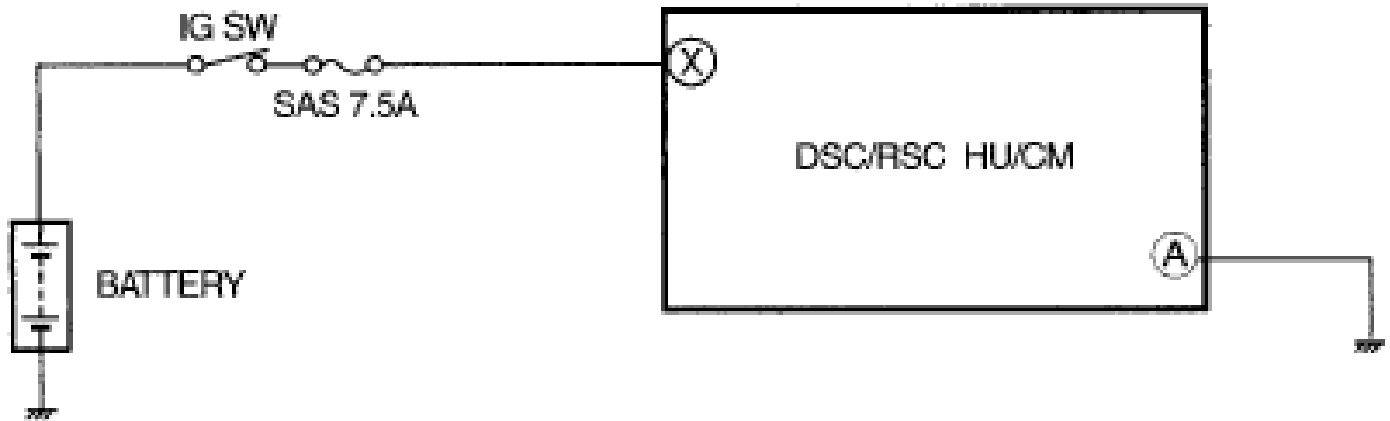
DTC B1317, B1318 [DSC/RSC] DETECTION CONDITION AND POSSIBLE CAUSE

DTC B1317, B1318	Power supply system
DETECTION CONDITION	<ul style="list-style-type: none"> • B1317 <ul style="list-style-type: none"> ○ DSC/RSC HU/CM terminal X voltage of 16 V or more continues for 3 s while driving at a vehicle speed of 8 km/h or more. ○ DSC/CM terminal X voltage of 18.5 V or more continues for 15 ms while driving at a vehicle speed of 8 km/h or more. • B1318 <ul style="list-style-type: none"> ○ DSC/RSC HU/CM terminal X voltage of 10 V or less continues for 3 s while driving at a vehicle speed of 8 km/h or more.
POSSIBLE CAUSE	<ul style="list-style-type: none"> • SAS 7.5A fuse malfunction • Open circuit or short to ground in the wiring harness between the DSC/RSC HU/CM terminal X and the battery • Open circuit or faulty ground in the wiring harness between the DSC/RSC HU/CM terminal A and the body ground

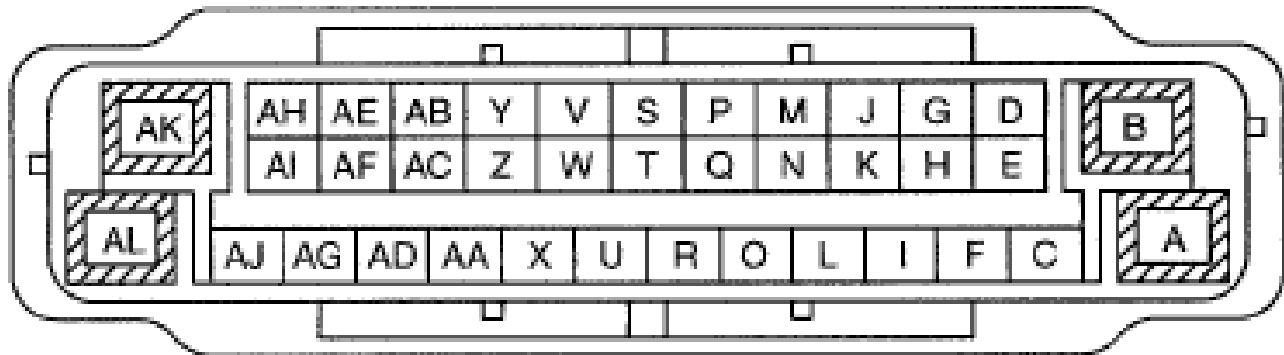
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- Battery deterioration
- Generator malfunction
- Poor connection at connectors (female terminal)



DSC/RSC HU/CM WIRING HARNESS-SIDE CONNECTOR



DIAGNOSTIC PROCEDURE

DTC B1317, B1318 DIAGNOSTIC PROCEDURE

STEP	INSPECTION	ACTION
1	INSPECT DSC/RSC HU/CM POWER SUPPLY FOR OPEN CIRCUIT <ul style="list-style-type: none"> • Start the engine. • Measure the voltage between 	Yes Go to the next step.
		No Repair or replace the wiring harness for open circuit between the DSC/RSC HU/CM and ground, then go

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	DSC/RSC HU/CM terminal X and ground. <ul style="list-style-type: none"> • Is the voltage approx. 10 V? 		to Step 3.
2	INSPECT DSC/RSC HU/CM GROUND FOR POOR GROUND OR OPEN CIRCUIT <ul style="list-style-type: none"> • Turn the ignition switch off. • Measure the resistance between ground and DSC/RSC HU/CM terminal A. • Is the resistance within 0-1 ohm ? 	Yes	Go to the next step.
		No	If there is no continuity: <ul style="list-style-type: none"> • Repair or replace the wiring harness for open circuit between the DSC/RSC HU/CM and ground, then go to the next step. If the resistance is not within 0-1 ohm : <ul style="list-style-type: none"> • Repair or replace the wiring harness for poor ground, then go to the next step.
3	VERIFY TROUBLESHOOTING COMPLETED <ul style="list-style-type: none"> • Make sure to reconnect all disconnected connectors. • Clear the DTC from the memory. (See <u>ON-BOARD DIAGNOSTIC [DSC/RSC].</u>) <ul style="list-style-type: none"> • Is the same DTC present? 	Yes	Replace the DSC/RSC HU/CM, then go to the next step. (See <u>DSC/RSC HU/CM REMOVAL/INSTALLATION</u> .)
		No	Go to the next step.
4	VERIFY AFTER REPAIR PROCEDURE <ul style="list-style-type: none"> • Are any other DTCs present? 	Yes	Go to the applicable DTC inspection. (See <u>ON-BOARD DIAGNOSTIC [DSC/RSC].</u>)
		No	DTC troubleshooting completed.

DTC B1342, C1730 [DSC/RSC]

NOTE: • Perform the inspection of DTCs other than B1342 and C1730 first when verifying DTCs.

DTC B1342, C1730 [DSC/RSC] DETECTION CONDITION AND POSSIBLE CAUSE

DTC B1342, C1730	DSC/RSC HU/CM system
DETECTION CONDITION	<ul style="list-style-type: none"> • B1342 <ul style="list-style-type: none"> ○ DSC/RSC HU/CM on-board diagnostic function detects control module malfunction. • C1730 <ul style="list-style-type: none"> ○ Sensor supply voltage is out of range.

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POSSIBLE CAUSE

- DSC/RSC HU/CM internal malfunction

DIAGNOSTIC PROCEDURE

DTC B1342, C1730 [DSC/RSC] DIAGNOSTIC PROCEDURE

STEP	INSPECTION	ACTION
1	VERIFY DTC INSPECTION <ul style="list-style-type: none"> • Turn the ignition switch off. • Using the M-MDS, perform the DTC inspection. • Are any DTCs other than B1342 and C1730 output? 	Yes Go to the applicable DTC inspection. (See <u>ON-BOARD DIAGNOSTIC [DSC/RSC].</u>)
		No Go to the next step.
2	VERIFY CURRENT STATUS OF MALFUNCTION <ul style="list-style-type: none"> • Clear the DTC from the memory. (See <u>ON-BOARD DIAGNOSTIC [DSC/RSC].</u>) • Is the same DTC present? 	Yes Replace the DSC/RSC HU/CM, then go to the next step. (See <u>DSC/RSC HU/CM REMOVAL/INSTALLATION .</u>)
		No Go to the next step.
3	VERIFY THAT NO DTCS ARE OUTPUT AGAIN <ul style="list-style-type: none"> • Drive the vehicle at 32 km/h or more. • Stop the vehicle and verify the DTCs. • Are DTCs output again? 	Yes If DTC B1342 or C1730 is output again, replace the DSC/RSC HU/CM. (See <u>DSC/RSC HU/CM REMOVAL/INSTALLATION .</u>)
		No DTC troubleshooting completed.

DTC B211B, C1279, C1280, C1281, C1282, C1516, C1517, C2769, C2770 [DSC/RSC]

DTC B211B, C1279, C1280, C1281, C1282, C1516, C1517, C2769, C2770 [DSC/RSC] DETECTION CONDITION AND POSSIBLE CAUSE

DTC B211B, C1279, C1280, C1281, C1282, C1516, C1517, C2769, C2770	Combined sensor system
	<ul style="list-style-type: none"> • B211B <ul style="list-style-type: none"> ○ Combined sensor internal malfunction. • C1279 <ul style="list-style-type: none"> ○ There is an abnormality in the signal from the

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DETECTION CONDITION	<p style="text-align: right;">combined sensor (yaw rate part).</p> <ul style="list-style-type: none"> • C1280 <ul style="list-style-type: none"> ○ Specified signal from combined (yaw rate part) sensor has not output. • C1281 <ul style="list-style-type: none"> ○ There is an abnormality in the signal from the combined sensor (lateral-G part). • C1282 <ul style="list-style-type: none"> ○ Specified signal from combined (lateral-G part) sensor has not output. • C1516 <ul style="list-style-type: none"> ○ Specified signal from combined (roll rate part) sensor has not output. • C1517 <ul style="list-style-type: none"> ○ There is an abnormality in the signal from the combined sensor (roll rate part). • C2769 <ul style="list-style-type: none"> ○ There is an abnormality in the signal from the combined sensor (longitudinal-G part). • C2770 <ul style="list-style-type: none"> ○ Specified signal from combined (longitudinal-G part) sensor has not output.
POSSIBLE CAUSE	<ul style="list-style-type: none"> • Combined sensor malfunction • Poor connection at connectors (female terminal)

DIAGNOSTIC PROCEDURE

DTC B211B, C1279, C1280, C1281, C1282, C1516, C1517, C2769, C2770 [DSC/RSC] DIAGNOSTIC PROCEDURE

STEP	INSPECTION	ACTION	
1	INSPECT COMBINED SENSOR <ul style="list-style-type: none"> • Inspect the combined sensor. <p style="text-align: center;">(See <u>COMBINED SENSOR INSPECTION</u> .)</p> <ul style="list-style-type: none"> • Is the combined sensor normal? 	Yes	Go to the next step.
		No	Replace the combined sensor, then go to the next step. (See <u>COMBINED SENSOR REMOVAL/INSTALLATION</u> .)
	VERIFY DTC TROUBLESHOOTING COMPLETED. <ul style="list-style-type: none"> • Clear the DTC from the memory. 	Yes	Replace the DSC/RSC HU/CM, then go to the next step.

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2	(See <u>ON-BOARD DIAGNOSTIC [DSC/RSC].</u>)		(See <u>DSC/RSC HU/CM REMOVAL/INSTALLATION .</u>)
	<ul style="list-style-type: none"> • Are the same DTCs present? 	No	Go to the next step.
3	VERIFY AFTER REPAIR PROCEDURE.		
	<ul style="list-style-type: none"> • Are any other DTCs present? 	Yes	Go to the applicable DTC inspection. (See <u>ON-BOARD DIAGNOSTIC [DSC/RSC].</u>)
		No	DTC troubleshooting completed.

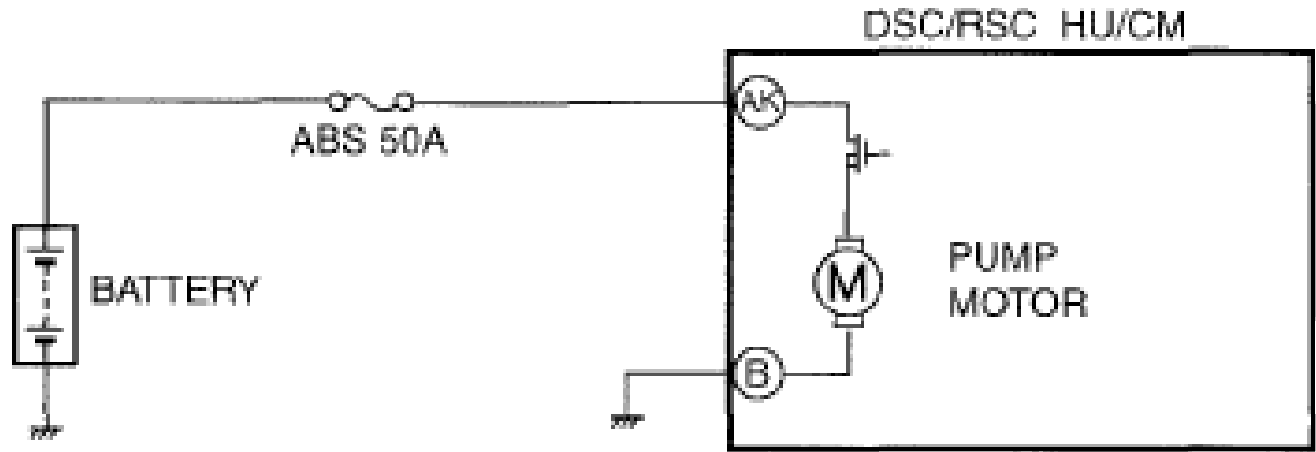
DTC C1095, C1096 [DSC/RSC]

DTC C1095, C1096 [DSC/RSC] DETECTION CONDITION AND POSSIBLE CAUSE

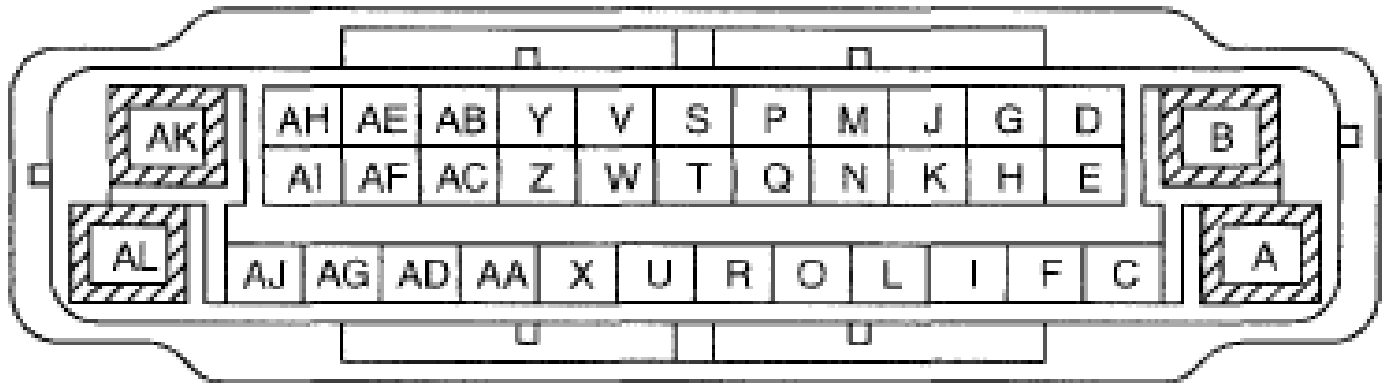
DTC C1095, C1096	Pump motor, motor relay system
DETECTION CONDITION	<ul style="list-style-type: none"> • C1095 <ul style="list-style-type: none"> ○ ABS motor monitor OFF signal is input within specified time limit when the motor signal is switched from ON to OFF by DSC/RSC HU/CM. • C1096 <ul style="list-style-type: none"> ○ When pump motor monitor voltage continues for 0.05s more than 0.75V among the pump motor ON.
POSSIBLE CAUSE	<ul style="list-style-type: none"> • ABS 50A fuse malfunction • Open or short to ground circuit in the wiring harness between the battery and the DSC/RSC HU/CM terminal AK • Open circuit in the wiring harness between the DSC/RSC HU/CM terminal B and the body ground • Open or short circuit in the DSC/RSC HU/CM internal motor relay, or stuck motor relay • Open or short circuit in the DSC/RSC HU/CM internal motor, or frozen motor • Motor relay malfunction • Poor connection at connectors (female terminal)

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DSC/RSC HU/CM WIRING HARNESS-SIDE CONNECTOR



DIAGNOSTIC PROCEDURE

DTC C1095, C1096 [DSC/RSC] DIAGNOSTIC PROCEDURE

STEP	INSPECTION	ACTION
1	INSPECT ABS FUSE CONDITION	Yes Go to the next step.
	<ul style="list-style-type: none"> Is the ABS 50A fuse normal? 	No Replace the fuse, then go to Step 5.
	INSPECT MOTOR RELAY POWER SUPPLY FOR OPEN CIRCUIT	Yes Go to the next step.
	<ul style="list-style-type: none"> Turn the ignition switch off. 	

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2	<ul style="list-style-type: none"> • Disconnect DSC/RSC HU/CM connector. • Turn the ignition switch to the ON position (engine off). • Measure voltage between DSC/RSC HU/CM terminal AK (harness-side) and ground. • Is the voltage B+? 	No	Repair or replace the wiring harness for open circuit between battery positive terminal and DSC/RSC HU/CM terminal AK, then go to Step 5.
3	<p>INSPECT PUMP MOTOR GROUND FOR OPEN CIRCUIT</p> <ul style="list-style-type: none"> • Turn the ignition switch off. • Inspect for continuity between DSC/RSC HU/CM terminal B (harness-side) and ground. • Is there continuity? 	Yes	Go to the next step.
		No	Repair or replace the wiring harness for open circuit between DSC/RSC HU/CM terminal B and ground, then go to Step 5.
4	<p>VERIFY PUMP MOTOR OPERATION</p> <ul style="list-style-type: none"> • Turn the ignition switch off. • Connect the M-MDS to the DLC-2. • Turn the ignition switch to the ON position (engine off). • Access PMP_MOTOR active command modes using the M-MDS. • Does the pump motor operate? 	Yes	Go to the next step.
		No	Replace the DSC/RSC HU/CM, then go to the next step. (See <u>DSC/RSC HU/CM REMOVAL/INSTALLATION</u> .)
5	<p>VERIFY TROUBLESHOOTING COMPLETED</p> <ul style="list-style-type: none"> • Make sure to reconnect all disconnected connectors. • Clear the DTC from the memory. <p>(See <u>ON-BOARD DIAGNOSTIC [DSC/RSC]</u>.)</p> <ul style="list-style-type: none"> • Gradually slow down and stop the vehicle. • Is the same DTC present? 	Yes	Replace the DSC/RSC HU/CM, then go to the next step. (See <u>DSC/RSC HU/CM REMOVAL/INSTALLATION</u> .)
		No	Go to the next step.
	<p>VERIFY AFTER REPAIR</p>		Go to the applicable DTC inspection.

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6	PROCEDURE	Yes	(See ON-BOARD DIAGNOSTIC [DSC/RSC].)
	<ul style="list-style-type: none"> • Are any other DTCs present? 	No	DTC troubleshooting completed.

DTC C1115, C1185 [DSC/RSC]

NOTE:

- Perform the inspection of DTCs other than C1115 and C1185 first when verifying DTCs.

DTC C1115, C1185 [DSC/RSC] DETECTION CONDITION AND POSSIBLE CAUSE

DTC C1115, C1185	Valve relay system
DETECTION CONDITION	<ul style="list-style-type: none"> • C1115 <ul style="list-style-type: none"> ○ Short circuit in the DSC/RSC HU/CM internal value relay. • C1185 <ul style="list-style-type: none"> ○ Open circuit in the DSC/RSC HU/CM internal value relay.
POSSIBLE CAUSE	<ul style="list-style-type: none"> • Open or short circuit in the DSC/RSC HU/CM internal valve relay, or stuck valve relay

DIAGNOSTIC PROCEDURE

DTC C1115, C1185 [DSC/RSC] DIAGNOSTIC PROCEDURE

STEP	INSPECTION	ACTION	
1	VERIFY DTC INSPECTION <ul style="list-style-type: none"> • Turn the ignition switch off. • Using the M-MDS, perform the DTC inspection. • Are any DTCs other than C1115 and C1185 output? 	Yes	Go to the applicable DTC inspection. (See ON-BOARD DIAGNOSTIC [DSC/RSC].)
		No	Go to the next step.
2	VERIFY CURRENT STATUS OF MALFUNCTION <ul style="list-style-type: none"> • Clear the DTC from the memory. (See ON-BOARD DIAGNOSTIC [DSC/RSC].) • Is the same DTC present? 	Yes	Replace the DSC/RSC HU/CM, then go to the next step. (See DSC/RSC HU/CM REMOVAL/INSTALLATION .)
		No	Go to the next step.
3	VERIFY THAT NO DTCS ARE OUTPUT AGAIN <ul style="list-style-type: none"> • Drive the vehicle at 32 km/h or 	Yes	If DTC C1115 or C1185 is output again, replace the DSC/RSC HU/CM. (See DSC/RSC HU/CM)

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more. <ul style="list-style-type: none"> • Stop the vehicle and verify the DTCs. • Are DTCs output again? 	No	REMOVAL/INSTALLATION .) DTC troubleshooting completed.
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DTC C1145, C1155, C1165, C1175 [DSC/RSC]

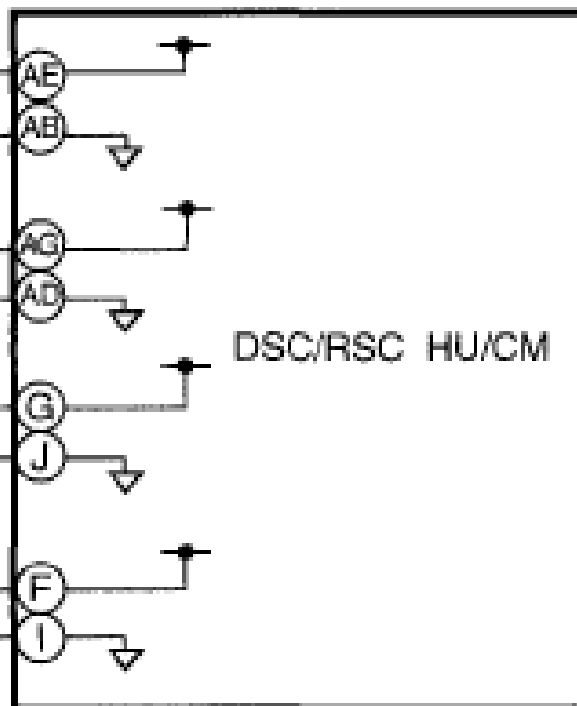
DTC C1145, C1155, C1165, C1175 [DSC/RSC] DETECTION CONDITION AND POSSIBLE CAUSE

DTC C1145	RF ABS wheel-speed sensor (open circuit) system
DTC C1155	LF ABS wheel-speed sensor (open circuit) system
DTC C1165	RR ABS wheel-speed sensor (open circuit) system
DTC C1175	LR ABS wheel-speed sensor (open circuit) system
DETECTION CONDITION	<ul style="list-style-type: none"> • Open circuit has been detected in the ABS wheel-speed sensor or the ABS wheel-speed sensor wiring harness on any of the four vehicle wheels.
POSSIBLE CAUSE	<ul style="list-style-type: none"> • Open circuit in the wiring harness between the following DSC/RSC HU/CM terminal and the ABS wheel-speed sensor terminal: <ul style="list-style-type: none"> ○ DSC/RSC HU/CM terminal AE-RF ABS wheel-speed sensor terminal A ○ DSC/RSC HU/CM terminal AB-RF ABS wheel-speed sensor terminal B ○ DSC/RSC HU/CM terminal AG-LF ABS wheel-speed sensor terminal A ○ DSC/RSC HU/CM terminal AD-LF ABS wheel-speed sensor terminal B ○ DSC/RSC HU/CM terminal G-RR ABS wheel-speed sensor terminal A ○ DSC/RSC HU/CM terminal J-RR ABS wheel-speed sensor terminal B ○ DSC/RSC HU/CM terminal F-LR ABS wheel-speed sensor terminal A ○ DSC/RSC HU/CM terminal I-LR ABS wheel-speed sensor terminal B • ABS wheel-speed sensor malfunction • Poor connection at connectors (female terminal)

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RF
ABS WHEEL-SPEED
SENSOR



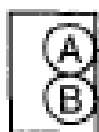
LF
ABS WHEEL-SPEED
SENSOR



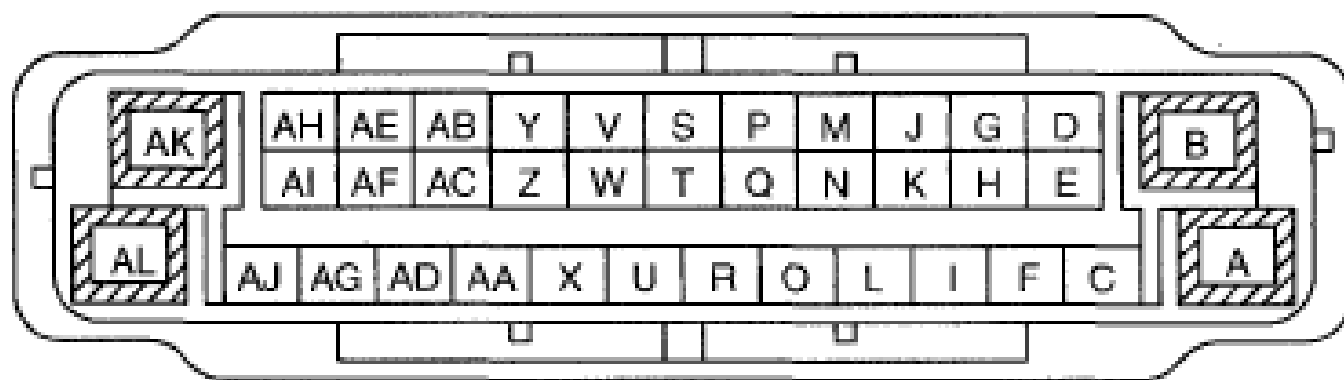
RR
ABS WHEEL-SPEED
SENSOR



LR
ABS WHEEL-SPEED
SENSOR



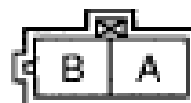
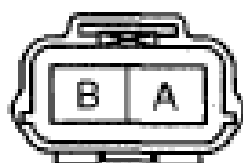
DSC/RSC HU/CM WIRING HARNESS-SIDE CONNECTOR



ABS WHEEL-SPEED SENSOR WIRING HARNESS-SIDE CONNECTOR

FRONT

REAR



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2008 BRAKES On-Board Diagnostic (DSC/RSC) - Mazda CX-9

DIAGNOSTIC PROCEDURE

DTC C1145, C1155, C1165, C1175 [DSC/RSC] DIAGNOSTIC PROCEDURE

STEP	INSPECTION	ACTION	
1	<p>INSPECT PID TO VERIFY THAT WHEEL SPEED-SIGNALS ARE TRANSMITTED FROM ABS WHEEL-SPEED SENSOR USING M-MDS</p> <ul style="list-style-type: none"> • Turn the ignition switch off. • Connect the M-MDS to the DLC-2. • Select the following PIDs using the M-MDS: <p style="margin-left: 20px;">WSPD_LF</p> <p style="margin-left: 20px;">WSPD_LR</p> <p style="margin-left: 20px;">WSPD_RF</p> <p style="margin-left: 20px;">WSPD_RR</p> <ul style="list-style-type: none"> • Drive the vehicle. • Verify that the wheel speed-signals are transmitted from each ABS wheel-speed sensor. • Are the wheel-speed signals transmitted? 	<p>Yes</p>	<p>Go to Step 4.</p>
		<p>No</p>	<p>Go to the next step.</p>
2	<p>INSPECT FOR OPEN CIRCUIT IN WIRING HARNESS BETWEEN DSC/RSC HU/CM AND ABS WHEEL-SPEED SENSOR</p> <ul style="list-style-type: none"> • Turn the ignition switch off. • Disconnect the DSC/RSC HU/CM connector and ABS wheel-speed sensor. • Inspect for continuity in the wiring harness between the following ABS wheel-speed sensor connectors on the vehicle wiring harness-side and DSC/RSC HU/CM connectors. <ul style="list-style-type: none"> ○ RF ABS wheel-speed sensor: AE-A ○ RF ABS wheel-speed sensor: AB-B ○ LF ABS wheel-speed sensor: AG-A ○ LF ABS wheel-speed sensor: AD-B ○ RR ABS wheel-speed sensor: G-A 	<p>Yes</p>	<p>Go to the next step.</p>
		<p>No</p>	<p>Repair or replace the wiring harness, then go to the next step.</p>

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	<ul style="list-style-type: none"> ○ RR ABS wheel-speed sensor: J-B ○ LR ABS wheel-speed sensor: F-A ○ LR ABS wheel-speed sensor: I-B <ul style="list-style-type: none"> ● Is there continuity? 		
3	<p>INSPECT ABS WHEEL-SPEED SENSOR FOR MALFUNCTION</p> <ul style="list-style-type: none"> ● Turn the ignition switch off. ● Disconnect the ABS wheel-speed sensor connector which may have a malfunction. ● Turn the ignition switch to the ON position, (engine off) ● Measure the power supply voltage between the ABS wheel-speed sensor connector terminal A (vehicle wiring harness-side) and body ground on the ABS wheel-speed sensor which may have a malfunction. ● Is the power supply voltage of the ABS wheel-speed sensor which may have a malfunction more than 10 V? 	Yes	Replace the ABS wheel-speed sensor, then go to the next step. (See <u>FRONT ABS WHEEL-SPEED SENSOR REMOVAL/INSTALLATION</u> .) (See <u>REAR ABS WHEEL-SPEED SENSOR REMOVAL/INSTALLATION [2WD]</u> .) (See <u>REAR ABS WHEEL-SPEED SENSOR REMOVAL/INSTALLATION [AWD]</u> .)
		No	Go to the next step.
4	<p>VERIFY THAT THE SAME DTC IS NOT PRESENT</p> <ul style="list-style-type: none"> ● Clear the DTCs from the memory. <p>(See <u>ON-BOARD DIAGNOSTIC [DSC/RSC]</u>.)</p> <ul style="list-style-type: none"> ● Are the same DTCs present? 	Yes	Repeat the inspection from Step 1. If the malfunction recurs, replace the DSC/RSC HU/CM, then go to the next step. (See <u>DSC/RSC HU/CM REMOVAL/INSTALLATION</u> .)
		No	Go to the next step.
5	<p>VERIFY THAT NO OTHER DTCS ARE PRESENT</p> <ul style="list-style-type: none"> ● Are any other DTCs output? 	Yes	Go to the applicable DTC inspection. (See <u>ON-BOARD DIAGNOSTIC [DSC/RSC]</u> .)
		No	DTC troubleshooting completed.

DTC C1194, C1198, C1210, C1214, C1242, C1246, C1250, C1254, C1404, C1410, C1957, C1958 [DSC/RSC]

DTC C1194, C1198, C1210, C1214, C1242, C1246, C1250, C1254, C1404, C1410, C1957, C1958 [DSC/RSC] DETECTION CONDITION AND POSSIBLE CAUSE

DTC C1194	LF outlet solenoid valve system
DTC C1198	LF inlet solenoid valve system
DTC C1210	RF outlet solenoid valve system
DTC C1214	RF inlet solenoid valve system

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DTC C1242	LR outlet solenoid valve system
DTC C1246	RR outlet solenoid valve system
DTC C1250	LR inlet solenoid valve system
DTC C1254	RR inlet solenoid valve system
DTC C1404	RH traction control solenoid valve system
DTC C1410	LH traction control solenoid valve system
DTC C1957	RH stability control solenoid valve system
DTC C1958	LH stability control solenoid valve system
DETECTION CONDITION	<ul style="list-style-type: none"> Solenoid valve operation does not correspond to solenoid ON/OFF commands from the DSC/RSC HU/CM.
POSSIBLE CAUSE	<ul style="list-style-type: none"> Open or short circuit in the DSC/RSC HU/CM internal solenoid valves Solenoid valve malfunction Poor connection at connectors (female terminal)

DIAGNOSTIC PROCEDURE

DTC C1194, C1198, C1210, C1214, C1242, C1246, C1250, C1254, C1404, C1410, C1957, C1958 [DSC/RSC] DIAGNOSTIC PROCEDURE

STEP	INSPECTION	ACTION
1	VERIFY DTC INSPECTION <ul style="list-style-type: none"> Turn the ignition switch off. Connect the M-MDS to the DLC-2. Turn the ignition switch to the ON position (engine off). Clear the DTC from the memory. (See ON-BOARD DIAGNOSTIC [DSC/RSC] .) <ul style="list-style-type: none"> Re-perform the DTC inspection. Is more than one solenoid valve-related DTC output? 	Yes Go to the next step.
		No Replace the DSC/RSC HU/CM, then go to the Step 3. (See DSC/RSC HU/CM REMOVAL/INSTALLATION .)
2	INSPECT DSC/RSC HU/CM POWER SUPPLY AND GROUND CIRCUIT FOR OPEN CIRCUIT <ul style="list-style-type: none"> Measure the voltage between DSC/RSC HU/CM terminal AL and terminal A. Is the voltage more than 10 V? 	Yes Replace the DSC/RSC HU/CM, then go to the next step. (See DSC/RSC HU/CM REMOVAL/INSTALLATION .)
		No Repair or replace the wiring harness, then go to the next step.
	VERIFY DTC TROUBLESHOOTING COMPLETED	Repeat the inspection from Step 1.

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3	<ul style="list-style-type: none"> • Clear the DTC from the memory. <p>(See <u>ON-BOARD DIAGNOSTIC [DSC/RSC].</u>)</p> <ul style="list-style-type: none"> • Are the same DTCs present? 	Yes	If the malfunction recurs, replace the DSC/RSC HU/CM, then go to the next step. (See <u>DSC/RSC HU/CM REMOVAL/INSTALLATION .</u>)
		No	Go to the next step.
4	<p>VERIFY AFTER REPAIR PROCEDURE</p> <ul style="list-style-type: none"> • Are any other DTCs present? 	Yes	Go to the applicable DTC inspection. (See <u>ON-BOARD DIAGNOSTIC [DSC/RSC].</u>)
		No	DTC troubleshooting completed.

DTC C1222 [DSC/RSC]

DTC C1222 [DSC/RSC] DETECTION CONDITION AND POSSIBLE CAUSE

DTC C1222	ABS wheel-speed sensor system
DETECTION CONDITION	<ul style="list-style-type: none"> • When the difference in the wheel speed between one tire and the others exceeds 25%.
POSSIBLE CAUSE	<ul style="list-style-type: none"> • A tire of different diameter is installed. • An incorrect ABS sensor rotor is installed (different number of teeth).

DIAGNOSTIC PROCEDURE

DTC C1222 [DSC/RSC] DIAGNOSTIC PROCEDURE

STEP	INSPECTION	ACTION	
1	<p>INSPECT PID (WHEEL SPEED) FOR DIFFERENCE IN EACH WHEEL SPEED USING M-MDS</p> <ul style="list-style-type: none"> • Turn the ignition switch off. • Connect the M-MDS to the DLC-2. • Select the following PIDs using the M-MDS: <p style="margin-left: 20px;">WSPD_LF</p> <p style="margin-left: 20px;">WSPD_LR</p> <p style="margin-left: 20px;">WSPD_RF</p> <p style="margin-left: 20px;">WSPD_RR</p> <ul style="list-style-type: none"> • Drive the vehicle. • Verify that the wheel speeds detected 	Yes	Go to Step 4.
		No	Go to the next step.

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	<p>by the four ABS wheel speed sensors are approximately the same.</p> <ul style="list-style-type: none"> • Are the wheel speeds approximately the same? 		
2	<p>INSPECT THE SIZE OF THE TIRE THAT HAS A DIFFERENT WHEEL SPEED</p> <ul style="list-style-type: none"> • Inspect the tire for differences in the tire diameter caused by the tire size, wear, or tire pressure. • Is the tire diameter the same as the others? 	Yes	Go to the next step.
		No	Replace the tire, then go to Step 4.
3	<p>INSPECT FOR INCORRECT ABS SENSOR ROTOR INSTALLATION</p> <ul style="list-style-type: none"> • Inspect if the number of teeth on the ABS sensor rotor is incorrect. • Is the number of teeth correct? 	Yes	Go to the next step.
		No	<p>Replace the ABS sensor rotor, then go to the next step.</p> <p>(See <u>FRONT ABS WHEEL-SPEED SENSOR REMOVAL/INSTALLATION</u> .)</p> <p>(See <u>REAR ABS WHEEL-SPEED SENSOR REMOVAL/INSTALLATION [2WD]</u> .)</p> <p>(See <u>REAR ABS WHEEL-SPEED SENSOR REMOVAL/INSTALLATION [AWD]</u> .)</p>
4	<p>VERIFY THAT THE SAME DTC IS NOT PRESENT</p> <ul style="list-style-type: none"> • Clear the DTC from the memory. <p>(See <u>ON-BOARD DIAGNOSTIC [DSC/RSC]</u>.)</p> <ul style="list-style-type: none"> • Are the same DTCs present? 	Yes	<p>Repeat the inspection from Step 1.</p> <p>If the malfunction recurs, replace the DSC/RSC HU/CM, then go to the next step.</p> <p>(See <u>DSC/RSC HU/CM REMOVAL/INSTALLATION</u> .)</p>
		No	Go to the next step.
5	<p>VERIFY THAT NO OTHER DTCS ARE PRESENT</p> <ul style="list-style-type: none"> • Are any other DTCs output? 	Yes	<p>Go to the applicable DTC inspection.</p> <p>(See <u>ON-BOARD DIAGNOSTIC [DSC/RSC]</u>.)</p>
		No	DTC troubleshooting completed.

DTC C1233, C1234, C1235, C1236 [DSC/RSC]

DTC C1233, C1234, C1235, C1236 [DSC/RSC] DETECTION CONDITION AND POSSIBLE CAUSE

DTC C1233	LF ABS wheel-speed sensor/ABS sensor rotor system
DTC C1234	RF ABS wheel-speed sensor/ABS sensor rotor system
DTC C1235	RR ABS wheel-speed sensor/ABS sensor rotor system
DTC C1236	LR ABS wheel-speed sensor/ABS sensor rotor system

- Vehicle wheel speed signals of any of the four vehicle wheels indicate

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DETECTION CONDITION	<p>abnormal acceleration that exceeds specification.</p> <ul style="list-style-type: none"> • Periodic abnormality is detected in the signal wave pattern from the ABS wheel-speed sensors.
POSSIBLE CAUSE	<ul style="list-style-type: none"> • ABS wheel-speed sensor malfunction (low output, metal shavings on sensor) • ABS sensor rotor malfunction (chipping of sensor rotor teeth) • Poor installation of ABS wheel-speed sensor and/or sensor rotor • Excessive clearance between the ABS wheel-speed sensor and sensor rotor

DIAGNOSTIC PROCEDURE

DTC C1233, C1234, C1235, C1236 [DSC/RSC] DIAGNOSTIC PROCEDURE

STEP	INSPECTION	ACTION
1	<p>INSPECT PID FOR ABNORMAL OUTPUT FROM ABS WHEEL-SPEED SENSOR USING M-MDS</p> <ul style="list-style-type: none"> • Turn the ignition switch off. • Connect the M-MDS to the DLC-2. • Select the following PIDs using the M-MDS: <p style="margin-left: 20px;">WSPD_LF</p> <p style="margin-left: 20px;">WSPD_LR</p> <p style="margin-left: 20px;">WSPD_RF</p> <p style="margin-left: 20px;">WSPD_RR</p> <ul style="list-style-type: none"> • Start the engine and drive the vehicle. • Verify that the PIDs of the four ABS wheel-speed sensors correspond approximately. • Do the vehicle speeds correspond? 	<p>Yes Go to Step 4.</p>
	<p>No</p> <p style="text-align: center;">If there is a difference in speeds of the four wheels, go to the next step.</p>	
	<p>INSPECT IF MALFUNCTION OCCURRED DUE TO IMPROPER SENSOR CLEARANCE.</p> <ul style="list-style-type: none"> • Inspect the clearance between the ABS wheel-speed sensor and the ABS sensor rotor. 	<p>Yes Go to the next step.</p>

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<p align="center">2</p>	<p>(See <u>FRONT ABS WHEEL-SPEED SENSOR INSPECTION</u> .)</p> <p>(See <u>REAR ABS WHEEL-SPEED SENSOR INSPECTION [2WD]</u> .)</p> <p>(See <u>REAR ABS WHEEL-SPEED SENSOR INSPECTION [AWD]</u> .)</p> <ul style="list-style-type: none"> • Is the clearance normal? <p>Clearance</p> <p>Front: 0.7-1.5 mm {0.028-0.059 in}</p> <p>Rear (2WD): 0.3-1.1 mm {0.012-0.043 in}</p> <p>Rear (AWD): 0.95-1.75 mm {0.038-0.068 in}</p>	<p align="center">No</p> <p>Replace the ABS wheel-speed sensor, then go to Step 4.</p> <p>(See <u>FRONT ABS WHEEL-SPEED SENSOR REMOVAL/INSTALLATION</u> .)</p> <p>(See <u>REAR ABS WHEEL-SPEED SENSOR REMOVAL/INSTALLATION [2WD]</u> .)</p> <p>(See <u>REAR ABS WHEEL-SPEED SENSOR REMOVAL/INSTALLATION [AWD]</u> .)</p>
<p align="center">3</p>	<p>VISUALLY INSPECT ABS SENSOR ROTOR FOR FOREIGN MATERIAL ADHERING OR IMPROPER INSTALLATION</p> <ul style="list-style-type: none"> • Is the result normal? 	<p align="center">Yes</p> <p>Go to the next step.</p> <p align="center">No</p> <p>Replace the front drive shaft, rear wheel hub component (2WD) or rear drive shaft (AWD), then go to the next step.</p> <p>(See <u>FRONT DRIVE SHAFT REMOVAL/INSTALLATION</u> .)</p> <p>(See <u>WHEEL HUB COMPONENT REMOVAL/INSTALLATION [2WD]</u> .)</p> <p>(See <u>REAR DRIVE SHAFT REMOVAL/INSTALLATION</u> .)</p>
<p align="center">4</p>	<p>VERIFY THAT THE SAME DTC IS NOT PRESENT</p> <ul style="list-style-type: none"> • Clear the DTC from the memory. <p>(See <u>ON-BOARD DIAGNOSTIC [DSC/RSC]</u>.)</p> <ul style="list-style-type: none"> • Start the engine and drive the vehicle at 10 km/h {6.2 mph} or more. • Are the same DTCs present? 	<p align="center">Yes</p> <p>Repeat the inspection from Step 1. If the malfunction recurs, replace the DSC/RSC HU/CM, then go to the next step.</p> <p>(See <u>DSC/RSC HU/CM REMOVAL/INSTALLATION</u> .)</p> <p align="center">No</p> <p align="center">Go to the next step.</p>
<p align="center">5</p>	<p>VERIFY THAT NO OTHER DTCS ARE PRESENT</p> <ul style="list-style-type: none"> • Are any other DTCs output? 	<p align="center">Yes</p> <p>Go to the applicable DTC inspection.</p> <p>(See <u>ON-BOARD DIAGNOSTIC [DSC/RSC]</u>.)</p> <p align="center">No</p> <p align="center">DTC troubleshooting completed.</p>

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DTC C1278, C1295, U2023 [DSC/RSC]

DTC C1278, C1295, U2023 [DSC/RSC] DETECTION CONDITION AND POSSIBLE CAUSE

DTC C1278, C1295, U2023	Steering angle sensor system
DETECTION CONDITION	<ul style="list-style-type: none"> • C1278 <ul style="list-style-type: none"> ○ The steering angle sensor detects an abnormality in the signal. • C1295, U2023 <ul style="list-style-type: none"> ○ The steering angle sensor detects an internal abnormality.
POSSIBLE CAUSE	<ul style="list-style-type: none"> • Steering angle sensor malfunction • Poor connection at connectors (female terminal)

DIAGNOSTIC PROCEDURE

DTC C1278, C1295, U2023 [DSC/RSC] DIAGNOSTIC PROCEDURE

STEP	INSPECTION	ACTION
1	INSPECT FOR BCM MALFUNCTION <ul style="list-style-type: none"> • Turn the ignition switch off. • Using the M-MDS, perform the DTC inspection for the BCM. • Are any DTCs detected? 	Yes Go to applicable DTC inspection. (See <u>DTC TABLE [BCM]</u> .)
		No Go to the next step.
2	VERIFY DTC TROUBLESHOOTING COMPLETED <ul style="list-style-type: none"> • Clear the DTC from the memory. (See <u>ON-BOARD DIAGNOSTIC [DSC/RSC]</u> .)	Yes Replace the DSC/RSC HU/CM, then go to the next step. (See <u>DSC/RSC HU/CM REMOVAL/INSTALLATION</u> .)
		No Go to the next step.
3	VERIFY AFTER REPAIR PROCEDURE <ul style="list-style-type: none"> • Are any other DTCs present? 	Yes Go to the applicable DTC inspection. (See <u>ON-BOARD DIAGNOSTIC [DSC/RSC]</u> .)
		No DTC troubleshooting completed.

DTC C1288 [DSC/RSC]

DTC C1288 [DSC/RSC] DETECTION CONDITION AND POSSIBLE CAUSE

DTC C1288	Brake fluid pressure sensor system
DETECTION CONDITION	<ul style="list-style-type: none"> • The pressure from the brake fluid pressure sensor when the system starts up is not within specification.
	<ul style="list-style-type: none"> • Open or short circuit in the brake fluid pressure sensor circuit in the

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POSSIBLE CAUSE	<p style="text-align: center;">DSC/RSC HU/CM</p> <ul style="list-style-type: none"> • Malfunction in the brake fluid pressure sensor • Conventional brake system malfunction
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DIAGNOSTIC PROCEDURE

DTC C1288 [DSC/RSC] DIAGNOSTIC PROCEDURE

STEP	INSPECTION		ACTION
1	INSPECT CONVENTIONAL BRAKE SYSTEM <ul style="list-style-type: none"> • Inspect the conventional Brake system for the following: <ul style="list-style-type: none"> ○ Normal master cylinder operation ○ Brake fluid leakage between the master cylinder and DSC/RSC HU/CM ○ Normal brake switch operation • Is the conventional brake system normal? 	Yes	Go to the next step.
		No	Replace the malfunctioning part, then go to the next step.
2	INSPECT BRAKE FLUID PRESSURE SENSOR <ul style="list-style-type: none"> • Inspect the brake fluid pressure sensor. (See <u>BRAKE FLUID PRESSURE SENSOR INSPECTION</u> .) • Is the brake fluid pressure sensor normal? 	Yes	Go to the next step.
		No	Replace the DSC/RSC HU/CM, then go to the next step. (See <u>DSC/RSC HU/CM REMOVAL/INSTALLATION</u> .)
3	VERIFY NO ABNORMALITY ON BRAKE FLUID PRESSURE SENSOR <ul style="list-style-type: none"> • Clear the DTCs from the memory. (See <u>ON-BOARD DIAGNOSTIC [DSC/RSC]</u>.) • Are the same DTCs present? 	Yes	Replace the DSC/RSC HU/CM, then go to the next step. (See <u>DSC/RSC HU/CM REMOVAL/INSTALLATION</u> .)
		No	Go to the next step.
4	VERIFY THAT NO OTHER DTCS ARE PRESENT <ul style="list-style-type: none"> • Are any other DTCs output? 	Yes	Go to the applicable DTC inspection. (See <u>ON-BOARD DIAGNOSTIC [DSC/RSC]</u> .)
		No	DTC troubleshooting completed.

DTC C1327 [DSC/RSC]

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DTC C1327 [DSC/RSC] DETECTION CONDITION AND POSSIBLE CAUSE

DTC C1327	Brake fluid level sensor
DETECTION CONDITION	<ul style="list-style-type: none"> • Brake fluid level remains low
POSSIBLE CAUSE	<ul style="list-style-type: none"> • Decrease in amount of brake fluid • Malfunction of brake fluid level sensor

DIAGNOSTIC PROCEDURE

DTC C1327 [DSC/RSC] DIAGNOSTIC PROCEDURE

STEP	INSPECTION	ACTION
1	INSPECT FOR BCM MALFUNCTION FOR DTCs <ul style="list-style-type: none"> • Turn the ignition switch off. • Using the M-MDS, perform the DTC inspection for the BCM. • Are any DTCs detected? 	Yes Go to applicable DTC inspection. (See <u>DTC TABLE [BCM]</u>)
		No Go to the next step.
2	INSPECT BRAKE FLUID LEVEL <ul style="list-style-type: none"> • Inspect the brake fluid level. • Is it normal? 	Yes Go to the next step.
		No Add brake fluid to specified level, then go to the next step.
3	INSPECT BRAKE FLUID LEVEL SENSOR <ul style="list-style-type: none"> • Inspect the brake fluid level sensor. <p>(See <u>BRAKE FLUID LEVEL SENSOR INSPECTION</u> .)</p> <ul style="list-style-type: none"> • Is it normal? 	Yes Go to the next step.
		No Repair brake fluid level sensor, then go to the next step. (See <u>MASTER CYLINDER REMOVAL/INSTALLATION</u> .)
4	VERIFY DTC TROUBLESHOOTING COMPLETED <ul style="list-style-type: none"> • Clear the DTC from the memory. <p>(See <u>ON-BOARD DIAGNOSTIC [DSC/RSC]</u>.)</p> <ul style="list-style-type: none"> • Is the same DTC present? 	Yes Repeat the inspection from Step 1. If the malfunction occurs again, replace the DSC/RSC HU/CM, then go to the next step. (See <u>DSC/RSC HU/CM REMOVAL/INSTALLATION</u> .)
		No Go to next step.
5	VERIFY AFTER REPAIR PROCEDURE	Yes Go to the applicable DTC inspection. (See <u>ON-BOARD DIAGNOSTIC [DSC/RSC]</u> .)

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- | | | |
|---|----|--------------------------------|
| <ul style="list-style-type: none"> • Are any other DTCs present? | No | DTC troubleshooting completed. |
|---|----|--------------------------------|

DTC C1329, C1330, C1331, C1332, C1333, C1334, C1335, C1336, C1527, C1528, C1530, C1531 [DSC/RSC]

DTC C1329, C1330, C1331, C1332, C1333, C1334, C1335, C1336, C1527, C1528, C1530, C1531 [DSC/RSC] DETECTION CONDITION AND POSSIBLE CAUSE

DTC C1329	RF outlet solenoid valve coil system
DTC C1330	LR outlet solenoid valve coil system
DTC C1331	RR outlet solenoid valve coil system
DTC C1332	LF outlet solenoid valve coil system
DTC C1333	LR inlet solenoid valve coil system
DTC C1334	LF inlet solenoid valve coil system
DTC C1335	RF inlet solenoid valve coil system
DTC C1336	RR inlet solenoid valve coil system
DTC C1527	RH traction control solenoid valve coil system
DTC C1528	LH traction control solenoid valve coil system
DTC C1530	RH stability control solenoid valve coil system
DTC C1531	LH stability control solenoid valve coil system
DETECTION CONDITION	<ul style="list-style-type: none"> • Temperature of a solenoid valve coil exceeds specification.
POSSIBLE CAUSE	<ul style="list-style-type: none"> • This does not indicate a malfunction since constant control over extended period of time is inhibited to protect the RSC solenoid valve inside the DSC/RSC HU.

DIAGNOSTIC PROCEDURE

DTC C1329, C1330, C1331, C1332, C1333, C1334, C1335, C1336, C1527, C1528, C1530, C1531 [DSC/RSC] DIAGNOSTIC PROCEDURE

STEP	INSPECTION		ACTION
1	VERIFY DTC TROUBLESHOOTING COMPLETED <ul style="list-style-type: none"> • Clear the DTC from the memory. (See <u>ON-BOARD DIAGNOSTIC [DSC/RSC].</u>)	Yes	Replace the DSC/RSC HU/CM, then go to the next step. (See <u>DSC/RSC HU/CM REMOVAL/INSTALLATION .</u>)
	<ul style="list-style-type: none"> • Are the same DTCs present? 	No	Go to the next step.
2	VERIFY AFTER REPAIR PROCEDURE <ul style="list-style-type: none"> • Are any other DTCs present? 	Yes	Go to the applicable DTC inspection. (See <u>ON-BOARD DIAGNOSTIC [DSC/RSC].</u>)
		No	DTC troubleshooting completed.

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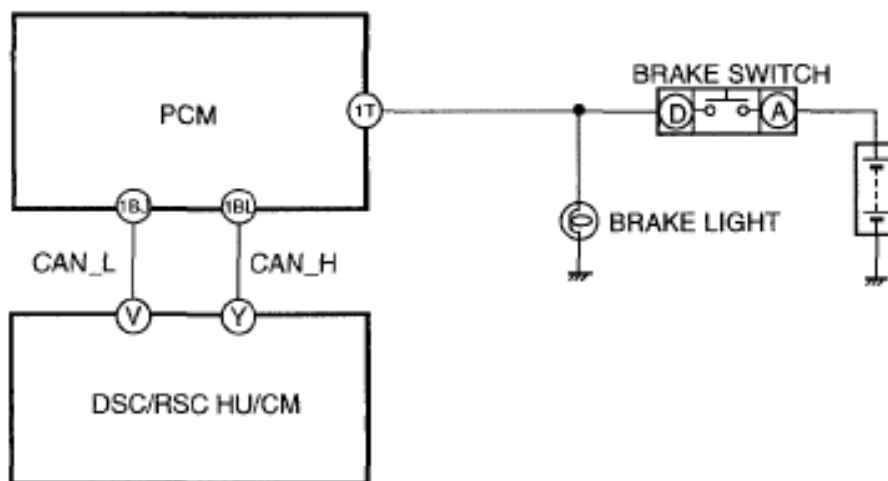
DTC C1446 [DSC/RSC]

DTC C1446 [DSC/RSC] DETECTION CONDITION AND POSSIBLE CAUSE

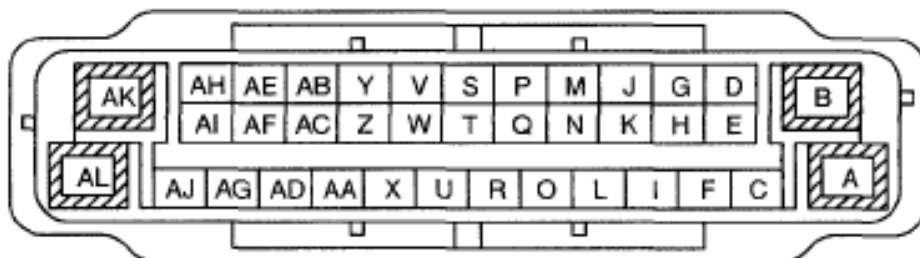
DTC C1446	Brake switch system
DETECTION CONDITION	<ul style="list-style-type: none">• Brake switch ON signal is not input when the brake fluid pressure sensor signal reaches the specified value.• Brake switch ON signal is input even if the signal from the brake fluid pressure sensor is less than the specification.
POSSIBLE CAUSE	<ul style="list-style-type: none">• Open or short circuit in wiring harness between the brake switch and PCM 1T terminal• Brake switch malfunction• Poor connection at connectors (female terminal)

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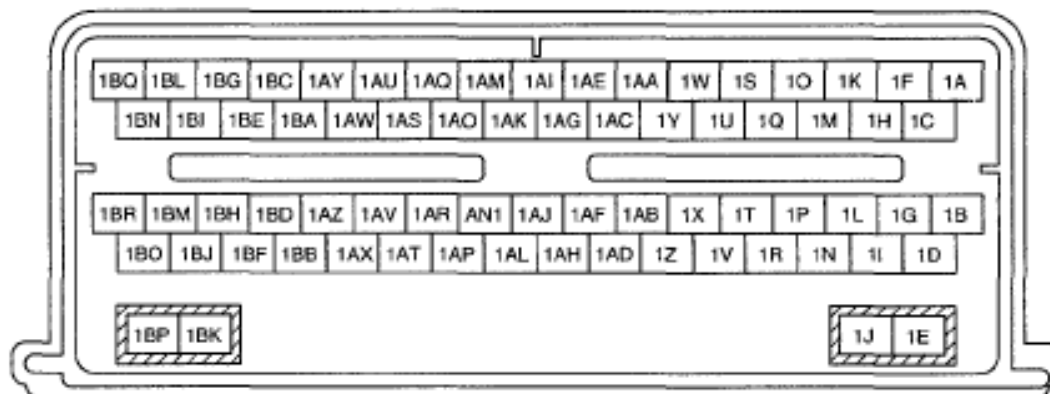
DSC/RSC HU/CM WIRING HARNESS-SIDE CONNECTOR



BRAKE SWITCH WIRING HARNESS-SIDE CONNECTOR



PCM WIRING HARNESS-SIDE CONNECTOR



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DTC C1446 [DSC/RSC] DIAGNOSTIC PROCEDURE

STEP	INSPECTION	ACTION
1	<p>VERIFY OPEN OR SHORT CIRCUIT IN BRAKE SWITCH SIGNAL</p> <ul style="list-style-type: none"> • Turn the ignition switch to the ON position. • Measure the voltage between the PCM terminal 1T and body ground when the brake pedal is depressed and released: <p>Voltage</p> <p>Brake pedal depressed: B+</p> <p>Brake pedal released:</p> <p>1 V or less</p>	<p>Yes Go to Step 5.</p>
		<p>No</p> <p>If it is B+ under any condition, then go to the next step. If it is 1 V or less under any condition, then go to Step 3.</p>
2	<p>INSPECT BRAKE SWITCH SIGNAL FOR SHORT TO POWER SUPPLY CIRCUIT</p> <ul style="list-style-type: none"> • Disconnect the brake switch connector. • Measure the voltage between the brake switch connector terminal D (vehicle harness-side) and body ground. • Is the voltage 1 V or less ? 	<p>Yes Go to Step 4.</p>
		<p>No</p> <p>Repair or replace the wiring harness between the PCM and brake switch, then go to Step 5</p>
3	<p>INSPECT BRAKE SWITCH SIGNAL FOR OPEN CIRCUIT</p> <ul style="list-style-type: none"> • Disconnect the PCM connectors. • Disconnect the brake switch connector. • Inspect continuity between the PCM connector terminal 1T (vehicle harness-side) and brake switch terminal D: • Is there continuity? 	<p>Yes Go to the next step.</p>
		<p>No</p> <p>Repair or replace the wiring harness between the PCM and brake switch, then go to Step 5.</p>
	<p>INSPECT BRAKE SWITCH</p> <ul style="list-style-type: none"> • Inspect the brake switch. 	<p>Yes Go to the next step.</p>

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4	<p>(See <u>BRAKE SWITCH INSPECTION</u> .)</p> <ul style="list-style-type: none"> • Is the brake switch normal? 	No	<p>Replace the brake switch, then go to the next step. (See <u>BRAKE PEDAL REMOVAL/INSTALLATION</u> .)</p>
5	<p>VERIFY THAT THE SAME DTC IS NOT PRESENT</p> <ul style="list-style-type: none"> • Reconnect all disconnected connectors. • Clear the DTCs from the memory. <p>(See <u>ON-BOARD DIAGNOSTIC [DSC/RSC]</u>.)</p> <ul style="list-style-type: none"> • Are the same DTCs present? 	Yes	<p>Repeat the inspection from Step 1. If the malfunction recurs, replace the DSC/RSC HU/CM, then go to the next step. (See <u>DSC/RSC HU/CM REMOVAL/INSTALLATION</u> .)</p>
		No	Go to the next step.
6	<p>VERIFY THAT NO OTHER DTCs ARE PRESENT</p> <ul style="list-style-type: none"> • Are any other DTCs output? 	Yes	<p>Go to the applicable DTC inspection. (See <u>ON-BOARD DIAGNOSTIC [DSC/RSC]</u>.)</p>
		No	DTC troubleshooting completed.

DTC C1963 [DSC/RSC]

NOTE:

- The initial point of the combined sensor (yaw rate sensor part) is corrected based on the signals from each sensor while the vehicle is driven straight, however, the correction cannot be performed if the vehicle is continuously driven on a curve and DTC C1963 is detected.

DTC C1963 [DSC/RSC] DETECTION CONDITION AND POSSIBLE CAUSE

DTC C1963	Combined sensor (Yaw rate sensor part) initial point correction error
DETECTION CONDITION	<ul style="list-style-type: none"> • When a difference occurs between the estimated yaw rate value which is calculated by each sensor and the yaw rate value which is detected by the combined sensor (yaw rate sensor part).
POSSIBLE CAUSE	<ul style="list-style-type: none"> • It occurs since the initial point correction for the combined sensor (yaw rate sensor part) cannot be performed due to the vehicle being continuously driven on a curve, and does not indicate an DSC/RSC system malfunction.

DIAGNOSTIC PROCEDURE

DTC C1963 [DSC/RSC] DIAGNOSTIC PROCEDURE

STEP	INSPECTION	ACTION
	<p>PERFORM INITIALIZATION PROCEDURE</p> <ul style="list-style-type: none"> • Perform the initialization 	

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1	<p>procedure for the combined sensor.</p> <p>(See <u>DSC/RSC SENSOR INITIALIZATION PROCEDURE</u> .)</p>	<p>After the initialization procedure for the combined sensor has been completed, go to the next step.</p>	
2	<p>VERIFY DTC TROUBLESHOOTING COMPLETED</p> <ul style="list-style-type: none"> • Clear the DTC from the memory. <p>(See <u>ON-BOARD DIAGNOSTIC [DSC/RSC]</u>.)</p> <ul style="list-style-type: none"> • Start the engine and drive the vehicle at 72 km/h {45 mph} or more. • Is the same DTC present? 	Yes	<p>Repeat the inspection from Step 1. If the malfunction occurs again, replace the DSC/RSC HU/CM, then go to the next step. (See <u>DSC/RSC HU/CM REMOVAL/INSTALLATION</u> .)</p>
		No	<p>Go to the next step.</p>
3	<p>VERIFY AFTER REPAIR PROCEDURE</p> <ul style="list-style-type: none"> • Are any other DTCs present? 	Yes	<p>Go to the applicable DTC inspection. (See <u>ON-BOARD DIAGNOSTIC [DSC/RSC]</u>.)</p>
		No	<p>DTC troubleshooting completed.</p>

DTC C1991 [DSC/RSC]

DTC C1991 [DSC/RSC] DETECTION CONDITION AND POSSIBLE CAUSE

DTC C1991	DSC/RSC sensor (abnormal initialization) system
DETECTION CONDITION	<ul style="list-style-type: none"> • The DSC/RSC sensor detects that the initialization procedure has not been performed.
POSSIBLE CAUSE	<ul style="list-style-type: none"> • The initialization procedure for the DSC/RSC sensor has not been performed.

DIAGNOSTIC PROCEDURE

DTC C1991 [DSC/RSC] DIAGNOSTIC PROCEDURE

STEP	INSPECTION	ACTION
1	<p>VERIFY INITIALIZATION PROCEDURE.</p> <ul style="list-style-type: none"> • Has the DSC/RSC sensor initialization procedure been performed? 	<p>Yes: Go to the next step.</p> <p>No: Perform the DSC/RSC sensor initialization procedure, then go to the next step. (See <u>DSC/RSC SENSOR INITIALIZATION PROCEDURE</u> .)</p>
	<p>VERIFY DTC</p>	

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2	<p>TROUBLESHOOTING COMPLETED</p> <ul style="list-style-type: none"> • Clear the DTC from the memory. <p>(See <u>ON-BOARD DIAGNOSTIC [DSC/RSC].</u>)</p>	Yes	<p>Repeat the inspection from Step 1. If the malfunction occurs again, replace the DSC/RSC HU/CM, then go to the next step. (See <u>DSC/RSC HU/CM REMOVAL/INSTALLATION .</u>)</p>
	<ul style="list-style-type: none"> • Is the same DTC present? 	No	Go to the next step.
3	<p>VERIFY AFTER REPAIR PROCEDURE</p>	Yes	<p>Go to the applicable DTC inspection. (See <u>ON-BOARD DIAGNOSTIC [DSC/RSC].</u>)</p>
	<ul style="list-style-type: none"> • Are any other DTCs present? 	No	DTC troubleshooting completed.

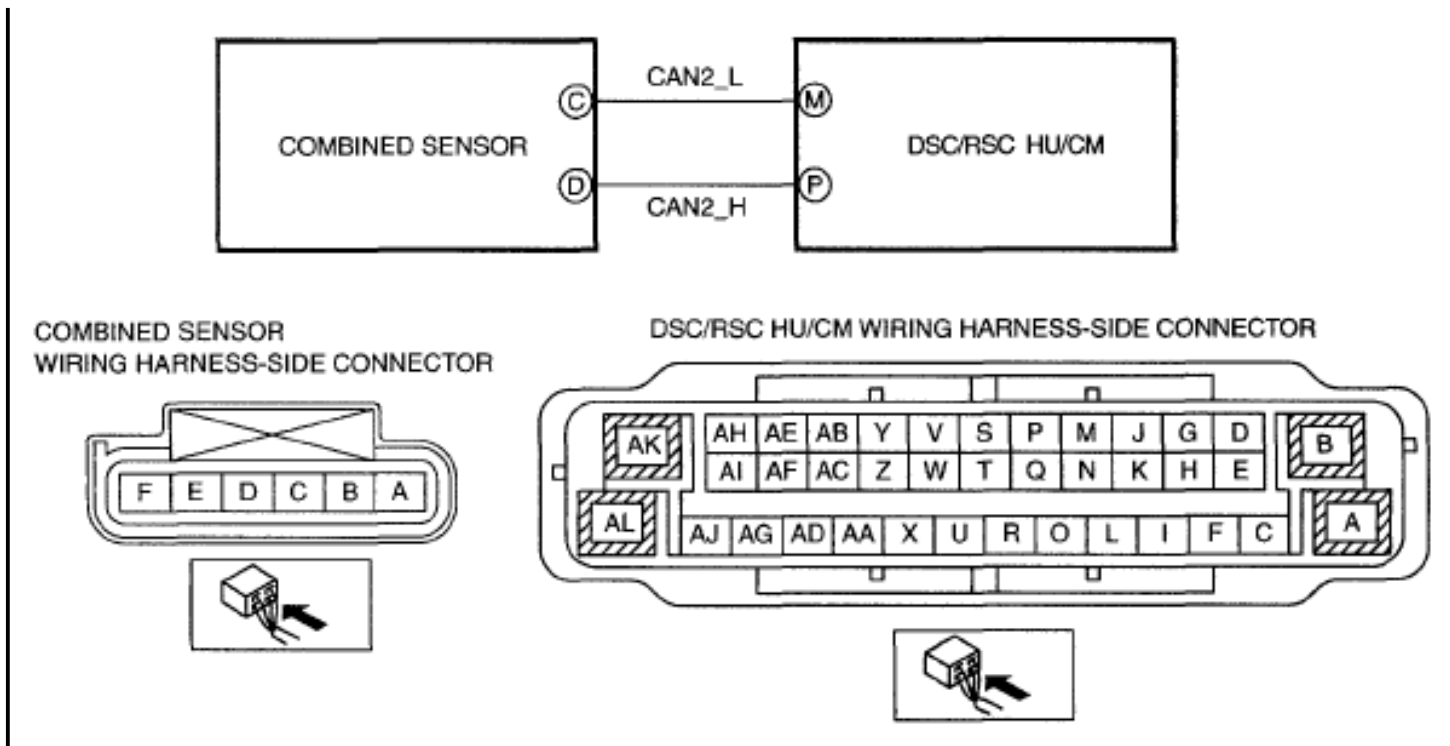
DTC U1901 [DSC/RSC]

DTC U1901 [DSC/RSC] DETECTION CONDITION AND POSSIBLE CAUSE

DTC U1901	Combined sensor system (CAN2 line malfunction)
DETECTION CONDITION	<ul style="list-style-type: none"> • The signal from the combined sensor is not within specification.
POSSIBLE CAUSE	<ul style="list-style-type: none"> • Open or short circuit in the CAN2_L wiring harness between combined sensor terminal C and DSC/RSC HU/CM terminal M • Open or short circuit in the CAN2_H wiring harness between combined sensor terminal D and DSC/RSC HU/CM terminal P • Combined sensor malfunction • DSC/RSC HU/CM malfunction • Poor connection at connectors (female terminal)

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DIAGNOSTIC PROCEDURE

DTC U1901 [DSC/RSC] DIAGNOSTIC PROCEDURE

STEP	INSPECTION	ACTION	
1	INSPECT COMBINED SENSOR SIGNAL (CAN2 LINE) FOR OPEN CIRCUIT <ul style="list-style-type: none"> • Disconnect the DSC/RSC HU/CM connectors. • Disconnect the combined sensor connectors. • Inspect for continuity between the DSC/RSC HU/CM connectors (vehicle harness-side) and the following combined sensor connector terminals (vehicle harness-side): <ul style="list-style-type: none"> ○ Combined sensor (CAN2_L): M-C ○ Combined sensor (CAN2_H): P-D • Is there continuity? 	Yes	Go to the next step.
		No	Repair or replace the wiring harness, then go to Step 4.
2	INSPECT COMBINED SENSOR SIGNAL (CAN2 LINE) FOR SHORT CIRCUIT <ul style="list-style-type: none"> • Inspect for continuity between the following DSC/RSC HU/CM connector terminals 	Yes	Repair or replace the wiring harness, then go to Step 4.

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	<p>(vehicle harness-side) and body ground:</p> <ul style="list-style-type: none"> ○ Combined sensor (CAN2_L): M ○ Combined sensor (CAN2_H): P <ul style="list-style-type: none"> ● Is there continuity? 	No	Go to the next step.
3	<p>INSPECT THE COMBINED SENSOR</p> <ul style="list-style-type: none"> ● Reconnect all disconnected connectors. Inspect the combined sensor. <p>(See <u>COMBINED SENSOR INSPECTION</u> .)</p> <ul style="list-style-type: none"> ● Is the combined sensor normal? 	Yes	Go to the next step.
		No	<p>Replace the combined sensor, then go to the next step.</p> <p>(See <u>COMBINED SENSOR REMOVAL/INSTALLATION</u> .)</p>
4	<p>VERIFY THAT THE SAME DTC IS NOT PRESENT</p> <ul style="list-style-type: none"> ● Clear the DTCs from the memory. <p>(See <u>ON-BOARD DIAGNOSTIC [DSC/RSC]</u>.)</p> <ul style="list-style-type: none"> ● Are the same DTCs present? 	Yes	<p>Repeat the inspection from Step 1. If the malfunction recurs, replace the DSC/RSC HU/CM, then go to the next step.</p> <p>(See <u>DSC/RSC HU/CM REMOVAL/INSTALLATION</u> .)</p>
		No	Go to the next step.
5	<p>VERIFY THAT NO OTHER DTCS ARE PRESENT</p> <ul style="list-style-type: none"> ● Are any other DTCs output? 	Yes	Go to the applicable DTC inspection. (See <u>ON-BOARD DIAGNOSTIC [DSC/RSC]</u> .)
		No	DTC troubleshooting completed.