



Mazda 3 Workshop Manual - BODY & ACCESSORIES

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FOREWORD [IMMOBILIZER SYSTEM]



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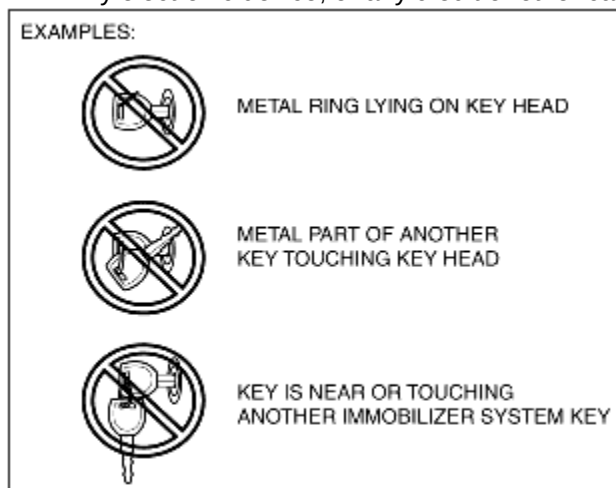
- Malfunction diagnosis occurs automatically when the ignition switch is turned from the LOCK (ACC) to the ON (START) position.
- If the results of the malfunction diagnosis show a malfunction, the security light displays a DTC and the PCM stores the DTC. DTCs stored in the PCM can be verified using the WDS or equivalent.
- DTCs for the immobilizer system that are stored in the PCM are cleared when the ignition switch is turned from the ON to the LOCK (ACC) position.
- There are certain DTCs which can only be verified using the WDS or equivalent, not the security light.
- The PID/data monitor function can be used to verify the number of keys registered for a single vehicle.
- If DTCs are not displayed even though the engine does not start, perform the following symptom troubleshooting:

- [NO.3 WILL NOT CRANK \[Z6\]](#)

- [NO.3 WILL NOT CRANK \[LF\]](#)

Caution

- Always use the WDS or equivalent to verify DTCs even if the DTCs are verified by the security light display. If the security light has a malfunction, it is possible that a DTC may not be properly displayed.
- Always use the WDS or equivalent to verify DTCs because there are certain DTCs which cannot be verified using the security light.
- If any of the following items are touching or near the key head, signal communication between the key and vehicle is negatively affected, resulting in the engine not starting. Do not start the engine if any of the following items are touching or near the key head.
 - Any metallic object
 - Spare keys or keys for other vehicles equipped with an immobilizer system
 - Any electronic device, or any credit or other cards with magnetic strips



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Note

- If multiple DTCs are detected as a result of malfunction diagnosis, only the DTC with the lowest number of those detected will be displayed by the security light. The PCM stores multiple DTCs at the same time.
- If two or more immobilizer system DTCs are verified, first repair the part indicated by the security light displayed DTC. After repairing one location, turn the ignition switch from the LOCK to the ON position and perform an immobilizer system malfunction diagnosis.

DTC INSPECTION [IMMOBILIZER SYSTEM]

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Security Light

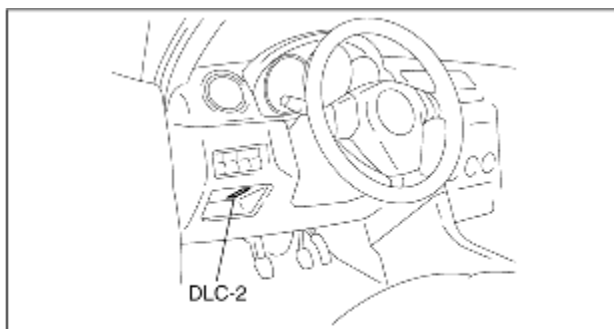
1. Turn the ignition switch to the ON position.
2. Verify the security light state.
 - If there is any malfunction:
 - After any malfunction is detected, the security light will function as follows **for approx. 1 min.**
 - DTC 16 and lower: Flashes
 - DTC 21 and higher: Illuminated
 - If there is no malfunction:
 - The security light illuminates **for approx. 3 s** and goes out.
3. When any malfunction has been detected, read DTCs via flashing patterns displayed after the security light flashes or is illuminated **for approx. 1 min.**
 - Perform troubleshooting according to the corresponding DTC inspection.

Note

- A verified DTC is flashed 10 times repeatedly by the security light.
- If multiple DTCs are verified, the security light displays only the smallest DTC.

WDS or Equivalent

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



B3E090201077W01

2. Verify if any DTCs are displayed.

- If any DTCs are displayed, carry out troubleshooting according to the corresponding DTC inspection.

3. Disconnect the WDS or equivalent.

DTC TABLE [IMMOBILIZER SYSTEM]

B3E090201077W03

DTC				Detection condition	Page
Security light flashing pattern		WDS or equivalent display*			
		Instrument cluster	PCM		
11		B1681	P1260	No detected communication with the coil	SECURITY LIGHT 11, DTC B1681/P1260
12		B2103	P1260	• Coil antenna malfunction • The PCM determined a malfunction in the coil antenna even though it is normal.	SECURITY LIGHT 12, DTC B2103/P1260
13		B1600	P1260	The key ID number data cannot be read.	SECURITY LIGHT 13, DTC B1600/P1260
		B2431	P1260	Key ID number registration error	SECURITY LIGHT 13, DTC B2431/P1260
14		B1602	P1260	The instrument cluster cannot read key ID number data normally.	SECURITY LIGHT 14, DTC B1602/P1260
15		B1601	P1260	The instrument cluster has detected unregistered key ID number.	SECURITY LIGHT 15, DTC B1601/P1260
16		U2510	P1260	Communication error between the instrument cluster and the PCM (no response)	SECURITY LIGHT 16, DTC U2510/P1260, U1147/P1260
		U1147	P1260	Communication error between the instrument cluster and the PCM (mismatched conditions)	

21		B1213	P1260	Only one key ID number is registered.	SECURITY LIGHT 21, DTC B1213/P1260
22		B2141	P1260	Communication error between the instrument cluster and the PCM (data transfer error)	SECURITY LIGHT 22, DTC B2141/P1260
23		B2139	P1260	ID number data in the PCM and the instrument cluster do not match.	SECURITY LIGHT 23, DTC B2139/P1260
Not illuminated		B1342	-	Instrument cluster malfunction	DTC B1342 [IMMOBILIZER SYSTEM]

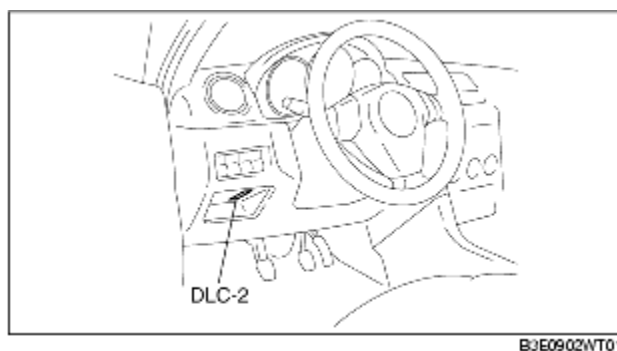
* :

The letters at the beginning of each DTC are only displayed when using the WDS or equivalent, and refer to the following: B= Body system, P= Powertrain system, U= Network communication system.

PID/DATA MONITOR INSPECTION [IMMOBILIZER SYSTEM]

B3E090201077W04

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



2. Display the PID/data monitor items.
 - Verify a displayed item according to the PID/data monitor table.
3. Disconnect the WDS or equivalent.

PID/DATA MONITOR TABLE [IMMOBILIZER SYSTEM]

B3E090201077W05

PID name (definition)	Detection condition
-----------------------	---------------------

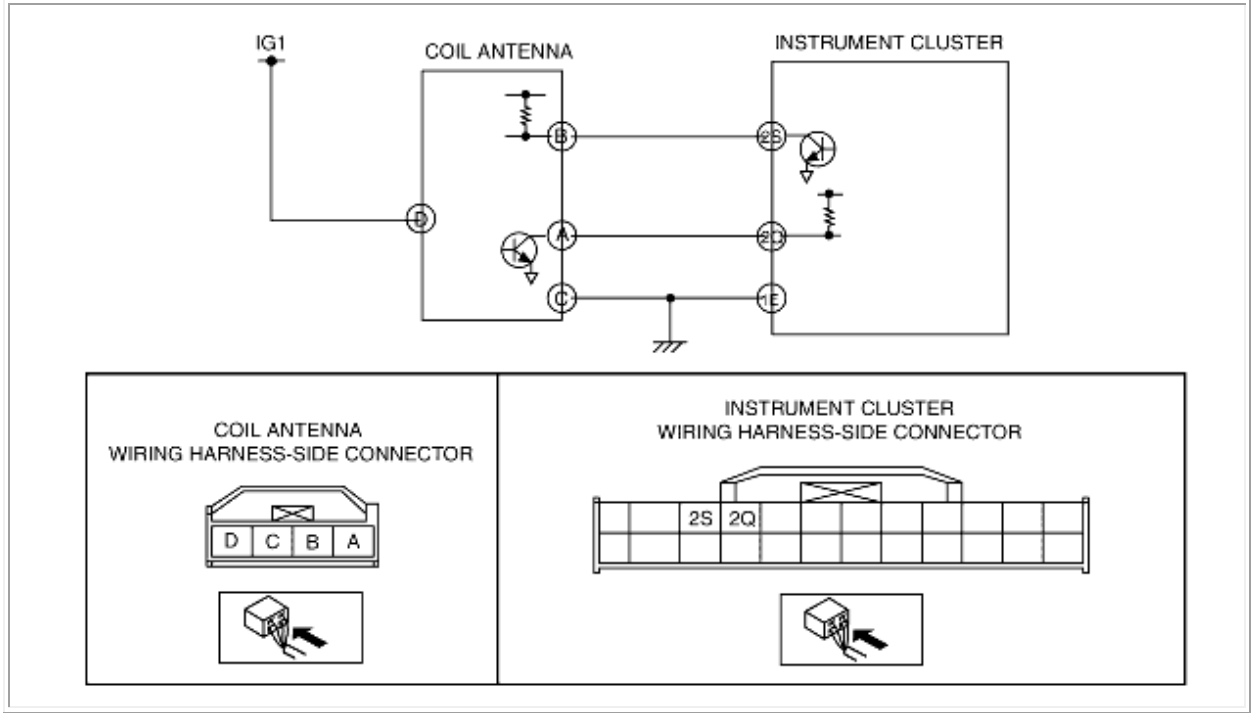


NUMKEYS	Number of key ID numbers registered: 0-8
(Number of key ID numbers registered in the instrument cluster)	

SECURITY LIGHT 11, DTC B1681/P1260

B3E090201077W06

SECURITY LIGHT: 11	No detected communication with the coil antenna
DTC: B1681/P1260	
DETECTION CONDITION	• No detected communication with the coil antenna
POSSIBLE CAUSE	• Coil antenna malfunction • Instrument cluster malfunction • Malfunction in the related wiring harnesses



Diagnostic Procedure

STEP	INSPECTION		ACTION
1	INSPECT COIL ANTENNA POWER SUPPLY SYSTEM • Disconnect the coil antenna connector. • Turn the ignition switch to the ON position. • Measure the voltage at coil antenna terminal D.	Yes	Go to the next step.
		No	Repair the wiring harness.

	- Is the voltage 8 V or more ?		
2	INSPECT WIRING HARNESS BETWEEN COIL ANTENNA AND GROUND • Turn the ignition switch to the LOCK position. • Inspect the wiring harness between coil antenna terminal C and ground for the following: - Short to power supply - Open circuit • Is the wiring harness normal?	Yes	Go to the next step.
		No	Repair the wiring harness.
3	INSPECT COIL ANTENNA INPUT SIGNAL CIRCUIT • Connect the coil antenna connector. • Turn the ignition switch to the ON position. • Measure the voltage at coil antenna terminal B. - Is the voltage 8 V or more?	Yes	Go to Step 7.
		No	Go to the next step.
4	INSPECT COIL ANTENNA INPUT SIGNAL CIRCUIT • Turn the ignition switch to the LOCK position. • Disconnect the instrument cluster connector. • Turn the ignition switch to the ON position. • Measure the voltage at instrument cluster terminal 2S. - Is the voltage 8 V or more?	Yes	Replace the instrument cluster and perform the resetting procedure for the immobilizer system when replacing the instrument cluster. (See INSTRUMENT CLUSTER REMOVAL/INSTALLATION.) (See IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING.)
		No	Go to the next step.
5	INSPECT COMMUNICATION CIRCUIT (INPUT) FOR CONTINUITY • Turn the ignition switch to the LOCK position. • Is there continuity between coil antenna terminal B and instrument cluster terminal 2S?	Yes	Go to the next step.
		No	Repair the wiring harness.
6	INSPECT COIL ANTENNA INPUT SIGNAL CIRCUIT	Yes	Replace the coil antenna. (See COIL ANTENNA REMOVAL/INSTALLATION.)

	• Measure the resistance between coil antenna terminal B and ground. - Is the resistance 10 kilohms or more?	No	Repair the wiring harness.
7	INSPECT COIL ANTENNA OUTPUT SIGNAL CIRCUIT • Connect the coil antenna connector and the instrument cluster connector. • Turn the ignition switch to the ON position. • Measure the voltage at coil antenna terminal A. - Is the voltage 8 V or more?	Yes	Replace the coil antenna. (See COIL ANTENNA REMOVAL/INSTALLATION.)
		No	Go to the next step.
8	INSPECT COIL ANTENNA OUTPUT SIGNAL CIRCUIT • Turn the ignition switch to the LOCK position. • Disconnect the coil antenna connector. • Turn the ignition switch to the ON position. • Measure the voltage at coil antenna terminal A. - Is the voltage 8 V or more?	Yes	Replace the coil antenna. (See COIL ANTENNA REMOVAL/INSTALLATION.)
		No	Go to the next step.
9	INSPECT COMMUNICATION CIRCUIT (OUTPUT) FOR CONTINUITY • Turn the ignition switch to the LOCK position. • Disconnect the instrument cluster connector. • Is there continuity between coil antenna terminal A and instrument cluster terminal 2Q?	Yes	Repair the wiring harness.
		No	Go to the next step.
10	INSPECT COIL ANTENNA OUTPUT SIGNAL CIRCUIT • Measure the resistance between instrument cluster terminal 2Q and ground. - Is the resistance 10 kilohms or more?	Yes	Replace the instrument cluster and perform the resetting procedure for the immobilizer system when replacing the instrument cluster. (See INSTRUMENT CLUSTER REMOVAL/INSTALLATION.) (See IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING.)
		No	Repair the wiring harness.

SECURITY LIGHT 12, DTC B2103/P1260

B3E090201077W07

SECURITY LIGHT: 12	Coil antenna malfunction
DTC: B2103/P1260	The PCM determined a malfunction in the coil antenna even though it is normal.
DETECTION CONDITION	- Coil antenna malfunction - The PCM determined a malfunction in the coil antenna even though it is normal.
POSSIBLE CAUSE	- Coil antenna malfunction - Poor connection of the coil antenna connector - PCM malfunction

Diagnostic Procedure

STEP	INSPECTION	ACTION
1	INSPECT CONNECTOR CONNECTION Are the coil antenna connector and the instrument cluster connector securely connected?	Yes Replace the coil antenna, then go to the next step. (See COIL ANTENNA REMOVAL/INSTALLATION .)
		No Connect the connector securely.
2	INSPECT PCM - Turn the ignition switch to the ON position. - Is the DTC displayed? - Security light: 12 - WDS or equivalent: B2103/P1260	Yes Replace the PCM and perform the resetting procedure for the immobilizer system when replacing the PCM. (See PCM REMOVAL/INSTALLATION [Z6] .) (See PCM REMOVAL/INSTALLATION [LF] .) (See IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING .)
		No DTC troubleshooting completed.

SECURITY LIGHT 13, DTC B1600/P1260

B3E090201077W08

SECURITY LIGHT: 13	The key ID number data cannot be read.
DTC: B1600/P1260	
DETECTION CONDITION	The key ID number data cannot be read.
	No transponder in the key

POSSIBLE CAUSE	• Transponder malfunction (Key ID number is not output) • Coil antenna malfunction • Instrument cluster malfunction • Any of the following items are touching or near the key head. - Spare keys - Keys for other vehicles equipped with an immobilizer system - Any metallic object - Any electronic device, or any credit or other cards with magnetic strips
	EXAMPLES:  METAL RING LYING ON KEY HEAD  METAL PART OF ANOTHER KEY TOUCHING KEY HEAD  KEY IS NEAR OR TOUCHING ANOTHER IMMOBILIZER SYSTEM KEY

Diagnostic Procedure

STEP	INSPECTION	ACTION
1	VERIFY DTC • Is B1600/P1260 displayed?	Yes Go to Step 3.
		No Go to the next step.
2	VERIFY DTC • Is B2431/P1260 displayed?	Yes Perform the DTC inspection for "SECURITY LIGHT: 13, WDS or equivalent: B2431/P1260". (See SECURITY LIGHT 13, DTC B2431/P1260 .)
		No Go to the next step.
3	VERIFY WHETHER KEY IS VALID OR NOT • Are there any keys with which the engine can be started, other than the key that is a cause of the displayed DTC?	Yes Go to Step 5.
		No Go to the next step.
4	VERIFY WHETHER MALFUNCTION IS IN KEY OR COIL ANTENNA • Using the WDS or equivalent, register an additional key.	Yes Replace the coil antenna, then go to Step 6. (See COIL ANTENNA REMOVAL/INSTALLATION .)
		No • Dispose of the malfunctioning key.

	(See IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING.) - Using the registered key, turn the ignition switch to the ON position. - Verify the DTC using the WDS or equivalent. - Is B1600/P1260 displayed again?		Register a new key if necessary. (See IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING.)
5	VERIFY WHETHER MALFUNCTION IS IN KEY OR COIL ANTENNA - Using another valid key, turn the ignition switch to the ON position. - Verify the DTC Using the WDS or equivalent. - Is B1600/P1260 displayed again?	Yes	Replace the coil antenna, then go to the next step. (See COIL ANTENNA REMOVAL/INSTALLATION.)
		No	- Dispose of the malfunctioning key. - Register a new key if necessary. (See IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING.)
6	INSPECT INSTRUMENT CLUSTER - Using the registered key, turn the ignition switch to the ON position. - Is B1600/P1260 displayed again?	Yes	Replace the instrument cluster and perform the resetting procedure for the immobilizer system when replacing the instrument cluster. (See INSTRUMENT CLUSTER REMOVAL/INSTALLATION.) (See IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING.)
		No	DTC troubleshooting completed.

SECURITY LIGHT 13, DTC B2431/P1260

B3E090201077W09

SECURITY LIGHT: 13	Key ID number registration error
DTC: B2431/P1260	
DETECTION CONDITION	Key ID number registration error
POSSIBLE CAUSE	- Errors during key ID number registration procedure - Any of the following items are touching or near the key head. - Spare keys - Keys for other vehicles equipped with an immobilizer system

	- Any metallic object - Any electronic device, or any credit or other cards with magnetic strips
	EXAMPLES:  METAL RING LYING ON KEY HEAD  METAL PART OF ANOTHER KEY TOUCHING KEY HEAD  KEY IS NEAR OR TOUCHING ANOTHER IMMOBILIZER SYSTEM KEY

Diagnostic Procedure

STEP	INSPECTION		ACTION
1	VERIFY DTC • Is B2431/P1260 displayed?	Yes	Go to Step 3.
		No	Go to the next step.
2	VERIFY DTC • Is B1600/P1260 displayed?	Yes	Perform the DTC inspection for "SECURITY LIGHT: 13, WDS or equivalent: B1600/P1260". (See SECURITY LIGHT 13, DTC B1600/P1260.)
		No	Go to the next step.
3	INSPECT INSTRUMENT CLUSTER • Using the WDS or equivalent, clear the key ID number and re-register it. (See IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING.) Note • Two or more keys must be registered to start the engine. • Using the registered key, turn the ignition switch to the ON position. • Verify the DTC Using the WDS or equivalent. - Is B2431/P1260 displayed again?	Yes	Replace the instrument cluster and perform the resetting procedure for the immobilizer system when replacing the instrument cluster. (See INSTRUMENT CLUSTER REMOVAL/INSTALLATION.) (See IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING.)
		No	DTC troubleshooting completed.

SECURITY LIGHT 14, DTC B1602/P1260

SECURITY LIGHT: 14	The instrument cluster cannot read key ID number data normally.
DTC: B1602/P1260	
DETECTION CONDITION	The instrument cluster cannot read key ID number data normally.
POSSIBLE CAUSE	- Transponder (key) malfunction - Coil antenna malfunction - Instrument cluster malfunction - Any of the following items are touching or near the key head. - Spare keys - Keys for other vehicles equipped with an immobilizer system - Any metallic object - Any electronic device, or any credit or other cards with magnetic strips EXAMPLES:  METAL RING LYING ON KEY HEAD  METAL PART OF ANOTHER KEY TOUCHING KEY HEAD  KEY IS NEAR OR TOUCHING ANOTHER IMMOBILIZER SYSTEM KEY

Diagnostic Procedure

STEP	INSPECTION	ACTION
1	VERIFY WHETHER KEY IS VALID OR NOT - Using another registered key, turn the ignition switch to the ON position. - If there is not another registered key, register an additional key using the WDS or equivalent and turn the ignition key to the ON position using the registered key. (See IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING.) - Is the DTC displayed again? - Security light: 14	Replace the coil antenna, then go to the next step. (See COIL ANTENNA REMOVAL/INSTALLATION.)
	Yes No	- Dispose of the malfunctioning key. - Register a new key if necessary. (See IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING.)

	- WDS or equivalent: B1602/P1260		
2	INSPECT INSTRUMENT CLUSTER - Using another registered key, turn the ignition switch to the ON position. - Is the DTC displayed again? - Security light: 14 - WDS or equivalent: B1602/P1260	Yes Replace the instrument cluster and perform the resetting procedure for the immobilizer system when replacing the instrument cluster. (See INSTRUMENT CLUSTER REMOVAL/INSTALLATION.) (See IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING.)	
		No	DTC troubleshooting completed.

SECURITY LIGHT 15, DTC B1601/P1260

B3E090201077W11

SECURITY LIGHT: 15	The instrument cluster has detected unregistered key ID number.
DTC: B1601/P1260	
DETECTION CONDITION	The instrument cluster has detected unregistered key ID number.
POSSIBLE CAUSE	- No keys have been registered after replacing the instrument cluster. - Unregistered key used - Attempt made to register a ninth key - Instrument cluster malfunction

Diagnostic Procedure

STEP	INSPECTION	ACTION
1	VERIFY NUMBER OF REGISTERED KEYS - Using the WDS or equivalent, perform the PID/data monitor inspection and confirm the number of registered keys. (See PID/DATA MONITOR TABLE [IMMOBILIZER SYSTEM].) - Are one or more keys registered?	Yes Go to the next step.
		No Go to Step 3.
2	VERIFY NUMBER OF REGISTERED KEYS - Using the WDS or equivalent, perform the PID/data monitor inspection and confirm the number of registered keys. (See PID/DATA MONITOR TABLE [IMMOBILIZER SYSTEM].) - Are eight keys registered?	Yes Using the WDS or equivalent, clear the key ID numbers as necessary, then go to the next step.
		No Go to the next step.

3	INSPECT INSTRUMENT CLUSTER - Using the WDS or equivalent, register the key ID number. (See IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING.) Note - Two or more keys must be registered to start the engine. - Using the registered key, turn the ignition switch to the ON position. - Is the DTC displayed again? - Security light: 15 - WDS or equivalent: B1601/P1260	Yes	Replace the instrument cluster and perform the resetting procedure for the immobilizer system when replacing the instrument cluster. (See INSTRUMENT CLUSTER REMOVAL/INSTALLATION.) (See IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING.)
		No	DTC troubleshooting completed.

SECURITY LIGHT 16, DTC U2510/P1260, U1147/P1260

B3E090201077W12

SECURITY LIGHT: 16	DTC: U2510/P1260	Communication error between the instrument cluster and the PCM (no response)
	DTC: U1147/P1260	Communication error between the instrument cluster and the PCM (mismatched conditions)
DETECTION CONDITION		Instrument cluster DTC: U2510 - Communication error between the instrument cluster and the PCM (no response) Instrument cluster DTC: U1147 - Communication error between the instrument cluster and the PCM (mismatched conditions)
POSSIBLE CAUSE		- Malfunction in the wiring harness (CAN line) between the instrument cluster and the PCM - PCM malfunction - Instrument cluster malfunction

Diagnostic Procedure

STEP	INSPECTION		ACTION
1	VERIFY DTC	Yes	Perform troubleshooting according to the corresponding DTC inspection. (See DTC U0073, U0516, U1900, U2516.)

	• Are either U1900 or U0073, or both, displayed, by either the instrument cluster or the PCM, or both?	No	Replace the instrument cluster and perform the resetting procedure for the immobilizer system when replacing the instrument cluster. (See INSTRUMENT CLUSTER REMOVAL/INSTALLATION.) (See IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING.) Go to the next step.
2	VERIFY DTC • Using the registered key, turn the ignition switch to the ON position. • Is the DTC displayed? - Security light: 16 - WDS or equivalent: U2510 or U1147/P1260	Yes	Replace the PCM and perform the resetting procedure for the immobilizer system when replacing the PCM. (See PCM REMOVAL/INSTALLATION [Z6].) (See PCM REMOVAL/INSTALLATION [LF].) (See IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING.)
		No	DTC troubleshooting completed.

SECURITY LIGHT 21, DTC B1213/P1260

B3E090201077W13

SECURITY LIGHT: 21	Only one key ID number is registered.
DTC: B1213/P1260	
DETECTION CONDITION	• Only one key is registered.
POSSIBLE CAUSE	• Only one registered key

Diagnostic Procedure

STEP	INSPECTION	ACTION
1	VERIFY NUMBER OF REGISTERED KEYS • Using the WDS or equivalent, perform the PID/data monitor inspection and confirm the number of registered keys. (See PID/DATA MONITOR TABLE [IMMOBILIZER SYSTEM].) • Are two or more keys registered?	Yes Replace the instrument cluster and perform the resetting procedure for the immobilizer system when replacing the instrument cluster. (See INSTRUMENT CLUSTER REMOVAL/INSTALLATION.) (See IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING.)
		No • Using the WDS or equivalent, clear the key ID number and register a new key if necessary.

			(See IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING.) • Go to the next step.
2	VERIFY DTC - Using the registered key, turn the ignition switch to the ON position. - Is the DTC displayed again? - Security light: 21 - WDS or equivalent: B1213/P1260	Yes No	Replace the instrument cluster and perform the resetting procedure for the immobilizer system when replacing the instrument cluster. (See INSTRUMENT CLUSTER REMOVAL/INSTALLATION.) (See IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING.) DTC troubleshooting completed.

SECURITY LIGHT 22, DTC B2141/P1260

B3E090201077W14

SECURITY LIGHT: 22	Communication error between the instrument cluster and the PCM (data transfer error)
DTC: B1241/P1260	
DETECTION CONDITION	• Communication error between the instrument cluster and the PCM (data transfer error)
POSSIBLE CAUSE	- Malfunction in the wiring harness (CAN line) between the instrument cluster and the PCM - Instrument cluster malfunction - PCM malfunction

Diagnostic Procedure

STEP	INSPECTION		ACTION
1	VERIFY DTC • Are either U1900 or U0073, or both displayed, by either the instrument cluster or the PCM, or both?	Yes	Perform troubleshooting according to the corresponding DTC inspection. (See DTC U0073, U0516, U1900, U2516.)
		No	Go to the next step.
2	VERIFY DTC • Using the registered key, turn the ignition switch to the ON position. • Is the DTC displayed? - Security light: 22 - WDS or equivalent: B2141/P1260	Yes	• Replace the PCM and perform the resetting procedure for the immobilizer system when replacing the PCM. (See IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING.) • Go to the next step.
		No	DTC troubleshooting completed.

3	EXAMINE INSTRUMENT CLUSTER AND PCM - Is the DTC displayed again? - Security light: 22 - WDS or equivalent: B2141/P1260	Yes	- Replace the instrument cluster and perform the resetting procedure for the immobilizer system when replacing the instrument cluster. (See INSTRUMENT CLUSTER REMOVAL/INSTALLATION .) (See IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING .) - Go to the next step.
		No	DTC troubleshooting completed.
4	EXAMINE PCM - Is the DTC displayed again? - Security light: 22 - WDS or equivalent: B2141/P1260	Yes	Replace the PCM and perform the resetting procedure for the immobilizer system when replacing the PCM. (See PCM REMOVAL/INSTALLATION [Z6] .) (See PCM REMOVAL/INSTALLATION [LF] .) (See IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING .)
		No	DTC troubleshooting completed.

SECURITY LIGHT 23, DTC B2139/P1260

B3E090201077W15

SECURITY LIGHT: 23	ID number data in the PCM and the instrument cluster do not match.
DTC: B2139/P1260	
DETECTION CONDITION	ID number data in the instrument cluster and the PCM are different.
POSSIBLE CAUSE	- Necessary procedures were not performed using the WDS or equivalent after replacing the PCM. - Instrument cluster malfunction - PCM malfunction

Diagnostic Procedure

STEP	INSPECTION	ACTION
1	VERIFY DTC Are either U1900 or U0073, or both, displayed, by either the instrument cluster or the PCM, or both?	Yes Perform troubleshooting according to the corresponding DTC inspection. (See DTC U0073, U0516, U1900, U2516 .)
		No Go to the next step.

2	EXAMINE INSTRUMENT CLUSTER AND PCM - Perform procedures for when replacing the PCM only. (See IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING.) - Using the registered key, turn the ignition switch to the ON position. - Is the DTC displayed? - Security light: 23 - WDS or equivalent: B2139/P1260	Yes	- Replace the instrument cluster and perform the resetting procedure for the immobilizer system when replacing the instrument cluster. (See INSTRUMENT CLUSTER REMOVAL/INSTALLATION.) (See IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING.) - Go to the next step.
		No	DTC troubleshooting completed.
3	VERIFY DTC - Is the DTC displayed again? - Security light: 23 - WDS or equivalent: B2139/P1260	Yes	Replace the PCM and perform the resetting procedure for the immobilizer system when replacing the PCM. (See PCM REMOVAL/INSTALLATION [Z6].) (See PCM REMOVAL/INSTALLATION [LF].) (See IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING.)
		No	DTC troubleshooting completed.

DTC B1342 [IMMOBILIZER SYSTEM]

B3E090201077W16

DTC: B1342	Instrument cluster malfunction
DETECTION CONDITION	Instrument cluster malfunction
POSSIBLE CAUSE	Instrument cluster malfunction

Diagnostic Procedure

STEP	INSPECTION	ACTION
1	EXAMINE INSTRUMENT CLUSTER AND PCM - Is the DTC displayed? - WDS or equivalent: B1342	Replace the instrument cluster and perform the resetting procedure for the immobilizer system when replacing the instrument cluster. (See INSTRUMENT CLUSTER REMOVAL/INSTALLATION.) (See IMMOBILIZER SYSTEM COMPONENT REPLACEMENT/KEY ADDITION AND CLEARING.)
		DTC troubleshooting completed.

MULTIPLEX COMMUNICATION SYSTEM

B3E090255430W01

Outline

• If the controller area network (CAN) system is malfunctioning, read the DTCs of the following modules, using the WDS or equivalent to determine the malfunctioning system.

- PCM
- EHPAS control module
- DSC HU/CM (with DSC)
- ABS HU/CM (with ABS)
- Instrument cluster
- Climate control unit
- SAS control module
- Audio unit (base module)
- PJB

Flowchart

• Use the following flowchart to verify the cause of the trouble.

STEP	INSPECTION	ACTION	
1	INSPECT DTC INDICATION • Using the WDS or equivalent, inspect if DTCs are displayed for the following module: - PCM - EHPAS control module - DSC HU/CM or ABS HU/CM - Instrument cluster - Climate control unit - SAS control module - PJB • Are any DTCs displayed?	Yes	Go to the next step.
		No	Go to Step 5.
2	INSPECT CAN SYSTEM-RELATED DTC • Are any DTCs other than the following displayed? - U0073 - U0100 - U0121	Yes	Repair the malfunctioning part by following the related DTC inspection. Go to the next step.
		No	Go to the next step.

	- U0131 - U0140 - U0155 - U0151 - U0184 - U0516 - U1900 - U2012 - U2023 - U2202 - U2516 - U2523		
3	INSPECT CAN SYSTEM-RELATED DTC • Are any of the following DTCs displayed? - PCM: U0073, U0121, U0155 - EHPAS control module: U0073, U0100, U2023 - DSC HU/CM or ABS HU/CM: U1900, U2012, U2523 - Instrument cluster: U0073, U0100, U0121, U0131, U0140, U0151, U0184, U2516 - Climate control unit: U0140, U0155, U0184, U0516 - SAS control module: U0073, U1900 - PJB: U1900	Yes	Repair the malfunctioning part by following the DTC inspection. Go to the next step.
		No	Troubleshooting completed.
4	VERIFY TROUBLESHOOTING COMPLETED • Clear the DTC from the CAN system-related modules using the WDS or equivalent. • Start the engine. • Are any of the CAN related DTCs displayed?	Yes	Go back to Step 3.
		No	Troubleshooting completed.
5	INSPECT COMMUNICATION CONDITION • Is there a response from the following modules? - PCM - EHPAS control module - DSC HU/CM or ABS HU/CM - Instrument cluster - Climate control unit	Yes	Troubleshooting completed.
		No	Go to the next step.

	- SAS control module - PJB		
6	INSPECT MODULES THAT DO NOT RESPOND • Inspect the power supply and the ground circuit for any units that do not respond. • Are they normal?	Yes	Go to the next step.
		No	Repair the malfunctioning part, then go back to Step 1.
7	INSPECT CONNECTOR AND WIRING HARNESS BETWEEN MODULES THAT DO NOT RESPOND AND DLC-2 • Turn the ignition switch to the LOCK position. • Inspect the wiring harness and connector between any module that does not respond and the DLC-2. PCM (LF)-DLC-2 1AM-F 1AI-E PCM (Z6)-DLC-2 1W-F 1S-E EHPAS control module-DLC-2 2B-F 2H-E DSC HU/CM-DLC-2 • P-F • D-E ABS HU/CM-DLC-2 • H-F • L-E Instrument cluster-DLC-2 1I-F 1K-E 1M-L 1O-K Climate control unit-DLC-2 • X-L • W-K SAS control module-DLC-2	Yes	Go to the next step.
		No	Repair the malfunctioning part, then go back to Step 1.

	1X-L 1T-K PJB-DLC-2 • J-04 D-L • J-04 B-K		
8	INSPECT WIRING HARNESS • Turn the ignition switch to the ON position (Engine off). • Measure the voltage between the following terminals. - DLC-2 terminals F and E - DLC-2 terminals L and K • Is the voltage 2.0-3.0 V?	Yes	Go to the next step.
		No	Go to Step 12.
9	INSPECT WIRING HARNESS • Turn the ignition switch to the LOCK position. • Measure the resistance between the following terminals. - DLC-2 terminals F and E - DLC-2 terminals L and K • Is the resistance 59-65 ohms?	Yes	Replace the modules that do not respond, then go back to Step 1.
		No	Go to the next step.
10	INSPECT PCM • Disconnect the PCM connector. • Measure the resistance between following terminals. - PCM terminals 1AM and 1AI (LF) (part-side) - PCM terminals 1W and 1S (Z6) (part-side) • Is the resistance 118-130 ohms?	Yes	Go to the next step.
		No	Replace the PCM, then go to the next step.
11	INSPECT INSTRUMENT CLUSTER • Disconnect the instrument cluster connector. • Measure the resistance between the following terminals. - Instrument cluster terminals 1I and 1K (part-side) - Instrument cluster terminals 1M and 1O (part-side) • Is the resistance 118-130 ohms?	Yes	Go to next step.
		No	Replace the instrument cluster, then go to the next step.
12	CLASSIFY WIRING HARNESS MALFUNCTION OR MODULE MALFUNCTION • Turn the ignition switch to the LOCK position.	Yes	Go to the next step.
		No	Retry this step with other module connector disconnected.

	• Disconnect the connector of any unit that does not respond. (If there are two or more units that do not respond, disconnect only one of the units.) • Turn the ignition switch to the ON position. • Measure the voltage between the following terminals. - DLC-2 terminals F and E - DLC-2 terminals L and K • Is voltage 2.0-3.0 V?		If all units that do not respond are disconnected, go to Step 14.
13	INSPECT WIRING HARNESS OF ANY UNIT THAT DOES NOT RESPOND • Turn the ignition switch to the LOCK position. • Inspect for continuity between the following connector terminals of any disconnected unit. PCM (LF) 1AM-other terminals 1AI-other terminals PCM (Z6) 1W-other terminals 1S-other terminals EHPAS control module 2B-other terminals 2H-other terminals DSC HU/CM • P-other terminals • D-other terminals ABS HU/CM • H-other terminals • L-other terminals Instrument cluster 1I-other terminals 1K-other terminals 1M-other terminals 1O-other terminals Climate control unit • X-other terminals • W-other terminals	Yes	Repair or replace the wiring harness, then go back to Step 1.
		No	Replace the disconnected unit, then go back to Step 1.

	SAS control module 1X-other terminals 1T-other terminals PJB • J-04 D-other terminals • J-04 B-other terminals Is there continuity?		
14	INSPECT CAN RELATED WIRING HARNESS • Inspect the related wiring harnesses (CAN_L and/or CAN_H) for the short circuit (to power supply or ground). • Is the wiring harness normal?	Yes	Repair or replace the wiring harness, then go back to Step 1.
		No	Go back to Step 1.

DTC TABLE [MULTIPLEX COMMUNICATION SYSTEM]

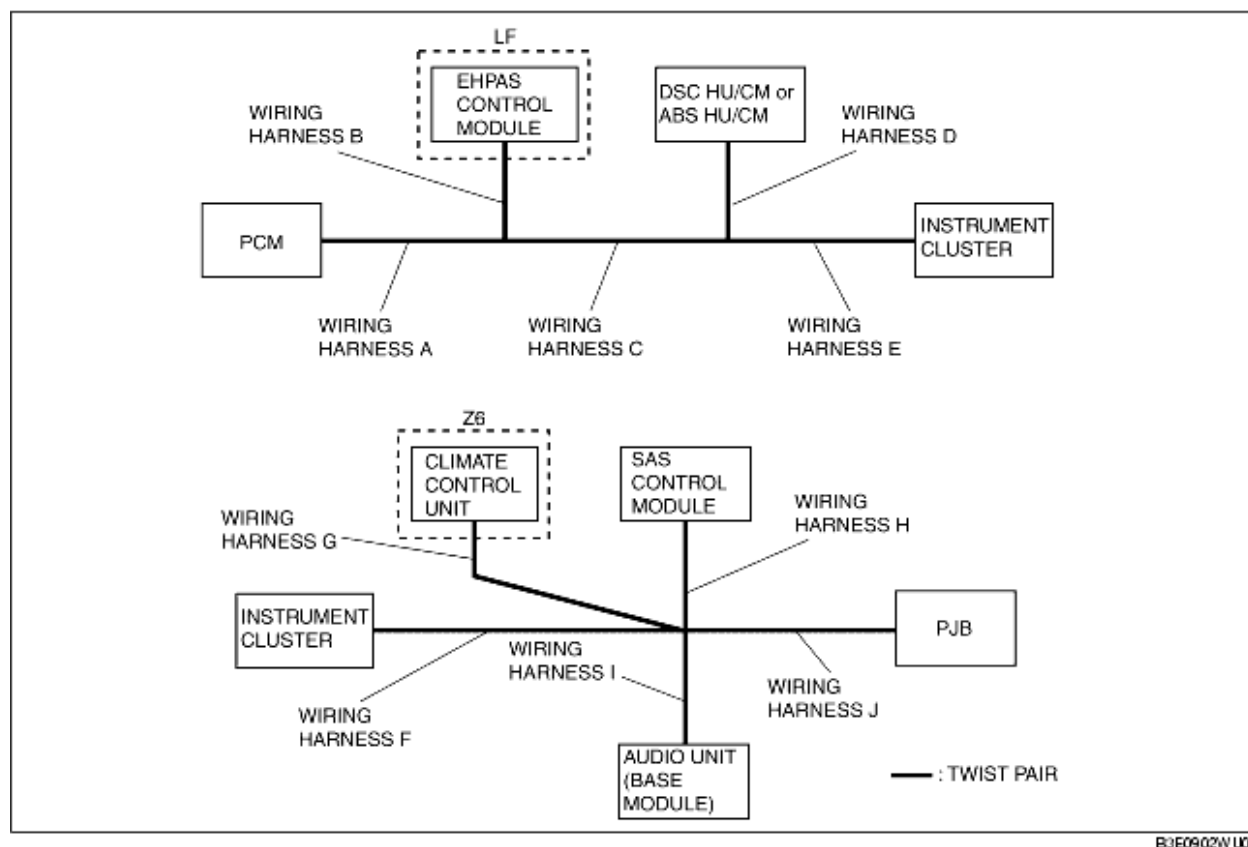
B3E090255430W02

DTC	Malfunction location	DTC output module	Page
U0073	CAN system communication error	• PCM • EHPAS control module • Instrument cluster	(See DTC U0073, U2012.)
		SAS control module	(See DTC U0073, U0516, U1900, U2516.)
U0100	Communication error to PCM	• EHPAS control module • Instrument cluster	(See PROCEDURES FOR DETERMINING THE LOCATION OF A MALFUNCTION.)
U0121	Communication error to DSC HU/CM or ABS HU/CM	• PCM • Instrument cluster	
U0131	Communication error to EHPAS control module	Instrument cluster	
U0140	Communication error to PJB	• Instrument cluster • Climate control unit	

U0151	Communication error to SAS control module	Instrument cluster	
U0155	Communication error to instrument cluster	• PCM • Climate control unit	
U0184	Communication error to audio unit (base module)	• Instrument cluster • Climate control unit	
U0516	CAN system communication error	Climate control unit	(See DTC U0073, U0516, U1900, U2516.)
U1900	Communication error to PCM	• ABS HU/CM (with ABS) • DSC HU/CM (with DSC)	(See PROCEDURES FOR DETERMINING THE LOCATION OF A MALFUNCTION.)
	Communication error to instrument cluster	SAS control module	
	CAN system communication error Abnormal message from other modules	PJB	(See PROCEDURES FOR DETERMINING THE LOCATION OF A MALFUNCTION.) (See DTC U0073, U0516, U1900, U2516.)
U2012	CAN system communication error	• ABS HU/CM (with ABS) • DSC HU/CM (with DSC)	(See DTC U0073, U2012.)
U2023	Abnormal message from PCM	EHPAS control module	(See PROCEDURES FOR DETERMINING THE LOCATION OF A MALFUNCTION.)
U2202	Communication error to PCM	DSC HU/CM (with DSC)	(See PROCEDURES FOR DETERMINING THE LOCATION OF A MALFUNCTION.)
U2516	CAN system communication error	Instrument cluster	(See DTC U0073, U0516, U1900, U2516.)
U2523	Communication error to PCM	• ABS HU/CM (with ABS) • DSC HU/CM (with DSC)	(See PROCEDURES FOR DETERMINING THE LOCATION OF A MALFUNCTION.)

PROCEDURES FOR DETERMINING THE LOCATION OF A MALFUNCTION

System Wiring Diagram



PCM

1. Inspect the display of DTC U0121 and/or U0155, using the WDS or equivalent. (See [DTC TABLE \[MULTIPLEX COMMUNICATION SYSTEM\]](#).)
2. Referring to the following table, determine the malfunctioning part of the CAN system.

×: Normal

-: Communication error

Module	Communication status		Malfunction location
	DSC HU/CM or ABS HU/CM	Instrument cluster	
PCM	-	-	• Wiring harness A • Wiring harness C • Instrument cluster • PCM
	×	-	• Wiring harness E • Instrument cluster
	-	×	• Wiring harness D

			• DSC HU/CM or ABS HU/CM
--	--	--	--------------------------

EHPAS Control Module

1. Inspect the display of DTC U0100 and/or U2023, using the WDS or equivalent. (See [DTC TABLE \[MULTIPLEX COMMUNICATION SYSTEM\]](#).)

2. Referring to the following table, determine the malfunctioning part of the CAN system.

×: Normal

-: Communication error

Module	Communication status	Malfunction location
	PCM	
EHPAS control module -		• Wiring harness A • Wiring harness B • EHPAS control module • PCM

DSC HU/CM or ABS HU/CM

1. Inspect the display of DTC U1900, U2202 (with DSC) and/or U2523, using the WDS or equivalent. (See [DTC TABLE \[MULTIPLEX COMMUNICATION SYSTEM\]](#).)

2. Referring to the following table, determine the malfunctioning part of the CAN system.

×: Normal

-: Communication error

Module	Communication status	Malfunction location
	PCM	
DSC HU/CM or ABS HU/CM -		• Wiring harness A • Wiring harness C • Wiring harness D • PCM

Instrument Cluster

1. Inspect the display of DTC U0100, U0121 and/or U0131, using the WDS or equivalent. (See [DTC TABLE \[MULTIPLEX COMMUNICATION SYSTEM\]](#).)

2. Referring to the following table, determine the malfunctioning part of the CAN system.

×: Normal

-: Communication error

Module	Communication status			Malfunction location
	PCM	DSC HU/CM or ABS HU/CM	EHPAS control module	
Instrument cluster	-	-	-	• Wiring harness E • PCM • DSC HU/CM or ABS HU/CM • EHPAS control module • Instrument cluster
	-	-	×	• Wiring harness A • Wiring harness D • PCM • DSC HU/CM or ABS HU/CM
	-	×	-	• Wiring harness C • PCM • EHPAS control module
	-	×	×	• Wiring harness A • PCM
	×	-	-	• Wiring harness B • Wiring harness D • DSC HU/CM or ABS HU/CM • EHPAS control module
	×	-	×	• Wiring harness D • DSC HU/CM or ABS HU/CM
	×	×	-	• Wiring harness B • EHPAS control module

3. Inspect the display of DTC U0140, U0151 and/or U0184, using the WDS or equivalent. (See [DTC TABLE \[MULTIPLEX COMMUNICATION SYSTEM\]](#).)

4. Referring to the following table, determine the malfunctioning part of the CAN system.

×: Normal

-: Communication error

Module	Communication status			Malfunction location
	PJB	SAS control module	Audio unit (base module)	
Instrument cluster	-	-	-	• Wiring harness F • Instrument cluster • PJB • SAS control module • Audio unit (base module)
	-	-	x	• Wiring harness H • Wiring harness J • PJB • SAS control module
	-	x	-	• Wiring harness I • Wiring harness J • PJB • Audio unit (base module)
	-	x	x	• Wiring harness J • PJB
	x	-	-	• Wiring harness H • Wiring harness I • SAS control module • Audio unit (base module)
	x	-	x	• Wiring harness H • SAS control module
	x	x	-	• Wiring harness I • Audio unit (base module)

Climate Control Unit

1. Inspect the display of DTC U0140, U0155 and/or U0184, using the WDS or equivalent. (See [DTC TABLE \[MULTIPLEX COMMUNICATION SYSTEM\]](#).)

2. Referring to the following table, determine the malfunctioning part of the CAN system.

x: Normal

-: Communication error

Module	Communication status	Malfunction location
--------	----------------------	----------------------

	PJB	Instrument cluster	Audio unit (base module)	
Climate control unit	-	-	-	• Wiring harness G • Climate control unit • PJB • Instrument cluster • Audio unit (base module)
	-	-	x	• Wiring harness F • Wiring harness J • PJB • Instrument cluster
	-	x	-	• Wiring harness I • Wiring harness J • PJB • Audio unit (base module)
	-	x	x	• Wiring harness J • PJB
	x	-	-	• Wiring harness F • Wiring harness I • Instrument cluster • Audio unit (base module)
	x	-	x	• Wiring harness F • Instrument cluster
	x	x	-	• Wiring harness I • Audio unit (base module)

SAS Control Module

1. Inspect the display of DTC U1900 using the WDS or equivalent. (See [DTC TABLE \[MULTIPLEX COMMUNICATION SYSTEM\]](#).)

2. Referring to the following table, determine the malfunctioning part of the CAN system.

x: Normal

-: Communication error

Module	Communication status	Malfunction location
	Instrument cluster	

SAS control module -	• Wiring harness F • Wiring harness H • SAS control module • Instrument cluster
----------------------	--

PJB

1. Inspect the display of DTC U1900 using the WDS or equivalent. (See [DTC TABLE \[MULTIPLEX COMMUNICATION SYSTEM\]](#).)

2. Referring to the following table, determine the malfunctioning part of the CAN system.

×: Normal

-: Communication error

Module	Communication status	
	Climate control unit	Malfunction location
	Audio unit (base module)	
	Instrument cluster	
PJB	-	• Wiring harness F • Wiring harness G • Wiring harness I • Wiring harness J • PJB • Climate control unit • Audio unit (base module) • Instrument cluster

Repair Procedure

1. Inspect the connector of malfunctioning module.

- If there is any malfunction, repair or replace the connector.

2. Inspect the malfunctioning wiring harnesses as follow:

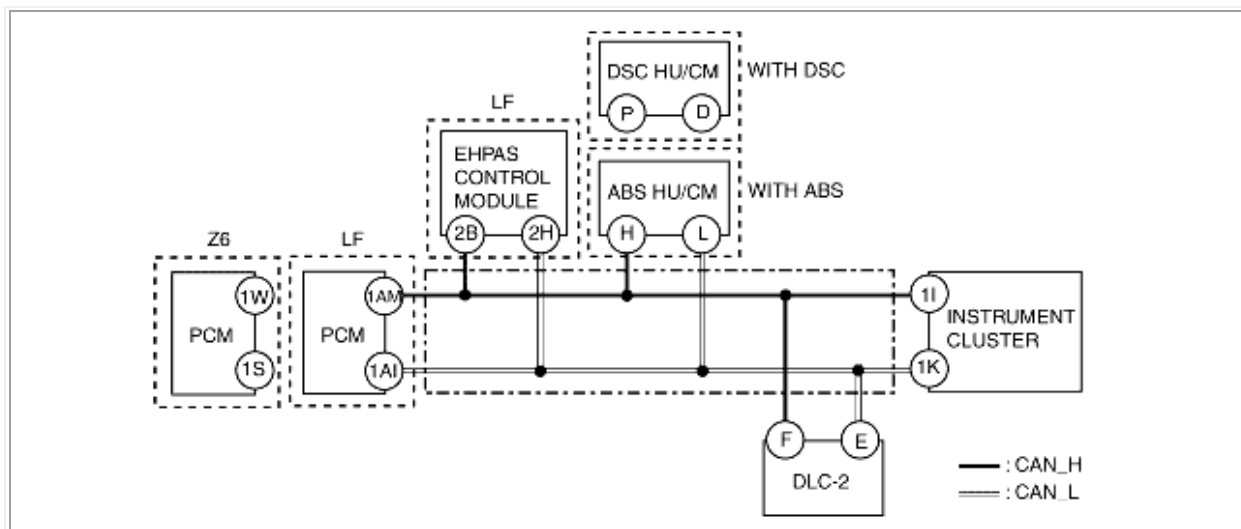
- If there is any malfunction, repair or replace the wiring harnesses.
- If there is no malfunction, replace the malfunctioning module.
- Short to GND
- Short to power supply
- Twisted pair short each other
- Open circuit

3. Make sure to reconnect all disconnected connectors.
4. Clear the CAN system related DTCs using the WDS or equivalent.
5. Verify if the CAN system related DTCs are displayed using the WDS or equivalent.
 - If the same following DTCs are present, replace the malfunctioning module.
 - U0073 (PCM, EHPAS control module, instrument cluster, SAS control module)
 - U0516 (Climate control unit)
 - U1900 (PJB)
 - U2012 (DSC HU/CM or ABS HU/CM)
 - U2516 (Instrument cluster)
 - If other DTC is present, perform the appropriate DTC inspection. (See [DTC TABLE \[MULTIPLEX COMMUNICATION SYSTEM\]](#).)

DTC U0073, U2012

B3E090255430W04

DTC	U0073	PCM EHPAS control module Instrument cluster	CAN system communication error
	U2012	DSC HU/CM ABS HU/CM	
DETECTION CONDITION		Warning • Detection conditions are for understanding the DTC outline before performing an inspection. Performing an inspection according to only detection conditions may cause injury due to operating error, or damage the system. When performing an inspection, always follow the inspection procedure. • CAN system related harness malfunction • Related module communication error	
POSSIBLE CAUSE		• Open or short circuit in wiring harness • Malfunction of connectors between PCM, EHPAS control module, DSC HU/CM, ABS HU/CM and instrument cluster • PCM malfunction • EHPAS control module malfunction • DSC HU/CM or ABS HU/CM malfunction • Instrument cluster malfunction	



Diagnostic procedure

STEP	INSPECTION		ACTION
1	INSPECT CAN SYSTEM-RELATED DTC - Are any DTCs other than the following displayed? - U0073 - U2012	Yes	Determine malfunctioning part in CAN system. (See PROCEDURES FOR DETERMINING THE LOCATION OF A MALFUNCTION)
		No	Go to the next step.
2	INSPECT CONNECTOR - Inspect the connector of the module that outputs the DTC. - Is it normal?	Yes	Go to the next step.
		No	Repair or replace the connector, then go to Step 4.
3	INSPECT WIRING HARNESES - Inspect for the following malfunctioning wiring harnesses: - Short to GND - Short to power supply - Twisted pair short each other - Open circuit - Is there any malfunction?	Yes	Repair or replace the wiring harness, then go to the next step.
		No	Go to the next step.
4	VERIFY TROUBLESHOOTING COMPLETED - Make sure to reconnect all disconnected connectors. - Clear the DTC using the WDS or equivalent.	Yes	Replace the module that outputs the DTC, then retry this step.
		No	Troubleshooting completed.

• Is the same DTC present?

DTC U0073, U0516, U1900, U2516

B3E090255430W05

DTC	U0073	SAS control module	CAN system communication error
	U0516	Climate control unit	
	U1900	PJB	
	U2516	Instrument cluster	
DETECTION CONDITION		Warning • Detection conditions are for understanding the DTC outline before performing an inspection. Performing an inspection according to only detection conditions may cause injury due to operating error, or damage the system. When performing an inspection, always follow the inspection procedure. • CAN system related harness malfunction • Related module communication error	
POSSIBLE CAUSE		• Open or short circuit in wiring harness • Malfunction of connectors between SAS control module, climate control unit, PJB and instrument cluster • SAS control module malfunction • Climate control unit malfunction • PJB malfunction • Instrument cluster malfunction	

Diagram illustrating the CAN bus network connections for the CAN system communication error (DTC U0073, U0516, U1900, U2516). The diagram shows the Instrument Cluster, Climate Control Unit (Z6), SAS Control Module, PJB, DLC-2, and Audio Unit (Base Module) connected via CAN_H (solid line) and CAN_L (dashed line) lines.

Legend:

- : CAN_H
- - - : CAN_L

Diagnostic procedure

STEP	INSPECTION	ACTION	
1	INSPECT CAN SYSTEM-RELATED DTC - Are any DTCs other than the following displayed? - U0073 - U0516 - U1900 - U2516	Yes	Determine malfunctioning part in CAN system. (See PROCEDURES FOR DETERMINING THE LOCATION OF A MALFUNCTION.)
		No	Go to the next step.
2	INSPECT CONNECTOR - Inspect the connector of the module that outputs the DTC. - Is it normal?	Yes	Go to the next step.
		No	Repair or replace the connector, then go to Step 4.
3	INSPECT WIRING HARNESES - Inspect for the following malfunctioning wiring harnesses: - Short to GND - Short to power supply - Twisted pair short each other - Open circuit - Is there any malfunction?	Yes	Repair or replace the wiring harness, then go to the next step.
		No	Go to the next step.
4	VERIFY TROUBLESHOOTING COMPLETED - Make sure to reconnect all disconnected connectors. - Clear the DTC using the WDS or equivalent. - Is the same DTC present?	Yes	Replace the module that outputs the DTC, then retry this step.
		No	Troubleshooting completed.

ON-BOARD DIAGNOSTIC[AUDIO]

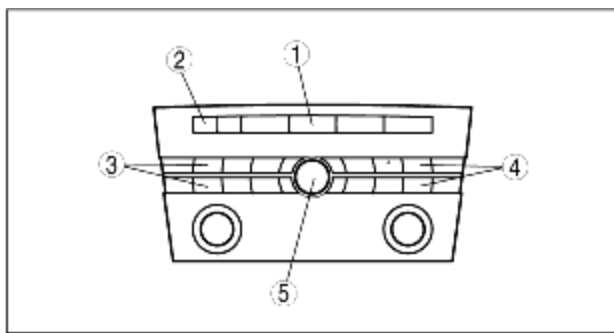
STARTING PROCEDURE FOR ON-BOARD DIAGNOSTIC TEST MODE

B3E090266900W01

Note

- All DTCs displayed in the on-board diagnostic test mode should be entered in the Audio Repair Order Form.

1. Turn the ignition switch to the ACC or ON position.
2. While pressing the POWER button, simultaneously press the AM button and the CLOCK button for **2 s or more**.



B3E090266900W01

1	AM button
2	CLOCK button
3	SEEK button (without RDS)
4	SEEK button (with RDS)
5	POWER button

Note

- If several DTCs are in the memory, they can be displayed using the SEEK button.

3. To stop the on-board diagnostic test mode, turn the ignition switch to the LOCK position.

SUPPLIER IDENTIFICATION PROCEDURE

B3E090266900W02

Note

- The supplier can vary with the module. When asking the supplier (service center) for repair or replacement, identify the supplier and fill in the Audio Repair Order Form with the following procedures.

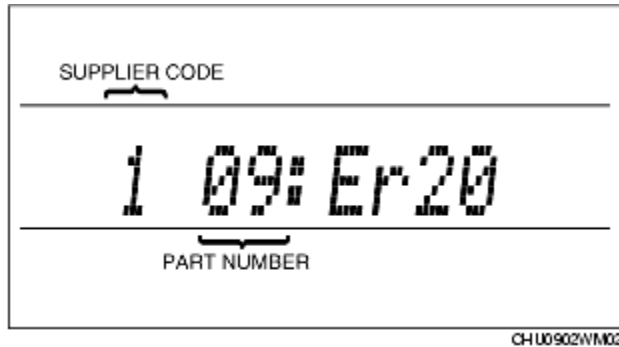
Identification Using the Label or Inscribed Lettering

1. Remove the audio unit.

2. Verify the supplier by referring to the label attached to each unit.

Identification Using the On-board Diagnostic Test Mode.

1. Start the on-board diagnostic test mode.
2. Identify the device and supplier codes by referring to the LCD display.



Note

- If no DTC is stored, no codes will be displayed.

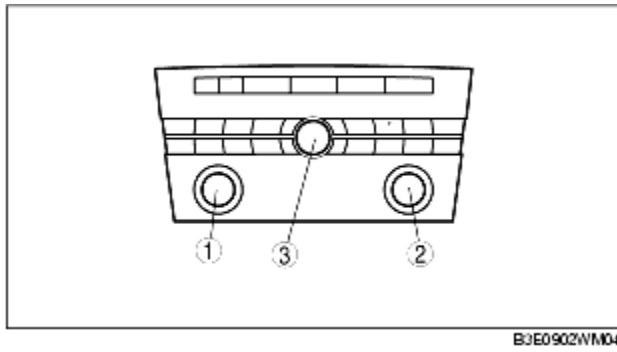
Supplier code	Supplier name
1	FMS audio
2	Panasonic
3	CLARION

Part number	Part name
00	Cassette deck
03	CD player
05	CD changer (external)
06	CD changer (upper module)
07	MD player
09	Base unit
10	MP3 applicable CD player system

MEMORY CLEARING PROCEDURE

B3E090266900W03

1. Start the on-board diagnostic test mode.
2. While pressing the POWER button, simultaneously press the AUDIO CONT button for **2 s or more**.



1	AUDIO CONT button (without RDS)
2	AUDIO CONT button (with RDS)
3	POWER button

Caution

- Before clearing the memory, be sure to enter all of the DTCs displayed in the on-board diagnostic test mode in the Audio Repair Order Form.

3. To stop the on-board diagnostic test mode, turn the ignition switch to the LOCK position.

DTC TABLE [AUDIO SYSTEM]

B3E090266900W04

Screen display		System malfunction location
DTC (When starting on-board diagnostic test function)	Error message (When error is found)	
09: Er22	-	Base unit (peripheral circuit for tuner)
09: Er20	-	Power supply circuit to base unit
00: Er10	-	Cassette deck communication circuit system
03: Er10	-	CD player communication circuit system
05: Er10	-	CD changer (external) communication circuit system
06: Er10	-	CD changer (upper module) communication circuit system
07: Er10	-	MD player communication circuit system
03: Er01	-	CD player system
03: Er02	CHECK CD	CD player system

03: Er07	CHECK CD	CD player system
00: Er01	-	Cassette deck system
00: Er03	-	Cassette deck system
00: Er04	CHECK TAPE	Cassette tape system
05: Er01	-	CD changer (external) system
05: Er07	CHECK CD	CD changer (external) system
06: Er01	-	CD changer (upper module) system
06: Er02	CHECK CD	CD changer (upper module) system
06: Er07	CHECK CD	CD changer (upper module) system
07: Er01	-	MD player system
07: Er02	CHECK MD	MD player system
07: Er07	CHECK MD	MD player system
07: Er08	CHECK MD	MD system
10: Er01	-	MP3 applicable CD player system
10: Er02	CHECK CD	MP3 applicable CD player system
no Er	-	No DTCs stored

DTC 09:ER22

B3E090266900W05

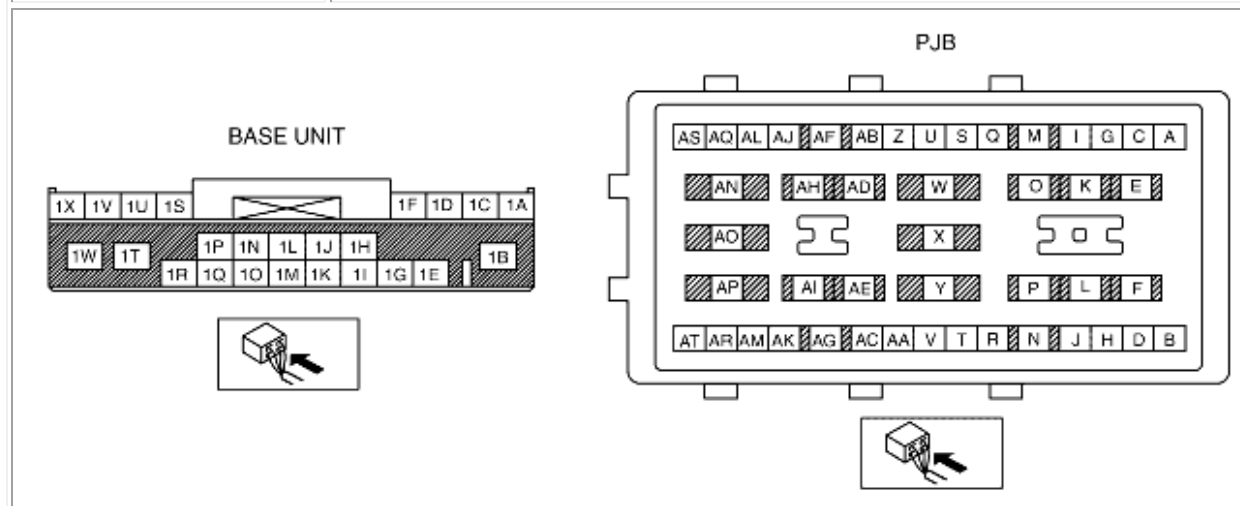
DTC 09:Er22	Base unit (peripheral circuit for tuner)
DETECTION CONDITION	• Base unit detects malfunction in inner circuit (related to tuner).
POSSIBLE CAUSE	• Base unit malfunction

Diagnostic procedure

INSPECTION		ACTION
Clear the DTC and operate the radio for 3 s or more . Is DTC 09: Er22 indicated?	Yes	Replace the base unit.
	No	DTC troubleshooting completed.

DTC 09:ER20

DTC 09:Er20	Power supply circuit of base unit
DETECTION CONDITION	Voltage detected at base unit terminals 1B and 1R is less than 8.5 V, or more than 16 V (must not be 16V).
POSSIBLE CAUSE	- Weak battery - Malfunction in wiring harness between battery and base unit



Diagnostic procedure

STEP	INSPECTION		ACTION
1	Remove the ROOM 15 A fuse and METER 7.5 A fuse. Are the fuses normal?	Yes	Go to the next step.
		No	Inspect related wiring harness, then replace the fuse.
2	Measure the battery voltage. Is the voltage between 8.5-16 V ?	Yes	Go to the next step.
		No	Battery malfunction Inspect the charge/discharge system.
3	Measure the voltage between PJB terminal P and base unit terminal 1B. Is the voltage between 8.5-16 V ?	Yes	Go to the next step.
		No	Inspect fuses and related wiring harness between the battery and PJB. • If there is malfunction, repair or replace the applicable part.
4	Install the ROOM 15 A fuse and METER 7.5 A fuse. Turn the ignition switch to the ACC position. Measure the voltage at the base unit terminals 1B and 1R. Is the voltage between 8.5-16 V ?	Yes	Go to the next step.
		No	Repair the wiring harness between the PJB and base unit.

5	Turn the ignition switch to the ACC or ON position and hold for 30 s or more .	Yes	Replace the base unit.
	Is DTC 09: Er20 displayed?	No	DTC troubleshooting completed.

DTC 00:ER10

B3E090266900W07

DTC 00:Er10	Cassette deck-base unit communication line
DETECTION CONDITION	Base unit detects communication error with cassette deck.
POSSIBLE CAUSE	- Malfunction of connectors between base unit and cassette deck - Cassette deck malfunction - Base unit malfunction

Diagnostic procedure

STEP	INSPECTION	ACTION
1	Remove the cassette deck and verify the connector condition (bent pins, poor female terminal connection, trapped foreign material)	Yes Go to the next step.
	Is the connector normal?	No Repair the connector and go to the next step.
2	Assemble the cassette deck to the base unit and verify the assembly condition.	Yes Go to the next step.
	Is the assembly condition normal?	No Repair the assembly and go to the next step.
3	Clear the DTC, turn the ignition switch to the ON position and then hold for 3 s or more .	Yes Replace the base unit and cassette deck.
	Is DTC 00: Er10 displayed?	No DTC troubleshooting completed.

DTC 03:ER10

B3E090266900W08

DTC 03:Er10	CD player-base unit communication line
DETECTION CONDITION	Base unit detects communication error with CD player.
POSSIBLE CAUSE	- Malfunction of connectors between base unit and CD player - CD player malfunction - Base unit malfunction

Diagnostic procedure

STEP	INSPECTION		ACTION
1	Remove the CD player and verify the connector condition (bent pins, poor female terminal connection, trapped foreign material). Is the connector normal?	Yes	Go to the next step.
		No	Repair the connector and go to the next step.
2	Assemble the CD player to the base unit and verify assembly condition. Is assembly condition normal?	Yes	Go to the next step.
		No	Repair the assembly condition and go to the next step.
3	Clear the DTC, turn the ignition switch to the ON position and then hold for 3 s or more . Is DTC 03: Er10 displayed?	Yes	Replace the base unit and CD player.
		No	DTC troubleshooting completed.

DTC 06:ER10

B3E090266900W09

DTC 06:Er10	CD changer (upper module)-base unit communication line
DETECTION CONDITION	Base unit detects communication error with CD changer (upper module).
POSSIBLE CAUSE	- Malfunction of connectors between base unit and CD changer (upper module) - CD changer (upper module) malfunction - Base unit malfunction

Diagnostic procedure

STEP	INSPECTION		ACTION
1	Verify the connections of the base unit and CD changer connectors. Are the connections normal?	Yes	Go to the next step.
		No	Repair the connections and go to the next step.
2	Inspect the wiring harness between the base unit and CD changer (external). Is the wiring harness normal?	Yes	Go to the next step.
		No	Repair the wiring harness and go to the next step.
3	Clear the DTC, turn the ignition switch to the ON position and then hold for 3 s or more .	Yes	Replace the base unit and CD changer (external).

Is DTC 06: Er10 displayed?	No	DTC troubleshooting completed.
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DTC 07:ER10

B3E090266900W10

DTC 07:Er10	MD player-base unit communication line
DETECTION CONDITION	Base unit detects communication error with MD player.
POSSIBLE CAUSE	- Malfunction of connectors between base unit and MD player - MD player malfunction - Base unit malfunction

Diagnostic procedure

STEP	INSPECTION		ACTION
1	Remove the MD player and inspect the connector condition (bent pins, poor female terminal connection, trapped foreign material). Is the connector normal?	Yes	Go to the next step.
		No	Repair the connector and go to the next step.
2	Assemble the MD player to the base unit and verify assembly condition. Is assembly condition normal?	Yes	Go to the next step.
		No	Repair the assembly condition and go to the next step.
3	Clear the DTC, turn the ignition switch to the ON position and then hold for 3 s or more . Is DTC 07: Er10 displayed?	Yes	Replace the base unit and MD player.
		No	DTC troubleshooting completed.

DTC 03:ER01

B3E090266900W11

DTC 03:Er01	CD player
DETECTION CONDITION	CD player cannot implement insert and eject commands.
POSSIBLE CAUSE	- Defective CD (broken or foreign material stuck/attached) - CD player malfunction

STEP	INSPECTION		ACTION
1		Yes	Go to the next step.

	Verify the condition of the CD when the error occurs. Is the CD normal?	No	Repair (remove foreign material) or replace the CD, and go to the next step.
2	Clear the DTC. Insert then eject a normal CD. Is DTC 03: Er01 displayed?	Yes	Replace the CD player.
		No	DTC troubleshooting completed.

DTC 03:ER02

B3E090266900W12

DTC 03:Er02	CD player
DETECTION CONDITION	Note - When error occurs, error message "CHECK CD" is displayed in the LCD. - Cannot play CD normally or change tracks.
POSSIBLE CAUSE	- Defective CD (scratches or dirt) - CD player malfunction

STEP	INSPECTION	ACTION	
1	Play the CD and change tracks. Can tracks be changed?	Yes	Go to Step 3.
		No	Cannot change to specific tracks. Go to the next step.
			Cannot change to any track. Replace the CD and try to change tracks again. - If the function is normal, go to Step 3. - If the function is not normal, replace the CD player.
2	Verify the condition of the CD when the error occurs. Is the CD normal?	Yes	Go to the next step.
		No	Repair (remove foreign material, clean) or replace the CD, and go to the next step.
3	Clear the DTC. Play the CD and change tracks. Is DTC 03: Er02 displayed?	Yes	Replace the CD player.
		No	DTC troubleshooting completed.

DTC 03:ER07

DTC 03:Er07	CD player
DETECTION CONDITION	Note • When error occurs, error message "CHECK CD" is displayed in the LCD. • Base unit detects CD reading error.
POSSIBLE CAUSE	• Defective CD (scratches or dirt) • CD player malfunction

Diagnostic procedure

STEP	INSPECTION		ACTION
1	Verify the condition of the CD when the error occurs.	Yes	Go to the next step.
	Is the CD normal?	No	Repair (remove foreign material, clean) or replace the CD, and go to the next step.
2	Clear the DTC and insert a normal CD.	Yes	Replace the CD player.
	Play the CD. Is DTC 03: Er07 displayed?	No	DTC troubleshooting completed.

DTC 00:ER01

DTC 00:Er01	Cassette deck
DETECTION CONDITION	• Cassette deck cannot implement insert and eject commands.
POSSIBLE CAUSE	• Defective cassette tape (deformation, broken, or foreign material stuck/attached) • Cassette deck malfunction

Diagnostic procedure

STEP	INSPECTION		ACTION
1	Can cassette tape be ejected?	Yes	Go to the next step.
		No	Replace the cassette deck.
2		Yes	Go to the next step.

	Verify condition of the cassette tape when the error occurs. Is the cassette tape normal?	No	Repair (remove foreign material) or replace the cassette tape, and go to the next step.
3	Clear the DTC. Insert then eject a normal cassette tape. Is DTC 00: Er01 displayed?	Yes	Replace the cassette deck.
		No	DTC troubleshooting completed.

DTC 00:ER03

B3E090266900W15

DTC 00:Er03	Cassette deck
DETECTION CONDITION	Base unit detects that reel built into cassette deck does not operate.
POSSIBLE CAUSE	- Defective cassette tape (tape slack, pinched tape in internal cassette deck) - Cassette deck malfunction

Diagnostic procedure

STEP	INSPECTION		ACTION
1	Verify condition of the cassette tape when the error occurs. Is the cassette tape normal?	Yes	Go to the next step.
		No	Repair (tighten slack, clear pinched tape inside cassette deck) or replace the cassette tape, and go to the next step.
2	Clear the DTC, and then insert a normal cassette tape. Play the cassette tape for 20 s or more . Is DTC 00: Er03 displayed?	Yes	Replace the cassette deck.
		No	DTC troubleshooting completed.

DTC 00:ER04

B3E090266900W16

DTC 00:Er04	Cassette tape
DETECTION CONDITION	Note - When error occurs, error message "CHECK TAPE" is displayed in the LCD. - Cassette tape is worn out.

POSSIBLE CAUSE	• Tape wear • Cassette deck malfunction
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Diagnostic procedure

STEP	INSPECTION		ACTION
1	Verify condition of the cassette tape when the error occurs.	Yes	Go to the next step.
	Is the cassette tape normal?	No	Replace the cassette tape and go to the next step.
2	Clear the DTC, and then insert a normal cassette tape.	Yes	Replace the cassette deck.
	Play the cassette tape for 20 s or more . Is DTC 00: Er04 displayed?	No	DTC troubleshooting completed.

DTC 06:ER01

B3E090266900W17

DTC 06:Er01	CD changer (upper module)
DETECTION CONDITION	• CD changer (upper module) cannot implement insert, eject, and disc change commands.
POSSIBLE CAUSE	• Defective CD (broken or foreign material stuck/attached) • CD changer (upper module) malfunction

Diagnostic procedure

STEP	INSPECTION		ACTION
1	Can CD be ejected?	Yes	Go to the next step.
		No	Replace the CD changer (upper module).
2	Verify the condition of the CD when the error occurs.	Yes	Go to the next step.
	Is the CD normal?	No	Repair (remove foreign material) or replace the CD, and go to the next step.
3	Clear the DTC.	Yes	Replace the CD changer (upper module).
	Insert then eject a normal CD. Is DTC 06: Er01 displayed?	No	DTC troubleshooting completed.

DTC 06:ER02

B3E090266900W18

DTC 06:Er02	CD changer (upper module)
DETECTION CONDITION	Note • When error occurs, error message "CHECK CD" is displayed in the LCD. • Cannot play CD normally or change tracks.
POSSIBLE CAUSE	• Defective CD (scratches or dirt) • CD changer (upper module) malfunction

Diagnostic procedure

STEP	INSPECTION		ACTION
1	Play all the CDs in the changer and change tracks. Can tracks be changed?	Yes	Go to Step 3.
		No	Cannot change to specific tracks. Go to the next step.
			Change the CD and try to change tracks again. • If the function is normal, go to Step 3. • If the function is not normal, replace the CD changer (upper module).
2	Verify the condition of the CD when the error occurs. Is the CD normal?	Yes	Go to the next step.
		No	Repair (remove foreign material, clean) or replace the CD, and go to the next step.
3	Clear the DTC. Play the CD and change tracks. Is DTC 06: Er02 displayed?	Yes	Replace the CD changer (upper module).
		No	DTC troubleshooting completed.

DTC 06:ER07

B3E090266900W19

DTC 06:Er07	CD changer (upper module)
DETECTION CONDITION	Note

	• When error occurs, error message "CHECK CD" is displayed in the LCD. • Base unit detects CD reading error.
POSSIBLE CAUSE	• Defective CD (scratches or dirt) • CD changer (upper module) malfunction

Diagnostic procedure

STEP	INSPECTION	ACTION
1	Play all the CDs in the changer. Are they read normally?	Yes Go to Step 3.
		No Cannot read specific CDs. Go to the next step.
		No Cannot read any CD. Go to Step 3.
2	Verify the condition of the CD when the error occurs. Is the CD normal?	Yes Go to the next step.
		No Repair (remove foreign material, clean) or replace the CD, and go to the next step.
3	Clear the DTC, and then insert a normal CD. Play the CD for 12 s or more . Is DTC 06: Er07 displayed?	Yes Replace the CD changer (upper module).
		No DTC troubleshooting completed.

DTC 07:ER01

B3E090266900W20

DTC 07:Er01	MD player
DETECTION CONDITION	• MD player cannot implement insert and eject commands.
POSSIBLE CAUSE	• Defective MD (broken or foreign material stuck/attached) • MD player malfunction

Diagnostic procedure

STEP	INSPECTION	ACTION
1	Can MD be ejected?	Yes Go to the next step.
		No Replace the MD player.
2		Yes Go to the next step.

	Verify the condition of the MD when the error occurs. Is the MD normal?	No	Repair (remove foreign material) or replace the MD, and go to the next step.
3	Clear the DTC. Insert then eject a normal MD. Is DTC 07: Er01 displayed?	Yes	Replace the MD player.
		No	DTC troubleshooting completed.

DTC 07:ER02

B3E090266900W21

DTC 07:Er02	MD player
DETECTION CONDITION	Note - When error occurs, error message "CHECK MD" is displayed in the LCD. - Cannot play MD normally or change tracks.
POSSIBLE CAUSE	- Defective MD (scratches or dirt) - MD player malfunction

Diagnostic procedure

STEP	INSPECTION	ACTION	
1	Play the MD and change tracks. Can tracks be changed?	Yes	Go to Step 3.
		No	Cannot change to specific tracks. Go to the next step.
			Cannot change to any track. Change the MD and try to change tracks again. - If the function is normal, go to Step 3. - If the function is not normal, replace the MD player.
2	Verify the condition of the MD when the error occurs. Is the MD normal?	Yes	Go to the next step.
		No	Repair (remove foreign material, clean) or replace the MD, and go to the next step.
3	Clear the DTC. Play the MD and change tracks. Is DTC 07: Er02 displayed?	Yes	Replace the MD player.
		No	DTC troubleshooting completed.

DTC 07:ER07

B3E090266900W22

DTC 07:Er07	MD player
DETECTION CONDITION	Note • When error occurs, error message "CHECK MD" is displayed in the LCD. • Base unit detects MD reading error.
POSSIBLE CAUSE	• Defective MD (scratches or dirt) • MD player malfunction

Diagnostic procedure

STEP	INSPECTION		ACTION
1	Verify the condition of the MD when the error occurs.	Yes	Go to the next step.
	Is the MD normal?	No	Repair (remove foreign material, clean) or replace the MD, and go to the next step.
2	Clear the DTC, and then insert a normal MD.	Yes	Replace the MD player.
	Play the MD for 12 s or more . Is DTC 07: Er07 displayed?	No	DTC troubleshooting completed.

DTC 07:ER08

B3E090266900W23

DTC 07:Er08	MD
DETECTION CONDITION	• Blank unrecorded MD is inserted.
POSSIBLE CAUSE	• Blank unrecorded MD

Diagnostic procedure

ACTION
• Insert a recorded MD into the MD player. • Inform customer that a blank MD had been inserted into the MD player.

DTC 10:ER01

B3E090266900W24

DTC 10:Er01	MP3 applicable CD player
DETECTION CONDITION	• CD player cannot implement insert and eject commands.
POSSIBLE CAUSE	• Defective CD (broken or foreign material stuck/attached) • MP3 applicable CD player malfunction

Diagnostic procedure

STEP	INSPECTION		ACTION
1	Verify the condition of the CD when the error occurs.	Yes	Go to the next step.
	Is the CD normal?	No	Repair (remove foreign material, clean) or replace the CD, and go to the next step.
2	Clear the DTC and insert a normal CD.	Yes	Replace the MP3 applicable CD player.
	Play the CD. Is DTC 10: Er10 displayed?	No	DTC troubleshooting completed.

DTC 10:ER02

B3E090266900W25

DTC 10:Er02	MP3 applicable CD player
DETECTION CONDITION	Note • When error occurs, error message "CHECK CD" is displayed in the LCD. • Cannot play CD normally or change tracks.
POSSIBLE CAUSE	• Defective CD (scratches or dirt) • MP3 applicable CD player malfunction

STEP	INSPECTION		ACTION
1	Play the CD and change tracks. Can tracks be changed?	Yes	Go to Step 3.
		No	Cannot change to specific tracks. Go to the next step.
			Cannot change to any track. Replace the CD and try to change tracks again.

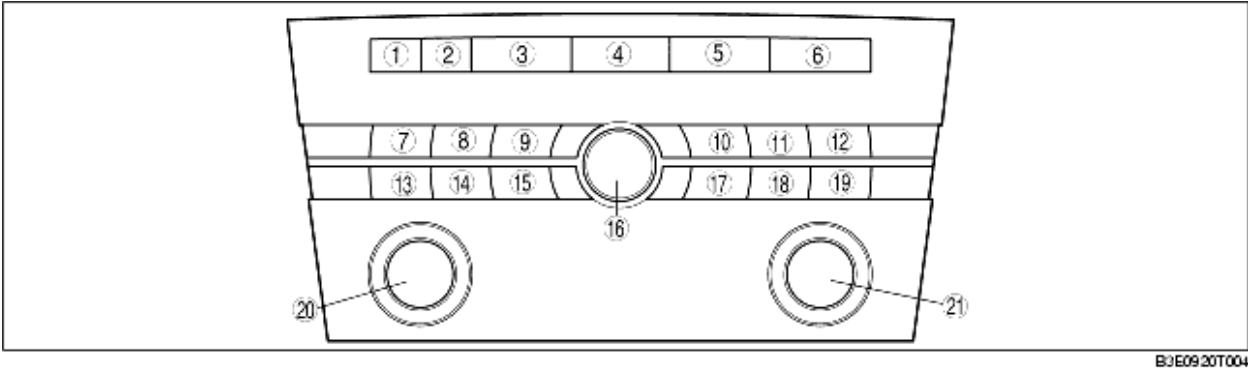
				• If the function is normal, go to Step 3. • If the function is not normal, replace the MP3 applicable CD player.
2	Verify the condition of the CD when the error occurs. Is the CD normal?	Yes	Go to the next step.	
		No	Repair (remove foreign material, clean) or replace the CD, and go to the next step.	
3	Clear the DTC. Play the CD and change tracks. Is DTC 10: Er02 displayed?	Yes	Replace the MP3 applicable CD player.	
		No	DTC troubleshooting completed.	

DIAGNOSTIC ASSIST FUNCTION

B3E090266900W26

Structural View

Buttons



B3E09 30T004

1	CLOCK button
2	INFO button (with drive information system)
	SET button (without drive information system)
3	FM1/2 button
4	AM button
5	CD button
6	TAPE/MD button
7	SEEK UP button (with RDS)
	Preset button "1" (without RDS)

8	TA button (with RDS)
	Preset button "2" (without RDS)
9	PTY button (with RDS)
	Preset button "3" (without RDS)
10	Preset button "1" (with RDS)
	RPT button (with RDS)
11	Preset button "2" (with RDS)
	SCAN button (without RDS)
12	Preset button "3" (with RDS)
	SEEK UP button (without RDS)
13	SEEK DOWN button (with RDS)
	Preset button "4" (without RDS)
14	PROG button (with RDS)
	Preset button "5" (without RDS)
15	AF button (with RDS)
	Preset button "6" (without RDS)
16	POWER/VOLUME button
17	Preset button "4" (with RDS)
	RDM button (without RDS)
18	Preset button "5" (with RDS)
	PROG button (without RDS)
19	Preset button "6" (with RDS)
	SEEK DOWN button (without RDS)
20	TUNE/TEXT/AUTO-M button (with RDS)
	AUDIO CONT button (without RDS)
21	AUDIO CONT button (with RDS)
	TUNE/TEXT/AUTO-M button (without RDS)

LCD Inspection

1. With the audio power on, press the POWER button and simultaneously press the SEEK button (upper) for **approx. 1 s**.

2. Inspect according to the following table:

INSPECTION	DISPLAY	ACTION	
Start the LCD inspection mode.		The characters displayed on the LCD are not truncated or faint.	The LCD is normal.
		Except above	Replace the information display.

3. Turn the audio off or the ignition switch to the LOCK position to stop the diagnostic assist function.

Button Inspection

1. With the audio power on, press the POWER button and simultaneously press the CLOCK button for **approx. 1 s**.

2. Inspect according to the following table:

INSPECTION	DISPLAY	ACTION	
- Start the button inspection mode. - Press all buttons.	-	The buzzer sounds.	The button is normal.
		The buzzer does not sound.	Replace the base unit.

3. Turn the audio off or the ignition switch to the LOCK position to stop the diagnostic assist function.

Speaker Inspection

1. With the audio power on, press the POWER button and simultaneously press the AUTO-M button for **approx. 1 s**.

2. Inspect according to the following table:

INSPECTION	DISPLAY	ACTION	
- Start the speaker inspection mode. - Does each speaker output sound in the following order? - Front passenger-side door speaker and tweeter - Front driver-side door speaker and tweeter	-	Yes	Speakers, and wiring harness between the base unit and speakers are normal.
		No	- Inspect the following parts. - Malfunctioning speaker - Wiring harness between base unit and malfunctioning speaker

3. Driver-side rear door speaker			
4. Passenger-side rear door speaker			

3. Turn the audio off or the ignition switch to the LOCK position to stop the diagnostic assist function.

Radio Reception Condition Inspection

1. With the audio power on, press the POWER button and simultaneously press the PRESET 2 button for **approx. 1 s**.

2. Inspect according to the following table:

Caution

- Even if the system is normal, radio reception may be difficult depending on where the system is inspected (indoors/outdoors, or conditions at the location). Before inspecting the system, verify that radio reception is adequate.
- When inspecting, select a frequency band (radio station) with the best reception.

INSPECTION	DISPLAY	ACTION
Start the radio reception condition inspection mode.	NORMAL CONDITION S-METER 5 S-METER 9	Antenna, antenna feeder and base unit are normal
	S-METER 3 S-METER 4	Change the frequency (radio station) and inspect again.
	MALFUNCTION PRESENT S-METER 0 S-METER 2	Inspect the antenna and antenna feeder. • If either the antenna or the antenna feeder is not normal, replace the malfunctioning part. • If the antenna and antenna feeder are normal, replace the base unit.

3. Turn the audio off or the ignition switch to the LOCK position to stop the diagnostic assist function.

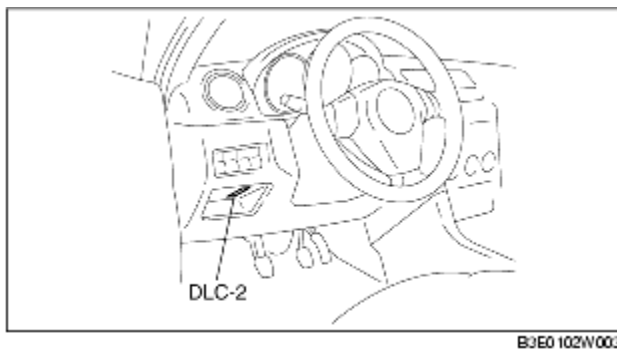
ON-BOARD DIAGNOSTIC [INSTRUMENTATION/DRIVER INFO.]

DTC INSPECTION [INSTRMENT CLUSTER]

B3E090255430W06

WDS

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



2. Verify if any DTCs are displayed.

- If any DTCs are displayed, perform the troubleshooting according to the corresponding DTC inspection.

3. Disconnect the WDS or equivalent.

DTC TABLE [INSTRMENT CLUSTER]

B3E090255430W07

DTC	Description	Page
B1342	Instrument cluster malfunction	(See DTC B1342 [INSTRUMENT CLUSTER].)
B2477	Configuration error	(See DTC B2477 [INSTRUMENT CLUSTER].)

DTC B1342 [INSTRUMENT CLUSTER]

DTC B1342	• Instrument cluster malfunction
DETECTION CONDITION	• Malfunction in the instrument cluster internal circuit
POSSIBLE CAUSE	• Instrument cluster malfunction

Diagnostic procedure

STEP	INSPECTION		ACTION
1	INSPECT INSTRUMENT CLUSTER • Clear the DTC from the memory. • Turn the ignition switch to the LOCK position. • Turn the ignition switch to the ON position. • Is B1342 displayed?	Yes	Replace the instrument cluster.
		No	DTC troubleshooting completed.

DTC B2477 [INSTRUMENT CLUSTER]

B3E090255430W09

DTC B2477	• Configuration error
DETECTION CONDITION	• Configuration error • Malfunction in the instrument cluster internal circuit
POSSIBLE CAUSE	• Instrument cluster malfunction

Diagnostic procedure

STEP	INSPECTION		ACTION
1	PERFORM INSTRUMENT CLUSTER CONFIGURATION • Perform instrument cluster configuration. • Is B2477 displayed?	Yes	Replace the instrument cluster.
		No	Go to the next step.
2	VERIFY TROUBLESHOOTING OF DTC B2477 COMPLETED • Clear the DTC from the memory. • Is B2477 displayed?	Yes	Go to the applicable DTC inspection.
		No	DTC troubleshooting completed.