Diagnostic Assist Code "01" CD Player Inspection

1. Input diagnostic assist code "01" according to diagnostic assist code input procedure. (See **Diagnostic Assist Code Input Procedure**.)

2. After inputting diagnostic assist code, insert the CD into the CD player **within 10 s**.

Inspection	Display of center display	Action
• Launch the CD player inspection mode. • Verify the inspection results.	CD OK	CD player is normal.
	CD Mechanical Linkage Failure	Verify if CD is damaged or deformed. **If there is a malfunction:** • Re-perform the inspection using a normal disc. **If there is no malfunction:** • Replace the CD player. (See **CD PLAYER REMOVAL**.) (See **CD PLAYER INSTALLATION**.)
	CD Signal Plausibility Failure	Replace with a CD that does not include data types other than Music data (CD-DA)/MP3/WMA (Windows Media Audio)/AAC (Advanced Audio Coding).

3. Cancel the diagnostic assist function according to ending procedure. (See **Ending Procedure**.)

Diagnostic Assist Code "02" DTC Clear

1. Input diagnostic assist code "02" according to diagnostic assist code input procedure. (See **Diagnostic Assist Code Input Procedure**.)

2. Verify that all DTCs are cleared.

3. Cancel the diagnostic assist function according to ending procedure. (See **Ending Procedure**.)

Diagnostic Assist Code "03/04/05/06" DTC Inspection

1. Verify the module to be inspected for DTCs referring to the chart, then input diagnostic assist code according to diagnostic assist code input procedure. (See **Diagnostic Assist Code Input Procedure**.)

NOTE:

• Combination of DTC and diagnostic assist code can be verified in the DTC table. (See **DTC TABLE [CONNECTIVITY MASTER UNIT]**.)

• Detection of DTCs is limited if the ignition is in the ACC position.

×: Applicable—: Not applicable

Diagnostic assist code	Modules which can be verified for DTC		
	Connectivity master unit (CMU)	Tuner and amp unit (TAU)	CD player

03	×	×	×
04	×	—	—
05	—	×	—
06	—	—	×

2. If a DTC is displayed, repair the malfunctioning location according to the applicable DTC troubleshooting. (See **DTC TABLE [CONNECTIVITY MASTER UNIT]**.)

3. Cancel the diagnostic assist function according to ending procedure. (See **Ending Procedure**.)

Diagnostic Assist Code "08" Software Reset

1. Input diagnostic assist code "08" according to diagnostic assist code input procedure. (See **Diagnostic Assist Code Input Procedure**.)

2. The software is automatically reset.

3. Cancel the diagnostic assist function according to ending procedure. (See **Ending Procedure**.)

Diagnostic Assist Code "09/53/57/68/69/93" Software Version Verification

1. Verify the module to be inspected for the software version referring to the chart, then input the diagnostic assist code according to diagnostic assist code input procedure. (See **Diagnostic Assist Code Input Procedure**.)

Diagnostic assist code	Software version to be verified
09	CD player
53	Connectivity master unit (overall entertainment system)
57	Connectivity master unit (overall communication system between vehicle)
68	Center display (TFT LCD screen control system)
69	Center display (Touch panel control system)
93	Tuner and amp unit

2. Cancel the diagnostic assist function according to ending procedure. (See **Ending Procedure**.)

Diagnostic Assist Code "10/85" Part Number Verification

1. Verify the module to be inspected for the part number referring to the chart, then input diagnostic assist code according to diagnostic assist code input procedure. (See **Diagnostic Assist Code Input Procedure**.)

Diagnostic assist code	Module to be verified for part number
10	CD player

85	Tuner and amp unit

2. Verify the part number.

NOTE:

- Only upper 4 digits of the part number are displayed.

3. Cancel the diagnostic assist function according to ending procedure. (See **Ending Procedure**.)

Diagnostic Assist Code "25" Antenna Control Output Condition Inspection

1. Input diagnostic assist code "25" according to diagnostic assist code input procedure. (See **Diagnostic Assist Code Input Procedure**.)

2. Inspect the malfunctioning location 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 performing the inspection, select the best area for receiving radio frequencies.

Inspection	Display of center display		Action
• Verify that the launched antenna control output condition inspection mode is displayed on the screen.	ANT-ON	Good sound quality	System is normal.
		Bad sound quality	Inspect the glass antenna, antenna amplifier (4SD)/center roof antenna (5HB), and antenna feeder. (See **GLASS ANTENNA INSPECTION**.) (See **ANTENNA AMPLIFIER INSPECTION**.) (See **CENTER ROOF ANTENNA INSPECTION**.) (See **ANTENNA FEEDER NO.1 INSPECTION**.) (See **ANTENNA FEEDER NO.2 INSPECTION**.) (See **ANTENNA FEEDER NO.3 INSPECTION**.) • If the glass antenna, antenna amplifier (4SD)/center roof antenna (5HB), or antenna feeder is malfunctioning: ▪ Replace the malfunctioning part. (See **FILAMENT REPAIR**.) (See **ANTENNA AMPLIFIER REMOVAL/INSTALLATION**.) (See **CENTER ROOF ANTENNA REMOVAL/INSTALLATION**.) (See **ANTENNA FEEDER NO.1**

		REMOVAL/INSTALLATION.)
		
		(See **ANTENNA FEEDER NO.2 REMOVAL**.)
		
		(See **ANTENNA FEEDER NO.2 INSTALLATION**.)
		
		(See **ANTENNA FEEDER NO.3 REMOVAL/INSTALLATION**.)
		
		• If the glass antenna, antenna amplifier (4SD)/center roof antenna (5HB), and antenna feeder are normal:
		
		      • Replace the tuner and amp unit (TAU).
		
		      (See **TUNER AND AMP UNIT (TAU) REMOVAL/INSTALLATION**.)

	ANT-OFF	Replace the tuner and amp unit (TAU). (See **TUNER AND AMP UNIT (TAU) REMOVAL/INSTALLATION**.)

3. Cancel the diagnostic assist function according to ending procedure. (See **Ending Procedure**.)

Diagnostic Assist Code "58" Configuration Information Verification

1. Input diagnostic assist code "58" according to diagnostic assist code input procedure. (See **Diagnostic Assist Code Input Procedure**.)

2. Verify the configuration information.

Display of center display	Content
Destination	Destination information
CMU Types	Recognition condition whether connectivity master unit is equipped or not

3. Cancel the diagnostic assist function according to ending procedure. (See **Ending Procedure**.)

Diagnostic Assist Code "59" Individual Number Verification

1. Input diagnostic assist code "59" according to diagnostic assist code input procedure. (See **Diagnostic Assist Code Input Procedure**.)

2. Verify the individual number of the connectivity master unit.

3. Cancel the diagnostic assist function according to ending procedure. (See **Ending Procedure**.)

Diagnostic Assist Code "61" Vehicle Signal Verification

1. Input diagnostic assist code "61" according to diagnostic assist code input procedure. (See **Diagnostic Assist Code Input Procedure**.)

2. Verify the vehicle signal.

Display of center display	Content
ST-SW	Steering switch signal input condition
Commander	Commander switch signal input condition
GPS	GPS antenna signal input condition
Microphone	Microphone signal input condition
HUB1	HUB1 signal input condition
HUB2	HUB2 signal input condition
RS-485	RS-485 signal input condition
NAVI (SD)	SD card insertion condition
CD/DVD	CD or DVD equipment recognition condition
DTV	DVD equipment recognition condition

3. Cancel the diagnostic assist function according to ending procedure. (See **Ending Procedure**.)

Diagnostic Assist Code "65" Switch Inspection

1. Input diagnostic assist code "65" according to diagnostic assist code input procedure. (See **Diagnostic Assist Code Input Procedure**.)

2. Perform the steering switch inspection or commander switch inspection.

NOTE:

- When the switch is operated, the switch operation content detected by the connectivity master unit is displayed in the center display.

- If the switch operation content previously detected is being displayed in the center display, newly detected content is added over it.

Steering switch inspection

Inspection	Display of center display	Action	
- Launch the switch inspection mode. - Operate each switch of the steering switch. - Does the display in the center display correspond	- ST-SW Talk Button Pressed: TALK switch is pressed - ST-SW Talk Button Released: TALK switch is released	Yes	The steering switch is normal.
		Inspect the steering switch. (See **STEERING SWITCH INSPECTION**.) - If there is a malfunction: - Replace the steering switch. (See **STEERING SWITCH REMOVAL/INSTALLATION**.) - If the steering switch is normal: - Replace the connectivity	

to each switch operation?	ST-SW Pick-Up Button Pressed: Pick-Up switch is pressed		master unit. (See **CONNECTIVITY MASTER UNIT (CMU) REMOVAL/INSTALLATION**.)
	• ST-SW Pick-Up Button Released: Pick-Up switch is released		
	• ST-SW Hang-Up Button Pressed: Hang-Up switch is pressed		
	• ST-SW Hang-Up Button Released: Hang-Up switch is released		
	• ST-SW Volume + Button Pressed: VOLUME (+) switch is pressed		
	• ST-SW Volume + Button Released: VOLUME (+) switch is released	No	
	• ST-SW Volume - Button Pressed: VOLUME (-) switch is pressed		
	• ST-SW Volume - Button Released: VOLUME (-) switch is released		
	• ST-SW Seek + Button Pressed: Seek (+) switch is pressed		

- ST-SW Seek + Button Released: SEEK (+) switch is released

- ST-SW Seek - Button Pressed: Seek (-) switch is pressed

- ST-SW Seek - Button Released: Seek (-) switch is released

Commander switch inspection

Inspection	Display of center display	Action	
• Launch the switch inspection mode. • Operate each button and knob of the commander switch. • Does the display in the center display correspond to each operation?	• Home Button Pressed: HOME button is pressed • Home Button Released: HOME button is released • Navi Button Pressed: NAV button is pressed • Navi Button Released: NAV button is released • Audio Button Pressed: AUDIO button is pressed • Audio Button Released: AUDIO button is released • Favorites Button Pressed: FAVORITE button is pressed • Favorites Button Released: FAVORITE button is released • Back Button Pressed: BACK button is pressed • Back Button Released: BACK button is released • Commander Pushed In: Commander knob is pressed • Commander Released: Commander knob is released • Tilt Up Pressed: Commander knob is tilted up • Tilt Up Released: Commander knob is released from tilted up condition	Yes	Commander switch is normal.
			Replace the commander switch. (See **COMMANDER SWITCH REMOVAL/INSTALLATION**.)

• Tilt Right Pressed: Commander knob is tilted to the right	No	
• Tilt Right Released: Commander knob is released from tilted right condition		
• Tilt Down Pressed: Commander knob is tilted down		
• Tilt Down Released: Commander knob is released from tilted down condition		
• Tilt Left Pressed: Commander knob is tilted to the left		
• Tilt Left Released: Commander knob is released from tilted left condition		
• Commander Turned Clockwise: Commander knob is turned clockwise		
• Commander Turned Counter Clockwise: Commander knob is turned counterclockwise		
• Volume Knob Pushed In: Volume dial is pressed		
• Volume Knob Released: Volume dial is released		
• Volume Knob Turned Clockwise: Volume dial is turned clockwise		
• Volume Knob Turned Counter Clockwise: Volume dial is turned counterclockwise		

3. Cancel the diagnostic assist function according to ending procedure. (See **Ending Procedure**.)

Diagnostic Assist Code "70" Display/Touch Panel Inspection

1. Input diagnostic assist code "70" according to diagnostic assist code input procedure. (See **Diagnostic Assist Code Input Procedure**.)

NOTE:

- The display/touch panel inspection is repeated periodically until a same location in the center display is touched for **10 s or more**.

Inspection	Display of center display		Action

• Launch the display/touch panel inspection mode.
 	
• Verify the center display.
	If normal, [+] cursor is displayed centering around the touched area, and at the same time, the display switches in the following order.
	
	    • Unicolor screen in the following colors
	
	        ■ White→Black→Red→Green→Blue
	
	    • Horizontal-striped screen in black and the
		Yes	Center display is normal.

			Replace the center display. (See **CENTER DISPLAY REMOVAL/INSTALLATION**.

• Does the center display normally?	following colors ■ Red→Green→Blue • Vertical-striped screen in black and the following colors ■ Red→Green→Blue • Checkered screen in black and the following colors ■ Red→Green→Blue • Returns to 1.	No	

2. Continuously touch the same location for **10 s or more**.

NOTE:

- When the display/touch panel inspection is finished, the diagnostic assist function is canceled without returning to the diagnostic assist code input screen.
- When the diagnostic assist function is canceled, it returns to a different screen depending on the way in which the diagnostic assist function was launched.
    - If launched using the commander switch: The previous screen before launching the diagnostic assist function
    - If launched not using the commander switch: The setting screen

Diagnostic Assist Code "72" GPS Information Verification

1. Input diagnostic assist code "72" according to diagnostic assist code input procedure. (See **Diagnostic Assist Code Input Procedure**.)

2. Verify the GPS information.

NOTE:

- GPS reception signal is updated **every 1 s**.

Display of center display	Content
Longitude (X)	Degree of longitude in GPS information of the current location
Latitude (Y)	Degree of latitude in GPS information of the current location
Absolute Time (Z)	Date and time information (GMT)
Number of Satellites	Number of satellites being receipt

3. Cancel the diagnostic assist function according to ending procedure. (See **Ending Procedure**.)

Diagnostic Assist Code "84" Manufacturer Name Verification

1. Input diagnostic assist code "84" according to diagnostic assist code input procedure. (See **Diagnostic Assist Code Input Procedure**.)

2. Verify the manufacturer name.

3. Cancel the diagnostic assist function according to ending procedure. (See **Ending Procedure**.)

Diagnostic Assist Code "90" Radio Reception Condition Inspection

1. Tune in the radio.

2. Input diagnostic assist code "90" according to diagnostic assist code input procedure. (See **Diagnostic Assist Code Input Procedure**.)

3. Inspect the malfunctioning location 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 performing the inspection, select a frequency (radio station) with optimum reception in the area.

Inspection	Display of center display	Action
- Start the radio reception condition inspection mode. - Select frequency (radio station) by operating the commander knob. - Verify the inspection results.	TAU AM Reception Level Test Result:10—5	Glass antenna, antenna amplifier (4SD)/center roof antenna (5HB), antenna feeder and tuner and amp unit are normal.
	TAU AM Reception Level Test Result:4—3	Change frequencies and re-perform the inspection.
	TAU AM Reception Level Test Result:2—0	Inspect the glass antenna, antenna amplifier (4SD)/center roof antenna (5HB), and antenna feeder. (See **GLASS ANTENNA INSPECTION**.) (See **ANTENNA AMPLIFIER INSPECTION**.) (See **CENTER ROOF ANTENNA INSPECTION**.) (See **ANTENNA FEEDER NO.1 INSPECTION**.) (See **ANTENNA FEEDER NO.2 INSPECTION**.) (See **ANTENNA FEEDER NO.3 INSPECTION**.) - If the glass antenna, antenna amplifier (4SD)/center roof antenna (5HB), or antenna feeder is malfunctioning: - Replace the malfunctioning part. (See **FILAMENT REPAIR**.) (See **ANTENNA AMPLIFIER REMOVAL/INSTALLATION**.) (See **CENTER ROOF ANTENNA REMOVAL/INSTALLATION**.) (See **ANTENNA FEEDER NO.1 REMOVAL/INSTALLATION**.) (See **ANTENNA FEEDER NO.2 REMOVAL**.)

| | | | (See **ANTENNA FEEDER NO.2 INSTALLATION**.)

(See **ANTENNA FEEDER NO.3 REMOVAL/INSTALLATION**.)

- If the glass antenna, antenna amplifier (4SD)/center roof antenna (5HB), and antenna feeder are normal:

  - Replace the tuner and amp unit.

  (See **TUNER AND AMP UNIT (TAU) REMOVAL/INSTALLATION**.) |

4. Cancel the diagnostic assist function according to ending procedure. (See **Ending Procedure**.)

Diagnostic Assist Code "94" Speaker Inspection

1. Input diagnostic assist code "94" according to diagnostic assist code input procedure. (See **Diagnostic Assist Code Input Procedure**.)

Inspection	Display of center display		Action

- Launch the speaker inspection mode.
 	
- Does each speaker output sound in the following order?:
 	
  Without Bose®
 	
  1. Front door speaker (LH) and tweeter (LH)
 	
  2. Front door speaker (RH) and tweeter (RH)
 	
  3. Rear door speaker (RH)
 	
  4. Rear door speaker (LH)
 	
  With
		Yes	**Without Bose®**
			
			- The speaker tuner and amp unit, and the wiring harness between the tuner and amp unit and speaker are normal.
			
			With Bose®
			
			- The speaker tuner and amp unit, audio amplifier, wiring harness between audio amplifier and speaker, and wiring harness between tuner and amp unit and audio amplifier are normal.

			Refer to the symptom troubleshooting. (See **NO SOUND OUTPUT IN ALL MODES [ENTERTAINMENT SYSTEM [WITH CENTER DISPLAY]]**.)

Bose® 1. Front door speaker (LH), front side speaker (LH) and front center speaker 2. Front door speaker (RH), front side speaker (RH) and front center speaker 3. Rear door speaker (RH) ,rear speaker (LH) and rear speaker (RH) 4. Rear door speaker (LH) ,rear speaker (LH) and rear speaker (RH)	—	No	

2. Cancel the diagnostic assist function according to ending procedure. (See **Ending Procedure**.)

Diagnostic Assist Code "96" XM tuner Unique Number Verification

1. Input diagnostic assist code "96" according to diagnostic assist code input procedure. (See **Diagnostic Assist Code Input Procedure**.)

2. Verify the unique number of the XM tuner inside the tuner and amp unit.

3. Cancel the diagnostic assist function according to ending procedure. (See **Ending Procedure**.)

Diagnostic Assist Code "97" AM Radio Field Strength Verification

1. Input diagnostic assist code "97" according to diagnostic assist code input procedure. (See **Diagnostic Assist Code Input Procedure**.)

2. Verify the AM radio field strength.

- Frequencies can be changed by turning the commander knob.

Display of center display	Content
AM Frequency	AM radio station frequency (kHz) being received
Strength	Frequency field strength (dBuV)

3. Cancel the diagnostic assist function according to ending procedure. (See **Ending Procedure**.)

Diagnostic Assist Code "98" FM Radio Field Strength Verification

1. Input diagnostic assist code "98" according to diagnostic assist code input procedure. (See **Diagnostic Assist Code Input Procedure**.)

2. Verify the FM radio field strength.

- Frequencies can be changed by turning the commander knob.

Display of center display	Content
FM Frequency	FM radio station frequency (MHz) being received
Strength	Frequency field strength (dBuV)

3. Cancel the diagnostic assist function according to ending procedure. (See **Ending Procedure**.)