



# Technical Service Bulletin

SUBJECT:		No: <b>TSB-13-22-003</b>	
<b>TC-SST DIAGNOSIS AND OVERHAUL – SERVICE MANUAL REVISION</b>		DATE: <b>March. 2013</b>	
		MODEL: <b>See Below</b>	
CIRCULATE TO:	<input type="checkbox"/> GENERAL MANAGER	<input checked="" type="checkbox"/> PARTS MANAGER	<input checked="" type="checkbox"/> TECHNICIAN
<input checked="" type="checkbox"/> SERVICE ADVISOR	<input checked="" type="checkbox"/> SERVICE MANAGER	<input checked="" type="checkbox"/> WARRANTY PROCESSOR	<input type="checkbox"/> SALES MANAGER

## PURPOSE

The Mechatronic assembly (valve body and TCM) and the clutch assembly are now available as service parts. This TSB provides instructions for transmission overhaul that were not included in the service manual.

Clicking on blue page numbers will link to that page.

## AFFECTED VEHICLES

2008–2011 Lancer Evolution  
 2009–2011 Lancer (Ralliart Edition)  
 2010–2011 Lancer Sportback (Ralliart Edition)

## AFFECTED SERVICE MANUALS

2008–2009 Lancer Evolution, 2009–2011 Lancer (Ralliart Edition), 2010–2011 Lancer Sportback (Ralliart Edition):

Group 22C – Twin Clutch–Sportronic Shift Transmission (TC–SST):

- Special Tools
- Diagnosis <TC–SST)
- On–Vehicle Service
- Transaxle Assembly
- Oil Pan
- Mechatronic Assembly, Manual Control Lever
- Transaxle Case Oil Seal
- Oil Cooler
- Oil Filter

Group 22D – Twin Clutch–SST Overhaul:

Continued

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**GROUP 22**

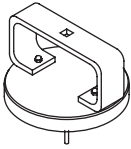
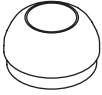

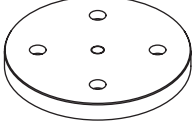
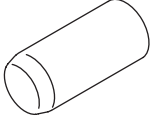
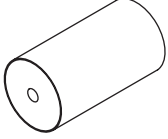
**TWIN CLUTCH-  
SPORTRONIC SHIFT  
TRANSMISSION  
(TC-SST)**

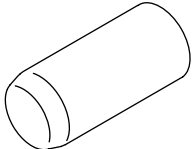
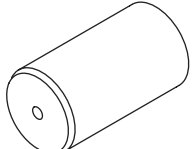
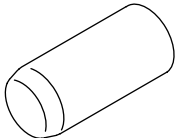
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## SPECIAL TOOLS

M1225000300208

Tool	Tool number and name	Supersession	Application
	MB992332 Clutch remover & installer	-	Installation of clutch assembly
	MB992324 Seal cover guide A	-	Installation of seal cover
	MB992325 Seal cover guide B	-	Installation of seal cover
	MB992323 Seal cover installer	-	Installation of seal cover
	MB992311 Oil seal guide	-	Installation of transaxle case (LH) oil seal
	MB992310 Oil seal installer	-	Installation of transaxle case (LH) oil seal

Tool	Tool number and name	Supersession	Application
	MB992313 Oil seal guide	–	Installation of transaxle case (RH) oil seal
	MB992312 Oil seal installer	–	Installation of transaxle case (RH) oil seal
	MB992314 V ring guide	–	Installation of V ring

## DIAGNOSIS <TC-SST>

### TC-SST TEACH-IN

M1225029400204

#### CAUTION

- Check the Diag. Version before Teach-in. If the Diag. Version is 0000, reprogram the ECU. (The software with Diag. Version 0000 does not have Teach-in function.)
- When the mechatronic assembly is replaced, reprogram the ECU and carry out the following Teach-In.
- However, when the mechatronic assembly is replaced, after the reprogramming of the ECU the coding must be carried out before the teach-in.
- When the clutch assembly is replaced, the following Teach-In must be carried out.
- However, when the Diag. Version of TC-SST-ECU is 0001, Item No.8 is not used.
- Follow the application table below to reprogram the ECU by using an applicable software.

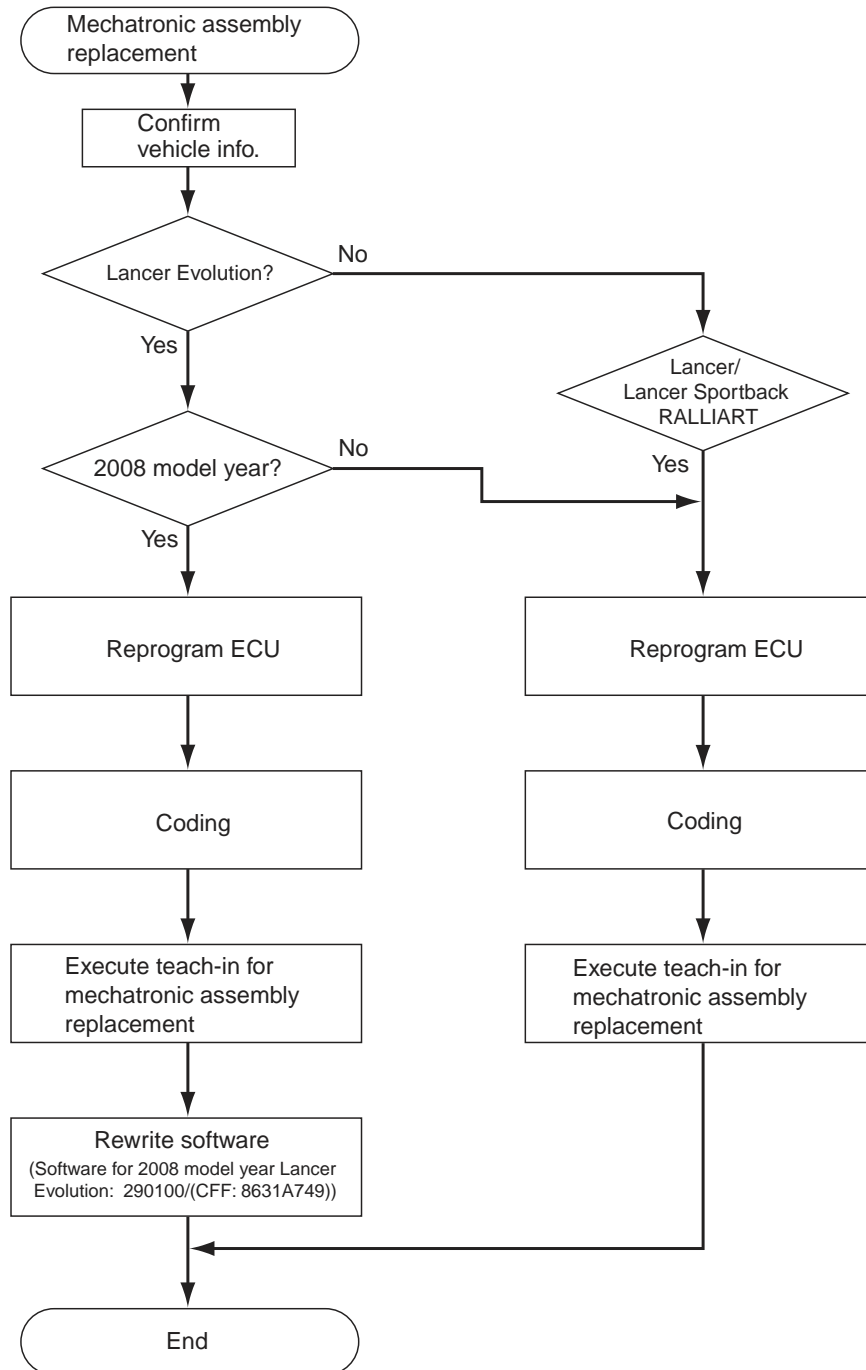
#### Application table

Model	Model year	Software version/ CFF part number	Remarks
Lancer Evolution	2008, 2009, 2010	2B0101/8631B001	On 08MY Lancer Evolution, after teach-in, be sure to rewrite the software from "2B0101/(CFF: 8631B001)" to "290100/(CFF: 8631A749)".
Lancer/ Lancer Sportback	2009, 2010	2B0101/8631B002	-

**NOTE:** On vehicles after 2011 model year, observe the latest software version to reprogram the ECU.

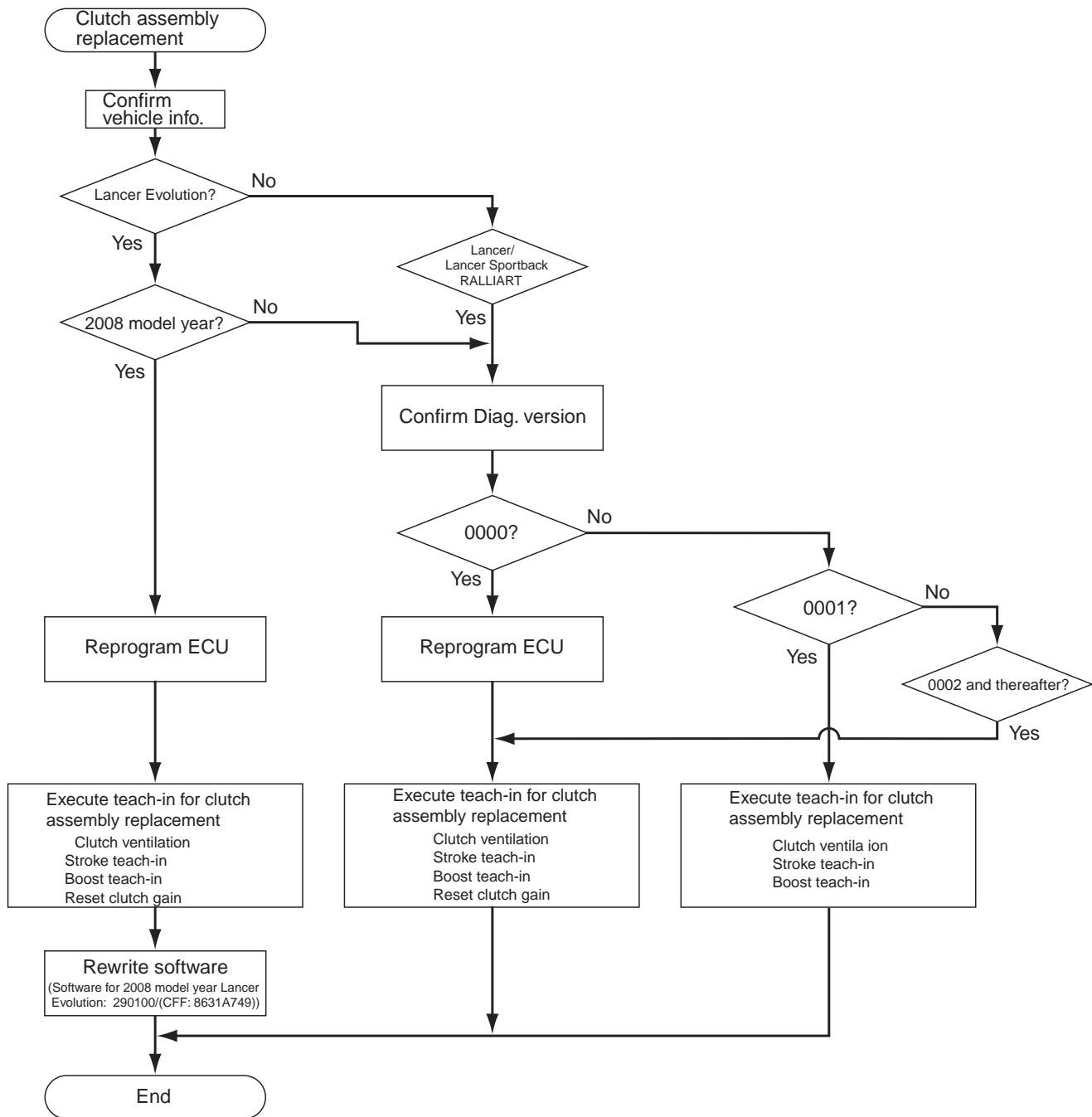
TEACH-IN ITEM

MECHATRONIC ASSEMBLY REPLACEMENT



ACB00797AD

CLUTCH ASSEMBLY REPLACEMENT



ACB00798AD

**1. Teach-In operation type**

There are two types of Teach-In operation and the type to be implemented varies depending on the replacement part.

Type	Teach-In	Mechatronic assembly replacement	Clutch assembly replacement
A	Teach-In for Shift fork	Implemented	Not implemented
B	Teach-In for Clutch	Implemented	Implemented

*NOTE: When replacing the mechatronic assembly, execute in A → B order.*

## 2. Scan tool item execution

To complete each Teach-In operation, multiple items must be executed using scan tool (MB991958), and those items shall be executed in a designated order.

### 2-1. SCAN TOOL ITEM LIST

Item No.	Scan Tool Item Name
1	Plausibility check
2	Shift fork Teach-In
3	Line pressure Test
4	Stroke Teach-In
5	Boost Teach-In
6	Interlock Teach-In
7	Clutch Ventilation
8	Reset clutch gain

*NOTE:*

- *Item No. 3 and No. 6 are displayed on the scan tool, however, those are not used.*
- *Item No.8 is not displayed when the Diag. Version of TC-SST-ECU is 0001. (Diag. Version can be checked by the Teach-In screen of scan tool.)*

### 2-2. ITEM EXECUTION ORDER

Type	Teach-In	Item execution order
A	Teach-In for Shift fork	No.1 → No.2
B	Teach-In for Clutch	No. 1 → No. 7 → No. 4 → No.5 → No.8

*NOTE: Item No.8 is not displayed when the Diag. Version of TC-SST-ECU is 0001. (Diag. Version can be checked by the Teach-In screen of scan tool.)*

## 3. Confirmation of Teach-In operation status

Using the data list simultaneously displayed with Teach-In, the execution status and results can be confirmed.

No.	Data List Item Name	Scan Tool display
100	Teach-In executing	No/Pending/Yes
101	Normal End	No/Yes
102	Abnormal End	No/Yes
103	Timeout error	No/Yes
104	Abort conditions error	No/Yes
110	Execute last Teach-in item	The previously conducted scan tool item name is displayed
111	Internal Error Data	The monitoring unit No. is displayed in case of an error

## TEACH-IN PROCEDURE

### NOTE:

- According to the transmission fluid state (fluid -filled state), Teach-In executed time is not equal.
- Item No.8 is not displayed when the Diag. Version of TC-SST-ECU is 0001. (Diag. Version can be checked by the Teach-In screen of M.U.T.-III.)

### <MECHATRONIC ASSEMBLY REPLACEMENT>

Steps	Contents
1	With the M.U.T.-III connected and the vehicle set to the condition below, execute the Teach-In. <ul style="list-style-type: none"> <li>• Engine: Idling</li> <li>• Shift lever position: P range</li> <li>• Brake pedal: Depressed</li> <li>• Parking brake: Pulled</li> <li>• Transmission fluid temperature: 40 °C to 80 °C</li> </ul>
2	Select "Special Function" of TC-SST.
3	Select "Teach-In" of Special Function.
4	According to "2-2 Item execution order", select the Item No.1: Plausibility check to execute. <i>NOTE: Before execution, "No" is displayed in the Data list No. 100: Teach-In executing.</i>
5	After execution, check that "Yes" is displayed in the Data list No. 100: Teach-In executing. <i>NOTE: In a case other than the execution conditions, "Pending" is displayed in the Data list No. 100: Teach-In executing.</i>
6	After the Teach-In (Item No.1: Plausibility check) completion, check that "No" is displayed in the Data list No. 100: Teach-In executing and execution results are displayed in the Data list No. 101 to No. 104. <ul style="list-style-type: none"> <li>• No.101: Normal End: On normal end, "Yes" is displayed.</li> <li>• No.102: Abnormal End: On abnormal end, "Yes" is displayed.</li> <li>• No.103: Timeout error: On timeout error, "Yes" is displayed</li> <li>• No.104: Abort conditions error: In a case other than the execution conditions, "Yes" is displayed.</li> </ul>
7	Change the item to No. 2: Shift fork Teach-In, and execute steps from 5 to 6 in the same manner.
8	Turn the ignition switch to the LOCK (OFF) position. To store the learned value in the memory, make sure that the TC-SST-ECU is shut down by turning the ignition switch OFF.
9	Start the engine again, and execute step 1 in the same manner.
10	Change the item to No. 1: Plausibility Check, and execute steps from 5 to 6 in the same manner.
11	<b>⚠ CAUTION</b> <b>Item No.7: If the clutch ventilation "fails", first follow steps 12 to 15, and then steps 9 to 11.</b> <b>Item No.7: If the clutch ventilation "completes successfully", repeat steps 12 to 15.</b> Change the item to No. 7: Clutch Ventilation, and execute steps from 5 to 6 in the same manner.
12	Change the item to No. 4: Stroke Teach-In, and execute steps from 5 to 6 in the same manner.
13	<b>⚠ CAUTION</b> <b>Be careful with the following items when performing Item No.5: Boost Teach-In.</b> <ul style="list-style-type: none"> <li>• <b>The engine speed could be high (4,000 r/min) when the Boost Teach-In is in progress. (Depending on the transmission state, the engine speed may not be high.)</b></li> </ul> Change the item to No. 5: Boost Teach-In, and execute steps from 5 to 6 in the same manner.
14	Change the item to No. 8: Reset clutch gain, and execute steps from 5 to 6 in the same manner. When the Diag. Version of TC-SST-ECU is 0001, Item No.8 is not used.
15	Turn the ignition switch to the LOCK (OFF) position.



**DIAGNOSIS FUNCTION**

M1225000500569

**FAIL-SAFE FUNCTION**

If an abnormality occurs to the signal of sensors, switches, solenoids, or others, TC-SST-ECU performs a control for the driver safety and system protection. The control contents are as follows.

**FAIL-SAFE REFERENCE TABLE**

Diagnostic trouble code No.			Control content
P0702 P1803 P1804 P1805	P1806 P1807 P1857 P1858	P185D P1866 P1868 P1872	Clutch open prohibits the vehicle from driving, and displays an occurrence of trouble to the multi information display to warn the driver.
P0776 P0777 P0964 P0965 P0966	P0968 P0970 P0971 P1852 P2733	P2736 P2738 P2739	Continues driving with the current gear fixed, and an occurrence of trouble is displayed to the multi information display to warn the driver.
P0715 P0716 P0753 P0758 P0841 P0842 P0843 P0846 P0847 P0848 P0973 P0974 P0976 P181B P181C P181E P181F P1820 P1821 P1822	P1823 P1824 P1825 P1826 P1827 P1828 P1829 P182A P182B P182C P182D P182E P1831 P1832 P1833 P1834 P1835 P1836 P183D P1844	P184B P1855 P1885 P1886 P1887 P1888 P2718 P2719 P2720 P2721 P2728 P2729 P2730 P2766 P2809 P2812 P2814 P2815	Drives with the odd number gear axle (1st, 3rd, 5th gear) or with the even gear axle (2nd, 4th, 6th gear), and an occurrence of trouble is displayed to the multi information display to warn the driver.
P1862 P1863 P186A P186B	P1876 P1877 P1878 P1879	P187A P187B P187C	Drives with the gears other than the gears related to the part in trouble, and an occurrence of trouble is displayed to the multi information display to warn the driver.

Diagnostic trouble code No.			Control content
P1871	U0001	U0100	The creep driving cannot be performed, and displays an occurrence of trouble to the multi information display to warn the driver.
P0746 P0963	P1870	P1871	Shift shock or shift response deterioration occurs, and displays an occurrence of trouble to the multi information display to warn the driver.
P0630 P0701 P0712 P0713 P0960 P0961 P0962 P0967	P1637 P1676 P180C P1864 P1867 P186C P186D P186E	P186F P1873 P1874 P1875 P1880 P1881 P1890	Normal driving can be performed, and displays an occurrence of trouble to the multi information display to warn the driver.

**FREEZE FRAME DATA CHECK**

Display items of the freeze frame data are as follows.

Various data of when the diagnostic trouble code is determined is obtained, and the status of that time is stored. By analyzing each data using the scan tool, troubleshooting can be performed efficiently.

**FREEZE FRAME DATA REFERENCE TABLE**

Item No.	Item	Unit/Display
1	Odometer	mile
2	Drive cycle	Count
4	Current trouble accumulative time	min
5	System power supply	V
7	Clutch pressure (Odd number gears)	mbar
8	Clutch pressure (Even number gears)	mbar
9	Clutch status (Odd number gears)	<ul style="list-style-type: none"> <li>• Inactive</li> <li>• Closed (During the torque control)</li> <li>• Hydraulic pressure charging</li> <li>• Pre-stroke</li> <li>• During hydraulic pressure relief</li> <li>• Clutch not engaged</li> <li>• Open</li> <li>• Clutch in engagement</li> <li>• Clutch in disengagement</li> </ul>
10	Clutch status (Even number gears)	<ul style="list-style-type: none"> <li>• Inactive</li> <li>• Closed (During the torque control)</li> <li>• Hydraulic pressure charging</li> <li>• Pre-stroke</li> <li>• During hydraulic pressure relief</li> <li>• Clutch not engaged</li> <li>• Open</li> <li>• Clutch in engagement</li> <li>• Clutch in disengagement</li> </ul>

Item No.	Item	Unit/Display
11	Shift fork position sensor 1	mm
12	Shift fork position sensor 2	mm
13	Shift fork position sensor 3	mm
14	Shift fork position sensor 4	mm
15	Input shaft (odd) speed	r/min
16	Input shaft (even) speed	r/min
22	Current gear	<ul style="list-style-type: none"> <li>• N</li> <li>• 1st</li> <li>• 2nd</li> <li>• 3rd</li> <li>• 4th</li> <li>• 5th</li> <li>• 6th</li> <li>• R</li> <li>• N (Odd number)</li> <li>• N (Even number)</li> <li>• Undefined gear</li> </ul>
23	Target gear	<ul style="list-style-type: none"> <li>• N</li> <li>• 1st</li> <li>• 2nd</li> <li>• 3rd</li> <li>• 4th</li> <li>• 5th</li> <li>• 6th</li> <li>• R</li> <li>• N (Odd number)</li> <li>• N (Even number)</li> <li>• Undefined gear</li> </ul>
24	SST control mode	<ul style="list-style-type: none"> <li>• NORMAL</li> <li>• SPORT</li> <li>• S-SPORT &lt;Only LANCER EVOLUTION&gt;</li> </ul>
25	Gear change mode	<ul style="list-style-type: none"> <li>• AUTO</li> <li>• Manual</li> </ul>
26	Torque limit request (Fuel cut)	<ul style="list-style-type: none"> <li>• ON</li> <li>• OFF</li> </ul>
27	Torque limit request (Throttle closing)	<ul style="list-style-type: none"> <li>• ON</li> <li>• OFF</li> </ul>
28	Torque limit request (Retard)	<ul style="list-style-type: none"> <li>• ON</li> <li>• OFF</li> </ul>

Item No.	Item	Unit/Display
30	Monitoring unit number (1)	Monitoring unit No. indication(Refer to P.22-11)
31	Monitoring unit number (2)	
32	Monitoring unit number (3)	
33	Monitoring unit number (4)	
34	Monitoring unit number (5)	
35	Monitoring unit number (6)	
36	Monitoring unit number (7)	
37	Monitoring unit number (8)	
39	Vehicle speed	mph
40	Highside driver 1 state	<ul style="list-style-type: none"> <li>• ON</li> <li>• OFF</li> </ul>
41	Highside driver 2 state	<ul style="list-style-type: none"> <li>• ON</li> <li>• OFF</li> </ul>
42	Highside driver 3 state	<ul style="list-style-type: none"> <li>• ON</li> <li>• OFF</li> </ul>
43	Dumper speed sensor	r/min

## DIAGNOSTIC TROUBLE CODE CHART

M1225000600544

### CAUTION

During diagnosis, a DTC associated with other system may be set when the ignition switch is turned ON with connector(s) disconnected. On completion, confirm all systems for DTC(s). If DTC(s) are set, erase them all.

#### NOTE:

- The monitoring unit No. indicates the malfunction code applicable to each DTC No., and it can be confirmed by the freeze frame data (item No. 30 to No. 37).
- For the DTC No. with \*, the malfunction indicator lamp lights up when the applicable DTC No. is set.
- The definition of drive cycle indicates from (Ignition switch: "ON" after starting the engine), (Ignition switch: "LOCK" (OFF)) to (Ignition switch: "ON" again).

DTC No.	Monitoring unit No.	Diagnostic item	Judgment drive cycle	Reference page
P0630	204	VIN not recorded	1	P.22-17
P0701	081	EEPROM system (Malfunction)	2	P.22-18
P0702	087, 088	Internal control module, monitoring processor system (Malfunction)	1	P.22-18
P0712*	136	TC-SST-ECU temperature sensor system (Output low range out)	2	P.22-19
P0713*	101	TC-SST-ECU temperature sensor system (Output high range out)	2	P.22-20
P0715*	090	Input shaft 1 (odd number gear axle) speed sensor system (Output high range out)	2	P.22-21
P0716*	114, 138	Input shaft 1 (odd number gear axle) speed sensor system (Poor performance)	2	P.22-22
P0717*	070	Input shaft 1 (odd number gear axle) speed sensor system (Output low range out)	2	P.22-23

DTC No.	Monitoring unit No.	Diagnostic item	Judgment drive cycle	Reference page
P0725	258	Engine speed signal abnormality	2	P.22-24
P0746*	107, 108	Line pressure solenoid system (Drive current range out)	1	P.22-25
P0753*	039	Shift select solenoid 1 system (Open circuit)	1	P.22-26
P0758*	042	Shift select solenoid 2 system (Open circuit)	1	P.22-26
P0776*	110, 111	Clutch cooling flow solenoid system (Drive current range out)	1	P.22-27
P0777*	112	Clutch cooling flow solenoid system (Stuck)	1	P.22-28
P0841*	117	Clutch 1 pressure sensor system (Poor performance)	2	P.22-29
P0842*	004	Clutch 1 pressure sensor system (Output low range out)	2	P.22-31
P0843*	005	Clutch 1 pressure sensor system (Output high range out)	2	P.22-31
P0846*	121	Clutch 2 pressure sensor system (Poor performance)	2	P.22-32
P0847*	006	Clutch 2 pressure sensor system (Output low range out)	2	P.22-33
P0848*	007	Clutch 2 pressure sensor system (Output high range out)	2	P.22-34
P0960*	030	Line pressure solenoid system (Open circuit)	1	P.22-35
P0961*	077	Line pressure solenoid system (Overcurrent)	1	P.22-36
P0962*	029	Line pressure solenoid system (Short to ground)	1	P.22-37
P0963*	028	Line pressure solenoid system (Short to power supply)	1	P.22-37
P0964*	033	Clutch cooling flow solenoid system (Open circuit)	1	P.22-38
P0965*	078	Clutch cooling flow solenoid system (Overcurrent)	1	P.22-39
P0966*	032	Clutch cooling flow solenoid system (Short to ground)	1	P.22-40
P0967*	031	Clutch cooling flow solenoid system (Short to power supply)	1	P.22-41
P0968*	036	Shift/cooling switching solenoid system (Open circuit)	1	P.22-41
P0970*	035	Shift/cooling switching solenoid system (Short to ground)	1	P.22-42
P0971*	034	Shift/cooling switching solenoid system (Short to power supply)	1	P.22-43
P0973*	038	Shift select solenoid 1 system (Short to ground)	1	P.22-44
P0974*	037	Shift select solenoid 1 system (Short to power supply)	1	P.22-45
P0976*	041	Shift select solenoid 2 system (Short to ground)	1	P.22-46
P0977	040	Shift select solenoid 2 system (Short to power supply)	1	P.22-46
P1637*	082	EEPROM system (DTC storing malfunction)	1	P.22-47
P1676*	109	Coding incomplete	1	P.22-48
P1802	089, 230	Shift lever system (LIN communication malfunction)	2	P.22-49
P1803	233	Shift lever system (CAN or LIN time-out error)	1	P.22-50

DTC No.	Monitoring unit No.	Diagnostic item	Judgment drive cycle	Reference page
P1804*	024	Shift fork position sensor 1 and 2 system (Power supply voltage low range out)	1	<a href="#">P.22-51</a>
P1805*	025	Shift fork position sensor 1 and 2 system (Power supply voltage high range out)	1	<a href="#">P.22-52</a>
P1806*	026	Shift fork position sensor 3 and 4 system (Power supply voltage low range out)	1	<a href="#">P.22-53</a>
P1807*	027	Shift fork position sensor 3 and 4 system (Power supply voltage high range out)	1	<a href="#">P.22-54</a>
P1808*	105	TC-SST-ECU temperature, fluid temperature sensor system (Correlation error)	1	<a href="#">P.22-55</a>
P180C	113	Clutch pressure cut spool sticking	2	<a href="#">P.22-56</a>
P181B*	124	Clutch 1 (Pressure low range out)	2	<a href="#">P.22-57</a>
P181C*	125	Clutch 1 (Pressure high range out)	2	<a href="#">P.22-58</a>
P181E*	129	Clutch 2 (Pressure low range out)	2	<a href="#">P.22-59</a>
P181F*	130	Clutch 2 (Pressure high range out)	2	<a href="#">P.22-61</a>
P1820*	008	Shift fork position sensor 1 system (Voltage low range out)	1	<a href="#">P.22-61</a>
P1821*	009	Shift fork position sensor 1 system (Voltage high range out)	1	<a href="#">P.22-63</a>
P1822*	144	Shift fork position sensor 1 system (Output range out)	1	<a href="#">P.22-64</a>
P1823*	158	Shift fork position sensor 1 system (Neutral)	1	<a href="#">P.22-65</a>
P1824*	156	Shift fork position sensor 1 system (Poor performance)	2	<a href="#">P.22-67</a>
P1825*	010	Shift fork position sensor 2 system (Voltage low range out)	1	<a href="#">P.22-68</a>
P1826*	011	Shift fork position sensor 2 system (Voltage high range out)	1	<a href="#">P.22-69</a>
P1827*	146	Shift fork position sensor 2 system (Output range out)	1	<a href="#">P.22-70</a>
P1828*	218	Shift fork position sensor 2 system (Neutral)	1	<a href="#">P.22-71</a>
P1829*	152	Shift fork position sensor 2 system (Poor performance)	2	<a href="#">P.22-73</a>
P182A*	012	Shift fork position sensor 3 system (Voltage low range out)	1	<a href="#">P.22-74</a>
P182B*	013	Shift fork position sensor 3 system (Voltage high range out)	1	<a href="#">P.22-75</a>
P182C*	148	Shift fork position sensor 3 system (Output range out)	1	<a href="#">P.22-76</a>
P182D*	219	Shift fork position sensor 3 system (Neutral)	1	<a href="#">P.22-77</a>
P182E*	153	Shift fork position sensor 3 system (Poor performance)	2	<a href="#">P.22-79</a>
P1831*	014	Shift fork position sensor 4 system (Voltage low range out)	1	<a href="#">P.22-80</a>
P1832*	015	Shift fork position sensor 4 system (Voltage high range out)	1	<a href="#">P.22-81</a>

DTC No.	Monitoring unit No.	Diagnostic item	Judgment drive cycle	Reference page
P1833*	150	Shift fork position sensor 4 system (Output range out)	1	<a href="#">P.22-82</a>
P1834*	159	Shift fork position sensor 4 system (Neutral)	1	<a href="#">P.22-84</a>
P1835*	157	Shift fork position sensor 4 system (Poor performance)	2	<a href="#">P.22-85</a>
P1836*	160, 172, 182, 183	Shift fork 1 malfunction	1	<a href="#">P.22-86</a>
P183D*	161, 174, 184, 185	Shift fork 2 malfunction	1	<a href="#">P.22-88</a>
P1844*	162, 178, 186, 187	Shift fork 3 malfunction	1	<a href="#">P.22-90</a>
P184B*	163, 180, 188, 189	Shift fork 4 malfunction	1	<a href="#">P.22-92</a>
P1852*	190, 191	Shift fork 1 or 2 opposite direction movement	1	<a href="#">P.22-94</a>
P1855*	192, 193	Shift fork 3 or 4 opposite direction movement	1	<a href="#">P.22-95</a>
P1857*	194	Odd number gear axle interlock	1	<a href="#">P.22-96</a>
P1858*	195	Even number gear axle interlock	1	<a href="#">P.22-97</a>
P185D	223	Clutch open not possible	1	<a href="#">P.22-98</a>
P1862*	059	High side 1 system (Overcurrent)	1	<a href="#">P.22-99</a>
P1863*	060	High side 1 system (Open circuit)	1	<a href="#">P.22-100</a>
P1864*	061	High side 1 system (Short to power supply)	1	<a href="#">P.22-100</a>
P1866*	062	High side 2 system (Overcurrent)	1	<a href="#">P.22-101</a>
P1867*	063	High side 2 system (Open circuit)	1	<a href="#">P.22-102</a>
P1868*	064	High side 2 system (Short to power supply)	1	<a href="#">P.22-103</a>
P186A*	065	High side 3 system (Overcurrent)	1	<a href="#">P.22-104</a>
P186B*	066	High side 3 system (Open circuit)	1	<a href="#">P.22-104</a>
P186C*	067	High side 3 system (Short to power supply)	1	<a href="#">P.22-105</a>
P186D*	173	High side 1 system (Voltage low range out)	1	<a href="#">P.22-106</a>
P186E*	177	High side 2 system (Voltage low range out)	1	<a href="#">P.22-107</a>
P186F*	179	High side 3 system (Voltage low range out)	1	<a href="#">P.22-108</a>
P1870*	205	Engine torque signal abnormality	2	<a href="#">P.22-109</a>
P1871*	203	APS system (Signal abnormality)	1	<a href="#">P.22-110</a>
P1872	220	Between shift lever and TC-SST system (Q-A function abnormality)	1	<a href="#">P.22-111</a>
P1873	212, 216	Clutch 1 system (Pressure abnormality)	2	<a href="#">P.22-112</a>
P1874	213, 217	Clutch 2 system (Pressure abnormality)	2	<a href="#">P.22-113</a>
P1875*	139, 207	Damper speed sensor system (Poor performance)	2	<a href="#">P.22-114</a>
P1876	196	Gear block 1st	3	<a href="#">P.22-115</a>

DTC No.	Monitoring unit No.	Diagnostic item	Judgment drive cycle	Reference page
P1877*	197	Gear block 2nd	2	<a href="#">P.22-116</a>
P1878*	198	Gear block 3rd	2	<a href="#">P.22-117</a>
P1879*	199	Gear block 4th	2	<a href="#">P.22-119</a>
P187A*	200	Gear block 5th	2	<a href="#">P.22-120</a>
P187B*	201	Gear block 6th	2	<a href="#">P.22-121</a>
P187C	202	Gear block reverse	3	<a href="#">P.22-123</a>
P1880	137	EOL Mode Active	1	<a href="#">P.22-124</a>
P1881	268	Twin clutch SST control mode switch system (Malfunction)	2	<a href="#">P.22-125</a>
P1885	168, 170	Shift fork 1 jump out	3	<a href="#">P.22-126</a>
P1886	164, 166	Shift fork 2 jump out	3	<a href="#">P.22-127</a>
P1887	165	Shift fork 3 jump out	3	<a href="#">P.22-128</a>
P1888	169, 171	Shift fork 4 jump out	3	<a href="#">P.22-129</a>
P1890	132	Teach-In not completed	2	<a href="#">P.22-130</a>
P2718*	045	Clutch/shift pressure solenoid 1 system (Open circuit)	1	<a href="#">P.22-131</a>
P2719*	079	Clutch/shift pressure solenoid 1 system (Overcurrent)	1	<a href="#">P.22-132</a>
P2720*	044	Clutch/shift pressure solenoid 1 system (Short to ground)	1	<a href="#">P.22-133</a>
P2721*	043	Clutch/shift pressure solenoid 1 system (Short to power supply)	1	<a href="#">P.22-133</a>
P2727*	048	Clutch/shift pressure solenoid 2 system (Open circuit)	1	<a href="#">P.22-134</a>
P2728*	080	Clutch/shift pressure solenoid 2 system (Overcurrent)	1	<a href="#">P.22-135</a>
P2729*	047	Clutch/shift pressure solenoid 2 system (Short to ground)	1	<a href="#">P.22-136</a>
P2730*	046	Clutch/shift pressure solenoid 2 system (Short to power supply)	1	<a href="#">P.22-137</a>
P2733*	134	Clutch/shift switching solenoid 1, spool stuck	1	<a href="#">P.22-137</a>
P2736*	051	Clutch/shift switching solenoid 1 system (Open circuit)	1	<a href="#">P.22-139</a>
P2738*	050	Clutch/shift switching solenoid 1 system (Short to ground)	1	<a href="#">P.22-139</a>
P2739*	049	Clutch/shift switching solenoid 1 system (Short to power supply)	1	<a href="#">P.22-140</a>
P2742*	135	Fluid temperature sensor system (Output low range out)	2	<a href="#">P.22-141</a>
P2743*	103	Fluid temperature sensor system (Output high range out)	2	<a href="#">P.22-142</a>
P2766*	115, 240	Input shaft 2 (even number gear axle) speed sensor system (Poor performance)	2	<a href="#">P.22-143</a>
P2809*	141	Clutch/shift switching solenoid 2, spool stuck	1	<a href="#">P.22-144</a>
P2812*	054	Clutch/shift switching solenoid 2 system (Open circuit)	1	<a href="#">P.22-145</a>



DTC No.	Monitoring unit No.	Diagnostic item	Judgment drive cycle	Reference page
P2814*	053	Clutch/shift switching solenoid 2 system (Short to ground)	1	P.22-146
P2815*	052	Clutch/shift switching solenoid 2 system (Short to power supply)	1	P.22-147
U0001*	083	Bus off	1	P.22-148
U0100*	116	Engine time-out error	1	P.22-148
U0103	123	Shift lever time-out error	1	P.22-149
U0121	122	ASC time-out error	1	P.22-150
U0136	209	AWC <LANCER EVOLUTION> or ACD <Except LANCER EVOLUTION> time-out error	1	P.22-151
U0141	120	ETACS time-out error	1	P.22-152

## SYMPTOM CHART

M1225005200477

### CAUTION

During diagnosis, a DTC associated with other system may be set when the ignition switch is turned ON with connector(s) disconnected. On completion, confirm all systems for diagnostic trouble code(s). If diagnostic trouble code(s) are set, erase them all.

Symptom	Inspection procedure No.	Reference page
The scan tool cannot communicate with TC-SST-ECU.	1	P.22-153
The driving mode cannot be changed.	2	P.22-153
Speed change with the paddle shift is impossible.	3	P.22-154
TC-SST-ECU power supply circuit malfunction	4	P.22-156
The shift lever does not operate.	5	P.22-158
Gears cannot be changed with the manual mode.	6	P.22-160
The vehicle moves with the P-range.	7	P.22-161
Slipping occurs with the D-range/R-range/manual mode, and engine racing occurs during gear shifting/driving.	8	P.22-162
The vehicle does not creep with the D-range/R-range/manual mode.	9	P.22-163
The shock is large when the vehicle is stopped and the brake pedal is released with the D-range/R-range/manual mode.	10	P.22-164
Poor acceleration	11	P.22-164
The gear shifting does not occur. (The transmission does not upshift or downshift.)	12	P.22-165
The shift shock is large.	13	P.22-166
Delay occurs when the lever is shifted N → D or N → R.	14	P.22-166
The engine stops when the lever is shifted N → D or N → R.	15	P.22-167
The vehicle moves with the N-range on the level ground.	16	P.22-168
Judder/vibration/noise	17	P.22-168

## DIAGNOSTIC TROUBLE CODE PROCEDURES

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### DTC P0630: VIN not Recorded

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#### CAUTION

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

#### DIAGNOSTIC FUNCTION

TC-SST-ECU checks that the chassis number is normal.

(TC-SST-ECU receives chassis number information from the engine control module via CAN, and write to TC-SST-ECU.)

#### DESCRIPTIONS OF MONITOR METHODS

The chassis number is determined to be written abnormally.

#### PROBABLE CAUSES

- The CAN bus line is defective.
- Malfunction of engine control module
- Malfunction of TC-SST-ECU

### DIAGNOSTIC PROCEDURE

#### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

#### STEP 1. Scan tool CAN bus diagnostics

Using scan tool MB991958, diagnose the CAN bus lines.

##### Q: Is the check result normal?

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

#### STEP 2. Scan tool diagnostic trouble code

Check the engine diagnostic trouble code.

##### Q: Is the DTC set?

**YES** : Perform the relevant troubleshooting.

**NO** : Go to Step 3.

---

#### STEP 3. Check whether the DTC is reset.

##### Q: Is DTC No. P0630 set?

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

**DTC P0701: EEPROM System (Malfunction)****⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the EEPROM and RAM in the TC-SST-ECU is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The EEPROM writing data is determined to be abnormal.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

**STEP 2. Check whether the DTC is reset.****Q: Is DTC No. P0701 set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

**DTC P0702: Internal control module, monitoring processor system (Malfunction)****⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the internal module and monitoring processor are normal.

**DESCRIPTIONS OF MONITOR METHODS**

The internal module and monitoring processor are determined to be abnormal.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)

- MB991824: Vehicle Communication Interface (V.C.I.)
- MB991827 M.U.T.-III USB Cable
- MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check the TC-SST-ECU power supply circuit**

Refer to [P.22-156](#).

**Q: Is the check result normal?**

**YES** : Go to Step 3.

**NO** : Repair the TC-SST-ECU power supply circuit. (Refer to [P.22-156](#).) After repairing the power supply circuit, go to Step 3.

---

**STEP 3. Check whether the DTC is reset.****Q: Is DTC No. P0702 set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176](#).)

**NO** : Intermittent malfunction.

---

**DTC P0712: TC-SST-ECU temperature sensor system (Output low range out)**

---

**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the output of the ECU temperature sensor is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The output of the ECU temperature is determined to be too low.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*
- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

**STEP 2. Check whether the DTC is reset.**

30 seconds after turning ON the ignition switch, check that the diagnostic trouble code is reset.

**Q: Is DTC No. P0712 set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

**DTC P0713: TC-SST-ECU temperature sensor system (Output high range out)****CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the output of the ECU temperature sensor is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The output of the ECU temperature is determined to be too high.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

30 seconds after turning ON the ignition switch, check that the DTC is reset.

**Q: Is DTC No. P0713 set?**

**YES :** Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO :** Intermittent malfunction.

---

**DTC P0715: Input shaft 1 (odd number gear axle) speed sensor system (Output high range out)**

---

**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the input shaft 1 (odd number gear axle) speed sensor is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The output of the input shaft 1 (odd number gear axle) is determined to be too high.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of input shaft 1 speed sensor

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

**DIAGNOSTIC PROCEDURE**

**Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES :** Go to Step 2.

**NO :** Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

After 5 or more seconds have passed with the engine idle status, check that the DTC is reset.

**Q: Is DTC No. P0715 set?**

**YES :** Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO :** Intermittent malfunction.

**DTC P0716: Input shaft 1 (odd number gear axle) speed sensor system (Poor performance)****CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the input shaft 1 (odd number gear axle) speed sensor is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The rotation speed of the input shaft 1 (odd number gear axle) is determined to be abnormal.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of input shaft 1 speed sensor

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

**STEP 2. Monitoring unit No. check**

(1) Check the freeze frame data (item No. 30 to No. 37).

(2) Check which monitoring unit (No. 114 or No. 138) is set.

**Q: Which monitoring unit is set, No. 114 or No. 138?**

**No. 114** : Go to Step 4

**No. 138** : Go to Step 3

**STEP 3. Check whether the DTC is reset.**

(1) Erase the DTC.

(2) Drive the vehicle at 50 km/h (31 mph) or more.

(3) Check that the DTC is reset.

**Q: Is DTC No.P0716 set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

---

**STEP 4. Check whether the DTC is reset.**

(1) Erase the DTC.

**⚠ CAUTION**

**When driving with each gear range, check that the gear engagement is correct and the engine rotation speed does not increase abnormally after gear shifting.**

(2) Drive with shifting to each gear range.

(3) Check that the DTC is reset.

**Q: Is DTC No.P0716 set?**

**YES** : Go to Step 5.

**NO** : Intermittent malfunction.

---

**STEP 5. Scan tool Teach-In**

(1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)

(2) After Teach-In, check which result ("Yes" or "No") is displayed in the Data list No. 101: Normal End. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)

**Q: Which is displayed, "Yes" or "No"?**

**"Yes"** : Replace the mechatronic assembly. (Refer to [P.22-176](#).)

**"No"** : Replace the transaxle assembly.

---

**DTC P0717: Input shaft 1 (odd number gear axle) speed sensor system (Output current low range out)**

---

**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the input shaft 1 (odd number gear axle) speed sensor is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The output of the input shaft 1 (odd number gear axle) speed sensor is determined to be too low.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of input shaft 1 speed sensor

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

**DIAGNOSTIC PROCEDURE**

**Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A



---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

After 5 or more seconds have passed with the engine idle status, check that the DTC is reset.

**Q: Is DTC No. P0717 set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

---

**DTC P0725: Engine speed signal abnormality**

---

**CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU receives the periodic communication data from the engine control module via the CAN bus lines, and checks the data for abnormality.

**DESCRIPTIONS OF MONITOR METHODS**

The engine speed signal from the engine control module is determined to be abnormal.

**PROBABLE CAUSES**

- The CAN bus line is defective.
- Malfunction of crankshaft position sensor
- Malfunction of engine control module
- Malfunction of TC-SST-ECU

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using the scan tool, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Scan tool diagnostic trouble code**

Check the engine diagnostic trouble code.

**Q: Is the DTC set?**

**YES** : Perform the relevant troubleshooting.

**NO** : Go to Step 3.

---

**STEP 3. Check whether the DTC is reset.**

After 10 or more seconds have passed with the engine idle status, check that the DTC is reset.

**Q: Is DTC No. P0725 set?**

**YES :** Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO :** Intermittent malfunction.

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**DTC P0746: Line Pressure Solenoid System (Drive current range out)**

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**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the line pressure solenoid is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The difference between the actual current of the line pressure solenoid and target current is large.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of line pressure solenoid

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

**DIAGNOSTIC PROCEDURE**

**Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES :** Go to Step 2.

**NO :** Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

Leave the engine idle for 15 seconds, and perform a test run of the vehicle. Then check that the DTC is reset.

**Q: Is DTC No. P0746 set?**

**YES :** Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO :** Intermittent malfunction.

**DTC P0753: Shift Select Solenoid 1 System (Open circuit)****⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the shift select solenoid 1 circuit is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The shift select solenoid 1 circuit is determined to be open.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of shift select solenoid 1

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*
- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

**STEP 2. Check whether the DTC is reset.****Q: Is DTC No. P0753 set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

**DTC P0758: Shift Select Solenoid 2 System (Open circuit)****⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the shift select solenoid 2 circuit is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The shift select solenoid 2 circuit is determined to be open.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU

- Malfunction of shift select solenoid 2

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*

- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

## DIAGNOSTIC PROCEDURE

### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

### STEP 1. Scan tool CAN bus diagnostics

Using scan tool MB991958, diagnose the CAN bus lines.

#### Q: Is the check result normal?

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

### STEP 2. Check whether the DTC is reset.

#### Q: Is DTC No. P0758 set?

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

---

## DTC P0776: Clutch Cooling Flow Solenoid System (Drive current range out)

---

### CAUTION

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

### DIAGNOSTIC FUNCTION

TC-SST-ECU checks that the clutch cooling flow solenoid is normal.

### DESCRIPTIONS OF MONITOR METHODS

The difference between the actual current of the clutch cooling flow solenoid and target current is large.

### PROBABLE CAUSES

- Malfunction of TC-SST-ECU
- Malfunction of clutch cooling flow solenoid

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*
- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

## DIAGNOSTIC PROCEDURE

### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)

- MB991827 M.U.T.-III USB Cable
- MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

**STEP 2. Check whether the DTC is reset.**

Leave the engine idle for 15 seconds, and perform a test run of the vehicle. Then check that the DTC is reset.

**Q: Is DTC No. P0776 set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

**DTC P0777: Clutch Cooling Flow Solenoid System (Stuck)****CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the clutch cooling flow solenoid is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The clutch cooling flow solenoid is determined to be seized.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of clutch cooling flow solenoid
- Insufficient fluid level
- Improper installation of mechatronic assembly

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*
- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

- (1) Erase the DTC.
- (2) Carry out the Item No. 3 (Teach-In): Line pressure Test.  
(Refer to Special Function (Teach-In Reference Table P.22-169).)
- (3) With the engine idle status, check that the DTC is reset.

**Q: Is the DTC No. P0777 restored? or Is the line pressure test of Teach-In not completed normally ("No" is displayed in the Data list No.101: Normal End)?**

- YES :** Go to Step 3.  
**NO :** Intermittent malfunction.

---

**STEP 3. Check the fluid.**

**Q: Is the fluid level proper?**

- YES :** Go to Step 4.  
**NO :** Add the fluid.

---

**STEP 4. Check the installation status of the mechatronic assembly.**

**Q: Is the mechatronic assembly installed correctly?**

- YES :** Go to Step 5  
**NO :** Install the mechatronic assembly correctly. (Refer to P.22-176.)

---

**STEP 5. Check whether the DTC is reset.**

- (1) Erase the DTC.
- (2) With the engine idle status, check that the DTC is reset.

**Q: Is DTC No.P0777 set?**

- YES :** Replace the mechatronic assembly. (Refer to P.22-176.) Then, go to Step 6.  
**NO :** Intermittent malfunction.

---

**STEP 6. Check whether the DTC is reset.**

- (1) Erase the DTC.
- (2) With the engine idle status, check that the DTC is reset.

**Q: Is DTC No.P0777 set?**

- YES :** Replace the transaxle assembly.  
**NO :** This diagnosis is complete.

---

**DTC P0841: Clutch 1 Pressure Sensor System (Poor performance)**

 **CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the clutch 1 pressure sensor is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The difference between the allowable torque of clutch 1 and the engine torque is large.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of clutch 1 pressure sensor
- Malfunction of clutch assembly
- Malfunction of engine system
- Insufficient fluid
- *MONITOR EXECUTION*
- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

**STEP 2. Scan tool diagnostic trouble code**

Check the engine diagnostic trouble code.

**Q: Is the DTC set?**

**YES** : Perform the relevant troubleshooting.

**NO** : Go to Step 3.

**STEP 3. Fluid check**

Drain the fluid and check that no bubbles, foreign material and contamination are found.

**Q: Is the check result normal?**

**YES** : Go to Step 4.

**NO** : Replace the fluid.

**STEP 4. Check whether the DTC is reset.**

- (1) Erase the DTC.
- (2) Gradually accelerate the vehicle.
- (3) Accelerate the vehicle with the accelerator pedal fully opened.
- (4) Check that the DTC is reset.

**Q: Is DTC No.P0841 set?**

**YES** : Replace the clutch assembly. (Refer to [P.22-187.](#))

**NO** : Intermittent malfunction.

---

**DTC P0842: Clutch 1 Pressure Sensor System (Output low range out)**

---

**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the clutch 1 pressure sensor is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The output of the clutch 1 pressure sensor is too low.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of clutch 1 pressure sensor

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

**DIAGNOSTIC PROCEDURE**

**Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES :** Go to Step 2.

**NO :** Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

15 seconds after turning ON the ignition switch, check that the DTC is reset.

**Q: Is DTC No. P0842 set?**

**YES :** Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO :** Intermittent malfunction.

---

**DTC P0843: Clutch 1 Pressure Sensor System (Output high range out)**

---

**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the clutch 1 pressure sensor is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The output of the clutch 1 pressure sensor is too high.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU



- Malfunction of clutch 1 pressure sensor

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*

- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

## DIAGNOSTIC PROCEDURE

### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

### STEP 1. Scan tool CAN bus diagnostics

Using scan tool MB991958, diagnose the CAN bus lines.

#### Q: Is the check result normal?

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

### STEP 2. Check whether the DTC is reset.

15 seconds after turning ON the ignition switch, check that the diagnostic trouble code is reset.

#### Q: Is DTC No. P0843 set?

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

---

## DTC P0846: Clutch 2 Pressure Sensor System (Poor performance)

### CAUTION

- **If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.**
- **Whenever the ECU is replaced, ensure that the CAN bus lines are normal.**

### DIAGNOSTIC FUNCTION

TC-SST-ECU checks that the clutch 2 pressure sensor is normal.

### DESCRIPTIONS OF MONITOR METHODS

The difference between the allowable torque of clutch 2 and the engine torque is large.

### PROBABLE CAUSES

- Malfunction of TC-SST-ECU
- Malfunction of clutch 2 pressure sensor
- Malfunction of clutch assembly
- Malfunction of engine system
- Insufficient fluid

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*
- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

## DIAGNOSTIC PROCEDURE

### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

### STEP 1. Scan tool CAN bus diagnostics

Using scan tool MB991958, diagnose the CAN bus lines.

#### Q: Is the check result normal?

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

### STEP 2. Scan tool diagnostic trouble code

Check the engine diagnostic trouble code.

#### Q: Is the DTC set?

**YES** : Perform the relevant troubleshooting.

**NO** : Go to Step 3.

---

### STEP 3. Fluid check

Drain the fluid and check that no bubbles, foreign material and contamination are found.

#### Q: Is the check result normal?

**YES** : Go to Step 4.

**NO** : Replace the fluid.

---

### STEP 4. Check whether the DTC is reset.

- (1) Erase the DTC.
- (2) Gradually accelerate the vehicle.
- (3) Accelerate the vehicle with the accelerator pedal fully opened.
- (4) Check that the DTC is reset.

#### Q: Is DTC No.P0846 set?

**YES** : Replace the clutch assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

---

## DTC P0847: Clutch 2 Pressure Sensor System (Output low range out)

---

### CAUTION

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

### DIAGNOSTIC FUNCTION

TC-SST-ECU checks that the clutch 2 pressure sensor is normal.

### DESCRIPTIONS OF MONITOR METHODS

The output of the clutch 2 pressure sensor is too low.

### PROBABLE CAUSES

- Malfunction of TC-SST-ECU
- Malfunction of clutch 2 pressure sensor

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

## DIAGNOSTIC PROCEDURE

### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

### STEP 1. Scan tool CAN bus diagnostics

Using scan tool MB991958, diagnose the CAN bus lines.

#### Q: Is the check result normal?

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

### STEP 2. Check whether the DTC is reset.

15 seconds after turning ON the ignition switch, check that the DTC is reset.

#### Q: Is DTC No. P0847 set?

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

## DTC P0848: Clutch 2 Pressure Sensor System (Output high range out)

### CAUTION

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

### DIAGNOSTIC FUNCTION

TC-SST-ECU checks that the clutch 2 pressure sensor is normal.

### DESCRIPTIONS OF MONITOR METHODS

The output of the clutch 2 pressure sensor is too high.

### PROBABLE CAUSES

- Malfunction of TC-SST-ECU
- Malfunction of clutch 2 pressure sensor

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

## DIAGNOSTIC PROCEDURE

### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

15 seconds after turning ON the ignition switch, check that the DTC is reset.

**Q: Is DTC No. P0848 set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

---

**DTC P0960: Line Pressure Solenoid System (Open circuit)**

---

**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the line pressure solenoid circuit is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The line pressure solenoid circuit is determined to be open.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of line pressure solenoid

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

**STEP 2. Check whether the DTC is reset.**

15 seconds after turning ON the ignition switch, check that the DTC is reset.

**Q: Is DTC No. P0960 set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

**DTC P0961: Line Pressure Solenoid System (Overcurrent)****⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the line pressure solenoid circuit is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The supply current to the line pressure solenoid is determined to be overcurrent.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of line pressure solenoid

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

**STEP 2. Check whether the DTC is reset.**

After 5 or more seconds have passed with the ignition switch ON position, check that the DTC is reset.

**Q: Is DTC No. P0961 set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

**DTC P0962: Line Pressure Solenoid System (Short to ground)**

**CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the line pressure solenoid circuit is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The line pressure solenoid circuit is determined to be short to ground.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of line pressure solenoid

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

**DIAGNOSTIC PROCEDURE**

**Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES :** Go to Step 2.

**NO :** Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

**STEP 2. Check whether the DTC is reset.**

**Q: Is DTC No. P0962 set?**

**YES :** Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO :** Intermittent malfunction.

**DTC P0963: Line Pressure Solenoid System (Short to power supply)**

**CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the line pressure solenoid circuit is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The line pressure solenoid circuit is determined to be short to power supply.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU

- Malfunction of line pressure solenoid

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*

- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

## DIAGNOSTIC PROCEDURE

### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

### STEP 1. Scan tool CAN bus diagnostics

Using scan tool MB991958, diagnose the CAN bus lines.

#### Q: Is the check result normal?

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

### STEP 2. Check whether the DTC is reset.

After 5 or more seconds have passed with the ignition switch ON position, check that the DTC is reset.

#### Q: Is DTC No. P0963 set?

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

---

## DTC P0964: Clutch Cooling Flow Solenoid System (Open circuit)

### CAUTION

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

### DIAGNOSTIC FUNCTION

TC-SST-ECU checks that the clutch cooling flow solenoid circuit is normal.

### DESCRIPTIONS OF MONITOR METHODS

The clutch cooling flow solenoid circuit is determined to be open.

### PROBABLE CAUSES

- Malfunction of TC-SST-ECU
- Malfunction of clutch cooling flow solenoid

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*
- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

## DIAGNOSTIC PROCEDURE

### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)

- MB991824: Vehicle Communication Interface (V.C.I.)
- MB991827 M.U.T.-III USB Cable
- MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.****Q: Is DTC No. P0964 set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

---

**DTC P0965: Clutch Cooling Flow Solenoid System (Overcurrent)**

---

**CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the clutch cooling flow solenoid circuit is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The supply current to the clutch cooling flow solenoid is determined to be overcurrent.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of clutch cooling flow solenoid

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.



**STEP 2. Check whether the DTC is reset.**

5 seconds after turning ON the ignition switch, check that the DTC is reset.

**Q: Is DTC No. P0965 set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

**DTC P0966: Clutch Cooling Flow Solenoid System (Short to ground)****CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the clutch cooling flow solenoid circuit is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The clutch cooling flow solenoid circuit is determined to be short to ground.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of clutch cooling flow solenoid

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

**STEP 2. Check whether the DTC is reset.****Q: Is DTC No. P0966 set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

---

### DTC P0967: Clutch Cooling Flow Solenoid System (Short to power supply)

---

#### CAUTION

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

#### DIAGNOSTIC FUNCTION

TC-SST-ECU checks that the clutch cooling flow solenoid circuit is normal.

#### DESCRIPTIONS OF MONITOR METHODS

The clutch cooling flow solenoid circuit is determined to be short to power supply.

#### PROBABLE CAUSES

- Malfunction of TC-SST-ECU
- Malfunction of clutch cooling flow solenoid

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

### DIAGNOSTIC PROCEDURE

#### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

#### STEP 1. Scan tool CAN bus diagnostics

Using scan tool MB991958, diagnose the CAN bus lines.

#### Q: Is the check result normal?

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

#### STEP 2. Check whether the DTC is reset.

After 5 or more seconds have passed with the ignition switch ON position, check that the DTC is reset.

#### Q: Is DTC No. P0967 set?

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

---

### DTC P0968: Shift/Cooling Switching Solenoid System (Open circuit)

---

#### CAUTION

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

#### DIAGNOSTIC FUNCTION

TC-SST-ECU checks that the shift/cooling switching solenoid circuit is normal.

#### DESCRIPTIONS OF MONITOR METHODS

The shift/cooling switching solenoid circuit is determined to be open.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of shift/cooling switching solenoid

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*
- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

**STEP 2. Check whether the DTC is reset.**

15 seconds after turning ON the ignition switch, check that the DTC is reset.

**Q: Is DTC No. P0968 set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

**DTC P0970: Shift/Cooling Switching Solenoid System (Short to ground)****⚠ CAUTION**

- **If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.**
- **Whenever the ECU is replaced, ensure that the CAN bus lines are normal.**

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the shift/cooling switching solenoid circuit is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The shift/cooling switching solenoid circuit is determined to be short to ground.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of shift/cooling switching solenoid

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*
- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

## DIAGNOSTIC PROCEDURE

### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

### STEP 1. Scan tool CAN bus diagnostics

Using scan tool MB991958, diagnose the CAN bus lines.

#### Q: Is the check result normal?

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

### STEP 2. Check whether the DTC is reset.

#### Q: Is DTC No. P0970 set?

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

---

## DTC P0971: Shift/Cooling Switching Solenoid System (Short to power supply)

---

### CAUTION

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

### DIAGNOSTIC FUNCTION

TC-SST-ECU checks that the shift/cooling switching solenoid circuit is normal.

### DESCRIPTIONS OF MONITOR METHODS

The shift/cooling switching solenoid circuit is determined to be short to power supply.

### PROBABLE CAUSES

- Malfunction of TC-SST-ECU
- Malfunction of shift/cooling switching solenoid

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

## DIAGNOSTIC PROCEDURE

### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

**STEP 2. Check whether the DTC is reset.****Q: Is DTC No. P0971 set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

**DTC P0973: Shift Select Solenoid 1 System (Short to ground)****⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the shift select solenoid 1 circuit is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The shift select solenoid 1 circuit is determined to be short to ground.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of shift select solenoid 1

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*
- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

**Q: Is DTC No. P0973 set?**

**YES :** Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO :** Intermittent malfunction.

---

**DTC P0974: Shift Select Solenoid 1 System (Short to power supply)**

---

**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the shift select solenoid 1 circuit is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The shift select solenoid 1 circuit is determined to be short to power supply.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of shift select solenoid 1

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

**DIAGNOSTIC PROCEDURE**

**Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES :** Go to Step 2.

**NO :** Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

After 5 or more seconds have passed with the ignition switch ON position, check that the DTC is reset.

**Q: Is DTC No. P0974 set?**

**YES :** Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO :** Intermittent malfunction.

**DTC P0976: Shift Select Solenoid 2 System (Short to ground)****CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the shift select solenoid 2 circuit is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The shift select solenoid 2 circuit is determined to be short to ground.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of shift select solenoid 2

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*
- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

**STEP 2. Check whether the DTC is reset.****Q: Is DTC No. P0976 set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

**DTC P0977: Shift Select Solenoid 2 System (Short to power supply)****CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the shift select solenoid 2 circuit is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The shift select solenoid 2 circuit is determined to be short to power supply.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU

- Malfunction of shift select solenoid 2

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*

- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

## DIAGNOSTIC PROCEDURE

### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

### STEP 1. Scan tool CAN bus diagnostics

Using scan tool MB991958, diagnose the CAN bus lines.

#### Q: Is the check result normal?

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

### STEP 2. Check whether the DTC is reset.

15 seconds after turning ON the ignition switch, check that the DTC is reset.

#### Q: Is DTC No. P0977 set?

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

---

## DTC P1637: EEPROM System (DTC storing malfunction)

### CAUTION

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

### DIAGNOSTIC FUNCTION

TC-SST-ECU checks that EEPROM in TC-SST-ECU is normal.

### DESCRIPTIONS OF MONITOR METHODS

The EEPROM writing data is determined to be abnormal.

### PROBABLE CAUSES

- Malfunction of TC-SST-ECU

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*
- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

## DIAGNOSTIC PROCEDURE

### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)



- MB991824: Vehicle Communication Interface (V.C.I.)
- MB991827 M.U.T.-III USB Cable
- MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

**STEP 2. Check whether the DTC is reset.**

After 5 or more seconds have passed with the ignition switch ON position, check that the DTC is reset.

**Q: Is DTC No. P1637 set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

**DTC P1676: Coding incomplete****CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the coding is normal. (TC-SST-ECU is a local coding.)

**DESCRIPTIONS OF MONITOR METHODS**

The coding is determined to be abnormal. (This abnormality occurs when the vehicle information has been incorrectly written to TC-SST-ECU at a factory before shipment.)

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*
- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

After 5 or more seconds have passed with the ignition switch ON position, check that the DTC is reset.

**Q: Is DTC No. P1676 set?**

**YES** : Perform coding (Refer to the "Scan tool operation manual" and perform coding.) or Replace the mechatronic assembly (Refer to [P.22-176](#)).

**NO** : Intermittent malfunction.

---

**DTC P1802: Shift Lever System (LIN communication malfunction)**

---

**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the CAN back-up communication (LIN) is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The CAN back-up communication is determined to be abnormal.

**PROBABLE CAUSES**

- Malfunction of the shift lever-ECU
- Malfunction of the LIN bus
- Malfunction of TC-SST-ECU

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Scan tool diagnostic trouble code**

Check the shift lever diagnostic trouble code.

**Q: Is the DTC set?**

**YES** : Perform the relevant troubleshooting.

**NO** : Go to Step 3.

---

**STEP 3. Inspection of the TC-SST-ECU connector, intermediate connector, and shift lever-ECU connector**  
Check for the contact with terminals.

**Q: Is the check result normal?**

**YES :** Go to Step 4.

**NO :** Repair the defective connector.

---

**STEP 4. Check the wiring harness between TC-SST-ECU connector terminal No. 17 and shift lever-ECU connector terminal No. 16.**

Check the communication line for open and short circuit.

**Q: Is the check result normal?**

**YES :** Go to Step 5.

**NO :** Repair the wiring harness.

---

**STEP 5. Check whether the DTC is reset.**

10 seconds after turning ON the ignition switch, check that the DTC is reset.

**Q: Is DTC No. P1802 set?**

**YES :** Go to Step 6.

**NO :** This diagnosis is complete.

---

**STEP 6. Replace the shift lever assembly, and check if the diagnostic trouble code is reset.**

(1) Replace the shift lever assembly.

(2) Check the DTC.

(3) After 10 or more seconds have passed with the ignition switch ON position, check that the DTC is reset.

**Q: Is DTC No. P1802 set?**

**YES :** Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO :** Intermittent malfunction.

---

### DTC P1803: Shift Lever System (CAN, LIN Time-out Error)

---

#### CAUTION

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

#### DIAGNOSTIC FUNCTION

TC-SST-ECU checks that the communication with the shift lever-ECU (CAN and LIN) is normal.

#### DESCRIPTIONS OF MONITOR METHODS

The CAN and LIN communication with the shift lever-ECU is determined to be abnormal.

#### PROBABLE CAUSES

- Malfunction of the shift lever-ECU
- Malfunction of the LIN bus
- The CAN bus line is defective.
- Malfunction of TC-SST-ECU

---

## DIAGNOSTIC PROCEDURE

### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

### STEP 1. Scan tool CAN bus diagnostics

Using scan tool MB991958, diagnose the CAN bus lines.

#### Q: Is the check result normal?

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

### STEP 2. Scan tool diagnostic trouble code

Check the shift lever diagnostic trouble code.

#### Q: Is the DTC set?

**YES** : Perform the relevant troubleshooting.

**NO** : Go to Step 3.

---

### STEP 3. Inspection of the TC-SST-ECU connector, intermediate connector, and shift lever-ECU connector

Check for the contact with terminals.

#### Q: Is the check result normal?

**YES** : Go to Step 4.

**NO** : Repair the defective connector.

---

### STEP 4. Check the wiring harness between TC-SST-ECU connector terminal No. 17 and shift lever-ECU connector terminal No. 16.

Check the communication line for open and short circuit.

#### Q: Is the check result normal?

**YES** : Go to Step 5.

**NO** : Repair the wiring harness.

---

### STEP 5. Check whether the DTC is reset.

30 seconds after turning ON the ignition switch, check that the DTC is reset.

#### Q: Is DTC No. P1803 set?

**YES** : Replace the shift lever assembly.

**NO** : Intermittent malfunction.

---

## DTC P1804: Shift Fork Position Sensor 1 and 2 System (Power supply voltage low range out)

---

### CAUTION

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.

- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

### DIAGNOSTIC FUNCTION

TC-SST-ECU checks that the supply voltage to the shift fork position sensor 1 and 2 is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The supply voltage to the shift fork position sensor 1 and 2 is too low.

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of shift fork position sensor 1 and 2

- *MONITOR EXECUTION*
- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

**STEP 2. Check the TC-SST-ECU power supply circuit**

Refer to [P.22-156](#).

**Q: Is the check result normal?**

**YES** : Go to Step 3.

**NO** : Repair the TC-SST-ECU power supply circuit. (Refer to [P.22-156](#).) After repairing the power supply circuit, go to Step 3.

**STEP 3. Check whether the DTC is reset.****Q: Is DTC No. P1804 set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176](#).)

**NO** : Intermittent malfunction.

**DTC P1805: Shift Fork Position Sensor 1 and 2 System (Power supply voltage high range out)****CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the supply voltage to the shift fork position sensor 1 and 2 is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The supply voltage to the shift fork position sensor 1 and 2 is too high.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU

- Malfunction of shift fork position sensor 1 and 2

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*

- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

## DIAGNOSTIC PROCEDURE

### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

### STEP 1. Scan tool CAN bus diagnostics

Using scan tool MB991958, diagnose the CAN bus lines.

#### Q: Is the check result normal?

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

### STEP 2. Check the TC-SST-ECU power supply circuit

Refer to [P.22-156](#).

#### Q: Is the check result normal?

**YES** : Go to Step 3.

**NO** : Repair the TC-SST-ECU power supply circuit. (Refer to [P.22-156](#).) After repairing the power supply circuit, go to Step 3.

---

### STEP 3. Check whether the DTC is reset.

#### Q: Is DTC No. P1805 set?

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176](#).)

**NO** : Intermittent malfunction.

---

## DTC P1806: Shift Fork Position Sensor 3 and 4 System (Power supply voltage low range out)

### CAUTION

- **If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.**
- **Whenever the ECU is replaced, ensure that the CAN bus lines are normal.**

### DIAGNOSTIC FUNCTION

TC-SST-ECU checks that the supply voltage to the shift fork position sensor 3 and 4 is normal.

- *MONITOR EXECUTION CONDITIONS (OTHER*

### DESCRIPTIONS OF MONITOR METHODS

The supply voltage to the shift fork position sensor 3 and 4 is too low.

### PROBABLE CAUSES

- Malfunction of TC-SST-ECU
- Malfunction of shift fork position sensor 3 and 4

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION MONITOR AND SENSOR)*

- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

## DIAGNOSTIC PROCEDURE

### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

### STEP 1. Scan tool CAN bus diagnostics

Using scan tool MB991958, diagnose the CAN bus lines.

#### Q: Is the check result normal?

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

### STEP 2. Check the TC-SST-ECU power supply circuit

Refer to [P.22-156](#).

#### Q: Is the check result normal?

**YES** : Go to Step 3.

**NO** : Repair the TC-SST-ECU power supply circuit. (Refer to [P.22-156](#).) After repairing the power supply circuit, go to Step 3.

---

### STEP 3. Check whether the DTC is reset.

#### Q: Is DTC No. P1806 set?

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176](#).)

**NO** : Intermittent malfunction.

---

## DTC P1807: Shift Fork Position Sensor 3 and 4 System (Power supply voltage high range out)

---

### CAUTION

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

### DIAGNOSTIC FUNCTION

TC-SST-ECU checks that the supply voltage to the shift fork position sensor 3 and 4 is normal.

### DESCRIPTIONS OF MONITOR METHODS

The supply voltage to the shift fork position sensor 3 and 4 is too high.

### PROBABLE CAUSES

- Malfunction of TC-SST-ECU
- Malfunction of shift fork position sensor 3 and 4

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

## DIAGNOSTIC PROCEDURE

### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

### STEP 1. Scan tool CAN bus diagnostics

Using scan tool MB991958, diagnose the CAN bus lines.

#### Q: Is the check result normal?

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

### STEP 2. Check the TC-SST-ECU power supply circuit

Refer to [P.22-156](#).

#### Q: Is the check result normal?

**YES** : Go to Step 3.

**NO** : Repair the TC-SST-ECU power supply circuit. (Refer to [P.22-156](#).) After repairing the power supply circuit, go to Step 3.

---

### STEP 3. Check whether the DTC is reset.

#### Q: Is DTC No. P1807 set?

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176](#).)

**NO** : Intermittent malfunction.

---

## DTC P1808: TC-SST-ECU temperature, fluid temperature sensor system (Correlation error)

---

### CAUTION

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

### DIAGNOSTIC FUNCTION

TC-SST-ECU checks that the temperature sensor and the fluid temperature sensor are normal.

### DESCRIPTIONS OF MONITOR METHODS

The difference of the output between the ECU temperature sensor and fluid temperature sensor is large.

### PROBABLE CAUSES

- Malfunction of TC-SST-ECU

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

## DIAGNOSTIC PROCEDURE

### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)



- MB991824: Vehicle Communication Interface (V.C.I.)
- MB991827 M.U.T.-III USB Cable
- MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

**STEP 2. Check whether the DTC is reset.**

15 seconds after turning ON the ignition switch, check that the DTC is reset.

**Q: Is DTC No. P1808 set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

**DTC P180C: Clutch pressure cut spool sticking****CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the clutch pressure cut spool is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The clutch pressure cut spool is determined to be seized.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

Warm up the engine and let it idle for 15 seconds. Then check that the DTC is reset.

**Q: Is DTC No. P180C set?**

**YES :** Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO :** Intermittent malfunction.

---

**DTC P181B: Clutch 1 (Pressure low range out)**

---

**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the clutch 1 pressure is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The pressure of the clutch 1 is too low.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Insufficient fluid level
- Improper installation of mechatronic assembly

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*
- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES :** Go to Step 2.

**NO :** Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the diagnosis code is reset.**

- (1) Erase the DTC.
- (2) Carry out the Item No. 3 (Teach-In) : Line pressure Test.  
(Refer to Special Function (Teach-In Reference Table [P.22-169](#).)
- (3) With the engine idle status, check that the DTC is reset.

**Q: Is the DTC No. P181B restored? or Is the line pressure test of Teach-In not completed normally ("No" is displayed in the Data list No.101: Normal End)?**

- YES** : Go to Step 3.  
**NO** : Intermittent malfunction.
- 

**STEP 3. Check the fluid.**

**Q: Is the fluid level proper?**

- YES** : Go to Step 4.  
**NO** : Add the fluid.
- 

**STEP 4. Check the installation status of the mechatronic assembly.**

**Q: Is the mechatronic assembly installed correctly?**

- YES** : Go to Step 5.  
**NO** : Install the mechatronic assembly correctly. (Refer to [P.22-176](#).)
- 

**STEP 5. Check whether the DTC is reset.**

- (1) Erase the DTC.
- (2) With the engine idle status, check that the DTC is reset.

**Q: Is DTC No.P181B set?**

- YES** : Replace the mechatronic assembly. (Refer to [P.22-176](#).) Then, go to Step 6.  
**NO** : Intermittent malfunction.
- 

**STEP 6. Check whether the DTC is reset.**

- (1) Erase the DTC.
- (2) With the engine idle status, check that the DTC is reset.

**Q: Is DTC No.P181B set?**

- YES** : Replace the transaxle assembly.  
**NO** : This diagnosis is complete.
- 

---

**DTC P181C: Clutch 1 (Pressure high range out)**

---

**CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the clutch 1 pressure is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The pressure of the clutch 1 is too high.

### PROBABLE CAUSES

- Malfunction of TC-SST-ECU

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

### DIAGNOSTIC PROCEDURE

#### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

#### STEP 1. Scan tool CAN bus diagnostics

Using scan tool MB991958, diagnose the CAN bus lines.

#### Q: Is the check result normal?

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

#### STEP 2. Check whether the DTC is reset.

After the test run, check that the DTC is reset.

#### Q: Is DTC No. P181C set?

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

---

### DTC P181E: Clutch 2 (Pressure low range out)

---

#### CAUTION

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

#### DIAGNOSTIC FUNCTION

TC-SST-ECU checks that the clutch 2 pressure is normal.

#### DESCRIPTIONS OF MONITOR METHODS

The pressure of the clutch 2 is too low.

#### PROBABLE CAUSES

- Malfunction of TC-SST-ECU
- Insufficient fluid level
- Improper installation of mechatronic assembly

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

### DIAGNOSTIC PROCEDURE

#### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)

- MB991827 M.U.T.-III USB Cable
- MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

(1) Erase the DTC.

(2) Carry out the Item No. 3 (Teach-In): Line pressure Test.  
(Refer to Special Function (Teach-In Reference Table [P.22-169](#).)

(3) With the engine idle status, check that the DTC is reset.

**Q: Is the DTC No. P181E restored? or Is the line pressure test of Teach-In not completed normally ("No" is displayed in the Data list No.101: Normal End)?**

**YES** : Go to Step 3.

**NO** : Intermittent malfunction.

---

**STEP 3. Check the fluid.****Q: Is the fluid level proper?**

**YES** : Go to Step 4.

**NO** : Add the fluid.

---

**STEP 4. Check the installation status of the mechatronic assembly.****Q: Is the mechatronic assembly installed correctly?**

**YES** : Go to Step 5.

**NO** : Install the mechatronic assembly correctly. (Refer to [P.22-176](#).)

---

**STEP 5. Check whether the DTC is reset.**

(1) Erase the DTC.

(2) With the engine idle status, check that the DTC is reset.

**Q: Is DTC No.P181E set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176](#).) Then, go to Step 6.

**NO** : Intermittent malfunction.

---

**STEP 6. Check whether the DTC is reset.**

(1) Erase the DTC.

(2) With the engine idle status, check that the DTC is reset.

**Q: Is DTC No.P181E set?**

**YES** : Replace the transaxle assembly.

**NO** : This diagnosis is complete.

---

**DTC P181F: Clutch 2 (Pressure high range out)**

---

**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the clutch 2 pressure is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The pressure of the clutch 2 is too high.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

**DIAGNOSTIC PROCEDURE**

**Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES :** Go to Step 2.

**NO :** Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

After the test run, check that the DTC is reset.

**Q: Is DTC No. P181F set?**

**YES :** Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO :** Intermittent malfunction.

---

**DTC P1820: Shift Fork Position Sensor 1 System (Voltage low range out)**

---

**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the voltage of the shift fork position sensor 1 is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The voltage of the shift fork position sensor 1 is too low.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU

- Malfunction of shift fork position sensor 1

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*

- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

## DIAGNOSTIC PROCEDURE

### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

### STEP 1. Scan tool CAN bus diagnostics

Using scan tool MB991958, diagnose the CAN bus lines.

#### Q: Is the check result normal?

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

### STEP 2. Check whether the DTC is reset.

#### Q: Is DTC No. P1820 set?

**YES** : Go to Step 3.

**NO** : Intermittent malfunction.

---

### STEP 3. Scan tool Teach-In

- (1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)
- (2) After Teach-In, check which result ("Yes" or "No") is displayed in the Data list No. 101: Normal End. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)

#### Q: Which is displayed, "Yes" or "No"?

**"Yes"** : Replace the transaxle assembly.

**"No"** : Go to Step 4.

---

### STEP 4. Replace the mechatronic assembly, and check if the DTC is reset.

- (1) Replace the mechatronic assembly. (Refer to [P.22-176](#).)
- (2) Perform a test run of the vehicle.
- (3) Check the DTC.

#### Q: Is DTC No.P1820 set?

**YES** : Replace the transaxle assembly.

**NO** : This diagnosis is complete.

---

**DTC P1821: Shift Fork Position Sensor 1 System (Voltage high range out)**

---

**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the voltage of the shift fork position sensor 1 is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The voltage of the shift fork position sensor 1 is too high.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of shift fork position sensor 1

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

---

**DIAGNOSTIC PROCEDURE**

**Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

**Q: Is DTC No. P1821 set?**

**YES** : Go to Step 3.

**NO** : Intermittent malfunction.

---

**STEP 3. Scan tool Teach-In**

- (1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table [P.22-169](#)).)
- (2) After Teach-In, check which result ("Yes" or "No") is displayed in the Data list No. 101: Normal End. (Refer to Special Function (Teach-In Reference Table [P.22-169](#)).)

**Q: Which is displayed, "Yes" or "No"?**

**"Yes"** : Replace the transaxle assembly.

**"No"** : Go to Step 4.



**STEP 4. Replace the mechatronic assembly, and check if the DTC is reset.**

- (1) Replace the mechatronic assembly. (Refer to P.22-176.)
- (2) Perform a test run of the vehicle.
- (3) Check the DTC.

**Q: Is DTC No.P1821 set?****YES** : Replace the transaxle assembly.**NO** : This diagnosis is complete.**DTC P1822: Shift Fork Position Sensor 1 System (Output range out)****⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the output of the shift fork position sensor 1 is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The output of the shift fork position sensor 1 is determined to be abnormal.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of shift fork position sensor 1

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?****YES** : Go to Step 2.**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

- (1) Erase the DTC.
- (2) With the engine idle status, operate the shift lever in the following sequence: P → R → D → R → P. (Hold each range for 5 seconds or more.)
- (3) Check that the DTC is reset.

**Q: Is DTC No.P1822 set?**

- YES** : Go to Step 3.  
**NO** : Intermittent malfunction.

---

**STEP 3. Scan tool Teach-In**

- (1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)
- (2) After Teach-In, check which result ("Yes" or "No") is displayed in the Data list No. 101: Normal End. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)

**Q: Which is displayed, "Yes" or "No"?**

- "Yes"** : Replace the transaxle assembly.  
**"No"** : Go to Step 4.

---

**STEP 4. Replace the mechatronic assembly, and check if the DTC is reset.**

- (1) Replace the mechatronic assembly. (Refer to [P.22-176](#).)
- (2) With the engine idle status, operate the shift lever in the following sequence: P → R → D → R → P. (Hold each range for 5 seconds or more.)
- (3) Check the DTC.

**Q: Is DTC No.P1822 set?**

- YES** : Replace the transaxle assembly.  
**NO** : This diagnosis is complete.

---

**DTC P1823: Shift Fork Position Sensor 1 System (Neutral)**

---

**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the shift fork position sensor 1 is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The shift fork position sensor 1 is determined to be abnormal.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of shift fork position sensor 1

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

---

## DIAGNOSTIC PROCEDURE

### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

### STEP 1. Scan tool CAN bus diagnostics

Using scan tool MB991958, diagnose the CAN bus lines.

#### Q: Is the check result normal?

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

### STEP 2. Check whether the DTC is reset.

After driving in the 3rd gear, check that the DTC is reset.

#### Q: Is DTC No.P1823 set?

**YES** : Go to Step 3.

**NO** : Intermittent malfunction.

---

### STEP 3. Scan tool diagnostic trouble code

Check if a shift fork and shift fork position sensor-related DTC No. other than P1823 is stored.

#### Q: Is the DTC set?

**YES** : Go to Step 5.

**NO** : Go to Step 4.

---

### STEP 4. Scan tool Teach-In

- (1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)
- (2) After Teach-In, check which result ("Yes" or "No") is displayed in the Data list No. 101: Normal End. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)

#### Q: Which is displayed, "Yes" or "No"?

"Yes" : Replace the transaxle assembly.

"No" : Go to Step 5.

---

### STEP 5. Replace the mechatronic assembly, and check if the DTC is reset.

After driving in the 3rd gear, check that the DTC is reset.

#### Q: Is DTC No.P1823 set?

**YES** : Replace the transaxle assembly.

**NO** : This diagnosis is complete.

---

**DTC P1824: Shift Fork Position Sensor 1 System (Poor performance)**

---

**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the shift fork position sensor 1 is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The shift fork position sensor 1 is determined to be abnormal.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of shift fork position sensor 1

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

---

**DIAGNOSTIC PROCEDURE**

**Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

- (1) Erase the DTC.
- (2) With the engine idle status, operate the shift lever in the following sequence: P → R → D → R → P. (Hold each range for 5 seconds or more.)
- (3) Check that the DTC is reset.

**Q: Is DTC No.P1824 set?**

**YES** : Go to Step 3.

**NO** : Intermittent malfunction.

---

**STEP 3. Scan tool Teach-In**

- (1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table [P.22-169](#)).)
- (2) After Teach-In, check which result ("Yes" or "No") is displayed in the Data list No. 101: Normal End. (Refer to Special Function (Teach-In Reference Table [P.22-169](#)).)

**Q: Which is displayed, "Yes" or "No"?**

**"Yes"** : Replace the transaxle assembly.

**"No"** : Go to Step 4.

**STEP 4. Replace the mechatronic assembly, and check if the DTC is reset.**

- (1) Replace the mechatronic assembly. (Refer to P.22-176.)
- (2) With the engine idle status, operate the shift lever in the following sequence: P → R → D → R → P. (Hold each range for 5 seconds or more.)
- (3) Check the DTC.

**Q: Is DTC No.P1824 set?****YES** : Replace the transaxle assembly.**NO** : This diagnosis is complete.**DTC P1825: Shift Fork Position Sensor 2 System (Voltage low range out)****CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the voltage of the shift fork position sensor 2 is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The voltage of the shift fork position sensor 2 is too low.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of shift fork position sensor 2

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?****YES** : Go to Step 2.**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.**STEP 2. Check whether the DTC is reset.****Q: Is DTC No. P1825 set?****YES** : Go to Step 3.**NO** : Intermittent malfunction.

---

### STEP 3. Scan tool Teach-In

- (1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table P.22-169).)
- (2) After Teach-In, check which result ("Yes" or "No") is displayed in the Data list No. 101: Normal End. (Refer to Special Function (Teach-In Reference Table P.22-169).)

#### Q: Which is displayed, "Yes" or "No"?

- "Yes" : Replace the transaxle assembly.  
"No" : Go to Step 4.

---

### STEP 4. Replace the mechatronic assembly, and check if the DTC is reset.

- (1) Replace the mechatronic assembly. (Refer to P.22-176.)
- (2) Perform a test run of the vehicle.
- (3) Check the DTC.

#### Q: Is DTC No.P1825 set?

- YES : Replace the transaxle assembly.  
NO : This diagnosis is complete.

---

## DTC P1826: Shift Fork Position Sensor 2 System (Voltage high range out)

---

### CAUTION

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

### DIAGNOSTIC FUNCTION

TC-SST-ECU checks that the voltage of the shift fork position sensor 2 is normal.

### DESCRIPTIONS OF MONITOR METHODS

The voltage of the shift fork position sensor 2 is too high.

### PROBABLE CAUSES

- Malfunction of TC-SST-ECU
- Malfunction of shift fork position sensor 2

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

## DIAGNOSTIC PROCEDURE

### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

**STEP 2. Check whether the DTC is reset.****Q: Is DTC No. P1826 set?**

**YES** : Go to Step 3.

**NO** : Intermittent malfunction.

**STEP 3. Scan tool Teach-In**

- (1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)
- (2) After Teach-In, check which result ("Yes" or "No") is displayed in the Data list No. 101: Normal End. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)

**Q: Which is displayed, "Yes" or "No"?**

**"Yes"** : Replace the transaxle assembly.

**"No"** : Go to Step 4.

**STEP 4. Replace the mechatronic assembly, and check if the DTC is reset.**

- (1) Replace the mechatronic assembly. (Refer to [P.22-176](#).)
- (2) Perform a test run of the vehicle.
- (3) Check the DTC.

**Q: Is DTC No.P1826 set?**

**YES** : Replace the transaxle assembly.

**NO** : This diagnosis is complete.

**DTC P1827: Shift Fork Position Sensor 2 System (Output range out)****⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the output of the shift fork position sensor 2 is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The output of the shift fork position sensor 2 is determined to be abnormal.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of shift fork position sensor 2

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*
- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

## DIAGNOSTIC PROCEDURE

### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

### STEP 1. Scan tool CAN bus diagnostics

Using scan tool MB991958, diagnose the CAN bus lines.

#### Q: Is the check result normal?

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

### STEP 2. Check whether the DTC is reset.

After driving in the 5th gear, check that the DTC is reset.

#### Q: Is DTC No. P1827 set?

**YES** : Go to Step 3.

**NO** : Intermittent malfunction.

---

### STEP 3. Scan tool Teach-In

- (1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)
- (2) After Teach-In, check which result ("Yes" or "No") is displayed in the Data list No. 101: Normal End. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)

#### Q: Which is displayed, "Yes" or "No"?

"Yes" : Replace the transaxle assembly.

"No" : Go to Step 4.

---

### STEP 4. Replace the mechatronic assembly, and check if the DTCe is reset.

- (1) Replace the mechatronic assembly. (Refer to [P.22-176](#).)
- (2) Drive in the 5th gear.
- (3) Check the DTC.

#### Q: Is DTC No.P1827 set?

**YES** : Replace the transaxle assembly.

**NO** : This diagnosis is complete.

---

## DTC P1828: Shift Fork Position Sensor 2 System (Neutral)

### CAUTION

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

### DIAGNOSTIC FUNCTION

TC-SST-ECU checks that the shift fork position sensor 2 is normal.

### DESCRIPTIONS OF MONITOR METHODS

The shift fork position sensor 2 is determined to be abnormal.

### PROBABLE CAUSES

- Malfunction of TC-SST-ECU



- Malfunction of shift fork position sensor 2

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*

- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

## DIAGNOSTIC PROCEDURE

### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

### STEP 1. Scan tool CAN bus diagnostics

Using scan tool MB991958, diagnose the CAN bus lines.

#### Q: Is the check result normal?

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

### STEP 2. Check whether the DTC is reset.

After driving in the 3rd gear, check that the DTC is reset.

#### Q: Is DTC No.P1828 set?

**YES** : Go to Step 3.

**NO** : Intermittent malfunction.

---

### STEP 3. Scan tool diagnostic trouble code

Check if a shift fork and shift fork position sensor-related DTC No. other than P1828 is stored.

#### Q: Is the DTC set?

**YES** : Go to Step 5.

**NO** : Go to Step 4.

---

### STEP 4. Scan tool Teach-In

- (1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)
- (2) After Teach-In, check which result ("Yes" or "No") is displayed in the Data list No. 101: Normal End. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)

#### Q: Which is displayed, "Yes" or "No"?

"Yes" : Replace the transaxle assembly.

"No" : Go to Step 5.

---

### STEP 5. Replace the mechatronic assembly, and check if the DTC is reset.

After driving in the 3rd gear, check that the DTCe is reset.

#### Q: Is DTC No.P1828 set?

**YES** : Replace the transaxle assembly.

**NO** : This diagnosis is complete.

---

**DTC P1829: Shift Fork Position Sensor 2 System (Poor performance)**

---

**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the shift fork position sensor 2 is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The shift fork position sensor 2 is determined to be abnormal.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of shift fork position sensor 2

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

---

**DIAGNOSTIC PROCEDURE**

**Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

After driving in the 5th gear, check that the DTC is reset.

**Q: Is DTC No. P1829 set?**

**YES** : Go to Step 3.

**NO** : Intermittent malfunction.

---

**STEP 3. Scan tool Teach-In**

- (1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)
- (2) After Teach-In, check which result ("Yes" or "No") is displayed in the Data list No. 101: Normal End. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)

**Q: Which is displayed, "Yes" or "No"?**

**"Yes"** : Replace the transaxle assembly.

**"No"** : Go to Step 4.

**STEP 4. Replace the mechatronic assembly, and check if the DTC is reset.**

- (1) Replace the mechatronic assembly. (Refer to P.22-176.)
- (2) Drive in the 5th gear.
- (3) Check the DTC.

**Q: Is DTC No.P1829 set?****YES** : Replace the transaxle assembly.**NO** : This diagnosis is complete.**DTC P182A: Shift Fork Position Sensor 3 System (Voltage low range out)****⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the voltage of the shift fork position sensor 3 is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The voltage of the shift fork position sensor 3 is too low.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of shift fork position sensor 3

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?****YES** : Go to Step 2.**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.**STEP 2. Check whether the DTC is reset.****Q: Is DTC No. P182A set?****YES** : Go to Step 3.**NO** : Intermittent malfunction.

---

### STEP 3. Scan tool Teach-In

- (1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table P.22-169).)
- (2) After Teach-In, check which result ("Yes" or "No") is displayed in the Data list No. 101: Normal End. (Refer to Special Function (Teach-In Reference Table P.22-169).)

#### Q: Which is displayed, "Yes" or "No"?

- "Yes" : Replace the transaxle assembly.  
"No" : Go to Step 4.

---

### STEP 4. Replace the mechatronic assembly, and check if the DTC is reset.

- (1) Replace the mechatronic assembly. (Refer to P.22-176.)
- (2) Perform a test run of the vehicle.
- (3) Check the DTC.

#### Q: Is DTC No.P182A set?

- YES : Replace the transaxle assembly.  
NO : This diagnosis is complete.

---

## DTC P182B: Shift Fork Position Sensor 3 System (Voltage high range out)

---

### CAUTION

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

### DIAGNOSTIC FUNCTION

TC-SST-ECU checks that the voltage of the shift fork position sensor 3 is normal.

### DESCRIPTIONS OF MONITOR METHODS

The voltage of the shift fork position sensor 3 is too high.

### PROBABLE CAUSES

- Malfunction of TC-SST-ECU
- Malfunction of shift fork position sensor 3

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

## DIAGNOSTIC PROCEDURE

### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

**STEP 2. Check whether the DTC is reset.****Q: Is DTC No. P182B set?**

**YES** : Go to Step 3.

**NO** : Intermittent malfunction.

**STEP 3. Scan tool Teach-In**

- (1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)
- (2) After Teach-In, check which result ("Yes" or "No") is displayed in the Data list No. 101: Normal End. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)

**Q: Which is displayed, "Yes" or "No"?**

**"Yes"** : Replace the transaxle assembly.

**"No"** : Go to Step 4.

**STEP 4. Replace the mechatronic assembly, and check if the DTC is reset.**

- (1) Replace the mechatronic assembly. (Refer to [P.22-176](#).)
- (2) Perform a test run of the vehicle.
- (3) Check the DTC.

**Q: Is DTC No.P182B set?**

**YES** : Replace the transaxle assembly.

**NO** : This diagnosis is complete.

**DTC P182C: Shift Fork Position Sensor 3 System (Output range out)****⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the output of the shift fork position sensor 3 is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The output of the shift fork position sensor 3 is determined to be abnormal.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of shift fork position sensor 3

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*
- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

## DIAGNOSTIC PROCEDURE

### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

### STEP 1. Scan tool CAN bus diagnostics

Using scan tool MB991958, diagnose the CAN bus lines.

#### Q: Is the check result normal?

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

### STEP 2. Check whether the DTC is reset.

After driving in the 6th gear, check that the DTC is reset.

#### Q: Is DTC No. P182C set?

**YES** : Go to Step 3.

**NO** : Intermittent malfunction.

---

### STEP 3. Scan tool Teach-In

- (1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)
- (2) After Teach-In, check which result ("Yes" or "No") is displayed in the Data list No. 101: Normal End. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)

#### Q: Which is displayed, "Yes" or "No"?

"Yes" : Replace the transaxle assembly.

"No" : Go to Step 4.

---

### STEP 4. Replace the mechatronic assembly, and check if the DTC is reset.

- (1) Replace the mechatronic assembly. (Refer to [P.22-176](#).)
- (2) Drive in the 6th gear.
- (3) Check the DTC.

#### Q: Is DTC No.P182C set?

**YES** : Replace the transaxle assembly.

**NO** : This diagnosis is complete.

---

## DTC P182D: Shift Fork Position Sensor 3 System (Neutral)

### CAUTION

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

### DIAGNOSTIC FUNCTION

TC-SST-ECU checks that the shift fork position sensor 3 is normal.

### DESCRIPTIONS OF MONITOR METHODS

The shift fork position sensor 3 is determined to be abnormal.

### PROBABLE CAUSES

- Malfunction of TC-SST-ECU

- Malfunction of shift fork position sensor 3

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*

- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

## DIAGNOSTIC PROCEDURE

### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

### STEP 1. Scan tool CAN bus diagnostics

Using scan tool MB991958, diagnose the CAN bus lines.

#### Q: Is the check result normal?

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

### STEP 2. Check whether the DTC is reset.

After driving in the 6th gear, check that the DTC is reset.

#### Q: Is DTC No. P182D set?

**YES** : Go to Step 3.

**NO** : Intermittent malfunction.

---

### STEP 3. Scan tool diagnostic trouble code

Check if a shift fork and shift fork position sensor-related DTC No. other than P182D is stored.

#### Q: Is the DTC set?

**YES** : Go to Step 5.

**NO** : Go to Step 4.

---

### STEP 4. Scan tool Teach-In

- (1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)
- (2) After Teach-In, check which result ("Yes" or "No") is displayed in the Data list No. 101: Normal End. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)

#### Q: Which is displayed, "Yes" or "No"?

**"Yes"** : Replace the transaxle assembly.

**"No"** : Go to Step 5.

---

**STEP 5. Replace the mechatronic assembly, and check if the DTC is reset.**

- (1) Replace the mechatronic assembly. (Refer to P.22-176.)
- (2) Drive in the 6th gear.
- (3) Check the DTC.

**Q: Is DTC No.P182D set?**

- YES** : Replace the transaxle assembly.  
**NO** : This diagnosis is complete.

---

**DTC P182E: Shift Fork Position Sensor 3 System (Poor performance)**

---

**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the shift fork position sensor 3 is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The shift fork position sensor 3 is determined to be abnormal.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of shift fork position sensor 3

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

**DIAGNOSTIC PROCEDURE**

**Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

- YES** : Go to Step 2.  
**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

After driving in the 6th gear, check that the DTC is reset.

**Q: Is DTC No. P182E set?**

- YES** : Go to Step 3.  
**NO** : Intermittent malfunction.



**STEP 3. Scan tool Teach-In**

- (1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table P.22-169).)
- (2) After Teach-In, check which result ("Yes" or "No") is displayed in the Data list No. 101: Normal End. (Refer to Special Function (Teach-In Reference Table P.22-169).)

**Q: Which is displayed, "Yes" or "No"?**

- "Yes" : Replace the transaxle assembly.  
"No" : Go to Step 4.

**STEP 4. Replace the mechatronic assembly, and check if the DTC is reset.**

- (1) Replace the mechatronic assembly. (Refer to P.22-176.)
- (2) Drive in the 6th gear.
- (3) Check the DTC.

**Q: Is DTC No.P182E set?**

- YES** : Replace the transaxle assembly.  
**NO** : This diagnosis is complete.

**DTC P1831: Shift Fork Position Sensor 4 System (Voltage low range out)****⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the voltage of the shift fork position sensor 4 is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The voltage of the shift fork position sensor 4 is too low.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of shift fork position sensor 4

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*
- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.****Q: Is DTC No. P1831 set?**

**YES** : Go to Step 3.

**NO** : Intermittent malfunction.

---

**STEP 3. Scan tool Teach-In**

- (1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)
- (2) After Teach-In, check which result ("Yes" or "No") is displayed in the Data list No. 101: Normal End. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)

**Q: Which is displayed, "Yes" or "No"?**

**"Yes"** : Replace the transaxle assembly.

**"No"** : Go to Step 4.

---

**STEP 4. Replace the mechatronic assembly, and check if the DTC is reset.**

- (1) Replace the mechatronic assembly. (Refer to [P.22-176](#).)
- (2) Perform a test run of the vehicle.
- (3) Check the DTC.

**Q: Is DTC No.P1831 set?**

**YES** : Replace the transaxle assembly.

**NO** : This diagnosis is complete.

---

**DTC P1832: Shift Fork Position Sensor 4 System (Voltage high range out)**

---

**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the voltage of the shift fork position sensor 4 is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The voltage of the shift fork position sensor 4 is too high.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of shift fork position sensor 4

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*
- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

**STEP 2. Check whether the DTC is reset.****Q: Is DTC No. P1832 set?**

**YES** : Go to Step 3.

**NO** : Intermittent malfunction.

**STEP 3. Scan tool Teach-In**

- (1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)
- (2) After Teach-In, check which result ("Yes" or "No") is displayed in the Data list No. 101: Normal End. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)

**Q: Which is displayed, "Yes" or "No"?**

**"Yes"** : Replace the transaxle assembly.

**"No"** : Go to Step 4.

**STEP 4. Replace the mechatronic assembly, and check if the DTC is reset.**

- (1) Replace the mechatronic assembly. (Refer to [P.22-176](#).)
- (2) Perform a test run of the vehicle.
- (3) Check the DTC.

**Q: Is DTC No.P1832 set?**

**YES** : Replace the transaxle assembly.

**NO** : This diagnosis is complete.

**DTC P1833: Shift Fork Position Sensor 4 System (Output range out)****CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the output of the shift fork position sensor 4 is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The output of the shift fork position sensor 4 is determined to be abnormal.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU

- Malfunction of shift fork position sensor 4

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*

- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

## DIAGNOSTIC PROCEDURE

### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

### STEP 1. Scan tool CAN bus diagnostics

Using scan tool MB991958, diagnose the CAN bus lines.

#### Q: Is the check result normal?

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

### STEP 2. Check whether the DTC is reset.

After driving in the 4th gear, check that the DTC is reset.

#### Q: Is DTC No. P1833 set?

**YES** : Go to Step 3.

**NO** : Intermittent malfunction.

---

### STEP 3. Scan tool Teach-In

- (1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)
- (2) After Teach-In, check which result ("Yes" or "No") is displayed in the Data list No. 101: Normal End. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)

#### Q: Which is displayed, "Yes" or "No"?

**"Yes"** : Replace the transaxle assembly.

**"No"** : Go to Step 4.

---

### STEP 4. Replace the mechatronic assembly, and check if the DTC is reset.

- (1) Replace the mechatronic assembly. (Refer to [P.22-176](#).)
- (2) Drive in the 4th gear.
- (3) Check the DTC.

#### Q: Is DTC No.P1833 set?

**YES** : Replace the transaxle assembly.

**NO** : This diagnosis is complete.

**DTC P1834: Shift Fork Position Sensor 4 System (Neutral)****⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the shift fork position sensor 4 is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The shift fork position sensor 4 is determined to be abnormal.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of shift fork position sensor 4

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*
- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

**STEP 2. Check whether the DTC is reset.**

After driving in the 6th gear, check that the DTC is reset.

**Q: Is DTC No. P1834 set?**

**YES** : Go to Step 3.

**NO** : Intermittent malfunction.

**STEP 3. Scan tool diagnostic trouble code**

Check if a shift fork and shift fork position sensor-related DTC No. other than P1834 is stored.

**Q: Is the DTC set?**

**YES** : Go to Step 5.

**NO** : Go to Step 4.

---

#### STEP 4. Scan tool Teach-In

- (1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table P.22-169).)
- (2) After Teach-In, check which result ("Yes" or "No") is displayed in the Data list No. 101: Normal End. (Refer to Special Function (Teach-In Reference Table P.22-169).)

#### Q: Which is displayed, "Yes" or "No"?

- "Yes" : Replace the transaxle assembly.  
"No" : Go to Step 5.

---

#### STEP 5. Replace the mechatronic assembly, and check if the DTC is reset.

- (1) Replace the mechatronic assembly. (Refer to P.22-176.)
- (2) Drive in the 6th gear.
- (3) Check the DTC.

#### Q: Is DTC No.P1834 set?

- YES : Replace the transaxle assembly.  
NO : This diagnosis is complete.

---

### DTC P1835: Shift Fork Position Sensor 4 System (Poor performance)

---

#### CAUTION

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

#### DIAGNOSTIC FUNCTION

TC-SST-ECU checks that the shift fork position sensor 4 is normal.

#### DESCRIPTIONS OF MONITOR METHODS

The shift fork position sensor 4 is determined to be abnormal.

#### PROBABLE CAUSES

- Malfunction of TC-SST-ECU
- Malfunction of shift fork position sensor 4

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

### DIAGNOSTIC PROCEDURE

#### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

**STEP 2. Check whether the DTC is reset.**

After driving in the 4th gear, check that the DTC is reset.

**Q: Is DTC No. P1835 set?**

**YES** : Go to Step 3.

**NO** : Intermittent malfunction.

**STEP 3. Scan tool Teach-In**

(1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)

(2) After Teach-In, check which result ("Yes" or "No") is displayed in the Data list No. 101: Normal End. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)

**Q: Which is displayed, "Yes" or "No"?**

"Yes" : Replace the transaxle assembly.

"No" : Go to Step 4.

**STEP 4. Replace the mechatronic assembly, and check if the DTC is reset.**

(1) Replace the mechatronic assembly. (Refer to [P.22-176](#).)

(2) Drive in the 4th gear.

(3) Check the DTC.

**Q: Is DTC No.P1835 set?**

**YES** : Replace the transaxle assembly.

**NO** : This diagnosis is complete.

**DTC P1836: Shift Fork 1 Malfunction****CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the movement of the shift fork 1 is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The movement of the shift fork 1 is determined to be abnormal.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of TC-SST shift fork

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*
- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

## DIAGNOSTIC PROCEDURE

### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

### STEP 1. Scan tool CAN bus diagnostics

Using scan tool MB991958, diagnose the CAN bus lines.

#### Q: Is the check result normal?

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

### STEP 2. Monitoring unit No. check

- (1) Check the freeze frame data (item No. 30 to No. 37).
- (2) Check which monitoring unit (No. 160, No. 172, No. 182, or No. 183) is set.

#### Q: Which monitoring unit is set, No. 160, No. 172, No. 182, or No. 183?

**No. 160** : Go to Step 4

**Other than No. 160** : Go to Step 3

---

### STEP 3. Check whether the DTC is reset.

- (1) Erase the DTC.
- (2) Drive with shifting to each gear range.
- (3) Check that the DTC is reset.

#### Q: Is DTC No.P1836 set?

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

---

### STEP 4. Check whether the DTC is reset.

- (1) Erase the DTC.
- (2) With the engine idle status, operate the shift lever in the following sequence: P → R → D → R → P. (Hold each range for 5 seconds or more.)
- (3) Check that the DTC is reset.

#### Q: Is DTC No.P1836 set?

**YES** : Go to Step 5.

**NO** : Intermittent malfunction.



**STEP 5. Scan tool Teach-In**

- (1) Carry out the Item No.3: Line pressure Test. (Refer to Special Function (Teach-In Reference Table P.22-169).)
- (2) After Teach-In, check which result ("Yes" or "No") is displayed in the Data list No. 101: Normal End. (Refer to Special Function (Teach-In Reference Table P.22-169).)

**Q: Which is displayed, "Yes" or "No"?**

**"Yes"** : Go to Step 6.

**"No"** : DTC No. P181B: Carry out the troubleshooting for the DTC No. P181B: Clutch 1 (Pressure low range out). (Refer to P.22-57.)

**STEP 6. Scan tool Teach-In**

- (1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table P.22-169).)
- (2) After Teach-In, check which result ("Yes" or "No") is displayed in the Data list No. 101: Normal End. (Refer to Special Function (Teach-In Reference Table P.22-169).)

**Q: Which is displayed, "Yes" or "No"?**

**"Yes"** : Replace the transaxle assembly.

**"No"** : Go to Step 7.

**STEP 7. Replace the mechatronic assembly, and check if the DTC is reset.**

- (1) Replace the mechatronic assembly. (Refer to P.22-176.)
- (2) With the engine idle status, operate the shift lever in the following sequence: P → R → D → R → P. (Hold each range for 5 seconds or more.)
- (3) Check the DTC.

**Q: Is DTC No.P1836 set?**

**YES** : Replace the transaxlen assembly.

**NO** : This diagnosis is complete.

**DTC P183D: Shift Fork 2 Malfunction****⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the movement of the shift fork 2 is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The movement of the shift fork 2 is determined to be abnormal.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of TC-SST shift fork

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

## DIAGNOSTIC PROCEDURE

### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

### STEP 1. Scan tool CAN bus diagnostics

Using scan tool MB991958, diagnose the CAN bus lines.

#### Q: Is the check result normal?

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

### STEP 2. Monitoring unit No. check

- (1) Check the freeze frame data (item No. 30 to No. 37).
- (2) Check which monitoring unit (No. 161, No. 174, No. 184, or No. 185) is set.

#### Q: Which monitoring unit is set, No. 161, No. 174, No. 184, or No. 185?

**No. 161** : Go to Step 4

**Other than No. 161** : Go to Step 3

---

### STEP 3. Check whether the DTC is reset.

- (1) Erase the DTC.
- (2) Drive with shifting to each gear range.
- (3) Check that the DTC is reset.

#### Q: Is DTC No.P183D set?

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

---

### STEP 4. Check whether the DTC is reset.

- (1) Erase the DTC.
- (2) Drive in the 3rd gear.
- (3) Check that the DTC is reset.

#### Q: Is DTC No.P183D set?

**YES** : Go to Step 5.

**NO** : Intermittent malfunction.

---

### STEP 5. Scan tool Teach-In

- (1) Carry out the Item No.3: Line pressure Test. (Refer to Special Function (Teach-In Reference Table [P.22-169.](#)))
- (2) After Teach-In, check which result ("Yes" or "No") is displayed in the Data list No. 101: Normal End. (Refer to Special Function (Teach-In Reference Table [P.22-169.](#)))

#### Q: Which is displayed, "Yes" or "No"?

**"Yes"** : Go to Step 6.

**"No"** : DTC No. P181B: Carry out the troubleshooting for the DTC No. P181B: Clutch 1 (Pressure low range out). (Refer to [P.22-57.](#))

**STEP 6. Scan tool Teach-In**

- (1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table P.22-169).)
- (2) After Teach-In, check which result ("Yes" or "No") is displayed in the Data list No. 101: Normal End. (Refer to Special Function (Teach-In Reference Table P.22-169).)

**Q: Which is displayed, "Yes" or "No"?**

- "Yes" : Replace the transaxle assembly.  
"No" : Go to Step 7.

**STEP 7. Replace the mechatronic assembly, and check if the DTC is reset.**

- (1) Replace the mechatronic assembly. (Refer to P.22-176.)
- (2) Drive in the 3rd gear.
- (3) Check the DTC.

**Q: Is DTC No.P183D set?**

- YES** : Replace the transaxle assembly.  
**NO** : This diagnosis is complete.

**DTC P1844: Shift Fork 3 Malfunction****⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the movement of the shift fork 3 is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The movement of the shift fork 3 is determined to be abnormal.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of TC-SST shift fork

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*
- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Monitoring unit No. check**

(1) Check the freeze frame data (item No. 30 to No. 37).

(2) Check which monitoring unit (No. 162, No. 178, No. 186, or No. 187) is set.

**Q: Which monitoring unit is set, No. 162, No. 178, No. 186, or No. 187?**

**No. 162** : Go to Step 4

**Other than No. 162** : Go to Step 3

---

**STEP 3. Check whether the DTC is reset.**

(1) Erase the DTC.

(2) Drive with shifting to each gear range.

(3) Check that the DTC is reset.

**Q: Is DTC No.P1844 set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

---

**STEP 4. Check whether the DTC is reset.**

(1) Erase the DTC.

(2) Drive in the 6th gear.

(3) Check that the DTC is reset.

**Q: Is DTC No.P1844 set?**

**YES** : Go to Step 5.

**NO** : Intermittent malfunction.

---

**STEP 5. Scan tool Teach-In**

(1) Carry out the Item No.3: Line pressure Test. (Refer to Special Function (Teach-In Reference Table [P.22-169.](#)))

(2) After Teach-In, check which result ("Yes" or "No") is displayed in the Data list No. 101: Normal End. (Refer to Special Function (Teach-In Reference Table [P.22-169.](#)))

**Q: Which is displayed, "Yes" or "No"?**

**"Yes"** : Go to Step 6.

**"No"** : DTC No. P181B: Carry out the troubleshooting for the DTC No. P181B: Clutch 1 (Pressure low range out). (Refer to [P.22-57.](#))

**STEP 6. Scan tool Teach-In**

- (1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table P.22-169).)
- (2) After Teach-In, check which result ("Yes" or "No") is displayed in the Data list No. 101: Normal End. (Refer to Special Function (Teach-In Reference Table P.22-169).)

**Q: Which is displayed, "Yes" or "No"?**

- "Yes" : Replace the transaxle assembly.  
"No" : Go to Step 7.

**STEP 7. Replace the mechatronic assembly, and check if the DTC is reset.**

- (1) Replace the mechatronic assembly. (Refer to P.22-176.)
- (2) Drive in the 6th gear.
- (3) Check the DTC.

**Q: Is DTC No.P1844 set?**

- YES** : Replace the transaxle assembly.  
**NO** : This diagnosis is complete.

**DTC P184B: Shift Fork 4 Malfunction****⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the movement of the shift fork 4 is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The movement of the shift fork 4 is determined to be abnormal.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of TC-SST shift fork

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*
- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Monitoring unit No. check**

(1) Check the freeze frame data (item No. 30 to No. 37).

(2) Check which monitoring unit (No. 163, No. 180, No. 188, or No. 189) is set.

**Q: Which monitoring unit is set, No. 163, No. 180, No. 188, or No. 189?**

**No. 163** : Go to Step 4

**Other than No. 163** : Go to Step 3

---

**STEP 3. Check whether the DTC is reset.**

(1) Erase the DTC.

(2) Drive with shifting to each gear range.

(3) Check that the DTC is reset.

**Q: Is DTC No.P184B set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

---

**STEP 4. Check whether the DTC is reset.**

(1) Erase the DTC.

(2) Drive in the 4th gear.

(3) Check that the DTC is reset.

**Q: Is DTC No.P184B set?**

**YES** : Go to Step 5.

**NO** : Intermittent malfunction.

---

**STEP 5. Scan tool Teach-In**

(1) Carry out the Item No.3: Line pressure Test. (Refer to Special Function (Teach-In Reference Table [P.22-169.](#)))

(2) After Teach-In, check which result ("Yes" or "No") is displayed in the Data list No. 101: Normal End. (Refer to Special Function (Teach-In Reference Table [P.22-169.](#)))

**Q: Which is displayed, "Yes" or "No"?**

**"Yes"** : Go to Step 6.

**"No"** : DTC No. P181B: Carry out the troubleshooting for the DTC No. P181B: Clutch 1 (Pressure low range out). (Refer to [P.22-57.](#))

**STEP 6. Scan tool Teach-In**

- (1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table P.22-169).)
- (2) After Teach-In, check which result ("Yes" or "No") is displayed in the Data list No. 101: Normal End. (Refer to Special Function (Teach-In Reference Table P.22-169).)

**Q: Which is displayed, "Yes" or "No"?**

- "Yes" : Replace the transaxle assembly.  
"No" : Go to Step 7.

**STEP 7. Replace the mechatronic assembly, and check if the DTC is reset.**

- (1) Replace the mechatronic assembly. (Refer to P.22-176.)
- (2) Drive in the 4th gear.
- (3) Check the DTC.

**Q: Is DTC No.P184B set?**

- YES** : Replace the transaxle assembly.  
**NO** : This diagnosis is complete.

**DTC P1852: Shift Fork 1 or 2 opposite direction movement****⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the movement of the shift fork is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The movements of the shift fork 1 and 2 are determined to be abnormal.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of valve body

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*
- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

(1) Erase the DTC.

(2) With the engine idle status, operate the shift lever in the following sequence: P → R → D → R → P. (Hold each range for 1 second or more.)

(3) Check that the DTC is reset.

**Q: Is the DTC No. P1852 set?**

**YES** : Replace the mechatronic assembly. (Refer to P.22-176.)

**NO** : Intermittent malfunction.

---

**DTC P1855: Shift Fork 3 or 4 opposite direction movement**

---

**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the movement of the shift fork is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The movements of the shift fork 3 and 4 are determined to be abnormal.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of valve body

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.



**STEP 2. Check whether the DTC is reset.**

After driving in the 4th gear, check that the DTC is reset.

**Q: Is the DTC No. P1855 set?**

**YES** : Replace the mechatronic assembly. (Refer to P.22-176.)

**NO** : Intermittent malfunction.

**DTC P1857: Odd number gear axle interlock****⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the gear engagement is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The two gears are determined to be engaged in the odd number gear range.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of TC-SST gear

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

**STEP 2. Check whether the DTC is reset.**

(1) Erase the DTC.

(2) With the ignition switch ON, operate the shift lever in the following sequence: P → R → D → R → P. (Hold each range for 5 seconds or more.)

(3) Check that the DTC is reset.

**Q: Is DTC No. P1857 set?**

**YES** : Go to Step 4.

**NO** : Go to Step 3.

---

**STEP 3. Check whether the DTC is reset.**

- (1) Drive with shifting to each gear range. (Hold each gear range for 5 seconds or more.)
- (2) Check that the DTC is reset.

**Q: Is DTC No.P1857 set?**

- YES :** Go to Step 4.  
**NO :** Intermittent malfunction.

---

**STEP 4. Scan tool diagnostic trouble code**

Check if any code from P1836, P183D, P1844, or P184B is set in addition to the DTC No. P1857.

**Q: Check if any code from P1836, P183D, P1844, or P184B is set in addition to the DTC No. P1857.**

- YES :** Replace the mechatronic assembly. (Refer to [P.22-176.](#))  
**NO :** Replace the transaxle assembly.

---

**DTC P1858: Even number gear axle interlock**

---

**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the gear engagement is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The two gears are determined to be engaged in the even number gear range.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of TC-SST gear

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

**DIAGNOSTIC PROCEDURE**

**Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

- YES :** Go to Step 2.  
**NO :** Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

- (1) Erase the DTC.
- (2) Drive with shifting to each gear range. (Hold each gear range for 5 seconds or more.)
- (3) Check that the DTC is reset.

**Q: Is DTC No.P1858 set?**

- YES** : Go to Step 3.  
**NO** : Intermittent malfunction.

---

**STEP 3. Scan tool diagnostic trouble code**

Check if any code from P1836, P183D, P1844, or P184B is set in addition to the DTC No. P1858.

**Q: Check if any code from P1836, P183D, P1844, or P184B is set in addition to the DTC No. P1858.**

- YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))  
**NO** : Replace the transaxle assembly.

---

**DTC P185D: Clutch open not possible**

---

**CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the clutch 1 and 2 are normal.

**DESCRIPTIONS OF MONITOR METHODS**

The disengagement of the clutch 1 and 2 are determined to be impossible.

**PROBABLE CAUSES**

- Malfunction of clutch assembly

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

- YES** : Go to Step 2.  
**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

After 15 seconds with the engine idle status, check that the DTC is reset.

**Q: Is DTC No. P185D set?**

- YES :** Replace the clutch assembly. (Refer to [P.22-187.](#))  
**NO :** Intermittent malfunction.

---

**DTC P1862: High side 1 system (Overcurrent)**

---

**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the high side 1 circuit is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The supply current to the high side 1 is determined to be overcurrent.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

- YES :** Go to Step 2.  
**NO :** Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

After 5 or more seconds have passed with the engine idle status, check that the DTC is reset.

**Q: Is DTC No. P1862 set?**

- YES :** Replace the mechatronic assembly. (Refer to [P.22-176.](#))  
**NO :** Intermittent malfunction.

**DTC P1863: High side 1 system (Open circuit)****CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the high side 1 circuit is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The high side 1 circuit is determined to be open.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

**STEP 2. Check whether the DTC is reset.**

After 5 or more seconds have passed with the engine idle status, check that the DTC is reset.

**Q: Is DTC No. P1863 set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

**DTC P1864: High side 1 system (Short to power supply)****CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the high side 1 circuit is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The high side 1 circuit is determined to be short to power supply.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION

- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

## DIAGNOSTIC PROCEDURE

### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

### STEP 1. Scan tool CAN bus diagnostics

Using scan tool MB991958, diagnose the CAN bus lines.

#### Q: Is the check result normal?

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

### STEP 2. Check whether the DTC is reset.

After 15 seconds with the engine idle status, check that the DTC is reset.

#### Q: Is DTC No. P1864 set?

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

---

## DTC P1866: High side 2 system (Overcurrent)

### CAUTION

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

### DIAGNOSTIC FUNCTION

TC-SST-ECU checks that the high side 2 circuit is normal.

### DESCRIPTIONS OF MONITOR METHODS

The supply current to the high side 2 is determined to be overcurrent.

### PROBABLE CAUSES

- Malfunction of TC-SST-ECU

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

## DIAGNOSTIC PROCEDURE

### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)

- MB991827 M.U.T.-III USB Cable
- MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

**STEP 2. Check whether the DTC is reset.**

After 5 or more seconds have passed with the engine idle status, check that the DTC is reset.

**Q: Is DTC No. P1866 set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

**DTC P1867: High side 2 system (Open circuit)****CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the high side 2 circuit is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The high side 2 circuit is determined to be open.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

After 5 or more seconds have passed with the engine idle status, check that the DTC is reset.

**Q: Is DTC No. P1867 set?**

**YES :** Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO :** Intermittent malfunction.

---

**DTC P1868: High side 2 system (Short to power supply)**

---

**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the high side 2 circuit is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The high side 2 circuit is determined to be short to power supply.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

**DIAGNOSTIC PROCEDURE**

**Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES :** Go to Step 2.

**NO :** Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

After 15 seconds with the engine idle status, check that the DTC is reset.

**Q: Is DTC No. P1868 set?**

**YES :** Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO :** Intermittent malfunction.



**DTC P186A: High side 3 system (Overcurrent)****CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the high side 3 circuit is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The supply current to the high side 3 is determined to be overcurrent.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

**STEP 2. Check whether the DTC is reset.**

After 5 seconds with the engine idle status, check that the DTC is reset.

**Q: Is DTC No. P186A set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

**DTC P186B: High side 3 system (Open circuit)****CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the high side 3 circuit is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The high side 3 circuit is determined to be open.

### PROBABLE CAUSES

- Malfunction of TC-SST-ECU

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

### DIAGNOSTIC PROCEDURE

#### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

#### STEP 1. Scan tool CAN bus diagnostics

Using scan tool MB991958, diagnose the CAN bus lines.

#### Q: Is the check result normal?

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

#### STEP 2. Check whether the DTC is reset.

After 5 or more seconds have passed with the engine idle status, check that the DTC is reset.

#### Q: Is DTC No. P186B set?

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

---

### DTC P186C: High side 3 system (Short to power supply)

---

#### CAUTION

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

#### DIAGNOSTIC FUNCTION

TC-SST-ECU checks that the high side 3 circuit is normal.

#### DESCRIPTIONS OF MONITOR METHODS

The high side 3 circuit is determined to be short to power supply.

#### PROBABLE CAUSES

- Malfunction of TC-SST-ECU

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

### DIAGNOSTIC PROCEDURE

#### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)

- MB991824: Vehicle Communication Interface (V.C.I.)
- MB991827 M.U.T.-III USB Cable
- MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

**STEP 2. Check whether the DTC is reset.**

After 15 seconds with the engine idle status, check that the DTC is reset.

**Q: Is DTC No. P186C set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

**DTC P186D: High side 1 system (Voltage low range out)****⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the high side 1 circuit is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The voltage of the high side 1 circuit is determined to be too low.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of power supply circuit (open circuit)

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*
- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check the TC-SST-ECU power supply circuit**

Refer to [P.22-156](#).

**Q: Is the check result normal?**

**YES** : Go to Step 3.

**NO** : Repair the TC-SST-ECU power supply circuit. (Refer to [P.22-156](#).) After repairing the power supply circuit, go to Step 3.

---

**STEP 3. Check whether the DTC is reset.**

After 10 or more seconds have passed with the engine idle status, check that the DTC is reset.

**Q: Is DTC No. P186D set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176](#).)

**NO** : Intermittent malfunction.

---

**DTC P186E: High side 2 system (Voltage low range out)**

---

**CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the high side 2 circuit is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The voltage of the high side 2 circuit is determined to be too low.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of power supply circuit (open circuit)

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

**STEP 2. Check the TC-SST-ECU power supply circuit**

Refer to P.22-156.

**Q: Is the check result normal?**

**YES** : Go to Step 3.

**NO** : Repair the TC-SST-ECU power supply circuit. (Refer to P.22-156.) After repairing the power supply circuit, go to Step 3.

**STEP 3. Check whether the DTC is reset.**

After 10 or more seconds have passed with the engine idle status, check that the DTC is reset.

**Q: Is DTC No. P186E set?**

**YES** : Replace the mechatronic assembly. (Refer to P.22-176.)

**NO** : Intermittent malfunction.

**DTC P186F: High side 3 system (Voltage low range out)****CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the high side 3 circuit is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The voltage of the high side 3 circuit is determined to be too low.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of power supply circuit (open circuit)

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check the TC-SST-ECU power supply circuit**

Refer to [P.22-156](#).

**Q: Is the check result normal?**

**YES** : Go to Step 3.

**NO** : Repair the TC-SST-ECU power supply circuit. (Refer to [P.22-156](#).) After repairing the power supply circuit, go to Step 3.

---

**STEP 3. Check whether the DTC is reset.**

After 10 or more seconds have passed with the engine idle status, check that the DTC is reset.

**Q: Is DTC No. P186F set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176](#).)

**NO** : Intermittent malfunction.

---

**DTC P1870: Engine torque signal abnormality**

---

**CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU receives the periodic communication data from the engine control module via the CAN bus lines, and checks the data for abnormality.

**DESCRIPTIONS OF MONITOR METHODS**

The engine torque signal from the engine control module is determined to be abnormal.

**PROBABLE CAUSES**

- The CAN bus line is defective.
- Malfunction of engine control module
- Malfunction of TC-SST-ECU

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*
- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using the scan tool, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

**STEP 2. Scan tool diagnostic trouble code.**

Check if the diagnostic trouble code is set to the system other than TC-SST.

**Q: Is the DTC set?**

**YES** : Perform the relevant troubleshooting.

**NO** : Go to Step 3.

**STEP 3. Scan tool diagnostic trouble code.**

After 15 seconds with the engine idle status, check that the diagnostic trouble code for engine is set.

**Q: Is the DTC set?**

**YES** : Perform the relevant troubleshooting.

**NO** : Go to Step 4.

**STEP 4. Check whether the DTC is reset.**

After 15 seconds with the engine idle status, check that the DTC is reset.

**Q: Is DTC No.P1870 set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

**DTC P1871: APS system (Signal abnormality)****CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU receives the periodic communication data from the engine control module via the CAN bus lines, and checks the data for abnormality.

**DESCRIPTIONS OF MONITOR METHODS**

The APS signal from the engine control module is determined to be abnormal.

**PROBABLE CAUSES**

- The CAN bus line is defective.
- APS malfunction
- Malfunction of engine control module
- Malfunction of TC-SST-ECU

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*
- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using the scan tool, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Scan tool diagnostic trouble code.**

Check if the diagnostic trouble code is set to the system other than TC-SST.

**Q: Is the DTC set?**

**YES** : Perform the relevant troubleshooting.

**NO** : Go to Step 3.

---

**STEP 3. Scan tool diagnostic trouble code.**

After 15 seconds with the engine idle status, check that the diagnostic trouble code for engine is set.

**Q: Is the DTC set?**

**YES** : Perform the relevant troubleshooting.

**NO** : Go to Step 4.

---

**STEP 4. Check whether the DTC is reset.**

After 15 seconds with the engine idle status, check that the DTC is reset.

**Q: Is DTC No.P1871 set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

---

**DTC P1872: Between shift lever and TC-SST system (Q-A function abnormality)**

---

**CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the shift lever-ECU is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The shift lever-ECU is determined to be abnormal.

**PROBABLE CAUSES**

- Malfunction of the shift lever-ECU
- Malfunction of TC-SST-ECU

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A



---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Scan tool diagnostic trouble code**

Check the shift lever diagnostic trouble code.

**Q: Is the DTC set?**

**YES** : Perform the relevant troubleshooting.

**NO** : Go to Step 3.

---

**STEP 3. Replace the shift lever assembly, and check if the diagnostic trouble code is reset.**

(1) Replace the shift lever assembly.

(2) Check the DTC.

**Q: Is DTC No. P1872 set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

---

**DTC P1873: Clutch 1 System (Pressure abnormality)**

---

**CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the clutch 1 pressure is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The clutch 1 pressure is determined to be abnormal.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of clutch assembly
- Malfunction of engine system

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Scan tool diagnostic trouble code.**

Check the engine diagnostic trouble code.

**Q: Is the DTC set?**

**YES** : Perform the relevant troubleshooting.

**NO** : Go to Step 3.

---

**STEP 3. Check whether the DTC is reset.**

After 30 seconds with the engine idle status, check that the DTC is reset.

**Q: Is DTC No.P1873 set?**

**YES** : Replace the clutch assembly. (Refer to [P.22-187.](#))  
After replacing the clutch assembly, go to Step 4.

**NO** : Intermittent malfunction.

---

**STEP 4. Check whether the DTC is reset.**

After 30 seconds with the engine idle status, check that the DTC is reset.

**Q: Is DTC No.P1873 set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

---

**DTC P1874: Clutch 2 System (Pressure abnormality)**

---

**CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the clutch 2 pressure is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The clutch 2 pressure is determined to be abnormal.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of clutch assembly
- Malfunction of engine system

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

**STEP 2. Scan tool diagnostic trouble code.**

Check the engine diagnostic trouble code.

**Q: Is the DTC set?**

**YES** : Perform the relevant troubleshooting.

**NO** : Go to Step 3.

**STEP 3. Check whether the DTC is reset.**

After 30 seconds with the engine idle status, check that the DTC is reset.

**Q: Is DTC No.P1874 set?**

**YES** : Replace the clutch assembly. (Refer to [P.22-187.](#))  
After replacing the clutch assembly, go to Step 4.

**NO** : Intermittent malfunction.

**STEP 4. Check whether the DTC is reset.**

After 30 seconds with the engine idle status, check that the DTC is reset.

**Q: Is DTC No.P1874 set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

**DTC P1875: Damper Speed Sensor System (Poor performance)****CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the damper (closer to the engine than input shaft) is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The damper speed sensor is determined to be abnormal.

**PROBABLE CAUSES**

- Malfunction of damper speed sensor
- Malfunction of TC-SST-ECU

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*
- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

With the vehicle stopped, hold a specific accelerator pedal angle for 20 seconds, and check that the DTC is reset.

**Q: Is DTC No.P1875 set?**

**YES** : Replace the transaxle assembly.

**NO** : Intermittent malfunction.

---

**DTC P1876: Gear Block 1st**

---

**CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the gear engagement is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The engagement of the 1st gear is determined to be impossible.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of TC-SST gear
- Malfunction of clutch assembly

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

**STEP 2. Check whether the DTC is reset.**

- (1) Erase the DTC.
- (2) With the engine idle status, operate the shift lever in the following sequence: P → R → D → R → P. (Hold each range for 5 seconds or more.)
- (3) Check that the DTC is reset.

**Q: Is DTC No.P1876 set?**

- YES** : Go to Step 3.  
**NO** : Intermittent malfunction.

**STEP 3. Scan tool Teach-In**

- (1) Carry out the Item No.3: Line pressure Test. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)
- (2) After Teach-In, check which result ("Yes" or "No") is displayed in the Data list No. 101: Normal End. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)

**Q: Which is displayed, "Yes" or "No"?**

- "Yes"** : Go to Step 4.  
**"No"** : DTC No. P181B: Carry out the troubleshooting for the DTC No. P181B: Clutch 1 (Pressure low range out). (Refer to [P.22-57](#).)

**STEP 4. Replace the clutch assembly, and check if the DTC is reset.**

- (1) Replace the clutch assembly. (Refer to [P.22-187](#).)
- (2) With the engine idle status, operate the shift lever in the following sequence: P → R → D → R → P. (Hold each range for 5 seconds or more.)
- (3) Check the DTC.

**Q: Is DTC No.P1876 set?**

- YES** : Replace the transaxle assembly.  
**NO** : This diagnosis is complete.

**DTC P1877: Gear Block 2nd****⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the gear engagement is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The engagement of the 2nd gear is determined to be impossible.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of TC-SST gear
- Malfunction of clutch assembly

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*
- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

---

## DIAGNOSTIC PROCEDURE

### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

### STEP 1. Scan tool CAN bus diagnostics

Using scan tool MB991958, diagnose the CAN bus lines.

#### Q: Is the check result normal?

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

### STEP 2. Check whether the DTC is reset.

- (1) Erase the DTC.
- (2) Drive with shifted in the 2nd gear.
- (3) Check that the DTC is reset.

#### Q: Is DTC No.P1877 set?

**YES** : Go to Step 3.

**NO** : Intermittent malfunction.

---

### STEP 3. Scan tool Teach-In

- (1) Carry out the Item No.3: Line pressure Test. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)
- (2) After Teach-In, check which result ("Yes" or "No") is displayed in the Data list No. 101: Normal End. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)

#### Q: Which is displayed, "Yes" or "No"?

**"Yes"** : Go to Step 4.

**"No"** : DTC No. P181B: Carry out the troubleshooting for the DTC No. P181B: Clutch 1 (Pressure low range out). (Refer to [P.22-57](#).)

---

### STEP 4. Replace the clutch assembly, and check if the DTC is reset.

- (1) Replace the clutch assembly. (Refer to [P.22-187](#).)
- (2) Drive with shifted in the 2nd gear.
- (3) Check the DTC.

#### Q: Is DTC No.P1877 set?

**YES** : Replace the transaxle assembly.

**NO** : This diagnosis is complete.

---

### DTC P1878: Gear Block 3rd

#### CAUTION

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.

- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the gear engagement is normal.

- Malfunction of clutch assembly

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

**DESCRIPTIONS OF MONITOR METHODS**

The engagement of the 3rd gear is determined to be impossible.

- *MONITOR EXECUTION*
- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of TC-SST gear

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

**STEP 2. Check whether the DTC is reset.**

- (1) Erase the DTC.
- (2) Drive with shifted in the 3rd gear.
- (3) Check that the DTC is reset.

**Q: Is DTC No.P1878 set?**

**YES** : Go to Step 3.

**NO** : Intermittent malfunction.

**STEP 3. Scan tool Teach-In**

- (1) Carry out the Item No.3: Line pressure Test. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)
- (2) After Teach-In, check which result ("Yes" or "No") is displayed in the Data list No. 101: Normal End. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)

**Q: Which is displayed, "Yes" or "No"?**

**"Yes"** : Go to Step 4.

**"No"** : DTC No. P181B: Carry out the troubleshooting for the DTC No. P181B: Clutch 1 (Pressure low range out). (Refer to [P.22-57](#).)

---

**STEP 4. Replace the clutch assembly, and check if the DTC is reset.**

- (1) Replace the clutch assembly. (Refer to P.22-187.)
- (2) Drive with shifted in the 3rd gear.
- (3) Check the DTC.

**Q: Is DTC No.P1878 set?**

- YES :** Replace the transaxle assembly.  
**NO :** This diagnosis is complete.

---

**DTC P1879: Gear Block 4th**

---

**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the gear engagement is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The engagement of the 4th gear is determined to be impossible.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of TC-SST gear
- Malfunction of clutch assembly

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

**DIAGNOSTIC PROCEDURE**

**Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

- YES :** Go to Step 2.  
**NO :** Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

- (1) Erase the DTC.
- (2) Drive with shifted in the 4th gear.
- (3) Check that the DTC is reset.

**Q: Is DTC No.P1879 set?**

- YES :** Go to Step 3.  
**NO :** Intermittent malfunction.



**STEP 3. Scan tool Teach-In**

- (1) Carry out the Item No.3: Line pressure Test. (Refer to Special Function (Teach-In Reference Table P.22-169).)
- (2) After Teach-In, check which result ("Yes" or "No") is displayed in the Data list No. 101: Normal End. (Refer to Special Function (Teach-In Reference Table P.22-169).)

**Q: Which is displayed, "Yes" or "No"?**

**"Yes"** : Go to Step 4

**"No"** : DTC No. P181B: Carry out the troubleshooting for the DTC No. P181B: Clutch 1 (Pressure low range out). (Refer to P.22-57.)

**STEP 4. Replace the clutch assembly, and check if the DTC is reset.**

- (1) Replace the clutch assembly. (Refer to P.22-187.)
- (2) Drive with shifted in the 4th gear.
- (3) Check the DTC.

**Q: Is DTC No.P1879 set?**

**YES** : Replace the transaxle assembly.

**NO** : This diagnosis is complete.

**DTC P187A: Gear Block 5th****⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the gear engagement is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The engagement of the 5th gear is determined to be impossible.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of TC-SST gear
- Malfunction of clutch assembly

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*
- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

- (1) Erase the DTC.
- (2) Drive with shifted in the 5th gear.
- (3) Check that the DTC is reset.

**Q: Is DTC No.P187A set?**

**YES** : Go to Step 3.

**NO** : Intermittent malfunction.

---

**STEP 3. Scan tool Teach-In**

- (1) Carry out the Item No.3: Line pressure Test. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)
- (2) After Teach-In, check which result ("Yes" or "No") is displayed in the Data list No. 101: Normal End. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)

**Q: Which is displayed, "Yes" or "No"?**

**"Yes"** : Go to Step 4.

**"No"** : DTC No. P181B: Carry out the troubleshooting for the DTC No. P181B: Clutch 1 (Pressure low range out). (Refer to [P.22-57](#).)

---

**STEP 4. Replace the clutch assembly, and check if the DTC is reset.**

- (1) Replace the clutch assembly. (Refer to [P.22-187](#).)
- (2) Drive with shifted in the 5th gear.
- (3) Check the DTC.

**Q: Is DTC No.P187A set?**

**YES** : Replace the transaxle assembly.

**NO** : This diagnosis is complete.

---

**DTC P187B: Gear Block 6th**

---

** CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the gear engagement is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The engagement of the 6th gear is determined to be impossible.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of TC-SST gear
- Malfunction of clutch assembly

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

## DIAGNOSTIC PROCEDURE

### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

### STEP 1. Scan tool CAN bus diagnostics

Using scan tool MB991958, diagnose the CAN bus lines.

#### Q: Is the check result normal?

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

### STEP 2. Check whether the DTC is reset.

- (1) Erase the DTC.
- (2) Drive with shifted in the 6th gear.
- (3) Check that the DTC is reset.

#### Q: Is DTC No.P187B set?

**YES** : Go to Step 3.

**NO** : Intermittent malfunction.

---

### STEP 3. Scan tool Teach-In

- (1) Carry out the Item No.3: Line pressure Test. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)
- (2) After Teach-In, check which result ("Yes" or "No") is displayed in the Data list No. 101: Normal End. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)

#### Q: Which is displayed, "Yes" or "No"?

**"Yes"** : Go to Step 4.

**"No"** : DTC No. P181B: Carry out the troubleshooting for the DTC No. P181B: Clutch 1 (Pressure low range out). (Refer to [P.22-57](#).)

---

### STEP 4. Replace the clutch assembly, and check if the DTC is reset.

- (1) Replace the clutch assembly. (Refer to [P.22-187](#).)
- (2) Drive with shifted in the 6th gear.
- (3) Check the DTC.

#### Q: Is DTC No.P187B set?

**YES** : Replace the transaxle assembly.

**NO** : This diagnosis is complete.

---

**DTC P187C: Gear Block Reverse**

---

**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the gear engagement is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The engagement of the reverse gear is determined to be impossible.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of TC-SST gear
- Malfunction of clutch assembly

---

**DIAGNOSTIC PROCEDURE**

**Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

- (1) Erase the DTC.
- (2) With the engine idle status, operate the shift lever in the following sequence: P → R → D → R → P. (Hold each range for 5 seconds or more.)
- (3) Check that the DTC is reset.

**Q: Is DTC No.P187C set?**

**YES** : Go to Step 3.

**NO** : Intermittent malfunction

---

**STEP 3. Scan tool Teach-In**

- (1) Carry out the Item No.3: Line pressure Test. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)
- (2) After Teach-In, check which result ("Yes" or "No") is displayed in the Data list No. 101: Normal End. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)

**Q: Which is displayed, "Yes" or "No"?**

**"Yes"** : Go to Step 4.

**"No"** : DTC No. P181B: Carry out the troubleshooting for the DTC No. P181B: Clutch 1 (Pressure low range out). (Refer to [P.22-57](#).)

**STEP 4. Replace the clutch assembly, and check if the DTC is reset.**

- (1) Replace the clutch assembly. (Refer to [P.22-187.](#))
- (2) With the engine idle status, operate the shift lever in the following sequence: P → R → D → R → P. (Hold each range for 5 seconds or more.)
- (3) Check the DTC.

**Q: Is DTC No.P187C set?**

- YES** : Replace the transaxle assembly.  
**NO** : This diagnosis is complete.

**DTC P1880: EOL Mode Active****CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the TC-SST setting mode is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The TC-SST setting mode is determined to be EOL (end of line) mode.

**PROBABLE CAUSES**

- The setting mode changeover mistake when TC-SST is shipped.
- Malfunction of TC-SST-ECU

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

- YES** : Go to Step 2.  
**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

**STEP 2. Check whether the DTC is reset.****Q: Is DTC No. P1880 set?**

- YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))  
**NO** : Intermittent malfunction.

---

**DTC P1881: Twin clutch SST control mode switch system (Malfunction)**

---

**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the twin clutch SST control mode switch is normal.

**DESCRIPTIONS OF MONITOR METHODS**

"+" and "-" signals of the twin clutch SST control mode switch is determined to be stuck on.

**PROBABLE CAUSES**

- Twin clutch SST control mode switch malfunction
- Malfunction of TC-SST-ECU

---

**DIAGNOSTIC PROCEDURE**

**Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

After 5 or more seconds have passed with the engine idle status, check that the DTC is reset.

**Q: Is DTC No. P1881 set?**

**YES** : Go to Step 3.

**NO** : Intermittent malfunction.

---

**STEP 3. Twin clutch SST control mode switch check**

**Q: Is the check result normal?**

**YES** : Go to Step 4.

**NO** : Replace the twin clutch SST control mode switch.

---

**STEP 4. Shift lever assembly replacement**

- (1) Replace the shift lever assembly.
- (2) Check if the DTC is set.

**Q: Is DTC No. P1881 set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

---

**DTC P1885: SHIFT FORK 1 JUMP OUT**

---

**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the movement of the shift fork 1 is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The movement of the shift fork 1 is determined to be abnormal.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of TC-SST shift fork
- Malfunction of valve body

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

- (1) Erase the DTC.
- (2) Drive with shifted in the 1st gear and reverse.
- (3) Check that the DTC is reset.

**Q: Is DTC No.P1885 set?**

**YES** : Go to Step 3.

**NO** : Intermittent malfunction.

---

**STEP 3. Replace the mechatronic assembly, and check if the DTC is reset.**

- (1) Replace the mechatronic assembly. (Refer to [P.22-176.](#))
- (2) Drive with shifted in the 1st gear and reverse.
- (3) Check the DTC.

**Q: Is DTC No.P1885 set?**

**YES** : Replace the transaxle assembly.

**NO** : This diagnosis is complete.

---

**DTC P1886: SHIFT FORK 2 JUMP OUT**

---

**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the movement of the shift fork 2 is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The movement of the shift fork 2 is determined to be abnormal.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of TC-SST shift fork
- Malfunction of valve body

---

**DIAGNOSTIC PROCEDURE**

**Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

- (1) Erase the DTC.
- (2) Drive with shifted in the 3rd gear and 5th gear.
- (3) Check that the DTC is reset.

**Q: Is DTC No.P1886 set?**

**YES** : Go to Step 3.

**NO** : Intermittent malfunction.

---

**STEP 3. Replace the mechatronic assembly, and check if the DTC is reset.**

- (1) Replace the mechatronic assembly. (Refer to [P.22-176.](#))
- (2) Drive with shifted in the 3rd gear and 5th gear.
- (3) Check the DTC.

**Q: Is DTC No.P1886 set?**

**YES** : Replace the transaxle assembly.

**NO** : This diagnosis is complete.



---

**DTC P1887: SHIFT FORK 3 JUMP OUT**

---

**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the movement of the shift fork 3 is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The movement of the shift fork 3 is determined to be abnormal.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of TC-SST shift fork
- Malfunction of valve body

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

- (1) Erase the DTC.
- (2) Drive with shifted in the 6th gear.
- (3) Check that the DTC is reset.

**Q: Is DTC No.P1887 set?**

**YES** : Go to Step 3.

**NO** : Intermittent malfunction.

---

**STEP 3. Replace the mechatronic assembly, and check if the DTC is reset.**

- (1) Replace the mechatronic assembly. (Refer to [P.22-176.](#))
- (2) Drive with shifted in the 6th gear.
- (3) Check the DTC.

**Q: Is DTC No.P1887 set?**

**YES** : Replace the transaxle assembly.

**NO** : This diagnosis is complete.

---

**DTC P1888: SHIFT FORK 4 JUMP OUT**

---

**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the movement of the shift fork 4 is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The movement of the shift fork 4 is determined to be abnormal.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of TC-SST shift fork
- Malfunction of valve body

---

**DIAGNOSTIC PROCEDURE**

**Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

- (1) Erase the DTC.
- (2) Drive with shifted in the 2nd gear and 4th gear.
- (3) Check that the DTC is reset.

**Q: Is DTC No.P1888 set?**

**YES** : Go to Step 3.

**NO** : Intermittent malfunction.

---

**STEP 3. Replace the mechatronic assembly, and check if the DTC is reset.**

- (1) Replace the mechatronic assembly. (Refer to [P.22-176.](#))
- (2) Drive with shifted in the 2nd gear and 4th gear.
- (3) Check the DTC.

**Q: Is DTC No.P1888 set?**

**YES** : Replace the transaxle assembly.

**NO** : This diagnosis is complete.

---

**DTC P1890 TEACH-IN NOT COMPLETED**

---

**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that Teach-In is completed normally.

**DESCRIPTIONS OF MONITOR METHODS**

It is judged that Teach-In is not completed normally.

**PROBABLE CAUSES**

- Teach-In not completed
- Malfunction of TC-SST-ECU
- Malfunction of clutch assembly

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

(1) Erase the DTC.

(2) After 10 or more seconds have passed with the ignition switch ON position, check that the DTC is reset.

**Q: Is DTC No.P1890 set?**

**YES** : Go to Step 3.

**NO** : Intermittent malfunction.

---

**STEP 3. Scan tool Teach-In**

(1) Perform Teach-In (the same item as the mechatronic assembly replacement). (Refer to [P.22-3.](#))

(2) After 10 or more seconds have passed with the ignition switch ON position, check that the DTC is reset.

**Q: Is DTC No.P1890 set?**

**YES** : Go to Step 4.

**NO** : Intermittent malfunction.

---

**STEP 4. Replace the mechatronic assembly, and check if the DTC is reset.**

- (1) Replace the mechatronic assembly. (Refer to [P.22-176.](#))
- (2) After 10 or more seconds have passed with the ignition switch ON position, check that the DTC is reset.

**Q: Is DTC No.P1890 set?**

**YES :** Go to Step 5.

**NO :** This diagnosis is complete.

---

**STEP 5. Replace the clutch assembly, and check if the DTC is reset.**

- (1) Replace the clutch assembly. (Refer to [P.22-187.](#))
- (2) After 10 or more seconds have passed with the ignition switch ON position, check that the DTC is reset.

**Q: Is DTC No.P1890 set?**

**YES :** Replace the transaxle assembly.

**NO :** This diagnosis is complete.

---

**DTC P2718: Clutch/Shift Pressure Solenoid 1 System (Open circuit)**

---

**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the clutch/shift pressure solenoid 1 circuit is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The clutch/shift pressure solenoid 1 circuit is determined to be open.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of clutch/shift pressure solenoid 1

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*
- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

**DIAGNOSTIC PROCEDURE**

**Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES :** Go to Step 2.

**NO :** Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.****Q: Is DTC No. P2718 set?****YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))**NO** : Intermittent malfunction.

---

**DTC P2719: Clutch/Shift Pressure Solenoid 1 System (Overcurrent)**

---

**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the clutch/shift pressure solenoid 1 circuit is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The supply current to the clutch/shift pressure solenoid 1 is determined to be overcurrent.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of clutch/shift pressure solenoid 1

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*
- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?****YES** : Go to Step 2.**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

After 5 or more seconds have passed with the engine idle status, check that the DTC is reset.

**Q: Is DTC No. P2719 set?****YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))**NO** : Intermittent malfunction.

---

**DTC P2720: Clutch/Shift Pressure Solenoid 1 System (Short to ground)**

---

**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the clutch/shift pressure solenoid 1 circuit is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The clutch/shift pressure solenoid 1 circuit is determined to be short to ground.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of clutch/shift pressure solenoid 1

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

---

**DIAGNOSTIC PROCEDURE**

**Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES :** Go to Step 2.

**NO :** Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

**Q: Is DTC No. P2720 set?**

**YES :** Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO :** Intermittent malfunction.

---

**DTC P2721: Clutch/Shift Pressure Solenoid 1 System (Short to power supply)**

---

**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the clutch/shift pressure solenoid 1 circuit is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The clutch/shift pressure solenoid 1 circuit is determined to be short to power supply.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU

- Malfunction of clutch/shift pressure solenoid 1

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*

- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

## DIAGNOSTIC PROCEDURE

### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

### STEP 1. Scan tool CAN bus diagnostics

Using scan tool MB991958, diagnose the CAN bus lines.

#### Q: Is the check result normal?

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

### STEP 2. Check whether the DTC is reset.

#### Q: Is DTC No. P2721 set?

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

---

## DTC P2727: Clutch/Shift Pressure Solenoid 2 System (Open circuit)

### CAUTION

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

### DIAGNOSTIC FUNCTION

TC-SST-ECU checks that the clutch/shift pressure solenoid 2 circuit is normal.

### DESCRIPTIONS OF MONITOR METHODS

The clutch/shift pressure solenoid 2 circuit is determined to be open.

### PROBABLE CAUSES

- Malfunction of TC-SST-ECU
- Malfunction of clutch/shift pressure solenoid 2

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*
- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

## DIAGNOSTIC PROCEDURE

### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable

- MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.****Q: Is DTC No. P2727 set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

---

**DTC P2728: Clutch/Shift Pressure Solenoid 2 System (Overcurrent)**

---

**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the clutch/shift pressure solenoid 2 circuit is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The supply current to the clutch/shift pressure solenoid 2 is determined to be overcurrent.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of clutch/shift pressure solenoid 2

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.



---

**STEP 2. Check whether the DTC is reset.****Q: Is DTC No. P2728 set?****YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))**NO** : Intermittent malfunction.

---

**DTC P2729: Clutch/Shift Pressure Solenoid 2 System (Short to ground)**

---

**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the clutch/shift pressure solenoid 2 circuit is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The clutch/shift pressure solenoid 2 circuit is determined to be short to ground.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of clutch/shift pressure solenoid 2

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*
- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?****YES** : Go to Step 2.**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.****Q: Is DTC No. P2729 set?****YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))**NO** : Intermittent malfunction.

---

**DTC P2730: Clutch/Shift Pressure Solenoid 2 System (Short to power supply)**

---

**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the clutch/shift pressure solenoid 2 circuit is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The clutch/shift pressure solenoid 2 circuit is determined to be short to power supply.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of clutch/shift pressure solenoid 2

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

---

**DIAGNOSTIC PROCEDURE**

**Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES :** Go to Step 2.

**NO :** Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

**Q: Is DTC No. P2730 set?**

**YES :** Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO :** Intermittent malfunction.

---

**DTC P2733: Clutch/Shift Switching Solenoid 1, spool stuck**

---

**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the clutch/shift switching solenoid 1 is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The clutch/shift switching solenoid 1 is determined to be seized.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU

- Insufficient fluid level
- Malfunction of clutch/shift switching solenoid 1

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*
- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

## DIAGNOSTIC PROCEDURE

### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

### STEP 1. Scan tool CAN bus diagnostics

Using scan tool MB991958, diagnose the CAN bus lines.

#### Q: Is the check result normal?

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

### STEP 2. Check whether the DTC is reset.

#### **WARNING**

***During inspection, the vehicle might move suddenly or the engine might stop. Be sure to depress the brake pedal securely. In addition, perform the vehicle inspection in a safe place isolated from people or objects.***

- (1) With the brake pedal pressed, start the engine.
- (2) With the engine idle status, operate the shift lever in the following sequence: P → R → D. (Hold each range for 1 seconds or more.)
- (3) Check that the DTC is reset.

#### Q: Is DTC No.P2733 set?

**YES** : Go to Step 3.

**NO** : Intermittent malfunction.

---

### STEP 3. Check the fluid.

#### Q: Is the fluid level proper?

**YES** : Go to Step 4.

**NO** : Add the fluid.

---

### STEP 4. Check the installation status of the mechatronic assembly.

#### Q: Is the mechatronic assembly installed correctly?

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Install the mechatronic assembly correctly. (Refer to [P.22-176.](#))

---

### DTC P2736: Clutch/Shift Switching Solenoid 1 System (Open circuit)

---

#### CAUTION

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

#### DIAGNOSTIC FUNCTION

TC-SST-ECU checks that the clutch/shift switching solenoid 1 circuit is normal.

#### DESCRIPTIONS OF MONITOR METHODS

The clutch/shift switching solenoid 1 circuit is determined to be open.

#### PROBABLE CAUSES

- Malfunction of TC-SST-ECU
- Malfunction of clutch/shift switching solenoid 1

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

### DIAGNOSTIC PROCEDURE

#### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

#### STEP 1. Scan tool CAN bus diagnostics

Using scan tool MB991958, diagnose the CAN bus lines.

#### Q: Is the check result normal?

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

#### STEP 2. Check whether the DTC is reset.

#### Q: Is DTC No. P2736 set?

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

---

### DTC P2738: Clutch/Shift Switching Solenoid 1 System (Short to ground)

---

#### CAUTION

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

#### DIAGNOSTIC FUNCTION

TC-SST-ECU checks that the clutch/shift switching solenoid 1 circuit is normal.

#### DESCRIPTIONS OF MONITOR METHODS

The clutch/shift switching solenoid 1 circuit is determined to be short to ground.

#### PROBABLE CAUSES

- Malfunction of TC-SST-ECU

- Malfunction of clutch/shift switching solenoid 1

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*

- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

## DIAGNOSTIC PROCEDURE

### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

### STEP 1. Scan tool CAN bus diagnostics

Using scan tool MB991958, diagnose the CAN bus lines.

#### Q: Is the check result normal?

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

### STEP 2. Check whether the DTC is reset.

#### Q: Is DTC No. P2738 set?

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

---

## DTC P2739: Clutch/Shift Switching Solenoid 1 System (Short to power supply)

---

### CAUTION

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

### DIAGNOSTIC FUNCTION

TC-SST-ECU checks that the clutch/shift switching solenoid 1 circuit is normal.

### DESCRIPTIONS OF MONITOR METHODS

The clutch/shift switching solenoid 1 circuit is determined to be short to power supply.

### PROBABLE CAUSES

- Malfunction of TC-SST-ECU
- Malfunction of clutch/shift switching solenoid 1

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*
- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

## DIAGNOSTIC PROCEDURE

### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable

- MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.****Q: Is DTC No. P2739 set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

---

**DTC P2742: Fluid Temperature Sensor System (Output low range out)**

---

**CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the output of the fluid temperature sensor is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The output is determined to be too low.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

**STEP 2. Check whether the DTC is reset.**

30 seconds after turning ON the ignition switch, check that the DTC is reset.

**Q: Is DTC No. P2742 set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

**DTC P2743: Fluid Temperature Sensor System (Output high range out)****CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the output of the fluid temperature sensor is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The output is determined to be too high.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

**STEP 2. Check whether the DTC is reset.**

30 seconds after turning ON the ignition switch, check that the DTC is reset.

**Q: Is DTC No. P2743 set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

---

**DTC P2766: Input Shaft 2 (Even number gear axle) Speed Sensor System (Poor performance)**

---

**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the input shaft sensor 2 is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The even number gear side input shaft speed (revolution) is determined to be abnormal.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

---

**DIAGNOSTIC PROCEDURE**

**Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES :** Go to Step 2.

**NO :** Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Monitoring unit No. check**

- (1) Check the freeze frame data (item No. 30 to No. 37).
- (2) Check which monitoring unit (No. 115 or No. 240) is set.

**Q: Which monitoring unit is set, No. 115 or No. 240?**

**No. 115 :** Go to Step 4

**No. 240 :** Go to Step 3

---

**STEP 3. Check whether the DTC is reset.**

- (1) Erase the DTC.
- (2) Drive the vehicle at 50 km/h (31 mph) or more.
- (3) Check that the DTC is reset.

**Q: Is DTC No.P2766 set?**

**YES :** Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO :** Intermittent malfunction.



**STEP 4. Check whether the DTC is reset.**

- (1) Erase the DTC.
- (2) Drive with shifting to each gear range.
- (3) Check that the DTC is reset.

**Q: Is DTC No.P2766 set?**

- YES** : Go to Step 5.  
**NO** : Intermittent malfunction.

**STEP 5. Scan tool Teach-In**

- (1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)
- (2) After Teach-In, check which result ("Yes" or "No") is displayed in the Data list No. 101: Normal End. (Refer to Special Function (Teach-In Reference Table [P.22-169](#).)

**Q: Which is displayed, "Yes" or "No"?**

- "Yes"** : Replace the transaxle assembly.  
**"No"** : Replace the mechatronic assembly. (Refer to [P.22-176](#).)

**DTC P2809: Clutch/Shift Switching Solenoid 2, spool stuck****⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the clutch/shift switching solenoid 2 is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The clutch/shift switching solenoid 2 is determined to be seized.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Insufficient fluid level
- Malfunction of clutch/shift switching solenoid 2

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*
- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

After driving in the 4th gear, check that the DTC is reset.

**Q: Is DTC No. P2809 set?**

**YES** : Go to Step 3.

**NO** : Intermittent malfunction.

---

**STEP 3. Check the fluid.****Q: Is the fluid level proper?**

**YES** : Go to Step 4.

**NO** : Add the fluid.

---

**STEP 4. Check the installation status of the mechatronic assembly.****Q: Is the mechatronic assembly installed correctly?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Install the mechatronic assembly correctly. (Refer to [P.22-176.](#))

---

**DTC P2812: Clutch/Shift Switching Solenoid 2 System (Open circuit)**

---

**CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the clutch/shift switching solenoid 2 circuit is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The clutch/shift switching solenoid 2 circuit is determined to be open.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of clutch/shift switching solenoid 2

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable

- MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

**STEP 2. Check whether the DTC is reset.**

After driving in the 4th gear, check that the DTC is reset.

**Q: Is DTC No. P2812 set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

**DTC P2814: Clutch/Shift Switching Solenoid 2 System (Short to ground)****⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the clutch/shift switching solenoid 2 circuit is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The clutch/shift switching solenoid 2 circuit is determined to be short to ground.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of clutch/shift switching solenoid 2

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

**Q: Is DTC No. P2814 set?**

**YES :** Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO :** Intermittent malfunction.

---

**DTC P2815: Clutch/Shift Switching Solenoid 2 System (Short to power supply)**

---

**⚠ CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DIAGNOSTIC FUNCTION**

TC-SST-ECU checks that the clutch/shift switching solenoid 2 circuit is normal.

**DESCRIPTIONS OF MONITOR METHODS**

The clutch/shift switching solenoid 2 circuit is determined to be short to power supply.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU
- Malfunction of clutch/shift switching solenoid 2

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- *MONITOR EXECUTION*
- *MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)*
- *LOGIC FLOW CHARTS (Monitor Sequence)*
- *DTC SET CONDITIONS*
- *OBD-II DRIVE CYCLE PATTERN*

**DIAGNOSTIC PROCEDURE**

**Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES :** Go to Step 2.

**NO :** Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Check whether the DTC is reset.**

**Q: Is DTC No. P2815 set?**

**YES :** Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO :** Intermittent malfunction.

**DTC U0001: Bus-off****CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DESCRIPTIONS OF MONITOR METHODS**

TC-SST-ECU ceases communication (bus-off).

**PROBABLE CAUSES**

- The CAN bus line is defective.

- Malfunction of TC-SST-ECU

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

**STEP 2. Check whether the DTC is reset.**

30 seconds after turning ON the ignition switch, check that the DTC is reset.

**Q: Is DTC No. U0001 set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

**DTC U0100: Engine Time-out Error****CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

*NOTE: For the OBD-II items below, refer to the service manuals of the appropriate model and model year.*

**DESCRIPTIONS OF MONITOR METHODS**

The periodic communication data from the engine control module cannot be received.

**PROBABLE CAUSES**

- The CAN bus line is defective.
- ECM malfunction
- Malfunction of TC-SST-ECU

*year.*

- MONITOR EXECUTION
- MONITOR EXECUTION CONDITIONS (OTHER MONITOR AND SENSOR)
- LOGIC FLOW CHARTS (Monitor Sequence)
- DTC SET CONDITIONS
- OBD-II DRIVE CYCLE PATTERN

## DIAGNOSTIC PROCEDURE

### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

### STEP 1. Scan tool CAN bus diagnostics

Using the scan tool, diagnose the CAN bus lines.

#### Q: Is the check result normal?

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

### STEP 2. Scan tool diagnostic trouble code

Check the engine diagnostic trouble code.

#### Q: Is the DTC set?

**YES** : Perform the relevant troubleshooting.

**NO** : Go to Step 3.

---

### STEP 3. Check whether the DTC is reset.

After 15 seconds with the engine idle status, check that the DTC is reset.

#### Q: Is DTC No. U0100 set?

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

---

## DTC U0103: Shift Lever Time-out Error

### CAUTION

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

### DESCRIPTIONS OF MONITOR METHODS

The periodic communication data from the shift lever-ECU cannot be received.

### PROBABLE CAUSES

- The CAN bus line is defective.
- Malfunction of the shift lever-ECU
- Malfunction of TC-SST-ECU

## DIAGNOSTIC PROCEDURE

### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using the scan tool, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Scan tool diagnostic trouble code**

Check the shift lever diagnostic trouble code.

**Q: Is the DTC set?**

**YES** : Perform the relevant troubleshooting.

**NO** : Go to Step 3.

---

**STEP 3. Check whether the DTC is reset.**

After 10 or more seconds have passed with the ignition switch ON position, check that the DTC is reset.

**Q: Is DTC No. U0103 set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

---

**DTC U0121: ASC Time-out Error**

---

**CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DESCRIPTIONS OF MONITOR METHODS**

The periodic communication data from the ASC-ECU cannot be received.

**PROBABLE CAUSES**

- The CAN bus line is defective.
- Malfunction of ASC-ECU
- Malfunction of TC-SST-ECU

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using the scan tool, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Scan tool diagnostic trouble code**

Check the ASC diagnostic trouble code.

**Q: Is the DTC set?**

**YES** : Perform the relevant troubleshooting.

**NO** : Go to Step 3.

---

**STEP 3. Check whether the DTC is reset.**

After 15 seconds with the engine idle status, check that the DTC is reset.

**Q: Is DTC No. U0121 set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

---

**DTC U0136: AWC <LANCER EVOLUTION> or ACD <Except LANCER EVOLUTION> Time-out Error**

---

**CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DESCRIPTIONS OF MONITOR METHODS**

The periodic communication data from the engine control module cannot be received.

**PROBABLE CAUSES**

- The CAN bus line is defective.
- Malfunction of AWC-ECU
- Malfunction of TC-SST-ECU

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using the scan tool, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines.

---

**STEP 2. Scan tool diagnostic trouble code**

Check the AWC <LANCER EVOLUTION> or ACD <Except LANCER EVOLUTION> diagnostic trouble code.

**Q: Is the DTC set?**

**YES** : Perform the relevant troubleshooting.

**NO** : Go to Step 3.



**STEP 3. Check whether the DTC is reset.**

After 10 or more seconds have passed with the ignition switch ON position, check that the DTC is reset.

**Q: Is DTC No. U0136 set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

**DTC U0141: ETACS Time-out Error****CAUTION**

- If there is any problem in the CAN bus lines, an incorrect diagnostic trouble code may be set. Prior to this diagnosis, diagnose the CAN bus lines.
- Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**DESCRIPTIONS OF MONITOR METHODS**

The periodic communication data from the ETACS-ECU cannot be received.

**PROBABLE CAUSES**

- The CAN bus line is defective.
- Malfunction of the ETACS-ECU
- Malfunction of TC-SST-ECU

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using the scan tool, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

**STEP 2. Scan tool diagnostic trouble code**

Check the ETACS diagnostic trouble code.

**Q: Is the DTC set?**

**YES** : Perform the relevant troubleshooting.

**NO** : Go to Step 3.

**STEP 3. Check whether the DTC is reset.**

After 15 seconds with the engine idle status, check that the DTC is reset.

**Q: Is DTC No. U0141 set?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

## SYMPTOM PROCEDURES

---

### INSPECTION PROCEDURE 1: The scan tool cannot communicate with TC-SST-ECU.

---

#### CAUTION

Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

#### COMMENTS ON TROUBLE SYMPTOM

The CAN bus line, TC-SST-ECU power supply circuit, or TC-SST-ECU may have a problem.

#### PROBABLE CAUSES

- Wrong scan tool wiring harness
- The CAN bus line is defective.
- Malfunction of TC-SST-ECU power supply circuit
- Malfunction of TC-SST-ECU
- ECU malfunction of other system

### DIAGNOSTIC PROCEDURE

#### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

#### STEP 1. Scan tool CAN bus diagnostics

Using scan tool MB991958, diagnose the CAN bus lines.

#### Q: Is the check result normal?

- YES** : Check and repair the TC-SST-ECU power supply circuit. (Refer to [P.22-156.](#))
- NO** : Repair the CAN bus lines.

---

### INSPECTION PROCEDURE 2: The driving mode cannot be changed.

---

#### CAUTION

Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

#### COMMENTS ON TROUBLE SYMPTOM

The twin clutch SST control mode switch, or TC-SST-ECU may have a problem.

#### PROBABLE CAUSES

- Malfunction of the twin clutch SST control mode switch
- Damaged harness wires and connectors
- Malfunction of the shift lever-ECU
- Malfunction of TC-SST-ECU

### DIAGNOSTIC PROCEDURE

#### Required Special Tools:

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

#### STEP 1. Scan tool CAN bus diagnostics

Using scan tool MB991958, diagnose the CAN bus lines.

#### Q: Is the check result normal?

- YES** : Go to Step 2.
- NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Scan tool data list**

Item No.32: Drive mode switch

**Q: Is the check result normal?****YES** : Intermittent malfunction.**NO** : Go to Step 3.

---

**STEP 3. Twin clutch SST control mode switch check****Q: Is the check result normal?****YES** : Go to Step 4.**NO** : Replace the twin clutch SST control mode switch.

---

**STEP 4. Twin clutch SST control mode switch connector check**

Check for the contact with terminals.

**Q: Is the check result normal?****YES** : Go to Step 5.**NO** : Repair the defective connector.

---

**STEP 5. Retest the system****Q: Does a malfunction take place again?****YES** : Go to Step 6**NO** : The inspection is complete.

---

**STEP 6. Trouble symptom recheck after replacing the shift lever assembly**

(1) Replace the shift lever assembly.

(2) Verify that the condition described by the customer exists.

**Q: Does a malfunction take place again?****YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))**NO** : Intermittent malfunction.

---

**INSPECTION PROCEDURE 3: Speed change with the paddle shift is impossible.**

---

**⚠ CAUTION**

Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**COMMENTS ON TROUBLE SYMPTOM**

The paddle shift switch, or TC-SST-ECU may have a problem.

**PROBABLE CAUSES**

- Malfunction of the paddle shift switch
- Damaged harness wires and connectors
- Malfunction of the shift lever-ECU
- Malfunction of TC-SST-ECU

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Paddle shift switch check**

**Q: Is the check result normal?**

**YES** : Go to Step 3.

**NO** : Replace the paddle shift assembly.

---

**STEP 3. Measure the resistance at paddle shift switch connector.**

Disconnect the connector, and measure the resistance between terminal No.2 and ground at the wiring harness side.

**OK: Continuity exists. (2  $\Omega$  or less)**

**Q: Is the check result normal?**

**YES** : Go to Step 6.

**NO** : Go to Step 4.

---

**STEP 4. Paddle shift switch connector check**

Check for the contact with terminals.

**Q: Is the check result normal?**

**YES** : Go to Step 5.

**NO** : Repair the defective connector.

---

**STEP 5. Check the wiring harness between paddle shift switch connector terminal No.2 and the body ground.**

Check the ground line for open circuit.

**Q: Is the check result normal?**

**YES** : Go to Step 6.

**NO** : Repair the wiring harness.

---

**STEP 6. Inspection of the shift lever assembly connector, intermediate connector, and paddle shift switch connector**

Check for the contact with terminals.

**Q: Is the check result normal?**

**YES** : Go to Step 7.

**NO** : Repair the defective connector.

---

**STEP 7. Check the wiring harness between paddle shift switch connector terminal No.1 and shift lever assembly connector terminal No.11, and between paddle shift switch connector terminal No.3 and shift lever assembly connector terminal No.10.**

Check the output line for short or open circuit.

**Q: Is the check result normal?**

**YES** : Go to Step 8.

**NO** : Repair the wiring harness.

---

**STEP 8. Retest the system****Q: Does a malfunction take place again?****YES** : Go to Step 9.**NO** : The inspection is complete.

---

**STEP 9. Trouble symptom recheck after replacing the shift lever assembly**

(1) Replace the shift lever assembly.

(2) Verify that the condition described by the customer exists.

**Q: Does a malfunction take place again?****YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))**NO** : Intermittent malfunction.

---

**INSPECTION PROCEDURE 4: TC-SST-ECU power supply circuit malfunction**

---

**⚠ CAUTION**

Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**COMMENTS ON TROUBLE SYMPTOM**

TC-SST-ECU power supply circuit, ground circuit, or TC-SST-ECU may have a problem.

**PROBABLE CAUSES**

- Defective battery
- Damaged harness wires and connectors
- Malfunction of the ETACS-ECU
- Malfunction of the shift lever-ECU

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Check the battery.****Q: Is the battery in good condition?****YES** : Go to Step 2.**NO** : Charge or replace the battery.

---

**STEP 2. Measure the resistance at TC-SST-ECU connector.**

Disconnect the connector, and measure the resistance between terminal No.19 and ground at the wiring harness side.

**OK: Continuity exists. (2 Ω or less)****Q: Is the check result normal?****YES** : Go to Step 5.**NO** : Go to Step 3.

---

**STEP 3. TC-SST-ECU connector check**

Check for the contact with terminals.

**Q: Is the check result normal?**

**YES** : Go to Step 4.

**NO** : Repair the defective connector.

---

**STEP 4. Check the wiring harness between TC-SST-ECU connector terminal No.19 and body ground.**

Check the ground line for open circuit.

**Q: Is the check result normal?**

**YES** : Go to Step 5.

**NO** : Repair the wiring harness.

---

**STEP 5. Measure the voltage at TC-SST-ECU connector.**

Disconnect the connector, and measure the voltage between terminal No.6 and ground at the wiring harness side.

**OK: Battery positive voltage**

**Q: Is the check result normal?**

**YES** : Go to Step 8.

**NO** : Go to Step 6.

---

**STEP 6. Inspection of the intermediate connector and TC-SST-ECU connector**

Check for the contact with terminals.

**Q: Is the check result normal?**

**YES** : Go to Step 7.

**NO** : Repair the defective connector.

---

**STEP 7. Check the wiring harness between TC-SST-ECU connector terminal No.6 and fusible link.**

Check the power supply line for short or open circuit.

**Q: Is the check result normal?**

**YES** : Go to Step 8.

**NO** : Repair the wiring harness.

---

**STEP 8. Scan tool diagnostic trouble code**

Check the ETACS diagnostic trouble code.

**Q: Is the DTC set?**

**YES** : Perform the relevant troubleshooting.

**NO** : Go to Step 9.

---

**STEP 9. Measure the voltage at TC-SST-ECU connector.**

- (1) Disconnect the connector, and measure the voltage between terminal No.11 and ground at the wiring harness side.
- (2) Turn the ignition switch to the "ON" position.

**OK: Battery positive voltage****Q: Is the check result normal?****YES :** Go to Step 12.**NO :** Go to Step 10.

---

**STEP 10. Inspection of the intermediate connector, TC-SST-ECU connector, J/C, and ETACS-ECU connector**

Check for the contact with terminals.

**Q: Is the check result normal?****YES :** Go to Step 11.**NO :** Repair the defective connector.

---

**STEP 11. Check the wiring harness between TC-SST-ECU connector terminal No.11 and ETACS-ECU connector terminal No.5.**

Check the power supply line for short or open circuit.

**Q: Is the check result normal?****YES :** Go to Step 12.**NO :** Repair the wiring harness.

---

**STEP 12. Retest the system.****Q: Does a malfunction take place again?****YES :** Replace the mechatronic assembly. (Refer to [P.22-176.](#))**NO :** Intermittent malfunction.

---

**INSPECTION PROCEDURE 5: The shift lever does not operate.**

---

**COMMENTS ON TROUBLE SYMPTOM**

The transaxle control cable, shift lever assembly, or transaxle assembly may have a problem.

*NOTE: Before performing this diagnosis, check that the stoplight illuminates when the brake pedal is depressed.**If the stoplight does not illuminate, check that the following items are normal. Then perform this diagnosis.*

- *Open circuit or short to ground (including blown fuse) in stoplight switch system (power supply circuit)*
- *Stoplight switch system (output circuit) is shorted to ground.*
- *Improper installation of stoplight switch*
- *Malfunction of stoplight switch*

**PROBABLE CAUSES**

- Malfunction of the transaxle control cable
- Malfunction of the shift lever assembly
- Malfunction of the transaxle assembly

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)

- MB991824: Vehicle Communication Interface (V.C.I.)
- MB991827 M.U.T.-III USB Cable
- MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool data list.**

Item No.5: Brake SW

**Q: Is the check result normal?**

**YES :** Go to Step 7.

**NO :** Go to Step 2.

---

**STEP 2. Shift lever-ECU connector check**

Check for the contact with terminals.

**Q: Is the check result normal?**

**YES :** Go to Step 3.

**NO :** Repair the defective connector.

---

**STEP 3. Measure the voltage at shift lever-ECU connector.**

Disconnect the connector, and measure the voltage between terminal No.4 and ground at the wiring harness side.

- **OK: 1 V or less (brake pedal released)**
- **OK: System voltage (brake pedal depressed)**

**Q: Is the check result normal?**

**YES :** Go to Step 6.

**NO :** Go to Step 4.

---

**STEP 4. Inspection of the stoplight switch connector, intermediate connector**

Check for the contact with terminals.

**Q: Is the check result normal?**

**YES :** Go to Step 5.

**NO :** Repair the defective connector.

---

**STEP 5. Check the wiring harness between stoplight switch connector terminal No.1 and shift lever-ECU connector terminal No.4.**

Check the output line for open or short circuit.

**Q: Is the check result normal?**

**YES :** Go to Step 6.

**NO :** Repair the wiring harness.

---

**STEP 6. Retest the system.**

**Q: Does a malfunction take place again?**

**YES :** Replace the shift lever assembly.

**NO :** Intermittent malfunction.

---

**STEP 7. Key interlock mechanism check**

**Q: Is the check result normal?**

**YES :** Go to Step 8.

**NO :** Adjust the key interlock mechanism.



**STEP 8. Shift lever operation check**

- (1) Disconnect the connection of the shift lever assembly and the transaxle control cable.
- (2) Turn the ignition switch to the ON position. Check that the shift lever can be moved to each range when the brake pedal is depressed.

**Q: Is the check result normal?****YES** : Go to Step 9.**NO** : Replace the shift lever assembly.**STEP 9. Transaxle control cable check**

- (1) Connect the connection of the shift lever assembly and the transaxle control cable.
- (2) Disconnect the connection of the transaxle assembly and the transaxle control cable.
- (3) Turn the ignition switch to the ON position. Check that the shift lever can be moved to each range when the brake pedal is depressed.

**Q: Is the check result normal?****YES** : Replace the transaxle assembly.**NO** : Check the transaxle control cable for installation condition, and repair or replace if necessary.**INSPECTION PROCEDURE 6: Gears cannot be changed with the manual mode.****CAUTION**

Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**COMMENTS ON TROUBLE SYMPTOM**

The CAN bus lines, shift lever assembly, or mechatronic assembly may have a problem.

**PROBABLE CAUSES**

- Malfunction of the CAN bus lines
- Malfunction of the shift lever assembly
- Malfunction of the mechatronic assembly

**DIAGNOSTIC PROCEDURE****Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?****YES** : Go to Step 2.**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Scan tool data list.**

Shift lever item No.1: Lever position

- (1) Confirm that "Manual" is displayed when the shift lever position is in the manual mode.
- (2) Confirm that "+" is displayed when the shift lever position is upshifted and held, and "-" is displayed when the shift lever position is downshifted and held.

**Q: Is the check result normal?**

**YES** : Go to Step 3.

**NO** : Replace the shift lever assembly.

---

**STEP 3. Retest the system.****Q: Does a malfunction take place again?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#))

**NO** : Intermittent malfunction.

---

**INSPECTION PROCEDURE 7: The vehicle moves with the P-range.**

---

**COMMENTS ON TROUBLE SYMPTOM**

The transaxle control cable, shift lever assembly, or transaxle assembly may have a problem.

**PROBABLE CAUSES**

- Malfunction of the transaxle control cable
- Malfunction of the shift lever assembly
- Malfunction of the transaxle assembly

**DIAGNOSTIC PROCEDURE**

---

**STEP 1. Check for transaxle control cable installation**

Check the transaxle control cable for installation condition.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Install the transaxle control cable properly.

---

**STEP 2. Transaxle control cable operation check**

1. Disconnect the connection of the transaxle assembly and the transaxle control cable.
2. Turn the ignition switch to the ON position and depress the brake pedal. Check that the transaxle control cable works when shift lever is moved to P↔R.

**Q: Is the check result normal?**

**YES** : Go to Step 5.

**NO** : Go to Step 3.

---

**STEP 3. Retest the system.****Q: Does a malfunction take place again?**

**YES** : Replace the transaxle control cable. Then, go to Step 4.

**NO** : Intermittent malfunction.

---

**STEP 4. Retest the system.****Q: Does a malfunction take place again?**

- YES** : Replace the shift lever assembly.  
**NO** : This diagnosis is complete.

---

**STEP 5. Retest the system.****Q: Does a malfunction take place again?**

- YES** : Replace the transaxle assembly.  
**NO** : Intermittent malfunction.

---

**INSPECTION PROCEDURE 8: Slipping occurs with the D-range/R-range/manual mode, and engine racing occurs during gear shifting/driving.**

---

**COMMENTS ON TROUBLE SYMPTOM**

Fluid may be insufficient or contaminated. Oil filter case assembly, mechatronic assembly, clutch assembly, or transaxle assembly may have a problem.

**PROBABLE CAUSES**

- Insufficient or contaminated fluid
- Malfunction of the oil filter case assembly
- Malfunction of the mechatronic assembly
- Malfunction of the clutch assembly
- Malfunction of the transaxle assembly

---

**DIAGNOSTIC PROCEDURE**

---

**STEP 1. Oil filter case assembly check**

- (1) Check if the oil filter is replaced according to the cycle specified in the Maintenance Note.
- Normal condition : 96,000 km (60,000 miles)
  - Severe condition : 48,000 km (30,000 miles)
- (2) Visually check that no fluid leaks from the oil filter case assembly and it is installed normally.

**Q: Is the check result normal?**

- YES** : Go to Step 2.  
**NO** : Replace the oil filter case assembly.

---

**STEP 2. Fluid check**

Check for the fluid level and if no foreign material and contamination are found.

**Q: Is the check result normal?**

- YES** : Go to Step 3.  
**NO** : Charge or replace the fluid.

---

**STEP 3. Retest the system.****Q: Does a malfunction take place again?**

- YES** : Replace the mechatronic assembly. (Refer to [P.22-176](#).) Then go to Step 4.  
**NO** : Intermittent malfunction.

---

**STEP 4. Retest the system.**

**Q: Does a malfunction take place again?**

**YES** : Replace the clutch assembly. (Refer to [P.22-187.](#))  
Then go to Step 5.

**NO** : Intermittent malfunction.

---

**STEP 5. Retest the system.**

**Q: Does a malfunction take place again?**

**YES** : Replace the transaxle assembly.

**NO** : Intermittent malfunction.

---

**INSPECTION PROCEDURE 9: The vehicle does not creep with the D-range/R-range/manual mode.**

---

**COMMENTS ON TROUBLE SYMPTOM**

The foot brake or parking brake may be dragging.  
Mechatronic assembly, clutch assembly, or transaxle  
assembly may have a problem.

*NOTE: If the fluid temperature is extremely high, the  
creep is controlled slightly for slip control.*

**PROBABLE CAUSES**

- Drag of foot brake or parking brake
- Malfunction of the mechatronic assembly
- Malfunction of the clutch assembly
- Malfunction of the transaxle assembly

**DIAGNOSTIC PROCEDURE**

---

**STEP 1. Inspect the foot brake or parking brake.**

Check that the foot brake or parking brake is not dragging.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Adjust the foot brake or parking brake.

---

**STEP 2. Retest the system.**

**Q: Does a malfunction take place again?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#)) Then go to Step 3.

**NO** : Intermittent malfunction.

---

**STEP 3. Retest the system.**

**Q: Does a malfunction take place again?**

**YES** : Replace the clutch assembly. (Refer to [P.22-187.](#))  
Then go to Step 4.

**NO** : Intermittent malfunction.

---

**STEP 4. Retest the system.**

**Q: Does a malfunction take place again?**

**YES** : Replace the transaxle assembly.

**NO** : Intermittent malfunction.

---

**INSPECTION PROCEDURE 10: The shock is large when the vehicle is stopped and the brake pedal is released with the D-range/R-range/manual mode.**

---

**COMMENTS ON TROUBLE SYMPTOM**

The mechatronic assembly, or clutch assembly may have a problem.

**PROBABLE CAUSES**

- Malfunction of the mechatronic assembly
- Malfunction of the clutch assembly

**DIAGNOSTIC PROCEDURE****STEP 1. Retest the system.****Q: Does a malfunction take place again?**

- YES :** Replace the mechatronic assembly. (Refer to [P.22-176.](#)) Then go to Step 2.  
**NO :** Intermittent malfunction.

**STEP 2. Retest the system.****Q: Does a malfunction take place again?**

- YES :** Replace the clutch assembly. (Refer to [P.22-187.](#))  
**NO :** Intermittent malfunction.

**INSPECTION PROCEDURE 11: Poor acceleration****COMMENTS ON TROUBLE SYMPTOM**

Fluid may be insufficient or contaminated. Engine system, mechatronic assembly, clutch assembly, or transaxle assembly may have a problem.

**PROBABLE CAUSES**

- Malfunction of the engine system
- Insufficient or contaminated fluid
- Malfunction of the mechatronic assembly
- Malfunction of the clutch assembly
- Malfunction of the transaxle assembly

**DIAGNOSTIC PROCEDURE****STEP 1. Check the engine system****Q: Is the check result normal?**

- YES :** Go to Step 2  
**NO :** Repair the engine system.

**STEP 2. Fluid check**

Check for the fluid level and if no foreign material and contamination are found.

**Q: Is the check result normal?**

- YES :** Go to Step 3.  
**NO :** Charge or replace the fluid.

**STEP 3. Retest the system.****Q: Does a malfunction take place again?**

- YES :** Replace the mechatronic assembly. (Refer to [P.22-176.](#)) Then go to Step 4.  
**NO :** Intermittent malfunction.

---

**STEP 4. Retest the system.**

**Q: Does a malfunction take place again?**

**YES** : Replace the clutch assembly. (Refer to [P.22-187.](#))  
Then go to Step 5.

**NO** : Intermittent malfunction.

---

**STEP 5. Retest the system.**

**Q: Does a malfunction take place again?**

**YES** : Replace the transaxle assembly.

**NO** : Intermittent malfunction.

---

**INSPECTION PROCEDURE 12: The gear shifting does not occur. (The transaxle does not upshift or downshift.)**

---

**⚠ CAUTION**

Whenever the ECU is replaced, ensure that the CAN bus lines are normal.

**COMMENTS ON TROUBLE SYMPTOM**

The CAN bus lines, mechatronic assembly, clutch assembly, or transaxle assembly may have a problem.

**PROBABLE CAUSES**

- Malfunction of the CAN bus lines
- Malfunction of the mechatronic assembly
- Malfunction of the clutch assembly
- Malfunction of the transaxle assembly

**DIAGNOSTIC PROCEDURE**

**Required Special Tools:**

- MB991958 Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827 M.U.T.-III USB Cable
  - MB991910 M.U.T.-III Main Harness A

---

**STEP 1. Scan tool CAN bus diagnostics**

Using scan tool MB991958, diagnose the CAN bus lines.

**Q: Is the check result normal?**

**YES** : Go to Step 2.

**NO** : Repair the CAN bus lines. After repairing the CAN bus line, go to Step 2.

---

**STEP 2. Retest the system.**

**Q: Does a malfunction take place again?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#)) Then go to Step 3.

**NO** : Intermittent malfunction.

---

**STEP 3. Retest the system.**

**Q: Does a malfunction take place again?**

**YES** : Replace the clutch assembly. (Refer to [P.22-187.](#))  
Then go to Step 4.

**NO** : Intermittent malfunction.

---

**STEP 4. Retest the system.****Q: Does a malfunction take place again?**

- YES** : Replace the transaxle assembly.  
**NO** : Intermittent malfunction.

---

**INSPECTION PROCEDURE 13: The shift shock is large.**

---

**COMMENTS ON TROUBLE SYMPTOM**

The mechatronic assembly, clutch assembly, or transaxle assembly may have a problem.

**PROBABLE CAUSES**

- Malfunction of the mechatronic assembly
- Malfunction of the clutch assembly
- Malfunction of the transaxle assembly

**DIAGNOSTIC PROCEDURE**

---

**STEP 1. Retest the system.****Q: Does a malfunction take place again?**

- YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#)) Then go to Step 2.  
**NO** : Intermittent malfunction.

---

**STEP 2. Retest the system.****Q: Does a malfunction take place again?**

- YES** : Replace the clutch assembly. (Refer to [P.22-187.](#)) Then go to Step 3.  
**NO** : Intermittent malfunction.

---

**STEP 3. Retest the system.****Q: Does a malfunction take place again?**

- YES** : Replace the transaxle assembly.  
**NO** : Intermittent malfunction.

---

**INSPECTION PROCEDURE 14: Delay occurs when the lever is shifted from "N" to "D" or "N" to "R".**

---

**COMMENTS ON TROUBLE SYMPTOM**

Fluid may be insufficient or contaminated. TC-SST-ECU power supply circuit, mechatronic assembly, clutch assembly, or transaxle assembly may have a problem.

**PROBABLE CAUSES**

- Malfunction of TC-SST-ECU power supply circuit
- Insufficient or contaminated fluid
- Malfunction of the mechatronic assembly
- Malfunction of the clutch assembly
- Malfunction of the transaxle assembly

---

## DIAGNOSTIC PROCEDURE

---

**STEP 1. Check the TC-SST-ECU power supply circuit**  
Refer to [P.22-156](#).

**Q: Is the check result normal?**

**YES :** Go to Step 2.

**NO :** Repair the TC-SST-ECU power supply circuit. (Refer to [P.22-156](#).)

---

**STEP 2. Fluid check**

Check for the fluid level and if no foreign material and contamination are found.

**Q: Is the check result normal?**

**YES :** Go to Step 3.

**NO :** Charge or replace the fluid.

---

**STEP 3. Retest the system.**

**Q: Does a malfunction take place again?**

**YES :** Replace the mechatronic assembly. (Refer to [P.22-176](#).) Then go to Step 4.

**NO :** Intermittent malfunction.

---

**STEP 4. Retest the system.**

**Q: Does a malfunction take place again?**

**YES :** Replace the clutch assembly. (Refer to [P.22-187](#).) Then go to Step 5.

**NO :** Intermittent malfunction.

---

**STEP 5. Retest the system.**

**Q: Does a malfunction take place again?**

**YES :** Replace the transaxle assembly.

**NO :** Intermittent malfunction.

---

**INSPECTION PROCEDURE 15: The engine stops when the lever is shifted from "N" to "D" or "N" to "R".**

---

### COMMENTS ON TROUBLE SYMPTOM

Engine system, mechatronic assembly, or clutch assembly may have a problem.

### PROBABLE CAUSES

- Malfunction of the engine system
- Malfunction of the mechatronic assembly
- Malfunction of the clutch assembly

---

## DIAGNOSTIC PROCEDURE

---

**STEP 1. Check the engine system**

**Q: Is the check result normal?**

**YES :** Go to Step 2.

**NO :** Repair the engine system.



---

**STEP 2. Retest the system.****Q: Does a malfunction take place again?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#)) Then go to Step 3.

**NO** : Intermittent malfunction.

---

**STEP 3. Retest the system.****Q: Does a malfunction take place again?**

**YES** : Replace the clutch assembly. (Refer to [P.22-187.](#))

**NO** : Intermittent malfunction.

---

**INSPECTION PROCEDURE 16: The vehicle moves with the N-range on the level ground.**

---

**COMMENTS ON TROUBLE SYMPTOM**

The mechatronic assembly, or clutch assembly may have a problem.

**PROBABLE CAUSES**

- Malfunction of the mechatronic assembly
- Malfunction of the clutch assembly

**DIAGNOSTIC PROCEDURE**

---

**STEP 1. Retest the system.****Q: Does a malfunction take place again?**

**YES** : Replace the mechatronic assembly. (Refer to [P.22-176.](#)) Then go to Step 2.

**NO** : Intermittent malfunction.

---

**STEP 2. Retest the system.****Q: Does a malfunction take place again?**

**YES** : Replace the clutch assembly. (Refer to [P.22-187.](#))

**NO** : Intermittent malfunction.

---

**INSPECTION PROCEDURE 17: Judder/noise/vibration**

---

**COMMENTS ON TROUBLE SYMPTOM**

Fluid may be insufficient or contaminated. Mechatronic assembly or clutch assembly may have a problem.

*NOTE: The following items can become a cause of the probable causes other than transaxle. Perform this troubleshooting after checking that the following probable causes are normal.*

- Engine system
- Vibration of exhaust system

- Driveshaft malfunction (flaw, wear, looseness, large deflection)
- Tire
- Interference of the drive system and body
- Suspension malfunction (looseness)

**PROBABLE CAUSES**

- Insufficient or contaminated fluid
- Malfunction of the mechatronic assembly
- Malfunction of the clutch assembly
- Malfunction of the transaxle assembly

**DIAGNOSTIC PROCEDURE**

**STEP 1. Fluid check**

Check for the fluid level and if no foreign material and contamination are found.

**Q: Is the check result normal?**

**YES :** Go to Step 2.

**NO :** Charge or replace the fluid.

**STEP 2. Retest the system.**

**Q: Does a malfunction take place again?**

**YES :** Replace the clutch assembly. (Refer to [P.22-187.](#))  
 Then go to Step 3.

**NO :** Intermittent malfunction.

**STEP 3. Retest the system.**

**Q: Does a malfunction take place again?**

**YES :** Replace the mechatronic assembly. (Refer to [P.22-176.](#)) Then go to Step 4.

**NO :** Intermittent malfunction.

**STEP 4. Retest the system.**

**Q: Does a malfunction take place again?**

**YES :** Replace the transaxle assembly.

**NO :** Intermittent malfunction.

**SPECIAL FUNCTION**

M1225028400126

**TEACH-IN REFERENCE TABLE**



Be careful with the following items when performing Item No.3: Line Pressure Test.

- The engine speed could be high (4,000 r/min) when the Line Pressure Test is in progress. (Depending on the transaxle state, the engine speed may not be high.)
- After Teach-In completion, check that it completed normally. (Teach-In execution results is displayed in the following Data list.)

**TEACH-IN**

Item No.	Scan tool Item Name
1	Plausibility check
2	Shift fork Teach-In
3	Line pressure Test
4	Stroke Teach-In
5	Boost Teach-In
6	Interlock Teach-In
7	Clutch Ventilation
8	Reset clutch gain

**NOTE:**

- According to the transmission fluid state (fluid -filled state), Teach-In executed time is not equal.

- Item No.8 is not displayed when the Diag. Version of TC-SST-ECU is 0001. (Diag. Version can be checked by the Teach-In screen of scan tool.)

**DATA LIST**

No.	Data List Item Name	Teach-In state or result	Scan tool display
100	Teach-In executing	Before execution	No
		Other than the execution conditions	Pending
		After execution	Yes → No
101	Normal End	At the normal end	Yes
		At the abnormal end	No
102	Abnormal End	At the normal end	No
		At the abnormal end	Yes
103	Timeout error	When a timeout error is not occurred	No
		When a timeout error is occurred	Yes
104	Abort conditions error	When an error other than the execution conditions is not occurred	No
		When an error other than the execution conditions is occurred	Yes
110	Execute last Teach-In item	–	The previously conducted scan tool item name is displayed
111	Internal Error Data	–	The monitoring unit No. is displayed in case of an error

**ON-VEHICLE SERVICE****TRANSMISSION FLUID LEAKAGE CHECK**

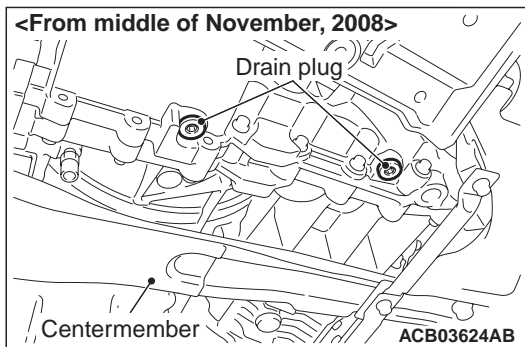
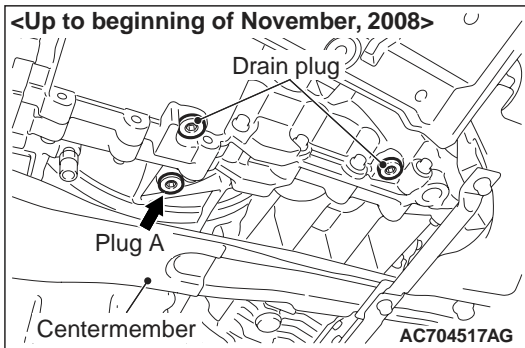
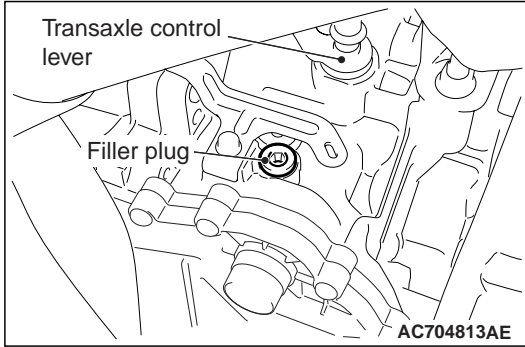
M1225029700108

1. Clean the transaxle exterior, and visually check the transaxle for fluid leaks.
2. If the fluid is leaking from the oil pan or the oil seal, replace the part. If the fluid is leaking from the part other than the oil pan and the oil seal, replace the transaxle assembly.

**TRANSMISSION FLUID LEVEL CHECK**

M1225008000278

1. Remove the engine room under cover front B assembly.
2. Start the engine, and let it run at idle to warm it up for 15 minutes.
3. Move the shift lever to every position (P, R, N, D, manual mode) (Hold for 20 seconds in each position), and then move it to the P range.
4. Stop the engine.
5. Remove the air cleaner element and air cleaner intake duct.  
<LANCER EVOLUTION>



- Remove the battery and battery tray. <Except LANCER EVOLUTION>
- Remove the filler plug.

**CAUTION**

- The drained fluid can be reused if it is between the replacement intervals.
- <Replacement interval>
- Normal condition: 96,000 km (60,000 miles)
  - Severe condition: 48,000 km (30,000 miles)
- When reusing the drained fluid, make sure that no foreign object gets into the fluid.

- Remove the drain plugs, and leave it for 3 minutes to drain the fluid.

*NOTE: Because the fluid in the oil cooler, oil filter, and transaxle assembly cannot be drained, the amount of drained fluid will be approximately 5.5 dm<sup>3</sup> (approximately 5.8 quarts).*

*NOTE: Do not remove this plug when the TC-SST with plug A is received the maintenance. If this plug is removed by a mistake, install it by the same procedures as for the drain plug.*

- Tighten the drain plugs to the specified torque.

**Tightening torque: 35 ± 5 N·m (26 ± 4 ft-lb)**

**CAUTION**

**Measure the drained fluid. If the drained fluid is less than approximately 5.5 dm<sup>3</sup> (approximately 5.8 quarts), add new fluid to make it approximately 5.5 dm<sup>3</sup> (approximately 5.8 quarts).**

- Fill the fluid into the filler plug.

**Brand name: Dia Queen SSTF-I**

**Filling amount: Approximately 5.5 dm<sup>3</sup> (approximately 5.8 quarts)**

- Tighten the filler plug to the specified torque.

**Tightening torque: 35 ± 5 N·m (26 ± 4 ft-lb)**

- Install the air cleaner element and air cleaner intake duct.

<LANCER EVOLUTION>

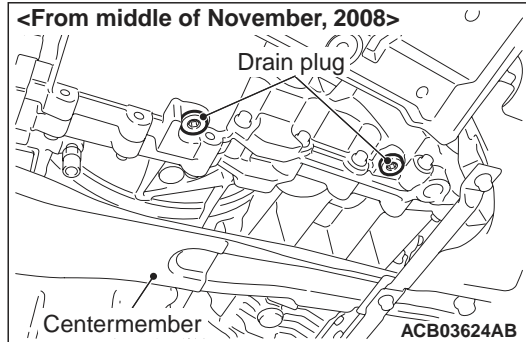
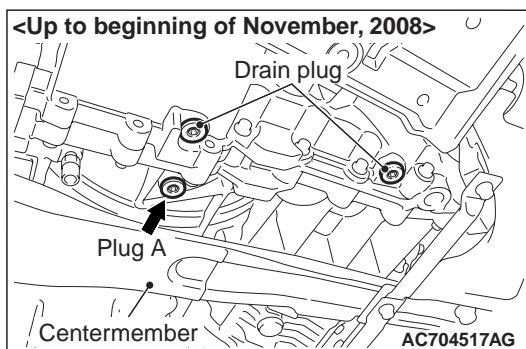
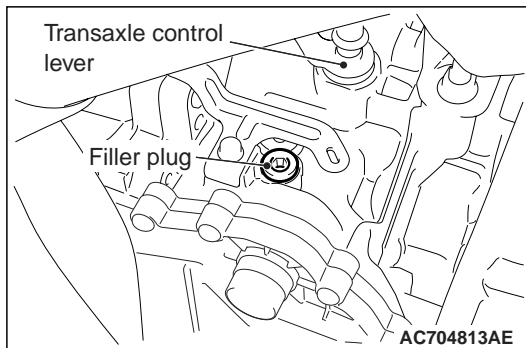
Install the battery and battery tray. <Except LANCER EVOLUTION>

- Install the engine room under cover front B assembly.

**TRANSMISSION FLUID CHANGE**

M1225008100297

- Remove the engine room under cover front B assembly.
- Start the engine, and let it run at idle to warm it up for 15 minutes.
- Move the shift lever to every position (P, R, N, D, manual mode) (Hold for 20 seconds in each position), and then move it to the P range.



4. Stop the engine.
5. Remove the air cleaner element and air cleaner intake duct.  
<LANCER EVOLUTION>  
Remove the battery and battery tray. <Except LANCER EVOLUTION>
6. Remove the filler plug.

7. Remove the drain plug, and leave it for 3 minutes to drain the fluid.

*NOTE: Because the fluid in the oil cooler, oil filter, and transaxle assembly cannot be drained, the amount of drained fluid will be approximately 5.5 dm<sup>3</sup> (approximately 5.8 quarts).*

*NOTE: Do not remove this plug when the TC-SST with plug A is received the maintenance. If this plug is removed by a mistake, install it by the same procedures as for the drain plug.*

8. Tighten the drain plug to the specified torque.

**Tightening torque: 35 ± 5 N·m (26 ± 4 ft-lb)**

9. Fill the fluid into the filler plug.

**Brand name: Dia Queen SSTF-I**

**Filling amount: Approximately 5.5 dm<sup>3</sup> (approximately 5.8 quarts)**

10. Tighten the filler plug to the specified torque.

**Tightening torque: 35 ± 5 N·m (26 ± 4 ft-lb)**

11. Install the air cleaner element and air cleaner intake duct.  
<LANCER EVOLUTION>

Install the battery and battery tray. <Except LANCER EVOLUTION>

12. Install the engine room under cover front B assembly.

## TRANSAXLE ASSEMBLY

### REMOVAL AND INSTALLATION

M1225010200473

#### CAUTION

- When the transaxle assembly is replaced, save the vehicle identification number and perform the variant coding. Refer to the "M.U.T.-III Owner's Manual" and perform coding.
- When the mechatronic assembly is replaced, reprogram the ECU and carry out the following Teach-In (Refer to [P.22-3](#)).
- When the clutch assembly is replaced, the following Teach-In must be carried out (Refer to [P.22-3](#)).
- When the transaxle control cable is disconnected, check after the installation that the cable is properly connected, and that the parking lock mechanism operates normally. At this time, do not check by simply using the display on the combination meter and shift indicator panel. Always check according to the procedure below.
  - When driving at 5 km/h (3.1 mph) or less, the vehicle stops when the shift lever is moved to the P range.
  - With the P range, the vehicle does not move on a slight slope or when pushed by hands.
- Drain the fluid remaining in the oil cooler before installing the transaxle assembly.
- Do not refill the fluid when replacing the transaxle assembly with a new one.

#### NOTE:

- The new transaxle assembly is filled with 7.6 dm<sup>3</sup> (8.0 qt) of the fluid (including the oil cooler).
- The transaxle assembly has a sealed structure, and the fluid does not drain out from parts other than the oil cooler hose.

#### CAUTION

Refill 6.1 dm<sup>3</sup> (6.4 qt) of the transmission fluid.

NOTE: The fluid capacity of the oil cooler assembly and the oil cooler hose is 0.6 dm<sup>3</sup> (0.6 qt).

#### CAUTION

- If the transaxle assembly is repaired, fill new fluid and check the transmission fluid level. (Refer to [P.22-170](#).)
- When the transaxle assembly is not repaired, the drained fluid can be reused if it is between the replacement intervals.

# OIL PAN

## REMOVAL AND INSTALLATION

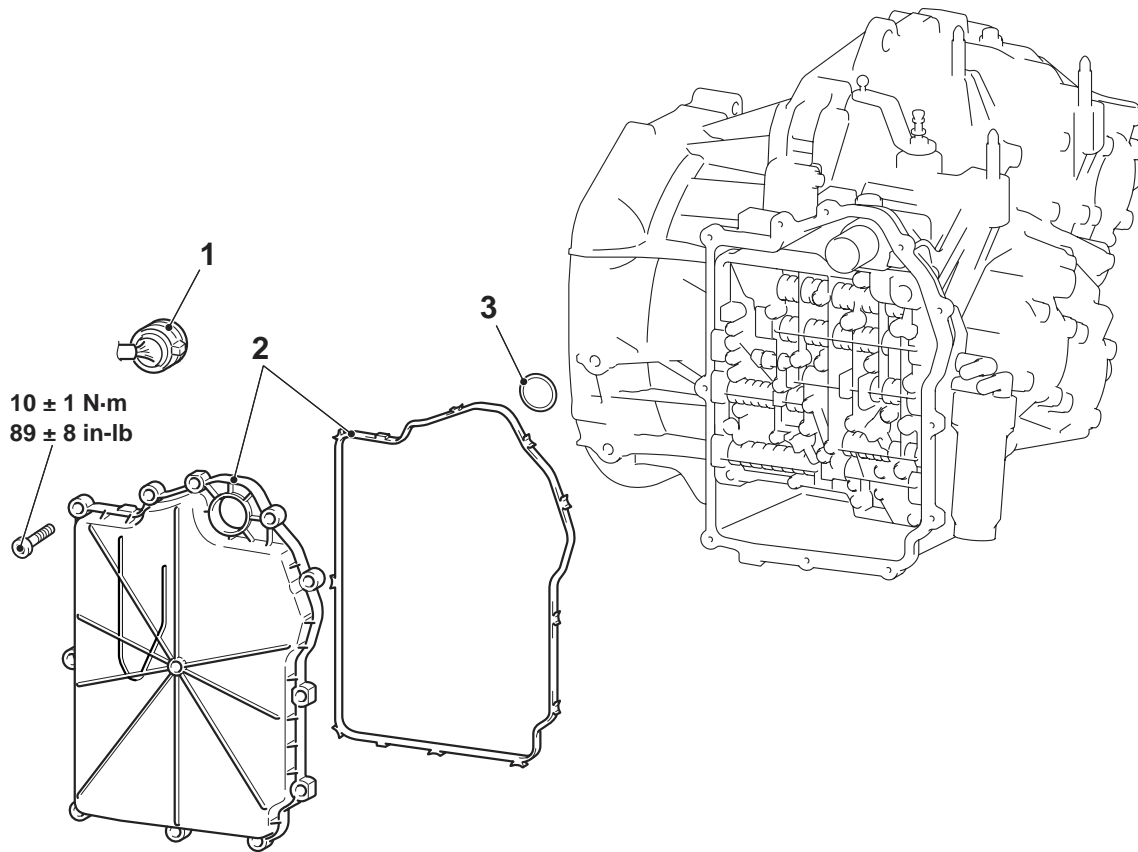
M1225028800328

**CAUTION**

If a fluid leakage is present in the area around the oil pan, clean around the oil pan. After cleaning, warm up the engine. Only if a fluid leakage is present in the area around the oil pan again, replace the oil pan assembly.

**Pre-removal and Post-installation Operation**

Charge Air Cooler Outlet Air Hose and Charge Air Cooler Outlet Air Hose E Removal and Installation



AC901761AC

<<A>>

**Removal steps**

- Transmission Fluid Draining and Refilling (Refer to P.22-171.)
1. Transaxle assembly connector connection

>>B<<

<<B>>

>>A<<

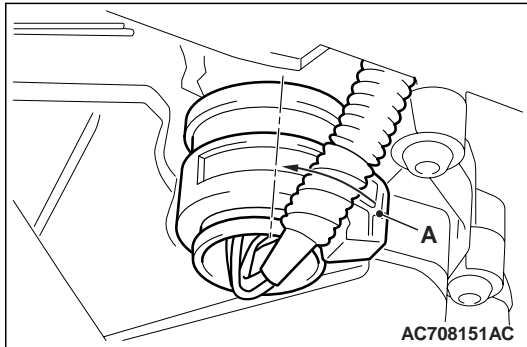
**Removal steps (Continued)**

2. Oil pan assembly
3. O-ring

## REMOVAL SERVICE POINTS

### <<A>> TRANSAXLE ASSEMBLY CONNECTOR DISCONNECTION

Rotate the section A of the connector 90° to the direction of the arrow to disconnect the connector.



### <<B>> OIL PAN ASSEMBLY REMOVAL

#### **⚠ CAUTION**

When removing the oil pan assembly, pay attention to avoid damage to the connector and the O-ring between the oil pan assembly and the connector.

## INSTALLATION SERVICE POINTS

### >>A<< OIL PAN ASSEMBLY INSTALLATION

1. Completely degrease the oil pan assembly installation surface on the transaxle side.
2. Remove the gasket from the oil pan assembly, and completely degrease the groove of the oil pan assembly (gasket installation area) and the gasket. Then, install the gasket to the groove of the oil pan assembly.

#### **⚠ CAUTION**

When installing the oil pan assembly, pay attention to avoid damage to the connector and the O-ring installed to the connector.

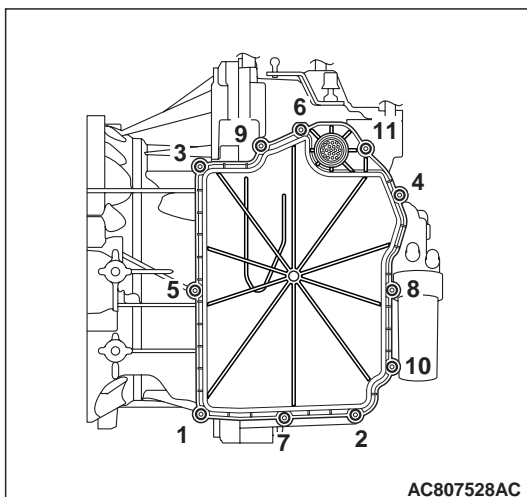
3. Tighten the screws to the specified torque in the order shown in the figure.

**Tightening torque: 10 ± 1 N·m (89 ± 8 in·lb)**

### >>B<< TRANSMISSION FLUID REFILLING

#### **⚠ CAUTION**

- If the internal components are repaired, fill new fluid and check the transmission fluid level. (Refer to [P.22-170.](#))
- If the internal components are not repaired, the drained fluid can be reused if it is between the replacement intervals.





# MECHATRONIC ASSEMBLY, MANUAL CONTROL LEVER

## REMOVAL AND INSTALLATION

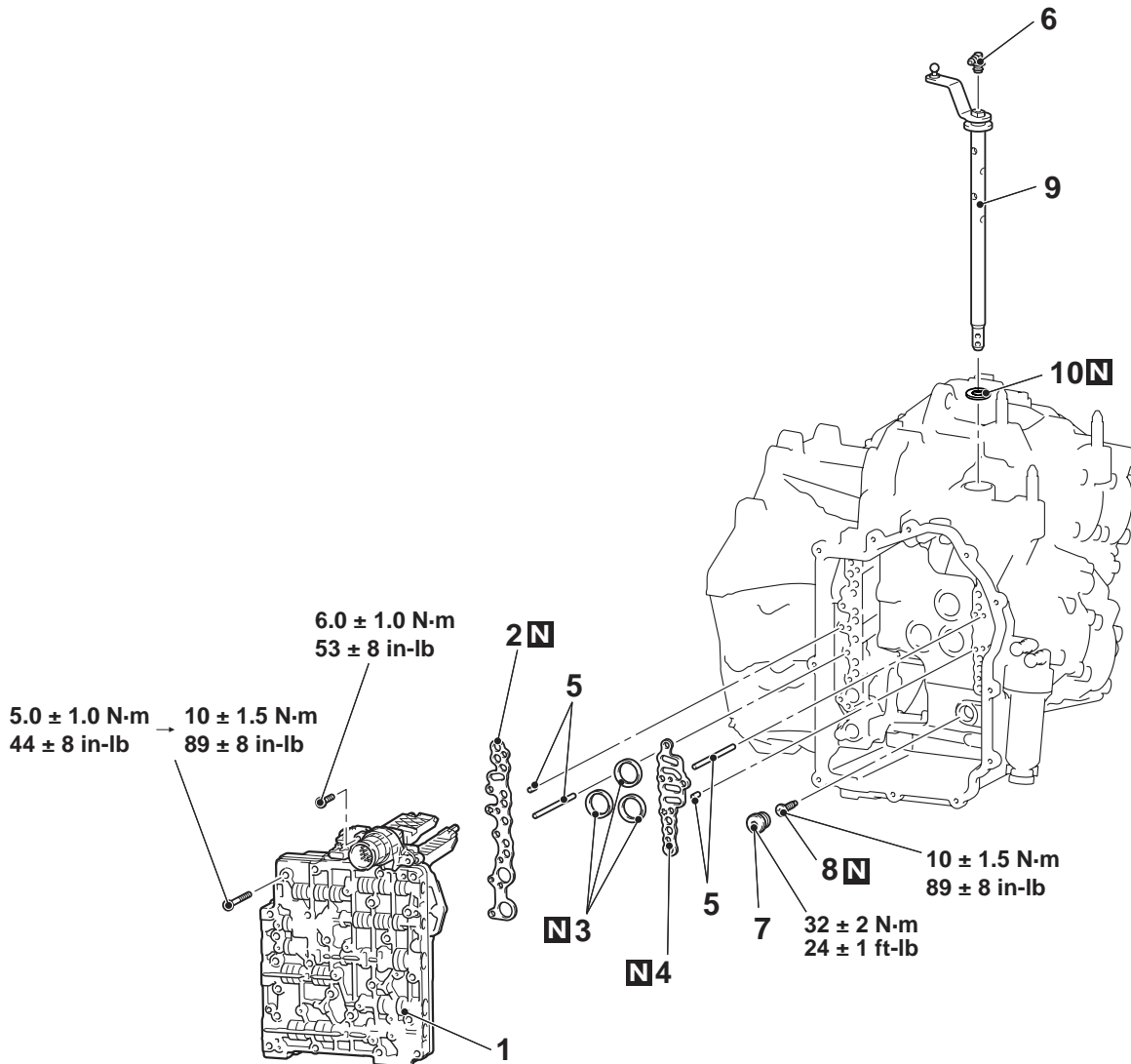
M1225029600060

**CAUTION**

When the mechatronic assembly is replaced, reprogram the ECU and carry out the following Teach-In (Refer to P.22-3).

**Pre-removal and Post-installation Operation**

- Radiator Lower Pipe Assembly Removal and Installation.
- Fan, Fan Motor and Fan Shroud Assembly Removal and Installation.
- Intercooler Outlet Air Pipe C Removal and Installation.
- Oil Pan Removal and Installation (Refer to P.22-174.)



AC900881AD

- Removal steps**
- <<A>> >>B<< 1. Mechatronic assembly
  - >>B<< 2. Gasket A
  - >>B<< 3. Gasket B
  - >>B<< 4. Gasket C
  - >>B<< 5. Pin

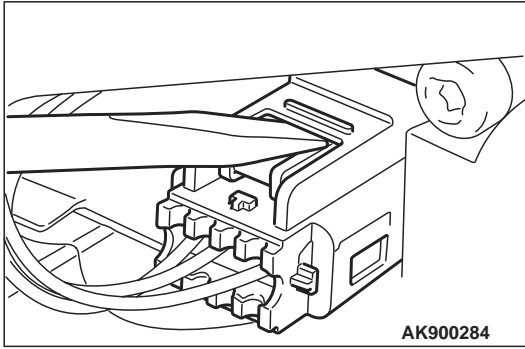
- Removal steps (Continued)**
- <<B>> >>A<< 6. Breather nipple
  - <<B>> >>A<< 7. Plug
  - <<B>> >>A<< 8. Bolt
  - <<B>> >>A<< 9. Manual control shaft
  - <<B>> >>A<< 10. Oil seal

TSB Revision

## REMOVAL SERVICE POINTS

### <<A>> MECHATRONIC ASSEMBLY REMOVAL

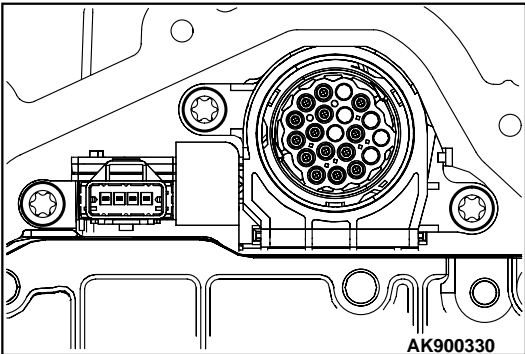
1. Remove the connector carefully.



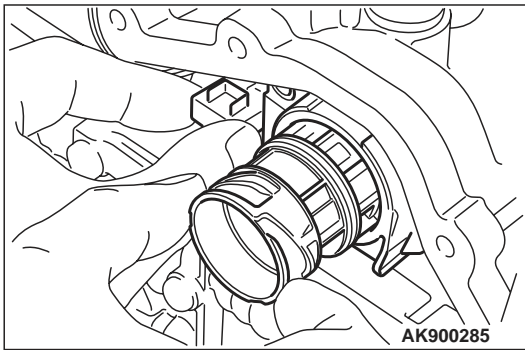
#### CAUTION

When removing bolt, use magnetic tools to prevent them from falling out.

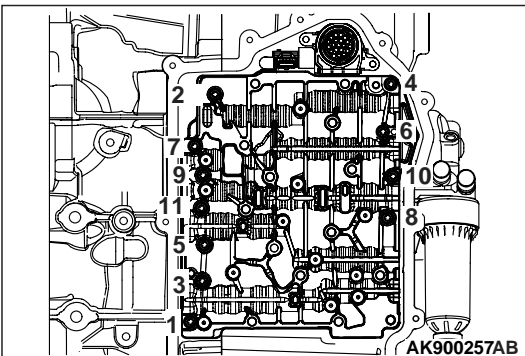
2. Remove the three bolts.

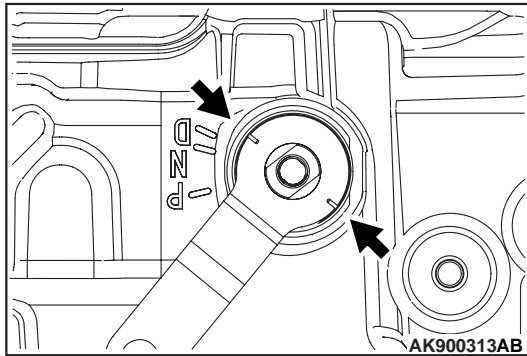


3. Pull carefully at the connector to loose by approx. 2 - 3 mm (0.08 - 0.12 inch).

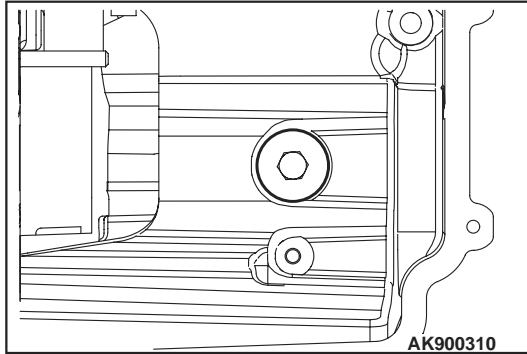


4. Remove the bolts in the order shown and remove the mechatronic assembly carefully.

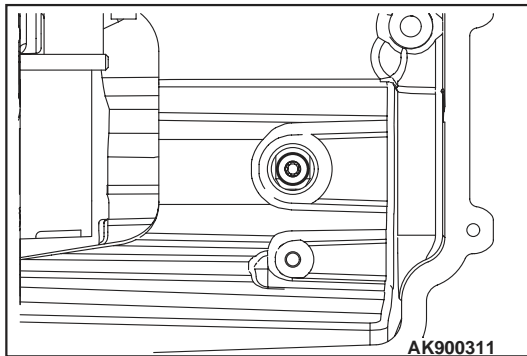


**<<B>> PLUG/BOLT/MANUAL CONTROL SHAFT REMOVAL**

1. Move the lever from D in clock direction to the service position as shown.



2. Remove the plug.

**⚠ CAUTION**

**When removing bolt, use magnetic tools to prevent them from falling out.**

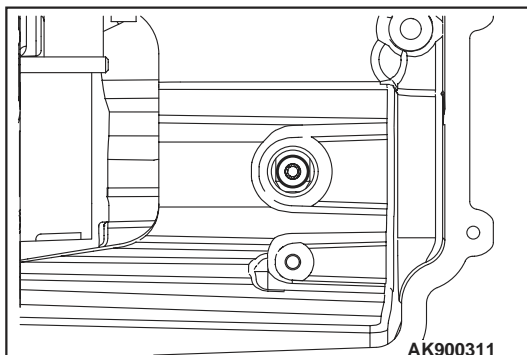
3. When removing the bolt located behind the plug, pay attention to the bolt not to fall in the transaxle case.
4. Remove the manual control shaft carefully.

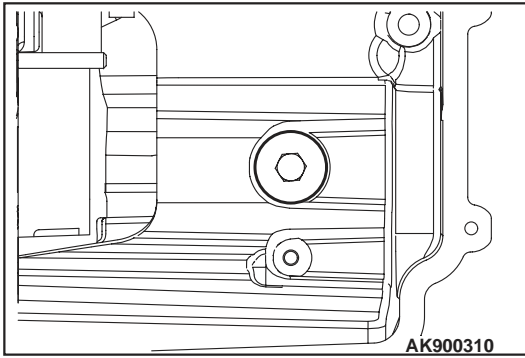
**INSTALLATION SERVICE POINTS****>>A<< MANUAL CONTROL SHAFT/BOLT/PLUG INSTALLA-****⚠ CAUTION**

**When installing bolt, use magnetic tools to prevent them from falling out.**

1. Install the manual control shaft carefully and tighten the bolt to the specified torque.

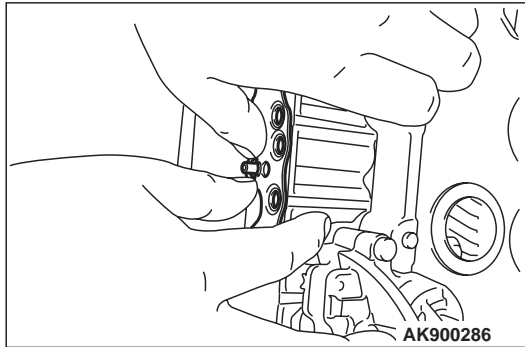
**Tightening torque:  $10 \pm 1.5$  N·m ( $89 \pm 8$  in-lb)**



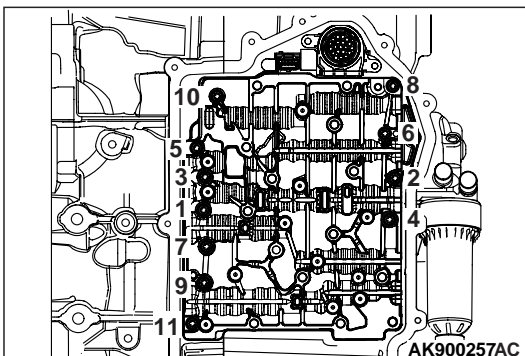
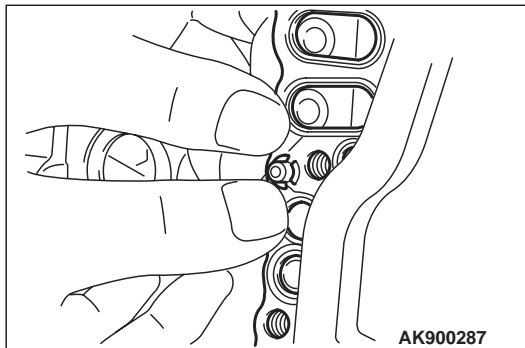


2. Tighten the plug to the specified torque.  
**Tightening torque:  $32 \pm 2$  N·m ( $24 \pm 1$  ft-lb)**

**>>B<< GASKET A/GASKET C/MECHATRONIC ASSEMBLY INSTALLATION**



1. As shown in the illustration, fix the gasket to the transaxle case by pushing the gasket at the area to which the gasket dowel pin is inserted.



2. Install the mechatronic assembly carefully and tighten the mechatronic assembly mounting bolts to the specified torque in the order of number shown in the figure.  
**Tightening torque:  $5.0 \pm 1.0$  N·m ( $44 \pm 8$  in-lb)**
3. Tighten again the mechatronic assembly mounting bolts to the specified torque in the order of number shown in the figure.  
**Tightening torque:  $10 \pm 1.5$  N·m ( $89 \pm 8$  in-lb)**

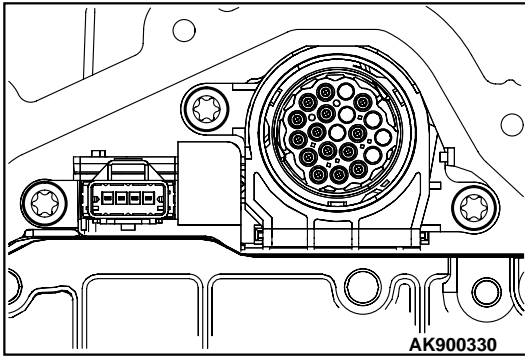
**CAUTION**

When installing bolt, use magnetic tools to prevent them from falling out.

4. Tighten the bolts to the specified torque.

**Tightening torque: 6.0 ± 1.0 N·m (53 ± 8 in-lb)**

5. Install the connector.



## TRANSAXLE CASE OIL SEAL

### REMOVAL AND INSTALLATION

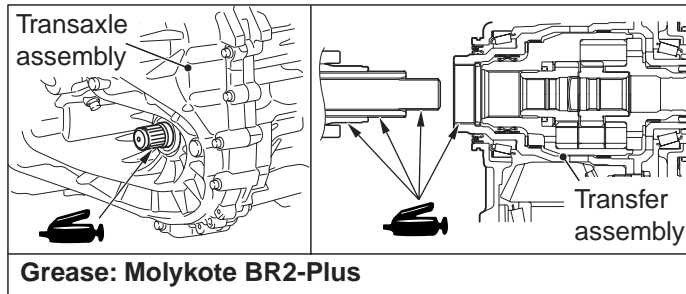
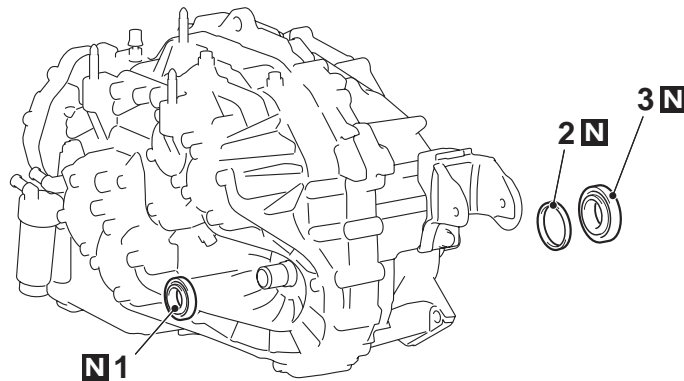
M1225029000273

**Pre-removal Operation**

- Transmission Fluid Draining (Refer to P.22-171.)

**Post-installation Operation**

- Transmission Fluid Refilling (Refer to P.22-171.)
- Transmission Fluid Level Check (Refer to P.22-170.)



AC901630AC

**Transaxle case oil seal (LH) removal steps**

- Front driveshaft assembly (LH)

<<A>> >>C<< 1. Transaxle case oil seal (LH)

**Transaxle case oil seal (RH) removal steps**

- Transfer assembly
- 2. V ring

<<A>> >>B<< >>A<< 3. Transaxle case oil seal (RH)

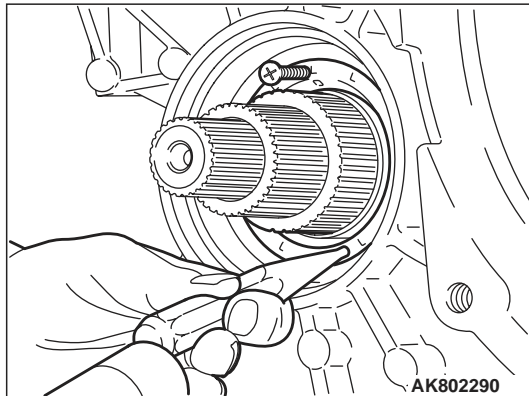
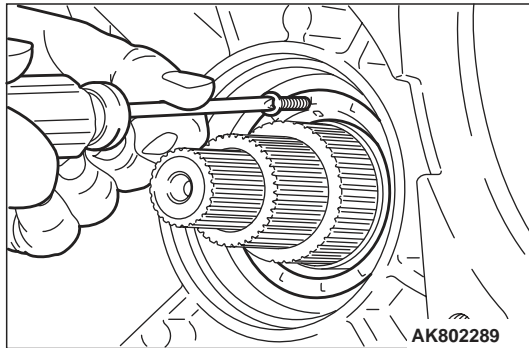
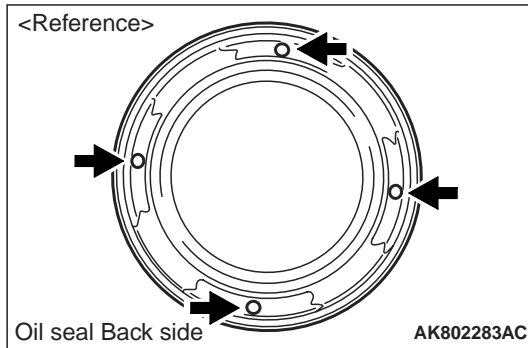
**Required Special Tools:**

- MB992310: Oil seal installer
- MB992311: Oil seal guide
- MB992312: Oil seal installer
- MB992313: Oil seal guide
- MB992314: V ring guide

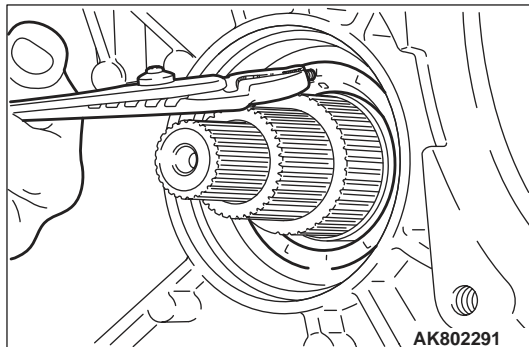
## REMOVAL SERVICE POINTS

### <<A>> TRANSAXLE CASE OIL SEAL (LH)/TRANSAXLE CASE OIL SEAL (RH) REMOVAL

1. Insert the tapping screw ( $\phi$  3 mm [0.1 inch]) to one of four hollows (round shape) on the oil seal by turning it 2 or 3 times.



2. Tap the opposite side of the inserted tapping screw using a knock pin punch to press in the oil seal approximately 1 mm (0.04 inch).

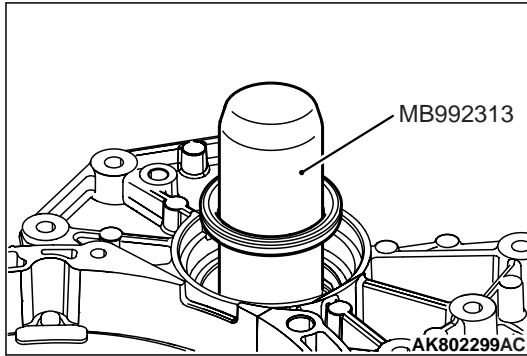


3. Hold the inserted tapping screw with pliers or similar tools, and remove the oil seal.

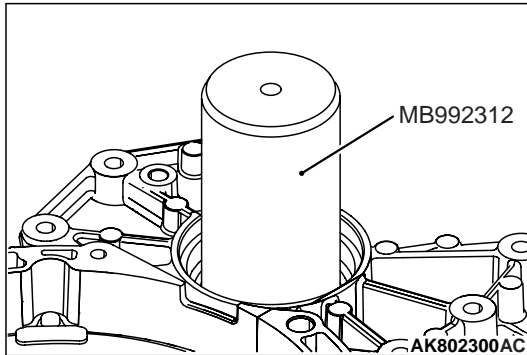
*NOTE: If the transaxle case oil seal (RH) is replaced, the V-ring must also be replaced.*

**INSTALLATION SERVICE POINTS****>>A<< TRANSAXLE CASE OIL SEAL (RH) INSTALLATION**

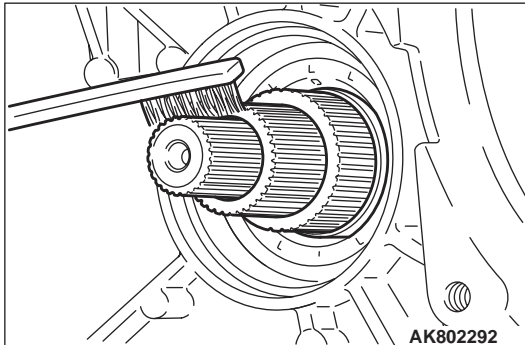
1. Apply the transaxle oil to the oil seal guide (special tool: MB992313). Insert the oil seal to oil seal guide (special tool: MB992313).



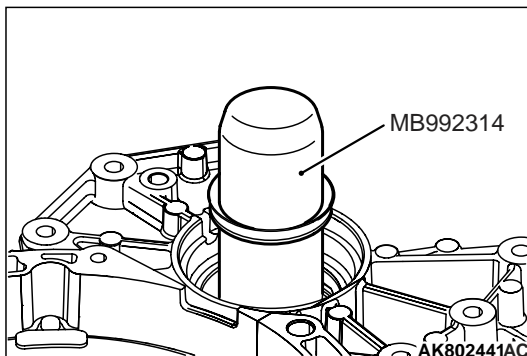
2. Use special tool oil seal installer (special tool: MB992312) to install the oil seal to the transaxle case.

**>>B<< V RING INSTALLATION**

1. Clean the spline with a brush or the like.

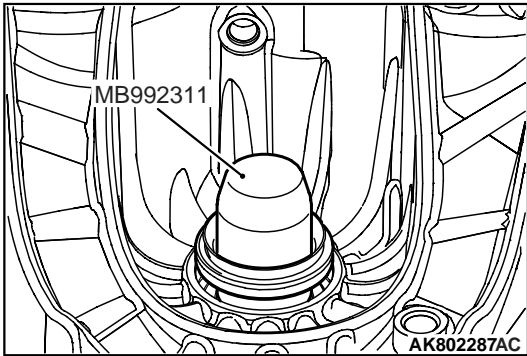


2. Apply the transaxle oil to the V ring guide (special tool: MB992314). Insert the V ring to V ring guide (special tool: MB992314), and install the V ring to the transaxle case.
3. Check that the V ring is installed securely.

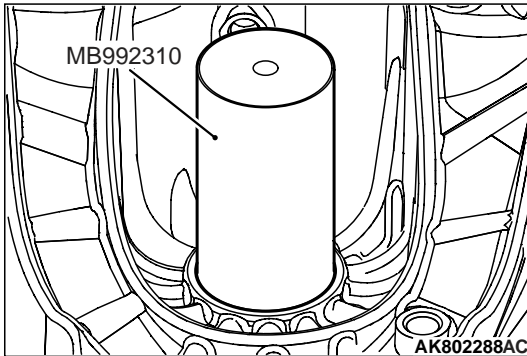


### >>C<< TRANSAXLE CASE OIL SEAL (LH) INSTALLATION

1. Apply the transaxle oil to the oil seal guide (special tool: MB992311). Insert the oil seal to oil seal guide (special tool: MB992311).



2. Use special tool oil seal installer (special tool: MB992310) to install the oil seal to the transaxle case.



## OIL COOLER

### REMOVAL AND INSTALLATION

M1225010400381

#### **CAUTION**

Do not refill the fluid when replacing the transaxle assembly and the oil cooler with new ones at the same time.

#### NOTE:

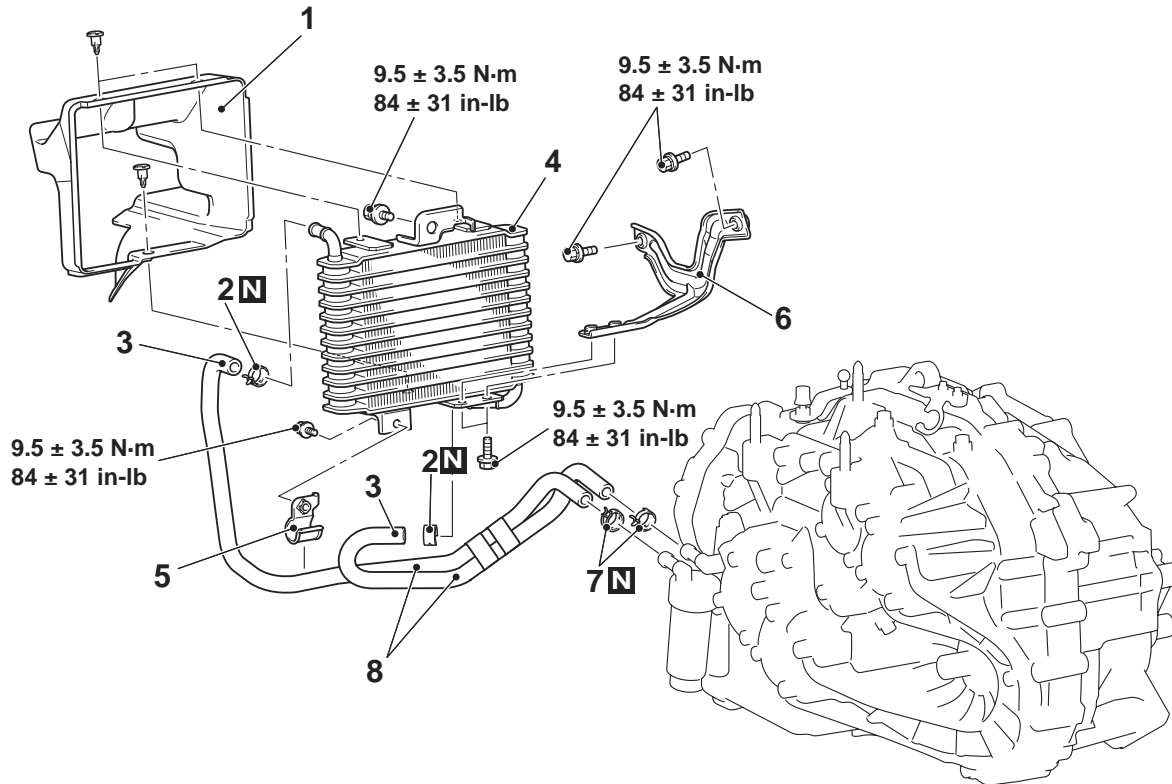
- The new transaxle assembly is filled with 7.6 dm<sup>3</sup> (8.0 qt) of the fluid (including the oil cooler).



- The transaxle assembly has a sealed structure, and the fluid does not drain out from parts other than the oil cooler hose.

**Pre-removal and Post-installation Operation**

Front bumper and radiator grille assembly removal and installation.



AC705841AJ

- >>A<<
- Removal steps**
- Transmission fluid draining and refilling (Refer to P.22-171.)
  - 1. Oil cooler duct
  - 2. Hose clip
  - 3. Oil cooler hose assembly connection

- Removal steps (Continued)**
4. Oil cooler assembly
  5. Hose clamp
  6. Oil cooler bracket
  7. Hose clip
  8. Oil cooler hose assembly

**INSTALLATION SERVICE POINT****>>A<< TRANSMISSION FLUID REFILLING****⚠ CAUTION**

Refill 6.1 dm<sup>3</sup> (6.4 qt) of the transmission fluid.

*NOTE: The fluid capacity of the oil cooler assembly and the oil cooler hose assembly is 0.6 dm<sup>3</sup> (0.6 qt).*

**⚠ CAUTION**

- If the oil cooler is repaired, fill new fluid and check the transmission fluid level. (Refer to P.22-170.)
- When the oil cooler is not repaired, the drained fluid can be reused if it is between the replacement intervals.

# OIL FILTER

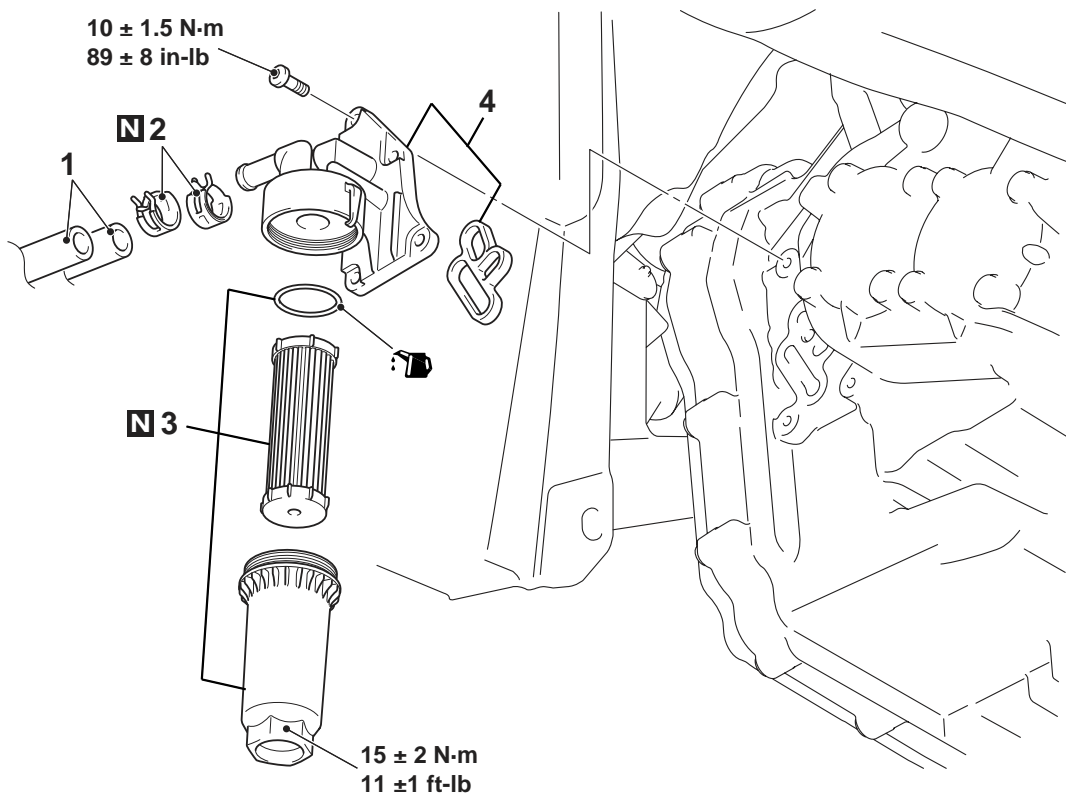
## REMOVAL AND INSTALLATION

M1225028600238

### CAUTION

If a fluid leakage is present in the area around the oil filter bracket, clean around the oil filter bracket. After cleaning, warm up the engine. Only if a fluid leakage is present in the area around the oil filter bracket again, replace the oil filter bracket assembly.

**Pre-removal and Post-installation Operation**  
 Engine Room Side Cover <LH>.



AC807228AK

<<A>> >>B<<

- Removal steps**
- Transmission fluid draining and refilling (Refer to P.22-171.)
  - 1. Oil cooler hose assembly connection

- Removal steps (Continued)**
- 2. Hose clip
  - 3. Oil filter case assembly
  - 4. Oil filter bracket assembly
- >>A<<

### REMOVAL SERVICE POINT

#### <<A>> TRANSMISSION FLUID DRAINING

Drain the fluid in the transaxle assembly and the oil cooler.

### INSTALLATION SERVICE POINTS

#### >>A<< OIL FILTER BRACKET ASSEMBLY INSTALLATION

- 1. Completely degrease the oil filter bracket assembly installation surface on the transaxle side.

2. Remove the gasket from the oil filter bracket assembly, and completely degrease the groove of the oil filter bracket assembly (gasket installation area) and the gasket. Then, install the gasket to the groove of the oil filter bracket assembly.
3. Tighten the screws to the specified torque.  
**Tightening torque:  $10 \pm 1.5$  N·m ( $89 \pm 8$  in-lb)**

### >>B<< TRANSMISSION FLUID REFILLING

#### CAUTION

**Refill  $6.2$  dm<sup>3</sup> (6.6 qt) of the transmission fluid.**

*NOTE: The fluid capacity of the oil cooler assembly and the oil cooler hose is  $0.6$  dm<sup>3</sup> (0.6 qt), and the fluid capacity of the oil filter case assembly is  $0.1$  dm<sup>3</sup> (0.1 qt).*

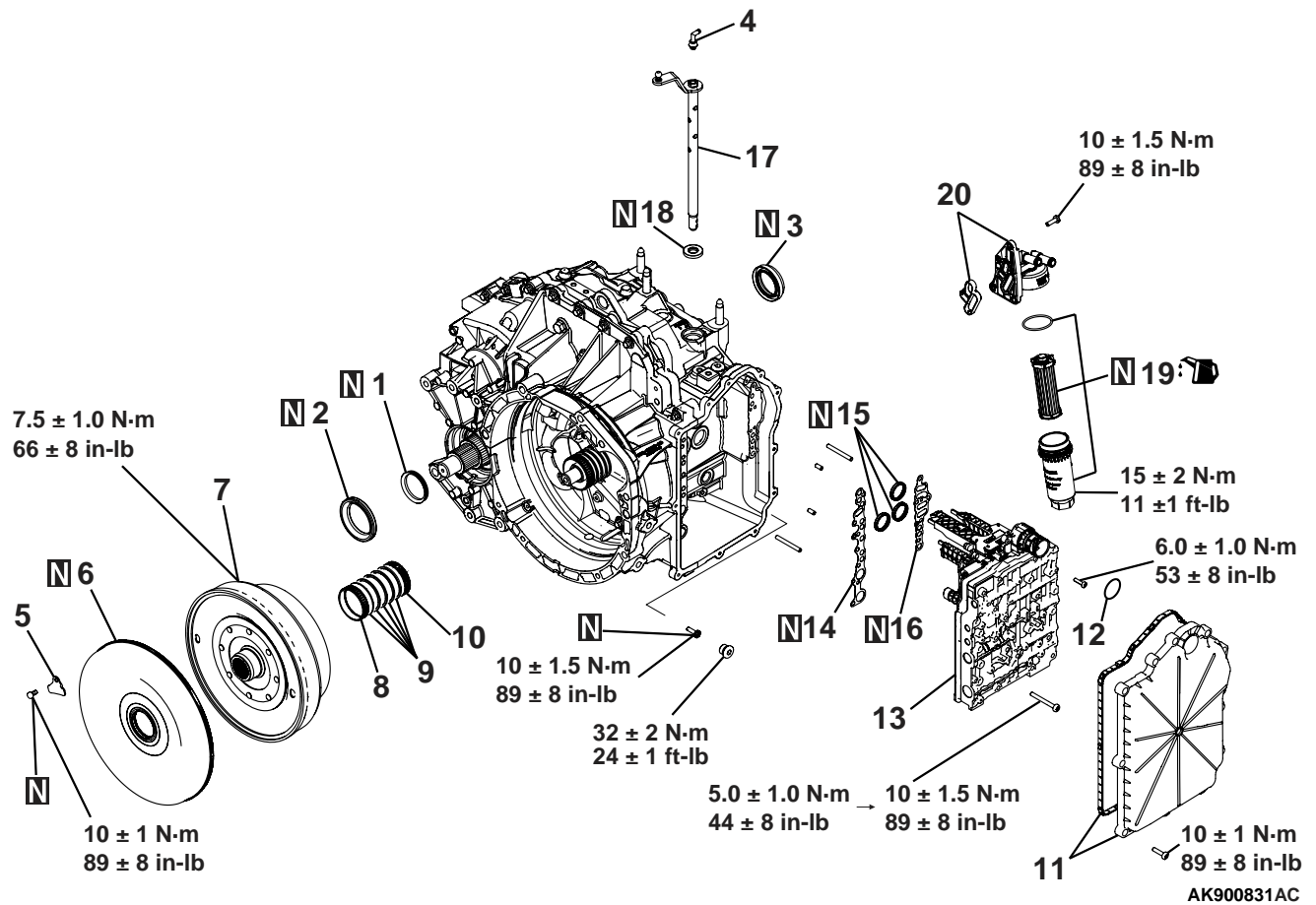
#### CAUTION

- If the fluid leakage from the oil filter is repaired, fill new fluid and check the transmission fluid level. (Refer to [P.22-170.](#))
- When the oil filter is replaced, the drained fluid can be reused if it is between the replacement intervals.

# TRANSAXLE <OVERHAUL>

## DISASSEMBLY AND REASSEMBLY

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### Disassembly steps

- |       |       |                                 |
|-------|-------|---------------------------------|
| <<A>> | >>K<< | 1. V ring                       |
| <<A>> | >>J<< | 2. Transaxle case oil seal (RH) |
| <<A>> | >>I<< | 3. Transaxle case oil seal (LH) |
| <<B>> | >>H<< | 4. Breather                     |
| <<B>> | >>H<< | 5. Seal cover bracket           |
| <<C>> | >>G<< | 6. Seal cover                   |
|       | >>F<< | 7. Clutch assembly              |
|       | >>E<< | 8. Needle roller bearing        |
|       |       | 9. Seal ring                    |
|       |       | 10. Needle roller bearing       |

### Disassembly steps

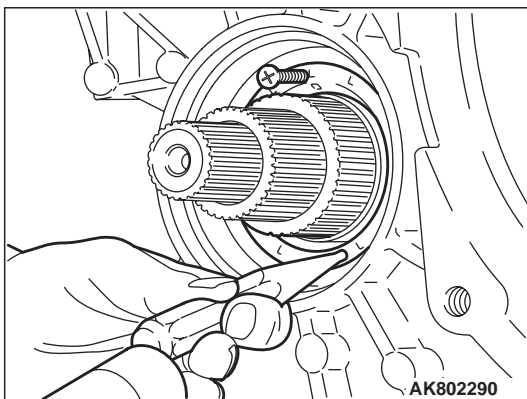
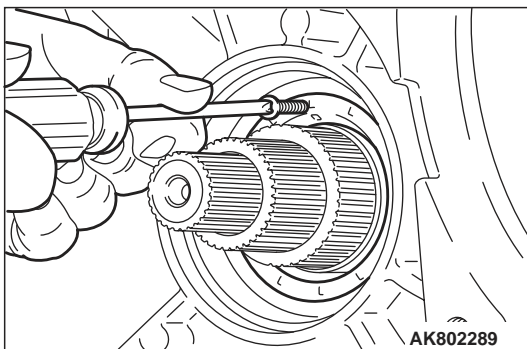
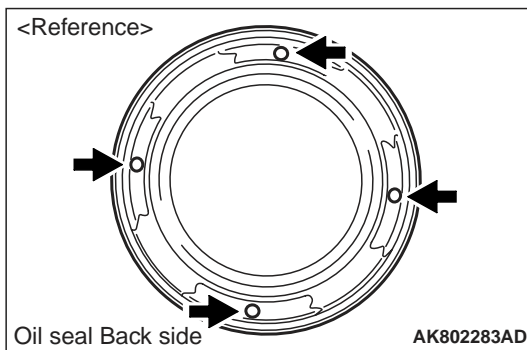
- |       |       |                                 |
|-------|-------|---------------------------------|
| <<D>> | >>D<< | 11. Oil pan assembly            |
| <<E>> | >>C<< | 12. O-ring                      |
| <<F>> | >>C<< | 13. Mechatronic assembly        |
|       | >>C<< | 14. Gasket A                    |
|       | >>C<< | 15. Gasket B                    |
|       | >>C<< | 16. Gasket C                    |
|       | >>B<< | 17. Manual control shaft        |
|       | >>A<< | 18. Oil seal                    |
|       |       | 19. Oil filter case assembly    |
|       |       | 20. Oil filter bracket assembly |

**CAUTION**

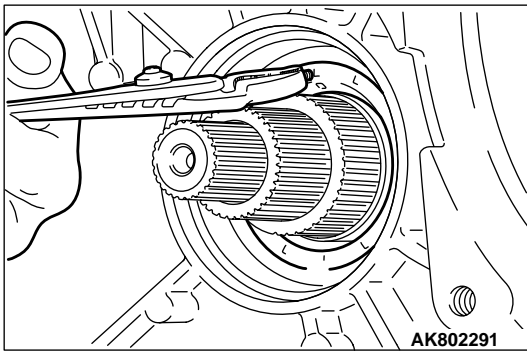
- When installing or removing screws, use magnetic tools to prevent them from falling out.
- If debris or parts enter into the transaxle case, pay attention to the following to replace the transaxle assembly:
- When the mechatronic assembly is replaced, reprogram the ECU and carry out the following Teach-In (Refer to P.22-3).
- When the clutch assembly is replaced, the following Teach-In must be carried out (Refer to P.22-3).

**REMOVAL SERVICE POINTS****<<A>> TRANSAXLE CASE OIL SEAL (RH) / TRANSAXLE CASE OIL SEAL (LH) REMOVAL**

1. Insert the tapping screw ( $\phi$  3 mm [0.1 inch].) to one of four hollows (round shape) on the oil seal by turning it 2 or 3 times.

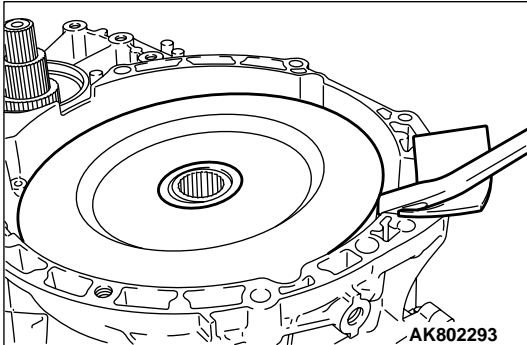


2. Tap the opposite side of the inserted tapping screw using a knock pin punch to press in the oil seal approximately 1 mm (0.04 inch).



3. Hold the inserted tapping screw with pliers or similar tools, and remove the oil seal.

*NOTE: If the transaxle case oil seal (RH) is replaced, the V ring must also be replaced.*

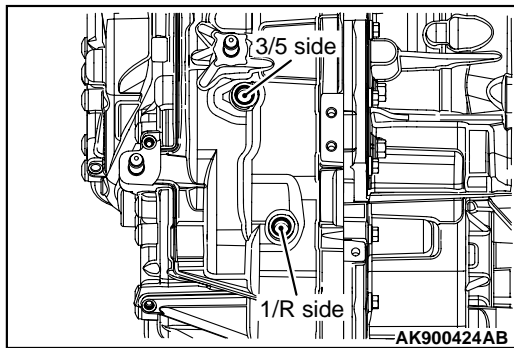


### <<B>> SEAL COVER BRACKET / SEAL COVER REMOVAL

1. Remove the seal cover bracket.

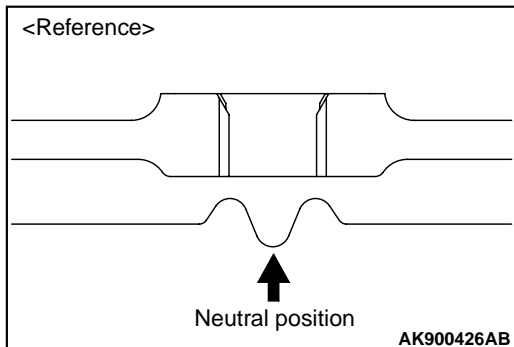
#### **CAUTION**

- Before removing the seal cover, securely remove metal debris including dusts by air spray.
  - Before removing the seal cover, use the ladder sheet and so forth for the supporting point not to damage the clutching housing.
2. Remove the seal cover from the transaxle, using the tool such as crowbar.



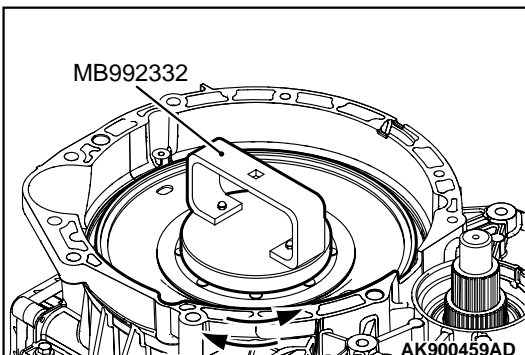
### <<C>> CLUTCH ASSEMBLY REMOVAL

1. Remove the poppet spring assembly 1/R and poppet spring assembly 3/5.



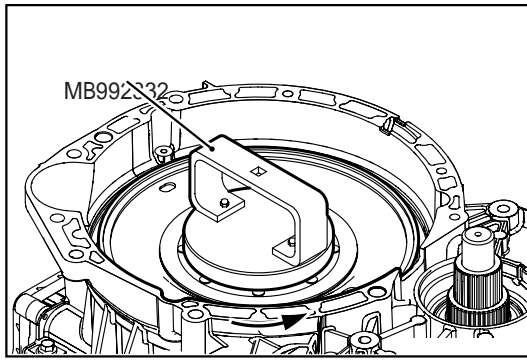
2. Using a driver, move the lever to the neutral position.

*NOTE: For checking the neutral position, turn the clutch assembly spline by hand to check whether the friction exists or not.*



3. Align the four pins of the special tool, clutch remover & installer (MB992332), with the four holes of the clutch assembly to set the special tool, clutch remover & installer (MB992332), to the clutch assembly.
4. Rotate the clutch assembly in the axial direction to insert the pins into all four clutch disks in the clutch assembly.

*NOTE: When the pins are inserted into all four clutch disks, the clutch assembly cannot easily be rotated in the axial direction.*

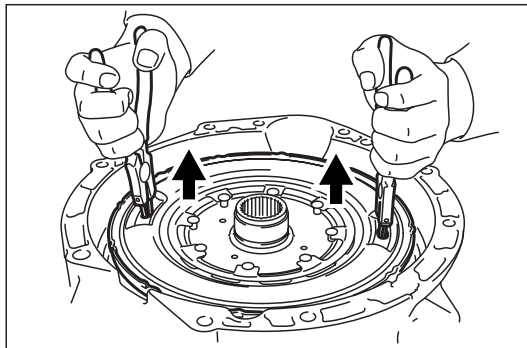


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5. Rotate the clutch assembly counterclockwise six to seven times to loosen the clutch assembly.

**⚠ CAUTION**

- When lifting the clutch assembly, the tool must not hook the clutch disk.
- The clutch assembly might possibly have the needle bearing. Pay attention to it.
- Carefully handle the clutch assembly to place it on the clean place.



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6. Lift the clutch assembly in the vertical direction to remove the clutch assembly from the transaxle assembly.

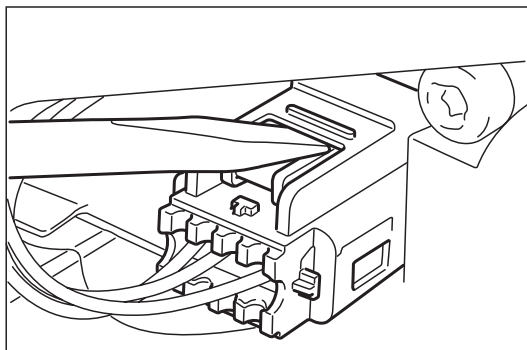
### <<D>> OIL PAN ASSEMBLY REMOVAL

**⚠ CAUTION**

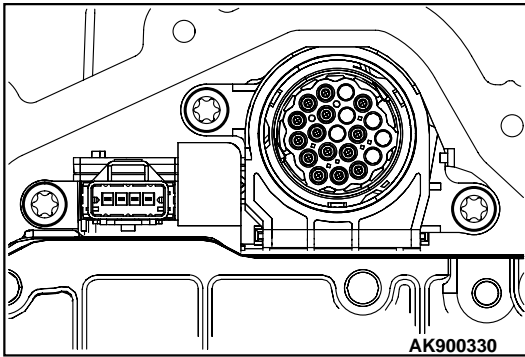
When removing the oil pan assembly, pay attention to avoid damage to the connector and the O-ring between the oil pan assembly and the connector.

### <<E>> MECHATRONIC ASSEMBLY REMOVAL

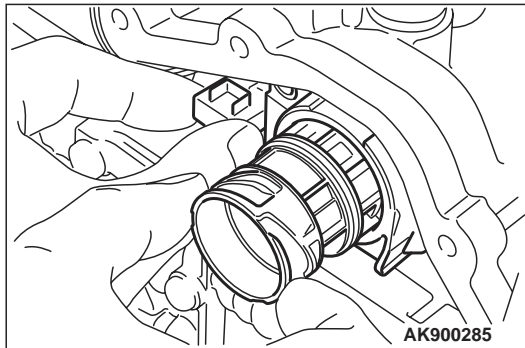
1. Remove the connector carefully.



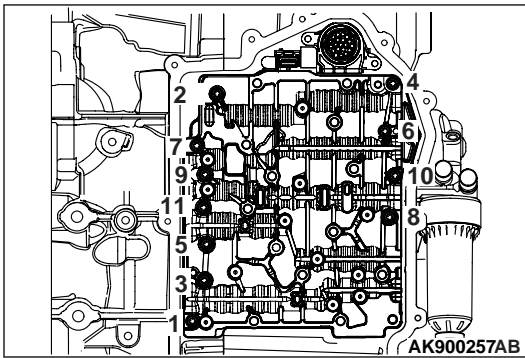
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2. Remove the three bolts.

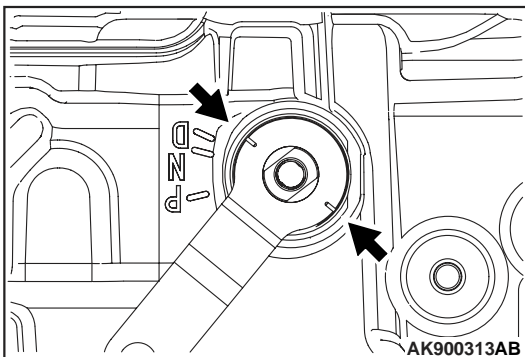


3. Pull carefully at the connector to loose by approx. 2 - 3 mm (0.08 - 0.12 inch).



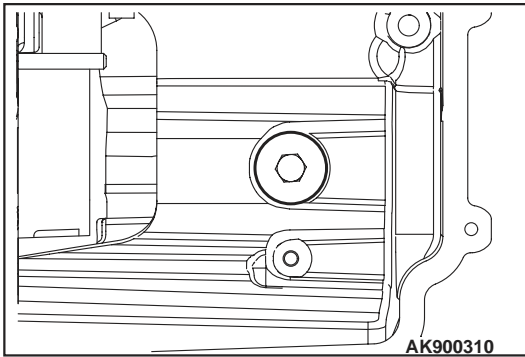
4. Remove the eleven bolts as shown and remove the mechatronic assembly carefully.

**<<F>> MANUAL CONTROL SHAFT REMOVAL**

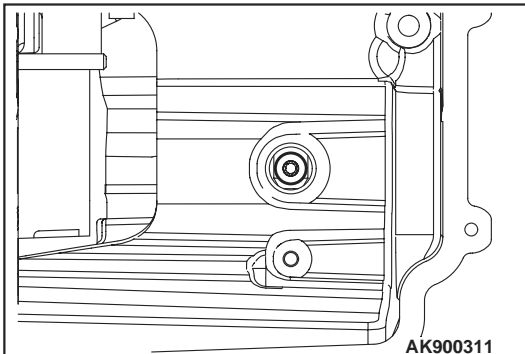


1. Move the park manual outer lever from D in clock direction to the service position as shown.





2. Remove the plug.



3. When removing the screw located behind the plug, pay attention to the screw not to fall in the transaxle case.

4. Remove the manual control shaft carefully.

## INSTALLATION SERVICE POINTS

### >>A<< OIL FILTER BRACKET ASSEMBLY INSTALLATION

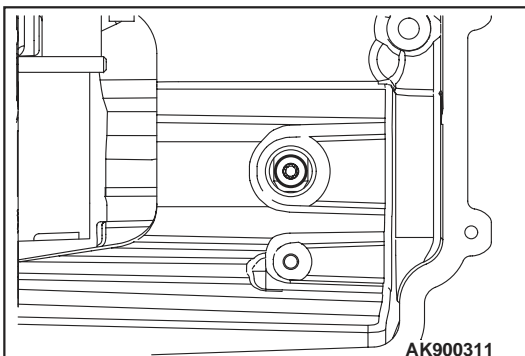
1. Completely degrease the oil filter bracket assembly installation surface on the transaxle side.
2. Remove the gasket from the oil filter bracket assembly, and completely degrease the groove of the oil filter bracket assembly (gasket installation area) and the gasket. Then, install the gasket to the groove of the oil filter bracket assembly.
3. Tighten the screws to the specified torque.

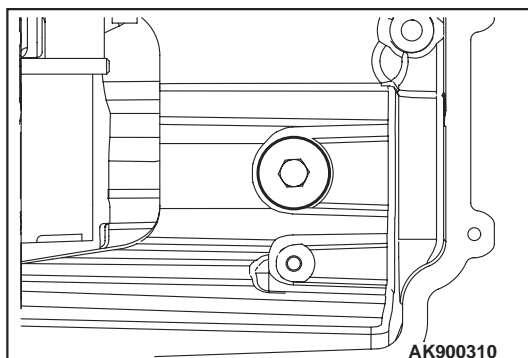
**Tightening torque:  $10 \pm 1.5$  N·m ( $89 \pm 8$  in-lb)**

### >>B<< MANUAL CONTROL SHAFT INSTALLATION

1. Install the manual control shaft carefully and tighten the screw to the specified torque.

**Tightening torque:  $10 \pm 1.5$  N·m ( $89 \pm 8$  in-lb)**



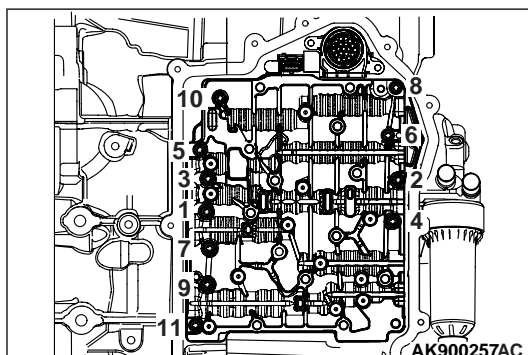
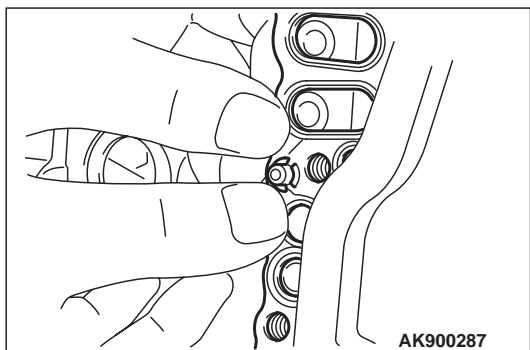
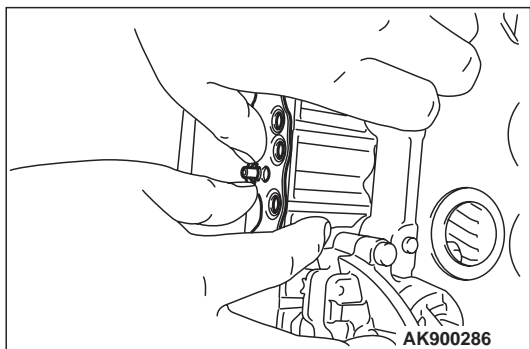


2. Tighten the plug to the specified torque.

**Tightening torque:  $32 \pm 2$  N·m ( $24 \pm 1$  ft·lb)**

### >>C<< GASKET A / GASKET C / MECHATRONIC ASSEMBLY INSTALLATION

1. As shown in the illustration, fix the gasket to the transaxle case by pushing the gasket at the area to which the gasket dowel pin is inserted.

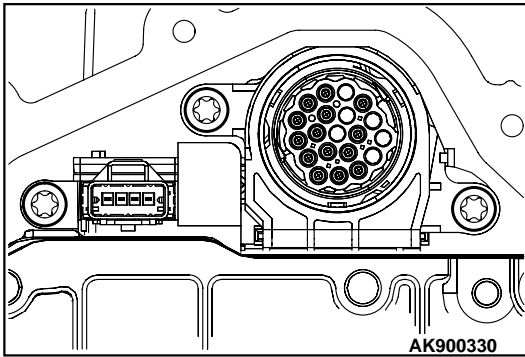


2. Install the mechatronic assembly carefully and tighten the mechatronic assembly mounting bolts to the specified torque in the order of number shown in the figure.

**Tightening torque:  $5.0 \pm 1.0$  N·m ( $44 \pm 8$  in·lb)**

3. Tighten again the mechatronic assembly mounting bolts to the specified torque in the order of number shown in the figure.

**Tightening torque:  $10 \pm 1.5$  N·m ( $89 \pm 8$  in·lb)**



4. Tighten the bolts to the specified torque.

**Tightening torque:  $6.0 \pm 1.0$  N·m ( $53 \pm 8$  in·lb)**

### >>D<< OIL PAN ASSEMBLY INSTALLATION

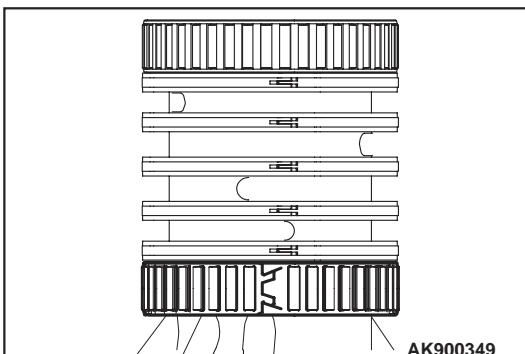
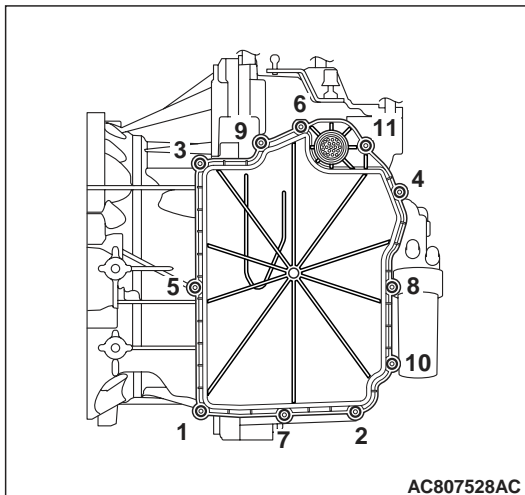
1. Completely degrease the oil pan assembly installation surface on the transaxle side.
2. Remove the gasket from the oil pan assembly, and completely degrease the groove of the oil pan assembly (gasket installation area) and the gasket. Then, install the gasket to the groove of the oil pan assembly.

#### **CAUTION**

**When installing the oil pan assembly, pay attention to avoid damage to the connector and the O-ring installed to the connector.**

3. Tighten the screws to the specified torque in the order shown in the figure.

**Tightening torque:  $10 \pm 1$  N·m ( $89 \pm 8$  in·lb)**



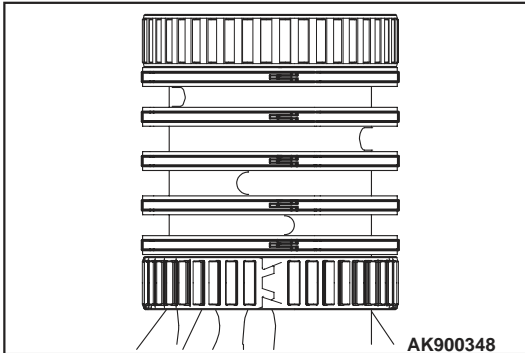
### >>E<< NEEDLE ROLLER BEARING INSTALLATION

1. Insert the needle roller bearing and ensure that the lock is closed completely.

## &gt;&gt;F&lt;&lt; SEAL RING INSTALLATION

**⚠ CAUTION****Do not expand the seal ring more than necessary.**

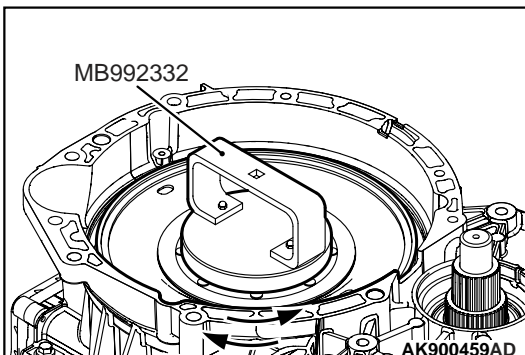
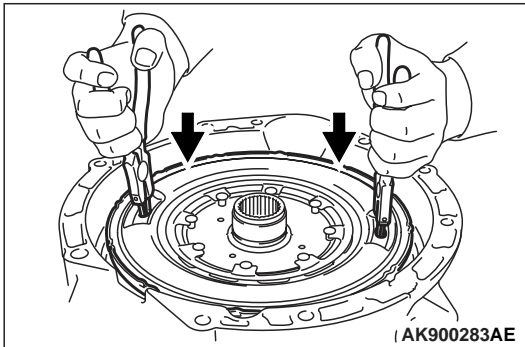
1. Insert the seal ring.
2. Ensure that the lock is closed completely and it is seated flat into its position.



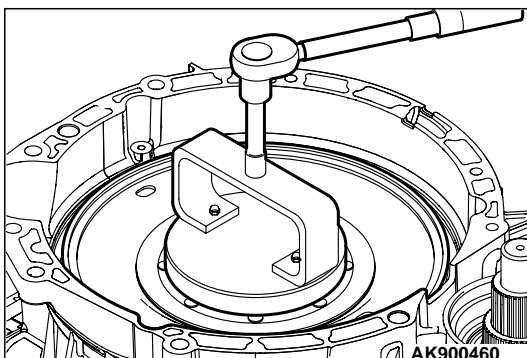
## &gt;&gt;G&lt;&lt; CLUTCH ASSEMBLY INSTALLATION

**⚠ CAUTION****Pay attention to the clutch assembly not to touch the seal ring and needle bearing.**

1. Put down the clutch assembly in the vertical direction to carefully install it.



2. Align the four pins of the special tool, clutch remover & installer (MB992332), with the four holes of the clutch assembly to set the special tool, clutch remover & installer (MB992332), to the clutch assembly.
3. Rotate the clutch assembly in the axial direction to insert the pins into all four clutch disks in the clutch assembly.



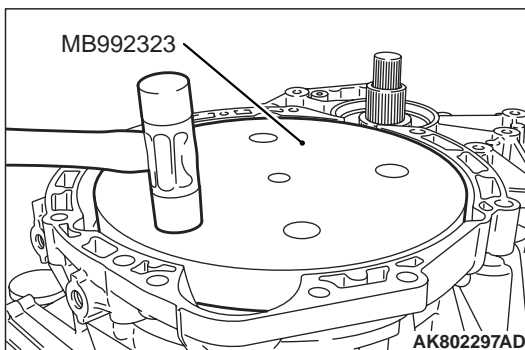
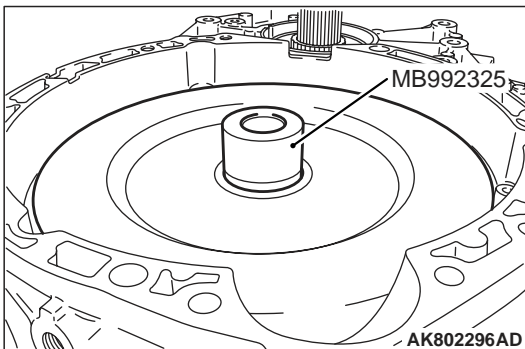
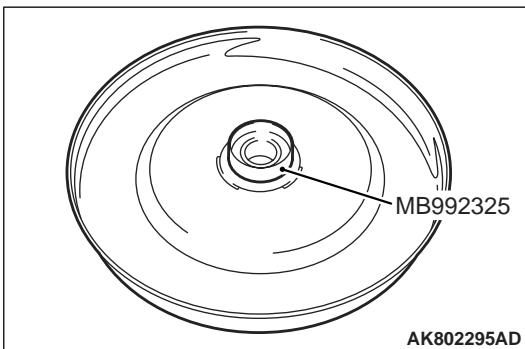
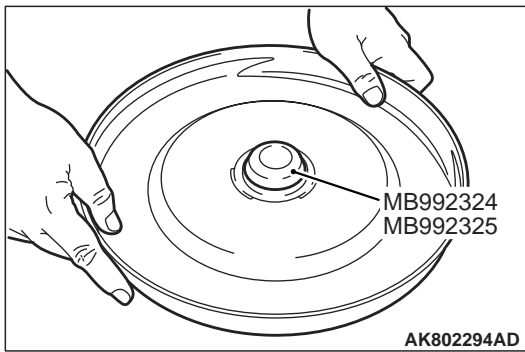
4. Rotate the clutch assembly clockwise to install it. Tighten it to the specified torque.

**Tightening torque: 7.5 ± 1.0 N·m (66 ± 8 in-lb)**

**>>H<< SEAL COVER BRACKET / SEAL COVER  
INSTALLATION**

1. Install the seal cover to the following special tool.

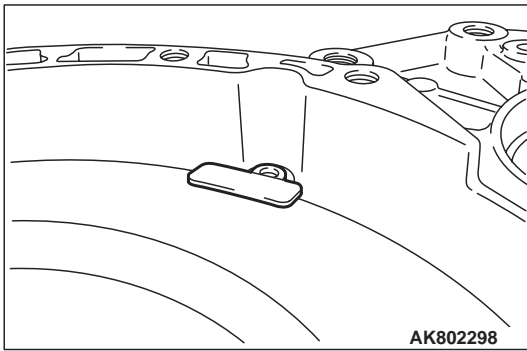
- Seal cover guide A (MB992324)
- Seal cover guide B (MB992325)



2. Remove the special tool, Seal Cover Guide A (MB992324), from Seal Cover Guide B (MB992325).

3. Install the seal cover to the transaxle. Remove the special tool, Seal Cover Guide B (MB992325).

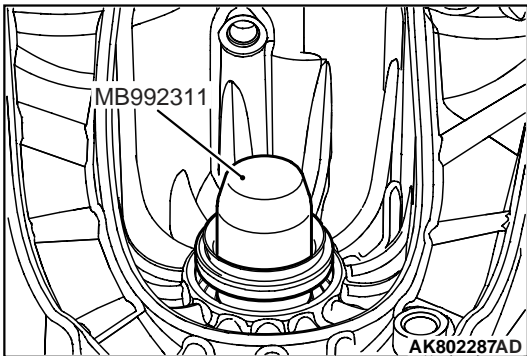
4. Use special tool Seal cover installer (MB992323) to install the seal cover to the transaxle.



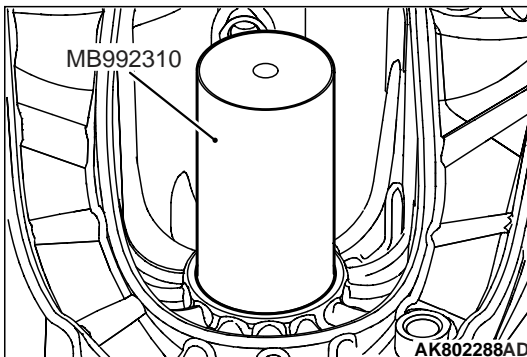
5. Install the seal cover bracket.  
Confirm that it is not shaky.
6. Tighten the seal cover bracket mounting bolt to the specified torque.

**Tightening torque: 10 ± 1 N·m (89 ± 8 in-lb)**

**>>I<< TRANSAXLE CASE OIL SEAL (LH) INSTALLATION**

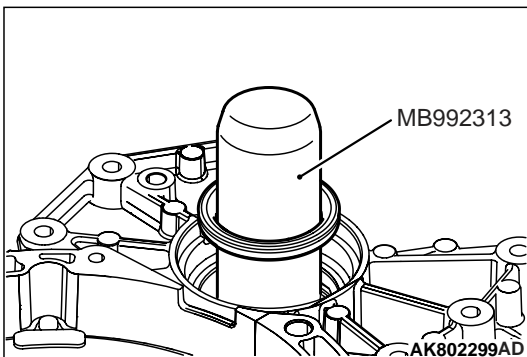


1. Apply the transaxle oil to the special tool oil seal guide (MB992311).  
Insert the special tool oil seal guide (MB992311).  
*NOTE: Do not use special tool oil seal guide (MB992311) without first removing the snap ring from the output shaft.*

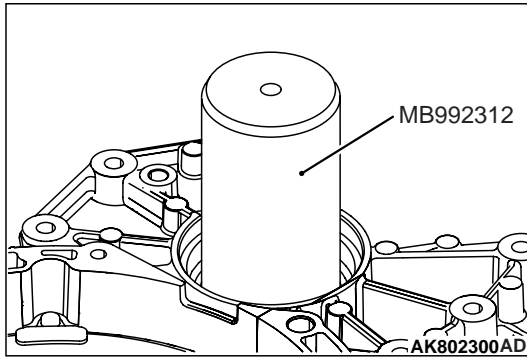


2. Use special tool oil seal installer (MB992310) to install the oil seal to the transaxle.

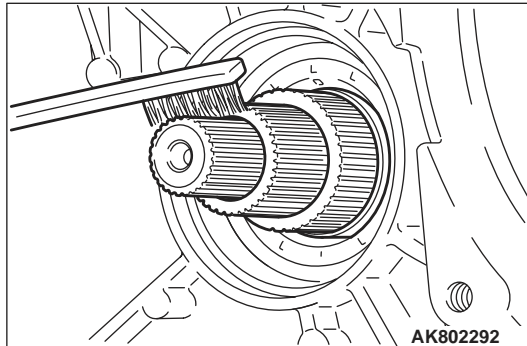
**>>J<< TRANSAXLE CASE OIL SEAL (RH) INSTALLATION**



1. Apply the transaxle oil to the special tool oil seal guide (MB992313).  
Insert the oil seal to the special tool oil seal guide (MB992313).

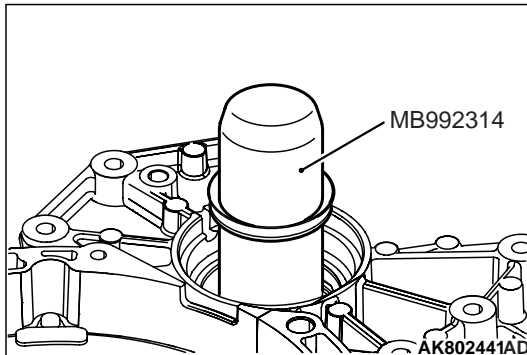


2. Use special tool oil seal installer (MB992312) to install the oil seal to the transaxle.



### >>K<< V RING INSTALLATION

1. Clean the spline with a brush or the like.



2. Apply the transaxle oil to the special tool V ring guide (MB992314).  
Insert the V ring to the special tool V ring guide (MB992314).
3. Check that the V ring is installed securely.