MITSUBISHI MOTORS

SERVICE BULLETIN

GLOBAL AFTER SALES OFFICE, MITSUBISHI MOTORS CORPORATION

PURPOSE : INFORMATION	ISSUE NO. : MSB-11E22-001	DATE : 2011-07-20
SUBJECT : TC-SST: MECHATRONIC AND CLUTCH ASSEMBLIES SERVICE PROCEDURES		<MODEL> (EUR) For vehicles with TC-SST (GS41, GS44S, GS41-EVO, GS45X) <M/Y> ALL
GROUP : MANUAL TRANSMISSION		

1. Description:

Service procedures for the TC-SST (Twin Clutch-Sport Shift Transmission) mechatronic assembly and clutch assembly have been established for the applicable Workshop Manuals. This Service Bulletin contains the additional descriptions.

2. Details:

Title	Page in Attached Sheet 2
SPECIAL TOOLS	22-1
TROUBLESHOOTING	22-2
ON-VEHICLE SERVICE	22-106
TRANSMISSION ASSEMBLY	22-108
OIL PAN	22-109
MECHATRONIC ASSEMBLY, MANUAL CONTROL LEVER	22-111
TRANSMISSION CASE OIL SEAL	22-114
OIL COOLER	22-117
OIL FILTER	22-118
TRANSMISSION <OVERHAUL>	22-119

Diagnosis code No.	Monitoring unit No.	Diagnosis Item	Judgment drive cycle	Reference page
U0001*	083	Bus off	1	P.22-92
U0100*	116	Engine time-out error	1	P.22-92
U0103	123	Shift lever time-out error	1	P.22-93
U0121	122	ASC time-out error	1	P.22-93
U0136	209	AWC <LANCER EVOLUTION> or ACD <Except LANCER EVOLUTION> time-out error	1	P.22-94
U0141	120	ETACS time-out error	1	P.22-94

DIAGNOSIS CODE PROCEDURES

Code No.P0630: Vehicle Identification Number (VIN) Malfunction

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the chassis number is normal.
(TC-SST-ECU receives chassis number information from the engine-ECU via CAN, and write to TC-SST-ECU.)

DIAGNOSIS CODE SET CONDITIONS
The chassis number is determined to be written abnormally.

PROBABLE CAUSES
- The CAN bus line is defective.
- Malfunction of engine-ECU
- Malfunction of TC-SST-ECU

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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. M.U.T.-III diagnosis code
Check if the engine-related diagnosis code No.P0630 is set.

Q: Is the diagnosis code set?
YES : Perform the relevant troubleshooting.
NO : Go to Step 3.

STEP 3. Check whether the diagnosis code is reset.

Q: Is diagnosis code No.P0630 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P0701: EEPROM System (Malfunction)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS

The EEPROM writing data is determined to be abnormal.

PROBABLE CAUSES

- Malfunction of TC-SST-ECU

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics

Use M.U.T.-III to perform the CAN bus diagnosis.

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.

Q: Is diagnosis code No.P0701 set?

YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P0702: Internal control module, monitoring processor system (Malfunction)

⚠ CAUTION

- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION

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

DIAGNOSIS CODE SET CONDITIONS

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

PROBABLE CAUSES

- Malfunction of TC-SST-ECU

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics

Use M.U.T.-III to perform the CAN bus diagnosis.

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.22-97.

Q: Is the check result normal?

YES : Go to Step 3.
NO : Repair the TC-SST-ECU power supply circuit. (Refer to P.22-97.) After repairing the power supply circuit, go to Step 3.

STEP 3. Check whether the diagnosis code is reset.

Q: Is diagnosis code No.P0702 set?

YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P0712: TC-SST-ECU temperature sensor system (Output low range out)

⚠ CAUTION

- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION

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

DIAGNOSIS CODE SET CONDITIONS

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

PROBABLE CAUSES
- Malfunction of TC-SST-ECU

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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

Q: Is diagnosis code No.P0712 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P0713: TC-SST-ECU temperature sensor system (Output high range out)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
The output of the ECU temperature is determined to be too high.

PROBABLE CAUSES
- Malfunction of TC-SST-ECU

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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

Q: Is diagnosis code No. P0713 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.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 diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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

Q: Is diagnosis code No. P0715 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.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 diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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 diagnosis code is reset.
(1) Erase the diagnosis code.
(2) Drive the vehicle at 50 km/h or more.
(3) Check that the diagnosis code is reset.

Q: Is diagnosis code No.P0716 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

STEP 4. Check whether the diagnosis code is reset.
(1) Erase the diagnosis code.

⚠ 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 diagnosis code is reset.

Q: Is diagnosis code No.P0716 set?
YES : Go to Step 5.
NO : Intermittent malfunction.

STEP 5. M.U.T.-III Teach-In
(1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table P.22-105).)
(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.22-105).)

Q: Which is displayed, "Yes" or "No"?
"Yes" : Replace the mechatronic assembly. (Refer to P.22-111.)
"No" : Replace the transmission assembly.

Code No.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 diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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

Q: Is diagnosis code No.P0717 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P0725: Engine speed signal abnormality

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
The engine speed signal from the engine-ECU is determined to be abnormal.

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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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. M.U.T.-III diagnosis code
Check the engine diagnosis code.

Q: Is the diagnosis code set?
YES : Perform the relevant troubleshooting.
NO : Go to Step 3.

STEP 3. Check whether the diagnosis code is reset.
After 10 or more seconds have passed with the engine idle status, check that the diagnosis code is reset.

Q: Is diagnosis code No.P0725 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P0746: Line Pressure Solenoid System (Drive current range out)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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

Q: Is diagnosis code No.P0746 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P0753: Shift Select Solenoid 1 System (Open circuit)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
The shift select solenoid 1 circuit is determined to be open.

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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.

Q: Is diagnosis code No.P0753 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P0758: Shift Select Solenoid 2 System (Open circuit)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
The shift select solenoid 2 circuit is determined to be open.

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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.

Q: Is diagnosis code No.P0758 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P0776: Clutch Cooling Flow Solenoid System (Drive current range out)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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

Q: Is diagnosis code No.P0776 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P0777: Clutch Cooling Flow Solenoid System (Stuck)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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 diagnosis code.
(2) Carry out the Item No. 3 (Teach-In) : Line pressure Test. (Refer to Special Function (Teach-In Reference Table P.22-105).)
(3) With the engine idle status, check that the diagnosis code is reset.

Q: Is the diagnosis code 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.22-111.)

STEP 5. Check whether the diagnosis code is reset.
(1) Erase the diagnosis code.
(2) With the engine idle status, check that the diagnosis code is reset.

Q: Is diagnosis code No.P0777 set?
YES : Replace the mechatronic assembly. (Refer to P.22-119.) Then, go to Step 6.
NO : Intermittent malfunction.

STEP 6. Check whether the diagnosis code is reset.
(1) Erase the diagnosis code.
(2) With the engine idle status, check that the diagnosis code is reset.

Q: Is diagnosis code No.P0777 set?
YES : Replace the transmission assembly.
NO : This diagnosis is complete.

Code No.P0841: Clutch 1 Pressure Sensor System (Poor performance)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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. M.U.T.-III diagnosis code
Check the engine diagnosis code.

Q: Is the diagnosis code 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 diagnosis code is reset.
(1) Erase the diagnosis code.
(2) Gradually accelerate the vehicle.
(3) Accelerate the vehicle with the accelerator pedal fully opened.
(4) Check that the diagnosis code is reset.

Q: Is diagnosis code No.P0841 set?
YES : Replace the clutch assembly. (Refer to P.22-119.)
NO : Intermittent malfunction.

Code No.P0842: Clutch 1 Pressure Sensor System (Output low range out)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
The output of the clutch 1 pressure sensor is too low.

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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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

Q: Is diagnosis code No.P0842 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P0843: Clutch 1 Pressure Sensor System (Output high range out)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
The output of the clutch 1 pressure sensor is too high.

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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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

Q: Is diagnosis code No.P0843 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P0846: Clutch 2 Pressure Sensor System (Poor performance)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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. M.U.T.-III diagnosis code
Check the engine diagnosis code.

Q: Is the diagnosis code 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 diagnosis code is reset.
(1) Erase the diagnosis code.

(2) Gradually accelerate the vehicle.
(3) Accelerate the vehicle with the accelerator pedal fully opened.
(4) Check that the diagnosis code is reset.

Q: Is diagnosis code No.P0846 set?
YES : Replace the clutch assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P0847: Clutch 2 Pressure Sensor System (Output low range out)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
The output of the clutch 2 pressure sensor is too low.

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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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

Q: Is diagnosis code No.P0847 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P0848: Clutch 2 Pressure Sensor System (Output high range out)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
The output of the clutch 2 pressure sensor is too high.

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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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

Q: Is diagnosis code No.P0848 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P0960: Line Pressure Solenoid System (Open circuit)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
The line pressure solenoid circuit is determined to be open.

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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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

Q: Is diagnosis code No.P0960 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P0961: Line Pressure Solenoid System (Overcurrent)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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

Q: Is diagnosis code No.P0961 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P0962: Line Pressure Solenoid System (Short to earth)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
The line pressure solenoid circuit is determined to be short to earth.

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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.

Q: Is diagnosis code No.P0962 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P0963: Line Pressure Solenoid System (Short to power supply)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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

Q: Is diagnosis code No.P0963 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P0964: Clutch Cooling Flow Solenoid System (Open circuit)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
The clutch cooling flow solenoid circuit is determined to be open.

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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.

Q: Is diagnosis code No. P0964 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P0965: Clutch Cooling Flow Solenoid System (Overcurrent)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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

Q: Is diagnosis code No. P0965 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P0966: Clutch Cooling Flow Solenoid System (Short to earth)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
The clutch cooling flow solenoid circuit is determined to be short to earth.

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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.

Q: Is diagnosis code No. P0966 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P0967: Clutch Cooling Flow Solenoid System (Short to power supply)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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

Q: Is diagnosis code No. P0967 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P0968: Shift/Cooling Changeover Solenoid System (Open circuit)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
The shift/cooling changeover solenoid circuit is determined to be open.

PROBABLE CAUSES
- Malfunction of TC-SST-ECU
- Malfunction of shift/cooling changeover solenoid

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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

Q: Is diagnosis code No. P0968 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P0970: Shift/Cooling Changeover Solenoid System (Short to earth)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
The shift/cooling changeover solenoid circuit is determined to be short to earth.

PROBABLE CAUSES
- Malfunction of TC-SST-ECU
- Malfunction of shift/cooling changeover solenoid

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.

Q: Is diagnosis code No. P0970 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P0971: Shift/Cooling Changeover Solenoid System (Short to power supply)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
The shift/cooling changeover solenoid circuit is determined to be short to power supply.

PROBABLE CAUSES
- Malfunction of TC-SST-ECU
- Malfunction of shift/cooling changeover solenoid

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.

Q: Is diagnosis code No. P0971 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P0973: Shift Select Solenoid 1 System (Short to earth)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
The shift select solenoid 1 circuit is determined to be short to earth.

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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.

Q: Is diagnosis code No. P0973 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P0974: Shift Select Solenoid 1 System (Short to power supply)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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

Q: Is diagnosis code No. P0974 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P0976: Shift Select Solenoid 2 System (Short to earth)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
The shift select solenoid 2 circuit is determined to be short to earth.

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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.

Q: Is diagnosis code No. P0976 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P0977: Shift Select Solenoid 2 System (Short to power supply)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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

Q: Is diagnosis code No. P0977 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P1637: EEPROM System (diagnosis code storing malfunction)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
The EEPROM writing data is determined to be abnormal.

PROBABLE CAUSES
- Malfunction of TC-SST-ECU

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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

Q: Is diagnosis code No. P1637 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P1676: Coding incomplete

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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

Q: Is diagnosis code No. P1676 set?
YES : Perform coding (Refer to the "M.U.T.-III operation manual" and perform coding.) or Replace the mechatronic assembly (Refer to P.22-111).
NO : Intermittent malfunction.

Code No.P1802: Shift Lever System (LIN communication malfunction)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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. M.U.T.-III diagnosis code
Check the shift lever diagnosis code.

Q: Is the diagnosis code 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 or short circuit.

Q: Is the check result normal?
YES : Go to Step 5.
NO : Repair the wiring harness.

STEP 5. Check whether the diagnosis code is reset.
10 seconds after turning ON the ignition switch, check that the diagnosis code is reset.

Q: Is diagnosis code No. P1802 set?
YES : Go to Step 6.
NO : This diagnosis is complete.

STEP 6. Replace the shift lever assembly, and check if the diagnosis code is reset.
(1) Replace the shift lever assembly.
(2) Check the diagnosis code.
(3) After 10 or more seconds have passed with the ignition switch ON position, check that the diagnosis code is reset.

Q: Is diagnosis code No. P1802 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P1803: Shift Lever System (CAN, LIN time-out error)

LIN COMMUNICATION SYSTEM CIRCUIT
Refer to P.22-36.

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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. M.U.T.-III diagnosis code
Check the shift lever diagnosis code.

Q: Is the diagnosis code 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 or short circuit.

Q: Is the check result normal?
YES : Go to Step 5.
NO : Repair the wiring harness.

STEP 5. Check whether the diagnosis code is reset.
30 seconds after turning ON the ignition switch, check that the diagnosis code is reset.

Q: Is diagnosis code No. P1803 set?
YES : Replace the shift lever assembly.
NO : Intermittent malfunction.

Code No.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 diagnosis 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.**

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

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

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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.22-97.

Q: Is the check result normal?
YES : Go to Step 3.
NO : Repair the TC-SST-ECU power supply circuit. (Refer to P.22-97.) After repairing the power supply circuit, go to Step 3.

STEP 3. Check whether the diagnosis code is reset.

Q: Is diagnosis code No. P1804 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.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 diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.22-97.

Q: Is the check result normal?
YES : Go to Step 3.
NO : Repair the TC-SST-ECU power supply circuit. (Refer to P.22-97.) After repairing the power supply circuit, go to Step 3.

STEP 3. Check whether the diagnosis code is reset.

Q: Is diagnosis code No. P1805 set?

YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.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 diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.22-97.

Q: Is the check result normal?
YES : Go to Step 3.
NO : Repair the TC-SST-ECU power supply circuit. (Refer to P.22-97.) After repairing the power supply circuit, go to Step 3.

STEP 3. Check whether the diagnosis code is reset.

Q: Is diagnosis code No. P1806 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.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 diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.22-97.

Q: Is the check result normal?
YES : Go to Step 3.
NO : Repair the TC-SST-ECU power supply circuit. (Refer to P.22-97.) After repairing the power supply circuit, go to Step 3.

STEP 3. Check whether the diagnosis code is reset.

Q: Is diagnosis code No. P1807 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P1808: TC-SST-ECU temperature, fluid temperature sensor system (Correlation error)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
The difference of the output between the ECU temperature sensor and fluid temperature sensor is large.

PROBABLE CAUSES
- Malfunction of TC-SST-ECU

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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

Q: Is diagnosis code No. P1808 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P180C: Clutch pressure cut spool sticking

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
The clutch pressure cut spool is determined to be seized.

PROBABLE CAUSES
- Malfunction of TC-SST-ECU

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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

Q: Is diagnosis code No. P180C set?

YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P181B: Clutch 1 (Pressure low range out)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
The pressure of the clutch 1 is too low.

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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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 diagnosis code.
(2) Carry out the Item No. 3 (Teach-In) : Line pressure Test. (Refer to Special Function (Teach-In Reference Table P.22-105).)
(3) With the engine idle status, check that the diagnosis code is reset.

Q: Is the diagnosis code 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.22-111.)

STEP 5. Check whether the diagnosis code is reset.
(1) Erase the diagnosis code.
(2) With the engine idle status, check that the diagnosis code is reset.

Q: Is diagnosis code No.P181B set?
YES : Replace the mechatronic assembly. (Refer to P.22-119.) Then, go to Step 6.
NO : Intermittent malfunction.

STEP 6. Check whether the diagnosis code is reset.
(1) Erase the diagnosis code.
(2) With the engine idle status, check that the diagnosis code is reset.

Q: Is diagnosis code No.P181B set?
YES : Replace the transmission assembly.
NO : This diagnosis is complete.

Code No.P181C: Clutch 1 (Pressure high range out)

⚠ CAUTION

- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION

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

DIAGNOSIS CODE SET CONDITIONS

The pressure of the clutch 1 is too high.

PROBABLE CAUSES

- Malfunction of TC-SST-ECU

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics

Use M.U.T.-III to perform the CAN bus diagnosis.

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.

After the test run, check that the diagnosis code is reset.

Q: Is diagnosis code No. P181C set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P181E: Clutch 2 (Pressure low range out)

⚠ CAUTION

- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION

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

DIAGNOSIS CODE SET CONDITIONS

The pressure of the clutch 2 is too low.

PROBABLE CAUSES

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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics

Use M.U.T.-III to perform the CAN bus diagnosis.

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 diagnosis code.
(2) Carry out the Item No. 3 (Teach-In) : Line pressure Test. (Refer to Special Function (Teach-In Reference Table P.22-105).)
(3) With the engine idle status, check that the diagnosis code is reset.

Q: Is the diagnosis code 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.22-111.)

STEP 5. Check whether the diagnosis code is reset.
(1) Erase the diagnosis code.
(2) With the engine idle status, check that the diagnosis code is reset.

Q: Is diagnosis code No.P181E set?
YES : Replace the mechatronic assembly. (Refer to P.22-119.) Then, go to Step 6.
NO : Intermittent malfunction.

STEP 6. Check whether the diagnosis code is reset.
(1) Erase the diagnosis code.
(2) With the engine idle status, check that the diagnosis code is reset.

Q: Is diagnosis code No.P181E set?
YES : Replace the transmission assembly.
NO : This diagnosis is complete.

Code No.P181F: Clutch 2 (Pressure high range out)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
The pressure of the clutch 2 is too high.

PROBABLE CAUSES
- Malfunction of TC-SST-ECU

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.
After the test run, check that the diagnosis code is reset.

Q: Is diagnosis code No. P181F set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P1820: Shift Fork Position Sensor 1 System (Voltage low range out)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the voltage of the shift fork position sensor 1 is normal.

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.

Q: Is diagnosis code No. P1820 set?
YES : Go to Step 3.
NO : Intermittent malfunction.

STEP 3. M.U.T.-III Teach-In
(1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table P.22-105).)
(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.22-105).)

Q: Which is displayed, "Yes" or "No"?
"Yes" : Replace the transmission assembly.
"No" : Go to Step 4.

STEP 4. Replace the mechatronic assembly, and check if the diagnosis code is reset.
(1) Replace the mechatronic assembly. (Refer to P.22-111.)
(2) Perform a test run of the vehicle.
(3) Check the diagnosis code.

Q: Is diagnosis code No.P1820 set?
YES : Replace the transmission assembly.
NO : This diagnosis is complete.

Code No.P1821: Shift Fork Position Sensor 1 System (Voltage high range out)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the voltage of the shift fork position sensor 1 is normal.

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.

Q: Is diagnosis code No. P1821 set?
YES : Go to Step 3.
NO : Intermittent malfunction.

STEP 3. M.U.T.-III Teach-In
(1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table P.22-105).)
(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.22-105).)

Q: Which is displayed, "Yes" or "No"?
"Yes" : Replace the transmission assembly.
"No" : Go to Step 4.

STEP 4. Replace the mechatronic assembly, and check if the diagnosis code is reset.
(1) Replace the mechatronic assembly. (Refer to P.22-111.)
(2) Perform a test run of the vehicle.
(3) Check the diagnosis code.

Q: Is diagnosis code No.P1821 set?
YES : Replace the transmission assembly.
NO : This diagnosis is complete.

Code No.P1822: Shift Fork Position Sensor 1 System (Output range out)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the output of the shift fork position sensor 1 is normal.

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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 diagnosis code.
(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 diagnosis code is reset.

Q: Is diagnosis code No.P1822 set?
YES : Go to Step 3.
NO : Intermittent malfunction.

STEP 3. M.U.T.-III Teach-In
(1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table P.22-105).)
(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.22-105).)

Q: Which is displayed, "Yes" or "No"?
"Yes" : Replace the transmission assembly.
"No" : Go to Step 4.

STEP 4. Replace the mechatronic assembly, and check if the diagnosis code is reset.
(1) Replace the mechatronic assembly. (Refer to P.22-111.)
(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 diagnosis code.

Q: Is diagnosis code No.P1822 set?
YES : Replace the transmission assembly.
NO : This diagnosis is complete.

Code No.P1823: Shift Fork Position Sensor 1 System (Neutral)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the shift fork position sensor 1 is normal.

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.
After driving in the 3rd gear, check that the diagnosis code is reset.

Q: Is diagnosis code No.P1823 set?
YES : Go to Step 3.
NO : Intermittent malfunction.

STEP 3. M.U.T.-III diagnosis code
Check if a shift fork and shift fork position sensor-related diagnosis code No. other than P1823 is stored.

Q: Is the diagnosis code set?
YES : Go to Step 5.
NO : Go to Step 4.

STEP 4. M.U.T.-III Teach-In
(1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table P.22-105).)
(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.22-105).)

Q: Which is displayed, "Yes" or "No"?
"Yes" : Replace the transmission assembly.
"No" : Go to Step 5.

STEP 5. Replace the mechatronic assembly, and check if the diagnosis code is reset.
After driving in the 3rd gear, check that the diagnosis code is reset.

Q: Is diagnosis code No.P1823 set?
YES : Replace the transmission assembly.
NO : This diagnosis is complete.

Code No.P1824: Shift Fork Position Sensor 1 System (Poor performance)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the shift fork position sensor 1 is normal.

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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 diagnosis code.
(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 diagnosis code is reset.

Q: Is diagnosis code No.P1824 set?
YES : Go to Step 3.
NO : Intermittent malfunction.

STEP 3. M.U.T.-III Teach-In
(1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table P.22-105).)
(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.22-105).)

Q: Which is displayed, "Yes" or "No"?
"Yes" : Replace the transmission assembly.
"No" : Go to Step 4.

STEP 4. Replace the mechatronic assembly, and check if the diagnosis code is reset.
(1) Replace the mechatronic assembly. (Refer to P.22-111.)

(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 diagnosis code.

Q: Is diagnosis code No.P1824 set?
YES : Replace the transmission assembly.
NO : This diagnosis is complete.

Code No.P1825: Shift Fork Position Sensor 2 System (Voltage low range out)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the voltage of the shift fork position sensor 2 is normal.

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.

Q: Is diagnosis code No. P1825 set?
YES : Go to Step 3.
NO : Intermittent malfunction.

STEP 3. M.U.T.-III Teach-In
(1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table P.22-105).)
(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.22-105).)

Q: Which is displayed, "Yes" or "No"?
"Yes" : Replace the transmission assembly.
"No" : Go to Step 4.

STEP 4. Replace the mechatronic assembly, and check if the diagnosis code is reset.
(1) Replace the mechatronic assembly. (Refer to P.22-111.)
(2) Perform a test run of the vehicle.
(3) Check the diagnosis code.

Q: Is diagnosis code No.P1825 set?
YES : Replace the transmission assembly.
NO : This diagnosis is complete.

Code No.P1826: Shift Fork Position Sensor 2 System (Voltage high range out)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the voltage of the shift fork position sensor 2 is normal.

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.

Q: Is diagnosis code No. P1826 set?
YES : Go to Step 3.
NO : Intermittent malfunction.

STEP 3. M.U.T.-III Teach-In
(1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table P.22-105).)
(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.22-105).)

Q: Which is displayed, "Yes" or "No"?
"Yes" : Replace the transmission assembly.
"No" : Go to Step 4.

STEP 4. Replace the mechatronic assembly, and check if the diagnosis code is reset.
(1) Replace the mechatronic assembly. (Refer to P.22-111.)
(2) Perform a test run of the vehicle.
(3) Check the diagnosis code.

Q: Is diagnosis code No.P1826 set?
YES : Replace the transmission assembly.
NO : This diagnosis is complete.

Code No.P1827: Shift Fork Position Sensor 2 System (Output range out)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the output of the shift fork position sensor 2 is normal.

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.
After driving in the 5th gear, check that the diagnosis code is reset.

Q: Is diagnosis code No. P1827 set?
YES : Go to Step 3.
NO : Intermittent malfunction.

STEP 3. M.U.T.-III Teach-In
(1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table P.22-105).)
(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.22-105).)

Q: Which is displayed, "Yes" or "No"?
"Yes" : Replace the transmission assembly.
"No" : Go to Step 4.

STEP 4. Replace the mechatronic assembly, and check if the diagnosis code is reset.
(1) Replace the mechatronic assembly. (Refer to P.22-111.)
(2) Drive in the 5th gear.
(3) Check the diagnosis code.

Q: Is diagnosis code No.P1827 set?

YES : Replace the transmission assembly.
NO : This diagnosis is complete.

Code No.P1828: Shift Fork Position Sensor 2 System (Neutral)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the shift fork position sensor 2 is normal.

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.
After driving in the 3rd gear, check that the diagnosis code is reset.

Q: Is diagnosis code No.P1828 set?
YES : Go to Step 3.
NO : Intermittent malfunction.

STEP 3. M.U.T.-III diagnosis code
Check if a shift fork and shift fork position sensor-related diagnosis code No. other than P1828 is stored.

Q: Is the diagnosis code set?
YES : Go to Step 5.
NO : Go to Step 4.

STEP 4. M.U.T.-III Teach-In
(1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table P.22-105).)
(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.22-105).)

Q: Which is displayed, "Yes" or "No"?
"Yes" : Replace the transmission assembly.
"No" : Go to Step 5.

STEP 5. Replace the mechatronic assembly, and check if the diagnosis code is reset.
After driving in the 3rd gear, check that the diagnosis code is reset.

Q: Is diagnosis code No.P1828 set?
YES : Replace the transmission assembly.
NO : This diagnosis is complete.

Code No.P1829: Shift Fork Position Sensor 2 System (Poor performance)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the shift fork position sensor 2 is normal.

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.
After driving in the 5th gear, check that the diagnosis code is reset.

Q: Is diagnosis code No. P1829 set?
YES : Go to Step 3.
NO : Intermittent malfunction.

STEP 3. M.U.T.-III Teach-In
(1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table P.22-105).)
(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.22-105).)

Q: Which is displayed, "Yes" or "No"?
"Yes" : Replace the transmission assembly.
"No" : Go to Step 4.

STEP 4. Replace the mechatronic assembly, and check if the diagnosis code is reset.
(1) Replace the mechatronic assembly. (Refer to P.22-111.)
(2) Drive in the 5th gear.
(3) Check the diagnosis code.

Q: Is diagnosis code No.P1829 set?
YES : Replace the transmission assembly.
NO : This diagnosis is complete.

Code No.P182A: Shift Fork Position Sensor 3 System (Voltage low range out)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the voltage of the shift fork position sensor 3 is normal.

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.

Q: Is diagnosis code No. P182A set?
YES : Go to Step 3.
NO : Intermittent malfunction.

STEP 3. M.U.T.-III Teach-In
(1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table P.22-105).)
(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.22-105).)

Q: Which is displayed, "Yes" or "No"?
"Yes" : Replace the transmission assembly.
"No" : Go to Step 4.

STEP 4. Replace the mechatronic assembly, and check if the diagnosis code is reset.
(1) Replace the mechatronic assembly. (Refer to

P.22-111.)
(2) Perform a test run of the vehicle.
(3) Check the diagnosis code.

Q: Is diagnosis code No.P182A set?
YES : Replace the transmission assembly.
NO : This diagnosis is complete.

Code No.P182B: Shift Fork Position Sensor 3 System (Voltage high range out)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the voltage of the shift fork position sensor 3 is normal.

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.

Q: Is diagnosis code No. P182B set?
YES : Go to Step 3.
NO : Intermittent malfunction.

STEP 3. M.U.T.-III Teach-In
(1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table P.22-105).)
(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.22-105).)

Q: Which is displayed, "Yes" or "No"?
"Yes" : Replace the transmission assembly.
"No" : Go to Step 4.

STEP 4. Replace the mechatronic assembly, and check if the diagnosis code is reset.
(1) Replace the mechatronic assembly. (Refer to P.22-111.)
(2) Perform a test run of the vehicle.
(3) Check the diagnosis code.

Q: Is diagnosis code No.P182B set?
YES : Replace the transmission assembly.
NO : This diagnosis is complete.

Code No.P182C: Shift Fork Position Sensor 3 System (Output range out)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the output of the shift fork position sensor 3 is normal.

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.
After driving in the 6th gear, check that the diagnosis code is reset.

Q: Is diagnosis code No. P182C set?
YES : Go to Step 3.
NO : Intermittent malfunction.

STEP 3. M.U.T.-III Teach-In
(1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table P.22-105).)
(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.22-105).)

Q: Which is displayed, "Yes" or "No"?
"Yes" : Replace the transmission assembly.
"No" : Go to Step 4.

STEP 4. Replace the mechatronic assembly, and check if the diagnosis code is reset.
(1) Replace the mechatronic assembly. (Refer to P.22-111.)
(2) Drive in the 6th gear.
(3) Check the diagnosis code.

Q: Is diagnosis code No.P182C set?
YES : Replace the transmission assembly.
NO : This diagnosis is complete.

Code No.P182D: Shift Fork Position Sensor 3 System (Neutral)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the shift fork position sensor 3 is normal.

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.
After driving in the 6th gear, check that the diagnosis code is reset.

Q: Is diagnosis code No. P182D set?
YES : Go to Step 3.
NO : Intermittent malfunction.

STEP 3. M.U.T.-III diagnosis code
Check if a shift fork and shift fork position sensor-related diagnosis code No. other than P182D is stored.

Q: Is the diagnosis code set?
YES : Go to Step 5.
NO : Go to Step 4.

STEP 4. M.U.T.-III Teach-In
(1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table P.22-105).)
(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.22-105).)

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

"Yes" : Replace the transmission assembly.
"No" : Go to Step 5.

STEP 5. Replace the mechatronic assembly, and check if the diagnosis code is reset.
(1) Replace the mechatronic assembly. (Refer to P.22-111.)
(2) Drive in the 6th gear.
(3) Check the diagnosis code.

Q: Is diagnosis code No.P182D set?
YES : Replace the transmission assembly.
NO : This diagnosis is complete.

Code No.P182E: Shift Fork Position Sensor 3 System (Poor performance)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the shift fork position sensor 3 is normal.

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.
After driving in the 6th gear, check that the diagnosis code is reset.

Q: Is diagnosis code No. P182E set?
YES : Go to Step 3.
NO : Intermittent malfunction.

STEP 3. M.U.T.-III Teach-In
(1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table P.22-105).)
(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.22-105).)

Q: Which is displayed, "Yes" or "No"?
"Yes" : Replace the transmission assembly.
"No" : Go to Step 4.

STEP 4. Replace the mechatronic assembly, and check if the diagnosis code is reset.
(1) Replace the mechatronic assembly. (Refer to P.22-111.)
(2) Drive in the 6th gear.
(3) Check the diagnosis code.

Q: Is diagnosis code No.P182E set?
YES : Replace the transmission assembly.
NO : This diagnosis is complete.

Code No.P1831: Shift Fork Position Sensor 4 System (Voltage low range out)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the voltage of the shift fork position sensor 4 is normal.

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.

Q: Is diagnosis code No. P1831 set?
YES : Go to Step 3.
NO : Intermittent malfunction.

STEP 3. M.U.T.-III Teach-In
(1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table P.22-105).)
(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.22-105).)

Q: Which is displayed, "Yes" or "No"?
"Yes" : Replace the transmission assembly.
"No" : Go to Step 4.

STEP 4. Replace the mechatronic assembly, and check if the diagnosis code is reset.
(1) Replace the mechatronic assembly. (Refer to P.22-111.)
(2) Perform a test run of the vehicle.
(3) Check the diagnosis code.

Q: Is diagnosis code No.P1831 set?
YES : Replace the transmission assembly.
NO : This diagnosis is complete.

Code No.P1832: Shift Fork Position Sensor 4 System (Voltage high range out)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the voltage of the shift fork position sensor 4 is normal.

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.

Q: Is diagnosis code No. P1832 set?
YES : Go to Step 3.
NO : Intermittent malfunction.

STEP 3. M.U.T.-III Teach-In
(1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table P.22-105).)
(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.22-105).)

Q: Which is displayed, "Yes" or "No"?
"Yes" : Replace the transmission assembly.
"No" : Go to Step 4.

STEP 4. Replace the mechatronic assembly, and check if the diagnosis code is reset.
(1) Replace the mechatronic assembly. (Refer to

P.22-111.)
(2) Perform a test run of the vehicle.
(3) Check the diagnosis code.

Q: Is diagnosis code No.P1832 set?
YES : Replace the transmission assembly.
NO : This diagnosis is complete.

Code No.P1833: Shift Fork Position Sensor 4 System (Output range out)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the output of the shift fork position sensor 4 is normal.

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.
After driving in the 4th gear, check that the diagnosis code is reset.

Q: Is diagnosis code No. P1833 set?
YES : Go to Step 3.
NO : Intermittent malfunction.

STEP 3. M.U.T.-III Teach-In
(1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table P.22-105).)
(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.22-105).)

Q: Which is displayed, "Yes" or "No"?
"Yes" : Replace the transmission assembly.
"No" : Go to Step 4.

STEP 4. Replace the mechatronic assembly, and check if the diagnosis code is reset.
(1) Replace the mechatronic assembly. (Refer to P.22-111.)
(2) Drive in the 4th gear.
(3) Check the diagnosis code.

Q: Is diagnosis code No.P1833 set?
YES : Replace the transmission assembly.
NO : This diagnosis is complete.

Code No.P1834: Shift Fork Position Sensor 4 System (Neutral)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the shift fork position sensor 4 is normal.

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.
After driving in the 6th gear, check that the diagnosis code is reset.

Q: Is diagnosis code No. P1834 set?
YES : Go to Step 3.
NO : Intermittent malfunction.

STEP 3. M.U.T.-III diagnosis code
Check if a shift fork and shift fork position sensor-related diagnosis code No. other than P1834 is stored.

Q: Is the diagnosis code set?
YES : Go to Step 5.
NO : Go to Step 4.

STEP 4. M.U.T.-III Teach-In
(1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table P.22-105).)
(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.22-105).)

Q: Which is displayed, "Yes" or "No"?
"Yes" : Replace the transmission assembly.
"No" : Go to Step 5.

STEP 5. Replace the mechatronic assembly, and check if the diagnosis code is reset.
(1) Replace the mechatronic assembly. (Refer to P.22-111.)
(2) Drive in the 6th gear.
(3) Check the diagnosis code.

Q: Is diagnosis code No.P1834 set?
YES : Replace the transmission assembly.
NO : This diagnosis is complete.

Code No.P1835: Shift Fork Position Sensor 4 System (Poor performance)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the shift fork position sensor 4 is normal.

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.
After driving in the 4th gear, check that the diagnosis code is reset.

Q: Is diagnosis code No. P1835 set?
YES : Go to Step 3.
NO : Intermittent malfunction.

STEP 3. M.U.T.-III Teach-In
(1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table P.22-105).)
(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.22-105).)

Q: Which is displayed, "Yes" or "No"?
"Yes" : Replace the transmission assembly.
"No" : Go to Step 4.

STEP 4. Replace the mechatronic assembly, and check if the diagnosis code is reset.
(1) Replace the mechatronic assembly. (Refer to P.22-111.)
(2) Drive in the 4th gear.
(3) Check the diagnosis code.

Q: Is diagnosis code No.P1835 set?
YES : Replace the transmission assembly.
NO : This diagnosis is complete.

Code No.P1836: Shift Fork 1 Malfunction

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the movement of the shift fork 1 is normal.

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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 diagnosis code is reset.
(1) Erase the diagnosis code.
(2) Drive with shifting to each gear range.
(3) Check that the diagnosis code is reset.

Q: Is diagnosis code No.P1836 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

STEP 4. Check whether the diagnosis code is reset.
(1) Erase the diagnosis code.
(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 diagnosis code is reset.

Q: Is diagnosis code No.P1836 set?
YES : Go to Step 5.
NO : Intermittent malfunction.

STEP 5. M.U.T.-III Teach-In
(1) Carry out the Item No.3: Line pressure Test. (Refer to Special Function (Teach-In Reference Table P.22-105).)
(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.22-105).)

Q: Which is displayed, "Yes" or "No"?
"Yes" : Go to Step 6
"No" : Diagnosis code No. P181B: Carry out the troubleshooting for the diagnosis code No. P181B: Clutch 1 (Pressure low range out). (Refer to P.22-41.)

STEP 6. M.U.T.-III Teach-In
(1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table P.22-105).)
(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.22-105).)

Q: Which is displayed, "Yes" or "No"?
"Yes" : Replace the transmission assembly.
"No" : Go to Step 7.

STEP 7. Replace the mechatronic assembly, and check if the diagnosis code is reset.
(1) Replace the mechatronic assembly. (Refer to P.22-111.)
(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 diagnosis code.

Q: Is diagnosis code No.P1836 set?
YES : Replace the transmission assembly.
NO : This diagnosis is complete.

Code No.P183D: Shift Fork 2 Malfunction

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the movement of the shift fork 2 is normal.

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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 diagnosis code is reset.
(1) Erase the diagnosis code.
(2) Drive with shifting to each gear range.
(3) Check that the diagnosis code is reset.

Q: Is diagnosis code No.P183D set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

STEP 4. Check whether the diagnosis code is reset.
(1) Erase the diagnosis code.
(2) Drive in the 3rd gear.
(3) Check that the diagnosis code is reset.

Q: Is diagnosis code No.P183D set?
YES : Go to Step 5.
NO : Intermittent malfunction.

STEP 5. M.U.T.-III Teach-In
(1) Carry out the Item No.3: Line pressure Test. (Refer to Special Function (Teach-In Reference Table P.22-105).)
(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.22-105).)

Q: Which is displayed, "Yes" or "No"?
"Yes" : Go to Step 6
"No" : Diagnosis code No. P181B: Carry out the troubleshooting for the diagnosis code No. P181B: Clutch 1 (Pressure low range out). (Refer to P.22-41.)

STEP 6. M.U.T.-III Teach-In
(1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table P.22-105).)
(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.22-105).)

Q: Which is displayed, "Yes" or "No"?
"Yes" : Replace the transmission assembly.
"No" : Go to Step 7.

STEP 7. Replace the mechatronic assembly, and check if the diagnosis code is reset.
(1) Replace the mechatronic assembly. (Refer to P.22-111.)
(2) Drive in the 3rd gear.
(3) Check the diagnosis code.

Q: Is diagnosis code No.P183D set?
YES : Replace the transmission assembly.
NO : This diagnosis is complete.

Code No.P1844: Shift Fork 3 Malfunction

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the movement of the shift fork 3 is normal.

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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 diagnosis code is reset.
(1) Erase the diagnosis code.
(2) Drive with shifting to each gear range.
(3) Check that the diagnosis code is reset.

Q: Is diagnosis code No.P1844 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

STEP 4. Check whether the diagnosis code is reset.
(1) Erase the diagnosis code.
(2) Drive in the 6th gear.
(3) Check that the diagnosis code is reset.

Q: Is diagnosis code No.P1844 set?
YES : Go to Step 5.
NO : Intermittent malfunction.

STEP 5. M.U.T.-III Teach-In
(1) Carry out the Item No.3: Line pressure Test. (Refer to Special Function (Teach-In Reference Table P.22-105).)
(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.22-105).)

Q: Which is displayed, "Yes" or "No"?
"Yes" : Go to Step 6
"No" : Diagnosis code No. P181B: Carry out the troubleshooting for the diagnosis code No. P181B: Clutch 1 (Pressure low range out). (Refer to P.22-41.)

STEP 6. M.U.T.-III Teach-In
(1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table P.22-105).)
(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.22-105).)

Q: Which is displayed, "Yes" or "No"?
"Yes" : Replace the transmission assembly.
"No" : Go to Step 7.

STEP 7. Replace the mechatronic assembly, and check if the diagnosis code is reset.
(1) Replace the mechatronic assembly. (Refer to P.22-111.)
(2) Drive in the 6th gear.
(3) Check the diagnosis code.

Q: Is diagnosis code No.P1844 set?
YES : Replace the transmission assembly.
NO : This diagnosis is complete.

Code No.P184B: Shift Fork 4 Malfunction

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the movement of the shift fork 4 is normal.

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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 diagnosis code is reset.
(1) Erase the diagnosis code.
(2) Drive with shifting to each gear range.
(3) Check that the diagnosis code is reset.

Q: Is diagnosis code No.P184B set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

STEP 4. Check whether the diagnosis code is reset.
(1) Erase the diagnosis code.
(2) Drive in the 4th gear.
(3) Check that the diagnosis code is reset.

Q: Is diagnosis code No.P184B set?
YES : Go to Step 5.
NO : Intermittent malfunction.

STEP 5. M.U.T.-III Teach-In
(1) Carry out the Item No.3: Line pressure Test. (Refer to Special Function (Teach-In Reference Table P.22-105).)
(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.22-105).)

Q: Which is displayed, "Yes" or "No"?
"Yes" : Go to Step 6
"No" : Diagnosis code No. P181B: Carry out the troubleshooting for the diagnosis code No. P181B: Clutch 1 (Pressure low range out). (Refer to P.22-41.)

STEP 6. M.U.T.-III Teach-In
(1) Carry out the Item No. 1: Plausibility check. (Refer to Special Function (Teach-In Reference Table P.22-105).)
(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.22-105).)

Q: Which is displayed, "Yes" or "No"?
"Yes" : Replace the transmission assembly.
"No" : Go to Step 7.

STEP 7. Replace the mechatronic assembly, and check if the diagnosis code is reset.
(1) Replace the mechatronic assembly. (Refer to P.22-111.)
(2) Drive in the 4th gear.
(3) Check the diagnosis code.

Q: Is diagnosis code No.P184B set?
YES : Replace the transmission assembly.
NO : This diagnosis is complete.

Code No.P1852: Shift Fork 1 or 2 opposite direction movement

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the movement of the shift fork is normal.

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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 diagnosis code.
(2) With the engine idle status, operate the shift lever in the following sequence: P →R →D →R →P. (Hold each range for 1 seconds or more.)
(3) Check that the diagnosis code is reset.

Q: Is the diagnosis code No. P1852 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P1855: Shift Fork 3 or 4 opposite direction movement

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the movement of the shift fork is normal.

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.
After driving in the 4th gear, check that the diagnosis code is reset.

Q: Is the diagnosis code No. P1855 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P1857: Odd number gear axle interlock

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the gear engagement is normal.

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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 diagnosis code.
(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 diagnosis code is reset.

Q: Is diagnosis code No. P1857 set?
YES : Go to Step 4.
NO : Go to Step 3.

STEP 3. Check whether the diagnosis code is reset.
(1) Drive with shifting to each gear range. (Hold each gear range for 5 seconds or more.)
(2) Check that the diagnosis code is reset.

Q: Is diagnosis code No.P1857 set?
YES : Go to Step 4.
NO : Intermittent malfunction.

STEP 4. M.U.T.-III diagnosis code
Check if any code from P1836, P183D, P1844, or P184B is set in addition to the diagnosis code No. P1857.

Q: Check if any code from P1836, P183D, P1844, or P184B is set in addition to the diagnosis code No. P1857.
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Replace the transmission assembly.

Code No.P1858: Even number gear axle interlock

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the gear engagement is normal.

DIAGNOSIS CODE SET CONDITIONS
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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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 diagnosis code.
(2) Drive with shifting to each gear range. (Hold each gear range for 5 seconds or more.)
(3) Check that the diagnosis code is reset.

Q: Is diagnosis code No.P1858 set?
YES : Go to Step 3.
NO : Intermittent malfunction.

STEP 3. M.U.T.-III diagnosis code
Check if any code from P1836, P183D, P1844, or P184B is set in addition to the diagnosis code No. P1858.

Q: Check if any code from P1836, P183D, P1844, or P184B is set in addition to the diagnosis code No. P1858.
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Replace the transmission assembly.

Code No.P185D: Clutch open not possible

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the clutch 1 and 2 are normal.

DIAGNOSIS CODE SET CONDITIONS
The disengagement of the clutch 1 and 2 are determined to be impossible.

PROBABLE CAUSES
- Malfunction of clutch assembly

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.
After 15 seconds with the engine idle status, check that the diagnosis code is reset.

Q: Is diagnosis code No. P185D set?
YES : Replace the clutch assembly. (Refer to P.22-119.)
NO : Intermittent malfunction.

Code No.P1862: High side 1 system (Overcurrent)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the high side 1 circuit is normal.

DIAGNOSIS CODE SET CONDITIONS
The supply current to the high side 1 is determined to be overcurrent.

PROBABLE CAUSES
- Malfunction of TC-SST-ECU

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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

Q: Is diagnosis code No. P1862 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P1863: High side 1 system (Open circuit)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the high side 1 circuit is normal.

DIAGNOSIS CODE SET CONDITIONS
The high side 1 circuit is determined to be open.

PROBABLE CAUSES
- Malfunction of TC-SST-ECU

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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

Q: Is diagnosis code No. P1863 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P1864: High side 1 system (Short to power supply)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the high side 1 circuit is normal.

DIAGNOSIS CODE SET CONDITIONS
The high side 1 circuit is determined to be short to power supply.

PROBABLE CAUSES
- Malfunction of TC-SST-ECU

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.
After 15 seconds with the engine idle status, check that the diagnosis code is reset.

Q: Is diagnosis code No. P1864 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P1866: High side 2 system (Overcurrent)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the high side 2 circuit is normal.

DIAGNOSIS CODE SET CONDITIONS
The supply current to the high side 2 is determined to be overcurrent.

PROBABLE CAUSES
- Malfunction of TC-SST-ECU

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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

Q: Is diagnosis code No. P1866 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P1867: High side 2 system (Open circuit)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the high side 2 circuit is normal.

DIAGNOSIS CODE SET CONDITIONS
The high side 2 circuit is determined to be open.

PROBABLE CAUSES
- Malfunction of TC-SST-ECU

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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

Q: Is diagnosis code No. P1867 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P1868: High side 2 system (Short to power supply)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the high side 2 circuit is normal.

DIAGNOSIS CODE SET CONDITIONS
The high side 2 circuit is determined to be short to power supply.

PROBABLE CAUSES
- Malfunction of TC-SST-ECU

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.
After 15 seconds with the engine idle status, check that the diagnosis code is reset.

Q: Is diagnosis code No. P1868 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P186A: High side 3 system (Overcurrent)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the high side 3 circuit is normal.

DIAGNOSIS CODE SET CONDITIONS
The supply current to the high side 3 is determined to be overcurrent.

PROBABLE CAUSES
- Malfunction of TC-SST-ECU

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.
After 5 seconds with the engine idle status, check that the diagnosis code is reset.

Q: Is diagnosis code No. P186A set?

YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P186B: High side 3 system (Open circuit)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the high side 3 circuit is normal.

DIAGNOSIS CODE SET CONDITIONS
The high side 3 circuit is determined to be open.

PROBABLE CAUSES
- Malfunction of TC-SST-ECU

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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

Q: Is diagnosis code No. P186B set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P186C: High side 3 system (Short to power supply)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the high side 3 circuit is normal.

DIAGNOSIS CODE SET CONDITIONS
The high side 3 circuit is determined to be short to power supply.

PROBABLE CAUSES
- Malfunction of TC-SST-ECU

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.
After 15 seconds with the engine idle status, check that the diagnosis code is reset.

Q: Is diagnosis code No. P186C set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P186D: High side 1 system (Voltage low range out)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the high side 1 circuit is normal.

DIAGNOSIS CODE SET CONDITIONS
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)

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.22-97.

Q: Is the check result normal?
YES : Go to Step 3.
NO : Repair the TC-SST-ECU power supply circuit. (Refer to P.22-97.) After repairing the power supply circuit, go to Step 3.

STEP 3. Check whether the diagnosis code is reset.
After 10 or more seconds have passed with the engine idle status, check that the diagnosis code is reset.

Q: Is diagnosis code No. P186D set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P186E: High side 2 system (Voltage low range out)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the high side 2 circuit is normal.

DIAGNOSIS CODE SET CONDITIONS
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)

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics
Use M.U.T.-III to perform the CAN bus diagnosis.

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.22-97.

Q: Is the check result normal?
YES : Go to Step 3.
NO : Repair the TC-SST-ECU power supply circuit. (Refer to P.22-97.) After repairing the power supply circuit, go to Step 3.

STEP 3. Check whether the diagnosis code is reset.
After 10 or more seconds have passed with the engine idle status, check that the diagnosis code is reset.

Q: Is diagnosis code No. P186E set?

YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P186F: High side 3 system (Voltage low range out)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the high side 3 circuit is normal.

DIAGNOSIS CODE SET CONDITIONS
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)

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics.
Use M.U.T.-III to perform the CAN bus diagnosis.

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.22-97.

Q: Is the check result normal?
YES : Go to Step 3.
NO : Repair the TC-SST-ECU power supply circuit. (Refer to P.22-97.) After repairing the power supply circuit, go to Step 3.

STEP 3. Check whether the diagnosis code is reset.
After 10 or more seconds have passed with the engine idle status, check that the diagnosis code is reset.

Q: Is diagnosis code No. P186F set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P1870: Engine torque signal abnormality

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
The engine torque signal from the engine-ECU is determined to be abnormal.

PROBABLE CAUSES
- The CAN bus line is defective.
- Malfunction of engine-ECU
- Malfunction of TC-SST-ECU

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics.
Use M.U.T.-III to perform the CAN bus diagnosis.

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. M.U.T.-III diagnosis code.
Check if the diagnosis code is set to the system other than TC-SST.

Q: Is the diagnosis code set?
YES : Perform the relevant troubleshooting.
NO : Go to Step 3.

STEP 3. M.U.T.-III diagnosis code.
After 15 seconds with the engine idle status, check that the diagnosis code for engine is set.

Q: Is the diagnosis code set?
YES : Perform the relevant troubleshooting.
NO : Go to Step 4.

STEP 4. Check whether the diagnosis code is reset.
After 15 seconds with the engine idle status, check that the diagnosis code is reset.

Q: Is diagnosis code No.P1870 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P1871: APS system (Signal abnormality)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
The APS signal from the engine-ECU is determined to be abnormal.

PROBABLE CAUSES
- The CAN bus line is defective.
- APS malfunction
- Malfunction of engine-ECU
- Malfunction of TC-SST-ECU

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics.
Use M.U.T.-III to perform the CAN bus diagnosis.

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. M.U.T.-III diagnosis code.
Check if the diagnosis code is set to the system other than TC-SST.

Q: Is the diagnosis code set?
YES : Perform the relevant troubleshooting.
NO : Go to Step 3.

STEP 3. M.U.T.-III diagnosis code.
After 15 seconds with the engine idle status, check that the diagnosis code for engine is set.

Q: Is the diagnosis code set?
YES : Perform the relevant troubleshooting.
NO : Go to Step 4.

STEP 4. Check whether the diagnosis code is reset.
After 15 seconds with the engine idle status, check that the diagnosis code is reset.

Q: Is diagnosis code No.P1871 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.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 diagnosis 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.**

OPERATION
TC-SST-ECU checks that the shift lever-ECU is normal.

DIAGNOSIS CODE SET CONDITIONS
The shift lever-ECU is determined to be abnormal.

PROBABLE CAUSES
- Malfunction of the shift lever-ECU
- Malfunction of TC-SST-ECU

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics.
Use M.U.T.-III to perform the CAN bus diagnosis.

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. M.U.T.-III diagnosis code
Check the shift lever diagnosis code.

Q: Is the diagnosis code set?
YES : Perform the relevant troubleshooting.
NO : Go to Step 3.

STEP 3. Replace the shift lever assembly, and check if the diagnosis code is reset.
(1) Replace the shift lever assembly.
(2) Check the diagnosis code.

Q: Is diagnosis code No.P1872 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P1873: Clutch 1 System (Pressure abnormality)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
The clutch 1 pressure is determined to be abnormal.

PROBABLE CAUSES
- Malfunction of TC-SST-ECU
- Malfunction of clutch assembly
- Malfunction of engine system

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics.
Use M.U.T.-III to perform the CAN bus diagnosis.

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. M.U.T.-III diagnosis code.
Check the engine diagnosis code.

Q: Is the diagnosis code set?
YES : Perform the relevant troubleshooting.
NO : Go to Step 3.

STEP 3. Check whether the diagnosis code is reset.
After 30 seconds with the engine idle status, check that the diagnosis code is reset.

Q: Is diagnosis code No.P1873 set?

YES : Replace the clutch assembly. (Refer to P.22-119.) After replacing the clutch assembly, go to Step 4.
NO : Intermittent malfunction.

STEP 4. Check whether the diagnosis code is reset.
After 30 seconds with the engine idle status, check that the diagnosis code is reset.

Q: Is diagnosis code No.P1873 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P1874: Clutch 2 System (Pressure abnormality)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

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

DIAGNOSIS CODE SET CONDITIONS
The clutch 2 pressure is determined to be abnormal.

PROBABLE CAUSES
- Malfunction of TC-SST-ECU
- Malfunction of clutch assembly
- Malfunction of engine system

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics.
Use M.U.T.-III to perform the CAN bus diagnosis.

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. M.U.T.-III diagnosis code.
Check the engine diagnosis code.

Q: Is the diagnosis code set?
YES : Perform the relevant troubleshooting.
NO : Go to Step 3.

STEP 3. Check whether the diagnosis code is reset.
After 30 seconds with the engine idle status, check that the diagnosis code is reset.

Q: Is diagnosis code No.P1874 set?
YES : Replace the clutch assembly. (Refer to P.22-119.) After replacing the clutch assembly, go to Step 4.
NO : Intermittent malfunction.

STEP 4. Check whether the diagnosis code is reset.
After 30 seconds with the engine idle status, check that the diagnosis code is reset.

Q: Is diagnosis code No.P1874 set?
YES : Replace the mechatronic assembly. (Refer to P.22-111.)
NO : Intermittent malfunction.

Code No.P1875: Damper Speed Sensor System (Poor performance)

⚠ CAUTION
- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION
TC-SST-ECU checks that the damper (closer to the engine than input shaft) is normal.

DIAGNOSIS CODE SET CONDITIONS
The damper speed sensor is determined to be abnormal.

PROBABLE CAUSES

- Malfunction of damper speed sensor
- Malfunction of TC-SST-ECU

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics.
Use M.U.T.-III to perform the CAN bus diagnosis.

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.
With the vehicle stopped, hold a specific accelerator pedal angle for 20 seconds, and check that the diagnosis code is reset.

Q: Is diagnosis code No.P1875 set?
YES : Replace the transmission assembly.
NO : Intermittent malfunction.

Code No.P1876: 1st Gear Block

⚠ CAUTION

- **If there is any problem in the CAN bus lines, an incorrect diagnosis 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.**

OPERATION

TC-SST-ECU checks that the gear engagement is normal.

DIAGNOSIS CODE SET CONDITIONS

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

DIAGNOSIS PROCEDURE

STEP 1. M.U.T.-III CAN bus diagnostics.
Use M.U.T.-III to perform the CAN bus diagnosis.

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 diagnosis code.
(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 diagnosis code is reset.

Q: Is diagnosis code No.P1876 set?
YES : Go to Step 3.
NO : Intermittent malfunction.

STEP 3. M.U.T.-III Teach-In
(1) Carry out the Item No.3: Line pressure Test. (Refer to Special Function (Teach-In Reference Table P.22-105).)
(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.22-105).)

Q: Which is displayed, "Yes" or "No"?
"Yes" : Go to Step 4
"No" : Diagnosis code No. P181B: Carry out the troubleshooting for the diagnosis code No. P181B: Clutch 1 (Pressure low range out). (Refer to P.22-41.)

STEP 4. Replace the clutch assembly, and check if the diagnosis code is reset.
(1) Replace the clutch assembly. (Refer to P.22-119.)
(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 diagnosis code.

Q: Is diagnosis code No.P1876 set?
YES : Replace the transmission assembly.
NO : This diagnosis is complete.