SERVICE MANUAL

DAIHATSU

TERIOS

Chassis

FOREWORD

This manual contains the information about those points that have been affected by the minor change made this time.
For those items for which no entry is made, please refer to the manuals already published.
All information used in this service manual was in effect at the time when the manual was printed. However, the specifications and procedures may be revised owing to continuing improvements in the design without advance notice and without incurring any obligation to us.

Published in May, 2000

DAIHATSU MOTOR CO., LTD.

NO. 9712-JE

HYDRAULIC PRESSURE MEASURING PROCEDURE

Pressure C2

1. Apply the parking brake. Place chocks.
2. Start the engine.
3. While depressing the brake pedal strongly by your left foot, move the shift lever to the D range. Operate the accelerator pedal with your right foot and measure the hydraulic pressure.

Pressure C1, pressure B2

1. Apply the parking brake. Place chocks.
2. Start the engine.
3. While depressing the brake pedal strongly by your left foot, move the shift lever to the R range. Operate the accelerator pedal with your right foot and measure each hydraulic pressure.

Pressure B1

1. Jack up the four wheels. Support the vehicle with rigid racks.
2. Start the engine.
3. Place the shift lever in the D range. Depress the accelerator pedal gradually so that a shifting to the 2nd gear takes place. Measure the hydraulic pressure at the engine speed of 2000 rpm.

Pressure C3

1. Jack up the four wheels. Support the vehicle with rigid racks.
2. Start the engine.
3. Place the shift lever in the D range. Depress the accelerator pedal gradually so that a shifting to the 3rd gear takes place. Measure the hydraulic pressure when you release the accelerator pedal.

LUC OFF pressure

1. Jack up the four wheels. Support the vehicle with rigid racks.
2. Start the engine.
3. Place the shift lever in the D range. Measure the hydraulic pressure. (Hydraulic pressure when lock up is OFF)
4. Depress the accelerator pedal gradually so that a shifting to the 3rd gear takes place. Further accelerate gradually. Measure the vehicle hydraulic pressure at the time when the lock up takes place. (Hydraulic pressure when lock up is ON)

   NOTE:

   - The lock up in the 3rd gear takes place when the vehicle speed is about 47 km/h and the throttle opening is 6 - 25 %.

Specifications

Item	Measuring condition		Specified value (kPa)
	Range	Running condition	
C2	D	Stall revolving condition	930 - 1120
C1, B2	R	Stall revolving condition	1520 - 2110
C3	D	3rd gear, accelerator OFF (When lock up is OFF)	440 - 640
B1	D	2nd gear, engine revolution 2000 rpm	930 - 1130
LUC OFF pressure	D	When lock up is OFF	590 - 750
		When lock up is ON	20 or less

JAT00023-00000

REMOVAL OF OIL PAN AND OIL STRAINER

ARTICLES TO BE PREPARED

Instrument	Torque wrench
Lubricant	DEXRON® III or II, Three bond 1281B

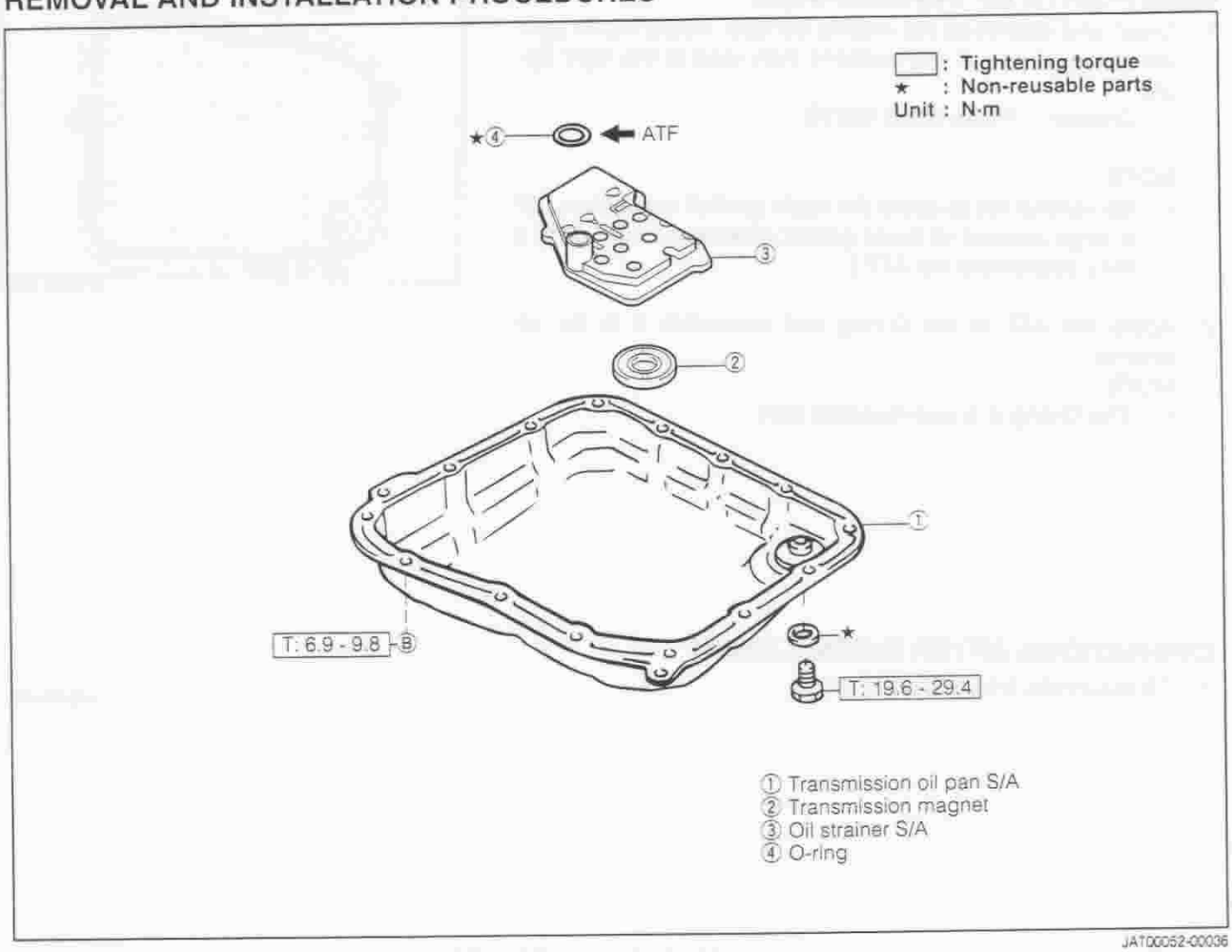
JAT00050-00000

OPERATIONS PRIOR TO REMOVAL

1. Drain automatic transmission fluid.

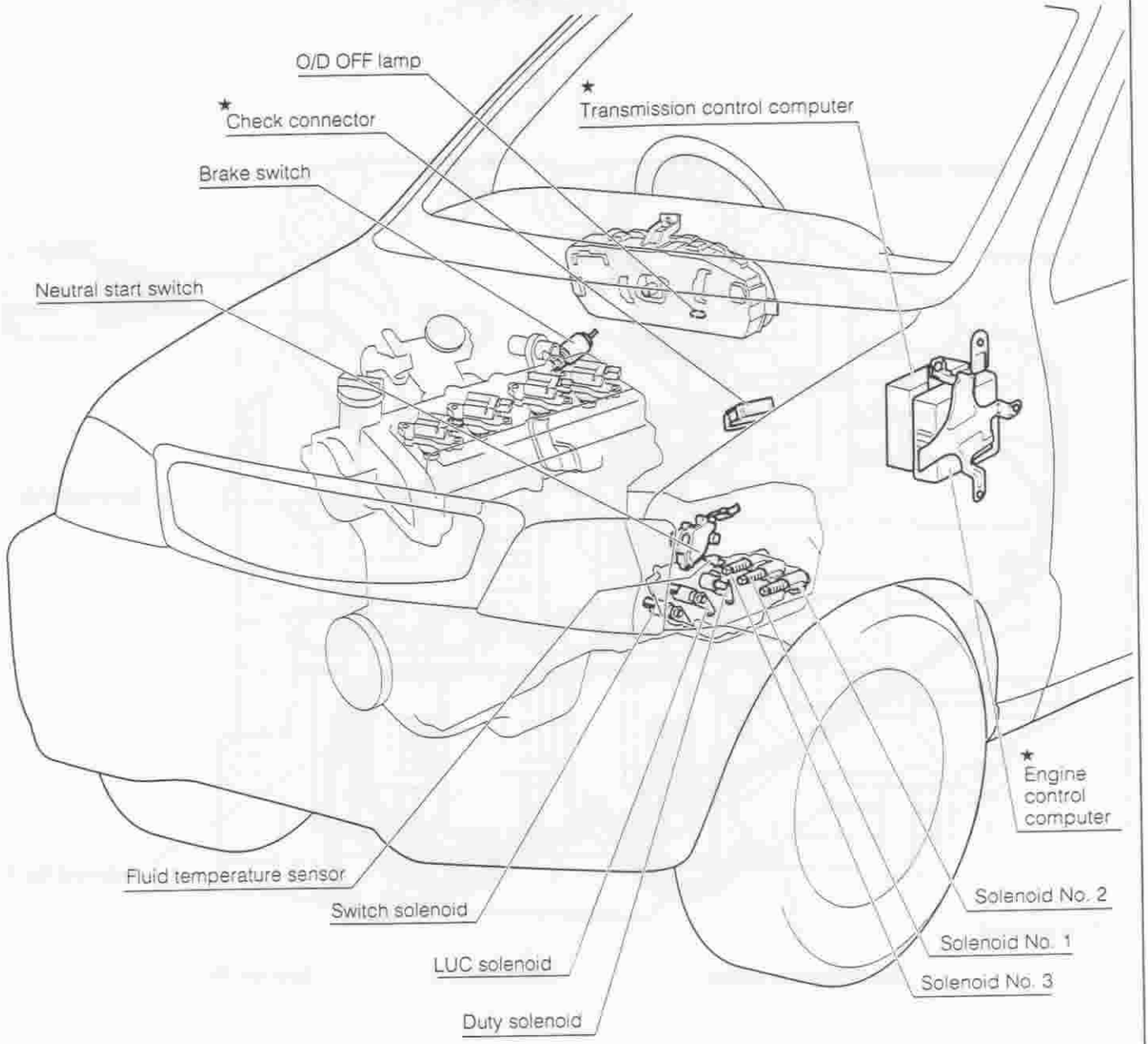
JAT00051-00000

REMOVAL AND INSTALLATION PROCEDURES



JAT00052-00036

LOCATION OF COMPONENTS



NOTE:
• On the LHD vehicles, as for the asterisk-marked parts, they are installed symmetrically between the right and left sides.

JAT00073-00052

CONFIRMATION OF PHENOMENON

When performing the trouble-shooting, it is impossible to pinpoint the cause, unless first the operator confirms the phenomenon. In order to confirm the phenomenon, it is indispensable to reproduce the malfunction phenomenon concerned by producing the conditions and environment similar to those where the malfunction took place, based on the information obtained at the time of the diagnosis through question-and-answer.

As for the phenomenon which is difficult to reproduce, it is necessary to produce the situation close to the running conditions where the malfunction took place (road conditions, meteorological conditions and driving conditions), based on the information obtained at the time of the diagnosis through question-and-answer. To this end, it is of great importance to produce the phenomenon

perseveringly by applying external factors, such as vibration (moving wire harnesses or relays by hands), heat (applying hot wind) and water (giving humidity).

JAT00084-00000

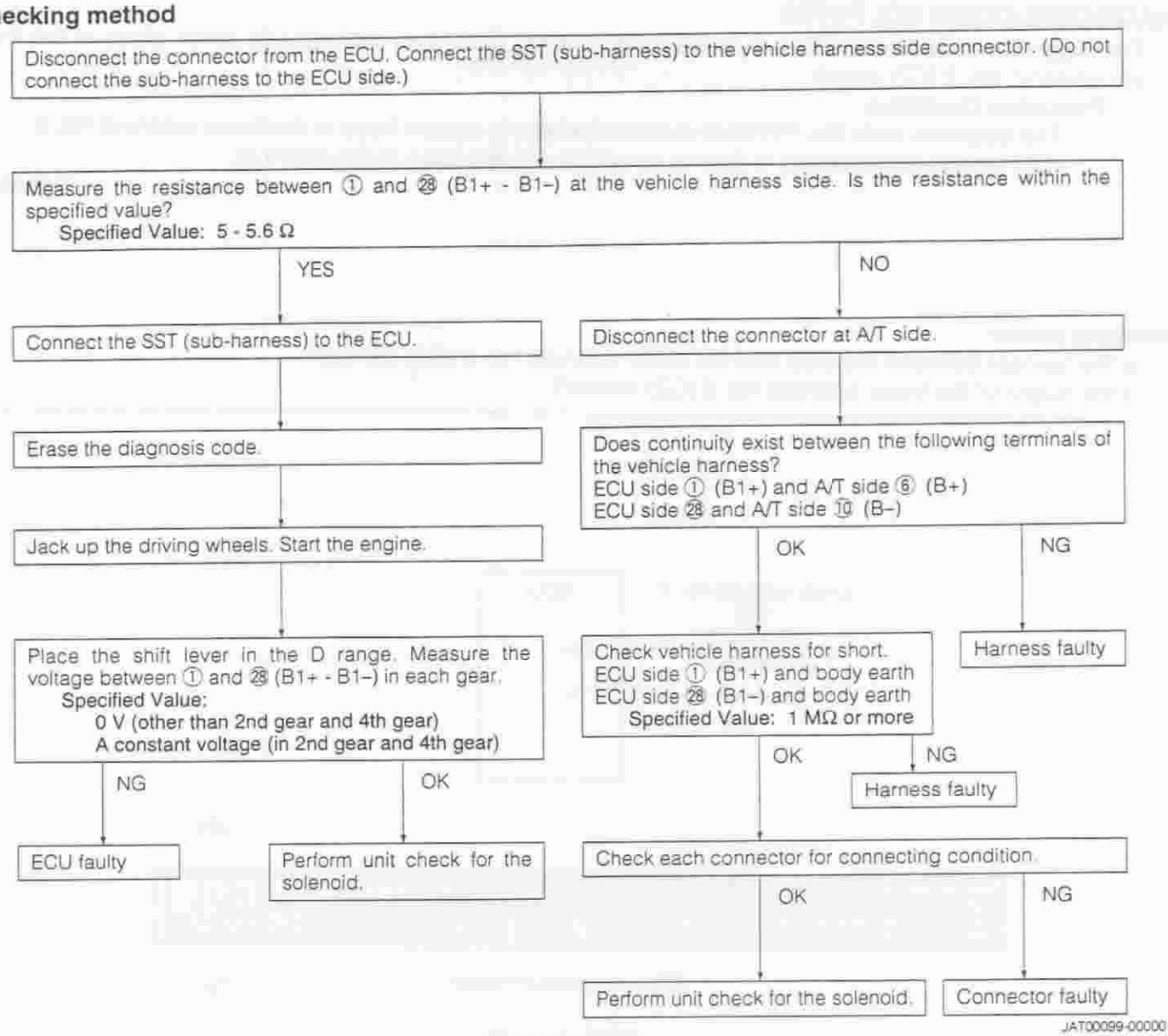
RE-CHECK OF DIAGNOSIS CODE

Re-check the diagnosis code after confirmation of the malfunction phenomenon. In this way, it is possible to judge whether the system for which the code was indicated before confirmation is now functioning properly or the malfunction still persists.

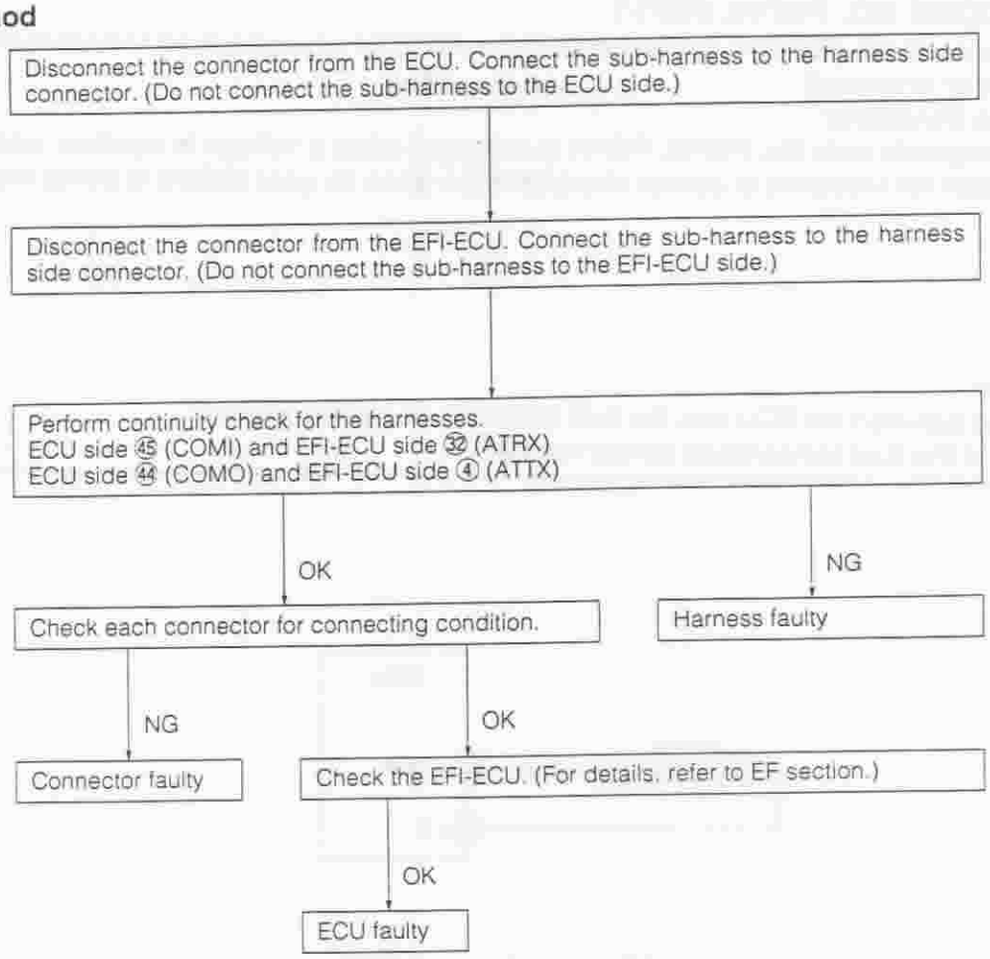
1. In cases where the malfunction takes place at time of re-confirmation and the abnormality code still persists even after the re-confirmation, perform the trouble-shooting according to the codes.
2. In cases where the malfunction took place but the normal code is now indicated after the re-confirmation, most likely the malfunction is caused by systems other than the diagnosis system. Therefore, perform the checks described in the trouble shooting table on the next page or the checks of trouble shooting according to malfunction phenomenon (Refer to AT–68).
3. In cases where no malfunction took place and the normal code is indicated after the confirmation, most likely the harness or connector sections had malfunctions, such as poor contact in the past, but now those sections are functioning normally.
   Therefore, check the system for which the code was indicated before confirmation of the phenomenon.

JAT00085-00000

Checking method



Checking method



JAT00114-00000

(3) Vehicle will not move forward.

1. Check and adjustment of control cable (Refer to AT–4.)
   If it is OK, go to step 2.
   If it is NG, adjust the control cable.
2. Manual running test
   Disconnect the connector of the A/T ECU. Check the gear position of each range.
   If it is OK, go to step 3.
   If it is NG, go to step 4.

Specifications

Range	P · N	D · 2 · L	R
Gear position	Neutral	3rd	Reverse

3. Check of ECU power supply circuit (Refer to AT–33.)
   If it is OK, replace the A/T ECU. If the malfunction still persists after replacement, go to step 5.
   If it is NG, repair the connectors or circuits concerned.
4. Remove the oil pan. In the N range, ensure that the manual valve groove is aligned with the hole at the valve body side.
   If it is OK, go to step 5.
   If it is NG, adjust the manual valve. (Refer to the AT Unit service manual.)
5. Unit check of solenoid No. 2 (Operation) (Refer to AT–77.)
   If it is OK, go to step 6.
   If it is NG, replace the solenoid No. 2.
6. Replace the valve body.
   If the malfunction still persists, replace the automatic transmission assembly.

(4) Vehicle will not move backward.

1. Check and adjustment of control cable (Refer to AT–4.)
   If it is OK, go to step 2.
   If it is NG, adjust the control cable.
2. Manual running test
   Disconnect the connector of the A/T ECU. Check the gear position of each range.
   If it is OK, go to step 3.
   If it is NG, go to step 4.

Specifications

Range	P · N	D · 2 · L	R
Gear position	Neutral	3rd	Reverse

3. Check of ECU power supply circuit (Refer to AT–33.)
   If it is OK, replace the A/T ECU. If the malfunction still persists after replacement, go to step 5.
   If it is NG, repair the connectors or circuits concerned.
4. Remove the oil pan. In the N range, ensure that the manual valve groove is aligned with the hole at the valve body side. (Refer to the AT Unit service manual.)
   If it is OK, replace the automatic transmission assembly.
   If it is NG, adjust the manual valve.

JAT00138-00000

(2) Unit check

① Solenoid connector ③ - Duty solenoid connector ① (LUCC)

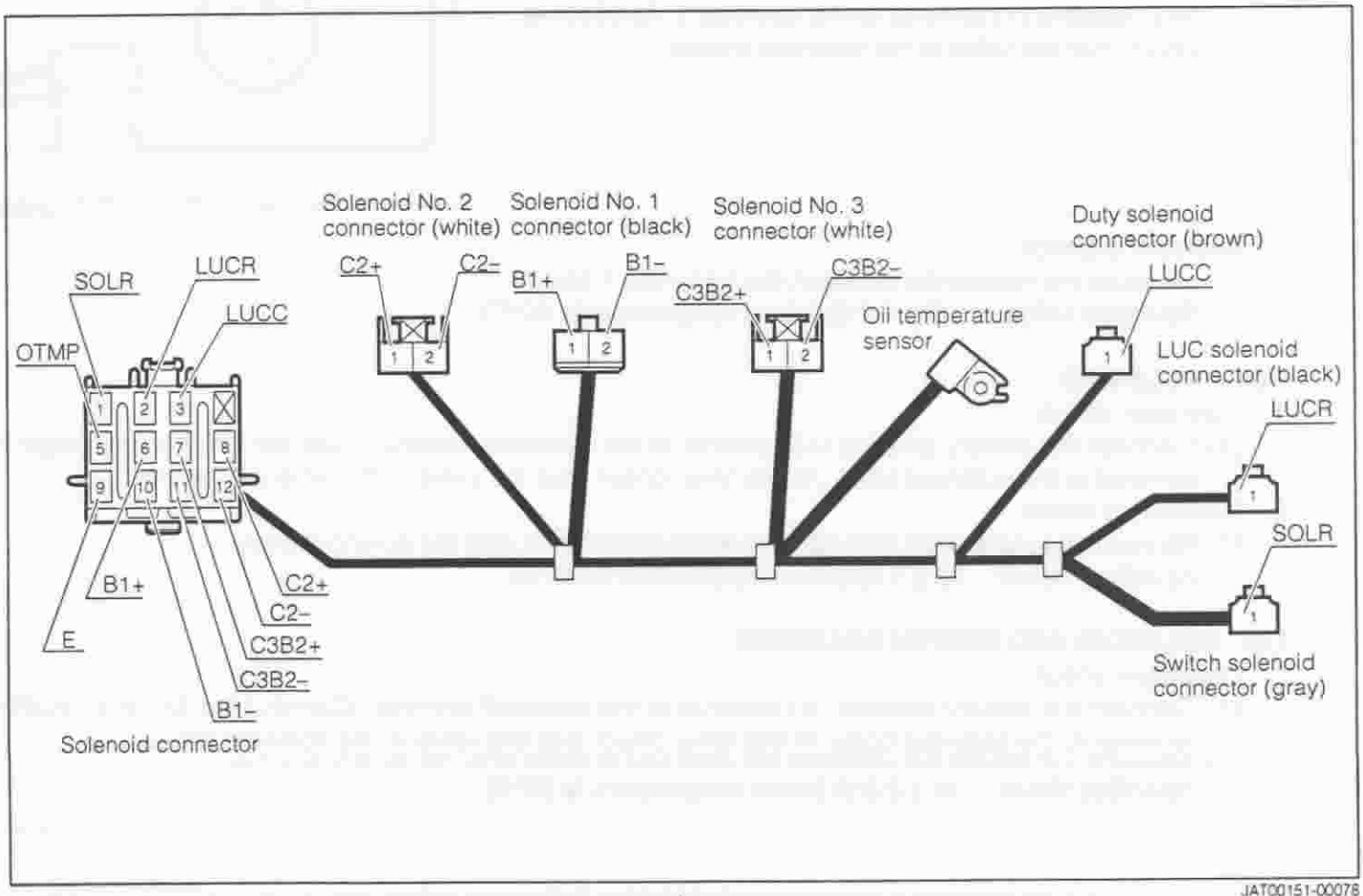
(4) Solenoid No. 1 system
- ① Solenoid connector ⑥ - Solenoid No. 1 connector ① (B1+)
- ② Solenoid connector ⑩ - Solenoid No. 1 connector ② (B1-)

(5) Solenoid No. 2 system
- ① Solenoid connector ⑧ - Solenoid No. 2 connector ① (C2+)
- ② Solenoid connector ⑫ - Solenoid No. 2 connector ② (C2-)

(6) Solenoid No. 3 system
- ① Solenoid connector ⑦ - Solenoid No. 3 connector ① (C3B2+)
- ② Solenoid connector ⑪ - Solenoid No. 3 connector ② (C3B2-)

3. Fluid temperature sensor system
   (1) Measure the resistance between ⑤ OTMP and ⑨ E of the solenoid connector.
   Specified Value: 5.63 ± 0.56 kΩ (0°C)
   0.072 ± 0.0022 kΩ (140°C)

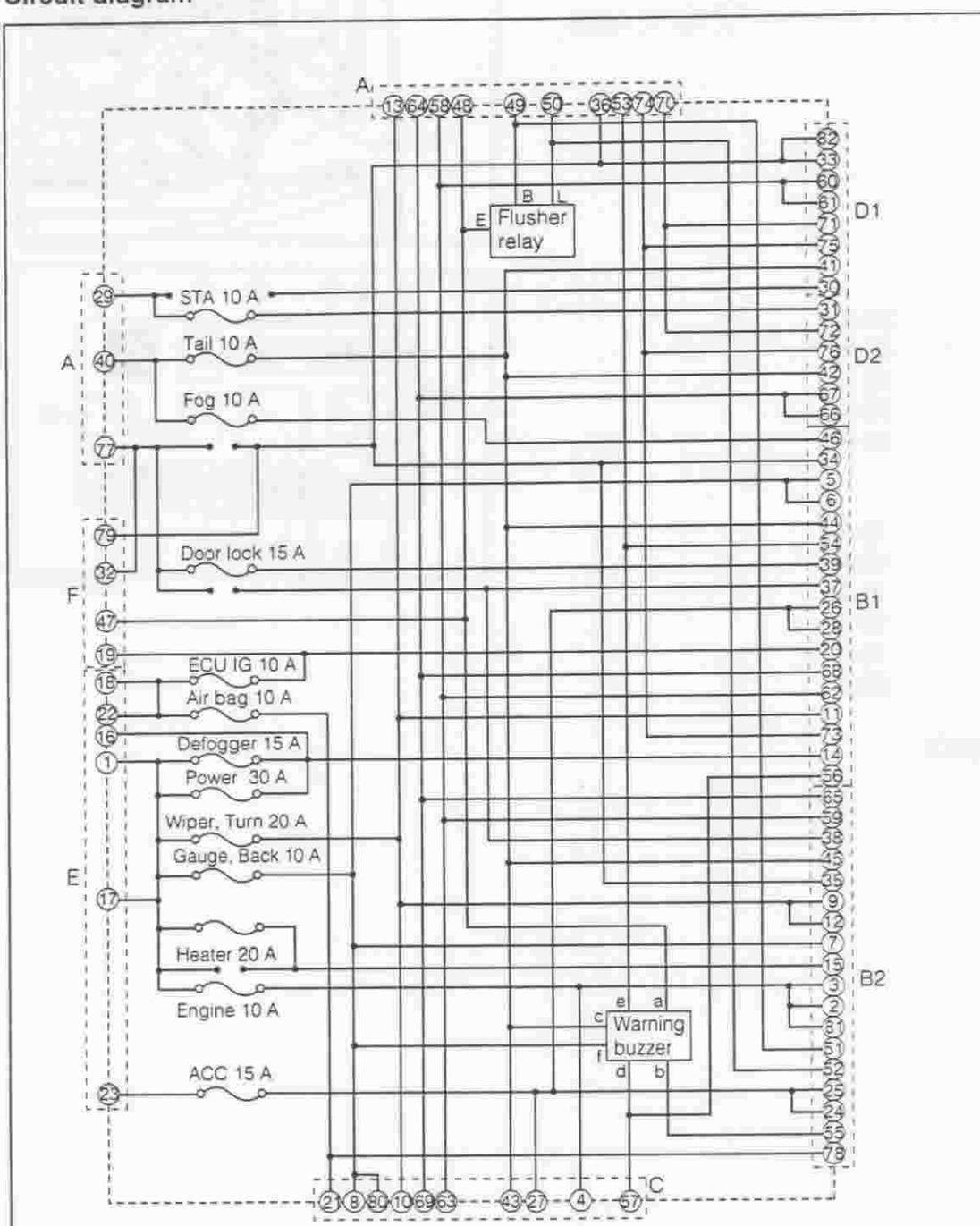
4. Check that there is no short between the connector terminals given below.

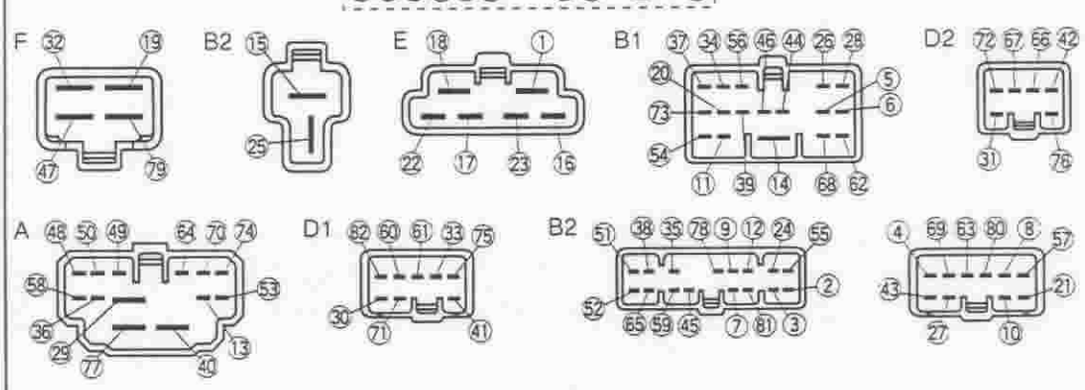


JAT00151-00078

JUNCTION BLOCK

Circuit diagram





1. IG SW (IG1)
2. Diagnosis check +B
3. Ignition coil +B
4. IG Coil +B
5. Meter +B
6. Cowl IG
7. Back lamp SW
8. Back lamp SW
9. Front wiper motor
10. Rear wiper motor
11. Rear wiper SW +B
12. Hazard SW +IG
13. Turn SW (+IG)
14. Defogger SW +B
15. Heater motor +B
16. Power window SW +B
17. Sub fuse (Heater)
18. IG SW (IG2)
19. EFI Main relay
20. EPS ECU
21. Air bag ECU (Sub)
22. Sub fuse (Air bag)
23. IG SW (ACC)
24. Radio +B
25. Cigarette lighter +B
26. Electric mirror +B
27. ACC (Sub)
28. Power supply (Option)
29. Ignition switch (M/T)
30. R/B-Starter relay (A/T)
31. EFI ECU (STA)
32. Tail FL (L)
33. Horn +B
34. Key SW (+)
35. Hazard SW +B
36. Turn SW (Hazard)
37. Stop SW +B
38. Room lamp +B
39. Door lock relay +B
40. Tail SW (L)
41. Clearance lamp RH
42. Clearance lamp LH
43. Tail lamp +B
44. Meter illumination +B
45. Heater illumination +B
46. Fog lamp SW +B
47. Earth
48. Turn SW (Earth)
49. Turn SW (L)
50. Turn SW (RLSW)
51. Hazard SW (L)
52. Hazard SW (RLSW)
53. Turn SW (RF)
54. Key SW (L)
55. Reverse SW (L)
56. Courtesy SW (+)
57. Courtesy SW (+)
58. Turn SW (RH)
59. Hazard SW (RH)
60. Front turn lamp RH
61. Side turn lamp RH
62. Turn indicator RH
63. Rear turn lamp RH
64. Turn SW (LH)
65. Hazard SW (LH)
66. Front turn lamp LH
67. Side turn lamp LH
68. Turn indicator LH
69. Rear turn lamp LH
70. Turn SW (Dimmer Hi)
71. Head lamp Hi RH
72. Head lamp Hi LH
73. High beam indicator
74. Turn SW (Dimmer Lo)
75. Head lamp Lo RH
76. Head lamp Lo LH
77. Tail SW (+)
78. Air bag ECU
79. Horn, Hazard fuse
80. Gauge, Back (Sub)
81. Air bag ECU power supply
82. Horn, Hazard (Sub)

JBE00005-00004

Replenishment of compressor oil

1. Be sure to use the designated compressor oil.
   Name of Compressor Oil: ND—OIL—8

2. Replenishing amount of compressor oil.
   (1) When condenser only has been replaced: 40 cc
   (2) When cooling unit only has been replaced: 40 cc
   (3) When compressor only has been replaced:
   The oil amount of a new compressor should be the same as that of the compressor that has been replaced.

NOTE:
- Some compressor oil remains in the cooling unit or condenser. Hence, the oil of that remaining amount must be drained from the new compressor.

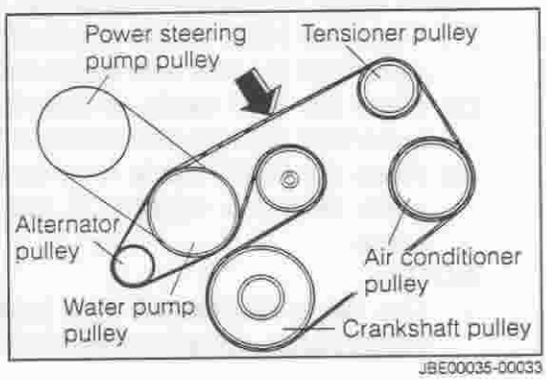
JBE00034-00000

Tension adjustment of compressor belt

Ensure that the tension of the compressor belt is within the specifications given below.

Specifications:

	When a new belt is installed	When a used belt is installed
Belt tension	590 ± 100 N·m (60 ± 10 kgf)	390 ± 50 N·m (40 ± 5 kgf)
Deflection when a force of 100 N·m (10 kgf) is applied	9 - 11 mm	13 - 15 mm

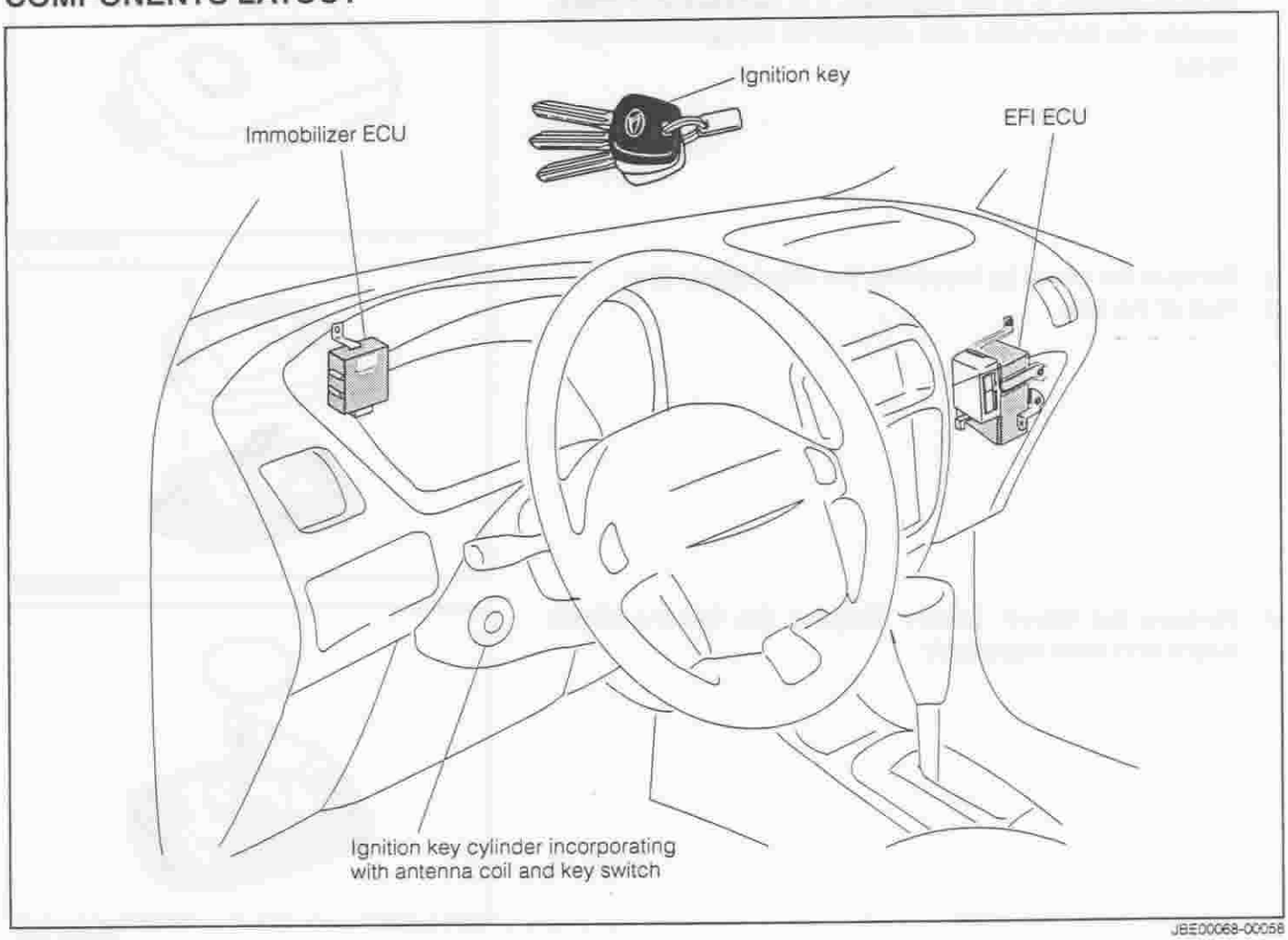


JBE00035-00033

NOTE:
- If the tension does not comply with the specifications above, adjust it by loosening the bolt.
- For the detailed procedure for the belt tension adjustment, refer to the Section CH of the relative service manual of the engine concerned.

IMMOBILIZER SYSTEM

COMPONENTS LAYOUT



JBE00068-00058

OUTLINE

This system consists of a transponder-built-in key, an antenna coil, an immobilizer ECU and EFI ECU.
In this immobilizer system.
In this immobilizer system, when the key is inserted into the ignition key cylinder, the key switch is turned ON, thus starting the system. Then, comparison is made between the code memorized in the immobilizer ECU and the code memorized in the key. When both codes match with each other, the immobilizer ECU sends to the EFI ECU the permission signals for ignition and fuel injection. The key ID code is a transponder intrinsic code, whereas the rolling code takes a different value every time the engine is started. This code is renewed and memorized in the EFI ECU and immobilizer ECU as the rolling code for the next starting.

JBE00069-00000

4	DS-21 on screen	Check lamp indication
	DTC No. B2787	Code No. 23

Diagnosis code No. 23 is indicated.

↓

Start engine again, using master key.

OK → ID code of key that was used for first starting is not registered.
- Register key, using registration function of master key.

NG ↓

Register master key and sub keys in key registration mode. Start engine again.

OK → Registration for master key and sub keys have been done properly.
- Release key registration mode. Use vehicle under this state.

NG ↓

There is abnormality in immobilizer ECU.
- Replace ECU with a new one. Register key newly.

JBE00103-00000

5	DS-21 on screen	Check lamp indication
	DTC No. B2790	Code No. 31

Diagnosis code No. 31 is indicated.

↓

Check that terminal T of immobilizer is connected with ground properly.

NG → Connect terminal T of immobilizer with ground properly. Register sub key again. Start engine.

OK ↓

NG → Sub key have been registered properly.
- Release key registration mode. Use vehicle under this state.

OK ↑

Check that master key is used properly in key registration mode.

NG → Register sub key again, using master key. Start engine.

OK ↓

NG → (to ECU abnormality)

There is abnormality in immobilizer ECU.
- Replace ECU with a new one. Register key newly.

JBE00104-00000

Flow chart No. [K]

① Connect the terminal T of the IMB of the diagnosis connector to the terminal E.

② Insert into the key cylinder the master key for which an identification code is registered.

③ Turn ON the ignition switch.

④ Turn OFF the ignition switch and pull out the key from the key cylinder.

⑤ Within 10 seconds after completion of Step ④, turn ON the ignition switch, using the sub key for which an identification code is registered.

⑥ Turn OFF the ignition switch and pull out the key from the key cylinder.

⑦ Within 10 seconds after completion of Step ⑥, turn ON the ignition switch, using another sub key for which an identification code is registered.

⑧ Turn OFF the ignition switch and pull out the key from the key cylinder.

⑨ This completes the registration.

JBE00130-00000

Flow chart No. [L]

① Connect the terminal T of the IMB of the diagnosis connector to the terminal E.

② Insert into the key cylinder the master key for which an identification code is registered.

③ Turn ON the ignition switch.

④ Turn OFF the ignition switch and pull out the key from the key cylinder.

⑤ Within 10 seconds after completion of Step ④, turn ON the ignition switch, using the sub key for which an identification code is registered.

⑥ Turn OFF the ignition switch and pull out the key from the key cylinder.

⑦ Within 10 seconds after completion of Step ⑥, turn ON the ignition switch, using another sub key.

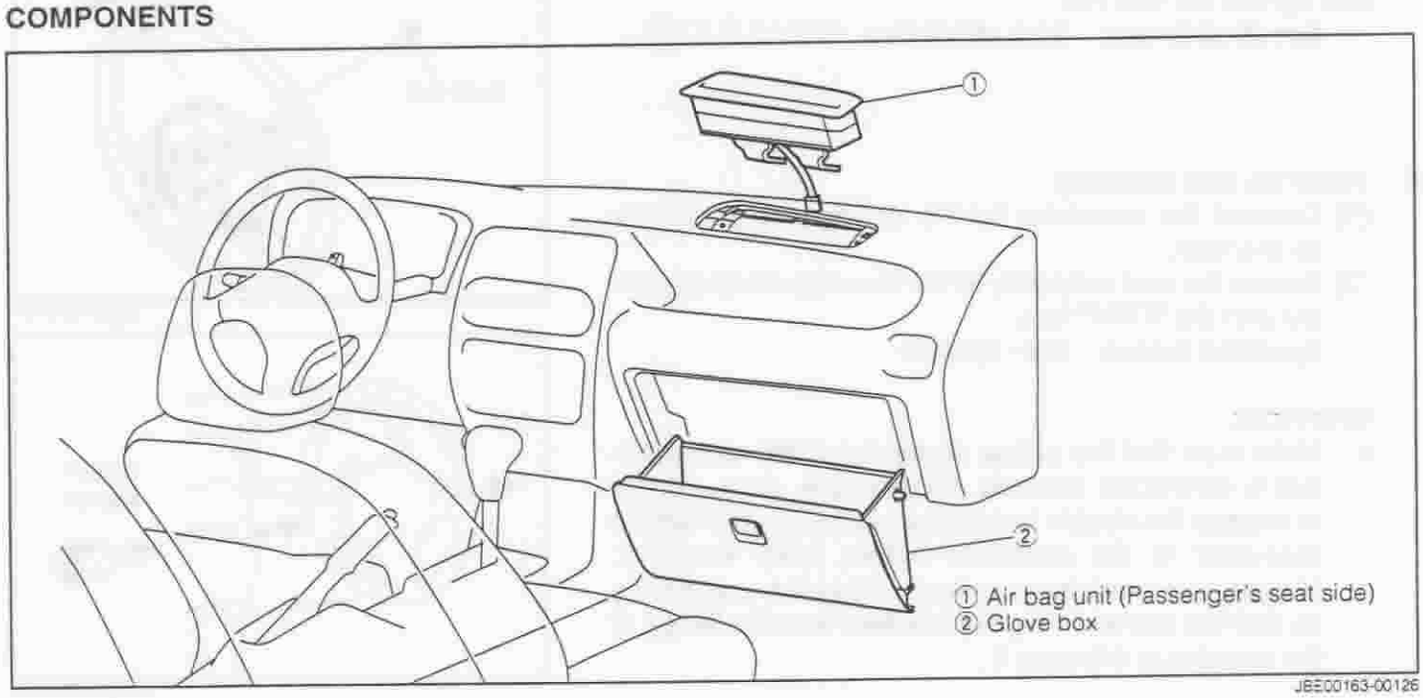
⑧ Turn OFF the ignition switch and pull out the key from the key cylinder.

⑨ This completes the registration.

JBE00131-00000

AIR BAG UNIT (FRONT PASSENGER'S SEAT SIDE)

COMPONENTS



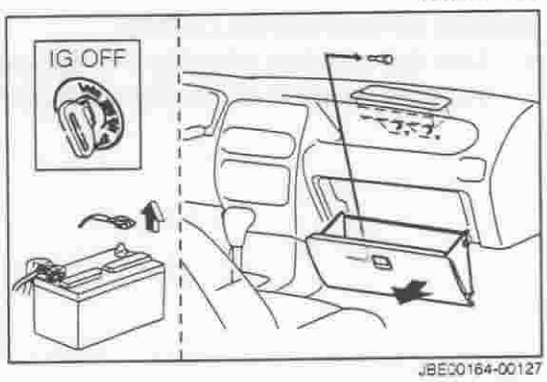
JBE00163-00126

REMOVAL

WARNING:

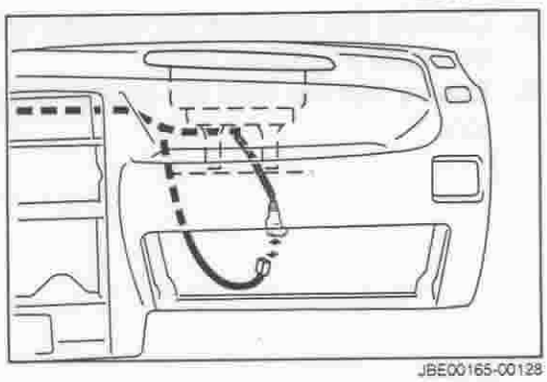
- Be sure to read "IMPORTANT SAFETY NOTICE", page BE-45 - 46, before handling the air bag components and observe every notice during work.

1. Turn OFF the ignition switch and detach the negative (–) terminal of the battery cable. Then wait for at least 90 seconds.
2. Remove the glove box by removing attaching clip.



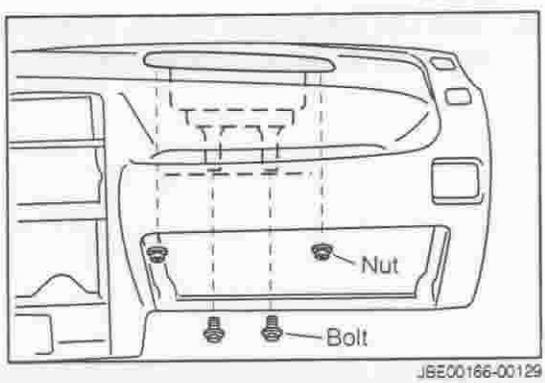
JBE00164-00127

3. Disconnect the connector which connects the wire harness of the air bag unit and the cowl wire.



JBE00165-00128

4. Remove the air bag unit assembly from the instrument panel by removing attaching bolts and nuts.

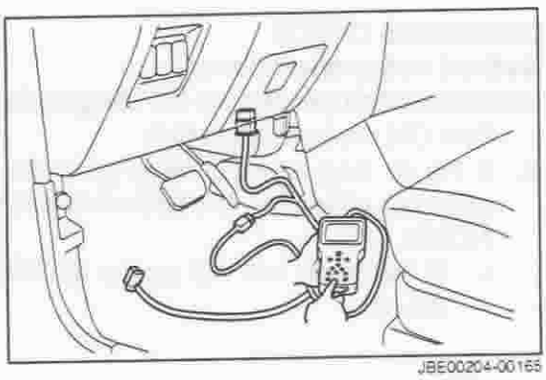


JBE00166-00129

Method using diagnostic tester (DS-21)

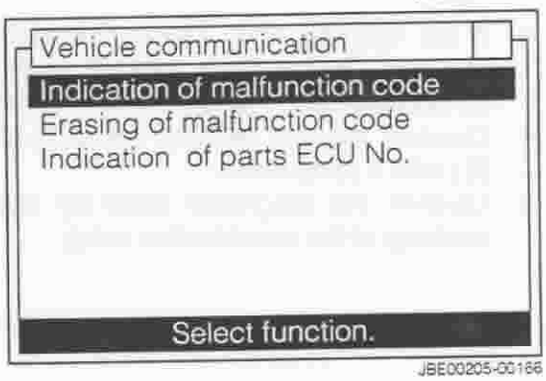
<Reading of diagnosis codes>

1. Connect the diagnostic tester (DS-21) to the diagnosis check connector.



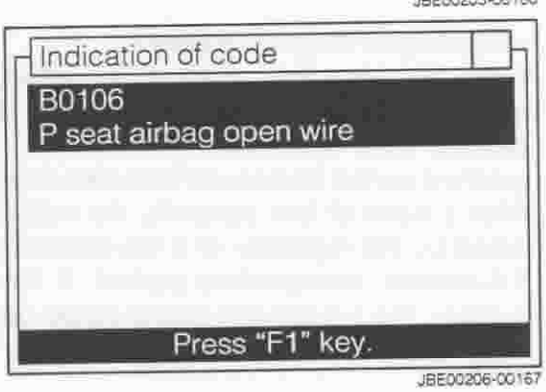
JBE00204-00165

2. Execute the "Indication of malfunction code" of the vehicle communication item for the airbag.



JBE00205-00166

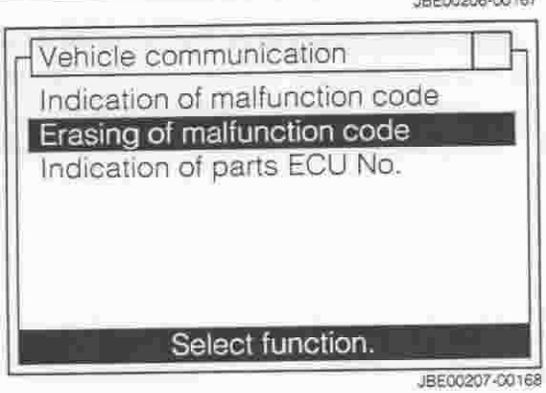
3. In cases where any malfunction code is present, the number of abnormality codes memorized in the airbag ECU and the diagnosis contents will be indicated.
   When no malfunction code exists, a message "Not found" appears.



JBE00206-00167

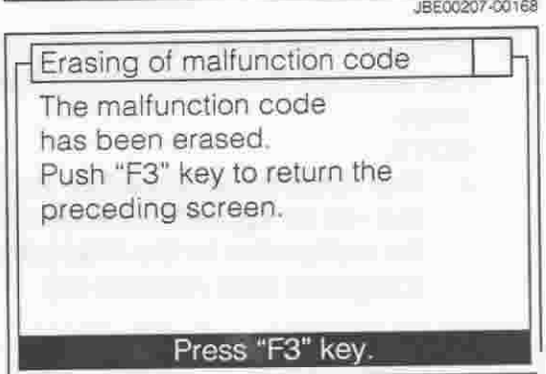
<Canceling procedure for records of diagnosis codes>

1. Execute the "Erasing of malfunction code" of the vehicle communication item for the airbag.



JBE00207-00168

2. The malfunction codes will be erased.



JBE00208-00169

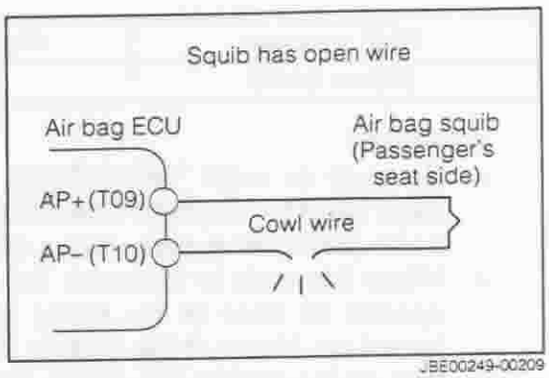
DS-21 on screen	Check lamp indication
DTC No. B0106	Code No. 54

WARNING:
- Be sure to read "IMPORTANT SAFETY NOTICE", page BE–45 - 46, before handling the air bag components and observe every notice during work.

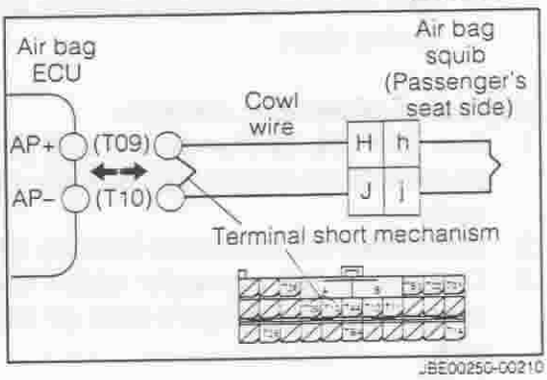
NOTE:
- As regards the removal and installation procedures for the air bag related parts, refer to page BE–51 - 59 of this service manual.

Inspection

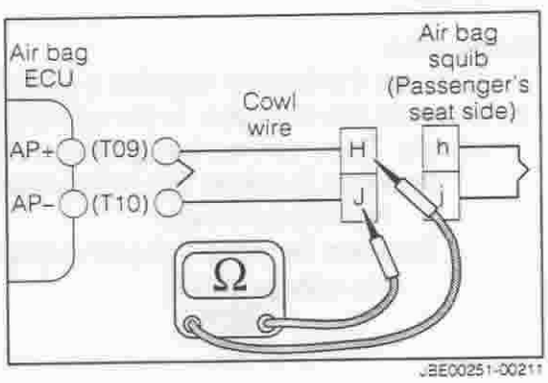
1. Turn OFF the ignition switch and detach the negative (–) terminal of the battery cable. Then wait for at least 90 seconds.
2. Disconnect the connector from the air bag ECU.
   NOTE:
   - When the connector is disconnected from the air bag ECU, the connector terminals AP+ (T09) and AP– (T10) at the cowl wire harness side are shorted automatically by the short circuit bridge.
3. Disconnect the connector which connects the wire harness of the passenger's side air bag unit and the cowl wire.
4. Ensure that the continuity exists between the respective terminals.
   Between Terminal H (+) and J (–): Continuity exists.
5. If there is no open wire, connect both ends of the air bag terminals at the cowl wire harness side with a jump wire to short them.
6. Connect the connector at the cowl wire harness side and the air bag ECU connector that were disconnected at Step 2.
7. Connect the battery negative (–) cable.
8. Turn ON the ignition switch and take a reading of the diagnosis code.
   CAUTION:
   - If the code 53 (short circuit of squib circuit) is indicated, it proves indirectly that there is open wire in the squib of the air bag unit. Therefore, replace the air bag assembly.
9. After the inspection and installation, cancel the diagnosis code and confirm that the code 53 and 54 are not outputted any more.



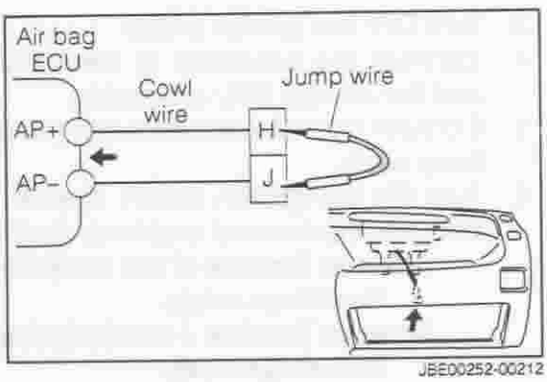
JBE00249-00209



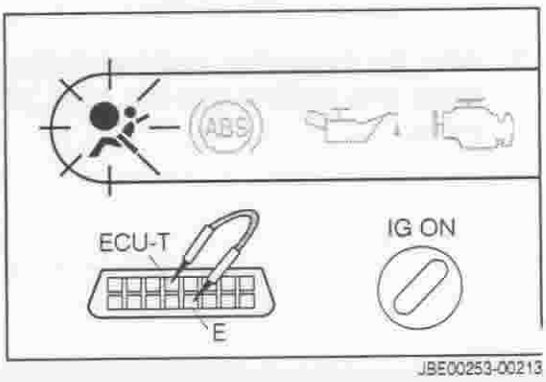
JBE00250-00210



JBE00251-00211



JBE00252-00212

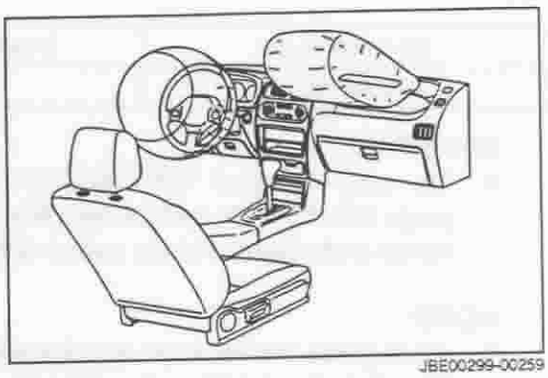


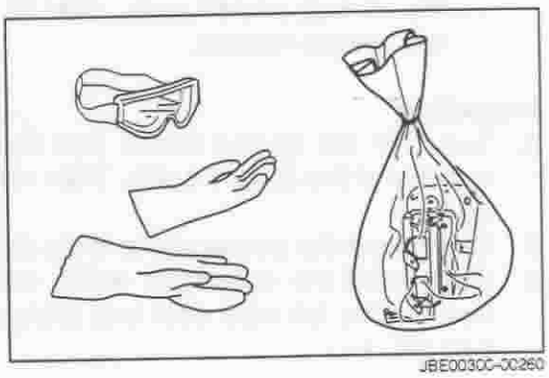
JBE00253-00213

DS-21 on screen	Check lamp indication
DTC No. B1310	Code No. 91
DTC No. B1311	Code No. 92
DTC No. B1312	Code No. 93

NOTE:
- This code is outputted when the airbag system and pretensioner system were operated. Then fuel cut signal already outputted. This diagnosis code can not be canceled and the airbag, pretensioner and airbag ECU can not be used again. It is necessary to replace them.

WARNING:
- Be sure to read "IMPORTANT SAFETY NOTICE", page BE–45 - 46, before handling the airbag components and observe every notice during work.
- Refer to the disposal procedure for the airbag and pretensioner at page BE–87.


JBE00299-00259

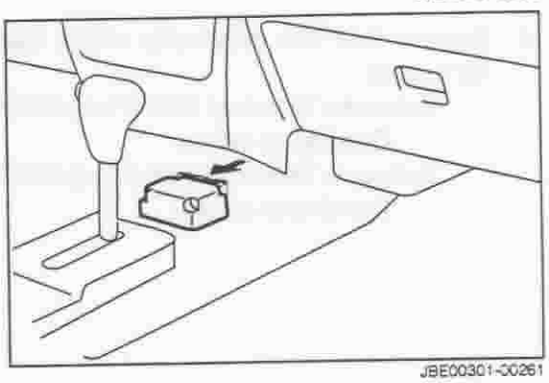

JBE00300-00260

DS-21 on screen	Check lamp indication
DTC No. B1100	Code No. 31

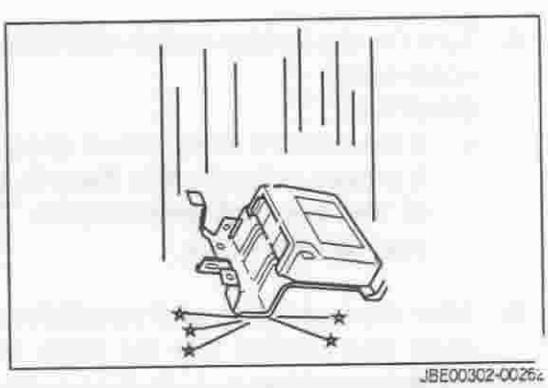
Possible cause for malfunction: Malfunction of ECU

NOTE:
- This code indicates that the ECU is malfunctioning. This diagnosis code can not be canceled. Therefore, the air bag ECU can not be used again. It is necessary to replace the air bag ECU.

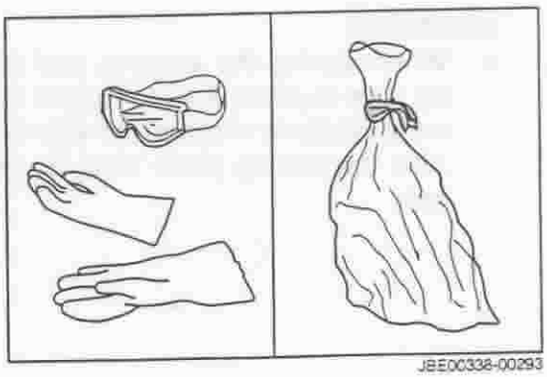
WARNING:
- Be sure to read "IMPORTANT SAFETY NOTICE", page BE–45 - 46, before handling the air bag components and observe every notice during work.


JBE00301-00261

CAUTION:
- The G sensor is built in the air bag ECU. If the ECU is dropped once, the reliability of CPU and G sensor can not be assured. Therefore, the air bag ECU can not be used again. Extreme care must be exercised as to its handling.

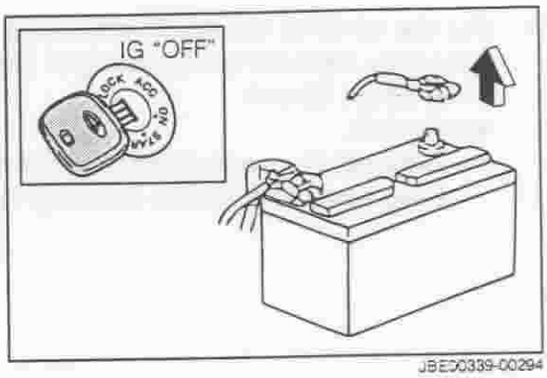

JBE00302-00262

9. Since the metal section of the gas generator is extremely hot, leave it at least for thirty minutes to allow it to cool naturally. After the deployed air bag cools down completely, it shall be sealed in a bag to be disposed.
   WARNING:
   - Be sure to wear protective goggles and gloves during this operation. After completion of the operation, gargle and wash your hands. If you feel any abnormality in your respiratory organs, follow the instruction of a doctor.


JBE00338-00293

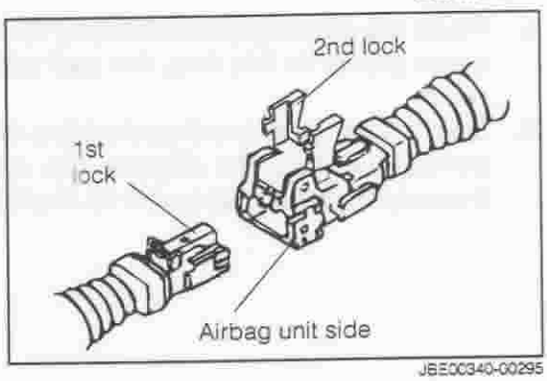
<Disposal procedure of air bag in front passenger seat>

1. Turn OFF the ignition switch. Disconnect the vehicle battery cable terminal from the negative terminal of the battery.



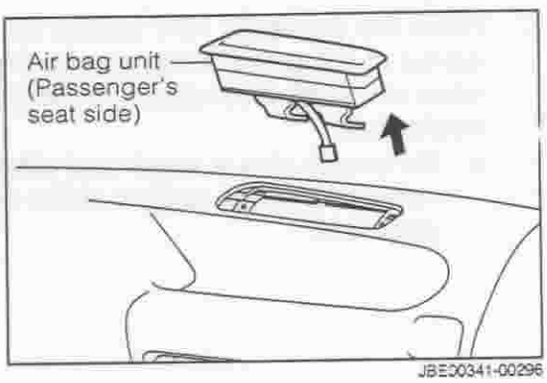
JBE00339-00294

2. Turn OFF the ignition switch and wait for 90 seconds. Disconnect the connector which connects the wire harness of the air bag unit and the wire cowl.



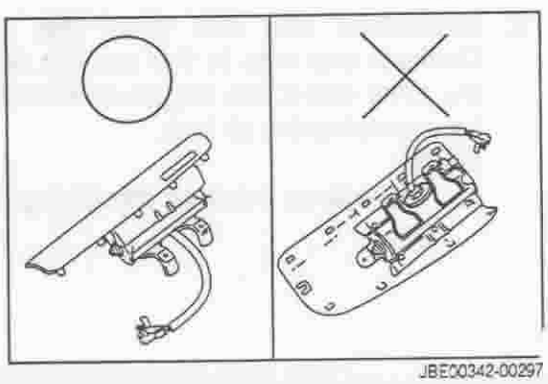
JBE00340-00295

3. Remove the air bag unit assembly in the front passenger seat.

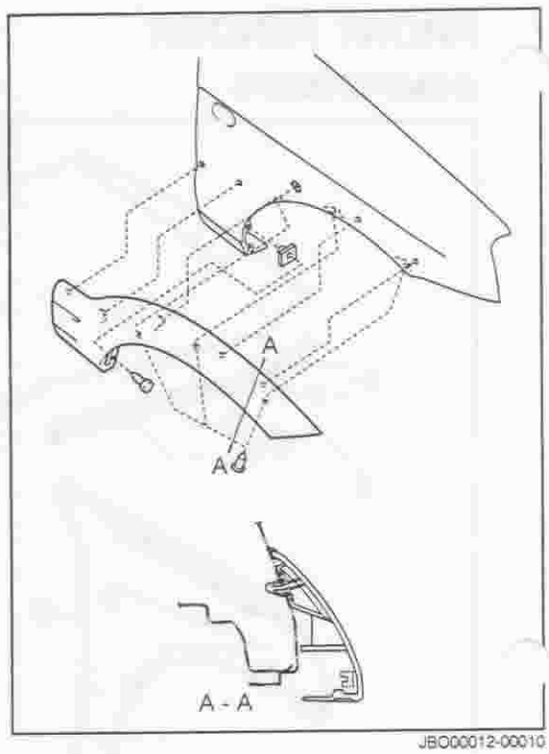


JBE00341-00296

WARNING:
- When storing the air bag unit assembly in the front passenger seat temporarily, be sure to place it with the pad surface facing upward on a flat place which is not exposed to direct sun rays. Also the storing place shall be away from water and rain.


JBE00342-00297

4. Remove the over fender from the fender panel by disconnecting the retainers while retracting the lock section, using a nosepliers or the like.
5. Remove the side turn signal lamp.
   (Refer to the BE section.)
6. Remove the front fender subassembly by removing the five attaching bolts.
7. Remove the hood moulding.



JBO00012-00010

INSTALLATION

NOTE:

- Basically the installation procedure is reverse to the removal procedure. Therefore, illustrations are not given in this installation procedure. Refer to the illustrations in the removal procedure in cases where any difficulty is encountered.

1. Install the front fender subassembly with the attaching bolts and tighten them properly.
2. Install the side turn signal lamp.
   (Refer to the BE section.)
3. Installation of over fender
   (1) Ensure that the retainers are installed properly and there is no damage.
   If any damage exists, replace the retainer with a new one.
   (2) Install the over fender to the front fender by connecting the retainers on the over fender to the front fender.
   (3) Ensure that the retainers are locked properly.
4. Install the front fender liner. (Refer to the fender liner section.)
5. Install the front mudguard with the three attaching bolts.
6. Install the front bumper. (Refer to the front bumper section.)
7. Install the hood moulding.

JBO00013-00000

INSPECTION

Ensure that the clearance of each mounting is within the specified value, as shown in the figure.
If the clearance fails meet with the specified value mentioned in the figure, replace the part with a new c or adjust the clearance by changing the attaching position.

REMOVAL/INSTALLATION

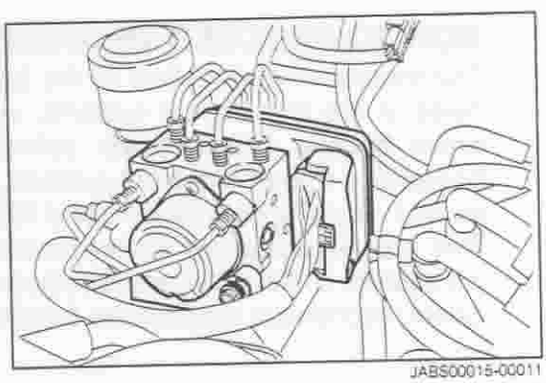
1. Lift up the engine and transmission slightly, using an engine lifter and/or transmission jack, etc.
2. Remove the engine mountings.
3. Install a new engine mounting with the attaching bolts and nuts. Then, tighten the attaching bolts and nuts to the specified tightening torque as mentioned in the figure.
4. Remove the engine lifter and/or transmission jack, etc from the engine and transmission.
5. Ensure that the clearance of the engine mountings are within the specified value.
   If the clearance fails to meet the specified value, loosen the attaching bolts of the engine mountings attaching position. Then, tighten the attaching bolts to the specified tightening torque mentioned in the figure.
6. Ensure that the clearance of each mountings are within the specified value as mentioned in the figure above.
   NOTE:
   - Check the alignment of the vehicle shell or the engine mounting member if the clearance fails to meet the specified value after replacing the engine mounting.

JBO00049-00U0

11. When installing a wireless installation (Telephone, HAM, CB, etc.) :
The ABS actuator unit has been so designed that it is resistant to external influence. However, if a vehicle is equipped with a wireless installation, such as CB, HAM, telephone and so forth, (even if its output is only 10 Watts) it may affect the ABS actuator unit adversely. Therefore, observe the following precautions.
    - Install the antenna at a place as far away as possible from the ABS actuator unit and related harnesses.
    - The antenna cord should be kept at least 30 cm from the ABS actuator unit and its related harnesses.
    - The antenna cord should not be routed in parallel to ABS related harnesses.
    - Adjust the antenna output correctly.
    - Never install a wireless installation with a high output into the vehicle.
    - Never use or place a handy telephone near the components of the ABS and its related harnesses.

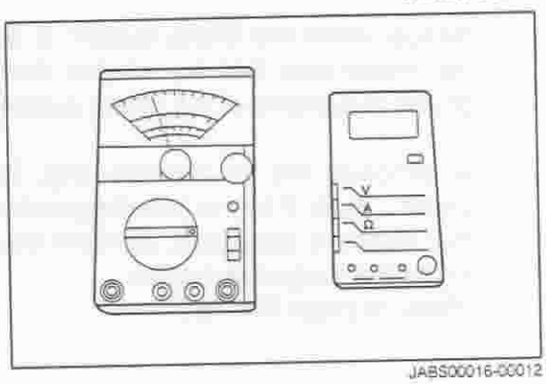
JABS00014-00000

12. When disconnecting or connecting connectors:
    - Prevent dust, water and foreign material, etc. from being admitted into the ABS-related connectors when disconnecting or connecting the connectors. Failure to observe this caution may cause serious malfunction, due to lowering the insulation of each terminal.
    - Never damage or lose the seal of connectors during disconnection or connection.
    - Be sure to confirm the shape of the lock and release the lock properly before disconnecting the connectors.



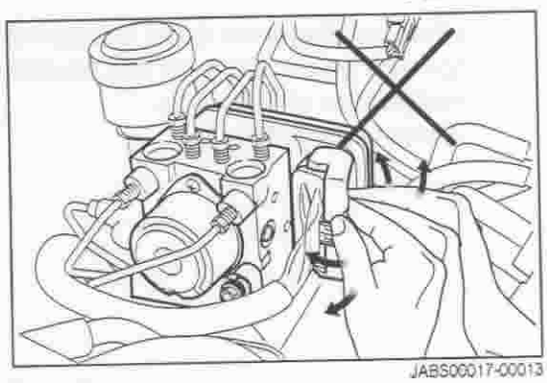
JABS00015-00011

13. Circuit tester
    - For trouble shooting, use a volt/ohmmeter whose internal resistance is more than 10 k ohm, whose resolution is 0.1 V or more and 0.5 ohm or more, and whose accuracy is 0 ± 2 % or more.
    Use of a volt/ohmmeter which has lower specifications than those described above for trouble shooting may lead to wrong diagnosis or mis-judgement.

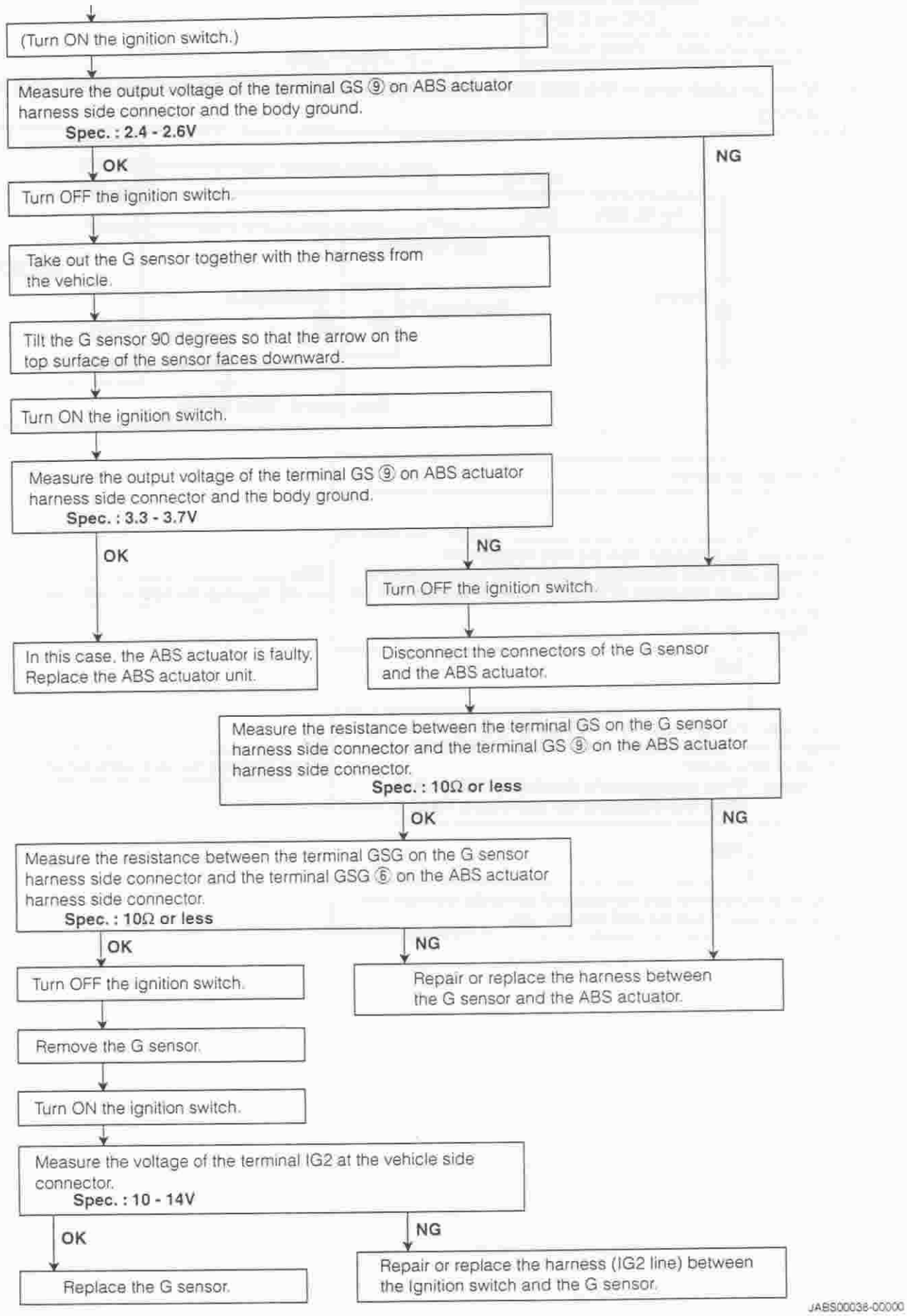


JABS00016-00012

14. Never deform the terminals of connectors by applying an excessive force when checks are performed by attaching the probe electrodes of the volt/ohmmeter to the terminals.
15. Be sure to disconnect the ground cable from the negative terminal of the battery before disconnecting the connector of the wire harness from the ABS actuator unit. Failure to observe this caution may lead to ABS unit damage.



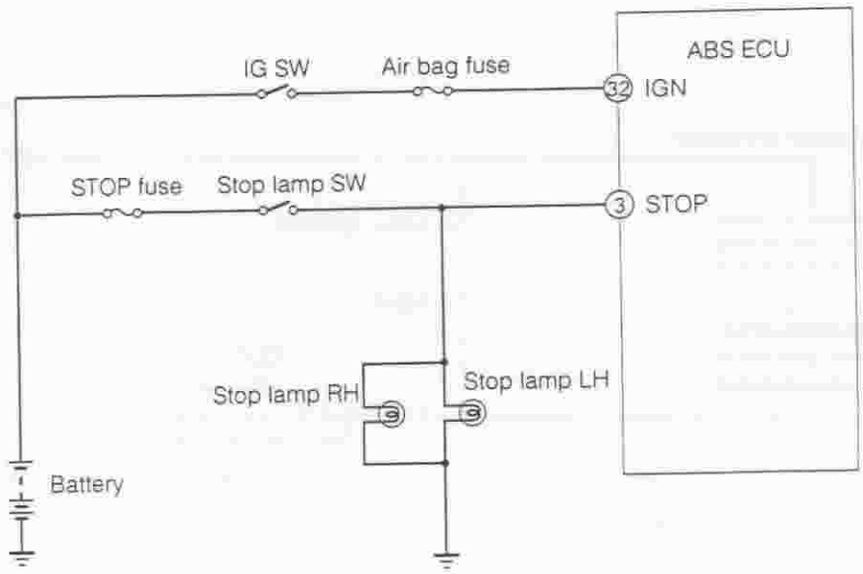
JABS00017-00013



JABS00038-00000

TROUBLE PHENOMENA TABLE ITEM 11

TROUBLE PHENOMENA : Diagnosis code will not be erased.



JABS00000-00031

Checking point:

1. Stop lamp switch signal
2. ABS actuator unit

1. Diagnosis code will not be erased.

2. Repeat the diagnosis code erasing procedure described in the "Erasing procedure for diagnosis codes" properly

Erased → End.

Not erased

3. Turn off ignition switch.
4. Disconnect the wire harness connector from the ABS actuator unit

5. Ensure that approximate battery voltage will be applied to the STOP ③ terminal of ABS actuator unit connector of the wire harness when brake pedal is depressed.

NO → Ensure that continuity exists between stop lamp switch and STOP ③ terminal of the ABS actuator unit.

YES → Check fuse, stop lamp switch and related harness for open wire. Repair, as required.

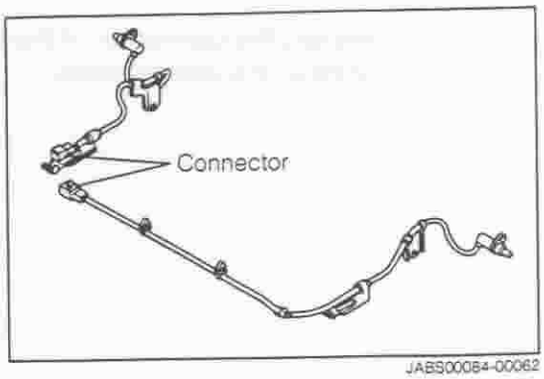
NO → Repair wire harness.

YES

6. Check ABS actuator unit. (Refer to unit inspection of ABS actuator unit.)

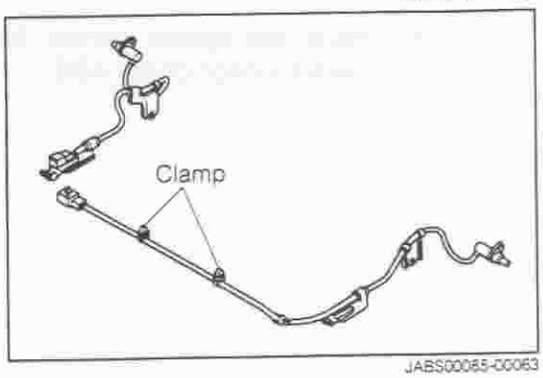
JABS00051-00000

4. Removal of speed sensor
   (1) Turn off the ignition switch.
   (2) Disconnect the connector of the speed sensor from the connector of the wire harness.



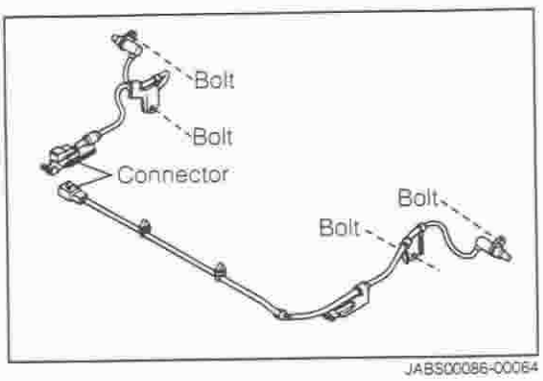
JABS00084-00062

   (3) Disconnect the sensor harness clamp by removing the attaching bolts.
   (4) Disconnect the sensor harness clamp from the floor panel by retracting its lock sections, using a minor screwdriver or the like.



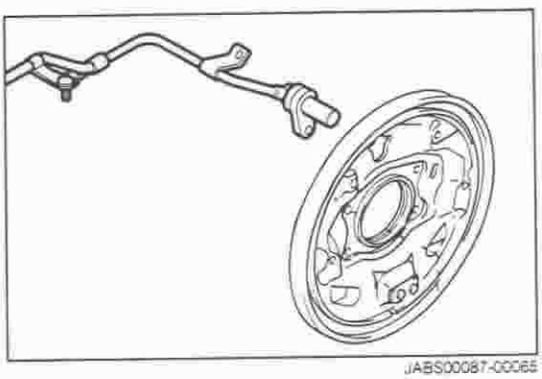
JABS00085-00063

   (3) Remove the speed sensor by removing the attaching bolts.



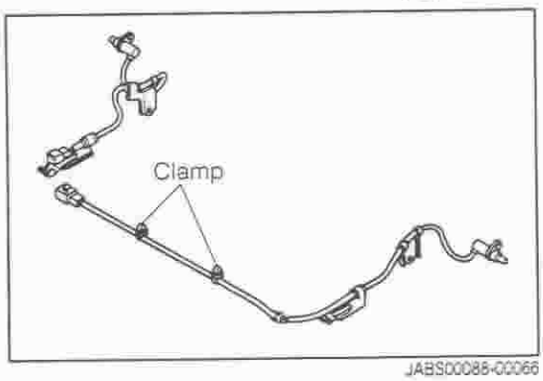
JABS00086-00064

5. Installation of speed sensor
   (1) Clean the attaching surface of the speed sensor and backing plate.
   (2) Install the speed sensor with the attaching bolt and tightening it to the specified tightening torque.
   Tightening Torque: 6.9 - 9.8 N·m


JABS00087-00065

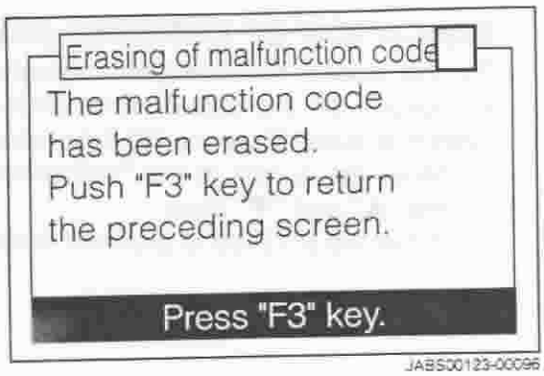
   CAUTION:
   - After the installation, be sure to check that the clearance between the speed sensor and the speed sensor rotor is within the specified value.

   (3) Connect the sensor harness clamp to the floor panel and ensure that the locking section is properly engaged by pulling it lightly.
   (4) Connect the sensor harness clamp with the attaching bolts and tighten them to the specified tightening torque.
   Tightening Torque: 6.9 - 9.8 N·m



JABS00088-00066

4. When the screen indicated in the right figure appears, it means that the malfunction codes have been erased. Press the [F3] key to return to the preceding screen.

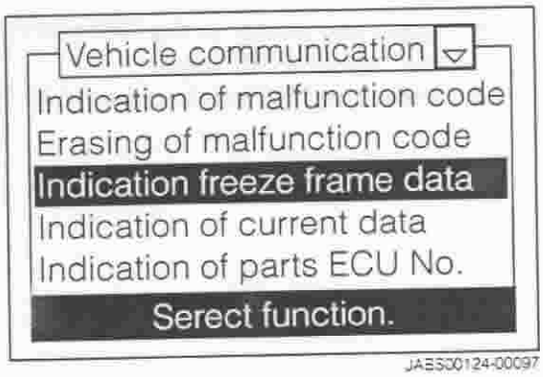


JABS00123-00096

INDICATION OF FREEZE FRAME DATA

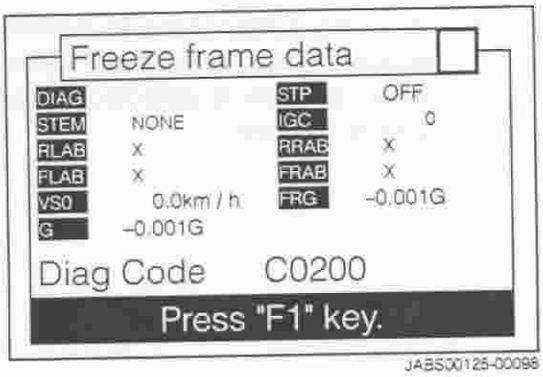
For the system that has been already selected, it is possible to indicate the freeze frame data memorized in the ECU at the moment when a malfunction took place.

1. Move the cursor to the "Indication freeze frame data," using the "▲" and "▼" keys.
2. Press the [F1] key to proceed to the next operation.



JABS00124-00097

3. The freeze frame data is indicated.
   NOTE:
   - The following table shows the original words of abbreviations.



JABS00125-00098

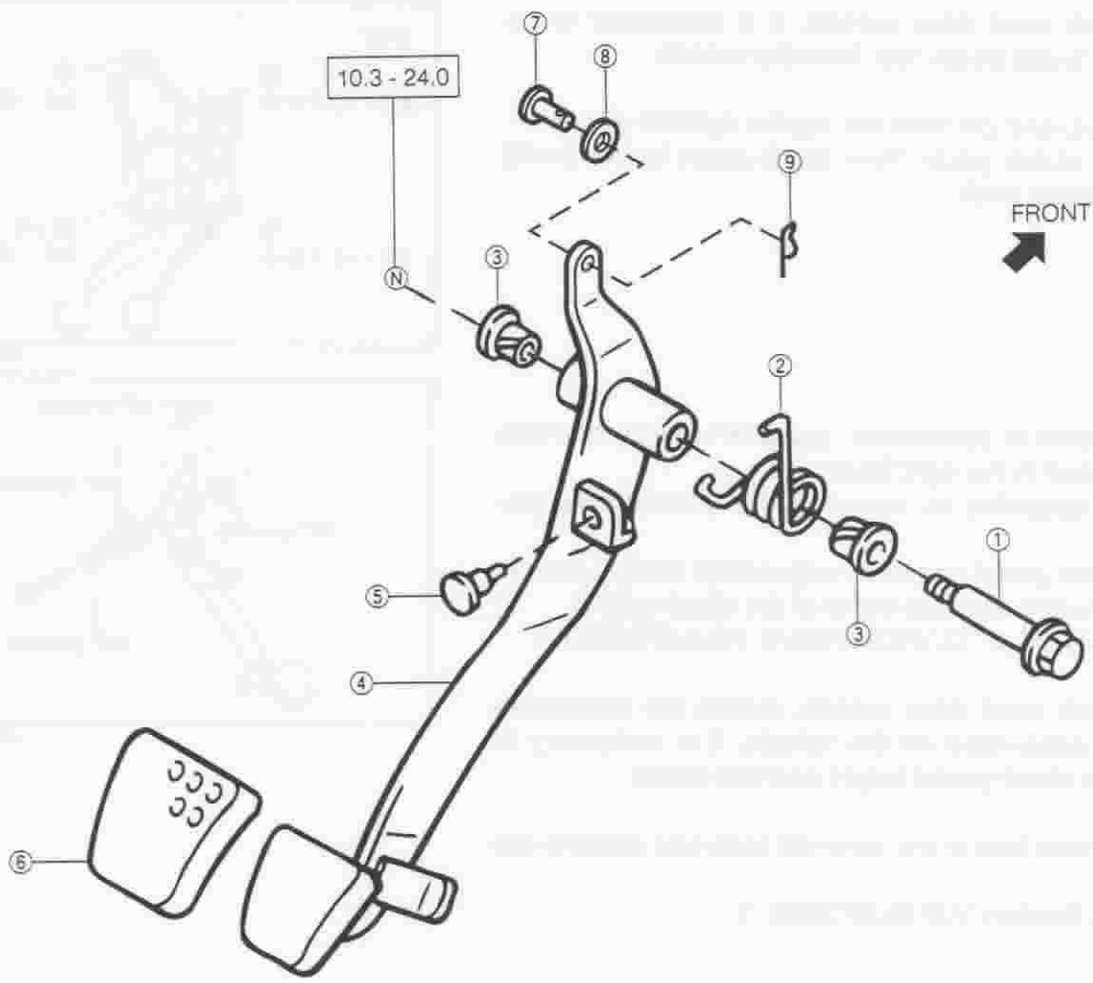
Table showing abbreviations of freeze frame data

Abbreviation	Original words
DIAG	Number of diagnosis code
STP	Stop lamp switch
STEM	Operation system
IGC	Number of IG ON
RLAB	RL wheel ABS control provided
RRAB	RR wheel ABS control provided
FLAB	FL wheel ABS control provided
FRAB	FR wheel ABS control provided
VS0	Vehicle bidy speed
FRG	Front / rear G
G	Vehicle body deceleration

JABS00126-00000

LHD

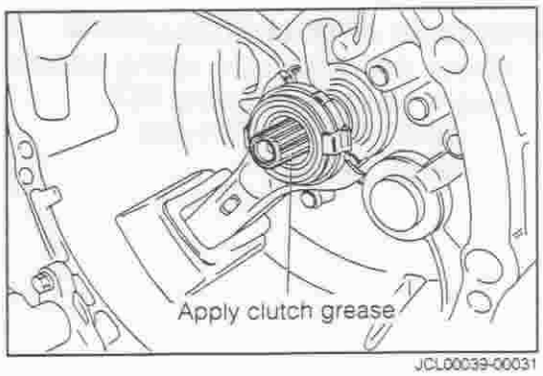
□ : Tightening torque
Unit : N·m



① Pedal shaft
② Spring
③ Bush
④ Clutch pedal subassembly
⑤ Cushion
⑥ Clutch pedal pad
⑦ Pin
⑧ Wave washer
⑨ Clip

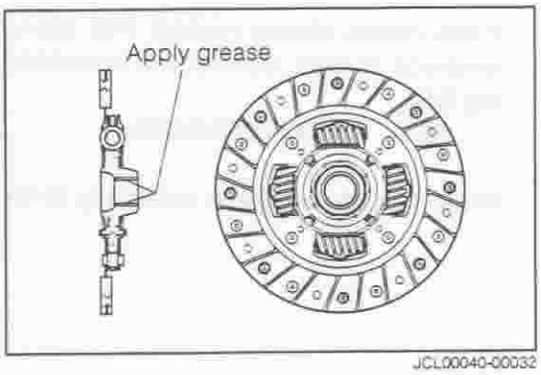
JCL00000-00006

4. Apply clutch grease to the entire inner periphery of the clutch release bearing hub assembly. Install the clutch release fork to the transmission.



JCL00039-00031

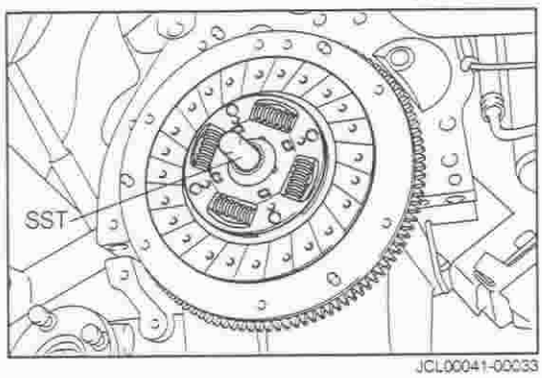
5. Thinly apply clutch grease to the spline section of the clutch disc assembly.
NOTE:
- The grease should be applied from the clutch cover side. Be sure to apply the grease as sparsely as possible so that no excess grease may ooze out to the flywheel side.
Specified Amount: 0.1 - 0.2 g



JCL00040-00032

6. With the clutch disc assembly placed at the center position by means of the following SST, install the clutch disc assembly to the flywheel.
SST: 09301-87703-000

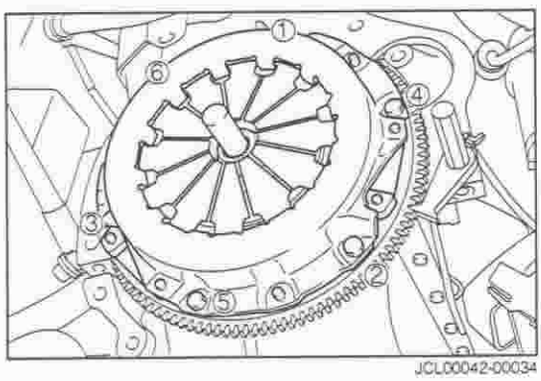
NOTE:
- Be very careful not to mistake the installation direction of the clutch disc assembly.



JCL00041-00033

7. Install the clutch cover assembly, aligning with the locating pins of the flywheel at three points. Tighten the six bolts to the specified torque, while preventing the flywheel from turning by means of the following SST.
SST: 09210-87701-000

NOTE:
- As for the tightening sequence of the bolts, first temporarily tighten the bolt ①. Then, fully tighten the bolts in order of ② - ③ - ① - ④ - ⑤ - ⑥. (Here, any bolt can be the bolt ①.)
Tightening Torque: 14.7 - 21.6 N·m (1.5 - 2.2 kgf-m)



JCL00042-00034

HANDLING INSTRUCTIONS ON CATALYTIC CONVERTER

WARNING:

- When a great amount of unburnt gas is admitted into the catalytic converter, overheating is prone to occur, resulting in a fire hazard.
  To avoid such trouble in advance, be certain to observe the following precautions. Also, be sure to explain such precautions to your customers.

1. Use only unleaded gasoline.

2. Avoid idling the engine for a prolonged length of time.
   Do not run the engine continuously at idle speed for more than 20 minutes.
   WARNING:
   - Immediately check and repair the vehicle if the fast idle speed or idle speed is unstable or the system exhibits malfunction. Failure to observe this warning may result in a fire hazard.

3. Be sure to observe the following points when performing the spark jump tests.
   (1) The spark jump test must be limited to cases where such test is absolutely necessary. Also, be sure to finish the test in the shortest possible time.
   (2) Be sure to shut off the fuel supply when performing the spark jump test in advance.

4. Do not run the engine when the fuel tank becomes nearly empty.
   Failure to observe this caution will cause misfiring. Also, it will apply excessive load to the catalytic converter, even leading to catalyst damage.

5. Do not dispose of the waste catalyst along with parts contaminated with gasoline or oil.

JGI00009-00000

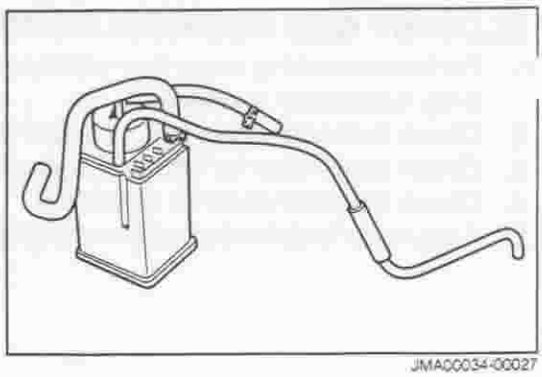
MAINTENANCE REQUIREMENTS

The scheduled maintenance service is important to ensure trouble-free, safe and economical driving. Failure to perform the scheduled maintenance may cause an accident or serious damage.
If you conduct the periodical maintenance, Daihatsu car owners may reduce the chance of accidents or car problems. Furthermore, it becomes possible for you to find at an earlier stage malfunctions which may lead to serious damages. Consequently, potential vehicle damage can be prevented or the degree of the damage can be minimized.
Therefore, all of the persons who are concerned with servicing the Daihatsu vehicles should offer the periodical maintenance service to Daihatsu car owners in order that they may be protected from accidents or unexpected problems.
To prevent malfunctions in advance, however, conducting the periodical maintenance service only is insufficient. It is essential that owners themselves perform maintenance, such as the pre-starting check described in the owner's manual, so that the vehicle exhibits no abnormal change or phenomenon. Hence, please explain to owners about the necessity of maintenance performed by them. However, malfunction may occur on those vehicles which are always checked by their owners. For instance, if a part instructed to be replaced periodically should be used beyond the replacement intervals and the life of the part has expired, there are cases where malfunction occurs suddenly despite the fact that no malfunction has taken place until yesterday. To prevent such malfunction in advance, be sure to replace parts recommended to be replaced periodically at the specified replacement intervals.
This section describes those items of the scheduled maintenance service recommended by the Daihatsu and their intervals. Be sure to observe the maintenance schedule.

JMA00002-00000

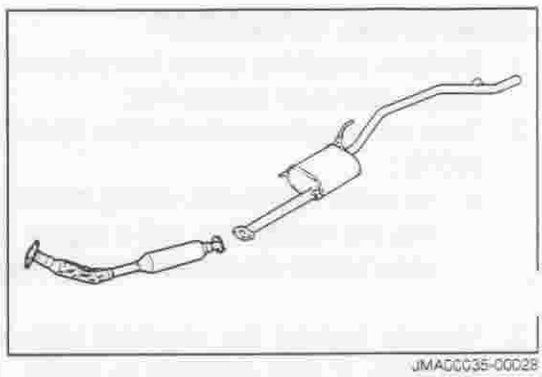
EVAPORATIVE EMISSION HOSES

1. Replace the hoses every eight years.
   CAUTION:
   - Be sure to make connections at the piping with new hose bands and clips.

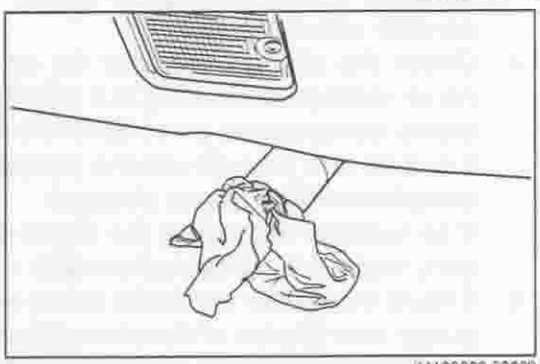

JMA00034-00027

EXHAUST PIPE & MUFFLER MOUNTING

1. Perform checking every year or 20,000 kilometer running, whichever comes first.
2. If the vehicle has been run under severe driving environments, perform check every six months or 5,000 kilometer running, whichever comes first.
3. Check the exhaust pipe and muffler for damage.
4. Check the mounting of the exhaust pipe and muffler for defects.

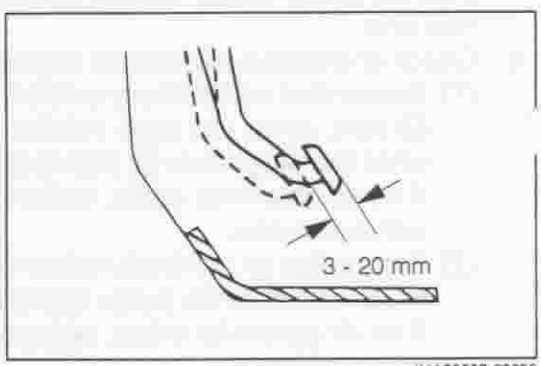

JMA00035-00028

5. Start the engine. With the engine idling, restrict the outlet of the exhaust gas with a cloth or the like. Ensure that no gas leaks from the exhaust pipe, muffler or their connections.
   WARNING:
   - There is the possibility that you may burn yourself during this operation when the exhaust pipe is hot.
6. If the exhaust pipe or muffler mounting is defective, repair or replace.

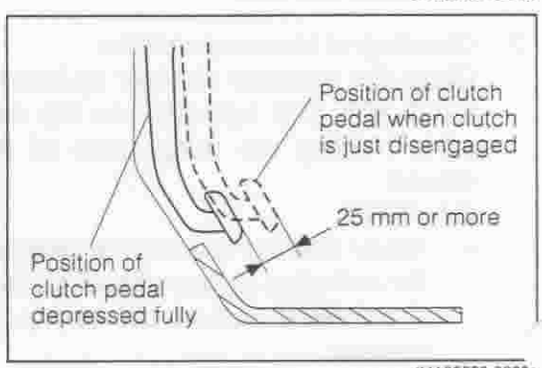

JMA00036-00029

CLUTCH

1. Perform checking every year or 20,000 kilometer running, whichever comes first.
2. Push the clutch pedal downward. Measure the distance between the pedal initial position and a point where a resistance begins to be felt.
   Specified Value: 3 - 20 mm
3. If the distance does not conform to the specification, perform the adjustment. For details of the adjustment, refer to Section CL.
4. Install an engine tachometer.
5. Pull the parking brake lever. Place the shift position of the transmission in the neutral position. Start the engine.
6. Depress the clutch pedal fully. Place the shift position of the transmission in the first gear position. Disengage the clutch pedal gradually. Measure the distance between the fully-depressed clutch pedal and the pedal just before the engine evolution speed begins to drop.
   Specified Value: 25 mm or more



JMA00037-00030



JMA00038-00031

MANUAL TRANSMISSION

This manual describes the checking and servicing procedures and unit installing/removing procedure with the manual transmission mounted on the vehicle.
As for the check and service of the unit itself, refer to the service manual for Terios (No. 9710-JE).

JMT00002-00000

SPECIFICATIONS

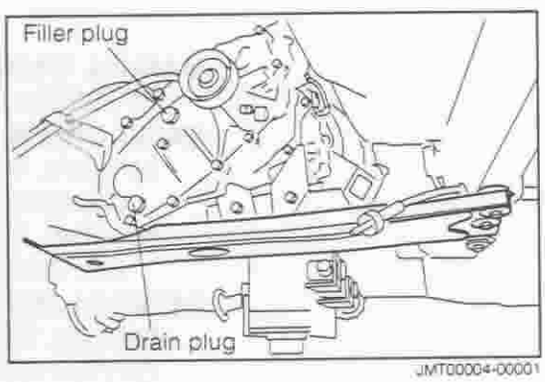
Item		Specifications
Engine type		K3-VE
Type	Forward gears	Constant-mesh type
	Reverse gear	Selective sliding type
Gear ratio	1st gear	3.769
	2nd gear	2.045
	3rd gear	1.376
	4th gear	1.000
	5th gear	0.838
	Reverse gear	4.128
Oil used	Type	SAE 75W-85 or 75W-90 API GL-3 or GL-4
	Capacity liter	2.2 (including transfer)

JMT00003-00000

BASIC CHECK

MANUAL TRANSMISSION OIL LEVEL CHECK

1. Remove the filler plug. With the vehicle placed horizontally, check that the oil level is the specified one.
   Specified Value:
   Between 0 - 5 mm from lower edge of filler plug hole
   Tightening Torque: 29.4 - 49.0 N·m



JMT00004-00001

NOTE:
- If the oil level is too low, check to see if any oil leakage is present. The gasket is a non-reusable part.

MANUAL TRANSMISSION OIL CHANGE

Oil: Transmission gear oil SAE 75W-85 or 75W-90 (API classification GL-3 or GL-4)
Total Capacity: 4WD; Approx. 2.2 liters (including transfer section)
Specified Value: Between 0 - 5 mm from lower edge of filler plug hole
Tightening Torque: 29.4 - 49.0 N·m (Drain plug, filler plug)

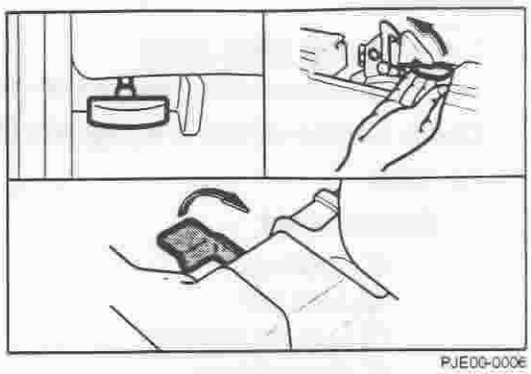
NOTE:
- The gasket is a non-reusable part.

JMT00005-00000

3 REMOTE RELEASE OPERATION

Check the operation of the remote release wire and parts.

- ☐ Engine hood
- ☐ Fuel lid

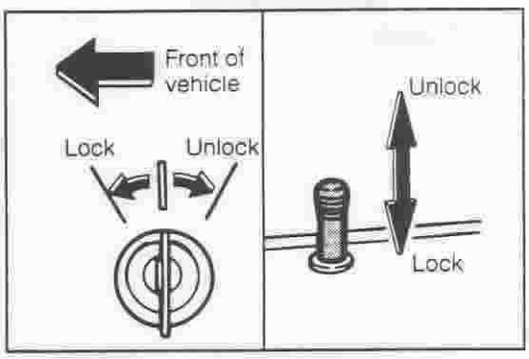


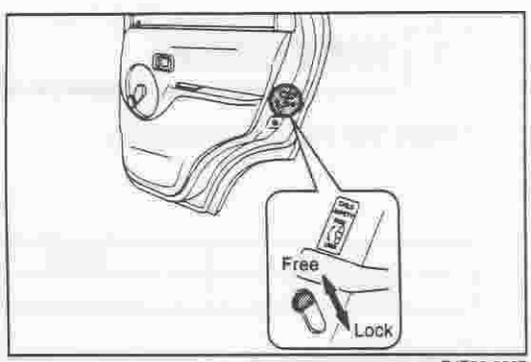
PJE00-0006

4 LOCKS AND HINGES OPERATION

Check the proper operation and lubricate as necessary.

- ☐ Lock and unlock each door with the key.
- ☐ Lock and unlock each door with the inside door lock.
- ☐ Check the central door lock control to be sure its locking and unlocking all doors (if equipped).
- ☐ Unlock the back door with the key to check lock and hinge operation.
- ☐ Close the back door to check latch operation.
- ☐ Open the engine hood.
- ☐ Close the engine hood to check latch operation.
- ☐ Check the child safety knobs for proper operation. The door should not open from the inside when the child safety knobs is in the "lock" position.



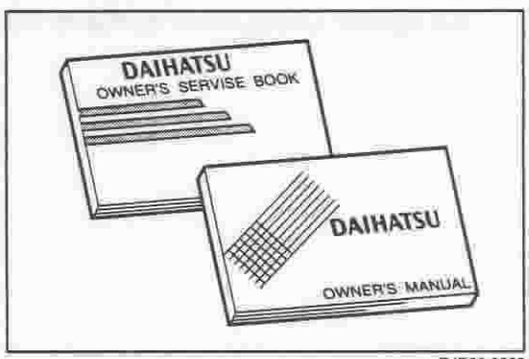


PJE00-0007

5 OWNER'S MANUAL/OWNER'S SERVICE BOOK

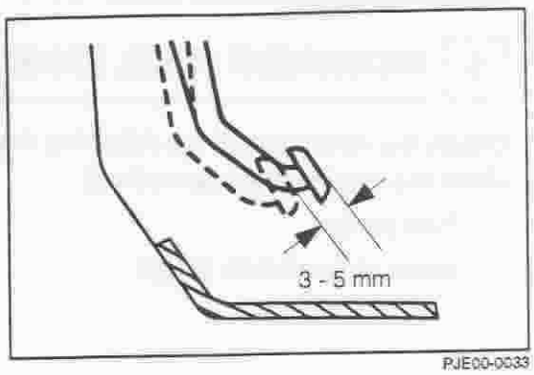
Ensure that the glove box contains the followings.

- ☐ Owner's Manual
- ☐ Owner's Service Book/Warranty Information Book



PJE00-0008

3 ACCELERATOR PEDAL FREE PLAY



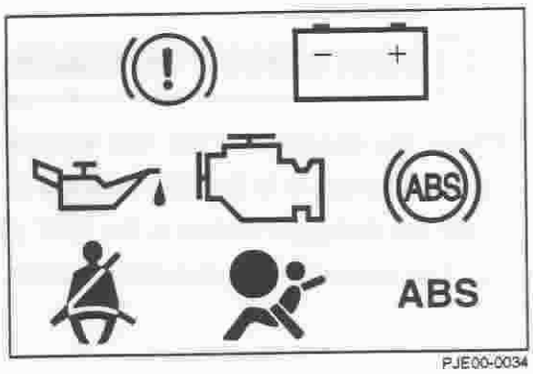
PJE00-0033

Check the accelerator pedal free play.

- ☐ Measure the accelerator pedal free play from the pedal resting point to a point where resistance is felt.
  Specification: 3 - 5 mm

If adjustment is required, refer to the end of this section.

4 INSTRUMENT PANEL WARNING LIGHTS

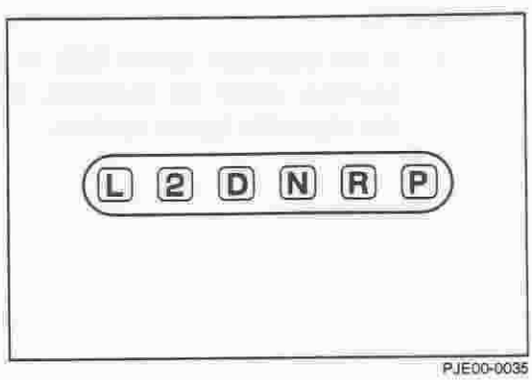


PJE00-0034

Check the operation of the warning lights. (Ignition switch is in the "ON" position.)

- ☐ Parking brake/Brake — Illuminates while parking brake lever is pulled.
- ☐ Oil pressure — Illuminates
- ☐ Battery/Charging system — Illuminates
- ☐ Check engine — Illuminates
- ☐ Seat belt — Illuminates while the driver side seat belt is unfastened.
- ☐ Hazard light/both turn signal indicators — Flash intermittently while hazard warning switch is depressed.
- ☐ A.B.S. — Illuminates for a few seconds
- ☐ Air Bag — Illuminates for a six seconds

5 INSTRUMENT PANEL INDICATION LIGHTS



PJE00-0035

Check the operation of the indication lights. (Ignition switch is in the "ON" position.)

- ☐ Automatic transmission mode indication light — Illuminates.
- ☐ O/D OFF indicator light — Illuminates when the overdrive switch is turned off.
- ☐ High beam — Illuminates when turn signal lever is pulled back.
- ☐ Rear fog light-on indicator light — Illuminates when rear fog light is on.
- ☐ Center differential lock indicator light — Illuminates when the center differential lock indicator light switch is turned on with the engine switch turned on.