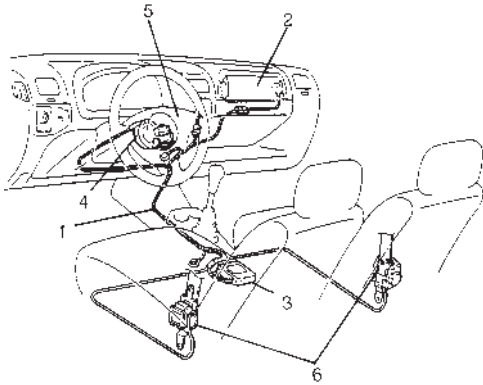


PRECAUTIONS

PRECAUTION FOR VEHICLES EQUIPPED WITH A SUPPLEMENTAL RESTRAINT SYSTEM



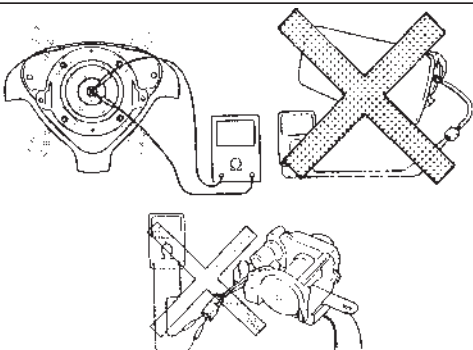
- | | |
|--|-------------------------------------|
| 1. Air bag wire harness | 4. Contact coil |
| 2. Passenger air bag (inflator) module (if equipped) | 5. Driver air bag (inflator) module |
| 3. SDM | 6. Seat belt pretensioner |

WARNING:

- The configuration of air bag system parts are as shown in the figure. When it is necessary to service (remove, reinstall and inspect) these parts, be sure to follow procedures described in SECTION 10B. Failure to follow proper procedures could result in possible air bag system activation, personal injury, damage to parts or air bag system being unable to activate when necessary.
- If the air bag system and another vehicle system both need repair, Suzuki recommends that the air bag system be repaired first, to help avoid unintended air bag system activation.
- Do not modify the steering wheel, dashboard, or any other air bag system components. Modifications can adversely affect air bag system performance and lead to injury.
- If the vehicle will be exposed to temperatures over 93°C (200°F) (for example, during a paint baking process), remove the air bag system components beforehand to avoid component damage or unintended air bag system activation.

DIAGNOSIS

- When troubleshooting air bag system, be sure to follow “DIAGNOSIS” in SECTION 10B. Bypassing these procedures may result in extended diagnostic time, incorrect diagnosis, and incorrect parts replacement.
- Never use electrical test equipment other than that specified in this manual.

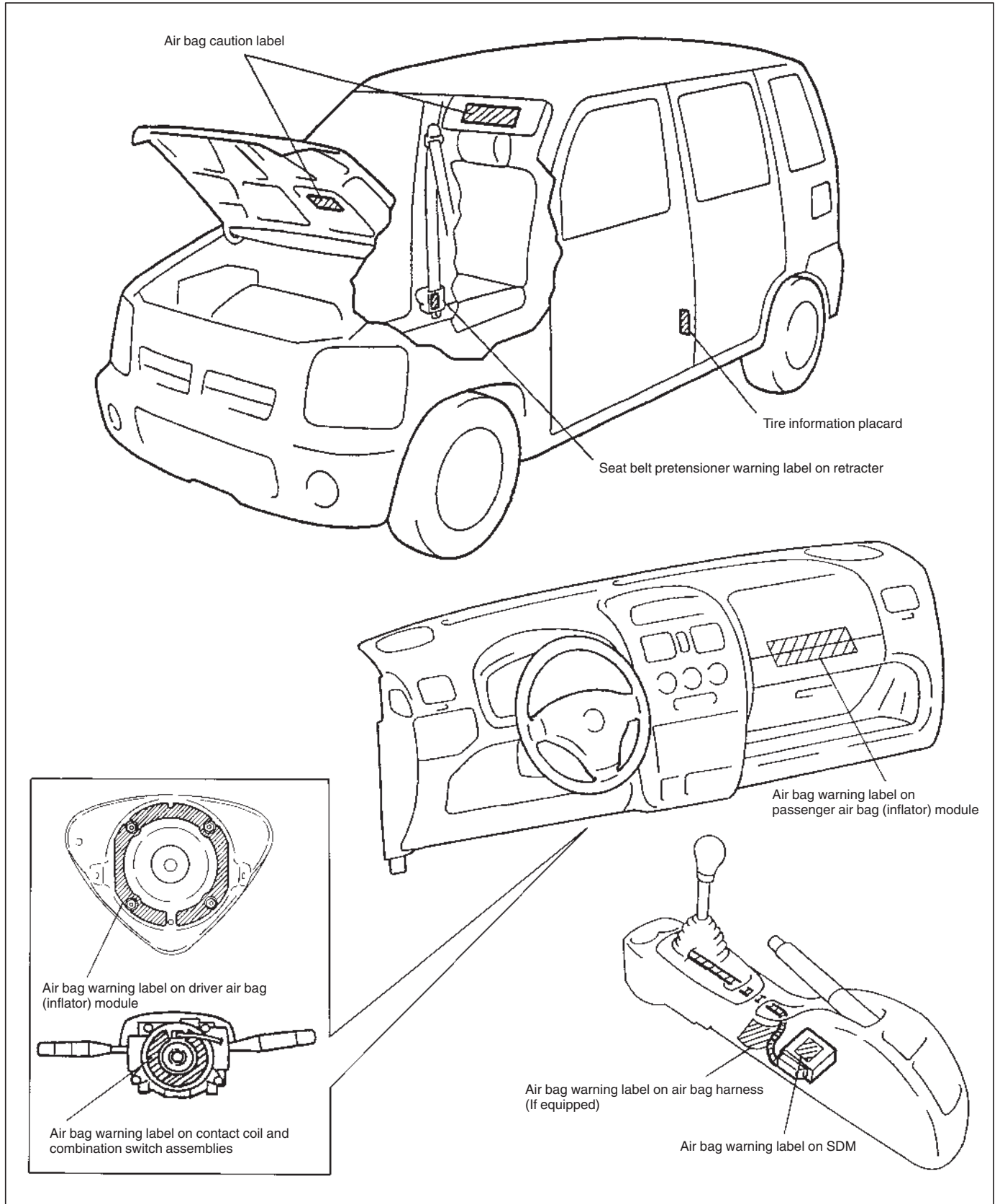


WARNING:

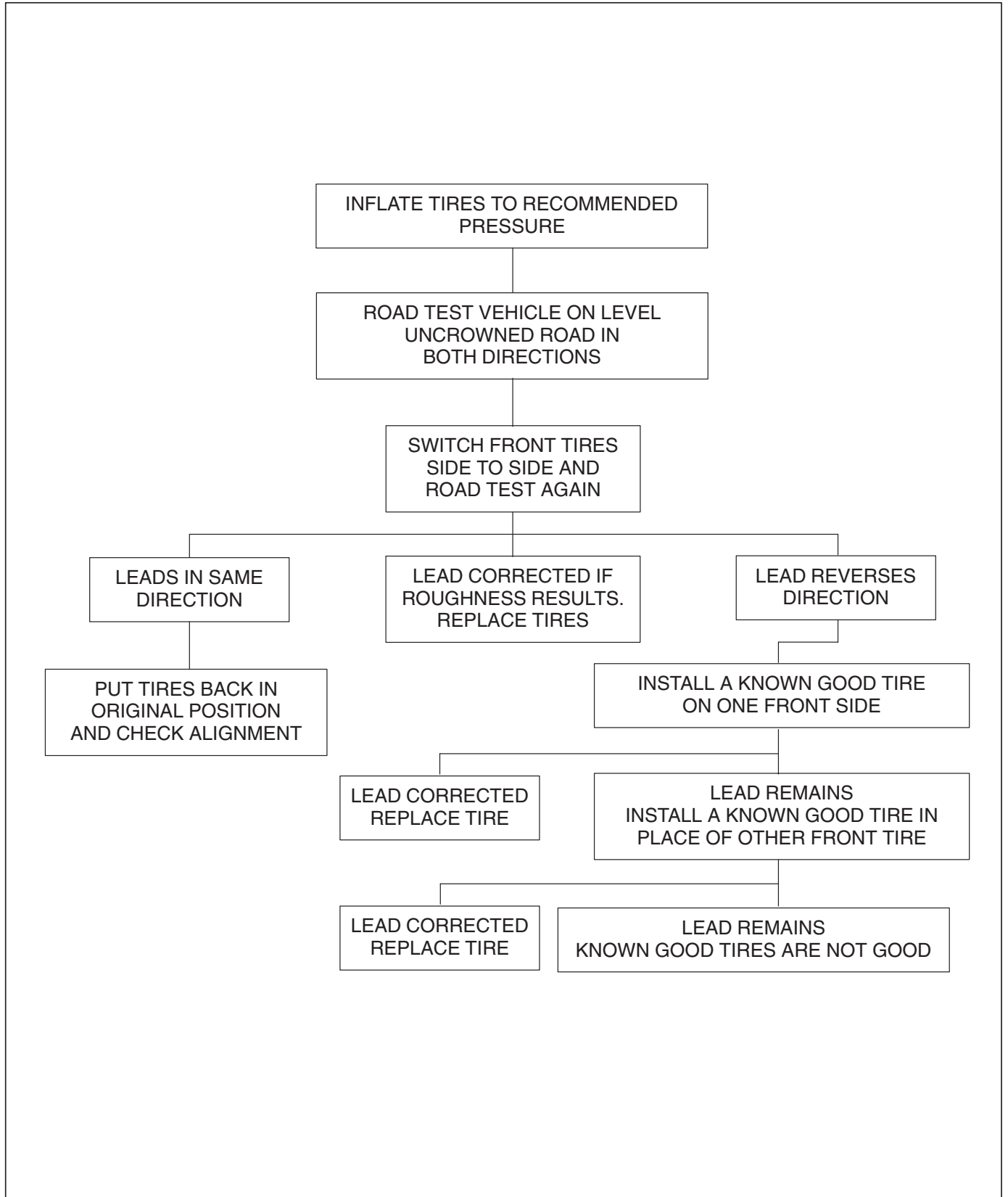
Never attempt to measure the resistance of the air bag (inflator) modules (driver and passenger) and seat belt pretensioners (driver and passenger). It is very dangerous as the electric current from the tester may deploy the air bag or activate the pretensioner.

WARNING, CAUTION AND INFORMATION LABELS

The figure below shows main labels among others that are attached to vehicle component parts. When servicing and handling parts, refer to WARNING/CAUTION instructions printed on labels. If any WARNING/CAUTION label is found stained or damaged, clean or replace it as necessary.

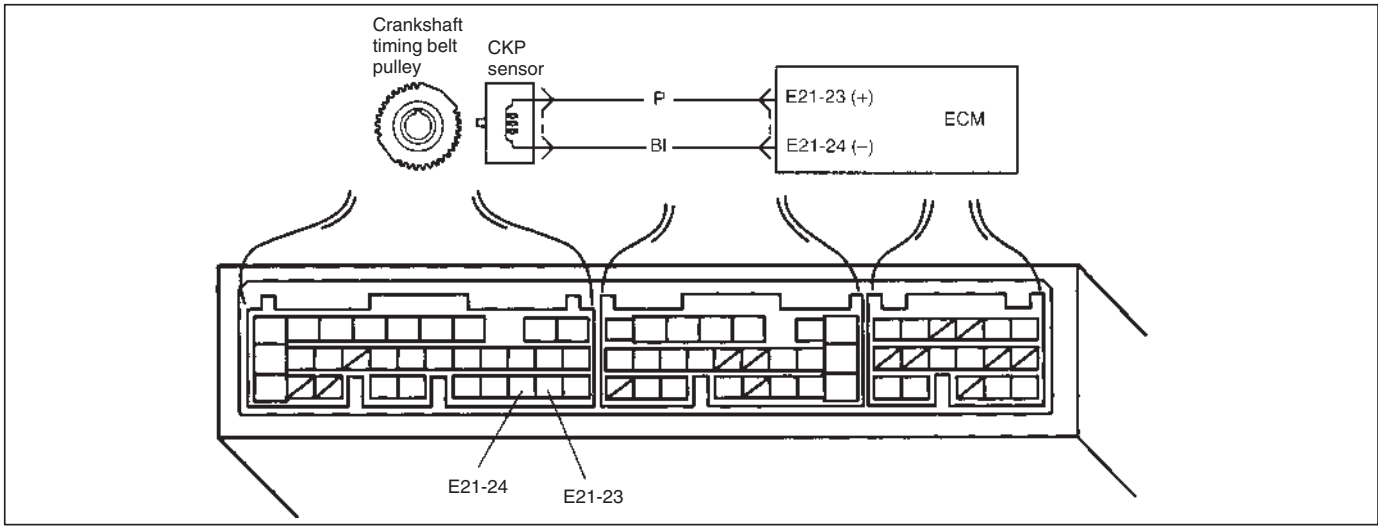


- 1) Ride vehicle to determine whether the front or rear waddles.
- 2) Install tires and wheels that are known to be good (on similar vehicle) in place of those on waddling end of vehicle. If waddling end cannot be identified, substitute rear ones.
- 3) Road test again. If improvement is noted, reinstall originals one at a time till waddle causal tire is found. If no improvement is noted, install known good tires in place of all four. Then reinstall originals in the same manner as above.



DTC P0335 CRANKSHAFT POSITION (CKP) SENSOR CIRCUIT (DTC No.23) MALFUNCTION

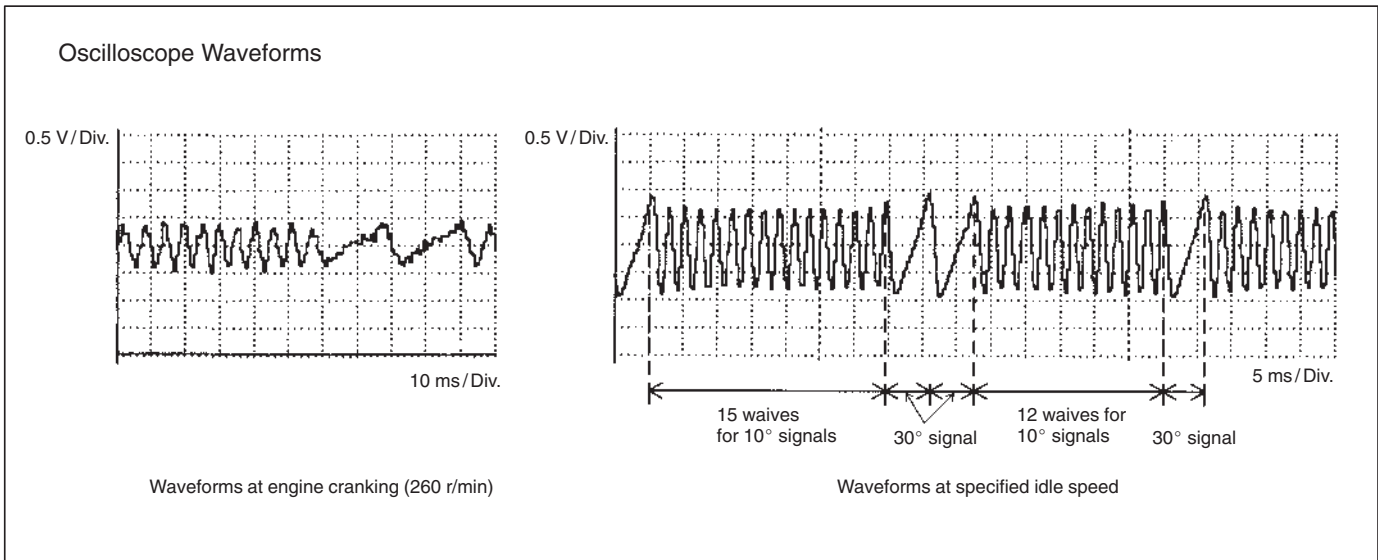
CIRCUIT DESCRIPTION



DTC DETECTING CONDITION	POSSIBLE CAUSE
<ul style="list-style-type: none"> • NO CKP sensor signal for 2 seconds at engine cranking. 	<ul style="list-style-type: none"> • CKP sensor circuit open or short. • Crankshaft timing belt pulley teeth damaged. • CKP sensor malfunction, foreign material being attached or improper installation. • ECM malfunction.

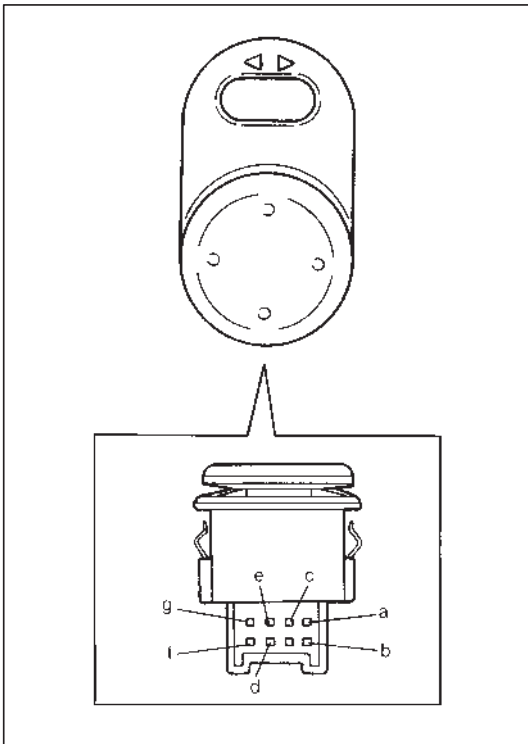
Reference

Connect oscilloscope between terminals C20-3 (+) and C20-11 (-) of ECM connector connected to ECM and check CKP sensor signal.



DTC CONFIRMATION PROCEDURE

- 1) Clear DTC and crank engine for 2 sec.
- 2) Select "DTC" mode on scan tool and check DTC.



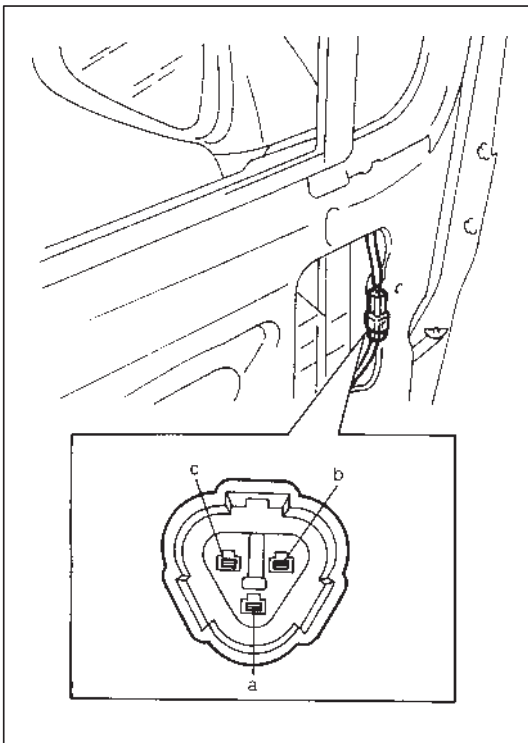
POWER DOOR MIRROR CONTROL SYSTEM (IF EQUIPPED)

MIRROR SWITCH

INSPECTION

- 1) Disconnect negative cable at battery.
- 2) Pull out mirror switch from door trim.
- 3) Disconnect mirror switch lead wire coupler.
- 4) Check continuity between terminals at each switch position.
If any continuity is not obtained, replace mirror switch.

L	a	b	c	d	g
R				e	f
UP	○—○	○—○	○—○	○—○	
DOWN	○—○	○—○	○—○	○—○	
LEFT	○—○	○—○	○—○	○—○	○—○
RIGHT	○—○	○—○	○—○	○—○	○—○



DOOR MIRROR ACTUATOR

INSPECTION

- 1) Disconnect negative cable at battery.
- 2) Remove door trim. Refer to steps 1) to 5) of FRONT DOOR GLASS REMOVAL in Section 9.
- 3) Disconnect door mirror coupler.
- 4) Check that door mirror operates properly when battery voltage is applied to connector terminals.
Connect battery positive and negative terminal to the door mirror terminal shown below.
If it does not operate as specified in table below, replace door mirror assembly.

Terminal / Operation	a	b	c
Up	⊖	⊕	
Down	⊕	⊖	
Left	⊖		⊕
Right	⊕		⊖

- 5) Install door trim. Reverse removal procedure.

REMOVAL AND INSTALLATION

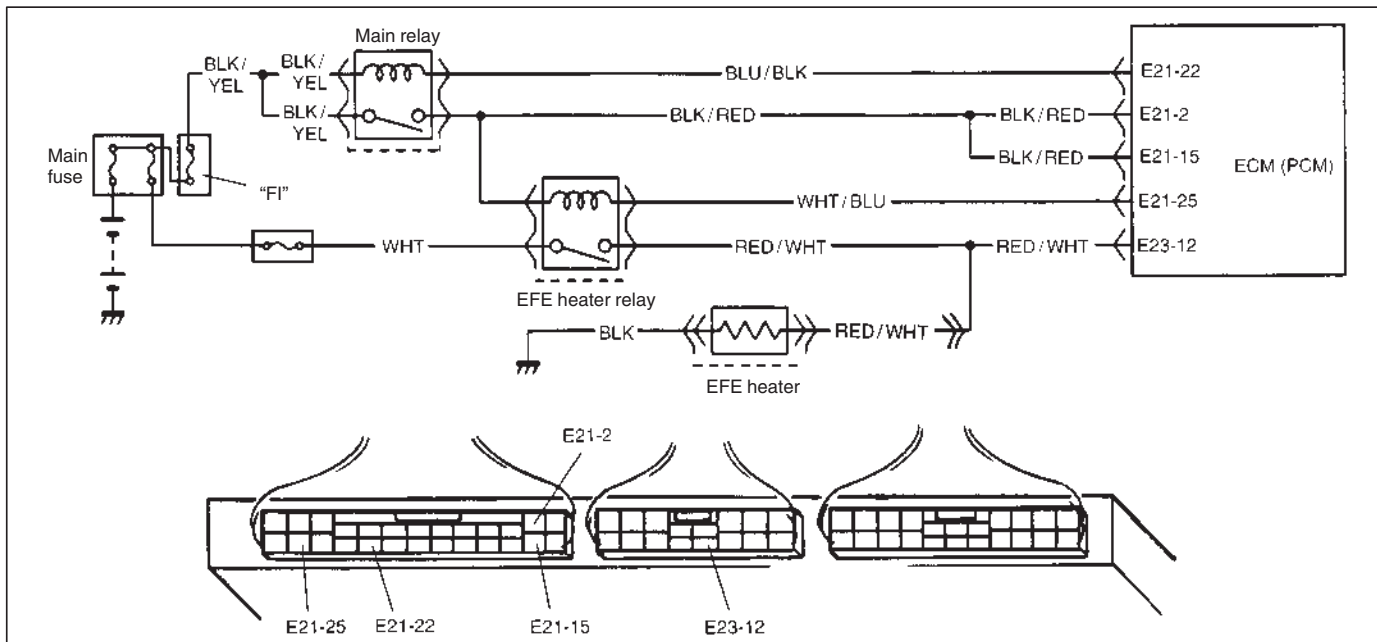
Refer to DOOR MIRROR REMOVAL AND INSTALLATION in Section 9.

NOTE:

When installing door mirror to door, be careful not to pinch harness between door and door mirror.

DTC P1250 EARLY FUEL EVAPORATION (EFE) HEATER CIRCUIT MALFUNCTION

CIRCUIT DESCRIPTION



DTC DETECTING CONDITION	POSSIBLE CAUSE
<ul style="list-style-type: none"> ● Voltage low at terminal E23-12 during engine warming up or ● Voltage high at terminal E23-12 after engine warming up ※ 2 driving cycle detection logic, continuous monitoring 	<ul style="list-style-type: none"> ● "WHT/BLU", "RED/WHT" or "WHT" circuit open or short ● EFE heater relay malfunction ● EFE heater malfunction ● ECM (PCM) malfunction

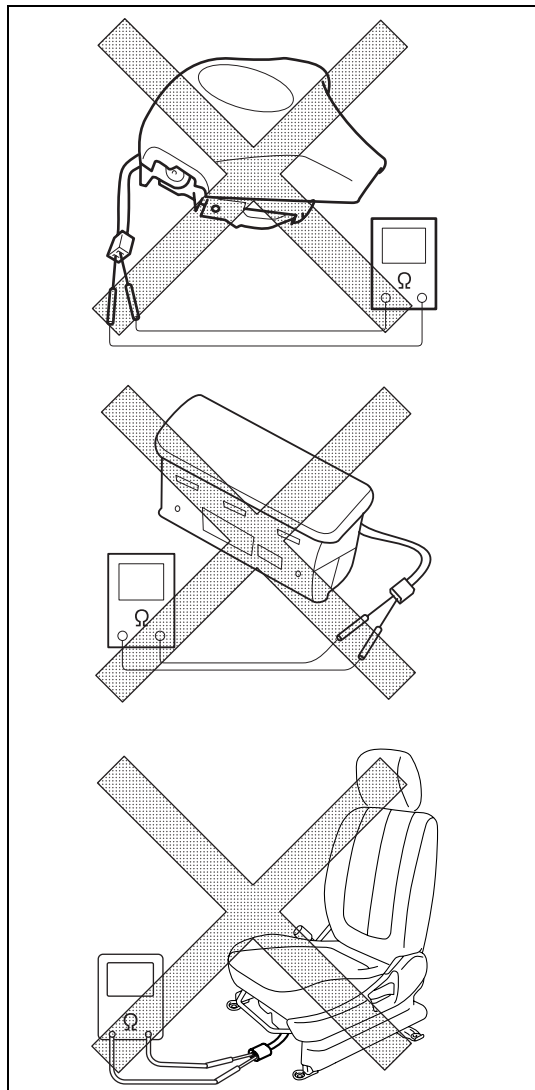
DTC CONFIRMATION PROCEDURE

- 1) Turn ignition switch OFF.
- 2) Clear DTC with ignition switch ON.
- 3) Check vehicle and environmental condition for:
 - Altitude (barometric pressure): 2400 m, 8000 ft or less (560 mmHg, 75 kPa or more)
 - Ambient temp: -10°C , 14°F or higher
 - Intake air temp: 70°C , 158°F or lower
- 4) Start cool engine and warm it up to normal operating temperature.
- 5) Check pending DTC in "ON BOARD TEST" or "PENDING DTC" mode and DTC in "DTC" mode.

LIVE (UNDEPLOYED) AIR BAG (INFLATOR) MODULES

Special care is necessary when handling and storing a live (undeployed) air bag (inflator) modules.

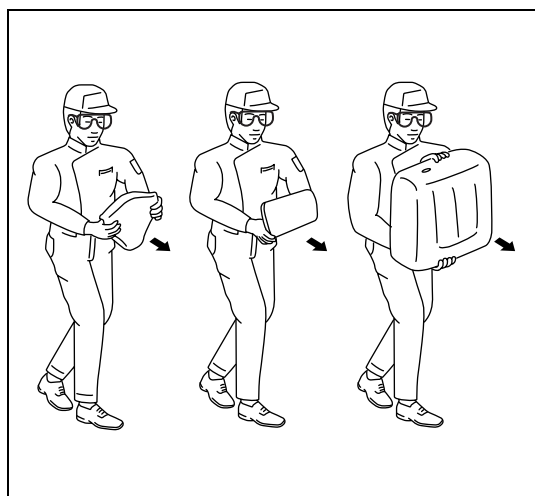
The rapid gas generation produced during deployment of the air bag could cause the air bag (inflator) module, or an object in front of the air bag (inflator) module, to be thrown through the air in the unlikely event of an accidental deployment.



WARNING:

Never attempt to measure the resistance of the air bag (inflator) modules (driver, passenger and side). It is very dangerous as the electric current from the tester may deploy the air bag.

- Never attempt disassembly of the air bag (inflator) modules.
- If any abnormality is found, be sure to replace it with new one as an assembly.
- When an abnormality is noted as existing in the live (undeployed) air bag (inflator) module, be sure to deploy it before discarding it.
- When grease, cleaning agent, oil, water, etc., got on the air bag (inflator) modules (driver, passenger and side of driver and passenger), wipe it off immediately with a dry cloth.
- If air bag (inflator) module was dropped from a height of 90 cm (3 ft) or more, it should be replaced with a new one as an assembly.



WARNING:

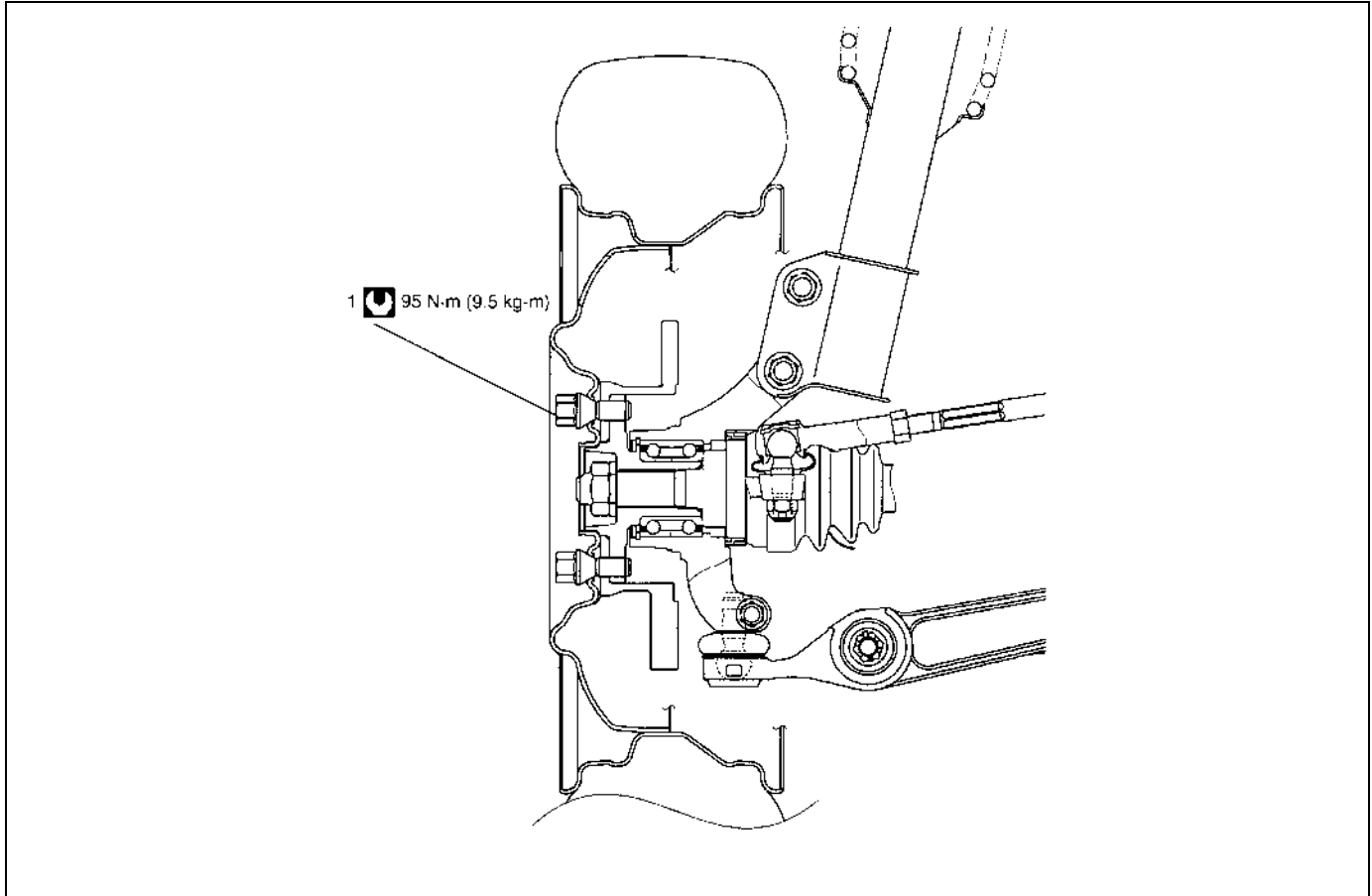
- For handling and storage of a live air bag (inflator) module, select a place where the ambient temperature below 65°C (150°F), without high humidity and away from electric noise.
- When carrying a live air bag (inflator) module, make sure the bag opening is pointed away from you. In case of an accidental deployment, the bag will then deploy with minimal chance of injury. Never carry the air bag (inflator) module by the wires or connector on the underside of the module.

Otherwise, personal injury may result.

On-Vehicle Service

CAUTION:

Lubricate parts as specified. Do not use lubricated shop air on brake parts as damage to rubber components may result. If any component is removed or line disconnected, bleed the brake system. Replace pads in axle sets only. The torque values specified are for dry, unlubricated fasteners.



1. Wheel bolt



Tightening torque

Front Disc Brake Pad

Installation

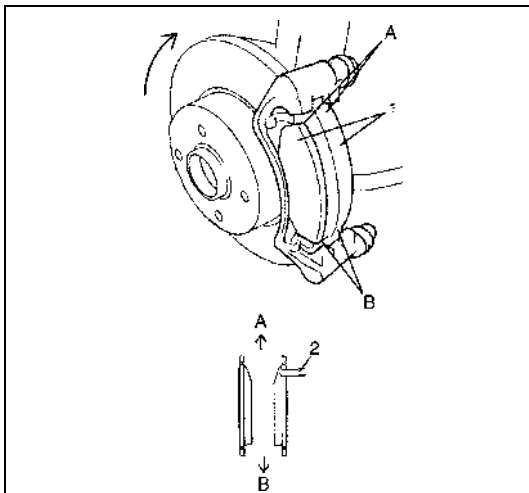
- 1) Install pads (1).

NOTE:

- When installing brake pad, make sure that its tapered side is positioned upward (A) as shown in figure.
- Install pad with sensor (2) to vehicle center side on right wheel brake.

A: Upper side

B: Lower side



General Description

Ignition System Construction

The ignition system is an electronic (distributorless) ignition system. Its consists of the parts as described below.

- ECM

It detects the engine and vehicle conditions through the signals from the sensors, determines the most suitable ignition timing and time for electricity to flow to the primary coil and sends a signal to the ignitor (power unit) in the ignition coil assembly.

- Ignition coil assembly (including an ignitor)

The ignition coil assembly has a built-in ignitor which turns ON and OFF the current flow to the primary coil according to the signal from ECM. When the current flow to the primary coil is turned OFF, a high voltage is induced in the secondary coil.

- High tension cords and spark plugs.

- CMP sensor (Camshaft position sensor) and CKP sensor (Crankshaft position sensor)

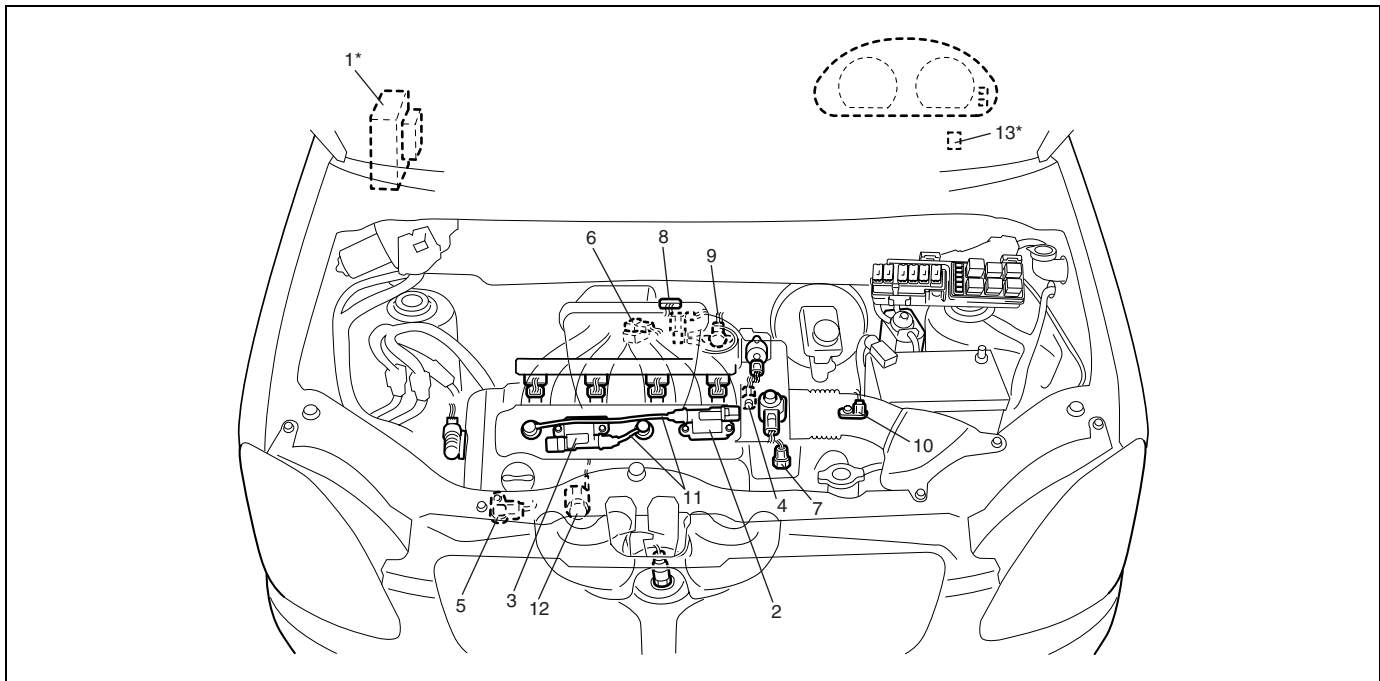
Using signals from these sensors, ECM identifies the specific cylinder whose piston is in the compression stroke, detects the crank angle and adjusts ignition timing automatically.

- TP sensor, ECT sensor, MAP sensor, MAF sensor, IAT sensor and other sensors/switches

Refer to “Electronic Control System” in Section 6E2 for details.

Although this ignition system does not have a distributor, it has two ignition coil assemblies (one is for No.1 and No.4 spark plugs and the other is for No.2 and No.3 spark plugs). When an ignition signal is sent from ECM to the ignitor in the ignition coil assembly for No.1 and No.4 spark plugs, a high voltage is induced in the secondary coil and that passes through the high-tension cords and causes No.1 and No.4 spark plugs to spark simultaneously. Likewise, when an ignition signal is sent to the ignitor in the other ignition coil assembly, No.2 and No.3 spark plugs spark simultaneously.

Ignition System Components Locator Diagram

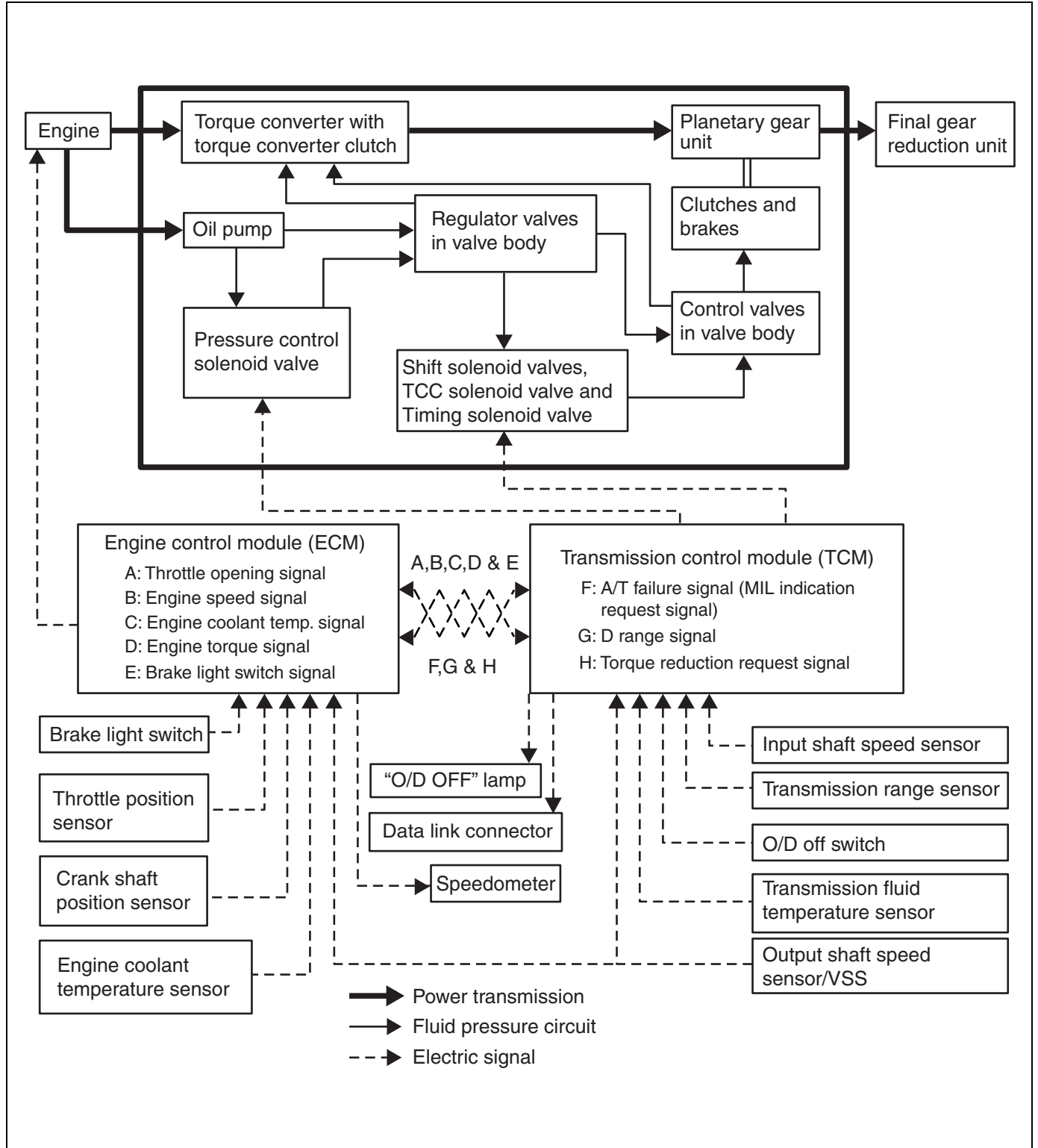


1. ECM	4. CMP sensor	7. ECT sensor	10. VSS	13. Data link connector
2. Ignition coil assembly for No.1 and No.4 spark plugs	5. CKP sensor	8. MAF and IAT sensor	11. High-tension cords	
3. Ignition coil assembly for No.2 and No.3 spark plugs	6. MAP sensor	9. TP sensor	12. Knock sensor	

NOTE:

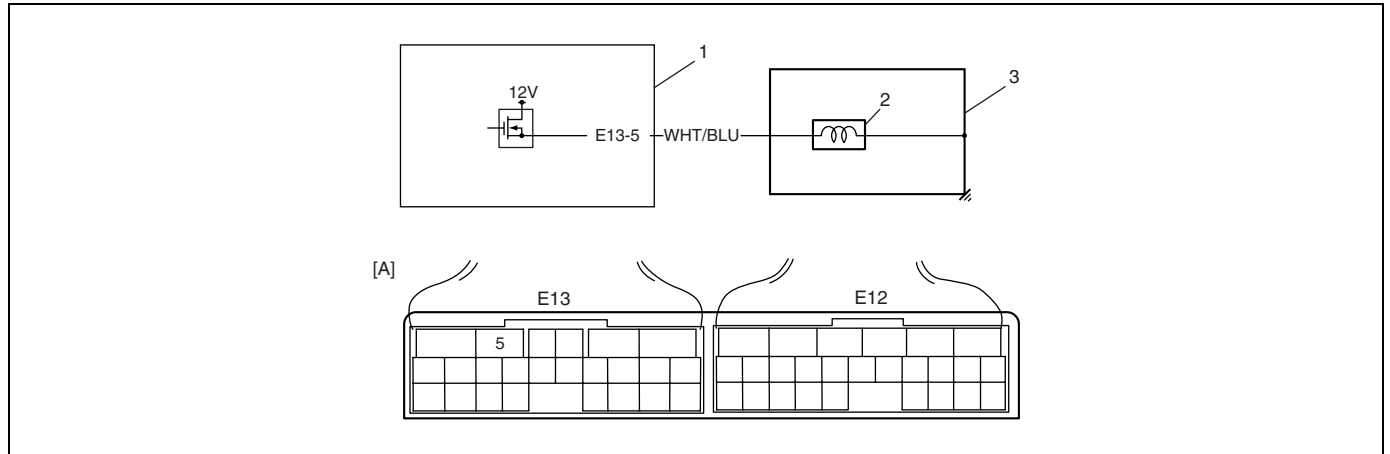
Above figure shows left-hand steering vehicle. For right-hand steering vehicle, parts with (*) are installed at the opposite side.

1. Engine	9. Pressure control solenoid valve	17. Transmission range sensor coupler
2. Transaxle	10. Shift solenoid valve-B (No.2)	18. Solenoid valve coupler
3. "O/D OFF" lamp	11. Shift solenoid valve-A (No.1)	19. Output shaft speed sensor (VSS)
4. MIL	12. Timing solenoid valve	20. O/D OFF switch
5. Throttle position (TP) sensor	13. Transmission fluid temperature sensor	21. A/T relay
6. ECM	14. TCC (lock-up) solenoid valve	22. Brake light switch
7. TCM	15. Transmission range sensor	23. Data link connector (DLC)
8. Engine coolant temperature (ECT) sensor	16. Input shaft speed sensor	



DTC P2769 Torque Converter Clutch (TCC) Circuit Low

Wiring Diagram



1. TCC solenoid valve

2. TCM

3. A/T

[A]: Terminal arrangement of TCM connector (Viewed from harness side)

DTC Detecting Condition and Trouble Area

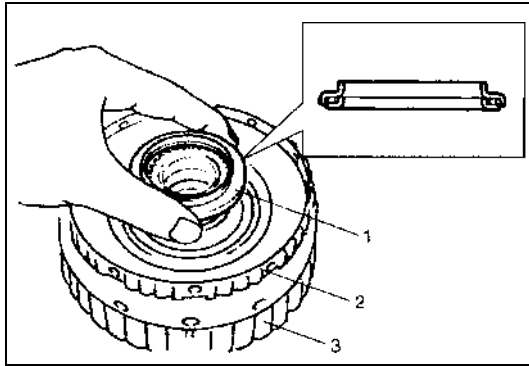
DTC DETECTING CONDITION	TROUBLE AREA
Voltage of TCC solenoid valve TCM terminal is low although TCM is commanding TCC solenoid to turn ON	<ul style="list-style-type: none"> TCC solenoid valve circuit shorted to ground. Malfunction of TCC solenoid valve TCM

DTC Confirmation Procedure

WARNING:

- When performing a road test, select a place where there is no traffic or possibility of a traffic accident and be very careful during testing to avoid occurrence of an accident.
- Road test should be carried out with 2 persons, a driver and tester, on a level road.

- Connect scan tool to DLC with ignition switch OFF, if available.
- Clear DTCs in TCM memory.
- Start engine.
- Keep engine running at idle speed in "P" range for 20 seconds or more.
- Check DTC.

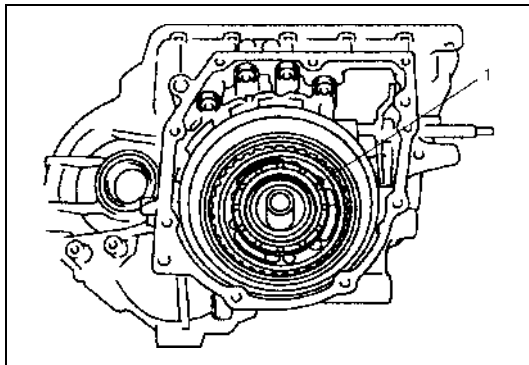


44) Remove planetary gear thrust bearing (1).

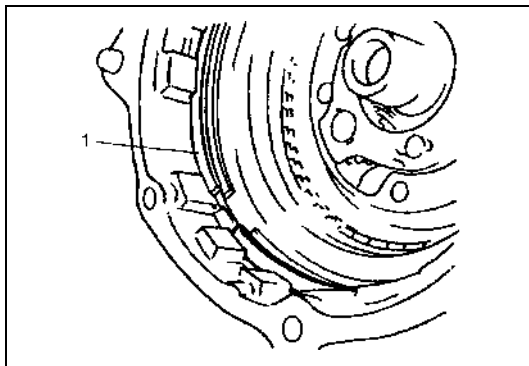
NOTE:

If planetary gear thrust bearing is not found on one-way clutch No.1 assembly, it may have been left in trasaxle.

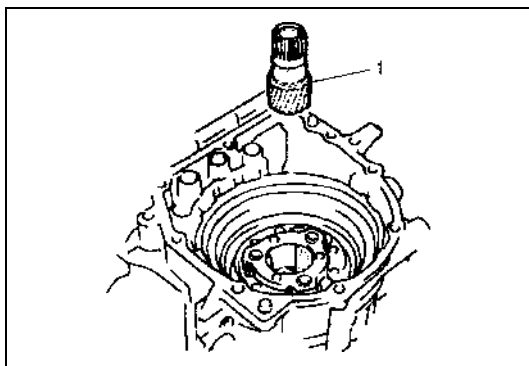
45) Remove one-way clutch No.1 assembly (2) from rear planetary sun gear subassembly (3).



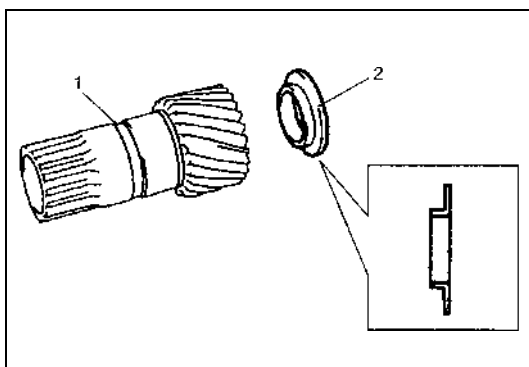
46) Remove planetary carrier thrust washer (1).



47) Remove O/D and 2nd coast brake retaining plate snap ring (1).



48) Remove front planetary sun gear (1).



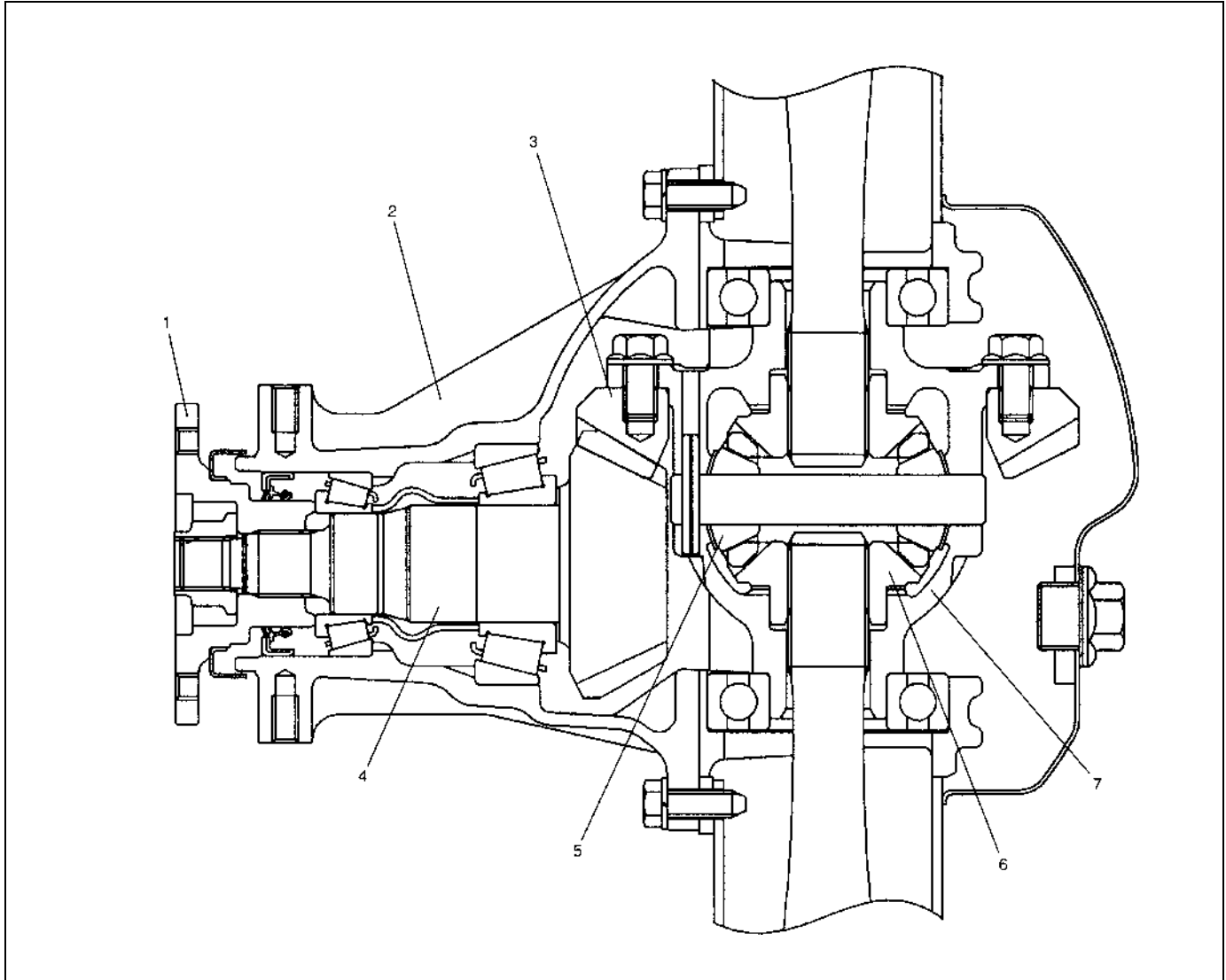
49) Remove front sun gear thrust bearing race (2) from front planetary sun gear (1).

General Description

The rear differential assembly for 4WD model uses a hypoid bevel pinion and gear.

The differential assembly is decisive in that the drive power is concentrated there. Therefore, use of genuine parts and specified torque is compulsory. Further, because of sliding tooth meshing with high pressure between bevel pinion and gear, it is mandatory to lubricate them by hypoid gear oil.

The hypoid gears have an advantage of preventing gear noise, at the same time, they require accurate adjustment of tooth contact and backlash.



1. Companion flange	5. Differential pinion
2. Differential carrier	6. Differential side gear
3. Drive bevel gear (hypoid gear)	7. Differential case
4. Drive bevel pinion (hypoid gear)	

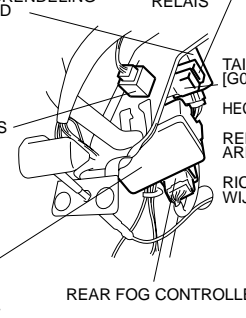
Differential Unit

DISMOUNTING

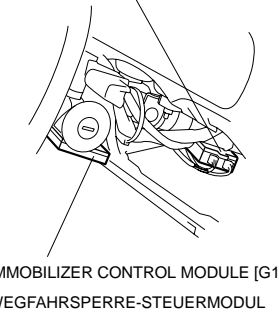
- 1) Hoist vehicle and remove wheels.
- 2) Drain differential oil referring to "Rear Differential Gear Oil Change" in this section.

INSTRUMENT PANEL (LEFT HAND STEERING VEHICLE)
INSTRUMENTENTAFEL (FAHRZEUG MIT LINKSLENKUNG)
TABLEAU DE BORD (VEHICULE A CONDUITE A GAUCHE)
INSTRUMENTENPANEEL (VOERTUIG MET LINKS STUUR)

DOOR LOCK CONTROLLER [G02] STEUEREINHEIT FÜR TÜRVERRIEGELUNG COMMANDE DE VERROUILLAGE DES PORTES PORTIERVERGREDELING-REGELEENHEID	REAR WINDOW DEFOGGER RELAY [G01-1] HECKSCHEIBENHEIZUNGS-RELAIS RELAIS DE DÉSEMBUEUR DE LUNETTE ARRIÈRE ACHTERRUITVERWARMINGS-RELAIS
TURN SIGNAL RELAY [G04] BLINKERRELAIS RELAIS DE CLIGNOTANT ACHTERLICHT-RELAIS	TAIL LIGHT RELAY [G01-2] HECKLEUCHTENRELAIS RELAIS DE FEUX ARRIÈRE RICHTINGAANWIJZERRELAIS
CIRCUIT FUSE SCHALTKREIS-SICHERUNG FUSIBLE DE CIRCUIT CIRCUITZEKERING	REAR FOG CONTROLLER [G53] NEBEL SCHLUSSLEUCHTENREGLER RÉGULATEUR DE BROUILLARD ARRIÈRE MISTACHTERLICHT-REGELEENHEID

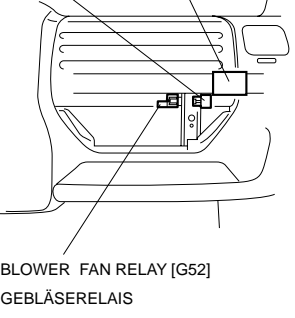


P/S CONTROL MODULE [G14]
SERVOLENKUNGS-STEUERMODUL
MODULE DE CONTRÔLE P/S
STUURBEKRACHTIGING-REGELAPPARAAT

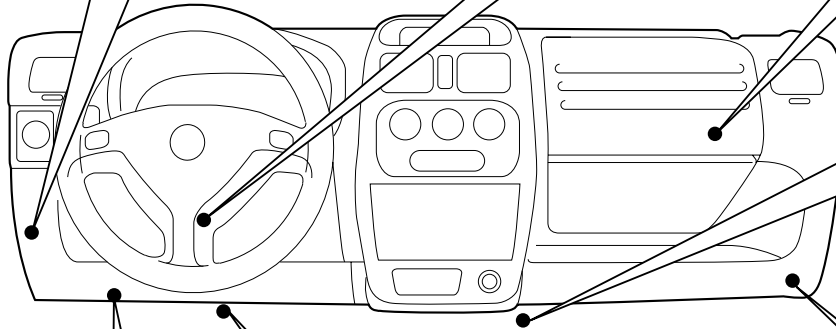


IMMOBILIZER CONTROL MODULE [G17]
WEGFAHRSPERRE-STEUERMODUL
MODULE DE COMMANDE D'IMMOBILISATEUR
STARTONDERBREKER-REGELMODULE

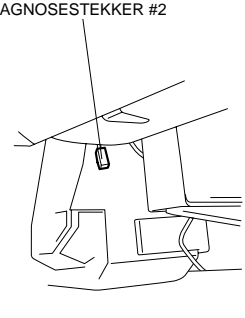
INTERMITTENT TIMER [G51] INTERVALLTIMER MINUTERIE INTERMITTENTE TIJDKLOK INTERVALWISSER	DRL CONTROLLER [G61,G62] DRL-REGLER REGULATEUR DE DRL DRL REGELAAR
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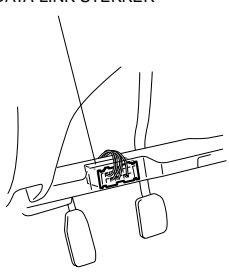
BLOWER FAN RELAY [G52]
GEBLÄSERELAIS
RELAIS DE VENTILATEUR DE SOUFFLERIE
AANJAGERVENTILATORRELAIS




(TYPE 1)
DIAGNOSIS CONNECTOR #2 [Q04]
DIAGNOSESTECKER #2
CONNECTEUR DE DIAGNOSTIC #2
DIAGNOSESTEKKER #2



DATA LINK CONNECTOR [G09]
DATENVERBINDUNGSSTECKER
CONNECTEUR DE TRANSMISSION DE DONNÉES
DATA-LINK STEKKER

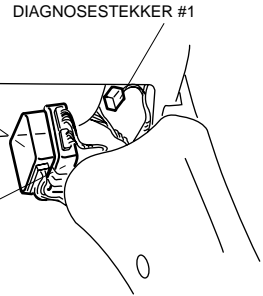


BRAKE LIGHT SWITCH [G15]
BREMSLICHT-SCHALTER
INTERRUPTEUR DE FEUX STOP
REM LICHTSCHAKELAAR



TRANSMISSION CONTROL MODULE [E12,E13] GETRIEBE-STEUERMODUL MODULE DE COMMANDE DE TRANSMISSION MOTORREGELAPPARAAT	(TYPE 1) DIAGNOSIS CONNECTOR #1 [E19] DIAGNOSESTECKER #1 CONNECTEUR DE DIAGNOSTIC #1 DIAGNOSESTEKKER #1
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ENGINE CONTROL MODULE [E21,E22,E23]
MOTORSTEUERMODUL
MODULE DE COMMANDE DU MOTEUR
MOTORREGELAPPARAAT



A-4 Ignition system (M13A)

A-4 Zündanlage (M13A)

A-4 Système d'allumage (M13A)

A-4 Ontstekingsysteem (M13A)

