SECTION **GI**

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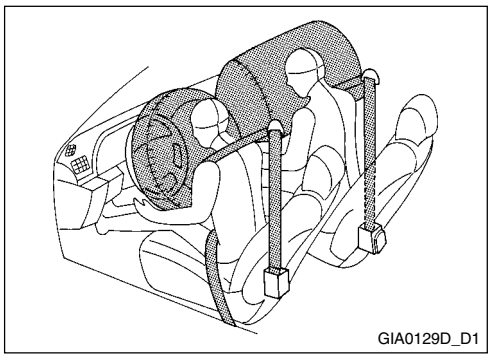
SRS Airbag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SRS Airbag • Pretensioner Seatbelt

The driver and passenger's SRS (Supplemental Restraint System) airbag that is employed with the pretensioner seatbelt helps diminish the facial impact of both driver and passenger during frontal crash.

The driver and passenger's SRS side airbag, with the aid of seatbelt, stiff body structure and energy-absorbing doors, also helps diminish the facial and chest impact.

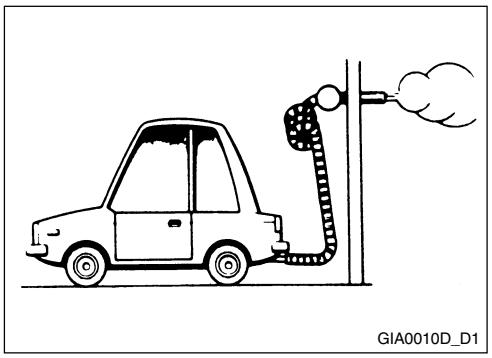
The SRS airbag and pretensioner seatbelt system consists of driver airbag module (in center of steering wheel), passenger airbag module (in passenger's instrument panel), front side airbag modules (outer location of front seats), pretensioner seatbelt, airbag sensor unit, spiral cable, side sensor, and warning light.

Refer to "RS Restraint System" in this service manual for safe airbag system service.

WARNING:

- **To install/remove the SRS airbag, pretensioner seatbelt system related components and harness, turn the ignition switch "OFF", disconnect the battery terminals and wait over 3 minutes. (This is to discharge all the remaining electricity in the airbag sensor unit's auxiliary power circuit.)**
- **Do not use air impact or electrical tools when installing/ removing the components.**
- **Do not use any hand-held tools for harness used in SRS airbag and pretensioner seatbelt systems. Be careful with the harness not to tangle with or interfere with other components.**
- **Do not use any electrical test equipments such as circuit tester when inspecting the SRS airbag and pretensioner seatbelt circuit while installed unless the Service Manual instructs to do so. (The weak current in the tester can cause the SRS airbag to operate.)**
- **Do not insert any foreign materials such as a screwdriver in the airbag module and pretensioner seatbelt connector in order to prevent unintended operation due to static electricity.**
- **The harnesses used in SRS airbag and pretensioner are covered with yellow insulation for easy identification.**
- **Refer to "RS Restraint System" in this Service Manual for safe airbag system service information.**

General Precautions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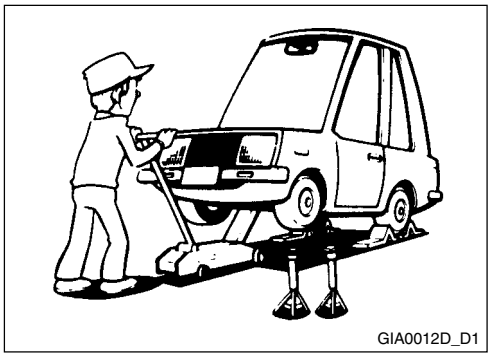
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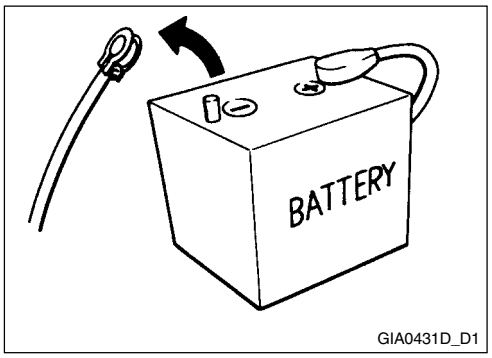

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SAFE SERVICE

- Do not work while engine is running when there are no proper air ventilation against exhaust gases.
- Keep the work site well ventilated and remove inflammable materials. Be extra careful when working with inflammables or poisonous materials such as gasoline or refrigerant.
- Dispose of used engine oils and other used cleansing liquids according to the local laws.
- Be careful not to get burnt or hurt when working on hot or moving parts.
- Place wheel blocks or tires to prevent the vehicle from moving before lifting the vehicle with the garage jack.
- After lifting the vehicle, place supporting objects under the vehicle to hold it firm.
- Hold or support the heavy components firmly such as the engine or suspension parts when removing them.
- When there is no need of the battery power, always place the ignition switch at “OFF” position and disconnect the battery ground (-) terminal in order to prevent an unwanted short circuit.

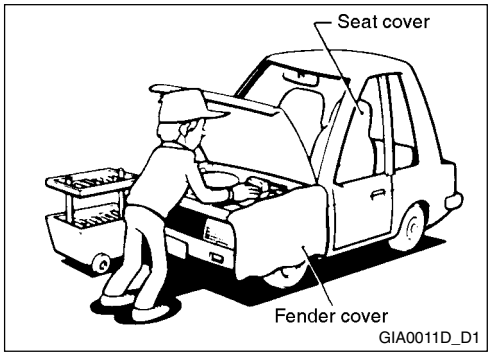
CAUTION:

- **When battery terminal is disconnected, all the memories in the radio and control units will be erased.**
- Do not touch hot components such as radiator, exhaust manifold and muffler to prevent from burning your skin. When engine is hot, do not remove any radiator components such as the radiator cap until it cools down completely.
- Use designated tools or special tools for safe and effective service.
- When fuel dispenser nozzle stops automatically while fueling in the gas station, do not attempt to overfill the fuel tank. If so, it may lead to fire due to fuel overflow.

General Precautions (Cont'd)

CORRECT SERVICE

- Operate effectively by fully understanding and diagnosing the trouble symptom.
- Be sure of the fully assembled components before performing any disassemble and removal. If need, mark on the part not to affect normal operating functions.
- When removing oil seals, gaskets, packing, O-rings, locking washers, cotter pins, self-locking nuts, replace them with new parts when instructed (when re-use is not allowed).
- Both inner and outer taper roller bearing and needle bearing should be replaced.
- Place the removed parts in order in which they were removed.
- Clean the removed parts with cleaning solutions or solvents and then perform inspection or assembly.
- The NISSAN genuine parts must be used when replacing the components.
- Use designated paper gasket and sealant.
- Release all the remaining pressure inside the pipes and hoses before removing them.
- When working on the fuel, oil, coolant, exhaust and vacuum systems, check if any of their system is wet.



VEHICLE PROTECTION

- Use fender covers, seat covers, steering wheel covers and paper mats to prevent the vehicle from getting dirty.

Precautions in Wireless System Installation

The installation of business or personal wireless or cellular phones may cause trouble to electronic control systems according to their installed locations. Be sure to check the following criteria before performing any installations.

- Place the antenna as far as possible from the ECCS control unit.
- Place the antenna feeder line no less then 20 cm from the control unit harness.
- Adjust the antenna and feeder lines so that there is no jamming.
- Be sure to check the vehicle's radio ground wire.

How to Use This Manual

General

This section explains about “removal, disassembly, assembly, installation, inspection, adjustment and trouble diagnosis”.

Definition of Terms

WARNING: When instructions are not properly followed, death or serious injuries may occur.

CAUTION: When instructions are not properly followed, vehicle damage or personal injuries may occur.

REFERENCE: Useful explanations for easy service.

Standard Value: The permitted range in inspection and adjustment.

Limit Value: The maximum and minimum values never to be exceeded during inspection and adjustment.

Definition of Units

This manual uses N•m (kgf-m) for tightening torque.

“Example”

Tightening Torque:

58.8 - 78.4 N•m (6.0 - 8.0 kgf-m)

Alternative Units

Item	SI unit	Conventional unit	To convert to SI unit
Acceleration	m/s^2	G	9.80665
Torque, Moment	N•m	kgf-m	9.80665
Power	N	kgf	9.80665
Pressure	MPa	kgf/cm^2	0.0980665
	kPa	mmHg	0.133322
Work efficiency,	k W	PS	0.735499
Power efficiency	W	kcal/h	1.16279
Volume	cm^3	cc	1
Spring coefficient	N/mm	kgf/mm	9.80665
Fuel consumption ratio	※g/kW•h	g/PS•h	1.3596

※ The conventional unit can be used as SI unit.

Manual Description Order

Precautions: Describes caution details at the beginning of each section.

Preparation: Describes details at the beginning of each section and trouble diagnosis regarding special tools and gauges that need to be prepared before work. However, general service tools are excluded.

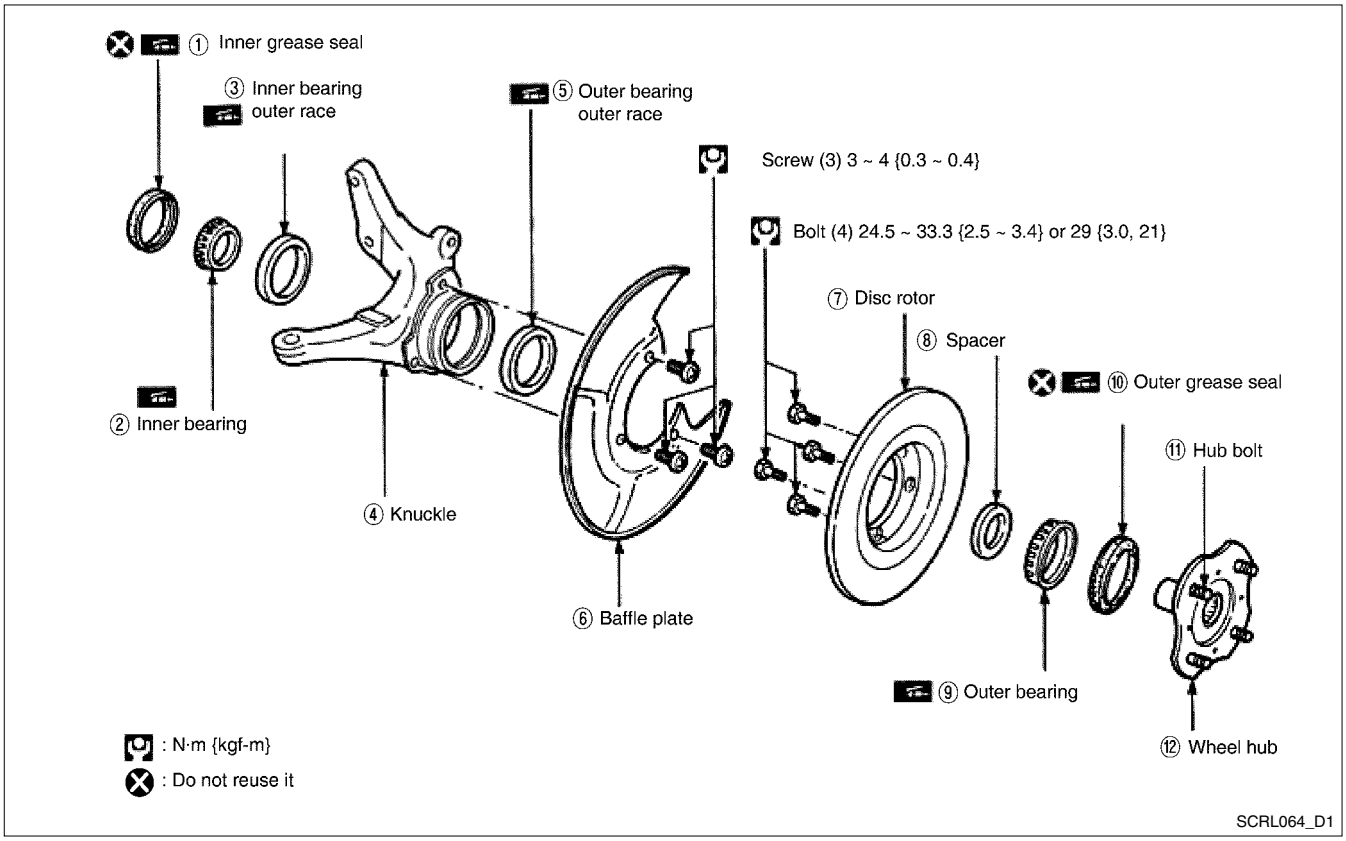
Description: All the service instructions, notes, special tools and other service information needed for each appropriate service is described in.

CAUTION:

- **Visual inspection and cleaning of removed parts are not described in this manual since they are fundamental operations. Be sure to perform these operations.**

Components Diagram

The components diagram (see illustration) contains informational notes such as installation/removal, tightening torque on disassembly/assembly, lubrication points and parts should not be reused.



Symbols

Symbol	Description	Symbol	Description
	The part should be tightened with specified torque and its tightening torque. When the specified torque is△-△ N•m (○-○ kgf-m), the standard torque will be the mean value.		Always replace after every disassembly.
	Apply grease. Unless otherwise indicated, use recommended multi-purpose grease.	Petrolatum	Apply petroleum jelly.
	Lubrication point. The location where lubricant should be applied.	★	Select with proper thickness.
	Sealing point.	☆	Adjustment needed.
	Checking point.		

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Trouble Diagnosis

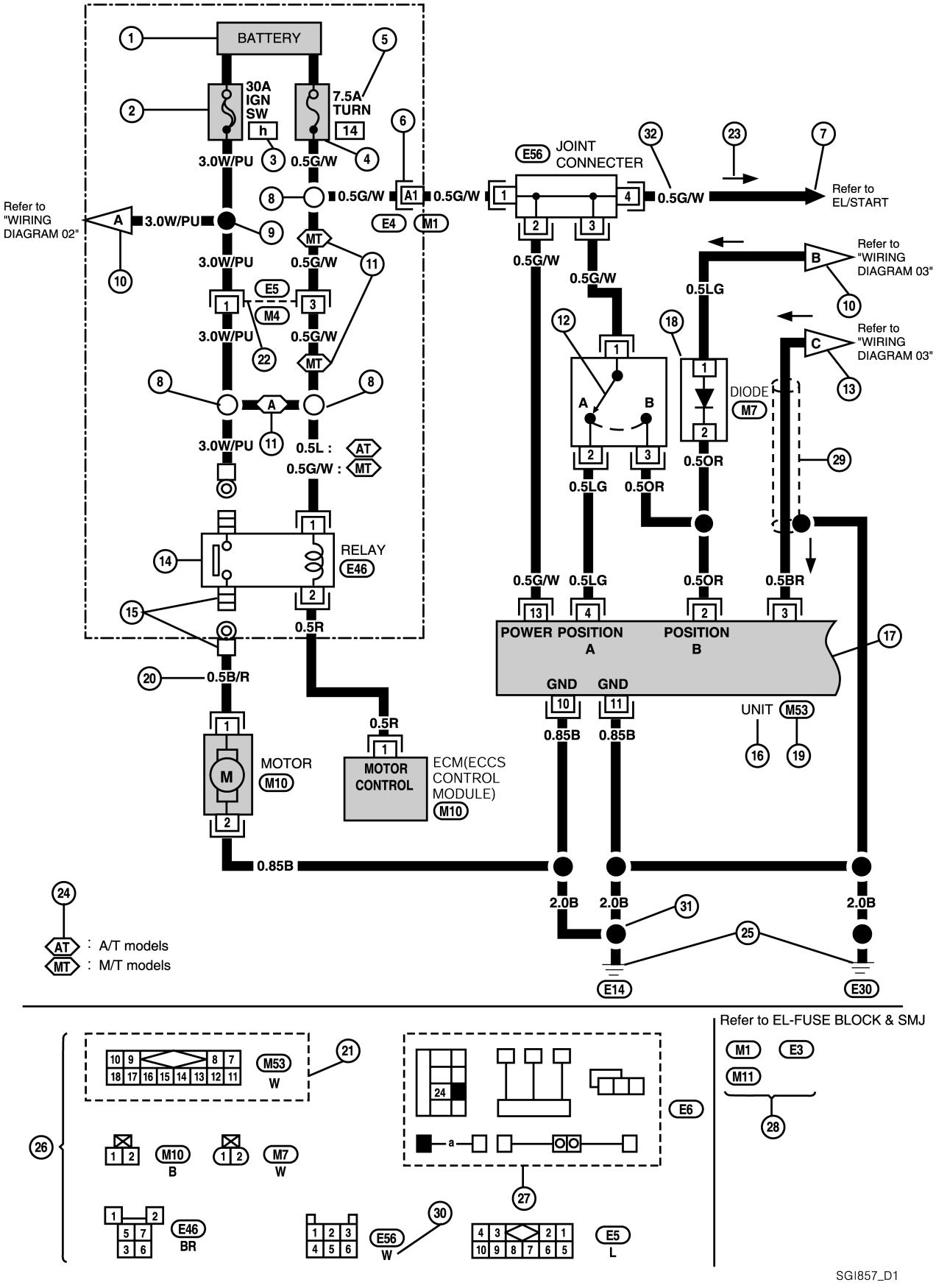
CAUTION:

The trouble diagnosis tells the sequence where trouble cause is effectively found. When executing the trouble diagnosis, refer to the following.

- **Read "General Inspection" and "Troubleshooting Table by Symptoms" before executing the trouble diagnosis.**
- **After repair, check whether functional defectives are removed.**
- **Refer to each section's "Component Location" for location of parts and harness connectors.**
- **Use circuit diagram for simple inspection. For detailed inspection including sub-harnesses, use wiring diagram to check the harness layout by identifying the connectors.**
- **Always place the ignition switch "OFF" when inspecting the circuit.**
- **Measure the battery voltage before checking the connector voltage.**
- **After finishing the diagnosis or inspection, check whether all the harness connectors are in original position.**

How to Read Wiring Diagrams

1. Sample/Wiring Diagram - EXAMPLE -



How to Read Wiring Diagrams (Cont'd)

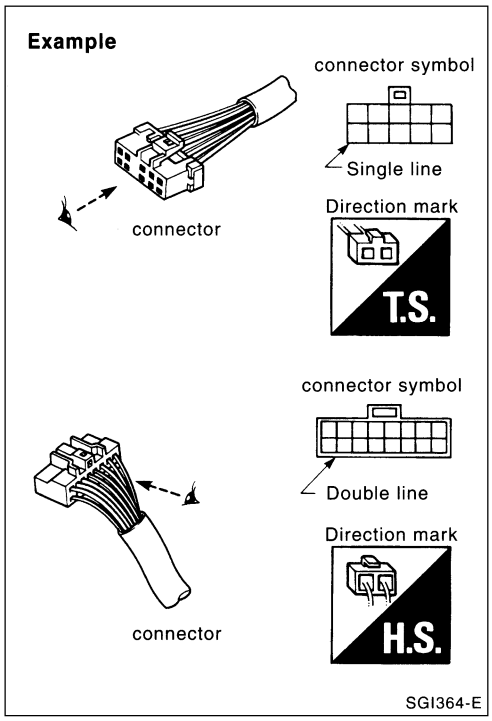
2. Description

Number	Item	Description
1	Power condition	● This shows the condition when the system receives battery positive voltage (can be operated).
2	Fusible link	● The double line shows that this is a fusible link. ● The open circle shows current flow in, and the shaded circle shows current flow out.
3	Fusible link/fuse location	● This shows the location of the fusible link or fuse in the fusible link or fuse box. For arrangement, refer to "FUSE BLOCK-JUNCTION BLOCK (J/B)" (WH-183).
4	Fuse	● The single line shows that this is a fuse. ● The open circle shows current flow in, and the shaded circle shows current flow out.
5	Current rating	● This shows the current rating of the fusible link of fuse.
6	Connectors	● This shows that connector E3 is female and connector M1 is male. ● The 0.5G/R wire is located in the A1 terminal of both connectors. ● Terminal number with an alphabet (A1, B5, etc.) indicates that the connector is SMJ connector. Refer to GI-13.
7	System branch	● This show that the system branches to another system identified by cell code. (section and system)
8	Optional Splice	● The open circle shows that the splice is optional depending on vehicle application.
9	Splice	● The shaded circle shows that the splice is always on the vehicle.
10	Page crossing	● This arrow shows that the circuit continues to an adjacent page. ● The A will match with the A on the preceding or next page.
11	Option abbreviation	● This shows that the circuit is optional depending on vehicle application.
12	Switch	● This shows that continuity exists between terminals 1 and 2 when the switch is in the A position. Continuity exists between terminals 1 and 3 when the switch is in the B position.
13	Page crossing	● This arrow shows that the circuit continues to an adjacent page.
14	Relay	● This shows an internal representation of the relay. For details, refer to "ELECTRICAL UNIT LOCATION" (WH-166).
15	Connectors	● This shows that the connector is connected to the body or a terminal with bolt or nut.
16	Component name	● This shows the name of a component.
17	Component box in wave line	● This shows that another part of the component is also shown on another page (indicated by wave line) within the system.
18	Assembly parts	● Connector terminal in component shows that it is a harness incorporated assembly.
19	Connector number	● This shows the connector number. ● The letter shows which harness the connector is located in. Example: M: main harness. For detail and to locate the connector, refer to "HARNESS LAYOUT" (WH-171). A coordinate grid is included for complex harnesses to aid in locating connectors.

How to Read Wiring Diagrams (Cont'd)

Number	Item	Description
20	Wire color	● This shows a code for the color of the wire. B = Black BR = Brown W = White OR = Orange R = Red P = Pink G = Green PU = Purple L = Blue GY = Gray Y = Yellow SB = Sky Blue LG = Light Green CH = Dark Brown DG = Dark Green When the wire color is striped, the base color is given first, followed by the stripe color as shown below: Example: L/W = Blue with White Stripe
21	Common component	● Connectors enclosed in broken line show that these connectors belong to the same component
22	Common connector	● The dotted lines between terminals show that these terminals are part of the same connector.
23	Current flow arrow	● Arrow indicates electric current flow, especially where the direction of standard flow (vertically downward or horizontally from left to right) is difficult to follow. ● A double arrow "⇔" shows that current can flow in either direction depending on circuit operation.
24	Option description	● This shows a description of the option abbreviation used on the page.
25	Ground (GND)	● This shows the ground connection.
26	Connector component	● This area shows the connector faces of the components in the wiring diagram on the page.
27	Fusible link and fuse box	● This shows the arrangement of fusible link(s), used for connector views of "FUSE BLOCK-JUNCTION BLOCK (J/B)" (WH-183). The open square shows current flow in, and the shaded square shows current flow out. This is the same meaning as open circle and shaded circle of No. 2 and No. 4.
28	Reference area	● This shows that more information on the Super Multiple Junction (SMJ) and Joint Connectors (J/C) exists on the foldout page.
29	Shielded line	● The line enclosed by broken line circle shows shield wire.
30	Connector color	● This shows a code for the color of the connector. For code meaning, refer to wire color codes, Number 20 of the chart.
31	Ground (GND)	● The line spliced and grounded under wire color shows that ground line is spliced at the grounded connector.

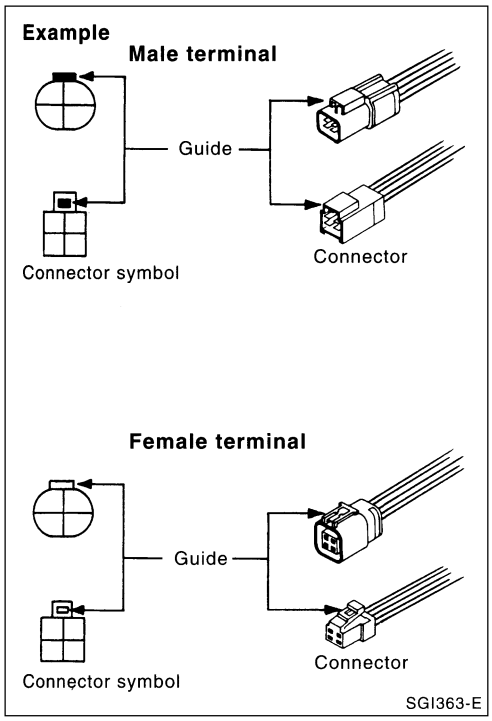
How to Read Wiring Diagrams (Cont'd)



2-1. CONNECTOR SYMBOLS

Most of connector symbols in wiring diagrams are shown from the terminal side.

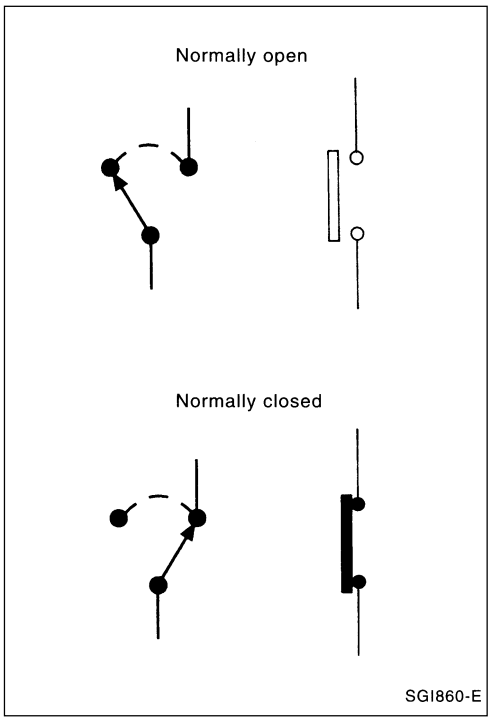
- Connector symbols shown from the terminal side are enclosed by a single line and followed by the direction mark (T.S.).
- Connector symbols shown from the harness side are enclosed by a double line and followed by the direction mark (H.S.).



- Male and female terminals

  Connector guides for male terminals are shown in black and female terminals in white in wiring diagrams.

How to Read Wiring Diagrams (Cont'd)



2-2. SWITCH POSITIONS

Switches are shown in wiring diagrams as if the vehicle is in the "normal" condition

A vehicle is in the "normal" condition when:

- ignition switch is "OFF",
- doors, hood and trunk lid/back door are closed,
- pedals are not depressed, and
- parking brake is released.

2-3. MULTIPLE SWITCH

The continuity of multiple switch is described in two ways as shown below.

- The switch chart is used in schematic diagrams.
- The switch diagram is used in wiring diagrams.

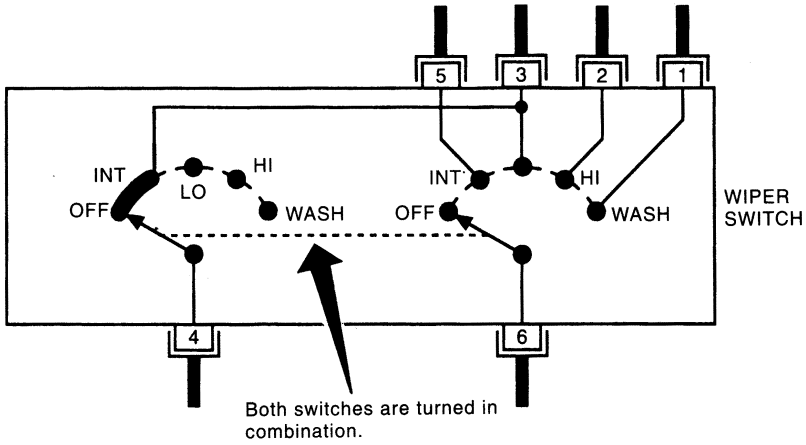
Example

(SWITCH CHART)

WIPER SWITCH

	OFF	INT	LO	HI	WAS
1					○
2				○	
3	○	○	○		
4	○	○			
5		○			
6		○	○	○	○

(SWITCH DIAGRAM)



Continuity circuit of wiper switch

SWITCH POSITION	CONTINUITY CIRCUIT
OFF	3-4
INT	3-4, 5-6
LO	3-6
HI	2-6
WASH	1-6

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How to Read Wiring Diagrams (Cont'd)

2-4. FOLDOUT PAGE

The foldout page should be opened when reading wiring diagram.

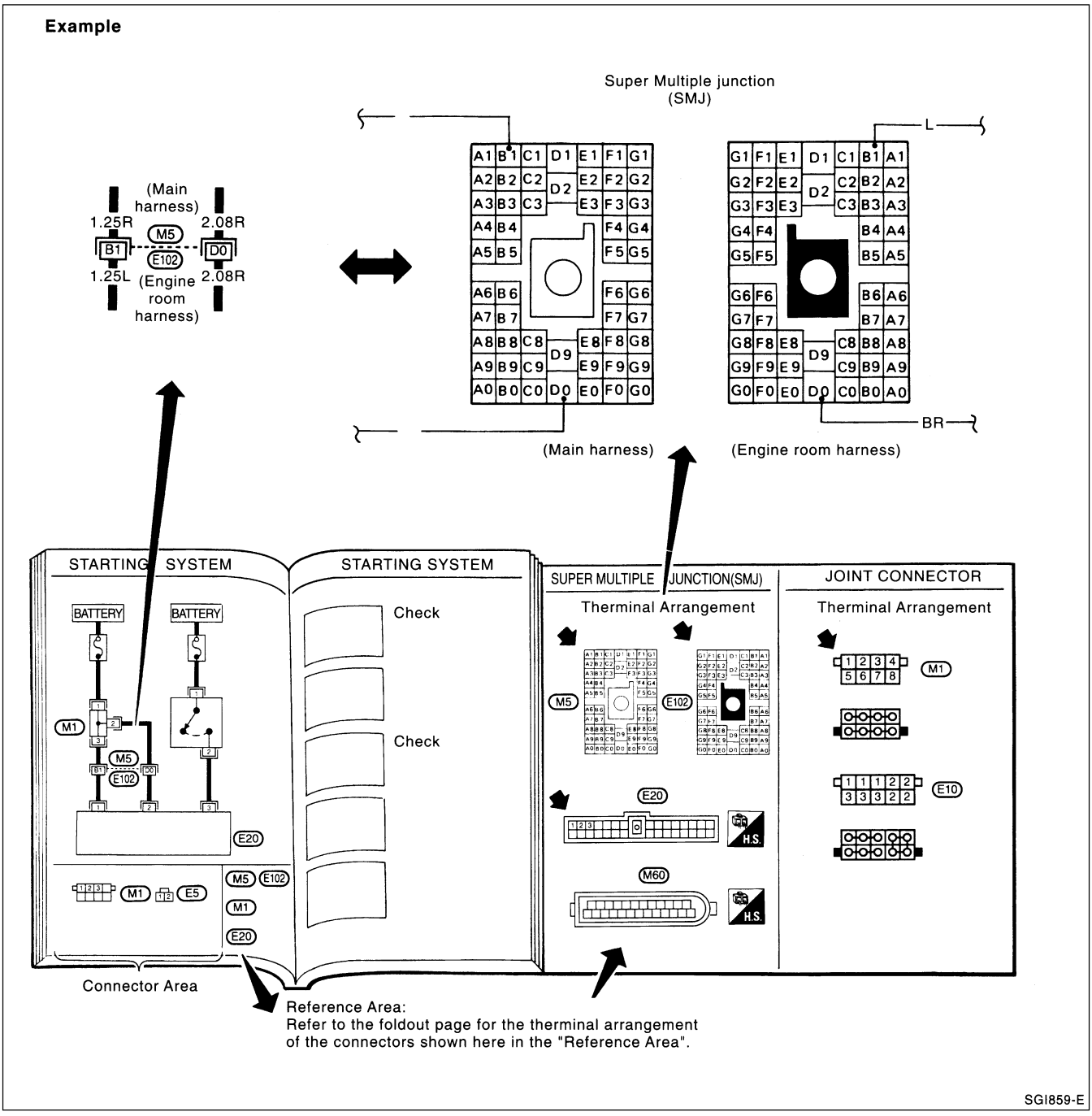
2-5. SUPER MULTIPLE JUNCTION (SMJ)

In wiring diagram, connectors consisting of terminals having terminal numbers with an alphabet (B1, D0, etc.) are SMJ connectors.

If connector numbers are shown in Reference Area, these connector symbols are not shown in Conector Area. For terminal arrangement of these connectors, refer to the foldout page at the end of this manual.

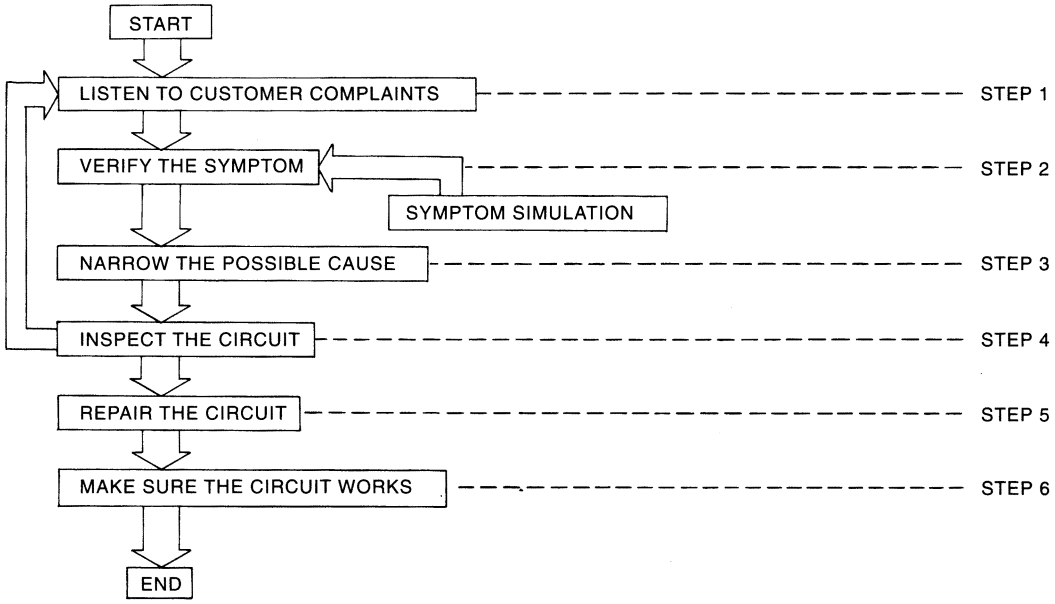
2-6. JOINT CONNECTOR

Joint connector symbols are shown in Connector Area in the wiring diagram concerned. Foldout page also carries inside wiring layout together with such joint connector symbols.



How to Perform Efficient Diagnosis for an Electrical Incident

1. Work Flow



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STEP	DESCRIPTION
STEP 1	Get detailed information about the conditions and the environment when the incident occurred. The following are key pieces of information required to make a good analysis: **WHAT** Vehicle Model, Engine, Trans Axle and the System, etc. (i.e. Radio) **WHEN** Date, Time of Day, Weather conditions, Frequency. **WHERE** Road Conditions, Altitude and Traffic Situation. **HOW** System Symptoms, Operating Conditions, (Other Components Interaction) Service History and if any After Market Accessories have been installed.
STEP 2	Operate the system, road test if necessary. Verify the parameter of the incident. If the problem can not be duplicated, refer to “Incident Simulation Tests” next page.
STEP 3	Get the proper diagnosis materials together including: ● POWER SUPPLY ROUTING ● System Operation Descriptions ● Applicable Service Manual Sections ● Available Service Bulletin Identify where to begin diagnosis based upon your knowledge of the system operation and the customer comments.
STEP 4	Inspect the system for mechanical binding, loose connectors or wiring damage. Determine which circuits and components are involved and diagnose using the Power Supply Routing and Harness Layouts.
STEP 5	Repair or replace the incident circuit or component.
STEP 6	Operate the system in all modes. Verify the system works properly under all conditions. Make sure you have not inadvertently created a new incident during your diagnosis or repair steps.

2. Incident Simulation Tests

2-1. INTRODUCTION

Sometimes the symptom is not present when the vehicle is brought in for service If possible, recreate the conditions present at the time of the incident. Doing so may help avoid a No Trouble Found Diagnosis. The following section illustrates ways to simulate the conditions/environment under which the owner experiences an electrical incident.

The section is broken into the six following topics:

- Vehicle Vibration
- Heat sensitive
- Freezing
- Water Intrusion
- Electrical load
- Cold or hot start up

Get a thorough description of the incident from the customer. It is important for simulating the conditions of the problem.

2-2. VEHICLE VIBRATION

The problem may occur or become worse while driving on a rough road or when engine is vibrating (idle with A/C on). In such a case, you will want to check for a vibration related condition. Refer to the illustration below.

2-3. CONNECTORS & HARNESS

Determine which connectors and wiring harness would affect the electrical system you are inspecting. Gently shake each connector and harness while monitoring the system for the incident you are trying to duplicate. This test may indicate a loose or poor electrical connection.

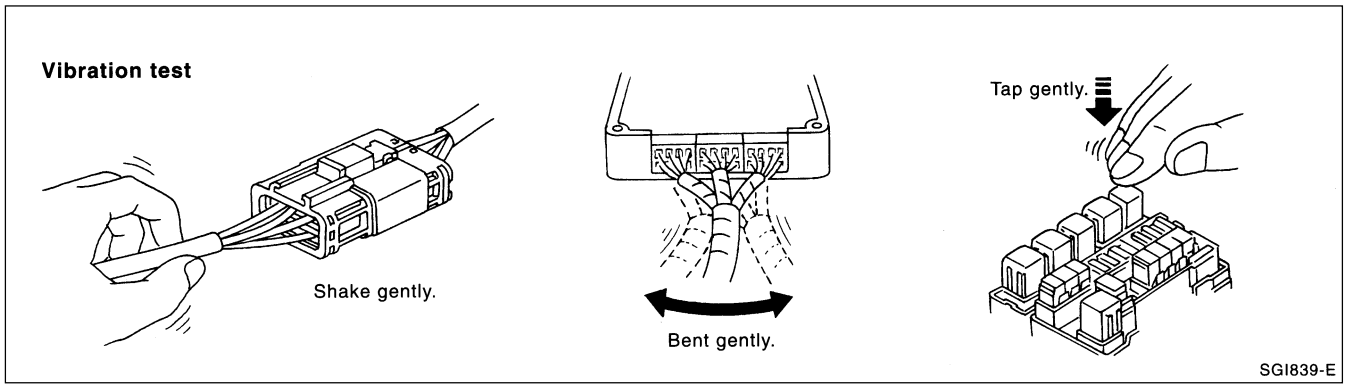
2-4. HINT

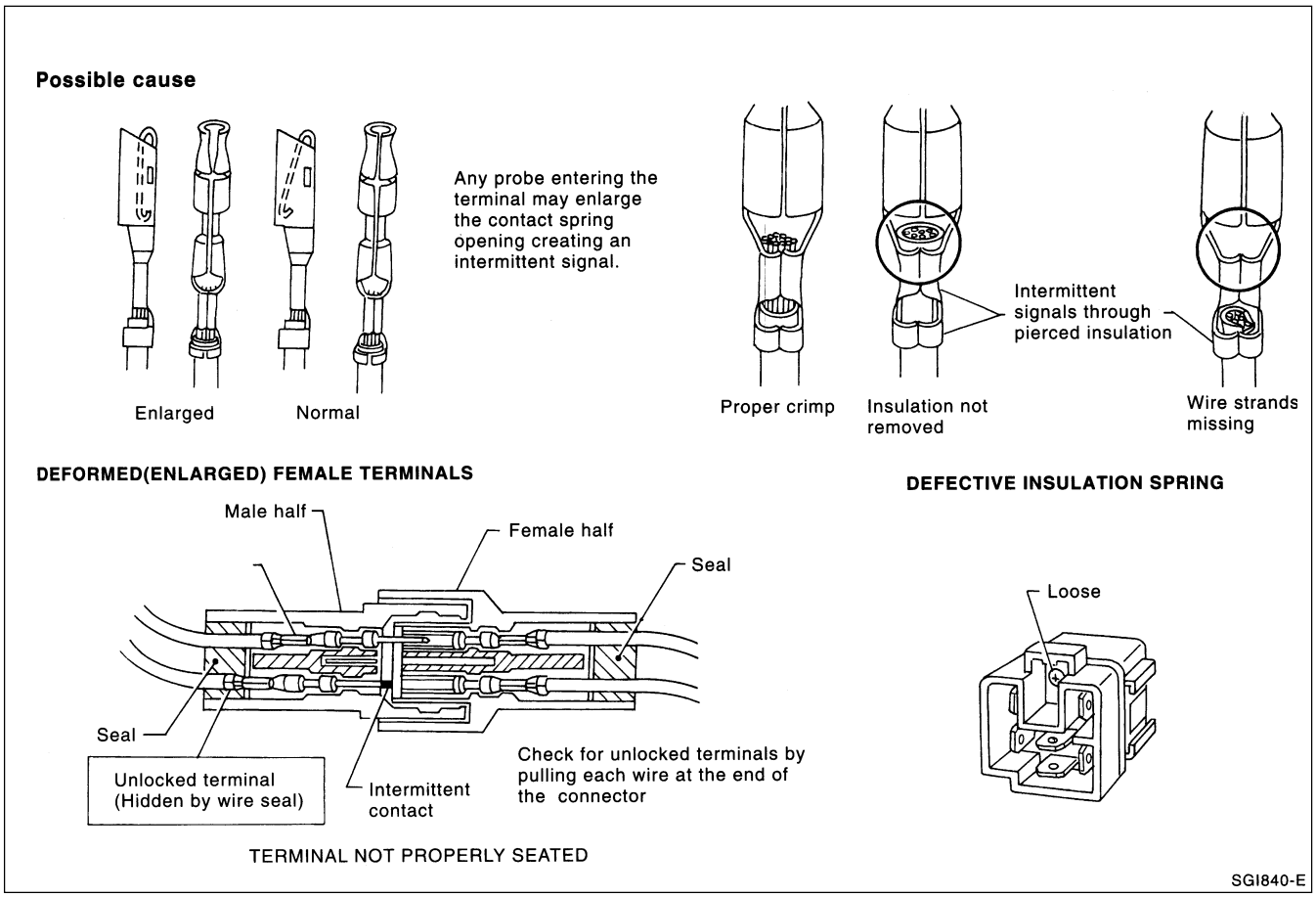
Connectors can be exposed to moisture. It possible to get a thin film of corrosion on the connetctor terminals. A visual inspection may not reveal this without disconnecting the connector. If the problem occurs intermittently, perhaps the problem is caused by corrosion. It is a good idea to disconnect, inspect and clean the terminals on related connectors in the system.

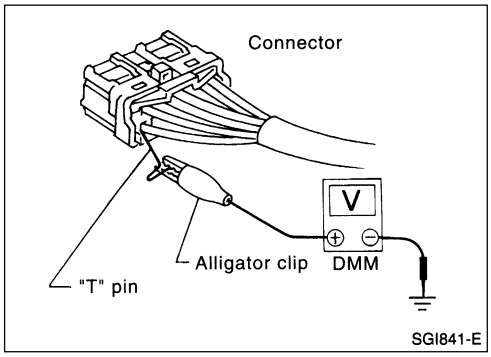
2-5. SENSORS & RELAYS

Gently apply a slight vibration to sensors and relays in the system you are inspecting.

This test may indicate a loose or poorly mounted sensor or relay.







2-6. TESTER PROBE

When probing a connector it is possible to enlarge the contact spring opening If this occurs it may create an intermittent signal in the circuit. When probing a connector, use care not to enlarge the opening. The probe of the Digital Multimeter (DMM) may not fit into the connector cavity. In such cases make an extension of a “T” pin and probe it from the harness side of the connector. Most DMMs have accessory alligator clips. Slide these over the probe to allow clipping the “T” pin for a better contact. If you have any difficulty probing a terminal, inspect the terminal. Ensure you have not accidentally opened the contact spring or pulled a wire loose.

2-7. ENGINE COMPARTMENT

There are several reasons a vehicle or engine vibration could cause an electrical complaint. Some of the things to check for are:

- Connectors not got near diagnosis probe.
- Connectors not fully seated.
- Wiring harness not long enough and is being stressed due to engine vibrations or rocking.
- Wires laying across brackets or moving components.
- Loose, dirty or corroded ground wires.
- Wires routed too close to hot components.

To inspect components under the hood, start by verifying the integrity of ground connections. Refer to GROUND INSPECTION (GI-21). First check that the system is properly grounded.

Then check for loose connection by gently shaking the wiring or components as previously explained. Using the wiring diagrams inspect the wiring for continuity.

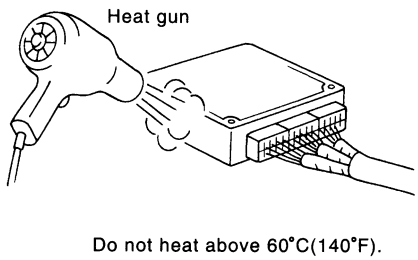
2-8. BEHIND THE INSTRUMENT PANEL

An improperly routed or improperly clamped harness can become pinched during accessory installation. Vehicle vibration can aggravate a harness which is routed along a bracket or near a screw.

2-9. UNDER SEATING AREAS

An unclamped or loose harness can cause wiring to be pinched by seat components (such as slide guides) during vehicle vibration. If the wiring runs under seating areas, inspect wire routing for possible damage or pinching.

Heating test

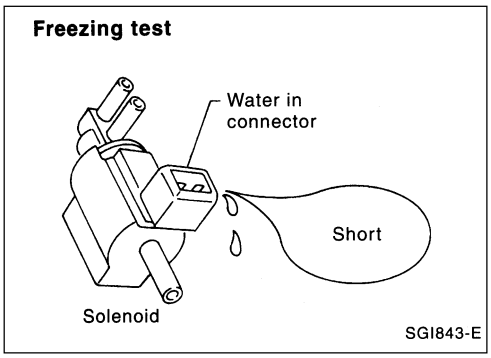


2-10. HEAT SENSITIVE

The owner's problem may occur during hot weather or after car has sat for a short time. In such cases you will want to check for a heat sensitive condition.

To determine if an electrical component is heat sensitive, heat the component with a heat gun or equivalent.

Do not heat components above 60°C (140°F). If incident occurs while heating the unit, either replace or properly insulate the component.

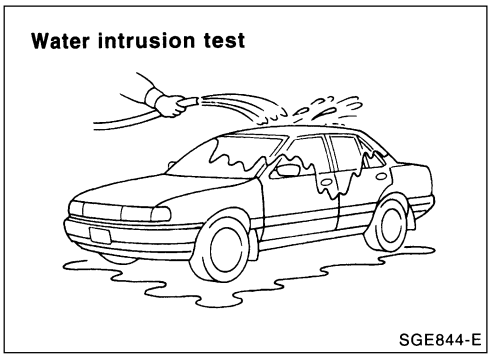


2-11. FREEZING

The customer may indicate the incident goes away after the car warms up (winter time). The cause could be related to water freezing somewhere in the wiring/electrical system.

There are two methods to check for this. The first is to arrange for the owner to leave his car overnight. Make sure it will get cold enough to demonstrate his complaint. Leave the car parked outside overnight. In the morning, do a quick and thorough diagnosis of those electrical components which could be affected.

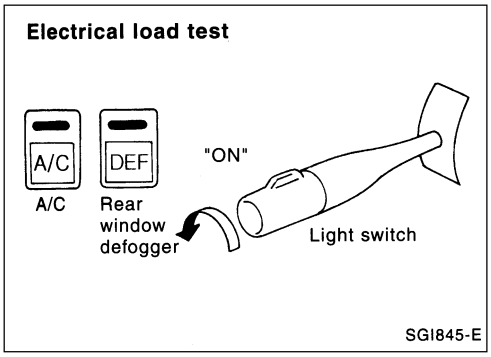
The second method is to put the suspect component into a freezer long enough for any water to freeze. Reinstall the part into the car and check for the reoccurrence of the incident. If it occurs, repair or replace the component.



2-12. WATER INTRUSION

The incident may occur only during high humidity or in rainy/snowy weather. In such cases the incident could be caused by water intrusion on an electrical part. This can be simulated by soaking the car or running it through a car wash.

Do not spray water directly on any electrical components.



2-13. ELECTRICAL LOAD

The incident may be electrical load sensitive. Perform diagnosis with all accessories (including A/C, rear window defogger, radio, fog lamps) turned on.

2-14. COLD OR HOT START UP

On some occasions an electrical incident may occur only when the car is started cold. Or it may occur when the car is restarted hot shortly after being turned off. In these cases you may have to keep the car overnight to make a proper diagnosis.

3. Circuit Inspection

3-1. INTRODUCTION

In general, testing electrical circuits is an easy task if it approached in a logical and organized method. Before beginning it is important to have all available information on the system to be tested.

Also, get a thorough understanding of system operation. Then you will be able to use the appropriate equipment and follow the correct test procedure.

You may have to simulate vehicle vibrations while testing electrical components. Gently shake the wiring harness or electrical component to do this.

OPEN A circuit is open when there is no continuity through a section of the circuit.

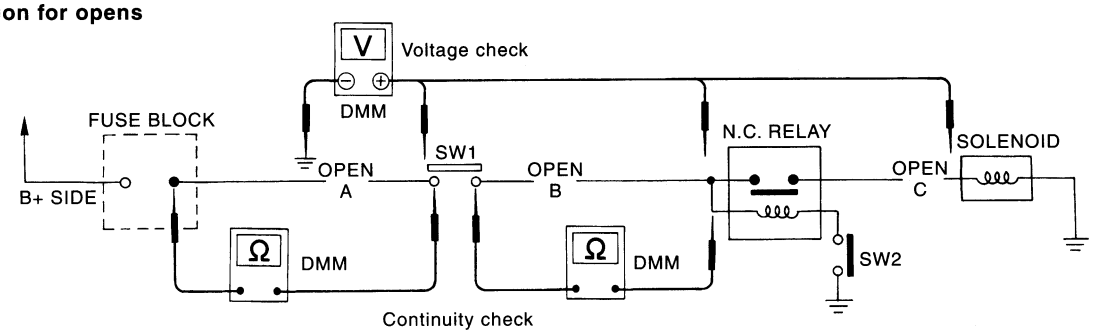
SHORT There are two types of shorts.

- SHORT CIRCUIT When a circuit contacts another circuit and causes the normal resistance to change.
- SHORTTOGROUND When a circuit contacts a ground source and grounds the circuit.

3-2. TESTING FOR "OPENS" IN THE CIRCUIT

Before you begin to diagnose and test the system, you should rough sketch a schematic of the system. This will help you to logically walk through the diagnosis process. Drawing the sketch will also reinforce your working knowledge of the system.

Inspection for opens



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3-3. CONTINUITY CHECK METHOD

The continuity check is used to find an open in the circuit, The Digital Multimeter (DMM) set on the resistance function will indicate an open circuit as over limit. (OL, no beep tone or no ohms symbol)

Make sure to always start with the DMM at the highest resistance level.

To help in understanding the diagnosis of open circuits please refer to the schematic above.

1. Disconnect the battery negative cable.
2. Start at one end of the circuit and work your way to the other end. (At the fuse block in this example)
3. Connect one probe of the DMM to the fuse block terminal on the load side.
4. Connect the other probe to the fuse block (power) side of SWI. Little or no resistance will indicate that portion of the circuit has good continuity. If there were an open in the circuit, the DMM would indicate an over limit or infinite resistance condition. (point A)
5. Connect the probes between SWI and the relay. Little or no resistance will indicate that portion of the circuit has good continuity. If there were an open in the circuit, the DMM would indicate an over limit or infinite resistance condition. (point B)
6. Connect the probes between the relay and the solenoid. Little or no resistance will indicate that portion of the circuit has good continuity If there were an open in the circuit, the DMM would indicate an over limit or infinite resistance condition. (point C)

   Any circuit can be diagnosed using the approach in the above example.

3-4. VOLTAGE CHECK METHOD

To help in understanding the diagnosis of open circuits please refer to the previous schematic.

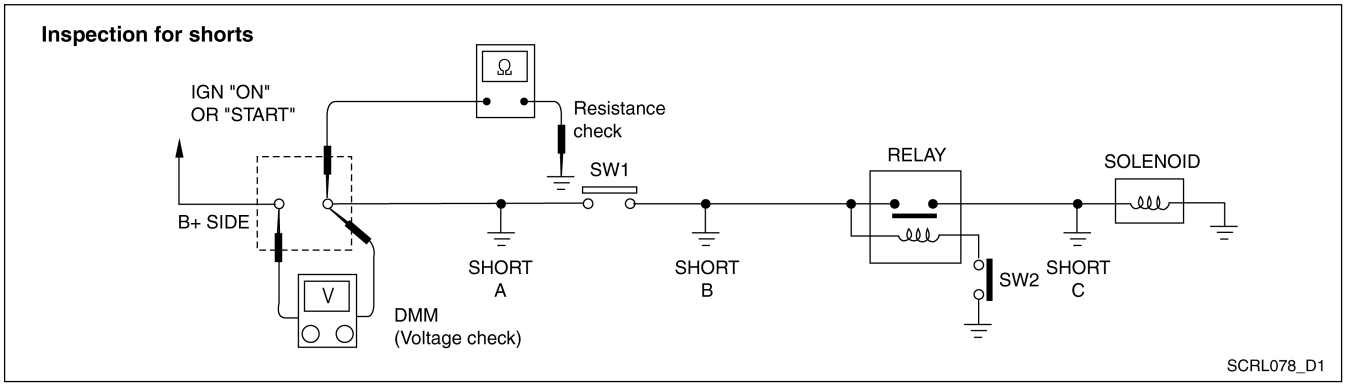
In any powered circuit, an open can be found by methodically checking the system for the presence of voltage. This is done by switching the DMM to the voltage function.

1. Connect one probe of the DMM to a known good ground.
2. Begin probing at one end of the circuit and work your way to the other end.
3. With SW1 open, probe at SW1 to check for voltage.
   - voltage; open is further down the circuit than SW1.
   - no voltage; open is between fuse block and SW1. (point A)
4. Close SW1 and probe at relay.
   - voltage; open is further down the circuit than the relay.
   - no voltage; open is between SW1 and relay. (point B)
5. Close the relay and probe at the solenoid.
   - voltage; open is further down the circuit than the solenoid.
   - no voltage; open is between relay and solenoid. (point C)

Any powered circuit can be diagnosed using the approach in the above example.

3-5. TESTING FOR "SHORT" IN THE CIRCUIT

To simplify the discussion of shorts in the system please refer to the schematic below.



3-6 RESISTANCE CHECK METHOD

1. Disconnect the battery negative cable and remove the blown fuse.
2. Disconnect all loads (SW1 open, relay disconnected and solenoid disconnected) powered through the fuse.
3. Connect one probe of the ohmmeter to the load side of the fuse terminal. Connect the other probe to a known good ground.
4. With SW1 open, check for continuity.
   - continuity; short is between fuse terminal and SW1 (point A)
   - no continuity; short is further down the circuit than SW1.
5. Close SW1 and disconnect the relay. Put probes at the load side of fuse terminal and a known good ground. Then, check for continuity.
   - continuity; short is between SW1 and the relay. (point B)
   - no continuity; short is further down the circuit than the relay.
6. Close SW1 and jump the relay contacts with jumper wire. Put probes at the load side of fuse terminal and a known good ground. Then, check for continuity.
   - continuity; short is between relay and solenoid. (point C)
   - no continuity; check solenoid, retrace steps.

3-7. VOLTAGE CHECK METHOD

1. Remove the blown fuse and disconnect all loads (i.e. SW1 open, relay disconnected and solenoid disconnected) powered through the fuse.
2. Turn the ignition key to the ON or START position. Verity battery voltage at the B + side of the fuse terminal (one led on the B + terminal side of the fuse block and on lead on a known good ground).
3. With SW1 open and the DMM leads across both fuse terminals, check for voltage.
   - voltage; short is between fuse block and SW1. (point A)
   - no voltage; short is further down the circuit than SW1.
4. With SW1 closed, relay and solenoid disconnected and the DMM leads across both fuse terminals, check for voltage.
   - voltage; short is between SW1 and the relay. (point B)
   - no voltage; short is further down the circuit than the relay.
5. With SW1 closed, relay contacts jumped with fused jumper wire check for voltage.
   - voltage; short is down the circuit of the relay or between the relay and the disconnected solenoid. (point C)
   - no voltage; retrace steps and check power to fuse block

3-8. GROUND INSPECTION

Ground connections are very important to the proper operation of electrical and electronic circuits.

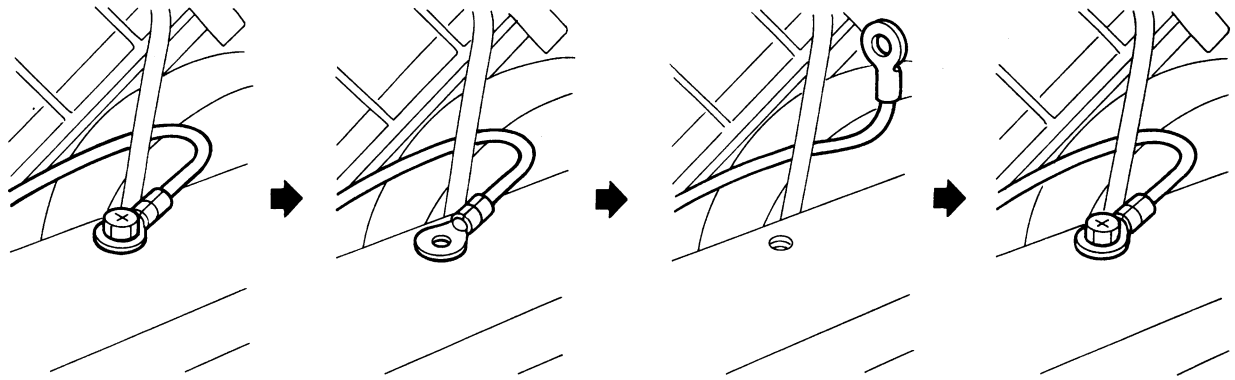
Ground connections are often exposed to moisture, dirt and other corrosive elements. The corrosion (rust) can become an unwanted resistance. This unwanted resistance can change the way a circuit works.

Electronically controlled circuits are very sensitive to proper grounding. A loose or corroded ground can drastically affect an electronically controlled circuit. A poor or corroded ground can easily affect the circuit. Even when the ground connection looks clean, there can be a thin film of rust on the surface.

When inspecting a ground connection follow these rules:

1. Remove the ground bolt screw or clip.
2. Inspect all mating surfaces for tarnish, dirt, rust, etc.
3. Clean as required to assure good contact.
4. Reinstall bolt or screw securely.
5. Inspect for “add-on” accessories which may be interfering with the ground circuit.
6. If several wires are crimped into one ground eyelet terminal, check for proper crimps, Make sure all of the wires are clean, securely fastened and providing a good ground path. If multiple wires are cased in one eyelet make sure no ground wires have excess wire insulation.

Ground Inspection



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3-9. VOLTAGE DROP TESTS

Voltage drop tests are often used to find components or circuits which have excessive resistance.

voltage drop in a circuit is caused by a resistance when the circuit is in operation.

Check the wire in the illustration. When measuring resistance with ohmmeter, contact by a single strand of wire will give reading of 0 ohms. This would indicate a good circuit. When the circuit operates, this single stand of wire is not able to carry the current. The single strand will have a high resistance to the current. This will be picked up as slight voltage drop.

Unwanted resistance can be caused by many situations as follows:

Undersized wiring (single strand example)

Corrosion on switch contacts

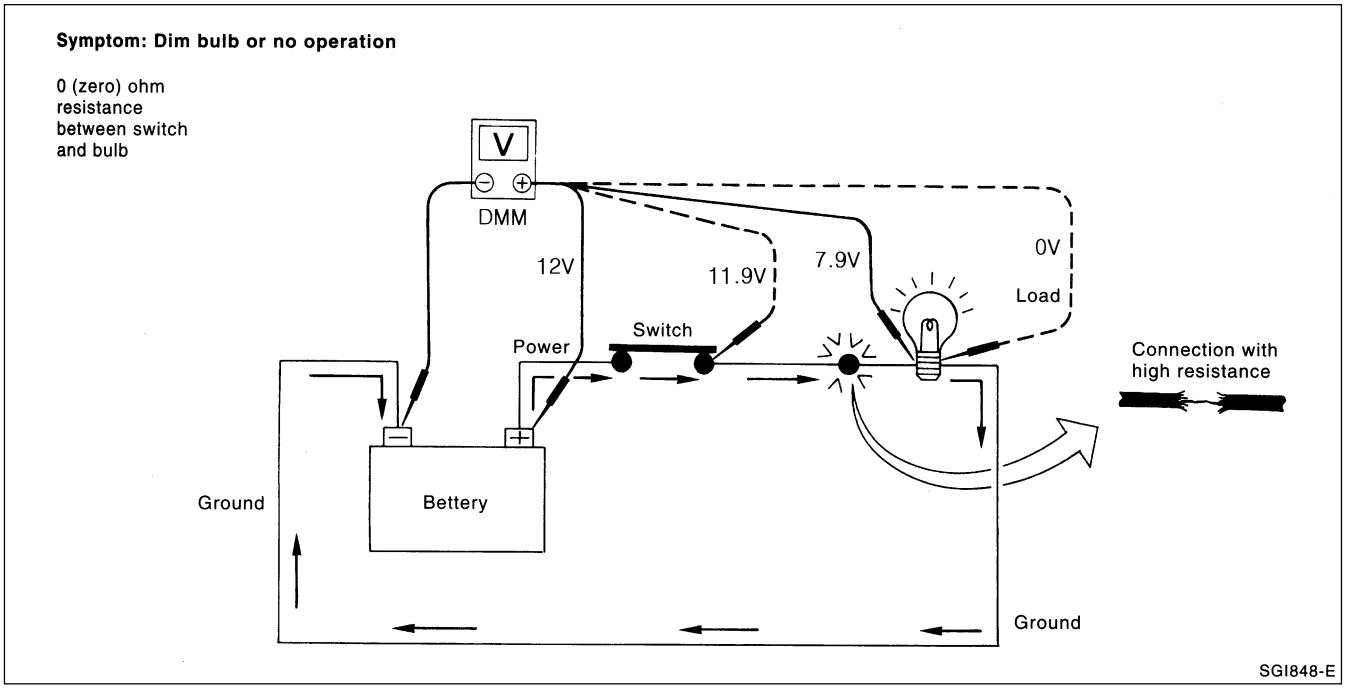
Loose wire connections or splices.

If repairs are needed always use wire that is of the same or larger gauge.

3-10. MEASURING VOLTAGE DROP - ACCUMULATED METHOD

1. Connect the voltmeter across the connector or part of the circuit you want to check. The positive lead of the voltmeter should be closer to power and the negative lead closer to ground.
2. Operate the circuit.
3. The voltmeter will indicate how manu volts are being used to “push” current through that part of the circuit.

Note in the illustration that there is an excessive 4.1 volt drop between the battery and the bulb.



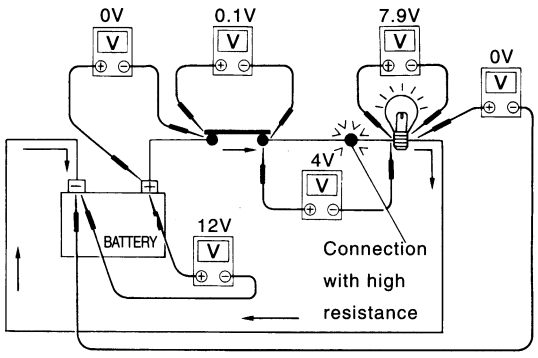
3-11. MEASURING VOLTAGE DROP - STEP BY STEP

The step by step method is most useful for isolating excessive drops in low voltage system. (such as those in “Computer Controlled System”)

Circuit in the “Computer Controlled System” operate on very low amperage.

The (Computer Controlled) system operations can be adversely affected by any variation in resistance in the system. Such resistance variation may be caused by poor connection, improper installation, improper wire gauge or corrosion.

The step by step voltage drop test can identify a component or wire with too much resistance.



1. Connect the voltmeter as shown, starting at the battery and working your way around the circut.
2. An unsually large voltage drop will indicate a component or wire that needs to be repuired. As you can see the illustration left, the poor connection causes a 4 volt drop.

The chart that follows illustrates some maximum allowable voltage drops. These values are given as a guideline, the exact value for each component vary.

COMPONENT	VOLTAGE DROP
Wire	negligible < .001 volts
Ground Connections	Approx. 0.1 volts
Switch Contacts	Approx. 0.3 volts

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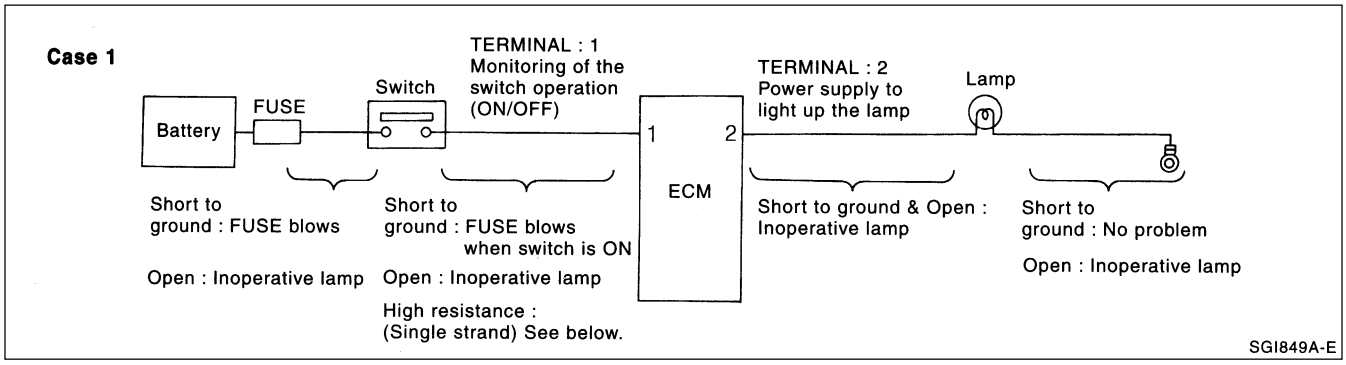
3-12. CONTROL UNIT CIRCUIT TEST

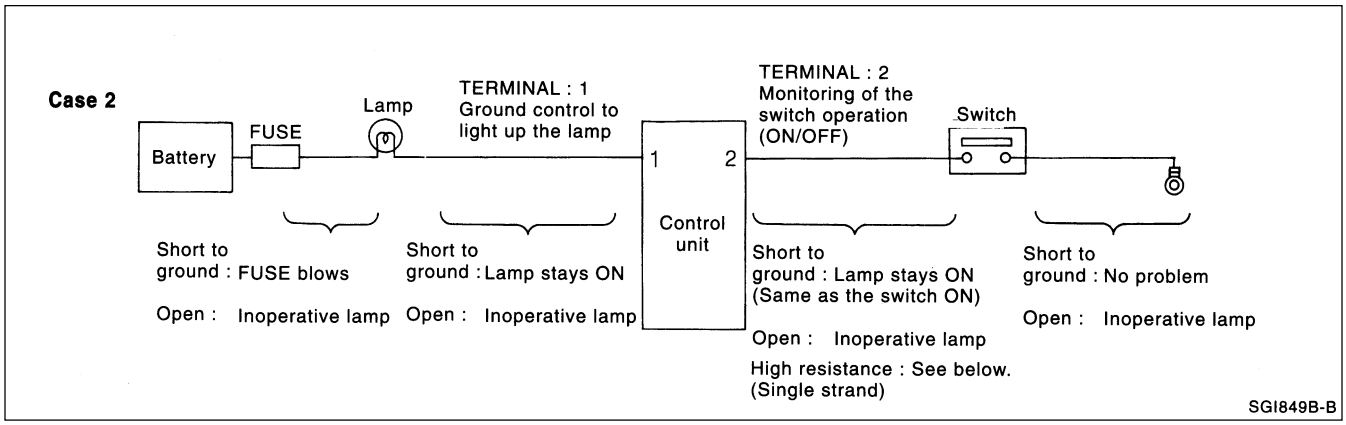
System Description: When the switch is ON, the control unit lights up the lamp.



Input-output voltage chart

Pin No.	Item	Condition	Voltage value [V]	In case of high resistance such as single strand [V] *
1	Switch	Switch	Battery	Lower than battery voltage
		ON	voltage	Approx. 8 (Example)
		OFF	Approx. 0	Approx. 0
2	Lamp	Switch	Battery	Approx. 0
		ON	voltage	(Inoperative lamp)
		OFF	Approx. 0	Approx. 0

The voltage value is based on the body ground.

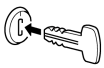
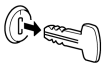
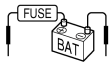
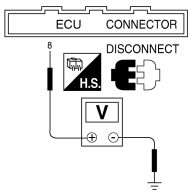
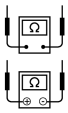


Input-output voltage chart

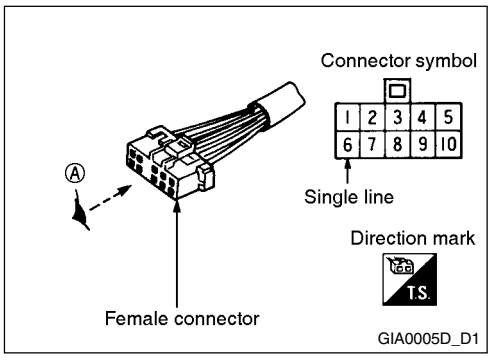
Pin No.	Item	Condition	Voltage value [V]	In case of high resistance such as single strand [V] *
1	Lamp	Switch	Battery	Battery voltage
		ON	voltage	(Inoperative lamp)
		OFF	Approx. 0	Battery voltage
2	Switch	Switch	Battery	Higher than 0
		ON	voltage	Approx. 4 (Example)
		OFF	Approx. 0	Approx. 5

The voltage value is based on the body round.

Key to Symbols Signifying Measurements or Procedures

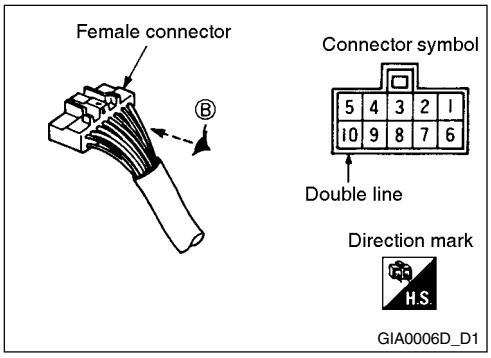
Symbol	Symbol explanation	Symbol	Symbol explanation
DISCONNECT 	Check after disconnecting the connector to be measured.		A/C switch is "OFF"
CONNECT 	Check after connecting the connector to be measured.		A/C switch is "ON"
	Insert key into ignition switch.		REC switch is "ON"
	Remove key from ignition switch.		REC switch is "OFF"
	Turn ignition switch to "OFF" position.		DEF switch is "ON"
	Turn ignition switch to "ON" position.		Vent switch is "ON"
	Turn ignition switch to "START" position.		Fan switch is "ON". (At any position except for "OFF" position)
	Turn ignition switch from "OFF" to "ACC" position.		Fan switch is "OFF".
	Turn ignition switch from "ACC" to "OFF" position.		Apply positive voltage from battery with fuse directly to components.
	Turn ignition switch from "OFF" to "ON" position.		Drive vehicle.
	Turn ignition switch from "ON" to "OFF" position.		Disconnect battery negative cable.
	Do not start engine, or check with engine stopped.		Depress brake pedal.
	Start engine, or check with engine running.		Release brake pedal.
	Apply parking brake.		Depress accelerator pedal.
	Release parking brake.		Release accelerator pedal.
	Check after engine is warmed up sufficiently.		Pin terminal check for SMJ type ECU and A/T control unit connectors. For details regarding the terminal arrangement, refer to the foldout page.
	Voltage should be measured with a voltmeter.		
	Circuit resistance should be measurd with an ohmmeter.		
	Current should be measured with an ammeter.		

Harness Connector Symbols

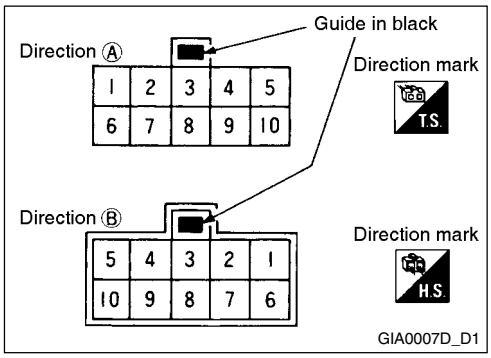


FEMALE CONNECTORS

- When the harness connector is viewed from the A-direction (at the terminal), the connector is indicated in single line. Also, a "T.S." (Terminal Side) is shown in white as a direction mark.

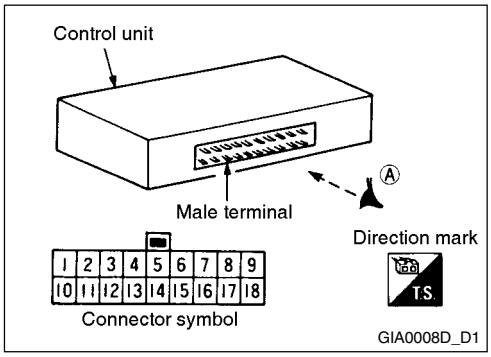


- When the harness connector is viewed from the B-direction (at the harness), the connector is indicated in double lines. Also, a "H.S." (Harness Side) is shown in white as a direction mark.
- The terminal arrangement in connector symbol is indicated as shown from A or B direction. So A-direction has reverse arrangement from B-direction.



MALE CONNECTORS

- It is the same as the female connector, but the male terminal connector guide is colored in black for identification.



ASSEMBLY SUCH AS CONTROL UNIT

- For assemblies such as control units, they have A-direction-view as illustrated.

Abbreviations

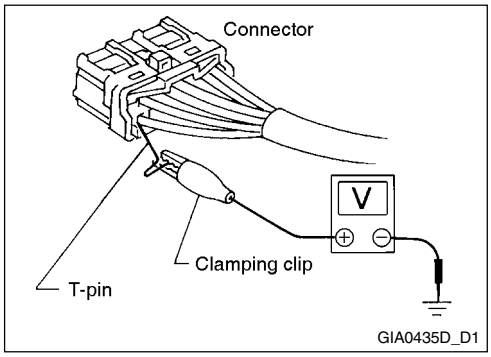
Abbreviation	Description	Abbreviation	Description
A/C	Air conditioner	ILL	Illumination
A/T	Automatic transaxle	INT	Intake
ABS	Anti-lock brake system	L/B	Lean-burn
ACC	Accessory	LH	Left
ADS	Active damper suspension	L.S.V	Load sensing valve
ALT	Alternator	L/U	Lock-up
ASCD	Auto speed control device	LED	Light emitting diode
ASSY	Assembly	LLC	Long life coolant
AV	Audio-visual	LSD	Limited slip differential
BC Valve	Boost control valve	M/T	Manual transaxle
BAT	Battery	NAVI	Navigation
BPT Valve	Back pressure transducer valve	O/D	Overdrive
	(back pressure control)	OHC	Overhead camshaft
C/B	Circuit breaker	OHV	Overhead valve
C/P	Crank pulley	OS	Oversize
C/U	Control unit	P/S	Power steering
CD	Compact disc	P/W	Power window
CVTC	Variable valve timing control	PBR	Potentio balance resistor
Cyl	Cylinder	PTC	Potentio temperature control
DOHC	Double overhead camshaft	PTO	Power take off
DSP	Digital signal processor	RH	Right
ELR	Emergency locking retractor	RR	Rear
ENG	Engine	S/V	Solenoid valve
EXH	Exhaust	SAS	Slow adjusting screw
F/L	Fusible link	SMJ	Super multi junction
FICD	Fast idle control device	SRS	Supplemental restraint system
FPCM	Fuel pump control module	TAS	Throttle adjusting screw
FR	Front	TCS	Traction control system
GPS	Global positioning system	TCU	Time control unit
H/B	Hatchback	Tr	Transistor
H/T	Hardtop	TV Valve	Thermal vacuum valve
HEC	Hybrid electronic control unit	US	Undersize
I/P	Idle pulley	VENT	Ventilation
IAA	Idle auxiliary air unit	VTC	Valve timing control
IAS	Idle adjust screw	VVT Valve	Ventury vacuum transducer valve
IGN	Ignition		

Connector Terminal Inspection

CONNECTOR INSPECTION

Incorrect circuit connector inspection may cause connector damage or bad connection.

The plug of the voltmeter or so may not be inserted into connector correctly. In that case follow the steps described below using the clips and T-pins.

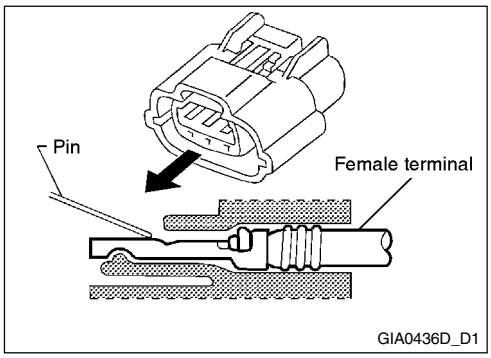


INSPECTION FROM HARNESS

For standard connectors, insert the T-pin from the harness side before inspection.

CAUTION:

- **Remove the rear cover before inspection for connectors with the rear cover as in the ECU.**



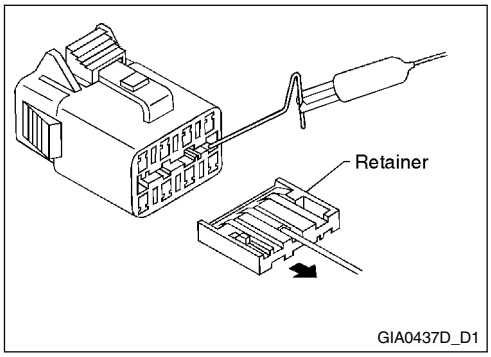
INSPECTION FROM TERMINALS

Female terminal

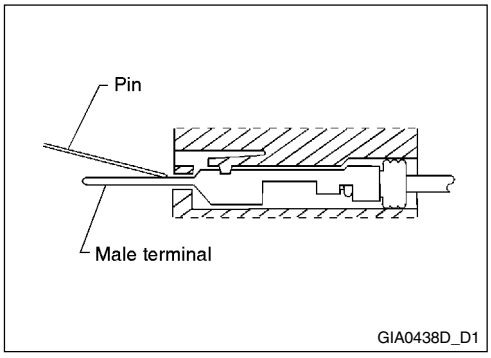
- Every female terminal has a small gap. Insert the T-pin into the gap and perform inspection.

CAUTION:

- **Do not insert any terminals except for the same type male terminal into the female terminal.**



- Inspect after removing the retainer for female terminals without a gap.



Male terminal

Inspect by positioning the T-pin at the surface of each male terminals.

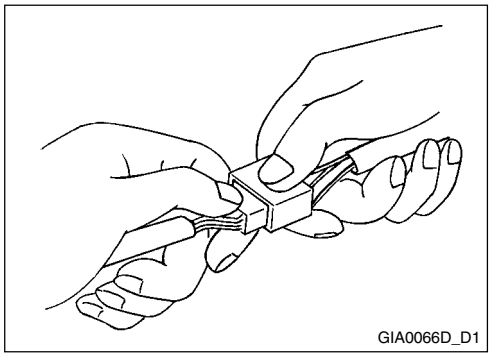
CAUTION:

- **Do not bend the terminal.**

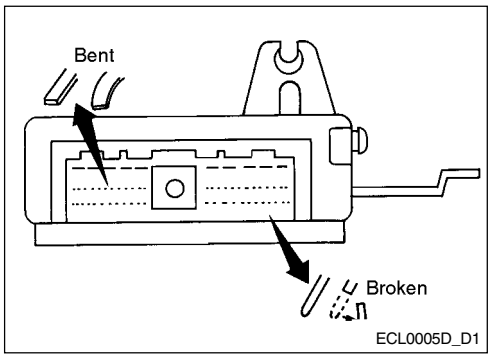
Electrical System Inspection

GENERAL

- When trouble occurs within the electrical system, inspect for short circuit in fuses and fusible links, and short/open circuit in connectors.
- If the fuse or the fusible link is shorted, inspect the cause and replace it with a fuse or fusible link with the specified capacity after replacing it.



- When fuses or fusible links are shorted, examine the cause and replace with correct capacity fuses and fusible links.
- Do not twist or pull too hard when disconnecting the connectors.
- Do not pull the harness.

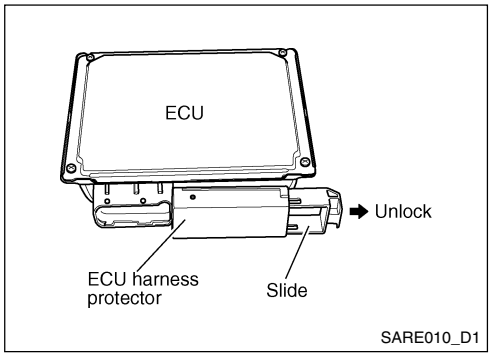


- For lock-type connectors, first disconnect the lock at the connector, hold the connectors and disconnect.
- Check if the connector terminals are not bent or broken. Then firmly connect them.
- For lock-type connectors, connect them by inserting until a firm lock has engaged.
- Avoid harness protrusion or tangling during assembly.

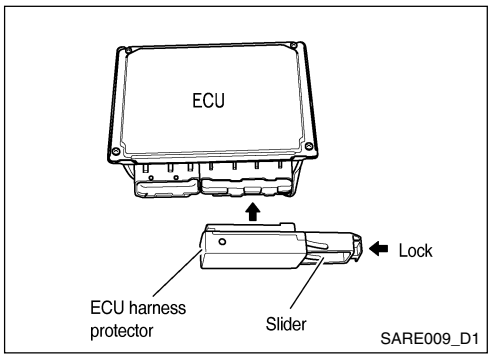
Control Unit and Electronic Components

PRECAUTIONS IN HANDLING

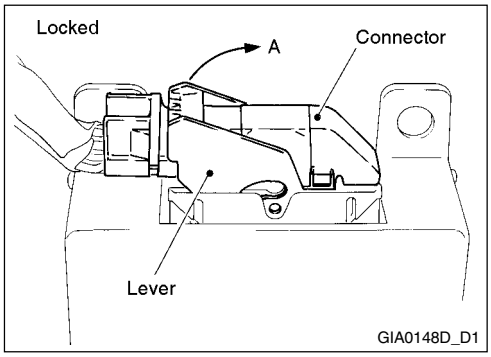
- Never inversely connect the battery terminals.
- Do not install any parts other then designated for the vehicle.
- Perform the unit input/output inspection and functional inspection of the components before replacing the control unit.
- Do not twist or pull too hard when disconnecting the connectors.
- When disconnecting ECU harness connector, push out the slider to unlock.



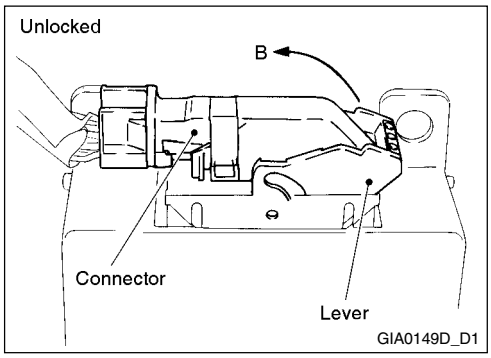
Electrical System Inspection (Cont'd)



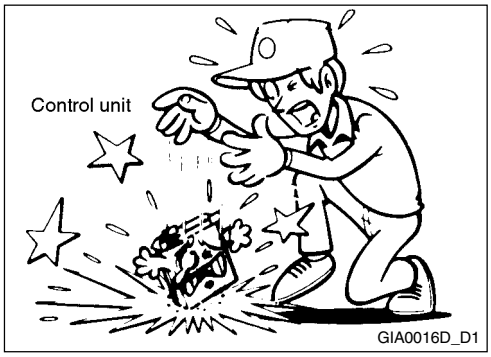
- Check if the connector terminals are not bent or broken. Then firmly connect them. When connecting ECU harness connector, push the slider to its end to lock securely. After connecting it, check for looseness by rocking the connector body.



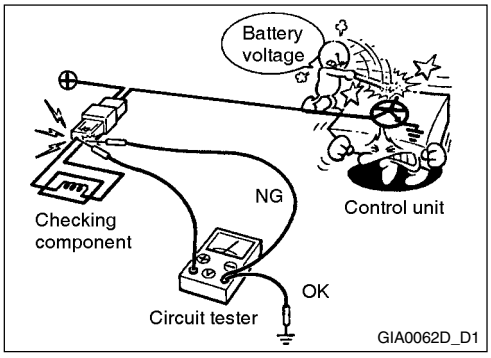
- For lever lock type removal, disconnect the connector by lifting the lever to A-direction as illustrated.



- For lever lock type installation, place the lever to B-direction until it clicks in.



- Do not exert any hard impact to the control unit such as dropping or hitting it.
- Avoid moisture due to sudden temperature change and rain from the control unit. When this happens, completely dry the control unit before installing into the vehicle.
- Be careful not to stain oil in the control unit connectors.
- Avoid volatile solvent cleaning for control unit.
- Do not remove the upper and lower cover of the control unit.



- During circuit testing, be careful not to place the proves too closely. If the tester probes come in contact each other, it may cause circuit overheating and may damage the power transistor inside the control unit due to battery voltage. Allow distance between the tester probes. Use the designated check adaptor when checking the input/output signals from the control unit.

Lifting Point and Towing

JACK/LIFT-UP POINTS

CAUTION:

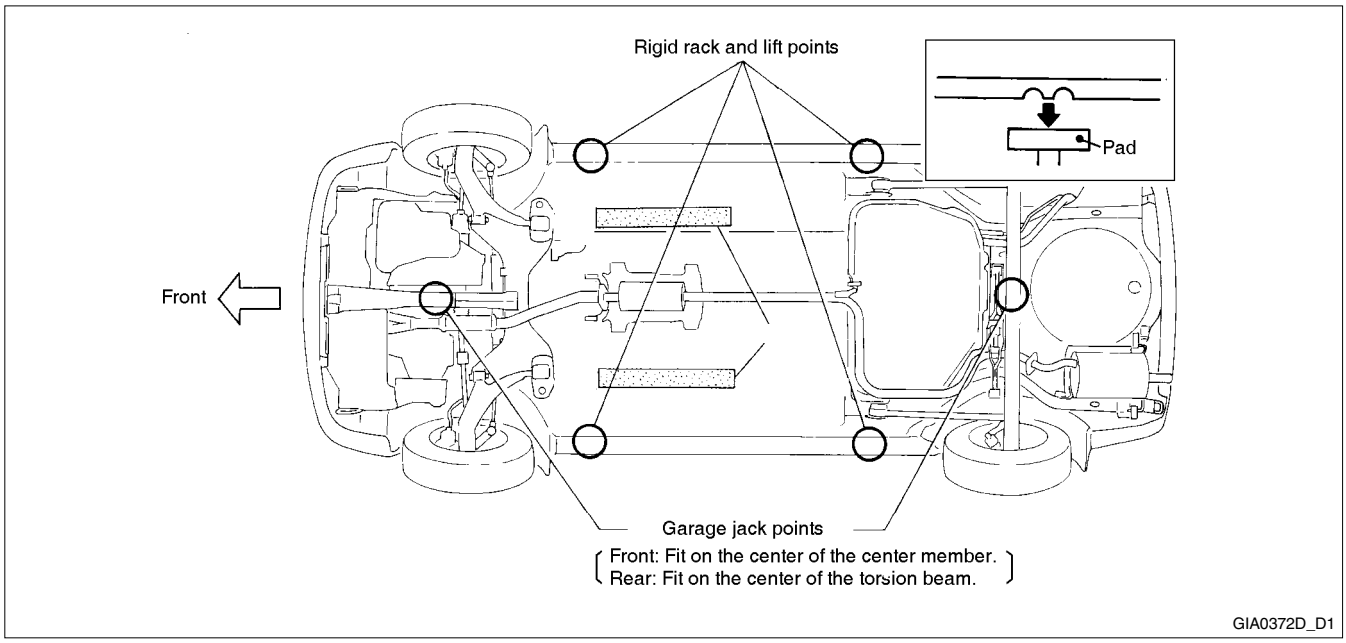
- **Check if the vehicle is empty before lifting.**
- **Support with transmission jack or others to the rear jack-up points of the vehicle during removal of frontal main components such as engine, transaxle and suspension because it may change the center of vehicle's gravity.**

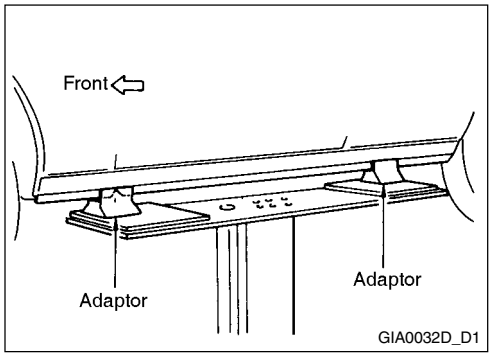
GARAGE JACK AND RIGID RACK SUPPORT POINTS

CAUTION:

- **Always work in flat surface when using the garage jack.**
- **When lifting the front (rear) with the jack, support the vehicle with the rigid rack by placing wood block behind the rear axle (in front of the front axle) and place wood blocks at both rear wheels (both front wheels).**
- **Use both jack and rigid rack when working.**
- **Set the rigid rack with an adaptor to adjust the rigid rack under the jack-up point of the vehicle.**

- Never place a rigid rack at the side members on the under floor and at the surface of the floor.





DOUBLE-POST LIFT SUPPORT POINTS

Put the double-post lift pad at the jack-up point.

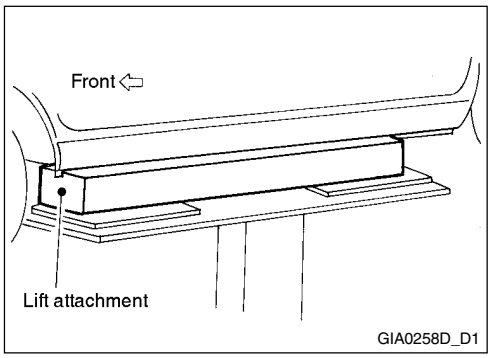
BOARD-ON LIFT SUPPORT POINTS

Put the adaptor at the jack-up point when using the board-on lift adaptor.

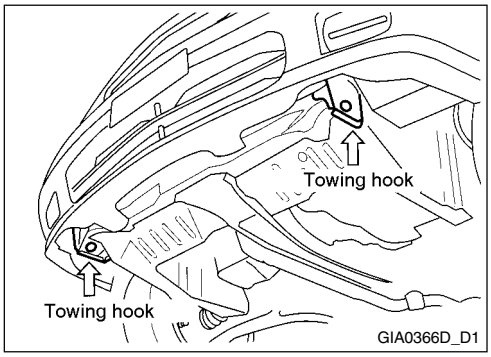
CAUTION:

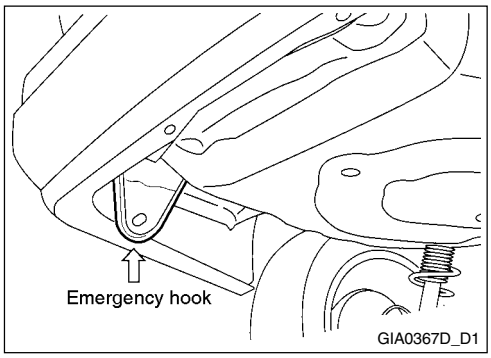
- **When the board-on lift cannot be installed at the front and rear jack-up points, use the lift attachment method as illustrated.**

Lifting Point and Towing (Cont'd)



- The jack-up points of the vehicle should be on the center of the lift attachments.





Towing

TOWING HOOK LOCATION

FRONT

Place the rope at the hook located at the front side member.

CAUTION:

- **The rope may damage the painted surface of the bumper. Wrap a cloth around the rope.**

REAR

CAUTION:

- **The hook located at the left rear of the side member must be used in emergency. Do not use it when towing.**

CAUTION:

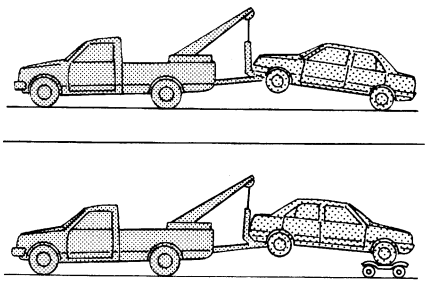
- **Obey all local laws regarding towing.**
- **Use appropriate towing tools to avoid any damages on the vehicle during towing.**

Lifting Point and Towing (Cont'd)

Tow Truck Towing

CAUTION:

- **All applicable local laws regarding the towing operation must be obeyed.**
- **It is necessary to use proper towing equipment to avoid possible damage to the vehicle during towing operation.**
- **When towing with the rear wheels on the ground, release the parking brake and move the gearshift lever to neutral position.**



SGI805-E

NISSAN recommends that vehicle be towed with the driving (front) wheels off the ground as illustrated.

TOWING AN AUTOMATIC TRANSAXLE MODEL WITH FOUR WHEELS ON GROUND

Observe the following restricted towing speeds and distances.

Speed:

Below 50 km/h (30 MPH)

Distance:

Less than 65 km (40 miles)

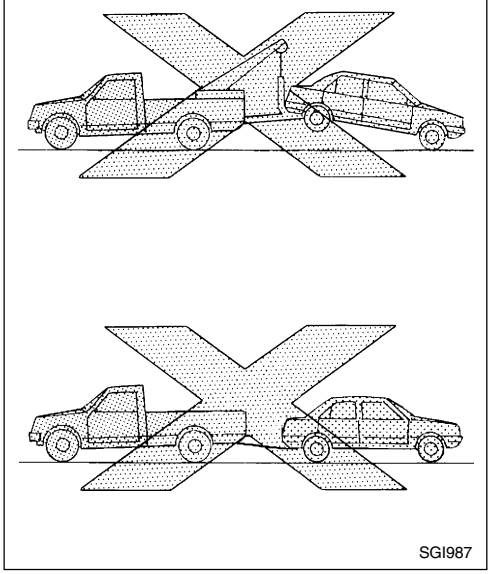
CAUTION:

Never tow an automatic transaxle model from the rear (i.e., backward) with four wheels on the ground as this may cause serious and expensive damage to the transaxle.

TOWING AN AUTOMATIC TRANSAXLE MODEL WITH REAR WHEELS RAISED (With front wheels on ground)

Never tow an automatic transaxle model with rear wheels raised (with front wheels on ground) as this may cause serious and expensive damage to the transaxle. If it is necessary to tow it with rear wheels raised, always use a towing dolly under the front wheels.

Automatic transaxle model



SGI987

Tightening Torque of Standard Bolt

Grade	Bolt size	Bolt diameter	Pitch	Standard tightening torque			
				Standard bolt		Flange bolt	
				N•m	kg-m	N•m	kg-m
4T	M6	6.0	1.0	5.1	0.52	6.1	0.62
	M8	8.0	1.25	13	1.3	15	1.5
			1.0	13	1.3	16	1.6
	M10	10.0	1.5	25	2.5	29	3.0
			1.25	25	2.6	30	3.1
	M12	12.0	1.75	42	4.3	51	5.2
			1.25	46	4.7	56	5.7
	M14	14.0	1.5	74	7.5	88	9.0
7T	M6	6.0	1.0	8.4	0.86	10	1.0
	M8	8.0	1.25	21	2.1	25	2.5
			1.0	22	2.2	26	2.7
	M10	10.0	1.5	41	4.2	48	4.9
			1.25	43	4.4	51	5.2
	M12	12.0	1.75	71	7.2	84	8.6
			1.25	77	7.9	92	9.4
	M14	14.0	1.5	127	13.0	147	15.0
9T	M6	6.0	1.0	12	1.2	15	1.5
	M8	8.0	1.25	29	3.0	35	3.6
			1.0	31	3.2	37	3.8
	M10	10.0	1.5	59	6.0	70	7.1
			1.25	62	6.3	74	7.5
	M12	12.0	1.75	98	10.0	118	12.0
			1.25	108	11.0	137	14.0
	M14	14.0	1.5	177	18.0	206	21.0

CAUTION:

- **Special parts are excluded.**
- **Above standards can be applied on the bolts which has following marks on the bolt head.**
  Grade Mark
  4T..... 4 or no mark
  7T..... 7
  9T..... 9

Description

- CONSULT-II is a hand-held type tester. When it is connected with a diagnostic connector equipped on the vehicle side, it will communicate with the control unit equipped in the vehicle and then enable various kinds of diagnostic tests.
- Refer to “CONSULT-II Software Operation Manual” for more information.

Function and System Application

Diagnostic test mode	Function	ENGINE (1.5L)	ENGINE (1.6L)	A/T	AIRBAG/PRT (R)	ABS	CLUSTER
Work support	This mode enables a technician to adjust some devices faster and more accurately by following the indications on CONSULT-II.	-	X	X	X	-	-
Self-diagnostic results	Self-diagnostic results can be read and erased quickly.	X	X	X	X	X	X
Data monitor	Input/Output data in the ECU can be read.	X	X	X	X	X	X
Active test	Diagnostic Test Mode in which CONSULT-II drives some actuators apart from the ECUs and also shifts some parameters in a specified range.	X	X	-	-	X	X
DTC work support	The operating condition to confirm Diagnosis Trouble Codes can be selected.	-	-	X	-	-	-
ECU (ECM/TCM) part number	ECU (ECM/TCM) part number can be read.	X	X	X	X	X	X
Function test	This mode can show results of self-diagnosis of ECU with either “OK” or “NG”. For engines, more practical tests regarding sensors/switches and/or actuators are available.	-	X	X	-	X	-
CAN diagnosis support monitor	The condition of CAN communication line can be indicated.	X	X	X	-	-	X
Configuration	Function to READ/WRITE/NATS SETTING vehicle configuration on combination meter	-	-	-	-	-	X

X: Applicable

Nickel Metal Hydride Battery Replacement

CONSULT-II contains a nickel metal hydride battery. When replacing the battery obey the following:

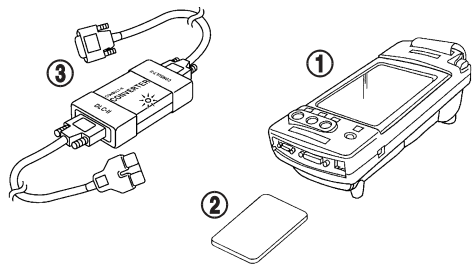
WARNING:

Replace the nickel metal hydride battery with Genuine CONSULT-II battery only. Use of another battery may present a risk of fire or explosion. The battery may present a fire or chemical burn hazard if mistreated. Do not recharge, disassemble or dispose of in fire.

Keep the battery out of reach of children and discard used battery conforming to the local regulations.

Checking Equipment

When ordering the following equipment, contact your NISSAN/INFINITI distributor.

Tool name	Description
NISSAN CONSULT-II 1. CONSULT-II unit (Tester internal soft: Resident version 3.3.0) and accessories 2. Program card AED06A and AEN06A (For NATS) 3. CONSULT-II CONVERTER	 SAIA0362E

CAUTION:

- **Previous CONSULT-II "I" and "Y" DLC-I and DLC-II cables should NOT be used anymore because their DDL connector pins can be damaged during cable swapping.**
- **If CONSULT-II is used with no connection of CONSULT-II CONVERTER, malfunctions might be detected in self-diagnosis depending on control unit which carry out CAN communication.**
- **If CONSULT-II CONVERTER is not connected with CONSULT-II, vehicle occur the "FAIL SAFE MODE" which is "LIGHT UP the HEAD LIGHT" and/or "COOLING FAN ROTATING" when CONSULT-II is started.**

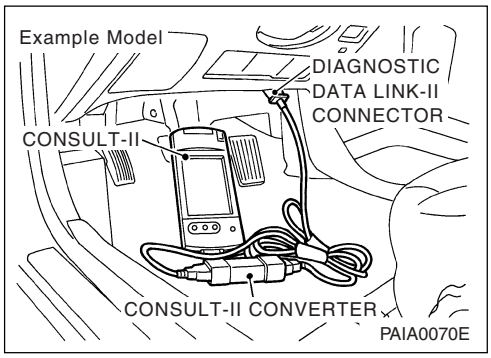
NOTE:

- The CONSULT-II must be used in conjunction with a program card.
  CONSULT-II does not require loading (Initialization) procedure.
- Be sure the CONSULT-II is turned off before installing or removing a program card.

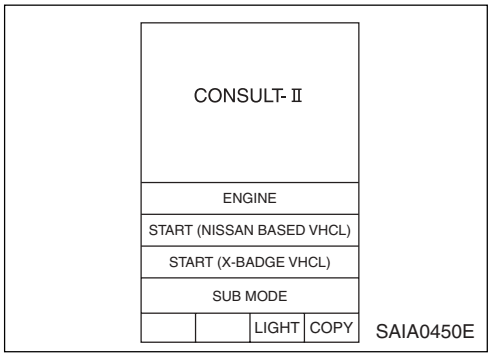
CONSULT-II Start Procedure

NOTE:

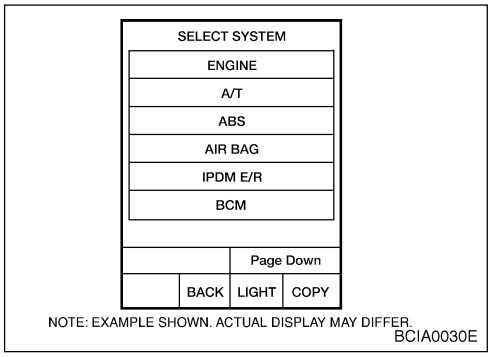
Turning ignition switch off when performing CAN diagnosis could cause CAN memory to be erased.



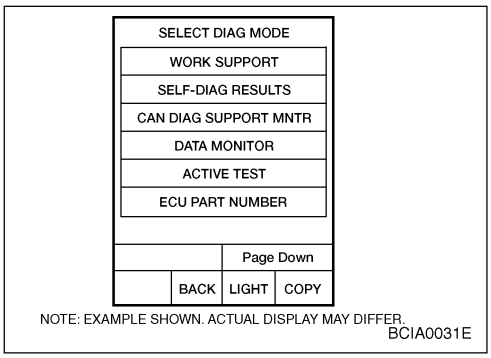
1. Connect CONSULT-II and CONSULT-II CONVERTER to the data link connector.



2. If necessary, turn on the ignition switch.
3. Touch "START (X-BADGE VHCL)" or System Shortcut key (eg: ENGINE) on the screen.



4. Touch necessary system on "SELECT SYSTEM" screen. If necessary system is not indicated, check power supply and ground of system control unit. If it is normal, refer to GI-37, "CONSULT-II Data Link Connector (DLC) Circuit".



5. Select the desired part to be diagnosed on the “SELECT DIAG MODE” screen.

CONSULT-II Data Link Connector (DLC) Circuit

INSPECTION PROCEDURE

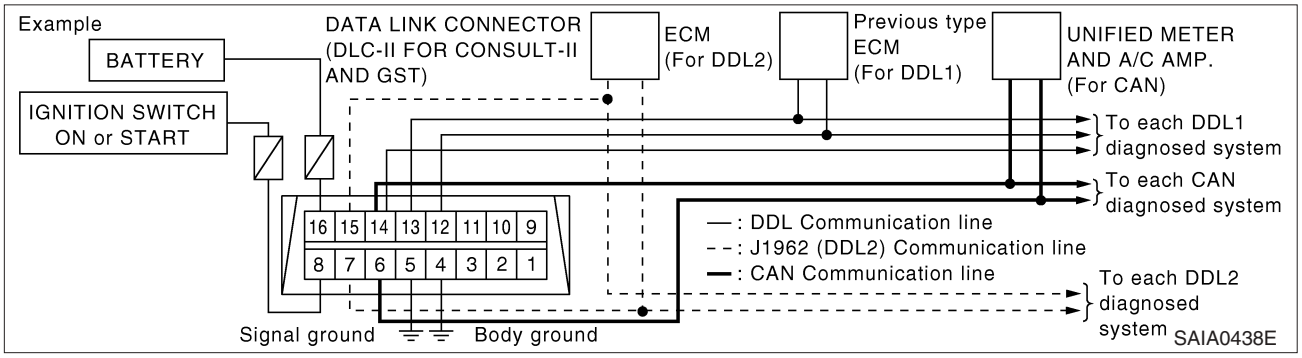
If the CONSULT-II cannot diagnose the system properly, check the following items.

Symptom	Check item
CONSULT-II cannot access any system.	● CONSULT-II DLC power supply circuit (Terminal 8) and ground circuit (Terminal 4) For detailed circuit, refer to “MIL AND DATA LINK CONNECTOR” (QG16: EC-312). ● CONSULT-II DLC cable and CONSULT-II CONVERTER
CONSULT-II cannot access individual system. (Other systems can be accessed.)	● CONSULT-II program card (Check the appropriate CONSULT-II program card for the system). Refer to “Checking Equipment” (GI-35). ● Power supply and ground circuit for the control unit of the system (For detailed circuit, refer to wiring diagram for each system.) ● Open or short circuit between the system and CONSULT-II DLC (For detailed circuit, refer to wiring diagram for each system.) ● Open or short circuit CAN communication line. Refer to LAN section.

NOTE:

The DDL1 and DDL2 circuits from DLC pins 12, 13, 14 and 15 may be connected to more than one system. A short in a DDL circuit connected to a control unit in one system may affect CONSULT-II access to other systems.

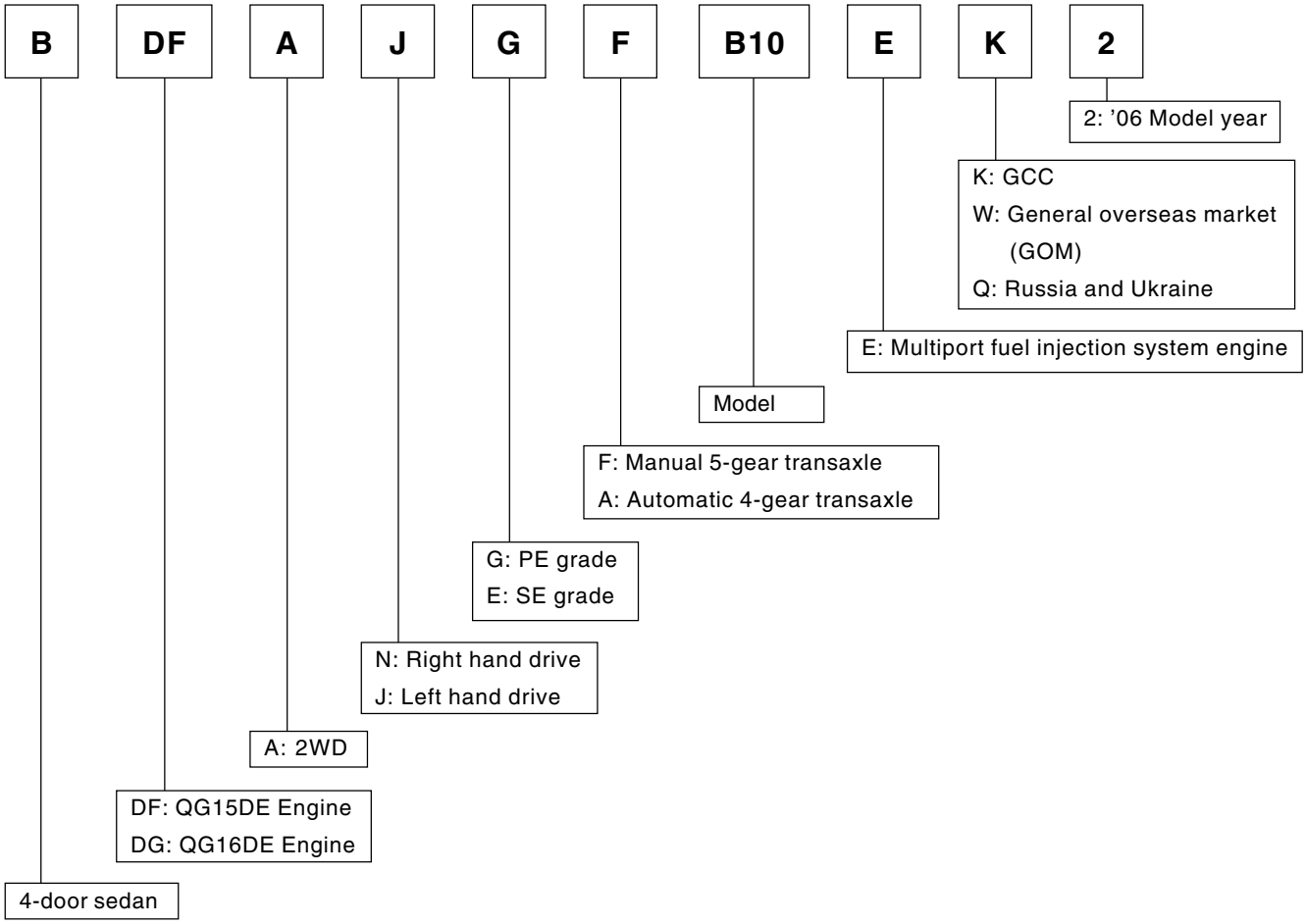
CIRCUIT DIAGRAM



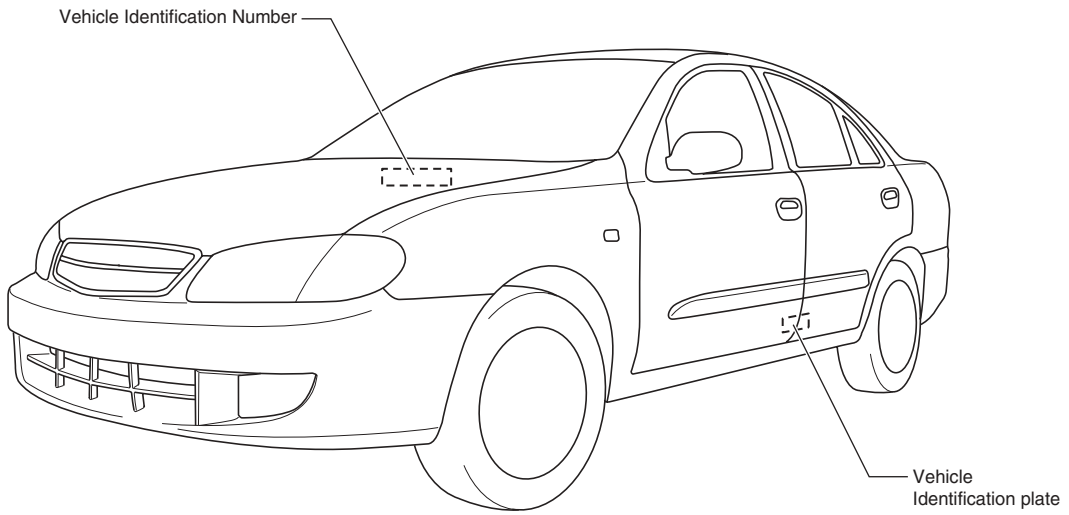
Vehicle Model

Body	Destination	Axle type	Engine	Handle	Grade	Transaxle	Model	Model year
4-door sedan	GCC	2WD	QG16DE	LH	PE	5MT	BDGAJGF-EK2	'06
						4AT	BDGAJGA-EK2	
					SE	5MT	BDGAJEF-EK2	
						4AT	BDGAJEA-EK2	
	Nigeria and Ghana	2WD	QG15DE	LH	PE	5MT	BDFAJGF-EW2	
					SE	5MT	BDFAJEF-EW2	
						4AT	BDFAJEA-EW2	
	Except GCC, Nigeria and Ghana	2WD	QG16DE	RH	PE	5MT	BDGANGF-EW2	
						4AT	BDGANGA-EW2	
					SE	5MT	BDGANEF-EW2	
						4AT	BDGANEA-EW2	
				LH	PE	5MT	BDGAJGF-EW2	
						4AT	BDGAJGA-EW2	
					SE	5MT	BDGAJEF-EW2	
						4AT	BDGAJEA-EW2	
	Russia and Ukraine	2WD	QG16DE	LH	PE	5MT	BDGAJGF-EQ2	
						4AT	BDGAJGA-EQ2	
					SE	5MT	BDGAJEF-EQ2	
						4AT	BDGAJEA-EQ2	

Description for Vehicle Model Name



Vehicle Identification Number



SGI207A

VEHICLE IDENTIFICATION NUMBER (FOR RUSSIA AND UKRAINE)

K	N	M	C	S	H	L	M	S	6	P	OOOOOO
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫

① Country of origin: K → Korea
② Make: N → RENAULT SAMSUNG MOTORS CO., LTD.
③ Vehicle type: M → Passenger car
④ Line & models: C → B10 left hand drive models
⑤ Body type: S → Sedan
⑥ Engine capacity: H → 1600 cc, In-line 4 cylinders
⑦ Steering wheel position: L → Left hand drive
⑧ Transmission type: A → 4AT
M → 5MT
⑨ Check digit: S → Check digit for Europe
⑩ Model year: 6 → 2006
7 → 2007
⑪ Assembly plant: P → Pusan
⑫ Vehicle serial number: 000001 - 999999

VEHICLE IDENTIFICATION NUMBER (EXCEPT FOR RUSSIA AND UKRAINE)

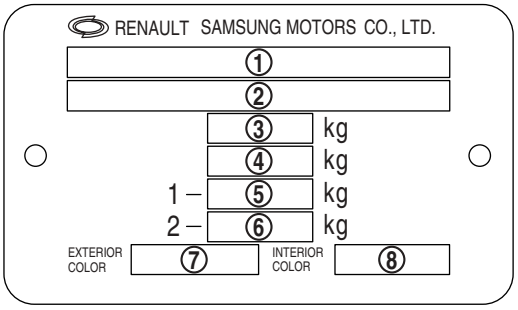
K	N	M	C	C	4	2	H	★	6	P	OOOOOO
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫

① Country of origin: K → Korea
② Make: N → RENAULT SAMSUNG MOTORS CO., LTD.
③ Vehicle type: M → Passenger car
④ Line & models: C → B10 left hand drive models
D → B10 right hand drive models
⑤ The number of door: C → 4 doors for GCC
4 → 4 doors except for GCC
⑥ The number of passenger/
Engine capacity: 4 → 5 passengers for GCC
B → Small (From 800 to 1500 cc): QG15DE engine models except for GCC
C → Medium (From 1500 to 2000 cc): QG16DE engine models except for GCC
⑦ Restraint system: 2 → 3-point seatbelt with airbag
⑧ Engine type: G → 1500 cc, In-line 4 cylinders (Gasoline)
H → 1600 cc, In-line 4 cylinders (Gasoline)
⑨ Check digit: Depending on calculated value for GCC
P → Pilot production except for GCC
M → Mass production except for GCC
⑩ Model year: 6 → 2006
7 → 2007
⑪ Assembly plant: P → Pusan
⑫ Vehicle serial number: 000001 - 999999

Vehicle Identification Number (Cont'd)

Label-Certification

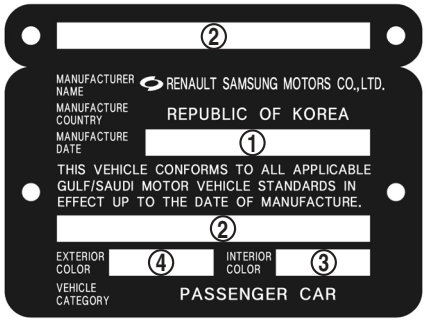
FOR RUSSIA AND UKRAINE



SGI208A

① Vehicle type approval number
② Vehicle identification number
③ Maximum permitted laden mass of the vehicle
④ Maximum permitted laden mass for the combination
⑤ Maximum permitted mass for front axle
⑥ Maximum permitted mass for rear axle
⑦ Exterior color code.
⑧ Interior color code.

FOR GCC

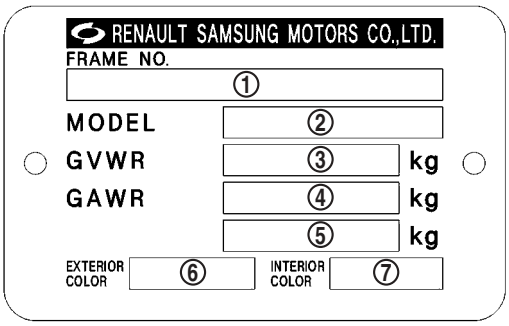


SGI209A

① Manufacture date (year, month)
② Vehicle identification number
③ Exterior color code.
④ Interior color code.

Vehicle Identification Number (Cont'd)

EXCEPT FOR GCC, RUSSIA AND UKRAINE



SGI210A

① Frame No.
② Model
③ GVWR (gross vehicle weight rating)
④ GAWR (gross axle weight rating, front)
⑤ GAWR (gross axle weight rating, rear)
⑥ Exterior color code.
⑦ Interior color code.

Location

The identification plate is ribetted at driver side B pillar