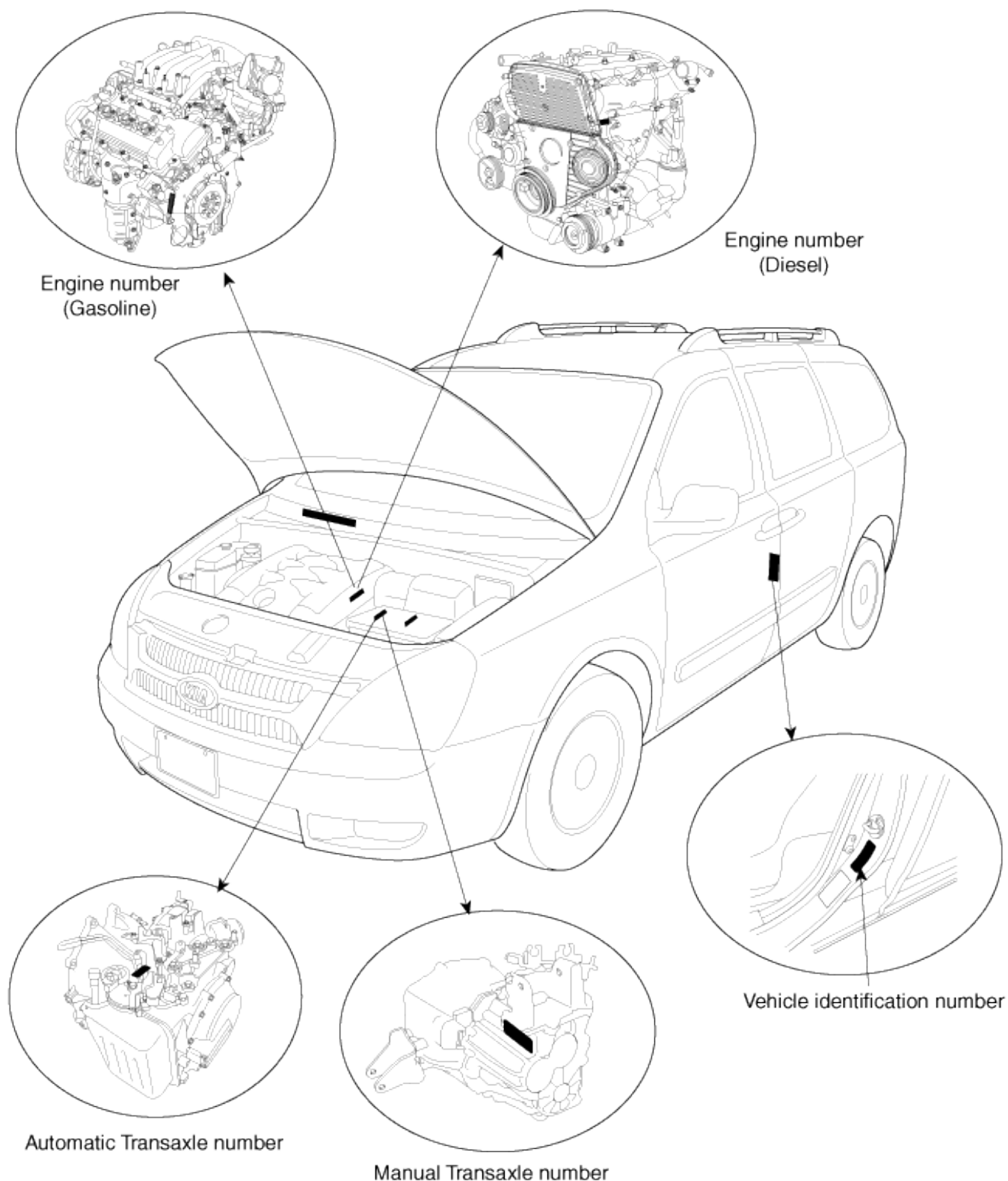
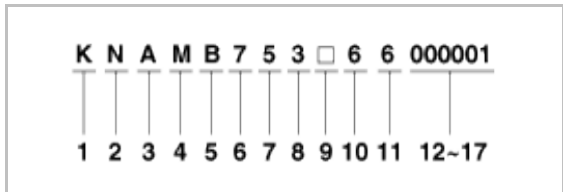




General Information

General Information

IDENTIFICATION NUMBER LOCATIONS**IDENTIFICATION NUMBER DESCRIPTION****VEHICLE IDENTIFICATION NUMBER**



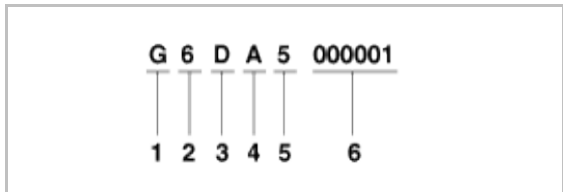
- 1 : Geographic zone
 - K = Korea
- 2 : Manufacturer
 - N = Kia motor company
- 3 : Vehicle type
 - A = Passenger car
- 4 - 5 : Vehicle Line/Series
 - MB = VQ
 - MC = EP
- 6 - 7: Body type
 - 75 = Coach & GVW 2271 ~ 2720 kg
 - 76 = Long coach & GVW 2271 ~ 2720 kg
- 8 : Engine type
 - 1 = J2.9 Diesel
 - 2 = μ 2.7
 - 3 = λ3.8 Gasoline
- 9 : Transmission type
 - 2 : Manual
 - 5 : Automatic
- 10 : Model year
 - 5 = 2005, 6 = 2006, 7 = 2007
- 11 : Plant location
 - 6 = Soha plant
- 12 - 17 : Production sequential number
 - 000001 ~ 999999

PAINT CODE

CODE	COLOR
UD	CLEAR WHITH
6C	CLEAR SILVER
K5	VELVET INDIGO
7P	CHERRY KISS COC
K9	CRISTAL BLUE
U4	GOLD (B/ST)
J9	EVENING SAILING
7V	OLIVE GRAY
9B	MIDNIGHT BLACK

ENGINE IDENTIFICATION NUMBER

GASOLINE



- 1. Engine fuel
 - G : Gasoline
- 2. Engine range

- 4 : 4 cycle 4 cylinder
- 6 : 4 cycle 6 cylinder
- 3. Engine development order
 - D : Lambda engine
- 4. Engine capacity
 - A : 3778 cc (λ -engine)
 - E : 2656 cc (μ -engine)
- 5. Production year
 - 5 : 2005, 6 : 2006
- 6. Engine production sequence number
 - 000001 ~ 999999

DIESEL

J	3	D	000001
1	2	3	4

- 1 - 2. Engine type
 - J3 : J-Engine 2.9L
3. Check digit
4. Engine production sequence number
 - 000001 ~ 999999

TRANSMISSION IDENTIFICATION NUMBER

AUTOMATIC

U	5	K	BD	□	000001
1	2	3	4	5	6

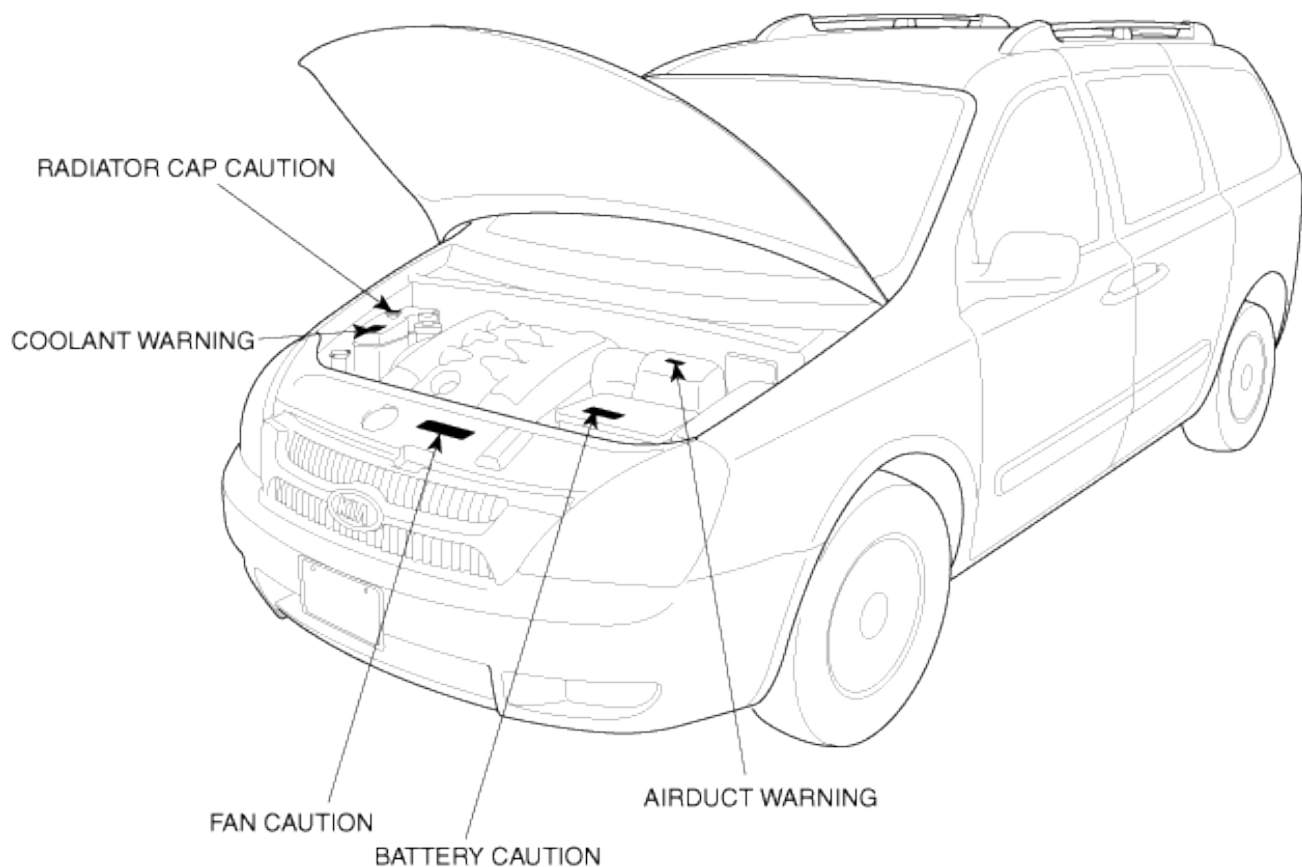
1. Modle
 - U : A5HF1
2. Production year
 - 5 : 2005, 6 : 2006, 7 : 2007
3. Gear ratio
 - K : 3.333
4. Detailed chassification
 - FD : 3.8D
5. Spare
6. Transaxle production sequence number
 - 000001 ~ 999999

MANUAL

Y	0507	000001
1	2	3

1. Model
 - Y : M5HF2
2. Production year
 - 5 : 2005, 6 : 2006, 7 : 2007
3. Transaxle production sequence number

WARNING / CAUTION LABEL LOCATIONS



ATTENTION

SRS VEHICLE

THIS CAR IS EQUIPPED WITH A SUPPLEMENTAL RESTRAINT SYSTEM. TO PROVIDE CONTINUED RELIABILITY, CERTAIN ELEMENTS OF THE SUPPLEMENTAL RESTRAINT SYSTEM SHALL BE SERVICED OR REPLACED BY AUTHORIZED DEALER TEN YEARS AFTER VEHICLE LABEL. FOR FURTHER INFORMATION, SEE OWNER'S MANUAL.

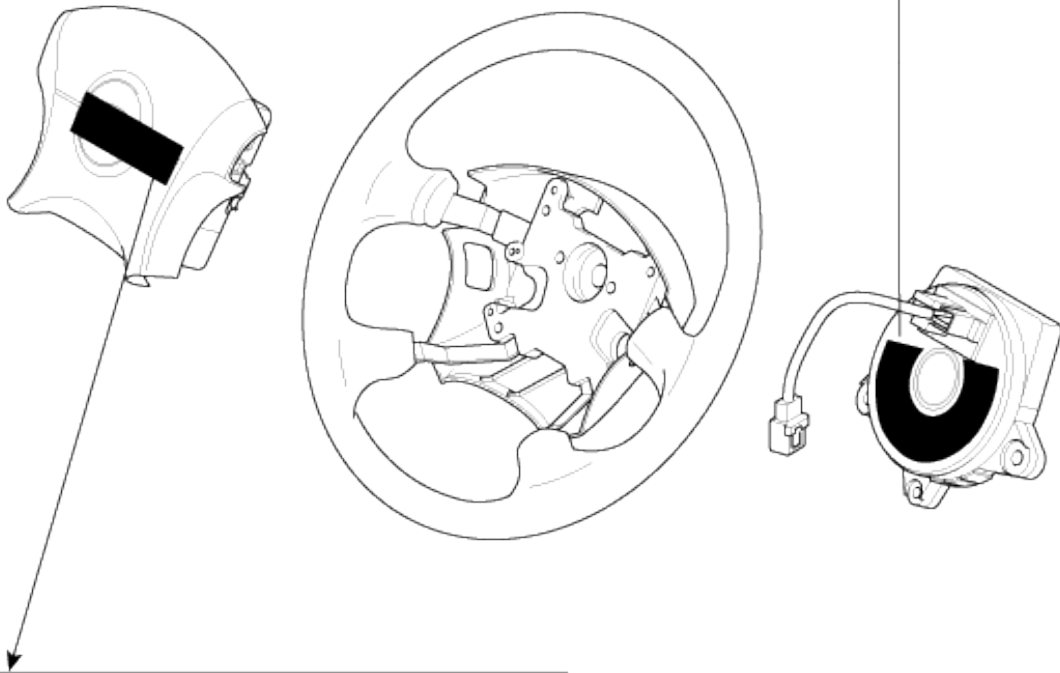
SIDE AIR BAG

THIS CAR IS EQUIPPED WITH A SIDE AIRBAG SYSTEM. TO PROVIDE CONTINUED RELIABILITY, CERTAIN ELEMENTS OF THE SIDE AIRBAG SYSTEM SHALL BE SERVICED OR REPLACED BY AUTHORIZED DEALER TEN YEARS AFTER VEHICLE MANUFACTURE DATE SHOWN ON CERTIFICATION LABEL. FOR FURTHER INFORMATION, SEE OWNER'S MANUAL.

AIR BAG WARNING / CAUTION LABEL

CAUTION

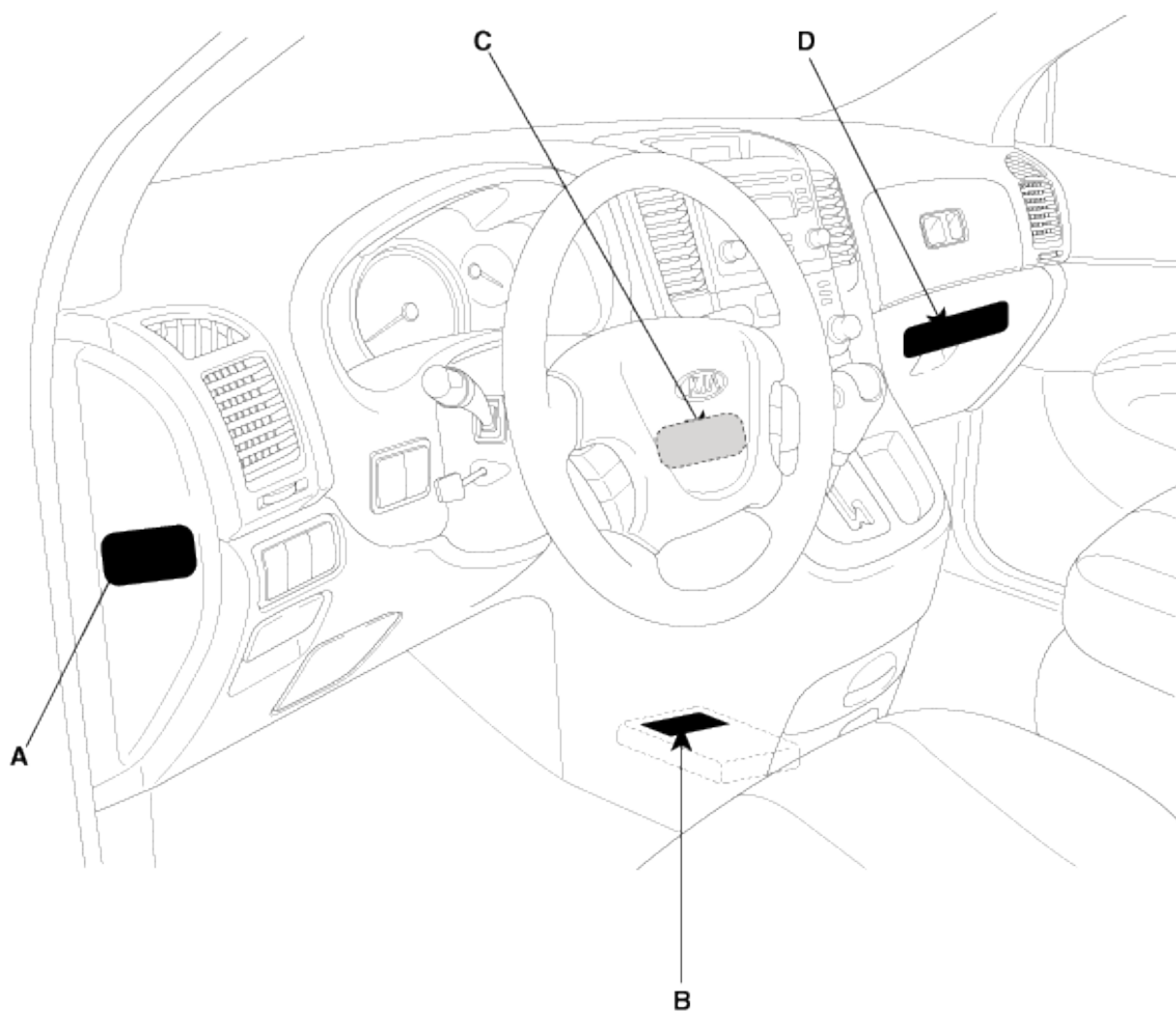
AIR BAG : Handling is limited to trained personnel.
To be used only in prescribed vehicles. If not properly installed, device may become a dangerous projectile.
See service manual instruction

**DRIVE AIR BAG (DAB) CAUTION****Caution**

Don't open, remove or transfer to another vehicle. Risk of malfunction and bodily injury!

This unit is to be installed and/or dismantled by trained personnel only. This item contains an explosive device.

AIR BAG WARNING / CAUTION LABEL (CONT'D)



WARNING / CAUTION LABEL (cont'd)

A : WARNING
SEE OWNER'S MANUAL.

This car is equipped a side airbag for each front seat.

- Do not use any accessory seat covers.
- Use of other seat covers could reduce the effect of the system.
- Do not install any accessories on the side or near the side airbag.
- Do not use excessive force on the side of the seat.
- For further information, see the owner's manual.

B : CAUTION
AIR BAG ESPE UNIT

Detach connector before unmounting. Assemble strictly according to manual instructions.

C : PASSENGER MODULE CAUTION

CAUTION

Don't open, remove or transfer to another vehicle. Risk of malfunction and bodily injury!

This unit is to be installed and/or dismantled by trained personnel only. This item contains an explosive device.

D : SUPPLEMENTAL RESTRAINT SYSTEM (AIR BAG) INFORMATION

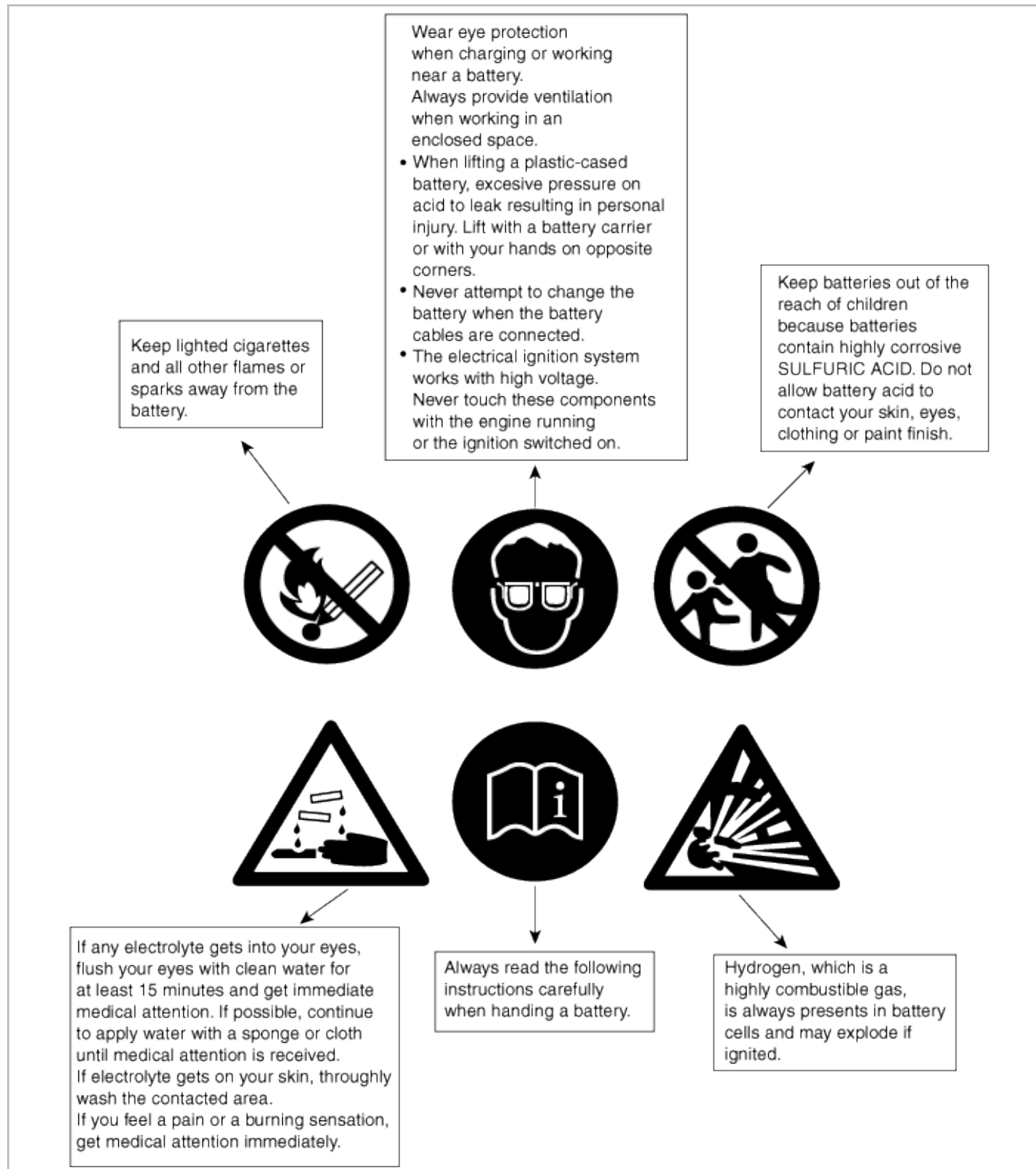
- The air bag is a Supplement Restraint System (SRS).
You must always wear the seat belts.
- The airbag system condition is normal when the "SRS" lamp in the cluster illuminates for approximately 6 seconds after the ignition key is turned on and then goes off.
- If any of the following condition occur, the system must be serviced.
 - "SRS" lamp does not light up when the key is turned on.
 - "SRS" lamp stays lit or flashes continuously.
 - The air bag has inflated.
- The air bag system must be inspected by an authorized dealer ten years after the vehicle manufacture date shown on the certification label, located on left front door opening area.

WARNING

Failure to the above instructions may result in injury to you or other occupants in the vehicle

- See the "SRS" section in Owner's Manual for more information about airbags.

BATTERY CAUTION LABEL DESCRIPTION



HANDLING AND STORAGE THE BATTERY

Battery Itself	• Batteries should be stored in cool, dry (27 degrees Celsius) places and out of direct sunlight. • MF batteries are tightly sealed to prevent acid leakage. However, tilting the battery to an angle of 45 degrees can cause acid to leak through the vents on the sides. Therefore, batteries should always be stored in their upright positions. Prevent placing any aqueous or solid (i.e. conductors) bodies on top of the battery. • It is extremely dangerous to use tools, such as hammers, on the battery terminals when connecting cables to the mounted battery.
Battery on Vehicle	• When storing the vehicle for long periods of time, make sure to remove the

memory fuse at junction box to prevent natural discharging.

- Also, run the engine for battery charging within 1 month if the memory fuse wasn't removed from the start of vehicle storing.
If the memory fuse was removed, run the engine for battery charging within 3 months from the start of vehicle storing.

LIFT AND SUPPORT POINTS

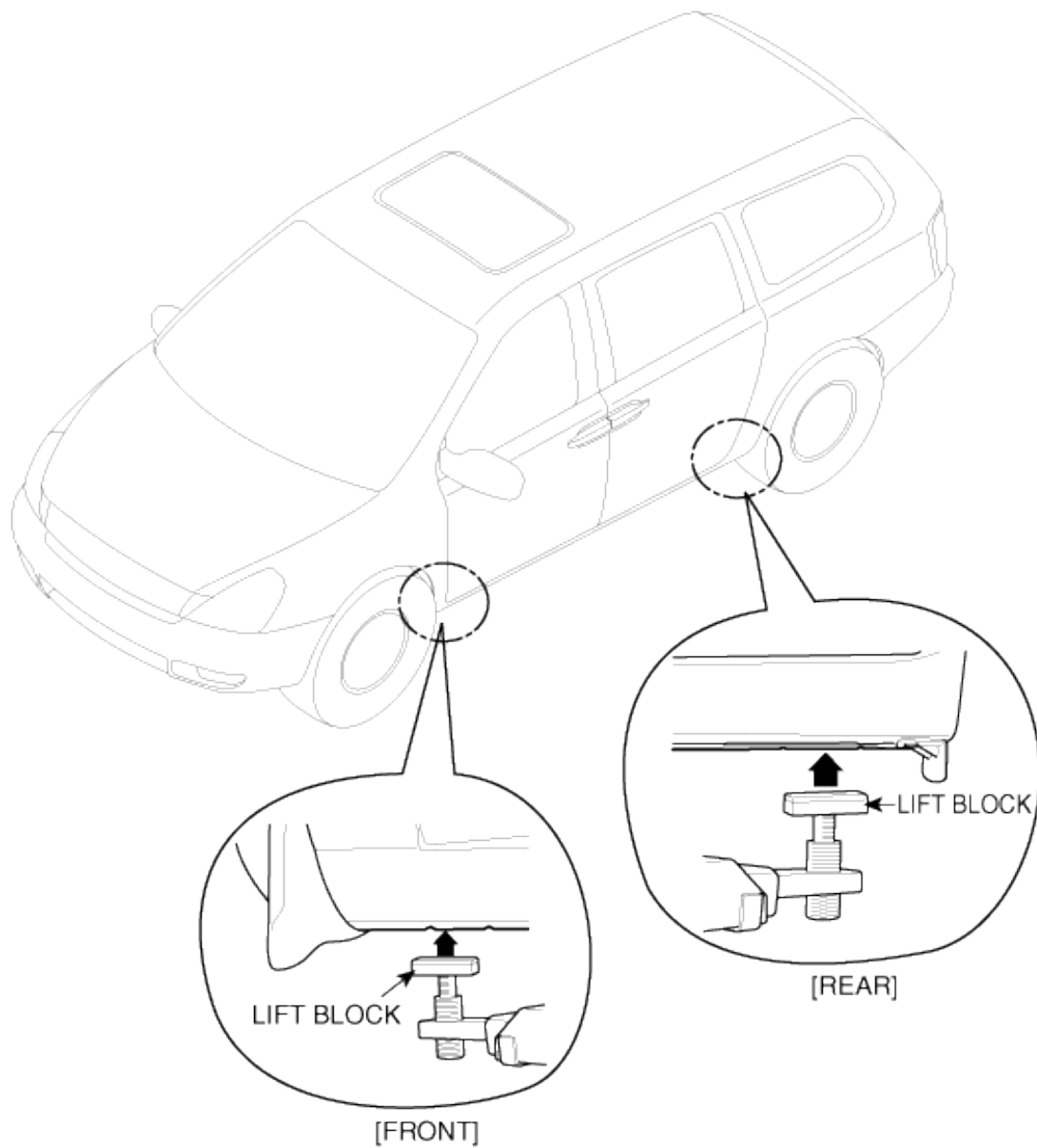
WARNING

When heavy rear components such as suspension, fuel tank, spare tire, tailgate and trunk lid are to be removed, place additional weight in the luggage area before hoisting. When substantial weight is removed from the rear of the vehicle, the center of gravity may change and can cause the vehicle to tip forward on the hoist.

NOTICE

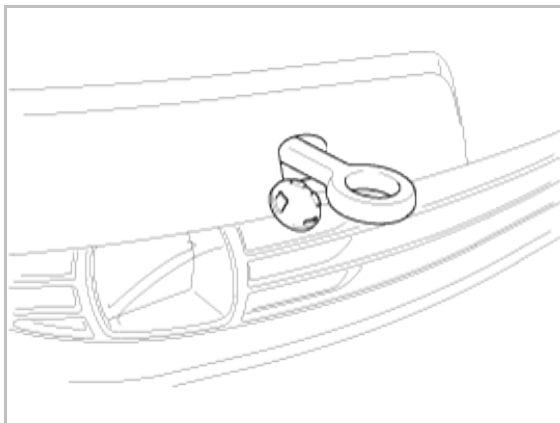
- Since each tire/wheel assembly weights approximately 30lbs (14kg), placing the front wheels in the luggage area can assist with the weight distribution.
- Use the same support points to support the vehicle on safety stands.

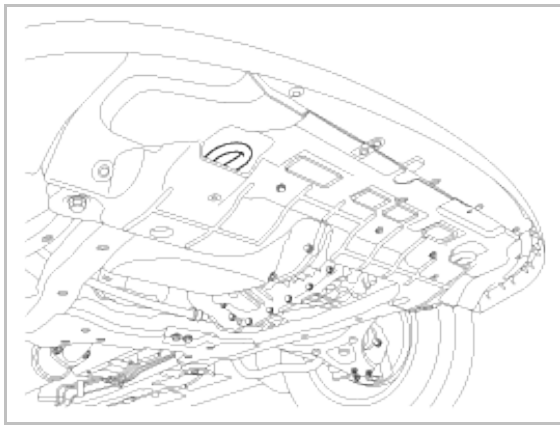
1. Place the lift blocks under the support points as shown in the illustration.
2. Raise the hoist a few inches (centimeters) and rock the vehicle to be sure it is firmly supported.
3. Raise the hoist to full height to inspect the lift points for secure support.



TOWING

If the vehicle needs to be towed, call a professional towing service. Never tow vehicle with just a rope or chain. It is very dangerous.





Emergency Towing

There are three popular methods of towing a vehicle :

- The operator loads the vehicle on the back of truck. This is best way of transporting the vehicle.
- The tow truck uses two pivoting arms that go under the tires (front or rear) and lift them off the ground. The other two wheels remain on the ground.
- The tow truck uses metal cables with hooks on the ends. These hooks go around parts of the frame or suspension, and the cables lift that end of the vehicle off the ground. The vehicle's suspension and body can be seriously damaged if this method of towing is attempted.

If the vehicle cannot be transported by flat-bed, it should be towed with the front wheels off the ground. If due to damage, the vehicle must be towed with the front wheels on the ground, do the following :

Manual Transmission

- Release the parking brake.
- Shift the transmission to neutral

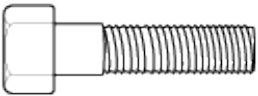
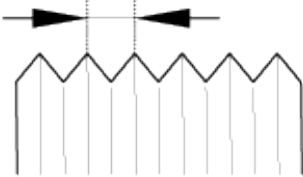
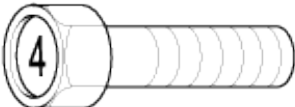
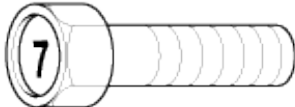
Automatic Transmission

- Release the parking brake.
- Start the engine.
- Shift to [D] position, then [N] position.
- Turn off the engine.

CAUTION

- Improper towing preparation will damage the transmission. Follow the above procedure exactly. If you cannot shift the transmission or start the engine(automatic transmission), your vehicle must be transported on a flatbed.
- It is the best to tow vehicle no farther than 19miles (30km), and keep the speed below 30mph (50km/h).
- Trying to lift or tow your vehicle by the bumpers will cause serious damage. The bumpers are not designed to support the vehicle's weight.

TIGHTENING TORQUE TABLE OF STANDARD PARTS

Bolt nominal diameter (mm)	Pitch (mm)	Torque Nm (kg.cm, lb.ft)	
		Head Mark 4	Head Mark 7
			
M5	0.8	3 ~ 4 (30 ~ 40, 2.2 ~ 2.9)	5 ~ 6 (50 ~ 60, 3.6 ~ 4.3)
M6	1.0	5 ~ 6 (50 ~ 50, 3.6 ~ 4.3)	9 ~ 11 (90 ~ 110, 6.5 ~ 8.0)

M8	1.25	12 ~ 15 (120 ~ 150, 9 ~ 11)	20 ~ 25 (200 ~ 250, 14.5 ~ 18.0)
M10	1.25	25 ~ 30 (250 ~ 300, 18 ~ 22)	30 ~ 50 (300 ~ 500, 22 ~ 36)
M12	1.25	35 ~ 45 (350 ~ 450, 25 ~ 33)	60 ~ 80 (600 ~ 800, 43 ~ 58)
M14	1.5	75 ~ 85 (750 ~ 850, 54 ~ 61)	120 ~ 140 (1,200 ~ 1,400, 85 ~ 100)
M16	1.5	110 ~ 130 (1,100 ~ 1,300, 80 ~ 94)	180 ~ 210 (1,800 ~ 2,100, 130 ~ 150)
M18	1.5	160 ~ 180 (1,600 ~ 1,800, 116 ~ 130)	260 ~ 300 (2,600 ~ 3,000, 190 ~ 215)
M20	1.5	220 ~ 250 (2,200 ~ 2,500, 160 ~ 180)	360 ~ 420 (3,600 ~ 4,200, 260 ~ 300)
M22	1.5	290 ~ 330 (2,900 ~ 3,300, 210 ~ 240)	480 ~ 550 (4,800 ~ 5,500, 350 ~ 400)
M24	1.5	360 ~ 420 (3,600 ~ 4,200, 260 ~ 300)	610 ~ 700 (6,100 ~ 7,000, 440 ~ 505)

NOTICE

- The torques shown in the table are standard values under the following conditions :
 - Nuts and bolts are made of galvanized steel bar.
 - Galvanized plain steel washers are inserted.
 - All nuts, bolts and plain washers are dry.
- The torques shown in the table are not applicable :
 - When spring washers, toothed washers and the like are inserted.
 - If plastic parts are fastened.
 - If self-tapping screws or self-locking nuts are used.
 - If threads and surfaces are coated with oil.
- Reduce the torque values to the indicated percentage of the standard value under the following conditions.
 - If spring washers are used : 85%
 - If threads and bearing surfaces are stained with oil : 85%

LUBRICANTS

RECOMMENDED LUBRICANTS

Parts		OIL & GREASE STANDARD	
Engine Oil	Gasoline	API SJ or SL	SAE 5W -20
		If 5W-20 engine oil is not available, 5W-30 or secondary recommended engine oil for corresponding temperature range can be used.	
	Diesel	API Classification CH-4 and above ACEA Classification B4 and above	
Transaxle	Auto	DIAMOND ATF SP-III, SK ATF SP-III	
	Manual	API Classification GL-4 (SAE 75W/85)	
Power Steering		PSF - 3	
Brake Steering		DOT 3 or equivalent	
Coolant		Ethylene glycol base for aluminium radiator	
Transaxle linkage, parking brake cable mechanism, hood, door latch, seat adjuster, tailgate latch, door hinges, tailgate		Multipurpose grease NIGL grade #2	

WARNING

Always use Genuine Kia parts and recommended fluid.
Using any other type of parts and fluid can cause serious damaged if the vehicle.

RECOMMENDED LUBRICANTS

LUBRICANTS CAPACITIES

Description		2.7	3.8	2.9
Engine oil	Oil pan	4.2 (4.44, 3.70)	5.5 (5.81, 4.84)	5.4 (5.70, 4.75)
	Oil filter	0.3 (0.32, 0.26)	0.4 (0.42, 0.35)	0.6 (0.63, 0.52)
	Total	4.5 (4.76, 0.26)	6.4 (6.76, 5.63)	6.0 (6.3, 5.2)
Cooling system		8.2~8.3 (8.66~8.77, 7.22~7.3)	8.6 (9.09, 7.57)	10 (10.56, 8.8)
Manual transaxle		1.85 (1.95, 1.62)	-	1.85 (1.95, 1.62)
Automatic transaxle		10.7 (11.3, 9.41)	10.9 (11.52, 9.59)	10.7 (11.3, 9.41)
Power steering		1.0 (1.06, 0.88)	1.0 (1.06, 0.88)	1.0 (1.05, 0.87)

Capacities : [liter (U.S.qus, Imp.qts)]

SELECTION OF ENGINE OIL (Gasoline-3.8)

RECOMMENDED ILSAC classification : GF-3 OR ABOVE

RECOMMENDED API classification : SL(SJ) OR ABOVE

RECOMMENDED SAE viscosity grades :

Temperature range
anticipated before
next oil change

Recommended SAE viscosity number

- 18°C - 0.4°F

10W

- 30

5W

- 20

- 30

NOTICE

For best performance and maximum protection of all types of operation, select only those lubricants which.

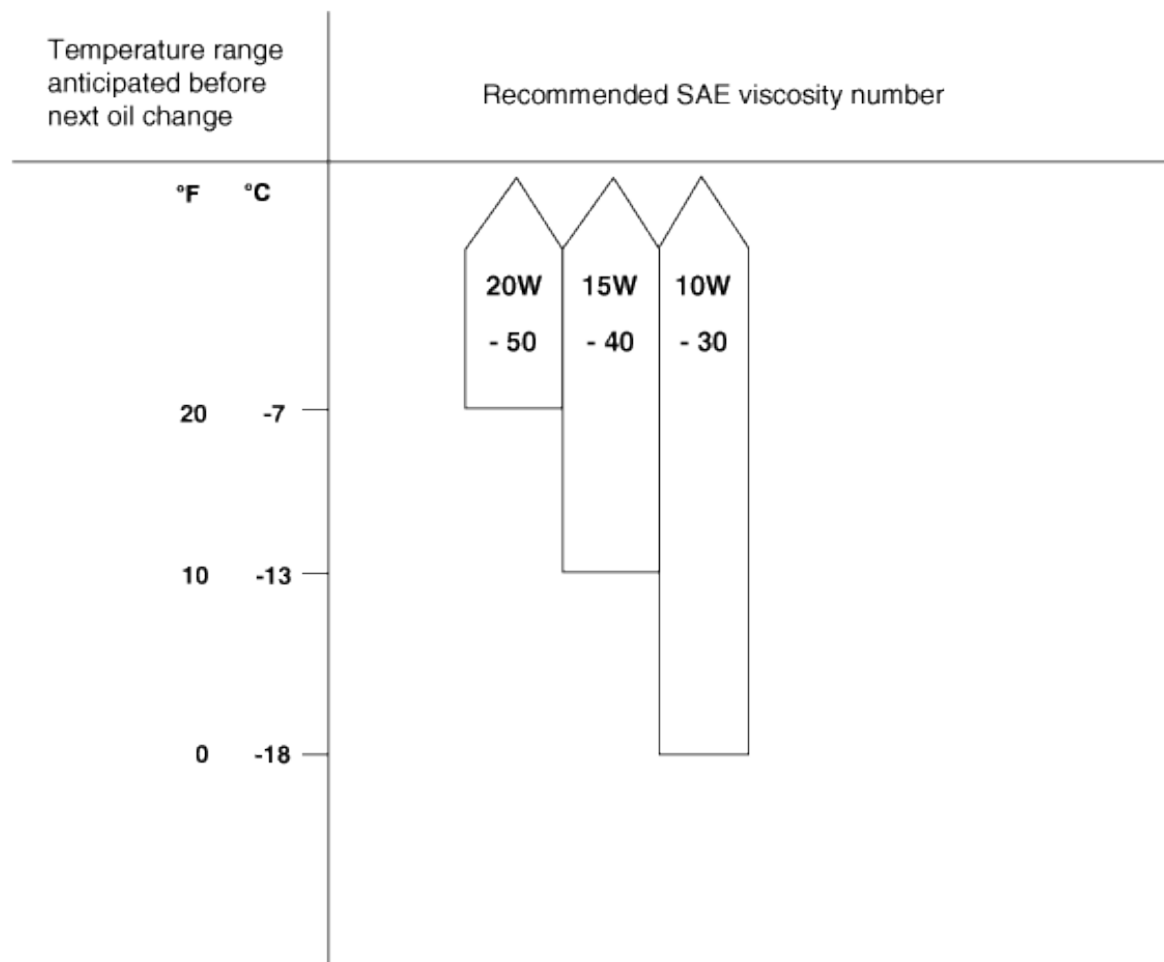
1. Satisfy the requirements of the API classification.
2. Have the proper SAE grade number for expected ambient temperature range.
3. Lubricants that do not have both an SAE grade number and API service classification on the container should not be used.

SELECTION OF ENGINE OIL (Gasoline-2.7)

RECOMMENDED ILSAC classification : GF-3 OR ABOVE

RECOMMENDED API classification : SL(SJ) OR ABOVE

RECOMMENDED SAE viscosity grades :



NOTICE

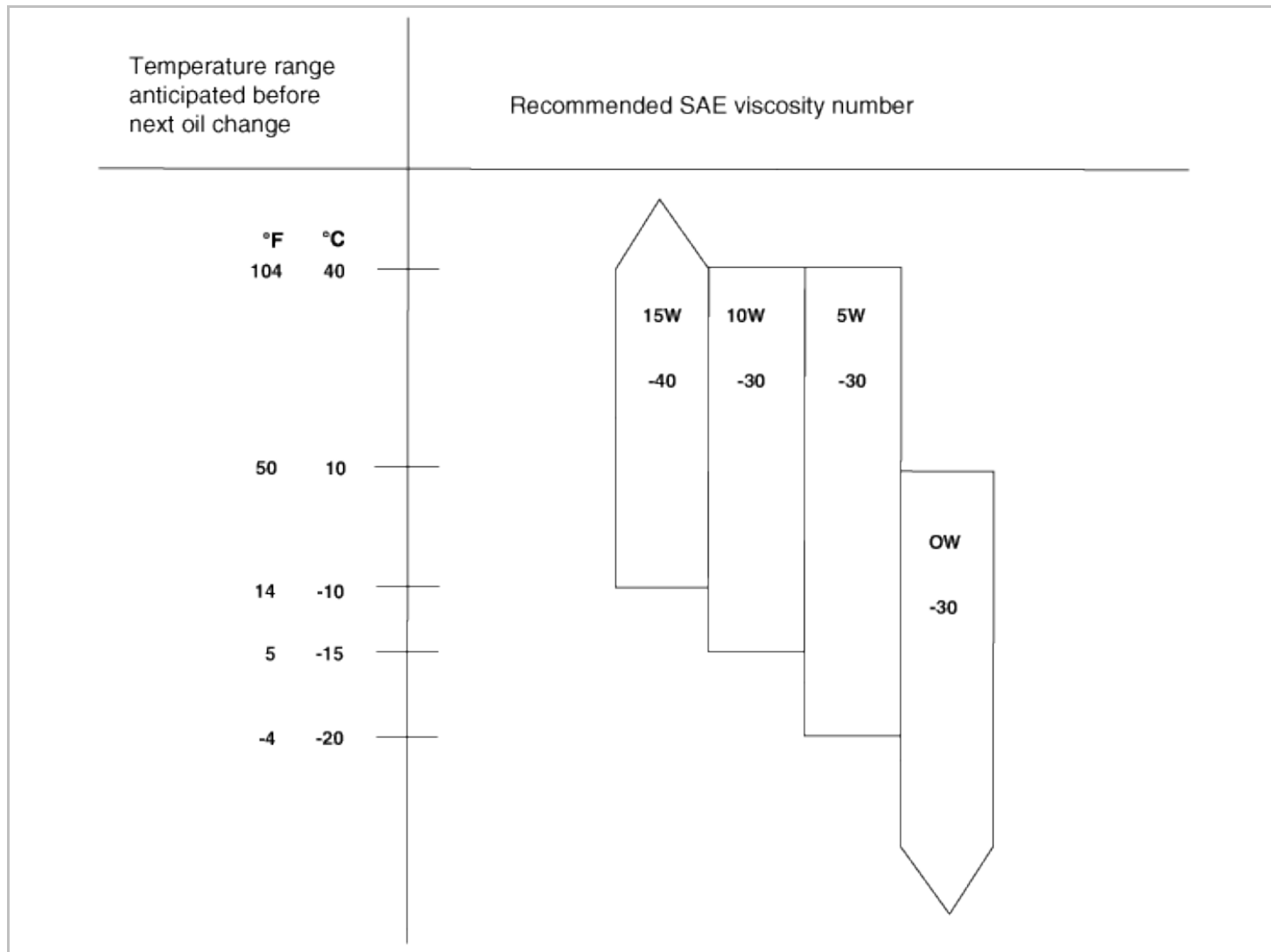
For best performance and maximum protection of all types of operation, select only those lubricants which.

1. Satisfy the requirements of the API classification.
2. Have the proper SAE grade number for expected ambient temperature range.
3. Lubricants that do not have both an SAE grade number and API service classification on the container should not be used.

SELECTION OF ENGINE OIL (Diesel)

RECOMMENDED API classification : CH-4 ABOVE

RECOMMENDED SAE viscosity grades :



NOTICE

For best performance and maximum protection of all types of operation, select only those lubricants which.

1. Satisfy the requirements of the API classification.
2. Have the proper SAE grade number for expected ambient temperature range.
3. Lubricants that do not have both an SAE grade number and API service classification on the container should not be used.

GENERAL SERVICE INFORMATION

PROTECTION OF THE VEHICLE

Always be sure to cover fenders, seats, and floor areas before starting work.

CAUTION

The support rod must be inserted into the hole near the edge of the hood whenever you inspect the engine compartment to prevent the hood from falling and causing possible injury.

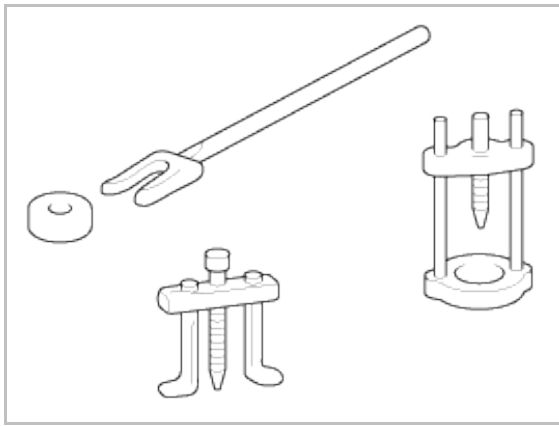
Make sure that the support rod has been released prior to closing the hood. Always check to be sure the hood is firmly latched before driving the vehicle.

PREPARATION OF TOOLS AND MESURING EQUIPMENT

Be sure that all necessary tools and measuring equipment are available starting work.

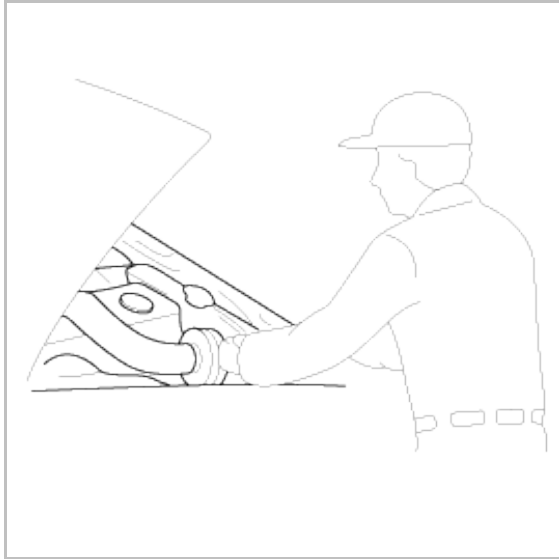
SPECIAL TOOLS

Use special tools when they are required.



REMOVAL OF PARTS

First find the cause of the problem and then determine whether removal or disassembly before starting the job.



DISASSEMBLY

If the disassembly procedure is complex, requiring many parts to be disassembled, all parts should be disassembled in a way that will not affect their performance or external appearance.

1. Inspection of parts

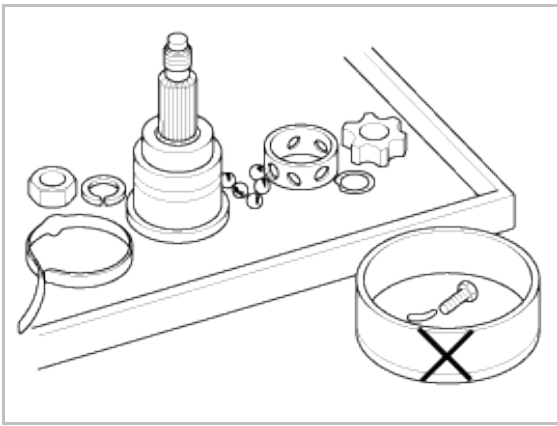
Each part, when removed, should be carefully inspected for malfunction, deformation, damage, and other problems.



2. Arrangement of parts

All disassembled parts should be carefully arranged for effective reassembly.

Be sure to separate and correctly identify the parts to be replaced from those that will be used again.



3. Cleaning parts for reuse

All parts to be used again should be carefully and thoroughly cleaned by an appropriate method.



PARTS

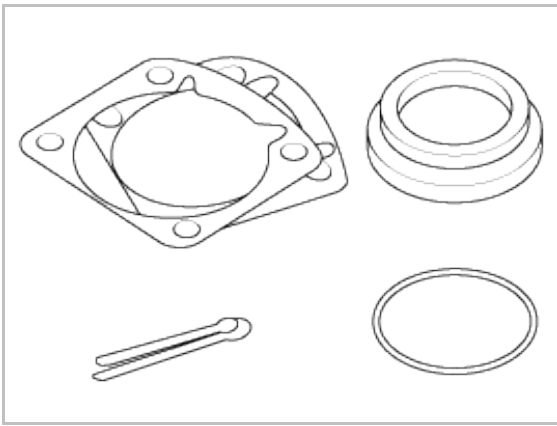
When replacing parts, use KIA MOTORS genuine parts.



REPLACEMENT

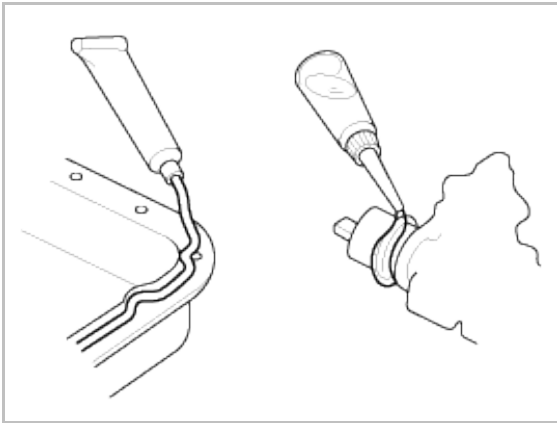
Standard values, such as torques and certain adjustments, must be strictly observed in the reassembly of all parts. If removed, the following parts should always be replaced with new ones.

1. Oil seals
2. Gaskets
3. O-rings
4. Lock washers
5. Cotter pins (split pins)
6. Plastic nuts



Depending on their location.

7. Sealant should be applied to gaskets.
8. Oil should be applied to the moving components of parts.
9. Specified oil or grease should be applied to the prescribed locations (oil seals, etc) before assembly.

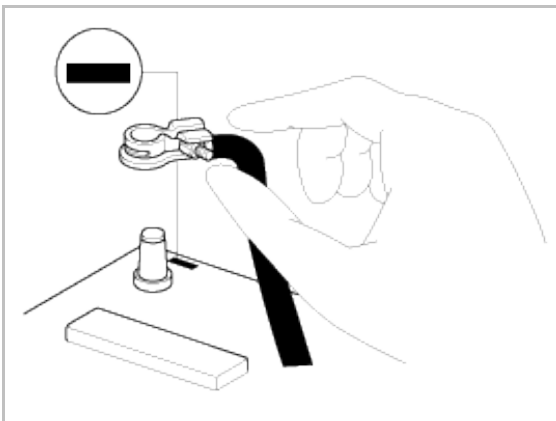


ADJUSTMENT

Use gauges and testers to adjust correctly the parts to standard values correctly.

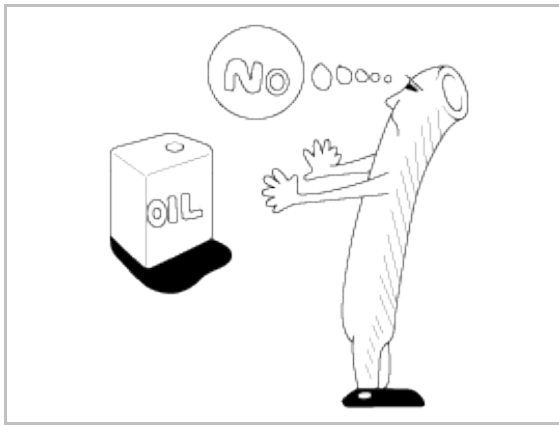
ELECTRICAL SYSTEM

1. Be sure to disconnect the battery cable from the negative (-) terminal of the battery.
2. Never pull on the wires when disconnecting connectors.
3. Locking connectors will click when the connector is secure.
4. Handle sensors and relays carefully. Be careful not to drop them against other parts.



RUBER PARTS AND TUBES

Always prevent gasoline or from touching rubber parts or tubing.

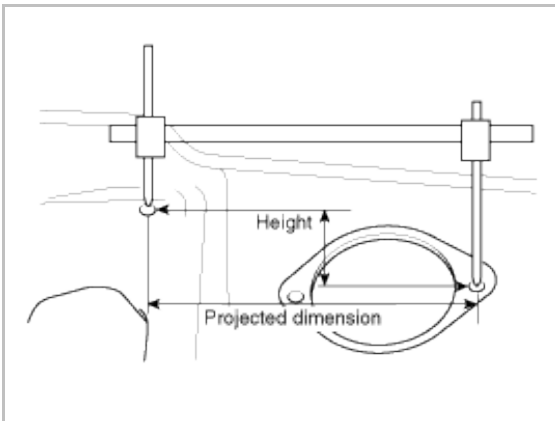


MEASURING BODY DIMENSIONGS

1. Basically, all measurements in this manual are taken with a tracking gauge.
2. When a measuring tape is used, check to be sure there is no elongation, twisting or bending.
3. For measuring dimensions, both projected dimensioners and actual - measurement dimensions are used in this manual.

DIMENSIONS PROJECTED

1. These are the dimensions measured when the measurement points are projected from the vehicle's surface, and are the reference dimensions used for used for body alterations.
2. If the length of the tracking gauge probes is adjustable, measure it by lengthening one of two probes as long as the different value in height of the two surface.

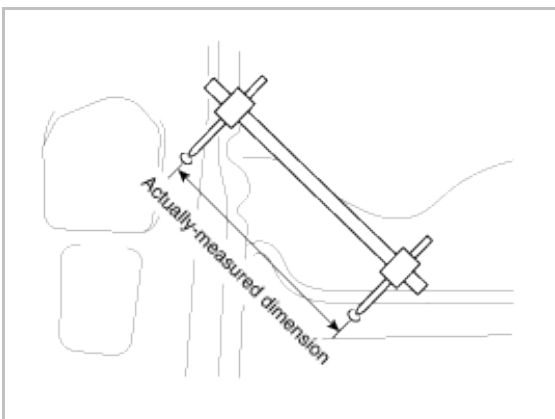


MEASURING ACTUAL DIMENSIONS

1. These dimensions indicate the actual linear distance between measurement points, and are used as the reference dimensions when a tracking gauge is used for measurement.
2. First adjust both probes to the same length ($A=A'$) before measurement.

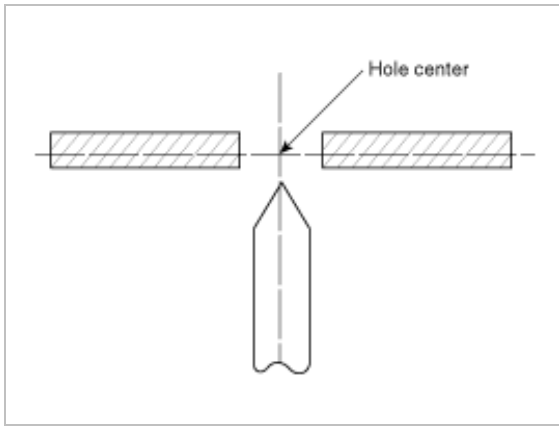
NOTICE

Check the probes and gauge itself to make sure there is no free play.



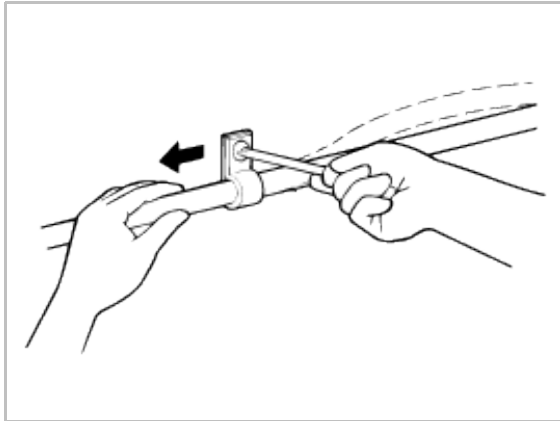
MEASUREMENT POINT

Measurements should be taken at the center of the hole.



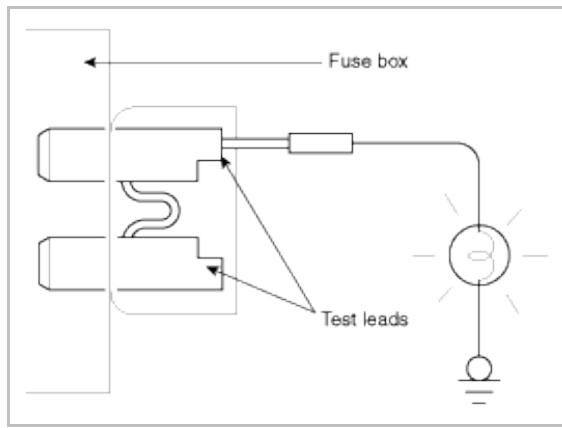
CHECKING CABLES AND WIRES

1. Check the terminal for tightness.
2. Check terminals and wires for corrosion from battery electrolyte, etc.
3. Check terminals and wires for open circuits.
4. Check wire insulation and coating for damage, cracks and degrading.
5. Check the conductive parts of terminals for contact with other metallic parts (vehicle body and other parts).
6. Check grounded parts to verify that there is complete continuity between their attaching bolt(s) and the vehicle's body.
7. Check for incorrect wiring.
8. Check that the wiring is so clamped to prevent contact with sharp corners of the vehicle body, etc. or hot parts (exhaust manifold, etc.)
9. Check that the wiring is clamped firmly to provide enough clearance from the fan pulley, fan belt and other rotating or moving parts.
10. Check that the wiring has a little space so that it can vibrate between fixed and moving parts such as the vehicle body and the engine.



CHECK FUSES

A blade type fuse test taps provided to allow checking the fuse itself without removing it from the fuse box. The fuse is good if the test lamp lights up when one lead is connected to the test taps (one at a time) and the other lead is grounded. (Turn the ignition switch so that the fuse circuit becomes operative)

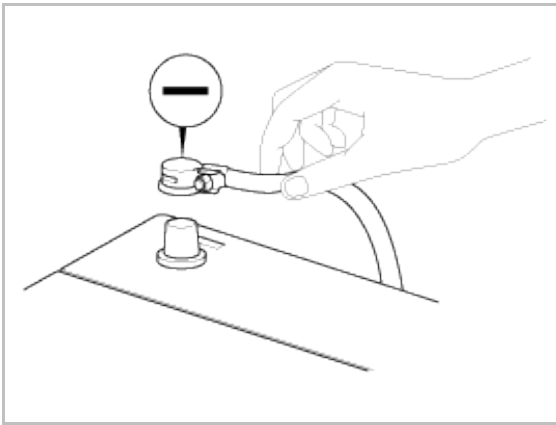


SERVICING THE ELECTRICAL SYSTEM

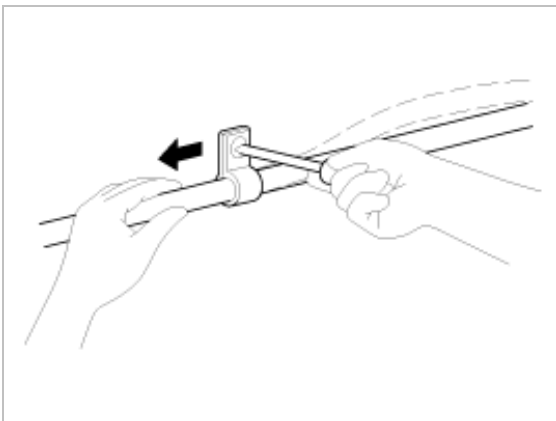
1. Prior to servicing the electrical system, be sure to turn off the ignition switch and disconnect the battery ground cable.

NOTICE

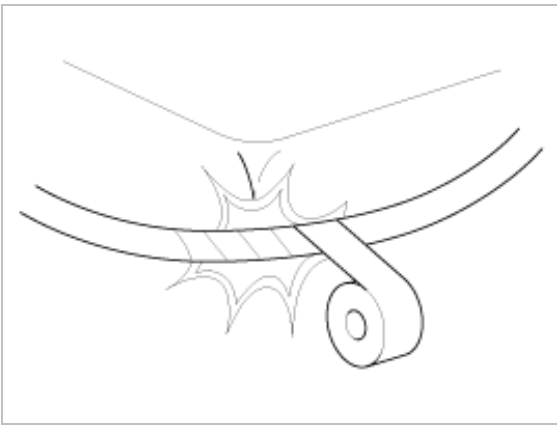
In the course of MFI or ELC system diagnosis, when the battery cable is removed, any diagnostic trouble code retained by the computer will be cleared. Therefore, if necessary, record the diagnostic data before removing the battery cable.



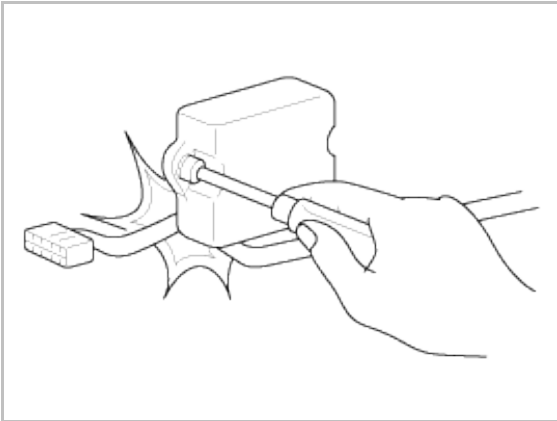
2. Attach the wiring harnesses with clamps so that there is no slack. However, for any harness which passes the engine or other vibrating parts of the vehicle, allow some slack within a range that does not allow the engine vibrations to cause the harness to come into contact with any of the surrounding parts and then secure the harness by using a clamp.



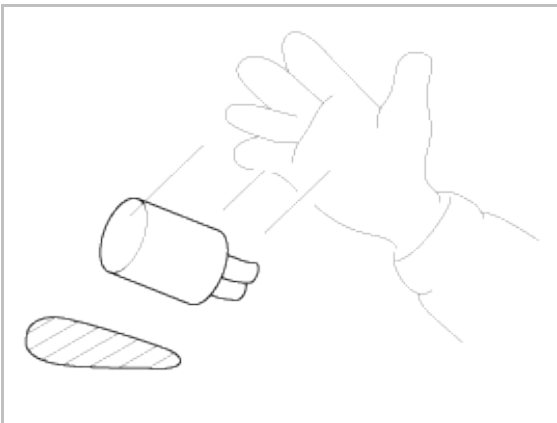
3. If any section of a wiring harness interferes with the edge of a parts, or a corner, wrap the section of the harness with tape or something similar in order to protect it from damage.



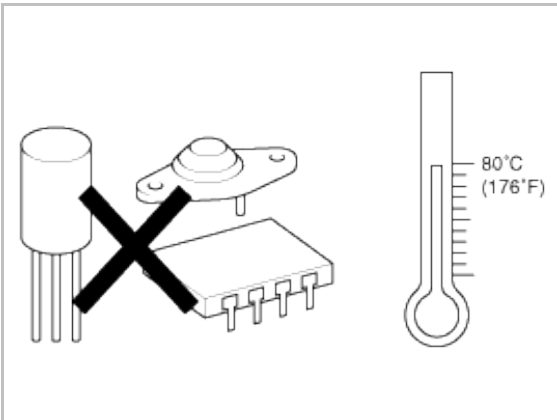
4. When installing any parts, be careful not to pinch or damage any of the wiring harness.



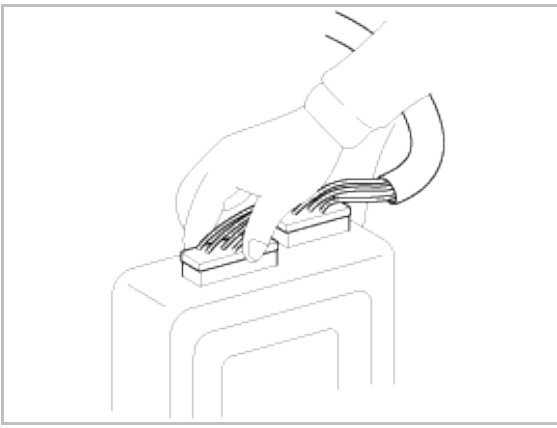
5. Never throw relays, sensors or electrical parts, or expose them to strong shock.



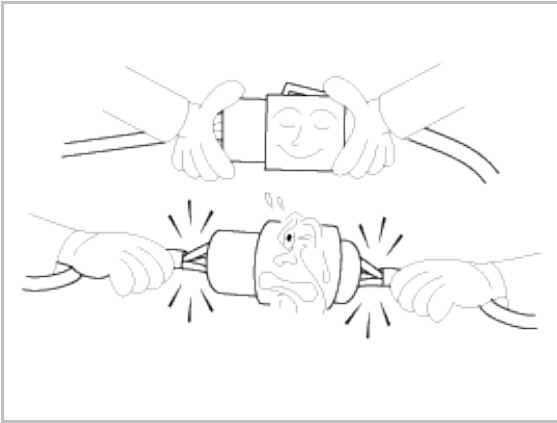
6. The electronic parts used in the computer, relays, etc. are readily damaged by heat. If there is a need for service operations that may cause the temperature to exceed 80°C (176°F), remove the electronic parts before hand.



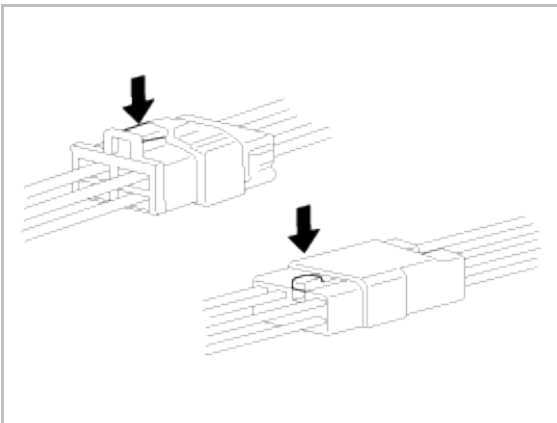
7. Loose connectors cause problems. Make sure that the connectors are always securely fastened.



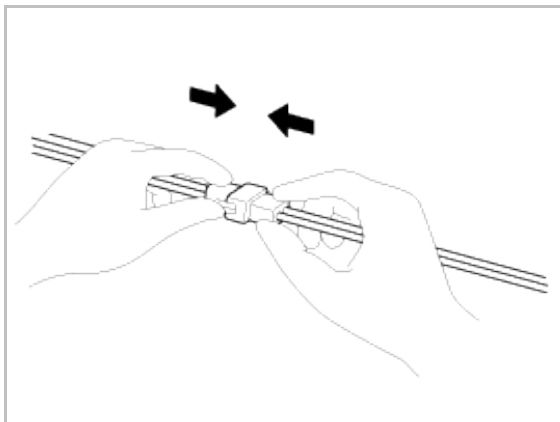
8. When disconnecting a connector, be sure to grip only the connector, not the wires.



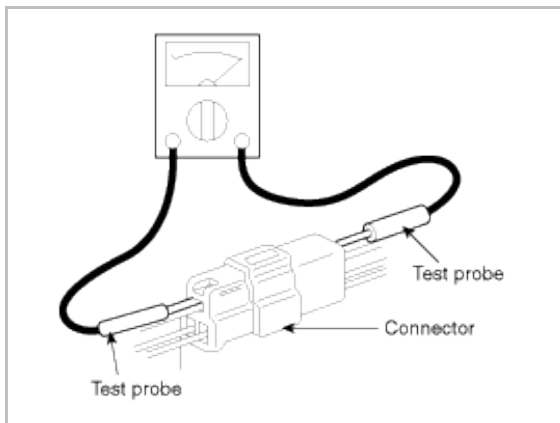
9. Disconnect connector which have catches by pressing in the direction of the arrows shown the illustration.



10. Connect connectors which have catches by inserting the connectors until they make a clicking sound.



11. When using a circuit tester to check continuity or voltage on connector terminals, insert the test probe into the harness side. If the connector is a sealed connector, insert the test probe through the hole in the rubber cap until contacts the terminal, being careful not to damage the insulation of the wires.



12. To avoid overloading the wiring, take the electrical current load of the optional equipment into consideration, and determine the appropriate wire size.

Nominal size	SAE gauge No.	Permissible current	
		In engine compartment	Other areas
0.3mm ²	AWG 22	-	5A
0.5mm ²	AWG 20	7A	13A
0.85mm ²	AWG 18	9A	17A
1.25mm ²	AWG 16	12A	22A
2.0mm ²	AWG 14	16A	30A
3.0mm ²	AWG 12	21A	40A
5.0mm ²	AWG 10	31A	54A

PRECAUTIONS FOR CATALYTIC CONVERTER

CAUTION

If a large amount of unburned gasoline flows into the converter, it may overheat and create a fire hazard. To prevent this observe the following precautions and explain them to your customer.

1. Use only unleaded gasoline.
2. Do not run the engine while the car is at rest for a long time. Avoid running the engine at fast idle for more than 10 minutes and idle speed for more than 20 minutes.
3. Do not measure engine compression for an extended time. Engine compression tests must be made as rapidly as possible. Remove the fuel pump relay before performing a compression test.
4. Do not dispose of used catalytic converter together with parts contaminated with gasoline or oil.