

# MAINTENANCE

## SECTION **MA**

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EC

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## PRECAUTIONS AND PREPARATION

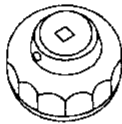
### Supplemental Restraint System "AIR BAG" and "SEAT BELT PRE-TENSIONER"

The Supplemental Restraint System "Air Bag" and "Seat Belt Pre-tensioner", used along with a seat belt, help to reduce the risk or severity of injury to the driver and front passenger in a frontal collision. The Supplemental Restraint System consists of air bags (located in the center of the steering wheel and on the instrument panel on the passenger side), seat belt pre-tensioners, sensors, a control unit, warning lamp, wiring harness and spiral cable. Information necessary to service the system safely is included in the **BF section** of this Service Manual.

**WARNING:**

- To avoid rendering the SRS inoperative, which could lead to personal injury or death in the event of a severe frontal collision, all maintenance must be performed by an authorized INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system.
- All SRS air bag electrical wiring harnesses and connectors are covered with yellow outer insulation. Do not use electrical test equipment on any circuit related to the SRS SYSTEM.

### Special Service Tool

| Tool number<br>(Kent-Moore No.)<br>Tool name                        | Description  |
|---|--|
| KV10115800<br>(J38956)<br>Oil filter wrench<br>65 mm (2.56 in) dia. | <br>NT006 |

## GENERAL MAINTENANCE

General maintenance includes those items which should be checked during normal day-to-day operation of the vehicle. They are essential if the vehicle is to continue operating properly. The owners can perform checks and inspections themselves or have their INFINITI dealers do them.

| Item   | Reference page |                |
|--|----------------|----------------|
| <b>OUTSIDE THE VEHICLE</b>   |                |                |
| The maintenance items listed here should be performed from time to time, unless otherwise specified.   |                |                |
| <b>Tires</b> Check the pressure with a gauge periodically when at a service station, including the spare, and adjust to the specified pressure if necessary. Check carefully for damage, cuts or excessive wear.   | —              | GI<br>MA<br>EM |
| <b>Wheel nuts</b> When checking the tires, make sure no nuts are missing, and check for any loose nuts. Tighten if necessary.  | —              | LC             |
| <b>Tire rotation</b> Tires should be rotated every 12,000 km (7,500 miles).  | MA-16          |                |
| <b>Wheel alignment and balance</b> If the vehicle pulls to either side while driving on a straight and level road, or if you detect uneven or abnormal tire wear, there may be a need for wheel alignment. If the steering wheel or seat vibrates at normal highway speeds, wheel balancing may be needed.   | MA-16<br>FA-5  | EC<br>FE       |
| <b>Windshield wiper blades</b> Check for cracks or wear if they do not wipe properly.  | —              |                |
| <b>Doors and engine hood</b> Check that all doors and the engine hood operate smoothly as well as the trunk lid and back hatch. Also, make sure that all latches lock securely. Lubricate hinges, latches, rollers and links if necessary. Make sure that the secondary latch keeps the hood from opening when the primary latch is released.<br>When driving in areas using road salt or other corrosive materials, check lubrication frequently. | MA-19          | CL<br>MT       |
| <b>INSIDE THE VEHICLE</b>  |                |                |
| The maintenance items listed here should be checked on a regular basis, such as when performing periodic maintenance, cleaning the vehicle, etc.   |                |                |
| <b>Lights</b> Make sure that the headlights, stop lights, tail lights, turn signal lights, and other lights are all operating properly and installed securely. Also check headlight aim.   | —              | AT<br>FA       |
| <b>Warning lights and buzzers/chimes</b> Make sure that all warning lights and buzzers/chimes are operating properly.  | —              | RA             |
| <b>Windshield wiper and washer</b> Check that the wipers and washer operate properly and that the wipers do not streak.  | —              | BR             |
| <b>Windshield defroster</b> Check that air comes out of the defroster outlets properly and in good quantity when operating the heater or air conditioner.  | —              | ST             |
| <b>Steering wheel</b> Check that it has the specified free play. Be sure to check for changes in the steering condition, such as excessive free play, hard steering or strange noises.<br><b>Free play: Less than 35 mm (1.38 in)</b>  | —              | BF             |
| <b>Seats</b> Check seat position controls such as seat adjusters, seatback recliner, etc. to make sure they operate smoothly and that all latches lock securely in every position. Check that the head restraints move up and down smoothly and that the locks (if equipped) hold securely in all latched positions. Check that the latches lock securely for folding-down rear seatbacks.   | —              | HA<br>EL       |
| <b>Seat belts</b> Check that all parts of the seat belt system (e.g. buckles, anchors, adjusters and retractors) operate properly and smoothly, and are installed securely. Check the belt webbing for cuts, fraying, wear or damage.  | MA-19          | IDX            |
| <b>Accelerator pedal</b> Check the pedal for smooth operation and make sure the pedal does not catch or require uneven effort. Keep the floor mats away from the pedal.  | —              |                |
| <b>Clutch pedal</b> Make sure the pedal operates smoothly and check that it has the proper free travel.  | CL-4           |                |
| <b>Brakes</b> Check that the brake does not pull the vehicle to one side when applied.   | —              |                |

## GENERAL MAINTENANCE

| Item  | Reference page |
|---|----------------|
| <b>Brake pedal and booster</b> Check the pedal for smooth operation and make sure it has the proper distance under it when depressed fully. Check the brake booster function. Be sure to keep floor mats away from the pedal.   | BR-6<br>BR-9   |
| <b>Parking brake</b> Check that the lever has the proper travel and make sure that your vehicle is held securely on a fairly steep hill with only the parking brake applied.  | BR-22          |
| <b>Automatic transaxle "Park position" mechanism</b> Check that the lock release button on the selector lever operates properly and smoothly. On a fairly steep hill check that your vehicle is held securely with the selector lever in the "P" position without applying any brakes.  | —              |
| <b>UNDER THE HOOD AND VEHICLE</b>   |                |
| The maintenance items listed here should be checked periodically (e.g. each time you check the engine oil or refuel).   |                |
| <b>Windshield washer fluid</b> Check that there is adequate fluid in the tank.  | —              |
| <b>Engine coolant level</b> Check the coolant level when the engine is cold.  | MA-10          |
| <b>Radiator and hoses</b> Check the front of the radiator and clean off any dirt, insects, leaves, etc., that may have accumulated. Make sure the hoses have no cracks, deformation, deterioration or loose connections.  | —              |
| <b>Brake fluid level</b> Make sure that the brake fluid level is between the "MAX" and "MIN" lines on the reservoir.  | MA-17          |
| <b>Battery</b> Check the fluid level in each cell. It should be between the "MAX" and "MIN" lines.  | —              |
| <b>Engine drive belts</b> Make sure that no belt is frayed, worn, cracked or oily.  | MA-9           |
| <b>Engine oil level</b> Check the level on the dipstick after parking the vehicle on a level spot and turning off the engine.   | MA-12          |
| <b>Power steering fluid level and lines</b> Check the level when the fluid is cold and the engine is turned off. Check the lines for proper attachment, leaks, cracks, etc.   | MA-18          |
| <b>Automatic transaxle fluid level</b> Check the level on the dipstick after putting the selector lever in "P" with the engine idling.  | MA-15          |
| <b>Exhaust system</b> Make sure there are no loose supports, cracks or holes. If the sound of the exhaust seems unusual or there is a smell of exhaust fumes, immediately locate the trouble and correct it.  | MA-15          |
| <b>Underbody</b> The underbody is frequently exposed to corrosive substances such as those used on icy roads or to control dust. It is very important to remove these substances, otherwise rust will form on the floor pan, frame, fuel lines and around the exhaust system. At the end of winter, the underbody should be thoroughly flushed with plain water, being careful to clean those areas where mud and dirt can easily accumulate. | —              |
| <b>Fluid leaks</b> Check under the vehicle for fuel, oil, water or other fluid leaks after the vehicle has been parked for a while. Water dripping from the air conditioner after use is normal. If you should notice any leaks or gasoline fumes are evident, check for the cause and correct it immediately.  | —              |

# PERIODIC MAINTENANCE

Two different maintenance schedules are provided, and should be used, depending upon the conditions in which the vehicle is mainly operated. **After 60,000 miles (96,000 km) or 48 months, continue the periodic maintenance at the same mileage/time intervals.**

## SCHEDULE 1

Follow Periodic Maintenance Schedule 1 if your driving habits frequently includes one or more of the following driving conditions:

- Repeated short trips of less than 5 miles (8 km).
- Repeated short trips of less than 10 miles (16 km) with outside temperatures remaining below freezing.
- Operating in hot weather in stop-and-go “rush hour” traffic.
- Extensive idling and/or low speed driving for long distances, such as police, taxi or door-to-door delivery use.
- Driving in dusty conditions.
- Driving on rough, muddy, or salt spread roads.
- Towing a trailer, using a camper or a car-top carrier.

## SCHEDULE 2

Follow Periodic Maintenance Schedule 2 if none of the driving conditions shown in Schedule 1 apply to your driving habits.

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Schedule 1

Abbreviations: R = Replace I = Inspect. Correct or replace as necessary. [ ]: Perform service at the mileage intervals only

**MAINTENANCE OPERATION**

|  | 3.75 | 7.5  | 11.25 | 15   | 18.75 | 22.5 | 26.25 | 30   | 33.75 | 37.5 | 41.25 | 45   | 48.75 | 52.5 | 56.25 | 60   | Reference page |
|--|------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|----------------|
| Perform at number of miles, kilometers or months, whichever comes first. | (6)  | (12) | (18)  | (24) | (30)  | (36) | (42)  | (48) | (54)  | (60) | (66)  | (72) | (78)  | (84) | (90)  | (96) |                |
| Miles x 1,000  | 3    | 6    | 9     | 12   | 15    | 18   | 21    | 24   | 27    | 30   | 33    | 36   | 39    | 42   | 45    | 48   |                |
| (km x 1,000)   |      |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |                |
| Months   |      |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |                |

**EMISSION CONTROL SYSTEM MAINTENANCE**

|                                    |   |   |   |   |   |   |   |     |   |   |   |   |   |   |   |   |       |
|------------------------------------|---|---|---|---|---|---|---|-----|---|---|---|---|---|---|---|---|-------|
| Service "A"                        |   |   |   |   |   |   |   |     |   |   |   |   |   |   |   |   |       |
| Engine oil                         | R | R | R | R | R | R | R | R   | R | R | R | R | R | R | R | R | MA-12 |
| Engine oil filter                  | R | R | R | R | R | R | R | R   | R | R | R | R | R | R | R | R | MA-13 |
| Service "E"                        |   |   |   |   |   |   |   |     |   |   |   |   |   |   |   |   |       |
| Air cleaner filter                 |   |   |   |   |   |   |   | [R] |   |   |   |   |   |   |   |   | MA-12 |
| See NOTE (1).                      |   |   |   |   |   |   |   |     |   |   |   |   |   |   |   |   |       |
| Service "F"                        |   |   |   |   |   |   |   |     |   |   |   |   |   |   |   |   |       |
| Vapor lines                        |   |   |   |   |   |   |   | I*  |   |   |   |   |   |   |   |   | MA-14 |
| Fuel lines                         |   |   |   |   |   |   |   | I*  |   |   |   |   |   |   |   |   | MA-11 |
| Fuel filter                        |   |   |   |   |   |   |   |     |   |   |   |   |   |   |   |   | MA-11 |
| See NOTE (2)*                      |   |   |   |   |   |   |   |     |   |   |   |   |   |   |   |   |       |
| Service "G"                        |   |   |   |   |   |   |   |     |   |   |   |   |   |   |   |   |       |
| Drive belts                        |   |   |   |   |   |   |   |     |   |   |   |   |   |   |   |   | MA-9  |
| See NOTE (3).                      |   |   |   |   |   |   |   |     |   |   |   |   |   |   |   |   |       |
| Service "J"                        |   |   |   |   |   |   |   |     |   |   |   |   |   |   |   |   |       |
| Engine coolant                     |   |   |   |   |   |   |   |     |   |   |   |   |   |   |   |   | MA-10 |
| See NOTE (4).                      |   |   |   |   |   |   |   |     |   |   |   |   |   |   |   |   |       |
| Service "H"                        |   |   |   |   |   |   |   |     |   |   |   |   |   |   |   |   |       |
| Spark plugs (PLATINUM-TIPPED type) |   |   |   |   |   |   |   |     |   |   |   |   |   |   |   |   | MA-13 |
| See NOTE (5).                      |   |   |   |   |   |   |   |     |   |   |   |   |   |   |   |   |       |

**CHASSIS AND BODY MAINTENANCE**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------------------|
| Service "B"   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                   |
| Brake pads & discs  | I | I | I | I | I | I | I | I | I | I | I | I | I | I | I | I | MA-17             |
| Steering gear & linkage, axle & suspension parts            | I | I | I | I | I | I | I | I | I | I | I | I | I | I | I | I | MA-17, FA-4, RA-4 |
| Steering linkage ball joints & front suspension ball joints | I | I | I | I | I | I | I | I | I | I | I | I | I | I | I | I | MA-17, FA-4       |
| Exhaust system & drive shaft boots                          | I | I | I | I | I | I | I | I | I | I | I | I | I | I | I | I | MA-15, FA-6       |
| Service "D"   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                   |
| Brake lines & cables  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | MA-17             |
| Automatic & manual transmission oil                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | MA-15, 16         |
| See NOTE (6).   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                   |
| Air bag system  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | BF-90             |
| See NOTE (7).   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                   |

**NOTE: (1)** If operating mainly in dusty conditions, more frequent maintenance may be required.  
**(2)** If vehicle is operated under extremely adverse weather conditions or in areas where ambient temperatures are either extremely low or extremely high, the filters might become clogged. In such an event, replace them immediately.  
**(3)** After 60,000 miles (96,000 km) or 48 months, inspect every 15,000 miles (24,000 km) or 12 months.  
**(4)** After 60,000 miles (96,000 km) or 48 months, replace every 30,000 miles (48,000 km) or 24 months.  
**(5)** Original equipment platinum-tipped plugs should be replaced at 60,000 miles (96,000 km). Conventional spark plugs can be used but should be replaced at 30,000 miles (48,000 km) intervals.  
**(6)** If towing a trailer, using a camper or a car-top carrier, or driving on rough or muddy roads, change (not just inspect) oil at every 30,000 miles (48,000 km) or 24 months.  
**(7)** Inspect the air bag system 10 years after the date of manufacture as noted on the F.M.V.S.S. certification label.  
**(8)** Maintenance items and intervals with "\*" are recommended by INFINTI for reliable vehicle operation. The owner need not perform such maintenance in order to maintain the emission warranty or manufacturer recall liability. Other maintenance items and intervals are required.

Schedule 2

Abbreviations: R = Replace I = Inspect [ ] = Perform service at the mileage intervals only [ ] = Perform service as necessary.

| MAINTENANCE OPERATION  | MAINTENANCE INTERVAL          |             |            |              |            |              |            |              |            |        | Reference page    |
|--|-------------------------------|-------------|------------|--------------|------------|--------------|------------|--------------|------------|--------|-------------------|
|  | Miles x 1,000<br>(km x 1,000) | 7.5<br>(12) | 15<br>(24) | 22.5<br>(36) | 30<br>(48) | 37.5<br>(60) | 45<br>(72) | 52.5<br>(84) | 60<br>(96) | Months |                   |
| <b>EMISSION CONTROL SYSTEM MAINTENANCE</b>                   |                               |             |            |              |            |              |            |              |            |        |                   |
| Service "A"<br>Engine oil                                    |                               | R           | R          | R            | R          | R            | R          | R            | R          | R      | MA-12             |
| Service "C"<br>Engine oil filter                             |                               |             | R          |              | R          |              | R          |              | R          |        | MA-13             |
| Service "E"<br>Air cleaner filter                            |                               |             |            |              | [R]        |              |            |              | [R]        |        | MA-12             |
| Service "F"<br>Vapor lines                                   |                               |             |            |              | I*         |              |            |              | I*         |        | MA-15             |
| Fuel lines   |                               |             |            |              | I*         |              |            |              | I*         |        | MA-11             |
| Fuel filter  |                               |             |            |              |            |              |            |              |            |        | MA-11             |
| Service "G"<br>Drive belts                                   |                               |             |            |              |            |              |            |              |            |        | MA-9              |
| Service "J"<br>Engine coolant                                |                               |             |            |              |            |              |            |              |            |        | MA-10             |
| Service "H"<br>Spark plugs (PLATINUM-TIPPED Type)            |                               |             |            |              |            |              |            |              |            | [R]    | MA-13             |
| <b>CHASSIS AND BODY MAINTENANCE</b>                          |                               |             |            |              |            |              |            |              |            |        |                   |
| Service "D"<br>Brake lines & cables                          |                               |             |            |              |            |              |            |              |            |        | MA-17             |
| Brake pads & discs   |                               |             |            |              |            |              |            |              |            |        | MA-17             |
| Automatic & manual transaxle oil                             |                               |             |            |              |            |              |            |              |            |        | MA-15, 16         |
| Exhaust system   |                               |             |            |              |            |              |            |              |            |        | MA-15             |
| Drive shaft boots  |                               |             |            |              |            |              |            |              |            |        | FA-6              |
| Service "F"<br>Steering gear linkage axle & suspension parts |                               |             |            |              |            |              |            |              |            |        | MA-17, FA-4, RA-4 |
| Air bag system   |                               |             |            |              |            |              |            |              |            |        | BF-90             |

**NOTE: (1)** If vehicle is operated under extremely adverse weather conditions or in areas where ambient temperatures are either extremely low or extremely high, the filters might become clogged. In such an event, replace them immediately.

**(2)** After 60,000 miles (96,000 km) or 48 months, inspect every 15,000 miles (24,000 km) or 12 months.

**(3)** After 60,000 miles (96,000 km) or 48 months, replace every 30,000 miles (48,000 km) or 24 months.

**(4)** Original equipment platinum-tipped plugs should be replaced at 60,000 miles (96,000 km). Conventional spark plugs can be used but should be replaced at 30,000 miles (48,000 km) intervals.

**(5)** Inspect the air bag system 10 years after the date of manufacture as noted on the F.M.V.S.S. certification label.

**(6)** Maintenance items and intervals with "\*" are recommended by INFINITI for reliable vehicle operation. The owner need not perform such maintenance in order to maintain the emission warranty or manufacturer recall liability. Other maintenance items and intervals are required.

# RECOMMENDED FLUIDS AND LUBRICANTS

## Fluids and Lubricants

|  |                    | Capacity (Approximate) |                  |           | Recommended fluids and lubricants                               |
|--|--------------------|------------------------|------------------|-----------|---|
|  |                    | US measure             | Imp measure      | Liter     |   |
| Engine oil (Refill)                        |                    |                        |                  |           |   |
|  | With oil filter    | 3-5/8 qt               | 3 qt             | 3.4       | Energy Conserving Oils of API SG *2, *3                         |
|  | Without oil filter | 3-3/8 qt               | 2-7/8 qt         | 3.2       |   |
| Cooling system<br>(With reservoir<br>tank) | M/T                | 6-1/2 qt               | 5-3/8 qt         | 6.1       | Anti-freeze coolant (Ethylene glycol base)                      |
|  | A/T                | 6-7/8 qt               | 5-3/4 qt         | 6.5       |   |
| Manual transaxle gear oil                  |                    | 7-3/8 - 7-7/8 pt       | 6-1/8 - 6-1/2 pt | 3.5 - 3.7 | API GL-4*2  |
| Automatic transaxle fluid                  |                    | 7-3/8 qt               | 6-1/8 qt         | 7.0       | Genuine ATF*1 or equivalent<br>Type DEXRON™ II-E                |
| Power steering fluid                       |                    | —                      | —                | —         | Type DEXRON™ II or equivalent                                   |
| Brake fluid                                |                    | —                      | —                | —         | Genuine Brake Fluid*1 or equivalent<br>DOT 3 (US FMVSS No. 116) |
| Multi-purpose grease                       |                    | —                      | —                | —         | NLGI No. 2 (Lithium soap base)                                  |

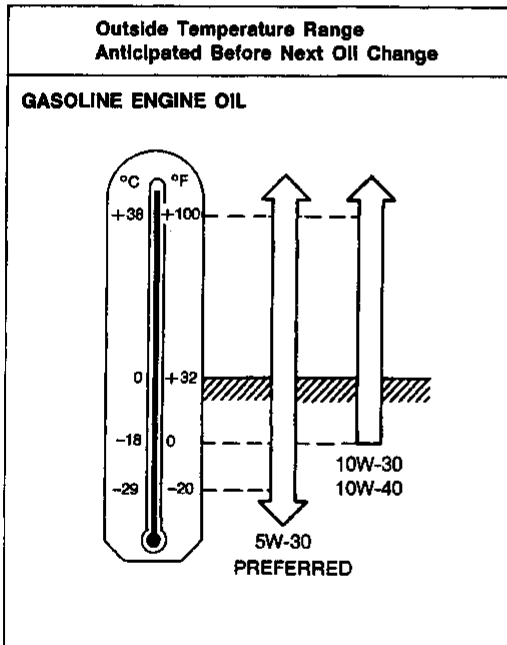
\*1: Available in mainland U.S.A. through your INFINITI dealer.

\*2: For further details, see "Recommended SAE viscosity number".

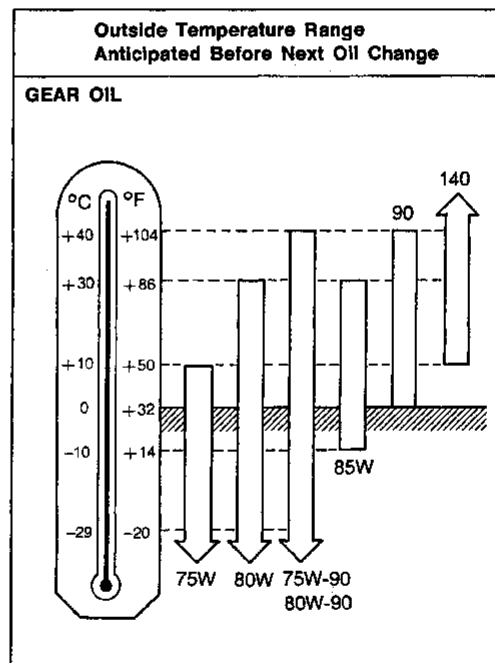
\*3: Energy conserving oils

These oils can be identified by such labels as EC-I, EC-II energy conserving, energy saving, improved fuel economy, etc.

## SAE Viscosity Number



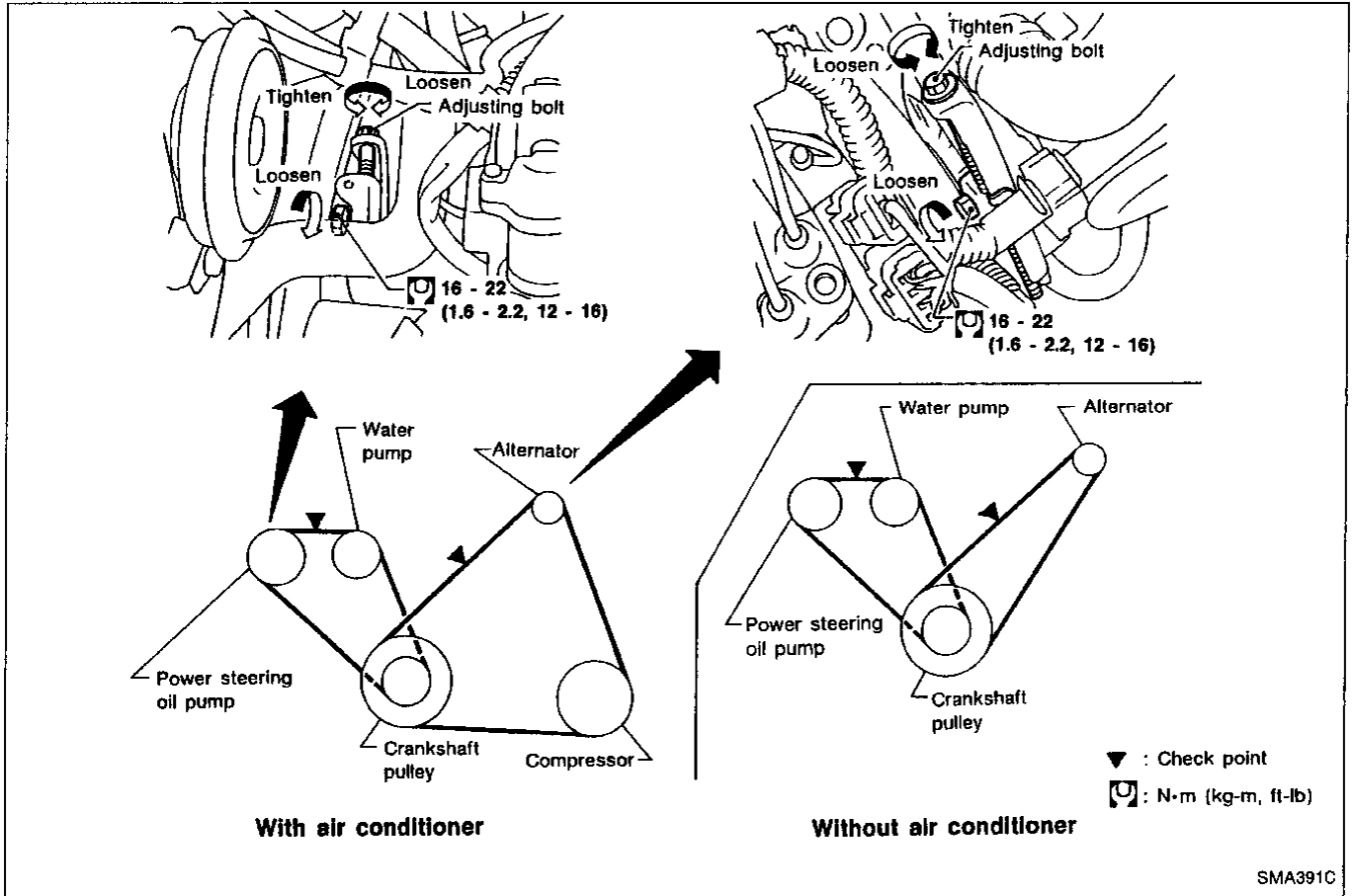
**5W-30 is preferable for all ambient temperatures. 20W-40 and 20W-50 are usable for ambient temperatures above 10°C (50°F) for all seasons.**



**80W-90 is preferable for ambient temperatures below 40°C (104°F).**



## Checking Drive Belts



GI  
**MA**  
 EM  
 LC  
 EC  
 FE  
 CL  
 MT  
 AT  
 FA

1. Inspect for cracks, fraying, wear or oil adhesion. If necessary, replace with a new one.
2. Inspect drive belt deflections by pushing on the belt midway between pulleys.

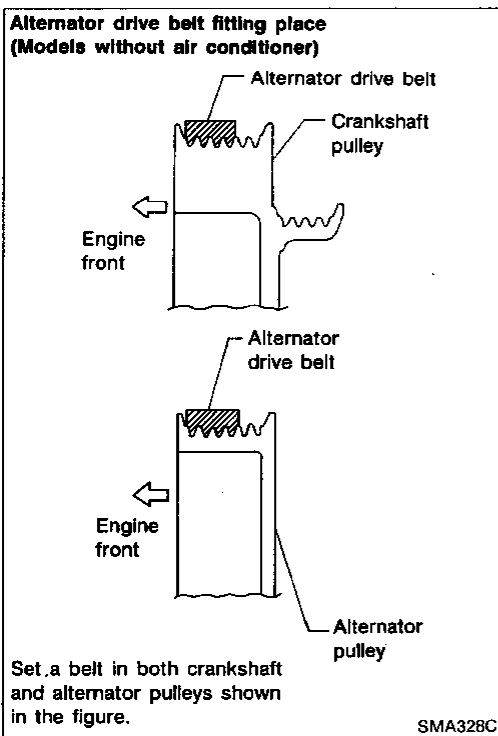
**Adjust if belt deflections exceed the limit.**

**Belt deflection:**

Unit: mm (in)

| Drive belts                        | Used belt deflection           |                             | Deflection of new belt       |
|------------------------------------|--------------------------------|-----------------------------|------------------------------|
|                                    | Limit                          | Deflection after adjustment |                              |
| Alternator                         |                                |                             |                              |
| With air conditioner compressor    | 11.5 - 12.5<br>(0.453 - 0.492) | 7 - 8<br>(0.28 - 0.31)      | 6.5 - 7.5<br>(0.256 - 0.295) |
| Without air conditioner compressor | 12 - 13<br>(0.47 - 0.51)       | 8 - 9<br>(0.31 - 0.35)      | 7 - 8<br>(0.28 - 0.31)       |
| Power steering oil pump            | 6 - 7<br>(0.24 - 0.28)         | 4 - 5<br>(0.16 - 0.20)      | 3.5 - 4.5<br>(0.138 - 0.177) |
| Applied pushing force              | 98 N (10 kg, 22 lb)            |                             |                              |

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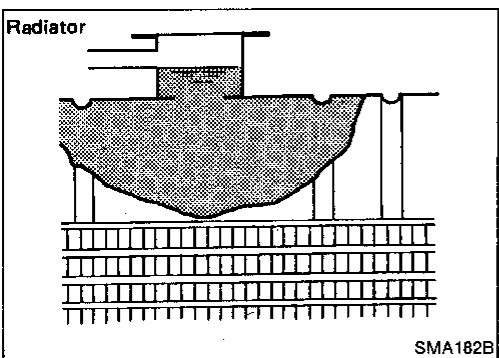
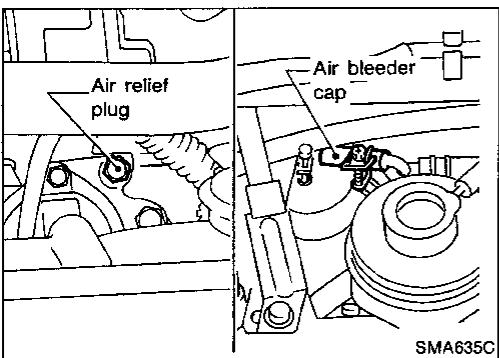
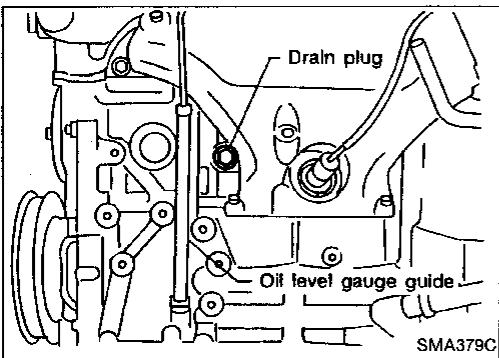
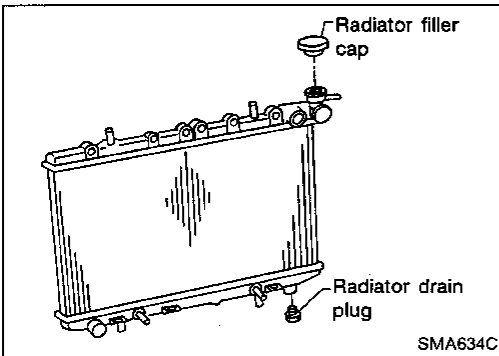
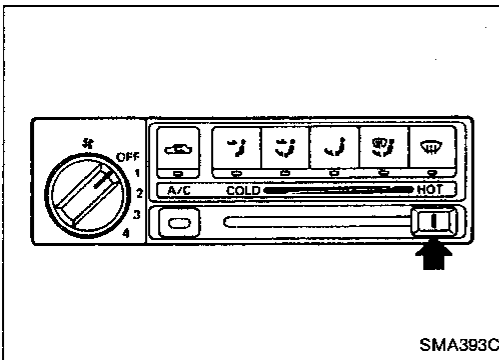
SMA328C

## Changing Engine Coolant

### WARNING:

To avoid being scalded, never change the coolant when the engine is hot.

1. Move heater "TEMP" control lever all the way to "HOT".



2. Remove radiator drain plug and radiator filler cap.
  3. Remove reservoir tank, drain coolant, then clean reservoir tank.  
Install it temporarily.
- Be careful not to allow coolant to contact drive belts.

4. Remove cylinder block drain plug, air relief plug and air bleeder cap.
5. Install radiator drain plug and tighten cylinder block drain plug securely.
6. Fill radiator and reservoir tank with water.  
Air relief plug is reinstalled once coolant spills from the air relief hole during refill.  
Then fill radiator and reservoir tank with water.

### Air relief plug:

: 10 N·m (1.0 kg-m, 7 ft-lb)

7. Reinstall radiator filler cap and air bleeder cap.
8. Warm up engine until cooling fan operates, then race engine 2 or 3 times under no-load.

- Make sure that air conditioner switch is "OFF".

9. Stop engine and wait until it cools down.
10. Repeat step 2 through step 9 until clear water begins to drain from radiator.

11. Drain water.

- Apply sealant to thread of drain plug.

: 8 - 12 N·m (0.8 - 1.2 kg-m, 5.8 - 8.7 ft-lb)

12. Reinstall reservoir tank.

13. Fill radiator and reservoir tank with coolant up to specified level following step 6 through step 9.  
Follow instructions attached to anti-freeze container for mixing ratio of anti-freeze to water.

### Coolant capacity (With reservoir tank):

Unit: ℓ (US qt, Imp qt)

|     |                    |
|-----|--------------------|
| M/T | 6.1 (6-1/2, 5-3/8) |
| A/T | 6.5 (6-7/8, 5-3/4) |

# ENGINE MAINTENANCE

## Changing Engine Coolant (Cont'd)

[Reservoir tank capacity for "H" level is 0.6 l (5/8 US qt, 1/2 Imp qt).]

**Pour coolant through coolant filler neck slowly to allow air in system to escape.**

14. If necessary, add coolant.
15. Start and warm up engine, then increase engine speed to 4,000 rpm. Check that radiator coolant level does not lower, or no water noise is heard in heater core. If water noise is heard, bleed air referring to "Refilling Engine Coolant" in section LC.

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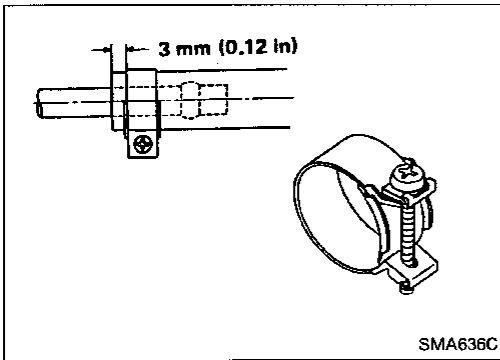
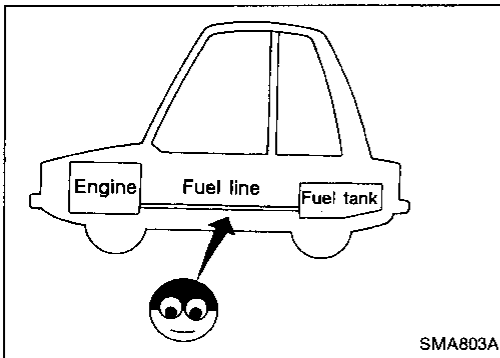
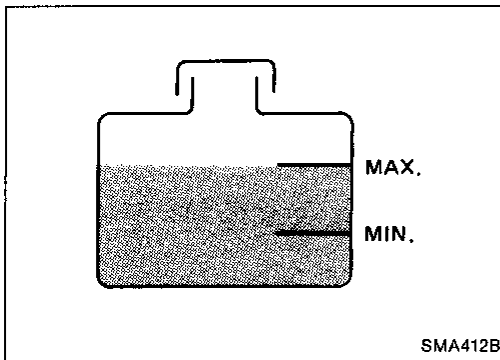
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## Checking Fuel Lines

Check fuel lines and tank for improper attachment, leaks, cracks, damage, loose connections, chafing and deterioration. If necessary, repair or replace faulty parts.

### CAUTION:

**Tighten high-pressure rubber hose clamp so that clamp end is 3 mm (0.12 in) from hose end.**

**Tightening torque specifications are the same for all rubber hose clamps.**

**Ensure that screw does not contact adjacent parts.**

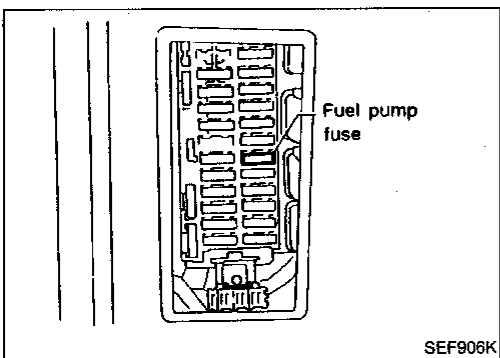
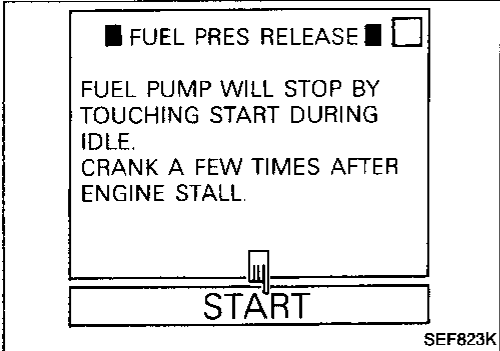
## Changing Fuel Filter

### WARNING:

**Before removing fuel filter, release fuel pressure from fuel line to eliminate danger.**

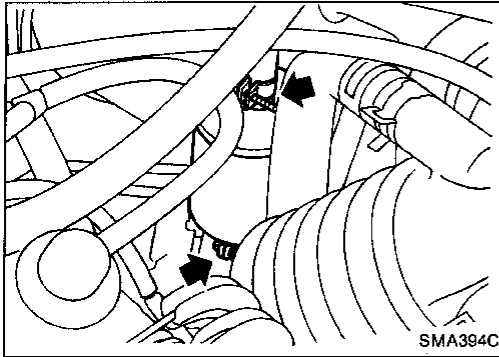
1. Perform "FUEL PRESSURE RELEASE" in "WORK SUPPORT" mode and release fuel pressure to zero.
2. Turn ignition switch off.

1. Remove fuel pump fuse.
2. Start engine.
3. After engine stalls, crank engine two or three times to make sure that fuel pressure is released.
4. Turn ignition switch off and install fuel pump fuse.



## ENGINE MAINTENANCE

### Changing Fuel Filter (Cont'd)

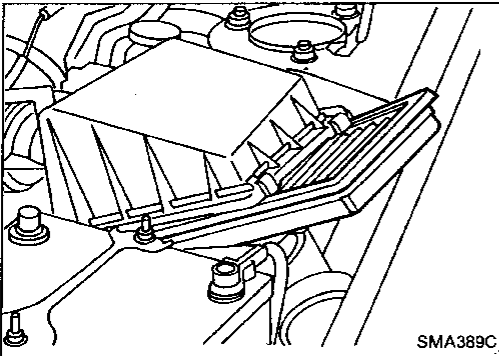


5. Loosen fuel hose clamps.
  6. Replace fuel filter.
- **Be careful not to spill fuel over engine compartment. Place a shop towel to absorb fuel.**
  - **Use a high-pressure type fuel filter. Do not use a synthetic resinous fuel filter.**
  - **When tightening fuel hose clamps, refer to "Checking Fuel Lines".**

### Changing Air Cleaner Filter

#### Viscous paper type

The viscous paper type filter does not need cleaning between renewals.



### Changing Engine Oil

#### WARNING:

- **Be careful not to burn yourself, as the engine oil is hot.**
- **Prolonged and repeated contact with used engine oil may cause skin cancer; try to avoid direct skin contact with used oil. If skin contact is made, wash thoroughly with soap or hand cleaner as soon as possible.**

1. Warm up engine, and check for oil leakage from engine components.
2. Remove drain plug and oil filler cap.
3. Drain oil and refill with new engine oil.

**Oil grade: API SG**

**Viscosity: See MA-8.**

#### Refill oil capacity (Approximate):


Unit: ℓ (US qt, Imp qt)

|                           |                    |
|---------------------------|--------------------|
| With oil filter change    | 3.4 (3-5/8, 3)     |
| Without oil filter change | 3.2 (3-3/8, 2-7/8) |

#### CAUTION:

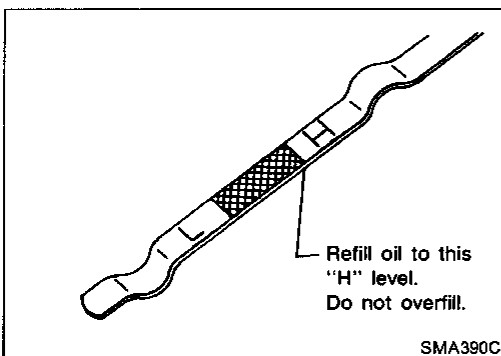
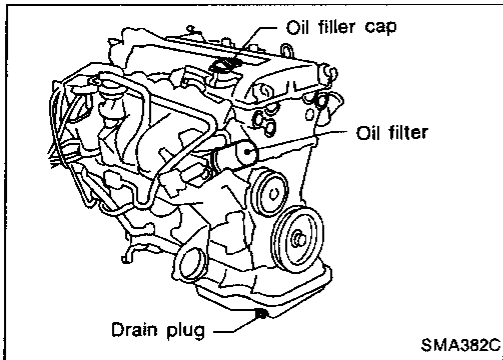
- **Be sure to clean drain plug and install with new washer.**

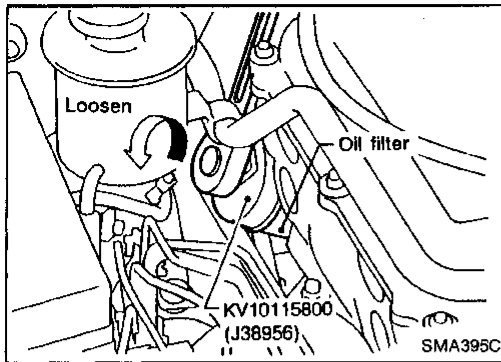
#### Drain plug:

: 29 - 39 N·m (3.0 - 4.0 kg-m, 22 - 29 ft-lb)

The refill capacity changes depending on the oil temperature and drain time, use these valves as a reference and be certain to check with the dipstick when changing the oil.

4. Check oil level.
5. Start engine and check area around drain plug and oil filter for oil leakage.
6. Run engine for a few minutes, then turn it off. After several minutes, check oil level.



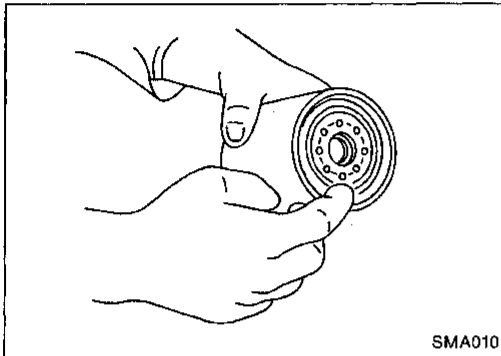


## Changing Oil Filter

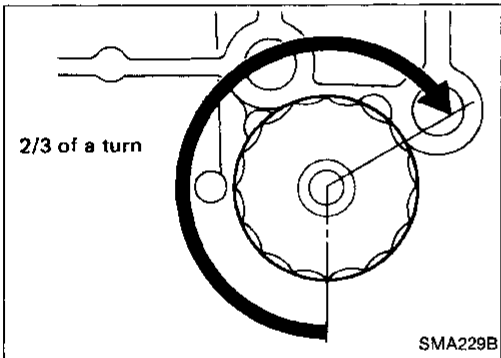
1. Remove oil filter with Tool.

### WARNING:

Be careful not to burn yourself, as the engine and the engine oil are hot.



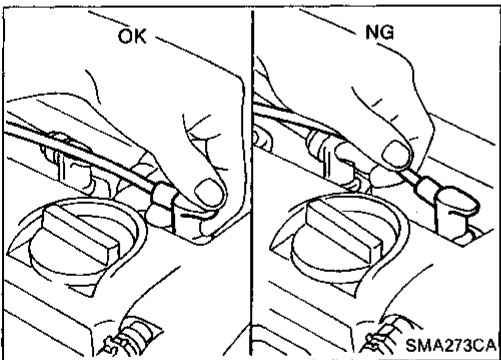
2. Before installing new oil filter, clean the oil filter mounting surface on cylinder block. Then coat the rubber seal of oil filter with a little engine oil.



3. Screw in the oil filter until a slight resistance is felt, then tighten additionally more than 2/3 turn.

4. Add engine oil.

Refer to Changing Engine Oil.

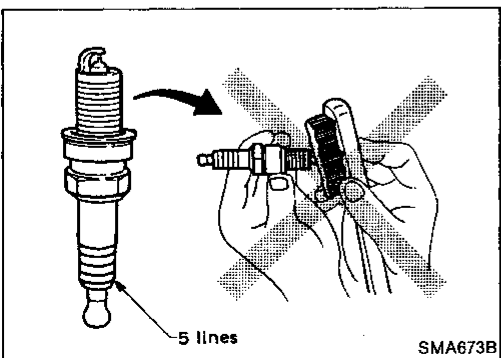


## Changing Spark Plugs (Platinum-tipped type)

1. Disconnect ignition wires from spark plugs at boot. Do not pull on the wire.
2. Remove spark plugs with 16 mm (0.63 in) spark plug wrench.

### Spark plug:

|               |                    |
|---------------|--------------------|
| Standard type | PFR5B-11           |
| Cold type     | PFR6B-11, PFR7B-11 |



- Checking and adjusting plug gap are not required between renewals.
- Do not use a wire brush for cleaning.
- If plug tip is covered with carbon, spark plug cleaner may be used.

### Cleaner air pressure:

Less than 588 kPa (6.0 kg/cm<sup>2</sup>, 85 psi)

### Cleaning time:

Less than 20 seconds

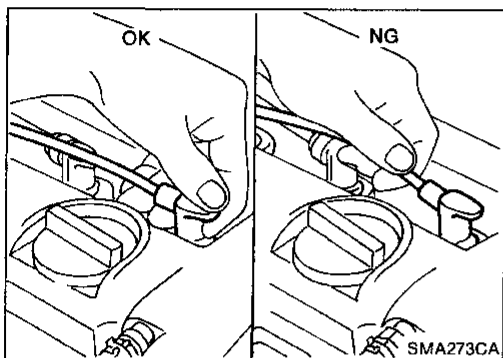
## ENGINE MAINTENANCE

### Changing Spark Plugs (Platinum-tipped type) (Cont'd)

3. Install spark plugs. Reconnect ignition wires according to nos. indicated on them.

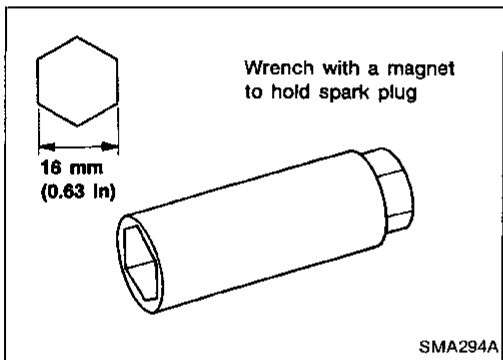
**Spark plug:**

: 20 - 29 N·m  
(2.0 - 3.0 kg-m, 14 - 22 ft-lb)



### Changing Spark Plugs (Conventional type)

1. Disconnect ignition wires from spark plugs at boot. Do not pull on the wire.



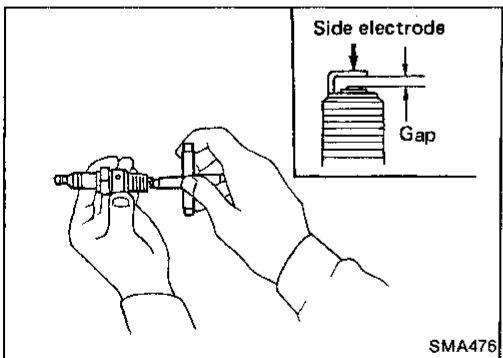
2. Remove spark plugs with spark plug wrench.

**Spark plug:**

**Standard type**      **BKR6E**

**Hot type**            **BKR5E**

**Cold type**            **BKR7E**




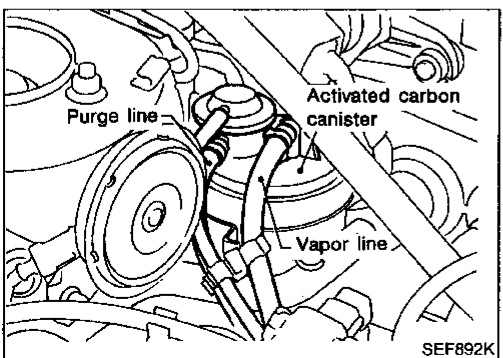
3. Check gap of each new spark plug.

**Gap: 0.8 - 0.9 mm (0.031 - 0.035 in)**

4. Install spark plugs. Reconnect ignition wires according to nos. indicated on them.

**Spark plug:**

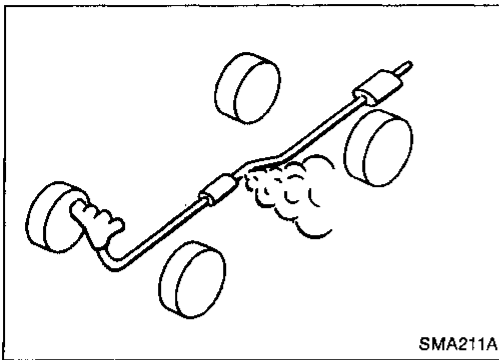
: 20 - 29 N·m (2.0 - 3.0 kg-m, 14 - 22 ft-lb)



### Checking Vapor Lines

1. Visually inspect vapor lines for improper attachment and for cracks, damage, loose connections, chafing and deterioration.
2. Inspect vacuum relief valve of fuel tank filler cap for clogging, sticking, etc.

**Refer to EVAPORATIVE EMISSION SYSTEM in EC section.**



## Checking Exhaust System

Check exhaust pipes, muffler and mounting for improper attachment, leaks, cracks, damage, loose connections, chafing and deterioration.

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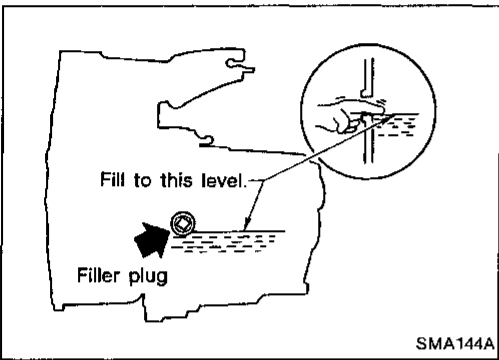
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## Checking M/T Oil

Check for oil leaks and oil level.

**Never start engine while checking oil level.**

**Oil level**

**Distance L:**

**RS5F32A 40 - 47 mm (1.57 - 1.85 in)**

**RS5F32V 38 - 44 mm (1.50 - 1.73 in)**

## Changing M/T Oil

1. Drain oil from drain plug and refill with new gear oil.
2. Check oil level.

**Oil capacity:**

**3.5 - 3.7 ℓ (7-3/8 - 7-7/8 US pt, 6-1/8 - 6-1/2 Imp pt)**

**Drain plug:**

**⌘: 25 - 34 N·m (2.5 - 3.5 kg·m, 18 - 25 ft·lb)**

## Checking A/T Fluid Level

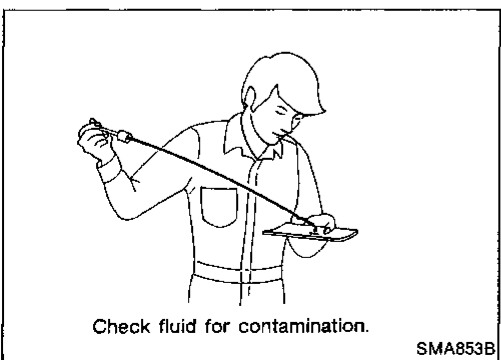
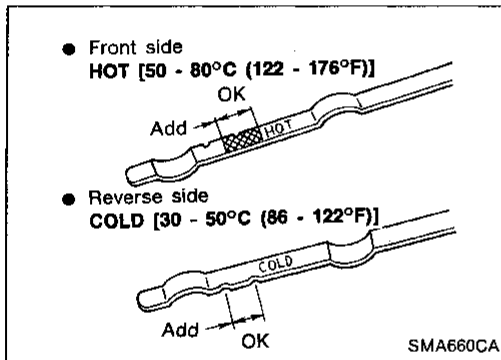
1. Check for fluid leakage and fuel level.

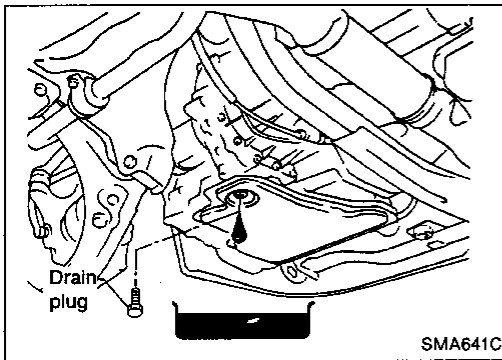
Drive vehicle approximately 5 minutes in urban areas after engine is warmed up. Then check fluid level using "HOT" range on dipstick [at fluid temperatures of 50 to 80°C (122 to 176°F)]. For reference, after engine is warmed up, it can be checked using "COLD" range [at fluid temperatures of 30 to 50°C (86 to 122°F)]. However, fluid level must be rechecked using "HOT" range.

- 1) Park vehicle on level surface and set parking brake.
- 2) Start engine and then move selector lever through each gear range, ending in "P".
- 3) Check fluid level with engine idling.
- 4) Remove dipstick and wipe it clean with lint-free paper.
- 5) Re-insert dipstick into charging pipe as far as it will go.
- 6) Remove dipstick and note reading. If level is at low side of either range, add fluid to the charging pipe.

**Do not overfill.**

2. Check fluid for contamination. If fluid is very dark or smells burned, or contains frictional material (clutches, band, etc.), check operation of A/T. Refer to section AT for checking operation of A/T.





## Changing A/T Fluid

1. Warm up A/T fluid.
2. Stop engine.
3. Drain A/T fluid from drain plug and refill with new A/T fluid. Always refill same volume with drained fluid.

### Oil grade:

**Genuine Nissan ATF or equivalent type DEXRON™ II-E**

### Oil capacity (With torque converter):

**7.0 liters (7-3/8 US qt, 6-1/8 Imp qt)**

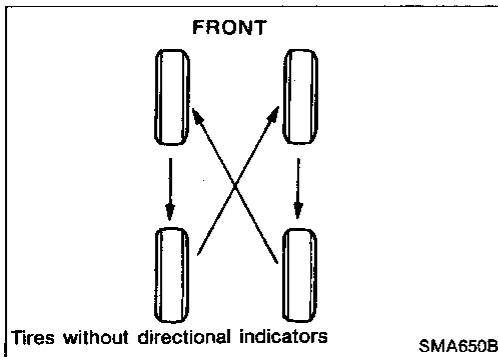
### Drain plug:

**⌘: 29 - 39 N·m (3.0 - 4.0 kg-m, 22 - 29 ft-lb)**

4. Run engine at idle speed for five minutes.
5. Check fluid level and condition. Refer to "Checking A/T Fluid". If fluid is still dirty, repeat step 2. through 5.

## Balancing Wheels

- Adjust wheel balance using road wheel center. Refer to SDS.



## Tire Rotation

### Wheel nuts:

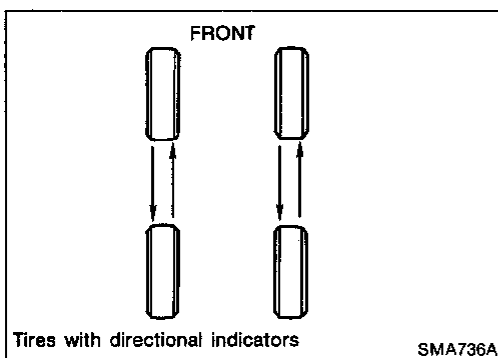
**⌘: 98 - 118 N·m (10 - 12 kg-m, 72 - 87 ft-lb)**

## T-TYPE SPARE TIRE

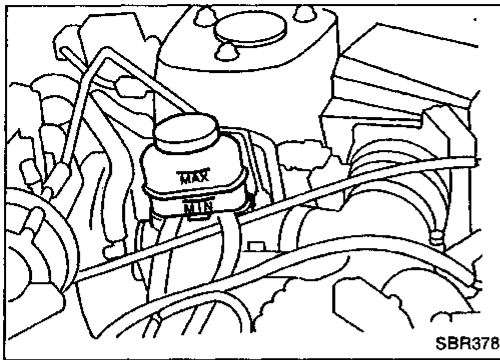
- Do not include the T-type spare tire when rotating the tires.

### Wheel nuts:

**⌘: 98 - 118 N·m (10 - 12 kg-m, 72 - 87 ft-lb)**







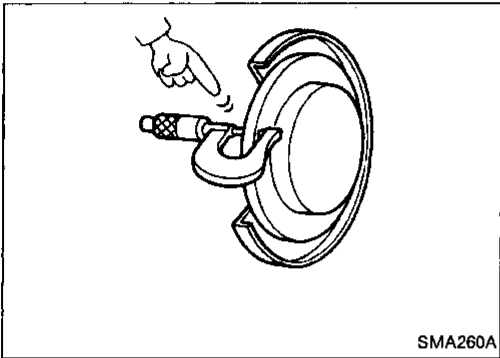
SBR378

## Checking Brake Fluid Level and Leaks

If fluid level is extremely low, check brake system for leaks, and brake pads for wear.

## Checking Brake Lines and Cables

Check brake fluid lines and parking brake cables for improper attachment, leaks, chafing, abrasion, deterioration, etc.



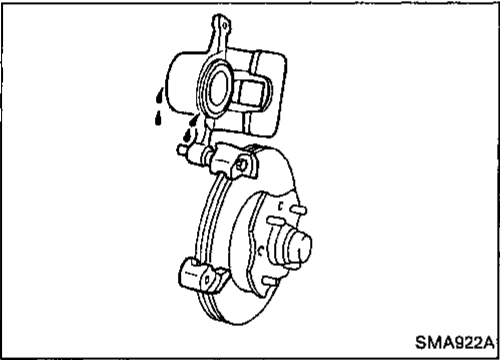
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## Checking Disc Brake

### ROTOR

Check condition and thickness.

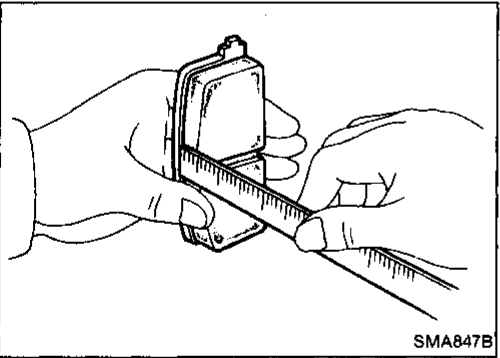
|                    | Unit: mm (in) |             |
|--------------------|---------------|-------------|
|                    | CL25VA        | CL9HA       |
| Standard thickness | 22 (0.87)     | 9 (0.35)    |
| Minimum thickness  | 20.0 (0.787)  | 8.0 (0.315) |



SMA922A

### CALIPER

Check operation and for leakage.

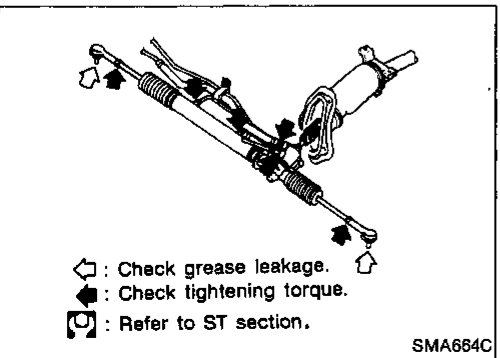


SMA847B

### PAD

Check for wear or damage.

|                    | Unit: mm (in) |             |
|--------------------|---------------|-------------|
|                    | CL25VA        | CL9HA       |
| Standard thickness | 11 (0.43)     | 10 (0.39)   |
| Minimum thickness  | 2.0 (0.079)   | 1.5 (0.059) |



- ◁ : Check grease leakage.
- ◆ : Check tightening torque.
- ⊗ : Refer to ST section.

SMA684C

## Checking Steering Gear and Linkage

### STEERING GEAR

- Check gear housing and boots for looseness, damage or grease leakage.
- Check connection with steering column for looseness.

### STEERING LINKAGE

- Check ball joint, dust cover and other component parts for looseness, wear, damage or grease leakage.

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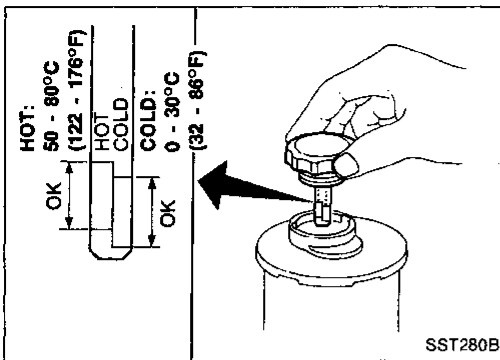
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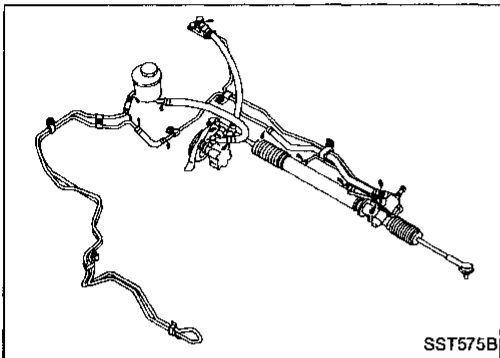
## Checking Power Steering Fluid and Lines

Check fluid level with dipstick.

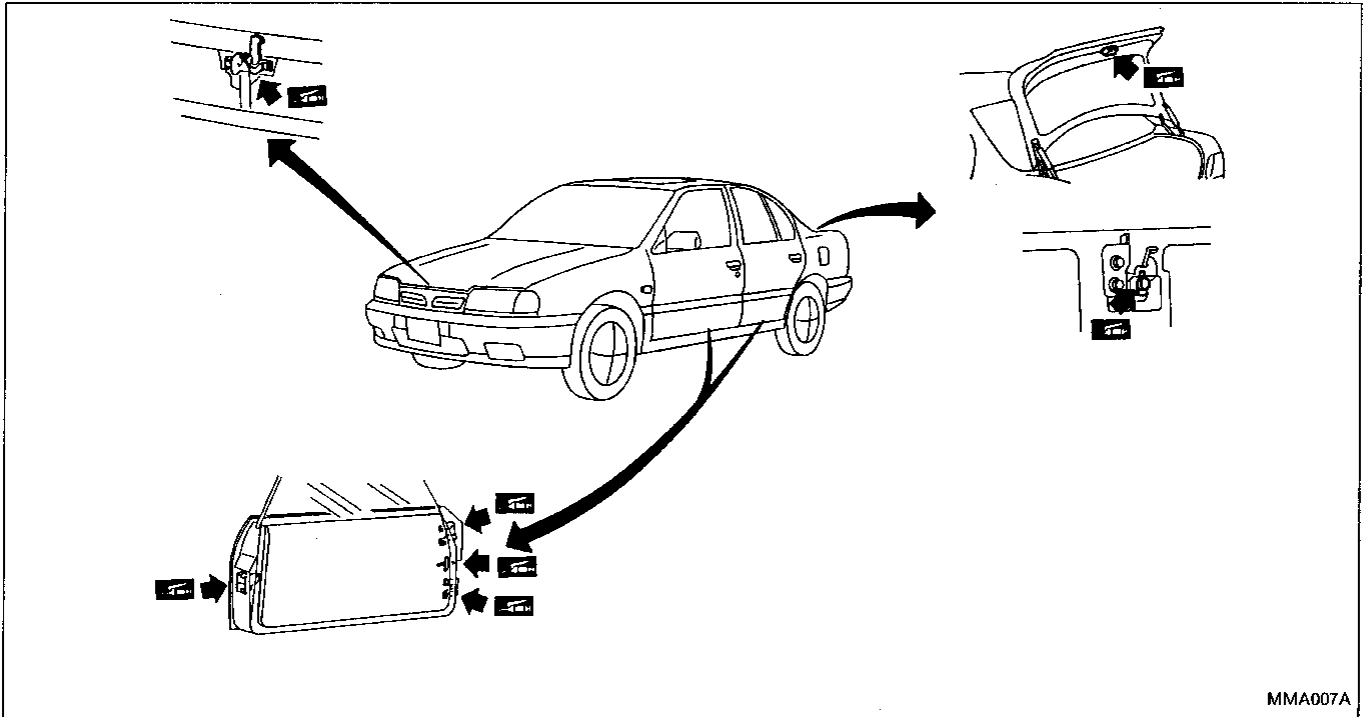
Use "HOT" range at fluid temperatures of 50 to 80°C (122 to 176°F) or "COLD" range at fluid temperatures of 0 to 30°C (32 to 86°F).

### CAUTION:

- Do not overfill.
- Recommended fluid is Automatic Transmission Fluid type DEXRON™II or equivalent.
- Check lines for improper attachment, leaks, cracks, damage, loose connections, chafing and deterioration.



## Lubricating Hood Latches, Locks and Hinges




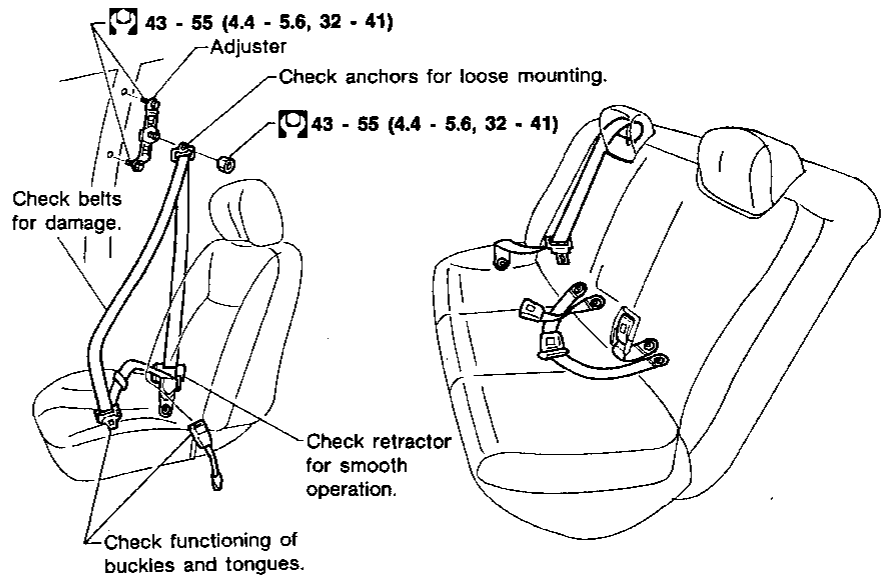
MMA007A


## Checking Seat Belts, Buckles, Retractors, Anchors and Adjusters

### CAUTION:

1. All seat belt assemblies, including retractors and attaching hardware such as guide rail set, etc., should be inspected after any collision. Nissan recommends that all seat belt assemblies in use during a collision be replaced unless the collision was minor and the belts show no damage and continue to operate properly. Seat belt assemblies not in use during a collision should also be inspected and replaced if either damage or improper operation is noted.
2. If the condition of any component of seat belt assembly is questionable, do not have it repaired, but replaced as seat belt assembly.
3. If webbing is cut, frayed, or damaged, replace belt assembly.
4. Do not spill drinks, oil, etc. on inner lap belt buckle. Never oil tongue and buckle.
5. Use a genuine seat belt assembly.

 Anchor bolt  
43 - 55 N·m  
(4.4 - 5.6 kg·m,  
32 - 41 ft·lb)



 : N·m (kg·m, ft·lb)

MMA008AA

# SERVICE DATA AND SPECIFICATIONS (SDS)

## Engine Maintenance

### INSPECTION AND ADJUSTMENT

#### Drive belt deflection

Unit: mm (in)

| Drive belts                        | Used belt deflection           |                             | Deflection of new belt       |
|------------------------------------|--------------------------------|-----------------------------|------------------------------|
|                                    | Limit                          | Deflection after adjustment |                              |
| Alternator                         |                                |                             |                              |
| With air conditioner compressor    | 11.5 - 12.5<br>(0.453 - 0.492) | 7 - 8<br>(0.28 - 0.31)      | 6.5 - 7.5<br>(0.256 - 0.295) |
| Without air conditioner compressor | 12 - 13<br>(0.47 - 0.51)       | 8 - 9<br>(0.31 - 0.35)      | 7 - 8<br>(0.28 - 0.31)       |
| Power steering oil pump            | 6 - 7<br>(0.24 - 0.28)         | 4 - 5<br>(0.16 - 0.20)      | 3.5 - 4.5<br>(0.138 - 0.177) |
| Applied pushing force              | 98 N (10 kg, 22 lb)            |                             |                              |

#### Spark plug

|          |         | Platinum-tipped type         | Conventional type            |
|----------|---------|------------------------------|------------------------------|
| Type     |         |                              |                              |
| Standard |         | PFR5B-11                     | BKR6E                        |
| Hot      |         |                              | BKR5E                        |
| Cold     |         | PFR6B-11,<br>PFR7B-11        | BKR7E                        |
| Plug gap | mm (in) | 1.0 - 1.1<br>(0.039 - 0.043) | 0.8 - 0.9<br>(0.031 - 0.035) |

## Chassis and Body Maintenance

### INSPECTION AND ADJUSTMENT

#### Brake

Unit: mm (in)

|                    |             |
|--------------------|-------------|
| Disc brake         |             |
| Pad                |             |
| Standard thickness |             |
| CL25VA             | 11 (0.43)   |
| CL9HA              | 10 (0.39)   |
| Minimum thickness  |             |
| CL25VA             | 2.0 (0.079) |
| CL9HA              | 1.5 (0.059) |
| Rotor              |             |
| Standard thickness |             |
| CL25VA             | 22 (0.87)   |
| CL9HA              | 9 (0.35)    |
| Minimum thickness  |             |
| CL25VA             | 20 (0.79)   |
| CL9HA              | 8.0 (0.315) |

#### Wheel balance

| Maximum allowable unbalance<br>g (oz) | Dynamic (at rim flange) | 10 (0.35)<br>(one side) |
|---------------------------------------|-------------------------|-------------------------|
|                                       |                         | Static                  |