

**SECTION MA**  
**MAINTENANCE**

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# PREPARATION

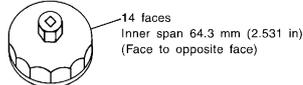
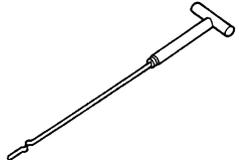
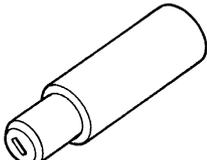
## PREPARATION

PPF:00002

### Special Service Tools

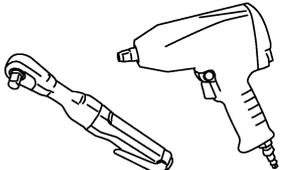
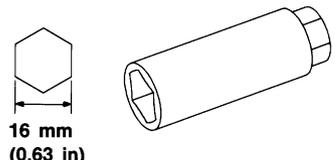
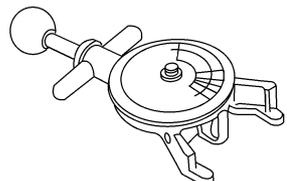
ALS00013

The actual shapes of Kent-Moore tools may differ from those of special service tools illustrated here.

| Tool number<br>(Kent-Moore No.)<br>Tool name   | Description   |
|--|---|
| KV10115801<br>(J38956)<br>Oil filter wrench <div data-bbox="606 457 909 542" style="text-align: center;">  <p>14 faces<br/>Inner span 64.3 mm (2.531 in)<br/>(Face to opposite face)</p> </div> <div data-bbox="829 585 893 606" style="text-align: right;">                         S-NT772                     </div> | Removing and installing oil filter                      |
| (J45475)<br>A/T fluid level gauge <div data-bbox="638 659 877 819" style="text-align: center;">  </div> <div data-bbox="829 819 909 840" style="text-align: right;">                         SCIA1182E                     </div>   | Checking A/T fluid (Use for models up to serial 099999) |
| (J45475-1)<br>Level gauge adapter <div data-bbox="654 893 861 1053" style="text-align: center;">  </div> <div data-bbox="829 1053 909 1074" style="text-align: right;">                         SCIA1280E                     </div>   |   |

## Commercial Service Tools

ALS00014

| Tool name<br>(Kent-Moore No.)   | Description                        |
|---|------------------------------------|
| Power tool <div data-bbox="606 1266 893 1436" style="text-align: center;">  </div> <div data-bbox="829 1436 909 1457" style="text-align: right;">                         PBIC0190E                     </div>                                 | Loosening bolts and nuts           |
| Spark plug wrench <div data-bbox="590 1510 925 1670" style="text-align: center;">  <p>16 mm<br/>(0.63 in)</p> </div> <div data-bbox="829 1670 893 1691" style="text-align: right;">                         S-NT047                     </div> | Removing and installing spark plug |
| Belt tension gauge<br>(BT3373-F) <div data-bbox="590 1723 877 1904" style="text-align: center;">  </div> <div data-bbox="829 1904 893 1925" style="text-align: right;">                         AMA126                     </div>              | Checking drive belt tension        |

# GENERAL MAINTENANCE

## GENERAL MAINTENANCE

PFP:00000

### Explanation of General Maintenance

ALS0001C

General maintenance includes those items which should be checked during the 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.

### OUTSIDE THE VEHICLE

The maintenance items listed here should be performed from time to time, unless otherwise specified.

| Item                               |   | Reference page                                |
|------------------------------------|---|---|
| <b>Tires</b>                       | Check the pressure with a gauge, including the spare, at least once a month and always prior to a long distance trips. Adjust to the specified pressure if necessary. Check carefully for damage, cuts or excessive wear.   | —   |
| <b>Wheel nuts</b>                  | When checking the tires, make sure no nuts are missing, and check for any loose nuts. Tighten if necessary.   | —   |
| <b>Windshield</b>                  | Clean the windshield on a regular basis. Check the windshield at least every six months for cracks or other damage. Repair as necessary.  | —   |
| <b>Tire rotation</b>               | Tires should be rotated every 12,000 km (7,500 miles).  | <a href="#">MA-26</a>                         |
| <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.   | <a href="#">MA-25</a> , <a href="#">FSU-7</a> |
| <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 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. | <a href="#">MA-30</a>                         |
| <b>Lamps</b>                       | Make sure that the headlamps, stop lamps, tail lamps, turn signal lamps, and other lamps are all operating properly and installed securely. Also check headlamp aim. Clean the headlamps on a regular basis.  | —   |

### INSIDE THE VEHICLE

The maintenance items listed here should be checked on a regular basis, such as when performing periodic maintenance, cleaning the vehicle, etc.

| Item                               |   | Reference page        |
|------------------------------------|---|-----------------------|
| <b>Warning lamps and chimes</b>    | Make sure that all warning lamps and chimes are operating properly.   | —                     |
| <b>Windshield wiper and washer</b> | Check that the wipers and washer operate properly and that the wipers do not streak.  | —                     |
| <b>Windshield defroster</b>        | Check that the air comes out of the defroster outlets properly and in sufficient quantity when operating the heater or air conditioner.   | —                     |
| <b>Steering wheel</b>              | Check that it has the specified play. Be sure to check for changes in the steering condition, such as excessive play, hard steering or strange noises.<br><b>Free play: Less than 35 mm (1.38 in)</b>   | —                     |
| <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. | —                     |
| <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.   | <a href="#">MA-30</a> |
| <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>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 the floor mats away from the pedal.<br><br><a href="#">BR-6</a> , <a href="#">BR-18</a> |
| <b>Clutch pedal</b>                            | Make sure the pedal operates smoothly and check that it has the proper free play.<br><br><a href="#">CL-5</a> , " <a href="#">CLUTCH PEDAL</a> "   |
| <b>Parking brake</b>                           | Check that the pedal or lever has the proper travel and make sure that the vehicle is held securely on a fairly steep hill when only the parking brake is applied.<br><br><a href="#">PB-3</a> , <a href="#">PB-4</a>                                  |
| <b>Automatic transmission "Park" mechanism</b> | Check that the lock release button on the selector lever operates properly and smoothly. On a fairly steep hill check that the vehicle is held securely with the selector lever in the "P" position without applying any brakes.<br><br>—              |

### UNDER THE HOOD AND VEHICLE

The maintenance items listed here should be checked periodically (e.g. each time you check the engine oil or refuel).

| Item  | Reference page  |
|---|---|
| <b>Windshield washer fluid</b>              | Check that there is adequate fluid in the tank.<br><br>—  |
| <b>Engine coolant level</b>                 | Check the coolant level when the engine is cold.<br><br><a href="#">MA-15</a>   |
| <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.<br><br>—   |
| <b>Brake and clutch fluid level</b>         | Make sure that the brake and clutch fluid levels are between the "MAX" and "MIN" lines on the reservoir.<br><br><a href="#">MA-27</a> , <a href="#">MA-21</a>   |
| <b>Battery</b>                              | Check the fluid level in each cell. It should be between the "MAX" and "MIN" lines. Vehicles operated in high temperatures or under severe conditions require frequent checks of the battery fluid level.<br><br>—  |
| <b>Engine drive belts</b>                   | Make sure that no belt is frayed, worn, cracked or oily.<br><br><a href="#">MA-13</a>   |
| <b>Engine oil level</b>                     | Check the level on the dipstick after parking the vehicle on a level spot and turning off the engine.<br><br><a href="#">MA-17</a>  |
| <b>Power steering fluid level and lines</b> | Check the level on the dipstick with the engine off. Check the lines for improper attachment, leaks, cracks, etc.<br><br><a href="#">MA-28</a>  |
| <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.<br><br><a href="#">MA-21</a>   |
| <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.<br><br>— |
| <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.<br><br>—  |

# PERIODIC MAINTENANCE

## PERIODIC MAINTENANCE

PFP:00026

### Introduction of Periodic Maintenance

ALS0001D

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 the driving habits frequently include one or more of the following driving conditions: <ul style="list-style-type: none"> <li>● Repeated short trips of less than 5 miles (8 km).</li> <li>● Repeated short trips of less than 10 miles (16 km) with outside temperatures remaining below freezing.</li> <li>● Operating in hot weather in stop-and-go “rush hour” traffic.</li> <li>● Extensive idling and/or low speed driving for long distances, such as police, taxi or door-to-door delivery use.</li> <li>● Driving in dusty conditions.</li> <li>● Driving on rough, muddy, or salt spread roads.</li> <li>● Towing a trailer, using a camper or a car-top carrier.</li> </ul> | Emission Control System Maintenance | <a href="#">MA-7</a> |
|            |  | Chassis and Body Maintenance        | <a href="#">MA-8</a> |
| Schedule 2 | Follow Periodic Maintenance Schedule 2 if none of driving conditions shown in Schedule 1 apply to the driving habits.  | Emission Control System Maintenance | <a href="#">MA-9</a> |
|            |  | Chassis and Body Maintenance        | <a href="#">MA-9</a> |

# PERIODIC MAINTENANCE

## Schedule 1 EMISSION CONTROL SYSTEM MAINTENANCE

ALS0001E

Abbreviations: R = Replace. I = Inspect. Correct or replace if necessary. [ ]: At the mileage intervals only

| MAINTENANCE OPERATION  |                                      | MAINTENANCE INTERVAL                      |                   |                    |                  |                     |                    |                     |                  | Reference Section - Page or - Content Title                 |
|--|--------------------------------------|---|-------------------|--------------------|------------------|---------------------|--------------------|---------------------|------------------|---|
| Perform at number of miles, kilometers or months, whichever comes first.   | Miles x 1,000 (km x 1,000)<br>Months | 3.75<br>(6)<br>3                          | 7.50<br>(12)<br>6 | 11.25<br>(18)<br>9 | 15<br>(24)<br>12 | 18.75<br>(30)<br>15 | 22.5<br>(36)<br>18 | 26.25<br>(42)<br>21 | 30<br>(48)<br>24 |   |
| Drive belts  | NOTE (1)                             |   |                   |                    |                  |                     |                    |                     |                  | <a href="#">MA-13</a>                                       |
| Air cleaner filter   | NOTE (2)                             |   |                   |                    |                  |                     |                    |                     | [R]              | <a href="#">MA-17</a>                                       |
| EVAP vapor lines   |                                      |   |                   |                    |                  |                     |                    |                     | I*               | <a href="#">MA-20</a>                                       |
| Fuel lines   |                                      |   |                   |                    |                  |                     |                    |                     | I*               | <a href="#">MA-17</a>                                       |
| Fuel filter  | NOTE (3)                             |   |                   |                    |                  |                     |                    |                     |                  | -   |
| Engine coolant   | NOTE (4)                             |   |                   |                    |                  |                     |                    |                     |                  | <a href="#">MA-15</a>                                       |
| Engine oil   |                                      | R   | R                 | R                  | R                | R                   | R                  | R                   | R                | <a href="#">MA-17</a>                                       |
| Engine oil filter (Use part No. 15208 31U00 or 15208 65F00 or equivalent.) |                                      | R   | R                 | R                  | R                | R                   | R                  | R                   | R                | <a href="#">MA-18</a>                                       |
| Spark plugs (PLATINUM-TIPPED type)   |                                      | Replace every 105,000 miles (169,000 km). |                   |                    |                  |                     |                    |                     |                  | <a href="#">MA-19</a>                                       |
| Intake & exhaust valve clearance*  | NOTE (5)                             |   |                   |                    |                  |                     |                    |                     |                  | <a href="#">EM-91.</a><br><a href="#">"Valve Clearance"</a> |

| MAINTENANCE OPERATION  |                                      | MAINTENANCE INTERVAL                      |                    |                     |                  |                     |                    |                     |                  | Reference Section - Page or - Content Title                 |                       |
|--|--------------------------------------|---|--------------------|---------------------|------------------|---------------------|--------------------|---------------------|------------------|---|-----------------------|
| Perform at number of miles, kilometers or months, whichever comes first.   | Miles x 1,000 (km x 1,000)<br>Months | 33.75<br>(54)<br>27                       | 37.5<br>(60)<br>30 | 41.25<br>(66)<br>33 | 45<br>(72)<br>36 | 48.75<br>(78)<br>39 | 52.5<br>(84)<br>42 | 56.25<br>(90)<br>45 | 60<br>(96)<br>48 |   |                       |
| Drive belts  | NOTE (1)                             |   |                    |                     |                  |                     |                    |                     |                  | I*  | <a href="#">MA-13</a> |
| Air cleaner filter   | NOTE (2)                             |   |                    |                     |                  |                     |                    |                     | [R]              | <a href="#">MA-17</a>                                       |                       |
| EVAP vapor lines   |                                      |   |                    |                     |                  |                     |                    |                     | I*               | <a href="#">MA-20</a>                                       |                       |
| Fuel lines   |                                      |   |                    |                     |                  |                     |                    |                     | I*               | <a href="#">MA-17</a>                                       |                       |
| Fuel filter  | NOTE (3)                             |   |                    |                     |                  |                     |                    |                     |                  | -   |                       |
| Engine coolant   | NOTE (4)                             |   |                    |                     |                  |                     |                    |                     | R*               | <a href="#">MA-15</a>                                       |                       |
| Engine oil   |                                      | R   | R                  | R                   | R                | R                   | R                  | R                   | R                | <a href="#">MA-17</a>                                       |                       |
| Engine oil filter (Use part No. 15208 31U00 or 15208 65F00 or equivalent.) |                                      | R   | R                  | R                   | R                | R                   | R                  | R                   | R                | <a href="#">MA-18</a>                                       |                       |
| Spark plugs (PLATINUM-TIPPED type)   |                                      | Replace every 105,000 miles (169,000 km). |                    |                     |                  |                     |                    |                     |                  | <a href="#">MA-19</a>                                       |                       |
| Intake & exhaust valve clearance*  | NOTE (5)                             |   |                    |                     |                  |                     |                    |                     |                  | <a href="#">EM-91.</a><br><a href="#">"Valve Clearance"</a> |                       |

**NOTE:**

- (1) After 60,000 miles (96,000 km) or 48 months, inspect every 15,000 miles (24,000 km) or 12 months. Replace the drive belts if found damaged.
- (2) If operating mainly in dusty conditions, more frequent maintenance may be required.
- (3) Maintenance-free item. For service procedures, refer to FL section.
- (4) After 60,000 miles (96,000 km) or 48 months, replace every 30,000 miles (48,000 km) or 24 months.
- (5) If valve noise increases, inspect valve clearance.

\* 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.

# PERIODIC MAINTENANCE

## CHASSIS AND BODY MAINTENANCE

Abbreviations: R = Replace. I = Inspect. Correct or replace if necessary.

| MAINTENANCE OPERATION  |                                   | MAINTENANCE INTERVAL |                |                 |               |                  |                 |                  |               | Reference Section - Page or - Content Title   |
|--|-----------------------------------|----------------------|----------------|-----------------|---------------|------------------|-----------------|------------------|---------------|---|
| Perform at number of miles, kilometers or months, whichever comes first.                           | Miles x 1,000 (km x 1,000) Months | 3.75 (6)<br>3        | 7.50 (12)<br>6 | 11.25 (18)<br>9 | 15 (24)<br>12 | 18.75 (30)<br>15 | 22.5 (36)<br>18 | 26.25 (42)<br>21 | 30 (48)<br>24 |   |
| Brake lines & cables   |                                   |                      |                |                 | I             |                  |                 |                  | I             | <a href="#">MA-27</a>   |
| Brake pads & rotors  |                                   |                      | I              |                 | I             |                  | I               |                  | I             | <a href="#">MA-27</a>   |
| Automatic transmission fluid, manual transmission gear oil, transfer fluid & differential gear oil | NOTE (1)                          |                      |                |                 | I             |                  |                 |                  | I             | <a href="#">MA-21</a> , <a href="#">MA-24</a> , <a href="#">MA-21</a> , <a href="#">MA-23</a> |
| Drive shaft boots and propeller shaft (AWD models)   |                                   |                      | I              |                 | I             |                  | I               |                  | I             | <a href="#">MA-29</a> , <a href="#">MA-24</a>   |
| Steering gear & linkage, axle & suspension parts   |                                   |                      | I              |                 | I             |                  | I               |                  | I             | <a href="#">MA-28</a> , <a href="#">RSU-5</a> , <a href="#">MA-29</a>                         |
| Tire rotation  | NOTE (2)                          |                      |                |                 |               |                  |                 |                  |               | <a href="#">MA-4</a> , <a href="#">MA-26</a>  |
| Exhaust system   |                                   |                      | I              |                 | I             |                  | I               |                  | I             | <a href="#">MA-21</a>   |
| In-cabin microfilter   |                                   |                      |                |                 | R             |                  |                 |                  | R             | <a href="#">ATC-129</a>   |

| MAINTENANCE OPERATION  |                                   | MAINTENANCE INTERVAL |                 |                  |               |                  |                 |                  |               | Reference Section - Page or - Content Title   |
|--|-----------------------------------|----------------------|-----------------|------------------|---------------|------------------|-----------------|------------------|---------------|---|
| Perform at number of miles, kilometers or months, whichever comes first.                           | Miles x 1,000 (km x 1,000) Months | 33.75 (54)<br>27     | 37.5 (60)<br>30 | 41.25 (66)<br>33 | 45 (72)<br>36 | 48.75 (78)<br>39 | 52.5 (84)<br>42 | 56.25 (90)<br>45 | 60 (96)<br>48 |   |
| Brake lines & cables   |                                   |                      |                 |                  | I             |                  |                 |                  | I             | <a href="#">MA-27</a>   |
| Brake pads & rotors  |                                   |                      | I               |                  | I             |                  | I               |                  | I             | <a href="#">MA-27</a>   |
| Automatic transmission fluid, manual transmission gear oil, transfer fluid & differential gear oil | NOTE (1)                          |                      |                 |                  | I             |                  |                 |                  | I             | <a href="#">MA-21</a> , <a href="#">MA-24</a> , <a href="#">MA-21</a> , <a href="#">MA-23</a> |
| Drive shaft boots and propeller shaft (AWD models)   |                                   |                      | I               |                  | I             |                  | I               |                  | I             | <a href="#">MA-29</a> , <a href="#">MA-24</a>   |
| Steering gear & linkage, axle & suspension parts   |                                   |                      | I               |                  | I             |                  | I               |                  | I             | <a href="#">MA-28</a> , <a href="#">RSU-5</a> , <a href="#">MA-29</a>                         |
| Tire rotation  | NOTE (2)                          |                      |                 |                  |               |                  |                 |                  |               | <a href="#">MA-4</a> , <a href="#">MA-26</a>  |
| Exhaust system   |                                   |                      | I               |                  | I             |                  | I               |                  | I             | <a href="#">MA-21</a>   |
| In-cabin microfilter   |                                   |                      |                 |                  | R             |                  |                 |                  | R             | <a href="#">ATC-129</a>   |

**NOTE:**

(1) 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. **Using automatic transmission fluid other than Genuine Nissan Matic J ATF will cause deterioration in driveability and automatic transmission durability, and may damage the automatic transmission, which is not covered by the INFINITI new vehicle limited warranty.**

(2) Refer to "Tire rotation" under the "General maintenance" heading earlier in this section.

# PERIODIC MAINTENANCE

## Schedule 2 EMISSION CONTROL SYSTEM MAINTENANCE

ALS0001F

Abbreviations: R = Replace. I = Inspect. Correct or replace if necessary. [ ]: At the mileage intervals only

| MAINTENANCE OPERATION  | Miles x 1,000<br>(km x 1,000)<br>Months | MAINTENANCE INTERVAL                      |                  |                    |                  |                    |                  |                    |                  | Reference Section - Page or - Content Title |
|--|---|---|------------------|--------------------|------------------|--------------------|------------------|--------------------|------------------|---|
|  |   | 7.5<br>(12)<br>6                          | 15<br>(24)<br>12 | 22.5<br>(36)<br>18 | 30<br>(48)<br>24 | 37.5<br>(60)<br>30 | 45<br>(72)<br>36 | 52.5<br>(84)<br>42 | 60<br>(96)<br>48 |   |
| Perform at number of miles, kilometers or months, whichever comes first.   |   |   |                  |                    |                  |                    |                  |                    |                  |   |
| Drive belts  | NOTE (1)                                |   |                  |                    |                  |                    |                  |                    | I*               | <a href="#">MA-13</a>                       |
| Air cleaner filter   |   |   |                  |                    | [R]              |                    |                  |                    | [R]              | <a href="#">MA-17</a>                       |
| EVAP vapor lines   |   |   |                  |                    | I*               |                    |                  |                    | I*               | <a href="#">MA-20</a>                       |
| Fuel lines   |   |   |                  |                    | I*               |                    |                  |                    | I*               | <a href="#">MA-17</a>                       |
| Fuel filter  | NOTE (2)                                |   |                  |                    |                  |                    |                  |                    |                  | -   |
| Engine coolant   | NOTE (3)                                |   |                  |                    |                  |                    |                  |                    | R*               | <a href="#">MA-15</a>                       |
| Engine oil   |   | R   | R                | R                  | R                | R                  | R                | R                  | R                | <a href="#">MA-17</a>                       |
| Engine oil filter (Use part No. 15208 31U00 or 15208 65F00 or equivalent.) |   | R   | R                | R                  | R                | R                  | R                | R                  | R                | <a href="#">MA-18</a>                       |
| Spark plugs (PLATINUM-TIPPED type)   |   | Replace every 105,000 miles (169,000 km). |                  |                    |                  |                    |                  |                    |                  | <a href="#">MA-19</a>                       |
| Intake & exhaust valve clearance*  | NOTE (4)                                |   |                  |                    |                  |                    |                  |                    |                  | <a href="#">EM-91, "Valve Clearance"</a>    |

**NOTE:**

(1) After 60,000 miles (96,000 km) or 48 months, inspect every 15,000 miles (24,000 km) or 12 months. Replace the drive belts if found damaged.

(2) Maintenance-free item. For service procedures, refer to FL section.

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

(4) If valve noise increases, inspect valve clearance.

\* 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

## CHASSIS AND BODY MAINTENANCE

Abbreviations: R = Replace. I = Inspect. Correct or replace if necessary.

| MAINTENANCE OPERATION  | Miles x 1,000<br>(km x 1,000)<br>Months | MAINTENANCE INTERVAL |                  |                    |                  |                    |                  |                    |                  | Reference Section - Page or - Content Title |
|--|---|----------------------|------------------|--------------------|------------------|--------------------|------------------|--------------------|------------------|---|
|  |   | 7.5<br>(12)<br>6     | 15<br>(24)<br>12 | 22.5<br>(36)<br>18 | 30<br>(48)<br>24 | 37.5<br>(60)<br>30 | 45<br>(72)<br>36 | 52.5<br>(84)<br>42 | 60<br>(96)<br>48 |   |
| Perform at number of miles, kilometers or months, whichever comes first.                           |   |                      |                  |                    |                  |                    |                  |                    |                  |   |
| Brake lines & cables   |   |                      | I                |                    | I                |                    | I                |                    | I                | <a href="#">MA-27</a>                       |
| Brake pads & rotors  |   |                      | I                |                    | I                |                    | I                |                    | I                | <a href="#">MA-27</a>                       |
| Automatic transmission fluid, manual transmission gear oil, transfer fluid & differential gear oil | NOTE (1)                                |                      | I                |                    | I                |                    | I                |                    | I                | <a href="#">MA-21, MA-24, MA-23, MA-21</a>  |
| Drive shaft boots and propeller shaft (AWD models)   |   |                      | I                |                    | I                |                    | I                |                    | I                | <a href="#">MA-29, MA-24</a>                |
| Steering gear & linkage, axle & suspension parts   |   |                      |                  |                    | I                |                    |                  |                    | I                | <a href="#">MA-28, RSU-5, MA-29</a>         |
| Tire rotation  | NOTE (2)                                |                      |                  |                    |                  |                    |                  |                    |                  | <a href="#">MA-4, MA-26</a>                 |
| Exhaust system   |   |                      |                  |                    | I                |                    |                  |                    | I                | <a href="#">MA-21</a>                       |
| In-cabin microfilter   |   |                      | R                |                    | R                |                    | R                |                    | R                | <a href="#">ATC-129</a>                     |

## PERIODIC MAINTENANCE

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**NOTE:**

**(1) Using automatic transmission fluid other than Genuine Nissan Matic J ATF will cause deterioration in driveability and automatic transmission durability, and may damage the automatic transmission, which is not covered by the INFINITI new vehicle limited warranty.**

(2) Refer to "Tire rotation" under the "General maintenance" heading earlier in this section.

# RECOMMENDED FLUIDS AND LUBRICANTS

## RECOMMENDED FLUIDS AND LUBRICANTS

PPF:00000

### Fluids and Lubricants

ALS0001G

|                                   |                           | Capacity (Approximate) |             |       | Recommended Fluids/Lubricants   |
|-----------------------------------|---------------------------|------------------------|-------------|-------|---|
|                                   |                           | US measure             | Imp measure | Liter |   |
| Engine oil<br>Drain and<br>refill | With oil filter change    | 5 qt                   | 4-1/8 qt    | 4.7   | <ul style="list-style-type: none"> <li>● API Certification Mark*1</li> <li>● API grade SG/SH, Energy Conserving I &amp; II or API grade SJ or SL, Energy Conserving*1</li> <li>● ILSAC grade GF-I, GF-II &amp; GF-III *1</li> </ul> |
|                                   | Without oil filter change | 4-5/8 qt               | 3-7/8 qt    | 4.4   |   |
| Dry engine (Overhaul)             |                           | 5-3/4 qt               | 4-3/4 qt    | 5.4   |   |
| Cooling system                    | With reservoir tank       | 9-1/4 qt               | 7-5/8 qt    | 8.7   | Genuine Nissan Long Life Antifreeze/ Coolant or equivalent  |
|                                   | Reservoir tank            | 7/8 qt                 | 3/4 qt      | 0.8   |   |
| Manual transmission gear oil      |                           | 3-1/8 qt               | 2-1/2 qt    | 2.9   | Genuine Nissan Manual Transmission Fluid (MTF) HQ Multi 75W-85 or API GL-4, Viscosity SAE 75W-85 or 75W-90  |
| Automatic transmission fluid      |                           | 10-7/8 qt              | 9-1/8 qt    | 10.3  | Genuine Nissan Matic J ATF *2   |
| Transfer fluid                    |                           | 2-5/8 pt               | 2-1/4 pt    | 1.25  | Genuine Nissan Matic D ATF (Continental U.S. and Alaska) or Canada NISSAN Automatic Transmission Fluid *3   |
| Power steering fluid (PSF)        |                           | 1-1/8 qt               | 7/8 qt      | 1.0   | Genuine NISSAN PSF or equivalent *4   |
| Brake (and clutch) fluid          |                           | —                      | —           | —     | Genuine Nissan Super Heavy Duty Brake Fluid*5 or equivalent DOT 3 (US FMVSS No. 116)  |
| Differential gear oil             | Front                     | 1-3/8 pt               | 1-1/8 pt    | 0.65  | API GL-5, Viscosity SAE 80W-90 *6   |
|                                   | Rear                      | 3 pt                   | 2-1/2 pt    | 1.4   |   |
| Multi-purpose grease              |                           | —                      | —           | —     | NLGI No. 2 (Lithium soap base)  |
| Windshield washer fluid           |                           | —                      | —           | —     | Genuine Nissan Windshield Washer Concentrate Cleaner & Antifreeze Fluid or equivalent   |

\*1: For further details, see "SAE Viscosity Number".

**\*2: Using automatic transmission fluid other than Genuine Nissan Matic J ATF will cause deterioration in driveability and automatic transmission durability, and may damage the automatic transmission, which is not covered by the INFINITI new vehicle limited warranty.**

\*3: DEXRON™ III/ MERCON™ or equivalent may also be used. Outside the continental United States and Alaska contact an INFINITI dealer for more information regarding suitable fluids, including recommended brand(s) of DEXRON™ III/ MERCON™ automatic transmission fluid.

\*4: For Canada, NISSAN Automatic Transmission Fluid (ATF), DEXRON™ III/ MERCON™, or equivalent ATF may also be used.

\*5: Available in mainland U.S.A. through your INFINITI dealer.

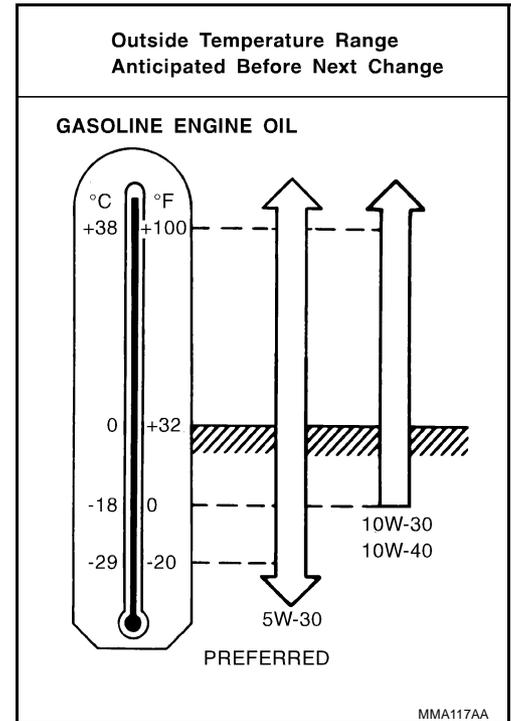
\*6: For hot climates, viscosity SAE 90 is suitable for ambient temperatures above 0°C (32°F).

# RECOMMENDED FLUIDS AND LUBRICANTS

ALS0001H

## SAE Viscosity Number GASOLINE ENGINE OIL

SAE 5W-30 viscosity oil is preferred for all temperatures. SAE 10W-30 and 10W-40 viscosity oil may be used if the ambient temperature is above -18°C(0°F)



## Anti-Freeze Coolant Mixture Ratio

ALS000A2

The engine cooling system is filled at the factory with a high-quality, year-round, anti-freeze coolant solution. The anti-freeze solution contains rust and corrosion inhibitors. Therefore, additional cooling system additives are not necessary.

### **CAUTION:**

**When adding or replacing coolant, be sure to use only Genuine Nissan Long Life Antifreeze/ Coolant or equivalent with the proper mixture ratio of 50% anti-freeze and 50% demineralized water/distilled water.**

**Other types of coolant solutions may damage your cooling system.**

| Outside temperature down to |     | Anti-freeze | Demineralized water or distilled water |
|-----------------------------|-----|-------------|--|
| °C                          | °F  |             |  |
| -35                         | -30 | 50%         | 50%                                    |

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# ENGINE MAINTENANCE

## ENGINE MAINTENANCE

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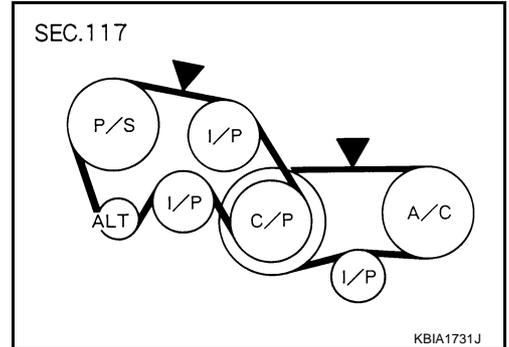
### Checking Drive Belts

ALS00010

#### WARNING:

Be sure to perform when the engine is stopped.

1. Inspect belts for cracks, fraying, wear and oil. If necessary, replace.
2. Inspect drive belt deflection or tension at a point on the belt mid-way between pulleys.
  - Inspection should be done only when engine is cold, or over 30 minutes after engine is stopped.
  - Measure the belt tension with belt tension gauge (commercial service tool: BT3373-F or equivalent) at points marked ▼ shown in the figure.
  - When measuring deflection, apply 98 N (10 kg, 22 lb) at the ▼ marked point.
  - Adjust if belt deflection exceeds the limit or if belt tension is not within specifications.



#### CAUTION:

- When checking belt deflection or tension immediately after installation, first adjust it to the specified value. Then, after turning the crankshaft two turns or more, re-adjust to the specified value to avoid variation in deflection between pulleys.
- Tighten idler pulley lock nut by hand and measure the deflection or tension without looseness.

#### Belt deflection and tension

|   | Deflection adjustment |                         | Unit: mm (in)                | Tension adjustment* |  | Unit: N (kg, lb)                         |
|---|-----------------------|-------------------------|------------------------------|---------------------|--|--|
|   | Used belt             |                         | New belt                     | Used belt           |  | New belt                                 |
|   | Limit                 | After adjustment        |                              | Limit               | After adjustment                         |  |
| Alternator and power steering oil pump belt | 7 (0.28)              | 4 - 5<br>(0.16 - 0.20)  | 3.5 - 4.5<br>(0.138 - 0.177) | 294 (30, 66)        | 730 - 818<br>(74.5 - 83.5,<br>164 - 184) | 838 - 926<br>(85.5 - 94.5,<br>188 - 208) |
| A/C compressor belt                         | 12 (0.47)             | 9 - 10<br>(0.35 - 0.39) | 8 - 9<br>(0.31 - 0.35)       | 196 (20, 44)        | 348 - 436<br>(35.5 - 44.5,<br>78 - 98)   | 470 - 559<br>(48 - 57,<br>106 - 126)     |
| Applied pushing force                       | 98 N (10 kg, 22 lb)   |                         |                              | —                   |  |  |

\* : If belt tension gauge cannot be installed at check points shown, check drive belt tension at different location on the belt.

# ENGINE MAINTENANCE

## Tension Adjustment

ALS0001P

| Portion                                     | Belt tightening method for adjustment |
|---|---------------------------------------|
| Alternator and power steering oil pump belt | Adjusting bolt on idler pulley        |
| A/C compressor belt                         | Adjusting bolt on idler pulley        |

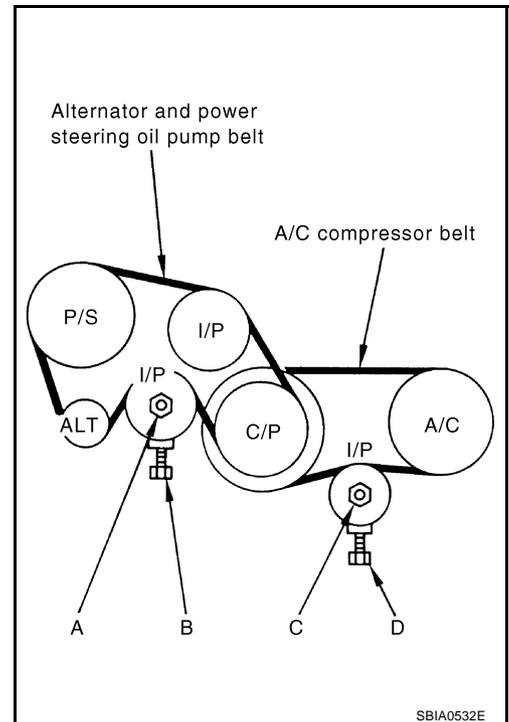
### CAUTION:

- When belt is replaced with a new one, adjust it to value for “New belt” to accommodate for insufficient adaptability with pulley grooves.
- When deflection or tension of belt being used exceeds “Limit”, adjust it to value for “After adjustment”.
- When checking belt deflection or tension immediately after installation, first adjust it to the specified value. Then, after turning crankshaft two turns or more, re-adjust to the specified value to avoid variation in deflection between pulleys.
- When installing belt, make sure that it is correctly engaged with pulley groove.
- Keep oil and water away from belt.
- Do not twist or bend belt excessively.

### ALTERNATOR AND POWER STEERING OIL PUMP BELT

1. Remove undercover with power tool.
2. Loosen idler pulley lock nut (A) and adjust tension by turning adjusting bolt (B).
  - For specified belt tension, refer to [EM-14, "Checking Drive Belts"](#) .
3. Tighten nut (A).

 : 34.8 N-m (3.5 kg-m, 26 ft-lb)



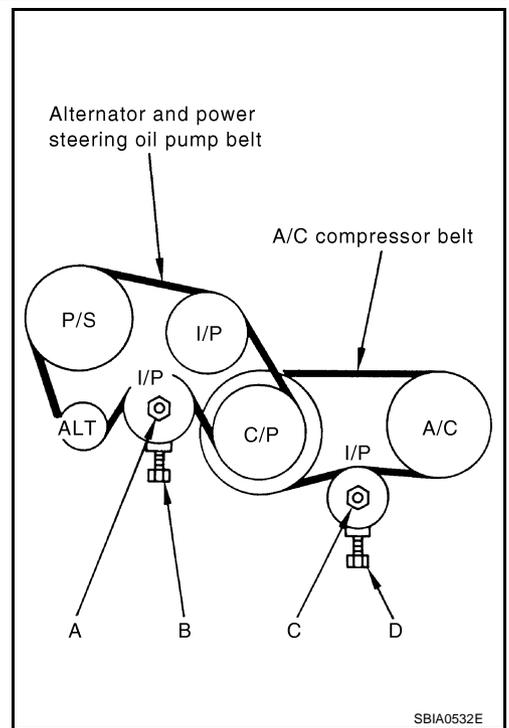
### A/C COMPRESSOR BELT

1. Remove undercover with power tool.

# ENGINE MAINTENANCE

- Loosen idler pulley lock nut (C) and adjust tension by turning adjusting bolt (D).
  - For specified belt tension, refer to [EM-14, "Checking Drive Belts"](#).
- Tighten nut (C).

 : 34.8 N·m (3.5 kg-m, 26 ft-lb)



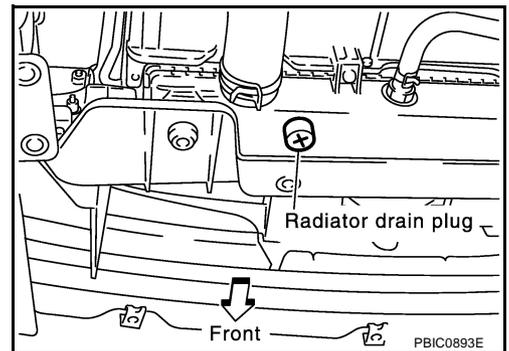
## Changing Engine Coolant

### WARNING:

- To avoid being scalded, do not change engine coolant when engine is hot.
- Wrap a thick cloth around radiator cap and carefully remove radiator cap. First, turn cap a quarter of a turn to release built-up pressure. Then turn radiator cap all the way.
- Be careful not to allow engine coolant to contact drive belts.

### DRAINING ENGINE COOLANT

- Remove undercover with power tool.
- Open radiator drain plug at the bottom of radiator, and then remove radiator cap.



When drain all of engine coolant in the system, open water drain plugs on engine cylinder block. Refer to [EM-122, "DISASSEMBLY"](#).

- Remove reservoir tank, drain engine coolant and clean tank before installing.
- Check drained engine coolant for contaminants such as rust, corrosion or discoloration. If contaminated, flush the engine cooling system. Refer to [MA-17, "FLUSHING COOLING SYSTEM"](#).

### REFILLING ENGINE COOLANT

- Install reservoir tank, and radiator drain plug.

### CAUTION:

Be sure to clean drain plug and install with new O-ring.

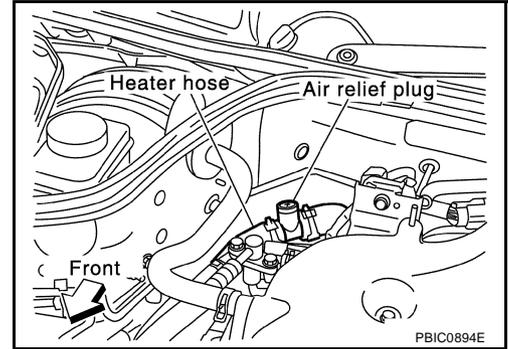
Radiator drain plug:

 : 1.2 N·m (0.12 kg-m, 11 in-lb)

# ENGINE MAINTENANCE

If cylinder block drain plugs are removed, close and tighten them. Refer to [EM-127, "ASSEMBLY"](#) .

- Remove air relief plug on heater hose.



- Fill radiator and reservoir tank to specified level.

- Pour engine coolant through engine coolant filler neck slowly of less than 2 ℓ (2-1/8 US qt, 1-3/4 Imp qt) a minute to allow air in system to escape.
- Use Genuine Nissan Long Life Antifreeze/ Coolant or equivalent mixed with water (distilled or demineralized). Refer to [MA-11, "RECOMMENDED FLUIDS AND LUBRICANTS"](#) .

**Engine coolant capacity (Approximate)  
(with reservoir tank at "MAX" level)**

**: 8.7 ℓ (9-1/4 US qt, 7-5/8 Imp qt)**

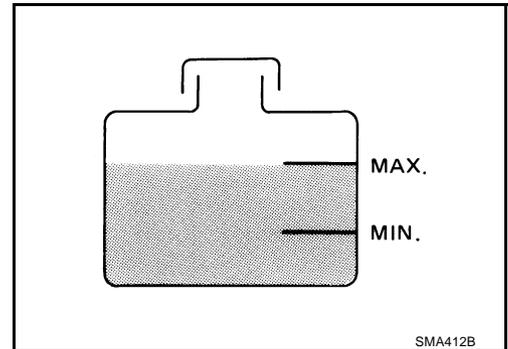
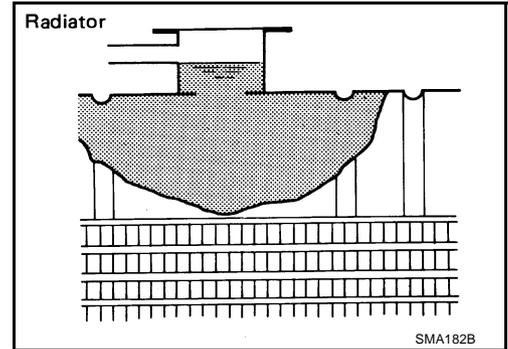
**Reservoir tank capacity (at "MAX" level)**

**: 0.8 ℓ (7/8 US qt, 3/4 Imp qt)**

- When engine coolant overflows air relief hole on heater hose, install air relief plug with new O-ring.

**Air relief plug:**

 **: 1.2 N·m (0.12 kg·m, 11 in·lb)**



- Warm up engine to normal operating temperature with radiator cap installed.
  - Run engine at 3,000 rpm for 10 seconds and return to idle speed.
    - Repeat two or three times.
- CAUTION:**  
**Watch water temperature gauge so as not to overheat engine.**
- Stop engine and cool down to less than approximately 50°C (122°F).
    - Cool down using a fan to reduce the time.
    - If necessary, refill radiator up to filler neck with engine coolant.
  - Refill reservoir tank to "MAX" level line with engine coolant.
  - Repeat steps 3 through 6 two or more times with radiator cap installed until engine coolant level no longer drops.
  - Check cooling system for leaks with engine running.
  - Warm up engine, and check for sound of engine coolant flow while running engine from idle up to 3,000 rpm with heater temperature controller set at several position between "COOL" and "WARM".
    - Sound may be noticeable at heater unit.
  - Repeat step 10 three times.
  - If sound is heard, bleed air from cooling system by repeating step 3 through 6 until engine coolant level no longer drops.

# ENGINE MAINTENANCE

- Clean excess engine coolant from engine.

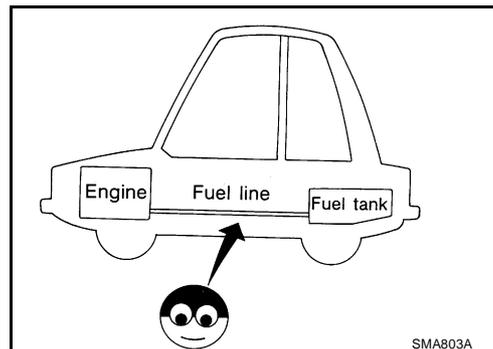
## FLUSHING COOLING SYSTEM

1. Fill radiator with water until water spills from the air relief hole, then close air relief plug. Fill radiator and reservoir tank with water and reinstall radiator cap.
2. Run engine and warm it up to normal operating temperature.
3. Rev engine two or three times under no-load.
4. Stop engine and wait until it cools down.
5. Drain water from the system. Refer to [MA-15, "DRAINING ENGINE COOLANT"](#) .
6. Repeat steps 1 through 5 until clear water begins to drain from radiator.

## Checking Fuel Lines

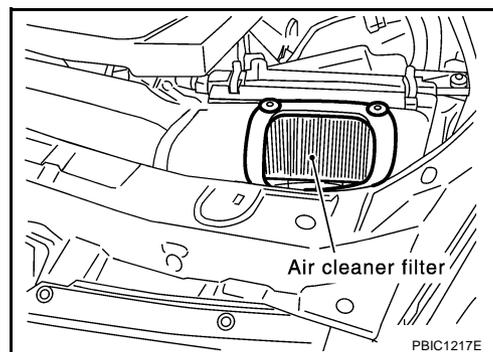
Inspect fuel lines, fuel filler cap and fuel tank for improper attachment, leaks, cracks, damage, loose connections, chafing or deterioration.

If necessary, repair or replace damaged parts.



## Changing Air Cleaner Filter VISCOUS PAPER TYPE

The viscous paper type filter does not need cleaning between replacement intervals. Refer to [MA-6, "PERIODIC MAINTENANCE"](#) .



## Changing Engine Oil

### WARNING:

- Be careful not to burn yourself, as the engine oil may be hot.
  - Prolonged and repeated contact with used engine oil may cause skin cancer; try to avoid direct skin contact with used engine oil. If skin contact is made, wash thoroughly with soap or hand cleaner as soon as possible.
1. Warm up engine, put vehicle horizontally and check for oil leakage from engine components. Refer to [LU-6, "OIL LEAKAGE"](#) .
  2. Stop engine and wait for 10 minutes.
  3. Loosen oil filler cap and then remove drain plug.
  4. Drain engine oil.
  5. Install drain plug with new washer. Refer to [EM-30, "OIL PAN AND OIL STRAINER"](#) .

### CAUTION:

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

Oil pan drain plug:

 : 34.3 N-m (3.5 kg-m, 25 ft-lb)

6. Refill with new engine oil.

# ENGINE MAINTENANCE

## Engine oil specification and viscosity:

Refer to [MA-11, "RECOMMENDED FLUIDS AND LUBRICANTS"](#) .

## Engine oil capacity (Approximate):

Unit: ℓ (US qt, Imp qt)

|                       |                           |                    |
|-----------------------|---------------------------|--------------------|
| Drain and refill      | With oil filter change    | 4.7 (5, 4-1/8)     |
|                       | Without oil filter change | 4.4 (4-5/8, 3-7/8) |
| Dry engine (Overhaul) |                           | 5.4 (5-3/4, 4-3/4) |

### CAUTION:

- When filling engine oil, do not pull out oil level gauge.
- The refill capacity depends on the engine oil temperature and drain time. Use these specifications for reference only.

7. Warm up engine and check area around drain plug and oil filter for oil leakage.
8. Stop engine and wait for 10 minutes.
9. Check the engine oil level. Refer to [LU-6, "OIL LEVEL"](#) .

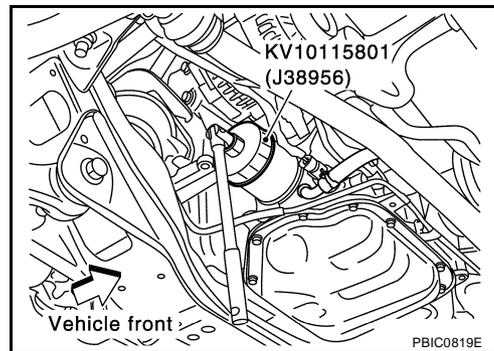
## Changing Oil Filter REMOVAL

ALS0008

1. Remove undercover.
2. Using oil filter wrench [SST], remove oil filter.

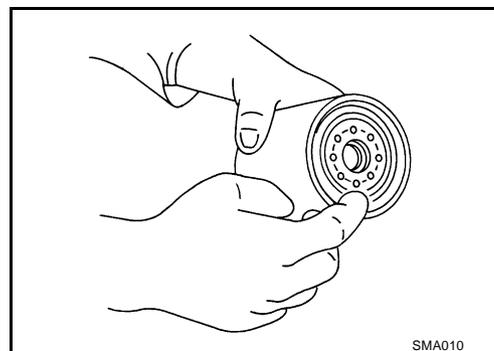
### CAUTION:

- Oil filter is provided with relief valve. Use Genuine Nissan Oil Filter or equivalent.
- Be careful not to get burned when engine and engine oil may be hot.
- When removing, prepare a shop cloth to absorb any engine oil leakage or spillage.
- Do not allow engine oil to adhere to drive belts.
- Completely wipe off any engine oil that adheres to engine and vehicle.



## INSTALLATION

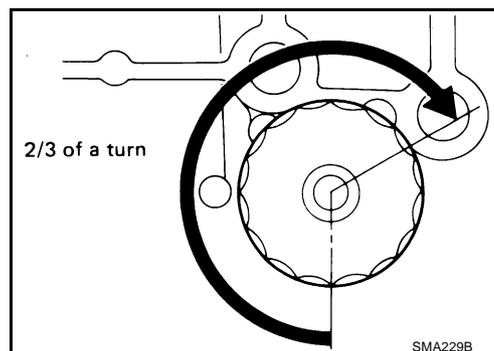
1. Remove foreign materials adhering to oil filter installation surface.
2. Apply engine oil to the oil seal contact surface of new oil filter.



3. Screw oil filter manually until it touches the installation surface, then tighten it by 2/3 turn. Or tighten to specification.

### Oil filter:

 : 17.6 N·m (1.8 kg·m, 13 ft·lb)



# ENGINE MAINTENANCE

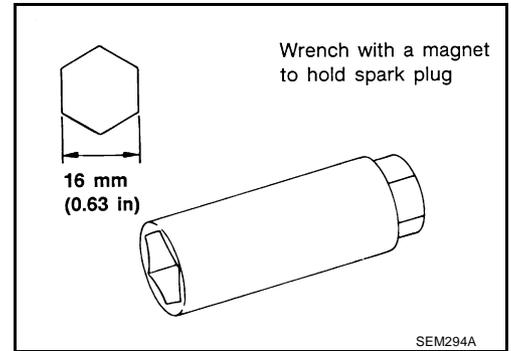
## INSPECTION AFTER INSTALLATION

1. Start engine, and check there is no leak of engine oil.
2. Stop engine and wait for 10 minutes.
3. Check the engine oil level and add engine oil. Refer to [MA-17, "Changing Engine Oil"](#) .

## Changing Spark Plugs (Platinum-Tipped Type) REMOVAL

ALS00009

1. Remove engine cover with power tool. Refer to [EM-19, "INTAKE MANIFOLD COLLECTOR"](#) .
2. Remove ignition coil. Refer to [EM-43, "IGNITION COIL"](#) .
3. Remove spark plug using spark plug wrench (commercial service tool).



## INSPECTION AFTER REMOVAL

Use standard type spark plug for normal condition.

Hot type spark plug is suitable when fouling occurs with standard type spark plug under conditions such as:

- Frequent engine starts
- Low ambient temperatures

Cold type spark plug is suitable when spark plug knock occurs with standard type spark plug under conditions such as:

- Extended highway driving
- Frequent high engine revolution

|               |           |
|---------------|-----------|
| Make          | NGK       |
| Standard type | PLFR5A-11 |
| Hot type      | PLFR4A-11 |
| Cold type     | PLFR6A-11 |

**Gap (Nominal) : 1.1 mm (0.043 in)**

### CAUTION:

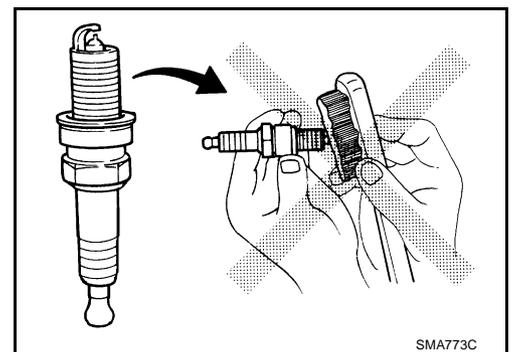
- Do not drop or shock spark plug.
- Do not use wire brush for cleaning.
- If plug tip is covered with carbon, spark plug cleaner may be used.

**Cleaner air pressure:**

**Less than 588 kPa (6 kg/cm<sup>2</sup> , 85 psi)**

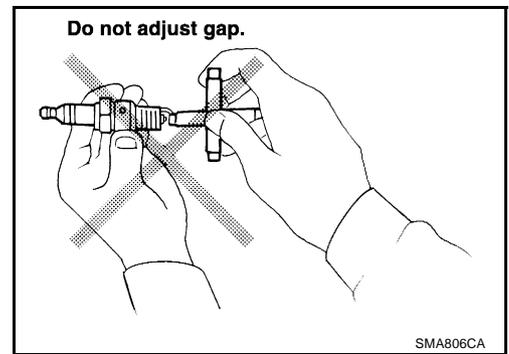
**Cleaning time:**

**Less than 20 seconds**



# ENGINE MAINTENANCE

- Checking and adjusting plug gap is not required between change intervals.



## INSTALLATION

Install in the reverse order of removal.

**Spark plug:**

 : 19.6 - 29.4 N·m (2.0 - 2.9 kg·m, 15 - 21 ft·lb)

## Checking EVAP Vapor Lines

ALS0000A

1. Visually inspect EVAP vapor lines for improper attachment and for cracks, damage, loose connections, chafing and deterioration.
2. Inspect fuel tank filler cap vacuum relief valve for clogging, sticking, etc.  
Refer to [EC-663, "EVAPORATIVE EMISSION SYSTEM"](#) .

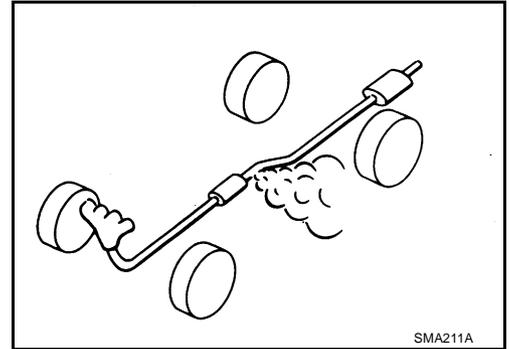
## CHASSIS AND BODY MAINTENANCE

PPF:00100

### Checking Exhaust System

ALS0000M

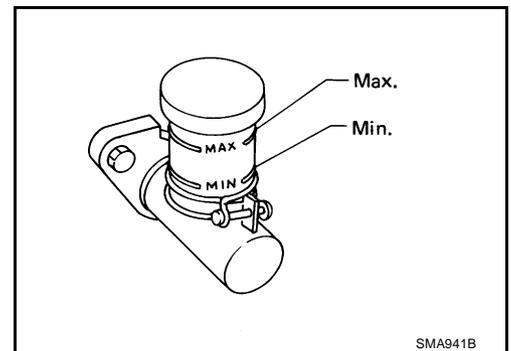
Check exhaust pipes, muffler and mounting for improper attachment, leaks, cracks, damage, chafing or deterioration.



### Checking Clutch Fluid Level and Leaks

ALS000HC

If fluid level is extremely low, check clutch system for leaks.



### Checking M/T Oil

1. Check for oil leakage.

### Changing M/T Oil

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

**Oil grade and viscosity:**

Refer to [MA-11, "RECOMMENDED FLUIDS AND LUBRICANTS"](#).

**Oil capacity:**

Approx. 2.9 ℓ (3-1/8 US qt, 2-1/2 Imp qt)

**Filler plug and drain plug:**

 : 34.5 N·m (3.5 kg·m, 25 ft·lb)

**CAUTION:**

Do not reuse gaskets.

### Checking A/T Fluid

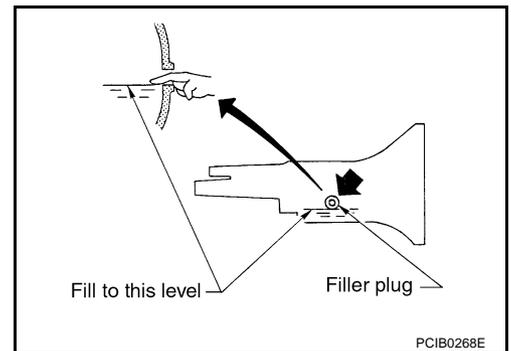
ALS000HD

ALS000Q5

1. Warm up engine.
2. Check for fluid leakage.
3. Remove the tightening bolt for A/T fluid level gauge.
4. Before driving, fluid level can be checked at fluid temperatures of 30 to 50°C (86 to 122°F) using "COLD" range on A/T fluid level gauge as follows.
  - a. Park vehicle on level surface and set parking brake.
  - b. Start engine and move selector lever through each gear position. Leave selector lever in "P" position.
  - c. Check fluid level with engine idling.
  - d. Remove A/T fluid level gauge and wipe clean with lint-free paper.

**CAUTION:**

When wiping away the fluid level gauge, always use lint-free paper, not a cloth one.



ALS0000N

## CHASSIS AND BODY MAINTENANCE

- e. Re-insert A/T fluid level gauge into charging pipe as far as it will go.

**CAUTION:**

To check fluid level, insert the A/T fluid level gauge until the cap contacts the end of the charging pipe, with the gauge reversed from the normal attachment conditions.

- f. Remove A/T fluid level gauge and note reading. If reading is at low side of range, add fluid to the charging pipe.

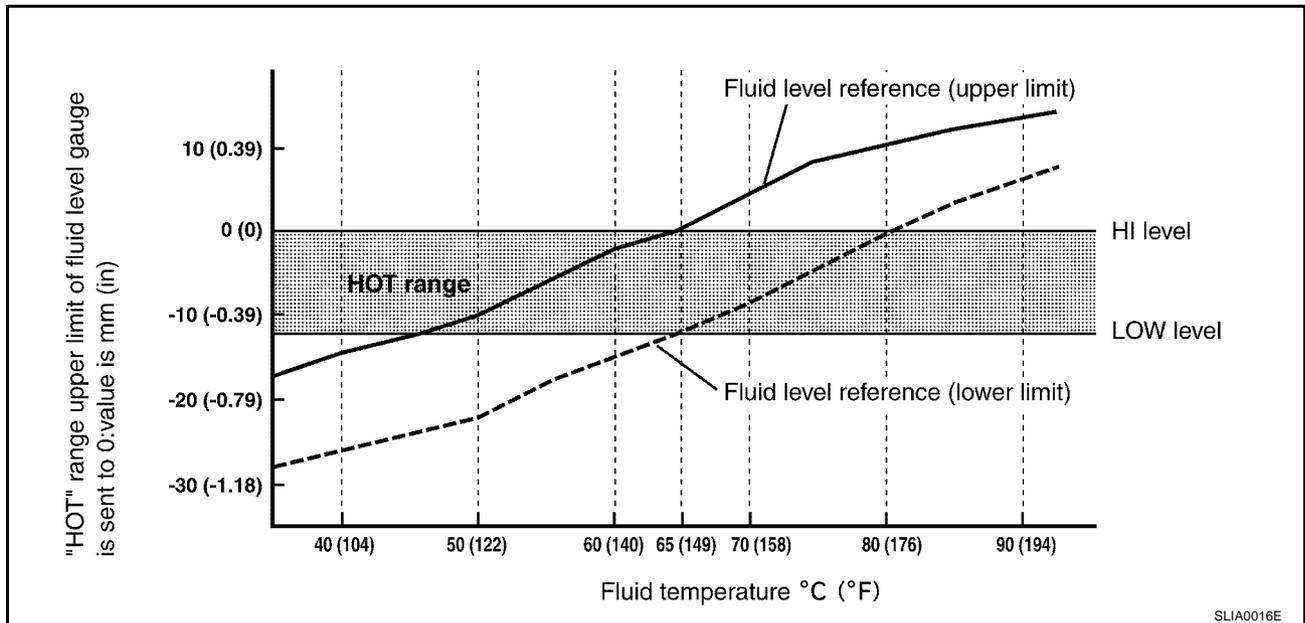
**CAUTION:**

**Do not overfill.**

5. Drive vehicle for approximately 5 minutes in urban areas.  
6. Make the fluid temperature approximately 65°C (149°F).

**NOTE:**

Fluid level will be greatly affected by temperature as shown in figure. Therefore, be certain to perform operation while checking data with CONSULT-II.



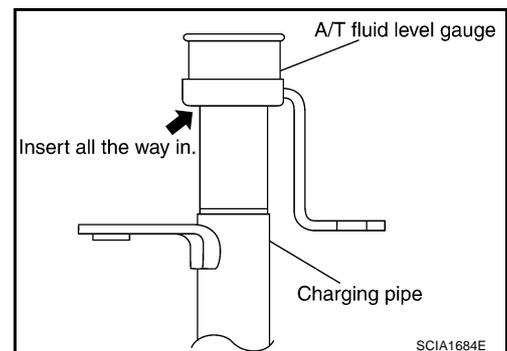
- a. Connect CONSULT-II to data link connector.  
b. Select "MAIN SIGNALS" in "DATA MONITOR" mode for "A/T" with CONSULT-II.  
c. Read out the value of "ATF TEMP 1".  
7. Re-check fluid level at fluid temperatures of approximately 65°C (149°F) using "HOT" range on A/T fluid level gauge.

**CAUTION:**

- When wiping away the fluid level gauge, always use lint-free paper, not a cloth one.
- To check fluid level, insert the A/T fluid level gauge until the cap contacts the end of the charging pipe, with the gauge reversed from the normal attachment conditions as shown.

8. Check fluid condition.

- If fluid is very dark or smells burned, check operation of A/T. Flush cooling system after repair of A/T.
- If A/T fluid contains frictional material (clutches, bands, etc.), replace radiator and flush cooler line using cleaning solvent and compressed air after repair of A/T. Refer to [CO-13, "RADIATOR"](#).



9. Install the removed A/T fluid level gauge in the fluid charging pipe.

**Level gauge bolt:**

: 5.1 N·m (0.52 kg·m, 45 in·lb)

## Changing A/T Fluid

ALS00000

1. Warm up A/T fluid.
2. Stop engine.
3. Remove the tightening bolt for A/T fluid level gauge.
4. Drain A/T fluid from drain plug and refill with new A/T fluid. Always refill same volume with drained fluid.
  - To replace the A/T fluid, pour in new fluid at the charging pipe with the engine idling and at the same time drain the old fluid from the radiator cooler hose return side.
  - When the color of the fluid coming out is about the same as the color of the new fluid, the replacement is complete. The amount of new transmission fluid to use should be 30 to 50% increase of the stipulated amount.

**A/T fluid: Genuine Nissan Matic J ATF**

**Fluid capacity: 10.3 ℓ (10-7/8 US qt, 9-1/8 Imp qt)**

### CAUTION:

- Use only Genuine Nissan Matic J ATF. Do not mix with other fluid.
- Using automatic transmission fluid other than Genuine Nissan Matic J ATF will cause deterioration in driveability and automatic transmission durability, and may damage the automatic transmission, which is not covered by the warranty.
- When filling A/T fluid, take care not to scatter heat generating parts such as exhaust.

**Drain plug:**

 : 34 N·m (3.5 kg·m, 25 ft·lb)

5. Run engine at idle speed for 5 minutes.
6. Check fluid level and condition. Refer to [MA-21, "Checking A/T Fluid"](#) . If fluid is still dirty, repeat step 2. through 5.
7. Install the removed A/T fluid level gauge in the fluid charging pipe.

**Level gauge bolt:**

 : 5.1 N·m (0.52 kg·m, 45 in·lb)

## Checking Transfer Fluid

ALS000QK

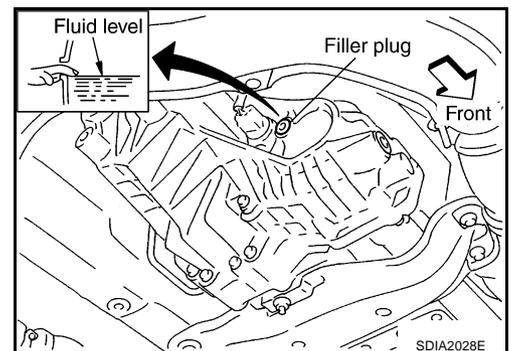
Check for fluid leakage and fluid level.

### CAUTION:

- Never start engine while checking fluid level.
- Do not reuse gasket.

**Filler plug:**

 : 35 N·m (3.6 kg·m, 26 ft·lb)



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# CHASSIS AND BODY MAINTENANCE

ALS000QL

## Changing Transfer Fluid

### CAUTION:

When draining fluid, protect exhaust tube flange with cover.

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

### CAUTION:

- Do not reuse gasket.
- Carefully fill the fluid. (Fill up for Approx. 3 minutes.)

### Fluid grade:

Genuine Nissan Matic D ATF (Continental U.S. and Alaska) or Canada NISSAN Automatic Transmission Fluid

Refer to [MA-11, "RECOMMENDED FLUIDS AND LUBRICANTS"](#).

### Fluid capacity:

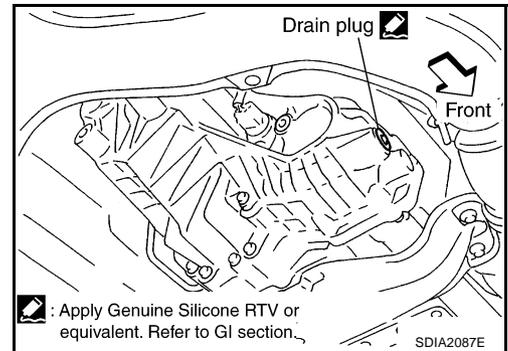
: Approx. 1.25 ℓ (2-5/8 US pt, 2-1/4 Imp pt)

### Drain plug:

 : 29.4 N·m (3.0 kg·m, 22 ft·lb)

### Filler plug:

 : 35 N·m (3.6 kg·m, 26 ft·lb)



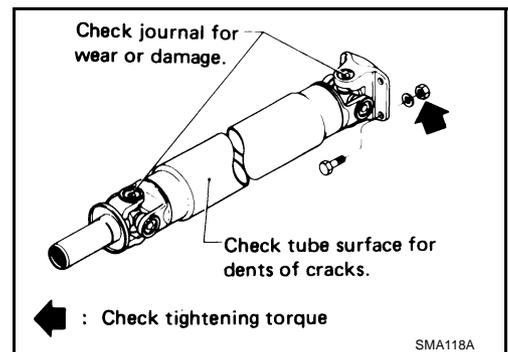
## Checking Propeller Shaft

Check propeller shaft for damage, looseness or grease leakage.

### Tightening torque:

Refer to [PR-4, "REAR PROPELLER SHAFT"](#).

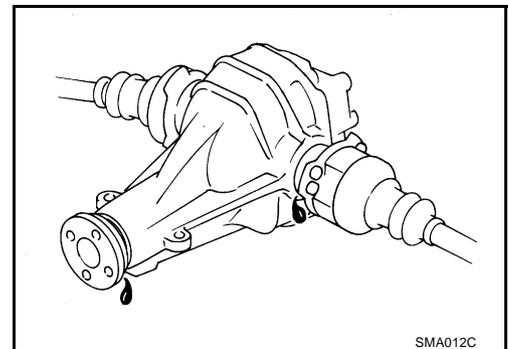
ALS00011



## Checking Differential Gear Oil

1. Check for oil leakage.

ALS0001J



# CHASSIS AND BODY MAINTENANCE

## Changing Differential Gear Oil

ALS0001K

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

### Oil grad and Viscosity:

Refer to **MA-11, "RECOMMENDED FLUIDS AND LUBRICANTS"**.

### Capacity:

R200

1.4 l (3 US pt, 2-1/2 Imp pt)

### Drain plug:

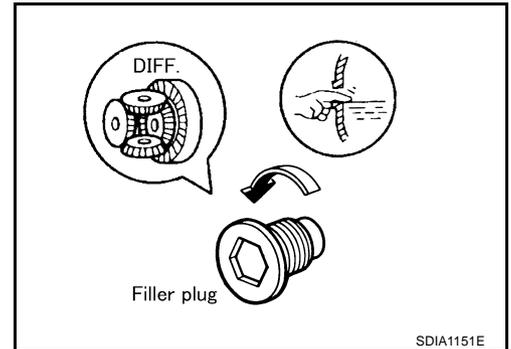
: 34.5 N·m (3.5 kg·m, 25 ft·lb)

### Filler plug:

: 34.5 N·m (3.5 kg·m, 25 ft·lb)

### CAUTION:

Gaskets are not reusable. Never reuse them.



## Balancing Wheels (Bonding Weight Type) REMOVAL

ALS0000C

1. Remove inner and outer balance weights from the road wheel.

### CAUTION:

Be careful not to scratch the road wheel during removal.

2. Using releasing agent, remove double-faced adhesive tape from the road wheel.

### CAUTION:

- Be careful not to scratch the road wheel during removal.
- After removing double-faced adhesive tape, wipe clean traces of releasing agent from the road wheel.

## WHEEL BALANCE ADJUSTMENT

- If a tire balance machine has adhesion balance weight mode settings and drive-in weight mode setting, select and adjust a drive-in weight mode suitable for road wheels.
1. Set road wheel on wheel balancer using the center hole as a guide. Start the tire balance machine.
  2. When inner and outer unbalance values are shown on the wheel balancer indicator, multiply outer unbalance value by 5/3 to determine balance weight that should be used. Select the outer balance weight with a value closest to the calculated value above and install it to the designated outer position of, or at the designated angle in relation to the road wheel.

### CAUTION:

- Do not install the inner balance weight before installing the outer balance weight.
- Before installing the balance weight, be sure to clean the mating surface of the road wheel.

Indicated unbalance value  $\times 5/3$  = balance weight to be installed

Calculation example:

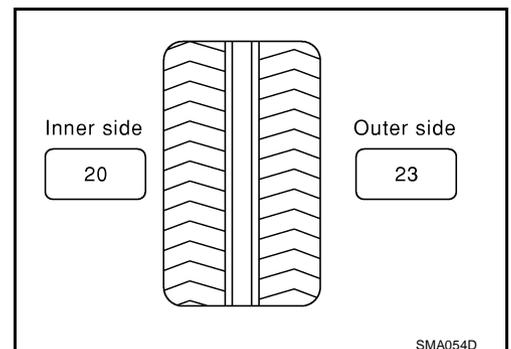
23 g (0.81 oz)  $\times 5/3$  = 38.33 g (1.35 oz) = 40 g (1.41 oz) balance weight (closer to calculated balance weight value)

Note that balance weight value must be closer to the calculated balance weight value.

Example:

37.4 = 35 g (1.23 oz)

37.5 = 40 g (1.41 oz)

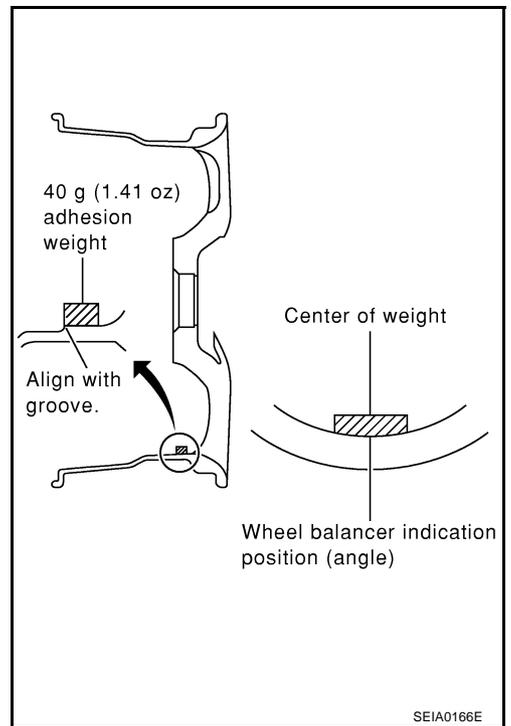


# CHASSIS AND BODY MAINTENANCE

- Install balance weight in the position shown in the figure at right.
- When installing balance weight to road wheels, set it into the grooved area on the inner wall of the road wheel as shown in the figure so that the balance weight center is aligned with the wheel balancer indication position (angle).

**CAUTION:**

- Always use genuine Nissan adhesion balance weights.
- Balance weights are un reusable; always replace with new ones.
- Do not install more than three sheets of balance weight.



- If calculated balance weight value exceeds 50 g (1.76 oz), install two balance weight sheets in line with each other (as shown in the figure).

**CAUTION:**

**Do not install one balance weight sheet on top of another.**

- Start wheel balancer again.
- Install drive-in balance weight on inner side of road wheel in the wheel balancer indication position (angle).

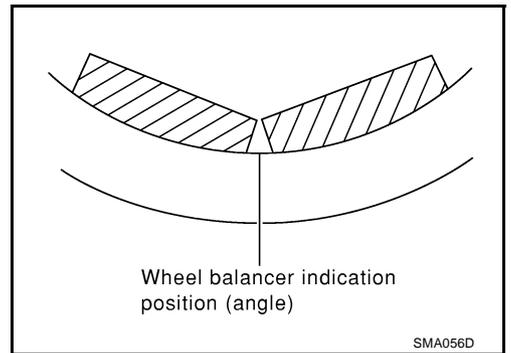
**CAUTION:**

**Do not install more than two balance weights.**

- Start wheel balancer. Make sure that inner and outer residual unbalance values are 10 g (0.35 oz) each or below.
  - If either residual unbalance value exceeds 10 g (0.35 oz), repeat installation procedures.

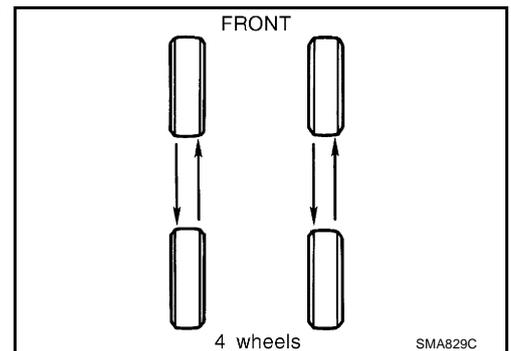
**Wheel balance (Maximum allowable unbalance):**

|                             |                         |                                     |
|-----------------------------|-------------------------|-------------------------------------|
| Maximum allowable unbalance | Dynamic (At rim flange) | Less than 10 g (0.35 oz) (one side) |
|                             | Static (At rim flange)  | Less than 20 g (0.70 oz)            |



## Tire Rotation

ALS0000D



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

**Wheel nuts**

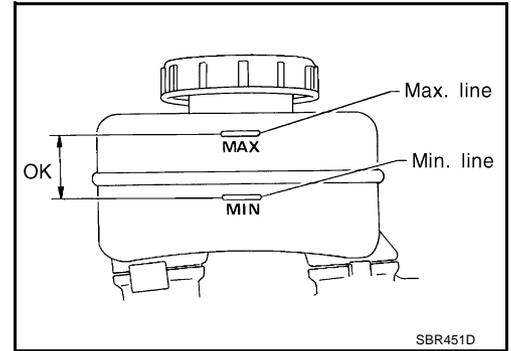
 : 98 - 118 N·m (10.0 - 12.0 kg·m, 72 - 87 ft·lb)

# CHASSIS AND BODY MAINTENANCE

## Checking Brake Fluid Level and Leaks

ALS0000E

- If fluid level is extremely low, check brake system for leaks.

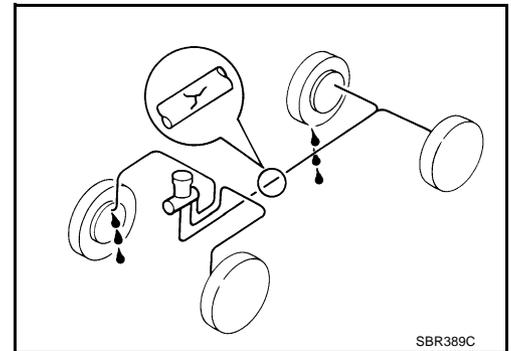


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## Checking Brake Lines and Cables

ALS0000F

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



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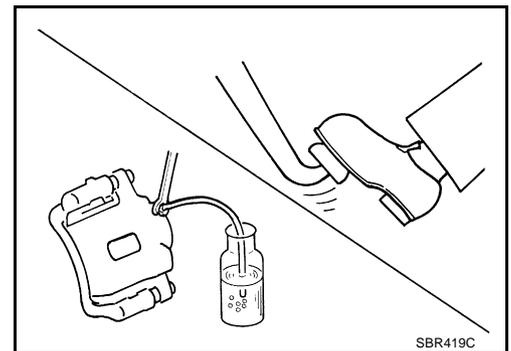
## Changing Brake Fluid

ALS0000G

1. Drain brake fluid from each air bleeder valve.
  2. Refill until new brake fluid comes out from each air bleeder valve.
- Use same procedure as in bleeding hydraulic system to refill brake fluid.

Refer to [BR-10, "Bleeding Brake System"](#) .

- Refill with recommended Genuine Brake Fluid or equivalent DOT 3 (US FMVSS No. 116).  
Refer to [MA-11, "RECOMMENDED FLUIDS AND LUBRICANTS"](#) .
- Never reuse drained brake fluid.
- Be careful not to splash brake fluid on painted areas.



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## Checking Disc Brake ROTOR

ALS0000H

Check condition, wear, and damage.

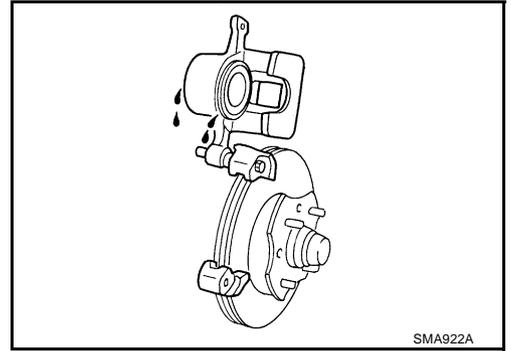
|                                | Front                | Rear                |
|--------------------------------|----------------------|---------------------|
| Brake model                    | CLZ25VD              | AD14VE              |
| Standard thickness             | 24.0 mm (0.945 in)   | 16.0 mm (0.630 in)  |
| Maximum runout                 | 0.035 mm (0.0014 in) | 0.10 mm (0.0039 in) |
| Minimum thickness (Wear limit) | 22.0 mm (0.866 in)   | 14.0 mm (0.551 in)  |

M

# CHASSIS AND BODY MAINTENANCE

## CALIPER

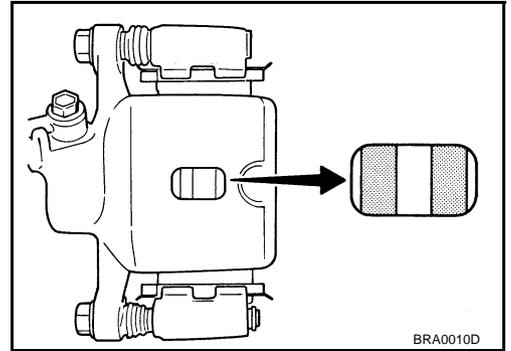
- Check for leakage.



## PAD

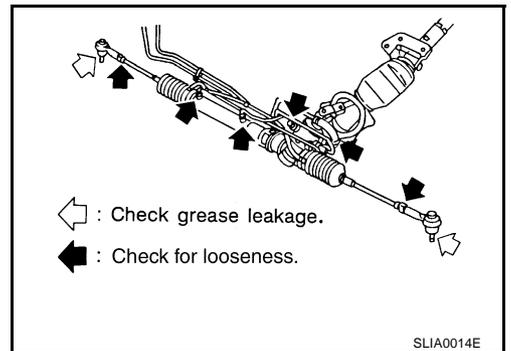
- Check for wear or damage.

| Brake model                    | CLZ25VD            | AD14VE            |
|--------------------------------|--------------------|-------------------|
| Standard thickness             | 11.0 mm (0.433 in) | 8.5 mm (0.335 in) |
| Minimum thickness (Wear limit) | 2.0 mm (0.079 in)  | 2.0 mm (0.079 in) |



## Checking Steering Gear and Linkage

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



## STEERING LINKAGE

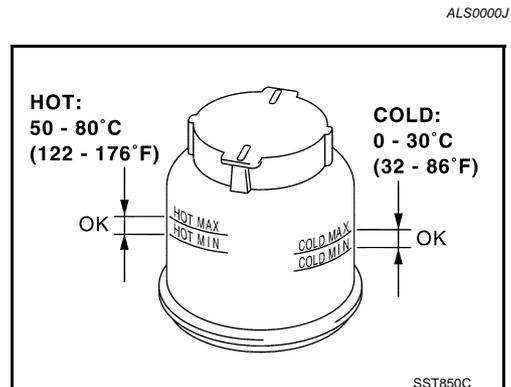
Check ball joint, dust cover and other component parts for looseness, wear, damage and grease leakage.

## Checking Power Steering Fluid and Lines

Check fluid level in reservoir tank with engine off.  
 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).

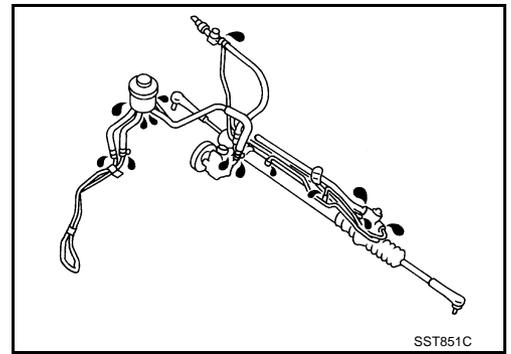
### CAUTION:

- Do not overfill.
- Recommended fluid is Genuine NISSAN PSF or equivalent. Refer to [MA-11, "RECOMMENDED FLUIDS AND LUBRICANTS"](#)



# CHASSIS AND BODY MAINTENANCE

- Check lines for improper attachment, leaks, cracks, damage, loose connections, chafing and deterioration.
- Check rack boots for accumulation of power steering fluid.

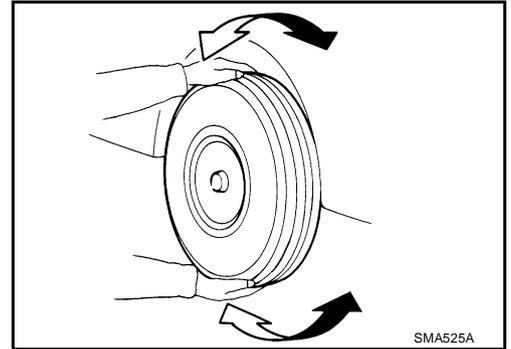


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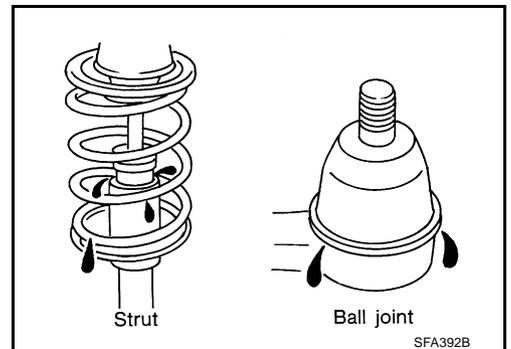
## Axle and Suspension Parts

Check front and rear axle and suspension parts for excessive play, cracks, wear or other damage.

- Shake each wheel to check for excessive play.
- Check wheel bearings for smooth operation.
- Check axle and suspension nuts and bolts for looseness.
- Check strut (shock absorber) for oil leakage or other damage.
- Check suspension ball joint for grease leakage and ball joint dust cover for cracks or other damage.



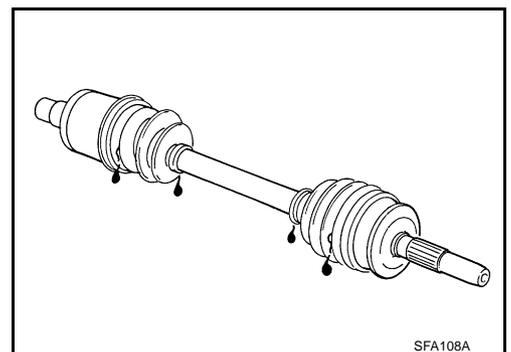
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## Drive Shaft

Check boot and drive shaft for cracks, wear, damage and grease leakage.



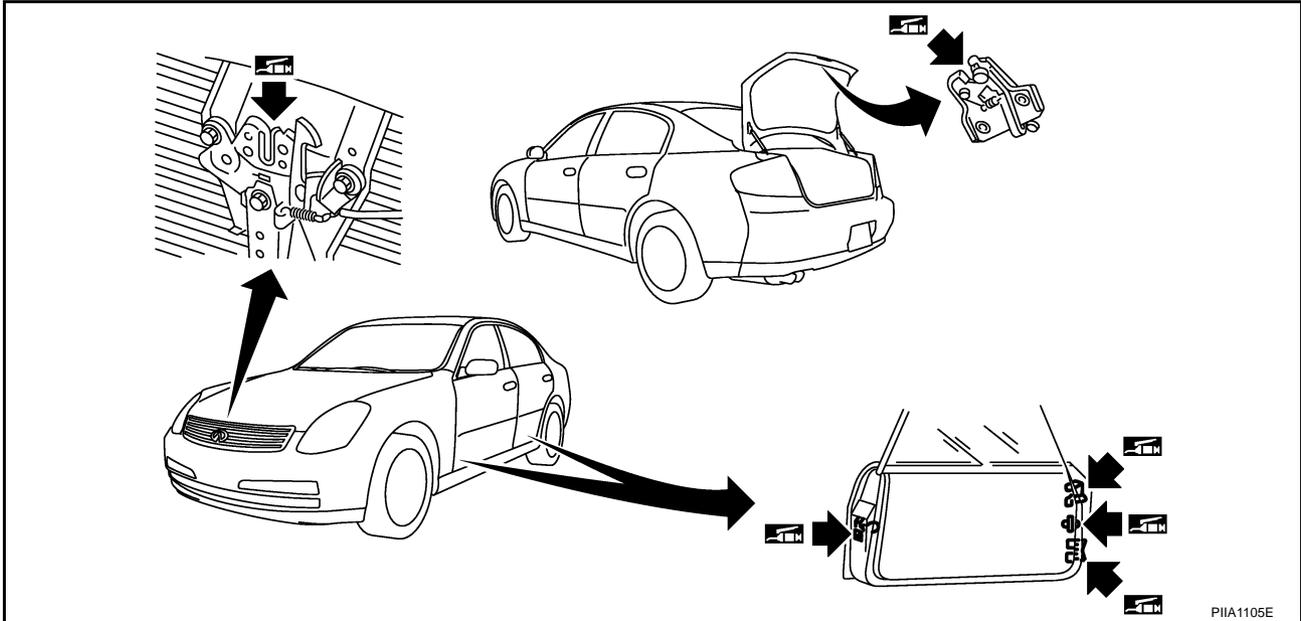
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# CHASSIS AND BODY MAINTENANCE

## Lubricating Locks, Hinges and Hood Latch

ALS0001L



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

ALS0001M

### CAUTION:

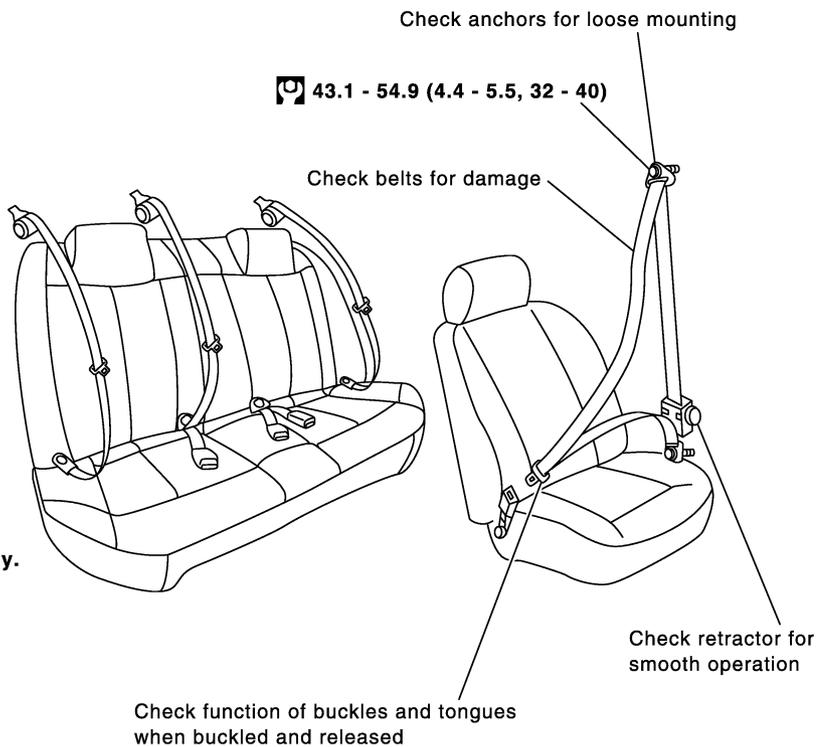
- After any collision, inspect all seat belt assemblies, including retractors and other attached hardware (i.e. anchor bolt, guide rail set). Nissan recommends to replace all seat belt assemblies in use during a collision, unless not damaged and properly operating after minor collision. Also inspect seat belt assemblies not in use during a collision, and replace if damaged or improperly operating. Seat belt pre-tensioner should be replaced even if the seat belts are not in use during a frontal collision where the driver and passenger air bags are deployed.
- If any component of seat belt assembly is questionable, do not repair. Replace as seat belt assembly.
- If webbing is cut, frayed, or damaged, replace belt assembly.
- Never oil tongue and buckle.
- Use a genuine NISSAN seat belt assembly.

For details, refer to "Seat Belt Inspection" in SB section.

Anchor bolt

43.1 - 54.9 (4.4 - 5.5, 32 - 40)

N•m (kg-m, ft-lb)



PIA1111E

# SERVICE DATA AND SPECIFICATIONS (SDS)

## SERVICE DATA AND SPECIFICATIONS (SDS)

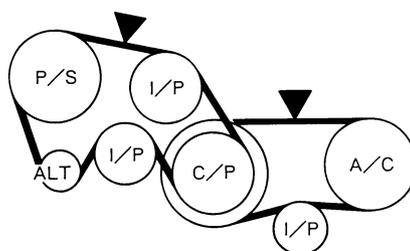
PFP:00030

### Standard and Limit BELT DEFLECTION AND TENSION

ALS0000B

|   | Deflection adjustment |                         | Unit: mm (in)                | Tension adjustment* |  | Unit: N (kg, lb)                         |
|---|-----------------------|-------------------------|------------------------------|---------------------|--|--|
|   | Used belt             |                         | New belt                     | Used belt           |  | New belt                                 |
|   | Limit                 | After adjustment        |                              | Limit               | After adjustment                         |  |
| Alternator and power steering oil pump belt | 7 (0.28)              | 4 - 5<br>(0.16 - 0.20)  | 3.5 - 4.5<br>(0.138 - 0.177) | 294 (30, 66)        | 730 - 818<br>(74.5 - 83.5,<br>164 - 184) | 838 - 926<br>(85.5 - 94.5,<br>188 - 208) |
| Air conditioner compressor                  | 12 (0.47)             | 9 - 10<br>(0.35 - 0.39) | 8 - 9<br>(0.31 - 0.35)       | 196 (20, 44)        | 348 - 436<br>(35.5 - 44.5,<br>78 - 98)   | 470 - 559<br>(48 - 57,<br>106 - 126)     |
| Applied pushing force                       | 98 N(10 kg, 22 lb)    |                         |                              | —                   |  |  |

SEC.117



KBIA1731J

\*: If belt tension gauge cannot be installed at check points shown, check drive belt tension at different location on the belt.

### ENGINE COOLANT CAPACITY (APPROXIMATE)

Unit: ℓ (US qt, Imp qt)

|  |                    |
|--|--------------------|
| Engine coolant capacity (With reservoir tank at MAX level) | 8.7 (9-1/4, 7-5/8) |
| Reservoir tank engine coolant capacity (At MAX level)      | 0.8 (7/8, 3/4)     |

### ENGINE OIL CAPACITY (APPROXIMATE)

Unit: ℓ (US qt, Imp qt)

|                       |                           |                    |
|-----------------------|---------------------------|--------------------|
| Drain and refill      | With oil filter change    | 4.7 (5, 4-1/8)     |
|                       | Without oil filter change | 4.4 (4-5/8, 3-7/8) |
| Dry engine (Overhaul) |                           | 5.4 (5-3/4, 4-3/4) |

### SPARK PLUG (PLATINUM-TIPPED TYPE)

|                |                            |           |
|----------------|----------------------------|-----------|
| Make           | NGK                        |           |
| Type           | Standard                   | PLFR5A-11 |
|                | Hot                        | PLFR4A-11 |
|                | Cold                       | PLFR6A-11 |
| Spark plug gap | Nominal: 1.1 mm (0.043 in) |           |

### WHEEL BALANCE

|                             |                         |                                     |
|-----------------------------|-------------------------|-------------------------------------|
| Maximum allowable unbalance | Dynamic (At rim flange) | Less than 10 g (0.35 oz) (one side) |
|                             | Static (At rim flange)  | Less than 20 g (0.71 oz)            |

# SERVICE DATA AND SPECIFICATIONS (SDS)

## Tightening Torque

ALS000A5

Unit: N·m (kg-m, ft-lb)

Unit: N·m (kg-m, in-lb)\*

|  |                                  |
|--|----------------------------------|
| Radiator drain plug                    | 1.2 (0.12, 11)*                  |
| Cylinder block drain plug (LH)         | 19.6 (2.0, 14)                   |
| Cylinder block drain plug (RH)         | 19.6 (2.0, 14)                   |
| Cylinder block drain plug (Front side) | 9.8 (1.0, 87)*                   |
| Air relief plug                        | 1.2 (0.12, 11)*                  |
| Oil pan drain plug                     | 34.3 (3.5, 25)                   |
| Oil filter                             | 17.6 (1.8, 13)                   |
| Spark plug                             | 19.6 - 29.4 (2.0 - 2.9, 15 - 21) |