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 MAINTENANCE

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# PRECAUTIONS

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## PRECAUTION

### PRECAUTIONS

#### Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

INFOID:000000008979775

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

**WARNING:**

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SR section.
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

#### PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

**WARNING:**

- When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery and wait at least 3 minutes before performing any service.

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# PREPARATION

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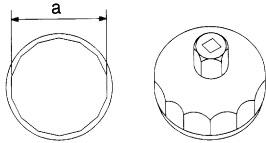
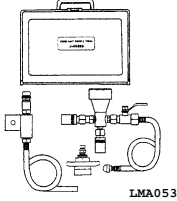
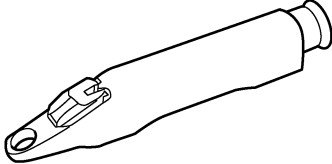
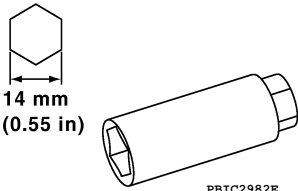
## PREPARATION

### PREPARATION

#### Special Service Tool


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

Tool number (Kent-Moore No.) Tool name	Description
KV10115801 (J-38956) Oil filter wrench   S-NT375	Removing and installing oil filter <b>a: 64.3 mm (2.531 in)</b>
KV991J0070 (J-45695) Coolant refill tool   LMA053	Refilling engine cooling system
— (J-23688) Engine coolant refractometer   WBTA0539E	Checking concentration of ethylene glycol in engine coolant
— (J-48891) Spark plug wrench   PBIC2982E	Removing and installing spark plug

#### Commercial Service Tool

INFOID:000000008777884

Tool name	Description
Power tool   PIIB1407E	Loosening nuts, screws and bolts

# GENERAL MAINTENANCE

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## PERIODIC MAINTENANCE

### GENERAL MAINTENANCE

#### Explanation of General Maintenance

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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 **NISSAN** 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 often and always prior to long distance trips. Adjust the pressure in all tires, including the spare, to the pressure specified. Check carefully for damage, cuts or excessive wear.	<a href="#">WT-44</a>
<b>Wheel nuts</b>	When checking the tires, make sure no nuts are missing, and check for any loose nuts. Tighten if necessary.	<a href="#">WT-45</a>
<b>Tire rotation</b>	Tires should be rotated every 7,500 miles (12,000 km).	<a href="#">WT-44</a>
<b>Tire Pressure Monitoring System (TPMS) transmitter components</b>	Replace the TPMS transmitter grommet seal, valve core and cap when the tires are replaced due to wear or age.	<a href="#">WT-48</a>
<b>Wheel alignment and balance</b>	If the vehicle should pull 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. For additional information regarding tires, refer to "Important Tire Safety Information" (US) or "Tire Safety Information" (Canada) in the NISSAN Warranty Information Booklet.	<a href="#">WT-45</a>
<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>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 properly. 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. When driving in areas using road salt or other corrosive materials, check for lubrication frequently.	<a href="#">DLK-176</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.	<a href="#">EXL-113</a>

#### 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. Check for changes in the steering condition, such as excessive play, hard steering or strange noises. <b>Free play: Less than 35 mm (1.38 in)</b>	—

## GENERAL MAINTENANCE

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Item		Reference page
<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="#">SB-5</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.	—
<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.	<a href="#">BR-15</a> , <a href="#">BR-11</a>
<b>Clutch pedal</b>	Make sure the pedal operates smoothly and check that it has the proper free play.	<a href="#">CL-5</a>
<b>Parking brake</b>	Check that the lever or the pedal 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.	<a href="#">PB-4</a>
<b>CVT P (Park) position mechanism</b>	On a fairly steep hill check that the vehicle is held securely with the shift selector in the P (Park) position without applying any brakes.	—

### 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.	—
<b>Engine coolant level</b>	Check the coolant level when the engine is cold.	<a href="#">CO-11</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.	—
<b>Brake and clutch fluid levels</b>	Make sure that the brake and clutch fluid levels are between the “MAX” and “MIN” lines on the reservoirs.	<a href="#">BR-9</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.	—
<b>Engine drive belts</b>	Make sure that no belt is frayed, worn, cracked or oily.	<a href="#">EM-16</a>
<b>Engine oil level</b>	Check the level on the oil level gauge after parking the vehicle on a level spot and turning off the engine.	<a href="#">LU-7</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.	<a href="#">EX-4</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.	—
<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

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## PERIODIC MAINTENANCE

### Introduction of Periodic Maintenance

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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-7</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>

### Schedule 1

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### EMISSION CONTROL SYSTEM

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) Months	3.75 (6)	7.50 (12)	11.25 (18)	15 (24)	18.75 (30)	22.5 (36)	26.25 (42)	30 (48)	
Drive belts	NOTE (1)									<a href="#">EM-16</a>
Air cleaner filter	NOTE (2)								[R]	<a href="#">EM-19</a>
EVAP vapor lines									I*	<a href="#">FL-5</a>
Fuel lines									I*	<a href="#">FL-5</a>
Fuel filter	NOTE (3)									<a href="#">FL-5</a>
Engine coolant *	NOTE (4) (5)									<a href="#">CO-11</a>
Engine oil		R	R	R	R	R	R	R	R	<a href="#">LU-7</a>
Engine oil filter		R	R	R	R	R	R	R	R	<a href="#">LU-11</a>
Spark plugs (Iridium/Platinum-tipped type)	NOTE (6)	Replace every 105,000 miles (168,000 km).								<a href="#">EM-13</a>
Intake & exhaust valve clearance *	NOTE (7)									<a href="#">EM-20</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)	37.5 (60)	41.25 (66)	45 (72)	48.75 (78)	52.5 (84)	56.25 (90)	60 (96)	
Drive belts	NOTE (1)								I*	<a href="#">EM-16</a>
Air cleaner filter	NOTE (2)								[R]	<a href="#">EM-19</a>
EVAP vapor lines									I*	<a href="#">FL-5</a>
Fuel lines									I*	<a href="#">FL-5</a>
Fuel filter	NOTE (3)									<a href="#">FL-5</a>

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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) 27	37.5 (60) 30	41.25 (66) 33	45 (72) 36	48.75 (78) 39	52.5 (84) 42	56.25 (90) 45	60 (96) 48	
Engine coolant *	NOTE (4) (5)									<a href="#">CO-11</a>
Engine oil		R	R	R	R	R	R	R	R	<a href="#">LU-7</a>
Engine oil filter		R	R	R	R	R	R	R	R	<a href="#">LU-11</a>
Spark plugs (Iridium/Platinum-tipped type)	NOTE (6)	Replace every 105,000 miles (168,000 km).								<a href="#">EM-13</a>
Intake & exhaust valve clearance *	NOTE (7)									<a href="#">EM-20</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 or if the drive belt auto-tensioner reading reaches the maximum limit.
- (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) First replacement intervals 105,000 miles (168,000 km) or 84 months. After first replacement, replace every 75,000 miles (120,000 km) or 60 months.
- (5) When adding or replacing coolant, be sure to use only Genuine NISSAN Long Life Antifreeze/Coolant (blue) or equivalent. Genuine NISSAN Long Life Antifreeze/Coolant (blue) is pre diluted to provide antifreeze protection to -34°F (-37°C). If additional freeze protection is needed due to weather where the vehicle is operated, add Genuine NISSAN Long Life Antifreeze/Coolant (blue) concentrate following the directions on the container. If an equivalent coolant other than Genuine NISSAN Long Life Antifreeze/Coolant (blue) is used, follow the coolant manufacturer's instructions to maintain minimum antifreeze protection to -34°F (-37°C). The use of other types or coolant solutions other than Genuine NISSAN Long Life Antifreeze/Coolant (blue) or equivalent may damage the engine cooling system.
- (6) Replace spark plug when the spark plug gap exceeds 1.35 mm (0.053 in) even if within specified periodic replacement mileage.
- (7) Periodic maintenance is not required. However, if valve noise increases, inspect valve clearance.

\* Maintenance items and intervals with "\*" are recommended by NISSAN 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

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) 3	7.50 (12) 6	11.25 (18) 9	15 (24) 12	18.75 (30) 15	22.5 (36) 18	26.25 (42) 21	30 (48) 24	
Brake lines & cables					I				I	<a href="#">PB-4</a>
Brake fluid					R				R	<a href="#">BR-9</a>
Brake pads, rotors, drums & linings			I		I		I		I	<a href="#">BR-12</a> , <a href="#">BR-12</a> <a href="#">BR-13</a> , <a href="#">BR-19</a> <a href="#">BR-13</a> <a href="#">BR-14</a> <a href="#">BR-14</a>
CVT fluid	NOTE (1)				I				I	<a href="#">TM-244</a>
Manual transaxle gear oil	NOTE (2)				I				I	<a href="#">TM-19</a> ,
Steering gear and linkage, axle & suspension parts			I		I		I		I	<a href="#">ST-9</a>
Tire rotation	NOTE (3)									<a href="#">WT-44</a>
Exhaust system			I		I		I		I	<a href="#">EX-4</a>



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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) 3	7.50 (12) 6	11.25 (18) 9	15 (24) 12	18.75 (30) 15	22.5 (36) 18	26.25 (42) 21	30 (48) 24	
Front drive shaft boot			I		I		I		I	<a href="#">FAX-16</a>
In-cabin microfilter					R				R	<a href="#">VTL-5</a>

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	33.75 (54) 27	37.5 (60) 30	41.25 (66) 33	45 (72) 36	48.75 (78) 39	52.5 (84) 42	56.25 (90) 45	60 (96) 48	
Brake lines & cables					I				I	<a href="#">PB-4</a>
Brake fluid					R				R	<a href="#">BR-9</a>
Brake pads, rotors, drums & linings			I		I		I		I	<a href="#">BR-12</a> , <a href="#">BR-12</a> , <a href="#">BR-13</a> , <a href="#">BR-19</a> , <a href="#">BR-13</a> , <a href="#">BR-14</a>
CVT fluid	NOTE (1)				I				I	<a href="#">TM-244</a>
Manual transaxle gear oil	NOTE (2)				I				I	<a href="#">TM-19</a>
Steering gear and linkage, axle & suspension parts			I		I		I		I	<a href="#">ST-9</a>
Tire rotation	NOTE (3)									<a href="#">WT-44</a>
Exhaust system			I		I		I		I	<a href="#">EX-4</a>
Front drive shaft boot			I		I		I		I	<a href="#">FAX-16</a>
In-cabin microfilter					R				R	<a href="#">VTL-5</a>

### NOTE:

(1) Use only Genuine NISSAN CVT fluid (NS-3). If towing a trailer, using a camper or a car-top carrier or driving on rough or muddy roads, inspect CVT fluid deterioration at NISSAN dealer every 60,000 miles (96,000 km), then change CVT fluid NS-3 if necessary. And if the inspection is not performed, change (not just inspect) CVT fluid NS-3 every 60,000 miles (96,000 km). Using transmission fluid other than Genuine NISSAN CVT Fluid NS-3 will damage the CVT, which is not covered by the NISSAN new vehicle limited warranty.

(2) 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), 24 months.

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

## Schedule 2

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## EMISSION CONTROL SYSTEM

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) Months	7.5 (12) 6	15 (24) 12	22.5 (36) 18	30 (48) 24	37.5 (60) 30	45 (72) 36	52.5 (84) 42	60 (96) 48	
Drive belts	NOTE (1)								I*	<a href="#">EM-16</a>
Air cleaner filter					[R]				[R]	<a href="#">EM-19</a>
EVAP vapor lines					I*				I*	<a href="#">FL-5</a>
Fuel lines					I*				I*	<a href="#">FL-5</a>
Fuel filter	NOTE (2)									<a href="#">FL-5</a>
Engine coolant*	NOTE (3) (4)									<a href="#">CO-12</a>

# PERIODIC MAINTENANCE

## < PERIODIC MAINTENANCE >

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	7.5 (12) 6	15 (24) 12	22.5 (36) 18	30 (48) 24	37.5 (60) 30	45 (72) 36	52.5 (84) 42	60 (96) 48	
Engine oil		R	R	R	R	R	R	R	R	<a href="#">LU-7</a>
Engine oil filter		R	R	R	R	R	R	R	R	<a href="#">LU-10</a>
Spark plugs (Iridium/Platinum-tipped type)	NOTE (5)	Replace every 105,000 miles (168,000 km).								<a href="#">EM-13</a>
Intake & exhaust valve clearance*	NOTE (6)									<a href="#">EM-20</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 or if the drive belt auto-tensioner reading reaches the maximum limit.
- (2) Maintenance-free item. For service procedures, refer to FL section.
- (3) First replacement intervals 105,000 miles (168,000 km) or 84 months. After first replacement, replace every 75,000 miles (120,000 km) or 60 months.
- (4) When adding or replacing coolant, be sure to use only Genuine NISSAN Long Life Antifreeze/Coolant (blue) or equivalent. Genuine NISSAN Long Life Antifreeze/Coolant (blue) is pre diluted to provide antifreeze protection to -34°F (-37°C). If additional freeze protection is needed due to weather where the vehicle is operated, add Genuine NISSAN Long Life Antifreeze/Coolant (blue) concentrate following the directions on the container. If an equivalent coolant other than Genuine NISSAN Long Life Antifreeze/Coolant (blue) is used, follow the coolant manufacturer's instructions to maintain minimum antifreeze protection to -34°F (-37°C). The use of other types or coolant solutions other than Genuine NISSAN Long Life Antifreeze/Coolant (blue) or equivalent may damage the engine cooling system.
- (5) Replace spark plug when the spark plug gap exceeds 1.35 mm (0.053 in) even if within specified periodic replacement mileage.
- (6) Periodic maintenance is not required. However, if valve noise increases, inspect valve clearance.

\* Maintenance items and intervals with "\*" are recommended by NISSAN 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

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	7.5 (12) 6	15 (24) 12	22.5 (36) 18	30 (48) 24	37.5 (60) 30	45 (72) 36	52.5 (84) 42	60 (96) 48	
Brake lines and cables			I		I		I		I	<a href="#">PB-4</a>
Brake fluid					R				R	<a href="#">BR-9</a>
Brake pads, rotors, drums & linings			I		I		I		I	<a href="#">BR-12</a> , <a href="#">BR-12</a> , <a href="#">BR-13</a> , <a href="#">BR-19</a> , <a href="#">BR-13</a> , <a href="#">BR-14</a> , <a href="#">BR-14</a>
CVT fluid	NOTE (1)		I		I		I		I	<a href="#">TM-244</a>
Manual transaxle gear oil	NOTE (2)		I		I		I		I	
Steering gear and linkage, axle & suspension parts					I				I	<a href="#">ST-9</a>
Tire rotation	NOTE (3)									<a href="#">WT-44</a>
Exhaust system					I				I	<a href="#">EX-4</a>
Front drive shaft boot			I		I		I		I	<a href="#">FAX-16</a>
In-cabin microfilter			R		R		R		R	<a href="#">VTL-5</a>

**NOTE:**

- (1) Using transaxle fluid other than Genuine NISSAN CVT Fluid NS-3 will damage the CVT, which is not covered by the NISSAN new vehicle limited warranty.

# PERIODIC MAINTENANCE

## < PERIODIC MAINTENANCE >

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- (2) 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), 24 months.
- (3) Refer to "Tire rotation" under the "General maintenance" heading earlier in this section.

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MA

# RECOMMENDED FLUIDS AND LUBRICANTS

< PERIODIC MAINTENANCE >

## RECOMMENDED FLUIDS AND LUBRICANTS

### Fluids and Lubricants

INFOID:000000008777891

Description		Capacity (Approximate)			Recommended Fluids/Lubricants
		Metric	US measure	Imp measure	
Fuel		50.0 ℓ	13-1/4 gal	11 gal	Unleaded regular gasoline with an octane rating of at least 87 AKI (RON 91)
Engine oil Drain and refill	With oil filter change	4.0 ℓ	4-1/4 qt	3-1/2 qt	<ul style="list-style-type: none"> <li>• Engine oil with API Certification Mark *1</li> <li>• Viscosity SAE 0W-20 *1</li> </ul>
	Without oil filter change	3.8 ℓ	4 qt	3-3/8 qt	
Dry engine (engine overhaul)		4.8 ℓ	5-1/8 qt	4-1/4 qt	
Cooling system (with reservoir tank at MAX level)		6.6 ℓ	7 qt	5-7/8 qt	Pre-diluted Genuine NISSAN Long Life Antifreeze/ Coolant (blue) or equivalent
CVT fluid		6.9 ℓ	7-1/4 qt	6-1/8 qt	Genuine NISSAN CVT Fluid NS-3 *2
Manual transaxle gear oil		2.0 ℓ	4-1/4 pt	3-1/2 pt	Genuine NISSAN Manual Transmission Fluid (MTF) TL/JR Type 75W-80, or equivalent *3
Brake and clutch fluid		—	—	—	Genuine NISSAN Super Heavy Duty Brake Fluid *4 or equivalent DOT 3 (US FMVSS No. 116)
Multi-purpose grease		—	—	—	NLGI No. 2 (lithium soap base)
Windshield washer fluid		4.5 ℓ	4-3/4 qt	4 qt	Genuine NISSAN Windshield Washer Concentrate Cleaner & Antifreeze fluid or equivalent
Air conditioner system refrigerant		0.45 ± 0.05 kg	0.992 ± 0.110 lb	0.992 ± 0.110 lb	HFC-134a (R-134a) *5
Air conditioner system oil		90 m ℓ	3.0 fl oz	3.2 fl oz	SP-A2 (NISSAN Type S or equivalent) *5

\*1: For additional information, see "Engine Oil Recommendation".

**\*2: Use only Genuine NISSAN CVT Fluid NS-3, using automatic transmission fluid other than Genuine NISSAN CVT Fluid NS-3 will damage the CVT, which is not covered by the NISSAN new vehicle limited warranty.**

\*3 If Genuine NISSAN Manual Transmission fluid (MTF) TL/JR Type is not available, API GL-4+, Viscosity SAE 75W-80 may be used as a temporary replacement. However, use Genuine NISSAN Manual Transmission Fluid (MTF) TL/JR Type as soon as it is available.

\*4: Available in mainland U.S.A. through a NISSAN dealer.

\*5: For additional information, see "Air conditioner specification label".

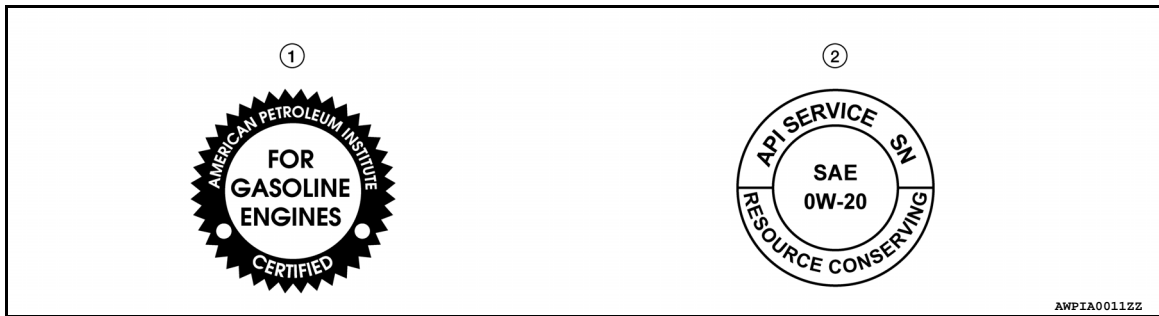
### Engine Oil Recommendation

INFOID:000000008777892

NISSAN recommends the use of an energy conserving oil in order to improve fuel economy. Select only engine oils that meet the American Petroleum Institute (API) certification and International Lubricant Standardization and Approval Committee (ILSAC) certification and SAE viscosity standard. These oils have the API certification mark on the front of the container. Oils which do not have the specified quality label should not be used as they could cause engine damage.

# RECOMMENDED FLUIDS AND LUBRICANTS

< PERIODIC MAINTENANCE >



1. API certification mark

2. API service symbol

## Engine Coolant Mixture Ratio

INFOID:000000008777893

The engine cooling system is filled at the factory with a pre-diluted mixture of 50% Genuine NISSAN Long Life Antifreeze/Coolant (blue) and 50% water to provide year-round anti-freeze and coolant protection. The anti-freeze solution contains rust and corrosion inhibitors. Additional engine cooling system additives are not necessary.

### WARNING:

- Do not remove the radiator or coolant reservoir cap when the engine is hot. Wait until the engine and radiator cool down. Serious burns could be caused by high pressure fluid escaping from the radiator.
- The radiator is equipped with a pressure type radiator cap. To prevent engine damage, use only a genuine NISSAN radiator cap.

### CAUTION:

- When adding or replacing coolant, be sure to use only Genuine NISSAN Long Life Antifreeze/Coolant (blue) or equivalent. Genuine NISSAN Long Life Antifreeze/Coolant (blue) is pre-diluted to provide antifreeze protection to -34°F (-37°C). If additional freeze protection is needed due to weather where the vehicle is operated, add Genuine NISSAN Long Life Antifreeze/Coolant (blue) concentrate following the directions on the container. If an equivalent coolant other than Genuine NISSAN Long Life Antifreeze/Coolant (blue) is used, follow the coolant manufacturer's instructions to maintain minimum antifreeze protection to -34°F (-37°C). The use of other types of coolant solutions other than Genuine NISSAN Long Life Antifreeze/Coolant (blue) or equivalent may damage the engine cooling system.
- Mixing any other type of coolant other than Genuine NISSAN Long Life Antifreeze/Coolant (blue), including Genuine NISSAN Long Life Antifreeze/Coolant (green), or the use of non-distilled water will reduce the life expectancy of the factory-fill coolant.

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# ENGINE MAINTENANCE

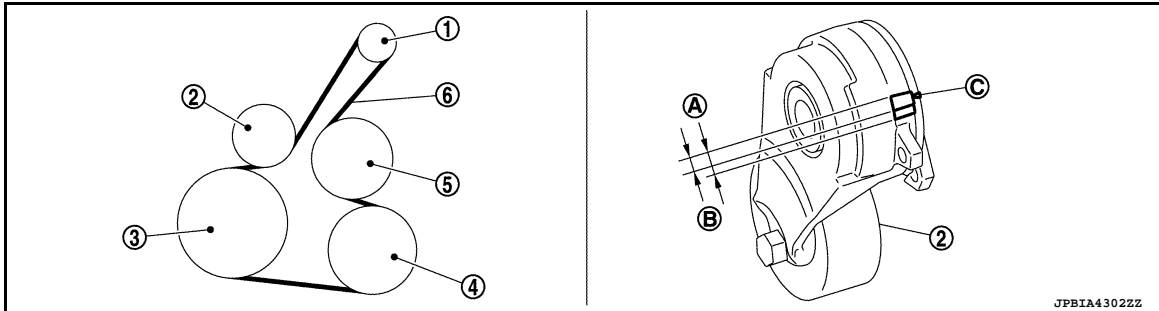
< PERIODIC MAINTENANCE >

## ENGINE MAINTENANCE

### DRIVE BELT

#### DRIVE BELT : Inspection

INFOID:000000009018296



- |                       |                              |                      |
|-----------------------|------------------------------|----------------------|
| 1. Alternator         | 2. Drive belt auto-tensioner | 3. Crankshaft pulley |
| 4. A/C compressor     | 5. Water pump                | 6. Drive belt        |
| A. Possible use range | B. New drive belt range      | C. Indicator         |

#### **WARNING:**

**Perform this step when engine is stopped.**

- Check that the indicator of drive belt auto-tensioner is within the possible use range.

#### **NOTE:**

- Check the drive belt auto-tensioner indication when the engine is cold.
- When new drive belt is installed, the indicator should be within the new drive belt range.
- Visually check entire drive belt for wear, damage or cracks.
- If the indicator is out of the possible use range or belt is damaged, replace drive belt.

#### DRIVE BELT : Adjustment

INFOID:000000009018297

Belt tension is not necessary, as it is automatically adjusted by drive belt auto-tensioner.

#### DRIVE BELT : Removal and Installation

INFOID:000000009020456

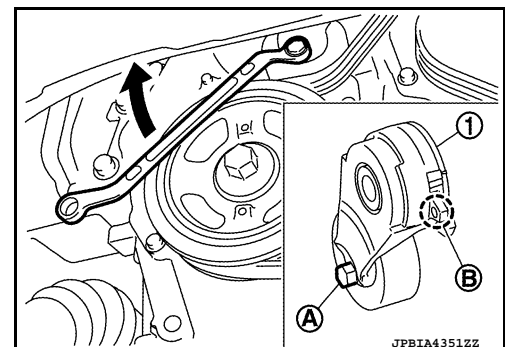
#### REMOVAL

1. Remove the front fender protector (RH) front side bolts and clips. Refer to [EXT-28, "FENDER PROTECTOR : Removal and Installation - Front Fender Protector"](#).
2. Hold the hexagonal part (A) of drive belt auto-tensioner (1) with a wrench securely. Then move the wrench handle in the direction of arrow (loosening direction of drive belt auto-tensioner).

#### **WARNING:**

**Avoid placing hand in a location where pinching may occur if the holding tool accidentally comes off.**

3. Insert a rod approximately 6 mm (0.24 in) in diameter into the hole (B) of the retaining boss to lock drive belt auto-tensioner.
  - Keep drive belt auto-tensioner pulley arm locked after drive belt is removed.
4. Remove drive belt.



#### INSTALLATION

1. Install drive belt.

#### **CAUTION:**

- Confirm drive belt is completely set to pulleys.
- Check for engine oil and engine coolant, be sure they are not adhered to drive belt and each pulley groove.

2. Release drive belt auto-tensioner, and apply tension to drive belt.

#### **WARNING:**

# ENGINE MAINTENANCE

## < PERIODIC MAINTENANCE >

**Avoid placing hand in a location where pinching may occur if the holding tool accidentally comes off.**

3. Turn crankshaft pulley clockwise several times to equalize tension between each pulley.
4. Confirm tension of drive belt at indicator (notch on fixed side) is within the possible use range. Refer to [EM-15, "Exploded View"](#).
5. Install the front fender protector (RH) front side bolts and clips. Refer to [EXT-28, "FENDER PROTECTOR : Removal and Installation - Front Fender Protector"](#).

## ENGINE COOLANT

### ENGINE COOLANT : System Inspection

INFOID:000000009000938

#### **WARNING:**

- Do not remove the radiator cap when the engine is hot. Serious burns could occur from high pressure engine coolant escaping from the radiator.
- Wrap a thick cloth around the cap. Slowly push down and turn it a quarter turn to allow built-up pressure to escape. Carefully remove the cap by pushing down and turning it all the way.

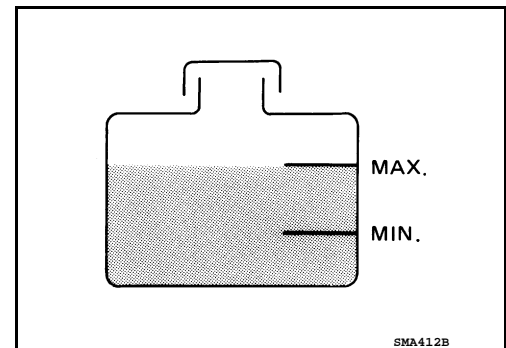
### CHECKING COOLING SYSTEM HOSES

Check hoses for the following:

- Improper attachment
- Leaks
- Cracks
- Damage
- Loose connections
- Chafing
- Deterioration

### CHECKING RESERVOIR LEVEL

- Check if the reservoir tank engine coolant level is within MIN to MAX when the engine is cool.
- Adjust engine coolant level if it is too much or too little.



### ENGINE COOLANT : Changing Engine Coolant

INFOID:000000009000939

#### **WARNING:**

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

### DRAINING ENGINE COOLANT

1. Remove the engine under cover. Refer to [EXT-16, "Exploded View"](#).

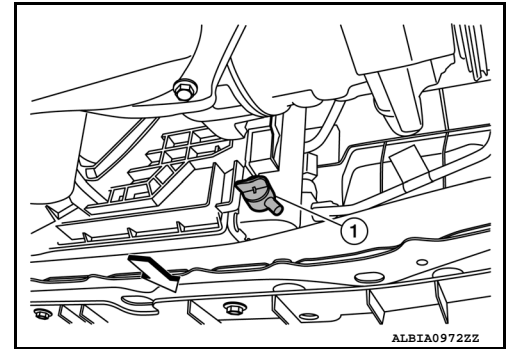
## ENGINE MAINTENANCE

### < PERIODIC MAINTENANCE >

2. Open the radiator drain plug (1) at the bottom of the radiator and remove the radiator filler cap. This is the only step required when partially draining the cooling system (radiator only).

**CAUTION:**

- Do not spill engine coolant on the drive belt.
- Perform this step when the engine is cold.



3. Follow this step for heater core removal/replacement only. Disconnect the upper heater hose at the engine side and apply moderate air pressure [103.46 kPa (1.055 kg/cm<sup>2</sup>, 15 psi) maximum air pressure] into the hose for 30 seconds to blow the excess engine coolant out of the heater core.
4. When draining all of the engine coolant in the system, remove the reservoir tank and drain the engine coolant, then clean the reservoir tank before installation.

**CAUTION:**

  - Do not allow the engine coolant to contact the drive belt.
  - Perform this step when engine is cold.
5. When draining all of the engine coolant in the system for engine removal or repair, remove the engine coolant drain plugs on the cylinder block.
6. Check the drained engine coolant for contaminants such as rust, corrosion or discoloration. If the engine coolant is contaminated, flush the engine cooling system.

### REFILLING ENGINE COOLANT

1. Install the radiator drain plug. Install the reservoir tank and cylinder block drain plug, if removed for a total system drain or for engine removal or repair.
  - The radiator must be completely empty of engine coolant and water.
  - Apply sealant to the threads of the cylinder block drain plug. Use Genuine High Performance Thread Sealant or equivalent. Refer to [MA-12, "Fluids and Lubricants"](#).

**Radiator drain plug** : Refer to [CO-15, "Exploded View"](#).

2. If disconnected, reattach the upper radiator hose at the engine side.
3. Set the vehicle heater controls to the full HOT and heater ON position. Turn the vehicle ignition ON with the engine OFF as necessary to activate the heater mode.



# ENGINE MAINTENANCE

## < PERIODIC MAINTENANCE >

4. Install the Tool by installing the radiator cap adapter onto the radiator neck opening. Then attach the gauge body assembly with the refill tube and the venturi assembly to the radiator cap adapter.

**Tool number** : KV991J0070 (J-45695)

5. Insert the refill hose into the engine coolant mixture container that is placed at floor level. Make sure the ball valve is in the closed position.
  - **Use recommended engine coolant or equivalent.**  
Refer to [MA-12, "Fluids and Lubricants"](#) (United States and Canada).

**Engine coolant capacity (with reservoir tank)** : Refer to [CO-27, "Periodical Maintenance Specification"](#).

### CAUTION:

**Do not use any cooling system additives such as radiator sealer. Additives may clog the cooling system and cause damage to the engine, transmission and/or cooling system.**

6. Install an air hose to the venturi assembly, the air pressure must be within specification.

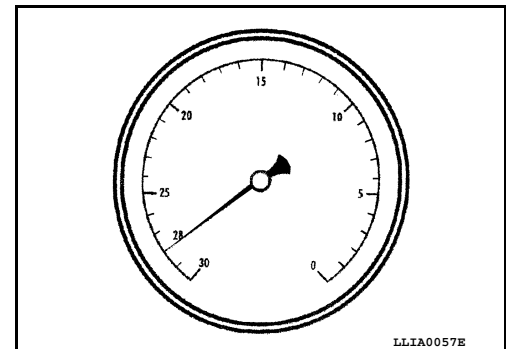
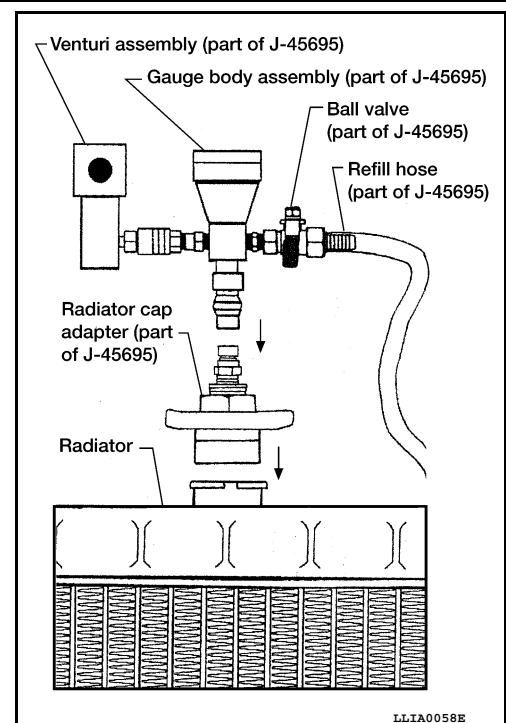
**Compressed air supply pressure** : 549 - 824 kPa (5.6 - 8.4 kg/cm<sup>2</sup>, 80 - 119 psi)

### CAUTION:

**The compressed air supply must be equipped with an air dryer.**

7. The vacuum gauge will begin to rise and there will be an audible hissing noise. During this process open the ball valve on the refill hose slightly. Engine coolant will be visible rising in the refill hose. Once the refill hose is full of engine coolant, close the ball valve. This will purge any air trapped in the refill hose.
8. Continue to draw the vacuum until the gauge reaches 28 inches of vacuum. The gauge may not reach 28 inches in high altitude locations, use the vacuum specifications based on the altitude above sea level.

Altitude above sea level	Vacuum gauge reading
0 - 100 m (328 ft)	: 28 inches of vacuum
300 m (984 ft)	: 27 inches of vacuum
500 m (1,641 ft)	: 26 inches of vacuum
1,000 m (3,281 ft)	: 24 - 25 inches of vacuum



9. When the vacuum gauge has reached the specified amount, disconnect the air hose and wait 20 seconds to see if the system loses any vacuum. If the vacuum level drops, perform any necessary repairs to the system and repeat steps 6 - 8 to bring the vacuum to the specified amount. Recheck for any leaks.
10. Place the engine coolant container (with the refill hose inserted) at the same level as the top of the radiator. Then open the ball valve on the refill hose so the engine coolant will be drawn up to fill the cooling system. The cooling system is full when the vacuum gauge reads zero.

### CAUTION:

**Do not allow the engine coolant container to get too low when filling, to avoid air from being drawn into the cooling system.**

11. Remove the Tool from the radiator neck opening.
12. Fill the cooling system reservoir tank to the specified level and install the radiator cap. Run the engine to warm up the cooling system and top up the system as necessary.
13. Install the engine under cover. Refer to [EXT-16, "Exploded View"](#).

## FLUSHING COOLING SYSTEM

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# ENGINE MAINTENANCE

## < PERIODIC MAINTENANCE >

1. Fill the radiator from the filler neck above the radiator upper hose and reservoir tank with clean water and reinstall the radiator filler cap.
2. Run the engine until it reaches normal operating temperature.
3. Rev the engine two or three times under no-load.
4. Stop the engine and wait until it cools down.
5. Drain the water from the system. Refer to [MA-15. "ENGINE COOLANT : Changing Engine Coolant"](#).
6. Repeat steps 1 through 5 until clear water begins to drain from the radiator.

## FUEL LINES

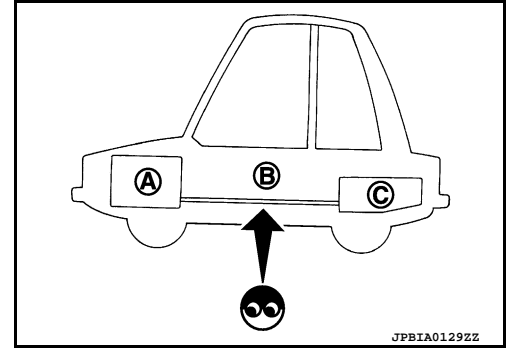
### FUEL LINES : Inspection

INFOID:000000008979825

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

- (A) : Engine
- (B) : Fuel line
- (C) : Fuel tank

If necessary, repair or replace damaged parts.



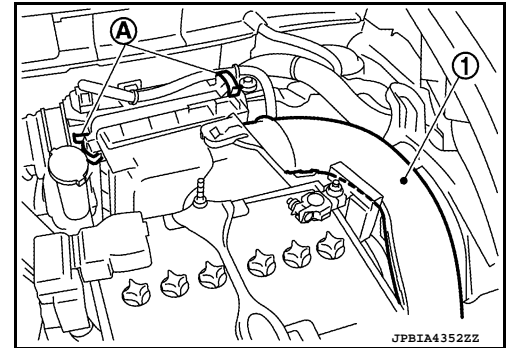
## AIR CLEANER FILTER

### AIR CLEANER FILTER : Removal and Installation

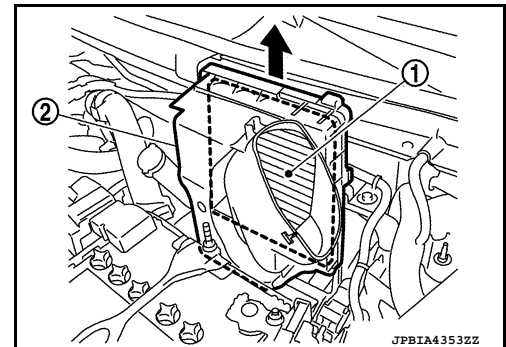
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#### REMOVAL

1. Remove air duct inlet (upper) (1).
2. Unhook the tabs (A) of both ends of the air cleaner cover.



3. Remove the air cleaner filter (1) and air cleaner body (2) from the air cleaner cover.
4. Remove the air cleaner filter from the air cleaner body.



#### INSTALLATION

Installation is in the reverse order of removal.

- Tabs shall be fixed after inserting air cleaner body protrusion to air cleaner case notch hole.
- Make sure that whether air cleaner body has been firmly installed by shaking it.

# ENGINE MAINTENANCE

< PERIODIC MAINTENANCE >

## AIR CLEANER FILTER : Inspection

INFOID:000000009000980

### INSPECTION AFTER REMOVAL

Examine with eyes that there is no stain, clogging, or damage on air cleaner element.

- Remove dusts (such as dead leaves) on air cleaner element surface and inside cleaner case.
- If clogging or damage is observed, replace the air cleaner element.

#### **CAUTION:**

**Do not clean the viscous paper type air cleaner filter by blowing as there is risk of deterioration of its performance.**

## ENGINE OIL

### ENGINE OIL : Inspection

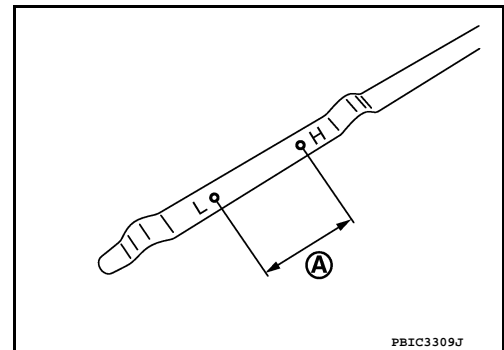
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#### ENGINE OIL LEVEL

##### **NOTE:**

Before starting engine, put vehicle horizontally and check the engine oil level. If engine is already started, stop it and allow 10 minutes before checking.

1. Pull out oil level gauge and wipe it clean.
2. Insert oil level gauge and check that the engine oil level is within the range (A) shown.
3. If engine oil is out of range, adjust it.



#### ENGINE OIL APPEARANCE

- Check engine oil for white turbidity or heavy contamination.
- If engine oil becomes turbid and white, it is highly probable that it is contaminated with engine coolant. Repair or replace damaged parts.

#### ENGINE OIL LEAKAGE

Check for engine oil leaks around the following areas.

- Oil cooler
- Oil temperature sensor
- Oil pan (upper and lower)
- Oil pan drain plug
- Oil pressure sensor
- Oil filter
- Valve timing control cover
- Valve timing control solenoid valve (intake and exhaust)
- Front cover
- Mating surface between cylinder head and camshaft bracket
- Mating surface between cylinder block and cylinder head
- Mating surface between camshaft bracket and rocker cover
- Crankshaft oil seals (front and rear)

### ENGINE OIL : Draining

INFOID:000000009000982

#### **WARNING:**

- **Be careful not to get burned, as 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 the engine, and check for engine oil leaks from engine components. Refer to [MA-19, "ENGINE OIL : Inspection"](#).

# ENGINE MAINTENANCE

## < PERIODIC MAINTENANCE >

2. Stop the engine and wait for 10 minutes.
3. Loosen oil filler cap.
4. Remove drain plug and then drain engine oil.

## ENGINE OIL : Refilling

INFOID:000000009000983

1. Install drain plug with new drain plug washer. Refer to [EM-33, "Exploded View"](#).

### **CAUTION:**

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

**Tightening torque : 34.3 N·m (3.5 kg-m, 25 ft-lb).**

2. Refill with new engine oil.
    - **Engine oil specification and viscosity:** Refer to [MA-12, "Engine Oil Recommendation"](#).
    - **Engine oil capacity :** Refer to [LU-17, "Oil Capacity"](#).
- CAUTION:**
- **The refill capacity depends on the engine oil temperature and drain time. Use these specifications for reference only.**
  - **Always use oil level gauge to determine the proper amount of engine oil in the engine.**
3. Warm up engine and check area around drain plug and oil filter for engine oil leaks.
  4. Stop engine and wait for 10 minutes.
  5. Check the engine oil level. Refer to [MA-19, "ENGINE OIL : Inspection"](#).

## OIL FILTER

### OIL FILTER : Removal and Installation

INFOID:000000009000984

#### REMOVAL

1. Remove engine under cover. Refer to [EXT-16, "Exploded View"](#).
2. Drain engine oil. Refer to [MA-19, "ENGINE OIL : Draining"](#).
3. Remove the oil filter using Tool (A) as shown.



**: Front**

**Tool number : KV10115801 (J-38956)**

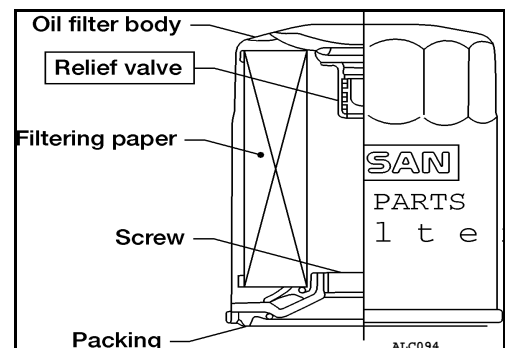
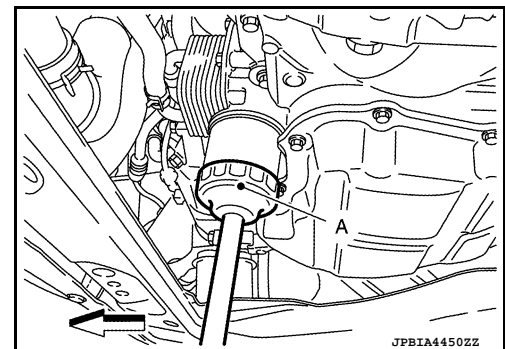
### **WARNING:**

**Be careful not to burn yourself, as the engine oil may be hot.**

### **CAUTION:**

- **When removing, prepare a shop cloth to absorb any oil leaks or spills.**
- **Do not allow engine oil to adhere to the drive belts.**
- **Completely wipe off any oil that adheres to the engine and the vehicle.**

- **The oil filter is provided with a relief valve. Use a Genuine NISSAN oil filter or equivalent.**



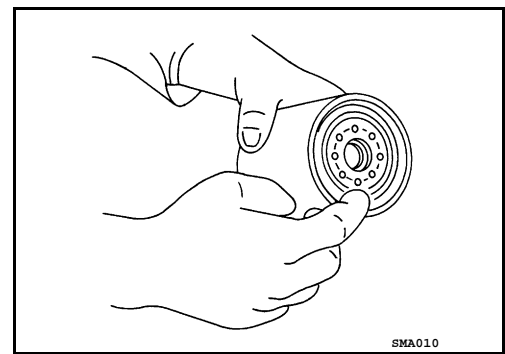
#### INSTALLATION

1. Remove foreign materials adhering to the oil filter installation surface.

# ENGINE MAINTENANCE

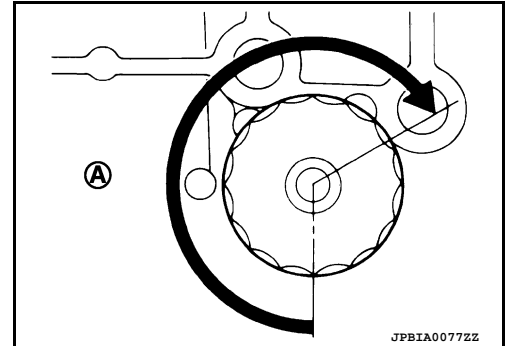
## < PERIODIC MAINTENANCE >

2. Apply new 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 (A), or tighten to specification.

**Oil filter** : 18.0 N-m (1.8 kg-m, 13 ft-lb)  
**Tool number** : KV10115801 (J-38956)



4. Refill engine with new engine oil. Refer to [MA-20, "ENGINE OIL : Refilling"](#).
5. Install engine under cover. Refer to [EXT-16, "Exploded View"](#).

## OIL FILTER : Inspection

INFOID:000000009000985

### INSPECTION AFTER INSTALLATION

1. Check the engine oil level. Refer to [MA-19, "ENGINE OIL : Inspection"](#).
2. Start the engine, and check that there are no leaks of engine oil.
3. Stop the engine and wait for 10 minutes.
4. Check the engine oil level, and adjust the level. Refer to [MA-19, "ENGINE OIL : Inspection"](#).

## SPARK PLUG

### SPARK PLUG : Removal and Installation

INFOID:000000009000986

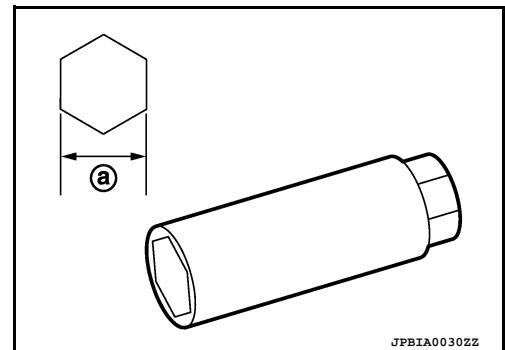
#### REMOVAL

1. Remove engine room cover. Refer to [EM-24, "Exploded View"](#).
2. Remove ignition coil. Refer to [EM-46, "Exploded View"](#).
3. Remove spark plug using suitable tool.

(A) : 14 mm (0.55 in)

#### CAUTION:

**Do not drop or shock spark plug.**



#### INSTALLATION

Installation is in the reverse order of removal.

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MA

# ENGINE MAINTENANCE

## < PERIODIC MAINTENANCE >

Standard type*	DENSO
	PLZKAR6A-11 (except California) DILKAR6A-11 (California)
Gap (nominal)	1.1 mm (0.043 in)

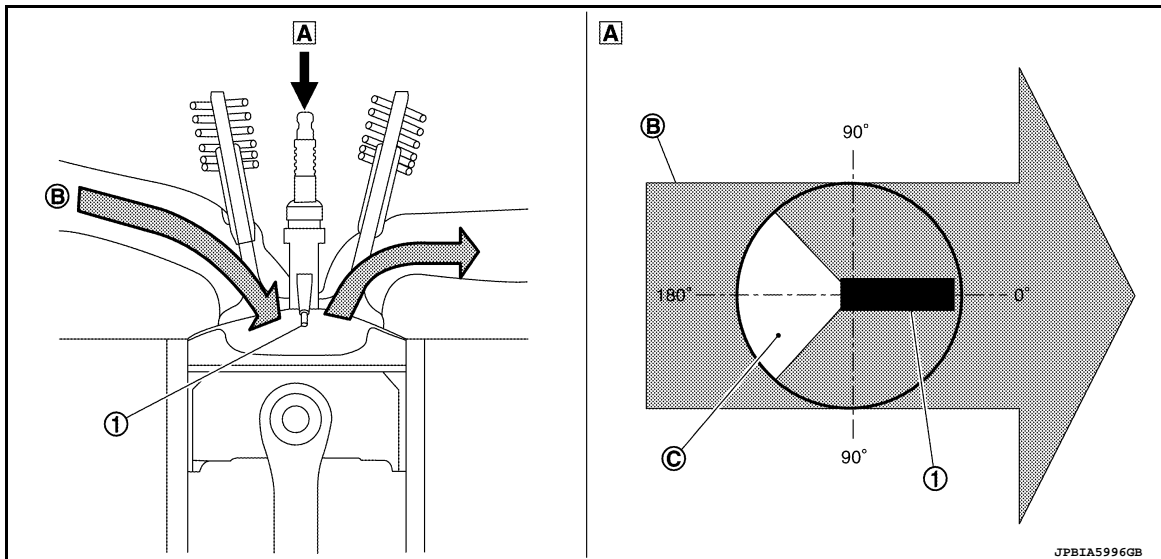
\*: Always check with the Parts Department for the latest parts information.

### CAUTION:

Always tighten the spark plug to specified torque to align the orientation of electrodes. The ground electrode of a genuine spark plug is positioned in the area of maximum ignitability by tightening to the specified torque. When replacing spark plugs, use genuine spark plugs of which the ground electrode is adjusted.

### NOTE:

The ground electrode of the spark plug is positioned in the area of maximum ignitability to improve combustion efficiency in the cylinder, reduce CO<sub>2</sub> (carbon dioxide) emission and improve fuel economy.



1. Ground electrode of spark plug

A. Top view

B. Air-fuel mixture flow

C. Poor ignitability region

## SPARK PLUG : Inspection

INFOID:000000009000987

### INSPECTION AFTER REMOVAL

Use the standard type spark plug for normal condition.

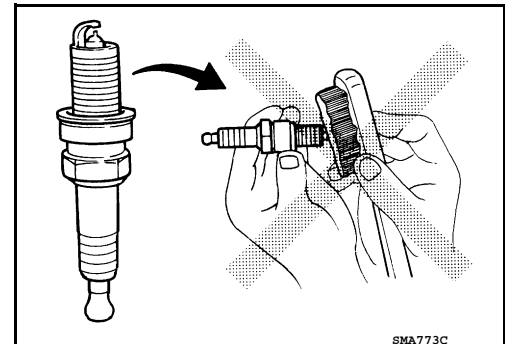
Spark plug (Standard type) : Refer to [EM-118. "Spark Plug"](#).

### CAUTION:

- Do not drop or shock spark plug.
- 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 (5.88 bar, 6 kg/cm<sup>2</sup>, 85 psi)

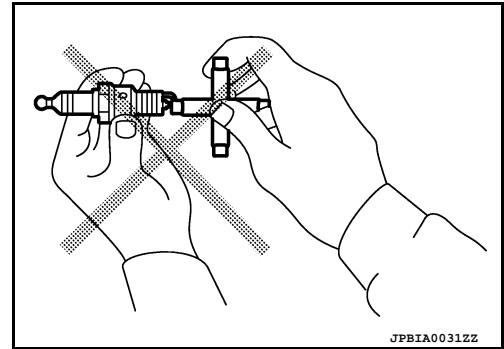
Cleaning time : Less than 20 seconds



# ENGINE MAINTENANCE

## < PERIODIC MAINTENANCE >

- Spark plug gap adjustment is not required between replacement intervals.
- Measure spark plug gap. when it exceeds the limit, replace spark plug even if it is with in the specified replacement mileage. Refer to [EM-118, "Spark Plug"](#).



## EVAP VAPOR LINES

### EVAP VAPOR LINES : Inspection

INFOID:000000008777907

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.

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MA

# CHASSIS AND BODY MAINTENANCE

< PERIODIC MAINTENANCE >

## CHASSIS AND BODY MAINTENANCE

### IN-CABIN MICROFILTER

#### IN-CABIN MICROFILTER : Removal and Installation

INFOID:000000009000990

#### REMOVAL

1. Remove the in-cabin microfilter cover.

**CAUTION:**

**Before removing the in-cabin microfilter cover, let the vehicle rest for at least 30 minutes.**

- a. Release the filter cover tab (A), then pull the bottom of the in-cabin microfilter cover outwards.
  - b. Pull down the in-cabin microfilter cover to disengage the hook at the top, then remove the in-cabin microfilter cover.
2. Remove the in-cabin microfilter.

#### INSTALLATION

Installation is in the reverse order of removal.

**CAUTION:**

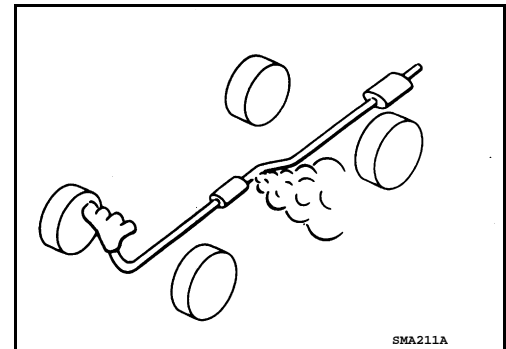
**After installation, check that the in-cabin microfilter cover is securely fastened to the heating and cooling unit assembly.**

### EXHAUST SYSTEM

#### EXHAUST SYSTEM : Checking Exhaust System

INFOID:000000008777920

Check the exhaust pipes, muffler, and mounting components for incorrect attachment, leaks, cracks, damage, or deterioration.



### M/T OIL

#### M/T OIL : Inspection

INFOID:000000009018301

#### OIL LEAKAGE

Make sure that gear oil is not leaking from transaxle or around it.

#### OIL LEVEL

1. Remove filler plug (1) and gasket from transaxle case.
2. Check the oil level from filler plug mounting hole as shown.

**CAUTION:**

**Do not start engine while checking oil level.**

3. Set a gasket on filler plug and then install it to transaxle case.

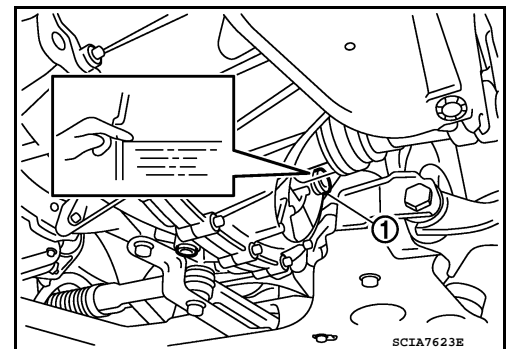
**CAUTION:**

**Do not reuse gasket.**

4. Tighten filler plug to the specified torque. Refer to [TM-30](#), "[Exploded View](#)".

**CAUTION:**

**Do not overtighten the filler plug as this could cause the transaxle case to crack.**



#### M/T OIL : Draining

INFOID:000000009018302

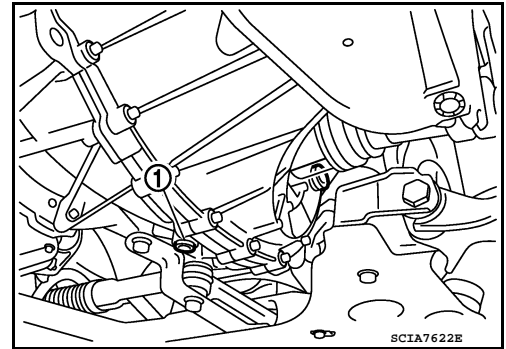
1. Start engine and let it run to warm up transaxle.



# CHASSIS AND BODY MAINTENANCE

## < PERIODIC MAINTENANCE >

2. Stop engine. Remove drain plug (1) and gasket, using a suitable tool and then drain gear oil.
3. Set a gasket on drain plug and install it to clutch housing, using a suitable tool.  
**CAUTION:**  
**Do not reuse gasket.**
4. Tighten drain plug to the specified torque. Refer to [TM-30, "Exploded View"](#).  
**CAUTION:**  
**Do not overtighten the filler plug as this could cause the transaxle case to crack.**



INFOID:000000009018303

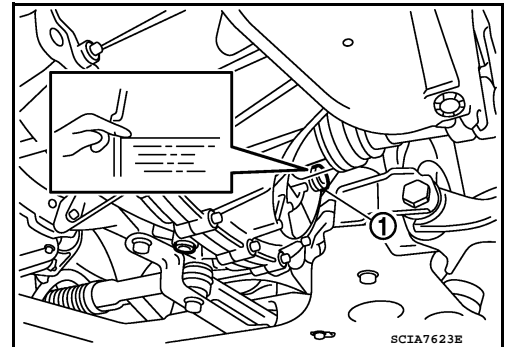
## M/T OIL : Refilling

1. Remove filler plug (1) and gasket from transaxle case.
2. Fill with new gear oil until oil level reaches the specified limit at filler plug mounting hole as shown.

**Oil grade and viscosity** : Refer to [MA-12, "Fluids and Lubricants"](#).

**Oil capacity** : Refer to [MA-12, "Fluids and Lubricants"](#).

3. After refilling gear oil, check the oil level. Refer to [MA-24, "M/T OIL : Inspection"](#).
4. Set a gasket on filler plug and then install it to transaxle case.  
**CAUTION:**  
**Do not reuse gasket.**
5. Tighten filler plug to the specified torque. Refer to [TM-30, "Exploded View"](#).  
**CAUTION:**  
**Do not overtighten the filler plug as this could cause the transaxle case to crack.**



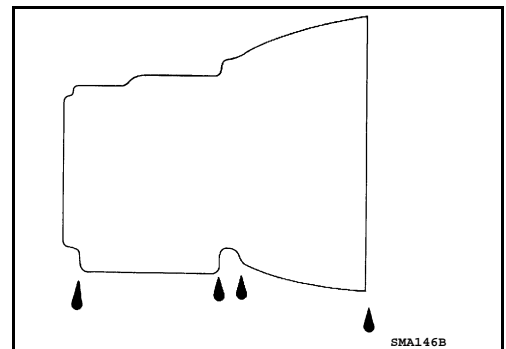
## CVT FLUID

### CVT FLUID : Inspection

INFOID:000000009000994

### FLUID LEAKAGE

- Check transaxle surrounding area (oil seal and plug etc.) for fluid leakage.
- If anything is found, repair or replace damaged parts and adjust CVT fluid level. Refer to [MA-27, "CVT FLUID : Adjustment"](#).



### CVT FLUID : Replacement

INFOID:000000009000995

**CVT fluid** : Refer to [TM-275, "General Specification"](#).

**Fluid capacity** : Refer to [TM-275, "General Specification"](#).

### **CAUTION:**

- Use only Genuine NISSAN CVT Fluid NS-2. Using transmission fluid other than Genuine NISSAN CVT Fluid NS-2 will damage the CVT, which is not covered by the (NISSAN new vehicle limited) warranty.
- Always use shop paper. Never use shop cloth.
- Replace a drain plug gasket with new ones at the final stage of the operation when installing.

# CHASSIS AND BODY MAINTENANCE

## < PERIODIC MAINTENANCE >

- Use caution when looking into the drain hole as there is a risk of dripping fluid entering the eye.
- After replacement, always perform CVT fluid leakage check.

1. Select "Data Monitor" in "TRANSMISSION" using CONSULT.
2. Select "FLUID TEMP" and confirm that the CVT fluid temperature is 40°C (104°F) or less.
3. Check that the selector lever is in the "P" position, then completely engage the parking brake.
4. Lift up the vehicle.
5. Remove the drain plug and overflow tube and drain the CVT fluid from the oil pan. [TM-260. "Exploded View"](#).
6. Install the charging pipe set (KV311039S0) (A) into the drain hole.

**CAUTION:**

**Tighten the charging pipe by hand.**

7. Install the ATF changer hose (B) to the charging pipe.

**CAUTION:**

**Press the ATF changer hose all the way onto the charging pipe until it stops.**

8. Fill approximately 3 liter (2-5/8 Imp qt) of the CVT fluid.
9. Remove the ATF changer hose and charging pipe, then install the drain plug.

**NOTE:**

Perform this work quickly because CVT fluid leaks.

10. Lift down the vehicle.
11. Start the engine.
12. While depressing the brake pedal, shift the selector lever to the entire position from "P" to "L", and shift it to the "P" position.

**NOTE:**

Hold the lever at each position for 5 seconds.

13. Check that the CONSULT "Data monitor" in "FLUID TEMP" is 35°C (95°F) to 45°C (113°F).

14. Stop the engine.

15. Lift up the vehicle.

16. Remove the drain plug, and then drain CVT fluid from oil pan.

17. Repeat steps 6 to 16 (one time).

18. Install the overflow tube. Refer to [TM-260. "Exploded View"](#).

**CAUTION:**

**Be sure to tighten to the specified torque. If it is not tightened to the specified torque, the tube may be damaged.**

19. Install the charging pipe set (KV311039S0) (A) into the drain hole.

**CAUTION:**

**Tighten the charging pipe by hand.**

20. Install the ATF changer hose (B) to the charging pipe.

**CAUTION:**

**Press the ATF changer hose all the way onto the charging pipe until it stops.**

21. Fill approximately 3 liter (2-5/8 Imp qt) of the CVT fluid.

22. Remove the ATF changer hose and charging pipe, then install the drain plug.

**NOTE:**

Perform this work quickly because CVT fluid leaks.

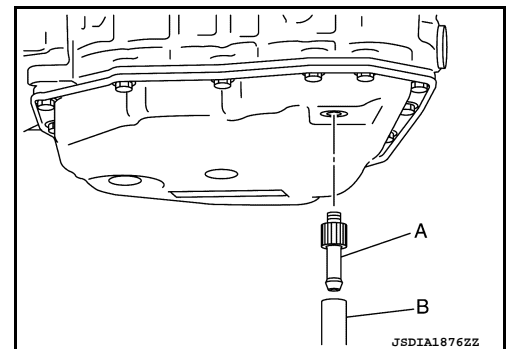
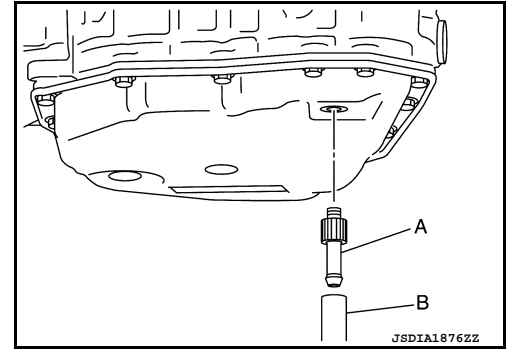
23. Lift down the vehicle.

24. Start the engine.

25. While depressing the brake pedal, shift the selector lever to the entire position from "P" to "L", and shift it to the "P" position.

**NOTE:**

Hold the lever at each position for 5 seconds.



# CHASSIS AND BODY MAINTENANCE

## < PERIODIC MAINTENANCE >

26. Check that the CONSULT "Data monitor" in "FLUID TEMP" is 35°C (95°F) to 45°C (113°F).
27. Lift up the vehicle.
28. Remove the drain plug and confirm that the CVT fluid is drained from the overflow tube.  
**CAUTION:**  
**Perform this work with the vehicle idling.**  
**NOTE:**  
If the CVT fluid is not drained, refer to "Adjustment" and refill with the CVT fluid.
29. When the flow of CVT fluid slows to a drip, tighten the drain plug to the specified torque. [TM-260, "Exploded View"](#).  
**CAUTION:**  
**Never reuse drain plug gasket.**
30. Lift down the vehicle.
31. Select "Work Support" in "TRANSMISSION" using CONSULT.
32. Select "CONFORM CVTF DETERIORATION".
33. Touch "Erase".
34. Stop the engine.

## CVT FLUID : Adjustment

INFOID:000000009000996

- CVT fluid** : Refer to [TM-275, "General Specification"](#).  
**Fluid capacity** : Refer to [TM-275, "General Specification"](#).

### **CAUTION:**

- Use only Genuine NISSAN CVT Fluid NS-2. Using transmission fluid other than Genuine NISSAN CVT Fluid NS-2 will damage the CVT, which is not covered by the (NISSAN new vehicle limited) warranty.
- During adjustment of the CVT fluid level, check CONSULT so that the oil temperature may be maintained from 35 to 45°C (95 to 113°F).
- Use caution when looking into the drain hole as there is a risk of dripping fluid entering the eye.

1. Check that the selector lever is in the "P" position, then completely engage the parking brake.
2. Start the engine.
3. Adjust the CVT fluid temperature to be approximately 40°C (104°F).

### **NOTE:**

The CVT fluid is largely affected by temperature. Therefore be sure to use CONSULT and check the "FLUID TEMP" under "TRANSMISSION" in "Data Monitor" while adjusting.

4. While depressing the brake pedal, shift the selector lever to the entire position from "P" to "L", and shift it to the "P" position.

### **NOTE:**

Hold the lever at each position for 5 seconds.

5. Lift up the vehicle.
6. Check that there is no CVT fluid leakage.
7. Remove the drain plug. Refer to [TM-260, "Exploded View"](#).

8. Install the charging pipe set (KV311039S0) (A) into the drain plug hole.

### **CAUTION:**

**Tighten the charging pipe by hand.**

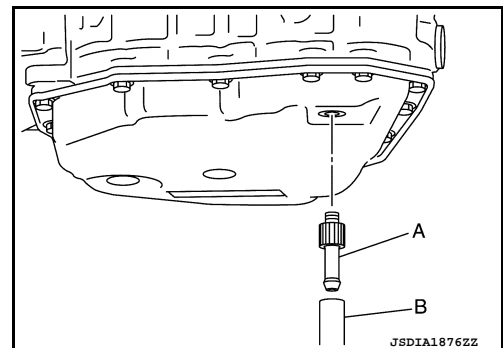
9. Install the ATF changer hose (B) to the charging pipe.

### **CAUTION:**

**Press the ATF changer hose all the way onto the charging pipe until it stops.**

10. Fill approximately 0.5 liter (1/2 Imp qt) of the CVT fluid.
11. Remove the ATF changer hose from the charging pipe, and check that the CVT fluid drains out from the charging pipe. If it does not drain out, perform charging again.

### **CAUTION:**



# CHASSIS AND BODY MAINTENANCE

## < PERIODIC MAINTENANCE >

**Perform this work with the vehicle idling.**

12. When the flow of CVT fluid slows to a drip, remove the charging pipe from the oil pan.
13. Tighten the drain plug to the specified torque. Refer to [TM-260. "Exploded View"](#).

**CAUTION:**

**Never reuse drain plug gasket.**

14. Lift down the vehicle.
15. Stop the engine.

## WHEELS

### WHEELS : Inspection

INFOID:000000009021929

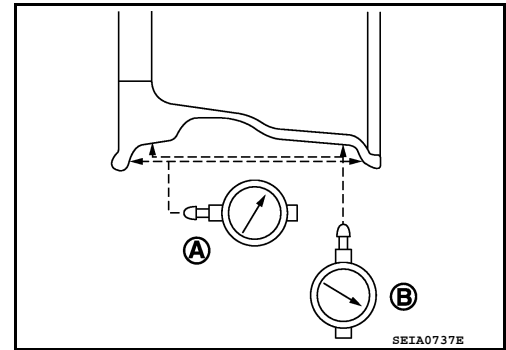
#### ALUMINUM WHEEL

1. Check tires for wear and improper inflation.
2. Check wheels for deformation, cracks and other damage. If deformed, remove wheel and check wheel runout.
  - a. Remove tire from aluminum wheel and mount wheel on a balancer machine.
  - b. Set dial indicator as shown.
  - c. Check runout, if runout value exceeds the limit, replace aluminum wheel.

#### Limit

**Lateral Deflection (A)** Refer to [WT-52. "Road Wheel"](#).

**Radial Deflection (B)** Refer to [WT-52. "Road Wheel"](#).



#### STEEL WHEEL

1. Check tires for wear and improper inflation.
2. Check wheels for deformation, cracks and other damage. If deformed, remove wheel and check wheel runout.
  - a. Remove tire from steel wheel and mount wheel on a balancer machine.
  - b. Set two dial indicators as shown.
  - c. Set each dial indicator to "0".
  - d. Rotate wheel and check dial indicators at several points around the circumference of the wheel.
  - e. Calculate runout at each point as shown below.

**Lateral deflection (A) = (W+X)/2**

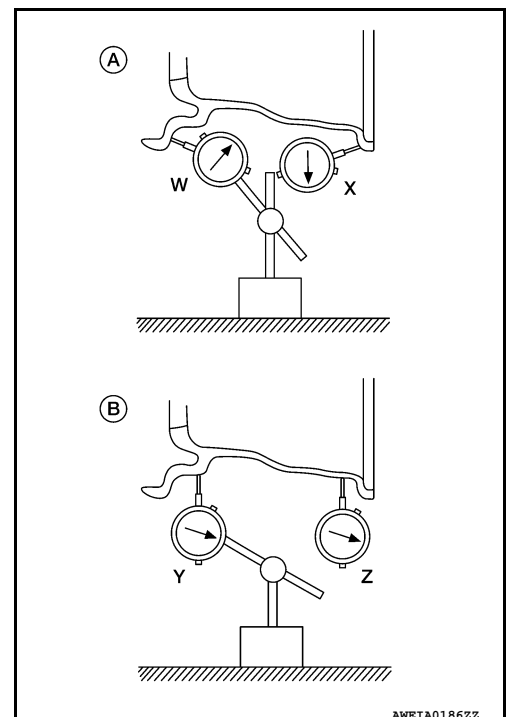
**Radial deflection (B) = (Y+Z)/2**

- f. Select maximum positive runout value and the maximum negative value. Add the two values to determine total runout. In case a positive or negative value is not available, use the maximum value (negative or positive) for total runout. If the total runout value exceeds the limit, replace steel wheel.

#### Limit

**Lateral Deflection (A)** Refer to [WT-52. "Road Wheel"](#).

**Radial Deflection (B)** Refer to [WT-52. "Road Wheel"](#).



# CHASSIS AND BODY MAINTENANCE

< PERIODIC MAINTENANCE >

## WHEELS : Adjustment

INFOID:000000009018304

### BALANCING WHEELS (ADHESIVE WEIGHT TYPE)

#### Preparation Before Adjustment

Remove inner and outer balance weights from the road wheel. Using releasing agent, remove double-faced adhesive tape from the road wheel.

#### CAUTION:

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

#### Wheel Balance Adjustment

- If a balancer machine has an adhesive weight mode setting, select the adhesive weight mode setting and skip Step 2. below. If a balancer machine only has the clip-on (rim flange) weight mode setting, follow Step 2. to calculate the correct size adhesive weight.

1. Set road wheel on balancer machine using the center hole as a guide. Start the balancer machine.
2. For balancer machines that only have a clip-on (rim flange) weight mode setting, follow this step to calculate the correct size adhesive weight to use. When inner and outer imbalance values are shown on the balancer machine indicator, multiply outer imbalance value by 5/3 (1.67) to determine balance weight that should be used. Select the outer balance weight with a value closest to the calculated value above and install in to the designated outer position of, or at the designated angle in relation to the road wheel.

- a. Indicated imbalance value  $\times 5/3$  (1.67) = balance weight to be installed

#### Calculation example:

$23 \text{ g (0.81 oz)} \times 5/3$  (1.67) = 38.33 g (1.35 oz)  $\Rightarrow$  40 g (1.41 oz)  
balance weight (closer to calculated balance weight value)

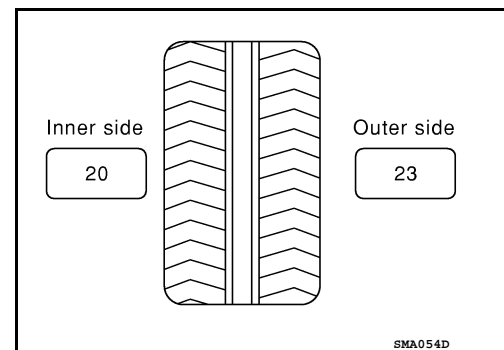
#### NOTE:

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

#### Example:

37.4  $\Rightarrow$  35 g (1.23 oz)

37.5  $\Rightarrow$  40 g (1.41 oz)



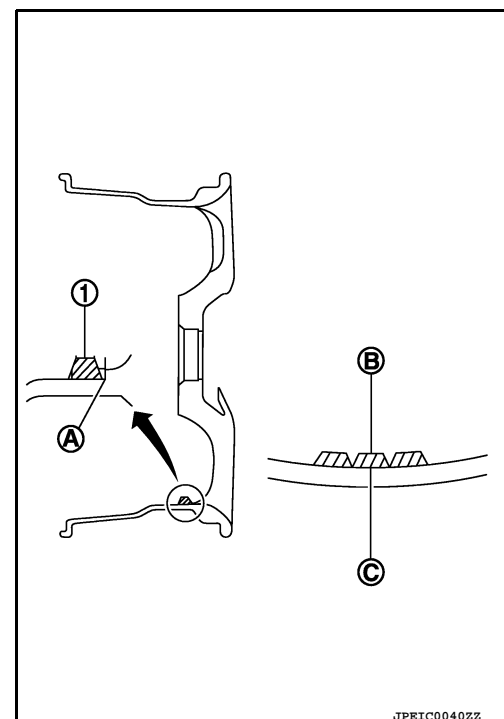
3. Install balance weight in the position shown.

#### 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.**
- When installing balance weight (1) to road wheel, set it into the grooved area (A) on the inner wall of the road wheel as shown so that the balance weight center (B) is aligned with the balancer machine indication position (angle) (C).

#### CAUTION:

- **Always use genuine NISSAN adhesive balance weights.**
- **Balance weights are non-reusable; always replace with new ones.**
- **Do not install more than three sheets of balance weight.**



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# CHASSIS AND BODY MAINTENANCE

## < PERIODIC MAINTENANCE >

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

**CAUTION:**

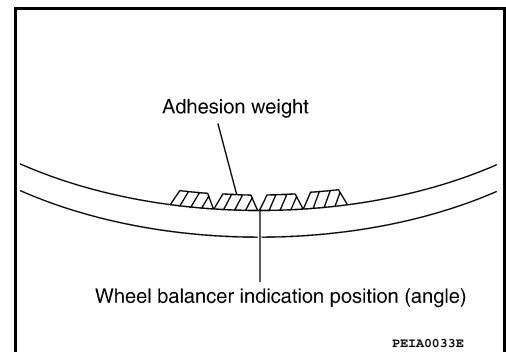
**Do not install one balance weight sheet on top of another.**

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

**CAUTION:**

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

7. Start balancer machine. Make sure that inner and outer residual imbalance values are 5 g (0.18 oz) each or below.
8. If either residual imbalance value exceeds 5 g (0.18 oz), repeat installation procedures.



**Allowable imbalance**

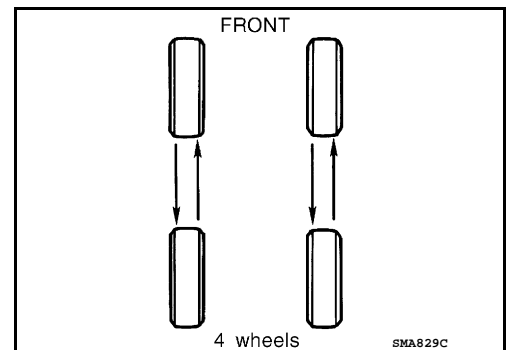
**Refer to [WT-52, "Road Wheel"](#).**

## TIRE ROTATION

- Follow the maintenance schedule for tire rotation service intervals. Refer to [MA-5, "Explanation of General Maintenance"](#).
- When installing the wheel, tighten wheel nuts to the specified torque.

**CAUTION:**

- **Do not include the T-type spare tire when rotating the tires.**
- **When installing wheels, tighten them diagonally by dividing the work two to three times in order to prevent the wheels from developing any distortion.**
- **Be careful not to tighten wheel nut at torque exceeding the criteria for preventing strain of disc rotor.**
- **Use NISSAN genuine wheel nuts for aluminum wheels.**



**Wheel nut tightening torque** Refer to [WT-52, "Road Wheel"](#).

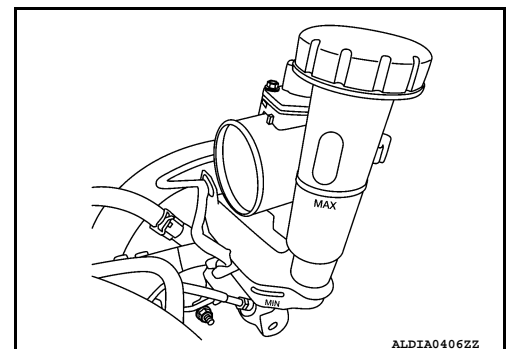
## BRAKE FLUID LEVEL AND LEAKS

### BRAKE FLUID LEVEL AND LEAKS : Inspection

INFOID:000000009018305

#### BRAKE FLUID LEVEL

- Make sure that the brake fluid level in the reservoir tank is between the MAX and MIN lines.
- Visually check around the reservoir tank for brake fluid leakage.
- If the brake fluid level is excessively low, check the brake system for leakage.
- If brake warning lamp remains illuminated after parking brake pedal is released, check the brake system for brake fluid leakage.



#### BRAKE LINE

1. Check brake line (tubes and hoses) for cracks, deterioration or other damage. Replace any damaged parts.

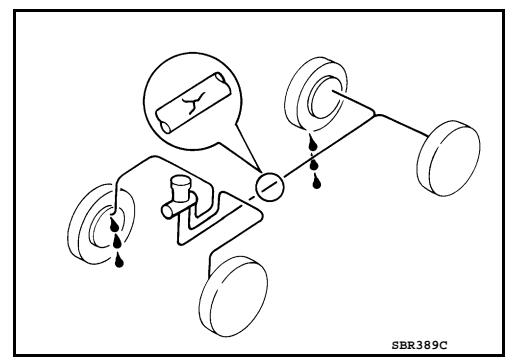
# CHASSIS AND BODY MAINTENANCE

## < PERIODIC MAINTENANCE >

2. Check for brake fluid leakage by depressing brake pedal under a force of 785 N (80 kg-f, 177 lb-ft) for approximately 5 seconds while engine is running.

**CAUTION:**

If brake fluid leakage occurs around joints, retighten or replace damaged parts as necessary.

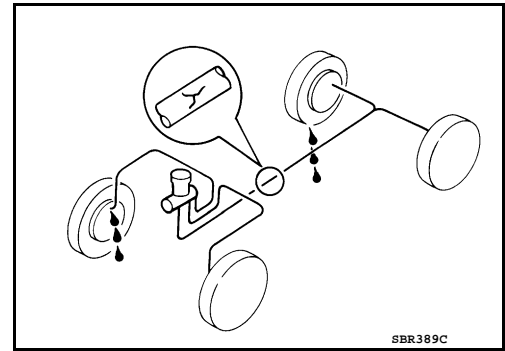


## BRAKE LINES AND CABLES

### BRAKE LINES AND CABLES : Inspection

INFOID:000000008777930

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



## BRAKE FLUID

### BRAKE FLUID : Drain and Refill

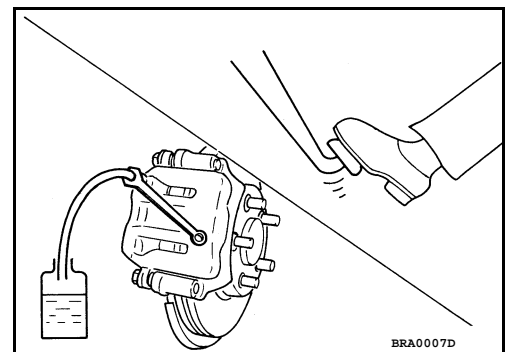
INFOID:000000009018306

**CAUTION:**

- Do not spill or splash brake fluid on painted surfaces. Brake fluid may damage paint. If brake fluid is splashed on painted areas, wash it away with water immediately.
- Prior to repair, turn the ignition switch OFF, disconnect the ABS actuator and electric unit (control unit) connector or negative battery terminal. Refer to [PG-50, "Exploded View"](#).
- Refill brake system with new brake fluid. Refer to [MA-12, "Fluids and Lubricants"](#).
- Do not reuse drained brake fluid.

### DRAINING

1. Turn ignition switch OFF and disconnect ABS actuator and electric unit (control unit) connector or negative battery terminal. Refer to [PG-50, "Exploded View"](#).
2. Connect a vinyl tube to bleeder valve.
3. Depress brake pedal, loosen bleeder valve, and gradually remove brake fluid.



### REFILLING

1. Make sure no foreign material exists in the reservoir and refill with new brake fluid.

**CAUTION:**

Do not reuse drained brake fluid.

2. Refill the brake system as follows:

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
K  
L  
M  
N  
O  
MA

# CHASSIS AND BODY MAINTENANCE

## < PERIODIC MAINTENANCE >

- Depress the brake pedal.
- Loosen bleeder valve.
- Slowly depress brake pedal to 2/3 of the brake pedal full stroke.
- Tighten bleeder valve.
- Release brake pedal.

Repeat this operation at intervals of two or three seconds until all old brake fluid is discharged. Add new brake fluid to master cylinder reservoir sub tank frequently.

### **CAUTION:**

**Do not allow master cylinder reservoir to empty as this may cause damage to master cylinder internal components.**

3. Bleed the air out of the brake hydraulic system. Refer to [BR-16, "Bleeding Brake System"](#).

## FRONT DISC BRAKE

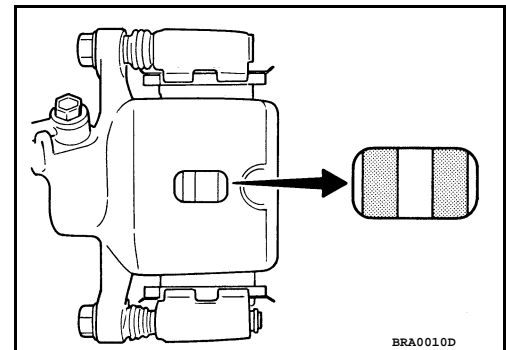
### FRONT DISC BRAKE : Inspection

INFOID:000000009021930

#### PAD WEAR

Check brake pad thickness from an inspection hole on caliper body.  
Check using a scale if necessary.

**Wear limit thickness** : Refer to [BR-54, "Front Disc Brake"](#).



### FRONT DISC BRAKE : Inspection

INFOID:000000009021932

#### APPEARANCE

Check surface of disc rotor for uneven wear, cracks or damage. Replace if any abnormal conditions exist.

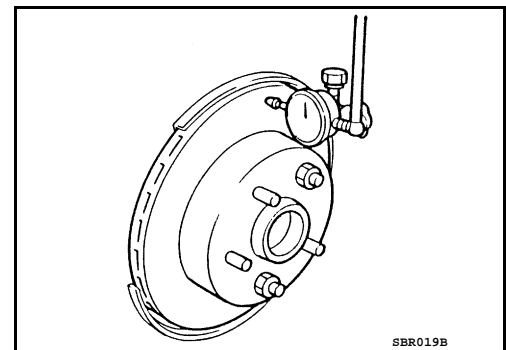
#### RUNOUT

1. Check the wheel bearing axial end play before the inspection. Refer to [FAX-6, "Inspection"](#).
2. Secure the disc rotor to the wheel hub and bearing assembly with wheel nuts at two wheel nut locations.
3. Inspect the runout with a dial gauge, measured at 10 mm (0.39 in) inside the disc edge.

**Runout** : Refer to [BR-54, "Front Disc Brake"](#).

4. Find the installation position with a minimum runout by shifting the disc rotor-to-wheel hub and bearing assembly installation position by one hole at a time if the runout exceeds the limit value.
5. Refinish the disc rotor if the runout is outside the limit even after performing the above operation. When refinishing, use Tool.

**Tool number** : 38-PFM90.5 ( — )



#### THICKNESS



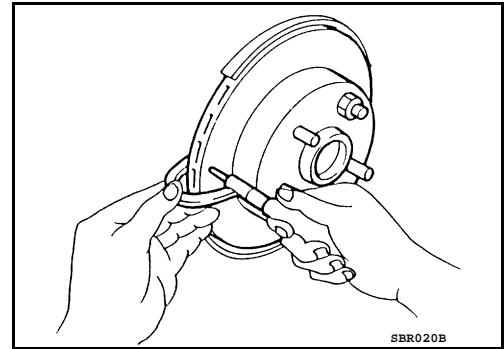
# CHASSIS AND BODY MAINTENANCE

## < PERIODIC MAINTENANCE >

Check the thickness of the disc rotor using a micrometer. Replace the disc rotor if the thickness is below the wear limit.

**Wear thickness** : Refer to [BR-54, "Front Disc Brake"](#).

**Thickness variation** : Refer to [BR-54, "Front Disc Brake"](#).



INFOID:000000009021931

## FRONT DISC BRAKE : Brake Burnishing

### CAUTION:

- Burnish contact surfaces between brake pads and disc rotor according to the following procedure after refinishing the disc rotor, replacing brake pads or if a soft pedal occurs at very low mileage.
  - Be careful of vehicle speed. Brakes do not operate firmly/securely until pads and disc rotor are securely seated.
  - Only perform this procedure under safe road and traffic conditions. Use extreme caution.
1. Drive the vehicle on straight, flat road.
  2. Depress the brake pedal until the vehicle stops.
  3. Release the brake pedal for a few minutes to allow the brake components to cool.
  4. Repeat steps 1 to 3 until pad and disc rotor are securely seated.

## REAR DRUM BRAKE

### REAR DRUM BRAKE : Inspection

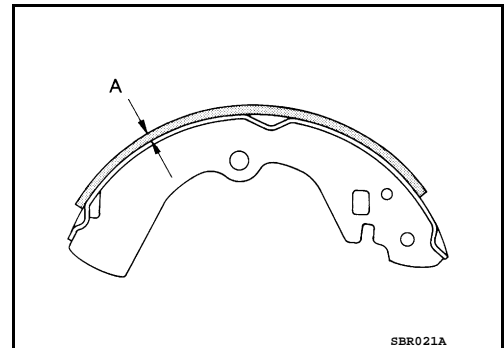
INFOID:000000009021933

#### INSPECTION

##### Brake Lining

1. Check brake lining wear thickness (A). Check using a scale if necessary.

**Lining wear thickness (A)** : Refer to [BR-54, "Rear Drum Brake"](#).



INFOID:000000009021934

### REAR DRUM BRAKE : Inspection

#### INSPECTION

##### Appearance

Check surface of brake drum for uneven wear, cracks and serious damage. Replace it if necessary. Refer to [BR-41, "Removal and Installation"](#).

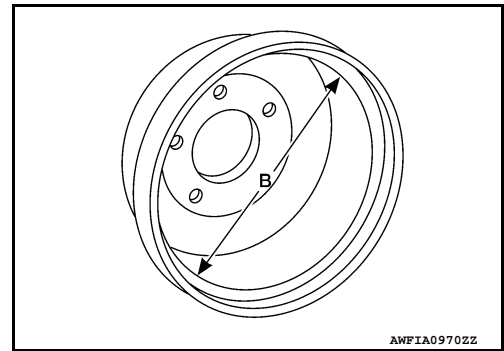
##### Brake Drum Inner Diameter

# CHASSIS AND BODY MAINTENANCE

## < PERIODIC MAINTENANCE >

Check inner diameter (B) of the brake drum using suitable tool.

**Brake drum inner diameter (B)** : Refer to [BR-54, "Rear Drum Brake"](#).



## REAR DRUM BRAKE : Brake Burnishing

INFOID:000000009018310

### CAUTION:

- Burnish contact surfaces between brake drum and brake lining according to the following procedure after refinishing or replacing brake drum, or if a soft pedal occurs at very low mileage.
  - Be careful of vehicle speed because the brake does not operate firmly/securely until brake drum and brake lining are securely fitted.
  - Only perform this procedure under safe road and traffic conditions. Use extreme caution.
1. Drive the vehicle on straight, flat road.
  2. Depress the brake pedal until the vehicle stops.
  3. Release the brake pedal for a few minutes to allow the brake components to cool.
  4. Repeat steps 1 to 3 until pad and disc rotor are securely seated.

## REAR DISC BRAKE

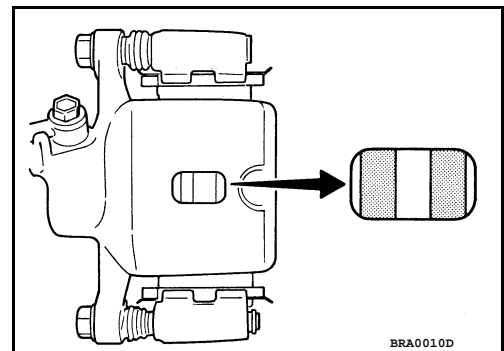
### REAR DISC BRAKE : Inspection

INFOID:000000009021935

### PAD WEAR

Check pad thickness from an inspection hole on caliper body. Check using a scale if necessary.

**Wear limit thickness** : Refer to [BR-54, "Rear Disc Brake"](#).



### REAR DISC BRAKE : Inspection

INFOID:000000009021936

### APPERANCE

Check surface of disc rotor for uneven wear, cracks or damage. Replace if any abnormal conditions exist.

### RUNOUT

1. Check the wheel bearing axial end play before the inspection. Refer to [RAX-5, "Inspection"](#).

# CHASSIS AND BODY MAINTENANCE

## < PERIODIC MAINTENANCE >

2. Secure the disc rotor to the wheel hub and bearing assembly with wheel nuts at two wheel nut locations.
3. Inspect the runout with a dial gauge, measured at 10 mm (0.39 in) inside the disc edge.

**Runout** : Refer to [BR-54, "Rear Disc Brake"](#).

4. Find the installation position with a minimum runout by shifting the disc rotor-to-wheel hub and bearing assembly installation position by one hole at a time if the runout exceeds the limit value.
5. Refinish the disc rotor if the runout is outside the limit even after performing the above operation. When refinishing, use Tool.

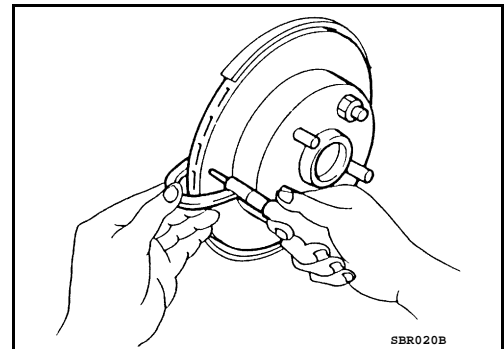
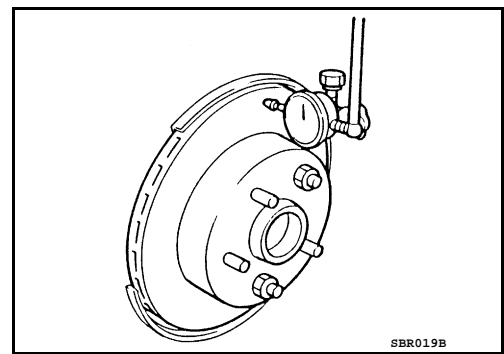
**Tool number** : 38-PFM90.5 ( — )

### Thickness

Check the thickness of the disc rotor using a micrometer. Replace the disc rotor if the thickness is below the minimum thickness.

**Minimum thickness** : Refer to [BR-54, "Rear Disc Brake"](#).

**Thickness variation** : Refer to [BR-54, "Rear Disc Brake"](#).



## REAR DISC BRAKE : Brake Burnishing

INFOID:000000009021937

### CAUTION:

- Burnish contact surfaces between brake pads and disc rotor according to the following procedure after refinishing the disc rotor, replacing brake pads or if a soft pedal occurs at very low mileage.
- Be careful of vehicle speed. Brakes do not operate firmly/securely until pads and disc rotor are securely seated.
- Only perform this procedure under safe road and traffic conditions. Use extreme caution.

1. Drive the vehicle on straight, flat road.
2. Depress the brake pedal until the vehicle stops.
3. Release the brake pedal for a few minutes to allow the brake components to cool.
4. Repeat steps 1 to 3 until pad and disc rotor are securely seated.

## STEERING GEAR AND LINKAGE

### STEERING GEAR AND LINKAGE : Inspection

INFOID:000000009001031

#### INSPECTION AFTER DISASSEMBLY

##### BOOT

- Check boot for cracks. Replace if any damage is found.

##### STEERING GEAR ASSEMBLY HOUSING

- Check steering gear assembly housing for damage and scratches. Replace if there are any abnormal conditions.

##### OUTER SOCKET AND INNER SOCKET

- Ball joint swinging torque

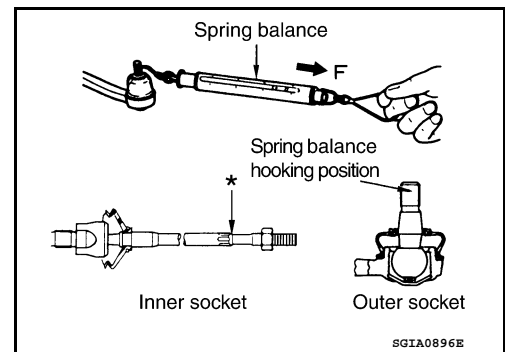
## CHASSIS AND BODY MAINTENANCE

### < PERIODIC MAINTENANCE >

- Hook a spring balance to the ball stud and inner socket measuring point (\*) and pull the spring balance. Make sure that the spring balance reads the specified value when ball stud and inner socket start to move. Replace outer socket and inner socket if they are outside the specification.

**Tool number** : — (J-44372)

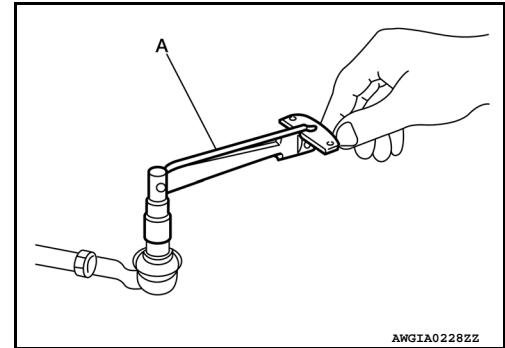
**Swinging torque** : Refer to [ST-21, "Power Steering Gear"](#).



- Ball joint rotating torque
- Make sure that the reading is within the following specified range using Tool (A). Replace outer socket if the reading is outside the specification.

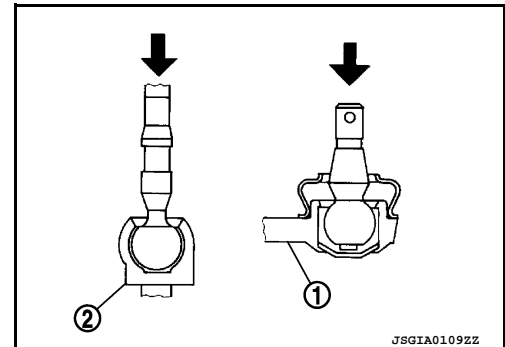
**Tool number (A)** : ST3127S000 (J-25765-A)

**Rotating torque** : Refer to [ST-21, "Power Steering Gear"](#).



- Ball joint axial end play
- Apply an axial load of 490 N (50 kg, 111 lb.) to ball stud. Measuring the amount of stud movement using a dial gauge, make sure that the value is within specification. Replace outer socket (A) and inner socket (B) if the measured value is outside specification.

**Axial end play** : Refer to [ST-21, "Power Steering Gear"](#).



### INSPECTION AFTER INSTALLATION

- Check if steering wheel turns smoothly when it is turned several times fully to the end of the left and right.
- Check the steering wheel play, neutral position steering wheel, steering wheel turning force, and front wheel turning angle.
  - Steering wheel play: Refer to [ST-20, "Steering Wheel"](#).
  - Neutral position steering wheel, steering wheel turning force, and front wheel turning angle: Refer to [ST-6, "Inspection"](#).

### AXLE AND SUSPENSION PARTS

# CHASSIS AND BODY MAINTENANCE

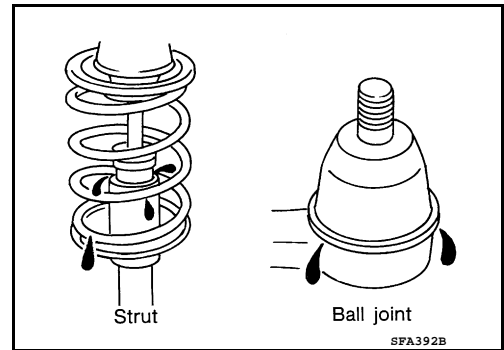
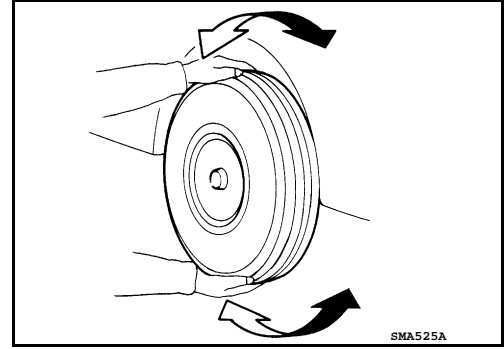
## < PERIODIC MAINTENANCE >

### AXLE AND SUSPENSION PARTS : Inspection

INFOID:000000008777942

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.



### DRIVE SHAFT

#### DRIVE SHAFT : Inspection

INFOID:000000009001036

Check the following items, and replace the part if necessary.

- Check drive shaft mounting point and joint for looseness and other damage.

#### **CAUTION:**

**Replace entire drive shaft assembly when noise or vibration occurs from drive shaft.**

- Check boot for cracks and other damage.

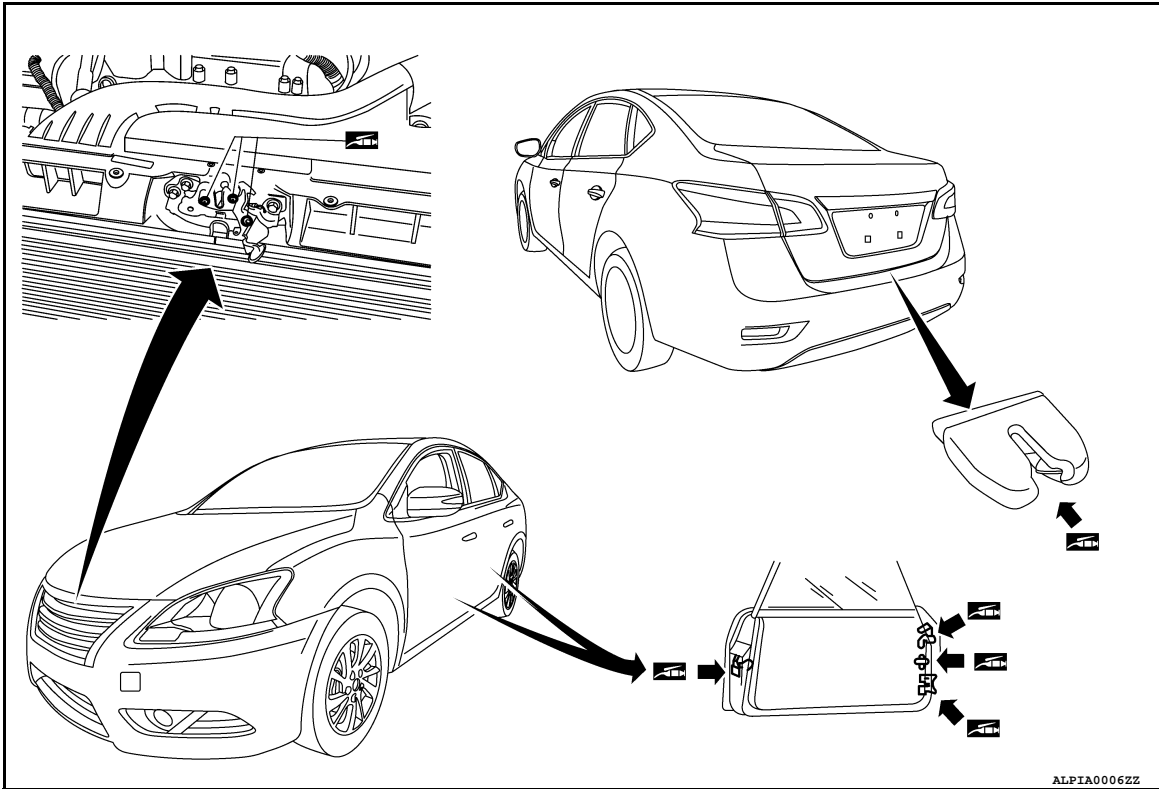
### LOCKS, HINGES AND HOOD LATCH

## CHASSIS AND BODY MAINTENANCE

< PERIODIC MAINTENANCE >

### LOCKS, HINGES AND HOOD LATCH : Lubricating

INFOID:000000008777944



### SEAT BELT, BUCKLES, RETRACTORS, ANCHORS AND ADJUSTERS

### SEAT BELT, BUCKLES, RETRACTORS, ANCHORS AND ADJUSTERS : Inspection

INFOID:000000009001396

#### **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 seat belt assembly.
- Do not oil tongue and buckle.
- Use only a Genuine NISSAN seat belt assembly.

For details, refer to [SB-5. "Inspection"](#) in the SB section.

- Check anchors for loose mounting.
- Check belts for damage.
- Check retractor for smooth operation.
- Check function of buckles and tongues when buckled and released.