

SECTION **MA**  
 MAINTENANCE

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# PREPARATION

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[REGULAR GRADE]

## PREPARATION

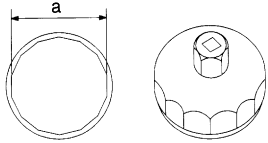
### PREPARATION FOR NORTH AMERICA

#### FOR NORTH AMERICA : Special Service Tool

*INFOID:000000010839966*

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	Removing and installing oil filter <b>a: 64.3 mm (2.531 in)</b>

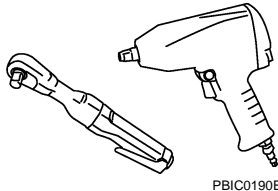


S-NT375

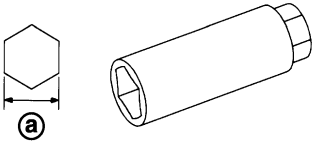
#### FOR NORTH AMERICA : Commercial Service Tool

*INFOID:000000010839967*

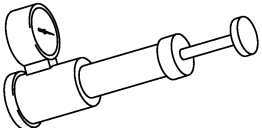
Tool name	Description
Power tool	Loosening nuts and bolts
Spark plug wrench	Removing and installing spark plug a: 14 mm (0.55 in)
Radiator cap tester	Checking radiator and radiator cap
Radiator cap tester adapter	Adapting radiator cap tester to radiator cap and water outlet (front) filler neck <b>a: 28 (1.10) dia.</b> <b>b: 31.4 (1.236) dia.</b> <b>c: 41.3 (1.626) dia.</b> Unit: mm (in)



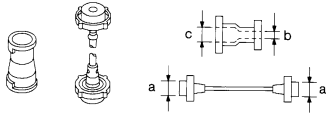
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PBIC1982E



S-NT564

### EXCEPT FOR NORTH AMERICA

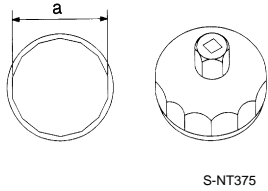
# PREPARATION

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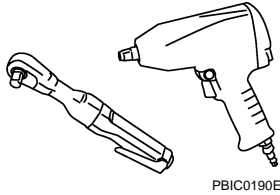
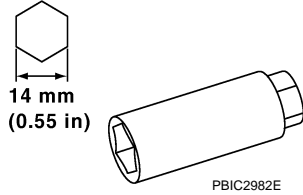
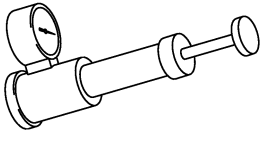
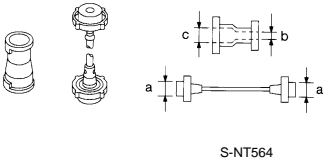
EXCEPT FOR NORTH AMERICA : Special Service Tool

INFOID:000000010839968

Tool number Tool name	Description
KV10115801 Oil filter wrench 	Removing and installing oil filter <b>a: 64.3 mm (2.531 in)</b>

EXCEPT FOR NORTH AMERICA : Commercial Service Tool

INFOID:000000010839969

Tool name	Description
Power tool 	Loosening nuts and bolts
Spark plug wrench 	Removing and installing spark plug
Radiator cap tester 	Checking radiator and radiator cap
Radiator cap tester adapter 	Adapting radiator cap tester to radiator cap and water outlet (front) filler neck <b>a: 28 (1.10) dia.</b> <b>b: 31.4 (1.236) dia.</b> <b>c: 41.3 (1.626) dia.</b> Unit: mm (in)

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## PERIODIC MAINTENANCE

### GENERAL MAINTENANCE FOR NORTH AMERICA

#### FOR NORTH AMERICA : Explanation of General Maintenance

INFOID:000000010839970

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-54</a>
<b>Wheel nuts</b>	When checking the tires, make sure no nuts are missing, and check for any loose nuts. Tighten if necessary.	—
<b>Tire rotation</b>	Tires cannot be rotated, as front tires are different size from rear tires and the direction of wheel rotation is fixed in each tire.	<a href="#">MA-37</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-51</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="#">FSU-9</a> <a href="#">RSU-7</a> <a href="#">MA-37</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="#">MA-44</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. 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

< PERIODIC MAINTENANCE >

[REGULAR GRADE]

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="#">MA-44</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-9</a> <a href="#">BR-15</a>
<b>Clutch pedal</b>	Make sure the pedal operates smoothly and check that it has the proper free play.	<a href="#">CL-8</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>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 (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="#">MA-20</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.	<a href="#">MA-25</a>
<b>Brake and clutch fluid levels</b>	Make sure that the brake and clutch fluid level(s) are(is) between the "MAX" and "MIN" line(s) on the reservoir(s).	<a href="#">MA-40</a> <a href="#">MA-33</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.	<a href="#">PG-3</a>
<b>Engine drive belts</b>	Make sure that no belt is frayed, worn, cracked or oily.	<a href="#">MA-20</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>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.	<a href="#">MA-42</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="#">MA-30</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.	—

FOR MEXICO

# GENERAL MAINTENANCE

[REGULAR GRADE]

< PERIODIC MAINTENANCE >

## FOR MEXICO : General Maintenance

INFOID:0000000110839971

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 the checks and inspections themselves or they can 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>Doors and hood</b>	Check that all doors and the hood operate smoothly as well as the back door, trunk lid and 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. When driving in areas using road salt or other corrosive materials, check lubrication frequently.	<a href="#">MA-44</a>
<b>Lamps</b>	Clean the headlamps on a regular basis. Make sure that the headlamps, stop lamps, tail lamps, turn signal lamps, and other lamps are all operating properly and installed securely. Also check the aim of the headlamps.	—
<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-54</a>
<b>Tire rotation</b>	In the case that Two-Wheel Drive (2WD) and front & rear tires are same size; Tires should be rotated every 10,000 km (6,000 miles). Tires marked with directional indicators can only be rotated between front and rear. Make sure that the directional indicators point in the direction of wheel rotation after the tire rotation is completed. In the case that Four-Wheel Drive (4WD) and front & rear tires are same size; Tires should be rotated every 5,000 km (3,000 miles). Tires marked with directional indicators can only be rotated between front and rear. Make sure that the directional indicators point in the direction of wheel rotation after the tire rotation is completed. In the case that front tires are different size from rear tires; Tires cannot be rotated. However, the timing for tire rotation may vary according to your driving habits and the road surface conditions.	<a href="#">MA-37</a>
<b>Tire Pressure Monitoring System (TPMS) transmitter components (if equipped)</b>	Replace the TPMS transmitter grommet seal, valve core and cap when the tires are replaced due to wear or age.	<a href="#">WT-51</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.	<a href="#">FSU-9</a> <a href="#">RSU-7</a> <a href="#">MA-37</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>Wiper blades</b>	Check for cracks or wear if not functioning correctly.	—

### 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>Accelerator pedal</b>	Check the pedal for smooth operation and make sure that the pedal does not catch or require uneven effort. Keep the floor mats away from the pedal.	—
<b>Brake pedal</b>	Check the pedal for smooth operation and make sure that it is the proper distance from the floor mat when depressed fully. Check the brake booster function. Be sure to keep the floor mats away from the pedal.	<a href="#">BR-9</a>
<b>Parking brake</b>	Check the parking brake operation regularly. Check that the lever (if equipped) or the pedal (if equipped) has the proper travel. Also 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>Seat belts</b>	Check that all parts of the seat belt system (for example, 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-44</a>



# GENERAL MAINTENANCE

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[REGULAR GRADE]

	Item	Reference page
<b>Steering wheel</b>	Check for changes in the steering condition, such as excessive play, hard steering or strange noises. Check that it has the specified play. <b>Free play: Less than 35 mm (1.38 in)</b>	—
<b>Warning lamps and chimes</b>	Make sure that all warning lamps and chimes are operating properly.	—
<b>Windshield defogger</b>	Check that the air comes out of the defogger outlets properly and in good quantity when operating the heater or air conditioner.	—
<b>Windshield wiper and washer</b>	Check that the wipers and washer operate properly and that the wipers do not streak.	—

## UNDER THE HOOD AND VEHICLE

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

	Item	Reference page
<b>Battery</b>	Except for maintenance free battery; Check the fluid level in each cell. It should be between the "UPPER" and "LOWER" lines. Vehicles operated in high temperatures or under severe conditions require frequent checks of the battery fluid level.	<a href="#">PG-3</a>
<b>Brake (and clutch) fluid level(s)</b>	For Manual Transmission (MT) model; Make sure that the brake and clutch fluid levels are between the "MAX" and "MIN" lines on the reservoir(s). Except for Manual Transmission (MT) model; Make sure that the brake fluid level is between the "MAX" and "MIN" lines on the reservoir.	<a href="#">MA-40</a> <a href="#">MA-33</a>
<b>Coolant level</b>	Check the coolant level when the coolant is cold. Make sure that the coolant level is between the "MAX" and "MIN" lines on the reservoir.	<a href="#">MA-20</a>
<b>Engine drive belt(s)</b>	Make sure that drive belt(s) is/are not frayed, worn, cracked or oily.	<a href="#">MA-20</a>
<b>Engine oil level</b>	Check the level after parking the vehicle (on a level ground) and turning off the engine.	<a href="#">LU-7</a>
<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 if fuel fumes are evident, check for cause and have it corrected immediately.	—
<b>Power steering fluid level and lines</b>	Check the level when the fluid is cold with the engine off. Check the lines for proper attachment, leaks, cracks, etc.	<a href="#">MA-42</a>
<b>Windshield washer fluid</b>	Check that there is adequate fluid in the reservoir.	—

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# PERIODIC MAINTENANCE

< PERIODIC MAINTENANCE >

[REGULAR GRADE]

## PERIODIC MAINTENANCE FOR NORTH AMERICA

### FOR NORTH AMERICA : Introduction of Periodic Maintenance

INFOID:000000010839972

The following tables show the normal maintenance schedule. Depending upon weather and atmospheric conditions, varying road surfaces, individual driving habits and vehicle usage, additional or more frequent maintenance may be required.

**Periodic maintenance beyond the last period shown on the tables requires similar maintenance.**

#### Emission Control System Maintenance

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

MAINTENANCE OPERATION		MAINTENANCE INTERVAL								
Perform at number of miles, kilometers or months, whichever comes first.	Miles x 1,000 (km x 1,000)	5	10	15	20	25	30	35	40	45
	Months	(8)	(16)	(24)	(32)	(40)	(48)	(56)	(64)	(72)
Drive belt	NOTE (1)								I*	
Air cleaner filter	NOTE (2)						R			
EVAP vapor lines					I*				I*	
Fuel lines					I*				I*	
Fuel filter	NOTE (3)									
Engine coolant*	NOTE (4)(5)									
Engine oil		R	R	R	R	R	R	R	R	R
Engine oil filter (Use genuine NISSAN engine oil filter or equivalent)		R	R	R	R	R	R	R	R	R
Spark plugs (Iridium-tipped type)	NOTE (6)	Replace every 105,000 miles (168,000 km)								
Intake and exhaust valve clearance*	NOTE (7)									

MAINTENANCE OPERATION		MAINTENANCE INTERVAL								
Perform at number of miles, kilometers or months, whichever comes first.	Miles x 1,000 (km x 1,000)	50	55	60	65	70	75	80	85	90
	Months	(80)	(88)	(96)	(104)	(112)	(120)	(128)	(136)	(144)
Drive belt	NOTE (1)	I*		I*		I*		I*		I*
Air cleaner filter	NOTE (2)			R						R
EVAP vapor lines				I*				I*		
Fuel lines				I*				I*		
Fuel filter	NOTE (3)									
Engine coolant*	NOTE (4)(5)									
Engine oil		R	R	R	R	R	R	R	R	R
Engine oil filter (Use genuine NISSAN engine oil filter or equivalent)		R	R	R	R	R	R	R	R	R
Spark plugs (Iridium-tipped type)	NOTE (6)	Replace every 105,000 miles (168,000 km)								
Intake and exhaust valve clearance*	NOTE (7)									

MAINTENANCE OPERATION		MAINTENANCE INTERVAL						Reference Page
Perform at number of miles, kilometers or months, whichever comes first.	Miles x 1,000 (km x 1,000)	95	100	105	110	115	120	
	Months	(152)	(160)	(168)	(176)	(184)	(192)	
Drive belt	NOTE (1)		I*		I*		I*	<a href="#">MA-20</a>
Air cleaner filter	NOTE (2)						R	<a href="#">MA-26</a>
EVAP vapor lines			I*				I*	<a href="#">MA-29</a>

# PERIODIC MAINTENANCE

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MAINTENANCE OPERATION		MAINTENANCE INTERVAL						Reference Page
Perform at number of miles, kilometers or months, whichever comes first.	Miles x 1,000 (km x 1,000) Months	95 (152) 114	100 (160) 120	105 (168) 126	110 (176) 132	115 (184) 138	120 (192) 144	
Fuel lines			I*				I*	<a href="#">MA-25</a>
Fuel filter	NOTE (3)							—
Engine coolant*	NOTE (4)(5)							<a href="#">MA-21</a>
Engine oil		R	R	R	R	R	R	<a href="#">MA-26</a>
Engine oil filter (Use genuine NISSAN engine oil filter or equivalent)		R	R	R	R	R	R	<a href="#">MA-27</a>
Spark plugs (Iridium-tipped type)	NOTE (6)	Replace every 105,000 miles (168,000 km)						<a href="#">MA-28</a>
Intake and exhaust valve clearance*	NOTE (7)							<a href="#">EM-23</a>

**NOTE:**

- (1) After 40,000 miles (64,000 km) or 48 months, inspect every 10,000 miles (16,000 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 the FL section.
- (4) First replacement interval is 105,000 miles (168,000 km) or 84 months. After first replacement, replace every 75,000 miles (120,000 km) or 60 months.
- (5) Use only Genuine NISSAN long life Antifreeze/Coolant (blue) or equivalent with proper mixture ratio of 50% anti-freeze and 50% demineralized or distilled water. Mixing any other type of coolant or the use of non-distilled water will reduce the life expectancy of the factory fill coolant.
- (6) Replace spark plug when the plug gap exceeds 1.4 mm (0.055 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 Maintenance

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

MAINTENANCE OPERATION		MAINTENANCE INTERVAL								
Perform at number of miles, kilometers or months, whichever comes first.	Miles x 1,000 (km x 1,000) Months	5 (8) 6	10 (16) 12	15 (24) 18	20 (32) 24	25 (40) 30	30 (48) 36	35 (56) 42	40 (64) 48	45 (72) 54
Brake lines & cables			I		I		I		I	
Brake pads & rotors★			I		I		I		I	
Brake fluid★					R				R	
Automatic transmission fluid	NOTE (1)									
Manual transmission gear oil & differential gear oil	NOTE (2)		I		I		I		I	
Steering gear & linkage, axle & suspension parts★					I				I	
Tire rotation	NOTE (3)									
Exhaust system★					I				I	
In-cabin microfilter				R			R			R

# PERIODIC MAINTENANCE

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MAINTENANCE OPERATION		MAINTENANCE INTERVAL									
Perform at number of miles, kilometers or months, whichever comes first.	Miles x 1,000 (km x 1,000)	50 (80)	55 (88)	60 (96)	65 (104)	70 (112)	75 (120)	80 (128)	85 (136)	90 (144)	
	Months	60	66	72	78	84	90	96	102	108	
Brake lines & cables		I		I		I		I		I	
Brake pads & rotors★		I		I		I		I		I	
Brake fluid★				R				R			
Automatic transmission fluid	NOTE (1)										
Manual transmission gear oil & differential gear oil	NOTE (2)	I		I		I		I		I	
Steering gear & linkage, axle & suspension parts★				I				I			
Tire rotation	NOTE (3)										
Exhaust system★				I				I			
In-cabin microfilter				R			R			R	

MAINTENANCE OPERATION		MAINTENANCE INTERVAL						Reference Page
Perform at number of miles, kilometers or months, whichever comes first.	Miles x 1,000 (km x 1,000)	95 (152)	100 (160)	105 (168)	110 (176)	115 (184)	120 (192)	
	Months	114	120	126	132	138	144	
Brake lines & cables			I		I		I	<a href="#">MA-40</a>
Brake pads & rotors★			I		I		I	<a href="#">MA-40</a>
Brake fluid★			R				R	<a href="#">MA-40</a>
Automatic transmission fluid	NOTE (1)							<a href="#">MA-30</a>
Manual transmission gear oil & differential gear oil	NOTE (2)		I		I		I	<a href="#">MA-32</a> <a href="#">MA-35(R200)</a> <a href="#">MA-36(R200V)</a>
Steering gear & linkage, axle & suspension parts★			I				I	<a href="#">MA-42</a> <a href="#">MA-43</a>
Tire rotation	NOTE (3)							<a href="#">MA-6</a> <a href="#">MA-37</a>
Exhaust system★			I				I	<a href="#">MA-30</a>
In-cabin microfilter				R			R	<a href="#">VTL-16</a>

**NOTE:**

- Maintenance items with “★” should be performed more frequently according to “Maintenance Under Severe Driving Conditions”.
- (1) Automatic transmission fluid maintenance-free.
- (2) If towing a trailer, using a camper or car-top carrier, or driving on rough or muddy roads, change (not just inspect) oil at every 20,000 miles (32,000 km) or 24 months.
- (3) Refer to “Tire rotation” under the “GENERAL MAINTENANCE” heading earlier in this section.

## MAINTENANCE UNDER SEVERE DRIVING CONDITIONS

The maintenance intervals shown on the preceding pages are for normal operating conditions. If the vehicle is mainly operated under severe driving conditions as shown below, more frequent maintenance must be performed on the following items as shown in the table.

### Severe driving conditions

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

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- Towing a trailer, using a camper or a car-top carrier.

Maintenance operation: Inspect = Inspect and correct or replace as necessary.

Maintenance item	Maintenance operation	Maintenance interval	Reference page
Brake fluid	Replace	Every 10,000 miles (16,000 km) or 12 months	<a href="#">MA-40</a>
Brake pads & rotors	Inspect	Every 5,000 miles (8,000 km) or 6 months	<a href="#">MA-40</a>
Steering gear & linkage, axle & suspension parts	Inspect	Every 5,000 miles (8,000 km) or 6 months	<a href="#">MA-42</a> <a href="#">MA-43</a>
Exhaust system	Inspect	Every 5,000 miles (8,000 km) or 6 months	<a href="#">MA-30</a>

## FOR MEXICO

### FOR MEXICO : Periodic Maintenance

INFOID:000000010839973

The following tables show the normal maintenance schedule. Depending upon weather and atmospheric conditions, varying road surfaces, individual driving habits and vehicle usage, additional or more frequent maintenance may be required.

**Periodic maintenance beyond the last period shown on the tables requires similar maintenance.**

### ENGINE AND EMISSION CONTROL MAINTENANCE

Abbreviations: I = Inspect and correct or replace as necessary, R = Replace, E = Check and correct the engine coolant mixture ratio.

MAINTENANCE OPERATION		MAINTENANCE INTERVAL								Reference page
Perform at a kilometers (miles) or month interval, whichever comes first.	km × 1,000 (Miles × 1,000) Months	12 (7.5) 6	24 (15) 12	36 (22.5) 18	48 (30) 24	60 (37.5) 30	72 (45) 36	84 (52.5) 42	96 (60) 48	
<b>Underhood and under vehicle</b>										
Intake & exhaust valve clearance	See NOTE (1)									<a href="#">EM-23</a>
Drive belt	See NOTE (2)				I				I	<a href="#">MA-20</a>
Engine oil (Use recommended oil.)★		R	R	R	R	R	R	R	R	<a href="#">MA-26</a>
Engine oil filter (Use genuine NISSAN engine oil filter or equivalent)★		R	R	R	R	R	R	R	R	<a href="#">MA-27</a>
Engine coolant	See NOTE (3)				E				E	<a href="#">MA-21</a>
Cooling system					I				I	<a href="#">MA-20</a> <a href="#">MA-24</a> <a href="#">MA-25</a>
Fuel lines					I				I	<a href="#">MA-25</a>
Air cleaner filter (Viscous paper type)★		Replace every 36,000 km (22,500 miles) or 24 months								<a href="#">MA-26</a>
Fuel filter (In-tank type)	See NOTE (4)									—
Spark plugs (Iridium-tipped type)	See NOTE (5)	Replace every 96,000 km (60,000 miles)								<a href="#">MA-28</a>
EVAP vapor lines (With carbon canister)					I				I	<a href="#">MA-29</a>

**NOTE:**

- Maintenance items with “★” should be performed more frequently according to “Maintenance Under Severe Driving Conditions”.
- (1) Periodic maintenance is not required. However, if valve noise increases, check valve clearance.
- (2) Replace the drive belts if found damaged or if the auto belt tensioner reading reaches the maximum limit.
- (3) Use Genuine NISSAN Engine Coolant (blue) or equivalent in its quality, in order to avoid possible aluminium corrosion within the engine cooling system caused by the use of non-genuine engine coolant. First replacement interval is 168,000 km (105,000 miles) or

# PERIODIC MAINTENANCE

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96 months. After first replacement, replace every 84,000 km (52,500 miles) or 48 months. Check and correct the engine coolant mixture ratio every 48,000 km (30,000 miles) or 24 months.

- (4) Maintenance-free item.
- (5) Replace spark plug when the spark plug gap exceeds 1.4 mm (0.055 in) even if within specified periodic replacement mileage.

## CHASSIS AND BODY MAINTENANCE

Abbreviations: I = Inspect and correct or replace as necessary, R = Replace

MAINTENANCE OPERATION	km × 1,000 (Miles × 1,000) Months	MAINTENANCE INTERVAL								Reference page
		12 (7.5) 6	24 (15) 12	36 (22.5) 18	48 (30) 24	60 (37.5) 30	72 (45) 36	84 (52.5) 42	96 (60) 48	
<b>Underhood and under vehicle</b>										
Brake line & cables			I		I		I		I	<a href="#">MA-40</a>
Brake & clutch fluid (For level & leaks)			I		I		I		I	<a href="#">MA-40</a> <a href="#">MA-33</a>
Brake fluid★					R				R	<a href="#">MA-40</a>
Exhaust system					I				I	<a href="#">MA-30</a>
Power steering fluid & lines (For level & leaks)			I		I		I		I	<a href="#">MA-42</a>
Clutch system			I		I		I		I	<a href="#">CL-8</a>
Automatic transmission fluid	See NOTE (1)									<a href="#">MA-30</a>
Manual transmission gear oil (For level & leaks)			I		I		I		I	<a href="#">MA-32</a>
Differential gear oil (For level & leaks)★			I		I		I		I	<a href="#">MA-35</a> (R200) <a href="#">MA-36</a> (R200V)
Steering gear & linkage, axle & suspension parts★					I				I	<a href="#">MA-42</a> <a href="#">MA-43</a>
<b>Outside and inside</b>										
Wheel alignment (If necessary, balance wheels)			I		I		I		I	<a href="#">FSU-9</a> <a href="#">RSU-7</a> <a href="#">MA-37</a>
Brake pads, rotors, drums & linings★			I		I		I		I	<a href="#">MA-40</a> <a href="#">BR-16</a> <a href="#">BR-18</a>
Foot brake, parking brake & clutch (For free play, stroke & operation)			I		I		I		I	<a href="#">BR-9</a> <a href="#">PB-4</a> <a href="#">CL-8</a>
Air conditioner filter★			R		R		R		R	<a href="#">VTL-16</a>

### NOTE:

- Maintenance items with “★” should be performed more frequently according to “Maintenance Under Severe Driving Conditions”.
- (1) Automatic transmission fluid is maintenance-free.

### MAINTENANCE UNDER SEVERE DRIVING CONDITIONS

The maintenance intervals shown on the preceding pages are for normal operating conditions. If the vehicle is mainly operated under severe driving conditions as shown below, more frequent maintenance must be performed on the following items as shown in the table.

#### Severe driving conditions

- A — Driving under dusty conditions
- B — Driving repeatedly short distances
- C — Towing a trailer or caravan

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- D — Extensive idling
- E — Driving in extremely adverse weather conditions or in areas where ambient temperatures are either extremely low or extremely high
- F — Driving in high humidity or mountainous areas
- G — Driving in areas using salt or other corrosive areas
- H — Driving on rough and/or muddy roads or in the desert
- I — Driving with frequent use of braking or in mountainous areas
- J — Frequent driving in water

Maintenance operation: Inspect = Inspect and correct or replace as necessary.

Driving condition										Maintenance item		Maintenance operation	Maintenance interval	Reference page
A	.	.	.	.	.	.	.	.	.	Air cleaner filter	Viscous paper type	Replace	More frequently	<a href="#">MA-26</a>
A	B	C	D	.	.	.	.	.	.	Engine oil & engine oil filter		Replace	Every 6,000 km (3,750 miles) or 3 months	<a href="#">MA-26</a> <a href="#">MA-27</a>
.	.	.	.	.	F	.	.	.	.	Brake fluid		Replace	Every 24,000 km (15,000 miles) or 12 months	<a href="#">MA-40</a>
.	.	C	.	.	.	.	H	.	.	Differential gear oil		Replace	Every 36,000 km (25,500 miles) or 24 months	<a href="#">MA-35</a> (R200) <a href="#">MA-36</a> (R200V)
.	.	.	.	.	.	G	H	.	.	Steering gear & linkage, axle & suspension parts		Inspect	Every 24,000 km (15,000 miles) or 12 months	<a href="#">MA-42</a> <a href="#">MA-43</a>
A	.	C	.	.	.	G	H	I	.	Brake pads, rotors, drums & linings		Inspect	Every 12,000 km (7,500 miles) or 6 months	<a href="#">MA-40</a> <a href="#">BR-16</a> <a href="#">BR-18</a>
A	.	.	.	.	.	.	.	.	.	Air conditioner filter		Replace	More frequently	<a href="#">VTL-16</a>

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# RECOMMENDED FLUIDS AND LUBRICANTS

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[REGULAR GRADE]

## RECOMMENDED FLUIDS AND LUBRICANTS FOR NORTH AMERICA

### FOR NORTH AMERICA : Fluids and Lubricants

INFOID:000000010839974

The following are approximate capacities. The actual refill capacities may be slightly different. When refilling, follow the procedures described elsewhere in this manual.

			Capacity (Approximate)			Recommended Fluids/Lubricants
			US mea- sure	Imp mea- sure	Liter	
Engine oil Drain and refill	With oil filter change		5-1/8 qt	4-1/4 qt	4.9	Genuine NISSAN engine oil or equivalent (NISSAN recommends Genuine NISSAN Ester Oil available at a NISSAN dealer.) • Engine oil with API Certification Mark (For additional information, see "Engine Oil Recommendation".) • Viscosity SAE 5W-30
	Without oil filter change		4-7/8 qt	4 qt	4.6	
Dry engine (Overhaul)			6 qt	5 qt	5.7	
Cooling system	With reservoir tank	A/T models	9-5/8 qt	8 qt	9.1	Pre-diluted Genuine NISSAN Long Life Antifreeze/ Coolant (blue) or equivalent
		M/T models	9-3/4 qt	8-1/8 qt	9.2	
	Reservoir tank		7/8 qt	3/4 qt	0.8	
Automatic transmission fluid			9-3/4 qt* <sup>1</sup>	8-1/8 qt* <sup>1</sup>	9.2* <sup>1</sup>	Genuine NISSAN Matic S ATF (Using automatic transmission fluid other than Genuine NISSAN Matic S ATF will cause deterioration in driveability and automatic transmission durability, and may damage the automatic transmission, which is not covered by the NISSAN new vehicle limited warranty.)
Manual transmission gear oil			6 pt	5 pt	2.83	Genuine NISSAN Manual Transmission Fluid (MTF) HQ Multi 75W-85 or API GL-4, Viscosity SAE 75W-85
Differential gear oil			3 pt	2-1/2 pt	1.40	For MT models: Genuine NISSAN Differential Oil Hypoid Super GL-5 80W-90 or API GL-5, Viscosity SAE 80W-90 (For hot climates, viscosity SAE 90 is suitable for ambient temperatures above 32°F (0°C).) For AT models: API GL-5, Synthetic gear oil, Viscosity SAE 75W-90 (See a NISSAN dealer for service for synthetic oil.)
Power steering fluid (PSF)			1-1/8 qt	7/8 qt	1.0	• Genuine NISSAN PSF or equivalent • DEXRON™ VI type ATF may also be used.
Brake fluid			—	—	—	Genuine NISSAN Super Heavy Duty Brake Fluid (Available in mainland U.S.A. through a NISSAN dealer.) or equivalent DOT 3 (US FM-VSS No.116)
Clutch fluid			—	—	—	Genuine NISSAN Brake Fluid R35 Special II (Never mix different types of fluids.) (NISSAN recommends Genuine NISSAN Brake Fluid R35 Special II available at a NISSAN dealer.)
Multi-purpose grease			—	—	—	NLGI No. 2 (Lithium soap base)
Windshield washer fluid			—	—	—	Genuine NISSAN Windshield Washer Concentrate Cleaner & Antifreeze or equivalent
Fuel recommendation			—	—	—	Refer to <a href="#">GI-35. "Fuel"</a> .

\*1: The fluid capacity is the reference value.



# RECOMMENDED FLUIDS AND LUBRICANTS

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## FOR NORTH AMERICA : Engine Oil Recommendation

INFOID:000000010839975

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.



1. API certification mark
2. API service symbol

## FOR NORTH AMERICA : Anti-Freeze Coolant Mixture Ratio

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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:

- Never 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 you operate your vehicle, 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.

## FOR MEXICO

## FOR MEXICO : Fluids and Lubricants

INFOID:000000010839977

The following are approximate capacities. The actual refill capacities may be slightly different. When refilling, follow the procedures described elsewhere in this manual.

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# RECOMMENDED FLUIDS AND LUBRICANTS

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		Capacity (Approximate)		Recommended Fluids/Lubricants
		Liter	Imp measure	
Engine oil Drain and refill	With oil filter change	4.9	4-1/4 qt	Nippon oil (Genuine NISSAN engine oil) API grade SM Viscosity SAE 5W-30
	Without oil filter change	4.6	4 qt	
Dry engine (engine overhaul)		5.7	5 qt	
Cooling system (with reservoir)	A/T models	9.1	8 qt	Genuine NISSAN Engine Coolant (blue) or equivalent (Use Genuine NISSAN Engine Coolant (blue) or equivalent in its quality, in order to avoid possible aluminum corrosion within the engine cooling system caused by the use of non-genuine engine coolant. Note that any repairs for the incidents within the engine cooling system while using non-genuine engine coolant may not be covered by the warranty even if such incidents occurred during the warranty period.)
	M/T models	9.2	8-1/8 qt	
Reservoir tank		0.8	3/4 qt	
Automatic transmission fluid		9.2*1	8-1/8 qt*1	Genuine NISSAN Matic S ATF (Using automatic transmission fluid other than Genuine NISSAN Matic S ATF will cause deterioration in driveability and automatic transmission durability, and may damage the automatic transmission, which is not covered by warranty.)
Manual transmission gear oil		2.83	5 pt	Genuine NISSAN Manual Transmission Fluid (MTF) HQ Multi 75W-85 or API GL-4, Viscosity SAE 75W-85
Differential gear oil		1.4	2-1/2 pt	For MT models: Genuine NISSAN Differential Oil Hypoid Super GL-5 80W-90 or API GL-5 (For additional information, see "SAE Viscosity Number".) For AT models: Genuine NISSAN Differential Oil Hypoid Super-S GL-5 synthetic 75W-90 or equivalent (See a NISSAN dealer for service for synthetic oil.)
Power steering fluid (PSF)		1.0	7/8 qt	<ul style="list-style-type: none"> <li>• Genuine NISSAN PSF or equivalent</li> <li>• DEXRON™ VI type ATF may also be used.</li> </ul>
Brake fluid		—	—	Genuine NISSAN Brake Fluid, or equivalent DOT 3 (US FMVSS No.116)
Clutch fluid		—	—	Genuine NISSAN Brake Fluid R35 Special II (Never mix different types of fluids.) (NISSAN recommends Genuine NISSAN Brake Fluid R35 Special II available at a NISSAN dealer.) or equivalent DOT4
Multi-purpose grease		—	—	NLGI No. 2 (Lithium soap base)

\*1: The fluid capacity is the reference value.

FOR MEXICO : SAE Viscosity Number

INFOID:0000000010839978

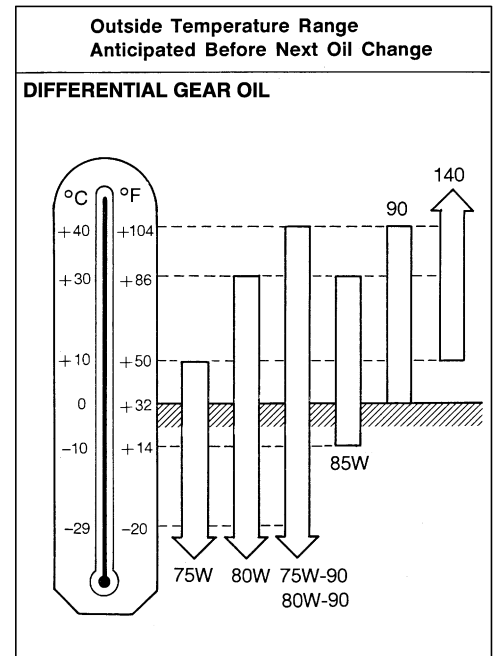
DIFFERENTIAL GEAR OIL

# RECOMMENDED FLUIDS AND LUBRICANTS

< PERIODIC MAINTENANCE >

[REGULAR GRADE]

- AT model: 75W-90 for the differential gear is preferable.
- MT model: 80W-90 for the differential gear is preferable.



JPIIA0001GB

INFOID:000000010839979

## FOR MEXICO : Engine Coolant Mixture Ratio

The engine cooling system is filled at the factory with a high-quality, year-round and extended life engine coolant. The high quality engine coolant contains the specific solutions effective for the anti-corrosion and the anti-freeze function. Therefore, additional cooling system additives are not necessary.

### CAUTION:

- When adding or replacing coolant, be sure to use only Genuine NISSAN Engine Coolant or equivalent in its quality with the proper mixture ratio. See the examples shown right.

The use of other types of engine coolant may damage the engine cooling system.

- When checking the engine coolant mixture ratio by the coolant hydrometer, use the chart below to correct your hydrometer reading (specific gravity) according to coolant temperature.

Outside temperature down to		Composition	
°C	°F	Engine coolant (Concentrated)	Demineralized water or distilled water
-15	5	30%	70%
-35	-30	50%	50%

SMA089D

Mixed coolant specific gravity

Unit: specific gravity

Engine coolant mixture ratio	Coolant temperature °C (°F)			
	15 (59)	25 (77)	35 (95)	45 (113)
30%	1.046 - 1.050	1.042 - 1.046	1.038 - 1.042	1.033 - 1.038
50%	1.076 - 1.080	1.070 - 1.076	1.065 - 1.071	1.059 - 1.065

### WARNING:

Never remove the radiator cap when the engine is hot. Serious burns could be caused by high pressure fluid escaping from the radiator. Wait until the engine and radiator cool down.

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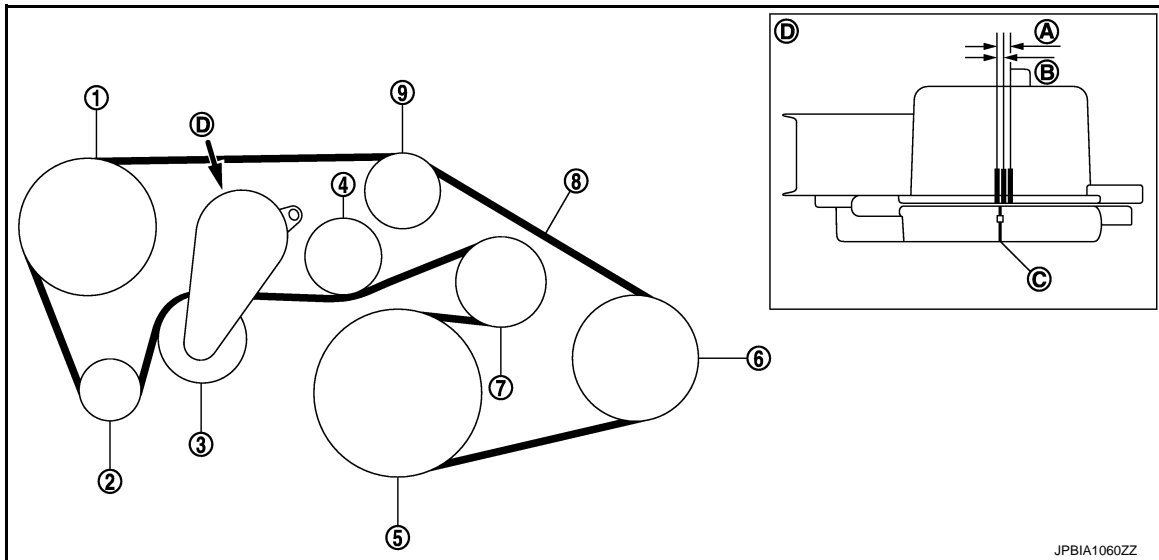
MA

## ENGINE MAINTENANCE

### DRIVE BELT

#### DRIVE BELT : Exploded View

INFOID:000000010839980



- |                            |   |                              |
|----------------------------|---|------------------------------|
| 1. Power steering oil pump | 2. Alternator                             | 3. Drive belt auto-tensioner |
| 4. Idler pulley            | 5. Crankshaft pulley                      | 6. A/C compressor            |
| 7. Idler pulley            | 8. Drive belt                             | 9. Idler pulley              |
| A. Possible use range      | B. Range when new drive belt is installed | C. Indicator                 |
| D. View D                  |   |                              |

#### DRIVE BELT : Checking

INFOID:000000010839981

#### WARNING:

**Be sure to perform this step when engine is stopped.**

- Check that the indicator (C) (notch on fixed side) of drive belt auto-tensioner is within the possible use range (A).

#### NOTE:

- Check the drive belt auto-tensioner indication when the engine is cold.
- When new drive belt is installed, the indicator (notch on fixed side) should be within the range (B) in the figure.
- Visually check the entire drive belt for wear, damage or crack.
- If the indicator (notch on fixed side) is out of the possible use range or belt is damaged, replace drive belt.

#### DRIVE BELT : Tension Adjustment

INFOID:000000010839982

Refer to [EM-145. "Drive Belt"](#).

## ENGINE COOLANT

### ENGINE COOLANT : Inspection

INFOID:000000010839983

#### LEVEL

# ENGINE MAINTENANCE

## < PERIODIC MAINTENANCE >

[REGULAR GRADE]

- Check if the reservoir tank engine coolant level is within the “MIN” to “MAX” when the engine is cool.

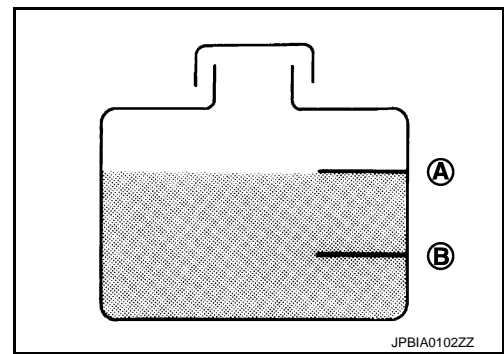
A : MAX  
B : MIN

- Adjust the engine coolant level if necessary.

**CAUTION:**

Refill Genuine NISSAN Long Life Antifreeze/Coolant (blue) or equivalent in its quality mixed with water (distilled or demineralized). Refer to [MA-16, "FOR NORTH AMERICA : Fluids and Lubricants"](#) (FOR NORTH AMERICA) or [MA-17, "FOR MEXICO : Fluids and Lubricants"](#) (FOR MEXICO).

- Check that the reservoir tank cap is tightened.



## LEAKAGE

- To check for leakage, apply pressure to the cooling system with the radiator cap tester (commercial service tool) (A) and radiator cap tester adapter (commercial service tool) (B).

Testing pressure : Refer to [CO-31, "Radiator"](#).

**WARNING:**

Never remove radiator cap and reservoir tank cap when engine is hot. Serious burns could occur from high-pressure engine coolant escaping from engine cooling system.

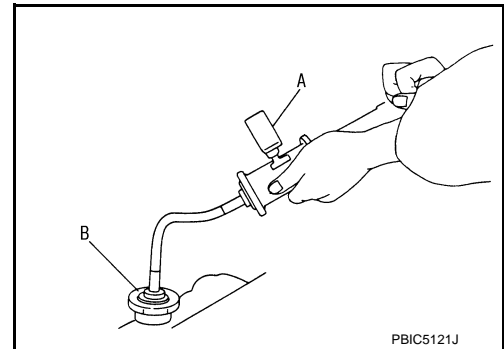
**CAUTION:**

Higher test pressure than specified may cause radiator damage.

**NOTE:**

In a case that engine coolant decreases, replenish radiator with engine coolant.

- If anything is found, repair or replace damaged parts.



## ENGINE COOLANT : Draining

INFOID:0000000010839984

**WARNING:**

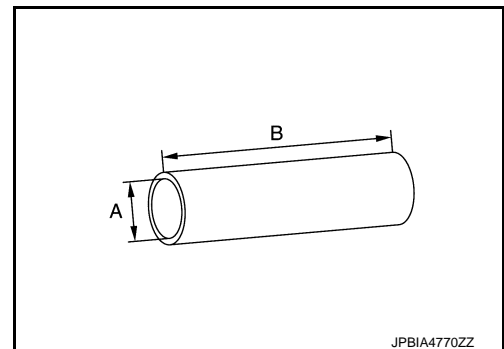
- To avoid being scalded, never change engine coolant when the engine is hot.
- Wrap a thick cloth around radiator cap and carefully remove radiator cap. First, turn radiator cap a quarter of a turn to release built-up pressure. Then turn radiator cap all the way.

1. Connect drain hose.

**NOTE:**

Use a general-purpose hose with the dimensions shown in the figure.

A :  $\phi 15 - 16$  mm (0.59 - 0.63 in)  
B : 145 mm (5.71 in)



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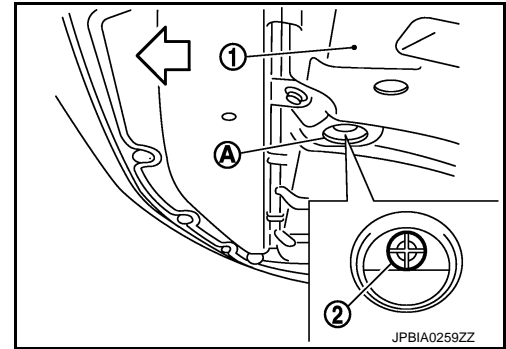
# ENGINE MAINTENANCE

## < PERIODIC MAINTENANCE >

[REGULAR GRADE]

2. Open radiator drain plug (2) at the bottom of radiator, and then remove radiator cap.

- 1 : Engine under cover
- A : Radiator drain plug hole
- ⇐ : Vehicle front



**When draining all of engine coolant in the system, open water drain plugs on cylinder block. Refer to [EM-80, "Setting"](#).**

3. Remove reservoir tank if necessary, and drain engine coolant and clean reservoir tank before installing.
4. Check drained engine coolant for contaminants such as rust, corrosion or discoloration. If contaminated, flush the engine cooling system. Refer to [CO-14, "Flushing"](#).
5. Disconnect drain hose.

## ENGINE COOLANT : Refilling

INFOID:000000010839985

### CAUTION:

- Do not reuse O-rings.
- Do not put additive such as waterleak preventive, since it may cause cooling waterway clogging.
- When refilling use Genuine NISSAN Long Life Antifreeze/Coolant (blue) or equivalent in its quality mixed with water (distilled or demineralized). Refer to [MA-16, "FOR NORTH AMERICA : Fluids and Lubricants"](#) (FOR NORTH AMERICA) or [MA-17, "FOR MEXICO : Fluids and Lubricants"](#) (FOR MEXICO).

1. Install radiator drain plug.

### CAUTION:

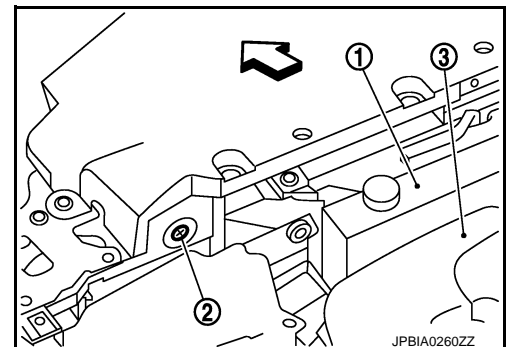
Be sure to clean drain plug and install with new O-ring.

**Tightening torque** : Refer to [CO-17, "Exploded View"](#).

**If water drain plugs on cylinder block are removed, close and tighten them. Refer to [EM-119, "Disassembly and Assembly"](#).**

2. Remove air cleaner case (LH). Refer to [EM-32, "Exploded View"](#).
3. Install reservoir tank if removed.
4. Check that each hose clamp has been firmly tightened.
5. Remove air relief plug (2) on radiator left side.

- 1 : Reservoir tank
- 3 : Engine cover
- ⇐ : Vehicle front



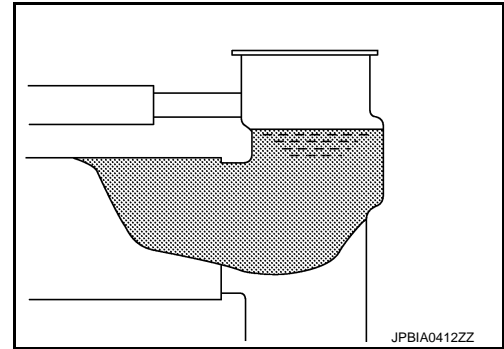
# ENGINE MAINTENANCE

< PERIODIC MAINTENANCE >

[REGULAR GRADE]

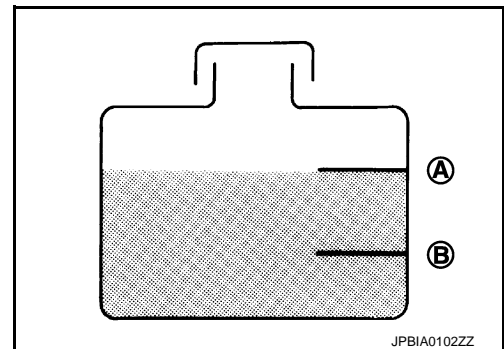
6. Fill radiator, and reservoir tank if removed, to specified level.
- **Pour engine coolant through engine coolant filler neck slowly of less than 2 ℓ (2-1/8 US qt, 1-3/4 Imp qt) a minute to allow air in system to escape.**

**Engine coolant capacity** : Refer to [CO-31](#),  
(With reservoir tank at "MAX" level) ["Periodical Maintenance Specification"](#).



**Reservoir tank engine coolant capacity** : Refer to [CO-31](#),  
(At "MAX" level) ["Periodical Maintenance Specification"](#).

A : MAX  
B : MIN



7. When engine coolant overflows air relief hole on radiator, install air relief plug with new O-ring.
- CAUTION:**  
**Do not reuse O-ring.**

**Tightening torque** : Refer to [CO-17](#), ["Exploded View"](#).

8. Repeat step 6.
9. Install air cleaner case (LH). Refer to [EM-32](#), ["Exploded View"](#).
10. Install reservoir tank cap.
11. Warm up engine until opening thermostat. Standard for warming-up time is approximately 10 minutes at 3,000 rpm.
- Check thermostat opening condition by touching radiator hose (lower) to see a flow of warm water.
- CAUTION:**  
**Watch water temperature gauge so as not to overheat engine.**
12. Stop the engine and cool down to less than approximately 50°C (122°F).
- Cool down using fan to reduce the time.
  - If necessary, refill radiator up to filler neck with engine coolant.
13. Refill reservoir tank to "MAX" level line with engine coolant.
14. Repeat steps 11 through 13 two or more times with reservoir tank cap installed until engine coolant level no longer drops.
15. Check cooling system for leakage with engine running.
16. Warm up the 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.
17. Repeat step 16 three times.
18. If sound is heard, bleed air from cooling system by repeating step 6, and steps from 10 to 17 until engine coolant level no longer drops.
19. Check that the reservoir tank cap is tightened.

## ENGINE COOLANT : Flushing

INFOID:0000000110839986

1. Install radiator drain plug.

**CAUTION:**

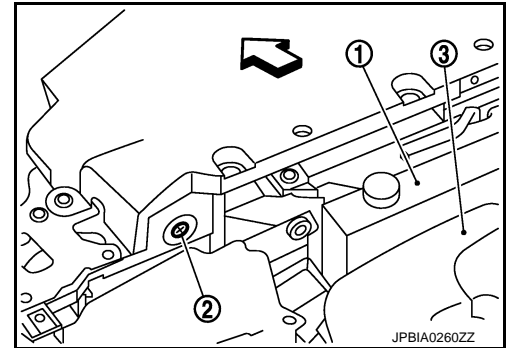
**Be sure to clean drain plug and install with new O-ring.**

**Tightening torque** : Refer to [CO-17, "Exploded View"](#).

**If water drain plugs on cylinder block are removed, close and tighten them. Refer to [EM-119, "Dis-assembly and Assembly"](#).**

2. Remove air cleaner case (LH). Refer to [EM-32, "Exploded View"](#).
3. Install reservoir tank if removed.
4. Remove air relief plug (2) on radiator.

- 1 : Reservoir tank
- 3 : Engine cover
- ⇐ : Vehicle front



5. Fill radiator with water until water spills from the air relief hole, then close air relief plug.

**Tightening torque** : Refer to [CO-17, "Exploded View"](#).

6. Fill radiator and reservoir tank with water and reinstall reservoir tank cap.
7. Install air cleaner case (LH). Refer to [EM-32, "Exploded View"](#).
8. Run the engine and warm it up to normal operating temperature.
9. Rev the engine two or three times under no-load.
10. Stop the engine and wait until it cools down.
11. Drain water from the system. Refer to [CO-11, "Draining"](#).
12. Repeat steps 1 through 11 until clear water begins to drain from radiator.
13. Check that the reservoir tank cap is tightened.

## RESERVOIR TANK CAP

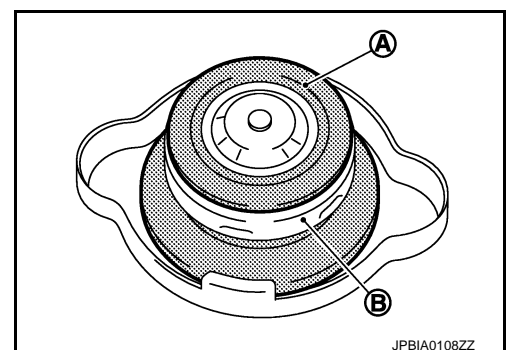
### RESERVOIR TANK CAP : Inspection

INFOID:0000000110839987

- Check valve seat (A) of reservoir tank cap.

B : Metal plunger

- Check if valve seat is swollen to the extent that the edge of the plunger cannot be seen when watching it vertically from the top.
- Check if valve seat has no soil and damage.



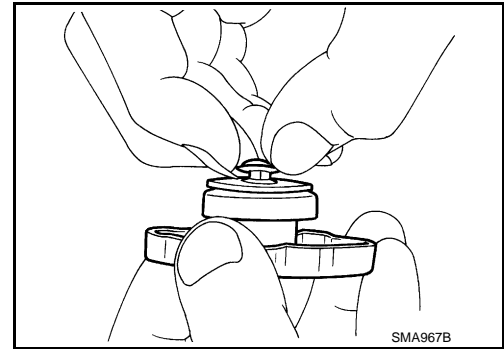


# ENGINE MAINTENANCE

## < PERIODIC MAINTENANCE >

[REGULAR GRADE]

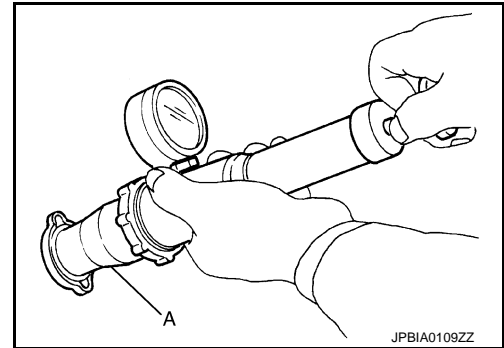
- Pull negative-pressure valve to open it, and check that it close completely when released.
- Check that there is no dirt or damage on the valve seat of reservoir tank cap negative-pressure valve.
- Check that there are no unusualness in the opening and closing conditions of negative-pressure valve.



- Check reservoir tank cap relief pressure.

**Standard and limit** : Refer to [CO-31, "Radiator"](#).

- When connecting reservoir tank cap to the radiator cap tester and the radiator cap tester adapter (commercial service tool) (A), apply engine coolant to the cap seal surface.



- Replace reservoir tank cap if there is an unusualness related to the above three.

### **CAUTION:**

**When installing reservoir tank cap, thoroughly wipe out the reservoir tank to remove any waxy residue or foreign material.**

## RADIATOR

### RADIATOR : Inspection

INFOID:000000010839988

Check radiator for mud or clogging. If necessary, clean radiator as follows:

- Be careful not to bend or damage radiator fins.
  - When radiator is cleaned without removal, remove all surrounding parts such as radiator cooling fan assembly and horns. Then tape harness and connectors to prevent water from entering.
1. Apply water by hose to the back side of the radiator core vertically downward.
  2. Apply water again to all radiator core surfaces once per minute.
  3. Stop washing if any stains no longer flow out from radiator.
  4. Blow air into the back side of radiator core vertically downward.
    - Use compressed air lower than 490 kPa (5 kg/cm<sup>2</sup>, 71 psi) and keep distance more than 30 cm (11.8 in).
  5. Blow air again into all the radiator core surfaces once per minute until no water sprays out.

## FUEL LINES

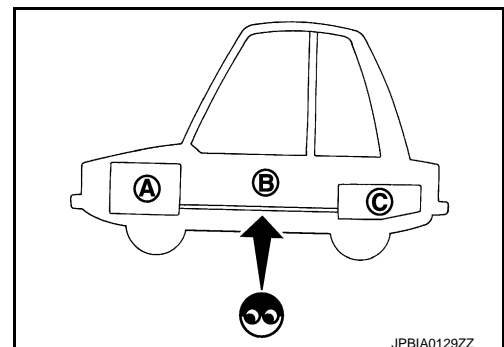
### FUEL LINES : Inspection

INFOID:000000010839989

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

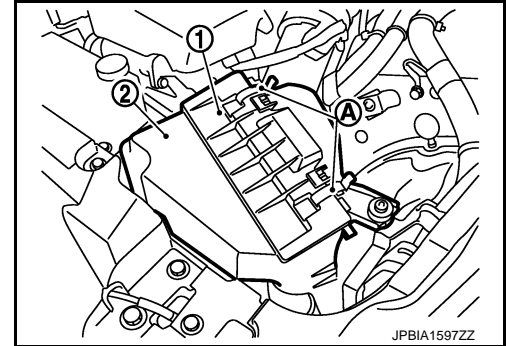
### AIR CLEANER FILTER : Removal and Installation

INFOID:0000000110839990

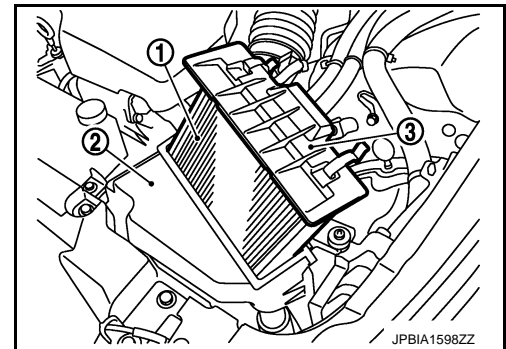
#### REMOVAL

1. Unhook clips (A).

- 1 : Holder
- 2 : Air cleaner case



2. Remove holder (3) from air cleaner case (2), and then remove air cleaner filter (1) from holder.



#### INSTALLATION

Note the following, and install in the reverse order of removal.

- Install the air cleaner filter by aligning the seal with the notch of air cleaner case.

## ENGINE OIL

### ENGINE OIL : Draining

INFOID:0000000110839991

#### **WARNING:**

- Be careful not to get burn yourself, 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 leakage from engine components. Refer to [LU-7, "Inspection"](#).
2. Stop the engine and wait for 10 minutes.
3. Loosen oil filler cap.
4. Remove undercover with power tool.
5. Remove drain plug and then drain engine oil.

### ENGINE OIL : Refilling

INFOID:0000000110839992

1. Install drain plug with new washer. Refer to [EM-50, "Exploded View"](#).

#### **CAUTION:**

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

**Tightening torque** : Refer to [EM-50, "Exploded View"](#).

2. Refill with new engine oil.

# ENGINE MAINTENANCE

< PERIODIC MAINTENANCE >

[REGULAR GRADE]

**Engine oil specification and viscosity:** Refer to [MA-16, "FOR NORTH AMERICA : Fluids and Lubricants"](#) (FOR NORTH AMERICA) or [MA-17, "FOR MEXICO : Fluids and Lubricants"](#) (FOR MEXICO).

**Engine oil capacity** : Refer to [LU-16, "Periodical Maintenance Specification"](#).

**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.
  - Always use oil level gauge to determine the proper amount of engine oil in engine.
3. Warm up the engine and check area around drain plug and oil filter for engine oil leakage.
  4. Stop the engine and wait for 10 minutes.
  5. Check the engine oil level. Refer to [LU-7, "Inspection"](#).

## OIL FILTER

### OIL FILTER : Removal and Installation

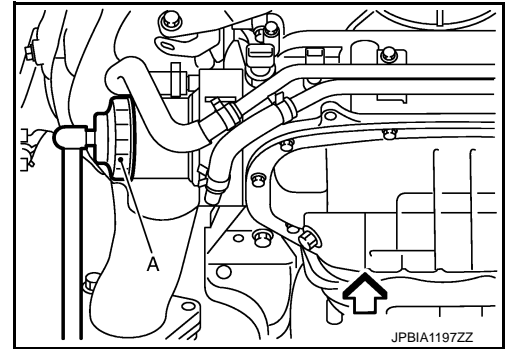
INFOID:000000010839993

#### REMOVAL

**CAUTION:**

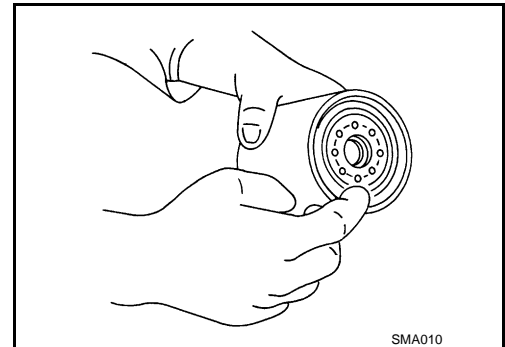
- Oil filter is provided with relief valve. Use genuine NISSAN oil filter or equivalent.
  - Be careful not to get burned when engine and engine oil may be hot.
  - When removing, prepare a shop cloth to absorb any engine oil leakage or spillage.
  - Never allow engine oil to adhere to drive belt.
  - Completely wipe off any engine oil that adheres to engine and vehicle.
1. Remove engine undercover with power tool.
  2. Using oil filter wrench [SST: KV10115801 (J-38956)] (A), remove oil filter.

← : Engine front



#### 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.



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# ENGINE MAINTENANCE

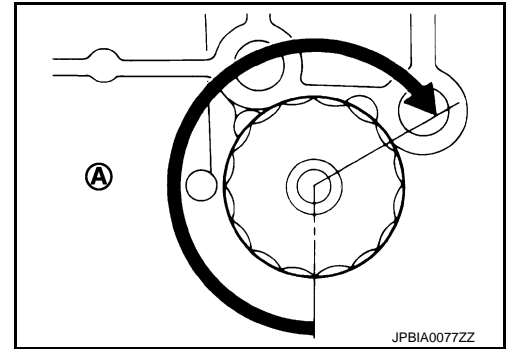
< PERIODIC MAINTENANCE >

[REGULAR GRADE]

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

Oil filter:

: 17.7 N·m (1.8 kg·m, 13 ft·lb)



INFOID:0000000110839994

## OIL FILTER : Inspection

### INSPECTION AFTER INSTALLATION

1. Check the engine oil level. Refer to [LU-7, "Inspection"](#).
2. Start the engine, and check there is no leakage of engine oil.
3. Stop the engine and wait for 10 minutes.
4. Check the engine oil level, and adjust the level. Refer to [LU-7, "Inspection"](#).

## SPARK PLUG

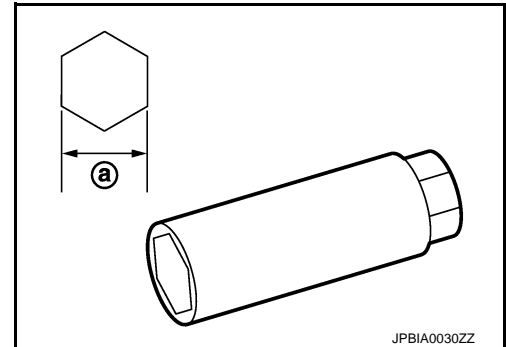
### SPARK PLUG : Removal and Installation

INFOID:0000000110839995

#### REMOVAL

1. Remove engine cover with power tool. Refer to [EM-30, "Exploded View"](#).
2. Remove air cleaner case and air duct (RH and LH). Refer to [EM-32, "Exploded View"](#).
3. Remove electric throttle control actuator. Refer to [EM-34, "Exploded View"](#).
4. Remove ignition coil. Refer to [EM-53, "Removal and Installation"](#).
5. Remove spark plug with a spark plug wrench (commercial service tool).

a : 14 mm (0.55 in)



#### INSTALLATION

Installation is the reverse order of removal.

### SPARK PLUG : Inspection

INFOID:0000000110839996

#### INSPECTION AFTER REMOVAL

Use the standard type spark plug for normal condition.

Spark plug (Standard type) : Refer to [EM-145, "Spark Plug"](#).

**CAUTION:**

# ENGINE MAINTENANCE

## < PERIODIC MAINTENANCE >

[REGULAR GRADE]

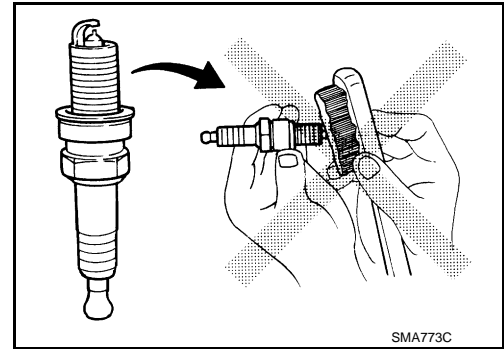
- Never drop or shock spark plug.
- Never use a wire brush for cleaning.
- If plug tip is covered with carbon, use spark plug cleaner to clean.

### Cleaner air pressure

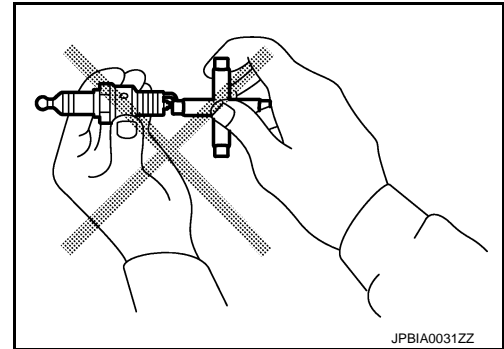
: Less than 588 kPa (6 kg/cm<sup>2</sup>, 85 psi)

### Cleaning time

: Less than 20 seconds



- Measure spark plug gap. When it exceeds the limit, replace spark plug even if it is within the specified replacement mileage. Refer to [EM-145, "Spark Plug"](#).
- Spark plug gap adjustment is not required between replacement intervals.



## EVAP VAPOR LINES

### EVAP VAPOR LINES : Inspection

INFOID:000000010839997

1. Visually inspect EVAP vapor lines for improper attachment and for cracks, damage, loose connections, chafing and deterioration. Refer to [EC-632, "Inspection"](#).
2. Inspect fuel tank filler cap vacuum relief valve for clogging, sticking, etc. Refer to [EC-359, "Component Inspection"](#).

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## CHASSIS MAINTENANCE

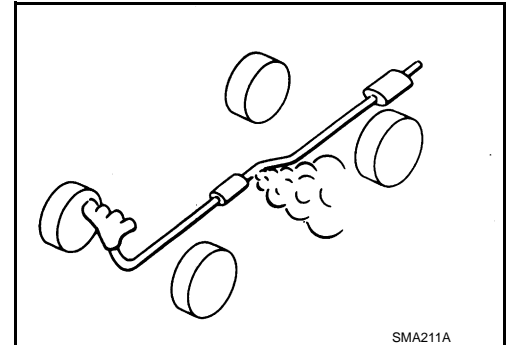
### EXHAUST SYSTEM

#### EXHAUST SYSTEM : Inspection

INFOID:000000010839998

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

- If anything is found, repair or replace damaged parts.



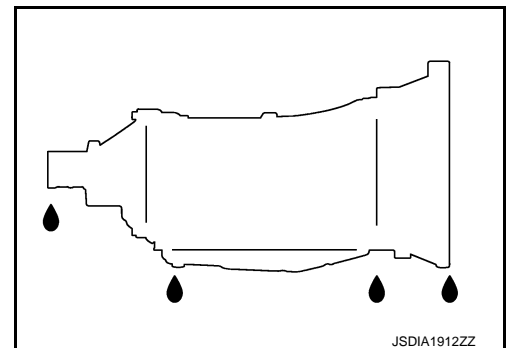
### A/T FLUID

#### A/T FLUID : Inspection

INFOID:000000010839999

#### FLUID LEAKAGE

- Check transmission surrounding area (oil seal and plug etc.) for fluid leakage.
- If anything is found, repair or replace damaged parts and adjust A/T fluid level. Refer to [TM-317, "Adjustment"](#).



#### A/T FLUID : Changing

INFOID:000000010840000

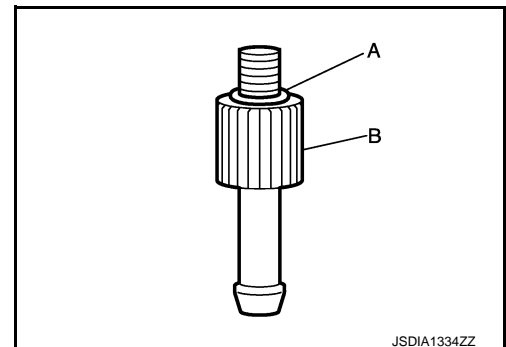
Recommended fluid and fluid capacity : Refer to [MA-16, "FOR NORTH AMERICA : Fluids and Lubricants"](#) (For North America), [MA-17, "FOR MEXICO : Fluids and Lubricants"](#) (For Mexico).

#### CAUTION:

- Use only recommended ATF. Never mix with other ATF.
- Using ATF other than recommended ATF will cause deterioration in driveability and A/T durability, and may damage the A/T, which is not covered by the NISSAN new vehicle limited warranty.
- When filling ATF, be careful not to scatter heat generating parts such as exhaust.

#### 1. Step 1

- Install the O-ring (315268E000) (A) to the charging pipe (310811EA5A) (B).



#### 2. Step 2

# CHASSIS MAINTENANCE

[REGULAR GRADE]

## < PERIODIC MAINTENANCE >

- a. Use CONSULT to check that the ATF temperature is 40°C (104°F) or less.
- b. Lift up the vehicle.
- c. Remove the drain plug from the oil pan, and then drain the ATF.
- d. When the ATF starts to drip, temporarily tighten the drain plug to the oil pan.

**NOTE:**

Never replace drain plug and drain plug gasket with new ones yet.

- e. Remove overflow plug from oil pan.
- f. Install the charging pipe (A) to the overflow plug hole.

**CAUTION:**

**Tighten the charging pipe by hand.**

- g. Install the bucket pump hose (B) to the charging pipe.

**CAUTION:**

**Insert the bucket pump hose all the way to the end of the charging pipe.**

- h. Fill approximately 3 liters (3-1/8 US qt, 2-5/8 Imp qt) of the ATF.
- i. Remove the bucket pump hose to remove the charging pipe, and then temporarily tighten the overflow plug to the oil pan.

**CAUTION:**

**Quickly perform the procedure to avoid ATF leakage from the oil pan.**

- j. Lift down the vehicle.
- k. Start the engine and wait for approximately 3 minutes.
- l. Stop the engine.

### 3. Step 3

- a. Repeat "Step 2".

### 4. Final Step

- a. Use CONSULT to check that the ATF temperature is 40°C (104°F) or less.

- b. Lift up the vehicle.

- c. Remove the drain plug from the oil pan, and then drain the ATF.

- d. When the ATF starts to drip, tighten the drain plug to the oil pan to the specified torque. Refer to [TM-328, "Exploded View"](#).

**CAUTION:**

**Never reuse drain plug and drain plug gasket.**

- e. Remove overflow plug from oil pan.

- f. Install the charging pipe (A) to the overflow plug hole.

**CAUTION:**

**Tighten the charging pipe by hand.**

- g. Install the bucket pump hose (B) to the charging pipe.

**CAUTION:**

**Insert the bucket pump hose all the way to the end of the charging pipe.**

- h. Fill approximately 3 liters (3-1/8 US qt, 2-5/8 Imp qt) of the ATF.
- i. Remove the bucket pump hose to remove the charging pipe, and then temporarily tighten the overflow plug to the oil pan.

**CAUTION:**

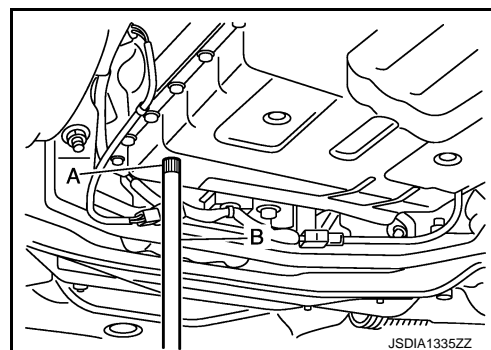
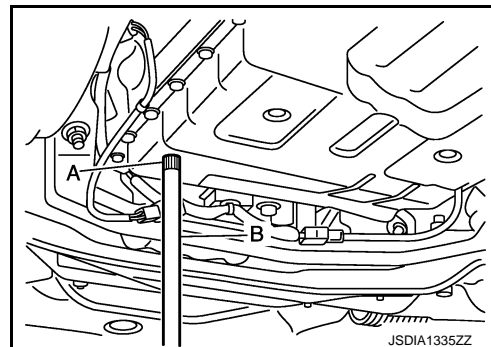
**Quickly perform the procedure to avoid ATF leakage from the oil pan.**

- j. Lift down the vehicle.
- k. Start the engine.
- l. Make the ATF temperature approximately 40°C (104°F).

**NOTE:**

The ATF level is greatly affected by the temperature. Always check the ATF temperature on "ATF TEMP 1" of "Data Monitor" using CONSULT.

- m. Park vehicle on level surface and set parking brake.



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# CHASSIS MAINTENANCE

< PERIODIC MAINTENANCE >

[REGULAR GRADE]

- n. Shift the selector lever through each gear position. Leave selector lever in "P" position.
- o. Lift up the vehicle when the ATF temperature reaches 40°C (104°F), and then remove the overflow plug from the oil pan.
- p. When the ATF starts to drip, tighten the overflow plug to the oil pan to the specified torque. Refer to [TM-328, "Exploded View"](#).

**CAUTION:**

**Never reuse overflow plug.**

## A/T FLUID : Adjustment

INFOID:000000010840001

Recommended fluid and fluid capacity : Refer to [MA-16, "FOR NORTH AMERICA : Fluids and Lubricants"](#) (For North America), [MA-17, "FOR MEXICO : Fluids and Lubricants"](#) (For Mexico).

**CAUTION:**

- Use only recommended ATF. Never mix with other ATF.
- Using ATF other than recommended ATF will cause deterioration in driveability and A/T durability, and may damage the A/T, which is not covered by the NISSAN new vehicle limited warranty.
- When filling ATF, be careful not to scatter heat generating parts such as exhaust.
- Always maintain the ATF temperature within between 35°C (95°F) and 45°C (113°F) while checking with CONSULT when the ATF level adjustment is performed.

1. Install the O-ring (315268E000) (A) to the charging pipe (310811EA5A) (B).
2. Start the engine.
3. Make the ATF temperature approximately 40°C (104°F).

**NOTE:**

The ATF level is greatly affected by the temperature. Always check the ATF temperature on "ATF TEMP 1" of "Data Monitor" using CONSULT.

4. Park vehicle on level surface and set parking brake.
5. Shift the selector lever through each gear position. Leave selector lever in "P" position.
6. Lift up the vehicle.
7. Check the ATF leakage from transmission.
8. Remove overflow plug from oil pan.
9. Install the charging pipe (A) to the overflow plug hole.

**CAUTION:**

**Tighten the charging pipe by hand.**

10. Install the bucket pump hose (B) to the charging pipe.
- CAUTION:**  
**Insert the bucket pump hose all the way to the end of the charging pipe.**
11. Fill approximately 0.5 liters (1/2 US qt, 1/2 Imp qt) of the ATF.
  12. Check that the ATF leaks when removing the charging pipe and the bucket pump hose. If the ATF does not leak, refill the ATF.
  13. When the ATF starts to drip, tighten the overflow plug to the oil pan to the specified torque. Refer to [TM-328, "Exploded View"](#).

**CAUTION:**

**Never reuse overflow plug.**

## GEAR OIL

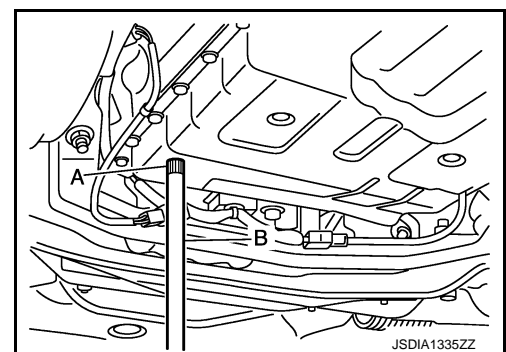
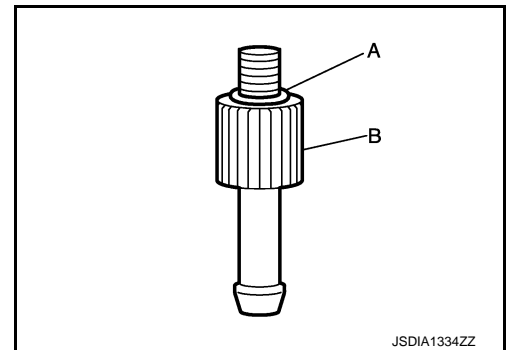
### GEAR OIL : Inspection

INFOID:000000010840002

### OIL LEAKAGE

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

### OIL LEVEL



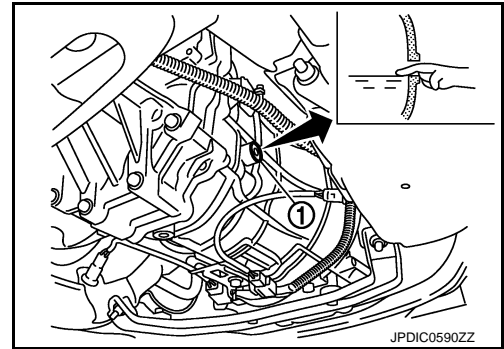


# CHASSIS MAINTENANCE

< PERIODIC MAINTENANCE >

[REGULAR GRADE]

1. Remove filler plug (1) and gasket from transmission case.
2. Check the oil level from filler plug mounting hole as shown in the figure.  
**CAUTION:**  
**Never start engine while checking oil level.**
3. Set a gasket on filler plug and then install it to transmission case.  
**CAUTION:**  
**Never reuse gasket.**
4. Tighten filler plug to the specified torque. Refer to [TM-49, "WITHOUT S-MODE : Exploded View"](#) (Without S-MODE) or [TM-81, "WITH S-MODE : Exploded View"](#) (With S-MODE).



## GEAR OIL : Draining

INFOID:000000010840003

1. Start the engine and let it run to warm up transmission.
2. Stop the engine.
3. Remove drain plug and gasket from transmission case and then drain gear oil.
4. Set a gasket on drain plug and install it to transmission case.  
**CAUTION:**  
**Never reuse gasket.**
5. Tighten drain plug to the specified torque. Refer to [TM-49, "WITHOUT S-MODE : Exploded View"](#) (Without S-MODE) or [TM-81, "WITH S-MODE : Exploded View"](#) (With S-MODE).

## GEAR OIL : Refilling

INFOID:000000010840004

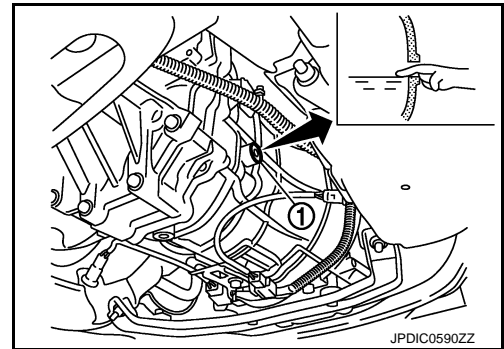
1. Remove filler plug (1) and gasket from transmission case.
2. Fill with new gear oil to transmission as shown in the figure.

**Oil grade and viscosity** : Refer to [MA-16, "FOR NORTH AMERICA : Fluids and Lubricants"](#) (For North America) or [MA-17, "FOR MEXICO : Fluids and Lubricants"](#) (For Mexico).

**Oil capacity** : Refer to [TM-147, "General Specification"](#).

**CAUTION:**  
**Never reuse drained gear oil.**

3. After refilling gear oil, check the oil level. Refer to [MA-32, "GEAR OIL : Inspection"](#).
4. Set a gasket on filler plug and then install it to transmission case.  
**CAUTION:**  
**Never reuse gasket.**
5. Tighten filler plug to the specified torque. Refer to [TM-49, "WITHOUT S-MODE : Exploded View"](#) (Without S-MODE) or [TM-81, "WITH S-MODE : Exploded View"](#) (With S-MODE).



## CLUTCH FLUID

### CLUTCH FLUID : Inspection

INFOID:000000010840005

### FLUID LEAKAGE

- Check clutch line (tubes and hoses) for cracks, deterioration or other damage. Replace any damaged parts.
- Check for fluid leakage by fully depressing clutch pedal while engine is running.

**CAUTION:**  
**If leakage occurs around joints, retighten or, if necessary, replace damaged parts.**

### FLUID LEVEL

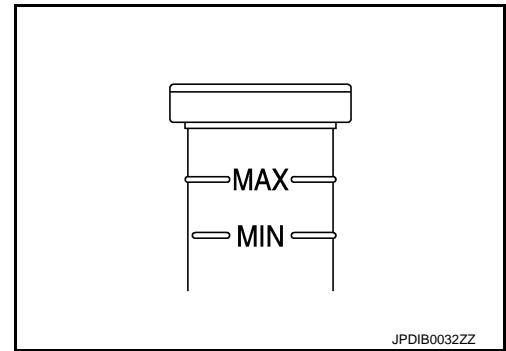
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# CHASSIS MAINTENANCE

< PERIODIC MAINTENANCE >

[REGULAR GRADE]

- Check that the fluid level in the reservoir tank is within the specified range (MAX – MIN lines).
- Visually check for any fluid leakage around the reservoir tank.
- Check the clutch system for any leakage if the fluid level is extremely low (lower than MIN).



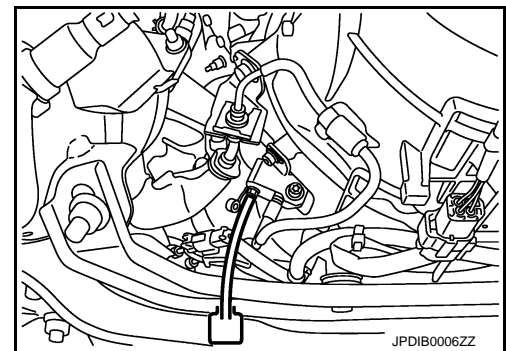
INFOID:0000000110840006

## CLUTCH FLUID : Draining

### CAUTION:

Keep painted surface on the body or other parts free of clutch fluid. If it spills, wipe up immediately and wash the affected area with water.

1. Connect a transparent vinyl hose to air bleeder valve.
2. Depress clutch pedal and loosen air bleeder valve to completely discharge clutch fluid.



INFOID:0000000110840007

## CLUTCH FLUID : Refilling

### CAUTION:

- Keep painted surface on the body or other parts free of clutch fluid. If it spills, wipe up immediately and wash the affected area with water.
- Note the following instructions when filling with clutch fluid:
  - Never use fluid of which performance may be deteriorated because of not storing it in a cool and dark place with low humidity.
  - The bottle used for filling the reservoir tank with fluid must be free of foreign materials and liquid other than clutch fluid.
  - Check clutch fluid for bubbles and slowly fill with fluid to prevent the generation of bubbles. If bubbles are generated, then wait until the bubbles disappear.
  - While filling with fluid, never allow foreign materials to enter into the reservoir tank. If foreign matter enters into the reservoir tank, then remove them thoroughly with a clean waste or dropper.

1. Check that there is no foreign material in reservoir tank and then fill with new clutch fluid.

### CAUTION:

- Never reuse drained clutch fluid.
  - Remove foreign materials thoroughly from the reservoir tank, if any, with a clean waste or dropper.
2. With the air bleeder valve loosened, repeat the following operation at intervals of two to three seconds until new clutch fluid drains: Fully depress the clutch pedal and release it completely.
  3. Depress clutch pedal and loosen air bleeder valve to completely discharge clutch fluid.
  4. Repeat steps 1 to 2 operations.

### CAUTION:

Monitor clutch fluid level in reservoir tank to make sure it does not empty.

5. Tighten air bleeder valve with the clutch pedal depressed.
6. Perform the air bleeding. Refer to [CL-10, "Air Bleeding Procedure"](#).

## REAR PROPELLER SHAFT

# CHASSIS MAINTENANCE

< PERIODIC MAINTENANCE >

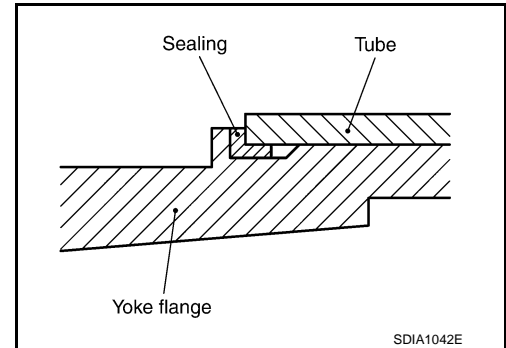
[REGULAR GRADE]

## REAR PROPELLER SHAFT : Inspection

INFOID:000000010840008

### NOISE

- Check the propeller shaft tube surface for dents or cracks. If damaged, replace propeller shaft assembly.
- Check that there is clearance between the tube end and yoke flange. If no clearance is found, replace the propeller shaft.
- If there are cracks, peeling, or any other breakage on the seal (yoke and tube joint) replace the propeller shaft assembly.

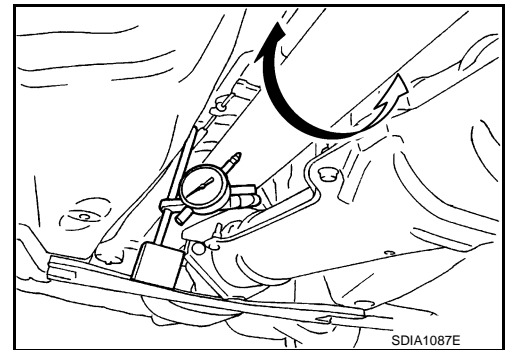


### VIBRATION

If vibration is present at high speed, inspect propeller shaft runout first.

1. With a dial indicator, measure propeller shaft runout at runout measuring points by rotating final drive companion flange with hands.

**Propeller shaft runout** : Refer to [DLN-10, "Propeller Shaft Runout"](#).



- Propeller shaft runout measuring point (Point "Δ").

←: Vehicle front

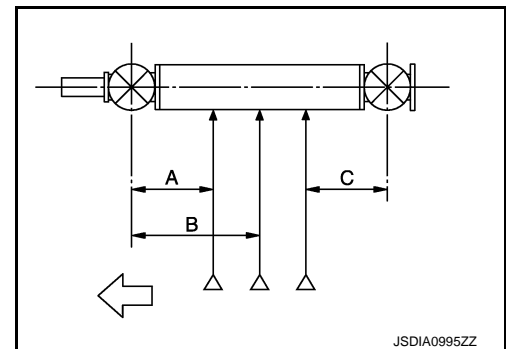
#### Standard

M/T

- A : 340 mm (13.39 in)
- B : 610 mm (24.02 in)
- C : 340 mm (13.39 in)

A/T

- A : 340 mm (13.39 in)
- B : 580 mm (22.83 in)
- C : 340 mm (13.39 in)



2. If runout still exceeds specifications, separate propeller shaft at final drive companion flange; then change the phase between companion flange and propeller shaft by the one bolt hole at a time and install propeller shaft.
3. Check runout again. If runout still exceeds specifications, replace propeller shaft assembly.
4. Check the vibration by driving vehicle.

## REAR DIFFERENTIAL GEAR OIL: R200

### REAR DIFFERENTIAL GEAR OIL: R200 : Inspection

INFOID:000000010840009

### OIL LEAKAGE

Make sure that oil is not leaking from final drive assembly or around it.

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# CHASSIS MAINTENANCE

< PERIODIC MAINTENANCE >

[REGULAR GRADE]

## OIL LEVEL

- Remove filler plug (1) and check oil level from filler plug mounting hole as shown in the figure.

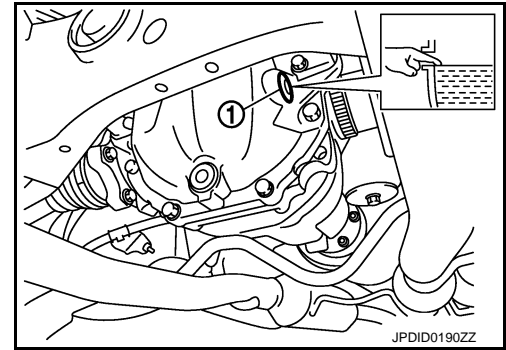
**CAUTION:**

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

- Set a gasket on filler plug and install it on final drive assembly. Refer to [DLN-28, "Exploded View"](#).

**CAUTION:**

**Never reuse gasket.**



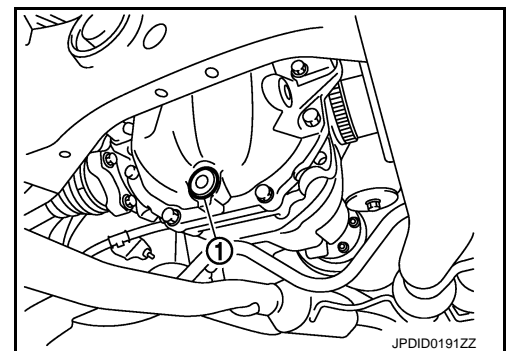
## REAR DIFFERENTIAL GEAR OIL: R200 : Draining

INFOID:000000010840010

- Stop the engine.
- Remove drain plug (1) and drain gear oil.
- Set a gasket on drain plug and install it to final drive assembly and tighten to the specified torque. Refer to [DLN-28, "Exploded View"](#).

**CAUTION:**

**Never reuse gasket.**



## REAR DIFFERENTIAL GEAR OIL: R200 : Refilling

INFOID:000000010840011

- Remove filler plug (1). Fill with new gear oil until oil level reaches the specified level near filler plug mounting hole.

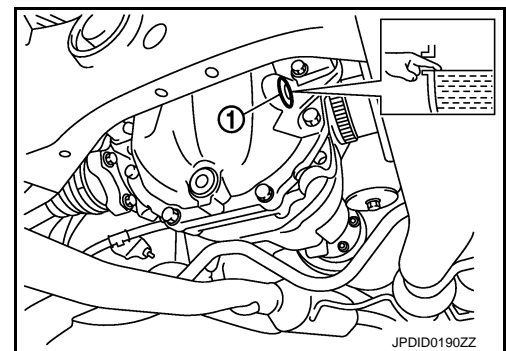
**Oil grade, viscosity, and capacity**

**: Refer to [MA-16, "FOR NORTH AMERICA : Fluids and Lubricants"](#) (for NORTH AMERICA), [MA-17, "FOR MEXICO : Fluids and Lubricants"](#) (for MEXICO).**

- After refilling oil, check oil level. Set a gasket to filler plug, then install it to final drive assembly. Refer to [DLN-28, "Exploded View"](#).

**CAUTION:**

**Never reuse gasket.**



## REAR DIFFERENTIAL GEAR OIL: R200V

## REAR DIFFERENTIAL GEAR OIL: R200V : Inspection

INFOID:000000010840012

## OIL LEAKAGE

Make sure that oil is not leaking from final drive assembly or around it.

## OIL LEVEL

# CHASSIS MAINTENANCE

## < PERIODIC MAINTENANCE >

[REGULAR GRADE]

- Remove filler plug (1) and check oil level from filler plug mounting hole as shown in the figure.

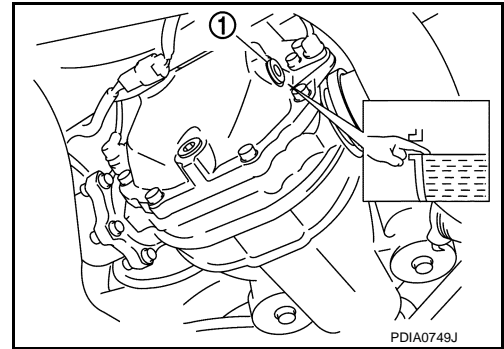
**CAUTION:**

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

- Set a gasket on filler plug and install it on final drive assembly. Refer to [DLN-67, "Exploded View"](#).

**CAUTION:**

**Never reuse gasket.**



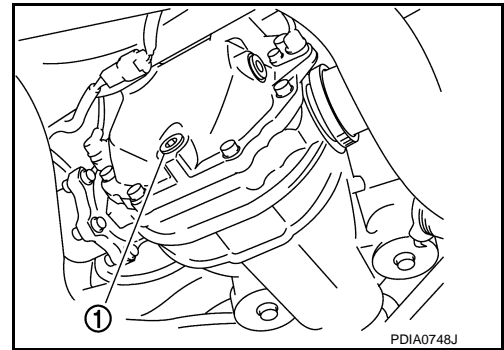
## REAR DIFFERENTIAL GEAR OIL: R200V : Draining

INFOID:000000010840013

- Stop the engine.
- Remove drain plug (1) and drain gear oil.
- Set a gasket on drain plug and install it to final drive assembly and tighten to the specified torque. Refer to [DLN-67, "Exploded View"](#).

**CAUTION:**

**Never reuse gasket.**



## REAR DIFFERENTIAL GEAR OIL: R200V : Refilling

INFOID:000000010840014

- Remove filler plug (1). Fill with new gear oil until oil level reaches the specified level near filler plug mounting hole.

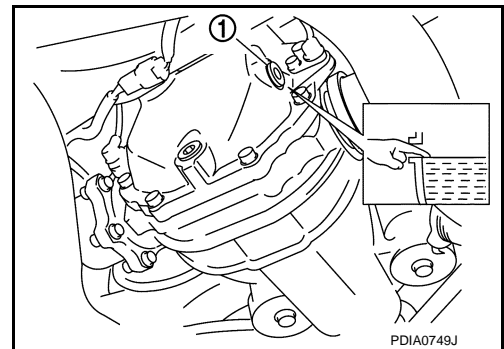
**Oil grade, viscosity, and capacity**

**: Refer to [MA-16, "FOR NORTH AMERICA : Fluids and Lubricants"](#) (for NORTH AMERICA), [MA-17, "FOR MEXICO : Fluids and Lubricants"](#) (for MEXICO).**

- After refilling oil, check oil level. Set a gasket to filler plug, then install it to final drive assembly. Refer to [DLN-67, "Exploded View"](#).

**CAUTION:**

**Never reuse gasket.**



## WHEELS (BONDING WEIGHT TYPE)

### WHEELS (BONDING WEIGHT TYPE) : Adjustment

INFOID:000000010840015

#### BALANCING WHEELS (BONDING WEIGHT TYPE)

##### Preparation Before Adjustment

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

- The details of the adjustment procedure are different for each model of wheel balancer. Therefore, refer to each instruction manual.

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# CHASSIS MAINTENANCE

## < PERIODIC MAINTENANCE >

[REGULAR GRADE]

- 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 tire balance machine using the center hole as a guide. Start the tire balance machine.
  2. When inner and outer unbalance values are shown on the tire balance machine 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 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.

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

**Calculation example:**

$23 \text{ g (0.81 oz)} \times 5/3 = 38.33 \text{ g (1.35 oz)} \Rightarrow 37.5 \text{ g (1.32 oz)}$  balance weight (closer to calculated balance weight value)

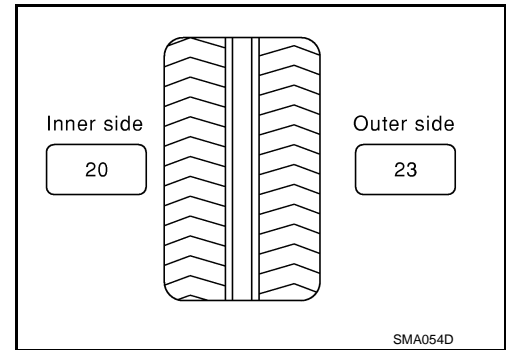
**NOTE:**

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

**Example:**

$36.2 \Rightarrow 35 \text{ g (1.23 oz)}$

$36.3 \Rightarrow 37.5 \text{ g (1.32 oz)}$

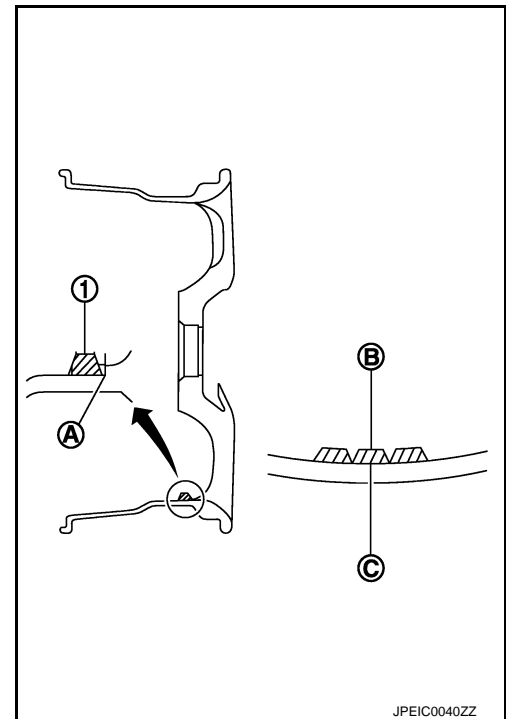


- b. Installed balance weight in the position.

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

**CAUTION:**

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



- c. 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:**

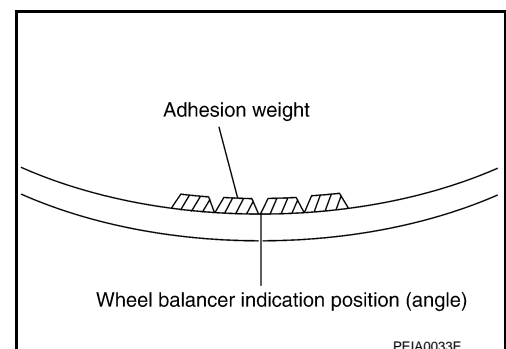
**Do not install one balance weight sheet on top of another.**

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

**CAUTION:**

**Do not install three or more balance weight.**

5. Start the tire balance machine. Check that inner and outer residual unbalance values is within the allowable unbalance value.





# CHASSIS MAINTENANCE

< PERIODIC MAINTENANCE >

[REGULAR GRADE]

## CAUTION:

If either residual unbalance value exceeds limit, repeat installation procedures.

### Allowable unbalance value

Dynamic (At flange) : Refer to [WT-54, "Road Wheel"](#).

Static (At flange) : Refer to [WT-54, "Road Wheel"](#).

## TIRE ROTATION

- Tire cannot be rotated in vehicle, as front tire are different size from rear tire and the direction of wheel rotation is fixed in each tire.

Wheel nuts tightening torque : Refer to [WT-54, "Road Wheel"](#).

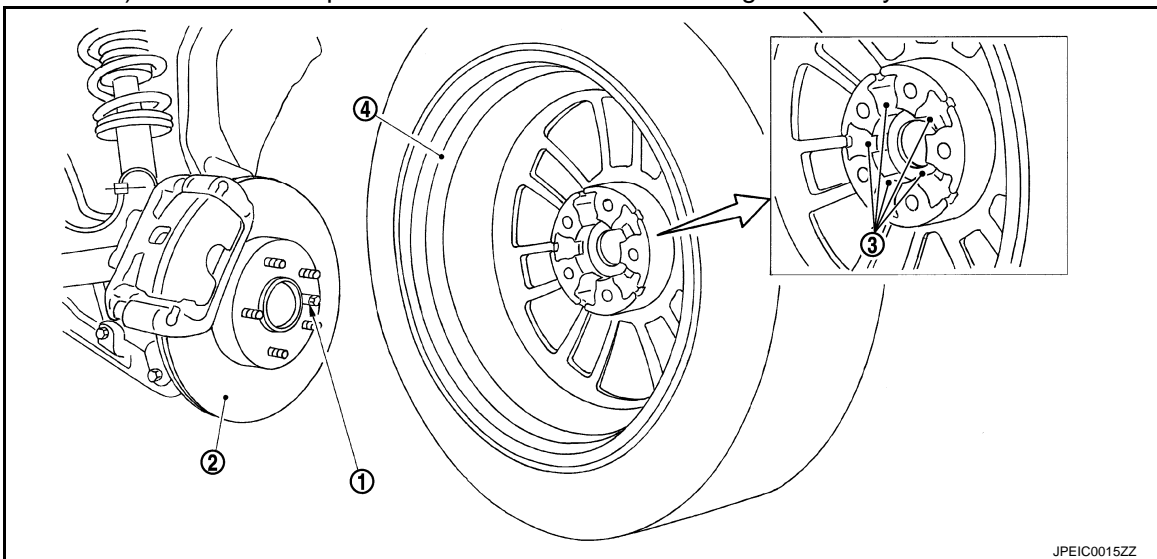
## CAUTION:

- Never include the T-type spare tire when rotating the tires.
- Use NISSAN genuine wheel nuts for aluminum wheels.

Safety Device Preventing from Being Incorrectly installed

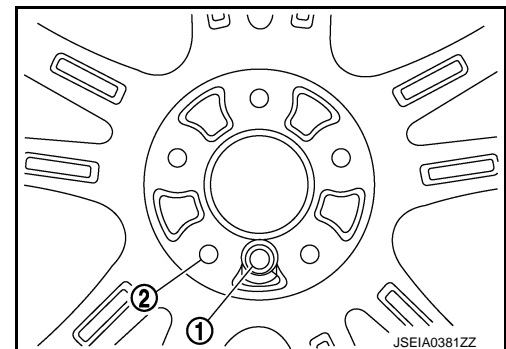
## FRONT BRAKE DISC ROTOR AND FRONT WHEEL

- Front and rear wheel size for this model differs, therefore special pin (1) is adopted to the front brake disc rotor (2). And a hole (3) that matches to this pin is adopted to the front wheel (4) (the rear wheel does not have this wheel). This structure prevents the rear wheel from being mistakenly installed on the front.



## T-TYPE SPARE TIRE WHEEL

- Regarding spare tire (for emergency) wheel, wrong assembly protection pin hole (1) has been set in addition to regular bolt holes (2) in order to enable installation to front wheel.



## BRAKE FLUID LEVEL AND LEAKS

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# CHASSIS MAINTENANCE

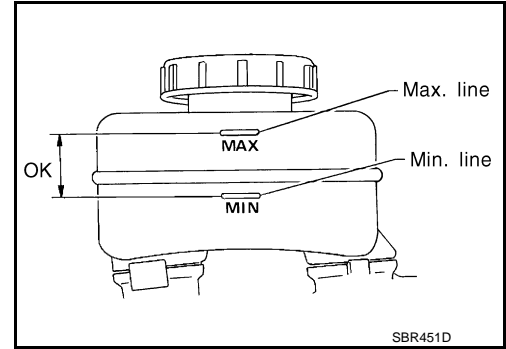
< PERIODIC MAINTENANCE >

[REGULAR GRADE]

## BRAKE FLUID LEVEL AND LEAKS : Inspection

INFOID:000000010840016

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

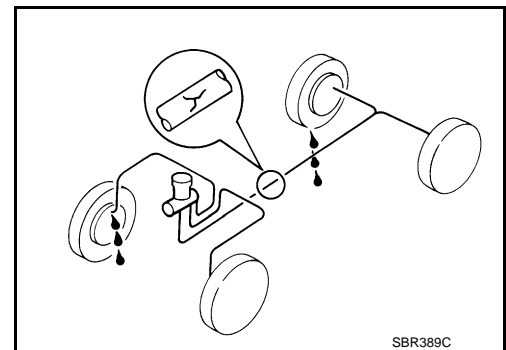


## BRAKE LINES AND CABLES

### BRAKE LINES AND CABLES : Inspection

INFOID:000000010840017

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

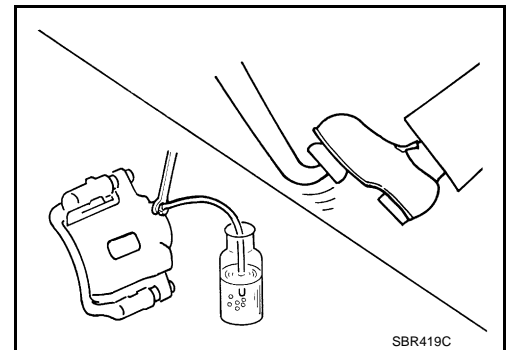


## BRAKE FLUID

### BRAKE FLUID : Changing

INFOID:000000010840018

1. Drain brake fluid from each bleed valve.
2. Refill until new brake fluid comes out from each bleed valve. Use same procedure as in bleeding hydraulic system to refill brake fluid.  
Refer to [BR-13. "Bleeding Brake System"](#).
  - Refill with recommended Genuine NISSAN Super Heavy Duty Brake Fluid or equivalent DOT 3 (US FMVSS No. 116). Refer to [MA-16. "FOR NORTH AMERICA : Fluids and Lubricants"](#).
    - Never reuse drained brake fluid.
    - Be careful not to splash brake fluid on painted areas.



## DISC BRAKE

### DISC BRAKE : Inspection

INFOID:000000010840019

#### DISC ROTOR

Check condition, wear, and damage.

#### CALIPER

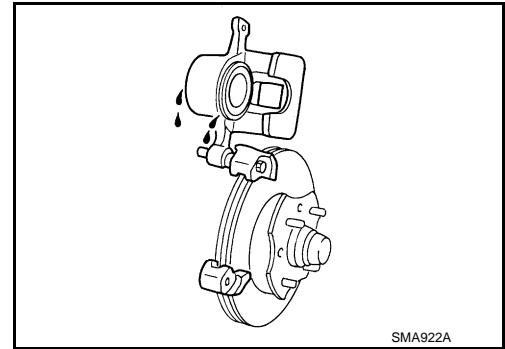
- Check for leakage.



# CHASSIS MAINTENANCE

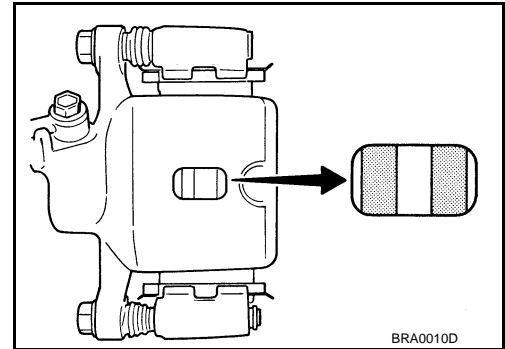
< PERIODIC MAINTENANCE >

[REGULAR GRADE]



## BRAKE PAD

- Check for wear or damage.



## DISC BRAKE : Front Disc Brake

INFOID:000000010840020

### 2 PISTON TYPE

Unit: mm (in)

Item		Limit
Brake pad	Wear thickness	2.0 (0.079)
	Wear thickness	26.0 (1.024)
Disc rotor	Thickness variation (measured at 8 positions)	0.015 (0.0006)
	Runout (with it attached to the vehicle)	0.035 (0.0014)

### 4 PISTON TYPE

Unit: mm (in)

Item		Limit
Brake pad	Wear thickness	2.0 (0.079)
	Wear thickness	30.0 (1.181)
Disc rotor	Thickness variation (measured at 8 positions)	0.015 (0.0006)
	Runout (with it attached to the vehicle)	0.035 (0.0014)

## DISC BRAKE : Rear Disc Brake

INFOID:000000010840021

### 1 PISTON TYPE

Unit: mm (in)

Item		Limit
Brake pad	Wear thickness	2.0 (0.079)
	Wear thickness	14.0 (0.551)
Disc rotor	Thickness variation (measured at 8 positions)	0.015 (0.0006)
	Runout (with it attached to the vehicle)	0.055 (0.0022)

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# CHASSIS MAINTENANCE

< PERIODIC MAINTENANCE >

[REGULAR GRADE]

Unit: mm (in)

Item		Limit
Brake pad	Wear thickness	2.0 (0.079)
	Wear thickness	18.0 (0.709)
Disc rotor	Thickness variation (measured at 8 positions)	0.015 (0.0006)
	Runout (with it attached to the vehicle)	0.055 (0.0022)

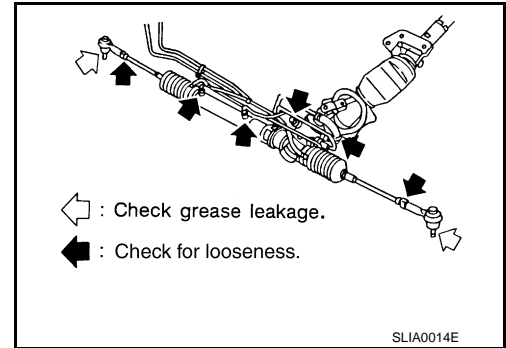
## STEERING GEAR AND LINKAGE

### STEERING GEAR AND LINKAGE : Inspection

INFOID:000000010840022

#### STEERING GEAR

- 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.

### POWER STEERING FLUID AND LINES

#### POWER STEERING FLUID AND LINES : Inspection

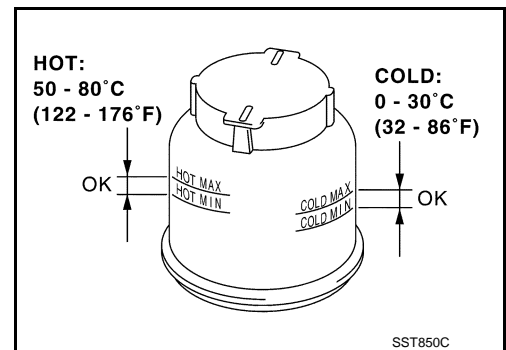
INFOID:000000010840023

Check fluid level in reservoir tank with engine off.

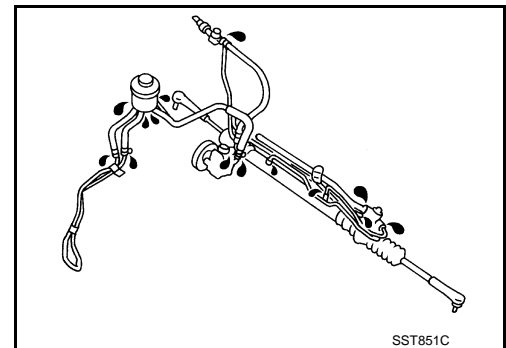
Use "HOT" range at fluid temperatures of 50 to 80°C (122 to 176°F) or "COLD" range at fluid temperatures of 0 to 30°C (32 to 86°F).

#### CAUTION:

- Do not overfill.
- Recommended fluid is Genuine NISSAN PSF or equivalent. Refer to [MA-16. "FOR NORTH AMERICA : Fluids and Lubricants"](#).



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



## AXLE AND SUSPENSION PARTS

# CHASSIS MAINTENANCE

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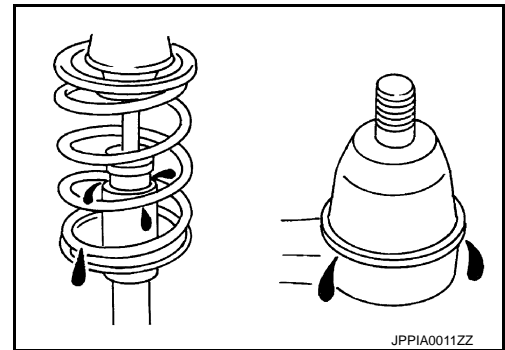
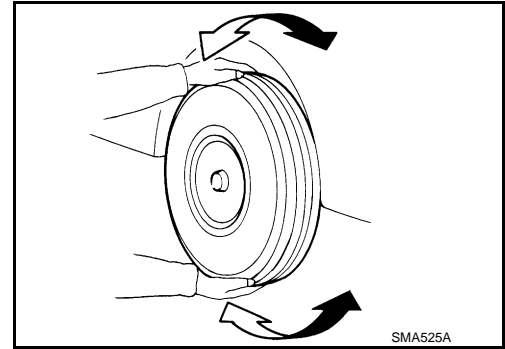
[REGULAR GRADE]

## AXLE AND SUSPENSION PARTS : Inspection

INFOID:000000010840024

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.

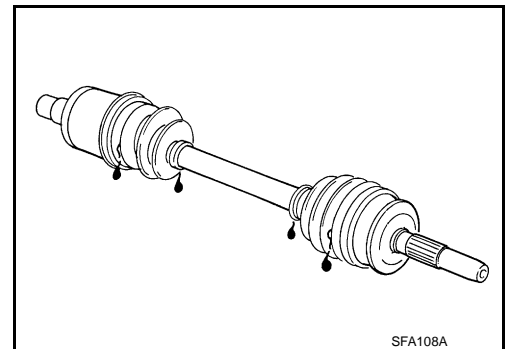


## DRIVE SHAFT

### DRIVE SHAFT : Inspection

INFOID:000000010840025

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



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## BODY MAINTENANCE

### LOCKS, HINGES AND HOOD LATCH

#### LOCKS, HINGES AND HOOD LATCH : Lubricating

INFOID:000000010840026

##### Coupe

For hood and hood lock illustration.

- Hood: Refer to [DLK-164, "HOOD ASSEMBLY : Exploded View"](#).
- Hood lock: Refer to [DLK-186, "Exploded View"](#).

For door and door lock illustration.

- Door: Refer to [DLK-174, "DOOR ASSEMBLY : Exploded View"](#).
- Door lock: Refer to [DLK-189, "DOOR LOCK : Exploded View"](#).

For back door and back door lock illustration.

- Back door: Refer to [DLK-179, "BACK DOOR ASSEMBLY : Exploded View"](#).
- Back door lock: Refer to [DLK-193, "BACK DOOR LOCK : Exploded View"](#).

##### Roadster

For hood and hood lock illustration.

- Hood: Refer to [DLK-367, "HOOD ASSEMBLY : Exploded View"](#).
- Hood lock: Refer to [DLK-389, "Exploded View"](#).

For door and door lock illustration.

- Door: Refer to [DLK-377, "DOOR ASSEMBLY : Exploded View"](#).
- Door lock: Refer to [DLK-392, "DOOR LOCK : Exploded View"](#).

For trunk lid and trunk lid lock illustration.

- Trunk lid: Refer to [DLK-383, "TRUNK LID ASSEMBLY : Exploded View"](#).
- Trunk lid lock: Refer to [DLK-396, "TRUNK LID LOCK : Exploded View"](#).

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

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

INFOID:000000010840027

For seat belt illustration. Refer to [SB-8, "SEAT BELT RETRACTOR : Exploded View"](#).

##### **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 [SB-6, "SEAT BELT RETRACTOR : Inspection"](#) in 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

# SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

[REGULAR GRADE]

## SERVICE DATA AND SPECIFICATIONS (SDS)

### SERVICE DATA AND SPECIFICATIONS (SDS)

#### DRIVE BELT

DRIVE BELT : Drive Belt

INFOID:0000000010840028

#### DRIVE BELT

Tension of drive belt	Belt tension is not necessary, as it is automatically adjusted by drive belt auto-tensioner.
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### ENGINE COOLANT

ENGINE COOLANT : Periodical Maintenance Specification

INFOID:0000000010840029

#### ENGINE COOLANT CAPACITY (APPROXIMATE)

Unit: ℓ (US qt, Imp qt)

Engine coolant capacity [With reservoir tank ("MAX" level)]	A/T models	9.1 (9-5/8, 8)
	M/T models	9.2 (9-3/4, 8-1/8)
Reservoir tank engine coolant capacity (At "MAX" level)		0.8 (7/8, 3/4)

### ENGINE OIL

ENGINE OIL : Periodical Maintenance Specification

INFOID:0000000010840030

#### ENGINE OIL CAPACITY (APPROXIMATE)

Unit: ℓ (US qt, Imp qt)

Drain and refill	With oil filter change	4.9 (5-1/8, 4-1/4)
	Without oil filter change	4.6 (4-7/8, 4)
Dry engine (Overhaul)		5.7 (6, 5)

### SPARK PLUG

SPARK PLUG : Spark Plug

INFOID:0000000010840031

#### SPARK PLUG

Unit: mm (in)

Make	DENSO	
Standard type	FXE24HR11	
Gap (Nominal)	Standard	1.1 (0.043)
	Limit	1.4 (0.055)

### ROAD WHEEL

ROAD WHEEL : Road Wheel

INFOID:0000000010840032

#### CONVENTIONAL

Item		Limit
Radial runout	Axial runout	Less than 0.3 mm (0.012 in)
	Radial runout	
Allowable unbalance	Dynamic (At flange)	Less than 5 g (0.17 oz) (one side)
	Static (At flange)	Less than 10 g (0.35 oz)

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# SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

[REGULAR GRADE]

EMERGENCY

Item		Limit
Radial runout	Axial runout	Less than 1.5 mm (0.059 in)
	Radial runout	

# PERIODIC MAINTENANCE

< PERIODIC MAINTENANCE >

[Nismo 370Z]

## PERIODIC MAINTENANCE

### PERIODIC MAINTENANCE FOR NORTH AMERICA

#### FOR NORTH AMERICA : Introduction of Periodic Maintenance

INFOID:000000010840033

Emission Control System Maintenance  
NISMO models

MAINTENANCE OPERATION		MAINTENANCE INTERVAL								
Perform at number of miles, kilometers or months, whichever comes first.	Miles x 1,000 (km x 1,000)	5 (8)	10 (16)	15 (24)	20 (32)	25 (40)	30 (48)	35 (56)	40 (64)	45 (72)
	Months	6	12	18	24	30	36	42	48	54
Spark plugs (Iridium-tipped type)	NOTE	Replace every 60,000 miles (96,000 km)								

MAINTENANCE OPERATION		MAINTENANCE INTERVAL								
Perform at number of miles, kilometers or months, whichever comes first.	Miles x 1,000 (km x 1,000)	50 (80)	55 (88)	60 (96)	65 (104)	70 (112)	75 (120)	80 (128)	85 (136)	90 (144)
	Months	60	66	72	78	84	90	96	102	108
Spark plugs (Iridium-tipped type)	NOTE	Replace every 60,000 miles (96,000 km)								

MAINTENANCE OPERATION		MAINTENANCE INTERVAL						Reference Page
Perform at number of miles, kilometers or months, whichever comes first.	Miles x 1,000 (km x 1,000)	95 (152)	100 (160)	105 (168)	110 (176)	115 (184)	120 (192)	
	Months	114	120	126	132	138	144	
Spark plugs (Iridium-tipped type)	NOTE	Replace every 60,000 miles (96,000 km)						<a href="#">MA-28</a>

**NOTE:**

- Replace spark plug when the plug gap exceeds 1.4 mm (0.055 in) even if within specified periodic replacement mileage.

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# RECOMMENDED FLUIDS AND LUBRICANTS

< PERIODIC MAINTENANCE >

[Nismo 370Z]

## RECOMMENDED FLUIDS AND LUBRICANTS

### Fluids and Lubricants

INFOID:000000010840034

NISMO models

The following are approximate capacities. The actual refill capacities may be slightly different. When refilling, follow the procedures described elsewhere in this manual.

	Capacity (Approximate)			Recommended Fluids/Lubricants
	US measure	Imp measure	Liter	
Differential gear oil	3 pt	2-1/2 pt	1.40	API GL-5, Synthetic gear oil, Viscosity SAE 75W-90 (See a NISSAN dealer for service for synthetic oil.)
Brake fluid	—	—	—	Genuine NISSAN Brake Fluid R35 Special II (Never mix different types of fluids.) (Genuine NISSAN Brake Fluid R35 Special II is the factory fill brake fluid. The Vehicle Dynamic Control (VDC) unit and other related parts were specially designed for this brake fluid. Using any other fluid may result in improper operation of the brake system which could result in serious injury or death.)



## CHASSIS MAINTENANCE

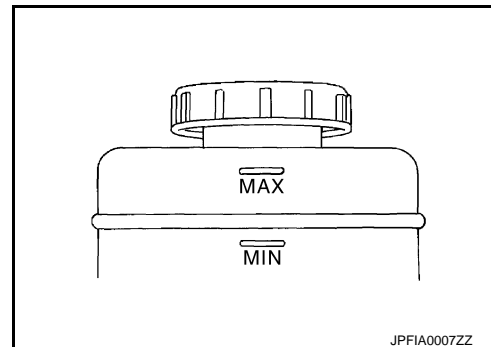
### BRAKE FLUID

#### BRAKE FLUID : Inspection

INFOID:000000010840035

##### BRAKE FLUID LEVEL

- Check that the fluid level in the reservoir tank is within the specified range (MAX – MIN lines).
- Visually check for any brake fluid leakage around the reservoir tank.
- Check the brake system for any leakage if the fluid level is extremely low (lower than MIN).
- Check the brake system for fluid leakage if the warning lamp remains illuminated even after the parking brake lever is released.
- Check the reservoir tank for the mixing of foreign matter (e.g. dust) and oils other than brake fluid.



##### BRAKE LINE

1. Check the brake line (tube and hose) for any cracks or damage.  
**CAUTION:**  
**Replace with new ones if necessary.**
2. Depress the brake pedal with a force of 785 N (80 kg, 176 lb) and hold down the pedal for approximately 5 seconds with the engine running. Check for any fluid leakage.  
**CAUTION:**  
**Retighten each part to the specified torque and repair any abnormal (damaged, worn, or deformed) part if any fluid leakage is present.**

##### BRAKE FLUID : Draining

INFOID:000000010840036

##### **CAUTION:**

- **Never spill or splash brake fluid on painted surfaces. Brake fluid may seriously damage paint. Wipe it out immediately and wash with water if it gets on a painted surface.**
  - **Turn the ignition switch OFF and disconnect the ABS actuator and electric unit (control unit) connector or the battery negative terminal before performing work.**
  - **Wrap the flare nut wrench with waste cloth to protect the caliper from damage.**
  - **If the brake fluid adheres to the caliper or disc rotor, quickly wipe it out.**
1. Remove tires. Refer to [WT-49, "Exploded View"](#).
  2. Connect a vinyl tube to the bleeder valve.
  3. Depress the brake pedal and loosen the bleeder valve to gradually discharge brake fluid.

##### BRAKE FLUID : Refilling

INFOID:000000010840037

##### **CAUTION:**

- **Never spill or splash brake fluid on painted surfaces. Brake fluid may seriously damage paint. Wipe it out immediately and wash with water if it gets on a painted surface.**
  - **Turn the ignition switch OFF and disconnect the ABS actuator and electric unit (control unit) connector or the battery negative terminal before performing work.**
  - **Wrap the flare nut wrench with waste cloth to protect the caliper from damage.**
  - **If the brake fluid adheres to the caliper or disc rotor, quickly wipe it out.**
  - **Never allow foreign matter (e.g. dust) and oils other than brake fluid to enter the reservoir tank.**
  - **Since brake fluid is susceptible to deterioration from moisture, discard brake fluid remaining in the container.**
1. Check that there is no foreign material in the reservoir tank, and refill the brake fluid with new one.  
**CAUTION:**  
**Never reuse drained brake fluid.**
  2. Loosen the bleeder valve, slowly depress the brake pedal to the full stroke, and then release the pedal. Repeat this operation at intervals of 2 or 3 seconds until all of the brake fluid is discharged. Then close the bleeder valve with the brake pedal depressed. Repeat the same work on each wheel.

## CHASSIS MAINTENANCE

[Nismo 370Z]

< PERIODIC MAINTENANCE >

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3. Perform the air bleeding. Refer to [BR-13. "Bleeding Brake System"](#).

# SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

[Nismo 370Z]

## SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

SPARK PLUG

SPARK PLUG : Spark Plug

INFOID:000000010840038

SPARK PLUG

Unit: mm (in)

Make	DENSO	
Standard type	FXE24HR11	
Gap (Nominal)	Standard	1.1 (0.043)
	Limit	1.3 (0.051)

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