

**SECTION MA**  
**MAINTENANCE**

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# PREPARATION

< PREPARATION >

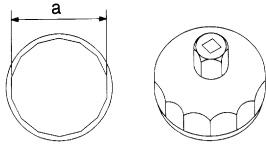
## PREPARATION

### PREPARATION

#### Special Service Tool

INFOID:000000001316143

Tool number (RENAULT Tool number) Tool name	Description
KV10115801 ( — ) Oil filter wrench	Removing and installing oil filter (QR25DE and MR20DE engine models) <b>a: 64.3 mm (2.531 in)</b>

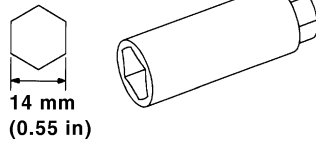


S-NT375

#### Commercial Service Tool

INFOID:000000001316144

Tool name	Description
Spark plug wrench	Removing and installing spark plug (QR25DE and MR20DE engine models)



PBIC3874E

#### Pre-Delivery Inspection Item

INFOID:000000001316145

Shown below are Pre-delivery Inspection Items required for the new vehicle. It is recommended that necessary items other than those listed here be added, paying due regard to the conditions in each country.

# PREPARATION

< PREPARATION >

Perform applicable items on each model. Consult text of this section for specifications.



## NEW CAR PRE-DELIVERY INSPECTION

Customer name:	Model:	
Address:	VIN:	
	Engine code & no.:	
Dealer name:	Registration number:	Delivery date:
Code:	Key no.:	
	Radio code:	

No. <input checked="" type="checkbox"/> Operation	No. <input checked="" type="checkbox"/> Operation
1 <input type="checkbox"/> Install vehicle protection kit	
Where applicable: 2 <input type="checkbox"/> Fit all accessories ordered (e.g. towbar, audio, navigation, air conditioner, styling kit)	
<b>UNDER HOOD</b>	<b>ROAD TEST</b>
3 <input type="checkbox"/> Check coolant level and cooling system for leaks	38 <input type="checkbox"/> Check clutch operation
4 <input type="checkbox"/> Charge battery and check terminals for condition	39 <input type="checkbox"/> Check foot brake operation
5 <input type="checkbox"/> Check drive belts tension	40 <input type="checkbox"/> Check parking brake operation
6 <input type="checkbox"/> Check fuel filter for water or dust (diesel only) and fuel system for leaks	41 <input type="checkbox"/> Check steering operation, self-centering and steering wheel alignment
7 <input type="checkbox"/> Check engine oil level and for oil leaks	42 <input type="checkbox"/> Check engine performance
8 <input type="checkbox"/> Check brake and clutch fluid levels and fluid lines for leaks	43 <input type="checkbox"/> Check for squeaks, rattles and noise from interior, suspension and brakes
9 <input type="checkbox"/> Check and top up washer reservoirs	44 <input type="checkbox"/> Check heating, ventilation and air conditioning operation
Where applicable:	45 <input type="checkbox"/> Check Audio and Navigation system operation
10 <input type="checkbox"/> Check power steering fluid level and fluid lines for leaks	46 <input type="checkbox"/> Check odometer and trip meter operation and cancelling
11 <input type="checkbox"/> Check air conditioning system for gas leaks	47 <input type="checkbox"/> Check instruments for operation
<b>INSIDE AND OUTSIDE</b>	Where applicable:
12 <input type="checkbox"/> Install transit fuse if removed for vehicle storage and perform initialization of disabled electrical systems	48 <input type="checkbox"/> Check automatic transmission/ transaxle/ CVT shift pattern and kickdown operation
13 <input type="checkbox"/> Check instruments, gauges, lamps, horn and accessories for operation	49 <input type="checkbox"/> Check cruise control and navigation system operation
14 <input type="checkbox"/> Check wipers and washers for operation and adjustment	<b>WITH ENGINE AT OPERATING TEMPERATURE</b>
15 <input type="checkbox"/> Check interior and door mirrors and sun visors for operation	50 <input type="checkbox"/> Check idle speed
16 <input type="checkbox"/> Set radio code and set clock	Where applicable:
17 <input type="checkbox"/> Check parking brake adjustment	51 <input type="checkbox"/> Check automatic transmission/ transaxle/ CVT oil level
18 <input type="checkbox"/> Check clutch pedal adjustment	<b>FINAL INSPECTION - TECHNICIAN</b>
19 <input type="checkbox"/> Check steering lock operation	52 <input type="checkbox"/> Remove vehicle protection kit
20 <input type="checkbox"/> Check seat adjusters and seat belts for operation	53 <input type="checkbox"/> Fit interior mats and wheel covers
21 <input type="checkbox"/> Check electric window operation and alignment, including 1 touch up and down (if applicable). Perform initialization if required	54 <input type="checkbox"/> Check for interior and exterior metal and paint damage
22 <input type="checkbox"/> Check mouldings, trim and fittings for fit and alignment	55 <input type="checkbox"/> Wash, clean interior and exterior
23 <input type="checkbox"/> Check weatherstrips for fit and adhesion	The above checks have been completed, any faults found have been corrected as necessary and the vehicle passed fit for delivery
24 <input type="checkbox"/> Check hood, trunk lid, door panels and fuel lid for fit and alignment	Date: _____ Job no.: _____
25 <input type="checkbox"/> Check latches, keys, remote key, door locks and remote trunk lid and fuel lid release for operation. Ensure child locks are off	Technician's signature: _____
26 <input type="checkbox"/> Check wheel nut torques	<b>FINAL INSPECTION - SALES EXECUTIVE</b>
27 <input type="checkbox"/> Check tire pressure (incl. spare tire)	56 <input type="checkbox"/> Confirm all accessories ordered have been fitted
28 <input type="checkbox"/> Check tool kit and jack for operation	57 <input type="checkbox"/> Check content of vehicle owner's manuals pack, operation manuals for accessories and Quick Reference Guide (if applicable)
29 <input type="checkbox"/> Remove towing eye from bumper (if applicable)	58 <input type="checkbox"/> Complete warranty booklet record
Where applicable:	
30 <input type="checkbox"/> Check automatic transmission starter inhibitor	
31 <input type="checkbox"/> Check sunroof for operation and alignment	
32 <input type="checkbox"/> Set up Trip Computer service reminder	
<b>UNDER VEHICLE</b>	I confirm that I am satisfied with the condition of the vehicle and it is ready for delivery to the customer
33 <input type="checkbox"/> Check manual transmission/ transaxle, differential and transfer box for oil level and oil leaks	Date: _____
34 <input type="checkbox"/> Tighten bolts and nuts steering linkage and gear box, axle/suspension parts, propeller shaft and exhaust system	Sales executive signature: _____
35 <input type="checkbox"/> Check brake and clutch lines, and oil/fluid reservoirs for leaks	
Where applicable:	
36 <input type="checkbox"/> Remove front suspension spacer blocks	
37 <input type="checkbox"/> Check body mountings torque	

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MA

# GENERAL MAINTENANCE

< ON-VEHICLE MAINTENANCE >

## ON-VEHICLE MAINTENANCE

### GENERAL MAINTENANCE

#### General Maintenance

INFOID:000000001316146

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 for a nominal charge.

#### 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 periodically when at a service station, including the spare, and adjust to the specified pressure if necessary. Check carefully for damage, cuts or excessive wear.	—
<b>Windshield wiper blades</b>	Check for cracks or wear if not functioning correctly.	—
<b>Doors and engine hood</b>	Check that all doors, the engine hood, the trunk lid and back door operate properly. Also ensure 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-74</a>
<b>Tire rotation</b>	Tires should be rotated every 10,000 km (6,000 miles) for 2WD models and every 5,000 km (3,000 miles) for 4WD models.	<a href="#">MA-70</a>

#### INSIDE THE VEHICLE

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

Item		Reference page
<b>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.	—
<b>Warning lamps and chimes</b>	Make sure that all warning lamps and buzzers/chimes are operating properly.	—
<b>Steering wheel</b>	Check that it has the specified play. Check for changes in the steering conditions, such as excessive free play, hard steering or strange noises. <b>Free play: Less than 35 mm (1.38 in)</b>	—
<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-74</a>

#### 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-25</a> (MR)
		<a href="#">MA-34</a> (QR)
		<a href="#">MA-44</a> (M9R)
<b>Engine oil level</b>	Check the level after parking the vehicle on a level spot and turning off the engine.	<a href="#">LU-6</a> (MR)
		<a href="#">LU-16</a> (QR)
		<a href="#">LU-28</a> (M9R)
<b>Brake and clutch fluid levels</b>	Make sure that the brake and clutch fluid levels are between the "MAX" and "MIN" lines on the reservoir.	<a href="#">MA-71</a> , <a href="#">MA-68</a>
<b>Battery</b>	Check the fluid level in each cell. It should be between the "MAX" and "MIN" lines.	—

# PERIODIC MAINTENANCE

< ON-VEHICLE MAINTENANCE >

## PERIODIC MAINTENANCE

### Periodic Maintenance

INFOID:000000001316147

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 (MR20DE PETROL ENGINE) (Annual Mileage <30,000 Km/year)

Abbreviations: I = Inspect and correct or replace as necessary, R = Replace, [ ] = At the specified mileage only.

MAINTENANCE OPERATION	km x 1,000 (Miles x 1,000) Months	MAINTENANCE INTERVAL								Ref- er- ence page
		15 (9)	30 (18)	45 (27)	60 (36)	75 (45)	90 (54)	105 (63)	120 (72)	
Perform at a kilometer (mile) interval or month interval, whichever comes first.		12	24	36	48	60	72	84	96	
<b>Engine compartment and under vehicle</b>										
Intake and exhaust valve clearance	See NOTE (1)									<a href="#">EM-20</a>
Drive belt	See NOTE (2)		I		I		I		I	<a href="#">MA-25</a>
Engine oil (Use recommended oil.)★		Replace every 30,000 km (18,000 miles)/12 months								<a href="#">MA-30</a>
Engine oil filter (Use genuine NISSAN engine oil filter or equivalent)★		Replace every 30,000 km (18,000 miles)/12 months								<a href="#">MA-31</a>
Engine coolant (Use genuine NISSAN Engine Coolant or equivalent in its quality.)	See NOTE (3)		I		I		R		I	<a href="#">MA-26</a>
Cooling system			I		I		I		I	<a href="#">MA-25,</a> <a href="#">MA-29,</a> <a href="#">MA-29</a>
Fuel and EVAP vapor lines			I		I		I		I	<a href="#">MA-30,</a> <a href="#">MA-33</a>
Air cleaner filter★					R				R	<a href="#">MA-30</a>
Fuel filter (In-tank type)	See NOTE (4)									—
Spark plugs (Platinum-tipped type)	See NOTE (5)	[R]* <sup>1</sup>	[R]* <sup>1</sup>	[R]* <sup>1</sup>	[R]* <sup>1</sup>	[R]* <sup>1</sup>	[R]	[R]* <sup>1</sup>	[R]* <sup>1</sup>	<a href="#">MA-32</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 belt if found damaged or if the auto belt tensioner reading reaches the maximum limit.
- (3) First replace at 90,000 Km (54,000 miles)/60 months, then every 60,000 km (36,000 miles)/48 months. Perform "I" (Checking the mixture ratio and correcting the mixture ratio if necessary) at the middle of replacement interval.

# PERIODIC MAINTENANCE

## < ON-VEHICLE MAINTENANCE >

- (4) Fuel filter is maintenance-free. For service procedures, refer to FL section.
- (5) Intervals marked with “\*1” are for Russia and Ukraine only.

## CHASSIS AND BODY MAINTENANCE (MR20DE PETROL ENGINE) (Annual Mileage <30,000 Km/year)

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

MAINTENANCE OPERATION		MAINTENANCE INTERVAL								Reference page
		km x 1,000 (Miles x 1,000) Months	15 (9) 12	30 (18) 24	45 (27) 36	60 (36) 48	75 (45) 60	90 (54) 72	105 (63) 84	
<b>Underhood and under vehicle</b>										
Headlamp aiming			I		I		I		I	<a href="#">MA-53</a> , <a href="#">MA-55</a> , <a href="#">MA-58</a> , <a href="#">MA-60</a>
Brake & clutch, systems and fluids (For level & leaks)			I		I		I		I	<a href="#">MA-71</a> , <a href="#">MA-71</a>
Brake fluid★			R		R		R		R	<a href="#">MA-71</a>
Brake booster vacuum hoses, connections & check valve			I		I		I		I	<a href="#">BR-14</a> , <a href="#">BR-64</a>
CVT fluid (For level & leaks)	See NOTE (1)		I		I		I		I	<a href="#">MA-63</a> , <a href="#">MA-64</a>
Manual transaxle gear oil (For level & leaks)			I		I		I		I	<a href="#">MA-65</a> (2WD) <a href="#">MA-66</a> (4WD)
Transfer oil (For level & leaks)			I		I		I		I	<a href="#">MA-68</a>
Differential gear oil (For level & leaks)★			I		I		I		I	<a href="#">MA-69</a>
Steering gear & linkage, axle & suspension parts, propeller shaft, drive shafts (2WD models), & exhaust system★			I		I		I		I	<a href="#">MA-72</a> , <a href="#">MA-73</a> , <a href="#">MA-69</a> , <a href="#">MA-73</a> , <a href="#">MA-63</a>
Drive shafts (For 4WD models)★		Inspect every 30,000 km (18,000 miles)/12 months								<a href="#">MA-73</a>
Wheel alignment (If necessary, rotate & balance wheels)			I		I		I		I	<a href="#">FSU-7</a> , <a href="#">RSU-5</a> , <a href="#">MA-70</a>
Brake pads, rotors & other brake components★			I		I		I		I	<a href="#">MA-71</a> , <a href="#">BR-15</a> , <a href="#">BR-16</a> , <a href="#">BR-65</a> , <a href="#">BR-66</a>
Foot brake, parking brake & clutch (For free play, stroke & operation)			I		I		I		I	<a href="#">BR-8</a> , <a href="#">BR-58</a> , <a href="#">PB-2</a> , <a href="#">CL-5</a>
Air conditioner filter★			R		R		R		R	<a href="#">VTL-18</a> , <a href="#">VTL-64</a>
Body corrosion	See NOTE (3)									<a href="#">MA-74</a>

### NOTE:

- (1) If towing a trailer, using a camper or a car-top carrier, or driving on rough or muddy roads, inspect CVT fluid deterioration with Consult-III every 90,000 km (54,000 miles), then change CVT fluid NS-2 if necessary. And if Consult-III is not available, change (do not just inspect) CVT fluid NS-2 every 90,000 km (54,000 miles). Using transmission fluid other than Genuine NISSAN CVT fluid NS-2 will damage the CVT, which is not covered by the warranty.



# PERIODIC MAINTENANCE

## < ON-VEHICLE MAINTENANCE >

- (2) Inspect once per year.
- ★ Maintenance items with “★” should be performed more frequently according to “Maintenance Under Severe Driving Conditions”.

## ENGINE AND EMISSION CONTROL MAINTENANCE (QR25DE PETROL ENGINE) (Annual Mileage <30,000 Km/year)

Abbreviations: I = Inspect and correct or replace as necessary, R = Replace, [ ] = At the specified mileage only.

MAINTENANCE OPERATION	km x 1,000 (Miles x 1,000) Months	MAINTENANCE INTERVAL								Ref- er- ence page
		15 (9) 12	30 (18) 24	45 (27) 36	60 (36) 48	75 (45) 60	90 (54) 72	105 (63) 84	120 (72) 96	
<b>Engine compartment and under vehicle</b>										
Intake and exhaust valve clearance	See NOTE (1)									EM- 143
Drive belt	See NOTE (2)		I		I		I		I	MA- 34
Engine oil (Use recommended oil.)★		Replace every 30,000 km (18,000 miles)/12 months								MA- 40
Engine oil filter (Use genuine NISSAN engine oil filter or equivalent)★		Replace every 30,000 km (18,000 miles)/12 months								MA- 41
Engine coolant (Use genuine NISSAN Engine Coolant or equivalent in its quality.)	See NOTE (3)		I		I		R		I	MA- 35
Cooling system			I		I		I		I	MA- 34, MA- 38, MA- 39
Fuel and EVAP vapor lines			I		I		I		I	MA- 40, MA- 43
Air cleaner filter★					R				R	MA- 40
Fuel filter (In-tank type)	See NOTE (4)									—
Spark plugs (Iridium-tipped type)	See NOTE (5)		[R]*1		[R]*1		[R]		[R]*1	MA- 42
Heated oxygen sensor2★	See NOTE (6)									XX- XX- ***** " "

### 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 belt if found damaged or if the auto belt tensioner reading reaches the maximum limit.
- (3) First replace at 90,000 Km (54,000 miles)/60 months, then every 60,000 km (36,000 miles)/48 months. Perform "I" (Checking the mixture ratio and correcting the mixture ratio if necessary) at the middle of replacement interval.
- (4) Fuel filter is maintenance-free. For service procedures, refer to FL section.

# PERIODIC MAINTENANCE

## < ON-VEHICLE MAINTENANCE >

- (5) Intervals marked with “\*1” are for EURO 2 applied Russia and Ukraine only.
- (6) Perform only according to “Maintenance Under Severe Driving conditions” for EURO 2 applied models without Euro-OBD system such as for Russia and Ukraine. For models with Euro-OBD system, periodic maintenance is not required.

## CHASSIS AND BODY MAINTENANCE (QR25DE PETROL ENGINE) (Annual Mileage <30,000 Km/year)

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

MAINTENANCE OPERATION		MAINTENANCE INTERVAL								Reference page
		km x 1,000 (Miles x 1,000) Months	15 (9) 12	30 (18) 24	45 (27) 36	60 (36) 48	75 (45) 60	90 (54) 72	105 (63) 84	
<b>Underhood and under vehicle</b>										
Headlamp aiming			I		I		I		I	<a href="#">MA-53</a> , <a href="#">MA-55</a> , <a href="#">MA-58</a> , <a href="#">MA-60</a>
Brake & clutch, systems and fluids (For level & leaks)			I		I		I		I	<a href="#">MA-71</a> , <a href="#">MA-71</a>
Brake fluid★			R		R		R		R	<a href="#">MA-71</a>
Brake booster vacuum hoses, connections & check valve			I		I		I		I	<a href="#">BR-14</a> , <a href="#">BR-64</a>
CVT fluid (For level & leaks)	See NOTE (1)		I		I		I		I	<a href="#">MA-63</a> , <a href="#">MA-64</a>
Manual transaxle gear oil (For level & leaks)			I		I		I		I	<a href="#">MA-66</a>
Transfer oil (For level & leaks)			I		I		I		I	<a href="#">MA-68</a>
Differential gear oil (For level & leaks) ★			I		I		I		I	<a href="#">MA-69</a>
Steering gear & linkage, axle & suspension parts, propeller shaft, & exhaust system★			I		I		I		I	<a href="#">MA-72</a> , <a href="#">MA-73</a> , <a href="#">MA-69</a> , <a href="#">MA-63</a>
Drive shafts★		Inspect every 30,000 km (18,000 miles)/12 months								<a href="#">MA-73</a>
Wheel alignment (If necessary, rotate & balance wheels)			I		I		I		I	<a href="#">FSU-7</a> , <a href="#">RSU-5</a> , <a href="#">MA-70</a>
Brake pads, rotors & other brake components★			I		I		I		I	<a href="#">MA-71</a> , <a href="#">BR-15</a> , <a href="#">BR-16</a> , <a href="#">BR-65</a> , <a href="#">BR-66</a>
Foot brake, parking brake & clutch (For free play, stroke & operation)			I		I		I		I	<a href="#">BR-8</a> , <a href="#">BR-58</a> , <a href="#">PB-2</a> , <a href="#">CL-5</a>
Air conditioner filter★			R		R		R		R	<a href="#">VTL-18</a> , <a href="#">VTL-64</a>
Body corrosion	See NOTE (2)									<a href="#">MA-74</a>

**NOTE:**

- (1) If towing a trailer, using a camper or a car-top carrier, or driving on rough or muddy roads, inspect CVT fluid deterioration with Consult-III every 90,000 km (54,000 miles), then change CVT fluid NS-2 if necessary. And if Consult-III is not available, change (do not just inspect) CVT fluid NS-2 every 90,000 km (54,000 miles). Using transmission fluid other than Genuine NISSAN CVT fluid NS-2 will damage the CVT, which is not covered by the warranty.
- (2) Inspect once per year.

# PERIODIC MAINTENANCE

## < ON-VEHICLE MAINTENANCE >

- ★ Maintenance items with “★” should be performed more frequently according to “Maintenance Under Severe Driving Conditions”.

### ENGINE AND EMISSION CONTROL MAINTENANCE (M9R DIESEL ENGINE) (Annual Mileage <30,000 Km/year)

Abbreviations: I = Inspect and correct or replace as necessary, R = Replace, D = Check filter and drain water

MAINTENANCE OPERATION		MAINTENANCE INTERVAL						Reference page
	km x 1,000 (Miles x 1,000) Months	20 (12) 12	40 (24) 24	60 (36) 36	80 (48) 48	100 (60) 60	120 (72) 72	
<b>Engine compartment and under vehicle</b>								
Engine oil (Use recommended oil.)★		R	R	R	R	R	R	<a href="#">MA-51</a>
Engine oil filter (Use recommended oil filter)★			R		R		R	<a href="#">MA-51</a>
Drive belt	See NOTE (1)	I	I	I	I	I	I	<a href="#">MA-44</a>
Cooling system		I	I	I	I	I	I	<a href="#">MA-44</a> , <a href="#">MA-48</a> , <a href="#">MA-48</a>
Engine coolant (Use genuine NISSAN Engine Coolant or equivalent in its quality.)	See NOTE (2)		I			R		<a href="#">MA-45</a>
Air cleaner filter ★				R			R	<a href="#">MA-50</a>
Intake & exhaust valve clearance (Hydraulic lash adjuster type)	See NOTE (3)							—
Fuel lines		I	I	I	I	I	I	<a href="#">MA-49</a>
Fuel filter★		[D]	[D]	R	[D]	[D]	R	<a href="#">FL-17</a> , <a href="#">FL-16</a>

#### NOTE:

- ★ Maintenance items with “★” should be performed more frequently according to “Maintenance Under Severe Driving Conditions”.
- (1) Replace every 160,000 km (96,000 miles)/96 months. Replace drive belt if it comes into contact with fuel or damage is found during inspection.
- (2) First replace at 100,000 Km (60,000 miles)/60 months, then every 60,000Km (36,000 miles)/36 months. After first replacement, perform "I" (checking the mixture ratio and correcting the mixture ratio if necessary) at the middle of replacement interval (every 30,000km/18,000 miles)/18 months).
- (3) Intake and exhaust valve clearance is maintenance-free item.

### CHASSIS AND BODY MAINTENANCE (M9R DIESEL ENGINE) (Annual Mileage <30,000 Km/year)

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

MAINTENANCE OPERATION		MAINTENANCE INTERVAL						Reference page
	km x 1,000 (Miles x 1,000) Months	20 (12) 12	40 (24) 24	60 (36) 36	80 (48) 48	100 (60) 60	120 (72) 72	
<b>Underhood and under vehicle</b>								
Headlamp aiming		I	I	I	I	I	I	<a href="#">MA-53</a> , <a href="#">MA-55</a> , <a href="#">MA-58</a> , <a href="#">MA-60</a>
Brake & clutch, systems and fluids (For level & leaks)		I	I	I	I	I	I	<a href="#">MA-71</a> , <a href="#">MA-71</a>
Brake fluid★			R		R		R	<a href="#">MA-71</a>

# PERIODIC MAINTENANCE

## < ON-VEHICLE MAINTENANCE >

MAINTENANCE OPERATION		MAINTENANCE INTERVAL						Reference page
		20 (12) 12	40 (24) 24	60 (36) 36	80 (48) 48	100 (60) 60	120 (72) 72	
Perform on a kilometer basis, but on an annual basis when driving less than 20,000 km (12,000 miles) per year	km x 1,000 (Miles x 1,000) Months							
Brake booster vacuum hoses, connections & check valve			I		I		I	<a href="#">BR-14</a> , <a href="#">BR-64</a>
Automatic transaxle fluid	See NOTE (1)							—
Manual transaxle gear oil (For level & leaks)		I	I	I	I	I	I	<a href="#">MA-65</a> (2WD) <a href="#">MA-66</a> (4WD)
Transfer gear oil (For level & leaks)		I	I	I	I	I	I	<a href="#">MA-68</a>
Differential gear oil (For level & leaks)		I	I	I	I	I	I	<a href="#">MA-69</a>
Steering gear & linkage, axle & suspension parts, propeller shaft, drive shafts, & exhaust system★		I*1	I	I*1	I	I*1	I	<a href="#">MA-72</a> , <a href="#">MA-73</a> , <a href="#">MA-69</a> , <a href="#">MA-73</a> , <a href="#">MA-63</a>
Wheel alignment (If necessary, rotate & balance wheels)		I	I	I	I	I	I	<a href="#">FSU-7</a> , <a href="#">RSU-5</a> , <a href="#">MA-70</a>
Brake pads, rotors & other brake components★		I	I	I	I	I	I	<a href="#">MA-71</a> , <a href="#">BR-15</a> , <a href="#">BR-16</a> , <a href="#">BR-65</a> , <a href="#">BR-66</a>
Foot brake, parking brake & clutch (For free play, stroke & operation)		I	I	I	I	I	I	<a href="#">BR-8</a> , <a href="#">BR-58</a> , <a href="#">PB-2</a> , <a href="#">CL-5</a>
Air conditioner filter★		R	R	R	R	R	R	<a href="#">VTL-18</a> , <a href="#">VTL-64</a>
Body corrosion	See NOTE (2)							<a href="#">MA-74</a>

**NOTE:**

- (1) Automatic transaxle fluid is maintenance-free.
- (2) Inspect once per year.
- ★ Maintenance items with “★” should be performed more frequently according to “Maintenance Under Severe Driving Conditions”.
- \*1: For 4WD models only

### MAINTENANCE UNDER SEVERE DRIVING CONDITIONS

#### (Annual Mileage <30,000 Km/year)

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 in dusty conditions
- B — Driving repeatedly short distances or door to door driving
- C — Towing a trailer or caravan
- D — Extensive idling or urban driving
- 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 areas or in mountainous areas
- G — Driving in areas using salt or other corrosive materials
- H — Driving on rough and/or muddy roads or in the desert

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- I — Driving with frequent use of braking or in mountainous areas
- J — Frequent off road use or driving in water
- K — Sustained high speed driving
- L — For models without Euro-OBD system (For QR25DE engine models)

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

Driving condition												Maintenance item			Maintenance operation	Maintenance interval	Reference page	
A	.	.	.	.	.	.	.	.	.	.	.	Air cleaner filter	Petrol models	MR	Re-place	Every 30,000 km (18,000 miles) or 24 months	<a href="#">MA-30</a>	
														QR			<a href="#">MA-40</a>	
													Diesel models	M9R		Every 30,000 km (18,000 miles) or 18 months	<a href="#">MA-50</a>	
A	B	C	D	.	.	.	.	.	.	.	.	Engine oil & engine oil filter	Petrol models	MR	Re-place	Every 15,000 km (9,000 miles) or 6 months	<a href="#">MA-30</a> , <a href="#">MA-31</a>	
														QR			<a href="#">MA-40</a> , <a href="#">MA-41</a>	
A	B	C	D	.	.	.	.	.	.	.	.	Engine oil	Diesel models	M9R	Re-place	Every 10,000 km (6,000 miles) or 6 months	<a href="#">MA-51</a>	
												Engine oil filter				Every 20,000 km (12,000 miles) or 12 months	<a href="#">MA-51</a>	
.	.	C	.	.	.	.	.	.	.	.	.	Fuel filter	Diesel models	M9R	Check & drain water	Every 10,000 km (6,000 miles) or 6 months	<a href="#">FL-17</a>	
															Re-place	Every 30,000 km (18,000 miles) or 18 months	<a href="#">FL-16</a>	
.	.	.	.	.	.	.	.	.	.	.	.	L	Heated oxygen sensor 2	Petrol models	QR	Inspect	Every 30,000 km (18,000 miles) or 24 months	<del>XX-XX</del> *****
.	.	.	.	.	.	.	.	.	.	.	.	Brake fluid	Petrol models	MR	Re-place	Every 15,000 km (9,000 miles) or 12 months	<a href="#">MA-71</a>	
														QR				
													Diesel models	M9R		Every 20,000 km (12,000 miles) or 12 months		
.	.	C	.	.	.	.	.	.	.	.	.	Differential gear oil	Petrol models	MR	Re-place	Every 30,000 km (18,000 miles) or 24 months	<a href="#">MA-70</a>	
														QR				
													Diesel models	M9R		Every 40,000 km (24,000 miles) or 24 months		

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

# PERIODIC MAINTENANCE

## < ON-VEHICLE MAINTENANCE >

Driving condition													Maintenance item			Maintenance operation	Maintenance interval	Reference page
.	.	.	.	.	.	.	.	.	G	H	.	.	Steering gear & linkage, axle & suspension parts, propeller shaft, drive shafts (2WD models), & exhaust system	Petrol models	MR QR	Inspect	Every 15,000 km (9,000 miles) or 12 months	<a href="#">MA-72</a> , <a href="#">MA-73</a> , <a href="#">MA-69</a> , <a href="#">MA-73</a> , <a href="#">MA-63</a>
.	.	.	.	.	.	.	.	.	.	.	.	Steering gear & linkage, axle & suspension parts, propeller shaft, drive shafts & exhaust system	Diesel models	M9R	Every 20,000 km (12,000 miles) or 12 months for 2WD models Every 10,000 km (6,000 miles) or 6 months for 4WD models			
.	.	.	.	.	.	.	.	G	H	.	.	.	Drive shafts (For 4WD models)	Petrol models	MR QR	Inspect	Every 15,000 km (9,000 miles) or 6 months	<a href="#">MA-73</a>
.	.	.	.	.	.	.	.	.	.	.	.	.	Brake pads, rotors & other brake components	Petrol models	MR QR			
A	.	C	.	.	.	.	G	H	I	.	.	.	Air conditioner filter	Petrol models	MR QR	Re-place	Every 15,000 km (9,000 miles) or 12 months Every 10,000 km (6,000 miles) or 6 months	<a href="#">VTL-18</a> , <a href="#">VTL-64</a>
.	.	.	.	.	.	.	.	.	.	.	.	.	Diesel models	M9R				

## ENGINE AND EMISSION CONTROL MAINTENANCE (MR20DE PETROL ENGINE) (Annual Mileage >30,000 Km/year)

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

MAINTENANCE OPERATION		MAINTENANCE INTERVAL									Reference page
Perform at number of kilometers (miles) basis only.	km x 1,000 (Miles x 1,000)	15 (9)	30 (18)	45 (27)	60 (36)	75 (45)	90 (54)	105 (63)	120 (72)		
<b>Engine compartment and under vehicle</b>											
Intake and exhaust valve clearance	See NOTE (1)									<a href="#">EM-20</a>	
Drive belt	See NOTE (2)		I		I		I		I	<a href="#">MA-25</a>	
Engine oil (Use recommended oil.)★			R		R		R		R	<a href="#">MA-30</a>	
Engine oil filter (Use genuine NISSAN engine oil filter or equivalent)★			R		R		R		R	<a href="#">MA-31</a>	
Engine coolant (Use genuine NISSAN Engine Coolant or equivalent in its quality.)	See NOTE (3)		I		I		R		I	<a href="#">MA-26</a>	
Cooling system			I		I		I		I	<a href="#">MA-25</a> , <a href="#">MA-29</a> , <a href="#">MA-29</a>	

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## < ON-VEHICLE MAINTENANCE >

MAINTENANCE OPERATION	km x 1,000 (Miles x 1,000)	MAINTENANCE INTERVAL								Reference page
		15 (9)	30 (18)	45 (27)	60 (36)	75 (45)	90 (54)	105 (63)	120 (72)	
Perform at number of kilometers (miles) basis only.										
Fuel and EVAP vapor lines					I				I	<a href="#">MA-30</a> , <a href="#">MA-33</a>
Air cleaner filter★					R				R	<a href="#">MA-30</a>
Fuel filter (In-tank type)	See NOTE (4)									—
Spark-plugs (Platinum-tipped type)	See NOTE (5)	R*1	R*1	R*1	R*1	R*1	R	R*1	R*1	<a href="#">MA-32</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 belt if found damaged or if the auto belt tensioner reading reaches the maximum limit.
- (3) First replace at 90,000 Km (54,000 miles), then every 60,000 km (36,000 miles). Perform "I" (Checking the mixture ratio and correcting the mixture ratio if necessary) at the middle of replacement interval.
- (4) Fuel filter is maintenance-free. For service procedures, refer to FL section.
- (5) Intervals marked with “\*1” are for Russia and Ukraine only.

## CHASSIS AND BODY MAINTENANCE (MR20DE PETROL ENGINE) (Annual Mileage >30,000 Km/year)

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

MAINTENANCE OPERATION	km x 1,000 (Miles x 1,000)	MAINTENANCE INTERVAL								Reference page
		15 (9)	30 (18)	45 (27)	60 (36)	75 (45)	90 (54)	105 (63)	120 (72)	
<b>Underhood and under vehicle</b>										
Headlamp aiming			I		I		I		I	<a href="#">MA-53</a> , <a href="#">MA-55</a> , <a href="#">MA-58</a> , <a href="#">MA-60</a>
Brake, systems and fluid (For level & leaks)			I		I		I		I	<a href="#">MA-71</a> , <a href="#">MA-71</a>
Brake fluid★					R				R	<a href="#">MA-71</a>
Brake booster vacuum hoses, connections & check valve					I				I	<a href="#">BR-14</a> , <a href="#">BR-64</a>
CVT fluid (For level & leaks)	See NOTE (1)		I		I		I		I	<a href="#">MA-63</a> , <a href="#">MA-64</a>
Manual transaxle gear oil (For level & leaks)			I		I		I		I	<a href="#">MA-65</a> (2WD) <a href="#">MA-66</a> (4WD)
Transfer gear oil (For level & leaks)			I		I		I		I	<a href="#">MA-68</a>
Differential gear oil (For level & leak)★			I		I		I		I	<a href="#">MA-69</a>
Steering gear & linkage, axle & suspension parts, propeller shaft, drive shafts, & exhaust system★	See NOTE (2)		I*1		I		I*1		I	<a href="#">MA-72</a> , <a href="#">MA-73</a> , <a href="#">MA-69</a> , <a href="#">MA-73</a> , <a href="#">MA-63</a>
Wheel alignment (If necessary, rotate & balance wheels)			I		I		I		I	<a href="#">FSU-7</a> , <a href="#">RSU-5</a> , <a href="#">MA-70</a>

# PERIODIC MAINTENANCE

## < ON-VEHICLE MAINTENANCE >

MAINTENANCE OPERATION		MAINTENANCE INTERVAL								Reference page
Perform at number of kilometers (miles) basis only.	km x 1,000 (Miles x 1,000)	15 (9)	30 (18)	45 (27)	60 (36)	75 (45)	90 (54)	105 (63)	120 (72)	
Brake pads, rotors & other brake components★			I		I		I		I	<a href="#">MA-71</a> , <a href="#">BR-15</a> , <a href="#">BR-16</a> , <a href="#">BR-65</a> , <a href="#">BR-66</a>
Foot brake, parking brake & clutch (For free play, stroke & operation)			I		I		I		I	<a href="#">BR-8</a> , <a href="#">BR-58</a> , <a href="#">PB-2</a> , <a href="#">CL-5</a>
Air conditioner filter★			R		R		R		R	<a href="#">VTL-18</a> , <a href="#">VTL-64</a>
Body corrosion	See NOTE (3)									<a href="#">MA-74</a>

### NOTE:

- (1) If towing a trailer, using a camper or a car-top carrier, or driving on rough or muddy roads, inspect CVT fluid deterioration with Consult-III every 90,000 km (54,000 miles), then change CVT fluid NS-2 if necessary. And if Consult-III is not available, change (do not just inspect) CVT fluid NS-2 every 90,000 km (54,000 miles). Using transmission fluid other than Genuine NISSAN CVT Fluid NS-2 will damage the CVT, which is not covered by the warranty.
- (2) Intervals marked with “\*1” are only for drive shaft inspection for 4WD models.
- (3) Inspect once per year.
- ★ Maintenance items with “★” should be performed more frequently according to “Maintenance Under Severe Driving Conditions”.

## ENGINE AND EMISSION CONTROL MAINTENANCE (QR25DE PETROL ENGINE) (Annual Mileage >30,000 Km/year)

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

MAINTENANCE OPERATION		MAINTENANCE INTERVAL								Reference page
Perform at number of kilometers (miles) basis only.	km x 1,000 (Miles x 1,000)	15 (9)	30 (18)	45 (27)	60 (36)	75 (45)	90 (54)	105 (63)	120 (72)	
<b>Engine compartment and under vehicle</b>										
Intake and exhaust valve clearance	See NOTE (1)									<a href="#">EM-143</a>
Drive belt	See NOTE (2)		I		I		I		I	<a href="#">MA-34</a>
Engine oil (Use recommended oil.)★			R		R		R		R	<a href="#">MA-40</a>
Engine oil filter (Use genuine NISSAN engine oil filter or equivalent)★			R		R		R		R	<a href="#">MA-41</a>
Engine coolant (Use genuine NISSAN Engine Coolant or equivalent in its quality.)	See NOTE (3)		I		I		R		I	<a href="#">MA-35</a>
Cooling system			I		I		I		I	<a href="#">MA-34</a> , <a href="#">MA-38</a> , <a href="#">MA-39</a>
Fuel and EVAP vapor lines					I				I	<a href="#">MA-40</a> , <a href="#">MA-43</a>
Air cleaner filter★					R				R	<a href="#">MA-40</a>
Fuel filter (In-tank type)	See NOTE (4)									—



# PERIODIC MAINTENANCE

## < ON-VEHICLE MAINTENANCE >

MAINTENANCE OPERATION		MAINTENANCE INTERVAL								Reference page
	km x 1,000 (Miles x 1,000)	15 (9)	30 (18)	45 (27)	60 (36)	75 (45)	90 (54)	105 (63)	120 (72)	
Perform at number of kilometers (miles) basis only.										
Spark-plugs (Iridium-tipped type)	See NOTE (5)		R*1		R*1		R		R*1	<a href="#">MA-42</a>
Heated oxygen sensor 2★	See NOTE (6)									<del>XX-XX</del> *****

**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 belt if found damaged or if the auto belt tensioner reading reaches the maximum limit.
- (3) First replace at 90,000 Km (54,000 miles), then every 60,000 km (36,000 miles). Perform "I" (Checking the mixture ratio and correcting the mixture ratio if necessary) at the middle of replacement interval.
- (4) Fuel filter is maintenance-free. For service procedures, refer to FL section.
- (5) Intervals marked with “\*1” are for EURO 2 applied Russia and Ukraine only.
- (6) Perform only according to “Maintenance Under Severe Driving conditions” for EURO 2 applied models without Euro-OBd system such as for Russia and Ukraine. For models with Euro-OBd system, periodic maintenance is not required.

## CHASSIS AND BODY MAINTENANCE (QR25DE PETROL ENGINE) (Annual Mileage >30,000 Km/year)

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

MAINTENANCE OPERATION		MAINTENANCE INTERVAL								Reference page
	km x 1,000 (Miles x 1,000)	15 (9)	30 (18)	45 (27)	60 (36)	75 (45)	90 (54)	105 (63)	120 (72)	
<b>Underhood and under vehicle</b>										
Headlamp aiming			I		I		I		I	<a href="#">MA-53</a> , <a href="#">MA-55</a> , <a href="#">MA-58</a> , <a href="#">MA-60</a>
Brake & clutch, systems and fluids (For level & leaks)			I		I		I		I	<a href="#">MA-71</a> , <a href="#">MA-71</a>
Brake fluid★					R				R	<a href="#">MA-71</a>
Brake booster vacuum hoses, connections & check valve					I				I	<a href="#">BR-14</a> , <a href="#">BR-64</a>
CVT fluid (For level & leaks)	See NOTE (1)									<a href="#">MA-63</a> , <a href="#">MA-64</a>
Manual transaxle gear oil (For level & leaks)			I		I		I		I	<a href="#">MA-66</a>
Transfer gear oil (For level & leaks)			I		I		I		I	<a href="#">MA-68</a>
Differential gear oil (For level & leak)★			I		I		I		I	<a href="#">MA-69</a>
Steering gear & linkage, axle & suspension parts, propeller shaft, drive shafts, & exhaust system★	See NOTE (2)		I*1		I		I*1		I	<a href="#">MA-72</a> , <a href="#">MA-73</a> , <a href="#">MA-69</a> , <a href="#">MA-73</a> , <a href="#">MA-63</a>
Wheel alignment (If necessary, rotate & balance wheels)			I		I		I		I	<a href="#">FSU-7</a> , <a href="#">RSU-5</a> , <a href="#">MA-70</a>

# PERIODIC MAINTENANCE

## < ON-VEHICLE MAINTENANCE >

MAINTENANCE OPERATION		MAINTENANCE INTERVAL								Reference page
Perform at number of kilometers (miles) basis only.	km x 1,000 (Miles x 1,000)	15 (9)	30 (18)	45 (27)	60 (36)	75 (45)	90 (54)	105 (63)	120 (72)	
Brake pads, rotors & other brake components★			I		I		I		I	<a href="#">MA-71</a> , <a href="#">BR-15</a> , <a href="#">BR-16</a> , <a href="#">BR-65</a> , <a href="#">BR-66</a>
Foot brake, parking brake & clutch (For free play, stroke & operation)			I		I		I		I	<a href="#">BR-8</a> , <a href="#">BR-58</a> , <a href="#">PB-2</a> , <a href="#">CL-5</a>
Air conditioner filter★			R		R		R		R	<a href="#">VTL-18</a> , <a href="#">VTL-64</a>
Body corrosion	See NOTE (3)									<a href="#">MA-74</a>

**NOTE:**

- (1) If towing a trailer, using a camper or a car-top carrier, or driving on rough or muddy roads, inspect CVT fluid deterioration with Consult-III every 90,000 km (54,000 miles), then change CVT fluid NS-2 if necessary. And if Consult-III is not available, change (do not just inspect) CVT fluid NS-2 every 90,000 km (54,000 miles). Using transmission fluid other than Genuine NISSAN CVT Fluid NS-2 will damage the CVT, which is not covered by the warranty.
- (2) Intervals marked with “\*1” are only for drive shaft inspection.
- (3) Inspect once per year.
- ★ Maintenance items with “★” should be performed more frequently according to “Maintenance Under Severe Driving Conditions”.

## ENGINE AND EMISSION CONTROL MAINTENANCE (M9R DIESEL ENGINE) (Annual Mileage >30,000 Km/year)

Abbreviations: I = Inspect and correct or replace as necessary, R = Replace, D = Check filter and drain water

MAINTENANCE OPERATION		MAINTENANCE INTERVAL						Reference page
Perform at number of kilometers (miles) basis only.	km x 1,000 (Miles x 1,000)	20 (12)	40 (24)	60 (36)	80 (48)	100 (60)	120 (72)	
<b>Engine compartment and under vehicle</b>								
Engine oil (Use recommended oil.)★		R	R	R	R	R	R	<a href="#">MA-51</a>
Engine oil filter (Use recommended oil filter)★			R		R		R	<a href="#">MA-51</a>
Drive belt	See NOTE (1)	I	I	I	I	I	I	<a href="#">MA-44</a>
Cooling system		I	I	I	I	I	I	<a href="#">MA-44</a> , <a href="#">MA-48</a> , <a href="#">MA-48</a>
Engine coolant (Use genuine NISSAN Engine Coolant or equivalent in its quality.)	See NOTE (2)		I			R		<a href="#">MA-45</a>
Air cleaner filter ★				R			R	<a href="#">MA-50</a>
Intake & exhaust valve clearance (Hydraulic lash adjuster type)	See NOTE (3)							—
Fuel lines		I	I	I	I	I	I	<a href="#">MA-49</a>
Fuel filter★		D	D	R	D	D	R	<a href="#">FL-17</a> , <a href="#">FL-16</a>

**NOTE:**

- ★ Maintenance items with “★” should be performed more frequently according to “Maintenance Under Severe Driving Conditions”.

# PERIODIC MAINTENANCE

## < ON-VEHICLE MAINTENANCE >

- (1) Replace every 160,000 km (96,000 miles). Replace drive belt if it comes into contact with fuel or damage is found during inspection.
- (2) First replace at 100,000 Km (60,000 miles), then every 60,000Km (36,000 miles). After first replacement, perform "I" (checking the mixture ratio and correcting the mixture ratio if necessary) at the middle of replacement interval (every 30,000 km (18,000 miles).
- (3) Intake and exhaust valve clearance is maintenance-free.

## CHASSIS AND BODY MAINTENANCE (M9R DIESEL ENGINE)

**(Annual Mileage >30,000 Km/year)**

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

MAINTENANCE OPERATION		MAINTENANCE INTERVAL						Reference page
		20 (12)	40 (24)	60 (36)	80 (48)	100 (60)	120 (72)	
Perform at number of kilometers (miles) basis only.		km x 1,000 (Miles x 1,000)						
<b>Underhood and under vehicle</b>								
Headlamp aiming			I		I		I	<a href="#">MA-53</a> , <a href="#">MA-55</a> , <a href="#">MA-58</a> , <a href="#">MA-60</a>
Brake & clutch, systems and fluids (For level & leaks)			I	I	I	I	I	<a href="#">MA-71</a> , <a href="#">MA-71</a>
Brake fluid★					R		R	<a href="#">MA-71</a>
Brake booster vacuum hoses, connections & check valve					I		I	<a href="#">BR-14</a> , <a href="#">BR-64</a>
Automatic transaxle fluid	See NOTE (1)							—
Manual transaxle gear oil (For level & leaks)			I	I	I	I	I	<a href="#">MA-65</a> (2WD) <a href="#">MA-66</a> (4WD)
Transfer gear oil (For level & leaks)			I	I	I	I	I	<a href="#">MA-68</a>
Differential gear oil (For level & leaks)★			I	I	I	I	I	<a href="#">MA-69</a>
Steering gear & linkage, axle & suspension parts, propeller shaft, drive shafts, & exhaust system★			I <sup>*1</sup>	I <sup>*1</sup>	I	I <sup>*1</sup>	I <sup>*1</sup>	<a href="#">MA-72</a> , <a href="#">MA-73</a> , <a href="#">MA-69</a> , <a href="#">MA-73</a> , <a href="#">MA-63</a>
Wheel alignment (If necessary, rotate & balance wheels)			I	I	I	I	I	<a href="#">FSU-7</a> , <a href="#">RSU-5</a> , <a href="#">MA-70</a>
Brake pads, rotors & other brake components★			I	I	I	I	I	<a href="#">MA-71</a> , <a href="#">BR-15</a> , <a href="#">BR-16</a> , <a href="#">BR-65</a> , <a href="#">BR-66</a>
Foot brake, parking brake & clutch (For free play, stroke & operation)			I	I	I	I	I	<a href="#">BR-8</a> , <a href="#">BR-58</a> , <a href="#">PB-2</a> , <a href="#">CL-5</a>
Air conditioner filter★			R	R	R	R	R	<a href="#">VTL-18</a> , <a href="#">VTL-64</a>
Body corrosion	See NOTE (2)							<a href="#">MA-74</a>

**NOTE:**

- (1) Automatic transaxle fluid is maintenance-free.
- (2) Inspect once per year.

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# PERIODIC MAINTENANCE

## < ON-VEHICLE MAINTENANCE >

- ★ Maintenance items with “★” should be performed more frequently according to “Maintenance Under Severe Driving Conditions”.
- \*1: For 4WD models only

### MAINTENANCE UNDER SEVERE DRIVING CONDITIONS (Annual Mileage >30,000 Km/year)

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 in dusty conditions
- B — Driving repeatedly short distances or door to door driving
- C — Towing a trailer or caravan
- D — Extensive idling or urban driving
- 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 areas or in mountainous areas
- G — Driving in areas using salt or other corrosive materials
- 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 off road use or driving in water
- K — Sustained high speed driving
- L — For models without Euro-OBD system (For QR25DE engine models)

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

Driving condition													Maintenance item			Maintenance operation	Maintenance interval	Reference page	
A	.	.	.	.	.	.	.	.	.	.	.	.	Air cleaner filter	Petrol models	MR	Re-place	Every 30,000 km (18,000 miles)	<a href="#">MA-30</a>	
														QR	<a href="#">MA-40</a>				
												Diesel models		M9R	<a href="#">MA-50</a>				
A	B	C	D	.	.	.	.	.	.	.	.	.	Engine oil & engine oil filter	Petrol models	MR	Re-place	Every 15,000 km (9,000 miles)	<a href="#">MA-30</a> , <a href="#">MA-31</a>	
														QR	<a href="#">MA-40</a> , <a href="#">MA-41</a>				
A	B	C	D	.	.	.	.	.	.	.	.	.	Engine oil	Diesel models	M9R	Re-place	Every 10,000 km (6,000 miles)	<a href="#">MA-51</a>	
A	B	C	D	.	.	.	.	.	.	.	.	.	Engine oil filter						Every 20,000 km (12,000 miles)
A	.	.	.	E	.	.	.	.	.	.	.	.	Fuel filter	Diesel models	M9R	Check & drain water	Every 10,000 km (6,000 miles)	<a href="#">FL-17</a>	
																	Re-place	Every 30,000 km (18,000 miles)	<a href="#">FL-16</a>
.	.	.	.	.	.	.	.	.	.	.	.	.	Heated oxygen sensor 2	Petrol models	QR	inspect	Every 60,000 km (36,000 miles)	<del>XX-XX</del> *****	
.	.	.	.	.	F	.	.	.	.	.	.	.	Brake fluid	Petrol models	MR	Re-place	Every 30,000 km (18,000 miles)	<a href="#">MA-71</a>	
														QR					
														Diesel models	M9R				
.	.	C	.	.	.	.	.	.	.	H	.	.	Differential gear oil	Petrol models	MR	Re-place	Every 60,000 km (36,000 miles)	<a href="#">MA-70</a>	
														QR					
												Diesel models		M9R					

# PERIODIC MAINTENANCE

## < ON-VEHICLE MAINTENANCE >

Driving condition													Maintenance item			Maintenance operation	Maintenance interval	Reference page
.	.	.	.	.	.	.	G	H	.	.	.	.	Steering gear & linkage, axle & suspension parts, propeller shaft, drive shafts, & exhaust system	Petrol models	MR	Inspect	Every 30,000 km (18,000 miles) for 2WD models Every 15,000 km (9,000 miles) for drive shafts of 4WD models	<a href="#">MA-72</a> , <a href="#">MA-73</a> , <a href="#">MA-69</a> , <a href="#">MA-73</a> , <a href="#">MA-63</a>
														QR				
														Diesel models	M9R			
A	.	C	.	.	.	.	G	H	I	.	.	.	Brake pads, rotors & other brake components	Petrol models	MR	Inspect	Every 15,000 km (9,000 miles)	<a href="#">MA-71</a> , <a href="#">BR-15</a> , <a href="#">BR-16</a> , <a href="#">BR-65</a> , <a href="#">BR-66</a>
														QR				
														Diesel models	M9R			
A	.	.	.	.	.	.	.	.	.	.	.	.	Air conditioner filter	Petrol models	MR	Re-place	Every 15,000 km (9,000 miles)	<a href="#">VTL-18</a> , <a href="#">VTL-64</a>
														QR				
														Diesel models	M9R			

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# RECOMMENDED FLUIDS AND LUBRICANTS

< ON-VEHICLE MAINTENANCE >

## RECOMMENDED FLUIDS AND LUBRICANTS

### Fluids and Lubricants

INFOID:000000001316148

			Capacity (Approximate)		Recommended Fluids/Lubricants	
			Liter	Imp measure		
Engine oil Drain and refill	With oil filter change	MR20DE	4.4	3-7/8 qt	<ul style="list-style-type: none"> <li>• Gasoline engine Genuine NISSAN engine oil*1 API SL or SM*1 ILSAC grade GF-3 or GF-4*1 ACEA A1/B1, A3/B3, A3/B4, A5/B5, C2 or C3*1</li> <li>• Diesel engine Genuine NISSAN engine oil *1 ACEA C3 LOW ASH HTHS, Viscosity SAE 5W-30</li> </ul>	
		QR25DE	With WVTA	5.1		4-1/2 qt
			Without WVTA	4.6		4 qt
	M9R		7.4	6-1/2 qt		
	Without oil filter change	MR20DE		4.2		3-3/4 qt
		QR25DE	With WVTA	4.8		4-1/4 qt
			Without WVTA	4.3		3-3/4 qt
		M9R		7.0		6-1/8 qt
	Dry engine (engine over- haul)	MR20DE		5.2		4-5/8 qt
QR25DE		With WVTA	5.9	5-1/4 qt		
		Without WVTA	5.4	4-3/4 qt		
M9R		8.4	7-3/8 qt			
Cooling system (with res- ervoir)	MR20DE	M/T models (2WD)	7.0	6-1/8 qt	Genuine NISSAN Engine Coolant or equivalent in its quality*2	
		M/T models (4WD)	7.1	6-1/4 qt		
		CVT models	7.4	6-1/2 qt		
	QR25DE	M/T models	6.8	6 qt		
		CVT models	7.1	6-1/4 qt		
	M9R	M/T models	8.4	7-3/8 qt		
		A/T models	8.9	7-7/8 qt		
Reservoir tank	MR20DE		0.75	5/8 qt		
	QR25DE		0.75	5/8 qt		
	M9R		0.7	5/8 qt		
Manual transaxle gear oil	RS6F94R		2.0	3-1/2 pt	Genuine NISSAN gear oil or API GL-4, Viscosity SAE 75W-80	
	RS6F52A		2.0	3-1/2 pt	Genuine NISSAN Manual Transmission Fluid (MTF) HQ Multi 75W-85 or API GL- 4, Viscosity SAE 75W-85	
Transfer gear oil	M/T, A/T		0.38	5/8 pt	Genuine NISSAN Differential oil Hypoid Super GL-5 80W-90 or API GL-5, Vis- cosity SAE 80W-90	
	CVT		0.36	5/8 pt		
Differential gear oil			0.55	1 pt	Genuine NISSAN Differential oil Hypoid Super GL-5 80W-90 or API GL-5, Vis- cosity SAE 80W-90	
CVT fluid			9.5	8-3/8 qt	Genuine NISSAN CVT Fluid NS-2*3	
Automatic transaxle fluid (ATF)			7.5	6-5/8 qt	Genuine NISSAN Matic J ATF*4	
Brake and clutch fluid			—	—	Genuine NISSAN brake fluid or equiva- lent DOT 3 (US FMVSS No. 116)*5	
Multi-purpose grease			—	—	NLGI No. 2 (Lithium soap base)	

# RECOMMENDED FLUIDS AND LUBRICANTS

## < ON-VEHICLE MAINTENANCE >

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

\*2: Use Genuine NISSAN Engine Coolant 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.**

\*3: Using transmission fluid other than Genuine NISSAN CVT fluid NS-2 will damage the CVT, which is not covered by the warranty.

\*4: Using automatic transmission fluid other than Genuine NISSAN Matic J ATF will cause deterioration in driveability and automatic transmission durability, and may damage the automatic transmission, which is not covered by the warranty.

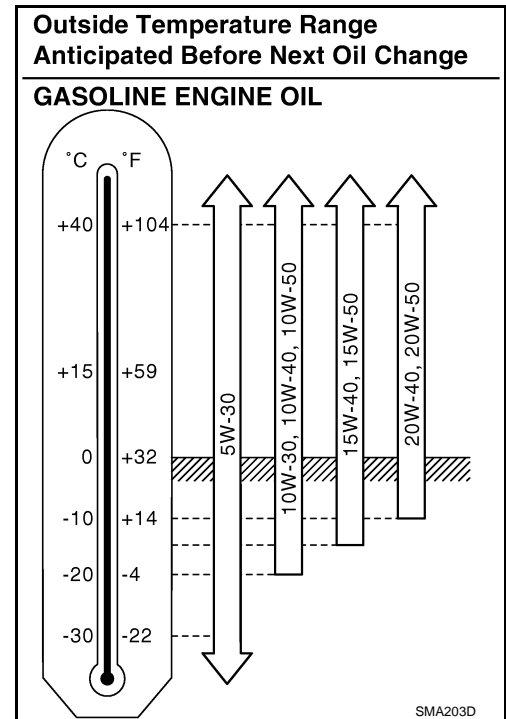
\*5: Never mix different types of fluids.

## SAE Viscosity Number

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### GASOLINE ENGINE

- 5W-30 is preferable.  
If 5W-30 is not available, select the viscosity, from the chart, that is suitable for the outside temperature range.



### DIESEL ENGINE

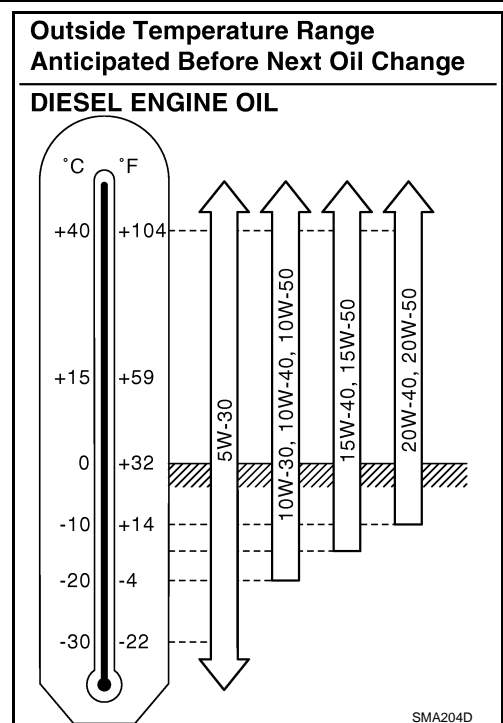
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# RECOMMENDED FLUIDS AND LUBRICANTS

## < ON-VEHICLE MAINTENANCE >

- 5W-30 is preferable.  
If 5W-30 is not available, select the viscosity, from the chart, that is suitable for the outside temperature range.



## Engine Coolant Mixture Ratio

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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. **Genuine NISSAN Engine Coolant** is premixed (mixture ratio 50%) type coolant.

The use of other types of engine coolant may damage your 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%

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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.



# ENGINE MAINTENANCE (MR20DE)

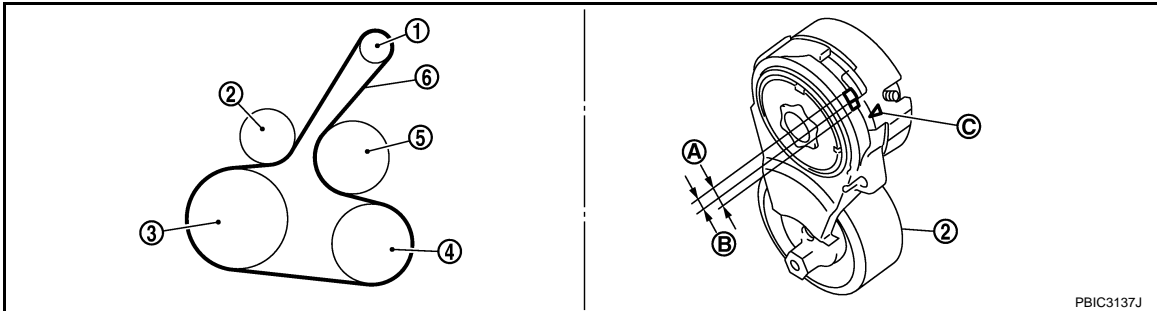
< ON-VEHICLE MAINTENANCE >

## ENGINE MAINTENANCE (MR20DE)

### DRIVE BELTS

#### DRIVE BELTS : Exploded View

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- |  |   |                      |
|--|---|----------------------|
| 1. Alternator  | 2. Drive belt auto-tensioner              | 3. Crankshaft pulley |
| 4. A/C compressor (with A/C models)<br>Idler pulley (without A/C models) | 5. Water pump                             | 6. Drive belt        |
| A. Possible use range  | B. Range when new drive belt is installed | C. Indicator         |

#### DRIVE BELTS : Checking

INFOID:000000001559824

##### **WARNING:**

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

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

##### **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 entire drive belt for wear, damage or cracks.
- If the indicator (notch on fixed side) is out of the possible use range or belt is damaged, replace drive belt.

#### DRIVE BELTS : Tension Adjustment

INFOID:000000001518911

Refer to : [EM-119, "Drive Belt"](#).

## ENGINE COOLANT

### ENGINE COOLANT : Inspection

INFOID:000000001518912

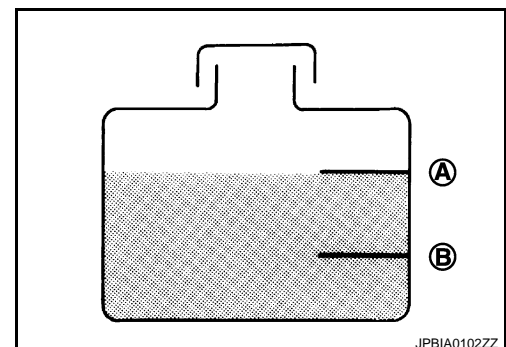
#### LEVEL

- Check that 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.



#### LEAKAGE

# ENGINE MAINTENANCE (MR20DE)

## < ON-VEHICLE MAINTENANCE >

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

Testing pressure: Refer to [CO-32, "Radiator"](#).

### WARNING:

Never remove radiator cap when engine is hot. Serious burns may occur from high-pressure engine coolant escaping from radiator.

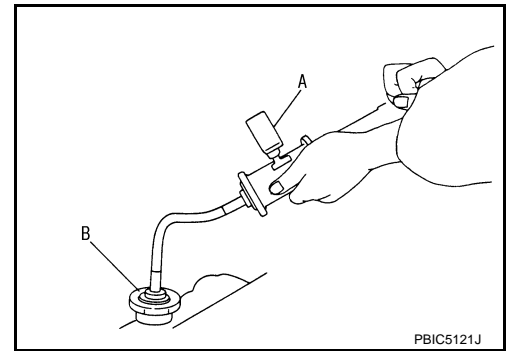
### CAUTION:

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:000000001518913

### WARNING:

- Never remove radiator cap when engine is hot. Serious burns may occur from high-pressure engine coolant escaping from radiator.
- Wrap a thick cloth around the radiator cap. Slowly turn it a quarter of a turn to release built-up pressure. Then turn it all the way.

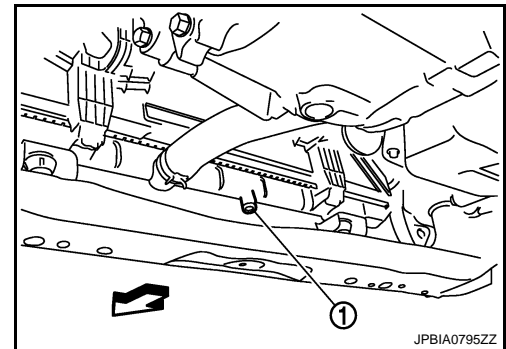
1. Remove engine under cover.
2. Open radiator drain plug (1) at the bottom of radiator, and then remove radiator cap.

⇐ : Vehicle front

### CAUTION:

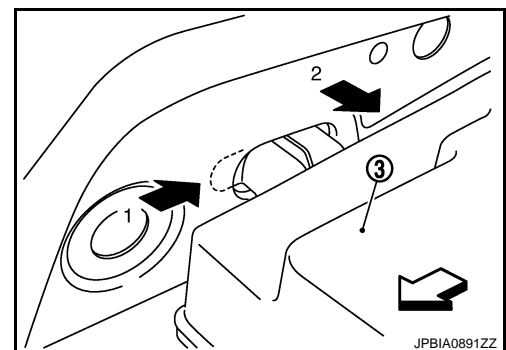
Perform this step when engine is cold.

- When draining all of engine coolant in the system, open water drain plugs on cylinder block. Refer to [CO-16, "Exploded View"](#).



3. Remove reservoir tank if necessary, and drain engine coolant and clean reservoir tank before installing.
  - Removal of engine mounting insulator (RH) is necessary. Refer to [EM-75, "M/T : Exploded View"](#) (M/T models) or [EM-81, "CVT : Exploded View"](#) (CVT models).
  - Move reservoir tank (3), and then remove it numerical order as shown in the figure.

⇐ : Vehicle front



4. Check drained engine coolant for contaminants such as rust, corrosion or discoloration. If contaminated, flush the engine cooling system. Refer to [MA-28, "ENGINE COOLANT : Flushing"](#).

## ENGINE COOLANT : Refilling

INFOID:000000001518914

1. Install reservoir tank if removed, and radiator drain plug.

### CAUTION:

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

# ENGINE MAINTENANCE (MR20DE)

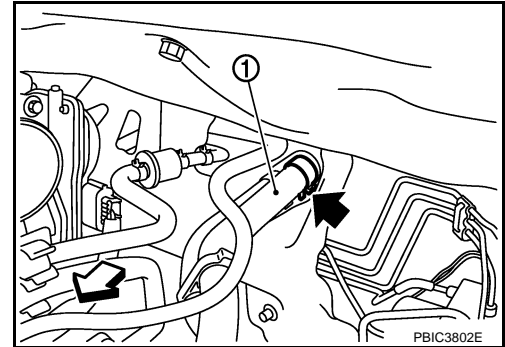
## < ON-VEHICLE MAINTENANCE >

### Radiator drain plug : Refer to [CO-16, "Exploded View"](#).

- If water drain plugs on cylinder block are removed, close and tighten them. Refer to [EM-94, "Disassembly and Assembly"](#).
2. Check that each hose clamp has been firmly tightened.
3. Remove air duct and resonator assembly, and move electric throttle control actuator to aside. Refer to [EM-25, "Exploded View"](#) and [EM-27, "Exploded View"](#).
4. Disconnect heater hose (1) at position (←) in the figure.

← : Vehicle front

- Enhance heater hose as high as possible.

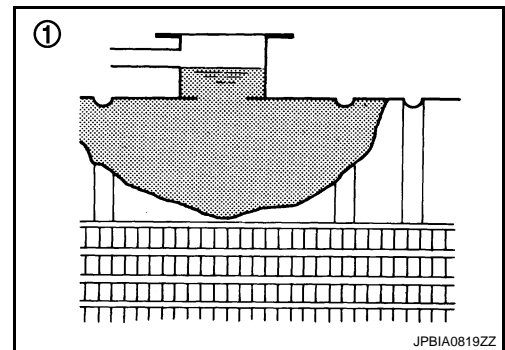


5. Fill radiator (1) to specified level.

#### **CAUTION:**

**Never adhere the engine coolant to electronic equipments (alternator etc.).**

- Pour coolant slowly of less than 2 ℓ (1-3/4 Imp qt) a minute to allow air in system to escape.
- When coolant from heater unit starts to drain, connect heater hose and continue filling the engine coolant.
- Use Genuine NISSAN Engine Coolant or equivalent in its quality mixed with water (distilled or demineralized). Refer to [MA-22, "Fluids and Lubricants"](#).



### Engine coolant capacity

(With reservoir tank at "MAX" level)

Refer to [CO-32, "Periodical Maintenance Specification"](#).

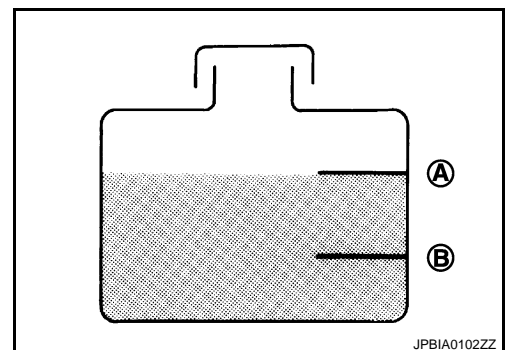
6. Refill reservoir tank to "MAX" level line with engine coolant.

A : MAX

B : MIN

**Reservoir tank engine coolant capacity**  
(At "MAX" level)

Refer to [CO-32, "Periodical Maintenance Specification"](#).



7. Install radiator cap.
8. Install electric throttle control actuator and air duct and resonator assembly. Refer to [EM-27, "Exploded View"](#) and [EM-25, "Exploded View"](#).
9. 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.**
10. 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.

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

# ENGINE MAINTENANCE (MR20DE)

## < ON-VEHICLE MAINTENANCE >

### **CAUTION:**

**Never adhere the engine coolant to electronic equipments (alternator etc.).**

11. Refill reservoir tank to "MAX" level line with engine coolant.
12. Repeat steps 5 through 10 two or more times with radiator cap installed until engine coolant level no longer drops.
13. Check cooling system for leakage with engine running.
14. 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.
15. Repeat step 14 three times.
16. If sound is heard, bleed air from cooling system by repeating step 5 through 10 until reservoir tank level no longer drops.

## ENGINE COOLANT : Flushing

INFOID:000000001518915

1. Install reservoir tank if removed and radiator drain plug.

### **CAUTION:**

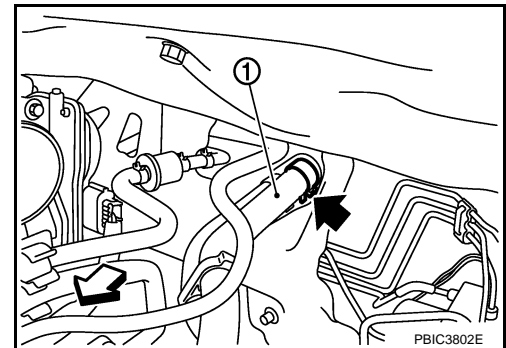
**Be sure to clean drain plug and install with new O-ring.**

**Radiator drain plug** : Refer to [CO-16, "Exploded View"](#).

- If water drain plugs on cylinder block are removed, close and tighten them. Refer to [EM-94, "Disassembly and Assembly"](#).
2. Remove air duct and resonator assembly and move electric throttle control actuator to aside. Refer to [EM-25, "Exploded View"](#) and [EM-27, "Exploded View"](#).
  3. Disconnect heater hose (1) at position (◀) in the figure.

◀ : Vehicle front

- Enhance heater hose as high as possible.



4. Fill radiator and reservoir tank with water and reinstall radiator cap.
  - When engine coolant over flows disconnected heater hose, connect heater hose, and continue filling the engine coolant.
5. Install electric throttle control actuator and air duct and resonator assembly. Refer to [EM-27, "Exploded View"](#) and [EM-25, "Exploded View"](#).
6. Run the engine and warm it up to normal operating temperature.
7. Rev the engine two or three times under no-load.
8. Stop the engine and wait until it cools down.
9. Drain water from the system. Refer to [MA-26, "ENGINE COOLANT : Draining"](#).
10. Repeat steps 1 through 9 until clear water begins to drain from radiator.

## RADIATOR CAP

# ENGINE MAINTENANCE (MR20DE)

## < ON-VEHICLE MAINTENANCE >

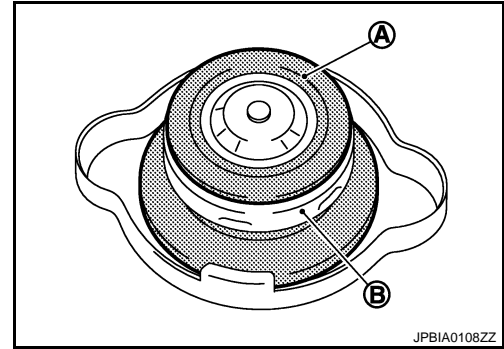
### RADIATOR CAP : Inspection

INFOID:000000001518916

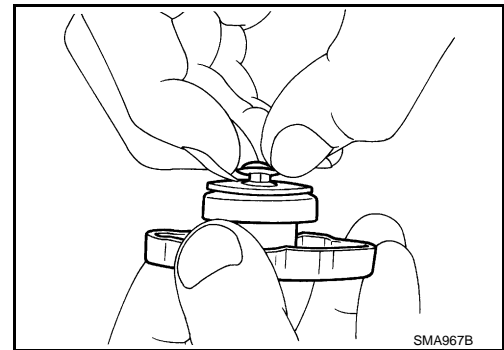
- Check valve seat of radiator cap.

A : Valve seat  
B : Metal plunger

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



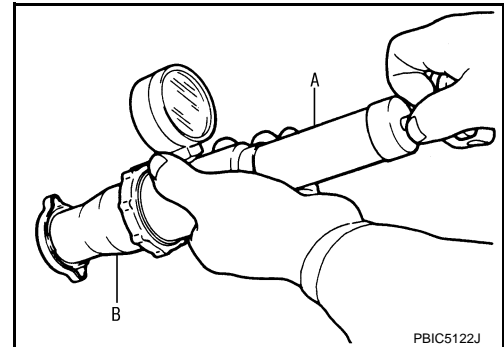
- Pull negative-pressure valve to open it, and check that it closes completely when released.
- Check that there is no dirt or damage on the valve seat of radiator cap negative-pressure valve.
- Check that there are no unusualness in the opening and closing conditions of negative-pressure valve.



- Check radiator cap relief pressure.

**Standard and Limit** : Refer to [CO-32. "Radiator"](#).

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



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

#### **CAUTION:**

**When installing radiator cap, thoroughly wipe out the radiator filler neck to remove any waxy residue or foreign material.**

### RADIATOR

#### RADIATOR : Inspection

INFOID:000000001528748

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

#### **CAUTION:**

- **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 harness 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 (4.9 bar, 5 kg/cm<sup>2</sup>, 71 psi) and keep distance more than 30 cm (11.8 in).

A  
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L  
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N  
O

# ENGINE MAINTENANCE (MR20DE)

## < ON-VEHICLE MAINTENANCE >

5. Blow air again into all the radiator core surfaces once per minute until no water sprays out.

## FUEL LINES

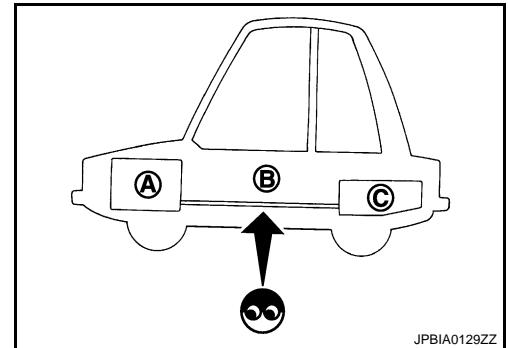
### FUEL LINES : Inspection

INFOID:000000001521441

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

If necessary, repair or replace damaged parts.

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



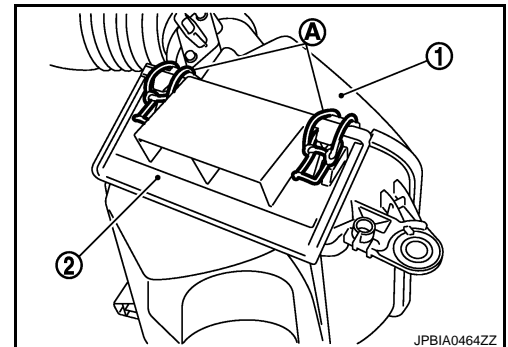
## AIR CLEANER FILTER

### AIR CLEANER FILTER : Removal and Installation

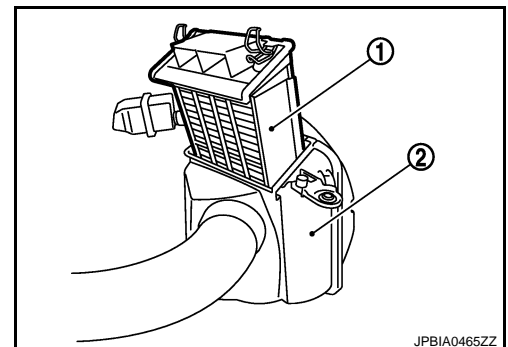
INFOID:000000001559830

#### REMOVAL

1. Unhook clips (A) and remove holder (2) from air cleaner case (1).



2. Remove air cleaner filter (1) from air cleaner case (2).



#### 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:000000001518922

#### **WARNING:**

- Be careful not to get burned, as engine oil may be hot.
- Prolonged and repeated contact with used engine oil may cause skin cancer. Try to avoid direct skin contact with used engine oil. If skin contact is made, wash thoroughly with soap or hand cleaner as soon as possible.

# ENGINE MAINTENANCE (MR20DE)

## < ON-VEHICLE MAINTENANCE >

1. Warm up the engine, and check for engine oil leakage from engine components. Refer to [LU-6. "Inspection"](#).
2. Stop the engine and wait for 10 minutes.
3. Loosen oil filler cap.
4. Remove drain plug and then drain engine oil.

## ENGINE OIL : Refilling

INFOID:000000001518923

1. Install drain plug with new washer. Refer to [EM-33. "Exploded View"](#).  
**CAUTION:**  
Be sure to clean drain plug and install with new washer.

**Tightening torque** : Refer to [EM-33. "Exploded View"](#).

2. Refill with new engine oil.  
**Engine oil specification and viscosity:** Refer to [MA-22. "Fluids and Lubricants"](#).

**Engine oil capacity** : Refer to [LU-12. "Periodical Maintenance Specification"](#).

### **CAUTION:**

- The refill capacity depends on the engine oil temperature and drain time. Use these specifications for reference only.
  - Always use oil level gauge to determine the proper amount of engine oil in the engine.
3. Warm up engine and check area around drain plug and oil filter for engine oil leakage.
  4. Stop engine and wait for 10 minutes.
  5. Check the engine oil level. Refer to [LU-6. "Inspection"](#).

## OIL FILTER

### OIL FILTER : Removal and Installation

INFOID:000000001518924

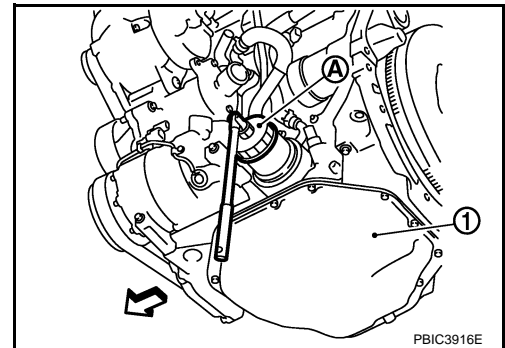
#### REMOVAL

- Using oil filter wrench [SST: KV10115801] (A), remove oil filter.

- 1 : Oil pan (lower)  
↶ : Engine front

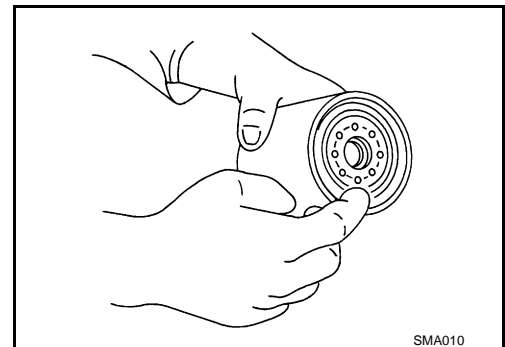
### **CAUTION:**

- 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.
- Completely wipe off any engine oil that adheres to engine and vehicle.



#### INSTALLATION

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



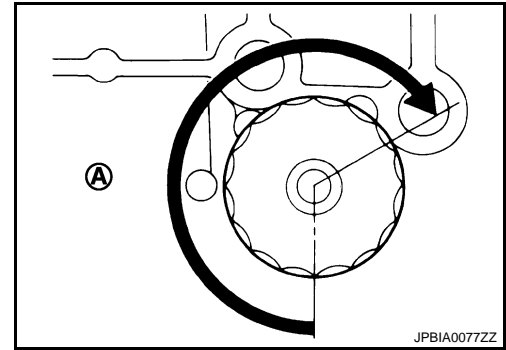
# ENGINE MAINTENANCE (MR20DE)

## < ON-VEHICLE MAINTENANCE >

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

Oil filter:

: 17.7 N·m (1.8 kg-m, 13 ft-lb)



INFOID:000000001518925

## OIL FILTER : Inspection

### INSPECTION AFTER INSTALLATION

1. Check the engine oil level. Refer to [LU-6, "Inspection"](#).
2. Start the engine, and check there is no leak 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-6, "Inspection"](#).

## SPARK PLUG

### SPARK PLUG : Removal and Installation

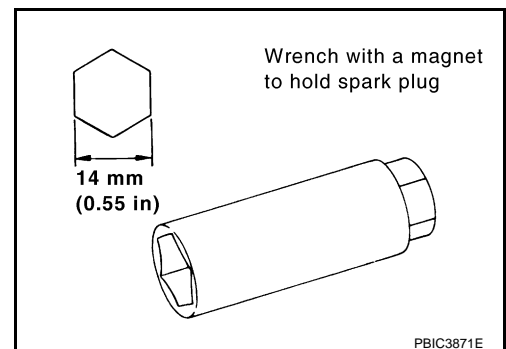
INFOID:000000001518926

#### REMOVAL

1. Remove ignition coil. Refer to [EM-41, "Exploded View"](#).
2. Remove spark plug with a spark plug wrench (commercial service tool).

#### CAUTION:

Never drop or shock spark plug.



#### INSTALLATION

Installation is the reverse order of removal.

### SPARK PLUG : Inspection

INFOID:000000001518927

#### INSPECTION AFTER REMOVAL

Use the standard type spark plug for normal condition.

Spark plug (standard) : Refer to [EM-119, "Spark Plug"](#).

#### CAUTION:



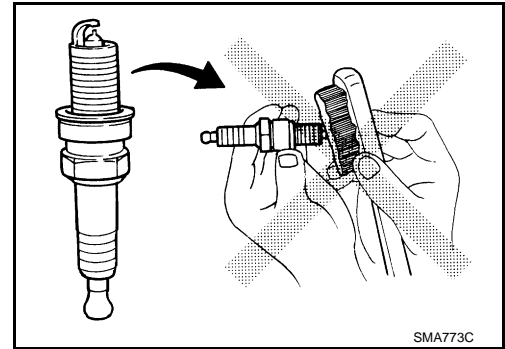
# ENGINE MAINTENANCE (MR20DE)

## < ON-VEHICLE MAINTENANCE >

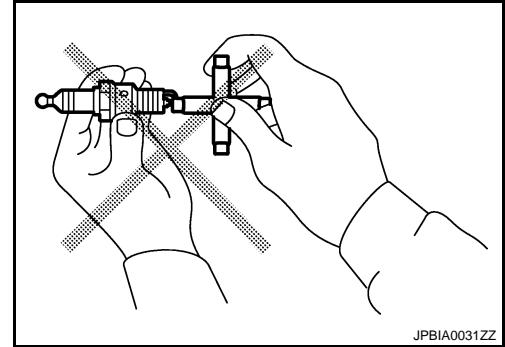
- Never drop or shock spark plug.
- Never use a wire brush for cleaning.
- If plug tip is covered with carbon, spark plug cleaner may be used.

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

Cleaning time : Less than 20 seconds



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



## EVAP VAPOR LINES

### EVAP VAPOR LINES : Inspection

Refer to XX-XX, "\*\*\*\*\*".

INFOID:000000001316185

A  
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C  
D  
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O

MA

# ENGINE MAINTENANCE (QR25DE)

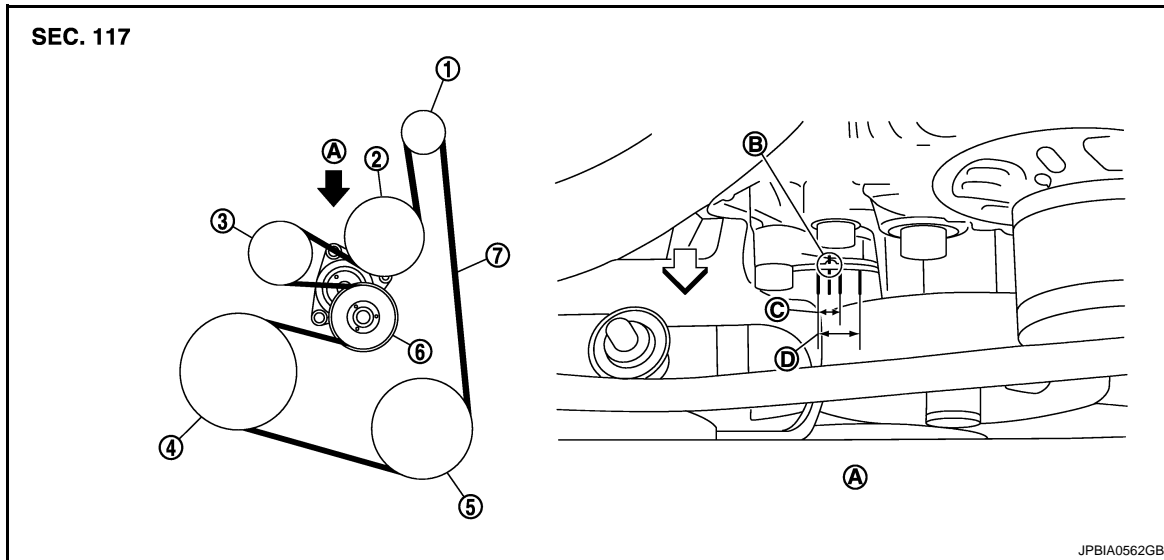
< ON-VEHICLE MAINTENANCE >

## ENGINE MAINTENANCE (QR25DE)

### DRIVE BELTS

#### DRIVE BELTS : Exploded View

INFOID:000000001528615



- |                      |                   |                              |
|----------------------|-------------------|------------------------------|
| 1. Alternator        | 2. Water pump     | 3. Idler pulley              |
| 4. Crankshaft pulley | 5. A/C compressor | 6. Drive belt auto-tensioner |
| 7. Drive belt        |                   |                              |
- A. View A                      B. Indicator (notch on the fixed side)      C. Range when new drive belt is installed
- D. Possible use range
- ↶ : Engine front

#### DRIVE BELTS : Checking

INFOID:000000001518990

#### **WARNING:**

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

- Check that the indicator (notch on fixed side) of drive belt auto-tensioner is within the possible use range (between four line notches on moving side).

#### **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 (C) in the figure.
- Visually check entire drive belt for wear, damage or cracks.
- If the indicator (notch on fixed side) is out of the possible use range or belt is damaged, replace drive belt.

#### DRIVE BELTS : Tension Adjustment

INFOID:000000001518991

Refer to : [EM-235, "Drive belt"](#).

### ENGINE COOLANT

#### ENGINE COOLANT : Inspection

INFOID:000000001518992

#### LEVEL

# ENGINE MAINTENANCE (QR25DE)

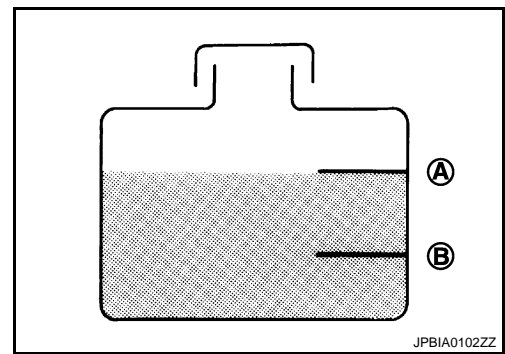
## < ON-VEHICLE MAINTENANCE >

- Check that 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.



## LEAKAGE

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

Testing pressure: Refer to [CO-61, "Radiator"](#).

### WARNING:

Never remove radiator cap when engine is hot. Serious burns may occur from high-pressure engine coolant escaping from radiator.

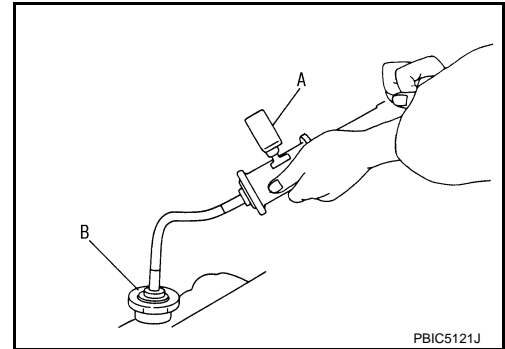
### CAUTION:

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:000000001518993

### WARNING:

- Never remove radiator cap when engine is hot. Serious burns may occur from high-pressure engine coolant escaping from radiator.
- Wrap a thick cloth around the radiator cap. Slowly turn it a quarter of a turn to release built-up pressure. Then turn it all the way.

1. Remove engine under cover.
2. Open radiator drain plug at the bottom of radiator, and then remove radiator cap.

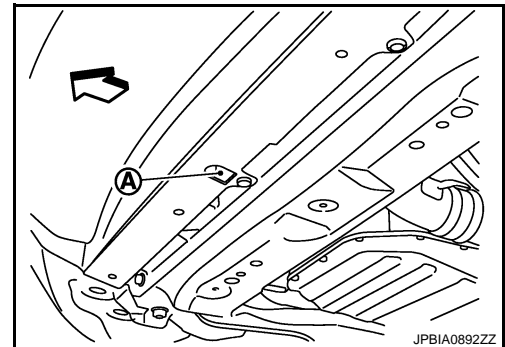
A : Radiator drain plug hole

⇐ : Vehicle front

### CAUTION:

Perform this step when engine is cold.

- When draining all of engine coolant in the system, open water drain plugs on cylinder block. Refer to [EM-210, "Exploded View"](#).



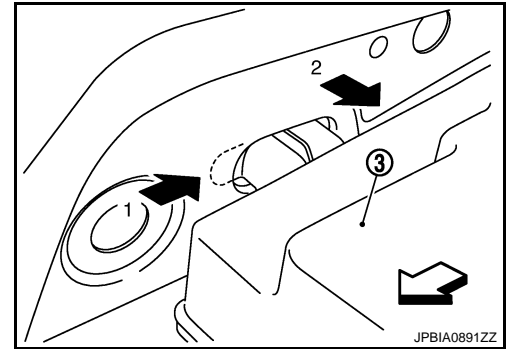
3. Remove reservoir tank if necessary, and drain engine coolant and clean reservoir tank before installing.

# ENGINE MAINTENANCE (QR25DE)

## < ON-VEHICLE MAINTENANCE >

- Move reservoir tank (3), and then remove it numerical order as shown in the figure.

↔ : Vehicle front



4. Check drained engine coolant for contaminants such as rust, corrosion or discoloration. If contaminated, flush the engine cooling system. Refer to [MA-37, "ENGINE COOLANT : Flushing"](#).

## ENGINE COOLANT : Refilling

INFOID:000000001518994

1. Install reservoir tank if removed, and radiator drain plug.

### **CAUTION:**

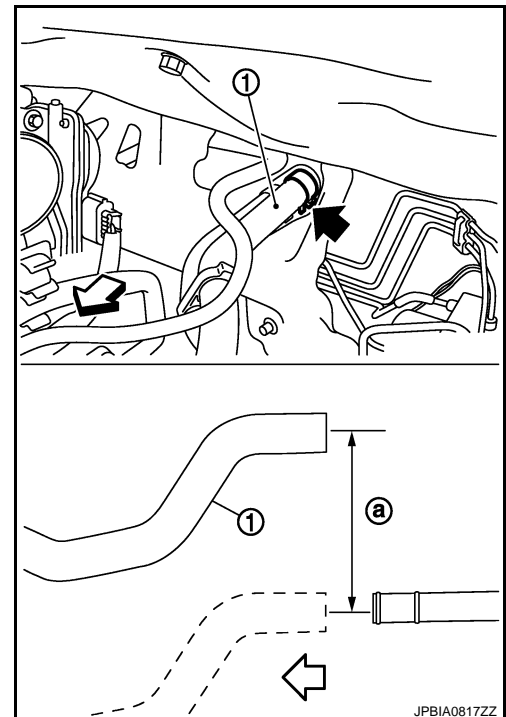
**Be sure to clean drain plug and install with new O-ring.**

**Radiator drain plug: Refer to [CO-47, "Exploded View"](#).**

- If water drain plugs on cylinder block are removed, close and tighten them. Refer to [EM-210, "Exploded View"](#).
2. Check that each hose clamp has been firmly tightened.
  3. Remove air duct assembly, and move electric throttle control actuator to aside. Refer to [EM-150, "Exploded View"](#) and [EM-152, "Exploded View"](#).
  4. Disconnect heater hose (1) at the position (↔) in the figure.

↔ : Vehicle front

- Lift up the heater hose end approximately 100 mm (3.94 in) (a) higher than the height at installation.



# ENGINE MAINTENANCE (QR25DE)

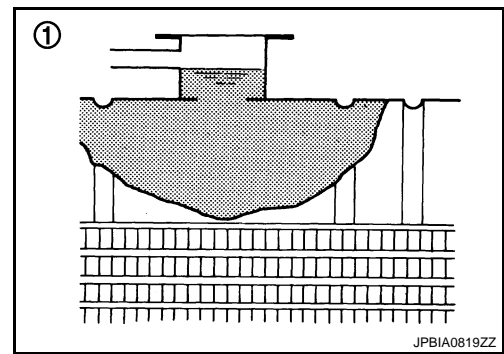
## < ON-VEHICLE MAINTENANCE >

5. Fill radiator (1) to specified level.

**CAUTION:**

**Never adhere the engine coolant to electronic equipments (alternator etc.).**

- 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.
- When engine coolant overflows disconnected heater hose, connect heater hose, and continue filling the engine coolant.
- Use Genuine NISSAN Engine Coolant or equivalent in its quality mixed with water (distilled or demineralized). Refer to [MA-22, "Fluids and Lubricants"](#).



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

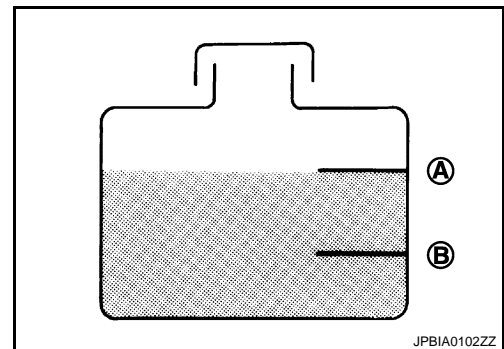
Refer to [CO-61, "Periodical Maintenance Specification"](#).

6. Refill reservoir tank to "MAX" level line with engine coolant.

- A : MAX  
B : MIN

**Reservoir tank engine coolant capacity**  
(At "MAX" level)

Refer to [CO-61, "Periodical Maintenance Specification"](#).



7. Install radiator cap.
8. Install air duct assembly and electric throttle control actuator. Refer to [EM-150, "Exploded View"](#) and [EM-152, "Exploded View"](#).
9. 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.**
10. 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.
- CAUTION:**  
**Never adhere the engine coolant to electronic equipments (alternator etc.).**
11. Refill reservoir tank to "MAX" level line with engine coolant.
12. Repeat steps 5 through 10 two or more times with radiator cap installed until engine coolant level no longer drops.
13. Check cooling system for leakage with engine running.
14. 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.
15. Repeat step 14 three times.
16. If sound is heard, bleed air from cooling system by repeating step 5 through 10 until engine coolant level no longer drops.

## ENGINE COOLANT : Flushing

INFOID:000000001518995

1. Install reservoir tank if removed, and radiator drain plug.

**CAUTION:**

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

**Radiator drain plug** : Refer to [CO-47, "Exploded View"](#).

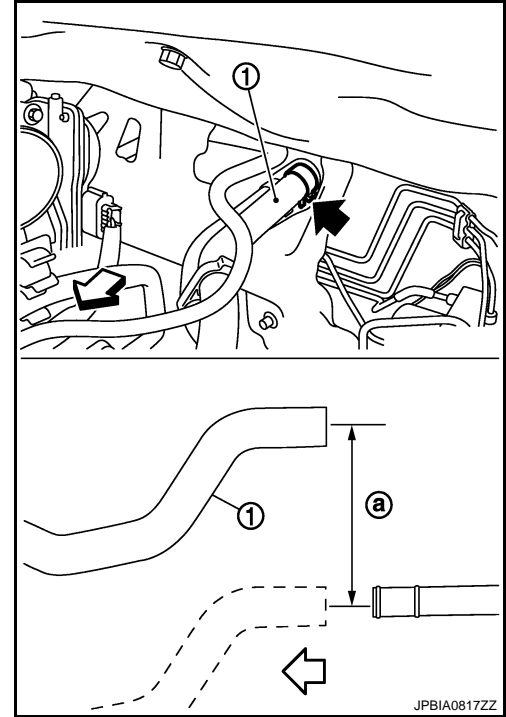
# ENGINE MAINTENANCE (QR25DE)

## < ON-VEHICLE MAINTENANCE >

- If water drain plugs on cylinder block are removed, close and tighten them. Refer to [EM-210. "Exploded View"](#).
2. Remove air duct assembly and move electric throttle control actuator to aside. Refer to [EM-150. "Exploded View"](#) and [EM-152. "Exploded View"](#).
  3. Disconnect heater hose (1) at the position (←) in the figure.

← : Vehicle front

- Lift up the heater hose end approximately 100 mm (3.94 in) (a) higher than the height at installation.



4. Fill radiator and reservoir tank with water and reinstall radiator cap.
  - When engine coolant overflows disconnected heater hose, connect heater hose, and continue filling the engine coolant.
5. Install air duct assembly and electric throttle control actuator. Refer to [EM-150. "Exploded View"](#) and [EM-152. "Exploded View"](#).
6. Run the engine and warm it up to normal operating temperature.
7. Rev the engine two or three times under no-load.
8. Stop the engine and wait until it cools down.
9. Drain water from the system. Refer to [MA-35. "ENGINE COOLANT : Draining"](#).
10. Repeat steps 1 through 9 until clear water begins to drain from radiator.

## RADIATOR CAP

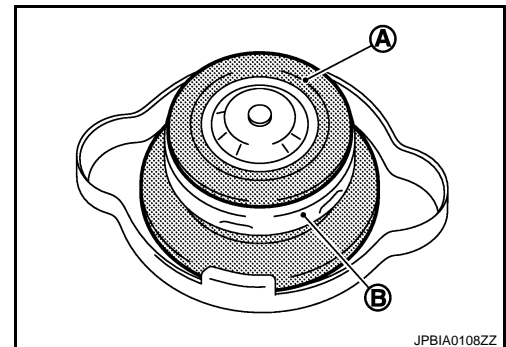
### RADIATOR CAP : Inspection

INFOID:000000001518996

- Check valve seat of radiator cap.

A : Valve seat  
B : Metal plunger

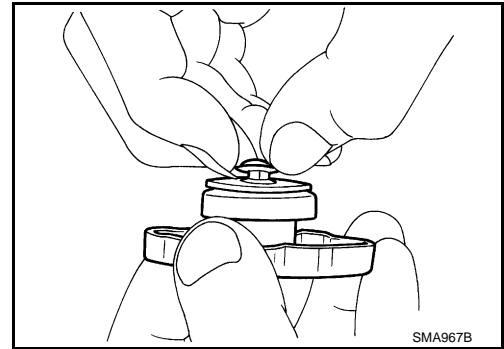
- Check that valve seat is swollen to the extent that the edge of the plunger cannot be seen when watching it vertically from the top.
- Check that valve seat has no soil and damage.



# ENGINE MAINTENANCE (QR25DE)

## < ON-VEHICLE MAINTENANCE >

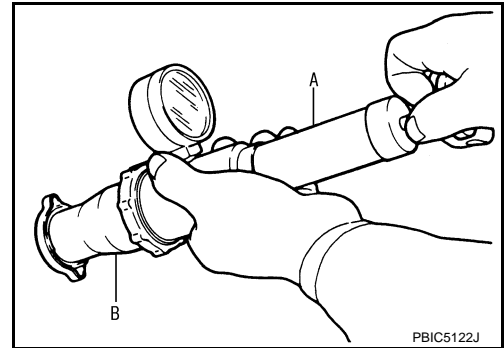
- Pull negative-pressure valve to open it, and check that it close completely when released.
- Check that there is no dirt or damage on the valve seat of radiator cap negative-pressure valve.
- Check that there are no unusualness in the opening and closing conditions of negative-pressure valve.



- Check radiator cap relief pressure.

**Standard and Limit: Refer to CO-61, "Radiator".**

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



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

### **CAUTION:**

**When installing radiator cap, thoroughly wipe out the radiator filler neck to remove any waxy residue or foreign material.**

## RADIATOR

### RADIATOR : Inspection

INFOID:000000001518997

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

### **CAUTION:**

- **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 harness 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 (4.9 bar, 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

# ENGINE MAINTENANCE (QR25DE)

## < ON-VEHICLE MAINTENANCE >

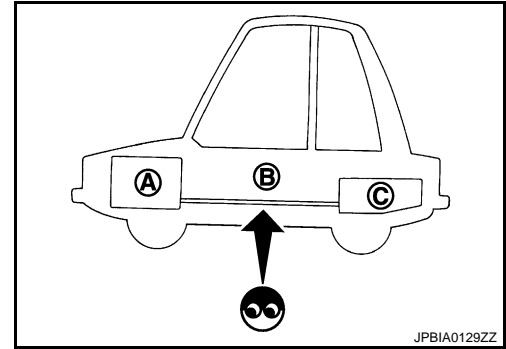
### FUEL LINES : Inspection

INFOID:000000001518998

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

If necessary, repair or replace damaged parts.

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



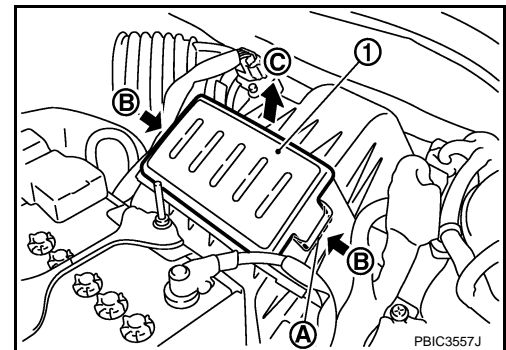
### AIR CLEANER FILTER

#### AIR CLEANER FILTER : Removal and Installation

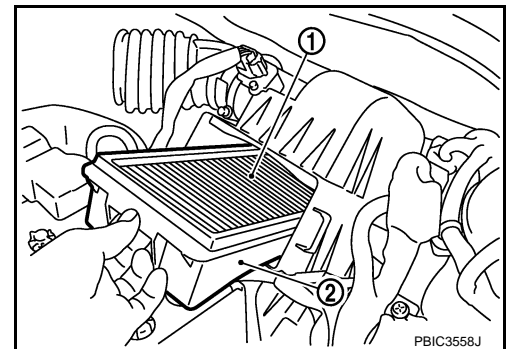
INFOID:000000001518999

##### REMOVAL

1. Push the tabs (A) of both ends of the air cleaner cover (1) into the inside (B).
2. Pull up the air cleaner cover forward (C) and remove it.



3. Remove the air cleaner filter (1) and holder (2) assembly from the air cleaner case.
4. Remove the air cleaner filter from the holder.



##### INSTALLATION

Installation is the reverse order of removal.

### ENGINE OIL

#### ENGINE OIL : Draining

INFOID:000000001519000

##### **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-16, "Inspection"](#).
2. Stop the engine and wait for 10 minutes.
3. Loosen oil filler cap.

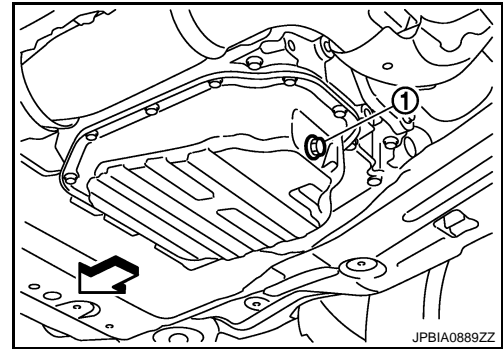


# ENGINE MAINTENANCE (QR25DE)

## < ON-VEHICLE MAINTENANCE >

4. Remove drain plug (1) and then drain engine oil.

← : Vehicle front



INFOID:000000001519002

## ENGINE OIL : Refilling

1. Install drain plug with new washer. Refer to [EM-158, "Exploded View"](#).

### CAUTION:

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

**Tightening torque** : Refer to EM-XX, "Exploded View".

2. Refill with new engine oil.

### Engine oil specification and viscosity:

Refer to [MA-22, "Fluids and Lubricants"](#).

**Engine oil capacity** : Refer to [LU-25, "Periodical Maintenance Specification"](#).

### CAUTION:

- The refill capacity depends on the engine oil temperature and drain time. Use these specifications for reference only.
- Always use oil level gauge to determine the proper amount of engine oil in 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-16, "Inspection"](#).

## OIL FILTER

### OIL FILTER : Removal and Installation

INFOID:000000001519003

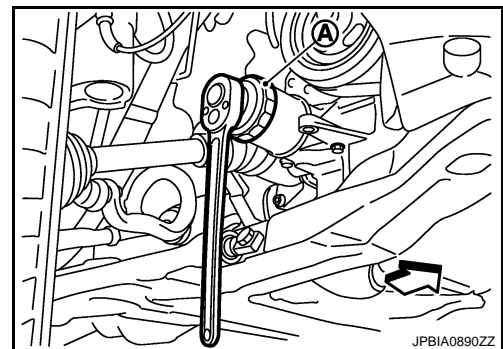
#### REMOVAL

1. Remove splash guard. Refer to [EXT-21, "Exploded View"](#).
2. Using oil filter wrench [SST: KV10115801] (A), remove oil filter.

← : Vehicle front

### 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 belts.
- Completely wipe off any engine oil that adheres to engine and vehicle.



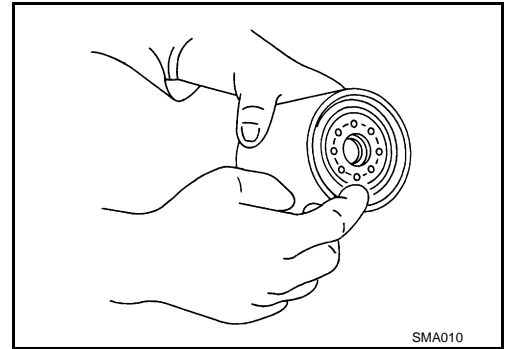
#### INSTALLATION

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

# ENGINE MAINTENANCE (QR25DE)

## < ON-VEHICLE MAINTENANCE >

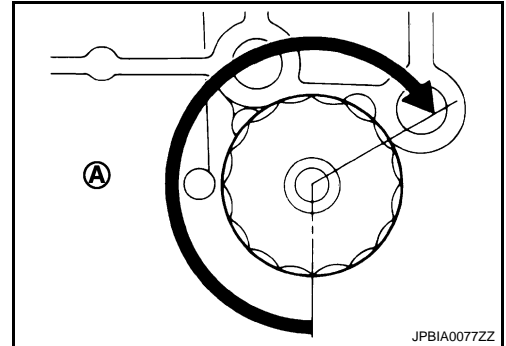
2. Apply new engine oil to the oil seal contact surface of new oil filter.



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

### Oil filter:

: 17.6 N·m (1.8 kg-m, 13 ft-lb)



## OIL FILTER : Inspection

INFOID:000000001519005

### INSPECTION AFTER INSTALLATION

1. Check the engine oil level. Refer to [LU-16](#).
2. Start the engine, and check there is no leak 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-16](#).

## SPARK PLUG

### SPARK PLUG : Removal and Installation

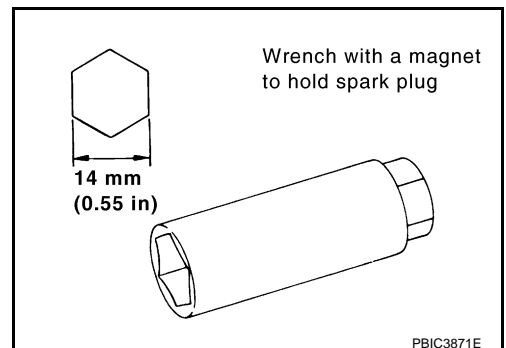
INFOID:000000001519006

#### REMOVAL

1. Remove ignition coil. Refer to [EM-164, "Removal and Installation"](#).
2. Remove spark plug with spark plug wrench (commercial service tool).

#### **CAUTION:**

**Never drop or shock spark plug.**



#### INSTALLATION

Installation is the reverse order of removal.

## SPARK PLUG : Inspection

INFOID:000000001519007

### INSPECTION AFTER REMOVAL

**Use standard type spark plug for normal condition.**

# ENGINE MAINTENANCE (QR25DE)

< ON-VEHICLE MAINTENANCE >

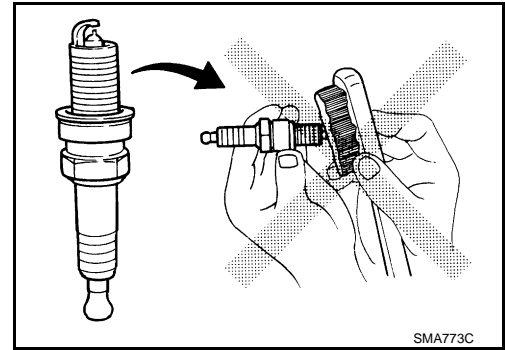
Spark plug (standard) : Refer to [EM-235, "Spark Plug"](#).

**CAUTION:**

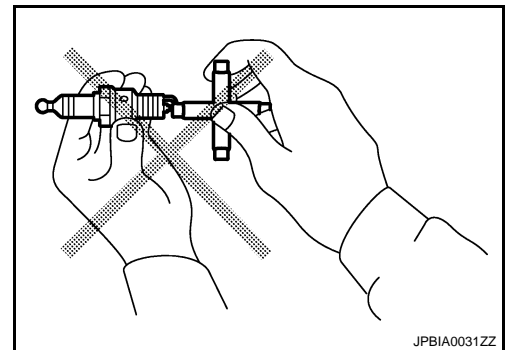
- Never drop or shock spark plug.
- Never use wire brush for cleaning.
- If plug tip is covered with carbon, spark plug cleaner may be used.

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

Cleaning time: Less than 20 seconds



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



## EVAP VAPOR LINES

### EVAP VAPOR LINES : Inspection

INFOID:000000001316167

Refer to [XX-XX, "\\*\\*\\*\\*\\*"](#) (QR25DE WITH EURO-OBD), [XX-XX, "\\*\\*\\*\\*\\*"](#) (QR25DE WITHOUT EURO-OBD).

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

MA

## ENGINE MAINTENANCE (M9R)

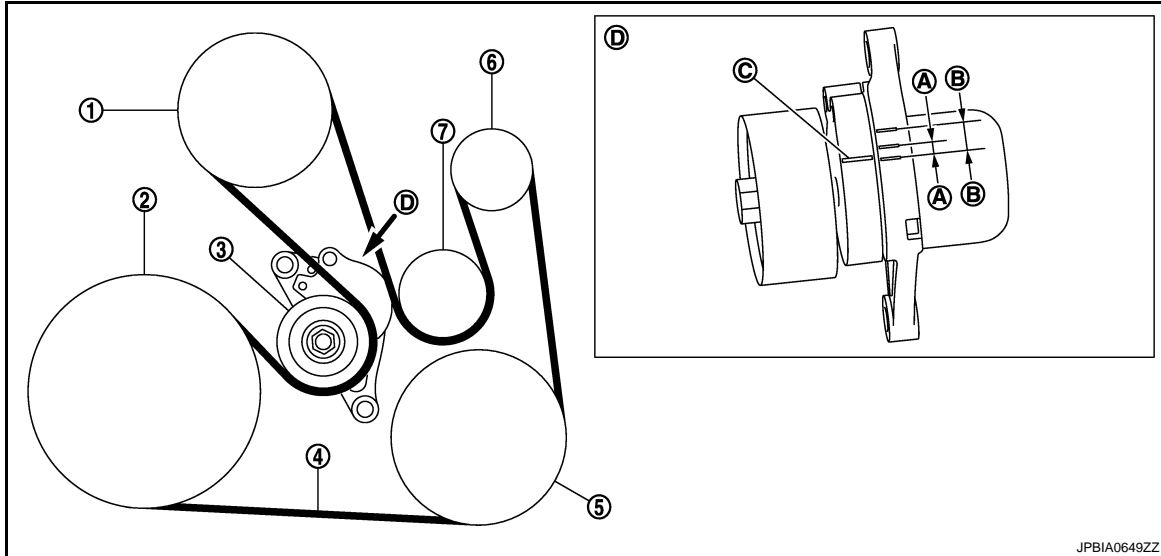
< ON-VEHICLE MAINTENANCE >

### ENGINE MAINTENANCE (M9R)

#### DRIVE BELTS

##### DRIVE BELTS : Exploded View

INFOID:000000001527534



JPBIA0649ZZ

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

##### DRIVE BELTS : Checking

INFOID:000000001527535

#### **WARNING:**

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

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

#### **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 (A) in the figure.
- Visually check entire drive belt for wear, damage or cracks.
- If the indicator (notch on fixed side) is out of the possible use range or belt is damaged, replace drive belt.

#### **CAUTION:**

**Drive belt auto-tensioner and idler pulley must be replaced with new ones when the drive belt is replaced.**

##### DRIVE BELTS : Tension Adjustment

INFOID:000000001527536

Refer to [EM-329, "Drive Belts"](#).

#### ENGINE COOLANT

##### ENGINE COOLANT : Inspection

INFOID:000000001527537

#### LEVEL

# ENGINE MAINTENANCE (M9R)

## < ON-VEHICLE MAINTENANCE >

- Check that the reservoir tank engine coolant level is within the "MIN" to "MAX" when the engine is cool.

A : MAX

B : MIN

- Regarding engine coolant level check, perform it with engine at idle.

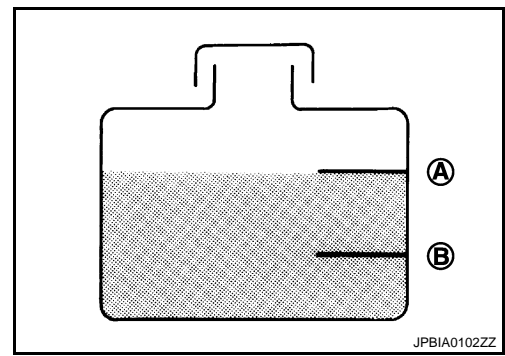
### NOTE:

Engine coolant level rises approximately 15 mm (0.59 in) in the engine stop.

- Adjust the engine coolant level if necessary.

### WARNING:

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



## LEAKAGE

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

Testing pressure: Refer to [CO-88, "Radiator"](#).

### WARNING:

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

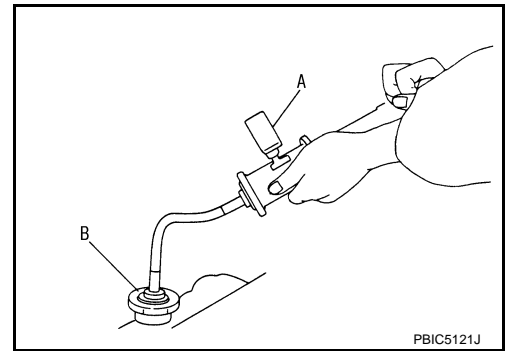
### CAUTION:

**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:000000001527538

### WARNING:

- **Never remove radiator cap and reservoir tank cap when engine is hot. Serious burns may occur from high-pressure engine coolant escaping from radiator and reservoir tank.**
- **Wrap a thick cloth around the caps. Slowly turn it a quarter of a turn to release built-up pressure. Then turn it all the way.**

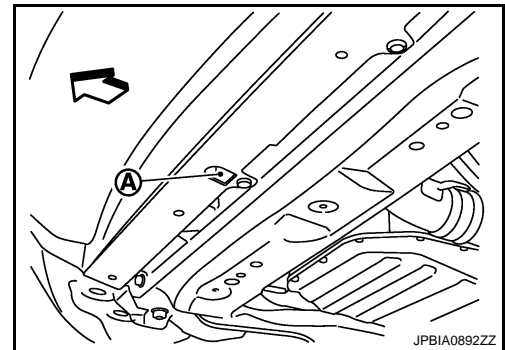
1. Remove engine undercover.
2. Open radiator drain plug at the bottom of radiator, and then remove reservoir tank cap.

A : Radiator drain plug hole

↙ : Vehicle front

### CAUTION:

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



3. Remove reservoir tank if necessary, and drain engine coolant and clean reservoir tank before installing.
  - Removal of fuel filter is necessary. Refer to [FL-16, "Exploded View"](#).
4. Check drained engine coolant for contaminants such as rust, corrosion or discoloration. If contaminated, flush the engine cooling system. Refer to [MA-47, "ENGINE COOLANT : Flushing"](#).

# ENGINE MAINTENANCE (M9R)

< ON-VEHICLE MAINTENANCE >

## ENGINE COOLANT : Refilling

INFOID:000000001527539

1. Install reservoir tank if removed, and radiator drain plug.

**CAUTION:**

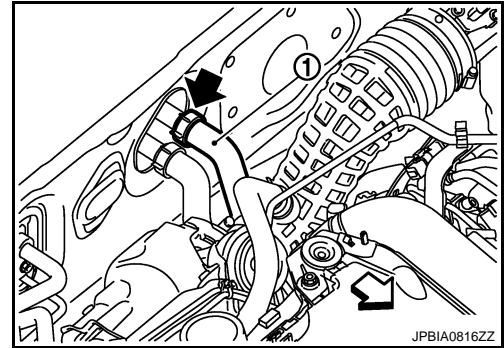
**Be sure to clean drain plug and install with new O-ring.**

**Radiator drain plug: Refer to [CO-73, "Exploded View"](#).**

2. Check that each hose clamp has been firmly tightened.
3. Remove air duct assembly. Refer to [EM-263, "Exploded View"](#).
4. Disconnect heater hose (1) at position (◀) in the figure.

◀ : Vehicle front

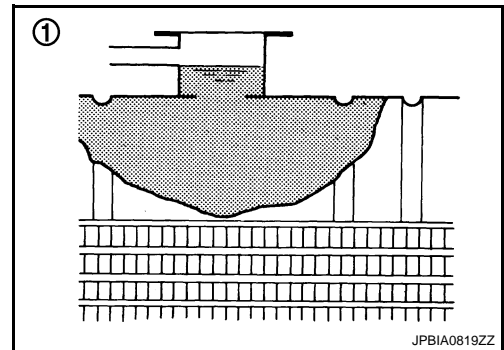
- Enhance heater hose as high as possible.



5. When engine coolant from heater hose starts to drain, install heater hose, and continue filling with engine coolant until radiator (1) gets full.

**CAUTION:**

- Prevent engine coolant overflowing from reservoir tank.
- Never adhere the engine coolant to electronic equipments. (alternator etc.)
- Pour coolant slowly of less than 2 ℓ (1-3/4 Imp qt) a minute to allow air in system to escape.
- Start engine without closing reservoir tank cap. Keep engine racing at 1,500 rpm for about 2-3 minutes.
- Use Genuine NISSAN Engine Coolant or equivalent in its quality mixed with water (distilled or demineralized). Refer to [MA-22, "Fluids and Lubricants"](#)



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

**Refer to [:CO-88, "Periodical Maintenance Specification"](#).**

6. Install radiator cap.
7. Fill the reservoir tank approximately 15 mm (0.59 in) above the "MAX" level of engine coolant.

A : MAX

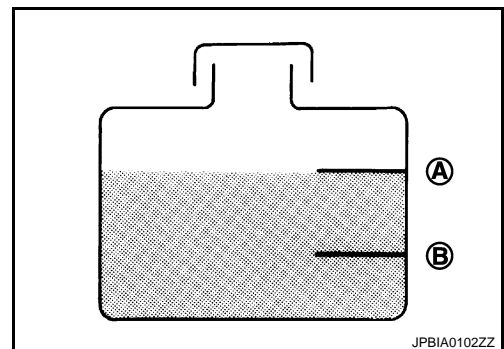
B : MIN

**NOTE:**

Engine coolant level rises approximately 15 mm (0.59 in) in the engine stop.

**Reservoir tank engine coolant capacity  
(At "MAX" level)**

**Refer to [CO-88, "Periodical Maintenance Specification"](#).**



8. Install air duct assembly. Refer to [EM-263, "Exploded View"](#).
9. 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 (upper) to see a flow of warm water.

# ENGINE MAINTENANCE (M9R)

## < ON-VEHICLE MAINTENANCE >

### CAUTION:

Watch water temperature gauge so as not to overheat engine.

10. 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.

### CAUTION:

Never adhere the engine coolant to electronic equipments. (alternator etc.)

11. Fill the reservoir tank approximately 15 mm (0.59 in) above the "MAX" level of engine coolant.

### NOTE:

Engine coolant level rises approximately 15 mm (0.59 in) in the engine stop.

12. Repeat steps 5 through 10 two or more times with cap (radiator and reservoir tank) installed until engine coolant level no longer drops.
13. Check cooling system for leakage with engine running.
14. 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.
15. Repeat step 14 three times.
16. If sound is heard, bleed air from cooling system by repeating step 5 through 10 until reservoir tank level no longer drops.

## ENGINE COOLANT : Flushing

INFOID:000000001527540

1. Install reservoir tank if removed, and radiator drain plug.

### CAUTION:

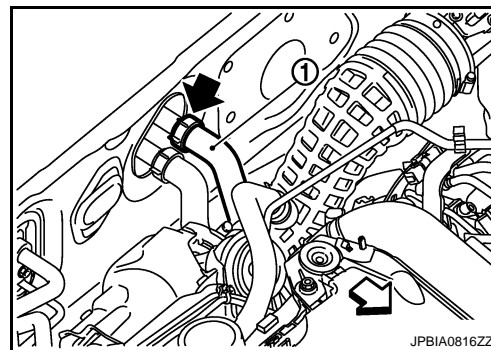
Be sure to clean drain plug and install with new O-ring.

Radiator drain plug: Refer to [CO-73, "Exploded View"](#).

2. Remove air duct assembly. Refer to [EM-263, "Exploded View"](#).
3. Disconnect heater hose (1) at position (←) in the figure.

← : Vehicle front

- Enhance heater hose as high as possible.



4. Fill radiator and reservoir tank with water and reinstall radiator cap and reservoir tank cap.
  - When engine coolant over flows disconnected heater hose, connect heater hose, and continue filling the engine coolant.
5. Install air duct assembly. Refer to [EM-263, "Exploded View"](#).
6. Run the engine and warm it up to normal operating temperature.
7. Rev the engine two or three times under no-load.
8. Stop the engine and wait until it cools down.
9. Drain water from the system. Refer to [MA-45, "ENGINE COOLANT : Draining"](#).
10. Repeat steps 1 through 9 until clear water begins to drain from radiator.

## RESERVOIR TANK CAP

# ENGINE MAINTENANCE (M9R)

## < ON-VEHICLE MAINTENANCE >

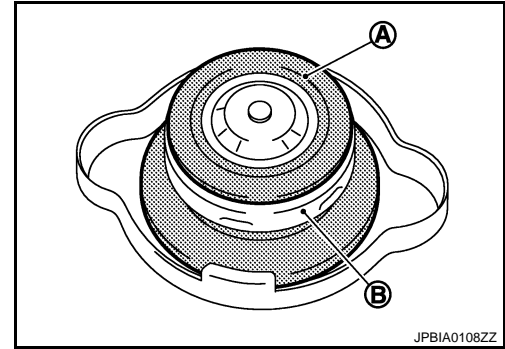
### RESERVOIR TANK CAP : Inspection

INFOID:000000001527541

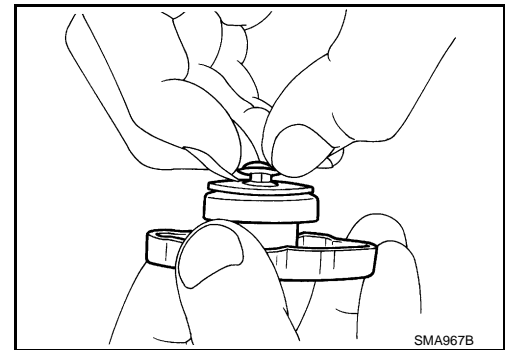
- Check valve seat of reservoir tank cap.

A : Valve seat  
B : Metal plunger

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



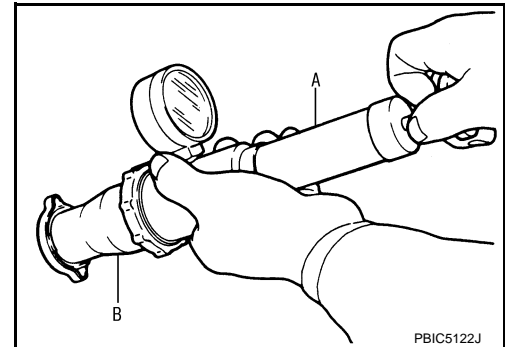
- Pull negative-pressure valve to open it, and check that it closes completely when released.
- Check that there is no dirt or damage on the valve seat of reservoir tank cap negative-pressure valve.
- Check that there are no unusualness in the opening and closing conditions of negative-pressure valve.



- Check reservoir tank cap relief pressure.

**Standard and Limit** : Refer to [CO-88. "Radiator"](#).

- When connecting reservoir tank cap to the radiator cap tester (commercial service tool) (A) and the radiator cap tester adapter (commercial service tool) (B), 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 radiator cap and reservoir tank cap, thoroughly wipe out the radiator filler neck to remove any waxy residue or foreign material.**

### RADIATOR

#### RADIATOR : Inspection

INFOID:000000001527542

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

#### **CAUTION:**

- **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 (4.9 bar, 5 kg/cm<sup>2</sup>, 71 psi) and keep distance more than 30 cm (11.8 in).



# ENGINE MAINTENANCE (M9R)

## < ON-VEHICLE MAINTENANCE >

5. Blow air again into all the radiator core surfaces once per minute until no water sprays out.

## FUEL LINES

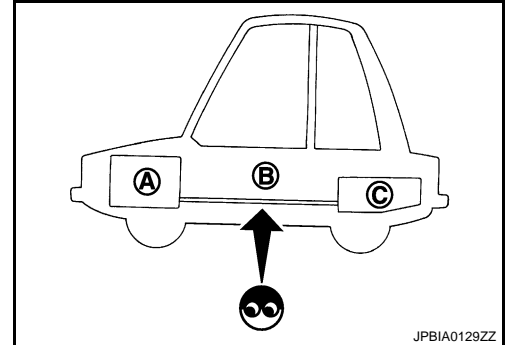
### FUEL LINES : Inspection

INFOID:000000001527555

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

If necessary, repair or replace damaged parts.

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



## FUEL FILTER

### FUEL FILTER : Water Draining

INFOID:000000001527551

1. Connect drain hose (suitable hose) to the end of drain plug (A).
2. Prepare a tray at the drain plug open end.
3. Loosen drain plug, and operate priming bulb to drain water from fuel filter.

#### CAUTION:

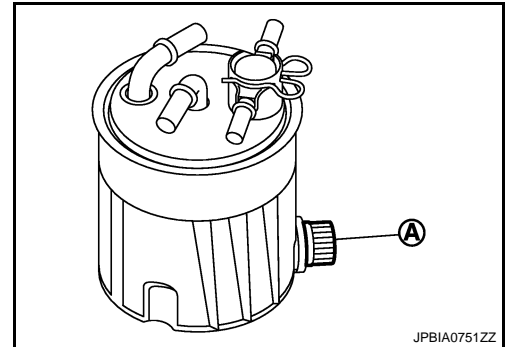
- Water in filter is drained with fuel. Prepare larger capacity pan than fuel filter volume.
- Drained water is mixed with fuel. Prevent fuel from adhering to rubber parts such as engine mounting insulator.

4. After draining, close drain plug by hand.

#### CAUTION:

If drain plug is tightened excessively, it may be damaged and fuel will leak. Never use tools to tighten drain plug.

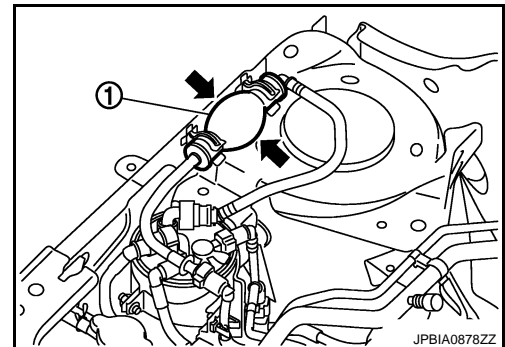
5. Bleed air in fuel piping. Refer to [MA-49, "FUEL FILTER : Air Bleeding"](#).
6. Start engine and check there is no fuel leakage.



### FUEL FILTER : Air Bleeding

INFOID:000000001527552

1. Prime the circuit using the priming bulb (1).
2. Perform engine cranking with repeating several times until engine starting.



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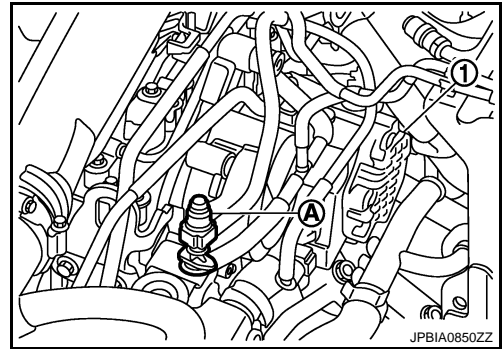
# ENGINE MAINTENANCE (M9R)

## < ON-VEHICLE MAINTENANCE >

3. If the engine does not start, disconnect the quick connector (A) on the fuel hose (return).

1 : Fuel pump

4. When the bleeding is completed, connect the quick connector, and check absence of leakage.

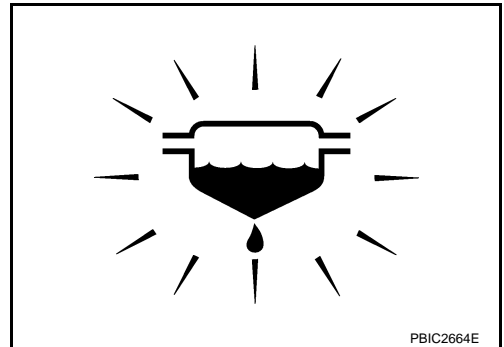


JPBIA0850ZZ

## FUEL FILTER : Fuel Filter Sensor (With Fuel Filter Warning)

INFOID:000000001527553

- Drain water from fuel filter, when the fuel filter warning lamp turns ON. Refer to [FL-17, "Water Draining"](#).



PBIC2664E

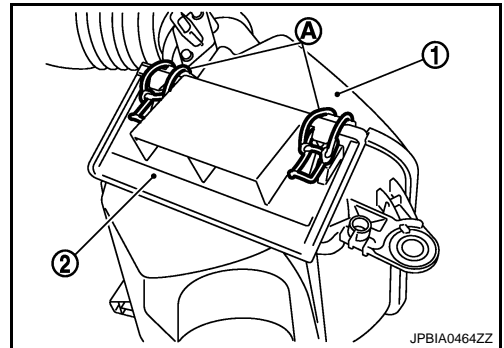
## AIR CLEANER FILTER

### AIR CLEANER FILTER : Removal and Installation

INFOID:000000001527554

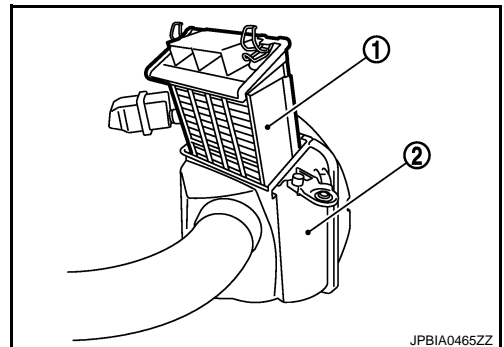
#### REMOVAL

1. Unhook clips (A) and remove holder (2) from air cleaner case (1).



JPBIA0464ZZ

2. Remove air cleaner filter (1) from air cleaner case (2).



JPBIA0465ZZ

#### INSTALLATION

Install in the reverse order of removal.

## ENGINE OIL

# ENGINE MAINTENANCE (M9R)

< ON-VEHICLE MAINTENANCE >

## ENGINE OIL : Draining

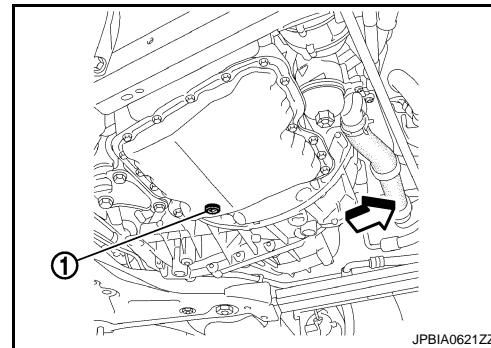
INFOID:000000001527556

### WARNING:

- Be careful not to get burned, as engine oil may be hot.
- Prolonged and repeated contact with used engine oil may cause skin cancer. Try to avoid direct skin contact with used engine oil. If skin contact is made, wash thoroughly with soap or hand cleaner as soon as possible.

1. Warm up the engine, and check for engine oil leakage from engine components. Refer to [LU-28, "Inspection"](#).
2. Stop the engine and wait for 10 minutes.
3. Remove engine undercover.
4. Loosen oil level gauge.
5. Remove oil pan drain plug (1) using a square driver [8 mm (0.315 in)]. Drain engine oil.

↶ : Vehicle front



## ENGINE OIL : Refilling

INFOID:000000001527557

1. Install drain plug with new washer.

### CAUTION:

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

**Tightening torque** : Refer to [EM-280, "Exploded View"](#).

2. Refill with new engine oil.  
**Engine oil specification and viscosity:** Refer to [MA-22, "Fluids and Lubricants"](#).

**Engine oil capacity** : Refer to [LU-33, "Periodical Maintenance Specification"](#).

### CAUTION:

- The refill capacity depends on the engine oil temperature and drain time. Use these specifications for reference only.
- Always use oil level gauge to determine the proper amount of engine oil in the engine.

3. Warm up engine and check area around drain plug and oil filter body for engine oil leakage.
4. Stop engine and wait for 10 minutes.
5. Check the engine oil level. Refer to [LU-28, "Inspection"](#).

## OIL FILTER

### OIL FILTER : Removal and Installation

INFOID:000000001527558

#### REMOVAL

### WARNING:

Be careful not to get burned when engine and engine oil may be hot.

### CAUTION:

- When removing, prepare a shop cloth to absorb any engine oil leakage or spillage.
- Completely wipe off any engine oil that adheres to engine and vehicle.

1. Remove engine undercover.
2. Loosen oil filter body assembly using a socket [27 mm (1.06 in)].
3. Remove oil filter body, and then remove oil filter and O-ring.

## ENGINE MAINTENANCE (M9R)

< ON-VEHICLE MAINTENANCE >

---

**CAUTION:**

**Completely wipe clean any engine oil remaining on oil filter body or vehicle.**

### INSTALLATION

1. Completely remove all foreign objects adhering to the inside of oil filter body or O-ring mounting area.
2. Install oil filter and O-ring to oil filter body.
3. Install oil filter body assembly to oil cooler.

**Tightening torque: Refer to [LU-31, "Exploded View"](#).**

### OIL FILTER : Inspection

INFOID:000000001527559

### INSPECTION AFTER INSTALLATION

1. Check that the engine oil level. Refer to [LU-28, "Inspection"](#).
2. Start the engine, and check that there is no leak of engine oil.
3. Stop the engine and wait for 10 minutes.
4. Check that the engine oil level, and adjust the level. Refer to [LU-28, "Inspection"](#).

# CHASSIS MAINTENANCE

< ON-VEHICLE MAINTENANCE >

## CHASSIS MAINTENANCE

### HEADLAMP AIMING ADJUSTMENT (XENON TYPE - LHD)

HEADLAMP AIMING ADJUSTMENT (XENON TYPE - LHD) : Description INFOID:000000001519017

#### PREPARATION BEFORE ADJUSTING

**NOTE:**

- For details, refer to the regulations in your own country.
- Perform aiming if the vehicle front body has been repaired and/or the headlamp assembly has been replaced.

Before performing aiming adjustment, check the following.

- Adjust the tire pressure to the specification.
- Fill with fuel, engine coolant and each oil.
- Maintain the unloaded vehicle condition. (Remove luggage from the passenger compartment and the luggage room.)

**NOTE:**

Do not remove the temporary tire, jack and on-vehicle tool.

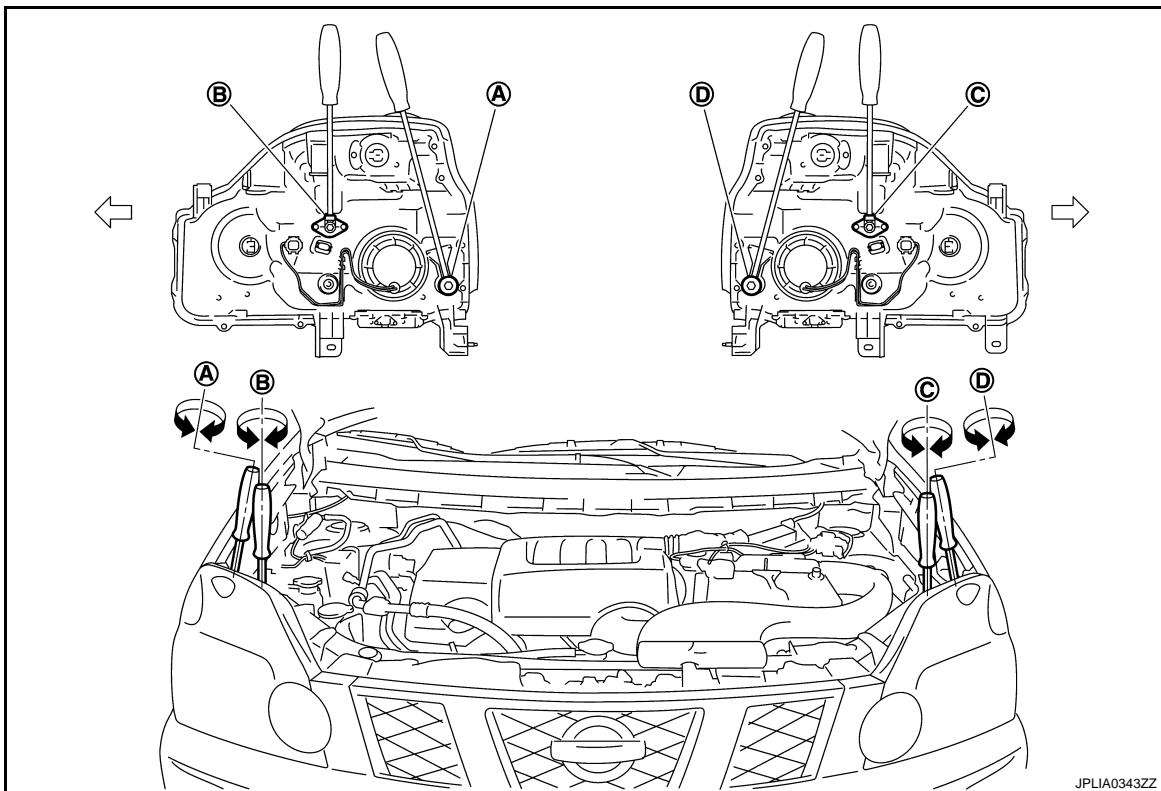
- Wipe out dirt on the headlamp.

**CAUTION:**

**Never use organic solvent (thinner, gasoline etc.)**

- Ride alone on the driver seat.

#### AIMING ADJUSTMENT SCREW



- A. Headlamp RH (INSIDE/OUTSIDE) adjustment screw
- B. Headlamp RH (UP/DOWN) adjustment screw
- C. Headlamp LH (UP/DOWN) adjustment screw
- D. Headlamp LH (INSIDE/OUTSIDE) adjustment screw

↔ Vehicle center

# CHASSIS MAINTENANCE

## < ON-VEHICLE MAINTENANCE >

Adjustment screw		Screw driver rotation	Facing direction
A	Headlamp RH (INSIDE/OUTSIDE)	Clockwise	INSIDE
		Counterclockwise	OUTSIDE
B	Headlamp RH (UP/DOWN)	Clockwise	UP
		Counterclockwise	DOWN
C	Headlamp LH (UP/DOWN)	Clockwise	UP
		Counterclockwise	DOWN
D	Headlamp LH (INSIDE/OUTSIDE)	Clockwise	INSIDE
		Counterclockwise	OUTSIDE

### HEADLAMP AIMING ADJUSTMENT (XENON TYPE - LHD) : Aiming Adjustment Procedure

INFOID:000000001519018

1. Place the screen.

**NOTE:**

- Stop the vehicle at the perpendicular angle to the wall.
- Set the screen perpendicularly to the ground.

2. Face the vehicle squarely toward the screen and make the distance between the headlamp bulb center and the screen 10 m (32.8 ft).

3. Start the engine and illuminate the headlamp (LO).

**NOTE:**

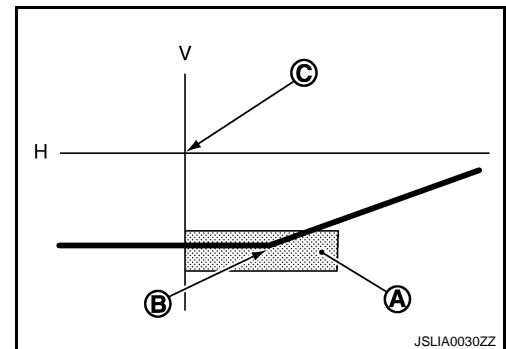
Block light from the headlamp that is not being adjusted with a thick fabric or another object, so that it does not reach the adjustment screen.

**CAUTION:**

**Never cover lens surface with tape, etc. because it is made from plastic.**

4. Use the aiming adjustment screw to adjust the elbow point projected by the low beams on the screen, so that it is within the aiming adjustment area.

Low beam distribution on the screen



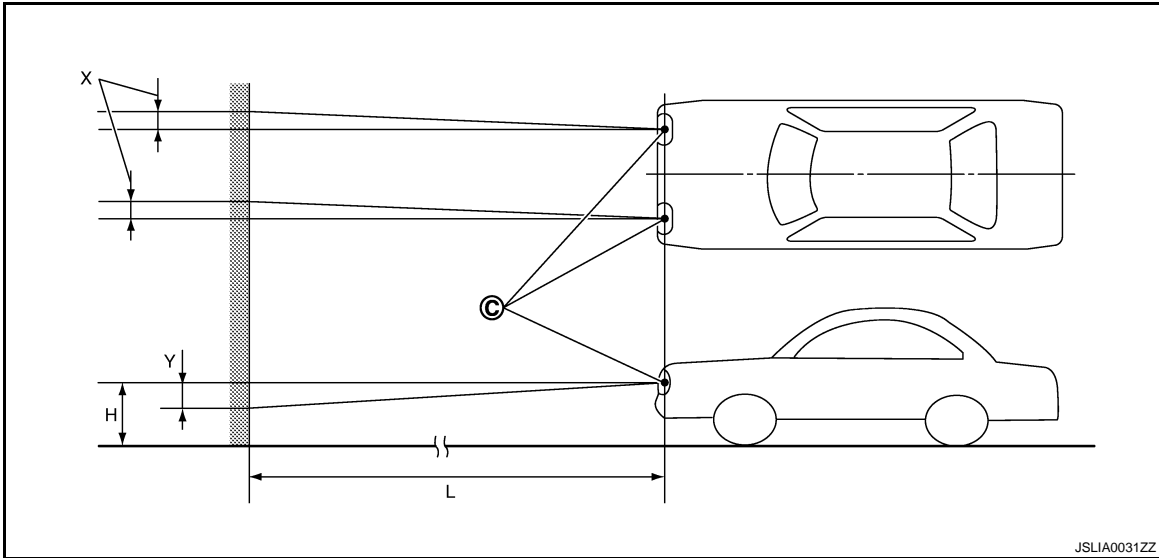
- A. Aiming adjustment area
- B. Elbow point
- C. Headlamp center
- H. Horizontal center line of headlamp
- V. Vertical center line of headlamp

Unit: mm (in)

Aiming adjustment area	
Vertical direction (Y) (Lower side from headlamp center height)	Lateral direction (X) (Right side from headlamp centerline)
105 – 135 (4.13 – 5.31)	Within 100 (3.94)

# CHASSIS MAINTENANCE

## < ON-VEHICLE MAINTENANCE >



- C. Vertical center line of headlamp    H. Horizontal center line of headlamp    L. Distance from headlamp center to screen  
X. Aiming adjustment area (lateral)    Y. Aiming adjustment area (Vertical)

**Distance from headlamp center to screen (L) : 10 m (32.8 ft)**

### HEADLAMP AIMING ADJUSTMENT (XENON TYPE - RHD)

### HEADLAMP AIMING ADJUSTMENT (XENON TYPE - RHD) : Description INFOID:000000001519019

#### PREPARATION BEFORE ADJUSTING

##### NOTE:

- For details, refer to the regulations in your own country.
- Perform aiming if the vehicle front body has been repaired and/or the headlamp assembly has been replaced.

Before performing aiming adjustment, check the following.

- Adjust the tire pressure to the specification.
- Fill with fuel, engine coolant and each oil.
- Maintain the unloaded vehicle condition. (Remove luggage from the passenger compartment and the luggage room.)

##### NOTE:

Do not remove the temporary tire, jack and on-vehicle tool.

- Wipe out dirt on the headlamp.

##### CAUTION:

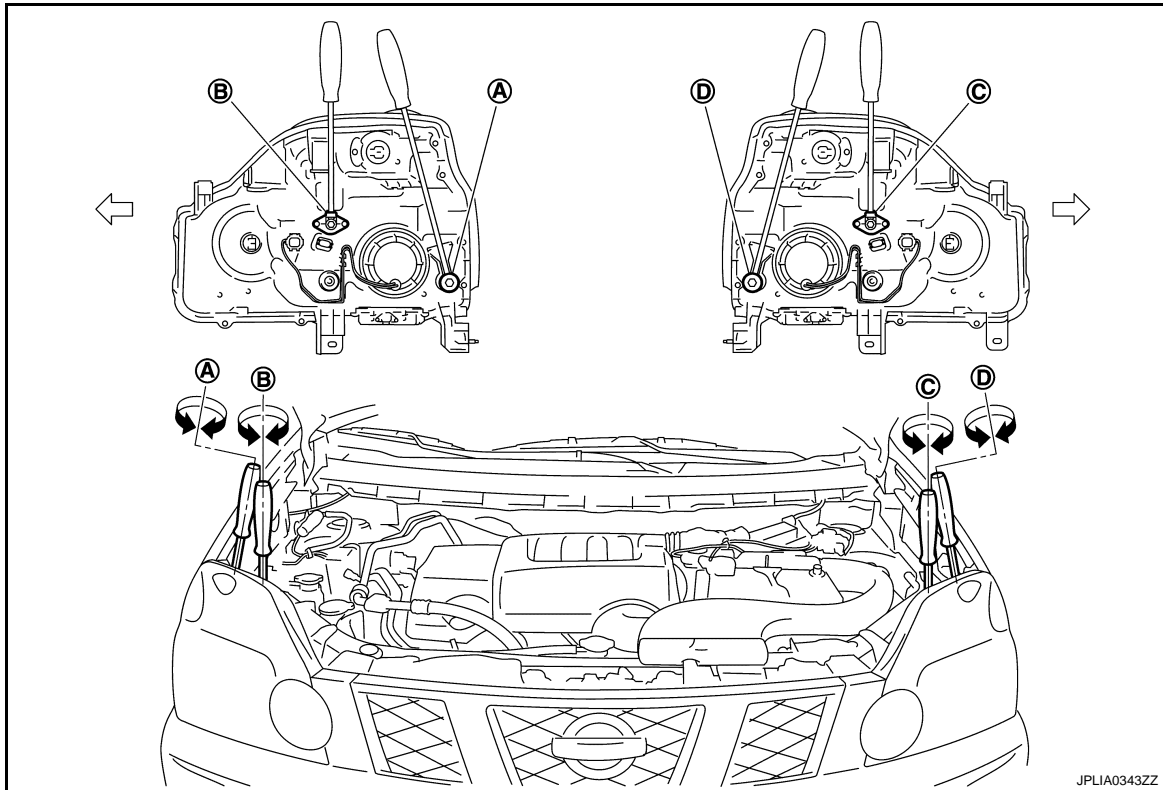
**Never use organic solvent (thinner, gasoline etc.)**

- Ride alone on the driver seat.

#### AIMING ADJUSTMENT SCREW

# CHASSIS MAINTENANCE

< ON-VEHICLE MAINTENANCE >



- A. Headlamp RH (INSIDE/OUTSIDE) adjustment screw      B. Headlamp RH (UP/DOWN) adjustment screw      C. Headlamp LH (UP/DOWN) adjustment screw  
 D. Headlamp LH (INSIDE/OUTSIDE) adjustment screw

↔: Vehicle center

Adjustment screw		Screw driver rotation	Facing direction
A	Headlamp RH (INSIDE/OUTSIDE)	Clockwise	INSIDE
		Counterclockwise	OUTSIDE
B	Headlamp RH (UP/DOWN)	Clockwise	UP
		Counterclockwise	DOWN
C	Headlamp LH (UP/DOWN)	Clockwise	UP
		Counterclockwise	DOWN
D	Headlamp LH (INSIDE/OUTSIDE)	Clockwise	INSIDE
		Counterclockwise	OUTSIDE

## HEADLAMP AIMING ADJUSTMENT (XENON TYPE - RHD) : Aiming Adjustment Procedure

INFOID:000000001519020

- Place the screen.  
**NOTE:**
  - Stop the vehicle at the perpendicular angle to the wall.
  - Set the screen perpendicularly to the ground.
- Face the vehicle squarely toward the screen and make the distance between the headlamp bulb center and the screen 10 m (32.8 ft).
- Start the engine and illuminate the headlamp (LO).  
**NOTE:**  
 Block light from the headlamp that is not being adjusted with a thick fabric or another object, so that it does not reach the adjustment screen.



# CHASSIS MAINTENANCE

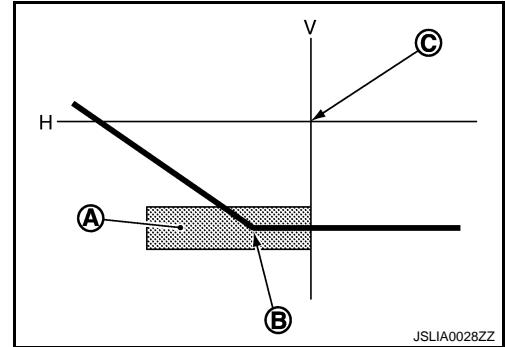
## < ON-VEHICLE MAINTENANCE >

### CAUTION:

Never cover lens surface with tape, etc. because it is made from plastic.

- Use the aiming adjustment screw to adjust the elbow point projected by the low beams on the screen, so that it is within the aiming adjustment area.

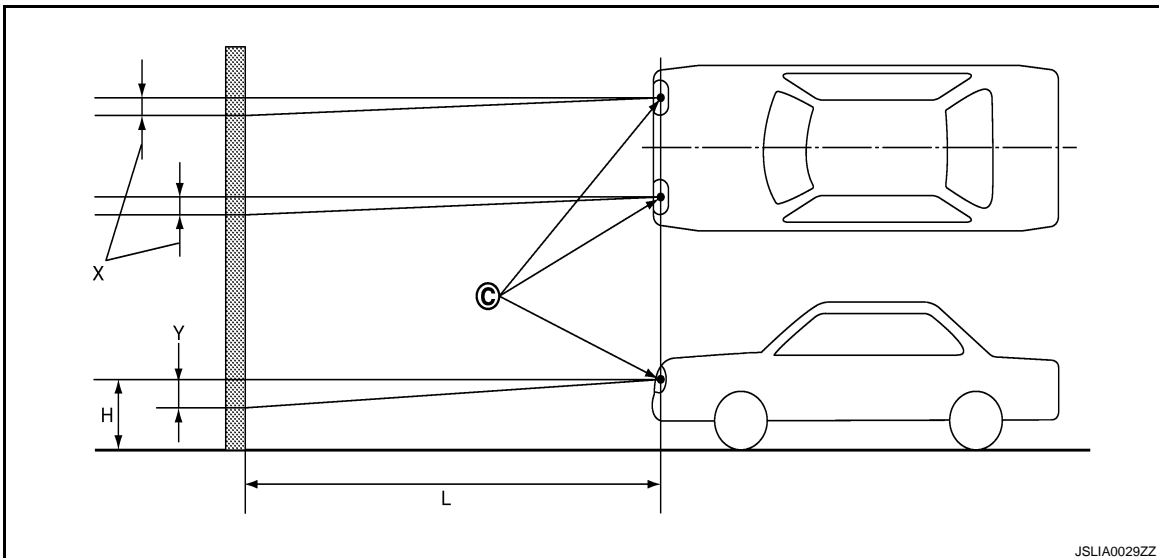
Low beam distribution on the screen



- A. Aiming adjustment area
- B. Elbow point
- C. Headlamp center
- H. Horizontal center line of headlamp
- V. Vertical center line of headlamp

Unit: mm (in)

Aiming adjustment area	
Vertical direction (Y) (Lower side from headlamp center height)	Lateral direction (X) (Left side from headlamp centerline)
105 – 135 (4.13 – 5.31)	Within 100 (3.94)



- C. Vertical center line of headlamp
- H. Horizontal center line of headlamp
- L. Distance from headlamp center to screen
- X. Aiming adjustment area (lateral)
- Y. Aiming adjustment area (Vertical)

**Distance from headlamp center to screen (L) : 10 m (32.8 ft)**

## HEADLAMP AIMING ADJUSTMENT (HALOGEN TYPE - LHD)

# CHASSIS MAINTENANCE

< ON-VEHICLE MAINTENANCE >

## HEADLAMP AIMING ADJUSTMENT (HALOGEN TYPE - LHD) : Description

INFOID:000000001519021

### PREPARATION BEFORE ADJUSTING

#### NOTE:

- For details, refer to the regulations in your own country.
- Perform aiming if the vehicle front body has been repaired and/or the headlamp assembly has been replaced.

Before performing aiming adjustment, check the following.

- Adjust the tire pressure to the specification.
- Fill with fuel, engine coolant and each oil.
- Maintain the unloaded vehicle condition. (Remove luggage from the passenger compartment and the luggage room.)

#### NOTE:

Do not remove the temporary tire, jack and on-vehicle tool.

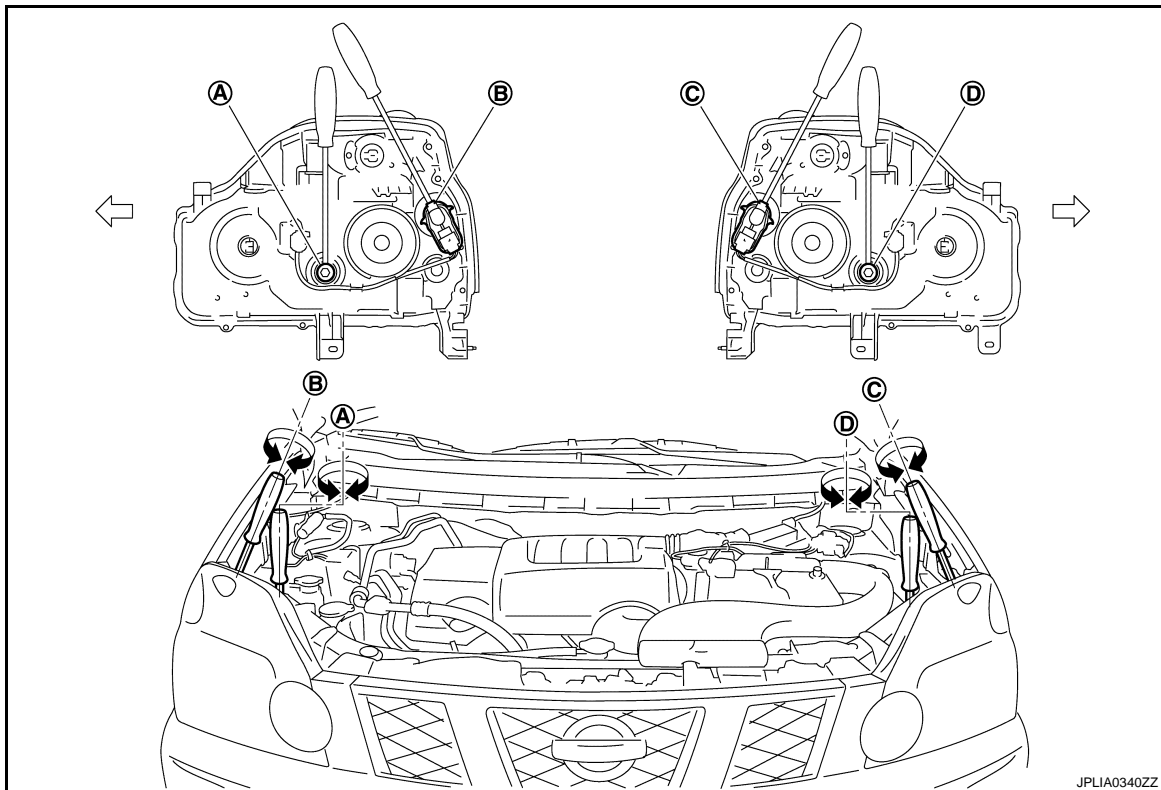
- Wipe out dirt on the headlamp.

#### CAUTION:

**Never use organic solvent (thinner, gasoline etc.)**

- Ride alone on the driver seat.
- Headlamp aiming switch sets to "0".

### AIMING ADJUSTMENT SCREW



- A. Headlamp RH (INSIDE/OUTSIDE) adjustment screw    B. Headlamp RH (UP/DOWN) adjustment screw    C. Headlamp LH (UP/DOWN) adjustment screw  
D. Headlamp LH (INSIDE/OUTSIDE) adjustment screw

↔: Vehicle center

# CHASSIS MAINTENANCE

## < ON-VEHICLE MAINTENANCE >

	Adjustment screw	Screw driver rotation	Facing direction
A	Headlamp RH (INSIDE/OUTSIDE)	Clockwise	OUTSIDE
		Counterclockwise	INSIDE
B	Headlamp RH (UP/DOWN)	Clockwise	DOWN
		Counterclockwise	UP
C	Headlamp LH (UP/DOWN)	Clockwise	DOWN
		Counterclockwise	UP
D	Headlamp LH (INSIDE/OUTSIDE)	Clockwise	OUTSIDE
		Counterclockwise	INSIDE

### HEADLAMP AIMING ADJUSTMENT (HALOGEN TYPE - LHD) : Aiming Adjustment Procedure

INFOID:000000001528619

- Place the screen.

**NOTE:**

- Stop the vehicle at the perpendicular angle to the wall.
- Set the screen perpendicularly to the ground.

- Face the vehicle squarely toward the screen and make the distance between the headlamp bulb center and the screen 10 m (32.8 ft).

- Start the engine and illuminate the headlamp (LO).

**NOTE:**

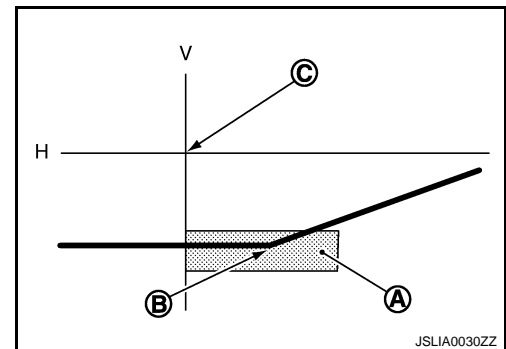
Block light from the headlamp that is not being adjusted with a thick fabric or another object, so that it does not reach the adjustment screen.

**CAUTION:**

**Never cover lens surface with tape, etc. because it is made from plastic.**

- Use the aiming adjustment screw to adjust the elbow point projected by the low beams on the screen, so that it is within the aiming adjustment area.

Low beam distribution on the screen



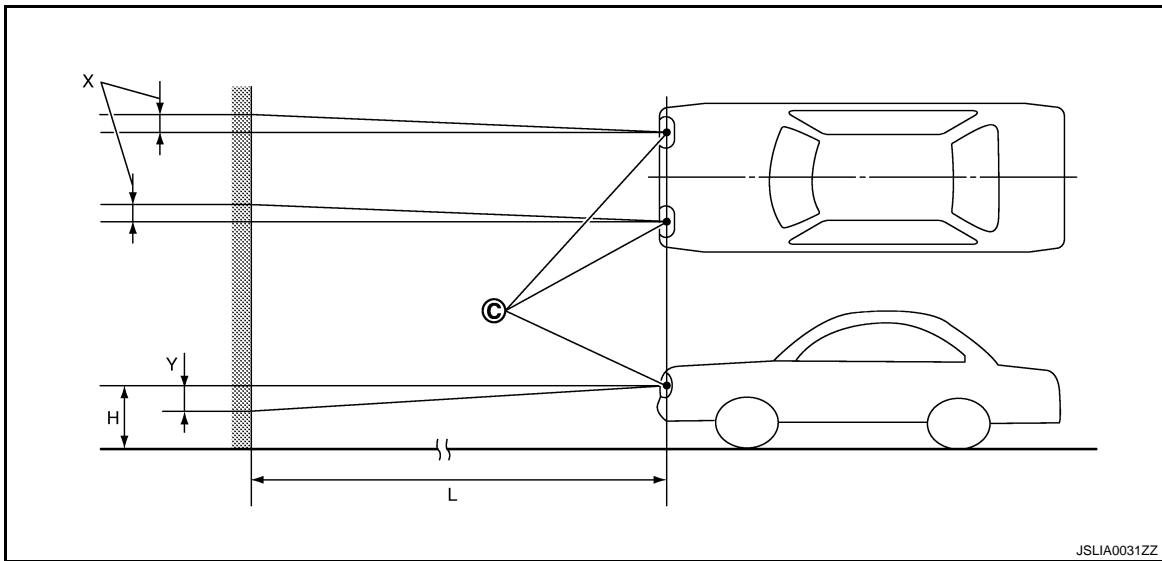
- A. Aiming adjustment area
- B. Elbow point
- C. Headlamp center
- H. Horizontal center line of headlamp
- V. Vertical center line of headlamp

Unit: mm (in)

Aiming adjustment area	
Vertical direction (Y) (Lower side from headlamp center height)	Lateral direction (X) (Right side from headlamp centerline)
105 – 135 (4.13 – 5.31)	Within 100 (3.94)

# CHASSIS MAINTENANCE

< ON-VEHICLE MAINTENANCE >



- C. Vertical center line of headlamp    H. Horizontal center line of headlamp    L. Distance from headlamp center to screen  
X. Aiming adjustment area (lateral)    Y. Aiming adjustment area (Vertical)

**Distance from headlamp center to screen (L) : 10 m (32.8 ft)**

## HEADLAMP AIMING ADJUSTMENT (HALOGEN TYPE - RHD)

### HEADLAMP AIMING ADJUSTMENT (HALOGEN TYPE - RHD) : Description

INFOID:000000001519022

#### PREPARATION BEFORE ADJUSTING

##### NOTE:

- For details, refer to the regulations in your own country.
- Perform aiming if the vehicle front body has been repaired and/or the headlamp assembly has been replaced.

Before performing aiming adjustment, check the following.

- Adjust the tire pressure to the specification.
- Fill with fuel, engine coolant and each oil.
- Maintain the unloaded vehicle condition. (Remove luggage from the passenger compartment and the luggage room.)

##### NOTE:

Do not remove the temporary tire, jack and on-vehicle tool.

- Wipe out dirt on the headlamp.

##### CAUTION:

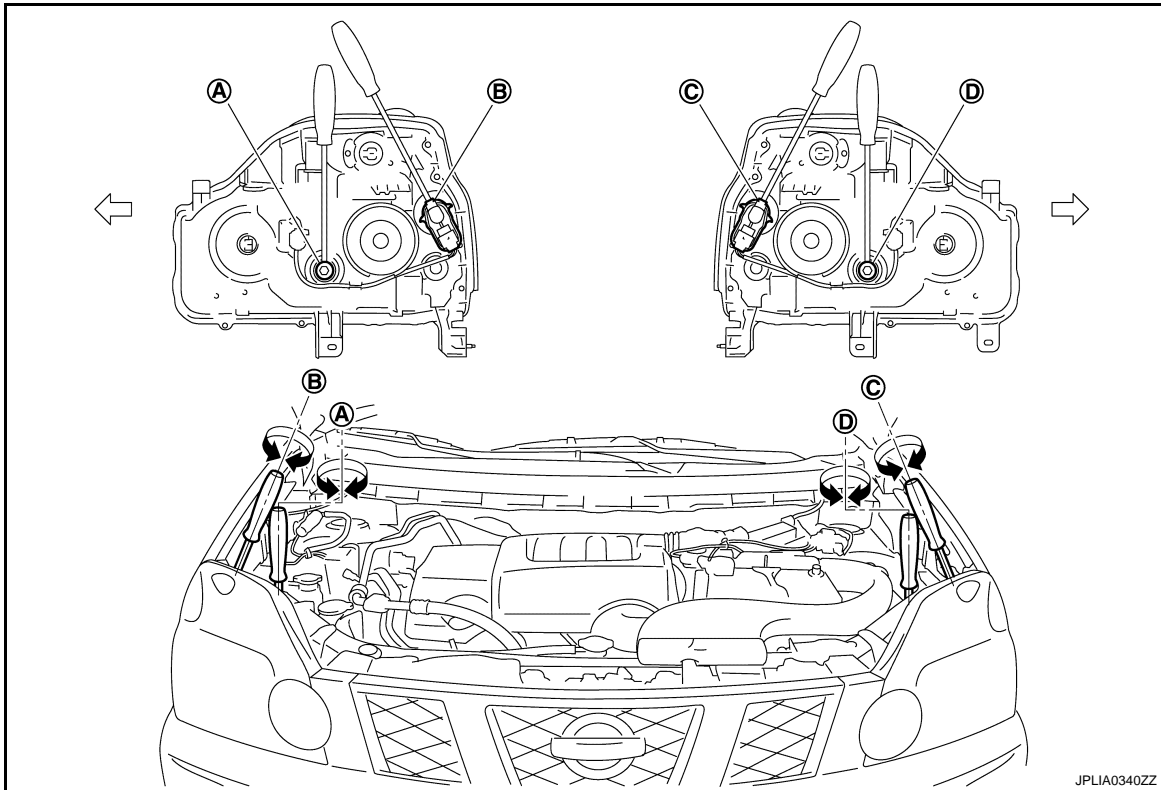
**Never use organic solvent (thinner, gasoline etc.)**

- Ride alone on the driver seat.
- Headlamp aiming switch sets to "0".

#### AIMING ADJUSTMENT SCREW

# CHASSIS MAINTENANCE

## < ON-VEHICLE MAINTENANCE >



- A. Headlamp RH (INSIDE/OUTSIDE) adjustment screw
- B. Headlamp RH (UP/DOWN) adjustment screw
- C. Headlamp LH (UP/DOWN) adjustment screw
- D. Headlamp LH (INSIDE/OUTSIDE) adjustment screw

↔ Vehicle center

Adjustment screw		Screw driver rotation	Facing direction
A	Headlamp RH (INSIDE/OUTSIDE)	Clockwise	OUTSIDE
		Counterclockwise	INSIDE
B	Headlamp RH (UP/DOWN)	Clockwise	DOWN
		Counterclockwise	UP
C	Headlamp LH (UP/DOWN)	Clockwise	DOWN
		Counterclockwise	UP
D	Headlamp LH (INSIDE/OUTSIDE)	Clockwise	OUTSIDE
		Counterclockwise	INSIDE

### HEADLAMP AIMING ADJUSTMENT (HALOGEN TYPE - RHD) : Aiming Adjustment Procedure

INFOID:000000001528620

1. Place the screen.
  - NOTE:**
  - Stop the vehicle at the perpendicular angle to the wall.
  - Set the screen perpendicularly to the ground.
2. Face the vehicle squarely toward the screen and make the distance between the headlamp bulb center and the screen 10 m (32.8 ft).
3. Start the engine and illuminate the headlamp (LO).
  - NOTE:**
  - Block light from the headlamp that is not being adjusted with a thick fabric or another object, so that it does not reach the adjustment screen.

# CHASSIS MAINTENANCE

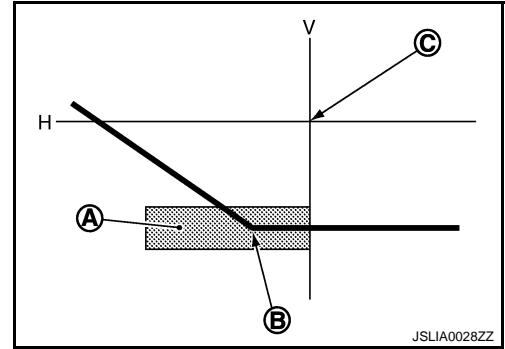
## < ON-VEHICLE MAINTENANCE >

**CAUTION:**

**Never cover lens surface with tape, etc. because it is made from plastic.**

- Use the aiming adjustment screw to adjust the elbow point projected by the low beams on the screen, so that it is within the aiming adjustment area.

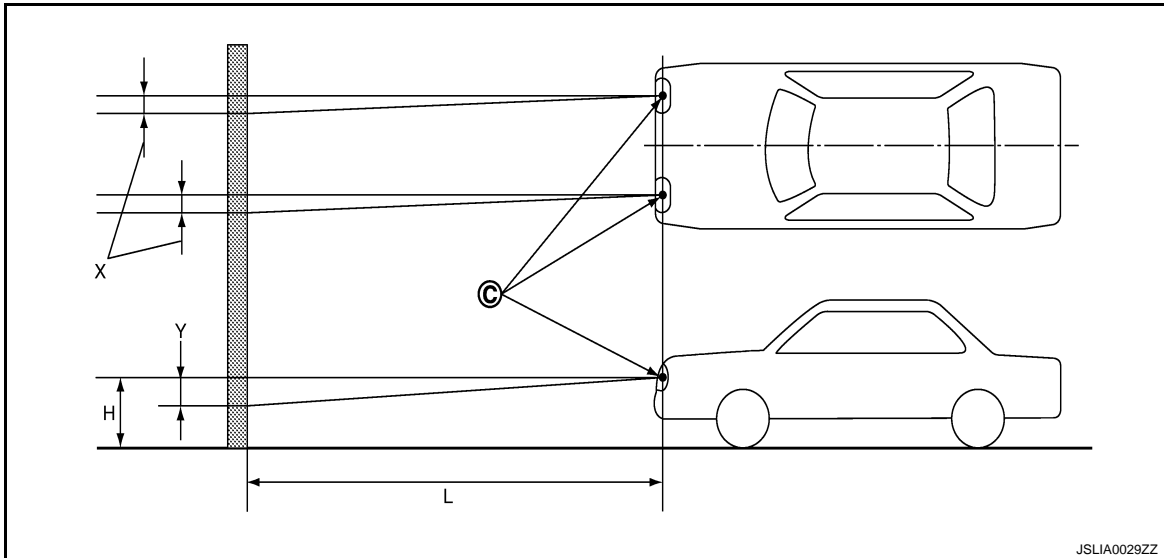
Low beam distribution on the screen



- A. Aiming adjustment area
- B. Elbow point
- C. Headlamp center
- H. Horizontal center line of headlamp
- V. Vertical center line of headlamp

Unit: mm (in)

Aiming adjustment area	
Vertical direction (Y) (Lower side from headlamp center height)	Lateral direction (X) (Left side from headlamp centerline)
105 – 135 (4.13 – 5.31)	Within 100 (3.94)



- C. Vertical center line of headlamp
- H. Horizontal center line of headlamp
- L. Distance from headlamp center to screen
- X. Aiming adjustment area (lateral)
- Y. Aiming adjustment area (Vertical)

**Distance from headlamp center to screen (L) : 10 m (32.8 ft)**

## EXHAUST SYSTEM

# CHASSIS MAINTENANCE

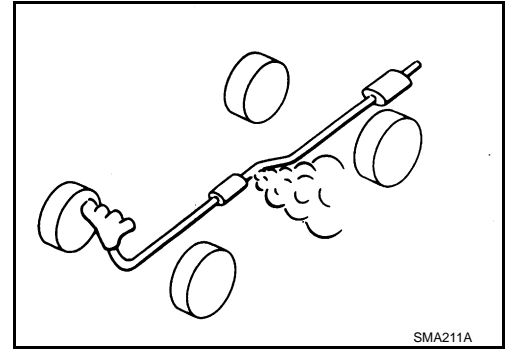
< ON-VEHICLE MAINTENANCE >

## EXHAUST SYSTEM : Inspection

INFOID:000000001521379

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

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



## CVT FLUID

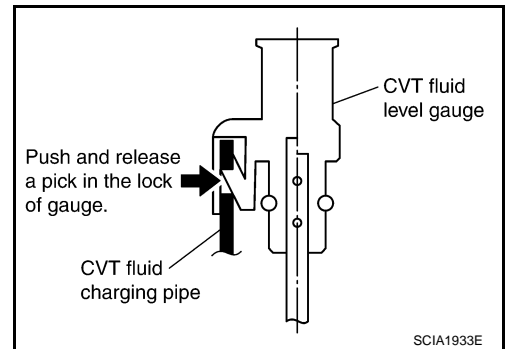
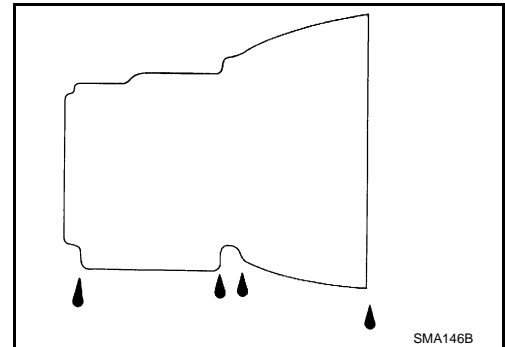
### CVT FLUID : Inspection

INFOID:000000001521380

#### CHECKING CVT FLUID

Fluid level should be checked with the fluid warmed up to 50 to 80°C (122 to 176°F). The fluid level check procedure is as follows:

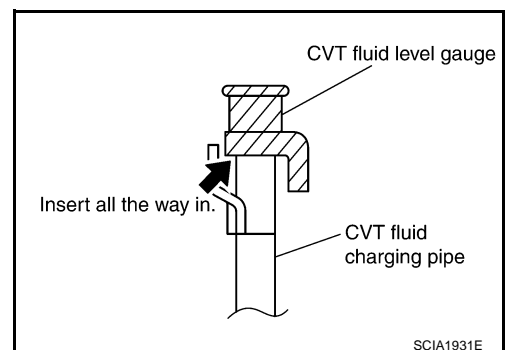
1. Check for fluid leakage.
2. With the engine warmed up, drive the vehicle in an urban area. When ambient temperature is 20°C (68°F), it takes about 10 minutes for the CVT fluid to warm up to 50 to 80°C (122 to 176°F).
3. Park the vehicle on a level surface.
4. Apply parking brake firmly.
5. With engine at idle, while depressing brake pedal, move shift selector throughout the entire shift range.
6. Pull out the CVT fluid level gauge from the CVT fluid charging pipe after pressing the tab on the CVT fluid level gauge to release the lock.



7. Wipe fluid off the CVT fluid level gauge. Insert the CVT fluid level gauge rotating 180° from the originally installed position, then securely push the CVT fluid level gauge until it meets the top end of the CVT fluid charging pipe.

#### **CAUTION:**

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



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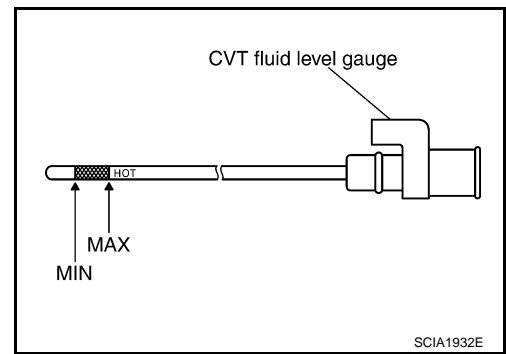
# CHASSIS MAINTENANCE

## < ON-VEHICLE MAINTENANCE >

- Place the selector lever in "P" or "N" and make sure the fluid level is within the specified range.

**CAUTION:**

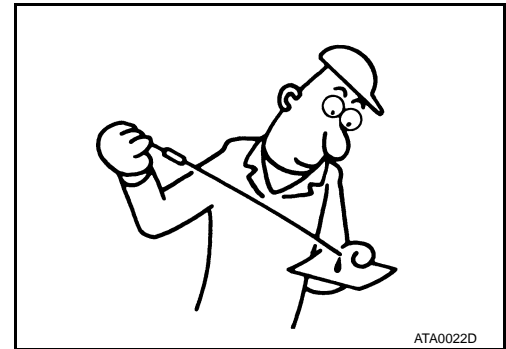
**When reinstalling CVT fluid level gauge, insert it into the CVT fluid charging pipe and rotate it to the original installation position until securely locked.**



## CVT FLUID CONDITION

Check CVT fluid condition.

- If CVT fluid is very dark or smells burned, check operation of CVT. Flush cooling system after repair of CVT.
- If CVT fluid contains frictional material (clutches, brakes, etc.), replace radiator and flush cooler line using cleaning solvent and compressed air after repair of CVT. Refer to [CO-16, "Exploded View" \(MR20DE\)](#), [CO-47, "Exploded View" \(QR25DE\)](#).



Fluid status	Conceivable cause	Required operation
Varnished (viscous varnish state)	CVT fluid become degraded due to high temperatures.	Replace the CVT fluid and check the CVT main unit and the vehicle for malfunctions (wire harnesses, cooler pipes, etc.)
Milky white or cloudy	Water in the fluid	Replace the CVT fluid and check for places where water is getting in.
Large amount of metal powder mixed in	Unusual wear of sliding parts within CVT	Replace the CVT fluid and check for improper operation of the CVT.

## CVT FLUID : Changing

INFOID:000000001521381

- Remove drain plug, and then drain CVT fluid from oil pan.
- Install drain plug to oil pan.

**CAUTION:**

**Never reuse drain plug gasket.**

**Drain plug – tightening torque** : Refer to [XX-XX, "\\*\\*\\*\\*\\*"](#).

- Fill CVT fluid from CVT fluid charging pipe to the specified level.
- With the engine warmed up, drive the vehicle in an urban area. When ambient temperature is 20°C (68°F), it takes about 10 minutes for the CVT fluid to warm up to 50 to 80°C (122 to 176°F).
- Check CVT fluid level and condition.
- Repeat steps 1 to 5 if CVT fluid has been contaminated.

**CVT fluid** : Refer to [XX-XX, "\\*\\*\\*\\*\\*"](#).

**Fluid capacity** : Refer to [XX-XX, "\\*\\*\\*\\*\\*"](#).

**CAUTION:**

- Use only Genuine NISSAN CVT Fluid NS-2. Never mix with other fluid.
- Using CVT fluid other than Genuine NISSAN CVT Fluid NS-2 will deteriorate in driveability and CVT durability, and may damage the CVT, which is not covered by the warranty.
- When filling CVT fluid, take care not to scatter heat generating parts such as exhaust.
- Sufficiently shake the container of CVT fluid before using.
- Delete CVT fluid deterioration date with CONSULT-III after changing CVT fluid.

GEAR OIL: RS6F94R



# CHASSIS MAINTENANCE

< ON-VEHICLE MAINTENANCE >

## GEAR OIL: RS6F94R : Inspection

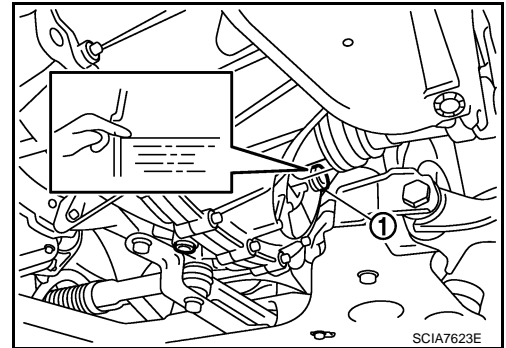
INFOID:000000001521382

### LEAKAGE

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

### LEVEL

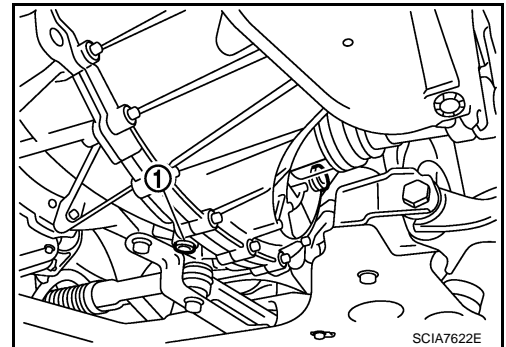
1. Remove filler plug (1) and check oil level at filler plug hole as shown.  
**CAUTION:**  
**Never start engine while checking oil level.**
2. Set a gasket on filler plug and then install it to transaxle case.  
**CAUTION:**  
**Never reuse gasket.**
3. Tighten filler plug to the specified torque.



## GEAR OIL: RS6F94R : Draining

INFOID:000000001521383

1. Start engine and let it run to warm up transaxle.
2. Stop engine. Remove drain plug (1) and then drain gear oil.
3. Set a gasket on drain plug and install it to clutch housing. Tighten drain plug to the specified torque.  
**CAUTION:**  
**Never reuse gasket.**



## GEAR OIL: RS6F94R : Refilling

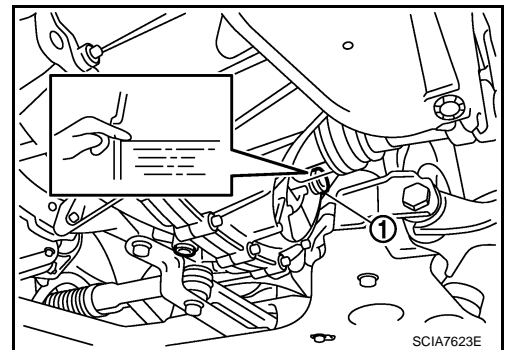
INFOID:000000001521384

1. Remove filler plug (1). Fill with new gear oil until oil level reaches the specified limit at filler plug hole as shown.

**Oil grade and viscosity** : Refer to [MA-22, "Fluids and Lubricants"](#).

**Oil capacity** : Refer to [XX-XX, "\\*\\*\\*\\*\\*"](#).

2. After refilling gear oil, check oil level. Refer to [MA-65, "GEAR OIL: RS6F94R : Inspection"](#).
3. Set a gasket on filler plug and then install it to transaxle case.  
**CAUTION:**  
**Never reuse gasket.**
4. Tighten filler plug to the specified torque.



## GEAR OIL RS6F52A (2WD)

### GEAR OIL RS6F52A (2WD) : Inspection

INFOID:000000001521405

### LEAKAGE

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

### LEVEL

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# CHASSIS MAINTENANCE

## < ON-VEHICLE MAINTENANCE >

1. Remove plug (1).
2. Measure oil level using a suitable gauge (A) as shown in the figure and then check if it is within the specifications.

**Oil level "L" : Refer to XX-XX, "\*\*\*\*\*".**

**CAUTION:**

- Never start engine while checking oil level.
- Measure suitable gauge according to the wall of the plug mounting hole.

3. Set a O-ring on plug and then install it to transaxle case.

**CAUTION:**

**Never reuse O-ring.**

4. Tighten plug mounting bolt to the specified torque.

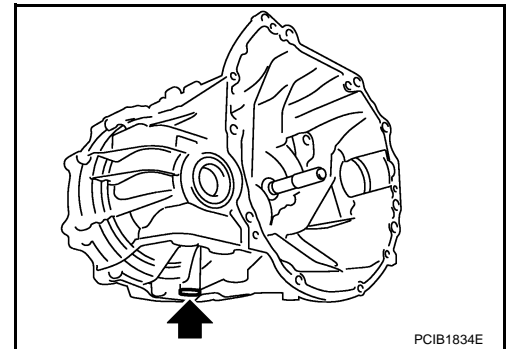
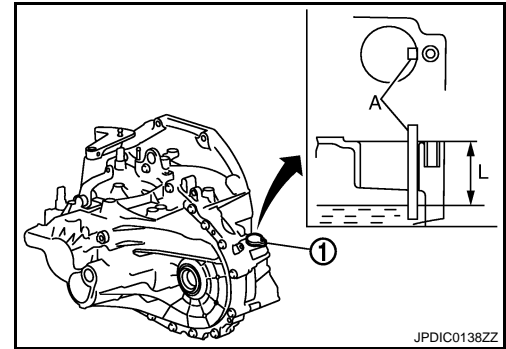
### GEAR OIL RS6F52A (2WD) : Draining

INFOID:000000001521406

1. Start engine and let it run to warm up transaxle.
2. Stop engine. Remove drain plug and then drain gear oil.
3. Set a gasket on drain plug and install it to clutch housing. Tighten drain plug to the specified torque.

**CAUTION:**

**Never reuse gasket.**



### GEAR OIL RS6F52A (2WD) : Refilling

INFOID:000000001521407

1. Remove plug (1). Fill with new gear oil to transaxle.

A : Suitable gauge

**Oil grade and viscosity : Refer to MA-22, "Fluids and Lubricants".**

**Oil capacity (reference) : Refer to XX-XX, "\*\*\*\*\*".**

2. After refilling gear oil, check oil level. Refer to MA-65, "GEAR OIL RS6F52A (2WD) : Inspection".
3. Set a O-ring on plug and then install it to clutch housing.

**CAUTION:**

**Never reuse O-ring.**

4. Tighten plug mounting bolt to the specified torque.

### GEAR OIL RS6F52A (4WD)

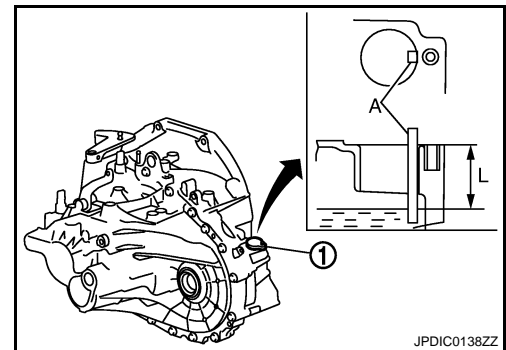
### GEAR OIL RS6F52A (4WD) : Inspection

INFOID:000000001521408

### LEAKAGE

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

### LEVEL



# CHASSIS MAINTENANCE

## < ON-VEHICLE MAINTENANCE >

1. Remove filler plug (1).

← : Vehicle front

2. Measure oil level using a suitable gauge (A) as shown in the figure and then check if it is within the specifications.

**Oil level "L" : Refer to XX-XX, "\*\*\*\*\*".**

**CAUTION:**

- **Never start engine while checking oil level.**
- **Measure suitable gauge according to the wall of the plug mounting hole.**

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

**CAUTION:**

**Never reuse gasket.**

4. Tighten filler plug to the specified torque.

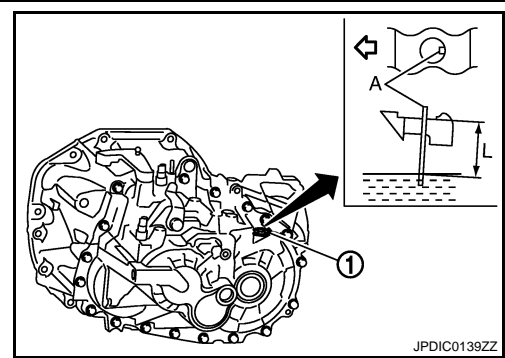
### GEAR OIL RS6F52A (4WD) : Draining

INFOID:000000001521409

1. Start engine and let it run to warm up transaxle.
2. Stop engine. Remove drain plug and then drain gear oil.
3. Set a gasket on drain plug and install it to clutch housing. Tighten drain plug to the specified torque.

**CAUTION:**

**Never reuse gasket.**



A  
B  
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### GEAR OIL RS6F52A (4WD) : Refilling

INFOID:000000001521410

1. Remove filler plug (1). Fill with new gear oil to transaxle.

A : Suitable gauge

← : Vehicle front

**Oil grade and viscosity : Refer to MA-22, "Fluids and Lubricants".**

**Oil capacity (reference) : Refer to XX-XX, "\*\*\*\*\*".**

2. After refilling gear oil, check oil level. Refer to MA-66, "GEAR OIL RS6F52A (4WD) : Inspection".

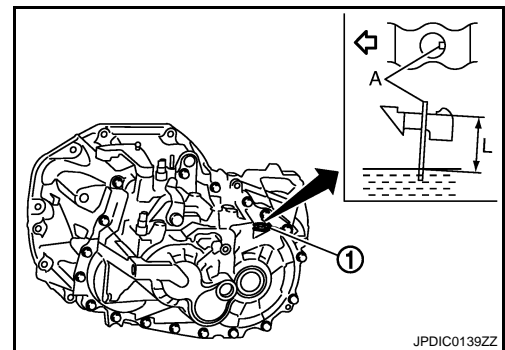
3. Set a gasket on filler plug and then install it to transaxle case.

**CAUTION:**

**Never reuse gasket.**

4. Tighten filler plug to the specified torque.

### CLUTCH FLUID



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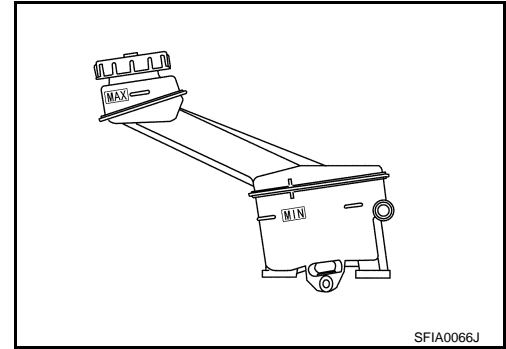
# CHASSIS MAINTENANCE

< ON-VEHICLE MAINTENANCE >

## CLUTCH FLUID : Inspection

INFOID:000000001316219

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



## TRANSFER OIL

### TRANSFER OIL : Inspection

INFOID:000000001521385

#### OIL LEAKAGE

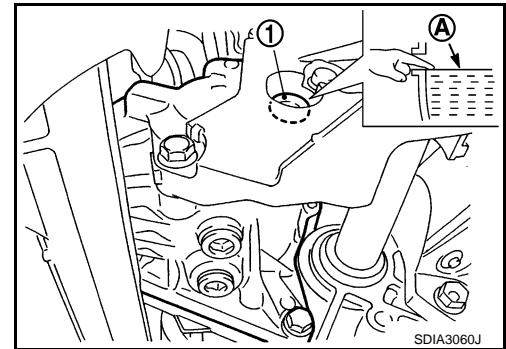
Check transfer surrounding area (oil seal, drain plug, filler plug, and transfer case, etc.) for oil leakage.

#### OIL LEVEL

1. Remove filler plug (1) and gasket. Then check that oil is filled up (A) from mounting hole for the filler plug.
2. Before installing filler plug, set a new gasket. Install filler plug on transfer and tighten to the specified torque. Refer to XX-XX, \*\*\*\*\* (M/T, A/T), XX-XX, \*\*\*\*\* (CVT).

**CAUTION:**

**Never reuse gaskets.**



### TRANSFER OIL : Draining

INFOID:000000001521386

1. Run the vehicle to warm up the transfer unit sufficiently.
2. Stop the engine and remove drain plug (1) and gaskets to drain the transfer oil.

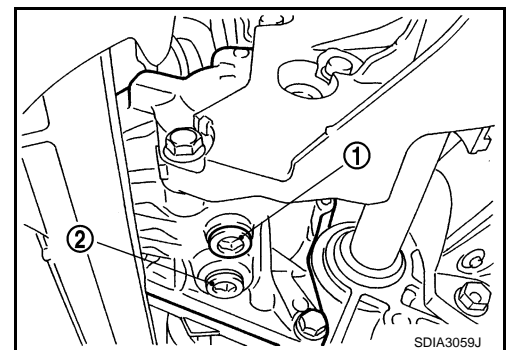
**CAUTION:**

**Never remove tooth contact test hole plug (2).**

3. Before installing drain plug, set a new gasket. Install drain plug on transfer and tighten to the specified torque. Refer to XX-XX, \*\*\*\*\* (M/T, A/T), XX-XX, \*\*\*\*\* (CVT).

**CAUTION:**

**Never reuse gaskets.**



# CHASSIS MAINTENANCE

< ON-VEHICLE MAINTENANCE >

## TRANSFER OIL : Refilling

INFOID:000000001521387

1. Remove filler plug (1) and gasket. Then fill oil up to mounting hole (A) for the filler plug.

**Oil grade and viscosity** : Refer to [MA-22, "Fluids and Lubricants"](#).

**Oil capacity** : Refer to [XX-XX, "\\*\\*\\*\\*\\*"](#).

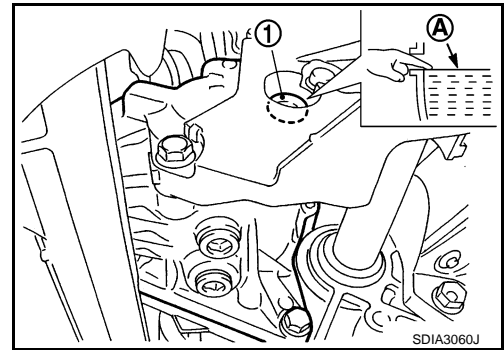
**CAUTION:**

**Carefully fill the oil. (Fill up for approximately 3 minutes.)**

2. Leave the vehicle for 3 minutes. Then check oil level again.
3. Before installing filler plug, set a new gasket. Install filler plug on transfer and tighten to the specified torque. Refer to [XX-XX, "\\*\\*\\*\\*\\*"](#) (M/T, A/T), [XX-XX, "\\*\\*\\*\\*\\*"](#) (CVT).

**CAUTION:**

**Never reuse gasket.**



## REAR PROPELLER SHAFT

### REAR PROPELLER SHAFT : Inspection

INFOID:000000001521388

#### NOISE

- Check the propeller shaft tube surface for dents or cracks. If damaged, replace propeller shaft assembly.
- If center bearing is noisy or damaged, replace propeller shaft assembly.

#### VIBRATION

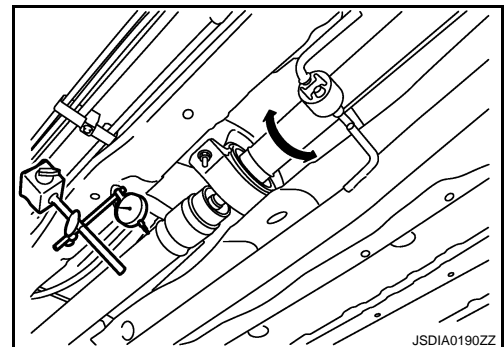
If vibration is present at high speed, inspect propeller shaft runout first.

1. Measure propeller shaft runout at runout measuring points by rotating final drive companion flange with hands.

**Limit**

**Propeller shaft runout** : Refer to [XX-XX, "\\*\\*\\*\\*\\*"](#).

2. If runout still exceeds specifications, separate propeller shaft at final drive companion flange or transfer companion flange; then rotate companion flange 90, 180, 270 degrees and install propeller shaft.
3. Check runout again. If runout still exceeds specifications, replace propeller shaft assembly.
4. Check the vibration by driving vehicle.



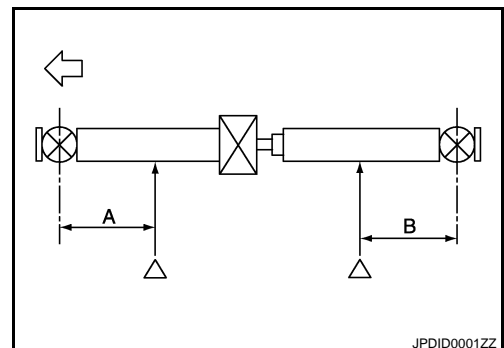
#### RUNOUT MEASURING POINT

Propeller shaft runout measuring point (Point "△").

← : Vehicle front

**Dimension** **A: 498 mm (19.61 in)**

**B: 416 mm (16.38 in)**



## REAR DIFFERENTIAL GEAR OIL

### REAR DIFFERENTIAL GEAR OIL : Inspection

INFOID:000000001521389

#### OIL LEAKEGE

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

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# CHASSIS MAINTENANCE

## < ON-VEHICLE MAINTENANCE >

### OIL LEVEL

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

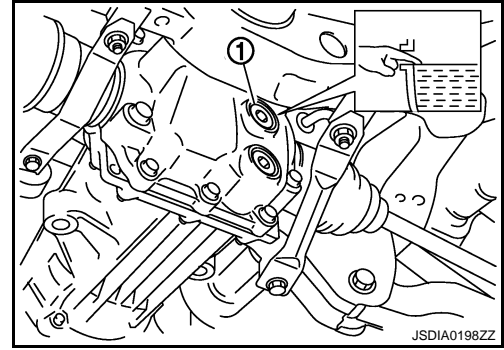
**CAUTION:**

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

- Set a new gasket on filler plug and install it on final drive assembly. Refer to XX-XX, "\*\*\*\*\*".

**CAUTION:**

**Never reuse gasket.**



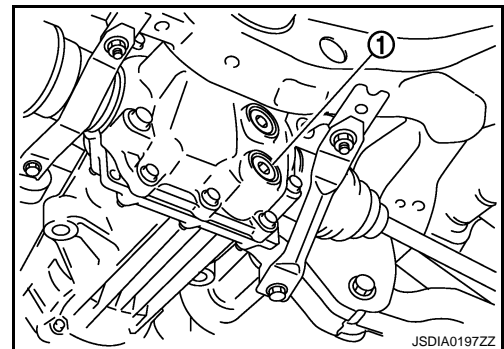
INFOID:000000001521390

### REAR DIFFERENTIAL GEAR OIL : Draining

- Stop engine.
- Remove drain plug (1) and drain gear oil.
- Set a new gasket on drain plug and install it to final drive assembly and tighten to the specified torque. Refer to XX-XX, "\*\*\*\*\*".

**CAUTION:**

**Never reuse gasket.**



INFOID:000000001521391

### REAR DIFFERENTIAL GEAR OIL : Refilling

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

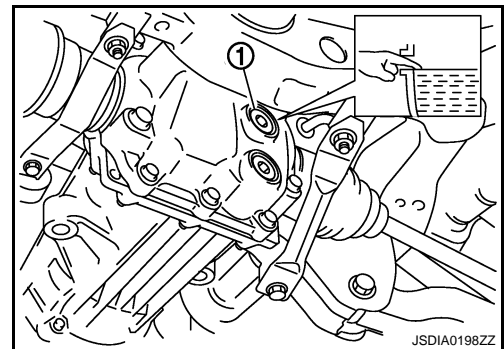
**Oil grade and viscosity** : Refer to MA-22, "Fluids and Lubricants".

**Oil capacity** : Refer to XX-XX, "\*\*\*\*\*".

- After refilling oil, check oil level. Set a new gasket to filler plug, then install it to final drive assembly. Refer to XX-XX, "\*\*\*\*\*".

**CAUTION:**

**Never reuse gasket.**



### WHEELS (BONDING WEIGHT TYPE)

### WHEELS (BONDING WEIGHT TYPE) : Adjustment

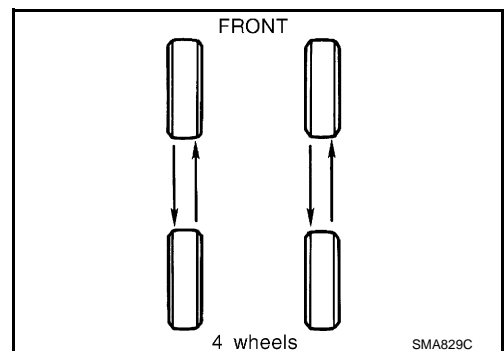
INFOID:000000001521392

### TIRE ROTATION

- Follow the maintenance schedule for tire rotation service intervals. Refer to MA-6, "General Maintenance".
- Do not include the T-type spare tire when rotating the tires.
- When installing the wheel, tighten wheel nuts to the specified torque.

**CAUTION:**

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



# CHASSIS MAINTENANCE

< ON-VEHICLE MAINTENANCE >

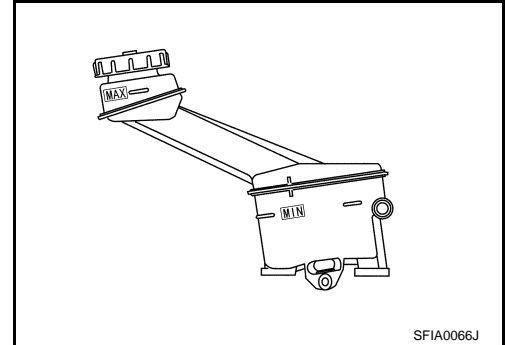
Wheel nuts tightening torque: Refer to [WT-4, "Road Wheel"](#).

## BRAKE FLUID LEVEL AND LEAKS

### BRAKE FLUID LEVEL AND LEAKS : Inspection

INFOID:000000001316228

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

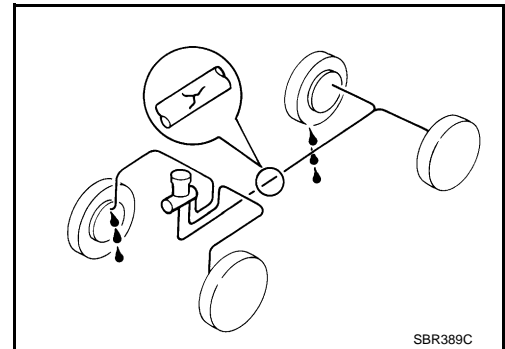


## BRAKE LINES AND CABLES

### BRAKE LINES AND CABLES : Inspection

INFOID:000000001316229

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

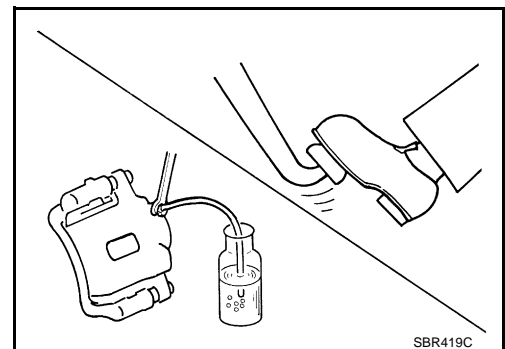


## BRAKE FLUID

### BRAKE FLUID : Changing

INFOID:000000001316230

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-11, "Refilling"](#) (LHD), [BR-61, "Refilling"](#) (RHD).
  - Refill with recommended brake fluid.  
Refer to [MA-22, "Fluids and Lubricants"](#).
  - Never reuse drained brake fluid.
  - Be careful not to splash brake fluid on painted areas.



## DISC BRAKE

### DISC BRAKE : Inspection

INFOID:000000001316231

#### DISC ROTOR

Check condition, wear, and damage.

#### CALIPER

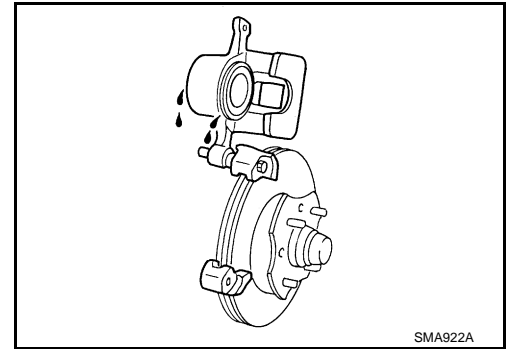
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# CHASSIS MAINTENANCE

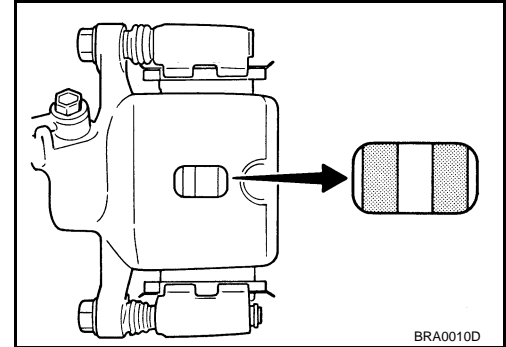
## < ON-VEHICLE MAINTENANCE >

- Check for leakage.



### BRAKE PAD

- Check for wear or damage.



### DISC BRAKE : Front Disc Brake

INFOID:000000001521403

Unit: mm (in.)

Brake pad	Standard thickness	11.0 (0.433)
	Wear limit thickness	2.0 (0.079)
Disc rotor	Standard thickness	26.0 (1.024)
	Wear limit thickness	24.0 (0.945)
	Thickness variation (measured at 8 positions)	0.020 (0.0008)
	Runout limit (with it attached to the vehicle)	0.035 (0.0014)

### DISC BRAKE : Rear Disc Brake

INFOID:000000001521404

Unit: mm (in.)

Brake pad	Standard thickness	8.5 (0.335)
	Wear limit thickness	1.5 (0.059)
Disc rotor	Standard thickness	16.0 (0.630)
	Wear limit thickness	14.0 (0.551)
	Thickness variation (measured at 8 positions)	0.020 (0.0008)
	Runout limit (with it attached to the vehicle)	0.070 (0.0028)

## STEERING GEAR AND LINKAGE

### STEERING GEAR AND LINKAGE : Inspection

INFOID:000000001316234

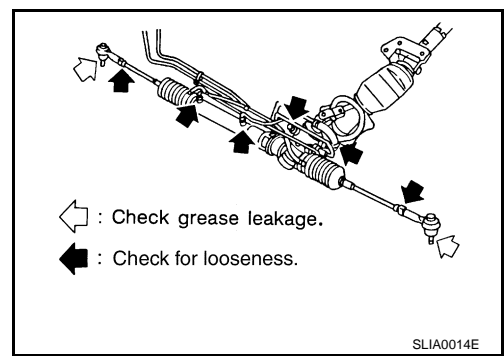
### STEERING GEAR



# CHASSIS MAINTENANCE

## < ON-VEHICLE MAINTENANCE >

- 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.

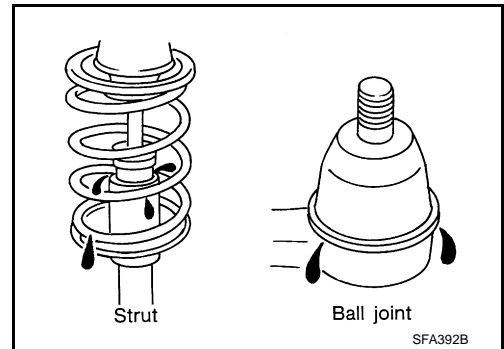
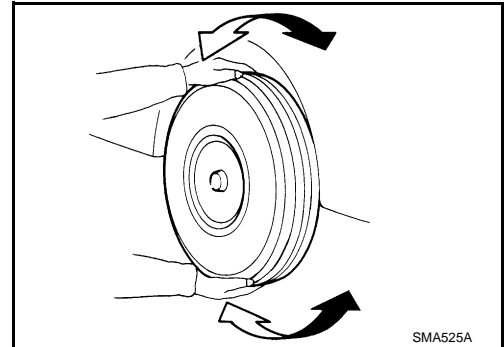
## AXLE AND SUSPENSION PARTS

### AXLE AND SUSPENSION PARTS : Inspection

INFOID:000000001316235

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.

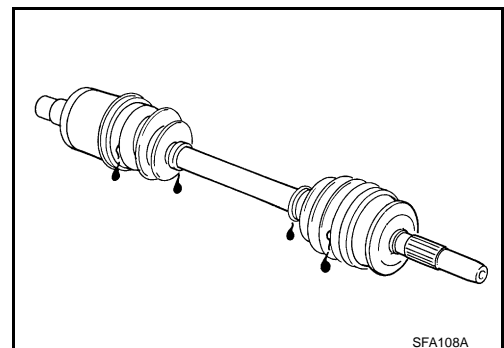


## DRIVE SHAFT

### DRIVE SHAFT : Inspection

INFOID:000000001316236

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



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# BODY MAINTENANCE

< ON-VEHICLE MAINTENANCE >

## BODY MAINTENANCE

### LOCKS, HINGES AND HOOD LATCH

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

INFOID:000000001316237

For hood and hood lock illustration.

- Hood: Refer to [XX-XX, \\*\\*\\*\\*\\*](#).
- Hood lock control: Refer to [XX-XX, \\*\\*\\*\\*\\*](#).

For door and door lock illustration.

- Front door: Refer to [XX-XX, \\*\\*\\*\\*\\*](#).
- Front door lock: Refer to [XX-XX, \\*\\*\\*\\*\\*](#).
- Rear door: Refer to [XX-XX, \\*\\*\\*\\*\\*](#).
- Rear door lock: Refer to [XX-XX, \\*\\*\\*\\*\\*](#).

For back door and back door lock illustration.

- Back door: Refer to [XX-XX, \\*\\*\\*\\*\\*](#).
- Back door lock: Refer to [XX-XX, \\*\\*\\*\\*\\*](#).

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

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

INFOID:000000001316238

For front seat belt illustration. Refer to [SB-5, "SEAT BELT RETRACTOR : Exploded View"](#).

For rear seat belt illustration. Refer to [SB-10, "SEAT BELT RETRACTOR : Exploded View"](#).

#### **CAUTION:**

- **After any collision, inspect all seat belt assemblies, including retractors and other attached hardwares (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-3, "SEAT BELT RETRACTOR : Inspection"](#) , [SB-8, "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

### BODY CORROSION

#### BODY CORROSION : Checking Body Corrosion

INFOID:000000001316239

Visually check body panels for collision damage (scratches, chipping, rubbing, etc.) or damage to the anti-corrosion materials. In particular, check the following locations.

#### HEMMED PANELS

Hood front end, door lower end, trunk lid rear end, etc.

#### PANEL JOINT

Side sill of rear fender and center pillar, rear wheel housing of rear fender, around strut tower in engine compartment, etc.

#### PANEL EDGE

Trunk lid opening, sunroof opening, fender wheel-arch flange, fuel filler lid flange, around holes in panel, etc.

#### PARTS CONTACT

Waist moulding, windshield moulding, bumper, etc.

## BODY MAINTENANCE

< ON-VEHICLE MAINTENANCE >

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### PROTECTORS

Damage or condition of mudguard, fender protector, chipping protector, etc.

A

### ANTI-CORROSION MATERIALS

Damage or separation of anti-corrosion materials under the body.

B

### DRAIN HOLES

Condition of drain holes at door and side sill. When repairing corroded areas, refer to the Corrosion Repair Manual.

C

D

E

F

G

H

I

J

K

L

M

N

O

MA

## SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

### SERVICE DATA AND SPECIFICATIONS (SDS)

#### SERVICE DATA AND SPECIFICATIONS (SDS)

##### DRIVE BELTS (MR20DE)

DRIVE BELTS (MR20DE) : Drive Belt

INFOID:000000001521414

##### 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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##### DRIVE BELTS (QR25DE)

DRIVE BELTS (QR25DE) : Drive belt

INFOID:000000001521415

##### 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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##### DRIVE BELTS (M9R)

DRIVE BELTS (M9R) : Drive Belts

INFOID:000000001527560

##### DRIVE BELT

Tension of drive belt	Belt tensioning is not necessary, as it is automatically adjusted by drive belt auto-tensioner.
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##### ENGINE COOLANT (MR20DE)

ENGINE COOLANT (MR20DE) : Periodical Maintenance Specification

INFOID:000000001521416

##### ENGINE COOLANT CAPACITY (APPROXIMATE)

Unit: ℓ (Imp qt)

Engine coolant capacity (With reservoir tank at "MAX" level)	M/T models (2WD)	7.0 (6 - 1/8)
	M/T models (4WD)	7.1 (6 - 1/4)
	CVT models	7.4 (6 - 1/2)
Reservoir tank engine coolant capacity (At "MAX" level)		0.75 (5/8)

##### ENGINE COOLANT (QR25DE)

ENGINE COOLANT (QR25DE) : Periodical Maintenance Specification

INFOID:000000001521418

##### ENGINE COOLANT CAPACITY (APPROXIMATE)

Unit: ℓ (Imp qt)

Engine coolant capacity (With reservoir tank at "MAX" level)	M/T models	6.8 (6)
	CVT models	7.1 (6 - 1/4)
Reservoir tank		0.75 (5/8)

##### ENGINE COOLANT (M9R)

ENGINE COOLANT (M9R) : Periodical Maintenance Specification

INFOID:000000001527561

##### ENGINE COOLANT CAPACITY (APPROXIMATE)

# SERVICE DATA AND SPECIFICATIONS (SDS)

## < SERVICE DATA AND SPECIFICATIONS (SDS)

Unit: ℓ (Imp qt)

Engine coolant capacity (With reservoir tank at "MAX" level)	M/T models	8.4 (7-3/8)
	A/T models	8.9 (7-7/8)
Reservoir tank engine coolant capacity (At "MAX" level)		0.7 (5/8)

### ENGINE OIL (MR20DE)

#### ENGINE OIL (MR20DE) : Periodical Maintenance Specification

INFOID:000000001521421

#### ENGINE OIL CAPACITY (APPROXIMATE)

Unit: ℓ (Imp qt)

Drain and refill	With oil filter change	4.4 (3-7/8)
	Without oil filter change	4.2 (3-3/4)
Dry engine (Overhaul)		5.2 (4-5/8)

### ENGINE OIL (QR25DE)

#### ENGINE OIL (QR25DE) : Periodical Maintenance Specification

INFOID:000000001521422

#### ENGINE OIL CAPACITY (APPROXIMATE)

Unit: ℓ (Imp qt)

Destination		With WVTA	Without WVTA
Drain and refill	With oil filter change	5.1 (4-1/2)	4.6 (4)
	Without oil filter change	4.8 (4-1/4)	4.3 (3-3/4)
Dry engine (Overhaul)		5.9 (5-1/4)	5.4 (4-3/4)

### ENGINE OIL (M9R)

#### ENGINE OIL (M9R) : Periodical Maintenance Specification

INFOID:000000001527562

#### ENGINE OIL CAPACITY (APPROXIMATE)

Unit: ℓ (Imp qt)

Drain and refill	With oil filter change	7.4 (6-1/2)
	Without oil filter change	7.0 (6-1/8)
Dry engine (Overhaul)		8.4 (7-3/8)

### SPARK PLUG (MR20DE)

#### SPARK PLUG (MR20DE) : Spark Plug

INFOID:000000001521424

#### SPARK PLUG

Unit: mm (in)

Make	NGK
Standard type	PLZKAR6A-11
Gap (Nominal)	1.1 (0.043)

### SPARK PLUG (QR25DE)

#### SPARK PLUG (QR25DE) : Spark Plug

INFOID:000000001521425

#### SPARK PLUG

Unit: mm (in)

Make	NGK
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# SERVICE DATA AND SPECIFICATIONS (SDS)

## < SERVICE DATA AND SPECIFICATIONS (SDS)

Standard type	DILKAR6A-11
Spark plug gap (Nominal)	1.1 (0.043)

## ROAD WHEEL

### ROAD WHEEL : Road Wheel

INFOID:000000001521426

Kind of wheel		Aluminum	Steel
Maximum radial runout limit	Lateral deflection	Less than 0.3 mm (0.012 in)	Less than 0.8 mm (0.031 in)
	Vertical deflection		Less than 0.5 mm (0.020 in)
Maximum allowable unbalance limit	Dynamic (At rim flange)	Less than 5 g (0.17 oz) (one side)	
	Static (At rim flange)	Less than 10 g (0.35 oz)	
Wheel nuts tightening torque		108 N·m (11 kg-m, 80 ft-lb)	