SECTION MA
MAINTENANCE

CONTENTS

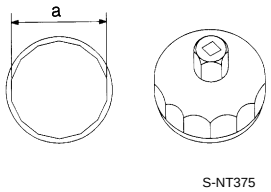
PREPARATION

PREPARATION

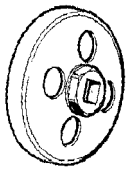
Special Service Tool

INFOID:0000000006419556

MR16DDT ENGINE MODELS AND HR16DE ENGINE MODELS

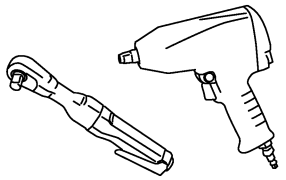
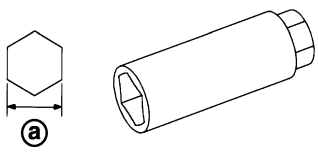
Tool number Tool name	Description
Oil filter wrench  S-NT375	Removing and installing oil filter **a: 64.3 mm (2.531 in)**

K9K ENGINE MODELS

NISSAN tool number (RENAULT tool number) Tool name	Description
KV113C0010 (Mot.1329) Oil filter wrench  MBIB0369E	Removing and installing oil filter

Commercial Service Tool

INFOID:0000000006419557

Tool name	Description
Power tool  PBIC0190E	Loosening nuts and bolts
Spark plug wrench  JPBIA0399ZZ	Removing and installing spark plug a : 14 mm (0.55 in)

PERIODIC MAINTENANCE

GENERAL MAINTENANCE

General Maintenance

INFOID:0000000006419558

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

OUTSIDE THE VEHICLE

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

Item		Reference page
Tires	Check the pressure with a gauge often and always prior to long distance trips. Adjust the pressure in all tires, including the spare, to the pressure specified. Check carefully for damage, cuts or excessive wear.	WT-9
Windshield wiper blades	Check for cracks or wear if not functioning correctly.	—
Doors and engine hood	Check that all doors and the engine hood operate smoothly as well as the back door. Also make sure that all latches lock securely. Lubricate if necessary. Make sure that the secondary latch keeps the hood from opening when the primary latch is released. When driving in areas using road salt or other corrosive materials, check for lubrication frequently.	MA-58
Tire rotation	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.	WT-6
Wheel alignment and balance	If the vehicle should pull to either side while driving on a straight and level road, or if you detect uneven or abnormal tire wear, there may be a need for wheel alignment. If the steering wheel or seat vibrates at normal highway speeds, wheel balancing may be needed.	FSU-7 RSU-6 (2WD) RSU-20 (4WD) MA-52

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
Lamps	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.	—
Warning lamps and chimes	Make sure that all warning lamps and chimes are operating properly.	—
Steering wheel	Check that it has the specified play. Check for changes in the steering condition, such as excessive play, hard steering or strange noises. **Free play: Less than 35 mm (1.38 in)**	—
Seat belts	Check that all parts of the seat belt system (e.g. buckles, anchors, adjusters and retractors) operate properly and smoothly, and are installed securely. Check the belt webbing for cuts, fraying, wear or damage.	MA-58

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
Windshield washer fluid	Check that there is adequate fluid in the tank.	—
Engine coolant level	Check the coolant level when the engine is cold.	MA-15 (MR16) MA-25 (HR16) MA-33 (K9K)
Engine oil level	Check the level after parking the vehicle on a level ground and turning off the engine.	LU-8 (MR16) LU-25 (HR16) LU-33 (K9K)
Brake and clutch fluid levels	Make sure that the brake and clutch fluid levels are between the “MAX” and “MIN” lines on the reservoir.	MA-55 CL-10 (5MT) CL-13 (6MT)
Battery	Check the fluid level in each cell. It should be between the “MAX” and “MIN” lines.	PG-111

PERIODIC MAINTENANCE

Periodic Maintenance

INFOID:0000000006419559

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 (MR16DDT PETROL ENGINE)

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

MAINTENANCE OPERATION		MAINTENANCE INTERVAL						Reference page
Perform at a kilometer (mile) or month interval, whichever comes first.	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	
Intake & exhaust valve clearance	See NOTE (1)							EM-14
Drive belt(s)	See NOTE (2)	I	I	I	I	I	I	MA-15
Engine oil (Use recommended oil.)★		R	R	R	R	R	R	MA-20
Engine oil filter (Use genuine NISSAN engine oil filter or equivalent.)★		R	R	R	R	R	R	MA-21
Engine coolant (Use Genuine NISSAN Engine Coolant or equivalent in its quality.)	See NOTE (3)	I	I	I	I	R	I	MA-15
Cooling system		I	I	I	I	I	I	MA-15 MA-19 MA-19
Fuel lines			I		I		I	MA-20
EVAP vapor lines (With carbon canister)			I		I		I	MA-23
Air cleaner filter (Viscous paper type)★				R			R	MA-20
Air cleaner filter (Dry paper type)★		Clean every 5,000 km (3,000 miles)						
			R		R		R	
Fuel filter (In-tank type)	See NOTE (4)							—
Spark plugs (Iridium-Platinum tipped type) (For Europe)						[R]		MA-22
Spark plugs (Iridium-Platinum tipped type) (For Russia and Ukraine)		Replace every 15,000 km (9,000 miles)						

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.**
- **(3) 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. First replace at 100,000 km (60,000 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.**

CHASSIS AND BODY MAINTENANCE (MR16DDT PETROL ENGINE)

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

MAINTENANCE OPERATION		MAINTENANCE INTERVAL						Reference page
Perform at a kilometer (mile) or month interval, whichever comes first.	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	
Headlamp aiming		I	I	I	I	I	I	MA-40 (LHD) MA-42 (RHD)
Brake & clutch, systems and fluids (For level and leaks)		I	I	I	I	I	I	MA-55 MA-49 (5MT) MA-49 (6MT)
Brake fluid★			R		R		R	MA-55
Brake booster vacuum hoses, connections & check valve			I		I		I	BR-15 (LHD) BR-83 (RHD)
CVT fluid (For leaks)	See NOTE (1)	I	I	I	I	I	I	MA-47 (RE0F11A) MA-45 (RE0F10B)
Manual transaxle gear oil (For level & leaks)		I	I	I	I	I	I	MA-47 (5MT) MA-48 (6MT)
Transfer oil (For level & leaks)		I	I	I	I	I	I	MA-50
Differential gear oil (For level & leaks)★		I	I	I	I	I	I	MA-52
Steering gear & linkage, axle & suspension parts, propeller shaft & drive shafts★			I		I		I	MA-57 MA-57 MA-51 MA-57
Exhaust system★			I		I		I	MA-45
Brake pads, rotors & other brake components★		I	I	I	I	I	I	MA-55 BR-16 (LHD) BR-18 (LHD) BR-84 (RHD) BR-86 (RHD)
Foot brake, parking brake & clutch (For free play, stroke & operation)		I	I	I	I	I	I	BR-9 (LHD) BR-77 (RHD) PB-2 CL-7
Air conditioner filter★		R	R	R	R	R	R	VTL-18 (LHD) VTL-18 (RHD)
Body corrosion	See NOTE (2)							MA-58

NOTE:

- **Maintenance items with "★" should be performed more frequently according to "Maintenance under severe driving conditions".**

- **(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 (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.**

MAINTENANCE UNDER SEVERE DRIVING CONDITIONS (MR16DDT PETROL ENGINE)

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

Severe driving conditions

A — Driving under dusty conditions
B — Driving repeatedly short distances
C — Towing a trailer or caravan
D — Extensive idling
E — Driving in extremely adverse weather conditions or in areas where ambient temperatures are either extremely low or extremely high
F — Driving in high humidity or mountainous areas
G — Driving in areas using salt or other corrosive areas
H — Driving on rough and/or muddy roads or in the desert
I — Driving with frequent use of braking or in mountainous areas

Driving condition									Maintenance item	Maintenance operation	Maintenance interval	Reference page
A	.	.	.	.	.	.	.	.	Air cleaner filter	Replace	More frequently	MA-20
A	B	C	D	.	.	.	.	.	Engine oil & engine oil filter	Replace	Every 10,000 km (6,000 miles) or 6 months	MA-20 MA-21
.	.	.	.	.	F	.	.	.	Brake fluid	Replace	Every 20,000 km (12,000 miles) or 12 months	MA-55
.	.	C	.	.	.	.	H	.	Differential gear oil	Replace	Every 40,000 km (24,000 miles) or 24 months	MA-52
.	.	.	.	.	.	G	H	.	Steering gear & linkage, axle & suspension parts, propeller shaft, & drive shafts	Inspect	Every 20,000 km (12,000 miles) or 12 months	MA-57 MA-57 MA-51 MA-57
.	.	.	.	.	.	G	H	.	Exhaust system	Inspect	Every 20,000 km (12,000 miles) or 12 months	MA-45
A	.	C	.	.	.	G	H	I	Brake pads, rotors & other brake components	Inspect	Every 10,000 km (6,000 miles) or 12 months	MA-55 BR-16 (LHD) BR-18 (LHD) BR-84 (RHD) BR-86 (RHD)
A	.	.	.	.	.	.	.	.	Air conditioner filter	Replace	Every 10,000 km (6,000 miles) or 12 months	VTL-18 (LHD) VTL-18 (LHD)

ENGINE AND EMISSION CONTROL MAINTENANCE (HR16DE PETROL ENGINE)

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

MAINTENANCE OPERATION		MAINTENANCE INTERVAL				Reference page
Perform at a kilometer (mile) or month interval, whichever comes first.	km x 1,000 (Miles x 1,000) Months	30 (18) 12	60 (36) 24	90 (54) 36	120 (72) 48	
Intake & exhaust valve clearance	See NOTE (1)					EM-148
Drive belt(s)	See NOTE (2)	I	I	I	I	MA-24
Engine oil (Use recommended oil.)★		R	R	R	R	MA-30
Engine oil filter (Use genuine NISSAN engine oil filter or equivalent.)★		R	R	R	R	MA-30
Engine coolant (Use Genuine NISSAN Engine Coolant or equivalent in its quality.)	See NOTE (3)	I	I	I	I	MA-25
Cooling system		I	I	I	I	MA-25 MA-28 MA-29
Fuel lines			I		I	MA-29
EVAP vapor lines (With carbon canister)		I	I	I	I	MA-32
Air cleaner filter★			R		R	MA-29
Fuel filter (In-tank type)	See NOTE (4)					—
Spark plugs (Platinum-tipped type) (For Europe)				[R]		MA-31
Spark plugs (Platinum-tipped type) (For Russia and Ukraine)		Replace every 15,000 km (9,000 miles)				

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.**
- **(3) 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. 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.**

CHASSIS AND BODY MAINTENANCE (HR16DE PETROL ENGINE)

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

MAINTENANCE OPERATION		MAINTENANCE INTERVAL				Reference page
Perform at a kilometer (mile) or month interval, whichever comes first.	km x 1,000 (Miles x 1,000) Months	30 (18) 12	60 (36) 24	90 (54) 36	120 (72) 48	
Headlamp aiming		I	I	I	I	MA-40 (LHD) MA-42 (RHD)
Brake & clutch, systems and fluids (For level and leaks)		I	I	I	I	MA-55 MA-49 (5MT) MA-49 (6MT)
Brake fluid★			R		R	MA-55
Brake booster vacuum hoses, connections & check valve			I		I	BR-15 (LHD) BR-83 (RHD)

MAINTENANCE OPERATION		MAINTENANCE INTERVAL				Reference page
Perform at a kilometer (mile) or month interval, whichever comes first.	km x 1,000 (Miles x 1,000) Months	30 (18) 12	60 (36) 24	90 (54) 36	120 (72) 48	
CVT fluid (For leaks)	See NOTE (1)	I	I	I	I	MA-47 (RE0F11A) MA-45 (RE0F10B)
Manual transaxle gear oil (For level & leaks)		I	I	I	I	MA-47 (5MT) MA-48 (6MT)
Steering gear & linkage, axle & suspension parts, & front drive shafts★			I		I	MA-57 MA-57 MA-57
Exhaust system★			I		I	MA-45
Brake pads, rotors & other brake components★		I	I	I	I	MA-55 BR-16 (LHD) BR-18 (LHD) BR-84 (RHD) BR-86 (RHD)
Foot brake, parking brake & clutch (For free play, stroke & operation)		I	I	I	I	BR-9 (LHD) BR-77 (RHD) PB-2 CL-7
Air conditioner filter★		R	R	R	R	VTL-18 (LHD) VTL-18 (RHD)
Body corrosion	See NOTE (2)					MA-58

NOTE:

- **Maintenance items with "★" should be performed more frequently according to "Maintenance under severe driving conditions".**
- **(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 (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.**

MAINTENANCE UNDER SEVERE DRIVING CONDITIONS (HR16DE PETROL ENGINE)

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

Severe driving conditions

A — Driving under dusty conditions
B — Driving repeatedly short distances
C — Towing a trailer or caravan
D — Extensive idling
E — Driving in extremely adverse weather conditions or in areas where ambient temperatures are either extremely low or extremely high
F — Driving in high humidity or mountainous areas
G — Driving in areas using salt or other corrosive areas

H — Driving on rough and/or muddy roads or in the desert
I — Driving with frequent use of braking or in mountainous areas

Driving condition									Maintenance item	Maintenance operation	Maintenance interval	Reference page
A	.	.	.	.	.	.	.	.	Air cleaner filter	Replace	More frequently	MA-29
A	B	C	D	.	.	.	.	.	Engine oil & engine oil filter	Replace	Every 15,000 km (9,000 miles) or 6 months	MA-30 MA-30
.	.	.	.	.	F	.	.	.	Brake fluid	Replace	Every 30,000 km (18,000 miles) or 12 months	MA-55
.	.	.	.	.	.	G	H	.	Steering gear & linkage, axle & suspension parts, & front drive shafts	Inspect	Every 30,000 km (18,000 miles) or 12 months	MA-57 MA-57 MA-57
.	.	.	.	.	.	G	H	.	Exhaust system	Inspect	Every 30,000 km (18,000 miles) or 12 months	MA-45
A	.	C	.	.	.	G	H	I	Brake pads, rotors & other brake components	Inspect	Every 15,000 km (9,000 miles) or 12 months	MA-55 BR-16 (LHD) BR-18 (LHD) BR-84 (RHD) BR-86 (RHD)
A	.	.	.	.	.	.	.	.	Air conditioner filter	Replace	Every 15,000 km (9,000 miles) or 12 months	MA-29

RECOMMENDED FLUIDS AND LUBRICANTS

Fluids and Lubricants

INFOID:0000000006419560

			Capacity (Approximate)		Recommended Fluids/Lubricants
			Imp measure	Liter	
Engine oil Drain and refill	With oil filter change	MR16DDT	4-1/4 qt	4.8	Genuine NISSAN engine oil*1 API grade 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
		HR16DE	3-6/8 qt	4.3	
	Without oil filter change	MR16DDT	4 qt	4.6	
		HR16DE	3-5/8 qt	4.1	
Dry engine (Overhaul)		MR16DDT	4-3/4 qt	5.4	
		HR16DE	4-2/8 qt	4.8	
Cooling system	With reservoir tank		7-1/8 qt	8.1	Genuine NISSAN Engine Coolant or equivalent in its quality*2
	Reservoir tank		1/2 qt	0.6	
CVT fluid		RE0F10B	7-1/2 qt	8.5	Genuine NISSAN CVT Fluid NS-2*3
		RE0F11A	6-1/8 qt	6.9	
Manual transaxle gear oil		RS5F92R	4 pt	2.3	Genuine NISSAN gear oil (Chevron Texaco ETL8997B) 75W-80, or equivalent*4
		RS6F94R	3-1/2 pt	2.0	
Transfer fluid			5/8 pt	0.37	Genuine NISSAN Differential Oil Hypoid Super GL-5 80W-90 or API GL-5, Viscosity SAE 80W-90
Brake and clutch fluid			—	—	Genuine NISSAN Brake Fluid, or equivalent DOT3 or DOT4*5 (US FMVSS No. 116)
Differential gear oil			3/4 pt	0.4	Genuine NISSAN Differential Oil Hypoid Super GL-5 80W-90 or API GL-5*1
Multi-purpose grease			—	—	NLGI No. 2 (Lithium soap base)

*1: For additional information, see “SAE Viscosity Number”.

*2: Use Genuine NISSAN Engine Coolant or equivalent in its quality, in order to avoid possible aluminium corrosion within the engine cooling system caused by the use of non-genuine engine coolant.

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: Use only Genuine NISSAN CVT Fluid NS-2. Using transmission fluid other than Genuine NISSAN CVT Fluid NS-2 will damage the CVT, which is not covered by the warranty.

*4: If Genuine NISSAN gear oil (Chevron Texaco ETL8997B) is not available, API GL-4, Viscosity SAE 75W-80 may be used as a temporary replacement. However, use Genuine NISSAN gear oil as soon as it is available.

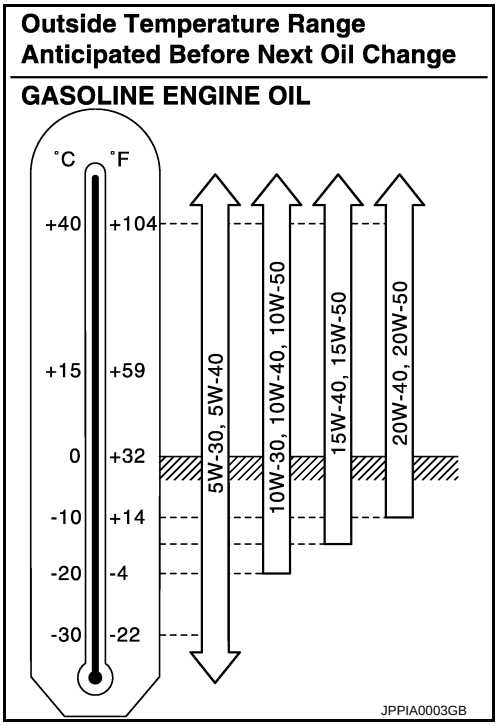
*5: Never mix different types of fluids (DOT3 and DOT4).

SAE Viscosity Number

INFOID:0000000006419561

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.



Engine Coolant Mixture Ratio

INFOID:0000000006419562

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 a Genuine NISSAN Engine Coolant or equivalent in its quality with the proper mixture ratio (50%). See the examples shown in the figure.**

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

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

SMA089D

- 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.

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:

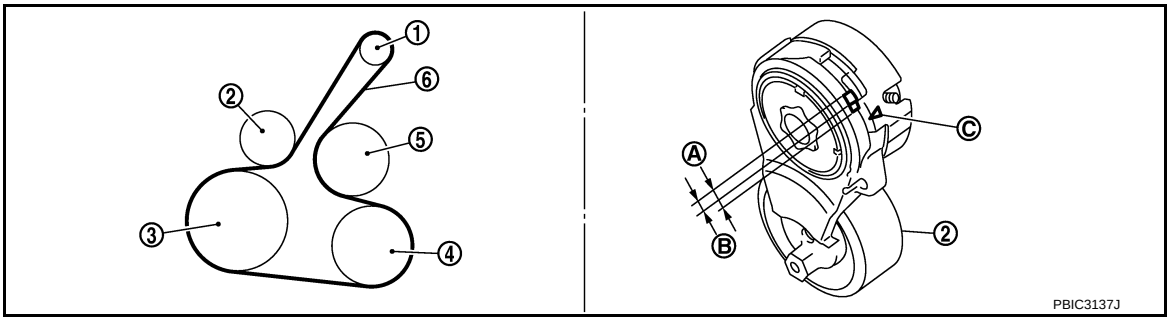
Never remove the radiator cap and reservoir tank cap when the engine is hot. Serious burns could be caused by high pressure fluid escaping from the radiator. Wait until the engine and radiator cool down.

ENGINE MAINTENANCE (MR16DDT)

DRIVE BELT

DRIVE BELT : Exploded View

INFOID:0000000006419681



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

DRIVE BELT : Checking

INFOID:0000000006419682

WARNING:

Perform this step when engine is stopped.

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

INFOID:0000000006419683

Refer to : EM-129, "Drive Belt".

ENGINE COOLANT

ENGINE COOLANT : Inspection

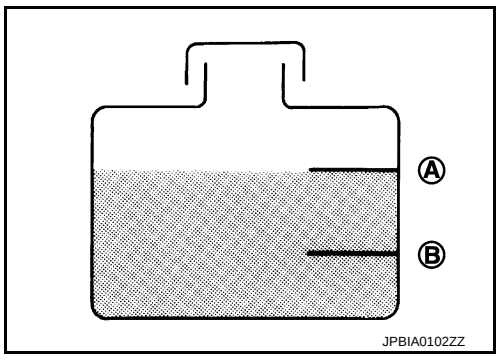
INFOID:0000000006419691

LEVEL

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

  A : MAX

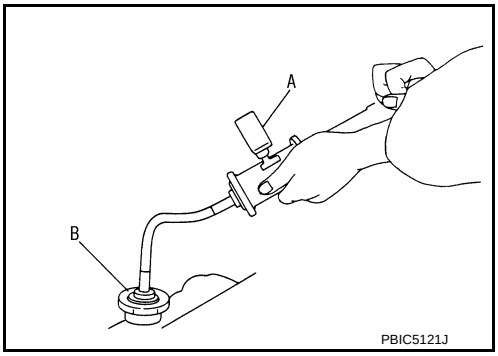
  B : MIN



- Adjust the engine coolant level if necessary.

LEAKAGE

- 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-29, "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.

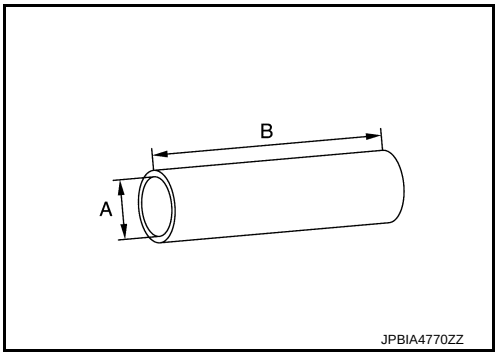
- If anything is found, repair or replace damaged parts.

ENGINE COOLANT : Draining

INFOID:0000000006419692

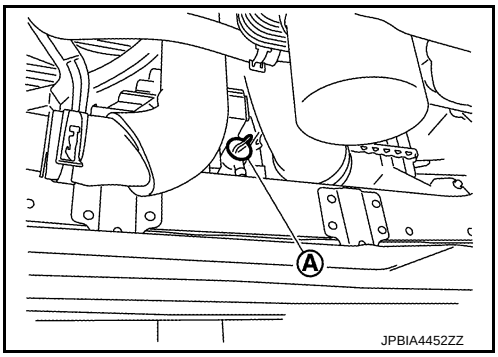
WARNING:
- **Never remove radiator cap when engine is hot. Serious burns may occur from high-pressure engine coolant escaping from radiator.**
- **Wrap a thick cloth around the radiator cap. Slowly turn it a quarter of a turn to release built-up pressure. Then turn it all the way.**

1. Connect drain hose.
   - Use a genera-purpose hose with the dimensions show in the figure.



   A : ϕ 8 mm
   B : 300 mm

2. Open radiator drain plug (A) 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 EM-63, "Setting".

3. Remove reservoir tank if necessary, and drain engine coolant and clean reservoir tank before installing. Refer to CO-17, "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-18, "ENGINE COOLANT : Flushing".

ENGINE COOLANT : Refilling

INFOID:0000000006419693

1. IInstall reservoir tank if removed, and install radiator drain plug.
   CAUTION:
   Be sure to clean drain plug and install with new O-ring.

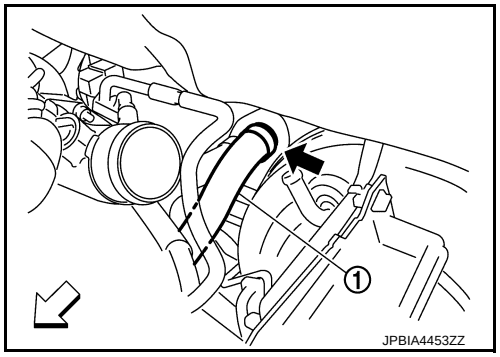
Radiator drain plug : Refer to CO-17, "Exploded View".

- If water drain plugs on cylinder block are removed, close and tighten them. Refer to EM-63, "Setting".

2. Check that each hose clamp has been firmly tightened.
3. Remove air duct (between air cleaner cover assembly and turbocharger inlet tube). Refer to EM-26, "Exploded View".
4. For LHD models, disconnect vacuum hose break booster side, and removal vacuum tube from clamp. Refer to BR-49, "MR16DDT : Exploded View" (LHD models).
5. Disconnect heater hose (1) at position (⇦) in the figure.

⇦ : Vehicle front

- Enhance heater hose as high as possible.

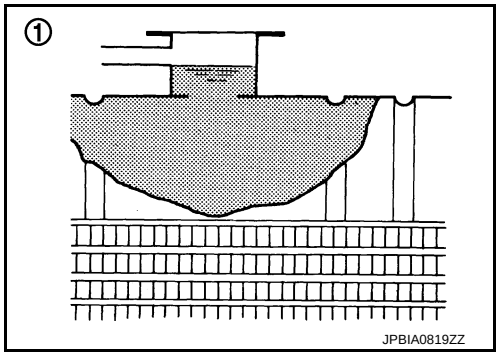


6. Fill radiator (1) to specified level.

CAUTION:

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

- **Pour coolant slowly of less than 2 ℓ (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-13, "Fluids and Lubricants".**



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

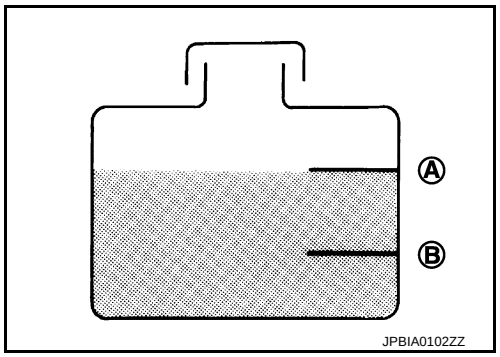
Refer to CO-29, "Periodical Maintenance Specification".

7. 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-29, "Periodical Maintenance Specification".



8. Install air duct (between air cleaner cover assembly and turbocharger inlet tube). Refer to EM-26, "Exploded View".
9. Install radiator cap.
10. 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.

11. 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.).
12. Refill reservoir tank to “MAX” level line with engine coolant.
13. Repeat steps 6 through 11 two or more times with radiator cap installed until engine coolant level no longer drops.
14. Check cooling system for leakage with engine running.
15. 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.
16. Repeat step 15 three times.
17. If sound is heard, bleed air from cooling system by repeating step 6 through 11 until reservoir tank level no longer drops.

ENGINE COOLANT : Flushing

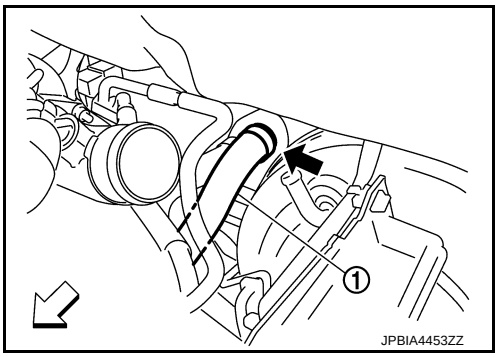
INFOID:0000000006419694

1. Install radiator drain plug.

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

   Radiator drain plug : Refer to CO-17, "Exploded View".
   - If water drain plugs on cylinder block are removed, close and tighten them. Refer to EM-63, "Setting".
2. Remove air duct (between air cleaner cover assembly and turbocharger), air cleaner cover assembly and air cleaner body assembly. Refer to EM-26, "Exploded View".
3. Disconnect vacuum hose break booster side, and remove vacuum tube from clamp. Refer to .
4. Disconnect heater hose (1) at position (⇦) in the figure.

   ⇦ : Vehicle front
   - Enhance heater as high as possible.



5. 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.
6. Connect vacuum hose, and install vacuum tube. Refer to .
7. Install air duct (between air cleaner cover and turbocharger), air cleaner cover assembly and air cleaner body assembly. Refer to EM-26, "Exploded View".
8. Run the engine and warm it up to normal operating temperature.
9. Rev the engine two or three times under no-load.
10. Stop the engine and wait until it cools down.
11. Drain water from the system. Refer to MA-16, "ENGINE COOLANT : Draining".
12. Repeat steps 1 through 9 until clear water begins to drain from radiator.

RADIATOR CAP

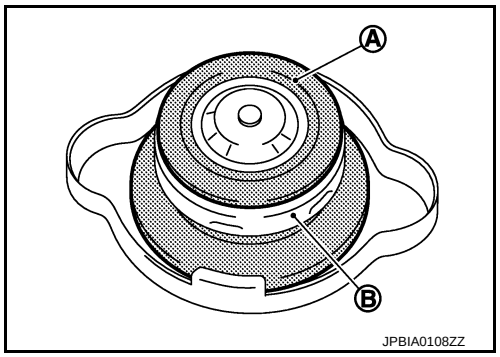
RADIATOR CAP : Inspection

INFOID:0000000006419695

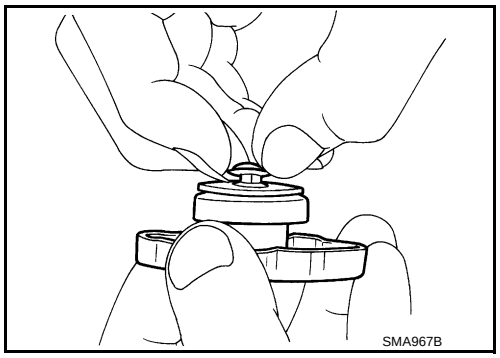
- Check valve seat (A) of radiator cap.

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.



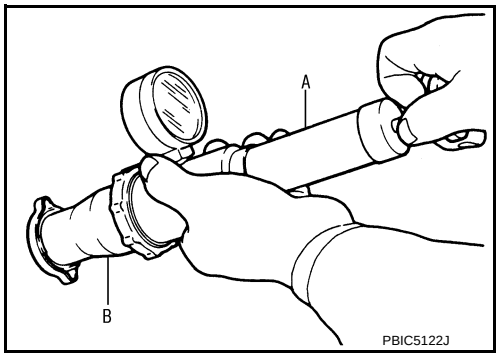
- Pull negative-pressure valve to open it, and that it close completely when released.
- Check that there is no dirt or damage on the valve seat of radiator cap negative-pressure valve.
- Check that there are no unusualness in the opening and closing conditions of negative-pressure valve.



- Check radiator cap relief pressure.

Standard and Limit : Refer to CO-29, "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:0000000006419697

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^2, 71 psi) and keep distance more than 30 cm (11.81 in).

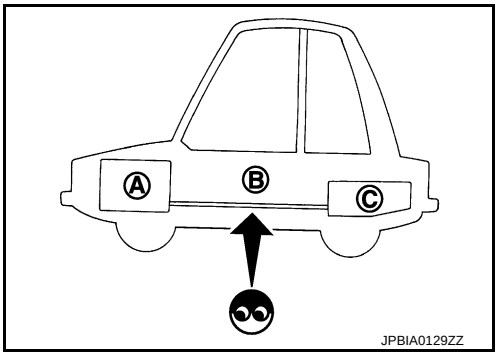
5. Blow air again into all the radiator core surfaces once per minute until no water sprays out.

FUEL LINES

FUEL LINES : Inspection

INFOID:0000000006419698

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



A : Engine
B : Fuel line
C : Fuel tank

If necessary, repair or replace damaged parts.

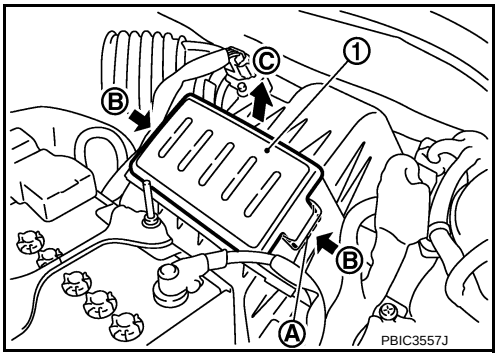
AIR CLEANER FILTER

AIR CLEANER FILTER : Removal and Installation

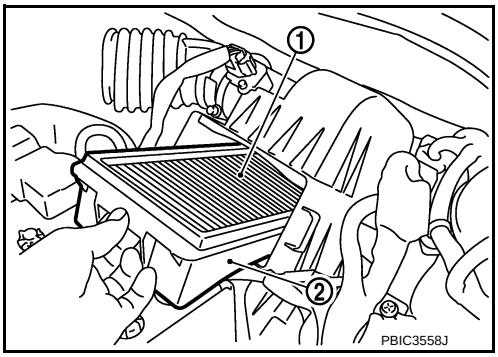
INFOID:0000000006419684

REMOVAL

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



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



INSTALLATION

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

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

ENGINE OIL

ENGINE OIL : Draining

INFOID:0000000006419687

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-8, "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:0000000006419688

1. Install drain plug with new drain plug washer. Refer to EM-40, "Exploded View".
   CAUTION:
   Be sure to clean drain plug and install with new drain plug washer.

   Tightening torque : Refer to EM-40, "Exploded View".
2. Refill with new engine oil.
   Engine oil specification and viscosity: Refer to MA-13, "Fluids and Lubricants".

   Engine oil capacity : Refer to LU-18, "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-8, "Inspection".

OIL FILTER

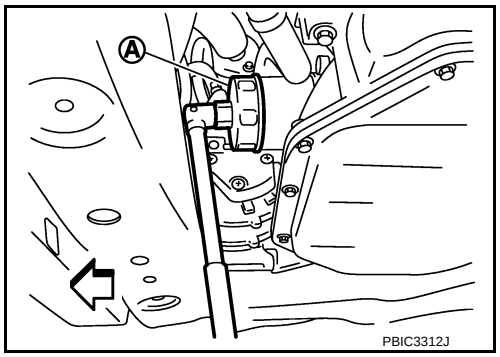
OIL FILTER : Removal and Installation

INFOID:0000000006419689

REMOVAL

1. Remove engine under cover.
2. Using oil filter wrench [SST: KV10115801 (J-38956)] (A), remove oil filter.

   ⇦ : Vehicle front

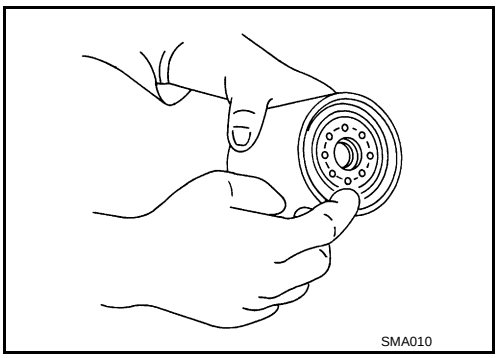


   CAUTION:
   - **Oil filter is provided with relief valve. Use genuine NISSAN oil filter or equivalent.**
   - **Be careful not to get burned when engine and engine oil may be hot.**
   - **When removing, prepare a shop cloth to absorb any engine oil leakage or spillage.**
   - **Completely wipe off any engine oil that adheres to engine and vehicle.**

INSTALLATION

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

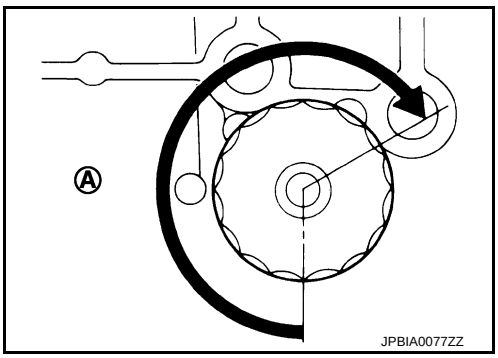
2. Apply new engine oil to the oil seal contact surface of new oil filter.



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)



OIL FILTER : Inspection

INFOID:0000000006419690

INSPECTION AFTER INSTALLATION

1. Check the engine oil level. Refer to LU-8, "Inspection".
2. Start the engine, and check that there is no leakage of engine oil.
3. Stop the engine and wait for 10 minutes.
4. Check the engine oil level, and adjust the level. Refer to LU-8, "Inspection".

SPARK PLUG

SPARK PLUG : Removal and Installation

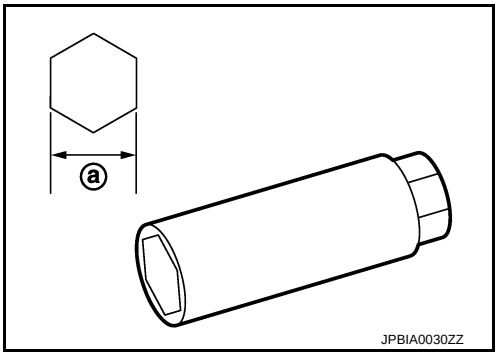
INFOID:0000000006419685

REMOVAL

1. Remove engine cover. Refer to EM-25, "Exploded View".
2. Remove air inlet tube assembly. Refer to EM-31, "Exploded View".
3. Remove ignition coil.
4. Remove spark plug with a spark plug wrench (commercial service tool).

a : 14 mm (0.55 in)

CAUTION:
Never drop or shock spark plug.



INSTALLATION

Install in the reverse order of removal.

SPARK PLUG : Inspection

INFOID:0000000006419686

INSPECTION AFTER REMOVAL

Use the standard type spark plug for normal condition.

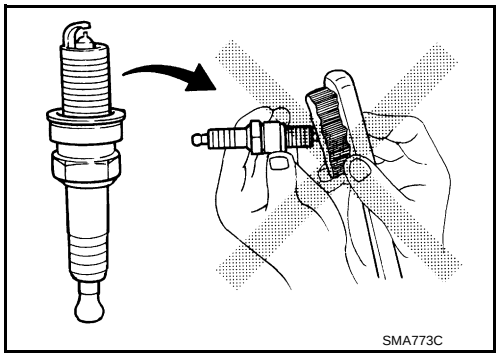
Spark plug (Standard type) : Refer to EM-129, "Spark Plug".

CAUTION:

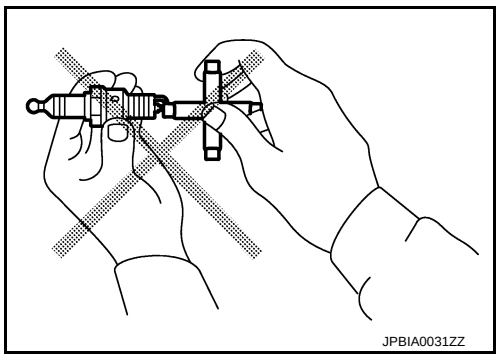
- **Never drop or shock spark plug.**
- **Never use a wire brush for cleaning.**
- **If plug tip is covered with carbon, spark plug cleaner may be used.**

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

Cleaning time : Less than 20 seconds



- **Spark plug gap adjustment is not required between replacement intervals.**
- **Measure spark plug gap. when it exceeds the limit, replace spark plug even if it is with in the specified replacement mileage. Refer to EM-129, "Spark Plug".**



EVAP VAPOR LINES

EVAP VAPOR LINES : Inspection

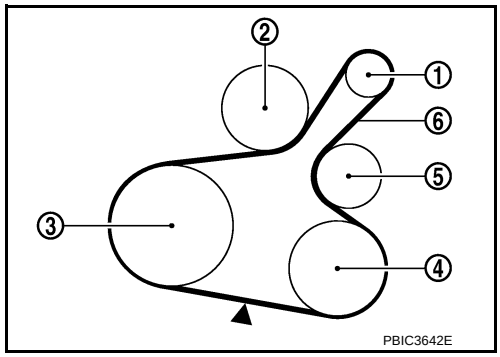
INFOID:0000000006419580

1. Visually inspect EVAP vapor lines for improper attachment and for cracks, damage, loose connections, chafing and deterioration.
2. Inspect fuel tank filler cap vacuum relief valve for clogging, sticking, etc.
   Refer to EC-445, "Inspection".

ENGINE MAINTENANCE (HR16DE)
DRIVE BELT
DRIVE BELT : Checking

INFOID:0000000006479321

- Inspection should be done only when engine is cold or over 30 minutes after the engine is stopped.



1 : Alternator
2 : Water pump
3 : Crankshaft pulley
4 : A/C compressor
5 : Idler pulley
6 : Drive belt

- Visually check belts for wear, damage, and cracks on inside and edges.
- Turn crankshaft pulley two time clockwise, and check tension on all pulleys is equal before doing the test.
- When measuring deflection, apply 98 N (10 kg, 22 lb) at the (▼) marked point.
- Measure the belt tension and frequency with acoustic tension gauge (commercial service tool) at the (▼) marked point.

CAUTION:
- **When the tension and frequency are measured, the acoustic tension gauge should be used.**
- **When checking immediately after installation, first adjust it to the specified value. Then, after turning crankshaft two turns or more, readjust to the specified value to avoid variation in deflection between pulleys.**

Belt Deflection/Belt Tension and Frequency: Refer to EM-250, "Drive Belt".

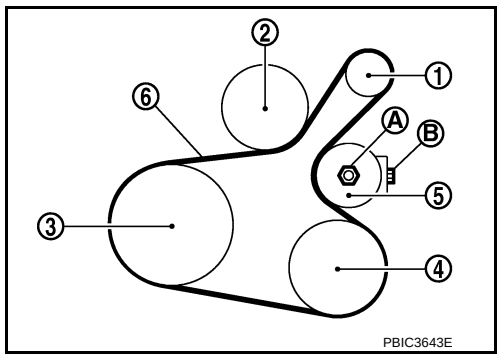
DRIVE BELT : Tension Adjustment

INFOID:0000000006479322

Location	Location of adjuster and tightening method
Drive belt	Adjusting bolt on idler pulley

CAUTION:
- **When belt is replaced with new one, adjust belt tension to the value for “New belt”, because new belt will not fully seat in the pulley groove.**
- **When tension of the belt being used exceeds “Limit”, adjust it to the value for “After adjusted”.**
- **When installing a belt, check it is correctly engaged with the pulley groove.**
- **Never allow oil or engine coolant to get on the belt.**
- **Never twist or bend the belt strongly.**

1. Remove front fender protector (RH). Refer to EXT-22, "Exploded View".
2. After loosening lock nut (A) of idler pulley (5) to release from the specified torque state, temporarily tighten the lock nut to the following torque



4.4 N·m (0.45 kg-m, 39 in-lb)

1 : Alternator
2 : Water pump
3 : Crankshaft pulley
4 : A/C compressor
5 : Idler pulley
6 : Drive belt

CAUTION:

- **When the lock nut is loosened excessively, the idler pulley tilts and the correct tension adjustment cannot be performed. Never loosen it excessively (more than 45 degrees).**
- **Put a matching mark on the lock nut (A), and check turning angle with a protractor. Never visually check the tightening angle.**

3. Adjust the belt tension by turning the adjusting bolt (B). Refer to MA-24, "DRIVE BELT : Checking".
CAUTION:
- **When checking immediately after installation, first adjust it to the specified value. Then, after turning crankshaft two turns or more, readjust to the specified value to avoid variation in deflection between pulleys.**
- **When the tension adjustment is performed, the lock nut should be in the condition at step“ 2”. If the tension adjustment is performed when the lock nut is loosened more than the standard, the idler pulley tilts and the correct tension adjustment cannot be performed.**

4. Tighten the lock nut.

: 34.8 N·m (3.5 kg-m, 26 ft-lb)

ENGINE COOLANT

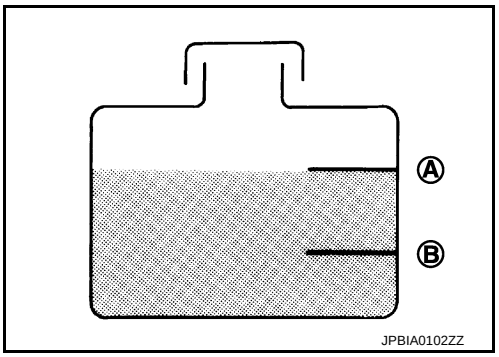
ENGINE COOLANT : Inspection

INFOID:0000000006603346

LEVEL

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

A : MAX
B : MIN

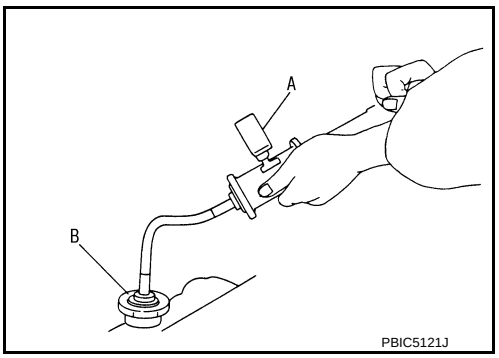


- Adjust the engine coolant level if necessary.

LEAKAGE

- 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-54, "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.

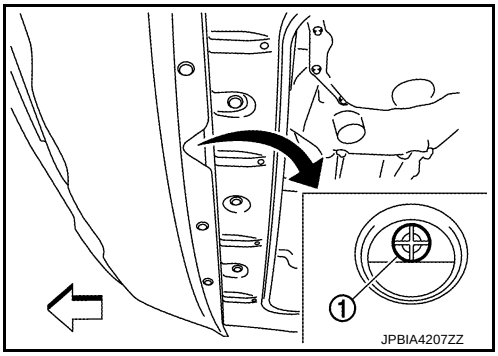
ENGINE COOLANT : Draining

INFOID:0000000006603347

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 (A) 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 EM-228, "Disassembly and Assembly".

3. Remove reservoir tank if necessary, and drain engine coolant and clean reservoir tank before installing. Refer to CO-42, "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-27, "ENGINE COOLANT : Flushing".

ENGINE COOLANT : Refilling

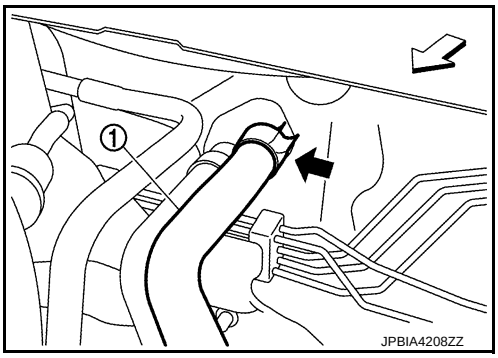
INFOID:0000000006603348

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-42, "Exploded View".

- If water drain plugs on cylinder block are removed, close and tighten them. Refer to EM-228, "Disassembly and Assembly".

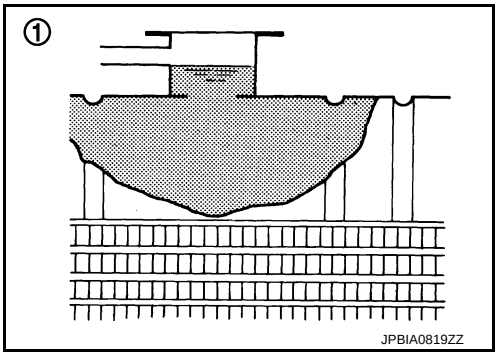
2. Check that each hose clamp has been firmly tightened.
3. Remove air duct (between air cleaner case and electric throttle control actuator). Refer to EM-161, "Exploded View".
4. Disconnect heater hose (1) at position (⬅) in the figure.



⇦ : Vehicle front

- Enhance heater hose as high as possible.

5. Fill radiator (1) to specified level.



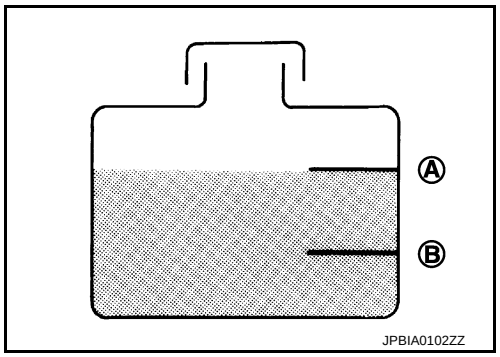
CAUTION:
Never adhere the engine coolant to electronic equipments (alternator etc.).
- **Pour coolant slowly of less than 2 ℓ (2-1/8 US qt, 1-3/4 Imp qt) a minute to allow air in system to escape.**
- **When engine coolant overflows disconnected heater hose, connect heater hose, and continue filling the engine coolant.**
- **Use Genuine NISSAN Engine Coolant or equivalent in its quality mixed with water (distilled or demineralized). Refer to MA-13, "Fluids and Lubricants".**

Engine coolant capacity
(With reservoir tank at "MAX" level)
Refer to CO-54, "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-54, "Periodical Maintenance Specification".



7. Install air duct (between air cleaner case and electric throttle control actuator). Refer to EM-161, "Exploded View".
8. Install radiator cap.
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 reservoir tank level no longer drops.

ENGINE COOLANT : Flushing

INFOID:0000000006603349

1. Install reservoir tank if removed and radiator drain plug.
   CAUTION:
   Be sure to clean drain plug and install with new O-ring.

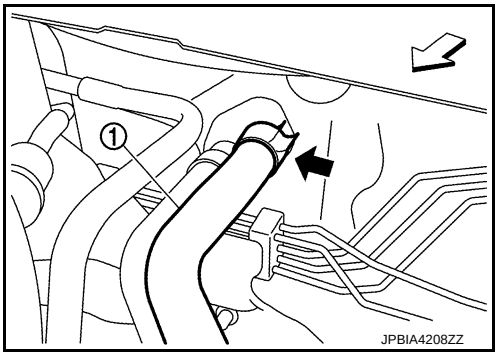
   Radiator drain plug : Refer to CO-42, "Exploded View".

   • If water drain plugs on cylinder block are removed, close and tighten them. Refer to EM-228, "Disassembly and Assembly".
2. EM-161, "Exploded View"Remove air duct (between air cleaner case and electric throttle control actuator). Refer to .

3. Disconnect heater hose (1) at position (⬅) in the figure.

⇦ : Vehicle front

- Enhance heater 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 air duct (between air cleaner case and electric throttle control actuator). Refer to EM-161, "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-25, "ENGINE COOLANT : Draining".
10. Repeat steps 1 through 9 until clear water begins to drain from radiator.

RADIATOR CAP

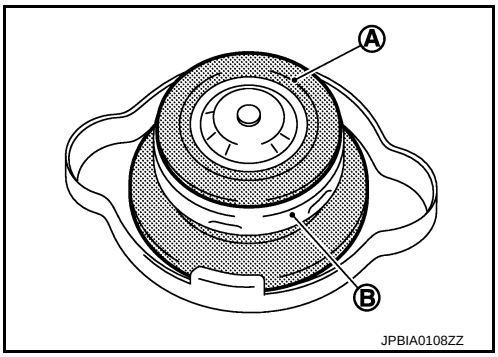
RADIATOR CAP : Inspection

INFOID:0000000006603350

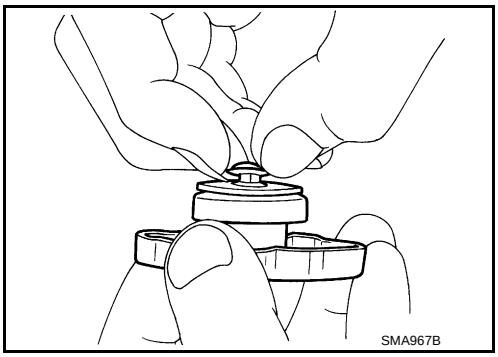
- Check valve seat (A) of radiator cap.

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.



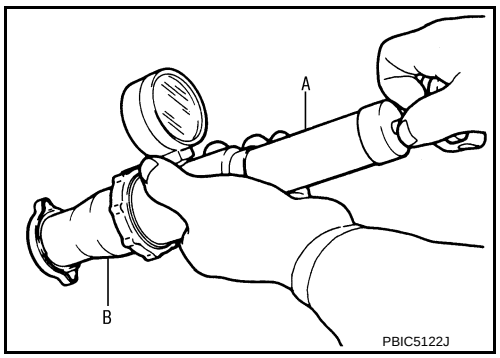
- Pull negative-pressure valve to open it, and that it close completely when released.
- Check that there is no dirt or damage on the valve seat of radiator cap negative-pressure valve.
- Check that there are no unusualness in the opening and closing conditions of negative-pressure valve.



- Check radiator cap relief pressure.

Standard and Limit : Refer to CO-54, "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:0000000006603351

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^2, 71 psi) and keep distance more than 30 cm (11.81 in).
5. Blow air again into all the radiator core surfaces once per minute until no water sprays out.

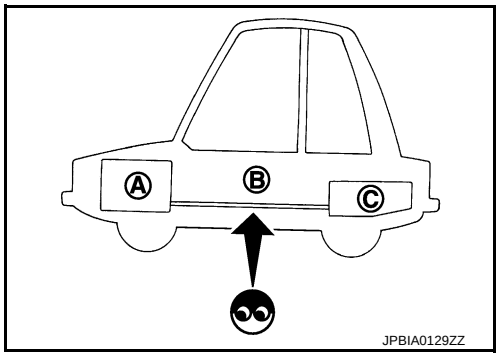
FUEL LINES

FUEL LINES : Inspection

INFOID:0000000006603352

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

A : Engine
B : Fuel line
C : Fuel tank



If necessary, repair or replace damaged parts.

AIR CLEANER FILTER

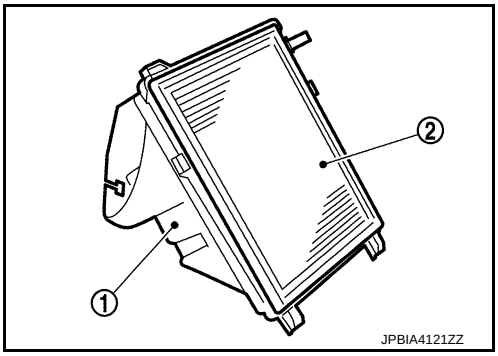
AIR CLEANER FILTER : Removal and Installation

INFOID:0000000006479327

REMOVAL

1. Remove the assembly consisting of element case, air cleaner case, and inlet air duct (upper).
2. Remove the air cleaner filter case.

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



INSTALLATION

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

- Check by the feel and the sound that both pawls of the air cleaner case are securely fastened to the element case.

ENGINE OIL

ENGINE OIL : Draining

INFOID:0000000006479333

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-25, "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:0000000006479334

1. Install drain plug with new drain plug washer. Refer to EM-169, "Exploded View".
   CAUTION:
   Be sure to clean drain plug and install with new drain plug washer.

   Tightening torque : Refer to EM-169, "Exploded View".
2. Refill with new engine oil.
   Engine oil specification and viscosity: Refer to MA-13, "Fluids and Lubricants".

   Engine oil capacity : Refer to LU-29, "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-25, "Inspection".

OIL FILTER

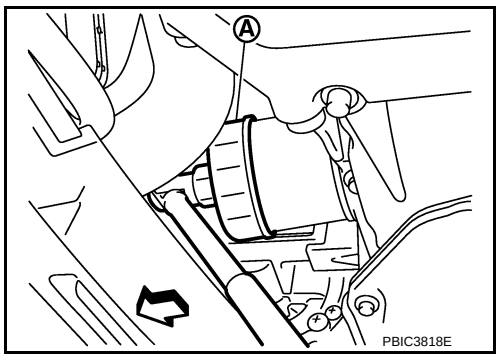
OIL FILTER : Removal and Installation

INFOID:0000000006479335

REMOVAL

1. Remove engine under cover.

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



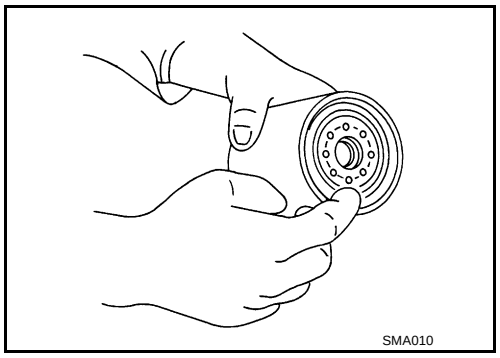
⇦ : Vehicle front

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

INSTALLATION

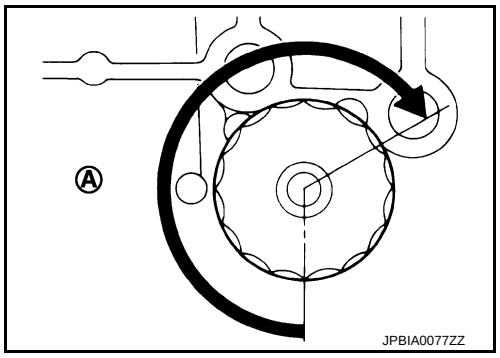
1. Remove foreign materials adhering to the oil filter installation surface.
2. Apply new engine oil to the oil seal contact surface of new oil filter.



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)



OIL FILTER : Inspection

INFOID:0000000006479336

INSPECTION AFTER INSTALLATION

1. Check the engine oil level. Refer to LU-25, "Inspection".
2. Start the engine, and check that there is no leakage of engine oil.
3. Stop the engine and wait for 10 minutes.
4. Check the engine oil level, and adjust the level. Refer to LU-25, "Inspection".

SPARK PLUG

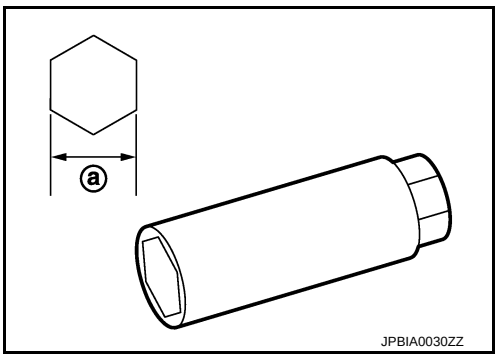
SPARK PLUG : Removal and Installation

INFOID:0000000006479331

REMOVAL

1. Remove ignition coil. Refer to EM-178, "Exploded View".

2. Remove spark plug with a spark plug wrench (commercial service tool).



a : 14 mm (0.55 in)

CAUTION:
Never drop or shock spark plug.

INSTALLATION
Install in the reverse order of removal.

SPARK PLUG : Inspection

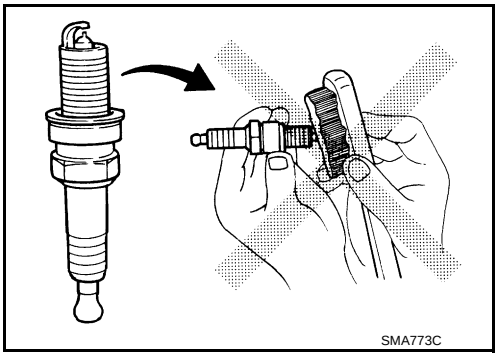
INFOID:0000000006479332

INSPECTION AFTER REMOVAL
Use the standard type spark plug for normal condition.

Spark plug (Standard type) : Refer to EM-251, "Spark Plug".

CAUTION:
- **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^2, 85 psi)**
Cleaning time	**: Less than 20 seconds**



EVAP VAPOR LINES

EVAP VAPOR LINES : Inspection

INFOID:0000000006479330

1. Visually inspect EVAP vapor lines for improper attachment and for cracks, damage, loose connections, chafing and deterioration.
2. Inspect fuel tank filler cap vacuum relief valve for clogging, sticking, etc.
   Refer to EC-803, "Inspection".

ENGINE MAINTENANCE (K9K)

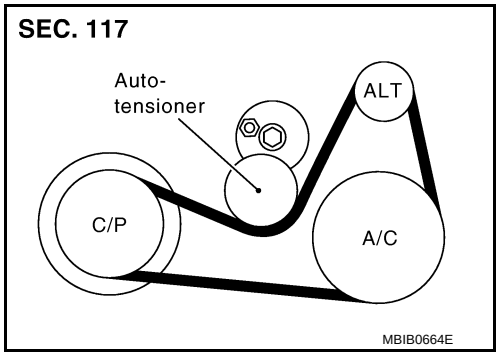
DRIVE BELT

DRIVE BELT : Checking Drive Belts

INFOID:0000000006603354

WARNING:
Be sure to perform when the engine is stopped.

1. Inspect belts for cracks, fraying, wear and oil. If necessary, replace.
2. Evaluate manually if the belt is enough tensioned (tension cannot be measured by way of frequency meter).
   CAUTION:
   Auto-tensioner must be replaced with a new one when the belt is replaced.



DRIVE BELT : Tension Adjustment

INFOID:0000000006603355

Belt tensioning is not necessary, as it is automatically adjusted by auto-tensioner.

ENGINE COOLANT

ENGINE COOLANT : Inspection

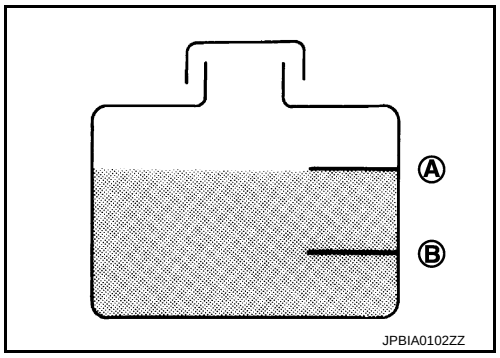
INFOID:0000000006603360

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.



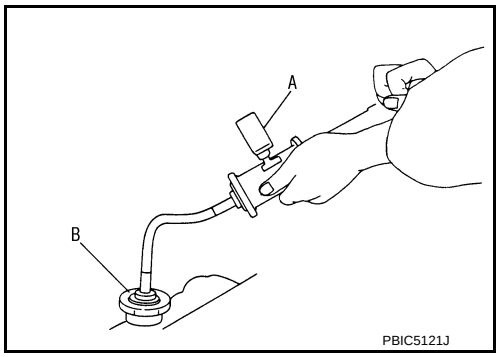
LEAKAGE

- 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-76, "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.



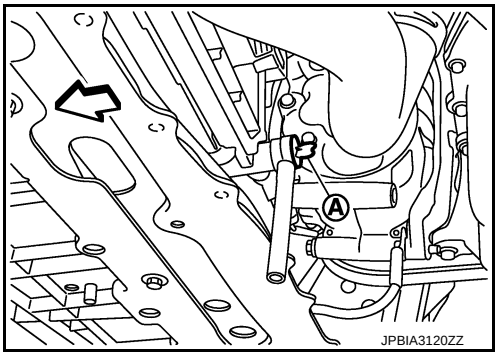
ENGINE COOLANT : Draining

INFOID:0000000006603361

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 (A) at the bottom of radiator, and then remove radiator cap.



⇦ : Vehicle front

CAUTION:
Perform this step when engine is cold.

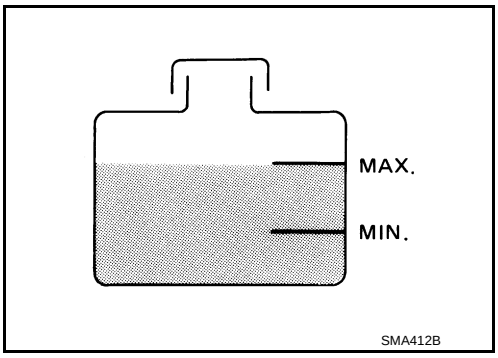
3. Remove reservoir tank if necessary, and drain engine coolant and clean reservoir tank before installing. Refer to CO-66, "Exploded View".
4. Check drained engine coolant for contaminants such as rust, corrosion or discoloration. If contaminated, flush the engine cooling system. Refer to MA-35, "ENGINE COOLANT : Flushing".
5. Remove air relief plug from water outlet. Refer to CO-75, "Exploded View".

ENGINE COOLANT : Refilling

INFOID:0000000006603362

- **Before start working, turn off the automatic air conditioner and the blower motor.**

1. Install reservoir tank, radiator drain plug and air relief plug.
2. Fill reservoir tank slowly with coolant until coolant spills from the air relief hole. Refer to CO-58, "Cooling Circuit".
   - **Put a cloth under the air relief plug to prevent engine coolant to dampen the crankshaft position sensor.**
   - Fill coolant to the MAX level line of the reservoir tank at a rate of 2 liter (1-3/4 lmp qt)/min or lower.



3. Close the air relief plug.
   CAUTION:
   If the filling rate is too fast, this could lead to air being mixed in the coolant. Be sure to fill the coolant slowly according to the rate indicated above.
   Use Genuine NISSAN Anti-freeze Coolant or equivalent mixed with water (distilled or demineralized). Refer to MA-13, "Fluids and Lubricants".

   Engine coolant capacity Approx. 6.7 ℓ (5 - 7/8 Imp qt)

   Reservoir tank capacity 0.7 ℓ (5/8 Imp qt)

4. Warm up the engine for approximately five minutes without reservoir tank cap installed, and then turn off the engine and loose air relief plug until coolant spills from air relief hole.
   - **If coolant overflows reservoir tank hole, install filler cap.**
   - **Watch engine coolant temperature warning light so as not overheat the engine during all of the operation.**

WARNING:
- **Be careful not be scaled with hot engine coolant or vacuum pump when operating.**
- **Radiator fan blade can start at any time and make personal injuries.**

5. Close the air relief plug and run the engine at 2,000 rpm until the upper hose comes hot and radiator fan operates. Let the engine running approximately 5 minutes at idle speed and check for sound of coolant flow while running engine from idle up to 3,000 rpm.
   • Sound may be noticeable at heater water cock.
6. If sound is heard, bleed air from cooling system by repeating steps 4 through 5 until coolant level no longer drops.
   • Check the radiator lower hose for any signs of leakage.
7. Turn off the engine and let it cool down.
   • Cool down using a fan to reduce the time.
8. After cooling period, loose the air relief plug and check if coolant spills from the air relief hole. In other case, remove the air relief plug until the coolant spills, and then close the relief air plug. Bleed air from cooling system by repeating steps 5 through 8 until the coolant spills immediately.
9. Check the engine coolant level when engine is cool and refill to MAX level line if the level is lower.
   • Clean excess coolant from engine.

ENGINE COOLANT : Flushing

INFOID:0000000006603363

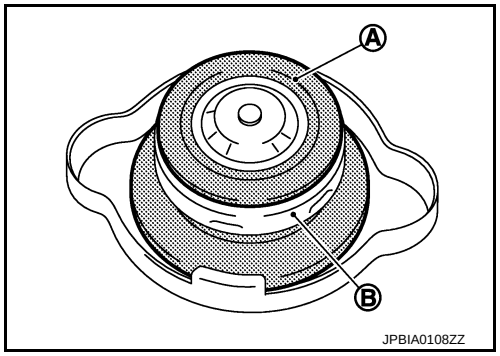
1. Fill reservoir tank with water until water spills from the air relief hole, then close air relief plug. Reinstall reservoir tank cap.
2. Run engine and warm it up to normal operating temperature.
3. Rev engine two or three times under no-load.
4. Stop engine and wait until it cools down.
5. Drain water.
6. Repeat steps 1 through 5 until clear water begins to drain from radiator.
7. Blow compressed air into cooling circuit through the reservoir tank valve hole to drain all the water.

RESERVOIR TANK CAP

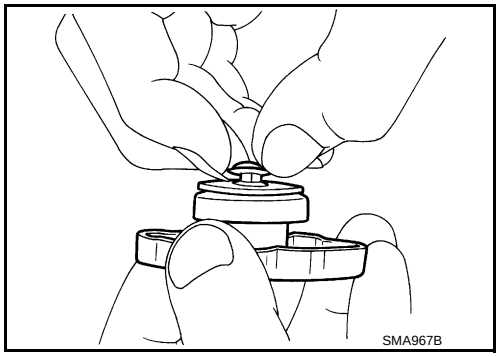
RESERVOIR TANK CAP : Inspection

INFOID:0000000006603364

- Check valve seat of reservoir tank cap.
- Check if valve seat (A) is swollen to the extent that the edge of the metal plunger (B) cannot be seen when watching it vertically from the top.
- Check if valve seat has no soil and damage.

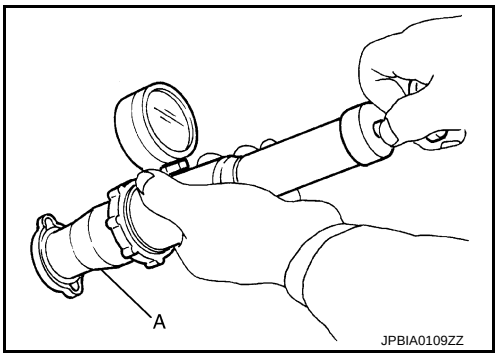


- Pull negative-pressure valve to open it, and check that it close completely when released.
- Check that there is no dirt or damage on the valve seat of reservoir tank cap negative-pressure valve.
- Check that there are no unusualness in the opening and closing conditions of negative-pressure valve.



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

Standard and limit : Refer to CO-76, "Radiator".



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

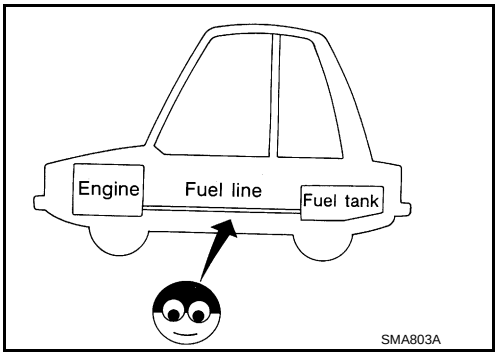
CAUTION:
When installing reservoir tank cap, thoroughly wipe out the reservoir tank filler neck to remove any waxy residue or foreign material.

FUEL LINES

FUEL LINES : Checking Fuel Line

INFOID:0000000006603365

Inspect fuel lines and tank for improper attachment, leaks, cracks, damage, chafing and deterioration.If necessary, repair or replace.



FUEL FILTER

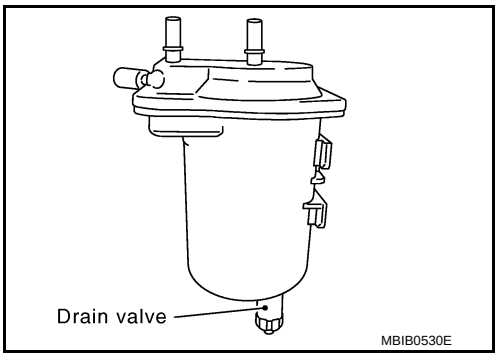
FUEL FILTER : Water Draining

INFOID:0000000006603366

DRAINING WATER (RHD)

CAUTION:
Before carrying out any work, wait for the fuel temperature is dropped.

Open drain valve at the bottom of fuel filter.



DRAINING WATER (LHD)

1. Remove fender protector RH. Refer to EXT-22, "Exploded View".
2. Remove foam insulator.
3. Open drain valve at the bottom of fuel filter.
   CAUTION:

Put a shop cloth under the drain valve, to avoid the water and fuel spill on ABS actuator.

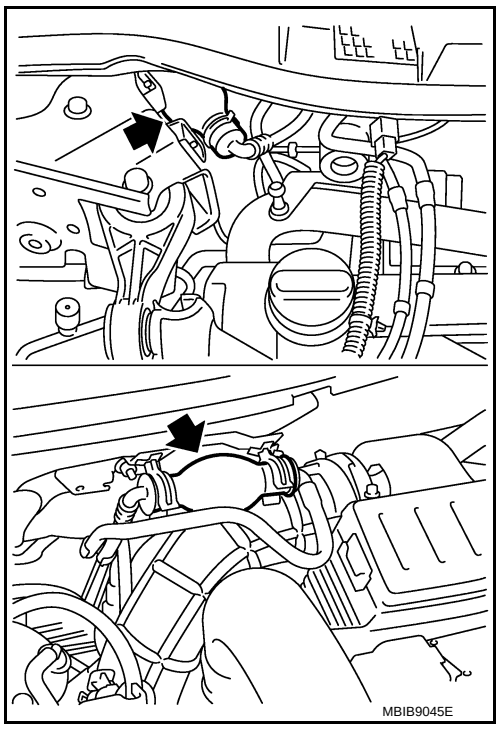
FUEL FILTER CHECK

Check fuel filter for fuel leakage, damage and other abnormal signs.

FUEL FILTER : Air Bleeding

INFOID:0000000006603367

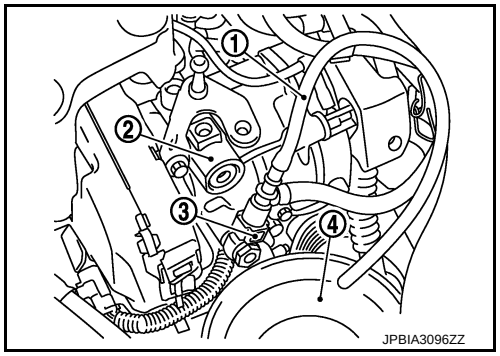
1. Prime the circuit using the priming bulb.
2. Perform engine cranking with repeating several times until engine starting.



3. If the engine does not start, perform the following procedure.

2 : High pressure supply pump

a. Remove high pressure pump protector. Refer to EM-298, "Exploded View".
b. Remove quick connector (black tab).
c. Connect drain hose (suitable hose) (1) to the end of quick connector (supply pipe side) (3).
d. Place a tray (4) at the drain hose open end.
e. Operate the priming bulb to completely bleed air from the circuit.



4. When air bleeding is completed, install quick connector, and check absence of leakage.

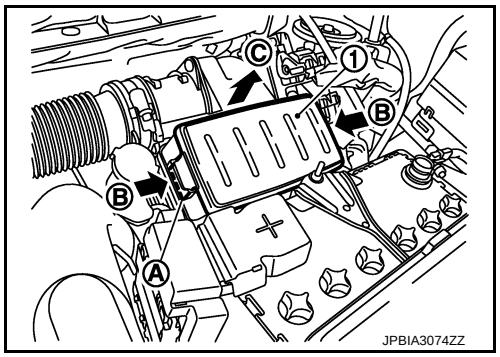
AIR CLEANER FILTER

AIR CLEANER FILTER : Removal and Installation

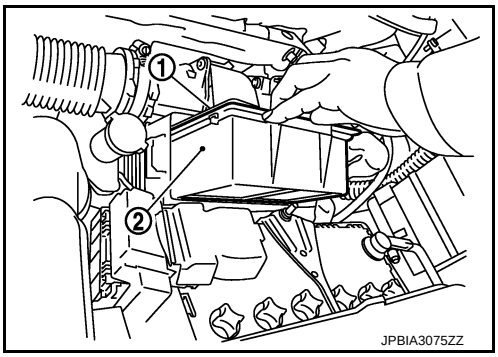
INFOID:0000000006603356

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

Install in the reverse order of removal.

ENGINE OIL

ENGINE OIL : Draining

INFOID:0000000006603357

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-25, "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:0000000006603358

1. Refill with new engine oil.
   Engine oil specification and viscosity: Refer to MA-13, "Fluids and Lubricants".

   Engine oil capacity : Refer to LU-39, "Standard and Limit".

   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.**
2. Warm up engine and check area around drain plug and oil filter for engine oil leakage.
3. Stop engine and wait for 10 minutes.
4. Check the engine oil level. Refer to LU-33, "Inspection".

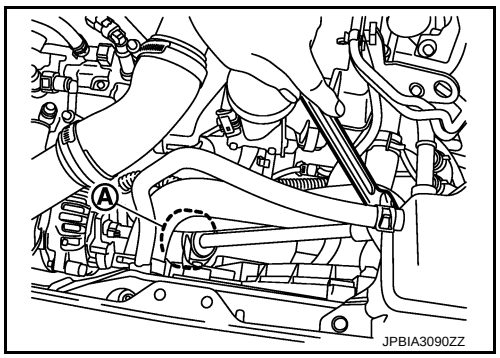
OIL FILTER

OIL FILTER : Removal and Installation

INFOID:0000000006603359

REMOVAL

1. Using an oil filter wrench [SST:KV113C0010 (Mot.1329)] (A) remove oil filter.

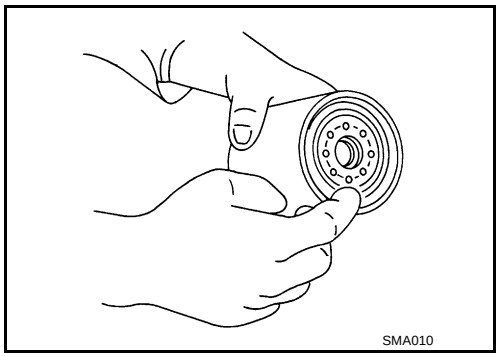


CAUTION:

- **Be careful not to get burned when the engine and engine oil are hot.**
- **When removing, prepare a shop cloth to absorb any oil leakage or spillage.**
- **Never allow engine oil to adhere to the drive belts.**
- **Completely wipe off any oil that adhere to the engine and the vehicle.**

INSTALLATION

1. Remove foreign materials adhering to the oil filter installation surface.
2. Install oil filter bracket to oil cooler.
   CAUTION:
   Install oil filter bracket, positioning lug in the hole of oil cooler.
3. Apply engine oil to the oil seal contact surface of the new oil filter.
4. Install the oil filter until it comes into contact with the oil seal on the engine bracket.
5. Tighten the oil filter three-quarters of a turn by hand.
6. After warming up the engine, check for engine oil leakage.
7. Check oil level and add engine oil. Refer to LU-33.



CHASSIS MAINTENANCE

HEADLAMP AIMING ADJUSTMENT (HALOGEN TYPE - LHD)

HEADLAMP AIMING ADJUSTMENT (HALOGEN TYPE - LHD) : Description

INFOID:0000000006484058

PREPARATION BEFORE ADJUSTING

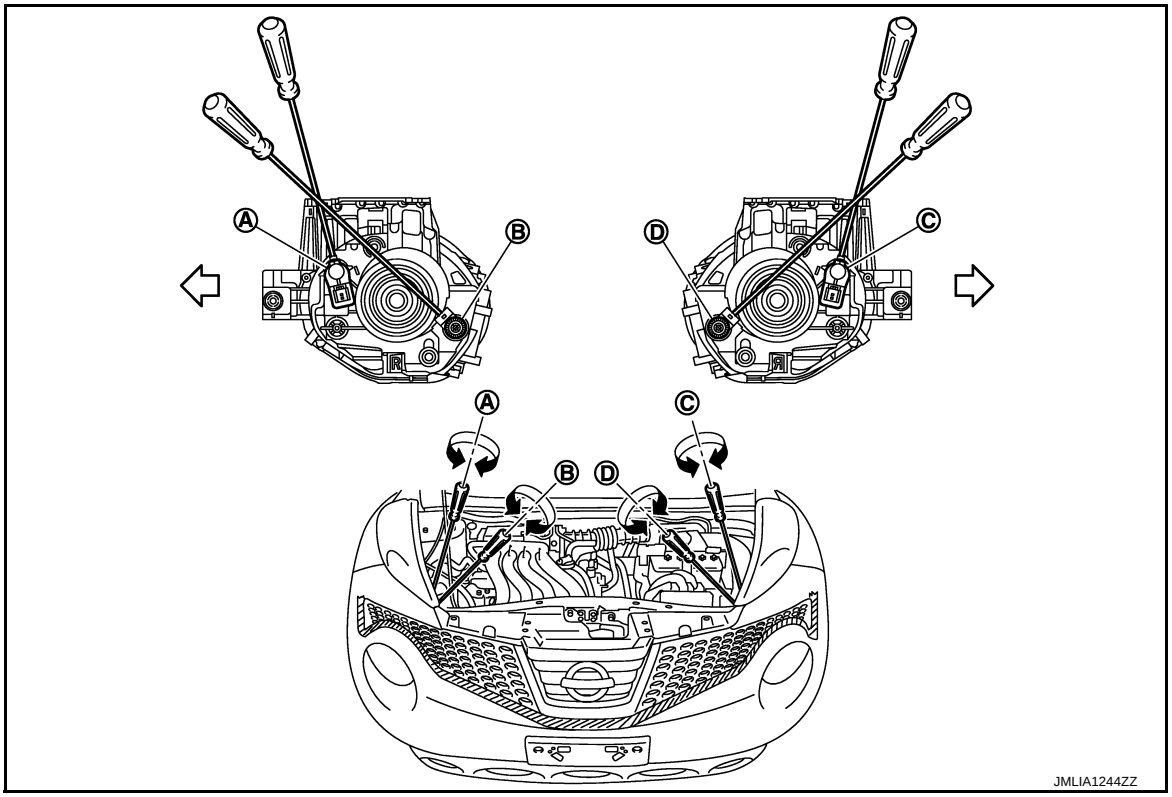
NOTE:

- 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



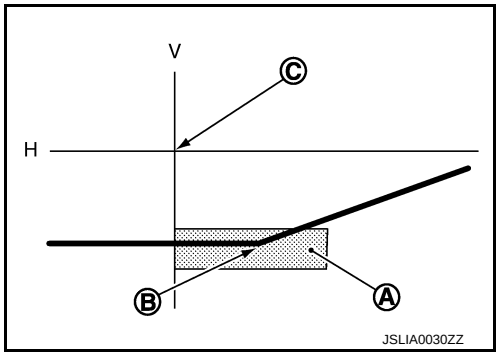
A. Headlamp RH (INSIDE/OUTSIDE) adjustment screw
B. Headlamp RH (UP/DOWN) adjustment screw
C. Headlamp LH (INSIDE/OUTSIDE) adjustment screw
D. Headlamp LH (UP/DOWN) adjustment screw
⇦ : Vehicle center

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

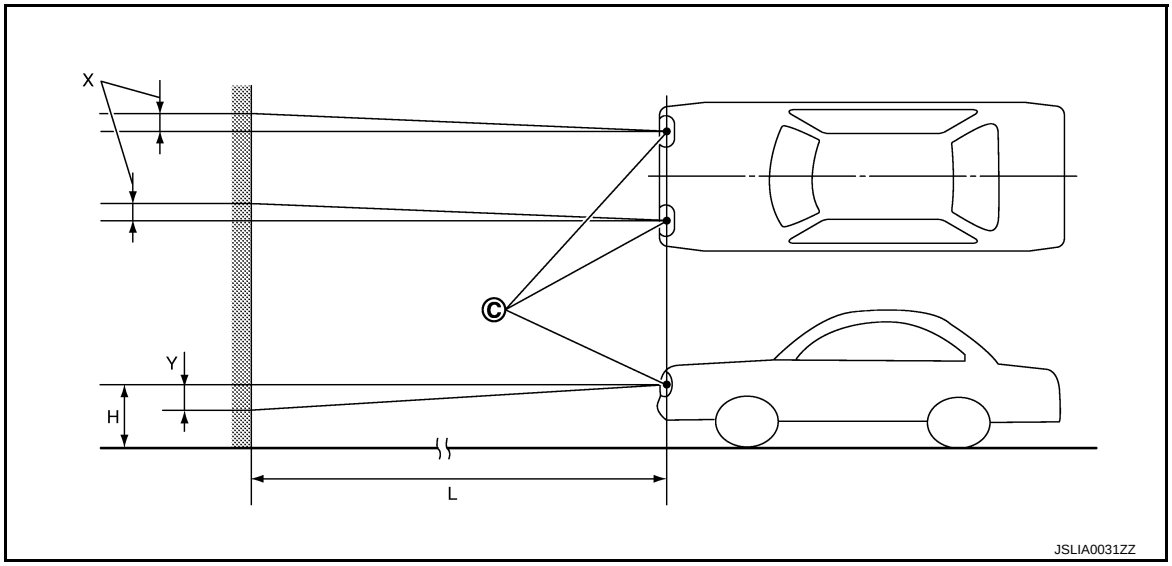
HEADLAMP AIMING ADJUSTMENT (HALOGEN TYPE - LHD) : Aiming Adjustment Procedure

INFOID:0000000006484059

1. Place the screen.
   NOTE:
   - Stop the vehicle at the perpendicular angle to the wall.
   - Set the screen so that it is perpendicular to a level load surface.
2. Face the vehicle squarely toward the screen and make the distance between the headlamp 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:
   Do not 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



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)

Unit: mm (in)

Aiming adjustment area		
Vertical direction (Y) (Lower side from headlamp center height)		Lateral direction (X) (Right side from headlamp center line)
Highest light axis	100 (3.94)	0 - 100 (3.94)
Target light axis	100 (3.94)	
Lowest light axis	130 (5.12)	

HEADLAMP AIMING ADJUSTMENT (HALOGEN TYPE - RHD)

HEADLAMP AIMING ADJUSTMENT (HALOGEN TYPE - RHD) : Description

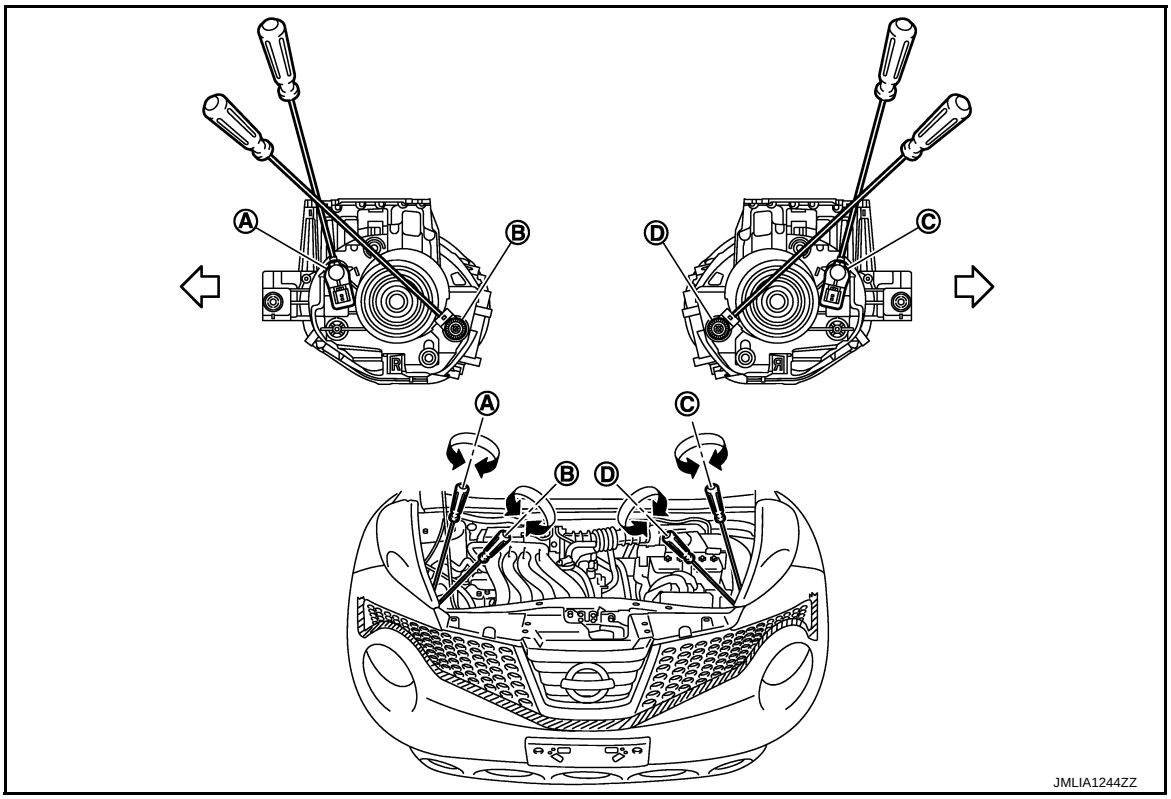
INFOID:0000000006484060

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 (INSIDE/OUTSIDE) adjustment screw
D. Headlamp LH (UP/DOWN) adjustment screw
⇦ : Vehicle center

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

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

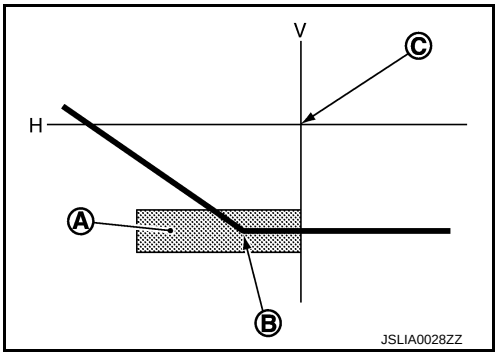
INFOID:0000000006484061

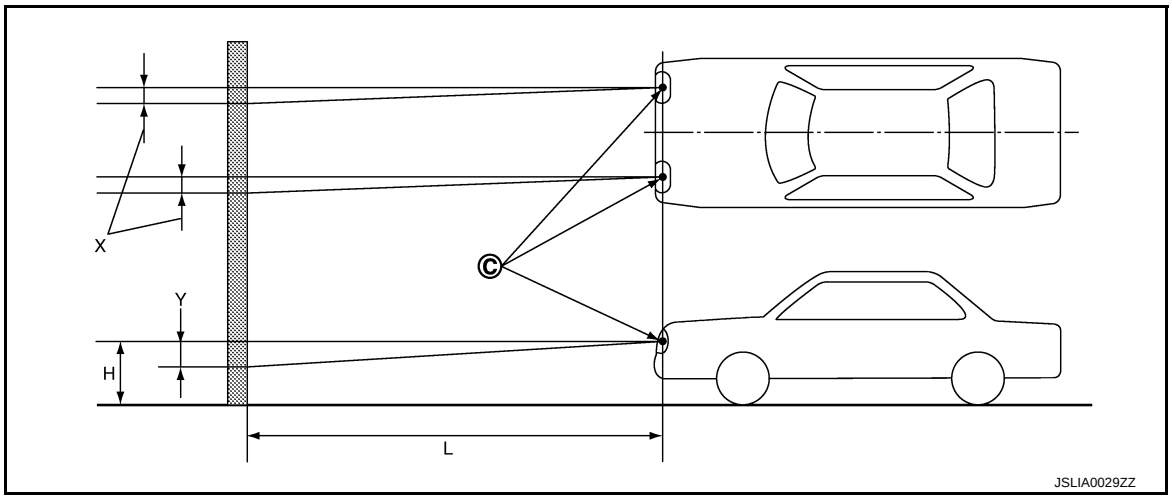
1. Place the screen.
NOTE:
• Stop the vehicle at the perpendicular angle to the wall.
• Set the screen so that it is perpendicular to a level load surface.
2. Face the vehicle squarely toward the screen and make the distance between the headlamp center and the screen 10 m (32.8 ft).
3. Start the engine 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:
Do not 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





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)

Unit: mm (in)

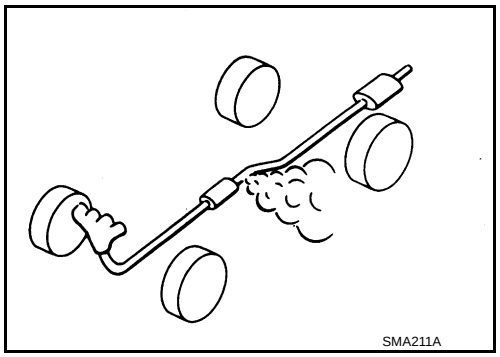
Aiming adjustment area		
Vertical direction (Y) (Lower side from headlamp center height)		Lateral direction (X) (Left side from headlamp center line)
Highest light axis	100 (3.94)	0 - 100 (3.94)
Target light axis	100 (3.94)	
Lowest light axis	130 (5.12)	

EXHAUST SYSTEM

EXHAUST SYSTEM : Inspection

INFOID:0000000006419699

Check exhaust pipes, muffler, and mounting for improper attachment, leakage, cracks, damage or deterioration.
- If anything is found, repair or replace damaged parts.


SMA211A

CVT FLUID (RE0F10B)

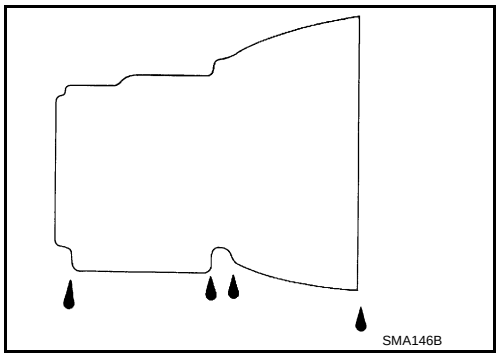
CVT FLUID (RE0F10B) : Inspection

INFOID:0000000006601378

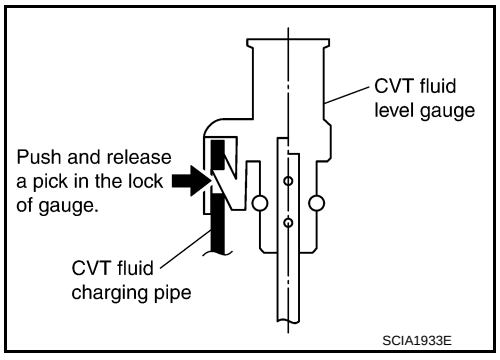
CHECKING CVT FLUID

The 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.


SMA146B

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.

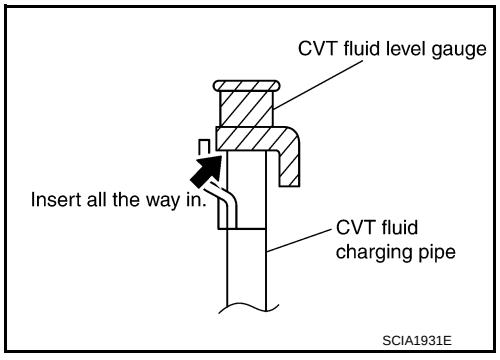


SCIA1933E

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.

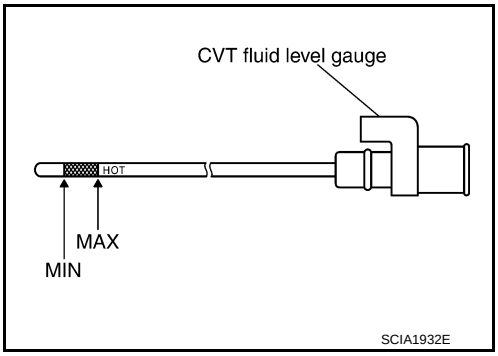
CAUTION:

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



SCIA1931E

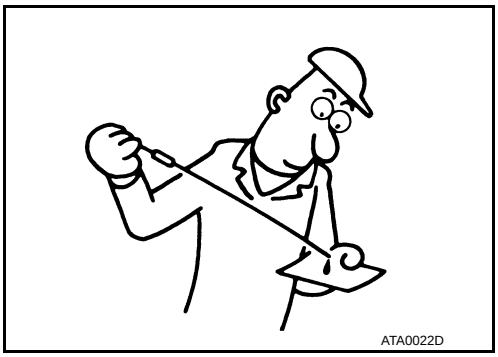
8. Place the selector lever in “P” or “N” and check that the fluid level is within the specified range.
   CAUTION:
   When reinstalling CVT fluid level gauge, insert it into the CVT fluid charging pipe and rotate it to the original installation position until securely locked.



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 TM-297, "Exploded View".



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 (RE0F10B) : Changing

INFOID:0000000006601379

CAUTION:
Replace drain plug gasket with new ones at the final stage of the operation when installing.

1. Remove drain plug from oil pan.
2. Remove drain plug gasket from drain plug.
3. Install drain plug gasket to drain plug.
   CAUTION:
   Never reuse drain plug gasket.
4. Install drain plug to oil pan.

Drain plug – tightening torque : Refer to TM-283, "Exploded View".

5. Fill CVT fluid from CVT fluid charging pipe to the specified level.

CVT fluid
Fluid capacity : Refer to TM-308, "General Specification".

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.**

6. With the engine warmed up, drive the vehicle in an urban area.

NOTE:
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).

7. Check CVT fluid level and condition.
8. Repeat steps 1 to 5 if CVT fluid has been contaminated.

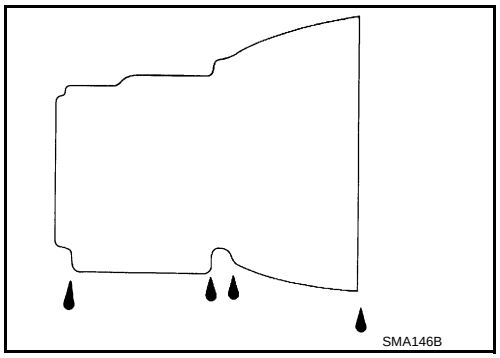
CVT FLUID (RE0F11A)

CVT FLUID (RE0F11A) : Inspection

INFOID:0000000006601376

FLUID LEAKAGE

- Check transaxle surrounding area (oil seal and plug etc.)for fluid leakage.
- If anything is found, repair or replace damaged parts and adjust CVT fluid level. Refer to TM-379, "Adjustment".


SMA146B

GEAR OIL (RS5F92R)

GEAR OIL (RS5F92R) : Inspection

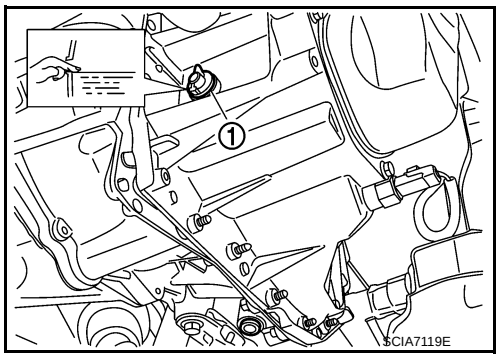
INFOID:0000000006419673

OIL LEAKAGE

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

OIL LEVEL

1. Remove filler plug (1) and gasket from transaxle case.
2. Check the oil level from filler plug mounting hole as shown in the figure.
   CAUTION:
   Never start engine while checking oil level.
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. Refer to TM-33, "Exploded View".



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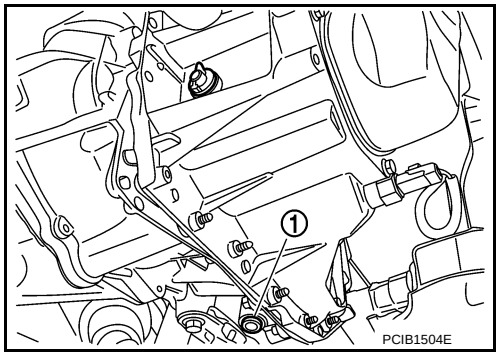
GEAR OIL (RS5F92R) : Draining

INFOID:0000000006419674

1. Start engine and let it run to warm up transaxle.
2. Stop engine. Remove drain plug (1) and gasket, using a socket [Commercial service tool] and then drain gear oil.
3. Set a gasket on drain plug and install it to clutch housing, using a socket [Commercial service tool].
   CAUTION:
   Never reuse gasket.
4. Tighten drain plug to the specified torque. Refer to TM-33, "Exploded View".



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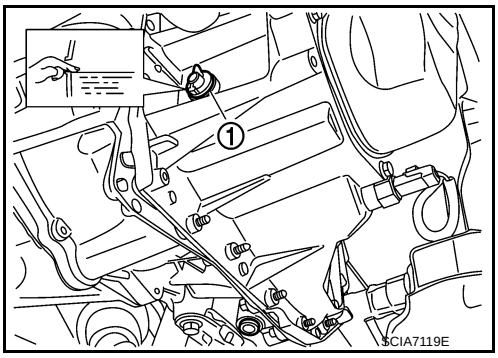
GEAR OIL (RS5F92R) : Refilling

INFOID:0000000006419675

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



Oil grade and viscosity : **Refer to MA-13, "Fluids and Lubricants".**

Oil capacity : **Refer to TM-63, "General Specifications".**

3. After refilling gear oil, check the oil level. Refer to MA-47, "GEAR OIL (RS5F92R) : Inspection".
4. Set a gasket on filler plug and then install it to transaxle case.
   CAUTION:
   Never reuse gasket.
5. Tighten filler plug to the specified torque. Refer to TM-33, "Exploded View".

GEAR OIL (RS6F94R)

GEAR OIL (RS6F94R) : Inspection

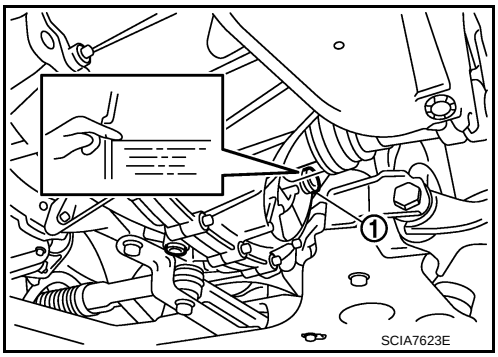
INFOID:0000000006419676

OIL LEAKAGE

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

OIL LEVEL

1. Remove filler plug (1) and gasket from transaxle case.
2. Check the oil level from filler plug mounting hole as shown in the figure.
   CAUTION:
   Never start engine while checking oil level.

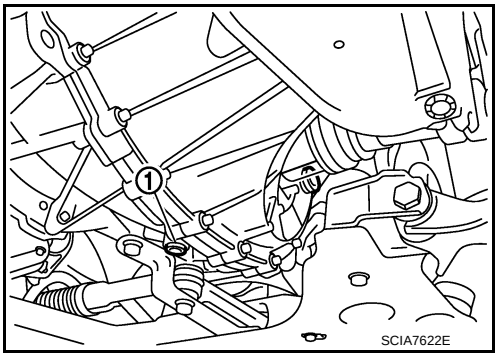


3. Set a gasket on filler plug and then install it to transaxle case.
   CAUTION:
   Never reuse gasket.
4. Tighten filler plug to the specified torque. Refer to TM-88, "Exploded View".

GEAR OIL (RS6F94R) : Draining

INFOID:0000000006419677

1. Start engine and let it run to warm up transaxle.
2. Stop engine. Remove drain plug (1) and gasket, using a socket [Commercial service tool] and then drain gear oil.
3. Set a gasket on drain plug and install it to clutch housing, using a socket [Commercial service tool].
   CAUTION:
   Never reuse gasket.

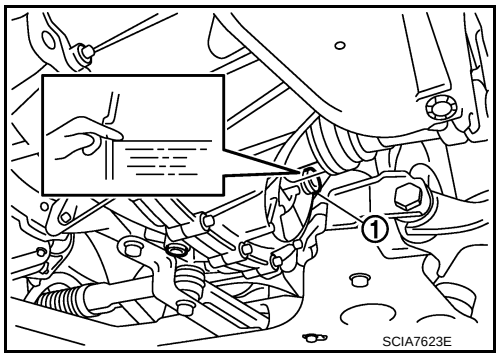


4. Tighten drain plug to the specified torque. Refer to TM-88, "Exploded View".

GEAR OIL (RS6F94R) : Refilling

INFOID:0000000006419678

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



Oil grade and viscosity : **Refer to MA-13, "Fluids and Lubricants".**

Oil capacity : **Refer to TM-123, "General Specifications".**

3. After refilling gear oil, check the oil level. Refer to MA-48, "GEAR OIL (RS6F94R) : Inspection".
4. Set a gasket on filler plug and then install it to transaxle case.
   CAUTION:
   Never reuse gasket.
5. Tighten filler plug to the specified torque. Refer to TM-88, "Exploded View".

CLUTCH FLUID (RS5F92R)

CLUTCH FLUID (RS5F92R) : Inspection

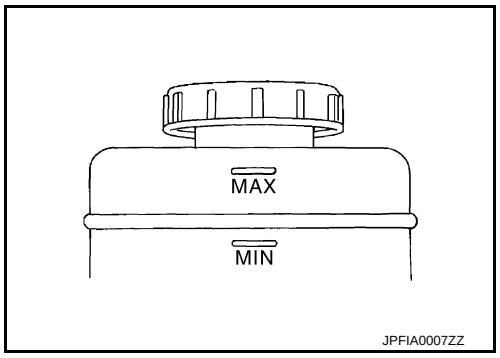
INFOID:0000000006419671

FLUID LEAKAGE

- Check clutch line for cracks, deterioration or other damage. Replace any damaged parts.
- Check for fluid leakage by fully depressing clutch pedal while engine is running.
  CAUTION:
  If leakage occurs around joints, reinstall the joints or, if necessary, replace damaged parts.

FLUID LEVEL

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



CLUTCH FLUID (RS6F94R)

CLUTCH FLUID (RS6F94R) : Inspection

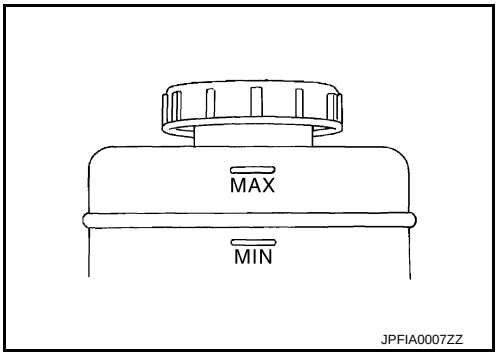
INFOID:0000000006419672

FLUID LEAKAGE

- Check clutch line for cracks, deterioration or other damage. Replace any damaged parts.
- Check for fluid leakage by fully depressing clutch pedal while engine is running.
  CAUTION:
  If leakage occurs around joints, reinstall the joints or, if necessary, replace damaged parts.

FLUID LEVEL

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



TRANSFER FLUID

TRANSFER FLUID : Inspection

INFOID:0000000006419705

OIL LEAKAGE

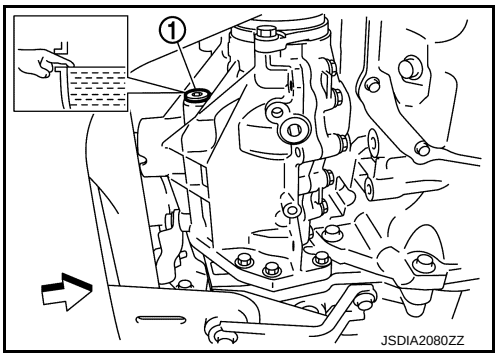
Check transfer surrounding area (oil seal, drain plug, filler plug, and transfer case etc.) for oil leakage.

OIL LEVEL

1. Remove filler plug (1) and gasket. Then check that oil is filled up from mounting hole for the filler plug.

   ⇦: Vehicle front

   CAUTION:
   Never start engine while checking oil level.
2. Before installing filler plug, set a new gasket. Install filler plug on transfer and tighten to the specified torque. Refer to DLN-113, "Exploded View".
   CAUTION:
   Never reuse gasket.



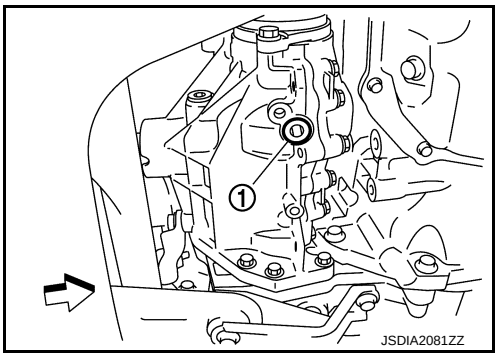
TRANSFER FLUID : Draining

INFOID:0000000006419706

1. Run the vehicle to warm up the transfer unit sufficiently.
2. Stop the engine and remove the drain plug (1) and gascket to drain the transfer oil.
3. Before installing drain plug, set a new gasket. Install drain plug on the transfer and tighten to the specified torque. Refer to DLN-113, "Exploded View".

   ⇦: Vehicle front

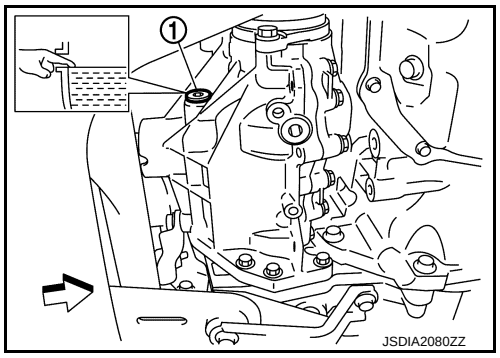
   CAUTION:
   Never reuse gasket.



TRANSFER FLUID : Refilling

INFOID:0000000006419707

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



⇦: Vehicle front

Oil and viscosity	**: Refer to MA-13, "Fluids and Lubricants".**
Oil capacity	**: Refer to DLN-117, "General Specifications".**

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

2. Leave the vehicle for 3 minutes, and check the 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 DLN-113, "Exploded View".

CAUTION:
Never reuse gasket.

REAR PROPELLER SHAFT

REAR PROPELLER SHAFT : Inspection

INFOID:0000000006484062

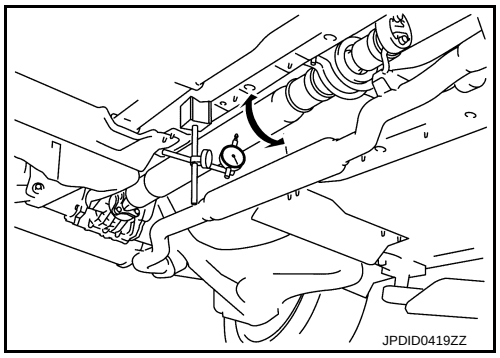
APPEARANCE AND NOISE

- 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

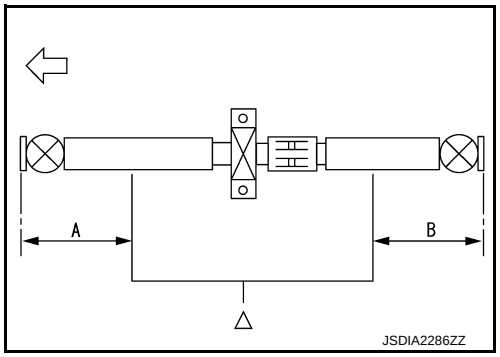
If vibration is present at high speed, inspect propeller shaft runout first.

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



Propeller shaft runout	**: Refer to DLN-125, "Propeller Shaft Runout".**

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



⇦ : Front

Dimension	**A: 542 mm (21.34 in)**
	B: 516.5 mm (20.33 in)

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

REAR DIFFERENTIAL GEAR OIL

REAR DIFFERENTIAL GEAR OIL : Inspection

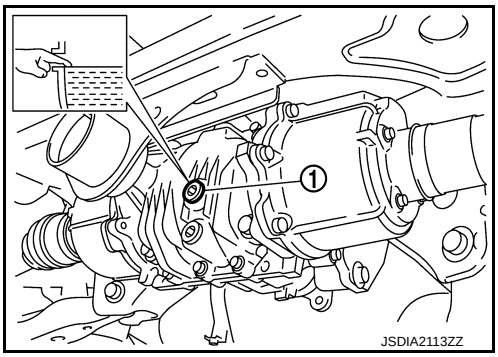
INFOID:0000000006603462

OIL LEAKAGE

Check rear final drive surrounding area (oil seal, drain plug, filler plug, and carrier case, etc.) for oil leakage.

OIL LEVEL

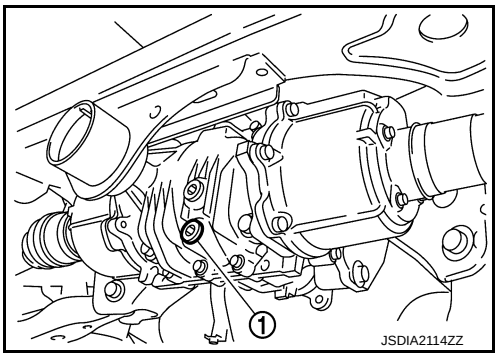
1. Remove filler plug (1) and check oil level from filler plug mounting hole as shown in the figure.
   CAUTION:
   Never start engine while checking oil level.
2. Set a new gasket on filler plug and install it on final drive assembly. Refer to DLN-151, "Exploded View".
   CAUTION:
   Never reuse gasket.



REAR DIFFERENTIAL GEAR OIL : Draining

INFOID:0000000006603463

1. Stop engine.
2. Remove drain plug (1) and drain gear oil.
3. Set a new gasket on drain plug and install it to final drive assembly and tighten to the specified torque. Refer to DLN-151, "Exploded View".
   CAUTION:
   Never reuse gasket.



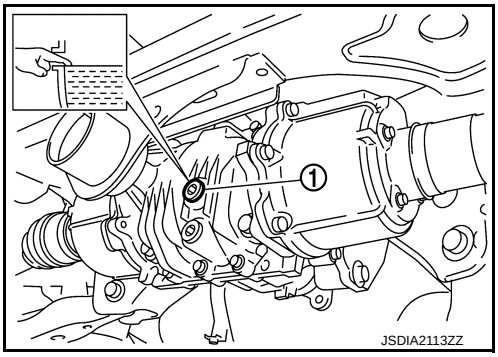
REAR DIFFERENTIAL GEAR OIL : Refilling

INFOID:0000000006603464

1. 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-13, "Fluids and Lubricants".**
Oil capacity	**: Refer to DLN-167, "General Specification".**

2. After refilling oil, check oil level. Set a new gasket to filler plug, then install it to final drive assembly. Refer to DLN-151, "Exploded View".
   CAUTION:
   Never reuse gasket.



WHEELS (BONDING WEIGHT TYPE)

WHEELS (BONDING WEIGHT TYPE) : Adjustment

INFOID:0000000006603465

BALANCING WHEELS (ALUMINUM WHEEL)

Preparation Before Adjustment

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

CAUTION:

- **Be careful not to scratch the road wheel during removal.**

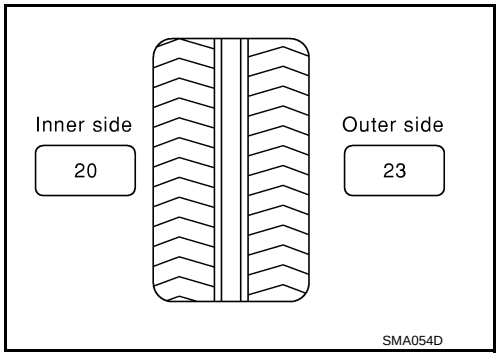
- **After removing double-faced adhesive tape, wipe clean traces of releasing agent from the road wheel.**

Wheel Balance Adjustment

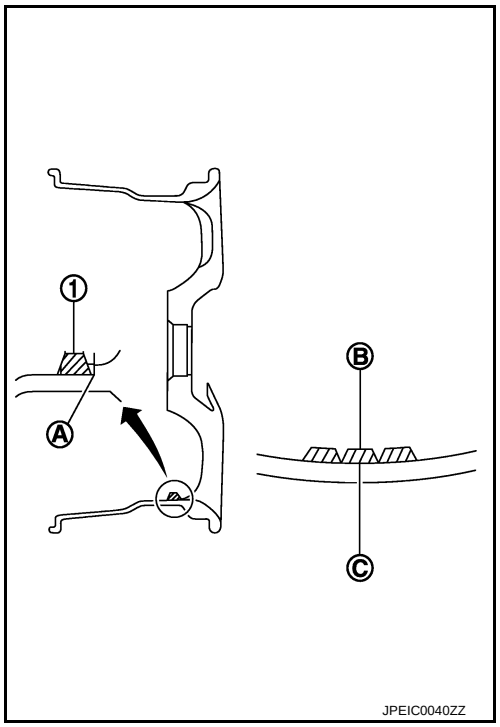
- The details of the adjustment procedure are different for each model of wheel balancer. Therefore, refer to each instruction manual.
- If a tire balance machine has adhesion balance weight mode settings and drive-in weight mode setting, select and adjust a drive-in weight mode suitable for aluminum wheels.

1. Set road wheel on tire balance machine using the center hole as a guide. Start the tire balance machine.
2. When inner and outer unbalance values are shown on the tire balance machine indicator, multiply outer unbalance value by 5/3 to determine balance weight that should be used. Select the outer balance weight with a value closest to the calculated value above and install to the designated outer position of, or at the designated angle in relation to the road wheel.
   CAUTION:
   - **Never install the inner balance weight before installing the outer balance weight.**
   - **Before installing the balance weight, always to clean the mating surface of the road wheel.**

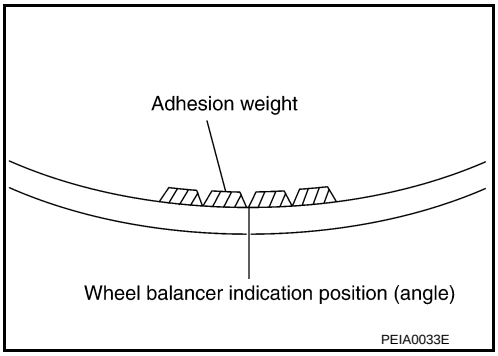
a. Indicated unbalance value × 5/3 = balance weight to be installed
Calculation example:
23 g (0.81 oz) × 5/3 = 38.33 g (1.35 oz) ⇒ 40 g (1.41 oz) balance weight (closer to calculated balance weight value)
NOTE:
Note that balance weight value must be closer to the calculated balance weight value.
Example:
37.4 ⇒ 35 g (1.23 oz)
37.5 ⇒ 40 g (1.41 oz)



b. Installed balance weight in the position.
- When installing balance weight (1) to road wheels, set it into the grooved area (A) on the inner wall of the road wheel as shown in the figure so that the balance weight center (B) is aligned with the tire balance machine indication position (angle) (C).
  CAUTION:
  - **Always use genuine NISSAN balance weights.**
  - **Balance weights are non-reusable; always replace with new ones.**
  - **Never install three or more sheets of balance weight.**



c. If calculated balance weight value exceeds 50 g (1.76 oz), install two balance weight sheets in line with each other as shown in the figure.
CAUTION:
Never install one balance weight sheet on top of another.



3. Start the tire balance machine again.
4. Install drive-in balance weight on inner side of road wheel in the tire balance machine indication position (angle).
CAUTION:
Never install three or more balance weight.
5. Start the tire balance machine. Check that the inner and outer residual unbalance value is within the allowable unbalance value.
CAUTION:
If either residual unbalance value exceeds limit, repeat installation procedures.

Allowable unbalance value

Dynamic (At flange) : Refer to WT-9, "Road Wheel".

Static (At flange) : Refer to WT-9, "Road Wheel".

BALANCING WHEELS (STEEL WHEEL)

Preparation Before Adjustment

Remove balance weight from the road wheel.

Wheel Balance Adjustment

- The details of the adjustment procedure are different for each model of wheel balancer. Therefore, refer to each instruction manual.
- If a tire balance machine has adhesion balance weight mode settings and drive-in weight mode setting, select and adjust a drive-in weight mode suitable for steel wheels.

1. Set road wheel to wheel balancer, and then start wheel balancer.
2. Install balance weight to road wheel according to the unbalance and position (angle) displayed on wheel balancer.
CAUTION:
- **Always use genuine NISSAN balance weights.**
- **Balance weights are non-reusable; always replace with new ones.**
- **Always use a plastic hammer when attaching the weight.**
- **Never install three or more balance weights on one side.**
3. Start the tire balance machine. Check that the inner and outer residual unbalance value is within the allowable unbalance value.
CAUTION:
If either residual unbalance value exceeds limit, repeat installation procedures.

Allowable unbalance value

Dynamic (At flange) : Refer to WT-9, "Road Wheel".

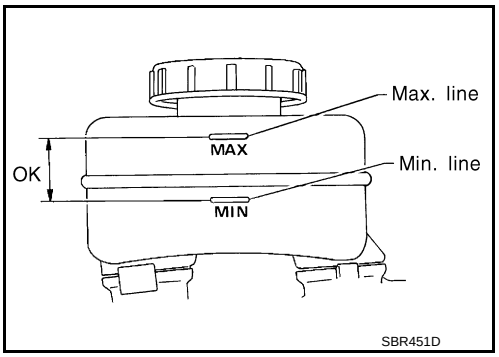
Static (At flange) : Refer to WT-9, "Road Wheel".

BRAKE FLUID LEVEL AND LEAKS

BRAKE FLUID LEVEL AND LEAKS : Inspection

INFOID:0000000006419628

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

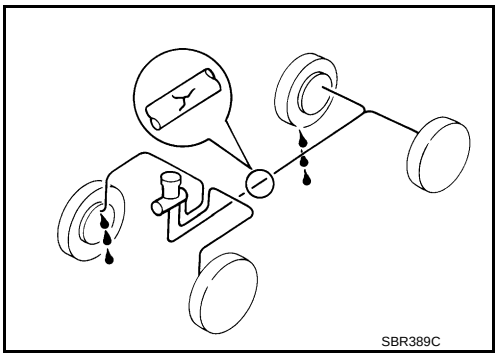


BRAKE LINES AND CABLES

BRAKE LINES AND CABLES : Inspection

INFOID:0000000006419629

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

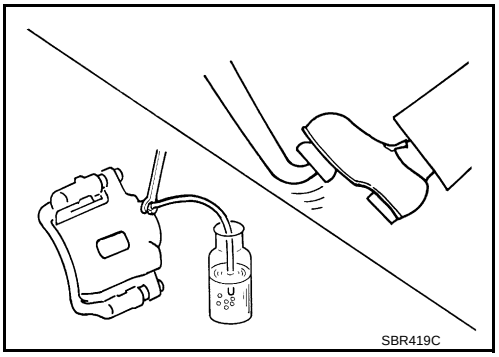


BRAKE FLUID

BRAKE FLUID : Changing

INFOID:0000000006419630

1. Drain brake fluid from each bleed valve.
2. Refill until new brake fluid comes out from each bleed valve.
   Use same procedure as in bleeding hydraulic system to refill brake fluid.
   Refer to BR-13, "Bleeding Brake System" (LHD models), BR-81, "Bleeding Brake System" (RHD models).
   - Refill with recommended brake fluid.
     Refer to MA-13, "Fluids and Lubricants".
   - Never reuse drained brake fluid.
   - Be careful not to splash brake fluid on painted areas.



DISC BRAKE

DISC BRAKE : Inspection

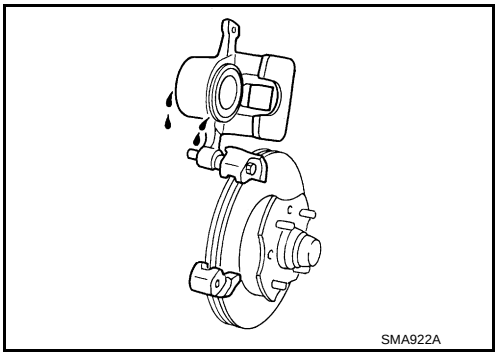
INFOID:0000000006419631

DISC ROTOR

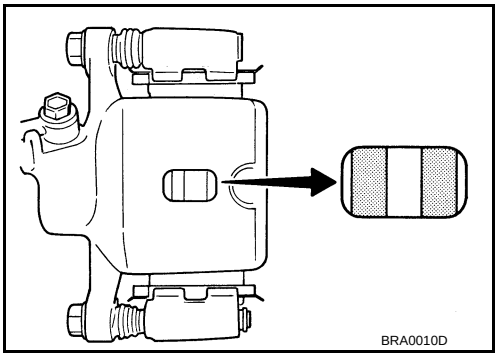
Check condition, wear, and damage.

CALIPER

- Check for leakage.


SMA922A

BRAKE PAD
- Check for wear or damage.


BRA0010D

DISC BRAKE : Front Disc Brake

INFOID:0000000006419709

MR16DDT

Unit: mm (in)

Item		Limit
Brake pad	Wear thickness	2.0 (0.079)
Disc rotor	Wear thickness	24.0 (0.945)
	Thickness variation (measured at 8 positions)	0.008 (0.0003)
	Runout (with it attached to the vehicle)	0.035 (0.0014)

HR16DE, K9K

Unit: mm (in)

Item		Limit
Brake pad	Wear thickness	2.0 (0.079)
Disc rotor	Wear thickness	22.0 (0.866)
	Thickness variation (measured at 8 positions)	0.008 (0.0003)
	Runout (with it attached to the vehicle)	0.035 (0.0014)

DISC BRAKE : Rear Disc Brake

INFOID:0000000006419710

Unit: mm (in)

Item		Limit
Brake pad	Wear thickness	2.0 (0.079)
Disc rotor	Wear thickness	8.0 (0.315)
	Thickness variation (measured at 8 positions)	0.016 (0.0006)
	Runout (with it attached to the vehicle)	0.1 (0.004)

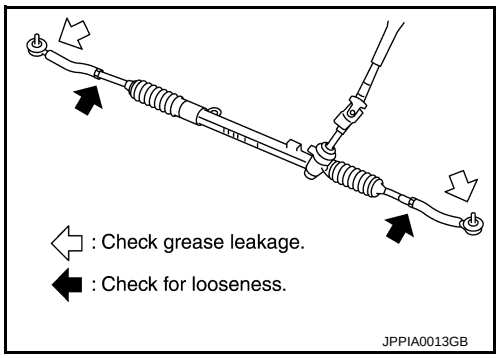
STEERING GEAR AND LINKAGE

STEERING GEAR AND LINKAGE : Inspection

INFOID:0000000006419634

STEERING GEAR

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



STEERING LINKAGE

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

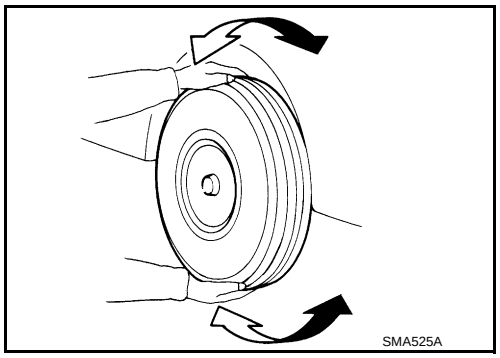
AXLE AND SUSPENSION PARTS

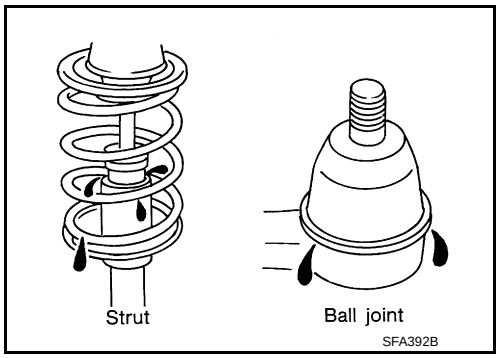
AXLE AND SUSPENSION PARTS : Inspection

INFOID:0000000006419636

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.



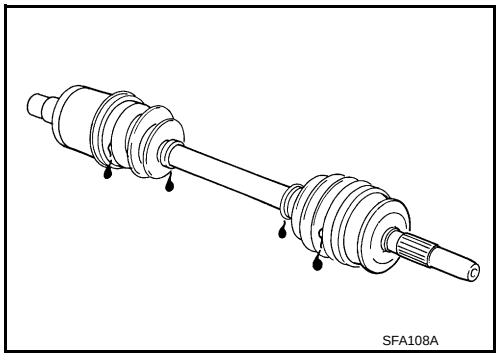


DRIVE SHAFT

DRIVE SHAFT : Inspection

INFOID:0000000006419637

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



BODY MAINTENANCE

LOCKS, HINGES AND HOOD LATCH

LOCKS, HINGES AND HOOD LATCH : Lubricating

INFOID:0000000006419638

PART	TYPE 1	TYPE 2	TYPE 3	TYPE 4
HOOD	DLK-141, "Exploded View"	DLK-304, "Exploded View"	DLK-439, "Exploded View"	DLK-555, "Exploded View"
HOOD LOCK	DLK-172, "Exploded View"	DLK-335, "Exploded View"	DLK-470, "Exploded View"	DLK-586, "Exploded View"
FRONT DOOR	DLK-154, "Exploded View"	DLK-317, "Exploded View"	DLK-452, "Exploded View"	DLK-568, "Exploded View"
FRONT DOOR LOCK	DLK-175, "Exploded View"	DLK-338, "Exploded View"	DLK-473, "Exploded View"	DLK-589, "Exploded View"
REAR DOOR	DLK-159, "Exploded View"	DLK-322, "Exploded View"	DLK-457, "Exploded View"	DLK-573, "Exploded View"
REAR DOOR LOCK	DLK-179, "Exploded View"	DLK-342, "Exploded View"	DLK-477, "Exploded View"	DLK-593, "Exploded View"
BACK DOOR	DLK-164, "Exploded View"	DLK-327, "Exploded View"	DLK-462, "Exploded View"	DLK-578, "Exploded View"
BACK DOOR LOCK	DLK-182, "Exploded View"	DLK-345, "Exploded View"	DLK-480, "Exploded View"	DLK-596, "Exploded View"

SEAT BELT, BUCKLES, RETRACTORS, ANCHORS AND ADJUSTERS

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

INFOID:0000000006419639

For front seat belt illustration. Refer to SB-4, "Exploded View".
For rear seat belt illustration. Refer to SB-10, "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-7, "SEAT BELT RETRACTOR : Inspection", SB-13, "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:0000000006419640

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.

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

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

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

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

DRIVE BELT (MR16DDT)

DRIVE BELT (MR16DDT) : Drive Belt

INFOID:0000000006419701

DRIVE BELT

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

DRIVE BELT (HR16DE)

DRIVE BELT (HR16DE) : Drive Belt

INFOID:0000000006602762

DRIVE BELT

Belt Deflection

Location	Deflection adjustment *		Unit: mm (in)
	Used belt		New belt
	Limit	After adjusted	
Drive belt	10 (0.39)	4.8 - 5.3 (0.19 - 0.21)	4.1 - 4.4 (0.16 - 0.17)
Applied pushing force	98 N (10 kg, 22 lb)		

*: When engine is cold.

Belt Tension and Frequency

Location	Tension adjustment *		Unit: N (kg, lb)	Frequency adjustment *		Unit: Hz
	Used belt		New belt	Used belt		New belt
	Limit	After adjusted		Limit	After adjusted	
Drive belt	500 (51.0, 112)	876 - 964 (89.4 - 98.3, 197 - 217)	1064 - 1152 (108.5 - 117.5, 239 - 259)	173	229 - 239	253.5 - 261.5

*: When engine is cold.

DRIVE BELT (K9K)

DRIVE BELT (K9K) : Drive Belt

INFOID:0000000006706099

DRIVE BELT

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

ENGINE COOLANT (MR16DDT)

ENGINE COOLANT (MR16DDT) : Periodical Maintenance Specification

INFOID:0000000006419703

ENGINE COOLANT CAPACITY (APPROXIMATE)

Unit: ℓ (Imp qt)

Engine coolant capacity (With reservoir tank at “MAX” level)	CVT models	8.1 (7-1/8)
	M/T models	
Reservoir tank engine coolant capacity (At “MAX” level)		0.6 (1/2)

ENGINE COOLANT (HR16DE)

ENGINE COOLANT (HR16DE) : Periodical Maintenance Specification

INFOID:0000000006602761

ENGINE COOLANT CAPACITY (APPROXIMATE)

Unit: ℓ (US qt, Imp qt)

Engine coolant capacity (With reservoir tank at “MAX” level)	CVT models	6.3 (6-2/3, 5-1/2)
	M/T models	
Reservoir tank engine coolant capacity (At “MAX” level)		0.7 (3/4, 5/8)

ENGINE COOLANT (K9K)

ENGINE COOLANT (K9K) : Periodical Maintenance Specification

INFOID:0000000006706097

ENGINE COOLANT CAPACITY (APPROXIMATE)

Unit: ℓ (Imp qt)

Engine coolant capacity (With reservoir tank at “MAX” level)	6.7 (5-7/8)
Reservoir tank engine coolant capacity (At “MAX” level)	0.7 (5/8)

ENGINE OIL (MR16DDT)

ENGINE OIL (MR16DDT) : Periodical Maintenance Specification

INFOID:0000000006419702

ENGINE OIL CAPACITY (APPROXIMATE)

Unit: ℓ (Imp qt)

Drain and refill	With oil filter change	4.8 (4-1/4)
	Without oil filter change	4.6 (4)
Dry engine (Overhaul)		5.4 (4-3/4)

ENGINE OIL (HR16DE)

ENGINE OIL (HR16DE) : Periodical Maintenance Specification

INFOID:0000000006602760

ENGINE OIL CAPACITY (APPROXIMATE)

Unit: ℓ (US qt, Imp qt)

Drain and refill	With oil filter change	4.3 (4-4/8, 3-6/8)
	Without oil filter change	4.1 (4-3/8, 3-5/8)
Dry engine (Overhaul)		4.8 (5-1/8, 4-2/8)

ENGINE OIL (K9K)

ENGINE OIL (K9K) : Standard and Limit

INFOID:0000000006706095

OIL PRESSURE

Engine speed rpm	Approximate discharge pressure kPa (bar, kg/cm^2, psi)
Idle speed	120 (1.2, 1.22, 17.4)
3,000	350 (3.5, 5.57, 50.8)

OIL CAPACITY (APPROXIMATE)

Unit: ℓ (Imp qt)

With oil filter change	4.40 (3 - 7/8 Imp qt)
Without oil filter change	4.24 (3 - 3/4 Imp qt)
Dry engine (overhaul)	4.56 (4 Imp qt)

TIGHTENING TORQUE

Unit: N·m (kg-m, ft-lb)

Oil pressure switch	25 (2.55, 18.4)

SPARK PLUG (MR16DDT)

SPARK PLUG (MR16DDT) : Spark Plug

INFOID:0000000006419700

SPARK PLUG

Unit: mm (in)

Make		DENSO
Standard type		FXE20HR11
Gap (Nominal)	Standard	1.1 (0.043)
	Limit	1.4 (0.055)

SPARK PLUG (HR16DE)

SPARK PLUG (HR16DE) : Spark Plug

INFOID:0000000006603344

SPARK PLUG (PLATINUM-TIPPED TYPE)

Unit: mm (in)

Make		NGK
Standard type		DILZKAR6A11
Spark plug gap	Standard	1.1 (0.043)

ROAD WHEEL

ROAD WHEEL : Road Wheel

INFOID:0000000006603345

ALUMINUM WHEEL

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

STEEL WHEEL

Item		Limit
Radial runout	Lateral deflection	Less than 0.8 mm (0.031 in)
	Vertical deflection	Less than 0.5 mm (0.020 in)
Allowable unbalance	Dynamic (At flange)	Less than 5 g (0.17 oz) (one side)
	Static (At flange)	Less than 10 g (0.35 oz)

STEEL WHEEL (EMERGENCY)

Item		Limit
Radial runout	Lateral deflection	Less than 1.2 mm (0.047 in)
	Vertical deflection	Less than 1.0 mm (0.039 in)