

SECTION MA

MAINTENANCE

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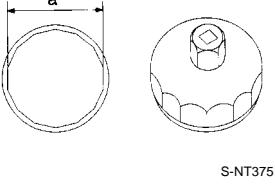
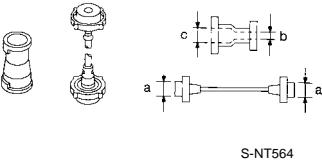
PREPARATION

PREPARATION

Special Service Tools

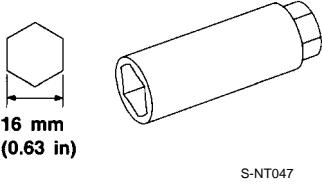
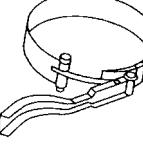
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ELS000B6

Tool number Tool name	Description
KV10115801 Oil filter wrench	 <p>Removing and installing oil filter (QR20DE and QR25DE engine models) a: 64.3 mm (2.531 in)</p>
EG17650301 Radiator cap tester adapter	 <p>Adapting radiator cap tester to radiator filler neck a: 28 (1.10) dia. b: 31.4 (1.236) dia. c: 41.3 (1.626) dia. Unit: mm (in)</p>

Commercial Service Tools

ELS000K9

Tool name	Description
Spark plug wrench	 <p>Removing and installing spark plug (QR20DE and QR25DE engine models)</p>
Fuel filter wrench	 <p>Removing fuel filter (YD22DDTi engine model)</p>

DESCRIPTION

DESCRIPTION

PFP:00000

Pre-delivery Inspection Items

ELS000AK

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

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

UNDER HOOD — engine off

- Radiator coolant level and coolant hose connections for leaks
- Battery fluid level, specific gravity and conditions of battery terminals
- Drive belts tension
- Fuel filter for water or dusts (Diesel only), and fuel lines and connections for leaks
- Engine oil level and oil leaks
- Clutch and brake reservoir fluid level and fluid lines for leaks
- Windshield and rear window washer and headlamp cleaner reservoir fluid level
- Power steering reservoir fluid level and hose connections for leaks

ON INSIDE AND OUTSIDE

- Remove front spring/strut spacer (If applicable)
- Operation of all instruments, gauges, lights and accessories
- Operation of horn(s), wiper and washer
- Steering lock for operation
- Check air conditioner for gas leaks
- Front and rear seats, and seat belts for operation
- All moldings, trims and fittings for fit and alignment
- All windows for operation and alignment
- Hood, trunk lid, door panels for fit and alignment
- Latches, keys and locks for operation
- Weatherstrips for adhesion and fit
- Headlamp aiming
- Tighten wheel nuts (Inc. inner nuts if applicable)
- Tire pressure (Inc. spare tire)
- Check front wheels for toe-in
- Install clock/voltmeter/room lamp fuse (If applicable)
- Install deodorizing filter to air conditioner (If applicable)
- Remove wiper blade protectors (If applicable)

UNDER BODY

- Manual transmission/transaxle, transfer and differential gear oil level
- Brake and fuel lines and oil/fluid reservoirs for leaks
- Tighten bolts and nuts of steering linkage and gear box, suspension, propeller shafts and drive shafts
- Tighten rear body bolts and nuts (Models with wooden bed only)

ROAD TEST

- Clutch operation
- Parking brake operation
- Service brake operation
- Automatic transmission/transaxle shift timing and kickdown
- Steering control and returnability
- Engine performance

DESCRIPTION

- Squeaks and rattles

A

ENGINE OPERATING AND HOT

- Adjust idle speed

B

- Automatic transmission/transaxle fluid level

- Engine idling and stop knob operation (Diesel only)

B

FINAL INSPECTION

- Install necessary parts (outside mirror, wheel covers, seat belts, mat, carpet or mud flaps)

C

- Inspect for interior and exterior metal and paint damage

D

- Check for spare tire, jack, tools (wheel chock), and literature

- Wash, clean interior and exterior

- : Not applicable to this model

E

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MA

M

GENERAL MAINTENANCE

GENERAL MAINTENANCE

PFP:00000

General Maintenance

ELS000AL

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

OUTSIDE THE VEHICLE

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

Item	Reference page	
Tires	Check the pressure with a gauge periodically when at a service station, including the spare, and adjust to the specified pressure if necessary. Check carefully for damage, cuts or excessive wear.	—
Windshield wiper blades	Check for cracks or wear if not functioning correctly.	—
Doors and engine hood	Check that all doors, the engine hood, the trunk lid and back door operate properly. Also ensure that all latches lock securely. Lubricate if necessary. Make sure that the secondary latch keeps the hood from opening when the primary latch is released. When driving in areas using road salt or other corrosive materials, check for lubrication frequently.	BL-4 , BL-8
Tire rotation	Tires should be rotated every 5,000 km (3,000 miles).	MA-38

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 buzzers/chimes are operating properly.	—
Steering wheel	Check that it has the specified play. Check for changes in the steering conditions, such as excessive free 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.	SB-3

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.	CO-29 (QR20DE, QR25DE)
		CO-29 (YD22DDTi)
Engine oil level	Check the level after parking the vehicle (on level ground) and turning off the engine.	LU-18 (QR20DE, QR25DE)
		LU-18 (YD22DDTi)
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-35 , MA-39
Battery	Check the fluid level in each cell. It should be between the "MAX" and "MIN" lines.	—

PERIODIC MAINTENANCE

PERIODIC MAINTENANCE

PFP:00026

Periodic Maintenance

ELS000AM

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 (QR20DE AND QR25DE PETROL ENGINE)

(Annual Mileage <30,000 Km/year)

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

MAINTENANCE OPERATION		MAINTENANCE INTERVAL								Reference page
		km x 1,000 (Miles x 1,000) Months	15 (9) 12	30 (18) 24	45 (27) 36	60 (36) 48	75 (45) 60	90 (54) 72	105 (63) 84	120 (72) 96
Engine compartment and under vehicle										
Intake and exhaust valve clearance	See NOTE (1)									EM-53
Drive belts	See NOTE (2)									MA-19
Engine oil (Use recommended oil.)★		R	R	R	R	R	R	R	R	MA-23
Engine oil filter (Use NISSAN genuine part or equivalent)★		R	R	R	R	R	R	R	R	MA-23
Engine anti-freeze coolant (Use genuine NISSAN Anti-Freeze Coolant (L2N) or equivalent.)	See NOTE (3)			I			R		I	MA-19
Cooling system		I	I	I	I	I	I	I	I	MA-21
Fuel lines			I		I		I		I	MA-22
Air cleaner filter★					R				R	MA-22
Fuel filter (In-tank type)	See NOTE (4)									FL-4
Spark plugs			R		R		R		R	MA-24
EVAP vapor lines (With carbon canister)			I		I		I		I	EC-425 or EC-1112
Heated oxygen sensor 1	See NOTE (5)									EC-1320

NOTE:

- ★ Maintenance items with “★” should be performed more frequently according to “Maintenance Under Severe Driving Conditions”.
- (1)Periodic maintenance is not required. However, if valve noise increases, check valve clearance.
- (2) Replace the drive belts if found damaged or if the auto belt tensioner reading reaches the maximum limit.
- (3) 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.
- (5) Perform only according to "Maintenance Under Severe Driving conditions" for models without Euro-OBD system. For models with Euro-OBD system, periodic maintenance is not required.

CHASSIS AND BODY MAINTENANCE (QR20DE AND QR25DE PETROL ENGINE)

(Annual Mileage <30,000 Km/year)

A

B

C

D

E

F

G

H

I

J

K

MA

M

PERIODIC MAINTENANCE

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

MAINTENANCE OPERATION		MAINTENANCE INTERVAL									Reference page
Perform either at number of kilometers (miles) or months, whichever comes first.	km x 1,000 (Miles x 1,000) Months	15 (9) 12	30 (18) 24	45 (27) 36	60 (36) 48	75 (45) 60	90 (54) 72	105 (63) 84	120 (72) 96		
Underhood and under vehicle											
Headlamp aiming		I	I	I	I	I	I	I	I	I	LT-6
Brake & clutch, systems and fluid (For level & leaks)		I	I	I	I	I	I	I	I	I	MA-35, MA-39
Brake fluid★			R		R		R		R		MA-39
Brake booster vacuum hoses, connections & check valve			I		I		I		I		BR-19
Power steering fluid & lines (For level & leaks)		I	I	I	I	I	I	I	I	I	MA-40
Manual transaxle gear oil (For level & leaks)		I	I	I	I	I	I	I	I	I	MA-35
Automatic transaxle fluid (For level & leaks)★		I	I	I	I	I	I	I	I	I	MA-36
Transfer gear oil (For level & leaks)		I	I	I	I	I	I	I	I	I	MA-37
Differential gear oil (For level & leaks or replace)★		I	I	I	R	I	I	I	R		MA-38,MA-38
Steering gear & linkage, axle & suspension parts, propeller shaft, front drive shafts & exhaust system★		I	I	I	I	I	I	I	I	I	MA-40,MA-41,MA-37,MA-41,"Drive Shaft"
Wheel alignment (If necessary, rotate & balance wheels)		I	I	I	I	I	I	I	I	I	FSU-6,MA-38
Brake pads, rotors & other brake components★		I	I	I	I	I	I	I	I	I	MA-40,MA-40,MA-39
Foot brake, parking brake & clutch (For free play, stroke & operation)		I	I	I	I	I	I	I	I	I	BR-6PB-3,CL-5
Ventilation air filter★			R		R		R		R		ATC-121
Body corrosion	See NOTE (1)										MA-42

NOTE:

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

ENGINE AND EMISSION CONTROL MAINTENANCE (YD22DDTI DIESEL ENGINE)

(Annual Mileage <30,000 Km/year)

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

MAINTENANCE OPERATION		MAINTENANCE INTERVAL							Reference page
Perform either at number of kilometers (miles) or months, 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		
Engine compartment and under vehicle									
Intake & exhaust valve clearance	See NOTE (1)								EM-163
Drive belts		I	I	I	I	I	I	I	MA-26
Engine oil (Use API CD, CE, CF, CF-4 oil.)★	See NOTE (2)	R	R	R	R	R	R	R	MA-32

PERIODIC MAINTENANCE

MAINTENANCE OPERATION		MAINTENANCE INTERVAL						Reference page
km x 1,000 (Miles x 1,000) Months	20 (12) 12	40 (24) 24	60 (36) 36	80 (48) 48	100 (60) 60	120 (72) 72		
Perform either at number of kilometers (miles) or months, whichever comes first.								
Engine oil filter (Use Eco filter or equivalent)★	See NOTE (3)	R	R	R	R	R	R	MA-33
Engine anti-freeze coolant (Use genuine Nissan Anti-freeze coolant (L2N) or equivalent)	See NOTE (4)		I			R		MA-27
Cooling system		I	I	I	I	I	I	MA-29
Fuel lines			I		I		I	MA-30
Air cleaner filter ★				R			R	MA-32
Fuel filter★		D	R	D	R	D	R	MA-31
Fuel injector	See NOTE (5)							EM-144

NOTE:

- ★ Maintenance items with “★” should be performed more frequently according to “Maintenance Under Severe Driving Conditions”.
- (1) If valve noise increases, check valve clearance.
- (2) Never use CG-4 oil.
- (3) Oil filter element assembly and O-ring seal are replacement parts.
- (4) First replace at 100,000 Km (60,000 miles)/60 months, then every 60,000Km (36,000 miles)/36 months. After first replacement, perform "I" (checking the mixture ratio and correcting the mixture ratio if necessary) at the middle of replacement interval.
- (5) If engine power decreases, black exhaust smoke is emitted or engine noise increases, perform this maintenance item.

CHASSIS AND BODY MAINTENANCE (YD22DDTI DIESEL ENGINE)

(Annual Mileage <30,000 Km/year)

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

MAINTENANCE OPERATION		MAINTENANCE INTERVAL						Reference page
km x 1,000 (Miles x 1,000) Months	20 (12) 12	40 (24) 24	60 (36) 36	80 (48) 48	100 (60) 60	120 (72) 72		
Underhood and under vehicle								
Headlamp aiming		I	I	I	I	I	I	LT-6
Brake & clutch, systems and fluid (For level & leaks)		I	I	I	I	I	I	MA-39,MA-35
Brake fluid★			R		R		R	MA-39
Brake booster vacuum hoses, connections & check valve			I		I		I	BR-19
Power steering fluid & lines (For level & leaks)		I	I	I	I	I	I	MA-40
Manual transaxle gear oil (For level & leaks)		I	I	I	I	I	I	MA-35,
Transfer gear oil (For level & leaks)		I	I	I	I	I	I	MA-37
Differential gear oil (For level & leaks or replace)★		I	I	R	I	I	R	MA-38
Steering gear & linkage, axle & suspension parts, propeller shaft, front drive shafts & exhaust system★		I	I	I	I	I	I	MA-40,MA-41,MA-37,MA-41,MA-35
Wheel alignment (If necessary, rotate & balance wheels)		I	I	I	I	I	I	FSU-6,MA-38

PERIODIC MAINTENANCE

MAINTENANCE OPERATION			MAINTENANCE INTERVAL						Reference page
Perform either at number of kilometers (miles) or months, 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	
Brake pads, rotors & other brake components★			I	I	I	I	I	I	MA-40,MA-39 ,MA-40
Foot brake, parking brake & clutch (For free play, stroke & operation)			I	I	I	I	I	I	BR-6,CL-5
Ventilation air filter★			R	R	R	R	R	R	ATC-121
Body corrosion	See NOTE (1)								MA-42

NOTE:

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

MAINTENANCE UNDER SEVERE DRIVING CONDITIONS

(Annual Mileage <30,000 Km/year)

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

Severe driving conditions

- A — Driving in dusty conditions
- B — Repeatedly driving 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 materials
- H — Driving on rough and/or muddy roads or in the desert
- I — Driving with frequent use of braking or in mountainous areas
- J — Frequent off road use or driving in water
- K — Sustained high speed driving
- L — For models without Euro-OBD system

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

Driving condition												Maintenance item		Mainten- ance operation	Maintenance interval		Refer- ence page
A	.	.	.	.	.	.	.	.	.	.	.	Air cleaner filter	Petrol models	Replace	Every 30,000 km (18,000 miles) or 24 months		MA-22
	.	.	.	.	.	.	.	.	.	.	.		Diesel models	Replace	Every 30,000 km (18,000 miles) or 18 months		MA-32
A	B	C	D	.	.	.	.	.	.	.	.	Engine oil & engine oil filter	Petrol models	Replace	Every 7,500 km (4,500 miles) or 6 months		MA-23, MA-23
	.	.	.	.	.	.	.	.	.	.	.		Diesel models	Replace	Every 10,000 km (6,000 miles) or 6 months		MA-32, MA-33
A	.	.	.	E	.	.	.	.	.	.	.	Fuel filter	Diesel models	Check & drain water	Every 10,000 km (6,000 miles) or 6 months		FL-15
	.	.	.	.	.	.	.	.	.	.	.			Replace	Every 20,000 km (12,000 miles) or 12 months		MA-31

PERIODIC MAINTENANCE

.	L	Heated oxygen sensor 1	Petrol models	Inspect	Every 30,000 km (18,000 miles) or 24 months	EC-1320
.	.	.	.	F	.	.	.	.	.	Brake fluid	Petrol models	Replace	Every 15,000 km (9,000 miles) or 12 months	MA-39
.	.	.	.	H	.	.	.	.	.		Diesel models	Replace	Every 20,000 km (12,000 miles) or 12 months	MA-39
.	C	.	.	.	.	.	.	.	.	Differential gear oil	Petrol models	Replace	Every 30,000 km (18,000 miles) or 24 months	MA-38
.	.	C	.	.	H	.	.	.	.		Diesel models	Replace	Every 30,000 km (18,000 miles) or 18 months	MA-38
.	C	.	.	.	H	.	.	.	.	Automatic transaxle fluid	Petrol models	Replace	Every 30,000 km (18,000 miles) or 24 months	MA-37
.	.	.	.	.	G	H	.	.	.	Steering gear & linkage, axle & suspension parts, propeller shaft, front drive shafts & exhaust system	Petrol models	Inspect	Every 7,500 km (4,500 miles) or 6 months	MA-40 , MA-41 , MA-37 , MA-41 , MA-35
.	.	.	.	.	G	H	.	.	.		Diesel models	Inspect	Every 10,000 km (6,000 miles) or 6 months	MA-40 , MA-41 , MA-37 , MA-41 , MA-35
A	.	C	.	.	G	H	I	.	.	Brake pads, rotors & other brake components	Petrol models	Inspect	Every 7,500 km (4,500 miles) or 6 months	MA-40 , MA-39 , MA-40	
A	.	.	.	.	G	H	I	.	.		Diesel models	Inspect	Every 10,000 km (6,000 miles) or 6 months	MA-40 , MA-39 , MA-40
A	.	.	.	.	.	.	.	.	.	Ventilation air filter	Petrol models	Replace	Every 15,000 km (9,000 miles) or 12 months	ATC-121
A	.	.	.	.	.	.	.	.	.		Diesel models	Replace	Every 10,000 km (6,000 miles) or 6 months	ATC-121

ENGINE AND EMISSION CONTROL MAINTENANCE (QR20DE AND QR25DE PETROL ENGINE) (Annual Mileage >30,000 Km/year)

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

MAINTENANCE OPERATION			MAINTENANCE INTERVAL								Reference page
Perform on a kilometer basis, but on an annual basis when driving less than 15,000 km (9,000 miles) per year			km x 1,000 (Miles x 1,000) Months	15 (9)	30 (18)	45 (27)	60 (36)	75 (45)	90 (54)	105 (63)	120 (72)

Engine compartment and under vehicle

Intake and exhaust valve clearance	See NOTE (1)										EM-53
Drive belts	See NOTE (2)	I	I	I	I	I	I	I	I	I	MA-19
Engine oil (Use recommended oil.)★		R	R	R	R	R	R	R	R	R	MA-23
Engine oil filter (Use NISSAN genuine part or equivalent)★		R	R	R	R	R	R	R	R	R	MA-23
Engine anti-freeze coolant (Use genuine NISSAN Anti-Freeze Coolant (L2N) or equivalent.)	See NOTE (3)			I			R		I		MA-19

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PERIODIC MAINTENANCE

MAINTENANCE OPERATION		MAINTENANCE INTERVAL								Refer- ence page
	km x 1,000 (Miles x 1,000) Months	15 (9)	30 (18)	45 (27)	60 (36)	75 (45)	90 (54)	105 (63)	120 (72)	
Perform on a kilometer basis, but on an annual basis when driving less than 15,000 km (9,000 miles) per year										
Cooling system			I		I		I		I	MA-21
Fuel lines					I				I	MA-22
Air cleaner filter★					R				R	MA-22
Fuel filter (In-tank type)	See NOTE (4)									FL-4
Spark plugs		R		R		R		R		MA-24
EVAP vapor lines (With carbon canister)					I				I	EC- 1112 or EC- 1112
Heated oxygen sensor 1	See NOTE (5)									EC- 1320

NOTE:

- ★ Maintenance items with “★” should be performed more frequently according to “Maintenance Under Severe Driving Conditions”.
- (1)Periodic maintenance is not required. However, if valve noise increases, check valve clearance.
- (2) Replace the drive belts if found damaged or if the auto belt tensioner reading reaches the maximum limit.
- (3) First replace at 90,000 Km (54,000 miles), then every 60,000 km (36,000 miles). Perform "I" (Checking the mixture ratio and correcting the mixture ratio if necessary) at the middle of replacement interval.
- (4) Fuel filter is maintenance-free. For service procedures, refer to FL section.
- (5) Perform only according to "Maintenance Under Severe Driving conditions" for models without Euro-OBD system. For models with Euro-OBD system, periodic maintenance is not required.

CHASSIS AND BODY MAINTENANCE (QR20DE AND QR25DE PETROL ENGINE)

(Annual Mileage >30,000 Km/year)

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

MAINTENANCE OPERATION		MAINTENANCE INTERVAL								Reference page
	km x 1,000 (Miles x 1,000) Months	15 (9)	30 (18)	45 (27)	60 (36)	75 (45)	90 (54)	105 (63)	120 (72)	
Underhood and under vehicle										
Headlamp aiming			I		I		I		I	LT-6
Brake & clutch, systems and fluid (For level & leaks)			I		I		I		I	MA-35, MA-39
Brake fluid★					R				R	MA-39
Brake booster vacuum hoses, connections & check valve					I				I	BR-19
Power steering fluid & lines (For level & leaks)			I		I		I		I	MA-40
Manual transaxle gear oil (For level & leaks)			I		I		I		I	MA-35
Automatic transaxle fluid (For level & leaks)★			I		I		I		I	MA-36
Transfer gear oil (For level & leaks)			I		I		I		I	MA-37
Differential gear oil (For level & leaks or replace)★			I		R		I		R	MA-38, MA-38

PERIODIC MAINTENANCE

MAINTENANCE OPERATION		MAINTENANCE INTERVAL								Reference page
Perform either at number of kilometers (miles) or months, whichever comes first.	km x 1,000 (Miles x 1,000) Months	15 (9)	30 (18)	45 (27)	60 (36)	75 (45)	90 (54)	105 (63)	120 (72)	
Steering gear & linkage, axle & suspension parts, propeller shaft, front drive shafts & exhaust system★			I		I		I		I	MA-40, MA-41, MA-37, MA-41, "Drive Shaft"
Wheel alignment (If necessary, rotate & balance wheels)			I		I		I		I	FSU-6, MA-38
Brake pads, rotors & other brake components★			I		I		I		I	MA-40, MA-40, MA-39
Foot brake, parking brake & clutch (For free play, stroke & operation)			I		I		I		I	BR-6, PB-3, CL-5
Ventilation air filter★			R		R		R		R	ATC-121
Body corrosion	See NOTE (1)									MA-42

NOTE:

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

ENGINE AND EMISSION CONTROL MAINTENANCE (YD22DDTI DIESEL ENGINE)

(Annual Mileage >30,000 Km/year)

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

MAINTENANCE OPERATION		MAINTENANCE INTERVAL							Reference page
Perform either at number of kilometers (miles) or months, whichever comes first.	km x 1,000 (Miles x 1,000) Months	20 (12)	40 (24)	60 (36)	80 (48)	100 (60)	120 (72)		
Engine compartment and under vehicle									
Intake & exhaust valve clearance	See NOTE (1)								EM-163
Drive belts		I	I	I	I	I	I	I	MA-26
Engine oil (Use API CD, CE, CF, CF-4 oil.)★	See NOTE (2)	R	R	R	R	R	R	MA-32	MA
Engine oil filter (Use Eco filter or equivalent)★	See NOTE (3)	R	R	R	R	R	R	MA-33	
Engine anti-freeze coolant (Use genuine Nissan Anti-freeze coolant (L2N) or equivalent)	See NOTE (4)		I			R		MA-27	
Cooling system		I	I	I	I	I	I	MA-29	
Fuel lines				I			I	MA-30	
Air cleaner filter ★					R			MA-32	
Fuel filter★		D	D	R	D	D	R	MA-31	
Fuel injector	See NOTE (5)							EM-144	

NOTE:

- ★ Maintenance items with "★" should be performed more frequently according to "Maintenance Under Severe Driving Conditions".
- (1) If valve noise increases, check valve clearance.
- (2) Never use CG-4 oil.
- (3) Oil filter element assembly and O-ring seal are replacement parts.

PERIODIC MAINTENANCE

- (4) First replace at 100,000 Km (60,000 miles), then every 60,000Km (36,000 miles). After first replacement, perform "I" (checking the mixture ratio and correcting the mixture ratio if necessary) at the middle of replacement interval.
- (5) If engine power decreases, black exhaust smoke is emitted or engine noise increases, perform this maintenance item.

CHASSIS AND BODY MAINTENANCE (YD22DDTI DIESEL ENGINE)

(Annual Mileage >30,000 Km/year)

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

MAINTENANCE OPERATION		MAINTENANCE INTERVAL						Reference page
Perform either at number of kilometers (miles) or months, whichever comes first.	km x 1,000 (Miles x 1,000) Months	20 (12)	40 (24)	60 (36)	80 (48)	100 (60)	120 (72)	
Underhood and under vehicle								
Headlamp aiming			I		I		I	LT-6
Brake & clutch, systems and fluid (For level & leaks)		I	I	I	I	I	I	MA-39,MA-35
Brake fluid★				R			R	MA-39
Brake booster vacuum hoses, connections & check valve				I			I	BR-19
Power steering fluid & lines (For level & leaks)		I	I	I	I	I	I	MA-40
Manual transaxle gear oil (For level & leaks)			I		I		I	MA-35
Transfer gear oil (For level & leaks)		I	I	I	I	I	I	MA-37
Differential gear oil (For level & leaks or replace)★		I	I	R	I	I	R	MA-38
Steering gear & linkage, axle & suspension parts, propeller shaft, front drive shafts & exhaust system★				I			I	MA-40,MA-41,MA-37,MA-41,MA-35
Wheel alignment (If necessary, rotate & balance wheels)			I		I		I	FSU-6,MA-38
Brake pads, rotors & other brake components★		I	I	I	I	I	I	MA-40,MA-39,MA-40
Foot brake, parking brake & clutch (For free play, stroke & operation)		I	I	I	I	I	I	BR-6,CL-5
Ventilation air filter★		R	R	R	R	R	R	ATC-121
Body corrosion	See NOTE (1)							MA-42

NOTE:

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

MAINTENANCE UNDER SEVERE DRIVING CONDITIONS

(Annual Mileage >30,000 Km/year)

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

Severe driving conditions

- A — Driving in dusty conditions
- B — Repeatedly driving 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 materials

PERIODIC MAINTENANCE

H — Driving on rough and/or muddy roads or in the desert
 I — Driving with frequent use of braking or in mountainous areas
 J — Frequent off road use or driving in water
 K — Sustained high speed driving
 L — For models without Euro-OBD system

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

Driving condition														Maintenance item		Maintenance operation	Maintenance interval	Reference page		
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P					
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Air cleaner filter	Petrol models	Replace	Every 30,000 km (18,000 miles)	MA-22
																Diesel models	Replace	Every 30,000 km (18,000 miles)	MA-32	
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Engine oil & engine oil filter	Petrol models	Replace	Every 7,500 km (4,500 miles)	MA-23 , MA-23
																Diesel models	Replace	Every 10,000 km (6,000 miles)	MA-32 , MA-33	
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Fuel filter	Diesel models	Check & drain water	Every 10,000 km (6,000 miles)	FL-15
																Replace	Every 30,000 km (18,000 miles)	MA-31		
.														L	Heated oxygen sensor 1	Petrol models	Inspect	Every 60,000 km (36,000 miles)	EC-1320	
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Brake fluid	Petrol models	Replace	Every 30,000 km (18,000 miles)	MA-39
															Diesel models	Replace	Every 30,000 km (18,000 miles)	MA-39		
.	.	C	.	.	.	.	H	.	.	.	.	.	.	.	Differential gear oil	Petrol models	Replace	Every 30,000 km (18,000 miles)	MA-38
															Diesel models	Replace	Every 30,000 km (18,000 miles)	MA-38		
.														H	Automatic transaxle fluid	Petrol models	Replace	Every 60,000 km (36,000 miles)	MA-37	
.	.	.	.	.	.	.	G	H	.	.	.	.	.	.	Steering gear & linkage, axle & suspension parts, propeller shaft, front drive shafts & exhaust system	Petrol models	Inspect	Every 30,000 km (18,000 miles)	MA-40 , MA-41 , MA-37 , MA-41 , MA-35
															Diesel models	Inspect	Every 30,000 km (18,000 miles)	MA-40 , MA-41 , MA-37 , MA-41 , MA-35		
A	C	.	.	.	.	.	G	H	I	.	.	.	.	.	Brake pads, rotors & other brake components	Petrol models	Inspect	Every 15,000 km (9,000 miles)	MA-40 , MA-39 , MA-40
															Diesel models	Inspect	Every 10,000 km (6,000 miles)	MA-40 , MA-39 , MA-40		
A	.	.	.	.	.	.	.	.	.	.	.	.	.	.	Ventilation air filter	Petrol models	Replace	Every 15,000 km (9,000 miles)	ATC-121
															Diesel models	Replace	Every 10,000 km (6,000 miles)	ATC-121		

RECOMMENDED FLUIDS AND LUBRICANTS

RECOMMENDED FLUIDS AND LUBRICANTS

PFP:00000

Fluids and Lubricants

ELS000C8

			Capacity (Approximate)		Recommended Fluids/Lubricants	
			Liter	Imp measure		
Engine oil Drain and refill	With oil filter change	QR20DE, QR25DE	3.9	3-3/8 qt	<ul style="list-style-type: none"> Gasoline engine API SG, SH, SJ or SL *1 ILSAC grade GF-I, GF-II or GF-III *1 ACEA 96-A2 Diesel engine API CF-4*1, *2 ACEA B1, B3, B4, B5*1, *2 	
		YD22DDTi	5.2	4-5/8 qt		
	Without oil filter change	QR20DE, QR25DE	3.5	3-1/8 qt		
		YD22DDTi	4.9	4-3/8 qt		
Dry engine (engine overhaul)		QR20DE, QR25DE	4.5	4 qt	<ul style="list-style-type: none"> Genuine Nissan Anti-freeze Coolant (L2N) or equivalent in its quality*3 	
		YD22DDTi	6.3	5-1/2 qt		
Cooling system (with reservoir)		QR20DE, QR25DE	7.1	6-1/4 qt		
		YD22DDTi	9.5	8-3/8 qt		
Reservoir tank		QR20DE, QR25DE	0.6	1/2 qt	<ul style="list-style-type: none"> Genuine Nissan gear oil or API GL-4, Viscosity SAE 75W-85 API GL-5*1, Viscosity SAE 80W-90 API GL-5*1, Viscosity SAE 80W-90 	
		YD22DDTi	0.6	1/2 qt		
Manual transaxle gear oil			2.3	4pt		
Transfer gear oil			0.31	1/2 pt		
Differential gear oil			0.55	1 pt		
Automatic transaxle fluid			8.5	7-1/2 qt	Genuine Nissan ATF or equivalent*4	
Power steering fluid			—	—	Type Dexron TM III or equivalent	
Brake and clutch fluid			—	—	● DOT 3 or DOT 4 (US FMVSS No. 116)*5	
Multi-purpose grease			—	—	NLGI No. 2 (Lithium soap base)	

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

*2: Never use API CG-4.

*3: Use Genuine Nissan Anti-freeze Coolant (L2N) or equivalent in its quality, in order to avoid possible aluminum corrosion within the engine cooling system caused by the use of non-genuine engine coolant.

Note that any repairs for the incidents within the engine cooling system while using non-genuine engine coolant may not be covered by the warranty even if such incidents occurred during the warranty period.

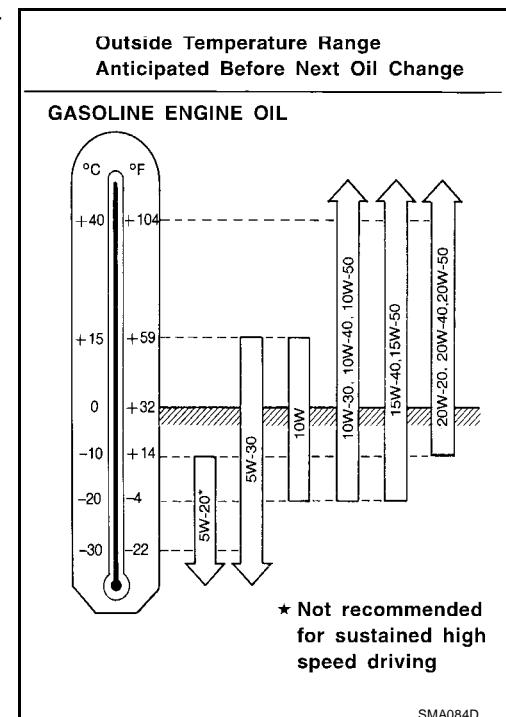
*4: Contact a Nissan dealership for more information regarding suitable fluids, including recommended brand(s) of DexronTM III/MerconTM Automatic Transmission Fluid.

*5: Never mix different types of fluids (DOT 3 and DOT 4).

RECOMMENDED FLUIDS AND LUBRICANTS

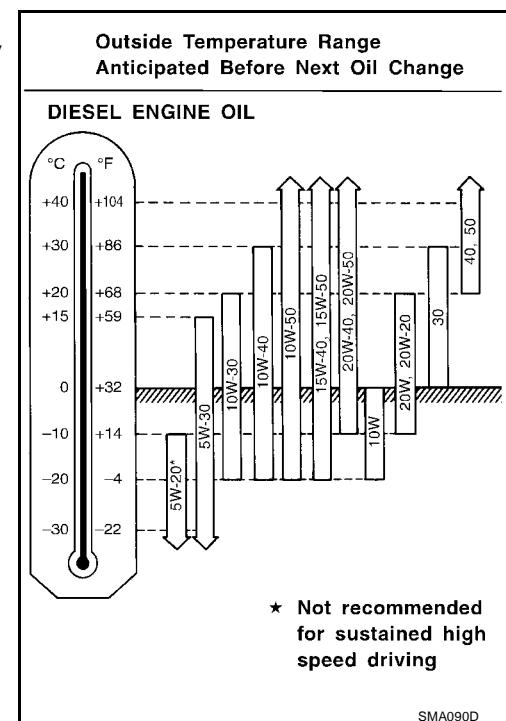
SAE Viscosity Number GASOLINE ENGINE

- For warm and cold areas: 10W-30 is preferable for ambient temperature above -20°C (-4°F).
- 5W-30 will positively improve fuel economy.
- For hot areas: 20W-40 and 20W-50 are suitable.



DIESEL ENGINE

- For cold areas: 10W-30 is preferable. On turbocharger models, 5W-20 is not recommended, and 5W-30 should be used only below 0°C (32°F).
- For hot and warm areas: 20W-40 and 20W-50 are suitable.



RECOMMENDED FLUIDS AND LUBRICANTS

Engine Coolant Mixture Ratio

ELS000AN

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

CAUTION:

- When adding or replacing coolant, be sure to use only Genuine NISSAN Anti-freeze Coolant (L2N) or equivalent. Because L2N is premixed type coolant.

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

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

Mixed coolant specific gravity

Unit: specific gravity

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

WARNING:

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

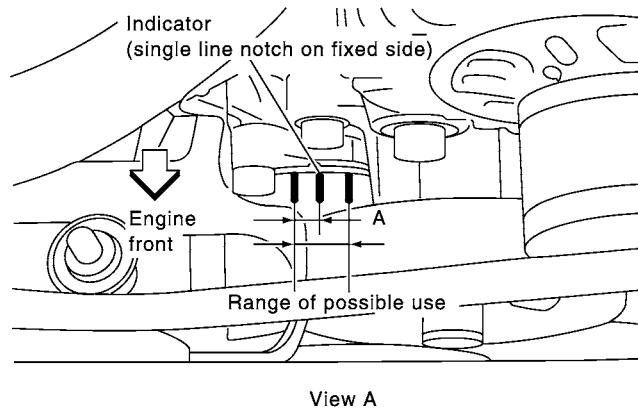
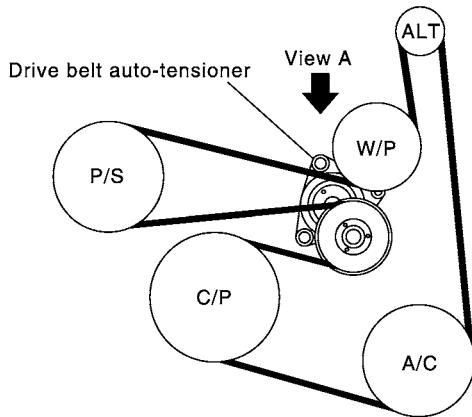
ENGINE MAINTENANCE (QR20DE-QR25DE)

PFP:00100

Checking Drive Belts

ELS000KA

SEC. 117



PBIC1234E

WARNING:

Be sure to perform when the engine is stopped.

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

NOTE:

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

Tension Adjustment

ELS000K4

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

Changing Engine Coolant

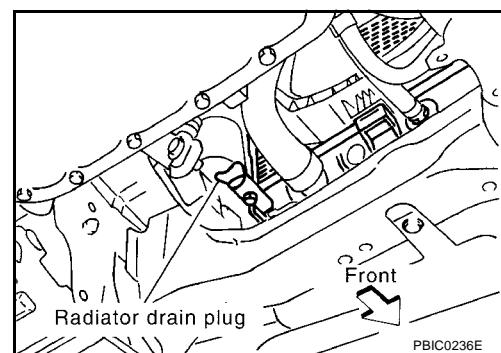
ELS000JV

WARNING:

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

DRAINING ENGINE COOLANT

- Open radiator drain plug at the bottom of radiator, and remove radiator cap.
 - Be careful not to allow engine coolant to contact drive belts.

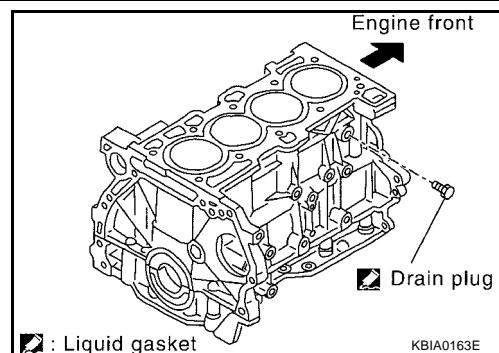


PBIC0236E

ENGINE MAINTENANCE (QR20DE-QR25DE)

2. Open drain plug on cylinder block.
3. Remove reservoir tank and drain engine coolant.
4. Check drained engine coolant for contaminants such as rust, corrosion or discoloration.

If contaminated, flush engine cooling system. Refer to [MA-21, "FLUSHING COOLING SYSTEM"](#).



REFILLING ENGINE COOLANT

1. Install reservoir tank, radiator drain plug and cylinder block drain plug.

- **Apply sealant to the thread of cylinder block drain plug.**
- Use Genuine Liquid Gasket or equivalent.**

Cylinder block drain plug:

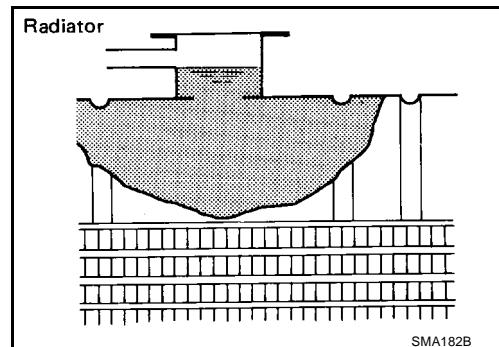
 : 7.8 - 11.8 N·m (0.8 - 1.2 kg·m, 69 - 104 in-lb)

2. Fill radiator and reservoir tank to specified level.

- **Use genuine Nissan engine coolant or equivalent in its quality. Refer to [MA-16, "RECOMMENDED FLUIDS AND LUBRICANTS"](#).**

Engine coolant capacity (With reservoir tank):

Approx. 7.1 ℥ (6-1/4 Imp qt)



Reservoir tank: 0.6 ℥ (1/2 Imp qt)

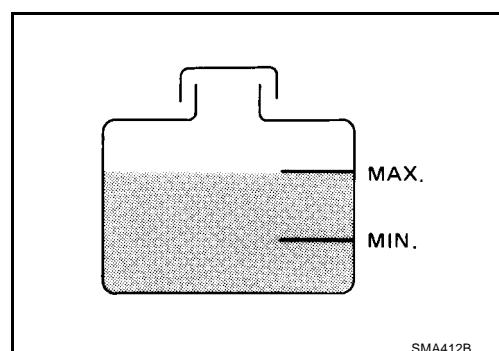
- **Pour engine coolant slowly of less than 2 ℥ (1-3/4 Imp qt) a minute to allow air in system to escape.**

3. Warm up engine to normal operating temperature without radiator cap installed.

- **If engine coolant overflows radiator filler hole, install radiator cap.**

4. Run engine at 3,000 rpm for 10 seconds and return to idle speed with radiator cap installed.

- Repeat two or three times.



Watch engine coolant temperature gauge so as not to overheat the engine.

5. Stop engine and cool down to less than approximately 50°C(122°F).

 - Cool down using a fan to reduce the time.
 - If necessary, refill radiator up to filler neck with engine coolant.

6. Refill reservoir tank to MAX level line with engine coolant.
7. Repeat steps 4 through 6 two or more times with radiator cap installed until engine coolant level no longer drops.
8. Check cooling system for leaks with engine running.
9. Warm up engine, and check for sound of engine coolant flow while running engine from idle up to 3,000 rpm with heater temperature controller set at several position between COOL and WARM.

 - Sound may be noticeable at heater unit.

10. If sound is heard, bleed air from cooling system by repeating steps 4 through 6 until engine coolant level no longer drops.

ENGINE MAINTENANCE (QR20DE-QR25DE)

- Clean excess engine coolant from engine.

FLUSHING COOLING SYSTEM

1. Fill radiator and reservoir tank with water and reinstall radiator cap.
2. Run engine and warm it up to normal operating temperature.
3. Rev engine two or three times under no-load.
4. Stop engine and wait until it cools down.
5. Drain water.
6. Repeat steps 1 through 5 until clear water begins to drain from radiator.

Checking Cooling System

ELS000JW

WARNING:

Never remove the radiator cap when the engine is hot; serious burns could be caused by high pressure fluid escaping from the radiator.

Wrap a thick cloth around the cap and carefully remove it by turning it a quarter turn to allow built-up pressure to escape and then turn the cap all the way off.

CHECKING COOLING SYSTEM HOSES

Check hoses for improper attachment, leaks, cracks, damage, loose connections, chafing and deterioration.

CHECKING RADIATOR

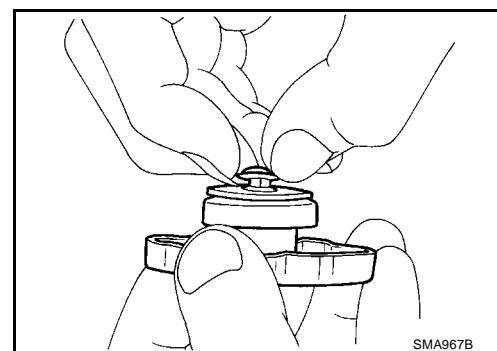
Check radiator for mud or clogging. If necessary, clean radiator as follows.

- Be careful not to bend or damage the radiator fins.
- When radiator is cleaned without removal, remove all surrounding parts such as cooling fan, radiator shroud and horns. Then tape the harness and connectors to prevent water from entering.

1. Apply water by hose to the back side of the radiator core vertically downward.
2. Apply water again to all radiator core surfaces once per minute.
3. Stop washing if any stains no longer flow out from the 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/cm², 71 psi) and keep distance more than 30 cm (11.8 in).
5. Blow air again into all the radiator core surfaces once per minute until no water sprays out.

CHECKING RADIATOR CAP

1. Pull the 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 the radiator cap negative-pressure valve.
 - Check that there are no abnormalities in the opening and closing conditions of the negative-pressure valve.



2. Check radiator cap relief pressure.

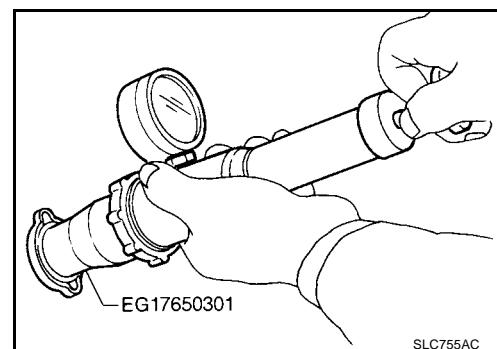
Standard:

78 - 98 kPa (0.78 - 0.98 bar, 0.8 - 1.0 kg/cm², 11 - 14 psi)

Limit:

59 kpa (0.59 bar, 0.6 kg/cm², 9 psi)

- When connecting the radiator cap to the tester, apply engine coolant to the cap seal part.



ENGINE MAINTENANCE (QR20DE-QR25DE)

- Replace the radiator cap if there is an abnormality in the negative-pressure valve, or if the open-valve pressure is outside of the standard values.

CHECKING RADIATOR SYSTEM FOR LEAKS

To check for leakage, apply pressure to the cooling system with a tester.

Testing pressure:

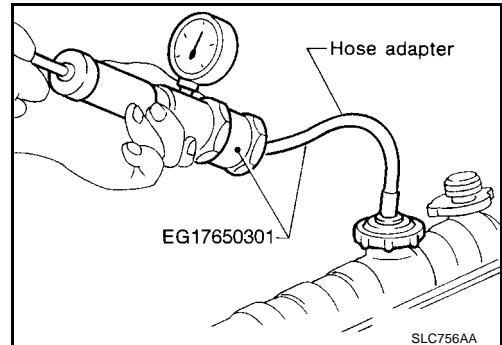
157 kPa (1.57 bar, 1.6 kg/cm², 23 psi)

WARNING:

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

CAUTION:

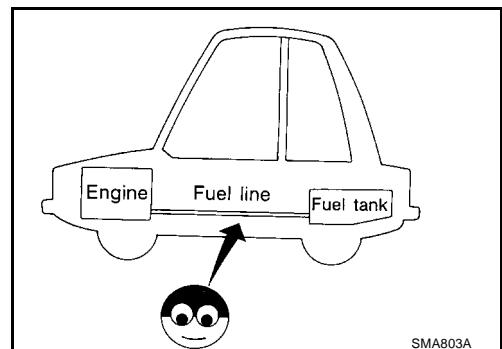
Higher pressure than specified may cause radiator damage.



ELS000JX

Checking Fuel Lines

Inspect fuel lines, filler cap and tank for improper attachment, leaks, cracks, damage, loose connections, chafing or deterioration. If necessary, repair or replace faulty parts.



SMA803A

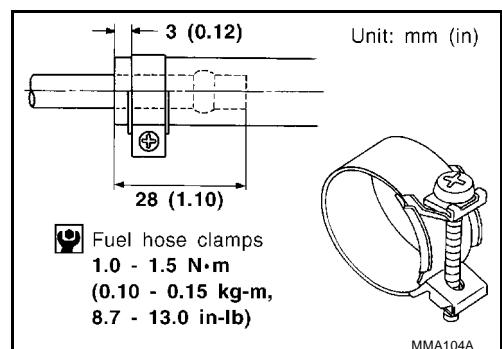
Fuel Hose Clamp

CAUTION:

Tighten high-pressure rubber hose clamp so that clamp end is 3 mm (0.12 in) from hose end.

Tightening torque specifications are the same for all rubber hose clamps.

Ensure that screw does not contact adjacent parts.



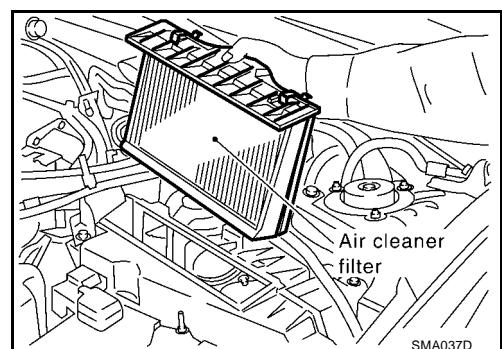
MMA104A

Changing Air Cleaner Filter

VISCOUS PAPER TYPE

The viscous paper type filter does not need cleaning.

ELS000JY



SMA037D

DRY PAPER TYPE

It is necessary to clean the filter or replace it at the recommended intervals, more often under dusty driving conditions.

Changing Engine Oil

ELS000JZ

WARNING:

- Be careful not to burn yourself, as the engine oil is 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.

- Warm up engine, put vehicle horizontally and check for engine oil leakage from engine components.
- Stop engine and wait for 10 minutes.
- Remove drain plug and oil filler cap.
- Drain engine oil.

- Install drain plug and refill with new engine oil.

Engine oil specifications and viscosity:

- API grade SG, SH, SJ or SL.
- ILSAC grade GF-I, GF-II or GF-III
- ACEA 96-A2
- Refer to [MA-16, "RECOMMENDED FLUIDS AND LUBRICANTS"](#) for further detail.

Engine oil capacity (Approximate):

Unit: liter (Imp qt)

Drain and refill	With oil filter change	Approximately 3.9 (3-3/8)
	Without oil filter change	Approximately 3.5 (3-1/8)
Dry engine (engine overhaul)	Approximately 4.5 (4)	

CAUTION:

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

Oil pan drain plug:

 : 29.4 - 39.2 N·m (3.0 - 4.0 kg·m, 22 - 28 ft-lb)

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

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

Changing Oil Filter

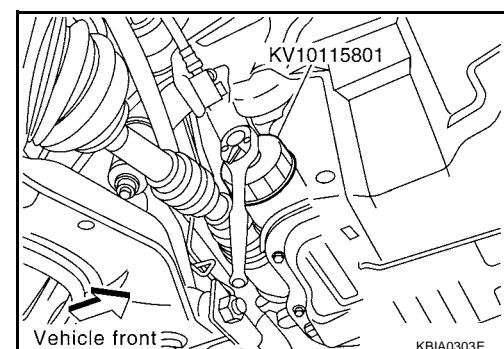
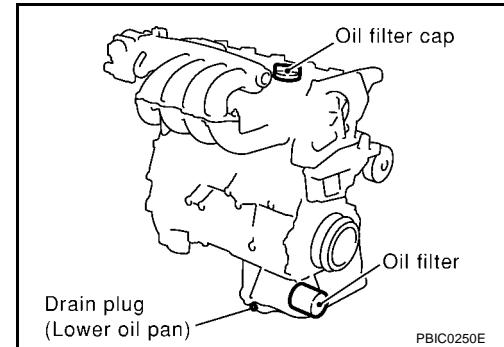
ELS000KO

- Open the oil filter installation/removal cover on the undercover.
- Using an oil filter wrench, remove the oil filter.

CAUTION:

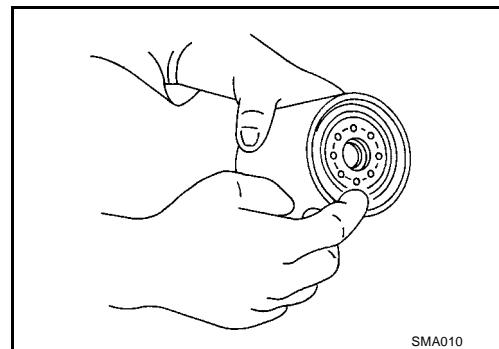
- The oil filter is provided with a relief valve. Use genuine NISSAN oil filter or equivalent.
- Be careful not to get burned when the engine and engine oil are hot.
- When removing, prepare a shop cloth to absorb any engine oil leakage or spillage.
- Do not allow engine oil to adhere to the drive belts.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

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



ENGINE MAINTENANCE (QR20DE-QR25DE)

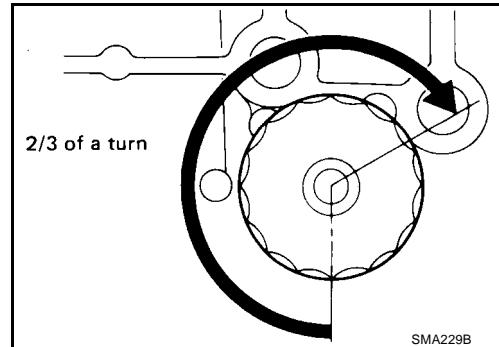
4. Apply engine oil to the oil seal circumference of the new oil filter.



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

Oil filter:

 : 14.7 - 20.5 N·m (1.5 - 2.1 Kg-m, 11 - 15 ft-lb)



6. After warming up the engine, check for engine oil leakage.
7. Check engine oil level and add engine oil. Refer to [LU-7, "ENGINE OIL"](#).

Checking and Changing Spark Plugs

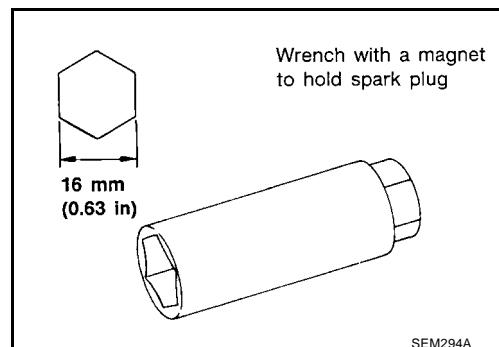
REMOVAL

ELS000K1

1. Remove ignition coil. Refer to [EM-29, "IGNITION COIL"](#).
2. Remove spark plug with suitable spark plug wrench.

CAUTION:

Do not drop or shock it.



INSPECTION AFTER REMOVAL

- Use standard type spark plug for normal condition.
- The hot type spark plug is suitable when fouling occurs with the standard type spark plug under conditions such as.
 - frequent engine starts.
 - low ambient temperatures.
- The cold type spark plug is suitable when spark knock occurs with the standard type spark plug under conditions such as.
 - extended highway driving.
 - frequent high engine revolution.

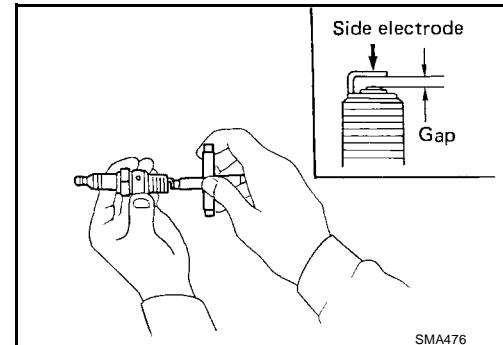
Make	NGK
Standard type	LFR5A-11
Hot type	LFR4A-11
Cold type	LFR6A-11

ENGINE MAINTENANCE (QR20DE-QR25DE)

Check plug gap of each spark plug. Adjust or replace if necessary.

Spark plug gap: 1.0 - 1.1 mm (0.039 - 0.043 in)

- Use a wire brush for cleaning, if necessary.



SMA476

INSTALLATION

Install in the reverse order of removal.

Spark plug:

 : 19.6 - 29.4 N·m (2.0 - 3.0 kg·m, 15 - 21 ft-lb)

Checking EVAP Vapor Lines

ELS000K2

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-747, "EVAPORATIVE EMISSION LINE DRAWING" \(QR25DE\)](#), [EC-1113, "EVAPORATIVE EMISSION LINE DRAWING" \(QR20DE\)](#).

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ENGINE MAINTENANCE (YD22DDTI)

PFP:00100

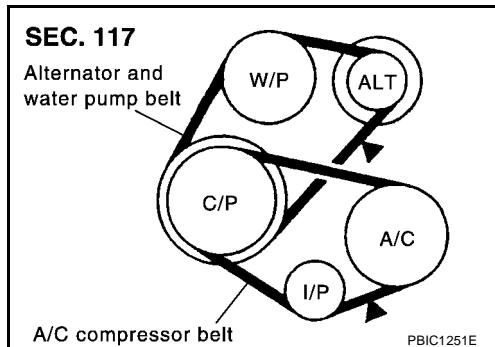
Checking Drive Belts

ELS000CC

- Before inspecting the engine, make sure the engine has cooled down; wait approximately 30 minutes after the engine has been stopped.
- Visually inspect all belts for wear, damage or cracks on contacting surfaces and edge areas.
- When measuring deflection, apply 98 N (10 kg, 22 lb) at the marked point (▲).

CAUTION:

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



Belt Deflection:

Applied belt	Belt deflection with 98 N (10 kg, 22 lb) force applied* mm (in)		
	New	Adjusted	Limit for re-adjusting
Air conditioner compressor belt	4 - 5 (0.16 - 0.20)	6 - 7 (0.24 - 0.28)	8.5 (0.335)
Alternator and water pump belt	9.0 - 10.5 (0.354 - 0.413)	11.0 - 12.5 (0.433 - 0.492)	16.5 (0.650)

*: When engine is cold.

Tension Adjustment

ELS000K5

Adjust belts with the parts shown below.

Applied belt	Belt adjustment method
Air conditioner compressor belt	Adjusting bolt on idler pulley
Alternator and water pump belt	Adjusting bolt on alternator

CAUTION:

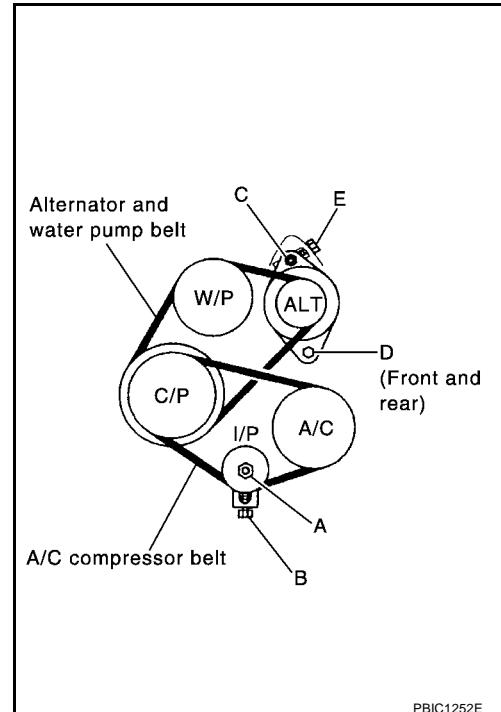
- When a new belt is installed as a replacement, adjust it to the value specified under "New" value because of insufficient adaptability with pulley grooves.
- If the belt deflection of the current belt is out of the "Limit for re-adjusting", adjust to the "Adjusted" value.
- When checking belt deflection immediately after installation, first adjust it to the specified value. Then, after turning crankshaft two turns or more, re-adjust it to the specified value to avoid variation in deflection between pulleys.
- Make sure the belts are fully fitted into the pulley grooves during installation.
- Handle with care to avoid smearing the belts with engine oil or cooling water etc.
- Do not twist or bend the belts with strong force.

AIR CONDITIONER COMPRESSOR BELT

1. Remove RH splash cover (with undercover attached).
2. Loosen idler pulley lock nut (A).
3. Turn adjusting bolt (B) to adjust.
 - Refer to [MA-26, "Checking Drive Belts"](#) .
4. Tighten lock nut (A).

Nut A:

 : 31 - 39 N·m (3.1 - 4.0 kg·m, 23 - 28 ft·lb)



ALTERNATOR AND WATER PUMP BELT

1. Loosen adjusting lock nut (C).
2. Loosen alternator fixing bolts (D) (each on front and rear).
3. Turn adjusting bolt (E) to adjust.
 - Refer to [MA-26, "Tension Adjustment"](#) .
4. Tighten nut (C) and bolt (D) in this order.

Nut C:

 : 19 - 24 N·m (1.9 - 2.5 kg·m, 14 - 18 ft·lb)

Bolt D:

 : 44 - 57 N·m (4.4 - 5.9 kg·m, 32 - 42 ft·lb)

Changing Engine Coolant

ELS000CD

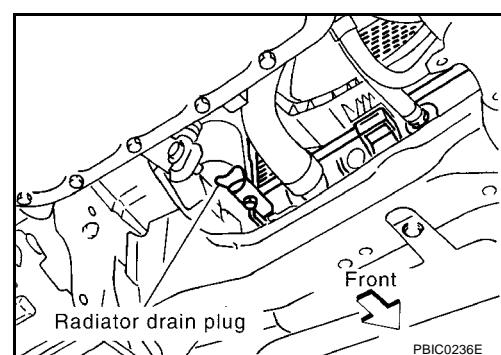
MA

WARNING:

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

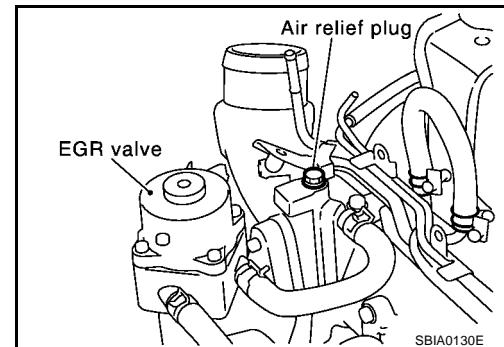
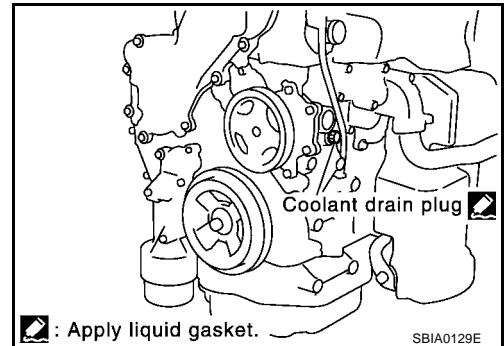
DRAINING ENGINE COOLANT

1. Open radiator drain plug at the bottom of radiator, and remove radiator cap.
 - Be careful not to allow engine coolant to contact drive belts.
 - Cover the exhaust tube heat shield to prevent from splashing engine coolant.



ENGINE MAINTENANCE (YD22DDTI)

2. Open drain plug on cylinder block and air relief plug.
3. Remove reservoir tank, drain engine coolant, then clean reservoir tank.
4. Check drained engine coolant for contaminants such as rust, corrosion or discoloration.
If contaminated, flush engine cooling system. Refer to [MA-29, "FLUSHING COOLING SYSTEM"](#).



REFILLING ENGINE COOLANT

1. Install reservoir tank, radiator drain plug and cylinder block drain plug.

- **Apply sealant to the thread of cylinder block drain plug.**
Use Genuine Liquid Gasket or equivalent.

Cylinder block drain plug:

: 7.8 - 11.8 N·m (0.8 - 1.2 kg·m, 69 - 104 in-lb)

2. Fill radiator slowly with engine coolant until engine coolant spills from the air relief plugs, then install air relief plugs.

CAUTION:

If the filling rate is too fast, this could lead to air being mixed in the engine coolant. Be sure to fill the engine coolant slowly according to the rate indicated above.

- Replace the copper washer of the air bleeding plug.

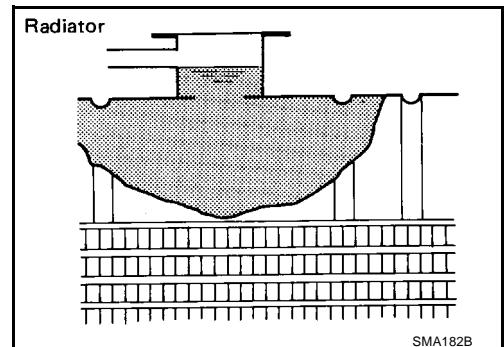
Air relief plug:

: 6.7 - 7.9 N·m (0.68 - 0.81 kg·m, 59 - 70 in-lb)

- Use genuine Nissan anti-freeze engine coolant or equivalent mixed with water (distilled or demineralized).
Refer to [MA-16, "RECOMMENDED FLUIDS AND LUBRICANTS"](#).

Engine coolant capacity (With reservoir tank):

9.5 ℥ (8-3/8 Imp qt)



Reservoir tank:

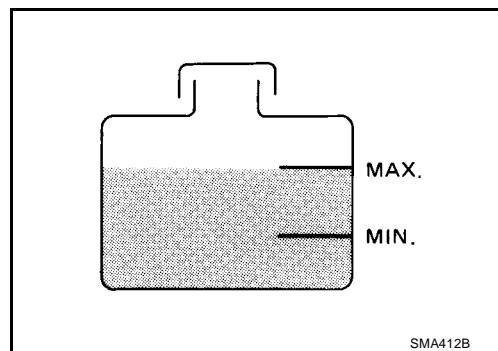
0.6 ℥ (1/2 Imp qt)

- Pour engine coolant through engine coolant filler neck slowly of less than 2 ℥ (1-3/4 Imp qt) a minute to allow air in system to escape.

ENGINE MAINTENANCE (YD22DDTI)

3. Fill reservoir tank to specified level.
4. Warm up engine to normal operating temperature without radiator cap installed.
 - If engine coolant overflows radiator filler hole, install radiator cap.
5. Run engine at 3,000 rpm for 10 seconds and return to idle speed with radiator cap installed.
 - Repeat two or three times.

Watch engine coolant temperature gauge so as not to overheat the engine.



SMA412B

6. Stop engine and cool down to less than approximately 50°C(122°F).
 - Cool down using a fan to reduce the time.
 - If necessary, refill radiator up to filler neck with engine coolant.
7. Refill reservoir tank to MAX level line with engine coolant.
8. Repeat steps 5 through 7 two or more times with radiator cap installed until engine coolant level no longer drops.
9. Check cooling system for leaks with engine running.
10. Warm up engine, and check for sound of engine coolant flow while running engine from idle up to 3,000 rpm with heater temperature controller set at several position between COOL and WARM.
 - Sound may be noticeable at heater unit.
11. If sound is heard, bleed air from cooling system by repeating steps 5 through 7 until engine coolant level no longer drops.
 - Clean excess engine coolant from engine.

FLUSHING COOLING SYSTEM

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

Checking Cooling System

ELS000C4

MA

WARNING:

Never remove the radiator cap when the engine is hot. Serious burns could occur from high pressure engine coolant escaping from the radiator. Wrap a thick cloth around the cap. Slowly turn it a quarter turn to allow built-up pressure to escape. Carefully remove the cap by turning it all the way.

M

CHECKING COOLING SYSTEM HOSES

Check hoses for improper attachment, leaks, cracks, damage, loose connections, chafing and deterioration.

CHECKING RADIATOR

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

- Be careful not to bend or damage the radiator fins.
- When radiator is cleaned without removal, remove all surrounding parts such as cooling fan, radiator shroud and horns. Then tape the harness and connectors to prevent water from entering.

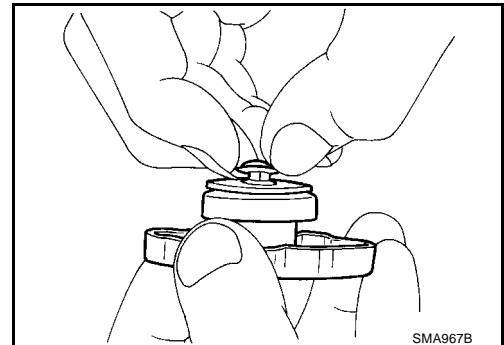
1. Apply water by hose to the back side of the radiator core vertically downwards.
2. Apply water again to all radiator core surface once per minute.
3. Stop washing if any stains no longer flow out from the radiator.
4. Blow air into the back side of radiator core vertically downwards.
 - Use compressed air lower than 490 kpa (4.9 bar, 5 kg/cm², 71psi) and keep distance more than 30 cm(11.8 in).

ENGINE MAINTENANCE (YD22DDTI)

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

CHECKING RADIATOR CAP

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



- Check radiator cap relief pressure.

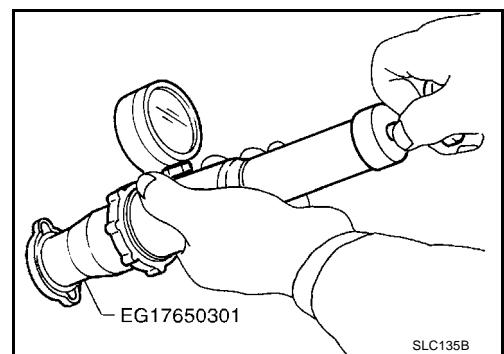
Standard:

78 - 98 kpa (0.78 - 0.98 bar, 0.8 - 1.0 kg/cm² , 11 - 14 psi)

Limit:

59kpa (0.59 bar, 0.6 kg/cm² , 9 psi)

- When connecting the radiator cap to the tester, apply engine coolant to the cap seal part.
- Replace the radiator cap if there is an unusualness in the negative-pressure valve, or if the open-valve pressure is outside of the standard values.



CHECKING RADIATOR SYSTEM FOR LEAKS

To check for leakage, apply pressure to the cooling system with a tester.

Testing pressure:

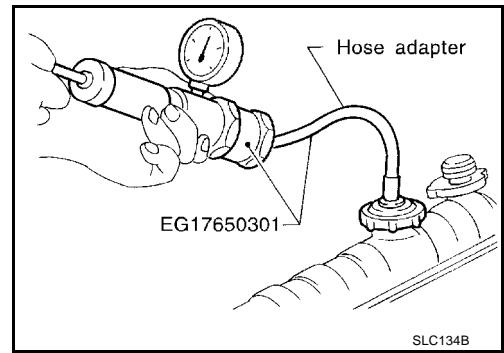
157 kPa (1.57 bar 1.6 kg/cm² , 23 psi)

WARNING:

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

CAUTION:

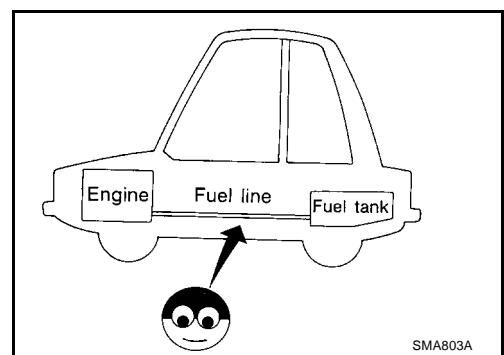
Higher pressure than specified may cause radiator damage.



Checking Fuel Lines

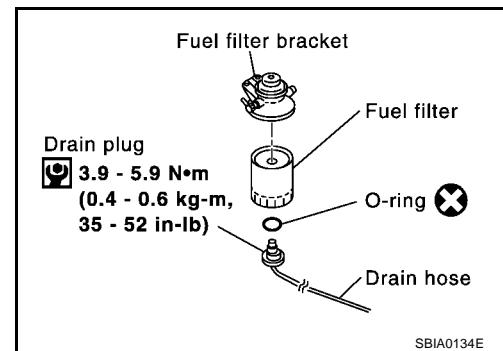
ELS000CE

Inspect fuel lines, filler cap and tank for improper attachment, leaks, cracks, damage, loose connections, chafing or deterioration. If necessary, repair or replace faulty parts.



Changing Fuel Filter REMOVAL

ELS000CF



1. Remove air duct and upper air cleaner case.
2. Remove fuel filter protector.
3. Remove fuel hoses from fuel filter bracket.

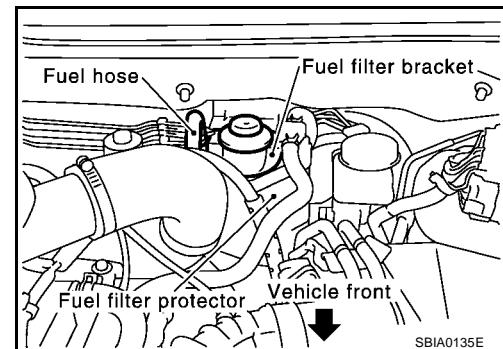
CAUTION:

Plug the pipe to prevent fuel from draining.

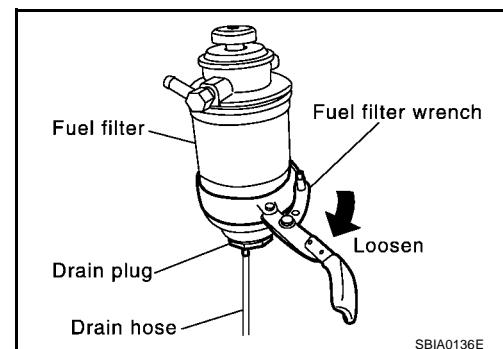
4. Remove fuel filter with bracket.

CAUTION:

Do not splash fuel during removal. If fuel is splashed, immediately wipe it off.



5. Using band-type filter wrench (commercial service tool), remove fuel filter.
6. Turn fuel filter upside down to drain fuel.
7. Remove drain plug from fuel filter.



INSTALLATION

Install in reverse order of removal, paying attention to following:

- Replace O-ring on drain plug with new one.

Fuel filter drain plug:

:(3.9 - 5.9 N·m (0.4 - 0.6 kg·m, 35 - 52 in-lb))

- Screw the fuel filter by hand until packing contacts sealing surface of bracket. Then tighten it by turning approximately 2/3 turn.
- After installation, bleed air from fuel path. Refer to [FL-16, "Air Bleeding"](#) .
- Check for fuel leakage with running engine.

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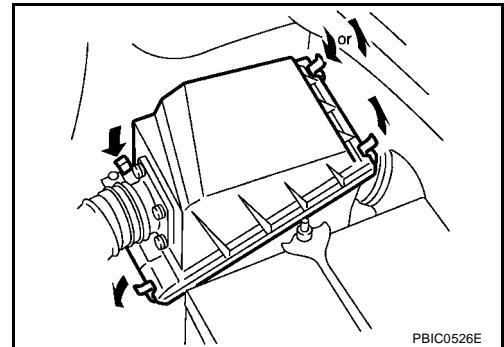
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Changing Air Cleaner Filter VISCOUS PAPER TYPE

ELS000CG

The viscous paper type air cleaner filter does not require any cleaning operation between renewal.



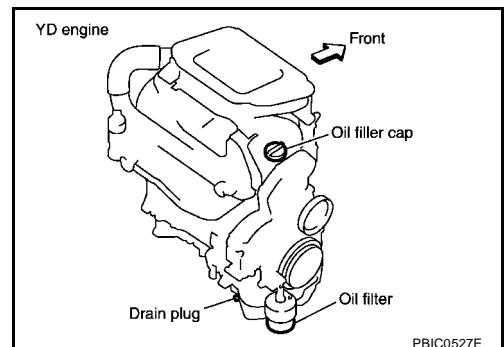
Changing Engine Oil

ELS000CH

WARNING:

- Be careful not to burn yourself, as the engine oil is 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.

- Warm up engine, put vehicle horizontally and check for engine oil leakage from engine components.
- Stop engine and wait for 10 minutes.
- Remove drain plug and oil filler cap.

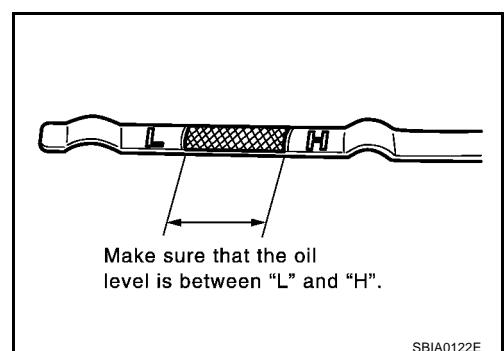


- Drain engine oil.
 - Install drain plug and refill with new engine oil.

Engine oil specification and viscosity:

- API grade CF-4.
- ACEA B1, B3, B4, B5
- Refer to [MA-16, "RECOMMENDED FLUIDS AND LUBRICANTS"](#).

Engine oil capacity (Approximate):



Drain and refill	With oil filter change	5.2 ℥ (4-5/8 Imp qt)
	Without oil filter change	4.9 ℥ (4-3/8 Imp qt)
Dry engine (engine overhaul)	6.3 ℥ (5-1/2 Imp qt)	

- The refill capacity depends on the engine oil temperature and drain time. Use these specifications for reference only.

Always use the dipstick to determine when the proper amount of engine oil is in the engine.

CAUTION:

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

Oil pan drain plug:

: 29 - 39 N·m (3.0 - 4.0 kg·m, 22 - 29 ft-lb)

- The refill capacity depends on the engine oil temperature and drain time. Use these specifications for reference only.

Always use the dipstick to determine when the proper amount of engine oil is in the engine.

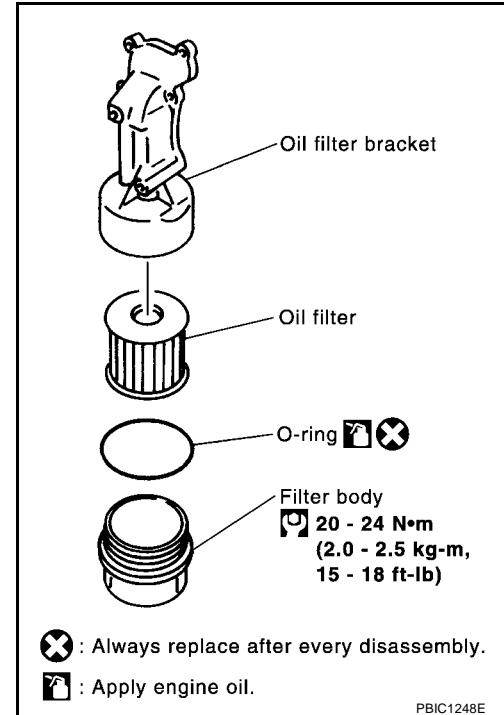
- Warm up engine and check area around drain plug and oil filter for engine oil leakage.
- Stop engine and wait for 10 minutes.
- Check engine oil level. Refer to [LU-18, "ENGINE OIL"](#).

Changing Oil Filter

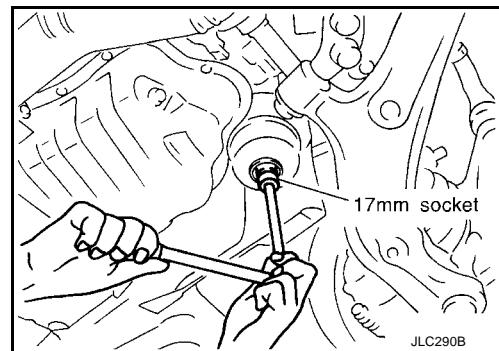
REMOVAL

CAUTION:

- Be careful not to get burned when the engine and engine oil are hot.
- When removing, prepare a shop cloth to absorb any engine oil leakage or spillage.
- Do not allow engine oil to adhere to the drive belts.
- Completely wipe off any engine oil that adhere to the engine and the vehicle.



1. Using a socket wrench [plane-to-plane width: 17 mm (0.67 in)], loosen the filter body approximately four turns.



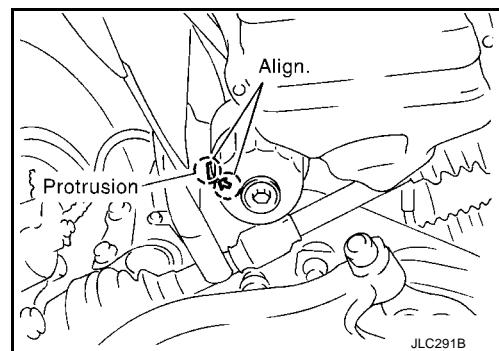
2. Drain the engine oil after matching the "DRAIN" arrow mark at the bottom of the filter body to the protrusion on the oil filter bracket.

- Catch the engine oil with a pan or cloth.

CAUTION:

- The drained engine oil flows over the right surface of the filter body.
- Completely wipe clean any engine oil remaining on the filter body or vehicle.

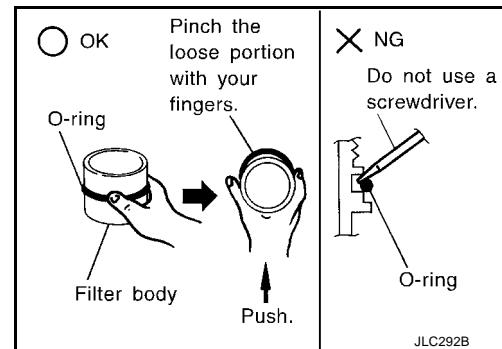
3. Remove the filter body, then remove the oil filter.



ENGINE MAINTENANCE (YD22DDTi)

- Remove the O-ring from the filter body.
 - Push the O-ring in one direction, lift the slack part using fingers, and remove the O-ring from the filter body.

CAUTION:
Do not use wires or flat-bladed screwdrivers etc. as they may cause damage to the filter body.



INSTALLATION

- Completely remove all foreign objects adhering to the inside of the filter body or O-ring mounting area (body side and bracket side).
- Install the oil filter and O-ring to the filter body.
 - Push the oil filter into the filter body completely.
- Install the filter body to the oil filter bracket.

Oil filter:

: 20 - 24 N·m (2.0 - 2.5 Kg·m, 15 - 18 ft-lb)

- After warming up the engine, check for engine oil leakage.
- Check engine oil level and add engine oil. Refer to [LU-18, "ENGINE OIL"](#).

Draining Water

ELS000CJ

- Prepare a tray at the drain hose open end.
- Loosen drain cock, and operate priming pump to drain water from fuel filter.

CAUTION:

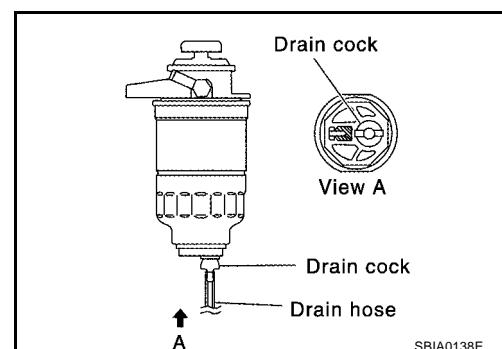
- Water in filter is drained with fuel. Prepare larger capacity pan than fuel filter volume.
- Drained water is mixed with fuel. Prevent fuel from adhering to rubber parts such as engine mount insulator.

- After draining, close drain cock by hand.

CAUTION:

If drain cock is tightened excessively, it may be damaged and fuel will leak. Do not use tools to tighten drain cock.

- Bleed air in fuel piping. Refer to [FL-16, "Air Bleeding"](#).
- Start engine and check fuel leakage.



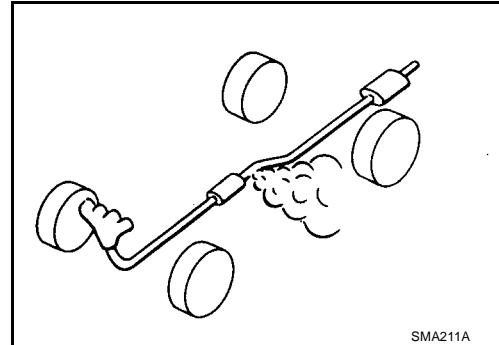
CHASSIS AND BODY MAINTENANCE

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Checking Exhaust System

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

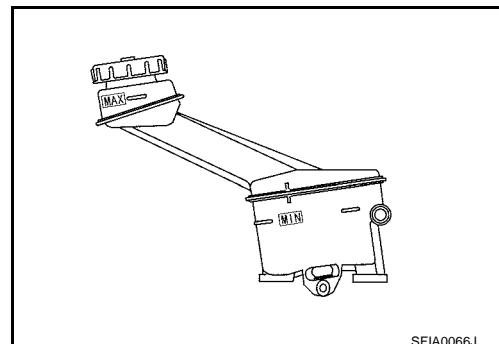


SMA211A

Checking Clutch Fluid Level and Leaks

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

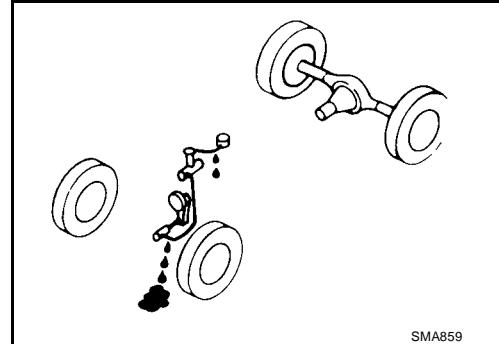


SFIA0066J

Checking Clutch System

ELS000BB

Check fluid lines and operating cylinder for improper attachment, cracks, damage, loose connections, chafing and deterioration.



SMA859

Checking M/T Oil

ELS000BC

- Check that oil is not leaking from transaxle or around it.
- Check oil level from filler plug mounting hole as shown in the figure.

CAUTION:

Never start engine while checking oil level.

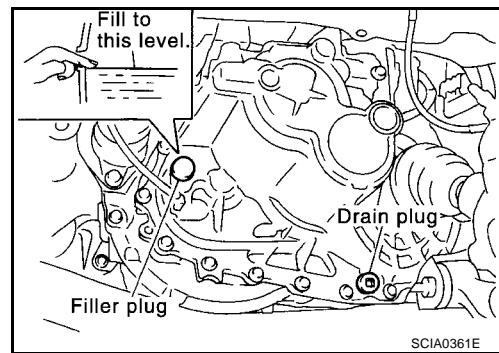
- Set a new gasket on the filler plug and install it on the transaxle.

Filler plug:

30 - 39 N·m (3.1 - 4.0 kg·m, 23 - 28 ft-lb)

CAUTION:

Do not reuse gasket.



SCIA0361E

Changing M/T Oil

ELS000BD

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

CHASSIS AND BODY MAINTENANCE

Oil grade:

API GL-4

Viscosity:

Refer to [MA-16, "RECOMMENDED FLUIDS AND LUBRICANTS"](#)

Oil capacity:

Approx. 2.3 ℥ (4 Imp pt)

Drain plug:

 30 - 39 N·m (3.1 - 4.0 kg-m, 23 - 28 ft-lb)

CAUTION:

Do not reuse gasket.

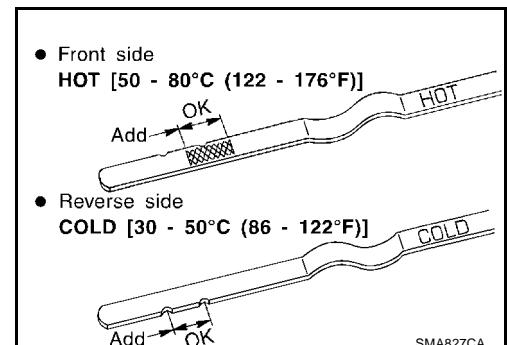
Checking A/T Fluid

ELS000BV

1. Warm up engine.
2. Check for fluid leakage.
3. Before driving, fluid level can be checked at fluid temperatures of 30 to 50°C (86 to 122°F) using "COLD" range on dipstick.
 - a. Park vehicle on level surface and set parking brake.
 - b. Start engine and move selector lever through each gear position. Leave selector lever in "P" position.
 - c. Check fluid level with engine idling.
 - d. Remove dipstick and note reading. If level is at low side of either range, add fluid to the charging pipe.
 - e. Re-insert dipstick into charging pipe as far as it will go.
 - f. Remove dipstick and note reading. If reading is at low side of range, add fluid to the charging pipe.

Do not overfill.

4. Drive vehicle for approximately 5 minutes in urban areas.
5. Re-check fluid level at fluid temperatures of 50 to 80°C (122 to 176°F) using "HOT" range on dipstick.
6. Check fluid condition.
 - If fluid is very dark or smells burned, refer to AT section for checking operation of A/T. Flush cooling system after repair of A/T.
 - If A/T fluid contains frictional material (clutches, bands, etc.), replace radiator and flush cooler line using cleaning solvent and compressed air after repair of A/T. Refer to [CO-11, "RADIATOR"](#), [CO-14, "RADIATOR \(ALUMINUM TYPE\)"](#).



Changing A/T Fluid

ELS000BV

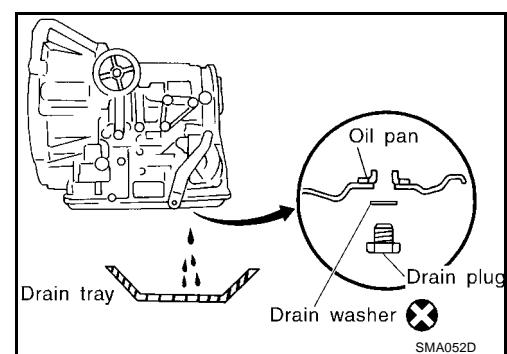
1. Warm up A/T fluid.
2. Stop engine.
3. Drain A/T fluid from drain plug and refill with new A/T fluid. Always refill same volume with drained fluid.

Fluid grade:

Genuine Nissan ATF or equivalent. Refer to [MA-16, "RECOMMENDED FLUIDS AND LUBRICANTS"](#).

Fluid capacity (With torque converter):

Approx. 8.5 ℥ (7-1/2 Imp qt)



Drain plug:

 : 29 - 39 N·m (3.0 - 4.0 kg·m, 22 - 29 ft·lb)

4. Run engine at idle speed for five minutes.
5. Check fluid level and condition. Refer to [MA-36, "Checking A/T Fluid"](#). If fluid is still dirty, repeat steps 2 through 5.

Checking Transfer Oil

ELS000BT

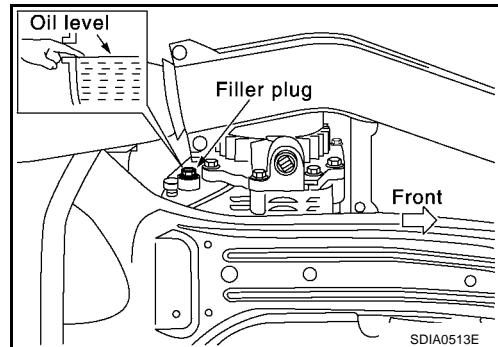
Check for oil leakage and oil level.

CAUTION:

Never start engine while checking oil level.

Filler plug:

 : 9.8 - 19.6 N·m (1.0 - 1.9 kg·m, 87 - 173 in·lb)



ELS000BU

Changing Transfer Oil

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

CAUTION:

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

Oil grade:

API GL-5

Viscosity:

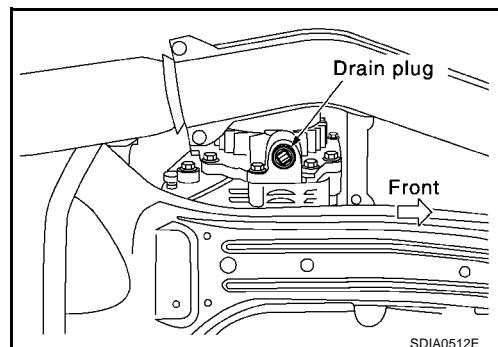
Refer to [MA-16, "RECOMMENDED FLUIDS AND LUBRICANTS"](#)

Oil capacity:

: Approx. 0.31 ℥ (1/2 Imp pt)

Drain plug:

 : 9.8 - 19.6 N·m (1.0 - 1.9 kg·m, 87 - 173 in·lb)



MA

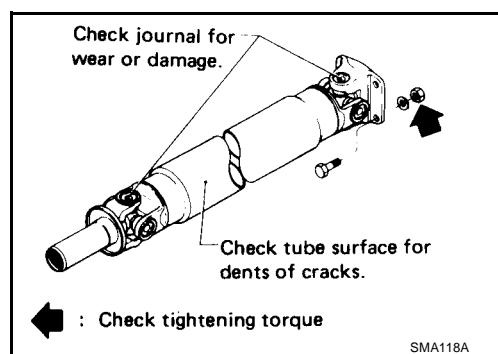
Checking Propeller Shaft

ELS000BE

Check propeller shaft for damage, looseness or grease leakage.

Tightening torque:

Refer to [PR-2, "REAR PROPELLER SHAFT"](#)



SMA118A

CHASSIS AND BODY MAINTENANCE

Checking Differential Gear Oil

ELS000BF

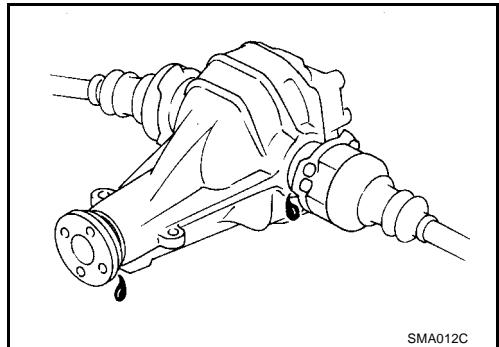
1. Check for oil leakage and oil level.

Filler plug:

 **30 - 39 N·m (3.1 - 3.9 kg·m, 23 - 28 ft-lb)**

CAUTION:

Gaskets are not reusable. Never reuse them.



Changing Differential Gear Oil

ELS000BG

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

Oil grad and Viscosity:

Refer to [MA-16, "Fluids and Lubricants"](#)

Capacity:

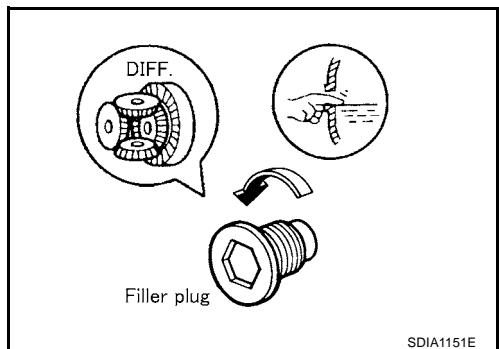
0.55 ℥ (1-1/8 US pt, 1 Imp pt)

Drain plug:

 **30 - 39 N·m (3.1 - 3.9 kg·m, 23 - 28 ft-lb)**

CAUTION:

Gaskets are not reusable. Never reuse them.



Balancing Wheels

ELS000BH

Adjust wheel balance using the road wheel center.

Wheel balance (Maximum allowable unbalance):

Refer to [WT-6, "SERVICE DATA AND SPECIFICATIONS \(SDS\)"](#) .

Rotation

ELS000BI

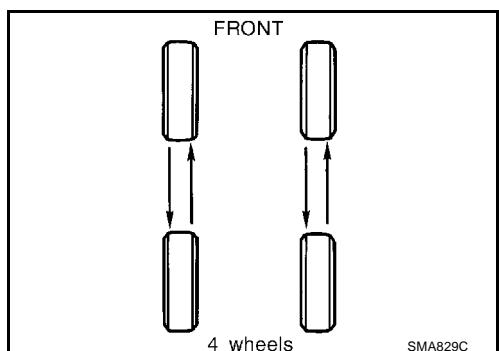
- After rotating the tires, adjust the tire pressure.
- Retighten the wheel nuts when the vehicle has been driven for 1,000 km (600 miles) (also in cases of a flat tire, etc.).

CAUTION:

When installing wheels, tighten them diagonally by dividing the work two to three times in order to prevent the wheels from developing any distortion.

Tightening torque of wheel nut:

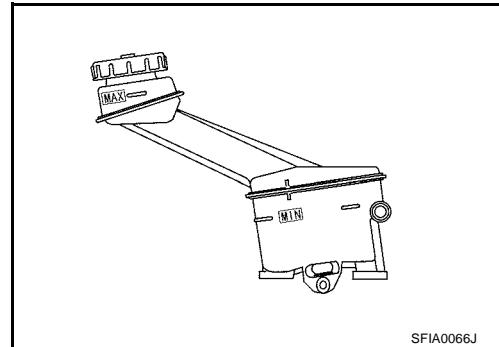
98 - 117 N·m (10 - 12 kg·m, 73 - 86 ft-lb)



Checking Brake Fluid Level and Leaks

ELS000BJ

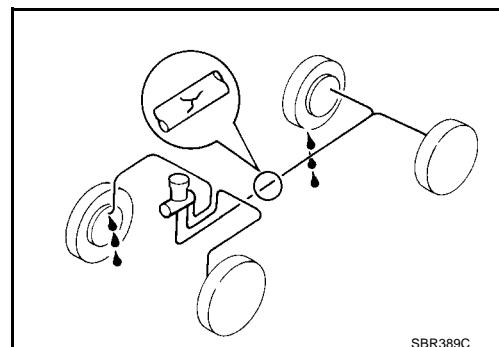
- If fluid level is extremely low, check brake system for leaks.



Checking Brake Lines and Cables

ELS000BK

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



Changing Brake Fluid

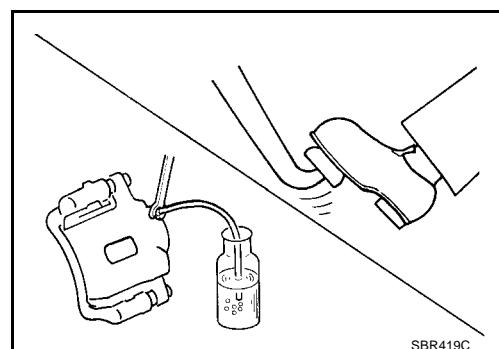
ELS000BL

1. Drain brake fluid from each air bleeder valve.
2. Refill until new brake fluid comes out from each air bleeder valve.

Use same procedure as in bleeding hydraulic system to refill brake fluid.

Refer to [BR-9, "Changing Brake Fluid"](#) .

- Refill with recommended Genuine Brake Fluid or equivalent "DOT 3" or "DO4".
Refer to [MA-16, "RECOMMENDED FLUIDS AND LUBRICANTS"](#) .
- Never reuse drained brake fluid.
- Be careful not to splash brake fluid on painted areas.



Checking Disc Brake ROTOR

ELS000BM

Check condition, wear, and damage.

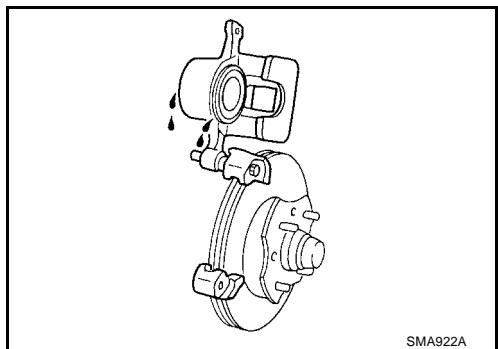
Applied	Front	Rear
Brake model	AD31VD	AD9VA
Standard thickness	28.0 mm (1.102 in)	16 mm (0.63 in)
Maximum runout	0.04 mm (0.0016 in)	0.07 mm (0.0028 in)
Minimum thickness (Wear limit)	26.0 mm (1.024 in)	14 mm (0.55 in)

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CHASSIS AND BODY MAINTENANCE

CALIPER

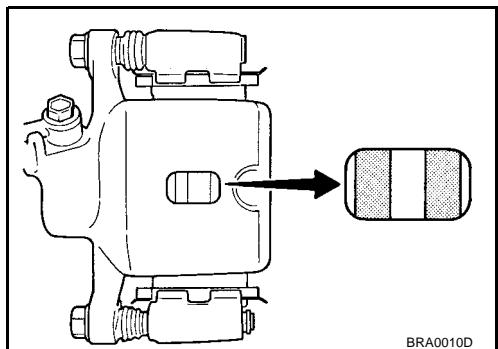
- Check for leakage.



PAD

- Check for wear or damage.

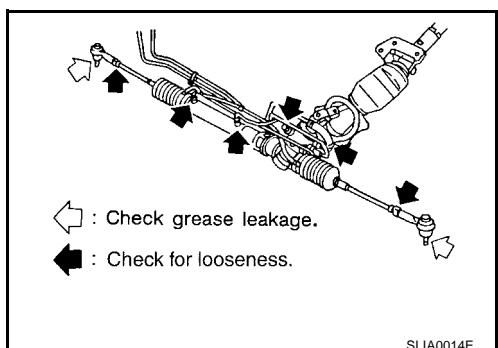
Brake model	AD31VD	AD9VA
Standard thickness	11.0 mm (0.433 in)	8.5 mm (0.335 in)
Minimum thickness (Wear Limit)	2.0 mm (0.079 in)	2.0 mm (0.079 in)



Checking Steering Gear and Linkage

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.

Checking Power Steering Fluid and Lines

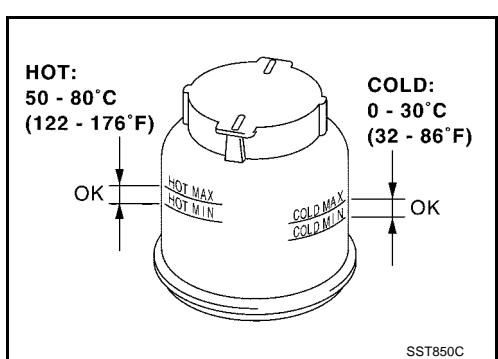
ELS000BP

Check fluid level in reservoir tank with engine off.

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

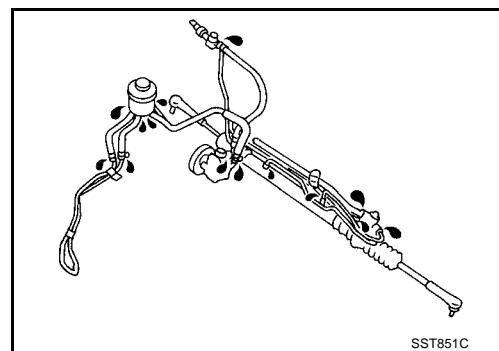
CAUTION:

- Do not overfill.
- Recommended fluid is DEXRON™ III or equivalent.
Refer to [MA-16, "RECOMMENDED FLUIDS AND LUBRICANTS"](#)



CHASSIS AND BODY MAINTENANCE

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

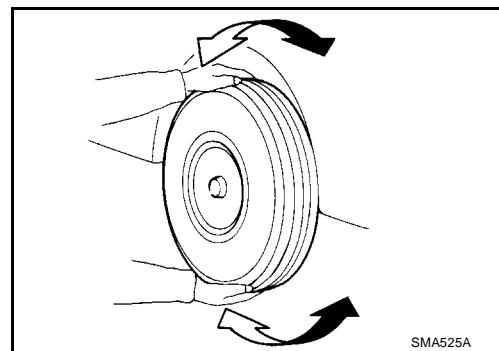


SST851C

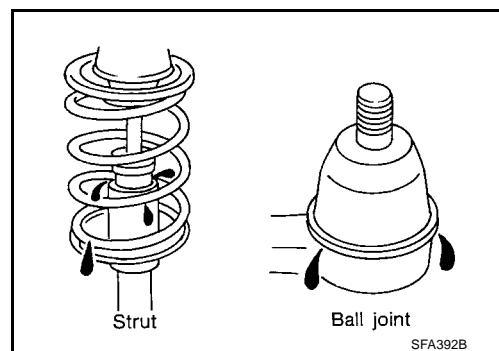
Axle and Suspension Parts

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

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



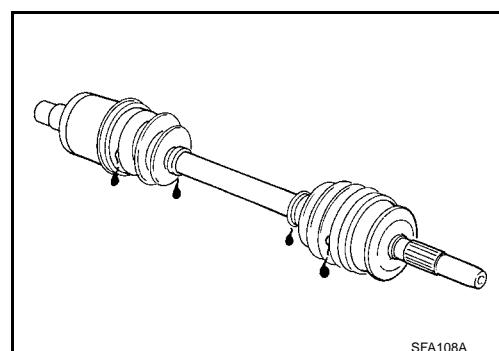
ELS000BQ



SFA392B

Drive Shaft

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



SFA108A

Lubricating Locks, Hinges and Hood Latches

ELS000BR

Front door	Refer to BL-8, "DOOR" .
Back door	Refer to BL-71, "BACK DOOR" .

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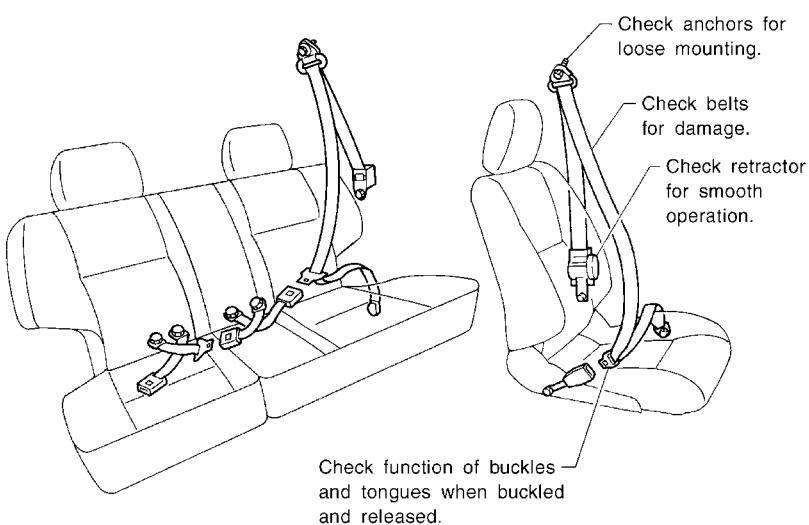
M

Checking Seat Belts, Buckles, Retractors, Anchors and Adjusters

ELS000BS

CAUTION:

- After any collision, inspect all seat belt assemblies, including retractors and other attached hardwares (i.e. 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.
- 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 seat belt assembly.



Anchor bolt

43 - 55 N·m
(4.4 - 5.6 kg·m,
32 - 41 ft-lb)

Checking Body Corrosion

ELS000CO

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)

PFP:00030

Standard and Limit

ELS000K3

BELT DEFLECTION AND TENSION

QR20DE and QR25DE

Tensions of drive belts	Auto-adjustment by auto-tensioner		
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YD22DDTi

Applied belt	Belt deflection with 98 N (10 kg, 22 lb) force applied* mm (in)		
	New	Adjusted	Limit for re-adjusting
Air conditioner compressor belt	4 - 5 (0.16 - 0.20)	6 - 7 (0.24 - 0.28)	8.5 (0.335)
Alternator and water pump belt	9.0 - 10.5 (0.354 - 0.413)	11.0 - 12.5 (0.433 - 0.492)	16.5 (0.650)

*: When engine is cold.

RADIATOR

Unit: kPa (bar, kg/cm² , psi)

Cap relief pressure	Standard	78 - 98 (0.78 - 0.98, 0.8 - 1.0, 11 - 14)
	Limit	59 (0.59, 0.6, 9)
Leakage test pressure		157 (1.57, 1.6, 23)

ENGINE COOLANT CAPACITY

QR20DE and QR25DE

Unit: ℓ (Imp qt)

Coolant capacity (With reservoir tank at MAX level)	7.1 (6-1/4)
Reservoir tank coolant capacity (At MAX level)	0.6 (1/2)

YD22DDTi

Unit: ℓ (Imp qt)

Coolant capacity (With reservoir tank at MAX level)	9.5 (8-3/8)
Reservoir tank coolant capacity (At MAX level)	0.6 (1/2)

ENGINE OIL CAPACITY

QR20DE and QR25DE

Unit: ℓ (Imp qt)

Drain and refill	With oil filter change	Approximately 3.9 (3-3/8)
	Without oil filter change	Approximately 3.5 (3-1/8)
Dry engine (Overhaul)		Approximately 4.5 (4)

YD22DDTi

Unit: ℓ (Imp qt)

Drain and refill	With oil filter change	Approximately 5.2 (4-5/8)
	Without oil filter change	Approximately 4.9 (4-3/8)
Dry engine (Overhaul)		Approximately 6.3 (5-1/2)

SPARK PLUG

QR20DE and QR25DE

Make	NGK
Standard type	LFR5A-11
Hot type	LFR4A-11
Cold type	LFR6A-11
Spark plug gap	mm(in)
	1.0 - 1.1 (0.039 - 0.043)

SERVICE DATA AND SPECIFICATIONS (SDS)
