

# SECTION MA

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## GENERAL MAINTENANCE

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.

Item	Reference page
<b>OUTSIDE THE VEHICLE</b>	
The maintenance items listed here should be performed from time to time, unless otherwise specified.	
<b>Tires</b> Check the pressure with a gauge periodically when at a service station, including the spare, and adjust to the specified pressure if necessary. Check carefully for damage, cuts or excessive wear.	—
<b>Wheel nuts</b> When checking the tires, make sure no nuts are missing, and check for any loose nuts. Tighten if necessary.	—
<b>Tire rotation</b> Tires should be rotated every 12,000 km (7,500 miles).	MA-19
<b>Wheel alignment and balance</b> If the vehicle should pull to either side while driving on a straight and level road, or if you detect uneven or abnormal tire wear, there may be a need for wheel alignment. If the steering wheel or seat vibrates at normal highway speeds, wheel balancing may be needed.	MA-19 FA-6
<b>Windshield wiper blades</b> Check for cracks or wear if they do not wipe properly.	—
<b>Doors and engine hood</b> Check that all doors and the engine hood operate smoothly as well as the trunk lid and back hatch. 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 lubrication frequently.	MA-23
<b>INSIDE THE VEHICLE</b>	
The maintenance items listed here should be checked on a regular basis, such as when performing periodic maintenance, cleaning the vehicle, etc.	
<b>Lights</b> Make sure that the headlights, stop lights, tail lights, turn signal lights, and other lights are all operating properly and installed securely. Also check headlight aim.	—
<b>Warning lights and buzzers/chimes</b> Make sure that all warning lights and buzzers/chimes are operating properly.	—
<b>Windshield wiper and washer</b> Check that the wipers and washer operate properly and that the wipers do not streak.	—
<b>Windshield defroster</b> Check that the air comes out of the defroster outlets properly and in sufficient quantity when operating the heater or air conditioner.	—
<b>Steering wheel</b> Check that it has the specified free play. Be sure to check for changes in the steering condition, such as excessive free play, hard steering or strange noises. <b>Free play: Less than 35 mm (1.38 in)</b>	—
<b>Seats</b> Check seat position controls such as seat adjusters, seatback recliner, etc. to ensure they operate smoothly and that all latches lock securely in every position. Check that the head restraints move up and down smoothly and that the locks (if so equipped) hold securely in all latched positions. Check that the latches lock securely for folding-down rear seatbacks.	—
<b>Seat belts</b> Check that all parts of the seat belt system (e.g. buckles, anchors, adjusters and retractors) operate properly and smoothly, and are installed securely. Check the belt webbing for cuts, fraying, wear or damage.	MA-23

## GENERAL MAINTENANCE

Item	Reference page	
<b>Clutch pedal</b> Make sure the pedal operates smoothly and check that it has the proper free travel.	CL-4	
<b>Brakes</b> Check that the brake does not pull the vehicle to one side when applied.	—	CI
<b>Brake pedal</b> Check the pedal for smooth operation and make sure it has the proper distance under it when depressed fully. Check the brake booster function. Be certain to keep the floor mats away from the pedal.	BR-7, 8	MA
<b>Parking brake</b> Check that the lever has the proper travel and confirm that your vehicle is held securely on a fairly steep hill with only the parking brake applied.	BR-28	EM
<b>Automatic transaxle "Park position" mechanism</b> Check that the lock release button on the selector lever operates properly and smoothly. On a fairly steep hill check that your vehicle is held securely with the selector lever in the "P" position without applying any brakes.	—	LC
<b>UNDER THE HOOD AND VEHICLE</b>		
The maintenance items listed here should be checked periodically (e.g. each time you check the engine oil or refuel!).		
<b>Windshield washer fluid</b> Check that there is adequate fluid in the tank.	—	FE
<b>Engine coolant level</b> Check the coolant level when the engine is cold.	MA-9, 14	
<b>Radiator and hoses</b> Check the front of the radiator and clean off any dirt, insects, leaves, etc., that may have accumulated. Make sure the hoses have no cracks, deformation, rot or loose connections.	—	CL
<b>Brake and clutch fluid levels</b> Make sure that the brake and clutch fluid levels are between the "MAX" and "MIN" lines on the reservoir.	MA-18, 20	MT
<b>Battery</b> Check the fluid level in each cell. It should be between the "MAX" and "MIN" lines.	—	AT
<b>Engine drive belts</b> Make sure that no belt is frayed, worn, cracked or oily.	MA-8, 13	
<b>Engine oil level</b> Check the level on the dipstick after parking the vehicle on a level spot and turning off the engine.	MA-11, 16	FA
<b>Power steering fluid level and lines</b> Check the level when the fluid is cold and the engine is turned off. Check the lines for proper attachment, leaks, cracks, etc.	MA-21	RA
<b>Automatic transaxle fluid level</b> Check the level on the dipstick after putting the selector lever in "P" with the engine idling.	MA-18	BR
<b>Exhaust system</b> Make sure there are no loose supports, cracks or holes. If the sound of the exhaust seems unusual or there is a smell of exhaust fumes, immediately locate the trouble and correct it.	MA-18	ST
<b>Underbody</b> The underbody is frequently exposed to corrosive substances such as those used on icy roads or to control dust. It is very important to remove these substances, otherwise rust will form on the floor pan, frame, fuel lines and around the exhaust system. At the end of winter, the underbody should be thoroughly flushed with plain water, being careful to clean those areas where mud and dirt can easily accumulate	—	BF
<b>Fluid leaks</b> Check under the vehicle for fuel, oil, water or other fluid leaks after the vehicle has been parked for a while. Water dripping from the air conditioner after use is normal. If you should notice any leaks or gasoline fumes are evident, check for the cause and correct it immediately.	—	HA EL

IDX

## PERIODIC MAINTENANCE

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Two different maintenance schedules are provided, and should be used, depending upon the conditions in which the vehicle is mainly operated. **After 60,000 miles (96,000 km) or 48 months, continue the periodic maintenance at the same mileage/time intervals.**

### SCHEDULE 1

Follow Periodic Maintenance Schedule 1 if your driving habits frequently includes one or more of the following driving conditions:

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

### SCHEDULE 2

Follow Periodic Maintenance Schedule 2 if none of the driving conditions shown in Schedule 1 apply to your driving habits.



# PERIODIC MAINTENANCE

## Schedule 2

Abbreviations: R = Replace, I = Inspect, Correct or replace if necessary. [ ]: At the mileage intervals only

MAINTENANCE OPERATION	MAINTENANCE INTERVAL											Reference page					
	Miles x 1,000 (km x 1,000)	7.5 (12)	15 (24)	22.5 (36)	30 (48)	37.5 (60)	45 (72)	52.5 (84)	60 (96)	Months	6 12		18 24	30 36	42 48		
<b>Emission control system maintenance</b>																	
Drive belts	See NOTE (1)														VG30E	MA-8	MA-13
Air cleaner filter					[R]										MA-10	MA-16	MA-17
Vapor lines					I*										MA-12	MA-17	MA-17
Fuel lines					I*										MA-9	MA-15	MA-15
Fuel filter	See NOTE (2)*														MA-10	MA-15	MA-15
Engine coolant	See NOTE (3)														MA-8	MA-13	MA-13
Engine oil		R	R	R	R	R	R	R	R	R	R	R	R	R	MA-10	MA-16	MA-16
Engine oil filter	See NOTE (4)					R									MA-11	MA-16	MA-16
Spark plugs	VE30DE engine (Use PLATINUM-TIPPED type) VG30E engine														[R]	—	MA-17
Timing belt (VG30E engine only)															[R]	MA-11	—
<b>Chassis and body maintenance</b>																	
Brake lines & cables		I	I	I	I	I	I	I	I	I	I	I	I	I		MA-20	MA-20
Brake pads, discs, drums & linings		I	I	I	I	I	I	I	I	I	I	I	I	I		MA-21	MA-21
Manual & automatic transaxle oil		I	I	I	I	I	I	I	I	I	I	I	I	I		MA-18	MA-18
Steering gear linkage, axle & suspension parts		I	I	I	I	I	I	I	I	I	I	I	I	I		MA-21, FA-5, RA-4	MA-21, FA-5, RA-4
Exhaust system		I	I	I	I	I	I	I	I	I	I	I	I	I		MA-18	MA-18
Drive shaft boots		I	I	I	I	I	I	I	I	I	I	I	I	I		FA-7	FA-7
Air bag system	See NOTE (5)															BF-85	BF-85

**NOTE: (1)** After 60,000 miles (96,000 km) or 48 months, inspect every 15,000 miles (24,000 km) or 12 months.  
**(2)** If vehicle is operated under extremely adverse weather conditions or in areas where ambient temperatures are either extremely low or extremely high, the filters might become clogged. In such an event, replace them immediately.  
**(3)** After 60,000 miles (96,000 km) or 48 months, replace every 30,000 miles (48,000 km) or 24 months.  
**(4)** Use Part No. 15208-60U00 or equivalent on VE30DE engine, and Nissan PREMIUM type or equivalent on VG30E engine.  
**(5)** Inspect the air bag system 10 years after the date of manufacture as noted on the F.M.V.S.S. certification label.  
**(6)** Maintenance items and intervals with "\*" are recommended by NISSAN for reliable vehicle operation. The owner need not perform such maintenance in order to maintain the emission warranty or manufacturer recall liability. Other maintenance items and intervals are required.

# RECOMMENDED FLUIDS AND LUBRICANTS

## Fluids and Lubricants

	Capacity (Approximate)			Recommended fluids and lubricants
	US measure	Imp measure	Liter	
<b>Engine oil (Refill)</b>				
VG30E engine				
With oil filter	4-1/8 qt	3-3/8 qt	3.9	Energy Conserving Oils of API SG*2, *3
Without oil filter	3-3/4 qt	3-1/8 qt	3.5	
VE30DE engine				
With oil filter	4 qt	3-3/8 qt	3.8	
Without oil filter	3-5/8 qt	3 qt	3.4	
<b>Cooling system (Reservoir tank included)</b>				
VG30E engine	8-3/4 qt	7-1/4 qt	8.3	Anti-freeze coolant (Ethylene glycol base)
VE30DE engine	11-1/4 qt	9-3/8 qt	10.6	
<b>Manual transaxle gear oil</b>				
RS5F50V	8-7/8 - 9-1/2 pt	7-3/8 - 7-7/8 pt	4.2 - 4.5	API GL-4*2
RS5F50A	9-1/4 - 10 pt	7-3/4 - 8-1/4 pt	4.4 - 4.7	API GL-4*2
<b>Automatic transaxle fluid</b>				
VG30E engine models	7-7/8 qt	6-1/2 qt	7.4	Genuine Nissan ATF*1 or equivalent Type DEXRON™II-E
VE30DE engine models	10-1/8 qt	8-1/2 qt	9.6	
<b>Power steering fluid</b>				
	—	—	—	Type DEXRON™II or equivalent
<b>Brake &amp; Clutch fluid</b>				
	—	—	—	Genuine Nissan Brake Fluid*1 or equivalent DOT 3 (US FMVSS No. 116)
<b>Multi-purpose grease</b>				
	—	—	—	NLGI No. 2 (Lithium soap base)

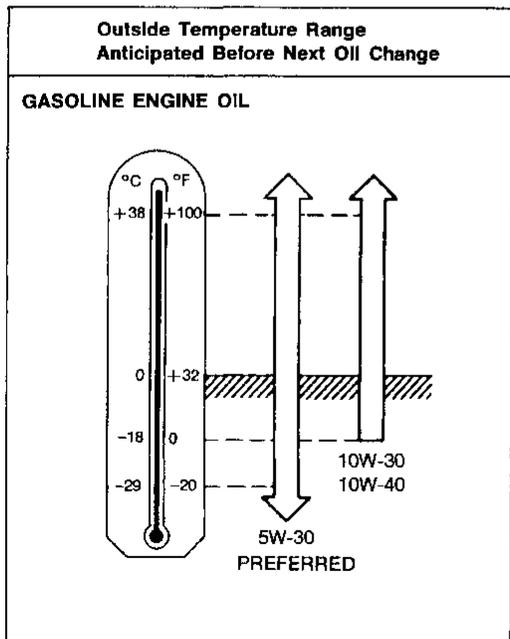
\*1: Available in mainland U.S.A. through your Nissan dealer.

\*2: For further details, see "SAE Viscosity Number".

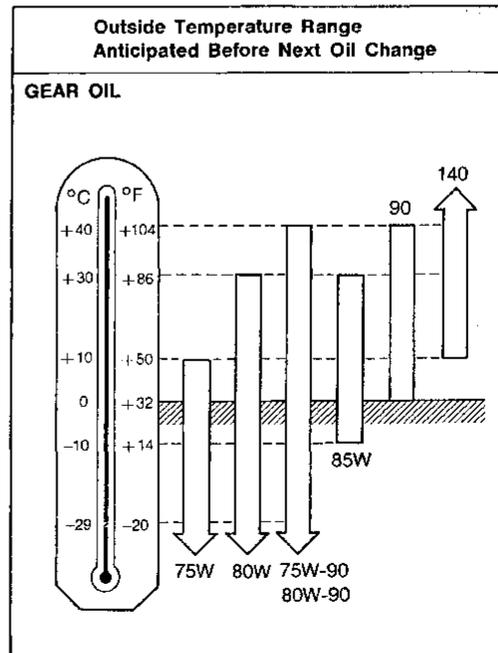
\*3: Energy conserving oils

These oils can be identified by such labels as EC-I, EC-II, energy conserving, energy saving, improved fuel economy, etc.

## SAE Viscosity Number



T10008

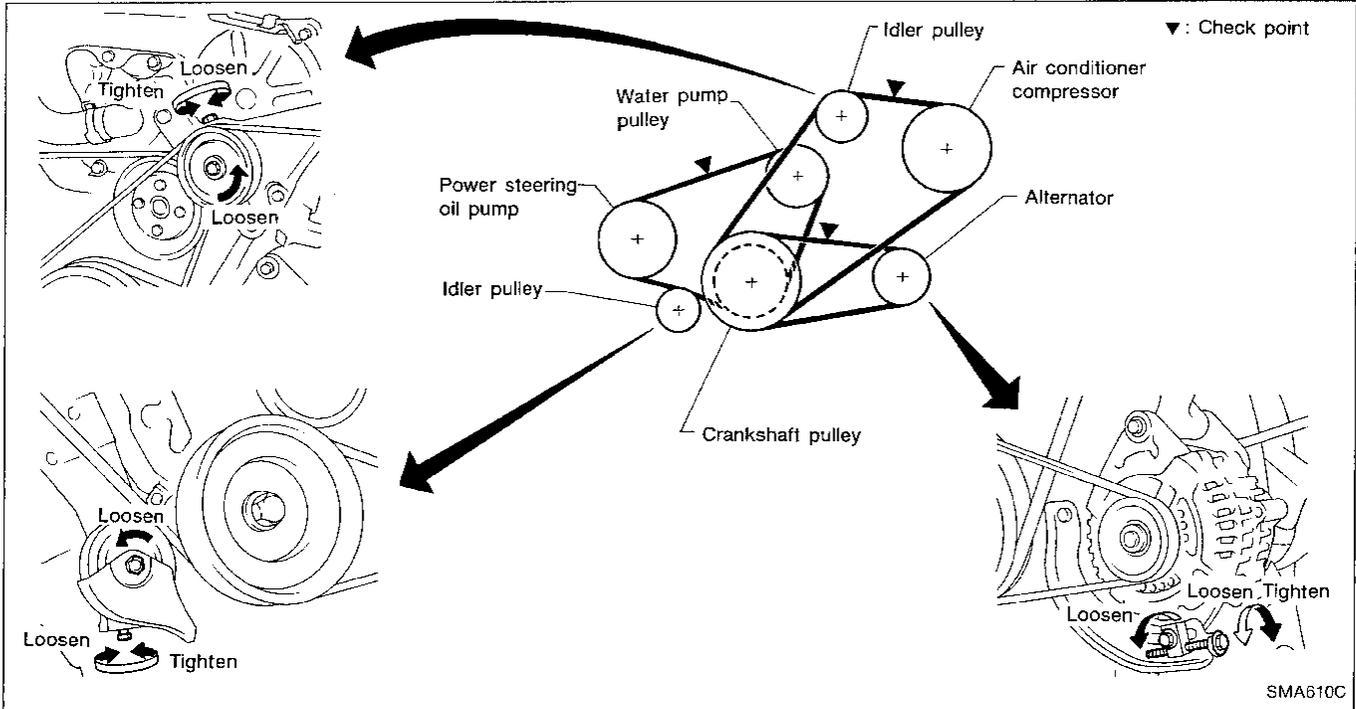


T10003

5W-30 is preferable for all ambient temperatures. 20W-40 and 20W-50 are usable for ambient temperatures above 10°C (50°F) for all seasons.

80W-90 is preferable for ambient temperature below 40°C (104°F).

Checking Drive Belts



1. Inspect for cracks, fraying, wear or oil adhesion. If necessary, replace with a new one.
2. Inspect drive belt deflection by pushing on the belt midway between pulleys.

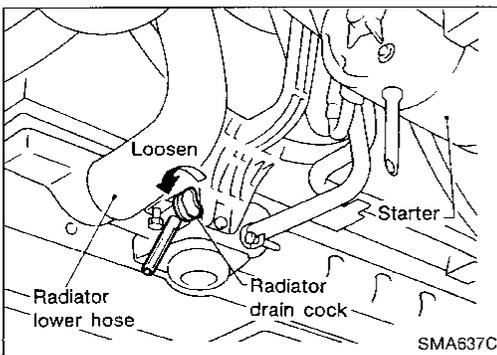
Adjust if belt deflection exceed the limit.

Belt deflection:

Unit: mm (in)

	Used belt deflection		Deflection of new belt
	Limit	Deflection after adjustment	
Alternator	12 (0.47)	7 - 9 (0.28 - 0.35)	6 - 8 (0.24 - 0.31)
Air conditioner compressor	10 (0.39)	5 - 7 (0.20 - 0.28)	4 - 6 (0.16 - 0.24)
Power steering oil pump	16 (0.63)	10 - 12 (0.39 - 0.47)	8 - 10 (0.31 - 0.39)
Applied pushing force	98 N (10 kg, 22 lb)		

Inspect drive belt deflection when engine is cold.



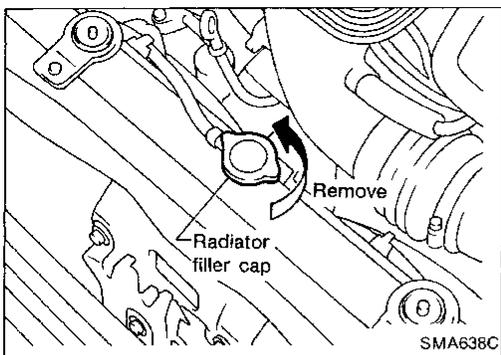
Changing Engine Coolant

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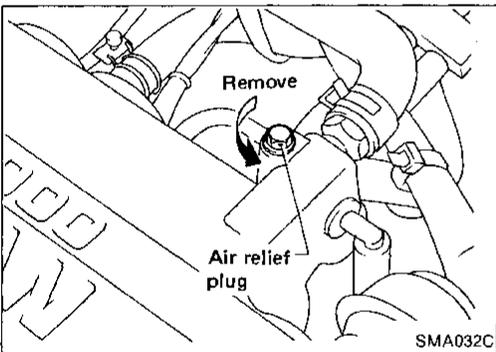
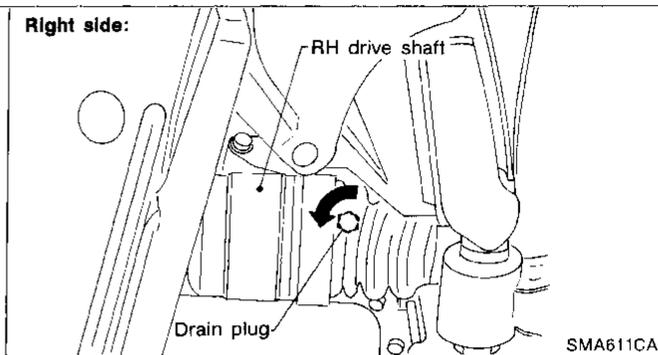
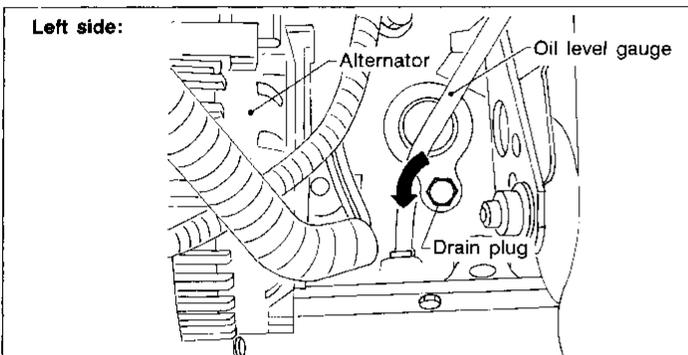
To avoid being scalded, never change the coolant when the engine is hot.

1.
  - 1) Manual air conditioner models:  
Move heater "TEMP" control lever all the way to "HOT".
  - 2) Auto air conditioner equipped models:  
Turn ignition switch "OFF".

**Changing Engine Coolant (Cont'd)**



2. Open drain cock at the bottom of radiator, and remove radiator cap.
  3. Remove drain plugs on both sides of cylinder block.
  4. Close drain cock and tighten drain plugs securely.
- **Apply sealant to the drain plug thread.**  
 ⚙️: 34 - 44 N·m  
 (3.5 - 4.5 kg-m, 25 - 33 ft-lb)

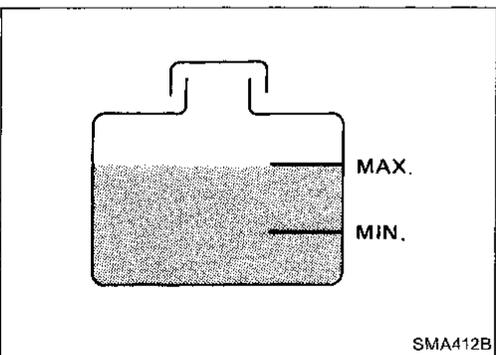


5. Open air relief plug.
6. Fill radiator with water and close air relief plug.
7. Start engine and warm it up sufficiently.
8. Stop engine and wait until it cools down.
9. Repeat step 3 through step 8 until clear water begins to drain from radiator.
10. Drain water.
11. Open air relief plug again.
12. Fill radiator with coolant up to bottom of spill outlet. Follow instructions attached to anti-freeze container for mixing ratio of anti-freeze to water.

**Coolant capacity (Without reservoir tank):**  
 8.3ℓ (8-3/4 US qt, 7-1/4 Imp qt)

**Reservoir tank: 0.6ℓ (5/8 US qt, 1/2 Imp qt)**

**Pour coolant through coolant filler neck slowly to allow air in system to escape.**

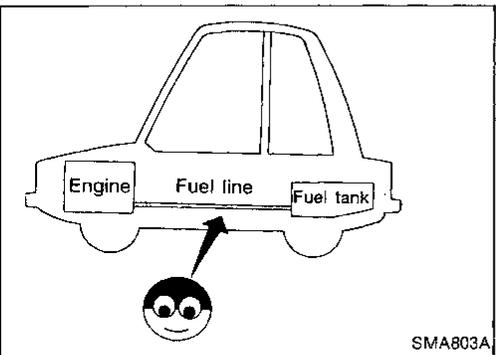


13. Remove reservoir tank, drain coolant, then clean reservoir tank.
14. Fill reservoir tank with coolant up to "MAX" level.
15. Close air relief plug again.
16. Run engine and warm it up.
17. Stop engine and cool it down, then add coolant as necessary.

**Checking Fuel Lines**

Inspect fuel lines and tank for improper attachment and for leaks, cracks, damage, loose connections, chafing and deterioration.

If necessary, repair or replace faulty parts.



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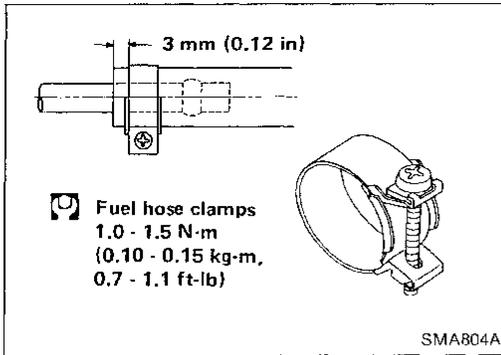
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Checking Fuel Lines (Cont'd)

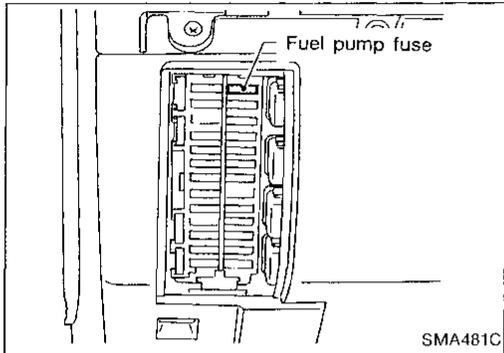


CAUTION:

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.

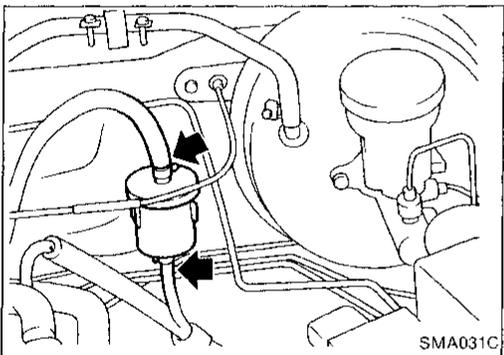


Changing Fuel Filter

WARNING:

Before removing fuel filter, release fuel pressure from fuel line to eliminate danger.

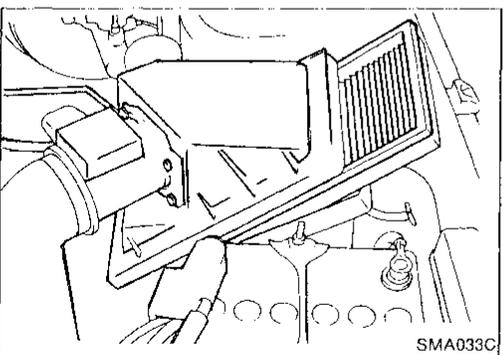
1. Remove fuse for fuel pump.
2. Start engine.
3. After engine stalls, crank engine two or three times to make sure that fuel pressure is released.
4. Turn ignition switch off and install fuse for fuel pump.



5. Loosen fuel hose clamps.

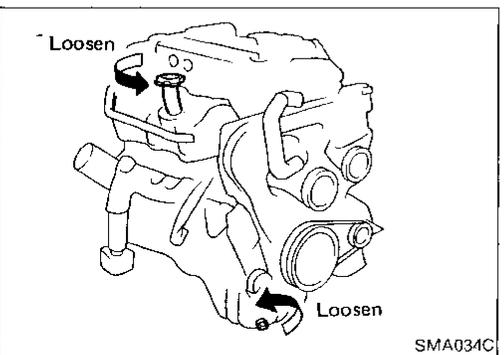
6. Replace fuel filter.

- Be careful not to spill fuel over engine compartment. Place a shop towel to absorb fuel.
- Use a high-pressure type fuel filter. Do not use a synthetic resinous fuel filter.
- When tightening fuel hose clamps, refer to "Checking Fuel Lines".
- Erase memory (Diagnostic trouble code No. 22) from ECM. (Refer to EF & EC section.)



Changing Air Cleaner Filter

The viscous paper type filter does not need cleaning between renewals.



Changing Engine Oil

WARNING:

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

1. Warm up engine, and check for oil leakage from engine components.
2. Remove drain plug and oil filler cap.
3. Drain oil and refill with new engine oil.

Oil grade: API SG

Viscosity: See "RECOMMENDED FLUIDS AND LUBRICANTS" in MA section.

### Changing Engine Oil (Cont'd)

Refill oil capacity (Approximate):

With oil filter: 3.9ℓ (4-1/8 US qt, 3-3/8 Imp qt)

Without oil filter: 3.5ℓ (3-3/4 US qt, 3-1/8 Imp qt)

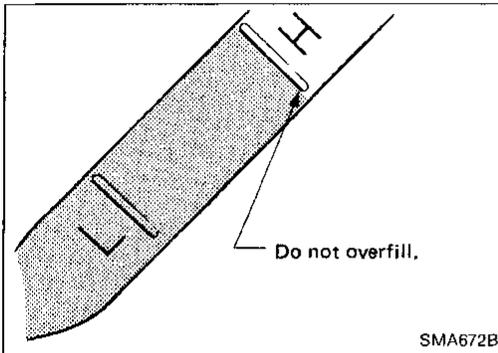
**CAUTION:**

- 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)
- Since the oil refill capacity changes depending on the oil temperature and drain time, use these values as a reference and be certain to check with the dipstick when changing the oil.

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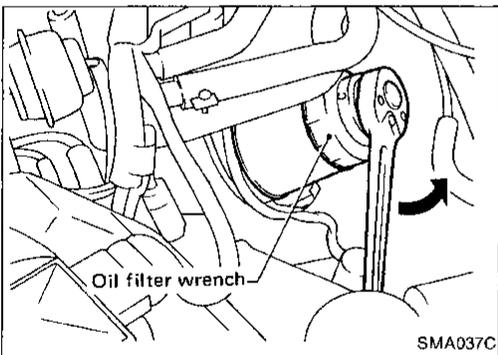
4. Check oil level.
5. Start engine and check area around drain plug and oil filter for oil leakage.
6. Run engine for a few minutes, then turn it off. After several minutes, check oil level.

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### Changing Oil Filter

1. Remove oil filter with a suitable tool.

**WARNING:**

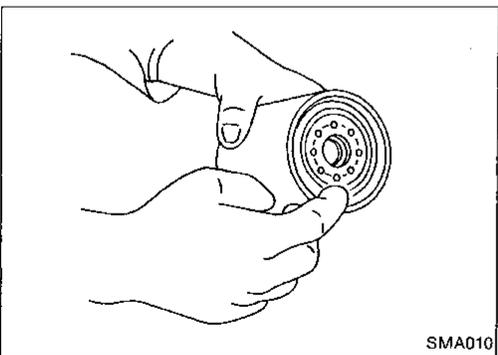
Be careful not to burn yourself, as the engine and engine oil are hot.

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2. Before installing a new oil filter, clean the oil filter mounting surface on cylinder block, and coat the oil filter rubber seal with a little engine oil.
3. Screw in the oil filter until a slight resistance is felt, then tighten additionally more than 2/3 turn.
4. Add engine oil.

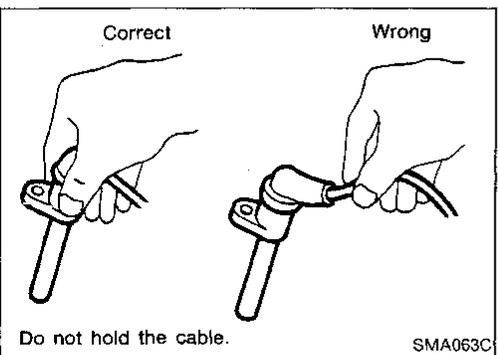
BR

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Refer to Changing Engine Oil.

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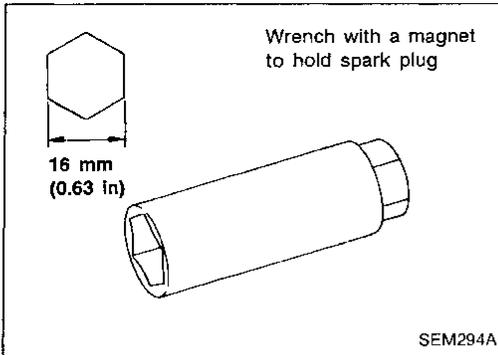
### Changing Spark Plugs

1. Disconnect ignition wires from spark plugs at boot. Do not pull on the wire.

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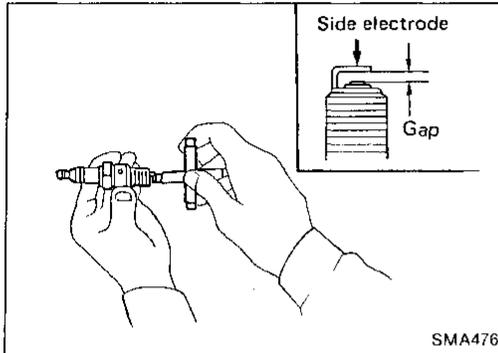
**Changing Spark Plugs (Cont'd)**



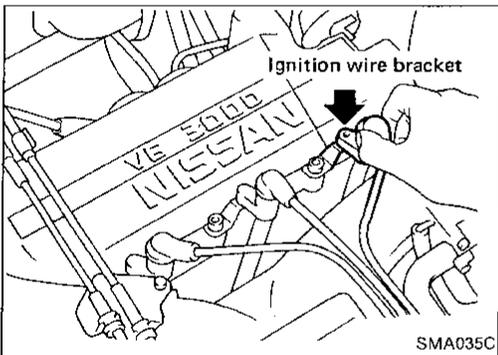
2. Remove spark plugs with spark plug wrench.
3. Clean plugs in sand blast cleaner.
4. Check insulator for cracks or chips, gasket for damage or deterioration and electrode for wear and burning. If they are excessively worn away, replace with new spark plugs.

**Spark plug:**

Standard type	BKR5ES-11
Option for service	BKR6ES-11
Cold type	BKR7ES-11



5. Check spark plug gap.  
**Gap:**  
**1.0 - 1.1 mm (0.039 - 0.043 in)**



6. Install spark plugs. Reconnect ignition wires according to Nos. indicated on them.

**When installing spark plugs to No. 2, 4, and 6 cylinders, securely fit each ignition wire mounting hole onto the ignition wire bracket pin.**

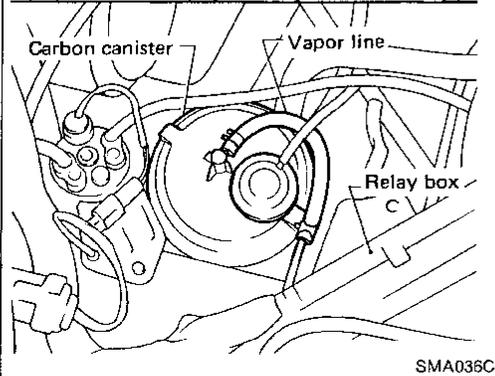
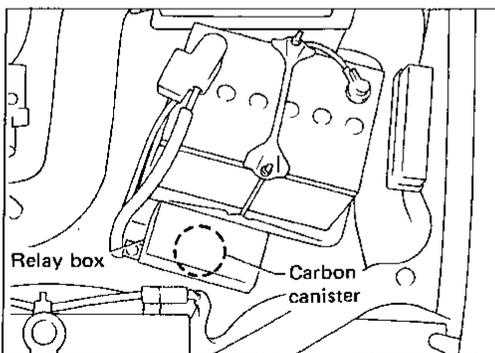
**Spark plug:**

**⚙️: 20 - 29 N·m  
 (2.0 - 3.0 kg-m, 14 - 22 ft-lb)**

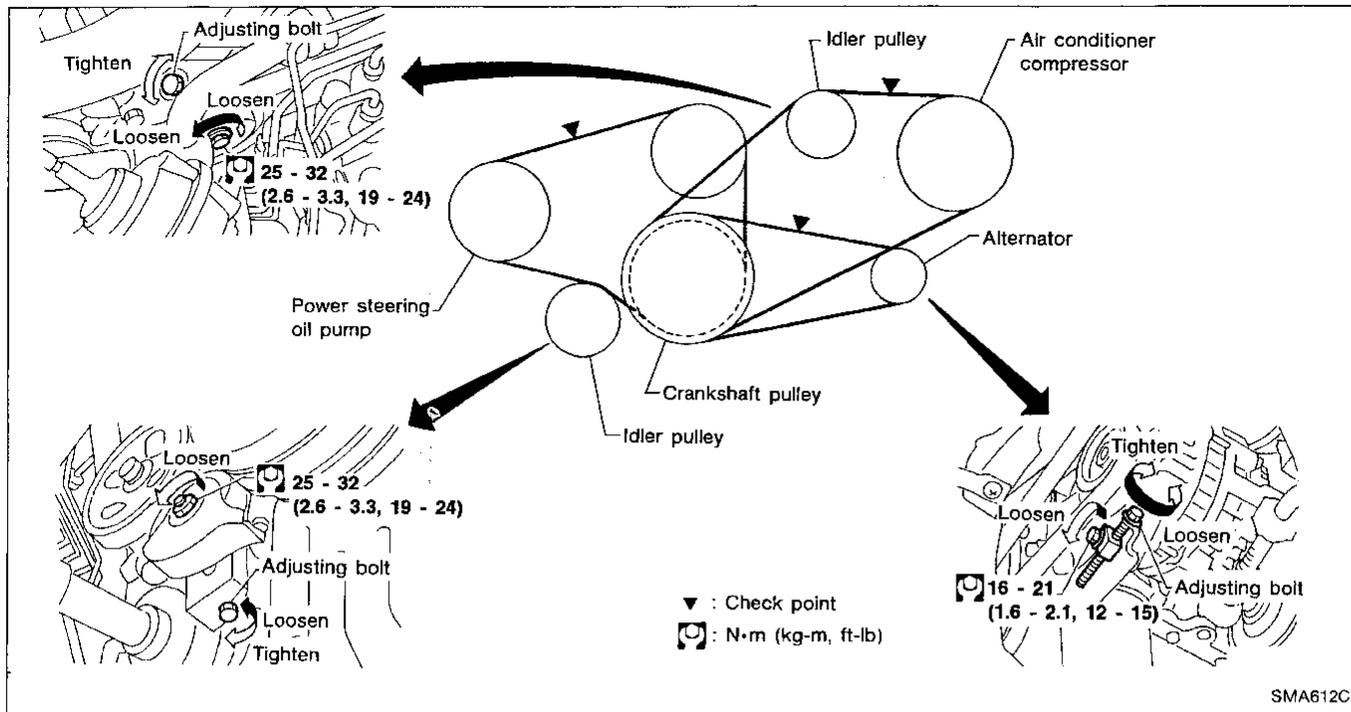
**Checking Vapor Lines**

1. Visually inspect vapor lines for improper attachment and for cracks, damage, loose connections, chafing and deterioration.
2. Inspect vacuum relief valve of fuel tank filler cap for clogging, sticking, etc.

**Refer to "EVAPORATIVE EMISSION SYSTEM" in EF & EC section.**



Checking Drive Belts



1. Inspect for cracks, fraying, wear or oil adhesion. If necessary, replace with a new one.
2. Inspect drive belt deflections by pushing on the belt midway between pulleys.

Adjust if belt deflections exceed the limit.

Belt deflection:

Unit: mm (in)

	Used belt deflection		Deflection of new belt
	Limit	Deflection after adjustment	
Alternator	11.5 - 12.5 (0.453 - 0.492)	7.5 - 8.5 (0.295 - 0.335)	6.5 - 7.5 (0.256 - 0.295)
Air conditioner compressor	8.5 - 9.5 (0.335 - 0.374)	5.5 - 6.5 (0.217 - 0.256)	5 - 6 (0.20 - 0.24)
Power steering oil pump	11.5 - 12.5 (0.453 - 0.492)	7.5 - 8.5 (0.295 - 0.335)	6.5 - 7.5 (0.256 - 0.295)
Applied pushing force	98 N (10 kg, 22 lb)		

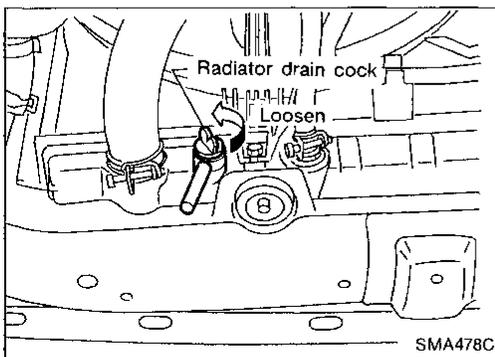
Inspect drive belt deflections when engine is cold.

Changing Engine Coolant

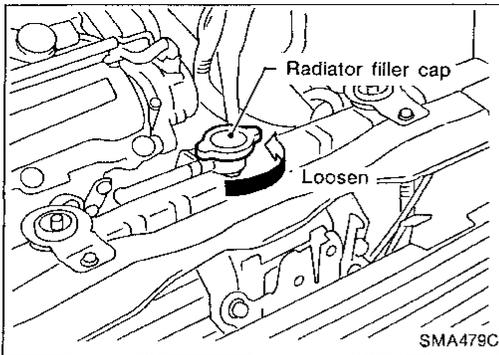
WARNING:

To avoid being scalded, never change the coolant when the engine is hot.

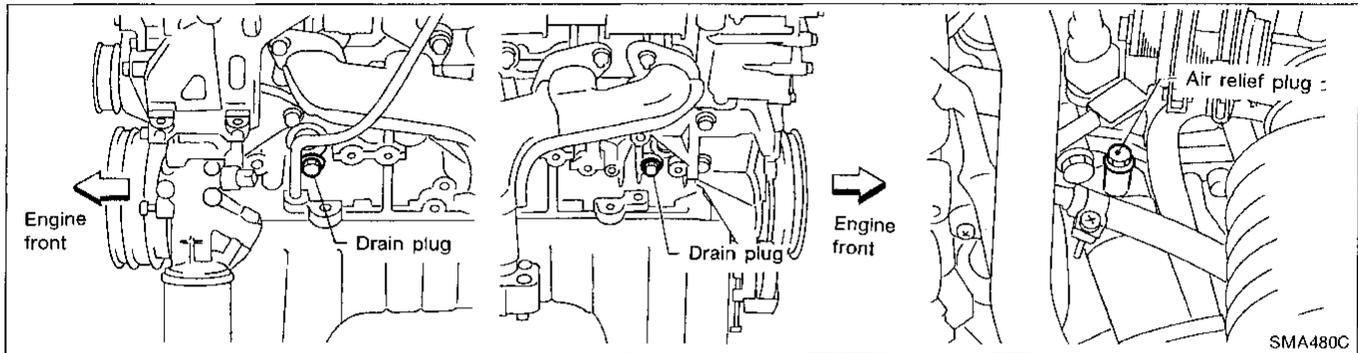
1.
  - Manual air conditioner models:  
Move heater "TEMP" control lever all the way to "HOT".
  - Auto air conditioner equipped models:  
Turn ignition switch "OFF".



**Changing Engine Coolant (Cont'd)**



2. Open radiator drain cock at the bottom of radiator, and remove radiator filler cap.
  3. Remove reservoir tank, drain coolant, then clean reservoir tank. Install it temporarily.
- **Be careful not to allow coolant to contact drive belts.**



4. Remove cylinder block drain plugs and air relief plug.
5. Close radiator drain cock and tighten cylinder block drain plugs securely.
6. Fill radiator with water until coolant spills from air relief hole during refill, then reinstall air relief plug. Then fill radiator and reservoir tank with water.

**Air relief plug:**

: 10 N·m (1.0 kg-m, 7 ft-lb)

7. Reinstall radiator filler cap.
8. Start engine.
9. Warm up engine until cooling fan operates, then race engine 2 or 3 times under no-load.

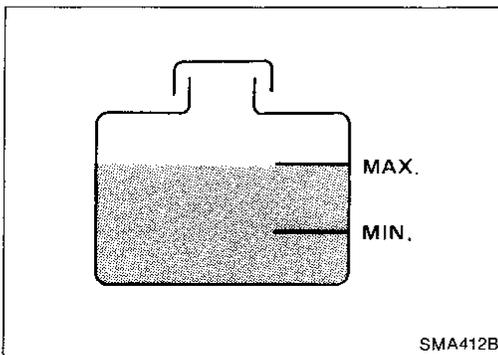
**Make sure that air conditioner switch is "OFF".**

10. Stop engine and wait until it cools down.
11. Repeat step 2 through step 10 until clear water begins to drain from radiator.
12. Drain water.

● **Apply sealant to drain plug thread.**

: 34 - 44 N·m (3.5 - 4.5 kg-m, 25 - 33 ft-lb)

13. Reinstall reservoir tank.



14. Fill radiator and reservoir tank with coolant following step 6 through step 10. Follow instructions attached to anti-freeze container for mixing ratio of anti-freeze to water.

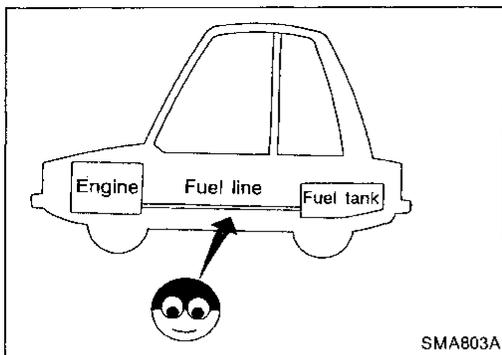
**Coolant capacity (With reservoir tank):**

**10.6 ℓ (11-1/4 US qt, 9-3/8 Imp qt)**

[Reservoir tank capacity at "MAX" level is 0.7 ℓ (3/4 US qt, 5/8 Imp qt).]

**Pour coolant through coolant filler neck slowly to allow air in system to escape.**

15. If necessary, add coolant.



### Checking Fuel Lines

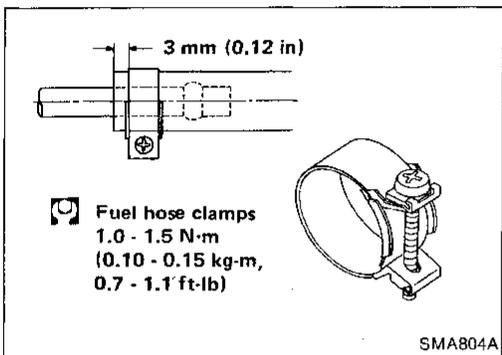
Inspect fuel lines and tank for improper attachment and for leaks, cracks, damage, loose connections, chafing and deterioration.

If necessary, repair or replace faulty parts.

GI

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#### 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.

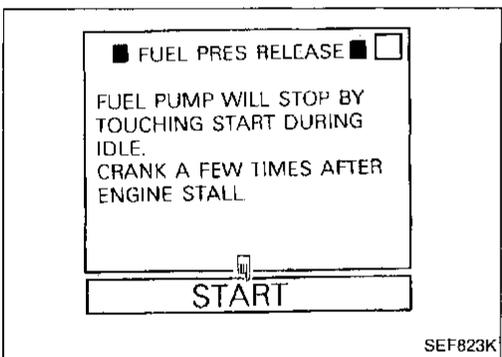
Ensure that screw does not contact adjacent parts.

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### Changing Fuel Filter

#### WARNING:

Before removing fuel filter, release fuel pressure from fuel line to eliminate danger.

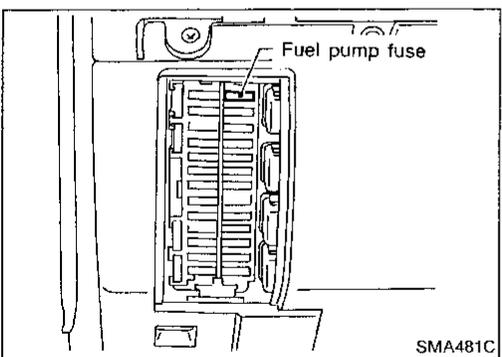
1. Start engine.
2. Perform "FUEL PRESSURE RELEASE" in "WORK SUPPORT" mode with CONSULT.
3. After engine stalls, crank engine two or three times to make sure that fuel pressure is released.
4. Turn ignition switch off and install fuel pump fuse.

WT

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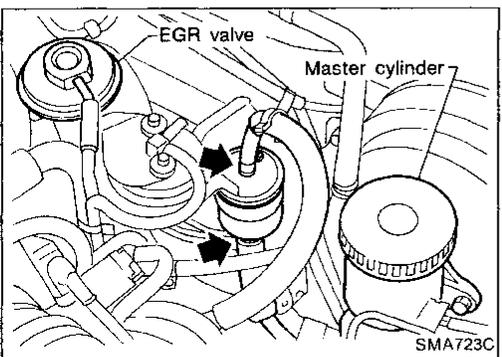
1. Remove fuel pump fuse.
2. Start engine.
3. After engine stalls, crank engine two or three times to make sure that fuel pressure is released.
4. Turn ignition switch off and install fuel pump fuse.

BR

ST

BF

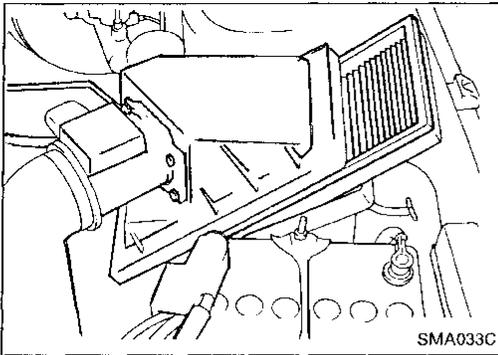
HA



5. Loosen fuel hose clamps.
  6. Replace fuel filter.
- Be careful not to spill fuel over engine compartment. Place a shop towel to absorb fuel.
  - Use a high-pressure type fuel filter. Do not use a synthetic resinous fuel filter.
  - When tightening fuel hose clamps, refer to "Checking Fuel Lines".

EL

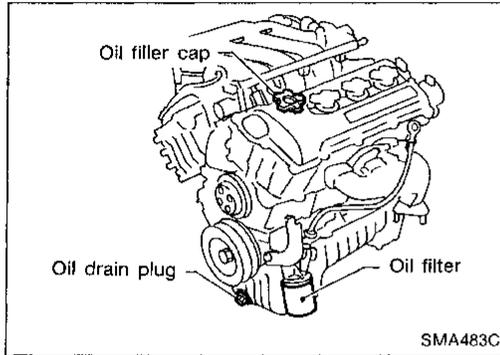
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### Changing Air Cleaner Filter

#### Viscous paper type

The viscous paper type filter does not need cleaning between renewals.



### Changing Engine Oil

#### WARNING:

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

1. Warm up engine, and check for oil leakage from engine components.
2. Remove drain plug and oil filler cap.
3. Drain oil and refill with new engine oil.

Oil grade: API SG

Viscosity: See "RECOMMENDED FLUIDS AND LUBRICANTS" in MA section.

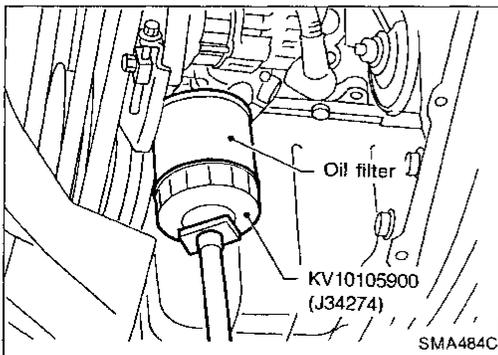
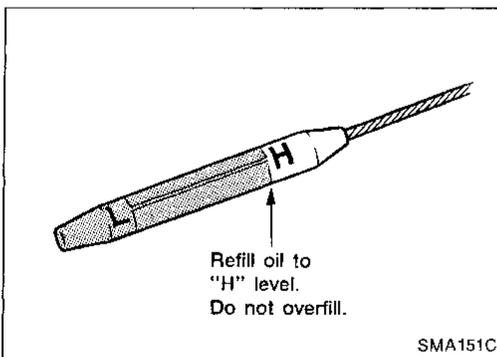
#### Refill oil capacity (Approximate):

Unit: liter (US qt, Imp qt)

With oil filter change	3.8 (4, 3-3/8)
Without oil filter change	3.4 (3-5/8, 3)

#### CAUTION:

- Be sure to clean drain plug and install with new washer.  
**Drain plug:**  
 ⚙️: 29 - 39 N·m (3.0 - 4.0 kg·m, 22 - 29 ft·lb)
  - The refill capacity changes depending on the oil temperature and drain time; use these values as a reference and be certain to check with the dipstick when changing the oil.
4. Check oil level.
  5. Start engine and check area around drain plug and oil filter for oil leakage.
  6. Run engine for a few minutes, then turn it off. After several minutes, check oil level.



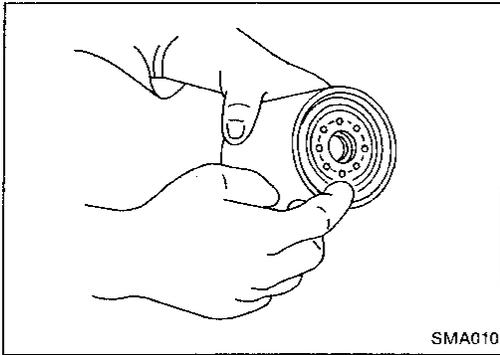
### Changing Oil Filter

1. Remove oil filter with Tool or suitable tool.

#### WARNING:

Be careful not to burn yourself, as the engine and the engine oil are hot.

**Changing Oil Filter (Cont'd)**



2. Before installing new oil filter, clean the oil filter mounting surface on cylinder block, and coat the oil filter rubber seal with a little engine oil.
3. Screw in the oil filter until a slight resistance is felt, then tighten an additional 2/3 turn.
4. Add engine oil.

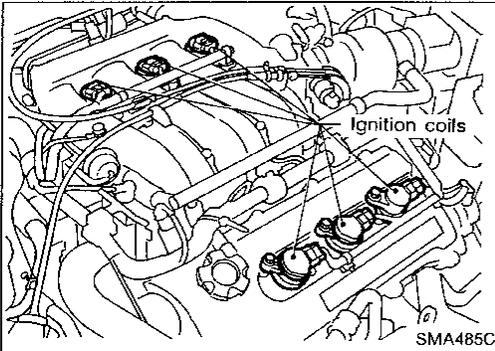
Refer to Changing Engine Oil.

GI

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EM

**Changing Spark Plugs**



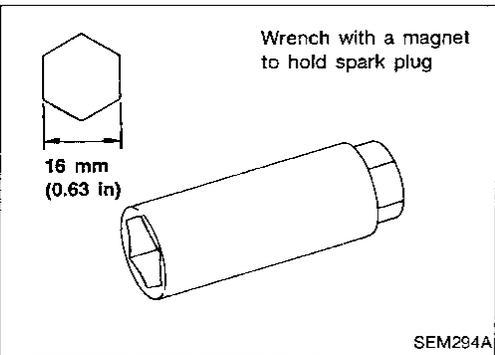
1. Disconnect ignition coil harness connectors.
2. Remove ignition coils.

LC

EF & EC

FE

CL



3. Remove spark plugs with spark plug wrench.

**Spark plug (Platinum-tipped type):**

Make	NGK
Standard type	PFR5C-11
Hot type	PFR4C-11
Cold type	PFR6C-11

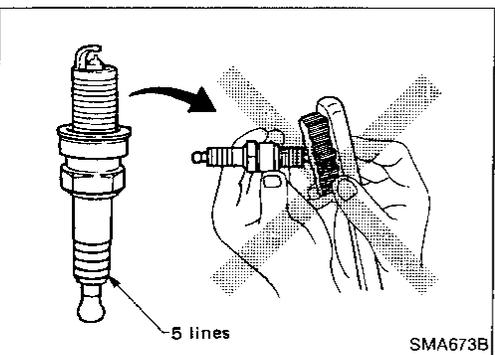
MT

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FA

: 20 - 29 N·m (2.0 - 3.0 kg-m, 14 - 22 ft-lb)

RA



- Checking and adjusting plug gap are not required between renewals.
- Do not use a wire brush for cleaning.
- If plug tip is covered with carbon, spark plug cleaner may be used.

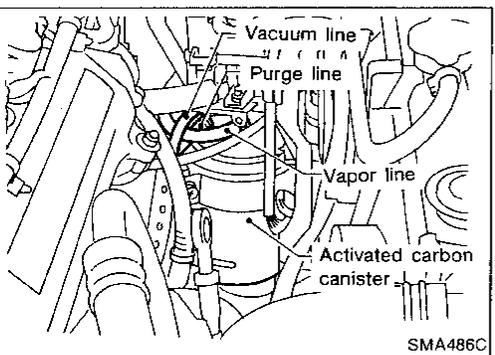
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Cleaner air pressure:  
Less than 588 kPa (6 kg/cm<sup>2</sup>, 85 psi)  
Cleaning time:  
Less than 20 seconds

BF

HA



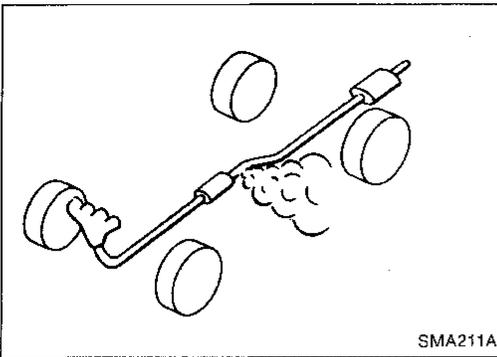
**Checking Vapor Lines**

1. Visually inspect 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.

EL

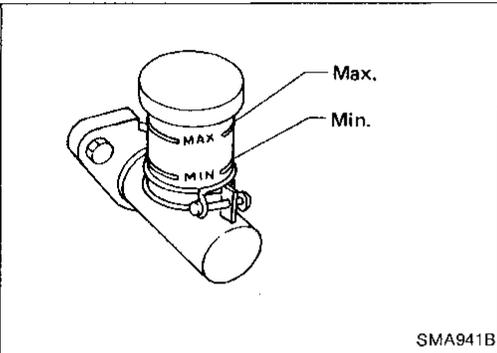
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REFER to EVAPORATIVE EMISSION SYSTEM INSPECTION in EF & EC section.



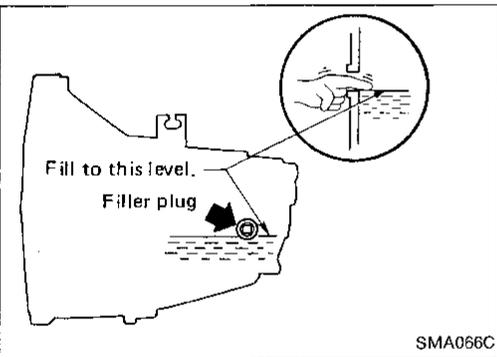
## Checking Exhaust System

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



## Checking Clutch Fluid Level and Leaks

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

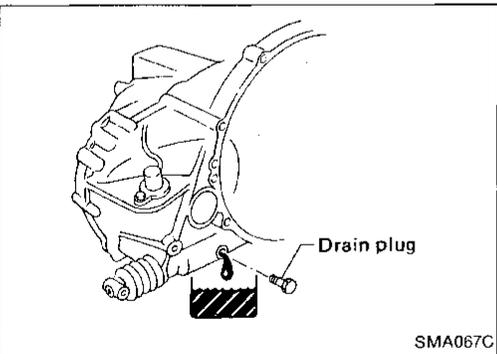


## Checking M/T Oil

- Check for oil leakage and oil level.

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

: Filler plug 25 - 34 N·m (2.5 - 3.5 kg-m, 18 - 25 ft-lb)



## Changing M/T Oil

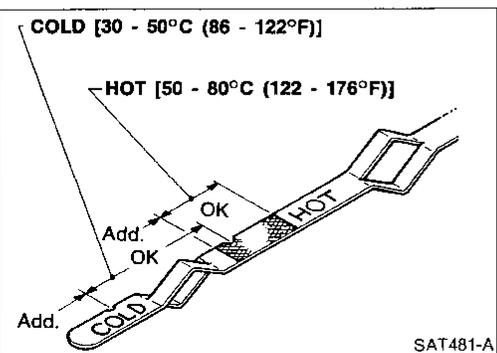
1. Drain oil from drain plug and refill with new gear oil.
2. Check oil level.

**Oil capacity:**

4.2 - 4.5 ℓ (8-7/8 - 9-1/2 US pt, 7-3/8 - 7-7/8 Imp pt) - RS5F50V

4.4 - 4.7 ℓ (9-1/4 - 10 US pt, 7-3/4 - 8-1/4 Imp pt) - RS5F50A

: Drain plug 20 - 29 N·m (2.0 - 3.0 kg-m, 14 - 22 ft-lb)



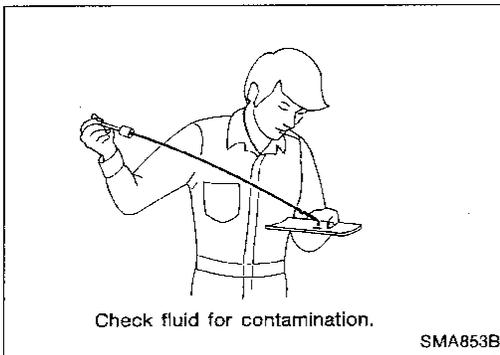
## Checking A/T Fluid

1. Check for fluid leakage and fluid level.

Fluid level should be checked using "HOT" range on dipstick at fluid temperatures of 50 to 80°C (122 to 176°F) after vehicle has been driven approximately 5 minutes in urban areas after engine is warmed up. But it can be checked at fluid temperatures of 30 to 50°C (86 to 122°F) using "COLD" range on dipstick for reference after engine is warmed up and before driving. However, fluid level must be rechecked using "HOT" range.

# CHASSIS AND BODY MAINTENANCE

## Checking A/T Fluid (Cont'd)

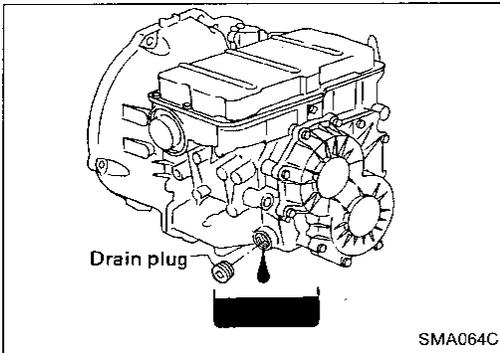


- 1) Park vehicle on level surface and set parking brake.
- 2) Start engine and then move selector lever through each gear range, ending in "P".
- 3) Check fluid level with engine idling.
- 4) Remove dipstick and wipe it clean with lint-free paper.
- 5) Reinsert dipstick into charging pipe as far as it will go.
- 6) Remove dipstick and note reading. If level is at low side of either range, add fluid to the charging pipe.

### Do not overfill.

2. Check fluid for contamination. If fluid is very dark or smells burned, or contains frictional material (clutches, band, etc.), check operation of A/T.

Refer to section AT for checking operation of A/T.



## Changing A/T Fluid

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.

### Oil grade:

**Genuine Nissan ATF or equivalent type  
DEXRON™II-E**

### Oil capacity (With torque converter):

**VG30 engine models**

**7.4ℓ (7-7/8 US qt, 6-1/2 Imp qt)**

**VE30 engine models**

**9.6ℓ (10-1/8 US qt, 8-1/2 Imp qt)**

### Drain plug :

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

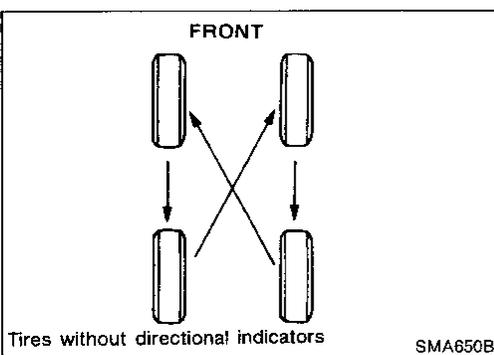
4. Run engine at idle speed for five minutes.
5. Check fluid level and condition. Refer to "Checking A/T Fluid". If fluid is still dirty, repeat step 2. through 5.

## Balancing Wheels

Adjust wheel balance using road wheel center.

**Wheel balance (Maximum allowable unbalance):**

**Refer to SDS.**



## Tire Rotation

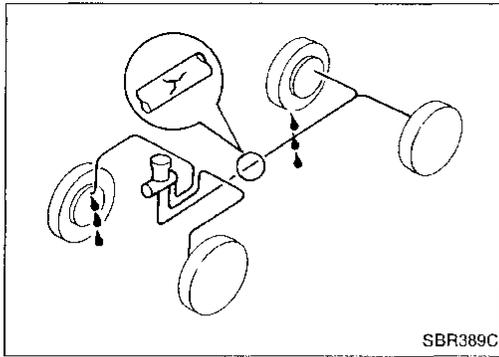
Do not include the T-type spare tire when rotating the tires.

### Wheel nuts:

**⌚: 98 - 118 N·m**

**(10.0 - 12.0 kg·m, 72 - 87 ft·lb)**

# CHASSIS AND BODY MAINTENANCE

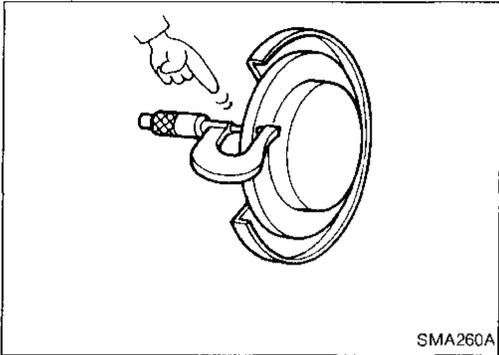


## Checking Brake Fluid Level and Leaks

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

## Checking Brake Lines and Cables

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



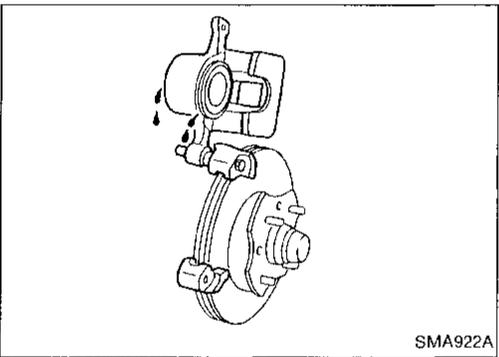
## Checking Disc Brake

### ROTOR

Check condition and thickness.

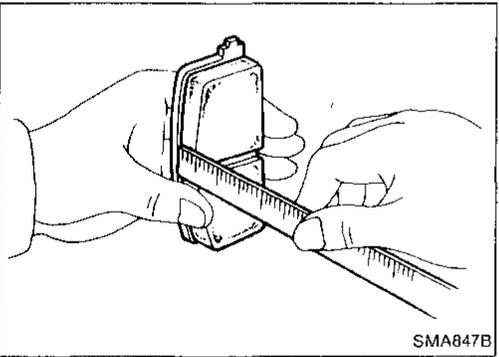
Unit: mm (in)

	CL25VB	CL9HA
Standard thickness	22 (0.87)	9 (0.35)
Minimum thickness	20.0 (0.787)	8.0 (0.315)



### CALIPER

Check operation and for leakage.

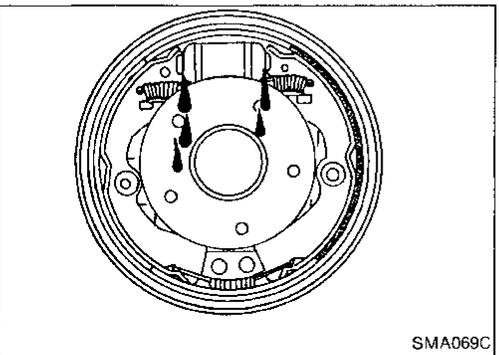


### PAD

Check for wear or damage.

Unit: mm (in)

	CL25VB	CL9HA
Standard thickness	11 (0.43)	10 (0.39)
Minimum thickness	2.0 (0.079)	2.0 (0.079)



## Checking Drum Brake

### WHEEL CYLINDER

Check operation and for leakage.

# CHASSIS AND BODY MAINTENANCE

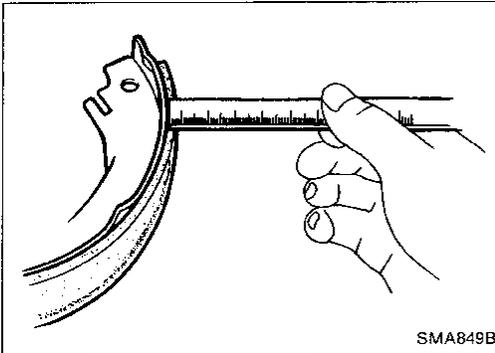
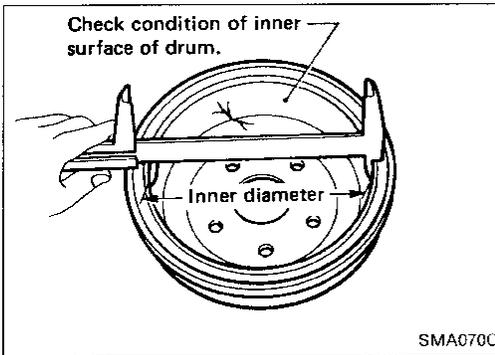
## Checking Drum Brake (Cont'd)

### DRUM

Check condition of inner surface.

**Standard inner diameter:**  
228.6 mm (9 in)

**Maximum diameter:**  
230.0 mm (9.06 in)



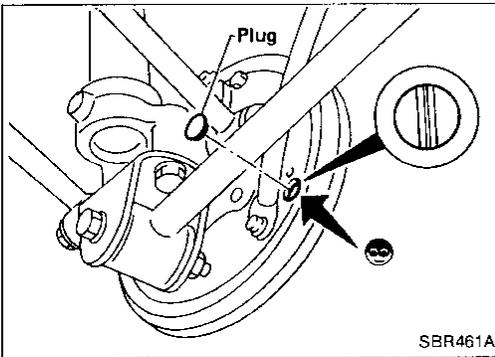
### LINING

Check for wear or damage.

**Standard thickness:**  
4.5 mm (0.177 in)

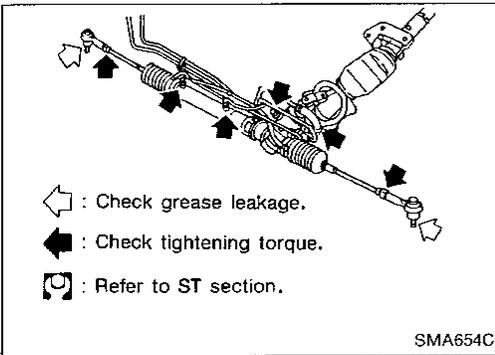
**Minimum thickness:**  
1.5 mm (0.059 in)

Refer to section BR for shoe replacement.



### TEMPORARY METHOD FOR CHECKING LINING WEAR

Remove inspection hole plug and check for lining wear.



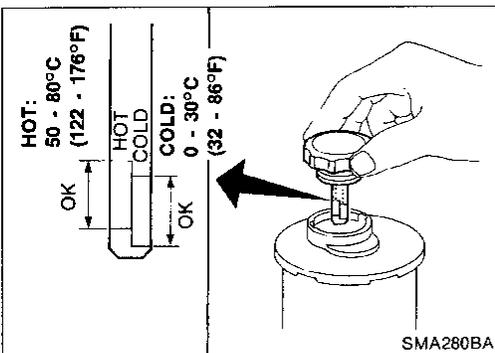
### Checking Steering Gear and Linkage

#### STEERING GEAR

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

#### STEERING LINKAGE

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



### Checking Power Steering Fluid and Lines

Checking fluid level.

Fluid level should be checked using "HOT" range on dipstick at fluid temperatures of 50 to 80°C (122 to 176°F) or using "COLD" range on dipstick at fluid temperatures of 0 to 30°C (32 to 86°F).

#### CAUTION:

- Do not overfill.
- Recommended fluid is Automatic Transmission Fluid type "DEXRON™II" or equivalent.

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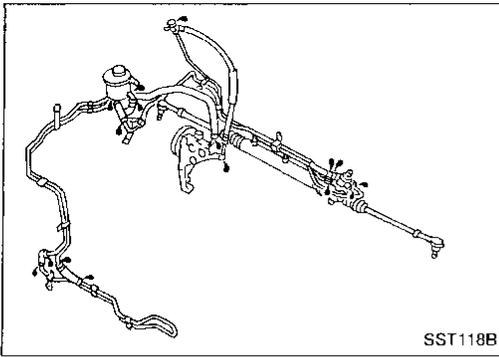
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## CHASSIS AND BODY MAINTENANCE

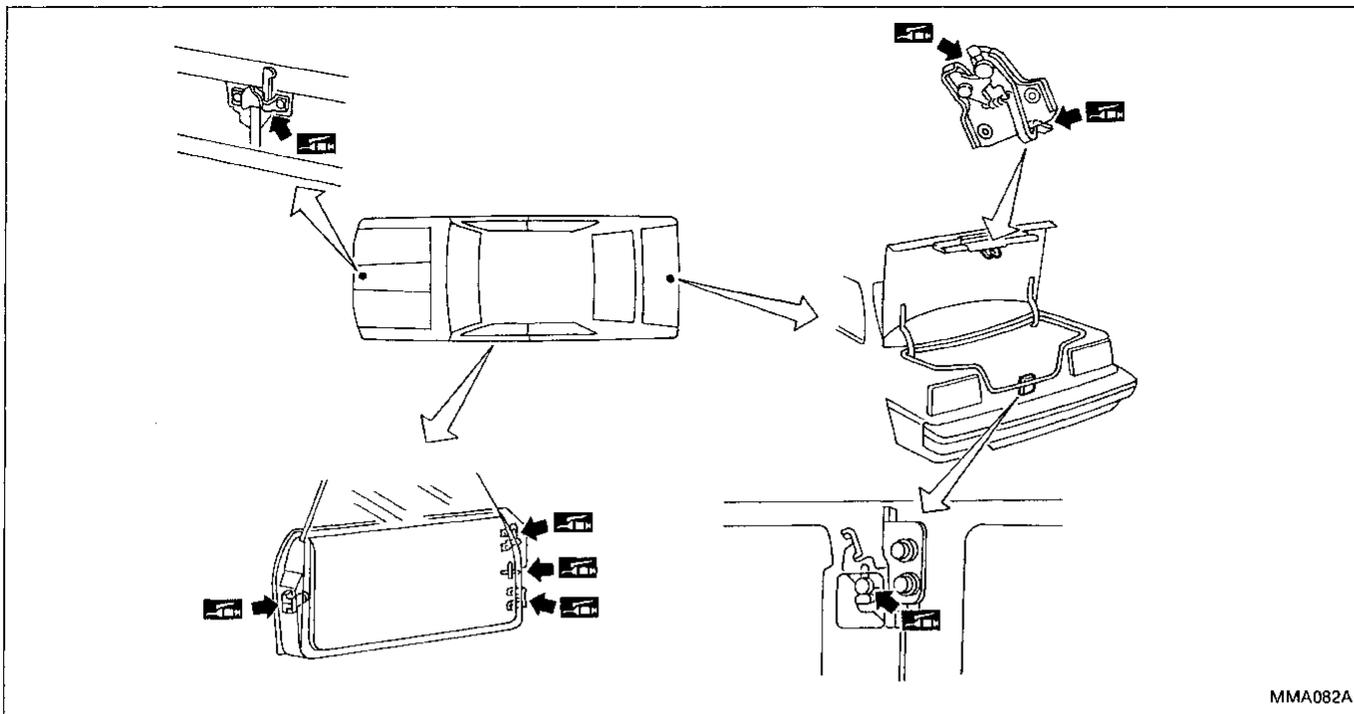
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### Checking Power Steering Fluid and Lines (Cont'd)

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



## Lubricating Locks, Hinges and Hood Latches



MMA082A

## Checking Seat Belts, Buckles, Retractors, Anchors and Adjusters

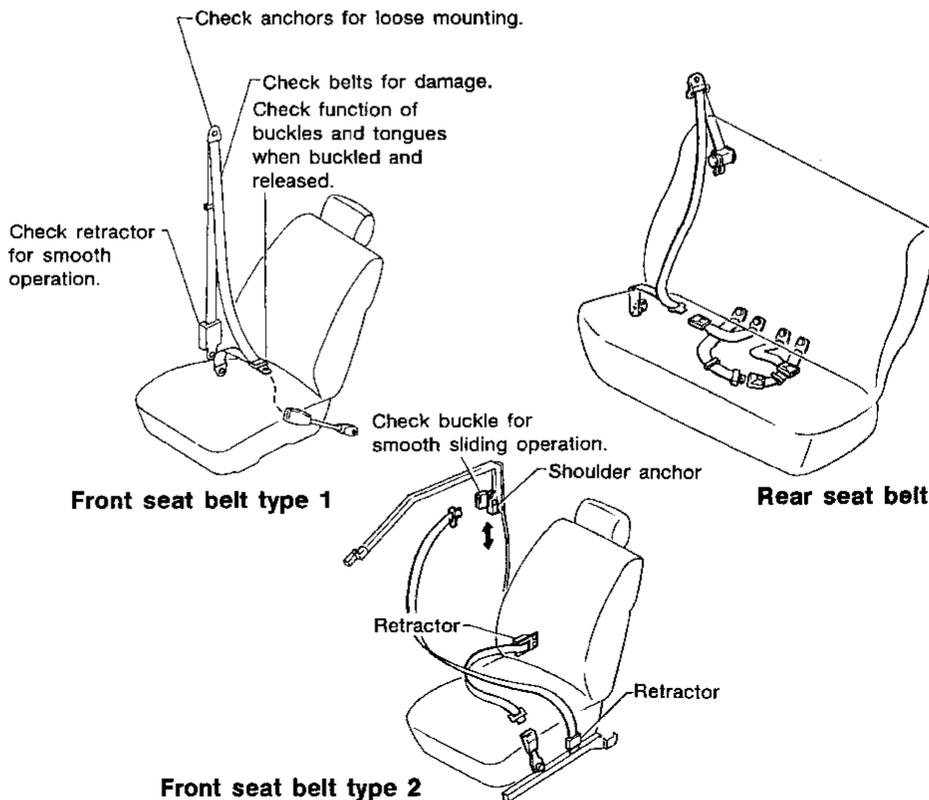
### CAUTION:

1. All seat belt assemblies, including retractors and attaching hardware such as guide rail set, etc., should be inspected after any collision. Nissan recommends that all seat belt assemblies in use during a collision be replaced unless the collision was minor and the belts show no damage and continue to operate properly. Seat belt assemblies not in use during a collision should also be inspected and replaced if either damage or improper operation is noted.
2. If the condition of any component of seat belt assembly is questionable, do not have it repaired, but replaced as seat belt assembly.
3. If webbing is cut, frayed, or damaged, replace belt assembly.
4. Do not spill drinks, oil, etc. on inner lap belt buckle. Never oil tongue and buckle.
5. Use a NISSAN genuine seat belt assembly.

#### Anchor bolt

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

For automatic seat belt details, refer to BF section.



SMA692B

# SERVICE DATA AND SPECIFICATIONS (SDS)

## Engine Maintenance (VG30E)

### INSPECTION AND ADJUSTMENT

#### Drive belt deflection

Unit: mm (in)

	Used belt deflection		Deflection of new belt
	Limit	Deflection after adjustment	
Alternator	12 (0.47)	7 - 9 (0.28 - 0.35)	6 - 8 (0.24 - 0.31)
Air conditioner compressor	10 (0.39)	5 - 7 (0.20 - 0.28)	4 - 6 (0.16 - 0.24)
Power steering oil pump	16 (0.63)	10 - 12 (0.39 - 0.47)	8 - 10 (0.31 - 0.39)
Applied pushing force	98 N (10 kg, 22 lb)		

#### Spark plug

Standard type	BKR5ES-11
Option for service	BKR6ES-11
Cold type	BKR7ES-11
Plug gap	mm (in) 1.0 - 1.1 (0.039 - 0.043)

## Engine Maintenance (VE30DE)

### INSPECTION AND ADJUSTMENT

#### Drive belt deflection

Unit: mm (in)

	Used belt deflection		Deflection of new belt
	Limit	Deflection after adjustment	
Alternator	11.5 - 12.5 (0.453 - 0.492)	7.5 - 8.5 (0.295 - 0.335)	6.5 - 7.5 (0.256 - 0.295)
Air conditioner compressor	8.5 - 9.5 (0.335 - 0.374)	5.5 - 6.5 (0.217 - 0.256)	5 - 6 (0.20 - 0.24)
Power steering oil pump	11.5 - 12.5 (0.453 - 0.492)	7.5 - 8.5 (0.295 - 0.335)	6.5 - 7.5 (0.256 - 0.295)
Applied pushing force	98 N (10 kg, 22 lb)		

#### Spark plug

	Platinum tipped type
Make	NGK
Type	
Standard	PFR5C-11
Hot	PFR4C-11
Cold	PFR6C-11
Plug gap	mm (in) 1.0 - 1.1 (0.039 - 0.043)

# SERVICE DATA AND SPECIFICATIONS (SDS)

## Chassis and Body Maintenance

### INSPECTION AND ADJUSTMENT

#### Wheel balance

Maximum allowable unbalance	Dynamic (At rim flange)	10 (0.35) (one side)
	g (oz)	
	Static	20 (0.71)
	g (oz)	

#### Brake

Disc brake	mm (in)	
<b>Pad</b>		
Standard thickness		
CL25VB	11 (0.43)	GI
CL9HA	10 (0.39)	<b>MA</b>
Minimum thickness		
CL25VB	2.0 (0.079)	EM
CL9HA	2.0 (0.079)	
<b>Rotor</b>		
Standard thickness		
CL25VB	22 (0.87)	LC
CL9HA	9 (0.35)	EF & EC
Minimum thickness		
CL25VB	20.0 (0.787)	FE
CL9HA	8.0 (0.315)	
<b>Drum brake</b>		
mm (in)		
<b>Lining</b>		
Standard thickness		
	4.5 (0.177)	CL
Minimum thickness		
	1.5 (0.059)	MT
<b>Drum</b>		
Standard diameter		
	228.6 (9)	AT
Maximum diameter		
	230.0 (9.06)	FA

GI

**MA**

EM

LC

EF &  
EC

FE

CL

MT

AT

FA

RA

BR

ST

BF

HA

EL

IDX