

## SECTION MA

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## GENERAL MAINTENANCE

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

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 as specified on the glove compartment tire placard. 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.	MA-20
<b>Tire rotation</b> Tires should be rotated every 12,000 km (7,500 miles.)	MA-20
<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-20, 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 back hatch. Also make sure that all latches lock securely. Lubricate if necessary. Make sure that the secondary latch keeps the hood from opening when the primary latch is released. When driving in areas using road salt or other corrosive materials, check lubrication frequently.	MA-22
<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>Lamps</b> Make sure that the headlamps, stop lamps, tail lamps, turn signal lamps, and other lamps are all operating properly and installed securely. Also check headlamp aim.	—
<b>Warning lamps and buzzers/chimes</b> Make sure that all warning lamps 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 good quantity when operating the heater or air conditioning.	—
<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 seat leg latches lock securely in every anchor position for folding-down rear seat and detachable rear seat (if so equipped).	—
<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-22
<b>Brakes</b> Check that the brake does not pull the vehicle to one side when applied.	—
<b>Brake pedal and booster</b> Check the pedal for smooth operation and make sure it has the proper distance under it when depressed fully. Check the brake booster function. Be certain to keep floor mats away from the pedal.	BR-11 BR-16
<b>Parking brake</b> Check that the pedal has the proper travel and confirm that the vehicle is held securely on a fairly steep hill when only the parking brake is applied.	BR-27

# GENERAL MAINTENANCE

Item	Reference page	
<b>Automatic transaxle "Park" mechanism</b> Check that the brake pedal must be depressed for the selector lever to be moved from the "P" position. On a fairly steep hill check that your vehicle is held securely with the selector lever in the "P" position without applying any brakes.	—	GI
<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.	—	EM
<b>Engine coolant level</b> Check the coolant level when the engine is cold.	MA-9	MA
<b>Radiator and hoses</b> Check the front of the radiator and clean off any dirt, insects, leaves, etc., that may have accumulated. Make sure the hoses have no cracks, deformation, deterioration or loose connections.	—	LC
<b>Brake fluid level</b> Make sure that the brake fluid level is between the "MAX" and "MIN" lines on the reservoir.	MA-18	EF & EC
<b>Battery</b> Check the fluid level in each cell. It should be up to the bottom of the cell filler neck.	—	FE
<b>Engine drive belts</b> Make sure that no belt is frayed, worn, cracked or oily.	MA-8	
<b>Engine oil level</b> Check the level on the dipstick after parking the vehicle on a level spot with the engine off for at least 30 seconds.	MA-14	AT
<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-20	FA
<b>Automatic transaxle fluid level</b> Check the level on the dipstick after putting the selector lever in "P" with the engine idling.	MA-17	RA
<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-17	BR
<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.	—	ST
<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 conditioning after use is normal. If you should notice any leaks or gasoline fumes are evident, check for the cause and correct it immediately.	—	BF 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.

Schedule 1

[ ]: At the mileage intervals only

MAINTENANCE OPERATION

MAINTENANCE INTERVAL

Perform at number of miles, kilometers or months, whichever comes first.	3.75	7.5	11.25	15	18.75	22.5	26.25	30	33.75	37.5	41.25	45	48.75	52.5	56.25	60	Reference page
Miles x 1,000																	
(km x 1,000)	(6)	(12)	(18)	(24)	(30)	(36)	(42)	(48)	(54)	(60)	(66)	(72)	(78)	(84)	(90)	(96)	
Months	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	

Emission control system maintenance

Drive belts	See NOTE (1)																I*	MA-8
Air cleaner filter	See NOTE (2)							[R]									[R]	MA-14
Vapor lines									I*								I*	MA-16
Fuel lines									I*								I*	MA-13
Fuel filter	See NOTE (3)*																	MA-13
Engine coolant	Replace every 30,000 miles (48,000 km) or 36 months*																	MA-9
Engine oil	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	MA-14
Engine oil filter (Use Nissan PREMIUM type or equivalent.)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	MA-15
Spark plugs								[R]									[R]	MA-15
Timing belt	Replace every 105,000 miles (168,000 km)																	EM-12

Chassis and body maintenance

Brake lines & cables																		I	MA-18
Brake pads, discs, drums & linings																		I	MA-18, 19
Automatic transaxle oil	See NOTE (4)																	I	MA-17
Steering gear & linkage, axle & suspension parts																		I	MA-20, FA-5, RA-4
Steering linkage ball joints & front suspension ball joints																		I	MA-20, FA-28, ST-25
Exhaust system																		I	MA-17
Drive shaft boots																		I	FA-18
Supplemental air bag system	See NOTE (5)																		BF-109

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 operating mainly in dusty conditions, more frequent maintenance may be required.

(3) 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.

(4) If towing a trailer, using a camper or a car-top carrier, or driving on rough or muddy roads, change (not just inspect) oil at every 30,000 miles (48,000 km) or 24 months.

(5) Inspect the supplemental air bag system 10 years after the date of manufacture as noted on the F.M.V.S.S. certification label.

(\*) 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.



# PERIODIC MAINTENANCE

## Schedule 2

[ ]: At the mileage intervals only

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

### MAINTENANCE OPERATION

Perform at number of miles, kilometers or months, whichever comes first.	Miles x 1,000 (km x 1,000)		Months		MAINTENANCE INTERVAL						Reference page
	7.5 (12)	15 (24)	22.5 (36)	30 (48)	37.5 (60)	45 (72)	52.5 (84)	60 (96)			
	6	12	18	24	30	36	42	48			

### Emission control system maintenance

Drive belts	See NOTE (1)								I*	MA-8
Air cleaner housing filter				[R]					[R]	MA-14
Vapor lines				I*					I*	MA-16
Fuel lines				I*					I*	MA-13
Fuel filter	See NOTE (2)*									MA-13
Engine coolant	Replace every 30,000 miles (48,000 km) or 36 months*									MA-9
Engine oil		R	R	R	R	R	R	R	R	MA-14
Engine oil filter (Use Nissan PREMIUM type or equivalent.)		R							R	MA-15
Spark plugs				[R]					[R]	MA-15
Timing belt	Replace every 105,000 miles (168,000 km)									EM-12

### Chassis and body maintenance

Brake lines & cables		I							I	MA-18
Brake pads, discs, drums & linings		I							I	MA-18, 19
Automatic transaxle oil		I							I	MA-17
Steering gear linkage, axle & suspension parts									I	MA-20, FA-5, FA-4
Exhaust system									I	MA-17
Drive shaft boots		I							I	FA-18
Supplemental air bag system	See NOTE (3)									BF-109

**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)** Inspect the supplemental air bag system 10 years after the date of manufacture as noted on the F.M.V.S.S. certification label.

**(\*)** 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	
Engine oil (Refill)				
With oil filter	4-1/4 qt	3-1/2 qt	4.0	Energy Conserving Oils of API SG *1, *2
Without oil filter	3-7/8 qt	3-1/8 qt	3.6	
Cooling system (Reservoir tank included)				
With rear heater	12-3/4 qt	10-5/8 qt	12.1	Anti-freeze coolant (Ethylene glycol base) 50/50 mixture
Without rear heater	11-3/8 qt	9-3/8 qt	10.7	
Automatic transaxle fluid	10 qt	8-1/4 qt	9.4	Genuine Nissan ATF *3 or DEXRON™ II E or equivalent
Power steering fluid	—	—	—	Type F Automatic Transmission Fluid
Brake fluid	—	—	—	Genuine Nissan Brake Fluid *3 or equivalent DOT 3 (US FMVSS No. 116)
Multi-purpose grease	—	—	—	NLGI No. 2 (Lithium soap base)

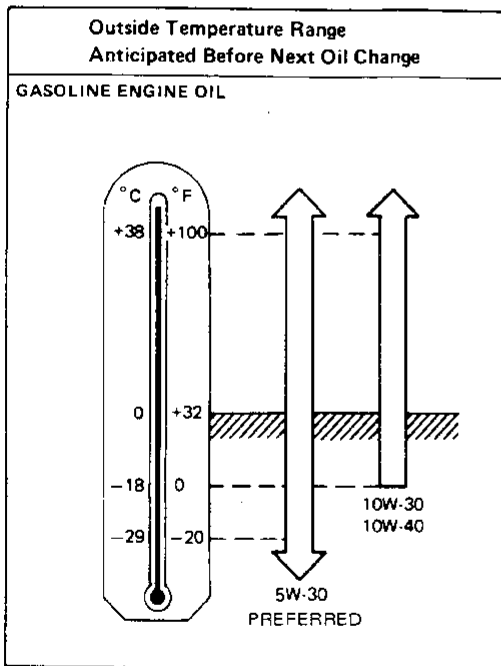
\*1: For further details, see "Recommended SAE viscosity number" below.

\*2: Energy conserving oils

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

\*3: Available in mainland USA through your Nissan dealer.

## SAE Viscosity Number

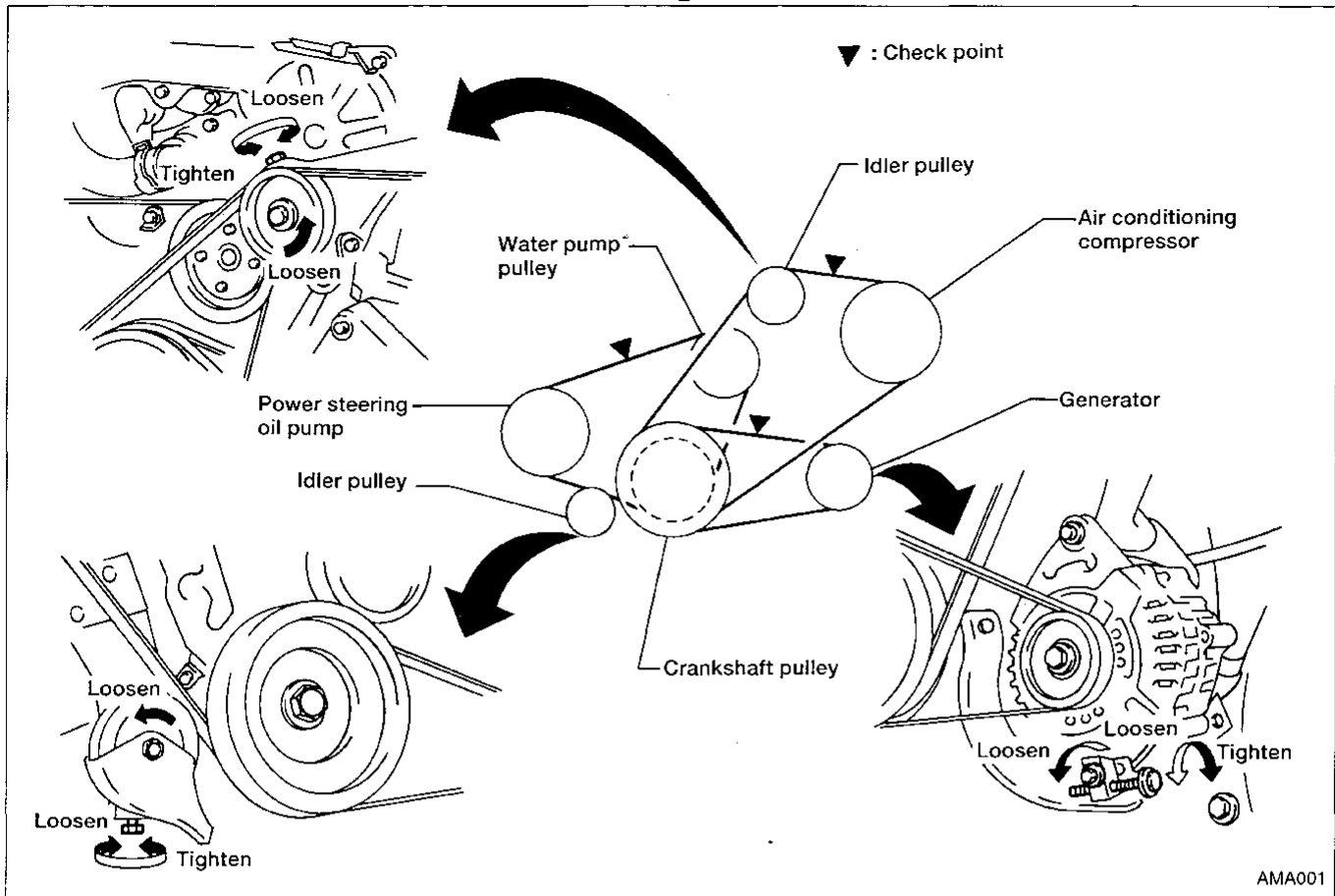


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**5W-30 is preferable for all ambient temperatures. 20W-40 and 20W-50 are usable for ambient temperatures above 10°C (50°F) for all seasons.**

# ENGINE MAINTENANCE

## 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 when engine is cold.

**Inspect drive belt deflections when engine is cold.**

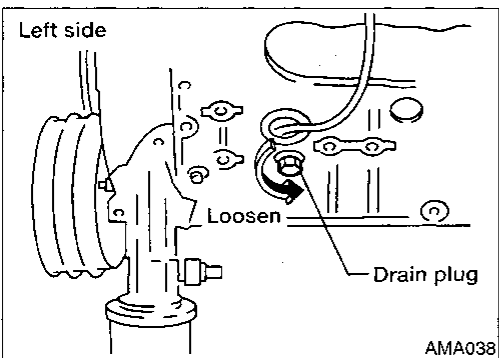
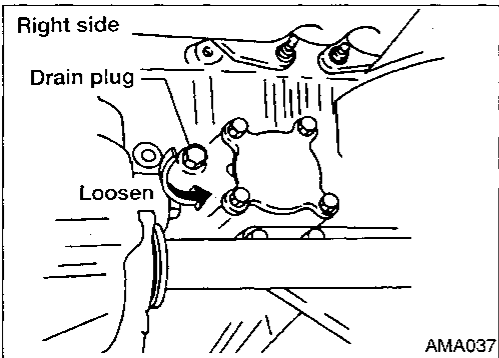
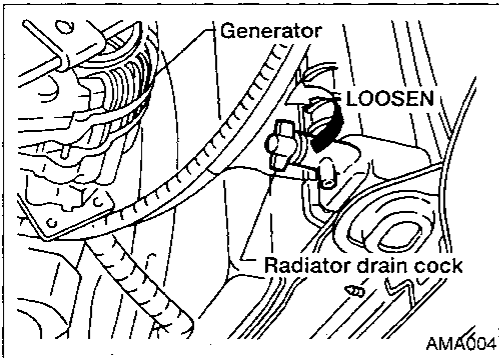
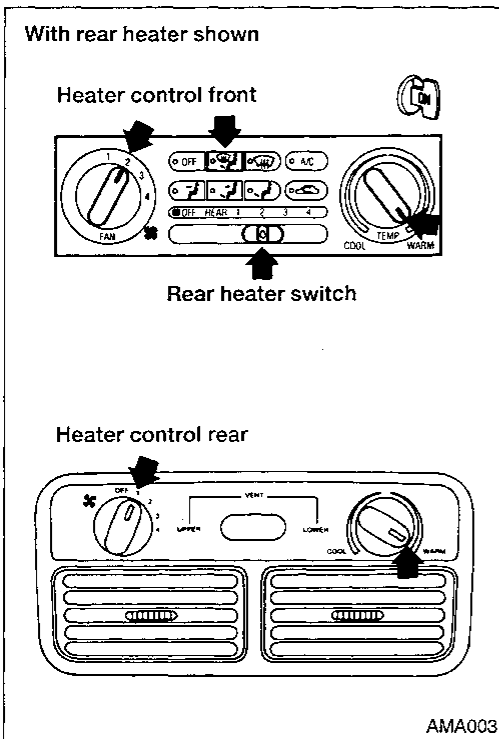
**Adjust if belt deflections exceed the limit.**

**Belt deflection:**

Unit: mm (in)

	Used belt deflection		Deflection of new belt
	Limit	Deflection after adjustment	
Generator	12 (0.47)	7.5 - 8.5 (0.295 - 0.335)	6.5 - 7.5 (0.256 - 0.295)
Air conditioning 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)		





## Draining Engine Coolant

1. Turn ignition switch "ON" and move heater "TEMP" control knob all the way to "WARM". Also select any fan speed and any mode except "OFF."

For a vehicle with rear heater, set both front and rear heaters as pictured.

2. Turn ignition key "OFF."

### WARNING:

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

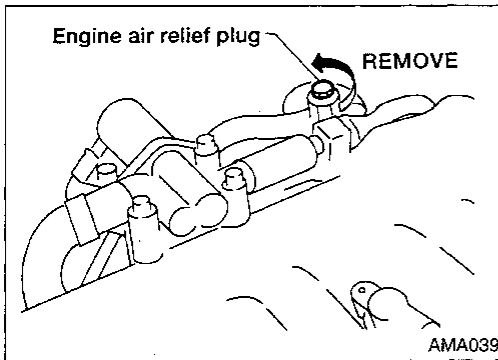
3. Open radiator drain cock at the bottom of radiator, remove radiator filler cap, and open engine air relief plug.
  4. Remove reservoir tank, drain coolant, then clean reservoir tank.  
Reinstall the reservoir tank.
  5. If equipped with rear heater, remove both underbody heater hoses.
- Be careful not to allow coolant to contact drive belts.
6. Remove the cylinder block drain plugs.

## Refilling Engine Coolant

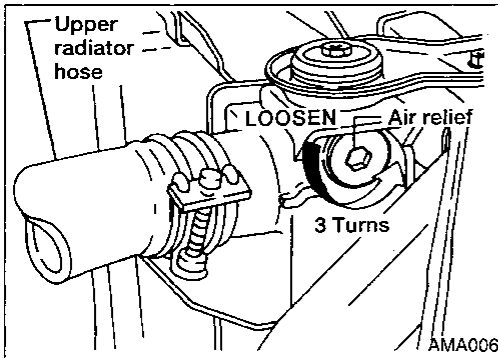
1. Close drain cock, tighten cylinder block drain plug securely, and reconnect underbody hoses.
  - : Apply sealant to the drain plug thread.
    - : 34 - 44 N·m  
(3.5 - 4.5 kg-m, 25 - 33 ft-lb)
2. Position heater controls in full "WARM" as detailed in Draining Engine Coolant (Step 1) above.

# ENGINE MAINTENANCE

## Refilling Engine Coolant (Cont'd)

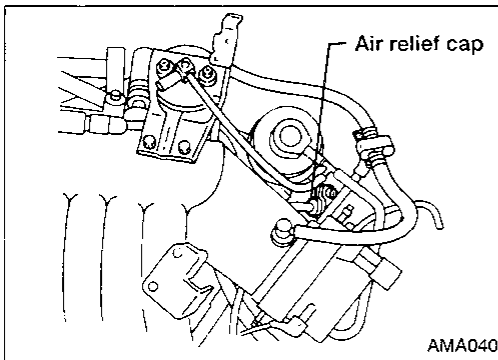


3. Remove engine air relief plug.

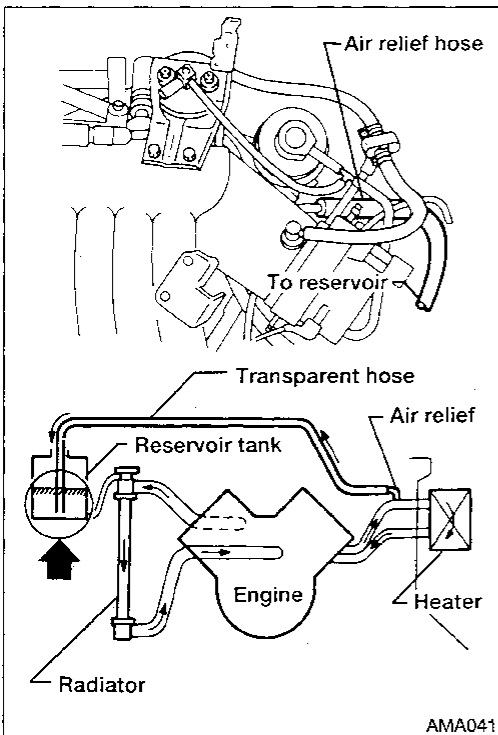


4. Loosen radiator air relief plug 3 turns.

- Do not remove the relief plug.



5. Remove heater pipe air relief cap.



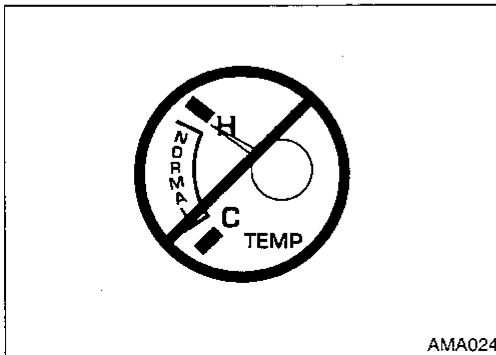
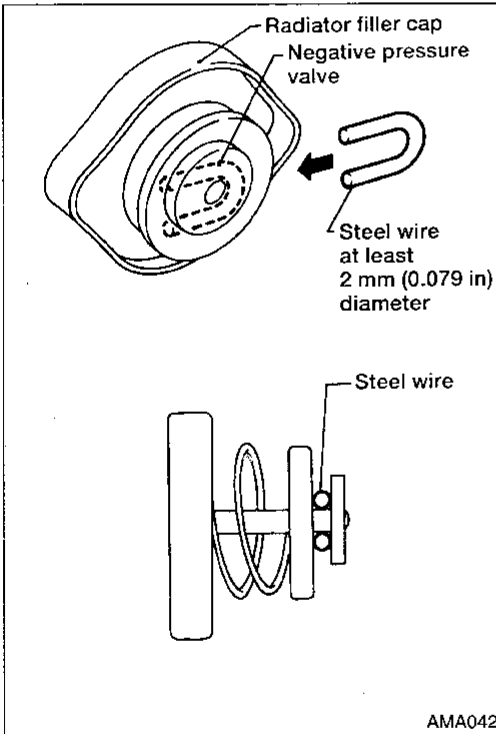
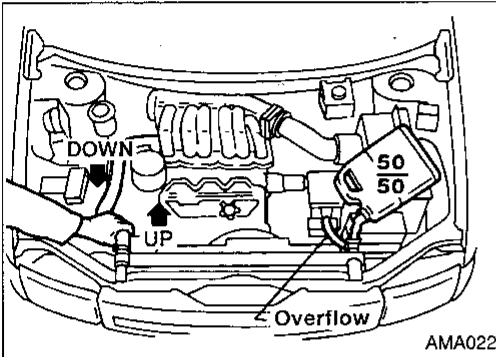
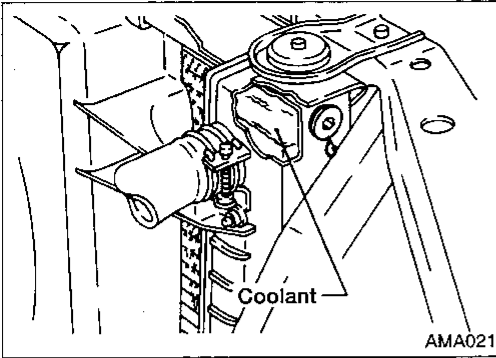
6. Install 1 meter (40") of 6 mm (0.24 in) I.D. heat resistant hose (clear if available, minimum temperature rating 105°C/ 220°F) to heater pipe air relief.

7. Add a 50/50 mixture of coolant to "MAX" mark on reservoir tank and place hose from heater pipe air relief in reservoir tank.

- Be sure hose end is in coolant at all times.

# ENGINE MAINTENANCE

## Refilling Engine Coolant (Cont'd)



8. Slowly pour a 50/50 mixture of coolant into the radiator filler neck. Allow several minutes for air to escape.
- **Fill until coolant just starts to drip from radiator air relief plug and close plug.**

⌚: 20 - 26 N·m  
(2.0 - 2.7 kg-m, 14 - 20 ft-lb)

9. Pour more coolant into radiator while gently moving upper radiator hose up and down.

- **Fill until coolant no longer lowers in the filler neck.**
- **If coolant comes out of engine air relief plug hole, install and tighten it.**

⌚: 20 - 26 N·m  
(2.0 - 2.7 kg-m, 14 - 20 ft-lb)

10. Install a wire under radiator filler cap negative pressure valve to allow flow of air and coolant regardless of pressure. **(Do not install cap).**

11. With engine air relief OPEN, radiator filler cap OFF, gear selector in PARK, start and run engine at 2,000 rpm until lower hose becomes hot (approx. 10 - 15 min.).

- **If coolant level in radiator neck lowers, add coolant.**
- **If coolant overflows radiator filler neck, install radiator filler cap (with wire installed).**
- **If coolant comes out of engine air relief plug hole, install and tighten it.**

⌚: 20 - 26 N·m  
(2.0 - 2.7 kg-m, 14 - 20 ft-lb)

12. Close engine air relief plug (disregard if done during Step 11).

⌚: 20 - 26 N·m  
(2.0 - 2.7 kg-m, 14 - 20 ft-lb)

13. Stop engine, allow to cool down completely.

14. Refill radiator and reservoir as necessary.

15. With radiator filler cap (with wire) installed, again warm engine to normal operating temperature.

- **Watch temperature gauge closely.** If gauge begins to rise above normal, stop engine, repeat Steps 13 and 14.

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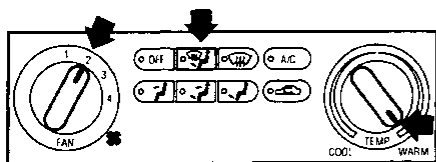
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# ENGINE MAINTENANCE

## Refilling Engine Coolant (Cont'd)

Without rear heater



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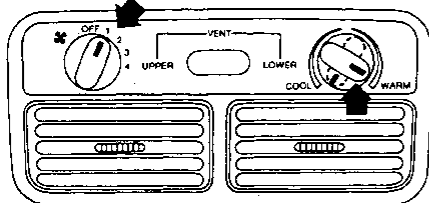
With rear heater



Heater control front



With rear heater

Heater control rear



 = 1st 5 minutes  
 = 2nd 5 minutes

AMA026

16. While performing this step, keep reservoir at maximum level.

**For models without rear heater:** Run engine at 3,000 rpm with knob in full "WARM" (be sure control is not "OFF") for 5 minutes or until outlet air is hot.

Repeat this process until no water noise is heard in heater core (but at least three times).

**For models with rear heater:** Run engine at 3,000 rpm with front heater control in full "COOL" position and rear heater control full "WARM" fan on, for 5 minutes or until rear outlet air is hot. Turn rear heater control "COOL", turn front heater to full "WARM" (be sure front control is not "OFF") until front outlet air is hot.

Repeat this process until no water noise is heard in heater core(s) (but at least three times).

17. Stop engine.

18. Add coolant mixture to reservoir tank to "MAX" level line. If coolant overflow occurs from reservoir, decrease engine rpm or stop engine.

19. Cool down engine.

20. Remove radiator filler cap.

● **Refill radiator as necessary.**

21. Remove wire, reinstall radiator filler cap.

22. Remove air relief hose from heater pipe, quickly reinstall cap and clamp.

23. Refill reservoir as necessary.

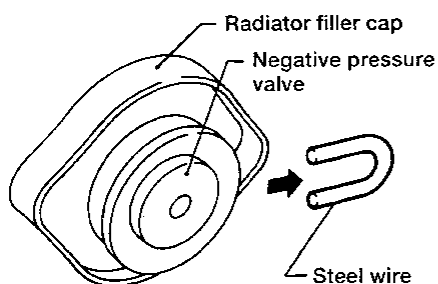
Reinstall coolant reservoir cap.

**Engine coolant level (With reservoir tank):**

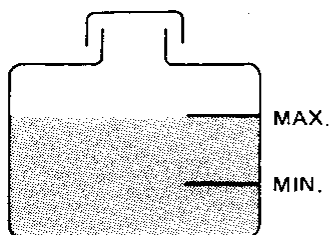
Unit: ℓ (US qt, Imp qt)

Without rear heater	10.7 (11-3/8, 9-3/8)
With rear heater	12.1 (12-3/4, 10-5/8)

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

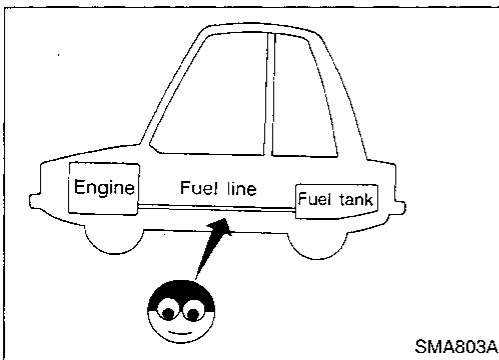


AMA027



SMA412B

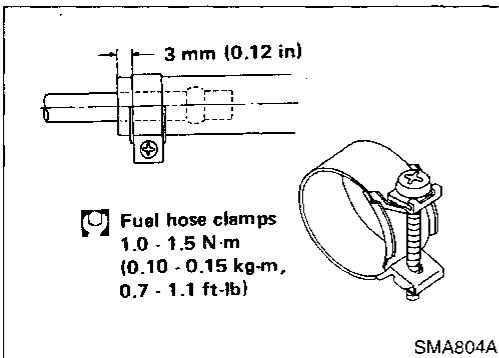
# ENGINE MAINTENANCE



## 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 damaged parts.



### CAUTION:

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

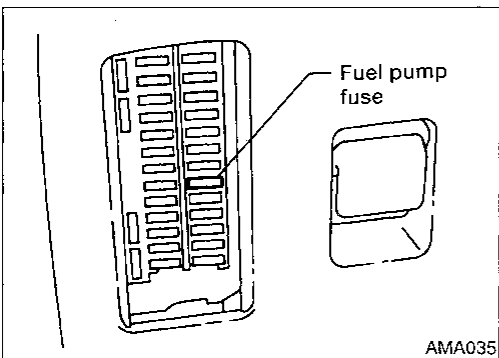
Tightening torque specifications are the same for all rubber hose clamps.

Ensure that screw does not contact adjacent parts.

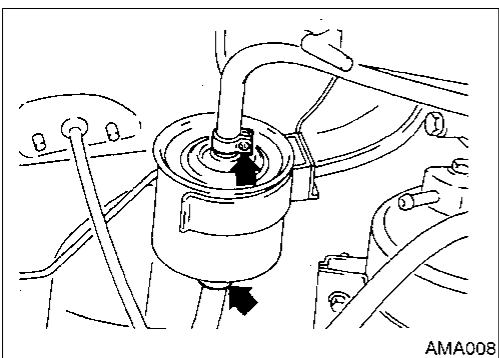
## Changing Fuel Filter

### WARNING:

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



1. Remove 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".



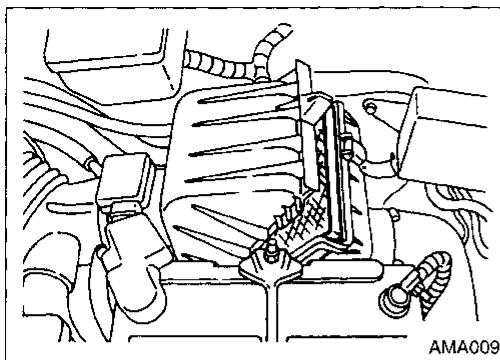
5. Loosen fuel hose clamps.
  6. Replace fuel filter.
- Be careful not to spill fuel over engine compartment. Place a shop towel to absorb fuel.
  - Use a high-pressure type fuel filter. Do not use a synthetic resinous fuel filter.

### Fuel Hose Clamps:

: 1.0 - 1.5 (0.102 - 0.153 kg·m, 0.74 - 1.11 ft·lb)

7. Install fuel pump fuse.

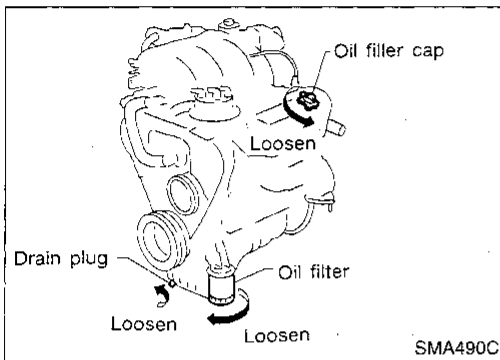
# ENGINE MAINTENANCE



## 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.
- Prolonged and repeated contact with used engine oil may cause skin cancer; try to avoid direct contact with used oil. If skin contact is made, wash thoroughly with soap or hand cleaner as soon as possible.

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:**

Refer to MA-7.

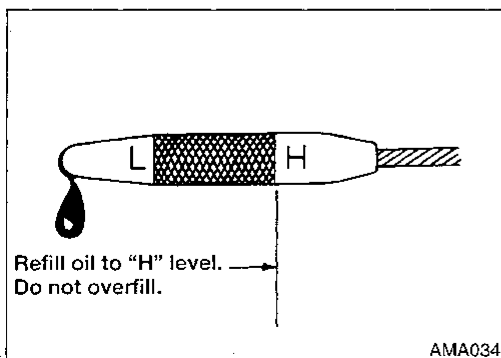
**Refill oil capacity (Approximate):**

Unit: liter (US qt, Imp qt)

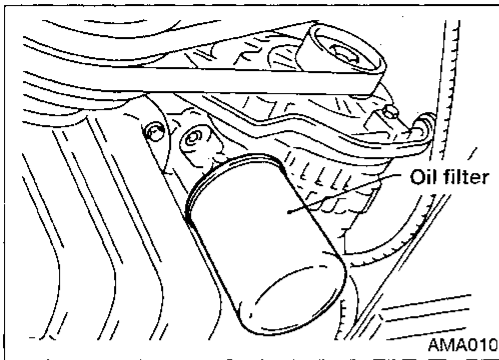
With oil filter change	4.0 (4-1/4, 3-1/2)
Without oil filter change	3.6 (3-7/8, 3-1/8)

### 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.

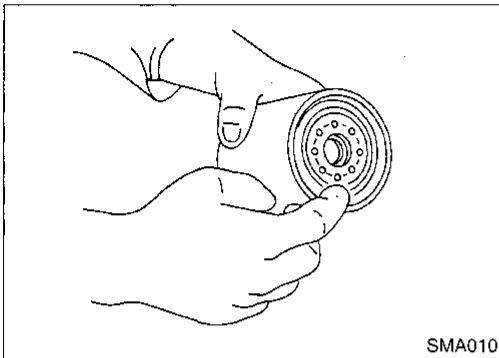


## Changing Oil Filter

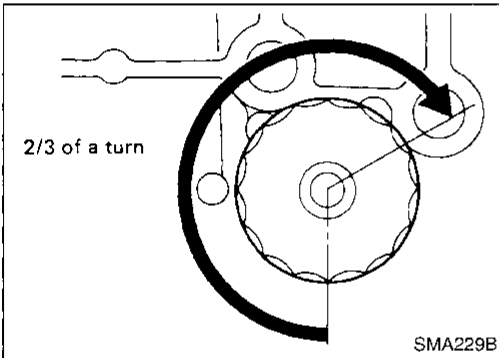
1. Remove oil filter with a suitable tool.

**WARNING:**

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



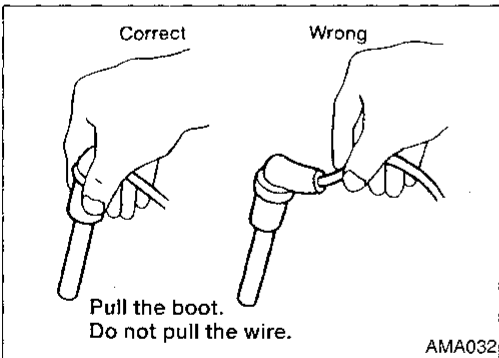
2. Before installing new oil filter, clean the oil filter mounting surface on cylinder block, and coat the oil filter rubber seal with a little engine oil.



3. Screw in the oil filter until a slight resistance is felt, then tighten an additional 2/3 turn.

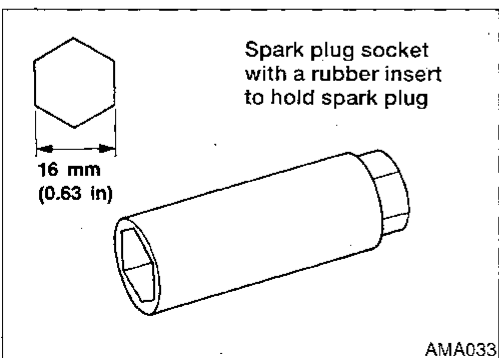
4. Add engine oil.

Refer to MA-14.



## Changing Spark Plugs

1. Disconnect spark plug wires from spark plugs by pulling the boot. Do not pull on the wire.



2. Remove spark plugs with spark plug socket.

**Spark plug:**

Make	NGK
Standard type	BKR5EY
Cold type	BKR6EY

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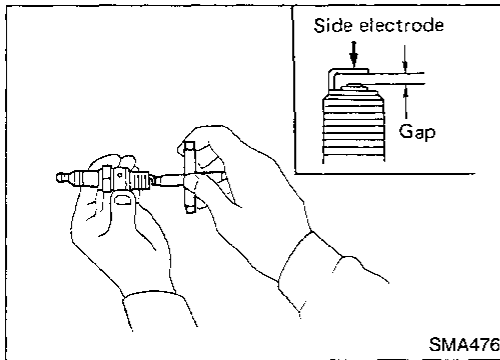
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## ENGINE MAINTENANCE

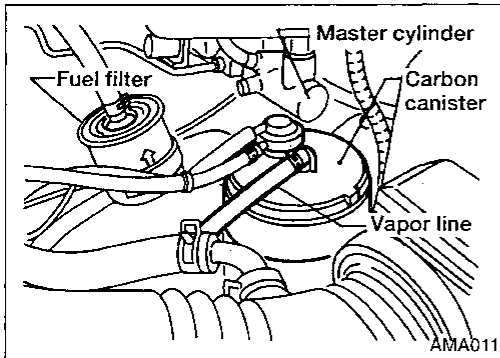
### Changing Spark Plugs (Cont'd)



3. Check spark plug gap.  
**Gap: 0.8 - 0.9 mm (0.031 - 0.035 in)**
4. Install spark plugs. Reconnect spark plug wires according to numbers indicated on them.

#### Spark plug:

: 20 - 29 N·m (2 - 3 kg-m, 14 - 22 ft-lb)

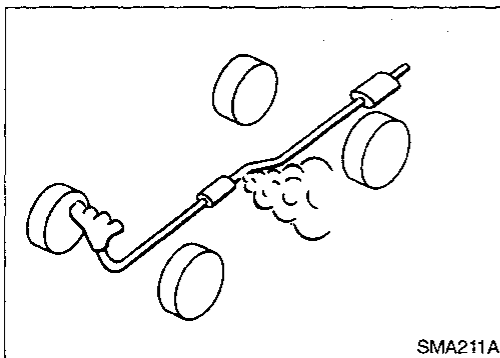


### Checking Vapor Lines

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

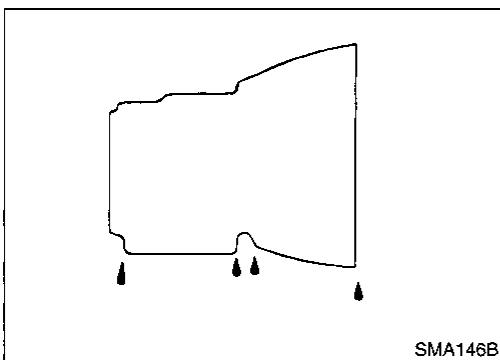
Refer to EF & EC section ("Inspection", "EVAPORATIVE EMISSION (EVAP) SYSTEM").





## Checking Exhaust System

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



## Checking A/T Fluid Level

1. Check for fluid leakage.
2. Check fluid level.

Fluid level should be checked using "HOT" range on dipstick at fluid temperatures of 66 to 77°C (151 to 171°F) after vehicle has been driven approximately 15 minutes under urban area driving conditions after engine has been warmed up. It can also be checked at fluid temperatures of 21 to 35°C (70 to 95°F) using "COLD" range on dipstick after engine has been warmed up and before driving, however, fluid level must be rechecked using "HOT" range.

Use CONSULT to determine A/T fluid temperature.

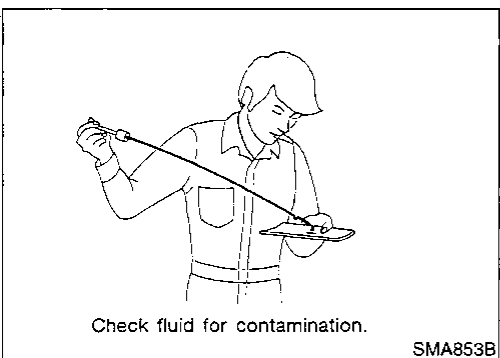
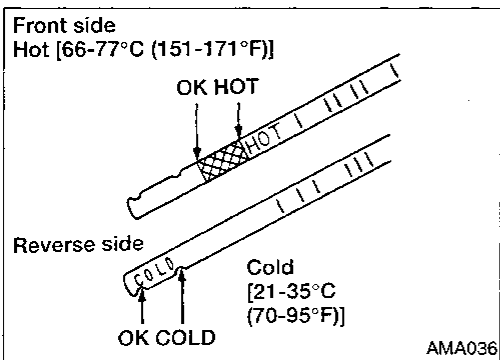
- A/T
- DATA MONITOR
- FLUID TEMP SE

Fluid temperature sensor value must be within range shown to ensure accurate reading:

**0.5 - 0.6V**

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

**Do not overfill.**



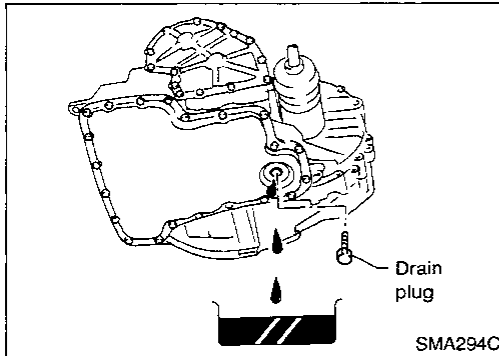
3. Check fluid condition.  
Check fluid for contamination. If fluid is very dark or smells burned, refer to AT section for checking operation of A/T. Flush cooling system after repair of A/T.

## CHASSIS AND BODY MAINTENANCE

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

#### ATF COOLER SERVICE

If foreign matter is found to accumulate in the oil pan in large quantities during overhaul or the strainer is excessively clogged, replace radiator lower tank (which includes ATF cooler) with a new one and flush cooler line using cleaning solvent and compressed air. Refer to LC section ("Radiator", "ENGINE COOLING SYSTEM").



#### Changing A/T Fluid

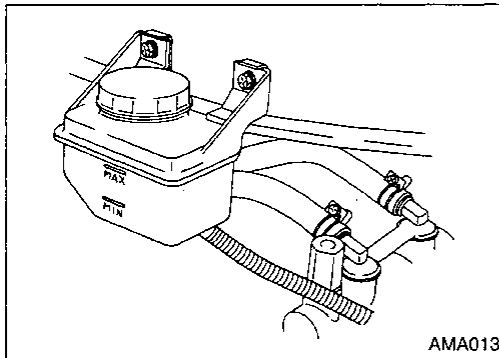
1. Warm up A/T fluid.
2. Stop engine.
3. Drain A/T fluid from drain plug and refill with new A/T fluid. Always refill with same volume as drained fluid.

**Oil capacity (With torque converter):**

**9.4ℓ (10 US qt, 8-1/4 Imp qt)**

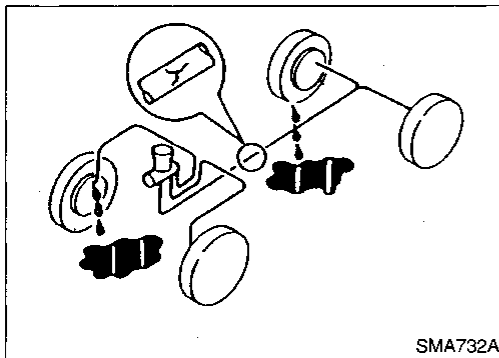
**Oil grade: Genuine Nissan ATF or DEXRON™ II E or equivalent.**

4. Run engine at idle speed for five minutes.



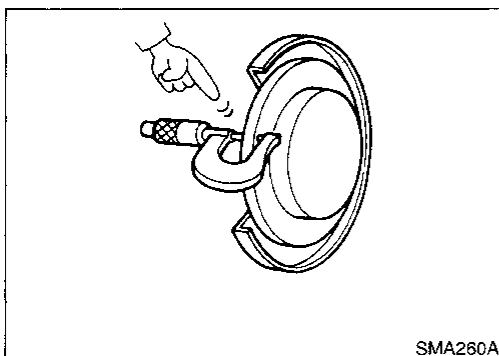
#### Checking Brake Fluid Level and Leaks

- 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, leaks, chafing, abrasion, deterioration, etc.



#### Checking Disc Brake

Check condition of disc brake components.

#### ROTOR

Check condition and thickness.

**Standard thickness**

**26 mm (1.02 in)**

**Minimum thickness**

**24 mm (0.94 in)**

# CHASSIS AND BODY MAINTENANCE

## Checking Disc Brake (Cont'd)

### CALIPER

Check operation and for leakage.

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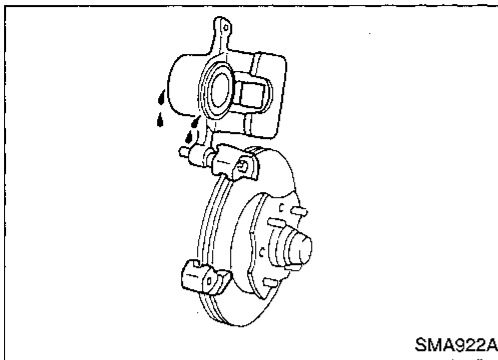
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SMA922A

### PAD

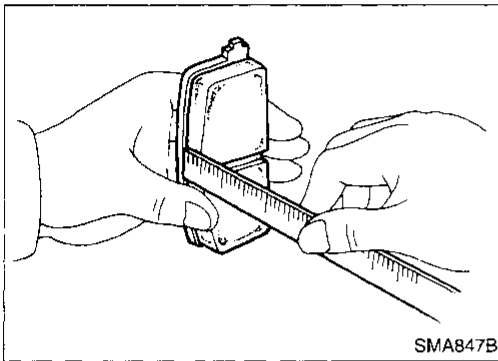
Check for wear or damage.

**Standard thickness:**

9.67 mm (0.3807 in)

**Pad wear limit (Minimum thickness):**

2.0 mm (0.079 in)



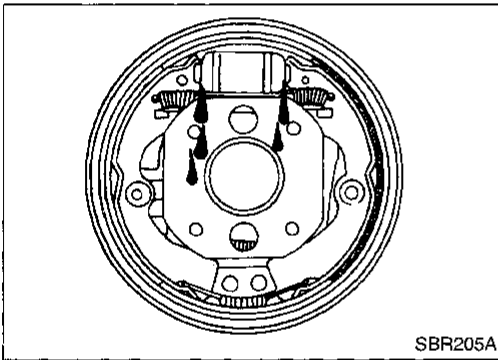
SMA847B

## Checking Drum Brake

Check condition of drum brake components.

### WHEEL CYLINDER

Check operation and for leakage.



SBR205A

### DRUM

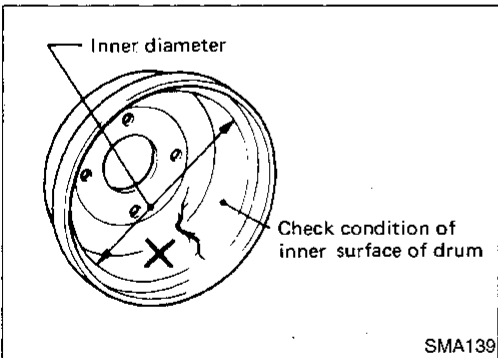
Check condition of inner surface.

**Standard diameter:**

250 mm (9.84 in)

**Drum repair limit (Inner diameter):**

251.5 mm (9.90 in)



SMA139

### LINING

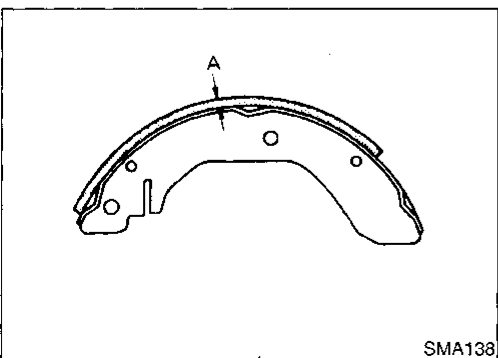
Check for wear or damage.

**Standard thickness:**

5.9 mm (0.232 in)

**Lining wear limit (Minimum thickness):**

2.0 mm (0.079 in)



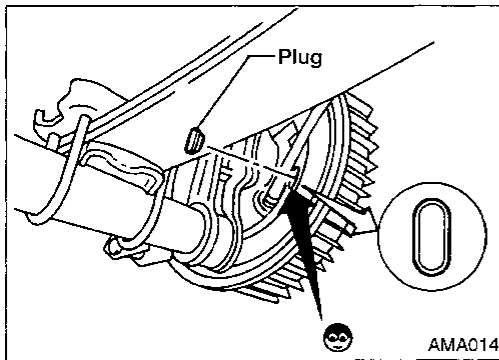
SMA138

## CHASSIS AND BODY MAINTENANCE

### Checking Drum Brake (Cont'd)

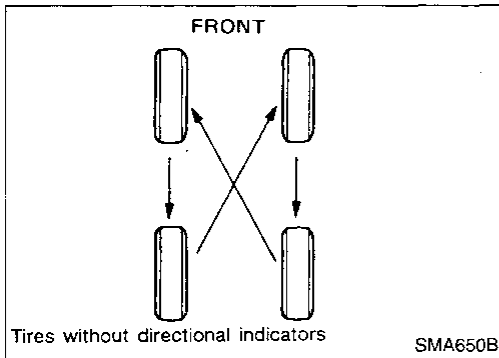
#### TEMPORARY METHOD FOR CHECKING LINING WEAR

Remove inspection hole plug and check for lining wear.



### Balancing Wheels

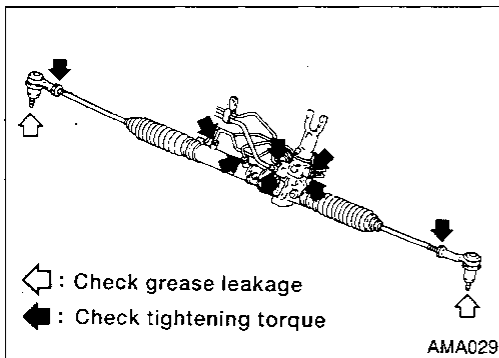
- Adjust wheel balance using road wheel center.  
**Wheel balance (Maximum allowable unbalance):**  
Refer to MA-24.



### Tire Rotation

#### T-TYPE SPARE TIRE

- Do not include the T-type or space saver spare tire when rotating the tires.  
**Wheel nuts:**  
🔧: 98 - 118 N·m (10.0 - 12.0 kg-m, 72 - 87 ft-lb)
- Tires marked with directional indicators can only be rotated between front and rear.



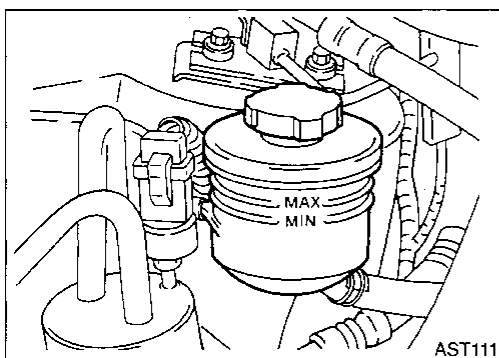
### Checking Steering Gear and Linkage

#### 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 at a fluid temperature between 0° to 30°C (32 to 86°F). Fluid level should be between the "MAX" and "MIN" level markings on the power steering fluid reservoir.

#### CAUTION:

Do not overfill.

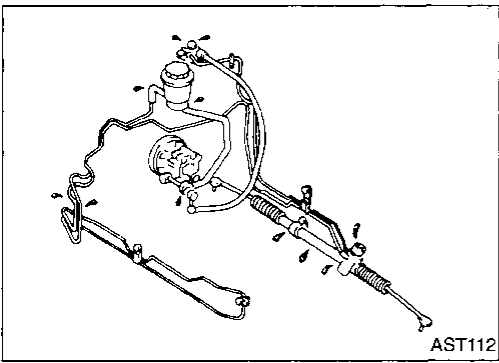
**Recommended fluid is Type F Automatic Transmission Fluid.**

# CHASSIS AND BODY MAINTENANCE

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

### CHECKING LINES

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



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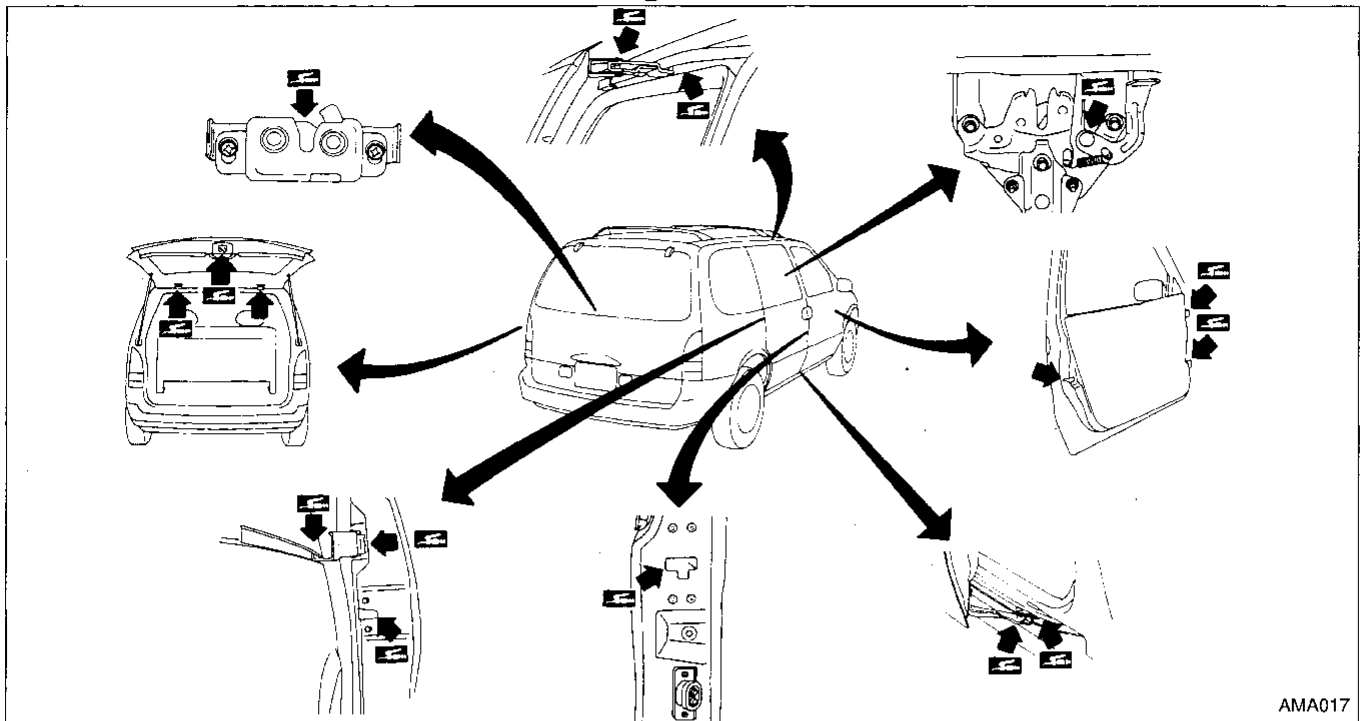
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# CHASSIS AND BODY MAINTENANCE

## Lubricating Hood Latches, Locks, Hinges, Sliding Door Rollers and Links



AMA017


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

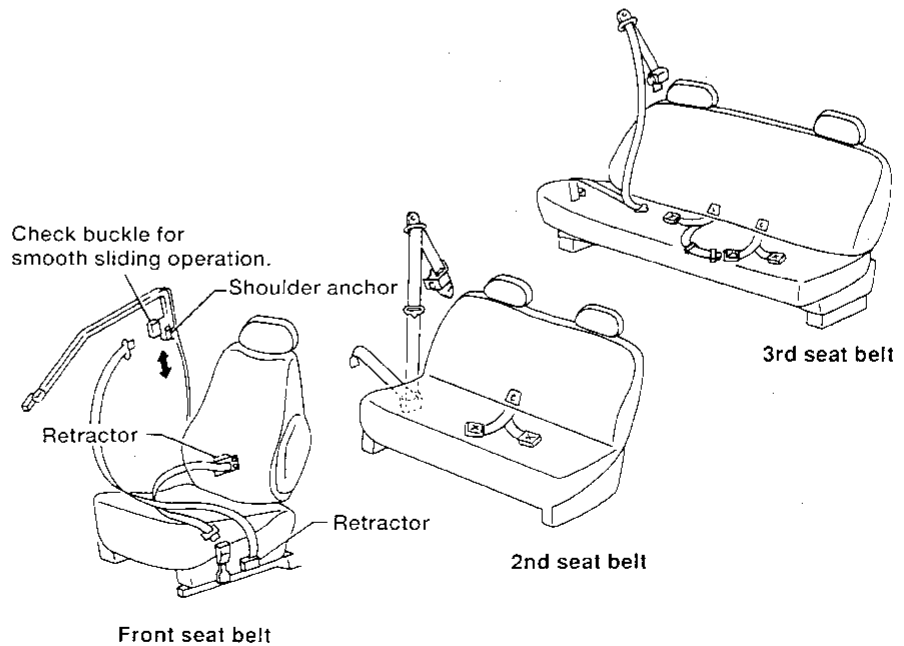
### CAUTION:

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 be also 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.

For automatic seat belt details, refer to BF section.

### Anchor bolt

 35.8 - 45.6 N·m  
(3.65 - 4.65 kg-m,  
26.4 - 33.6 ft-lb)



AMA018

# SERVICE DATA AND SPECIFICATIONS (SDS)

## Engine Maintenance

### INSPECTION AND ADJUSTMENT

#### Drive belt deflection

Unit: mm (in)

	Used belt deflection		Deflection of new belt
	Limit	Deflection after adjustment	
Generator	12 (0.47)	7.5 - 8.5 (0.295 - 0.335)	6.5 - 7.5 (0.256 - 0.295)
Air conditioning 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)		

#### Engine coolant level (Refill capacity)

Unit: ℓ (US qt, Imp qt)

	Without rear heater	With rear heater
With reservoir tank	10.7 (11-3/8, 9-3/8)	12.1 (12-3/4, 10-5/8)
Reservoir tank	0.7 (3/4, 5/8)	

#### Oil capacity (Refill capacity)

Unit: ℓ (US qt, Imp qt)

With oil filter change	4.0 (4-1/4, 3-1/2)
Without oil filter change	3.6 (3-7/8, 3-1/8)

#### Spark plug

		Conventional type
Make		NGK
Type		
Standard		BKR5EY
Cold		BKR6EY
Plug gap	mm (in)	0.8 - 0.9 (0.031 - 0.035)

GI

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# SERVICE DATA AND SPECIFICATIONS (SDS)

## Chassis and Body Maintenance

### INSPECTION AND ADJUSTMENT

#### Front axle and front suspension (Unladen\*)

Camber	degree	-27' to 1°03'
Caster	degree	3' - 1°33'
Toe-in	mm (in)	2 - 4 (0.08 - 0.16)
(Total toe-in)	degree	11' - 22'
Kingpin inclination	degree	12°50' - 14°20'
Front wheel turning angle		
Full turn	degree	
Inside/Outside		36° - 40°/28° - 32°

\*: Fuel, radiator coolant and engine oil full.  
Spare tire, jack, hand tools and mats in designated positions.

#### Rear axle and rear suspension (Unladen\*)

Camber	degree	0° ± 15'
Toe-in	mm (in)	0 ± 4.0 (0 ± 0.157)
(Total toe-in)	degree	0' ± 22'

\*: Fuel, radiator coolant and engine oil full.  
Spare tire, jack, hand tools and mats in designated positions.

### Brake

Disc brake	mm (in)	
Pad		
Standard thickness		9.67 (0.3807)
Minimum thickness		2.0 (0.079)
Rotor		
Standard thickness		26 (1.02)
Minimum thickness		24 (0.94)
Drum brake	mm (in)	
Lining		
Standard thickness		5.9 (0.232)
Minimum thickness		2.0 (0.079)
Drum		
Standard thickness		250 (9.84)
Maximum diameter		251.5 (9.90)

### Wheel balance

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

### Wheel bearing

	Front	Rear
Wheel bearing axial end play	0.05 (0.0020)	
mm (in)	or less	
Wheel bearing lock nut		
Tightening torque	235 - 314 (24 - 32, 174 - 231)	196 - 284 (20 - 29, 145 - 210)
N-m (kg-m, ft-lb)		

### TIGHTENING TORQUE

Unit	N-m	kg-m	ft-lb
Automatic transaxle			
Drain plug	29 - 39	3.0 - 4.0	22 - 29
Front axle and front suspension			
Tie-rod lock nut	29 - 39	3.0 - 4.0	22 - 29
Brake system			
Air bleeder valve			
Front	17 - 24	1.7 - 2.4	12 - 17
Rear	7 - 9	0.7 - 0.9	5.1 - 6.5
Stop lamp switch lock nut	12 - 15	1.2 - 1.5	9 - 11
Brake booster input rod lock nut	16 - 22	1.6 - 2.2	12 - 16
Wheel and tire			
Wheel nut	98 - 118	10.0 - 12.0	72 - 87