SECTION MA

CONTENTS

Supplemental Restraint System (SRS) "AIR BAG"

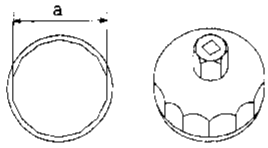
The Supplemental Restraint System "Air Bag", used along with a seat belt, helps to reduce the risk or severity of injury to the driver and front passenger in a frontal collision. The Supplemental Restraint System consists of air bag modules (located in the center of the steering wheel and on the instrument panel on the passenger side), a diagnosis sensor unit, warning lamp, wiring harness and spiral cable. Information necessary to service the system safely is included in the **RS section** of this Service Manual.

WARNING:

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized INFINITI dealer.**
- **Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system.**
- **Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses are covered with yellow insulation either just before the harness connectors or for the complete harness, for easy identification.**

Special Service Tool

The actual shapes of Kent-Moore tools may differ from those of special service tools illustrated here.

Tool number (Kent-Moore No.) Tool name	Description	
KV10115801 (J38956) Oil filter cap wrench	 NT375	Removing oil filter **a: 64.3 mm (2.531 in)**

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

Item	Reference page
OUTSIDE THE VEHICLE The maintenance items listed here should be performed from time to time, unless otherwise specified.	
Tires Check the pressure with a gauge periodically when at a service station, including the spare, and adjust to the specified pressure if necessary. Check carefully for damage, cuts or excessive wear.	—
Wheel nuts When checking the tires, make sure no nuts are missing, and check for any loose nuts. Tighten if necessary.	—
Tire rotation Tires should be rotated every 6,000 km (3,750 miles).	MA-20
Wheel alignment and balance If the vehicle pulls 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-8
Windshield wiper blades Check for cracks or wear if they do not wipe properly.	—
Doors and engine hood Check that all doors and the engine hood operate smoothly as well as the back door and glass 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-23
INSIDE THE VEHICLE The maintenance items listed here should be checked on a regular basis, such as when performing periodic maintenance, cleaning the vehicle, etc.	
Lamps Make sure that the headlamps, stop lamps, tail lamps, turn signal lamps, and other lamps are all operating properly and installed securely. Also check headlamp aim.	—
Warning lamps and buzzers/chimes Make sure that all warning lamps and buzzers/chimes are operating properly.	—
Windshield wiper and washer Check that the wipers and washer operate properly and that the wipers do not streak.	—
Windshield defroster Check that the air comes out of the defroster outlets properly and in sufficient quantity when operating the heater or air conditioning.	—
Steering wheel Check that it has the specified play. Be sure to check for changes in the steering condition, such as excessive play, hard steering or strange noises. **Free play: Less than 35 mm (1.38 in)**	—
Seats Check seat position controls such as seat adjusters, seatback recliner, etc. to make sure they operate smoothly and that all latches lock securely in every position. Check that the head restrains move up and down smoothly and that the locks (if equipped) hold securely in all latched positions. Check that the latches lock securely for folding-down rear seatbacks.	—
Seat belts Check that all parts of the seat belt system (e.g. buckles, anchors, adjusters and retractors) operate properly and smoothly and are installed securely. Check the belt webbing for cuts, fraying, wear or damage.	MA-23
Brakes Check that the brake does not pull the vehicle to one side when applied.	—
Brake pedal and booster 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 sure to keep floor mats away from the pedal.	BR-12, 17
Parking brake Check that the lever has the proper travel and make sure that the vehicle is held securely on a fairly steep hill when only the parking brake is applied.	BR-28
Automatic transmission "Park" mechanism Check that the lock release button on the selector lever operates properly and smoothly. On a fairly steep hill check that the vehicle is held securely with the selector lever in the "P" position without applying any brakes.	—

Item	Reference page
UNDER THE HOOD AND VEHICLE The maintenance items listed here should be checked periodically (e.g. each time you check the engine oil or refuel).	
Windshield washer fluid Check that there is adequate fluid in the tank.	—
Engine coolant level Check the coolant level when the engine is cold.	MA-11
Radiator and hoses 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.	—
Brake fluid levels Make sure that the brake fluid levels are between the "MAX" and "MIN" lines on the reservoir.	MA-20
Battery Check the fluid level in each cell. It should be between the "MAX" and "MIN" lines.	—
Engine drive belts Make sure that no belt is frayed, worn, cracked or oily.	MA-10
Engine oil level Check the level on the dipstick after parking the vehicle on a level spot and turning off the engine.	MA-14
Power steering fluid level and lines Check the level on the dipstick with the engine off. Check the lines for improper attachment, leaks, cracks, etc.	MA-22
Automatic transmission fluid level Check the level on the dipstick after putting the selector lever in "P" with the engine idling.	MA-17
Exhaust system 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
Underbody 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.	—
Fluid leaks 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.	—

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.

Maintenance for off-road driving

Whenever you drive off-road through sand, mud or water, more frequent maintenance may be required of the following items:

- ▲ Brake pads and discs
- ▲ Brake lining and drums
- ▲ Brake lines and hoses
- ▲ Wheel bearing grease
- ▲ Differential gear oil, automatic transmission and all mode 4WD transfer fluid
- ▲ Steering linkage
- ▲ Propeller shaft and drive shafts
- ▲ Air cleaner filter

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

[ ]: At the mileage intervals only

MAINTENANCE OPERATION Perform at number of miles, kilometers or months, whichever comes first.		MAINTENANCE INTERVAL																Reference page
	Miles x 1,000	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	
	(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									I*								I*	MA-10
Air cleaner filter	See NOTE (1)								[R]								[R]	MA-13
Vapor lines									I*								I*	MA-16
Fuel lines									I*								I*	MA-12
Fuel filter	See NOTE (2)*																	MA-13
Engine coolant	See NOTE (3)																R*	MA-11
Engine oil		R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	MA-14
Engine oil filter (Use Part No. 15208 31U00 or equivalent)		R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	MA-14
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				I				I	MA-20
Brake pads, discs, drums & linings			I		I		I		I		I		I		I		I	MA-21
Automatic transmission & all mode 4WD transfer fluid, & differential gear oil (exc. LSD)	See NOTE (4)				I				I				I				I	MA-17, 18, 19
Limited-slip differential (LSD) gear oil	See NOTE (4)				I				R				I				R	MA-20
Steering gear, linkage & transfer gear, axle & suspension parts			I		I		I		I		I		I		I		I	MA-22, FA-6, RA-5
Drive shaft boots & propeller shaft			I		I		I		I		I		I		I		I	MA-18, FA-10
Propeller shaft grease	See NOTE (5)		L		L		L		L		L		L		L		L	MA-19
Steering linkage ball joints & front suspension ball joints			I		I		I		I		I		I		I		I	MA-22, FA-6
Front wheel bearing grease	See NOTE (6)				I				R				I				R	FA-6
Exhaust system			I		I		I		I		I		I		I		I	MA-17
Air bag system	See NOTE (7)																	RS-7

NOTE: (1) If operating mainly in dusty conditions, more frequent maintenance may be required.

(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) If towing a trailer, using a camper or a car-top carrier, or driving on rough/muddy roads, change (not just inspect) fluid (A/T, all mode 4WD transfer)/ differential gear oil (exc. LSD) every 30,000 miles (48,000 km) or 24 months, and change LSD gear oil every 15,000 miles (24,000 km) or 12 months.

(5) The propeller shaft should be re-greased daily if it is immersed in water.

(6) If operating frequently in water, replace grease every 3,750 miles (6,000 km) or 3 months.

(7) Inspect the air bag system 10 years after the date of manufacture noted on the FMVSS certification label.

★ Maintenance items and intervals with "*" are recommended by INFINITI 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.

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

MAINTENANCE OPERATION		MAINTENANCE INTERVAL								
Perform at number of miles, kilometers or months, whichever comes first.	Miles x 1,000	7.5	15	22.5	30	37.5	45	52.5	60	Reference page
	(km x 1,000)	(12)	(24)	(36)	(48)	(60)	(72)	(84)	(96)	
	Months	6	12	18	24	30	36	42	48	
Emission control system maintenance										
Drive belts					I*				I*	MA-10
Air cleaner filter					[R]				[R]	MA-13
Vapor lines					I*				I*	MA-16
Fuel lines					I*				I*	MA-12
Fuel filter	See NOTE (1)*									MA-13
Engine coolant	See NOTE (2)								R*	MA-11
Engine oil		R	R	R	R	R	R	R	R	MA-14
Engine oil filter (Use Part No. 15208 31U00 or equivalent)		R	R	R	R	R	R	R	R	MA-14
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		I		I	MA-20
Brake pads, discs, drums & linings			I		I		I		I	MA-21
Automatic transmission & all mode 4WD transfer fluid, & differential gear oil (exc. LSD)			I		I		I		I	MA-17, 18, 19
Limited-slip differential (LSD) gear oil			I		R		I		R	MA-20
Steering gear, linkage & transfer gear, axle & suspension parts					I				I	MA-22, FA-6, RA-5
Drive shaft boots & propeller shaft			I		I		I		I	MA-18, FA-10
Propeller shaft grease	See NOTE (3)		L		L		L		L	MA-19
Steering linkage ball joints & front suspension ball joints									I	MA-22, FA-6
Front wheel bearing grease			I		R		I		R	FA-6
Exhaust system					I				I	MA-17
Air bag system	See NOTE (4)									RS-7

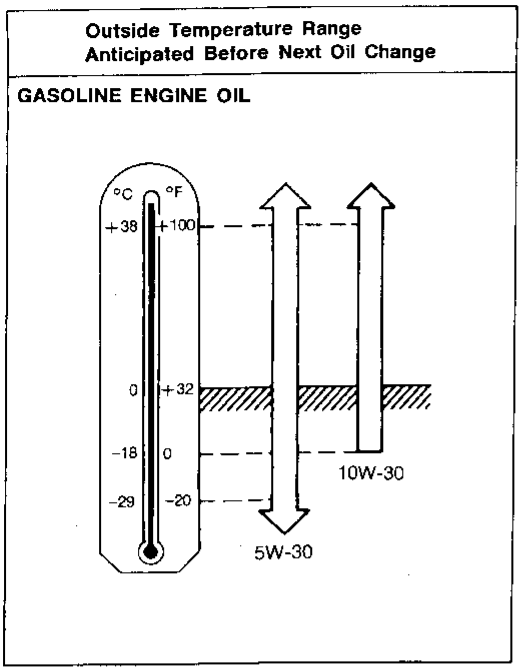
NOTE: (1) If vehicle is operated under extremely adverse weather conditions or in areas where ambient temperatures are either extremely low or extremely high, the filters might become clogged. In such an event, replace them immediately.
(2) After 60,000 miles (96,000 km) or 48 months, replace every 30,000 miles (48,000 km) or 24 months.
(3) The propeller shaft should be re-greased daily if it is immersed in water.
(4) Inspect the air bag system 10 years after the date of manufacture noted on the FMVSS certification label.
★ Maintenance items and intervals with "*" are recommended by INFINITI 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.

Fluids and Lubricants

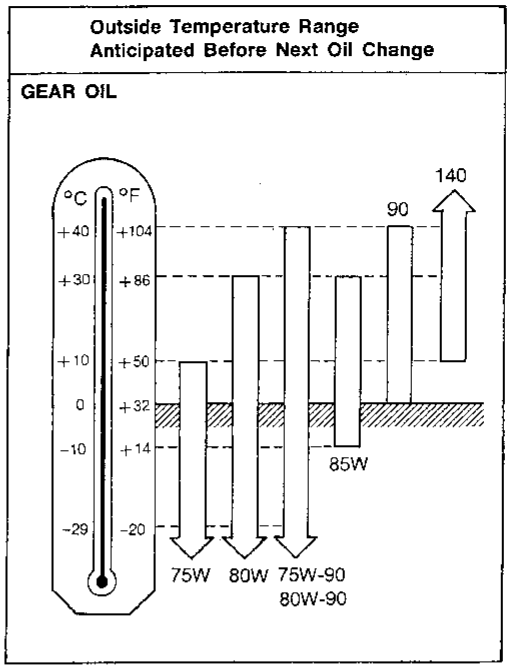
	Capacity (Approximate)			Recommended Fuel/Lubricants
	US measure	Imp measure	Liter	
Engine oil (Refill)				
With oil filter	3-7/8 qt	3-1/4 qt	3.7	• API SG or SH and Energy Conserving II*1 • API Certification Mark*1
Without oil filter	3-5/8 qt	3 qt	3.4	
Cooling system (With reservoir)	11-1/4 qt	9-3/8 qt	10.6	Anti-freeze coolant (Ethylene glycol base)
All mode 4WD transfer fluid	3-1/8 qt	2-5/8 qt	3.0	Nissan Matic "D" (Continental U.S. and Alaska) or Genuine Nissan Automatic Transmission Fluid (Canada)*6
Differential gear oil				
Front	4-3/8 pt	3-5/8 pt	2.05	Standard differential gear: API GL-5*1 Limited-slip differential (LSD) gear: Use only LSD gear oil API GL-5 and SAE 80W-90*4 approved for Nissan LSD*5.
Rear	5-7/8 pt	4-7/8 pt	2.8	
Automatic transmission fluid	9 qt	7-1/2 qt	8.5	Nissan Matic "D" (Continental U.S. and Alaska) or Genuine Nissan Automatic Transmission Fluid (Canada)*2
Power steering fluid	—	—	—	Type DEXRON™ IIE, DEXRON™ III or equivalent
Brake fluid	—	—	—	Genuine Nissan Brake Fluid*3 or equivalent DOT 3 (US FMVSS No. 116)
Propeller shaft grease	—	—	—	NLGI No. 2 (Molybdenum disulphide lithium soap base)
Multi-purpose grease	—	—	—	NLGI No. 2 (Lithium soap base)

*1: For further details, see "SAE Viscosity Number".
*2: Dexron™ III/Mercon™ or equivalent may also be used. Outside the continental United States and Alaska contact an INFINITI dealership for more information regarding suitable fluids, including recommended brand(s) of Dexron™ III/Mercon™ or Dexron™ IIE/Mercon™ Automatic Transmission Fluid.
*3: Available in mainland U.S.A. through your INFINITI dealer.
*4: SAE 90 is acceptable in ambient temperatures above −18°C (0°F).
*5: Contact an INFINITI dealer for a list of approved oils.
*6: Outside the continental United States and Alaska contact an INFINITI dealership for more information regarding suitable fluids, including recommended brand(s) of Dexron™ III/Mercon™ Automatic Transmission Fluid.

SAE Viscosity Number



SAE 5W-30 viscosity oil is preferred for all temperatures. SAE 10W-30 viscosity oil may be used if the ambient temperature is above –18°C (0°F).



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

Anti-freeze Coolant Mixture Ratio

The engine cooling system is filled at the factory with a high-quality, year-round, anti-freeze coolant solution. The anti-freeze solution contains rust and corrosion inhibitors. Therefore, additional cooling system additives are not necessary.

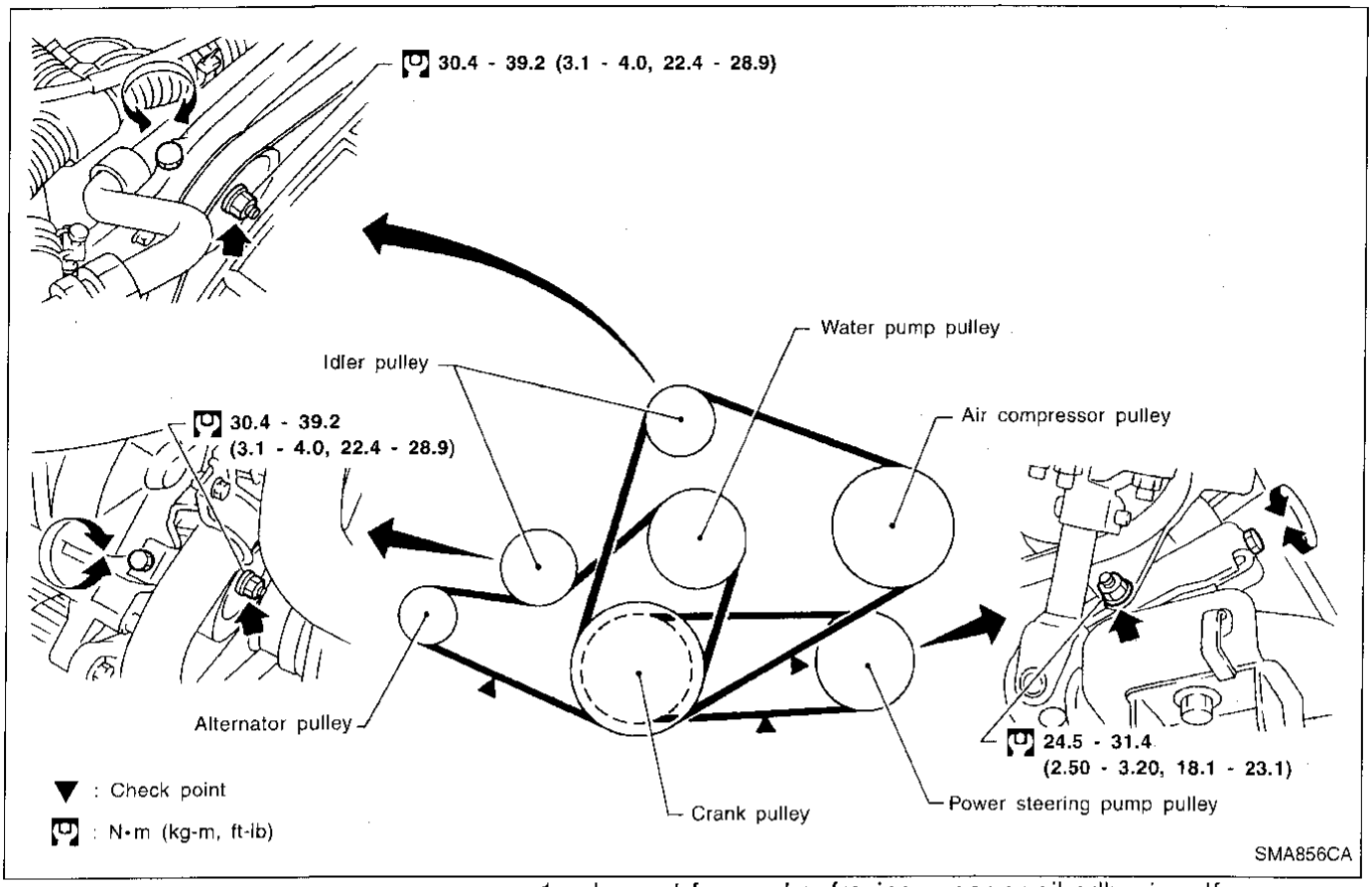
CAUTION:

When adding or replacing coolant, be sure to use only an ethylene glycol anti-freeze with the proper mixture ratio of 50% anti-freeze and 50% soft water.

Outside temperature down to		Anti-freeze	Soft water
°C	°F		
–35	–30	50%	50%

Other types of coolant solutions may damage your cooling system.

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.

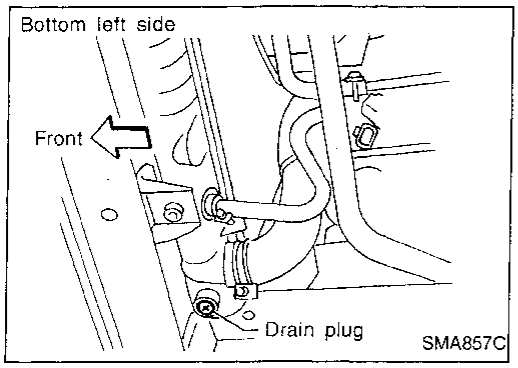
Inspect drive belt deflections when engine is cold.

Adjust if belt deflections exceed the limit.

Belt deflection:

Unit: mm (in)

	Used belt deflection		Deflection of new belt
	Limit	Deflection after adjustment	
Alternator	10.5 (0.413)	6 - 7 (0.24 - 0.28)	5.5 - 6.5 (0.217 - 0.256)
Air conditioner compressor	16.5 (0.650)	9 - 11 (0.35 - 0.43)	9 - 10 (0.35 - 0.39)
Power steering oil pump	18 (0.71)	9 - 10 (0.35 - 0.39)	9 - 11 (0.35 - 0.43)
Applied pushing force	98 N (10 kg, 22 lb)		

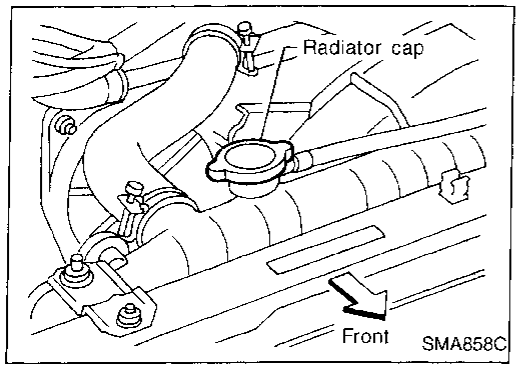


Changing Engine Coolant

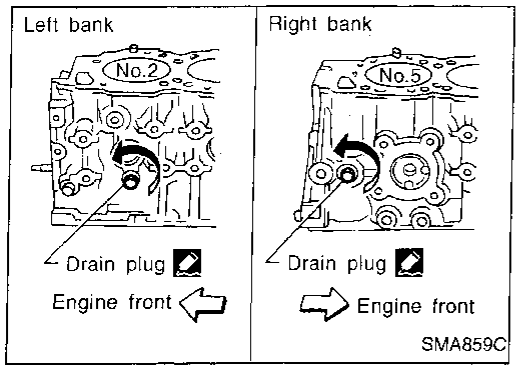
WARNING:
To avoid the danger of being scalded, never change the coolant when the engine is hot.

—DRAINING ENGINE COOLANT—

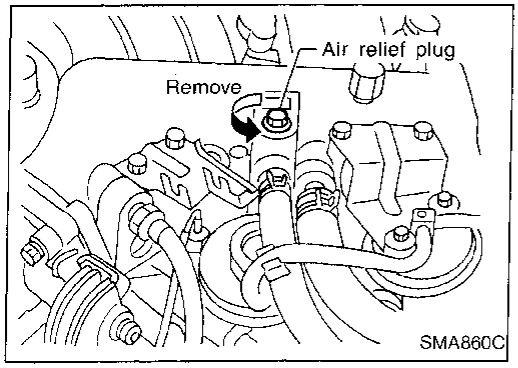
1. Set air conditioning system as follows to prevent coolant from remaining in the system.
   a. Turn ignition switch "ON" and set temperature controller to maximum hot position.
   b. Wait 10 seconds before turning ignition switch "OFF".
2. Open radiator drain plug at the bottom of radiator.



3. Remove radiator filler cap.
   Remove reservoir tank, drain coolant, then clean reservoir tank.
   Install it temporarily.
   - **Be careful not to allow coolant to contact drive belts.**

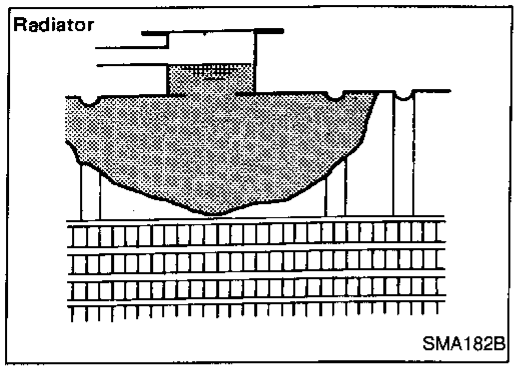


4. Open drain plugs on both sides of cylinder block and water pump side, then open air relief plug to drain coolant.
5. Flush cooling system by running fresh water through radiator.



Changing Engine Coolant (Cont'd)

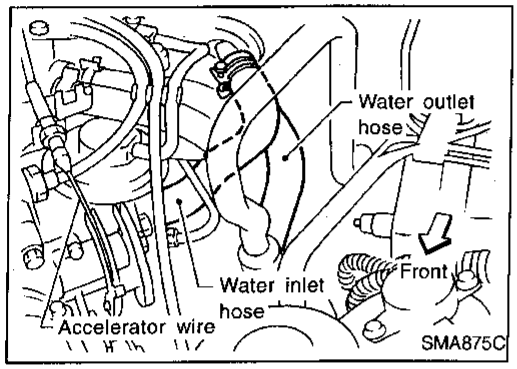
—REFILLING ENGINE COOLANT—



6. Install reservoir tank, radiator drain plug, and cylinder block drain plugs.

- **Apply sealant to the thread of cylinder block drain plug.**

: 34.3 - 44.1 N·m (3.5 - 4.5 kg-m, 25 - 33 ft-lb)



7. Remove heater hose at feeding connector on heater unit.
8. Fill radiator slowly with coolant until coolant spills from the air relief plug, then close air relief plug.
9. Fill radiator and reservoir tank with coolant up to the MAX level and install radiator cap.

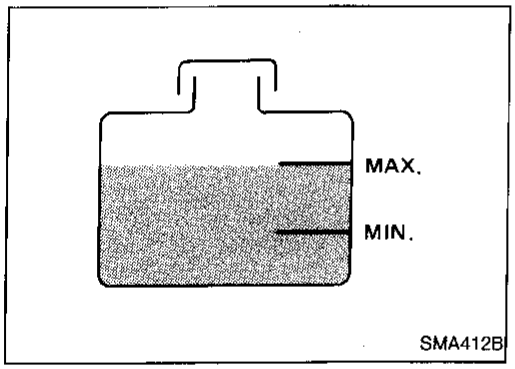
Air relief plug:

: 7 - 8 N·m (0.7 - 0.8 kg-m, 61 - 69 in-lb)

For coolant mixture ratio, refer to MA-9.

Coolant capacity (Without reservoir tank):

9.4 ℓ (10 US qt, 8-1/4 Imp qt)



Reservoir tank capacity (for MAX level):

1.2 ℓ (1-1/4 US qt, 1-1/8 Imp qt)

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

10. Warm up engine to normal operating temperature.
11. Run engine at 3,000 rpm for 10 seconds and return to idle speed.

- Repeat 2 or 3 times.

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

12. Stop engine and cool it down.

- Cool down using a fan to reduce the time.

13. Remove the radiator filler cap and check coolant level.

- If necessary, refill radiator up to filler neck with coolant.

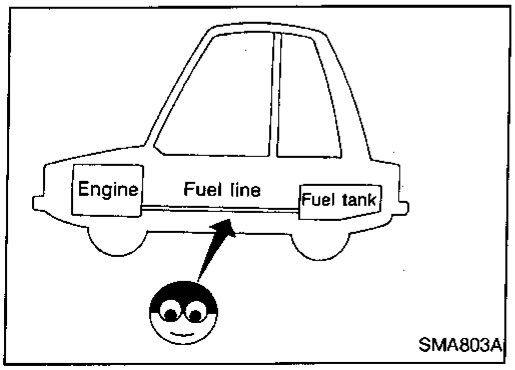
14. Refill reservoir tank to Max line with coolant.
15. Repeat step 10 through step 14 two or more times.
16. Warm up engine, and check for sound of coolant flow while running engine from idle up to 3,000 rpm with heater temperature control set at several positions between COOL and HOT.

- Sound may be noticeable at heater water cock.

17. If sound is heard, bleed air from cooling system by repeating steps 10 through 14 until coolant level no longer drops.

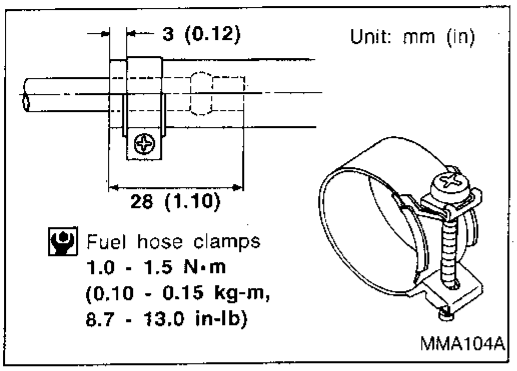
- **Clean excess coolant from engine.**

Checking Fuel Lines



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

Checking Fuel Lines (Cont'd)

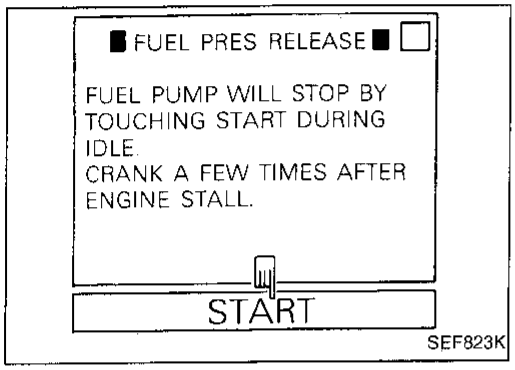


CAUTION:
Tighten high-pressure rubber hose clamp so that clamp end is 3 mm (0.12 in) from hose end.
Tightening torque specifications are the same for all rubber hose clamps.
Ensure that screw does not contact adjacent parts.

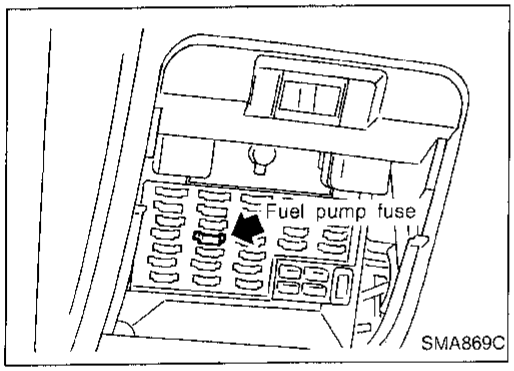
Changing Fuel Filter

WARNING:
Before removing fuel filter, release fuel pressure from fuel line.

1. Start engine.
2. Perform "FUEL PRESSURE RELEASE" in "WORK SUPPORT" mode to release fuel pressure to zero.
3. After engine stalls, crank engine two or three times to make sure that fuel pressure is released.
4. Turn ignition switch "OFF".

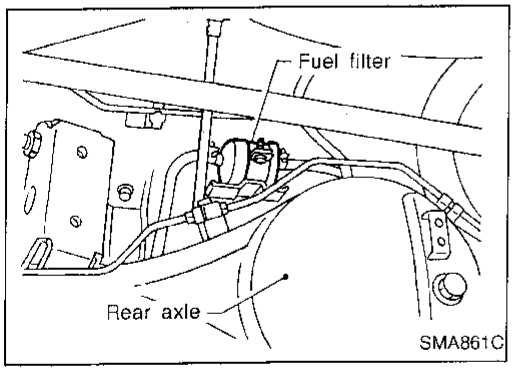


1. Remove fuel pump fuse.
2. Start engine.
3. After engine stalls, crank engine two or three times to make sure that fuel pressure is released.
4. Turn ignition switch "OFF" and install fuel pump fuse.



5. Loosen fuel hose clamps.
6. Replace fuel filter.

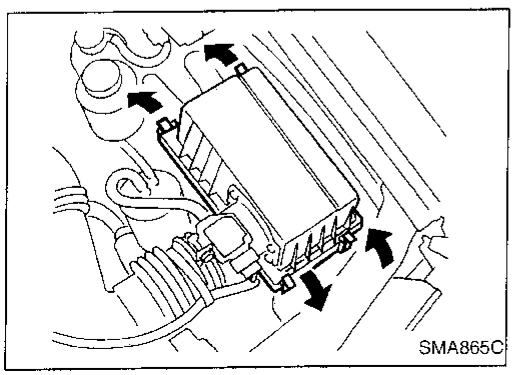
- **Be careful not to spill fuel over engine compartment. Place a shop towel to absorb fuel.**
- **Use a high-pressure type fuel filter. Do not use a synthetic resinous fuel filter.**
- **When tightening fuel hose clamps, refer to "Checking Fuel Lines".**

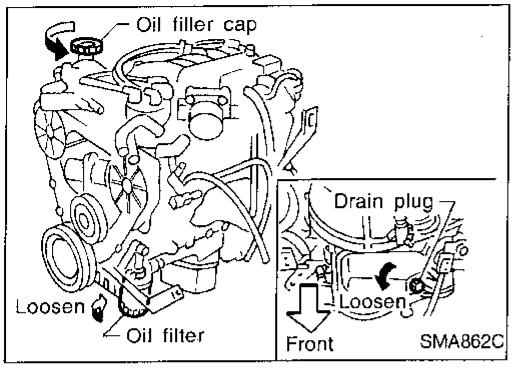


Changing Air Cleaner Filter

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 skin 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. Stop engine and wait for more than 10 minutes.
3. Remove drain plug and oil filler cap.
4. Drain oil and refill with new engine oil.

Oil specification and viscosity

- **API SG or SH and Energy Conserving II**
- **API Certification Mark**
- **See "RECOMMENDED FLUIDS AND LUBRICANTS", MA-8.**

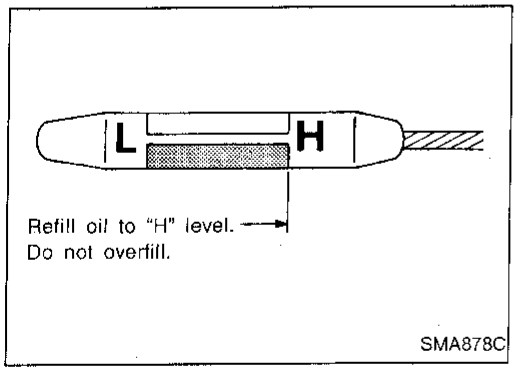
Refill oil capacity (Approximately) :

Unit: ℓ (US qt, Imp qt)

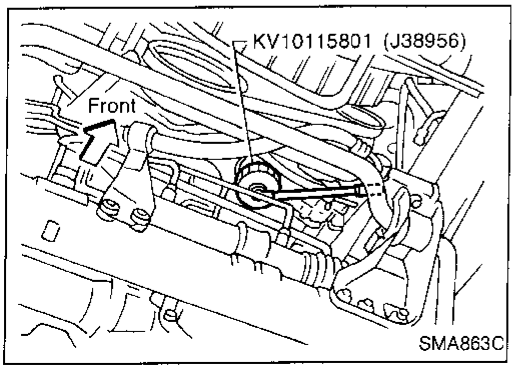
With oil filter change	3.7 (3-7/8, 3-1/4)
Without oil filter change	3.4 (3-5/8, 3)

CAUTION:

- **Be sure to clean drain plug and install with new washer.**
  Oil pan drain plug:
  : 29 - 39 N·m
  (3.0 - 4.0 kg-m, 22 - 29 ft-lb)
- **The refill capacity depends on the oil temperature and drain time; use the "Refill oil capacity" values as a reference and be certain to check with the dipstick when changing the oil.**



5. Warm up engine and check area around drain plug and oil filter for oil leakage.
6. Stop engine and wait for more than 10 minutes.
7. Check oil level.



Changing Oil Filter

1. Remove oil filter with Tool.

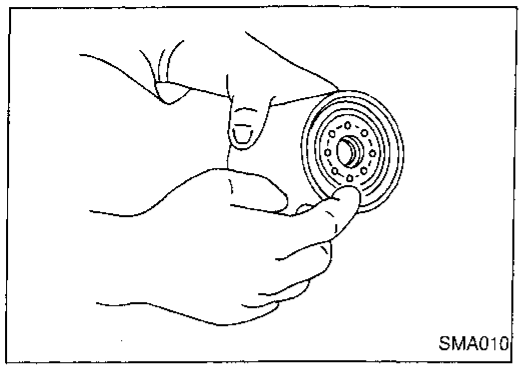
WARNING:

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

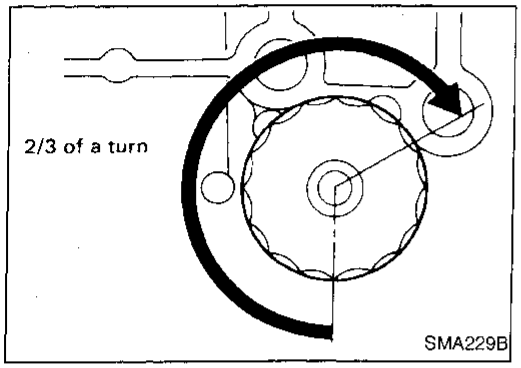
The filter is a full-flow cartridge type and is provided with a relief valve.

Refer to LC section ("Oil Filter", "ENGINE LUBRICATION SYSTEM").

Changing Oil Filter (Cont'd)



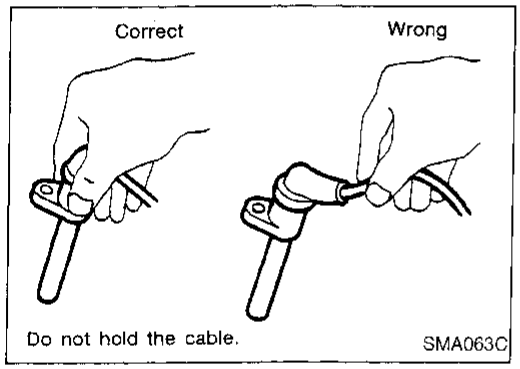
2. Clean oil filter mounting surface on cylinder block. Coat rubber seal of new oil filter with engine oil.



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

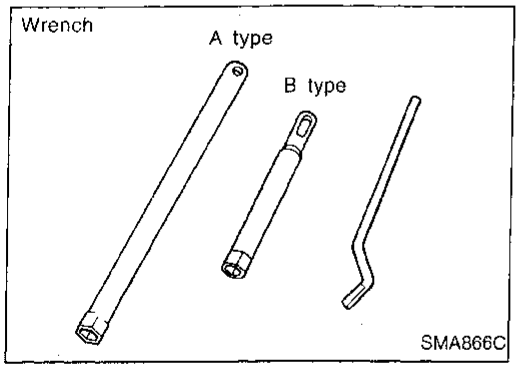
Refer to Changing Engine Oil.

- **Clean excess oil from engine.**



Changing Spark Plugs

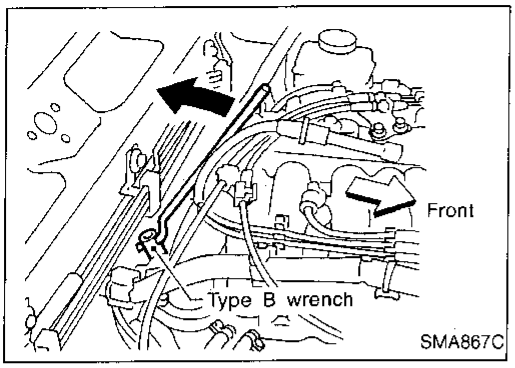
1. Disconnect ignition wires from spark plugs at boot. Do not pull on the wire.



2. Remove spark plugs with 16 mm (0.63 in) spark plug wrench.

- Spark plug wrench set is available in tool kit provided on vehicle.
  A type is for spark plugs except for No. 6 cylinder. B type is for No. 6 cylinder. Refer to section 995 of PARTS CATALOG for tool kit.

Changing Spark Plugs (Cont'd)



3. Check type and gap of new spark plug.

Spark plug type:

	Symbol	Make
Standard type	BKR5ES-11	NGK
Cold type	BKR6ES-11	NGK
Hot type	BKR4ES-11	NGK

Use standard type spark plug for normal condition.

The hot type spark plug is suitable when fouling may occur with the standard type spark plug such as:

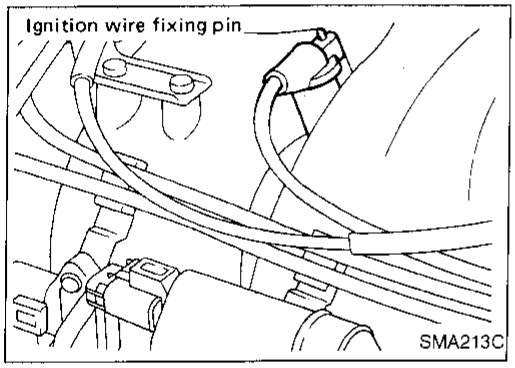
- frequent engine starts
- low ambient temperatures

The cold type spark plug is suitable when spark knock may occur with the standard type spark plug such as:

- extended highway driving
- frequent high engine revolution

Gap:

1.0 - 1.1 mm (0.039 - 0.043 in)

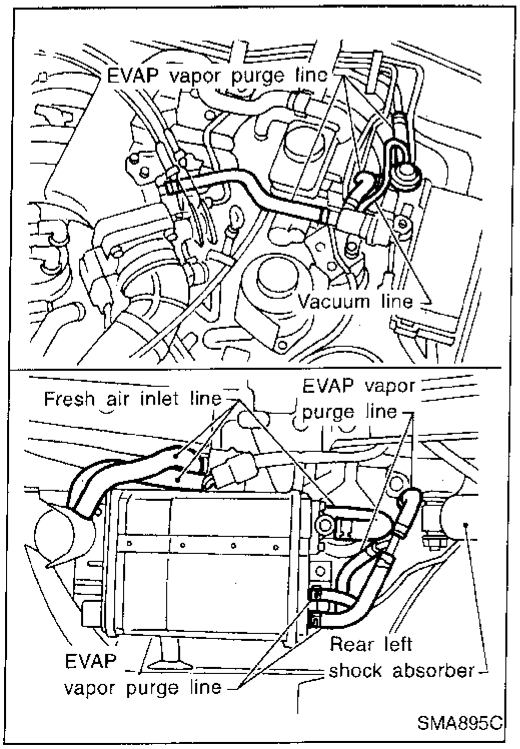


When installing spark plugs to No. 2 and 4 cylinders, securely fit each ignition wire mounting hole onto the ignition wire fixing pin.

Spark plug:

: 20 - 29 N·m

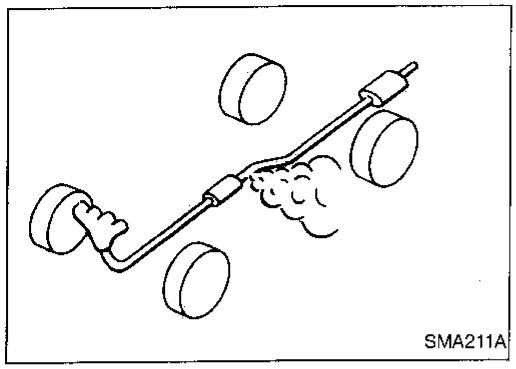
(2.0 - 3.0 kg-m, 14 - 22 ft-lb)



Checking EVAP Vapor Lines

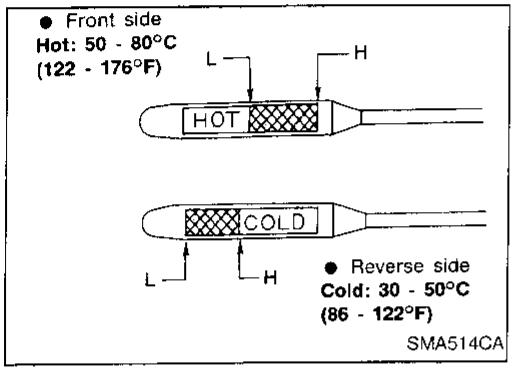
1. Visually inspect EVAP vapor lines for improper attachment, cracks, damage, loose connections, chafing or deterioration.
2. Inspect vacuum relief valve of fuel tank filler cap for clogging, sticking, etc.

Refer to EC section ("EVAPORATIVE EMISSION SYSTEM").


SMA211A

Checking Exhaust System

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



SMA514CA

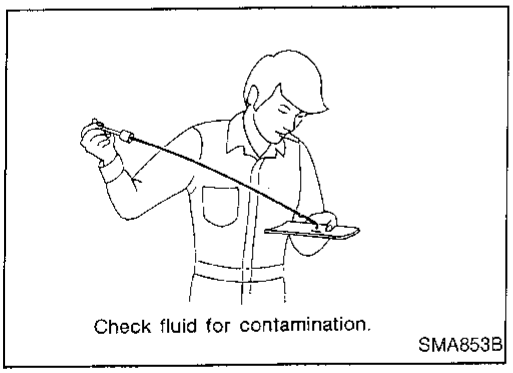
Checking A/T Fluid

1. Warm up engine.
2. Check for fluid leakage.
3. Before driving, fluid level can be checked at fluid temperatures of 30 to 50°C (86 to 122°F) using "COLD" range on dipstick.

a. Park vehicle on level surface and set parking brake.
b. Start engine and move selector lever through each gear position. Leave selector lever in "P" position.
c. Check fluid level with engine idling.
d. Remove dipstick and note reading. If level is at low side of either range, and fluid to the charging pipe.
e. Re-insert dipstick into charging pipe as far as it will go.
f. Remove dipstick and note reading. If reading is at low side of range, add fluid to the charging pipe.

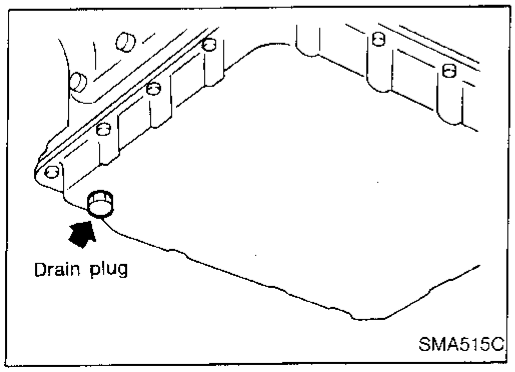
Do not overfill.

4. Drive vehicle for approximately 5 minutes in urban areas.
5. Re-check fluid level at fluid temperatures of 50° to 80°C (122° to 176°F) using "HOT" range on dipstick.


Check fluid for contamination.
SMA853B

6. Check fluid condition.

- If fluid is very dark or smells burned, refer to AT section for checking operation of A/T. Flush cooling system after repair of A/T.
- If A/T fluid contains frictional material (clutches, bands, etc.), replace radiator and flush cooler line using cleaning solvent and compressed air after repair of A/T. Refer to LC section ("Radiator", "ENGINE COOLING SYSTEM").



SMA515C

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.

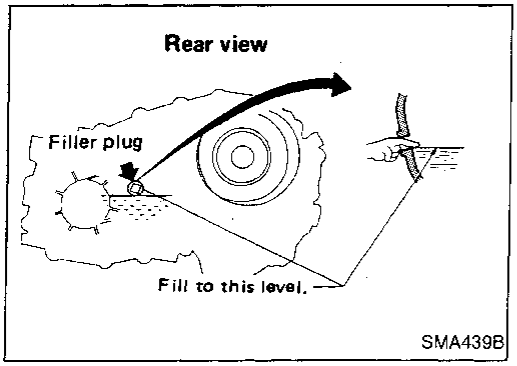
Fluid grade:

Nissan Matic "D" (Continental U.S. and Alaska) or Genuine Nissan Automatic Transmission Fluid (Canada). Refer to "RECOMMENDED FLUIDS AND LUBRICANTS", MA-8.

Changing A/T Fluid (Cont'd)

Fluid capacity (With torque converter):
8.5 ℓ (9 US qt, 7-1/2 Imp qt)
Drain plug:
: 29 - 39 N·m (3.0 - 4.0 kg-m, 22 - 29 ft-lb)

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

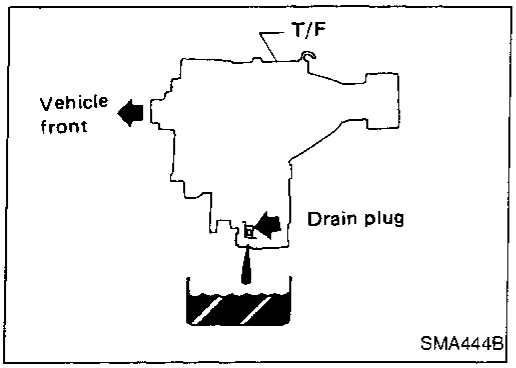


Checking All Mode 4WD Transfer Fluid

Check for oil leakage and fluid level.

A/T fluid is used for the all mode 4WD transfer in the factory.
Never start engine while checking fluid level.

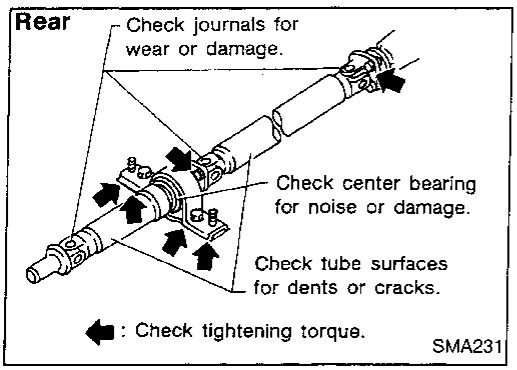
Filler plug:
: 10 - 20 N·m (1.0 - 2.0 kg-m, 87 - 174 in-lb)



Changing All Mode 4WD Transfer Fluid

When changing all mode 4WD transfer fluid completely, A/T fluid may be used.

Fluid grade:
Nissan Matic "D" (Continental U.S. and Alaska) or Genuine Nissan Automatic Transmission Fluid (Canada)
Refer to "RECOMMENDED FLUIDS AND LUBRICANTS", MA-8.
Fluid capacity:
3.0 ℓ (3-1/8 US qt, 2-5/8 Imp qt)
Drain plug:
: 10 - 20 N·m (1.0 - 2.0 kg-m, 87 - 174 in-lb)

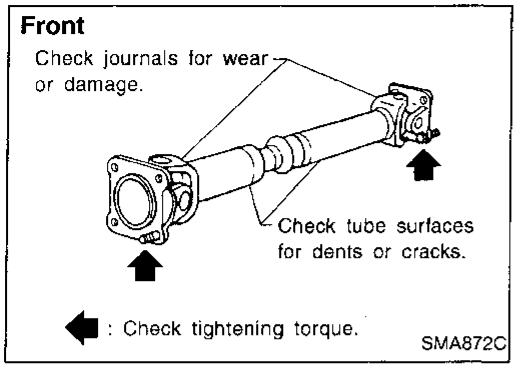


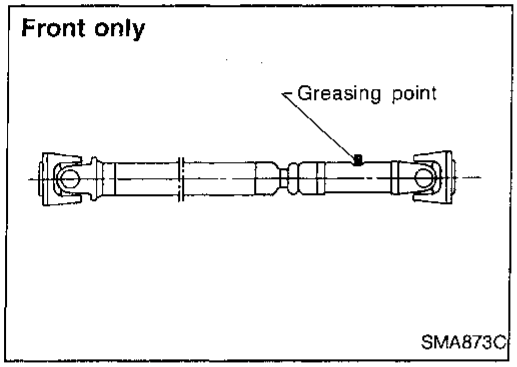
Checking Propeller Shaft

Check propeller shaft for damage, looseness or grease leakage.

Tightening torque: Refer to PD section.

Checking Propeller Shaft (Cont'd)



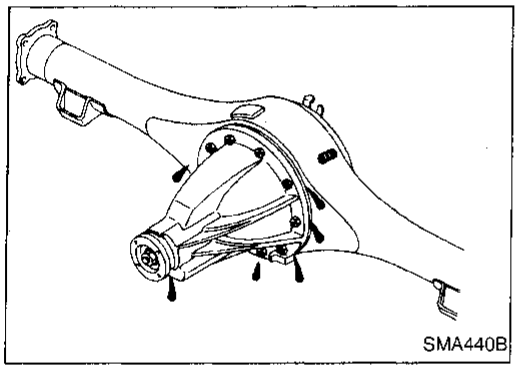


Greasing Propeller Shaft

Apply specified grease to nipples provided on propeller shaft.

Grease grade:

Refer to "RECOMMENDED FLUIDS AND LUBRICANTS", MA-8.



Checking Differential Gear Oil

Check for oil leakage and oil level.

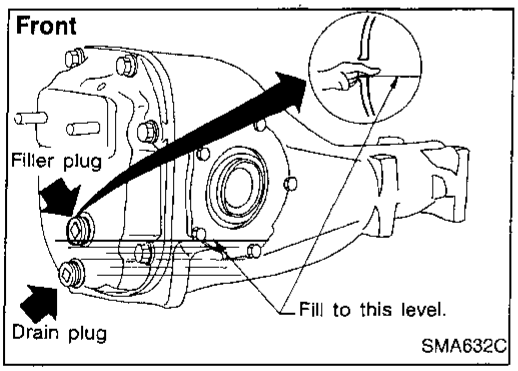
Filler plug:

Front

: 39 - 59 N·m (4 - 6 kg-m, 29 - 43 ft-lb)

Rear

: 59 - 118 N·m (6 - 12 kg-m, 43 - 87 ft-lb)



Changing Differential Gear Oil

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

Oil grade and viscosity:

See "RECOMMENDED FLUIDS AND LUBRICATNS", MA-8, 9.

Oil capacity:

Front

2.05 ℓ (4-3/8 US pt, 3-5/8 Imp pt)

Rear

2.8 ℓ (5-7/8 US pt, 4-7/8 Imp pt)

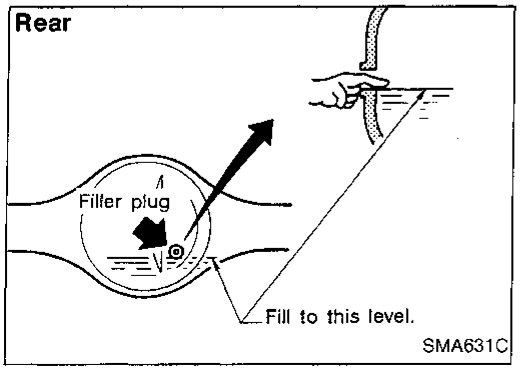
Drain plug:

Front

: 39 - 59 N·m (4 - 6 kg-m, 29 - 43 ft-lb)

Rear

: 59 - 118 N·m (6 - 12 kg-m, 43 - 87 ft-lb)



Changing Differential Gear Oil (Cont'd)

Limited-slip differential gear

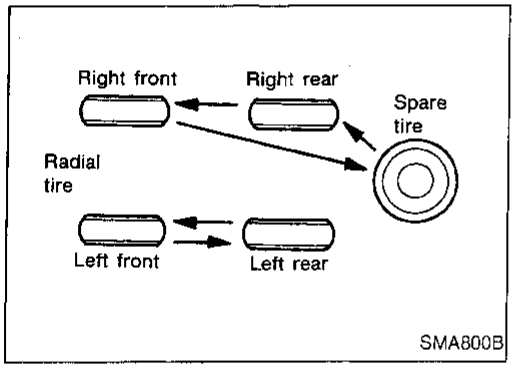
- Use only approved limited-slip differential gear oil.
- Limited-slip differential identification.

(1) Lift both rear wheels off the ground.
(2) Turn one rear wheel by hand.
(3) If both rear wheels turn in the same direction simultaneously, vehicle is equipped with limited-slip differential.

Balancing Wheels

Adjust wheel balance using the road wheel center.

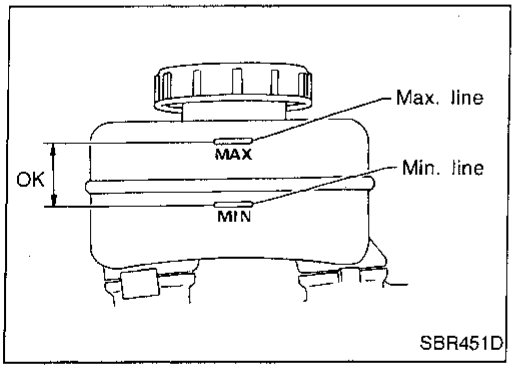
Wheel balance (Maximum allowable unbalance):
Refer to SDS, MA-24.



Tire Rotation

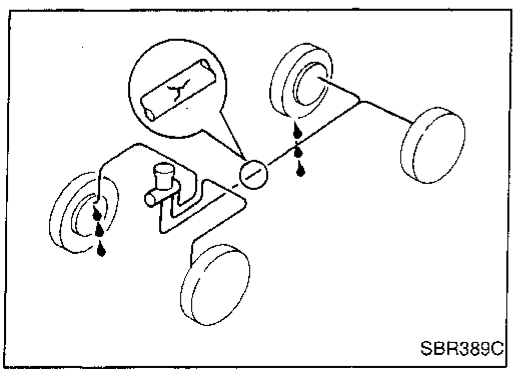
- **After rotating the tires, adjust the tire pressure.**
- **Retighten the wheel nuts after the aluminum wheel has been run for the first 1,000 km (600 miles). (also in cases of a flat tire, etc.)**

Wheel nuts:
[O]: 118 - 147 N·m (12 - 15 kg-m, 87 - 108 ft-lb)



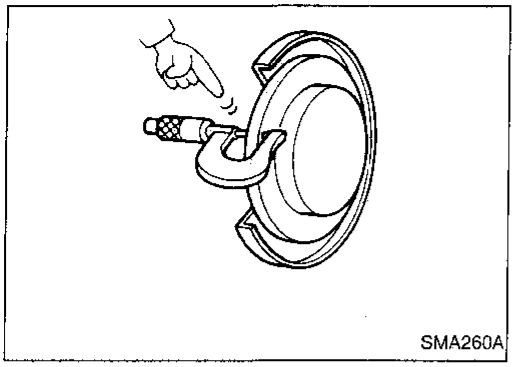
Checking Brake Fluid Level and Leaks

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, abrasions, or deterioration.

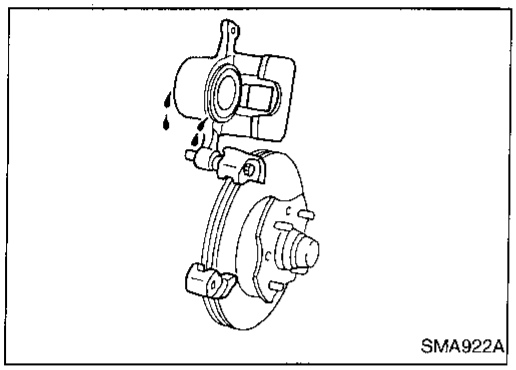

SMA260A

Checking Disc Brake

ROTOR

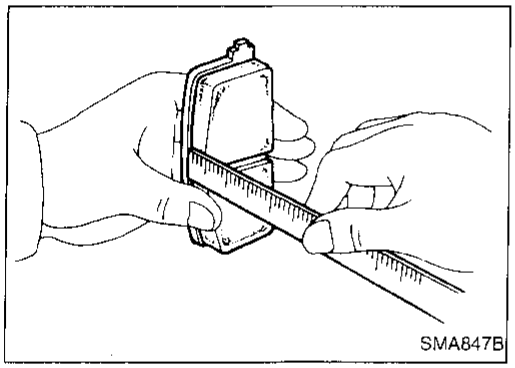
Check condition and thickness.

Standard thickness:
28 mm (1.10 in)
Minimum thickness:
AD31VA 26 mm (1.02 in)


SMA922A

CALIPER

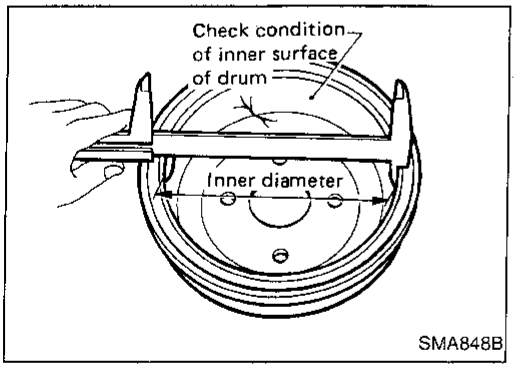
Check for leakage.


SMA847B

PAD

Check wear or damage.

Standard thickness:
11 mm (0.43 in)
Minimum thickness: 2 mm (0.08 in)



SMA848B

Checking Drum Brake

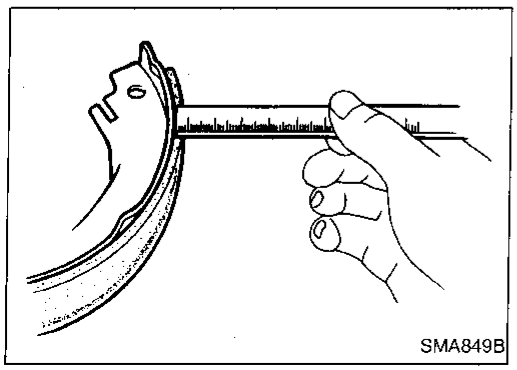
WHEEL CYLINDER

Check for leakage.

DRUM

Check condition and inner surface.

Standard inner diameter:
295 mm (11.61 in)
Drum repair limit (Inner diameter):
LT30C 296.5 mm (11.67 in)

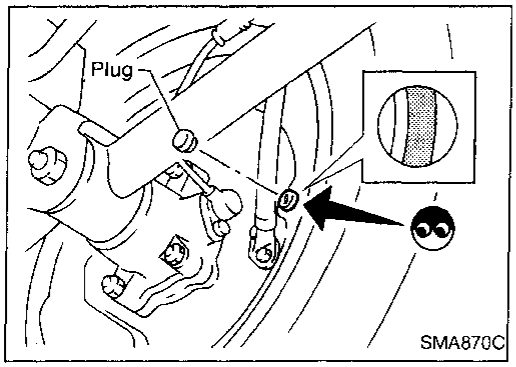

SMA849B

LINING

Check wear or damage.

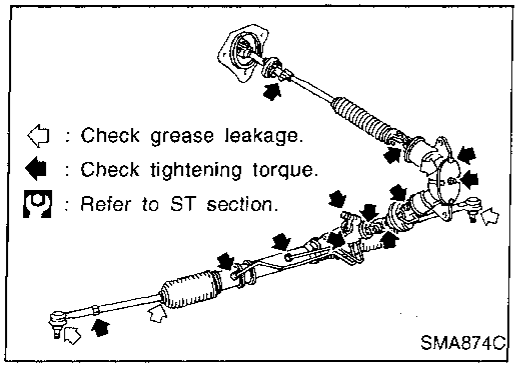
Standard thickness:
6.1 mm (0.24 in)
Lining wear limit (Minimum thickness):
1.5 mm (0.059 in)

Checking Drum Brake (Cont'd)



TEMPORARY METHOD FOR CHECKING LINING WEAR

Remove inspection hole plug and check for lining wear.



Checking Steering Gear, Linkage and Transfer Gear

STEERING GEAR

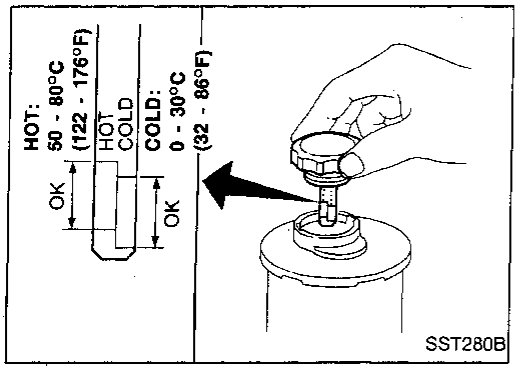
- Check gear housing and boots for looseness, damage or grease leakage.
- Check connection with steering column for looseness.

STEERING LINKAGE

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

STEERING TRANSFER GEAR

- Check gear box for looseness, damage or grease leakage.



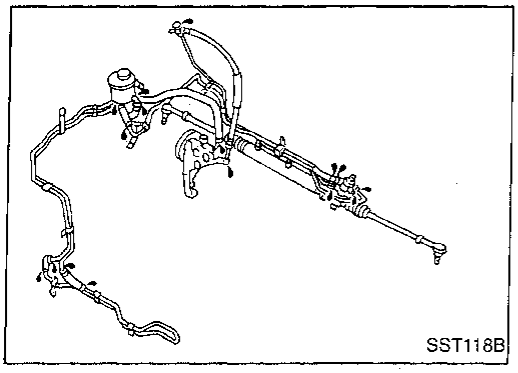
Checking Power Steering Fluid and Lines

CHECKING FLUID LEVEL

- Check fluid level with engine off.
- Check fluid level with dipstick on reservoir cap. Use "HOT" range at fluid temperatures of 50 to 80°C (122 to 176°F). Use "COLD" range at fluid temperatures of 0 to 30°C (32 to 86°F).

CAUTION:

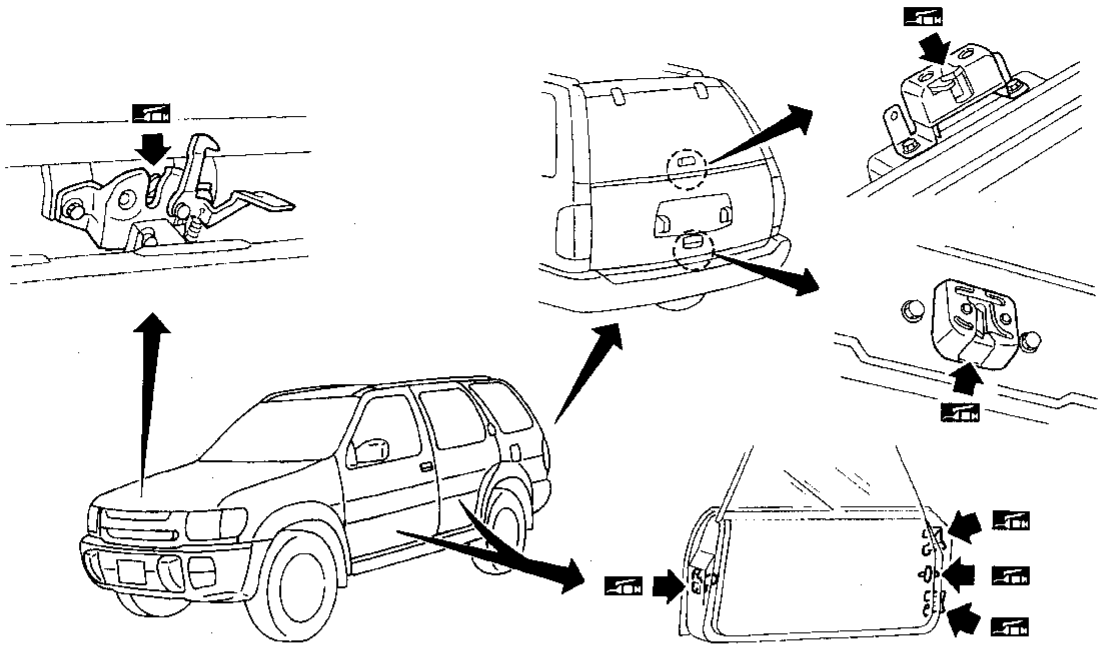
- **Do not overfill.**
- **Recommended fluid is Automatic Transmission Fluid type DEXRON™ IIE, DEXRON™III *or equivalent.***



CHECKING LINES

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

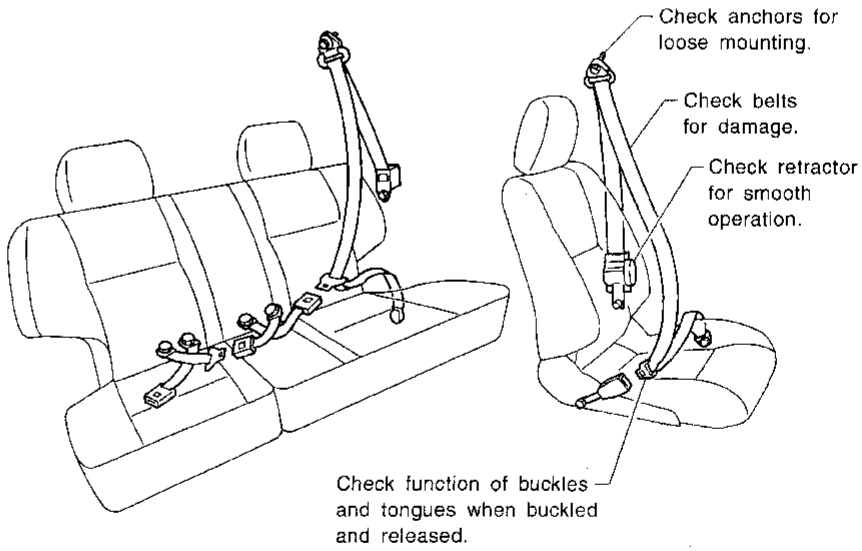
Lubricating Locks, Hinges and Hood Latches



Checking Seat Belts, Buckles, Retractors, Anchors and Adjusters

CAUTION:

- After any collision, inspect all seat belt assemblies, including retractors and other attached hardwares (i.e. guide rail set). Nissan recommends to replace all seat belt assemblies in use during a collision, unless not damaged and properly operating after minor collision.
  Also inspect seat belt assemblies not in use during a collision, and replace if damaged or improperly operating.
- If any component of seat belt assembly is questionable, do not repair. Replace as seat belt assembly.
- If webbing is cut, frayed, or damaged, replace belt assembly.
- Never oil tongue and buckle.
- Use a genuine seat belt assembly.



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

Engine Maintenance

INSPECTION AND ADJUSTMENT

Drive belt deflection

Unit: mm (in)

	Used belt deflection		Deflection of new belt
	Limit	Deflection after adjustment	
Alternator	10.5 (0.413)	6 - 7 (0.24 - 0.28)	5.5 - 6.5 (0.217 - 0.256)
Air conditioner compressor	16.5 (0.650)	9 - 11 (0.35 - 0.43)	9 - 10 (0.35 - 0.39)
Power steering oil pump	18 (0.71)	9 - 10 (0.35 - 0.39)	9 - 11 (0.35 - 0.43)
Applied pushing force	98 N (10 kg, 22 lb)		

Spark plug type

Standard type	BKR5ES-11
Cold type	BKR6ES-11
Hot type	BKR4ES-11
Plug gap	1.0 - 1.1 mm (0.039 - 0.043 in)

Chassis and Body Maintenance

INSPECTION AND ADJUSTMENT

Wheel balance

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