

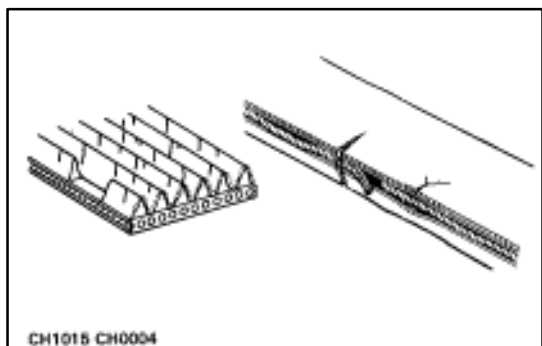
MAINTENANCE OPERATIONS

ENGINE

Cold Engine Operations

1. REPLACE TIMING BELT

- (a) Remove the timing belt.
(See pages [EM-35](#) to 43)
- (b) Install the timing belt.
(See pages [EM-47](#) to 57)



2. INSPECT DRIVE BELT

HINT: A belt tensioner is used, so checking the belt tension is not necessary.

- (a) Visually check the drive belt for excessive wear, frayed cords etc.

If necessary, replace the drive belt.

HINT:

- Cracks on rib side of a drive belt are considered acceptable. If the drive belt has chunks missing from the ribs, it should be replaced.
- The drive belt tension can be released by turning the belt tensioner counterclockwise. The pulley bolt for the belt tensioner has a left-hand thread.
- (b) Check the belt tensioner operation.
 - Check that the belt tensioner moves downward when the drive belt is pressed down at the points indicated in the illustration with approx. 98 N (10 kgf, 22.0 lb) of force.
 - Check the alignment of the belt tensioner pulley to make sure the drive belt has not slipped off the pulley.

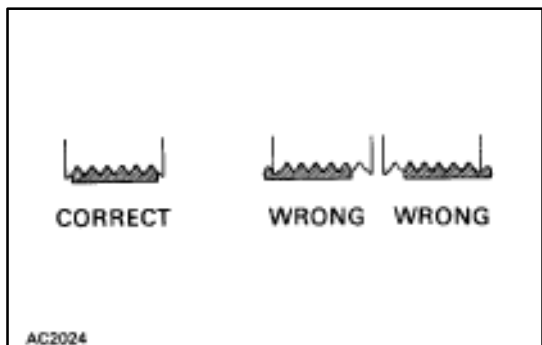
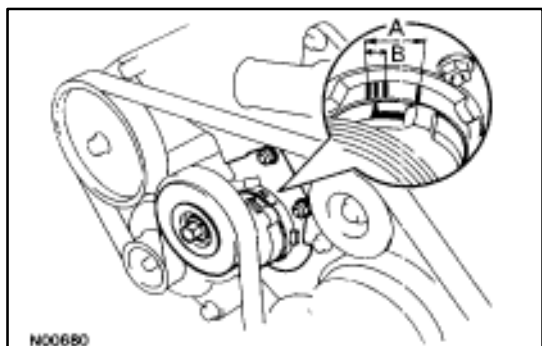
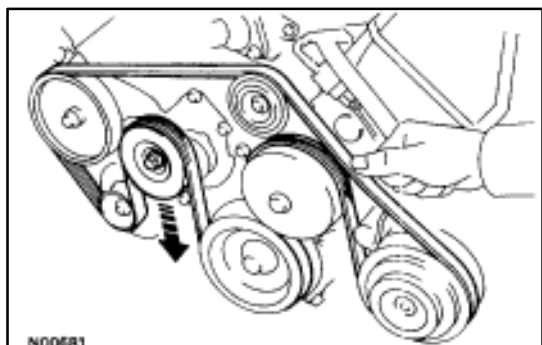
If necessary, replace the belt tensioner.

- Check that the arrow mark on the belt tensioner falls within area A of the scale.

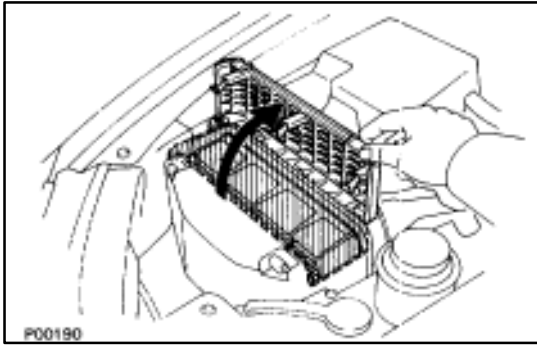
If it is outside area A, replace the drive belt.

HINT:

- When a new belt is installed, it should lie within area B. If not, the drive belt is not correct.

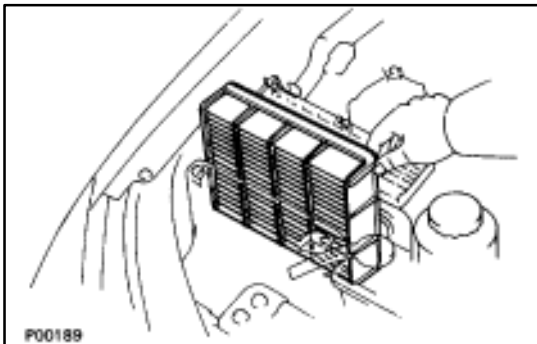


- After installing a belt, check that it fits properly in the ribbed grooves.
- Check by hand to confirm that the belt has not slipped out of the groove on the bottom of the pulley.



3. INSPECT AIR FILTER

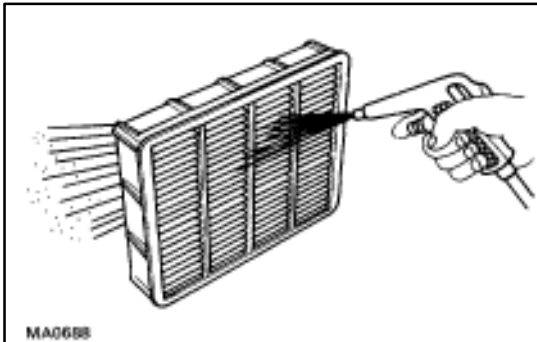
(a) Open the air cleaner cap.



(b) Remove the air filter.

(c) Visually check that the air cleaner filter is not excessively damaged or oily.

If necessary, replace the air filter.



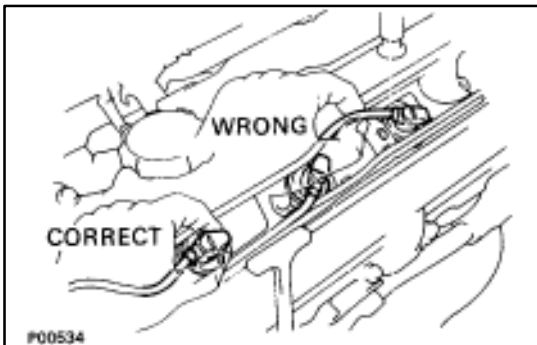
(d) Clean the element with compressed air.

First blow from the inside thoroughly, then blow off the outside of the filter.

(e) Reinstall the air filter.

4. REPLACE AIR FILTER

Replace the air cleaner element with a new one.

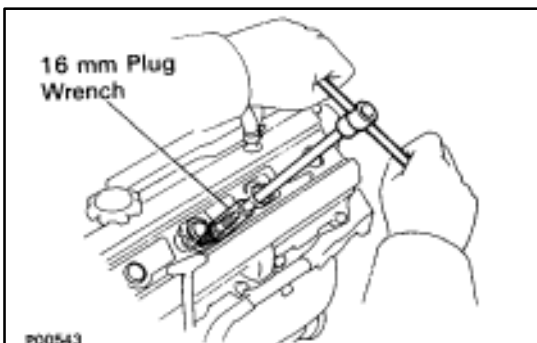


5. REPLACE SPARK PLUGS

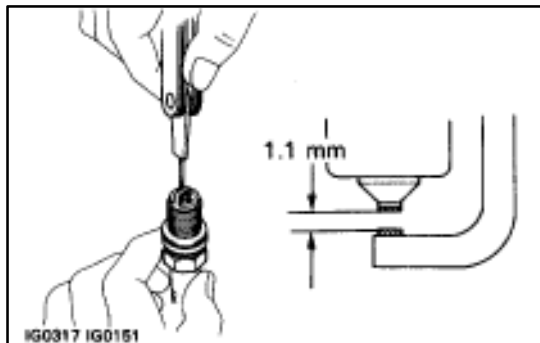
(a) Remove the No.3 timing belt covers.

(See steps 1, 5 to 10 and 14 on pages [EM-11](#) to 13)

(b) Disconnect the high-tension cords from the spark plugs at the rubber boot. DO NOT pull on the high-tension cords.



(c) Using a 16 mm plug wrench, remove the spark plugs.



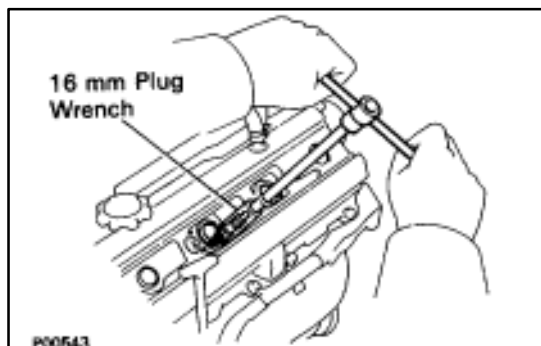
(d) Check the electrode gap of new spark plugs.

Correct electrode gap: 1.1 mm (0.043 in.)

Recommended spark plugs: ND PK20R11

NGK BKR6EP11

NOTICE: If adjusting the gap of a new spark plug, bend only the base of the ground electrode. Do not touch the tip.



(d) Using a 16 mm plug wrench, install the spark plugs.

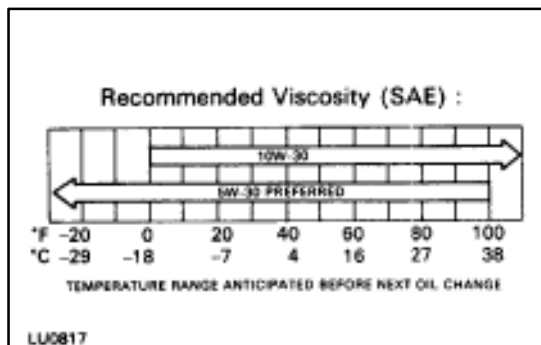
Torque: 18 N·m (180 kgf·cm, 13 ft·lbf)

(e) Connect the high-tension cords.

(f) Fit the high-tension cords to the cord clamps.

(g) Reinstall the No.3 timing belt covers.

(See steps 28 to 30, 34 to 37 and 41 on pages [EM-25](#) to 27)



6. REPLACE ENGINE OIL AND OIL FILTER

(See page [LU-6](#))

Oil grade: API grade SG, Energy-Conserving II

multigrade. Recommended viscosity is as shown, with SAE 5W-30 being the preferred engine oil.

Drain and refill capacity:

w/ Oil filter change

4.8 liters (5.1 US qts, 4.2 Imp. qts)

w/o Oil filter change

4.5 liters (4.8 US qts, 4.0 Imp. qts)

7. REPLACE ENGINE COOLANT

(See page [CO-6](#))

HINT:

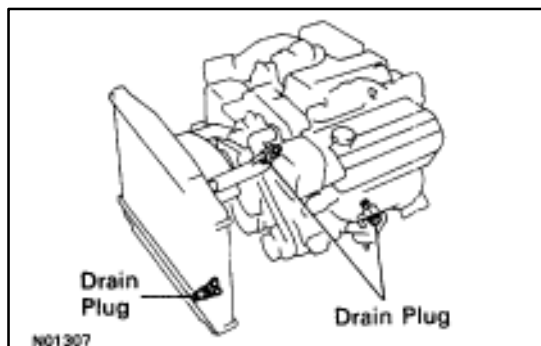
- Used a good brand of ethylene-glycol base coolant, mixed according to the manufacturer's instructions.
- Using coolant which includes more than 50 % ethylene-glycol (but not more 70 %) is recommended.

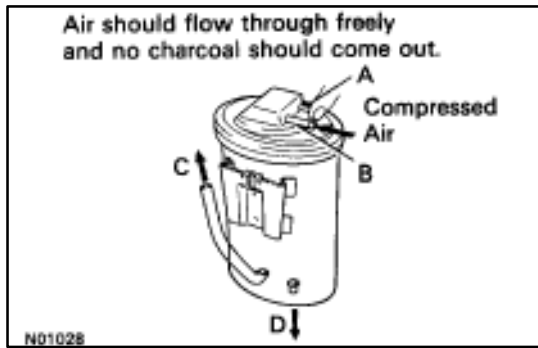
NOTICE:

- Do not use alcohol type coolant.
- The coolant should be mixed with demineralized water or distilled water.

Coolant capacity (w/ Heater):

10.8 liters (11.4 US qts, 9.5 Imp. qts)





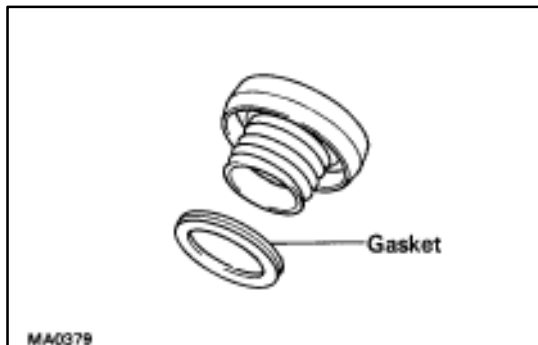
8. INSPECT CHARCOAL CANISTER

- Disconnect the hoses from the charcoal canister.
- Remove the charcoal canister.
- Remove the check valve from the hose end on the charcoal canister.
- Plug port A with your finger, and blow 294 kPa (3 kgf/cm², 43 psi) of compressed air through port B (fuel tank side).
 - Check that air comes out of the bottom ports C and D without resistance.
 - Check that no activated charcoal comes out.

If necessary, replace the charcoal canister.

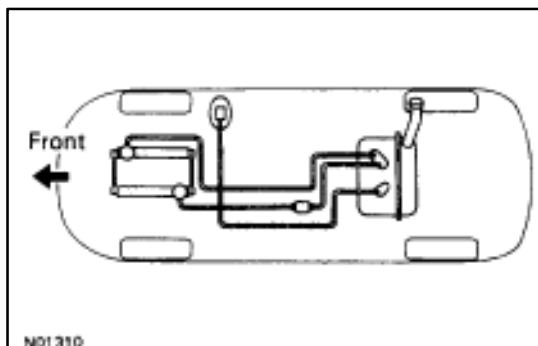
NOTICE: Do not attempt to wash the charcoal.

- Reinstall the check valve to the hose end on the charcoal canister.
- Reinstall the charcoal canister.
- Reconnect the hoses to the charcoal canister.



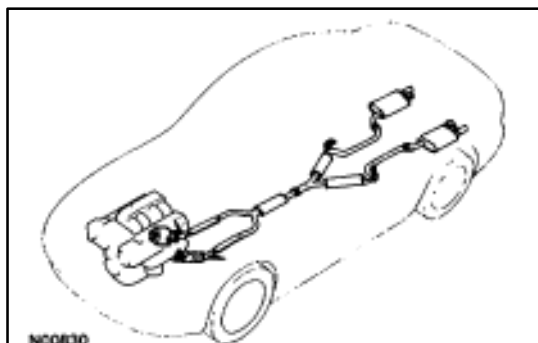
9. REPLACE GASKET IN FUEL TANK CAP

- Remove the old gasket from the tank cap.
- NOTICE: Do not damage the tank cap.**
- Install a new gasket by hand.
 - Check the cap for damage or cracks.
 - Install the cap and check the torque limiter.



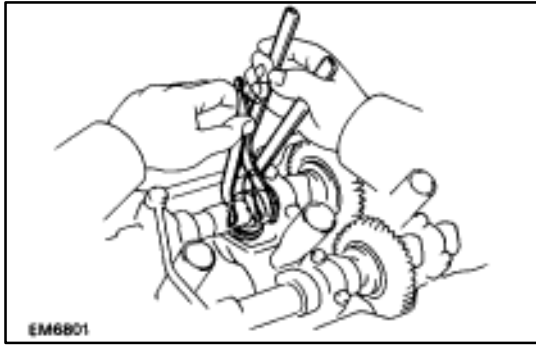
10. INSPECT FUEL LINES AND CONNECTIONS

Visually check the fuel lines for cracks, leakage, loose connections, deformation or tank band looseness.



11. INSPECT EXHAUST PIPES AND MOUNTINGS

Visually check the pipes, hangers and connections for severe corrosion, leaks or damage.

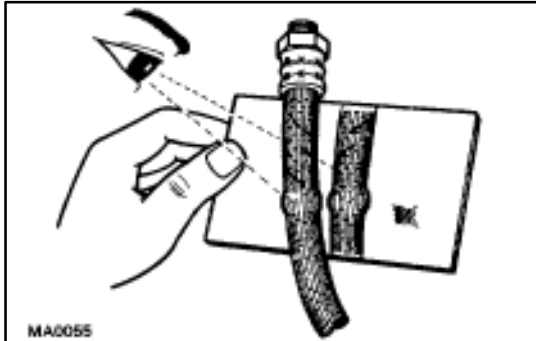


12. ADJUST VALVE CLEARANCE (See pages EM-11 to 27)

Valve clearance (Cold):

Intake 0.15–0.25 mm (0.006–0.010 in.)

Exhaust 0.25–0.35 mm (0.010–0.014 in.)

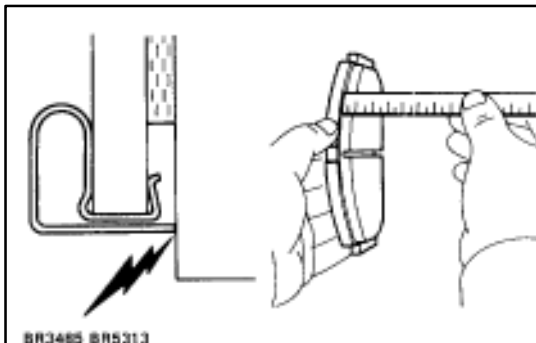
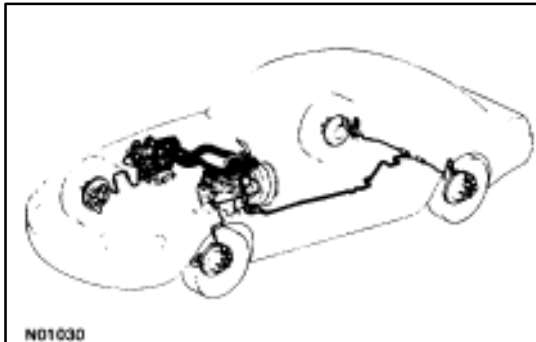


BRAKES

13. INSPECT BRAKE LINE PIPES AND HOSES

HINT: Check in a well lighted area. Check the entire circumference and length of the brake hoses using a mirror as required. Turn the front wheels fully right or left before checking the front brake.

- (a) Check all brake lines and hoses for:
 - Damage
 - Wear
 - Deformation
 - Cracks
 - Corrosion
 - Leaks
 - Bends
 - Twists
- (b) Check all clamps for tightness and connections for leakage.
- (c) Check that the hoses and lines are clear of sharp edges, moving parts and the exhaust system.
- (d) Check that the lines installed in grommets pass through the center of the grommets.



14. INSPECT BRAKE PADS AND DISCS

- (a) Check the thickness of the disc brake pads and check for irregular wear.

Minimum pad thickness: 1.0 mm (0.039 in.)

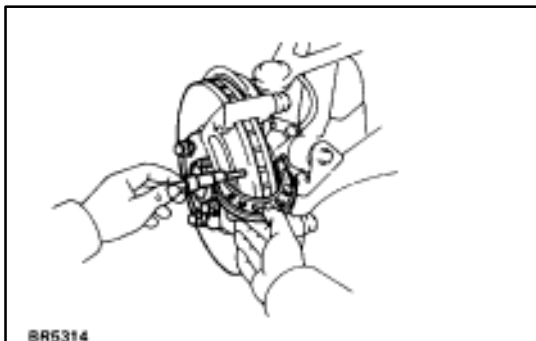
HINT: If a squealing or scraping noise comes from the brake during driving, check the pad wear indicator to see if it is contacting the disc rotor. If so, the disc pad should be replaced.

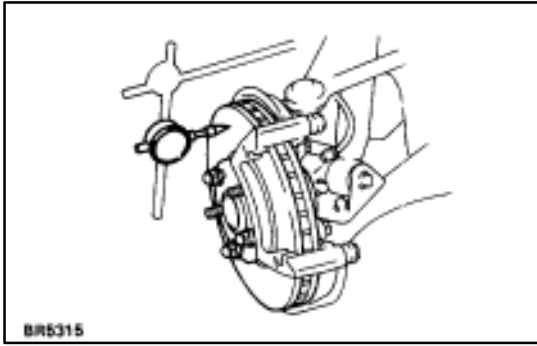
- (b) Check the disc for wear.

Minimum disc thickness:

Front 30.0 mm (1.181 in.)

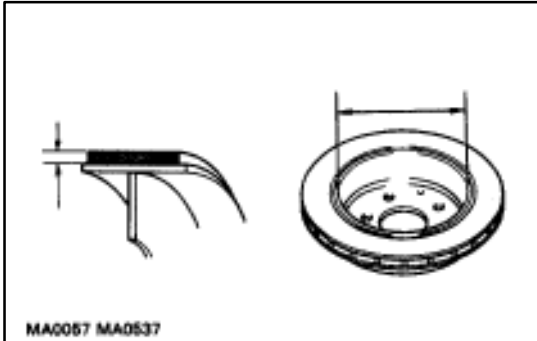
Rear 15.0 mm (0.591 in.)





(b) Check the disc for runout.

Maximum disc runout: 0.05 mm (0.0020 in.)



15. INSPECT PARKING BRAKE LININGS AND DRUMS

(a) Check the lining-to-drum contact condition and lining wear.

Minimum lining thickness: 1.0 mm (0.0039 in.)

(b) Check the brake drums for scoring or wear.

Maximum drum inside diameter: 191.0 mm (7.52 in.)

(c) Clean the brake parts with a damp cloth.

NOTICE: Do not use compressed air to clean the brake parts.

(d) Settle the parking brake shoes and drum. When performing the road test in item 26, do the followings:

- Drive the vehicle at approx. 50 km/h (30 mph) on a safe, level and dry road.
- With the parking brake release lever pushed in, pull on the lever with 88 N (9 kgf, 20 lbf) of force.
- Drive the vehicle for approx. 400 m (1/4 mile) in this position.
- Repeat this procedure 2 or 3 times.
- Check parking lever travel.

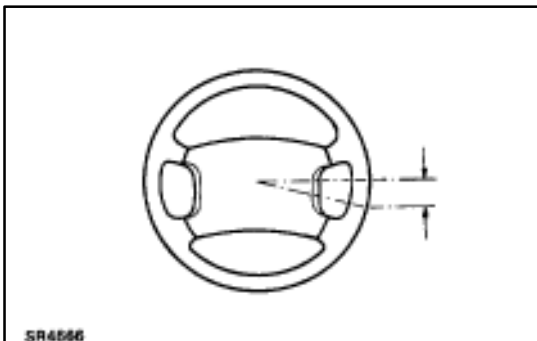
If necessary, adjust the parking brake.

16. INSPECT AND REPLACE BRAKE FLUID

(a) Visually check the master cylinder for leaks.

(b) Replace the brake fluid. (See page [BR-5](#))

Fluid: SAE 1703 or FMVSS NO.116 DOT 3



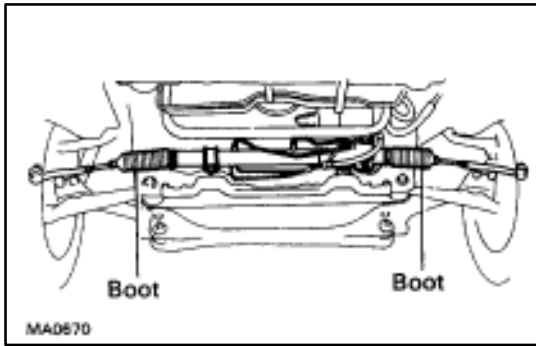
CHASSIS

17. INSPECT STEERING LINKAGE

(a) Check the steering wheel freeplay.

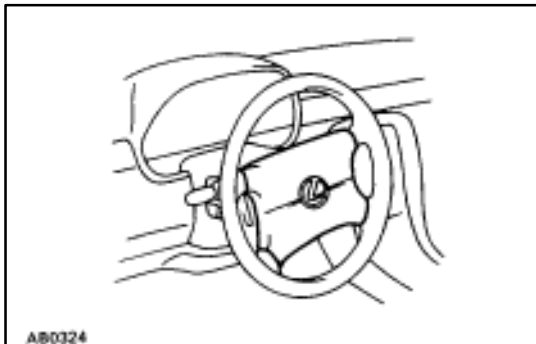
Maximum steering wheel freeplay: 30 mm (1.18 in.)

With the vehicle stopped and pointed straight ahead, rock the steering wheel gently back and forth with light finger pressure.



(b) Check the steering linkage for looseness or damage. Check that:

- Tie rod ends do not have excessive play.
- Dust seals and boots are not damaged.
- Boot clamps are not loose.



18. INSPECT SRS AIRBAG

Visually check the steering wheel pad (airbag and inflator).

- Use the diagnosis check to check if there are abnormalities.
- Check that there are no cuts, cracks or noticeable color changes on the surface of the steering wheel pad or in the center groove of the pad.
- Remove the steering wheel pad from the vehicle and check the wiring and steering wheel for damage and corrosion due to rusting, etc.

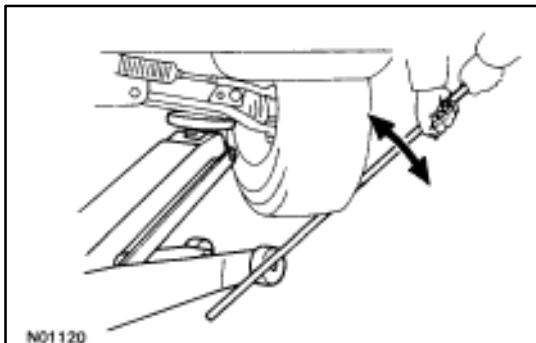
If necessary, replace the pad.

CAUTION:

- For removal and replacement of the steering wheel pad, see page [AB-16](#) and be sure to perform the operation in the correct order.
- Before disposing of the steering wheel pad, the airbag must first be deployed by using an SST (see page [AB-91](#)).

19. INSPECT STEERING GEAR HOUSING OIL

Check the steering gear box for oil leakage.



20. INSPECT BALL JOINTS AND DUST COVERS

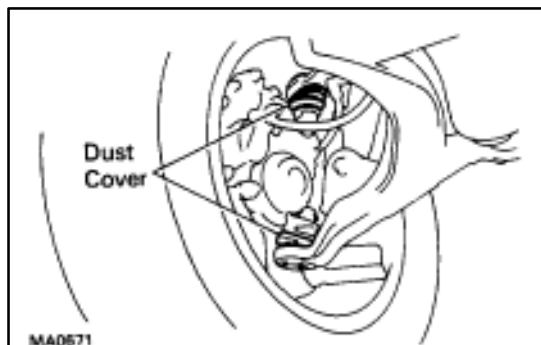
(a) Inspect the ball joints for excessive looseness.

- Jack up the front of the vehicle, and support it with stands.
- Make sure that the front wheels are in a straightahead position, and depress the brake pedal.
- Jack up the lower suspension arm until there is about half a load on the front coil spring.
- Move the front wheel up and down, and check that the ball joint has no excessive play.

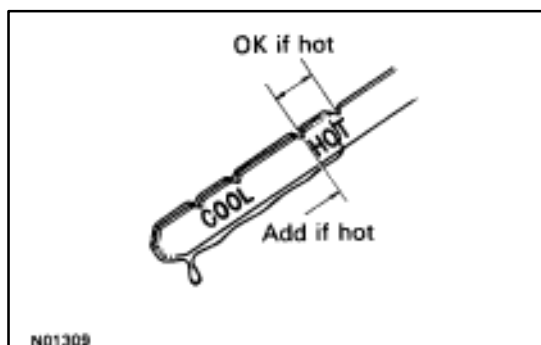
Maximum ball joint vertical play:

0.3 mm (0.012 in.)

If there is play, replace the ball joint.



- (b) Check the dust cover for damage.

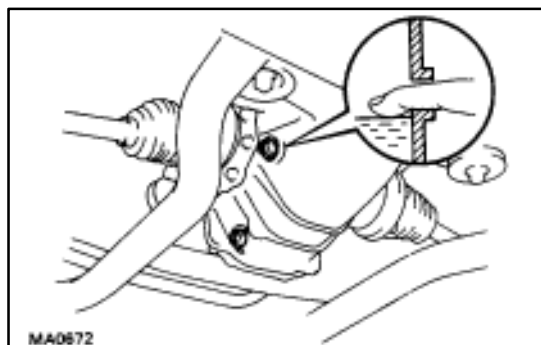


21. INSPECT TRANSMISSION FLUID AND DIFFERENTIAL OIL

A. Inspect transmission fluid

- (a) Visually check the transmission for fluid leakage. If leakage is found, check for the cause and repair.
- (b) Check the fluid level. If the level is low, add fluid.

Transmission fluid: See item 22 (A)

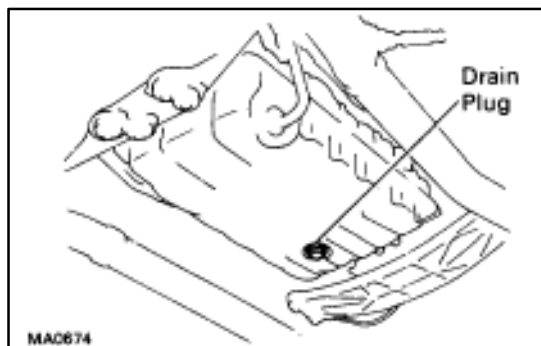


B. Inspect differential oil

- (a) Visually check the differential for oil leakage. If leakage is found, check for the cause and repair.
- (b) Remove the filler plug, and feel inside the hole with your finger. Check that the oil comes to within 5 mm (0.20 in.) of the bottom edge of the filler hole. If the level is low, add oil until it begins to run out of the filler hole.

Differential oil: See item 22 (B)

- (c) Reinstall the filler plug securely.



22. REPLACE TRANSMISSION FLUID AND DIFFERENTIAL OIL

A. Replace transmission fluid

- (a) Remove the drain plug, and drain the fluid.
- (b) Reinstall the drain plugs securely.

- (c) With the engine OFF, add new fluid through the oil dipstick tube.

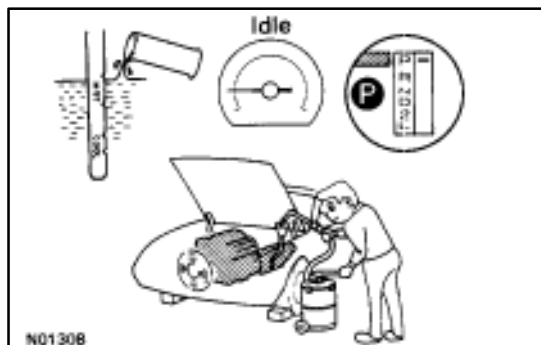
Fluid type: Type T-II or equivalent

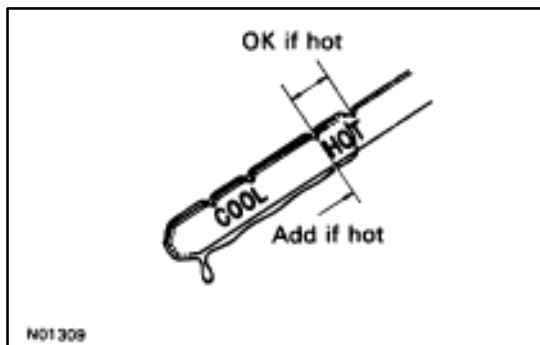
Drain and refill capacity:

1.9 liters (2.0 US qts, 1.7 Imp. qts)

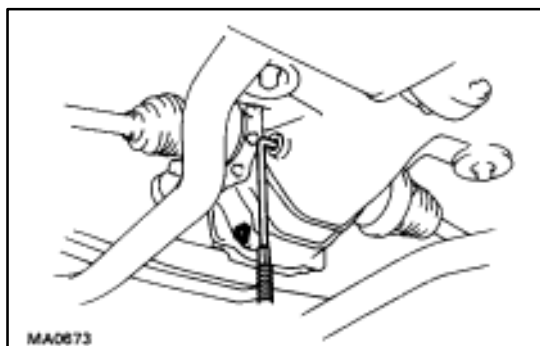
- (d) Start the engine, and shift the shift lever into all positions from "P" through "L", and then shift into "P".
- (e) With the engine idling, check the fluid level. Add fluid up to the "COOL" level on the dipstick.

NOTICE: Do not overfill.





- (f) Recheck the fluid level with the normal temperature (70–80°C (158–176°F)) and add as necessary.



B. Replace differential oil

- Remove the filler and drain plugs, and drain the oil.
- Reinstall the drain plugs securely.
- Add new oil until it begins to run out of the filler hole.

Differential oil:

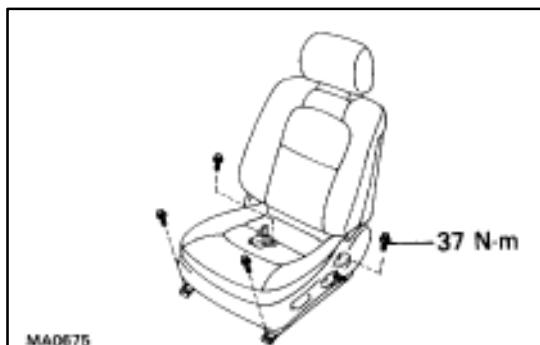
Oil grade API GL-5 or equivalent

Viscosity Above–18°C (0°F) SAE 90

Below–18°C (0°F) SAE 80W-90 or 80 W

Capacity: 1.35 liters (1.43 US qts, 1.19 Imp. qts)

- Reinstall the filler plug securely.

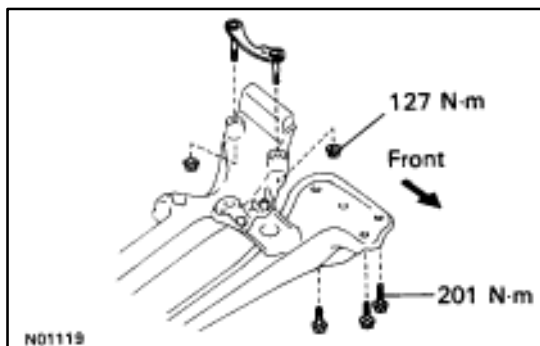


23. TIGHTEN BOLTS AND NUTS ON CHASSIS AND BODY

Tighten the following parts:

- Front seats mounting bolts

Torque: 37 N·m (375 kgf·cm, 27 ft·lbf)



- Front suspension crossmembers-to-body mounting nuts and bolts

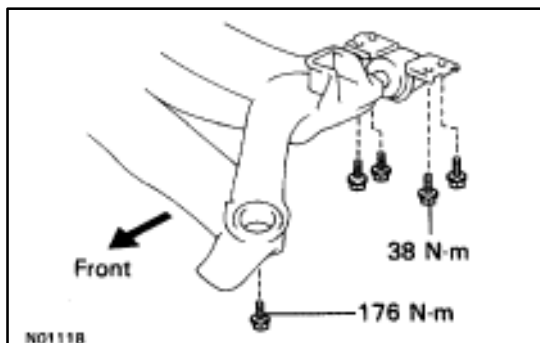
Torque:

Nut (Front side)

127 N·m (1,300 kgf·cm, 94 ft·lbf)

Bolt (Rear side)

201 N·m (2,050 kgf·cm, 148 ft·lbf)



- Rear suspension members-to-body mounting bolts

Torque:

Front side

176 N·m (1,800 kgf·cm, 130 ft·lbf)

Rear side

38 N·m (390 kgf·cm, 28 ft·lbf)

24. BODY INSPECTION

- (a) Check the body exterior for dents, scratches and rust.
- (b) Check the underbody for rust and damage.

25. ROAD TEST

- (a) Check the engine and chassis for abnormal noises.
- (b) Check that the vehicle does not wander or pull to one side.
- (c) Check that the brakes work properly and do not drag.
- (d) Perform setting down of the parking brake shoes and drum. (See page [MA-9](#))

26. FINAL INSPECTION

- (a) Check the operation of the body parts:
 - Hood
 - Auxiliary catch operation properly
 - Hood locks securely when closed
 - Doors
 - Door locks operate properly
 - Doors close properly
 - Luggage compartment door and back door
 - Door sock operates properly
 - Seats
 - Seat adjusts easily and locks securely in any position
 - Front seat back locks securely in any position
 - Folding-down rear seat backs lock securely
- (b) Be sure to deliver a clean car. Especially checked:
 - Steering wheel
 - Shift lever knob
 - All switch knobs
 - Door handles
 - Seats