MAINTENANCE OPERATIONS

ENGINE

Cold Engine Operations

1. REPLACE TIMING BELT

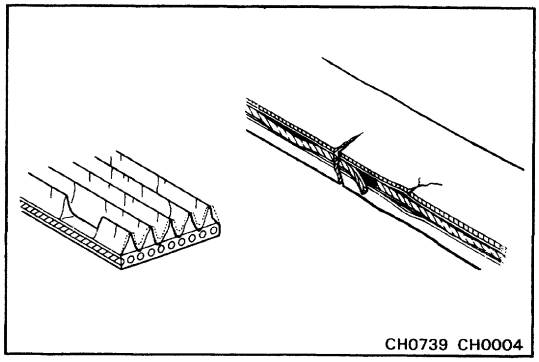
(a) Remove the timing belt.
(See pages EM–16 to 19)

(b) Install the timing belt.
(See pages EM–22 to 25)

2. INSPECT DRIVE BELTS

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

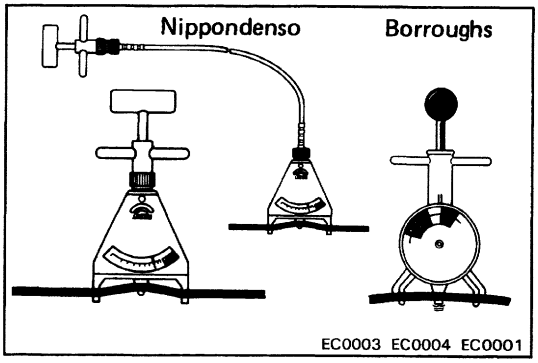
HINT: Cracks on the rib side of a belt are considered acceptable. If the belt has chunks missing from the ribs, it should be replaced.



(b) Using a belt tension gauge, check the drive belt tension.

Belt tension gauge:
Nippondenso BTG–20 (95506–00020)
Borroughs No. BT–33–73F

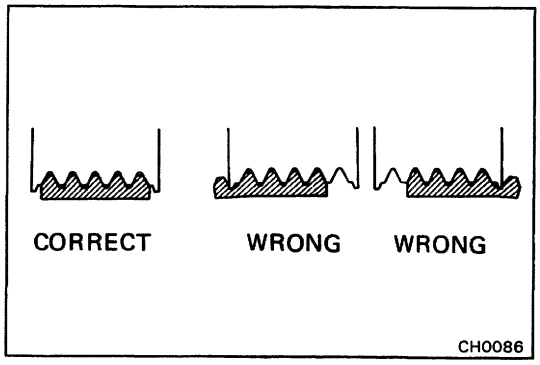
Drive belt tension:
Alternator Used belt 115 ± 20 lb
New belt 175 ± 5 lb
PS pump Used belt 100 ± 20 lb
New belt 160 ± 20 lb
A/C Used belt 105 ± 10 lb
New belt 160 ± 20 lb



If necessary, adjust the drive belt tension.

HINT:

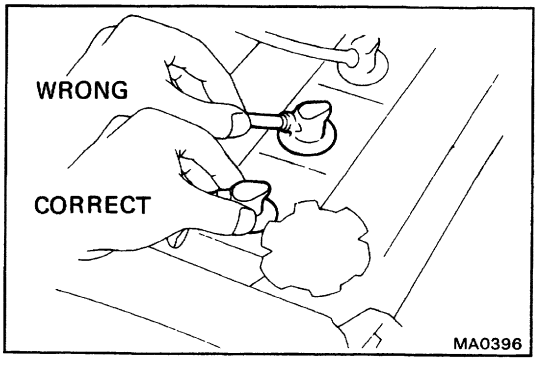
- ”New belt” refers to a belt which has been used less than 5 minutes on a running engine.
- ”Used belt” refers to a belt which has been used on a running engine for 5 minutes or more.
- After replacing the drive belt, check that it fits properly in the ribbed grooves, especially in the places difficult to see.
- After installing a new belt, run the engine for about 5 minutes and then recheck the tension.

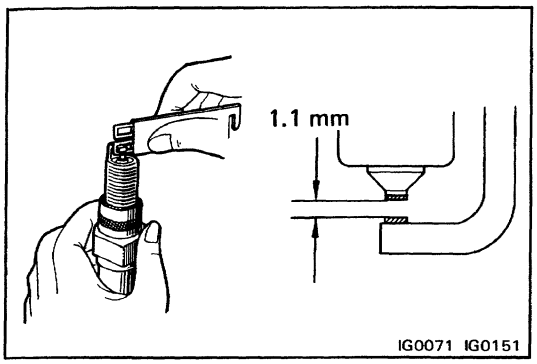


3. REPLACE SPARK PLUGS (Platinum tipped type)

(a) Disconnect the high–tension cords at the boot. DO NOT pull on the cords.

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





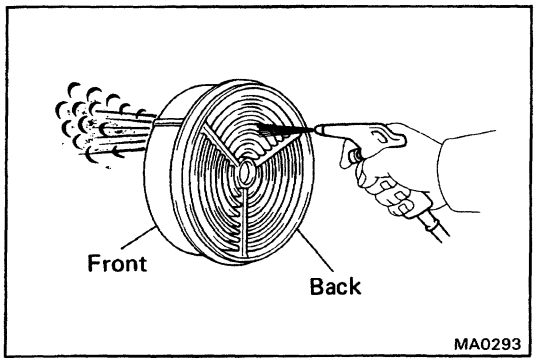
(c) Check the gap on the new plugs.

Correct electrode gap: 1.1 mm (0.043 in.)

Recommended spark plugs: ND PQ16R

NGK BCPR5EP11

HINT: If adjusting the gap of a new plug, bend only the base of the ground electrode. Do not touch the tip. Never attempt to adjust the gap on a used plug.



4. INSPECT AIR FILTER

(a) Visually check that the air cleaner element is not excessively dirty, damaged or oily.

If necessary, replace the air cleaner element.

(b) Clean the element with compressed air.

First blow from the back side thoroughly, then blow off the front side of the element.

5. REPLACE AIR FILTER

Replace the air cleaner element with a new one.

6. REPLACE ENGINE OIL AND OIL FILTER

(See page LU–5)

Oil grade: API grade SG, multigrade, fuel–efficient and recommended viscosity oil.

Engine oil capacity:

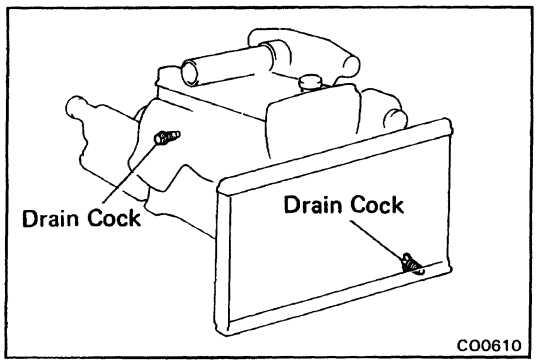
Drain and refill

w/o Oil filter change

4.1 liters i4.3 US qts, 3.6 lmp. qts)

w/ Oil filter change

4.4 liters (4.7 US qts, 3.9 lmp. qts)



7. REPLACE ENGINE COOLANT

(a) Drain the coolant from radiator and engine drain cocks.

(b) Apply sealant to the threads of the engine drain cock.

Sealant: Part No. o8833–00070, THREE BOND 1324 or equivalent

(c) Close the drain cocks.

(d) Fill system with coolant.

Coolant capacity:

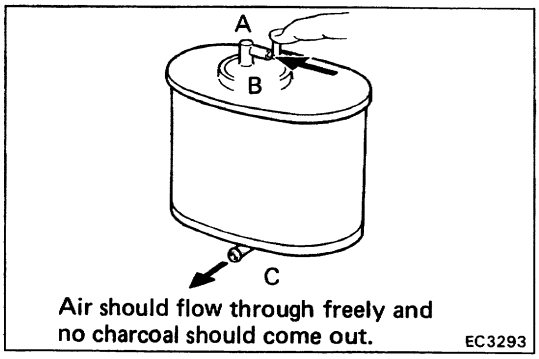
8.3 liters (8.8 US qts, 7.3 lmp. qts)

HINT:

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

NOTICE:

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



8. INSPECT CHARCOAL CANISTER

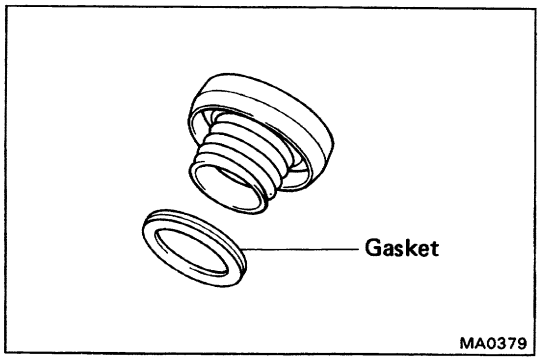
(a) Disconnect the hoses to the charcoal canister. Label hoses for correct reinstallation.

(b) Plug pipe A with your finger and blow compressed air (3 kg/cm2, 43 psi or 294 kPa) through pipe B (fuel tank side).

- Check that the air comes out of the bottom pipe C without resistance.
- Check that no activated charcoal comes out. If necessary, replace the charcoal canister.

HINT: Do not attempt to wash the charcoal.

(c) Connect the hoses to the charcoal canister.



9. REPLACE GASKET IN FUEL TANK CAP

(a) Remove the old gasket (O–ring) from the tank cap. Do not damage the cap.

(b) Install the new gasket by hand.

(c) Inspect the cap for damage or cracks.

(d) Install the cap and check the torque limiter.

10. INSPECT FUEL LINES AND CONNECTIONS

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

11. INSPECT EXHAUST PIPES AND MOUNTINGS

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

12. ADJUST VALVE CLEARANCE

HINT: Check and adjust the valve clearance while the engine is cold.

(a) Remove the cylinder head covers.

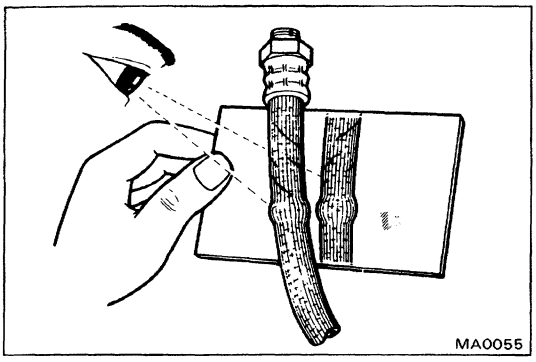
(b) Measure and adjust valve clearance.
(See page EM–8)

Valve clearance (cold):

Intake 0.15 – 0.25 mm (0.008 – 0.010 in.)

Exhaust 0.20 – 0.30 mm (0.008 – 0.012 in.)

(c) Reinstall the cylinder head covers.



BRAKES

13. INSPECT BRAKE LINE PIPES AND HOSES

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

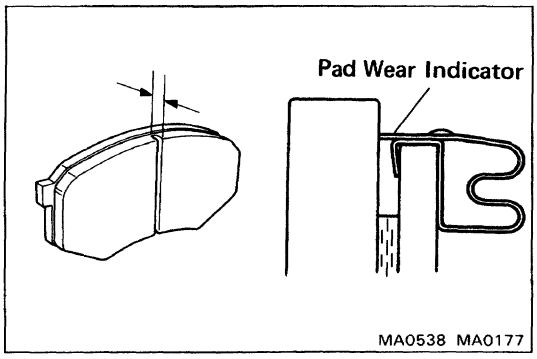
(a) Check all brake lines and hoses for:

- Damager Corrosion
- Wear Leaks
- Deformation Bends
- Cracks 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 FRONT AND REAR BRAKE PADS AND DISCS

(See pages BR–28, 36)

(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.
If there are traces of the indicator contacting the disc rotor, the disc pad should be replaced.

(b) Check the disc for wear or runout.

Minimum disc thickness:

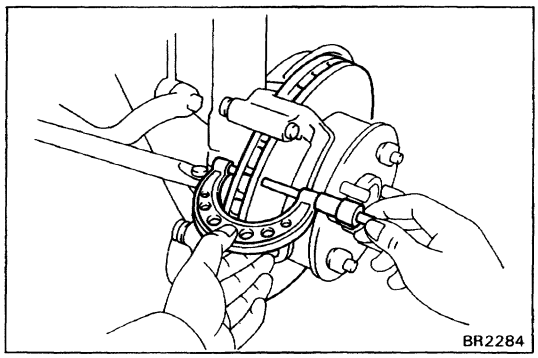
Front 21.0 mm (0.827 in.)

Rear 17.0 mm (0.669 in.)

Maximum disc runout:

Front 0.07 mm (0.0028 in.)

Rear 0.13 mm (0.0051 in.)



15. INSPECT PARKING BRAKE LININGS AND DRUMS

(See page BR–41)

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

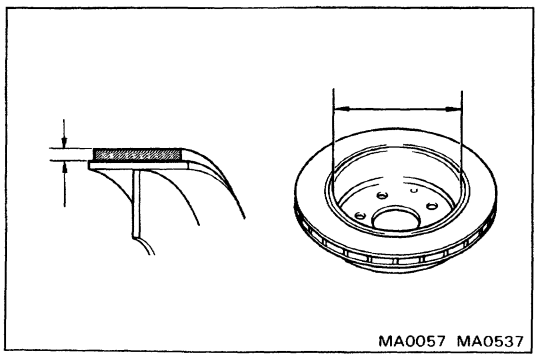
Minimum lining thickness: 1.0 mm (0.039 in.)

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

Maximum drum inside diameter: 177 mm (6.97 in.)

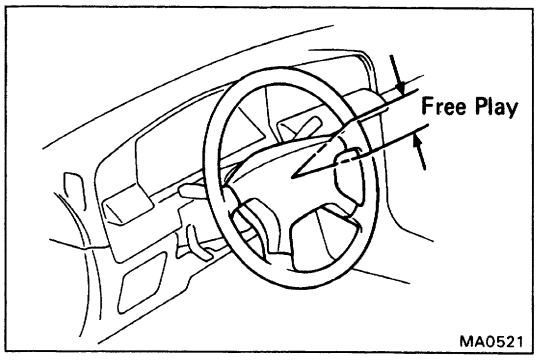
(c) Clean the brake parts with a damp cloth.

HINT: 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 24, do the following:

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



CHASSIS

16. INSPECT STEERING LINKAGE

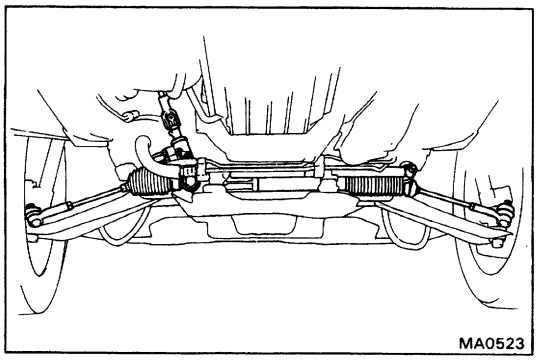
(a) Check the steering wheel freeplay.

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.



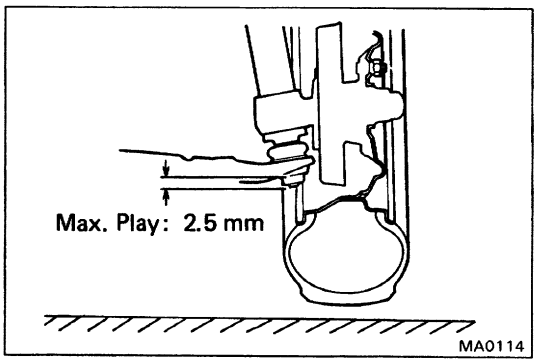
17. INSPECT STEERING GEAR HOUSING

Check the steering gear housing for oil leakage.

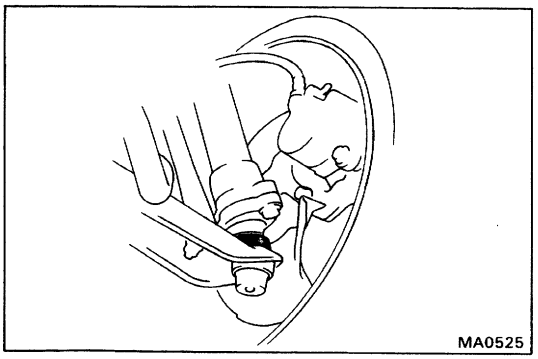
18. INSPECT BALL JOINTS AND DUST COVERS

(a) Inspect the ball joints for excessive looseness.

- Jack up the front of the vehicle and place wooden blocks with a height of 180 – 200 mm (7.09 – 7.87 in.) under the front tires.
- Lower the jack until there is about half the load on the front coil springs. Place stands under the vehicle for safety.
- Make sure the front wheels are in a straight forward position, and block them with chocks.
- Using a lever, pry up the end of the lower arm, and check the amount of play.
  Maximum ball joint vertical play: 2.5 mm (0.098 in.)
  If there is play, replace the ball joint.

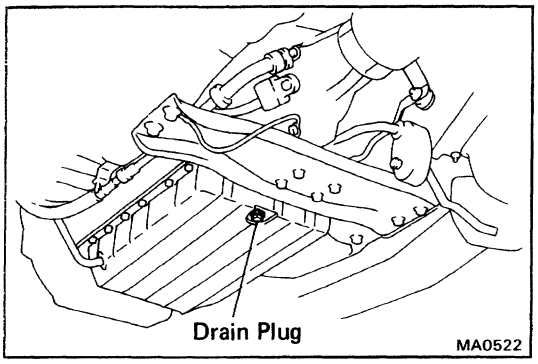


(b) Inspect the dust cover for damage.



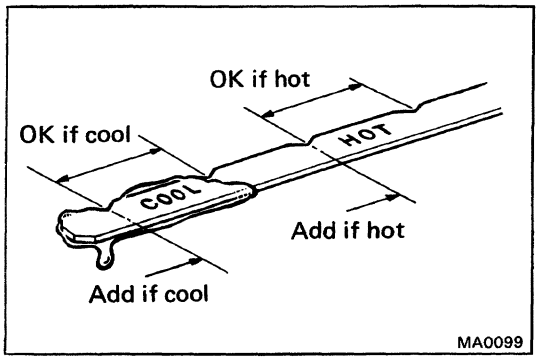
19. CHECK AUTOMATIC TRANSMISSION AND DIFFERENTIAL OIL

Visually check the automatic transmission and differential for oil leakage.
If leakage is found, check for cause and repair.

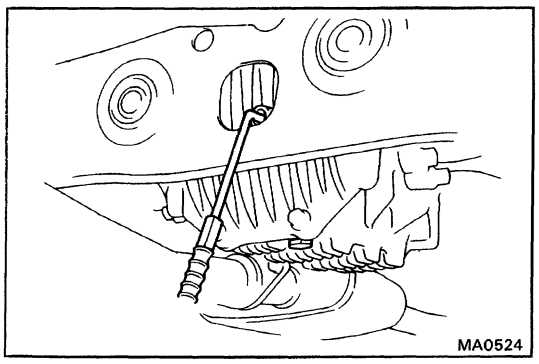


20. REPLACE AUTOMATIC TRANSMISSION FLUID

(a) Remove the drain plug and drain the fluid.
(b) Reinstall the drain plug securely.
(c) With the engine ”OFF”, add new fluid through the dipstick tube.
Fluid: ATF DEXRON© II
Drain and refill capacity:
1.6 liters (1.7 US qts, 1.4 Imp. qts)

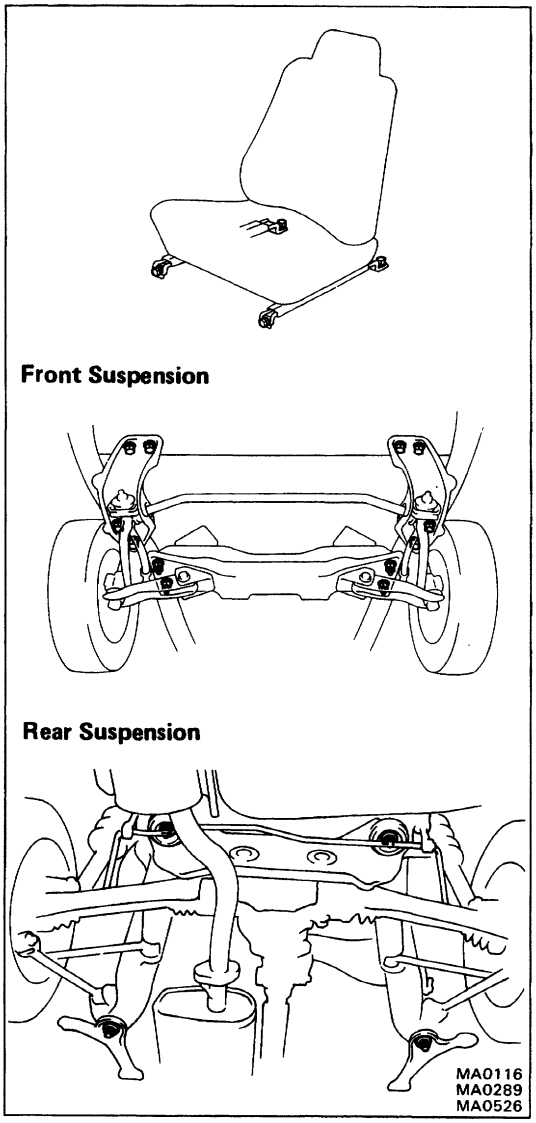


(d) Start the engine and shift the selector into all positions from ”P” through ”L”, and then shift into “P”
(e) With the engine idling, check the fluid level. Add fluid up to the ”COOL” level on the dipstick.
NOTICE: Do not overfill.
(f) Check that the fluid level is in the ”'HOT” range at the normal operating temperature (70 – 80˚C or 158 – 176 ˚F) and add as necessary.



21. REPLACE DIFFERENTIAL OIL

(a) Remove the drain plug and drain the oil.
(b) Clean the drain plug.
(c) Reinstall the drain plug.
(d) Add new oil until it begins to run out of the filler hole.
Oil grade: API GL–5 hypoid gear oil or for LSD oil (LSD only)
Viscosity: Above – 18˚C (0˚F) SAE 90
Below – 180C (0 ˚ F) SAE 80W–90 or 80w
Capacity: 1.3 liters (1.4 US qts, 1.1 Imp. qts)



22. TIGHTEN BOLTS AND NUTS ON CHASSIS AND BODY

Tighten the following parts:

- Front seat mounting bolts

Torque: 375 kg–cm (27 ft–lb, 37 N–m)

- Front suspension member–to–body mounting bolts and nuts

Torque: 1,000 kg–cm (72 ft–lb, 98 N–m)

- Strut bar bracket–to–body mounting bolts

Torque: 1,190 kg–cm (86 ft–lb, 117 N–m)

- Rear suspension member–to–body mounting bolts and nuts

Torque: 1,900 kg–cm (137 ft–lb, 186 N–m)

23. FINAL INSPECTION

(a) Check the operation of the body parts:

- Hood
  Auxiliary catch operates properly
  Hood locks securely when closed
- Front and rear doors
  Door locks operate properly
  Doors close properly
- Luggage compartment door
  Door lock 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) Road test

- Check the engine and chassis for abnormal noises.
- Check that the vehicle does not wander or pull to one side.
- Check that the brakes work properly and do not drag.
- Perform bedding down of the parking brake shoes and drum. (See page MA–8)

(c) Be sure to deliver a clean car and especially check:

- Steering wheel
- Shift lever knob
- All switch knobs
- Door handles
- Seats