MAINTENANCE OPERATIONS

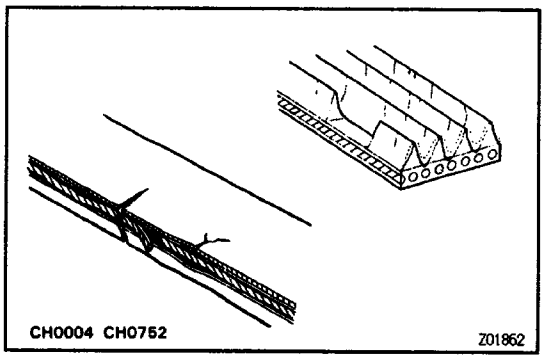
MA00E–02

ENGINE

Cold Engine Operations

1. REPLACE TIMING BELT

(See Engine Mechanical in EG section)

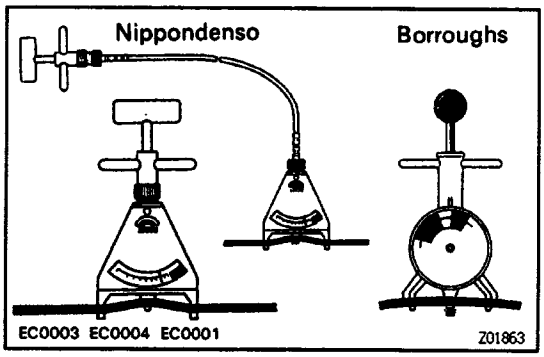


2. INSPECT DRIVE BELTS

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

If necessary, replace the drive belt.

HINT: Cranks 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, measure the belt tension.

Belt tension gauge:

Nippondenso BTG–20 (95506–00020)

Borroughs No. BT–33–73F

Drive belt tension:

Alternator

New belt

120 ± 20 lbf

Used belt

104 ± 20 lbf

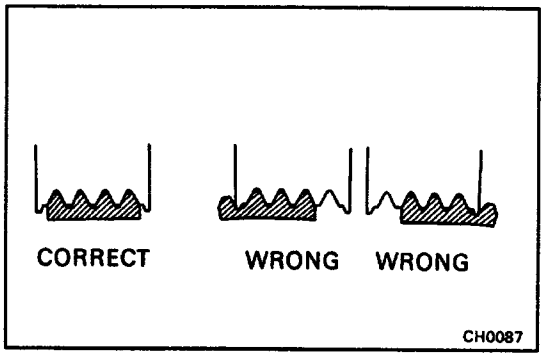
A/C compressor

New belt

160 ± 25 lbf

Used belt

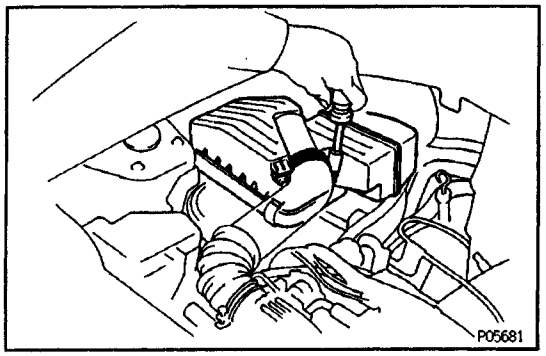
100 ± 20 lbf



If necessary, adjust the belt tension.

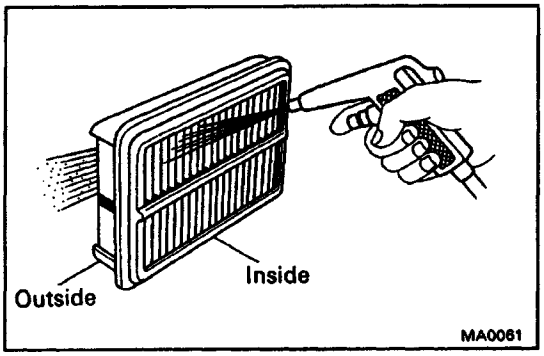
HINT:

- ”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 installing the 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.
- After installing a new belt, run the engine for about 5 minutes and recheck the belt tension.



3. INSPECT AIR FILTER

(a) Remove the air cleaner cap and air filter.



(b) Visually check that the air filter is not excessively damaged only.

If necessary, replace the air filter.

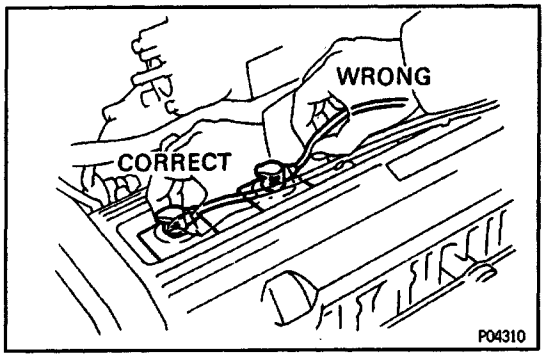
(c) Clean the air filter with compressed air.

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

(d) Reinstall the air filter and cap.

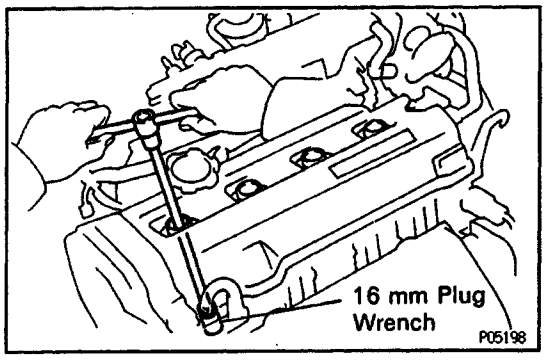
4. REPLACE AIR FILTER

Replace the air filter with a new one.

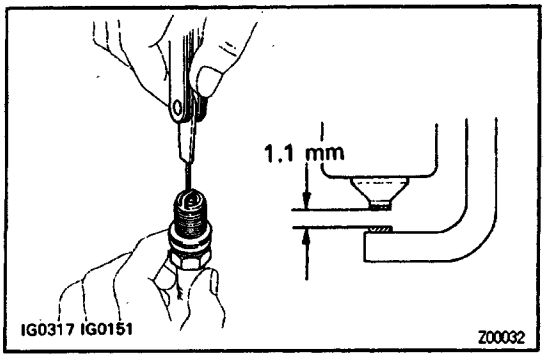


5. REPLACE SPARK PLUGS

(a) Disconnect the high–tension cords at the rubber boot. Do not pull on the cords.



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



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

Correct electrode gap:

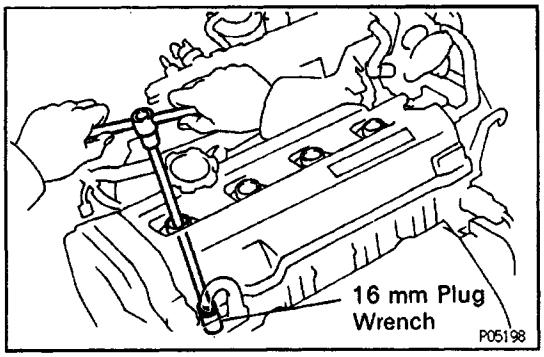
1.1 mm (0.0043 in.)

Recommended spark plugs:

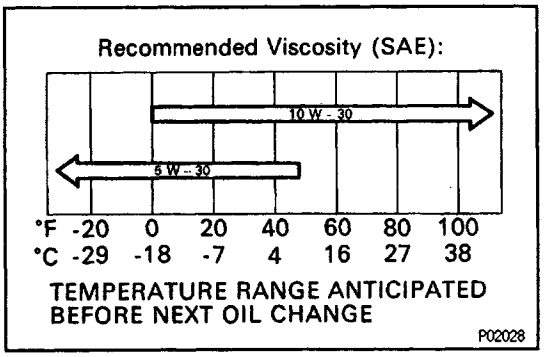
PK20R11 for ND

BKR6EP–11 for NGK

NOTICE: 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.



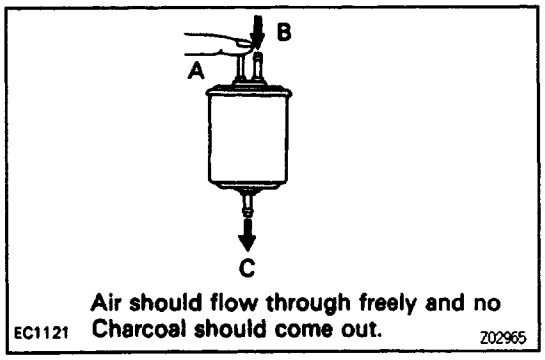
(d) Using a 16 mm plug wrench, reinstall the spark plugs.
Torque: 18 N–m (180 kgf–cm, 13 ft–lbf)
(e) Reconnect the high–tension cords.



6. REPLACE ENGINE OIL AND OIL FILTER
(See Lubrication System in EG section)
Oil grade:
API grade SG Energy – Conserving II multigrade engine oil. Recommended viscosity is as shown.
Drain and refill capacity:
w/ oil filter change
4.2 liters (4.4 US qts, 3.7 Imp. qts)
w/o Oil filter change
3.8 liters (4.0 US qts, 3.3 Imp. qts)

7. REPLACE ENGINE COOLANT
(See Cooling System in EG section)
HINT:
- Use a good brand of ethylene–glycol base coo–lant and mix it according to the manufacturer's instructions.
- Using coolant which includes more than 50% ethylene – glycol (but not more than 74%) is recommended.

NOTICE:
- **Do not use alcohol type coolant.**
- **The coolant should be mixed with demineralized water or distilled water.**
- **Coolant capacity (w/ Heater):**
  13.0 liters (13.7 US qts, 11.0 Imp. qts)

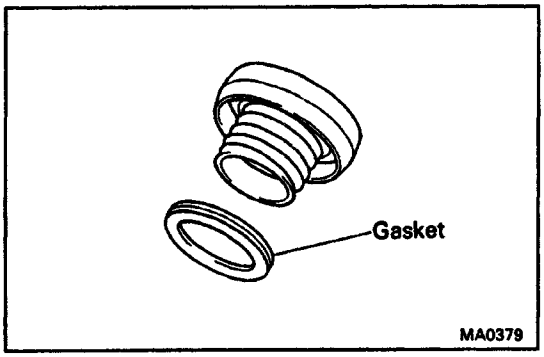


8. INSPECT CHARCOAL CANISTER
(a) Disconnect the hoses from the charcoal canister.
Label hoses for correct installation.
(b) Plug port A with your finger, and blow compressed air (294 kPa (3kgf/cm_2, 43 psi)) through port B (fuel tank side).
- Check that the air comes out of the bottom of port C without resistance.
- Check that no activated charcoal comes out.

If necessary, replace the charcoal canister–.

NOTICE: Do not attempt to wash the charcoal.

(c) Reconnect the hoses to the charcoal canister.



9. REPLACE GASKET IN FUEL TANK CAP

(a) Remove the old gasket from the tank cap.

NOTICE: Do not damage the tank cap.

(b) Install a new gasket by hand.

(c) Check the cap for damage or cracks.

(d) Reinstall 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 Tune–Up in EG section)

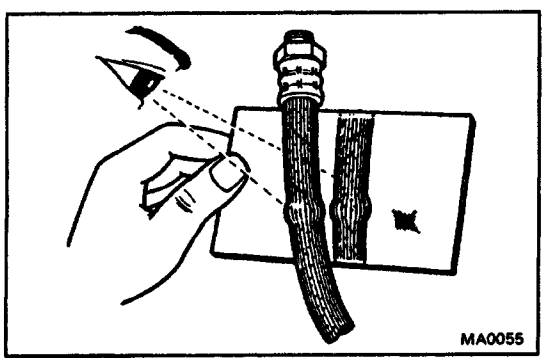
Valve clearance (Cold):

Intake

0.19 – 0.29 mm (0.007 – 0.011 in.)

Exhaust

0.28 – 0.38 mm (0.011 – 0.015 in.)



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BRAKES

13. INSPECT BRAKE LINE PIPES AND HOSES

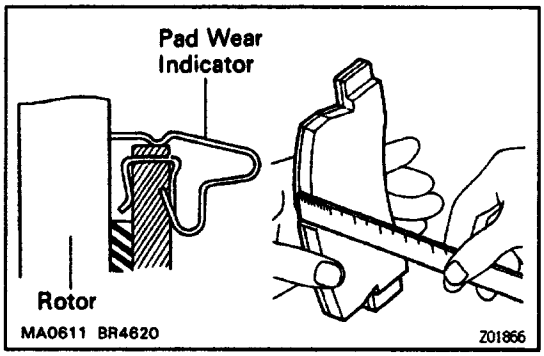
HINT: Check in a well lighted area. Check the entire circumference and length of the brake hoses using a mirror as required. Turn the front wheels fully right or left before checking the front brake.

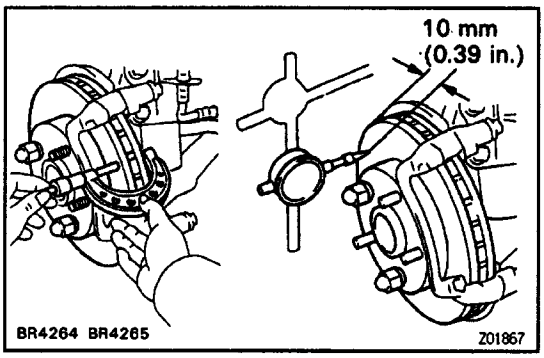
(a) Check all brake lines and hoses for:
- Damage
- Wear
- Deformation
- Cracks
- Corrosion
- Leaks
- Bends
- Twists

(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 thr–ough the center of the grommets.





14. INSPECT BRAKE PADS AND DISCS (See BR section)

(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 or runout.

Minimum disc thickness:

Front

24.0 mm (0.787 in.)

Rear

15.0 mm (0.590 in.)

Maximum disc runout:

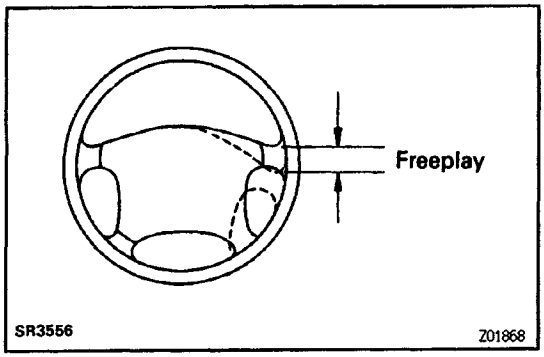
Front

0.07 mm (0.0028 in.)

Rear

0.10 mm (0.0039 in.)

MA01J–01



CHASSIS

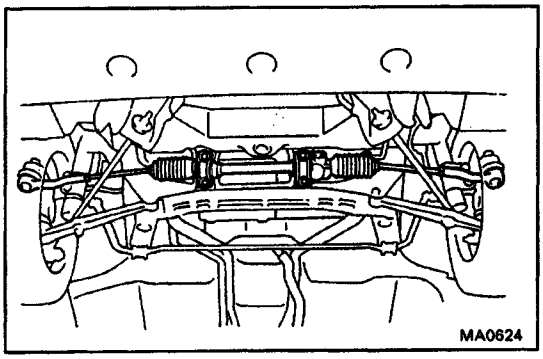
15. INSPECT STEERING LINKAGE

(a) Check the steering wheel freeplay.

Maximum steering wheel freeplay:

30 mm (1.18 in.)

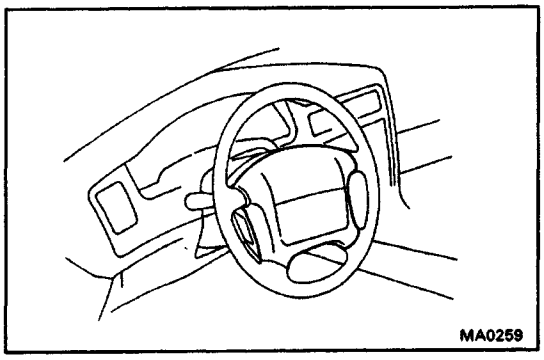
With the vehicle stopped and pointed straight ahead, rock the steering wheel gently back and forth with light finger pressure.



(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 inspect the steering wheel pad (airbag and inflater).

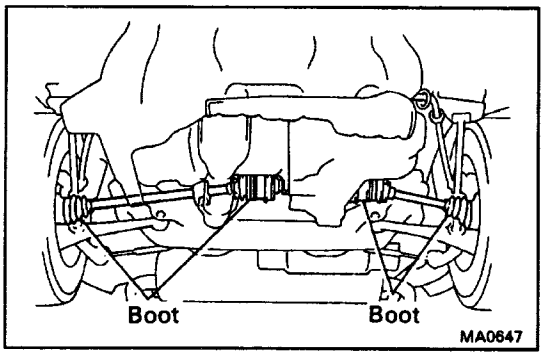
- Use the diagnosis check to check if there are abnormalities.
- Check that there are no cuts, cracks or noticeable color changes on the surface of the steering wheel pad or in the center groove of the pad.
- Remove the steering wheel pad from the vehicle and check the wiring and steering wheel for damage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

CAUTION:

- For removal and replacement of the steering wheel pad, see page SR section 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 AB section).

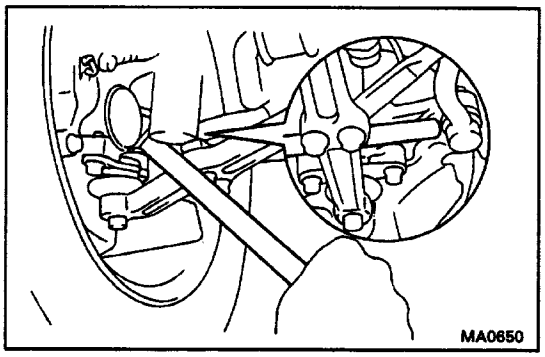
17. INSPECT STEERING GEAR HOUSING OIL

Check the steering gear housing for oil leakage.



18. INSPECT DRIVE SHAFT BOOTS

Check the drive shaft boots for clamp looseness, leakage or damage.



19. INSPECT BALL JOINTS AND DUST COVERS

(a) Inspect the ball joints for excessive looseness.

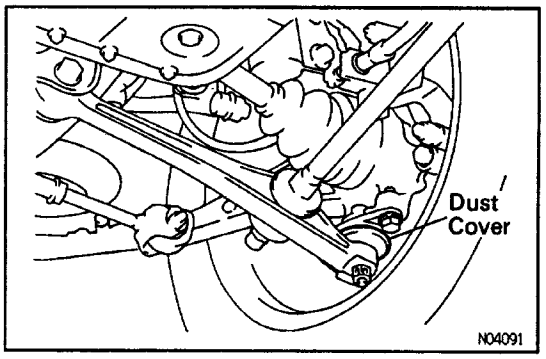
- Jack up the front of the vehicle and place wooden blocks with a height of 180 – 200 mm (7.09 – 7.87 in.) under the front tires.
- Lower the jack until there is about half a load on the front coil spring. Place stands under the ve–hicle for safety.
- Check that the front wheels are in a straight forward position, and block them with shocks.
- Using a lever, pry up the end of the lower arm, and check the amount of play.

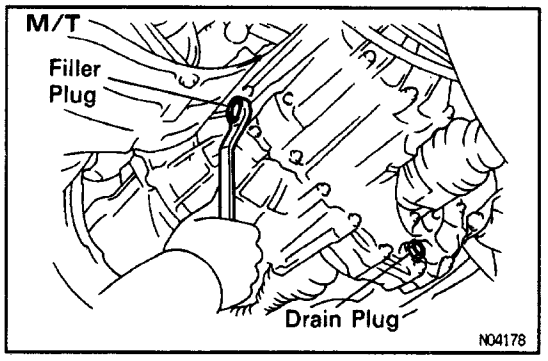
Maximum ball joint vertical play:

0 mm (0 in.)

If there is play, replace the ball joint.

(b) Check the dust cover for damage.





20. CHECK TRANSAXLE OIL (FLUID)

Visually check the transaxle for oil (fluid) leakage.

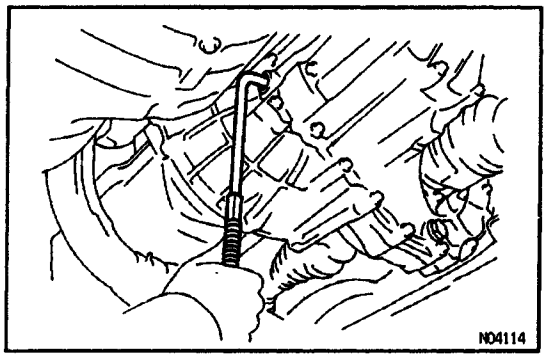
If leakage is found, check for the cause and repair.

21. REPLACE TRANSAXLE OIL (FLUID)
(INCL. DIFFERENTIAL OIL)

A. Replace transaxle oil (M/T)

(a) Remove the filler and drain plugs, and drain the oil.

(b) Reinstall the drain plug securely.



(c) Add new oil until it begins to run out of the filler hole.

Recommended transaxle oil:

Oil grade AN GL–3

Viscosity SAE 75W–90

Capacity:

2.6 liters (2.7 US qts, 2.3 Imp. qts)

In case the above oil grade is unavailable, use type A or B.

Type A:

Oil grade API GL–4

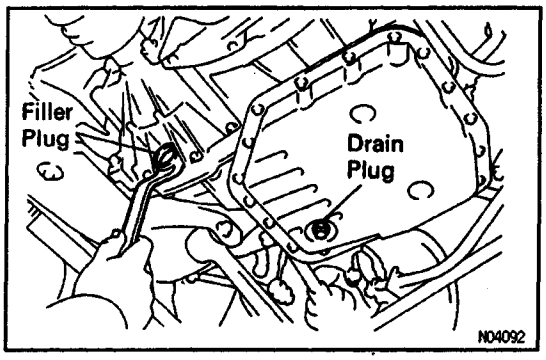
Viscosity SAE 75W–90

Type B:

oil grade AN GL–5

Viscosity SAE 75W–90

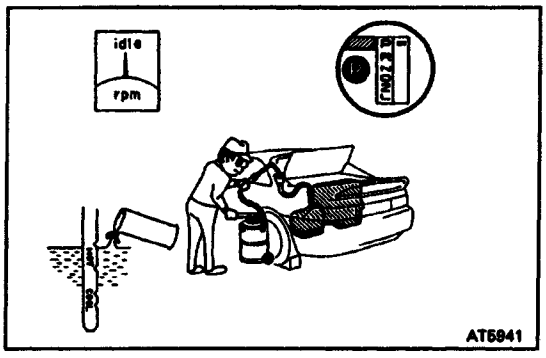
(d) Reinstall the filler plug securely.



B. Replace transaxle fluid (A/T)

(a) Using a 10 mm hexagon wrench, remove the drain plug and drain the fluid.

(b) Reinstall the drain plug securely.



(c) With the engine OFF, and new fluid through the dip–stick tube.

Transmission fluid:

ATF DEXRON® II

Drain and refill capacity:

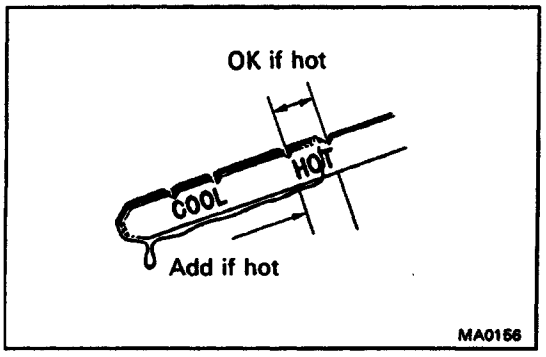
3.3 liters (3.6 US qts, 2.9 Imp. qts)

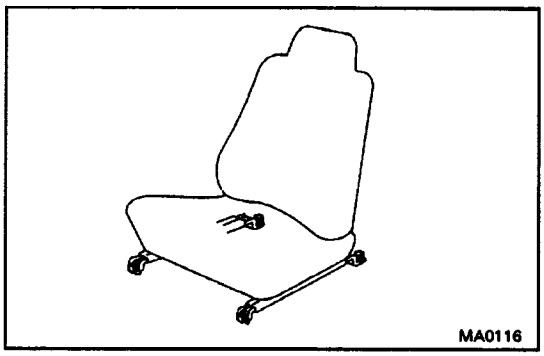
(d) Start the engine and shift the selector into all positions from ”P” through ”L”, and then shift into ”P”.

(e) With the engine idling, check the fluid level. Add fluid up to the ”COOL” level on the dipstick.

NOTICE: Do not over–fill. The transmission and differential are separate units.

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



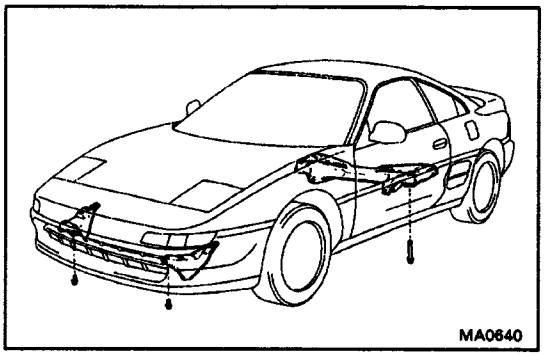


22. TIGHTEN BOLTS AND NUTS ON CHASSIS AND BODY

Tighten the following parts:

- Seat mount bolts

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



Strut bar bracket–to–body mounting bolts

Torque: 80 N–m (820 kgf–cm, 59 ft–lbf)

Rear suspension lower crossmember–to –body mounting bolts

Torque: 113 N–m (1,150 kgf–cm, 83 ft–lbf)

23. FINAL INSPECTION

(a) Check the operation of the body parts:

- Hood
  Auxiliary catch operates properly
  Hood locks securely when closed
- Doors
  Door lock operates 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.

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

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