# MAINTENANCE

# MAINTENANCE SCHEDULE

## SCHEDULE A

Maintenance operations:
A = Check and adjust if necessary
R = Replace, change or lubricate
I = Inspect and correct or replace if necessary

**CONDITIONS:**

- Towing a trailer, using a camper or car top carrier.
- Repeated short trips less than 5 miles (8 km) and outside temperature remains below freezing.
- Extensive idling and/or speed driving for a long distance such as police, taxi or door–to–door delivery use.
- Operating on dusty, rough, muddy or salt spread roads.

| System | Service interval (Odometer reading or months whichever comes first) / Maintenance items | | Maintenance services beyond 60,000 miles (96,000 km) should continue to be performed at intervals shown for each maintenance schedule. | | | | | | | | | | | | | | | | | See page (item No.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 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 | Months | |
| | | km x 1,000 | 6 | 12 | 18 | 24 | 30 | 36 | 42 | 48 | 54 | 60 | 66 | 72 | 78 | 84 | 90 | 96 | | |
| ENGINE | Timin belt | | | | | | | | | | | | | | | | | R | – | MA–4 (item 1) |
| | Valve clearance | | | | | | | | | | | | | | | | | A | A: Every 72 months | MA–7 (item 12) |
| | Drive belt | | I: First period, 60,000 miles (96,000 km) or 72 months. I: After that every 7,500 miles (12,000 km) or 12 months. | | | | | | | | | | | | | | | | | MA–4 (item 2) |
| | Engine oil* MaintenancE | 3S–GTE engine | R. Every 2,500 miles (4,000 km) or 3 months | | | | | | | | | | | | | | | | | MA–6 (item 6) |
| | | Others | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R: Every 6 months | |
| | Engine oil filter* | 3S–GTE engine | R. Every 5,000 miles (8,000 km) or 6 months | | | | | | | | | | | | | | | | | MA–6 (item 6) |
| | | Others | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R: Every 6 months | |
| | En ine coolant | | R: First period, 45,000 miles (72,000 km) or 36 months. R: After that every 30,000 mile (48,000 km) or 24 months | | | | | | | | | | | | | | | | | MA–7 (item 7) |
| FUEL | Exhaust pipes and mountin s | | | | | I | | | | I | | | | I | | | | I | I: Every 24 months | MA–8 (item 11) |
| | Idle speed | 4A–FE engine | A: Adjust at first 7,500 miles (12,000 km) or 12 months, and at 15,000 miles (24,000 km) or 24 months Then adjust every 15,000 miles (24,000 km) or 24 months. | | | | | | | | | | | | | | | | | MA–8 (item 13) |
| | Air Filter (2)–, | 3S–GTE engine | I: Every 5,000 miles (8,000 km) or 6 months R: Every 30,000 miles (48,000 km) or 36 months | | | | | | | | | | | | | | | | | MA–5 (item 3,4) |
| | | Others | I | I | I | I | I | I | I | R | I | I | I | I | I | I | I | R | I: Every 6 months R: Every 36 months | |
| | Fuel lines and connections | | | | | | | | | I | | | | | | | | I | I: Every 36 months | MA–8 (item 10) |
| IGNITION | Fuel tank ca asket | | | | | | | | | | | | | | | | | R | I: Every 72 months | MA–7 (item 9) |
| | Spark plug | 4A–FE engine *,, | | | | | | | | R | | | | | | | | R | R: Every 36 months | MA–5 (item 5) |
| EVAP | | Others | | | | | | | | | | | | | | | | R | R: Every 72 months | |
| BRAKES | Charcoal canister | | | | | | | | | | | | | | | | | I | I: Every 72 months | MA–7 (item 8) |
| | Brake linings and drums (d) | | | I | | I | | I | | I | | I | | I | | I | | I | I: Every 12 months | MA–10 (item 16) |
| | Brake pads and discs Front and rear | | | I | | I | | I | | I | | I | | I | | I | | I | I: Every 12 months | MA–10 (item 15) |
| CHASSIS | Brake line pipes and hoses | | | | | I | | | | I | | | | I | | | | I | I: Every 24 months | MA–9 (item 14) |
| | Steerin linka e | | | I | | I | | I | | I | | I | | I | | I | | I | I: Every 12 months | MA–11 (item 17) |
| | SRS airba, | | I: First period, 10 years. I: After that every 2 years. | | | | | | | | | | | | | | | | | MA–11 (item 18) |
| | Drive shaft boots | | | I | | I | | I | | I | | I | | I | | I | | I | I: Every 12 months | MA–12 item 20 |
| | Ball joints and dust covers | | | I | | I | | I | | I | | I | | I | | I | | I | I: Every 12 months | MA–12 item 21 |
| | Manual transaxle, automatic transaxle, transfer and differential | | | | | R | | | | R | | | | R | | | | R | R: Every 24 months | MA–13 (item 22, 23 |
| | Steerin ear housin oil | | | | | I | | | | I | | | | I | | | | I | I: Every 24 months | MA–12 item 19 |
| | Bolts and nuts on chassis and bod | | | I | | I | | I | | I | | I | | I | | I | | I | I: Every 12 months | MA–15 item 24 |

*and ‘ marks indicate maintenance which is part of the warranty conditions for the Emission Control System. The warranty period is i¿¿ accordance with the owner’s guide or the warranty booklet.
(* California specification vehicles
’: Other specification vehicles)
(1) Applicable to vehicles operated under conditions of extensive idling and/or low speed driving for a long distance such as police, taxi or door–to–door delivery use.
(2) Applicable when operating mainly on dusty road. If not, apply SCHEDULE B.
(3) Includes inspection of fuel tank band and vapor vent system.
(4) Also applicable to lining drum for parking brake.
(5) Check for leakage.
(6) Check for oil leaks from steering gear housing.
(7) Applicable only when operating mainly on rough, muddy roads. The applicable parts are listed below. For other usage conditions, refer to SCHEDULE B.

- Front and rear suspension member to cross body
- Strut bar bracket to body bolts
- Bolts for seat installation

# SCHEDULE B

**CONDITIONS: Conditions other than those listed for SCHEDULE A.**

| System | Service interval (Odometer reading or months, whichever comes first) / Maintenance items | | Maintenance service beyond 60,000 miles (96,000 km) should continue to be performed at the same intervals shown for each maintenance schedule. | | | | | | | | | See page (item No.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Miles x 1,000 | 7.5 | 15 | 22.5 | 30 | 37.5 | 45 | 52.5 | 60 | Months | |
| | | km x 1,000 | 12 | 24 | 36 | 48 | 60 | 72 | 84 | 96 | | |
| ENGINE | Valve clearance | | | | | | | | | A | A: Every 72 months | MA–8 (item 12) |
| | Drive belt | | I: First period, 60,000 miles (96,000 km) or 72 months. I: After that every 7,500 miles (12,000 km) or 12 months. | | | | | | | | | MA–4 (item 2) |
| | Engine oil* | 3S–GTE engine | R: Every 5,000 miles (8,000 km) or 6 months. | | | | | | | | | MA–6 (item 6) |
| | | Others | R | R | R | R | R | R | R | R | R: Every 12 months | |
| | Engine oil filter" | 3S–GTE engine | R: Every 10,000 miles (16,000 km) or 12 months. | | | | | | | | | MA–6 (item 6) |
| | | Others | R | R | R | R | R | R | R | R | R: Every 12 months | |
| | Engine coolant | | R: First period, 45,000 miles (72,000 km) or 36 months. R: After that every 30,000 miles (48,000 km) or 24 months. | | | | | | | | | MA–7 (item 7) |
| | Exhaust pipes and mountings | | | | | I | | | | I | I: Every 36 months | MA–8 (item 11) |
| FUEL | Idle speed | 4A–FE engine | A: Adjust at first 7,500 miles (12,000 km) or 12 months, and at 15,000 miles (24,000 km) or 24 months. Then adjust every 15,000 miles (24,000 km) or 24 months. | | | | | | | | | MA–8 (item 13) |
| | Air filter" | | | | | R | | | | R | R: Every 36 months | MA–5 (item 4) |
| | Fuel lines and connections | | | | | I | | | | I | I: Every 36 months | MA–8 (item 10) |
| | Fuel tank cap gasket | | | | | | | | | R | R: Every 72 months | MA–7 (item 9) |
| IGNITION | Speak plugs | 4A–FE engine"' | | | | R | | | | R | R: Every 36 months | MA–5 (item 5) |
| | | Others | | | | | | | | R | R: Every 72 months | |
| EVAP | Charcoal canister | | | | | | | | | I | I: Every 72 months | MA–7 (item 8) |
| BRAKES | Brake linings and drums (2) | | | I | | I | | I | | I | I: Every 24 months | MA–10 (item 16) |
| | Brake pads and discs (Front and rear) | | | I | | I | | I | | I | I: Every 24 months | MA–10 (item 15) |
| | Brake line pipes and hoses | | | I | | I | | I | | I | I: Every 24 months | MA–9 (item 14) |
| CHASSIS | Steering linkage | | | I | | I | | I | | I | I: Every 24 months | MA–11 (item 17) |
| | SRS airbag | | I: First period, 10 years. I: After that every 2 years. | | | | | | | | | MA–11 (item 18) |
| | Drive shaft boots | | | I | | I | | I | | I | I: Every 24 months | MA–12 (item 20) |
| | Ball joints and dust covers | | | I | | I | | I | | I | I: Every 24 months | MA–12 (item 21) |
| | Manual transaxle, automatic transaxle and differential (3) | | | I | | I | | I | | I | I: Every 24 months | MA–13 (item 22) |
| | Steering gear housing oil | | | I | | I | | I | | I | I: Every 24 months | MA–12 (item 19) |
| | Bolts and nuts on chassis and body (5) | | | I | | I | | I | | I | I: Every 24 months | MA–15 (item 24) |

* ad * marks conditions for the Emission Control System. The warranty period is in accordance with the owner's guide or the warranty booklet .
i*: California specification vehicles *: Other specification vehicles)
1 Includes inspection of fuel tank band and vapor vent system.
2 Also applicable to lining drum for parking brake.
3 Check for leakage.
4 Check for oil leaks from steering gear housing.
5 The applicable parts are listed below.

- Front and rear suspension member to cross body
- Strut bar bracket to body bolt

# MAINTENANCE OPERATIONS

## ENGINE

## Cold Engine Operations

**1. REPLACE TIMING BELT**

(a) Remove the timing belt.

4A–FE (See pages EM–33 to 37)

3S–GTE (See pages EM–46 to 51)

5S–FE (See pages EM–67 to 72)

(b) Install the timing belt.

4A–FE (See pages EM–40 to 45)

3S–GTE (See pages EM–55 to 61)

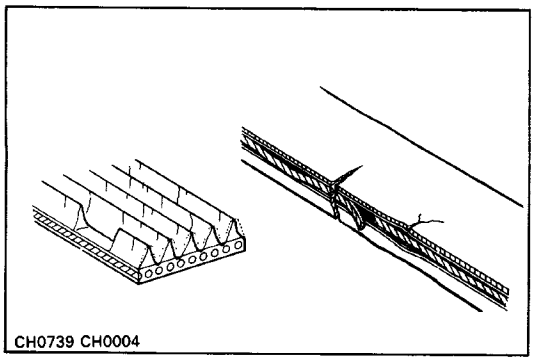
5S–FE (See pages EM–75 to 80)

**2. INSPECT DRIVE BELT**

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

If necessary, replace the drive belt.

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

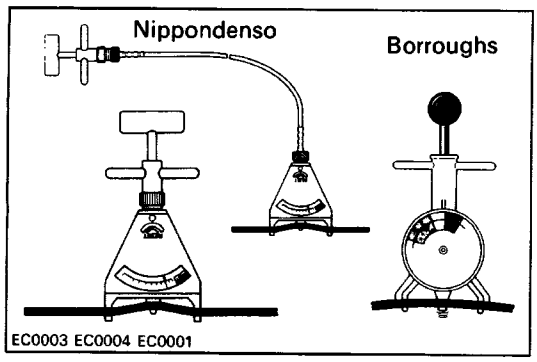



(b) Using a belt tension gauge, measure the drive belt tension.

Belt tension gauge:

Nippondenso BTG–20 (95506–00020)

Borroughs No. BT–33–73F




**Drive belt tension:**

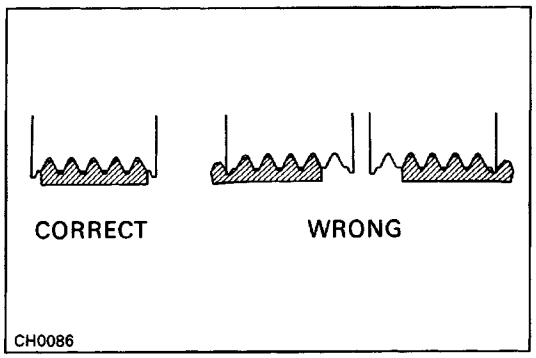
**(4A–FE)**

| | | |
|---|---|---|
| **Alternator** | **New belt 160 + 20 lbf** |
| | **Used belt 130 + 20 lbf** |
| **PS pump** | **New belt 125 ±25 lbf** |
| | **Used belt 80 ±20 lbf** |
| **A/C compressor** | **New belt 160 + 20 lbf** |
| | **Used belt 100 + 20 lbf** |

**(3S–GTE and 5S–FE):**

| | | |
|---|---|---|
| **Alternator (3S–GTE)** | | |
| | **w/ A/C** | **New belt 175 f 5 lbf** |
| | | **Used belt 115 + 20 lbf** |
| | **w/o A/C** | **New belt 150 ±25 lbf** |
| | | **Used belt 130 + 25 lbf** |
| **Alternator (5S–FE)** | | |
| | **w/ A/C** | **New belt 175 ±5 lbf** |
| | | **Used belt 130 ±10 lbf** |
| | **w/o A/C** | **New belt 125 + 25 lbf** |
| | | **Used belt 95 + 20 lbf** |
| **PS pump** | | **New belt 125 + 25 lbf** |
| | | **Used belt 80 ±20 lbf** |

If necessary, adjust the drive belt tension.



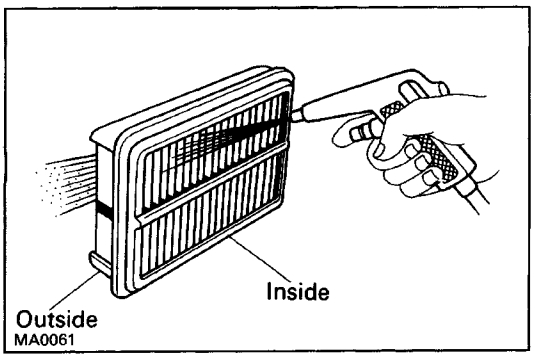

HINT:

- ”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 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) Visually check that the element is not excessively damaged or oily.
If necessary, replace the element.

(b) Clean the element with compressed air.
First blow from the inside thoroughly, then blow off the outside of the element.



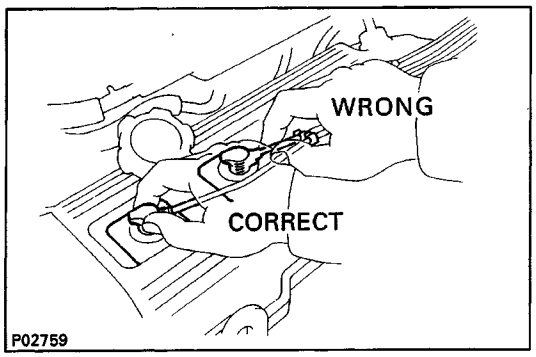

**4. REPLACE AIR FILTER**

Replace the element with a new one.

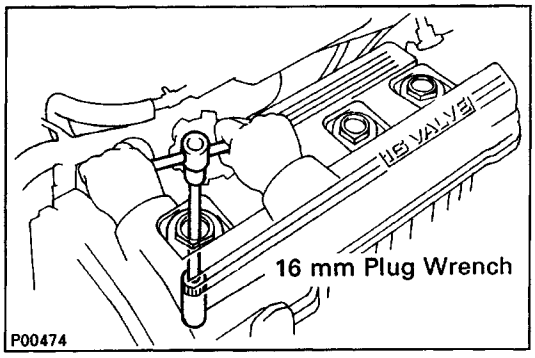
**5. REPLACE SPARK PLUGS**

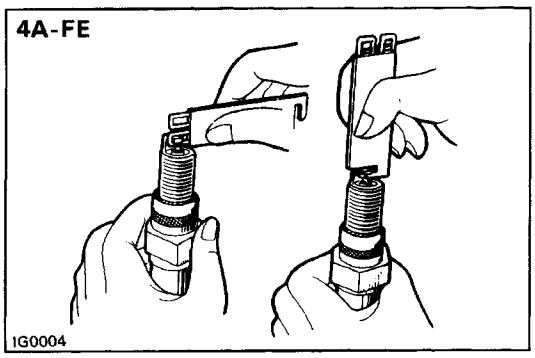
(a) (3S–GTE)
Remove the intercooler.
(See pages TC–9 and 10)

(b) Disconnect the spark plug cords at the rubber boot.
DO NOT pull on the cords.




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

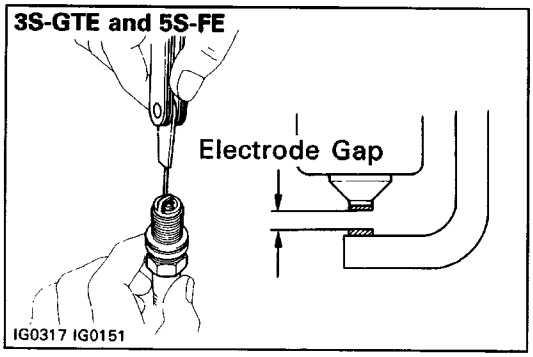



(d) (4A–FE)

Adjust the electrode gap of new spark plugs.

**Correct electrode gap:** **0.8 mm (0.031 in.)**
**Recommended spark plugs:** **ND Q16R–U**
**NGK BCPRSEY**




(e) (3S–GTE and 5S–FE)
Check the electrode gap of new spark plugs.

**Correct electrode gap:**
**3S–GTE 0.8 mm (0.031 in.)**
**5S–FE 1.1 mm (0.043 in.)**

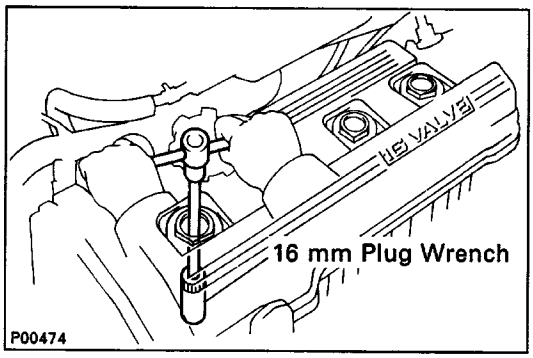
**Recommended spark plugs:**
**3S–GTE ND PK20R8**
**NGK BKR6EP8**
**5S–FE ND PK20R17**
**NGK BKR6EP–11**

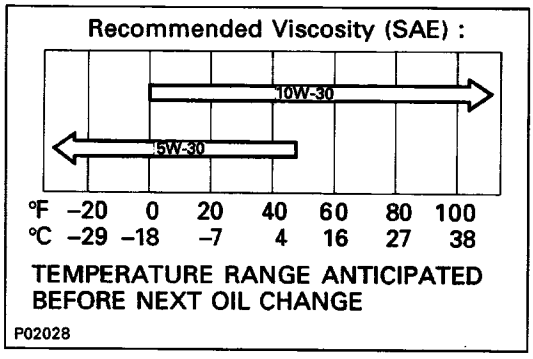
HINT: If adjusting the gap of anew plug, bend only the base of the ground electrode.

(f) Using a 16 mm plug wrench, reinstall the spark plugs.
**Torque: 18 N–m (180 kgf–cm, 13 ft–lbf)**

(g) Reconnect the spark plug cords.

(h) (3S–GTE)
Reinstall the intercooler. (See page TC–17)



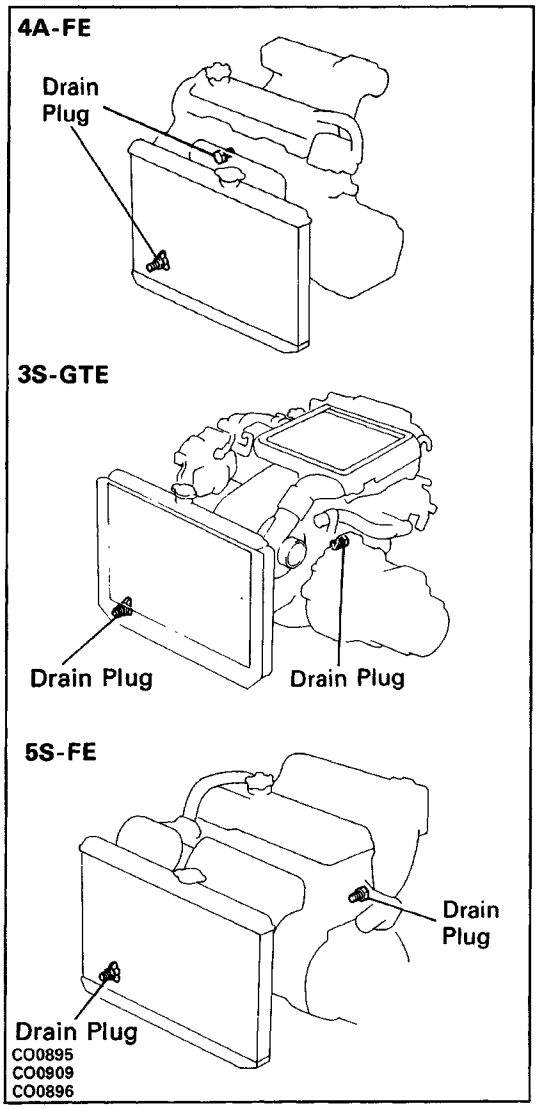




**6. REPLACE ENGINE OIL AND OIL FILTER**
**(See page LU–7)**

**Oil grade: API grade SG, multigrade and fuel–efficient oil**

**Recommended viscosity: Refer to illustration**

**Drain and refill capacity:**
**(4A–FE)**
**w/ Oil filter change**
**3.2 liters (3.3 US qts, 2.8 Imp. qts)**
**w/o Oil filter change**
**3.0 liters (3.1 US qts, 3.4 Imp. qts)**
**(3S–GTE)**
**w/ Oil filter change**
**3.9 liters (4.1 US qts, 3.4 Imp. qts)**
**w/o Oil filter change**
**3.6 liters (3.8 US qts, 3.2 Imp. qts)**
**(5S–FE w/ Oil cooler)**
**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)**
**(5S–FE w/o Oil cooler)**
**w/ Oil filter change**
**4.1 liters (4.3 US qts, 3.6 Imp. qts)**
**w/o Oil filter change**
**3.7 liters (3.9 US qts, 3.3 Imp. qts)**




### 7. REPLACE ENGINE COOLANT

**(See page CO–6)**

HINT:

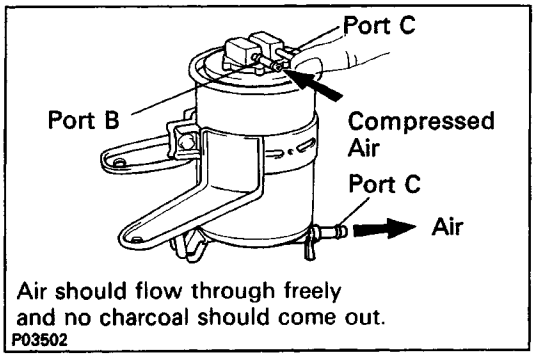
- Use a good brand of ethylene–glycol base coolant, mixed according to the manufacturer's instructions.
- Using coolant which includes more than 50% ethylene–glycol (but not more than 70%) is recommended.

**NOTICE:**

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

**Coolant capacity (w/ Heater):**

**(4A–FE)**
**M/T 5.2 liters (5.5 US qts, 4.6 Imp. qts)**
**A/T 5.6 liters (5.9 US qts, 4.9 Imp. qts)**
**(3S–GTE) 6.5 liters (6.9 US qts, 5.7 Imp. qts)**
**(5S–FE)**
**M/T 6.2 liters (6.6 US qts, 5.5 Imp. qts)**
**A/T 6.1 liters (6.4 US qts, 5.4 Imp. qts)**



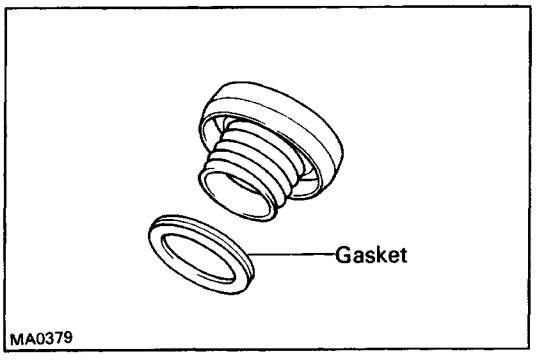

### 8. INSPECT CHARCOAL CANISTER

(a) Disconnect the hoses from the charcoal canister.
Label hoses for correct installation.
(b) Plug port C with your finger, and blow compressed air (294 kPa (3 kgf/cm$^2$, 43 psi)) through port B (fuel tank side).

- Check that the air comes out of the bottom of port A 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**

**4A–FE (See page EM–13)**

**3S–GTE (See page EM–17)**

**5S–FE (See page EM–22)**

**Valve clearance (Cold):**

**4A–FE Intake 0.15 – 0.25 mm**
**(0.006 – 0.010 in.)**
**Exhaust 0.20 – 0.30 mm**
**(0.008 – 0.012 in.)**
**3S–GTE Intake 0.15 – 0.25 mm**
**(0.006 – 0.010 in.)**
**Exhaust 0.28 – 0.38 mm**
**(0.011 – 0.015 in.)**
**5S–FE Intake 0.19 – 0.29 mm**
**(0.007 – 0.011 in.)**
**Exhaust 0.28 – 0.38 mm**
**(0.011 – 0.015 in.)**

## Hot Engine Operations

**13. (4A–FE)**

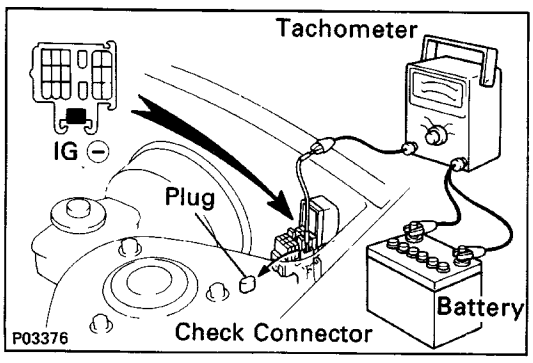
**ADJUST IDLE SPEED**

(a) Preparation

- Engine at normal operating temperature
- Air cleaner installed
- All pipes and hoses of air induction system connected
- All vacuum lines connected

HINT: All vacuum hoses for EGR systems, etc. should be properly connected.

- EFI system wiring connector fully plugged
- All accessories switched OFF
- Transmission in neutral position

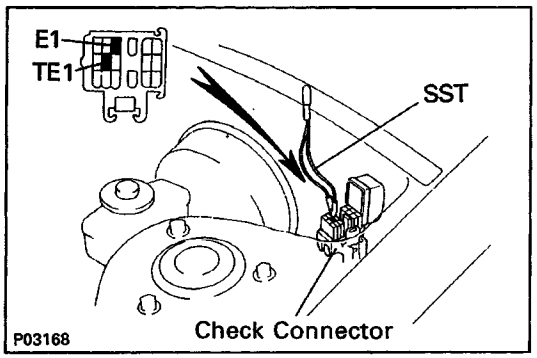



(b) Connect a tachometer to the engine.

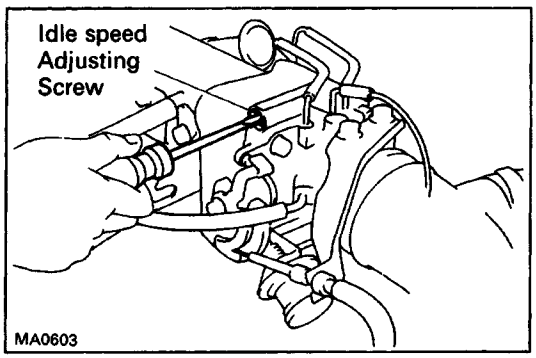
Connect the test probe of a tachometer to terminal IG (–) of the check connector.

**NOTICE:**

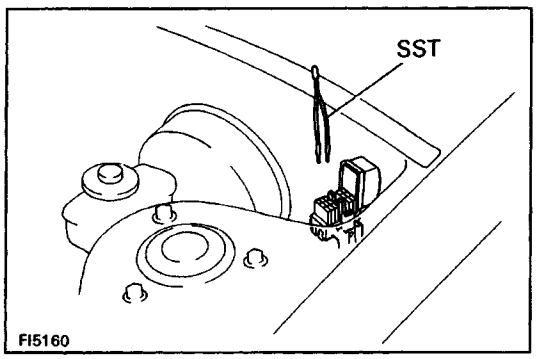
- **NEVER allow the tachometer terminal to touch ground as it could result in damage to the igniter and/or igniter coil.**
- **As some tachometers are not compatible with this ignition system, we recommend that you confirm the compatibility of your unit before use.**



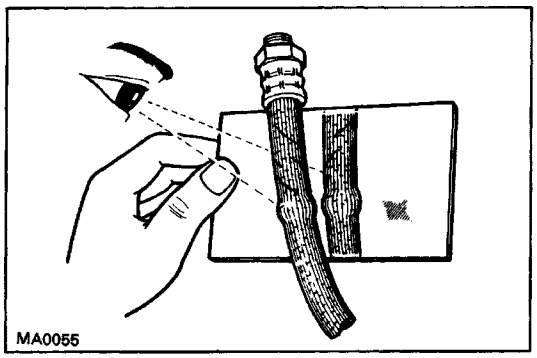

(c) Race the engine at 2.500 rpm for approx. 2 minutes.
(d) Using SST, connect terminals TE1 and E1 of the check connector.
SST 09843–18020




(e) Adjust the idle speed by turning the IDLE SPEED ADJUSTING SCREW.
**Idle speed: 800 rpm (w/ Cooling fan OFF)**
HINT: Make adjustments with the engine cooling fan OFF.




(f) Remove the SST from the check connector.
SST 09843–18020



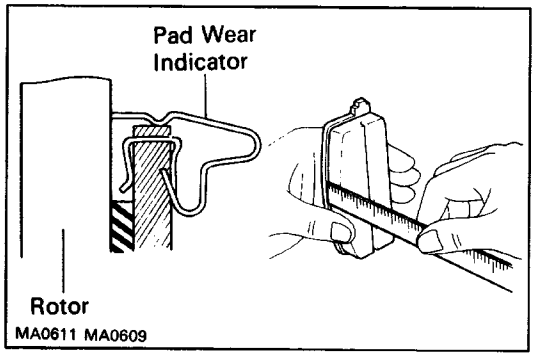

**BRAKES**

**14. 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.

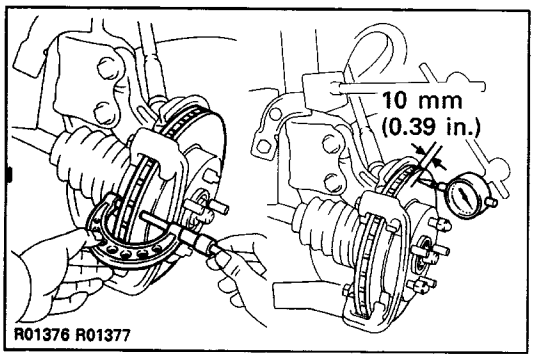



**15. INSPECT BRAKE PADS AND DISCS**

(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 or runout.

**Minimum disc thickness:**

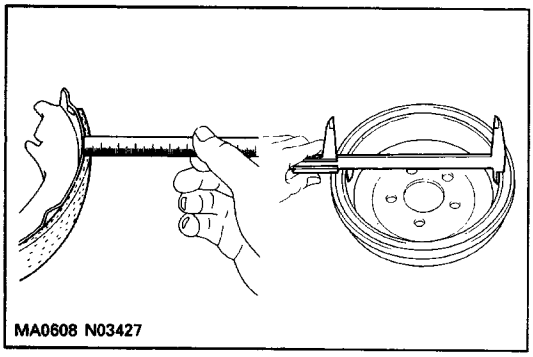
**Front 23.0 mm (0.906 in.)**

**Rear 9.0 mm (0.354 in.)**

**Maximum disc runout:**

**Front 0.07 mm (0.0028 in.)**

**Rear 0.15 mm (0.0059 in.)**




**16. INSPECT BRAKE LININGS AND DRUMS**

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

**Minimum lining thickness: 1.0 mm (0.039 in.)**

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

**Maximum drum inside diameter:**

**Drum brake 201.0 mm (7.913 in.)**

**Disc brake 171.0 mm (6.732 in.)**

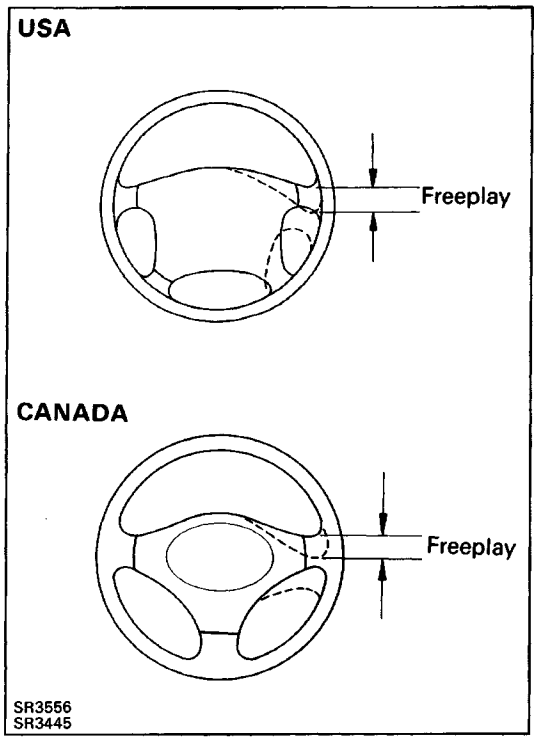
(c) Clean the brake parts with a damp cloth.

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

(d) (Disc Brake)

Settle the parking brake shoes and drum. When performing the road test in item 27, do the following:

- 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.



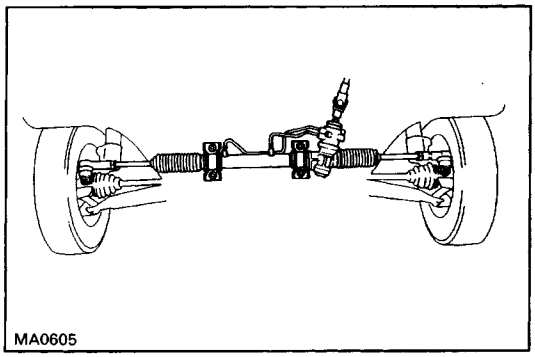

# CHASSIS

**17. INSPECT STEERING LINKAGE**

(a) Check the steering wheel freeplay.

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

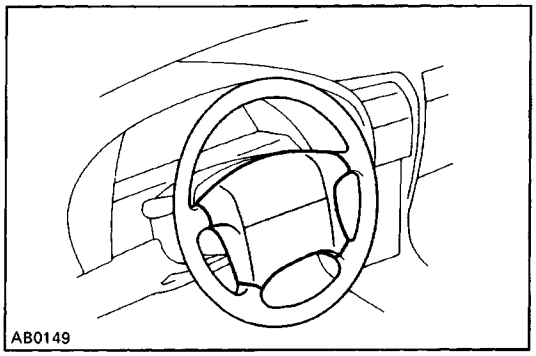
With the vehicle stopped and pointed straight ahead, rock the steering wheel gently back and forth with light finger pressure.




(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 inflater) .

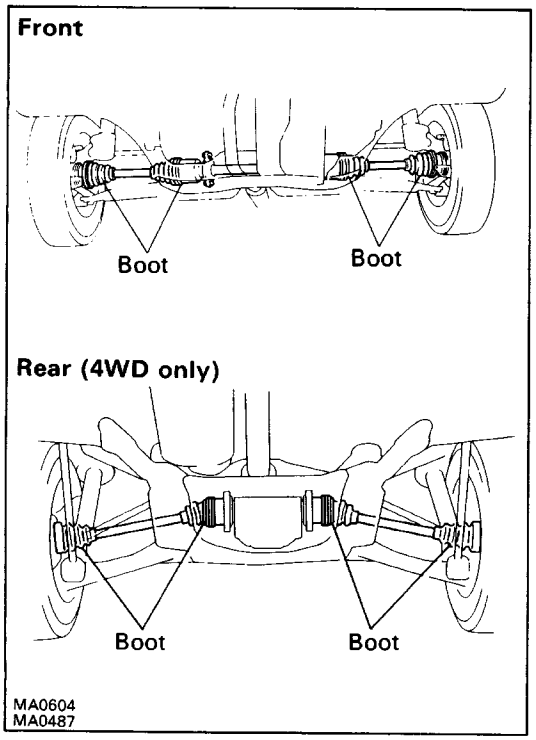
- Use the diagnosis check to check if there are abnormalities.
- Check that there are no cuts, cracks or noticeable color changes on the surface of the steering wheel pad or in the center groove of the pad.
- Remove the steering wheel pad from the vehicle and check the wiring and steering wheel for damage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

**CAUTION:**

- **For removal and replacement of the steering wheel pad, see Steering Wheel Pad and Spiral Cable on AB 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 SST (see Disposal of Steering Wheel Pad on AB section).**

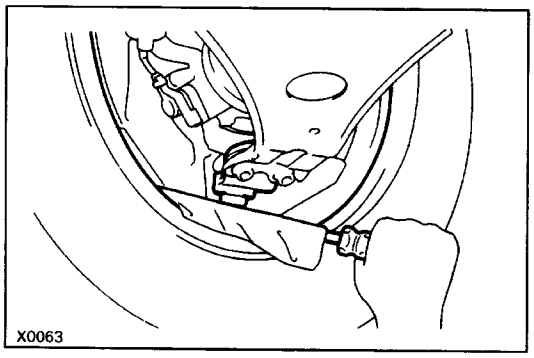
**19. INSPECT STEERING GEAR HOUSING OIL**

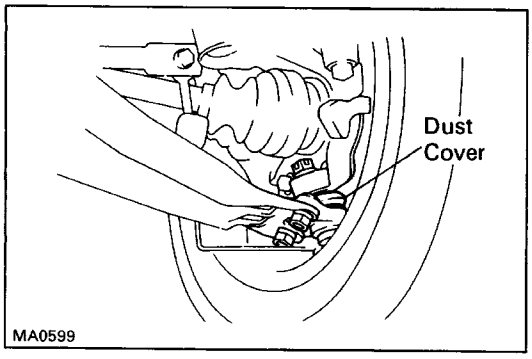
Check the steering gear box for oil leakage.




**20. INSPECT DRIVE SHAFT BOOTS**

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




**21. INSPECT BALL JOINTS AND DUST COVERS**

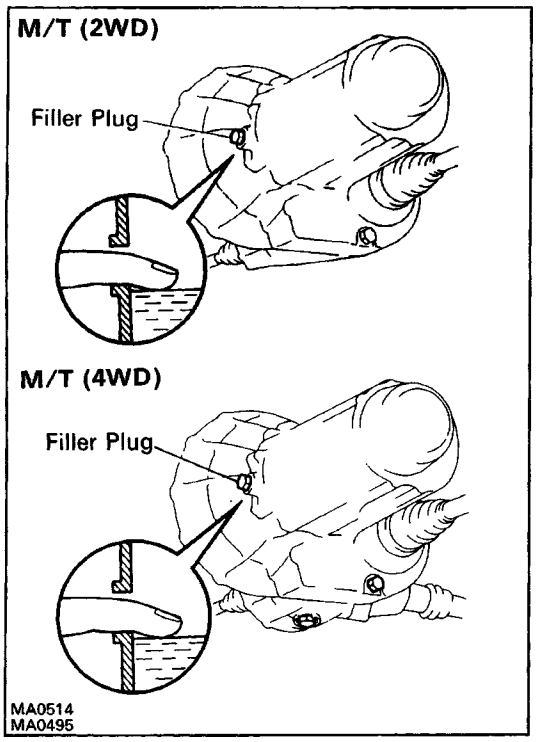
(a) Inspect the ball joints for excessive looseness.

- 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 springs. Place stands under the vehicle for safety.
- Check that 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: 0 mm (0 in.)**

If there is play, replace the ball joint.

(b) Check the dust cover for damage.




**22. CHECK TRANSAXLE FLUID**

**A. (M/T)**

Check manual transaxle fluid

(a) Remove the LH engine under cover.

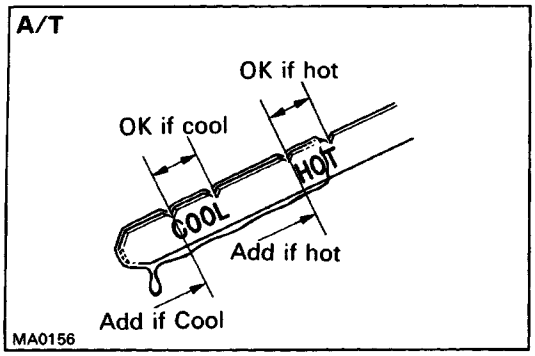
(b) Visually check the transaxle for fluid leakage.
If leakage is found, check for the cause and repair.

(c) Remove the filler plug and feel inside the hole with your finger. Check that the fluid comes to within 5 mm (0.20 in.) of the bottom edge of the filler hole.
If the level is low, add oil fluid until it begins to run out of the filler hole.

**Transaxle fluid: 2WD See item 23 (A)**
**4WD See item 23 ( B )**

(d) Reinstall the filler plug securely.

(e) Reinstall the LH engine under cover.




**B. (A/T)**

Check automatic transaxle fluid

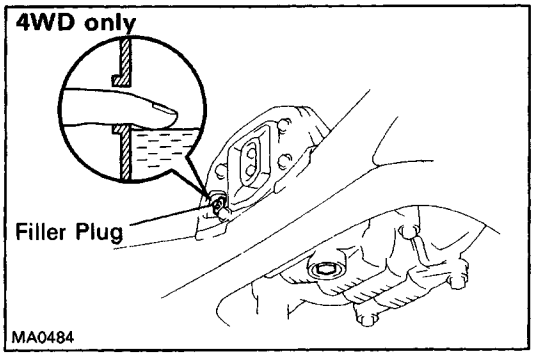
(a) Remove the LH engine under cover.

(b) Visually check the transaxle for fluid leakage.
If leakage is found, check for the cause and repair.

(c) Check the fluid level.
If the level is low, add fluid.

**Transmission fluid: See item 23 (C)**

(d) Reinstall the LH engine under cover.




**C. (4WD only)**

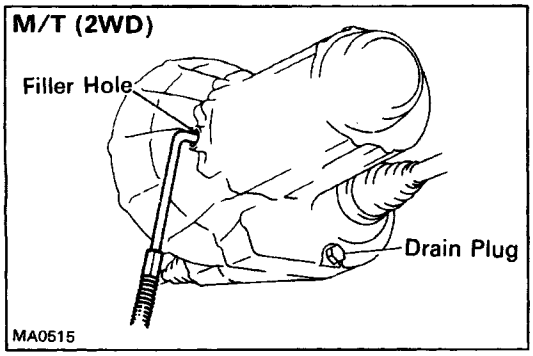
**Check rear differential oil**

(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.

**Transaxle oil: See item 23 (D)**

(c) Reinstall the filler plug securely.




**23. REPLACE TRANSAXLE FLUID**

**A. (M/T (2WD))**

**Replace transaxle fluid**

(a) Remove the LH engine under cover.
(b) Remove the filler and drain plugs, and drain the fluid.
(c) Reinstall the drain plug securely.
(d) Add new fluid until it begins to run out of the filler hole.

**Recommended transaxle oil:**
**Oil grade API GL–3**
**Viscosity SAE 75W–90**

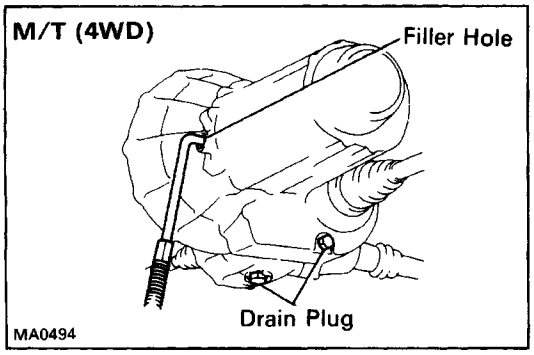
**Capacity: 2.6 liters (2.7 US qts, 2.3 Imp. qts)**

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 API GL–5**
**Viscosity SAE 75W–90**

(e) Reinstall the filler plug securely.
(f) Reinstall the LH engine under cover.




**B. (M /T (4WD))**

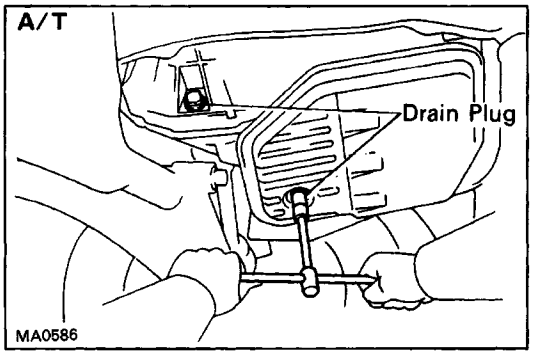
**Replace transaxle oil (Incl. transfer oil)**

(a) Remove the LH engine under cover.
(b) Remove the filler and drain plugs, and drain the oil.
(c) Reinstall the drain plugs securely.
(d) Add new oil until it begins to run out of the filler hole.

**Transaxle oil: Transaxle oil E50 (08885–80206) or equivalent**

**Recommended transaxle oil:**
**Oil grade API GL–5**
**Viscosity SAE 75W–90 or 80W–90**
**Above –18˚C (0˚F) SAE 90**
**Below – 18˚C (0˚F) SAE 80W**
**Capacity: 5.2 liters (5.5 US qts, 4.6 Imp. qts)**

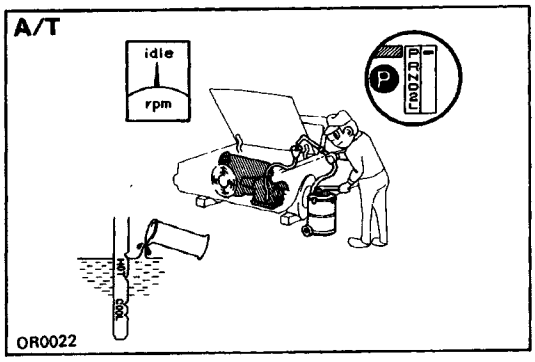
(e) Reinstall the filler plug securely.
(f) Reinstall the LH engine under cover.




**C. (A/T)**

**Replace transaxle fluid**

(a) Remove the LH engine under cover.
(b) Remove the drain plugs, and drain the fluid.
(c) Reinstall the drain plugs securely.




(d) With the engine OFF, add new fluid through the dipstick tube.

**Transaxle fluid: ATF DEXRON□II**

**Drain and refill capacity:**

**3.3 liters (3.5 US qts, 2.9 Imp. qts)**

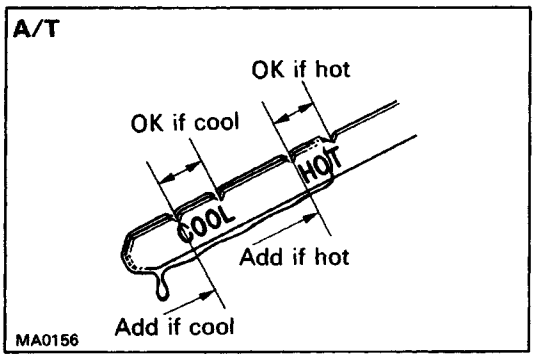
(e) Start the engine and shift the selector into all positions from "P" through "L", and then shift into "P".

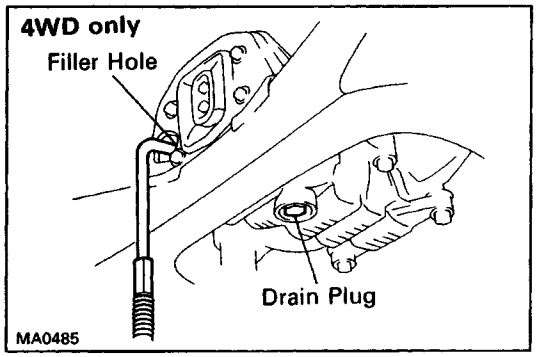
(f) With the engine idling, check the fluid level. Add fluid up to the "COOL" level on the dipstick.

**NOTICE: Do not overfill.**

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

(h) Reinstall the LH engine under cover.




**D. (4WD only)**

**Replace rear differential oil**

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

(b) Reinstall the drain plugs securely.

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

**Rear differential oil:**

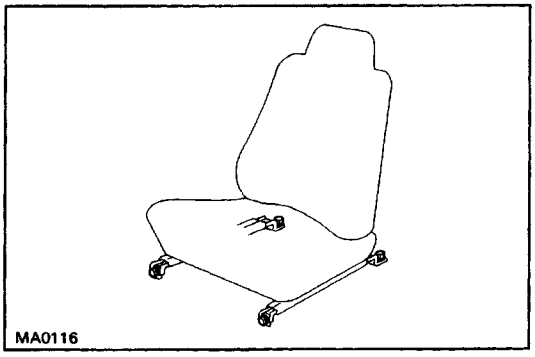
**Oil grade API GL–5 hypo^d gear oil**

**Viscosity Above –18˚C (0˚F) SAE 90**

**Below–18˚C (0˚F) SAE 80W–90 or 80W**

**Capacity: 1.1 liters (1.2 US qts, 1.0 Imp. qts)**

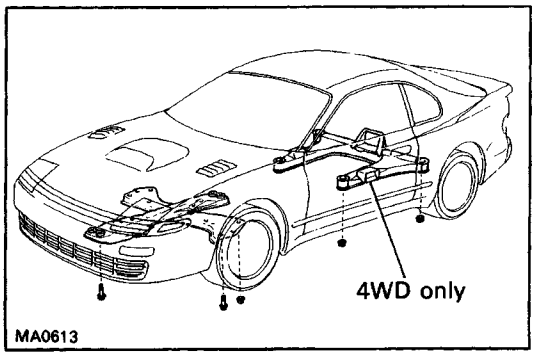
(d) Reinstall the filler plug securely.




**24. TIGHTEN BOLTS AND NUTS ON CHASSIS AND BODY**

Tighten the following parts:

- Front seat mounting bolts
  **Torque: 37 N–m (375 kgf–cm, 27 ft–lbf)**
- Engine mounting center member–to–body mounting bolts
  **Torque: 52 N–m (530 kgf–cm, 38 ft–lbf)**
- Front suspension lower crossmember–to– body mounting bolts
  **Torque: 152 N–m (1,550 kgf–cm, 112 ft–lbf)**
- (4WD only)
  Rear suspension lower crossmember–to–body mounting bolts
  **Torque: 159 N–m (9,620 kgf–cm, 117 ft–lbf)**



**25. BODY INSPECTION**

(a) Check the body exterior for dents, scratches and rust.

(b) Check the underbody for rust and damage.

**26. 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–1 0)

**27. 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 and back 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) Be sure to deliver a clean car. Especially check:

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

# GENERAL MAINTENANCE

These are the maintenance and inspection items which are considered to be the owner's responsibility. They can be performed by the owner or he can have them done at a service shop. These items include those which should be checked on a daily basis, those which, in most cases, do not require (special) tools and those which are considered to be reasonable for the owner to perform. Items and procedures for general maintenance are as follows.

# OUTSIDE VEHICLE

**1. TIRES**

(a) Check the pressure with a gauge. Adjust if necessary.

(b) Check for cuts, damage of excessive wear.

**2. WHEEL NUTS**

When checking the tires, check the nuts for looseness or for missing nuts. If necessary, tighten them.

**3. TIRE ROTATION**

It is recommended that tires be rotated every 7,500 miles (12,000 km).

**4. WINDSHIELD WIPER BLADES**

Check for wear or cracks whenever they do not wipe clean. Replace if necessary.

**5. FLUID LEAKS**

(a) Check underneath for leaking fuel, oil, water or other fluid.

(b) If you smell gasoline fumes or notice any leak, have the cause found and corrected.

**6. DOORS AND ENGINE HOOD**

(a) Check that all doors including the trunk lid and back door operate smoothly, and that all latches lock securely.

(b) Check that the engine hood secondary latch secures the hood from opening when the primary latch is released.

# INSIDE VEHICLE

**7. LIGHTS**

(a) Check that the headlights, stop lights, taillights, turn signal lights, and other lights are all working.

(b) Check the headlight aim.

**8. WARNING LIGHTS AND BUZZERS**

Check that all warning lights and buzzers function properly.

**9. HORN**

Check that it is working.

**10. WINDSHIELD GLASS**

Check for scratches, pits or abrasions.

**11. WINDSHIELD WIPER AND WASHER**

(a) Check operation of the wipers and washer.

(b) Check that the wipers do not streak.

**12. WINDSHIELD DEFROSTER**

Check that the air comes out from the defroster outlet when operating the heater or air conditioner at defroster mode.

**13. REAR VIEW MIRROR**

Check that it is mounted securely.

**14. SUN VISORS**

Check that they move freely and are mounted securely.

**15. STEERING WHEEL**

Check that it has specified freeplay. Be alert for changes in steering condition, such as hard steering, excessive freeplay or strange noise.

**16. SEATS**

(a) Check that all front seat controls such as seat adjuster, seatback recliner, etc. operate smoothly.

(b) Check that all latches lock securely in any position.

(c) Check that the locks hold securely in any latched position.

(d) Check that the head restraints move up and down smoothly and that the locks hold securely in any latched position.

(e) For folding–down rear backs, check that the latches lock securely.

**17. SEAT BELTS**

(a) Check that the seat belt system such as buckles, retractors and anchors operate properly and smoothly,.

(b) Check that the belt webbing is not cut, frayed, worn or damaged.

**18. ACCELERATOR PEDAL**

Check the pedal for smooth operation and uneven pedal effort or catching.

**19. CLUTCH PEDAL (See Check and Adjustment of Clutch Pedal in CL section)**

Check the pedal for smooth operation.
Check that the pedal has the proper freeplay.

**20. BRAKE PEDAL (See Checks and Adjustments in BR section)**

(a) Check the pedal for smooth operation.
(b) Check that the pedal has the proper reserve distance and freeplay.
(c) Check the brake booster function.

**21. BRAKES**

At a safe place, check that the brakes do not pull to one side when applied.

**22. PARKING BRAKE (See Check and Adjustment of Parking Brake in BR section)**

(a) Check that the lever has the proper travel.
(b) On a safe incline, check that the vehicle is held securely with only the parking brake applied.

**23. AUTOMATIC TRANSMISSION "PARK" MECHANISM**

(a) Check the lock release button of the selector lever for proper and smooth operation.
(b) On a safe incline, check that the vehicle is held securely with the selector lever in the "P" position and all brakes released.

# UNDER HOOD

**24. WINDSHIELD WASHER FLUID**

Check that there is sufficient fluid in the tank.

**25. ENGINE COOLANT LEVEL**

Check that the coolant level is between the "FULL" and "LOW" lines on the see–through reservoir.

**26. RADIATOR AND HOSES**

(a) Check that the front of the radiator is clean and not blocked with leaves, dirt or bugs.
(b) Check the hoses for cracks, kinks, rot or loose connections.

**27. BATTERY ELECTROLYTE LEVEL**

Check that the electrolyte level of all battery cells is between the upper and lower level lines on the case. If level is low, add distilled water only.

**28. BRAKE AND CLUTCH FLUID LEVELS**

(a) Check that the brake fluid level is near the upper level line on the see–through reservoir.
(b) Check that the clutch fluid level is within ±5 mm (0.20 in.) of the reservoir hem.

**29. ENGINE DRIVE BELTS**

Check all drive belts for fraying, cranks, wear or oiliness.

**30. ENGINE OIL LEVEL**

Check the level on the dipstick with the engine turned off.

**31. POWER STEERING FLUID LEVEL**

Check the level on the dipstick.
The level should be in the "HOT" or "COLD" range depending on the fluid temperature.

**32. AUTOMATIC TRANSMISSION FLUID LEVEL**

(a) Park the vehicle on a level surface.
(b) With the engine idling and the parking brake applied, shift the selector into all positions from "P" to "L", and then shift into "P".
(c) Pull out the dipstick and wipe off the fluid with a clean rag. Re–insert the dipstick and check that the fluid level is in the HOT range.
(d) Perform this check with the fluid at normal driving temperature (70 – 80˚C (158 – 176˚F)).

HINT: Wait about 30 minutes before checking the fluid level after extended driving at high speeds in hot weather, driving in heavy traffic or with a trailer.

**33. EXHAUST SYSTEM**

Visually inspect for cracks, holes or loose supports.
If any change in the sound of the exhaust or smell of the exhaust fumes is noticed, have the cause located and corrected.