

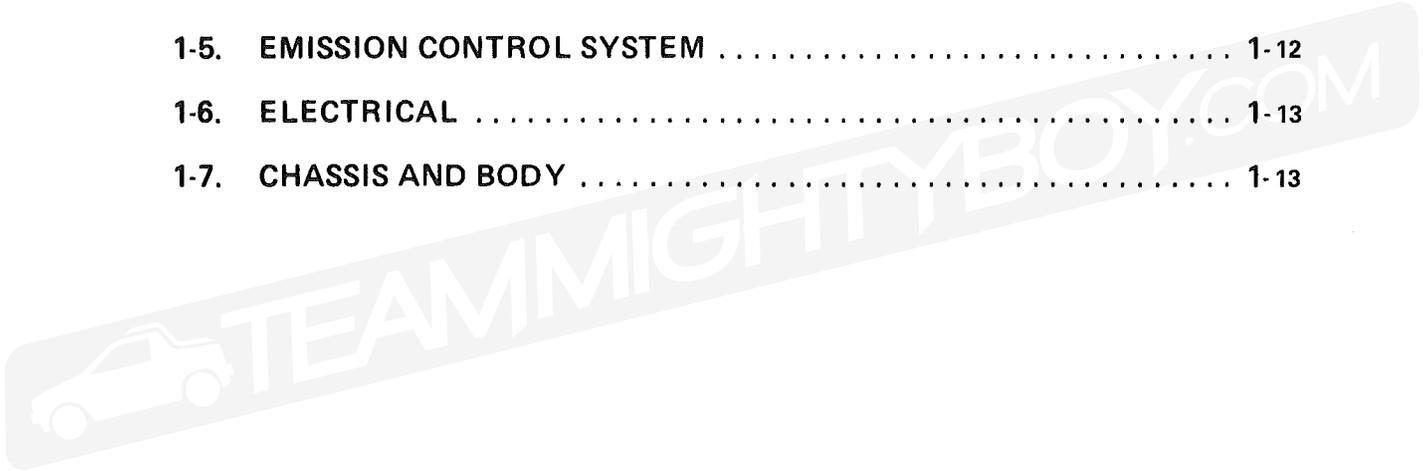
## SECTION 1

# PERIODIC MAINTENANCE SERVICE

1

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## 1-1. MAINTENANCE SCHEDULE

|   |  |  |                                       |     |     |     |     |     |     |     |
|---|--|--|---------------------------------------|-----|-----|-----|-----|-----|-----|-----|
| Interval:<br>This interval should be judged by odometer reading or months, whichever comes first. | This table includes services as scheduled up to 80,000 km (48,000 miles) mileage. Beyond 80,000 km (48,000 miles), carry out the same services at the same intervals respectively. |  |                                       |     |     |     |     |     |     |     |
|   | km (x 1,000)   | 1  | 10                                    | 20  | 30  | 40  | 50  | 60  | 70  | 80  |
|   | miles (x 1,000)  | 1  | 6                                     | 12  | 18  | 24  | 30  | 36  | 42  | 48  |
|   | months   | 1  | 6                                     | 12  | 18  | 24  | 30  | 36  | 42  | 48  |
| <b>ENGINE</b>   |  |  |                                       |     |     |     |     |     |     |     |
| 1. Water pump drive belt (tension, damage)  |  | I  | -                                     | I   | -   | R   | -   | I   | -   | R   |
| 2. Valve lash (clearance)   |  | I  | -                                     | I   | -   | I   | -   | I   | -   | I   |
| 3. Engine bolts (All cylinder head and manifold fixings)  |  | -  | -                                     | -   | -   | T   | -   | -   | -   | T   |
| 4. Engine oil filter  |  | -  | R                                     | R   | R   | R   | R   | R   | R   | R   |
| 5. Engine oil   | API Grade SD, SE or SF   | R  | Replace every 10,000 km (6,000 miles) |     |     |     |     |     |     |     |
|   | API Grade SC   | R  | Replace every 5,000 km (3,000 miles)  |     |     |     |     |     |     |     |
| 6. Engine coolant   |  | -  | -                                     | -   | -   | R   | -   | -   | -   | R   |
| 7. Cooling system hoses and connections   |  | -  | -                                     | I   | -   | I   | -   | I   | -   | I   |
| 8. Exhaust pipes and mountings (leakage, damage, tightness)                                       |  | -  | -                                     | I   | -   | I   | -   | I   | -   | I   |
| <b>IGNITION</b>   |  |  |                                       |     |     |     |     |     |     |     |
| 9. Ignition wiring (high tension cords)   |  | -  | -                                     | I   | -   | I   | -   | I   | -   | I   |
| 10. Distributor cap and rotor (crack, wear)   |  | -  | -                                     | I   | -   | I   | -   | I   | -   | I   |
| 11. Spark plugs and distributor breaker point   |  | -  | R                                     | R   | R   | R   | R   | R   | R   | R   |
| 12. Ignition timing   |  | I  | I                                     | I   | I   | I   | I   | I   | I   | I   |
| 13. Distributor advance   |  | -  | -                                     | I   | -   | I   | -   | I   | -   | I   |
| <b>FUEL SYSTEM</b>  |  |  |                                       |     |     |     |     |     |     |     |
| 14. Air cleaner filter element  | Paved-road   | Clean every 10,000 km (6,000 miles)  |                                       |     |     |     |     |     |     |     |
|   | Dusty condition  | Clean every 2,500 km (1,500 miles) or as required  |                                       |     |     |     |     |     |     |     |
|   |  | Replace every 40,000 km (24,000 miles)<br>More frequent replacement if under dusty driving conditions. |                                       |     |     |     |     |     |     |     |
| 15. Carburetor choke system and accelerator shaft   |  | -  | I&L                                   | I&L | I&L | I&L | I&L | I&L | I&L | I&L |
| 16. Fuel tank cap, gas lines and connections (leakage, damage)                                    |  | I  | -                                     | -   | -   | I   | -   | -   | -   | I   |
| 17. Fuel filter   |  | -  | -                                     | -   | -   | R   | -   | -   | -   | R   |
| 18. Idle speed and idle mixture   |  | I  | -                                     | I   | -   | I   | -   | I   | -   | I   |

|   |  |   |    |    |    |    |    |    |    |    |
|---|--|---|----|----|----|----|----|----|----|----|
| Interval.<br>This interval should be judged by odometer reading or months, whichever comes first. | This table includes services as scheduled up to 80,000 km (48,000 miles) mileage. Beyond 80,000 km (48,000 miles), carry out the same services at the same intervals respectively. |   |    |    |    |    |    |    |    |    |
|   | km (x 1,000)   | 1 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
|   | miles (x 1,000)  | 1 | 6  | 12 | 18 | 24 | 30 | 36 | 42 | 48 |
|   | months   | 1 | 6  | 12 | 18 | 24 | 30 | 36 | 42 | 48 |
| <b>EMISSION CONTROL SYSTEM</b>  |  |   |    |    |    |    |    |    |    |    |
| 19. Crankcase ventilation hoses and connections   | -  | - | I  | -  | I  | -  | I  | -  | I  |    |
| *20. PCV valve  | -  | - | -  | -  | I  | -  | -  | -  | I  |    |
| 21. Fuel vapor storage system, hoses and connections  | -  | - | I  | -  | I  | -  | I  | -  | I  |    |
| <b>ELECTRICAL</b>   |  |   |    |    |    |    |    |    |    |    |
| 22. Wiring harness connections and headlights   | -  | - | I  | -  | I  | -  | I  | -  | I  |    |
| <b>CHASSIS AND BODY</b>   |  |   |    |    |    |    |    |    |    |    |
| *23. Clutch release arm free travel   | I  | I | I  | I  | I  | I  | I  | I  | I  | I  |
| 24. Brake discs and pads (wear, damage)<br>24-1. Brake drums and shoes (wear, damage)             | -  | I | I  | I  | I  | I  | I  | I  | I  | I  |
| 25. Brake hoses and pipes (leakage, damage, clamp)  | -  | I | I  | I  | I  | I  | I  | I  | I  | I  |
| 26. Brake fluid (level, leakage)  | I  | I | I  | I  | R  | I  | I  | I  | I  | R  |
| 27. Brake pedal (pedal-to-wall clearance)   | I  | I | I  | I  | I  | I  | I  | I  | I  | I  |
| 28. Brake lever and cable (stroke, damage)  | I  | I | I  | I  | I  | I  | I  | I  | I  | I  |
| 29. Tires (abnormal wear and pressure)  | -  | I | I  | I  | I  | I  | I  | I  | I  | I  |
| 30. Wheels, wheel nuts (damage, tightness)  | I  | I | I  | I  | I  | I  | I  | I  | I  | I  |
| 31. Shock absorbers (oil leakage, damage)   | I  | I | I  | I  | I  | I  | I  | I  | I  | I  |
| 32. Drive shafts (damage)   | -  | - | I  | -  | I  | -  | I  | -  | I  |    |
| *33. Transmission and differential oil (leakage, level)   | R  | I | I  | I  | R  | I  | I  | I  | I  | R  |
| 34. Suspension (Tightness, damage, rattle)  | T  | - | T  | -  | T  | -  | T  | -  | T  |    |
| 35. Steering condition (Tightness, damage, breakage, rattle)                                      | I  | I | I  | I  | I  | I  | I  | I  | I  | I  |
| 36. Door hinges, gear shift control lever and shaft   | -  | L | L  | L  | L  | L  | L  | L  | L  | L  |
| 37. Test drive  | Test drive on completion of each service   |   |    |    |    |    |    |    |    |    |

\* Item 20 is applicable to the car equipped with a PCV valve on the intake manifold.

\* Items 23 and 33 are applicable to the car equipped with a manual transmission.

**NOTICE:**

"R" : Replace or Change

"I" : Inspect and correct or replace if necessary

"T" : Tighten to the specified torque

"L" : Lubricate

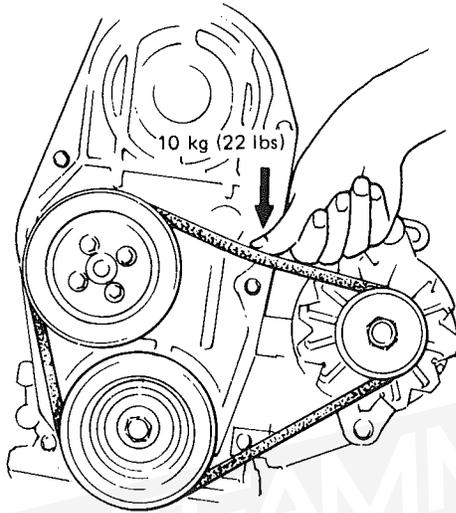
## 1-2. ENGINE

### 1. WATER PUMP BELT INSPECTION

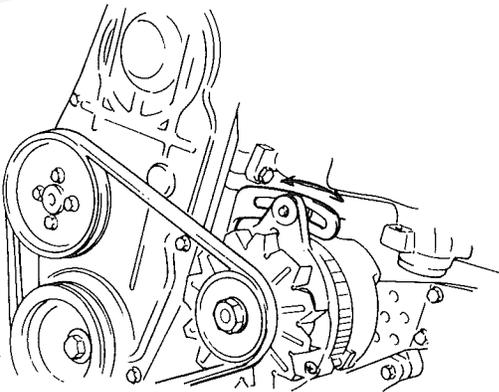
#### [Inspection]

- 1) Disconnect negative battery lead at battery.
- 2) Inspect belt for cracks, cuts, deformation, wear and cleanliness. Check belt for tension. The belt is in proper tension if it deflects 6 to 9 mm (0.24 – 0.35 in.) under thumb pressure (about 10 kg or 22 lb.).

|                            |  |
|----------------------------|--|
| Belt tension specification | 6 – 9 mm (0.24 – 0.35 in.) as deflection |
|----------------------------|--|



- 3) If the belt is too tight or too loose, adjust it to specification by adjusting alternator position.



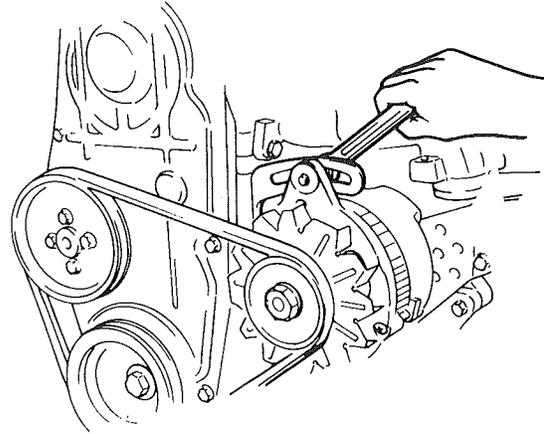
- 4) Tighten alternator adjusting bolt and pivot bolt.
- 5) Connect negative battery lead to battery.

#### **WARNING:**

All adjustments noted above are to be performed with **ENGINE NOT RUNNING**.

#### [Replacement and adjustment]

- 1) Disconnect negative battery lead at battery.
- 2) Loosen alternator adjusting bolt and pivot bolts and move alternator inward.



- 3) Replace belt.
- 4) Move alternator outward and adjust belt to specified tension.
- 5) Tighten alternator adjusting bolt and pivot bolts.
- 6) Connect negative battery lead to battery.

#### **WARNING:**

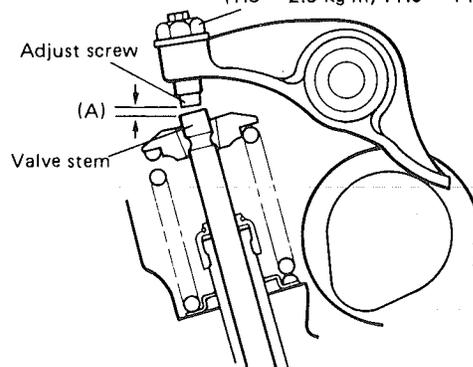
All adjustments noted above are to be performed with **ENGINE NOT RUNNING**.

### 2. VALVE LASH INSPECTION

- 1) Remove cylinder head cover.
- 2) Inspect intake and exhaust valve lash and adjust as necessary.

| Valve lash (gap A) specification |        | When cold | When hot                              |
|----------------------------------|--------|-----------|---------------------------------------|
|                                  | Intake |           | 0.13 - 0.18 mm<br>(0.005 - 0.007 in.) |
| Exhaust                          |        |           |                                       |

Screw lock nut 15 – 20 N·m  
(1.5 – 2.0 kg-m, 11.0 – 14.0 lb-ft)



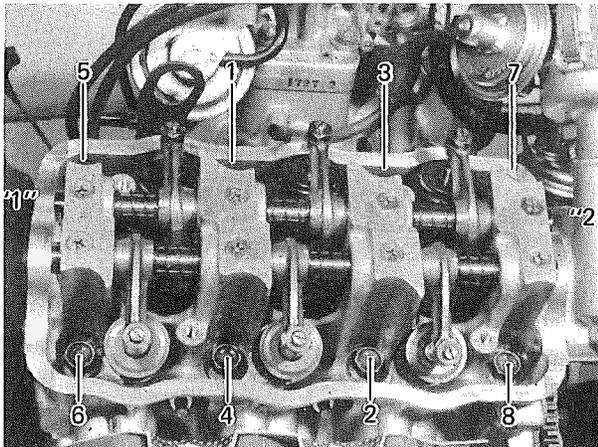
- 3) Refer to SECTION 3 for valve lash inspection and adjustment procedures.
- 4) Install cylinder head cover and tighten bolts to specification. (Refer to item 3)

### 3. ENGINE BOLTS (ALL CYLINDER HEAD AND MANIFOLD FIXINGS)

- 1) To check cylinder head bolts, head cover must be removed. The tightening torque for the cylinder head bolts is as follows.

| Tightening torque for cylinder head bolts | N·m     | kg·m      | lb·ft       |
|---|---------|-----------|-------------|
|   | 55 – 60 | 5.5 – 6.0 | 40.0 – 43.0 |

- 2) When securing cylinder head or when retightening these bolts, torque each bolt in such a way as to equalize the pressure throughout gasketed surface. The tightening sequence is as shown below.



"1" Camshaft pulley side  
"2" Distributor side

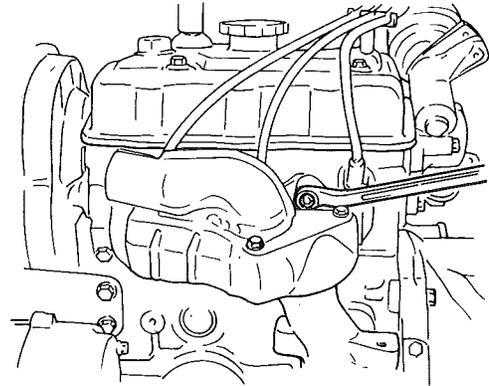
- 3) Cylinder-head cover bolt should be tightened to the following torque:

| Tightening torque for cylinder head cover bolts | N·m   | kg·m      | lb·ft     |
|---|-------|-----------|-----------|
|   | 4 – 5 | 0.4 – 0.5 | 3.0 – 3.5 |

- 4) Check the intake and exhaust manifold nuts for tightness and retighten them as necessary.

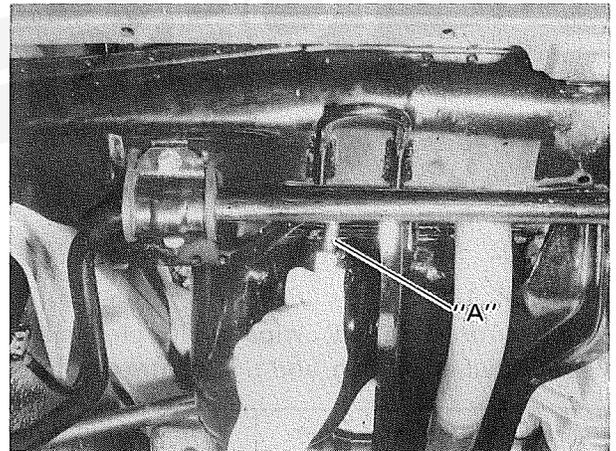
### Tightening torque

| Exhaust manifold nut | N·m     | kg·m      | lb·ft       |
|----------------------|---------|-----------|-------------|
|                      | 18 – 23 | 1.8 – 2.3 | 13.5 – 16.5 |
| Intake manifold nut  | 18 – 23 | 1.8 – 2.3 | 13.5 – 16.5 |



### 4. ENGINE OIL FILTER CHANGE

- 1) Loosen oil filter by using oil filter wrench "A" (special tool 09915-47310).



#### NOTICE:

Before fitting new oil filter, be sure to oil its "O" ring. Use engine oil for this purpose.

- 2) Screw on the new filter by hand until the filter "O" ring contacts the mounting surface.

#### CAUTION:

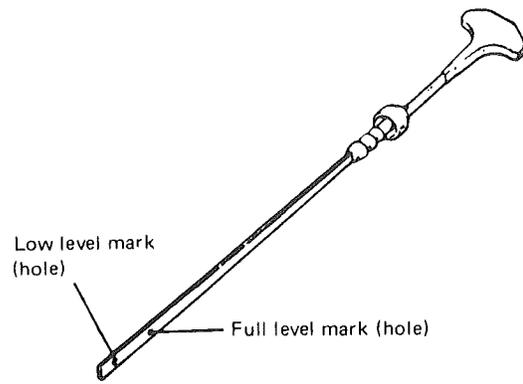
To tighten the oil filter properly, it is important to accurately identify the position at which the filter "O" ring first contacts the mounting surface.

- 3) Tighten the filter 2/3 turn from the point of contact with the mounting surface using an oil filter wrench.

**CAUTION:**

To prevent oil leakage, make sure that the oil filter is tight, but do not overtighten it.

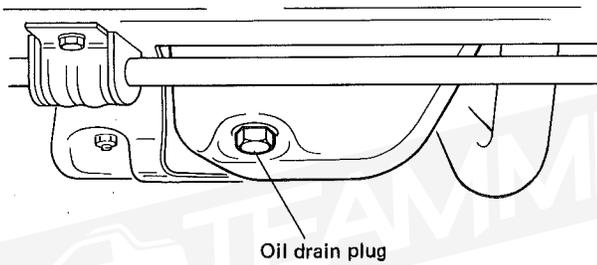
- 4) After installing oil filter, start engine and check oil filter for oil leakage.



**5. ENGINE OIL CHANGE**

Before draining engine oil, check engine for oil leakage. If any evidence of leakage is found, make sure to correct defective part before proceeding to the following work.

- 1) Drain engine oil by removing drain plug.



- 2) After draining oil, wipe drain plug clean. Reinstall drain plug, and tighten it securely.

| Tightening torque for oil drain plug | N·m   | kg·m    | lb·ft     |
|--------------------------------------|-------|---------|-----------|
|                                      | 30-40 | 3.0-4.0 | 22.0-36.0 |

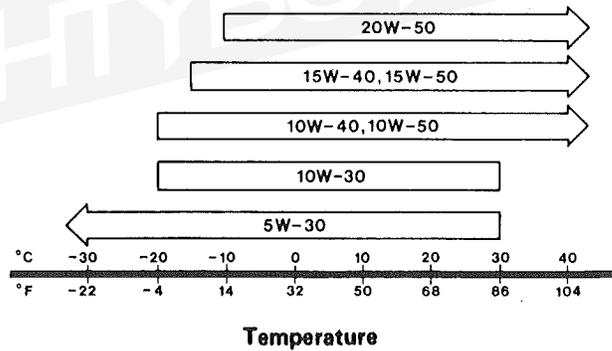
- 3) Replenish oil until oil level is brought to FULL level mark on dipstick. (about 2.5 liters or 5.3/4.4 US/Imp pt.). The filler inlet is atop the cylinder head cover.
- 4) Start engine and run it for three minutes. Stop engine and wait another three minutes before checking oil level. Add oil, as necessary, to bring oil level to FULL level mark on dip stick.

**NOTICE:**

Steps 1) – 3) outlined above must be performed with ENGINE NOT RUNNING. For step 4), be sure to have adequate ventilation while engine is running.

It is recommended to use engine oil of SD, SE or SF class.

**Proper Engine Oil Viscosity Chart**



**Engine oil capacity**

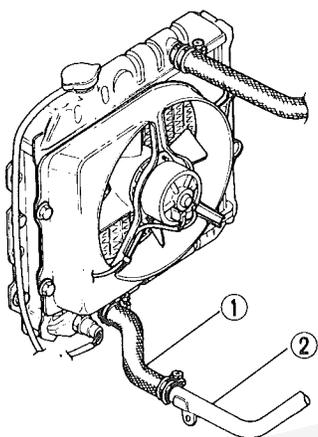
|                     |  |
|---------------------|--|
| Oil pan capacity    | 2.5 liters<br>(5.3/4.4 US/Imp pt.)               |
| Oil filter capacity | 0.2 liters<br>(0.4/0.3 US/Imp pt.)               |
| Others              | 0.3 liters<br>(0.6/0.5 US/Imp pt.)               |
| <b>Total</b>        | <b>3.0 liters</b><br><b>(6.3/5.3 US/Imp pt.)</b> |

## 6. ENGINE COOLANT CHANGE

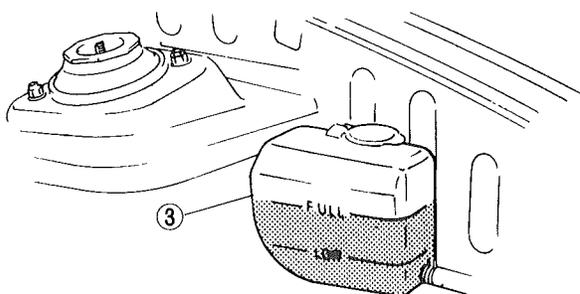
### IMPORTANT:

To help avoid danger of being burned, do not remove radiator cap while engine and radiator are still hot. Scalding fluid and steam can be blown out under pressure if the cap is taken off too soon.

- 1) Remove radiator cap when engine is cool:
- 2) Disconnect water hose ① (radiator outlet) from water pipe ②.



- 3) Remove reservoir tank ③, and drain.
- 4) Connect water hose ① to water pipe ② and tighten clamp. Also reinstall reservoir.



- 5) Fill radiator with specified amount of coolant, and run engine for 2 or 3 minutes at idle. This drives out any air which may still be trapped within cooling system. STOP ENGINE. Add coolant as necessary until coolant level reaches the filler throat of radiator. Reinstall radiator cap.
- 6) Add coolant to reservoir tank so that the level aligns with Full mark.

| COOLANT CAPACITY            |                     |                        |
|-----------------------------|---------------------|------------------------|
| Model                       | Manual transmission | Automatic transmission |
| Engine, radiator and heater | 2.4 liters          | 2.9 liters             |
| Reservoir tank              | 0.6 liters          | 0.6 liters             |
| Total                       | 3.0 liters          | 3.5 liters             |

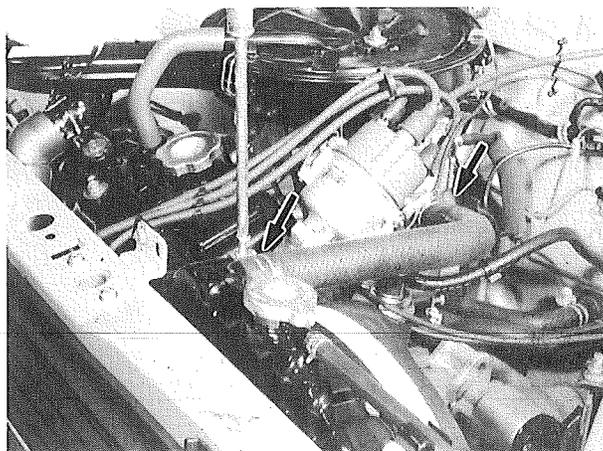
### CAUTION:

When changing engine coolant, use mixture of 50% water and 50% GOLDEN CRUISER 1200 for the market where ambient temperature falls lower than  $-16^{\circ}\text{C}$  ( $3^{\circ}\text{F}$ ) in winter and mixture of 70% water and 30% GOLDEN CRUISER 1200 for the market where ambient temperature doesn't fall lower than  $-16^{\circ}\text{C}$  ( $3^{\circ}\text{F}$ ).

Even in a market where no freezing temperature is anticipated, mixture of 70% water and 30% GOLDEN CRUISER 1200 should be used for the purpose of corrosion protection and lubrication.

## 7. COOLING SYSTEM HOSES INSPECTION

- 1) Visually inspect cooling system hoses for any evidence of leakage and cracks. Examine them for damage, and check connection clamps for tightness.



- 2) Replace all hoses which show evidence of leakage, cracks or other damage. Replace all clamps which cannot maintain proper tightness.

## 8. EXHAUST PIPES AND MOUNTINGS INSPECTION

### IMPORTANT:

To avoid danger of being burned, do not touch exhaust system when system is hot. Any service on exhaust system should be performed when system is cool.

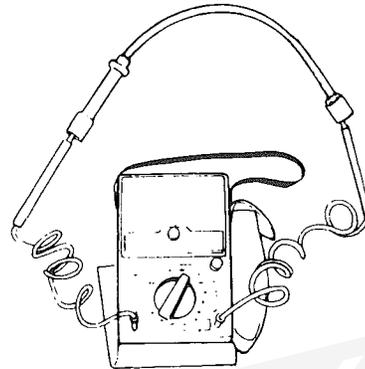
When carrying out periodic maintenance, or the car is raised for other service, check exhaust system as follows:

- Check rubber mountings for damage, deterioration, and out of position.
- Check exhaust system for leakage, loose connections, dents, and damages. If bolts or nuts are loose, tighten them.
- Check nearby body areas for damaged, missing, or mispositioned parts, open seams, holes, loose connections or other defects which could permit exhaust fumes to seep into the car.
- Make sure that exhaust system components have enough clearance from the underbody to avoid overheating and possible damage to the floor carpet.
- Any defects should be fixed at once.

## 1-3. IGNITION SYSTEM

### 9. IGNITION WIRING (High Tension Cords) INSPECTION

- 1) Inspect high-tension cords for cracks and check that their connections are secure.
- 2) Measure resistance of high-tension cords by using a circuit tester (special tool 09900-25002).



- 3) Replace high-tension cords that show evidence of deterioration.

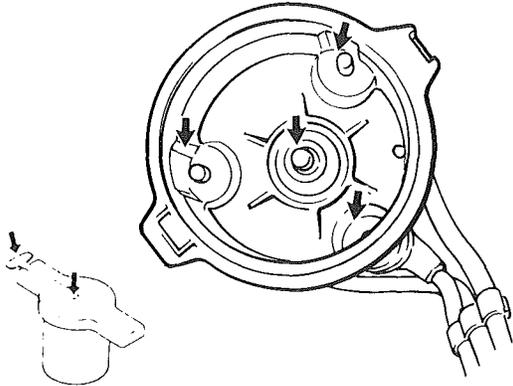
### NOTICE:

Check to make sure that each of the high tension cord terminals and connections is secure and fully inserted into its mating component. Any burnt fitting must be replaced.

| HIGH-TENSION CORD RESISTANCE |                             |
|------------------------------|-----------------------------|
| Standard                     | 16 k $\Omega$ /3.3 ft (1 m) |
| Service limit                | 20 k $\Omega$ /pc.          |

## 10. DISTRIBUTOR CAP AND ROTOR INSPECTION

- 1) Inspect distributor cap and rubber caps for cracks.
- 2) Inspect center electrode and terminals for wear.



- 3) Inspect rotor for cracks, and its electrode for wear.
- 4) Repair or replace as necessary any component which is found to be in malcondition as described above.

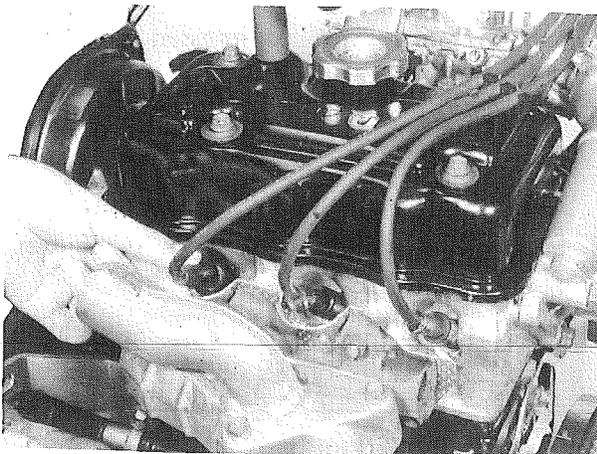
### NOTICE:

Dust and stains found within distributor can be cleaned by using a dry, soft cloth.

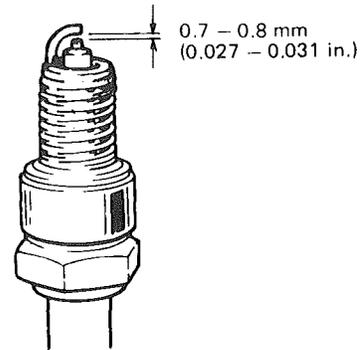
## 11. SPARK PLUGS AND DISTRIBUTOR BREAKER POINT REPLACEMENT

### [Spark plugs]

- 1) Disconnect high-tension cords from spark plugs. Make sure to pull only on spark plug caps.



- 2) Using a spark plug wrench, loosen and remove plugs.



### NOTICE:

When replacing plugs, make sure to use new plugs of specified heat range and size.

### PLUG SPECIFICATION

| Maker        | Heat range<br>Standard type |
|--------------|-----------------------------|
| NGK          | BP5ES (BPR5ES)              |
| Nippon Denso | W16EX-U (W16EXR-U)          |

As can be seen in the above table, there are two types of spark plugs for this car, one without R included in its code and the other with R in parenthesis. Which one is used depends on countries. Look at the label attached to the car. If originally equipped plug was with R included in its code, replacement plug should have R in its code, too.

- 3) Install new spark plugs. Tighten plugs to specification.
- 4) Connect high tension cords to spark plugs. DO NOT push cords for connection. Push boots.

|                                 |  |
|---------------------------------|--|
| Spark plug<br>tightening torque | 20 - 30 N·m<br>2.0 - 3.0 kg·m<br>14.5 - 21.5 lb·ft |
|---------------------------------|--|

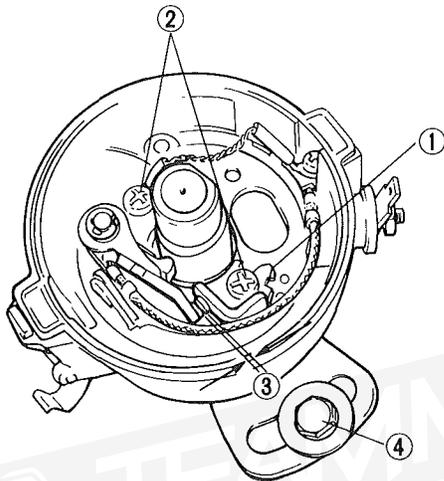
[Distributor breaker point]

- 1) Remove the distributor cap.
- 2) Replace the point and apply a small amount of grease to breaker arm heel.
- 3) Adjust the breaker point gap ③ to specifications.

**NOTICE:**

- Never loose the distributor housing clamp bolt ④ when replacing the breaker point.
- After adjust the breaker point gap to specifications, check the ignition timing.

|             |                                     |
|-------------|-------------------------------------|
| Point gap ③ | 0.4 – 0.5 mm<br>(0.016 – 0.019 in.) |
|-------------|-------------------------------------|



- ① Slit      ② Screws

**12. IGNITION TIMING INSPECTION**

Check to make sure that ignition timing is set properly. If out of specification, adjust it. Refer to SECTION 8 for ignition timing inspection and adjustment procedure.

**13. DISTRIBUTOR ADVANCE INSPECTION**

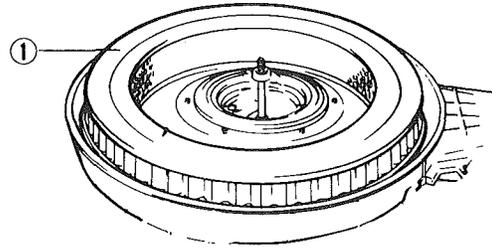
Check advance for proper operation. Refer to SECTION 8 for advance checking procedure.

**1-4. FUEL SYSTEM**

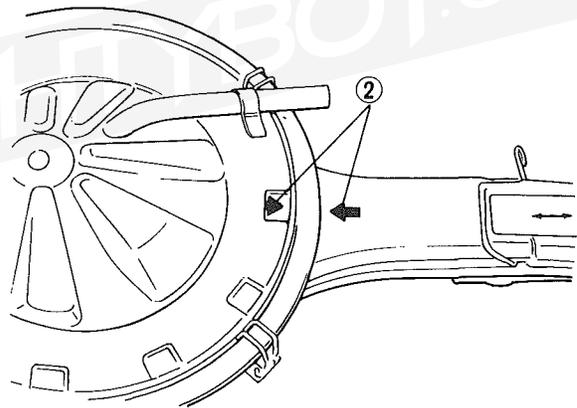
**14. AIR CLEANER ELEMENT CLEANING AND REPLACEMENT**

**Replacement**

- 1) Remove air cleaner cap.
- 2) Take cleaner element ① out of air cleaner case.
- 3) Install new cleaner element ① into cleaner case.



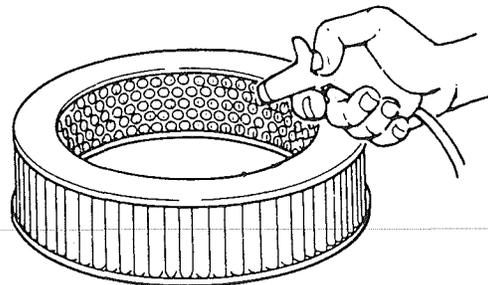
- 4) When installing air cleaner cap, align two arrow marks ② on the cap and the snorkel.



**Inspection and cleaning**

After driving in a dusty area, check element for dust. If found dusty, clean it as follows.

- 1) Blow off dust with compressed air from inside of element.



- 2) Install cleaner element into air cleaner case.

### 15. CARBURETOR CHOKE SYSTEM AND ACCELERATOR SHAFT LUBRICATION AND INSPECTION

- 1) Remove air cleaner case and lubricate rotating parts.
- 2) Check if choke valve operates smoothly to open and close fully when choke knob is pulled and pushed back respectively. Correct if it doesn't operate as described above.

### 16. FUEL TANK CAP, GAS LINES AND CONNECTIONS INSPECTION

- 1) Visually inspect fuel lines and connections for evidence of fuel leakage, hose cracking, and damage. Make sure all clamps are secure. Repair leaky joints, if any. Replace hoses that are suspected of being cracked.
- 2) Visually inspect packing of fuel tank cap. If it is damaged or deteriorated, replace it with new one.

### 17. FUEL FILTER CHANGE

The entire filter unit is replaced at regular scheduled intervals. The method of replacement is as follows:

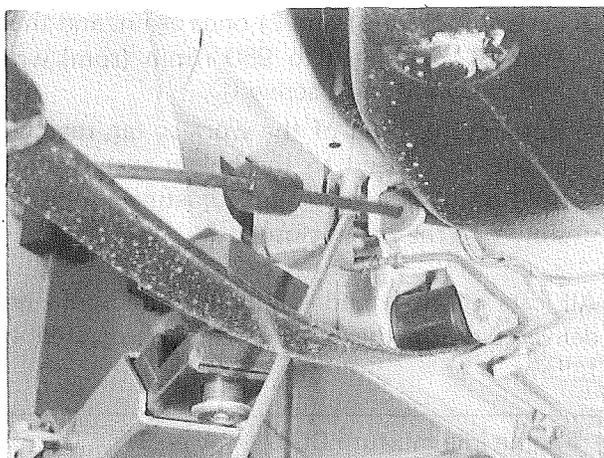
- 1) Fuel filter is located at the front part of fuel tank. The filter is removed from the car by disconnecting inlet and outlet hoses from the filter.
- 2) Position the new filter in place, and connect inlet and outlet hoses to it.

#### NOTICE:

The top connection is for the outlet hose, the lower one for the inlet hose.

#### WARNING:

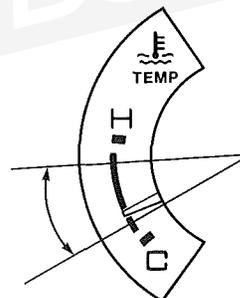
The above procedure must be performed in a well ventilated area and away from any open flames (such as gas hot water heaters).



### 18. ENGINE IDLE SPEED AND IDLE MIXTURE INSPECTION

#### NOTICE:

- Requires external tachometer.
- 1) As preliminary steps, check to be sure that:
    - Coolant temperature should be within the below indicated range. (Engine is normal operating temperature.)



- Choke valve is in full-open position.
- All accessories (wipers; heater, lights, etc.) are out of service.
- Ignition timing is within specification.
- Air cleaner has been properly installed and is in good condition.
- Engine valve clearance is within specification.

[Idle speed and idle mixture adjustment]

Adjust idle speed and idle mixture according to the following procedure.

- 1) Adjust idle speed to 950 r/min (rpm) by repositioning (turning) idle speed adjusting screw ①.
- 2) With engine idling at 950 r/min (rpm), turn idle mixture adjusting screw ② to the right or left and set it where the highest engine speed is obtained. (This is the best idle position).

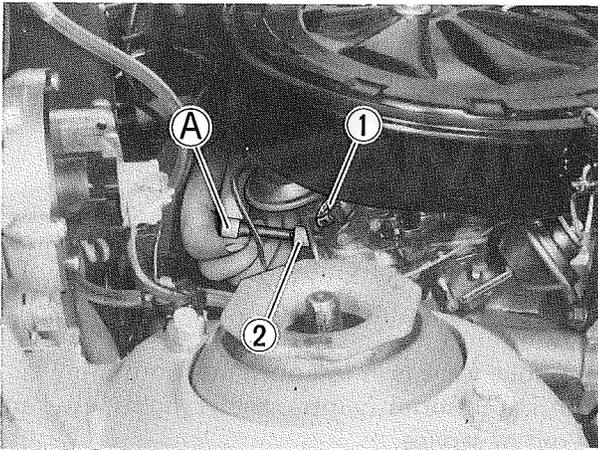
- 3) Perform above 1) and 2) once again, and then readjust idle speed to 950 r/min (rpm) with idle speed adjusting screw ①.
- 4) Upon completion of the work so far, readjust engine idle speed to the below specification by turning idle mixture adjusting screw ② slowly to the right (close).

All cars of this model now manufactured are delivered with their CO% factory adjusted as follows.

|                               |           |
|-------------------------------|-----------|
| Engine idle mixture CO%       | 1.5 ± 0.5 |
| Engine idle speed r/min (rpm) | 900       |

In the country with the statutory requirements for the exhaust gas (CO%), be sure to adjust the idle mixture adjusting screw so that the CO% indicated on the exhaust gas tester will meet the above specification.

Special tool ① is necessary to turn the idle mixture adjusting screw ②.



1. Idle speed adjusting screw
  2. Idle mixture adjusting screw
- ① : Special tool (Carburetor adjuster 09913-17310)

## 1-5. EMISSION CONTROL SYSTEM

### 19. CRANKCASE VENTILATION HOSES AND CONNECTIONS INSPECTION

Check crankcase ventilation hose for leaks and cracks, if any of these is defective, repair or replace.

### 20. PCV (Positive Crankcase Ventilation) VALVE INSPECTION

This item is not applicable in this model.

### 21. FUEL VAPOR STORAGE SYSTEM, HOSES AND CONNECTIONS INSPECTION

- 1) Visually inspect hoses for cracks, damage, or excessive bends. Inspect all clamps for damage and proper position.
- 2) If any of these is defective, repair or replace.

#### Charcoal Canister

[Applicable to the car equipped with canister in engine compartment]

Check Canister.

For checking procedure, refer to canister check of SECTION 5.

## 1-6. ELECTRICAL

### 22. WIRING HARNESS CONNECTIONS AND HEADLIGHTS INSPECTION

[Wiring harness and connections]

- 1) Visually inspect all wires located in engine compartment for evidence of breakage. Inspect the condition of the insulation (cracks). All clips and clamps should have solid connections to wires.
- 2) Replace any wires in a deteriorated or otherwise defective condition.

[Headlights]

- 1) Check vertical beam alignment.
- 2) Check horizontal beam alignment.

Refer headlight of SECTION 19 for above 1) and 2) checking procedures.

#### NOTICE:

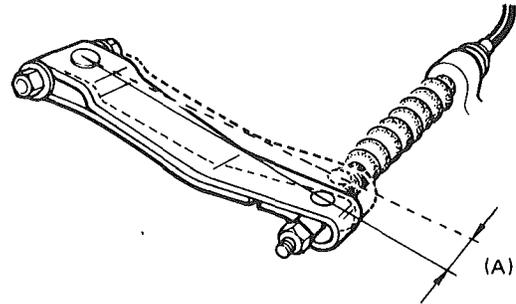
In the countries where statutory regulations define headlight alignments, adjust in conformity with such regulations.

## 1-7. CHASSIS AND BODY

### 23. CLUTCH RELEASE ARM INSPECTION

- 1) Check clutch pedal height. It should be the same as brake pedal height.
- 2) Check clutch release arm free travel.

|                             |                               |
|-----------------------------|-------------------------------|
| Clutch release arm play (A) | 2 – 4 mm<br>(0.08 – 0.16 in.) |
|-----------------------------|-------------------------------|



### 24. BRAKE DISCS, PADS, BRAKE DRUMS AND SHOES INSPECTION

#### Brake Discs and Pads

- 1) Remove wheel and caliper but don't disconnect brake hose from caliper.
- 2) Check front disc brake pads and discs for excessive wear, damage and deflection. Replace parts as necessary. For the details, refer to p. 17-11 and 17-12 of SECTION 17.

| Pad thickness<br>(lining + pad<br>rim) | Standard               | Limit                 |
|--|------------------------|-----------------------|
|  | 15.5 mm<br>(0.610 in.) | 6.5 mm<br>(0.256 in.) |

| Disc thickness | Standard             | Limit                 |
|----------------|----------------------|-----------------------|
|                | 11 mm<br>(0.433 in.) | 9.5 mm<br>(0.374 in.) |

|                          |                     |
|--------------------------|---------------------|
| Limit on disc deflection | 0.15 mm (0.006 in.) |
|--------------------------|---------------------|

Be sure to torque caliper bolts to specification for reinstallation.

#### Brake Drums and Shoes

- 1) Remove wheel and brake drum.
- 2) Check brake drums and brake linings for excessive wear and damage, while wheels and drums are removed. Also check wheel cylinders for leaks, at the same time. Replace these parts as necessary.

| Item            | Standard          | Service Limit     |
|-----------------|-------------------|-------------------|
| Brake drum I.D. | 180 mm (7.09 in.) | 182 mm (7.16 in.) |

| Brake lining                  | Standard          | Service Limit     |
|-------------------------------|-------------------|-------------------|
| Thickness (lining + shoe rim) | 7.0 mm (0.28 in.) | 3.0 mm (0.12 in.) |

For the details, refer to p. 17-12 and p. 17-13 of SECTION 17.

### 25. BRAKE HOSES AND PIPES INSPECTION

Check brake hoses and pipes for proper hook-up, leaks, cracks, chafing and other damage. Replace any of these parts as necessary.

**CAUTION:**

After replacing any brake pipe or hose, be sure to carry out air purge operation.

### 26. BRAKE FLUID INSPECTION AND CHANGE

- 1) Check around master cylinder and reservoir for fluid leakage. If found leaky, correct.
- 2) Check fluid level. If fluid level is lower than the minimum level of reservoir, refilling is necessary. Fill reservoir with either one of brake fluids listed below:

| Brake fluid | Specifications      |
|-------------|---------------------|
|             | DOT 3, or SAE J1703 |

For the details, refer to MAINTENANCE SERVICE (p. 17-20) of SECTION 17.

**CAUTION:**

Since the brake system of this car is factory-filled with glycol-base brake fluid, do not use or mix different type of fluid when refilling the system; otherwise serious damage will occur. Do not use old or used brake fluid, or one taken from unsealed container.

- 3) Change brake fluid every 2 years. As fluid change procedure, drain existing fluid from brake system completely, fill the system with above recommended fluid and carry out air purge operation. For description of air purge, refer to p. 17-24 and 17-25 of SECTION 17.

### 27. BRAKE PEDAL INSPECTION

Check brake pedal travel.

For checking procedure, refer to PEDAL TRAVEL CHECK (p. 17-21) of SECTION 17.

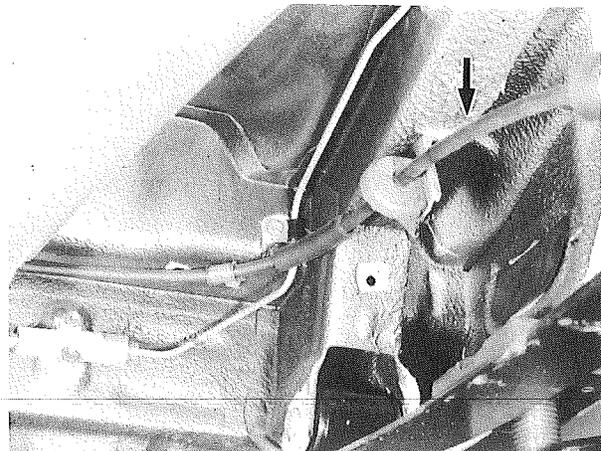
### 28. BRAKE LEVER AND CABLE INSPECTION

- 1) Check tooth tip of each notch for damage or wear. If any damage or wear is found, replace parking lever.
- 2) Pull up parking lever all the way with one hand to apply brake fully, and see how many notches of ratchet lever has traversed. If the number of traversed notches is more than 5 (five), adjust the parking brake cable.

|  |                      |
|--|----------------------|
| Parking brake stroke; When lever is pulled up at 20 kg (44 lb) | Within 2 – 5 notches |
|--|----------------------|

For stroke measurement and parking brake adjustment, refer to MAINTENANCE SERVICE (p. 17-22) of SECTION 17.

- 3) Parking brake cable. Inspect brake cable for damage and smooth movement. Replace cable if it is in deteriorated condition.



## 29. TIRE INSPECTION AND ROTATION

- 1) Check tires for uneven or excessive wear, or damage. If defective, replace.

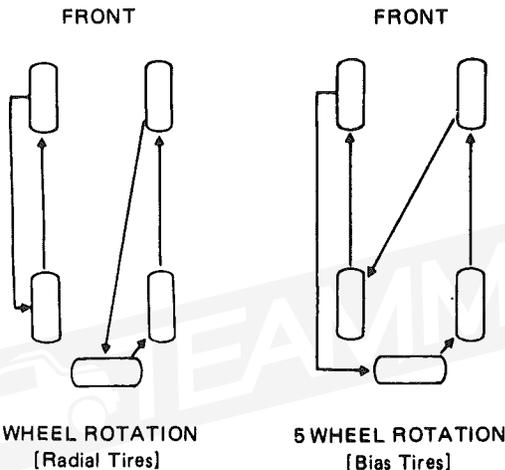
|                 |   |
|-----------------|---|
| Tire wear limit | Less than 1.6 mm (0.063 in.) depth of tread at two places |
|-----------------|---|

- 2) Check inflating pressure of each tire and adjust pressure to specification as necessary.

### NOTICE:

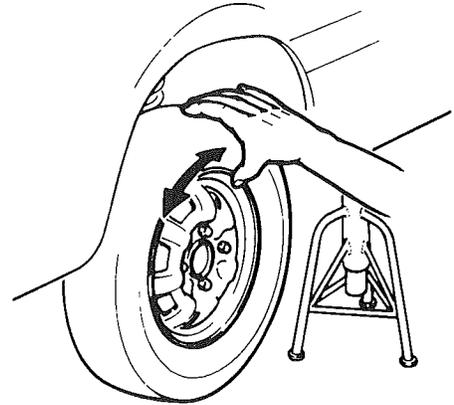
- Tire inflation pressure should be checked when tires are cool.
- Specified tire inflation pressure should be found on tire placard or in owners' manual which came with the car.

- 3) Rotate tires.



When measurement exceed limit, replace bearing.

By rotating wheel actually, check wheel bearing for noise and smooth rotation. If defective, replace bearing.



- 2) Check rear wheel bearing for wear, damage or rattles. When measuring thrust play, apply a dial gauge to the drum center after removing wheel center cap from wheel disc.

|                   |      |                   |
|-------------------|------|-------------------|
| Thrust play Limit | Rear | 0.3 mm (0.012 in) |
|-------------------|------|-------------------|

When the measurement exceeds limit, replace bearing.

By rotating wheel actually, check wheel bearing for noise and smooth rotation. If it is defective, replace bearing.

### Wheel Nuts

Check wheel nuts for tightness and, retighten them to specification as necessary.

|                                  |  |
|----------------------------------|--|
| Tightening torque for wheel nuts | 40 – 70 N·m<br>4.0 – 7.0 kg·m<br>(29.0 – 50.5 lb·ft) |
|----------------------------------|--|

## 30. WHEELS AND WHEEL NUTS INSPECTION

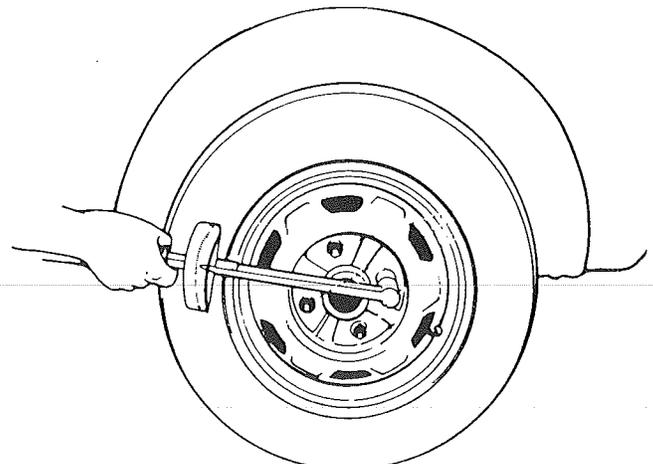
### Wheel Disc

Inspect each wheel disc for dents, distortion and cracks. A disc in badly damaged condition must be replaced.

### Wheel Bearings

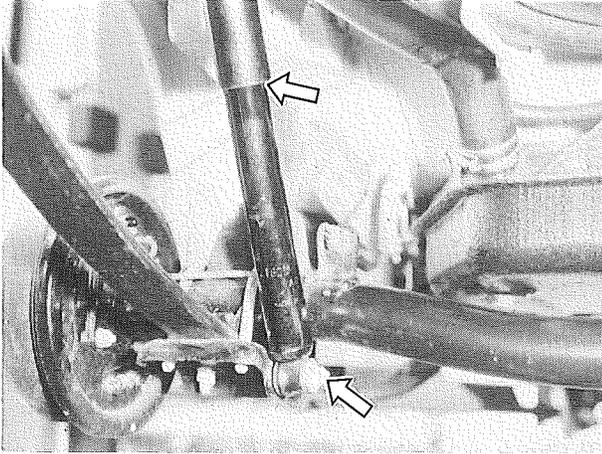
- 1) Check front wheel bearing for wear, damage or rattles. When measuring thrust play, apply a dial gauge to wheel hub center after removing wheel center cap from wheel disc.

|                   |                   |
|-------------------|-------------------|
| Thrust play Limit | 0.4 mm (0.016 in) |
|-------------------|-------------------|



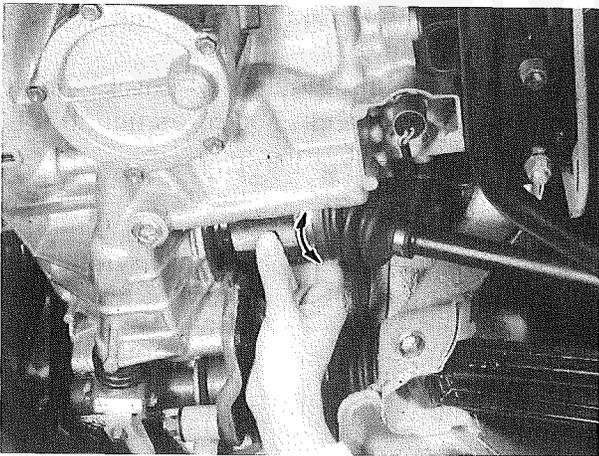
### 31. SHOCK ABSORBERS INSPECTION

- 1) Inspect absorbers for evidence of oil leakage, dents or any other damage on sleeves; and inspect anchor ends for deterioration.
- 2) Depending on the results of the above inspection, replace absorbers.

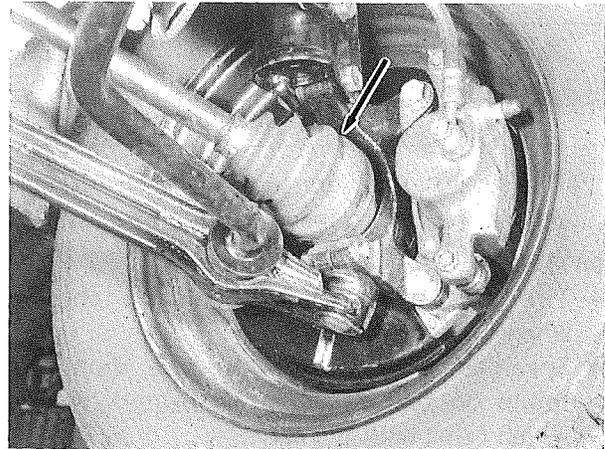


### 32. DRIVE SHAFTS INSPECTION

- 1) Jack up the car body and confirm that the drive shaft is free from play in the rotational direction and rotates smoothly.



- 2) Inspect the boots for breakage and replace if broken.

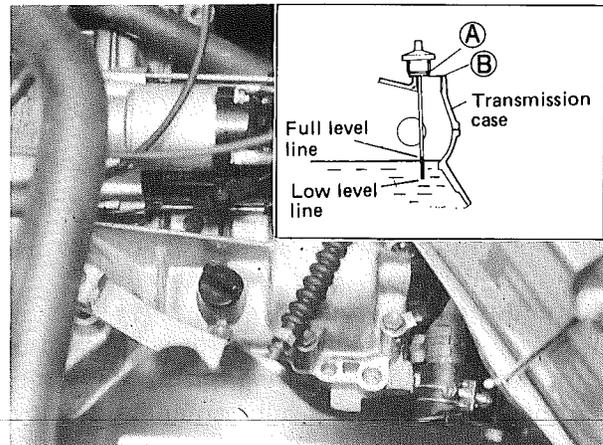


### 33. TRANSMISSION OIL INSPECTION AND CHANGE (For manual transmission)

#### [Inspection]

- 1) Inspect transmission case for evidence of oil leakage. Repair leaky point if any.
- 2) Make sure that the car is placed level for oil level check.
- 3) Take out the oil level gauge from the transmission case and wipe off the oil.
- 4) Bring face (A) of the oil level gauge to contact face (B) of the transmission case and check the oil level indicated by the oil on the gauge.

The oil level must be somewhere between FULL level line and LOW level line on the gauge.



**[Change]**

Oil change procedure is as follows.

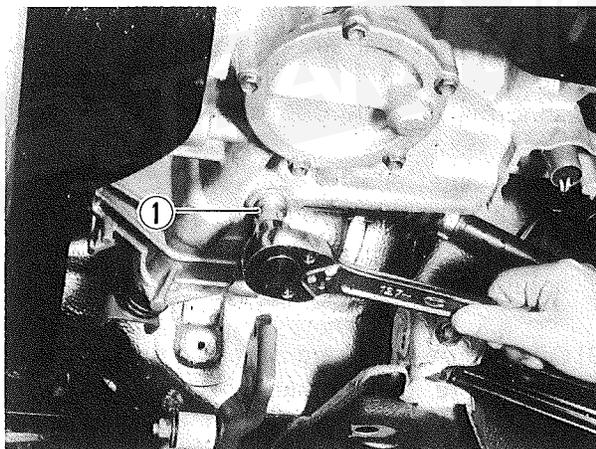
- 1) Place the car level.
- 2) Drain oil by removing drain plug.
- 3) Apply SUZUKI BOND No. 1215 (99000-31110) to the screw part of the drain plug.
- 4) Tighten drain plug to specified torque.
- 5) Pour specified amount of specified oil as in the below table.

**NOTICE:**

For the car used in such areas where ambient temperature becomes lower than  $-15^{\circ}\text{C}$  ( $5^{\circ}\text{F}$ ) during the coldest season, it is recommended that oil be changed with SAE80W or 75W/80 – 85 oils on such occasion of service as periodic maintenance.

Transmission oil change

|              |  |
|--------------|--|
| Oil capacity | 2.0 liters<br>(4.2/3.5 US/Imp pt.)                   |
| Type of oil  | Gear oil, SAE # 90,<br>SAE 75W/80 – 85 or<br>SAE 80W |



① 25 – 30 N·m (2.5 – 3.0 kg·m, 18.5 – 21.5 lb·ft)

- 6) After pouring specified amount of oil, perform step 4) of transmission oil inspection.
- 7) Tighten oil level gauge.

**34. SUSPENSION INSPECTION AND TIGHTENING**

- 1) Check leaf spring for wear, crack and damage. If excessive wear or cracking is noted, replace the spring with a new one.
- 2) Check bolts and nuts for tightness and retighten them as necessary. Repair or replace defective parts, if any.

**NOTICE:**

For the details of check points, refer to the table of RECOMMENDED TORQUE SPECIFICATIONS (p. 15-5, 15-10 and 15-11) of SECTION 15.

**35. STEERING CONDITION**

- 1) Check steering wheel for play and rattle, holding car in straight forward condition on the ground.

|                     |                            |
|---------------------|----------------------------|
| Steering wheel play | 0 – 30 mm<br>(0 – 1.2 in.) |
|---------------------|----------------------------|

- 2) Check steering shaft joint of steering shaft for rattle and damage. If rattle or damage is found, replace defective part with a new one.
- 3) Check bolts and nuts for tightness and retighten them as necessary. Repair or replace defective parts, if any. Refer to p. 16-12 for particular check points.
- 4) Check the steering rack boot for deterioration, cracks and other damage and replace if defective.
- 5) Check boots of tie rod ends for damage. If damage is found, replace it with a new one.
- 6) Check wheel alignment.

Alignment service data

|                     |                                  |
|---------------------|----------------------------------|
| Side slip           | OUT 3 – IN 3 m/km                |
| Toe-in              | 0 ~ 3 mm<br>(0 ~ 0.12 in.)       |
| Camber              | $1^{\circ} 20' \pm 1^{\circ}$    |
| Kingpin inclination | $12^{\circ} 50' \pm 0.8^{\circ}$ |
| Caster              | $3^{\circ} 15' \pm 1^{\circ}$    |

**NOTICE:**

For the details of wheel alignment, refer to WHEEL ALIGNMENT (p. 16-10) of SECTION 16.

- 7) Drive the car on road to be sure that:
- Steering wheel does not show abnormal resistance.
  - Steering wheel does not wobble.

### 36. DOOR HINGES, GEAR SHIFT CONTROL LEVER AND SHAFT LUBRICATION

[Door hinge]

Wipe off dirt and apply a thin coat of engine oil. Open and close door several times to insure that the oil has worked in effectively.

[Gearshift control lever and shaft joint]

Lubricate lever seat and shaft bushings with water resistant chassis grease. Refer to p. 12-3 of SECTION 12 for lubrication points.

### 37. TEST DRIVE

Upon completion of all periodical checks, 1 through 36, carry out road test in safe place.

#### **WARNING:**

When carrying out the following road tests, select a safe place where no man or no running car is seen so as to prevent any accident.

#### 1) Engine start

Check engine start for readiness.

#### **NOTICE:**

In the cold weather, start to operate engine by pulling choke control knob.

#### 2) Clutch

Check the following:

- that clutch is completely released when depressing clutch pedal,
- that no slipping clutch occurs when releasing pedal and accelerating,
- and that clutch itself is free from any abnormal condition.

#### 3) Gearshift Lever (Transmission)

Check gearshift lever for smooth shifting to all positions and for good performance of transmission in any position.

#### 4) Brake

[Foot brake]

Check the following when depressing brake pedal while driving;

- that brake works properly,
- that it is free from noise,
- and that braking force applies equally on all wheels.

[Parking brake]

Check to ensure that parking brake is fully effective when the car is stopped on the slop and brake lever is pulled all the way.

#### 5) Steering

Check to ensure that steering wheel is free from instability, or abnormally heavy feeling while driving.

#### 6) Engine

- Check that engine responds readily at all speed.
- Check that engine is free from abnormal noise and abnormal vibration.

#### 7) Body, Wheels and Power Transmitting System

Check that body, wheels and power transmitting system are free from abnormal noise and abnormal vibration or any other abnormal condition.

#### 8) Meters and Gauge

Check that speedometer, odometer, fuel meter, and temperature gauge are operating accurately.

#### 9) Oil pressure and charging indicator lights

Make sure that these lights stay off while engine is operating. If either of them comes on during engine operation, it means that something is wrong with engine lubrication system or charging system, and consequently immediate inspection is necessary.

#### 10) Seat Belt

Check that seat belt is securely locked at hard braking.

#### **WARNING:**

For this test, select a safe place without any running car so as to prevent any accident. And again make sure that no man or no other car is seen in front or behind and use great care to the surroundings when carrying out the test.