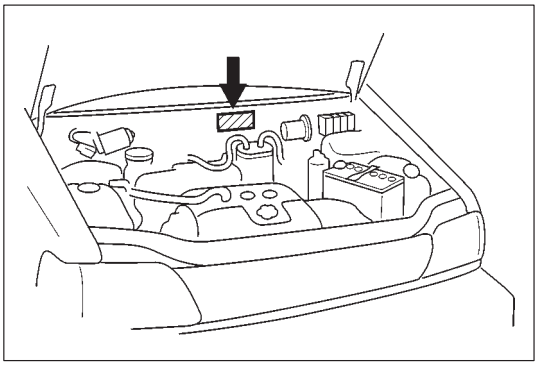
NOTE:
The screen toned Section 8A WIRING DIAGRAM is not contained in this manual.
The Section 8A is contained in WIRING DIAGRAM MANUAL mentioned in FOREWORD of this manual.

PRECAUTION FOR INSTALLING MOBILE COMMUNICATION EQUIPMENT

When installing mobile communication equipment such as CB (Citizens-Band)-radio or cellular-telephone, be sure to observe the following precautions.
Failure to follow cautions may adversely affect electronic control system.

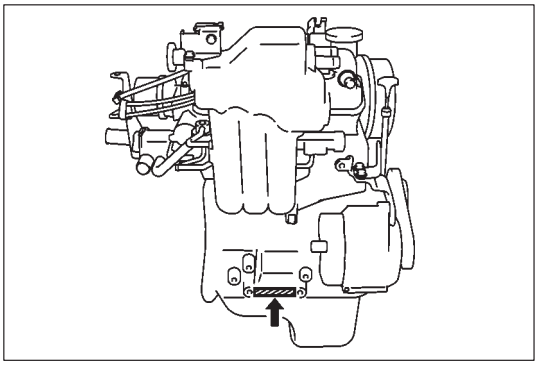
- Keep the antenna as far away as possible from the vehicle's electronic control unit.
- Keep the antenna feeder more than 20 cm (7.9 in) away from electronic control unit and its wire harnesses.
- Do not run the antenna feeder parallel with other wire harnesses.
- Confirm that the antenna and feeder are correctly adjusted.



IDENTIFICATION INFORMATION

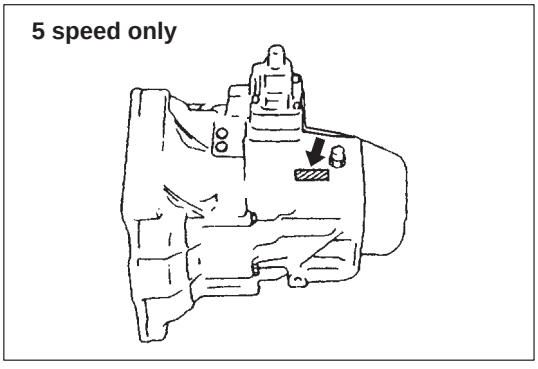
VEHICLE IDENTIFICATION NUMBER

The number is punched on the front dash panel in the engine room.



ENGINE IDENTIFICATION NUMBER

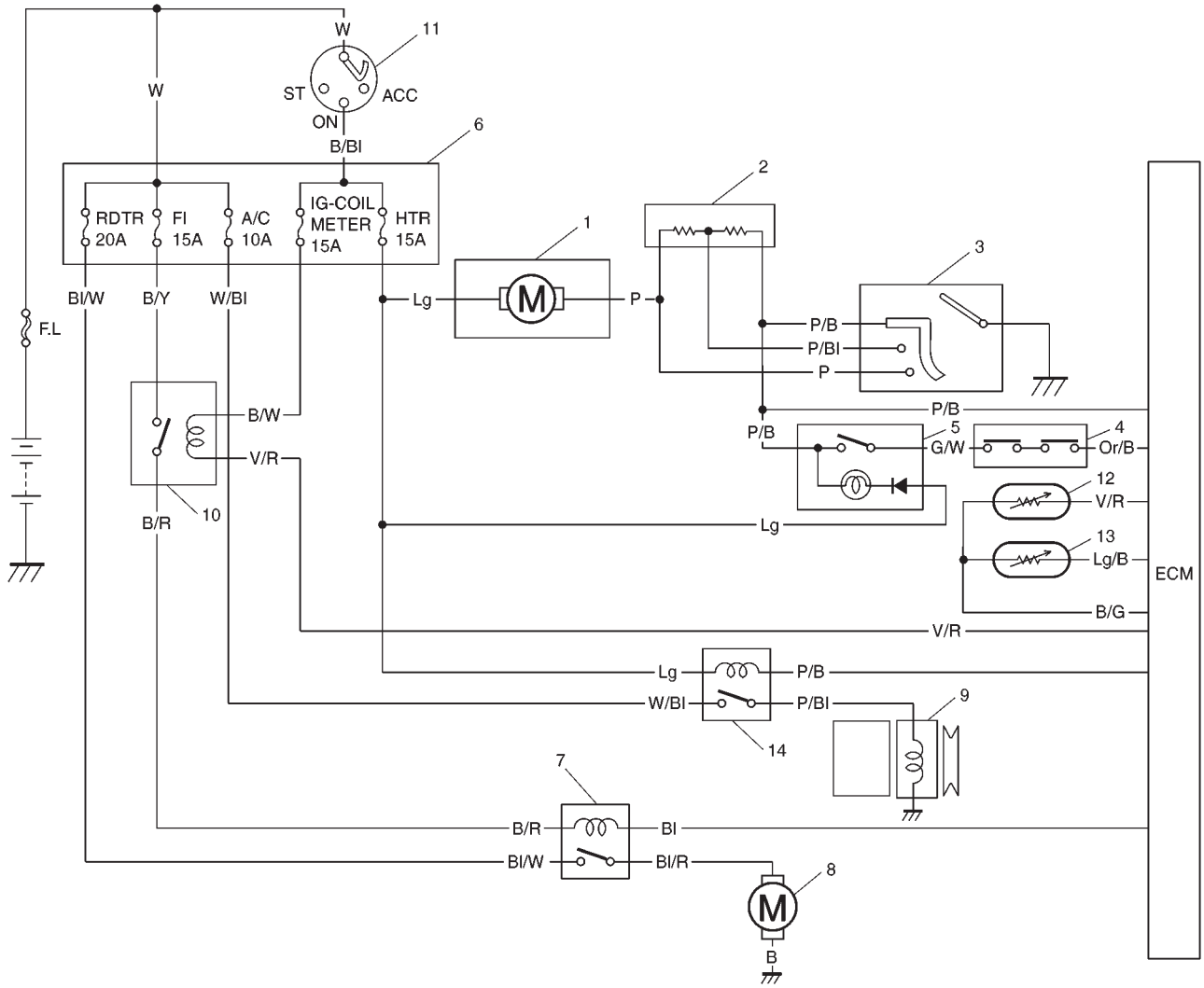
The number is punched on the cylinder block.



TRANSMISSION IDENTIFICATION NUMBER

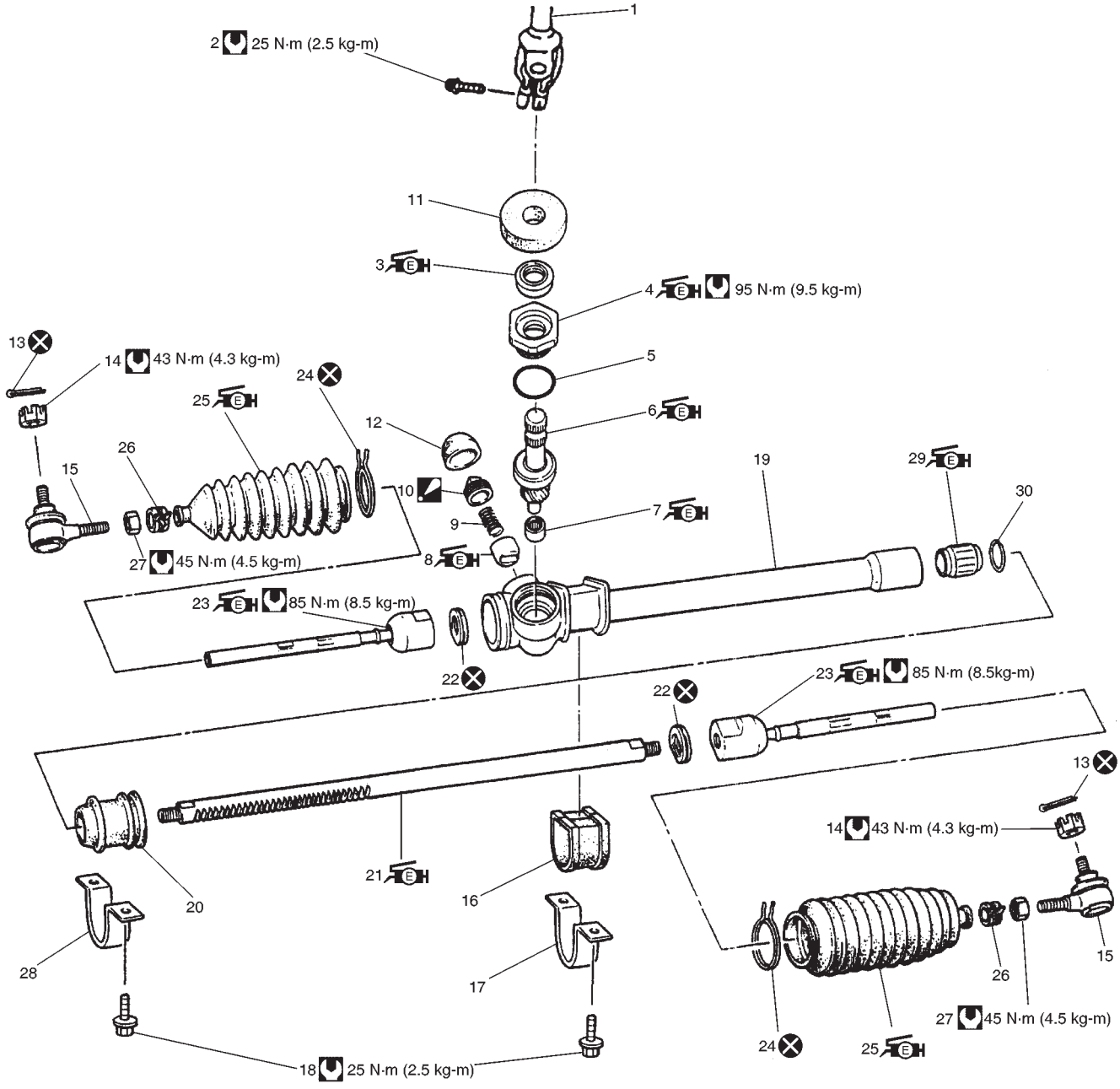
The identification number of the 5 speed transmission is located on the transmission case.
The identification number of the 4 speed transmission is not available.

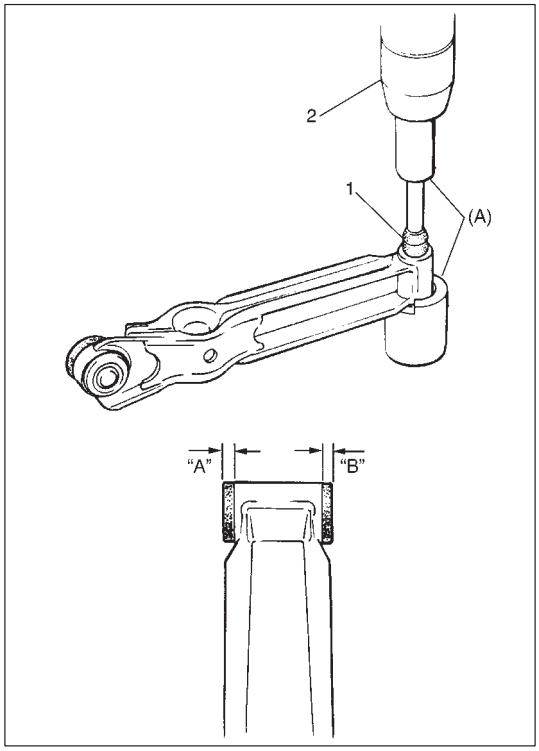
WIRING CIRCUIT



1. Blower fan motor
2. Blower fan motor resistor
3. Blower fan motor switch
4. Dual pressure switch
5. A/C Switch
6. Fuse box
7. Radiator (and condenser) cooling fan relay
8. Radiator (and condenser) cooling fan motor
9. Compressor
10. Main relay
11. Ignition switch
12. A/C evaporator thermistor
13. ECT sensor
14. Compressor relay

1. Steering lower shaft
2. Steering lower shaft lower bolt
3. Steering gear case oil seal:
   Apply SUZUKI SUPER GREASE E 99000-25050 to oil seal lip.
4. Pinion bearing plug:
   Fill SUZUKI SUPER GREASE E 99000-25050 to inside of pinion bearing plug.
5. O-ring
6. Steering pinion:
   Apply SUZUKI SUPER GREASE E 99000-25050 to all around pinion teeth and mating surface of pinion bearing.
7. Pinion needle bearing:
   Apply SUZUKI SUPER GREASE Ex 99000-25050 to rollers of pinion needle bearing.
8. Steering rack plunger:
   Apply SUZUKI SUPER GREASE E 99000-25050 to sliding part of plunger.
9. Rack plunger spring
10. Rack damper screw:
    Note the installing procedure, and the detail refer to page 3B-12.
11. Packing
12. Cap
13. Cotter pin
14. Castle nut
15. Tie-rod end
16. Steering pinion side mount
17. Bracket (Pinion side)
18. Bracket bolt
19. Steering rack housing and gear case
20. Steering rack side mount
21. Steering rack:
    Apply SUZUKI SUPER GREASE E 99000-25050 to entire surface of rack.
22. Tie-rod lock washer
23. Steering tie-rod:
    Apply SUZUKI SUPER GREASE E 99000-25050 to rack end ball joint.
24. Wire
25. Boot:
    Apply SUZUKI SUPER GREASE E 99000-25050 to contacting part of tie-rod and boot.
26. Clamp
27. Tie-rod end lock nut
28. Bracket (rack side)
29. Steering rack bushing:
    Apply SUZUKI SUPER GREASE E 99000-25050 lightly to entire inner surface of bushing.
30. Snap ring





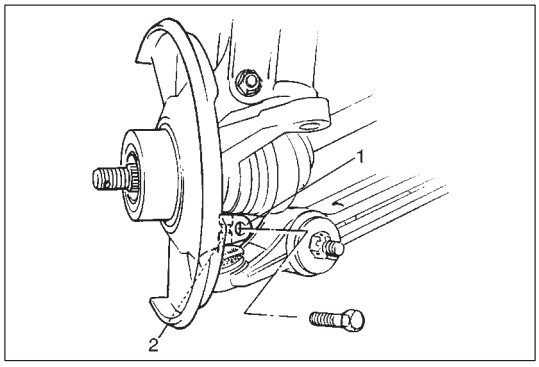
ASSEMBLY

Before installing bushing (1), apply soap water on its circumference to facilitate installation and then installing bushing with special tool and hydraulic press (2) as shown.

Special Tool
(A): 09943-77910

CAUTION:
Be sure to use new bushing.

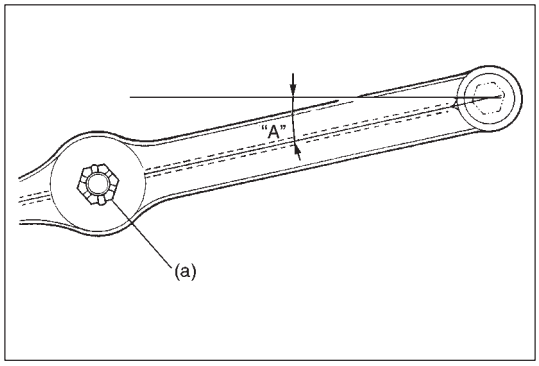
NOTE:
When installed, bush should be equal dimensions "A" and "B" in figure.



INSTALLATION

For installation, reverse removal procedure, observing following instructions.

1) Install ball stud (2) to knuckle (1). Align ball stud groove with knuckle bolt hole as shown. Then drive in ball stud bolt from the direction as shown.



2) Install control arm to vehicle body and tighten control arm bolt to specified torque at the position where control arm is installed at angle "A" as shown.

Tightening Torque
(a): 65 N·m (6.5 kg-m, 47.0 lb-ft)

Angle "A": 10° ± 5°

GENERAL BALANCE PROCEDURES

Deposits of mud, etc. must be cleaned from inside of rim.

WARNING:
Stones should be removed from the tread in order to avoid operator injury during spin balancing and to obtain good balance.

Each tire should be inspected for any damage, then balanced according to equipment manufacturer's recommendation.

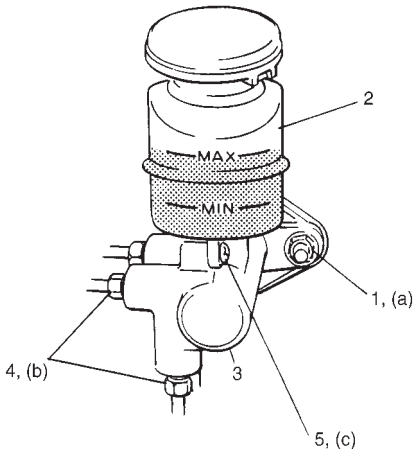
OFF-VEHICLE BALANCING

Most electronic off-vehicle balancers are more accurate than the on-vehicle spin balancers. They are easy to use and give a dynamic (two plane) balance. Although they do not correct for drum or disc unbalance as does on-vehicle spin blancing, this is overcome by their accuracy, usually to within 1/8 ounce.

ON-VEHICLE BALANCING

On-vehicle balancing methods vary with equipment and tool manufacturers. Be sure to follow each manufacturer's instructions during balancing operation.

WARNING:
Wheel spin should be limited to 35 mph (55 km/h) as indicated on speedometer.
This limit is necessary because speedometer only indicates one-half of actual wheel speed when one drive wheel is spinning and the other drive wheel is stopped.
Unless care is taken in limiting drive wheel spin, spinning wheel can reach excessive speeds. This can result in possible tire disintegration or differential failure, which could cause serious personal injury or extensive vehicle damage.



INSTALLATION

1) Install master cylinder (3) as shown and tighten attaching nuts (1) to specified torque.

   Tightening Torque
   (a) : 13 N·m (1.3 kg-m, 9.5 lb-ft)

2) Install master cylinder push rod to brake pedal and bend split pin securely.
3) Connect 4 hydraulic lines and tighten flare nuts (4) to specified torque.

   Tightening Torque
   (b) : 12 N·m (1.2 kg-m, 9.0 lb-ft)

4) When using new grommets, lubricate them with the same fluid as the one to fill reservoir (2) with. Then press-fit grommets to master cylinder.
5) Install reservoir and tighten screws (5) to specified torque.

   Tightening Torque
   (c) : 2.5 N·m (0.25 kg-m, 2.0 lb-ft)

6) Fill reservoir with specified fluid.
   After installing, check brake pedal height, bleed air from system (Refer to BRAKE PEDAL FREE HEIGHT ADJUSTMENT and BLEEDING BRAKES in this section.

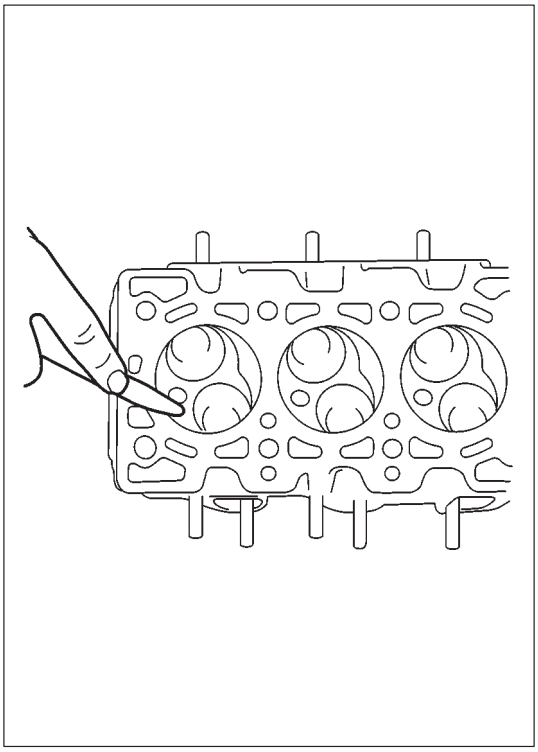
CAUTION:
- **Never use any mineral oil such as kerosene and gasoline when washing and assembling parts.**
- **Check inside of cylinder wall, pistons and cup seals are free from any foreign objects such as dust and dirt and use case not to cause any damage with a tool during assembly.**
- **Do not drop parts. Do not use any part which has been dropped.**

Fluid to fill reservoir with is indicated on reservoir cap of the vehicle with embossed letters or in owner's manual supplied with the vehicle.
Add fluid up to MAX line.

INSPECTION OF ENGINE COMPONENTS

NOTE:

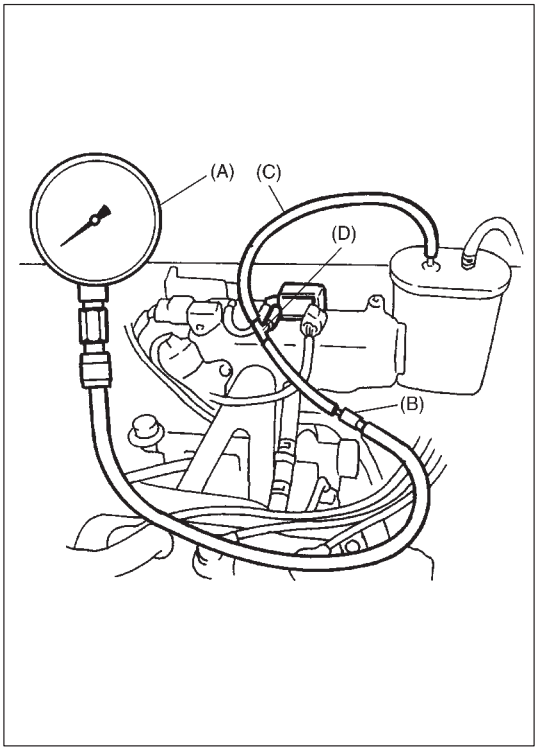
- **During and immediately after disassembly, inspect cylinder block and head for evidence of water leakage or damage and, after washing them clean, inspect more closely.**
- **Wash all disassembled parts clean, removing grease, slime, carbon and scales, before inspecting them to determine whether repair is necessary or not.**
  Be sure to de-scale the water jackets.
- **Use compressed air to clear internal oil holes and passages.**
- **Do not disturb the set combinations of valves, bearings and bearing caps, etc.**
  Have the sets segregated and identified.



Cylinder head

- De-carbon cylinder head:
  Deposits of carbon will be found on its combustion chamber surfaces and exhaust ports. Remember, overheating tendency and loss of output are often due to excessive carbon accumulation. De-carbon valves, too.

  NOTE:
  Do not use any sharp-edged tool to scrape off carbon. Be careful not to scuff or nick metal surfaces when de-carboning. This applies to valves and valve seats, too.



2) With engine stopped, disconnect canister purge control vacuum hose from canister purge control valve and connect 3-way joint, hose and special tool (vacuum gauge and joint) to canister purge control valve and vacuum hose disconnected.

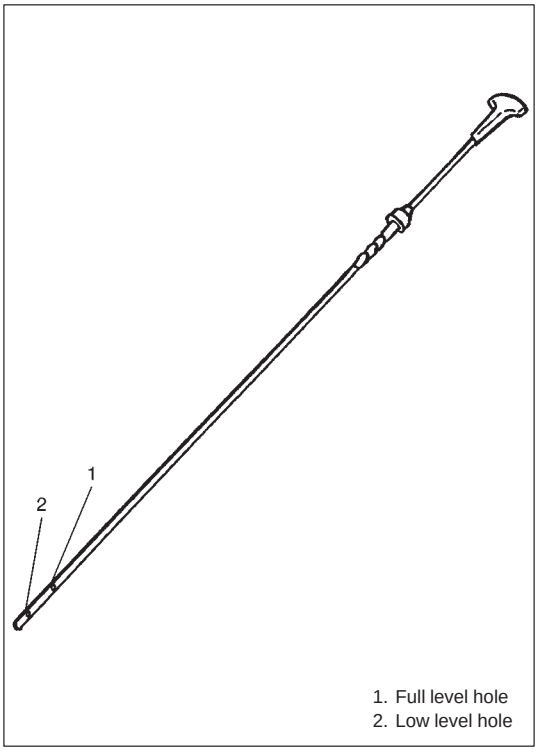
Special Tool
(A): 09915-67310
(B): 09918-08210

SUZUKI GENUINE PARTS
(C): Hose 09343-03087
(D): 3-way joint 09367-04002

3) Run engine at specified idle speed, and read vacuum gauge. Vacuum should be within following specification.

Vacuum specification (at sea level):
at specified idling speed
53.7 – 60.4 kPa (40 – 45 cmHg, 15.7 – 17.7 in.Hg)

4) After checking, connect vacuum hose to canister purge control valve.



1. Full level hole
2. Low level hole

OIL PRESSURE CHECK

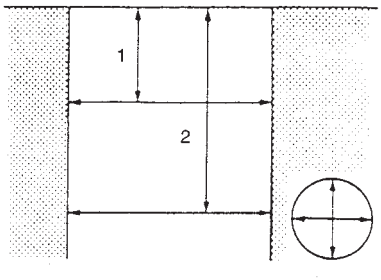
NOTE:
Prior to checking oil pressure, check following items.

- **Oil level in oil pan.**
  If oil level is low, add oil up to Full level hole on oil level gauge.
- **Oil quality.**
  If oil is discolored, or deteriorated, change it.
  For particular oil to be used, refer to the table in MAINTENANCE SERVICE of Section 0B.
- **Oil leaks.**
  If leak is found, repair it.

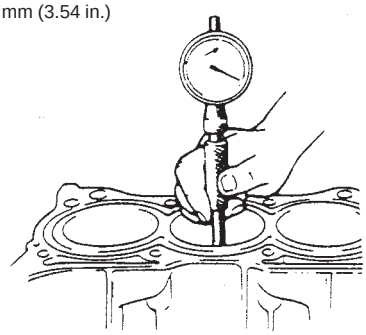
INSPECTION

Cylinders

- Inspect cylinder walls for scratches, roughness, or ridges which indicate excessive wear. If cylinder bore is very rough or deeply scratched, or ridged, rebore cylinder and use oversize piston.



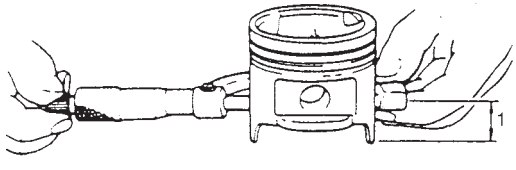
1. 50 mm (1.96 in.)
2. 90 mm (3.54 in.)



- Using a cylinder gauge, measure cylinder bore in thrust and axial directions at two positions as shown in figure.
  If any of following conditions is noted, rebore cylinder.
  1) Cylinder bore dia. exceeds limit.
  2) Difference of measurements at two positions exceeds taper limit.
  3) Difference between thrust and axial measurements exceeds out-of-round limit.

  Cylinder bore dia. limit: 68.57 mm (2.6996 in.)
  Taper and out-of-round limit: 0.10 mm (0.0039 in.)

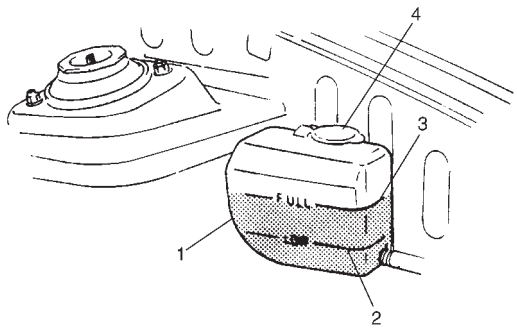
  NOTE:
  If any one of three cylinders has to be rebored, rebore all three to the same next oversize. This is necessary for the sake of uniformity and balance.



Pistons

- Inspect piston for faults, cracks or other damaged.
  Damaged or faulty piston should be replaced.
- Piston diameter:
  As indicated in figure, piston diameter should be measured at a position (1) 20 mm (0.79 in.) from piston skirt end in the direction perpendicular to piston pin.

Piston diameter	Standard	68.465 – 68.485 mm (2.6955 – 2.6962 in.)
	Oversize: 0.25 mm (0.0098 in.)	68.720 – 68.740 mm (2.7055 – 2.7063 in.)
	0.50 mm (0.0196 in.)	68.970 – 68.990 mm (2.7153 – 2.7161 in.)



COOLANT LEVEL

Coolant Level

To check level, lift hood and look at "see-through" coolant reservoir tank.
It is not necessary to remove radiator cap to check coolant level.

WARNING:
To help avoid danger of being burned:
- **do not remove reservoir tank cap while coolant is boiling, and**
- **do not remove radiator cap while engine and radiator are still hot.**

Scalding fluid and steam can be blown out under pressure if either cap is taken off too soon.

When engine is cool, check coolant level in reservoir tank (1).
A normal coolant level should be between FULL and LOW marks on reservoir tank.
If coolant level is below LOW mark (2), remove reservoir tank cap and add proper coolant to tank to bring coolant level up to FULL mark (3). Then, reinstall cap (4).

NOTE:
If proper quality antifreeze is used, there is no need to add extra inhibitors or additives that claim to improve system. They may be harmful to proper operation of system, and are unnecessary expense.

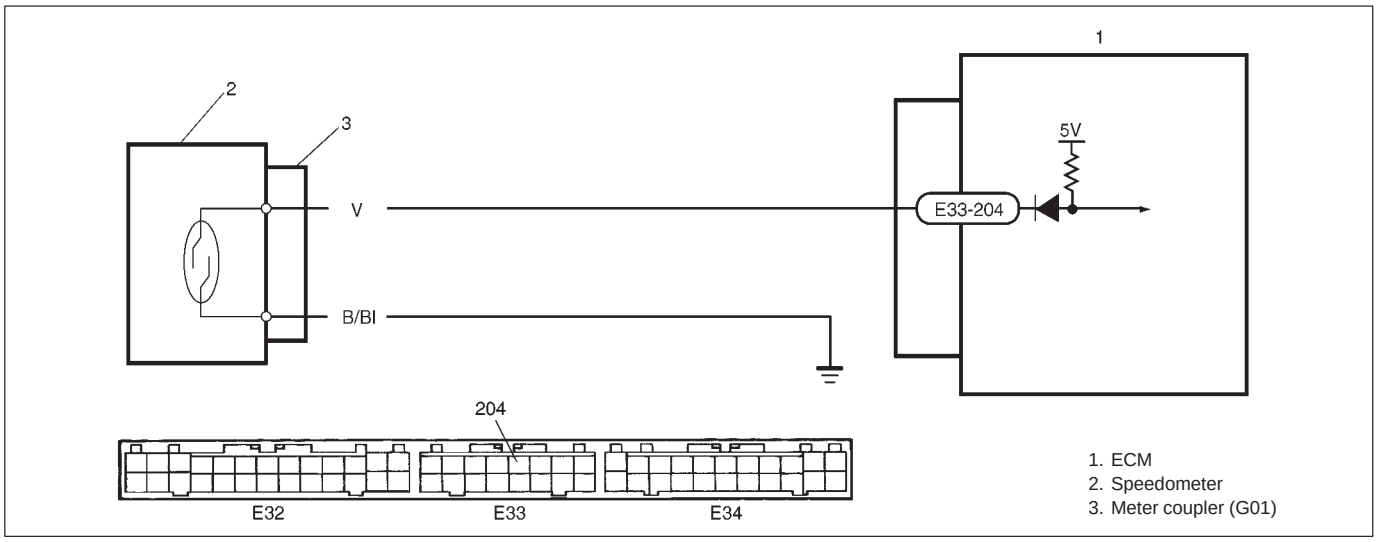
COOLING SYSTEM SERVICE

WARNING:
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 cap is taken off too soon.

Cooling system should be serviced as follows.
1) Check cooling system for leakage or damage.
2) Wash radiator cap and filler neck with clean water by removing radiator cap when engine is cold.
3) Check coolant for proper level and freeze protection.

CODE NO.16 (P0500) VSS CIRCUIT

(VSS SIGNAL NOT INPUTTED ALTHOUGH FUEL IS KEPT CUT AT LOWER THAN 4000 R/MIN. FOR LONGER THAN 4 SECONDS)



STEP	ACTION	YES	NO
1	Does speedometer indicate vehicle speed?	● "V" wire open. ● Poor "E33–204" connection. If OK, substitute a known-good ECM and recheck.	Broken speed meter cable. If if it OK, go to Step 2.
2	1) Disconnect ECM coupler with ignition switch at OFF position. 2) Connect ohmmeter between E33-204 terminal of ECM coupler and body ground. 3) Hoist front end of car and lock front right tire. 4) Turn front left tire slowly. Does ohmmeter indicator deflect between 0 and ∞ a few times while tire is turned one revolution?	Poor E33-204 connection. If connection is OK, intermittent trouble or faulty ECM. Recheck referring to INTERMITTENT TROUBLE.	Go to Step 3.
3	1) Remove combination meter. 2) Check speed sensor referring to VEHICLE SPEED SENSOR (VSS) INSPECTION under ON-VEHICLE SERVICE. Is it good condition?	Faulty speedometer.	"V" wire open, "B/Bl" wire open, poor coupler-to-meter connection or poor "B/Bl" wire ground. If OK, substitute a known-good ECM and recheck.

NOTE:

Upon completion of inspection and repair work, perform DTC Confirmation Procedure, referring to page 6E1-30 to confirm that the trouble has been corrected.

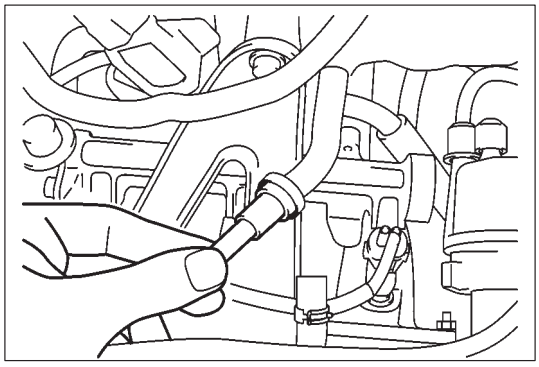
PCV SYSTEM

NOTE:

Be sure to check that there is no obstruction in PCV valve or its hoses before checking engine idle speed/IAC duty, for obstructed PCV valve or hose hampers its accurate checking.

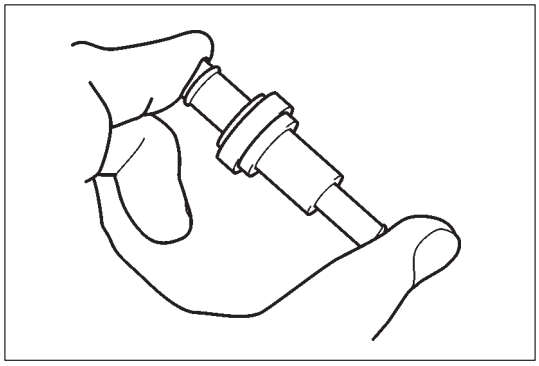
PCV HOSE INSPECTION

Check hoses for connection, leakage, clog and deterioration. Replace as necessary.



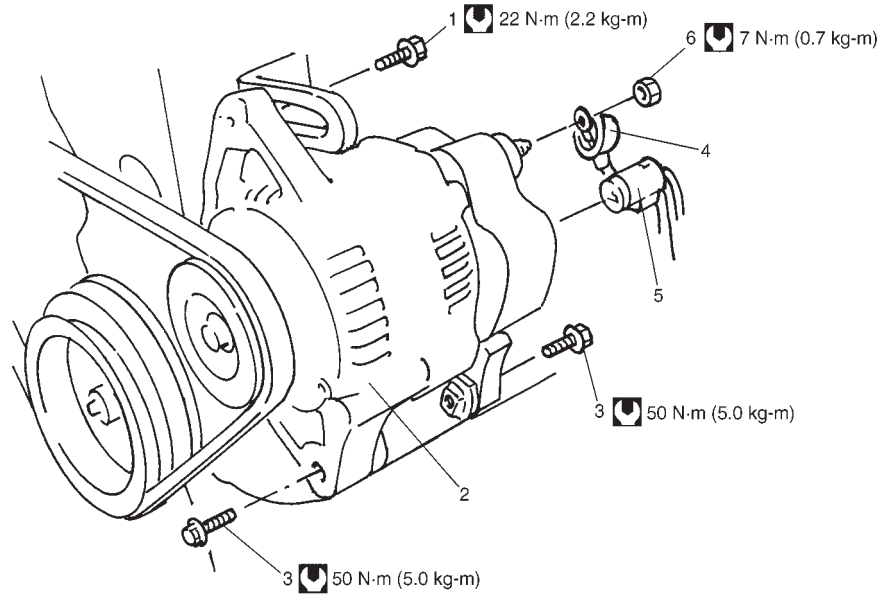
PCV VALVE INSPECTION

1) Disconnect PCV valve from cylinder head cover and install plug to head cover hole.
2) Run engine at idle speed.
3) Place your finger over end of PCV valve to check for vacuum. If there is no vacuum, check for clogged valve. Replace as necessary.



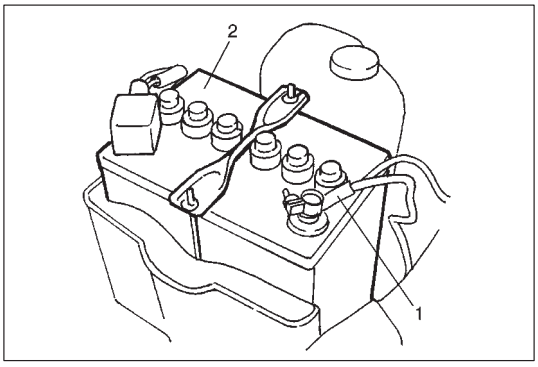
4) After checking vacuum, stop engine and remove PCV valve. Shake valve and listen for the rattle of check needle inside the valve.
   If valve does not rattle, replace it.
5) After checking, remove plug and install PCV valve.

GENERATOR



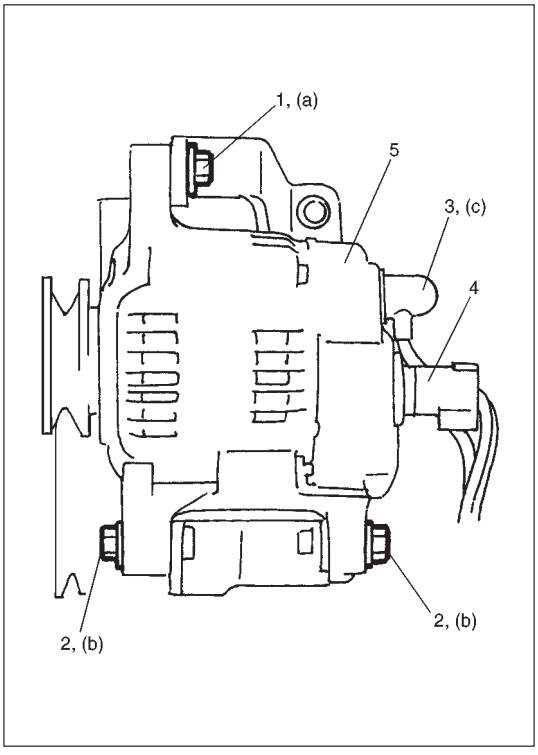
1. Adjusting bolt
2. Generator
3. Pivot bolt
4. "B" terminal wire
5. Coupler
6. Nut

: Tightening Torque



REMOVAL

1) Disconnect negative cable (1) at battery (2).
2) Remove front bumper.



3) Disconnect "B" terminal wire (3) and coupler (4) from generator (5).
4) Remove adjusting bolt (1) and pivot bolts (2).
5) Remove generator.

INSTALLATION

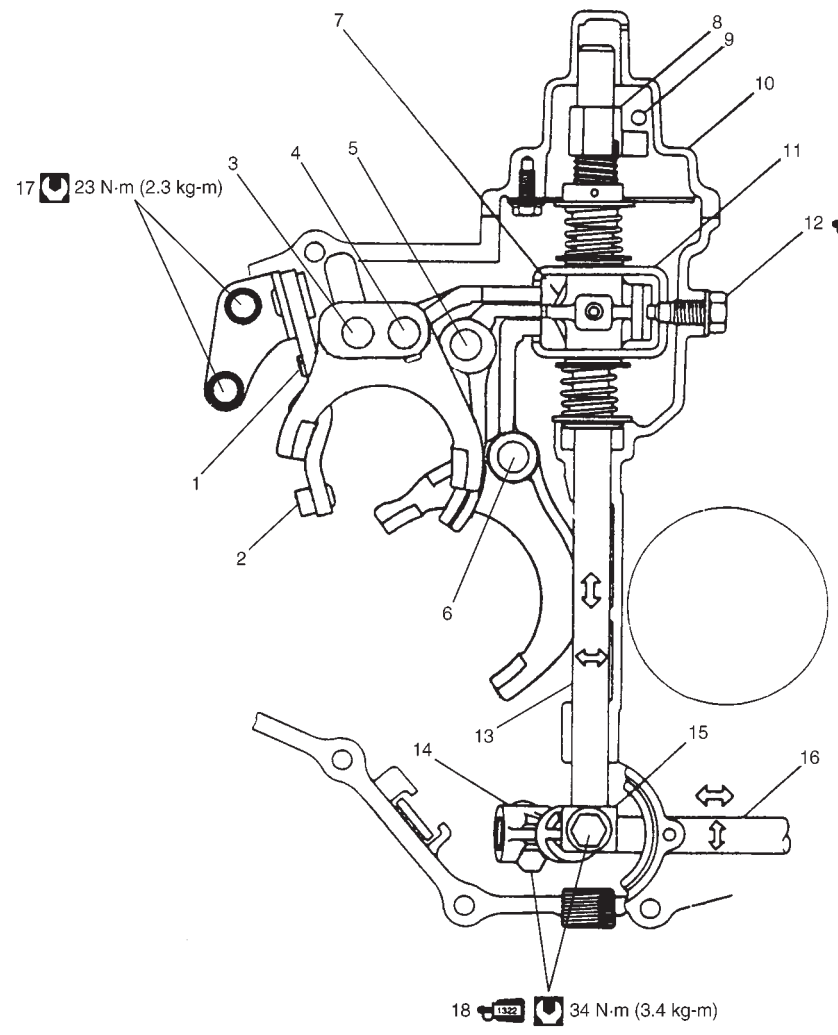
Reverse above procedure giving specified tension to drive belt. Refer to "Generator (Water Pump) Belt" for belt tension.

Tightening Torque

(a): 22 N·m (2.2 kg-m, 16.0 lb-ft)
(b): 50 N·m (5.0 kg-m, 36.5 lb-ft)
(c): 7 N·m (0.7 kg-m, 5.0 lb-ft)

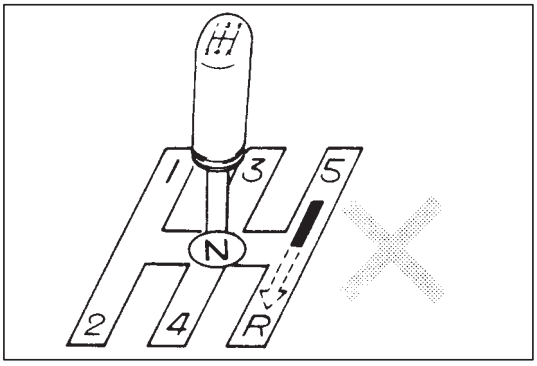
GEAR SHIFT MECHANISM

Movement of gear shift control lever is transmitted to gear shift shaft through gear shift control shaft, and gear shift & select shaft through gear shift arm and gear shift yoke, and then gear shift & select lever to each gear shift yoke, shaft and fork or arm. Gear shift interlock plate is provided to prevent the gear from engaging double.



1. Reverse gear shift arm
2. Reverse gear shift lever
3. 5th & REV gear shift guide shaft
4. 5th & REV gear shift shaft
5. High speed gear shift shaft
6. Low speed gear shift shaft
7. Gear shift & select lever
8. 5th & REV gear shift cam
9. 5th to REV interlock guide bolt
10. Gear shift guide case
11. Gear shift interlock plate
12. 1322 Gear shift interlock bolt: Apply thread lock cement 99000-32110 to thread part
13. Gear shift & select shaft
14. Gear shift arm
15. Gear shift yoke
16. Gear shift shaft
17. Reverse gear shift lever bolt
18. 1322 Gear shift arm bolt: Apply thread lock cement 99000-32110 to thread part

: Tightening Torque



5TH & REVERSE GEAR SHIFT CAM

5th & reverse gear shift cam, cam guide return spring and 5th to reverse interlock guide bolt are provided to prevent the gear from being directly shifted from 5th to reverse.