

**FOREWORD**

This manual contains an introductory description on the SUZUKI LT-A700X and procedures for its inspection/service and overhaul of its main components.

Other information considered as generally known is not included.

Read the GENERAL INFORMATION section to familiarize yourself with the motorcycle and its maintenance. Use this section as well as other sections to use as a guide for proper inspection and service. This manual will help you know the vehicle better so that you can assure your customers of fast and reliable service.

- \* This manual has been prepared on the basis of the latest specifications at the time of publication. If modifications have been made since then, differences may exist between the content of this manual and the actual vehicle.
- \* Illustrations in this manual are used to show the basic principles of operation and work procedures. They may not represent the actual vehicle exactly in detail.
- \* This manual is written for persons who have enough knowledge, skills and tools, including special tools, for servicing SUZUKI vehicles. If you do not have the proper knowledge and tools, ask your authorized SUZUKI motorcycle dealer to help you.

**▲ WARNING**

Inexperienced mechanics or mechanics without the proper tools and equipment may not be able to properly perform the services described in this manual. Improper repair may result in injury to the mechanic and may render the vehicle unsafe for the rider.

**GROUP INDEX**

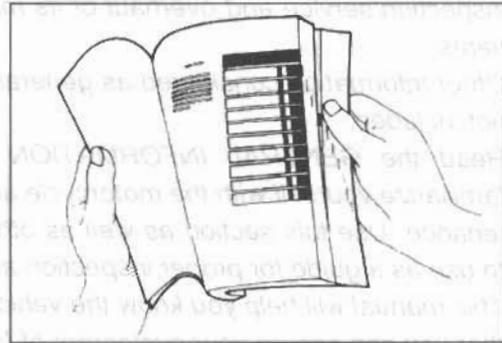
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## HOW TO USE THIS MANUAL TO LOCATE WHAT YOU ARE LOOKING FOR:

1. The text of this manual is divided into sections.
2. The section titles are listed in the GROUP INDEX.
3. Holding the manual as shown at the right will allow you to find the first page of the section easily.
4. The contents are listed on the first page of each section to help you find the item and page you need.



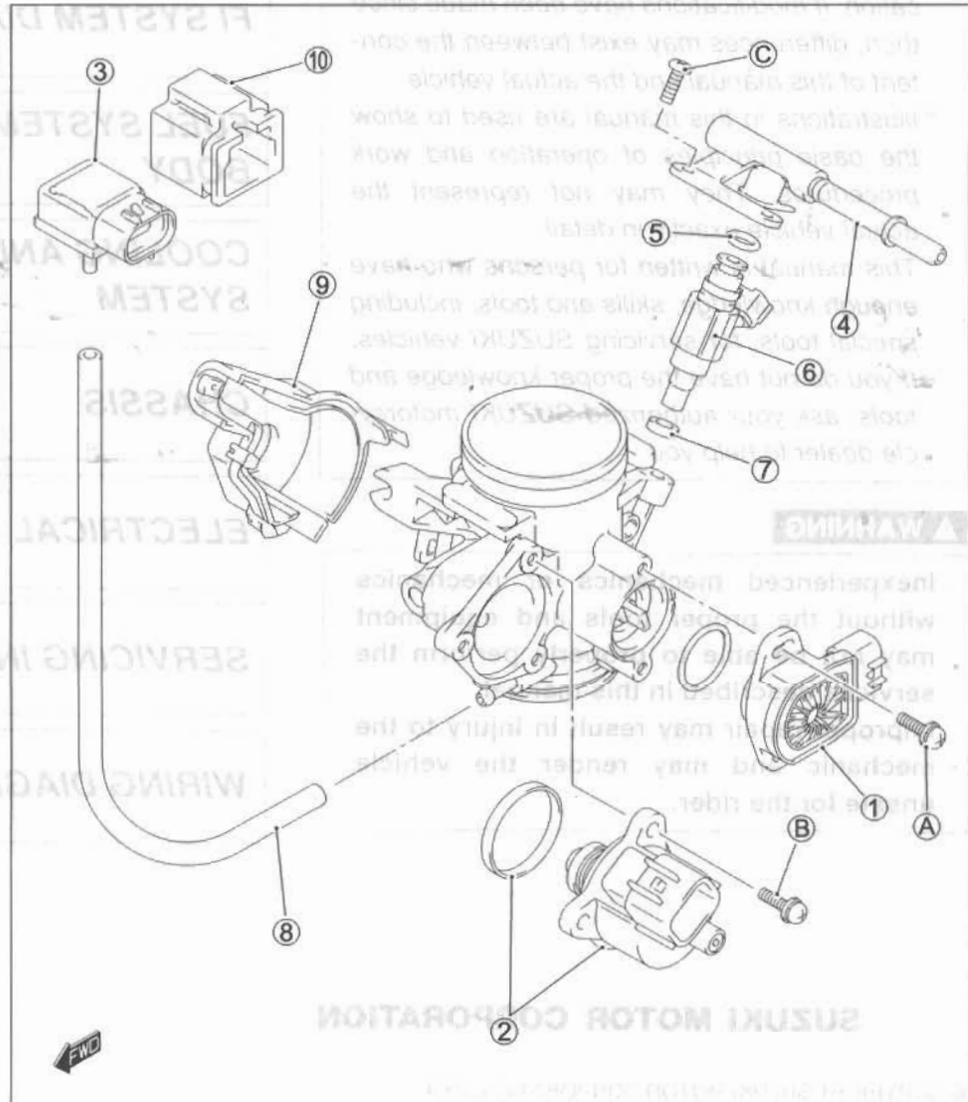
## COMPONENT PARTS AND WORK TO BE DONE

Under the name of each system or unit, is its exploded view. Work instructions and other service information such as the tightening torque, lubricating points and locking agent points, are provided.

Example:

|   |                                   |
|---|-----------------------------------|
| ① | TP sensor                         |
| ② | ISC valve                         |
| ③ | IAP sensor                        |
| ④ | Fuel delivery pipe                |
| ⑤ | O-ring                            |
| ⑥ | Fuel injector                     |
| ⑦ | Cushion seal                      |
| ⑧ | Vacuum hose                       |
| ⑨ | Throttle linkage cover            |
| ⑩ | IAP sensor cover                  |
| A | TP sensor mounting screw          |
| B | ISC valve mounting screw          |
| C | Fuel delivery pipe mounting screw |

| ITEM | N-m | kgf-m | lb-ft |
|------|-----|-------|-------|
| A    | 2.0 | 0.2   | 1.5   |
| B    | 2.0 | 0.2   | 1.5   |
| C    | 5   | 0.5   | 3.5   |



## SYMBOL

Listed in the table below are the symbols indicating instructions and other information necessary for servicing. The meaning of each symbol is also included in the table.

| SYMBOL  | DEFINITION  | SYMBOL  | DEFINITION  |
|---|---|---|---|
|    | Torque control required.<br>Data beside it indicates specified torque.                              |    | Apply THREAD LOCK SUPER "1305".<br>99000-32100              |
|    | Indicates service data.   |    | Apply THREAD LOCK SUPER "1322".<br>99000-32110 (Except USA) |
|    | Apply oil. Use engine oil unless otherwise specified.   |    | Apply THREAD LOCK "1342".<br>99000-32050                    |
|    | Apply hypoid gear oil.  |    | Apply THREAD LOCK SUPER "1360".<br>99000-32130              |
|    | Apply molybdenum oil solution.<br>(mixture of engine oil and SUZUKI MOLY PASTE in a ratio of 1 : 1) |    | Apply or use brake fluid.                                   |
|  | Apply SUZUKI SUPER GREASE "A".<br>99000-25030 (USA)<br>99000-25010 (Others)                         |  | Measure in voltage range.                                   |
|  | Apply SUZUKI SILICONE GREASE.<br>99000-25100  |  | Measure in resistance range.                                |
|  | Apply SUZUKI MOLY PASTE.<br>99000-25140   |  | Measure in current range.                                   |
|  | Apply WATER RESISTANCE GREASE.<br>99000-25160   |  | Measure in diode test range.                                |
|  | Apply SUZUKI BOND "1207B".<br>99104-31140 (USA)   |  | Measure in continuity test range.                           |
|  | Apply SUZUKI BOND "1215".<br>99000-31110 (Except USA)   |  | Use special tool.   |
|  | Apply SUZUKI BOND "1216B".<br>99100-31230   |  | Use engine coolant.<br>99000-99032-11X (Except USA)         |
|  | Apply THREAD LOCK SUPER "1303".<br>99000-32030  |   |   |

# ABBREVIATIONS USED IN THIS MANUAL

|   |  |
|---|--|
| <p><b>A</b></p> <p>ABDC : After Bottom Dead Center</p> <p>AC : Alternating Current</p> <p>ACL : Air Cleaner, Air Cleaner Box</p> <p>API : American Petroleum Institute</p> <p>ATDC : After Top Dead Center</p> <p>ATM Pressure : Atmospheric Pressure</p> <p style="padding-left: 20px;">: Atmospheric Pressure sensor (APS, AP Sensor)</p> <p>A/F : Air Fuel Mixture</p> | <p><b>E</b></p> <p>ECM : Engine Control Module</p> <p style="padding-left: 20px;">: Engine Control Unit (ECU) (FI Control Unit)</p> <p>ECT Sensor : Engine Coolant Temperature Sensor (ECTS), Water Temp. Sensor (WTS)</p> |
| <p><b>B</b></p> <p>BBDC : Before Bottom Dead Center</p> <p>BTDC : Before Top Dead Center</p> <p>B+ : Battery Positive Voltage</p>   | <p><b>F</b></p> <p>FI : Fuel Injection, Fuel Injector</p> <p>FP : Fuel Pump</p> <p>FPR : Fuel Pressure Regulator</p> <p>FP Relay : Fuel Pump Relay</p>   |
| <p><b>C</b></p> <p>CKP Sensor : Crankshaft Position Sensor (CKPS)</p> <p>CKT : Circuit</p> <p>CO : Carbon Monoxide</p> <p>CPU : Central Processing Unit</p>   | <p><b>G</b></p> <p>GEN : Generator</p> <p>GND : Ground</p> <p>GP Switch : Gear Position Switch</p>   |
| <p><b>D</b></p> <p>DC : Direct Current</p> <p>DIFF-LOCK Relay: Differential Lock Relay</p> <p>DMC : Dealer Mode Coupler</p> <p>DOHC : Double Over Head Camshaft</p> <p>DRL : Daytime Running Light</p>  | <p><b>H</b></p> <p>HC : Hydrocarbons</p>   |
| <p><b>L</b></p> <p>LCD : Liquid Crystal Display</p> <p>LED : Light Emitting Diode (Malfunction Indicator Lamp)</p> <p>LH : Left Hand</p>  | <p><b>I</b></p> <p>IAP Sensor : Intake Air Pressure Sensor (IAPS)</p> <p>IAT Sensor : Intake Air Temperature Sensor (IATS)</p> <p>IG : Ignition</p> <p>ISC Valve : Idle Speed Control Valve (ISCV)</p>                     |



## WIRE COLOR

B : Black  
Bl : Blue  
Lg : Light green  
O : Orange  
P : Pink

Gr : Gray  
W : White  
Y : Yellow  
G : Green

R : Red  
Br : Brown  
Dg : Dark green

B/Bl : Black with Blue tracer  
B/G : Black with Green tracer  
B/R : Black with Red tracer  
B/Y : Black with Yellow tracer  
Bl/G : Blue with Green tracer  
Bl/W : Blue with White tracer  
G/B : Green with Black tracer  
G/W : Green with White tracer  
Gr/B : Gray with Black tracer  
Gr/W : Gray with White tracer  
O/B : Orange with Black tracer  
O/G : Orange with Green tracer  
O/W : Orange with White tracer  
P/B : Pink with Black tracer  
R/B : Red with Black tracer  
R/G : Red with Green tracer  
W/B : White with Black tracer  
W/G : White with Green tracer  
W/Y : White with Yellow tracer  
Y/Bl : Yellow with Blue tracer  
Y/R : Yellow with Red tracer

B/Br : Black with Brown tracer  
B/Lg : Black with Light green tracer  
B/W : Black with White tracer  
Bl/B : Blue with Black tracer  
Bl/R : Blue with Red tracer  
Bl/Y : Blue with Yellow tracer  
G/Bl : Green with Blue tracer  
G/Y : Green with Yellow tracer  
Gr/R : Gray with Red tracer  
Gr/Y : Gray with Yellow tracer  
O/Bl : Orange with Blue tracer  
O/R : Orange with Red tracer  
O/Y : Orange with Yellow tracer  
P/W : Pink with White tracer  
R/Bl : Red with Blue tracer  
R/W : Red with White tracer  
W/Bl : White with Blue tracer  
W/R : White with Red tracer  
Y/B : Yellow with Black tracer  
Y/G : Yellow with Green tracer  
Y/W : Yellow with White tracer

# GENERAL INFORMATION

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## COUNTRY AND AREA CODES

The following codes stand for the applicable country (-ies) and area (-s).

| MODEL       | CODE | COUNTRY or AREA | EFFECTIVE FRAME NO. |
|-------------|------|-----------------|---------------------|
| LT-A700X K5 | E-17 | Sweden          | JSAAP41A 52100001-  |
|             | E-24 | Australia       |                     |
|             | E-28 | Canada          |                     |
|             | E-33 | U.S.A.          |                     |

## WARNING/CAUTION/NOTE

Please read this manual and follow its instructions carefully. To emphasize special information, the symbol and the words WARNING, CAUTION and NOTE have special meanings. Pay special attention to the messages highlighted by these signal words.

### **▲ WARNING**

Indicates a potential hazard that could result in death or injury.

### **CAUTION**

Indicates a potential hazard that could result in vehicle damage.

### **NOTE:**

Indicates special information to make maintenance easier or instructions clearer.

Please note, however, that the warnings and cautions contained in this manual cannot possibly cover all potential hazards relating to the servicing, or lack of servicing, of the vehicle. In addition to the WARNINGS and CAUTIONS stated, you must use good judgement and basic mechanical safety principles. If you are unsure about how to perform a particular service operation, ask a more experienced mechanic for advice.

## GENERAL PRECAUTIONS

### **▲ WARNING**

- \* Proper service and repair procedures are important for the safety of the service mechanic and the safety and reliability of the vehicle.
- \* When 2 or more persons work together, pay attention to the safety of each other.
- \* When it is necessary to run the engine indoors, make sure that exhaust gas is forced outdoors.
- \* When working with toxic or flammable materials, make sure that the area you work in is well-ventilated and that you follow all of the material manufacturer's instructions.
- \* Never use gasoline as a cleaning solvent.
- \* To avoid getting burned, do not touch the engine, engine oil, radiator and exhaust system until they have cooled.
- \* After servicing the fuel, oil, water, exhaust or brake systems, check all lines and fittings related to the system for leaks.

**CAUTION**

- \* If parts replacement is necessary, replace the parts with Suzuki Genuine Parts or their equivalents.
- \* When removing parts that are to be reused, keep them arranged in an orderly manner so that they may be reinstalled in the proper order and orientation.
- \* Be sure to use special tools when instructed.
- \* Make sure that all parts used in reassembly are clean. Lubricate them when specified.
- \* Use the specified lubricant, bond, or sealant.
- \* When removing the battery, disconnect the negative cable first and then the positive cable.
- \* When reconnecting the battery, connect the positive cable first and then the negative cable, and replace the terminal cover on the positive terminal.
- \* When performing service to electrical parts, if the service procedures do not require use of battery power, disconnect the negative cable from the battery.
- \* When tightening the cylinder head or case bolts and nuts, tighten the larger sizes first. Always tighten the bolts and nuts diagonally from the inside toward outside and to the specified tightening torque.
- \* Whenever you remove oil seals, gaskets, packing, O-rings, locking washers, self-locking nuts, cotter pins, circlips and certain other parts as specified, be sure to replace them with new ones. Also, before installing these new parts, be sure to remove any left over material from the mating surfaces.
- \* Never reuse a snap ring. When installing a new snap ring, take care not to expand the end gap larger than required to slip the snap ring over the shaft. After installing a snap ring, always ensure that it is completely seated in its groove and securely fitted.
- \* Use a torque wrench to tighten fasteners to the specified torque. Wipe off grease and oil if a thread is smeared with them.
- \* After reassembling, check parts for tightness and proper operation.

- \* To protect the environment, do not unlawfully dispose of used motor oil, engine coolant and other fluids: batteries, and tires.
- \* To protect Earth's natural resources, properly dispose of used vehicle and parts.



# SUZUKI LT-A700XK5 ('05-MODEL)

CAUTION



RIGHT SIDE

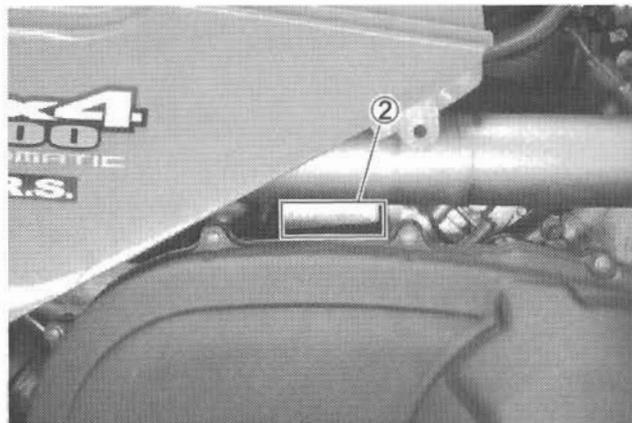
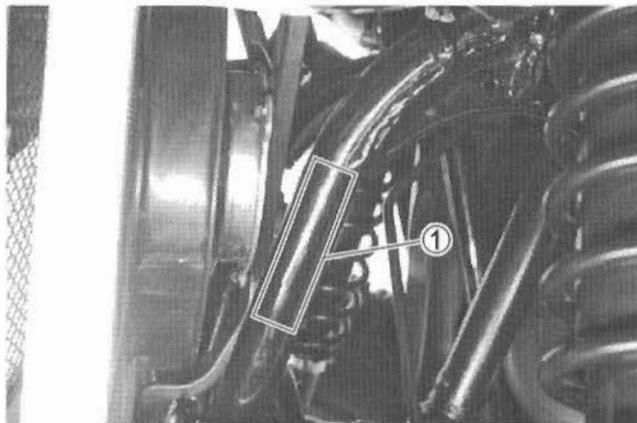


LEFT SIDE

- Difference between photograph and actual vehicle may exist depending on the markets.

## SERIAL NUMBER LOCATION

The frame serial number or V.I.N. (Vehicle Identification Number) ① is stamped, on the left side of the front frame pipe. The engine serial number ② is located on the right side of the crankcase. These numbers are required especially for registering the machine and ordering spare parts.



## FUEL, OIL AND ENGINE COOLANT RECOMMENDATION

### FUEL (FOR USA AND CANADA)

Use only unleaded gasoline of at least 87 pump octane (R/2 + M/2) or 91 octane or higher rated by the Research Method.

Gasoline containing MTBE (Methyl Tertiary Butyl Ether), less than 10 % ethanol, or less than 5 % methanol with appropriate cosolvents and corrosion inhibitor is permissible.

### FUEL (FOR OTHER COUNTRIES)

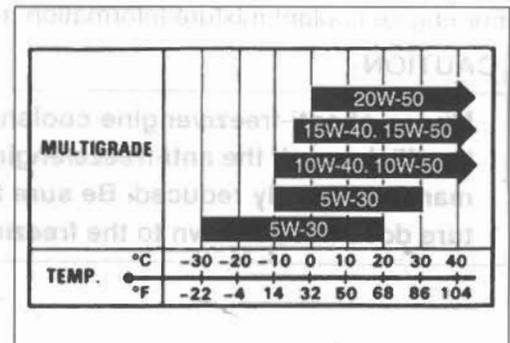
Gasoline used should be graded 91 octane (Research Method) or higher. An unleaded gasoline is recommended.

### ENGINE OIL (FOR USA)

SUZUKI recommends the use of SUZUKI PERFORMANCE 4 MOTOR OIL or an oil which is rated SF or SG under the API (American Petroleum Institute) service classification. The recommended viscosity is SAE 10W-40. If SAE 10W-40 oil is not available, select an alternative according to the following chart.

### ENGINE OIL (FOR OTHER COUNTRIES)

Use a premium quality 4-stroke motor oil to ensure longer service life of your vehicle. Use only oils which are rated SF or SG under the API service classification. The recommended viscosity is SAE 10W-40. If SAE 10W-40 motor oil is not available, select an alternative according to the right chart.



### FRONT DIFFERENTIAL GEAR OIL

Use hypoid gear oil that meets the API service classification GL-5 and is rated SAE #90. Use a hypoid gear oil with a rating of SAE #80 if the vehicle is operated where the ambient temperature is below 0 °C (32 °F).

### REAR DRIVE (FINAL) GEAR OIL

Use mobil fluid 424 or equivalent oil.

### BRAKE FLUID

Specification and classification: DOT 4

#### ▲ WARNING

Since the brake system of this vehicle is filled with a glycol-based brake fluid by the manufacturer, do not use or mix different types of fluid such as silicone-based and petroleum-based fluid for refilling the system, otherwise serious damage will result.

Do not use any brake fluid taken from old or used or unsealed containers.

Never re-use brake fluid left over from a previous servicing, which has been stored for a long period.

## ENGINE COOLANT

Use an anti-freeze/engine coolant compatible with an aluminum radiator, mixed with distilled water only.

## WATER FOR MIXING

Use distilled water only. Water other than distilled water can corrode and clog the aluminum radiator.

## ANTI-FREEZE/ENGINE COOLANT

The engine coolant performs as a corrosion and rust inhibitor as well as anti-freeze. Therefore, the engine coolant should be used at all times even though the atmospheric temperature in your area does not go down to freezing point.

Suzuki recommends the use of SUZUKI COOLANT anti-freeze/engine coolant. If this is not available, use an equivalent which is compatible with an aluminum radiator.

## LIQUID AMOUNT OF WATER/ENGINE COOLANT

**Solution capacity (total): Approx. 2 450 ml (2.59/2.16 US/Imp qt)**

For engine coolant mixture information, refer to cooling system section in page 7-2

|                               |  |
|-------------------------------|--|
| Mixing beyond it would reduce | Mixing of anti-freeze/engine coolant should be limited to 60 %. M<br>its efficiency. If the anti-freeze/engine coolant |
|-------------------------------|--|



### ▲ WARNING

Since the brake system of the vehicle is filled with a glycol-based brake fluid by the manufacturer, do not use or mix different types of fluid such as silicone-based and petroleum based fluid for refilling the system, otherwise serious damage will result.  
Do not use any brake fluid taken from old or used or unsealed containers.  
Never re-use brake fluid left over from a previous servicing, which has been stored for a long period.

# BREAK-IN PROCEDURES

During manufacture only the best possible materials are used and all machined parts are finished to a very high standard but it is still necessary to allow the moving parts to "BREAK-IN" before subjecting the engine to maximum stresses. The future performance and reliability of the engine depends on the care and restraint exercised during its early life. The general rules are as follows.

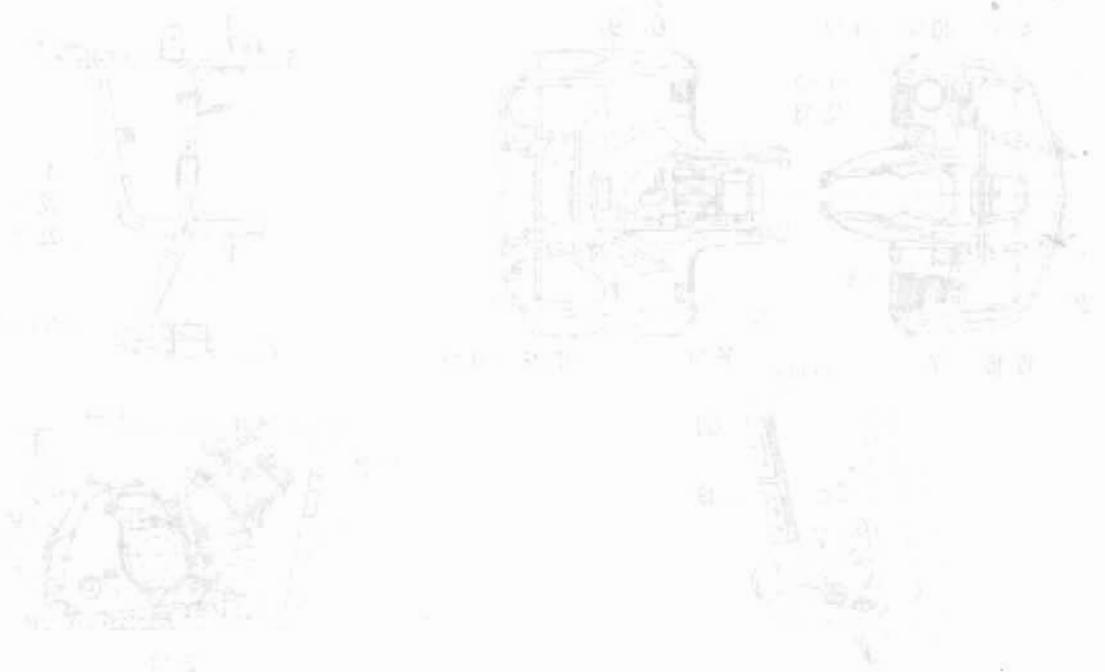
- Keep to these break-in engine speed limits:

## Brake-in engine speeds

**Initial 500 km (300 miles): Less than 1/2 throttle**

- Upon reaching an odometer reading of 500 km (300 miles) you can subject the vehicle to full throttle operation, for short periods of time.

|                       |                                |
|-----------------------|--------------------------------|
| A (For E-28)          | Wiring to passenger label      |
| A (For E-23)          | W/E 19 label                   |
| A (For E-24)          | Max AMP caution label          |
| A (For E-24)          | Max AMP caution label          |
| A (For E-24 33)       | 1-12 (Passenger) label         |
| A (For E-17 38)       | 1-12 (Passenger) warning label |
| A (For E-24 33)       | 1-12 (Passenger) warning label |
| A (For E-17 38)       | 1-12 (Passenger) warning label |
| A                     | 1-12 (Passenger) warning label |
| A (For E-17 (CHL) 28) | 1-12 (Passenger) warning label |
| A (For E-28)          | 1-12 (Passenger) warning label |
| A (For E-28)          | 1-12 (Passenger) warning label |
| A (For E-17)          | 1-12 (Passenger) warning label |



# INFORMATION LABELS

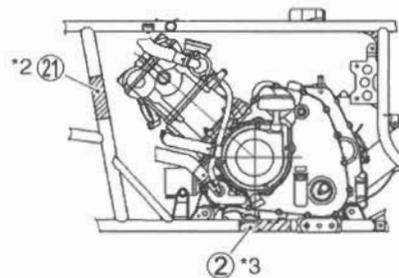
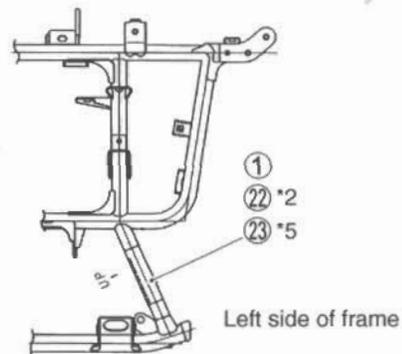
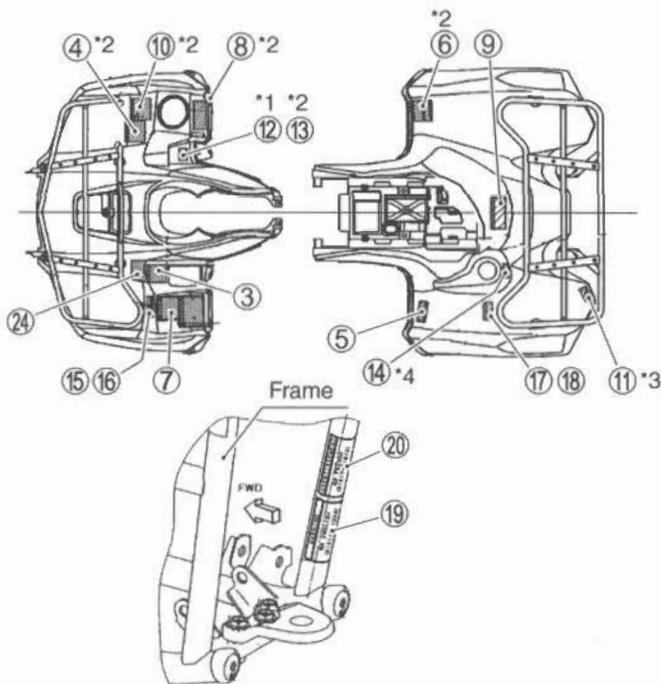
BREAK-IN PROCEDURES

|  |                       |
|--|-----------------------|
| ① Certification plate                                    | A (For E-24, 33)      |
| ② Information label                                      | A (For E-33)          |
| ③ Gearshift label  | A                     |
| ④ Gearshift label  | A (For E-28)          |
| ⑤ Tire air pressure label                                | A                     |
| ⑥ Tire air pressure label and warning no-passenger label | A (For E-28)          |
| ⑦ General warning & AGE, 16 label                        | A                     |
| ⑧ General warning label                                  | A (For E-28)          |
| ⑨ Warning no-passenger label                             | A                     |
| ⑩ AGE, 16 label  | A (For E-28)          |
| ⑪ Manual notice label                                    | A (For E-33)          |
| ⑫ Max AMP caution label                                  | A (Except for E-28)   |
| ⑬ Max AMP caution label                                  | A (For E-28)          |
| ⑭ Fuel caution label                                     | A (For E-24)          |
| ⑮ Front carrier warning label                            | A (For E-24, 33)      |
| ⑯ Front carrier warning label                            | A (For E-17, 28)      |
| ⑰ Rear carrier warning label                             | A (For E-24, 33)      |
| ⑱ Rear carrier warning label                             | A (For E-17, 28)      |
| ⑲ Trailer to warning label                               | A                     |
| ⑳ Trailer to warning label                               | A (For E-17 (CH), 28) |
| ㉑ ICES Canada label                                      | A (For E-28)          |
| ㉒ Compliance label                                       | A (For E-28)          |
| ㉓ ID plate   | A (For E-17)          |
| ㉔ Cooling fan label                                      | A                     |

A: Attached

\*1: Except for E-28 \*2: For E-28 \*3: For E-33 \*4: For E-24 \*5: For E-17

\*6: This label is attached on the seat. \*5: This label is attached on the left side of frame.



## SPECIFICATIONS

### DIMENSIONS AND DRY MASS

|                        |                          |          |
|------------------------|--------------------------|----------|
| Overall length .....   | 2 115 mm (83.3 in) ..... | E-28, 33 |
| Overall width .....    | 2 135 mm (84.1 in) ..... | E-17, 24 |
| Overall height .....   | 1 210 mm (47.6 in) ..... | E-28, 33 |
| Wheelbase .....        | 1 250 mm (49.2 in) ..... | E-17, 24 |
| Ground clearance ..... | 1 220 mm (48.0 in)       |          |
| Seat height .....      | 1 280 mm (50.4 in)       |          |
| Dry mass .....         | 260 mm (10.2 in)         |          |
| Front track .....      | 860 mm (33.9 in)         |          |
| Rear track .....       | 273 kg (601 lbs).....    | E-28, 33 |
|                        | 275 kg (606 lbs).....    | E-17, 24 |
|                        | 930 mm (36.6 in)         |          |
|                        | 940 mm (37.0 in)         |          |

### ENGINE

|                           |                                  |
|---------------------------|----------------------------------|
| Type .....                | 4 stroke, liquid-cooled, DOHC    |
| Number of cylinders ..... | 1                                |
| Bore .....                | 102.0 mm (4.016 in)              |
| Stroke .....              | 85.0 mm (3.346 in)               |
| Displacement .....        | 695 cm <sup>3</sup> (42.4 cu.in) |
| Compression ratio .....   | 10.0:1                           |
| Fuel system .....         | Fuel injection                   |
| Air cleaner .....         | Nonwoven fabric element          |
| Starter system .....      | Electric and recoil starter      |
| Lubrication system .....  | Wet sump                         |
| Idle speed .....          | 1 300 ± 100 r/min                |

### DRIVE TRAIN

|  |                                       |
|--|---------------------------------------|
| Clutch .....                               | Wet shoe, automatic, centrifugal type |
| Transmission .....                         | Automatic variable ratio (V-belt)     |
| Transfer .....                             | 2-speed forward with reverse          |
| Gearshift pattern, Transmission .....      | Automatic                             |
| Transfer .....                             | L-H-N-R (Hand operated)               |
| Automatic transmission ratio .....         | Variable change (2.763 – 0.78)        |
| Secondary reduction ratio .....            | 2.158 (40/21 × 17/15)                 |
| Final reduction ratio (Front & Rear) ..... | 3.600 (36/10)                         |
| Transfer gear ratio, Low .....             | 2.563 (41/16)                         |
| High .....                                 | 1.240 (31/25)                         |
| Reverse .....                              | 1.882 (32/17)                         |
| Drive system .....                         | Shaft drive                           |

**CHASSIS**

|                         |   |
|-------------------------|---|
| Front suspension.....   | Independent, double wishbone, coil spring, oil damped |
| Rear suspension.....    | Independent, double wishbone, coil spring, oil damped |
| Front wheel travel..... | 180 mm (7.1 in)                                       |
| Rear wheel travel.....  | 200 mm (7.9 in)                                       |
| Caster.....             | 1.6 °   |
| Trail.....              | 3.4 mm (0.13 in)                                      |
| Toe-out.....            | 10 mm (0.39 in)                                       |
| Camber.....             | 0.64 °  |
| Steering angle.....     | 46 ° (right & left)                                   |
| Turning radius.....     | 3.1 m (10.2 ft)                                       |
| Front brake.....        | Dual hydraulic disc                                   |
| Rear brake.....         | Sealed oil-bathed multi-disc                          |
| Front tire size.....    | AT25 × 8 – 12☆☆, tubeless                             |
| Rear tire size.....     | AT25 × 10 – 12☆☆, tubeless                            |

**ELECTRICAL**

|   |                             |
|---|-----------------------------|
| Ignition type.....                        | Electronic ignition (CDI)   |
| Ignition timing.....                      | 7 ° B.T.D.C. at 1 300 r/min |
| Spark plug.....                           | NGK CR6E or DENSO U20ESR-N  |
| Battery.....                              | 12 V 64.8 kC (18 Ah)/10 HR  |
| Generator.....                            | Three-phase A.C. generator  |
| Main fuse.....                            | 30 A                        |
| Fuse.....                                 | 10/10/10/10/15/15 A         |
| Headlight.....                            | 12 V 30/30 W × 2            |
| Auxiliary light.....                      | 12 V 40 W                   |
| Brake light/Taillight.....                | 12 V 21/5 W                 |
| Backup light.....                         | 12 V 21 W... E-17           |
| Speedometer light.....                    | LED                         |
| Neutral indicator light.....              | LED                         |
| High beam indicator light.....            | LED..... E-17               |
| Coolant temperature/FI warning light..... | LED                         |
| Reverse indicator light.....              | LED                         |
| Diff-lock indicator light.....            | LED                         |

**CAPACITIES**

|                             |                              |
|-----------------------------|------------------------------|
| Fuel tank.....              | 17.5 L (4.6/3.8 US/lmp gal)  |
| Engine oil, oil change..... | 2 300 ml (2.4/2.0 US/lmp qt) |
| with filter change.....     | 2 500 ml (2.6/2.2 US/lmp qt) |
| overhaul.....               | 3 000 ml (3.2/2.6 US/lmp qt) |
| Differential gear oil.....  | 500 ml (16.9/17.6 US/lmp oz) |
| Final gear oil.....         | 770 ml (26.0/27.1 US/lmp oz) |
| Coolant.....                | 2.45 L (2.6/2.2 US/lmp qt)   |

These specifications are subject to change without notice.

# PERIODIC MAINTENANCE

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## PERIODIC MAINTENANCE SCHEDULE

The chart below lists the recommended intervals for all the required periodic service work necessary to keep the vehicle operating at peak performance and economy. Maintenance intervals are expressed in terms of kilometers, miles and months, and are dependent on whichever comes first.

### NOTE:

More frequent servicing may be performed on vehicles that are used under severe conditions.

## PERIODIC MAINTENANCE CHART

| Item   | Interval | km     | Initial 200                            | Every 1 000 | Every 2 000 |
|--|----------|--------|--|-------------|-------------|
|  |          | miles  | Initial 100                            | Every 600   | Every 1 200 |
|  |          | months | 1                                      | 3           | 6           |
| Air cleaner                                  |          |        | —                                      | C           | C           |
| Exhaust pipe nuts and muffler mounting bolts |          |        | T                                      | T           | T           |
| Valve clearance                              |          |        | I                                      | —           | I           |
| Spark plug                                   |          |        | —                                      | —           | I           |
|  |          |        | Replace every 6 000 km (4 000 miles).  |             |             |
| Spark arrester                               |          |        | —                                      | —           | C           |
| Fuel line                                    |          |        | —                                      | I           | I           |
|  |          |        | Replace every four years.              |             |             |
| Throttle cable play                          |          |        | I                                      | I           | I           |
| Throttle body                                |          |        | —                                      | I           | I           |
| Engine oil and oil filter                    |          |        | R                                      | —           | R           |
| Differential gear oil                        |          |        | —                                      | —           | I           |
|  |          |        | Replace every two years.               |             |             |
| Final gear oil                               |          |        | —                                      | —           | I           |
|  |          |        | Replace every year.                    |             |             |
| Engine coolant                               |          |        | Replace every two years.               |             |             |
| Radiator                                     |          |        | —                                      | I           | I           |
| Radiator hose                                |          |        | —                                      | —           | I           |
| Drive belt                                   |          |        | —                                      | I           | R           |
| Brakes                                       |          |        | I                                      | I           | I           |
| Rear brake plates                            |          |        | Replace every 10 000 km (6 000 miles). |             |             |
| Brake fluid                                  |          |        | —                                      | I           | I           |
|  |          |        | Replace every two years.               |             |             |
| Brake hose                                   |          |        | —                                      | —           | I           |
|  |          |        | Replace every four years.              |             |             |
| Tires  |          |        | —                                      | I           | I           |
| Steering                                     |          |        | I                                      | I           | I           |
| Suspensions                                  |          |        | —                                      | —           | I           |
| Chassis nuts and bolts                       |          |        | T                                      | T           | T           |
| General lubrication                          |          |        | —                                      | L           | L           |

I = Inspect and adjust, clean, lubricate, or replace if necessary.

R = Replace

T = Tighten

C = Clean

L = Lubricate

## MAINTENANCE AND TUNE-UP PROCEDURES

This section describes the servicing procedures for each item mentioned in the periodic maintenance chart.

Before performing the servicing procedures mentioned in the periodic maintenance chart, remove following parts to ease servicing work;

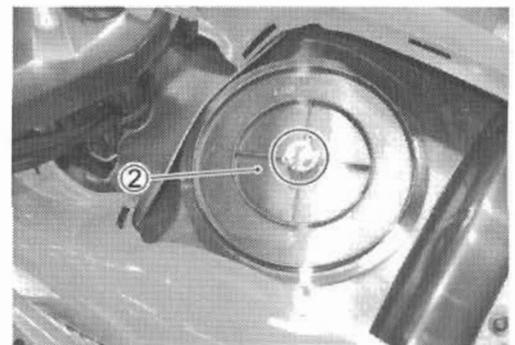
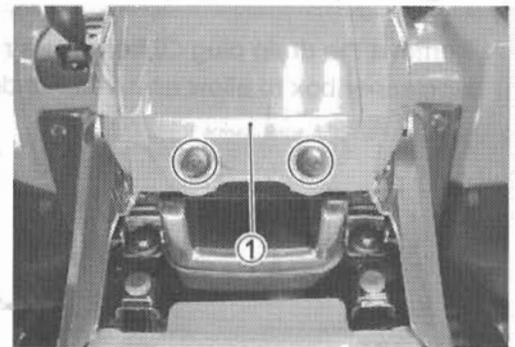
- Seat. (☞8-4)
- Front carrier. (☞8-4)
- Front grip bar. (☞8-5)
- Front fender. (☞8-5)
- Left inner fender. (☞8-6)
- Right inner fender. (☞8-6)
- Left side cover. (☞8-8)
- Right side cover. (☞8-8)
- Left mud guard. (☞8-8)
- Right mud guard. (☞8-8)
- Rear carrier. (☞8-9)
- Fuel tank cover. (☞8-10)
- Rear fender. (☞8-10)

### AIR CLEANER

**Clean every 1 000 km (600 miles, 3 months).**

If the air cleaner element is clogged with dust, intake resistance will be increased, which results decrease in power output and increase in fuel consumption. Check and clean the air cleaner element in the following manner.

- Remove the seat. (☞8-4)
- Remove the air cleaner box cover ①.
- Remove the air cleaner box cap ②.
- Remove the air cleaner element.



- Using compressed air, blow the dust from the cleaner element.

**CAUTION**

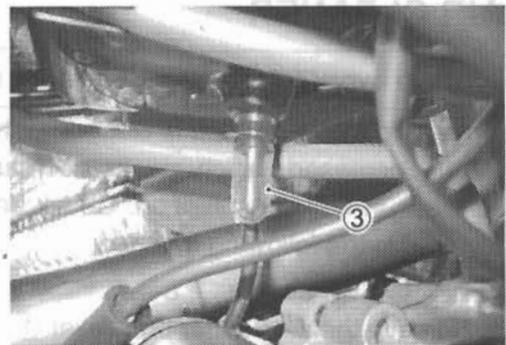
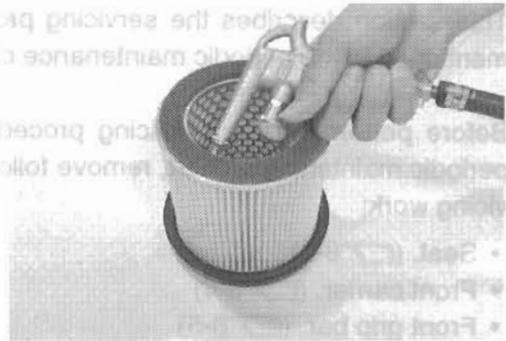
Always use air pressure from the inside of the air cleaner element. If air pressure is used on the other side, dirt will be forced into the pores of the air cleaner element thus restricting air flow through the air cleaner element.

- Reinstall the cleaned or new air cleaner element in the reverse order of removal.

**CAUTION**

In driving under dusty conditions, clean the air cleaner element more frequently. The surest way to accelerate engine wear is to operate the engine without the element or to use a worn element. Make sure that the air cleaner is in good condition at all times. The life of the engine depends largely on this component!

- Remove the drain plug ③ from the air cleaner drain hose and air cleaner box to allow any water to drain out.



- Remove the air cleaner box cap.
- Remove the air cleaner element.

MAINTENANCE AND TUNE-UP PROCEDURES

months)  
 dust, replace resistance  
 use in power output and  
 and clean the air cleaner

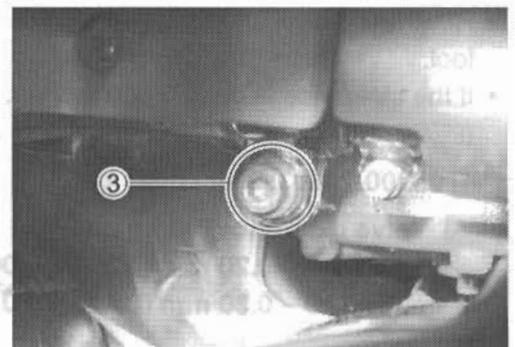
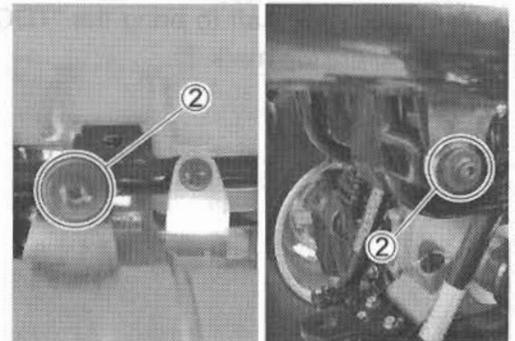
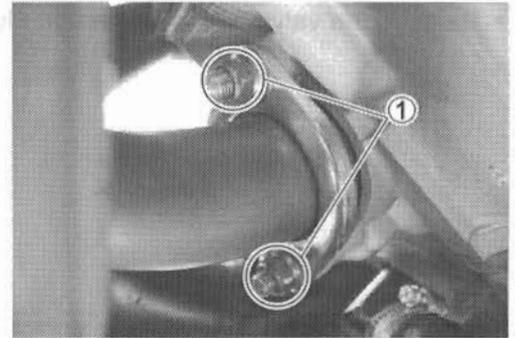
- Front fan belt (7-8-2)
- Left rear fan belt (7-8-3)
- Right rear fan belt (7-8-4)
- Left side fan belt (7-8-5)
- Right side fan belt (7-8-6)
- Left and right (7-8-7)
- Right and left (7-8-8)
- Rear fan belt (7-8-9)
- Fan belt (7-8-10)

## EXHAUST PIPE NUTS AND MUFFLER MOUNTING BOLTS

Tighten initially at 200 km (100 miles, 1 month) and every 1 000 km (600 miles, 3 months) thereafter.

- Remove the right inner fender. (☞ 8-6)
- Remove the right side cover. (☞ 8-8)
- Tighten the exhaust pipe nuts ①, muffler mounting bolts ② and exhaust pipe and muffler joint bolts ③ to the specified torque.

- ☑ Exhaust pipe nut: 23 N·m (2.3 kgf-m, 16.5 lb-ft)
- Muffler mounting bolt: 23 N·m (2.3 kgf-m, 16.5 lb-ft)
- Exhaust pipe, Muffler joint bolt: 23 N·m (2.3 kgf-m, 16.5 lb-ft)



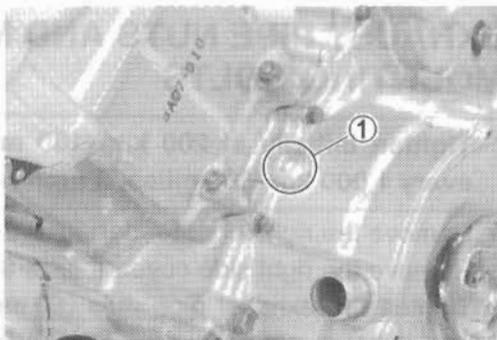
## VALVE CLEARANCE

Inspect initially at 200 km (100 miles, 1 month) and

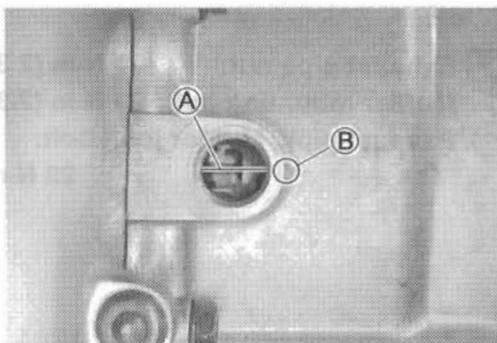
Excessive valve clearance results in valve noise and insufficient valve clearance results in valve damage and reduced power. Check the intake and exhaust valve clearances at the interval indicated above and adjust the valve clearances to specification, if necessary.

- Remove the front fender. (☞ 8-5)
- Remove the cylinder head cover. (☞ 3-13)
- Remove the recoil starter. (☞ 3-13)

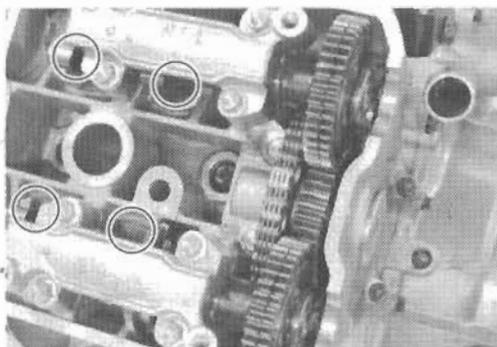
- Remove the valve timing inspection plug ①.



- Turn the crankshaft to bring the "TDC" line ① on the starter clutch to the lug mark ②.



- Read the valve clearance at all the valves with the special tool.
- If the clearance is out of specification, adjust the clearance. (2-7)



**TOOL** 09900-20803: Thickness gauge

**DATA** Valve clearance (when cold)  
 IN: 0.10 – 0.20 mm (0.004 – 0.008 in)  
 EX: 0.20 – 0.30 mm (0.008 – 0.012 in)

VALVE CLEARANCE

Inspect initially at 500 km (300 miles, 1 month) and every 2 000 km (1 200 miles, 6 months) thereafter.

Valve clearance results in valve damage and reduced power. Check for intake and exhaust valve clearance at 1/8 (3.2 mm) intervals along the valve length and adjust if necessary.

- Remove the front fender (2-8-2).
- Remove the cylinder head cover (2-3-1).
- Remove the recoil starter (2-3-13).

**VALVE CLEARANCE ADJUSTMENT**

The clearance is adjusted by replacing the existing tappet shim by a thicker or thinner one.

- Remove the intake or exhaust camshaft. (☞ 3-13)
- Remove the tappet and shim by fingers or magnetic hand.
- Check the figures printed on the shim. These figures indicate the thickness of the shim, as illustrated.
- Select a replacement shim that will provide a clearance within the specified range. For the purpose of this adjustment, a total of 21 sizes of tappet shim are available ranging from 2.50 to 3.50 mm in steps of 0.05 mm. Fit the selected shim to the valve stem end, with numbers toward tappet. Be sure to check shim size with micrometer to ensure its size. Refer to the tappet shim selection table (☞ 2-8, 2-9) for details.

**NOTE:**

- \* Be sure to apply engine oil to tappet shim top and bottom faces.
- \* When seating the tappet shim, be sure the figure printed surface faces the tappet.

**NOTE:**

Reinstall the camshafts in the specified manner. (☞ 3-101)

- After replacing the tappet shim and camshafts, rotate the engine so that the tappet is depressed fully. This will squeeze out oil trapped between the shim and the tappet that could cause an incorrect measurement. Then check the clearance again to confirm that it is within the specified range.
- Install the new gasket ① to the cylinder head cover.
- Apply SUZUKI BOND to the cam end caps of the gasket as shown.

**1207B** 99104-31140: SUZUKI BOND "1207B" (USA)  
99000-31110: SUZUKI BOND "1215" (Others)

**CAUTION**

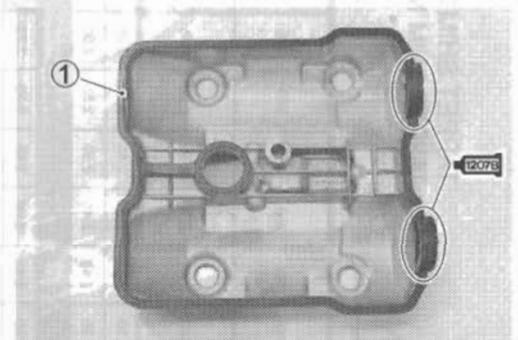
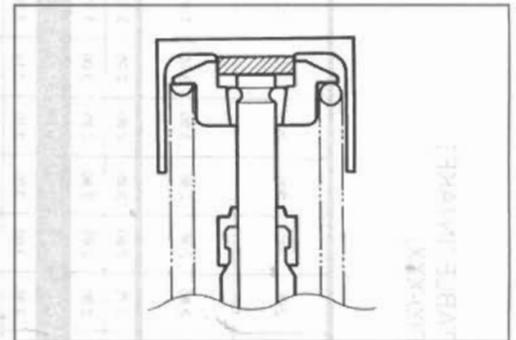
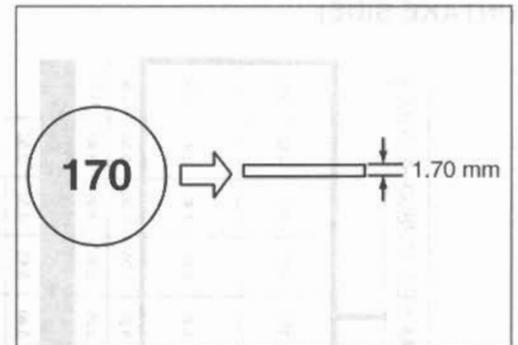
**Use the new gasket to prevent oil leakage.**

- Tighten the head cover bolts to the specified two-step torque sequentially and diagonally.

**U** **Head cover bolt: Initial 10 N·m (1.0 kgf·m, 7.0 lb-ft)**  
**Final 14 N·m (1.4 kgf·m, 10.0 lb-ft)**

**NOTE:**

Apply engine oil to the both side of head cover washer before installing the head cover bolts.



(INTAKE SIDE)

TAPPET SHIM SELECTION TABLE (INTAKE)  
TAPPET SHIM NO. (12892-41C00-XXX)

TAPPET SHIM SET (12800-41810)

OPTION

| MEASURED TAPPET CLEARANCE (mm) | OPTION                                     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | TAPPET SHIM SET (12800-41810) |      |      |      |      |      |      |      |      |  |  |  |  |  |  |  |
|--------------------------------|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------------------------------|------|------|------|------|------|------|------|------|--|--|--|--|--|--|--|
|                                | 230  | 235  | 240  | 245  | 250  | 255  | 260  | 265  | 270  | 275  | 280  | 285  | 290  | 295  | 300  | 305  | 310                           | 315  | 320  | 325  | 330  | 335  | 340  | 345  | 350  |  |  |  |  |  |  |  |
| PRESENT SHIM SIZE (mm)         | 2.30                                       | 2.35 | 2.40 | 2.45 | 2.50 | 2.55 | 2.60 | 2.65 | 2.70 | 2.75 | 2.80 | 2.85 | 2.90 | 2.95 | 3.00 | 3.05 | 3.10                          | 3.15 | 3.20 | 3.25 | 3.30 | 3.35 | 3.40 | 3.45 | 3.50 |  |  |  |  |  |  |  |
| MEASURED TAPPET CLEARANCE (mm) | SPECIFIED CLEARANCE/NO ADJUSTMENT REQUIRED |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                               |      |      |      |      |      |      |      |      |  |  |  |  |  |  |  |
| 0.00-0.04                      | 2.30                                       | 2.35 | 2.40 | 2.45 | 2.50 | 2.55 | 2.60 | 2.65 | 2.70 | 2.75 | 2.80 | 2.85 | 2.90 | 2.95 | 3.00 | 3.05 | 3.10                          | 3.15 | 3.20 | 3.25 | 3.30 | 3.35 | 3.40 | 3.45 | 3.50 |  |  |  |  |  |  |  |
| 0.05-0.09                      | 2.30                                       | 2.35 | 2.40 | 2.45 | 2.50 | 2.55 | 2.60 | 2.65 | 2.70 | 2.75 | 2.80 | 2.85 | 2.90 | 2.95 | 3.00 | 3.05 | 3.10                          | 3.15 | 3.20 | 3.25 | 3.30 | 3.35 | 3.40 | 3.45 | 3.50 |  |  |  |  |  |  |  |
| 0.10-0.20                      | 2.40                                       | 2.45 | 2.50 | 2.55 | 2.60 | 2.65 | 2.70 | 2.75 | 2.80 | 2.85 | 2.90 | 2.95 | 3.00 | 3.05 | 3.10 | 3.15 | 3.20                          | 3.25 | 3.30 | 3.35 | 3.40 | 3.45 | 3.50 | 3.50 | 3.50 |  |  |  |  |  |  |  |
| 0.21-0.25                      | 2.45                                       | 2.50 | 2.55 | 2.60 | 2.65 | 2.70 | 2.75 | 2.80 | 2.85 | 2.90 | 2.95 | 3.00 | 3.05 | 3.10 | 3.15 | 3.20 | 3.25                          | 3.30 | 3.35 | 3.40 | 3.45 | 3.50 | 3.50 | 3.50 | 3.50 |  |  |  |  |  |  |  |
| 0.26-0.30                      | 2.50                                       | 2.55 | 2.60 | 2.65 | 2.70 | 2.75 | 2.80 | 2.85 | 2.90 | 2.95 | 3.00 | 3.05 | 3.10 | 3.15 | 3.20 | 3.25 | 3.30                          | 3.35 | 3.40 | 3.45 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 |  |  |  |  |  |  |  |
| 0.31-0.35                      | 2.55                                       | 2.60 | 2.65 | 2.70 | 2.75 | 2.80 | 2.85 | 2.90 | 2.95 | 3.00 | 3.05 | 3.10 | 3.15 | 3.20 | 3.25 | 3.30 | 3.35                          | 3.40 | 3.45 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 |  |  |  |  |  |  |  |
| 0.36-0.40                      | 2.60                                       | 2.65 | 2.70 | 2.75 | 2.80 | 2.85 | 2.90 | 2.95 | 3.00 | 3.05 | 3.10 | 3.15 | 3.20 | 3.25 | 3.30 | 3.35 | 3.40                          | 3.45 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 |  |  |  |  |  |  |  |
| 0.41-0.45                      | 2.65                                       | 2.70 | 2.75 | 2.80 | 2.85 | 2.90 | 2.95 | 3.00 | 3.05 | 3.10 | 3.15 | 3.20 | 3.25 | 3.30 | 3.35 | 3.40 | 3.45                          | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 |  |  |  |  |  |  |  |
| 0.46-0.50                      | 2.70                                       | 2.75 | 2.80 | 2.85 | 2.90 | 2.95 | 3.00 | 3.05 | 3.10 | 3.15 | 3.20 | 3.25 | 3.30 | 3.35 | 3.40 | 3.45 | 3.50                          | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 |  |  |  |  |  |  |  |
| 0.51-0.55                      | 2.75                                       | 2.80 | 2.85 | 2.90 | 2.95 | 3.00 | 3.05 | 3.10 | 3.15 | 3.20 | 3.25 | 3.30 | 3.35 | 3.40 | 3.45 | 3.50 | 3.50                          | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 |  |  |  |  |  |  |  |
| 0.56-0.60                      | 2.80                                       | 2.85 | 2.90 | 2.95 | 3.00 | 3.05 | 3.10 | 3.15 | 3.20 | 3.25 | 3.30 | 3.35 | 3.40 | 3.45 | 3.50 | 3.50 | 3.50                          | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 |  |  |  |  |  |  |  |
| 0.61-0.65                      | 2.85                                       | 2.90 | 2.95 | 3.00 | 3.05 | 3.10 | 3.15 | 3.20 | 3.25 | 3.30 | 3.35 | 3.40 | 3.45 | 3.50 | 3.50 | 3.50 | 3.50                          | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 |  |  |  |  |  |  |  |
| 0.66-0.70                      | 2.90                                       | 2.95 | 3.00 | 3.05 | 3.10 | 3.15 | 3.20 | 3.25 | 3.30 | 3.35 | 3.40 | 3.45 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50                          | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 |  |  |  |  |  |  |  |
| 0.71-0.75                      | 2.95                                       | 3.00 | 3.05 | 3.10 | 3.15 | 3.20 | 3.25 | 3.30 | 3.35 | 3.40 | 3.45 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50                          | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 |  |  |  |  |  |  |  |
| 0.76-0.80                      | 3.00                                       | 3.05 | 3.10 | 3.15 | 3.20 | 3.25 | 3.30 | 3.35 | 3.40 | 3.45 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50                          | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 |  |  |  |  |  |  |  |
| 0.81-0.85                      | 3.05                                       | 3.10 | 3.15 | 3.20 | 3.25 | 3.30 | 3.35 | 3.40 | 3.45 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50                          | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 |  |  |  |  |  |  |  |
| 0.86-0.90                      | 3.10                                       | 3.15 | 3.20 | 3.25 | 3.30 | 3.35 | 3.40 | 3.45 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50                          | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 |  |  |  |  |  |  |  |
| 0.91-0.95                      | 3.15                                       | 3.20 | 3.25 | 3.30 | 3.35 | 3.40 | 3.45 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50                          | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 |  |  |  |  |  |  |  |
| 0.96-1.00                      | 3.20                                       | 3.25 | 3.30 | 3.35 | 3.40 | 3.45 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50                          | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 |  |  |  |  |  |  |  |
| 1.01-1.05                      | 3.25                                       | 3.30 | 3.35 | 3.40 | 3.45 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50                          | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 |  |  |  |  |  |  |  |
| 1.06-1.10                      | 3.30                                       | 3.35 | 3.40 | 3.45 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50                          | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 |  |  |  |  |  |  |  |
| 1.11-1.15                      | 3.35                                       | 3.40 | 3.45 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50                          | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 |  |  |  |  |  |  |  |
| 1.16-1.20                      | 3.40                                       | 3.45 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50                          | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 |  |  |  |  |  |  |  |
| 1.21-1.25                      | 3.45                                       | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50                          | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 |  |  |  |  |  |  |  |
| 1.26-1.30                      | 3.50                                       | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50                          | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 |  |  |  |  |  |  |  |
| 1.31-1.35                      | 3.50                                       | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50                          | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 |  |  |  |  |  |  |  |
| 1.36-1.40                      | 3.50                                       | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50                          | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 |  |  |  |  |  |  |  |

HOW TO USE THIS CHART:

- I. Measure tappet clearance. \*ENGINE IS COLD\*
- II. Measure present shim size.
- III. Match clearance in vertical column with present shim size in horizontal column.

EXAMPLE

Tappet clearance is 0.23 mm  
Present shim size 2.70 mm  
Shim size to be used 2.80 mm

(EXHAUST SIDE)

TAPPET SHIM SELECTION TABLE (EXHAUST)  
TAPPET SHIM NO. (12892-41C00-XXX)

OPTION

TAPPET SHIM SET (12800-41810)

| MEASURED TAPPET CLEARANCE (mm) | OPTION     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | TAPPET SHIM SET (12800-41810) |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |
|--------------------------------|------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|--|--|--|
|                                | SUFFIX NO. | 230  | 235  | 240  | 245  | 250  | 255  | 260  | 265  | 270  | 275  | 280  | 285  | 290  | 295  | 300  | 305                           | 310  | 315  | 320  | 325  | 330  | 335  | 340  | 345  | 350  |      |      |      |  |  |  |
| 0.00-0.04                      |            |      |      |      | 2.30 | 2.35 | 2.40 | 2.45 | 2.50 | 2.55 | 2.60 | 2.65 | 2.70 | 2.75 | 2.80 | 2.85 | 2.90                          | 2.95 | 3.00 | 3.05 | 3.10 | 3.15 | 3.20 | 3.25 | 3.30 | 3.35 | 3.40 | 3.45 | 3.50 |  |  |  |
| 0.05-0.09                      |            |      |      | 2.30 | 2.35 | 2.40 | 2.45 | 2.50 | 2.55 | 2.60 | 2.65 | 2.70 | 2.75 | 2.80 | 2.85 | 2.90 | 2.95                          | 3.00 | 3.05 | 3.10 | 3.15 | 3.20 | 3.25 | 3.30 | 3.35 | 3.40 | 3.45 | 3.50 |      |  |  |  |
| 0.10-0.14                      |            |      | 2.30 | 2.35 | 2.40 | 2.45 | 2.50 | 2.55 | 2.60 | 2.65 | 2.70 | 2.75 | 2.80 | 2.85 | 2.90 | 2.95 | 3.00                          | 3.05 | 3.10 | 3.15 | 3.20 | 3.25 | 3.30 | 3.35 | 3.40 | 3.45 | 3.50 |      |      |  |  |  |
| 0.15-0.19                      |            | 2.30 | 2.35 | 2.40 | 2.45 | 2.50 | 2.55 | 2.60 | 2.65 | 2.70 | 2.75 | 2.80 | 2.85 | 2.90 | 2.95 | 3.00 | 3.05                          | 3.10 | 3.15 | 3.20 | 3.25 | 3.30 | 3.35 | 3.40 | 3.45 | 3.50 |      |      |      |  |  |  |
| 0.20-0.30                      |            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                               |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |
| 0.31-0.35                      | 2.40       | 2.45 | 2.50 | 2.55 | 2.60 | 2.65 | 2.70 | 2.75 | 2.80 | 2.85 | 2.90 | 2.95 | 3.00 | 3.05 | 3.10 | 3.15 | 3.20                          | 3.25 | 3.30 | 3.35 | 3.40 | 3.45 | 3.50 |      |      |      |      |      |      |  |  |  |
| 0.36-0.40                      | 2.45       | 2.50 | 2.55 | 2.60 | 2.65 | 2.70 | 2.75 | 2.80 | 2.85 | 2.90 | 2.95 | 3.00 | 3.05 | 3.10 | 3.15 | 3.20 | 3.25                          | 3.30 | 3.35 | 3.40 | 3.45 | 3.50 |      |      |      |      |      |      |      |  |  |  |
| 0.41-0.45                      | 2.50       | 2.55 | 2.60 | 2.65 | 2.70 | 2.75 | 2.80 | 2.85 | 2.90 | 2.95 | 3.00 | 3.05 | 3.10 | 3.15 | 3.20 | 3.25 | 3.30                          | 3.35 | 3.40 | 3.45 | 3.50 |      |      |      |      |      |      |      |      |  |  |  |
| 0.46-0.50                      | 2.55       | 2.60 | 2.65 | 2.70 | 2.75 | 2.80 | 2.85 | 2.90 | 2.95 | 3.00 | 3.05 | 3.10 | 3.15 | 3.20 | 3.25 | 3.30 | 3.35                          | 3.40 | 3.45 | 3.50 |      |      |      |      |      |      |      |      |      |  |  |  |
| 0.51-0.55                      | 2.60       | 2.65 | 2.70 | 2.75 | 2.80 | 2.85 | 2.90 | 2.95 | 3.00 | 3.05 | 3.10 | 3.15 | 3.20 | 3.25 | 3.30 | 3.35 | 3.40                          | 3.45 | 3.50 |      |      |      |      |      |      |      |      |      |      |  |  |  |
| 0.56-0.60                      | 2.65       | 2.70 | 2.75 | 2.80 | 2.85 | 2.90 | 2.95 | 3.00 | 3.05 | 3.10 | 3.15 | 3.20 | 3.25 | 3.30 | 3.35 | 3.40 | 3.45                          | 3.50 |      |      |      |      |      |      |      |      |      |      |      |  |  |  |
| 0.61-0.65                      | 2.70       | 2.75 | 2.80 | 2.85 | 2.90 | 2.95 | 3.00 | 3.05 | 3.10 | 3.15 | 3.20 | 3.25 | 3.30 | 3.35 | 3.40 | 3.45 | 3.50                          |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |
| 0.66-0.70                      | 2.75       | 2.80 | 2.85 | 2.90 | 2.95 | 3.00 | 3.05 | 3.10 | 3.15 | 3.20 | 3.25 | 3.30 | 3.35 | 3.40 | 3.45 | 3.50 |                               |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |
| 0.71-0.75                      | 2.80       | 2.85 | 2.90 | 2.95 | 3.00 | 3.05 | 3.10 | 3.15 | 3.20 | 3.25 | 3.30 | 3.35 | 3.40 | 3.45 | 3.50 |      |                               |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |
| 0.76-0.80                      | 2.85       | 2.90 | 2.95 | 3.00 | 3.05 | 3.10 | 3.15 | 3.20 | 3.25 | 3.30 | 3.35 | 3.40 | 3.45 | 3.50 |      |      |                               |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |
| 0.81-0.85                      | 2.90       | 2.95 | 3.00 | 3.05 | 3.10 | 3.15 | 3.20 | 3.25 | 3.30 | 3.35 | 3.40 | 3.45 | 3.50 |      |      |      |                               |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |
| 0.86-0.90                      | 2.95       | 3.00 | 3.05 | 3.10 | 3.15 | 3.20 | 3.25 | 3.30 | 3.35 | 3.40 | 3.45 | 3.50 |      |      |      |      |                               |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |
| 0.91-0.95                      | 3.00       | 3.05 | 3.10 | 3.15 | 3.20 | 3.25 | 3.30 | 3.35 | 3.40 | 3.45 | 3.50 |      |      |      |      |      |                               |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |
| 0.96-1.00                      | 3.05       | 3.10 | 3.15 | 3.20 | 3.25 | 3.30 | 3.35 | 3.40 | 3.45 | 3.50 |      |      |      |      |      |      |                               |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |
| 1.01-1.05                      | 3.10       | 3.15 | 3.20 | 3.25 | 3.30 | 3.35 | 3.40 | 3.45 | 3.50 |      |      |      |      |      |      |      |                               |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |
| 1.06-1.10                      | 3.15       | 3.20 | 3.25 | 3.30 | 3.35 | 3.40 | 3.45 | 3.50 |      |      |      |      |      |      |      |      |                               |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |
| 1.11-1.15                      | 3.20       | 3.25 | 3.30 | 3.35 | 3.40 | 3.45 | 3.50 |      |      |      |      |      |      |      |      |      |                               |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |
| 1.16-1.20                      | 3.25       | 3.30 | 3.35 | 3.40 | 3.45 | 3.50 |      |      |      |      |      |      |      |      |      |      |                               |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |
| 1.21-1.25                      | 3.30       | 3.35 | 3.40 | 3.45 | 3.50 |      |      |      |      |      |      |      |      |      |      |      |                               |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |
| 1.26-1.30                      | 3.35       | 3.40 | 3.45 | 3.50 |      |      |      |      |      |      |      |      |      |      |      |      |                               |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |
| 1.31-1.35                      | 3.40       | 3.45 | 3.50 |      |      |      |      |      |      |      |      |      |      |      |      |      |                               |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |
| 1.36-1.40                      | 3.45       | 3.50 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                               |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |
| 1.41-1.45                      | 3.50       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                               |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |
| 1.46-1.50                      | 3.50       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                               |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |

SPECIFIED CLEARANCE/NO ADJUSTMENT REQUIRED

HOW TO USE THIS CHART:

- I. Measure tappet clearance. "ENGINE IS COLD"
- II. Measure present shim size.
- III. Match clearance in vertical column with present shim size in horizontal column.

EXAMPLE

Tappet clearance is 0.38 mm  
Present shim size 2.90 mm  
Shim size to be used 3.05 mm

## SPARK PLUG

Inspect every 2 000 km (1 200 miles, 6 months).  
Replace every 6 000 km (4 000 miles).

- Remove the right inner fender. (☞ 8-6)
- Disconnect the spark plug cap ① and remove the spark plug.

|       | Standard | Cold type |
|-------|----------|-----------|
| NGK   | CR6E     | CR7E      |
| DENSO | U20ESR-N | U22ESR-N  |

### CARBON DEPOSITS

Check to see if there are carbon deposits on the spark plug. If carbon is deposited, remove it with a spark plug cleaner machine or carefully use a tool with a pointed end.

### SPARK PLUG GAP

Measure the spark plug gap with a thickness gauge. If the spark plug gap is out of specification, adjust the gap.

#### DATA Standard

Spark plug gap: 0.7 – 0.8 mm (0.028 – 0.031 in)

**TOOL** 09900-20803: Thickness gauge

### ELECTRODE

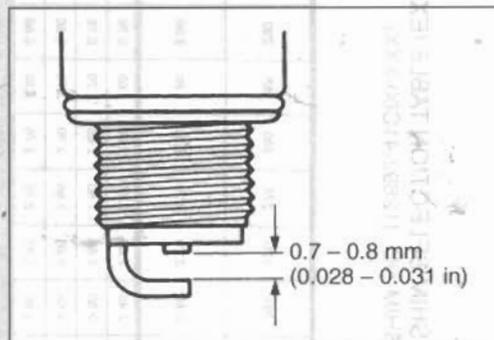
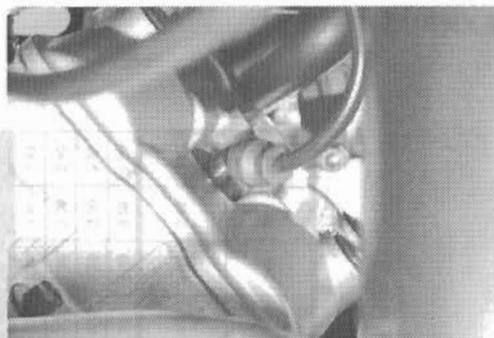
Check the condition of the electrode.

If the electrode is extremely worn or burnt, replace the spark plug with a new one.

Also, replace the spark plug if it has a broken insulator, damaged threads, etc.

#### CAUTION

Check the thread size and reach when replacing the spark plug. If the reach is too short, carbon will be deposited on the screw portion of the spark plug hole and engine damage may result.



## SPARK PLUG INSTALLATION

### CAUTION

To avoid damaging the cylinder head threads; first, tighten the spark plug by hand, and then tighten it to the specified torque using the spark plug wrench.

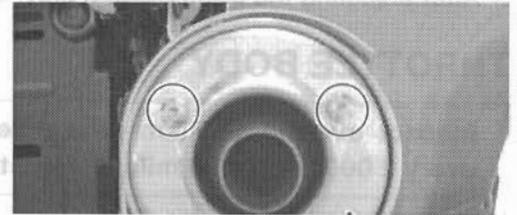
- Insert the spark plug and tighten it to the cylinder head by hand then tighten it to the specified torque.

 Spark plug: 11 N·m (1.1 kgf·m, 8.0 lb·ft)

## SPARK ARRESTER

Clean every 2 000 km (1 200 miles, 6 months).  
Replace every 6 000 km (4 000 miles).

- Remove the muffler end cover ①.
- Extract the spark arrester pipe ② from the muffler.



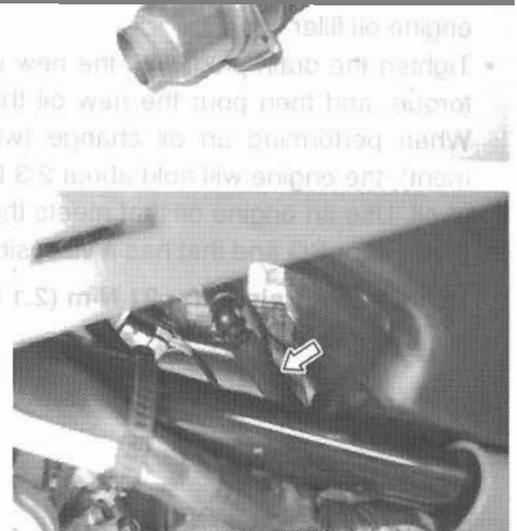
- Clean the spark arrester pipe ② by brush.

## FUEL LINE

Inspect every 1 000 km (600 miles, 3 months).  
Replace every four years.

Inspect the fuel feed hose for damage and fuel leakage. If any damages are found, replace it with a new one.

- When replacing the fuel feed hose, remove the fuel tank side cover. (6-2)



## THROTTLE CABLE PLAY

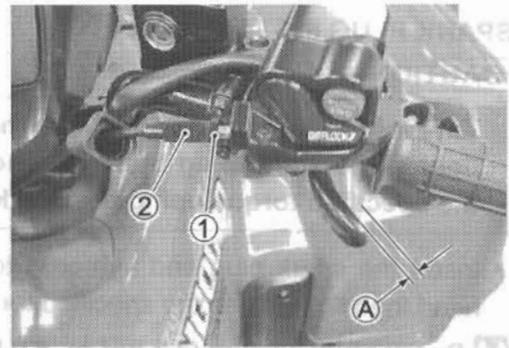
Inspect initially at 200 km (100 miles, 1 month) and every 1 000 km (600 miles, 3 months) thereafter.

Adjust the throttle cable play **A** as follows.

- Loosen the locknut **①** of the throttle cable.
- Turn the adjuster **②** in or out to obtain the correct play.

**DATA** Throttle cable play: 3 – 5 mm (0.12 – 0.20 in)

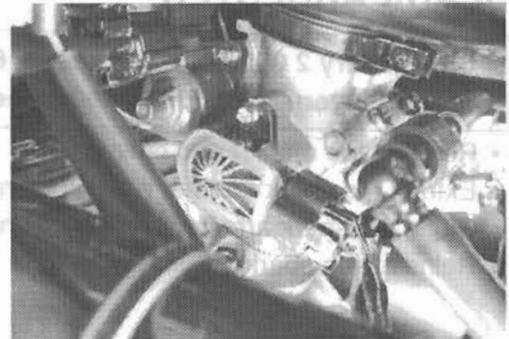
- After adjusting the throttle cable play, tighten the locknut **①**.



## THROTTLE BODY

Inspect every 1 000 km (600 miles, 3 months) and every 2 000 km (1 200 miles, 6 months) thereafter.

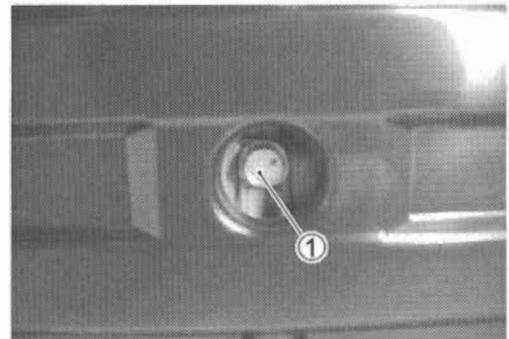
Inspect the throttle body for dirt or mud. If any dirt or mud is found, clean it.



## ENGINE OIL AND OIL FILTER

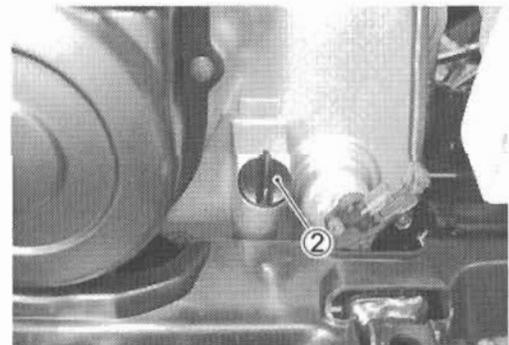
Replace initially at 200 km (100 miles, 1 month) and every 2 000 km (1 200 miles, 6 months) thereafter.

The oil should be changed while the engine is warm. Oil filter replacement at the above intervals should be done together with the engine oil change.



## ENGINE OIL REPLACEMENT

- Remove the left upper mud guard. (☞ 8-8)
- Place an oil pan under the drain plug **①**, and then drain out the engine oil by removing the engine oil drain plug **①** and engine oil filler cap **②**.
- Tighten the drain plug, with the new washer, to the specified torque, and then pour the new oil through the oil filler hole. When performing an oil change (without oil filter replacement), the engine will hold about 2.3 L (2.4 US qt, 2.0 Imp qt) of oil. Use an engine oil that meets the API service classifications SF or SG and that has a viscosity rating of SAE 10W/40.

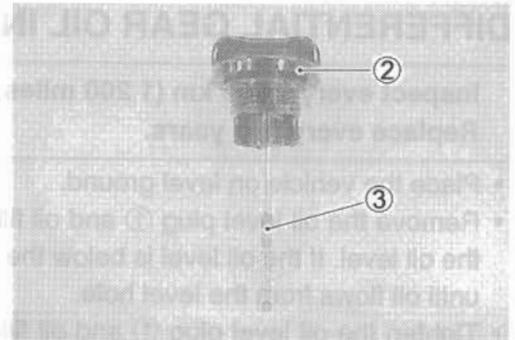


**☑ Engine oil drain plug: 21 N·m (2.1 kgf·m, 15.0 lb·ft)**



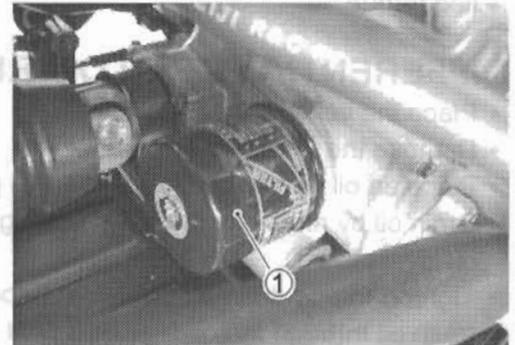
Inspect every 1 000 km (600 miles, 3 months) and replace every four years.  
 Inspect the fuel feed hose for damage and fuel leakage. If any damage is found, replace it with a new one.  
 • When refueling the fuel feed hose, remove the fuel tank side cover. (☞ 8-8)

- Tighten the oil filler cap ②.
- Start the engine and allow it to run for a few minutes at idling speed.
- Turn off the engine and wait about three minutes, and then check the oil level on the dipstick ③. If the level is below upper line, add oil to that level. The vehicle must be placed on level ground for accurate measurement.



### OIL FILTER REPLACEMENT

- Drain the engine oil. (☞ 2-12)
- Remove the left inner fender. (☞ 8-6)
- Remove the oil filter ① with the special tool.
- Apply engine oil lightly to the gasket of the new oil filter, before installation.



- Install the new oil filter to the engine. Turn it by hand until you feel that the oil filter gasket has contacted the oil filter mounting surface. Then, tighten the oil filter two full turns with the special tool.

#### **TOOL** 09915-40610: Oil filter wrench

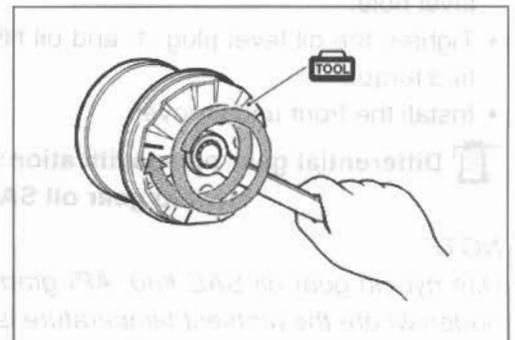
#### NOTE:

To properly tighten the oil filter, use the special tool. Never tighten the oil filter by hand.

- Pour the new engine oil through the oil filler hole. When performing the oil filter change, the engine will hold about 2.5 L (2.6 US qt, 2.2 Imp qt) of oil.
- Check the oil level. (☞ 2-12)
- Add new engine oil and check the oil level. (☞ 2-12)

#### **DATA** Engine oil capacity

|                        |                               |
|------------------------|-------------------------------|
| Oil change:            | 2.3 L (2.4 US qt, 2.0 Imp qt) |
| Oil and filter change: | 2.5 L (2.6 US qt, 2.2 Imp qt) |
| Engine overhaul:       | 3.0 L (3.2 US qt, 2.6 Imp qt) |



#### CAUTION

**ONLY USE A GENUINE SUZUKI MOTORCYCLE OIL FILTER.**

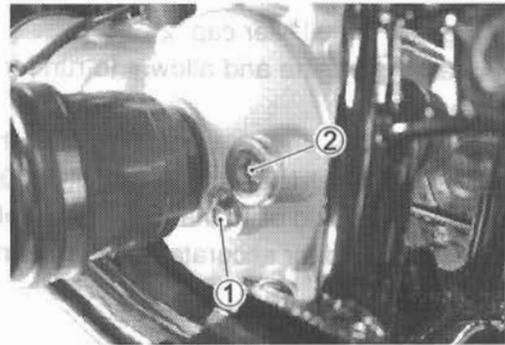
Other manufacture's oil filters may differ in thread specifications (thread diameter and pitch), filtering performance and durability which may lead to engine damage or oil leaks. Also, do not use a GENUINE SUZUKI AUTOMOBILE OIL FILTER on this vehicle.

**DIFFERENTIAL GEAR OIL INSPECTION**

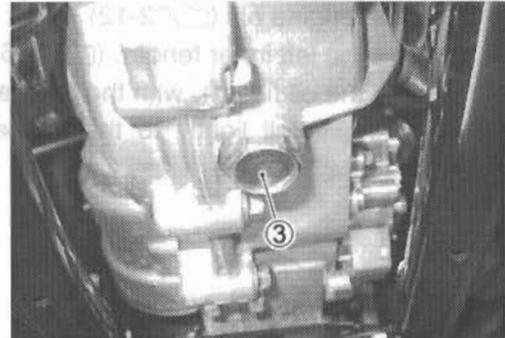
**Inspect every 2 000 km (1 200 miles, 6 months).**

**Replace every two years.**

- Place the vehicle on level ground.
- Remove the oil level plug ① and oil filler plug ②, and inspect the oil level. If the oil level is below the level hole, add fresh oil until oil flows from the level hole.
- Tighten the oil level plug ① and oil filler plug ② to the specified torque.

**DIFFERENTIAL GEAR OIL REPLACEMENT**

- Place the vehicle on level ground.
- Remove the front under cover.
- Place an oil pan below the differential gear case.
- Drain oil by removing the oil drain plug ③, oil filler plug ② and oil level plug ①.
- Tighten the oil drain plug ③ to the specified torque and pour fresh oil through the oil filler hole until it overflows from the oil level hole.
- Tighten the oil level plug ① and oil filler plug ② to the specified torque.
- Install the front under cover.



**Oil** Differential gear oil specification:

**Hypoid gear oil SAE #90, API grade GL-5**

**NOTE:**

Use hypoid gear oil SAE #80, API grade GL-5, if the vehicle is ridden where the ambient temperature is below 0 °C (32 °F)

**DATA** Front differential gear oil capacity:

**500 ml (16.9 US oz, 17.6 Imp oz)**

**Oil** Front differential gear oil level plug:

**9 N·m (0.9 kgf·m, 6.5 lb-ft)**

**Front differential gear oil drain plug:**

**32 N·m (3.2 kgf·m, 23.0 lb-ft)**

**Front differential gear oil filler plug:**

**35 N·m (3.5 kgf·m, 25.5 lb-ft)**