

## FOREWORD

*This manual contains an introductory description on the SUZUKI LT-A500F 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 vehicle and its maintenance. Use this section as well as other sections 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.**

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## ***SUPPLEMENTS***

***LT-A500FK3 ('03-MODEL)***

***10***

***LT-A500FK4 ('04-MODEL)***

***11***

***LT-A500FK5 ('05-MODEL)***

***12***

***LT-A500FK6 ('06-MODEL)***

***13***

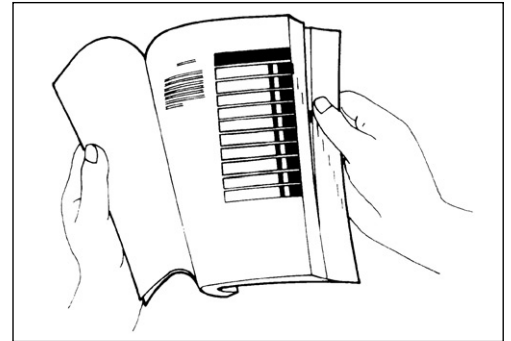
***LT-A500FK7 ('07-MODEL)***

***14***

# 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 there is an exploded view which provides work instructions and other service information (e.g.; tightening torque, lubricating points, and locking agent points).

Example: Rear suspension












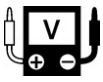

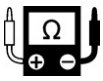

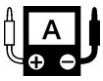

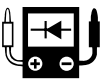







- ① Rear shock absorber
- ② Swingarm
- ③ Spacer
- ④ Dust seal
- ⑤ Bearing

- A Rear shock absorber mounting upper nut
- B Rear shock absorber mounting lower nut
- C Swingarm pivot locknut
- D Swingarm pivot bolt (LH)
- E Swingarm pivot bolt (RH)

ITEM	N-m	kgf-m	lb-ft
A	34	3.4	24.5
B	60	6.0	43.5
C	100	10.0	72.5
D	100	10.0	72.5
E	9.5	1.0	7.0

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



# GENERAL INFORMATION

**1**

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## 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 two 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 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, engine coolant, exhaust or brake systems, check all of the lines, and fittings related to the system for leaks.



**CAUTION**

- \* If parts replacement is necessary, replace the parts with SUZUKI Genuine Parts or their equivalent.
  - \* 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.
  - \* 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 lubricants, bonds, or sealants.
  - \* When removing the battery, disconnect the  $\ominus$  battery lead wire first, then the  $\oplus$  battery lead wire.
  - \* When reconnecting the battery, connect the  $\oplus$  battery lead wire first, then the  $\ominus$  battery lead wire. Finally, cover the  $\oplus$  battery terminal with the terminal cover.
  - \* When performing service to electrical parts, disconnect the  $\ominus$  battery lead wire, unless the service procedure requires the battery power.
  - \* When tightening cylinder head and crankcase nuts and bolts, tighten the larger sizes first. Always tighten the nuts and bolts from the inside working out, diagonally and to the specified torque.
  - \* Whenever you remove oil seals, gaskets, packing, O-rings, self-locking nuts, locking washers, cotter pins, circlips, snap rings, and other specified parts, 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 circlip and 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 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, all other fluids, batteries, and tires.
  - \* To protect the earth's natural resources, properly dispose of used vehicles and parts.

## SUZUKI LT-A500FK2 (2002-MODEL)



RIGHT SIDE

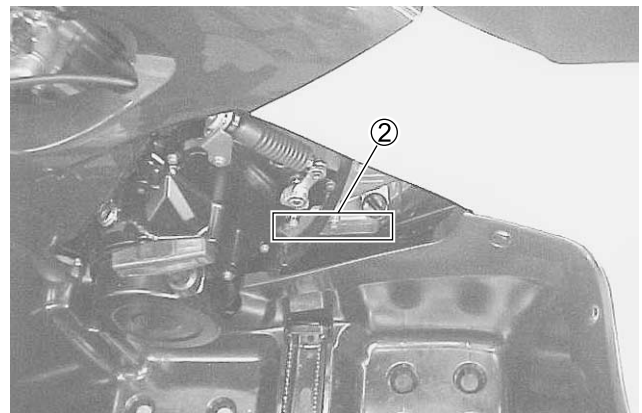
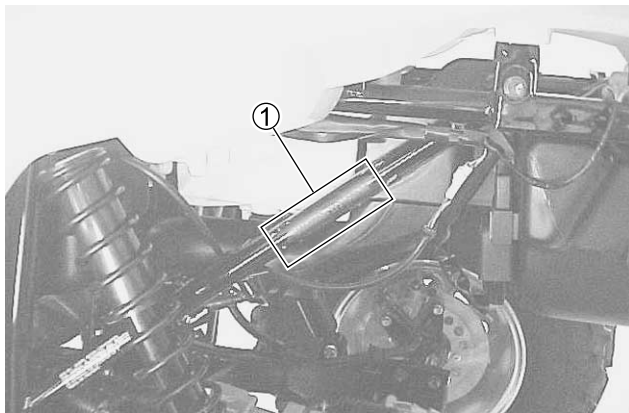


LEFT SIDE

\* Difference between photographs and actual vehicles depends 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 rear frame pipe. The engine serial number ② is located on the left 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 CANADA and USA)

- Use only unleaded gasoline of at least 87 pump octane (  $\frac{R+M}{2}$  ) method or 91 octane or higher rated by the Research Method.
- SUZUKI recommends that customers use alcohol-free unleaded gasoline whenever possible.
- Use of blended gasoline containing MTBE (Methyl Tertiary Butyl Ether) is permitted.
- Use of blended gasoline/alcohol fuel is permitted, provided that the fuel contains not more than 10% ethanol. Gasoline/alcohol fuel may contain up to 5% methanol if appropriate cosolvents and corrosion inhibitors are present in it.
- If the performance of the vehicle is unsatisfactory while using blended gasoline/alcohol fuel, you should switch to alcohol-free unleaded gasoline.
- Failure to follow these guidelines could possibly void applicable warranty coverage. Check with your fuel supplier to make sure that the fuel you intend to use meets the requirements listed above.

## FUEL (For the other countries)

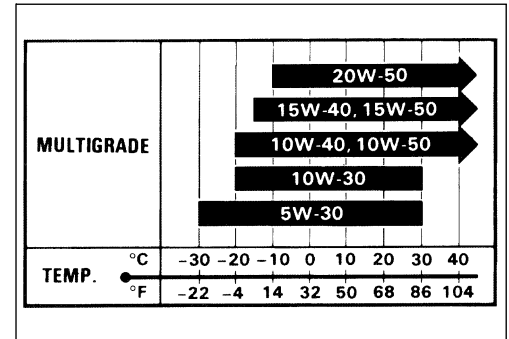
Use unleaded gasoline that is graded 91 octane or higher by the Research Method.

## ENGINE OIL (For USA)

SUZUKI recommends the use of SUZUKI PERFORMANCE 4 MOTOR OIL or oils that meet API service classifications SF or SG and that have a viscosity rating of SAE 10W/40. If engine oil with a rating of SAE 10W/40 is not available, select an alternative according to the chart.

## ENGINE OIL (For the other countries)

Use a premium quality 4-stroke motor oil to ensure longer service life of your vehicle. Use only oils that meet API service classifications SF or SG and that have a viscosity rating of SAE 10W/40. If engine oil with a rating of SAE 10W/40 is not available, select an alternative according to the chart.



## FRONT AND REAR DRIVE 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).

## BRAKE FLUID



Specification and classification: DOT 4

### ⚠ WARNING

**This vehicle uses a glycol-based brake fluid. Do not use or mix different types of brake fluid such as silicone-based and petroleum-based fluids for refilling the system, otherwise serious damage will result to the brake system.**

**Never use any brake fluid taken from old, used, or unsealed containers.**

**Never reuse brake fluid left over from the last servicing or which has been stored for a long period of time.**

## ENGINE COOLANT

Since antifreeze also has corrosion- and rust-inhibiting properties, always use engine coolant containing antifreeze, even if the atmospheric temperature does not go below the freezing point.

Use an antifreeze designed for aluminum radiators. SUZUKI recommends the use of SUZUKI COOLANT antifreeze. If this is not available, use an equivalent antifreeze for aluminum radiators.

Mix only distilled water with the antifreeze. Other types of water can corrode and clog the aluminum radiator.

**Mix distilled water and antifreeze at a ratio of 50 : 50 – 40 : 60.**

For more information, refer to page 6-2 in the Cooling System section.

**CAUTION**

The percentage of antifreeze in the coolant should be between 50 to 60%. If the percentage of antifreeze is above or below this range the coolant's frost protection and rust-inhibiting capabilities will be reduced. Always keep the antifreeze content above 50% even if the atmospheric temperature does not go below the freezing point.

## **BREAK-IN PROCEDURES**

During manufacturing only the best possible materials are used and all machined parts are finished to a very high standard. 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. Refer to the following break-in engine speed recommendations.

- Keep to these break-in engine speed limits.

### **Break-in engine speeds**

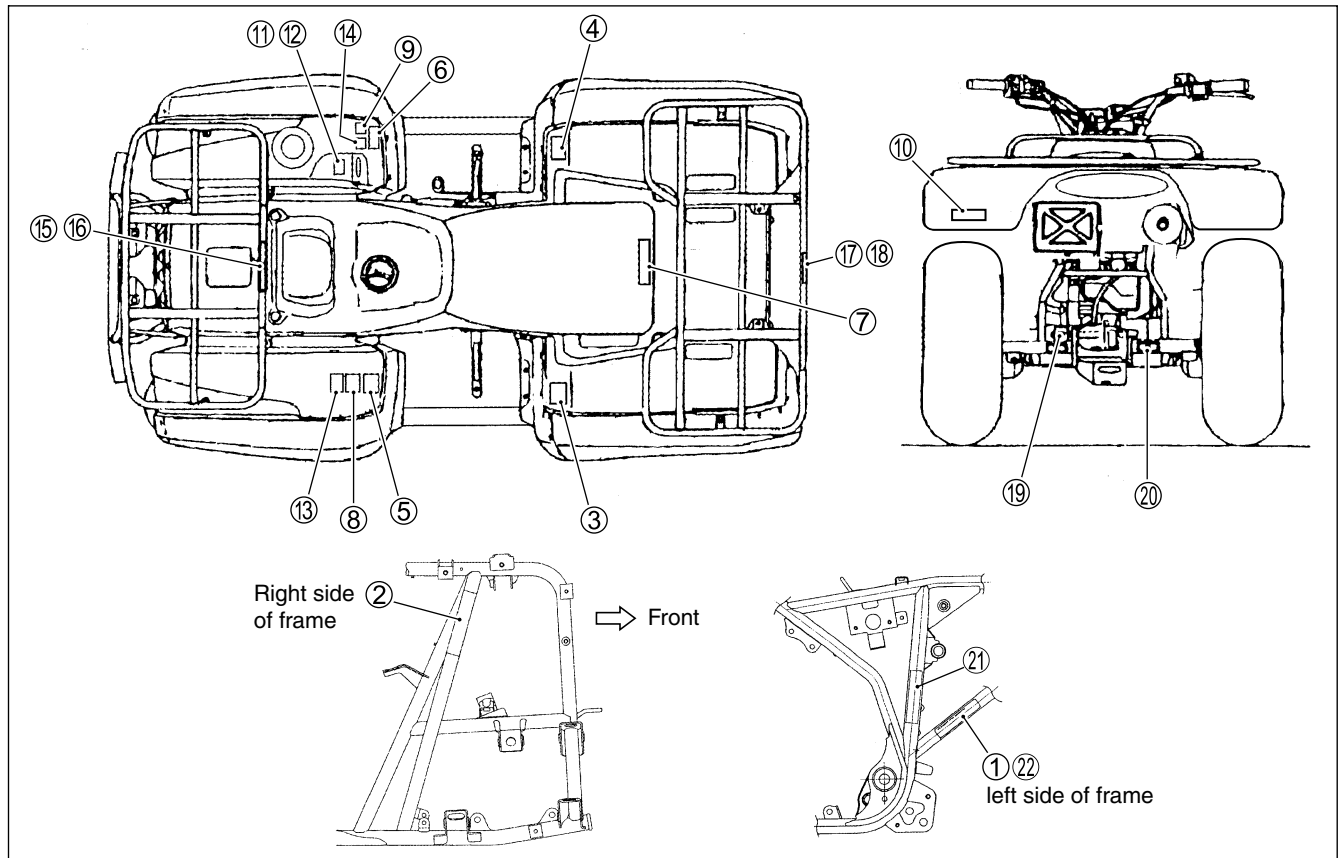
#### **Initial 500 km (300 miles): Less than ½ throttle**

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

# INFORMATION LABELS

NO	LABEL or PLATE NAME	APPLIED SPECIFICATION		
		E-03	E-28	E-33
①	Certification plate (E)	○	—	○
②	Information label (E)	—	—	○
③	Tire air pressure label (E)	○	○	○
④	Tire air pressure label and warning no-passenger label (F)	—	○	—
⑤	General warning label (E)	○	○	○
⑥	General warning label (F)	—	○	—
⑦	Warning no-passenger label (E)	○	○	○
⑧	Age, 16 label (E)	○	○	○
⑨	Age, 16 label (F)	—	○	—
⑩	Manual notice label (E)	○	—	○
⑪	Max AMP caution label (E)	○	—	○
⑫	Max AMP caution label (E, F)	—	○	—
⑬	Gearshift label (E)	○	○	○
⑭	Gearshift label (F)	—	○	—
⑮	Front carrier warning label (E)	○	—	○
⑯	Front carrier warning label (E, F)	—	○	—
⑰	Rear carrier warning label (E)	○	—	○
⑱	Rear carrier warning label (E, F)	—	○	—
⑲	Trailer to warning label (E)	○	○	○
⑳	Trailer to warning label (F)	—	○	—
㉑	ICES Canada label (F)	—	○	—
㉒	Compliance label (F)	—	○	—

(E): English (F): French



## SPECIFICATIONS

### DIMENSIONS AND DRY MASS

Overall length.....	2 095 mm (82.5 in)
Overall width.....	1 170 mm (46.1 in)
Overall height.....	1 200 mm (47.2 in)
Wheelbase.....	1 270 mm (50.0 in)
Front track.....	935 mm (36.8 in)
Rear track.....	930 mm (36.6 in)
Ground clearance.....	250 mm ( 9.8 in)
Seat height.....	860 mm (33.9 in)
Dry mass.....	274 kg (604 lbs)

### ENGINE

Type.....	Four-stroke, liquid-cooled, OHC
Number of cylinders.....	1
Bore.....	87.5 mm (3.445 in)
Stroke.....	82.0 mm (3.228 in)
Piston displacement.....	493 cm <sup>3</sup> (30.1 cu.in)
Compression ratio.....	10.2 : 1
Carburetor.....	KEIHIN CVK36SS
Air cleaner.....	Polyurethane foam element
Starter system.....	Electric and recoil starter
Lubrication system.....	Wet sump

### DRIVE TRAIN

Clutch.....	Wet shoe, automatic, centrifugal type
Transmission.....	Automatic, variable ratio (V-velt)
Transfer.....	2-speed forward with reverse
Gearshift pattern, Transmission.....	Automatic
Transfer.....	L-H-N-R (Hand operated)
Automatic transmission ratio.....	Variable change (2.876 – 0.703)
Secondary reduction ratio.....	2.562 (41/16)
Final reduction ratio (Front & Rear).....	3.600 (36/10)
Transfer gear ratio, Low.....	2.500 (40/16)
High.....	1.200 (30/25)
Reverse.....	1.999 (28/16 × 32/28)
Drive system.....	Shaft drive

## CHASSIS

Front suspension.....	Independent, double wishbone, coil spring, oil damped
Rear suspension .....	Swingarm type, coil spring, oil damped
Steering angle .....	Inside 38.5° Outside 26°
Caster.....	3.3°
Trail .....	17 mm (0.67 in)
Turning radius .....	3.0 m (9.8 ft)
Front brake .....	Disc brake, twin
Rear brake .....	Disc brake
Front tire size .....	AT25 × 8-12 ☆ ☆, tubeless
Rear tire size .....	AT25 × 10-12 ☆ ☆, tubeless
Front wheel travel.....	180 mm (7.1 in)
Rear wheel travel .....	200 mm (7.9 in)

## ELECTRICAL

Ignition type .....	Electronic ignition (CDI)
Ignition timing .....	10° BTDC at 1 500 r/min
Spark plug .....	NGK: CR6E DENSO: U20ESR-N
Battery .....	12 V 50.4 kC (14 Ah)/10 HR
Generator .....	Three-phase A.C. generator
Main fuse.....	30 A
Headlight .....	12 V 30/30 W × 2
Auxiliary light .....	12 V 40 W
Brake light/Taillight.....	12 V 21/5 W
Speedometer light .....	LED
Reverse indicator light.....	LED
Neutral indicator light .....	LED
Parking indicator light.....	LED
High beam indicator light.....	LED
Engine coolant temp. indicator light .....	LED

## CAPACITIES

Fuel tank, including reserve.....	19.0 L (5.0/4.2 US/Imp gal)
reserve.....	4.2 L (1.1/0.9 US/Imp gal)
Engine oil, oil change .....	2 500 ml (2.6/2.2 US/Imp qt)
oil and filter change.....	2 700 ml (2.9/2.4 US/Imp qt)
engine overhaul .....	3 200 ml (3.4/2.8 US/Imp qt)
Front drive (differential) gear oil .....	300 ml (10.1/10.6 US/Imp oz)
Rear drive gear oil.....	250 – 350 ml (8.5/8.8 – 11.8/12.3 US/Imp oz)
Engine coolant .....	2.0 L (2.1/1.8 US/Imp oz)

### NOTE:

\* These specifications are subject to change without notice.

## COUNTRY AND AREA CODES

The following codes stand for the applicable countries and areas.

CODE	COUNTRY OR AREA
E-03	USA
E-28	Canada
E-33	California (USA)



# PERIODIC MAINTENANCE

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