



# YOSHIMURA

RESEARCH&DEVELOPMENT OF AMERICA, INC.

SUZUKI 2003 LT-Z400

449cc STROKER KIT

[PART No. 4520B]

This product is for racing use only, not for use on public roads and highways.

- Be sure to carefully read the instruction manual before starting installation.
- While working, keep these instructions at hand and proceed with the work in accordance with the instructions.
- These instructions should be retained until the product is scrapped.

### PART LIST: (Included as Assembly)

NO.	DESCRIPTION	QTY	PART #
1	<b>Yoshimura 92mm Piston Kit (Kit Includes the below items)</b>		<b>45001</b>
	92mm Stroker Piston	1	45003
	Piston Wire Lock	1	45004
	Piston Wrist Pin	1	45005
	Piston Ring Set	1	45006
2	5mm Offset Crank Pin	1	45002

NO.	DESCRIPTION	QTY	PART #
3	Crank Pin Plug	2	45007
4	92mm Cylinder	1	45008
5	Gasket, Head	1	45010
6	Gasket, Cylinder Base	1	11241-29F11
7	Titanium wire hook for Stroker Kit	1	YRD7SH-4500
**	Instruction Kit	1	INST KIT
**	Yoshimura USA Sticker	2	17020C

### ● Applicable models

SUZUKI LT-Z400 (2003-)

Do not use this product for other models than listed above.



### Important:

**⚠ WARNING**

**CAUTION**

**NOTE**

Please read this manual and follow the 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.

**NOTE:** Indicates special information to make maintenance easier or instructions clearer.

### **⚠ WARNING**

Indicates potential hazard that could result in death or injury.

### **CAUTION**

Indicates potential hazard that could result in vehicle damage.

**Preparation prior to installation:**

Read instructions carefully. Lay out all parts and tools in a clean area. Visually inspect parts for possible damage from shipping.

**⚠ WARNING**

Engine and exhaust system can be extremely hot. Let ATV cool down before beginning installation.

**GENERAL PRECAUTIONS****⚠ WARNING**

- \* Proper service and repair procedures are important for the safety of the service mechanic and the safety and reliability of the ATV.
- \* 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 the exhaust gas is forced outdoors.
- \* When working with toxic or flammable materials, make sure 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, or exhaust systems, check all of the lines, and fittings relating 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 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, 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. When installing a new circlip, take care not to expand the end gap larger than required to slip the circlip over the shaft. After installing the circlip, 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.

Engine removal and installation should be done in accordance with the Suzuki LT-Z400 Service Manual.

**⚠ WARNING** During installation and/or reassembly it is critical to check all clearance values described in the following pages (See below for complete listing). Failure to do so may result in severe engine damage. If there are any problems encountered during installation and reassembly, contact Yoshimura R&D technical support at (909) 628-4722.

**CAUTION**

After disassembling, removed parts should be well cleaned and dried. Inspect all parts to ensure they meet the service limits as defined in the Suzuki service manual.

**⚠ WARNING**

-The following items were used in place of the standard parts described in the Suzuki service manual:  
 -Suzuki cylinder base gasket part number 112141-29F11  
 -Yoshimura supplied head gasket  
 -Yoshimura supplied piston, rings and wrist pin

**Break-In**

1. Start the engine, check for oil leakage, and idle until the oil temperature rises.
2. For first 1/2 hour of running, the throttle should be kept under 1/4 turn.
3. For next 1/2 hour of running, the throttle should be kept under 1/2 turn.

**CAUTION**

During break-in, avoid heavy loading such as sudden starting and rapid acceleration.

4. After break-in is completed, adjust the tappet clearance in accordance with the Suzuki LT-Z400 Service Manual and check for any abnormal noise.  
 If abnormal noise is heard, disassemble and check the engine again.

**CAUTION**

When the engine is started after break-in is completed, be sure to warm-up engine until oil temperature is sufficiently raised before use or riding.

**Specifications and Clearances:**

NO.	DESCRIPTION	MEASUREMENTS	ASSEMBLY NOTES
Fig 1	Connecting rod to crankcase housing clearance	0.35mm +	
Fig 4	Connecting rod to balancer clearance	0.75mm to 1.75mm	
Fig 6	Piston to head squish clearance	1.0mm to 1.15mm	
Fig 6	Piston ring end gap	0.02mm to 0.03mm	