



YAMAHA

2004

TT600RE

5CH5-ME1

SERVICE MANUAL

EASB0000

TT600RE

SERVICE MANUAL

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First edition, July 2003

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NOTICE

This manual was produced by the Belgarda S.p.A. primarily for use by Yamaha dealers and their qualified mechanics. It is not possible to include all the knowledge of a mechanic in one manual. Therefore, anyone who uses this book to perform maintenance and repairs on Yamaha vehicles should have a basic understanding of mechanics and the techniques to repair these types of vehicles. Repair and maintenance work attempted by anyone without this knowledge is likely to render the vehicle unsafe and unfit for use.

Belgarda S.p.A. is continually striving to improve all of its models. Modifications and significant changes in specifications or procedures will be forwarded to all authorized Yamaha dealers and will appear in future editions of this manual where applicable.

NOTE:

Designs and specifications are subject to change without notice.

IMPORTANT MANUAL INFORMATION

Particularly important information is distinguished in this manual by the following.



The Safety Alert Symbol means ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



Failure to follow WARNING instructions could result in severe injury or death to the motorcycle operator, a bystander or a person checking or repairing the motorcycle.



A CAUTION indicates special precautions that must be taken to avoid damage to the motorcycle.

NOTE:

A NOTE provides key information to make procedures easier or clearer.

HOW TO USE THIS MANUAL

This manual is intended as a handy, easy-to-read reference book for the mechanic. Comprehensive explanations of all installation, removal, disassembly, assembly, repair and check procedures are laid out with the individual steps in sequential order.

- ① The manual is divided into chapters. An abbreviation and symbol in the upper right corner of each page indicate the current chapter. Refer to "SYMBOLS".
- ② Each chapter is divided into sections. The current section title is shown at the top of each page, except in Chapter 3 ("PERIODIC CHECKS AND ADJUSTMENTS"), where the sub-section title(s) appears.
- ③ Sub-section titles appear in smaller print than the section title.
- ④ To help identify parts and clarify procedure steps, there are exploded diagrams at the start of each removal and disassembly section.
- ⑤ Numbers are given in the order of the jobs in the exploded diagram. A circled number indicates a disassembly step.
- ⑥ Symbols indicate parts to be lubricated or replaced. Refer to "SYMBOLS".
- ⑦ A job instruction chart accompanies the exploded diagram, providing the order of jobs, names of parts, notes in jobs, etc.
- ⑧ Jobs requiring more information (such as special tools and technical data) are described sequentially.

CLUTCH **ENG**

CLUTCH REMOVAL

1. Straighten:
 - Lock washer tab
 - 2. Loosen:
 - Nut (clutch boss) ①

NOTE:
Loosen the nut (clutch boss) ① while holding the clutch boss ② with the clutch holding tool ③.

Clutch holding tool:
90890-04086

PRIMARY DRIVE GEAR REMOVAL

1. Straighten:
 - Lock washer tab
 - 2. Loosen:
 - Nut (primary drive gear) ①

NOTE:
Place a copper plate ④ between the teeth of the primary drive gear ③ and primary driven gear to lock them.

CLUTCH INSPECTION

1. Inspect:
 - Friction plates
 - Wear/damage → Replace the friction plates as a set.
2. Measure:
 - Friction plate thickness
 - Out of specification → Replace the friction plates as a set.
 - Measure at four places.

Thickness (friction plate):
2.9 ~ 3.1 mm
◀Wear limit▶: 2.6 mm

3. Inspect:
 - Clutch plate
 - Damage → Replace the clutch plates as a set.
4. Measure:
 - Clutch plate warpage
 - Out of specification → Replace the clutch plates as a set.
 - Use a surface plate and a feeler gauge ⑤.







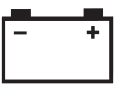















Warp limit (clutch plate):
Less than 0.2 mm

CLUTCH **ENG**

CLUTCH COVER

Order	Job name/Part name	Q'ty	Remarks
	Clutch cover removal		Remove the parts in the order below. Stand the motorcycle on a level surface.
	Engine oil		Refer to "ENGINE OIL REPLACEMENT" in CHAPTER 3.
	Muffler assembly 1,2		Refer to "ENGINE REMOVAL".
	Brake pedal link		
1	Oil filter cover plate	1	
2	Oil filter cover	1	L=70 mm × 1, 65 mm × 1, 25 mm × 3
3	O-ring	1	
4	Oil filter	1	
5	Crankcase cover (right)	1	L=65 mm × 1, 55 mm × 1, 45 mm × 4, 30 mm × 4

④ ⑤ ⑥ ⑦ ⑧

① GEN INFO 	② SPEC 	
③ INSP ADJ 	④ CHAS 	
⑤ ENG 	⑥ CARB 	
⑦ ELEC 	⑧ TRBL SHTG ?	
⑨ 	⑩ 	
⑪ 	⑫ 	
⑬ 	⑭ 	
⑮ 	⑯ 	
⑰ 	⑱ 	⑲ 
⑳ 	㉑ 	㉒ 
㉓ 	㉔ New	

ILLUSTRATED SYMBOLS

The following symbols are not relevant to every vehicle.

Illustrated symbols ① to ⑧ are printed on the top right of each page and indicate the subject of each chapter.

- ① General information
- ② Specifications
- ③ Periodic inspections and adjustments
- ④ Chassis
- ⑤ Engine
- ⑥ Carburetor
- ⑦ Electrical system
- ⑧ Troubleshooting

Illustrated symbols ⑨ to ⑯ are used to identify the specifications appearing in the text.

- ⑨ Can be serviced with engine mounted
- ⑩ Filling fluid
- ⑪ Lubricant
- ⑫ Special tool
- ⑬ Torque
- ⑭ Wear limit, clearance
- ⑮ Engine speed
- ⑯ Electrical data









Illustrated symbols ⑰ to ㉒ in the exploded diagrams indicate the types of lubricants and lubrication points.

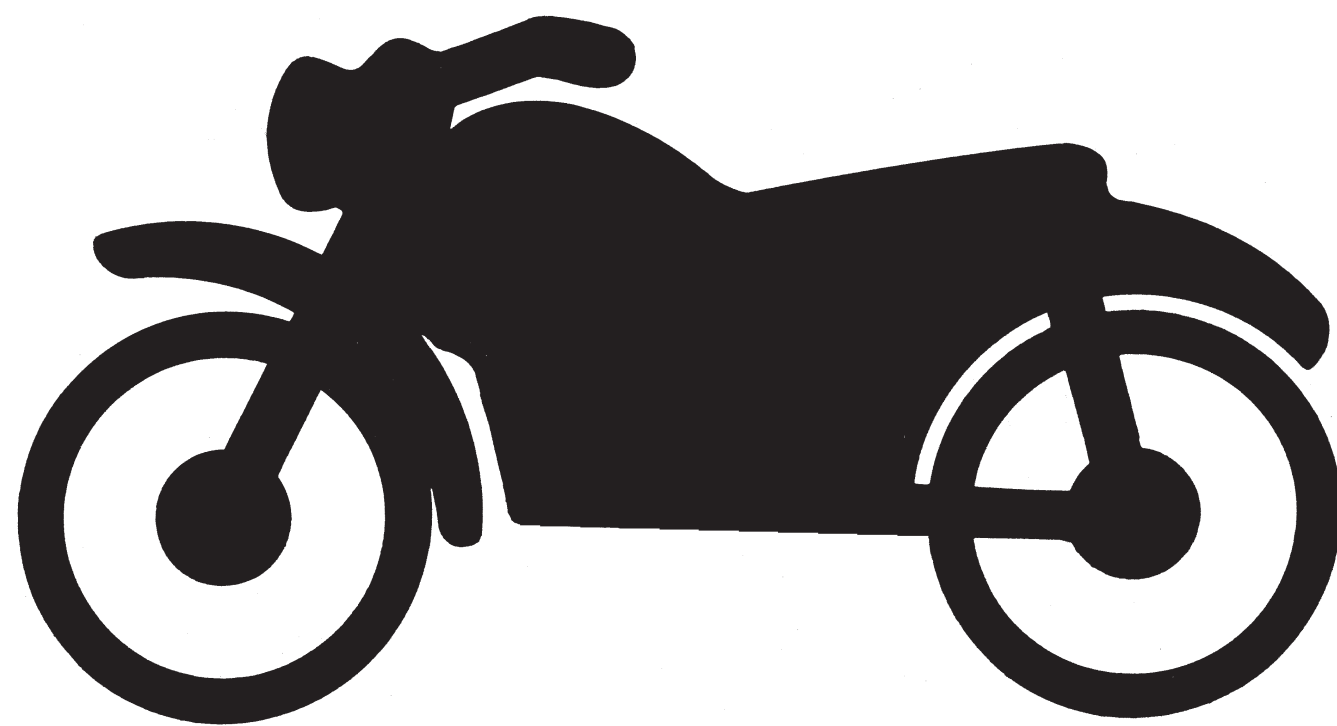
- ⑰ Apply engine oil
- ⑱ Apply gear oil
- ⑲ Apply molybdenum disulfide oil
- ⑳ Apply wheel bearing grease
- ㉑ Apply lightweight lithium-soap base grease
- ㉒ Apply molybdenum disulfide grease

Illustrated symbols ㉓ to ㉔ in the exploded diagrams indicate the following:

- ㉓ Apply locking agent (LOCTITE®)
- ㉔ Replace the part

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**GEN
INFO**

1

CHAPTER 1. GENERAL INFORMATION

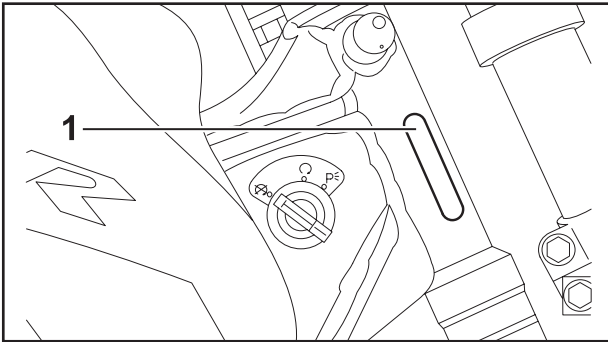
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GENERAL INFORMATION

VEHICLE IDENTIFICATION

VEHICLE IDENTIFICATION NUMBER

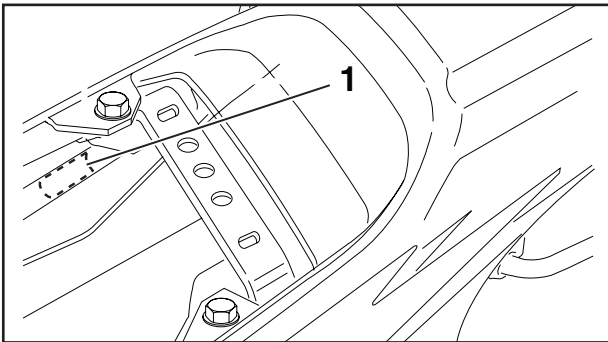
The vehicle identification number ① is stamped in-
to the frame.

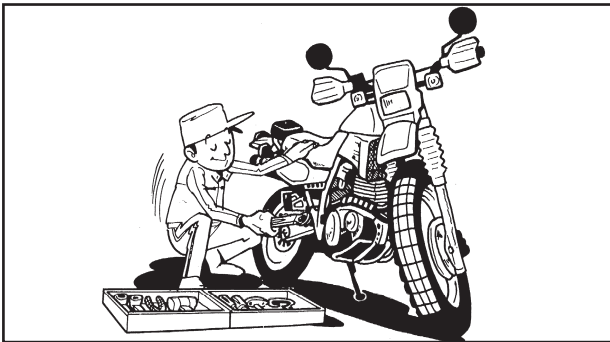
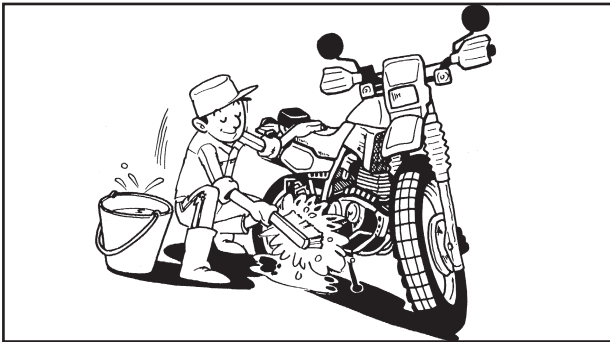


MODEL LABEL

The model label ① is affixed to the frame under
the seat.

This information will be needed to order spare
parts.





EB101000

IMPORTANT INFORMATION

PREPARATION FOR REMOVAL PROCEDURES

1. Remove all dirt, mud, dust and foreign material before removal and disassembly.
2. Use proper tools and cleaning equipment. Refer to the "SPECIAL TOOLS" section.
3. When disassembling the machine, always keep mated parts together. This includes gears, cylinders, pistons and other parts that have been "mated" through normal wear. Mated parts must always be reused or replaced as an assembly.
4. During machine disassembly, clean all parts and place them in trays in the order of disassembly. This will speed up assembly and allow for the correct installation of all parts.
5. Keep all parts away from any source of fire.

EB101010

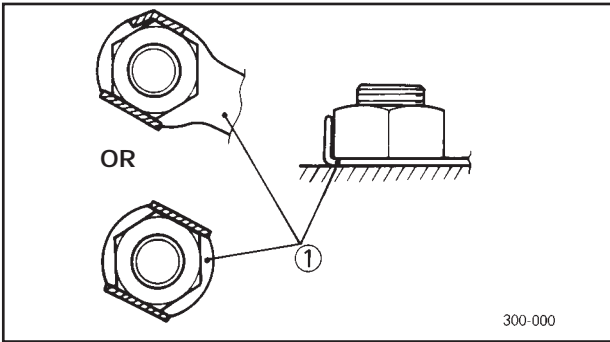
REPLACEMENT PARTS

1. Use only genuine Yamaha parts for all replacements. Use oil and grease recommended by Yamaha for all lubrication jobs. Other brands may be similar in function and appearance, but inferior in quality.

EB101020

GASKETS, OIL SEALS AND O-RINGS

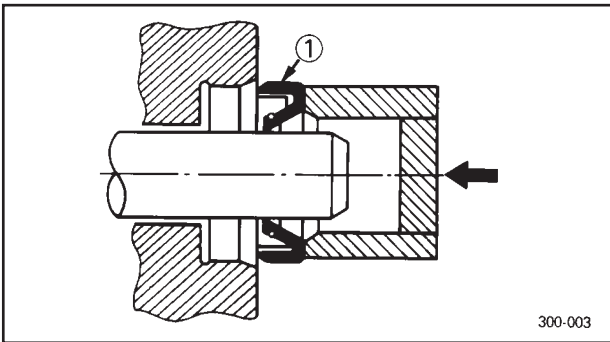
1. Replace all gaskets, seals and O-rings when overhauling the engine. All gasket surfaces, oil seal lips and O-rings must be cleaned.
2. Properly oil all mating parts and bearings during reassembly. Apply grease to the oil seal lips.



EB101030

LOCK WASHERS/PLATES AND COTTER PINS

1. Replace all lock washers/plates ① and cotter pins after removal. Bend lock tabs along the bolt or nut flats after the bolt or nut has been tightened to specification.



EB101040

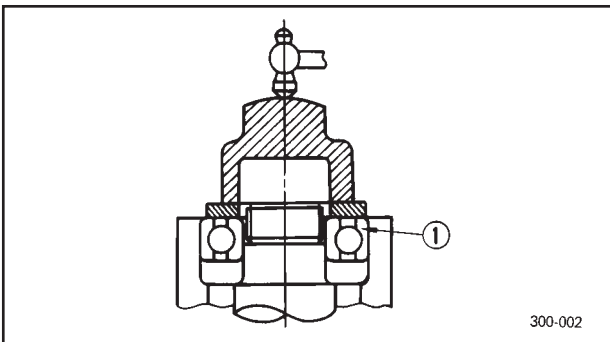
BEARINGS AND OIL SEALS

1. Install bearings and oil seals so that the manufacturer's marks or numbers are visible. When installing oil seals, apply a light coating of lightweight lithium base grease to the seal lips. Oil bearings liberally when installing, if appropriate.

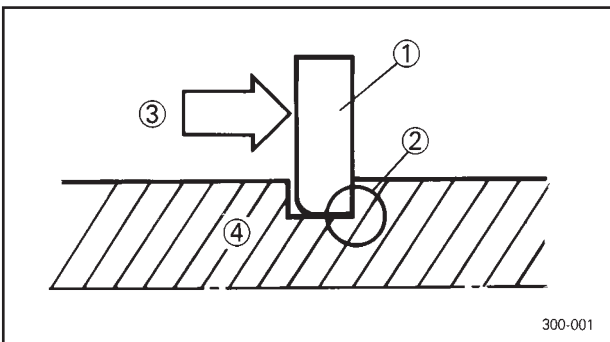
① Oil seal

CAUTION:

Do not use compressed air to spin the bearings dry. This will damage the bearing surfaces.



① Bearing

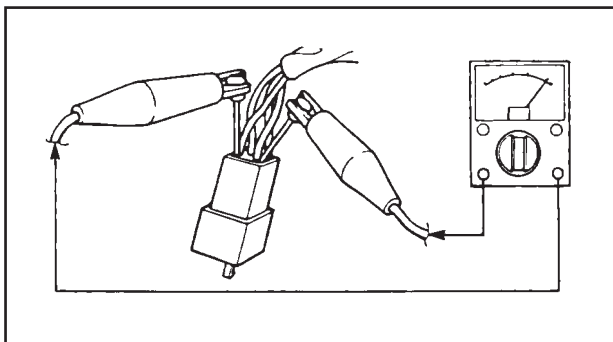
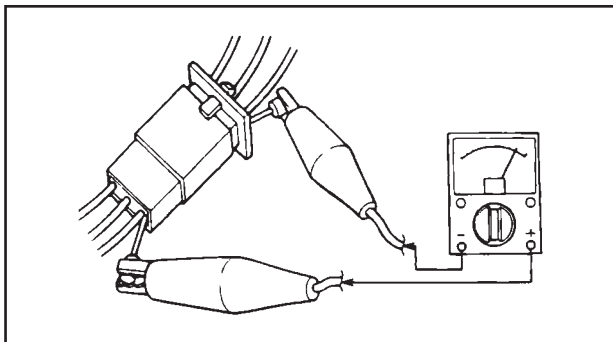
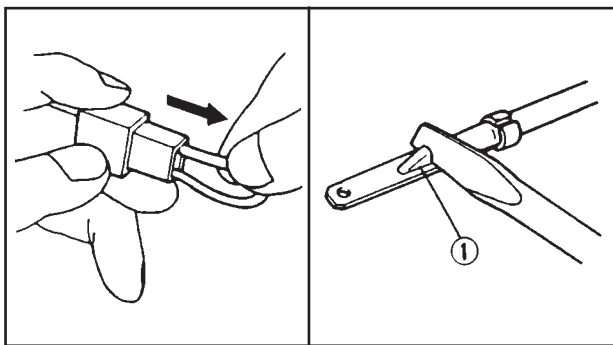
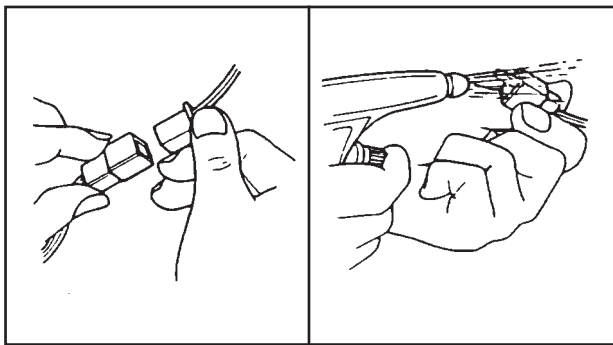


EB101050

CIRCLIPS

1. Check all circlips carefully before reassembly. Always replace piston pin clips after one use. Replace distorted circlips. When installing a circlip ①, make sure that the sharp-edged corner ② is positioned opposite the thrust ③ it receives. See sectional view.

④ Shaft



EB801000

CHECKING OF CONNECTIONS

Check the connectors for stains, rust, moisture, etc.

1. Disconnect:
 - connector
2. Check:
 - connector
 - Moisture → Dry each terminal with an air blower.
 - Stains/rust → Connect and disconnect the terminals several times.
3. Check:
 - connector leads
 - Looseness → Bend up the pin ① and connect the terminals.

4. Connect:
 - connector terminals

NOTE: _____
The two terminals “click” together.

5. Check:
 - continuity (using a pocket tester)

NOTE: _____

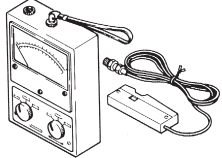
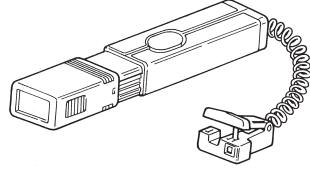
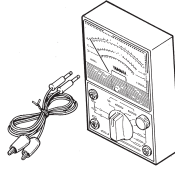
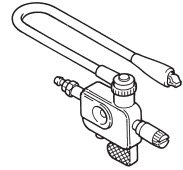
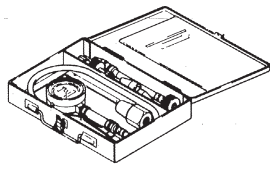
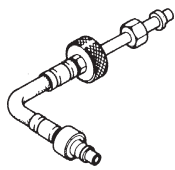
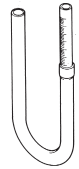
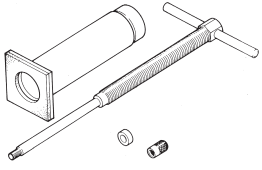
- If there is no continuity, clean the terminals.
- When checking the wire harness be sure to perform steps 1 to 3.
- As a quick remedy, use a contact revitalizer available at most part stores.
- Check the connector with a pocket tester as shown.





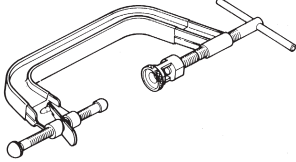
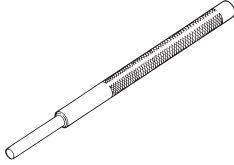
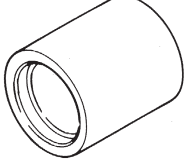
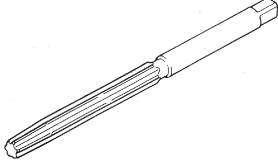
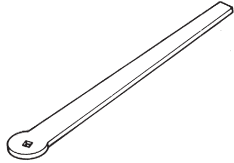
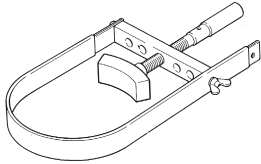
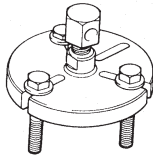
SPECIAL TOOLS

The following special tools are necessary for complete and accurate tune-up and assembly. Use only the appropriate special tools; this will help prevent damage caused by the use of inappropriate tools or improvised techniques.

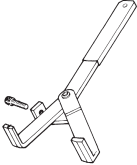
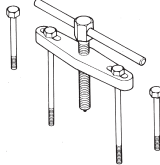
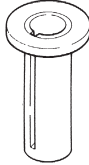

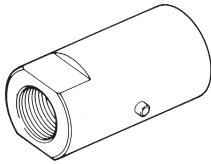
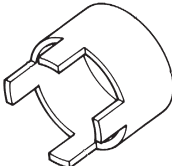
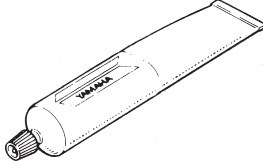
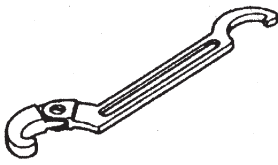
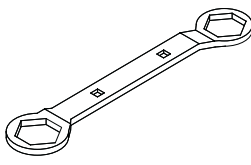
When placing an order, refer to the list provided below to avoid any mistakes.

Tool No.	Tool name / Usage	Illustration
90890-03113	Engine tachometer This tool is needed for detecting engine rpm.	
90890-03141	Timing light This tool is needed for detecting ignition timing.	
90890-03112	Pocket tester These instruments are invaluable for checking the electrical system.	
90890-06754	Ignition checker This instrument is necessary for checking the ignition system components.	
90890-03081	Compression gauge These tools are used to measure the engine compression.	
90890-04082	Adapter (compression gauge) This tool serves to measure the engine compression.	
90890-01312	Fuel level gauge This gauge is used to measure the fuel level in the float chamber.	
90890-01304	Piston pin clip puller This tool serves for removing the piston pin clip.	

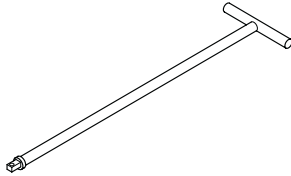
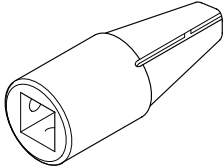
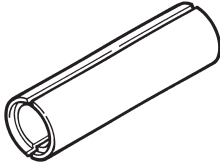


Tool No.	Tool name / Usage	Illustration
90890-01083	Rocker arm shaft puller bolt These tools are used when removing the rocker arm shafts.	
90890-01084	Weight These tools are used when removing the rocker arm shafts.	
90890-04019	Valve spring compressor These tools are used when removing or installing the valve and the valve spring.	
90890-01225	7 mm (0.28 in) valve guide puller This tool is used to remove the valve guides.	
90890-04017	7 mm (0.28 in) valve guide installer This tool is necessary to install the valve slides properly.	
90890-01227	7 mm (0.28 in) valve guide reamer This tool is used to re-ream the new valve guide.	
90890-01311	Valve adjusting tool This tool is necessary for adjusting valve clearance.	
90890-01701	Rotor holder This tool is used for loosening and tightening the rotor nut.	
90890-01362	Rotor screw puller This tool is used to disassemble the magneto flywheel rotor.	



Tool No.	Tool name / Usage	Illustration
90890-04086	<p>All-purpose clutch holder</p> <p>This tool is used to lock the clutch, when the clutch boss lock nut is being loosened or tightened.</p>	
90890-01135	<p>Crankcase separating tool</p> <p>This tool is necessary to disassemble the crankcase.</p>	
90890-01274	<p>Crankshaft installation hose</p> <p>This tool is used to install the crankshaft.</p>	
90890-01275	<p>Crankshaft installation bolt</p> <p>This tool is used to install the crankshaft.</p>	
90890-04059	<p>#10 (M14) adapter</p> <p>This tool is used to install the crankshaft.</p>	
90890-04081	<p>Crank spacer</p> <p>This tool is used to install the crankshaft.</p>	
90890-85505	<p>SEALANT (QUICK GASKET) ® Yamaha Bond No. 1215 ®</p> <p>This sealant (adhesive) is used for crankcase mating surfaces etc.</p>	
90890-01268	<p>Ringnut wrench</p> <p>This tool is used to loosen and tighten the steering ringnut.</p>	
90890-01348	<p>Ringnut wrench</p> <p>This tool is used to loosen and tighten the steering ringnut.</p>	



Tool No.	Tool name / Usage	Illustration
90890-01326	T-handle This tool is needed to loosen and tighten the front fork damper rod holding bolt.	
90890-01460	Front fork damper rod holder This tool is needed to hold the front fork damper rod when loosening and tightening the holding bolt.	
90890-11043	DU bush/oil seal guide This tool is used to install the DU bush and the fork oil seal.	



SPEC

2



CHAPTER 2. SPECIFICATIONS

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