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YAMAHA

2004

TT600RE

5CH5-ME1

SERVICE MANUAL

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**TT600RE
SERVICE MANUAL**
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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.

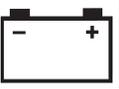
Warp limit (clutch plate):
Less than 0.2 mm

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.

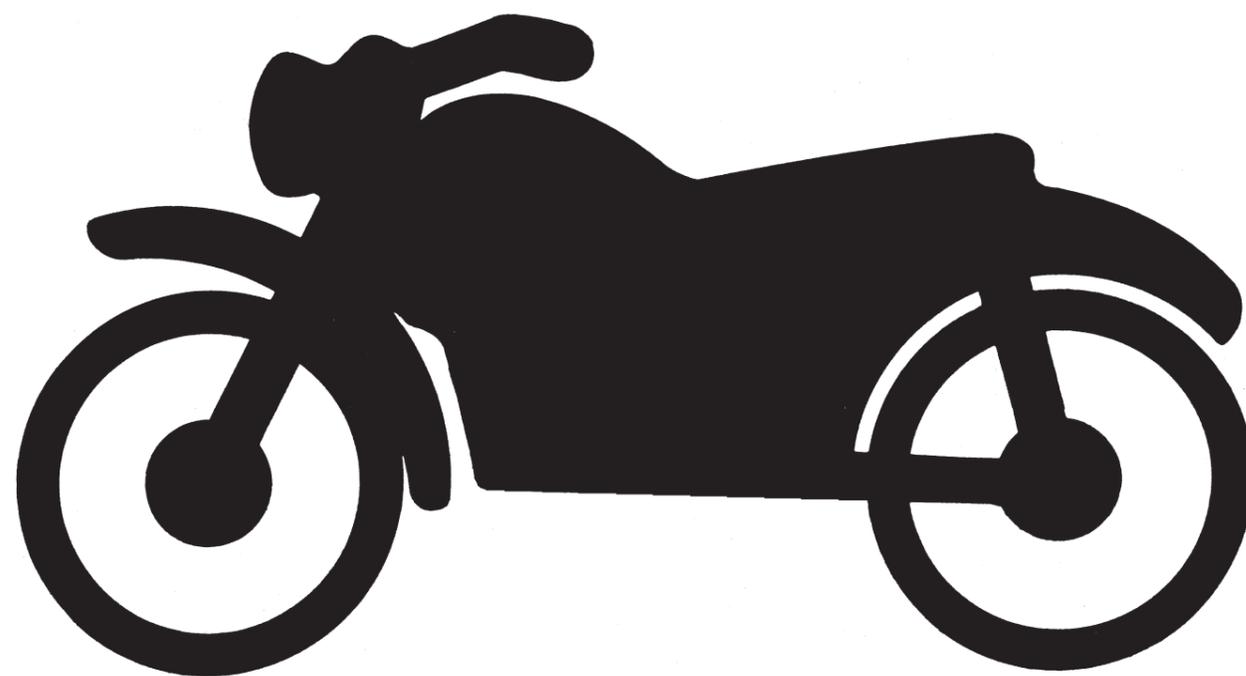
- ⑰ Apply engine oil
- ⑱ Apply gear oil
- ⑲ Apply molybdenum disulfide oil
- ⑳ Apply wheel bearing grease
- ㉑ Apply lightweight lithium-soap base grease
- ㉒ Apply molybdenum disulfide grease

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

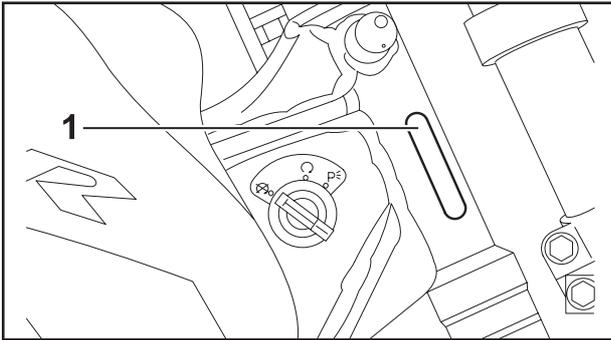
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GENERAL INFORMATION

VEHICLE IDENTIFICATION

VEHICLE IDENTIFICATION NUMBER

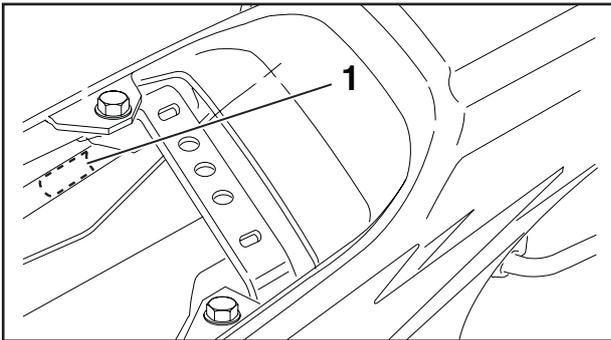
The vehicle identification number ① is stamped into the frame.

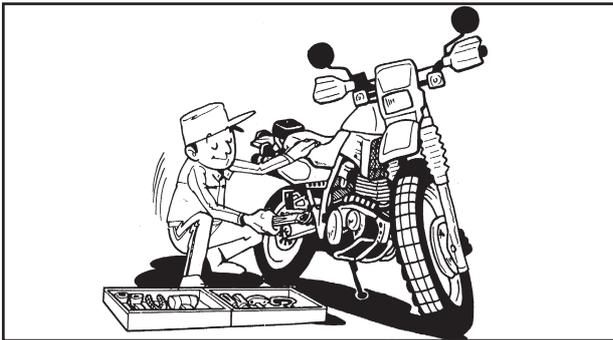
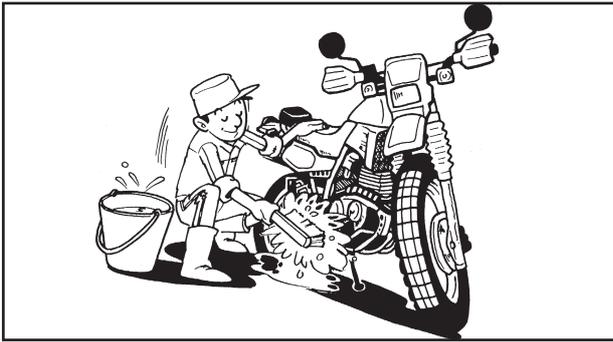


MODEL LABEL

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

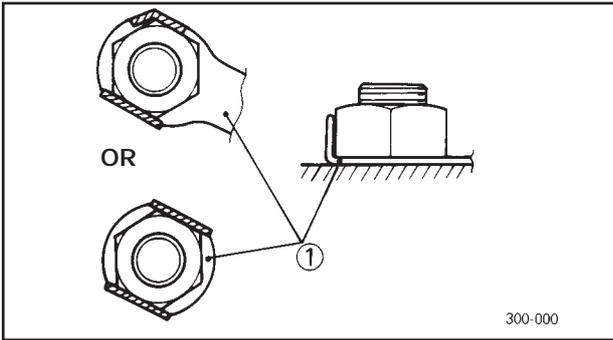
REPLACEMENT PARTS

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

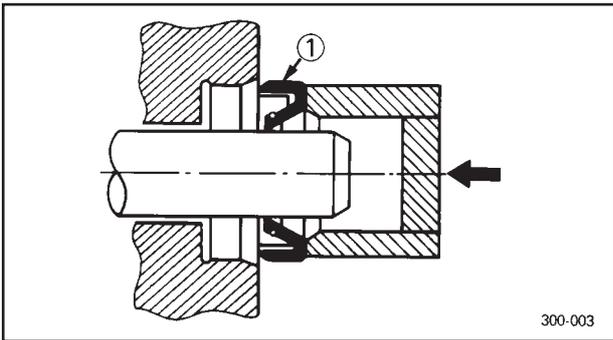
1. Replace all gaskets, seals and O-rings when overhauling the engine. All gasket surfaces, oil seal lips and O-rings must be cleaned.
2. Properly oil all mating parts and bearings during reassembly. Apply grease to the oil seal lips.



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

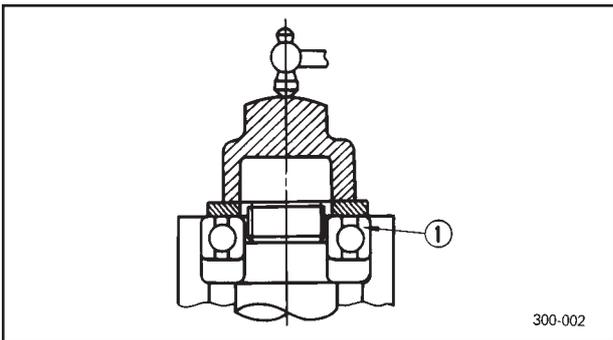
BEARINGS AND OIL SEALS

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.

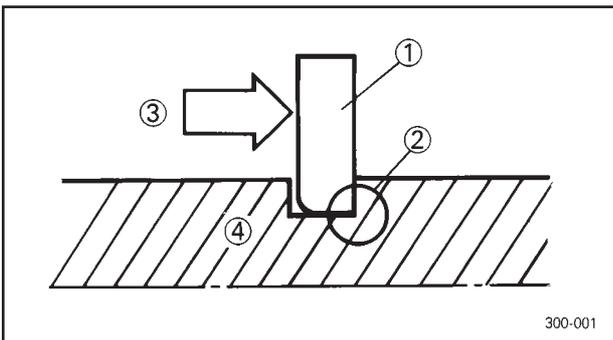
- ① Oil seal

CAUTION:

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



- ① Bearing

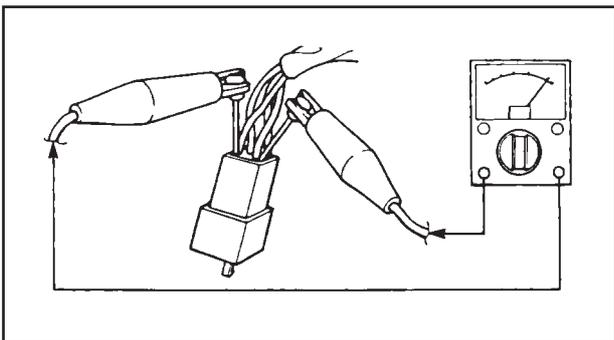
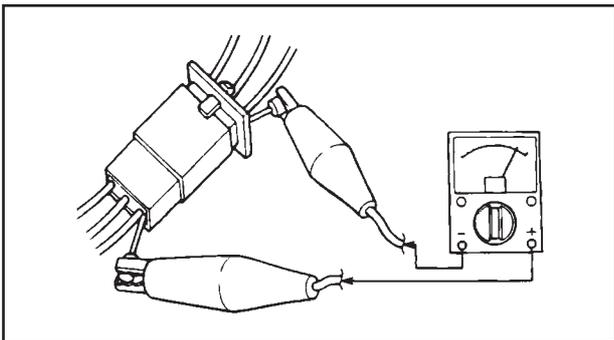
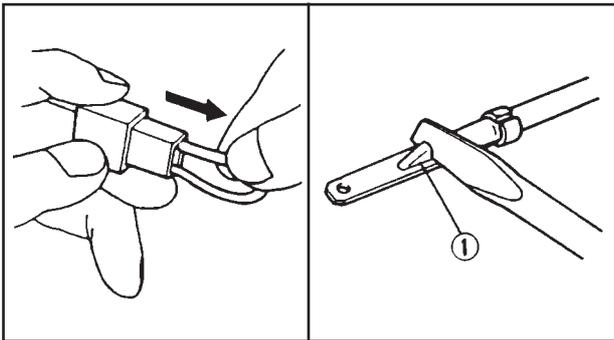
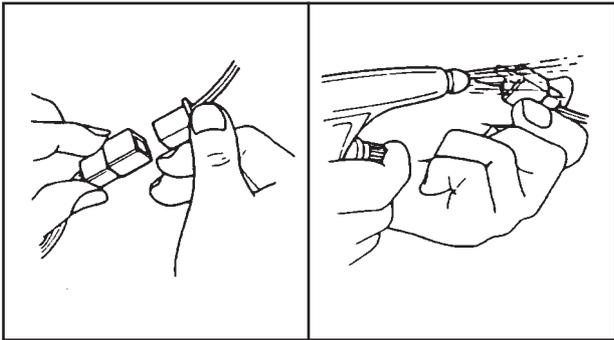


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CIRCLIPS

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: _____

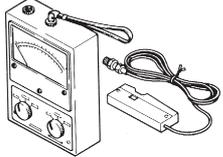
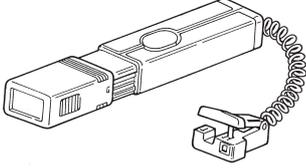
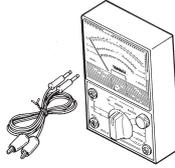
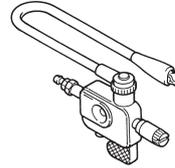
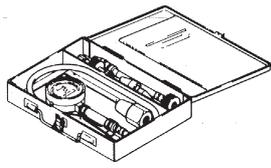
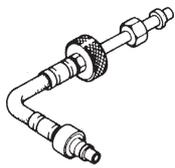
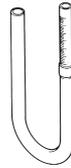
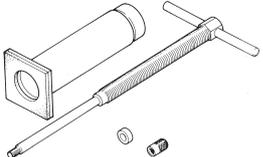
- If there is no continuity, clean the terminals.
- When checking the wire harness be sure to perform steps 1 to 3.
- As a quick remedy, use a contact revitalizer available at most part stores.
- Check the connector with a pocket tester as shown.



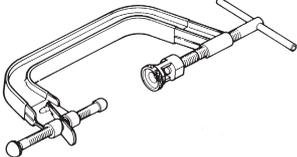
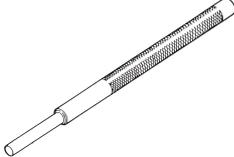
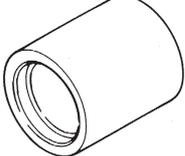
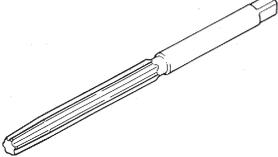
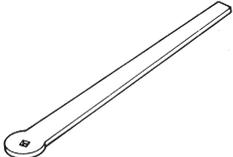
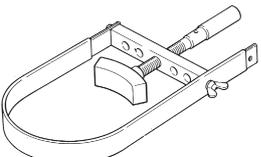
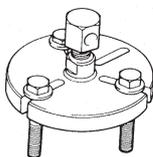
SPECIAL TOOLS

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.

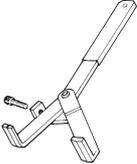
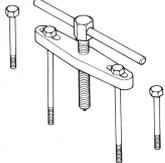
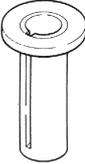
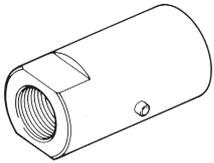
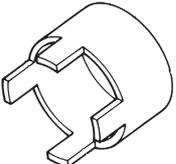
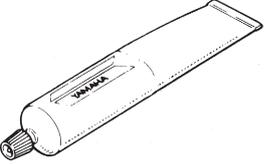
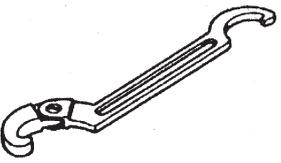
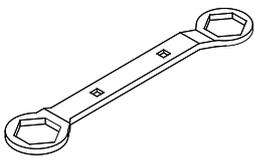
When placing an order, refer to the list provided below to avoid any mistakes.

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.	

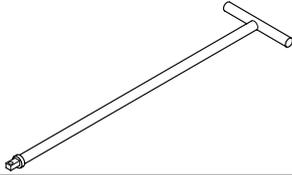
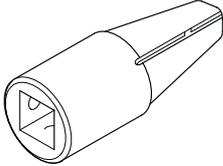
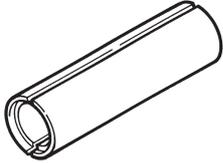


Tool No.	Tool name / Usage	Illustration
90890-01083	Rocker arm shaft puller bolt These tools are used when removing the rocker arm shafts.	
90890-01084	Weight These tools are used when removing the rocker arm shafts.	
90890-04019	Valve spring compressor These tools are used when removing or installing 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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SPECIFICATIONS

GENERAL SPECIFICATIONS

Item	Standard	Limit
Model	TT600RE: 5CH5	
Dimensions Overall length Overall width Overall height Seat height Wheelbase Ground clearance Minimum turning radius	2,220 mm 865 mm 1,195 mm 890 mm 1,480 mm 280 mm 3,300 mm (right) 3,100 mm (left)
Basic weight (with oil and full fuel tank)	164.5 kg	...
Engine Engine type Cylinder arrangement Displacement Bore x stroke Compression ratio Starting system Lubrication system	Air cooled 4-stroke, SOHC Forward inclined single cylinder 595 cm ³ 95.0 x 84.0 mm 8.5 : 1 Electric starter Dry sump with separate oil tank
Engine oil Type Temp. °C Recommended engine oil classification Quantity: Without oil filter cartridge replacement With oil filter cartridge replacement Total amount (dry engine)	SAE20W40SE or SAE10W30SE API Service SE, SF, SG or higher 2.4 L 2.5 L 3.0 L
Air filter	Wet type element	
Fuel Type Fuel tank capacity Fuel reserve amount	Regular unleaded gasoline 10 L 3.0 L
Carburetor Manufacturer Model x quantity	TEIKEI Y30PV-2ATK x 1	

GENERAL SPECIFICATIONS

SPEC



Item	Standard	Limit
Spark plug Manufacturer/model Gap	NGK/DPR8EA-9 or NGK/DPR9EA-9 0.8–0.9 mm	●●●
Clutch type	Wet. Multiple-disc	
Transmission Primary reduction system Primary reduction ratio Secondary reduction system Secondary reduction ratio Number of drive chain sprocket teeth (front/rear) Transmission type Operation Gear ratio	Spur gear 71/34 (2.088) Chain drive 47/15 (3.133) 15/47 Constant mesh 5-speed Left foot 2.583 1.588 1.200 0.955 0.792	
Chassis Frame type Caster angle Trail	Open cradle backbone frame/detachable rear frame 27° 117 mm	 ●●● ●●●
Tires Front: Type Size Manufacturer/model Rear: Type Size Manufacturer/model Maximum load* Tire air pressure (measured on cold tires): Up to 90 kg* Front Rear 90 kg–maximum* Front Rear Off-road riding Front Rear High-speed riding Front Rear * Total weight of rider, passenger, cargo and accessories	With tube 90/90-21-(54R) / 90/90-21-(54S) Pirelli / MT70 - Michelin / T63 With tube 130/80-18-(66R) / 130/80-18-(66S) Pirelli / MT70 - Michelin / T63 180 kg 200 kPa; 2.00 kgf/cm ² ; 2.00 bar 220 kPa; 2.20 kgf/cm ² ; 2.20 bar 210 kPa; 2.10 kgf/cm ² ; 2.10 bar 240 kPa; 2.40 kgf/cm ² ; 2.40 bar 150 kPa; 1.50 kgf/cm ² ; 1.50 bar 160 kPa; 1.60 kgf/cm ² ; 1.60 bar 210 kPa; 2.10 kgf/cm ² ; 2.10 bar 240 kPa; 2.40 kgf/cm ² ; 2.40 bar	 ●●● ●●● ●●● ●●● ●●● ●●● ●●● ●●● ●●●
Wheels Front: Type Size Rear: Type Size	Spoke wheel 21" x 1.85 Spoke wheel 18" x MT 2.50	

GENERAL SPECIFICATIONS

SPEC

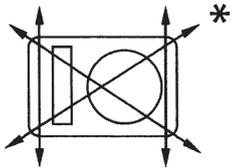
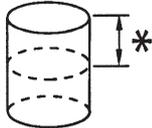
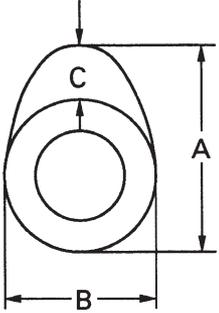
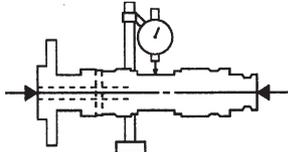


Item	Standard	Limit
Brakes		
Front:		
Type	Single Ø 267 mm disk brake, 2 x 28 mm	
Operation	Right hand	
Fluid	DOT 4	
Rear:		
Type	Single Ø 220 mm disk brake, 1 x 34 mm caliper	
Operation	Right foot	
Fluid	DOT 4	
Suspension		
Front	Telescopic fork Outside tube dia. 46 mm	
Rear	Deltabox Swingarm with adjustable shock absorber	
Spring/shock absorber		
Front	Coil spring / oil damper	
Rear	Coil spring / gas-oil damper, spring preload adjustable	
Wheel travel		
Front	230 mm	•••
Rear	230 mm	•••
Electrical system		
Ignition system	Transistorized coil ignition (digital)	
Charging system:		
Type	A.C. magneto	
Standard output	14V, 13.5A at 5.000 r/min	•••
Battery:		
Model	GT9B-4	
Voltage, capacity	12V, 8Ah	•••
Headlight type	Quartz bulb (halogen)	
Bulb voltage, wattage x quantity		
Headlight	12V 60W / 55W x 1	•••
Tail/brake light	12V 5W / 21W x 1	•••
Turn signal light	12V 10W x 4	•••
Auxiliary light	12V 5W x 1	•••
Meter lighting	12V 3W x 1	•••
Turn signal indicator light	12V 1.2W x 1	•••
Neutral indicator light	12V 1.2W x 1	•••
Auxiliary indicator light	12V 1.2W x 1	•••
High beam indicator light	12V 1.2W x 1	•••
Fuse	20A	•••



MAINTENANCE SPECIFICATIONS

ENGINE

Item	Standard	Limit
<p>Cylinder head Max. warpage *</p> 	<p>•••</p>	<p>0.03 mm</p>
<p>Cylinder Bore Measuring point *</p> 	<p>94.970 - 95.020 mm 50 mm</p>	<p>95.10 mm •••</p>
<p>Camshaft Drive system Camshaft cap inside diameter Camshaft journal diameter Camshaft-journal-to-camshaft-cap clearance Camshaft lobe dimensions:</p>  <p>Intake-measurement A Intake-measurement B Intake-measurement C</p> <p>Exhaust-measurement A Exhaust-measurement B Exhaust-measurement C Max. camshaft runout</p> 	<p>Chain drive (left) 23.000 - 23.021 mm 22.967 - 22.980 mm 0.020 - 0.054 mm</p> <p>36.470 - 36.570 mm 30.060 - 30.160 mm 6.41 mm</p> <p>36.620 - 36.720 mm 30.110 - 30.210 mm 6.51 mm •••</p>	<p>••• ••• ••• ••• ••• ••• ••• ••• ••• ••• ••• ••• 0.030 mm</p>

MAINTENANCE SPECIFICATIONS

SPEC

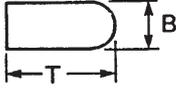
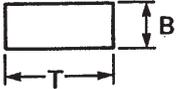
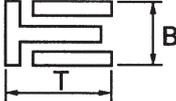
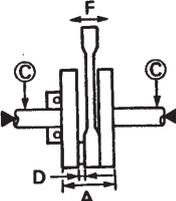


Item	Standard	Limit
Timing chain Model/number of links Tensioning system	75-010/126 Automatic	
Rocker arm/rocker arm shaft Arm inside diameter Shaft outside diameter Arm-to-shaft clearance	12.000 - 12.018 mm 11.976 - 11.991 mm 0.009 - 0.042 mm
Valve, valve seat, valve guide Valve clearance (cold)	intake 0.05 - 0.10 mm exhaust 0.12 - 0.17 mm
Valve dimensions:		
Valve head diameter A	intake 36.90 - 37.10 mm exhaust 31.90 - 32.10 mm
Valve face width B	intake 2.260 mm exhaust 2.260 mm
Valve seat width C	intake 1.00 - 1.20 mm exhaust 1.00 - 1.20 mm	1.80 mm 1.80 mm
Valve margin thickness D	intake 1.00 - 1.40 mm exhaust 0.80 - 1.20 mm	0.80 mm 0.65 mm
Valve stem diameter	intake 6.975 - 6.990 mm exhaust 6.955 - 6.970 mm	6.995 mm 6.925 mm
Valve guide inside diameter	intake 7.000 - 7.012 mm exhaust 7.000 - 7.012 mm	7.042 mm 7.042 mm
Valve stem to valve guide clearance	intake 0.010 - 0.037 mm exhaust 0.030 - 0.057 mm	0.08 mm 0.10 mm
Valve stem runout	...	0.010 mm
Valve seat width	intake 1.10 mm exhaust 1.10 mm	1.80 mm 1.80 mm



Item	Standard	Limit	
Valve spring			
Inner spring:			
Free length	intake	40.10 mm	38.10 mm
	exhaust	40.10 mm	38.10 mm
Installed length	intake	22.70 mm	...
(valve closed)	exhaust	22.70 mm	...
Compressed spring force	intake	164.80 - 190.20 N	...
(installed)		16.80 - 19.39 kg	...
	exhaust	164.80 - 190.20 N	...
		16.80 - 19.39 kg	...
Spring tilt intake	intake	...	2.5 °/1.7 mm
	exhaust	...	2.5 °/1.7 mm
Winding direction	intake	Clockwise	
(top view)	exhaust	Clockwise	
Outer spring:			
Free length intake	intake	43.80 mm	38.10 mm
	exhaust	43.80 mm	38.10 mm
Installed length	intake	34.20 mm	...
(valve closed)	exhaust	34.20 mm	...
Compressed spring force	intake	71.60 - 87.30 N	...
(installed)		7.3 - 8,9 kg	...
	exhaust	149.10 - 182.40 N	...
		15.2 - 18.6 kg	...
Spring tilt	intake	...	2.5 °/1.7 mm
	exhaust	...	2.5 °/1.9 mm
Winding direction	intake	Counterclockwise	
(top view)	exhaust	Counterclockwise	
Piston			
Piston-to-cylinder clearance			
Diameter D			
Height H			
0.045 - 0.065 mm			0.15 mm
94.915 - 94.965 mm			...
5.0 mm			...
Piston pin bore inside diameter			...
Offset			...
Offset direction			Intake side
Piston pin outside diameter			...
22.004 - 22.015 mm			...
2.00 mm			...
Intake side			
21.991 - 22.000 mm			...



Item	Standard	Limit
<p>Piston ring Top ring:</p>  <p>Ring type Dimensions (B x T) End gap (installed) Ring side clearance</p> <p>2nd ring:</p>  <p>Ring type Dimensions (B x T) End gap (installed) Ring side clearance</p> <p>Oil ring:</p>  <p>Dimensions (B x T) End gap (installed) Ring side clearance</p>	<p>Barrel 1.20 x 3.80 mm</p> <p>0.30 - 0.45 mm 0.040 - 0.080 mm</p> <p>Plain 1.20 x 3.80 mm</p> <p>0.30 - 0.45 mm 0.030 - 0.070 mm</p> <p>2.50 x 3.40 mm 0.20 - 0.70 mm 0.020 - 0.060 mm</p>	<p>••• 0.70 mm 0.130 mm</p> <p>••• 0.80 mm 0.130 mm</p> <p>••• ••• •••</p>
<p>Crankshaft</p>  <p>Width A Max. runout C Big end side clearance D Big end radial clearance Small end free play F</p>	<p>74.95 - 75.00 mm ••• 0.350 - 0.650 mm 0.010 - 0.025 mm 0.80 mm</p>	<p>••• 0.030 mm ••• ••• •••</p>

MAINTENANCE SPECIFICATIONS

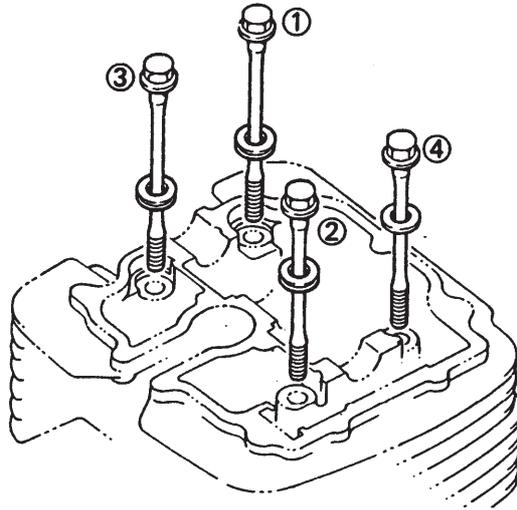
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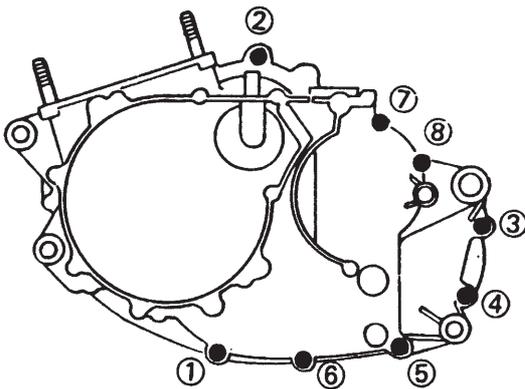
Item	Standard	Limit
Ballancer Ballancer drive method	Gear	
Clutch Clutch release method Friction plate thickness Wear limit Plate quantity Friction plate thickness Wear limit Plate quantity Clutch plate thickness Plate quantity Max. warpage Clutch spring free length Plate quantity Clutch housing thrust clearance	Inner push, cam push 2.72 - 2.88 mm ... 6 pcs 2.94 - 3.06 mm ... 2 pcs 1.20 mm 7 pcs ... 42.8 mm 5 pcs 0.070 - 0.071 mm	... 2.60 mm ... 2.8 mm ... 0.20 mm
Transmission Max. main axle runout Max. drive axle runout Shift mechanism type Cam drum and guide bar	0.08 mm 0.08 mm
Carburetor ID mark Main jet Main air jet Jet needle Needle jet Cutaway Pilot air jet 1 Pilot jet Bypass 1 Pilot screw turns out Valve seat size Starter jet 1 Float height	5CH5 10 #1:#150 #2:#145 #1:1.0 #2:0.9 #1:5C5A-3/5 #2:5Y18-3/5 2.600 4.00 # 0.8 mm # 50 # 1.0 2-3/4 +/- 1/2 2.5 # 74 6.0 - 8.0 mm
Engine idle speed CO% Intake vacuum	1,150-1,450 r/min 1.5 - 3 30.6-33.36 kPa - 230-250 mm Hg
Lubrication system Oil filter type Oil pump: Oil pump type Inner rotor to outer rotor tip clearance Outer rotor to pump housing clearance Bypass valve opening pressure Relief valve operating pressure Oil pressure (hot) Pressure check location	Dry sump Paper type Trochoid type 0.12 mm 0.030 - 0.080 mm 80.0 - 120.0 kPa (0.8 - 1.2 kgf/cm ²) 80.0 - 120.0 kPa (0.8 - 1.2 kgf/cm ²) 13.0 kPa (0.13 kgf/cm ²)/1,300 r/min Oil filter chamber	0.20 mm 0.150 mm

ENGINE

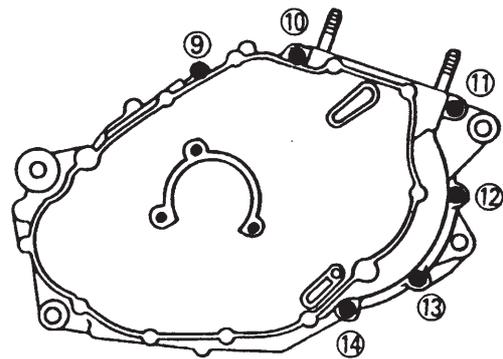
Cylinder head tightening steps:



Crankcase tightening steps:



Left crankcase



Right crankcase