

HOW TO USE THIS MANUAL

CONSTRUCTION OF THIS MANUAL

This manual consists of chapters for the main categories of subjects. (See «illustrated symbols».)

- 1st title ① This is a chapter with its symbol on the upper right of each page.
- 2nd title ② This title appears on the upper of each page on the left of the chapter symbol. (For the chapter «Periodic inspection and adjustment» the 3rd title appears.)
- 3rd title ③ This is a final title.

MANUAL FORMAT

All of the procedures in this manual are organized in a sequential, step-by-step format. The information has been compiled to provide the mechanic with an easy to read, handy reference that contains comprehensive explanations of all disassembly, repair, assembly, and inspections.

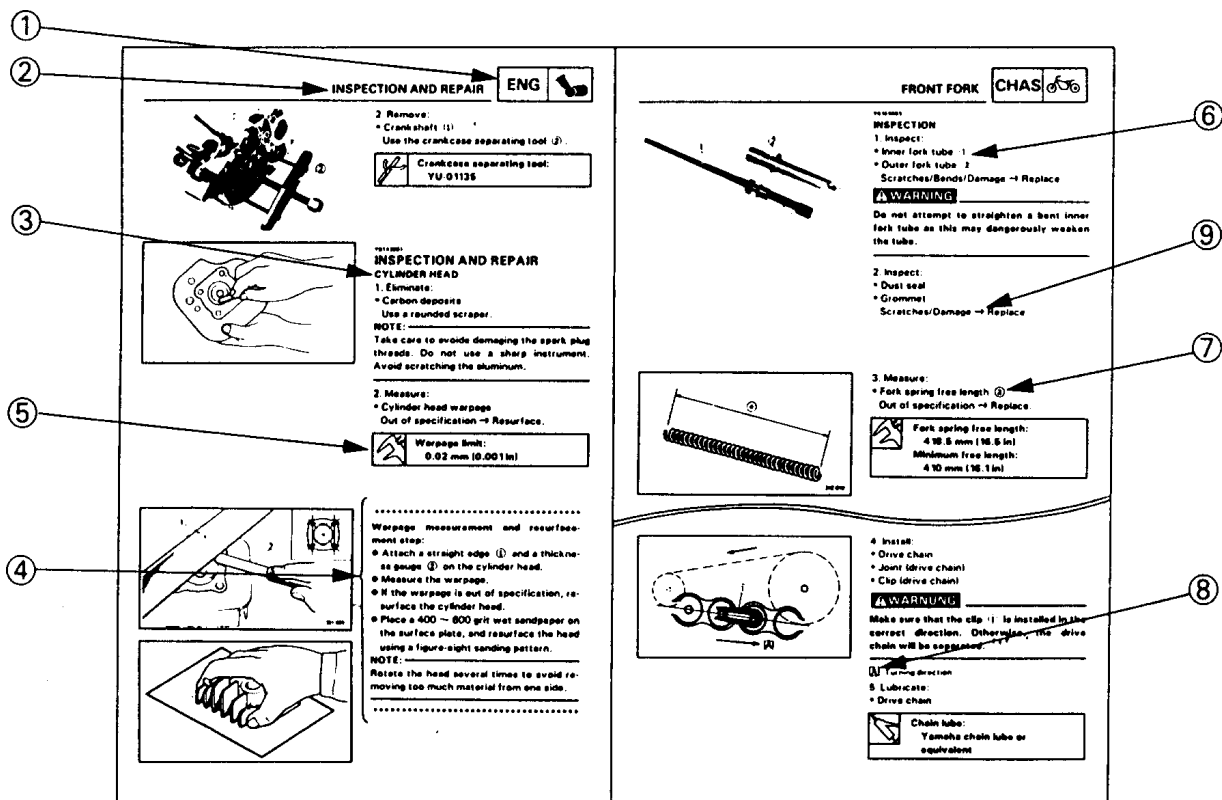
A set of particularly important procedure ④ is placed between a line of asterisks " * " with each step preceded by " • ".















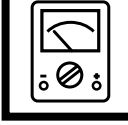








IMPORTANT FEATURES

- Data and a special tools are framed in a box preceded by a relevant symbol ⑤.
- An encircled numeral ⑥ indicates a part name, and an encircled alphabetical letter data for an alignment mark ⑦, the others being indicated by an alphabetical letter in a box ⑧.
- A condition of a faulty component will precede an arrow symbol and the course of action required the symbol ⑨.

EXPLODED DIAGRAM

Each chapter provides exploded diagrams are before each disassembly section for ease in identifying correct disassembly and assembly procedures.



<p>①</p> 	<p>②</p> 	
<p>③</p> 	<p>④</p> 	
<p>⑤</p> 	<p>⑥</p> 	
<p>⑦</p> 	<p>⑧</p> 	
<p>⑨</p> 	<p>⑩</p> 	
<p>⑪</p> 	<p>⑫</p> 	
<p>⑬</p> 	<p>⑭</p> 	
<p>⑮</p> 		
<p>⑯</p> 	<p>⑰</p> 	<p>⑱</p> 
<p>⑲</p> 	<p>⑳</p> 	<p>㉑</p> 
<p>㉒</p> 	<p>㉓</p> 	

ILLUSTRATED SYMBOLS (REFER TO THE ILLUSTRATION)

Illustrated symbols ① to ⑧ are designed as thumb tabs to indicate the chapter's number and content.

- ① General information
- ② Specifications
- ③ Periodic inspection and adjustment
- ④ Engine
- ⑤ Carburetion
- ⑥ Chassis
- ⑦ Electrical
- ⑧ Troubleshooting









Illustrated symbols ⑨ to ⑮ are used to identify the specifications appearing in the text.

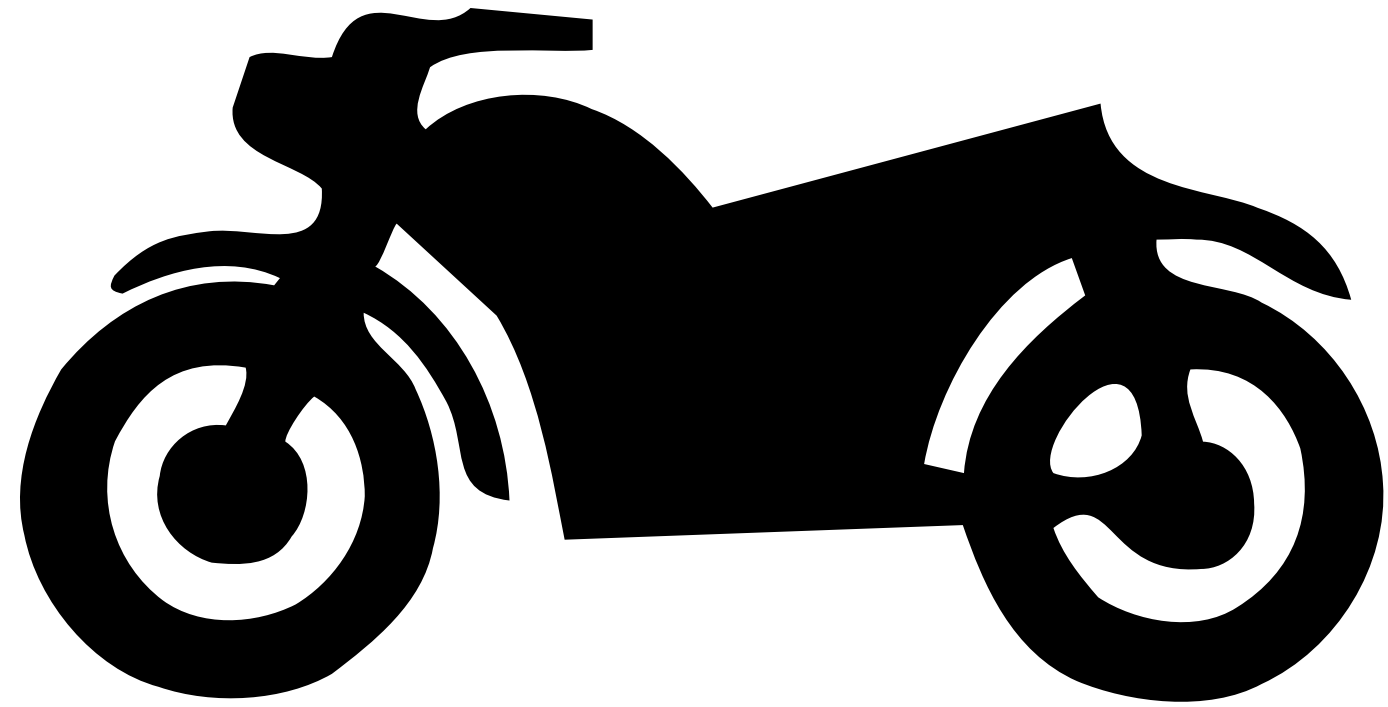
- ⑨ Filling fluid
- ⑩ Lubricant
- ⑪ Special tool
- ⑫ Tightening
- ⑬ Wear limit, clearance
- ⑭ Engine speed
- ⑮ Ω, V, A

Illustrated symbols ⑯ to ㉓ in the exploded diagram indicate grade of lubricant and location of lubrication point.

- ⑯ Apply engine oil
- ⑰ Apply gear oil
- ⑱ Apply molybdenum disulfide oil
- ⑲ Apply wheel bearing grease
- ⑳ Apply lightweight lithium-soap base grease
- ㉑ Apply molybdenum disulfide grease
- ㉒ Apply locking agent (THREADLOCK®)
- ㉓ Use new one

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CHASSIS	
	CHAS 7
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	ELEC 8
TROUBLESHOOTING	?
	TRBL SHTG 9



**GEN
INFO**

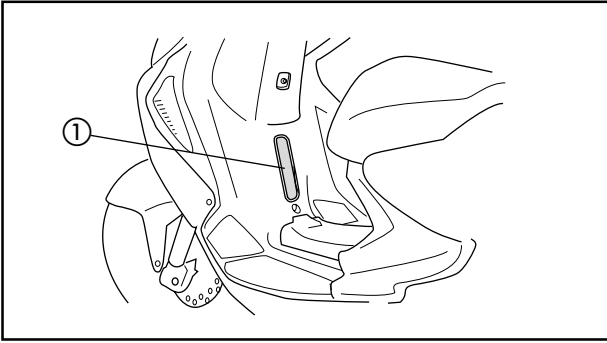
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**CHAPTER 1.
GENERAL INFORMATION**

SCOOTER IDENTIFICATION 1-1
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 LOCK WASHERS/PLATES AND COTTER PINS 1-2
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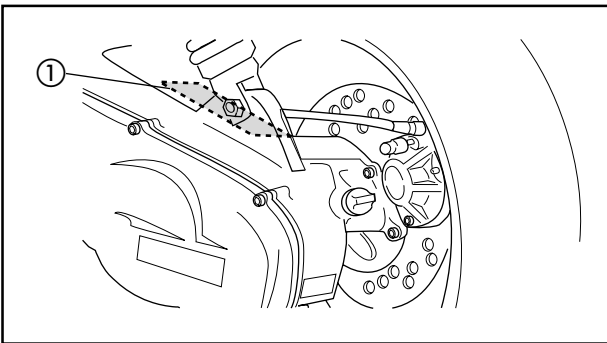


GENERAL INFORMATION SCOOTER IDENTIFICATION

VEHICLE IDENTIFICATION NUMBER

The vehicle identification number ① is stamped into the frame.

NOTE: _____
The vehicle identification number is used to identify your scooter and may be used to register your scooter with the licensing authority in your state.

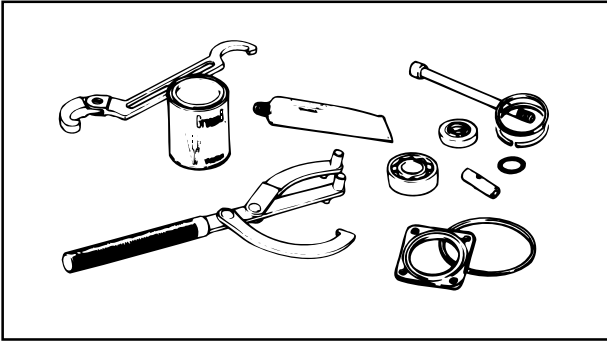


ENGINE SERIAL NUMBER

The engine serial number ① is stamped into the crankcase.

NOTE: _____
The first three digits of these numbers are for model identifications; the remaining digits are the unit production number.

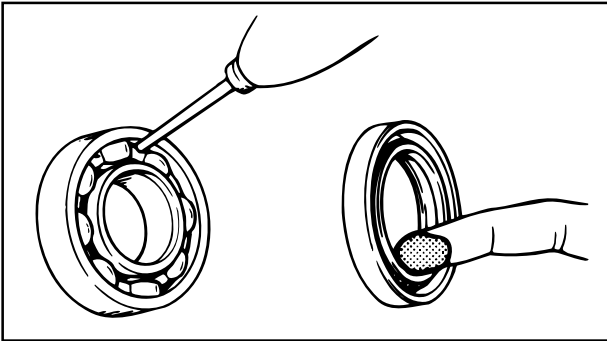
NOTE: _____
Designs and specifications are subject to change without notice.



IMPORTANT INFORMATION

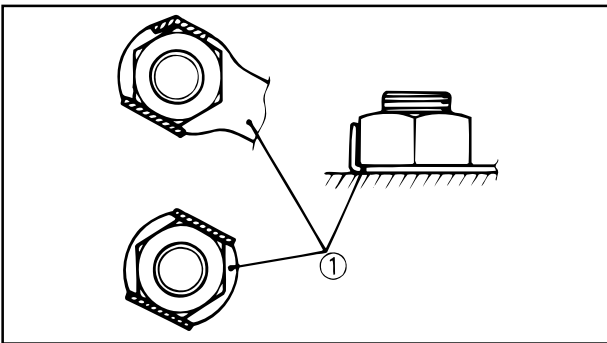
ALL REPLACEMENT PARTS

1. Use only genuine parts for all replacements. Use oil and/or grease recommended by MBK/YAMAHA for assembly and adjustment. Other brands may be similar in function and appearance, but inferior in quality.



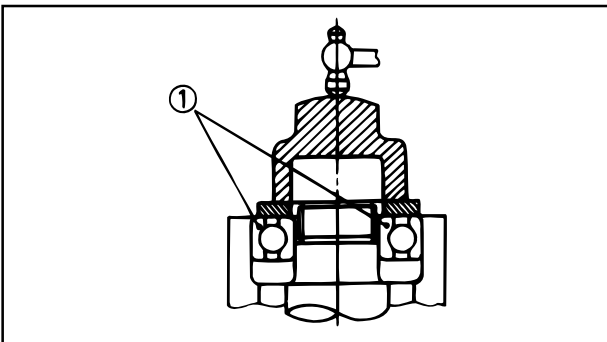
GASKETS, OIL SEALS, AND O-RINGS

1. All gaskets, seals and O-rings should be replaced when an engine is overhauled. All gaskets surfaces, oil seal lips and O-rings must be cleaned.
2. Properly oil all mating parts and bearing during reassembly. Apply grease to the oil seal lips.



LOCK WASHERS/PLATES AND COTTER PINS

1. All lock washers/plates ① and cotter pins must be replaced when they are removed. Lock tab(s) should be bent along the bolt or nut flat(s) after the bolt or nut has been properly tightened.

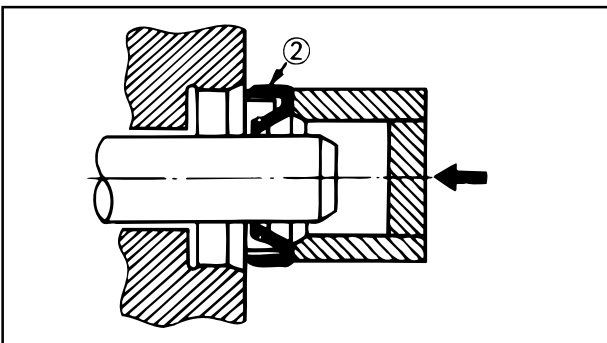


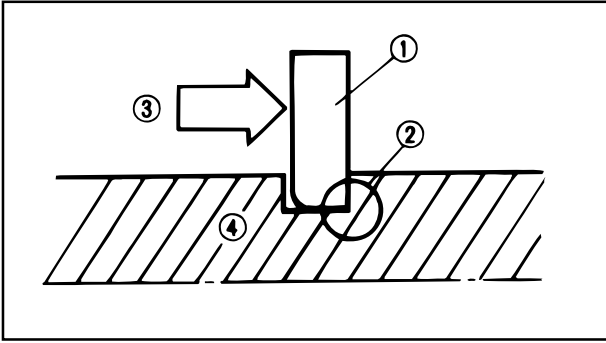
BEARINGS AND OIL SEALS

1. Install the bearing(s) ① and oil seal(s) ② with their manufacturer's marks or numbers facing outward. (In other words, the stamped letters must be on the side exposed to view.) When installing oil seal(s), apply a light coating of lightweight lithium base grease to the seal lip(s). Oil the bearings liberally when installing.

CAUTION :

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





CIRCLIPS

1. All circlips should be inspected carefully before reassembly. Always replace piston pin clips once they have been removed. Replace bent circlips. When installing a circlip ① make sure that the sharp edge ② is positioned opposite to the thrust ③ it receives. See the sectional view.

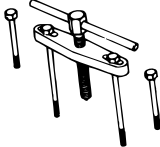
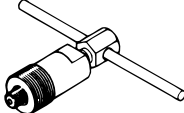
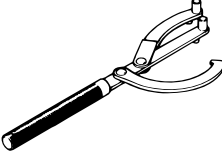
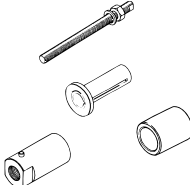
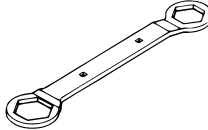

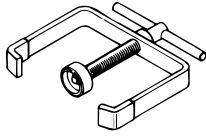
④ Shaft

EB102000

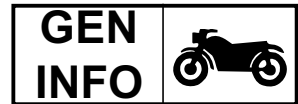
SPECIAL TOOLS

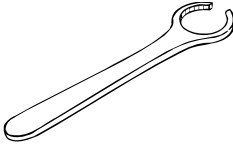
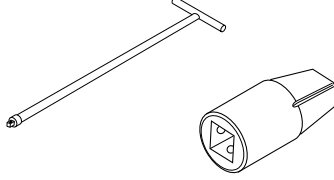
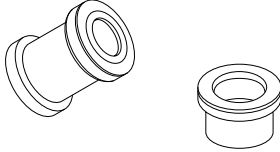

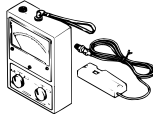
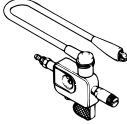
The following special tools are necessary for complete and accurate tune-up and assembly. Use only the appropriate special tools; this will help prevent damage caused by the use of inappropriate tools or improvised techniques.

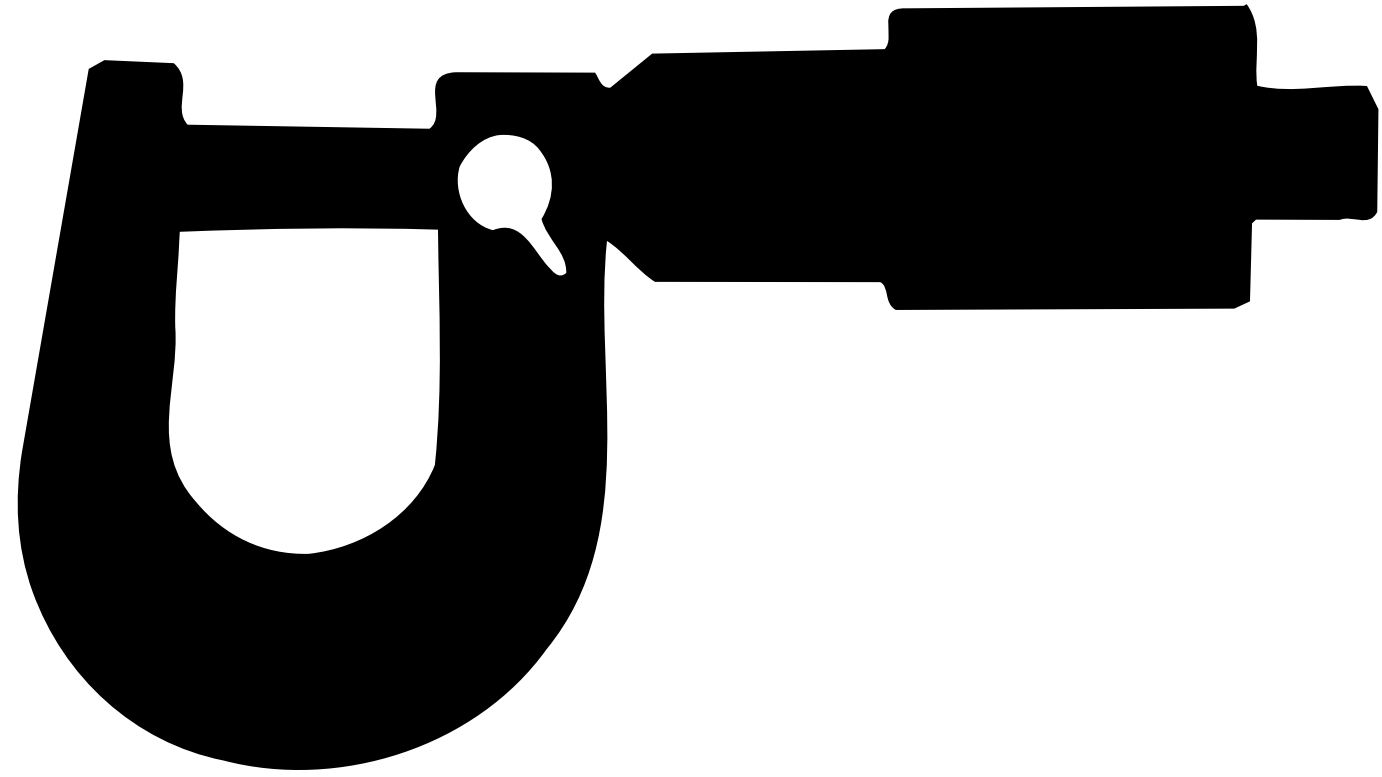
When placing an order, refer to the list provided below to avoid any mistakes.

Tool N°	Tool name/usage	Illustration
90890-01135	<p>Crankcase separating tool</p> <p>This tool is used to separate the crankcase and remove the crankshaft.</p>	
90890-01189	<p>Flywheel puller</p> <p>This tool is used to remove the flywheel magneto.</p>	
90890-01235	<p>Rotor holding tool</p> <p>This tool is used to remove the flywheel magneto.</p>	
<p>90890-01274 90890-01275 90890-01277 90890-01411</p>	<p>Crankshaft installer set.</p> <p>These tools are used to install the crankshaft.</p>	
90890-01348	<p>Locknut wrench</p> <p>This tool is used when removing or installing the secondary sheave nut.</p>	
90890-01701	<p>Sheave holder</p> <p>This tool is used to hold the secondary sheave when removing or installing the nut.</p>	
90890-01337	<p>Clutch spring holder.</p> <p>This tool is used for compressing the spring of the secondary sheave when removing the nut.</p>	

SPECIAL TOOLS



Tool N°	Tool name/usage	Illustration
9079Q-02218	<p>Ring nut wrench.</p> <p>This tool is used to loosen and tighten the steering ring nut.</p>	
90890-01326 90890-1294	<p>T-handle Damper rod holder</p> <p>These tools are used for holding the damper rod holder when removing or installing the damper rod holder.</p>	
90890-01184 90890-01186	<p>Fork seal driver weight. Fork seal driver attachment (ø27)</p> <p>These tools are used when installing the fork seals.</p>	
90890-03112	<p>Pocket Tester</p> <p>This instrument is invaluable for checking the electrical system.</p>	
90890-03113	<p>Engine tachometer.</p> <p>This tool is needed for detecting the engine rpm.</p>	
90890-06754	<p>Ignition checker.</p> <p>This instrument is necessary for checking the ignition system components.</p>	



SPEC

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CHAPTER 2. SPECIFICATIONS

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CABLE ROUTING	2-8



SPECIFICATIONS

GENERAL SPECIFICATIONS

Model	YQ50
Dimensions:	
Overall length	1.743 mm
Overall width	690 mm
Overall height	1.170mm
Seat height	828 mm
Wheelbase	1.256 mm
Minimum ground clearance	185 mm
Basic weight:	
With oil and full fuel tank	97 kg
Minimum turning radius :	1.800 mm
Engine:	
Type	Liquid-cooled 2-stroke, gasoline torque induction.
Cylinder arrangement	Single cylinder, horizontal
Displacement	49 cm ³
Bore x stroke	40 x 39.2 mm
Compression ratio	7.9 : 1 (F)(B)(P)(E)(I) 8 : 1 (D)(NL)(CHE)
Starting system	Electric and kick starter
Lubrication system:	Separate lubrication (Yamaha Autolube)
Oil type or grade:	
Engine oil:	Semi-synthetic, in accordance with the API TC TSC 3 Standard.
Transmission oil	SAE 10W30 type SE motor oil
Oil capacity:	
Transmission oil:	
Periodic oil change	0.11 L
Total amount	0.13 L
Radiator capacity	
Total amount (Including all routes)	1.2 L
Air filter:	Wet type element
Fuel:	
Type	Regular unleaded gasoline with a research octane number of 91 or higher.
Tank capacity	7.0 L

GENERAL SPECIFICATIONS

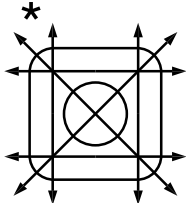
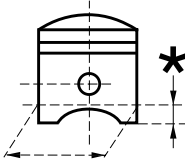
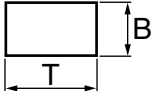
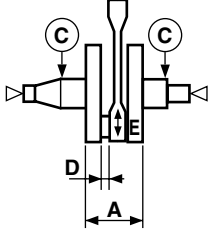
SPEC



Model	YQ50																											
Carburetor: Type/Manufacturer	PHBN12HS / DELL'ORTO																											
Spark plug: Type/Manufacturer Gap	BR8HS/NGK 0.5 ~ 0.7 mm																											
Clutch type:	Dry, centrifugal automatic																											
Transmission: Primary reduction system Primary reduction ratio Secondary reduction system Secondary reduction ratio Transmission Operation	Helical gear 52/13 (4.000) Spur gear 43/14 (3.071) V-belt Automatic																											
Chassis: Frame type Caster angle Trail	Steel tube underbone 27° 90 mm																											
Tire: Type Size Manufacturer/type Tire pressure (cold tire)	<table style="width: 100%; border: none;"> <tr> <td style="width: 30%;"></td> <td style="width: 15%; text-align: center;">Front</td> <td style="width: 55%;">Tubeless</td> </tr> <tr> <td></td> <td style="text-align: center;">Rear</td> <td>130/60-13</td> </tr> <tr> <td></td> <td style="text-align: center;">Front</td> <td>140/60-13</td> </tr> <tr> <td></td> <td style="text-align: center;">Rear</td> <td>PIRELLI / SL36</td> </tr> <tr> <td></td> <td style="text-align: center;">Rear</td> <td>MICHELIN / BOPPER</td> </tr> <tr> <td></td> <td style="text-align: center;">Front</td> <td>PIRELLI / SL36</td> </tr> <tr> <td></td> <td style="text-align: center;">Rear</td> <td>MICHELIN / BOPPER</td> </tr> <tr> <td></td> <td style="text-align: center;">Front</td> <td>150 kPa (1.50 kg/cm²)</td> </tr> <tr> <td></td> <td style="text-align: center;">Rear</td> <td>150 kPa (1.50 kg/cm²)</td> </tr> </table>		Front	Tubeless		Rear	130/60-13		Front	140/60-13		Rear	PIRELLI / SL36		Rear	MICHELIN / BOPPER		Front	PIRELLI / SL36		Rear	MICHELIN / BOPPER		Front	150 kPa (1.50 kg/cm ²)		Rear	150 kPa (1.50 kg/cm ²)
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	Rear	150 kPa (1.50 kg/cm ²)																										
Brake: Front brake type Operation Rear brake type Operation	Disc brake Right hand operation Disk brake Left hand operation																											
Suspension: Front Rear	Telescopic fork Unit swing																											
Shock absorber: Front Rear	Coil spring/Oil damper Coil spring/Oil damper																											
Wheel travel: Front wheel travel Rear wheel travel	80 mm 72 mm																											

MAINTENANCE SPECIFICATIONS

ENGINE

Model	YQ50
<p>Cylinder head: Warp limit</p> 	<p>0.02 mm * Lines indicate straight edge measurements.</p>
<p>Cylinder: Bore size <Limit> Taper limit</p>	<p>39.993 ~ 40.012 mm <40.1 mm> 0.05 mm</p>
<p>Piston: Piston size Measuring point *</p>  <p>Piston clearance <Limit> Piston pin bore size</p>	<p>39.957 ~ 39.977 mm 5 mm 0.029 ~ 0.042 mm <0.1 mm> 10.004 ~ 10.019 mm</p>
<p>Piston pin: Outside diameter</p>	<p>9.996 ~ 10.000 mm</p>
<p>Piston ring: Sectional sketch (BxT)/Type: Top ring 2nd ring End gap (installed): Top ring 2nd ring Side clearance (installed): Top ring 2nd ring</p> 	<p>1.5 ~ 1.8 mm 1.5 ~ 1.8 mm 0.15 ~ 0.35 mm 0.15 ~ 0.35 mm 0.03 ~ 0.05 mm 0.03 ~ 0.05 mm</p>
<p>Crankshaft:</p>  <p>Crank width "A" Runout limit "C" Connecting rod big end side clearance "D" Big end radial clearance "E"</p>	<p>37.90 ~ 37.95 mm 0.03 mm 0.2 ~ 0.5 mm 0.004 ~ 0.017 mm</p>

MAINTENANCE SPECIFICATIONS

SPEC



Model	YQ50
Automatic centrifugal clutch: Clutch shoe thickness <Wear limit> Clutch shoe spring free length Clutch housing inside diameter <Wear limit> Clutch-in revolution Clutch-stall revolution	2.0 mm <1.0 mm> 29.9 mm 107.0 mm 107.4 mm 3.950 ~ 4.450 r.p.m. 6.900 ~ 7.700 r.p.m.
V-belt: Width <Wear limit>	16.5 mm <15.7 mm>
Transmission: Main axle runout limit Drive axle runout limit	0.08 mm 0.08 mm
Kick starter: Type Kick clip tension	Ratchet type 0.15 ~ 0.25 kg
Carburetor: I.D mark Main jet (M.J) Main air jet (M.A.J) Jet needle (J.N) Needle jet (N.J) Cutaway (C.A) Pilot jet (P.J) Bypass 1 (B.P.1) Air screw (A.S) Valve seat size (V.S) Starter jet (G.S.1) Engine idle speed	DELLORTO PHBN 12 HS #86 (F)(B)(P)(I)(E) #85 (CHE) #74 (NL) ø1.5 A21 - 2/5 (F)(B)(P)(I)(E) A12 - 3/5 (D)(CHE) A20 - 3/5 (NL) 210 GA (F)(B)(P)(I)(E)(D) 209 GA (CHE) 208 GA (NL) 3.0 4.0 (CHE) #36 #34 (CHE) 0.8 1 3/8 ± 1/8 (F)(B)(P)(I)(E) 1 3/4 ± 1/8 (D) 1 5/8 ± 1/8 (NL) 2 ± 1/8 (CHE) 1.2 #45 1600 ~ 2000 rpm
Reed valve: Valve stopper height Reed valve clearance	6.0 ~ 6.4 mm Less than 0.2 mm
Lubrication system: Stroke Bore	Autolube pump 2.62 mm (F)(B)(P)(I)(E) 2.5 mm (D)(NL)(CHE) 0.5 mm