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NOTICE

This manual was written by the Yamaha Motor Company primarily for use by Yamaha dealers and their qualified mechanics. It is not possible to put an entire mechanic's education into one manual, so it is assumed that persons using this book to perform maintenance and repairs on Yamaha motorcycle has a basic understanding of the mechanical concepts and procedures inherent in motorcycle repair technology. Without such knowledge, attempted repairs or service to this model may render it unfit to use and/or unsafe.

Yamaha Motor Company, Ltd. is continually striving to improve all models manufactured by Yamaha. Modifications and significant changes in specifications or procedures will be forwarded to all Authorized Yamaha dealers and will, where applicable, appear in future editions of this manual.

NOTE:

PARTICULARLY IMPORTANT INFORMATION

This material distinguished by the following notation.



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.

CAUTION:

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.
- 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.

② CLUTCH

① ENG

④

CLUTCH

ENG

③

REMOVING THE CLUTCH

1. Straighten the lock washer tab.
2. Loosen:
 - clutch boss nut ①

NOTE:

While holding the clutch boss ② with the universal clutch holder, loosen the clutch boss nut.

Universal clutch holder ③
90890-04086

3. Remove:
 - clutch boss nut ①
 - lock washer ②
 - clutch boss ③
 - thrust washer
 - spacer ⑤
 - bearing ⑥
 - clutch housing ⑦

NOTE:

Insert two 6 mm bolts ⑧ into the spacer and then remove the spacer by pulling on the bolts.

⑧

CHECKING THE FRICTION PLATES

The following procedure applies to all of the friction plates.

1. Check:
 - friction plate
 - Damage/wear → Replace the friction plates as a set.
2. Measure:
 - friction plate thickness
 - Out of specification → Replace the friction plates as a set.

NOTE:

Measure the friction plate at four places.

Friction plate thickness
2.9 – 3.1 mm
◀Limit>: 2.8 mm







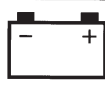















⑦

Order	Job/Part	Qty	Remarks
14	Clutch boss	1	
15	Stopper ring	1	
16	Clutch plate	1	
17	Clutch spring plate	1	
18	Clutch spring plate seat	1	
19	Friction plates (narrow)	1	Refer to "REMOVING/INSTALLING THE CLUTCH".
20	Thrust washer	1	
21	Spacer	1	
22	Bearing	1	
23	Clutch housing	1	

For installation, reverse the removal procedure.

4-34

4-35

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

SYMBOLS

The following symbols are not relevant to every vehicle.

Symbols ① to ⑧ indicate the subject of each chapter.

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

Symbols ⑨ to ⑯ indicate the following.

- ⑨ Serviceable with engine mounted
- ⑩ Filling fluid
- ⑪ Lubricant
- ⑫ Special tool
- ⑬ Tightening torque
- ⑭ Wear limit, clearance
- ⑮ Engine speed
- ⑯ Electrical data








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

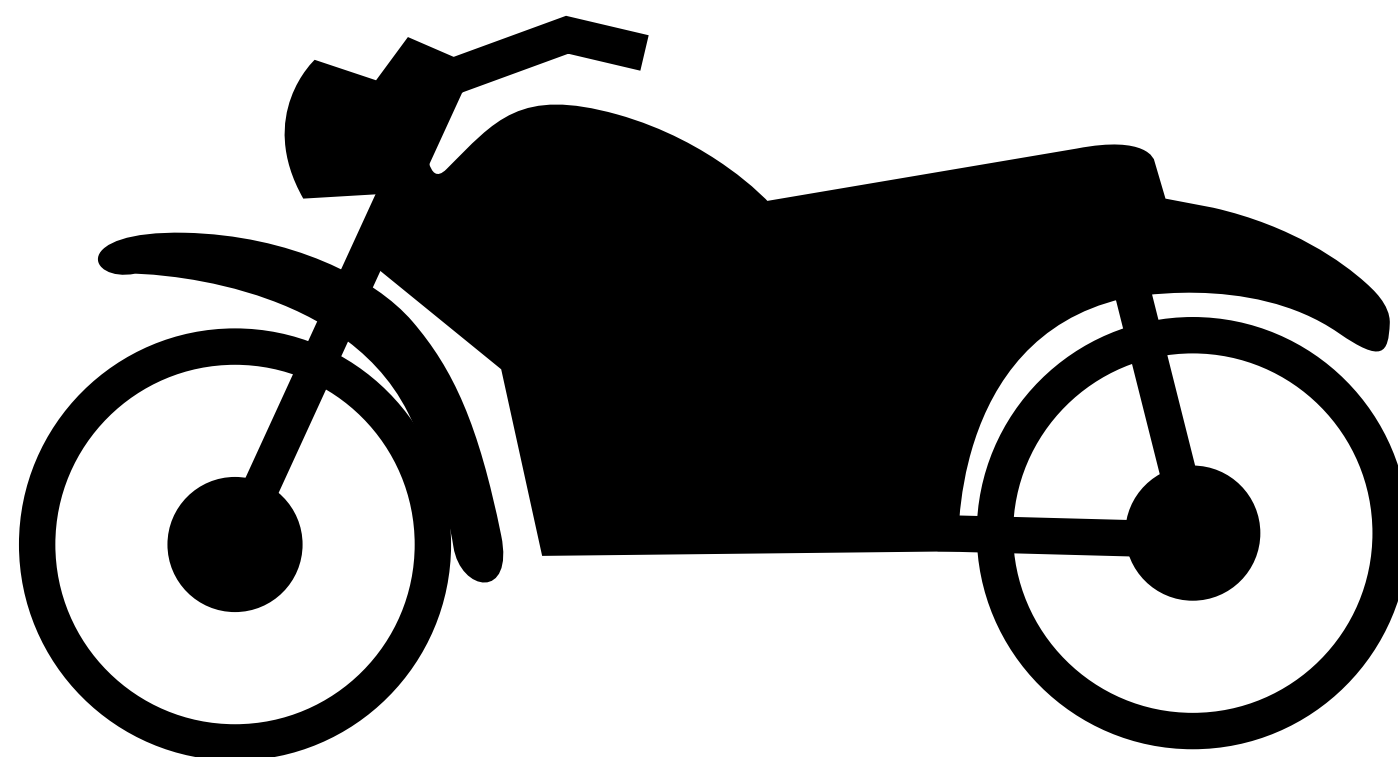
- ⑰ Engine oil
- ⑱ Gear oil
- ⑲ Molybdenum disulfide oil
- ⑳ Wheel bearing grease
- ㉑ Lithium soap base grease
- ㉒ Molybdenum disulfide grease

Symbols ㉓ to ㉔ in the exploded diagrams indicate the following:

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

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TROUBLESHOOTING	?
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**GEN
INFO**

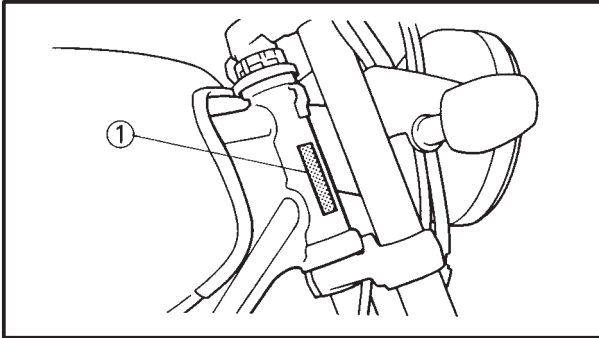
1

CHAPTER 1. GENERAL INFORMATION

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MOTORCYCLE IDENTIFICATION

GEN
INFO



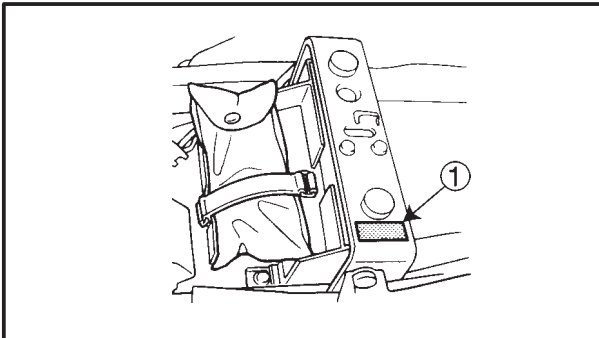
EAS00014

GENERAL INFORMATION MOTORCYCLE IDENTIFICATION

EAS00017

VEHICLE IDENTIFICATION NUMBER (For E)

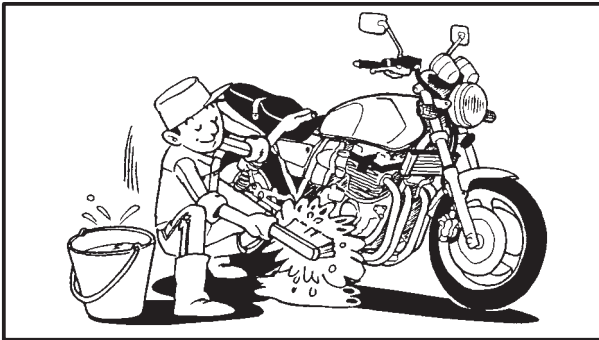
The vehicle identification number ① is stamped into the right side of the steering head.



EAS00018

MODEL CODE

The model code label ① is affixed to the frame. This information will be needed to order spare parts.



EAS00020

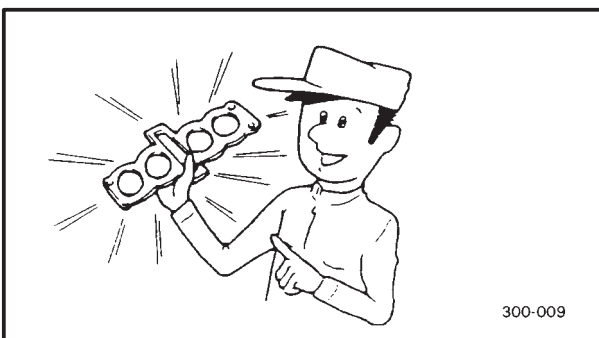
IMPORTANT INFORMATION PREPARATION FOR REMOVAL AND DIS- ASSEMBLY

1. Before removal and disassembly, remove all dirt, mud, dust, and foreign material.
2. Use only the proper tools and cleaning equipment.
Refer to "SPECIAL TOOLS".
3. When disassembling, 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 disassembly, clean all of the 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.

EAS00021

REPLACEMENT PARTS

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.

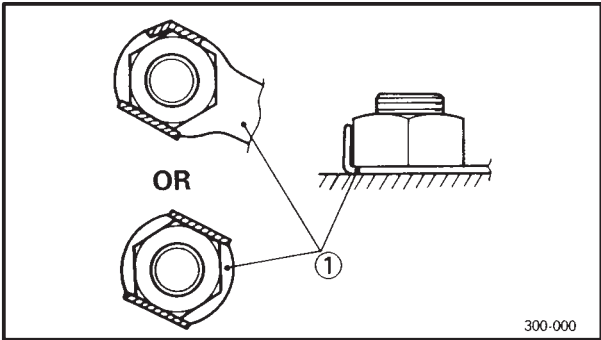


EAS00022

GASKETS, OIL SEALS AND O-RINGS

1. When overhauling the engine, replace all gaskets, seals and O-rings. All gasket surfaces, oil seal lips and O-rings must be cleaned.
2. During reassembly, properly oil all mating parts and bearings and lubricate the oil seal lips with grease.

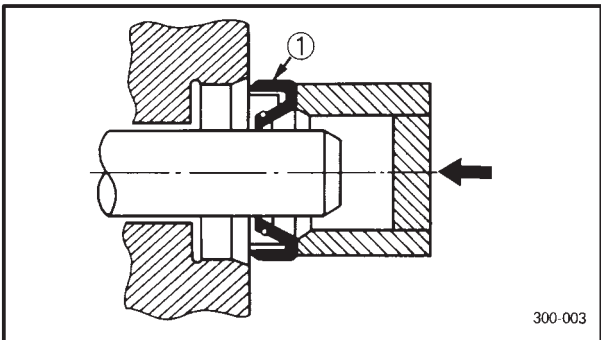
IMPORTANT INFORMATION



EAS00023

LOCK WASHERS/PLATES AND COTTER PINS

After removal, replace all lock washers/plates ① and cotter pins. After the bolt or nut has been tightened to specification, bend the lock washer tabs and the cotter pin ends along a flat of the bolt or nut.



EAS00024

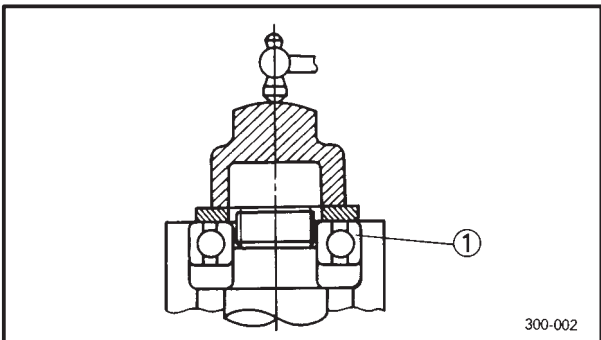
BEARINGS AND OIL SEALS

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

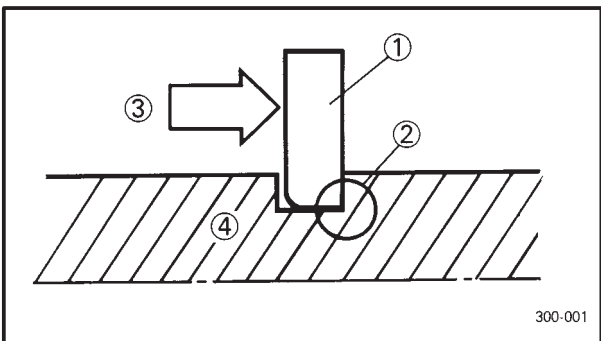
① Oil seal

CAUTION:

Do not spin the bearing with compressed air because this will damage the bearing surfaces.



① Bearing



EAS00025

CIRCLIPS

Before reassembly, check all circlips carefully and replace damaged or distorted circlips. Always replace piston pin clips after one use. When installing a circlip ①, make sure that the sharp-edged corner ② is positioned opposite the thrust ③ that the circlip receives.

④ Shaft

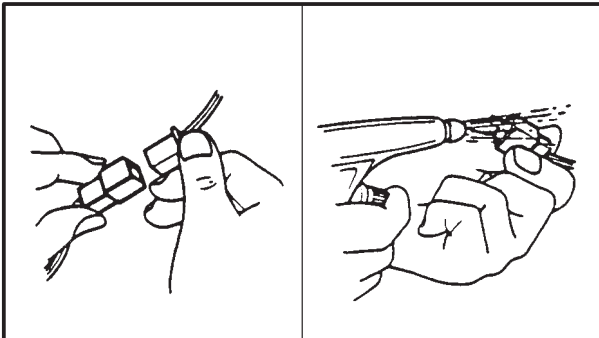
EAS00026

CHECKING THE CONNECTIONS

Check the leads, couplers, and connectors for stains, rust, moisture, etc.

1. Disconnect:

- Lead
- Coupler
- Connector

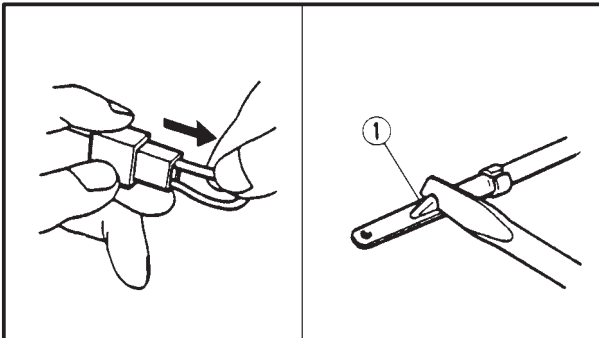


2. Check:

- Lead
- Coupler
- Connector

Moisture → Dry with an air blower.

Rust/stains → Connect and disconnect several times.



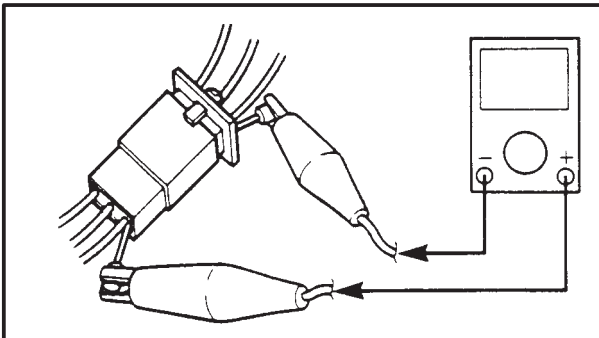
3. Check:

- All connections

Loose connection → Connect properly.

NOTE: _____

If the pin ① on the terminal is flattened, bend it up.



4. Connect:

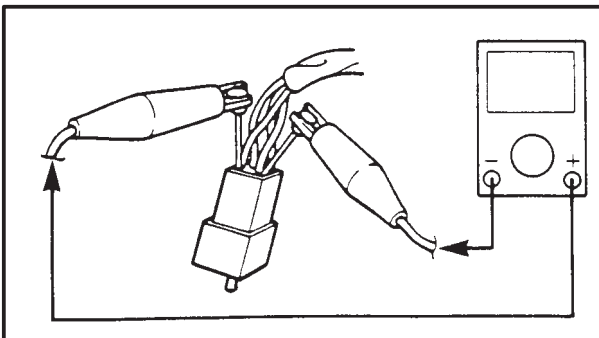
- Lead
- Coupler
- Connector

NOTE: _____

Make sure that all connections are tight.

5. Check:

- Continuity
- (with a pocket tester)



	Pocket tester 90890-03112
---	-------------------------------------

NOTE: _____

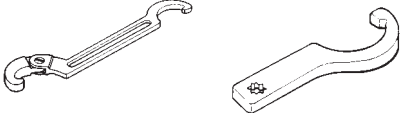
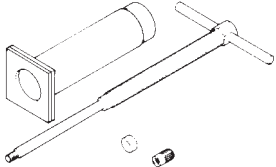


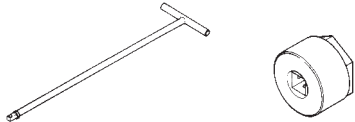
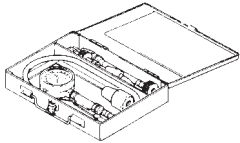
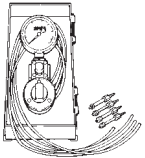
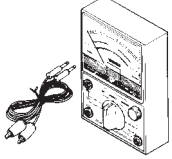
- If there is no continuity, clean the terminals.
 - When checking the wire harness, perform steps (1) to (3).
 - As a quick remedy, use a contact revitalizer available at most part stores.
- _____

EB104000

SPECIAL TOOLS

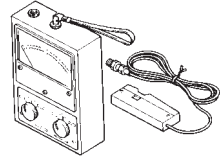
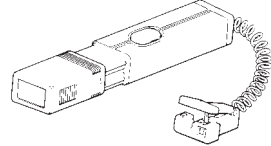
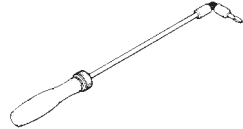
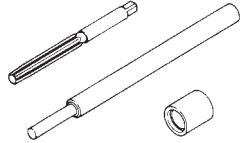
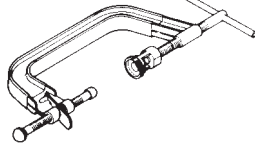

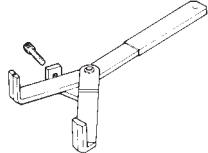

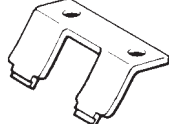
The following special tools are necessary for complete and accurate tune-up and assembly. Use only the appropriate special tools as this will help prevent damage caused by the use of inappropriate tools or improvised techniques.

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

Tool No.	Tool name/Function	Illustration
90890-01268 90890-01403	Exhaust & steering nut wrench Ring nut wrench These tools are used to loosen and tighten the steering ring nut.	
90890-01304	Piston pin puller This tool is used to remove the piston pins.	
90890-01312	Fuel level gauge This tool is used to measure the fuel level in the float chamber.	
90890-01367 90890-01374	Fork seal driver weight Fork seal driver attachment (ø43) These tools are used when installing the fork seal.	
90890-01326 90890-01327	T-handle Damper rod holder These tools are used to hold the damper rod assembly when loosening or tightening the damper rod assembly bolt.	
90890-03081 90890-04082	Compression gauge Adapter These tools are used to measure engine compression.	
90890-03094	Vacuum gauge This guide is used to synchronize the carburetors.	
90890-03112	Pocket tester This tool is used to check the electrical system.	

SPECIAL TOOLS

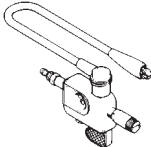
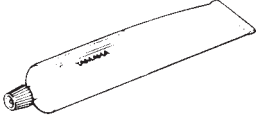


Tool No.	Tool name/Function	Illustration
90890-03113	<p>Engine tachometer</p> <p>This tool is used to check engine speed.</p>	
90890-03141	<p>Timing light</p> <p>This tool is used to check the ignition timing.</p>	
90890-03158	<p>Carburetor angle driver</p> <p>This tool is used to turn the pilot screw when adjusting the engine idling speed.</p>	
90890-04016	<p>Valve guide reamer, remover and installer (5.5 mm)</p> <p>These tools are used to rebore, remove and install the valve guide.</p>	
90890-04019	<p>Valve spring compressor</p> <p>This tool is used to remove or install the valve assemblies.</p>	
90890-03153 90890-03124	<p>Oil pressure gauge Oil pressure adaptor B</p> <p>These tools are used to measure the engine oil pressure.</p>	
90890-04086	<p>Clutch holding tool</p> <p>This tool is used to hold the clutch boss when removing or installing the clutch boss nut.</p>	
90890-04101	<p>Valve lapper</p> <p>This tool is used for removing and installing the valve lifter and for lapping the valve.</p>	
90890-04110	<p>Tappet adjusting tool</p> <p>This tool is necessary to replace valve adjusting pads.</p>	

SPECIAL TOOLS

GEN
INFO



Tool No.	Tool name/Function	Illustration
90890-06754	Ignition checker This tool is used to check the ignition system components.	 A technical drawing of an ignition checker tool, which consists of a long, thin metal rod with a hook at one end and a specialized probe tip at the other.
90890-85505	Yamaha bond No. 1215 This bond is used to seal two mating surfaces (e.g., crankcase mating surfaces).	 A technical drawing of a tube of Yamaha bond No. 1215, showing its cylindrical shape and a small nozzle at one end.



SPEC

2

CHAPTER 2. SPECIFICATIONS

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SPECIFICATIONS

GENERAL SPECIFICATIONS

Model	XJR1300(L)
Model code:	5EA2/5EA3/5EA4
Dimensions:	
Overall length	2175 mm (GB) (D) (NL) (B) (F) (E) (P) (I) (GR) (SF) (AUS)
Overall width	2250 mm (N) (SF) (G) (A)
Overall height	775 mm
Seat height	1115 mm
Wheelbase	775 mm
Minimum ground clearance	1500 mm
Minimum turning radius	120 mm
Minimum turning radius	2800 mm
Basic weight:	
With oil and full fuel tank	253 kg
Engine:	
Engine type	Air-cooled 4-stroke, DOHC
Cylinder arrangement	Forward-inclined parallel 4-cylinder
Displacement	1250 cm ³
Bore × stroke	79.0 × 63.8 mm
Compression ratio	9.7: 1
Compression pressure (STD)	1050 kPa (10.5 kg/cm ² , 10.5 bar) at 400 r/min
Starting system	Electric starter
Lubrication system:	Wet sump
Oil type or grade:	SE or higher grade
Engine oil	
Engine oil	
Periodic oil change	3.0 L
With oil filter replacement	3.35 L
Total amount	4.2 L
Oil cooler capacity (including all routes)	0.2 L
Air filter:	Dry type element
Fuel:	
Type	Regular unleaded gasoline
Fuel tank capacity	21 L
Fuel reserve amount	4.5 L

GENERAL SPECIFICATIONS

SPEC



Model	XJR1300(L)
Carburetor: Type/quantity Manufacturer	BS36/4 MIKUNI
Spark plug: Type × quantity Manufacturer Spark plug gap	DPR8EA-9/X24EPR-U9 × 4 NGK/DENSO 0.8 ~ 0.9 mm
Clutch type:	Wet, multiple-disc
Transmission: Primary reduction system Primary reduction ratio Secondary reduction system Secondary reduction ratio Transmission type Operation Gear ratio 1st 2nd 3rd 4th 5th	Spur gear 98/56 (1.750) Chain drive 38/17 (2.235) Constant mesh 5-speed Left foot operation 40/14 (2.857) 36/18 (2.000) 33/21 (1.571) 31/24 (1.292) 29/26 (1.115)
Chassis: Frame type Caster angle Trail	Double cradle 25.5° 100 mm
Tire: Type Size front rear Manufacturer front rear Type front rear	Tubeless 120/70ZR17 (58W) 180/55ZR17 (73W) MICHELIN/DUNLOP/BRIDGESTONE MICHELIN/DUNLOP/BRIDGESTONE MACADAM 90X/D207F/BT57F MACADAM 90X/D207/BT57R
Tire pressure (cold tire): Maximum load-except motorcycle Loading condition A * front rear Loading condition B * front rear High-speed riding front rear	207 kg 0 ~ 90 kg 250 kPa (2.5 kg/cm ² , 2.5 bar) 250 kPa (2.5 kg/cm ² , 2.5 bar) 90 ~ 207 kg 250 kPa (2.5 kg/cm ² , 2.5 bar) 290 kPa (2.9 kg/cm ² , 2.9 bar) 250 kPa (2.5 kg/cm ² , 2.5 bar) 290 kPa (2.9 kg/cm ² , 2.9 bar)

*Load is the total weight of cargo, rider, passenger, and accessories.

GENERAL SPECIFICATIONS

SPEC



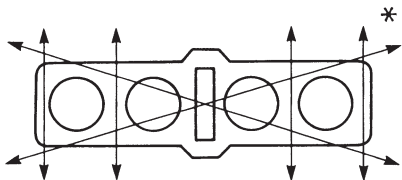






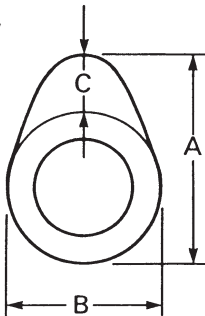




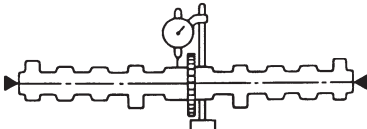



Model	XJR1300(L)
Brake: Front brake type operation Rear brake type operation	Dual disc brake Right hand operation Single disc brake Right foot operation
Suspension: Front suspension Rear suspension	Telescopic fork Swingarm
Shock absorber: Front shock absorber Rear shock absorber	Coil spring/Oil Damper Coil spring/Gas-oil damper
Wheel travel: Front wheel travel Rear wheel travel	130 mm 110 mm
Electrical: Ignition system Generator system Battery type Battery capacity	T.C.I. (Digital) A.C. generator GT14B-4 12 V 12AH
Headlight type:	Halogen bulb
Bulb wattage × quantity: Headlight Auxiliary light Tail/brake light Flasher light Meter light Neutral indicator light High beam indicator light Oil level indicator light Turn indicator light	12 V 60 W/55 W × 1 12 V 4 W × 1 12 V 5 W/21 W × 2 12 V 21 W × 4 12 V 1.7 W × 4 12 V 1.7 W × 1 12 V 3.4 W × 1 12 V 1.7 W × 1 12 V 1.7 W × 2

MAINTENANCE SPECIFICATIONS

SPEC



MAINTENANCE SPECIFICATIONS
ENGINE

Model	Standard	Limit
Cylinder head: Warp limit 		0.1 mm
Cylinder: Bore size Taper limit Out of round limit Wear limit	79.00 × 79.01 mm    	 0.05 mm 0.05 mm 79.1 mm
Camshaft: Drive method Cam cap inside diameter Camshaft outside diameter Shaft-to-cap clearance Cam dimensions 	Chain drive (Center) 25.000 × 25.021 mm 24.967 × 24.980 mm 0.020 × 0.054 mm	   
Intake "A" "B" "C" Exhaust "A" "B" "C" Camshaft runout limit 	35.95 × 36.05 mm 28.248 × 28.348 mm 7.95 × 8.05 mm 35.95 × 36.05 mm 28.248 × 28.348 mm 7.95 × 8.05 mm 	35.85 mm 28.15 mm  35.85 mm 28.15 mm  0.03 mm