



**YAMAHA**

**2021**

# **SERVICE MANUAL**

**MT-09**  
**MT-09SP**

**MTN890**  
**MTN890D**

**B7N-28197-E0**



## IMPORTANT

This manual was produced by the Yamaha Motor Company, Ltd. 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. Please refer to "BASIC INFORMATION" (separate volume, Y0A-28197-E0\*) for basic instructions that must be observed during servicing. Repair and maintenance work attempted by anyone without this knowledge is likely to render the vehicle unsafe and unfit for use.



Yamaha Motor Company, Ltd. 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.

### TIP

- \* If the contents of the manual are revised, the last digit of the manual number will be increased by one.
- Designs and specifications are subject to change without notice.

## IMPORTANT MANUAL INFORMATION

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

	<b>This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.</b>
 <b>WARNING</b>	<b>A WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.</b>
<b>NOTICE</b>	<b>A NOTICE indicates special precautions that must be taken to avoid damage to the vehicle or other property.</b>
<b>TIP</b>	<b>A TIP provides key information to make procedures easier or clearer.</b>

**MTN890/MTN890D  
SERVICE MANUAL  
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## 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.

- The manual is divided into chapters and each chapter is divided into sections. The current section title “1” is shown at the top of each page.
- Sub-section titles “2” appear in smaller print than the section title.
- To help identify parts and clarify procedure steps, there are exploded diagrams “3” at the start of each removal and disassembly section.
- Numbers “4” are given in the order of the jobs in the exploded diagram. A number indicates a disassembly step.
- Symbols “5” indicate parts to be lubricated or replaced.
- Refer to “SYMBOLS”.
- A job instruction chart “6” accompanies the exploded diagram, providing the order of jobs, names of parts, notes in jobs, etc. This step explains removal and disassembly procedure only. For installation and assembly procedure, reverse the steps.
- Jobs “7” requiring more information (such as special tools and technical data) are described sequentially.

**1**  
**CLUTCH**

**CLUTCH**

Removing the clutch cover

**3**

**4**

**5**

**6**

Order	Job/Parts to remove	Q'ty	Remarks
	Front side cowling assembly/Bottom cowling		Refer to "GENERAL CHASSIS (5)" on page 4-8.
	Engine oil		Drain. Refer to "CHANGING THE ENGINE OIL" on page 3-25.
	Coolant		Drain. Refer to "CHANGING THE COOLANT" on page 3-29.
1	Water pump breather hose	1	Disconnect.
2	Clutch cable	1	Disconnect.
3	Pull lever	1	
4	Pull lever spring	1	
5	Clutch cover	1	
6	Clutch cover gasket	1	
7	Dowel pin	2	

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**CLUTCH**

**REMOVING THE CLUTCH**

1. Remove:

- Oil strainer
- Refer to "OIL PUMP" on page 5-59.
- Water pump
- Refer to "WATER PUMP" on page 6-12.
- Friction plates
- Clutch plates

**TIP**

Be sure to mark the friction plates and clutch plates or note the position of each part so that they are installed in their original positions.

2. Straighten the clutch boss nut rib "a".

3. Loosen:

- Clutch boss nut "1"

**TIP**

While holding the clutch boss "2" with the universal clutch holder "3", loosen the clutch boss nut.

Universal clutch holder  
90899-04089

Universal clutch holder  
YM-91042

4. Remove:

- Spacer "1"
- Bearing
- Clutch housing "2"
- Oil pump drive chain

**TIP**

Remove the spacer and bearing from the main axle, then remove the oil pump drive chain from the oil pump driven sprocket, and then remove the clutch housing and oil pump drive chain from the main axle.

**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.

**TIP**

Measure the friction plate at four places.

Friction plate thickness  
2.92-3.08 mm (0.115-0.121 in)

Wear limit  
2.80 mm (0.110 in)

**CHECKING THE CLUTCH PLATES**

The following procedure applies to all of the clutch plates.





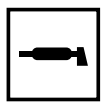









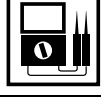



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## SYMBOLS

The following symbols are used in this manual for easier understanding.

### TIP

The following symbols are not relevant to every vehicle.

SYMBOL	DEFINITION	SYMBOL	DEFINITION
	Serviceable with engine mounted		Gear oil
	Filling fluid		Molybdenum disulfide oil
	Lubricant		Brake fluid
	Special tool		Wheel bearing grease
	Tightening torque		Lithium-soap-based grease
	Wear limit, clearance		Molybdenum disulfide grease
	Engine speed		Silicone grease
	Electrical data		Apply locking agent (LOCTITE®).
	Engine oil		Replace the part with a new one.