



YAMAHA

2021

SERVICE MANUAL

X-MAX 300

XMAX ABS CZD300-A

B5X-F8197-EZ

IMPORTANT

This manual was produced by the PT Yamaha Indonesia Motor Manufacturing 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.





PT Yamaha Indonesia Motor Manufacturing 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.

	<p>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.</p>
	<p>A WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.</p>
	<p>A NOTICE indicates special precautions that must be taken to avoid damage to the vehicle or other property.</p>
	<p>A TIP provides key information to make procedures easier or clearer.</p>

**XMAX ABS CZD300-A
 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

V-BELT AUTOMATIC TRANSMISSION

REMOVING THE V-BELT CASE

3

4

5

6

Order	Job/Parts to remove	Q'ty	Remarks
	Center cover		Refer to "GENERAL CHASSIS (1)" on page 4-1.
	Side cover assembly (right)		Refer to "GENERAL CHASSIS (2)" on page 4-5.
	Air filter case		Refer to "AIR FILTER CASE" on page 1-8.
1	V-belt case air filter element cover	1	
2	V-belt case air filter element	1	
3	V-belt case air filter element support	1	
4	V-belt case air duct	1	
5	V-belt case	1	

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V-BELT AUTOMATIC TRANSMISSION

REMOVING THE PRIMARY SHEAVE

1. Remove:

- Primary fixed sheave nut "1"
- Conical spring washer
- Washer
- Primary fixed sheave "2"
- V-belt

TIP
While holding the primary fixed sheave with the rotor holding tool "3", loosen the primary fixed sheave nut.

2. Loosen:

- Secondary sheave nut "1"

NOTICE
Do not remove the secondary sheave nut at this stage.

TIP
While holding the secondary sheave with the rotor holding tool "2", loosen the secondary sheave nut one full turn with the socket wrench "3".

Tools:

- Rotor holding tool 90890-01235, Universal magneto and rotor holder YU-01235
- Rotor holding tool 90890-04166, VM-04166, Socket wrench (39 mm) 90890-01493

REMOVING THE SECONDARY SHEAVE

1. Remove:

- Clutch housing nut "1"
- Clutch housing "2"

TIP
While holding the clutch housing with the rotor holding tool "3", loosen the clutch housing nut.

Tools:

- Rotor holding tool 90890-04166, YM-04166

DISASSEMBLING THE SECONDARY SHEAVE

1. Remove:

- Secondary sheave nut "1"

TIP
Install the sheave spring compressor "2" and sheave fixed block "3" onto the secondary sheave as shown. Then, compress the spring, and remove the secondary sheave nut.

Tools:

- Sheave spring compressor 90890-04134, Sheave spring compressor YM-04134, Sheave fixed block 90890-04135, Sheave fixed bracket YM-04135

2

7

5-38

EAS20005

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.

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GENERAL INFORMATION

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IDENTIFICATION

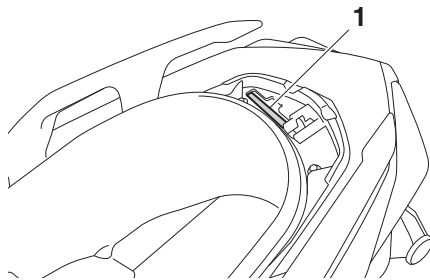
EAS20007

IDENTIFICATION

EAS30002

VEHICLE IDENTIFICATION NUMBER

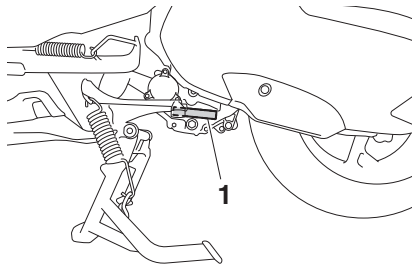
The vehicle identification number “1” is stamped into the frame.



EAS30004

ENGINE SERIAL NUMBER

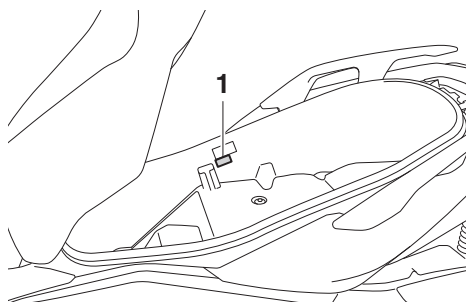
The engine serial number “1” is stamped into the crankcase.



EAS30003

MODEL LABEL

The model label “1” is affixed to the inside of the storage box.

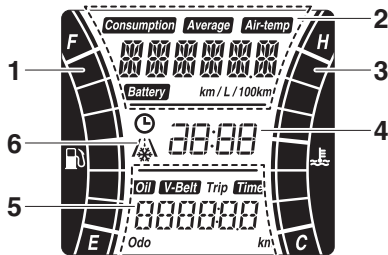



EAS20008

FEATURES

EAS30618

MULTI-FUNCTION DISPLAY



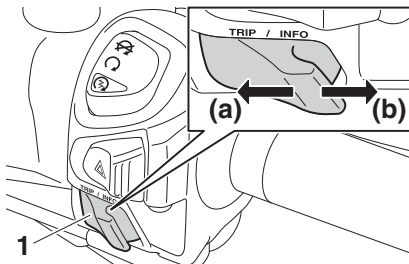
1. Fuel meter
2. Information display
3. Coolant temperature meter
4. Clock
5. Tripmeter display
6. Icy road warning indicator “”

EWA17650

WARNING

Be sure to stop the vehicle before making any setting changes to the multi-function meter unit. Changing settings while riding can distract the operator and increase the risk of an accident.

The “TRIP/INFO” switch is located on the right side of the handlebar. This switch allows you to control or change the settings of the multi-function meter unit. To use the “TRIP” switch, move the “TRIP/INFO” switch in direction (a). To use the “INFO” switch, move the “TRIP/INFO” switch in direction (b).

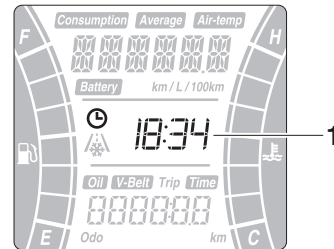


1. “TRIP/INFO” switch

The multi-function display is equipped with the following:

- clock
- fuel meter
- coolant temperature meter
- tripmeter display
- information display

Clock



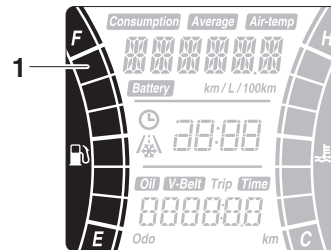
1. Clock

The clock uses a 24-hour time system.

To set the clock

1. Turn the main switch to “OFF”.
2. Push and hold the “TRIP” switch.
3. Turn the main switch to “ON” while pushing the “TRIP” switch, and then continue to push the “TRIP” switch for eight seconds. The hour digits will start flashing.
4. Use the “TRIP” switch to set the hours.
5. Push the “TRIP” switch for three seconds, and then release it. The minute digits will start flashing.
6. Use the “TRIP” switch to set the minutes.
7. Push the “TRIP” switch for three seconds, and then release it to start the clock.

Fuel meter



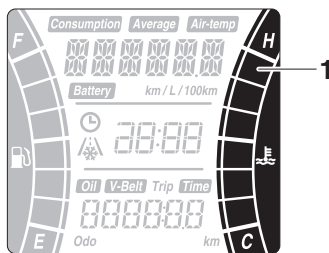
1. Fuel meter

The fuel meter indicates the amount of fuel in the fuel tank. The segments of the fuel meter disappear from “F” (full) towards “E” (empty) as the fuel level decreases. When the last segment of the fuel meter starts flashing, refuel as soon as possible.

TIP

- If a problem is detected in the fuel meter, the all segments will flash repeatedly. If this occurs, have a Yamaha dealer check the vehicle.
- When approximately 2.4 L of fuel remains in the fuel tank, the last segment of the fuel meter will start flashing. The display will automatically change to the fuel reserve tripmeter “F Trip” and start counting the distance traveled from that point.

Coolant temperature meter



1. Coolant temperature meter

The coolant temperature meter indicates the temperature of the coolant.

If the top segment flashes, stop the vehicle, then stop the engine, and let the engine cool.

ECA20730

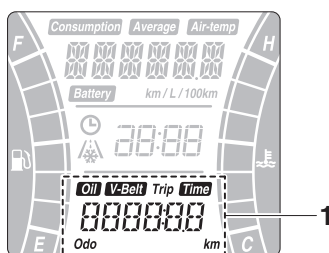
NOTICE

Do not continue to operate the engine if it is overheating.

TIP

- If a problem is detected in the coolant temperature meter, all segments will flash repeatedly. If this occurs, have a Yamaha dealer check the vehicle as soon as possible.
- The coolant temperature varies with changes in the weather and engine load.

Tripmeter display



1. Tripmeter display

The tripmeter display is equipped with the following:

- odometer
- tripmeter
- time tripmeter
- fuel reserve tripmeter
- oil change tripmeter
- V-belt replacement tripmeter

Push the “TRIP” switch to change the display between the odometer “Odo”, tripmeter “Trip”, time tripmeter “Trip Time”, oil change tripmeter “Oil Trip”, and V-belt replacement tripmeter “V-Belt Trip” in the following order:

Odo → Trip → Trip Time → Oil Trip → V-Belt Trip → Odo

TIP

When approximately 2.4 L of fuel remains in the fuel tank, the last segment of the fuel meter will start flashing. The display will automatically change to the fuel reserve tripmeter “F Trip” and start counting the distance traveled from that point.

Odometer “Odo” and tripmeter “Trip”

The odometer shows the total distance traveled by the vehicle.

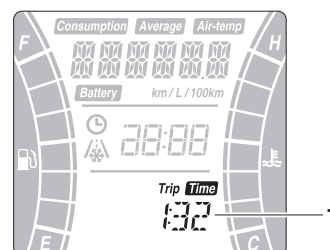
The tripmeter shows the distance traveled since it was last reset.

To reset the tripmeter, select it by pushing the “TRIP” switch, and then push the “TRIP” switch for three seconds.

TIP

- The odometer will lock at 999999.
- The tripmeter will reset and continue counting after 9999.9 is reached.

Time tripmeter “Time”



1. Time tripmeter

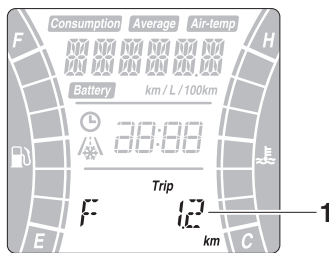
FEATURES

The time tripmeter displays the time that has elapsed while the main switch was in the “ON” position since it was last reset. The maximum time that can be shown is 99:59.

TIP

To reset the time tripmeter, select it by pushing the “TRIP” switch, and then push the “TRIP” switch for three seconds.

Fuel reserve tripmeter “F Trip”



1. Fuel reserve tripmeter

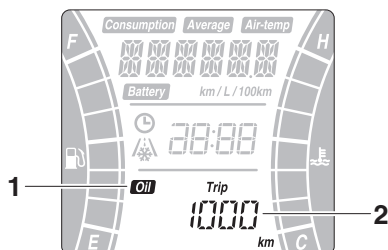
When approximately 2.4 L of fuel remains in the fuel tank, the last segment of the fuel meter will start flashing. The display will automatically change to the fuel reserve tripmeter “F Trip” and start counting the distance traveled from that point. In this case, push the “TRIP” switch to switch the display in the following order:

F Trip → Oil Trip → V-Belt Trip → Odo → Trip → Trip Time → F Trip

To reset the fuel reserve tripmeter, select it by pushing the “TRIP” switch, and then push the “TRIP” switch for three seconds.

The fuel reserve tripmeter will reset automatically and disappear after refueling and traveling 5 km.

Oil change tripmeter “Oil Trip”



1. Oil change indicator “Oil”
2. Oil change tripmeter

The oil change tripmeter shows the distance traveled since the oil was last changed. The oil change indicator “OIL” flashes at the initial 1000 km, then at 4000 km and every 5000 km thereafter to indicate that the engine oil should be changed.

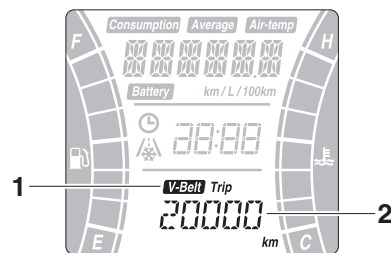
After changing the engine oil, reset the oil change indicator and the oil change tripmeter. To reset them both, select the oil change tripmeter, and then push the “TRIP” switch for three seconds.

While the oil change tripmeter is flashing, push the “TRIP” switch for 15 to 20 seconds. Release the “TRIP” switch, and the oil trip value will reset to zero.

TIP

If the engine oil is changed before the oil change indicator comes on (i.e., before the periodic oil change interval has been reached), the oil change tripmeter must be reset for the oil change indicator to come on at the correct time.

V-belt replacement tripmeter “V-Belt Trip”



1. V-belt replacement indicator “V-Belt”
2. V-belt replacement tripmeter

The V-belt replacement tripmeter shows the distance traveled since the V-belt was last replaced.

The V-belt replacement indicator “V-Belt” will flash every 20000 km to indicate that the V-belt should be replaced.

After replacing the V-belt, reset the V-belt replacement indicator and the V-belt replacement tripmeter. To reset them both, select the V-belt replacement tripmeter, and then push the “TRIP” switch for three seconds.

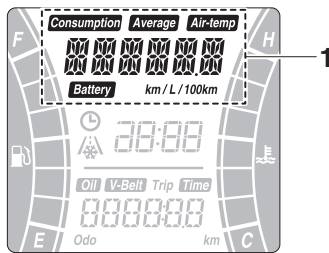
While the V-belt replacement tripmeter is flashing, push the “TRIP” switch for 15 to 20 seconds. Release the “TRIP” switch, and the V-belt trip value will reset to zero.

FEATURES

TIP

If the V-belt is replaced before the V-belt replacement indicator comes on (i.e., before the periodic V-belt replacement interval has been reached), the V-belt replacement tripmeter must be reset for the V-belt replacement indicator to come on at the correct time.

Information display



1. Information display

The information display is equipped with the following:

- air temperature display
- battery voltage display
- traction control system display
- average fuel consumption display
- instantaneous fuel consumption display
- average speed display
- warning message function

Navigating the information display

Push the "INFO" switch to change the display between the air temperature display "Air-temp", battery voltage display "Battery", traction control system display "TCS ON" or "TCSOFF", average fuel consumption display "Consumption/Average_ _ _ km/L" or "Consumption/Average_ _ _ L/100 km", instantaneous fuel consumption display "Consumption_ _ _ km/L" or "Consumption_ _ _ L/100 km" and average speed display "Average" in the following order:

Air-temp → Battery → TCS ON or TCSOFF → Consumption/Average_ _ _ km/L → Consumption/Average_ _ _ L/100 km → Consumption_ _ _ km/L → Consumption_ _ _ L/100 km → Average → Air-temp

Air temperature display



1. Air temperature display
2. Icy road warning indicator "❄️"

This display shows the air temperature from -10°C to 50°C in 1°C increments.

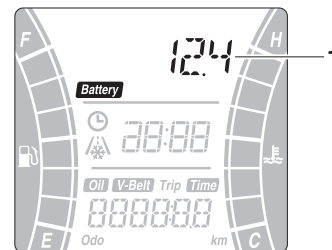
The icy road warning indicator "❄️" will flash when the temperature is below 4°C .

The temperature displayed may vary from the actual ambient temperature.

TIP

The accuracy of the temperature reading may be affected by engine heat when riding slowly (under 20 km/h or when stopped at traffic signals, etc).

Battery voltage display



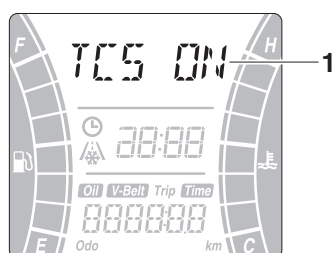
1. Battery voltage display

This display shows the current charge state of the battery.

TIP

- If the engine turns over slowly when using the start switch, have a Yamaha dealer charge the battery.
- If "--" appears in the battery voltage display, have a Yamaha dealer check the battery.

Traction control system mode display



1. Traction control system mode display

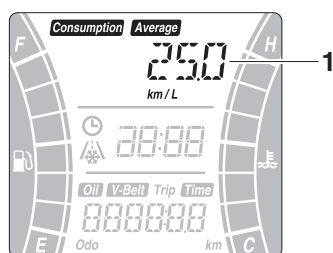
This display shows the current status of the traction control system.

- “TCS ON”: the system is on
- “TCSOFF”: the system is off

TIP

If only “TCS” is displayed, there is a communication error within the vehicle. Have a Yamaha dealer check the vehicle as soon as possible.

Average fuel consumption display



1. Average fuel consumption display

This function calculates the average fuel consumption since it was last reset.

The average fuel consumption can be displayed as either “Consumption/Average_ _ _ km/L” or “Consumption/Average_ _ _ L/100 km”.

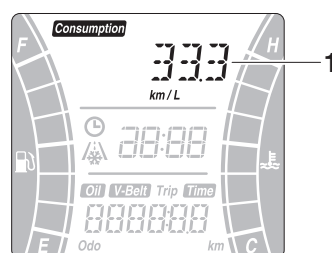
- “Consumption/Average_ _ _ km/L”: The average distance that can be traveled on 1.0 L of fuel is shown.
- “Consumption/Average_ _ _ L/100 km”: The average amount of fuel necessary to travel 100 km is shown.

To reset the average fuel consumption, push the “INFO” switch for at least three seconds.

TIP

After resetting the average fuel consumption, “_ _ _” will be shown until the vehicle has traveled 1 km.

Instantaneous fuel consumption display



1. Instantaneous fuel consumption display

This function calculates the fuel consumption under current riding conditions.

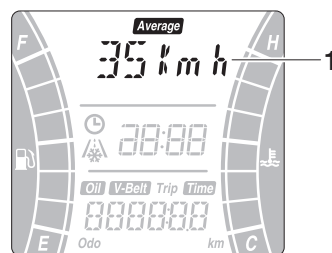
The instantaneous fuel consumption can be displayed as either “Consumption_ _ _ km/L” or “Consumption_ _ _ L/100 km”.

- “Consumption_ _ _ km/L”: The distance that can be traveled on 1.0 L of fuel under the current riding conditions is shown.
- “Consumption_ _ _ L/100 km”: The amount of fuel necessary to travel 100 km under the current riding conditions is shown.

TIP

If traveling at speeds under 10 km/h, “_ _ _” is displayed.

Average speed display



1. Average speed display

The average speed “Average_ _ _ km/h” is displayed.

The average speed is the total distance divided by the total time (with the main switch in the “ON” position) since the display was last reset to zero. This display shows the average speed since it was last reset.


To reset the average speed display, select it by pushing the “INFO” switch, and then push the “INFO” switch for three seconds.

Warning message function

This function displays a warning message corresponding to the current warning.

“L FUEL”: Appears when the last segment of the fuel meter starts flashing. If “L FUEL” is displayed, refuel as soon as possible.

“H TEMP”: Appears when the top segment of the coolant temperature meter starts flashing. If “H TEMP” is displayed, stop the vehicle, then stop the engine, and let the engine cool.

“ICE”: Appears when the icy road warning indicator  starts flashing. If “ICE” is displayed, be careful of icy roads.

“OIL SERV”: Appears when the oil change indicator “OIL” starts flashing. If “OIL SERV” is displayed, change the engine oil, and then reset the oil change indicator and oil change tripmeter.

“V-BELT SERV”: Appears when the V-belt replacement indicator “V-Belt” starts flashing. If “V-BELT SERV” is displayed, replace the V-belt, and then reset the V-belt replacement indicator and V-belt replacement tripmeter.

When there are two or more warnings, the warning messages are displayed in the following order:

L FUEL → H TEMP → ICE → OIL SERV → V-BELT SERV → L FUEL

SPECIAL TOOLS


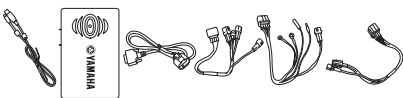
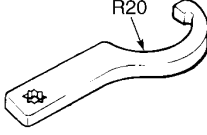
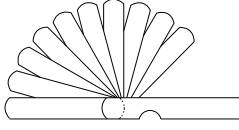
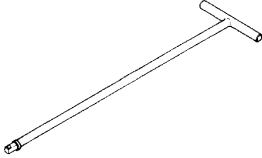

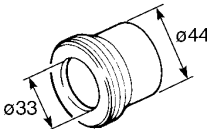
EAS20012

SPECIAL TOOLS

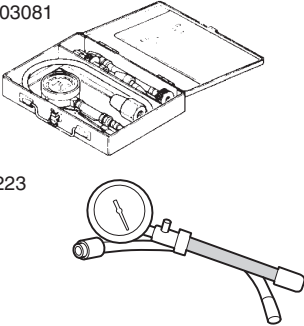

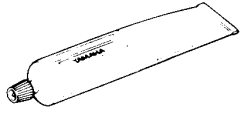
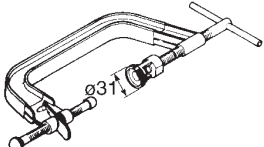
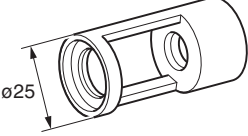
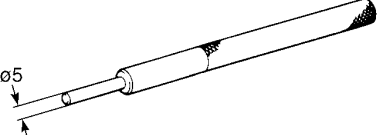
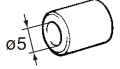
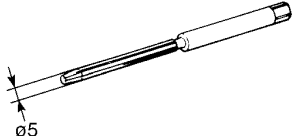
The following special tools are necessary for complete and accurate tune-up and assembly. Use only the appropriate special tools as this will help prevent damage caused by the use of inappropriate tools or improvised techniques. Special tools, part numbers or both may differ depending on the country. When placing an order, refer to the list provided below to avoid any mistakes.

TIP

- For U.S.A. and Canada, use part numbers starting with "YM-", "YU-", or "ACC-".
- For others, use part numbers starting with "90890-".

Tool name/Tool No.	Illustration	Reference pages
Yamaha diagnostic tool USB 90890-03267		3-3, 3-6, 3-7, 4-66, 4-67, 7-17, 7-17, 7-18, 7-18, 8-52, 9-3, 9-21, 9-21
Yamaha diagnostic tool (A/I) 90890-03264		3-3, 3-6, 3-7, 4-66, 4-67, 7-17, 7-17, 7-18, 7-18, 8-52, 9-3, 9-21, 9-21
Steering nut wrench 90890-01403 Exhaust flange nut wrench YU-A9472		3-14, 4-88
Thickness gauge 90890-03268 Feeler gauge set YU-26900-9		4-32, 4-36
T-handle 90890-01326 T-handle 3/8" drive 60 cm long YM-01326		4-81, 4-83
Fork seal driver weight 90890-01184 Replacement hammer YM-A9409-7		4-84, 4-84, 4-84
Fork seal driver attachment (ø33) 90890-01368 Replacement 33 mm YM-A9409-4		4-84, 4-84

SPECIAL TOOLS

Tool name/Tool No.	Illustration	Reference pages
Compression gauge 90890-03081 Engine compression tester YU-33223	90890-03081  YU-33223	5-5
Camshaft sprocket stopper 90890-04182 Camshaft sprocket stopper YM-04182		5-17, 5-20
Yamaha bond No. 1215 90890-85505 Three bond No. 1215®		5-19, 5-49, 5-61
Valve spring compressor 90890-04200 Valve spring compressor YM-04019		5-25, 5-29
Valve spring compressor attachment (ø25) 90890-06320 Valve spring compressor attachment (25mm) YM-06320		5-25, 5-29
Valve guide remover (ø5) 90890-04097 Valve guide remover (5.0 mm) YM-04097		5-26
Valve guide installer (ø5) 90890-04098 Valve guide installer (5.0 mm) YM-04098		5-26
Valve guide reamer (ø5) 90890-04099 Valve guide reamer (5.0 mm) YM-04099		5-26