



YAMAHA

2020

SERVICE MANUAL

YXZ1000R

**YXZ1000E
YXZ1000ET
YX10ZXPSL**

BAS-F8197-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, Y0B-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.

This model has been designed and manufactured to perform within certain specifications in regard to performance and emissions. Proper service with the correct tools is necessary to ensure that the vehicle will operate as designed. If there is any question about a service procedure, it is imperative that you contact a Yamaha dealer for any service information changes that apply to this model. This policy is intended to provide the customer with the most satisfaction from their vehicle and to conform to federal environmental quality objectives.



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.
- This Service Manual contains information regarding periodic maintenance to the emission control system. Please read this material carefully.
- Designs and specifications are subject to change without notice.

IMPORTANT MANUAL INFORMATION

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

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

**YZZ1000E/YZZ1000ET/YX10ZXPSL
SERVICE MANUAL**

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First edition, September 2019

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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
	Electrical components tray		Refer to "GENERAL CHASSIS (12)" or page 4-27.
1	Clutch cover	1	
2	Dowel pin	2	
3	Clutch cover gasket	1	

5-56

CLUTCH

REMOVING THE CLUTCH

1. Remove:

- Clutch cover "1"
- Clutch cover gasket

TIP
Loosen each bolt 1/4 of a turn at a time, in stages and in a crisscross pattern. After all of the bolts are fully loosened, remove them.

2. Remove:

- Clutch spring plate retainer "1"
- Clutch spring plate "2"
- Clutch spring plate seat
- Pressure plate
- Bearing
- Short clutch push rod
- Ball

TIP
Loosen the clutch spring plate retainer bolts in stages and in a crisscross pattern.

3. Remove:

- Friction plates 1
- Clutch plates

4. Remove:

- Long clutch push rod "1"

TIP
Push the long clutch push rod into the clutch release cylinder side of the transmission case, and remove it from the clutch side of the transmission case.

5. Straighten the clutch boss nut "a".

6. 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
90890-04086
Universal clutch holder
YM-91042

7. Remove: (YZ10YMXK/YZ10YMSK)

- Clutch boss nut "1"
- Conical spring washer "2"
- Plain washer "3"
- Wire circlip "4"
- Clutch plates "5"
- Friction plates 2 "6"
- Clutch damper springs "7"
- Clutch damper spring seats "8"
- Clutch boss "9"

5-68

EBS20005

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.

TABLE OF CONTENTS

GENERAL INFORMATION	1
SPECIFICATIONS	2
PERIODIC CHECKS AND ADJUSTMENTS	3
CHASSIS	4
ENGINE	5
COOLING SYSTEM	6
FUEL SYSTEM	7
DRIVE TRAIN	8
ELECTRICAL SYSTEM	9
TROUBLESHOOTING	10

GENERAL INFORMATION

IDENTIFICATION	1-1
VEHICLE IDENTIFICATION NUMBER	1-1
MODEL LABEL.....	1-1
FEATURES	1-2
INSTRUMENT FUNCTIONS	1-2
SPECIAL TOOLS	1-7

IDENTIFICATION

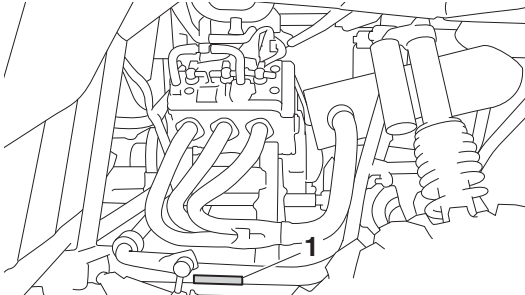
EBS20009

IDENTIFICATION

EBS30003

VEHICLE IDENTIFICATION NUMBER

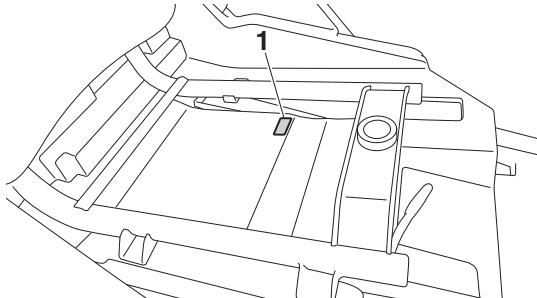
The vehicle identification number “1” is stamped into the frame.



EBS30004

MODEL LABEL

The model label “1” is affixed to the frame under the driver seat. This information will be needed to order spare parts.



FEATURES

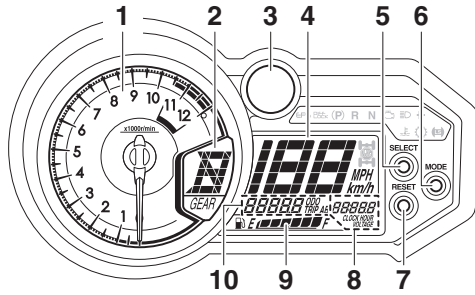
EBS20010

FEATURES

EBS30008

INSTRUMENT FUNCTIONS

Multi-function meter unit

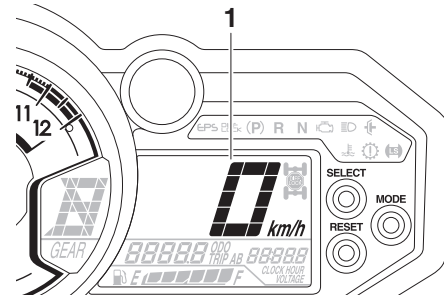


1. Tachometer
2. Transmission gear display
3. Shift light
4. Speedometer
5. "SELECT" button
6. "MODE" button
7. "RESET" button
8. Clock/Hour meter/Voltage display/Coolant temperature display
9. Fuel gauge
10. Odometer/Tripmeter A/Tripmeter B

The multi-function meter unit is equipped with the following:

- speedometer
- tachometer
- odometer
- two tripmeters
- clock
- hour meter
- voltage display
- coolant temperature display
- fuel gauge
- transmission gear display
- shift light control mode
- fault code display

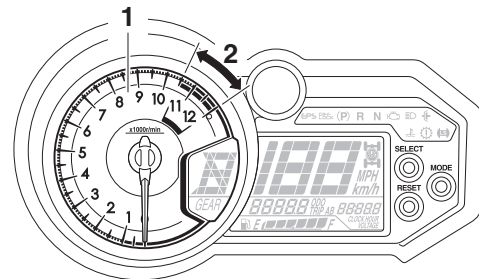
Speedometer



1. Speedometer

The speedometer shows the vehicle's traveling speed. The speedometer can be set to "MPH" or "km/h". This also changes the odometer and tripmeter units between miles and kilometers. To change the display between "MPH" and "km/h", turn the key to "O" (off), then hold the "SELECT" button pushed and turn the key to "I" (on).

Tachometer




1. Tachometer
2. Tachometer red zone

The tachometer shows the engine speed in crankshaft revolutions per minute (r/min). When the vehicle is first powered on, the tachometer needle will sweep once across the r/min range and then return to zero r/min in order to test the electrical circuit.

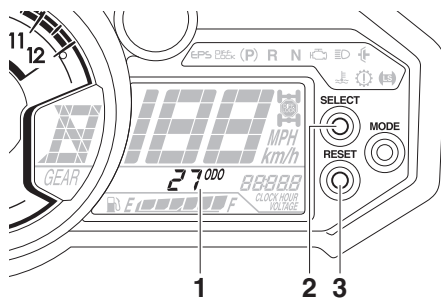
ECB03060

NOTICE

Do not operate the engine in the tachometer red zone.

	<p>Red zone 10500 r/min and above</p>
---	--

Odometer and tripmeters



1. Odometer/Tripmeter A/Tripmeter B
2. "SELECT" button
3. "RESET" button

The odometer shows the total distance traveled by the vehicle. The odometer can be used for maintenance and service intervals.

The tripmeters show the distance traveled since they were last reset. The tripmeters can be used to record the distance traveled on a single trip, or to estimate the distance that can be traveled with a full tank of gas, etc.

Push the "SELECT" button to switch between the odometer "ODO" and the tripmeters "TRIP A" and "TRIP B" in the following order:

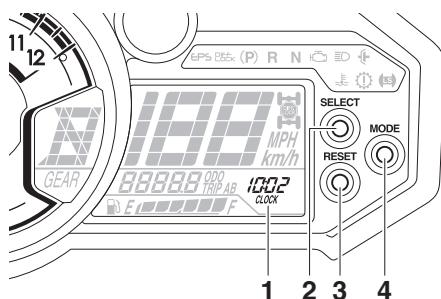
ODO → TRIP A → TRIP B → ODO

To reset a tripmeter, set the display to the tripmeter you want to reset, then push the "RESET" button until it is reset.

TIP

- The odometer will lock at 99999.
- The tripmeters will reset and continue counting after 9999.9 is reached.

Clock, hour meter, voltage display and coolant temperature display



1. Clock/Hour meter/Voltage display/Coolant temperature display
2. "SELECT" button
3. "RESET" button

4. "MODE" button

The clock displays time in 12-hour format. The hour meter shows the total time the engine has been running.

The voltage display shows the battery voltage. The coolant temperature display shows the temperature of the coolant.

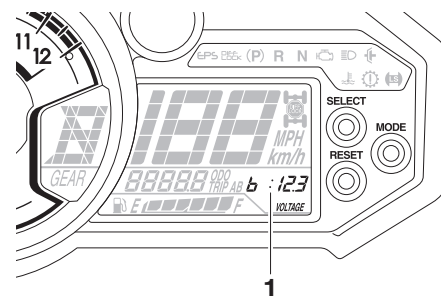
Push the "MODE" button to switch between the clock "CLOCK", the hour meter "HOUR", the voltage display "VOLTAGE", and the coolant temperature display in the following order:

CLOCK → HOUR → VOLTAGE → coolant temperature → CLOCK

[To set the clock]

1. Set the display to the clock.
2. Push both the "SELECT" button and "RESET" button until the hour digits start flashing.
3. Push the "RESET" button to set the hours.
4. Push the "SELECT" button, and the minute digits will start flashing.
5. Push the "RESET" button to set the minutes.
6. Push the "SELECT" button, and then release it to start the clock.

[Voltage display]



1. Voltage display

This display shows "V" and the battery voltage. When the battery voltage is low, "LO" will be displayed. When the battery voltage is high, "HI" will be displayed.

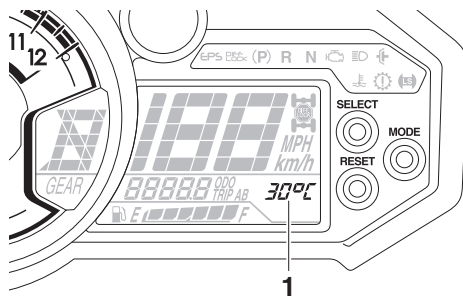
ECB02020

NOTICE

If the voltage display indicates "LO" or "HI", there may be trouble with the battery charging circuit or the battery may be faulty. If this occurs, check or repair the vehicle.

FEATURES

[Coolant temperature display]



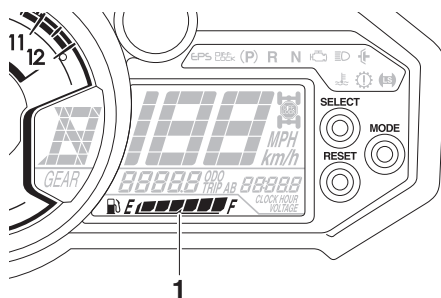
1. Coolant temperature display

When the coolant temperature is in the normal operating range, the temperature will be displayed. When the coolant temperature is low, “LO” will be displayed. When the coolant temperature rises, the coolant temperature display will begin to flash. If the coolant temperature continues to rise, the message “HI” will flash.

TIP

- The coolant temperature display can be set to “°C” or “°F”. To switch the temperature units, turn the key to “○” (off), then hold the “RESET” button pushed and turn the key to “⏏” (on).
- The radiator fan turns on and off automatically according to the coolant temperature.

Fuel gauge



1. Fuel gauge

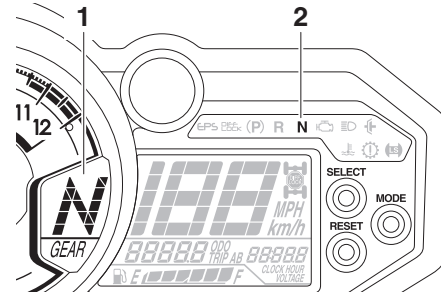
The fuel gauge indicates the amount of fuel in the fuel tank. The display segments of the fuel gauge disappear from “F” (full) towards “E” (empty) as the fuel level decreases. When the last segment of the fuel gauge starts flashing, refuel as soon as possible.

TIP

This fuel gauge is equipped with a self-diagnosis system. If a problem is detected in an electrical circuit, the fuel gauge will flash repeatedly. If this occurs, check the electrical circuit.

Refer to “SIGNALING SYSTEM” on page 9-23.

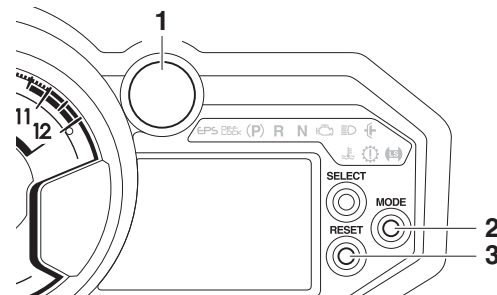
Transmission gear display



1. Transmission gear display
2. Neutral indicator light “N”

This display shows the selected gear. The neutral position is indicated by “N” and by the neutral indicator light “N”.

Shift light control mode





1. Shift light
2. “MODE” button
3. “RESET” button

The shift light has three settings which can be adjusted.

- Flashing pattern: this function allows you to choose whether or not the light will come on and whether it should flash or stay on when activated.
- Activation point: this function allows you to select the engine speed at which the light is activated.
- Deactivation point: this function allows you to select the engine speed at which the light is deactivated.

FEATURES

[To enter the shift light control mode]

1. Turn the key to “” (off).
2. Push and hold the “MODE” button.
3. Turn the key to “” (on), and then release the “MODE” button after all segments of the display disappear and the shift light comes on. The shift light can be adjusted as follows.

[To set the flashing pattern]

1. Push the “RESET” button to select one of the following flashing pattern settings:
 - On: the shift light stays on when activated. (The shift light will confirm this setting by staying on.)
 - Flash: the shift light flashes when activated. (The shift light will confirm this setting by flashing four times per second.)
 - Off: the shift light is deactivated; in other words, it does not come on or flash. (The shift light will confirm this setting by flashing once every two seconds.)
2. Push the “MODE” button to confirm the selected flashing pattern. The control mode changes to the activation point setting mode. The shift light remains on and the tachometer shows the current setting r/min for the activation point.

[To set the shift activation point]

TIP

- The shift light activation point can be set between 7000 r/min and 12000 r/min. The activation point can be set in increments of 500 r/min.
- The tachometer needle will start over at 7000 r/min after 12000 r/min.

1. Push the “RESET” button to select the desired engine speed for activating the shift light.
2. Push the “MODE” button to confirm the selected engine speed. The shift light flashes and the tachometer shows the current setting r/min for the deactivation point.

[To set the deactivation point]

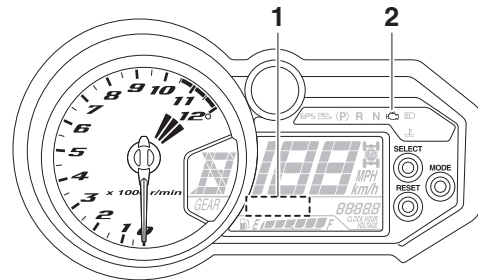
TIP


- Be sure to set the deactivation point to a higher engine speed than for the activation point, otherwise the shift light will not come on.
- The shift light deactivation point can be set between 7000 r/min and 12000 r/min. The deactivation point can be set in increments of 500 r/min.

- The tachometer needle will start over at 7000 r/min after 12000 r/min.

1. Push the “RESET” button to select the desired engine speed for deactivating the shift light.
2. Push the “MODE” button to confirm the selected engine speed. The display exits the shift light control mode and returns to the standard multi-function display mode.

Fault code display (YXZ100E)



1. Fault code display
2. Engine trouble warning light “”

This model is equipped with a self-diagnosis device for various electrical circuits.

If a problem is detected in any of those circuits, the engine trouble warning light will come on or flash, and the display will indicate a fault code. If the display indicates a fault code, note the code number, and then check the fuel injection system.

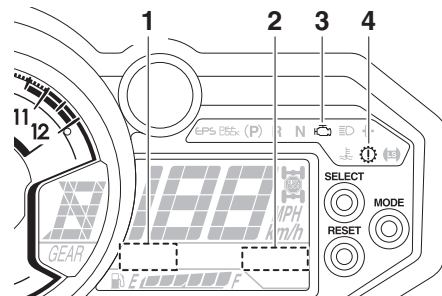
Refer to “FUEL INJECTION SYSTEM” on page 9-43.

ECB02030



NOTICE

If the display indicates a fault code, the vehicle should be checked as soon as possible in order to avoid engine damage.

Fault code display (YXZ1000ET/YX10ZXPSL)



1. Fault code display
2. YCC-S system fault code display

3. Engine trouble warning light “”
4. YCC-S system warning light “”

This model is equipped with a self-diagnosis device for various electrical circuits.

If a problem is detected in any of those circuits, the engine trouble warning light and/or the YCC-S system warning light will come on or flash, and the display will indicate a fault code.

TIP

- YCC-S system fault codes are displayed only when the engine is stopped.
- If the display indicates a fault code, note the code number, and then check the fuel injection system or YCC-S system.

ECB02030

NOTICE

If the display indicates a fault code, the vehicle should be checked as soon as possible in order to avoid engine damage.

SPECIAL TOOLS

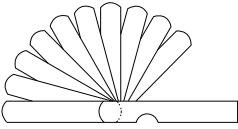

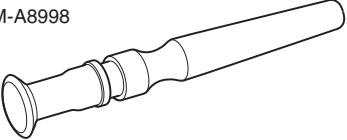


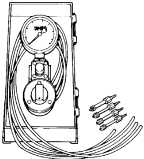

EBS20013

SPECIAL TOOLS

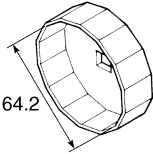

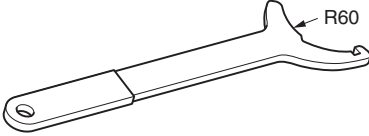
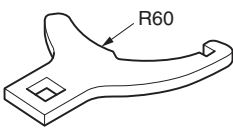
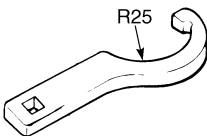
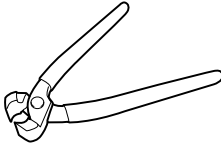
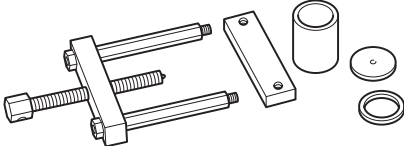
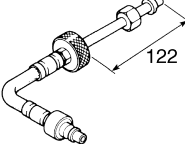
The following special tools are necessary for complete and accurate tune-up and assembly. Use only the appropriate special tools as this will help prevent damage caused by the use of inappropriate tools or improvised techniques. Special tools, part numbers or both may differ depending on the country.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

TIP

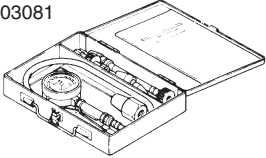
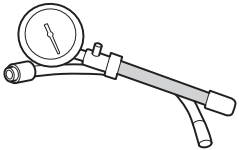
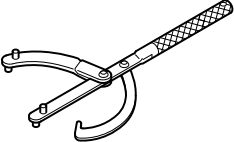
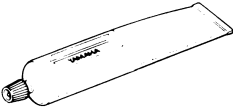
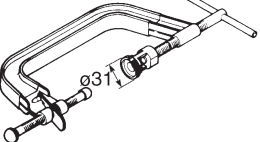
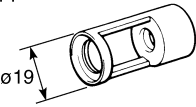
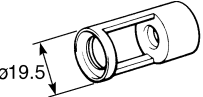
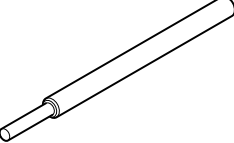
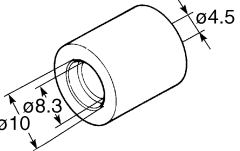
- For U.S.A. and Canada, use part number starting with "YM-", "YU-", "YS-", "YK-", or "ACC-".
- For others, use part number starting with "90890-".

Tool name/Tool No.	Illustration	Reference pages
Thickness gauge 90890-03268 Feeler gauge set YU-26900-9		3-6, 5-68
Valve lapper (ø14) 90890-04101 Valve lapping tool (14mm) YM-A8998	90890-04101  ø14 YM-A8998 	3-6
Yamaha diagnostic tool USB 90890-03267		3-9, 7-17, 9-49
Yamaha diagnostic tool (A/I) 90890-03264		3-9, 7-17, 9-49
Vacuum gauge 90890-03094 Vacuummate YU-44456	90890-03094  YU-44456 	3-11

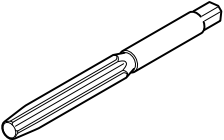
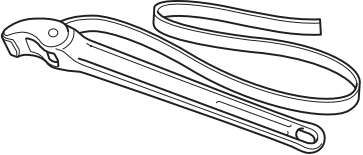
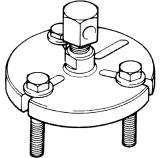

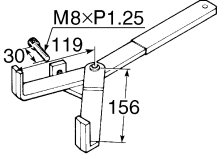
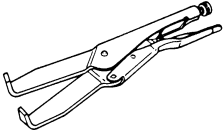
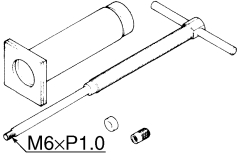
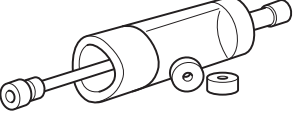
SPECIAL TOOLS

Tool name/Tool No.	Illustration	Reference pages
Oil filter wrench 90890-01426 Oil filter wrench YU-38411		3-20
Vacuum/pressure pump gauge set 90890-06756 Mityvac brake bleeding tool YS-42423		3-27, 7-5, 9-170
Ring nut wrench (R60) 90890-01584 Ring nut wrench (R60) YM-01584		3-39, 3-41, 3-45, 3-47, 4-83, 4-83
Ring nut wrench (R60 1/2square wrench) 90890-01585 Ring nut wrench (R60 1/2square wrench) YM-01585		3-40, 3-42, 3-45, 3-47
Steering nut wrench 90890-01443 Spanner wrench YU-33975		3-42, 3-43, 3-48, 3-48
Boots band installation tool 90890-01526 Boots band installation tool YM-01526		4-68, 8-11, 8-13, 8-25, 8-28
Ball joint installer 90890-01586 YM-01586		4-71, 4-76
Compression gauge extension 122mm 90890-04136 Compression gauge extension 122mm YM-04136		5-8

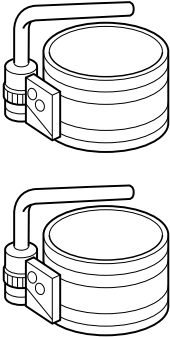
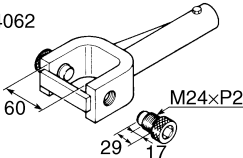
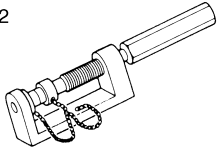
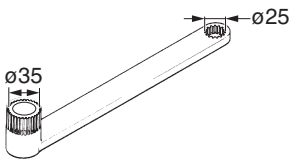
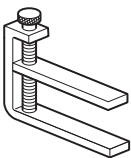
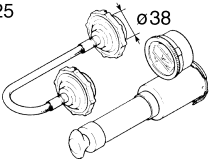
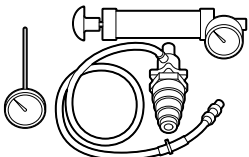
SPECIAL TOOLS

Tool name/Tool No.	Illustration	Reference pages
Compression gauge 90890-03081 Engine compression tester YU-33223	90890-03081  YU-33223 	5-8
Rotor holding tool 90890-01235 Universal magneto and rotor holder YU-01235		5-20, 5-22, 5-47, 5-48, 5-84, 5-87
Yamaha bond No. 1215 90890-85505 (Three bond No.1215®)		5-25, 5-39, 5-85, 5-110
Valve spring compressor 90890-04019 Valve spring compressor YM-04019		5-30, 5-34
Valve spring compressor attachment 90890-04114 Valve spring compressor adapter 19.5 mm YM-04114	90890-04114  $\phi 19$ YM-04114  $\phi 19.5$	5-30, 5-34
Valve guide remover ($\phi 4.5$) 90890-04116 Valve guide remover (4.5 mm) YM-04116		5-31
Valve guide installer ($\phi 4.5$) 90890-04117 Valve guide installer (4.5 mm) YM-04117	 $\phi 10$, $\phi 8.3$, $\phi 4.5$	5-31

SPECIAL TOOLS

Tool name/Tool No.	Illustration	Reference pages
Valve guide reamer ($\phi 4.5$) 90890-04118 Valve guide reamer (4.5 mm) YM-04118		5-31
Rotor holding tool 90890-04166 Rotor holding tool YM-04166		5-37, 5-37, 5-38, 5-38
Flywheel puller 90890-01362 Heavy duty puller YU-33270-B		5-37
Digital circuit tester (CD732) 90890-03243 Model 88 Multimeter with tachometer YU-A1927		5-42, 9-163, 9-164, 9-167, 9-167, 9-168, 9-169, 9-169, 9-170, 9-170, 9-171, 9-172, 9-173, 9-173, 9-174, 9-174, 9-174, 9-175, 9-176, 9-176, 9-176, 9-177, 9-177, 9-178
Universal clutch holder 90890-04086 Universal clutch holder YM-91042	90890-04086  YM-91042 	5-67, 5-70, 5-72
Piston pin puller set 90890-01304 Piston pin puller YU-01304	90890-01304  YU-01304 	5-89

SPECIAL TOOLS

Tool name/Tool No.	Illustration	Reference pages
Piston ring compressor 90890-05158 Piston ring compressor YM-08037		5-94
Universal joint holder 90890-04062 Universal joint holder YM-04062	90890-04062  YM-04062 	5-109, 5-113, 5-130, 5-131, 8-13, 8-16
Coupling gear/middle shaft tool 90890-01229 Gear holder YM-01229		5-109, 5-112
Damper spring compressor (120 mm) 90890-01588 YM-01588		5-117, 5-118, 5-130, 5-131
Radiator cap tester 90890-01325 Mityvac cooling system tester kit YU-24460-A	90890-01325  YU-24460-A 	6-9

SPECIAL TOOLS

Tool name/Tool No.	Illustration	Reference pages
Radiator cap tester adapter 90890-01352 Pressure tester adapter YU-33984	<p>90890-01352</p> <p>YU-33984</p>	6-9
Mechanical seal installer (ø30) 90890-01587 Mechanical seal installer (ø30) YM-01587		6-17
Middle driven shaft bearing driver 90890-04058 Middle drive bearing installer 40 & 50 mm YM-04058		6-17
Pressure gauge 90890-03153 Pressure gauge YU-03153		7-7
Fuel pressure adapter 90890-03176 Fuel pressure adapter YM-03176		7-7
Boots band installation tool screw type 90890-01554 Boots band installation tool screw type YM-01554		8-13, 8-27, 8-28
Ring gear fix bolt (M10) 90890-01527 Ring gear fix bolt (M10) YM-01527		8-17
Gear lash measurement tool 90890-01475 Middle drive gear lash tool YM-01475		8-17, 8-31