



**WaveRunner**

**VX 700**

**— VX 700 (F2V)**

**SERVICE MANUAL**

**F2V-28197-ZN-11**

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## Preface

This manual has been prepared by Yamaha primarily for use by Yamaha dealers and their trained mechanics when performing maintenance procedures and repairs to Yamaha equipment. It has been written to suit the needs of persons who have a basic understanding of the mechanical and electrical concepts and procedures inherent in the work, for without such knowledge attempted repairs or service to the equipment could render it unsafe or unfit for use.

Because Yamaha has a policy of continuously improving its products, models may differ in detail from the descriptions and illustrations given in this publication. Use only the latest edition of this manual. Authorized Yamaha dealers are notified periodically of modifications and significant changes in specifications and procedures, and these are incorporated in successive editions of this manual. Also, up-to-date parts information is available on YPEC-web. Additional information and up-to-date information on Yamaha products and services are available on Yamaha Service Portal.

### Important information

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

 The Safety Alert Symbol means ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!

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#### **WARNING**

A **WARNING** indicates a hazardous situation which, if not avoided, could result in death or serious injury.

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#### **NOTICE**

A **NOTICE** indicates special precautions that must be taken to avoid damages to the watercraft or other property.

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#### **TIP:**

A **TIP** provides key information to make procedures easier or clearer.

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# Contents

<b>General information</b>		<b>1</b>
	<b>GEN INFO</b>	
<b>Specification</b>		<b>2</b>
	<b>SPEC</b>	
<b>Maintenance</b>		<b>3</b>
	<b>MNT</b>	
<b>Fuel system</b>		<b>4</b>
	<b>FUEL</b>	
<b>Power unit</b>		<b>5</b>
	<b>POWR</b>	
<b>Jet pump unit</b>		<b>6</b>
	<b>JET PUMP</b>	
<b>Electrical system</b>		<b>7</b>
	<b>ELEC</b>	
<b>Hull and hood</b>		<b>8</b>
	<b>HULL HOOD</b>	
<b>Troubleshooting</b>	<b>?</b>	<b>9</b>
	<b>TRBL SHTG</b>	
<b>Appendix</b>		<b>A</b>





## General information

<b>⚠ Safety while working .....</b>	<b>1-1</b>
Rotating part .....	1-1
Hot part .....	1-1
Electric shock .....	1-1
Impeller .....	1-1
Handling of gasoline .....	1-1
Ventilation .....	1-2
Self-protection .....	1-2
Working with crane .....	1-2
Handling of heat gun .....	1-3
Part, lubricant, and sealant .....	1-3
Handling of sealant .....	1-3
Special service tool .....	1-3
Tightening torque .....	1-3
Non-reusable part .....	1-3
Disassembly and assembly .....	1-4
 <b>How to use this manual .....</b>	 <b>1-5</b>
Manual format .....	1-5
Abbreviation .....	1-6
 <b>Adhesive, lubricant, sealant, and thread locking agent .....</b>	 <b>1-7</b>
Symbol .....	1-7
 <b>Special service tool .....</b>	 <b>1-8</b>
 <b>Model feature .....</b>	 <b>1-10</b>
Identification number .....	1-10



## Safety while working

To prevent an accident or injury and to provide quality service, observe the following safety procedures.

### Rotating part

- Hands, feet, hair, jewelry, clothing, personal flotation device straps, and so on, can become entangled with internal rotating parts of the engine or jet pump unit, resulting in serious injury or death.
- Keep hands, feet, hair, jewelry, clothing, personal flotation device straps, and so on, away from any exposed moving parts when operating the engine with the seat removed.
- Keep away from intake grate while engine is on. Items such as hair, clothing, or personal flotation device straps can become entangled in moving parts resulting in severe injury.

### Hot part

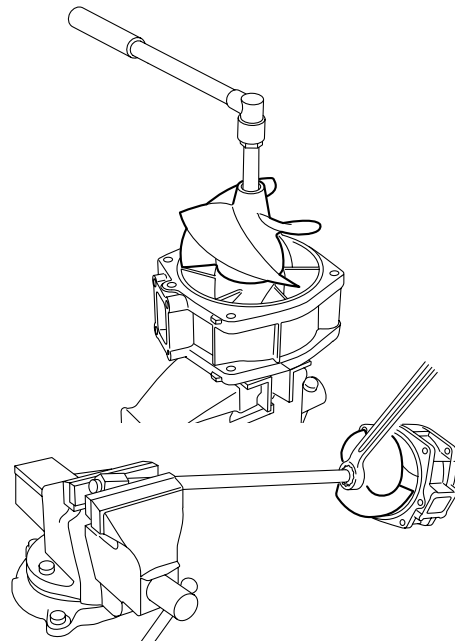
During and after operation, engine parts are hot enough to cause burns. Do not touch any parts in the engine compartment until the engine has cooled.

### Electric shock

Do not touch any electrical parts while starting or operating the engine. Otherwise, shock or electrocution could result.

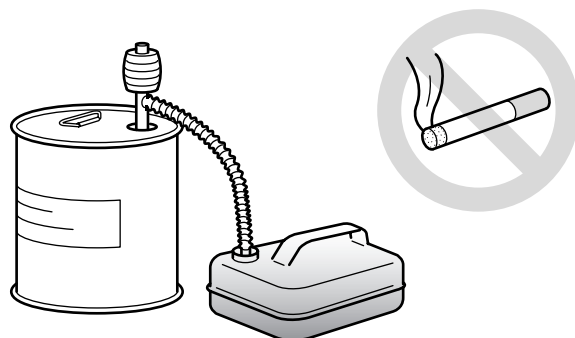
### Impeller

Do not hold the impeller with your hands when loosening or tightening the impeller.



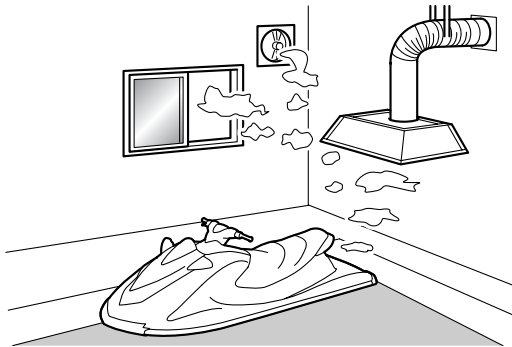
### Handling of gasoline

- Gasoline is highly flammable. Keep gasoline and all flammable products away from heat, sparks, and open flames.
- Gasoline is poisonous and can cause injury or death. Handle gasoline with care. Never siphon gasoline by mouth. If you swallow some gasoline, inhale a lot of gasoline vapor, or get some gasoline in your eyes, see your doctor immediately. If gasoline spills on your skin, wash with soap and water. If gasoline spills on your clothing, change your clothes.



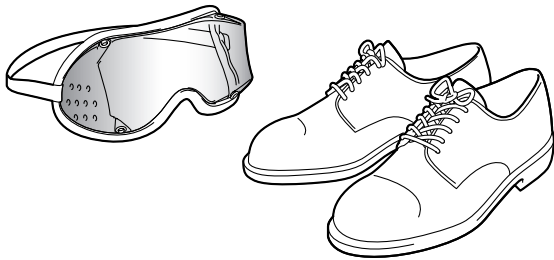
## Ventilation

- Gasoline vapor and exhaust gas are heavier than air and extremely poisonous. If gasoline vapor or exhaust gas is inhaled in large quantities, it may cause loss of consciousness and death within a short time.
- When test running an engine indoors (for example, in a water tank) make sure to do so where adequate ventilation can be maintained.



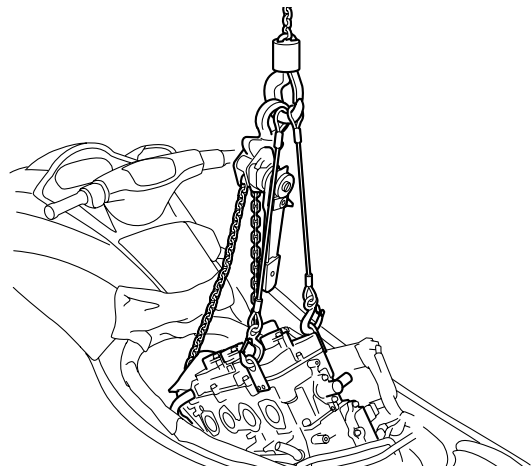
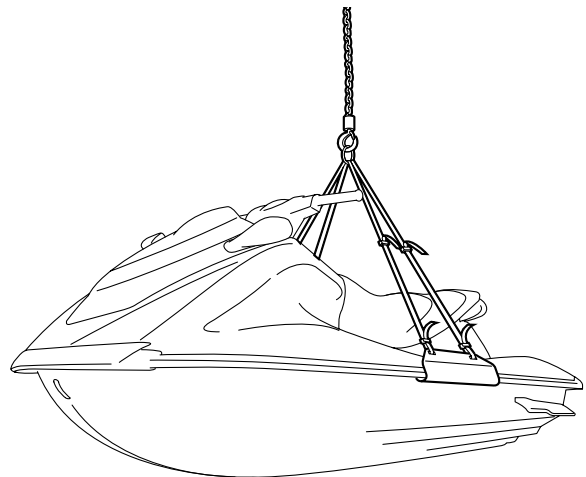
## Self-protection

- Protect your eyes by wearing safety glasses or safety goggles during all operations involving drilling and grinding, or when using an air compressor.
- Protect your hands and feet by wearing protective gloves and safety shoes when necessary.



## Working with crane

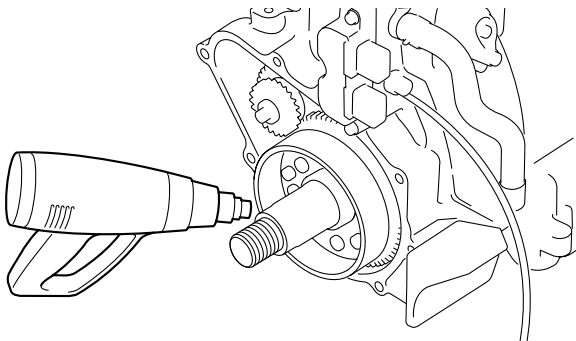
- When moving the watercraft, or when lifting the engine during removal or installation, make sure to use a crane with a lifting capacity that is equal to or more than the weight of the watercraft or engine respectively.
- When lifting the watercraft, use the watercraft lift harness and make sure that the watercraft is in a stable position when moving it.
- Use the wire ropes of adequate strength, and lift up the engine unit using the three point suspension. If the engine unit does not have three or more points to be suspended, support it using additional ropes or the like so that the engine unit can be lifted and carried in a stable manner.





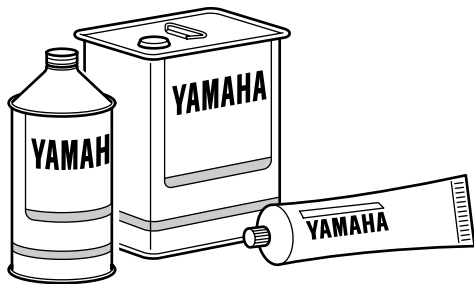
**Handling of heat gun**

- Improper handling of a heat gun may result in burns. For information on the proper handling of the heat gun, see the operation manual issued by the manufacturer.
- When using a heat gun, keep it away from the gasoline and oil, to prevent a fire.
- Components become hot enough to cause burns. Do not touch any hot components directly.



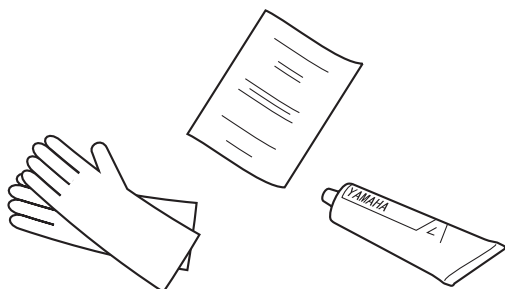
**Part, lubricant, and sealant**

Use only genuine Yamaha parts, lubricants, and sealants, or those recommended by Yamaha, when servicing or repairing the watercraft.



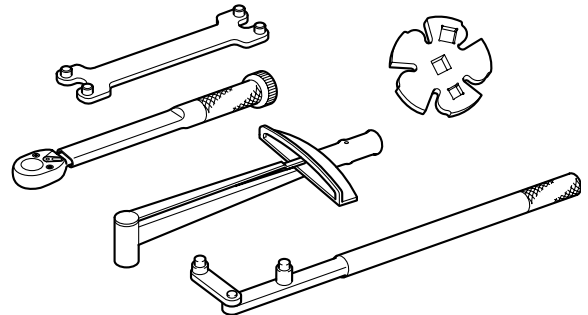
**Handling of sealant**

- Wear protective gloves to protect your skin, when using the sealants.
- See the material safety data sheet issued by the manufacturer. Some of the sealants may be harmful to human health.



**Special service tool**

Use the recommended special service tools to work safely, and to protect parts from damage.

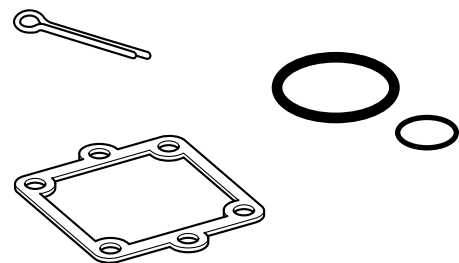


**Tightening torque**

Follow the tightening torque specifications provided throughout the manual. When tightening nuts, bolts, and screws, tighten the large sizes first, and tighten fasteners starting in the center and moving outward.

**Non-reusable part**

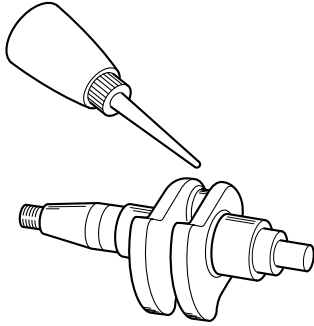
Always use new gaskets, seals, O-rings, cotter pins, and so on, when installing or assembling parts.





## Disassembly and assembly

- Use compressed air to remove dust and dirt during disassembly.
- Apply engine oil to the contact surfaces of moving parts before assembly.



- Install bearings so that the bearing identification mark is facing in the direction indicated in the installation procedure. In addition, make sure to lubricate the bearings liberally.
- Apply a thin coat of water resistant grease to the lip and periphery of an oil seal before installation.
- Check that moving parts operate normally after assembly.



General information

How to use this manual

Manual format

The format of this manual has been designed to make service procedures clear and easy to understand. Use the information below as a guide for effective and quality service.

- Parts are shown and detailed in an exploded diagram and are listed in the component list (see ① in the following figure for an example page).
- The component list consists of part names and quantities, as well as bolt and screw dimensions (see ② in the following figure). To assemble or install the components, reverse the steps indicated in the component list.
- Symbols are used to indicate important aspects of a procedure, such as the grade of lubricant and the lubrication point (see ③ in the following figure).
- Tightening torque specifications are provided in the exploded diagrams (see ④ in the following figure), and in the related detailed instructions. Some torque specifications are listed in stages as torque figures or angles in degrees.
- Separate procedures and illustrations are used to explain the details of removal, checking, and installation where necessary (see ⑤ in the following figure for an example page).

TIP:

For troubleshooting procedures, see Chapter 9, "Troubleshooting."

Jet thrust nozzle, impeller duct, and impeller housing / Impeller duct and drive shaft  
Impeller duct and drive shaft

8 N.m (0.8 kgf-m, 5.9 ft.lb)

75 N.m (7.5 kgf-m, 55.3 ft.lb)

No.	Part name	Q'ty	Remarks
1	Bolt	3	M6 20 mm
2	Cap	1	
3	O-ring	1	Not reusable
4	Cap	1	
5	Impeller	1	
6	Drive shaft	1	
7	Oil seal	1	Not reusable
8	Oil seal	1	Not reusable
9	Rear bearing	1	Not reusable
10	Spacer	1	
11	Front bearing	1	Not reusable
12	Impeller duct	1	

∴ EPNOC grease AP #0

6-6

JET PUMP Jet pump unit

Drive shaft removal

1. Remove the impeller.

Stopper guide plate: 90890-06501  
Bearing puller assembly: 90890-06535  
Stopper guide stand: 90890-06538

4. Remove the oil seals.

Crankshaft holder 20: 90890-06552

TIP: Hold the impeller duct assy. in a vise between two aluminum plates ③.

2. Remove the drive shaft ①.

TIP: Remove the drive shaft using a press.

3. Remove the rear bearing.

TIP: Remove the oil seals using a flat head screwdriver.

5. Remove the front bearing.

Driver rod L3: 90890-06652  
Needle bearing attachment: 90890-06614

TIP: Remove the front bearing using a press.

Impeller check

1. Check the impeller. Replace if damaged.

6-7