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- › [VEVOR](#) /
- › [VEVOR Hydraulic Steering Kit 90HP with 26ft Hose Instruction Manual](#)

VEVOR 90HP Hydraulic Outboard Steering Kit

VEVOR Hydraulic Steering Kit 90HP with 26ft Hose

Model: 90HP Hydraulic Outboard Steering Kit

1. INTRODUCTION AND OVERVIEW

This manual provides essential information for the safe and effective installation, operation, and maintenance of your VEVOR 90HP Hydraulic Outboard Steering Kit. This kit is designed to replace or upgrade existing steering systems, offering responsive and precise control for boats with outboard motors up to 90 horsepower.

The system includes a hydraulic helm, a hydraulic steering cylinder, a 13.5-inch steering wheel, two 26ft hydraulic hoses, and all necessary accessories for a complete setup.



Image 1.1: Overview of the VEVOR 90HP Hydraulic Outboard Steering Kit components and a boat in operation.

2. SAFETY INFORMATION

Read all instructions carefully before installation and operation. Failure to follow these instructions may result in equipment damage, serious injury, or death.

- **Professional Installation Recommended:** If you are not experienced with marine hydraulic systems, seek professional assistance for installation.
- **Eye Protection:** Always wear appropriate eye protection during installation and maintenance.

- **Hydraulic Fluid:** Use only recommended hydraulic fluid. Avoid skin contact and dispose of fluid responsibly.
- **Pressure Release:** Ensure all hydraulic pressure is relieved before disconnecting any components.
- **Secure Connections:** Verify all connections are tight and secure to prevent leaks and system failure.
- **Regular Inspection:** Periodically inspect the entire steering system for wear, damage, or leaks.
- **Engine Off:** Always ensure the engine is off and secured before performing any work on the steering system.

3. PACKAGE CONTENTS

Verify that all components listed below are present and undamaged upon unpacking.

- 1 x Hydraulic Helm
- 1 x Hydraulic Steering Cylinder
- 1 x 13.5-inch Steering Wheel
- 2 x 26ft Hydraulic Hoses (with quick-fit 5/16" fittings)
- Complete Set of Accessory Parts (e.g., mounting hardware, fittings)

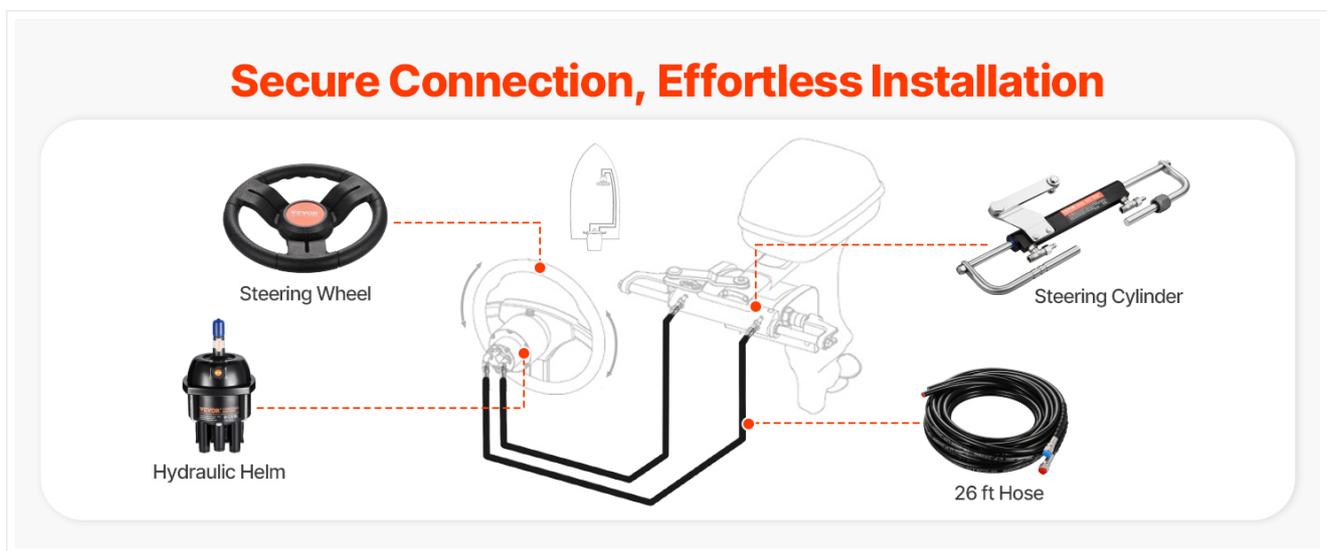


Image 3.1: All included components of the steering kit.

4. SPECIFICATIONS

Feature	Specification
Model Name	90HP Hydraulic Outboard Steering Kit
Brand	VEVOR
Max. Outboard HP	90 HP
Hydraulic Helm Max. Working Pressure	6.9 MPa / 1000 PSI
Hose Length	26 ft (x2)
Hose Diameter	5/16 inches
Steering Wheel Diameter	13.5 inches
Material	Aluminum, Polypropylene, Thermoplastic Polyester Elastomer

Item Weight	19.8 Pounds
Item Dimensions (LxWxH)	20.71 x 6.69 x 2.76 inches

5. SETUP AND INSTALLATION

Proper installation is crucial for the performance and safety of your hydraulic steering system. Follow these general steps, referring to the diagrams for visual guidance.

5.1. Hydraulic Helm Installation

Mount the hydraulic helm securely to your boat's dashboard or console. Ensure it is positioned for comfortable and unobstructed steering. The helm features a built-in check valve and filling port for convenience.



Image 5.1: Detailed view of the hydraulic helm with key features.

5.2. Hydraulic Steering Cylinder Installation

Install the hydraulic steering cylinder onto your outboard motor. This compact cylinder is designed to fit most splash wells. Use the provided engine attachment bolts and mounting rods to secure it firmly. Ensure the cylinder's movement is unrestricted throughout the full range of engine tilt and steering.

5/16" Diameter Hydraulic Hose

Conform to SAE 100R7 Standard
Rigorously Tested, High Standards



20Mpa Max Working Pressure
High Pressure Resistant,
Hard to Break



20Mpa

Pre-assembled Hose Connector
No Cutting Required,
Ensures Sealing Integrity



Image 5.2: Hydraulic steering cylinder components and connections.

5.3. Hose Connection

Connect the two 26ft hydraulic hoses between the helm pump and the steering cylinder. The hoses are equipped with quick-fit 5/16" fittings and comply with SAE 100R7 standards. Ensure connections are tight to prevent leaks. Pay close attention to the port and starboard connections; incorrect connections may result in reversed steering. Bleeding the system will be necessary after connection.



Image 5.3: Hydraulic hoses with quick connectors.

5.4. System Diagram

Refer to the diagram below for a visual representation of the complete system connection.



Image 5.4: System connection diagram.

5.5. Compatibility

This hydraulic steering system is suitable for outboard motors up to 90HP. Consult the compatibility chart below for specific engine models and years.

Suitable For a Wide Range of Boats

Hydraulic Steering System up to 90hp

ENGINE	POWER	YEAR
Yamaha	60-70 2 Stroke	1984-2008
	75C-90 2 Stroke	1998-2008
	F40G-F70 4 Stroke	2010-today
	F30-F40-F60-F75-F80-F90 EFFI 4 Stroke	1999-2007
	F80 4 Stroke	2000-today
	F40D-F50F-F60C EFI 4 Stroke	2004-today
Honda	BF40-50-60-75-90 4 Stroke	1995-today
	BF90 V-TEC 4 Stroke	2008-today
Suzuki	DF40-50-60-70-80-90 4 Stroke	1998-today
Tohatsu	40-50-60-70-90 2 Stroke	2004-today
	75-90 2 Stroke	2004-today
Nissan	40-50TLDI 4 Stroke	2004-today
	70-90 TLDI 4 Stroke	2004-today
Mercury Mariner	50-75-90 2 Stroke	1990-2008
	75-90-115 Optimax 2 Stroke	2004-today
	40-50-60-EFI 4 Stroke	2004-today
	75-80-90 EFI 4 Stroke	2000-today
Evinrude	E40-E50-E55-E60 2 Stroke	2004-today
	E75-E90 2 Stroke	2004-today
Selva	40XS-50 Madeira 2 Stroke	1995-today
	40XS-50 Bull shark 2 Stroke	
	40XS-60 Grey shark 2 Stroke	
	40XS-70 Mako shark 2 Stroke	
	40XS-60 St. Tropez 2 Stroke	
	80 Portofino/Tigershark 2 Stroke	
	25 Kingfish 4 Stroke	
	40 Aruana 4 Stroke	
40XS-40XSR-50-60 Dorado EFI 4 Stroke		
	40XSR EFI Murena 4 Stroke	
Johnson	BJ60-70 4 Stroke	2001-2007
	BJ90 4 Stroke	2001-2007
	J90 V4 2 Stroke	1995-2007

Image 5.5: Engine compatibility chart.

6. OPERATING INSTRUCTIONS

Once installed and bled, your VEVOR hydraulic steering system provides smooth and precise control. Operate the steering wheel as you would a conventional system. The hydraulic lock valve in the helm ensures positive rudder lock, maintaining your desired course.

- **Initial Check:** Before each use, perform a visual inspection of the steering system for any visible leaks or damage.
- **Smooth Operation:** The system is designed for effortless steering. If you experience unusual resistance or

looseness, refer to the troubleshooting section.

- **Full Range of Motion:** Periodically turn the steering wheel to its full lock positions in both directions to ensure proper function and to help circulate hydraulic fluid.

7. MAINTENANCE

Regular maintenance ensures the longevity and reliability of your hydraulic steering system.

- **Fluid Level Check:** Regularly check the hydraulic fluid level in the helm pump reservoir. Top up with recommended hydraulic fluid as needed.
- **Leak Detection:** Inspect all hoses, fittings, and seals for any signs of hydraulic fluid leaks. Address leaks immediately to prevent system failure.
- **Corrosion Prevention:** For marine environments, it is highly recommended to wash down the entire boat, including steering components, with fresh water after every use. Apply corrosion-inhibiting products like Corrosion X or Fluid Film at the end of each season to protect metal parts.
- **Component Inspection:** Periodically check the steering cylinder, helm, and hoses for physical damage, wear, or excessive play.
- **Bleeding:** If the steering feels spongy or unresponsive, the system may have air and require re-bleeding.

8. TROUBLESHOOTING

This section addresses common issues you might encounter with your hydraulic steering system.

Problem	Possible Cause	Solution
Steering feels spongy or loose	Air in the hydraulic system	Bleed the hydraulic system thoroughly to remove air. This can be a challenging process and may require specialized tools or professional assistance.
Steering is stiff or difficult to turn	Low hydraulic fluid level; Obstruction in hoses; Damaged cylinder or helm; Incorrect fluid type	Check and top up hydraulic fluid. Inspect hoses for kinks or blockages. Inspect cylinder and helm for damage. Ensure correct hydraulic fluid is used.
Hydraulic fluid leaks	Loose fittings; Damaged hoses or seals; Over-pressurization	Tighten all fittings. Replace damaged hoses or seals. Ensure system is not over-pressurized.
Steering direction is reversed	Hoses connected to incorrect ports on helm or cylinder	Verify and correct the hose connections between the helm and cylinder. The port and starboard connections must be accurate.

9. WARRANTY AND SUPPORT

For warranty information, technical support, or to inquire about replacement parts, please contact VEVOR customer service. Refer to your purchase documentation or the VEVOR official website for contact details.

VEVOR Official Website: www.vevor.com

