

Thruster Grease Overhaul

Introduction

The LBV² is fitted with four identical thrusters. Protecting the shaft seal and shaft is a grease gallery. After approximately 50 hours of use it is recommended that the grease be refreshed. The process is very simple and the special grease is supplied.



Work Environment

Prior to beginning ensure you have a clean and dry workspace. Locate the required tools and parts and have paper towels available. It is a good idea to have a container to keep fasteners in as they are removed. Read through the instructions fully prior to beginning and make sure you understand what they are asking you to do.


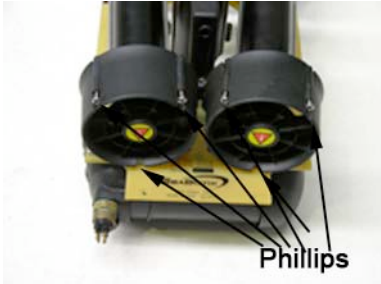


Reading Manual



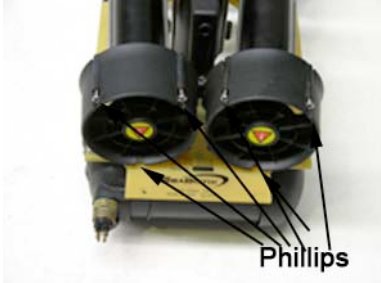
Below is a list of the required tools, estimated time to complete and level of difficulty. Next to each step where a tool is required the tool is listed. Some of the steps have special notes that must be observed.

Tools Required	Time to complete	Level of Difficulty
<ul style="list-style-type: none"> • #2 Phillips Screwdriver • Kluber grease 	<ul style="list-style-type: none"> • 5 minutes • 20 minutes including other procedures 	<ul style="list-style-type: none"> • Easy



Prior to working on the LBV make sure the power is off and the umbilical is DISCONNECTED.

	<p>Prior to performing this procedure you must first follow these procedures:</p> <ul style="list-style-type: none"> • Shell/Bumper frame removal • Flotation module removal
	<p><u>Step 1</u></p> <p>Place vehicle upside down.</p>
	<p><u>Step 2 - #2 Phillips Screwdriver</u></p> <p>Remove the six (6) Phillips head screws securing the forward Kort nozzles to the forward thruster assemblies and remove Kort nozzles.</p>
	<p><u>Step 3 - #2 Phillips Screwdriver</u></p> <p>Remove the black plastic Phillips head screw at the propeller end of each thruster end cap. Four (4) total.</p>
	<p><u>Step 4 - Kluber Grease</u></p> <p>Locate the Kluber brand grease syringe. Push the syringe into the hole exposed from the removal of the plastic screw.</p>

 <p>Excess Grease</p>	<p><u>Step 5</u></p> <p>Push grease into the gallery until the expelled grease at the opposite end of the propeller end cap is clean grease.</p>
	<p><u>Step 6</u></p> <p>Repeat steps 11 and 12 for each thruster.</p>
 <p>Seal Screw</p>	<p><u>Step 7 - #2 Phillips Screwdriver</u></p> <p>Reinstall the black plastic screws into each thruster propeller end cap being careful not to over tighten.</p>
	<p><u>Step 8</u></p> <p>Wipe away excess grease from each thruster.</p>
 <p>Phillips</p>	<p><u>Step 9 - #2 Phillips Screwdriver</u></p> <p>Install the Kort nozzle on the forward thrusters inserting and tightening the 6 Phillips pan head screws.</p> <p>Note: do not over tighten and strip the threads.</p>

	<p>Once complete follow the procedures to:</p>
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- **Install flotation module**
- **Install Shell/Bumper frame**