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INSTALLATION INSTRUCTIONS AND OWNER'S MANUAL

HYDRASTIK® HS-2500 HYDRAULIC STEERING SYSTEM

WARNING: Unsafe practices could result in personal injury or death.

Maintain your Hydraulic Steering System and it can give you years of boat steering satisfaction. Follow safe boating standards. Make your day on the water a pleasant one.

USE ONLY FLUIDS MEETING H5606 SPECIFICATIONS

Items included in HydraStik® Hydraulic Steering System Kit (HS-2500):

- (1) Hydraulic Helm Pump HP-250
- (2) Hydraulic Hose with fittings HO-2
- (1) Universal Hydraulic Cylinder CY-U15
- (1) Installation Package IP-1
- (1) HydraStik® Lever
- (1) Bezel

NOTE: Hydraulic fluid is included in this kit. To order HydraGlide® Hydraulic Fluid from Ezy-Glide, Inc., use part number HF-2 (includes 1 quart).



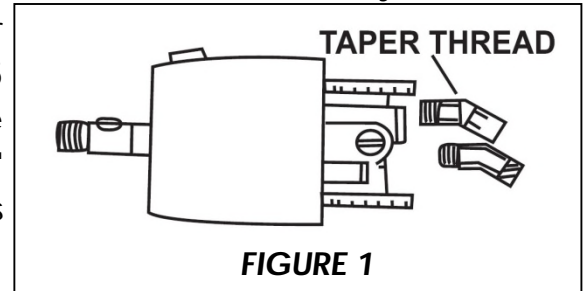
DON'T COMPROMISE PERFORMANCE! USE GENUINE EZY-GLIDE, INC. PARTS ONLY!

BEFORE OPERATING YOUR BOAT:

1. Test the steering system. Complete two (2) full cycles with the engine being taken from hard over to hard over in both the fully tilted DOWN and fully tilted UP positions. During this operation, inspect ALL moving components to ensure that no interference or restriction of mechanical components is present through the full range of travel including:
 - NO interference between cylinder, drag link, fasteners, engine cowling, tie-bar, transom, splashwell or other surfaces;
 - NO stretching, crushing or restriction of movement of hydraulic lines, kinking or chafing of lines against bulkhead/splashwell entry points or any other contact points.
2. Confirm that there is no interference between the steering cylinder and the transom, splashwell or jackplate or any positional combination of these parts by performing these simple steps.
3. Confirm that the hydraulic hose is situated correctly.

INSTALLING HELM PUMP

Make sure that the position that you choose to mount the helm is free of any obstacles. Make sure that the lever will not interfere with other equipment. Tape the mounting template (see page 5 of this manual) to the installation point. Mark the position of the holes to be drilled. Drill one (1) 3" diameter hole and four (4) 3/8" diameter mount holes as shown on template.



After completing the 3" hole for the helm, push the back of the helm through the 3" hole along with the 3/8" holes to receive the bolts to secure the helm. Tighten the four mount bolts to mount the helm to 100 in/lbs, not to exceed 110 in/lbs.

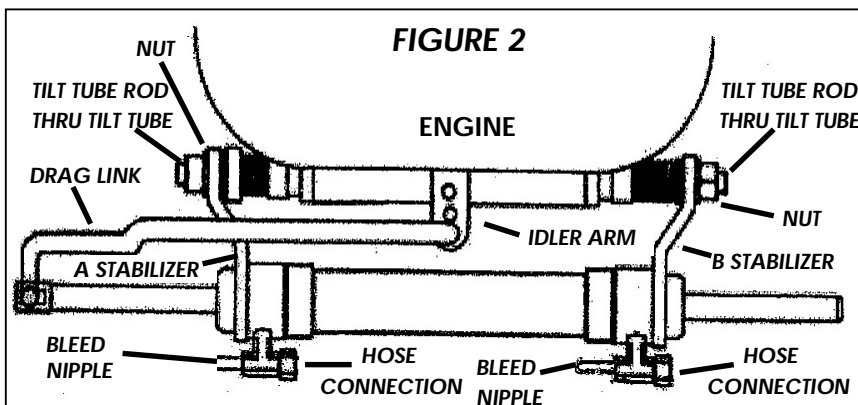
INSTALLING THE HUB

Lightly grease the steering shaft. The shaft has a slot for a key way. After the key is in place on the steering shaft, slip the hub onto the shaft. Make sure the key is still in place. Then begin tightening the nut onto the shaft. Tighten the shaft nut to 150 in/lbs, not to exceed 190 in/lbs.

MOUNTING THE LEVER

The bottom of the lever has four holes. The hub has twelve holes. With the engine in straight-ahead position, install the lever to the upright position. Use the four stainless screws to secure the lever to the hub. Tighten the screws to 90 in/lbs, not to exceed 105 in/lbs. The matching holes on the lever and hub may be used to adjust lever position if desired.

INSTALLING THE UNIVERSAL CYLINDER



1. Make sure the tilt tube is clear of any debris.
2. Lubricate all threads and tilt tube.
3. After inserting the rod through the tilt tube, attach A & B stabilizer to each end of the rod as shown. Now tighten the nuts on each end of the rod to 15 ft/lbs each.

4. Install the drag link to the idler arm and the other end to the guide rod as shown in figure 2. The tilt tube nuts should be tightened to 15 ft/lbs.

HYDRAULIC HOSE INSTALLATION

Steering hoses and the way they are installed are very important to the safe operation of your steering system. We recommend the use of Ezy-Glide, Inc. steering hoses only. Using other hoses may not be suitable for safe operation of your boat. Hoses that have been altered and/or cut will be useless.

Hoses must be protected from rubbing any sharp edges of any kind. Make sure your hoses are installed well away from any high heat. Install away from any battery fumes or electrical connections. Some use protective covers like PVC for added protection.

Hoses should not be bent tighter than 3 ½" radius. Hose lengths should be long enough for cylinder movement through all operation. Hoses may be crossed either at the hydraulic pump or at the cylinder, but NOT both locations.

The protective caps should be left on until installation is completed, with exception of the hose hook-up. This will prevent any foreign substance from entering the hose.

HYDRAULIC HOSE CONNECTION

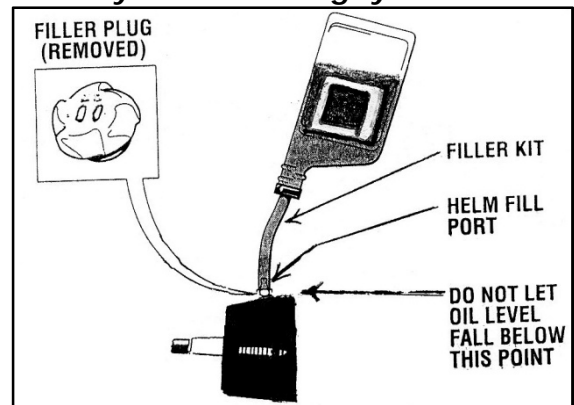
One hose has a green tape. The other has red tape. These ends are to hook to the helm pump. Install the Green hose to the "S" for starboard marked on the pump. Install the Red hose to "P" port connection on the pump. Run these hoses to the back for connection to the cylinder. Cross the hoses and connect each to the cylinder.

FILLING & PURGING YOUR SYSTEM

IMPORTANT NOTICE: Two persons are required for this procedure. One person may not be able to remove all the air from the system which can prevent stops at the end of rotation, cause handle drifts or unresponsive steering. A power/electric bleeding/purging system will make this process much more efficient and will help prevent air "bubbles" that cannot be removed by hand. Most marine dealers have a power bleeding machine for use with all hydraulic steering systems.

Place a drop cloth under the cylinder and loosen the bleeder valves. Cylinder should be in the retracted position.

1. Remove the oil cap from the helm.
2. Insert the fill plug into the helm.
3. Attach fill tube to the oil container.
4. Place finger over the end of tube and invert oil container. Slowly allow the air to escape from the fill tube until the oil has filled the tube.
5. Next attach the filler tube to the fill plug.



While filling & purging never let fluid level drop below ¼" of fill hole.

6. With the steering lever attached, rotate the handle counter-clockwise (from operators position) slowly until oil begins to bleed out from the valve at the cylinder, at this point close adjacent bleeder valve and continue to rotate handle counter-clockwise until the cylinder rod is fully extended. *NOTE: if rod does not extend reverse hoses at the cylinder.*
7. Hold slight pressure on lever and close bleeder valve.
8. Connect filler tube to second oil container. (continued on page 4)

9. Open second bleeder valve and begin to slowly rotate the steering lever clockwise until the cylinder rod is fully retracted.
10. Hold slight pressure on lever and close bleeder valve.
11. Slowly rotate lever until cylinder stops then reverse. If handle rotates smoothly your system is filled and purged. If you feel any "skips" while rotating lever you have air trapped in the line. Trapped air can be removed by slightly cracking bleeder valve and rotating lever until air pockets have been removed.

Failure to do this may result in stiff steering. Any hoses that are stretched upon turning the lever must be replaced for correct length hoses. Upon system check, make sure that a counter-clockwise will direct the boat to the left. Make sure there are no restrictions. Make sure you have no leaks before operating this system.

TROUBLESHOOTING

<i>FAULT</i>	<i>SOLUTION</i>
During filling of hydraulic fluid, the helm becomes hard or completely frozen.	Check for faulty fittings and replace.
Difficult to fill system. Air keeps coming out of helm fill port.	<ol style="list-style-type: none"> 1. Cylinder may be mounted wrong. Check cylinder installations. 2. Tighten fittings. Make sure hose is not crimped.
Steering is hard to turn.	Check valves and remove foreign substances.
Steering is easy to turn until boat is in motion.	Adjust the trim tab. Re-test. Fill and purge again. Over HP usage of 90hp.
Boat drifts right or left while underway and the lever isn't moving.	Clean ball seats. Clean valves and re-assemble.

As the manufacturer of the Hydra-Stik® steering system, we recommend a maximum horsepower usage of 90 OB (Outboard).



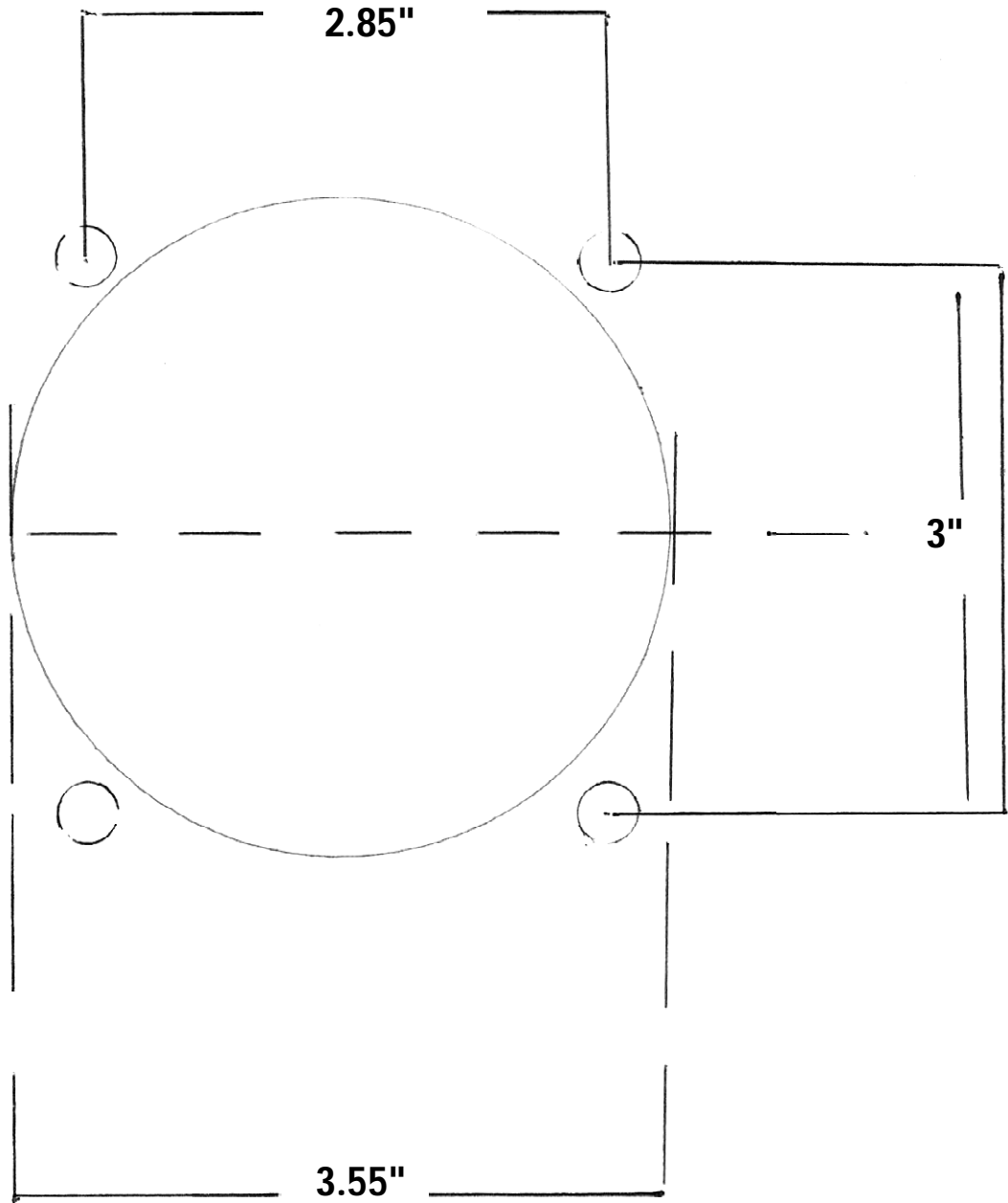
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Ezy-Glide, Inc. Hydraulic Steering systems will provide years of safe and satisfactory service with a minimum upkeep when properly installed and with the correct cylinder.

Thank you for your patronage of Ezy-Glide, Inc. steering systems. If we may be of service or assistance, please feel free to call us at (800) 874-7861.

HELM MOUNTING TEMPLATE

PRINT AT ACTUAL
SIZE! No Scaling
to fit paper.
Template will not
be correct size.



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Ezy-Glide, Inc. warrants these products for **THREE YEARS** from purchase date, against defective material or workmanship (abuse, accident or improper use not included). Tampering and/or redesign for various reasons including purpose to install parts not designed or tested for use in these steering systems, will also void this warranty.

Ezy-Glide, Inc. will at its option, repair, replace or issue credit for items found defective within **THREE YEARS** of date of purchase:

- A. *The product shipped pre-paid;*
- B. *Inspection by **Ezy-Glide, Inc.** determined that the product is defective, without evidence of abuse, improper use or accident.*

No warranty applies to a product's fitness for specific application. It will be so stated when a product is generally suited for an application. However, since we control neither specific applications nor specific use, we warrant nothing beyond specifications per print.