

OMC STERN DRIVE

SAIL DRIVE KIT

INSTALLATION INSTRUCTIONS

SAFETY

THE SAFETY SYMBOLS ARE TO ATTRACT YOUR ATTENTION TO POSSIBLE DANGERS. THE SYMBOLS, AND THE EXPLANATIONS WITH THEM, DESERVE YOUR CAREFUL ATTENTION AND UNDERSTANDING. SAFETY WARNINGS DO NOT ELIMINATE ANY DANGER, AND THE INSTRUCTIONS OR WARNINGS ARE NOT SUBSTITUTES FOR PROPER PREVENTION MEASURES.



SAFETY WARNING

FAILURE TO OBEY A SAFETY WARNING MAY RESULT IN INJURY TO YOU OR TO OTHERS.



NOTE

ADVISES YOU OF INFORMATION ESPECIALLY USEFUL IN THE INSTALLATION OF YOUR OMC SAIL DRIVE.

SOME WARNINGS AGAINST THE USE OF SPECIFIC INSTALLATION PROCEDURES, WHICH CAN DAMAGE THE SAIL DRIVE OR RENDER IT UNSAFE, ARE STATED IN THESE INSTRUCTIONS. PLEASE REMEMBER THAT THESE WARNINGS ARE NOT INCLUSIVE; SINCE, WE CANNOT EVALUATE AND ADVISE YOU OF ALL PROCEDURES AND HAZARDS. ACCORDINGLY, IF YOU USE AN INSTALLATION PROCEDURE OR EQUIPMENT WHICH IS NOT RECOMMENDED BY OMC STERN DRIVE, YOU MUST SATISFY YOURSELF THAT NEITHER YOUR SAFETY NOR THE UNIT'S SAFETY WILL BE JEOPARDIZED BY THE INSTALLATION PROCEDURE OR EQUIPMENT SELECTED.



SAFETY WARNING

PROPER INSTALLATION IS IMPORTANT FOR THE SAFE, RELIABLE OPERATION OF ALL MECHANICAL PRODUCTS. THE PROCEDURES WE RECOMMEND AND DESCRIBE IN THESE INSTRUCTIONS ARE EFFECTIVE METHODS FOR PERFORMING OPERATIONS. SOME OPERATIONS REQUIRE THE USE OF EQUIPMENT DESIGNED FOR THE PURPOSE; THIS SHOULD BE USED WHEN AND AS RECOMMENDED.

GENERAL

PURPOSE

The OMC Sail Drive is designed for an auxiliary powered sail boat. The following instructions are planned to simplify the OMC Sail Drive installation.



SAFETY WARNING

OMC Sail Drive is designed for sailboats 22 to 32 feet in length. If used on craft weighing less than 1000 lbs., start-in-gear protection must be used to prevent unexpected accelerations which could result in falls or loss of control.

INSTALLATIONS



NOTE

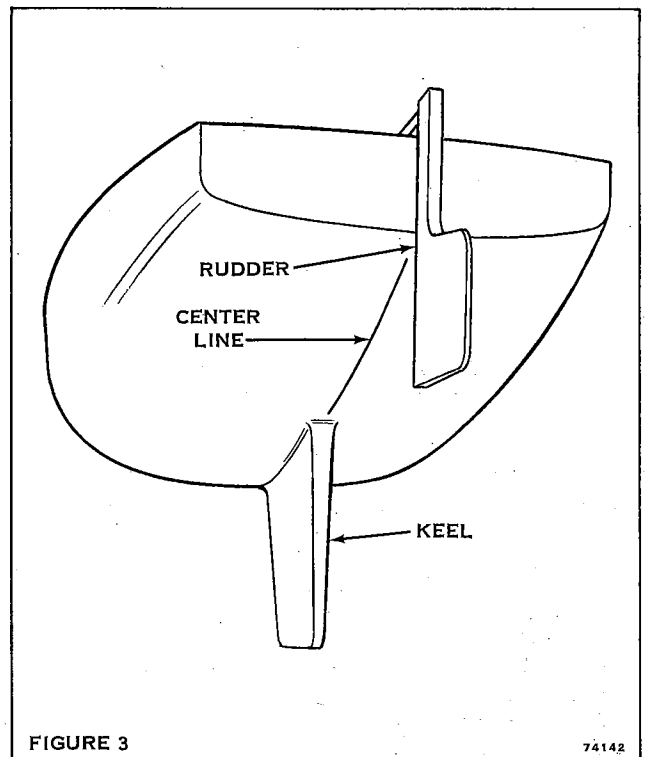
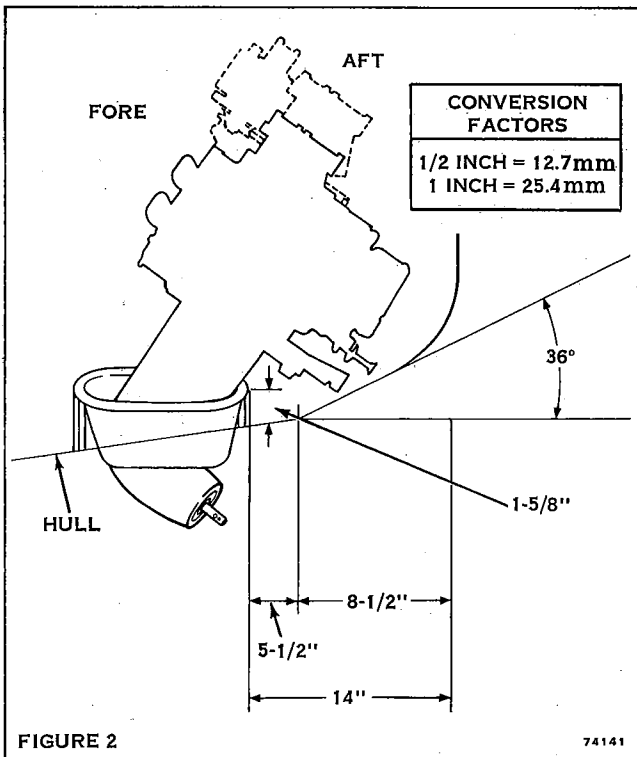
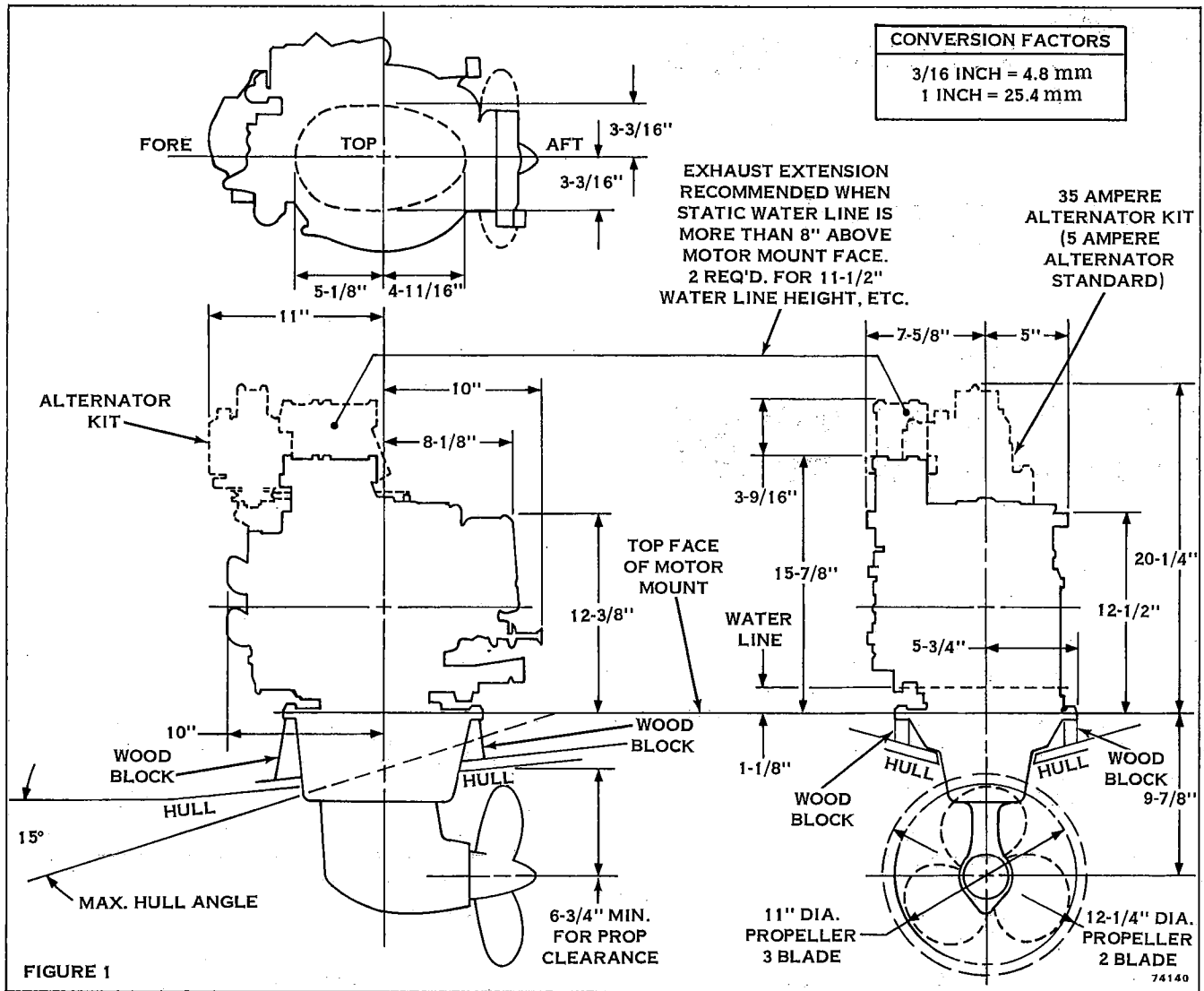
It is strongly recommended that each hull model be type tested to determine compatibility of all components used in the installation of the Sail Drive engine. For prototype installation approval, contact:

Sales Engineering Department
OMC Stern Drive
3145 Central Ave.
Waukegan, IL 60085
Phone: (312) 689-5700

OMC LIMITED WARRANTY (FOR COMPLETE WARRANTY SEE OWNER'S/OPERATOR'S MANUAL.)

The following is an excerpt from the OMC Warranty:

The warranty does not apply to any damage to an OMC Stern Drive Product that is the result of improper installation or maintenance, or to any such product that has been operated or maintained in any way contrary to the operating or maintenance instructions as specified in the OMC Stern Drive Owner's-Operator's Manual for the product. The warranty does not cover any OMC Stern Drive Product that has been altered or modified so as to adversely affect the product's operation, performance or durability, or that has been altered or modified so as to change the intended use of the OMC Stern Drive Product. In addition, the warranty does not extend to repairs made necessary by normal wear, or by the use of parts or accessories which in the reasonable judgment of OMC are either incompatible with the OMC Stern Drive Product or adversely affect its operation, performance or durability.



INSTRUCTIONS

1. As shown in Figures 1 and 2, determine where the Sail Drive engine will be installed, and draw a center line in this area as shown in Figure 3.

NOTE

The motor should be installed between the keel and rudder with enough clearance for the propeller. See Figure 1.

2. The hole for the motor mount can be cut from outside or inside of the hull. If cutting from the outside of the hull, remove the paper protecting the adhesive backing on the template. Locate the template on the centerline and apply it to the hull.

3. If cutting from inside the hull, do not remove the paper from the adhesive. Locate the template on the centerline on the outside of the hull. Drill two 1/8 inch holes on the centerline, locating one near the word "Aft" and the other near the word "Fore." Remove the paper protecting the adhesive backing on the template and locate the template over center line on the inside of the hull.

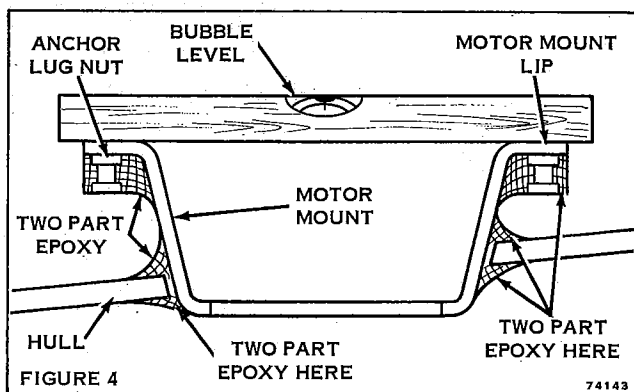
NOTE

Depending on the hull contour and thickness, the cutout may require enlargement.

Cut the hole with an appropriate saw making the edge vertical, not perpendicular to the hull contours.

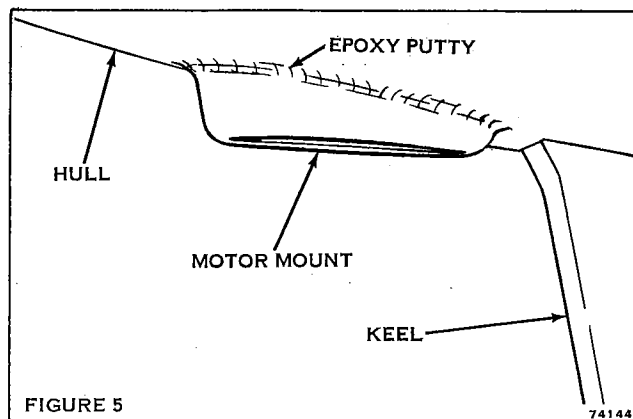
4. The exterior of the motor mount should be wiped with methylene chloride, and the interior of the hull around the cutout should be rough sanded to insure good adhesion.

5. Fit the motor mount into the cutout. A snug fit is desired fore, aft, and side to side. Level the mount with respect to the static water line. See Figure 4.



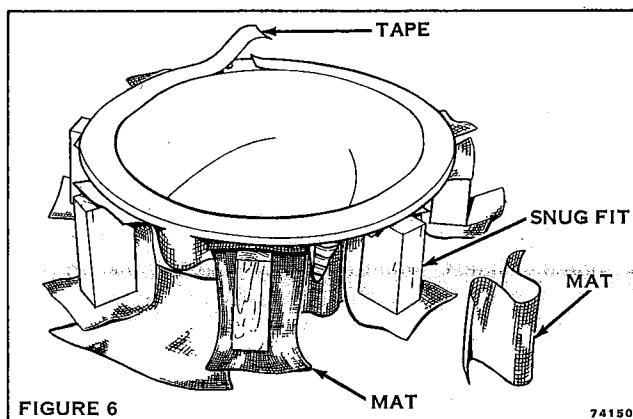
6. Using masking tape, mask the top lip of the mount to prevent fiberglass and epoxy from adhering to it. (The lip is a gasket surface.)

7. Using the two-part epoxy kit (OMC No. 980259 is available from OMC Stern Drive Sales Department), fill in the areas between the motor mount lip and interior hull (follow mixing instructions on can). See Figure 4. Make sure that the anchor-lug nuts are well covered. Apply epoxy putty to the exterior hull



and motor mount so that the hull and mount blend smoothly. See Figure 5.

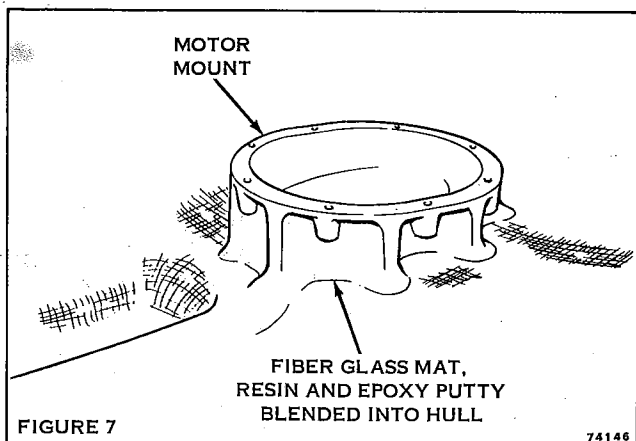
8. Cut eight wood blocks to fit in areas between lip of motor mount and inside of hull. See Figure 6. The blocks must fit snugly into curvatures of hull and motor mount with clearance for fiberglass mat and resin. Completely wrap wood blocks with fiberglass mat.



NOTE

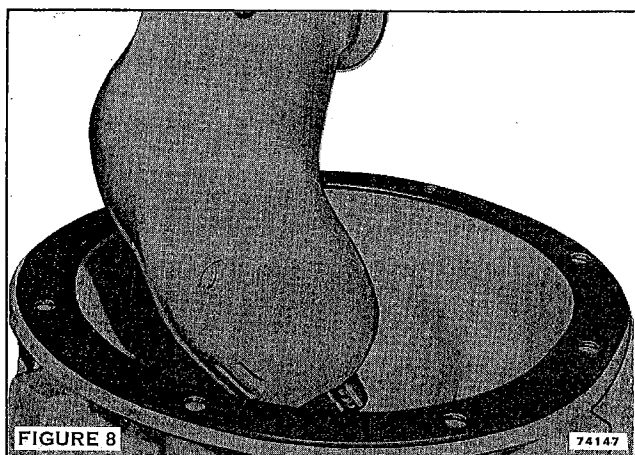
A strong bond is necessary between wood blocks, motor mount lip and hull.

9. After fiberglass has cured, additional epoxy putty should be used to fill in any voids and to form a smooth radius on all interior corners. See Figure 7.



10. After the epoxy has cured and been faired on the exterior hull, remove the masking tape from the motor mount lip. Position the gasket on the motor mount lip using OMC Gasket Sealing Compound, Part No. 317201 around the bolt holes to keep the gasket in place.

11. Insert Sail Drive gearcase into motor mount hole. (Tipping powerhead aft will allow greater clearance for the gearcase to pass through the mount hole.) See Figures 2 and 8.

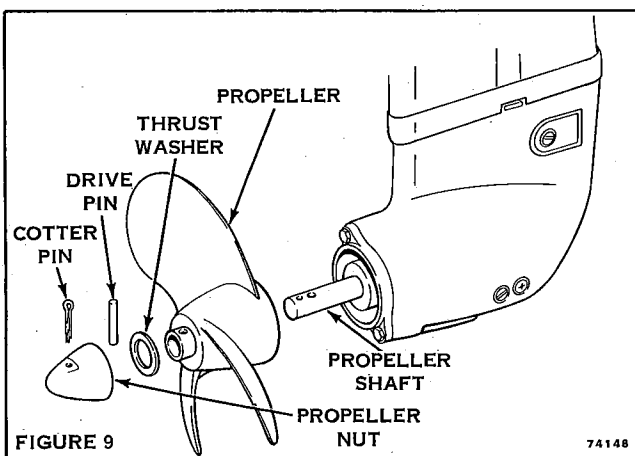


12. Align powerhead flange bolt holes with motor mount holes. Insert supplied bolts and torque to 15-20 foot-pounds using a crisscross pattern.

SAFETY WARNING

Failure to perform all the above installation steps properly may result in leakage and possible sinking of boat.

13. Attach Sail Drive propeller as shown in Figure 9.



14. At this time, a dash panel can be installed. Follow the instructions supplied with the panel and wiring harness for installation procedure.

15. Install the following equipment:

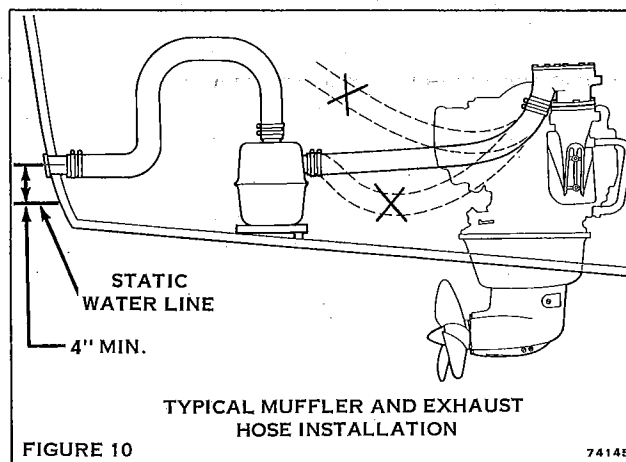
- a. Throttle and shift control

SAFETY WARNING

Use single lever controls to prevent damage to shift system parts which can occur by repeated shifting at elevated engine speeds. Failure of the shift system may result in loss of control.

If dual lever controls must be used, a tachometer is recommended to ensure shifting is done at idle engine speed.

- b. Throttle and shift control cables
- c. Exhaust hose and thru-hull fitting
- d. Fuel line-to-engine and fuel tank
- e. Battery
- f. Bilge blower
- g. All other engine accessories, other than OMC manufacture



16. Exhaust hose, elbow to muffler, must not droop or pitch upward. Hose must pitch downward. Through hull exhaust fitting must be a minimum of 4 inches above the static water line. Figure 10 shows a typical muffler and exhaust hose application.

SAFETY WARNING

Check exhaust system for leaks. Carbon monoxide is a colorless, odorless gas which can be fatal.

17. Throttle and shift control cable connections must be attached and lubricated with OMC Anti-Corrosion Lube. See Figure 11. See control and cable manufacturer's instructions for further assembly procedures.

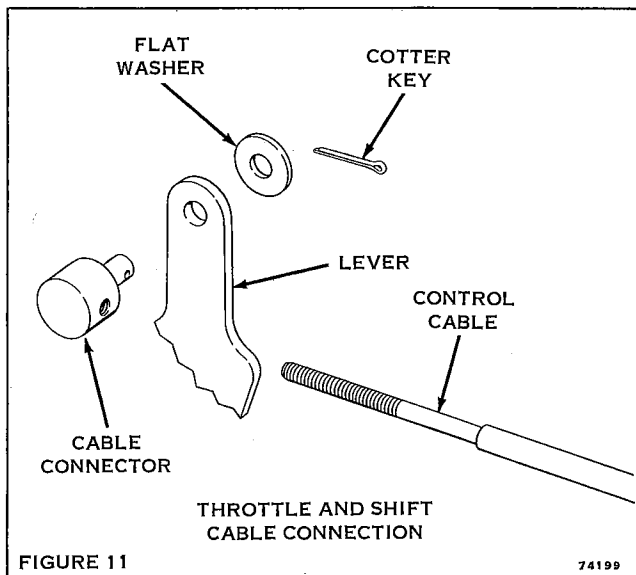


FIGURE 11

▲ SAFETY WARNING

The preceding equipment is installer supplied and must meet or exceed all United States Coast Guard (USCG) requirements, Boating Industry Association (BIA), or American Boat and Yacht Council, Inc. (ABYC) safety standards. It is the installer's responsibility to ascertain the compatibility of all components used with the installation of the Sail Drive engine.

18. Install primer-filter assembly in location that will be accessible for normal starting procedures and regular maintenance. Location of primer-filter close to fuel tank is best for easier cold starting. The anti-syphon valve and primer filter assemblies supplied with the OMC Sail Drive must be installed and tested as required by ABYC safety standards.

BATTERY REQUIREMENTS

In order to operate the engine starting system, a 12 volt (V) battery is required (not supplied with engine). For best performance, we recommend a 12 V, 70 ampere-hour battery or better, with a minimum of 2 minutes cold starting capacity at 300 amperes discharge, 0°F (minus 17.8°C), and a 10 second voltage rating of 7.5 V.

Battery should be installed in a battery box and properly secured to the boat.

■ NOTE

Connecting the cables to the battery should be the last step in your installation. **BE SURE NEGATIVE (-) BATTERY CABLE, BLACK, IS SECURELY ATTACHED TO NEGATIVE TERMINAL ON BATTERY AND POSITIVE (+) BATTERY CABLE, RED, IS SECURELY ATTACHED TO POSITIVE TERMINAL ON BATTERY.** If the cables are reversed, the charging unit will be immediately damaged. Do not attempt to connect or disconnect any part of the electrical circuit while the motor is running.

▲ SAFETY WARNING

Do not run engine with battery cable disconnected. If cable end becomes grounded, electrical sparks may occur which could result in fire or explosion.

ALTERNATORS

FIVE AMPERE ALTERNATOR

The alternator on the Sail Drive engine will keep the battery charged during normal operation.

All accessories, except as indicated in OMC Accessory Installation Instructions, should be properly fused and connected directly to battery.

THIRTY-FIVE AMPERE ALTERNATOR

A 35 ampere alternator is available in two versions, high mount or low mount, and both in accessory kit form. Both operate in conjunction with the standard 5 ampere alternator, and both have all necessary wiring, belt guards, and instructions. The manifold extension kit may be required with the high mount alternator kit.

▲ SAFETY WARNING

Do not substitute fuel or electrical system parts. See your dealer for authorized parts. Use of parts other than specified may result in fuel vapors and/or electrical sparks (ignition sources) in the engine compartment.

INFORMING THE FUTURE OWNER

These installation instructions contain information vital to the safe and reliable operation and maintenance of the OMC Sail Drive. The installer should ensure these instructions and OWNER'S/OPERATOR'S MANUAL are given to the future owner.

OMC STERN DRIVE

A DIVISION OF OUTBOARD MARINE CORPORATION

3145 CENTRAL AVENUE • WAUKEGAN, ILLINOIS • 60085

© OUTBOARD MARINE CORPORATION 1976 ALL RIGHTS RESERVED

PART NO. 322319 11/76 REV 1

LITHO IN U.S.A.