



**merCruiser**  
**SERVICE**  
**MANUAL**

Number 5

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**Stern Drive Units**  
**TR • TRS**

# STERN DRIVE UNITS - TR • TRS SERVICE MANUAL OUTLINE

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# GENERAL INFORMATION

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A



## IMPORTANT INFORMATION




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## Notice

Throughout this publication, "Dangers", "Warnings" and "Cautions" (accompanied by the International HAZARD symbol ) are used to alert the mechanic to special instructions concerning a particular service or operation that maybe hazardous if performed incorrectly or carelessly. — OBSERVE THEM CAREFULLY! These "Safety Alerts" alone cannot eliminate the hazards that they signal. Strict compliance to these special instructions when performing the service, plus "common sense" operation, are major accident prevention measures.

### DANGER

#### DANGER —

Immediate hazards which WILL result in severe personal injury or death.

### WARNING

#### WARNING —

Hazards or unsafe practices which COULD result in severe personal injury or death.

### CAUTION

#### CAUTION —

Hazards or unsafe practices which could result in minor personal injury or product or property damage.

## Notice To Users of This Manual

This service manual has been written and published by the service department of Mercury Marine to aid our dealers' mechanics and company service personnel when servicing the product described herein. It is assumed that these personnel are familiar with the servicing procedures of this product, or like or similar products manufactured and marketed by Mercury Marine. That they have been trained in the recommended servicing procedures of these products which includes the use of mechanics' common hand tools from other suppliers.

We could not possibly know of and advise the service trade of all conceivable procedures by which a service might be performed and of all possible hazards and/or results of each method. We have not undertaken any such wide evaluation. Therefore, anyone who uses a service procedure and/or tool which is not recommended by the manufacturer, first must completely satisfy himself that neither his nor the product's safety will be endangered by the service procedure selected.

All information, illustrations, and specifications contained in this manual are based on the latest product information available at time of publication.

As required, revisions to this manual will be sent to all dealers contracted by us to sell and/or service these products.

## Models Covered In This Manual

MCM TR/TRS TRANSOM ASSEMBLY WITH POWER STEERING

Serial Number 4922510 and above.

MCM TR/TRS TRANSOM ASSEMBLY WITHOUT POWER STEERING

Serial Number 4922285 and above.

MCM TR STERN DRIVE - Left Hand Rotation

Serial Number 5009867 and above.

MCM TR STERN DRIVE - Right Hand Rotation

Serial Number 5010092 and above.

MCM TRS STERN DRIVE - Left Hand Rotation

Serial Number 4895290 and above.

MCM TRS STERN DRIVE - Right Hand Rotation

Serial Number 4895730 and above.

## How To Use This Manual

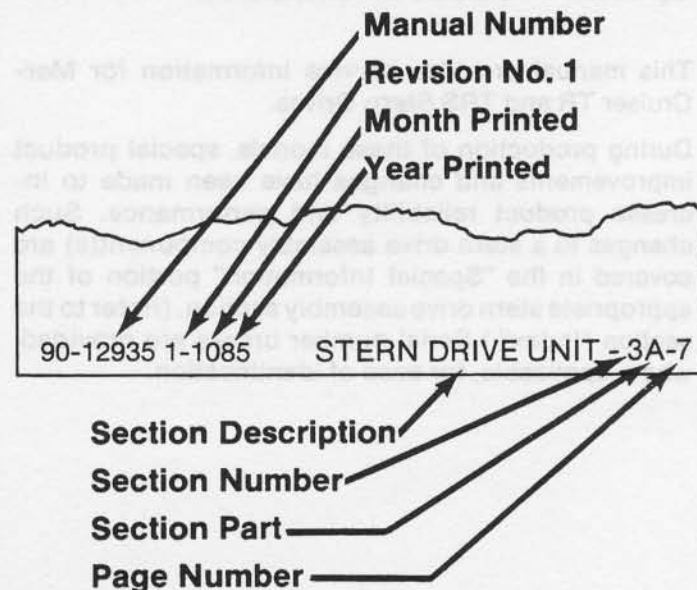
This Manual is divided into sections which represent major components and systems.

Some sections are further divided into parts which more fully describe the component.

Sections and parts are listed on page.

### PAGE NUMBERING

Two number groups appear at the bottom of each page. Following is an example and description.





## Introduction

This comprehensive overhaul and repair manual is designed as a service guide for the MerCruiser models previously listed. It provides specific information, including procedures for disassembly, inspection, assembly and adjustment, to enable dealers and service mechanics to repair these products.

Before attempting repairs, it is suggested that procedure first be read through to gain knowledge of the methods and tools used and the cautions and warnings required for safety.

## Replacement Parts

### ⚠WARNING

Electrical system components on MerCruiser Stern Drives are designed and manufactured to comply with U.S. Coast Guard Rules and Regulations to minimize risks of fire or explosion.

Use of replacement electrical system components, which do not comply to these rules and regulations, could result in a fire or explosion hazard and should be avoided.

When servicing electrical systems, it is extremely important that all components are properly installed and tightened. If not, any electrical component opening would permit sparks to ignite fuel vapors from fuel system leaks, if they existed.

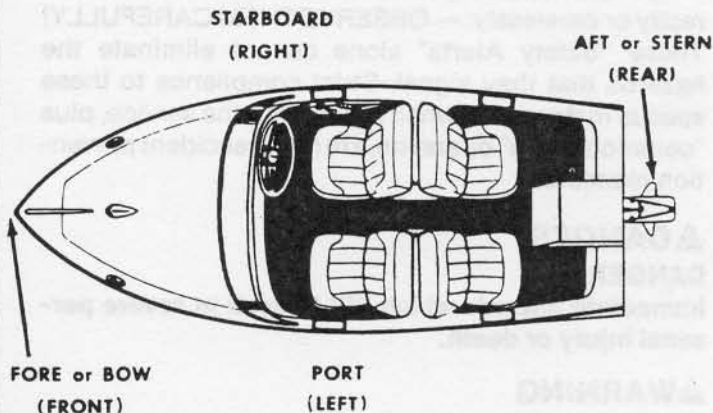
## Special Product Information

This manual provides service information for MerCruiser TR and TRS Stern Drives.

During production of these models, special product improvements and changes have been made to increase product reliability and performance. Such changes to a stern drive assembly component(s) are covered in the "Special Information" portion of the appropriate stern drive assembly section. (Refer to the section "Index".) Serial number breaks are provided, where applicable, for ease of identification.

## Directional References

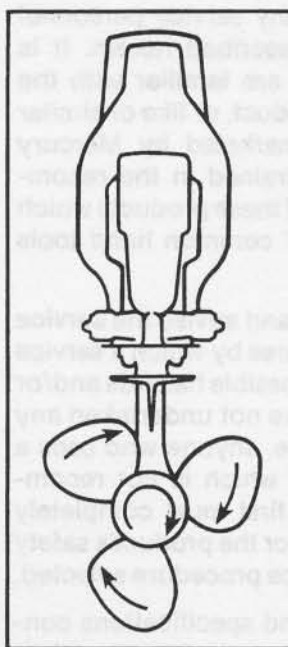
Front of boat is bow; rear is stern. Starboard side is right side; port side is left side. In this service manual, all directional references are given as they appear when viewing boat from stern, looking toward bow.



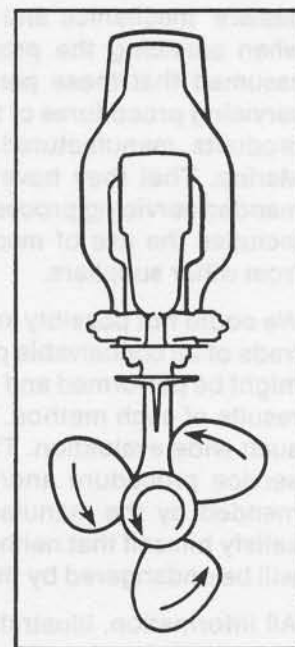
## Propeller Rotation

Propeller rotation for MerCruiser TR and TRS stern drives may be either the standard right rotation, or the optional left hand rotation.

Right hand rotation drive units will have an "RH" stamped on the propeller end of the propeller shaft. Left hand rotation drive units have no identifying stamp.

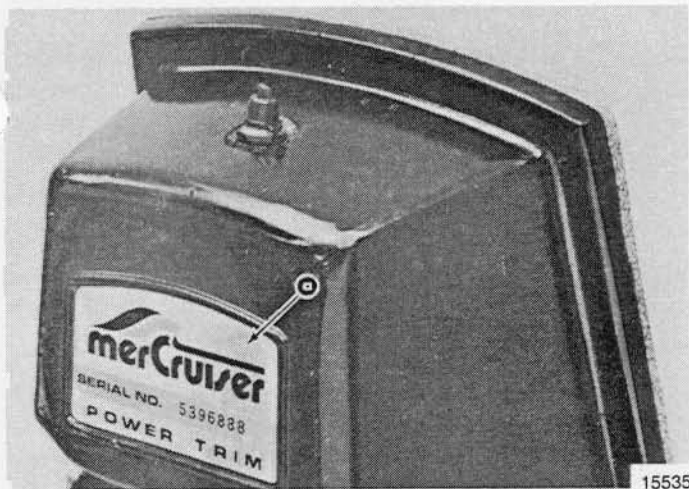


Right Hand Rotation



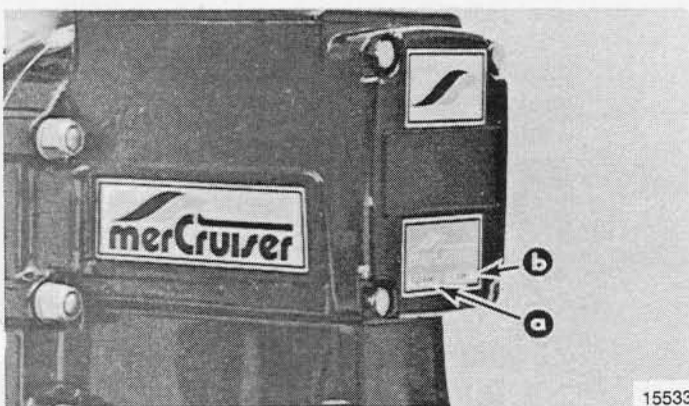
Left Hand Rotation

## Serial Number Locations



a - Transom Assembly Serial Number

### Transom Assembly Serial Number Location



a - Stern Drive Unit Serial Number

b - Stern Drive Unit Gear Ratio

### Stern Drive Unit Serial Number Location

## Hi-Performance Boating

Written by marine engineers, order Part No. 90-86168, entitled "Hi-Performance Boat Operation".

### Stern Drive Unit 10-Hour Break-In Period (New or with Replacement Gears)

1. Avoid full throttle starts.
2. DO NOT operate at any one constant speed for extended periods of time.
3. DO NOT exceed 75% of full throttle during the first 5 hours. During the next 5 hours, operate at intermittent full throttle.
4. Drive unit should be shifted into forward gear a minimum of 10 times during break-in, with run-in time at moderate RPM after each shift.

**Thank you very much  
for your reading.**

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manual instantly.**

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