



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

Number 1

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**Stern Drive Units  
and Marine Engines**

Book 1 of 2  
Sections 1 thru 5

MANUAL  
SERVICE  
NUMBER

and Machine Engines  
Stem Drive Units

Section 1 thru 5  
Book 1 of 2

## 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 products described herein.

It is assumed that these personnel are familiar with the servicing procedures of these products, 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 and the special Mercury Marine or recommended 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 the 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.

It should be kept in mind, while working on the product, that the electrical system and ignition system is capable of violent and damaging short circuits or severe electrical shocks. When performing any work where electrical terminals could possibly be grounded or touched by the mechanic, the battery cables should be disconnected at the battery.

Any time the intake or exhaust openings are exposed during service they should be covered to protect against accidental entrance of foreign material which could enter the cylinders and cause extensive internal damage when the engine is started.

It is important to note that, during any maintenance procedure, replacement fasteners must have the same measurements and strength as those removed, whether metric or customary. (Numbers on the heads of the metric bolts and on surfaces of metric nuts indicate their strength. Customary bolts use radial lines for this purpose, while most customary nuts do not have strength markings. Mismatched or incorrect fasteners can result in damage or malfunction, or possibly personal injury. Therefore, fasteners removed should be saved for re-use in the same locations whenever possible. Where the fasteners are not satisfactory for re-use, care should be taken to select a replacement that matches the original.

## Replacement Parts

### **⚠WARNING**

Electrical, ignition and fuel system components on MerCruiser Engines and 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, ignition or fuel 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 the electrical, ignition and fuel systems, it is extremely important that all components are properly installed and tightened. If not, any electrical or ignition component opening would permit sparks to ignite fuel vapors from fuel system leaks, if they existed.

## Engine Mechanical Components

Many of the engine mechanical components are designed for marine applications. Unlike automotive engines, marine engines are subjected to extended periods of heavy load and wide-open-throttle operation, therefore, require heavy-duty components. Special marine engine parts have design and manufacturing specifications which are required to provide long life and dependable performance. Marine engine parts also must be able to resist the corrosive action of salt or brackish water that will rust or corrode standard automotive parts within a short period of time.

Failure to use recommended Quicksilver service replacement parts can result in poor engine performance and/or durability, rapid corrosion of parts subjected to salt water and possibly complete failure of the engine.

Use of parts other than recommended service replacement parts will void the warranty on those parts which are damaged as a result of the use of other than recommended parts.

# MODELS COVERED IN THIS MANUAL

<b>MERCUISER STERN DRIVE ENGINES (MCM)</b>	
<b>Model</b>	<b>Serial Number</b>
MCM 60	All
MCM 80	All
MCM 90	All
MCM 110	All
MCM 120	3770649 and below
MCM 140 (6 Cyl.)	All
MCM 140 (4 Cyl.)	3771644 and below
MCM 150	All
MCM 160	All
MCM 165	3774864 and below
MCM 888	3777489 and below
MCM 190 (V-8)	All
MCM 200 (6 Cyl.)	All
MCM 215	All
MCM 225 (G.M.)	All
MCM 225TR (Ford)	3779774 and below
MCM 250 (327 CID)	4767999 and below
MCM 255TR (Ford)	3838787 and below
MCM 270	All
MCM 310	All
MCM 325	All
MCM 390	All

<b>TRANSOM ASSEMBLY AND STERN DRIVE UNITS</b>	
<b>Model</b>	<b>Serial Number</b>
MCO	All
MCI	All
MCIA/B/C	All
MCIA/B/C E-2	All
MC 80	All
MC 90	All
MC 120	3780849 and below
MC 140	3780849 and below
MC 160	All
MC 165	3780849 and below
MC 888	3784374 and below
MCM 215 H	All
MCM 215 E	All
MC TR	3787239 and below
MC II	All
MC III	All

<b>MERCUISER INBOARD ENGINES (MIE)</b>	
<b>Model</b>	<b>Serial Number</b>
MIE 30	All
MIE 55	All
MIE 215	All
MIE 225 (G.M.)	All
MIE 225 (Ford)	3750507 and below
MIE 250 (327 CID)	4767999 and below
MIE 255 (Ford)	3839487 and below
MIE 270	All
MIE 325	All
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# MERCUISER SERVICE MANUAL OUTLINE

## SECTION NO.

## SECTION HEADING

1 **General Information**

Part A - General Information  
Part B - Tuneup  
Part C - Lubrication

2 **Removal-Installation-Alignment**

Part A - MerCruiser 60-80-90  
Part B - MerCruiser I  
Part C - MerCruiser II Early  
Part D - MerCruiser II Transom  
Part E - MerCruiser III  
Part F - MerCruiser 215H  
Part G - MerCruiser 215E  
Part J - MerCruiser II-TR Drive Unit

3 **Electrical System**

Part A - Starting System  
Part B - Ignition System  
Part C - Alternator System  
Part D - Instrumentations  
Part E - Wiring Diagrams

4 **Fuel Systems**

Part A - Fuel Pumps  
Part B - Carburetors

5 **Engine**

Part A - Engine Mechanical,  
In-Line GM  
Part B - Engine Mechanical,  
In-Line 60-80-90  
Part C - Engine Mechanical, V-8 GM  
Part D - Engine Mechanical, V-8 Ford

6 **Drive Systems**

Part A - MerCruiser 60-80-90  
and MerCruiser I  
Part B - MerCruiser II  
Part C - MerCruiser 215  
Part D - MerCruiser III  
Part E - Direct Drive Transmission  
Part F - MerCruiser II-TR Drive Unit  
Part G - MerCruiser II-TR Transmission

7 **Accessories**

Part A - Power Tilt & Trim  
Part B - Steering System  
Part C - Remote Controls  
Part D - Cooling  
Part E - General Accessories

8 **Specifications**

9 **Tools**