
Service Manual Outline

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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 may be 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

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

WARNING

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

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 products described herein.

It is assumed that these personnel are familiar with marine product servicing procedures. Furthermore, it is assumed that they have been trained in the recommended service procedures of Mercury MerCruiser product, including 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 marine trade of all conceivable procedures and of the possible hazards and/or results of each method. 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.

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

We reserve the right to make changes to this manual without prior notification.

Refer to dealer service bulletins, operation maintenance and warranty manuals and installation manuals for other pertinent information concerning the products described in this manual.

Precautions

It should be kept in mind, while working on the product, that the electrical system and ignition system are 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, during any maintenance procedure replacement fasteners must have the same measurements and strength as those removed. Numbers on the heads of the metric bolts and on the surfaces of metric nuts indicate their strength. American bolts use radial lines for this purpose, while most American 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 reuse in the same locations whenever possible. Where the fasteners are not satisfactory for reuse, care should be taken to select a replacement that matches the original.

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 and, therefore, require heavy-duty components. Special marine engine parts have design and manufacturing specifications that 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.

Replacement Parts

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

WARNING

Electrical, ignition, and fuel system components on Mercury MerCruiser Engines and Sterndrives 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.

Models Covered In This Manual

Model	Serial Number
All Bravo Sterndrive Units	0W100000 and Above
All Bravo Transom Models	0W200000 and Above

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IMPORTANT INFORMATION

Section 1A -General Information



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General Information

NOTICE

For information and procedures not listed, refer to the appropriate Mercury MerCruiser Service Manual.
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NOTICE

Refer to appropriate Mercury MerCruiser Service Manual for engine assembly and repair.
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The following sections of supplemental information have been prepared to assist in the identification and servicing of Mercury MerCruiser shimmable Bravo Sterndrive Units

This supplement is intended to be used in conjunction with **Mercury MerCruiser Service Manual Number 28** and not in place of the manual. The scope of this supplement is to highlight new or different specifications, components, and procedural information as they pertain to the shimmable Bravo Sterndrive Units versus previous Bravo Sterndrive Units.

Introduction

This supplement is designed as a service guide for the models previously listed. It provides specific information, including procedures for disassembly, inspection, assembly, and adjustment to enable dealers and service mechanics to repair the shimmable Bravo Sterndrive Units.

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

How To Use This Manual

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

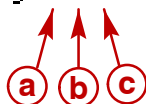
Some sections are further divided into parts that more fully describe the component.

Refer to the Service Manual Outline following Models Covered In This Manual for section titles.

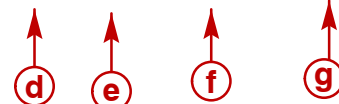
Page Identification

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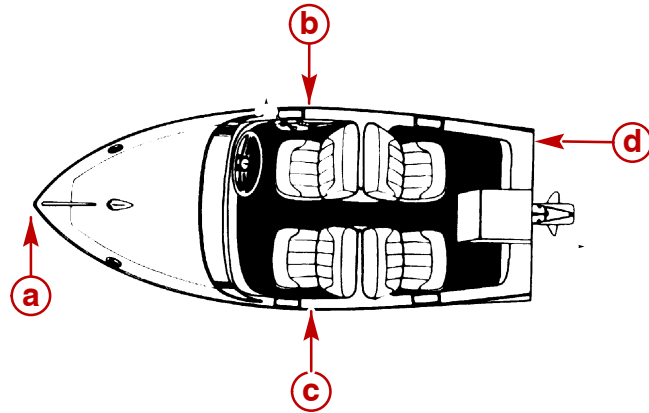
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- a** - Section number
- b** - Section part
- c** - Page number
- d** - Manual number
- e** - Revision number
- f** - Month printed
- g** - Year printed

Directional References

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

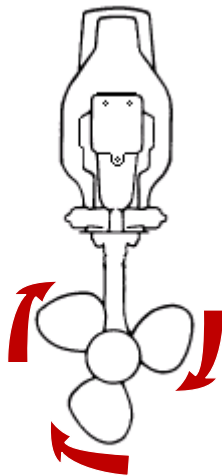
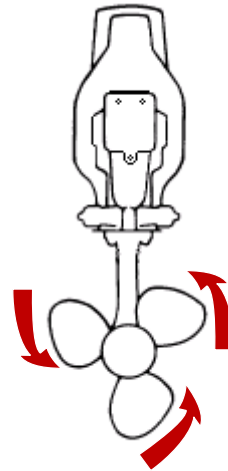


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- a** - Fore or bow (front)
- b** - Starboard (right)
- c** - Port (left)
- d** - Aft or stern (rear)

Propeller Rotation

Propeller rotation for sterndrive can be right-hand or left-hand rotation as viewed from the aft end of the propeller.

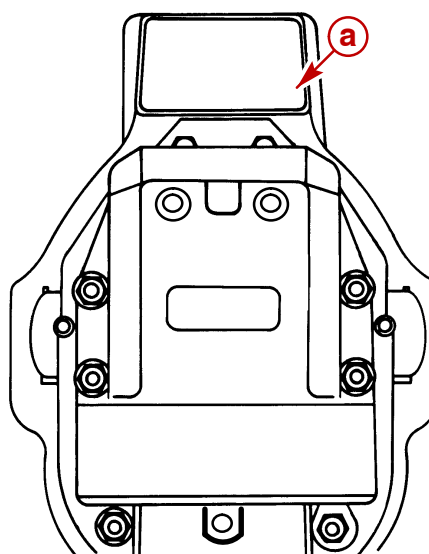
**Right-hand rotation****Left-hand rotation**

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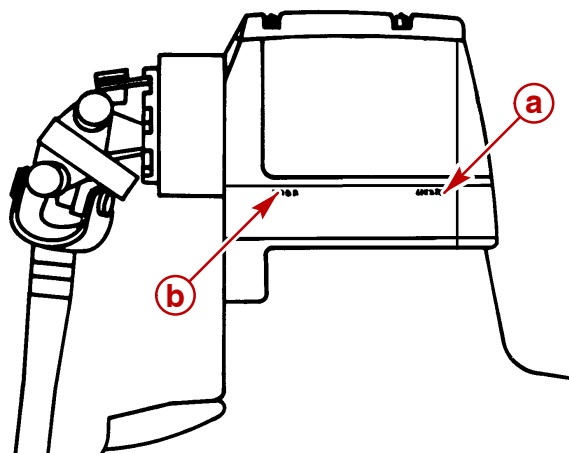
Sterndrive Unit 10-Hour Break-In Period (New or With Replacement Gears)

- Avoid full throttle starts.
- Do not operate at any one constant speed for extended periods of time.
- Do not exceed 75% of full throttle during the first 5 hours. During the next 5 hours, operate at intermittent full throttle.
- Sterndrive 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.

Serial Number Locations



a - Transom assembly serial number



Port side decal

- a** - Sterndrive unit serial number
- b** - Sterndrive unit gear ratio