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# 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 products 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.

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## 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 re-use, 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 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.**

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## Models Covered in This Manual

Sterndrive (MCM)	Serial Number
4.3L MPI Alpha and Bravo	0M300000 and Above

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# EXHAUST SYSTEM

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## DRIVES

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# IMPORTANT INFORMATION

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# Introduction

This comprehensive overhaul and repair manual 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 and tune these engines.

Before attempting repairs or tune-up, 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.

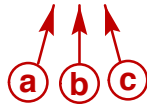
Refer to the Service Manual Outline following Models Covered In This Manual for section titles.

## Page Identification

The service manual number and section title appear at the top of the page. Two number groups appear at the bottom of each page. Following is an example and a description.

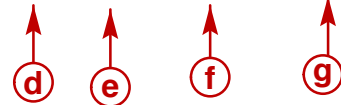
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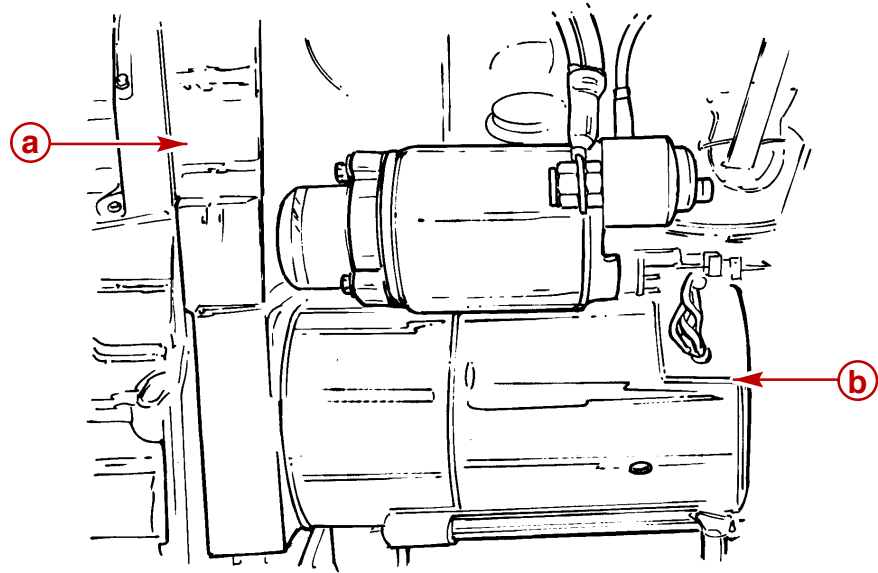
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- b** - Section Part
- c** - Page Number
- d** - Manual Number
- e** - Revision Number
- f** - Month Printed
- g** - Year Printed



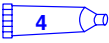
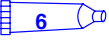

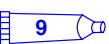
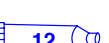


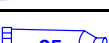
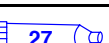

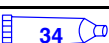
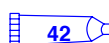
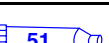



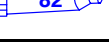
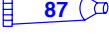
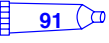
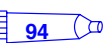

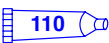
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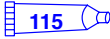
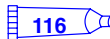

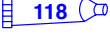
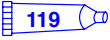
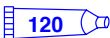
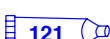
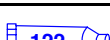
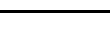



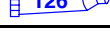




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- a** - Serial Number Plate
- b** - Starter Motor

# Mercury/Quicksilver Lubricants, Sealants And Adhesives

Tube Ref. #	Description	Container Size	Mercury Part Number	Quicksilver Part Number
 4	Needle Bearing Assy. Lubricant	8 oz (226.8 g) tube	N/A	92-802868A1
 6	Dielectric Grease	8 oz (226.8 g) can	N/A	92-823506-1
 7	Loctite 271 - Thread Locker	10 ml tube	N/A	92-809819
 9	Loctite 567 PST Pipe Sealant	50 ml tube	N/A	92-809822
 12	Loctite Master Gasket Kit		N/A	92-12564-2
 14	2 Cycle Premium Outboard Oil	1 US qt (0.94 L)	92-802813A1	92-802813Q1
 19	Perfect Seal	16 oz (0.45 kg) can	N/A	92-34227-1
 25	Liquid Neoprene	8 oz (226.8 g) can	N/A	92-25711-3
 27	Bellows Adhesive	1.5 oz (42.5 g) tube	N/A	92-86166Q1
 33	Loctite 680 Retaining Compound	10 ml tube	N/A	92-809833
 34	Special Lubricant 101	8 oz (226.8 g) tube	92-802865A1	92-802865Q1
 42	U-Joint and Gimbal Bearing Grease		92-802870A1	92-802870Q1
 51	Loctite 222 Thread Locker	10 ml tube	N/A	92-809818
 66	Loctite 242 Thread Locker	10 ml tube	N/A	92-809821
 79	4 Cycle 25W40 Engine Oil		92-802837A1	92-802837Q1
 82	Premium Gear Lubricant	1 US qt (0.94 L)	92-802846A1	92-802846Q1
 87	High Performance Gear Lube	1 US qt (0.94 L)	92-802854A1	92-802854Q1
 91	Engine Coupler Spline Grease	14 oz (0.39 kg) cartridge	92-802869A1	92-802869Q1
 94	Anti-Corrosion Grease	8 oz (226.8 g) tube	92-802867A1	92-802867Q1
 95	2-4-C with Teflon	8 oz (226.8 g) tube	92-802859A1	92-802859Q1
 110	4 Stroke 10W30 Outboard Oil	1 US qt (0.94 L)	92-802833A1	92-802833Q1
 114	Power Trim & Steering Fluid	8 oz (226.8 g)	92-802880A1	92-802880Q1

Tube Ref. #	Description	Container Size	Mercury Part Number	Quicksilver Part Number
 115	Premium Plus 2 Cycle TC-W3 Outboard Oil	1 US qt (0.94 L)	92-802824A1	92-802824Q1
 116	RTV 587 Silicone Sealer	3 oz (85.05 g)	N/A	92-809825
 117	Loctite 7649 Primer N	4.5 oz (127.57 g)	N/A	92-809824
 118	Storage Seal Rust Inhibitor	12 oz (325 ml) spray can	92-802878-56	92-802878Q56
 119	Corrosion Guard	12 oz (325 ml) spray can	92-802878 55	92-802878Q55
 120	15W40 4-cycle Diesel Engine Oil	1.06 US gal.(4 L)	92-877695K1	92-877695Q1
 121	Extended Life Antifreeze/Coolant	1 US gal. (3.78 L)	92-877770K1	92-877770K1
 122	Marine Engine Coolant	1.33 US gal. (5 L)	N/A	92-813054A2
 123	Fuel System Treatment and Stabilizer Concentrate	16 oz (437 ml)	92-802876A1	92-802876Q1
 124	Heat Transfer Compound	1.5 oz (42.5 g) tube	N/A	92-805701 1
 125	Liquid Gasket		N/A	92-808137
 126	T442 Sealant		N/A	92-862258
 127	Loctite 5900 Ultra Black RTV Silicone Sealant	13 oz (371 g) tube	N/A	92-809826
 128	Loctite Gasket Remover	18 oz (532 ml) spray can	N/A	92-809828 1
 129	Sealer Kit, Two Part Epoxy		N/A	92-65150 1
	Dexron III Automatic Transmission Fluid		Obtain Locally	Obtain Locally
	Loctite 592		Obtain Locally	Obtain Locally
	Loctite Quick Tite		Obtain Locally	Obtain Locally
	Isopropyl Alcohol		Obtain Locally	Obtain Locally
	Hot Glue		Obtain Locally	Obtain Locally
	Loctite 609		Obtain Locally	Obtain Locally
	Loctite 405		Obtain Locally	Obtain Locally
	Cyanacrylate Adhesive		Obtain Locally	Obtain Locally
	3M Permabond #3M08155		Obtain Locally	Obtain Locally
	Loctite 262		Obtain Locally	Obtain Locally

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