

## Design Improvements - Merc 18 and Merc 25

CIRCULATE TO:  
SERVICE MANAGER  
PARTS MANAGER  
MECHANICS

As a result of continuing engineering developments, technical advances and extensive testing, Mercury Marine has made some design changes to current model Merc 18/25 HP motors that result in increased reliability and durability of the engine.

The benefits of these changes/modifications (listed following) are such that we are recommending them for ALL Merc 18/25 HP customer motors (according to S/N GROUPS SPECIFIED), whenever a motor is serviced, for any reason.

By making these improvements at the time a motor is in for normal/routine service, customer cost will be minimized and most owners are certain to take advantage of them — ADVISE YOUR CUSTOMERS ACCORDINGLY!

### Water Inlet Screen Set (P/N 35-98487A1)

ALL Merc 18 and ALL Merc 25 in the Following Serial Number Groups:

- United States - S/N 6154074 and BELOW
- Belgium - S/N 9363415 and BELOW
- Canada - S/N 7198592 and BELOW

Replace water inlet screens in gear housing assembly with NEW Water Inlet Screen Set [P/N 35-98487A1 (one pair of screens for one motor).]

The new Water Inlet Screen Set is designed with 30° angle water inlet holes that create positive water pressure at the water inlet, thus, boosting cooling system efficiency.

**35-98487A1**

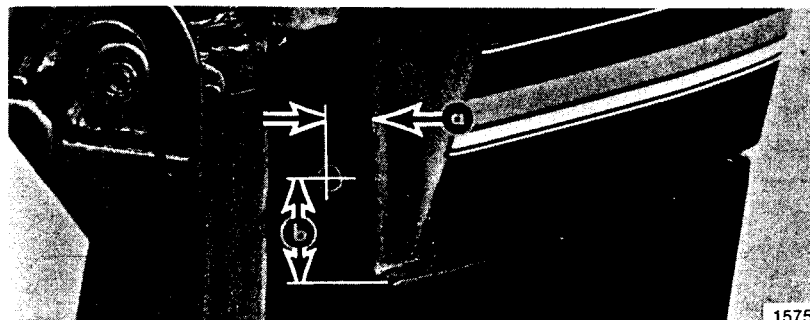
**Water Inlet Screen Set**

### Drive Shaft Housing/Vent Hole

ALL Merc 18 and ALL Merc 25 in the Following Serial Number Groups:

- United States - S/N 6152784 and BELOW
- Belgium - S/N 9363415 and BELOW
- Canada - S/N 7198592 and BELOW

Drill a  $\frac{3}{8}$ " (9.52 mm) diameter vent hole thru one wall of the drive shaft housing on the PORT side (steering handle side) of engine, at the location shown in Figure 1.



a - 1/2" (12.7mm) b - 1-1/2" (38.1mm)

**Figure 1. Vent Hole in Drive Shaft Housing**

(OVER)

This vent hole serves to relieve a vacuum in the drive shaft cavity of the housing, thus maintaining a lower water level in this cavity and preventing water from rising to powerhead level.

*NOTE: This vent hole (located where shown) does not, in any way, affect cooling system efficiency and/or engine performance. There WILL NOT be any discharge (exhaust, sound or water) from this hole because engine exhaust is channeled thru another, separate cavity.*

### **Inspection - Water Pump Assembly (P/N 46-85098A1)**

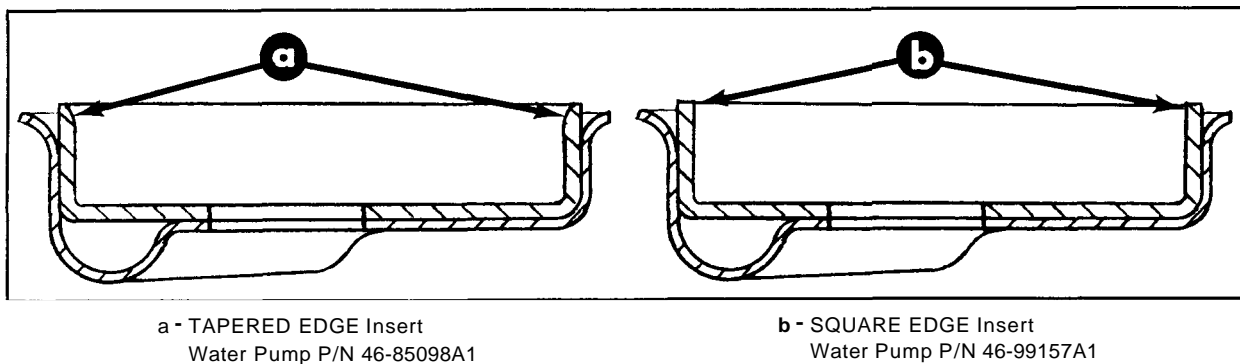
Merc 25 HP ONLY, in the Following Serial Number Groups:

United States - S/N 5861873 and BELOW

Canada - S/N 7168287 and BELOW

Whenever the gear housing assembly is removed from the motor for service, inspect the water pump assembly to determine the type of insert used in the pump. (Figure 2)

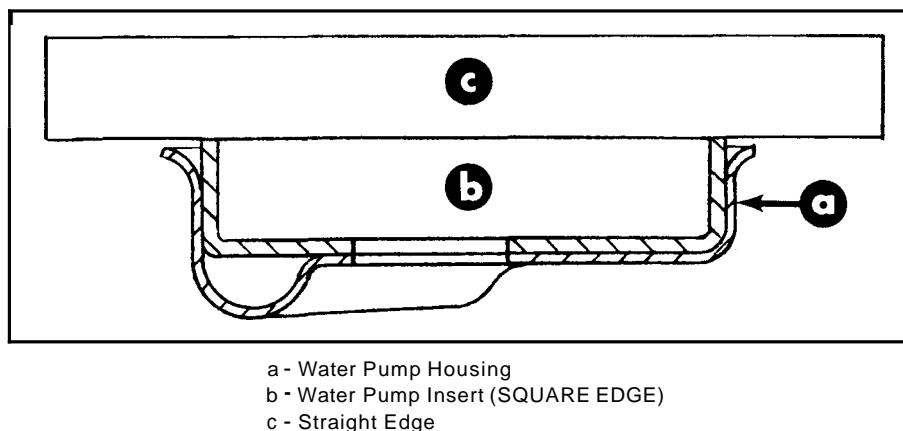
- 1) If the water pump assembly is equipped with a TAPERED EDGE insert, replace the water pump assembly with a new water pump assembly P/N 46-99157A1 (with a SQUARE EDGE insert).



**Figure 2. Water Pump Assemblies**

- 2) Water pump assemblies with a SQUARE EDGE insert also should be checked with a straight edge (Figure 3) to make certain that the insert is not cocked in the housing.

The insert must protrude from the housing (MUST BE ABOVE the housing) all the way around the housing. If the straight edge contacts the water pump housing at any point, replace the water pump assembly with a new P/N 46-99157A1.



**Figure 3. Checking Position of Water Pump Insert**

46-99157A1

Water Pump Assembly

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