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## **OFFSHORE EXHAUST SYSTEM FOR MERCUISER EFI ENGINES**

### **NOTICE TO INSTALLER:**

1. Before installing your new Hardin Marine exhaust system, we strongly urge that the water circulating system be inspected and any worn parts replaced. This will help prevent premature failures due to insufficient water flow.
2. This exhaust system is designed to utilize the factory water circulation system plumbing shown in the attached diagram. Standard factory MerCruiser® circulating systems (except for Mercury Hi-Performance engines) do not circulate water through the manifold until the thermostat opens. Use of such systems on Hardin Marine cast aluminum manifolds may result in overheating and casting failure. Hardin Marine manifolds must have water circulation at all times.
3. After the first ten (10) hours of operation, re-torque the four (4) 3/8-16 tailpipe flange nuts and the eight (8) manifold bolts to 30 foot pounds.

### **INSTALLATION:**

1. Remove the original exhaust manifolds and pipes. Clean all gasket surfaces thoroughly. Tie the EFI control box out of the way until the new exhaust is installed.
2. Install the manifolds and offshore tailpipes with the hardware supplied. The electrical mounting bracket mounts to the inside two manifold studs on the starboard side of the engine. The EFI control box mounts to this bracket with the three (3) ¼-20 x ¾" hex cap screws supplied.

An exclusive feature of this exhaust system is the exhaust TURBULATOR. The exhaust TURBULATOR prevents condensation from returning to the engine. The TURBULATOR is a conical-shaped device that is installed between the two flange gaskets provided in each tailpipe kit. The cone should point upward and extend into the tailpipe flange.

3. Plumb the rubber hose from the thermostat cover to the bottom of each manifold using original molded hoses. Plumb the water outlet from the top of the manifold to the tailpipe inlet using the molded 1" hose included.
4. Install the exhaust hose to offshore tailpipe and secure with two (2) hose clamps. Install 4" exhaust tips and secure to exhaust hose with two (2) hose clamps. Tips are not included with this system.

# OFFSHORE ASSEMBLY DIAGRAM

