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To: MasterCraft Employees, Dealers and Boat Owners

From: Indmar Service

Subject: LQ9 Draining Instructions

Besides the normal winterization steps such as changing the oil, removing/inspecting the raw water pump impeller etc., the LQ9 engine requires some special “draining” procedures to remove the water from the raw water side of the cooling system. These instructions provide that supplemental information.

NOTE: Use only “Sierra” brand, non-toxic anti freeze to top off the freshwater (anti-freeze) side of the cooling system. Engines leave Indmar with a 50:50 mix of anti-freeze and water. If this ratio does not provide adequate protection from freezing in your area, adjust the concentration accordingly.

In-Line and Reduction Gear Units

1. There are three drain plugs in the heat exchanger. The center drain plug is for the anti-freeze portion of the heat exchanger. The plugs on the ends of the heat exchanger are for the raw water portion of the heat exchanger. Remove the drain plugs from the raw water portion of the heat exchanger and drain it completely.

2. Follow the hose from the heat exchanger to the oil/transmission cooler. Remove the hose from the oil/transmission cooler and push the hose low into the bilge to make sure the hose drains. Remove the plug from the oil/transmission cooler and let the cooler drain. Lift the hose that runs from the raw water pump to the oil/transmission cooler so it drains through the cooler. Replace the drain plugs in the raw water portion of the heat exchanger and in the oil/transmission cooler. Reattach the hoses.

3. Disconnect the hose coupler from the exhaust manifolds. Lower the hose ends into the bilge to make sure that the manifolds drain properly. Reconnect the hose coupler.

V-Drive Units

1. There are two drain plugs in the side-mounted heat exchanger. The plug closest to the end of the heat exchanger drains the raw water side of the exchanger. Remove the plug and drain the heat exchanger.

2. Follow the hose from the heat exchanger to the oil/transmission cooler. Remove the hose from the oil/transmission cooler and push the end of the hose low into the bilge to make sure that the hose drains. Remove the drain plug from the oil/transmission cooler and let the cooler drain. Lift the hose that runs from the raw water pump to the oil/transmission cooler so it drains through the cooler. Replace the drain plug in the heat exchanger and in the oil/transmission cooler. Reattach the hoses.

3. Disconnect the hose coupler from the exhaust manifolds. Lower the hose ends into the bilge to make sure that the manifolds drain properly. Reconnect the hose coupler.

4. On the exhaust outlet end of the exhaust manifolds, there is a hose that runs from the exhaust manifold on the heat exchanger side of the engine to the exhaust manifold on the opposite side. Remove one end of that hose from whichever end is easier to access and push the end of the hose low into the bilge to drain the water from the hose. Reconnect the hose.