MERCURY Racing

Service Bulletin

Sterndrive No. 2018-01
OEM No. 2018-01

Circulate to: ☐ Sales Manager ☐ Accounting ☑ Service Manager ☑ Technician ☑ Parts Manager

Cooling System Preparation for the QC4v Engine

Scope

Worldwide

Models Affected

Models Covered	Serial Number Or Year
QC4v engines	All

Situation

Engines that are not properly serviced for cold storage can be damaged when the raw water (untreated) freezes.

Correction

Perform the following procedures to store the engine properly for freezing temperatures.

Cooling System Preparation (Turbocharged)

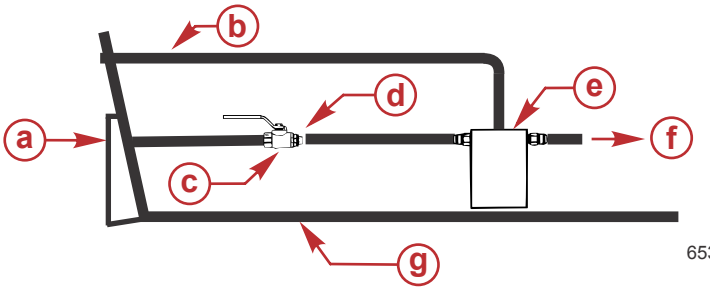
NOTICE
Water trapped in the seawater section of the cooling system can cause corrosion or freeze damage. Drain the seawater section of the cooling system immediately after operation or before any length of storage in freezing temperatures. If the boat is in the water, keep the seacock closed until restarting the engine to prevent water from flowing back into the cooling system. If the boat is not fitted with a seacock, leave the water inlet hose disconnected and plugged.

Using Antifreeze

NOTE: *A nontoxic and environmentally safe propylene glycol antifreeze containing a rust inhibitor must be used when preparing the seawater portion of the cooling system for cold weather or extended storage. Be certain to follow the manufacturer's recommendations.*

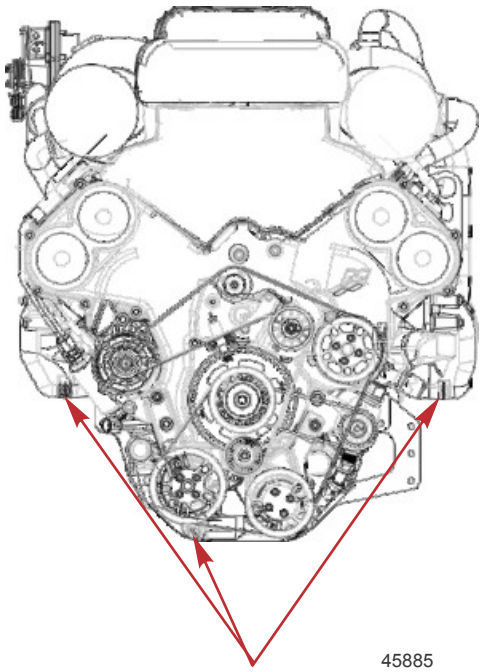
1. Place premixed propylene glycol antifreeze into an appropriate container that will allow the seawater inlet hose to be placed into the container.
2. If the boat is in the water, close the seawater inlet valve.
3. Remove the drain plugs from the exhaust manifold and the seawater pump—allow the water to drain from the engine.
4. Install the drain plugs.
5. Loosen the hose clamp and remove the seawater inlet hose from the downstream side of the valve.

6. Place the hose into the container of premixed antifreeze. The antifreeze mixture should be at the correct concentration level to protect the engine to the lowest temperature to which it will be exposed during cold weather or extended storage.



- **a -** Transom mounted seawater pickup
- **b -** Pressure relief line
- **c -** Seawater inlet valve
- **d -** Disconnect the hose at the valve and place into container of antifreeze
- **e -** Sea strainer
- **f -** To the seawater pump
- **g -** Boat hull

7. Operate the engine at idle until antifreeze is expelled from the exhaust manifolds of the engine.
8. Stop the engine and reconnect the seawater hose.
9. Remove the drain plugs and drain the coolant from the seawater section of the engine.



Three drain plugs for the seawater section

10. Install the drain plugs.
11. If the boat is in the water, do not open the seawater inlet valve until the power package is ready for recommissioning.

Cooling System Preparation (860)

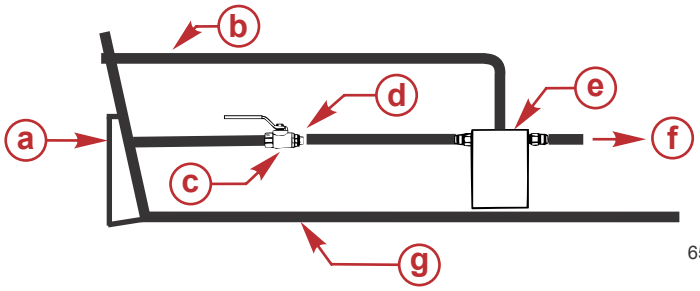
NOTICE

Water trapped in the seawater section of the cooling system can cause corrosion or freeze damage. Drain the seawater section of the cooling system immediately after operation or before any length of storage in freezing temperatures. If the boat is in the water, keep the seacock closed until restarting the engine to prevent water from flowing back into the cooling system. If the boat is not fitted with a seacock, leave the water inlet hose disconnected and plugged.

Using Antifreeze

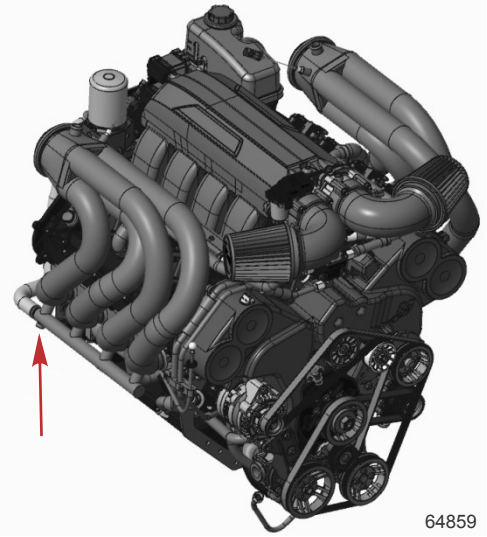
NOTE: *A nontoxic and environmentally safe propylene glycol antifreeze containing a rust inhibitor must be used when preparing the seawater portion of the cooling system for cold weather or extended storage. Be certain to follow the manufacturer's recommendations.*

1. Place premixed propylene glycol antifreeze into an appropriate container that will allow the seawater inlet hose to be placed into the container.
2. If the boat is in the water, close the seawater inlet valve.
3. Loosen the hose clamp and remove the seawater inlet hose from the downstream side of the valve.
4. Place the hose into the container of premixed antifreeze. The antifreeze mixture should be at the correct concentration level to protect the engine to the lowest temperature to which it will be exposed during cold weather or extended storage.

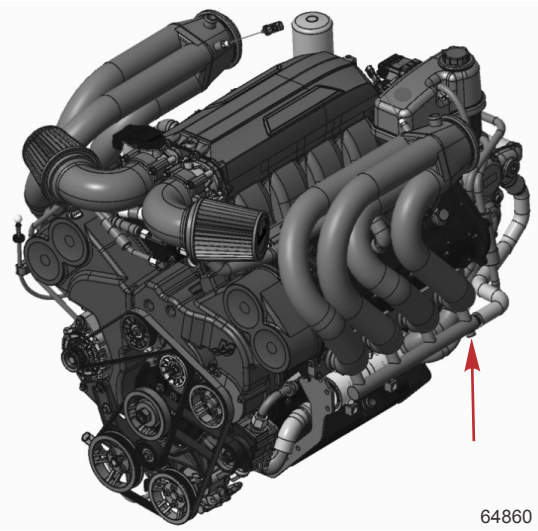


- **a -** Transom mounted seawater pickup
- **b -** Pressure relief line
- **c -** Seawater inlet valve
- **d -** Disconnect the hose at the valve and place into container of antifreeze
- **e -** Sea strainer
- **f -** To the seawater pump
- **g -** Boat hull

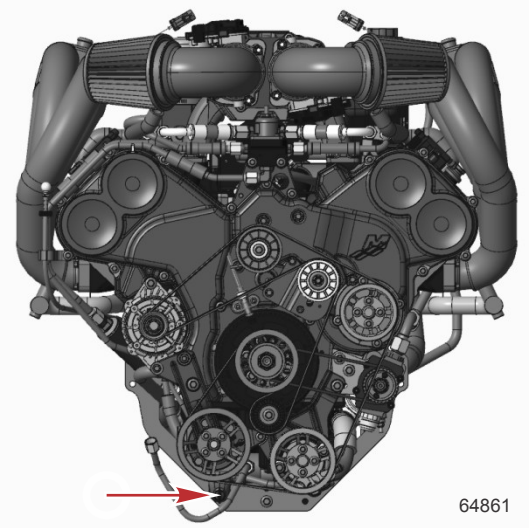
5. Operate the engine at idle until antifreeze is expelled from the exhaust manifolds of the engine.
6. Stop the engine and reconnect the seawater hose.
7. Remove the drain plugs and drain the coolant from the seawater section of the engine.
8. Install all the drain plugs that were removed.
9. If the boat is in the water, do not open the seawater inlet valve until the power package is ready for recommissioning.



Starboard exhaust drain plug location



Port exhaust drain plug location



Seawater pump drain plug location