

**INSTALLATION  
INSTRUCTIONS**

**THREADED IMMERSION HEATER  
CATERPILLAR 3176, C10/C12**



**WARNING**

DO NOT plug in heater if element is not immersed in coolant. If not immersed, element sheath may burst and could result in personal injury.



**CAUTION**

USE a 50/50 solution of ethylene glycol antifreeze and water for optimum heater performance.  
DO NOT use more than 65% concentration of antifreeze, as a shortened heater life will result.  
DO NOT use heater in coolant system containing any form of stop-leak additive, as a shortened heater life will result.

**HEATER INSTALLATION PROCEDURE**



**NOTE**

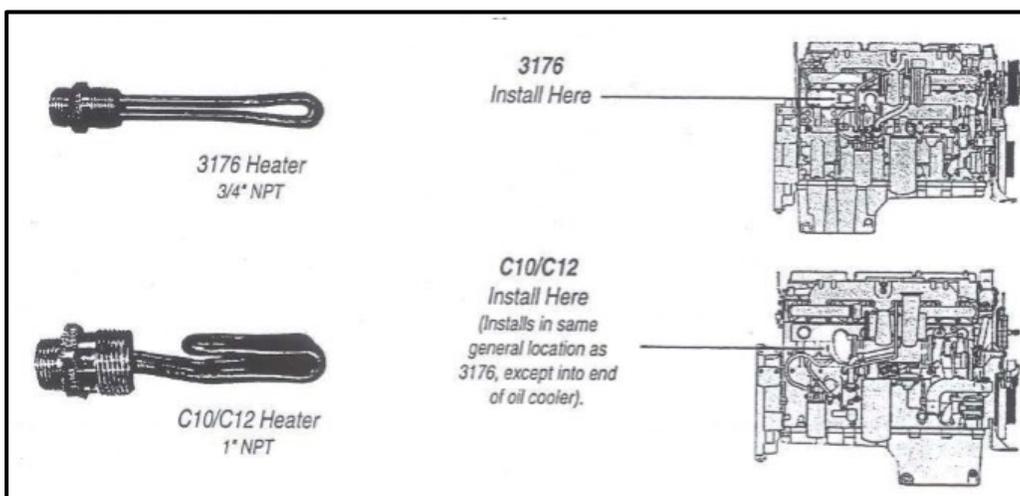
Engine heaters for this application must have silicone (orange) heater connector on cordset to prevent possibility of cord damage due to heat from exhaust manifold.

1. Drain engine coolant. Flush system if necessary.
2. 3176: Remove 3/4" pipe plug as shown on figure below. C10/C12: Plug is located on rear of oil cooler, facing back of engine.
3. Coat threads of heater adapter with thread sealant or teflon tape.
4. Install heater assembly and tighten securely.
5. Insert power cord connector firmly into socket, taking care to align pins with sockets of connector on cord. Tighten strain relief nut securely by hand.
6. Route cord to outside, securing where necessary to allow slack for engine vibration and ensure that cord does not touch engine, hot pipes, or any moving parts. **Connect only to properly grounded 120-Volt AC outlet. If an extension cord is used, it must be the three-wire grounded type.**
7. Refill cooling system with good grade permanent antifreeze solution. See CAUTION note above.



**CAUTION**

Before applying power to heater, remove all trapped air by operating engine for 5-10 minutes after thermostat opens (normal operating temperature).



**WARRANTY**

The Phillips & Temro Industries warranty statement is located on the website at [phillipsandtemro.com/terms](http://phillipsandtemro.com/terms).