

**INSTALLATION
INSTRUCTIONS**

CATERPILLAR 1" NPT ENGINE HEATER



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

1. Drain engine coolant.
2. Remove 1" diameter core plug.
3. Install heater assembly and tighten securely (approximately 2-3 full turns past finger tight).
4. Install (and tighten) power cord connector firmly into socket, taking care to align pins with sockets of connector on the cord. Tighten strain relief nut securely by hand.
5. 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 a properly grounded outlet. If an extension cord is used, it must be the three-wire grounded type.**
6. Fill cooling system completely with good grade permanent antifreeze solution. See CAUTION note above.



CAUTION

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



WARRANTY

The Phillips & Temro Industries warranty statement is located on the website at phillipsandtemro.com/terms.