



# CATERPILLAR C7 & 3126 ENGINES

KIM HOTSTART PART NUMBER: TL101-000  
TL102-000



**WARNING**

READ CAREFULLY FOR PROPER INSTALLATION & OPERATION

Customer Support: 509-536-8660

## I. LOCATE THE PROPER AREA OF INSTALLATION

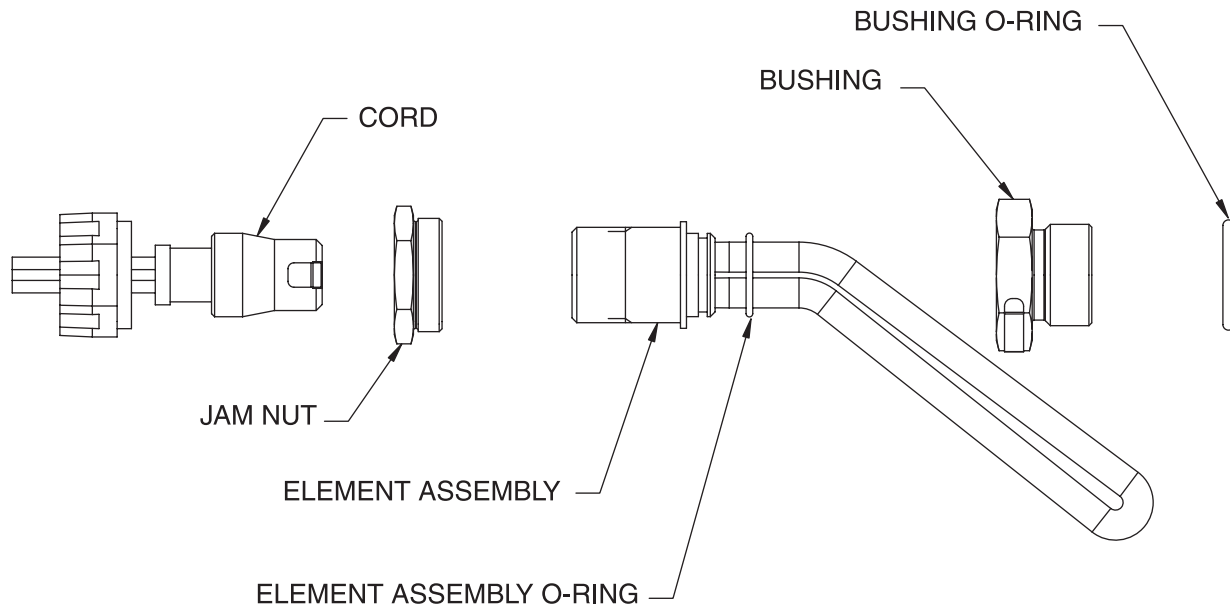
- A. This in-block direct immersion heater replaces a 1-1/16" threaded plug on the rear right hand side of the engine. This port is located just above the flywheel housing. The element installs pointing at the 5 o'clock position.

**NOTICE**

A special cord with heat shielding may be required with this engine. Check exhaust routing before installing heater.

## II. MOUNTING THE IN-BLOCK DIRECT IMMERSION HEATER

- A. Drain the cooling system.
- B. Remove the existing plug from the engine block.
- C. Apply a coating of engine oil to the bushing o-ring and install the bushing into engine block. Torque to 140 Nm [103 lbs-ft].
- D. Apply a coating of engine oil to the element assembly o-ring and insert assembly through the bushing into the engine
- E. Rotate the element assembly back-and-forth to ensure that the element is centered in the cavity.
- F. Install the jam nut. Torque to 135 Nm [37 lbs-ft].



### III. ATTACHING THE CORD

- A. Align cord with element pins and press on. If thread-on style plug, tighten nut "hand tight". If push-on style plug, position clamp around plug and tighten "hand tight" plus two clicks with the help of pliers.
- B. Route the cord to any convenient point and tie cord down to prevent damage and strain. Keep cord away from hot surfaces, moving objects, abrasion points and road hazards.

#### **NOTICE**

Do not plug heater into power supply prior to installing heater, filling the engine with coolant and bleeding the coolant system of trapped air. Premature element failure can occur (within minutes) if all of the trapped air is not bled from the cooling system. Premature element continuity failure is not warrantable.

### IV. TESTING THE IN-BLOCK DIRECT IMMERSION HEATER

- A. Refill the coolant system. Run engine until internal thermostat opens and continue running engine for 15 to 20 minutes to eliminate air pockets. Allow engine to cool. Check for leaks and proper coolant level.
- B. Plug heater into power supply and test for proper operation. The block near the heater should get hot.

### V. OPERATION & MAINTENANCE

- A. Plug heater into appropriate power supply based on wattage and voltage listed on heater label.

#### **CAUTION**

Use appropriate type and size extension cord based on extension cord manufacturer's recommendation.

#### **CAUTION**

To avoid possibility of electrical or fire hazard, inspect power plug and exposed cord for damage or wear before each use.

- B. To avoid heater damage, disconnect power to heater before starting engine.