

GROUNDING INSTRUCTIONS Z18346, Z18347

TEMPERATURE CONTROL SENSOR SWITCH

The Control Sensor is a switch that closes (TURNS ON) at a preset temperature, dwells at the ON position until the temperature falls 20 degrees it opens (TURNS OFF). When ON, the switch is completing a path to ground. Typical mounting locations for the temperature switch are a port in the engine; the threads are 3/8" NPT and can be adapted to 1/2" NPT engine ports with a NPT bushing.

CAUTION: Avoid using Teflon pipe tape for the sensor as this tape insulates the ground path; Use a small amount of pipe paste instead.

When there are no ports available a 3/8 NPT port X inlet hose tee can be used, Northern Part #Z17642 1-1/4" Hose, Part #17627 1-1/2" Hose

Any hose tee is electrically insulated from the vehicle ground because it is mounted in between two rubber hoses. To avoid sending stray current into the coolant, a grounding strap must be provided to the engine block or vehicle frame. See **figure 1** for Northern's tee with included strap and picture in **figure 2** is an alternate method for tees without ground:

- Strip back a 14 GA wire 1/2"
- Clean the tube with sandpaper, before clamping the hose
- Insert the hose onto the tube
- Pry up the hose with a small screwdriver and hold
- Insert the bare wire under the hose but don't go past the tube bead
- Remove the screwdriver and apply the hose clamp over the wire
- Ground the wire to the engine block or chassis ground



Figure 1 Sensor



Figure 2 Northern Tee



Figure 3 Tee