

# INSTALLATION INSTRUCTIONS SINGLE STAGE ELECTRIC FAN THERMOSTAT PART # 16720 & 16721

Please read these instructions completely before beginning installation

#### KIT CONTENTS

QTY. DESCRIPTION

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- **QTY. DESCRIPTION** 1 Blue 5/16" Ring Terminal
- 1 1/8" NPT Thermostat Switch
  Relay Wire Harness
- 2 Blue #10 Ring Terminal
- 3/8" x 1/8" Reducer Bushing
- 3 #10 Sheet Metal Screw
- 4 4" Wire Ties
- 2 Blue Butt Connectors2 Blue Female Connectors
- 2 Blue Wire Tap Connectors
- 1 Roll Extra Wire
- THERMOSTAT PROBE INSTALLATION

**Placement:** Locate a port on the vehicle, **generally** found on the vehicles radiator, manifold or water outlet.

**1/8" NPT port installation -** Using Teflon Tape or suitable sealant install the Thermostat Switch into the port on the vehicle.

**3/8" NPT port installation -** Using Teflon Tape or suitable sealant install the 3/8" x 1/8" NPT Reducer Bushing into the 3/8" NPT port on the vehicle. Using Teflon Tape or suitable sealant install the Thermostat Switch into the 3/8" x 1/8" NPT Reducer Bushing. (See Diagram #1)

## **RELAY WIRE HARNESS MOUNTING**

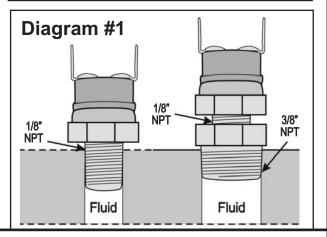
- Taking into consideration probe placement and wire routing requirements, choose a convenient location. Avoid mounting near HOT engine components.
- 2. Using the relay bracket as a template, mark and drill a 5/32" hole in the proper location.
- 3. Using the #10 Sheet Metal Screws provided, install the relay/wire harness.

### TOOLS NEEDED

| 12V Test Light         | Teflon Tape           |
|------------------------|-----------------------|
| Wire Stripper          | Standard Screw Driver |
| Crimping Tool          | or a 5/16" Nut Driver |
| 5/8" Open End Wrench   | Drill                 |
| 11/16" Open End Wrench | 5/32" Drill Bit       |

## **IMPORTANT**

This single stage electric fan thermostat will control up to two different fans with a **COMBINED MAXIMUM DRAW OF 25 CONTINUOUS AMPS.** If fans exceed 25 amps combined we recommend using one switch per fan.



# <u>WIRING</u>

Before starting, disconnect the Negative (-) cable on the vehicles battery.

Using the electrical connectors and wire ties provided, follow the directions below.

WARNING: When extending wires always use the identical gauge wire as provided.

#### See Diagrams # 2 & 3 on page 2

**Red:** Using the Blue 5/16" Ring Terminal provided attach to the Positive (+) terminal of the battery.

Black: Using the Blue #10 Ring Terminal and #10 Sheet Metal Screw provided attach to a good chassis ground (-).

Yellow Wire - Using the Blue Female Connector provided, attach the Yellow Wire to EITHER terminal on the Thermostat Switch.

**Thermostat Switch -** Using the Blue Female Connector, Blue Wire Tap Connector and Wire provided, attach the remaining Thermostat Switch Lead to a Positive (+) switched ignition source.

**Warning:** Attaching this wire directly to a 12V non-switched source will allow the fan to run after the vehicle has been turned off which could effect the vehicles battery performance.

**Green (Optional):** The green wire is designed to work in two different configurations. When used, this will allow the fan(s) to be turned on regardless of the temperature of the thermostat as it simply overrides all other functions. If you choose to not use this option disregard the wire.

- 1. A/C Override Using the Blue Wire Tap provided, attach the green wire to the positive (+) lead on the air conditioning compressor.
- 2. Manual Switch Override Attach the Green Wire to the manual switch NOT PROVIDED. (See Diagram #4 on page 2)

Orange/Blue Wires: See page 2 for single or dual fan configurations.

(Continues on reverse side)

# SINGLE FAN CONFIGURATION

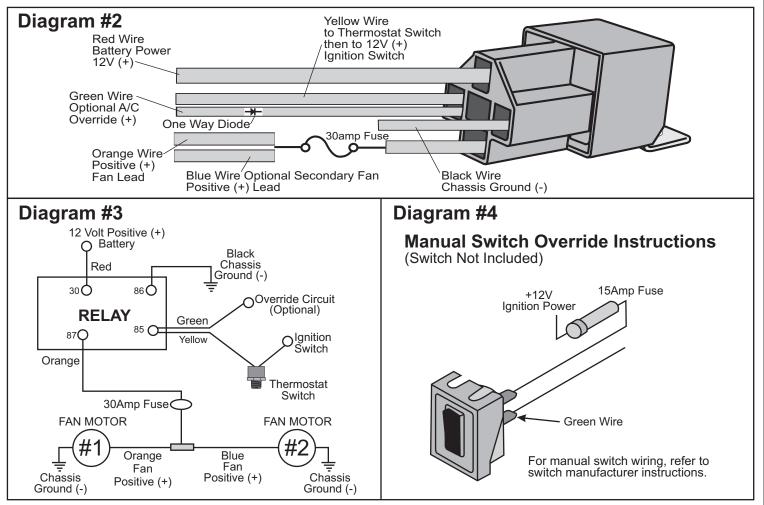
**Orange Wire:** Using a Blue Butt Connector provided attach the Orange wire to the Positive (+) electric fan lead. **Negative Fan Wire:** Using a Blue Ring Terminal provided attach the Negative (-) electric fan lead to a good chassis ground (-). **Blue Wire:** Disregard, cut any exposed copper and tape or shrink wrap the end of the wire.

# **DUAL FAN CONFIGURATION**

## Fan #1

**Orange Wire:** Using a Blue Butt Connector provided attach the Orange wire to the Positive (+) electric fan lead on fan #1. **Fan #2** 

**Blue Wire:** Using a Blue Butt Connector provided attach the Blue wire to the Positive (+) electric fan lead on fan #2. **Negative Fan Wires:** Using a Blue Ring Terminal provided, attach BOTH Negative (-) electric fan leads to a good chassis ground (-). Reattach the Negative (-) cable on the vehicles battery.



# TROUBLE SHOOTING Q&A

Q: Why doesn't the fan(s) turn on?

- A: 1. Check all connections to make sure all contacts are crimped correctly.
- 2. Check all Ground (-) connections to make sure all paint is sanded off and you are getting a metal to metal contact.
- Q: Why does the fan(s) run after the engine is turned off?
- A: Check the wire going to the Thermostat Switch, this wire should be connected to a 12V Positive (+) switched ignition source.
- Q: Why doesn't the fan(s) turn on when I use the Override function?
- A: To quickly test the Override circuit, disconnect the Green Wire and run a jumper wire directly to the Positive (+) terminal on the battery. The electric fan should start immediately. If fan started, reattach the Green Wire to the proper (+) wire on the A/C clutch or Manual Switch.

**Warning:** Installation of accessories should only be undertaken by those with mechanical knowledge and are familiar with working on vehicles. Always use eye protection (goggles, safety glasses or shield). Park the vehicle in a well lit area, on level ground and apply the parking brake. Only work on a cold vehicle that has been sitting overnight, failure to do so will result in severe burns and injury. Before starting the vehicle, make sure no tools or any other items are left under hood that could interfere with or be drawn into moving parts of the engine. Failure to follow instructions can lead to severe damage and personal injury.