



# INSTALLATION INSTRUCTIONS ELECTRIC FAN

## PART # 18309, 18310, 18312, 18314 & 18316

Please read these instructions completely before beginning installation

### PARTS LIST

QTY.	DESCRIPTION	QTY.	DESCRIPTION
1	Electric Fan	1	Push-in Probe
4	Mounting Rods	1	Retaining Probe Clip
4	Mounting Clips	1	Blue 5/16" Ring Terminal
4	Mounting Feet	2	Blue #10 Ring Terminal
5	1x1 Foam Pads	1	Blue Butt Connectors
1	Thermostat Switch	2	Blue Female Connectors
1	Relay Wire Harness	2	Blue Wire Tap Connectors
1	7 Ft. 14 Ga. Wire	4	4" Wire Ties
1	3/8" NPT Thread-in Probe	2	#10 Sheet Metal Screw

### TOOLS NEEDED

12V Test Light  
Wire Stripper  
Crimping Tool  
3/4" Wrench  
Teflon Tape  
Standard Screw Driver or a 5/16" Nut Driver  
Drill  
5/32" Drill Bit  
Dyke Pliers

### IMPORTANT

This fan assembly is designed for both PULLER and PUSHER APPLICATIONS. (See Diagram #1)

### PRE INSTALLATION

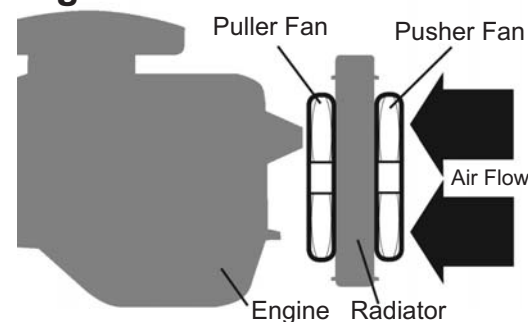
#### PULLER APPLICATION

1. Electric Fan is setup from the factory for Puller applications and requires no modification.
2. Check product label on Electric Fan shroud. The arrow on the label shows airflow direction through the fan.

#### PUSHER APPLICATION

1. Remove the nut/clip that holds fan blade to motor shaft.
2. Remove fan blade from motor shaft. **Note:** This is an interference fit and requires some effort. Be careful not to damage fan blade.
3. Flip blade over and align groove in fan blade with roll pin on motor shaft.
4. Reinstall nut/clip on motor shaft.

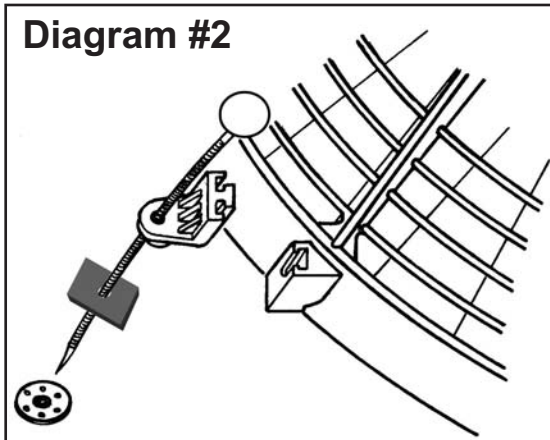
**Diagram #1**



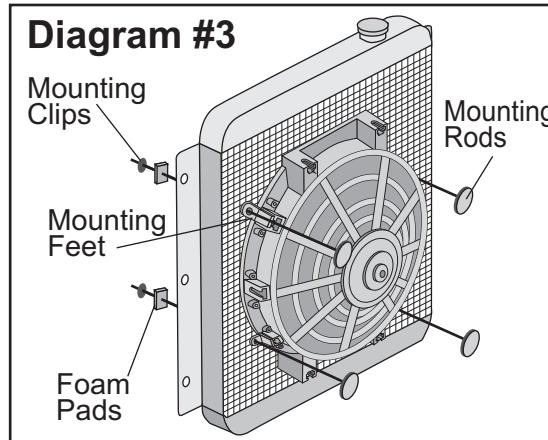
### ELECTRIC FAN MOUNTING

1. Position the electric fan against the radiator in the desired location.
  2. Take the Plastic Rods provided and install through the four mounting holes on the shroud pushing them slowly into and through the radiator core. (See Diagram #2)
- Caution:** Do not use excessive force when pushing Plastic Rods through radiator core. Excessive force could cause damage to the radiator fins and/or core. Plastic Rods should not be inserted thru both the radiator and the condenser cores.
3. Take the 1 x 1 Foam pads provided and install them onto the Plastic Rods now protruding through the radiator core. (See Diagram #3)
  4. Take the Plastic Clips provided, making sure they are in the correct direction (Derale writing out) install onto the Plastic Rods and cinch them until the 1 x 1 Foam Pads are compressed. (See Diagram #3)
  5. Cut off the excess Plastic Rod.

**Diagram #2**



**Diagram #3**



(Continues on Page 2)

## **THERMOSTAT PROBE INSTALLATION**

This kit includes two thermostat probe options.  
Choose the option that best fits your application.

**Option 1 - Push-in Radiator Probe** (See Diagram #4)

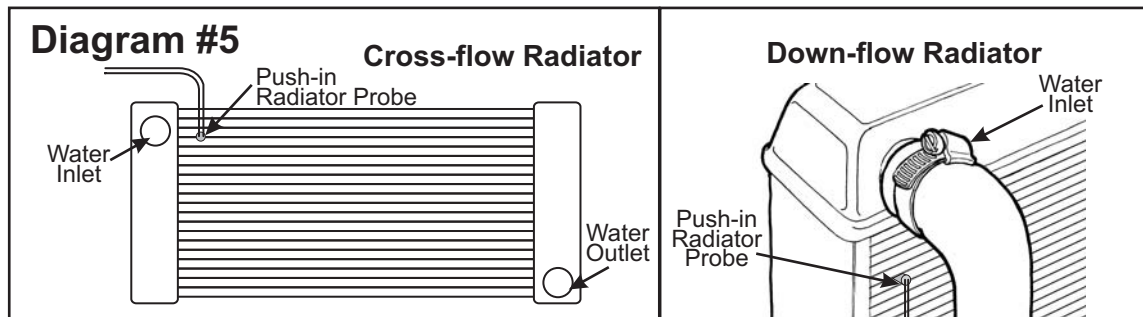
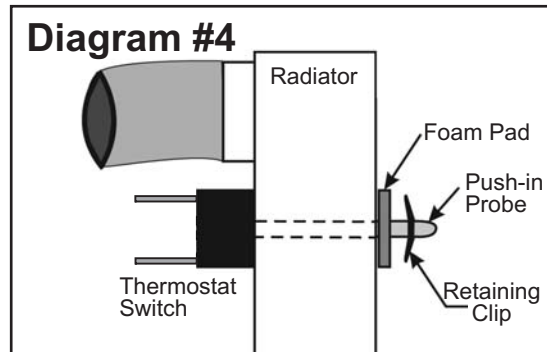
**Option 2 - Thread-in Radiator Probe** (See Diagram #6)

### **Option 1**

**Placement:** For best results we recommend installing the Push-in Probe as close as possible to the water inlet of the radiator.  
(See Diagram #5)

### **Installation:**

1. Take the Push-in Probe and thread it clockwise onto the Thermostat Switch.
2. Carefully insert the probe/thermostat assembly into the fins of the radiator until Thermostat Switch is flush with radiator.
3. Install the 1 x 1 foam pad onto the Push-in Probe.
4. Install Retaining Clip onto the Push-in Probe until tight. (See Diagram #4)



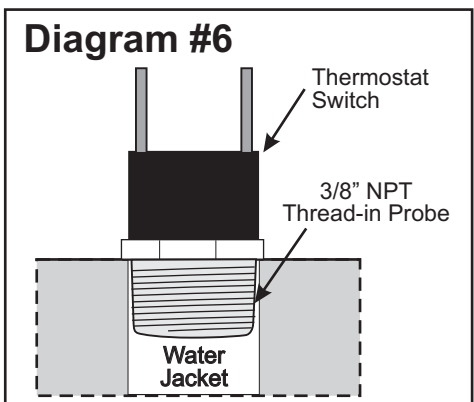
### **Option 2**

**Placement:** Locate a 3/8" NPT port either on the radiator, waterneck, intake manifold or cylinder heads.

### **Installation:**

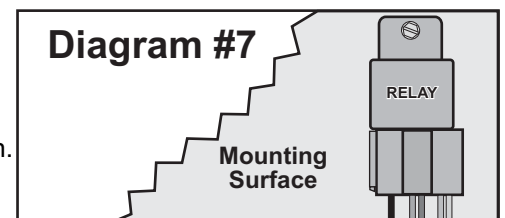
1. Using Teflon tape or suitable sealant install the probe into the 3/8" NPT Thread-in Probe on the vehicle.
2. Using a 3/4" wrench tighten the probe.
3. Carefully thread the Thermostat Switch clockwise into the Push-in Probe now installed on the vehicle. Sealant such as Loctite can be used for permanent installation. (See Diagram #6)

**Note:** DO NOT TIGHTEN THERMOSTAT WITH A WRENCH, HAND TIGHTEN ONLY.



## **RELAY HARNESS MOUNTING**

1. Taking into consideration wire routing preference, choose a location near the vehicles Battery or under hood fuse panel. Avoid mounting near HOT engine components.
2. Using the Relay as a template, mark and drill a 5/32" hole in the desired location.
3. Using the #10 Sheet Metal Screw provided, install the Relay/Wire Harness. (See Diagram #7)



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## WIRING

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 # 8 & 9.

### RELAY HARNESS

**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 a Blue Female Connector provided attach to EITHER of the two wires on the thermostat.

**Remaining Thermostat Wire:** Using a Blue Wire Tap and Blue Female Connector provided, attach the remaining Thermostat Wire to a 12V 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.

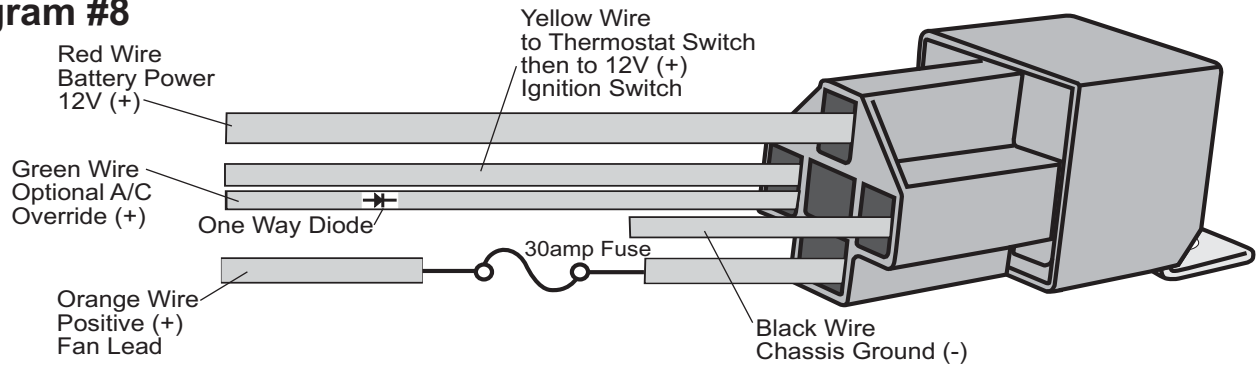
1. A/C Override - Using the Blue Wire Tap provided, attach the green wire to the positive (+) lead on the air conditioning compressor.
2. Manual Switch Override - Attach the Green Wire to the manual switch NOT PROVIDED.

### ELECTRIC FAN

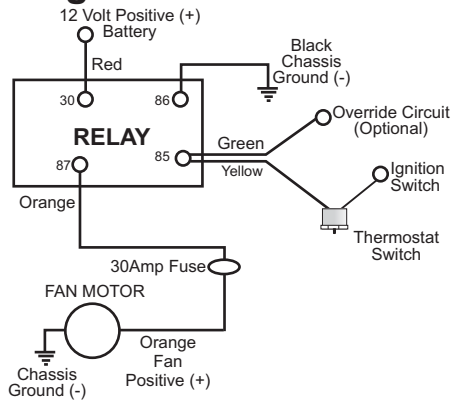
**Orange Wire:** Using a Blue Butt Connector provided attach the Orange wire to the Positive (+) electric fan lead.

**Negative Fan Wire:** Using a Blue Ring Terminal and #10 Sheet Metal Screw provided attach the Negative (-) electric fan lead to a good chassis ground (-).

#### Diagram #8



#### Diagram #9



### TROUBLE SHOOTING Q&A

Q: Why doesn't the fan 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 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 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.