INSTALLATION INSTRUCTIONS
HIGH OUTPUT DUAL RAD FAN ASSEMBLY
PART # 16028 & 16034

Please read these instructions completely before beginning installation

KIT CONTENTS

QTY.	DESCRIPTION	QTY.	DESCRIPTION
1	Left Shroud Assembly	8	1x1 Foam Pads
1	Right Shroud Assembly	2	Relay Wire Harness
4	Shroud Assembly Screws	1	Red Butt Connector
1	180° Thermostat Switch	2	Blue #10 Ring Terminals
1	3/8" Radiator Probe	2	Blue 5/16" Ring Terminals
1	Push-in Radiator Probe	3	Blue Butt Connectors
1	1 x 1 Foam Pad	2	Blue Female Connectors
1	Retaining Clip	4	Blue Wire Tap connectors
1	190° Thermostat Switch	7ft.	14 Gauge Wire
1	3/8" x 1/8" Adapter Bushing	6	4" Wire Ties
8	Mounting Rods	4	#10 Sheet Metal Screws
8	Mounting Clips		

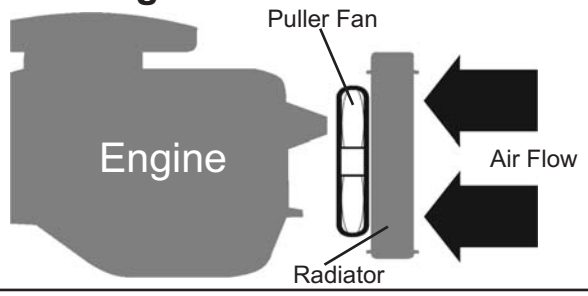
TOOLS NEEDED

5/8" Open End Wrench	Drill
11/16" Open End Wrench	5/32" Drill Bit
3/4" Open End Wrench	12V Test Light
Standard Screw Driver or 5/16" Nut Driver	Wire Stripper
	Crimping Tool
	Teflon Tape

IMPORTANT

This fan assembly is designed for PULLER APPLICATIONS **ONLY** Engine side of radiator. (See Diagram #1)

Diagram #1

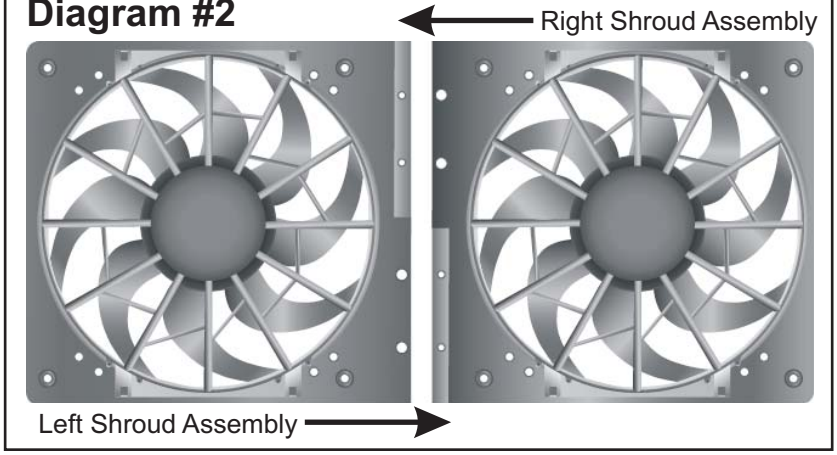


PRE-INSTALLATION

1. Identify the Right and Left Shroud Assembly and Fan Shroud Mounting Screws
2. Using a table or flat surface, lay both the Right & Left Shroud Assemblies on the flat surface with the fan motors both facing up. (See Diagram #2)
3. Slide both shrouds together lining up the mounting holes. (See Diagram #2)
4. Carefully install the 4 Fan Shroud Assembly Screws into each of the mounting holes and tighten.

   Note: Do not over tighten!

Diagram #2

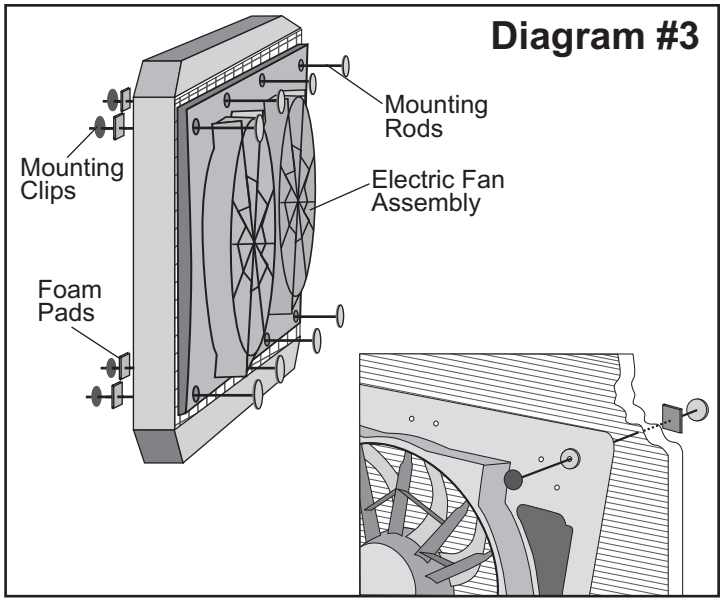


MOUNTING

1. Position the electric fan against the radiator in the desired location.
2. Take the Plastic Rods provided and install through the eight mounting holes on the shroud pushing them slowly into and through the radiator core. (See Diagram #3)

   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 #3



THERMOSTAT INSTALLATION

FAN #1 - 180° Thermostat Switch

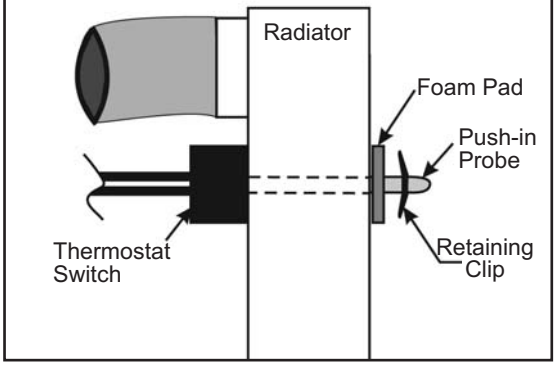
Identify the small bag labeled “180°F Thermostat Kit”

Fan #1 has two thermostat probe options. Choose the option below that best fits your application.

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

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

Diagram #4



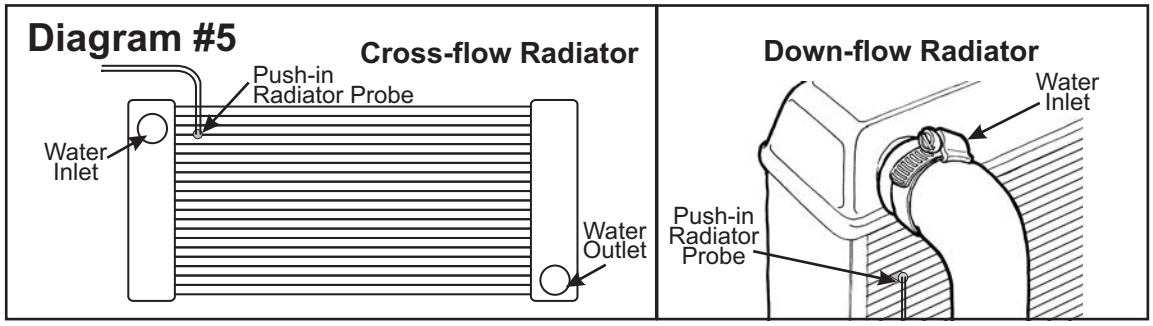
Option 1

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

Installation:

1. Take the brass probe and thread it clockwise onto the thermostat.
2. Carefully insert the probe/thermostat assembly into the fins of the radiator until thermostat 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)

Diagram #5



Option 2

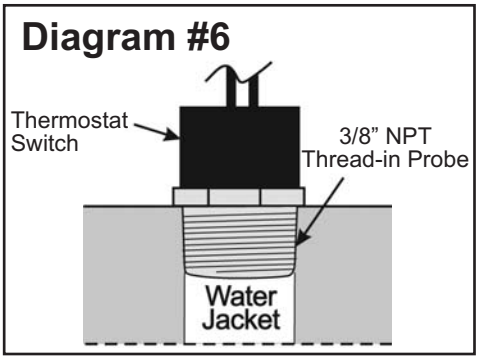
Placement: Locate a 3/8” NPT port either on the radiator, waterneck, intake manifold or cylinder heads.

Installation:

1. Using Teflon tape or suitable sealant install the probe into the 3/8” NPT port on the vehicle.
2. Using a 3/4” wrench tighten the probe.
3. Carefully thread the Thermostat Switch clockwise into the Thread-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.

Diagram #6



FAN #2 - 190° Thermostat Switch

Identify the small bag labeled “190° Thermostat Kit”

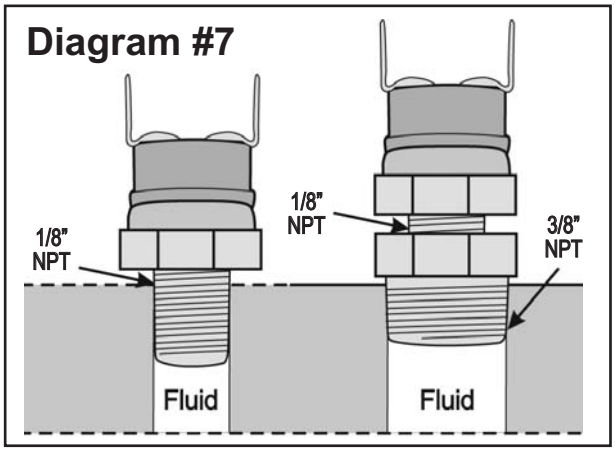
Fan #2 requires a threaded port either 1/8” NPT or 3/8” NPT. (See Diagram #7)

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 #7)

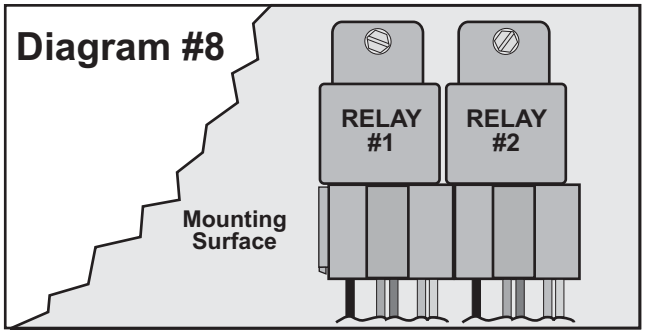
Diagram #7



RELAY WIRE HARNESS MOUNTING

1. Find a convenient location, taking into consideration Thermostat placement and wire routing requirements. Avoid mounting near HOT engine components.
2. Using the Relays as a template, mark and drill two 5/32” holes.
3. Using the two #10 Sheet Metal Screws provided and a standard screw driver or 5/16” nut driver, attach the two Relay Harnesses. (See Diagram #8)

Diagram #8



WIRING

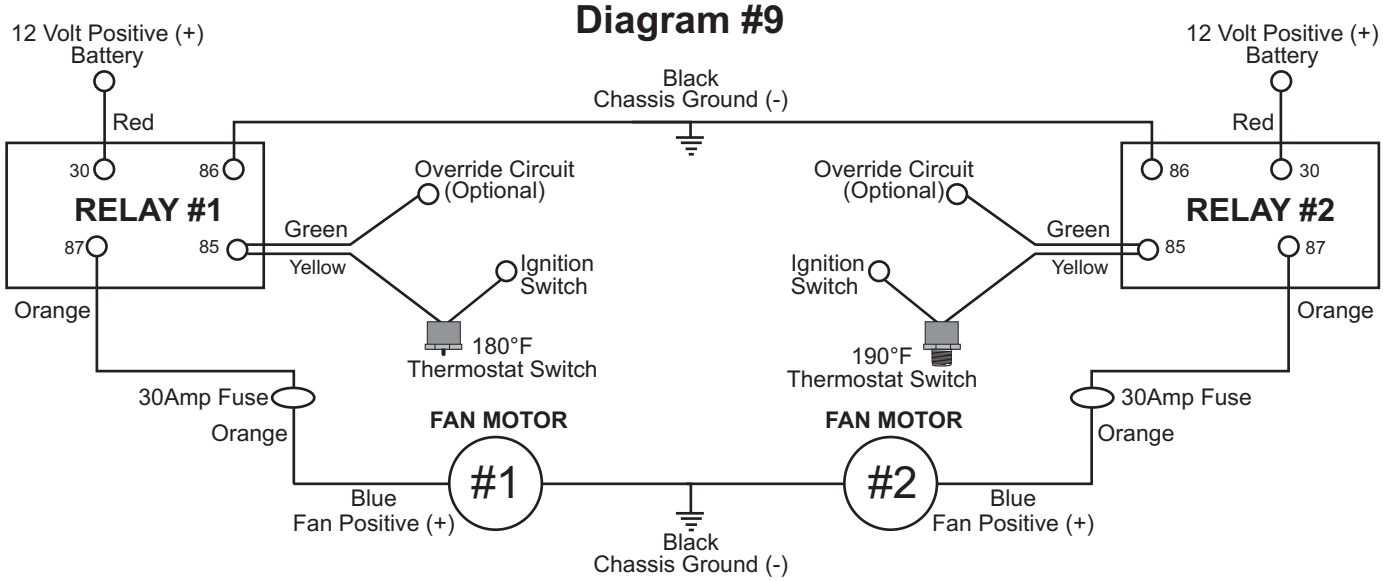
Before starting, disconnect the Negative (-) cable on the vehicles battery.

Using the electrical connectors and wire ties provided, follow the directions below. (See Diagram #9)

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

Identify which Relay will be used for Fan #1 and Fan #2 and temporarily mark using a piece of tape and pencil.

Diagram #9



ELECTRIC FAN WIRING

Black Wires - Using the Blue #10 Ring Terminal and #10 Sheet Metal Screw provided, attach **BOTH** Black wires coming from the Electric Fans to a good chassis Ground (-).

FAN #1

Blue Wire - Using the Blue Butt Connector provided, attach the Blue Positive (+) fan wire to the **ORANGE Wire** on Relay #1.

FAN #2

Blue Wire - Using the Blue Butt Connector provided, attach the Blue Positive (+) fan wire to the **ORANGE Wire** on Relay #2.

RELAY HARNESS WIRING

Black Wires - Using the Blue #10 Ring Terminal and #10 Sheet Metal Screw provided, attach **BOTH** Black wires coming from the Electric Fans to a good chassis Ground (-).

RELAY #1

Red Wire - Using the Blue 5/16” Ring Terminal provided, attach the Red wire directly to the vehicles Positive (+) battery terminal.

Yellow Wire - Using the Blue Butt Connector provided, attach the Yellow Wire to **EITHER** wire on the 180° Thermostat Switch.

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

Note: If the Yellow Wire is connected to a constant power source (battery) the electric fan will run after the vehicle has been shut off and could run down the battery.

Orange Wire - See Electric Fan Wiring

Green Wire - Override Circuit (Optional)

The Green Wire is designed to work in two different configurations. When used, this will allow the fan 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, cut any exposed copper and tape or shrink wrap the end of the wire.

(Wiring Continued)

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 #10 on page 4)

   For Manual Switch installation, always follow manufacturer's instructions.

RELAY #2

Red Wire - Using the Blue 5/16" Ring Terminal provided, attach the Red wire directly to the vehicles Positive (+) battery terminal.

Yellow Wire - Using the Blue Female Connector provided, attach the Yellow Wire to EITHER terminal on the 190° 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.

Note: If the Yellow Wire is connected to a constant power source (battery) the electric fan will run after the vehicle has been shut off and could run down the battery.

Orange Wire - See Electric Fan Wiring

Green Wire - Override Circuit (Optional)

The Green Wire is designed to work in two different configurations. When used, this will allow the fan 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, cut any exposed copper and tape or shrink wrap the end of 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 #10)

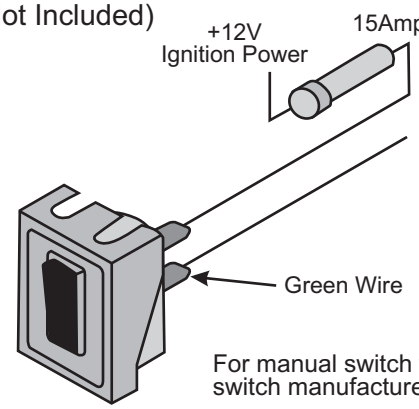
   For Manual Switch installation, always follow manufacturer's instruction

Reattach the Negative (-) terminal on the vehicles battery.

Diagram #10

Manual Switch Override Instructions

(Switch Not Included)



For manual switch wiring, refer to switch manufacturer instructions.

VEHICLE TESTING

1. Before you start the vehicle, make sure all wires are safely zip tied and away from any moving parts.
2. Start the vehicle.
3. If the Override function is being used, either turn on the vehicles air conditioning or flip the manual switch to the ON position. The Electric Fan should start immediately.
4. Turn off the Override function and allow the engine to warm up to operating temperature.
5. Fan #1 should start around 180°F.
6. Fan #2 should start at 190°F.

TROUBLE SHOOTING Q&A

Q: Why is the fan(s) blowing in the wrong direction?
A: Switch the Positive (+) and Negative (-) fan leads. This will reverse the airflow direction.

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.

(Page 4)

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.