

#180 with controls

#188 without controls

INSTALLATION INSTRUCTIONS

Tools Required for this installation:

- Quality wire cut/strip/crimp tool
- 4mm hex wrench (provided)
- 10mm socket or open-end wrench
- Voltmeter or test light
- $\frac{3}{8}$ " socket or straight screwdriver
- Appropriate tools to remove old fan & shroud (hoses & accessories also on some applications)
- Hand-held drill (some applications)
- Hack saw (some applications)
- Hand held thermometer (optional)



Optional

Model #180 Should include:

- 1 - Electric fan/shroud assembly
- 2 - #29001 aluminum brackets
- 4 - #29003 black brackets
- 1 - Control module with temp. sensor
- 1 - Complete wiring kit bag with mounting hardware

Step 1: Remove Existing Fan & Shroud

Tip: If your vehicle is equipped with a 2-piece shroud, it is usually easiest to remove the shroud first, then remove the fan blade/clutch. If a one-piece shroud, it is sometimes necessary to lift out the shroud and blade together.



Remove the original fan...



and shroud.

CONTINUE TO NEXT PAGE TO COMPLETE THE INSTALLATION.

Limited Warranty: This Warranty is provided to the original purchaser only and covers only products purchased by the original purchaser from an authorized Flex-A-Lite distributor. Legend Brands, Inc., 15180 Josh Wilson Rd., Burlington WA 98233, 800-932-3030, warrants to the original purchaser, all Flex-A-Lite products to be free of defects in material and workmanship for a period of one (1) year from the date of purchase. Flex-A-Lite products failing due to manufacturer's defect within one (1) year from date of purchase, may be returned to the factory through the point of purchase, transportation charges prepaid. If, on inspection, cause of failure is determined to be defective material or workmanship and not by misuse, accident, improper installation, or subsequent installations other than the original vehicle in which it was installed, Legend Brands, Inc., will replace the product free of charge, transportation prepaid. Legend Brands, Inc. will not be liable for incidental, progressive, or consequential damages. Flex-A-Lite warranty is limited to product replacement and will not cover any installation or removal costs should a product qualify for warranty. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights, which may vary from state to state. Flex-A-Lite is a brand of Legend Brands, Inc.

Step 2: Check Fit of New Fan Assembly

Hold, or have a friend hold the fan in place while checking for possible obstructions that may interfere with the blades or shroud. It may be necessary to move or tie back small hoses or wires. If the fan does not fit at this point, additional modifications or a different Flex-a-lite fan may be required.



When you have a clear path...



test-fit and check for obstructions.

Step 3: Mount Control Module: (Does not apply to #188)

The fan control module (included) can be mounted to any flat surface near the fan, or can be mounted to the fan shroud. Mark the 2 hole locations on the mounting surface, then drill $\frac{3}{16}$ " holes and use the self-tapping bolts provided to mount the module.



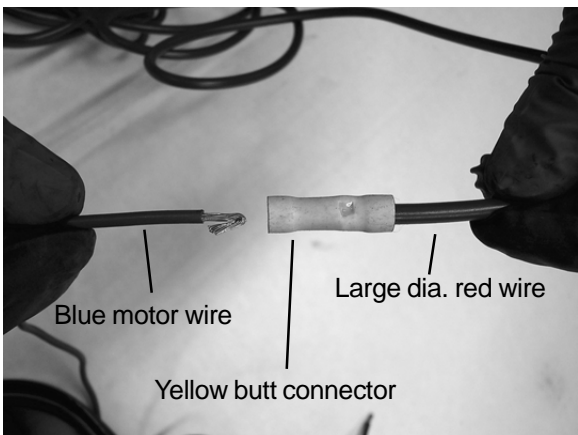
If necessary, drill two $\frac{3}{16}$ " holes...



and mount control module in desired location.

Step 4: Wire the fan motors (refer to Wiring Diagram, next page) Does not apply to #188

Using the yellow butt connectors provided, attach a length of the large diameter (10 AWG) red wire to the blue motor wire. Attach a length of the large diameter (10 AWG) black wire to the black motor wire. Once the fan is in place, these will attach to the control module. **Tip: Strip an additional 1/8" of insulation from the motor wires and fold them over to increase the thickness of the wire where it will slide into the butt connector.** If mounting the control module to the fan shroud, the motor wires can be connected now (see wiring diagram, next page). If mounting the control somewhere else in the engine compartment, leave enough wire to reach the control module, but do not connect yet.



Crimp the motor wires to the large supplied wire...

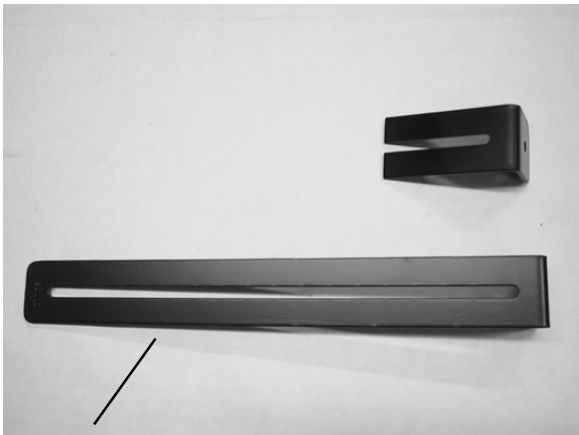


and if mounting control box to the shroud, they can be connected now.

CONTINUE TO NEXT PAGE TO COMPLETE THE INSTALLATION.

Step 5: Mount the fan assembly to the radiator

Look for at least four potential mounting points that are able to support the weight of the fan to attach the fan to the vehicle. Cross braces, radiator trays, front fascia, and radiator mounting points are all possible mounting points. Use the universal brackets and hardware kit supplied to hold the fan against the radiator core. On some applications, the brackets may need to be cut or modified to fit. Additional holes may need to be drilled as well.



#29003

The brackets can be cut to length if necessary.

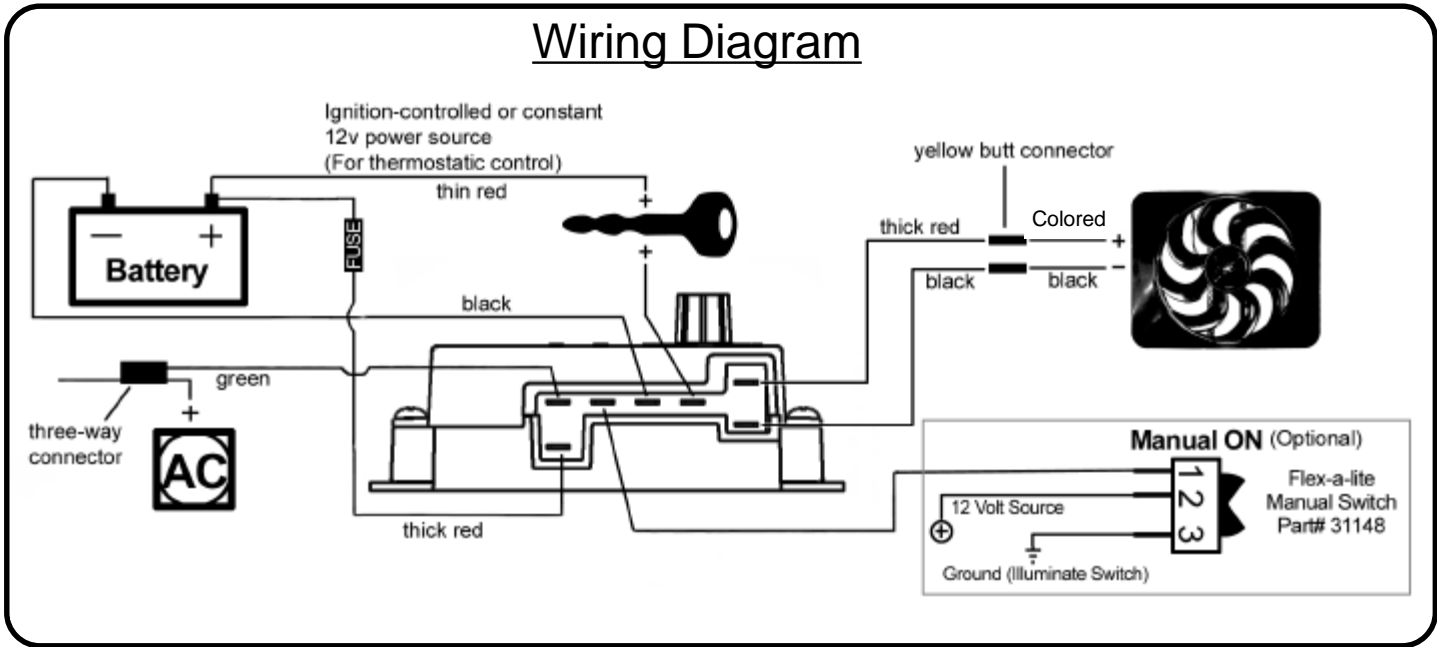


Compress seal against core and tighten in place.

Put the fan into place. Before tightening the brackets, adjust the fan so that the rubber seal is contacting the radiator core and compress the seal about 50%. It may help to have a friend hold the fan against the core while tightening brackets.

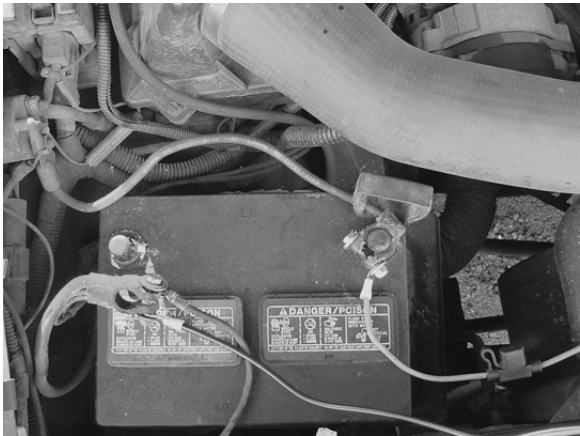
Step 6: Wire the control module (*Does not apply to #188*)

Wiring Diagram



6a. Connect the motor wires to the control module (Red wire to the "M+" terminal and black wire to the "M-" terminal).

6b. Disconnect the negative battery lead for safety while finishing the wiring. Use the large diameter red (10 AWG) wire to run power directly from the battery positive (+) terminal to the "B" terminal on the control module. Connect the fuse holder in-line with this wire, as shown, but do not insert the fuse yet. Use the yellow female, ring, and butt connectors provided.



CONTINUE TO NEXT PAGE TO COMPLETE THE INSTALLATION.

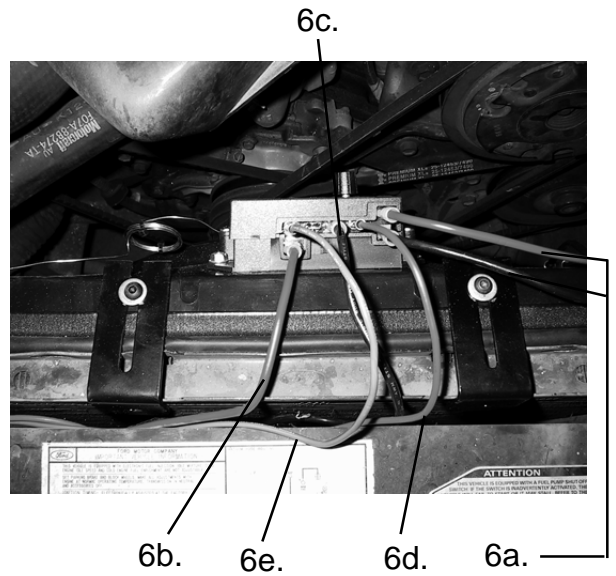
6c. Use the large diameter black (10 AWG) wire to run from the negative (-) battery terminal to the "G" terminal on the control module. Use the yellow female connector and ring connector provided.

6d. Use the small diameter red wire (14 AWG) to connect the "+" terminal on the control module to a positive power source. **NOTE: Attaching this wire to an ignition-controlled source will shut off the fan when the engine is turned off. Attach this wire to an uninterrupted (always hot) power source to allow the fan to continue running after the engine is shut off.** Use the blue female connector and fuse taps (included) if necessary.

6e. (Optional) For air conditioning control (if desired) connect the "C" terminal on the control module to the *positive* wire that triggers the A/C compressor using the small diameter green (14 AWG) wire. Using a voltmeter, determine which wire coming from the compressor is the *positive* trigger wire. Use the 3-way connector (included) to tap into this wire and send a signal to the fan control module. The fan will cycle on and off with the A/C clutch when the A/C is turned on.

6f. (Optional) For manual switch operation, use Flex-a-lite p/n 31148. Connect the switch as shown on the wiring diagram (previous page). Connect the "M" terminal on the control module to the "1" terminal on the switch. Connect the "2" terminal on the switch to a positive 12v power source. Connect terminal "3" on the switch to a good ground (for switch illumination). **NOTE: To prevent thermostatic activation (if only manual switch operation is desired), omit the lead to the "+" terminal of the control box. "B", "G", "M+" and "M-" must remain connected. If not using a Flex-a-lite manual switch, do not connect a ground wire to the switch!**

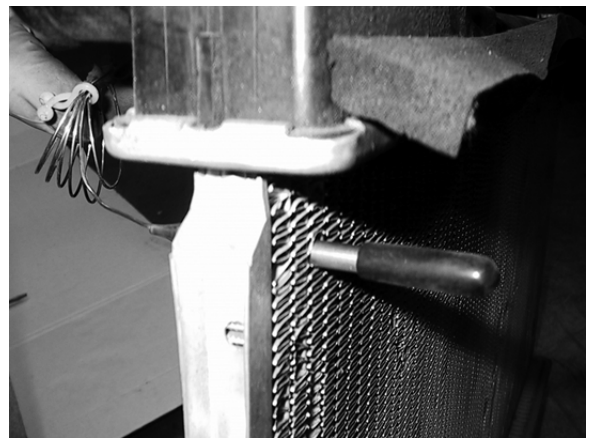
6g. Use the zip ties provided to secure the wires and prevent them from interfering with fan blades, belts, and pulleys in the engine compartment. Reconnect the battery and insert the fuse provided.



Step 7: Insert the temperature probe into the radiator fins (Does not apply to #188)



Install temp. probe near inlet hose...



then replace the insulator cap.

Locate the inlet hose from the engine to the radiator. Remove the black insulator cap and insert the temp. probe through the radiator fins near the inlet hose. Reinstall the black insulator cap.

Step 8: Adjust the temperature control knob on the control box

If you disconnected any hoses or drained coolant to install the fan, reconnect the hoses and refill the radiator. Press the control knob (included in wiring kit) onto the control box shaft. Turn the knob clockwise until it stops. Start the engine and allow it to idle. Using a hand held thermometer (positioned near the inlet hose) or the vehicle's temperature gauge, monitor the temperature. When the coolant temp. is slightly above normal (or desired temp.), turn the knob counter-clockwise just until the fan turns on. From now on, the fan should activate at this temperature setting. Adjust as necessary to maintain desired temperature.