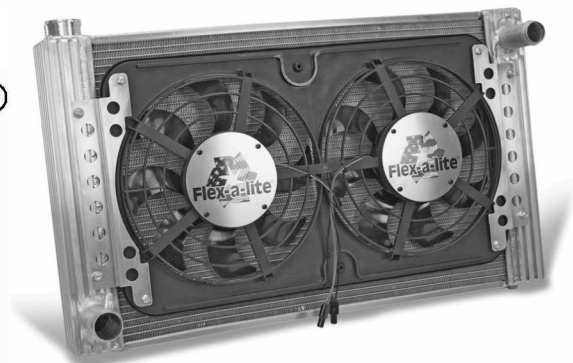


# Radiator/Fan Combo Models #56410R, #56410L

## Flex-a-Fit® ALUMINUM RADIATORS



## Fan Wiring Instructions

**FOLLOW THESE INSTRUCTIONS CAREFULLY TO AVOID DAMAGING THE CONTROL UNIT, FAN MOTORS, AND YOUR VEHICLE! WHEN CRIMPING WIRES, ALWAYS USE A QUALITY CRIMPING TOOL (DO NOT USE PLIERS OR OTHER DEVICES).**

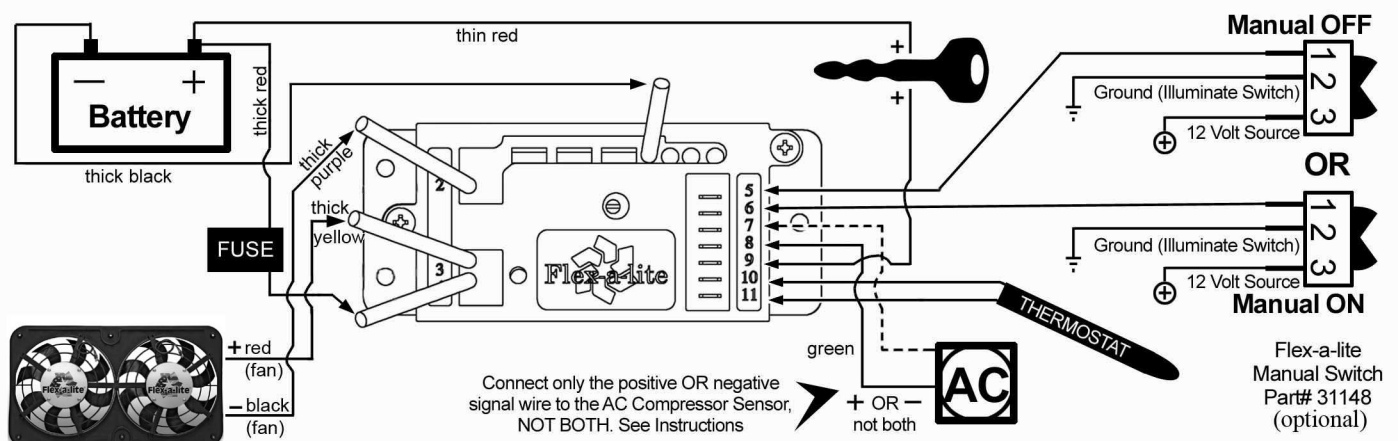
### Step 1: Locate mounting point for the VSC (variable speed control) unit

Locate a mounting point for the VSC near inlet side of the radiator. The control unit needs to be placed within about 2-feet of radiator inlet hose. On the fender well next to the radiator may be a convenient location. Attach the control unit using the screws provided.

### Step 2: Wire the fan motors (refer to Wiring Diagram, below)

Using a large yellow insulated butt connector provided, attach a length of the thick (12 AWG) **red** wire to the **red** motor wires at fan. Attach a length of the thick (12 AWG) **black** wire to the **black** motor wires at the fan. Once the fan is in place, these will attach to the control unit. If mounting the control somewhere in the engine compartment, leave enough wire to reach the control unit.

### WIRING DIAGRAM



**NOTE:** For pusher configuration, flip the fan blades over and reverse motor wire polarity (black motor wire positive, red wire negative).

### 3. Connect the fan wires to the VSC

Now begin wiring the motors to the VSC. Using the yellow butt connectors provided, connect the **red** wire you attached to the fan motor wires in Step 2 to the **yellow** wire on the VSC. Connect the **black** wire from the motor wires to the **purple** wire on the VSC. (see Diagram A below) **NOTE: Failure to do this will result in incorrect operation and damage to fan motors!**

### 4. Connect power leads

Determine the length needed to run thick red and black wire from the VSC to the battery terminals and trim appropriately. Crimp a large yellow ring connector to one end of the each wire and connect the black wire to the negative (-) battery terminal, but **Do Not** connect the red wire yet. Using butt connectors, connect the fuse holder provided inline with the red wire. The fuse and fuse holder will protect the fan motors and your vehicle's electrical system from damage.

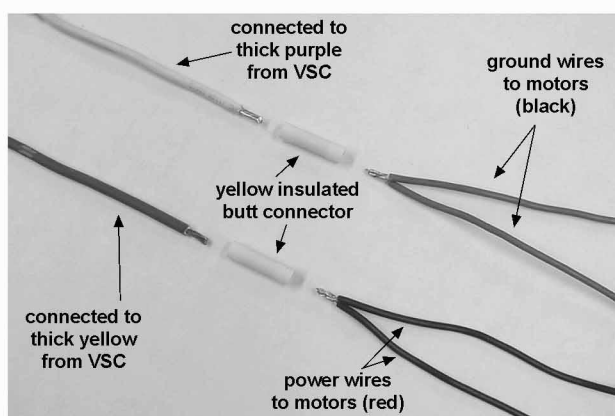


Diagram A

# Wiring Instructions Cont'd. 56410R/L

## 6. Ignition controlled power source

Locate fuse box. Find a circuit that is "hot " when the key is in the "ON" position. **NOTE: DO NOT use the DRL or brake/taillight fuse!** Attach the included fuse tap to fuse. Attach a female connector to the thin red wire included and connect to the fuse tap. Trim the wire so that it will reach the VSC. Attach pink female connector to end of wire and connect to **terminal #9** on VSC.

## 7. Fan operation with air conditioning

Locate the wires coming from the A/C compressor. Determine which wire is ground and which is positive by using a volt meter. Connect or splice the thin green wire to the positive (+) wire of the A/C compressor using the blue "Piggy-Back" connector. Determine length needed to reach VSC and trim to length. Attach a pink female connector to the wire. If the A/C compressor is activated by a positive (+) signal, connect this wire to **terminal #8** on VSC. If it is activated by a negative signal, connect to **terminal #7** on VSC.

## 8. Temperature sensor

Locate the temperature sensor. Gently push probe through fins in radiator as close to the upper radiator hose as possible, leaving about ¼" of the probe protruding out of the core (**See Diagram B**). Determine the length of wire needed to reach the VSC. **IMPORTANT:** Strip the insulation back about 1" and fold the wire onto itself to effectively double the thickness of the wire before connecting the pink female connectors as shown in at right. Attach these wires to **terminals #10 & 11** on the VSC. Both wires need to be connected but it doesn't matter which wire goes to each terminal. (**See Diagram C**)

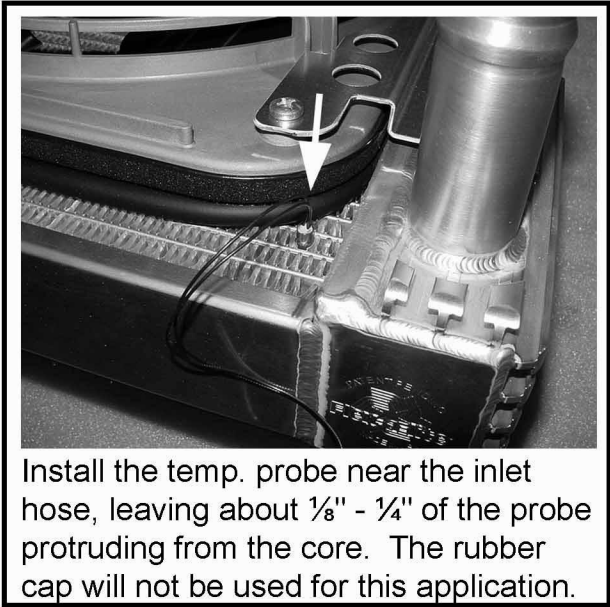


Diagram B

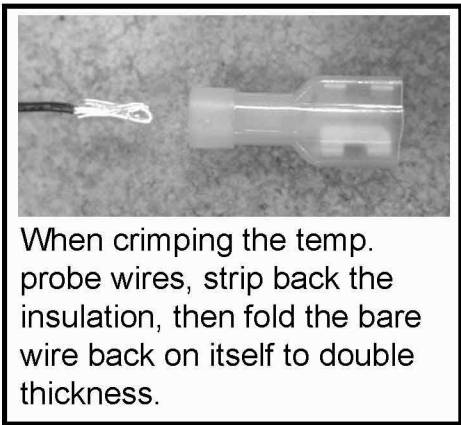


Diagram C

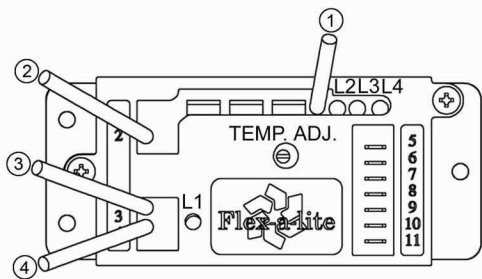
## 9. Manual Switch

If manual switches (Flex-a-lite #31148) have been purchased, attach them as follows: To override engine temperature signal and turn fans off, connect the switch to **terminal #5** on VSC to send a negative (-) signal. To override engine temperature signal and turn fans on, connect the switch to **terminal #6** on the VSC so that a negative (-) signal is sent.

### WIRING CONNECTIONS (See Diagram Below)

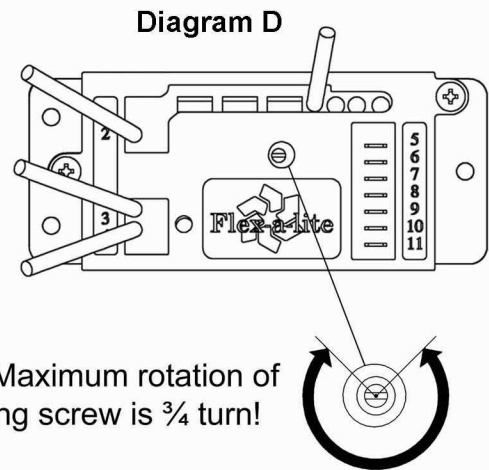
- |                                   |                                   |
|-----------------------------------|-----------------------------------|
| #1 Battery Negative*              | #8 A/C Compressor Positive Signal |
| #2 Negative to Fan*               | #9 Ignition Positive Signal*      |
| #3 Positive to Fan*               | #10 Temp Sensor Wire*             |
| #4 Battery Positive*              | #11 Temp Sensor Wire*             |
| #5 Negative Override Signal OFF   | L1 Fan Output Indicator           |
| #6 Negative Override Signal ON    | L2 Override Condition Indicator   |
| #7 A/C Compressor Negative Signal | L3 A/C Signal Indicator           |
|                                   | L4 Ignition Signal Indicator      |

\* mandatory connections



The Variable Speed Control has new features.

At the set temperature, the fans will come on at 60%; this reduces the load on your charging system. If the temperature rises, the fan speed will increase. If your set temperature is 195°F, then between 195° and 205° the fan speed will increase from 60% to 100%. So after a 10-degree rise from the set point, the fans will be running at 100%.



Initial Start-up and Adjustment Procedure

1. Turn ignition on. After 6 seconds, LED #L4 should light up (**Refer to wiring connections diagram on page 2**). If not, check to make sure that there is 12 Volts at terminal #9 on VSC. The delay is to allow starter to start the vehicle without the fans drawing any power.
2. With your engine running, engage the A/C. The fans should come on and cycle with the A/C compressor. LED's #L1, L3 and L4 should be lit when fans are running. If they do not turn on, verify that the A/C clutch is engaged and make sure you have a positive signal when the clutch is engaged at terminal #8 on the VSC. Shut off A/C and let engine continue to idle, or drive the vehicle a short distance to bring the engine to operating temperature (**IMPORTANT: You must monitor the vehicles temperature gauge**).
3. Verify that operating temperature has been reached by feeling the upper radiator hose. Hot water should be flowing through hose into the radiator. If the fans have not cycled on yet, slowly adjust the screw on the VSC until the fans cycle on. Turning the screw further in this direction will keep the engine at a lower temperature, and turning in the opposite direction will keep the engine at a higher temperature. (**See Diagram D**) **NOTE: THE TOTAL MOVEMENT OF THE ADJUSTMENT SCREW IS ABOUT  $\frac{3}{4}$  OF A TURN. TURNING THE SCREW BEYOND THE LIMITS WILL DAMAGE THE UNIT!** Once desired temperature is set, let the engine continue to idle and make sure the fans will cycle to maintain desired temperature. When fans are running, LED's #L1 and L4 should be lit.

**The Flex-a-lite Limited Warranty**  
Flex-a-lite Consolidated, 7213-45th St. Ct. E. Fife, WA 98424, Telephone No. 253-922-2700, warrants to the original purchasing user, that all Flex-a-lite products to be free of defects in material and workmanship for a period of 365 days (**1 year**) from date of purchase. Flex-a-lite products failing within 365 days (**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, accidental or improper installation, Flex-a-lite will replace the product free of charge, transportation prepaid. **Flex-a-lite will not be liable for incidental, progressive or consequential damages.** Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights and you may have other rights, which vary from state to state.  
The Flex-a-lite warranty is in compliance with the Magnuson-Moss Warranty Act of 1975.