



Dual Electric Fan #264

Fits 2003-2008 Dodge 2500/3500 w/ 5.9L & 6.7L Cummins Diesel

INSTALLATION INSTRUCTIONS

REMOVE EXISTING FAN & SHROUD:

1. **Make sure the engine is cool!**
 2. Disconnect battery negative (-) cable from both batteries.
 3. Dismount windshield washer tube and battery cable from top of shroud (3 plastic clips). **See detail 1**
 4. On passenger side, use 10mm socket, loosen air box front mounting point. **See detail 2**
 5. Remove 2-13mm bolts (one on each side) from top of shroud attached to radiator.
- Note:** To access bolt on passenger side, slide air box backwards. You may need to disconnect overflow tube as well. **See detail 3**
6. Hold back rubber flap at the top of "floating/stock" shroud. Using spring clamps can assist to keep flap from snapping back into your way. **See detail 4**
 7. Pull partial radiator side shroud out *slowly* from above.
 8. From below, disconnect electric clutch from harness; use flat-head screw driver to unlock connector. Harness can be found near mounting bracket of "floating" shroud on driver's side. **See detail 5**
 9. Un-mount electric clutch wire mount using 10mm socket. Wire mount will be attached to lower bracket of "floating" shroud on driver's side. **See detail 6**
- Suggestion:** Cut piece of cardboard (27" x 29" & tape to inside of core for radiator protection).
10. Remove 2-13mm nuts securing top half of "floating" shroud, allowing shroud to lean toward radiator core. This gives enough room for "fan clutch mounting-nut" accessibility.
 11. From below, remove 2-13mm nuts securing bottom of "floating" shroud to bottom bracket.
 12. While holding clutch pulley, use 36mm wrench & turn counter-clockwise to loosen fan clutch mounting-nut. Be careful not to drop fan & clutch assembly as it unscrews from pulley.
 13. *Slowly* pull fan & clutch assembly up simultaneously with "floating" shroud. Make sure electric clutch wire mount is free from snagging on bottom "floating" shroud bracket.

Remove top & bottom "floating" shroud brackets.

Note: Top bracket on passenger's side secures wiring loom. Find alternate mounting point near by and re-secure. The 2 top brackets & 1 bottom bracket

Note: Removal of "floating" shroud mounting brackets is for appearances only. There should be enough clearance to install new shroud without removal of brackets.



DETAIL #1



DETAIL #2



DETAIL #3



DETAIL #4



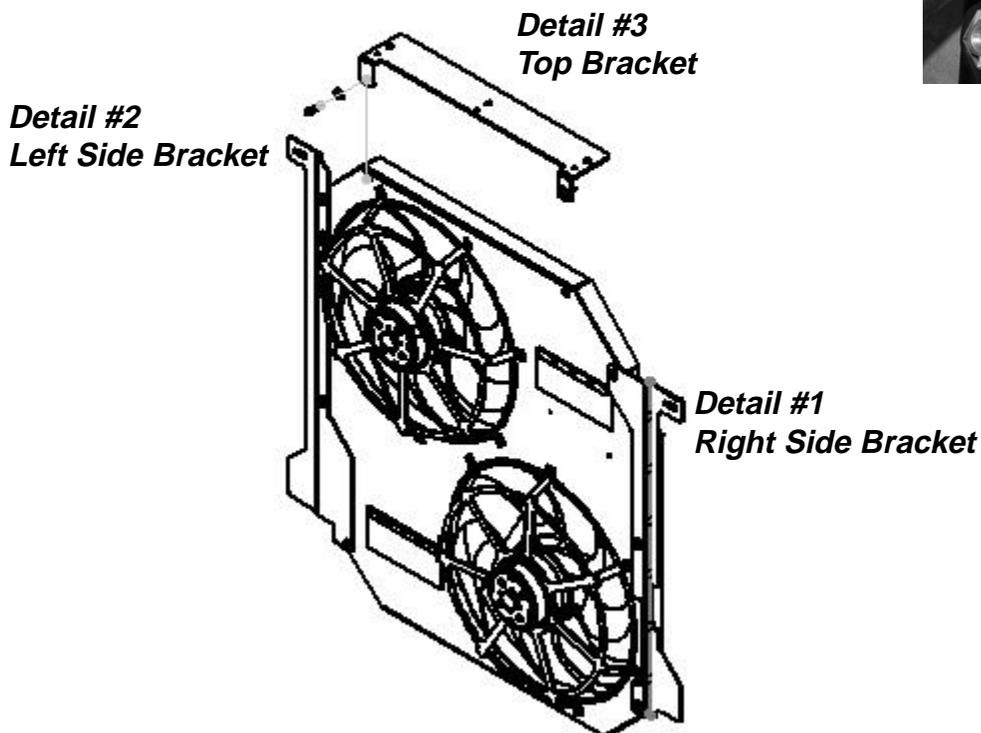
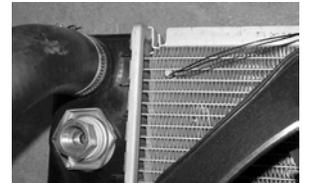
DETAIL #5



DETAIL #6

INSTALLATION OF ELECTRIC FAN & SHROUD:

1. Start by attaching PASSENGER side bracket to the shroud with 10mm hex bolts and lock nuts (3ea). **see detail #1**
2. Gently lower the fan/shroud into the vehicle placing the lower tab of the mounted bracket into the side tank slot on passenger side. Slot is at bottom of radiator molded onto side tank. *Examine old shroud tabs for reference.*
3. While holding up driver's side, insert factory 13mm bolt securing top of bracket to side tank mount on passenger's side.
4. Move air box on passenger's side forward and reattach using factory 10mm nut.
5. Attach driver's side bracket to shroud with shroud *in place* using 10mm hex bolts and lock nuts (3ea). **NOTE:** Place the lower tab of the mounting bracket into the side tank slot on driver's side *before* bolting to shroud. **see detail #2**
6. Insert factory 13mm bolt to secure top of bracket to side tank mount on driver's side.
7. Remove "loom clips" from top of old factory plastic shroud by pinching expanded wings on under side with needle nose pliers (these hold positive cable to secondary battery);
8. Insert "loom clips" into top replacement bracket.
9. Attach "loom clip" bracket to top of new shroud by aligning bolt thru holes of bracket to threaded inserts on top inside face of shroud. **see detail #3**
10. Reattach windshield washer tube and battery cable into "loom clips" along new top mounted bracket. **see detail #1**
11. Reattach overflow tube if removed earlier.
12. Locate the temperature sensor in the kit bag. Insert the temperature sensor into the radiator fins near the inlet. **Leave ¼" or less protruding from the surface of the radiator for optimum performance.** The wires will run out through the top corner of the fan shroud. These will be used later when wiring the VSC.



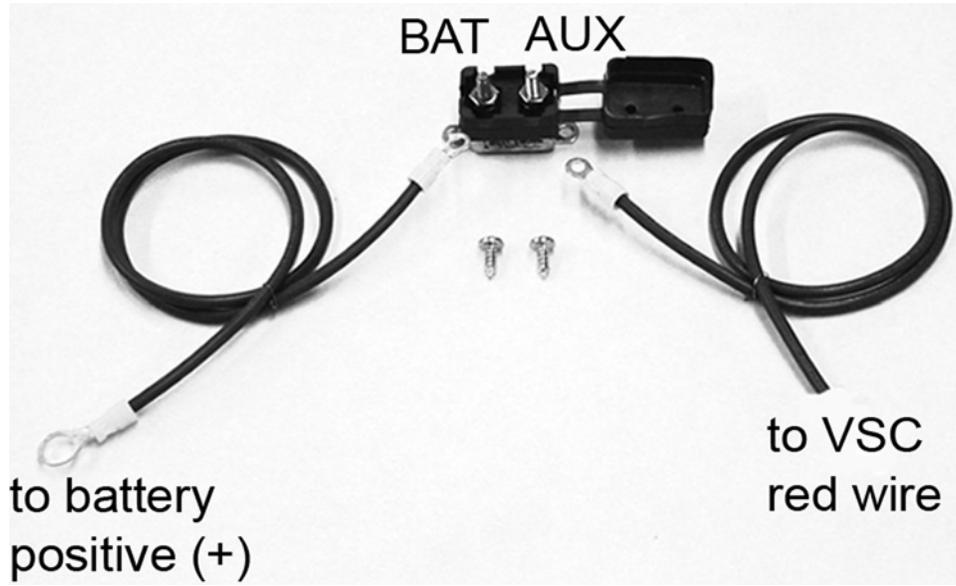
WIRING THE VARIABLE SPEED CONTROL



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).

1. Find the thick red and black wire bundles in the wiring kit. Use the yellow butt connectors to crimp the red wire to the short red wire on the Variable Speed Control (VSC), and the black wire to the short black wire on the VSC (**see wiring diagrams on next page**).
2. Determine the length needed to connect the red and black power leads to the battery terminals on the secondary battery on the passenger side and trim appropriately. Crimp a large yellow ring connector to the end of the black wire and connect to the negative (-) battery terminal but **DO NOT** connect the red wire yet.
3. Find a convenient place to mount the circuit breaker between the VSC and the positive (+) battery terminal and use the 2 screws provided to mount it securely. Cut the red wire at the point where you mounted the circuit breaker. Find the red boot for the circuit breaker and lay it on the breaker. Crimp a small yellow ring connector to the ends of the wires and connect them to the circuit breaker. **NOTE: BE SURE TO CONNECT THE END COMING FROM THE BATTERY POSITIVE (+) TERMINAL TO THE "BAT" TERMINAL ON THE CIRCUIT BREAKER (COPPER COLORED).** Once both positive (+) wires are connected to the circuit breaker, fold the top of the boot over and press to fit. This will help insulate the circuit breaker from arcing.

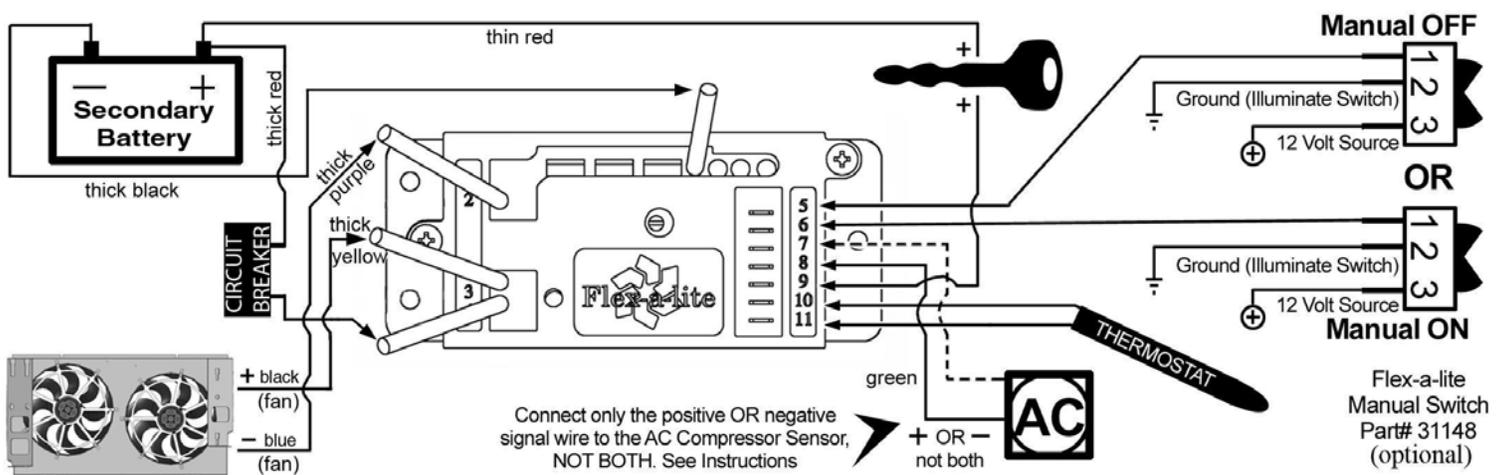
WIRING THE VARIABLE SPEED CONTROL CONTINUED



4. Crimp a large ring connector to the positive (+) battery end of the power lead and connect it to the battery terminal (secondary battery on passenger side).
5. Locate power distribution box (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 the fuse. Attach a pink female connector to the thin *red* wire included and attach to the fuse tap. Trim the wire so that it will reach the VSC. Attach pink female connector to the other end of the wire and connect it to **terminal #9** on the VSC.
6. Locate the wires going to the A/C clutch. Determine which wire is ground (-) and which wire is the positive (+) trigger wire. Tap into the positive (+) trigger wire using the supplied thin green wire and the piggy-back connector (blue). Determine the length needed to reach the VSC and trim to length. Attach a pink female connector and connect this wire to **terminal #8**. **NOTE: terminal #7 on VSC will be left open.**
7. Find the 2 thin black wires coming from the temperature sensor that you installed earlier in the radiator core. Determine the length of wire needed to reach the VSC. **IMPORTANT:** strip the insulation of the wires back about 1” and fold the bare wire back on itself to double the thickness of the wire before connecting the pink female connectors (*see detail #8*). Then attach these wires to **terminals #10 & 11**. Both wires need to be connected but it doesn’t matter which wire goes to each terminal.
8. If optional manual switched (Flex-a-lite #31148) has been purchased, attach it as follows: To override engine temperature to turn fans off, connect the switch to **terminal #5** on the VSC to send a negative (-) signal. To override engine temperature to turn fans on, connect the switch to **terminal #6** on the VSC so that a **NEGATIVE (-)** signal is sent.



DETAIL #8

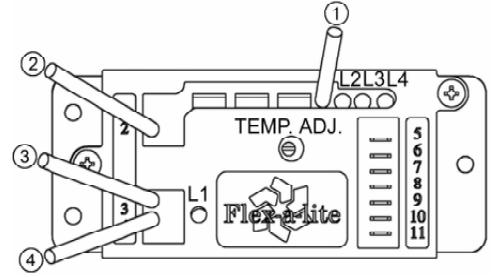


WIRING CONTINUED FROM PAGE 3

WIRING CONNECTIONS

- | | |
|-----------------------------------|-----------------------------------|
| #1 Battery Negative* (BLACK) | #8 A/C Compressor Positive Signal |
| #2 Negative to Fan* (PURPLE) | #9 Ignition Positive Signal* |
| #3 Positive to Fan* (YELLOW) | #10 Temp Sensor Wire* |
| #4 Battery Positive* (RED) | #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

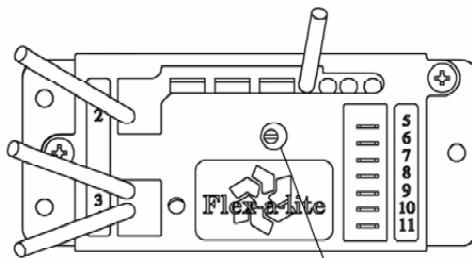


The Variable Speed Control has new features.

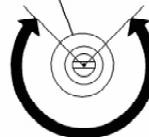
At the set temperature, the fans will come on at 60%; this reduces the load on your charging system. If the temperature rises, the fan speed will increase. If your set temperature is 195°F, then between 195° and 205° the fan speed will increase from 60% to 100%. So after a 10° rise from the set point,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

Initial Start-up and Adjustment Procedures

1. Turn ignition on. After 6 seconds, LED #L4 should light up. If not, check to make sure that there is 12 volts at terminal #9 on the VSC. The delay is to allow the starter to start the vehicle without the fans drawing any power.
2. With the engine running, engage the A/C. The fans should come on and cycle with the A/C clutch. LED's #L1, L3 and L4 should be lit when the 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 (monitor the vehicle's temperature gauge).
3. Verify that operating temperature has been reached by feeling the upper radiator hose. Hot water should be flowing through the 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. **NOTE: THE TOTAL MOVEMENT OF THE ADJUSTMENT SCREW IS ABOUT 3/4 OF A TURN. TURNING THE SCREW BEYOND THE LIMITS WILL DAMAGE THE UNIT!** Once the desired temperature is set, let the engine continue to idle and make sure the fans will cycle to maintain desired temperature. When the fans are running, LED's #L1 and L4 should be lit.



NOTE: Maximum rotation of adjusting screw is $\frac{3}{4}$ turn!



The Flex-a-lite Limited Warranty

Flex-a-lite consolidated, 7213-45th St. Ct. E., Fife, WA 98242, 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.