



## Dual Electric Fan #262

Fits 1994-2002 Dodge 2500/3500 w/ 5.9L Cummins Diesel

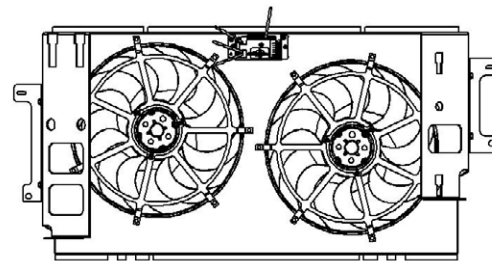
### INSTALLATION INSTRUCTIONS

#### REMOVE EXISTING FAN & SHROUD:

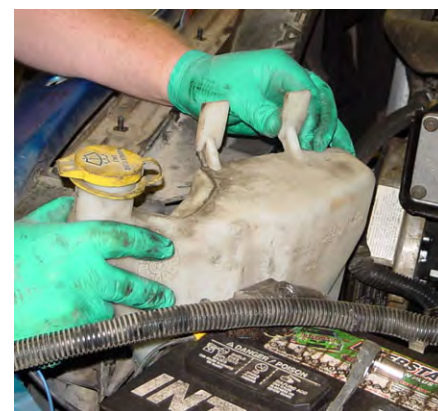
1. Disconnect battery negative (-) cable from both batteries.
2. **Make sure the engine is cool!** Open the radiator cap slightly to release the vacuum. Using the radiator valve drain located on the driver's side, drain enough coolant to clear the upper inlet hose of coolant. A hose or funnel will help reduce spillage.
3. Using a 10mm socket or wrench, remove secondary battery positive (+) cable that runs along the top of the radiator. **FOR YOUR SAFETY**, disconnect cable completely from both batteries!! *see detail 1.*
4. Disconnect coolant overflow bottle tube from radiator next to radiator cap.
5. Remove coolant overflow bottle from shroud by pressing on the round "button" located at the backside of the bottle towards the shroud while lifting up on the bottle at the same time.
6. Remove upper hose from radiator and hold off to the side for clearance.
7. Disconnect the windshield wash reservoir from the shroud by pressing the 2 locking "buttons" on the backside of the the tank towards the shroud and lifting up at the same time. It is not required to remove the tank entirely, just hold tank off to the side. *see detail 2.*
8. Using 10mm socket, remove the 4 bolts (2 left side and 2 right side) that hold the shroud in place. **KEEP** these bolts for installation of new fan.
9. Remove 2 small clips that hold the top of the factory shroud to the top of the radiator.
10. Locate lower wire harness fastened to the lower part of the factory shroud. Unfasten harness from the factory shroud. **NOTE: Do not disconnect harness from electrical system**
11. Remove OEM clutch fan. This can be accomplished by turning the large nut on the engine side of the fan clockwise. **NOTE: Careful not to let the fan hit the radiator core when it is spun loose from the engine.**
12. Lift out the fan and shroud together to avoid any damage to the radiator core.

#### INSTALLATION:

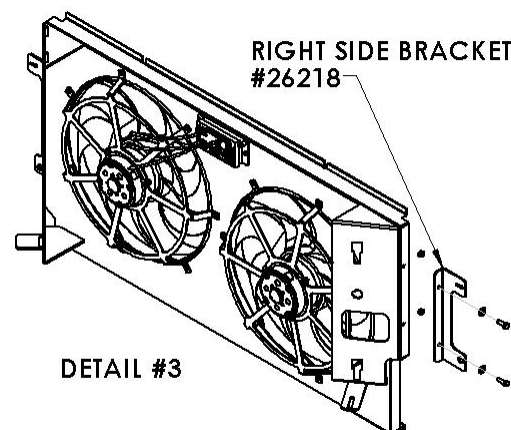
1. Start by attaching the side brackets to the shrouds with hex bolts and lock nuts provided. *see detail 3.*
2. Place the coolant overflow bottle on the new shroud by aligning the tab on the bottom of the bottle with the support tab on the bottom of the shroud. Push bottle into shroud and slide down to lock in place.
3. Locate the temperature sensor in the kit bag. Insert the temperature sensor into the radiator fins near the radiator inlet. **Leave 1/4" 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 while wiring the VSC. *see detail 4.*



DETAIL #1



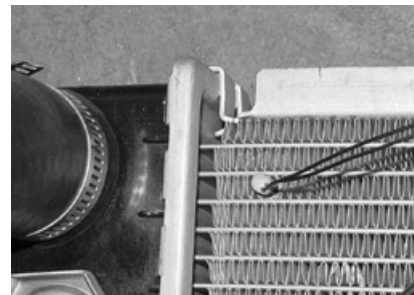
DETAIL #2



DETAIL #3

## INSTALLATION (CONTINUED FROM PAGE 1)

- Place the fan into the vehicle by placing the tabs on the bottom of the shroud into the factory slots at the bottom of the radiator. **NOTE: View old shroud tabs for reference.**
- Pull the new shroud to the radiator and place the 2 small clips from the factory shroud to the top edge of the new shroud to hold in place. *see detail 5.*
- Utilizing the 4 bolts from the factory shroud and the factory mounting holes, bolt the new fan assembly in place.
- Secure lower electrical harness so as not to be loose
- Install the windshield wash reservoir to the new shroud in the same way as the coolant overflow bottle. **NOTE: See step #2 of this section for reference.**
- Replace coolant overflow bottle hose to radiator. *see detail 6.*
- Attach the upper “inlet” hose to the radiator. Be sure the the drain plug is closed and refill the radiator with coolant.
- Reinstall the battery cable from the primary battery to the secondary battery using a 10mm socket.



DETAIL #4



DETAIL #5



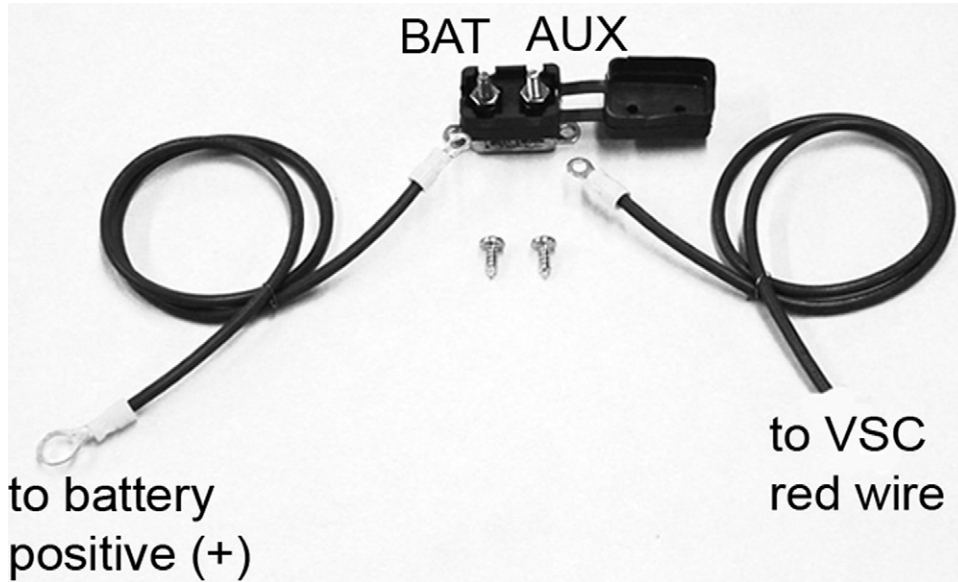
DETAIL #6

## 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).**

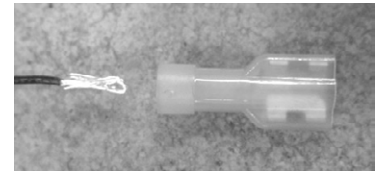
- Find the thick red and black wire bundles in the wiring kit. Use the yellow butt connectors to crimp the red wire to the short red wire on the Variable Speed Control (VSC), and the black wire to the short black wire on the VSC (*see wiring diagrams below*).
- Determine the length needed to connect the red and black power leads to the battery terminals on the primary battery on the drivers 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.
- 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 as shown in *detail #7*. 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. *see detail #7.*
- Crimp a large ring connector to the positive (+) battery end of the power lead and connect it to the battery terminal.
- 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.



DETAIL #7

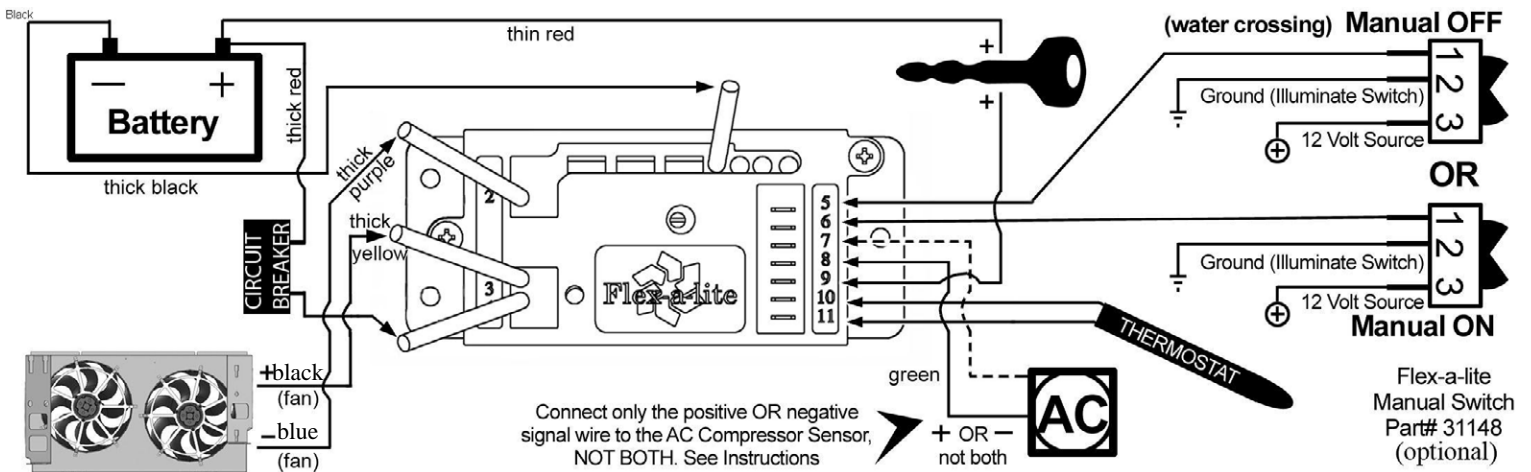
6. Locate the wires going to the A/C clutch. Determine which wire is ground (-) and which wire is the positive (+) trigger wire. Tap into the positive (+) trigger wire using the supplied thin green wire and the piggy-back connector (blue). Determine the length needed to reach the VSC and trim to length. 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.



DETAIL #8

8. If manual switch (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.



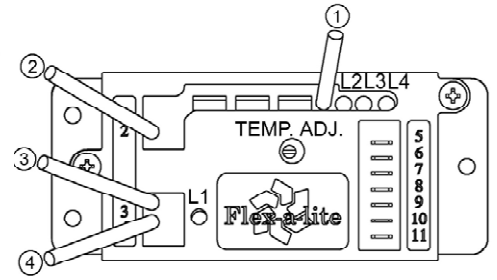


## WIRING CONTINUED FROM PAGE 3

### 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

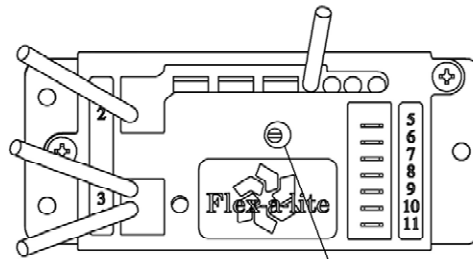


### The Variable Speed Control has new features.

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!

