

Installing Flex-A-Lite Electric Fan in 1974 Mercedes 450SL

Fan part number 16151-03619879

Straight Blade, 16" diameter, 10-blade pusher/puller type. Cost approx. \$100

Controller: Flex-A-Lite 31147 Electric Fan Temperature Switch. Cost approx. \$30

Also required for this method: Aluminum bar stock, 1/4" x 1", approx. 36" total length
1/4-20 screws, hex nuts and Nyloc nuts, and 1/4" fender washers



1. Remove stock fan and reassemble V-belt pulley without fan.



2. Remove fan shroud (if not already removed from radiator)



3. Cut aluminum bars to fit shroud and drill holes to match fan mounting holes and to fit convenient locations on shroud. Note that lower end of RH bar (shown at left in this view) is cut away to clear radiator hose and has no flat mounting surface available.



4. For this corner I just made a standoff by stacking 5 nuts for the appropriate height and attached to the shroud at an available spot. I used fender washers to reinforce the shroud at the attachment point. The screw at this corner is 2" long, the others are all 1" long.



5. Insert the temperature probe from the switch through the fins of the radiator near the upper radiator hose outlet. Reinstall the shroud with the fan attached, with the wiring extending between the radiator and the shroud at the left hand side. The thin silver wire shown here is from the temperature probe, the red and black wires are power to the fan.



6. Find a convenient spot on the left wheelwell to attach the controller. The temperature probe wire cannot be shortened but you can control it by passing the power wire through a coil of probe wire, leaving the correct length free.



7. A chassis bolt near the upper left corner of the radiator makes a convenient ground attachment point. For a power supply, I ran a heavy gauge wire with an inline fuse directly to the (+) battery terminal. This is simpler than finding a good supply point downstream of the ignition switch. It means that the fan continues to cycle according to coolant temperature after the engine is shut off, which I don't mind.
8. Adjust the controller knob to make the fan come on at the desired temperature. I have mine set to come on a bit above the 175F mark on the instrument panel temperature gauge.

This installation eliminates a parasitic power drain on the engine, which has been estimated to be between 5 and 10 horsepower (I have no way of verifying this figure). It also makes the engine quieter in normal operation, eliminating the vacuum-cleaner-like roar of the constantly running mechanical fan, and it's more controllable and reliable than the viscous clutch coupling (as well as being less costly than a replacement clutch).