65-66 Heater Blower Feed Cable Replacement Part II

Heater Motor Ink Stampings

These are the two stamps I had made to mark the motor, the part number and date code. They cost under $25 for both; the industrial strength ink was almost as much. Both stamp needed to be modified by grinding the side of the stamp to clear the bearing housing protrusion, part number on the lower edge, date code on the upper. I practiced stamping the part number several times on a painted surface to get the correct amount of ink and to get a clear stamping. It sort of worked.

There are two special nuts that hold the motor housing together. The dimensions are as follows: 10-32 thread, 0.115in thk, REDUCED HEX 5/16. They, and the long carriage screw (10-32X3 3/8in L) that hold the motor together, do not have a Ford part number I could find. The motor is replaced and not repaired by Ford.

Heater Motor Tape

The two halves of the motor housing have a one inch wide tape covering the joint to keep out moisture, dirt, etc. For 1964 thru 66 the tape used was a black masking tape. For 1967 it was one inch wide friction tape. AMK carries a reasonable equivalent but it comes in a 1 7/8 inch wide roll and you need to cut your piece to one inch wide. It's also 15 feet long, enough for 16 heater motors.

Preparing the Heater Tape

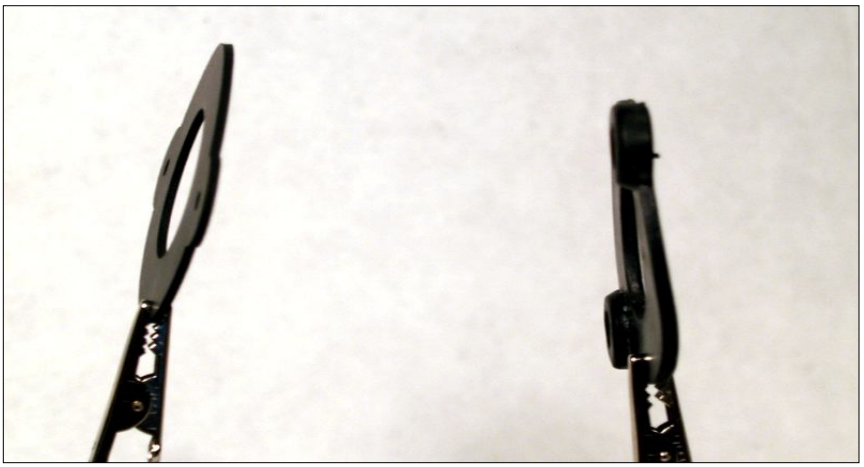
On a piece of glass, lay out a length of tape 10 1/4 inches long. This should give about 5/8 inch overlap. I don't recommend using plexiglass as the plastic will have a gouge in it making it unusable. Mark the required width, use a metal straight edge and slice the tape in two.

Before you remove either half from the glass, spray it with some semi-gloss clear paint, Eastwood Diamond, to seal it. Masking tape is porous and will allow moisture to seep in.

When the paint is dry, lift your half from the glass, wrap the tape with the ends at the underside of the motor when installed (the two alignment groves of the housing haves are on the bottom). The ends should overlap about 1/2 to 5/8 inch. From the factory, the masking tape came off the motor quickly so to keep it wrapped in place I put a dab of contact cement on the end.

Motor to Plate Seal

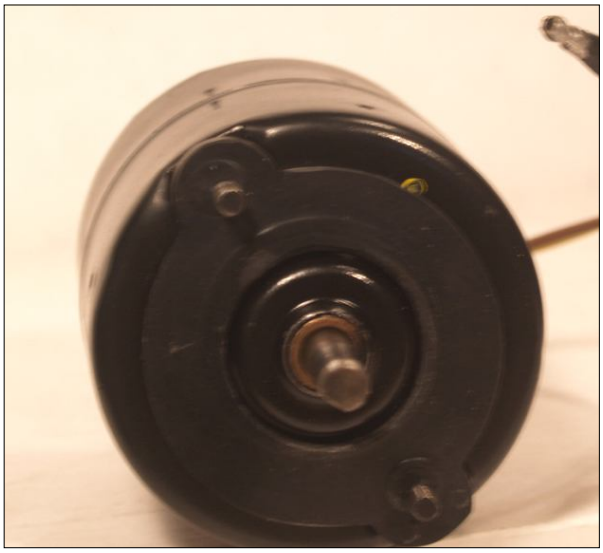
The seal in the heater rebuild kit is a flat piece of rubber, shown on the left. The factory seal, on the right, has bumps that fit over the two nuts on the long housing screws. I reused a good factory seal.



Install Motor Seal

After all the fuss about the part number and date code marking, they get covered with a seal, hopefully never to be seen again.

I know it's there, and you know it's there. If it's not, don't tell.



Attach Plate

Install the mounting plate on the two long screws over the seal. Note the offset left hole and the plate edges turned away (towards the engine compartment). Not shown is the wiring grommet and leads located on the top when the motor is installed properly.

The factory motors used two each of the following hardware items to retain the plate to the motor:

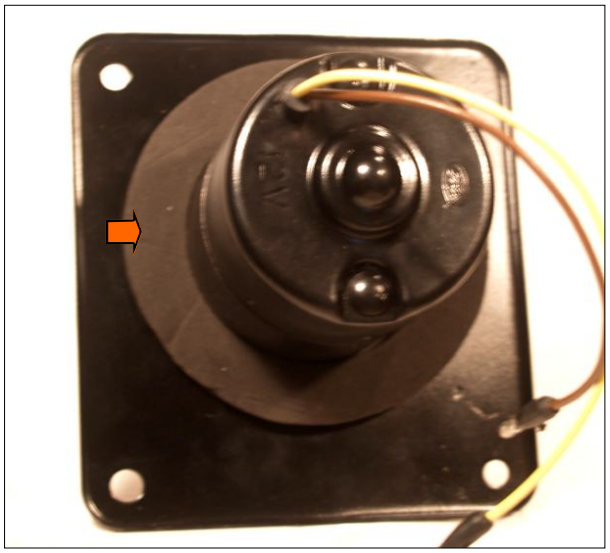
44712-S8 washer, no 10 flat steel, 0.438 inch outside diameter, 0.214-0.224 inch inside diameter, 0.036-0.065 inch thick;

34656-S8 nut, 10-32 0.117-0.130 inch thick, 3/8 hex, with an external tooth lock washer.

Installing Motor to Firewall Seal

Slide the motor to firewall seal over the motor.

Sanity check: the leads are on the top left, the offset hole in this view is on the top right, hidden.



Installing The Fan

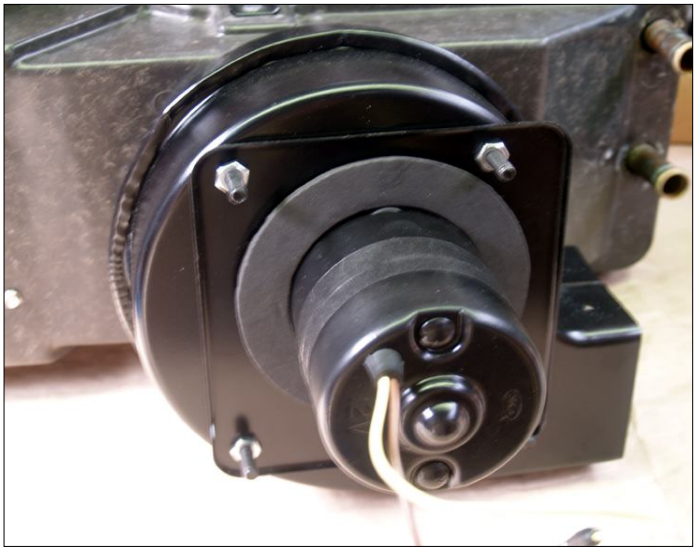
A replated (the original was natural rust) wheel (impeller or fan) installed on the motor. The shaft is a "D" shape so the set screw is positioned over the flat. Look thru the screw hole to adjust the depth of the wheel. The set screw is part of the wheel assembly and not documented. If you need a replacement set screw, it is 1/4-20X5/16 with a 1/8 inch hex drive. I could only find 1/4 or 3/8 inch long set screws locally.

Fan Balancing Clips

Note the two different size balance clips shown in this close up view. There's another one on the opposite side that is a in between size to these two. Mark the location on the back side of the wheel before you send it and the clips out to get replated: one dot for small, two dots for medium, etc. Not all wheels have them.

Attaching Motor to Heater

Use 4 each **33930-S8 jam nuts**, 1/4-20hex 0.160 inch thick, 7/16 hex, to install the heater blower plate to the heater housing.



Conclusion

This is my completed project, ready to install in a Mustang. I do not recommend putting the defroster plenum on until you are ready to install the entire assembly.

In other word, keep the cardboard plenum off and intact. The heater is not glued or sealed to the firewall, but is sealed after installation from the engine compartment.
Another installation suggestion is to not cut the hose before installation but to loop the hose from the engine compartment thru the two holes in the firewall to the heater core, attach the ends to the appropriate fittings on the heater core with tower clamps and then install the heater to the fire wall.

Installation Note - Attaching Heater Hoses

To attach the hoses to the engine: The proper installation lets water from the engine force any air bubbles out of the heater core into the water pump and then to the radiator.

For a V8: without cutting the hose yet, take the lower hose from the fire wall fitting and work it for a dry fit to the outlet on the intake manifold. Mark with white chalk, where you would cut the hose. Now do a dry fit for the upper hose to the lower fitting on the water pump. Your white chalk mark should allow you enough length to attach the hose to the pump. If not, figure out why: hose is to short; heater not firmly installed against the firewall; wrong routing.

For an I-6: it's about the same for a V8 except the lower hose comes from the rear fitting on the carburetor base, the upper hose still goes to the water pump, and a third hose comes from a fitting at the right hand front of the engine to the front fitting of the carburetor base. The idea is to make sure that you have enough heater hose.
.