

How to Rebuild An Early Datsun Roadster Heater Blower Motor

Thanx Eric

Disclaimer: No warranty can be made for this information's accuracy. If you notice something is incorrect, or have any comments to add to the information contained within these pages feel free to email me.

General information on the Blower motor. It is a squirrel-cage blower, is mounted under the passenger-side foot well.

1. Getting the blower housing out of the car.
 - This requires a wrench and or socket (w/s) size: 13mm
 - There are three bolts that hold the motor housing in place. One bolt near the back of the heater next to the heater-core and two in front of the housing near the top.
 - There are two rubber connections to the blower housing that are easily removed with no special tools. (They are held with compression rings.)
 - There is also one electrical connection (Male female connection to +12V, not active so it is safe to touch :-)
 - Once the rubber tubes are unhooked and the bolts removed the blower should be free from the car.

2. At this point, the blow motor and housing should be free from the car but sill in one unit.
 - Tools required: flat head screwdriver.
 - To take the motor out of the blower housing, remove the three screws/bolts.
 - There are also 3 brass spacers that reside in the rubber isolator between the motor and the blower housing. (See figure 1)

3. Now time to take apart the motor.
 - Tools needed, time, patience, large flat head screwdriver.
 - Getting off the squirrel cage is a challenge depending on how corroded the drive shaft is.
 - There is a brass nut that holds the fan blades on through a compression fitting.
 - No worries about anything springing apart here.
 - Once the nut is off, lubricate the shaft to make the task of pulling the fan blade off easier.
 - Note: I found that I could push the fan blades toward the motor, (opposite, the way we want it to go), and I could take some fine grit sand paper and smooth out some of the corroded shaft.
 - Now that the fan blades are off, remove the 2 nuts from the back of the motor.
 - Do not try to remove the screws on the front of the motor yet!



Figure 1

A. Removing the back casing of the motor.

- Took a hard rubber hammer and gave it a couple of good hits.
- These hits are administered at an angle toward the back of the motor, rotating the motor with each hit.
- Once a gap starts between the rear motor casing and the rest of the housing, use a screwdriver (some sort of pry device) to finish separating the cover from the rest of the housing.

B. The rear bearing.



Figure 2

- Possibility one – it is still stuck to the drive shaft.
 - It most likely means the end of the shaft has been flattened out so the bearing could not slide off. In this case be gentle when taking off the bearing, and good luck. (File or sand down the shaft)
 - To put the bearing back in, bend the black centering arms enough to allow you to fit the bearing back into its housing.
 - Bend back the centering arms to hold the bearing.
- Possibility two – it looks like the Figure 2. Great move on to next step.

- Add some grease to the felt and inside of the bearing, Use wheel bearing grease, it is heavy and will not run all over the place
- For adventures, Take a pair of calipers and measure the ID (Inside Diameter) of the bearing housing. Then the OD (Outside Diameter) of the drive shaft and go on down to the local bearing shop and see if they have a sealed bearing that will work.

C. Take out the two screws on the front of the motor.

- Tools a flat head screwdriver and w/s size:
- See figure 3.
- Note: The brass spacer in the picture under the nut, this does not belong there.



Figure 3

D. Remove the “C” clip.

- See Figure 4 and Figure 5



Figure 4

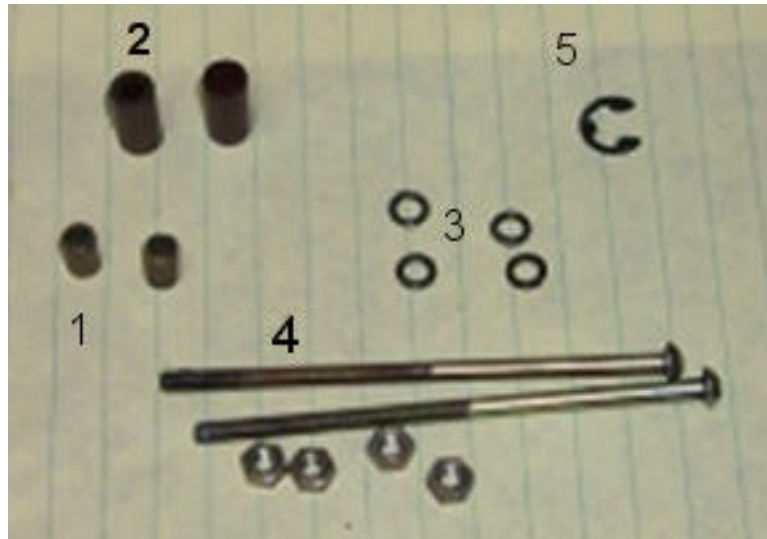


Figure 5

1. Brass spacers (should be 3).
2. Insulator spacers.
3. Lock washers
4. Long Bolts and nuts
5. "C" Clip

E. Removing the Armature

- Once the screws are removed, the brushes are free to be removed.
- Bending the insulator plate that hold the brushes out of the way, be careful not to damage the wire connections. These connections can also be unsoldered if the wires do not flex enough to allow the plate to be moved out of the way.
- Once the plate is out of the way the drive shaft may be removed (Armature) Figure 6.



Figure 6

F. Now the front bearing can be replaced or re-greased. Figure 7.

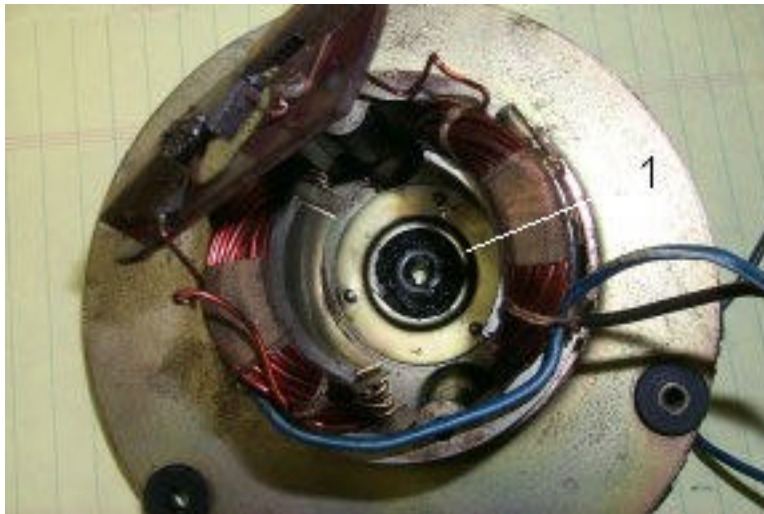


Figure 7

- The same bearing replacement can occur here as in did for the rear bearing.

G. Brush Replacement.

- Unsolder the old brushes, take them to a local Starter/Alternator repair shop, and have them match up some brushes.
- Solder on the new brushes and re-assemble.



Figure 8

4. Test before replacing motor back in the car.
 - Lay reassembled motor on the passenger floor and plug the +12V wire back in and attach a ground wire to the motor ground.
 - Put key in ignition (important) and turn on power. You do not need to start the car!
 - Now flip the heater switch and try its various speeds out.
 - If everything works well and quietly, replace back in car.