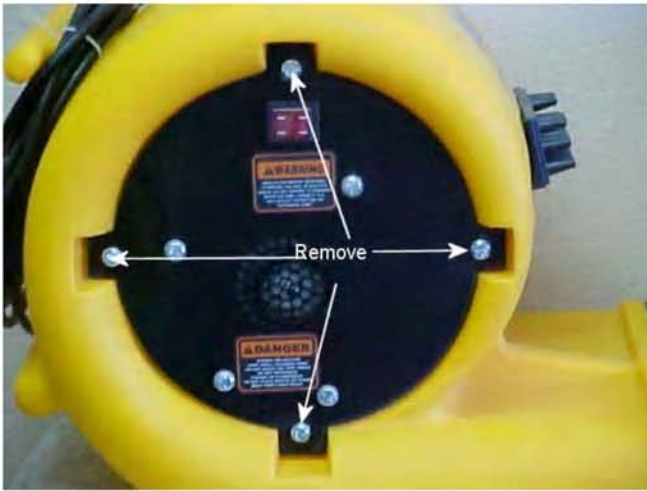
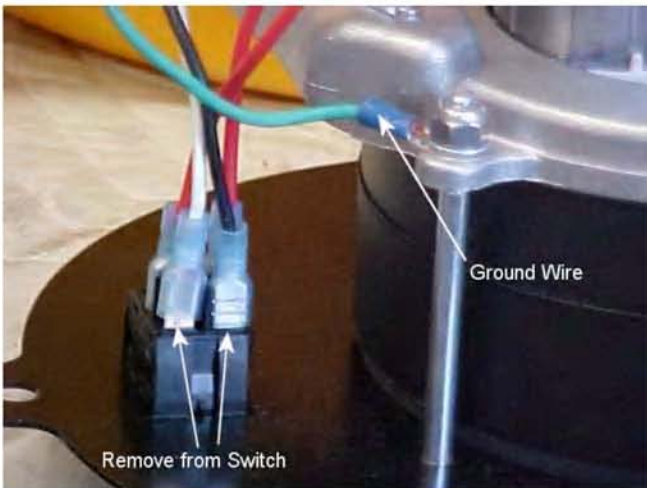


## PDS-21 Repair Instructions

### Gasket Replacement Procedure for PDS-21



1. Using a 3/8 inch wrench, remove the four flange-screws holding the Face Plate.
2. Remove the Face Plate.



3. Using two 7/16 inch wrenches, undo the motor bolt holding the green ground wire.
4. Unplug the black and white wires to the power cord, from the back of the switch, and mark their location.
5. Set the motor and Face Plate assembly aside.



6. Remove all of the old gasket material. Clean and dry the entire gasket area.

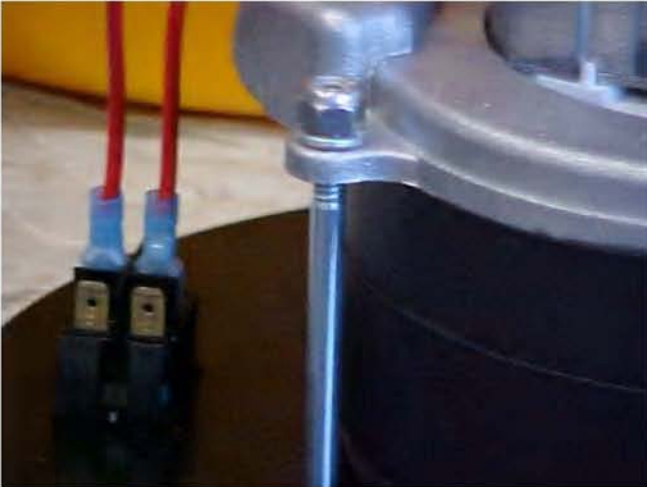


7. Select four gasket tabs.
8. Remove the white backing from the gasket, exposing the adhesive.
9. Place each of the tabs in the cut-out with the nutzerts showing through the center hole.
10. Apply pressure to each tab to ensure good contact and secure adhesion.



11. Remove the white backing from the main gasket.
12. Place the gasket on the outer ring with the gasket "ears" directly over the tabs from the previous step.
13. Apply pressure to the entire gasket to ensure good contact and secure adhesion.
  - 13.1. If the faceplate has been bent, It can usually be straightened, using a rubber mallet or dead-blow hammer (See next page).

## Repairing the Face Plate



14. Remove the remaining two wires from the switch, noting their position.



15. In Step 3, the bolt holding the green ground wire was removed.

16. Remove the remaining three bolts.

16.1. Note that only two or three threads are showing at the top of the Nylok nuts. This is to prevent over-crushing the motor gasket.

17. Remove the motor and set it aside.




18. Press the tabs on the switch and push the switch out of the face plate.

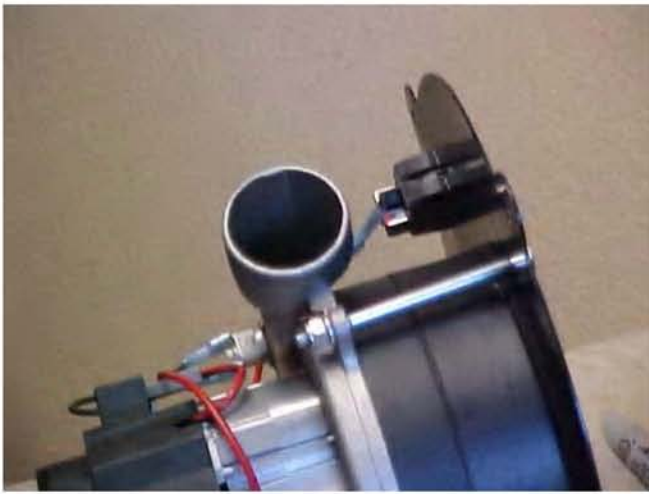
18.1. Note the placement of the switch to make reassembly easier.



19. Place the face plate on a flat, hard surface.

19.1. Using a rubber mallet, or dead-blow hammer, straighten all bent areas, as much as possible.

 **CAUTION:** DO NOT use a steel hammer, as this will damage the powder coat finish of the face plate.



20. Re-install the switch.

21. Reassemble the motor/faceplate assembly.

21.1. Ensure that the switch and exhaust horn of the motor are in the proper location.

21.2. Do not install the bolt for the ground wire bolt, yet.

21.3. As stated previously, only tighten the motor bolts to a point where two or three threads protrude from the Nylok nuts.



22. Re-attach the wires removed in Step 14.

23. Re-attach the green ground wire.

24. Re-attach the face plate using the four flange bolts.

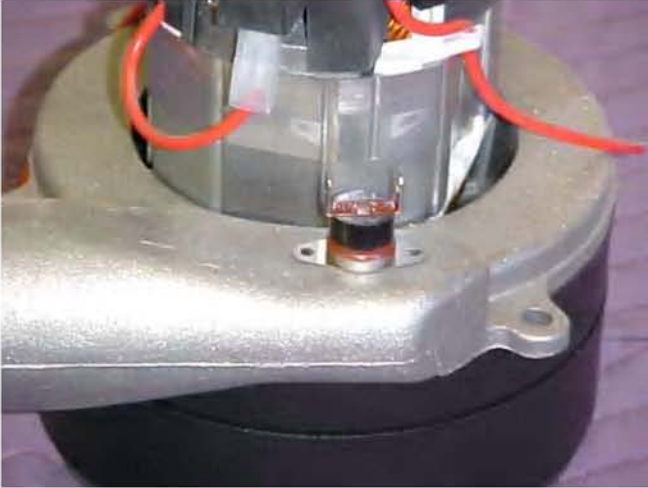
24.1. The flange bolts should not be torqued to more than eight (8) foot/pounds.

24.1.1. Eight foot/pounds is roughly equal to hand-tight plus  $\frac{1}{4}$  turn.  
If the bolts are any tighter than this, the tabs may bend and air pressure can be lost.



25. Apply power to the PDS-21 to ensure proper operation.

## Installing Thermal Safety Breaker



1. Place the Thermal breaker on the flat portion of the exhaust horn.
2. Mark the hole placement, using a marker or pencil.
3. Drill two 3/32" holes where you have marked.
4. Place a small dab of Thermal compound (supplied) on the flat side of the breaker and attach it to the exhaust horn using the supplied screws.
5. Attach a 6 inch jumper wire to one of the terminals on the on the breaker. This will be attached to the on-off switch, as shown at step 22.

## Installing the Intake Screen



1. Remove the old gasket material from the intake side of the Vacuum motor.
2. Lay the stainless steel screen over the motor intake. Center as well as possible.



3. Remove the backing from the motor gasket.
4. Center the gasket center-hole over the intake and press down to increase adhesion.
5. Install the motor as shown at Paragraph 20.

# Replace Motor Brushes



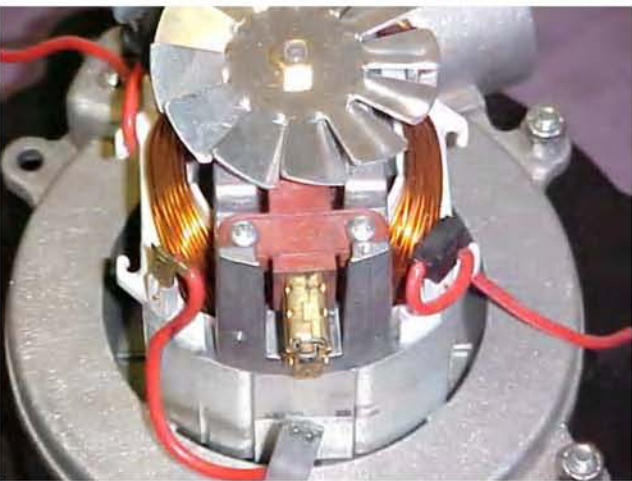
## Note:

Brushes are replaced as a set of two. **Never** replace just a single brush.

1. Using a #1 Phillips screwdriver, remove the two screws in the top of the motor housing. Lift off the housing and set aside.



2. Inspect windings, wires, and connectors to ensure proper condition.



3. Remove the connector from the first brush assembly. The connector will probably be difficult to remove and may require a small screwdriver for leverage.

4. Using a #2 Phillips screwdriver, remove the two screws anchoring the brush assembly. Set it aside.

5. Replace the brush with a new one and attach the connector.



6. Using a small screwdriver, pick, or awl, press in on the bottom of the brush spring until, you hear the brush snap into place.

7. Visually check to ensure that the carbon brush is contacting the commutator of the motor.

8. Install the second brush.

9. Replace the housing and test the motor to ensure proper operation.