Drum Vacuum Pump

Field Service Upgrade Procedure

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Revision History

Revision	Date	Author	Comments
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1. BACKGROUND

The manufacturer of the vacuum pumps used in the Drum Vacuum Pump Assemblies (DVP) discontinued manufacturing of the pump and offered a replacement part for the pump. The internal configuration of the new pump and the wire connections to it are different than the discontinued pump. The programming of the Drum Vacuum Drive's (DVD) power inverter must also be changed to accommodate the new pump.

2. SOLUTION

As the older vacuum pumps are now obsolete, any pump failure in the field requires the Drum Vacuum Pump assembly to be field upgraded by replacing the vacuum pump and changing the programming parameters of the Drum Vacuum Drive. This upgrade procedure details the actions required to install the new pump into an existing facility as a replacement.

3. SCOPE

This procedure details the steps necessary to replace the older vacuum pump (part # 15-1324) with the new vacuum pump (part #318-00010) inside a DVP. (This upgrade converts the DVP to a new part, #500-02732A).

4. PARTS REQUIRED

Part Number	Part Name	Quantity
77-0092A	Doc, Procedure, DVD Programming	1
709-00268A	Doc, Procedure, P7 DVD Programming	1
378-00010	Vacuum, 400V, 3PH, 7.5KVA, W/Muffler, New Motor	1
382-01235A	Label, Part no. 500-02732A,DVP,FX1,SLV	1

5. TOOLS REQUIRED

- 2.5 mm Allen Key
- 4 mm Allen Key
- Crescent Wrench
- 9/16" Box / Open ended Wrench
- Phillips Screwdriver (large)
- Phillips Screwdriver (medium)
- Flat Screwdriver (large)
- Channel Lock Pliers

- 7 mm Nut Driver

6. PROCEDURE

1. Lock out the Drum Vacuum Drive (DVD) so that it cannot be powered on. The power handle of the DVD has a lockout mechanism. (The red portion of the handle.) Push on the red protrusion located in the knee of the power handle. This pushes out the red leaver on the front side of handle. Grasp and pull out. The leaver has rings on its underside. Use a padlock or large wire to insert into the ring. With the red leaver held out, the power handle cannot be turned to the "on" position.
2. Remove the Drum Vacuum Pump (DVP) cover.
3. Open the vacuum pump's electrical terminal connection box and disconnect the wires from the DVP Junction box (armored cable). (3 power phase wires, 2 temperature wires and 1 ground wire.) Remove the armored cable from the terminal box.
4. Disconnect the internal vacuum hose from the vacuum pump inlet. Remove the block off plate (mounted in the intersecting wall above the pump's exhaust pipe).
5. Unfasten the mount nuts for the vacuum pump and remove the pump. Leave the vibration mounts in place.
6. Mount the new vacuum pump in place. It is physically a drop in replacement. Fasten the mounting nuts.
7. Open the new vacuum pump's electrical terminal connection box. Connect the bus bars on the motor phase terminals in a Delta Configuration. The positioning of the bus bars is diagrammed inside the cover of the terminal box. The correct positioning of the bus bars

is shown in figure 1 below.

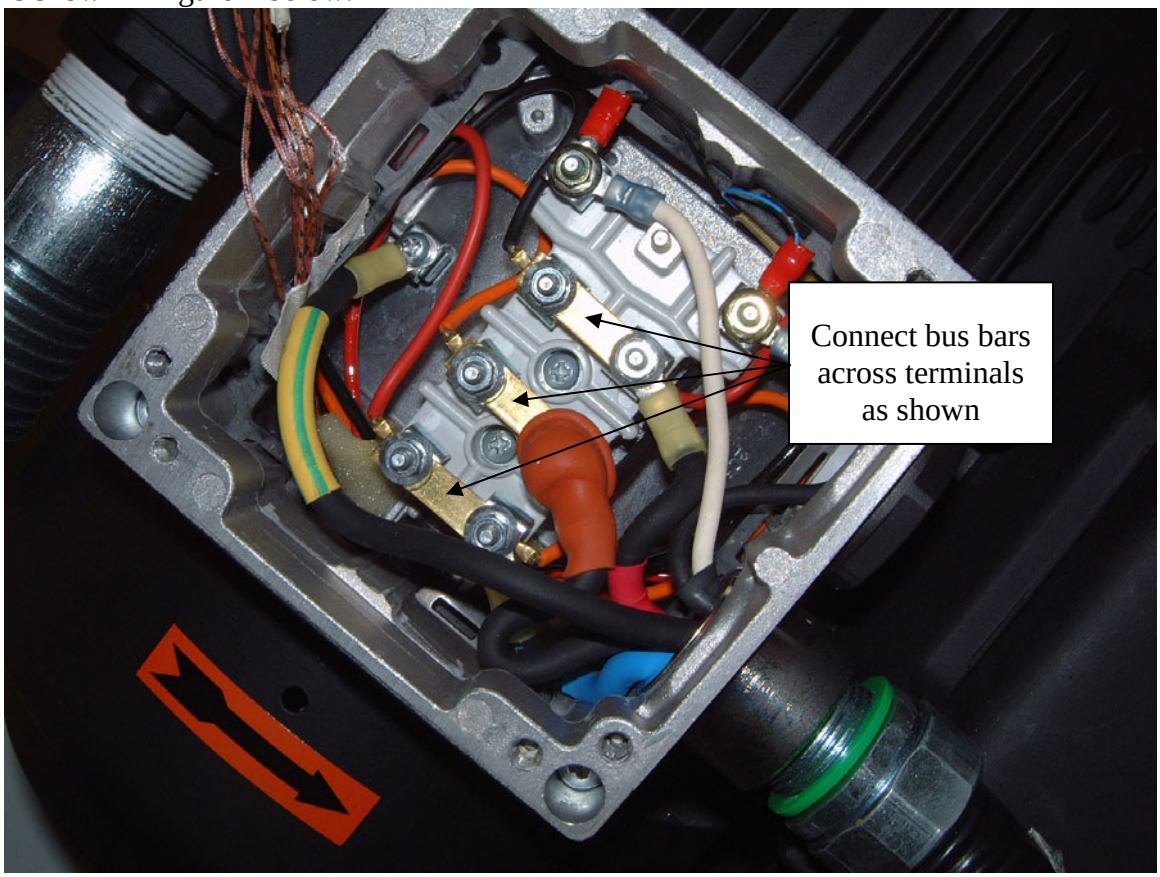


Figure 1

8. Install the armored cable into the electrical terminal box of the new vacuum pump. There are two holes to install it in, use the one which best accommodates the length of the cable. An adaptor extension is provided with the pump (screwed into one of the cable routing holes). Use the adaptor if necessary to install the cable.

9. Connect the wires of the armored cable to the terminals of the new vacuum pump as shown in figures 2 and 3 below. Reinstall the cover to the pump's electrical terminal connection box.

10. Reinstall the block off plate and internal vacuum hose.

11. Remove the lockout on the DVD. Remove the DVD's cover and use the crescent wrench to turn on the DVD. Documents 77-0092A (Document Procedure DVD Programming, FX1, P5) and 709-00268A (Document Procedure P7 DVD Programming FX1) have been included in the kit. Use the correct document (depending upon the type of inverter in the DVD) to reprogram the inverter for the new pump (part # 378-00010). Only the program parameters marked in bold should require changing. (Note: These documents work as well for Wide II Thermoflex systems.)

12. Test the installation by setting the DVD to manual operation and pressing the run button. Ensure that the vacuum pump is producing vacuum and that the cooling fan in the DVP is operating and drawing air in the correct direction. Stop the pump and power off the

DVD.

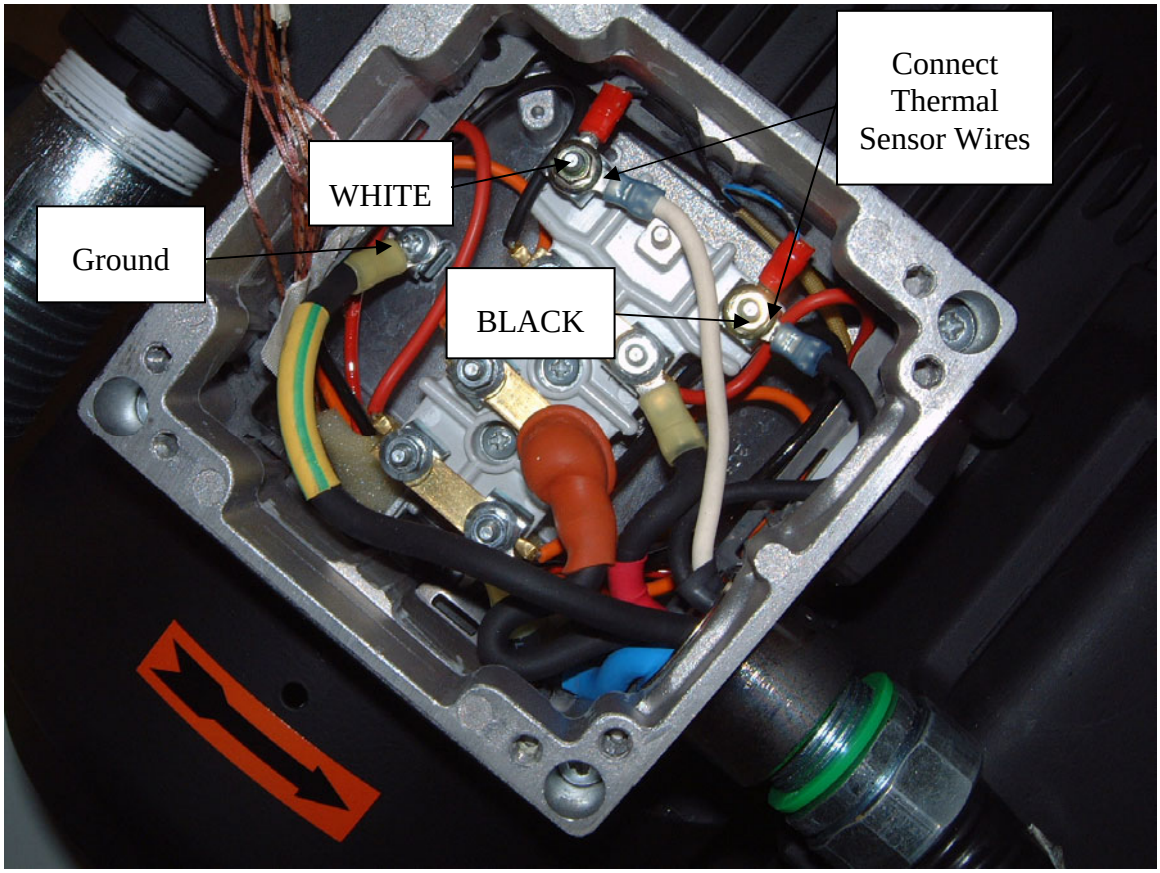


Figure 2

13. Reinstall the DVD cover and the DVP cover.
14. Power on the DVD and run the DVD / DVP from the Thermoflex system terminal to ensure proper operation.
15. Install the new label (part # 382-01235A, “Label Part No. 500-02732A”) on the exterior surface of the DVP as shown in figure 4.
16. Installation complete.

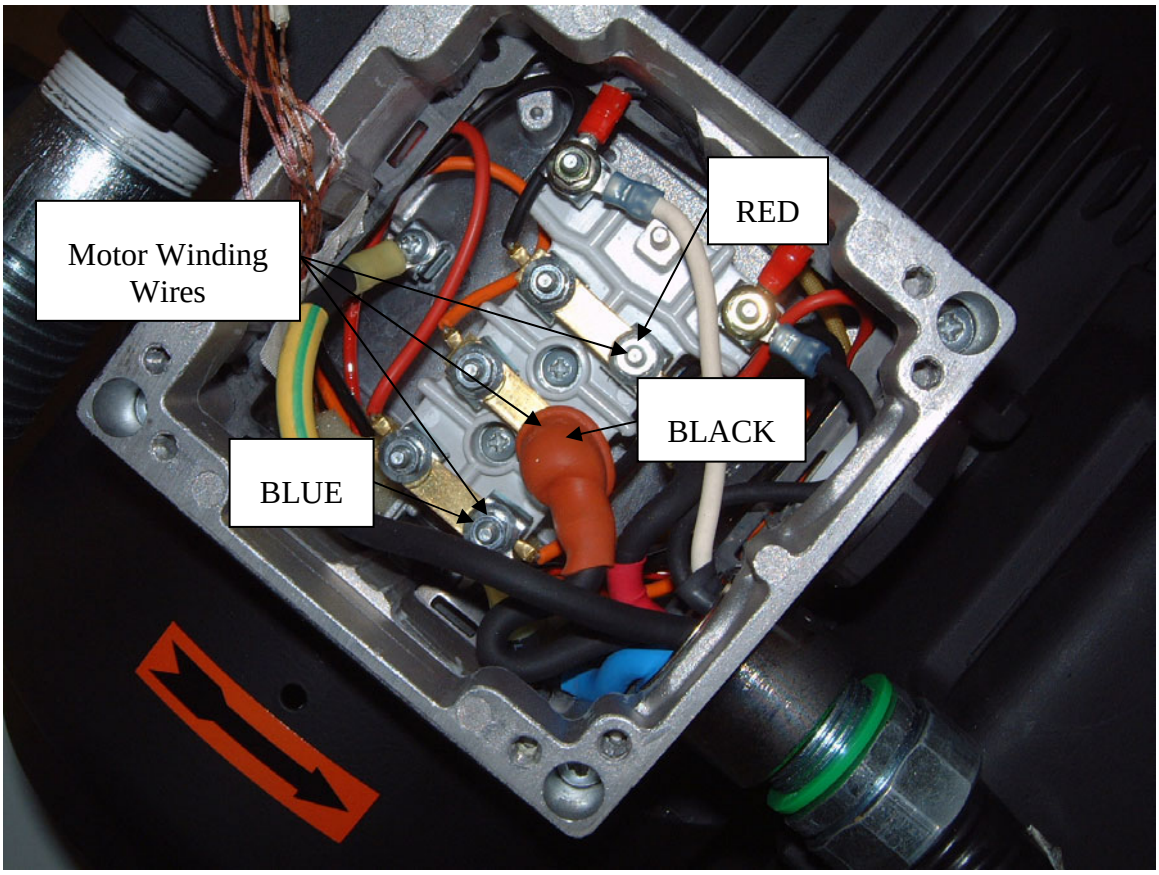


Figure 3

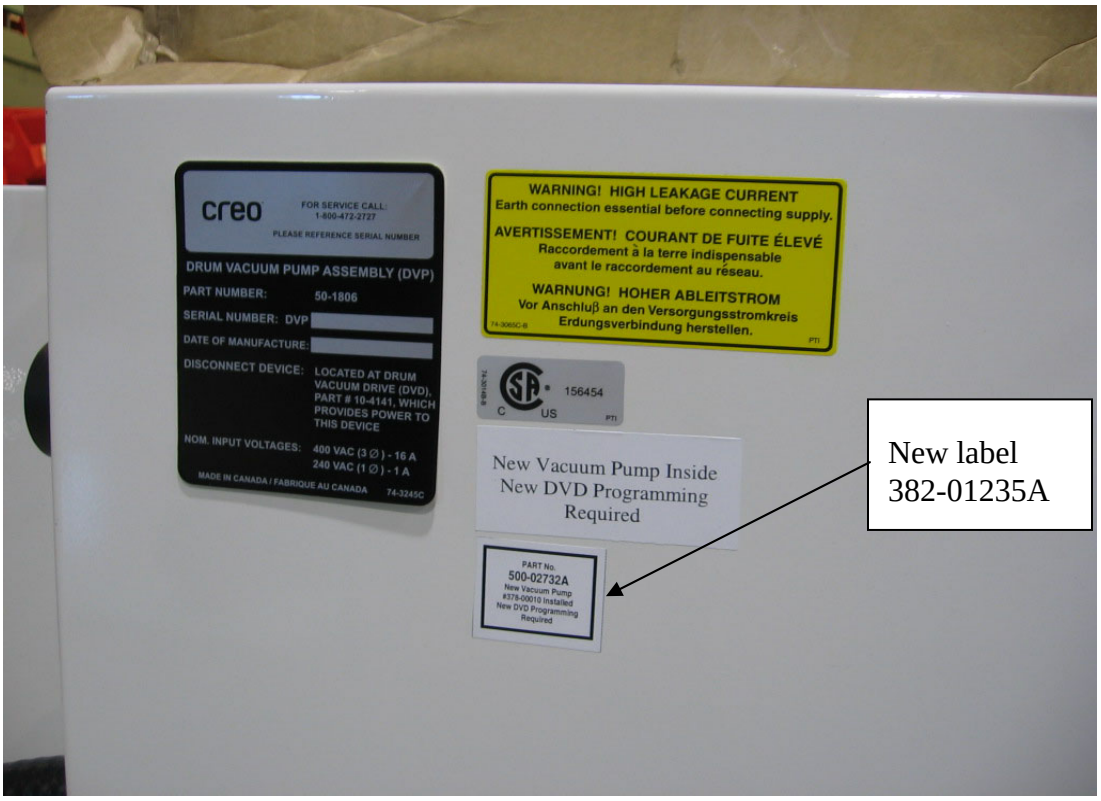


Figure 4

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