

SECTION 9 – TWIN ACCESSORY CABINET (TAC)

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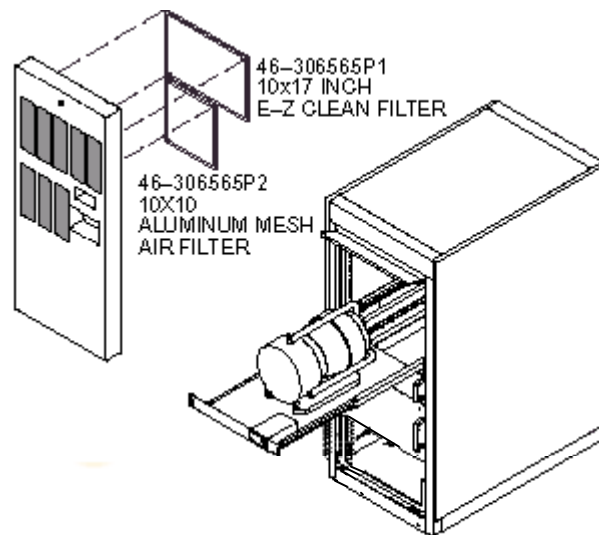
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9-1 Filter Replacement

Signa TwinSpeed 9.X & 10.X Accessory Cabinets use forced air cabinet cooling. The cabinet air passes through impregnated air filters (46-306565P1 & 46-306565P2) that must be replaced as necessary to assure proper cabinet cooling. See Illustration 9-1.

Procedure

1. Turn recessed screw at top center of cover 1/4-turn counterclockwise to release cover latch. See Illustration 9-1.
2. Tilt top of cover forward and lift up and out to remove cover for access to filters.
3. Lift bottom of filter frame up and out to remove filters from cover.
4. Inspect filters for dust build-up and replace as required. If replacement is not necessary proceed to step 7.
5. Apply coating of Filter adhesive (46-251301P160) to inlet side of new filters before installation.
6. Orient replacement filter with inlet side toward grill opening on cover and place top edge into opening under retaining lip.
7. Slide filter upward underneath retaining lip until bottom clears lower retaining lip. Lower filter into slot.
8. Replace cover on cabinet by inserting lower cover lip behind trim strip at bottom of cabinet and swinging top of cover into spring loaded "slam-latch".



TWIN ACCESSORY CABINET FILTER LOCATIONS
 ILLUSTRATION 9-1

9-2 Tip Seal Replacement

Required Tools & Equipment

TABLE 9-1
 SPECIAL TOOLS NEEDED

Item	Description	GE Part Number
1	Universal Lift Hoist Kit	46-317266G3, G4, G5 or G6
2	Vacuum Pump Tip Seal Kit	2282045-2
3	Small hand tools including a Phillips-head screwdriver	
4	Two medium-sized crescent wrenches	
5	A Cart (to work on the vacuum pump)	

Removal of Pump From Cabinet

1. Switch off the vacuum pump; allowing the pump to cool to a safe temperature.



POSSIBLE PERSONAL INJURY! AVOID SERIOUS INJURY OR DEATH BY ELECTROCUTION. REMOVE POWER FROM THE TAC CABINET BEFORE ATTEMPTING TO REMOVE THE VACUUM PUMP. VERIFY THAT THE TAC CABINET BREAKER ON THE FRONT OF THE PDU ARE OFF. LOCK AND TAG OUT THE PLEXI-GLASS COVER ON THE FRONT OF THE PDU.

2. Lock out and tag out the TAC cabinet. (Refer to 8.X Service Methods CD-ROM, Safety (SYSMSA2.DOC), Section 6, OSHA LOCKOUT/TAGOUT REQUIREMENTS.)

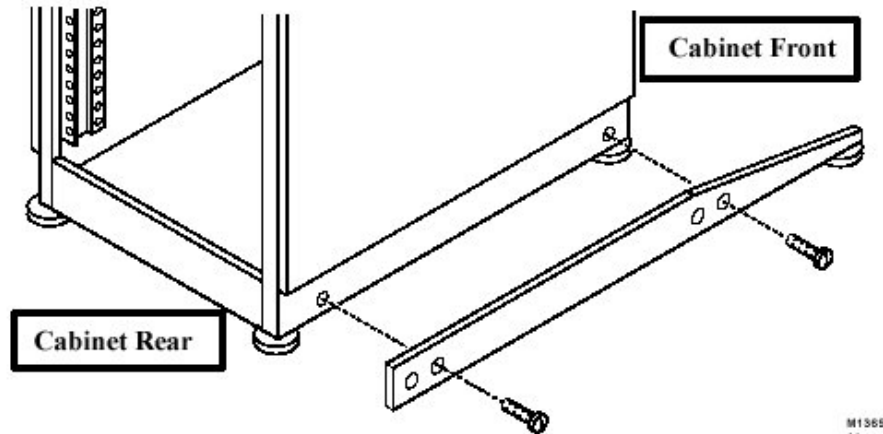


CABINET TIP HAZARD! POSSIBLE PERSONAL INJURY! CONFIRM THAT THE ALUMINUM ANTI-TIP LEGS STORED IN THE REAR OF THE CABINET ARE INSTALLED ON EITHER SIDE OF THE BASE OF THE CABINET BEFORE ATTEMPTING TO REMOVE THE VACUUM PUMP.

9-2 Tip Seal Replacement (Continued)

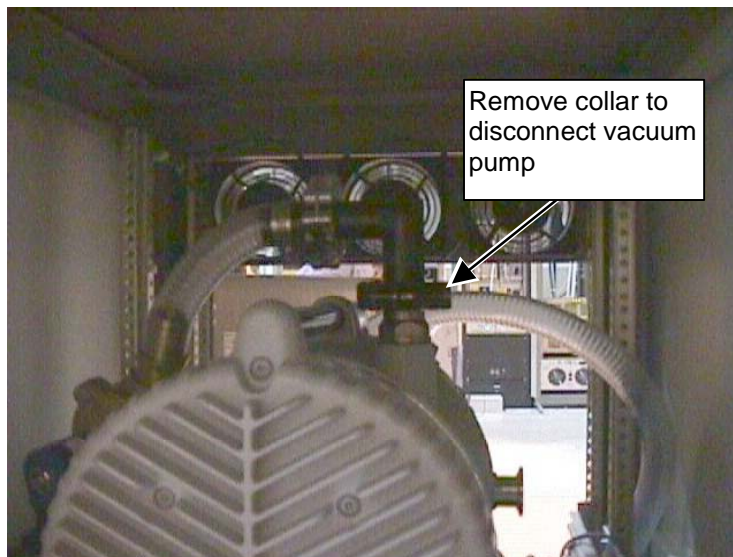
Removal of Pump From Cabinet (continued)

3. Using the screws included with the anti-tip legs, secure the aluminum anti-tip legs to the threaded holes on each side of the base of the TAC Cabinet. See Illustration 9-2.



INSTALLING ANTI-TIP LEGS ON SIDES OF CABINET
 ILLUSTRATION 9-2

4. Remove the front cover and the top bracket from the TAC cabinet.
5. Open the rear TAC cabinet door.
6. Remove the four (4) screws that attach the fan module to the TAC cabinet. Set the fan module in the cabinet.
7. Unplug the Vacuum Pump power cord from the side of the vacuum pump.
8. Remove the vacuum connector at the vacuum pump. See Illustration 9-3.



VACUUM CONNECTOR HOSE LOCATION
 ILLUSTRATION 9-3

9-2 Tip Seal Replacement (Continued)

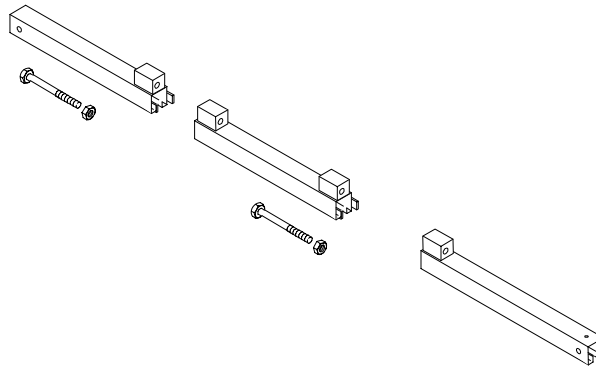
Removal of Pump From Cabinet (continued)

9. Locate and open the Universal Lift Hoist Kit.

Note

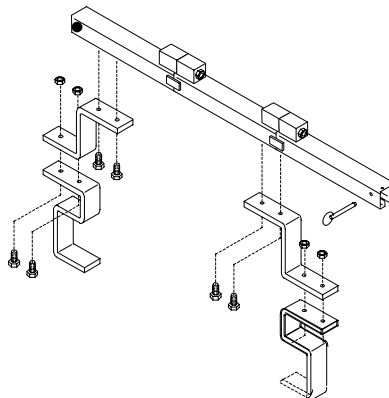
The Universal Lift Hoist is assembled from parts stored in the Universal Lift Hoist Kit. Lift attachments specially designed for the vacuum pump are located in the cardboard box at the bottom of the TAC Cabinet.

10. Locate the three (3) large Steel Rail sections and place them on a flat surface for assembly. See Illustration 9-4.



STEEL RAIL SECTIONS, HEX BOLTS, AND HEX NUTS
 ILLUSTRATION 9-4

2. Arrange the rail sections in the proper order (rear, center, then front) and fasten them together with 4.75" X 1/2" caps crews and hex nuts.
3. Use the crescent wrenches to tighten the cap screws.
4. Assemble and fasten the elevating brackets to the rail assembly. See Illustration 9-5.



HOIST TOP RAIL PARTS WITH ELEVATING BRACKETS
 ILLUSTRATION 9-5

9-2 Tip Seal Replacement (Continued)

Removal of Pump From Cabinet (continued)

14. Center the Steel Rail and elevating bracket assembly at the top of TAC Cabinet, so the hoist assembly will face the front of the cabinet. See Illustration 9-6.



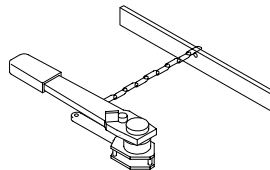
HOIST INSTALLED ON TAC CABINET
ILLUSTRATION 9-6

15. Tighten the bolts on the Steel Rail to secure it to the top of the cabinet.



POSSIBLE PERSONAL AND/OR PROPERTY DAMAGE! VERIFY THAT ALL HARDWARE IS SECURELY FASTENED; ALL BOLTS AND NUTS MUST BE TIGHT PRIOR TO ATTACHING THE HOIST ASSEMBLY TO THE LIFT KIT.

16. Locate the Hoist Assembly in the Lift Kit. See Illustration 9-7.

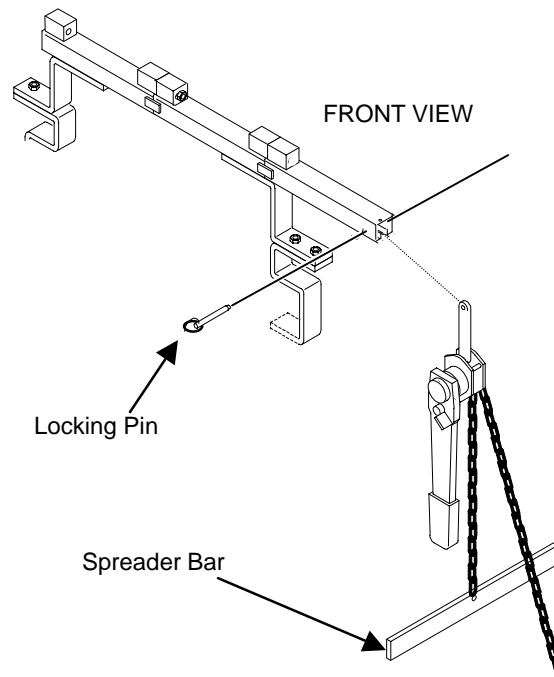


HOIST ASSEMBLY
ILLUSTRATION 9-7

9-2 Tip Seal Replacement (Continued)

Removal of Pump From Cabinet (continued)

17. Insert the Hoist Assembly into the open end of the front rail. Insert a locking pin into the holes near the front edge of the front rail. This locking pin prevents the Hoist Assembly from sliding out of the rails. See Illustration 9-8.

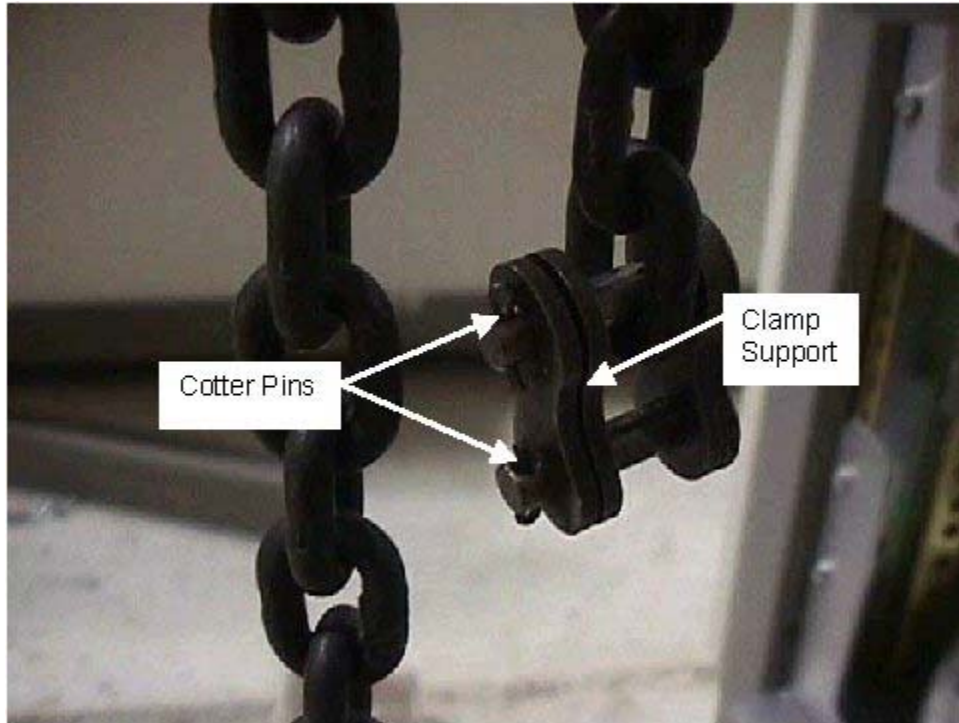


**PLACEMENT OF HOIST ASSEMBLY INTO FRONT END OF STEEL RAIL ASSEMBLY
ILLUSTRATION 9-8**

9-2 Tip Seal Replacement (Continued)

Removal of Pump From Cabinet (continued)

18. Remove the two cotter pins that hold the clamp to the hoist chain. See Illustration 9-9.



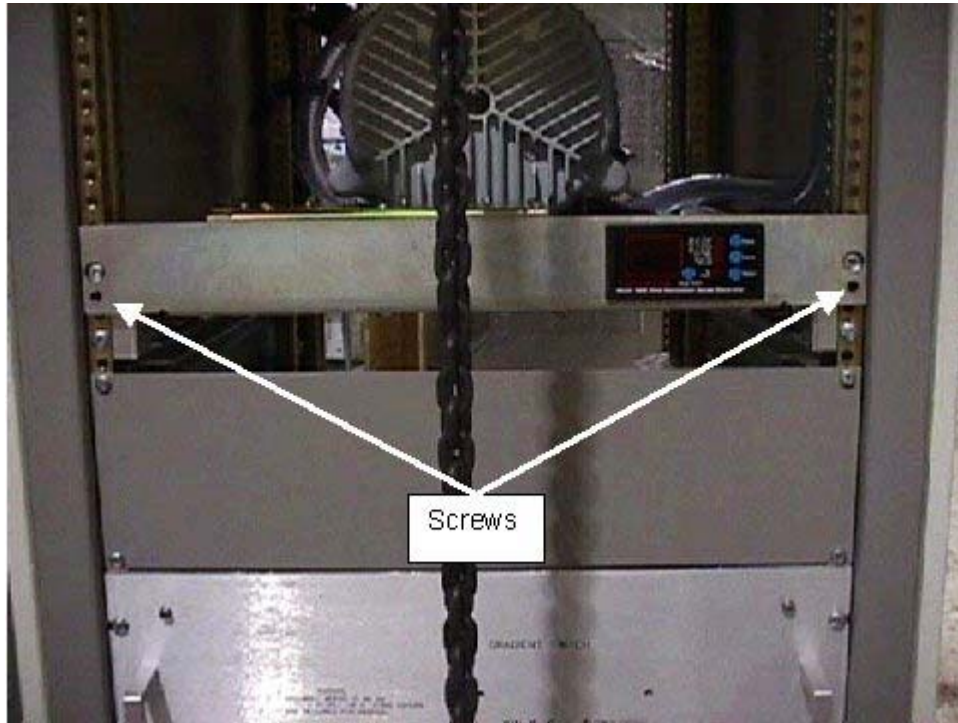
HOIST CHAIN WITHOUT SPREADER BAR
ILLUSTRATION 9-9

19. Remove the clamp support.
20. Remove the Spreader Bar. See Illustration 9-8.
21. Replace the clamp support and cotter pins.

9-2 Tip Seal Replacement (Continued)

Removal of Pump From Cabinet (continued)

22. Remove the two screws that hold the vacuum pump shelf in place. See Illustration 9-10.



VACUUM PUMP SHELF
ILLUSTRATION 9-10

23. Slide the vacuum pump out of the cabinet until you can access the pump handle.

9-2 Tip Seal Replacement (Continued)

Removal of Pump From Cabinet (continued)

24. Attach the vacuum pump lift bracket to the pump handle. The vacuum pump lift bracket is located in the cardboard box at the bottom of the TAC cabinet. See Illustration 9-11.
25. Attach the vacuum pump lift bracket to the hoist.



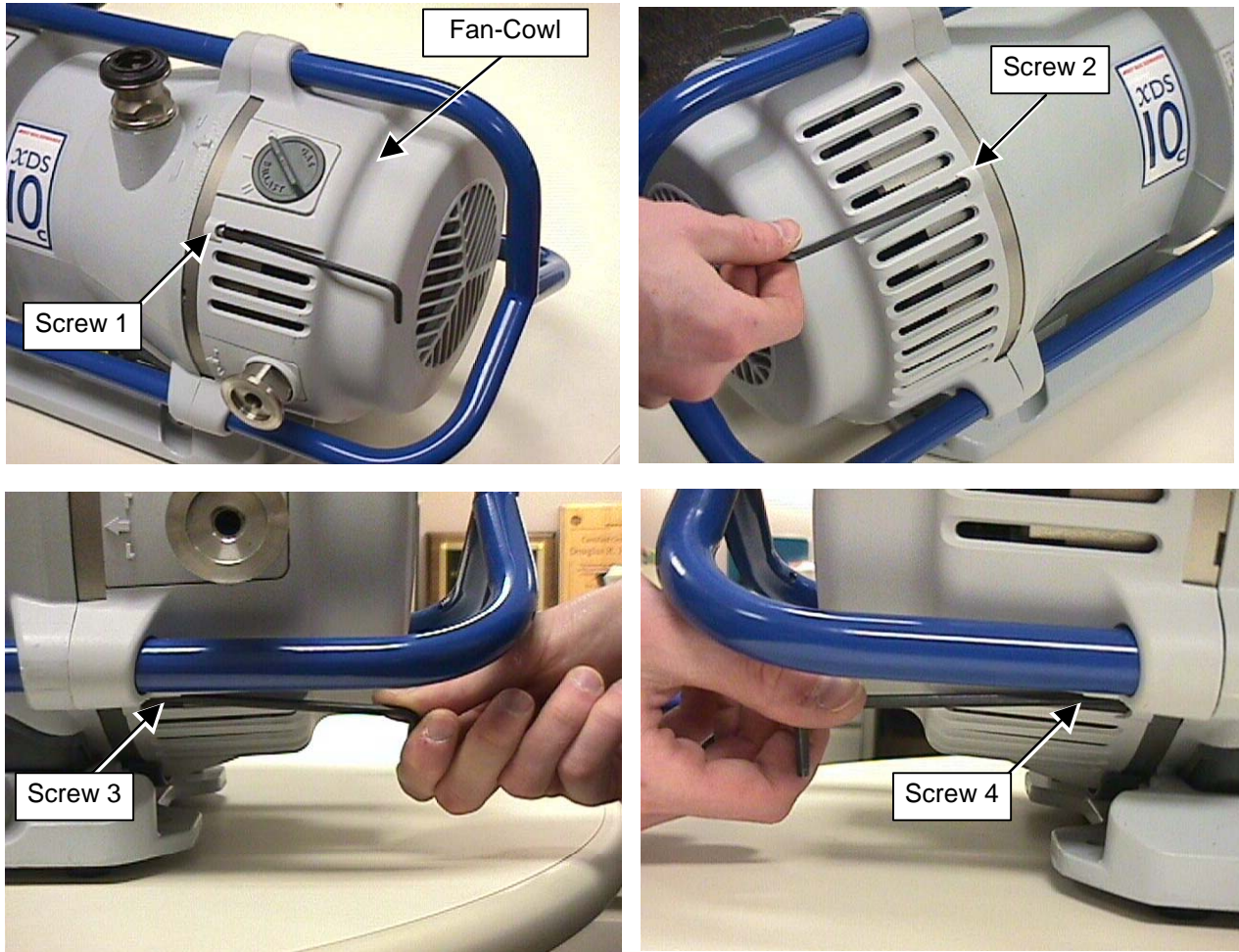
VACUUM PUMP LIFT BRACKET
ILLUSTRATION 9-11

26. Remove the four (4) bolts that connect the vacuum pump to the shelf.
27. Hoist the vacuum pump up and out of the cabinet, then place it safely on a cart.
28. Remove the vacuum pump lift bracket from the vacuum pump.

9-2 Tip Seal Replacement (Continued)

Replacing the Tip Seal

1. Loosen the four (4) cap screws that secure the fan-cowl to the pump body. See Illustration 9-12.



VACUUM PUMP CAP SCREWS
ILLUSTRATION 9-12

9-2 Tip Seal Replacement (Continued)

Replacing the Tip Seal (continued)

2. Pull off the rear of the vacuum pump. See Illustration 9-13.

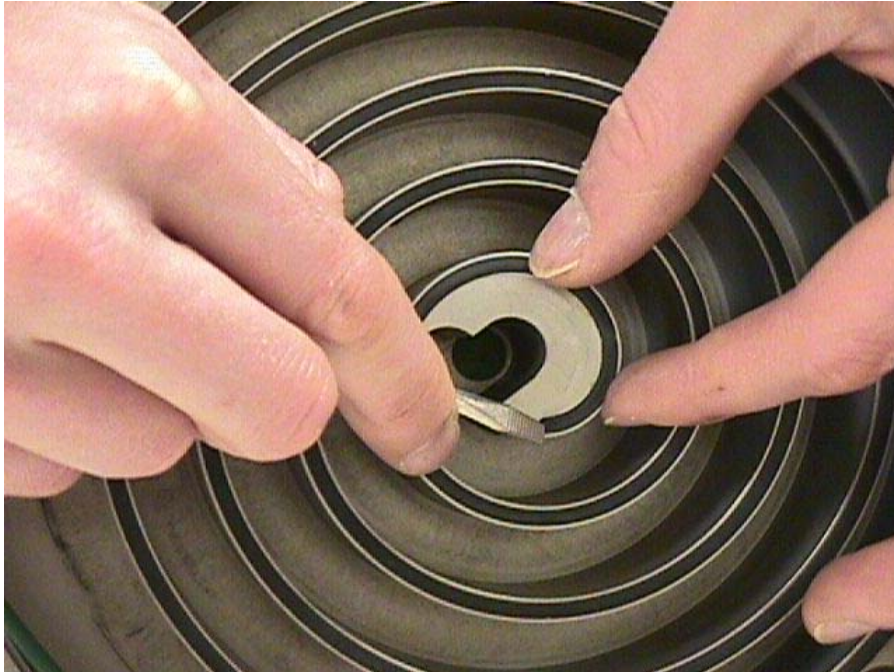


REMOVING THE REAR OF THE VACUUM PUMP
ILLUSTRATION 9-13

9-2 Tip Seal Replacement (Continued)

Replacing the Tip Seal (continued)

3. Remove the first tip seal. Use a small standard screwdriver to start. See Illustration 9-14.



TIP SEAL REMOVAL
ILLUSTRATION 9-14

9-2 Tip Seal Replacement (Continued)

Replacing the Tip Seal (continued)

4. Remove the entire seal. Make sure to dispose of the seals in accordance with all local and national safety and environmental requirements. See Illustration 9-15.



TIP SEAL REMOVAL
ILLUSTRATION 9-15

5. Make sure that there is no debris visible on the inside of the scrolls, especially in the tip seal slot. Use a soft, dry, lint-free cloth to remove any debris.

9-2 Tip Seal Replacement (Continued)

Replacing the Tip Seal (continued)

6. Replace the new seal, starting from the center and moving in a counter-clockwise direction. Make sure that the grooved surface of the seal faces down in the slot. The seal is longer than required, so it must be cut to the correct length. See Illustration 9-16.

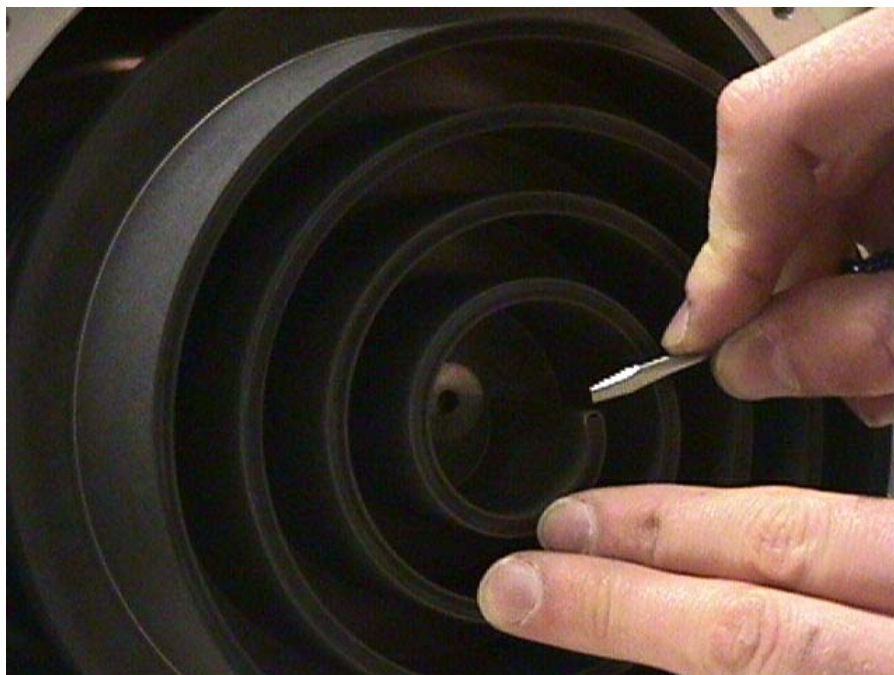


TIP SEAL INSTALLATION
ILLUSTRATION 9-16

9-2 Tip Seal Replacement (Continued)

Replacing the Tip Seal (continued)

7. Remove the second tip seal. See Illustration 9-17.

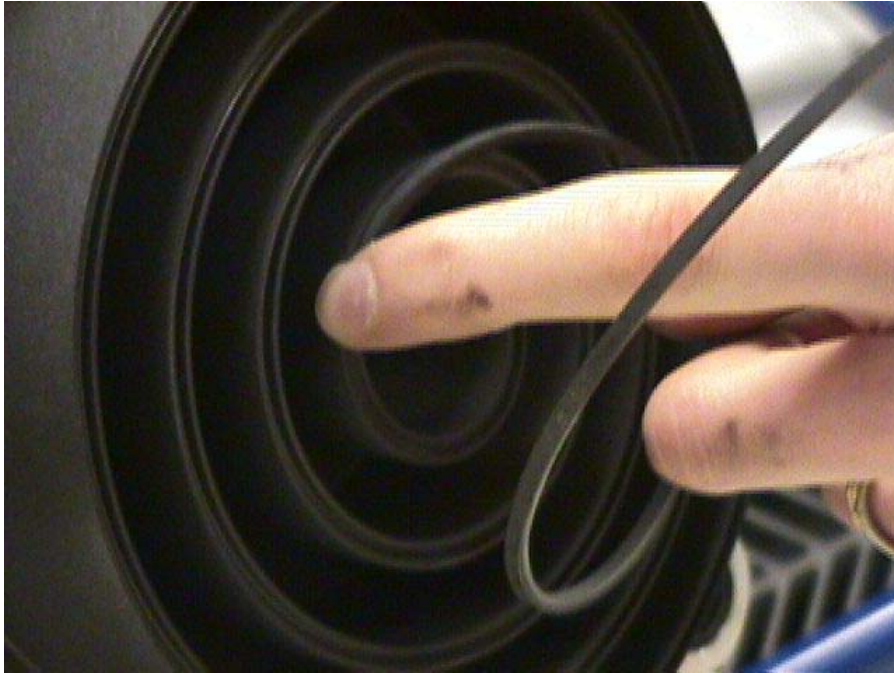


SECOND TIP SEAL REMOVAL
ILLUSTRATION 9-17

9-2 Tip Seal Replacement (Continued)

Replacing the Tip Seal (continued)

8. Replace the seal starting from the center and working in a clockwise direction. See Illustration 9-18.

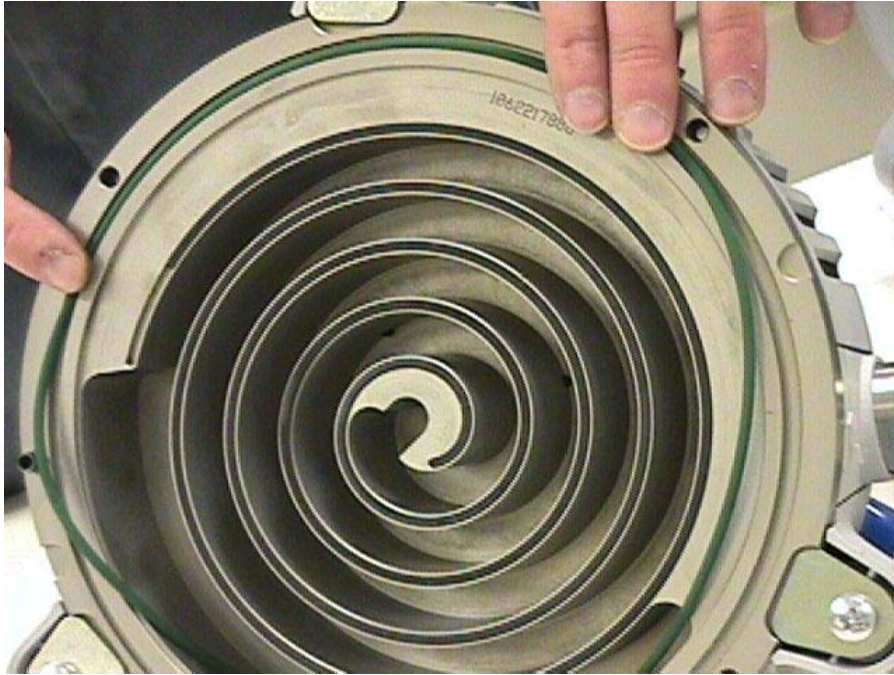


SECOND TIP SEAL INSTALLATION
ILLUSTRATION 9-18

9-2 Tip Seal Replacement (Continued)

Replacing the Tip Seal (continued)

9. Replace the large O ring on the perimeter of the motor assembly. See Illustration 9-19.



O RING REPLACEMENT
ILLUSTRATION 9-19

10. Replace the rear of the vacuum pump. Make sure that the seals do not drop out during assembly. See Illustration 9-13.
11. Install the four (4) cap screws. See Illustration 9-12.

9-3 – Clean Inlet Screen

Required Tools & Equipment

None.

Procedure

1. Remove the vacuum pump clamp and elbow. See Illustration 9-20.



VACUUM CLAMP AND ELBOW
ILLUSTRATION 9-20

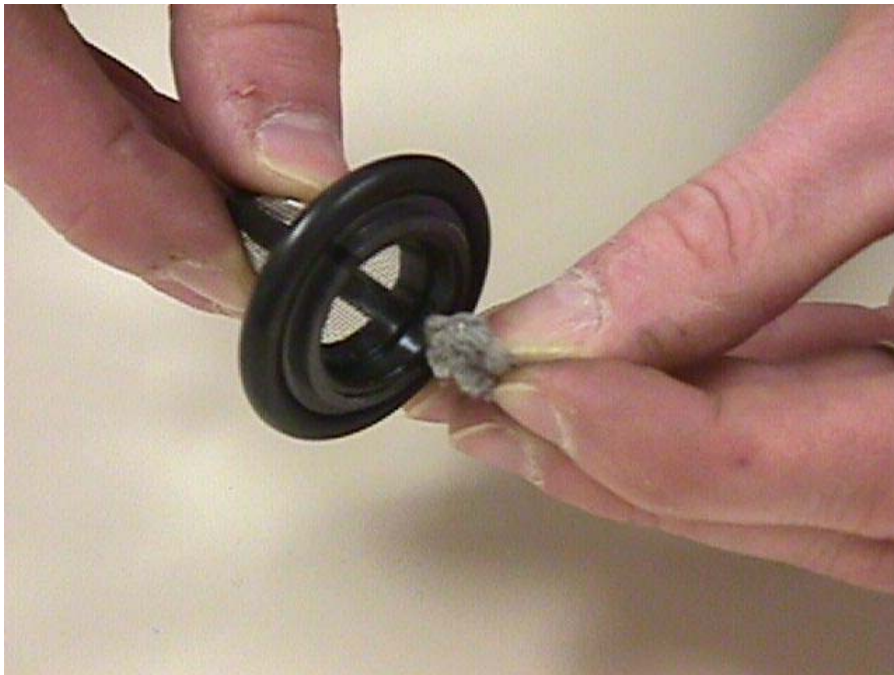
9-3 - Clean Inlet Screen (Continued)

2. Remove the inlet screen. See Illustration 9-21.



VACUUM CLAMP AND ELBOW
ILLUSTRATION 9-21

3. Remove any debris from the screen. See Illustration 9-22.



PULLING DEBRIS FROM INLET SCREEN
ILLUSTRATION 9-22

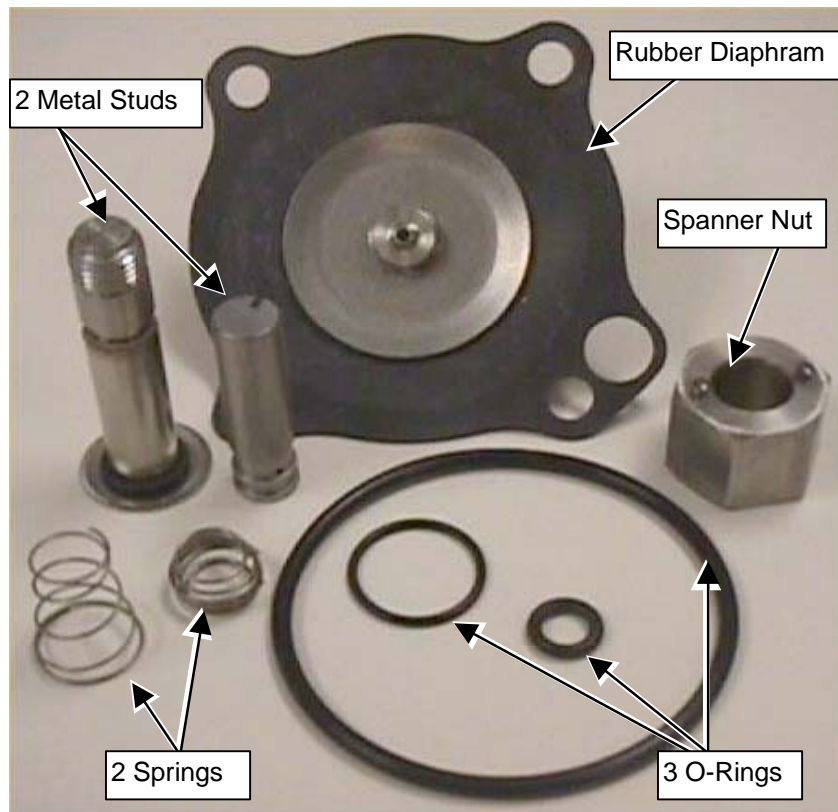
9-3 - Clean Inlet Screen (Continued)

4. Replace the inlet screen. See Illustration 9-21.
5. Replace the vacuum pump clamp and elbow. See Illustration 9-20.

9-4 Replace Solenoid Valve

Required Tools & Equipment

- Solenoid Valve Replacement Kit GE Part Number: 2317288-4
- Adjustable Crescent Wrench

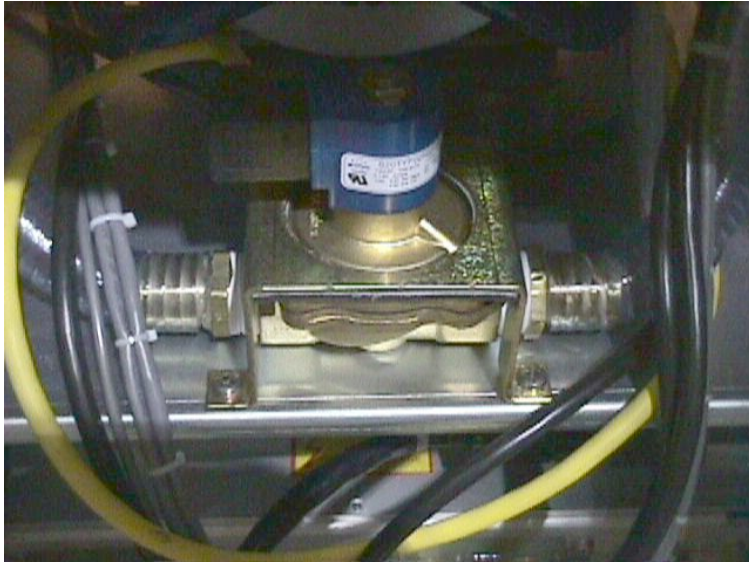


CONTENTS OF THE SOLENOID VALVE REPLACEMENT KIT
ILLUSTRATION 9-23

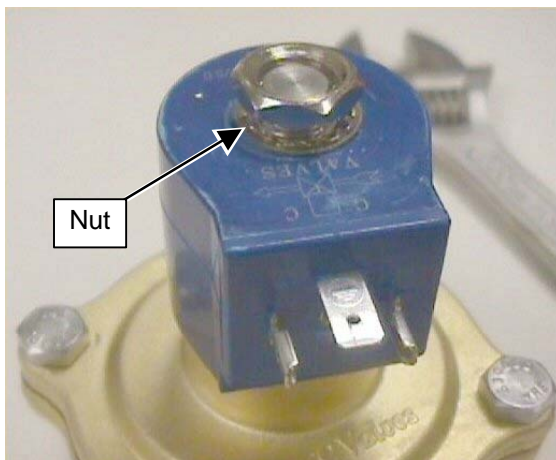
9-4 Replace Solenoid Valve (Continued)

Procedure

1. Remove the four Phillips-head screws to remove the bracket that houses the solenoid valve. See Illustration 9-24.



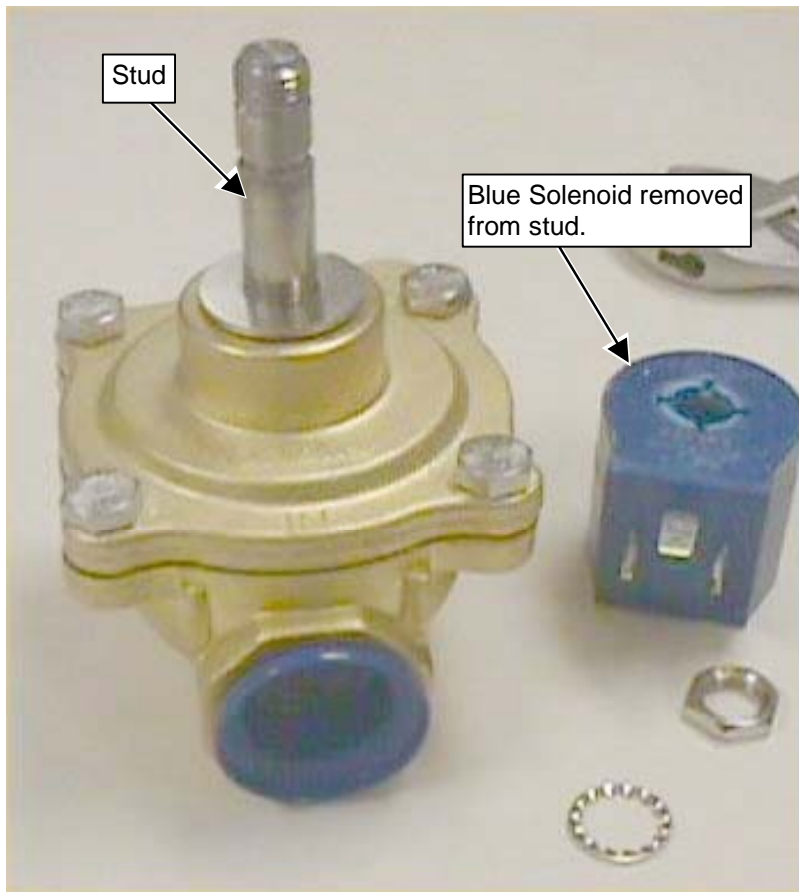
2. Using the crescent wrench, remove the top nut. See Illustration 9-25.



REMOVING TOP NUT FROM SOLENOID VALVE
ILLUSTRATION 9-25

9-4 Replace Solenoid Valve (Continued)

- 2. Remove the blue Solenoid. See Illustration 9-26.



BLUE SOLENOID REMOVED FROM STUD
ILLUSTRATION 9-26

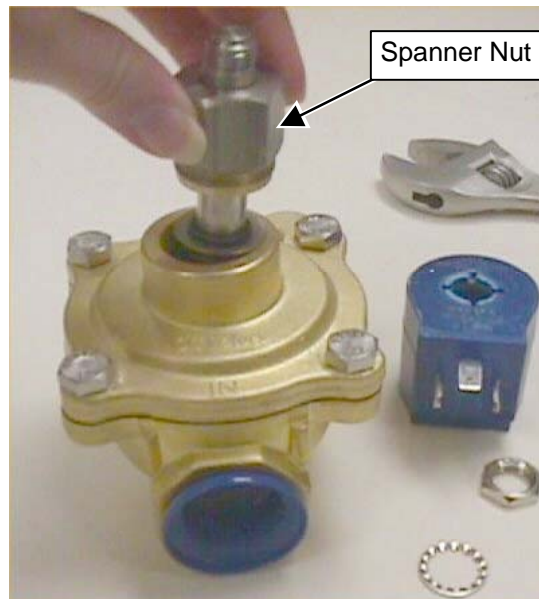
9-4 Replace Solenoid Valve (Continued)

3. Remove lock washer from base of stud. See Illustration 9-27.



REMOVING LOCK WASHER
ILLUSTRATION 9-27

4. Remove the spanner nut on the solenoid. See Illustration 9-28.



REMOVAL OF SPANNER NUT
ILLUSTRATION 9-28

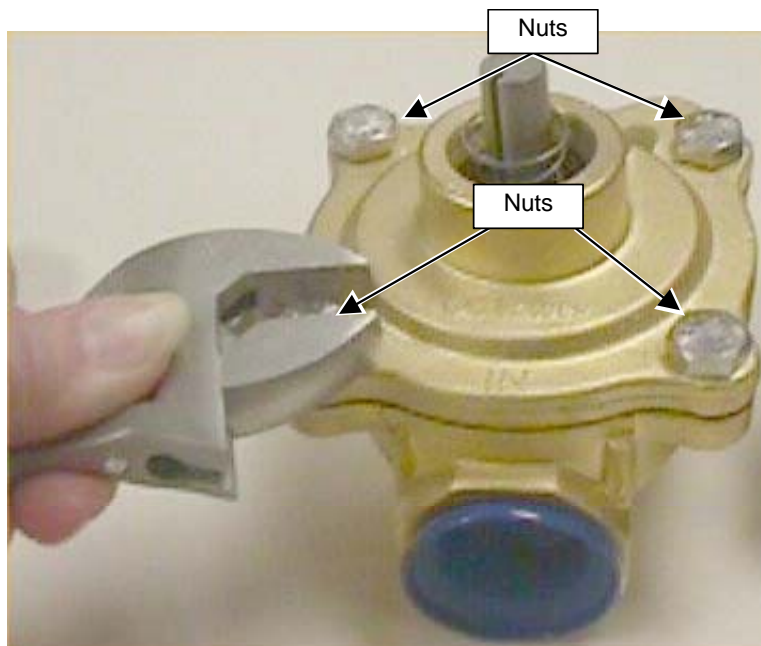
9-4 Replace Solenoid Valve (Continued)

- 5. Remove the stud. See Illustration 9-29.



REMOVING STUD
ILLUSTRATION 9-29

- 6. Remove four (4) nuts. See Illustration 9-30.



LOCATION OF NUTS TO REMOVE
ILLUSTRATION 9-30

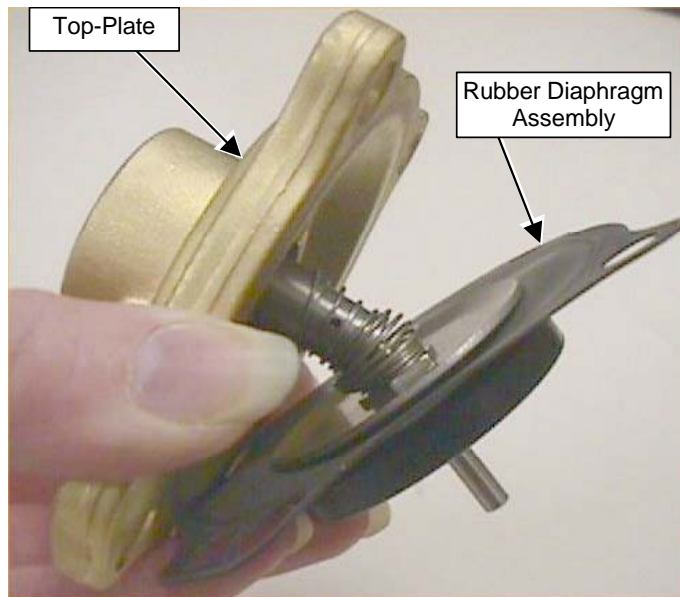
9-4 Replace Solenoid Valve (Continued)

7. Remove the top-plate of the solenoid valve. See Illustration 9-31.



REMOVING TOP-PLATE OF SOLENOID VALVE
ILLUSTRATION 9-31

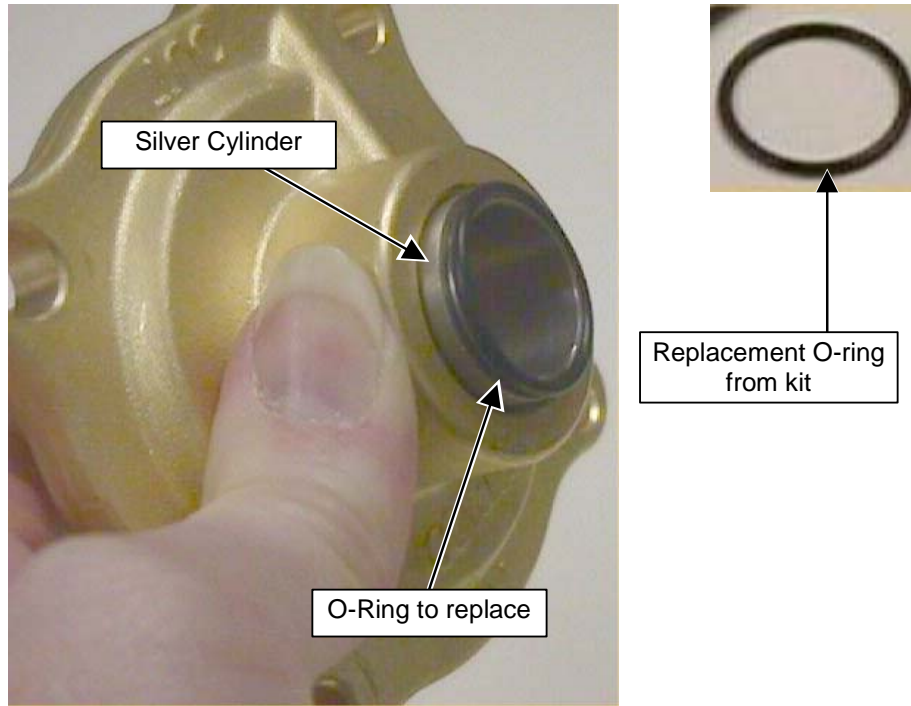
8. Remove the rubber diaphragm assembly from the top-plate and discard. See Illustration 9-32.



REMOVING RUBBER DIAPHRAGM
ILLUSTRATION 9-32

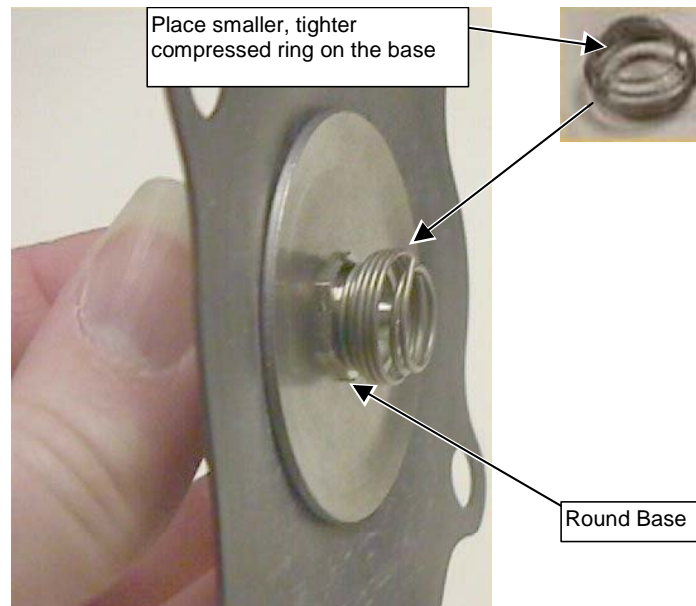
9-4 Replace Solenoid Valve (Continued)

9. In the top-plate is a silver cylinder. Push the silver cylinder out and replace the O-ring. See Illustration 9-33.



REPLACING O-RING ON SILVER CYLINDER
ILLUSTRATION 9-33

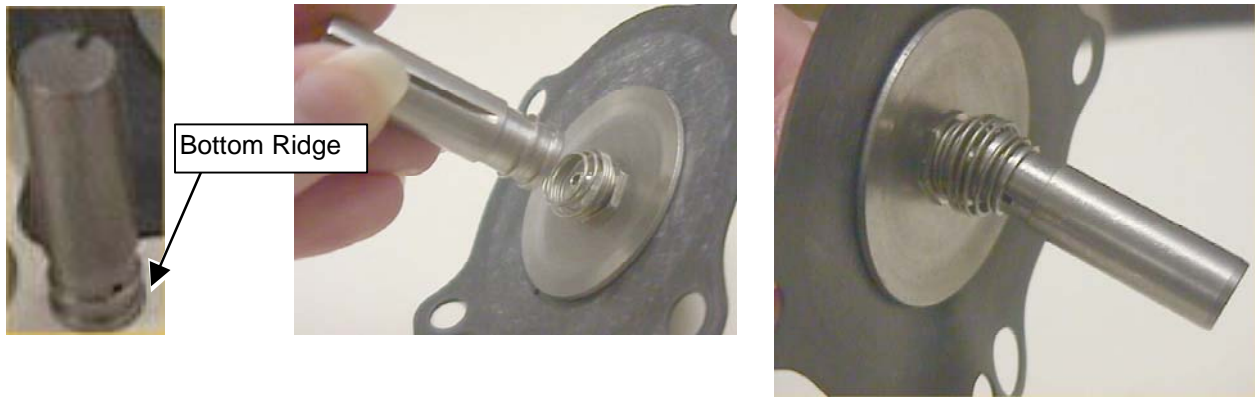
10. Take the new rubber diaphragm from the Solenoid Valve Kit and place the small spring on the round base of the rubber diaphragm. See Illustration 9-34.



PLACING SMALL SPRING ON ROUND BASE OF RUBBER DIAPHRAGM
ILLUSTRATION 9-34

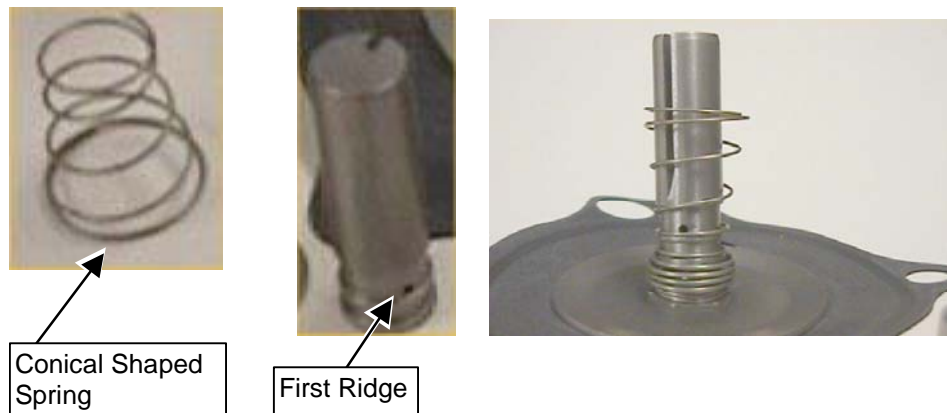
9-4 Replace Solenoid Valve (Continued)

10. Take the small metal stud from the kit and place on the spring of the rubber diaphragm till spring snaps on to the bottom ridge of the stud. See Illustration 9-35.



ATTACHING SMALL STUD TO RUBBER DIAPHRAGM
ILLUSTRATION 9-35

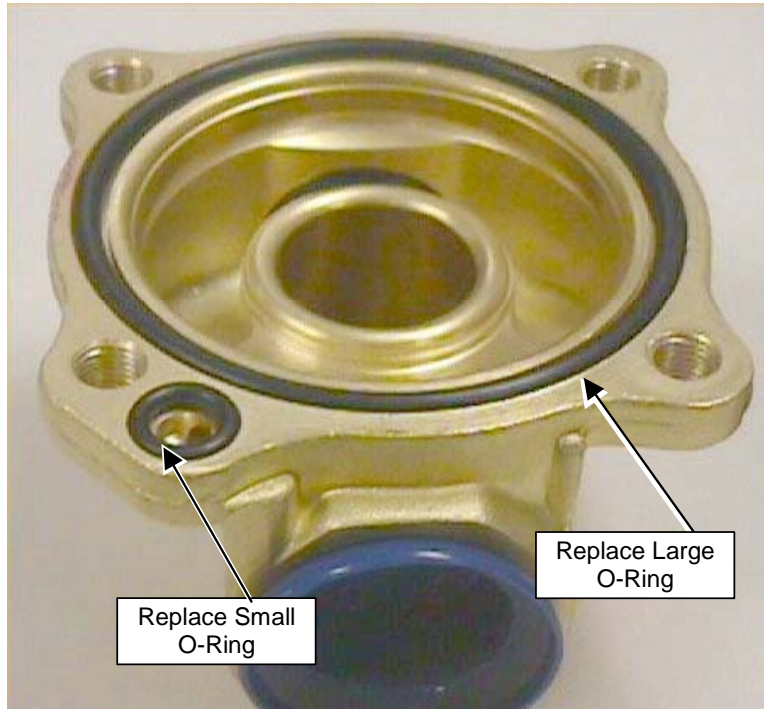
11. Take the larger conical shaped spring and place over the top of stud till it snaps on the first ridge of the stud. See Illustration 9-36.



PLACING CONICAL SHAPED SPRING ON STUD
ILLUSTRATION 9-36

9-4 Replace Solenoid Valve (Continued)

12. In the lower plate of the solenoid valve, remove the two (2) O-rings and replace with rings from kit. See Illustration 9-37.



REPLACING O-RINGS IN LOWER PLATE
ILLUSTRATION 9-37

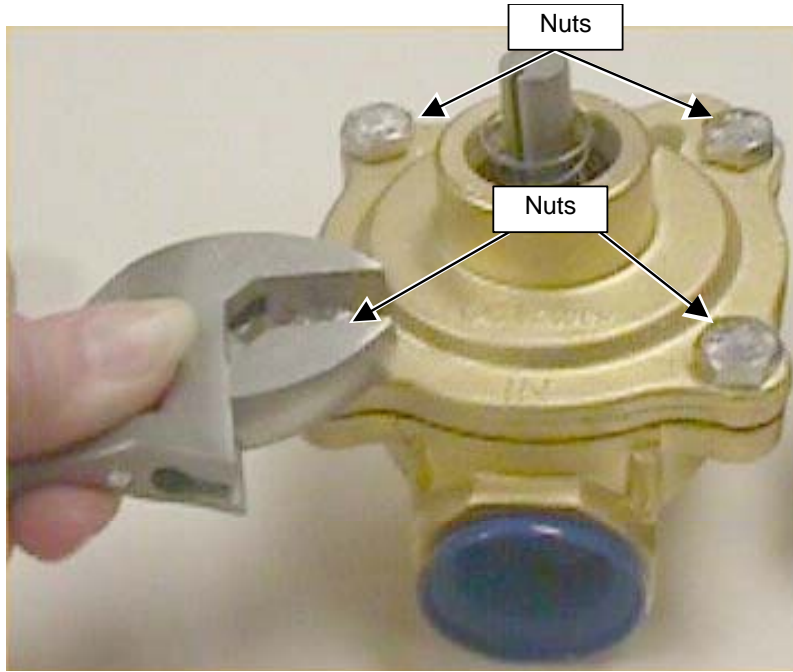
13. Replace the rubber diaphragm assembly in the top-plate. See Illustration 9-38.



NEW RUBBER DIAPHRAGM ON TOP-PLATE
ILLUSTRATION 9-38

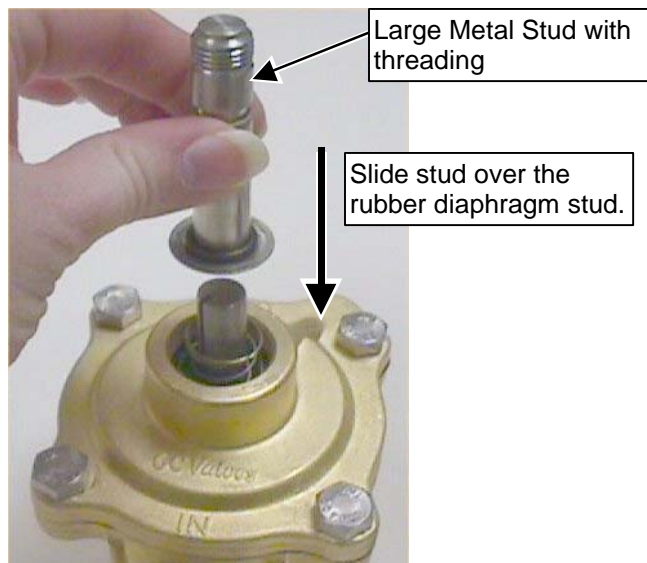
9-4 Replace Solenoid Valve (Continued)

- 14. Place the top-plate on the lower plate of the solenoid valve. Make sure the rubber diaphragm lines up with the correct holes.
- 15. Replace the four nuts and secure. See Illustration 9-39.



SECURING TOP-PLATE OF SOLENOID VALVE ASSEMBLY
ILLUSTRATION 9-39

- 16. Take the larger metal stud with threading from the kit and slide over the stud from the rubber diaphragm. See Illustration 9-40.



REPLACING LARGE METAL STUD
ILLUSTRATION 9-40

9-4 Replace Solenoid Valve (Continued)

17. Take the spanner nut from the kit and slide the nut in place to secure stud. See Illustration 9-41.



REPLACING SPANNER NUT
ILLUSTRATION 9-41

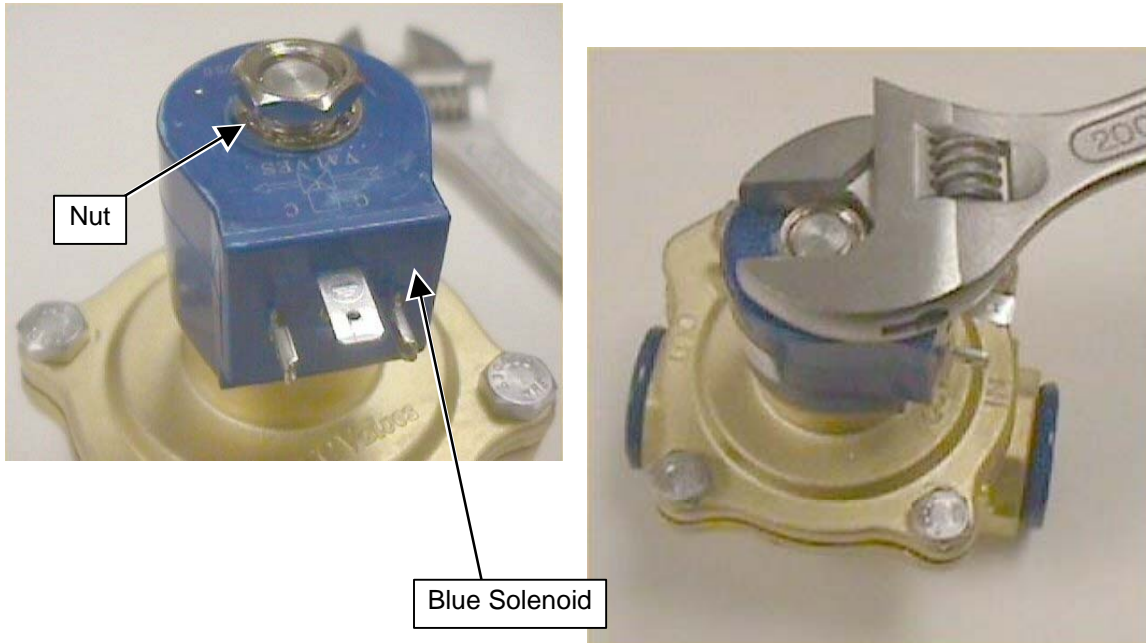
18. Replace the locking washer on top of the spanner nut. See Illustration 9-42.



REPLACING LOCKING WASHER
ILLUSTRATION 9-42

9-4 Replace Solenoid Valve (Continued)

19. Replace the blue solenoid. See Illustration 9-43.

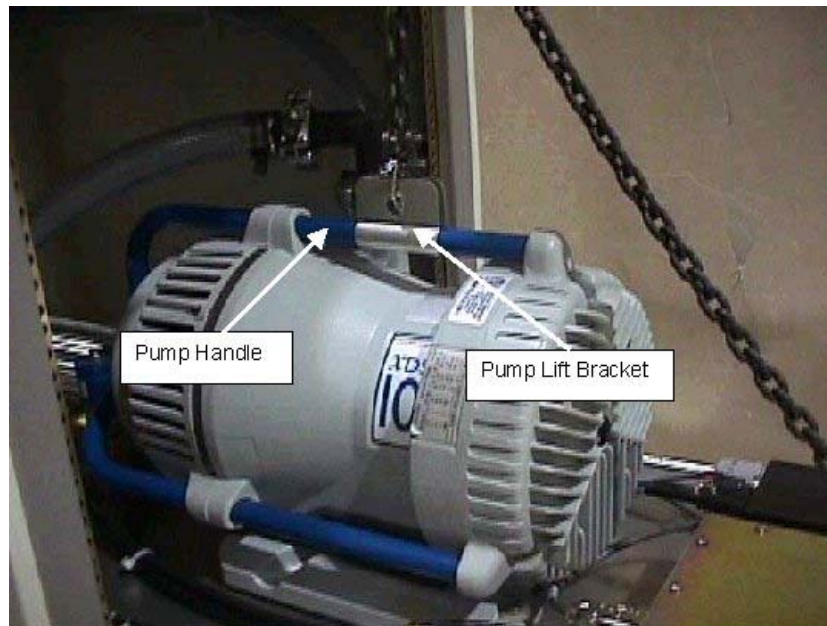


REPLACING AND SECURING BLUE SOLENOID
ILLUSTRATION 9-43

20. Replace the locking washer and nut on top of the blue solenoid and secure. See Illustration 9-43.
21. Replace the solenoid valve assembly.

Replace The Vacuum In Cabinet

1. Attach the vacuum pump lift bracket to the pump handle. See Illustration 9-44.

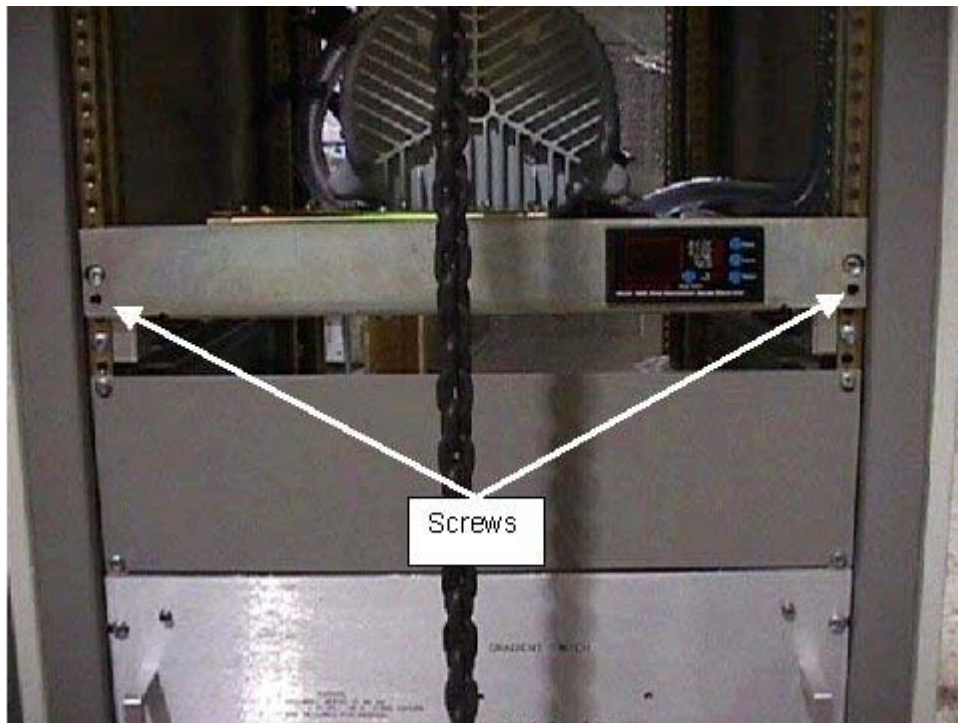


VACUUM PUMP LIFT BRACKET
ILLUSTRATION 9-44

2. Hoist the vacuum pump up and into of the cabinet.
3. Remove the vacuum pump lift bracket from the vacuum pump.
4. Replace the four (4) bolts that connect the vacuum pump to the shelf.
5. Reconnect the vacuum hose to the pump.
6. Replace the solenoid valve and secure bracket in place.
7. Slide the vacuum pump shelf into the cabinet.

Replace The Vacuum In Cabinet (Continued)

8. Replace the two screws that hold the vacuum pump shelf in place. See Illustration 9-45.

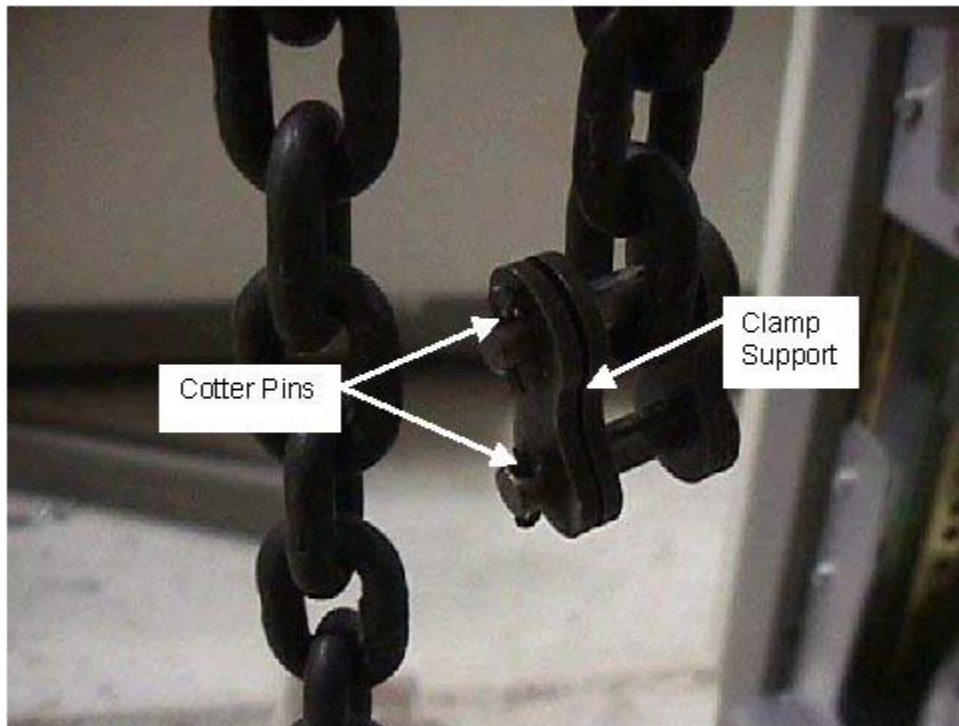


VACUUM PUMP SHELF
ILLUSTRATION 9-45

9. Remove the clamp support.
10. Replace the Spreader Bar on the Hoist.

Replace The Vacuum In Cabinet (Continued)

11. Replace the two cotter pins that hold the clamp to the hoist chain. See Illustration 9-46.



HOIST CHAIN WITHOUT SPREADER BAR
ILLUSTRATION 9-46

12. Connect the vacuum pump to the electrical supply and remove the lock out tag out to the breakers on the PDU.
13. Check that the electric fan is running, by feeling for air-flow at the fan cowl.
14. Remove Hoist Kit from cabinet and return parts to case.