POWERNAIL® CO.

Seal Kit Replacement Kit

Kit Includes 1 of each seal required for a pneumatic rebuild

Piston U-Cup Seal:	09-200-3026
Rubber Seat:	09-445-29723
Piston Rod U-Cup:	09-200-3028
Plunger Wiper Metal Cap O-Ring:	09-445-29729
Plunger Seal Set:	09-445-29725
Return Cylinder O-Ring:	09-445-29731
Return Cylinder U-Cup:	09-200-3027



09-2003058A

For Step-by-Step Videos and Instructions, Visit our Web Site at: www.Powernail.com

The Pneumatic Seal Kit contains all the seals necessary to rebuild Powernail pneumatic nailers & staplers.

Seal Kit for all Pneumatic Nailers: # 09-200-3058A

(Includes 1 of each seal for a pneumatic rebuild)

Models:

Model 200 445FS Stapler

Model 445

445FS Power Roller

Model 50P

445SN Surface Nailer 50P FLEX

445 FLEX Power Roller 50P FLEX Power Roller

WARNING

Read this replacement guide before you use this seal kit. Follow all safety warnings and instructions. If you are uncertain about the procedures involved, call us directly at 1-800-323-1653 for assistance or contact the closest Powernail Dealer for help. Please retain this information for future reference.

POWERNAIL COMPANY, INC. 1300 Rose Road, Lake Zurich, IL 60047 US Phone: 1-800-323-1653 OR 847-847-3000 www.powernail.com

Pneumatic Seal Replacement

PARTS & SERVICE:

When ordering parts include the part number, part description, Powernailer model and serial number. Be sure to state the quantity of the part(s) required. Contact your Powernail Dealer for the necessary parts.

WARNING: Never work on the Nailer if the air line is attached. Always disconnect the air line from the Nailer first.

SEAL REPLACEMENT:

There are 7 seals that may require replacement. We recommend that you have your POWERNAIL Dealer replace the Seals.

SEAL KIT:

You may choose to buy a Seal Replacement Kit and replace the seals yourself. It is good practice to replace all seals at one time regardless if only one seal needs replacement.

SEAL DESCRIPTION & NUMBER:

- 1. Rubber Seat (09-44529723)
- 2. Plunger Seal Set (09-44529725)
- 3. Piston U-Cup Lip Seal (09-2003026)
- 4. Return Cylinder U-Cup Lip Seal (09-2003027)
- 5. Piston Rod U-Cup Lip Seal (09-2003028)
- 6. Plunger Wiper Metal Cap O-Ring (09-44529729-No longer felt)
- 7. Return Cylinder O-Ring Gasket (09-44529731)

To change Seals follow these procedures. Be sure the air line is disconnected from the Nailer first before making any repairs. Consult the illustration for the name and location of the following component parts.

SEAL REPLACEMENT REQUIRES REMOVAL OF THE DRIVING BLADE ASSEMBLY:

- 1. Disconnect the air supply.
- 2. Remove Rubber Plunger Cap (#18).
- 3. Unscrew & remove Body Cap (#2).
- 4. Push Safety Yoke (#8) aside and unscrew the three #10-32 cap screws (#55) holding the Plunger (#12) to the Return Cylinder (#11).
- 5. Pull the Plunger up and out of the Nailer Body (#1) cavity.
- 6. Remove the Return Cylinder O-Ring Gasket (#26) located on the top of the Return Cylinder under the Plunger.
- 7. Turn the Nailer over and remove the four cap screws (#50), that fasten the Adapter Foot and Nail Channel Assembly to the Nailer Body and lift the Assembly off the Body.
- 8. Remove the Rubber Bumper (#20 or #65).
- 9. Pull the Driving Blade Assembly out of the Nailer Body by pulling on the Driving Blade (#14).
- 10. Hold the Piston Rod (#9) with an 11/16 socket over its hex end opposite the Piston. **Do not use** pliers or a vise anywhere on the metal parts, they can damage the sealing surfaces.
- 11. Use box wrenches (Part #: 09-445-29768) to remove the 5/8-18 Jam Nut (#51). Remove the Dowel Pin (#38) and Driving Blade (#14).
- 12. Unscrew the Piston from the Piston Rod using box wrenches (Part #: 09-445-29768) and separate the Piston (#10), Piston Rod (#9) and Return Cylinder (#11).

Pneumatic Seal Replacement, continued...

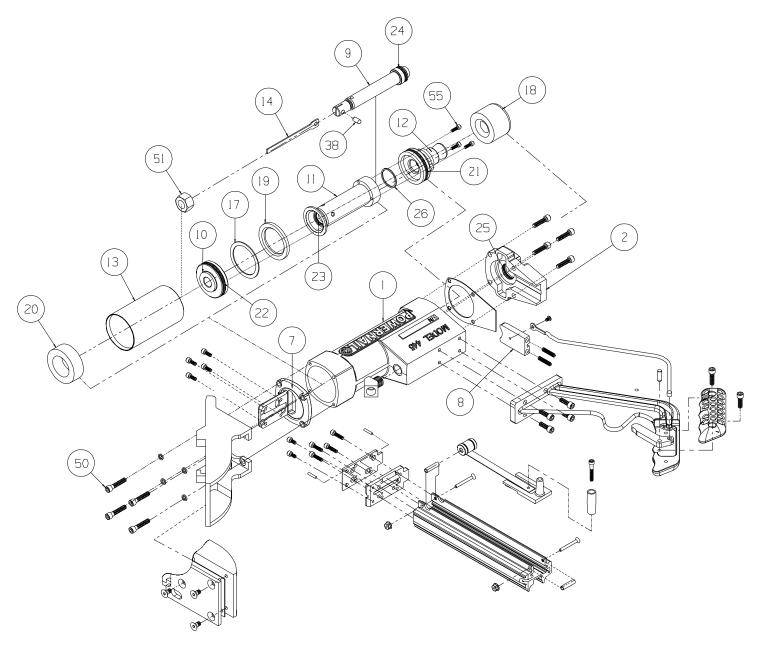
TO REPLACE THE SEALS:

Rubber Seat (#19):

- 1. Remove the Cylinder Sleeve (#13). The Cylinder Sleeve should slide out of the Nailer Body when you pull out the Driving Blade Assembly.
- 2. Remove the metal Support Ring (#17) and Rubber Seat from inside the Nailer body. Note that the chamfer on the inside of the Rubber Seat faces the BOTTOM of the Nailer, do not reverse the direction of the chamfer when you replace the Rubber Seat.
- 3. Replace the Rubber Seat, Support Ring and Cylinder Sleeve. Be sure to re install the steel Cylinder Sleeve with the chamfered inside edge facing the BOTTOM of the Nailer

Plunger Seal Set (#21):

- 1. Remove the Teflon® Seal and its O-Ring expander from the groove using a bent paper clip or pick. Be sure not to scratch the inside walls of the seal groove with the wire hook.
- 2. Clean out the seal groove. Place a new O-Ring into the seal groove by stretching it over the Plunger body. Make sure the O-Ring is not twisted in the groove. Place a new Teflon° Seal Ring into the seal groove over the O-Ring.



Pneumatic Seal Replacement, continued...

- 3. Carefully push the Teflon[®]Seal Ring over the edge of the Plunger with your thumbs and into the groove. Do this as quickly as possible to reduce stretching of the Teflon[®]Seal Ring. DO NOT OVER STRETCH THE TEFLON[®] SEAL RING! Be sure the Teflon[®] Seal Ring is centered all around the seal groove and not twisted.
- 4. Wipe off the Seal surface with a clean rag and lubricate it generously with Pneumatic Light Air Tool Oil lubricant.

Piston U-Cup Lip Seal (#22):

- 1. Remove the old Piston U-Cup Lip Seal from the Piston using a bent paper clip or pick, being careful not to scratch the inside walls of the seal groove or the edge of the Piston with the wire hook.
- 2. Clean out the seal groove. Place a new U-Cup Lip Seal into the groove. Make sure the lips is not twisted in the groove and the lips face the top of the Nailer See the sketch below.
- 3. Carefully wipe off the U-Cup Lip Seal surface with a clean rag and lubricate it generously with Pneumatic Light Air Tool Oil lubricant.

Return Cylinder U-Cup Lip Seal (#23):

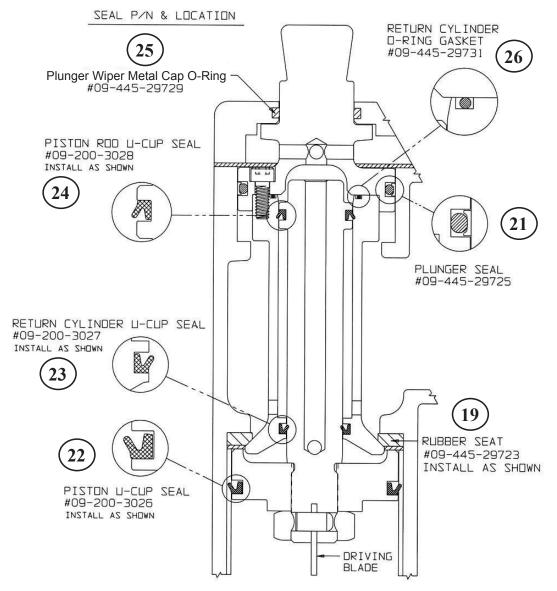
- 1. Use a bent paper clip or pick to remove the old U-Cup Lip Seal from the internal seal groove inside the Return Cylinder. Be careful not to scratch the inside walls of the seal groove with the wire hook.
- 2. Clean out the seal groove. Place a new U-Cup Lip Seal into the groove, be sure it is not twisted in the groove. Be sure the lips are facing the inside of the Return Cylinder as shown in the sketch below.

WARNING: The U-Cup Lip Seals #23 and #24 look alike, but they are different, DO NOT mix them up.

3. Carefully wipe off the Lip Seal surface with a clean rag and lubricate it generously with Pneumatic Light Air Tool Oil lubricant.

Piston Rod U-Cup Lip Seal (#24):

1. Remove the old U-Cup Lip Seal from the seal groove with a bent paper clip or pick using care not to scratch



Pneumatic Seal Replacement, continued...

the inside walls of the seal groove with the wire hook.

2. Clean out the seal groove and install a new U-Cup Lip Seal. Be sure the Lips are facing the right direction and are not twisted in the groove. See the sketch below.

WARNING: The Lip Seals #23 and #24 look alike, but they are different, DO NOT mix them up.

3. Carefully wipe off the seal surface with a clean rag and lubricate it generously with Pneumatic Light Air Tool Oil lubricant.

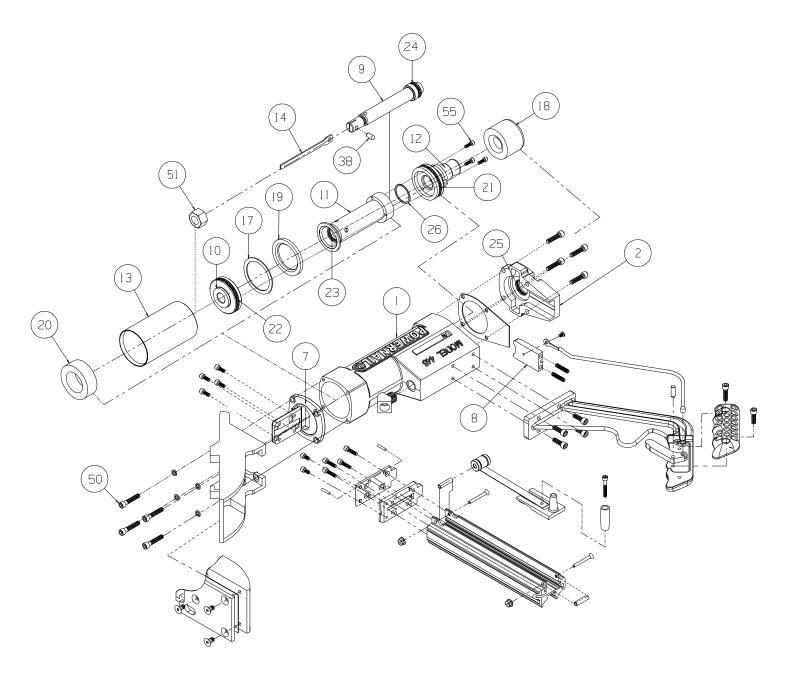
Plunger Wiper Metal Cap O-Ring (#25-No longer felt):

- 1. Use a bent paper clip to pick out the felt Wiper Seal out of its groove in the Body Cap (2).
- 2. Clean out the groove and insert the new O-Ring (25) in to the groove in the metal body cap (2).

Return Cylinder O-Ring Gasket (#26):

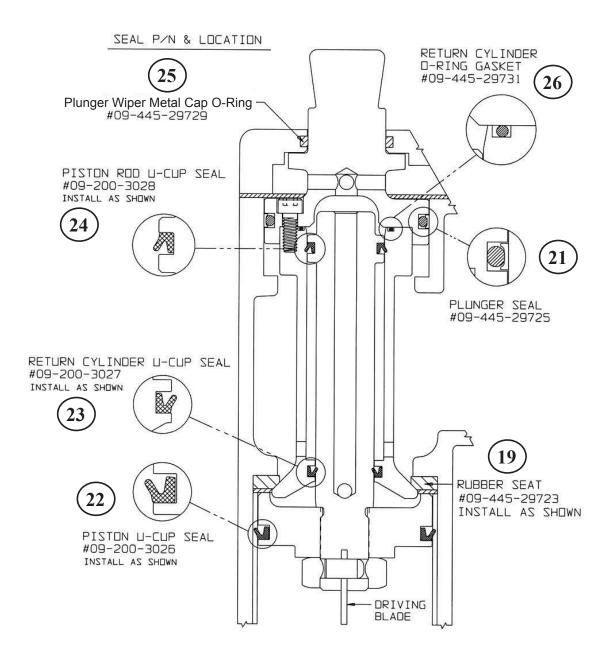
- 1. Place a new O-Ring Gasket in the groove on top of the Return Cylinder when you reassemble the Driving Blade Assembly.
- 2. Wipe off the O-Ring Gasket seal surface and lubricate it generously with Pneumatic Light Air Tool Oil lubricant.

REASSEMBLING THE NAILER:



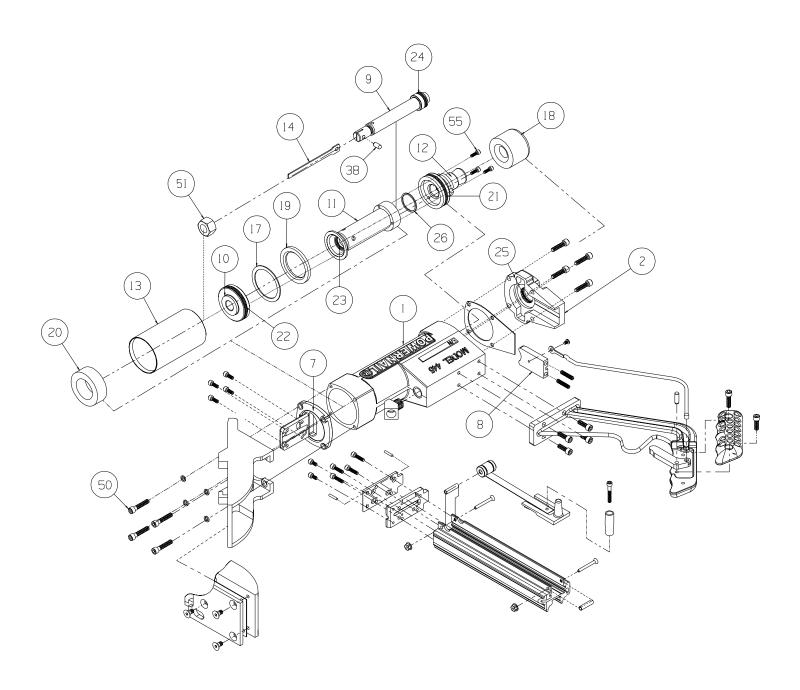
Nailer Reassembly

- 1. Be sure the Rubber Seat (19), Support Ring (17) and Cylinder are installed in the Body and are facing the correct way.
- 2. All seal surfaces must be clean and lubricated generously with Pneumatic Light Air Tool Oil lubricant. Replace any part that shows signs of wear.
- 3. Use care when installing the seals into their respective cavities. Be sure the Seals are contained in their groove and do not come out as the parts slide together. Generous cavity lead in chamfers have been provided to help Seal installation.
- 4. Carefully insert the Piston Rod (9) into the return Cylinder (11) and screw the Piston (10) onto the rod. Be sure the Piston is facing the correct way, ears up, hex down.
- 5. Assemble the Driving Blade, Dowel Pin and Jam Nut on to the Piston Rod (9).
- 6. Insert the Driving Blade Assembly up into the bottom of the Nailer Body Cylinder.
- 7. Be sure there is a new O-Ring Gasket (26) in the top groove of the Return Cylinder (11).



Pneumatic Seals Diagram

- 8. Lubricate the seals and then insert the Plunger (12) into the top cavity of the Body. Line up the holes and install the three Plunger retaining screws (55). It is important that the (3) #10-32 screws are tight or air leakage will occur. Our recommendation is to use 1-2 drops of blue Loctite® or similar on the 3 screws.
- 9. Position the Safety Yoke in the Plunger groove.
- 10. Install the Body Cap (25) and Plunger Rubber Cap (18).
- 11. Turn the Nailer upside down. Install the Rubber Bumper (20), Nail Channel Assembly and Adapter Foot. Be sure to align up the Driving Blade (14) with the slot in the Foot (7) before the Nailer is closed up.
- 12. NEVER FIRE THE NAILER WITHOUT THE RUBBER BUMPER INSTALLED, IT WILL DAMAGE THE NAILER.



Pneumatic Seal Kit

Return Cylinder Seal 09-2003027

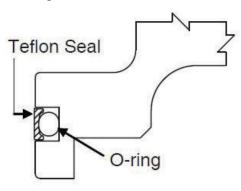








Plunger Seal Set 09-44529725

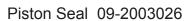




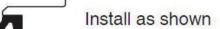
Return Cylinder O-Ring 09-44529731



Plunger Wiper Metal Cap O-Ring 09-44529729









Rubber Seat #09-445-29723

Place in cylinder from bottom of the nailer.
Inner beveled edge should be facing up.

