

# HDLV® 50-lb Dolly Transfer Pump Retrofit Grounding Kit



**WARNING:** Allow only qualified personnel to perform the following tasks. Follow the safety instructions in this document and all other related documentation.

## Description

The retrofit grounding kit for the HDLV® 50 lb dolly transfer pump contains components to update:

- Lower Y-block
- Pickup tube assembly
- Antistatic and polyethylene tubing
- Tubing fitting adapter

## Installing Grounding Kit

### Remove Old Lower Y-Block



**WARNING:** Shut off and relieve system air pressure before performing the following tasks. Failure to relieve air pressure may result in personal injury.

**NOTE:** Tag all air and powder tubing before disconnecting from the pump.

1. See Figure 1. Disconnect the purge air lines from the top of the pump.
2. Disconnect the inlet (suction) and outlet (delivery) powder tubing from the bottom of the pump.

**NOTE:** Measure and mark down the length of the inlet and outlet tubing for reference in later procedures.

3. Remove the two screws (A) and the cover from the pump.

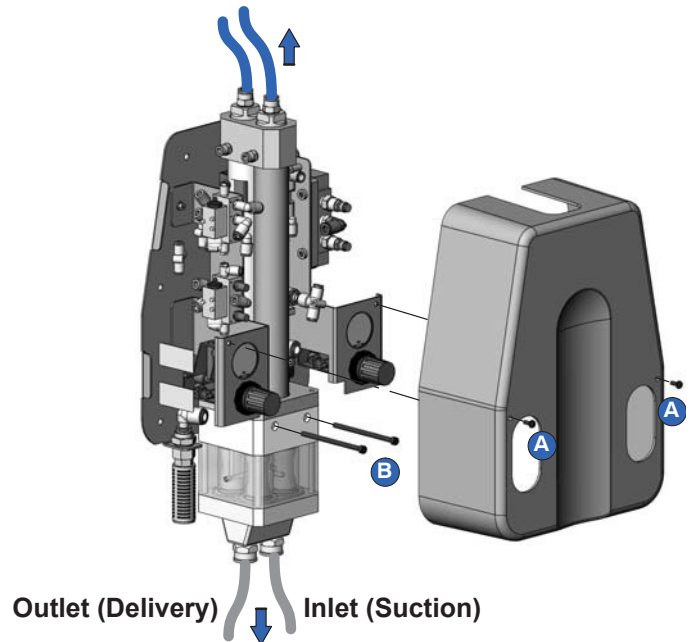


Figure 1 Removing the Pump Assembly

4. See Figure 2. Disconnect one end of each of the seven air tubes indicated.
5. See Figure 1. Remove the two screws (B) securing the pump assembly to the base. Remove the pump assembly to a clean work surface.

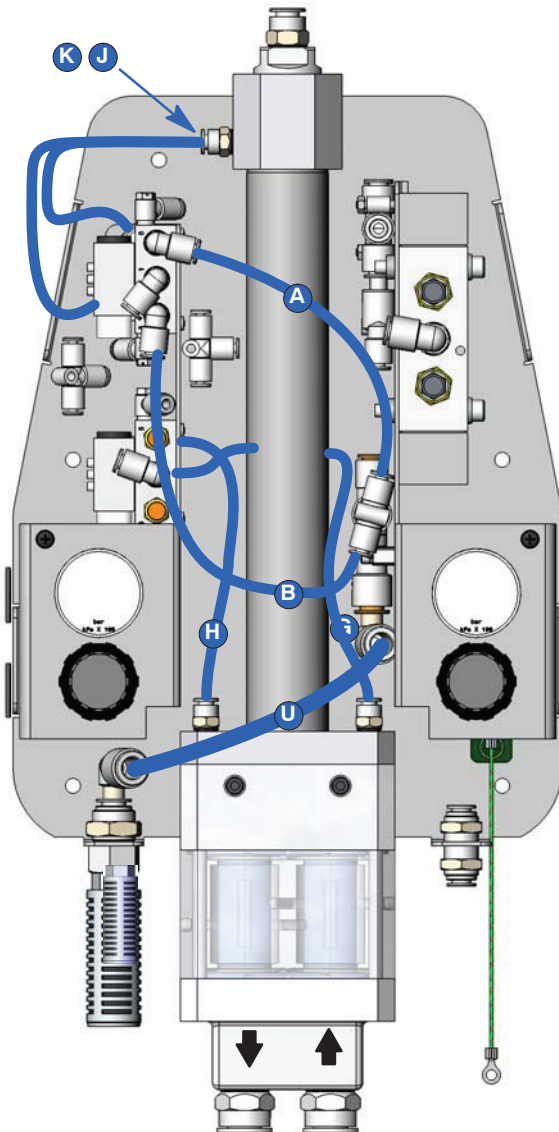


Figure 2 Disconnecting Air Tubing

6. See Figure Figure 3. Remove the four screws securing the lower Y-block to the pump.

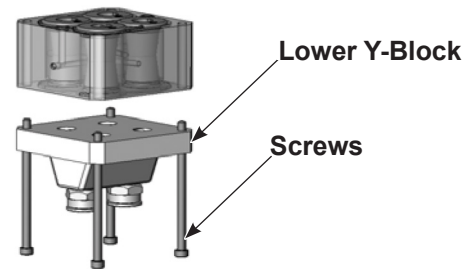


Figure 3 Remove Old Lower Y-Block

## Install New Grounded Lower Y-Block

1. See Figure 4. Install grounded lower Y-block using four screws. Tighten screws two turns at a time to 7-10 in-lb using an alternating pattern.

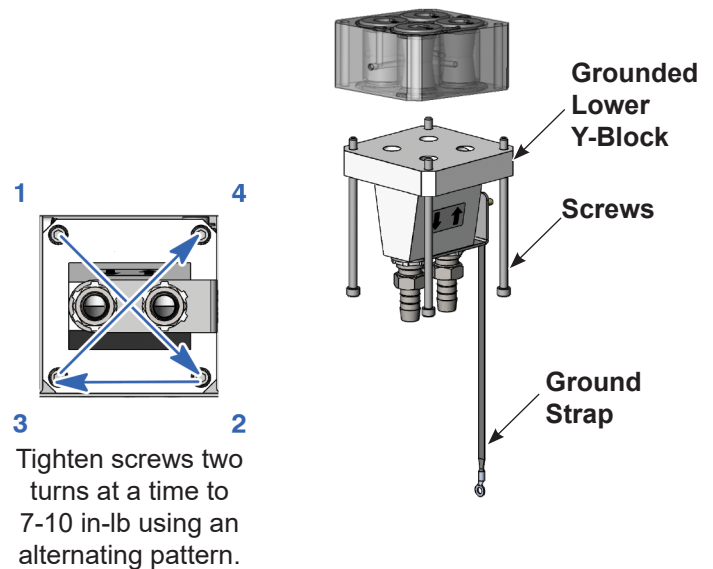


Figure 4 Install New Grounded Lower Y-Block

2. See Figure 1. Install pump assembly onto base and secure using two screws (B)
3. See Figure 2. Reconnect seven air tubes.
4. See Figure 4. Attach ground strap from lower Y block to pump back plate.
5. See Figure 1. Install the cover and the two screws (A) onto the pump.

## Install Pickup Tube and Suction Antistatic Tubing

1. Remove the old pickup tube and tubing.
2. Use the inlet tubing (suction) measurement taken from the previous procedure to measure and cut new antistatic tubing to the same length as old.
3. Slide the spring guard over the antistatic hose so spring is about 12 in. from the end.

**NOTE:** In the next step, if the antistatic tubing is too stiff, dip the end of antistatic tubing into a hot cup of water for 5 seconds to soften tubing.

4. See Figure 5. Push the tubing onto the pickup tube barb all the way so the internal ground wire of antistatic tubing contacts the flange shoulder on the pickup tube.

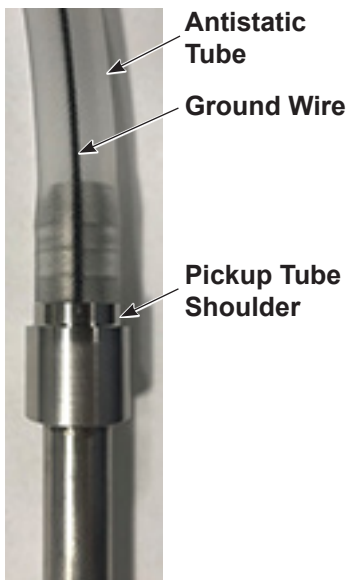


Figure 5 Install Antistatic Tube onto Pickup Tube

5. See Figure 6. Bring the spring guard down and rotate clockwise over the tubing onto the pickup tube to make contact with the pickup tube head. This creates both strain relief for the tubing and grounding for the spring.

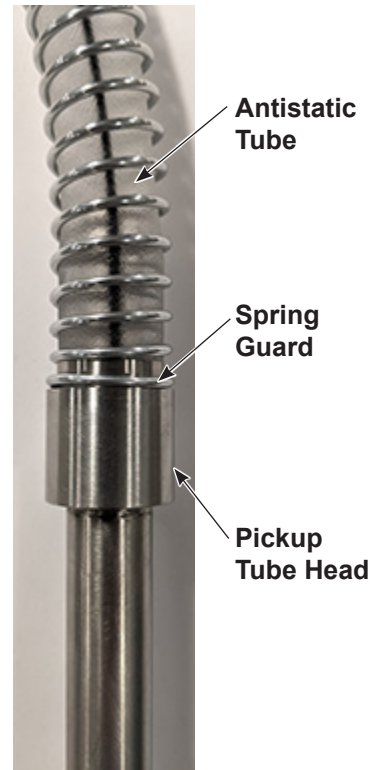


Figure 6 Assembly Pickup Tube with Spring Guard



**CAUTION:** For the next step, make sure the set screw is loose enough to allow the collar to slide easily over the pickup tube. If set screw is not loose enough, damage could occur to both collar and pickup tube.

6. See Figure 7. Loosen the set screw on the collar and slide collar up over pickup tube toward the pickup tube head. Leave about 2 in. of space between pickup tube head and collar and tighten set screw.

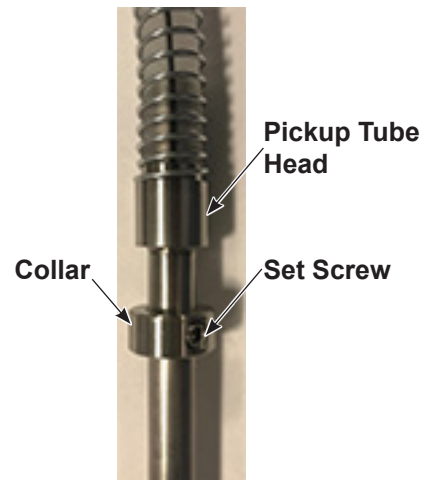


Figure 7 Install Collar

7. See Figure 8. Install the bushing and pickup tube into the arm assembly. Install and hand tighten the nut to secure pickup tube in place. Then, use a wrench to torque the nut 1/4 of a turn.

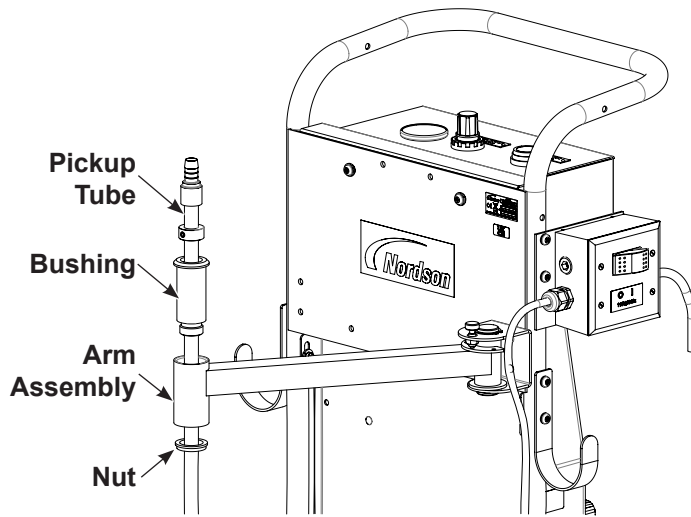


Figure 8 Install Pickup Tube into Arm Assembly

8. Connect the other end of the antistatic tubing to the right side barbed fitting (suction side) of the lower Y-block on the pump.

**NOTE:** Make sure the internal ground wire contacts the flange on the barbed fitting.

## Connect Grounding

1. See Figure 9. With the supplied ground wire, attach ring-tong end of the ground wire to the ground stud on the dolly frame base.

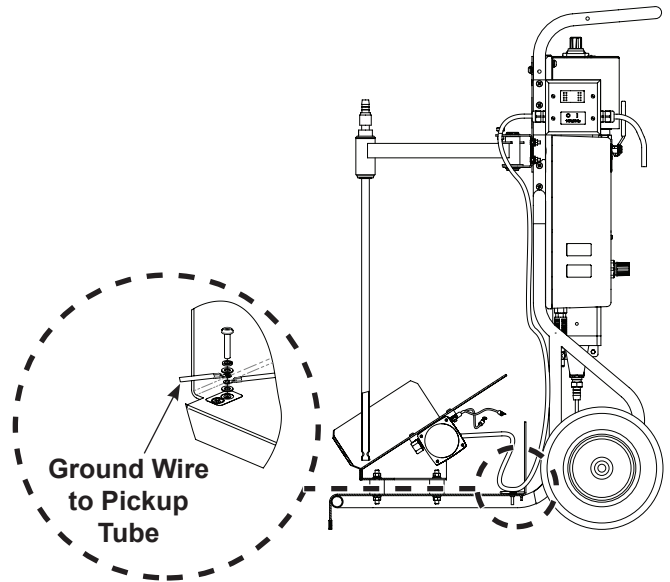


Figure 9 Connect Ground Wire to Dolly Base

2. Route ground wire and secure to dolly frame using tie wrap.
3. See Figure 10. Attach the other side of the ground wire with the ground clamp to the pipe of pickup tube above the collar.
4. Spiral wrap can be used to further secure ground wire near pickup tube head.

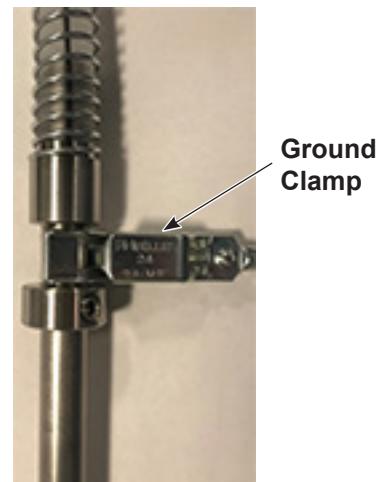


Figure 10 Install Ground Clamp

## Connect Delivery Antistatic Tubing

1. Use the outlet tubing (delivery) measurement taken from the previous procedure to measure and cut new antistatic tubing to the same length as old. Discard old tubing.
2. Cut about 4-6 in. length of the new polyethylene tubing.
3. See Figure 11. Install tubing onto the fitting adapter.

**NOTE:** In the next step, if the antistatic tubing is too stiff, dip the end of antistatic tubing into a hot cup of water for 5 seconds to soften tubing.

- a. Connect the antistatic tubing to the 14.7 mm side of the adapter. Make sure the ground wire makes contact with the adapter flange.
- b. Connect the polyethylene tubing to the 12.7 mm side of the adapter.

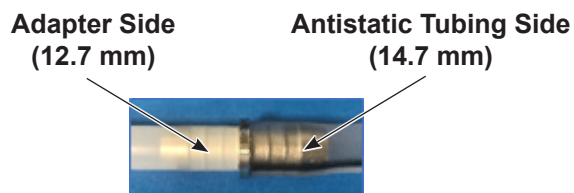


Figure 11 Fitting Adapter Installation

4. Connect the other end of the antistatic tubing to the left barbed fitting (delivery side) of the lower Y-block on the pump.

**NOTE:** Make sure the internal ground wire contacts the flange on the barbed fitting.

5. Connect the other end of the polyethylene tubing to bulk feed entry tube of the sieve cover or sieve accumulator.

Parts

| Item | Part    | Description  | Quantity | Note |
|------|---------|--|----------|------|
| —    | 1620761 | KIT, RETROFIT, DOLLY, 50 LB, GROUND HDLV                 | 1        |      |
| 1    | -----   | • TUBE, PICK UP, 50 LB,GROUND HDLV                       | 1        | A    |
| 2    | -----   | • BUSHING, HOLDER, PICK UP, DRUM, GROUND HDLV            | 1        |      |
| 3    | -----   | • COLLAR, SHAFT, SET SCREW, 5/8 X 1-1/8, STAINLESS STEEL | 1        | A    |
| 4    | 1106671 | • NUT, LOCK, NYLON, 3/4 IN NPT                           | 1        |      |
| 5    | 1620095 | • FITTING, BARB, DOUBLE, 11MM X 1/2 IN, STAINLESS STEEL  | 1        |      |
| 6    | 1610762 | • KIT, LOWER Y WITH BARB, HI CAP HDLV GEN II             | 1        |      |
| NS   | -----   | • SPRING GUARD, GALVANIZED STEEL, 0.75 IN ID X 12 IN L   | 1        | A    |
| NS   | 768178  | • TUBING, POWDER, ANTISTATIC 12.7 MM (0.5 IN) ID         | 50 ft    |      |
| NS   | 1063654 | • TUBE, POLYETHYLENE, 16 MM OD                           | 2 ft     |      |
| NS   | 134575  | • WIRE, GROUND   | 1        |      |
| NS   | 939004  | • STRAP, CABLE, 0.06-1.75, NATURAL, 12260-4              | 6        |      |

NOTE: A. Items included in kit 1620903.

NS: Not Shown

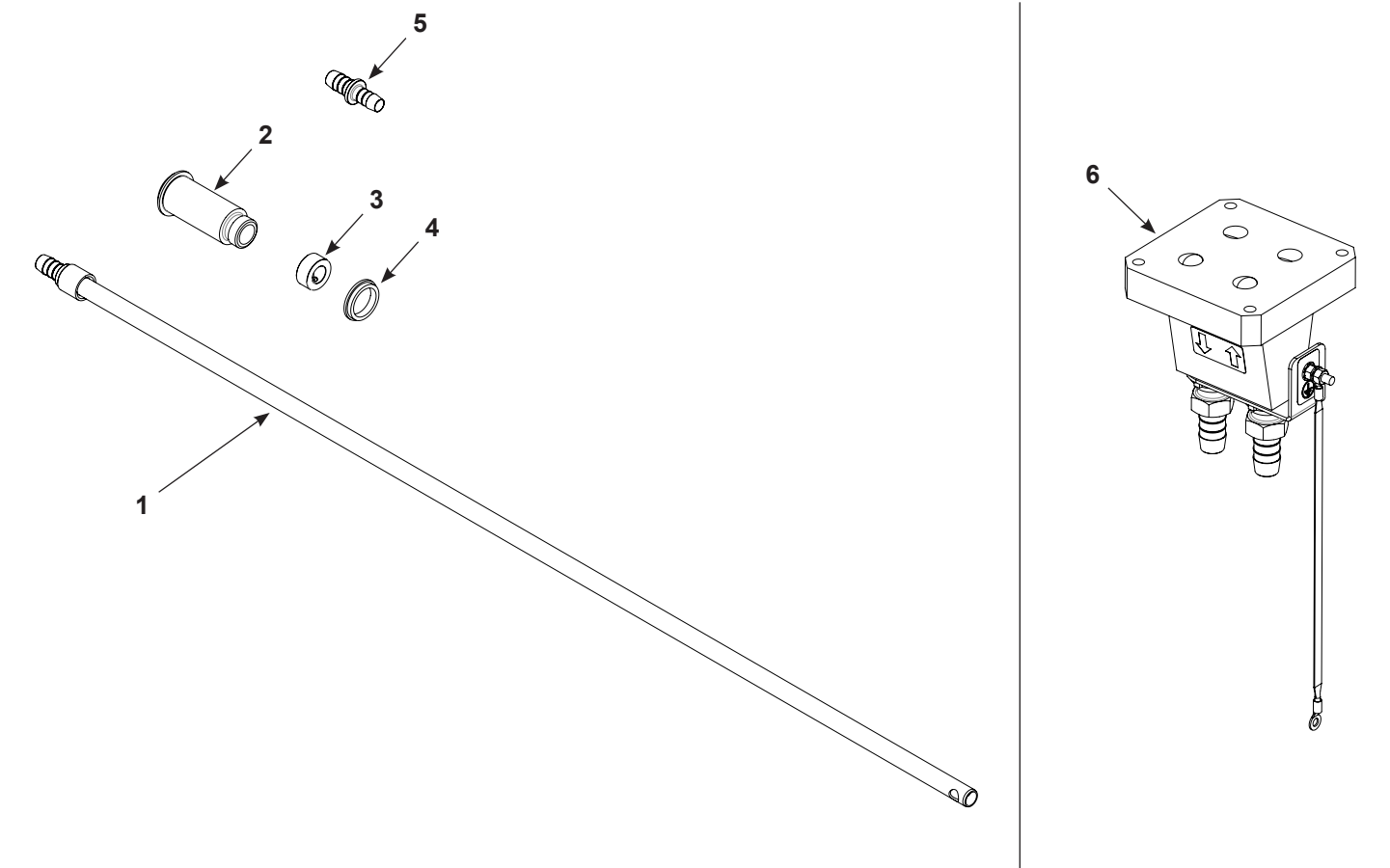


Figure 12 Ground Kit Parts

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