

HR-X-X Feed Hoppers



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

Description

This instruction sheet provides specifications; installation and operation instructions; and parts lists for the following hoppers:

- HR-2-50
- HR-2-80
- HR-8-80

The hoppers are shipped fully assembled, with lids that include pump adapter and pickup tube assemblies, vent tubes, and hinged loading doors. Powder pumps are sold separately or are included in configured systems.

Specifications

	HR-2-50	HR-2-80	HR-8-80
Powder Capacity:	23 kg (50 lb)	36 kg (80 lb)	36 kg (80 lb)
*Pump Knockouts:	2	2	8
*Pump Adapters Included:	1	1	2
Dimensions			
Height:	60 cm (23.5 in.)	77 cm (30.5 in.)	77 cm (30.5 in.)
Diameter:	40.6 cm (16 in.)	40.6 cm (16 in.)	40.6 cm (16 in.)
Weight (Empty):	10.5 kg (23 lb)	12 kg (27 lb)	12 kg (27 lb)
Weight (Full to Capacity):	33 kg (73 lb)	48.5 kg (107 lb)	48.5 kg (107 lb)
Fluidizing Pressure:	1-2.7 bar (15-40 psi)	1-2.7 bar (15-40 psi)	1-2.7 bar (15-40 psi)
Fluidizing Air Tubing:	10-mm OD	10-mm OD	10 mm-OD
*Pumps and additional adapters must be ordered separately.			

Installation

Basic

These hoppers are used primarily with Nordson powder spray handguns and control units mounted on two-wheeled dollies. The dollies have a platform with a built-in mounting for a hopper. The gun control units include controls for fluidizing, atomizing, and flow rate air.

See Figure 1.

1. Make sure the fluidizing drum (6) and lid (2) are securely clamped to the body (3), and that all gaskets are undamaged and sealing properly.
2. Connect 10-mm flexible air tubing to the fitting labeled AUX on the rear or side of the control unit, or another source of regulated fluidizing air. Connect the opposite end of the tubing to the fluidizing air connector (5).



WARNING: All electrically conductive equipment in the spray area must be grounded. Ungrounded or poorly grounded equipment can store an electrostatic charge which can give personnel a severe shock or arc and cause a fire or explosion.

3. Connect the ground wire shipped with the hopper from a true earth ground to the ground stud (4).
4. Make sure the pump adapter O-rings are installed correctly in the adapter grooves. Install the pump on the adapter with a slight twisting motion.
5. Connect the flexible vent hose shipped with the hopper to the vent hose adapter (1). Secure the hose to the adapter with a hose clamp. Connect the other end of the hose to the booth powder collector to prevent vented powder from contaminating the room air.

Installing Additional Pumps

If you wish to install additional pumps, you must order a pump adapter for each pump. The adapter must be installed in a hole in the lid. If you have a HR-2-80 hopper, you can order the HR-8-80 lid, which has eight holes in it, or you can knock out additional holes. No more than eight pumps can be installed, due to space limitations.

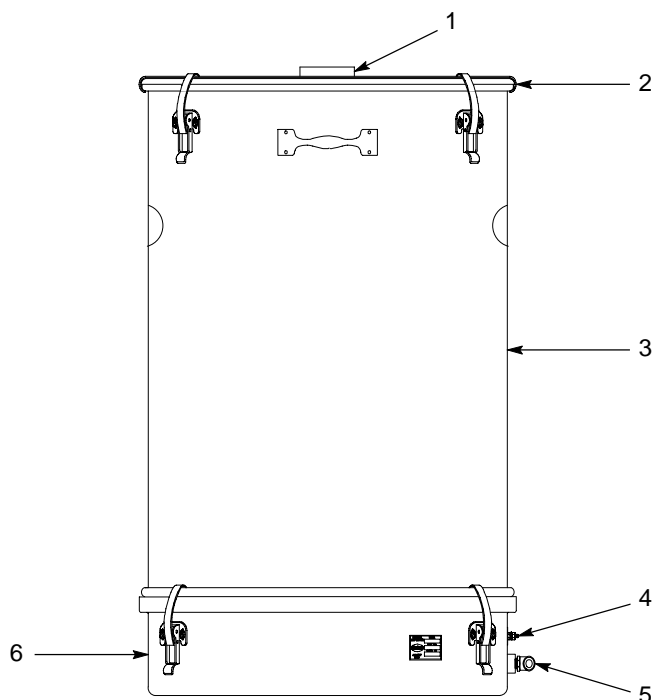


Figure 1 HR-X-X Feed Hoppers

- | | |
|----------------------|-----------------------------|
| 1. Vent hose adapter | 4. Ground stud |
| 2. Lid | 5. Fluidizing air connector |
| 3. Body | 6. Fluidizing drum |

Operation



WARNING: Wear an approved respirator, protective clothing, and gloves when handling powder. Avoid skin contact with powder coatings, or breathing powder particles.

1. Fill the hopper half full of powder, to provide room for expansion as the powder is fluidized. Do not overfill. Overfilling may prevent powder from being fully fluidized, and affect coating performance.
2. Turn on the fluidizing air, and adjust the regulator until the powder is gently "boiling." The air mixed with the powder will cause it to increase in volume. Fluidize the powder for five or ten minutes to make sure it is evenly fluidized and no clumps are left before spraying.

Maintenance

Periodically, empty the hopper and clean the interior. Clean the fluidizing plate and inspect it for signs of air contamination. If the plate is discolored and appears to be contaminated, replace it. Check your air supply and correct any contamination problems.

Parts

To order parts, call the Nordson Finishing Customer Support Center at (800) 433-9319 or your local Nordson representative. Use the following illustrations and parts lists to locate and describe parts correctly.

HR-2-50 Hopper

See Figure 2.

Item	Part	Description	Quantity	Note
—	163567	HOPPER, packaged, HR-2-50	1	
1	242402	• HOSE, flexible, 3 m (10 ft)	1	
2	970966	• CLAMP, hose	1	
3	104168	• PLATE, fluidizing	1	
4	104181	• GASKET, U-channel	1	
5	163560	• DRUM, fluidizing	1	A
6	163563	• BODY, hopper, packaged	1	
7	981170	• • SCREW, truss, unslotted, 10-32 x 0.375 in.	8	
8	984120	• • NUT, hex, machined	8	
9	164064	• • LATCH, hopper, curve base	4	
10	163548	• LID, hopper, packaged	1	B
11	163555	• TUBE, pickup, 50 lb, packaged	1	
12	152227	• • ADAPTER, pump, vibratory box feeder	1	
13	941185	• • O-RING, silicone, conductive, 0.875 x 1.062 in.	2	
14	941145	• • O-RING, silicone, conductive, 0.625 x 0.812 in.	2	
15	164063	• • MOUNT, pump	1	
16	164065	• • TUBE, pickup, 0.360-in. ID x 18 in.	1	
17	983055	• • WASHER, pump mount	1	
18	939613	• • LOCKNUT, conduit, $\frac{3}{4}$ -in. NPS	1	
19	972194	• ELBOW, male, $\frac{3}{8}$ -in. NPT tube x $\frac{3}{8}$ in.	1	
NOTE A: Refer to <i>Fluidizing Drum</i> on page 9 for a parts breakdown.				
B: Refer to <i>HR-X-X Hopper Lids</i> on page 8 for a parts breakdown.				

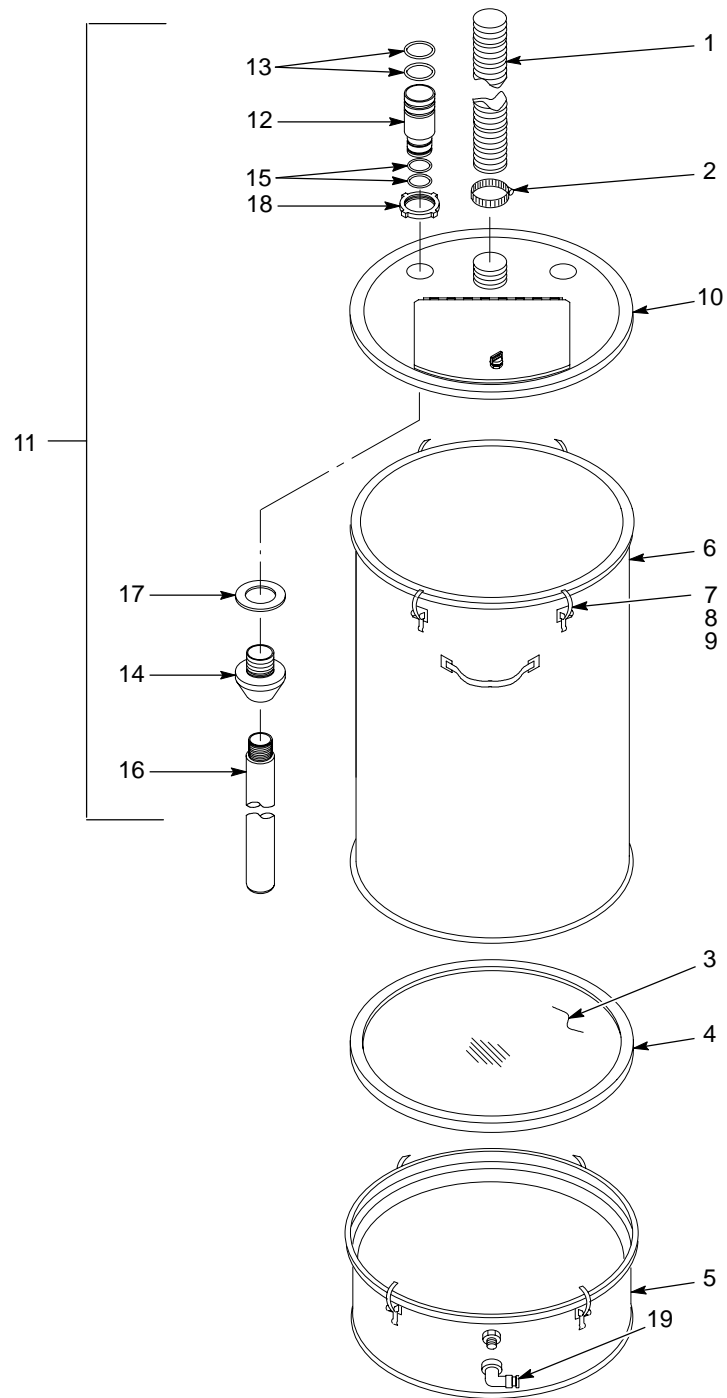


Figure 2 HR-2-50 Hopper

HR-2-80 Hopper

See Figure 3.

Item	Part	Description	Quantity	Note
—	163568	HOPPER, packaged, HR-2-80	1	
1	242402	• HOSE, flexible, 3 m (10 ft)	1	
2	970966	• CLAMP, hose	1	
3	104168	• PLATE, fluidizing	1	
4	104181	• GASKET, U-channel	1	
5	163560	• DRUM, fluidizing	1	A
6	163564	• BODY, hopper, packaged	1	
7	981170	• • SCREW, truss, unslotted, 10-32 x 0.375 in.	8	
8	984120	• • NUT, hex, machined	8	
9	164064	• • LATCH, hopper, curve base	4	
10	163548	• LID, hopper, packaged	1	B
11	163556	• TUBE, pickup, 80 lb, packaged	1	C
12	972194	• ELBOW, male, 3/8-in. NPT x 10 mm	1	

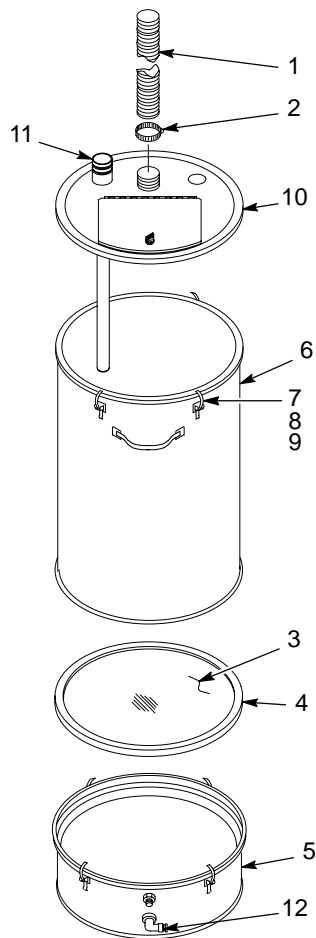
NOTE A: Refer to *Fluidizing Drum* on page 9 for a parts breakdown.B: Refer to *HR-X-X Hopper Lids* on page 8 for a parts breakdown.C: Refer to *Pickup Tube and Pump Adapter for 80 lb Hoppers* on page 10 for a parts breakdown.

Figure 3 HR-2-80 Hopper

HR-8-80 Hopper

See Figure 4.

Item	Part	Description	Quantity	Note
—	167957	HOPPER, packaged, HR-8-80	1	
1	242402	• HOSE, flexible, 3 m (10 ft)	1	
2	970966	• CLAMP, hose	1	
3	104168	• PLATE, fluidizing	1	
4	104181	• GASKET, U-channel	1	
5	163560	• DRUM, fluidizing	1	A
6	163564	• BODY, hopper, packaged	1	
7	981170	• • SCREW, truss, unslotted, 10-32 x 0.375 in.	8	
8	984120	• • NUT, hex, machined	8	
9	164064	• • LATCH, hopper, curve base	4	
10	167551	• LID, hopper, packaged	1	B
11	163556	• TUBE, pickup, 80 lb, packaged	2	C
12	972194	• ELBOW, male, 3/8-in. NPT tube x 3/8 in.	1	

NOTE A: Refer to *Fluidizing Drum* on page 9 for a parts breakdown.

B: Refer to *HR-X-X Hopper Lids* on page 8 for a parts breakdown.

C: Refer to *Pickup Tube and Pump Adapter for 80 lb Hoppers* on page 10 for a parts breakdown.

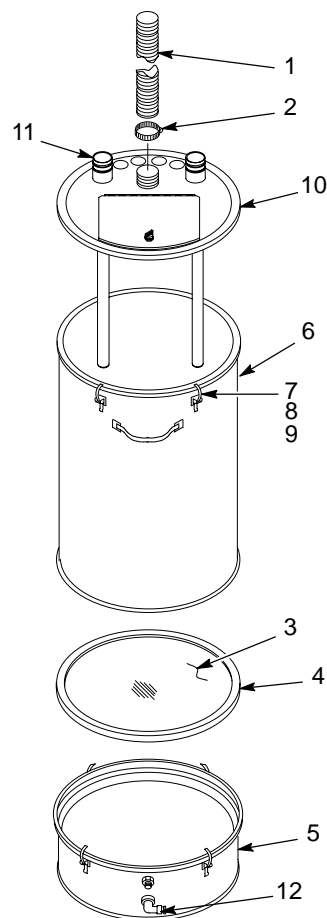


Figure 4 HR-8-80 Hopper

HR-X-X Hopper Lids

Item	Part	Description	Quantity	Note
—	163548	LID, hopper, packaged, HR-2-X	1	A
—	167551	LID, hopper, packaged, HR-8-80	1	B
1	144705	• NUT, conduit, 1.5 in.	1	
2	942240	• O-RING, hotpaint, 1.750 x 2.000 x 0.125 in.	1	
3	144780	• FITTING, pvc, 1.5 in., male adapter	1	
4	237196	• FILL LID ASSEMBLY SERVICE KIT	1	
5	-----	• • LID, fill, hopper	1	
6	237004	• • LATCH, compression, fill lid	1	
7	237006	• • GASKET, compression latch	1	
8	1074469	• GASKET, hopper, lid	1	
9	982096	• SCREW, pan head, M4 x 0.8, slotted, zinc	4	
10	984095	• NUT, hex cap, M4, steel, nickel plated	4	
11	983403	• LOCK WASHER, M4, split, steel, zinc	4	
12	142342	• PLUG, button	AR	
NS	144818	GASKET LID SERVICE KIT	1	

NOTE A: Used on all HR-2-X hoppers. Has two knockouts for pump adapters.

B: Used on HR-8-80 hoppers and can replace the lid used for HR-2-80 hoppers. Has eight knockouts for pump adapters.

AR: As Required

NS: Not Shown

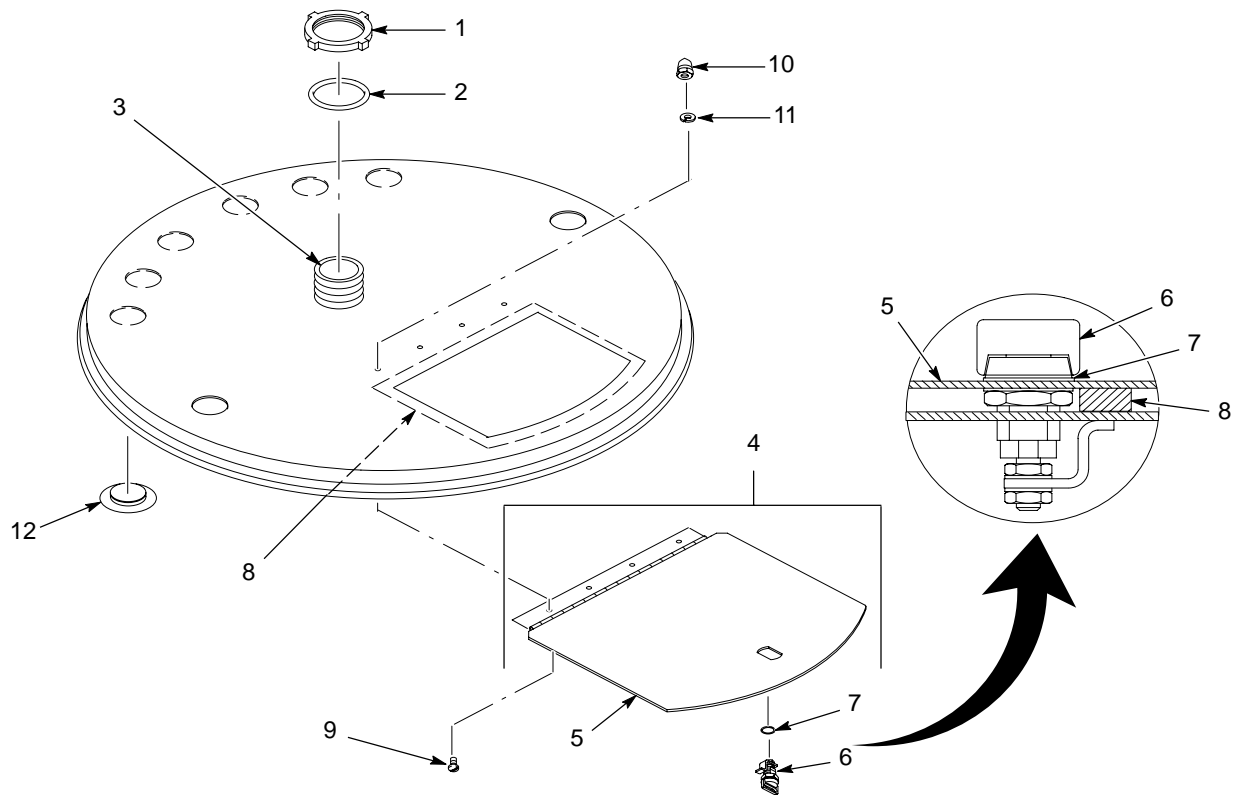


Figure 5 HR-X-X Hopper Lid

Fluidizing Drum

See Figure 6. The fluidizing drum is common to all HR-X-X Hoppers.

Item	Part	Description	Quantity	Note
—	163560	DRUM, fluidizing	1	
1	972124	• ELBOW, 10-mm tube x $\frac{3}{8}$ -in. NPT	1	
2	984702	• NUT, hex, M5, brass	2	
3	983401	• LOCK WASHER, split, M5, steel, zinc	11	
4	983021	• WASHER, flat, 0.203 x 0.405 x 0.040 in., brass	1	
5	982126	• SCREW, pan head, M5 x 25, brass	1	
6	240674	• TAG, ground	1	
7	164064	• LATCH, hopper, curve base	4	
8	982000	• SCREW, pan head, M5 x 10, zinc	8	
9	983123	• WASHER, flat, 0.219 x 0.500 x 0.049 in.	7	
10	984706	• NUT, hex, M5, steel, zinc	8	
11	-----	• STANDOFF, hex, 8-32 x 1.25-in. long	1	

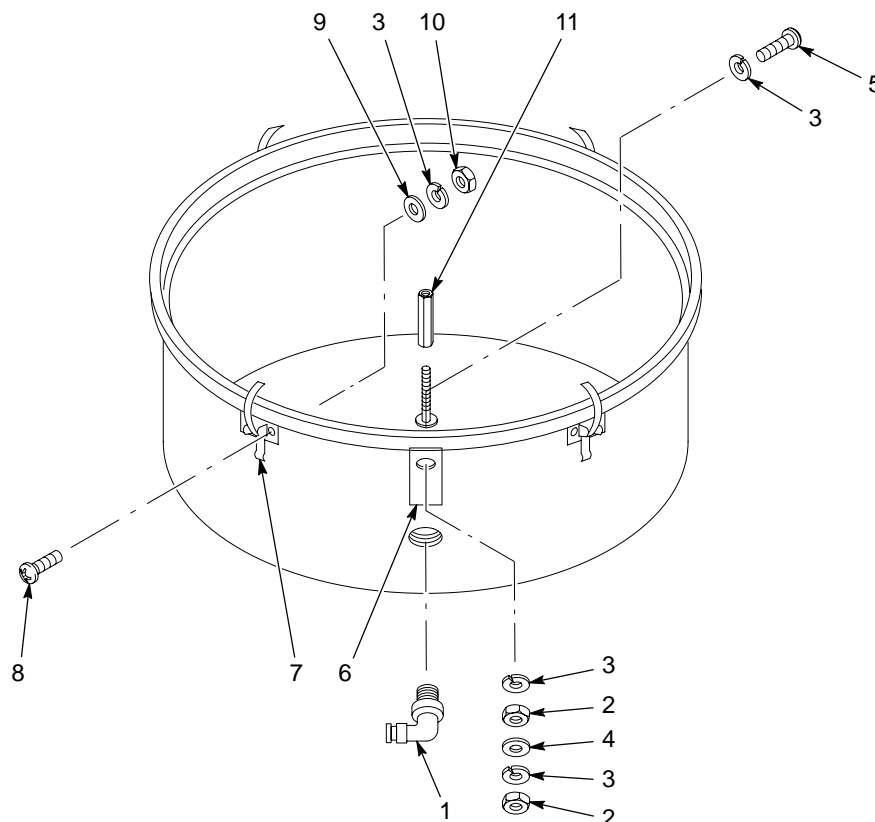


Figure 6 Fluidizing Drum

Pickup Tube and Pump Adapter for 80 lb Hoppers

See Figure 7.

Item	Part	Description	Quantity	Note
—	163556	TUBE, pickup, 80 lb, packaged	1	
1	152227	• ADAPTER, pump, vibratory box feeder	1	
2	941185	• O-RING, silicone, conductive, 0.875 x 1.062 in.	2	A
3	164063	• MOUNT, pump	1	
4	941145	• O-RING, silicone, conductive, 0.625 x 0.812 in.	2	
5	152223	• TUBE, pickup, 0.360-in. ID x 24 in.	1	
6	983055	• WASHER, pump mount	1	
7	939613	• LOCKNUT, conduit, $\frac{3}{4}$ -in. NPS	1	

NOTE A: Do not replace with non-conductive O-rings.

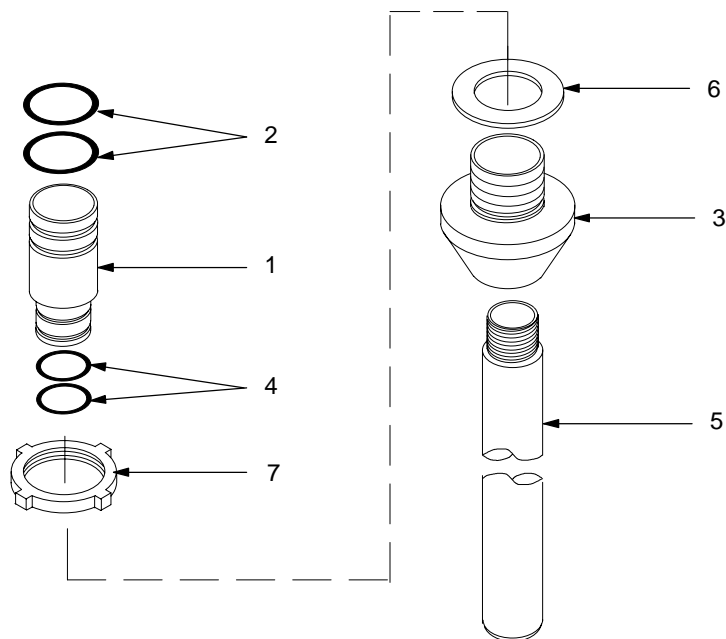


Figure 7 Pickup Tube and Pump Adapter for 80 lb Hoppers

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