

HDLV[®] 55-Gallon Powder Drum Unloader

Description

See Figure 1. The HDLV 55-gallon powder drum unloader uses a Prodigy[®] HDLV High Capacity pump to supply virgin powder to a powder coating system. The pump can be operated manually or automatically. An air-operated vibrator motor fluidizes the powder in the drum so it can be pumped easily.

This instruction sheet provides operating instructions and spare parts for the dolly and system. Refer to the following manuals for pump and pump station operation and parts information:

Manual P/N 1073134	HDLV Pump Station
Manual P/N 1092270	HDLV High Capacity Generation II Pump

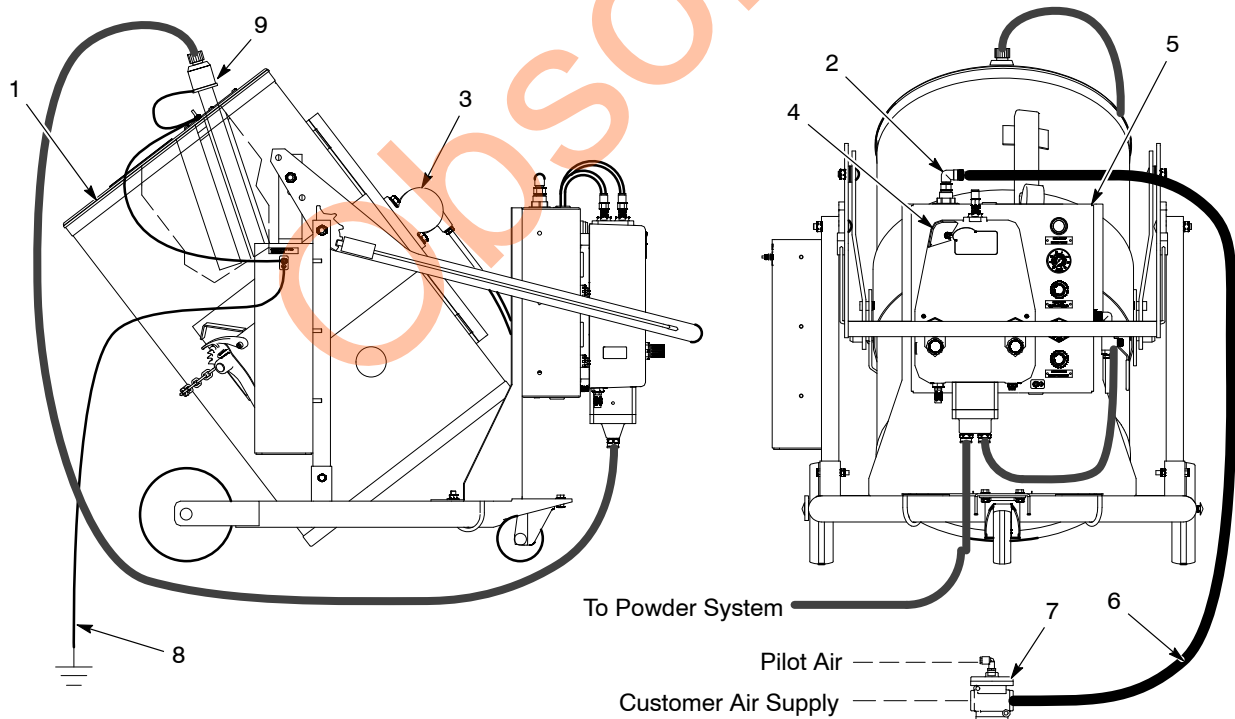


Figure 1 HDLV 55-Gallon Powder Drum Dolly Components and Connections

- | | | |
|---------------------|-----------------------|---------------------------------|
| 1. Drum cover | 4. HDLV pump | 7. Air-pilot valve |
| 2. Air supply inlet | 5. Pump control panel | 8. Dolly ground cable and clamp |
| 3. Vibrator motor | 6. Air hose | 9. Pickup tube and adapter |

Connections

See Figure 1. Make the following connections:

Automatic Operation: Install the supplied air-pilot valve (7) in the compressed air supply line to automatically start and stop the pump. Typically, a level sensor on a feed hopper opens a solenoid valve to supply pilot air to the valve.

Air Supply: Connect the supplied 4.5-meter (15-ft) air hose (6) to a supply of clean, dry compressed air. Minimum air pressure is 4.8 bar (70 psi).

Dolly Ground: Use the supplied ground cable and clamp to connect the dolly to a true earth ground. Do not operate the bulk feed system unless it is grounded.

Drum Lid: Install a drum on the dolly and secure it with the chain and ratchet assembly. Remove the shipping lid and install the drum cover in its place. Connect the drum cover ground clamp to the ground stud on the side of the dolly. Rotate the drum to the angle shown in Figure 1.

Pickup Tube and Adapter: Install a tubing adapter onto a pickup tube (9). Install the pickup tube into one of the tube guides in the cover. Connect one of the ground cables from the drum cover to the pickup tube.

Powder Tubing: 16-mm clear poly tubing is used for both suction and delivery lines. Install a short length of suction tubing from the bottom left pump fitting to the adapter on the pickup tube. Install delivery tubing from the bottom right pump fitting to a sieve inlet or hopper. Refer to the HDLV High-Capacity Pump manual for detailed instructions.

Remote Purge Control

See Figure 3. To purge the pump remotely, a customer-supplied shuttle valve can be installed into the pilot air line between the manual purge valve and the process valve as shown. Supply 4.8 bar (70 psi) air pressure to the shuttle valve from a remote source to trigger the process valve and purge the pump.

Operation

See Figures 2 and 3.

Item	Control	Function
1	Manual Purge	Press to manually purge the pump. Air at the supply pressure is delivered to the two fittings on top of the pump. Press the purge button repeatedly to pulse the purge air and clean the pump thoroughly.
2	Pump Supply Air Regulator	Regulates pump air. Normal operating pressure is 4.8 bar (70 psi).
3	Vibrator Air Control Valve	Controls air flow to the vibrator motor or to an auxiliary function.
4	Vibrator Air Regulator	Regulates air pressure to the vibrator motor or to an auxiliary function. Normal vibrator motor operation pressure is 2.75–3.45 bar (40–50 psi).
5	Pinch Valve Air Regulator	Regulates air pressure used to operate the pump pinch valves. Normally set to 2.4–2.75 bar (35–40 psi).
6	Conveying Air Regulator	Regulates positive and negative air pressure applied to the fluidizing tubes to draw powder into and push powder out of the pump. Normally set to 0.7–1.0 bar (10–15 psi).

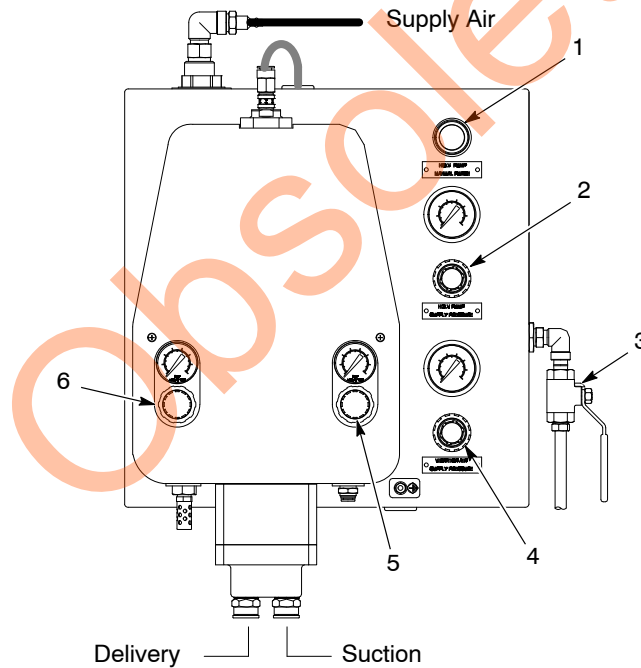


Figure 2 HDLV Pump Station and Pump Controls

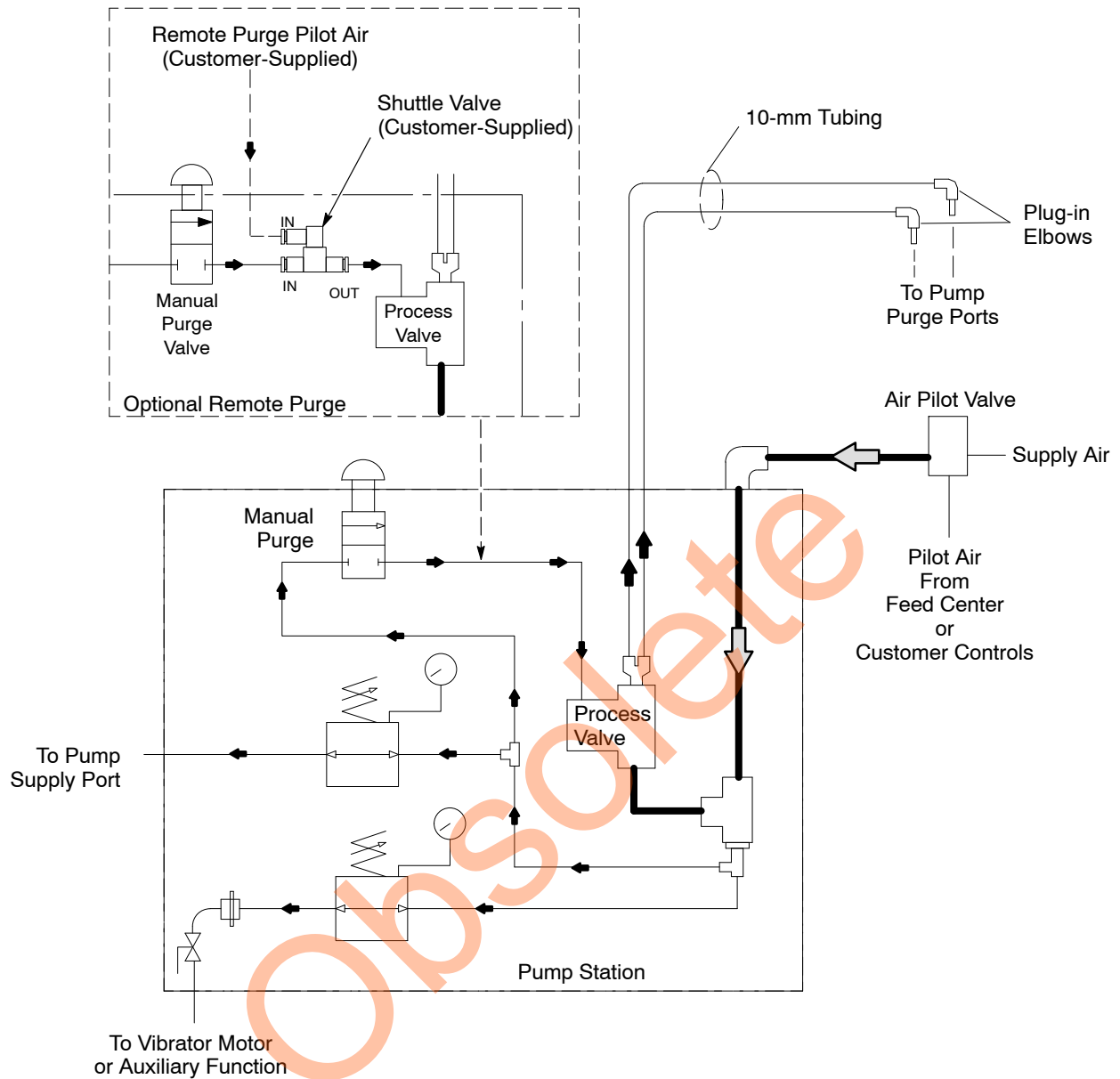


Figure 3 Pump Panel Pneumatic Diagram

Parts

Refer to the following manuals for parts and repair information for these components:

1073134
1092270

HDLV Pump Station
HDLV High Capacity Generation II Pump

Dolly and Miscellaneous Parts

Item	Part	Description	Quantity	Note
–	1067309	DOLLY, drum, powder, HDLV, 55 gallon	1	
1	901074	• VALVE, air pilot, 2 way	1	
2	971406	• ELBOW, male, 1/4-in. tube x 1/4-in. NPT, brass	1	
3	247814	• HOSE, air, 3/8-in. ID x 15-foot long	1	
4	1061690	• COVER, drum, 55 gallon, transfer pump	1	A
5	247810	• STRAP, ground	1	
6	247811	• STRAP, ground	1	
7	247812	• VIBRATOR, turbine	1	
8	981601	• SCREW, hex, 1/2-13 x 1.50, cap, zinc	2	
9	983180	• WASHER, lock, e, split, 1/2 in., steel, zinc	2	
10	984170	• NUT, hex, regular, 1/2-13, steel, zinc	2	
11	247815	• HOSE, air, 1/4-in. ID x 6-ft long	1	
12	247809	• STRAP, ground	1	
13	-----	• TRUCK, drum	1	
14	984129	• NUT, hex, machine, #10-32, brass	2	
15	983120	• WASHER, lock, e, split, #10, steel, zinc	1	
16	981156	• SCREW, pan, 10-32 x 1.00, brass	1	
17	983021	• WASHER, flat, e, 0.203 x 0.406 x 0.040 in., brass	1	
18	240674	• TAG, ground	1	
19	1067320	• PUMP STATION, drum loader, HDLV	1	C
20	1095777	• TUBE, feed, drum truck	1	
21	1068408	• DISCONNECTOR, high-cap HDLV pump, w/mounting O-ring	1	
NS	900740	• TUBING, polyurethane, 10/6.5–7 mm	AR	B
NS	1052893	• ELBOW, plugin, 10 mm tube x 10 mm stem, plastic	2	
NS	1063654	• TUBING, polyethylene, 16 mm OD	1	B
NOTE A: Refer to <i>Drum Cover</i> on page 6.				
B: Order in increments of one foot.				
C: Includes HDLV pump. Refer to manuals listed above for parts information.				
NS: Not Shown				

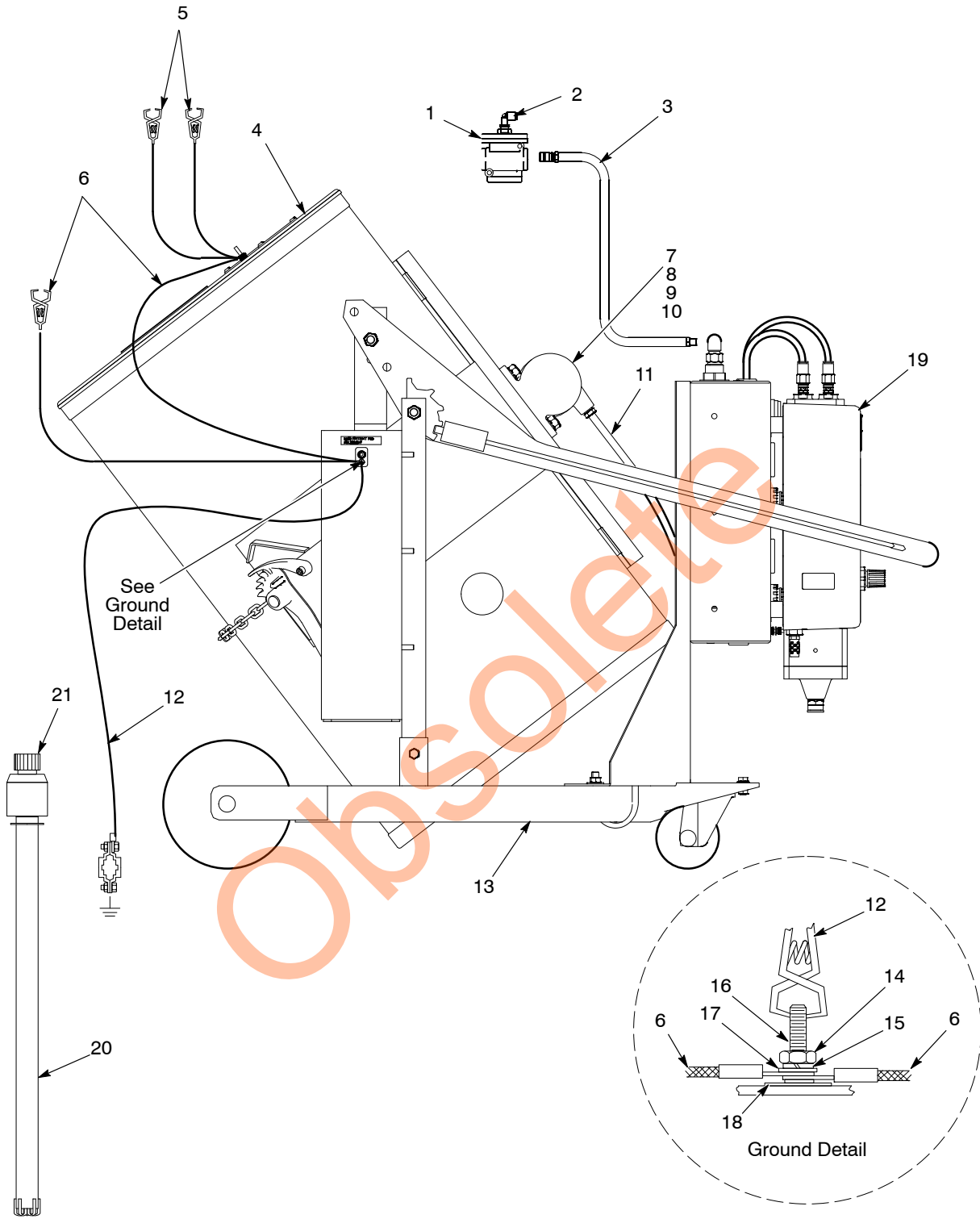


Figure 4 Parts

Drum Cover

See Figure 5.

Item	Part	Description	Quantity	Note
—	1067575	KIT, cover, drum, 55 gallon, transfer pump	1	
1	-----	• COVER, drum, bulk feed	1	
2	242654	• GASKET, cabinet	1	
3	-----	• GUIDE, transfer pump, bulk feed	1	
4	981995	• SCREW, flat, 10-32 x 0.50 in., steel, zinc	7	
5	983120	• WASHER, lock, e, split, #10, steel, zinc	9	
6	984120	• NUT, hex, machine, #10-32, steel, zinc	7	
7	240674	• TAG, ground	1	
8	981156	• SCREW, pan, 10-32 x 1.00 in., slotted, brass	1	
9	984129	• NUT, hex, machine, #10-32, brass	2	
10	983021	• WASHER, flat, e, 0.203 x 0.406 x 0.04 in., brass	2	

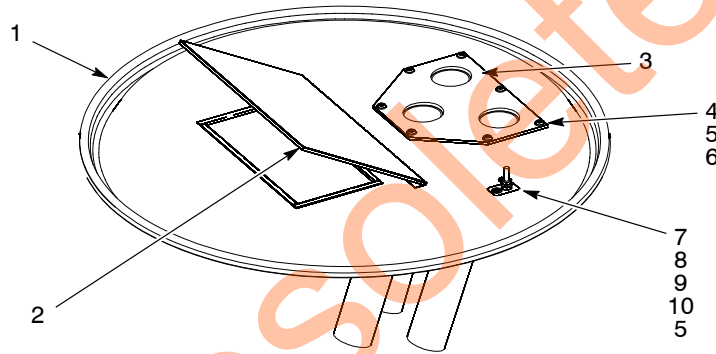
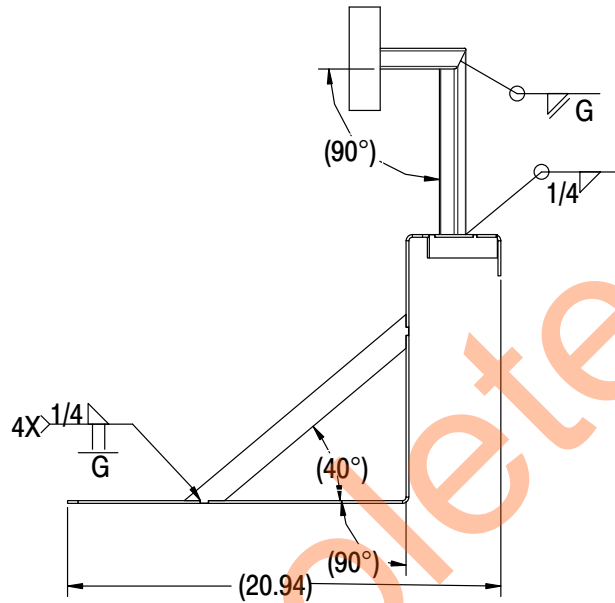


Figure 5 Drum Covers

Options

See Figure 6. The box adapter is a conversion bracket to accommodate smaller powder boxes for the HDLV 55-gallon powder drum unloader.

Part	Description	Note
1606577	BOX ADAPTER BRACKET, 55-gal drum unloader	



1606577

Figure 6 Options

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