


# Rhino<sup>®</sup> 125-/160-mm Pneumatic Container Level Indicators

## Safety Labels

Table 1 lists the safety labels on this equipment. The safety labels are provided to help you operate and maintain this equipment safely. See Figure 1 for the location of the safety labels.

**NOTE:** Some components not shown for clarity.

Table 1 Safety Labels

Item	Description	Description
1		<b>WARNING:</b> Pinch point

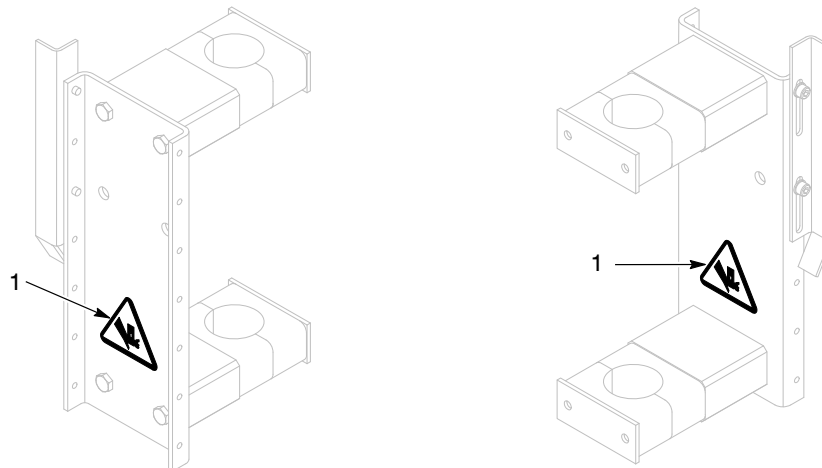


Figure 1 Safety Labels

## Description

See Figure 2. The pneumatic container level indicators use pneumatic limit switches to monitor the distance between the bottom of the follower plate and the base surface of the bulk unloader frame.

Trip plates on the bulk unloaders actuate the rollers attached to each limit switch. The trip plates are factory set and can be adjusted if necessary.

There are four drum/pail level indicators available:

- Drum Empty
- Pail Empty
- Drum Low and Empty
- Pail Low and Empty

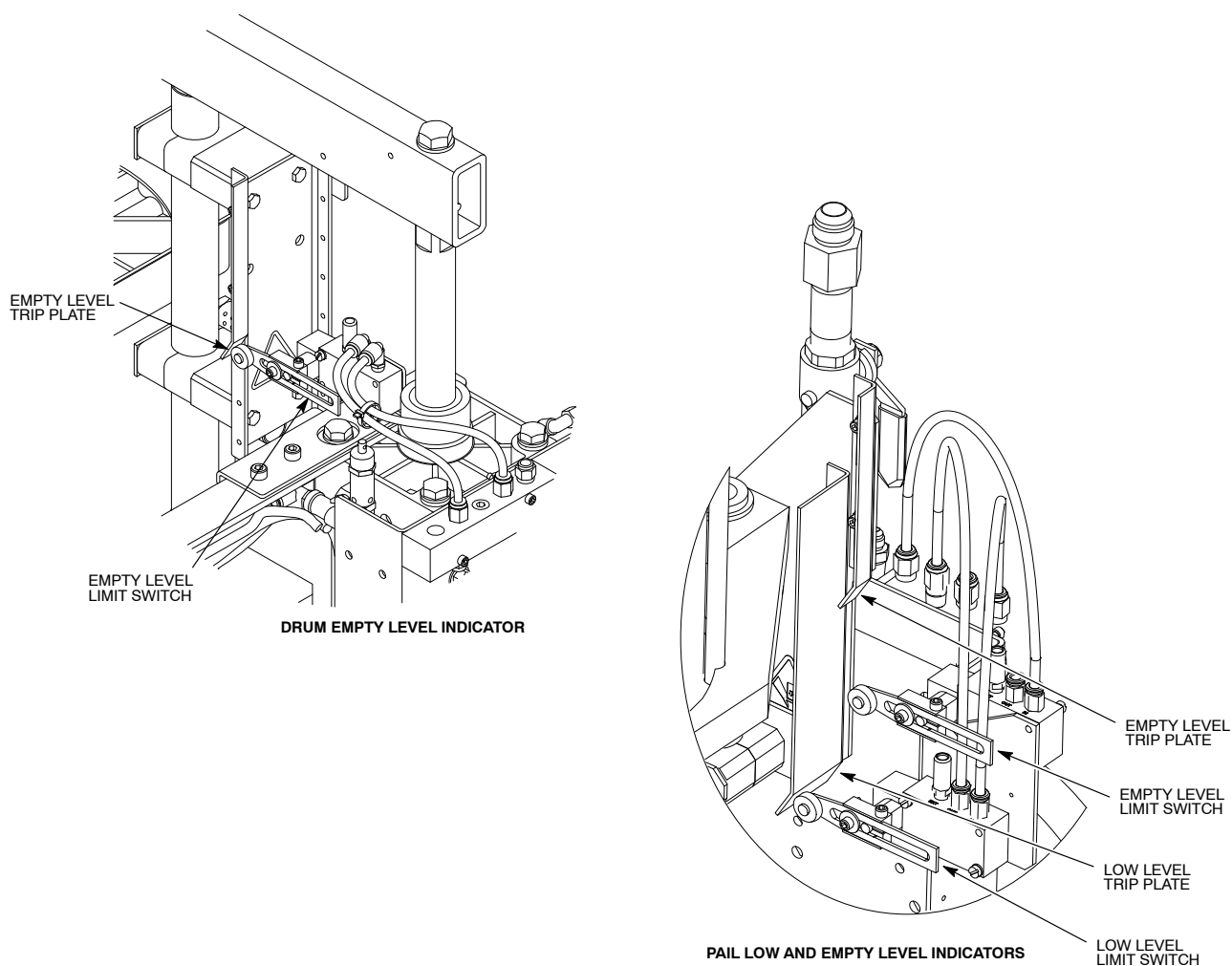


Figure 2 Typical Rhino SD2/XD2 Pneumatic Container Level Indicators

## Set the Low and Empty Level Trip Points

Refer to Table 2. The low and empty level trip points are factory set. Perform the *Change the Factory Settings* procedure to change the factory settings. Perform the *Reset the Factory Settings* procedure to reset the low and empty level trip points back to the factory settings.



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



**CAUTION:** To prevent damage to equipment, personnel performing these procedures must know how to safely operate the elevator control valve on the Rhino SD2/XD2 bulk unloader.

**NOTE:** Read and understand these procedures before setting the trip points. Contact a local Nordson representative regarding these procedures if necessary.

Table 2 Low and Empty Trip Point Factory Settings

Trip Point	Setting
Low	Pail Follower Plate: 4.5 in. between the bottom of the follower plate and the base surface on the frame  Drum Follower Plate: 7.5 in. between the bottom of the follower plate and the base surface on the frame
Empty	1.5 in. between the bottom of the follower plate and the base surface of the frame
<b>NOTE:</b> The base surface for 30- and 55-gallon drums is the top of the rails on the frame.	

## ***Change the Factory Settings***

**NOTE:** The bottom lip on standard drums/pails can vary and must be taken into consideration when making adjustments to the low and empty level limit switches.



**CAUTION:** If using spacers to adjust the empty level trip point on 30- and 55-gallon systems, remove the frame hold-down shoes to prevent damage to the follower plate seals.

1. Refer to Table 2 and see Figure 3. If applicable, remove the drum guides (1) from the frame (2).
2. Set spacers onto the base surface of the frame as shown in Figures 4 and 5. Using the Rhino SD2/XD2 bulk unloader elevator control valve, lower the follower plate onto the spacers.
3. Loosen the screws (4 or 9) securing the trip plate (3 or 10). Move the trip plate until the roller arm (7 or 8) makes contact with the trip plate and actuates the limit switch (5 or 6). Tighten the screws securely.
4. Repeat steps 2 and 3 for the remaining trip point if necessary.
5. If spacers were used, raise the follower plate and remove them.
6. Using the Rhino SD2/XD2 bulk unloader elevator control valve, raise and lower the follower plate to test the low and empty trip points.
7. If removed, install the drum guides (1) onto the frame (2).

## ***Reset the Factory Settings***

**NOTE:** See Figures 4 and 5. Have spacers of the proper height on hand before performing this procedure.



**CAUTION:** Remove the frame hold-down shoes on the 30- and 55-gallon systems to prevent damage to the follower plate seals.

1. See Figure 3. If applicable, remove the drum guides (1) from the frame (2).
2. Set the applicable spacers onto the base surface of the frame as shown in Figures 4 and 5. Using the Rhino SD2/XD2 bulk unloader elevator control valve, lower the follower plate onto the spacers.
3. Loosen the screws (4 or 9) securing the trip plate (3 or 10). Move the trip plate until the roller arm (7 or 8) makes contact with the trip plate and actuates the limit switch (5 or 6). Tighten the screws securely.
4. Raise the follower plate. Remove the spacers from the surface base of the frame.
5. Repeat steps 2 through 4 for the remaining trip plate if necessary.
6. Using the Rhino SD2/XD2 bulk unloader elevator control valve, raise and lower the follower plate to test the low and empty trip points.
7. If removed, install the drum guides (1) onto the frame (2).

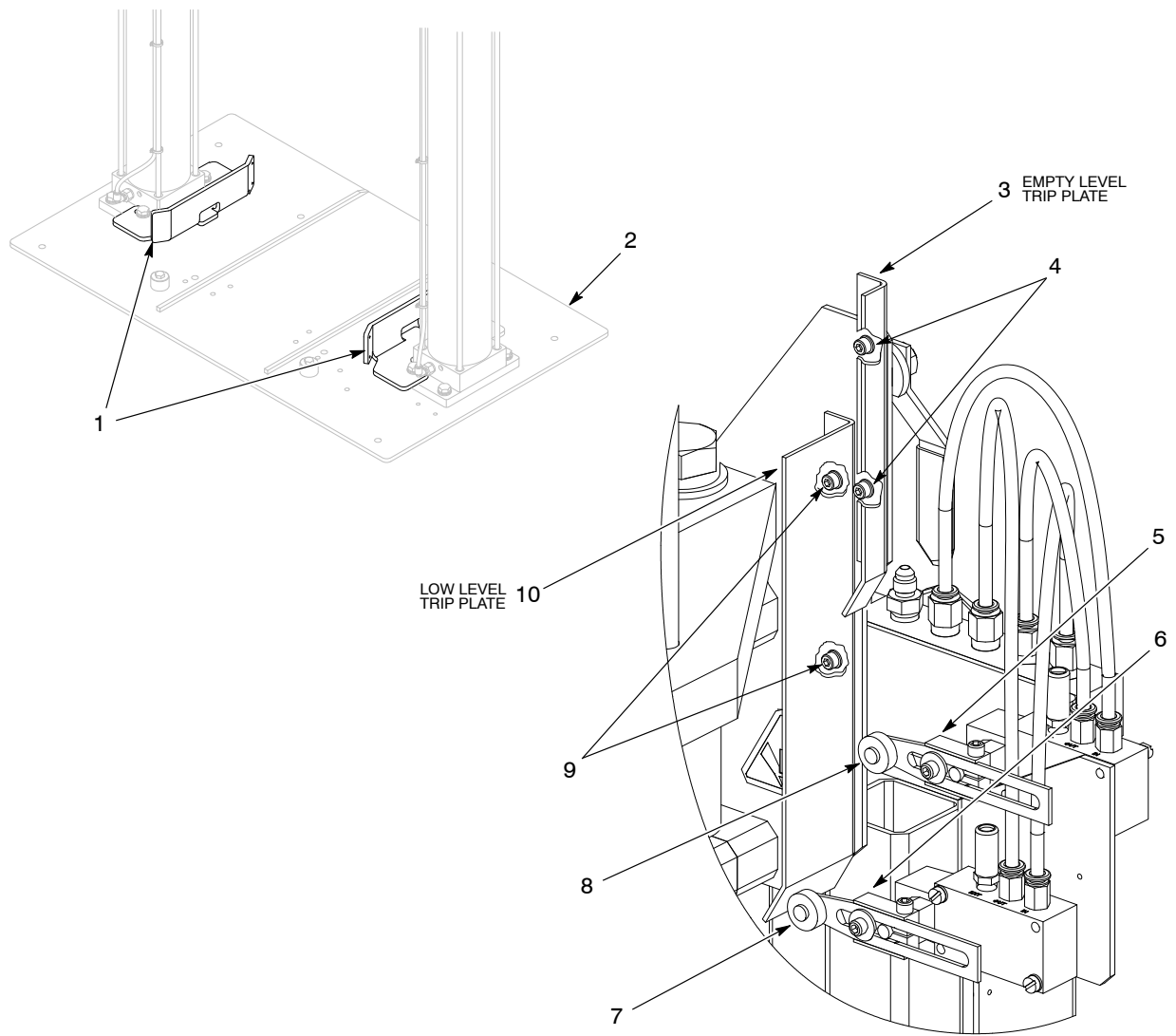


Figure 3 Typical Trip Plate Adjustment (*Low and Empty Pail Level Indicators Shown*)

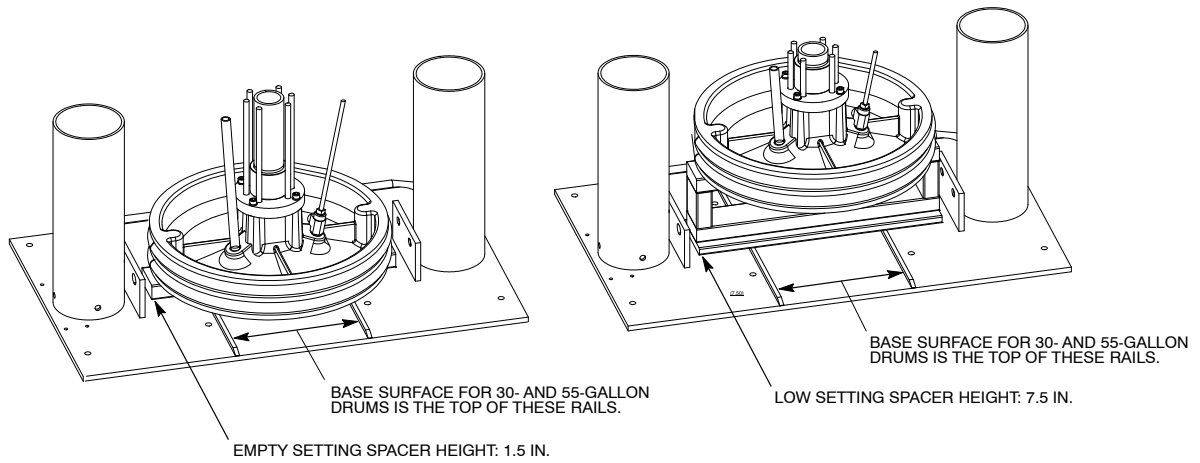
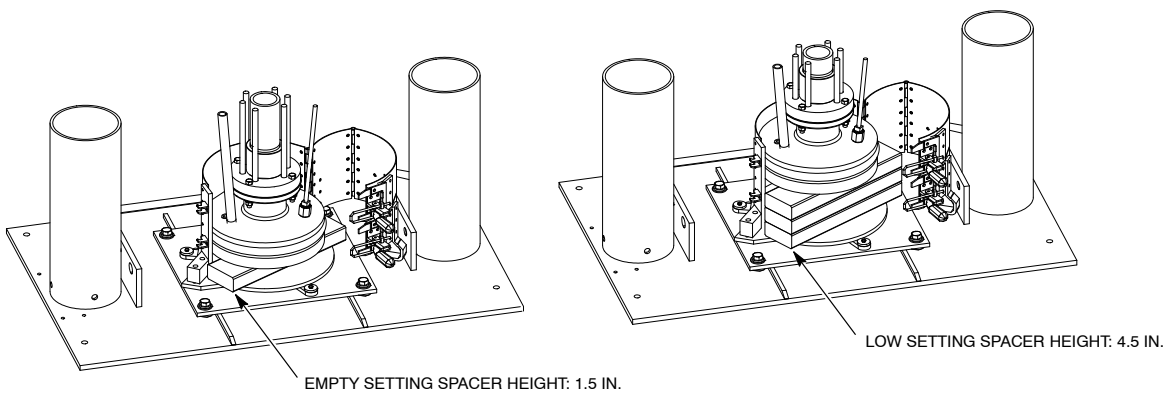
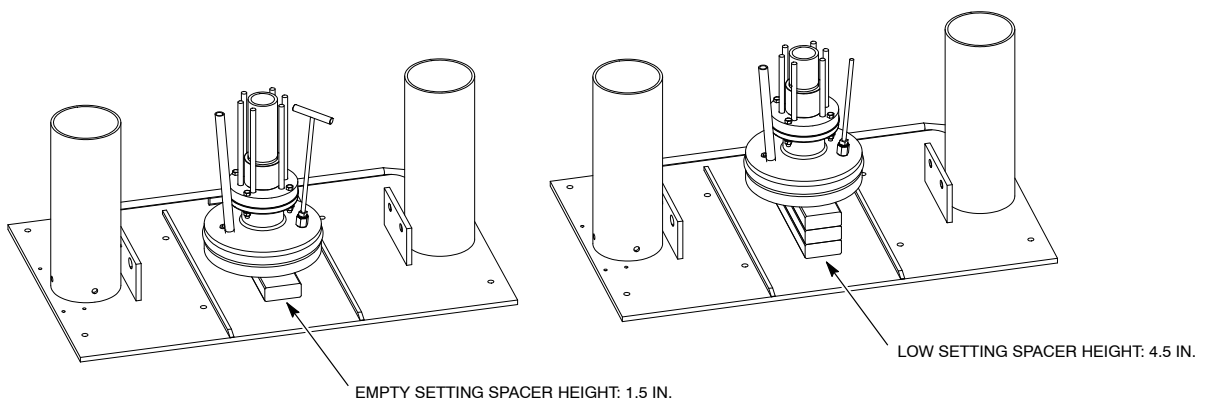
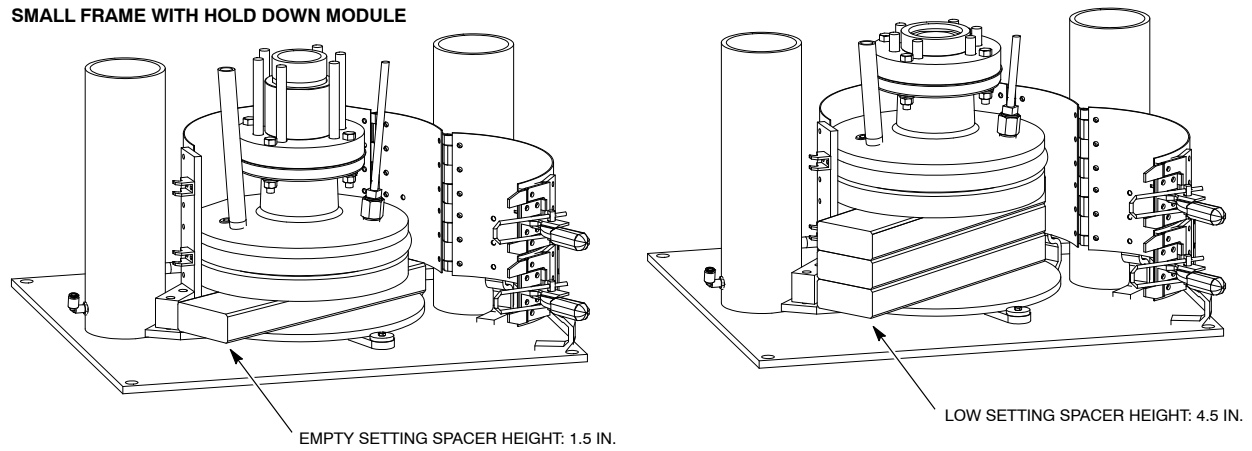
**LARGE FRAME WITH DRUM FOLLOWER PLATE****LARGE FRAME WITH PAIL FOLLOWER PLATE AND HOLD DOWN MODULE****LARGE FRAME WITH PAIL FOLLOWER PLATE**

Figure 4 Large Frame Spacer Height for Factory Settings

**SMALL FRAME WITH HOLD DOWN MODULE**



**SMALL FRAME WITHOUT HOLD DOWN MODULE**

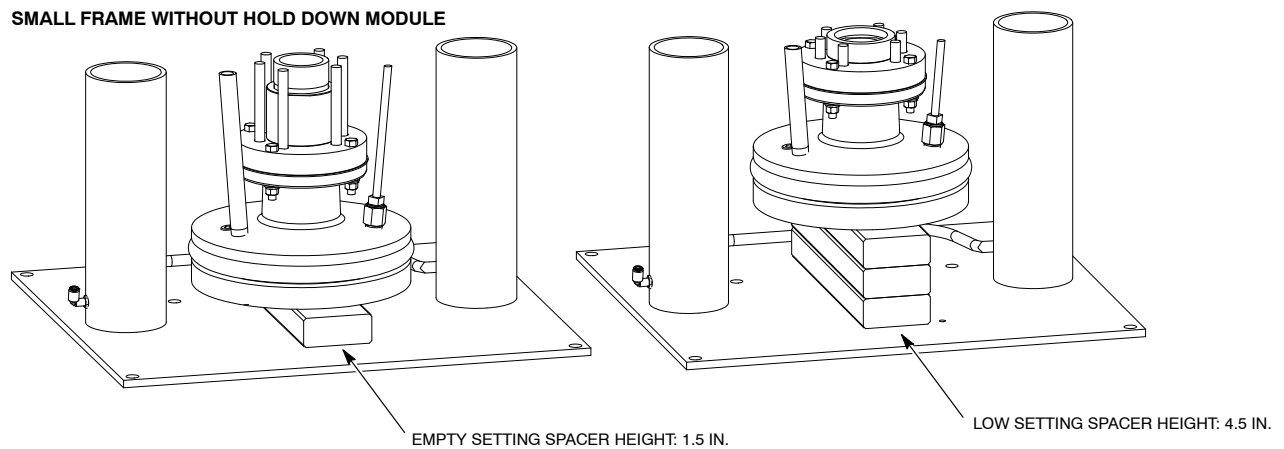


Figure 5 Small Frame Spacer Height for Factory Settings





Item	Part	Description	Quantity	Note
—	-----	MODULE, empty, pneumatic, hybrid, SD3	1	
1	1039075	• BRACKET, drum level, trip mount, Rhino SD	1	
2	1039069	• BRACKET, drum level empty trip, Rhino SD	1	
3	-----	• SCREW, socket, M5 x10, black, class 12.9 per ISO 4762	2	
4	-----	• WASHER, flat, M, regular, M5, steel, zinc, per ISO 7089	2	
5	282785	• CLAMPS, 1-½ ID	2	
6	-----	• ELBOW, male, ¼ tube x ⅛ NPT	2	
7	-----	• SCREW, drive, round, 4 x 0.250, zinc	2	
8	1036130	• SWITCH, limit, pneumatic, 3-way, normally closed	1	
9	-----	• WASHER, lock, E, split, #10, steel, nickel	2	
10	-----	• SCREW, 10-32 x 1.250, steel, zinc, grade 8 per ISO 4762	2	
11	-----	• SCREW, socket, M8 x 16, black, class 12.9 per ISO 4762	2	
12	1606332	• TUBING, ¼ OD, nylon, flame resistant, blue	4 ft	
AR: As Required				
NS: Not Shown				

## Consumables

Adhesives to use where instructed on the pneumatic container level indicators.

Item	Description
900481	ADHESIVE, pipe/thread/hydraulic sealant (PST)
900464	ADHESIVE, Loctite 242™, blue, removable, 50 mL

Issued 08/19

Original copyright date 2019. Nordson, the Nordson logo, and Rhino are registered trademarks of Nordson Corporation.  
All other trademarks are the property of their respective owner.