



## Discharge Elbow Kit Hypro Pumps

Used with:

- Model year 2006 and earlier pumps

## General Information

These instructions explain how to install the Discharge Elbow Kit. This kit replaces both original OEM single-part elbows, and current 3-part elbows. The 3-part assembly provides enhanced resistance to caustic chemicals.

These instructions apply to:

Option Package	Part Number
HYPRO PUMP DISCHARGE ELBOW KIT	407-188A

These instructions presume that the elbow to be replaced is the older single-part style.

The existing flange or elbow may be attached to the pump with removable nuts on threaded studs, or removable bolts and nuts. These instructions presume nuts on studs.

**Note:** Be careful not to drop or misplace the fasteners. They are likely in metric sizing, and due to supplier component changes over time, this manual is unable to precisely specify their call sizes.

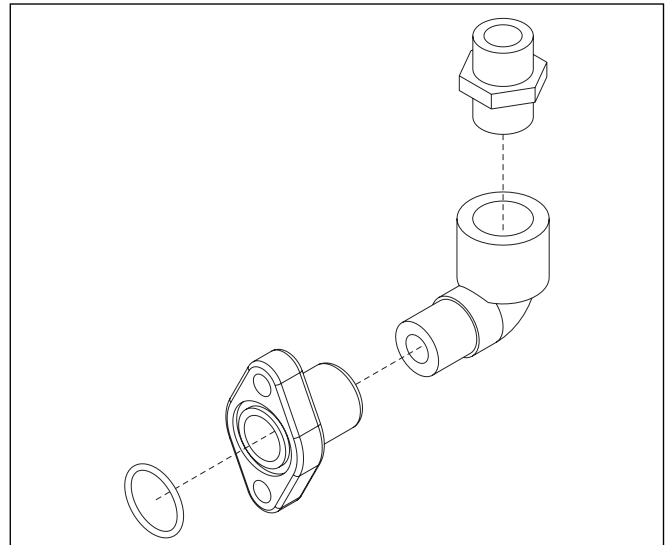


Figure 1  
Update Kit Components

26103

## Before You Start

Each kit converts one pump.

For each kit, inventory the contents per the “**Parts List**” on page 4.

Review the instructions, to make sure the steps are understood and what tools are expected.

Have the following items at hand:

- Appropriate safety equipment, such as chemical gloves, for working with the fertilizer chemicals most recently pumped.
- Suitable location and equipment for flushing the fertilizer line at the pump.
- Original or updated Parts Manual for your implement
- Basic hand tools
- Pipe thread sealant suitable for polypropylene, such as Rectorseal or Teflon® PTFE tape.

## Notations and Conventions

- ① callouts identify components in the currently referenced Figure or Figures
- ⑪ to ⑮ callouts reference new parts from the list on page 4
- ⑤① to ⑤⑤ callouts reference existing parts. The descriptions match those in your Parts manual.

## Installation

### Flush The Pump

1. Move the implement to a location suitable for flushing the fertilizer system, such as the field most recently fertilized.
2. Refer to the implement Operator's manual, and flush the fertilizer system with water (or if freezing weather is possible before next use, with RV anti-freeze).
3. If necessary, move the implement again, to a dry well-lighted location suitable for disassembly.
4. Raise and unfold the implement. Lower it, or if you prefer to leave it raised, install lift cylinder locks.
5. Secure the tractor.

### Disconnect Boom Line

#### CAUTION

*Because the discharge line usually exits upward from the pump, it is almost certain to contain a significant amount of fluid. Wear appropriate protective gear and ensure that the resulting spillage is contained, such as with a bucket under the pump.*

*Refer to Figure 2*

6. Loosen the:
  - ⑤② CLAMP WRM DRV #16 SS (.68-1.5)
 and disconnect the:
  - ⑤③ HOSE 1 ID 200PSI EPDM.
 Save these components.
7. Loosen the adaptor stack ① attached to the discharge elbow ⑤①.  
Remove and save it the adaptor stack.  
It is not necessary to further disassemble the stack.

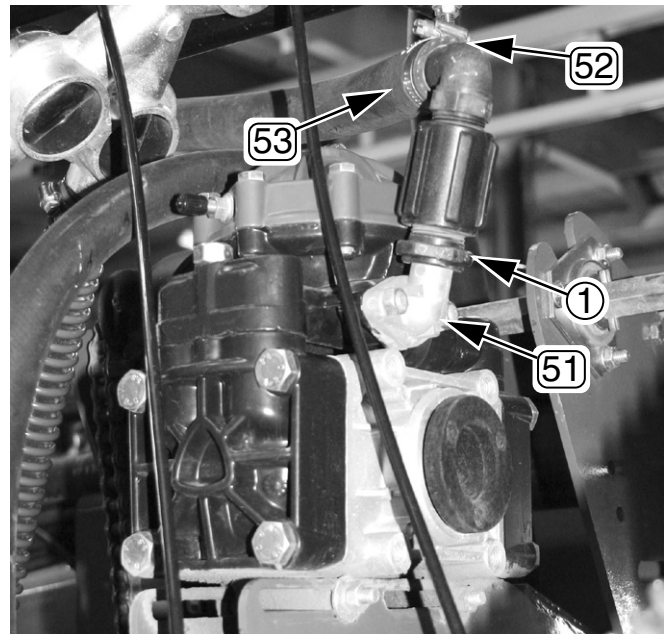


Figure 2  
Disconnect Discharge Line

26104

## Remove Old Elbow

Refer to Figure 3

8. Remove and save two:  
 (54) HYPRO NUT
9. Remove the old elbow:  
 (51) HYPRO FLANGE  
 The flange and O-ring are not re-used.
10. If the existing O-ring (55) does not come off with the old elbow, remove it from the face of the pump. The new elbow uses a different size O-ring.
11. Rinse any spilled fluids from the pump, pump fittings, implement frame and row units beneath.
12. Clean the face of the discharge port (1) on the pump.

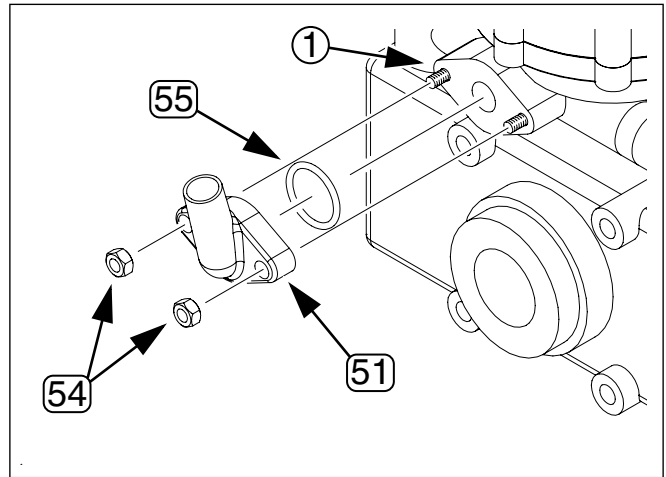


Figure 3  
Remove Old Elbow

26030

## Assemble New Fittings

Refer to Figure 4

Assemble the new fittings prior to mounting on pump, so that you have maximum flexibility in matching the original elbow orientation.

13. Select one each new:  
 (12) 407-173D STAINLESS FITTING  
 (13) 816-045C O-RING 15/16 I.D. X 1-1/8 O.D.  
 (14) 830-041C AD 1/2MNPT POLYPROP  
 (15) 830-048C EL 1/2MNPT X 1/2FNPT POLYP
14. Apply pipe thread sealant to threads and assemble fittings (12), (14) and (15) as shown. Do not over-tighten.
15. Insert O-ring (13) in face of flange (12).  
 Do not use any sealant on O-ring.

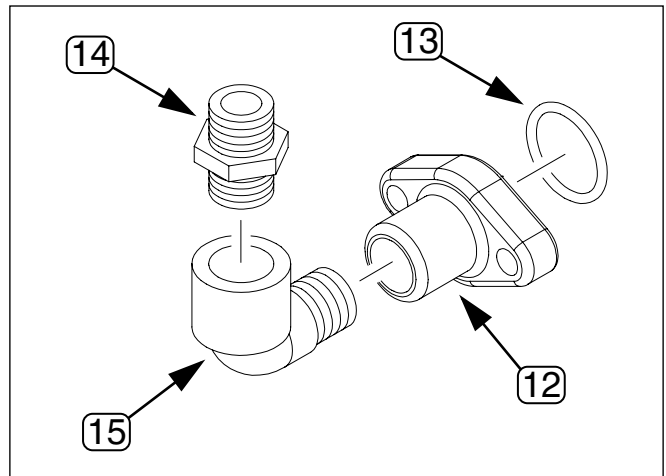


Figure 4  
Assemble New Flange

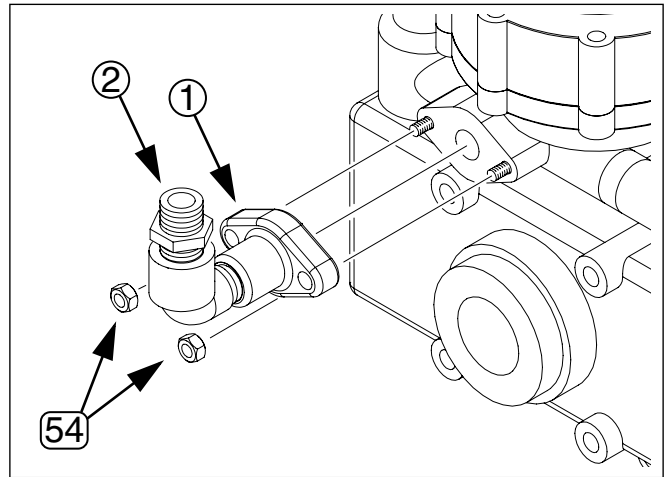
26105

## 4 | Discharge Elbow Kit

**Mount Fittings on Pump**

Refer to Figure 5

16. Using the saved nuts (54), attach the new fittings (1) to the pump. Orient the elbow to point upward.
17. Apply pipe sealant to the adaptor threads, and re-attach the adaptor/fitting stack removed at step 7.
18. Place the hose removed at step 6 over the top fitting and tighten the saved clamp.

Figure 5  
Mount Fittings

26106

**Reference Information****Abbreviations**

<b>AD</b>	Adaptor
<b>EL</b>	Elbow
<b>ID</b>	Inside Diameter
<b>NPT</b>	National Pipe Thread (Male/Female)
<b>OD</b>	Outside Diameter
<b>WRM DRV</b>	Worm Drive

**Torque Values**

Fastener/Fitting	N-m	Ft-Lbs
M5x0.8 Class 8.8	6	5
M6x1 Class 8.8	11	8
M8x1.25 Class 8.8	26	19
M8x1 Class 8.8	28	21

**Parts List****New Parts Included in the 407-188A Discharge Elbow Kit:**

Callout	Quantity	Part No.	Part Description
(11)	1	407-189M	This manual
(12)	1	407-173D	STAINLESS FITTING
(13)	1	816-045C	O-RING 15/16 I.D. X 1-1/8 O.D.
(14)	1	830-041C	AD 1/2MNPT POLYPROP
(15)	1	830-048C	EL 1/2MNPT X 1/2FNPT POLYP

**Great Plains Manufacturing, Inc.**Corporate Office: PO Box 5060  
Salina, KS 67402-5060 USA