

**ACCELERATOR  
8510(99)  
PARTS, OPERATOR'S &  
SERVICE MANUAL**

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## **Warranty**

HIGHLINE Mfg. Inc. warrants its products to the original owner for a period of two years from date of purchase, subject to the following provisions:

- 1st year      Warranty covers Parts & Labor
- 2nd year      Warranty covers Parts Only
- Warranty registration must be submitted to HIGHLINE Mfg. Inc. within 30 days of purchase.
- Highline Mfg Inc. is not liable for any damages to this equipment resulting from use that is inconsistent with this manual and such damages are not covered under this warranty.
- Warranty will be void, and Highline Mfg. Inc. will not be liable in any way, if the equipment is used for any purpose other than the intended agricultural application.
- All warranty service must be handled through an authorized HIGHLINE Mfg. Inc. dealer. At the time of requesting warranty service, the purchaser must present evidence of the delivery date of the equipment. The purchaser shall pay any premium for requested overtime, any charge for making service calls, and any charges incurred in transporting the equipment to and from the location of the warranty service. Freight costs associated with warranty repairs are not reimbursable.
- Any labor subject to warranty must be authorized by a HIGHLINE Mfg. Inc. representative before work is started.
- Warranty will be void if any component of this equipment is altered or modified in any way, unless written permission is given by HIGHLINE Mfg. Inc.
- Equipment used for rental, custom work, industrial or construction use will not be warranted by Highline Mfg. Inc.
- HIGHLINE Mfg. Inc. will not assume any responsibility or liability for any damage occurring to equipment to which HIGHLINE Mfg. Inc. equipment may be attached.
- Warranty terms and conditions are subject to provincial and state legislation.
- Warranty is limited to the purchase price paid for the equipment, up to the manufacturers suggested retail price. ***ANY WARRANTY LIABILITY RESULTING FROM THE WORKMANSHIP OF THIS EQUIPMENT*** is limited to the purchase price paid. Highline Mfg. Inc. assumes no responsibility whatsoever for warranty liability resulting from the misuse or improper operation and maintenance of this equipment.

## **President's Message**

Thank you for your recent purchase of the Accelerator, the fastest 10" conveyor. The Accelerator is the only conveyor to blend gentle handling with auger-like speed. With proper preventative maintenance, the Accelerator will provide years of outstanding performance.

This operator manual has been prepared to provide information necessary for the safe and efficient operation of your Accelerator. In it you will find safety procedures, maintenance routines and detailed parts diagrams.

In order to maintain high standards, changes or improvements are made from time to time. **Highline Mfg. Inc.** reserves the right to make those changes and add improvements when practical to do so, without incurring any obligation to make such changes and improvements on machines sold previously.

Should the need arise, this manual will assist you in acquiring replacement parts. If your dealer does not have the parts you require in stock, the dealer will order them for you. If you find that you require information not covered in this manual, feel free to consult your local dealer or **Highline Mfg. Inc.**

**Highline Mfg. Inc.** would like to again thank you for trusting your grain handling needs to the Accelerator.

Raymond Bussiere  
President

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Phone: 1-800-665-2010, (306) 258-2233, Fax (306) 258-2010

## **Safety Precautions**

|                                                                    |
|--------------------------------------------------------------------|
| <b>CAREFUL OPERATION IS THE BEST INSURANCE AGAINST AN ACCIDENT</b> |
|--------------------------------------------------------------------|

- Always disengage PTO and hydraulic motors before dismounting from the tractor.
- Keep yourself and others clear of rotating parts to prevent injury.
- Exercise extreme caution while loading or unloading grain.
- Never attempt to manually remove debris while PTO is engaged. Disengage PTO before unplugging or adjusting the Accelerator.
- Relieve pressure in hydraulic lines before disconnecting lines or performing maintenance on the hydraulic system.
- Keep away from discharge and intake area while moving material.
- Know the controls and what they do.
- Check machine to ensure nothing restricts moving or rotating parts.
- Ensure PTO is disengaged before starting tractor.
- Lower the conveyor to the ground and place on frame support after operation.
- Do not transport Accelerator on highway with PTO extension shaft on machine or with any material in the conveyor.
- Do not operate without safety shields and guards in place.
- Do not stand on any guards.
- Lower Conveyor when transporting to prevent contact with overhead power lines.
- Ensure the Accelerator Hitch is in transport position before transporting unit.
- Make sure ball valve is closed after raising the Accelerator and open before lowering.

## **1.0 Pre-delivery & Installation Instructions**

### **1.1 General Description of Accelerator 8510(99)**

The Accelerator 8510(99) is approximately 11'10" wide and approximately 13'6" high in transport position. The belt conveyor is driven by the tractor PTO drive. A tractor with a minimum of 80 hp is required. A total of 3 sets of hydraulic lines are required to operate a fully assembled conveyor. The first set of hydraulic lines is required for engaging the orbit motor that operates the auger in the intake. The second set is for the hydraulic cylinder that raises and lowers the conveyor for accessing bins. The third set is for operating the hitch cylinder for raising and lowering the unit.

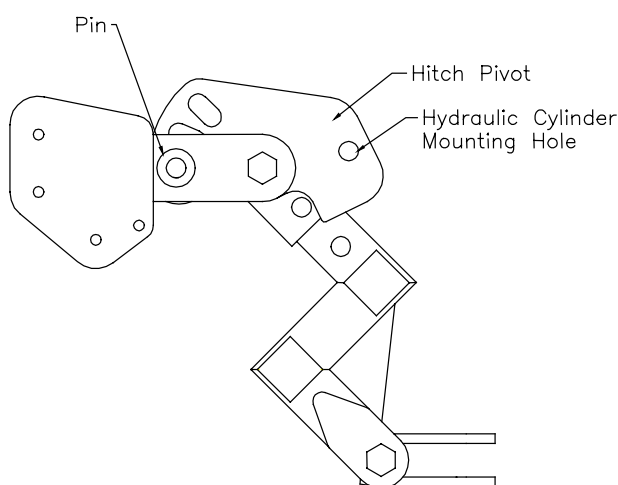


## 2.0 Operating Instructions

### 2.1 Transporting Instructions

To ensure safe transport of the Accelerator, first support the Conveyor with the manual jack provided. Remove the pin that connects the hitch cylinder to the hitch pivot. Remove the pin that connects the hitch pivot to the hitch mount. Rotate the hitch pivot and replace pin in the bottom slot as shown below. Ensure that the two safety chains are securely fastened to both the Accelerator and the vehicle being used to transport it.

**Figure 2a Transporting Setup**



### 2.2 Pre-Operation Instructions

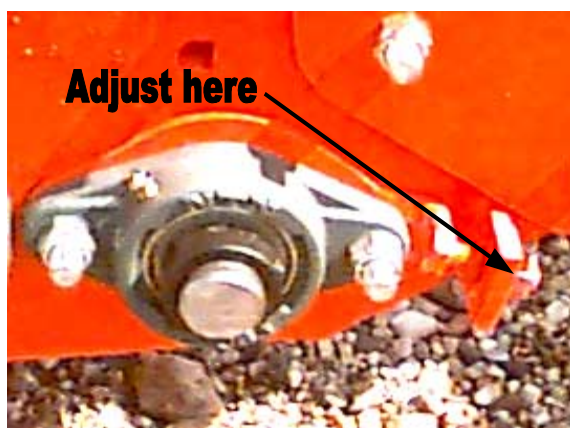
Prior to operating the Accelerator with material, operate it empty to familiarize yourself with the hydraulic controls and ensure the conveyor belt is centered (Figure 2b) when PTO is engaged. If the belt is not centered, first ensure that the belt tension is uniform from side to side (see part 2 below). If the belt is still not centered make the adjustments as described below to center it.

1. Belt Alignment - There are two locations where adjustment may be required. These adjustments occur at the intake and discharge main rollers (Figure 2c and 2d). To begin, loosen the two  $\frac{3}{4}$ " nuts on the intake roller bearing flange (Figure 2c). If the belt is running off to the left (Figure 2b), tighten the bolt. If the belt is running off to the right, loosen the bolt. When the belt is running straight, retighten the flange nuts. If the intake roller does not offer sufficient adjustment to align the belt, further adjustments can be made at the discharge roller (Figure 2d) following the same procedure outlined above.

Note: When belt is in operation some travel may occur in a side to side fashion on the rollers. The accepted tolerance is approximately  $\frac{3}{4}$ " overall.



**Figure 2b Belt Centering**



**Figure 2c Intake Adjustment**

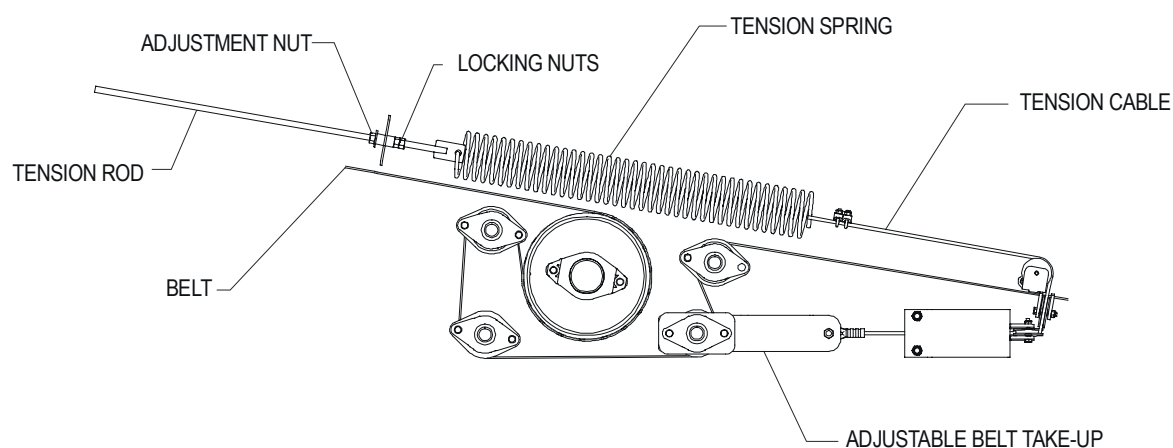


**Figure 2d Discharge Adjustment**

2. Belt tension is set at the factory and should not need adjustment. If however after running the conveyor, it is found to be slipping under some conditions tension can be increased by following the procedure set out below.

To start, turn back the two ½" locking nuts (1" at a time) on the tensioning rod located on the inside of the tensioner box. The outside ½" adjustment nut can then be tightened down to the inside nuts. Test the conveyor for belt slippage and repeat this procedure until the belt does not slip.

If the belt still slips and there is no adjustment left on the tensioning rod, a section of the belt can be removed and the tensioning system reset. This will need to be done by a qualified technician.



**Figure 2e Belt Tension Adjustment**

### 2.3 Field Instructions

For proper operation of the Accelerator, raise the conveyor to the desired location. Engage both the PTO and the hydraulics to turn the auger; use the flow control valve (Figure 2f) to set the speed of the auger (to increase the speed turn the valve clockwise, to decrease the speed turn the valve counter-clockwise). Begin material flow into the intake of the conveyor. As you increase the speed of the conveyor and the amount of material flowing, adjust the speed of the auger to allow the conveyor to run full and at the same time minimize spillage. Continually watch that material is flowing and that there is no slippage of the conveyor belt.



**Figure 2f Flow Control Valve**

### **2.4 General Operating Instructions**

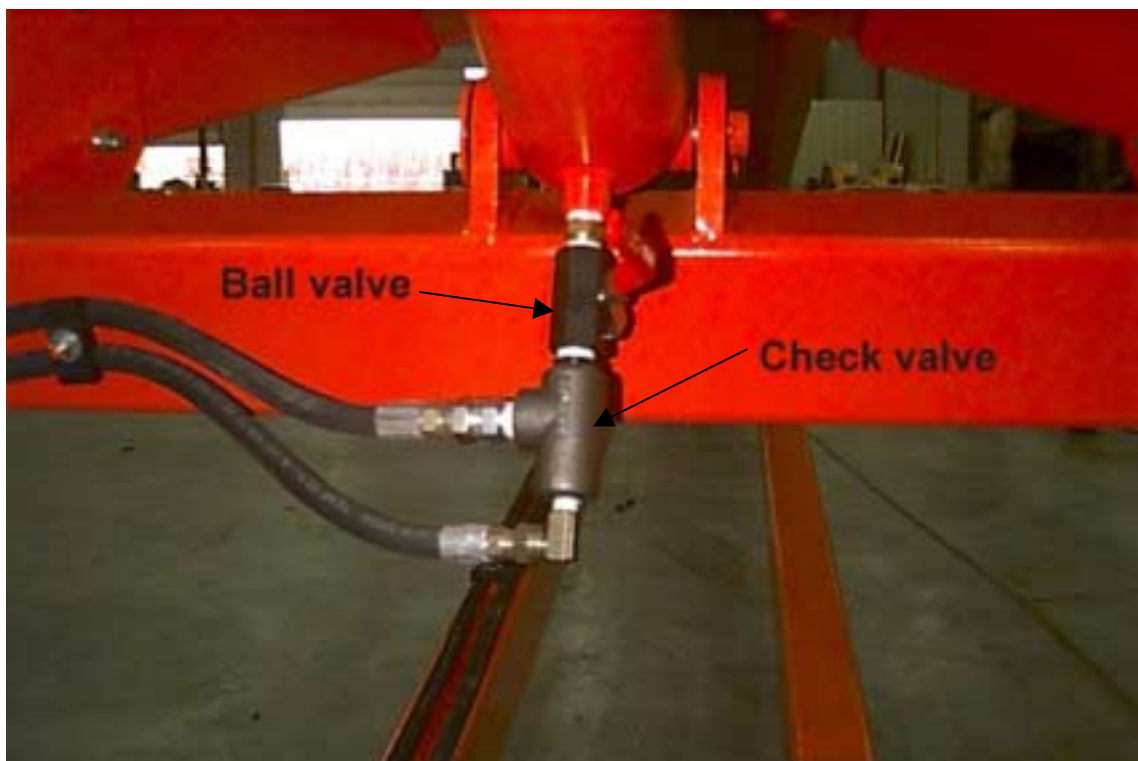
1. Watch the conveyor belt to ensure that it is centered on all rollers. If it is not centered, refer to section 2.2 Pre-Operation Instructions for instructions on centering the belt.
2. The main roller shaft (PTO output) should run between 500 and 600 RPM.
  - Tractor RPM should run at approximately 1000 – 1200 RPM
  - **Do Not Exceed 600 RPM PTO speed**
3. At no time should the belt be allowed to slip on the main drive roller. If slippage occurs, **IMMEDIATELY** shut down the conveyor, determine where the problem is, and fix the problem.
4. If the Accelerator belt slips with material in the tube, stop the machine, tighten the main belt tension adjustments bolts (Figure 2e) evenly, and slowly engage the PTO.
5. If the Accelerator belt stops due to over-filling of a bin, clear the material from the discharge and restart the conveyor slowly, making sure that the belt does not slip on the drive roller.

#### **IMPORTANT!**

When working around the Intake and Accelerator auger, make sure that the tractor is shut off and emergency brake is applied.

6. Never transport the conveyor with material in the tube.
7. **Watch for overhead lines. Always lower conveyor when moving. Maintain a minimum clearance of 10' between conveyor and overhead lines at all times.**

8. Place the spout of the conveyor 3" above the bin opening, never rest the spout on the bin opening. A check valve is used on the cylinder to prevent the cylinder from compressing if a hose fails (Figure 2g). A ball valve is added as well, to prevent the oil flow from lowering the Accelerator onto the bin. Always engage the ball valve if the Accelerator hydraulics have to be removed from the tractor.



**Figure 2g Cylinder Valves**

9. Stand clear of conveyor when raising or lowering.
10. Do not spill or allow oil to come in contact with the belt.
11. Do not run conveyor without all shields in place.
12. Keep all bolts, nuts, bearing lock collars, etc. tight at all times.

### 2.5 Cable Adjustment

Adjustment of the cables should be done very carefully. Tightening one side more than the other will result in a twisting of the tube. This will limit the capacity of the auger as well as cause the belt to bind and reduce the life of the belt. The cables can be tightened at four eyebolts (Figure 2h), making sure to loosen the cable clamps at the top of each truss before tightening. To determine whether or not the conveyor is straight, look up along the center of the tube. If the spout is over too far to the right, tighten the cables on the left. If the spout is over to the left, tighten the cables on the right. When tightening, do not tighten more than three revolutions per side before checking.



**Figure 2h Cable Tensioner**

### 2.6 SMV Sign Placement

The Slow Moving Vehicle Sign is placed on the left-hand side of the machine for transporting purposes. The sign should be located as shown (Figure 2j).



**Figure 2j SMV Sign**



### **3.0 Maintenance Instructions**

To ensure long operating life of your Accelerator 8510(99), follow this maintenance procedure.

- Periodically check all bolts for tightness.
- Periodically inspect belt splice for signs of wear and tear.
- Periodically check belt alignment and adjust as required.
- Grease the points as described below.

#### **3.1 Grease Locations**

|   | <b>Description</b>             | <b>Frequency</b> |
|---|--------------------------------|------------------|
| 1 | Intake Assembly (Figure 3a)    | 8hrs             |
| 2 | Drive Assembly (Figure 3b)     | 8hrs             |
| 3 | Discharge Assembly (Figure 3c) | 8hrs             |
| 4 | Hub Assembly (Figure 3d)       | 8hrs             |
| 5 | PTO Shaft (Not shown)          | 8hrs             |

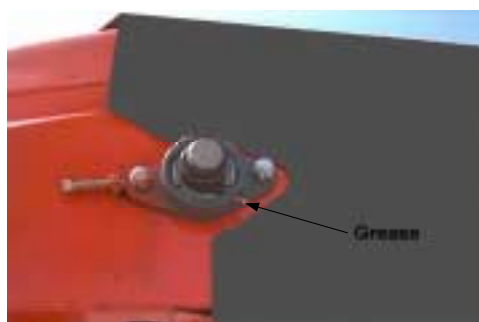
**Figure 3a Intake Grease Locations**



**Figure 3b Drive Grease Locations**



**Figure 3c Discharge Grease Location**



**Figure 3d Hub Grease Location**



## **4.0 Parts Information**

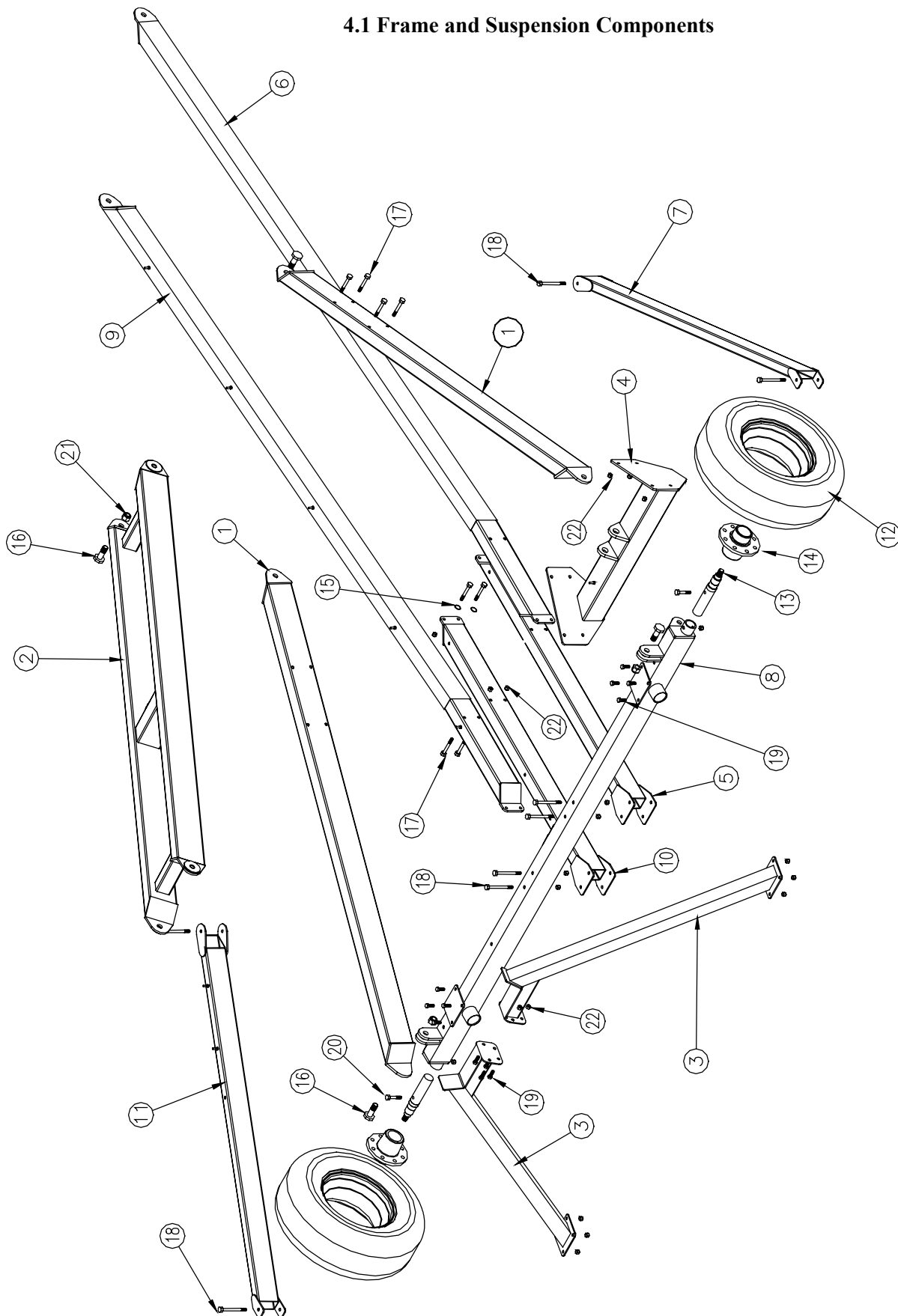
### **4.1 Frame and Suspension Components**

| Item | Part No. | Description                        | Quantity |
|------|----------|------------------------------------|----------|
| 1    | 50110    | Beam, Support, Cyl                 | 2        |
| 2    | 50111    | Frame, Cylinder                    | 1        |
| 3    | 50112    | Frame, Rest, Cylinder              | 2        |
| 4    | 50113    | Base, Support, Cyl                 | 1        |
| 5    | 50114    | Frame, Middle, Left                | 1        |
| 6    | 50115    | Frame, Extension, Left             | 1        |
| 7    | 50116    | Frame, Support, Left               | 1        |
| 8    | 50117    | Frame, Front                       | 1        |
| 9    | 50158    | Frame, Extension, Right            | 1        |
| 10   | 50161    | Frame, Middle, Right               | 1        |
| 11   | 50162    | Frame, Support, Right              | 1        |
| 12   | 49021    | Wheel, Complete                    | 2        |
| 13   | E4187    | Susp, Spindle, S614, Conveyor      | 2        |
| 14   | 45228    | Susp, Hub, H614, 5000lbs           | 2        |
| 15   | 31236    | Washer, Flat, ½, ZP                | 8        |
| 16   | 31471    | Bolt, Hex, 1x3, UNC, GR5, ZP       | 6        |
| 17   | 31027    | Bolt, Hex, 1/2x4-1/2, UNC, GR5, ZP | 16       |
| 18   | 31599    | Bolt, Hex, 1/2x6-1/2, UNC, GR5, ZP | 8        |
| 19   | 31332    | Bolt, Hex, 1/2x1-1/4, UNC, GR5, ZP | 12       |
| 20   | 31023    | Bolt, Hex, 1/2x3-1/2, UNC, GR5, ZP | 2        |
| 21   | 31172    | Nut, Nylock, 1, UNC, ZP            | 6        |
| 22   | 31173    | Nut, Nylock, ½, UNC, ZP            | 38       |
| 23   | 31183*   | Pin, Cotter, 3/16x2                | 2        |

\* Item Not Shown



# 4.1 Frame and Suspension Components

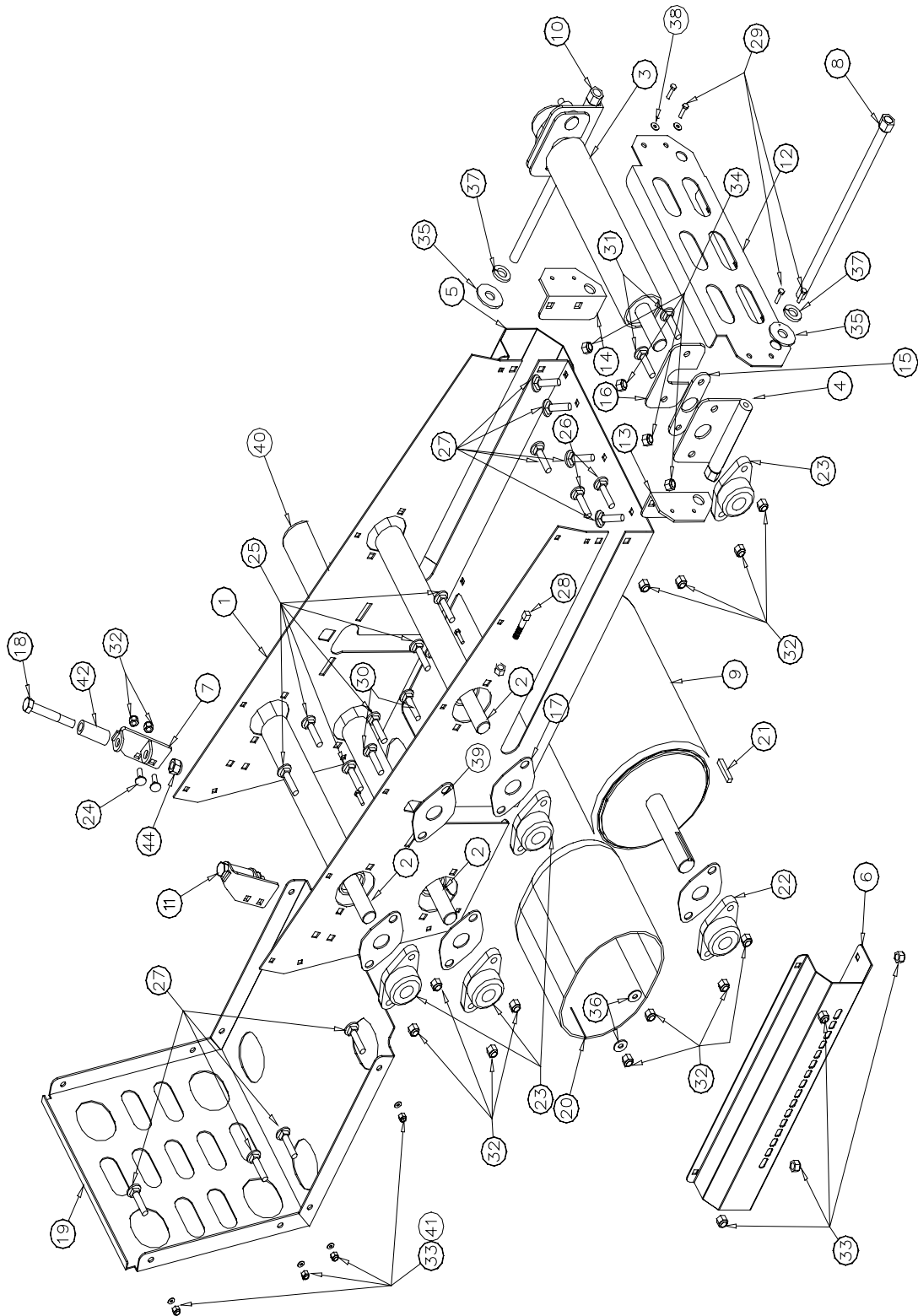


## 4.2 Drive Assembly

| Item | Part No. | Description                         | Quantity |
|------|----------|-------------------------------------|----------|
| 1    | 50103    | Pan, Drive                          | 1        |
| 2    | *50105   | Roller, 2-3/8                       | 3        |
| 3    | 50106    | Roller, 3-1/2                       | 1        |
| 4    | 50107    | Take-up, Slide, Left                | 1        |
| 5    | 50118    | Cover, Airseed, Take-up, Right      | 1        |
| 6    | 50119    | Cover, Airseed, Take-up, Left       | 1        |
| 7    | 50170    | Idler, Belt, Left                   | 1        |
| 8    | 50131    | Rod, Threaded                       | 2        |
| 9    | 50144    | Roller, Drive, Vulcanized           | 1        |
| 10   | 50151    | Take-up, Slide, Right               | 1        |
| 11   | 50172    | Idler, Belt, Right                  | 1        |
| 12   | E4070    | Cover, Drive, Rear                  | 1        |
| 13   | E4077    | Plt, Mounting, Cover, Left          | 1        |
| 14   | E4078    | Plt, Mounting, Cover, Right         | 1        |
| 15   | E4086    | Plt, Spacer                         | 2        |
| 16   | E4093    | Plt, Slide, Inside                  | 2        |
| 17   | E4104    | Plt, Retaining, Bearing             | 6        |
| 18   | 31486    | Bolt, Hex, 3/4x5, UNC, Gr5          | 2        |
| 19   | E4119    | Cover, Drive, Front                 | 1        |
| 20   | E4173    | Guard, PTO                          | 2        |
| 21   | E4182    | Key, 3/8x2                          | 1        |
| 22   | 30448    | Bearing, Flange, 1-1/2              | 2        |
| 23   | 30449    | Bearing, Flange, 1-1/4              | 8        |
| 24   | 31154    | Bolt, Carr, 1/2x1-1/4, UNC, Gr5     | 4        |
| 25   | 31008    | Bolt, Carr, 1/2x1-1/2, UNC, Gr5, ZP | 12       |
| 26   | 31434    | Bolt, Carr, 1/2x1, UNC, Gr5, ZP     | 4        |
| 27   | 31573    | Bolt, Carr, 3/8x1, UNC, Gr5, ZP     | 19       |
| 28   | 31566    | Bolt, Sqrhead, 7/16x2, UNC, Gr5, ZP | 2        |
| 29   | 31029    | Bolt, Hex, 1/4x1, UNC, Gr5, ZP      | 4        |
| 30   | 31431    | Bolt, Carr, 1/2x2 1/4, UNC, Gr5, ZP | 4        |
| 31   | 31070    | Bolt, Hex, 1/2x2, UNC, Gr5, ZP      | 4        |
| 32   | 31173    | Nut, Nylock, 1/2, UNC, ZP           | 32       |
| 33   | 31176    | Nut, Nyloc, 3/8, UNC, Gr5, Zp       | 19       |
| 34   | 31174    | Nut, Nylock, 1/4, UNC, ZP           | 4        |
| 35   | 31238    | Washer, Flat, 3/4, ZP               | 2        |
| 36   | 31236    | Washer, Flat, 1/2, ZP               | 4        |
| 37   | 31246    | Washer, Lock, 3/4, ZP               | 2        |
| 38   | 31237    | Washer, Flat, 1/4, ZP               | 4        |
| 39   | E4227    | Spacer, Roller, Drive               | 2        |
| 40   | 50197    | PTO, Guard Assembly                 | 1        |
| 41   | 31351    | Washer, Flat, 3/8, ZP               | 8        |
| 42   | E4231    | Bushing, Idler                      | 2        |
| 43   | 30092    | PTO Shaft – Not Shown               | 8        |
| 44   | 31175    | Nut, Nylock, 3/4, UNC, ZP           | 2        |

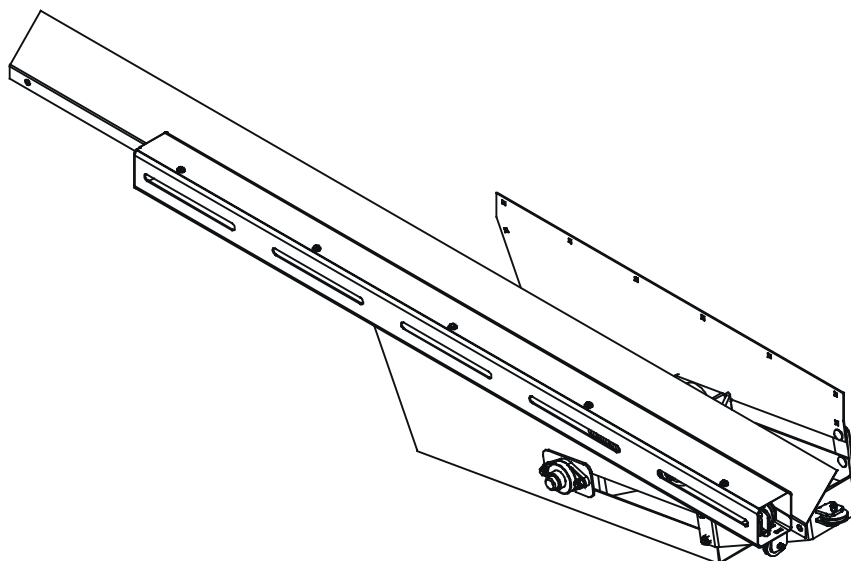
- NOTE: may be 3 1/2" rollers on some machines.

## 4.2 Drive Assembly

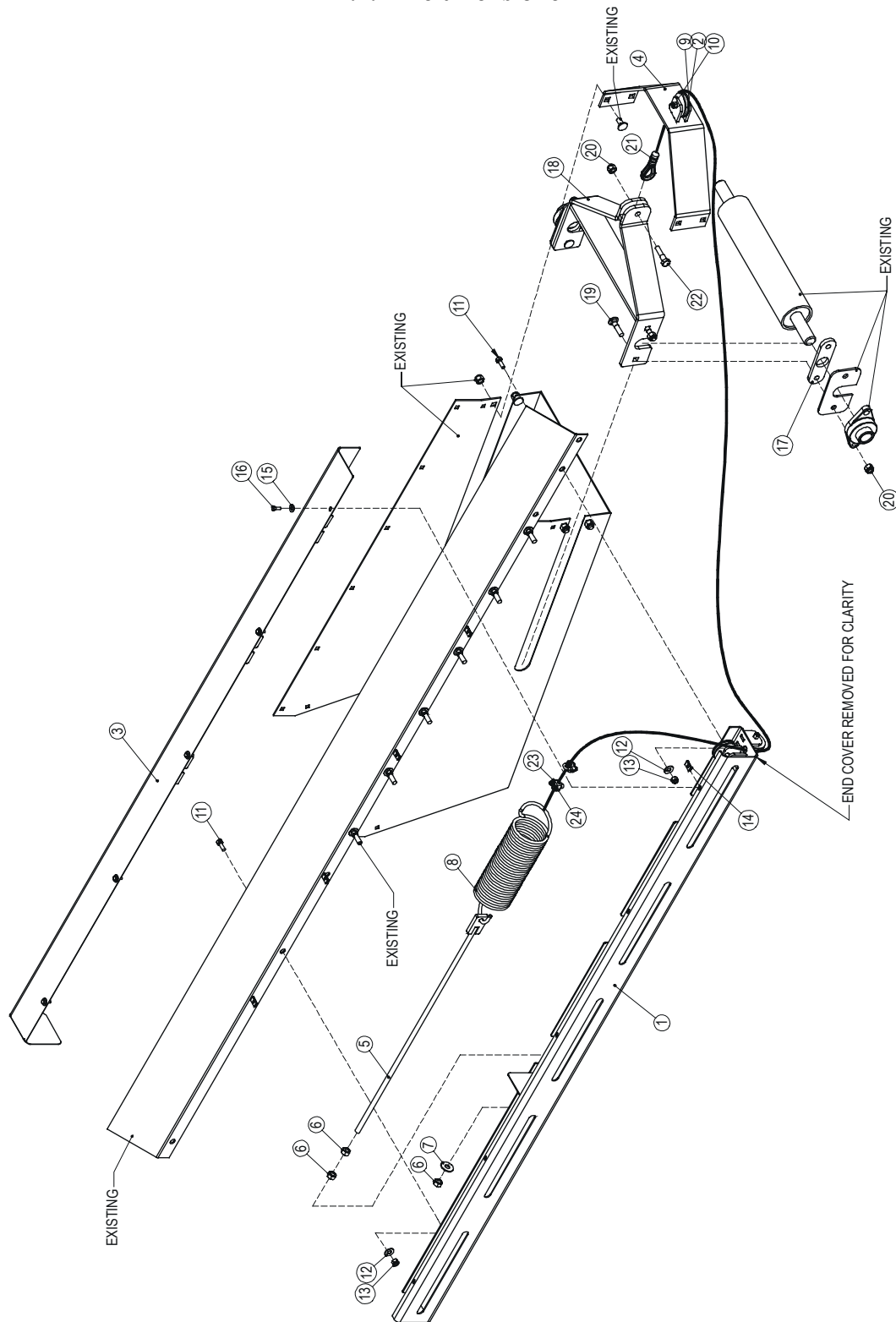


### 4.2.1 Belt Tensioner

| ITEM NO. | PART NO. | DESCRIPTION                    | QTY. |
|----------|----------|--------------------------------|------|
| 1        | 50352    | PAN,TENSIONER,WLDT             | 1    |
| 2        | 92062    | PULLEY,CABLE,1/4,2-1/2         | 3    |
| 3        | E5809    | COVER,TENSIONER                | 1    |
| 4        | 50351    | BRKT,TENSIONER,WLDT,DRIVE      | 1    |
| 5        | 50350    | ROD,TENSIONER,WLDT             | 1    |
| 6        | 31163    | NUT,HEX,1/2,UNC,GR5,ZP         | 3    |
| 7        | 31236    | WASHER,FLAT,1/2,ZP             | 1    |
| 8        | E5477    | SPRING,EXT,3-3/4X16.249        | 1    |
| 9        | 31047    | BOLT,HEX,5/16X1-3/4,UNC,GR5,ZP | 3    |
| 10       | 31177    | NUT,NYLOCK,5/16,UNC,ZP         | 3    |
| 11       | 31043    | BOLT,HEX,3/8X1,UNC,GR5,ZP      | 2    |
| 12       | 31351    | WASHER,FLAT,3/8,ZP             | 2    |
| 13       | 31176    | NUT,NYLOCK,3/8,UNC,ZP          | 2    |
| 14       | 31593    | CLIP,AUTOMOTIVE,1/4,GR5,ZP     | 5    |
| 15       | 31237    | WASHER,FLAT,1/4,ZP             | 5    |
| 16       | 31033    | BOLT,HEX,1/4X3/4,UNC,GR5,ZP    | 5    |
| 17       | E5112    | SPACER,DRIVE,PAN               | 2    |
| 18       | 50349    | TAKE-UP,WLDT,SHORT             | 1    |
| 19       | 31009    | BOLT,CARR,1/2X2,UNC,GR5,ZP     | 4    |
| 20       | 31173    | NUT,NYLOCK,1/2,UNC,ZP          | 5    |
| 21       | E5494    | CABLE,TENSIONER                | 1    |
| 22       | 31070    | BOLT,HEX,1/2X2,UNC,GR5,ZP      | 1    |
| 23       | 92014    | CLAMP,CABLE,1/4                | 2    |
| 24       | 31174    | NUT,NYLOCK,1/4,UNC,ZP          | 4    |



### 4.2.1 Belt Tensioner

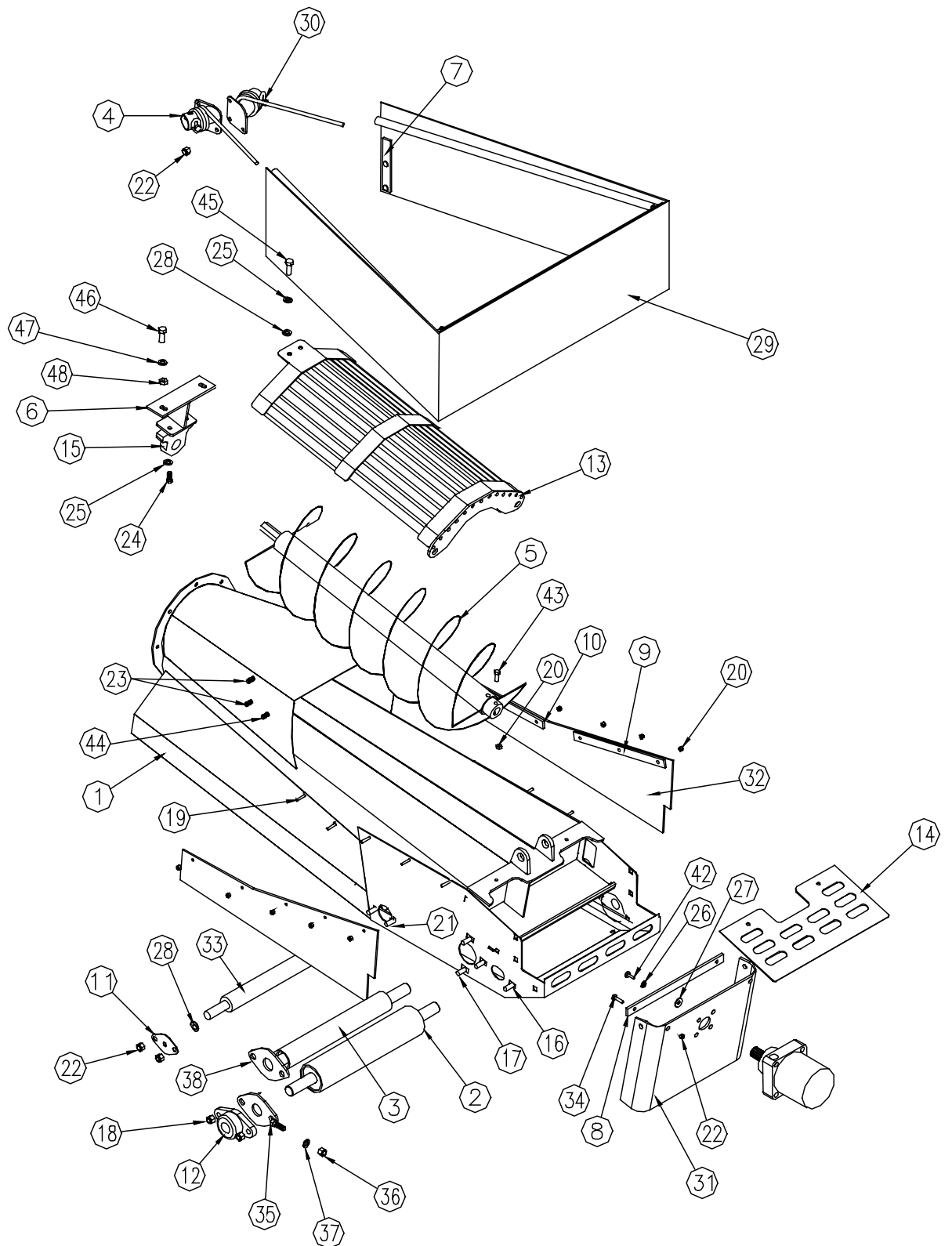


### 4.3 Intake

| Item | Part # | Description                    | Qty |
|------|--------|--------------------------------|-----|
| 1    | 50186  | Intake,ACC8510                 | 1   |
| 2    | 50105  | Roller,2-3/8                   | 1   |
| 3    | 50106  | Roller,3-1/2                   | 1   |
| 4    | 50134  | Spring,Complete,Left           | 1   |
| 5    | 50139  | Auger,Assembly                 | 1   |
| 6    | 50138  | Support,Bearing,Hex            | 1   |
| 7    | E4071  | Plate,Retaining,Canvas         | 2   |
| 8    | E4072  | Plate,Retaining,Canvas         | 1   |
| 9    | E4073  | Plate,Retaining,Canvas         | 2   |
| 10   | E4074  | Plate,Retaining,Canvas         | 2   |
| 11   | E4103  | Plate,Retaining,Interroller    | 2   |
| 12   | 30449  | Bearing,Flange,1-1/4           | 4   |
| 13   | 50124  | Cover,Auger                    | 1   |
| 14   | E4062  | Cover,Motor,Hyd                | 1   |
| 15   | 30450  | Bearing,Hex,1                  | 1   |
| 16   | 31009  | Bolt,Carr,1/2x2,UNC,GR5,ZP     | 2   |
| 17   | 31008  | Bolt,Carr,1/2x1-1/2,UNC,GR5,ZP | 6   |
| 18   | 31173  | Nut,Nylock,1/2,UNC,ZP          | 8   |
| 19   | 31569  | Bolt,Elev,1/4x1-1/4,UNC,GR5,ZP | 14  |
| 20   | 31174  | Nut,Nylock,1/4,UNC,ZP          | 16  |
| 21   | 31573  | Bolt,Car,3/8x1,UNC,GR5,ZP      | 4   |
| 22   | 31176  | Nut,Nylock,3/8,UNC,ZP          | 14  |
| 23   | 31043  | Bolt,Hex,3/8x1,UNC,GR5,ZP      | 10  |
| 24   | 31701  | Bolt,Hex,M14x25,GR5,ZP         | 2   |
| 25   | 31244  | Washer,Lock,1/2,ZP             | 2   |
| 26   | 31319  | Washer,Lock,3/8,ZP             | 6   |
| 27   | 31351  | Washer,Flat,3/8,ZP             | 10  |
| 28   | 31236  | Washer,Flat,1/2,ZP             | 2   |
| 29   | 50148  | Hopper,Canvas                  | 1   |
| 30   | 50150  | Spring,Complete,Right          | 1   |
| 31   | E4151  | Belting,Intake,Side            | 1   |
| 32   | E4152  | Belting,Intake                 | 2   |
| 33   | 30091  | Drv,Roller,1.9x17-3/4,7/16Hex  | 1   |
| 34   | 31067  | Bolt,Hex,3/8x2,UNC,GR5,ZP      | 2   |
| 35   | 50168  | Adjustment,Roller              | 1   |
| 36   | 31163  | Nut,Hex,1/2,UNC,GR5,ZP         | 1   |
| 37   | 31244  | Washer,Lock,1/2,ZP             | 1   |
| 38   | E4104  | Plt,Retaining,Bearing          | 1   |
| 39   | E4204* | Belting,Top                    | 1   |
| 40   | 31535* | Bolt,Hex,1/4x1-1/2,UNC,GR5,ZP  | 2   |
| 41   | 31237* | Washer,Flat,1/4,ZP             | 4   |
| 42   | 31479  | Bolt,Hex,3/8x1-1/4,UNC,GR5,ZP  | 4   |
| 43   | 31045  | Bolt,Hex,3/8x1-1/2,UNC,GR5,ZP  | 1   |
| 44   | 31581  | Bolt,Hex,1/4x1-1/4,UNC,GR5,ZP  | 2   |
| 45   | 31332  | Bolt,Hex,1/2x1-1/4,UNC,GR5,ZP  | 2   |
| 46   | 31444  | Bolt,Hex,7/16x1,UNC,GR5,ZP     | 2   |
| 47   | 31241  | Washer,Flat,7/16,ZP            | 2   |
| 48   | 31560  | Nut,Nylock,7/16,UNC,ZP         | 2   |

\* Items not shown

### 4.3 Intake

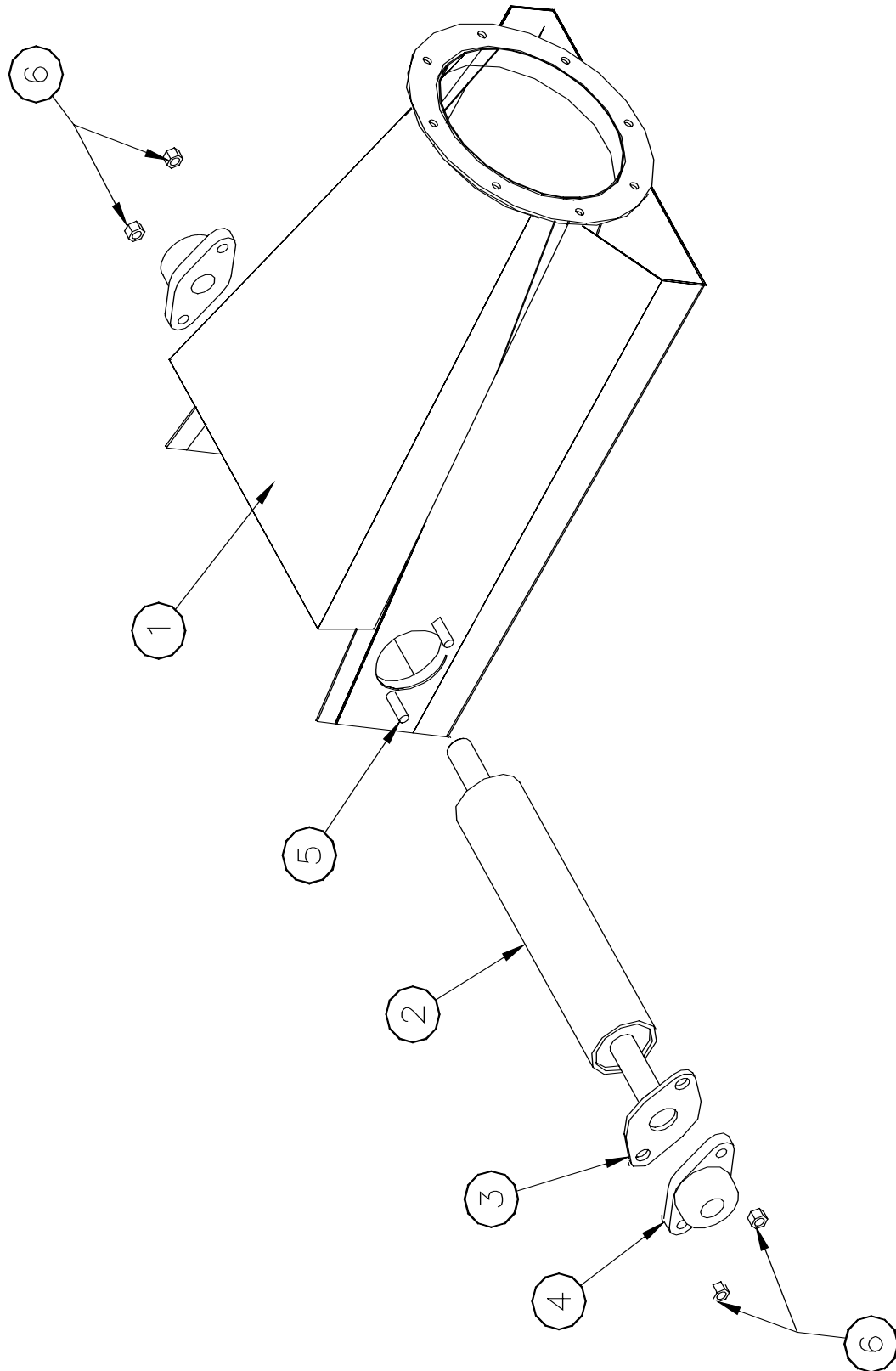


#### 4.4 Discharge

| Item | Part No. | Description                         | Quantity |
|------|----------|-------------------------------------|----------|
| 1    | 50195    | Discharge                           | 1        |
| 2    | 50106    | Roller, 3-1/2                       | 1        |
| 3    | E4104    | Plate, Retaining, Bearing           | 2        |
| 4    | 30449    | Bearing, Flange, 1-1/4              | 2        |
| 5    | 31008    | Bolt, Carr, 1/2x1-1/2, UNC, Gr5, ZP | 4        |
| 6    | 31173    | Nut, Nylock, 1/2, UNC, ZP           | 4        |



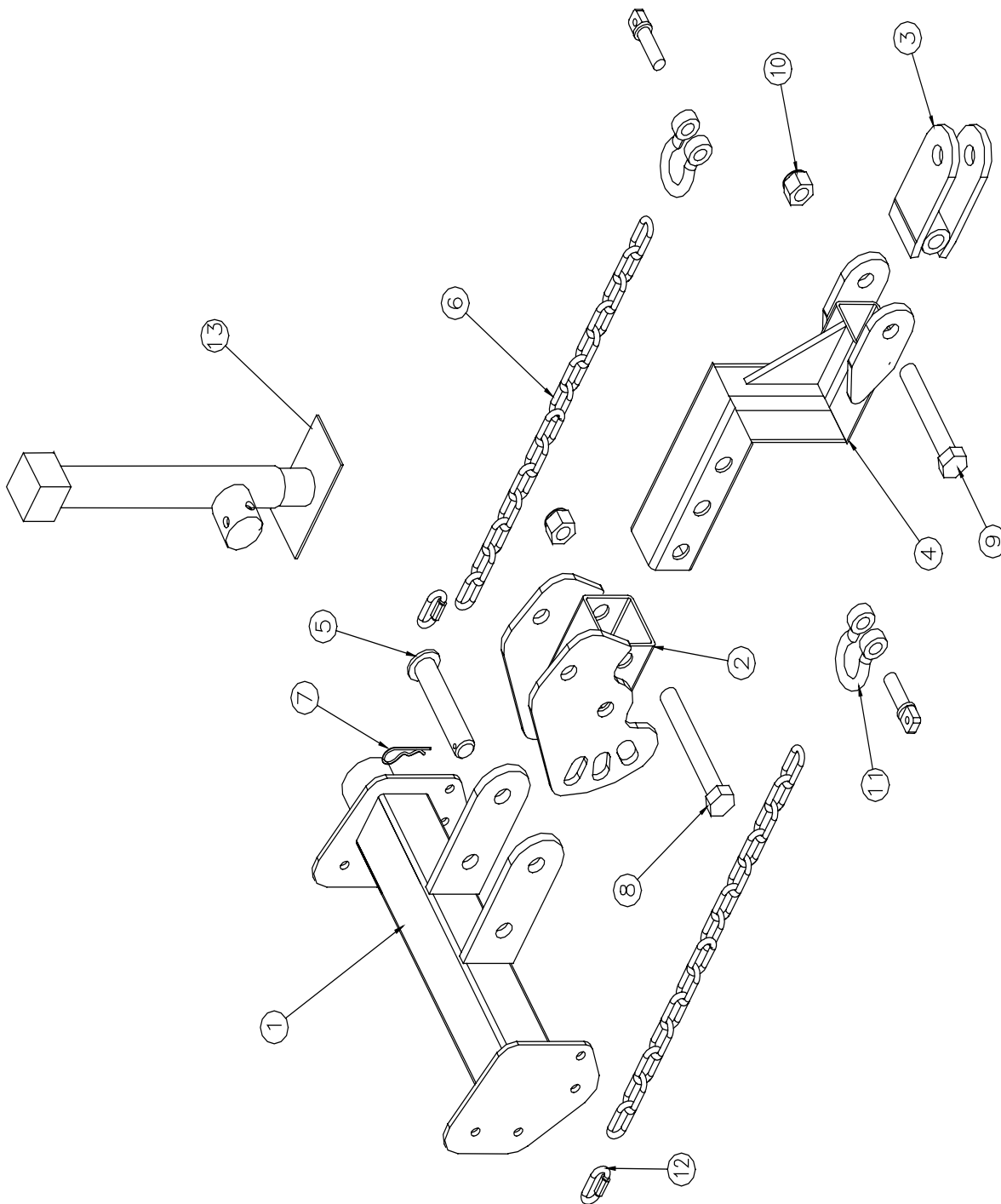
#### 4.4 Discharge



#### 4.5 Complete Hitch Assembly

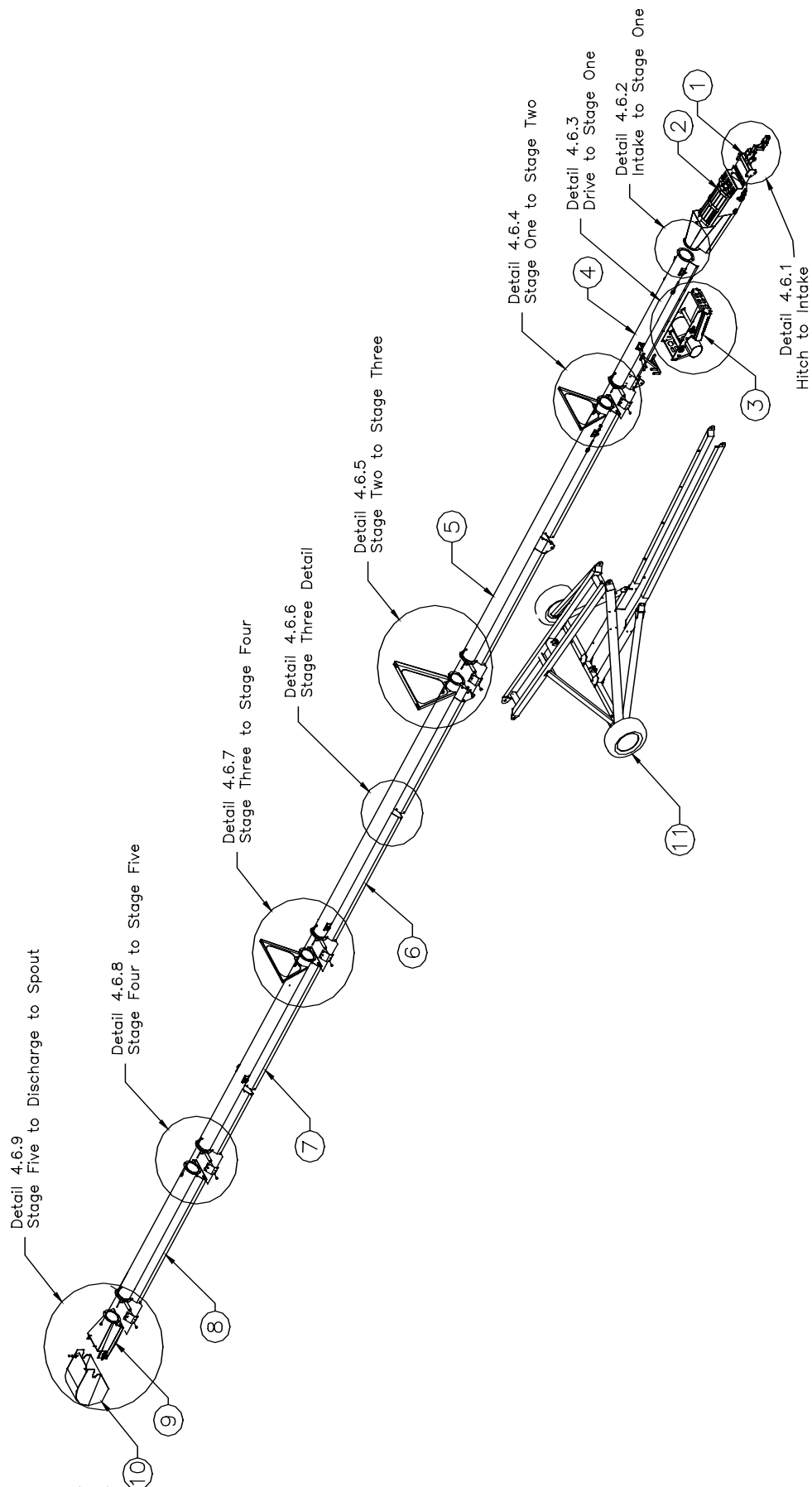
| Item | Part No. | Description                   | Quantity |
|------|----------|-------------------------------|----------|
| 1    | 50120    | Mount, Hitch                  | 1        |
| 2    | 50185    | Pivot, Hitch                  | 1        |
| 3    | 50122    | Tongue, Hitch                 | 1        |
| 4    | 50183    | Arm Hitch, Gooseneck          | 1        |
| 5    | 50176    | Pin                           | 1        |
| 6    | E4185    | Chain, Safety, Hitch          | 2        |
| 7    | 91608    | Pin, Hair, 1/8 x 2-1/2        | 1        |
| 8    | 31568    | Bolt, Hex, 1x6, UNC, Gr5, ZP  | 1        |
| 9    | 31160    | Bolt, Hex, 1x7, UNC, Gr5, ZP  | 1        |
| 10   | 31172    | Nut, Nylock, 1, UNC, ZP       | 2        |
| 11   | 30549    | Chain, Connector, Clevis, 3/8 | 2        |
| 12   | 30550    | Chain, Connector, 3/8         | 2        |

## 4.5 Complete Hitch Assembly

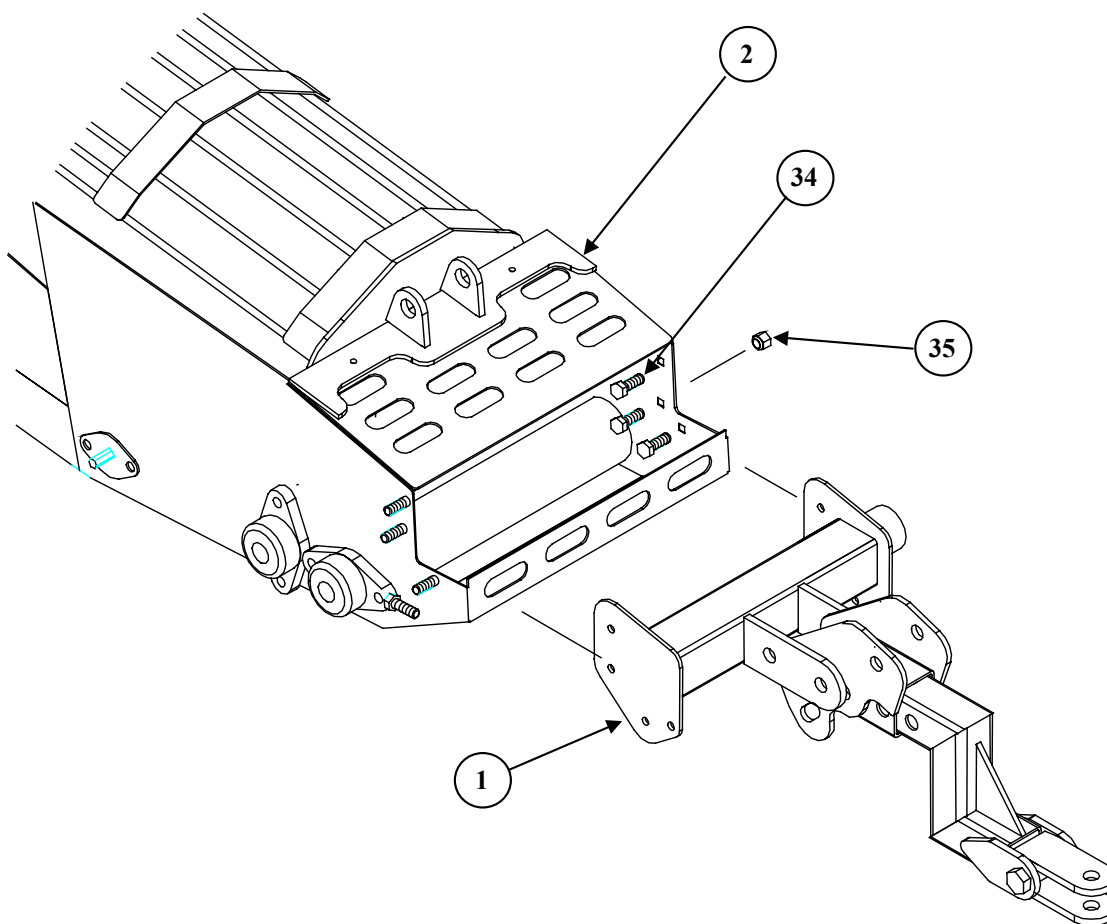


#### 4.6 Conveyor Assembly - See Pages 26 – 32 for Assembly Drawings

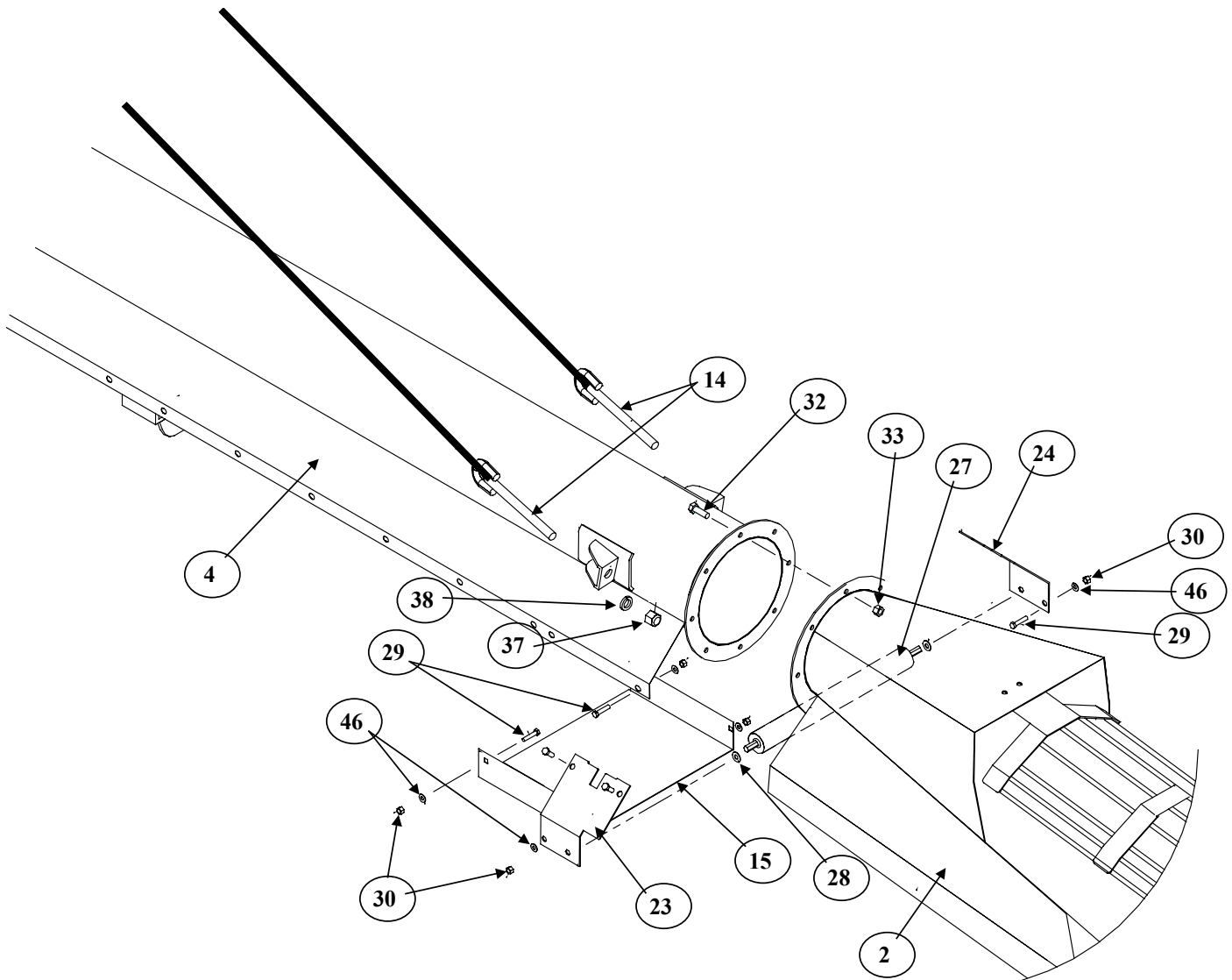
| Item | Part No. | Description                   | Quantity |
|------|----------|-------------------------------|----------|
| 1    | 50184    | Hitch, Complete               | 1        |
| 2    | 50187    | Intake, Complete              | 1        |
| 3    | 50140    | Drive, Complete               | 1        |
| 4    | 50192    | Stage One                     | 1        |
| 5    | 50193    | Stage Two                     | 1        |
| 6    | 50191    | Stage Three                   | 1        |
| 7    | 50194    | Stage Four                    | 1        |
| 8    | 50179    | Stage Five                    | 1        |
| 9    | 50196    | Discharge, Complete           | 1        |
| 10   | E4208    | Spout                         | 1        |
| 11   | 50137    | Frame, Complete               | 1        |
| 12   | 50164    | Bracket, Pto                  | 1        |
| 13   | 50182    | Rope, Wire, Assembly, Short   | 2        |
| 14   | 50181    | Rope, Wire, Assembly, Long    | 2        |
| 15   | E4076    | Pan, Belt, Short              | 1        |
| 16   | E4063    | Cover, Side                   | 6        |
| 17   | E4064    | Cover, Side, Slotted          | 8        |
| 18   | E4101    | Cover, Side, Discharge, Left  | 1        |
| 19   | E4102    | Cover, Side, Discharge, Right | 1        |
| 20   | E4001    | Pan, Belt, Drive, Bottom      | 1        |
| 21   | E4237    | Truss, Small                  | 2        |
| 22   | E4236    | Truss, Large                  | 1        |
| 23   | E4234    | Cover, Side, Intake, Left     | 1        |
| 24   | E4235    | Cover, Side, Intake, Right    | 1        |
| 25   | E4710    | Bracket, Sign, Smv            | 1        |
| 26   | E4711    | Plate, Sign, Smv              | 1        |
| 27   | 30091    | Drv,Roller,1.9X17-3/4,7/16Hex | 9        |
| 28   | 31236    | Washer,Flat,1/2,ZP            | 18       |
| 29   | 31573    | Bolt,Carr,3/8x1,UNC,GR5,ZP    | 92       |
| 30   | 31176    | Nut,Nylock,3/8,UNC,ZP         | 92       |
| 31   | 30456    | Clamp,Rope,Wire,3/8           | 8        |
| 32   | 31704    | Bolt,Hex,9/16x1-3/4,UNC,GR5   | 48       |
| 33   | 31646    | Nut,Nylock,9/16,UNC,GRC,ZP    | 48       |
| 34   | 31008    | Bolt,Carr,1/2x1-1/2,UNC,ZP    | 6        |
| 35   | 31173    | Nut,Nylock,1/2,UNC,ZP         | 8        |
| 36   | 92028    | Sign,Slow Moving              | 1        |
| 37   | 31167    | Nut,Hex,3/4,UNC,GR5,ZP        | 4        |
| 38   | 31246    | Washer,Lock,3/4,ZP            | 4        |
| 39   | 31241    | Washer,Flat,7/16,ZP           | 4        |
| 40   | 31351    | Washer,Flat,3/8,ZP            | 12       |
| 41   | 30294    | Screw,Tek,1/4x1               | 6        |
| 42   | 31587    | Bolt,Hex,1/4x4,UNC,GR5,ZP     | 2        |
| 43   | 31174    | Nut,Nylock,1/4,UNC,ZP         | 2        |
| 44   | 31429    | Washer,Lock,7/16,ZP           | 4        |
| 45   | 31444    | Bolt,Hex,7/16x1,UNC,GR2,ZP    | 4        |
| 46   | 31688    | Washer,Flat,7/16ID,3/4OD      | 80       |



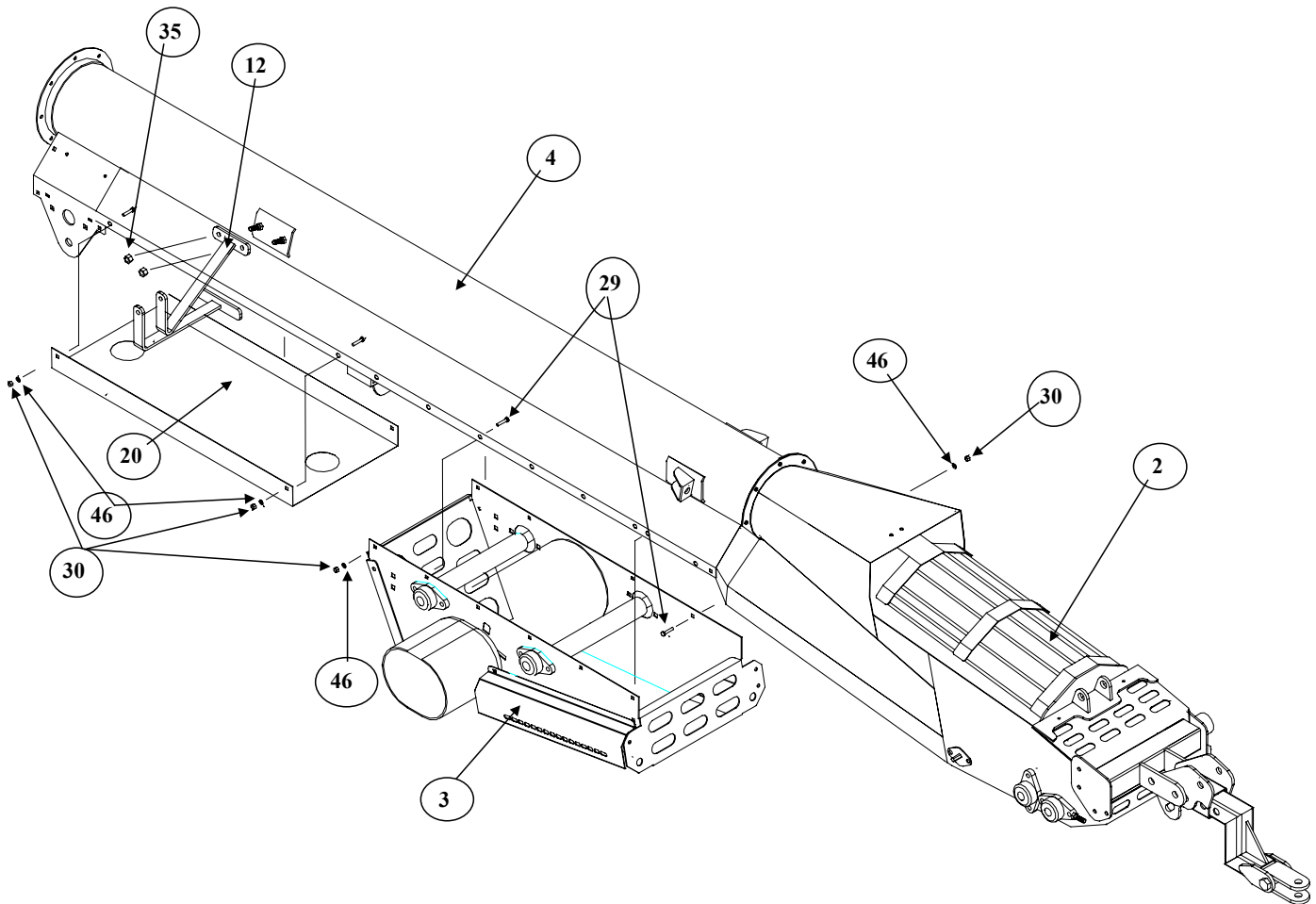
#### 4.6.1 Hitch to Intake



### 4.6.2 Intake to Stage One

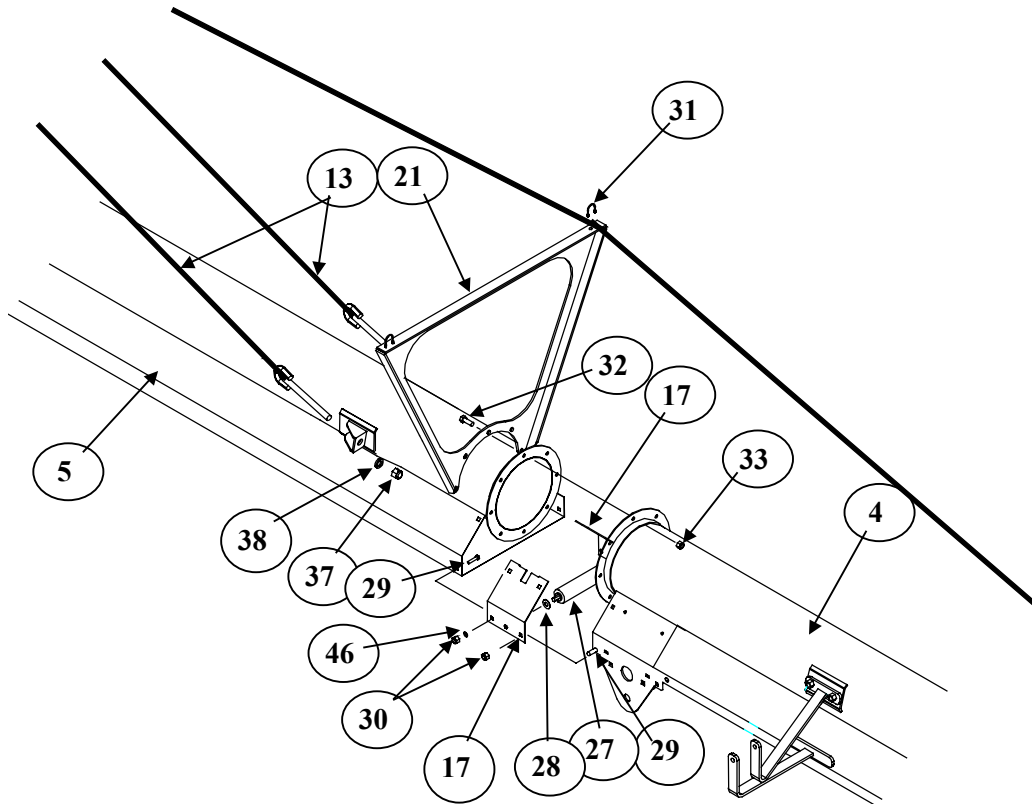


### 4.6.3 Drive to Stage One

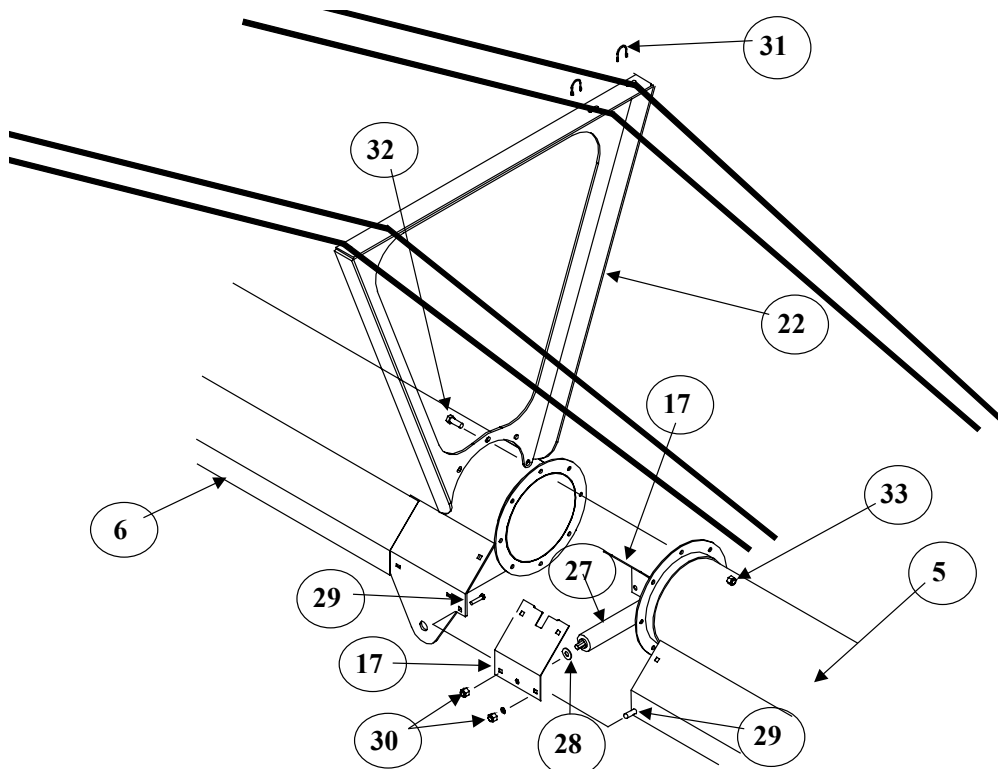




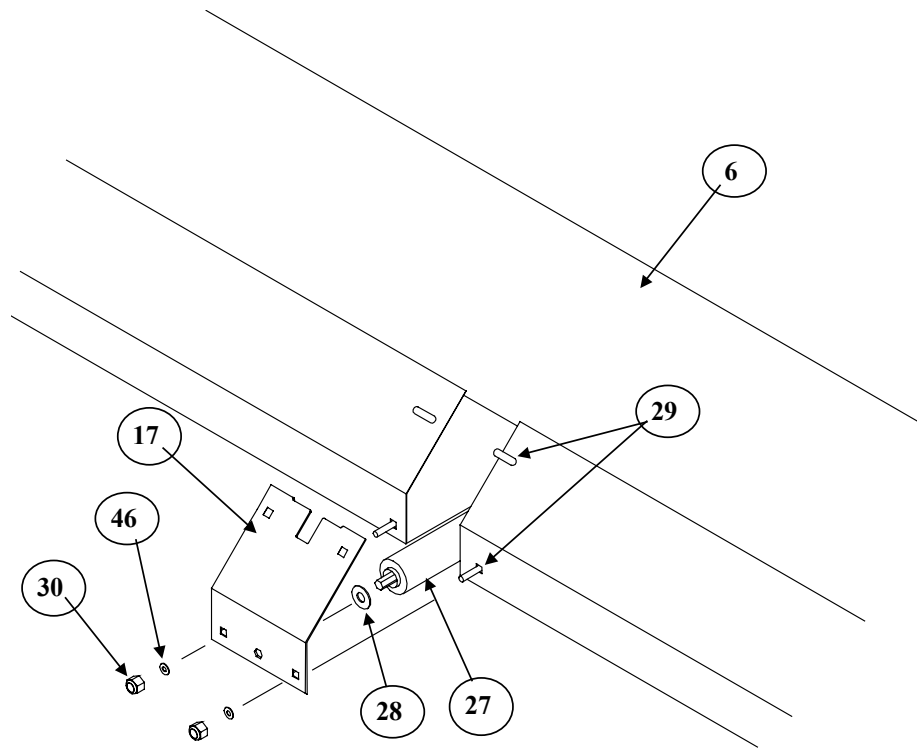
#### 4.6.4 Stage One to Stage Two



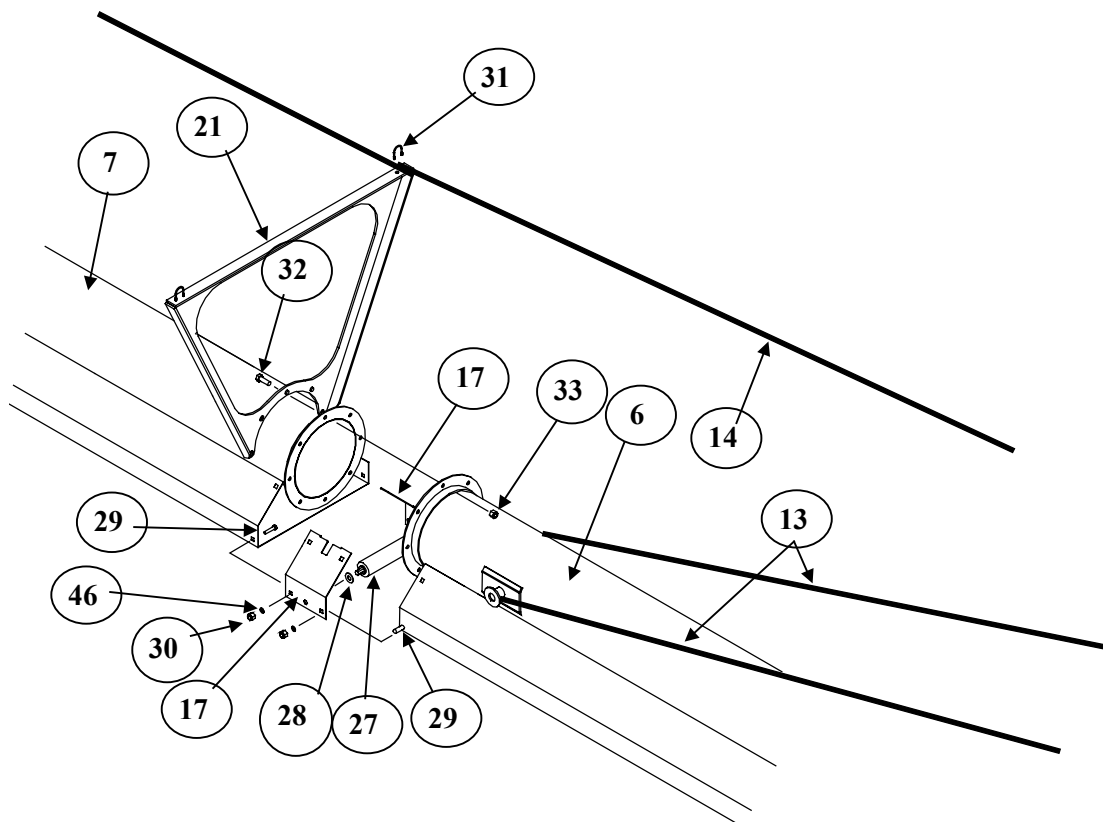
#### 4.6.5 Stage Two to Stage Three



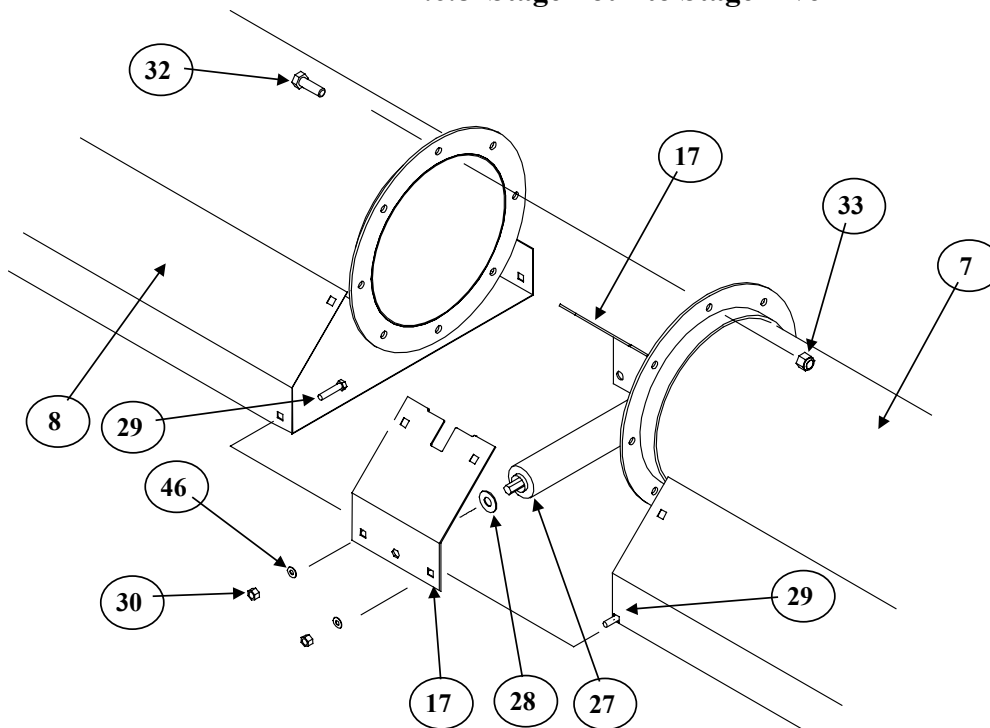
#### 4.6.6 Stage Three Detail



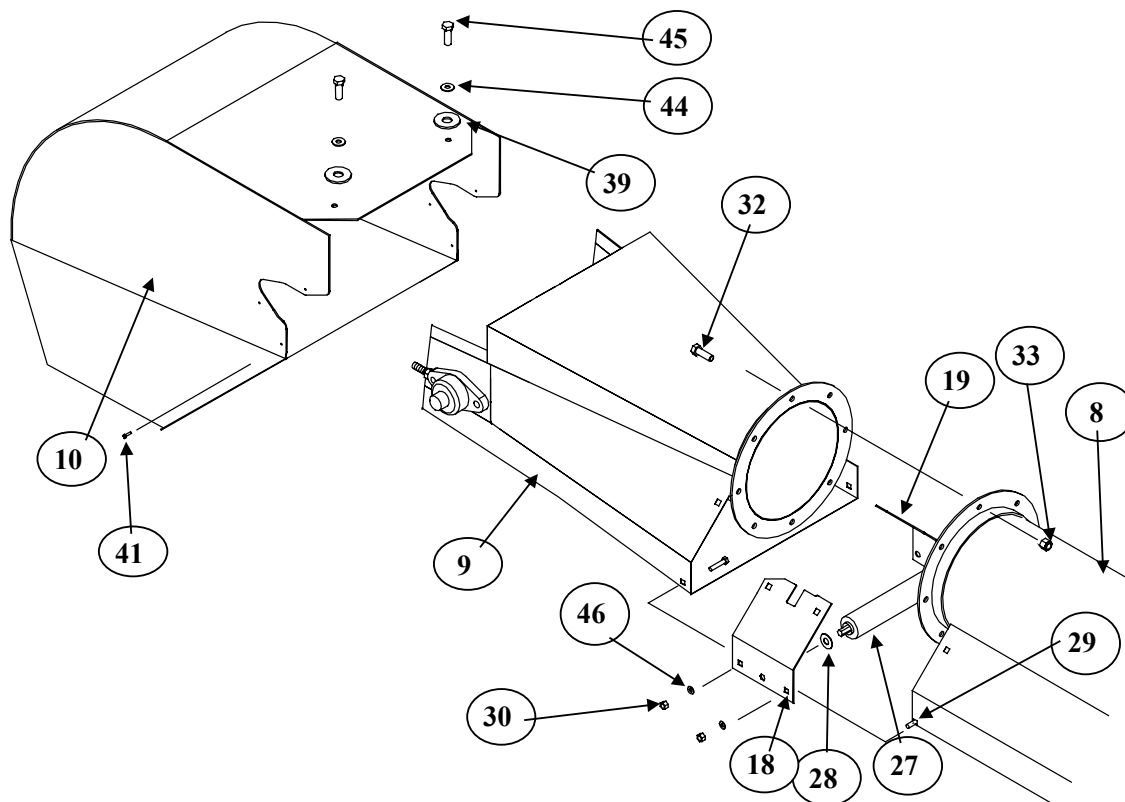
#### 4.6.7 Stage Three to Stage Four



#### 4.6.8 Stage Four to Stage Five



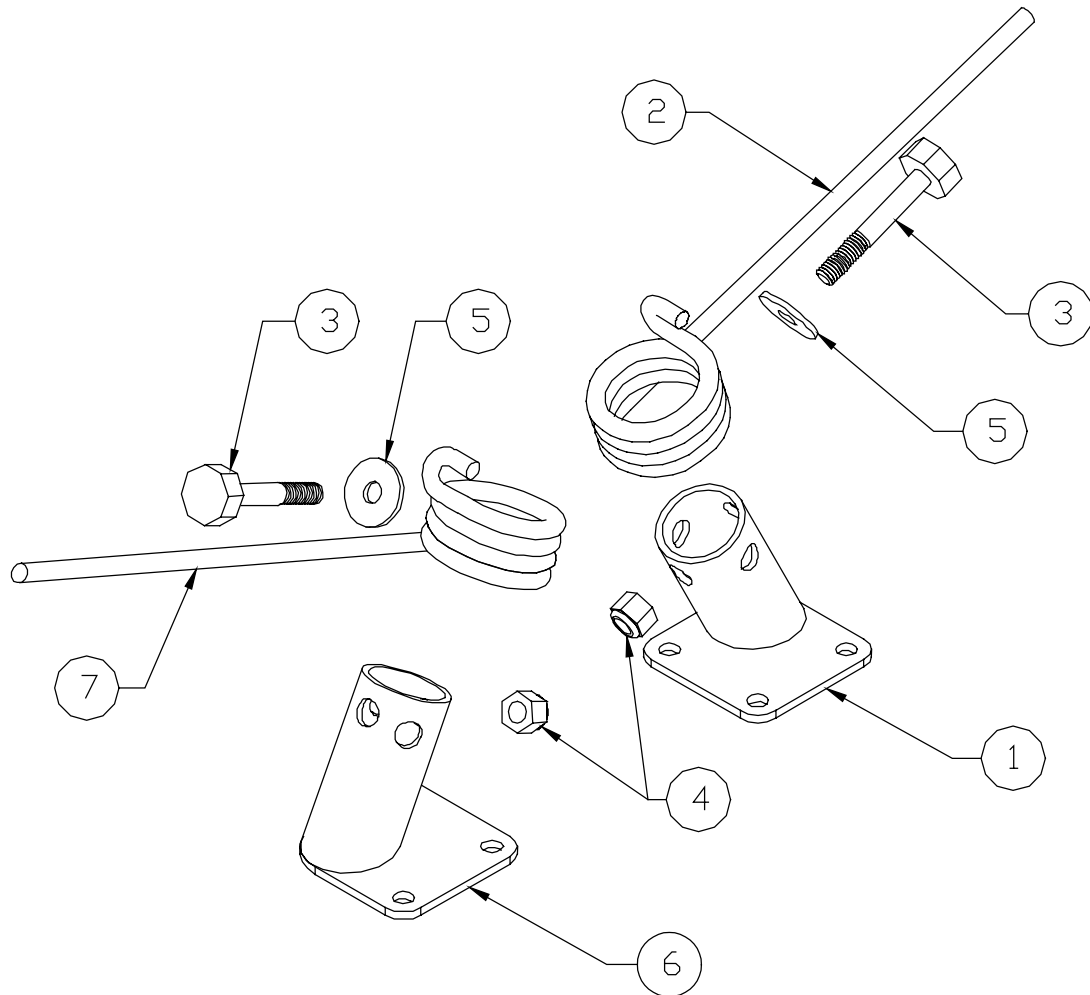
#### 4.6.9 Stage Five to Discharge to Spout



#### 4.7 Spring Assemblies

| Item | Part No. | Description                     | Quantity |
|------|----------|---------------------------------|----------|
| 1    | 50153    | Spring, Mount, Left             | 1        |
| 2    | 30454    | Spring, Coil, Conveyor, Left    | 1        |
| 3    | 31559    | Bolt, Hex, 7/16x3, UNC, Gr5, ZP | 2        |
| 4    | 31560    | Nut, Nylock, 7/16, UNC, Gr5, ZP | 2        |
| 5    | 31241    | Washer, Flat, 7/16, ZP          | 2        |
| 6    | 50133    | Spring, Mount, Right            | 1        |
| 7    | 30473    | Spring, Coil, Conveyor, Right   | 1        |

### 4.7 Spring Assemblies



## **5.0 Hydraulics**

### **5.1 Accelerator Cylinder Hydraulics**

| Item | Part No. | Description                       | Quantity |
|------|----------|-----------------------------------|----------|
| 1    | 30086    | Hyd, Cyl, 4x36, Conveyor          | 1        |
| 2    | 30209    | Hyd, Fit, Pioneer, Male, 8FP      | 2        |
| 3    | 30466    | Hyd, Fit, Orifice, 1/16, 8MP-8FPX | 1        |
| 4    | 30513    | Hyd, Hose, 3/8x504, 8MPx8MP       | 1        |
| 5    | 50156    | Pin, Cyl, Conveyor                | 1        |
| 6    | 50202    | Pin, Cyl, Conveyor, Lift          | 1        |
| 7    | 90691    | Hyd, Valve, Check                 | 1        |
| 8    | 91608    | Pin, Hair, 1/8x2-9/16             | 2        |
| 9    | 30512    | Hyd, Hose, 3/8x504, 4MP-8MP       | 1        |
| 10   | 30210*   | Hyd, Clamp, Hose, ½               | 11       |
| 11   | 31177*   | Nut, Nylock, 5/16, ZP             | 11       |
| 12   | 31239*   | Washer, Flat, 5/16, ZP            | 11       |
| 13   | 30469    | Hyd, Valve, Ball, 8FP             | 2        |
| 14   | 32020    | Hyd, Fit, Elbow, 4MP-4FPX90       | 1        |
| 15   | 32082    | Hyd, Fit, Adapter, 8MP-8MP        | 1        |

\*Items not shown

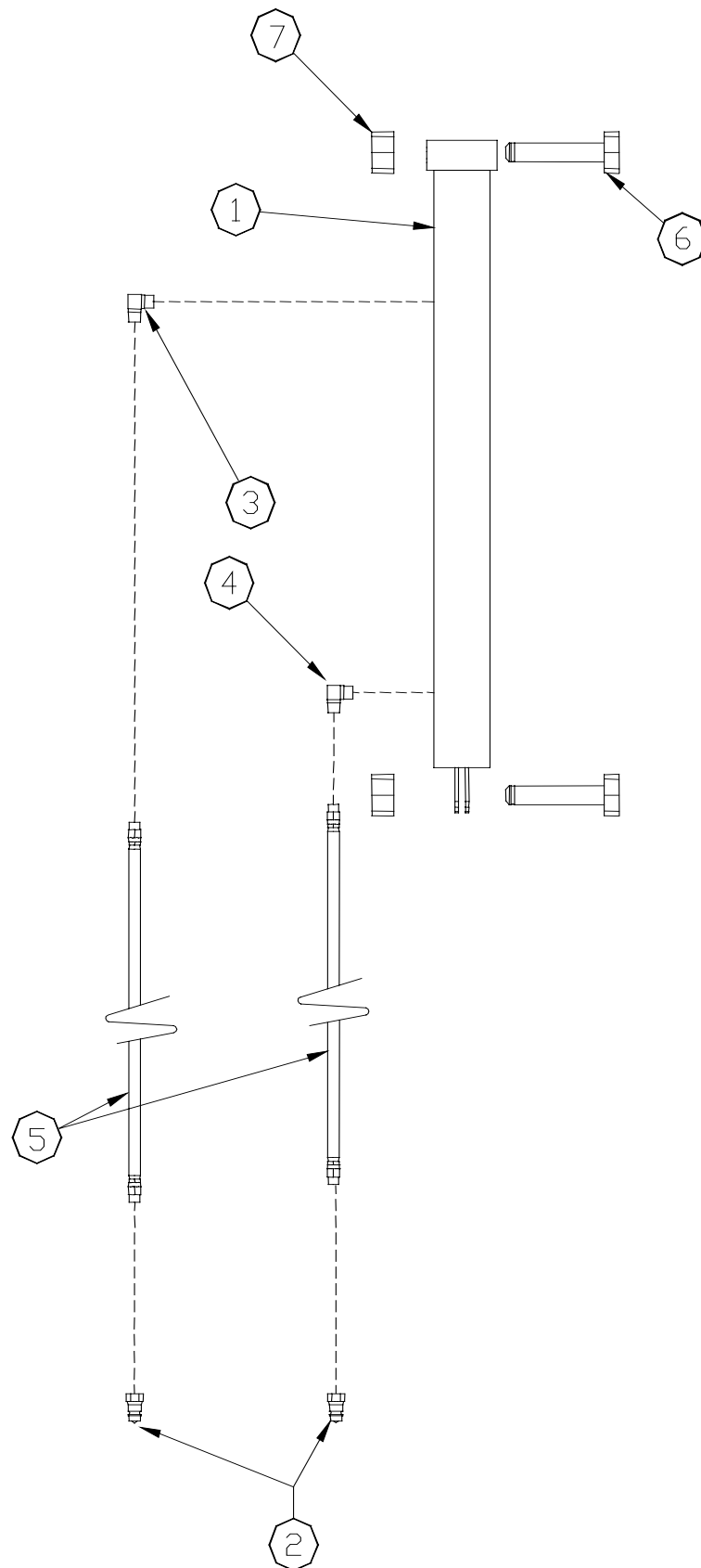
[illegible]

## 5.2 Hitch Cylinder Hydraulics

| Item | Part No. | Description                           | Quantity |
|------|----------|---------------------------------------|----------|
| 1    | 30088    | Hyd, Cyl, 2x8                         | 1        |
| 2    | 30209    | Hyd, Fit, Pioneer, Male, 8FP          | 2        |
| 3    | 30514    | Hyd, Fit, Orifice, 1/16, 4MP - 6FPX90 | 1        |
| 4    | 30500    | Hyd, Fit, Elbow, 4MP – 6FPX0          | 1        |
| 5    | 30515    | Hyd, Hose, 3/8x96, 6MP-8MP            | 2        |
| 6    | 31472    | Bolt, Hex, 1x5, UNC, Gr5, ZP          | 2        |
| 7    | 31172    | Nut, Nylock, 1, UNC, ZP               | 2        |

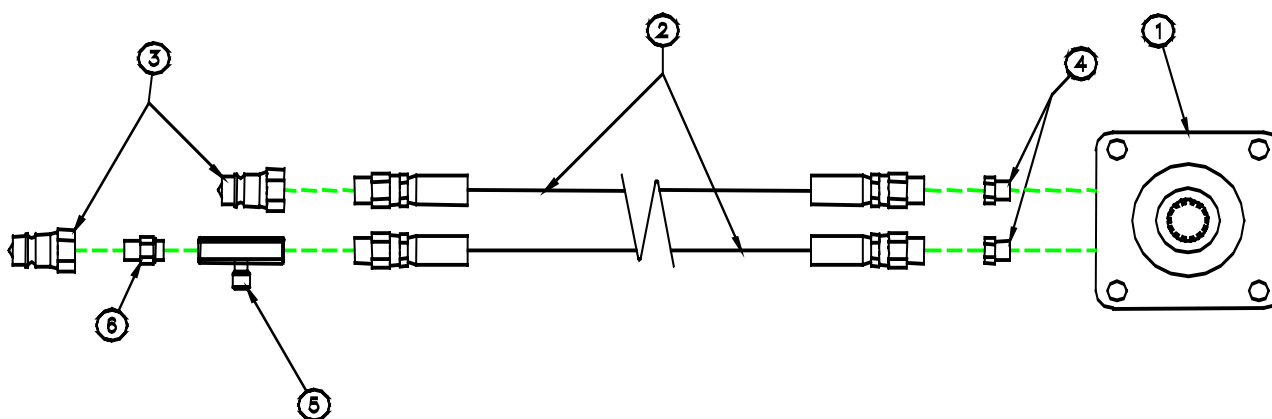


## 5.2 Hitch Cylinder Hydraulics



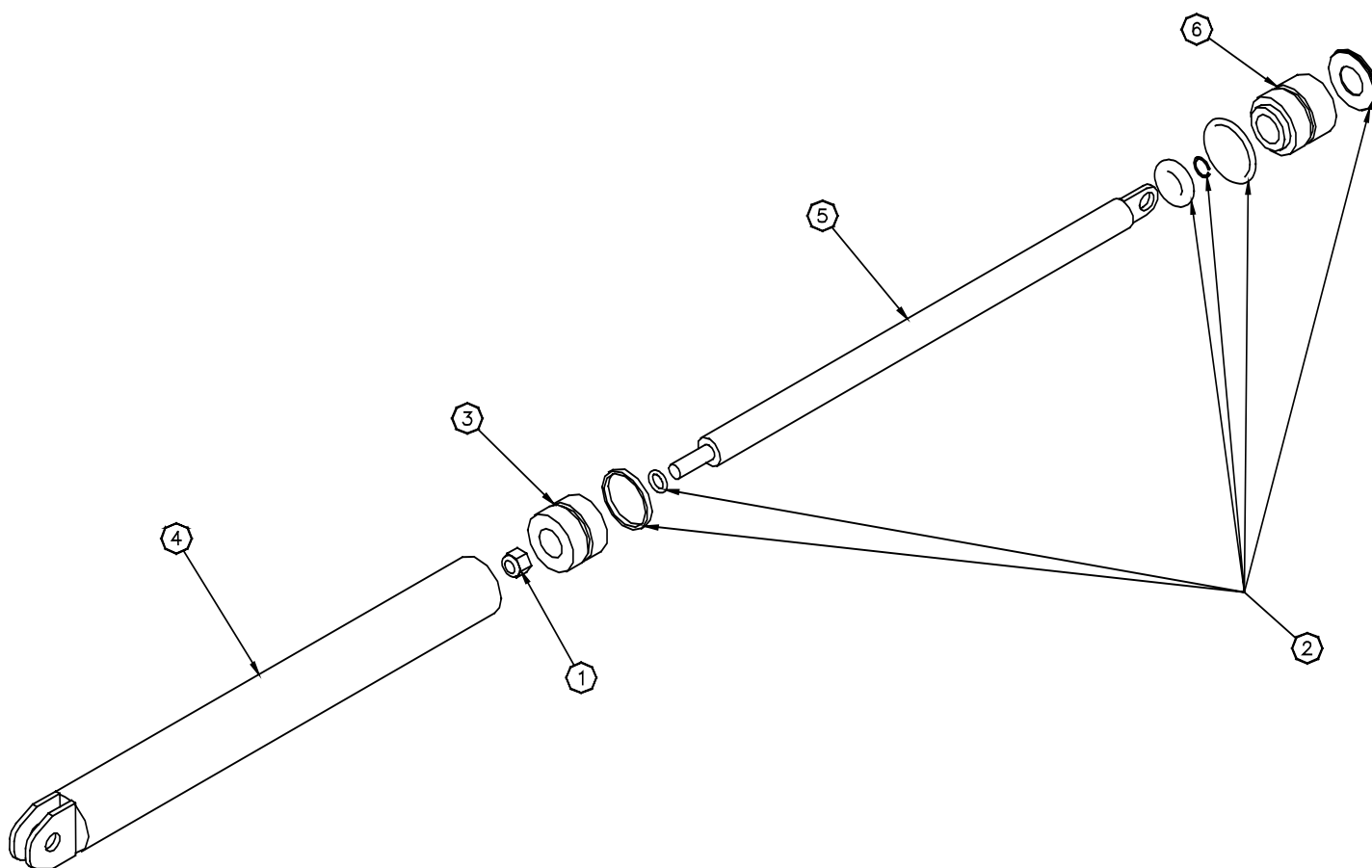
### 5.3 Motor Hydraulics

| Item | Part No. | Description                    | Quantity |
|------|----------|--------------------------------|----------|
| 1    | 30087    | Hyd, Motor                     | 1        |
| 2    | 90282    | Hyd, Hose, 3/8x179, 8MP        | 2        |
| 3    | 30209    | Hyd, Fit, Pioneer, Male, 8FP   | 2        |
| 4    | 32017    | Hyd, Fit, Adapter, 10MB-8FP    | 2        |
| 5    | 32975    | Hyd, Valve, Control, Flow, 8FP | 1        |
| 6    | 32082    | Hyd, Fit, Adapter, 8MP-8MP     | 1        |



**5.4 Cylinder 4 x 36, 2" Rod**

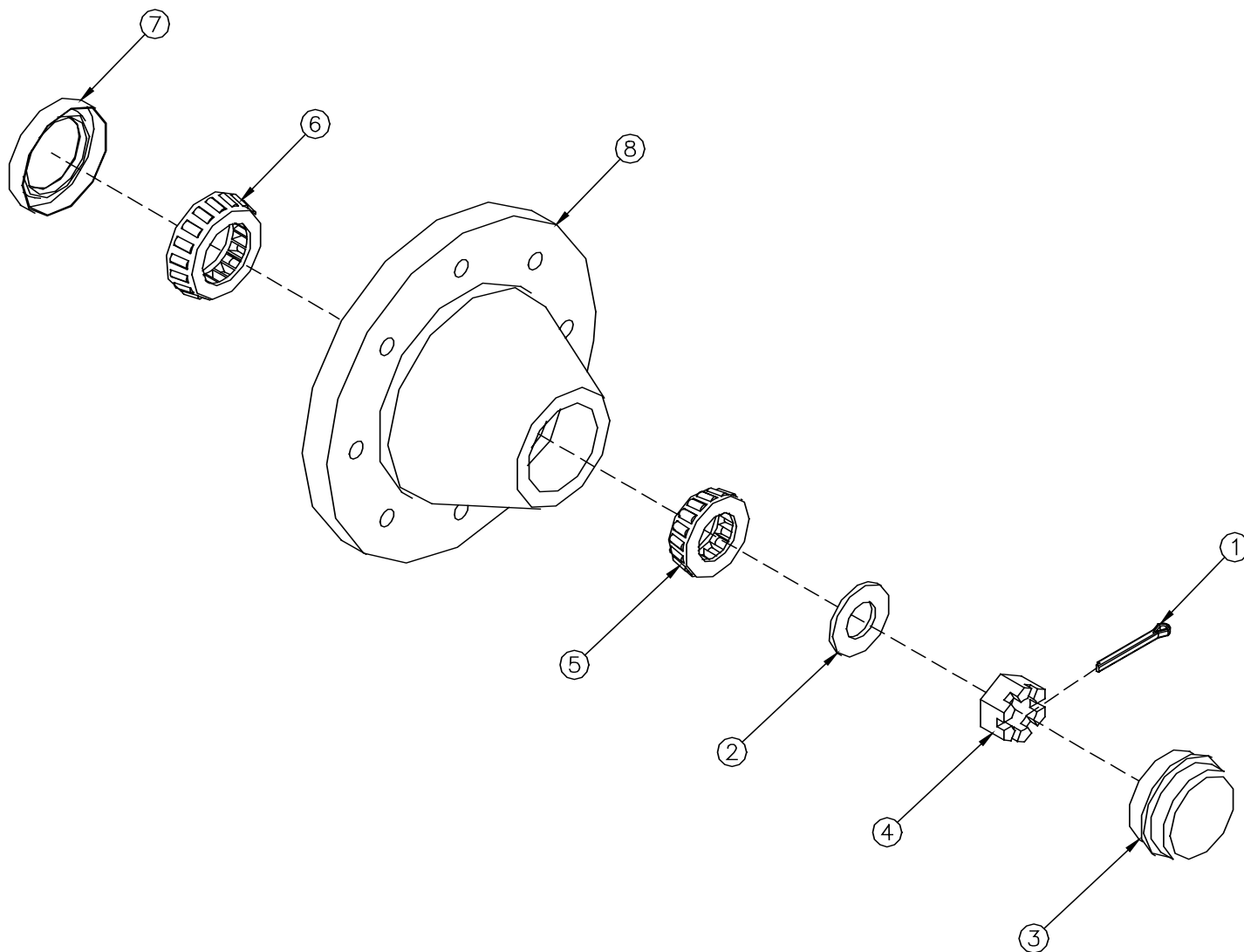
| Item | Part No. | Description                  | Quantity |
|------|----------|------------------------------|----------|
| 1    | 30502    | Nut, Lock, 1.00 – 14 UNS     | 1        |
| 2    | 30503    | Hyd, Sealkit, 4x36, 2rod     | 1        |
| 3    | 30504    | Hyd, Cyl, Piston, 4x1        | 1        |
| 4    | 30505    | Hyd, Cyl, Tube, 4x36         | 1        |
| 5    | 30506    | Hyd, Cyl, Shaft, 40/45/50-36 | 1        |
| 6    | 30507    | Hyd, Cyl, Head, 4x2          | 1        |



## **6.0 Wheels**

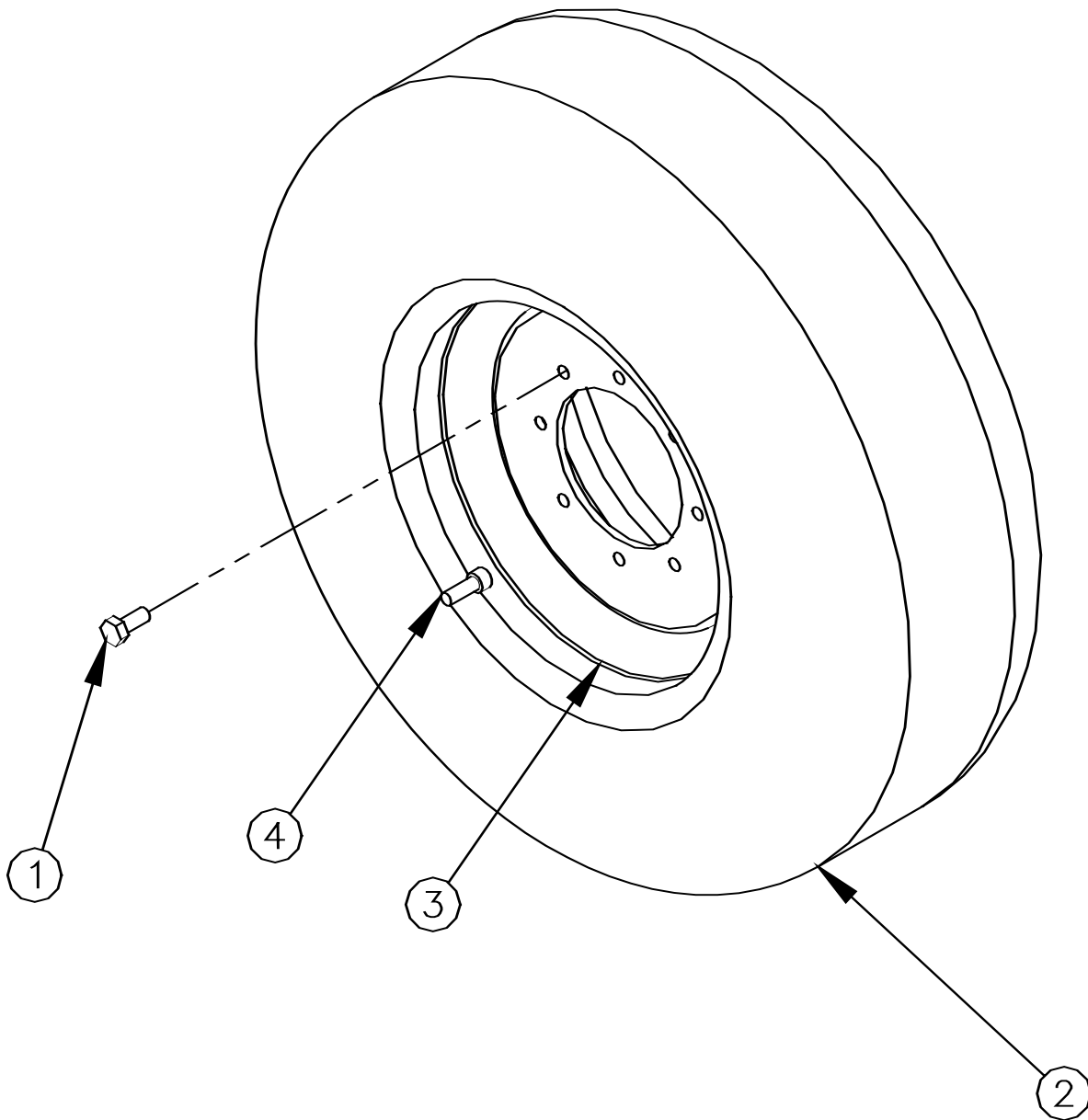
### **6.1 Hub**

| Item | Part No. | Description             | Quantity |
|------|----------|-------------------------|----------|
| 1    | 31183    | Pin, Cotter, 3/16" x 2" | 1        |
| 2    | 30223    | Washer, Flat, 1" SAE    | 1        |
| 3    | 32269    | Cap, Dust               | 1        |
| 4    | 32297    | Nut, Slotted, 1"        | 1        |
| 5    | 32300    | Bearing, Outer          | 1        |
| 6    | 32305    | Bearing, Inner          | 1        |
| 7    | 32306    | Seal, Grease            | 1        |
| 8    | 32312    | Hub, H614               | 1        |



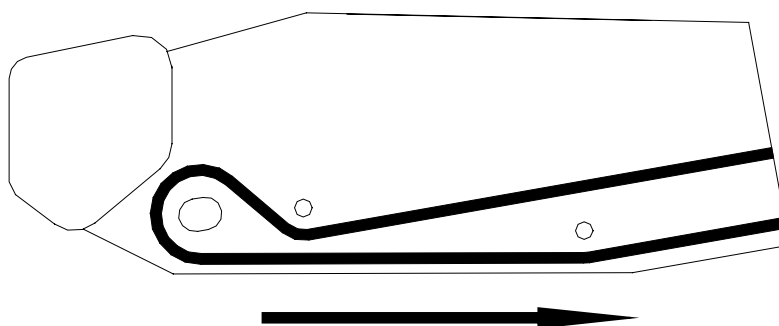
## 6.2 Wheel Assembly

| Item | Part No. | Description                               | Quantity |
|------|----------|-------------------------------------------|----------|
| 1    | 32301    | Susp, Wheel, Bolt, 9/16 x 1 1/4           | 6        |
| 2    | 45226    | Susp, Tire, 12.5L-15FI                    | 1        |
| 3    | 45227    | Susp, Wheel, 15 x 10 LB, 1.12 Off, 6 Bolt | 1        |
| 4    | 92005    | Susp, Stem, Valve                         | 1        |



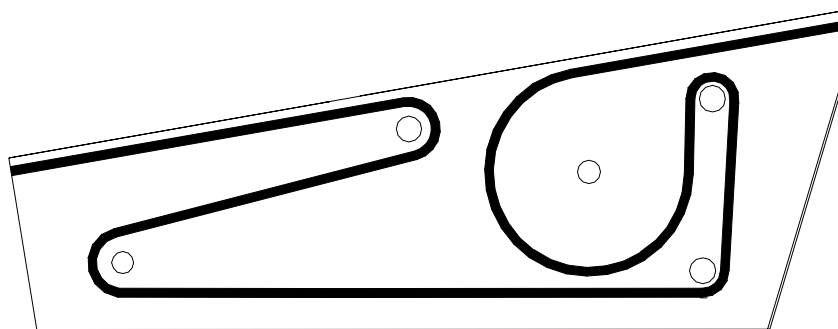
## **7.0 Belts**

### **7.1 Intake Belt Set-up**



**Direction of Belt Installation**

### **7.2 Drive Belt Set-up**



**Direction of Belt Installation**

### 7.3 Belt Replacement Parts

| Item | Part No. | Description          | Quantity |
|------|----------|----------------------|----------|
| 1    | 31634    | Belt, Splice         | 1        |
| 2    | 31697    | Belting, Rubber, 15" | 1        |

## **8.0 Specifications**

|                     |                      |
|---------------------|----------------------|
| Weight              | 4250 lbs.            |
| Total Length        | 85'                  |
| Total Width         | 12'                  |
| Maximum Height      | 40'                  |
| Transport Height    | 13'6"                |
|                     |                      |
| Horsepower Required | 80 + Horsepower      |
| Hydraulic Outlets   | 3                    |
| Hydraulic Pressure  | 2000 psi.(13790 KPa) |