



# **ROCK PICKER 250**

**OPERATORS MANUAL  
& PART LIST**



## Contents

<b>SECTION 1</b>	<b>PAGE</b>
INTRODUCTION & MANUAL INFORMATION	<b>1</b>
PRE-DELIVERY INSPECTION / NOTES	<b>3</b>
SPECIFICATIONS	<b>4</b>
SERVICE AND WARRANTY INFORMATION	<b>6,7</b>
SAFETY SUGGESTIONS	<b>8,9</b>
DECAL LOCATIONS	<b>10,11</b>
MAINTENANCE / GREASE LOCATIONS	<b>12,13</b>
OPERATING NSTRUCTIONS	<b>14-16</b>
GRADE CHART	<b>17</b>
TORQUE CHART	<b>18</b>

<b>SECTION 2</b>	<b>PAGE</b>
PARTS	<b>1-18</b>



# SECTION 1



***Thank you for making the decision to purchase a RITE WAY***

We are pleased to welcome you as an owner of a product from **RITE WAY MFG.** This product is the result of years of agricultural and engineering experience, and is built to give you many years of successful operating service.

For the best efficiency and smoothest operation of your **Rock Picker**, we have provided this Owners Manual. Its preparation is the result of years of experience gained in field testing and normal usage of this and similar implements. We urge you to carefully study this manual so that it will give you a thorough understanding of your **Rock Picker** before operation. We also urge your care of this manual so that it will be available for future reference when needed. If your manual should be lost, damaged or destroyed, a new copy can be purchased from your **RITE WAY MFG.** dealer. We will also be happy to answer any questions that you might have regarding the use or care of this product.

***Rite Way Manufacturing Co. Ltd.***

***P.O. Box 328***

***Imperial, Saskatchewan, Canada***

***S0G 2J0***

***PH: 306-963-2180***

***Fax: 306-963-2660***

***Web Site: [www.ritewaymfg.com](http://www.ritewaymfg.com)***

***Email: [info@ritewaymfg.com](mailto:info@ritewaymfg.com)***

## Manual Details

<b>Unit Model Number</b>	<b>RR-250-ST-Rock Picker</b>
<b>Manual Revision Number</b>	<b>Revision 1.1</b>
<b>Manual Revision Date</b>	<b>1/10/2019</b>
<b>Manual Serial Number Range</b>	<b>Serial # 18-250-966 - Current</b>
<b>Previous Serial Number Range</b>	<b>Serial # 15-250-917 - 17-250-965</b>

The area below is provided for the owner / end-user to make notes regarding the equipment.

## Owner / Equipment Information

<b>Serial Number of Unit</b>	
<b>Date of Purchase</b>	
<b>Dealer Name</b>	
<b>Dealer Address</b>	
<b>Dealer Phone Number</b>	
<b>Salesman Name</b>	
<b>Salesman Phone Number</b>	
<b>Notes</b>	



## Pre-delivery Inspection Check List

### General

- Remove wrapping and wash unit, removing all road debris. (Road salt, mud, snow, etc.)
- Inspect paint, decals and general appearance of unit.
- Verify that the owners manual is in the manual storage tube.
- Verify 'SLOW MOVING VEHICLE' sign (SMV) is on unit (if applicable)
- Verify that jacks are with the unit and function properly.
- Check wheel bolts for proper torque, proper wheel size and all tires are the same make
- Check for proper tire pressure (PSI).
- Verify that the wheel hubs are lubricated.
- Verify that locking pins and / or ram locks are in place.
- Lubricate all components as per operators manual recommendation.
- Check that all bolts and fasteners are at the proper torque specifications.

**(NOTE: All cap screws that have lock nuts join moving pieces should not be tightened completely, they must allow movement. i.e. Spring pressure kits, rock shaft connector, draft arm, etc.**

- Check sprocket alignment and chain tension. (If applicable)
- Check locking collars and set screws for proper torque. (If applicable)
- Verify operation of lights. (If applicable)
- Verify the unit moves 'IN' and 'OUT' of transport without any binding.
- Verify that tires are tracking properly when in transport mode.

### Hydraulics

- Insure that all hydraulic hoses and lines are routed properly and secured.
- Verify that all hydraulic fittings / hoses are secure and there are no oil leaks.
- Inspect all cylinders for leakage and the cylinder shaft for rust, pits, or scratches.
- Verify operation of all hydraulic functions - Cycle hydraulic cylinders to remove air from the system.

### Delivery

- Verify that 'The customer is aware of warning decals and proper jack placement for transport.'
- Verify that 'The customer is aware of proper operation and transportation of the unit'.
- Verify that 'The customer has received an operators manual'.
- Explain all maintenance and service intervals to the customer (From operators manual).
- Advise the customer of grease zerk locations and maintenance schedules.
- Level the unit per operators manual and instruct the customer on the proper procedures.
- Please attach this Pre-Delivery Inspection Check Sheet to Warranty Registration Form.**

Date: \_\_\_\_\_ Signature of Technician who performed the inspection \_\_\_\_\_

## Specifications

### Standard Equipment:

- Multi-position Hydraulic Swing Hitch
- 10" Side Wind Parking Jack
- Safety chains

<b>Drive</b>	<i>Variable Hydraulic Drive</i>
<b>Reel</b>	<i>2 Bat</i>
<b>Reel Chain</b>	<i>#80</i>
<b>Weight</b>	<i>2,931 lbs / 1,330 kg</i>
<b>Picking Width</b>	<i>50" / 127 cm</i>
<b>Minimum Rock Diameter</b>	<i>2" / 5 cm</i>
<b>Maximum Rock Diameter</b>	<i>24" x 45" / 61 cm x 114 cm</i>
<b>Bucket Capacity</b>	<i>1.25 cu yd / 0.96 cu meter</i>
<b>Reel &amp; Bucket Control</b>	<i>Electric over Hydraulic</i>
<b>Weight Capacity</b>	<i>3,600 lbs / 1,650 kg</i>
<b>Dumping Height</b>	<i>38" / 0.97 m</i>
<b>Tires</b>	<i>12.5L x 15-6 ply</i>
<b>Hitch</b>	<i>Multi-Position, Hydraulic Swing</i>
<b>Hydraulic Requirements</b>	<i>15 gal/min. @ 1200-1500 PSI 45-57 L/min @ 83-103 bar</i>

**Notes**

Large empty rectangular box for notes.

## Service & Warranty Policy

Rite Way Manufacturing Co. Ltd. (hereafter referred to as Rite way) warrants each new machine to be free from defects in materials and workmanship for a period of one (1) year from date of purchase under normal agricultural use and service. In addition, Rite Way will supply at no charge, (F.O.B Rite Way Factory) any part that has failed within the 2nd year. Rite Way's obligation under this warranty is limited to the repair or replacement of any defective parts of the equipment at its own discretion.

**Any** alterations, modifications or additions done to a finished product will **void this warranty** unless prior written permission from Rite Way is obtained.

Items that are not manufactured by Rite Way are covered by the warranty of the supplier of these items. We will therefore extend, without assuming any responsibility, any warranty given to us by our suppliers.

This warranty shall-not apply to any machine, that in the company's judgment has be subjected to misuse, negligence or accident. In no event shall the owner be entitled to recover costs for incidental, special or consequential damages such as, but not limited to; Loss of crop, loss of profit or revenue, other commercial losses, inconvenience or rental costs.

This warranty shall not apply unless Rite Way or its designated dealer is promptly notified of claimed defects and the allegedly defective part is held for inspection.

Repair parts purchased for machines 'Out of Warranty', are warranted to be free from defects in material and workmanship under normal use and service for a period of ninety (90) days from the date of delivery to the customer.

The warranty shall only become valid when delivery notification for warranty is received by Rite Way within 20 days of the completion of sale.

**OWNER'S / USERS OBLIGATION:** It is the responsibility of the user to read the Operators Manual and understand the safe and correct operating procedures as it pertains to the operation of the product, and to lubricate and maintain the product according to the maintenance schedule in the Manual.

The user is responsible for inspecting the machine, and for having parts repaired or replaced when continued use of the product could cause damage or excessive wear to any other parts. It is the user's responsibility to deliver their machine to a Rite Way dealer for service or replacement of defective parts which are covered by the standard warranty.

Rite Way **will not** by held responsible for charges such as transportation, fuel, lodging when a dealer / dealer representative travels to a customer location for warranty or inspection.

## **Service & Warranty Claim Procedure**

1. All claims must be handled through a dealer / distributor. All claims must be submitted on a properly completed warranty claim form within 30 days of the date of repair.
2. A warranty registration claim form must be on file at Rite Way Mfg. to validate a warranty claim.
3. Defective parts are to be held at the dealer / distributor's place of business until the warranty claim form has been processed. Rite Way will advise when parts can be released.
4. Parts that require inspection by Rite Way personnel must be accompanied by a Return Goods Form number, and must be sent by pre-paid freight. Rite Way will refund pre-paid freight charges on any items determined to be defective.
5. Rite Way will not assume responsibility for repairs or expenses incurred without authorization. Warranty labour in excess of \$150.00 must be authorized before such work is performed and photographs before and after repairs are required.
6. Warranty labour is to be claimed on the warranty claim form, only if the warranty labour was performed by the dealer. Travel time is not covered by warranty and should not be included. Rite Way reserves the right to adjust or allocate labour times and values based on its experience.
7. It is the responsibility of the dealer to ensure that the warranty registration forms are properly completed and returned to Rite Way Mfg., Imperial, SK.

## Safety Warnings (General)

1. Read the manual thoroughly and understand before operating or working on the machine.
2. Study all safety and warning decals on the implement.
3. Most accidents occur because of neglect or carelessness.
4. Do not allow riders on the tractor or implement during operation.
5. Do not allow children on or near the machine.
6. Connect the implement hitch to the tractor before operating the hydraulic system.
  - **NOTE: Be aware of any hydraulic leaks.**
7. Always throttle the tractor down and use caution when connecting the implement to the tractor hitch.
  - **NOTE: Never stand between the tractor and implement.**
8. Lower the hitch jack onto firm ground and chock the tires when un-hooking implement from tractor.
  - **NOTE: Ensure the unit is on level ground prior to un hooking tractor.**
9. Exercise extra caution when working on hillsides or near ditches.
10. Ensure that the tractor draw-bar is pinned during transport.
11. Maximum speed while transporting the Unit is 18 mph (29 km).
12. Do not work on this machine when hydraulic system is under pressure.
13. Observe all laws and regulations when transporting unit on public roads.
14. Do not transport this machine on public roads unless all safety & maintenance checks have been completed.
15. Ensure that safety chains are in secured prior to transporting.

**This machine will provide years of trouble-free & safe operation IF all maintenance and safety instructions are followed.**

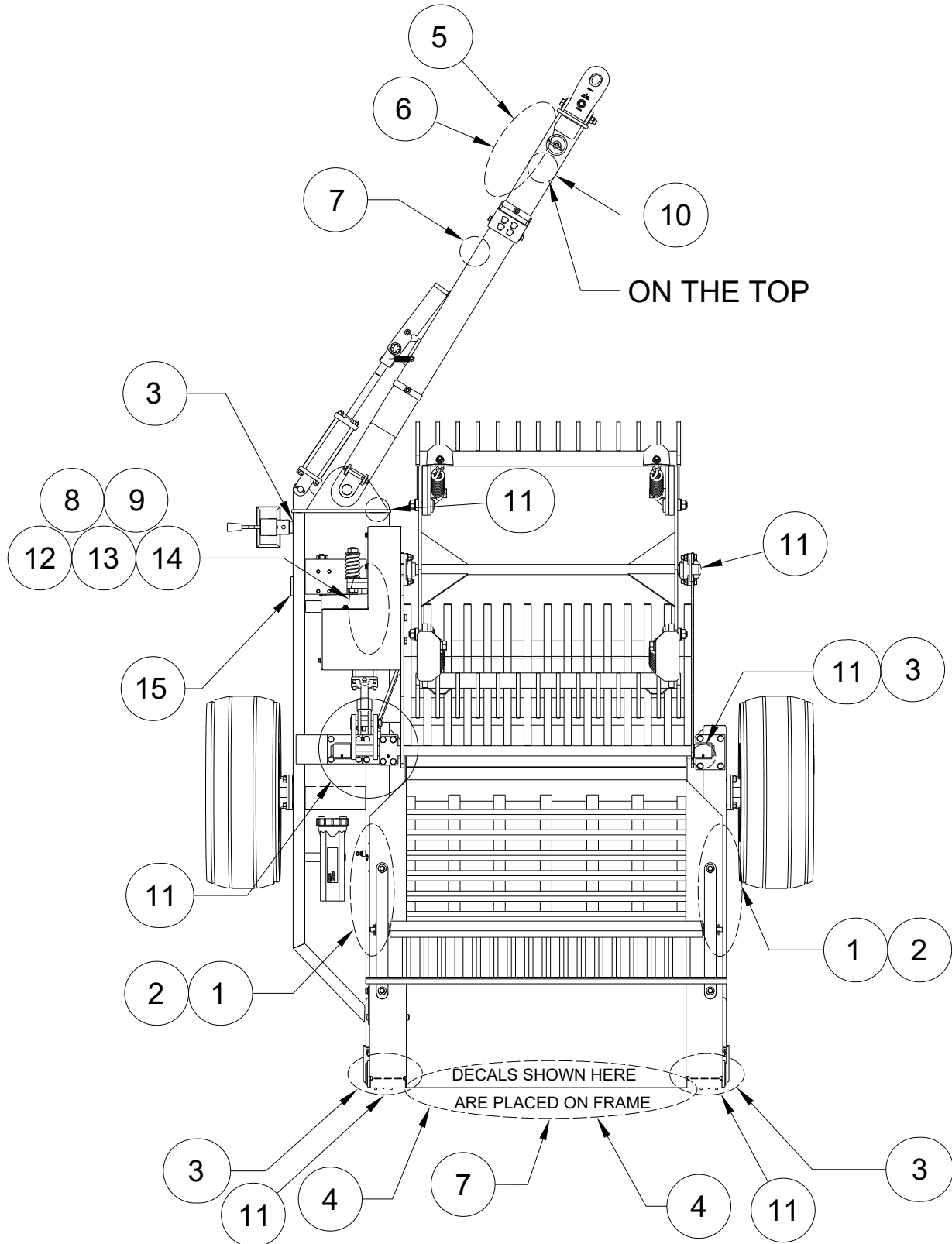
## Safety Warnings (Equipment Specific)

1. Read manual thoroughly before operating or working on the machine.
2. Study all warning decals on implement.
3. Most accidents occur because of **neglect** or **carelessness**.
4. Only the operator should be on the tractor during operation.
5. Connect the ROCK PICKER to the tractor before operating hydraulics.

**NOTE: Be aware of hydraulic oil leaks.**

6. Always throttle the tractor down and use caution in attaching the machine to the tractor. Never stand between the implement and the tractor.
7. Be very cautious when unhooking the tractor and the ROCK PICKER . The ***parking jack must be securely lowered on firm ground (on blocking with tires blocked)*** or the hitch will rise abruptly causing serious injury and other damage.
8. Proceed carefully when performing maintenance on the machine. The drum should be on the ground; however, if the nature of the work requires that the implement be in transport position, be sure to use the cylinder lock up.
9. The hydraulic cylinder should be locked up during transport
- 10. Limit towing to a maximum of 25 mph (40 km/h).**
11. Exercise caution when working on hillsides or near ditches.
12. Do not work on this machine when hydraulic system is under pressure.
13. Observe all laws and regulations when transporting unit on public roads.
14. Do not transport this machine on public roads unless all safety & maintenance checks have been completed.

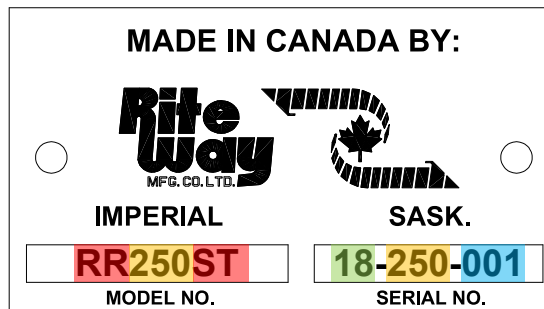
**Decals**





## Decals

Item #	Part #	Qty	Description
1	060-0121	2	Rite Way Mfg. (Large Decal, White)- <u>On Side Of The</u>
2	060-0072	2	RR 250ST (Large Decal, White)- <u>On The Side Of The</u>
3	060-0009	4	Amber Reflector - <u>On The Frame</u>
4	060-0022	2	Red Reflector - <u>On The Rear Of The Frame</u>
5	060-0015	1	Important - Block Wheel Before Unhooking....
6	060-0028	1	Warning – Lower or Block elevated comp....
7	060-0122	2	Rite Way Mfg. (Medium Decal, White, 13" x 4")
8	060-0038	1	Attention - Insure That All Cylinder Shafts....
9	060-0063	1	Caution - Do Not Dump Hopper....
10	060-0011	1	Caution - Escaping Fluids Hazard....
11	060-0046	7	Grease Every 8 Hours
12	060-0067	1	Warning - Check and Tighten Hub And Wheel Bolts
13	060-0037	1	Warning - This Machine Can Kill...(Big Yellow)
14	060-0069	1	Warning - Rotating Part Hazard....
15	060-0034	1	Serial Number Plate



UNIT SERIES  
UNIT SIZE  
MODEL YEAR  
UNIT NUMBER

## Maintenance

### General

- Repack the wheel hubs after the first 500 travel miles; then yearly thereafter.
- Visually inspect the wheel bolts for tightness each day. Riteway torque recommendation to 110 ft - lbs after the first few hours of operation and frequently there after, (manufactures torque recommendations 90 to 131 ft - lbs).
- Requires 3-1/2 to 4-1/2 HP per foot.

### Every 8 Hours (Daily)

- Grease all pins and knuckles. (See page 13 for detailed diagram).

### Every 100 Hours (Monthly)

- Visually inspect hydraulic hoses & fittings for leaks or damage.
- Inspect lighting system and electrical harness for damage

### Annually

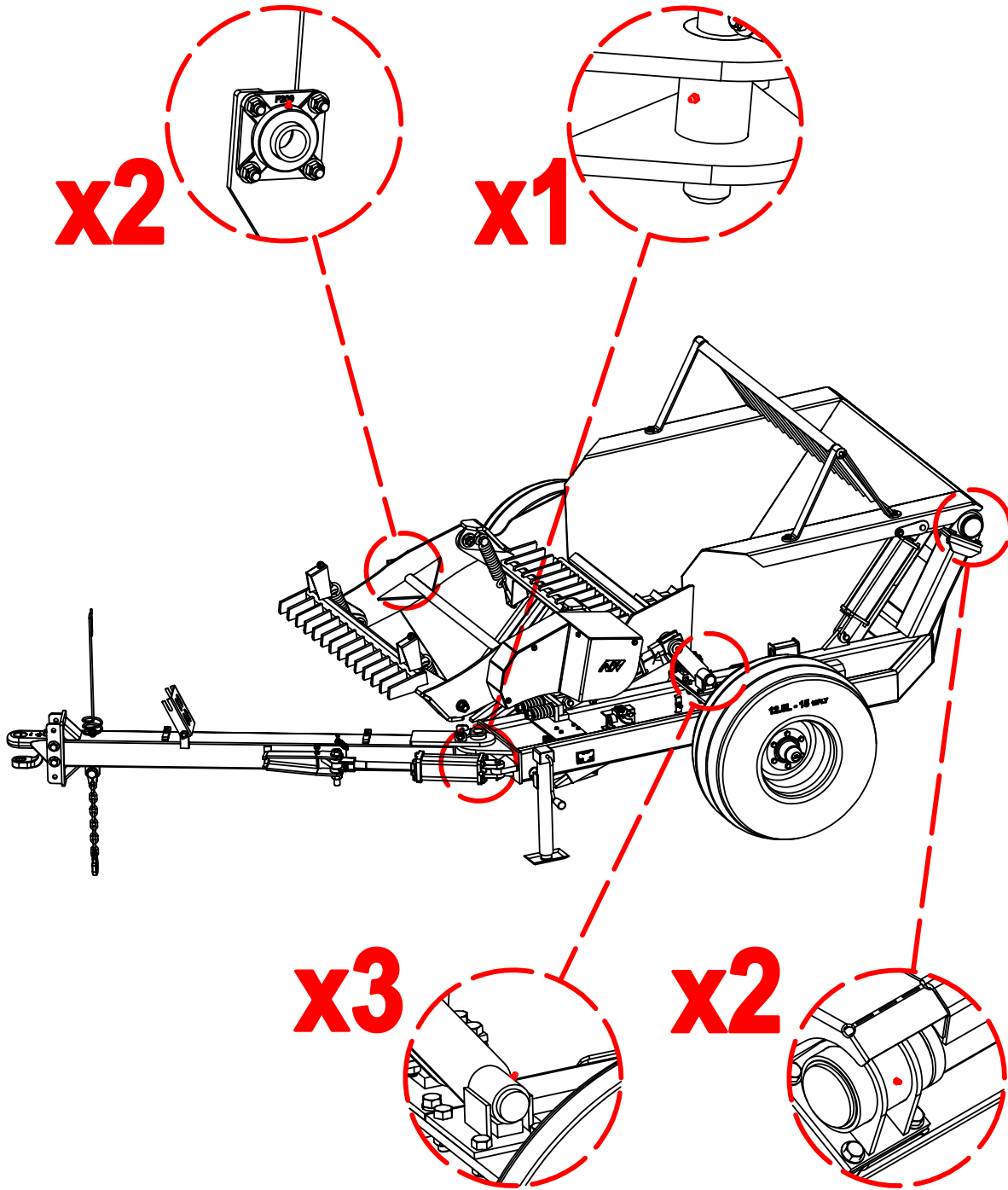
- Inspect wheel bearings / hubs and grease.
- Check wheel bolts and re-torque.
- Check tire pressure, follow tire manufactures inflation recommendations.
- Visually inspect unit for loose, worn or damaged components.

### Storage

- Coat any exposed cylinder shafts with thick oil or grease.
- Ensure that parking jacks are situated on firm ground.
- **NOTE: If jack pads sink into ground, it will be difficult to hook up unit.**
- Lock all applicable safety pins into place.

**Maintenance**

**Grease Locations**



## Operating Instructions

Always choose a level spot when manually or hydraulically moving the unit into or out of transport position.

### Preparation for Picking Rocks

1. Hook rock picker up to tractor. Connect the rotary switch to a 12V power source. Connect the white wire to the positive and the black wire to the negative.
2. Connect the hydraulic hoses to the tractor:
  - **Large hoses are for the Reel Motor.**
  - **Small hoses are for the Rake/Bucket and hitch.**
3. Remove the safety pin and swing the hitch pole into field position, either manually or hydraulically. The hitch must be swung fully into field position and then pinned into place. For the hydraulic hitch, the cylinder holds the hitch in place.

**Note: If this isn't done correctly, the reel may contact the hitch.**

4. Adjust the Reel RPM to ensure the proper picking speed.
  - To pick 2" – 6" rocks - 45 RPM
  - To pick 6" – 12" rocks - 35 RPM
  - To pick 12" – 16" rocks - 25 RPM
  - To pick 16" – 24" rocks - Shut off rotary reel. Pick up stone with rake. Lift approximately half way up, turn on rotary reel to push rocks to the back of the bucket.

**Reel speed can be varied by adjusting the Flow Control Valve (See Figure A). This can be done adjusting the flow controls in the cab of the tractor.**

**\*\*IF THE REEL IS MOVING TOO FAST, DAMAGE TO THE BATS WILL RESULT. \*\***



**FIGURE A -  
Flow Control Valve**

## Operating Instructions (cont)

5. Move the 3 position rotary switch to the *Rake* position in order to pick stones. See Figure B.

**ONLY THOSE ROCKS ON THE SURFACE CAN BE PICKED. IF THE ROCKS ARE DUG UP FROM UNDER THE GROUND, IT WILL CAUSE DAMAGE TO THE UNIT.**

6. To dump the unit, the rake must be fully lowered to the ground. Then, switch over to the *Bucket* position. See Figure B.

**WARNING: DO NOT ATTEMPT TO DUMP IF RAKE IS IN UPRIGHT POSITION.**

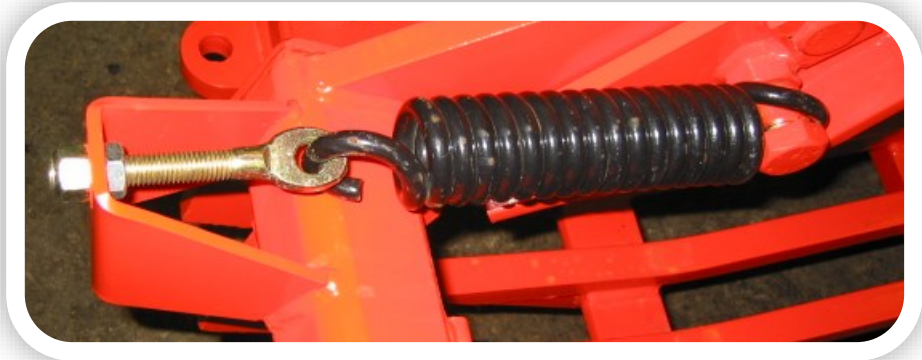
7. To use the hydraulic hitch, flip the rotary switch to the *Hitch* position. Use tractor hydraulics to position hitch in desired position. See Figure B.

8. The actuation switch is used to keep the bucket from dumping if the rake is too high. The switch is set to allow flow of the hydraulic system if it is activated by the rake. This allows the bucket to rise for dumping. If this does not occur then the switch must be reset so not to let the bucket rise if the switch isn't activated. This means the rake must be in the lowest position prior to the bucket going up to dump.

**NOTE: After some use the drive chain may stretch. Loosen the nuts and bolts on the motor mount to adjust the chain, there should be 1/2" of deflection, then re-tighten the nuts and bolts. The same interval of adjustment applies to each of the bat springs (See Figure C).**



**FIGURE B - Rotary Switch**

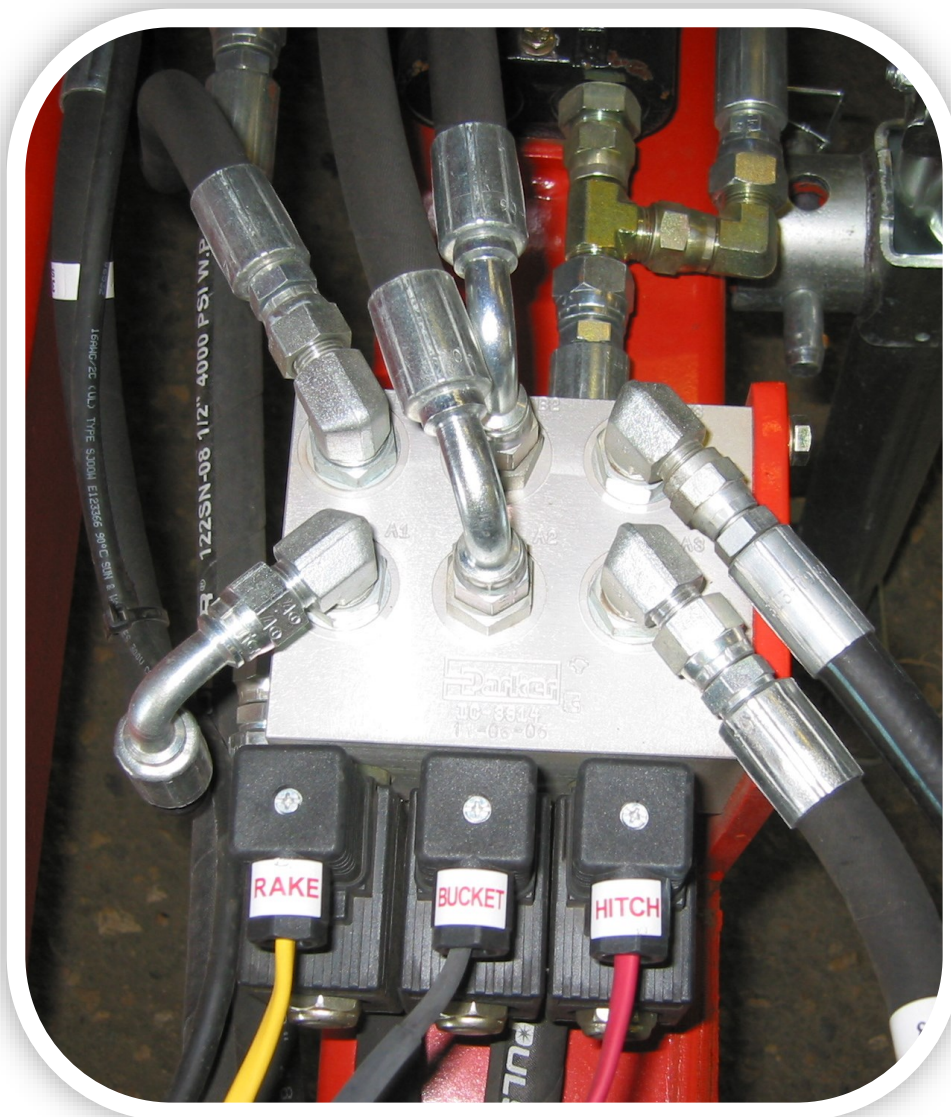


**FIGURE C - Bat Spring**

## Operating Instructions (cont)

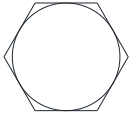
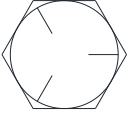
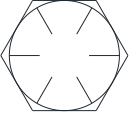
### PARKER ELECTRIC SELECTOR MANIFOLD

12-VOLT – ½” ORB (1C-3914)



**FIGURE D—Manifold top view**

**Grade Chart**

Specification	Material	Size Range (inches)	Min. Proof Strength (psi)	Min. Tensile Strength (psi)	Min. Yield Strength (psi)	Grade Identification Marking
Grade 1	Low or Medium Carbon Steel	1/4 to 1-1/2	33,000	60,000	36,000	
Grade 2		1/4 to 3/4 7/8 to 1-1/2	55,000 33,000	74,000 60,000	57,000 36,000	
Grade 5	Medium Carbon Steel: Quenched and Tempered	1/4 to 1 1-1/8 to 1-1/2	85,000 74,000	120,000 105,000	92,000 81,000	
Grade 8	Medium Carbon Alloy Steel: Quenched and Tempered	1/4 to 1-1/2	120,000	150,000	130,000	

# Torque Chart

Nominal Thread Size	Grade 2		Grade 5		Grade 8	
	Clamping Load	Tightening Torque	Clamping Load	Tightening Torque	Clamping Load	Tightening Torque
<b>Coarse Thread</b>						
<b>1/4-20</b>	1,300 lbs	65 in-lbs	2,000 lbs	100 in-lbs	2,850 lbs	143 in-lbs
<b>5/16-18</b>	2,150 lbs	134 in-lbs	3,350 lbs	210 in-lbs	4,700 lbs	305 in-lbs
<b>3/8-16</b>	3,200 lbs	20 ft-lbs	4,950 lbs	31 ft-lbs	6,950 lbs	44 ft-lbs
<b>7/16-14</b>	4,400 lbs	30 ft-lbs	6,800 lbs	50 ft-lbs	9,600 lbs	70 ft-lbs
<b>1/2-13</b>	5,850 lbs	49 ft-lbs	9,050 lbs	75 ft-lbs	12,800 lbs	107 ft-lbs
<b>9/16-12</b>	7,500 lbs	70 ft-lbs	11,600 lbs	109 ft-lbs	16,400 lbs	154 ft-lbs
<b>5/8-11</b>	9,300 lbs	97 ft-lbs	14,500 lbs	151 ft-lbs	20,300 lbs	211 ft-lbs
<b>3/4-10</b>	13,800 lbs	173 ft-lbs	21,300 lbs	266 ft-lbs	30,100 lbs	376 ft-lbs
<b>7/8-9</b>	11,425 lbs	166 ft-lbs	29,435 lbs	430 ft-lbs	41,550 lbs	606 ft-lbs
<b>1-8</b>	15,000 lbs	250 ft-lbs	38,600 lbs	640 ft-lbs	54,540 lbs	900 ft-lbs
<b>Fine Thread</b>						
<b>1/4-28</b>	1,500 lbs	75 in-lbs	2,300 lbs	115 in-lbs	3,250 lbs	163 in-lbs
<b>5/16-24</b>	2,400 lbs	150 in-lbs	3,700 lbs	230 in-lbs	5,200 lbs	325 in-lbs
<b>3/8-24</b>	3,600 lbs	23 ft-lbs	5,600 lbs	35 ft-lbs	7,900 lbs	50 ft-lbs
<b>7/16-20</b>	4,900 lbs	36 ft-lbs	7,550 lbs	55 ft-lbs	10,700 lbs	78 ft-lbs
<b>1/2-20</b>	6,600 lbs	55 ft-lbs	10,200 lbs	85 ft-lbs	14,400 lbs	120 ft-lbs
<b>9/16-18</b>	8,400 lbs	79 ft-lbs	13,000 lbs	112 ft-lbs	18,300 lbs	172 ft-lbs
<b>5/8-18</b>	10,600 lbs	110 ft-lbs	16,300 lbs	170 ft-lbs	23,000 lbs	240 ft-lbs
<b>3/4-16</b>	15,400 lbs	193 ft-lbs	23,800 lbs	298 ft-lbs	33,600 lbs	420 ft-lbs
<b>7/8-14</b>	12,610 lbs	184 ft-lbs	32,480 lbs	473 ft-lbs	45,855 lbs	668 ft-lbs



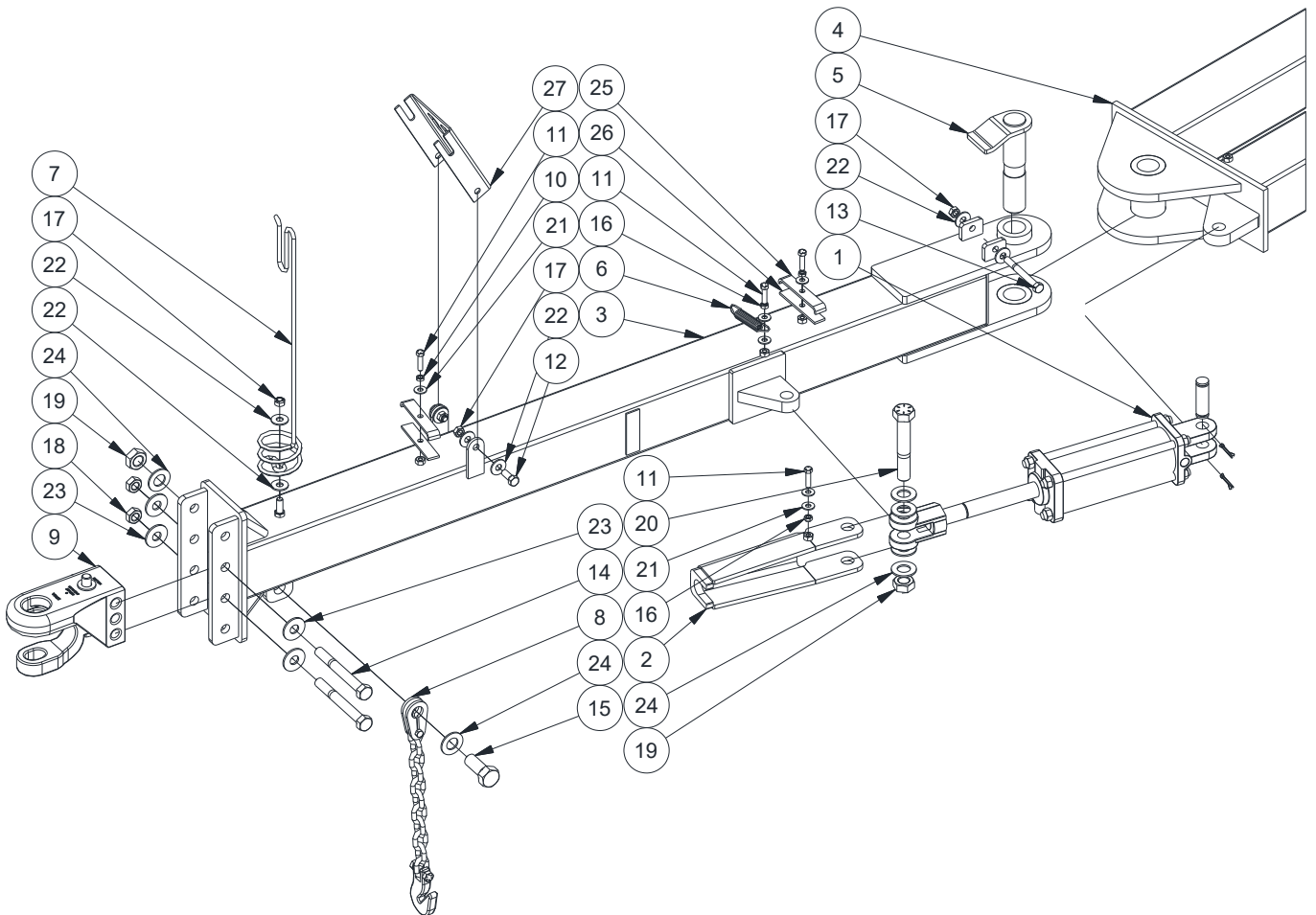
# SECTION 2





**Parts Details**

**Hitch Pole**



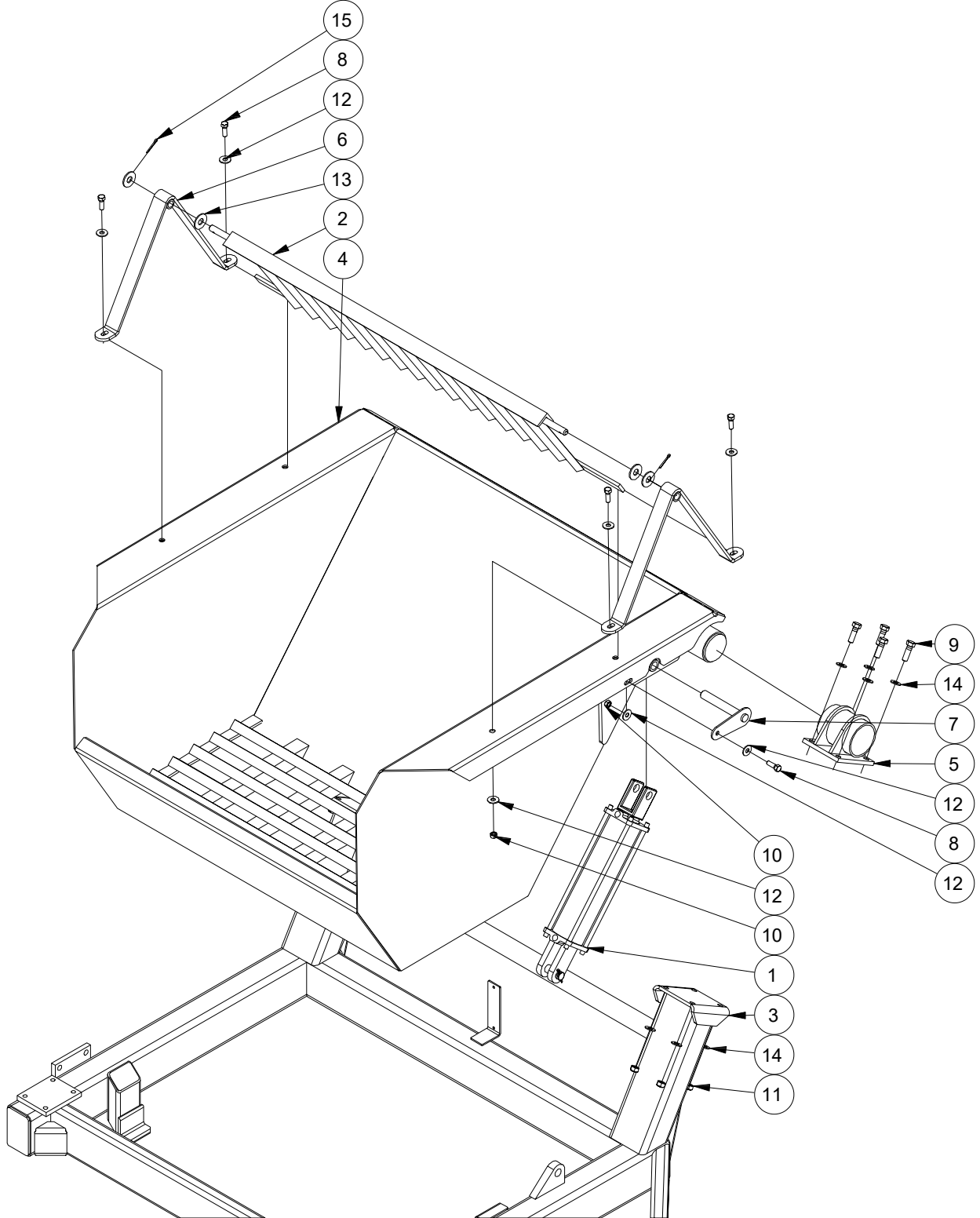
## Parts Details

### Hitch Pole

Item #	Part #	Description
1	030-5989	3-1/2" X 8" Hydraulic Cylinder, 3/4 ORB
2	105-1124	Lockup, Hitch Cylinder
3	110-2517	Hitch Pole Weldment
4	110-3502	Main Frame Weldment
5	123-3210	Hitch Pivot Pin
6	403-0269	Lockup Tension Spring
7	407-0003	24" Shepherd Hook Hose Standoff
8	409-9050	Safety Chain 20,000Lb, Clevis Mount
9	423-0012	Perfect Hitch C/W Clevis & Hardware
10	525-6106	Nut, Jam, Hex, Inch, Gr. 5, Yellow Zinc Plated
11	526-0613	Bolt, 3/8-16 UNC - 1.5, Gr.5, Full Thread, Yellow Zinc Plated
12	526-0810	Bolt, 1/2-13 UNC - 1.25, Gr.5, Yellow Zinc Plated
13	526-0836	Bolt, 1/2-13 UNC - 4.5, Gr.5, Yellow Zinc Plated
14	526-1252	Bolt, 3/4-10 UNC - 6.5, Gr.5, Yellow Zinc Plated
15	526-1620	Bolt, Hex, Inch, Gr. 5, Yellow Zinc Plated
16	526-6103	Nut, Stover Lock, 3/8-16 UNC, Gr.5, Yellow Zinc Plated
17	526-6105	Nut, Stover Lock, 1/2-13 UNC, Gr.5, Yellow Zinc Plated
18	526-6107	Nut, Stover Lock, 3/4-10 UNC, Gr.5, Yellow Zinc Plated
19	526-6109	Nut, Stover Lock, 1-8 UNC, Gr.5, Yellow Zinc Plated
20	530-1648	Bolt, 1-8 UNC - 6, Gr.5, Yellow Zinc Plated
21	550-5206	Washer, Flat, 3/8" - USS, Gr.5, Yellow Zinc Plated
22	550-5208	Washer, Flat, 1/2" - USS, Gr.5, Yellow Zinc Plated
23	550-5212	Washer, Flat, 3/4" - USS, Gr.5, Yellow Zinc Plated
24	550-5316	Washer, Flat, 1" - SAE, Gr.5, Yellow Zinc Plated
25	811-1020	5" Hose Clamp
26	811-1021	5" Backing Plate
27	835-1011	Tip & Chain Holder Small

**Parts Details**

**Main Frame & Bucket**

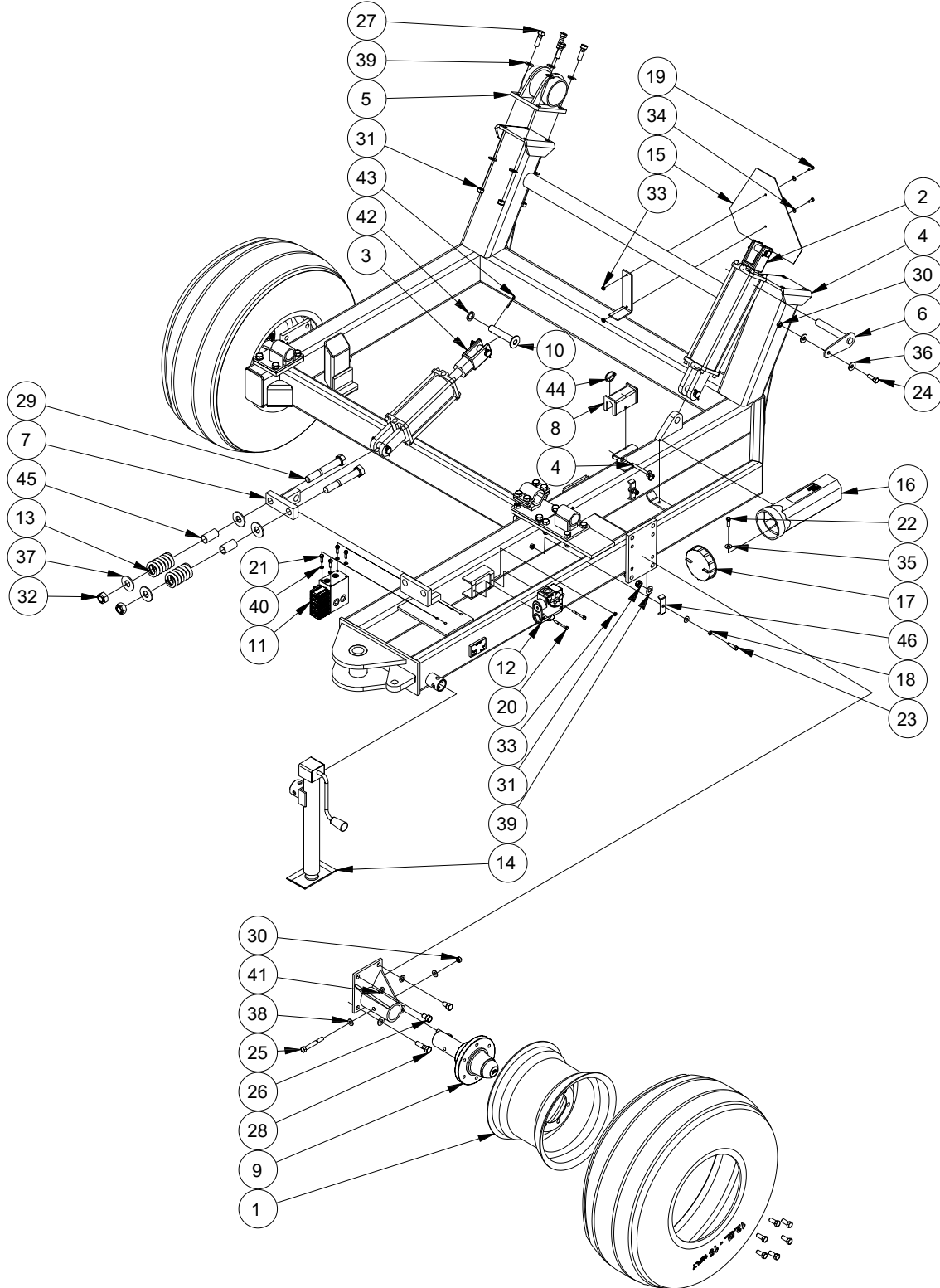


**Parts Details****Main Frame & Bucket**

<b>Item #</b>	<b>Part #</b>	<b>Description</b>
1	030-5938	3-1/2" X 14" Hydraulic Cylinder, 3/4 ORB
2	105-1126	Deflector Screen Weldment
3	110-2520	Rocker Picker Frame Weldment
4	110-2521	Bucket Weldment
5	110-2522	Bucket Bearing
6	110-2524	Deflector Mount Weldment
7	110-2525	Bucket Cylinder Pin Weldment
8	526-0812	Bolt, 1/2-13 UNC - 1.5, Gr.5, Yellow Zinc Plated
9	526-1016	Bolt, 5/8-11 UNC - 2, Gr.5, Yellow Zinc Plated
10	526-6105	Nut, Stover Lock, 1/2-13 UNC, Gr.5, Yellow Zinc Plated
11	526-6106	Nut, Stover Lock, 5/8-11 UNC, Gr.5, Yellow Zinc Plated
12	550-5208	Washer, Flat, 1/2" - USS, Gr.5, Yellow Zinc Plated
13	550-5212	Washer, Flat, 3/4" - USS, Gr.5, Yellow Zinc Plated
14	550-5310	Washer, Flat, 5/8" - SAE, Gr.5, Yellow Zinc Plated
15	556-0612	Cotter Pin - 3/16" X 1½" Plain

**Parts Details**

**Rake, Bat, & Reel**





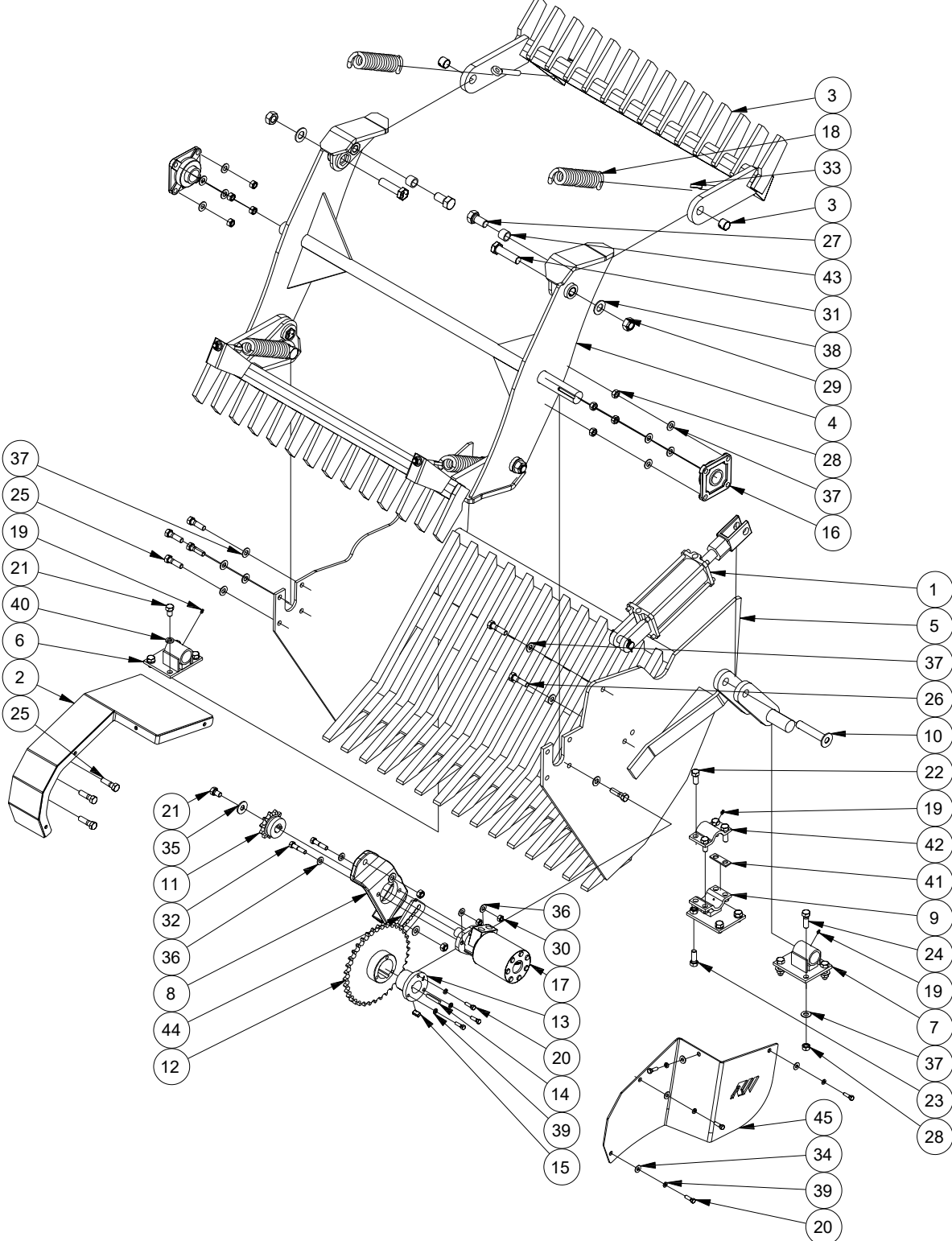
## Parts Details

### Rake, Bat, & Reel

Item #	Part #	Description
1	020-0112	12.5L X 15 Tire
2	030-5938	3-1/2" X 14" Hydraulic Cylinder, 3/4 ORB
3	030-5980	3-1/2" X 8" Hydraulic Cylinder, 3/4 ORB, With Stroke Control
4	110-2520	Rocker Picker Frame Weldment
5	110-2522	Bucket Bearing
6	110-2525	Bucket Cylinder Pin Weldment
7	112-2501	Shock Block Weldment
8	112-2518	Rake Cylinder Lock Up Weldment
9	120-1237	618 Hub & Spindle Assembly
10	123-2209	Rake Cyl. Pin
11	310-4038	Parker Selector Manifold
12	310-5010	Flow Control Valve
13	402-4027	Shock Spring
14	420-0132	10", 3000 Lbs. Side Wind Jack
15	424-0001	Slow Moving Sign (Smv)
16	426-0001	Manual Storage Tube
17	426-0002	Manual Storage Tube Cap
18	525-6106	Nut, Jam, Hex, Inch, Grade 5, Yellow Zinc Plated
19	526-0406	Bolt, 1/4-20 UNC - 0.75, Gr.5, Yellow Zinc Plated
20	526-0427	Bolt, 1/4-20 UNC - 2.5, Gr.5, Yellow Zinc Plated
21	526-0508	Bolt, 5/16-18 UNC - 1, Gr.5, Yellow Zinc Plated
22	526-0610	Bolt, 3/8-16 UNC - 1.25, Gr.5, Yellow Zinc Plated
23	526-0613	Bolt, 3/8-16 UNC - 1.5, Gr.5, Full Thread, Yellow Zinc Plated
24	526-0812	Bolt, 1/2-13 UNC - 1.5, Gr.5, Yellow Zinc Plated
25	526-0832	Bolt, 1/2-13 UNC - 4, Gr.5, Yellow Zinc Plated
26	526-1008	Bolt, 5/8-11 UNC - 1, Gr.5, Yellow Zinc Plated
27	526-1016	Bolt, 5/8-11 UNC - 2, Gr.5, Yellow Zinc Plated
28	526-1018	Bolt, 5/8-11 UNC - 2.25, Gr.5, Yellow Zinc Plated
29	526-1656	Bolt, 1-8 UNC - 7, Gr.5, Yellow Zinc Plated
30	526-6105	Nut, Stover Lock, 1/2-13 UNC, Gr.5, Yellow Zinc Plated
31	526-6106	Nut, Stover Lock, 5/8-11 UNC, Gr.5, Yellow Zinc Plated
32	526-6109	Nut, Stover Lock, 1-8 UNC, Gr.5, Yellow Zinc Plated
33	526-7104	Nut, Flange, 1/4-20 UNC, Gr.5, Pltd.
34	550-5204	Washer, Flat, 1/4" - USS, Gr.5, Yellow Zinc Plated
35	550-5206	Washer, Flat, 3/8" - USS, Gr.5, Yellow Zinc Plated
36	550-5208	Washer, Flat, 1/2" - USS, Gr.5, Yellow Zinc Plated
37	550-5216	Washer, Flat, 1" - USS, Gr.5, Yellow Zinc Plated
38	550-5308	Washer, Flat, 1/2" - SAE, Gr.5, Yellow Zinc Plated
39	550-5310	Washer, Flat, 5/8" - SAE, Gr.5, Yellow Zinc Plated
40	551-5005	Washer, Spring, 5/16, Gr.5, Yellow Zinc Plated
41	551-5010	Washer, Spring, 5/8, Gr.5, Yellow Zinc Plated
42	554-5404	Machinery Bushing, 1 Id X 10 Ga, Yellow Zinc Plated
43	556-0612	Cotter Pin - 3/16" X 1 1/2" Plain
44	559-1501	Lynch Pin, 3/16" X 1-9/16"
45	806-1512	Bushing, Shock Bolt
46	811-1001	3 Hose Clamp

**Parts Details**

**Bearing & Frame**



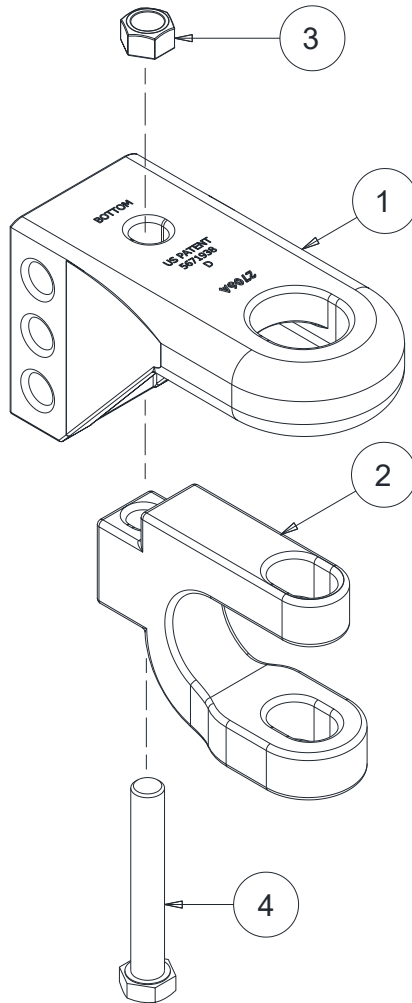
## Parts Details

### Bearing & Frame

Item #	Part #	Description
1	030-5980	3-1/2" X 8" Hydraulic Cylinder, 3/4 ORB, With Stroke Control
2	105-1123	Chain Guard Weldment
3	110-2514	Bat Weldment (14 Tooth)
4	110-2515	Two Bat Reel Weldment
5	110-2516	Rake Weldment (15-Tooth)
6	112-2503	Right Side Rake Bearing Weldment
7	112-2504	Left Side Rake Bearing Weldment
8	112-2507	Hyd. Motor Mount Casting
9	112-2514	Rake Split Bearing Weldment
10	123-2209	Rake Cyl. Pin $\phi$ 1" x 4-5/8 useable
11	252-1180	80B11 Sprocket
12	252-2681	H80Q26 Sprocket
13	261-6000	1-3/4 Split Tapered Bushing
14	263-0636	Key, 3/8 X 3/8 X 2-1/4
15	263-1701	Key, 3/8 X 1/2 X 1
16	292-4015	1-3/4 Id - 4 Bolt Flange Bearing
17	307-1003	Parker Hyd. Motor C/W Built In Reliefs
18	403-0268	Bat Spring
19	419-0004	Grease Zerk, 1/4"UNF - Straight
20	526-0610	Bolt, 3/8-16 UNC - 1.25, Gr.5, Yellow Zinc Plated
21	526-1008	Bolt, 5/8-11 UNC - 1, Gr.5, Yellow Zinc Plated
22	526-1012	Bolt, 5/8-11 UNC - 1.5, Gr.5, Yellow Zinc Plated
23	526-1014	Bolt, 5/8-11 UNC - 1.75, Gr.5, Yellow Zinc Plated
24	526-1016	Bolt, 5/8-11 UNC - 2, Gr.5, Yellow Zinc Plated
25	526-1018	Bolt, 5/8-11 UNC - 2.25, Gr.5, Yellow Zinc Plated
26	526-1020	Bolt, 5/8-11 UNC - 2.5, Gr.5, Yellow Zinc Plated
27	526-1616	Bolt, 1-8 UNC - 2, Gr.5, Yellow Zinc Plated
28	526-6106	Nut, Stover Lock, 5/8-11 UNC, Gr.5, Yellow Zinc Plated
29	526-6109	Nut, Stover Lock, 1-8 UNC, Gr.5, Yellow Zinc Plated
30	526-7608	Nut, Stover Lock, 1/2-20 UNF, Gr.5, Yellow Zinc Plated
31	530-1640-3.75	Bolt, 1-8 UNC - 5, Gr.8, Yellow Zinc Plated (Cut To 3-3/4)
32	538-0819	Bolt, 1/2-20 UNF - 2.25, Gr.8, Yellow Zinc Plated
33	546-0219	Bolt, Spade, 5/8-11 UNC - 4", Gr. 5, Yellow Zinc Plated
34	550-5206	Washer, Flat, 3/8" - USS, Gr.5, Yellow Zinc Plated
35	550-5210	Washer, Flat, 5/8" - USS, Gr.5, Yellow Zinc Plated
36	550-5308	Washer, Flat, 1/2" - SAE, Gr.5, Yellow Zinc Plated
37	550-5310	Washer, Flat, 5/8" - SAE, Gr.5, Yellow Zinc Plated
38	550-5316	Washer, Flat, 1" - SAE, Gr.5, Yellow Zinc Plated
39	551-5006	Washer, Spring, 3/8, Gr.5, Yellow Zinc Plated
40	551-5010	Washer, Spring, 5/8, Gr.5, Yellow Zinc Plated
41	811-1013	Spilt Rake Shim
42	814-3038	Rake Bearing Top
43	826-0108	Bushing For Bat Spring Bolts
44	839-1792	Motor Tensioner Plate
45	839-1801	Chain Guard, Front

**Parts Details**

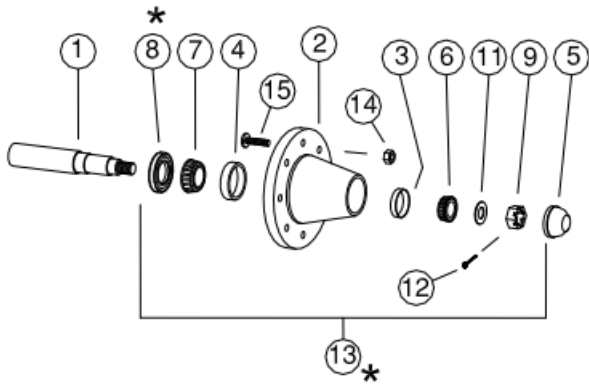
**Perfect Hitch**



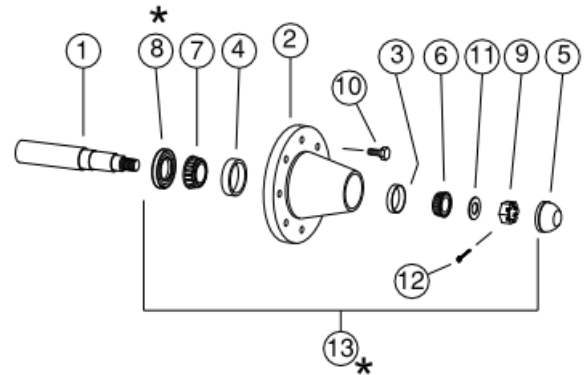
Item #	Part #	Description
1	423-0013	Perfect Hitch Base (PP1-237VR)
2	423-0006	Perfect Hitch Clevis (PP1-208VR-10)
3	526-6107	Nut, Stover Lock, 3/4-10 UNC, Gr.5, Yellow Zinc Plated
4	526-1248	Bolt, 3/4-10 UNC - 5, Gr.5, Yellow Zinc Plated

**Parts Details**

**Hub & Spindle**



**Press in Wheel Stud Type  
020-6014**

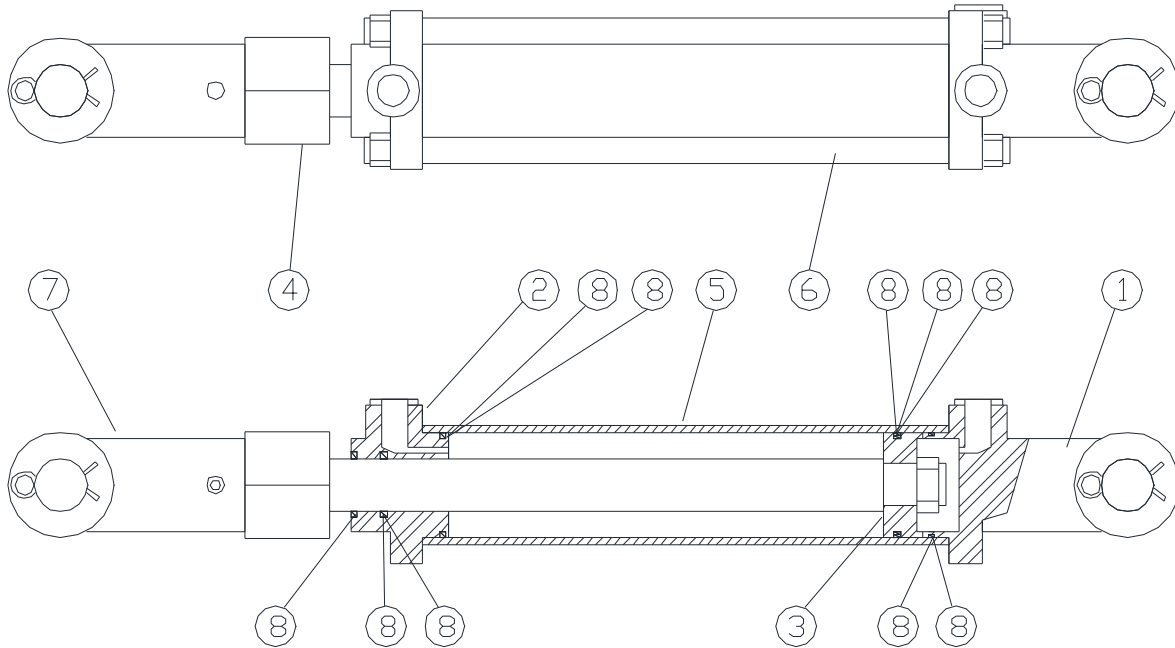


**Screw in Wheel Stud Type  
020-6016, 020-6017**

Item #	Part #	Description
1	203-6025	Spindle
2*	200-6011	812-1 Hub (Takes SE17)
2*	200-6013	812 Hub (Takes SE17)
2*	200-6014	812-2 Hub (Takes SE35)
3	201-6016	Outer Cup, LM2720
4	201-6017	Inner Cup, 3720
5	202-6013	DC17 Dust Cap
6	290-6013	Outer Bearing, 2790
7	290-6014	Inner Bearing, 3780
8*	295-5588	SE35, CR25100 (For 812-2)
8*	295-6016	SE17 (For 812)
9	534-7816	1" NF Castle Nut
10	543-5562	9/16" Wheel Bolt UNF
11	554-5303	1" Spindle Washer
12	556-0614	3/16" x 1-3/4" Cotter Pin
13*	020-6014	812-1 Hub Assembly
13*	020-6016	812 Hub Assembly
13*	020-6017	812-2 Hub Assembly
14	543-5563	9/16" NF Wheel Nut (For 812-1)
15	543-5564	9/16" NF Wheel Stud (For 812 or 812-2)

**Parts Details**

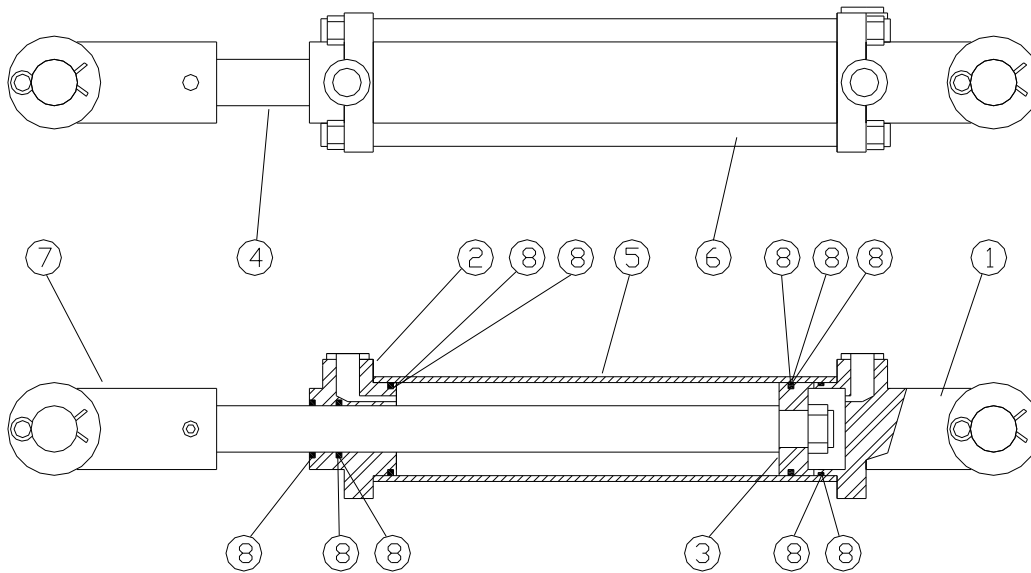
**MONARCH 3-1/2" x 8" x 1-1/4"**  
**MONARCH PART NUMBER 645666**  
**RITE WAY PART NUMBER 030-5980**



Item #	Part #	Description
1	492403	3-1/2" Clevis Cap
2	492423	Rod Cap
3	492528	3-1/2" Piston
4	492700	1-1/4" Rod
5	491798	3-1/2" Tube
6	492278	Tie Rod
7	458600	Rod Clevis
8	639577	Seal Kit
9	637371	Stroke Control

**Parts Details**

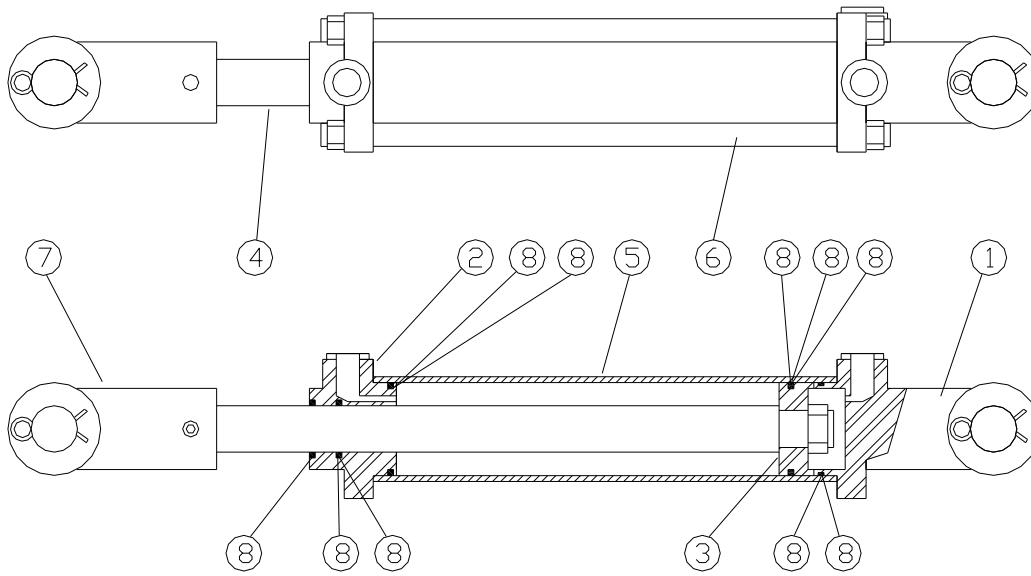
**MONARCH 3-1/2" x 8" x 1-1/4"**  
**MONARCH PART NUMBER 645665**  
**RITE WAY PART NUMBER 030-5989**



Item #	Part #	Description
1	492403	3-1/2" Clevis Cap
2	492423	Rod Cap
3	492528	3-1/2" Piston
4	492700	1-1/4" Rod
5	491798	3-1/2" Tube
6	492578	Tie Rod
7	458600	Rod Clevis
8	639577	Seal Kit

**Parts Details**

**MONARCH 3-1/2" x 14" x 1-1/4"**  
**MONARCH PART NUMBER 645667**  
**RITE WAY PART NUMBER 030-5938**

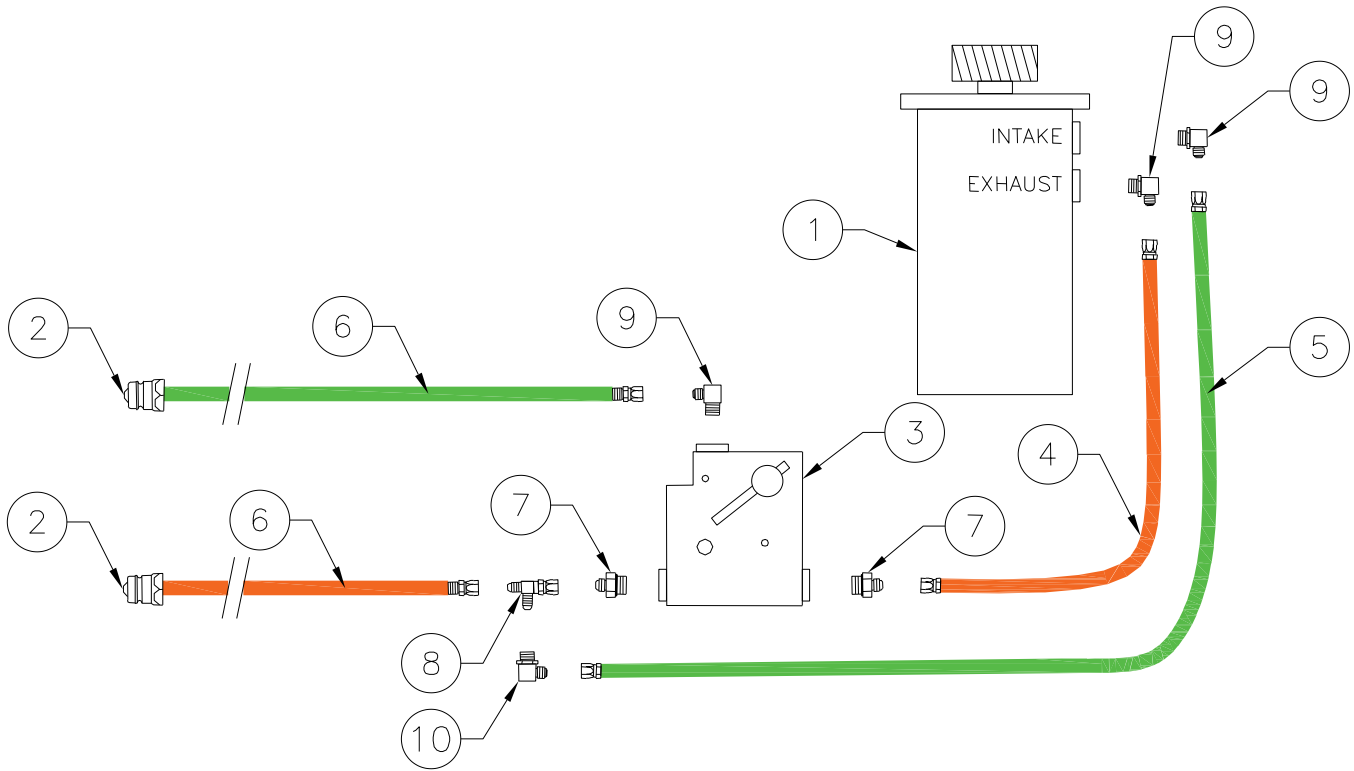


Item #	Part #	Description
1	492403	3-1/2" Clevis Cap
2	492423	Rod Cap
3	492528	3-1/2" Piston
4	492873	1-1/4" Rod
5	491804	3-1/2" Tube
6	492284	Tie Rod
7	458600	Rod Clevis
8	639577	Seal Kit



**Parts Details**

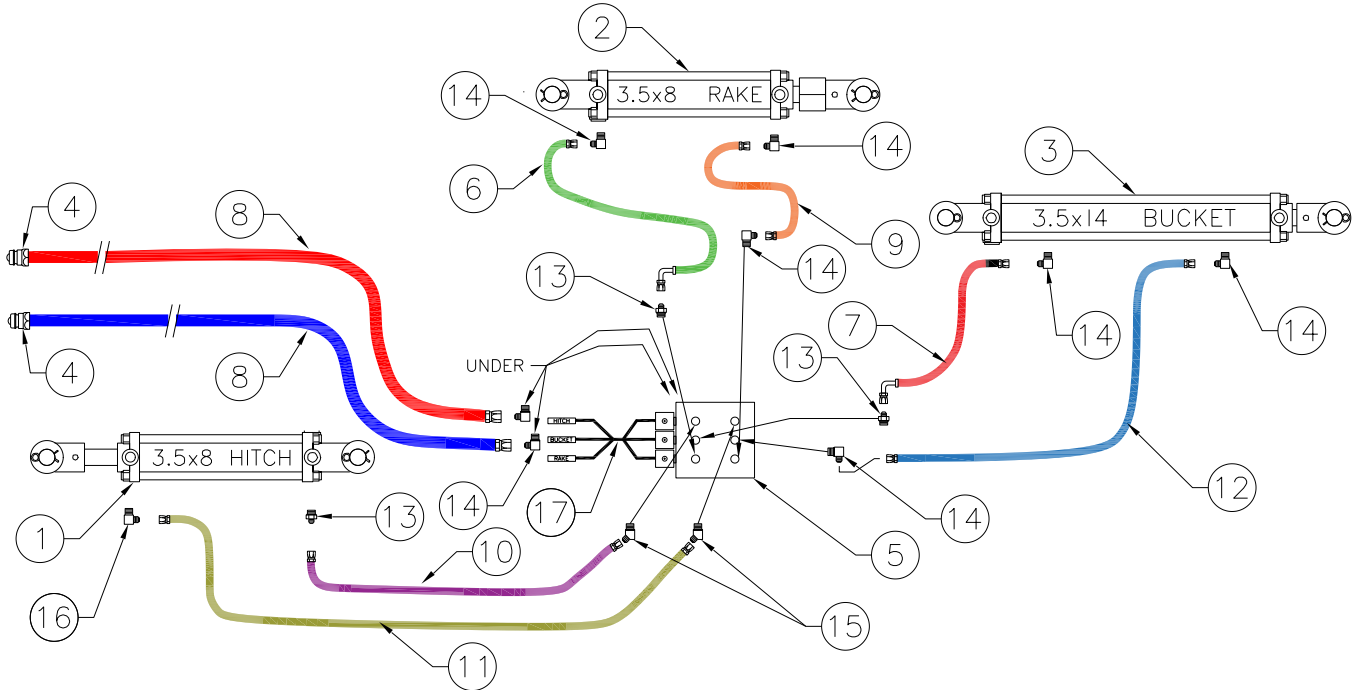
**Hydraulic Drive System**



Item #	Part #	Description
1	307-1003	Parker Hydraulic Motor c/w Built in Reliefs
2	308-0001	Pioneer Tip – ½” M Quick Connect, Poppet Type
3	310-5010	Flow Control Valve (5/8” ORB)
4	312-1745	½” Hose (2-Wire) – ½” JIC Sw F x ½” JIC Sw F – 45”
5	312-1750	½” Hose (2-Wire) – ½” JIC Sw F x ½” JIC Sw F – 50”
6	312-1683	½” Hose (2-Wire) – ½” JIC Sw F x ½” NPT M – 183”
7	316-0308	5/8” ORB M x ½” JIC M Adapter
8	318-5710	½” JIC Sw F (Run) x (2) ½” JIC M – Tee
9	319-5712	5/8” ORB M x ½” JIC M - 90° Elbow
10	319-5720	½” JIC Sw. F x ½” JIC M - 90° Elbow

**Parts Details**

**Rake, Bucket, & Hitch Hydraulics**



Item #	Part #	Description
1	030-5935	3-1/2" x 8" Hydraulic Cylinder
2	030-5936	3-1/2" x 8" Hydraulic Cylinder c/w Depth Control
3	030-5938	3-1/2" x 14" Hydraulic Cylinder
4	308-0001	1/2" NPT F – Male Quick Connect (Pioneer Tip)
5*	310-4038	Parker 12-Volt Electric Selector Manifold (1/2" ORB)
5*	310-5025	Selector Valve Coil, 12V
6	313-0018	3/8" Hose (2-Wire) – 3/8" JIC Sw.F x 3/8" JIC Sw.F 90° Elbow – 18"
7	313-0068	3/8" Hose (2-Wire) – 3/8" JIC Sw.F x 3/8" JIC Sw.F 90° Elbow – 68"
8	313-6566	3/8" Hose (2-Wire) – 3/8" JIC Sw.F x 1/2" NPT – 166"
9	313-7923	3/8" Hose (2-Wire) – 3/8" JIC Sw.F x 3/8" JIC Sw.F – 23"
10	313-7934	3/8" Hose (2-Wire) – 3/8" JIC Sw.F x 3/8" JIC Sw.F – 34"
11	313-7940	3/8" Hose (2-Wire) – 3/8" JIC Sw.F x 3/8" JIC Sw.F – 40"
12	313-7983	3/8" Hose (2-Wire) – 3/8" JIC Sw.F x 3/8" JIC Sw.F – 83"
13	316-0302	1/2" ORB M x 3/8" JIC M - Adaptor
14	319-5710	1/2" ORB M x 3/8" JIC M - 90° Elbow
15	319-5729	1/2" ORB M x 3/8" JIC M - 45° Elbow
16	319-5723	1/2" ORB M x 3/8" JIC M - 90° Elbow Restricted
17	417-0144	Wiring Harness, Selector Manifold c/w (3) 417-0135 (solenoid leads)
18	417-0130	Control Box, 3-Wire (For Parker Manifold) (Not Shown)
19	417-0141	Actuation Harness c/w Actuation Switch (Not Shown)

**NOTES**

A large rectangular box with a thin black border, intended for handwritten notes.