



**HEAVY HARROW
HH-8200NT
(NARROW TRANSPORT)**

**OPERATORS MANUAL
& PART LIST**

QUICK START GUIDE

HYDRAULIC CONNECTIONS TO TRACTOR

YELLOW – Wing lift/lower

RED – Tine angle adjust

GREEN – Wing wheel pivot

UNFOLD TO FIELD POSITION

- **IMPORTANT:** Ensure the center harrow section has been rotated forward after shipping and bolted in place or damage to the unit may result.
- Find a location that is as level as possible. Position harrow in line with tractor.
- Remove lock pins from wing lift and wing pivot wheels.
- From the cab of the tractor, rotate pivot wheels to 45° (**GREEN** hydraulic remote).
- Slowly back up the tractor to unfold.
- Once wings are nearly fully unfolded, rotate pivot wheels to 90°.
- Ensure that the draft arms have pushed the swing arms into the lock mechanism.
- Carefully lower the harrow wing halfway to the ground (**YELLOW** hydraulic remote). Ensure that the swing arms are both still locked in place.
- Slowly drive the tractor ahead, while lowering the harrow wing the rest of the way down.

NOTE:

- **IMPORTANT:** Do not lower the harrow wings fully down to the ground without driving ahead simultaneously. Damage to your rotary harrow sections could result.
- Check the level of A-frame hitch relative to the tractor. Adjust using hitch tongue to level
- Ensure all harrow chains are tight. Tighten chains using the tools provided on the left-most rotary harrow section if necessary.

CONTENTS

| SECTION 1 | PAGE |
|----------------------------|--------------|
| INTRODUCTION | 1 |
| MANUAL & EQUIPMENT DETAILS | 2 |
| PRE-DELIVERY INSPECTION | 3 |
| SPECIFICATIONS | 4 |
| SERVICE & WARRANTY POLICY | 5, 6 |
| SAFETY RECOMMENDATIONS | 7 |
| DECAL LOCATIONS | 9, 10 |
| MAINTENANCE | 11-13 |
| OPERATING INSTRUCTIONS | 14-21 |
| GRADE CHART | 22 |
| TORQUE CHART | 23 |

| SECTION 2 | PAGE |
|------------------|--------------|
| PARTS | 2-33 |
| WHEEL HUBS | 34-35 |
| HYDRAULICS | 36-41 |
| CYLINDERS | 42-51 |

SECTION 1

INTRODUCTION

Thank you for making the decision to purchase a RITE WAY product!

We are pleased to welcome you as an owner of a product from **RITE WAY MFG.** This machinery is the culmination of years of agricultural and engineering experience and has been designed to deliver you with many years of successful operation service.

For the most efficient operation of your **HH-8200NT** we have provided this owner's manual. In this manual we have included proper maintenance and functional procedures to offer maximum longevity for your new equipment. Before operating we urge a careful study of this manual to provide a thorough understanding of your new **HH-8200NT**. We also recommend that you take care of this manual so it will be available for future reference. Should your manual become lost or destroyed a new copy can be obtained from your **Rite Way Manufacturing** dealer. We will also be happy to answer any questions you might have concerning 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

Email: info@ritewaymfg.com

MANUAL INFORMATION

| | |
|-----------------------------------|-----------------------|
| Unit Model Number | HH-8200NT |
| Manual Revision Number | 4.2 |
| Manual Revision Date | March 9, 2021 |
| Manual Serial Number Range | 21-0079 and up |

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

| | |
|------------------------------|--|
| Serial Number of Unit | |
| Date of Purchase | |
| Dealer Name | |
| Dealer Address | |
| Dealer Phone Number | |
| Salesman Name | |
| Salesman Phone Number | |
| Notes | |

PRE-DELIVERY INSPECTION

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
- Verify that jacks are with the unit and function properly.
- Check wheel bolts for proper torque.
- 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 joining 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 tension. (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 zerks locations and maintenance schedules.
- Level the unit per operators manual and instruct the customer on the proper procedures.
- Verify that the center harrow section has been rotated to working position.

Pre-delivery Inspection Completed By (Sign Below)

Pre-delivery Inspection Confirmed By (Sign Below)

SPECIFICATIONS

GENERAL INFORMATION

- 40° to 85° Hydraulic Tine Angling From Tractor Cab
- 9/16" x 28" Harrow Tines
- Auto Fold With Rite Way Hydraulic Pivot Wheel System
- 5 Bars - 18" (460mm) Spacing Between Rows- 2-3/8" Diameter Pipe
- 15 Double Tines; APPROX. 2.75" Tine Spaces (6-1/2' Harrow)
- 25 Double Tines; APPROX. 2.75" Tine Spaces (11' Harrow)
- Self-Levelling Parallel Linkage
- Two Stage Adjustable Harrow
- Spring Adjustable Harrow Down Pressure
- Adjustable Hitch Height c/w Perfect Hitch Clevis
- Light Kit
- **ULTRA NARROW TRANSPORT WIDTH**

MAIN FRAME

- Heavy duty universal joint pivots
- 8" x 4" x 1/4" Wall A-Frame Tube
- Tires - 16.5L x 16.1 - 10PLY

HYDRAULIC SYSTEM

- Standard unit requires - 6 Hydraulic Banks.
- Heavy duty hydraulic cylinders.
- Zinc plated steel hydraulic lines

WINGS

- 8" x 8" x 3/8" Wall Wing Tube (62' and up), and Centre Bar
- Tires - 12.5L x 15 - 8PLY (62' and up)

OPTIONS

- Valmar granular applicator mounting kit
- Acremeter kit
- 5/8" x 28 Harrow Tine
- 9/16" x 28 Carbide Tip Harrow Tine
- 5/8" x 28 Carbide Tip Harrow Tine

| Technical Information | 8240NT | 8250NT | 8262NT | 8273NT |
|--------------------------------|----------------|----------------|----------------|----------------|
| Working Width | 40' (12.2m) | 50' (15.2m) | 62' (18.9m) | 73'(22.3m) |
| No. of Harrow Sections | 5 | 5 | 7 | 7 |
| Transp. Width | 9' 10" (3m) | 9' 2"(2.8m) | 9' 2" (2.8m) | 9' 2" (2.8m) |
| Transp. Height | 11'-4" (3.5m) | 11'-4" (3.5m) | 11'-4" (3.5m) | 11'-4" (3.5m) |
| Transp. Length | 36' 9" (11.2m) | 41' 2" (12.5m) | 48' 2" (14.7m) | 52' 2" (15.9m) |
| Approx. Weight (lbs/kg) | 9,250 / 4,205 | 10,245 / 4,657 | 12,225 / 5,557 | 13,900 / 6,318 |

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 been 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** be 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 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.

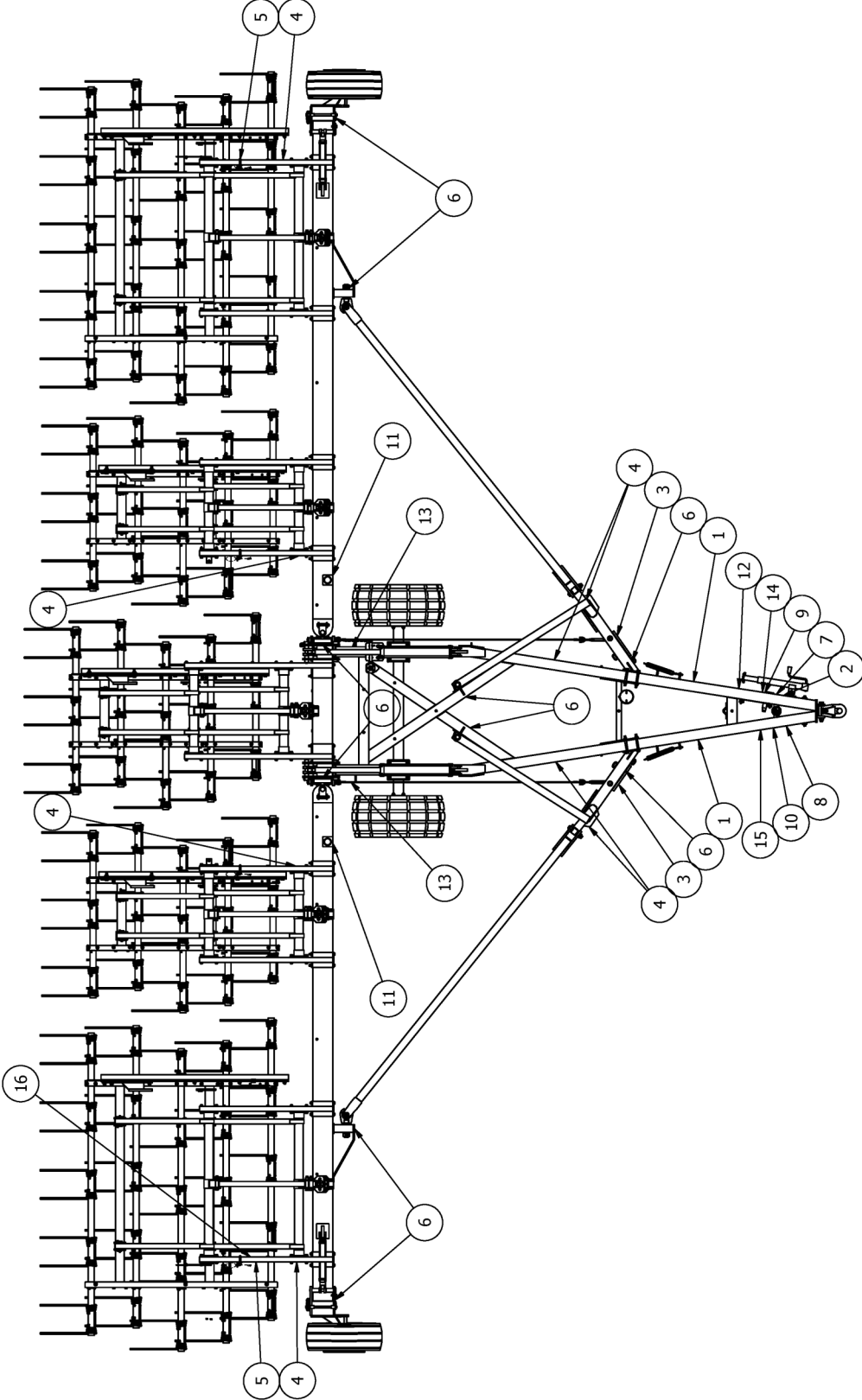
SAFETY RECOMENDATIONS

1. Read manual thoroughly before operating machine.
2. Study all warning decals on 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 **HH-8200NT** is 25 mph (40 km/h).
12. Ensure that the **HH-8200NT** frame is lowered to the ground before doing any work on machine.
NOTE: If it is necessary to work on machine with the drawbar raised, ensure that cylinders are locked in position using the lock pin.
13. Do not work on this machine when hydraulic system is under pressure.
14. Observe all laws and regulations when transporting unit on public roads.
15. Do not transport this machine on public roads unless all safety & maintenance checks have been completed.
16. Ensure the tires are inflated to the correct pressure:
11L-15 (Wings): 90 psi
12.5L-15 (Wings): 90 psi
16.5 x 16.1 (Center Frame): 35 psi

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

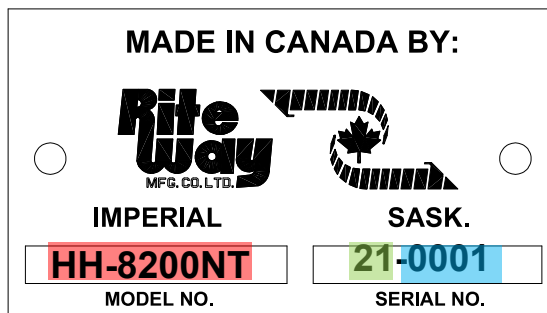
PAGE INTENTIONALLY LEFT BLANK

DECAL LOCATIONS



DECAL LOCATIONS

| ITEM # | PART # | DESCRIPTION | QTY |
|--------|----------------------|--|-----|
| 1 | 060-0121 | Rite Way Mfg. (Large Decal) | 2 |
| 2 | 060-0038 | Attention - Ensure That All Cylinders Are Retracted... | 1 |
| 3 | 060-0125 060-0126 | HH-8200NT - (3" x 11") | 2 |
| 4 | 060-0009 | Amber Reflector (3 x 2) | 14 |
| 5 | 060-0022 | Red Reflector (3 x 2) | 2 |
| 6 | 060-0046 | Grease Every 8 Hours | 10 |
| 7 | 060-0015 | Important - Block Wheels... | 1 |
| 8 | 060-0028 | Warning - Lower or Block Elevated Components | 1 |
| 9 | 060-0011 | Caution - Escaping Fluid Hazard... | 1 |
| 10 | 060-0029 | Warning - Stand Clear of Hitch Tongue... | 1 |
| 11 | 060-0036 | Place Jack in Small Mount for Transport... | 2 |
| 12 | 060-0034 | Rite Way Serial Number Plate | 1 |
| 13 | 060-0050 | Warning - Tine Angling Cylinders... | 2 |
| 14 | 060-0061 | Hydraulic - Hose Application | 1 |
| 15 | 060-0067 | Warning - Check and tighten hub and wheel bolts.. | 1 |
| 16 | 060-0091 | Tine Angle Indicator - (1234) 11 x 2-3/4" | 1 |
| 17 | 060-0108 | www.ritewaymfg.com - (1" x 20") | 2 |



UNIT SERIES
MODEL YEAR
UNIT NUMBER

MAINTANENCE

GENERAL

- Repack the wheel hubs after the first 500 kilometres of travel ; then yearly thereafter.
- Visually inspect the wheel bolts for tightness each day. Torque to 110 ft lbs. (149 Nm) after the first few hours of operation and frequently thereafter.

- Ensure the tires are inflated to the correct pressure:

11L-15 (Wings): 90 psi

12.5L-15 (Wings): 90 psi

16.5 x 16.1 (Center Frame): 35 psi

EVERY 8 HOURS (DAILY)

- Grease all pins and knuckles. (See decals locations)
- Grease harrow chain bearings.

EVERY 100 HOURS (MONTHLY)

- Visually inspect hydraulic hoses & fittings for leaks or damage.

ANNUALLY

- Inspect wheel bearings / hubs for tightness and grease.
- Check wheel bolts for tightness and re-torque.
- Visually inspect unit for loose, worn or damaged components.

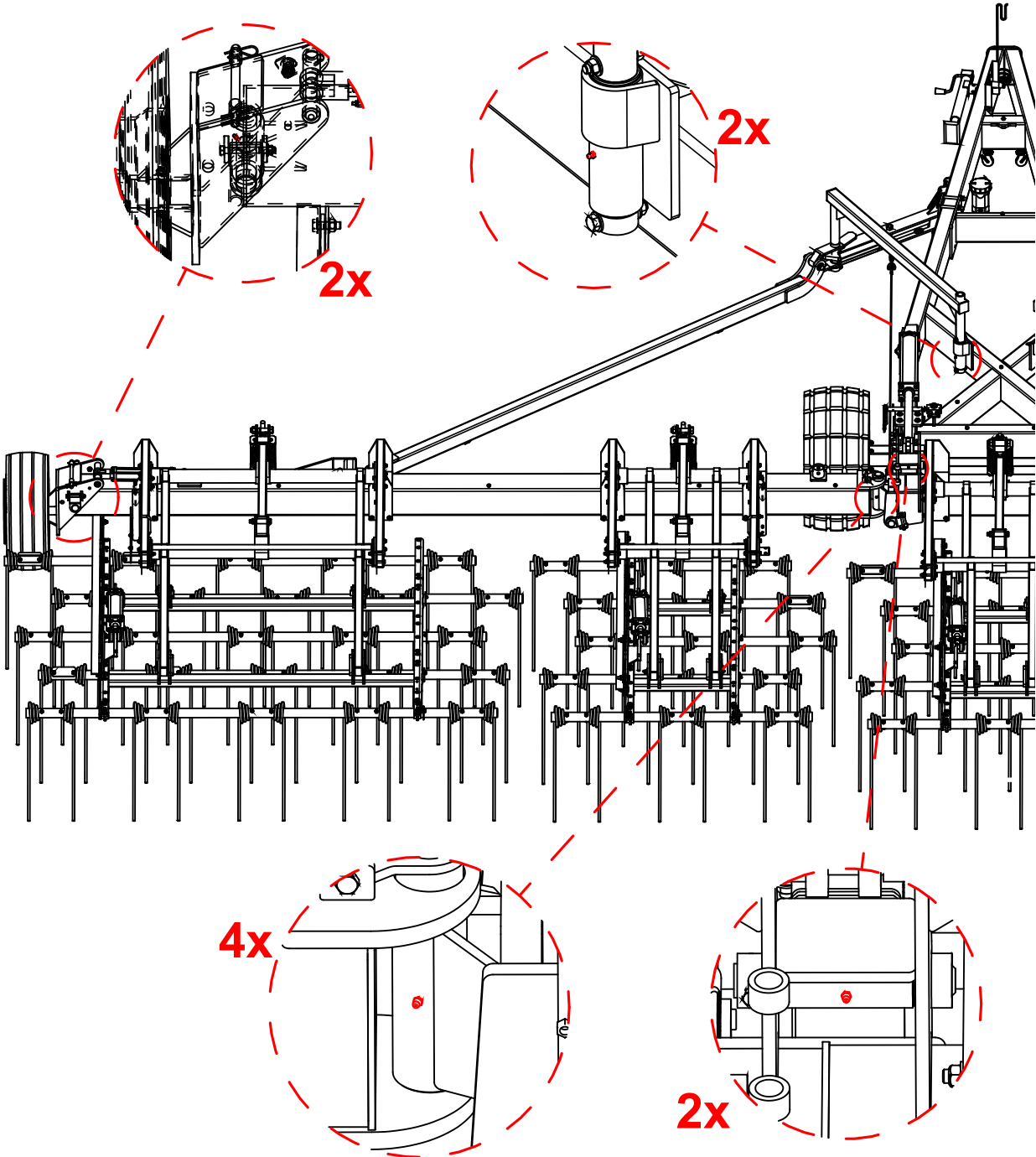
STORAGE

- Coat any exposed cylinder shafts with thick oil or grease.
- Ensure that parking jacks are situated on firm ground. Failure to do so may cause the hitch to rise sharply as the jack pads sink into the ground.
- Lock all applicable safety pins into place.

NOTE: All fasteners with locknuts that are used to join moving pieces should not be tightened completely to allow for movement.

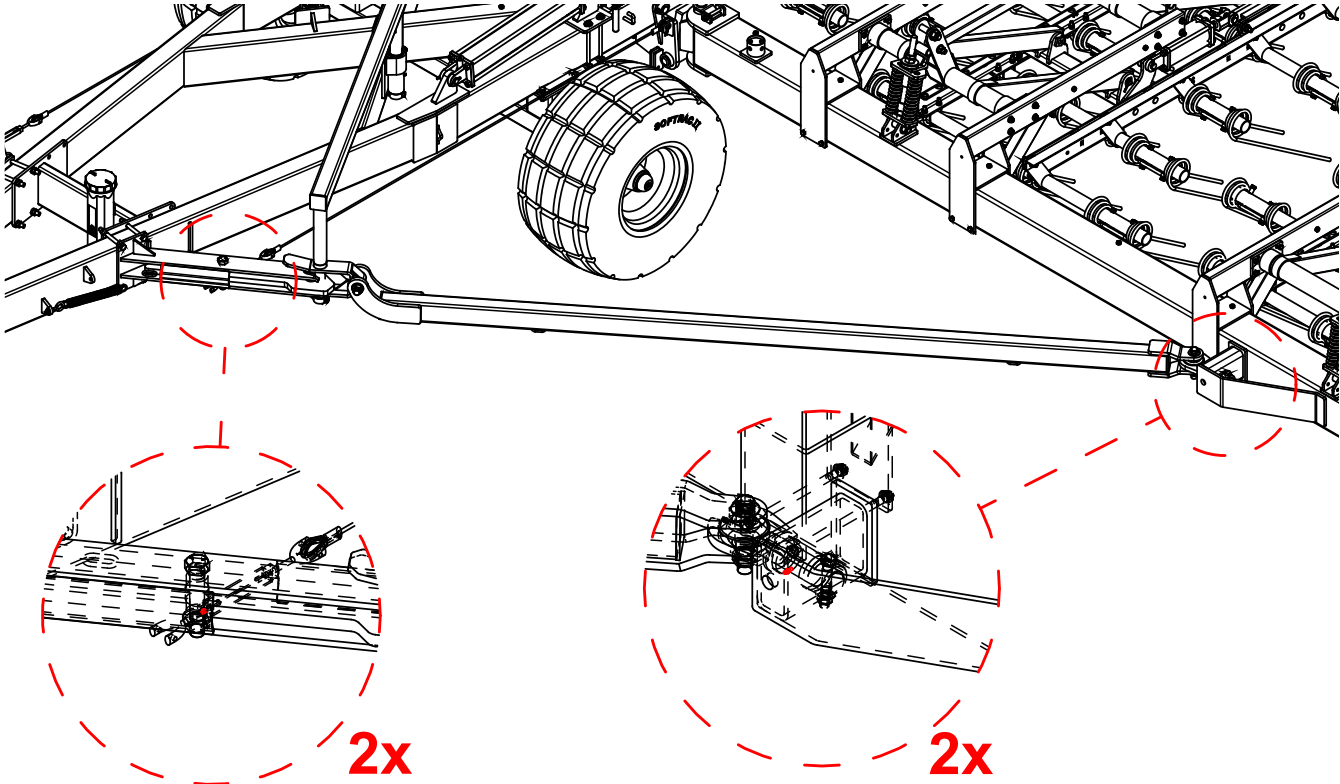
MAINTENANCE – GREASE LOCATIONS

Grease should be applied to both sides of the machine.



MAINTENANCE – GREASE LOCATIONS

Grease should be applied to both sides of the machine.



OPERATING INSTRUCTIONS

GENERAL INFORMATION

- In transport position, the maximum turning angle is 40°. Turning too tight will cause severe damage to the machine.
- Always choose a level area when folding the unit in or out of transport mode.
- Lubricate all pins, axles and bearings regularly to prevent premature failure.
- Clean hydraulic hose ends prior to coupling with tractor hydraulic system.
- The **HH-8200NT** requires three sets of hydraulic remotes to operate the machine, further detailed in this section.

TRACTOR HOOK-UP

- Move the tractor into position where the pin can be inserted into the draw bar hitch (fig. 1).
- If the hitch is too high, you can lower the hitch by adjusting the jack(s) on the wings.
- Retract the hitch parking jack and pin up in the sideways position
- Retract the wing parking jack(s) and pin in storage stub on harrow lift arm

NOTE: Use a clevis-type tractor hitch with a retained type of hitch pin.

NOTE: Ensure that the parking jack handle is secured by chain prior to moving the machine. Failure to do so can destroy the jack handle.

- Hook up the three hydraulic circuits to your tractor remote.

Recommended Hydraulic Connections:

RED – Remote 1 – Tine angle adjust

YELLOW – Remote 2 – Wing lift/lower

GREEN – Remote 3 – Wing wheel pivot

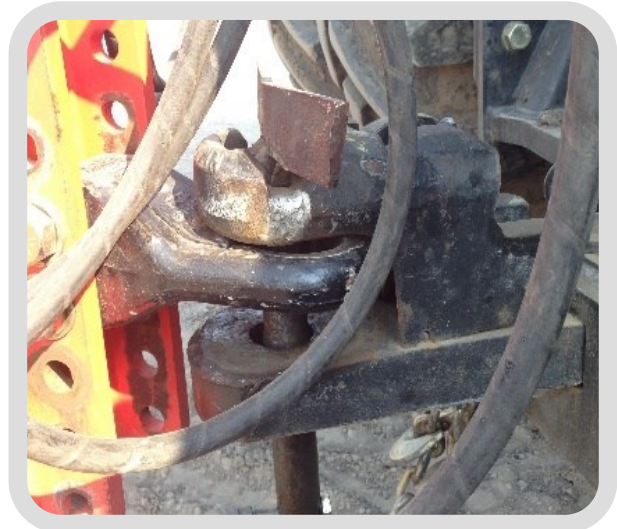


FIGURE 1

CAUTION

- Always choose a level area when folding unit either to or from transport position.
- Lubricate all pins, axles and bearings regularly to prevent premature failure of components.

OPERATING INSTRUCTIONS

TRANSPORT TO FIELD POSITION

1. Hook up harrow according to prior instructions.
2. Ensure that the safety pins are in transport position before towing on the road.
3. When entering the field from transport mode, find a level location.
4. Position the machine in-line with the tractor and bring the tractor to a full stop.
5. Remove both wheel pivot safety pins from transport position to field position and secure (fig. 2).
6. Remove the main lift safety pin (fig. 3).

NOTE: Failing to follow this procedure may cause severe damage to the machine.

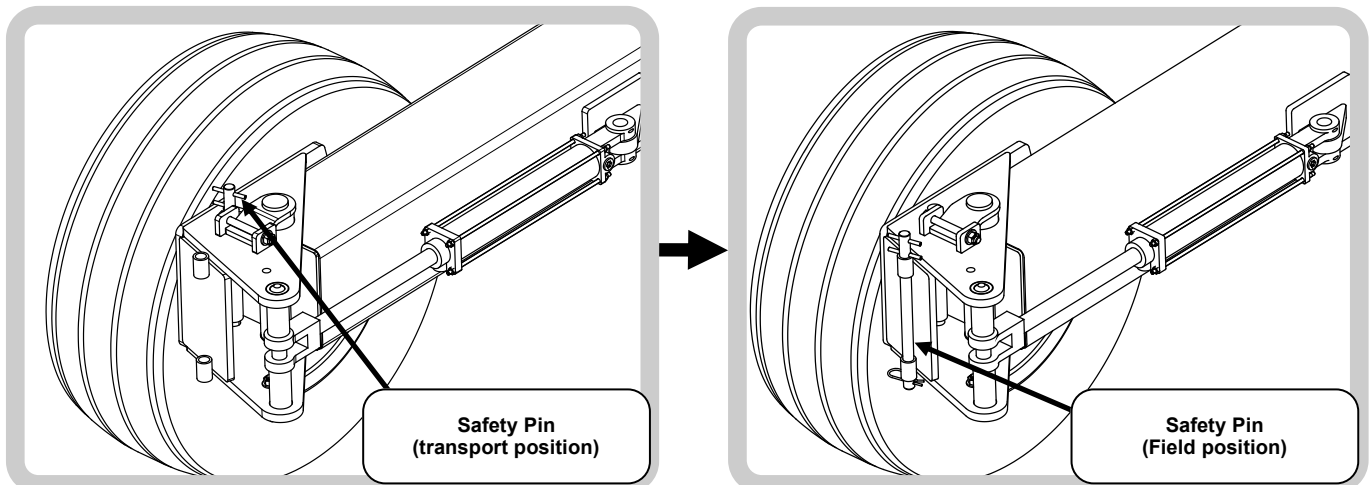


FIGURE 2

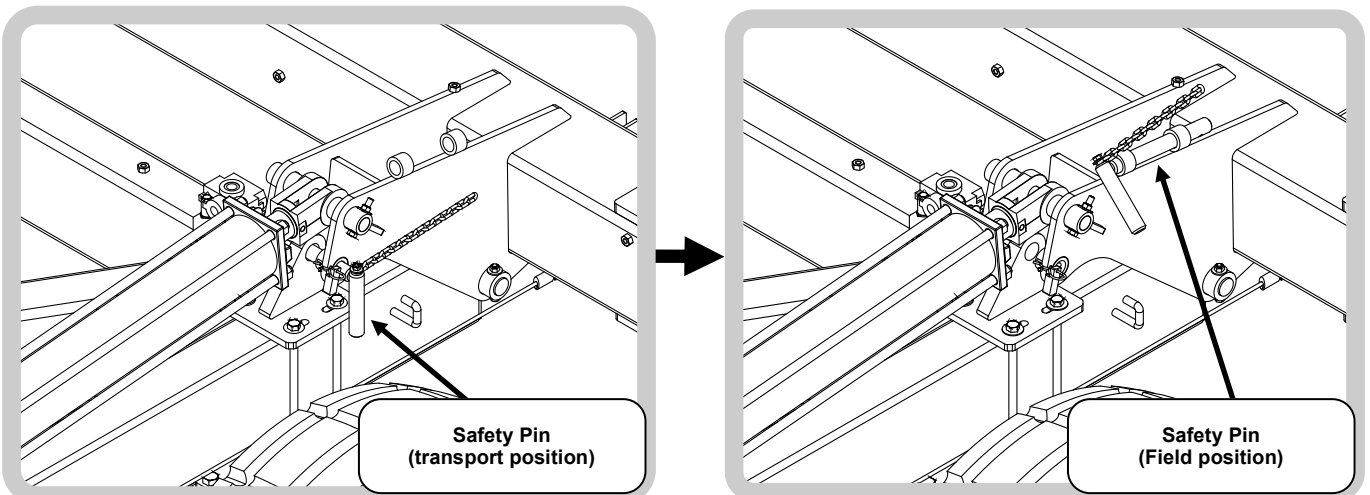


FIGURE 3

OPERATING INSTRUCTIONS

TRANSPORT TO FIELD POSITION

7. From the cab of the tractor, rotate pivot wheels to 45° (**GREEN** hydraulic remote) (fig. 4).
8. Slowly back up the tractor to unfold (fig. 5).
9. Once wings are nearly fully unfolded, rotate pivot wheels to 90°.

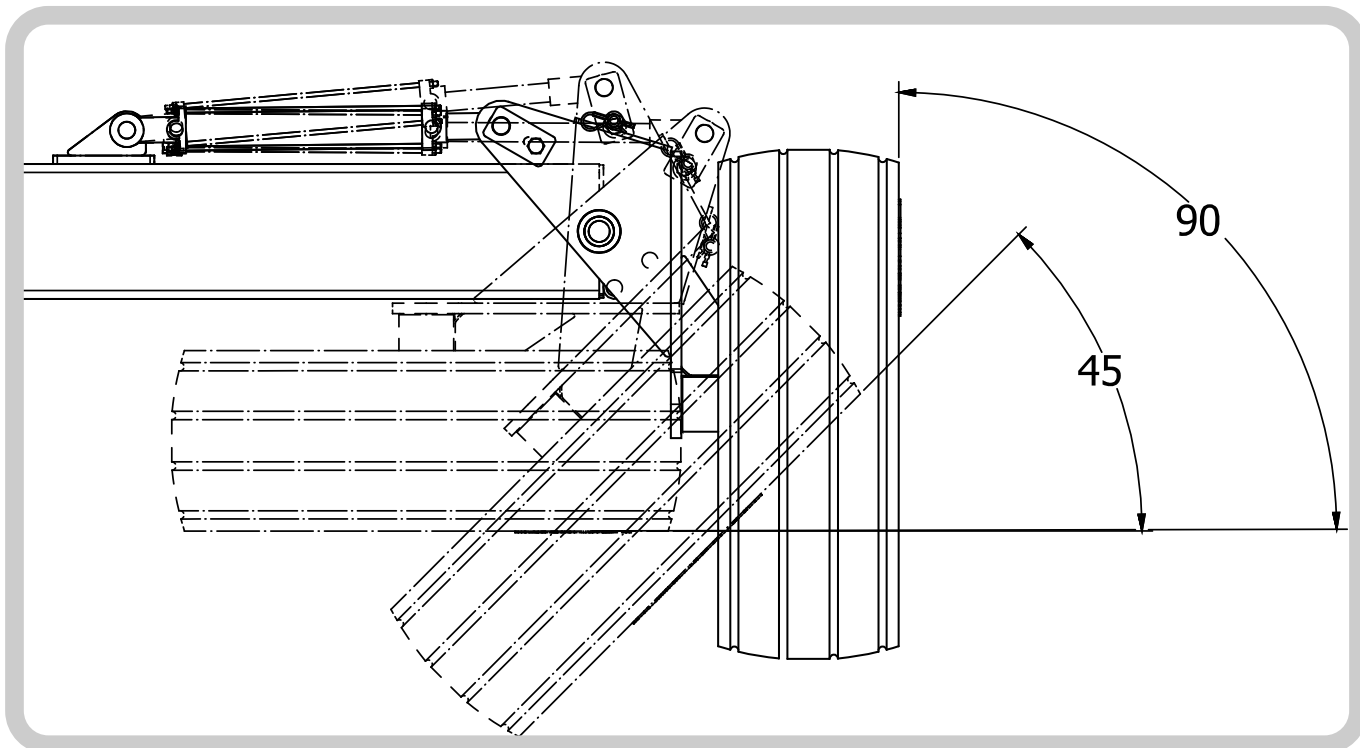


FIGURE 4

OPERATING INSTRUCTIONS

TRANSPORT TO FIELD POSITION

10. Ensure that the draft arms have pushed the swing arms into the lock mechanism (fig. 6).
11. Carefully lower the harrow wing halfway to the ground (**YELLOW** hydraulic remote). Ensure that the swing arms are both still locked in place.
12. Slowly drive the tractor ahead, while lowering the harrow wing the rest of the way down (fig. 7).

NOTE:

- Do not lower the harrow wings fully down to the ground without driving ahead simultaneously. Damage to your Heavy harrow sections could result.
- Check the level of A-frame hitch relative to the tractor. Adjust using hitch tongue to level
- Ensure all harrow prongs are tight.

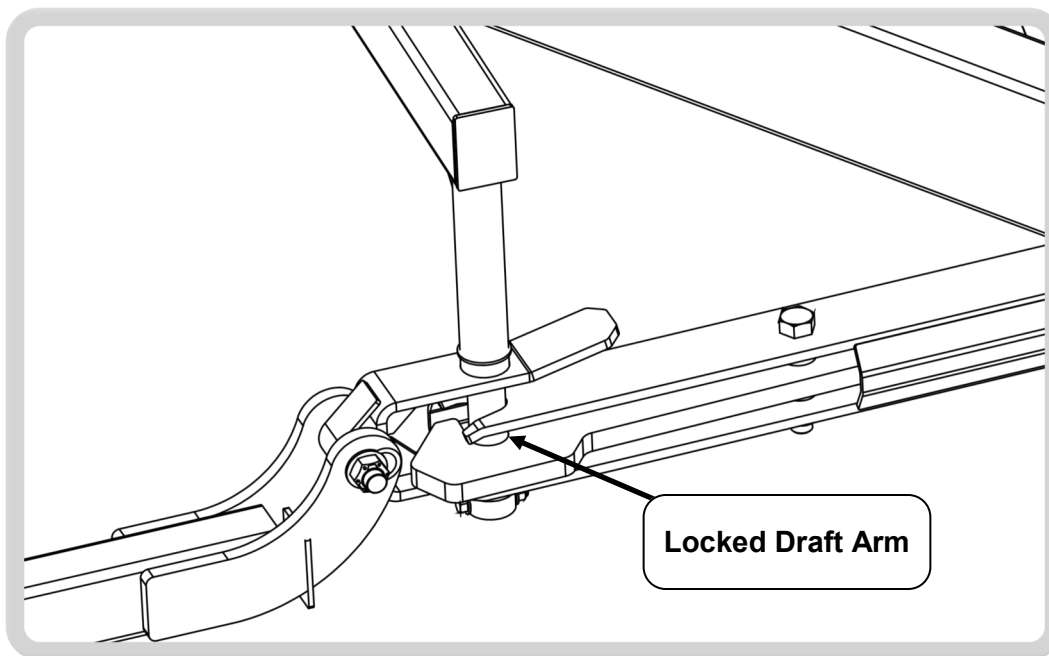


FIGURE 6

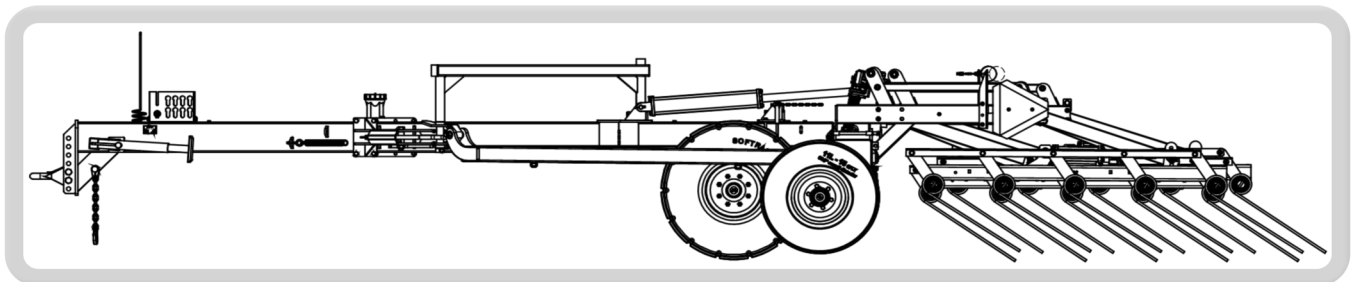


FIGURE 7

OPERATING INSTRUCTIONS

FIELD TO TRANSPORT POSITION

1. Stop the tractor before attempting to fold up the harrow toolbar.
2. Lift up the wings by activating the **YELLOW** hydraulic remote. Ensure the auto fold lock opens as the harrows are lifted to the raised position (fig. 8).
3. Turn the wing pivot wheels 90° using the **GREEN** hydraulic remote so that they are parallel to the wings.
4. Slowly drive forward to fold back wings.
5. Retract the tine adjust cylinders using the **RED** hydraulic remote to lower the harrow sections.
6. If you intend to disconnect the harrow from the tractor, line up the harrow with the tractor so that the parking jacks will not interfere with the draft arms.
7. Lock the wing lift and wing wheel cylinders with transport pins.
8. **Ensure the Main Lift transport pin is properly engaged. The roll pin must be locked into the tab in the frame and cotter pin installed (fig 9). If this is not properly engaged DAMAGE WILL OCCUR.**

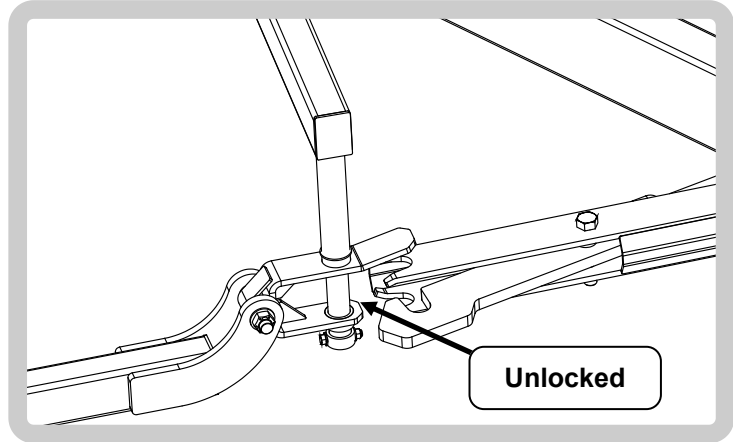


FIGURE 8

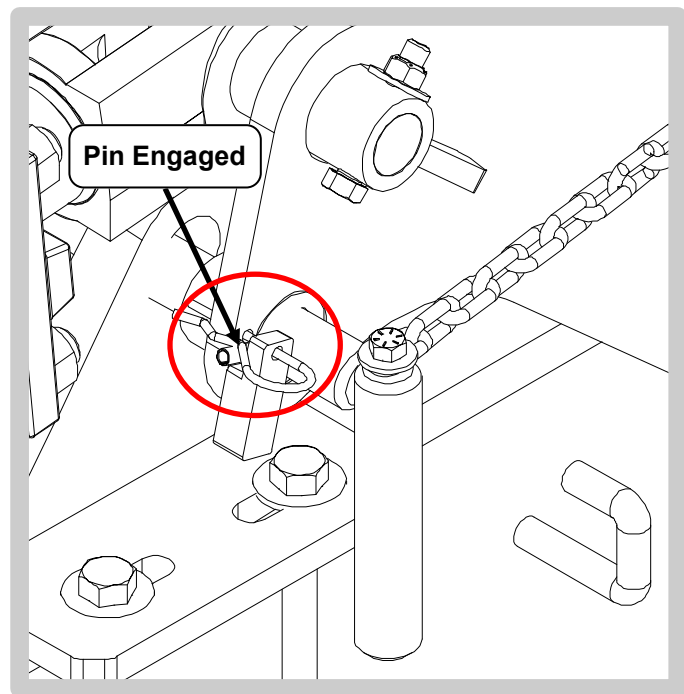


FIGURE 9

OPERATING INSTRUCTIONS

LEVELLING

1. Hitch unit up to tractor and unfold into field position on flat ground
2. Ensure the main lift cylinders are fully stoked outwards (measurement 60" eye to eye with full tine aggression)
3. Measure from the top of tubing on one of the lift arms to the ground (fig. 11).
4. Repeat measurement on the other end of the lift arm (fig. 11).
5. Adjust hitch clevis up or down accordingly until the measurements are within 1/4" of each other. (fig. 10).

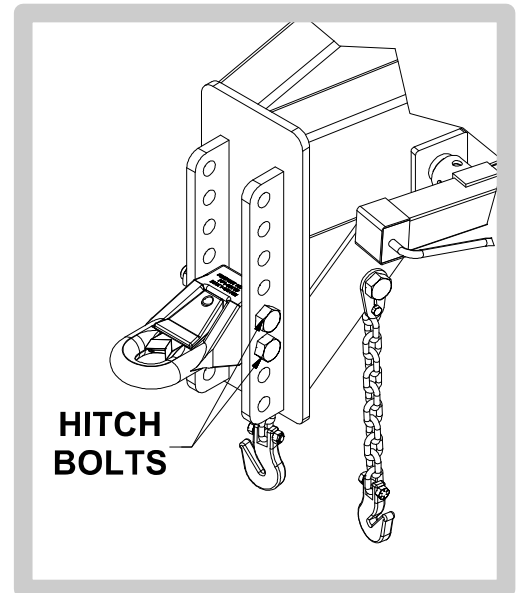


FIGURE 10

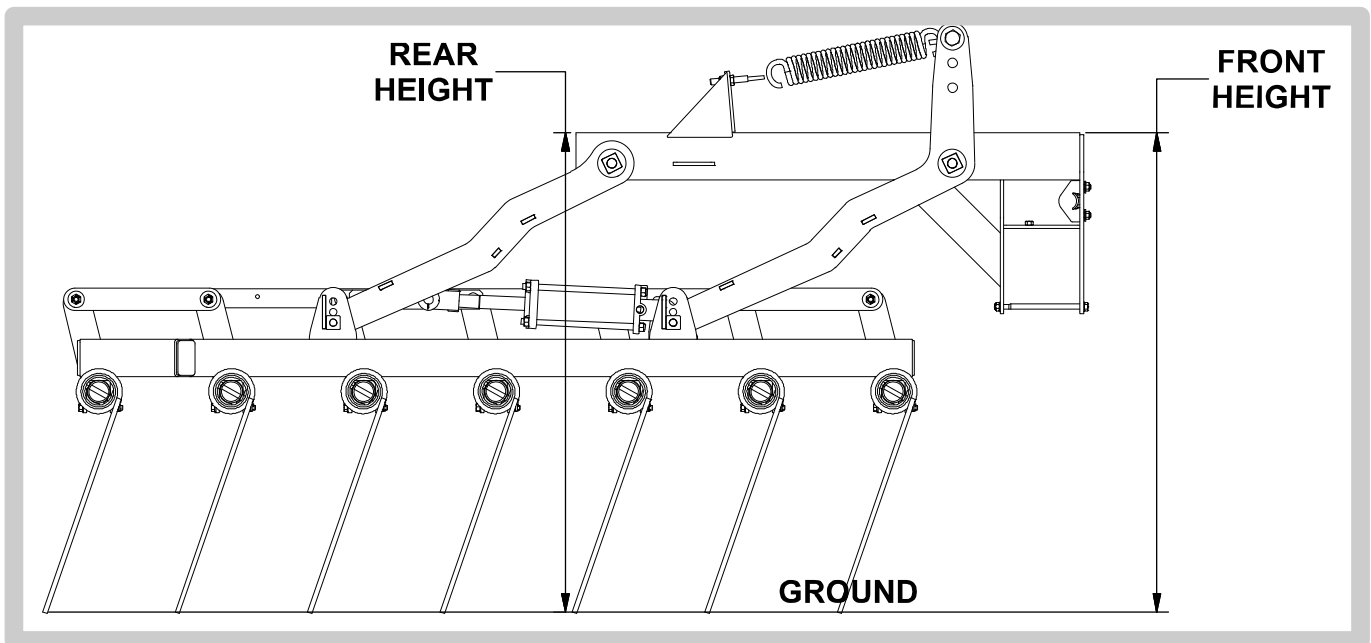


FIGURE 11

OPERATING INSTRUCTIONS

TINE SECTION ADJUSTMENT

- The Tine sections are fully adjustable based on your preferences and tine wear.
- Levelling:
 - **Before leveling the sections ensure the lift arms are properly leveled (Page 19)**
 - To level the section relocate the tine section pins in holes 1-3 (fig 12).
 - To bring the rear down, use rear #1 and front #3.
 - To bring the front down, use rear #3 and front #1.
 - The #2 setting can be used for less aggressive adjustments.
- Down pressure:
 - The down pressure can be adjusted by moving the spring position on the top of the lift arm, in holes A-C and D (fig 9).
 - For minimum downpressure, move the spring to hole A.
 - For maximum downpressure, move the spring to hole C.
 - Adjust D to tension the spring so that a piece of paper can slide between the coils.

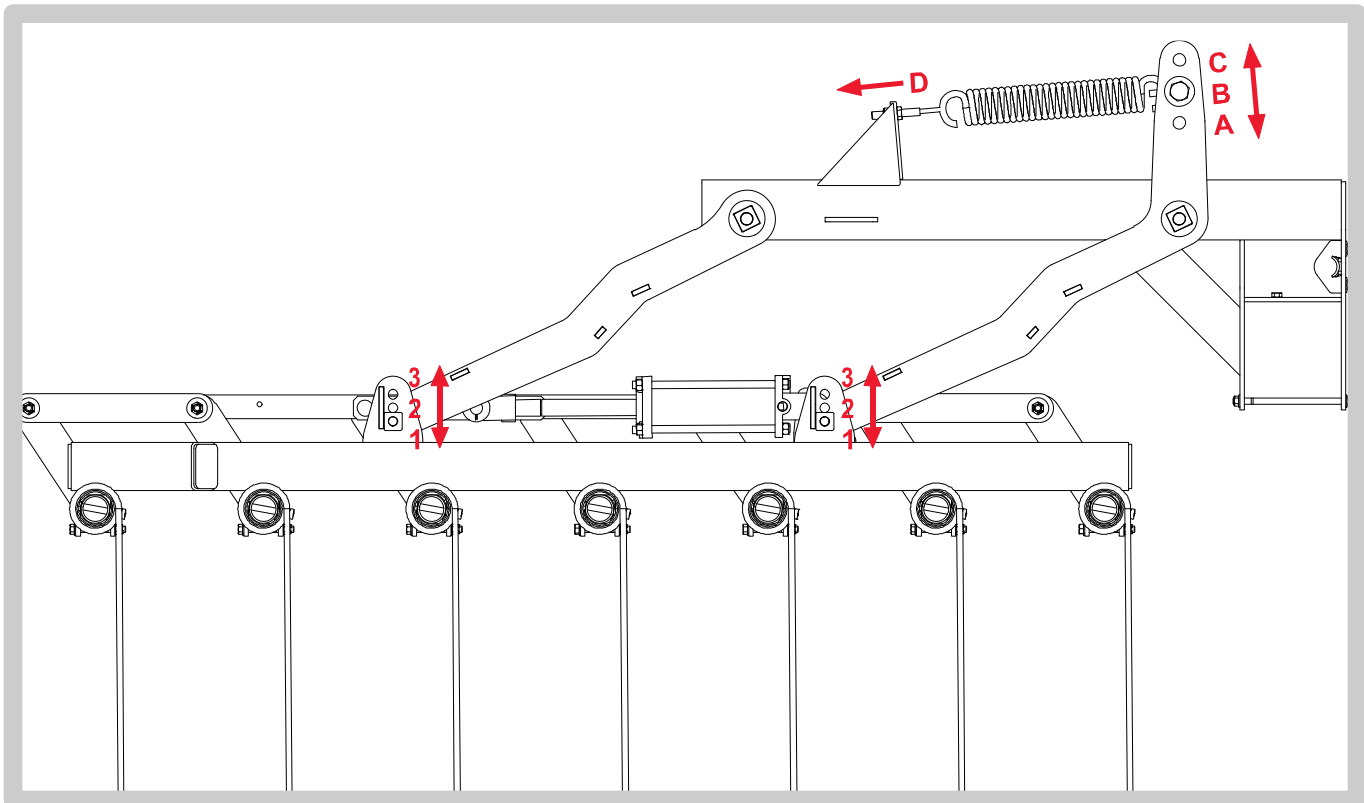


FIGURE 12

OPERATING INSTRUCTIONS

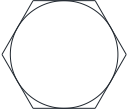
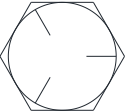

TRACTOR DISCONNECTING

1. Ensure that machine is in transport position
2. Put all lock pins into place
3. Block the A-frame tires, front and back, before disconnecting from the tractor
4. Apply lifting pressure at stubs on the wings with parking jack(s)
5. Pin the hitch parking jack in the downward position and crank to extend until the clevis lifts off the tractor hitch
6. Disconnect all hydraulic lines from the tractor
7. Pull out the tractor hitch pin

NOTE:

- **Ensure the jack is placed on firm ground prior to unhooking.**
- **Beware of sudden hitch up-ending due to negative hitch weight. Stay clear from the hitch when pulling ahead tractor as the hitch may rise suddenly.**

FASTENER GRADE CHART

| Specification | Material | Size Range (inches) | Min. Proof Strength (psi) | Min. Tensile Strength (psi) | Min. Yield Strength (psi) | Grade Identification Marking |
|---------------|--|----------------------------|---------------------------|-----------------------------|---------------------------|---|
| Grade 2 | Low or Medium Carbon Steel | 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 |  |

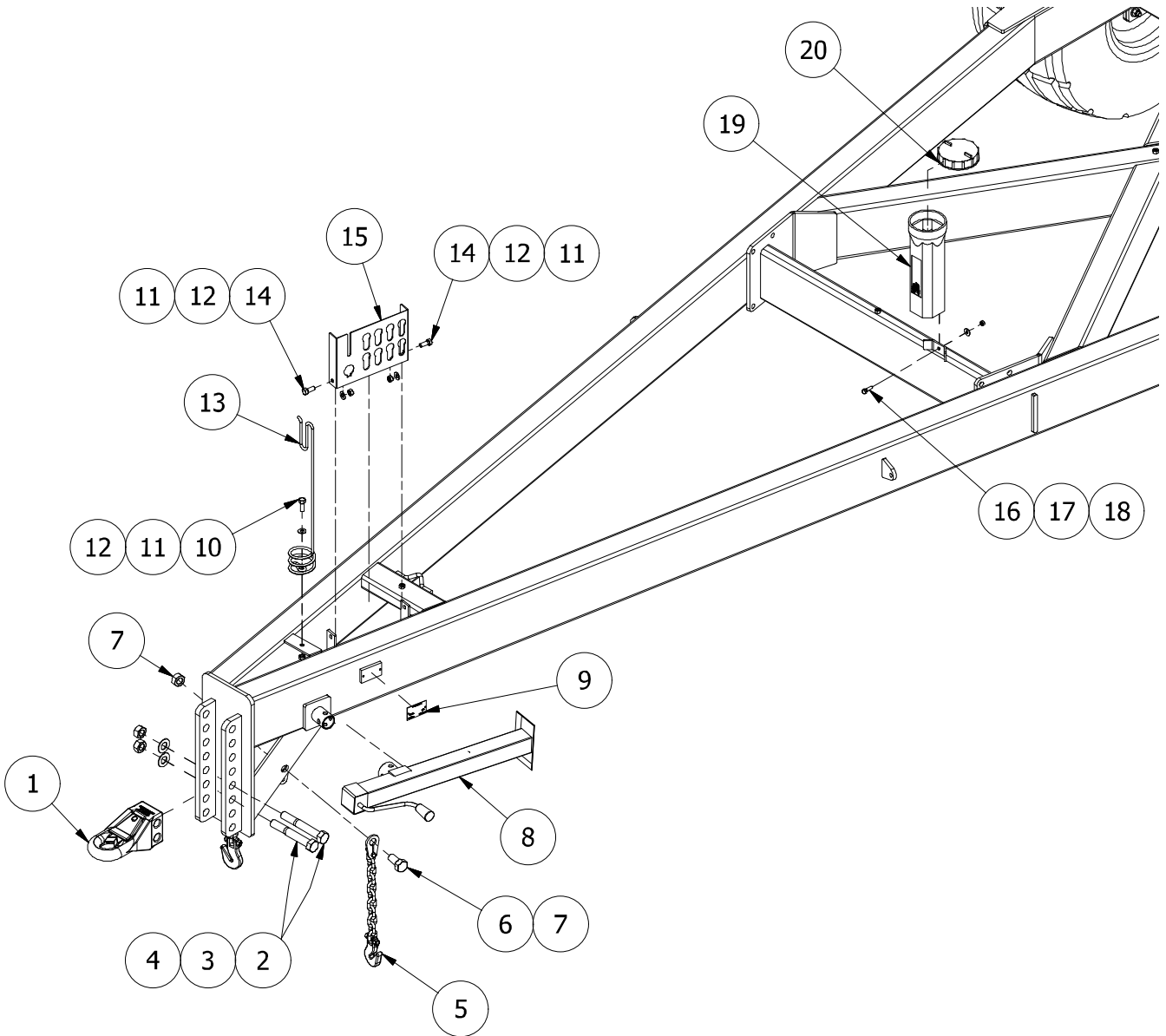
FASTENER TORQUE CHART

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

NOTES

SECTION 2

PARTS DETAILS – A-FRAME, HITCH

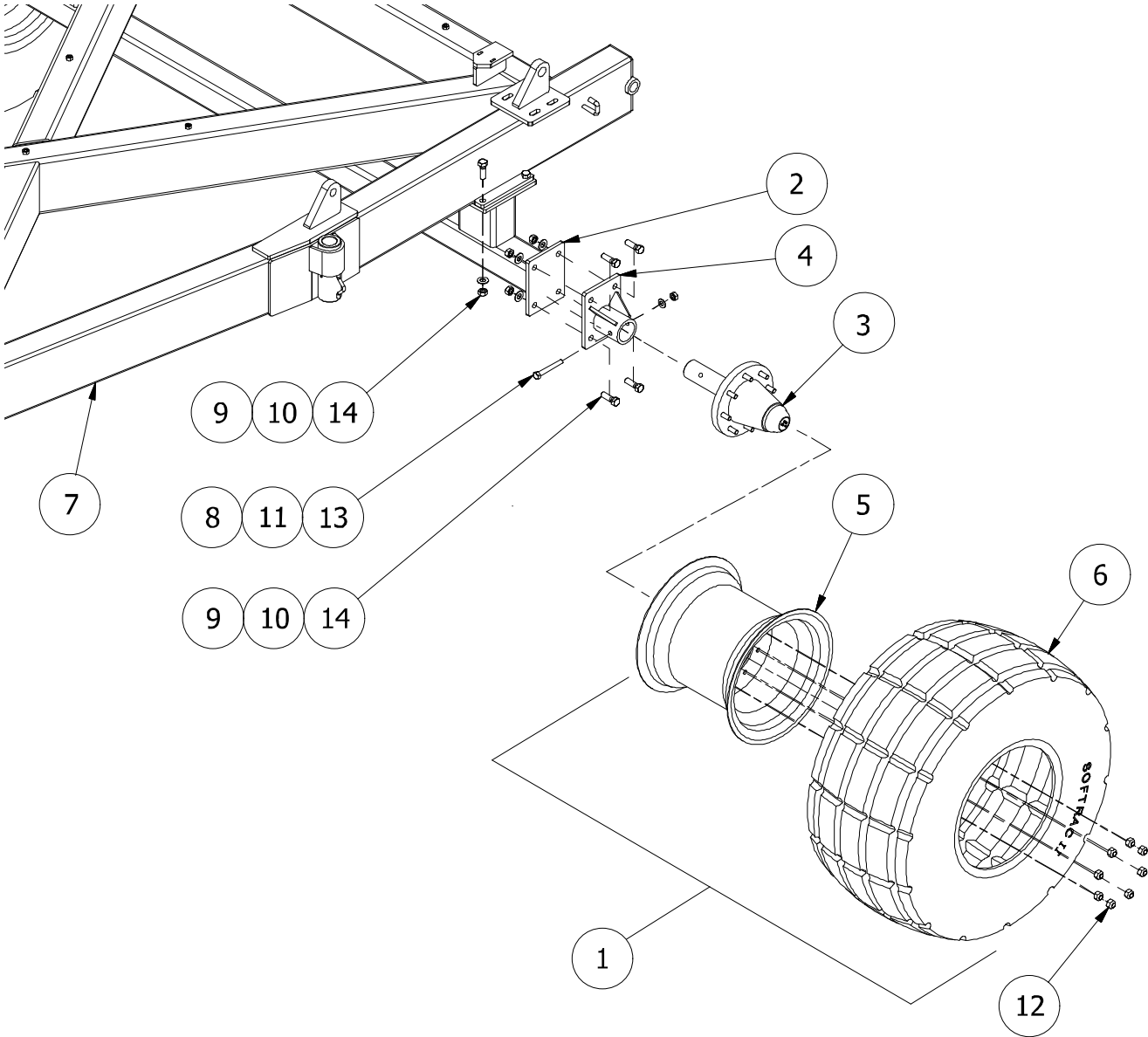


PARTS DETAILS – A-FRAME, HITCH

| ITEM # | PART # | DESCRIPTION |
|---------------|---------------|--|
| 1 | 423-0001 | PP1-301VH PERFECT HITCH c/w PP1-301VH |
| 2 | 526-1656 | BOLT, 1-8 UNC - 7, GR.5, YELLOW ZINC PLATED |
| 3 | 550-5316 | WASHER, FLAT, 1" - SAE, GR.5, YELLOW ZINC PLATED |
| 4 | 526-6109 | NUT, STOVER LOCK, 1-8 UNC, GR.5, YELLOW ZINC PLATED |
| 5 | 409-9050 | SAFETY CHAIN 20,000LB, CLEVIS MOUNT, NEW STYLE |
| 6 | 526-1616 | BOLT, 1-8 UNC - 2, GR.5, YELLOW ZINC PLATED |
| 7 | 526-6109 | NUT, STOVER LOCK, 1-8 UNC, GR.5, YELLOW ZINC PLATED |
| 8 | 420-0168 | 5000lb. 20" SQUARE SIDEWIND JACK 20.1"RL |
| 9 | 060-0034 | SERIAL PLATE |
| 10 | 526-0812 | BOLT, 1/2-13 UNC - 1.5, GR.5, YELLOW ZINC PLATED |
| 11 | 550-5308 | WASHER, FLAT, 1/2" - SAE, GR.5, YELLOW ZINC PLATED |
| 12 | 526-6105 | NUT, STOVER LOCK, 1/2-13 UNC, GR.5, YELLOW ZINC PLATED |
| 13 | 407-0003 | 24" SHEPHERD HOOK HOSE STANDOFF |
| 14 | 526-0810 | BOLT, 1/2-13 UNC - 1.25, GR.5, YELLOW ZINC PLATED |
| 15 | 835-1009 | CHAIN AND TIP HOLDER 14-1/4 X 8 |
| 16 | 526-0610 | BOLT, 3/8-16 UNC - 1.25, GR.5, YELLOW ZINC PLATED |
| 17 | 550-5206 | WASHER, FLAT, 3/8" - SAE, GR.5, YELLOW ZINC PLATED |
| 18 | 526-6103 | NUT, STOVER LOCK, 3/8-16 UNC, GR.5, YELLOW ZINC PLATED |
| 19 | 426-0001 | MANUAL STORAGE TUBE |
| 20 | 426-0002 | MANUAL STORAGE TUBE CAP |

PARTS DETAILS – A-FRAME, AXLE

NOTE: HH-8200 pictured, parts unique to HH-8200NT denoted in **BOLD**

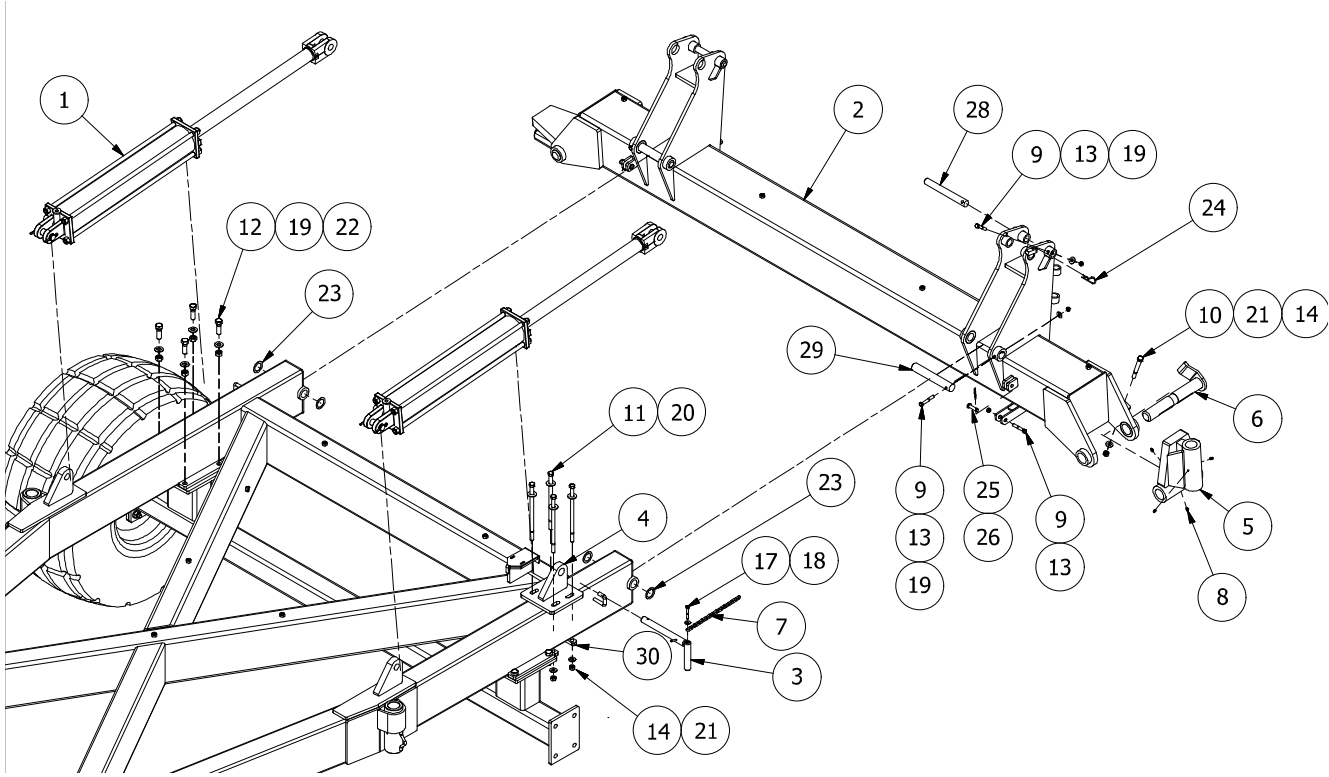


PARTS DETAILS – A-FRAME, AXLE

| ITEM # | PART # | DESCRIPTION |
|---------------|---------------|---|
| 1 | 020-0105 | 16.5 - 16.1 8 BOLT TIRE AND WHEEL ASS'Y |
| 2 | 120-1160 | 8200NT UNIVERSAL CENTRE AXLE |
| 3 | 120-1246 | 812 HUB & SPINDLE ASSEMBLY |
| 4 | 120-1230 | CENTRE AXLE STUB ASSEMBLY |
| 5 | 204-5585 | W14C x 16.1" - 8 HOLE WHEEL, 3/8" OFFSET |
| 6 | 205-1192 | 16.5 X 16.1 6 PLY TIRE |
| 7 | 105-0364 | 8100NT A-FRAME WELDMNT, W TIE BAR |
| 8 | 526-0932 | BOLT, 9/16-12 UNC - 4, GR.5, YELLOW ZINC PLATED |
| 9 | 526-1016 | BOLT, 5/8-11 UNC - 2, GR.5, YELLOW ZINC PLATED |
| 10 | 526-6106 | NUT, STOVER LOCK, 5/8-11 UNC, GR.5, YELLOW ZINC PLATED |
| 11 | 526-6112 | NUT, STOVER LOCK, 9/16-12 UNC, GR.5, YELLOW ZINC PLATED |
| 12 | 543-5563 | 9/16 WHEEL NUT, NF, Gr.5, PLTD. |
| 13 | 550-5309 | WASHER, FLAT, 9/16" - SAE, GR.5, YELLOW ZINC PLATED |
| 14 | 550-5310 | WASHER, FLAT, 5/8" - SAE, GR.5, YELLOW ZINC PLATED |

PARTS DETAILS – A-FRAME, CENTER BAR

NOTE: HH-8200 pictured, parts unique to HH-8200NT denoted in **BOLD**

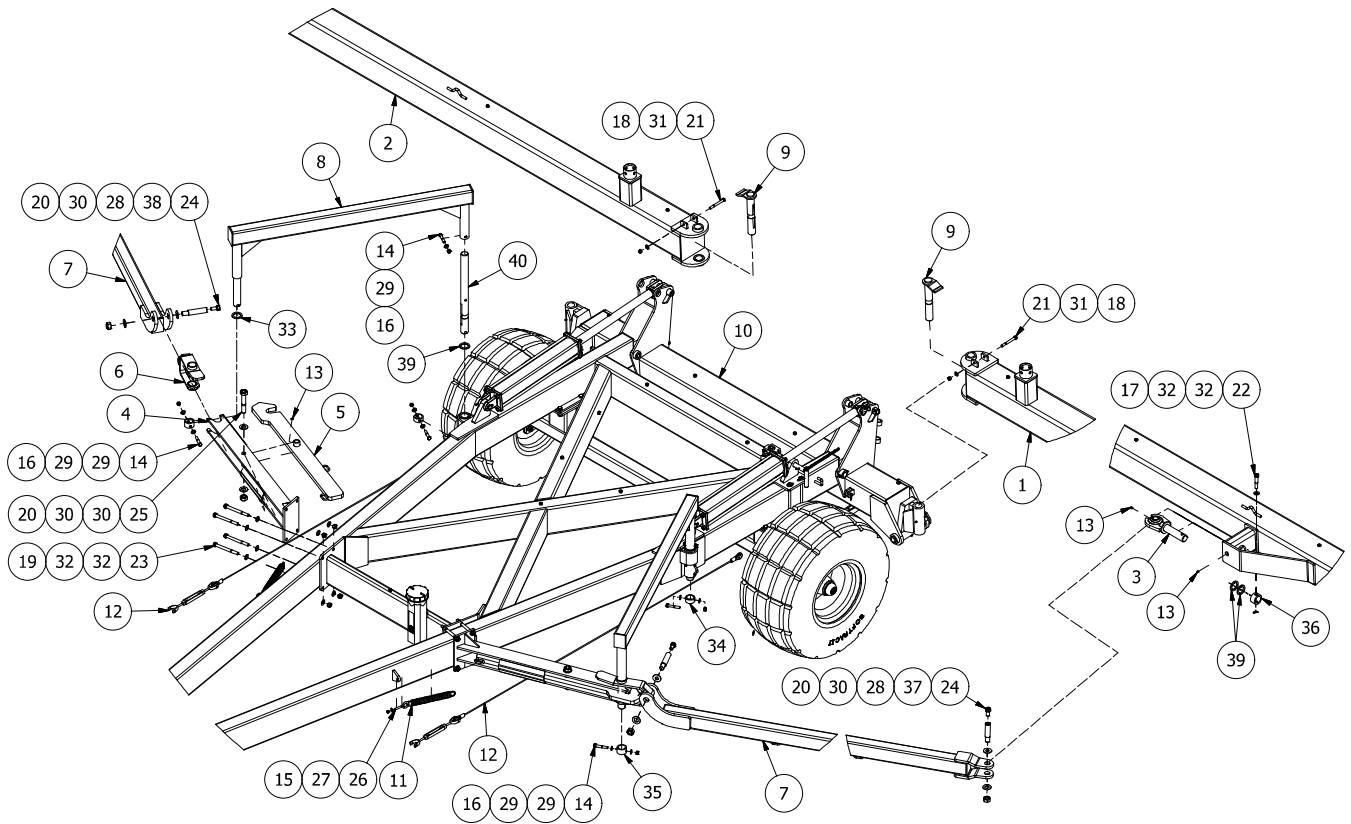


PARTS DETAILS – A-FRAME, CENTER BAR

| ITEM # | PART # | DESCRIPTION |
|---------------|-----------------|--|
| 1 | 030-5985 | TIE ROD CYLINDER, 4" BORE X 24" STROKE, 1.5" ROD, 36" RL |
| 2 | 105-1247 | 8200NT CENTRE BAR WELDMENT (REVISED ANGLE) |
| 3 | 105-1328 | HYD. VALVE LOCK PIN WELDMENT (HOLLOW) |
| 4 | 112-0509 | HYD. LOCK LUG WELDMENT |
| 5 | 113-0031 | 1-3/4 X 1-3/4 KNUCKLE |
| 6 | 123-3204 | 1-3/4 X 11-1/4 KNUCKLE LOCK PIN |
| 7 | 409-9057 | HYD. LOCK PIN CHAIN |
| 8 | 419-0004 | GREASE ZERK, 1/4"NF - STRAIGHT |
| 9 | 526-0620 | BOLT, 3/8-16 UNC - 2.25, GR.5, YELLOW ZINC PLATED |
| 10 | 526-0836 | BOLT, 1/2-13 UNC - 4.5, GR.5, YELLOW ZINC PLATED |
| 11 | 526-0880 | BOLT, 1/2-13 UNC - 10, GR.5, YELLOW ZINC PLATED |
| 12 | 526-1016 | BOLT, 5/8-11 UNC - 2, GR.5, YELLOW ZINC PLATED |
| 13 | 526-6103 | NUT, STOVER LOCK, 3/8-16 UNC, GR.5, YELLOW ZINC PLATED |
| 14 | 526-6105 | NUT, STOVER LOCK, 1/2-13 UNC, GR.5, YELLOW ZINC PLATED |
| 15 | 526-6106 | NUT, STOVER LOCK, 5/8-11 UNC, GR.5, YELLOW ZINC PLATED |
| 17 | 530-0516 | BOLT, 5/16-18 UNC - 2, GR.8, YELLOW ZINC PLATED |
| 19 | 550-5206 | WASHER, FLAT, 3/8" - USS, GR.5, YELLOW ZINC PLATED |
| 20 | 550-5208 | WASHER, FLAT, 1/2" - USS, GR.5, YELLOW ZINC PLATED |
| 21 | 550-5308 | WASHER, FLAT, 1/2" - SAE, GR.5, YELLOW ZINC PLATED |
| 22 | 550-5310 | WASHER, FLAT, 5/8" - SAE, GR.5, YELLOW ZINC PLATED |
| 23 | 554-1065 | WASHER, FLAT, 1 1/4 - Narrow, GR.5, YELLOW ZINC PLATED |
| 24 | 558-2057 | #9 HITCH PIN CLIP, PLTD. |
| 25 | 558-2059 | 3/32 x 2-5/16 #7 HITCH PIN CLIP |
| 26 | 560-0808 | 1/2 X 1-3/4 CLEVIS PIN (JUMBO) |
| 28 | 807-2804 | 1 X 8-5/8 LIFT CYLINDER PIN |
| 29 | 807-3205 | CENTRE BAR PIVOT PIN |
| 30 | 815-1008 | LOCK LUG TIE PLATE |

PARTS DETAILS – A-FRAME, AUTOFOLD

NOTE: HH-8200 pictured, parts unique to HH-8200NT denoted in **BOLD**

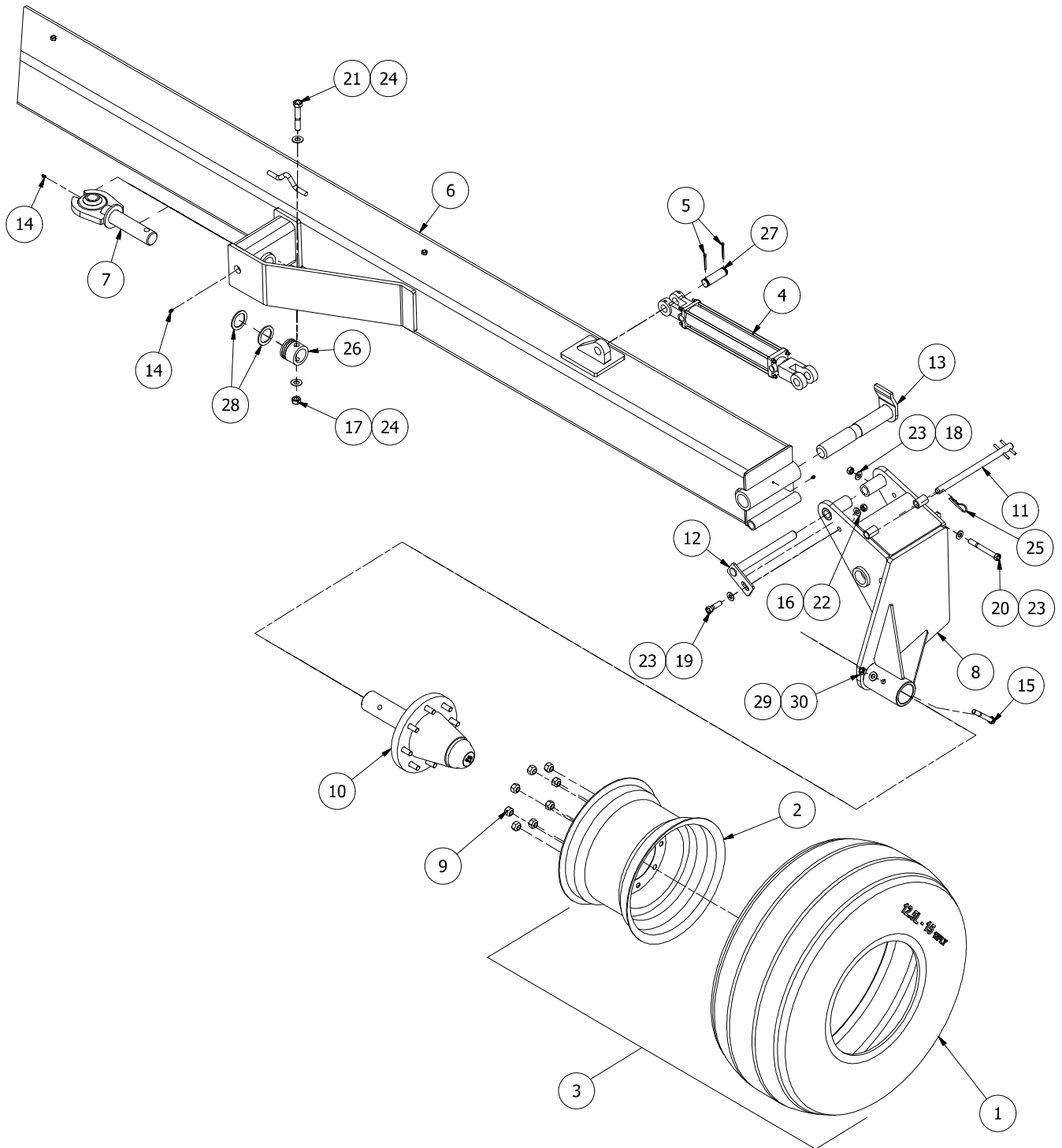


PARTS DETAILS – A-FRAME, AUTOFOLD

| ITEM # | PART # | DESCRIPTION |
|--------|----------|--|
| 1 | Varies | WING - SEE PAGE 16 |
| 2 | Varies | WING - SEE PAGE 16 |
| 3 | 105-1259 | DRAFT ARM PULL LUG PIN, EXTENDED (1-1/4") |
| 4 | Varies | LOCK BOX - SEE PAGE 16 |
| 5 | Varies | LOCK ARM - SEE PAGE 16 |
| 6 | 112-0507 | DRAFT ARM CLEVIS WELDMENT, (1-5/16") |
| 7 | Varies | DRAFT ARM - SEE PAGE 16 |
| 8 | 112-0608 | SWING ARM WELDMENT - BOLT IN SHAFT |
| 9 | 123-3204 | 1-3/4 X 11-1/4 KNUCKLE LOCK PIN |
| 10 | 105-1247 | 8200NT CENTRE BAR WELDMENT (REVISED ANGLE) |
| 11 | 403-0267 | 1-1/2" X 12-1/2" AUTO FOLD SPRING |
| 12 | 410-0321 | 1/4" X 97" AUTO FOLD CABLE c/w 3/8" X 6" TURN BUCKLE |
| 13 | 419-0004 | GREASE ZERK, 1/4"NF - STRAIGHT |
| 14 | 526-0824 | BOLT, 1/2-13 UNC - 3, GR.5, YELLOW ZINC PLATED |
| 15 | 526-6103 | NUT, STOVER LOCK, 3/8-16 UNC, GR.5, YELLOW ZINC PLATED |
| 16 | 526-6105 | NUT, STOVER LOCK, 1/2-13 UNC, GR.5, YELLOW ZINC PLATED |
| 17 | 526-6106 | NUT, STOVER LOCK, 5/8-11 UNC, GR.5, YELLOW ZINC PLATED |
| 18 | 526-7308 | 1/2 STOVER LOCK NUT, NC, GR.8, PLTD. |
| 19 | 526-7310 | NUT, STOVER LOCK, 5/8-11 UNC, GR.8, YELLOW ZINC PLATED |
| 20 | 526-7316 | NUT, STOVER LOCK, 1-8 UNC, GR.8, YELLOW ZINC PLATED |
| 21 | 530-0772 | BOLT, 1/2-13 UNC - 4.5, GR.8, YELLOW ZINC PLATED |
| 22 | 530-1000 | BOLT, 5/8-11 UNC - 3.5, GR.8, YELLOW ZINC PLATED |
| 23 | 530-1006 | BOLT, 5/8-11 UNC - 6.5, GR.8, YELLOW ZINC PLATED |
| 24 | 530-1246 | BOLT, 3/4-10 UNC - 1.5, GR.8, YELLOW ZINC PLATED |
| 25 | 530-1644 | BOLT, 1-8 UNC - 5.5, GR.8, YELLOW ZINC PLATED |
| 26 | 546-0199 | 3/8 X 4 EYE BOLT, NC, Gr.5, PLTD. |
| 27 | 550-5206 | WASHER, FLAT, 3/8 - Regular - Type B, GR.5, YELLOW ZINC PLATED |
| 28 | 550-5212 | WASHER, FLAT, 3/4 - Regular - Type B, GR.5, YELLOW ZINC PLATED |
| 29 | 550-5308 | WASHER, FLAT, 1/2" - SAE, GR.5, YELLOW ZINC PLATED |
| 30 | 550-5316 | WASHER, FLAT, 1" - SAE, GR.5, YELLOW ZINC PLATED |
| 31 | 550-5613 | WASHER, FLAT, 1/2 SAE, GR.8, YELLOW ZINC PLATED |
| 32 | 550-5617 | WASHER, FLAT, 5/8 SAE, GR.8, YELLOW ZINC PLATED |
| 33 | 554-5401 | 1-3/4 ID X 10 Ga. MACHINE WASHER, PLTD. |
| 34 | 805-6018 | 2 1/4 OD x .240W CDSM - 1 |
| 35 | 805-6021 | 2-1/4 OD x .240W CDSM - 1-3/8 |
| 36 | 805-7608 | 2-1/2 OD X .365W CDSM - 1-3/8 |
| 37 | 827-0077 | PIN, 1-1/4" OD, CR 1045, 5", END THREADED 1"UNC |
| 38 | 827-0078 | PIN, 1-1/4" OD, CR 1045, 6-1/8", END THREADED 1"UNC |
| 39 | 805-6005 | PULL LUG SPACER, 1/4" |
| 40 | 807-3654 | SWING ARM SHAFT, BOLT IN, 1045 |

PARTS DETAILS – WINGS, STEERING

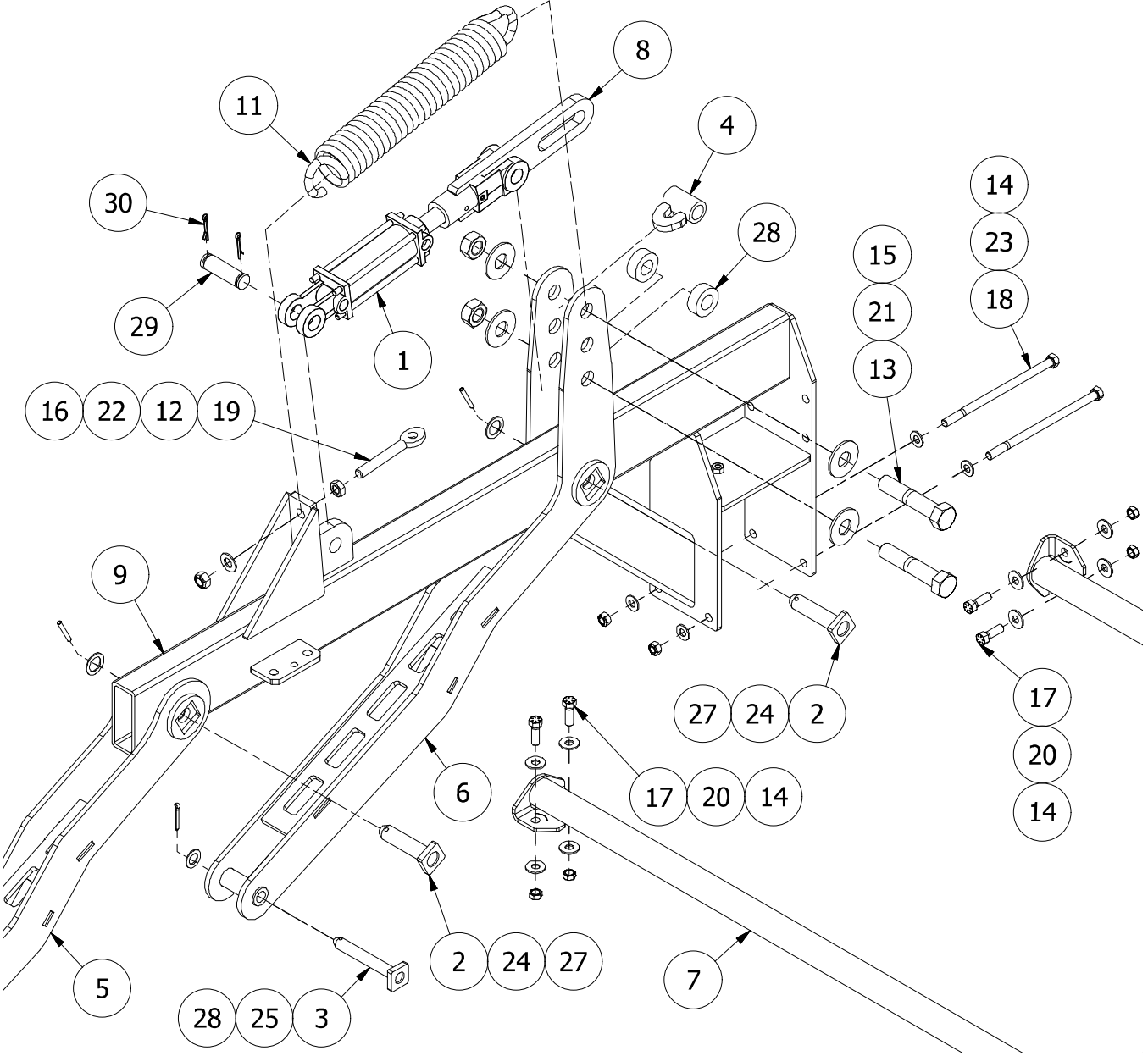
NOTE: HH-8200 pictured, parts unique to HH-8200NT denoted in **BOLD**



PARTS DETAILS – WINGS, STEERING

| ITEM # | PART # | DESCRIPTION |
|--------|----------|---|
| 1* | 205-1193 | 12.5 X 15 TIRE - 8 PLY TIRE |
| 1* | 205-1180 | 11 X 15 TIRE - 8 PLY TIRE |
| 2* | 204-5586 | WHEEL RIM 15x10x10 8 BOLT |
| 2* | 204-5565 | WHEEL RIM 15x8x6 6 BOLT |
| 3* | 020-0142 | 12.5L15 15x10x10 8 BOLT TIRE AND WHEEL ASS'Y |
| 3* | 020-0144 | 11L15 15x8x6 6 BOLT TIRE AND WHEEL ASS'Y |
| 4 | 030-5979 | 2 X 12 HYDRAULIC CYLINDER, 22.25" RL |
| 5 | 556-0906 | 3/16 X 1-3/4 COTTER PIN PLTD |
| 6 | Varies | WING, SEE PAGE 16 |
| 7 | 105-1259 | DRAFT ARM PULL LUG PIN, EXTENDED (1-1/4") |
| 8* | 120-1238 | LEFT WING AXLE WELDMENT |
| 8* | 120-1239 | RIGHT WING AXLE WELDMENT |
| 9 | 543-5563 | 9/16 WHEEL NUT, NF, GR.5, PLTD. |
| 10 | Varies | HUB & SPINDLE SEE PAGE 24-25 |
| 11 | 123-1807 | 3/4" x 11-1/2" WHEEL TEE LOCK PIN |
| 12 | 123-2222 | WING AXLE CYLINDER LOCK PIN WLD. |
| 13 | 123-3204 | 1-3/4 X 11-1/4 KNUCKLE LOCK PIN |
| 14 | 419-0004 | GREASE ZERK, 1/4"NF - STRAIGHT |
| 15 | 526-0932 | BOLT, 9/16-12 UNC - 4, GR.5, YELLOW ZINC PLATED |
| 16 | 526-6105 | NUT, STOVER LOCK, 1/2-13 UNC, GR.5, YELLOW ZINC PLATED |
| 17 | 526-6106 | NUT, STOVER LOCK, 5/8-11 UNC, GR.5, YELLOW ZINC PLATED |
| 18 | 526-7308 | 1/2 STOVER LOCK NUT, NC, GR.8, PLTD. |
| 19 | 530-0742 | BOLT, 1/2-13 UNC - 1.75, GR.8, YELLOW ZINC PLATED |
| 20 | 530-0772 | BOLT, 1/2-13 UNC - 4.5, GR.8, YELLOW ZINC PLATED |
| 21 | 530-1000 | BOLT, 5/8-11 UNC - 3.5, GR.8, YELLOW ZINC PLATED |
| 22 | 550-5308 | WASHER, FLAT, 1/2" - SAE, GR.5, YELLOW ZINC PLATED |
| 23 | 550-5613 | WASHER, FLAT, 1/2 SAE, GR.8, YELLOW ZINC PLATED |
| 24 | 550-5617 | WASHER, FLAT, 5/8 SAE, GR.8, YELLOW ZINC PLATED |
| 25 | 558-2057 | #9 HITCH PIN CLIP, PLTD. |
| 26 | 805-7608 | 2-1/2 OD X .365W CDSM - 1-3/8 |
| 27 | 807-2809 | 1 X 3-3/8 CYLINDER PIN, PLTD. |
| 28 | 839-1961 | PULL LUG SPACER, 1/4" |
| 29 | 550-5309 | WASHER, FLAT, 9/16" - SAE, GR.5, YELLOW ZINC PLATED |
| 30 | 526-6112 | NUT, STOVER LOCK, 9/16-12 UNC, GR.5, YELLOW ZINC PLATED |

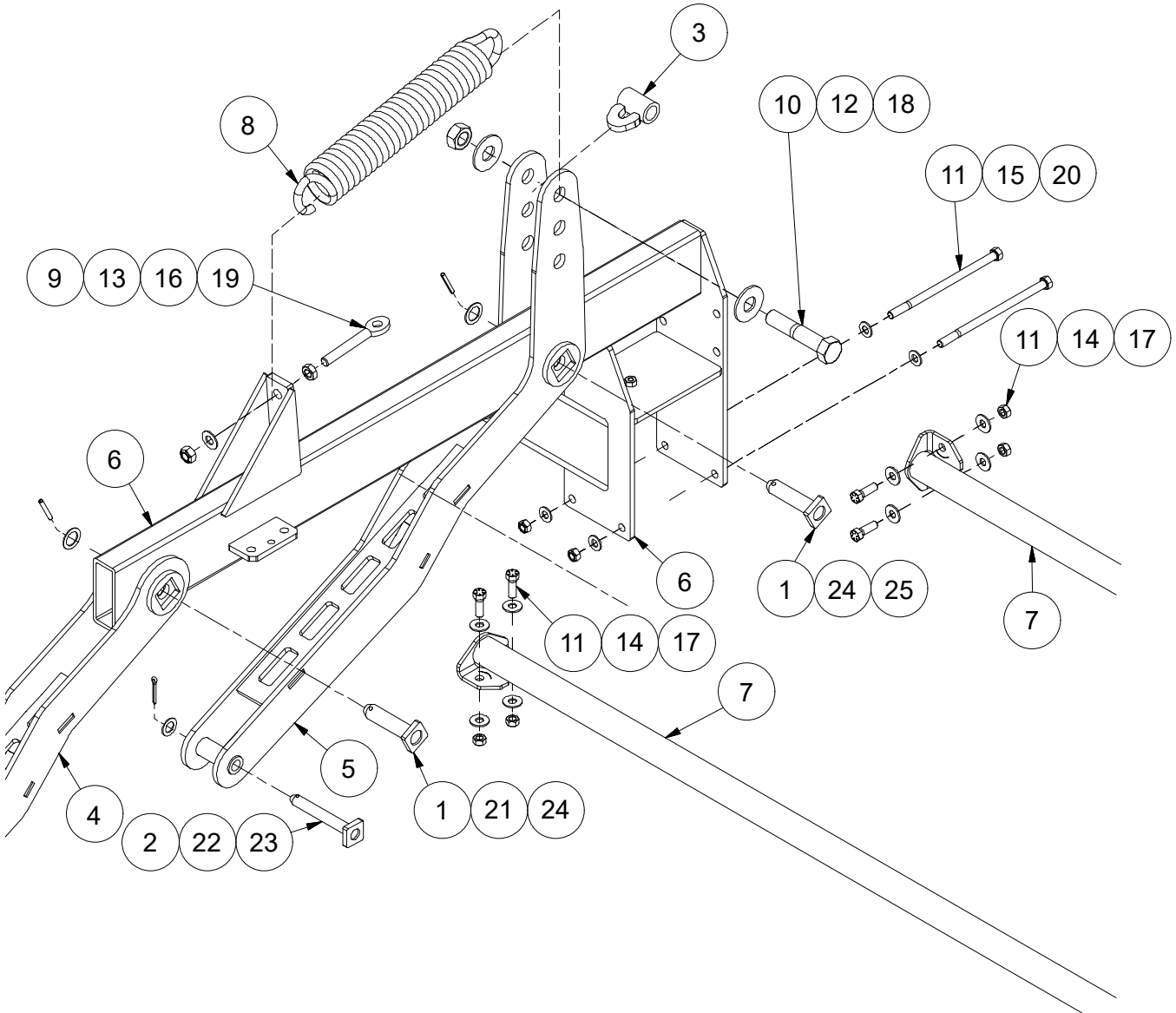
PARTS DETAILS – CENTER, LIFT ARMS



PARTS DETAILS – CENTER, LIFT ARMS

| ITEM # | PART # | DESCRIPTION |
|--------|----------|--|
| 1 | 030-5904 | 2 X 4 CYL - 112 BODY |
| 2 | 105-1162 | HARROW PIN, 1 X 3 3/8 USABLE LG |
| 3 | 105-1163 | HARROW PIN, 3/4 X 4 3/4 USABLE LG |
| 4 | 105-1164 | LUG, EXT SPRING KIT |
| 5 | 105-1165 | LINK ARM, FLOATING |
| 6 | 105-1169 | LINK ARM, DRIVEN |
| 7 | 105-1258 | CROSS BAR, SHORT |
| 8 | 105-1250 | HELPER CYLINDER CLEVIS WELDMENT |
| 9 | 105-1257 | LIFT ARM, CENTER |
| 11 | 403-0282 | SPRING, EXTENSION, 3" OD, 0.531" WIRE, 19-1/2" LG |
| 12 | 525-6110 | NUT, JAM, HEX, 5/8-11 UNC, GR.5, YELLOW ZINC PLATED |
| 13 | 526-1640 | BOLT, 1-8 UNC - 5, GR.5, YELLOW ZINC PLATED |
| 14 | 526-6105 | 1/2 STOVER LOCK NUT, NC, GR.5, PLTD. |
| 15 | 526-6109 | NUT, STOVER LOCK, 1-8 UNC, GR.5, YELLOW ZINC PLATED |
| 16 | 526-7310 | NUT, STOVER LOCK, 5/8-11 UNC, GR.8, YELLOW ZINC PLATED |
| 17 | 530-0740 | BOLT, 1/2-13 UNC - 1.5, GR.8, YELLOW ZINC PLATED |
| 18 | 530-0760 | BOLT, 1/2-13 UNC - 9.5, GR.8, YELLOW ZINC PLATED |
| 19 | 546-0219 | BOLT, SPADE, 5/8-11 NC, GR. 5 - 4" LG |
| 20 | 550-5208 | WASHER, FLAT, 1/2 - USS, GR.5, YELLOW ZINC PLATED |
| 21 | 550-5216 | WASHER, FLAT, 1" - USS, GR.5, YELLOW ZINC PLATED |
| 22 | 550-5310 | WASHER, FLAT, 5/8" - SAE, GR.5, YELLOW ZINC PLATED |
| 23 | 550-5613 | WASHER, FLAT, 1/2 SAE, GR.8, YELLOW ZINC PLATED |
| 24 | 554-5405 | MACHINERY BUSHING, 1 ID X 14 GA, PLTD. |
| 25 | 554-5414 | MACHINERY BUSHING, 3/4 ID X 14 GA, PLTD. |
| 26 | 556-0612 | COTTER PIN - 3/16" X 1" PLAIN |
| 27 | 556-1621 | 1/4 X 2 ROLL PIN, PLTD. |
| 28 | 839-1955 | SPACER WASHER |
| 29 | 807-2809 | 1" x 3-3/8" Cylinder Pin, Pltd. |
| 30 | 556-0906 | 3/16" x 1-3/4" Cotter Pin, Pltd. |

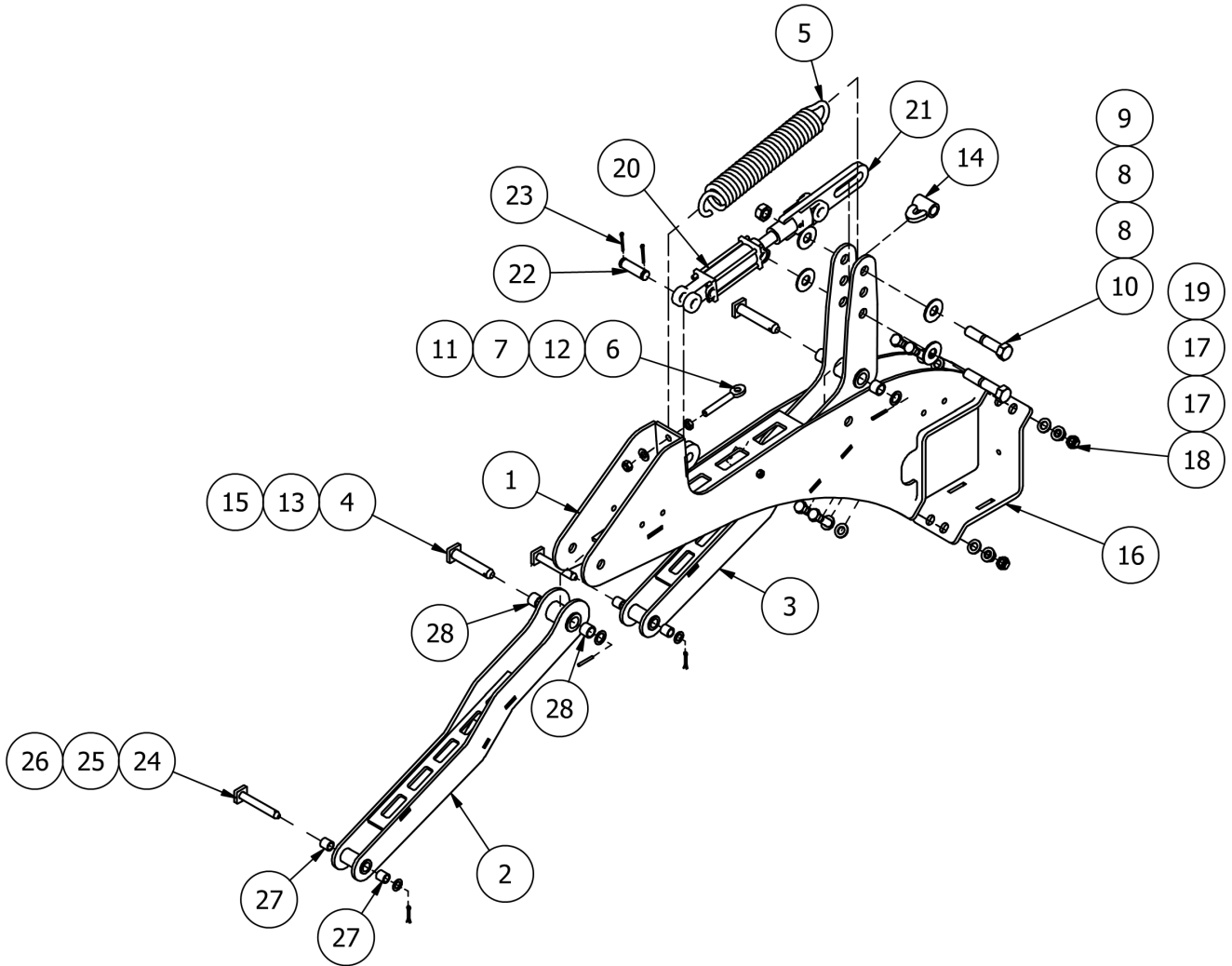
PARTS DETAILS – WINGS, LIFT ARMS



PARTS DETAILS – WINGS, LIFT ARMS

| ITEM # | PART # | DESCRIPTION |
|---------------|---------------|--|
| 1 | 105-1162 | HARROW PIN, 1 X 3 3/8 USABLE LG |
| 2 | 105-1163 | HARROW PIN, 3/4 X 4 3/4 USABLE LG |
| 3 | 105-1164 | LUG, EXT SPRING KIT |
| 4 | 105-1165 | LINK ARM, FLOATING |
| 5 | 105-1169 | LINK ARM, DRIVEN |
| 6 | 105-1182 | LIFT ARM, WING |
| 7* | 105-1183 | CROSS BAR, LONG |
| 7* | 105-1258 | CROSS BAR, SHORT |
| 8 | 403-0282 | SPRING, EXTENSION, 3" OD, 0.531" WIRE, 19-1/2" LG |
| 9 | 525-6110 | NUT, JAM, HEX, 5/8-11 UNC, GR.5, YELLOW ZINC PLATED |
| 10 | 526-1640 | BOLT, 1-8 UNC - 5, GR.5, YELLOW ZINC PLATED |
| 11 | 526-6105 | NUT, STOVER LOCK, 1/2-13 UNC, GR.5, YELLOW ZINC PLATED |
| 12 | 526-6109 | NUT, STOVER LOCK, 1-8 UNC, GR.5, YELLOW ZINC PLATED |
| 13 | 526-7310 | NUT, STOVER LOCK, 5/8-11 UNC, GR.8, YELLOW ZINC PLATED |
| 14 | 530-0740 | BOLT, 1/2-13 UNC - 1.5, GR.8, YELLOW ZINC PLATED |
| 15 | 530-0760 | BOLT, 1/2-13 UNC - 9.5, GR.8, YELLOW ZINC PLATED |
| 16 | 546-0219 | BOLT, SPADE, 5/8-11 NC, GR. 5 - 4" LG |
| 17 | 550-5208 | WASHER, FLAT, 1/2 - USS, GR.5, YELLOW ZINC PLATED |
| 18 | 550-5216 | WASHER, FLAT, 1" - USS, GR.5, YELLOW ZINC PLATED |
| 19 | 550-5310 | WASHER, FLAT, 5/8" - SAE, GR.5, YELLOW ZINC PLATED |
| 20 | 550-5613 | WASHER, FLAT, 1/2 SAE, GR.8, YELLOW ZINC PLATED |
| 21 | 554-5405 | MACHINERY BUSHING, 1 ID X 14 GA, PLTD. |
| 22 | 554-5414 | MACHINERY BUSHING, 3/4 ID X 14 GA, PLTD. |
| 23 | 556-0612 | COTTER PIN - 3/16" X 1" PLAIN |
| 24 | 556-1621 | 1/4 X 2 ROLL PIN, PLTD. |

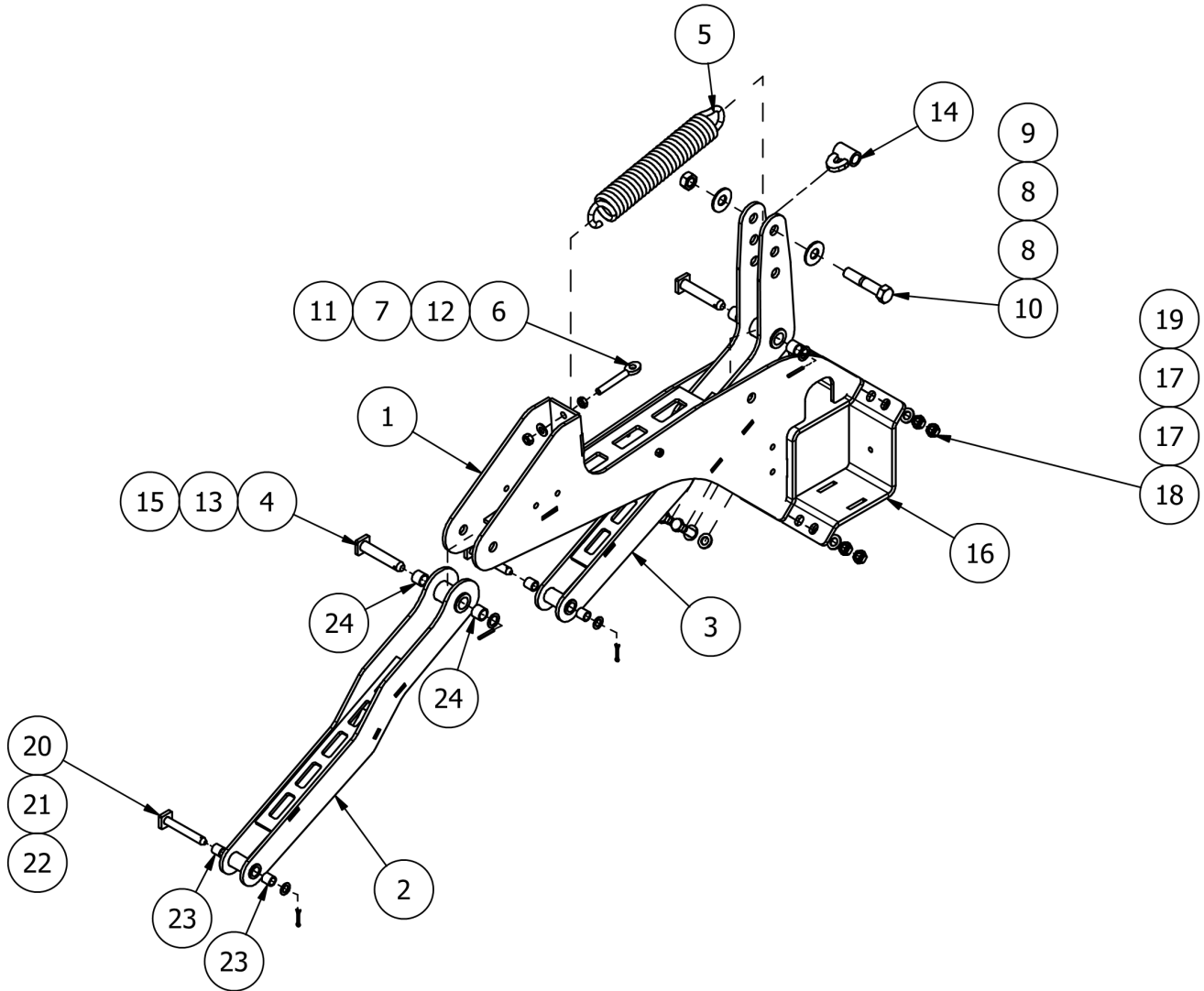
PARTS DETAILS – WINGS, LIFT ARMS PROFILED



PARTS DETAILS – CENTER, LIFT ARMS PROFILED

| ITEM # | PART # | DESCRIPTION |
|--------|----------|--|
| 1 | 105-1344 | LIFT ARM, PROFILED, EXTENDED |
| 2 | 160-0728 | LINK, IDLER W/ BUSHINGS |
| 3 | 160-0729 | LINK, DRIVEN W/ BUSHINGS |
| 4 | 105-1343 | HARROW PIN, $\phi 1 \times 4 \frac{5}{8}$ USABLE LG |
| 5 | 403-0275 | SPRING, EXTENSION, 3" OD, 0.531" WIRE, STD MACHINE HOOKS - 18" |
| 6 | 546-0219 | BOLT, SPADE, 5/8-11 NC, GR. 5 - 4" LG |
| 7 | 550-5310 | WASHER, FLAT, 5/8" - SAE, GR.5, YELLOW ZINC PLATED |
| 8 | 550-5216 | WASHER, FLAT, 1" - USS, GR.5, YELLOW ZINC PLATED |
| 9 | 526-6109 | NUT, STOVER LOCK, 1-8 UNC, GR.5, YELLOW ZINC PLATED |
| 10 | 526-1640 | BOLT, 1-8 UNC - 5, GR.5, YELLOW ZINC PLATED |
| 11 | 526-7310 | NUT, STOVER LOCK, 5/8-11 UNC, GR.8, YELLOW ZINC PLATED |
| 12 | 525-6110 | NUT, JAM, HEX, INCH, GRADE 5, YELLOW ZINC PLATED |
| 13 | 554-5405 | MACHINERY BUSHING, 1 ID X 14 GA, PLTD. |
| 14 | 105-1164 | LUG, EXT SPRING KIT |
| 15 | 556-1621 | 1/4 X 2 ROLL PIN, PLTD. |
| 16 | 839-2099 | LIFT ARM V CLAMP |
| 17 | 550-5312 | WASHER, FLAT, 3/4" - SAE, GR.5, YELLOW ZINC PLATED |
| 18 | 526-6107 | NUT, STOVER LOCK, 3/4-10 UNC, GR.5, YELLOW ZINC PLATED |
| 19 | 526-1222 | BOLT, 3/4-10 UNC - 2.75, GR.5, YELLOW ZINC PLATED |
| 20 | 030-5904 | 2 X 4 CYL - 112 BODY |
| 21 | 105-1250 | HELPER CYLINDER CLEVIS WELDMENT |
| 22 | 807-2809 | 1 X 3-3/8 CYLINDER PIN, PLTD. |
| 23 | 556-0906 | 3/16 X 1-3/4 COTTER PIN PLTD |
| 24 | 105-1163 | HARROW PIN, $\phi 3/4 \times 4 \frac{3}{4}$ USABLE LG |
| 25 | 554-5414 | MACHINERY BUSHING, 3/4 ID X 14 GA, PLTD. |
| 26 | 556-0612 | COTTER PIN, 3/16 x 1 1/2, ZINC PLATED |
| 27 | 610-0021 | BUSHING, 0.75 x 1 x 1 |
| 28 | 610-0014 | BUSHING, 1 x 1.26 x 1 |

PARTS DETAILS – WINGS, LIFT ARMS PROFILED

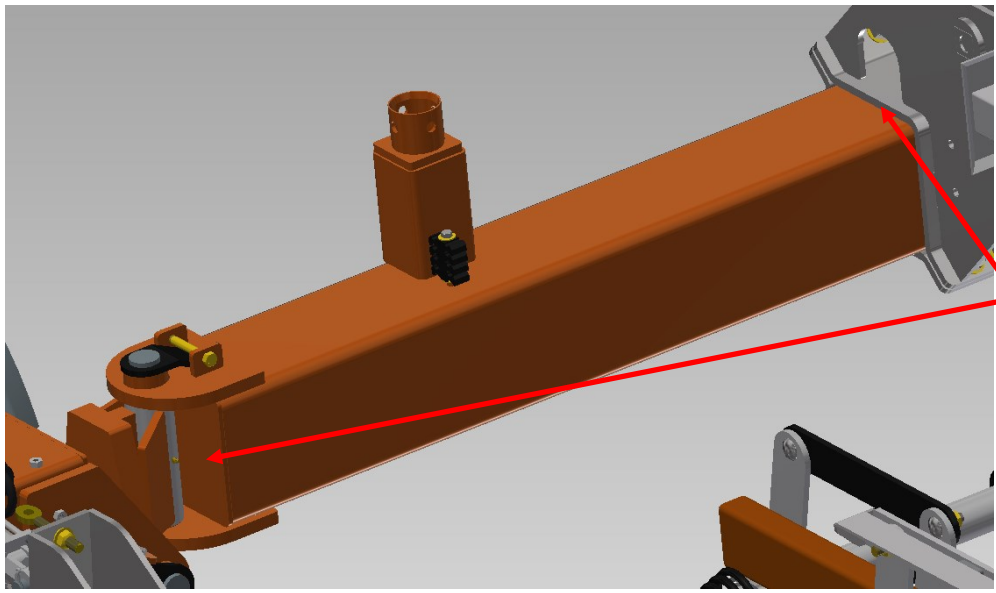


PARTS DETAILS – WINGS, LIFT ARMS PROFILED

| ITEM # | PART # | DESCRIPTION |
|--------|----------|--|
| 1 | 105-1342 | LIFT ARM, PROFILED |
| 2 | 160-0728 | LINK, IDLER W/ BUSHINGS |
| 3 | 160-0729 | LINK, DRIVEN W/ BUSHINGS |
| 4 | 105-1343 | HARROW PIN, $\phi 1 \times 4 \frac{5}{8}$ USABLE LG |
| 5 | 403-0275 | SPRING, EXTENSION, 3" OD, 0.531" WIRE, STD MACHINE HOOKS - 18" |
| 6 | 546-0219 | BOLT, SPADE, 5/8-11 NC, GR. 5 - 4" LG |
| 7 | 550-5310 | WASHER, FLAT, 5/8" - SAE, GR.5, YELLOW ZINC PLATED |
| 8 | 550-5216 | WASHER, FLAT, 1" - USS, GR.5, YELLOW ZINC PLATED |
| 9 | 526-6109 | NUT, STOVER LOCK, 1-8 UNC, GR.5, YELLOW ZINC PLATED |
| 10 | 526-1640 | BOLT, 1-8 UNC - 5, GR.5, YELLOW ZINC PLATED |
| 11 | 526-7310 | NUT, STOVER LOCK, 5/8-11 UNC, GR.8, YELLOW ZINC PLATED |
| 12 | 525-6110 | NUT, JAM, 5/8-11 UNC, GR.5, YELLOW ZINC PLATED |
| 13 | 554-5405 | MACHINERY BUSHING, 1 ID X 14 GA, PLTD. |
| 14 | 105-1164 | LUG, EXT SPRING KIT |
| 15 | 556-1621 | 1/4 X 2 ROLL PIN, PLTD. |
| 16 | 839-2099 | LIFT ARM V CLAMP |
| 17 | 550-5312 | WASHER, FLAT, 3/4" - SAE, GR.5, YELLOW ZINC PLATED |
| 18 | 526-6107 | NUT, STOVER LOCK, 3/4-10 UNC, GR.5, YELLOW ZINC PLATED |
| 19 | 526-1222 | BOLT, 3/4-10 UNC - 2.75, GR.5, YELLOW ZINC PLATED |
| 20 | 105-1163 | HARROW PIN, $\phi 3/4 \times 4 \frac{3}{4}$ USABLE LG |
| 21 | 554-5414 | MACHINERY BUSHING, 3/4 ID X 14 GA, PLTD. |
| 22 | 556-0612 | COTTER PIN, 3/16 x 1 1/2, ZINC PLATED |
| 23 | 610-0021 | BUSHING, 0.75 x 1 x 1 |
| 24 | 610-0014 | BUSHING, 1 x 1.26 x 1 |

PARTS DETAILS – WINGS, MEASUREMENTS

| UNIT | SECTION 1 | | SECTION 2 | | SECTION 3 | | SECTION 4 | | WING LENGTH |
|---------|-----------|-----------|------------|------------|------------|------------|------------|-----------|-------------|
| HH-8245 | 26-3/4" | 63-1/2" | 122-13/16" | 183-3/16" | | | | | 204" |
| HH-8255 | 39-5/16" | 94-11/16" | 173-13/16" | 229-3/16" | | | | | 258" |
| HH-8268 | 43-15/16" | 99-5/16" | 171-9/16" | 189-15/16" | 262-15/16" | 317-11/16" | | | 340" |
| HH-8278 | 39-5/16" | 94-11/16" | 173-13/16" | 229-3/16" | 308-5/16" | 363-11/16" | | | 388" |
| HH-8290 | 30-7/8" | 49-1/4" | 120-13/16" | 176-3/16" | 255-5/16" | 310-11/16" | 389-13/16" | 445-3/16" | 462" |
| HH-8240 | 26-3/4" | 63-1/2" | 122-13/16" | 183-3/16" | | | | | 204" |
| HH-8250 | 39-5/16" | 94-11/16" | 173-13/16" | 229-3/16" | | | | | 258" |
| HH-8262 | 43-15/16" | 99-5/16" | 171-9/16" | 189-15/16" | 262-15/16" | 317-11/16" | | | 340" |
| HH-8273 | 39-5/16" | 94-11/16" | 173-13/16" | 229-3/16" | 308-5/16" | 363-11/16" | | | 388" |
| MH-7258 | 48 | 103-3/8" | 190-3/8" | 241-3/4" | | | | | 264" |
| MH-7272 | 48-7/8" | 104-1/4" | 174-1/8" | 199-5/16" | 269-1/4" | 324-5/8" | | | 348" |
| MH-7282 | 47-11/16" | 103-1/16" | 188-9/16" | 243-15/16" | 329-7/16" | 384-13/16" | | | 406" |
| RH-9245 | 4-5/8" | 36-5/16" | 100-5/8" | | | | | | 162" |
| RH-9260 | 4-5/8" | 36-5/16" | 100-5/8" | 132-5/16" | 196-5/8" | | | | 258" |
| RH-9275 | 4-5/8" | 36-5/16" | 100-5/8" | | 196-5/8" | 228-5/16" | 292-5/8" | | 348" |



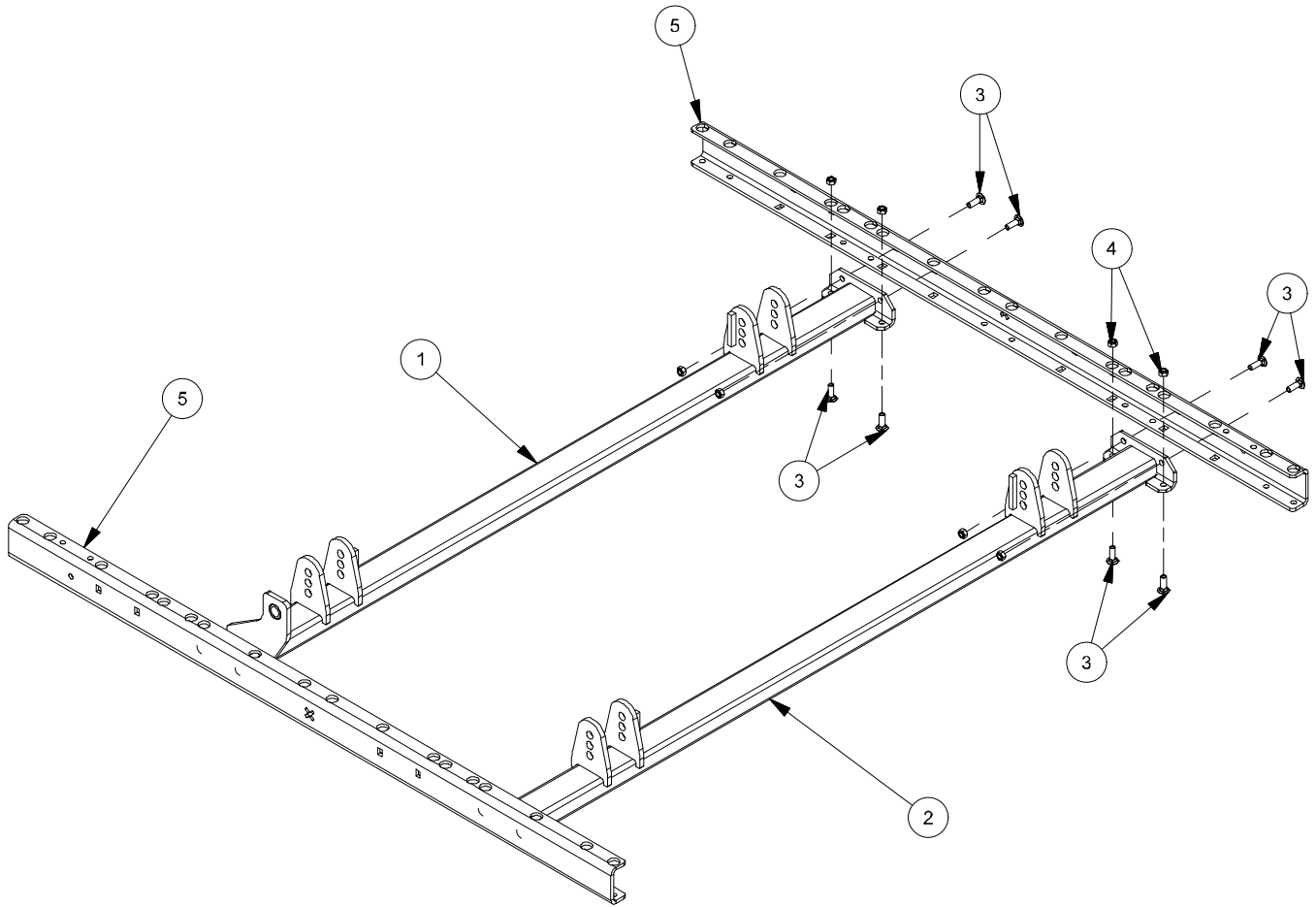
ALL DIMENSIONS ARE MEASURED FROM THE WING END CAP TO THE CLOSEST FACE OF THE RELATED LIFT ARM CLAMP

PARTS DETAILS – WINGS, MAJOR COMPONENTS

NOTE: Detail view on page 8

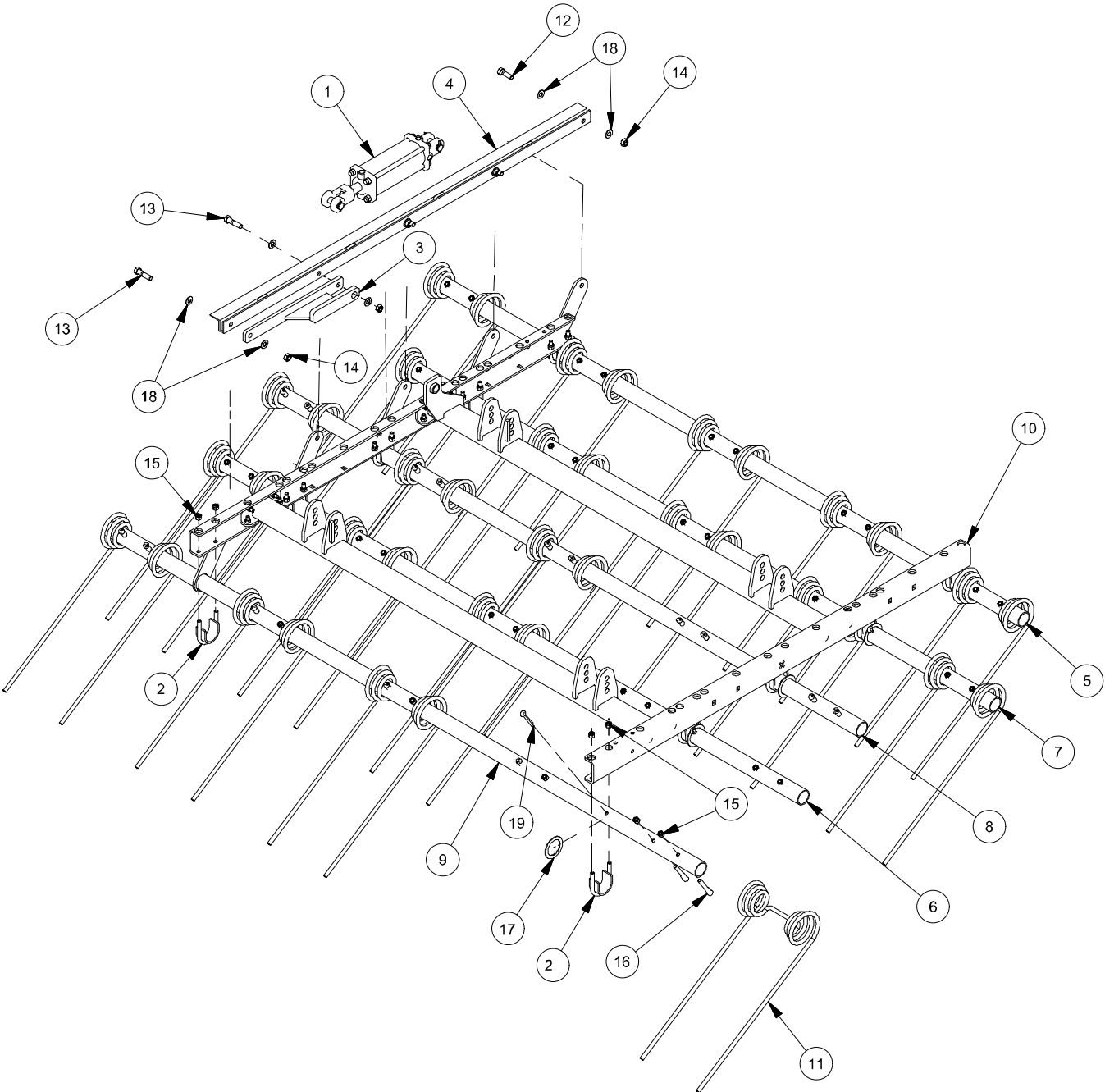
| UNIT | PART # | DESCRIPTION | DIMENSION |
|------|----------|---------------------------|------------------------|
| 40' | 105-1302 | WING, 8200, LEFT, 40'45' | 204" (17' - 0") |
| | 105-1303 | WING, 8200, RIGHT, 40'45' | |
| | 112-0600 | DRAFT ARM, 40' | 137" |
| | 112-0214 | LOCK BOX, 40', 50' | 35 - 7/16" (Long edge) |
| | 112-0216 | LOCK ARM, 40', 50' | 33 - 1/4" (Long edge) |
| 50' | 105-1304 | WING, 8200, LEFT, 50'55" | 258" (21' - 6") |
| | 105-1305 | WING, 8200, RIGHT, 50'55" | |
| | 112-0601 | DRAFT ARM, 50' | 183 - 3/8" |
| | 112-0214 | LOCK BOX, 40', 50' | 35 - 7/16" (Long edge) |
| | 112-0216 | LOCK ARM, 40', 50' | 33 - 1/4" (Long edge) |
| 62' | 105-1306 | WING, 8200, LEFT, 62'68' | 340" (28' - 4") |
| | 105-1307 | WING, 8200, RIGHT, 62'68' | |
| | 105-1151 | DRAFT ARM, 62', 68', 75' | 253-3/4" |
| | 112-0525 | LOCK BOX, 62'73' | 20 - 5/8" (Long edge) |
| | 112-0526 | LOCK ARM, 62'73' | 20 - 3/8" (Long edge) |
| 73' | 105-1308 | WING, 8200, LEFT, 73'78' | 388" (32' - 4") |
| | 105-1309 | WING, 8200, RIGHT, 73'78' | |
| | 105-1152 | DRAFT ARM, 73'78' | 282 - 9/16" |
| | 112-0525 | LOCK BOX, 62'73' | 20 - 5/8" (Long edge) |
| | 112-0526 | LOCK ARM, 62'73' | 20 - 3/8" (Long edge) |

PARTS DETAILS – SECTIONS, 11', FRAME



| ITEM # | PART # | DESCRIPTION |
|--------|----------|---|
| | 160-0582 | 11' JUMBO HARROW FRAME ASSEMBLY |
| 1 | 105-1070 | 11' FRONT CROSS MEMBER, BOLT ON |
| 2 | 105-1071 | 11' FRONT CROSS MEMBER, BOLT ON |
| 3 | 526-6105 | NUT, STOVER LOCK, 1/2-13 UNC, GR.5, YELLOW ZINC PLATED |
| 4 | 542-0812 | CARRIAGE BOLT, 1/2-13 UNC - 1.5, GR.5, YELLOW ZINC PLATED |
| 5 | 839-1268 | HARROW FRAME RAIL, UNIVERSAL |

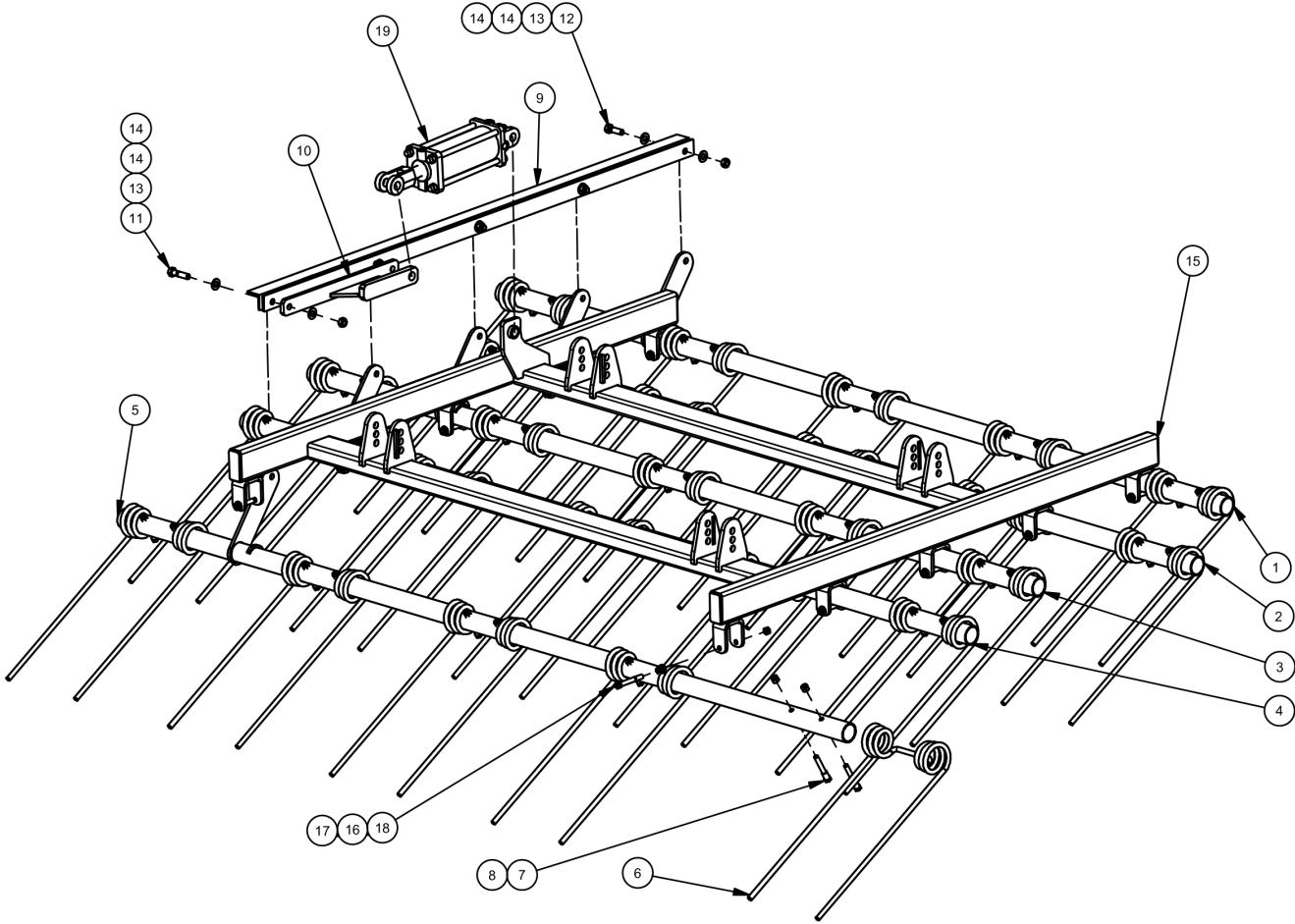
PARTS DETAILS – SECTIONS, 11'



PARTS DETAILS – SECTIONS, 11'

| ITEM # | PART # | DESCRIPTION |
|--------|------------|--|
| | 160-0584 | HARROW SECTION, 5-BAR, 11' |
| 1 | Varies | CYLINDER, REPHASING - SEE CYLINDERS SECTION |
| 2 | 105-0085 | HARROW PIPE U-BOLT CLAMP WLD. 1/2" x 3-1/2" |
| 3 | 112-0132 | TINE ADJUSTMENT WELDMENT |
| 4 | 116-8002r1 | HARROW ADJUSTING LINKAGE |
| 5 | 116-8003 | 11' HARROW SECTION PIPE 1, 24-1/2" |
| 6 | 116-8004 | 11' HARROW SECTION PIPE 2, 15-3/4" |
| 7 | 116-8007 | 11' HARROW SECTION PIPE 3, 12-3/4" |
| 8 | 116-8006 | 11' HARROW SECTION PIPE 4, 21-3/4" |
| 9 | 116-8005 | 11' HARROW SECTION PIPE 5, 18-3/4" |
| 10 | 160-0582 | 11' JUMBO HARROW FRAME ASSEMBLY, SEE PAGE 17 |
| 11* | 404-0028 | 9/16" X 28" HARROW TINE |
| 11* | 404-0035 | 9/16" X 28" HARROW TINE, W/ WEAR GUARD |
| 11* | 404-0030 | 5/8" X 28" HARROW TINE |
| 11* | 404-0037 | 5/8" X 28" HARROW TINE, W/ WEAR GUARD |
| 12 | 526-1016 | BOLT, 5/8-11 UNC - 2, GR.5, YELLOW ZINC PLATED |
| 13 | 526-1020 | BOLT, 5/8-11 UNC - 2.5, GR.5, YELLOW ZINC PLATED |
| 14 | 526-6106 | NUT, STOVER LOCK, 5/8-11 UNC, GR.5, YELLOW ZINC PLATED |
| 15 | 526-7008 | NUT, NYLOCK, 1/2-13 UNC, GR.5, YELLOW ZINC PLATED |
| 16 | 545-0015 | 1/2 X 3-3/4 HIGH HEAD HARROW BOLT |
| 17 | 550-5233 | WASHER, FLAT, 2-1/2", YELLOW ZINC PLATED |
| 18 | 550-5310 | WASHER, FLAT, 5/8" - SAE, GR.5, YELLOW ZINC PLATED |
| 19 | 556-0901 | 1/2 X 3 COTTER PIN, PLTD. |

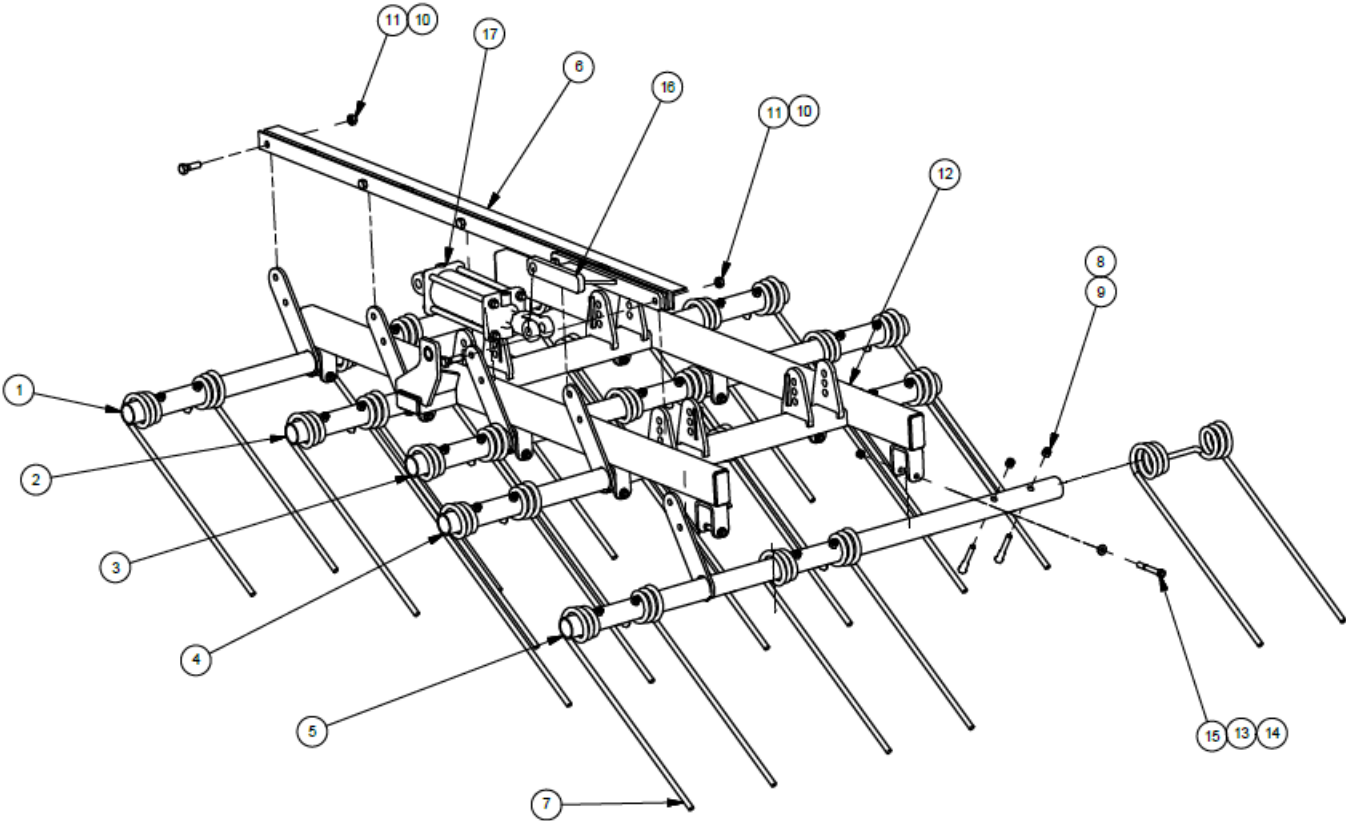
PARTS DETAILS – WELDED SECTIONS, 11'



PARTS DETAILS – WELDED SECTIONS, 11'

| ITEM # | PART # | DESCRIPTION |
|---------------|---------------|--|
| | 160-0584 | HARROW SECTION, 5-BAR, 11' |
| 1 | 105-1333 | 5 BAR, PIPE 1, 11' UNIVERSAL PIPE |
| 2 | 105-1334 | 5 BAR, PIPE 2, 11' UNIVERSAL PIPE |
| 3 | 105-1335 | 5 BAR, PIPE 3, 11' UNIVERSAL PIPE |
| 4 | 105-1336 | 5 BAR, PIPE 4, 11' UNIVERSAL PIPE |
| 5 | 105-1337 | 5 BAR, PIPE 5, 11' UNIVERSAL PIPE |
| 6 | 404-0010 | 2-3/8 ID X 26 HARROW TINE |
| 7 | 545-0015 | 1/2 X 3-3/4 HIGH HEAD HARROW BOLT |
| 8 | 526-6208 | NUT, NYLOCK, 1/2-13 UNC, GR.5, YELLOW ZINC PLATED |
| 9 | 116-8002r1 | HARROW ADJUSTING LINKAGE |
| 10 | 112-0132 | 11' TINE ADJUSTMENT WELDMENT |
| 11 | 530-1018 | BOLT, 5/8-11 UNC - 2.5, GR.8, YELLOW ZINC PLATED |
| 12 | 530-1002 | BOLT, 5/8-11 UNC - 2, GR.8, YELLOW ZINC PLATED |
| 13 | 526-7310 | NUT, STOVER LOCK, 5/8-11 UNC, GR.8, YELLOW ZINC PLATED |
| 14 | 550-5617 | WASHER, FLAT, 5/8 SAE, GR.8, YELLOW ZINC PLATED |
| 15 | 105-1072 | 5 BAR 11' JUMBO HAROW FRAME WELDED |
| 16 | 550-5308 | WASHER, FLAT, 1/2" - SAE, GR.5, YELLOW ZINC PLATED |
| 17 | 526-6105 | NUT, STOVER LOCK, 1/2-13 UNC, GR.5, YELLOW ZINC PLATED |
| 18 | 530-0754 | BOLT, 1/2-13 UNC - 4, GR.8, YELLOW ZINC PLATED |
| 19 | Varies | REPHASING CYLINDER CHECK PAGES 36-40 |

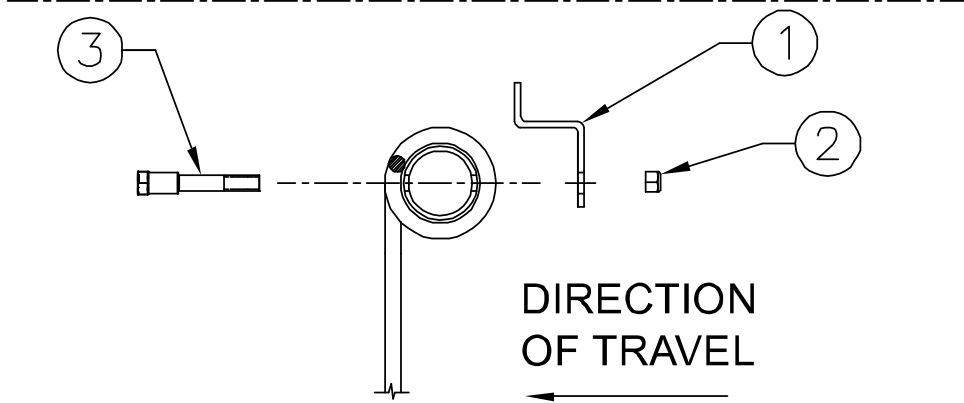
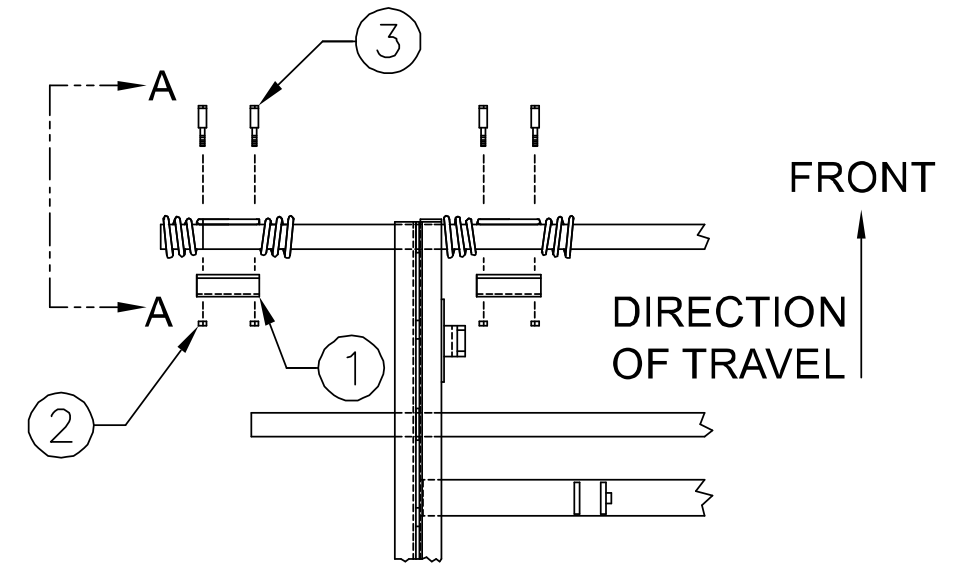
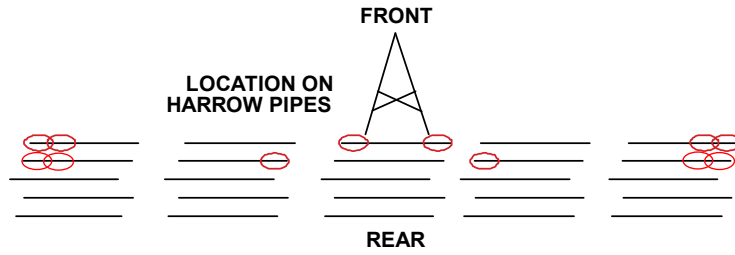
PARTS DETAILS – SECTIONS, 6-1/2'



PARTS DETAILS – SECTIONS, 6-1/2'

| ITEM # | PART # | DESCRIPTION |
|---------------|---------------|--|
| | 160-0585 | HARROW SECTION, 5-BAR, 6-1/2' |
| 1 | 105-1260 | 5 BAR, PIPE 1, 6-1/2' |
| 2 | 105-1261 | 5 BAR, PIPE 2, 6-1/2' |
| 3 | 105-1262 | 5 BAR, PIPE 3, 6-1/2' |
| 4 | 105-1331 | 5 BAR, PIPE 4, 6-1/2' |
| 5 | 105-1332 | 5 BAR, PIPE 5, 6-1/2' |
| 6 | 116-8002r1 | HARROW ADJUSTING LINKAGE |
| 7* | 404-0028 | 9/16" X 28" HARROW TINE |
| 7* | 404-0035 | 9/16" X 28" HARROW TINE, W/ WEAR GUARD |
| 7* | 404-0030 | 5/8" X 28" HARROW TINE |
| 7* | 404-0037 | 5/8" X 28" HARROW TINE, W/ WEAR GUARD |
| 8 | 545-0015 | 1/2 X 3-3/4 HIGH HEAD HARROW BOLT |
| 9 | 526-7008 | NUT, NYLOCK, 1/2-13 UNC, GR.5, YELLOW ZINC PLATED |
| 10 | 526-1016 | BOLT, 5/8-11 UNC - 2, GR.5, YELLOW ZINC PLATED |
| 11 | 526-6106 | NUT, STOVER LOCK, 5/8-11 UNC, GR.5, YELLOW ZINC PLATED |
| 12 | 105-1073 | 6-1/2' JUMBO HARROW FRAME WELDED |
| 13 | 550-5308 | WASHER, FLAT, 1/2" - SAE, GR.5, YELLOW ZINC PLATED |
| 14 | 526-6105 | NUT, STOVER LOCK, 1/2-13 UNC, GR.5, YELLOW ZINC PLATED |
| 15 | 530-0754 | BOLT, 1/2-13 UNC - 4, GR.8, YELLOW ZINC PLATED |
| 16 | 112-0132 | 11' TINE ADJUSTMENT WELDMENT |
| 17 | 030-5740 | Cylinder- 4 x 8 - 1-3/8 Shaft, 3/4 ORB Ports 90° to Pins (40TP08-137) (639964) |

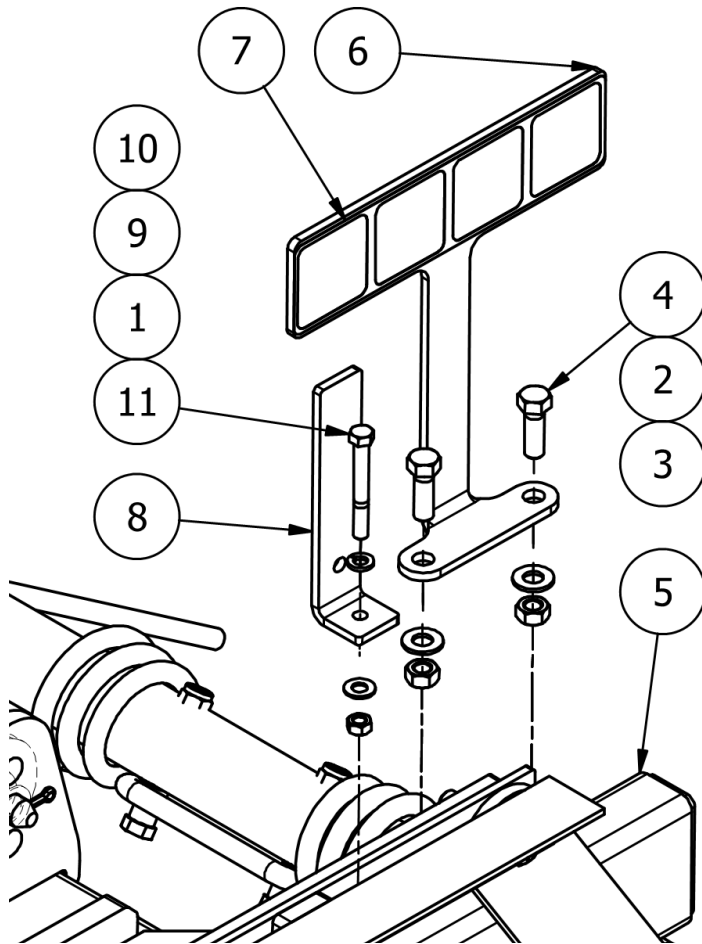
PARTS DETAILS – TINE RETAINERS



DETAIL A-A

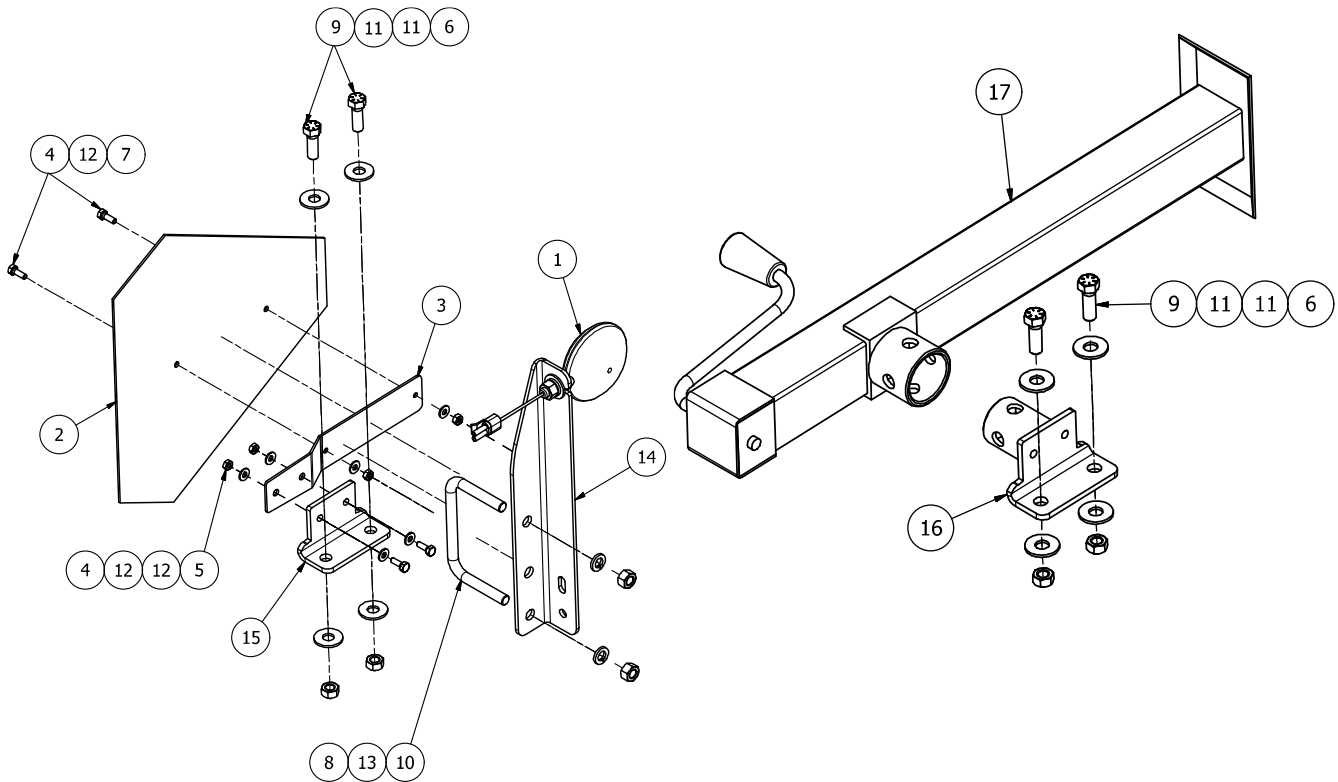
| ITEM # | PART # | DESCRIPTION |
|--------|----------|--|
| 1* | 112-0595 | Universal Tine Retainer Clip Weldment |
| 1* | 839-1832 | Tine Retainer, 5 Bar |
| 2 | 526-6105 | 1/2" Stover Lock Nut, NC, Gr.5, Pltd. |
| 3 | 545-0015 | 1/2" x 3-3/4" High Harrow Head Bolt, NC, Gr.5, Pltd. |

PARTS DETAILS – TINE ANGLE INDICATOR



| ITEM # | PART # | DESCRIPTION |
|--------|----------|--|
| 1 | 526-6103 | NUT, STOVER LOCK, 3/8-16 UNC, GR.5, YELLOW ZINC PLATED |
| 2 | 526-6105 | NUT, STOVER LOCK, 1/2-13 UNC, GR.5, YELLOW ZINC PLATED |
| 3 | 550-5308 | WASHER, FLAT, 1/2" - SAE, GR.5, YELLOW ZINC PLATED |
| 4 | 526-0812 | BOLT, 1/2-13 UNC - 1.5, GR.5, YELLOW ZINC PLATED |
| 5 | VARIES | OUTER MOST 11' HARROW SECTION |
| 6 | 839-1242 | TINE ADJ. SIGN BACKGROUND |
| 7 | 060-0091 | 1234 HARROW TINE DECAL |
| 8 | 839-1881 | PLATE, INDICATOR, TINE ANGLE |
| 9 | 551-5006 | WASHER, SPRING, INCH, YELLOW ZINC PLATED |
| 10 | 550-5306 | WASHER, FLAT, 3/8" - SAE, GR.5, YELLOW ZINC PLATED |
| 11 | 526-0624 | BOLT, 3/8-16 UNC - 3, GR.5, YELLOW ZINC PLATED |

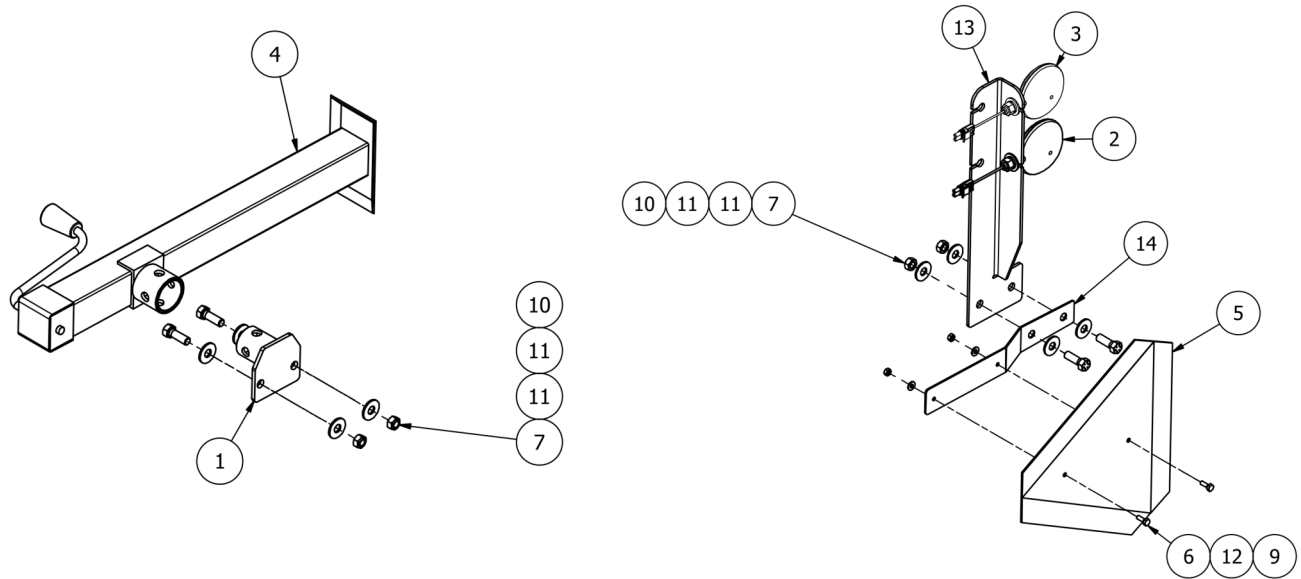
PARTS DETAILS – LIGHT KIT & SLOW MOVING SIGN



| ITEM # | PART # | DESCRIPTION |
|--------|----------|--|
| 1* | 417-0019 | RED WARNING LIGHT C/W HARDWARE |
| 1* | 417-0018 | AMBER WARNING LIGHT C/W HARDWARE |
| 2 | 424-0001 | SLOW MOVING SIGN (SMV) |
| 3 | 424-0002 | SLOW MOVING SIGN SPADE |
| 4 | 526-0406 | BOLT, 1/4-20 UNC - 0.75, GR.5, YELLOW ZINC PLATED |
| 5 | 526-6102 | NUT, STOVER LOCK, 1/4-20 UNC, GR.5, YELLOW ZINC PLATED |
| 6 | 526-6105 | NUT, STOVER LOCK, 1/2-13 UNC, GR.5, YELLOW ZINC PLATED |
| 7 | 526-6204 | NUT, HEX, INCH, GRADE 5, YELLOW ZINC PLATED |
| 8 | 526-6208 | NUT, HEX, INCH, GRADE 5, YELLOW ZINC PLATED |
| 9 | 530-0740 | BOLT, 1/2-13 UNC - 1.5, GR.8, YELLOW ZINC PLATED |
| 10 | 546-5157 | 4.5625 x 5 U-BOLT, SQUARE, ZINC PLATED |
| 11 | 550-5208 | WASHER, FLAT, 1/2" - USS, GR.5, YELLOW ZINC PLATED |
| 12 | 550-5304 | WASHER, FLAT, 1/4" - SAE, GR.5, YELLOW ZINC PLATED |
| 13 | 551-5008 | WASHER, SPRING, 1/2, GR.5, YELLOW ZINC PLATED |
| 14 | 839-1762 | RH, LIGHT BRACKET, FRONT |
| 15 | 839-1878 | BRACKET, SMV SIGN MOUNT, MH-7200 |
| 16 | 105-1193 | 7-BAR HARROW JACK STUB |
| 17 | 420-0168 | 20-40" SIDEWIND JACK |
| | 040-0026 | LIGHT KIT, HH-8240 & 50 (not shown) |
| | 040-0028 | LIGHT KIT, HH-8262 (not shown) |
| | 040-0029 | LIGHT KIT, HH-8273 (not shown) |

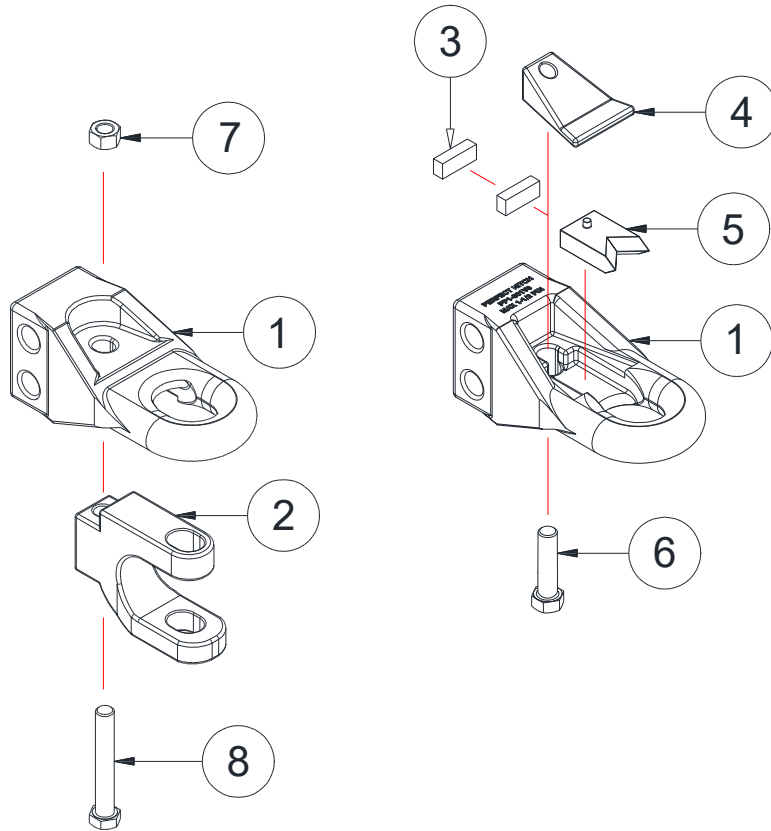
PARTS DETAILS – LIGHT KIT & SLOW MOVING SIGN

PROFILED LIFT ARMS



| ITEM # | PART # | DESCRIPTION |
|---------------|---------------|--|
| 1 | 105-1345 | JACK MOUNT WELDMENT, PROFILED LIFT ARM |
| 2 | 417-0018 | AMBER WARNING LIGHT C/W HARDWARE |
| 3 | 417-0019 | RED WARNING LIGHT C/W HARDWARE |
| 4 | 420-0168 | 5000lb. 20" SQUARE SIDEWIND JACK 20.1"RL |
| 5 | 424-0001 | SLOW MOVING SIGN (SMV) |
| 6 | 526-0406 | BOLT, 1/4-20 UNC - 0.75, GR.5, YELLOW ZINC PLATED |
| 7 | 526-6105 | NUT, STOVER LOCK, 1/2-13 UNC, GR.5, YELLOW ZINC PLATED |
| 8 | 526-6109 | NUT, STOVER LOCK, 1-8 UNC, GR.5, YELLOW ZINC PLATED |
| 9 | 526-6204 | NUT, HEX, INCH, GRADE 5, YELLOW ZINC PLATED |
| 10 | 530-0740 | BOLT, 1/2-13 UNC - 1.5, GR.8, YELLOW ZINC PLATED |
| 11 | 550-5208 | WASHER, FLAT, 1/2" - USS, GR.5, YELLOW ZINC PLATED |
| 12 | 550-5304 | WASHER, FLAT, 1/4" - SAE, GR.5, YELLOW ZINC PLATED |
| 13 | 839-2109 | UNIVERSAL, LIGHT BRACKET, PROFILED LIFT ARM |
| 14 | 839-2110 | SLOW MOVING SIGN SPADE, PROFILED LIFT ARM |
| | 040-0029 | LIGHT KIT, HH-8268 & 78 (not shown) |
| | 040-0030 | LIGHT KIT, HH-8245 & 55 (not shown) |

PARTS DETAILS – PERFECT HITCH



| ITEM # | PART # | DESCRIPTION |
|--------|----------|---|
| 1 | 423-0005 | Base Hitch (PP1-301VH) |
| 2 | 423-0006 | Clevis (PP1-208VR-10) |
| 3 | 423-0019 | Neoprene Cushion (PP1-205H) |
| 4 | 423-0017 | Top Plate Perfect Hitch (PP1-302V) |
| 5 | 423-0018 | V-Block (PP1-203VR) |
| 6 | 526-1224 | 3/4" x 3" Capscrew, NC, Gr.5, Pltd. |
| 7 | 526-6107 | 3/4" Stover Lock Nut, NC, Gr.B, Pltd. |
| 8 | 526-1241 | 3/4" x 5-1/2" Capscrew, NC, Gr.5, Pltd. |

The sliding V-block has a polyurethane cushion which is made to flex. The cushion also acts as a shock absorber to reduce driveline stress, giving driveline components longer life. **Do not remove all the cushions! Install the perfect hitch components with bolt head on the bottom and the top plate on top.**

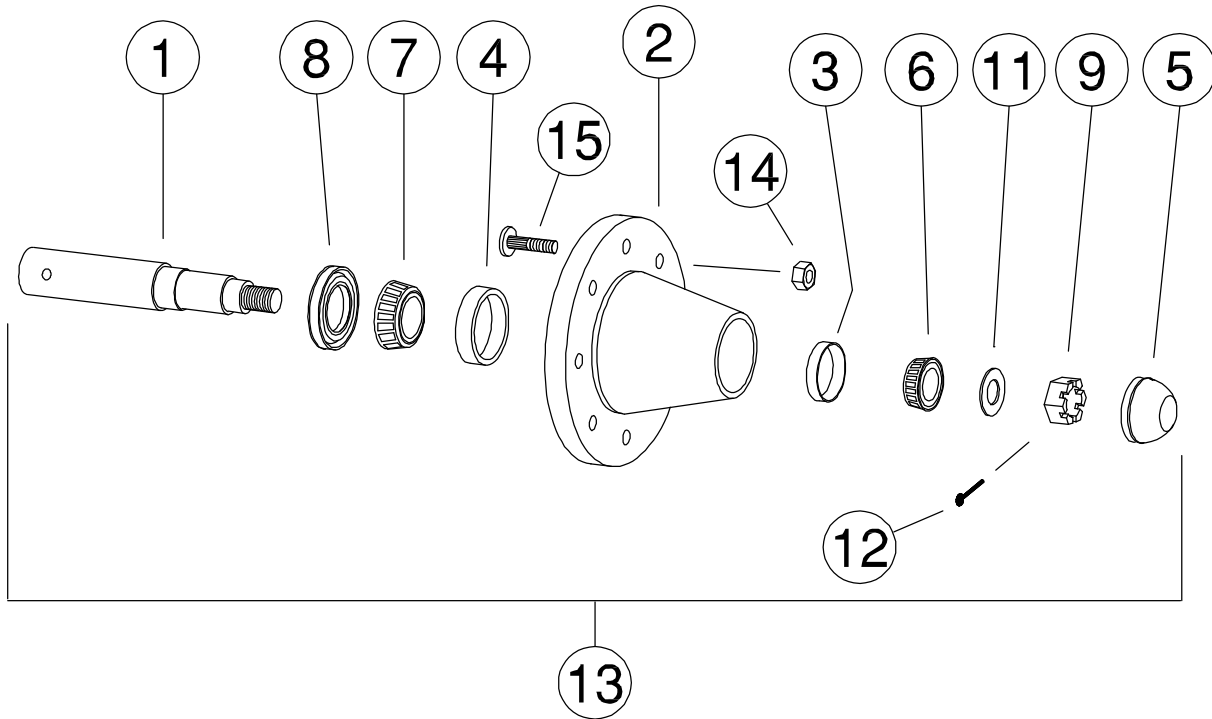
Always adjust the V-block to your tractor draw pin size by following these steps:

1. Remove top plate by unscrewing 3/4" bolt from bottom of Perfect Hitch and lifting top plate off.
2. The polyurethane cushion can be laid flat to achieve an extra 1/4" of adjustment.
3. If more closure is needed metal spacers (not supplied) can be placed behind the cushions to push the V-block forward and closer to the draw pin hole to tractor draw pin size.
4. Replace top plate and re-install 3/4" bolt tightly (Approx. 200 ft/lb).

PARTS DETAILS – CENTER HUB & SPINDLE

NOTE: 812 Hub & spindles are used on ALL center frames.

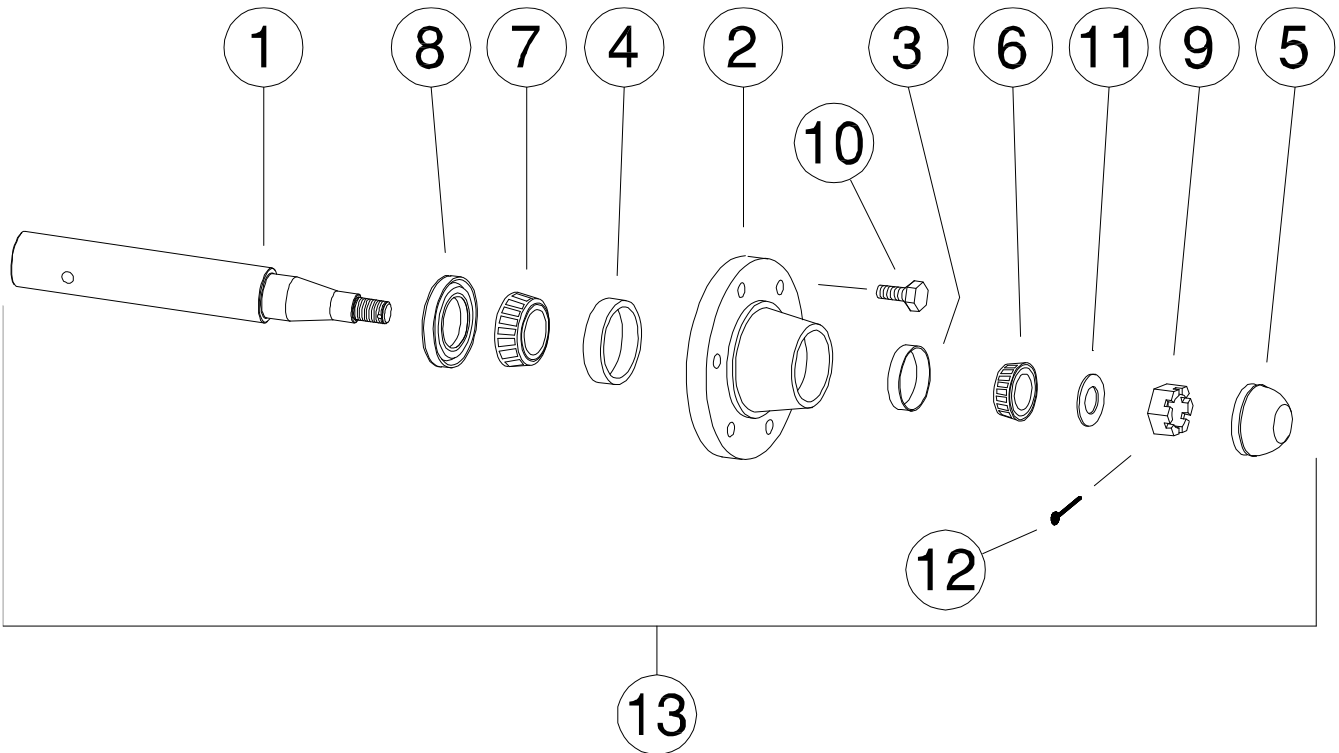
If 12.5Lx15 tires are used on the wings, 812s are used throughout the machine.



| ITEM # | PART # | DESCRIPTION |
|--------|----------|-------------------------------------|
| 1 | 203-6044 | 812 Spindle, Ø2-1/2" X 11-3/4" Long |
| 2 | 200-6011 | 812 Hub (complete) |
| 3 | 201-6016 | Outer Cup LM2720 |
| 4 | 201-6017 | Inner Cup 3720 |
| 5 | 202-6013 | DC 17 Dust Cap |
| 6 | 290-6013 | Outer Bearing, 2790 |
| 7 | 290-6014 | Inner Bearing, 3780 |
| 8 | 295-6016 | SE 17 Seal |
| 9 | 534-7816 | 1" Castle Nut, NF, Gr.5, Black |
| 11 | 554-5303 | 1" Spindle Washer, Black |
| 12 | 556-0614 | 3/16" x 1-3/4" Cotter Pin, Pltd. |
| 13 | 120-1246 | 812 Hub & Spindle Assembly |
| 14 | 543-5563 | 9/16" Wheel Nut, UNF |
| 15 | 543-5564 | 9/16" Wheel Stud |

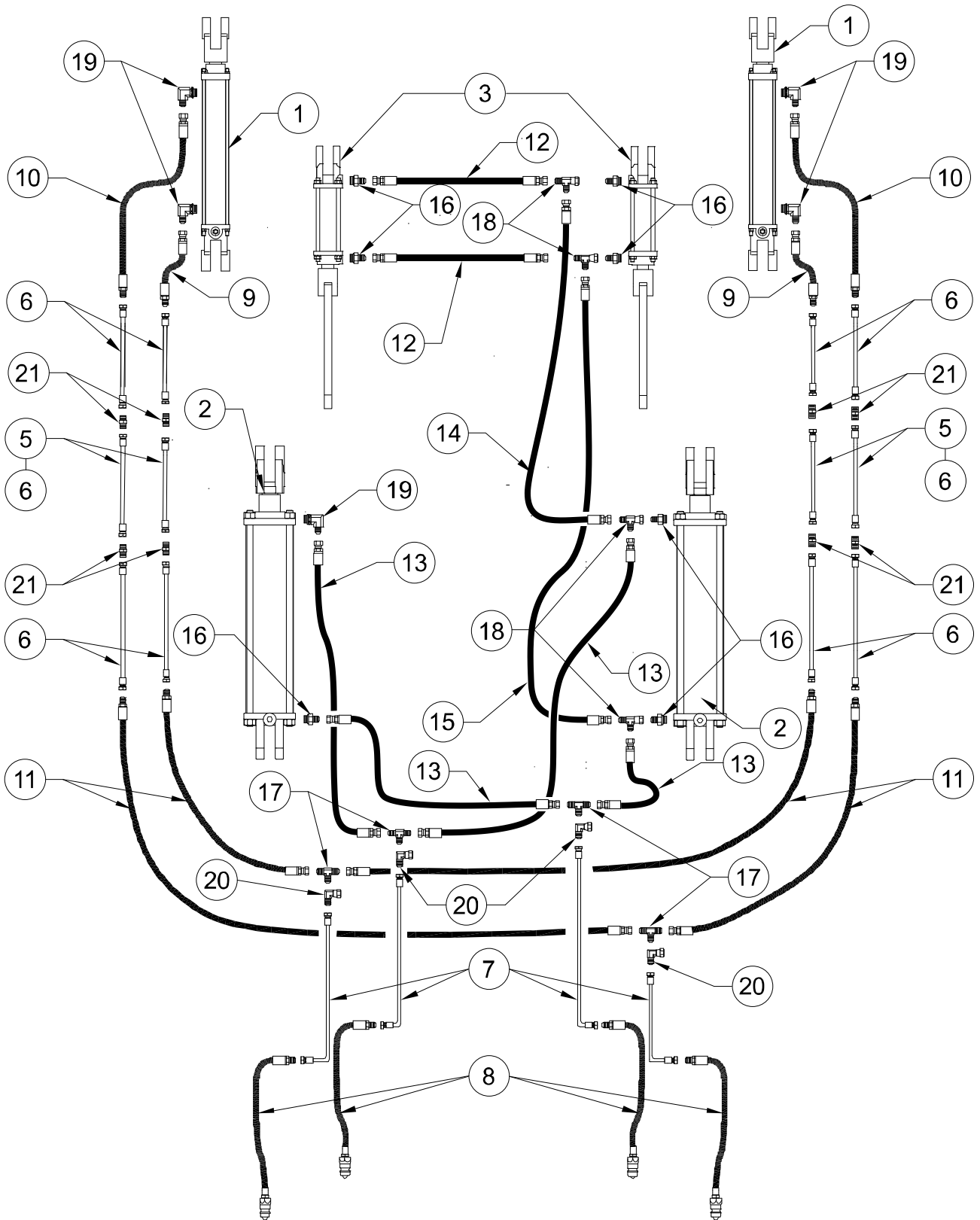
PARTS DETAILS – WING HUB & SPINDLE

NOTE: 618 Hub & spindles are used on wings with 11Lx15 tires **ONLY**



| ITEM # | PART # | DESCRIPTION |
|--------|----------|-------------------------------------|
| 1 | 203-6021 | 618 Spindle, Ø2-1/2" X 14-1/4" Long |
| 2 | 200-6009 | 618 Hub (complete) |
| 3 | 201-5523 | Outer Cup (LM48510) |
| 4 | 201-5525 | Inner Cup (LM25520) |
| 5 | 202-6005 | Dust Cap (DC 15) |
| 6 | 290-5515 | Outer Wheel Bearing (LM48548) |
| 7 | 290-5519 | Inner Wheel Bearing (LM25580) |
| 8 | 295-5576 | Seal (SE30) |
| 9 | 534-7816 | 1" Castle Nut, NF |
| 10 | 543-5562 | 9/16" Wheel Stud UNF |
| 11 | 554-5303 | 1" Spindle Washer WA12 |
| 12 | 556-0614 | 3/16" x 1-3/4" Cotter Pin, Black |
| 13 | 120-1237 | 618 Hub & Spindle Assembly |

PARTS DETAILS – HYDRAULICS, HITCH



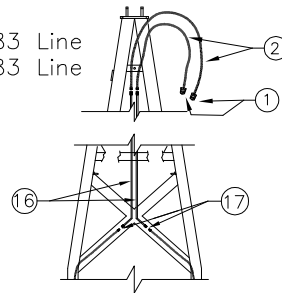
PARTS DETAILS – HYDRAULICS, HITCH

| ITEM # | PART # | DESCRIPTION |
|---------------|---------------|--|
| 1 | 030-5979 | 2" X 12" HYDRAULIC CYLINDER – ORB |
| 2 | 030-5985 | 4" X 24" HYDRAULIC CYLINDER, 1.50" ROD – ORB |
| 3 | 030-5999 | 2" X 4" HYDRAULIC CYLINDER – ORB |
| 5 | 311-2083 | 3/8" HYDRAULIC STEEL LINES- 83" |
| 6 | 311-2132 | 3/8" HYDRAULIC STEEL LINES- 132" |
| 7 | 311-2157 | 3/8" HYDRAULIC STEEL LINES - BENT- 157" |
| 8 | 313-5096 | 3/8" JIC M X 1/2" NPT M HYDRAULIC HOSE- 96" |
| 9 | 313-7812 | 3/8" JIC M X 3/8" JIC SW F HYDRAULIC HOSE- 12" |
| 10 | 313-7828 | 3/8" JIC M X 3/8" JIC SW F HYDRAULIC HOSE- 28" |
| 11 | 313-7895 | 3/8" JIC M X 3/8" JIC SW F HYDRAULIC HOSE- 144" |
| 12 | 313-7916 | 3/8" JIC SW F X 3/8" JIC SW F HYDRAULIC HOSE– 16" |
| 13 | 313-7928 | 3/8" JIC SW F X 3/8" JIC SW F HYDRAULIC HOSE– 28" |
| 14 | 313-7977 | 3/8" JIC SW F X 3/8" JIC SW F HYDRAULIC HOSE– 77" |
| 15 | 330-0117 | 3/8" JIC SW F X 3/8" JIC SW F HYDRAULIC HOSE– 117" |
| 16 | 316-0302 | 1/2" ORB M X 3/8" JIC MALE – ADAPTOR |
| 17 | 318-5704 | HYDRAULIC TEE - 3/8" JIC M (X2 RUN & BRANCH) |
| 18 | 318-5710 | HYDRAULIC TEE - 3/8" JIC M (X1 RUN, BRANCH) X 3/8" JIC SW F (X1 RUN) |
| 19 | 319-5710 | 1/2" ORB M X 3/8" JIC M - 90° ELBOW |
| 20 | 319-5714 | 3/8" JIC M X 3/8" JIC SW F - 90° ELBOW |
| 21 | 324-0031 | 3/8" JIC NIPPLE |

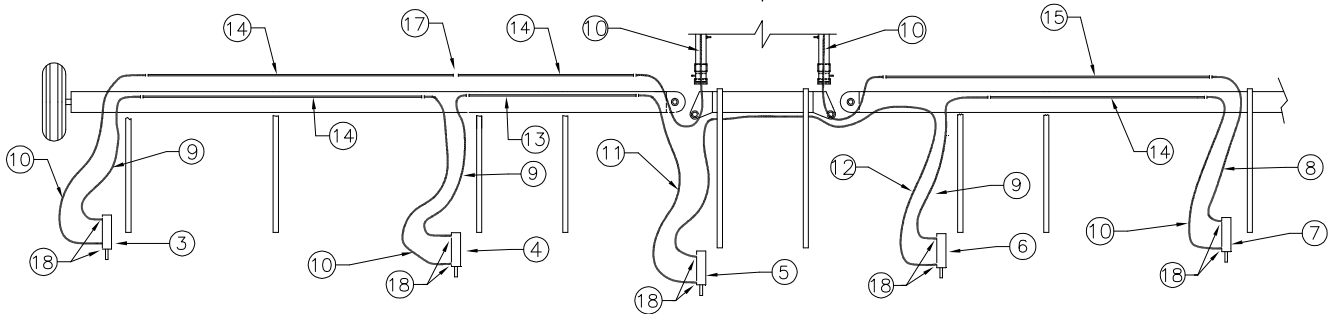
PARTS DETAILS – HYDRAULIC SCHEMATIC, 8240

PIVOT AXLES = 28 Hyd. Hose x 66 Line x 83 Line
 = 12 Hyd. Hose x 66 Line x 83 Line

TINE START = Hyd. Hose 132 Line
 TINE RETURN = 66 line x 83 Line



TOTAL = 66 x 6
 83 x 7
 132 x 1
 STEEL LINES



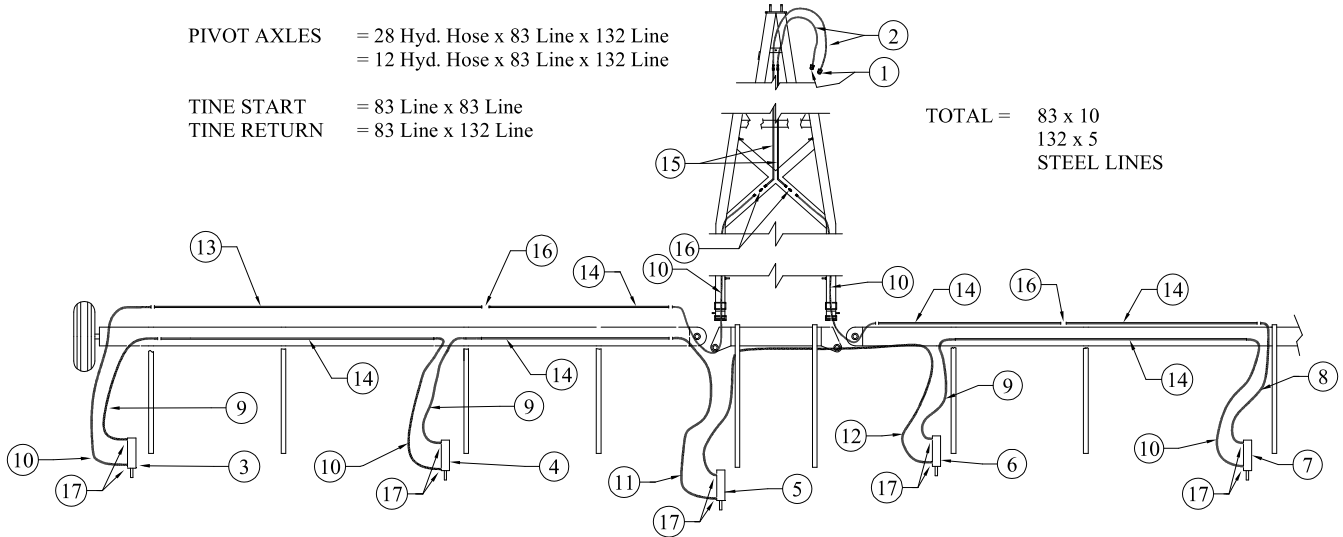
| ITEM # | PART # | DESCRIPTION | QTY |
|--------|----------|---|-----|
| 1 | 308-0001 | Pioneer Coupling – Poppet Style | 2 |
| 2 | 313-5096 | 3/8" JIC M x 1/2" NPT M Hydraulic Hose – 96" | 2 |
| 3 | 030-5734 | 2-1/2" x 8" BP Hydraulic Cylinder – 1/2" ORB | 1 |
| 4 | 030-5735 | 2-3/4" x 8" BP Hydraulic Cylinder – 1/2" ORB | 1 |
| 5 | 030-5736 | 3" x 8" BP Hydraulic Cylinder – 1/2" ORB | 1 |
| 6 | 030-5737 | 3-1/4" x 8" BP Hydraulic Cylinder – 1/2" ORB | 1 |
| 7 | 030-5738 | 3-1/2" x 8" BP Hydraulic Cylinder – 1/2" ORB | 1 |
| 8 | 313-7863 | 3/8" JIC M x 3/8" JIC Sw F Hydraulic Hose – 63" | 1 |
| 9 | 313-7871 | 3/8" JIC M x 3/8" JIC Sw F Hydraulic Hose – 71" | 3 |
| 10 | 313-7885 | 3/8" JIC M x 3/8" JIC Sw F Hydraulic Hose – 85" | 5 |
| 11 | 313-7899 | 3/8" JIC M x 3/8" JIC Sw F Hydraulic Hose – 113" | 1 |
| 12 | 313-7901 | 3/8" JIC Sw F x 3/8" JIC Sw F Hydraulic Hose – 270" | 1 |
| 13 | 311-2066 | 3/8" Steel Hydraulic Line – 66" | 4 |
| 14 | 311-2083 | 3/8" Steel Hydraulic Line – 83" | 9 |
| 15 | 311-2104 | 3/8" Steel Hydraulic Line – 104" | 1 |
| 16 | 311-2142 | 3/8" Steel Hydraulic Line – 142" | 2 |
| 17 | 324-0031 | 3/8" JIC Nipple | 1 |
| 18 | 319-5729 | 1/2 ORB M x 3/8 JIC M - 45° Elbow | 10 |

PARTS DETAILS – HYDRAULIC SCHEMATIC, 8250

PIVOT AXLES = 28 Hyd. Hose x 83 Line x 132 Line
 = 12 Hyd. Hose x 83 Line x 132 Line

TINE START = 83 Line x 83 Line
 TINE RETURN = 83 Line x 132 Line

TOTAL = 83 x 10
 132 x 5
 STEEL LINES



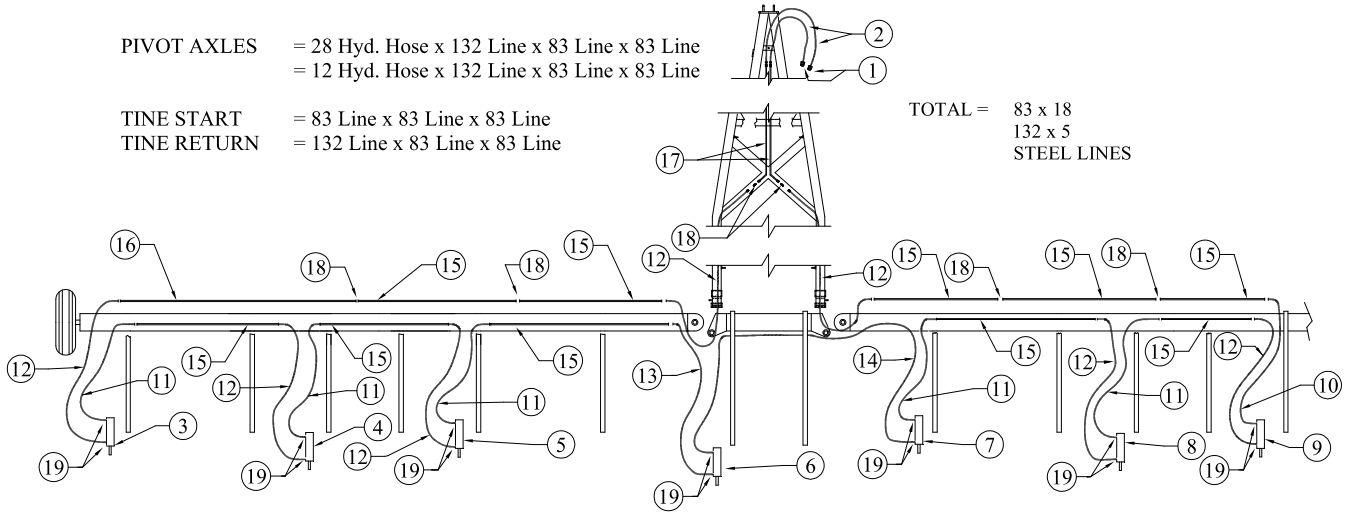
| ITEM # | PART # | DESCRIPTION | QTY |
|--------|----------|---|-----|
| 1 | 308-0001 | Pioneer Coupling – Poppet Style | 2 |
| 2 | 313-5096 | 3/8" JIC M x 1/2" NPT M Hydraulic Hose – 96" | 2 |
| 3 | 030-5734 | 2-1/2" x 8" BP Hydraulic Cylinder – 1/2" ORB | 1 |
| 4 | 030-5735 | 2-3/4" x 8" Hydraulic Cylinder – 1/2" ORB | 1 |
| 5 | 030-5736 | 3" x 8" BP Hydraulic Cylinder – 1/2" ORB | 1 |
| 6 | 030-5737 | 3-1/4" x 8" BP Hydraulic Cylinder – 1/2" ORB | 1 |
| 7 | 030-5738 | 3-1/2" x 8" BP Hydraulic Cylinder – 1/2" ORB | 1 |
| 8 | 313-7863 | 3/8" JIC M x 3/8" JIC Sw F Hydraulic Hose – 63" | 1 |
| 9 | 313-7871 | 3/8" JIC M x 3/8" JIC Sw F Hydraulic Hose – 71" | 3 |
| 10 | 313-7885 | 3/8" JIC M x 3/8" JIC Sw F Hydraulic Hose – 85" | 6 |
| 11 | 313-7899 | 3/8" JIC M x 3/8" JIC Sw F Hydraulic Hose – 113" | 1 |
| 12 | 313-7901 | 3/8" JIC Sw F x 3/8" JIC Sw F Hydraulic Hose – 270" | 1 |
| 13 | 311-2132 | 3/8" Steel Hydraulic Line – 132" | 1 |
| 14 | 311-2083 | 3/8" Steel Hydraulic Line – 83" | 6 |
| 15 | 311-2142 | 3/8" Steel Hydraulic Line – 142" | 2 |
| 16 | 324-0031 | 3/8" JIC Nipple | 4 |
| 17 | 319-5729 | 1/2 ORB M x 3/8 JIC M - 45° Elbow | 10 |

PARTS DETAILS – HYDRAULIC SCHEMATIC, 8262

PIVOT AXLES = 28 Hyd. Hose x 132 Line x 83 Line x 83 Line
 = 12 Hyd. Hose x 132 Line x 83 Line x 83 Line

TINE START = 83 Line x 83 Line x 83 Line
 TINE RETURN = 132 Line x 83 Line x 83 Line

TOTAL = 83 x 18
 132 x 5
 STEEL LINES



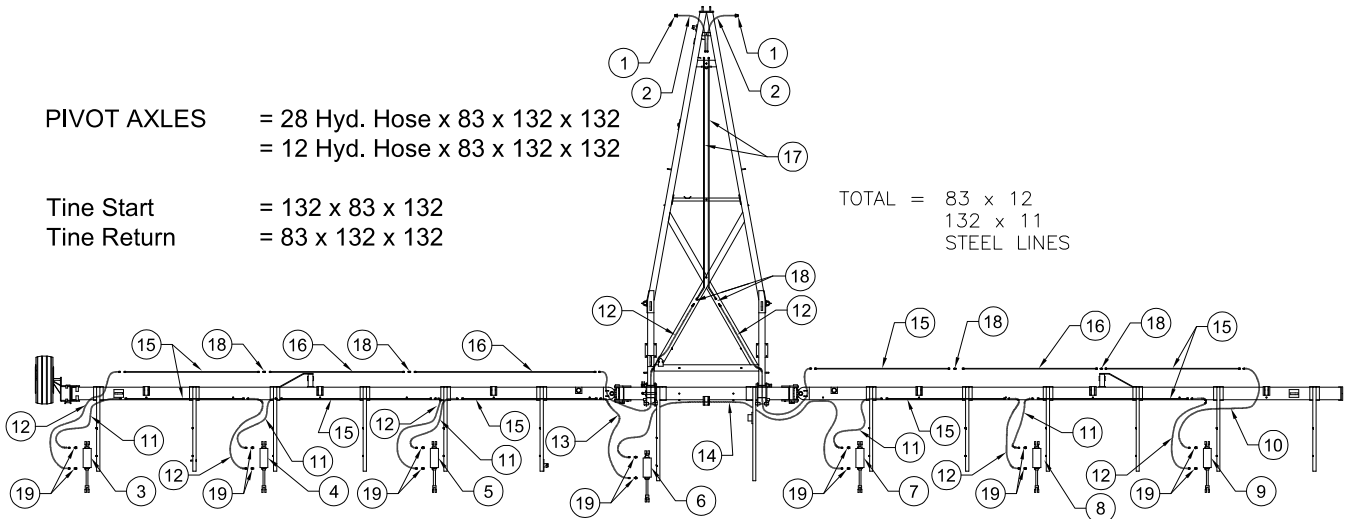
| ITEM # | PART # | DESCRIPTION | QTY |
|--------|----------|---|-----|
| 1 | 308-0001 | Pioneer Coupling – Poppet Style | 2 |
| 2 | 313-5096 | 3/8" JIC M x 1/2" NPT M Hydraulic Hose – 96" | 2 |
| 3 | 030-5734 | 2-1/2" x 8" BP Hydraulic Cylinder – 1/2" ORB | 1 |
| 4 | 030-5735 | 2-3/4" x 8" BP Hydraulic Cylinder – 1/2" ORB | 1 |
| 5 | 030-5736 | 3" x 8" BP Hydraulic Cylinder – 1/2" ORB | 1 |
| 6 | 030-5737 | 3-1/4" x 8" BP Hydraulic Cylinder – 1/2" ORB | 1 |
| 7 | 030-5738 | 3-1/2" x 8" BP Hydraulic Cylinder – 1/2" ORB | 1 |
| 8 | 030-5739 | 3-3/4" x 8" BP Hydraulic Cylinder – 1/2" ORB | 1 |
| 9 | 030-5740 | 4" x 8" BP Hydraulic Cylinder – 1/2" ORB | 1 |
| 10 | 313-7863 | 3/8" JIC M x 3/8" JIC Sw F Hydraulic Hose – 63" | 1 |
| 11 | 313-7871 | 3/8" JIC M x 3/8" JIC Sw F Hydraulic Hose – 71" | 5 |
| 12 | 313-7885 | 3/8" JIC M x 3/8" JIC Sw F Hydraulic Hose – 85" | 6 |
| 13 | 313-7899 | 3/8" JIC M x 3/8" JIC Sw F Hydraulic Hose – 113" | 1 |
| 14 | 313-7901 | 3/8" JIC Sw F x 3/8" JIC Sw F Hydraulic Hose – 270" | 1 |
| 15 | 311-2083 | 3/8" Steel Hydraulic Line – 83" | 10 |
| 16 | 311-2132 | 3/8" Steel Hydraulic Line – 132" | 1 |
| 17 | 311-2142 | 3/8" Steel Hydraulic Line – 142" | 2 |
| 18 | 324-0031 | 3/8" JIC Nipple | 6 |
| 19 | 319-5729 | 1/2 ORB M x 3/8 JIC M - 45° Elbow | 14 |

PARTS DETAILS – HYDRAULIC SCHEMATIC, 8273

PIVOT AXLES = 28 Hyd. Hose x 83 x 132 x 132
 = 12 Hyd. Hose x 83 x 132 x 132

Tine Start = 132 x 83 x 132
 Tine Return = 83 x 132 x 132

TOTAL = 83 x 12
 132 x 11
 STEEL LINES



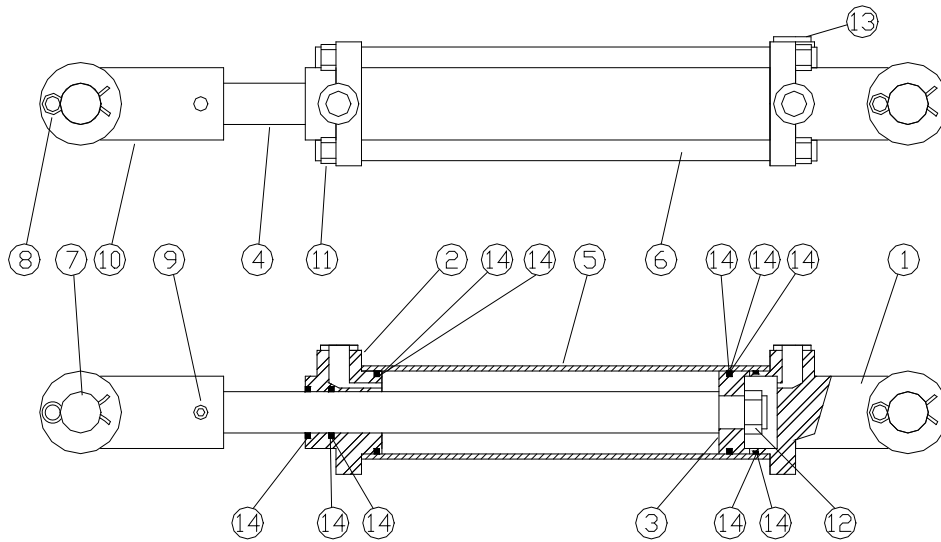
| ITEM # | PART # | DESCRIPTION | QTY |
|--------|----------|---|-----|
| 1 | 308-0001 | Pioneer Coupling | 2 |
| 2 | 313-5096 | 3/8" JIC M x 1/2" NPT M – 96" Hyd Hose | 2 |
| 3 | 030-5734 | 2-1/2" x 8" BP Hydraulic Cylinder – 1/2" ORB | 1 |
| 4 | 030-5735 | 2-3/4" x 8" BP Hydraulic Cylinder – 1/2" ORB | 1 |
| 5 | 030-5736 | 3" x 8" BP Hydraulic Cylinder – 1/2" ORB | 1 |
| 6 | 030-5737 | 3-1/4" x 8" BP Hydraulic Cylinder – 1/2" ORB | 1 |
| 7 | 030-5738 | 3-1/2" x 8" BP Hydraulic Cylinder – 1/2" ORB | 1 |
| 8 | 030-5739 | 3-3/4" x 8" BP Hydraulic Cylinder – 1/2" ORB | 1 |
| 9 | 030-5740 | 4" x 8" BP Hydraulic Cylinder - 1/2" ORB | 1 |
| 10 | 313-7863 | 3/8" JIC M x 3/8" JIC Sw F Hydraulic Hose – 63" | 1 |
| 11 | 313-7871 | 3/8" JIC M x 3/8" JIC Sw F Hydraulic Hose – 71" | 5 |
| 12 | 313-7885 | 3/8" JIC M x 3/8" JIC Sw F Hydraulic Hose – 85" | 6 |
| 13 | 313-7899 | 3/8" JIC M x 3/8" JIC Sw F Hydraulic Hose – 113" | 1 |
| 14 | 313-7901 | 3/8" JIC Sw F x 3/8" JIC Sw F Hydraulic Hose – 270" | 1 |
| 15 | 311-2083 | 3/8" Steel Hydraulic Line – 83" | 8 |
| 16 | 311-2132 | 3/8" Steel Hydraulic Line – 132" | 3 |
| 17 | 311-2142 | 3/8" Steel Hydraulic Line – 142" | 2 |
| 18 | 324-0031 | 3/8" JIC Nipple | 4 |
| 19 | 319-5729 | 1/2 ORB M x 3/8 JIC M - 45° Elbow | 14 |

PARTS DETAIL – CYLINDERS

MONARCH 4" X 24" (40THC24-150)

MONARCH PART NUMBER 671645

RITE WAY PART NUMBER 030-5985



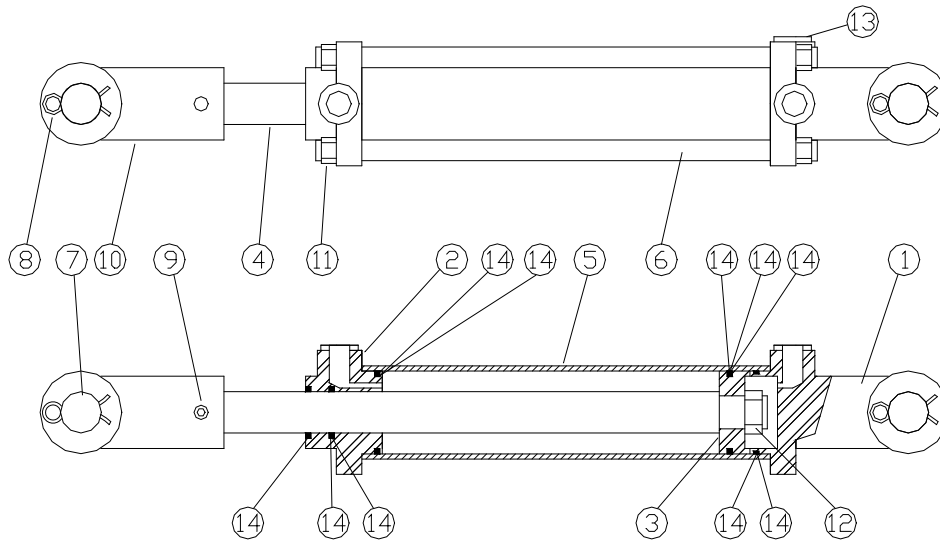
| ITEM # | PART # | DESCRIPTION |
|--------|--------|-------------------------------------|
| 1 | 492680 | Clevis Cap 4" x 3/4" ORB-1.00 |
| 2 | 492686 | Rod Cap - 4" x 1-1/2" - 3/4"ORB |
| 3 | 492527 | Piston - 4" Dia. CST DI |
| 4 | 492615 | Rod - 1-1/2" Dia. TL x 26" |
| 5 | 467324 | Tube - 4" x 24" 5/8" TR |
| 6 | 492354 | Tie Rod - 5/8" x 24" |
| 7 | 134953 | Pin Ø1" x 3.37" for Cotter |
| 8 | 134952 | Hair Pin - .105 Dia. |
| 9 | 148390 | SC SCKT Set 3/8" UNC x 1/2" KNUR |
| 10 | 492652 | Rod Clevis 1-1/4" |
| 11 | 128271 | Hex Nut - 5/8" UNC Gr.5 |
| 12 | 129110 | Hex Nut - 1" - 14 UNS Gr.5 |
| 13 | 186562 | Plug - 3/4" - 16 UNF SOC HD STR-THD |
| 14 | 639580 | Seal Kit - 4" x 1-1/2" |

PARTS DETAIL – CYLINDERS

MONARCH 2-1/2" X 8" BP (25TP08-112)

MONARCH PART NUMBER 639521

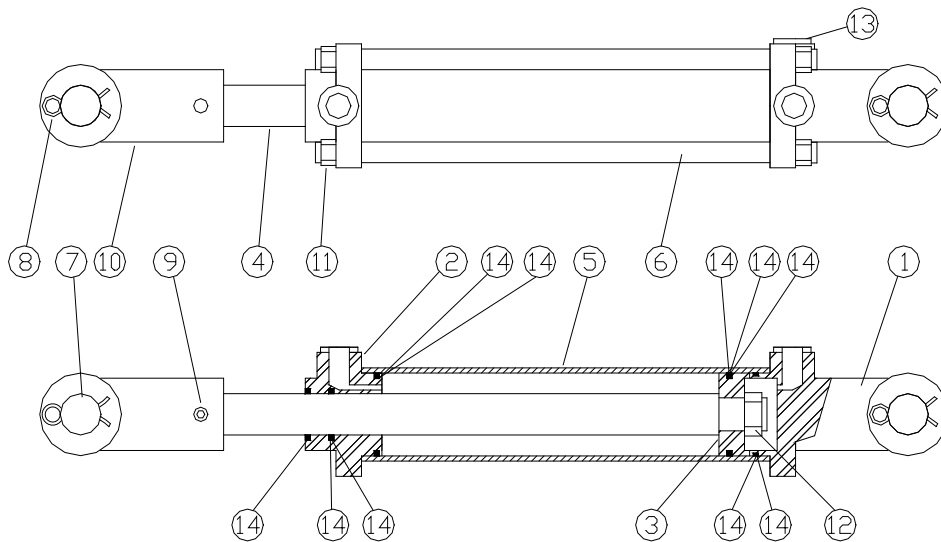
RITE WAY PART NUMBER 030-5734



| ITEM # | PART # | DESCRIPTION |
|--------|--------|--------------------------------------|
| 1 | 492674 | Clevis Cap 2-1/2" ORB |
| 2 | 492673 | Rod Cap 2-1/2" x 1-1/8" ORB |
| 3 | 494726 | Piston * R1 * 2-1/2" WPTR |
| 4 | 492699 | Rod 1.125 ASAE 8 |
| 5 | 464263 | Tube Weld 2-1/2" x 8" TP |
| 6 | 492218 | Tie Rod 3/8" x 8" |
| 7 | 469528 | Pin 1" Dia. for Cotter |
| 8 | 135995 | Cotter Pin 3/16" x 1-1/2" Hammerlock |
| 9 | 148390 | SC SCKT Set 3/8" UNC x 1/2" KNUR |
| 10 | 492650 | Rod Clevis 1-1/8" |
| 11 | 128230 | Nut Hex 3/8" UNC |
| 12 | 130556 | Nut Hex 3/4" UNF Gr.A Unitorque |
| 13 | 186562 | Plug 3/4"-16 UNF SOC HD STR-THD |
| 14 | 639555 | Seal Kit - 2-1/2" x 1-1/8" |

PARTS DETAIL – CYLINDERS

MONARCH 2-3/4" X 8" BP (27TP08 - 112)
MONARCH PART NUMBER 639522
RITE WAY PART NUMBER 030-5735



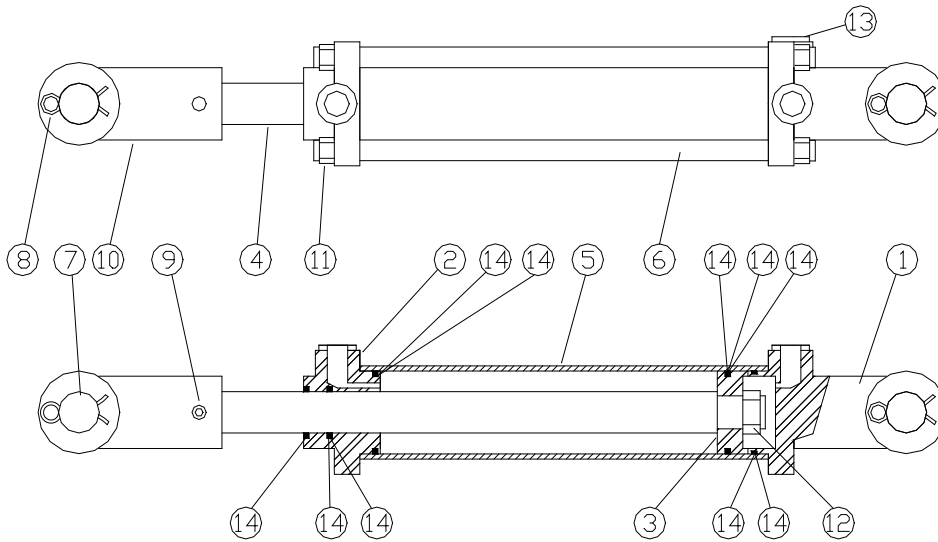
| ITEM # | PART # | DESCRIPTION |
|---------------|---------------|--------------------------------------|
| 1 | 492660 | Clevis Cap 2-3/4" ORB |
| 2 | 492661 | Rod Cap 2-3/4" x 1-1/8" ORB |
| 3 | 494727 | Piston * R1 * 2-3/4" WPTR |
| 4 | 492699 | Rod 1-1/8" ASAE 8 |
| 5 | 464264 | Tube Weld 2-3/4" x 8" TP |
| 6 | 492278 | Tie Rod 1/2" x 8" |
| 7 | 469528 | Pin 1" Dia. For Cotter |
| 8 | 135995 | Cotter Pin 3/16" x 1-1/2" Hammerlock |
| 9 | 148390 | SC SCKT Set 3/8" UNC x 1/2" KNUR |
| 10 | 492650 | Rod Clevis 1-1/8" |
| 11 | 128250 | Nut Hex 1/2" UNC |
| 12 | 130556 | Nut Hex 3/4" UNF Gr.A Unitorque |
| 13 | 186562 | Plug 3/4"-16 UNF SOC HD STR-THD |
| 14 | 639557 | Seal Kit 2-3/4" x 1-1/8" |

PARTS DETAIL – CYLINDERS

MONARCH 3" X 8" BP (30TP08-125)

MONARCH PART NUMBER 639523

RITE WAY PART NUMBER 030-5736



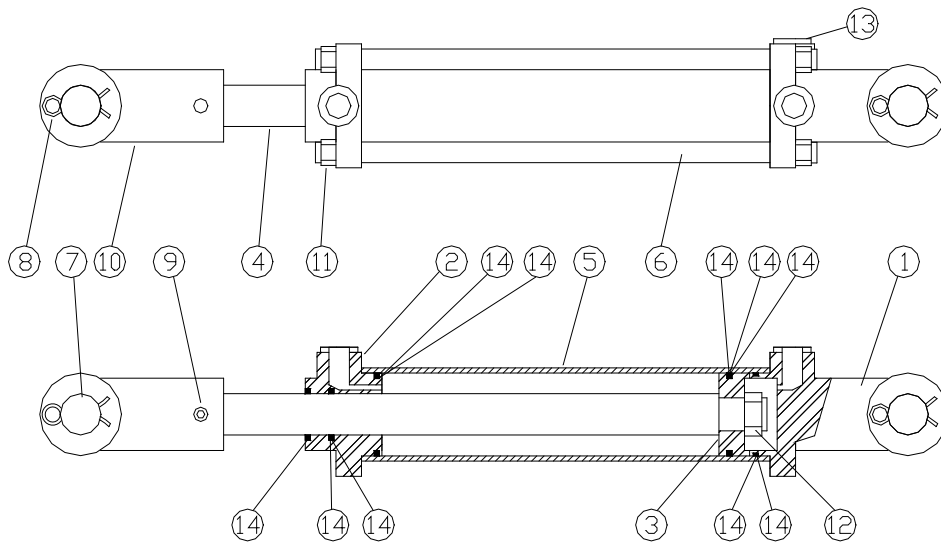
| ITEM # | PART # | DESCRIPTION |
|--------|--------|--------------------------------------|
| 1 | 492675 | Clevis Cap 3" ORB |
| 2 | 492670 | Rod Cap 3" x 1-1/4" ORB |
| 3 | 494719 | Piston *R1 * 3" WPTR |
| 4 | 492700 | Rod 1-1/4" Dia. ASAE 8 |
| 5 | 464265 | Tube Weld 3" x 8" TP |
| 6 | 492278 | Tie Rod 1/2" x 8" |
| 7 | 469528 | Pin 1" Dia For Cotter |
| 8 | 135995 | Cotter Pin 3/16" x 1-1/2" Hammerlock |
| 9 | 148390 | SC SCKT Set 3/8" UNC x 1/2" KNUR |
| 10 | 492652 | Rod Clevis 1-1/4" |
| 11 | 128250 | Nut Hex 1/2" UNC |
| 12 | 130560 | Nut Hex 1"-14 Gr.A Uнитарque |
| 13 | 186562 | Plug 3/4"-16 UNF SOC HD STR-THD |
| 14 | 639558 | Seal Kit 3" x 1-1/4" |

PARTS DETAIL – CYLINDERS

MONARCH 3-1/4" X 8" BP (32TP08-125)

MONARCH PART NUMBER 639524

RITE WAY PART NUMBER 030-5737



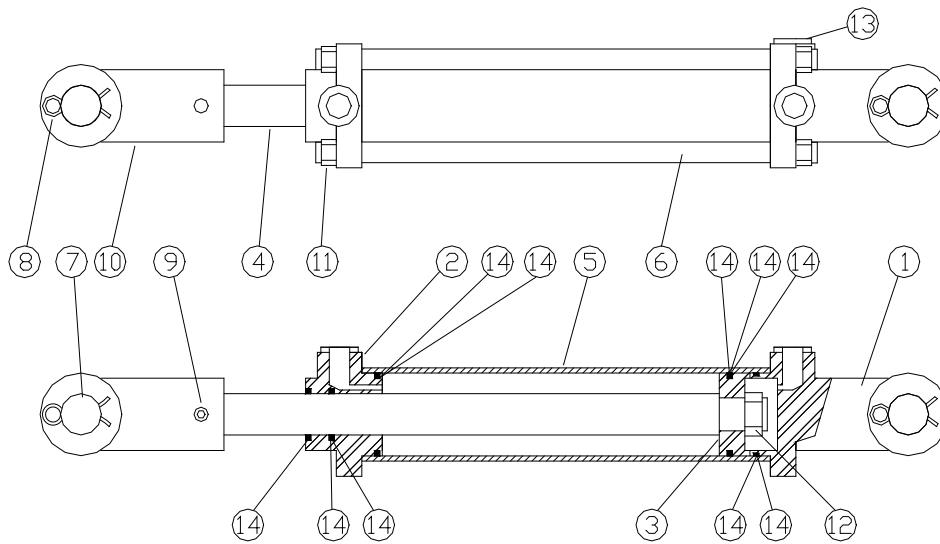
| ITEM # | PART # | DESCRIPTION |
|---------------|---------------|--------------------------------------|
| 1 | 492662 | Clevis Cap 3-1/4" ORB |
| 2 | 492664 | Rod Cap 3-1/4" x 1-1/4" ORB |
| 3 | 494737 | Piston 3-1/4" TP |
| 4 | 492700 | Rod 1-1/4" Dia. ASAE 8 |
| 5 | 464266 | Tube Weld 3-1/4" x 8" TP |
| 6 | 492338 | Tie Rod 5/8" x 8" |
| 7 | 469528 | Pin 1" Dia. For Cotter |
| 8 | 135995 | Cotter Pin 3/16" x 1-1/2" Hammerlock |
| 9 | 148390 | SC SCKT Set 3/8" UNC x 1/2" KNUR |
| 10 | 492652 | Rod Clevis 1-1/4" |
| 11 | 128271 | Nut Hex 5/8" UNF Grade 5 |
| 12 | 130560 | Nut Hex 1"-14 Gr.A Uitorque |
| 13 | 186562 | Plug 3/4"-16 UNF SOC HD STR-THD |
| 14 | 639560 | Seal Kit 3-1/4" x 1-1/4" |

PARTS DETAIL – CYLINDERS

MONARCH 3-1/2" X 8" BP (35TP08-125)

MONARCH PART NUMBER 639962

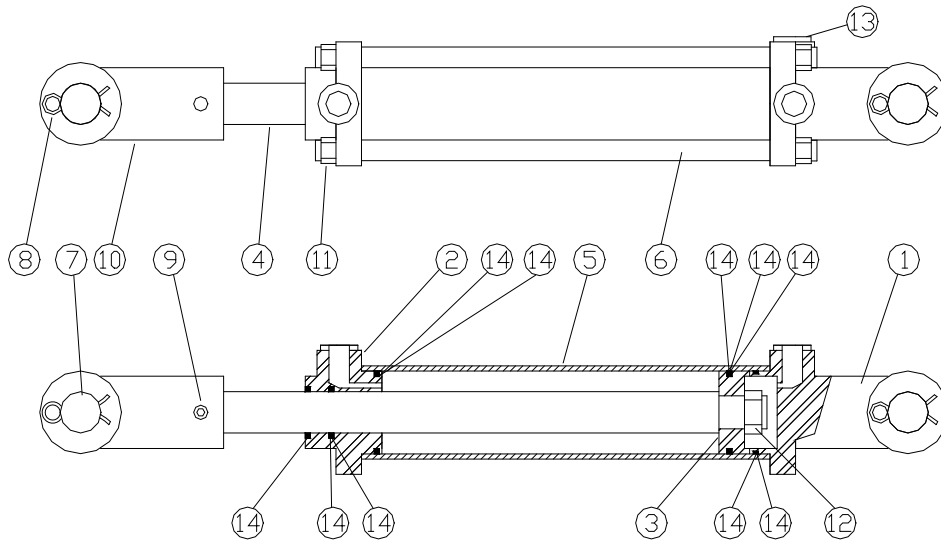
RITE WAY PART NUMBER 030-5738



| ITEM # | PART # | DESCRIPTION |
|---------------|---------------|--------------------------------------|
| 1 | 492676 | Clevis Cap 3-1/2" ORB |
| 2 | 492677 | Rod Cap 3-1/2" x 1-1/4" ORB |
| 3 | 494738 | Piston 3-1/2" TH/TP |
| 4 | 492700 | Rod 1-1/4" Dia. ASAE 8 |
| 5 | 464267 | Tube Weld 3-1/2" x 8" TP |
| 6 | 492338 | Tie Rod 5/8" x 8" |
| 7 | 469528 | Pin 1" Dia. For Cotter |
| 8 | 135995 | Cotter Pin 3/16" x 1-1/2" Hammerlock |
| 9 | 148390 | SC SCKT Set 3/8" UNC x 1/2" KNUR |
| 10 | 492652 | Rod Clevis 1-1/4" |
| 11 | 128271 | Nut Hex 5/8" UNF |
| 12 | 130560 | Nut Hex 1"-14 Gr.A Uitorque |
| 13 | 186562 | Plug 3/4"-16 UNF SOC HD STR-THD |
| 14 | 639561 | Seal Kit 3-1/2" x 1-1/4" |

PARTS DETAIL – CYLINDERS

MONARCH 3-3/4" X 8" BP (37TP08 - 137)
MONARCH PART NUMBER 639963
RITE WAY PART NUMBER 030-5739



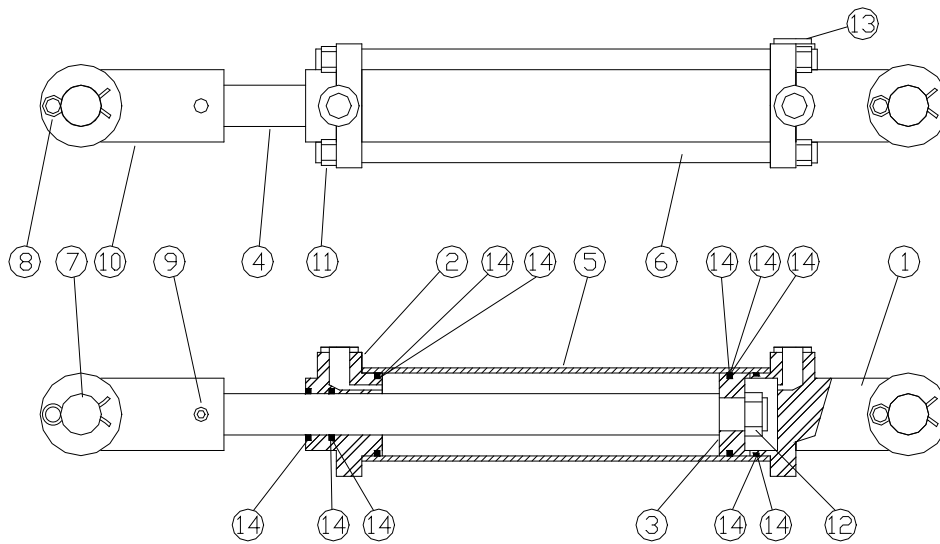
| ITEM # | PART # | DESCRIPTION |
|---------------|---------------|--------------------------------------|
| 1 | 492678 | Clevis Cap 3-3/4" ORB |
| 2 | 492679 | Rod Cap 3-3/4" x 1-3/8" ORB |
| 3 | 494732 | Piston 3-3/4" TP |
| 4 | 492800 | Rod 1-3/8" Dia. ASAE 8 |
| 5 | 464268 | Tube Weld 3-3/4" x 8" TP |
| 6 | 492338 | Tie Rod 5/8" x 8" |
| 7 | 469528 | Pin 1" Dia. For Cotter |
| 8 | 135995 | Cotter Pin 3/16" x 1-1/2" Hammerlock |
| 9 | 148390 | SC SCKT Set 3/8" UNC x 1/2" KNUR |
| 10 | 492652 | Rod Clevis 1-1/4" |
| 11 | 128271 | Nut Hex 5/8" UNF |
| 12 | 130559 | Nut Hex 1-1/8 UNF Gr.A Unitorque |
| 13 | 186562 | Plug 3/4" - 16 UNF SOC HD STR-THD |
| 14 | 639563 | Seal Kit 3-3/4" x 1-3/8" |

PARTS DETAIL – CYLINDERS

MONARCH 4" X 8" BP (40TP08 - 137)

MONARCH PART NUMBER 639964

RITE WAY PART NUMBER 030-5740



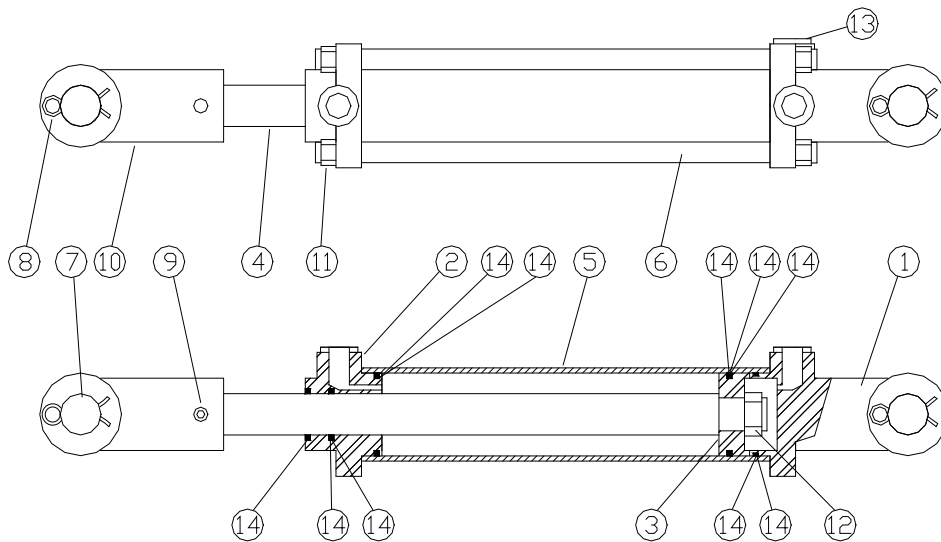
| ITEM # | PART # | DESCRIPTION |
|--------|--------|--------------------------------------|
| 1 | 492680 | Clevis Cap 4" ORB |
| 2 | 492685 | Rod Cap 4" x 1-3/8" ORB |
| 3 | 494730 | Piston 4" TH/TP |
| 4 | 492800 | Rod 1-3/8" Dia. ASAE 8 |
| 5 | 464269 | Tube Weld 4" x 8" TP |
| 6 | 492338 | Tie Rod 5/8" x 8" |
| 7 | 469528 | Pin 1" Dia. For Cotter |
| 8 | 135995 | Cotter Pin 3/16" x 1-1/2" Hammerlock |
| 9 | 148390 | SC SCKT Set 3/8" UNC x 1/2" KNUR |
| 10 | 492652 | Rod Clevis 1-1/4" |
| 11 | 128271 | Nut Hex 5/8" UNF |
| 12 | 130559 | Nut Hex 1-1/8" UNF Gr.A Uunitorque |
| 13 | 186562 | Plug 3/4" - 16 UNF SOC HD STR-THD |
| 14 | 639564 | Seal Kit 4" x 1-3/8" |

PARTS DETAIL – CYLINDERS

MONARCH 2" X 12" (20TXC12 - 113)

MONARCH PART NUMBER 671624

RITE WAY PART NUMBER 030-5979



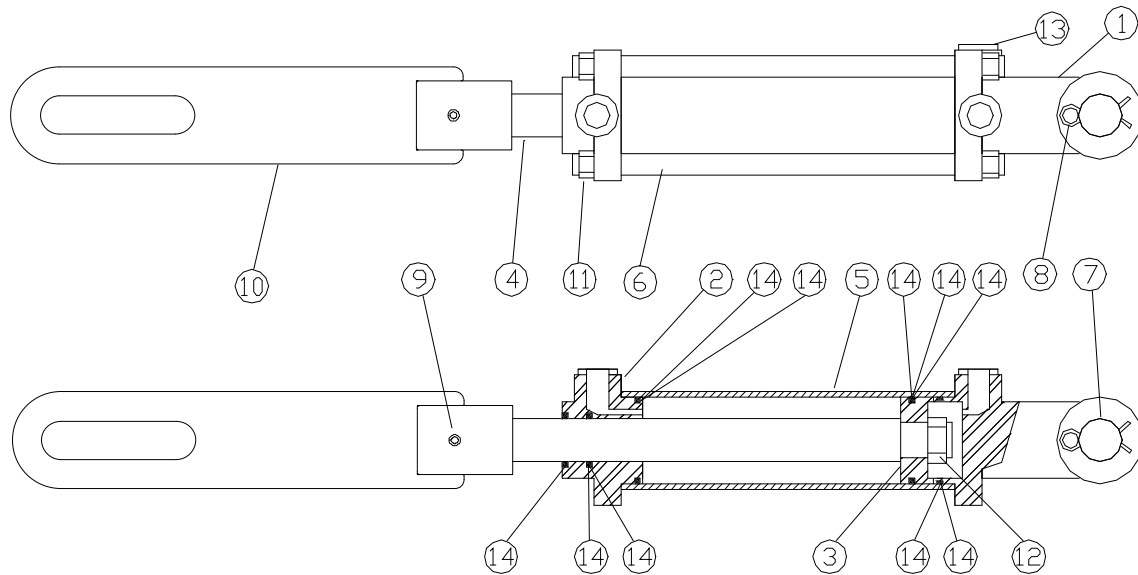
| ITEM # | PART # | DESCRIPTION |
|---------------|---------------|-----------------------------------|
| 1 | 492672 | Clevis Cap 2" x 3/8" ORB-1.00 |
| 2 | 492665 | Rod Cap 2" x 1-1/8" - 3/4" ORB |
| 3 | 492548 | Piston 2" Dia. CST DI |
| 4 | 492853 | Rod 1-1/8" x 12" |
| 5 | 491612 | Tube 2" x 12" Cylinder |
| 6 | 492222 | Tie Rod 3/8", 12" Cylinder |
| 7 | 134953 | Pin Ø1" x 3.37" for Cotter |
| 8 | 134952 | Hair Pin .105" Dia. |
| 9 | 148390 | SC SCKT Set, 3/8" UNC x 1/2" KNUR |
| 10 | 492650 | Rod Clevis 1-1/8" - 12 UNF |
| 11 | 128230 | Hex Nut 3/8" UNC Gr.5 |
| 12 | 129090 | Hex Nut 3/4" UNF Gr.5 |
| 13 | 186562 | Plug D 3/4"-16 SOC HD STR-THD |
| 14 | 639572 | Seal Kit - 2" x 1-1/8" |

PARTS DETAIL – CYLINDERS

MONARCH 2" X 4" (20TX04-112)

MONARCH PART NUMBER 661838

RITE WAY PART NUMBER 030-5999



| ITEM # | PART # | DESCRIPTION |
|--------|----------|---|
| 1 | 492672 | Clevis Cap 2" x 3/8" ORB-1.00 |
| 2 | 492665 | Rod Cap 2" x 1-1/8" - 3/4" ORB |
| 3 | 492548 | Piston 2" Dia. CST DI |
| 4 | 497505 | Rod 1-1/8" x 8" |
| 5 | 491604 | Tube 2" x 4" Cylinder |
| 6 | 492214 | Tie Rod 3/8", 4" Cylinder |
| 7 | 134953 | Pin Ø1" x 3.37" for Cotter |
| 8 | 134952 | Hair Pin .105" Dia. |
| 9 | 148390 | SC SCKT Set, 3/8" UNC x 1/2" KNUR |
| 10 | 105-1250 | Rod Clevis, Slotted (SOLD WITH CYLINDER ONLY) |
| 11 | 128230 | Hex Nut 3/8" UNC Gr.5 |
| 12 | 129090 | Hex Nut 3/4" UNF Gr.5 |
| 13 | 186562 | Plug D 3/4"-16 SOC HD STR-THD |
| 14 | 639572 | Seal Kit - 2" x 1-1/8" |

NOTES