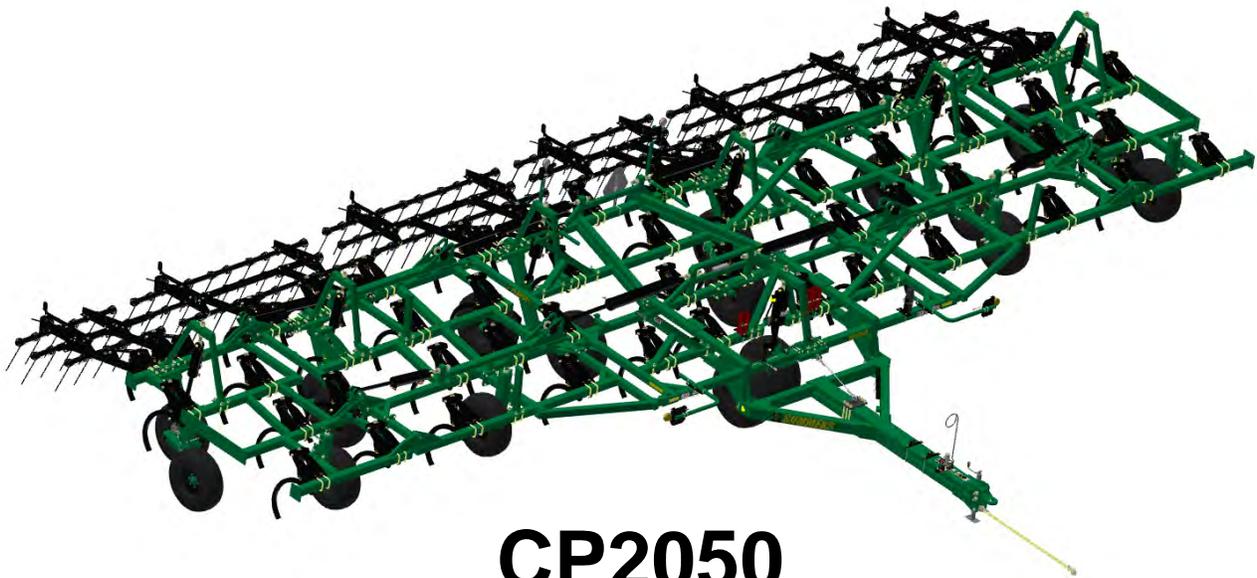


SUMMERS®

CP2050 - 5 Section Superchisel

CP2050 - 5 Section Superchisel

Operator's Manual



CP2050

(5 Section Superchisel)

IMPORTANT

THE OPERATOR IS RESPONSIBLE FOR ADJUSTING THE MACHINE SINCE MACHINE DOES NOT COME "FIELD READY" FROM FACTORY.



CAUTION

READ & UNDERSTAND OPERATOR'S MANUAL BEFORE USING MACHINE.

See www.summersmfg.com for latest version of all Summers Operator's Manuals.

SUMMERS MANUFACTURING CO., INC.

WEB SITE: www.summersmfg.com

DEVILS LAKE, NORTH DAKOTA 58301

(701) 662-5391

TABLE OF CONTENTS

| | |
|--|-------------|
| FOREWARD..... | 5 |
| Preface | 5 |
| Disclaimer | 5 |
| Contact Information | 5 |
| Owner Registration Information | 5 |
| WARRANTY | 6 |
| SECTION 1 – SAFETY..... | 1-1 |
| Safety Information..... | 1-1 |
| General Safety Practices | 1-1 |
| Safety During Transportation | 1-1 |
| Safety Decals..... | 1-2 |
| Safety Decal Locations | 1-4 - 1-9 |
| Safety Light Operation | 1-9 |
| General Maintenance Safety Practices | 1-10 |
| SECTION 2 – ASSEMBLING THE IMPLEMENT | 2-1 |
| Standard Center Assembly | 2-2 - 2-11 |
| Caster Wheel Center Assembly..... | 2-11 - 2-21 |
| All Machines Assembly | 2-22 - 2-28 |
| SECTION 3 – OPERATION SAFETY..... | 3-1 |
| SECTION 4 – OPERATION..... | 4-1 |
| Connecting to Implement..... | 4-1 |
| Field Operation | 4-4 |
| Transporting..... | 4-5 |
| SECTION 5 – MAINTENANCE & SPECIFICATIONS | 5-1 |
| Maintenance Safety | 5-1 |
| Daily & Periodic Maintenance..... | 5-2 |
| Troubleshooting | 5-3 |
| Specifications..... | 5-4 |

| | |
|--|------|
| SECTION 6 – PARTS LIST | 6-1 |
| Center | 6-2 |
| Standard Center Transport | 6-4 |
| Rear Center Transport | 6-6 |
| Standard Center Transport | 6-8 |
| Caster Wheel Hitch | 6-11 |
| Standard Center Hitch | 6-12 |
| Part 1 Wing | 6-14 |
| Gauge Wheel | 6-15 |
| Part 2 Wing | 6-16 |
| Standard Center Main Lift Hydraulics (50'-54') | 6-18 |
| Standard Center Main Lift Hydraulics (56'-60') | 6-20 |
| Caster Hitch Hydraulics (50'-54') | 6-22 |
| Caster Hitch Hydraulics (56'-60') | 6-24 |
| Wing Lift Hydraulics (50'-54') | 6-26 |
| Wing Lift Hydraulics (56'-60') | 6-28 |
| Safety Light Kit..... | 6-30 |
| Trip Assembly | 6-32 |
| Rear Hitch | 6-34 |
| Hub Assembly | 6-36 |
| 614 Hub with GBGI Seal Assembly | 6-37 |
| Mounted Harrow Mounting Arm Assembly..... | 6-38 |
| 3-Bar Mounted Harrow Assembly | 6-40 |
| 50', 52' & 54' Mounted Harrow Layout..... | 6-42 |
| 56' Mounted Harrow Layout..... | 6-43 |
| 58' Mounted Harrow Layout..... | 6-44 |
| 60' Mounted Harrow Layout..... | 6-45 |

TRANSPORT SAFETY

1. Road speed should not exceed 20 mph (32 km/hr).



2. Do not tow if the implement's towing vehicle ratio is greater than 1.5:1. See Specifications Section for implement weights.
3. If more than one implement is to be pulled by a towing vehicle, it is recommended that each implement is to be a maximum of 50% of the weight of the preceding implement. If it is not possible to reach this weight limit, transport the implements separately.
4. When approaching rough roads/ground (such as entering a road), slow down to a safe driving speed.
5. Check all lights and reflectors to ensure ALL regulations are met. Make sure the SMV emblem is attached to the implement and is clearly visible from the rear.



SMV emblems are only attached to vehicles traveling slower than 25 mph (40 km/hr). The most hazardous conditions to drive in are a daybreak and dusk. The use of a pilot car is recommended.

6. Always install ALL safety locks before transporting an implement.
7. Always park implements on a firm, level surface.

Preface

This manual is intended for use with CP2050 Chisel Plow for Summers® Manufacturing Company, Inc.

This book is composed of these basic sections: Safety, Assembly, Operation & Maintenance, Troubleshooting and Parts. The assembly section provides complete instructions for the proper assembly of your Summers Chisel Plow. The Operation & Maintenance section provides information for the proper operation and maintenance of your Summers Chisel Plow. A complete Parts breakdown is provided in the Parts section.

Parts are referenced in each drawing with the Summers Manufacturing part number. Use this part number when ordering replacement parts from your Summers dealer. See the back section of the manual for description of each part.

Reference to “Right” and “Left” in this book is determined when the machine is viewed from the rear.

Disclaimer

It is the policy of this company to improve its products whenever possible and practical to do so. We reserve the right to make changes or improvements in the design or construction of parts at any time without incurring the obligation to install such changes on products previously delivered.

Summers Manufacturing Company, Inc. strongly recommends that each Chisel Plow operator READ and UNDERSTAND the Operator’s Manual before using the machine. In addition, the Operator’s Manual should be REVIEWED at least Annually thereafter.

Scan code to the right for the latest version of all Summers Operator’s Manuals.



Contact Information

Summers Manufacturing Company, Inc.
103 Summers St. NW
Devils Lake, ND 58301
Toll Free: 1-800-732-4392
Local: 1-701-662-5391 (Devils Lake, ND)
1-605-226-3644 (Aberdeen, SD)

www.summersmfg.com

Owner Registration Information

Bring this information when ordering parts (Serial Number is located at front of Chisel by hitch).

| | |
|-------------------|------------------------|
| Name _____ | Size _____ |
| Address _____ | Serial Number _____ |
| City _____ | (located by the hitch) |
| State/Prov. _____ | Date Purchased _____ |
| Mail Code _____ | Dealer _____ |

WARRANTY

Summers warrants only products of its manufacture against operational failure caused by defective materials or workmanship which occur during normal use within 36 months from the date by the end user from Summers' dealer.

Summers' obligation is to replace, free of charge, any part of the product that Summers inspection shows to be defective excluding transportation charges to Maddock, ND or Devils Lake, ND and return and also excluding all transportation costs from Summers' dealer to the dealer's customer and all other costs, such as removal and installation expense.

Summers shall not be liable for loss of time, manufacturing costs, labor, material, loss of profits, consequential damages, direct or indirect, because of defective products whether due to rights arising under the contract of sale or independently thereof, and whether or not such claim is based on contract, tort or warranty.

Written permission for any warranty claim return must be first obtained from authorized Summers' personnel. All returns must be accompanied with a complete written explanation of claimed defects and the circumstances of operational failure.

Written warranty for all component parts used in the manufacture of Summers products is available upon request. Warranty of such component parts will be determined by said component manufacturer upon their inspection of the claimed defective part.

This express warranty is the sole warranty of Summers. There are no warranties, which extend beyond the warranty therein expressly set forth. The sales for products of Summers under any other warranty or guarantee express or implied is not authorized. This warranty voids all previous issues.

Summers® Manufacturing Co., Inc.
Devils Lake, ND 58301

01/16

Safety Information



This safety alert symbol is used to denote possible danger and care should be taken to prevent bodily injury. When you see this symbol it means ATTENTION, BECOME ALERT! and/or YOUR SAFETY IS INVOLVED!

WARNING: Safe practices must be followed when working on or operating this equipment. All personnel involved must:



- Read and understand the instructions and manuals for this machine.
- Be instructed in the safe use of tools and all lifting devices involved in the assembly of this equipment.
- Clear the area of all personnel not involved in the assembly of this machine.

General Safety Practices

1. READ and UNDERSTAND the Operator's Manual before using any equipment. Review at least annually thereafter.
2. VERIFY all safety devices and shields are in place before using any equipment.
3. KEEP hands, feet, hair and clothing away from moving parts.
4. STOP engine, place all controls in neutral, set parking brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting, maintaining or unplugging.
5. BE CAREFUL when working around high pressure hydraulic system.
6. DO NOT ALLOW RIDERS.

Safety During Transportation

1. ONLY TOW at a safe speed. Use caution when making corners and meeting traffic.
2. USE safety chain between tractor drawbar and implement hitch when transporting on public roads.
3. ALWAYS use transport locks when transporting on public roads.
4. COMPLY with local lighting, marking and oversize regulations when transporting on highways.
5. FREQUENTLY check for traffic from rear, especially during turns.

SAFETY

Safety Decals



Indicates an immediate hazardous situation that will result in death or serious injury. The color associated with Danger is RED.



Indicates a potentially hazardous situation that could result in death or serious injury. The color associated with Warning is ORANGE.



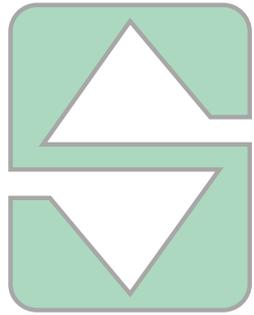
Indicates a potentially hazardous situation that may result in minor or moderate injury. It may also be used to alert against unsafe practices. The color associated with Caution is YELLOW.

The Notice decals and statements in this manual are to inform the operator of the correct fluids or operational practices for this machine. Failure to follow these notices will result in damage to the machine. The color associated with Notice is GREEN.

1. Keep safety signs clean and legible at all times.
2. Replace safety signs that are missing or have become illegible.
3. Replaced parts that displayed a safety sign should also display the current sign.
4. Safety signs are available from your dealer's parts department or the factory.

How to install safety signs?

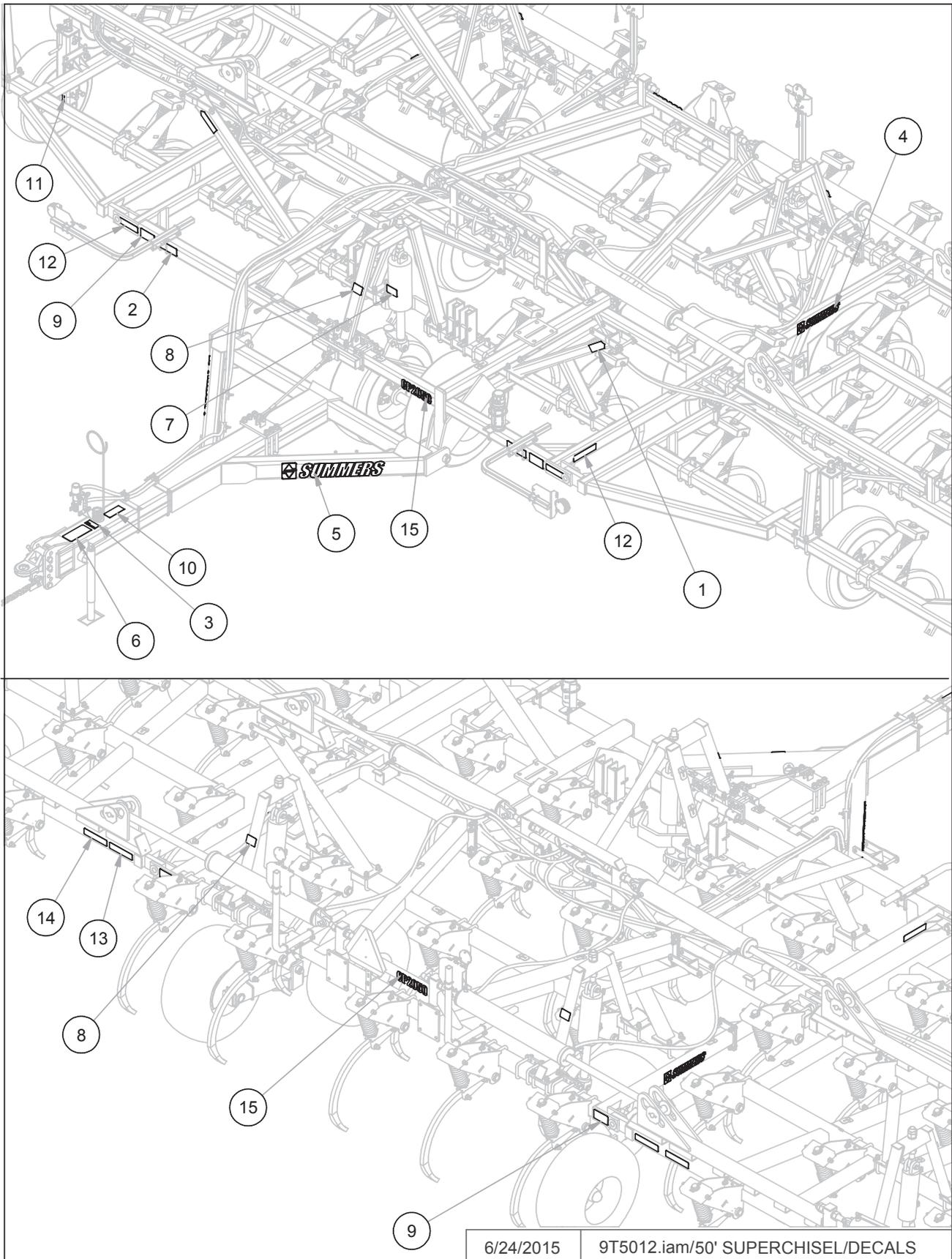
1. Be sure that the installation area is clean and dry.
2. Be sure the temperature is above 50° F (10° C).
3. Decide on the exact position before removing the backing paper.
4. Remove the smallest portion of the split backing paper.
5. Align the sign over the specified area and carefully press the small portion with the exposed sticky backing in place.
6. Slowly peel back the remaining paper and carefully smooth the remaining portion of the sign in place.
7. Small air pockets can be pierced with a pin and smoothed out using the piece of sign backing paper.



SUMMERS[®]

SAFETY

Safety Decal Locations

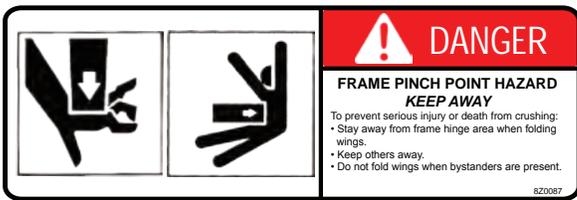


Safety Decal Locations

The types of safety signs and locations on the equipment are shown in the illustrations below. Good safety requires that you familiarize yourself with the various safety signs, the type of WARNING and the area or particular function related to that area, that requires your SAFETY AWARENESS.

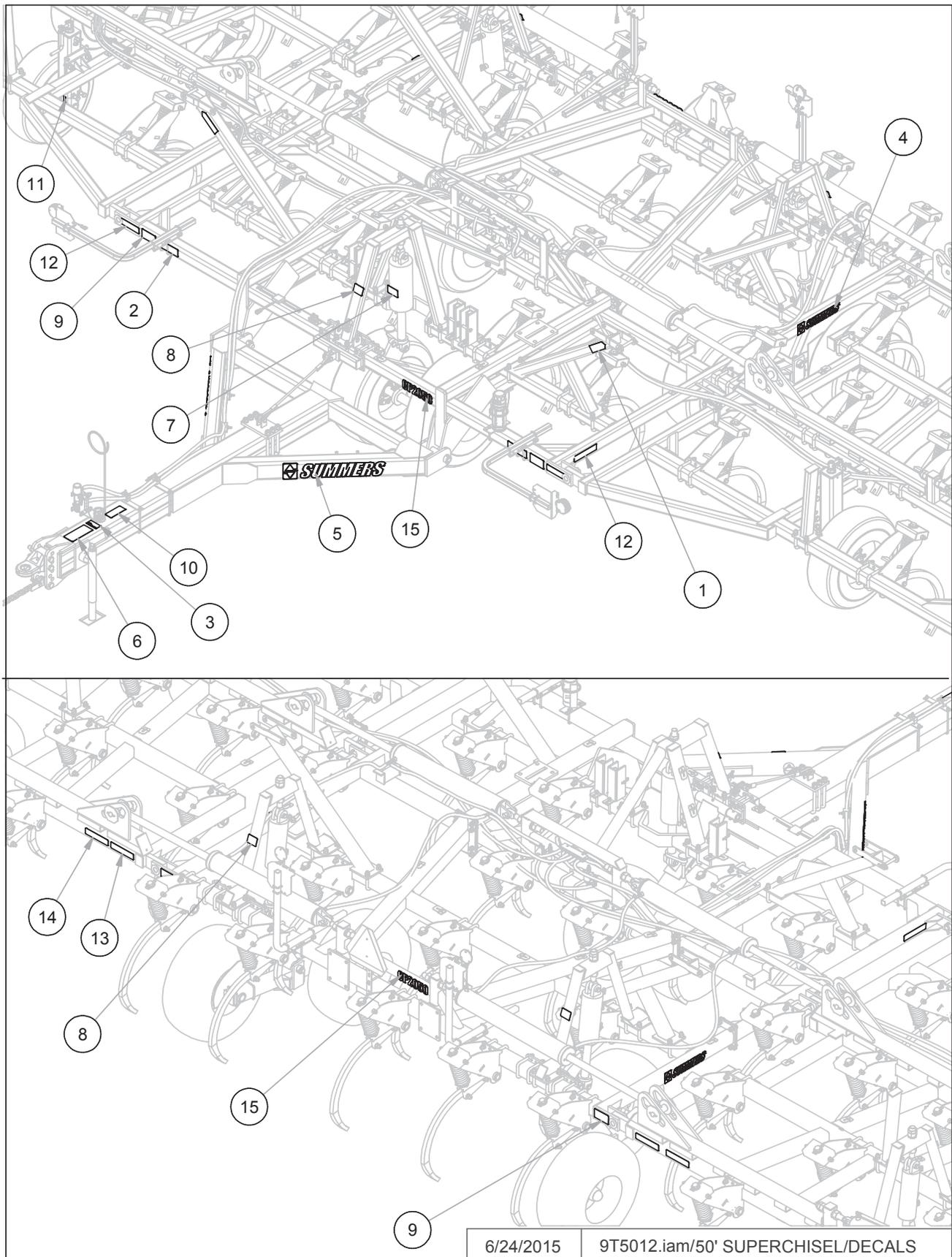
IMPORTANT: If Safety Signs have been damaged, removed, become illegible or parts replaced without safety signs, new signs must be applied. New safety signs are available from your authorized dealer.

Safety Decals

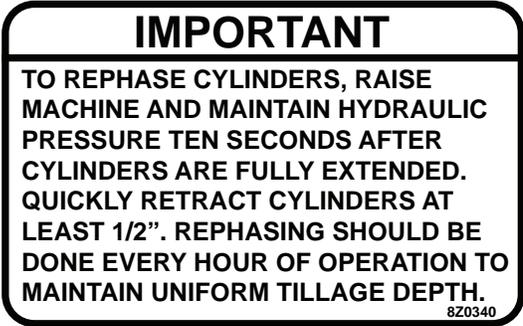
| DECALS | | | | |
|--------|--------|-----|-----------------------|--|
| ITEM | PN | QTY | DESCRIPTION | |
| 1 | 8Z0075 | 1 | TRANSPORT LOCK DECAL |  |
| 2 | 8Z0087 | 4 | PINCH POINT DECAL |  |
| 3 | 8Z0100 | 1 | MADE IN THE USA DECAL |  |
| 4 | 8Z0202 | 4 | 3.5" SUMMERS DECAL |  |
| 5 | 8Z0204 | 2 | 5.5" SUMMERS DECAL |  |

SAFETY

Safety Decal Locations (cont'd)

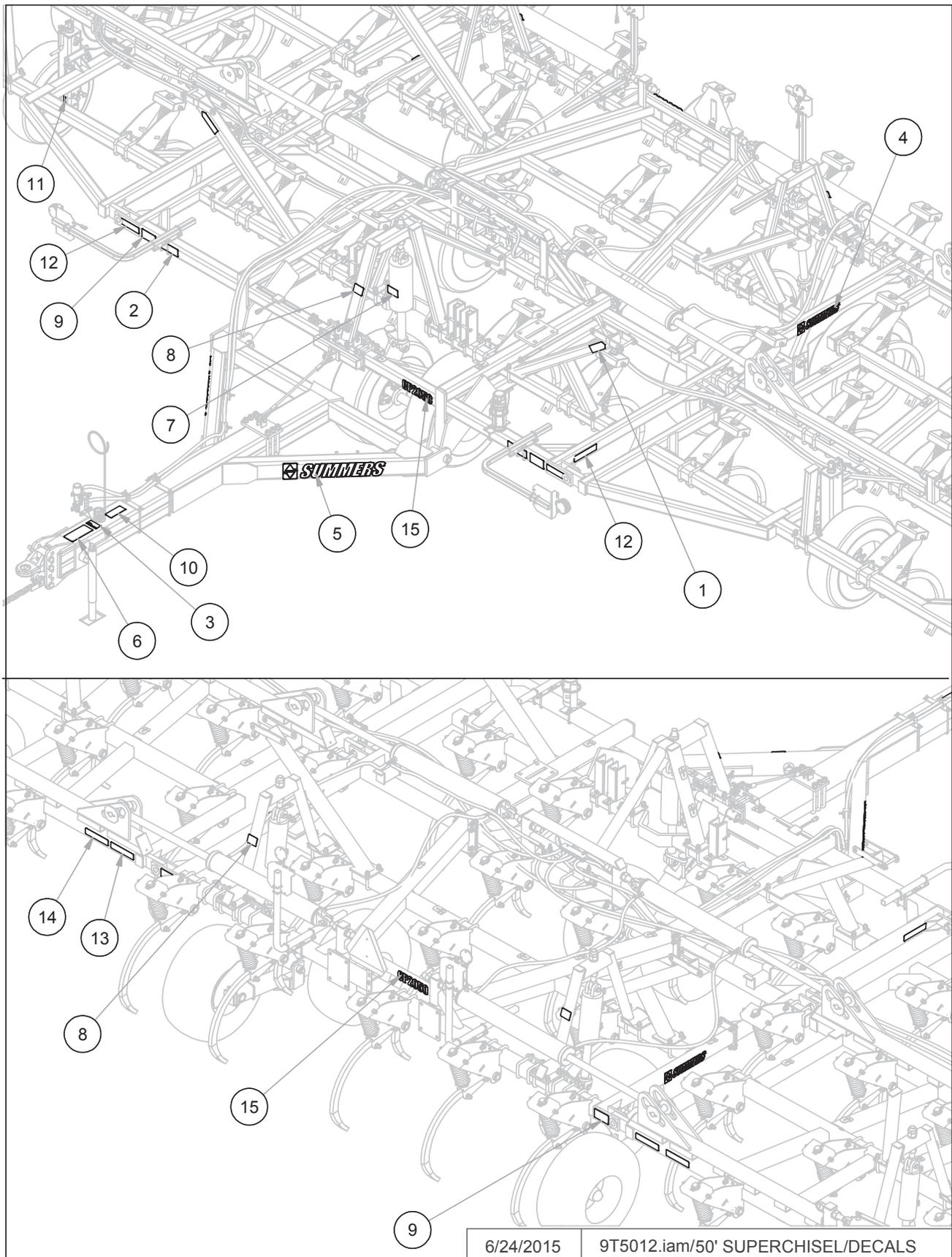


Safety Decal Locations (cont'd)

| | | | | |
|----|--------|---|------------------------------------|--|
| 6 | 8Z0276 | 1 | GENERAL MACHINE CAUTION DECAL |  <p>CAUTION</p> <ol style="list-style-type: none"> 1. Read and understand Operator's Manual before using machine. 2. For Sprayers: <ol style="list-style-type: none"> a. Read and follow chemical manufacturers' WARNINGS, instructions and procedures before using. b. Use recommended personal protective equipment to reduce or eliminate chemical contact. c. Never run pump dry. 3. Verify all safety devices and shields are in place before using machine. 4. Keep hands, feet, hair and clothing away from moving parts. 5. Stop engine, place all controls in neutral, set parking brakes, remove ignition key and wait for all moving parts to stop before servicing, adjusting, maintaining or unplugging. 6. Be careful when working around high pressure hydraulic system. 7. Do not allow riders. 8. Check all wheel bolts DAILY for tightness. 9. Refer to Operator's Manual for periodic and annual maintenance. 10. For Towed Implements, DO NOT EXCEED 20 MPH. <p>8Z0276</p> |
| 7 | 8Z0340 | 1 | REPHASING CYLINDERS DECAL |  <p>IMPORTANT</p> <p>TO REPHASE CYLINDERS, RAISE MACHINE AND MAINTAIN HYDRAULIC PRESSURE TEN SECONDS AFTER CYLINDERS ARE FULLY EXTENDED. QUICKLY RETRACT CYLINDERS AT LEAST 1/2". REPHASING SHOULD BE DONE EVERY HOUR OF OPERATION TO MAINTAIN UNIFORM TILLAGE DEPTH.</p> <p>8Z0340</p> |
| 8 | 8Z0342 | 3 | INSTALL CYL LOCKS DECAL |  <p>WARNING</p> <p>TO AVOID INJURY INSTALL CYLINDER LOCKS BEFORE TRANSPORTING OR SERVICING MACHINE.</p> <p>8Z0342</p> |
| 9 | 8Z0344 | 4 | WING DANGER DECAL |  <p>DANGER</p> <p>TO AVOID INJURY OR DEATH STAND CLEAR OF MACHINE WHEN WINGS ARE BEING RAISED AND LOWERED. MECHANICAL OR HYDRAULIC FAILURE CAN ALLOW WINGS TO FALL RAPIDLY.</p> <p>8Z0344</p> |
| 10 | 8Z0346 | 1 | ELECTROCUTION-TILLAGE EQUIP. DECAL |  <p>DANGER</p> <p>TO AVOID INJURY OR DEATH DO NOT CONTACT ELECTRICAL LINES.</p> <p>8Z0346</p> |

SAFETY

Safety Decal Locations (cont'd)



Safety Decal Locations (cont'd)

| | | | | |
|----|--------|---|---|--|
| 11 | 8Z0348 | 4 | GUAGE WHEEL DEPTH DECAL |  |
| 12 | 8Z0800 | 4 | REFLECTOR - YELLOW - ADHESIVE BACKED |  |
| 13 | 8Z0805 | 4 | REFLECTOR - RED- ORANGE ADHESIVE BACKED |  |
| 14 | 8Z0810 | 6 | REFLECTOR - RED - ADHESIVE BACKED |  |
| 15 | 8Z2320 | 2 | CP2050 DECAL |  |

Safety Light Operation

Figure 1

The Summers Safety Light Kit is equipped with a 7 pin connector which meets SAE J560 specification. To protect 7 pin connector, store in dust cap (8K8067) when not attached to towing vehicle.



General Maintenance Safety Practices

NOTE: Read the entire section before beginning work.

Before You Begin

- **YOU ARE RESPONSIBLE** for the safe maintenance of the chisel plow.
- **DO NOT ALLOW CHILDREN** or other unauthorized persons within the chisel plow operational area.
- **WEAR PERSONAL PROTECTIVE EQUIPMENT** which includes a hard hat, eye protection, work gloves and steel toed boots with slip resistant soles.
- **DO NOT MODIFY** the equipment or substitute parts in any way. Unauthorized modifications may impair the function and/or safety of the machine.
- **USE SUITABLE LIFTING DEVICE** for components which could cause personal injury.
- **BLOCK UP ANY RAISED PART** of the machine. Be sure machine is stable after blocking.
- **ALWAYS INSPECT LIFTING CHAINS AND SLINGS** for damage or wear.
- **BE SURE LIFTING DEVICE IS RATED TO HANDLE THE WEIGHT.**
- **STOP ENGINE**, place all controls in neutral, set parking brake, remove ignition key and wait for all moving parts to stop before servicing or adjusting.
- **BE SURE PRESSURE IS RELIEVED** from hydraulic circuits before servicing or disconnecting from tractor.
- **USE EXTREME CARE** when assembling, servicing or adjusting.

General Assembly Instructions

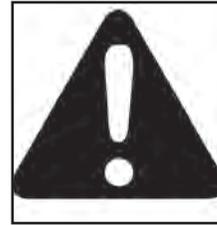
1. READ AND UNDERSTAND Operator's Manual before assembly of machine.
2. Machine should be assembled in horizontal (field) position only.
3. If machine is to be assembled INDOORS, check that exit door is a MINIMUM OF 19'6" WIDE. Minimum height requirement is

| <u>Machine Width</u> | <u>Height</u> |
|----------------------|---------------|
| 50'-54' | 15'8" |
| 56'-60' | 17'8" |

Shanks may be left off to reduce height and width requirement.

4. Reference to "RIGHT" and "LEFT" is determined when machine IS VIEWED FROM THE REAR.
5. Reference to "FORWARD" means TOWARDS THE TRACTOR.
6. Reference to "REAR" means AWAY FROM THE TRACTOR.

Safety Alert Symbol



This symbol is an alert to the potential for personal injury. This symbol means

ATTENTION! BECOME ALERT!

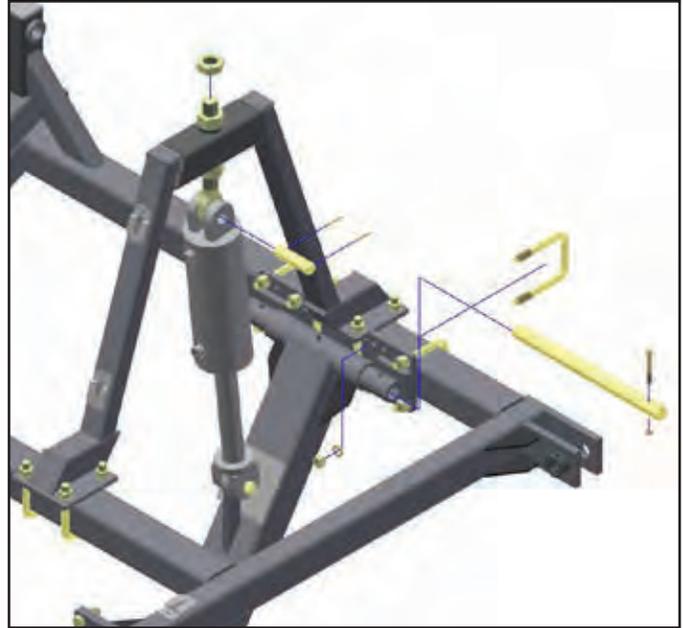
YOUR PERSONAL SAFETY IS INVOLVED!

ASSEMBLY - STANDARD CENTER

Center Section

1. Place front and rear center section on floor with bolt plates facing each other.
2. Attach sections with 24 – 3/4"x2-1/4" bolts, lock washers and nuts.
3. Block center frames off the floor.
4. Position Rear cylinder attach brackets (8T4226) 62" from the center of the frame. Secure cylinder attach brackets with 3/4" u-bolts.

– Front cylinder attach bracket (8T4205) should be centered on the front of the frame.

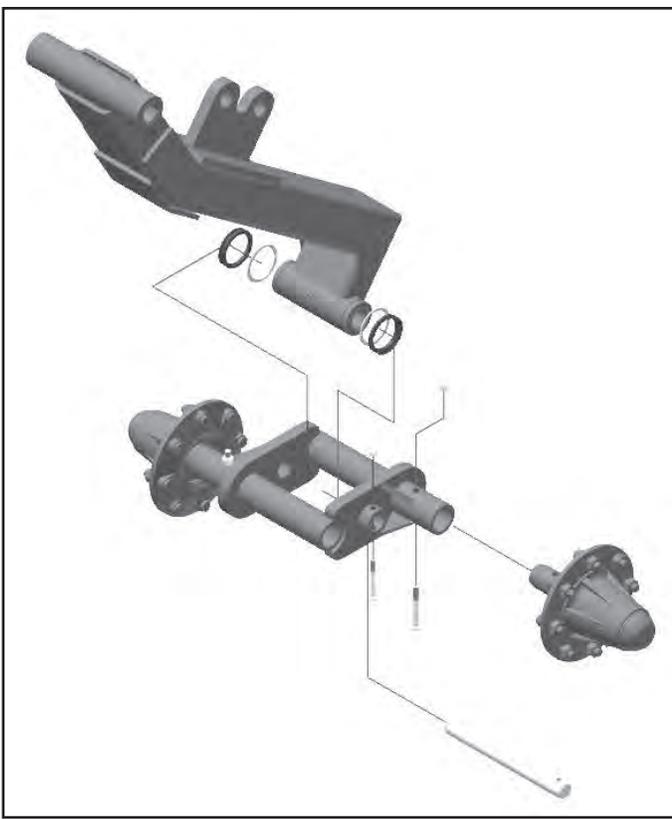


5. Insert eyebolts (8K1755) into each cylinder attach bracket. Tighten 1-1/2" nuts so the same amount of threads are above the top nut on all eyebolts. Ensure that cylinder attach holes are aligned when eyebolts are tightened.

6. All liftarms will be centered beneath cylinder attach brackets. Use 3/4" u-bolts for 4"x4" to attach liftarm pivots (8T4100) to frame. Slide pivot pin (8T3640) through liftarm and liftarm pivots. All liftarms use the same pivot pin. Insert 7/16" x 3-1/2" bolt in retaining bolt holes. Secure with locknut.
7. Install walking tandem assemblies to bottom of rear liftarms. The left hand side of the center frame uses a left hand assembly (8T4166) and the right hand side uses a right hand assembly (8T4168). Slide pivot pin (8T3620) through walking tandem assembly and liftarm. Insert 7/16" x 3-1/2" bolt in retaining bolt holes. Secure with locknut. Install 8T4190 (left) and 8T4192 (right) mud guards as shown. Secure with 3/8" u-bolts and flange nuts.

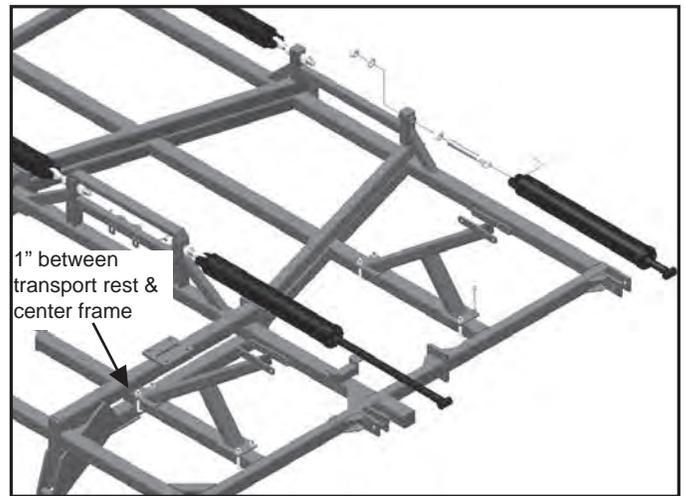


ASSEMBLY - STANDARD CENTER



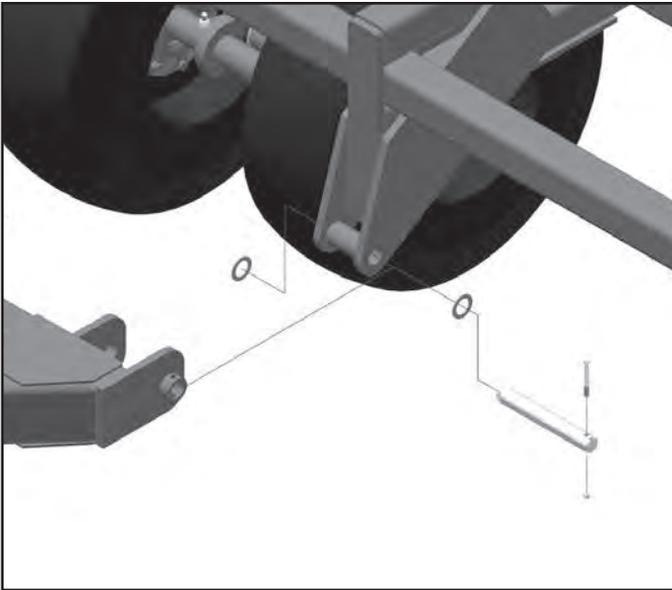
8. Install walking tandem assembly to bottom of front center lift arm. Check inside surface of walking tandem assembly (8T4132). A 3-3/4" diameter surface around the 1-1/2" dia. pivot hole must be smooth and burr-free. Remove any welding spatter or roughness prior to further assembly. Install snap rings (8K1920) past grooves of lower pivot tube. Install V-seals over lower pivot tube until solid side is against snap ring. Protect lip of V-seals during assembly. Install walking tandem assembly to the bottom of center liftarm. Mount so right axle is towards **front**. Insert pivot pin (8T3620) through walking tandem assembly and liftarm. Retain with 7/16" x 3-1/2" bolt and locknut. Push V-seals against walking tandem assembly and secure by placing snap ring into groove.

9. Hang cylinders in the appropriate location. Use pins and rollpins provided with cylinders. Use 5" x 10" (8T1050) on left hand side of center, 5-1/2" x 10" (8T1055) on right hand side of center, and 6" x 10" (8T1060) on center wheel assembly. The front center lift arm (8T4130) has two cylinder attach locations. If chisel plow will have a full set of mounted harrows, use rear cylinder attach hole. Cylinder attach location can be changed based on final adjustments. Connecting front center cylinder to rear hole will lower front end of chisel plow in transport position.
10. Install 8K1105S (8 bolt) axle and hub assembly into each walking tandem. Apply good quality anti-seize to axles before installation. Retain axle into receiver tube with 1/2" x 3-3/4" bolt and locknut.
11. Attach wheels onto hubs with 5/8" wheel nuts (torque required: 240 ft-lbs).
12. Attach wing transport locks to center frame with 3/4" u-bolts. See below for location of front transport locks. Position rear transport locks at same distance from center. Install Transport lock pins inside storage holes of transport locks.



13. Insert 1-1/2" x 10-3/8" eyebolts into wing lift cylinder attach base. Leave 1-1/2" nuts loose, they will need to be adjusted after wing is installed.
14. Attach wing lift cylinders to frame with pins and roll pins provided with cylinders. Four 5" x 36" cylinders (8K9650) are used.

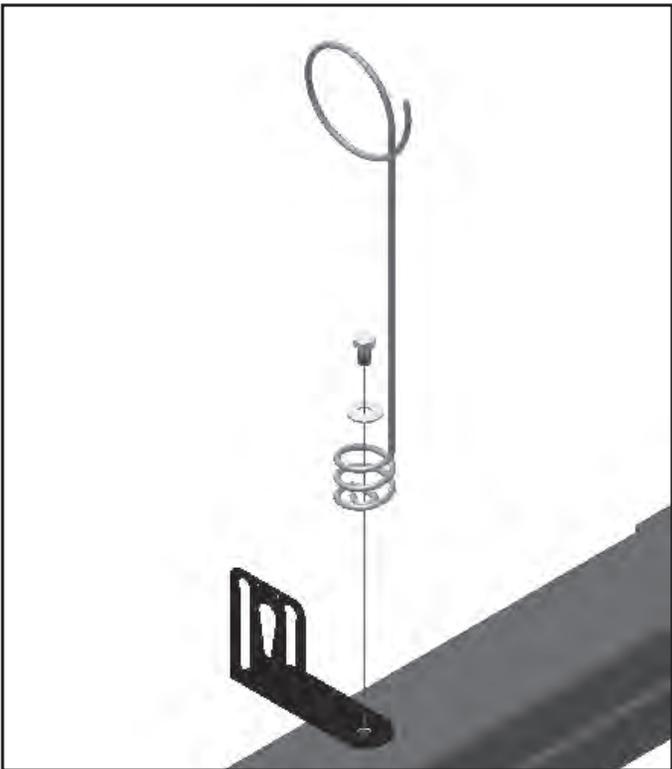
ASSEMBLY - STANDARD CENTER



15. Attach hitch to center with 1-1/2" x 10-5/8" pins.

NOTE: Center with 1-1/2" ID 10 GA flat washers.

16. Install 7/16" x 3-1/2" retaining bolts through hitch pivot pins. Secure with locknuts.



17. Attach hydraulic hose holder and tip holder with 3/4" x 1-1/4" bolt and flat washer.

18. Attach hitch jack to jack spool.

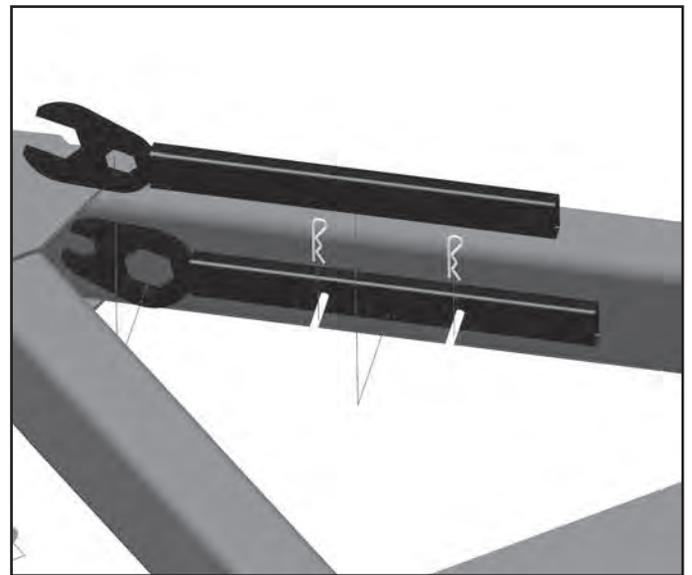
19. Remove blocks from under center frame and allow wheel assemblies to support machine. Block tires to prevent movement.

20. Add depth control cylinder locks and storage bases.

– Attach locks for rear cylinders by liftarm pivots located closest to center of machine.

– Locate lock for front center cylinder on front 4"x4" tube.

21. Install SMV sign mounting bracket and sign at center of rear rank.

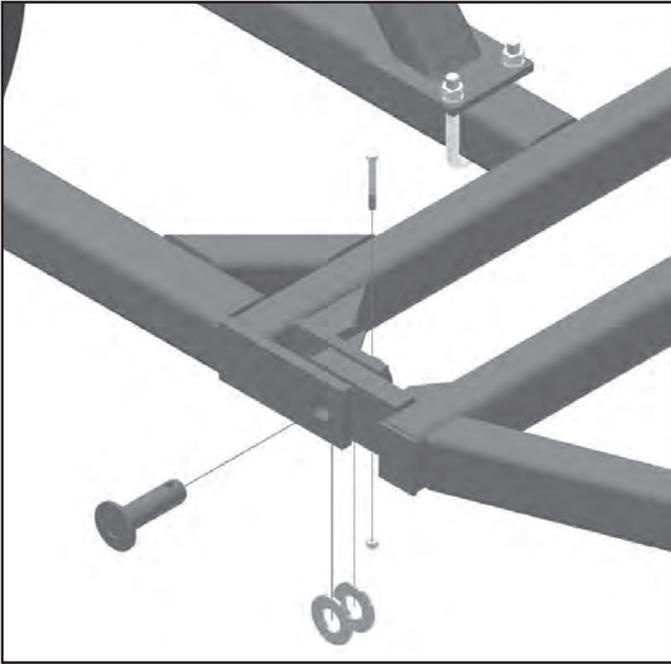


22. Place adjustment wrenches on clevis pins found on left hand of hitch. Retain with hair pin clips.

NOTE: It is recommended to set up both sides of machine at the same time.

ASSEMBLY - STANDARD CENTER

Part 1 Wing



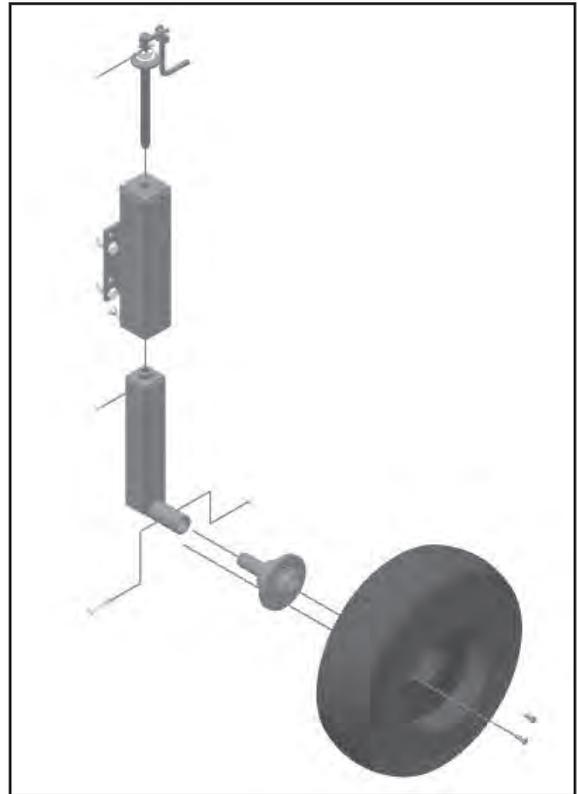
1. Attach wing to center section with pins, washers, bolts and locknuts.

– Washers are used to center wing in hinges and prevent shift.

2. Fasten cylinder attach brackets (8T4226) with 3/4" u-bolts. Bracket should be located 188" on 50'-54', 212" on 56'-60' from the center of the machine (See page 2-22 or 2-23).
3. Insert eyebolts (8K1755) into cylinder attach bracket. Tighten 1-1/2" nuts so the same amount of threads are above the top nut on all eyebolts. Ensure that cylinder attach holes are aligned when eyebolts are tightened.
4. Center liftarm under cylinder attach brackets. Use 3/4" u-bolts for 4"x4" tube to attach liftarm pivots (8T4100) to frame. Slide pivot pin (8T3640) through liftarm and liftarm pivots. Insert 7/16" x 3-1/2" bolt in retaining bolt holes. Secure with locknut.
5. Install walking tandem assembly to bottom of liftarm. The left hand wing will use a right hand assembly – 8T4168. The right hand wing will use a left hand assembly – 8T4166. Slide pivot pin (8T3620) through walking tandem assembly and liftarm. Insert 7/16" x 3-1/2" bolt in retaining bolt holes. Secure with locknut.

6. Hang cylinders in appropriate location. Use pins and roll pins provided with cylinders. Rod end of cylinder (positioned down) attaches to lift arm. Use 4.5" x 10" (8T1045) on left hand wing. Use 3.75" x 10" (8T1037) on right hand wing.
7. Install 8K1100 (6 bolt) axle and hub assembly into each walking tandem. Apply good quality anti-seize to axles before installation. Retain axle into receiver tube with 1/2" x 3-3/4" bolt and locknut.
8. Attach 11L x 15 wheels onto hubs with 9/16" wheel bolts (torque required: 170 ft-lbs).
9. Install gauge wheel support (8T4090) onto wing with 7/8" x 2-1/2" bolts.

NOTE: STEPS 10 THROUGH 14 MAY HAVE BEEN PRE-ASSEMBLED AT FACTORY



10. Apply anti-seize to jack bolt (8T6000) threads. Screw jack bolt into axle holder (8T4094) far enough to see hole on bottom of bolt through hole in axle holder. Insert 3/16" x 2" roll pin. Insert pin far enough so it will clear tube when rotated.
11. Place gauge wheel depth decal on axle holder. Locate decal 1" from bottom of 4"x4" tube. Make sure that decal faces the front of the machine. At-

ASSEMBLY - STANDARD CENTER

tach decal off to one side of axle holder to avoid seam on support tube.

- Slide axle holder and jack bolt into gauge wheel support. Slide 1-1/4" flat washer onto bolt and turn 1-1/4" slotted nut on. Do not tighten slotted nut.
- Add gauge wheel screw top onto jack bolt. Insert 1/2 x 2-1/4" bolt into screw top and bolt. Secure with locknut.
- Attach gauge wheel jack handle to screw top. Install 3/8 x 2" bolt in handle and screw top. Secure with locknut. Do not over tighten. Handle must pivot freely.
- Check free operation of gauge wheel assembly. Loosen or tighten slotted nut for optimum performance of gauge wheel. Install 3/16" x 2" roll pin after slotted nut is adjusted properly.
- Adjust clearance between 8T4090 and 8T4094 with 3/4" set bolts and jam nuts.
- Install 8K1100 (6 bolt) axle and hub assembly into each receiver tube. Apply good quality anti-seize to axles before installation. Retain axle into receiver tube with 1/2"x3-3/4" bolt and locknut.
- Attach 11L x 15 wheel to hub with 9/16" wheel bolts (torque required: 170 ft-lbs).

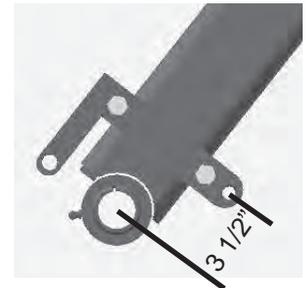
NOTE: It is recommended to set up both sides of the machine at the same time.

- Insert eyebolts (8K1755) into part 2 wing lift cylinder bases. Leave eyebolts loose, they will need to be adjusted after charging hydraulic system.
- Install four 4-1/2"x16" (8D9466) cylinders onto part 1 wings with pins provided.
- Attach part 2 wing to part 1 wing with 8T3606 pins, 7/16" x 3-1/2" retaining bolts and locknuts. Grease zerks should point towards the front of the machine.
- Fasten cylinder attach brackets (8T4224) with 3/4" u-bolts. Locate bracket 277" on 50'-54', 301" on 56'-60' from center of machine (See Page 2-22 or 2-23).
- Insert eyebolts (8K1755) into cylinder attach brackets. Tighten 1-1/2" nuts so the same amount of threads are above top nut on all eyebolts.

- Center liftarm under cylinder attach brackets. Use 3/4" u-bolts for to attach liftarm pivots (8T4100) to 4"x4" frame. The pivot closest to the center will be attached with 3/4" x 6-1/2" bolts and a trip assembly. Slide pivot pin (8T3640) through liftarm and liftarm pivots. Insert 7/16" x 3-1/2" bolt in retaining bolt holes. Secure with locknuts.

- Install wheel spring liftarm support brackets onto bottom of liftarms. Use spring support (8T4177) on left wing liftarm. Use 8T4178 on right side. Install 1/2"x7-1/2" bolts through support bracket and 8T4174 bolt plate. (Third hole towards rear).

– **Locate bracket so cross bolts are 3-1/2" above center of pivot pin.**



- Install walking tandem assembly to the bottom of the liftarm. The left hand wing will use a right hand assembly – 8T4168. The right hand wing will use a left hand assembly – 8T4166. Slide pivot pin (8T3620) through walking tandem assembly and liftarm. Insert 7/16" x 3-1/2" bolt in retaining bolt holes. Secure with locknut.
- Hang cylinders in appropriate location. Use pins and roll pins provided with cylinders. Rod end of cylinder (positioned down) attaches to liftarm. Use 4" x 10" (8T1040B) on left hand wing. Use 3-1/2" x 10" (8T1035) on right hand wing.
- Insert 8K1100 (6 bolt) axle and hub assembly into each walking tandem. Apply good quality anti-seize to axles before installation. Retain axle into receiver tube with 1/2" x 3-3/4" bolt and locknut. Install a right hand wheel spring support (8T4179) onto the front receiver tube on the right hand walking tandem. Install an 8T4178 on left hand walking tandem. Install an 8T4175 support on rear tubes of both walking tandems. Install 1/2" x 4-1/2" bolts to hold the spring support and axle onto the walking tandems. Secure with locknut.
- Install eyebolts and springs between spring supports on each wheel assembly. **The spring assist assembly is designed to keep walking tandem parallel to the bottom of the chisel plow frame**

ASSEMBLY - STANDARD CENTER

when machine is raised up. This will reduce interference when folding machine into transport. Adjust locknut on eyebolts so walking tandem stays in parallel position when wing is raised. Maximum extended length of spring is 11-3/8".

12. Attach 11L x 15 wheels onto hubs with 9/16" wheel bolts (torque required: 170 ft-lbs).

NOTE: STEPS 14 THROUGH 18 MAY HAVE BEEN PRE-ASSEMBLED AT FACTORY.

13. Install gauge wheel support (8T4090) onto wing with 7/8" x 2-1/2" bolts.

14. Apply anti-seize to jack bolt (8T6000) threads. Screw jack bolt into axle holder (8T4094) far enough to see hole on bottom of bolt through hole in axle holder. Insert 3/16" x 2" roll pin. Insert pin far enough so it will clear tube when rotated.

15. Place gauge wheel depth decal on axle holder. Locate decal 1" from bottom of 4"x4" tube. Make sure that decal faces the front of the machine. Attach decal off to one side of axle holder to avoid seam on support tube.

16. Slide axle holder and jack bolt into gauge wheel support. Slide 1-1/4" flat washer onto bolt and turn 1-1/4" slotted nut on. Do not tighten slotted nut.

17. Add gauge wheel screw top onto jack bolt. Insert 1/2" x 2-1/4" bolt into screw top and bolts. Secure with locknut.

18. Attach gauge wheel jack handle to screw top. Install 3/8" x 2" bolt in handle and screw top. Secure with locknut. Do not over tighten. Handle must pivot freely.

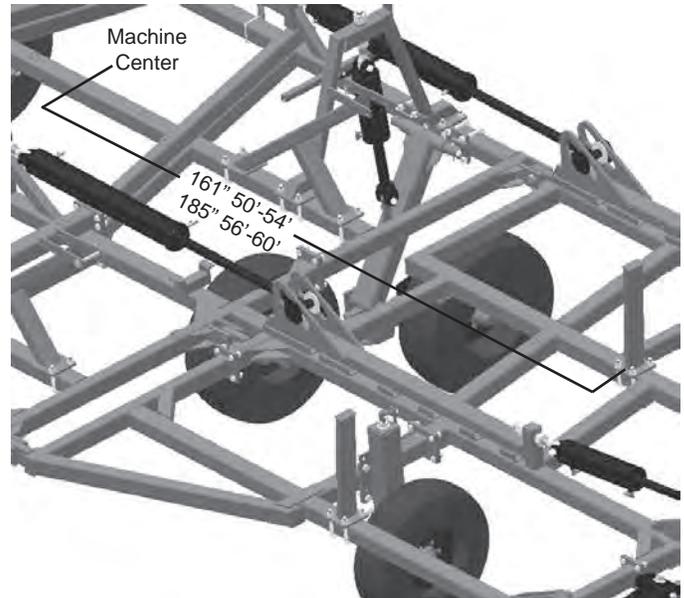
19. Check free operation of gauge wheel assembly. Loosen or tighten slotted nut for optimum performance of gauge wheel. Install 3/16" x 2" roll pin after slotted nut is adjusted properly.

20. Insert 8K1100 (6 bolt) axle and hub assembly into each receiver tube. Apply good quality anti-seize to axles before installation. Retain axle into receiver tube with 1/2" x 3-3/4" bolt and locknut.

21. Attach 11L x 15 wheel onto hub with 9/16" wheel bolts (torque required: 170 ft-lbs).

22. Fasten part 2 wing rests (8T4260) with 3/4" u-

bolts. Attach supports to part 1 wing on the first and third rank. Locate supports 161" on 50'-54', 185" on 56'-60' from center of the machine. Rotate supports so wing will rest flush when folded.

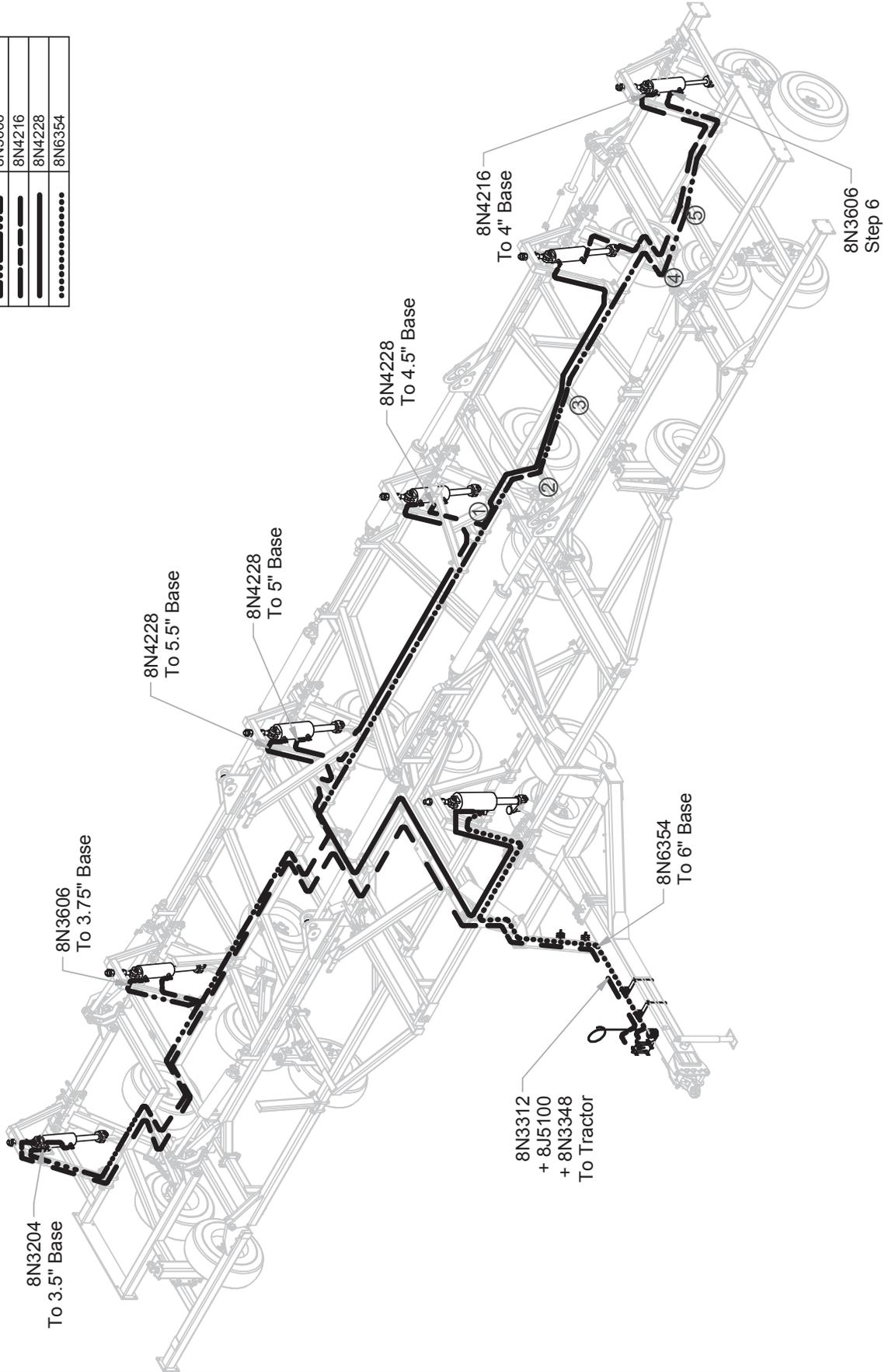


23. Install optional extensions as shown in shank layout drawings.

ASSEMBLY - STANDARD CENTER

50'-54' MAIN LIFT HYDRAULICS

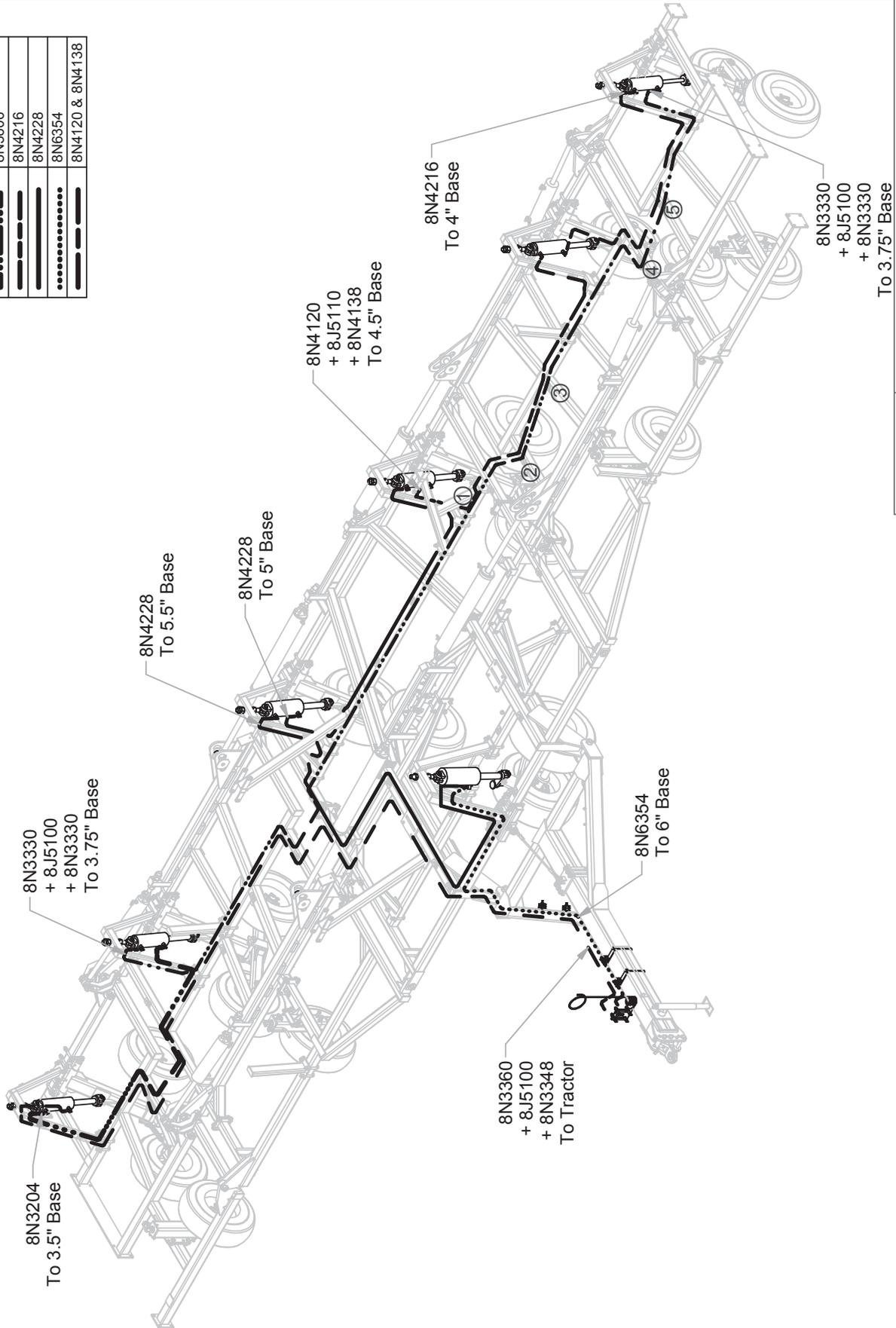
| | |
|----------|--------|
| —●●●— | 8N3204 |
| —●— | 8N3312 |
| —●●●●— | 8N3606 |
| —●●●●— | 8N4216 |
| —●●●●— | 8N4228 |
| —●●●●●●— | 8N6354 |



ASSEMBLY - STANDARD CENTER

56'-60" MAIN LIFT HYDRAULICS

| | |
|-----------|-----------------|
| —●—●—●—●— | 8N3204 |
| —●—●—●—●— | 8N3312 |
| —●—●—●—●— | 8N3606 |
| —●—●—●—●— | 8N4216 |
| —●—●—●—●— | 8N4228 |
| —●—●—●—●— | 8N6354 |
| —●—●—●—●— | 8N4120 & 8N4138 |



7/8/2015

MAIN_LIFT_HYD_56-60'

ASSEMBLY - STANDARD CENTER

Main Lift Hydraulics

NOTE: The Summers Superchisel uses rephasing hydraulic depth control cylinders. Oil from the rod end of largest cylinder travels to the base end of second cylinder and so forth. It is very important that all hoses are routed correctly or machine will not operate properly.

Helpful Hint: Leave rubber backed clamps and plastic clamps loose at locations where depth control hoses will use the same bolts as wing lift hoses. (Wherever there is more than one clamp, wait to tighten until wing lift hoses are installed.)

1. It is best to start by routing the 3/4" hose for the 6" x 10" cylinder. Route hose along hitch frame. Use rubber-backed hose clamps provided. Do not tighten until routing is complete. Rubber backed clamps will be placed on top of plastic hose clamp bolts. Install correct quantity of plastic clamps before installing rubber backed clamps. (2 plastic clamps per bolt are needed on the hitch and front center section. 3 plastic clamps per bolt are needed on rear center section. 1 plastic clamp is needed on right hand rear cylinder attach.) **Plastic clamps are made to have the round surface point towards the surface that you are mounting to. Leave plenty of slack by hitch pivot. The hitch pivot point will move up and down from transport position to field position. Hoses must be loose enough to allow full range of motion.** Continue to route 3/4" hose to front center cylinder. Hose Clamp Attachments welded to the frame show routing. Attach this supply hose to the port that is connected to the poppet valve.
2. Route 1/2" hose from the 6" x 10" to the 5-1/2" x 10" cylinder along center section. Route hose under transport lock and up the right hand rear center cylinder attach bracket to the 5-1/2" x 10" cylinder. This hose must be attached to the base end (top) of the 5-1/2" x 10" cylinder.
3. Route 1/2" hose from the 5-1/2" x 10" to the 5" x 10" cylinder. This hose must go from the rod end (bottom) of the 5-1/2" x 10" to the base end (top) of the 5" x 10" cylinder. Route this hose under transport locks.
4. Route 1/2" hose from the 5" x 10" to the 4-1/2"

x 10" cylinder. 2 plastic hose clamps should be installed by the left hand rear transport lock and at points 2 and 3 on drawing. **Leave slack between points 1 and 2 to keep hose from stretching during folding and field operation. Pull hose tight between points 2 and 3. This will prevent hose from laying in the way of the transport lock when wing is folded.** Hose must go from the rod end (bottom) of the 5" x 10" to the base end (top) of the 4-1/2" x 10".

5. Route 1/2" hose from the 4-1/2" x 10" to the 4" x 10". **Leave slack between points 4 and 5 to keep hose from stretching during folding and field operation.** The hose must go from the rod end (bottom) of the 4-1/2" x 10" to the base end (top) of the 4" x 10".
6. Route 3/8" hose from the 4" x 10" to the 3-3/4" x 10". This hose must follow the reverse path through points 5, 4, 3, 2 and 1 and then cross the rear center section and go out to the 3-3/4" x 10" cylinder through points 1, 2 and 3 on the right hand side of the machine. This hose must go from the rod end of the 4" x 10" to the base end of the 3-3/4" x 10".
7. Route 3/8" hose from the 3-3/4" x 10" cylinder to the 3-1/2" x 10" cylinder. Follow the same path through points 4 and 5 as described in step 5. This hose must go from the rod end of the 3-3/4" x 10" to the base end of the 3-1/2" x 10".
8. Route 3/8" hose from the 3-1/2" x 10" cylinder to the front of the hitch. Follow reverse path through points 5, 4, 3, 2 and 1 to the center section. Then follow bolt locations to the front of the hitch. Leave slack by hitch pivot. The hose must be loose enough to allow a full range of motion of the hitch without stretching. Attach green nylon ties near the Hyd. Tips and Master Cylinder to identify depth control hoses. Tighten hose clamps enough to secure hose but not enough to crush it.
9. Charge the depth control cylinder system.

NOTE: Grease all pivot points before raising machine.

10. Connect Chisel Plow to tractor drawbar with a locked draw pin. Connect depth control cylinder hoses to tractor. Raise chisel plow slowly. One

ASSEMBLY - STANDARD CENTER

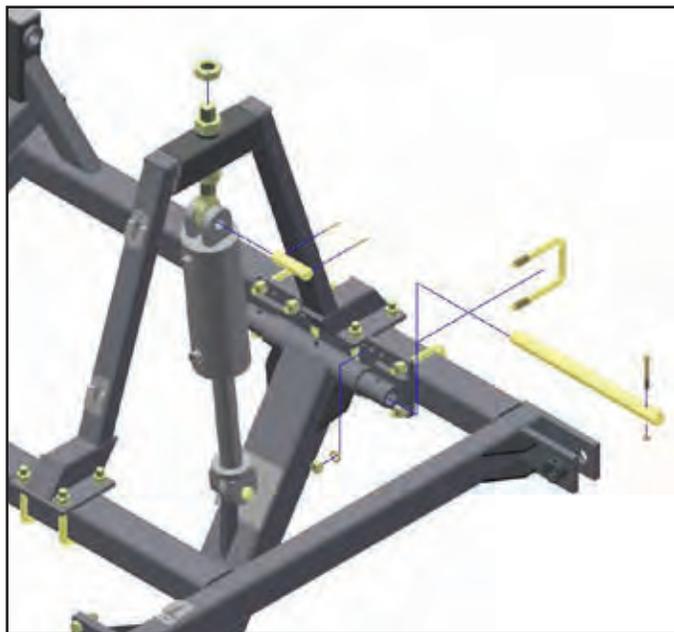
cylinder will extend at a time. Do not allow anyone to stand near the Chisel Plow. When all cylinders are fully extended, fully cycle circuit four times to make sure that all air has been removed from system.

11. Lower chisel plow before the next step.

ASSEMBLY - CASTER WHEEL CENTER

Center Section

1. Place front and rear center section on floor with bolt plates facing each other.
2. Attach sections with 24 – 3/4"x2-1/4" bolts, lock washers and nuts.
3. Block center frames off the floor.
4. Position Rear cylinder attach brackets (8T4226) 62" from the center of the frame. Secure cylinder attach brackets with 3/4" u-bolts.
5. Insert eyebolts (8K1755) into each cylinder attach bracket. Tighten 1-1/2" nuts so the same amount of threads are above the top nut on all eyebolts. Ensure that cylinder attach holes are aligned when eyebolts are tightened.

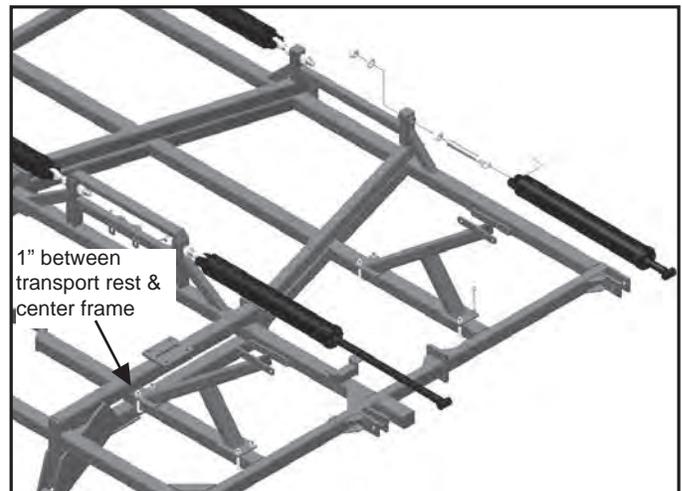


6. All liftarms will be centered beneath cylinder attach brackets. Use 3/4" u-bolts for 4"x4" to attach liftarm pivots (8T4100) to frame. Slide pivot pin (8T3640) through liftarm and liftarm pivots. All liftarms use the same pivot pin. Insert 7/16" x 3-1/2" bolt in retaining bolt holes. Secure with locknut.
7. Install walking tandem assemblies to bottom of rear liftarms. The left hand side of the center frame uses a left hand assembly (8T4166) and the right hand side uses a right hand assembly (8T4168). Slide pivot pin (8T3620) through walking tandem assembly and liftarm. Insert 7/16" x 3-1/2" bolt in retaining bolt holes. Secure with locknut. Install

8T4190 (left) and 8T4192 (right) mud guards as shown. Secure with 3/8" u-bolts and flange nuts.



8. Hang cylinders in the appropriate location. Use pins and rollpins provided with cylinders.
9. Install 8K1105S (8 bolt) axle and hub assembly into each walking tandem. Apply good quality anti-seize to axles before installation. Retain axle into receiver tube with 1/2" x 3-3/4" bolt and locknut.
10. Attach wheels onto hubs with 5/8" wheel nuts (torque required: 240 ft-lbs).
11. Attach wing transport locks to center frame with 3/4" u-bolts. *See below for location of front transport locks. Position rear transport locks at same distance from center.* Install Transport lock pins inside storage holes of transport locks.



12. Insert 1-1/2" x 10-3/8" eyebolts into wing lift cylinder attach base. Leave 1-1/2" nuts loose, they

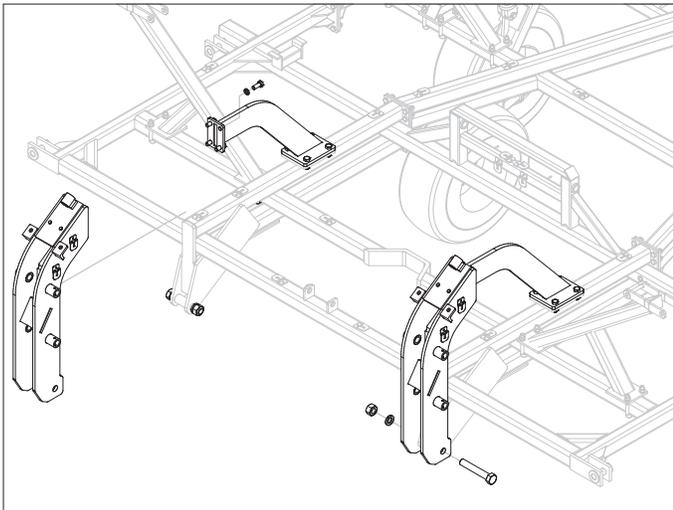
ASSEMBLY - CASTER WHEEL CENTER

will need to be adjusted after wing is installed.

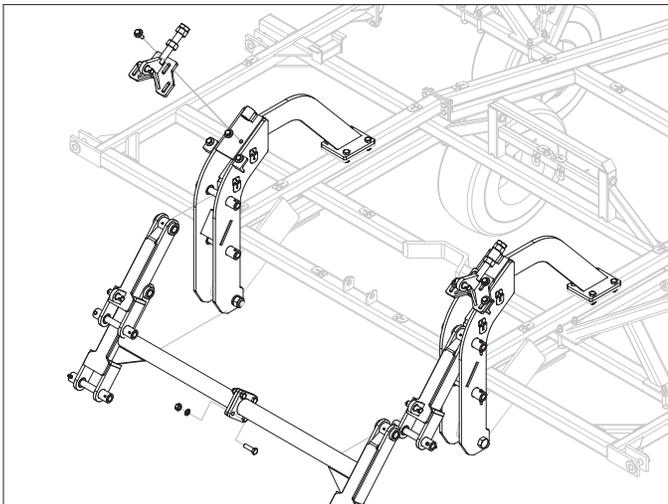
13. Attach wing lift cylinders to frame with pins and roll pins provided with cylinders. Four 5" x 36" cylinders (8K9650) are used.

NOTE: Leave all fasteners loose until instructed to tighten.

14. Install two 8T3955 onto bolt plate on top of front center frame using 7/8" x 2-1/2" bolt, lock washer and nut. Attach two 8T3950 to front center frame using 1.5"x9" bolt, lock washer and nut. Bolt 8T3955 and 8T3950 together using 7/8" x 2" bolt and lockwasher. Leave hardware loose.

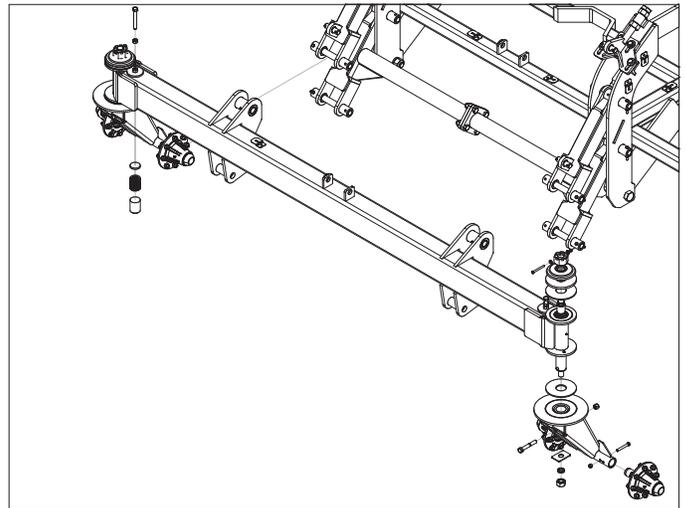


15. Install two 8CC6026 and two 8CC6022 onto 8T3950 with pins. Secure pins with roll pins. Connect the two 8CC6026 together using 7/8" x 3" bolts, lockwashers and nuts.



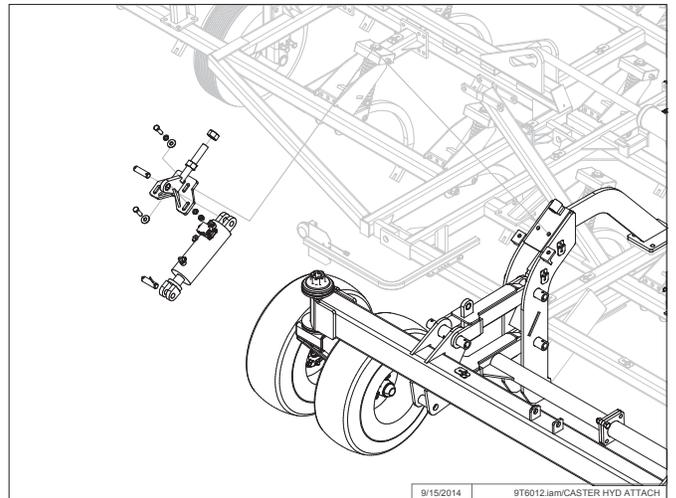
16. Install 8CC6000B (pivot tube) onto 8CC6022

using 8T3620 pin. Secure with roll pins. Tighten all hardware. Install 8L0246 bushings into caster ends of 8CC6000B.



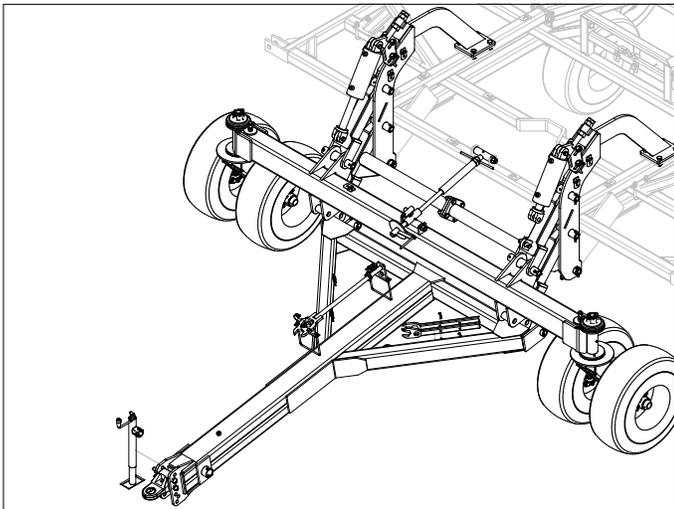
17. Install caster assemblies as shown. Tighten locking nut to 800 ft. lbs. (check frequently). Set hubs to wide position to prevent mud buildup.

18. Install 8T1050 (hydraulic cylinders) and attachments (shown below).



19. Install hitch using pin and roll pins. Use shims on hitch if necessary.

ASSEMBLY - CASTER WHEEL CENTER



on poppet. Attach 8N6354 to 8J6020 (on end of poppet) and route to front of machine.



20. Install 8J6020 into base and rod ends of 8T1045, 8T1040B, 8T1037 cylinders. Hang cylinders according to layout.

21. Attach hydraulic connections to both 8J1050 hydraulic cylinders - Install 8J7108 to base end. Install 8J5312 (tee) into port 1 of 8J7108. Install 8J5690 into port 3 and 8J5520 into port 2. Install 8J6020 into rod end of 8T1050s. Attach cylinders to 8T3950s using pin and roll pins with hydraulic ports facing front of machine.

22. Install 8N4216 from T's of 8J7108s to base ends of 8T1045s. Install 8N4010s from rod ends of 8T1050s to other end of tees.

23. Assembly Single Point Depth Control. Note that 8T1010 (poppet) must be positioned with short end facing rear of machine.

26. Install 8J5310 and 8J5710 along center of machine. Join 8N4198 and 8N4160 using one 8J5510 and attach to 8J5710. Run other end to front of machine. Join two 8N4216s using one 8J5110 to run off each side of 8J5310. Attach other end of this to rod ends of 8T1037.



24. Install 8J5312 (T) onto side of poppet. Install 8J5710 from each end of poppet. Install 8J6020 on end of poppet.

25. Attach 8N4060s from port 2 of 8J7108s to 8J5710s

27. Install 8N4228 from rod end of 8T1045 and base end of 8T1040B on each side of machine. Install 8N4216 from rod end of 8T1040B to base end of 8T1037 on each side of machine.

28. Rubber backed clamps will be placed on top of plastic hose clamp bolts. Install correct quantity of plastic clamps before installing rubber backed clamps. (2 plastic clamps per bolt are needed on the hitch and front center section. 3 plastic clamps per bolt are needed on rear center section. 1 plastic clamp is needed on right hand rear cylinder attach.) Plastic clamps are made to have the round surface point towards the surface that you are

ASSEMBLY - CASTER WHEEL CENTER

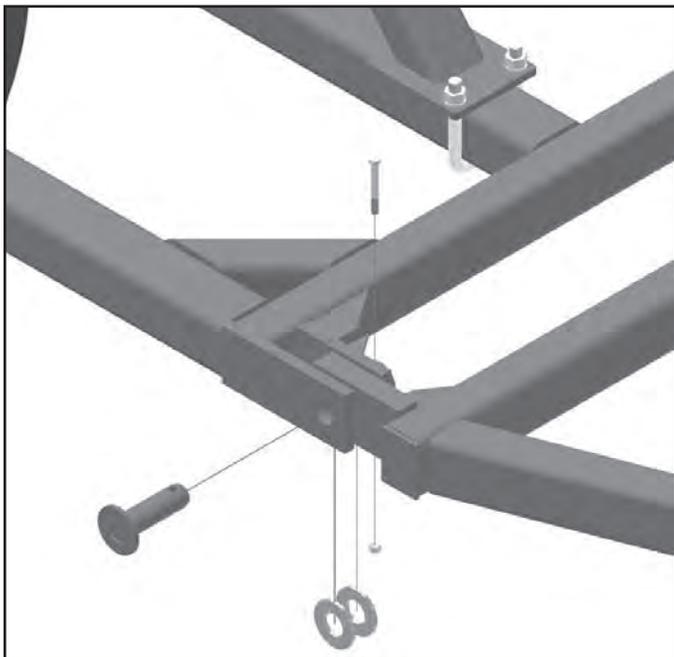
mounting to. Leave plenty of slack by hitch pivot. The hitch pivot point will move up and down from transport position to field position. Hoses must be loose enough to allow full range of motion. See pictures to right and below for routing.

29. Attach green nylon ties near the Hyd. Tips and Master Cylinder to identify depth control hoses. Tighten hose clamps enough to secure hose but not enough to crush it.
30. Grease all pivot points before raising machine. Connect Chisel Plow to tractor drawbar with a locked draw pin. Connect depth control cylinder hoses to tractor. Raise chisel plow slowly. One cylinder will extend at a time. Do not allow anyone to stand near the Chisel Plow. When all cylinders are fully extended, fully cycle circuit four times to make sure that all air has been removed from system.



ASSEMBLY - CASTER WHEEL CENTER

Part 1 Wing



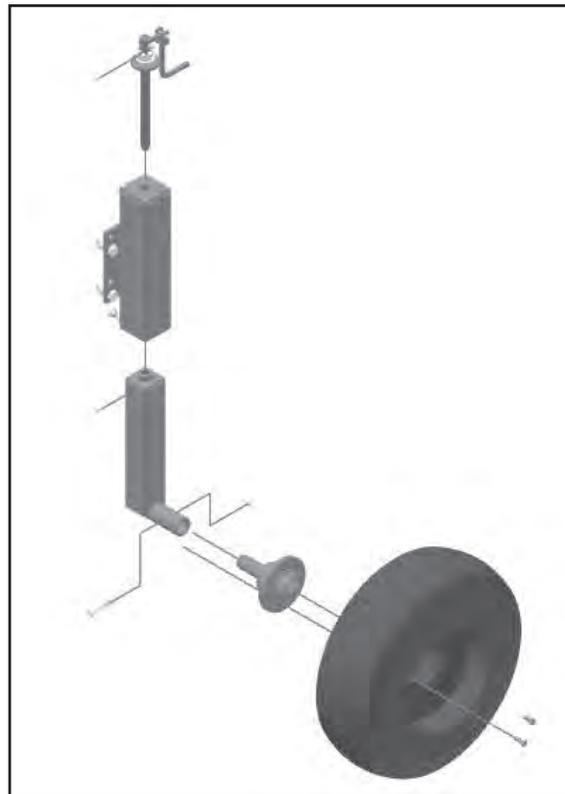
1. Attach wing to center section with pins, washers, bolts and locknuts.

– Washers are used to center wing in hinges and prevent shift.

2. Fasten cylinder attach brackets (8T4226) with 3/4" u-bolts. Bracket should be located 188" on 50'-54', 212" on 56'-60' from the center of the machine (See page 2-22 or 2-23).
3. Insert eyebolts (8K1755) into cylinder attach bracket. Tighten 1-1/2" nuts so the same amount of threads are above the top nut on all eyebolts. Ensure that cylinder attach holes are aligned when eyebolts are tightened.
4. Center liftarm under cylinder attach brackets. Use 3/4" u-bolts for 4"x4" tube to attach liftarm pivots (8T4100) to frame. Slide pivot pin (8T3640) through liftarm and liftarm pivots. Insert 7/16" x 3-1/2" bolt in retaining bolt holes. Secure with locknut.
5. Install walking tandem assembly to bottom of liftarm. The left hand wing will use a right hand assembly – 8T4168. The right hand wing will use a left hand assembly – 8T4166. Slide pivot pin (8T3620) through walking tandem assembly and liftarm. Insert 7/16" x 3-1/2" bolt in retaining bolt holes. Secure with locknut.

6. Hang cylinders in appropriate location. Use pins and roll pins provided with cylinders. Rod end of cylinder (positioned down) attaches to lift arm. Use 4.5" x 10" (8T1045) on left hand wing. Use 3.75" x 10" (8T1037) on right hand wing.
7. Install 8K1100 (6 bolt) axle and hub assembly into each walking tandem. Apply good quality anti-seize to axles before installation. Retain axle into receiver tube with 1/2" x 3-3/4" bolt and locknut.
8. Attach 11L x 15 wheels onto hubs with 9/16" wheel bolts (torque required: 170 ft-lbs).
9. Install gauge wheel support (8T4090) onto wing with 7/8" x 2-1/2" bolts.

NOTE: STEPS 10 THROUGH 14 MAY HAVE BEEN PRE-ASSEMBLED AT FACTORY



10. Apply anti-seize to jack bolt (8T6000) threads. Screw jack bolt into axle holder (8T4094) far enough to see hole on bottom of bolt through hole in axle holder. Insert 3/16" x 2" roll pin. Insert pin far enough so it will clear tube when rotated.
11. Place gauge wheel depth decal on axle holder. Locate decal 1" from bottom of 4"x4" tube. Make sure that decal faces the front of the machine. At-

ASSEMBLY - CASTER WHEEL CENTER

tach decal off to one side of axle holder to avoid seam on support tube.

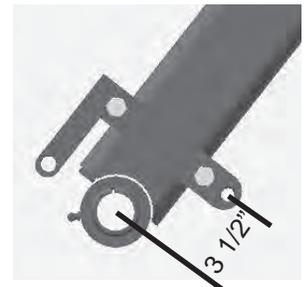
- Slide axle holder and jack bolt into gauge wheel support. Slide 1-1/4" flat washer onto bolt and turn 1-1/4" slotted nut on. Do not tighten slotted nut.
- Add gauge wheel screw top onto jack bolt. Insert 1/2 x 2-1/4" bolt into screw top and bolt. Secure with locknut.
- Attach gauge wheel jack handle to screw top. Install 3/8 x 2" bolt in handle and screw top. Secure with locknut. Do not over tighten. Handle must pivot freely.
- Check free operation of gauge wheel assembly. Loosen or tighten slotted nut for optimum performance of gauge wheel. Install 3/16" x 2" roll pin after slotted nut is adjusted properly.
- Adjust clearance between 8T4090 and 8T4094 with 3/4" set bolts and jam nuts.
- Install 8K1100 (6 bolt) axle and hub assembly into each receiver tube. Apply good quality anti-seize to axles before installation. Retain axle into receiver tube with 1/2"x3-3/4" bolt and locknut.
- Attach 11L x 15 wheel to hub with 9/16" wheel bolts (torque required: 170 ft-lbs).

NOTE: It is recommended to set up both sides of the machine at the same time.

- Insert eyebolts (8K1755) into part 2 wing lift cylinder bases. Leave eyebolts loose, they will need to be adjusted after charging hydraulic system.
- Install four 4-1/2"x16" (8D9466) cylinders onto part 1 wings with pins provided.
- Attach part 2 wing to part 1 wing with 8T3606 pins, 7/16" x 3-1/2" retaining bolts and locknuts. Grease zerks should point towards the front of the machine.
- Fasten cylinder attach brackets (8T4224) with 3/4" u-bolts. Locate bracket 277" on 50'-54', 301" on 56'-60' from center of machine (See Page 2-22 or 2-23).
- Insert eyebolts (8K1755) into cylinder attach brackets. Tighten 1-1/2" nuts so the same amount of threads are above top nut on all eyebolts.

- Center liftarm under cylinder attach brackets. Use 3/4" u-bolts for to attach liftarm pivots (8T4100) to 4"x4" frame. The pivot closest to the center will be attached with 3/4" x 6-1/2" bolts and a trip assembly. Slide pivot pin (8T3640) through liftarm and liftarm pivots. Insert 7/16" x 3-1/2" bolt in retaining bolt holes. Secure with locknuts.
- Install wheel spring liftarm support brackets onto bottom of liftarms. Use spring support (8T4177) on left wing liftarm. Use 8T4178 on right side. Install 1/2"x7-1/2" bolts through support bracket and 8T4174 bolt plate. (Third hole towards rear).

– **Locate bracket so cross bolts are 3-1/2" above center of pivot pin.**



- Install walking tandem assembly to the bottom of the liftarm. The left hand wing will use a right hand assembly – 8T4168. The right hand wing will use a left hand assembly – 8T4166. Slide pivot pin (8T3620) through walking tandem assembly and liftarm. Insert 7/16" x 3-1/2" bolt in retaining bolt holes. Secure with locknut.
- Hang cylinders in appropriate location. Use pins and roll pins provided with cylinders. Rod end of cylinder (positioned down) attaches to liftarm. Use 4" x 10" (8T1040B) on left hand wing. Use 3-1/2" x 10" (8T1035) on right hand wing.
- Insert 8K1100 (6 bolt) axle and hub assembly into each walking tandem. Apply good quality anti-seize to axles before installation. Retain axle into receiver tube with 1/2" x 3-3/4" bolt and locknut. Install a right hand wheel spring support (8T4179) onto the front receiver tube on the right hand walking tandem. Install an 8T4178 on left hand walking tandem. Install an 8T4175 support on rear tubes of both walking tandems. Install 1/2" x 4-1/2" bolts to hold the spring support and axle onto the walking tandems. Secure with locknut.
- Install eyebolts and springs between spring supports on each wheel assembly. **The spring assist assembly is designed to keep walking tandem parallel to the bottom of the chisel plow frame**

ASSEMBLY - CASTER WHEEL CENTER

when machine is raised up. This will reduce interference when folding machine into transport. Adjust locknut on eyebolts so walking tandem stays in parallel position when wing is raised. Maximum extended length of spring is 11-3/8".

12. Attach 11L x 15 wheels onto hubs with 9/16" wheel bolts (torque required: 170 ft-lbs).

NOTE: STEPS 14 THROUGH 18 MAY HAVE BEEN PRE-ASSEMBLED AT FACTORY.

13. Install gauge wheel support (8T4090) onto wing with 7/8" x 2-1/2" bolts.

14. Apply anti-seize to jack bolt (8T6000) threads. Screw jack bolt into axle holder (8T4094) far enough to see hole on bottom of bolt through hole in axle holder. Insert 3/16" x 2" roll pin. Insert pin far enough so it will clear tube when rotated.

15. Place gauge wheel depth decal on axle holder. Locate decal 1" from bottom of 4"x4" tube. Make sure that decal faces the front of the machine. Attach decal off to one side of axle holder to avoid seam on support tube.

16. Slide axle holder and jack bolt into gauge wheel support. Slide 1-1/4" flat washer onto bolt and turn 1-1/4" slotted nut on. Do not tighten slotted nut.

17. Add gauge wheel screw top onto jack bolt. Insert 1/2" x 2-1/4" bolt into screw top and bolts. Secure with locknut.

18. Attach gauge wheel jack handle to screw top. Install 3/8" x 2" bolt in handle and screw top. Secure with locknut. Do not over tighten. Handle must pivot freely.

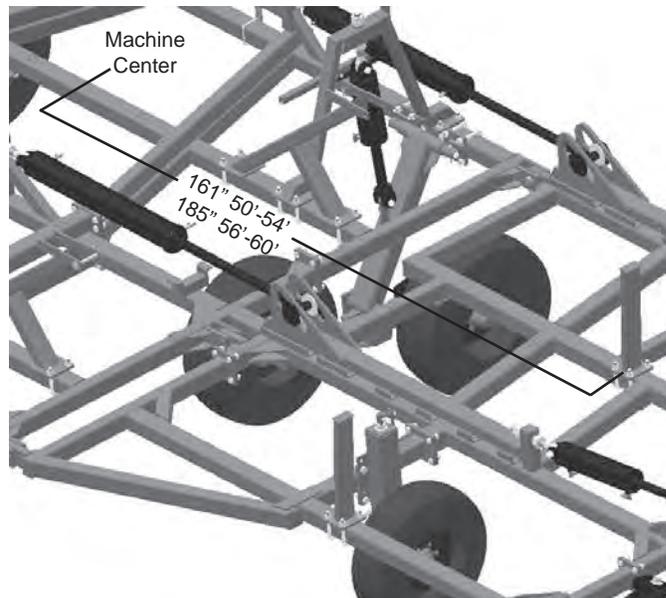
19. Check free operation of gauge wheel assembly. Loosen or tighten slotted nut for optimum performance of gauge wheel. Install 3/16" x 2" roll pin after slotted nut is adjusted properly.

20. Insert 8K1100 (6 bolt) axle and hub assembly into each receiver tube. Apply good quality anti-seize to axles before installation. Retain axle into receiver tube with 1/2" x 3-3/4" bolt and locknut.

21. Attach 11L x 15 wheel onto hub with 9/16" wheel bolts (torque required: 170 ft-lbs).

22. Fasten part 2 wing rests (8T4260) with 3/4" u-

bolts. Attach supports to part 1 wing on the first and third rank. Locate supports 161" on 50'-54', 185" on 56'-60' from center of the machine. Rotate supports so wing will rest flush when folded.



23. Install optional extensions as shown in shank layout drawings.

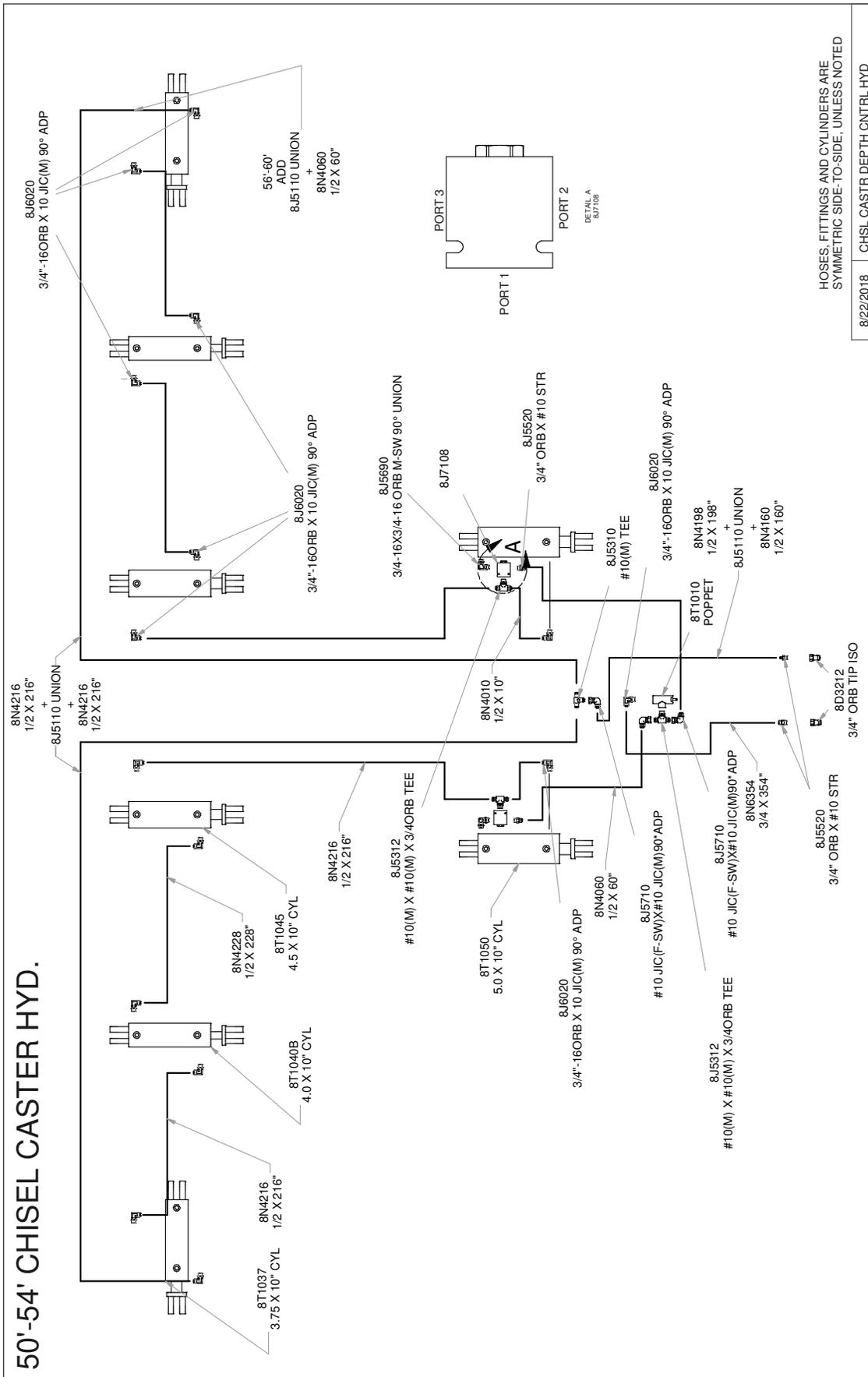
ASSEMBLY - CASTER WHEEL CENTER

Main Lift Hydraulics

NOTE: The Summers Superchisel uses rephasing hydraulic depth control cylinders. Oil from the rod end of largest cylinder travels to the base end of second cylinder and so forth. It is very important that all hoses are routed correctly or machine will not operate properly.

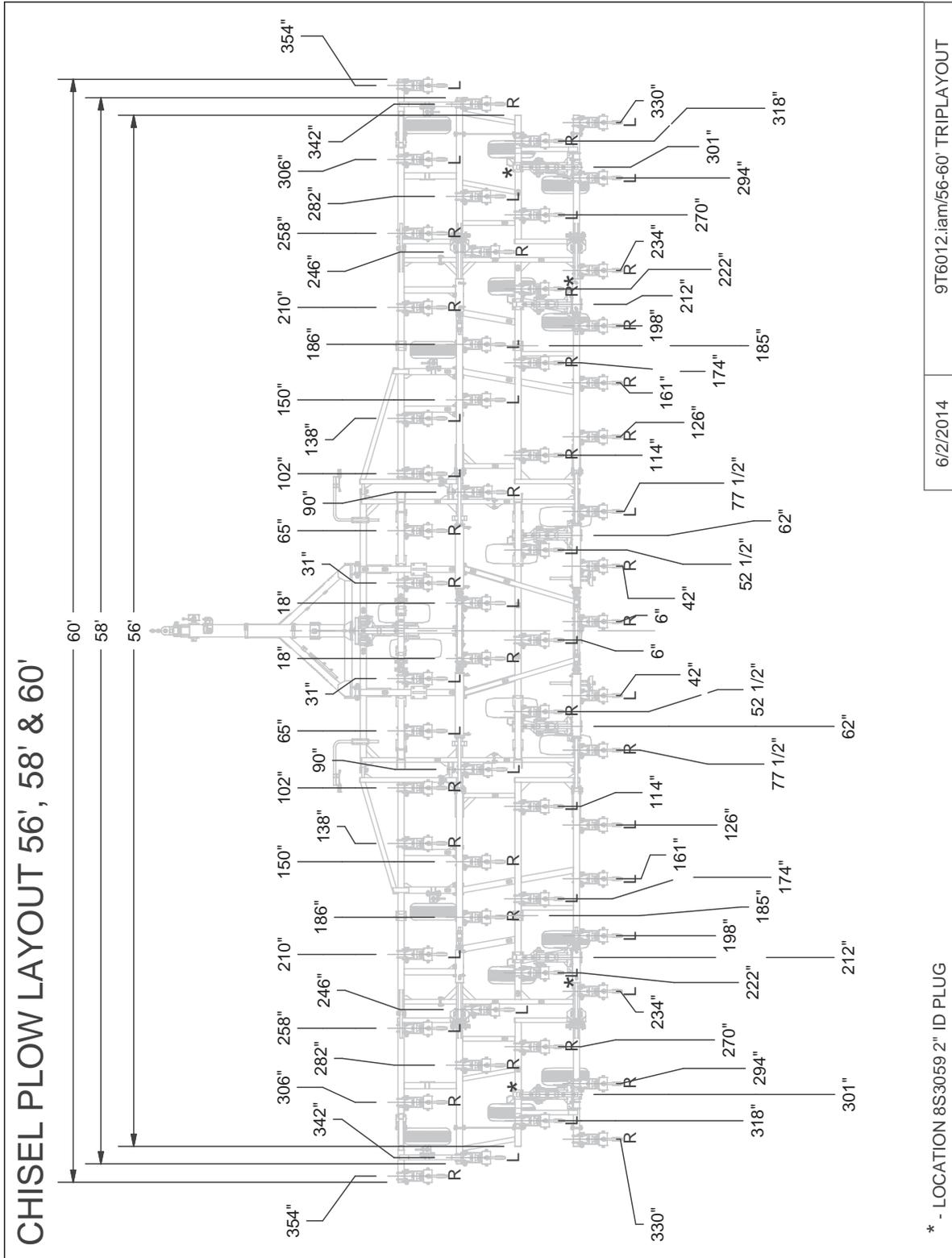
Helpful Hint: Leave rubber backed clamps and plastic clamps loose at locations where depth control hoses will use the same bolts as wing lift hoses. (Wherever there is more than one clamp, wait to tighten until wing lift hoses are installed.)

ASSEMBLY - CASTER WHEEL CENTER



ASSEMBLY - ALL MACHINES

2. Trip assemblies located at 270" on 50'-54', 294" on 56'-60' from center are attached with 3/4" x 6-1/2" (8X0121) bolts (see drawing on next page). These bolts also hold the liftarm pivot bracket at that location.
3. Install shanks into trip assemblies. Slide shank into shank holder. Install 3/4" x 4" bolts and tighten securely. Shanks will fit snugly into shank holder. If tapping bottom of shank does not work, it may be necessary to remove burrs or paint from shank or shank holder.



ASSEMBLY - ALL MACHINES

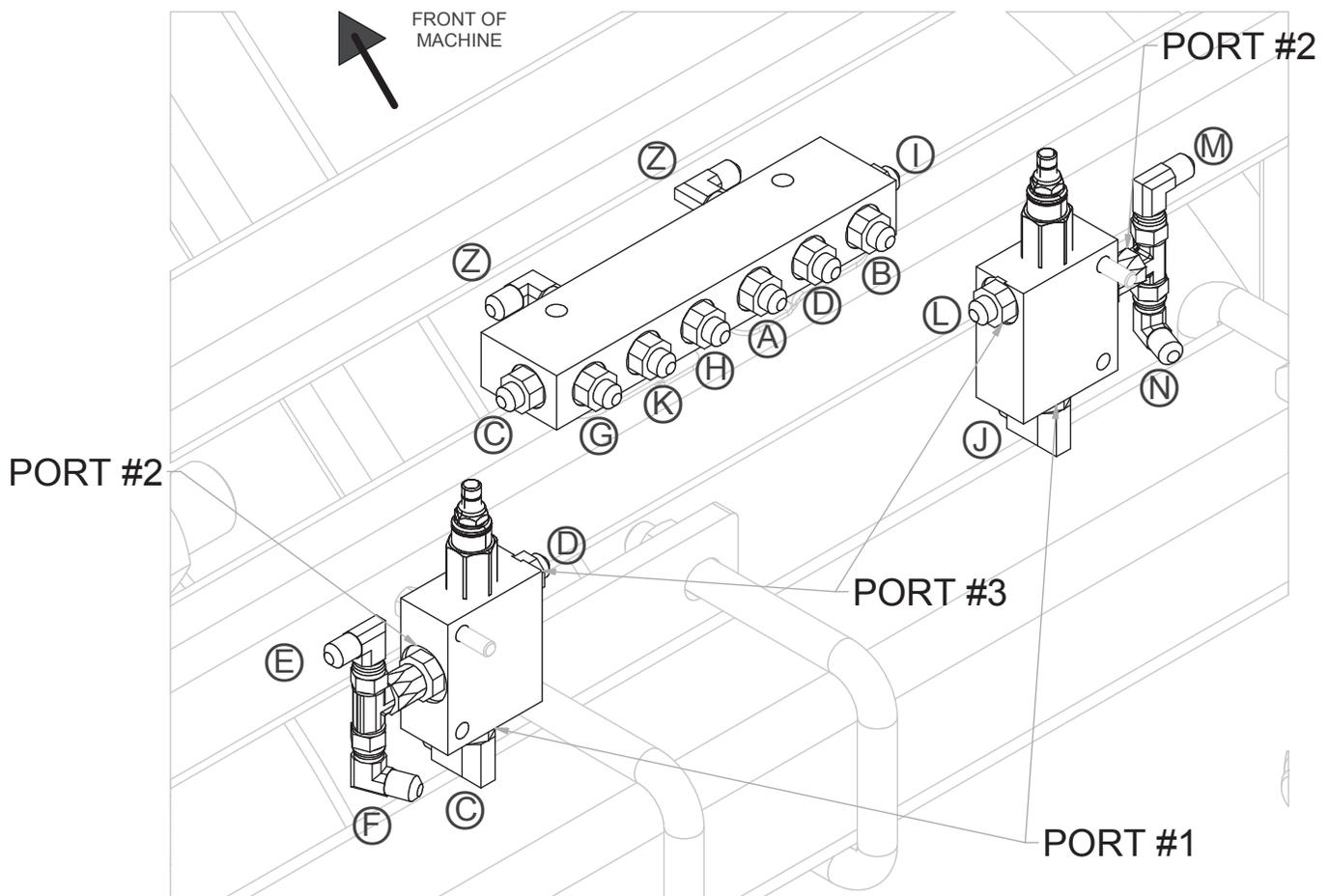
WING LIFT HYDRAULICS - ALL MACHINES

Note: The Summers Superchisel uses in-line restrictors to control hydraulic flow of the part 2 wing lift cylinders and extension (lowering) of the part 1 wing lift cylinders. It is important that restrictors are installed in the wing lift circuit. This chisel plow uses sequencing valves to ensure the wings fold properly. After installation, it may be necessary to change the pressure level of these valves for the wings to fold properly. See page 4-3, 6-27 AND 6-28 for Wing Lift layout.

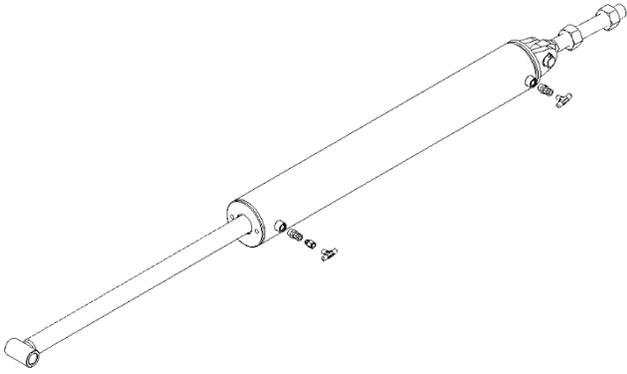
1. Install fittings into manifold block (8W1360) as shown in drawing. Install eight 8J5500 - 9/16" ORB x 6 JIC(M) and two 8J6000 - 9/16" ORB x 6 JIC 90°(M) fittings into manifold block (8W1360). Install fittings as shown. Attach manifold block onto the front center of chisel plow. There are two bolts on the top of the cross member for the cylinder support that hold the block. Secure with

lock nuts.

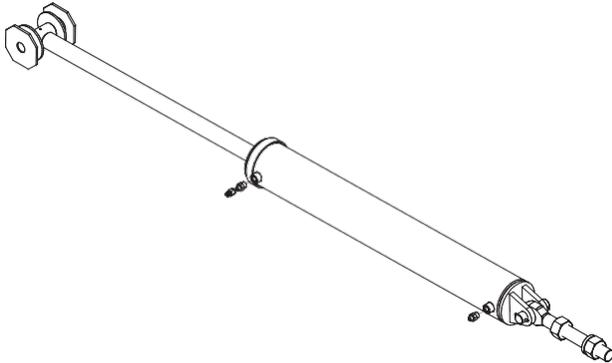
2. Install fittings into sequencing valves (8T8100) as shown in drawing. Install 8J6010 - 3/4" ORB x 6 JIC(M) x 90 adapters into port #1 on the valve bodies. This is the main supply port for each valve. Install 8J5500 - 9/16" ORB x 6 JIC(M) fittings into port #3 on the valve bodies. This is the drain port for each valve. Install 8J5620 - 3/4" ORB x 6 JIC(F-SW) fittings into port #2 and then attach one 8J5300 - 6 JIC(M) T and two 8J5700 - 6 JIC(F-SW) x 6 JIC(M) x 90 adapters to each of these fittings. This is the supply to the cylinders that are being sequenced. Place the sequencing valves behind the cross member the manifold block is attached to. Position so both port #3's are toward the center of the machine.



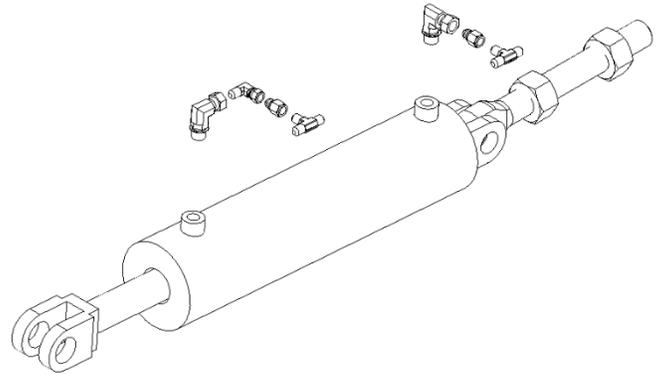
ASSEMBLY - ALL MACHINES



3. Install hoses that supply base end of part 1 wing lift cylinders. Install 35" hose from one right hand port of the manifold block (A & B) to the base end of both front 5" x 36" cylinders. Connect base end of rear 5" x 36" cylinders to front cylinders with 70" hoses.

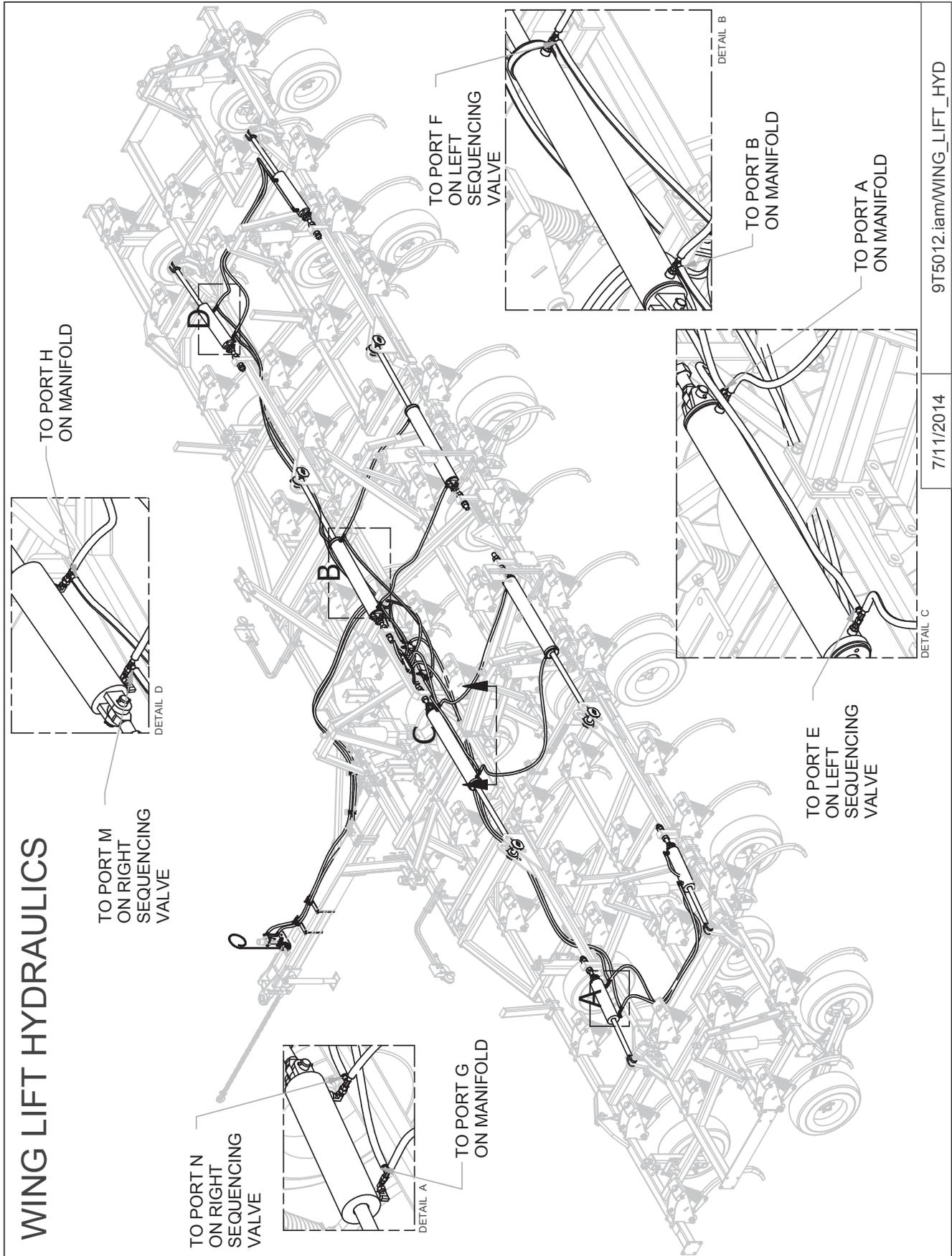


4. Retraction of part 1 wing lift cylinders is controlled with a sequencing valve. This step will show proper plumbing for this part of the wing lift circuit. Connect an 18" hose from the left hand end of the manifold block (C) to port #1 (C) on the left hand sequencing valve. Connect another 18" hose from the middle port on the right hand side of the manifold block (D) to port #3 (D) on the left sequencing valve. This hose will allow draining of the valve. Connect a 60" (E) and an 84" (F) hose to the T on port #2 of the left sequencing valve. The 84" hose will go to right side of the machine. Route hoses to rod end of the front 5" x 36" cylinders. Install fitting shown and a 6 JIC(F) x 6 JIC(M) 1/16" restrictor to rod end of each 5" x 36" cylinder. Connect rod end of rear 5" x 36" cylinders to front cylinders with 70" hoses.



5. Plumbing rod ends of part 2 wing lift cylinders. Connect a 228" (252" on 56'-60') hose to two rear ports on the left hand side of the manifold block (G & H). Route these hoses to front 4-1/2" x 16" cylinders on wings along second rank. Install a 6 JIC(M) T at the end of these hoses. Connect 124" hose on one side of each T. Be sure that 1/16" restrictors are installed with fittings shown. Connect 124" hoses to rod end of rear 4-1/2" x 16" cylinders as shown.
6. Extension of part 2 wing lift cylinders is controlled with a sequencing valve. This step will show proper plumbing for this part of the wing lift circuit. Connect an 18" hose from the right hand end of the manifold block (I) to port #1 (J) on the right hand sequencing valve. Connect another 18" hose from the middle port on the left hand side of the manifold block (K) to port #3 (L) on the sequencing valve. This hose will allow draining of the valve. Connect a 204" (M) and a 228" (N) (228" and 252" on 56'-60') hose to the T on port #2 of the sequencing valve. The longer hose will go to left side of the machine. Route these hoses to front 4-1/2" x 16" cylinders on wings along second rank. Connect a 6 JIC(M) T to the end of each of these hoses. Connect a 96" hose to each T. Be sure that 1/16" restrictors are installed with fittings shown. Connect 96" hoses to the base end of each rear 4-1/2" x 16" cylinder as shown.

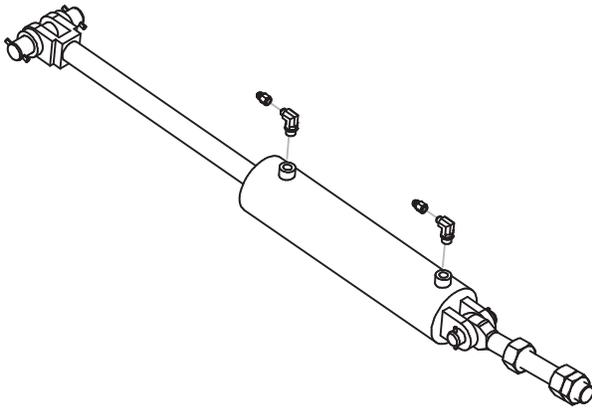
ASSEMBLY - ALL MACHINES



9T5012.iam/WING_LIFT_HYD

7/11/2014

ASSEMBLY - ALL MACHINES



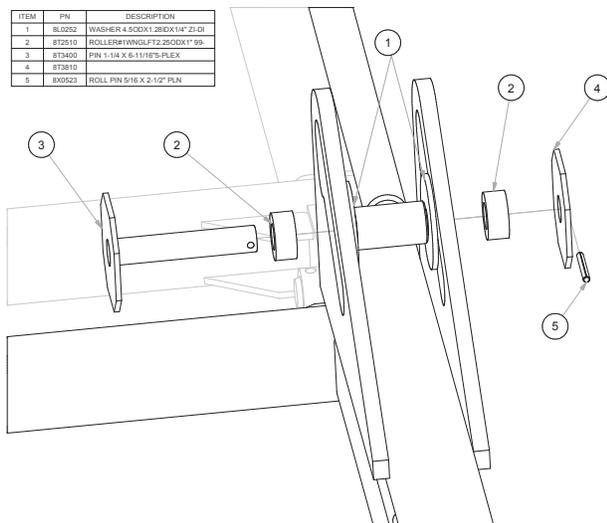
- Connect two 330" hoses to front side of manifold block (Z). Route these hoses to front of hitch along same path as depth control hoses. Leave slack by the hitch pivot. Install 3/4" ORB x 6 JIC(M) adapters and ISO tips onto ends of 330" hoses. Install yellow nylon ties by tips and closest cylinder to identify Wing Lift circuit. Use nylon ties to hold hoses away from pinch points.

NOTE: Hydraulic hoses will expand and shorten when pressurized. Do not overtighten hose clamps. Leave some slack between all clamps.

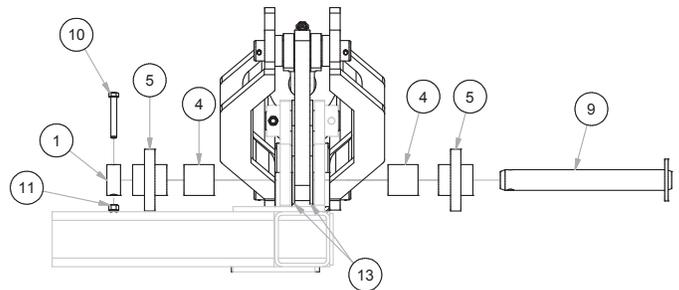
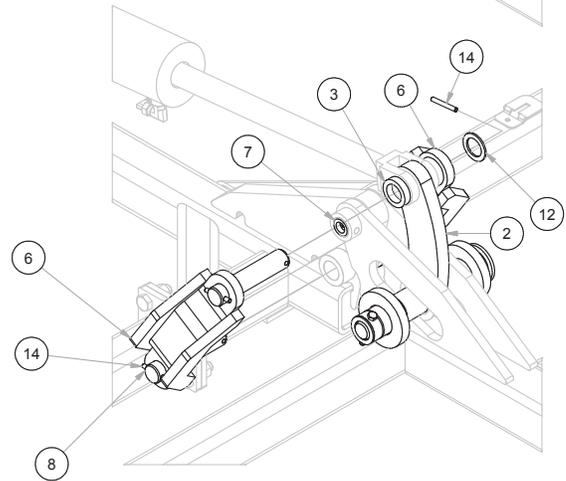
- Charge wing lift cylinder system. Block rod end of cylinders up so that cylinder shafts can be extended without hitting anything. Fully cycle cylinders several times to make sure that all air has been removed from the system. Leave cylinders in fully extended position.

END VIEW PART 1 WING LIFT PIN

| ITEM | PN | DESCRIPTION |
|------|--------|-----------------------------------|
| 1 | 8L0252 | WASHER 4.500X1.280X1/4" Z1-D1 |
| 2 | 8T2510 | ROLLER 1/2 WING LIFT 2.2500X1" 99 |
| 3 | 8T3400 | PIN 1.154 X 6-11/16" 5- PLEX |
| 4 | 8T3810 | |
| 5 | 8X0523 | ROLL PIN 5/16 X 2-1/2" PLN |



- Connect rod end of 5" x 36" cylinders to part 1 wing. Install wing lift pin, rollers and washers onto the wing and cylinder rod tube. Secure pin with 8T3810 washer and roll pin. The 8L0250 1/4" thick washers must slide freely inside wing flamecuts. The drawing below shows an end view of this connection. Grease rod end tube on 5" x 36" cylinders before lifting wings. Also grease part 2 wing pivot pins.



Ref PN DESCRIPTION

- | | | |
|----|--------|---------------------------------|
| 1 | 7T2532 | TUBE |
| 2 | 8T0400 | FC 7T0400 PNTD |
| 3 | 8T2514 | SPACER PART 1 TO 2 LINK |
| 4 | 8T2520 | ROLLER PART 2 WING LIFT |
| 5 | 8T2530 | ROLLER W/TUBE |
| 6 | 8T3590 | LINK PART 1 TO 2 FOR 5 PLEX |
| 7 | 8T3606 | PART 2 HINGE PIN 5 PLEX |
| 8 | 8T3608 | PIN HARDENED |
| 9 | 8T3625 | PIN, W/ WELDED WASHER- HARDENED |
| 10 | 8X0041 | BOLT 7/16"-14NC X 3" GR5 ZDI |
| 11 | 8X0234 | NUT 7/16"-14NC NY-LOCK GR2 ZDI |
| 12 | 8X0355 | WASHER 1-1/2"IDX2.25"X10GA PLN |
| 13 | 8X0365 | WASHER 2-1/2"IDX3.5"X 3/16"PLN |
| 14 | 8X0523 | ROLL PIN 5/16" X 2-1/2" PLN |

ASSEMBLY - ALL MACHINES

10. Connect rod end of 4-1/2" x 16" cylinders to part 2 wing. Install one 8T3608 pin with 5/16" roll pin and 1-1/2" FW into an 8T3590 link and insert it into the collar on the part 1 wing. Install another 8T3590 link onto the other side of pin and secure with 1-1/2" FW (as required to remove clearance, must be free to pivot) and 5/16" roll pin. Install an 8T3608 pin with 5/16" roll pin and 1-1/2" FW into the opposite end of the 8T3590 link. Slide an 8T2514 spacer onto pin. Slide pin through one side of cylinder clevis and through 8T0400 lift link. Continue to push pin through clevis, another spacer and top of other 8T3590 link. Secure pin with FW (as required) and roll pin. With the 8T0400 link resting between the two flame cuts with slots, install an 8T3625 pin into an 8T2530 and 8T2520 roller and slide pin through slot and into bottom of the lift link (8T0400). Apply anti-seize to 8T3625 prior to installation. Repeat sequence on other side of slot. Secure pin with 1-1/2" FW (as required) retaining collar (7T2532), 7/16" x 3" bolt and locknut. Repeat these steps for all 4 part 2 wing lift cylinders.
11. Before raising outer wings for the first time, make sure wing lift cylinder attach eyebolts are loose. Slowly raise part 2 wings into transport position. Fully retract part 2 cylinders and let wings rest against transport supports. Test adjustment of sequencing valve before turning set screw. If valve is set with too much pressure, part 1 wings will not rise. To reduce the amount of pressure, turn set screw outward. With cylinders fully retracted and part 2 wings resting on transport supports, adjust cylinder attach eyebolts so cylinders allow lift link rollers to rest on the bottom of slot. Tighten nuts.
12. Before raising part 1 wings for the first time, make sure cylinder attach eyebolts are loose. Slowly raise wings by fully retracting part 1 wing lift cylinders, allow wings to rest against the transport locks. If wing does not rest against both locks, adjust locks accordingly. Tighten cylinder attach eyebolts so cylinders allow part 1 wing lift rollers to rest on the bottom of slot.
13. Lower wings to field position. Make sure the part 1 wing lift cylinders fully extend before part 2 wings start to move. Test the adjustment before turning set screw. If the valve is set with too much pressure, the part 2 wings will not unfold. To reduce

the amount of pressure, turn set screw outward.

14. Fold and unfold machine again to make sure that everything is working properly.

Safety Lights

1. Install light module (8K8030A) onto frame. Route wiring harness (8K8075A) along frame according to drawing on Page 6-30 in Parts List. Connect wire ends to light assemblies. Use nylon ties to secure to frame. Connect main harness (8K8070B) to module and route along hitch to front of machine. The 7 pin connector stores in dust cap (8K8067) when not in use.

Decals

1. Install danger, warning and caution decals. Part numbers can be found on the lower right hand corner of each decal. Match this number with decal location drawing on Pages 1-4 through 1-9. – The drawing gives approximate locations of decals. Decals must be clearly visible. – Order replacement decals if any are damaged.
2. Install reflectors. Attach Amber reflectors (8Z0800) on front corners and sides of machine in transport position. Attach Red-orange reflectors (8Z0805) on outside back of machine in transport position. Attach Red reflectors (8Z0810) on outside back of machine in transport position.

Options

See Parts Section for layout of Optional Mounted Harrows and Rear Hitch.

OPERATION SAFETY

Operation Safety

1. READ AND UNDERSTAND Operator's Manual before using machine. Review at least annually thereafter.
2. VERIFY that all safety devices and shields are in place before using machine.
3. KEEP hands, feet, hair and clothing away from moving parts.
4. STOP engine, place all controls in neutral, set parking brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting, maintaining or unplugging.
5. BE CAREFUL when working around high pressure hydraulic system.
6. ALWAYS make sure that pressure is relieved from hydraulic circuits before servicing or disconnecting from tractor.
7. DO NOT ALLOW RIDERS.
8. USE EXTREME CARE when making adjustments.
9. KEEP CHILDREN AWAY from machinery at all times.
10. NEVER ALLOW anyone to walk or work under a raised piece of equipment without installing cylinder and transport locks.

Steps Prior to Operation

1. COMPLETE WARRANTY REGISTRATION CARD
 - A. Complete and return WARRANTY REGISTRATION CARD located at the beginning of this manual. **RETURNING CARD ENTITLES YOU TO A FREE GIFT.**
 - B. Complete the OWNER REGISTER also located at the beginning of this manual (Serial Number is located by the hitch piece). OWNER REGISTER INFORMATION MAY BE NEEDED WHEN ORDERING PARTS.
 2. VERIFY TRACTOR REQUIREMENTS
 - A. Recommended engine horsepower is 8-11 per foot.
- NOTE: It may be necessary to reduce tillage depth, change tillage tools or perform multiple passes if below this horsepower range.**
3. FINAL CHECK
 - A. After receiving or assembling your Chisel Plow, it is a good practice to double check the entire machine so that all fasteners are securely tightened.
 - B. Make sure all grease fittings are in place and greased properly.
 - C. Inflate tires to recommended inflation pressure (see page 5-4) and check that wheel bolts are tight.

OPERATION SAFETY

Operation Safety

1. READ AND UNDERSTAND Operator's Manual before using machine. Review at least annually thereafter.
2. VERIFY that all safety devices and shields are in place before using machine.
3. KEEP hands, feet, hair and clothing away from moving parts.
4. STOP engine, place all controls in neutral, set parking brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting, maintaining or unplugging.
5. BE CAREFUL when working around high pressure hydraulic system.
6. ALWAYS make sure that pressure is relieved from hydraulic circuits before servicing or disconnecting from tractor.
7. DO NOT ALLOW RIDERS.
8. USE EXTREME CARE when making adjustments.
9. KEEP CHILDREN AWAY from machinery at all times.
10. NEVER ALLOW anyone to walk or work under a raised piece of equipment without installing cylinder and transport locks.

Steps Prior to Operation

1. COMPLETE WARRANTY REGISTRATION CARD
 - A. Complete and return WARRANTY REGISTRATION CARD located at the beginning of this manual. **RETURNING CARD ENTITLES YOU TO A FREE GIFT.**
 - B. Complete the OWNER REGISTER also located at the beginning of this manual (Serial Number is located by the hitch piece). OWNER REGISTER INFORMATION MAY BE NEEDED WHEN ORDERING PARTS.

2. VERIFY TRACTOR REQUIREMENTS

- A. Recommended engine horsepower is 8-11 per foot.

NOTE: It may be necessary to reduce tillage depth, change tillage tools or perform multiple passes if below this horsepower range.

3. FINAL CHECK

- A. After receiving or assembling your Chisel Plow, it is a good practice to double check the entire machine so that all fasteners are securely tightened.
- B. Make sure all grease fittings are in place and greased properly.
- C. Inflate tires to recommended inflation pressure (see page 5-4) and check that wheel bolts are tight.

Initial Hookup

1. Make tractor to hitch connection with locking draw pin and safety chain.
2. Retract jack and rotate into storage position. Connect Safety Light Kit to 7 pin receptacle.
3. Plug wing lift hoses into desired tractor outlet. Ensure that tips and couplers are CLEAN.
4. Plug depth control hoses into desired tractor outlet.
5. Park tractor and chisel plow on a level surface.
6. Remove transport lock pins on wings.



OPERATION

7. Lower the wings with caution.
 - A. Do not raise or lower the wings when moving. Operate tractor hydraulics from operator station only. Do not allow anyone to stand near the Chisel Plow when folding or unfolding.
 - B. Make sure the part 1 wing lift cylinders are fully extended before the part 2 wings start to move.
 - C. If part 2 wings move, sequencing valve pressure for base end of the 4-1/2" x 16" cylinders must be increased. To increase the sequencing valve pressure, loosen the jam nut on the valve (valve is located at the right hand side of the center section on the 2nd rank). Use an allen wrench to turn the set screw on the poppit 1/2 turn inward to increase pressure. Test new adjustment before turning the set screw anymore. If the valve is set with too much pressure, the part 2 wings will not unfold. To reduce the amount of pressure, turn the set screw outward.
 - D. Fold and unfold the machine again to make sure that everything is working properly.
 - E. Slowly raise the part 2 wings into transport position.
 - F. Fully retract the part 2 cylinders and let wings rest against transport supports. If part 1 wings start to rise before part 2 cylinders are completely retracted, the sequencing valve pressure that feeds rod ends of 5" x 36" cylinders must be increased. To increase the sequencing valve pressure, loosen the jam nut on the valve (valve is located on the left hand side of the center section on the 2nd rank). Use an allen wrench to turn the set screw on the poppit 1/2 turn inward to increase pressure. Test new adjustment before turning the set screw any-

more. If the valve is set with too much pressure, the part 1 wings will not rise. To reduce the amount of pressure, turn the set screw outward.

- G. Slowly raise wings. Retract part 1 wing lift cylinders fully to allow wings to rest against transport locks. If wing does not rest against both locks, adjust locks.
- H. Return machine to field position when sequencing adjustments are complete.

IMPORTANT! *Restrictors are installed in the part 2 wing lowering and raising hydraulic circuit. They are also installed in the part 1 wing lowering hydraulic circuit. This has been done to reduce the chance of wing free fall. Do not remove these restrictors.*

8. Fully extend depth control cylinders and maintain hydraulic pressure for 30 seconds to ensure that all air has been purged from the system.

NOTE: **This machine has rephasing style depth control cylinders. When cylinders are fully extended, oil will bypass through a rephasing slot on each cylinder in order to equalize the system.**

9. Remove depth control cylinder transport locks.

- A. Store transport locks in their appropriate holders.

- B. Become familiar with single point depth control. Control can be found on 6" x 10 cylinder located on the center section. A hairpin clip is used to hold plunger in desired location.



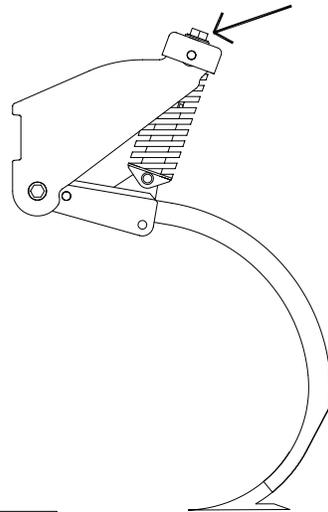
Field Operation

1. Always rephase cylinders before starting field operation.
2. Choose a flat spot in a field to set depth and level the chisel plow.

IMPORTANT! *The operator is responsible for adjusting the machine since machine does not come "Field Ready" from the factory.*

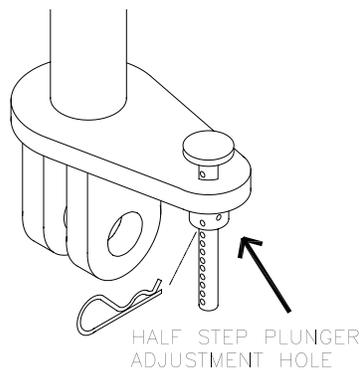
3. Determine desired tillage depth by working test strips within the field.

NOTE: Optimum performance of the machine is achieved by tilling at a depth and moving at a speed that does not go beyond the limit of the trip assemblies. This limit is exceeded if the connecting bolt (shown to right) continually rides above the trip assembly cap.

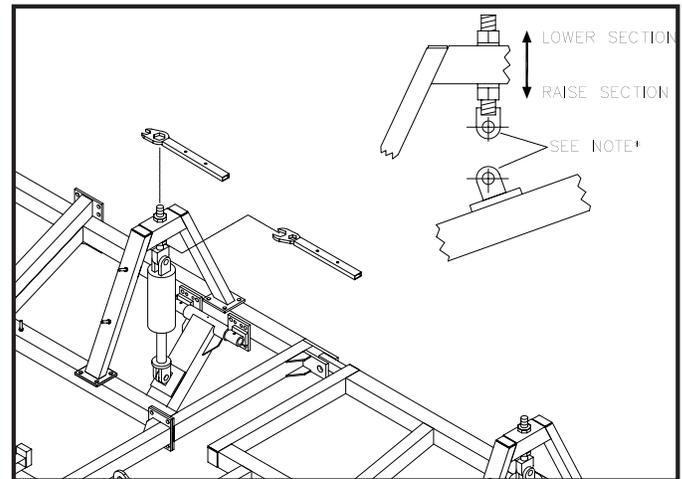


NOTE: Increased draft will occur if connecting bolt continually rides above the trip assembly cap. This will consume horsepower as well as reduce the life of the trip assembly.

4. After determining desired tillage depth, set depth control plunger accordingly. Standard plunger hole spacing gives 5/16" cylinder stroke adjustment. By rotating plunger 90 degrees, a half step adjustment can be



achieved.



5. Leveling the chisel plow from side to side. Stop the tractor with the machine still in the ground. Check the depth of tillage on the left wing, center, and right wing. If leveling is necessary, use wrenches provided to adjust the eyebolts on the cylinder attachments located at the rear of the machine.

***NOTE: Ensure that cylinder attach holes are aligned when eyebolts are tightened.**

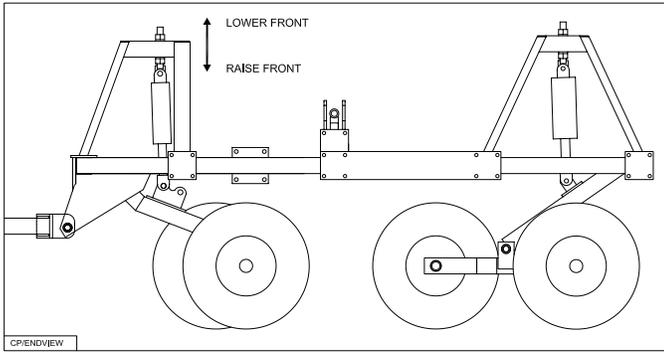
IMPORTANT! *Pressure must be removed from cylinders before adjusting eyebolts. Rest chisel plow on top of the ground, shut tractor off and relieve pressure by cycling remote lever back and forth.*

One turn of the 1-1/2" NC Cylinder Attach Eyebolt Nut changes chisel height 3/8". One inch of adjustment moves chisel plow height over 2 inches. It may be necessary to move eyebolts a small amount to attain correct adjustment of each section.

NOTE: It is best to check levelness of the chisel plow after each adjustment by working test strips within the field.

6. Leveling the machine from front to back. Check depth of tillage at front and back of the machine. If leveling is necessary, use wrenches provided to adjust the eyebolt on the front wheel assembly up or down.

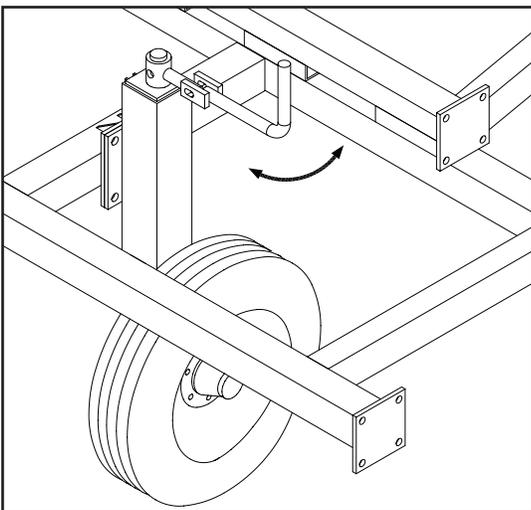
OPERATION



The front center lift arm has two cylinder attach locations. If chisel plow has a full set of mounted harrows or if rear of machine is low in transport position, use rear cylinder attach hole. Connecting front center cylinder to rear hole will lower front of chisel plow in transport position.

IMPORTANT! Pressure must be removed from cylinders before adjusting eyebolts. Rest chisel plow on top of the ground. Shut tractor off and relieve pressure by cycling remote lever back and forth.

7. Setting gauge wheels. After depth has been established and chisel plow has been leveled, operator must set gauge wheels. Stop tractor with chisel plow in the ground. Adjust crank assembly until wheel rests on top of the ground. Set bolts are installed on each gauge wheel assembly. Adjust set bolts so gauge wheel depth can still be changed but rotation of assembly is limited. If running at a consistent depth, set bolts can be securely tightened to lock gauge wheels.



IMPORTANT! Gauge wheels are only intended to stabilize the machine. They should not be used to support entire weight of the wings. Tough soil conditions may create “suction” on the front of the chisel plow. As long as the machine is not operated beyond the trip assembly limit (see page 4-3), the gauge wheels are being used properly. Failure to follow these guidelines may result in machine damage.

A depth decal is attached to the axle holder to help the operator in setting the gauge wheels.

8. Operation “Tips”

- The 7 solid lift arms on this machine are designed to prevent skewing from side to side. To avoid damage to the lift arms and wheel assemblies, do not take sharp corners with the chisel plow in the ground.
- Floating hitch machines are designed to follow contours of the ground. The Summers chisel plow has a short wheel base in field position that allows it to smoothly follow through ditches and gullies. This machine will also follow deep furrows in the field. The operator may want to till through deep furrows at an angle to maintain a more uniform tillage depth.
- Rephase cylinders every hour. If the chisel plow is raised and lowered only a small amount during operation, the cylinders will not remain in phase. Since each section is supported by individual cylinders, it is important to keep these cylinders in phase in order to maintain uniform tillage depth.

NOTE: Sweeps that are 14” and less can be used without trimming. Wider sweeps may need to be trimmed by tires and/or walking tandems.

Transporting

1. Park tractor and chisel plow on level surface with depth control cylinders fully raised.
2. Raise wings with caution.
3. Install transport lock pins on wings and cylinder locks on depth control cylinders.



4. Use a safety chain between tractor drawbar and chisel plow hitch when transporting.
5. Only tow at a safe speed – 20 MPH MAXIMUM. Use caution when making corners or meeting traffic.
6. Follow all local laws governing transporting of farm machinery.
7. Be aware of and comply with all height and width transport requirements. (See specifications page 5-4).
8. Stay clear of overhead lines.
9. Frequently check for traffic from rear, especially during turns.
10. Avoid sharp turns on hard surfaces. Solid mounted lift arms may cause wheel assemblies to scuff. Damage to tires and machine could occur.

Unhooking From Tractor

1. Lower Chisel Plow into field position and relieve hydraulic pressure from cylinders before disconnecting from tractor.
2. Disconnect hydraulics and safety light kit wiring harness.
3. Rotate jack into standing position and extend jack.
4. Block tires to prevent movement of machine after unhooking.
5. Remove draw pin and safety chain.

OPERATION

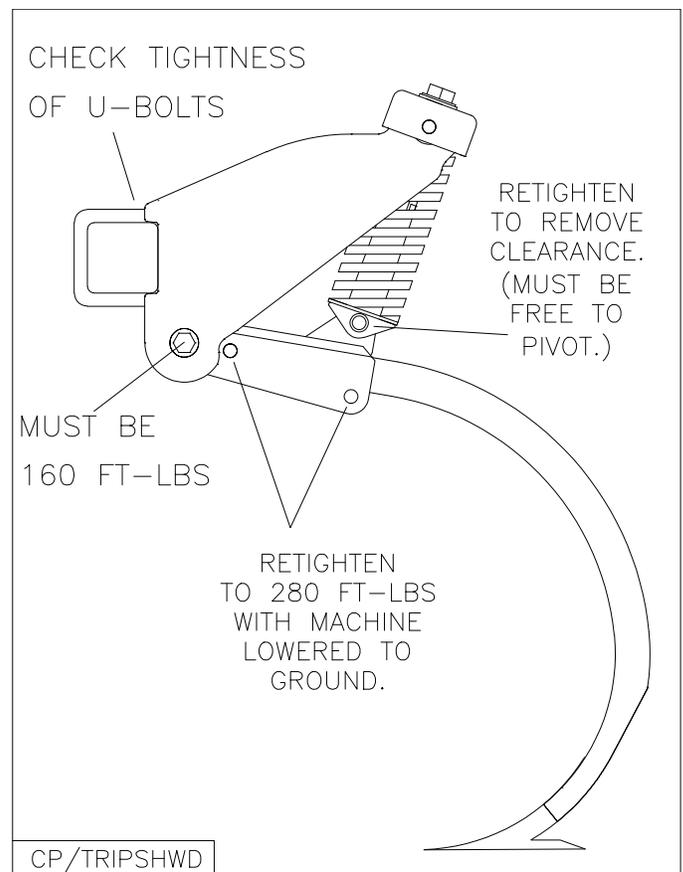
MAINTENANCE & SPECIFICATIONS

Maintenance Safety

1. **STOP** engine, place all controls in neutral, set parking brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting or maintaining.
2. **BE CAREFUL** when working around high pressure hydraulic system.
3. **ALWAYS** make sure that pressure is relieved from hydraulic circuits before servicing or disconnecting from tractor.
4. **USE EXTREME CARE** when making adjustments.
5. **KEEP CHILDREN AWAY** from machinery at all times.
6. **NEVER ALLOW** anyone to walk or work under a raised piece of equipment without installing cylinder and transport locks.

Maintenance after the 1st day and week of Operation

1. Grease lift arms, walking tandem assemblies, wing pivots, and hitch pivots.
2. Check all hydraulic components for leaks daily.
3. Check tightness of all wheel bolts daily.
4. Check tightness of wheel bearings.
5. Check tightness of trip assembly hardware as indicated in sketch.



6. Check tightness of all hardware. Pay special attention to hitch bolts and all pivot retaining bolts.

MAINTENANCE & SPECIFICATIONS

Daily Maintenance

1. Grease lift arms, walking tandem assemblies, wing pivots, and hitch pivots.
2. Check all hydraulic components for leaks.
3. Check tightness of all wheel bolts.



Periodic Maintenance

1. Repack wheel bearings and check their tightness (See Page 6-36).
2. Check tire air pressure (See specification page 5-4).
3. Check tightness of trip assembly hardware as explained under "Maintenance for after the first day and week of operation".
4. Check tightness of all hardware. Pay special attention to hitch bolts and all pivot retaining bolts.
5. Check chisel plow for damaged or worn parts. Replace as needed.

Storage

1. Clean and remove all excessive dirt and grease from the chisel plow.
2. Grease all zerks.
3. To prevent rusting, repaint any areas that have been worn, chipped or scratched.
4. Retract cylinders when possible. Apply grease* to any exposed part of cylinder shafts.

***NOTE:** Before returning chisel plow into service, all grease must be removed from cylinder shafts to prevent damage to seals.

MAINTENANCE & SPECIFICATIONS

| PROBLEM | CAUSE | CORRECTION |
|--|---|--|
| 1. Not tilling level. | A. Depth control cylinders out of phase. | Rephase cylinders. See Page 4-3. |
| | B. Eyebolts not adjusted properly. | Adjust with wrenches provided. See pages 4-4. |
| | C. Gauge wheels not adjusted properly. | Adjust gauge wheels so they ride freely on top of the ground. |
| | D. Hard soils conditions. | Use different tillage tool or perform multiple passes, starting at less depth. |
| 2. Not pulling straight. | A. Chisel plow not tilling level. | See "not tiling level" above. |
| 3. Inconsistent tillage depth. | A. Excessive travel speed. | Reduce speed. |
| | B. Hard soil conditions. | Use different tillage tool or perform multiple passes, starting at less depth. |
| | C. Deep furrows. | Travel across field furrows at an angle. |
| 4. Plugging. | A. Working in extremely heavy trash. | If equipped with mounted harrows, reduce aggressiveness of harrows or lock harrows in the up position. |
| | B. Tillage tool (spike, sweep, etc.) causing plugging. | Change type of tool. Make sure twisted spikes are not throwing soil towards wheels. |
| 5. Poor penetration. | A. Machine not running level front to back. | Adjust eyebolts on front center wheel assembly. |
| | B. Gauge wheels adjusted improperly. | Adjust gauge wheels so they ride freely on top of the ground. |
| | C. Hard soil conditions. | Use different tillage tool. |
| 6. Depth control cylinders not working properly. | A. Depth control cylinders out of phase. | Rephase cylinders by fully extending and holding tractor remote lever for 30 seconds. |
| | B. Hydraulic hoses not connected properly or faulty coupler. | Reconnect hydraulic hoses or replace hydraulic coupler. |
| | C. Tractor hydraulics not set properly. | Adjust tractor hydraulic flow rate to maximum on Depth Control Circuit. |
| 7. Wing lift cylinders move too fast. | A. One way restrictor(s) not installed properly. | Check restrictors (PN 8J7116). See Page 4-3 and Parts breakdown. |
| | B. Tractor hydraulics not set properly. | Reduce flow rate to Wing Lift Cylinder Circuit. |
| 8. Wings do not unfold properly. | A. Part 2 wing lift cylinder moving before part 1 wing lift cylinders fully extend. | Increase pressure in sequencing valve that feeds base end of part 2 cylinders. |
| | B. Part 2 wing lift cylinders not extending. | Decrease pressure in sequencing valve that feeds base end of part 2 cylinders. |
| 9. Wings do not fold properly. | A. Part 1 wing lift cylinders moving before part 2 wing lift cylinders fully retract. | Increase pressure in sequencing valve that feeds rod end of part 1 cylinders. |
| | B. Part 1 wing lift cylinders not retracting. | Decrease pressure in sequencing valve that feeds rod end of part 1 cylinders. |

MAINTENANCE & SPECIFICATIONS

WIDTH, HEIGHT, WEIGHT, LENGTH

| SIZE | APPROX. TRANSPORT WIDTH | APPROX | | WEIGHT W/3BAR 104 HARROWS | LENGTH W/3BAR 104 HARROWS |
|------|-------------------------|------------------|-----------------|---------------------------|---------------------------|
| | | TRANSPORT HEIGHT | STANDARD WEIGHT | | |
| 50' | 19'2" | 15'8" | 21,896 | 23,809 | 33' |
| 52' | 19'2" | 15'8" | 22,190 | 24,140 | 33' |
| 54' | 19'2" | 15'8" | 22,670 | 24,674 | 33' |
| 56' | 19'2" | 17'8" | 26,302* | 26,302* | 33' |
| 58' | 19'2" | 17'8" | 26,836* | 26,836* | 33' |
| 60' | 19'2" | 17'8" | 27,401* | 27,401* | 33' |

* Available with Mounted Harrows Only.

TIRE SPECIFICATIONS

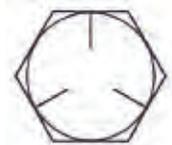
| LOCATION | TIRE SIZE | PLY RATING | AIR PRESSURE (PSI) |
|------------------|------------|------------|--------------------|
| CENTER SECTION | 12.5L x 15 | LRF | 90 |
| PART 1 & 2 WINGS | 11L x 15 | LRF | 85 |

* To increase penetration depth, inflation pressure can be reduced by up to 33% on rear tires and 25% on front center tires.

PROPER BOLT USE

DO NOT use these values if a different torque value or tightening procedure is given for a specific application. Torque values listed are for general use only. Check tightness of fasteners periodically.

| BOLT SIZE | WRENCH SIZE | GRADE 5 | | GRADE 8 | |
|-------------------|--------------------|---------|-------|---------|-------|
| | | ft-lbs | N • m | ft-lbs | N • m |
| 1/4" | 7/16" or 3/8" | 7 | 9.5 | 12 | 17 |
| 5/16" | 1/2" | 15 | 20 | 25 | 34 |
| 3/8" | 9/16" | 30 | 41 | 45 | 61 |
| 7/16" | 5/8" or 11/16" | 45 | 61 | 70 | 95 |
| 1/2" | 3/4" | 70 | 95 | 105 | 142 |
| 9/16" wheel bolts | 7/8" | 170 | 231 | | |
| 5/8" | 15/16" | 170 | 231 | 210 | 285 |
| 5/8" wheel nuts | 1-1/16" | 240 | 325 | | |
| 3/4" | 1-1/16"* or 1-1/8" | 250 | 339 | 375 | 509 |
| 7/8" | 1-5/16" | 350 | 475 | 600 | 814 |
| 1" | 1-1/2" | 450 | 610 | 880 | 1193 |
| 1-1/4" | 1-7/8" | 500 | 678 | | |
| 1-1/2" | 2-1/4" | 570 | 773 | | |
| 2" | 3-1/8" | 1200 | 1627 | | |



SAE
GRADE 5



SAE
GRADE 8

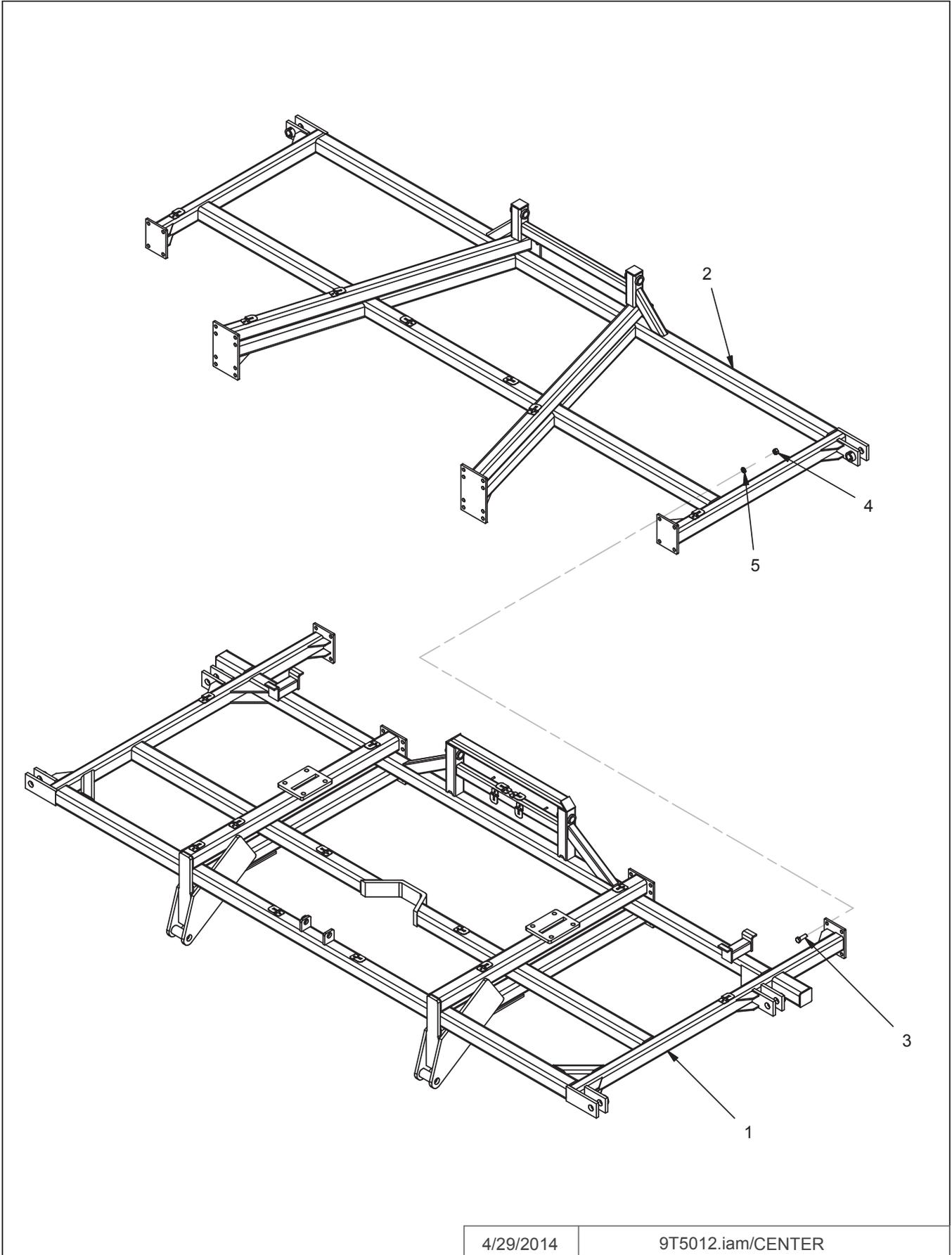
*Nylon Lock Nut

3/8/12 TILLAGE

Parts Ordering Procedure

When ordering parts for your Summers chisel plow, please contact an authorized Summers dealer in your area. If the parts are associated with a possible warranty claim, make sure that you contact the original dealer from which you purchased the Summers implement. Make sure to provide the Summers implement model, Serial number, Part number, Part description and quantity.

PARTS LIST



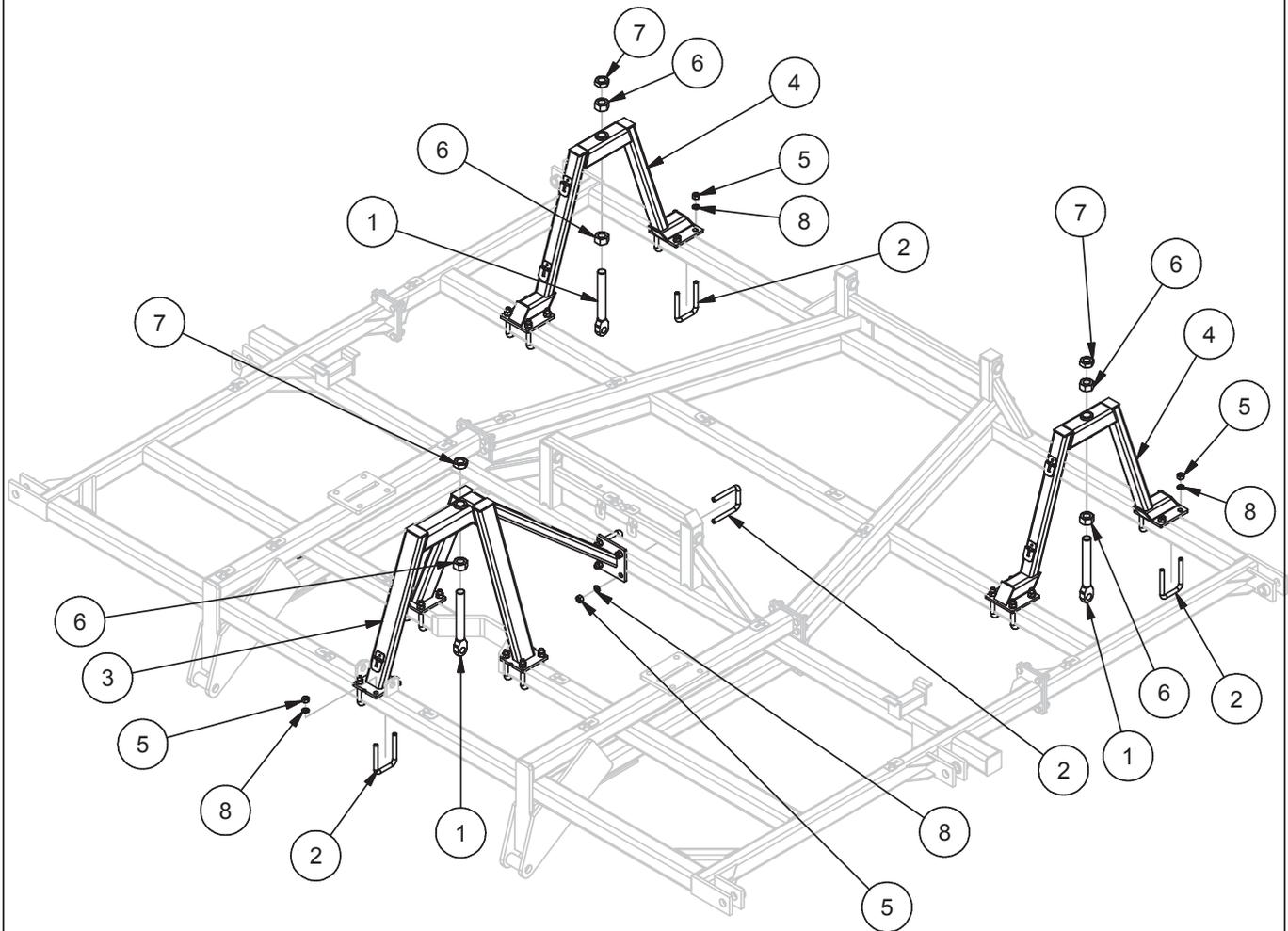
4/29/2014

9T5012.iam/CENTER

PARTS LIST

| CENTER PARTS LIST | | | | |
|--------------------------|-----------|--------------------|--------------|---------------------------------|
| Ref. | FN | Part Number | Model | Description |
| 1 | | 8T4020 | | FRAME, FRONT CENTER CHISEL PLOW |
| 2 | | 8T4032 | | FRAME, REAR CNTR 5 PLEX CHPLOW |
| 3 | | 8X0112 | | BOLT 3/4"-10NC X 2-1/4" GR5 ZDI |
| 4 | | 8X0260 | | NUT 3/4"-10NC HEX GR2 ZDI |
| 5 | | 8X0306 | | LOCKWASHER 3/4" YLW ZNC |

PARTS LIST



5/27/2014

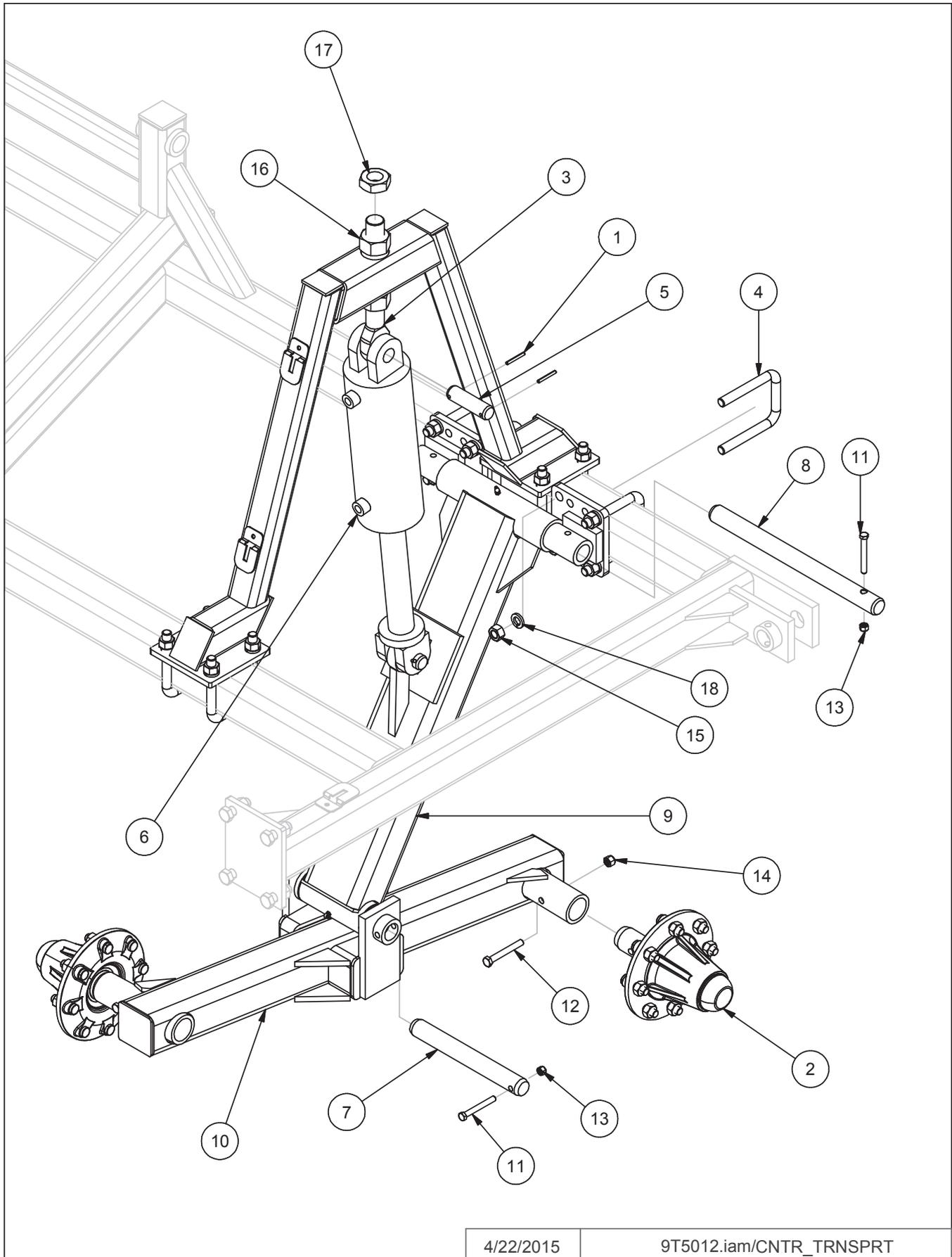
9T5012.iam/CENTER

PARTS LIST

STANDARD CENTER TRANSPORT ASSEMBLY PARTS LIST

| Ref. | FN | Part Number | Model | Description |
|------|----|-------------|-------|-------------------------------------|
| 1 | | 8K1755 | | EYEBOLT 1.5"DIA X 1.26"EYE X 14" YZ |
| 2 | | 8K5515 | | U-BOLT 3/4" X 4-1/16 X 6" SQ |
| 3 | | 8T4205 | | CYL ATTCH FRNT CNTR CHSL 10- |
| 4 | | 8T4226 | | CYL ATTCH, OFFSET REAR 5PLEX |
| 5 | | 8X0260 | | NUT 3/4"-10NC HEX GR2 ZDI |
| 6 | | 8X0285 | | NUT 1-1/2"-6NC HEX GR2 YZ |
| 7 | | 8X0286 | | NUT 1-1/2"-6NC JAM GR2 ZDI |
| 8 | | 8X0306 | | LOCKWASHER 3/4" YLW ZNC |

PARTS LIST

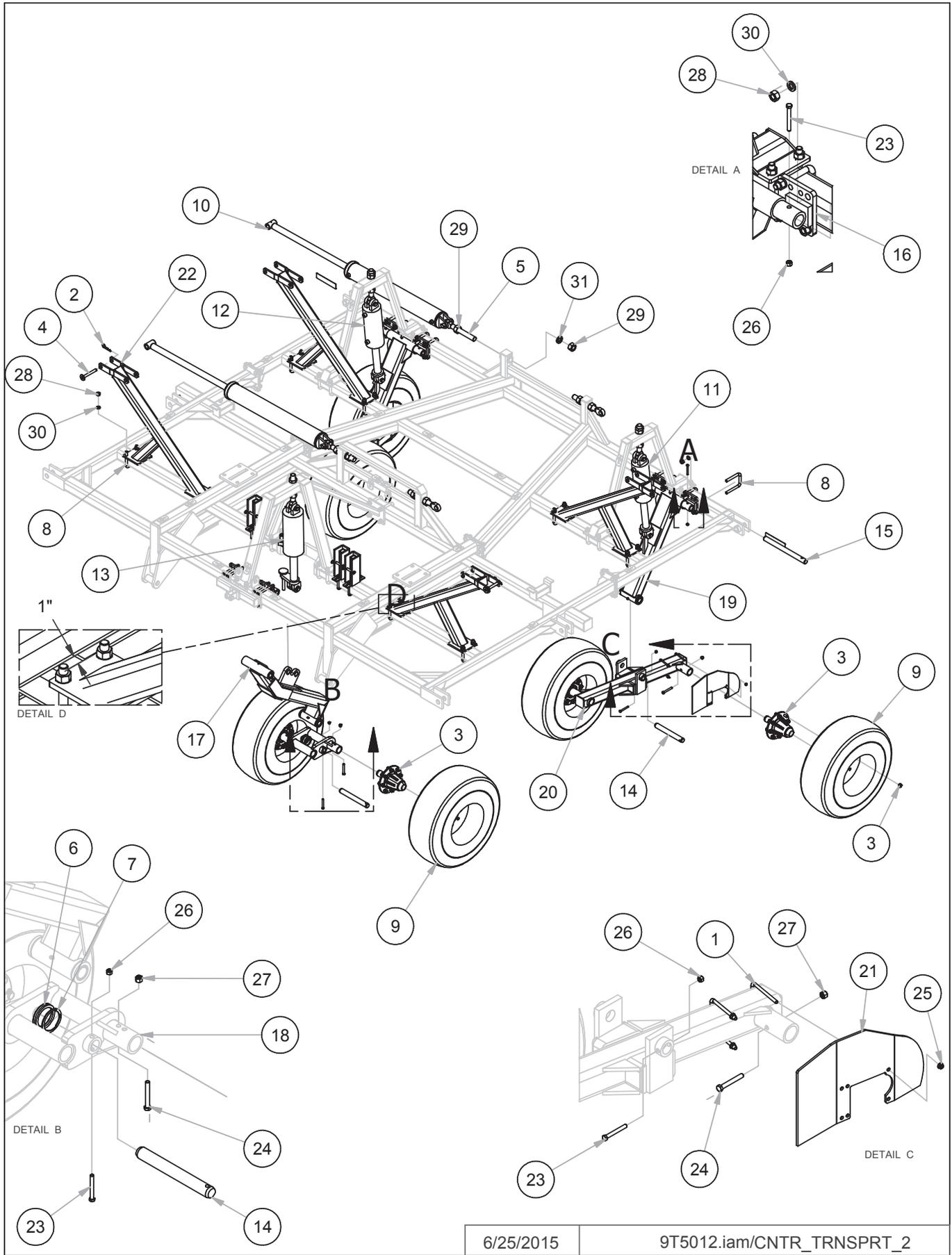


PARTS LIST

REAR CENTER TRANSPORT PARTS LIST

| Ref | FN | Part Number | Model | Description |
|-----|----|-------------|-------|-------------------------------------|
| 1 | | 8D9108 | | ROLL PIN 1/4" X 2" YLW ZNC |
| 2 | | 8K1105S | | HUB&AXLE ASSY HD812 (2"RCVR) |
| 3 | | 8K1755 | | EYEBOLT 1.5"DIA X 1.26"EYE X 14" YZ |
| 4 | | 8K5515 | | U-BOLT 3/4" X 4-1/16 X 6" SQ |
| 5 | | 8K9106 | | PIN 1-1/4" X 4-3/8" HARDENED |
| 6 | | 8T1050 | | HYD CYL 5.0" X 10" REPHASE 96- |
| 7 | | 8T3620 | | PIN 1-1/2" X 12-1/2" HRDND&ZINC |
| 8 | | 8T3640 | | PIN 1-1/2" X 19" HARDENED 98- |
| 9 | | 8T4140 | | LIFTARM REAR WLKNG TNDM CH96- |
| 10 | | 8T4166 | | WALKNG TNDM W/ANGLD4X4LEFT99- |
| 11 | | 8X0044 | | BOLT 7/16"-14NC X 3-1/2"GR5 ZDI |
| 12 | | 8X0072 | | BOLT 1/2"-13NC X 3-3/4" GR5 YZ |
| 13 | | 8X0234 | | NUT 7/16"-14NC NY-LOCK GR2 ZDI |
| 14 | | 8X0242 | | NUT 1/2"-13NC NY-LOCK GR2 YZ |
| 15 | | 8X0260 | | NUT 3/4"-10NC HEX GR2 YZ |
| 16 | | 8X0285 | | NUT 1-1/2"-6NC HEX GR2 YZ |
| 17 | | 8X0286 | | NUT 1-1/2"-6NC JAM GR2 YZ |
| 18 | | 8X0306 | | LOCKWASHER 3/4" YLW ZNC |

PARTS LIST



6/25/2015

9T5012.iam/CNTR_TRNSPRT_2

PARTS LIST

| STANDARD CENTER TRANSPORT PARTS LIST | | | | |
|--------------------------------------|----|------------------|-------|---|
| Ref | FN | Part Number | Model | Description |
| 1 | | 8A1156 | | U-BOLT 3/8 X 4-1/16 X 5" SQ |
| 2 | | 8D9110 | | HAIR PIN CLIP LARGE(1"CYL PIN) |
| 3 | | 8K1105S | | HUB&AXLE ASSY HD812 (2"RCVR) |
| 4 | | 8K1610 | | PIN 3/4 X 6 1/4" SAFETYLOCK |
| 5 | | 8K1755 | | EYEBOLT 1.5DIA X 1.26"EYE X 14" YZ |
| 6 | | 8K1900 | | SEAL GBGI V WALKING TANDEM 01- |
| 7 | | 8K1920 | | RETAINING RING 2-7/8" INV 00- |
| 8 | | 8K5515 | | U-BOLT 3/4 X 4-1/16 X 6" SQ |
| 9 | | 8K7042 | | 12.5L X 15 LRF ON 15X10X8 WHL |
| 10 | | 8K9650 | | 5" DIA. X 33" STR. CYL. ASSY |
| 11 | | 8T1050 | | HYD CYL 5.0 X 10" REPHASE 96- |
| 12 | | 8T1055 | | HYD CYL 5.5 X 10" REPHASE 96- |
| 13 | | 8T1060 | | HYD CYL 6 X 10 W/ STRK CNTRL 96- |
| 14 | | 8T3620 | | PIN 1-1/2 X 12-1/2" HRDND&ZINC |
| 15 | | 8T3640 | | PIN 1-1/2 X 19" HARDENED 98- |
| 16 | | 8T4100 | | PIVOT W/BLTPLATE LIFTARM 96- |
| 17 | | 8T4130 | | LIFTARM FRONT CNTR CHSL 98- |
| 18 | | 8T4132 | | WLKNG TNDM 7.5"C-C 2" ID 98- |
| 19 | | 8T4140 | | LIFTARM REAR WLKNG TNDM CH96- |
| 20 | | 8T4166 | | WALKNG TNDM W/ANGLD4X4LEFT99- |
| 21 | | 8T4190 8T4192 | | MUD DFLCTR W/T 7T0125 BNT LEFT MUD DFLCTR W/T 7T0125 BNT RIGHT |
| 22 | | 8T4325 | | WING LCK, 5 PLEX CHPLOW |
| 23 | | 8X0044 | | BOLT 7/16-14NC X 3-1/2"GR5 ZDI |
| 24 | | 8X0072 | | BOLT 1/2-13NC X 3-3/4" GR5 YZ |
| 25 | | 8X0203 | | NUT 3/8"-16NC SERFLANG GR2 YZ |
| 26 | | 8X0234 | | NUT 7/16"-14NC NY-LOCK GR2 ZDI |
| 27 | | 8X0242 | | NUT 1/2"-13NC NY-LOCK GR2 YZ |
| 28 | | 8X0260 | | NUT 3/4"-10NC HEX GR2 YZ |
| 29 | | 8X0285 | | NUT 1-1/2"-6NC HEX GR2 YZ |
| 30 | | 8X0306 | | LOCKWASHER 3/4" YLW ZNC |
| 31 | | 8X0315 | | LOCKWASHER 1-1/2" YLW ZNC |

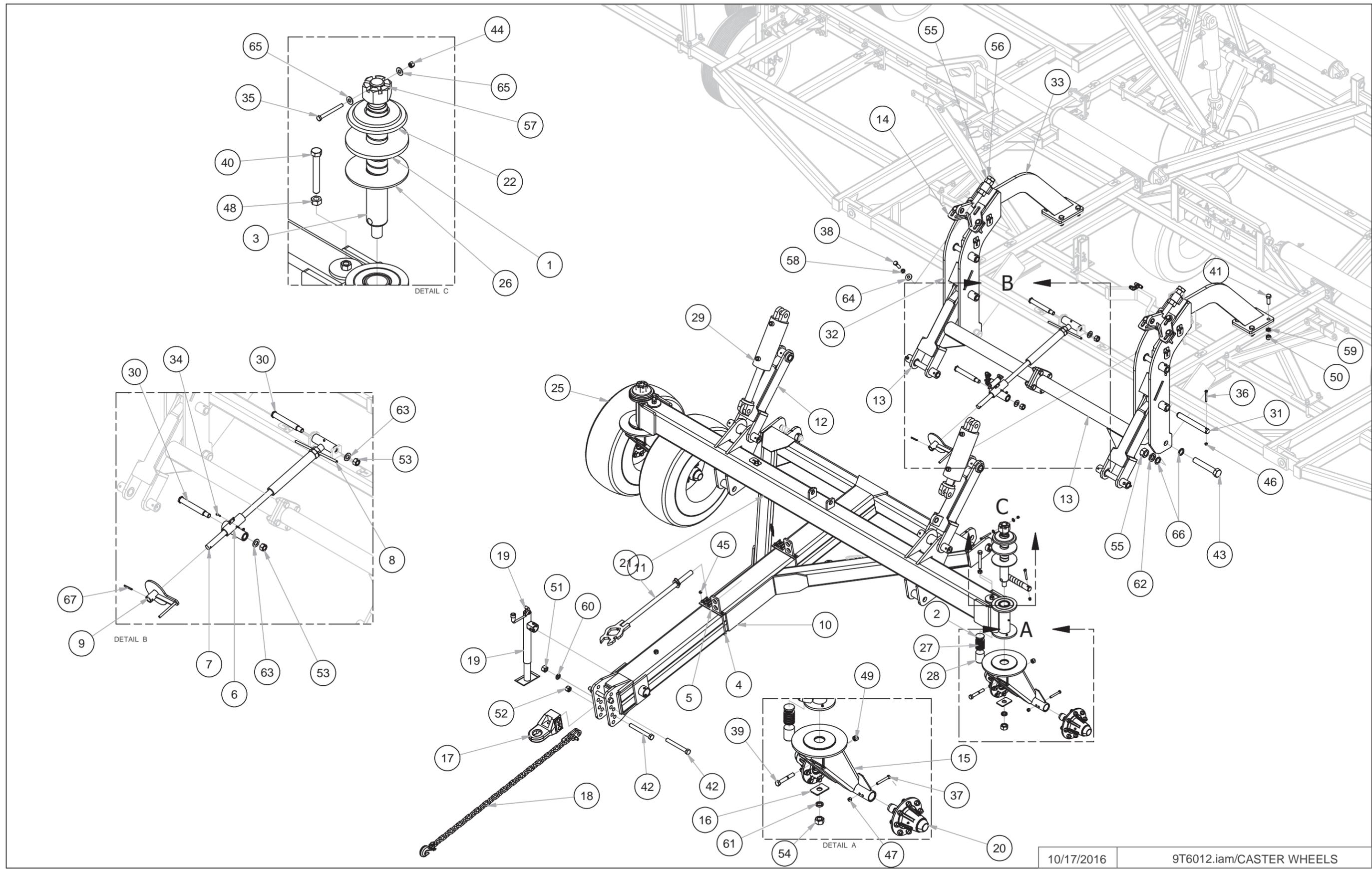
PARTS LIST

CASTER WHEEL HITCH PARTS LIST

| Ref | FN | Part Number | Model | Description |
|-----|----|-------------|-------|-----------------------------------|
| 1 | | 7L2150 | | STL 1/2 X 7-1/2"OD X 2-9/16"ID |
| 2 | | 7P7289 | | STL |
| 3 | | 7P8530 | | ROUND CR 2 1/2"-22 1/4" 07- |
| 4 | | 8C1710 | | U-BOLT 3/8 X 8 X 9" SQ |
| 5 | | 8CC0600 | | HOLDDOWN HOSE 8" WDNH W/ WRNCH |
| 6 | | 8CC0750 | | CROSS TUBE POPPET MNT |
| 7 | | 8CC0756 | | LINK ROD SNGL PT DPTH ADJ |
| 8 | | 8CC0780 | | NUT JAM 1-1/2 W/ HNDL |
| 9 | | 8CC0785 | | POPPET STOP W/ HANDLE |
| 10 | | 8CC4000 | | HITCH |
| 11 | | 8CC6000B | | D/C CHSL&STD DSK CSTR MNT |
| 12 | | 8CC6022 | | D/C CHSL LINK W/ CYLATTCH |
| 13 | | 8CC6026 | | PARALLEL LINK W/ RCKSHFT |
| 14 | | 8CC6028 | | PARALLEL LNK ADJ CYL ATTCH R2 |
| 15 | | 8CC6030B | | D/C CHSL DUAL CASTER ARM |
| 16 | | 8CC6035 | | WASHER 2.5X4X 1.281ID |
| 17 | | 8D0720 | | HITCH PIECE CAST CAT.3CTD PNT |
| 18 | | 8D2470 | | SAFETY CHAIN 7/16" X 5' |
| 19 | | 8D8522 | | JACK 5000# TOP CRANK 15"LIFT |
| 20 | | 8K1105S | | HUB&AXLE ASSY HD812 (2"RCVR) |
| 21 | | 8K3002 | | GANG WRENCH |
| 22 | | 8K5200 | | WASHER GANG BOLT 2.030"ID |
| 23 | | 8K6940 | | SWEEP 16" 50* 1/2"BLT 2.25C-C |
| 24 | | 8K6942 | | SPIKE REVERSIBL4.5"WDTX1/4" |
| 25 | | 8K7042 | | 12.5L X 15 LRF ON 15X10X8 WHL |
| 26 | | 8L0320 | | PLATE 2PT CASTER WEAR |
| 27 | | 8P7200 | | SPRING 2.5" OD-1.5 ID-3" 10- |
| 28 | | 8P7210 | | ROUND 2.5" UHMW BRAKE |
| 29 | | 8T1050 | | HYD CYL 5.0 X 10" REPHASE 96- |
| 30 | | 8T3300 | | PIVOT BOLT CHSLTRP&WNGLFT YZ |
| 31 | | 8T3620 | | PIN 1-1/2 X 12-1/2" HRDND&ZINC |
| 32 | | 8T3950 | | CHSL HITCH TOWER |
| 33 | | 8T3955 | | CHSL HITCH TOWER BRACE |
| 34 | | 8X0000B | | BOLT 1/4-20NC X 1" GR5 ZDI |
| 35 | | 8X0015 | | BOLT 3/8-16NC X 3-3/4" GR5 ZDI |

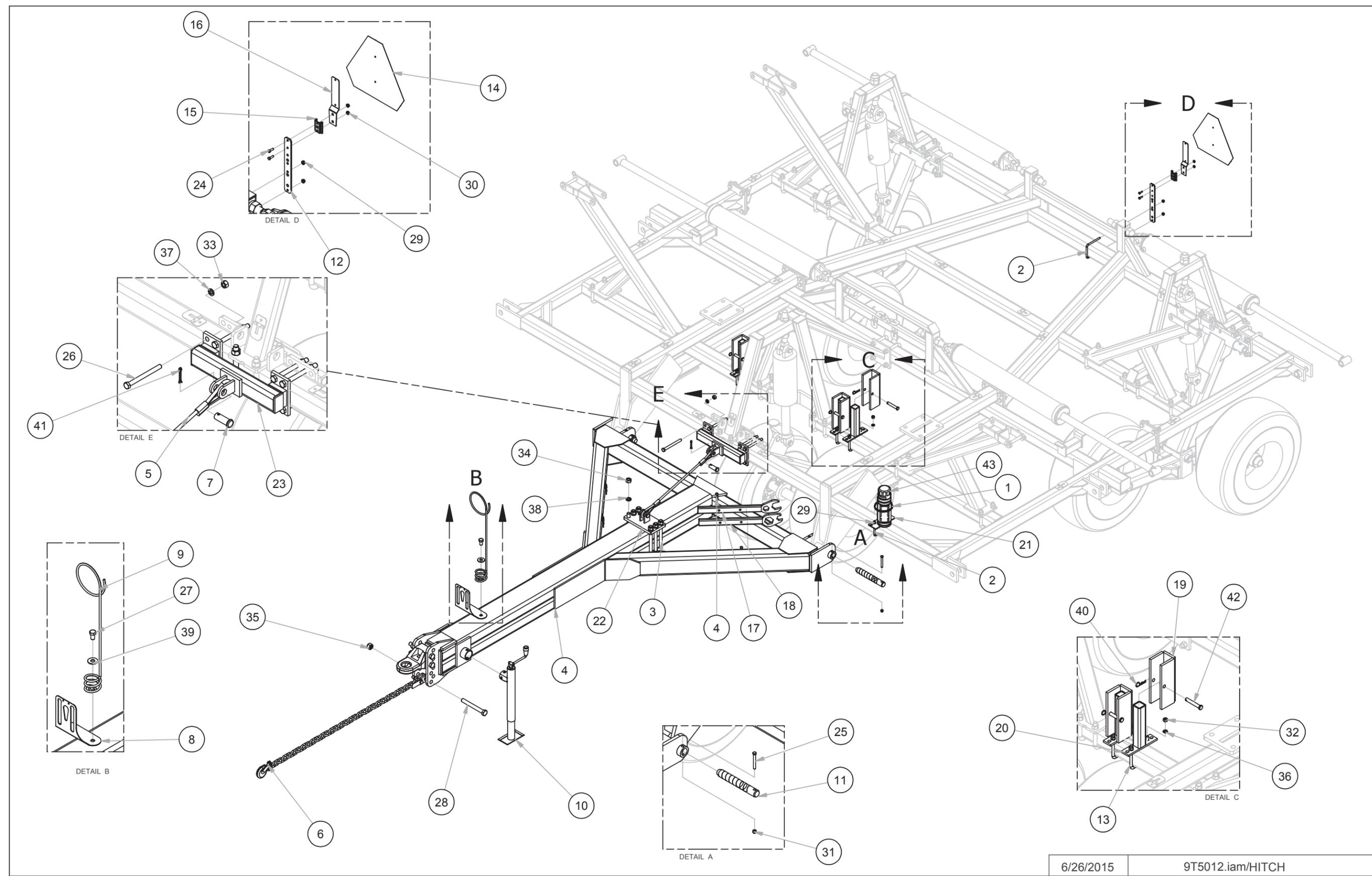
| Ref | FN | Part Number | Model | Description |
|-----|----|-------------|-------|-------------------------------------|
| 36 | | 8X0044 | | BOLT 7/16-14NC X 3-1/2"GR5 ZDI |
| 37 | | 8X0072 | | BOLT 1/2-13NC X 3-3/4" GR5 YZ |
| 38 | | 8X0111 | | BOLT 3/4-10NC X 2-1/2" GR5 YZ |
| 39 | | 8X0113 | | BOLT 3/4-10NC X 5" GR5 YZ |
| 40 | | 8X0123A | | BOLT 3/4NCX 5.5"FULLTHD GR5 |
| 41 | | 8X0132 | | BOLT 7/8-9NC X 2-1/2" GR5 ZDI |
| 42 | | 8X0146 | | BOLT 1-8NCX8.5" W/1.5"THD GR5ZDI |
| 43 | | 8X0155 | | BOLT 1.5-6NC X 9" GR5 ZDI |
| 44 | | 8X0202 | | NUT 3/8"-16NC NY-LOCK GR2 YZ |
| 45 | | 8X0203 | | NUT 3/8"-16NC SERFLANG GR2 YZ |
| 46 | | 8X0234 | | NUT 7/16"-14NC NY-LOCK GR2 ZDI |
| 47 | | 8X0242 | | NUT 1/2"-13NC NY-LOCK GR2 YZ |
| 48 | | 8X0259 | | NUT JAM 3/4"-10NC GR2 ZDI |
| 49 | | 8X0261 | | NUT 3/4"-10NC NY-LOCK GR2 YZ |
| 50 | | 8X0268 | | NUT 7/8"-9NC HEX GR2 YZ |
| 51 | | 8X0280 | | NUT 1"-8NC HEX GR2 YZ |
| 52 | | 8X0281 | | NUT 1"-8NC NY-LOCK GR2 YZ |
| 53 | | 8X0282 | | NUT 1"-14TPI TOPLOCK GR B Z |
| 54 | | 8X0284 | | NUT 1-1/4"-7NC HEX GR2 YZ |
| 55 | | 8X0285 | | NUT 1-1/2"-6NC HEX GR2 YZ |
| 56 | | 8X0286 | | NUT 1-1/2"-6NC JAM GR2 YZ |
| 57 | | 8X0292 | | NUT 2"-4.5 HVY HEXSLOT GR2 PLN |
| 58 | | 8X0306 | | LOCKWASHER 3/4" YLW ZNC |
| 59 | | 8X0307 | | LOCKWASHER 7/8" YLW ZNC |
| 60 | | 8X0309 | | LOCKWASHER 1" YLW ZNC |
| 61 | | 8X0311 | | LOCKWASHER 1-1/4" YLW ZNC |
| 62 | | 8X0315 | | LOCKWASHER 1-1/2" YLW ZNC |
| 63 | | 8X0316 | | WASHER 1" SAE FLAT YZ |
| 64 | | 8X0318 | | WASHER 3/4"(13/16"ID)FLAT YZ |
| 65 | | 8X0320 | | WASHER 3/8" (7/16" ID)FLAT ZDI |
| 66 | | 8X0355 | | WASHER 1-1/2"IDX2.25"X10GA PLN |
| 67 | | 8X0523 | | ROLL PIN 5/16 X 2-1/2" PLN |

PARTS LIST



10/17/2016

9T6012.iam/CASTER WHEELS



6/26/2015

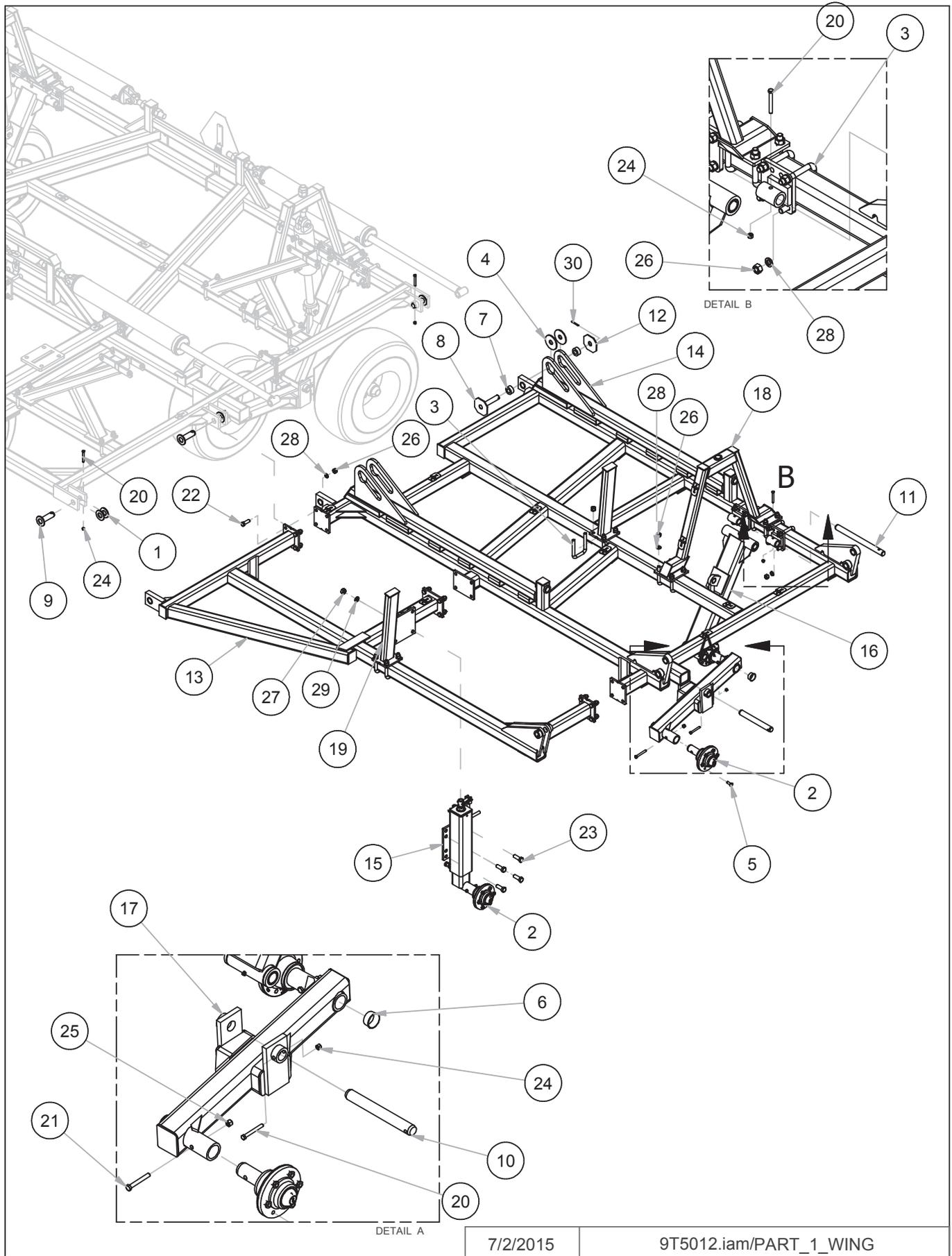
9T5012.iam/HITCH

PARTS LIST

STANDARD CENTER HITCH PARTS LIST

| Ref | FN | Part Number | Model | Description |
|-----|----|-------------|-------|-----------------------------------|
| 1 | | 8A1004 | | CLAMP HOSE 5" #72 |
| 2 | | 8A1156 | | U-BOLT 3/8" X 4-1/16" X 5" SQ |
| 3 | | 8C1780 | | U-BOLT 7/8" X 8-1/16" X 10" SQ |
| 4 | | 8CC4000 | | HITCH |
| 5 | | 8D1770 | | CABLE 1/2" X 30.5"EYE-EYE |
| 6 | | 8D2470 | | SAFETY CHAIN 7/16" X 5' |
| 7 | | 8D2730 | | PIN 1" X 2-3/4" CABLE PLATED |
| 8 | | 8D8490 | | PIONEER/ISO TIP HLDR BNT |
| 9 | | 8D8500 | | HYD HOSE HOLDER PNTD BLK 91- |
| 10 | | 8D8522 | | JACK 5000# TOP CRANK 15"LIFT |
| 11 | | 8K1640 | | PIN 1-1/2" X 10-5/8" HITCH 84- |
| 12 | | 8K8200 | | BRCKT SMV ATTCH 4-8"FRAME98- |
| 13 | | 8S0340 | | U-BOLT 1/2" X 4" X 5-1/4" SQ |
| 14 | | 8S1120 | | SIGN SLOW MOVING VEHICLE(SMV) |
| 15 | | 8S1124 | | MOUNTING SOCKET SMV SIGN ZDI |
| 16 | | 8S1126 | | MNT SPADE W/HRDWR SMV SIGN |
| 17 | | 8T0606 | | WRNCH 2.25" OPEN, 1.5" BOX |
| 18 | | 8T0608 | | WRNCH 1.5" OPEN, 2.25" BOX |
| 19 | | 8T4350 | | CYL LOCK |
| 20 | | 8T4380 | | HOLDER CYL LOCK 4"&6" MNT 96- |
| 21 | | 8T4385 | | HOLDER MANUAL-PAK |
| 22 | | 8T4405 | | BRCKT LIMIT CBL8"SQ HTCH |
| 23 | | 8T4410 | | SUPPORT CABLE LIMIT/FRM |
| 24 | | 8X0021A | | BOLT 5/16"-18NC X 1" GR5 YZ |
| 25 | | 8X0044 | | BOLT 7/16"-14NC X 3-1/2"GR5 YZ |
| 26 | | 8X0099 | | BOLT 5/8"-11NC X 6.75" |
| 27 | | 8X0110 | | BOLT 3/4"-10NC X 1-1/4" GR5 YZ |
| 28 | | 8X0146 | | BOLT 1"-8NCX8.5" W/1.5"THD GR5 YZ |
| 29 | | 8X0203 | | NUT 3/8"-16NC SERFLANG GR2 YZ |
| 30 | | 8X0211 | | NUT 5/16"-18NC SERFLANG GR2 YZ |
| 31 | | 8X0234 | | NUT 7/16"-14NC NY-LOCK GR2 YZ |
| 32 | | 8X0240 | | NUT 1/2"-13NC HEX GR2 YZ |
| 33 | | 8X0250 | | NUT 5/8"-11NC HEX GR2 YZ |
| 34 | | 8X0268 | | NUT 7/8"-9NC HEX GR2 YZ |
| 35 | | 8X0281 | | NUT 1"-8NC NY-LOCK GR2 YZ |
| 36 | | 8X0303 | | LOCKWASHER 1/2" YLW ZNC |
| 37 | | 8X0304 | | LOCKWASHER 5/8" YLW ZNC |
| 38 | | 8X0307 | | LOCKWASHER 7/8" YLW ZNC |
| 39 | | 8X0318 | | WASHER 3/4"(13/16"ID)FLAT YZ |
| 40 | | 8X0402 | | HAIR PIN CLIP 1/8" X 2-9/16" |
| 41 | | 8X0414 | | COTTER PIN 1/4" X 2" YZ |
| 42 | | 8X0440 | | CLEVIS PIN 5/8" X 3-7/8" YZ |
| 43 | | 8Z1000 | | MANUAL-PAK 3"DIA X 11.75" 09- |

PARTS LIST



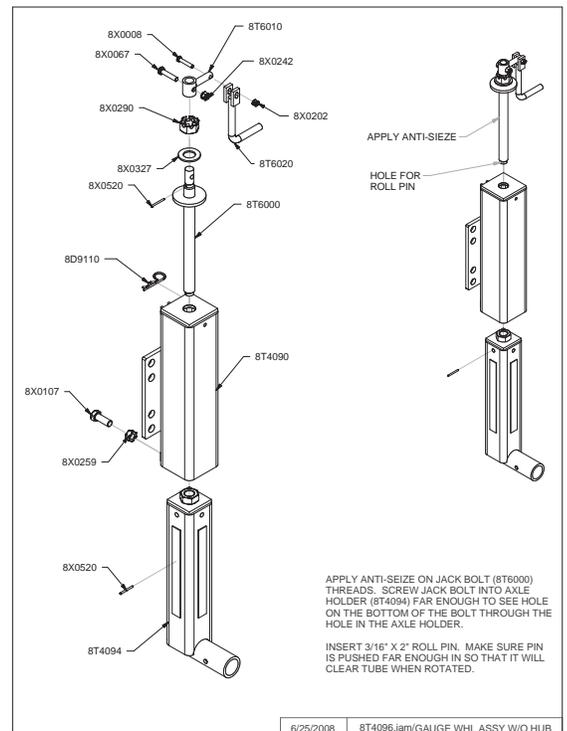
7/2/2015

9T5012.iam/PART_1_WING

PARTS LIST

PART 1 WING PARTS LIST

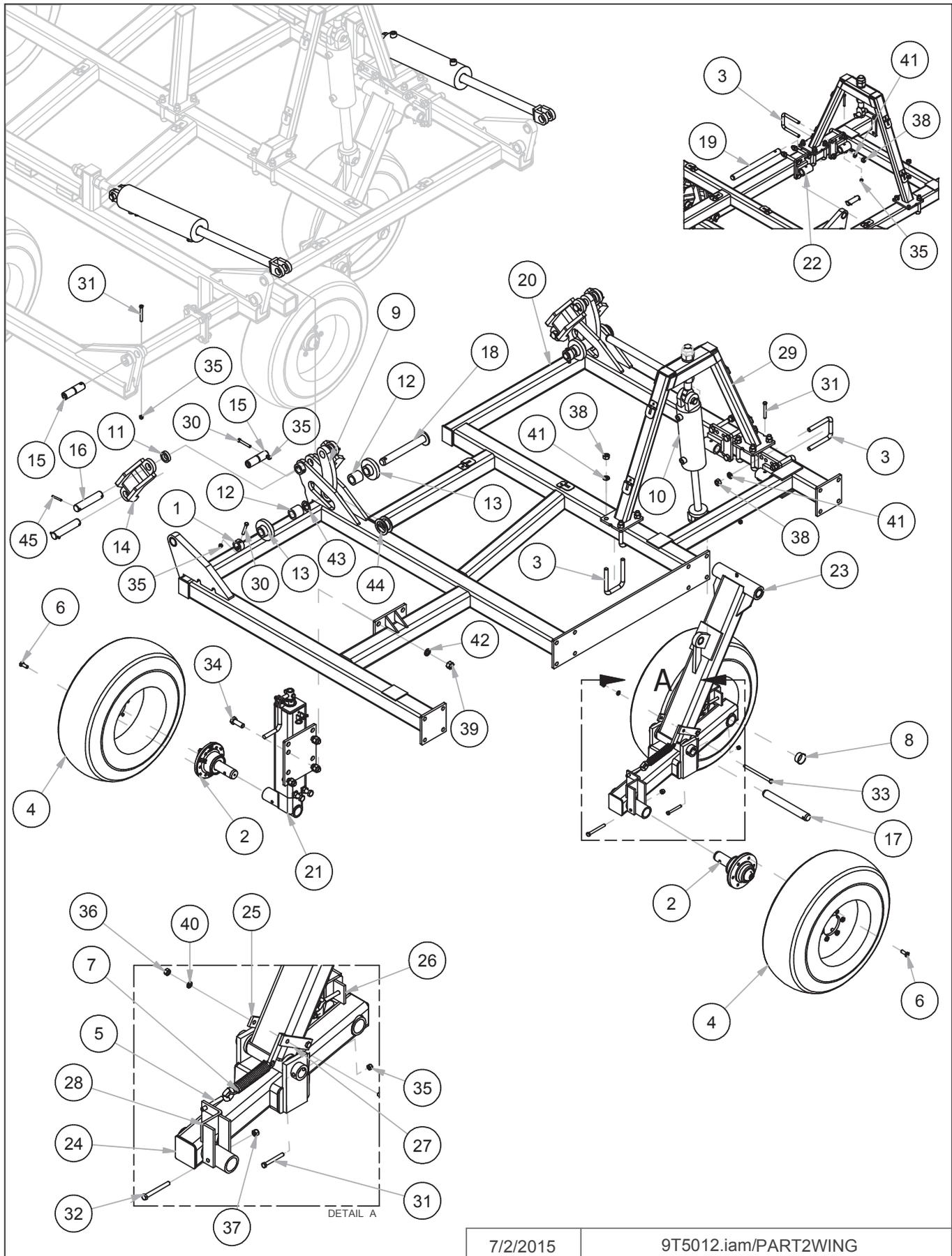
| Ref | FN | Part Number | Model | Description |
|-----|----|--|-------|---|
| 1 | | 8C6015 | | WASHER 1.53"ID X 3-1/16"ODX1/4 |
| 2 | | 8K1100 | | HUB&AXLE ASSY 614(GBGI-2"RCVR) |
| 3 | | 8K5515 | | U-BOLT 3/4" X 4-1/16" X 6" SQ |
| 4 | | 8L0252 | | WASHER 4.5"ODX1.28"IDX1/4" ZI-DI |
| 5 | | 8R6914 | | BOLT WHEEL 9/16"-18 UNF- 1.25" |
| 6 | | 8S3059 | | CAPLUG FITS 2.067"ID TUBE96- |
| 7 | | 8T2510 | | ROLLER#1WNGFLT2.25"ODX1" 99- |
| 8 | | 8T3400 | | PIN 1-1/4" X 6-11/16"5-PLEX |
| 9 | | 8T3600 | | PIN 1-1/2" X 4-7/8" WNG PIVT98- |
| 10 | | 8T3620 | | PIN 1-1/2" X 12-1/2" HRDND&ZINC |
| 11 | | 8T3640 | | PIN 1-1/2" X 19" HARDENED 98- |
| 12 | | 8T3810 | | 7T4286 HEX WASHER PNTD 99- |
| 13 | | 8T4054F 8T4056F 8T4058F 8T4059F | | WING PT1 LFT FRNT 50'-54' WING PT 1 RGHT FRNT 50'-54' WING PT 1 LFT FRNT 56'-60' WING PT 1 RGHT FRNT 56'-60' 07- |
| 14 | | 8T4054R 8T4056R 8T4058R 8T4059R | | WING PT1 LFT REAR 50'-54' WING PT 1 RGHT REAR 50'-54' WING PT1 LFT REAR 56'-60' WING PT 1 RGHT REAR 56'-60' |
| 15 | | 8T4096 | | GAUGE WHEEL ASSY W/O HUB 04- |
| 16 | | 8T4140 | | LIFTARM REAR WLKNG TNDM CH96- |
| 17 | | 8T4168 | | WALKNG TNDM W/ANGLD4X4RGHT99- |
| 18 | | 8T4226 | | CYL ATTCH, OS REAR 5PLEX |
| 19 | | 8T4260 | | PART 2 WING REST |
| 20 | | 8X0044 | | BOLT 7/16"-14NC X 3-1/2"GR5 ZDI |
| 21 | | 8X0072 | | BOLT 1/2"-13NC X 3-3/4" GR5 YZ |
| 22 | | 8X0112 | | BOLT 3/4"-10NC X 2-1/4" GR5 YZ |
| 23 | | 8X0132 | | BOLT 7/8"-9NC X 2-1/2" GR5 ZDI |
| 24 | | 8X0234 | | NUT 7/16"-14NC NY-LOCK GR2 ZDI |
| 25 | | 8X0242 | | NUT 1/2"-13NC NY-LOCK GR2 YZ |
| 26 | | 8X0260 | | NUT 3/4"-10NC HEX GR2 YZ |
| 27 | | 8X0268 | | NUT 7/8"-9NC HEX GR2 YZ |
| 28 | | 8X0306 | | LOCKWASHER 3/4" YLW ZNC |
| 29 | | 8X0307 | | LOCKWASHER 7/8" YLW ZNC |
| 30 | | 8X0523 | | ROLL PIN 5/16" X 2-1/2" PLN |



Gauge Wheel Part Numbers

| Ref | Part Number | Description |
|-----|-------------|---------------------------------|
| 1 | 8D9110 | HAIR PIN CLIP LARGE (1"CYL PIN) |
| 2 | 8T4090 | SUPPORT GAUGE WHEEL(5"SQ) 97- |
| 3 | 8T4094 | HOLDER GAUGE WHL AXL(4"SQ) 97- |
| 4 | 8T6000 | GAUGE WHEEL JACKBLT PLTD 96- |
| 5 | 8T6010 | GAUGE WHEEL SCREW TOP 96- |
| 6 | 8T6020 | GAUGE WHEEL JACK HANDL 96- |
| 7 | 8X0008 | BOLT 3/8"-16NC X 2" GR5 ZDI |
| 8 | 8X0067 | BOLT 1/2"-13NC X 2-1/4" GR5 ZDI |
| 9 | 8X0107 | BOLT 3/4"-10NC X 2" GR5 ZDI |
| 10 | 8X0202 | NUT 3/8"-16NC NY-LOCK GR2 ZDI |
| 11 | 8X0242 | NUT 1/2"-13NC NY-LOCK GR2 ZDI |
| 12 | 8X0259 | NUT JAM 3/4"-10NC GR2 ZDI |
| 13 | 8X0290 | NUT 1-1/4"-7NC HEXSLOT GR2 ZDI |
| 14 | 8X0327 | WASHER SAE FLAT 1-1/4" ZDI |
| 15 | 8X0520 | ROLL PIN 3/16" X 2" PLN |
| | 8X1510 | COPPER BASED ANTI-SEIZE |

PARTS LIST



7/2/2015

9T5012.iam/PART2WING

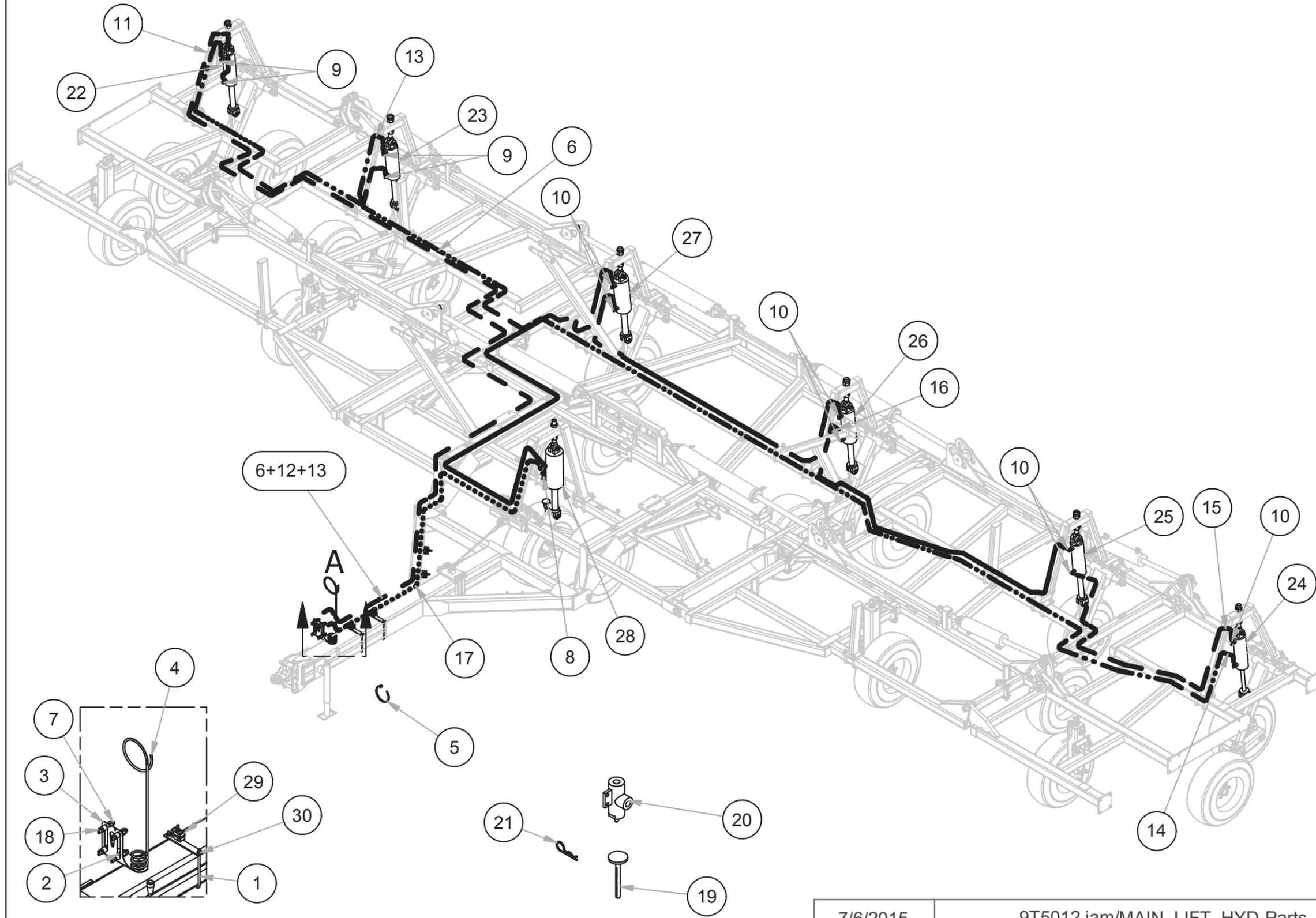
PARTS LIST

| PART 2 WING PARTS LIST | | | | |
|------------------------|----|------------------|-------|--|
| Ref | FN | Part Number | Model | Description |
| 1 | | 7T2532 | | TUBE |
| 2 | | 8K1100 | | HUB&AXLE ASSY 614(GBGI-2"RCVR) |
| 3 | | 8K5515 | | U-BOLT 3/4" X 4-1/16 X 6" SQ |
| 4 | | 8K7033 | | 11L X 15 LRF ON 15X8X6 WHEEL |
| 5 | | 8L0300 | | EYE BOLT 1/2"-13NC X 1"EYE X 4" |
| 6 | | 8R6914 | | BOLT WHEEL 9/16"-18 UNF- 1.25" |
| 7 | | 8S0660 | | SPRING 1.42"ODX 7.81"EXT PNTD |
| 8 | | 8S3059 | | CAPLUG FITS 2.067"ID TUBE96- |
| 9 | | 8T0400 | | FC 7T0400 PNTD |
| 10 | | 8T1040B | | HYD CYL 4.0" X10" FOR 5PLX |
| 11 | | 8T2514 | | SPACER PART 1 TO 2 LINK |
| 12 | | 8T2520 | | ROLLER PART 2 WING LIFT |
| 13 | | 8T2530 | | ROLLER W/TUBE |
| 14 | | 8T3590 | | LINK PART 1 TO 2 FOR 5 PLEX |
| 15 | | 8T3606 | | PART 2 HINGE PIN 5 PLEX |
| 16 | | 8T3608 | | PIN HARDENED |
| 17 | | 8T3620 | | PIN 1-1/2 X 12-1/2" HRDND&ZINC |
| 18 | | 8T3625 | | PIN, W/ WELDED WASHER- HARDENED |
| 19 | | 8T3640 | | PIN 1-1/2" X 19" HARDENED 98- |
| 20 | | 8T4046 8T4048 | | WING 6' FOR 5-PLEX LH WING 6' FOR 5-PLEX RH |
| 21 | | 8T4096 | | GAUGE WHEEL ASSY W/O HUB 04- |
| 22 | | 8T4100 | | PIVOT W/BLTPLATE LIFTARM 96- |
| 23 | | 8T4140 | | LIFTARM REAR WLKNG TNDM CH96- |
| 24 | | 8T4168 | | WALKNG TNDM W/ANGLD4X4RGHT99- |
| 25 | | 8T4174 | | FLAT |
| 26 | | 8T4175 | | REAR SPRING ATTCH BRCKT 50'-60' |
| 27 | | 8T4176 8T4177 | | SUPPORT-WHL SPRG LARM LEFT99- SUPPORT-WHL SPRG LARM RGHT99- |
| 28 | | 8T4178 8T4179 | | FRONT-SPRG I-BLT ATTCH LEFT 99- FRONT-SPRG I-BLT ATTCH RGHT 99- |
| 29 | | 8T4224 | | CYL ATTCH "A" REAR CHSL 99- |
| 30 | | 8X0041 | | BOLT 7/16"-14NC X 3" GR5 YZ |
| 31 | | 8X0044 | | BOLT 7/16"-14NC X 3-1/2"GR5 YZ |
| 32 | | 8X0074 | | BOLT 1/2"-13NC X 4-1/2" GR5 YZ |
| 33 | | 8X0077 | | BOLT 1/2"-13NC X 7-1/2" GR5 YZ |
| 34 | | 8X0132 | | BOLT 7/8"-9NC X 2-1/2" GR5 YZ |
| 35 | | 8X0234 | | NUT 7/16"-14NC NY-LOCK GR2 YZ |
| 36 | | 8X0240 | | NUT 1/2"-13NC HEX GR2 YZ |
| 37 | | 8X0242 | | NUT 1/2"-13NC NY-LOCK GR2 YZ |
| 38 | | 8X0260 | | NUT 3/4"-10NC HEX GR2 YZ |
| 39 | | 8X0268 | | NUT 7/8"-9NC HEX GR2 YZ |
| 40 | | 8X0303 | | LOCKWASHER 1/2" YLW ZNC |
| 41 | | 8X0306 | | LOCKWASHER 3/4" YLW ZNC |
| 42 | | 8X0307 | | LOCKWASHER 7/8" YLW ZNC |
| 43 | | 8X0355 | | WASHER 1-1/2"IDX2.25"X10GA PLN |
| 44 | | 8X0365 | | WASHER 2-1/2"IDX3.5"X 3/16"PLN |
| 45 | | 8X0523 | | ROLL PIN 5/16" X 2-1/2" PLN |

PARTS LIST

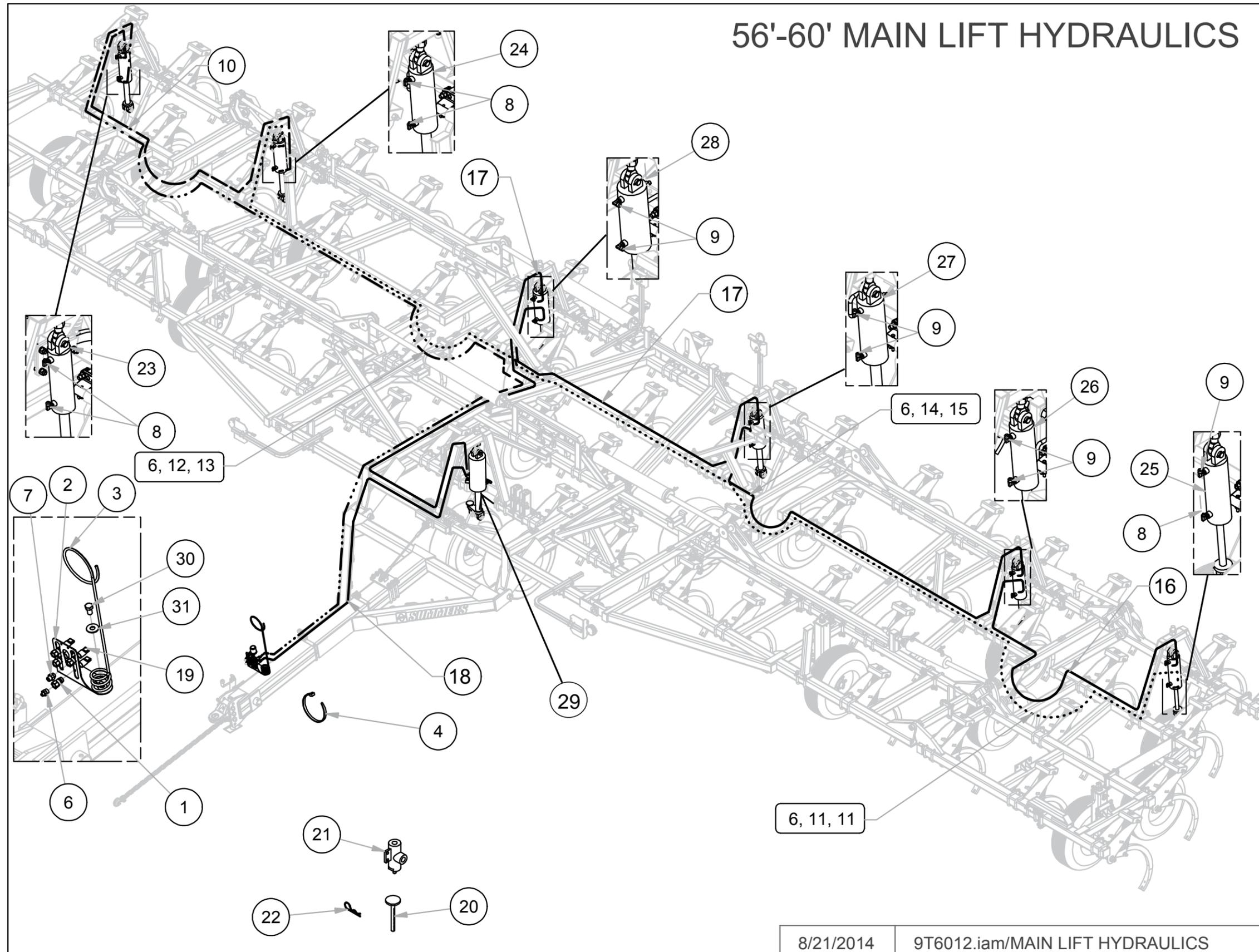
| STANDARD CENTER MAIN LIFT HYDRAULICS PARTS LIST (50'-54') | | | | |
|---|----|-------------|-------|---------------------------------------|
| Ref | FN | Part Number | Model | Description |
| 1 | | 8C1710 | | U-BOLT 3/8" X 8" X 9" SQ |
| 2 | | 8D3212 | | 3/4" ORB TIP ISO |
| 3 | | 8D8490 | | PIONEER TIP HLDR BNT |
| 4 | | 8D8500 | | HYD HOSE HOLDER PNTD BLK 91- |
| 5 | | 8G2285 | | NYLON TIE GREEN |
| 6 | | 8J5100 | | #6 JIC(M) X #6 JIC(M) UNION |
| 7 | | 8J5510 | | 3/4" ORB X #6 JIC(M) |
| 8 | | 8J5520 | | 3/4" ORB X #10 STR |
| 9 | | 8J6010 | | 3/4"-16ORB X #6JIC(M) 90° ADP |
| 10 | | 8J6020 | | 3/4"-16 ORB X #10JIC(M) 90° ADP |
| 11 | | 8N3204 | | 3/8"X204" HYD HOSE #6FJX3000PSI |
| 12 | | 8N3312 | | 3/8"X312" HYD HOSE #6FJX3000PSI |
| 13 | | 8N3348 | | 3/8"X348" HYD HOSE #6FJX3000PSI |
| 14 | | 8N3606 | | 3/8"X606" HYD HOSE #6FJX3000PSI |
| 15 | | 8N4216 | | 1/2"X216" HYD HOSE #10FJX3000PSI |
| 16 | | 8N4228 | | 1/2"X228" HYD HOSE #10FJX3000PSI |
| 17 | | 8N6354 | | 3/8"X354" HYD HOSE #10FJX3000PSI |
| 18 | | 8S3095 | | HYD CAPLUG |
| | | 8T1004 | | PLUNGER REPAIR KIT (96-02) 1/4" SHAFT |
| 19 | | 8T1006 | | PLUNGER |
| | | 8T1008 | | PLUNGER REPAIR KIT (02-) 3/8" SHAFT |
| 20 | | 8T1010 | | POPPET |
| 21 | | 8T1015 | | HAIRPIN CLIP |
| 22 | | 8T1035 | | HYD CYL 3.5" X 10" R35SM-10BP |
| 23 | | 8T1037 | | HYD CYL 3.75" X 10" R3755M-10BP |
| 24 | | 8T1040B | | HYD CYL 4.0" X 10" FOR 5PLX |
| 25 | | 8T1045 | | HYD CYL 4.5" X 10" REPHASE 96- |
| 26 | | 8T1050 | | HYD CYL 5.0" X 10" REPHASE 96- |
| 27 | | 8T1055 | | HYD CYL 5.5" X 10" REPHASE 96- |
| 28 | | 8T1060 | | HYD CYL 6" X 10" W/STRK CNTRL 96- |
| 29 | | 8W1398 | | HOLDDOWN HOSE 8" WIDTH |
| 30 | | 8X0203 | | NUT 3/8"-16NC SER FLANG GR2ZDI |

50'-54' MAIN LIFT HYDRAULICS



7/6/2015 | 9T5012.iam/MAIN_LIFT_HYD-Parts

56'-60' MAIN LIFT HYDRAULICS



8/21/2014 9T6012.iam/MAIN LIFT HYDRAULICS

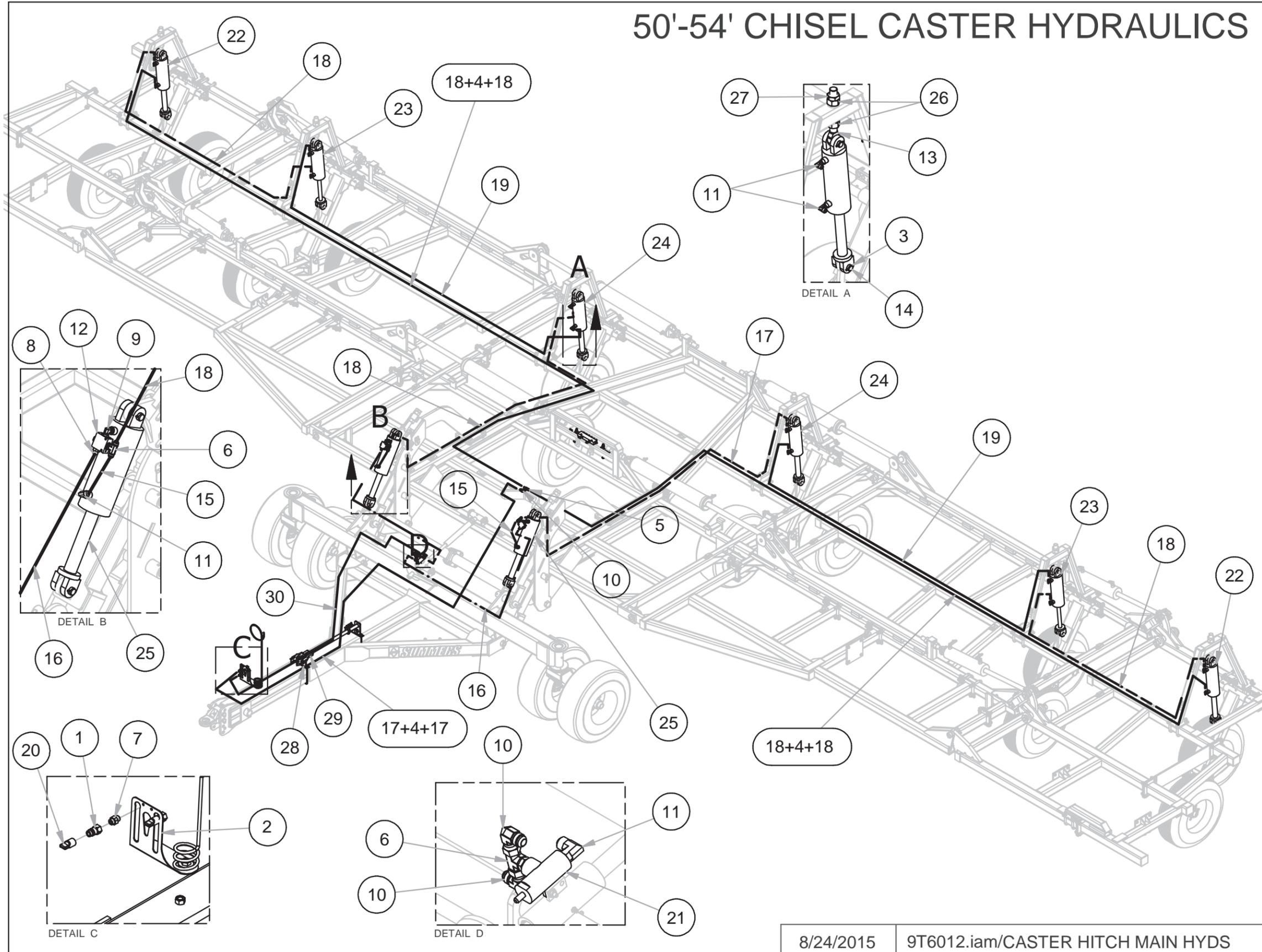
PARTS LIST

| STANDARD CENTER MAIN LIFT HYDRAULICS PARTS LIST (56'-60') | | | | |
|---|----|-------------|-------|---------------------------------------|
| Ref | FN | Part Number | Model | Description |
| 1 | | 8D3212 | | 3/4" ORB TIP ISO |
| 2 | | 8D8490 | | PIONEER TIP HLDR BNT |
| 3 | | 8D8500 | | HYD HOSE HOLDER PNTD BLK 91- |
| 4 | | 8G2285 | | NYLON TIE GREEN |
| 5 | | 8J5100 | | #6 JIC(M) X #6 JIC(M) UNION |
| 6 | | 8J5510 | | 3/4" ORB X #6 JIC(M) |
| 7 | | 8J5520 | | 3/4" ORB X #10 STR |
| 8 | | 8J6010 | | 3/4"-16ORB X #6JIC(M) 90° ADP |
| 9 | | 8J6020 | | 3/4"-16 ORB X #10JIC(M) 90° ADP |
| 10 | | 8N3204 | | 3/8"X204" HYD HOSE #6FJX3000PSI |
| 11 | | 8N3330 | | 3/8"X330" HYD HOSE #6FJX3000PSI |
| 12 | | 8N3348 | | 3/8"X348" HYD HOSE #6FJX3000PSI |
| 13 | | 8N3360 | | 3/8"X360" HYD HOSE #6FJX3000PSI |
| 14 | | 8N4120 | | 1/2"X120" HYD HOSE #10FJX3000PSI |
| 15 | | 8N4138 | | 1/2"X138" HYD HOSE #10FJX3000PSI |
| 16 | | 8N4216 | | 1/2"X216" HYD HOSE #10FJX3000PSI |
| 17 | | 8N4228 | | 1/2"X228" HYD HOSE #10FJX3000PSI |
| 18 | | 8N6354 | | 3/4"X354" HYD HOSE #10FJX3000PSI |
| 19 | | 8S3095 | | HYD CAPLUG |
| | | 8T1004 | | PLUNGER REPAIR KIT (96-02) 1/4" SHAFT |
| 20 | | 8T1006 | | PLUNGER |
| | | 8T1008 | | PLUNGER REPAIR KIT (02-) 3/8" SHAFT |
| 21 | | 8T1010 | | POPPET |
| 22 | | 8T1015 | | HAIRPIN CLIP |
| 23 | | 8T1035 | | HYD CYL 3.5" X 10" R35SM-10BP |
| 24 | | 8T1037 | | HYD CYL 3.75" X 10" R375SM-10BP |
| 25 | | 8T1040B | | HYD CYL 4.0" X 10" FOR 5PLX |
| 26 | | 8T1045 | | HYD CYL 4.5" X 10" REPHASE 96- |
| 27 | | 8T1050 | | HYD CYL 5.0" X 10" REPHASE 96- |
| 28 | | 8T1055 | | HYD CYL 5.5" X 10" REPHASE 96- |
| 29 | | 8T1060 | | HYD CYL 6" X 10" W/STRK CNTRL 96- |
| 30 | | 8X0110 | | BOLT 3/4"-10NC X 1-1/4" GR5 YZ |
| 31 | | 8X0318 | | WASHER 3/4"(13/16"ID)FLAT YZ |

PARTS LIST

| CASTER HITCH HYDRAULICS PARTS LIST (50'-54') | | | | |
|--|----|--------------|-------|------------------------------------|
| Ref | FN | Parts Number | Model | Description |
| 1 | | 8D3212 | | MALE TIP 3/4"-16 ORB ISO |
| 2 | | 8D8490 | | PIONEER/ISO TIP HLDR BNT |
| 3 | | 8D9108 | | ROLL PIN 1/4 X 2" YLW ZNC |
| 4 | | 8J5110 | | #10 JIC(M) X #10 JIC(M) UNION |
| 5 | | 8J5310 | | #10 JIC (MALE) 3X TEE |
| 6 | | 8J5312 | | TEE #10JIC(M2X)X3/4-16ORBBRNCH |
| 8 | | 8J5520 | | 3/4" -16 ORB X #10 JIC(M) STR |
| 9 | | 8J5690 | | 3/4-16X3/4-16 ORB M-SW90*UNION |
| 10 | | 8J5710 | | #10 JIC(F-SW)X#10 JIC(M)90*ADP |
| 11 | | 8J6020 | | 3/4"-16 ORB X #10 JIC(M)90*ADP |
| 12 | | 8J7108 | | CHECKVLV 3/4-16ORB PILOT-OPEN |
| 13 | | 8K1755 | | EYEBOLT 1.5DIA X 1.26"EYE X 14" YZ |
| 14 | | 8K9106 | | PIN 1-1/4 X 4-3/8" HARDENED |
| 15 | | 8N4010 | | 1/2" X 10" HYD HOSE #10FJX3000PSI |
| 16 | | 8N4060 | | 1/2" X 60" HYD HOSE #10FJX3000PSI |
| 17 | | 8N4160 | | 1/2" X 160" HYD HOSE #10FJX3000PSI |
| 18 | | 8N4216 | | 1/2" X 216" HYD HOSE #10FJX3000PSI |
| 19 | | 8N4228 | | 1/2" X 228" HYD HOSE #10FJX3000PSI |
| 20 | | 8S3095 | | CAPLUG FITS ISO HYD COUPLR 08- |
| 21 | | 8T1010 | | POPPET ASSY HD BLT-ON RAM02- |
| 22 | | 8T1037 | | HYD CYL 3.75 X 10"R3755M-10BP |
| 23 | | 8T1040B | | HYD CYL 4.0 X10" FOR 5PLX |
| 24 | | 8T1045 | | HYD CYL 4.5 X 10" REPHASE 96- |
| 25 | | 8T1050 | | HYD CYL 5.0 X 10" REPHASE 96- |
| 26 | | 8X0285 | | NUT 1-1/2"-6NC HEX GR2 YZ |
| 27 | | 8X0286 | | NUT 1-1/2"-6NC JAM GR2 YZ |
| 28 | | 8CC0600 | | HOLDDOWN HOSE 8" WDNH W/WRNCH |
| 29 | | 8K3002 | | GANG WRENCH |
| 30 | | 8N6354 | | 3/4" X 354" HYD HOSE #10FJX3000PSI |

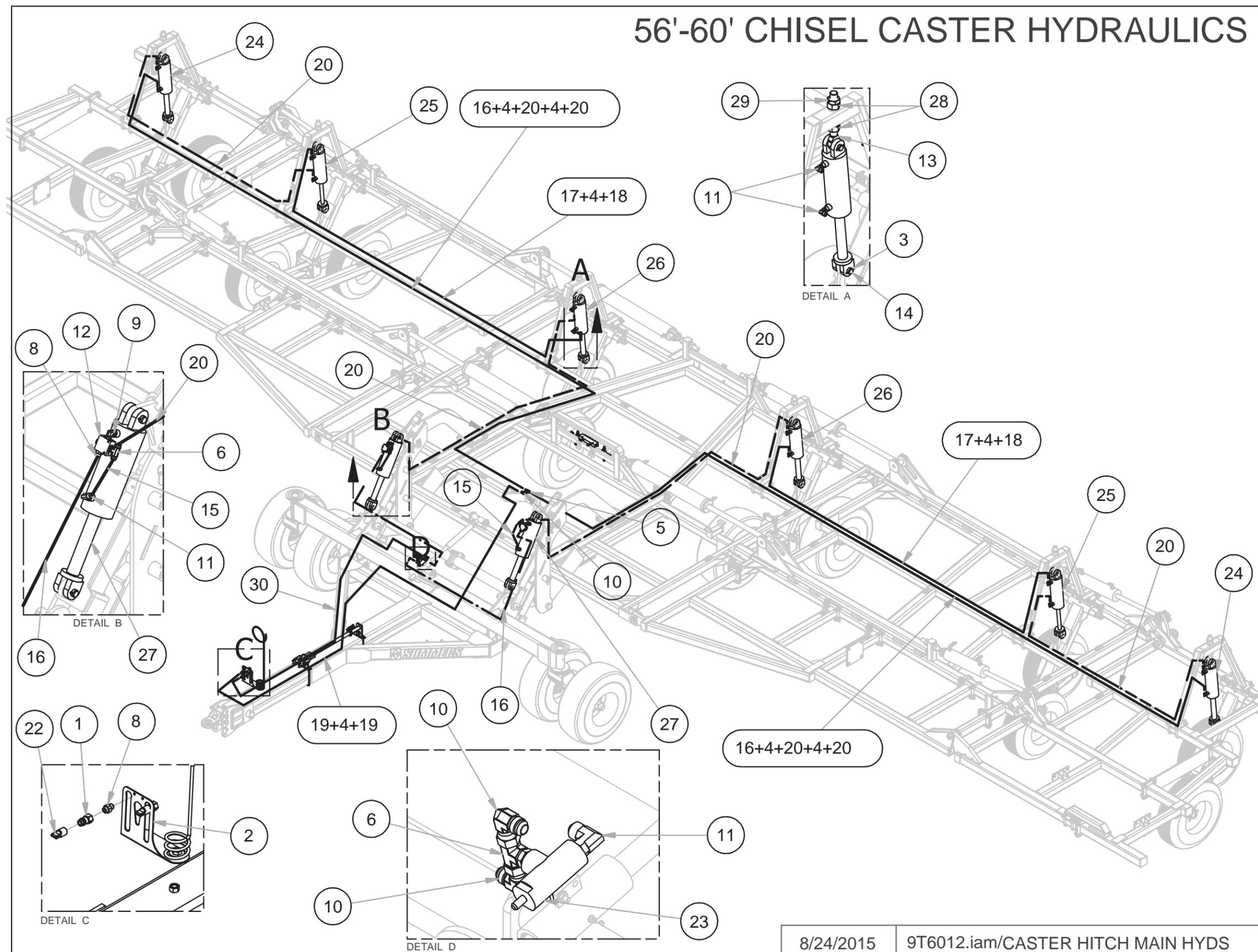
50'-54' CHISEL CASTER HYDRAULICS



8/24/2015

9T6012.iam/CASTER HITCH MAIN HYDS

56'-60' CHISEL CASTER HYDRAULICS



8/24/2015 9T6012.iam/CASTER HITCH MAIN HYDS

PARTS LIST

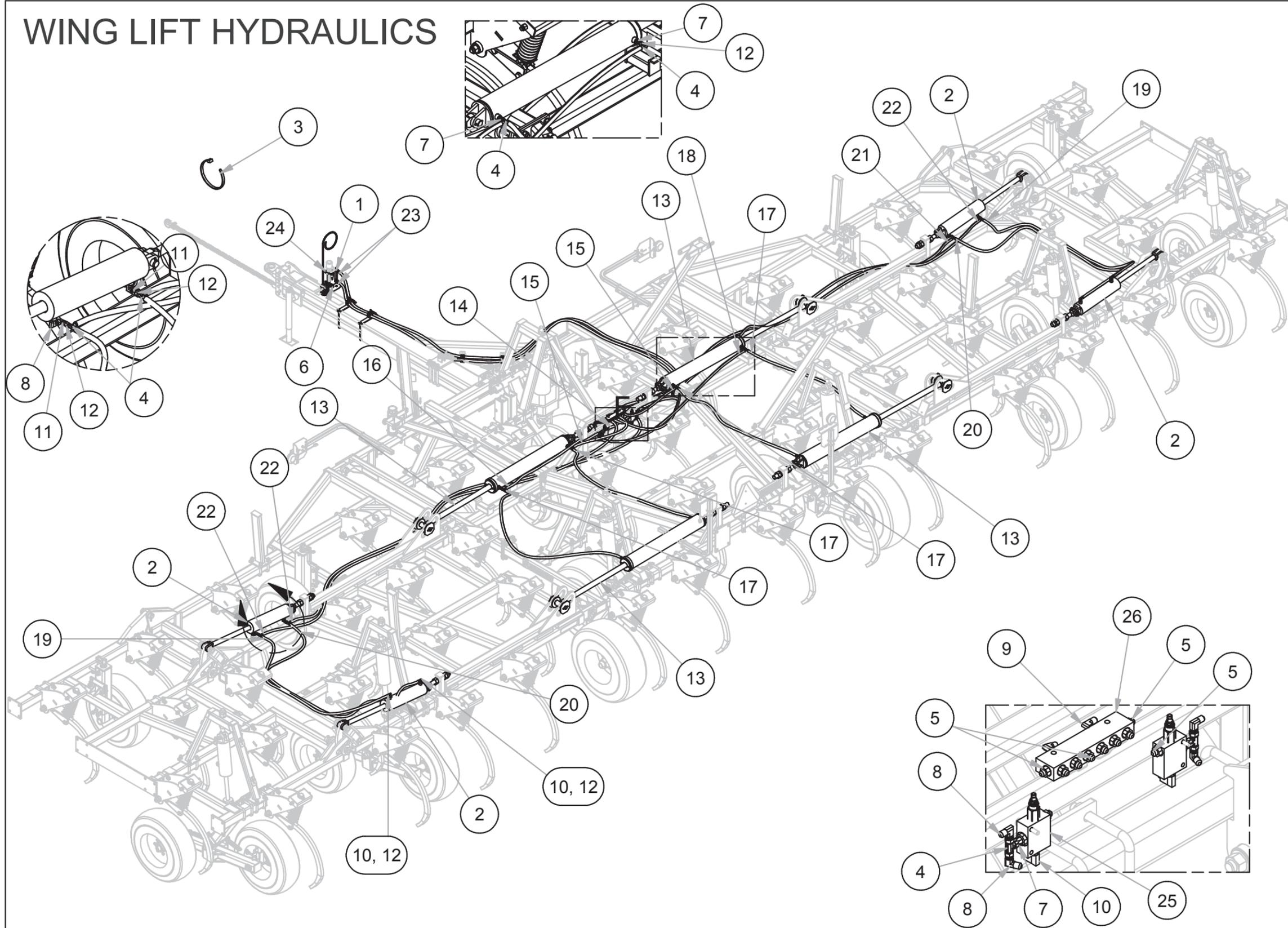
CASTER HITCH HYDRAULICS PARTS LIST (56'-60')

| Ref | FN | Parts Number | Model | Description |
|-----|----|--------------|-------|------------------------------------|
| 1 | | 8D3212 | | MALE TIP 3/4"-16 ORB ISO |
| 2 | | 8D8490 | | PIONEER/ISO TIP HLDR BNT |
| 3 | | 8D9108 | | ROLL PIN 1/4 X 2" YLW ZNC |
| 4 | | 8J5110 | | #10 JIC(M) X #10 JIC(M) UNION |
| 5 | | 8J5310 | | #10 JIC (MALE) 3X TEE |
| 6 | | 8J5312 | | TEE #10JIC(M2X)X3/4-16ORBBRNCH |
| 8 | | 8J5520 | | 3/4" -16 ORB X #10 JIC(M) STR |
| 9 | | 8J5690 | | 3/4-16X3/4-16 ORB M-SW90*UNION |
| 10 | | 8J5710 | | #10 JIC(F-SW)X#10 JIC(M)90*ADP |
| 11 | | 8J6020 | | 3/4"-16 ORB X #10 JIC(M)90*ADP |
| 12 | | 8J7108 | | CHECKVLV 3/4-16ORB PILOT-OPEN |
| 13 | | 8K1755 | | EYEBOLT 1.5DIA X 1.26"EYE X 14" YZ |
| 14 | | 8K9106 | | PIN 1-1/4 X 4-3/8" HARDENED |
| 15 | | 8N4010 | | 1/2" X 10" HYD HOSE #10FJX3000PSI |
| 16 | | 8N4060 | | 1/2" X 60" HYD HOSE #10FJX3000PSI |
| 17 | | 8N4120 | | 1/2" X 120" HYD HOSE #10FJX3000PSI |
| 18 | | 8N4138 | | 1/2" X 138" HYD HOSE #10FJX3000PSI |
| 19 | | 8N4160 | | 1/2" X 160" HYD HOSE #10FJX3000PSI |
| 20 | | 8N4216 | | 1/2" X 216" HYD HOSE #10FJX3000PSI |
| 22 | | 8S3095 | | CAPLUG FITS ISO HYD COUPLR 08- |
| 23 | | 8T1010 | | POPPET ASSY HD BLT-ON RAM02- |
| 24 | | 8T1037 | | HYD CYL 3.75 X 10"R3755M-10BP |
| 25 | | 8T1040B | | HYD CYL 4.0 X10" FOR 5PLX |
| 26 | | 8T1045 | | HYD CYL 4.5 X 10" REPHASE 96- |
| 27 | | 8T1050 | | HYD CYL 5.0 X 10" REPHASE 96- |
| 28 | | 8X0285 | | NUT 1-1/2"-6NC HEX GR2 YZ |
| 29 | | 8X0286 | | NUT 1-1/2"-6NC JAM GR2 YZ |
| 30 | | 8N6354 | | 3/4" X 354" HYD HOSE #10FJX3000PSI |

PARTS LIST

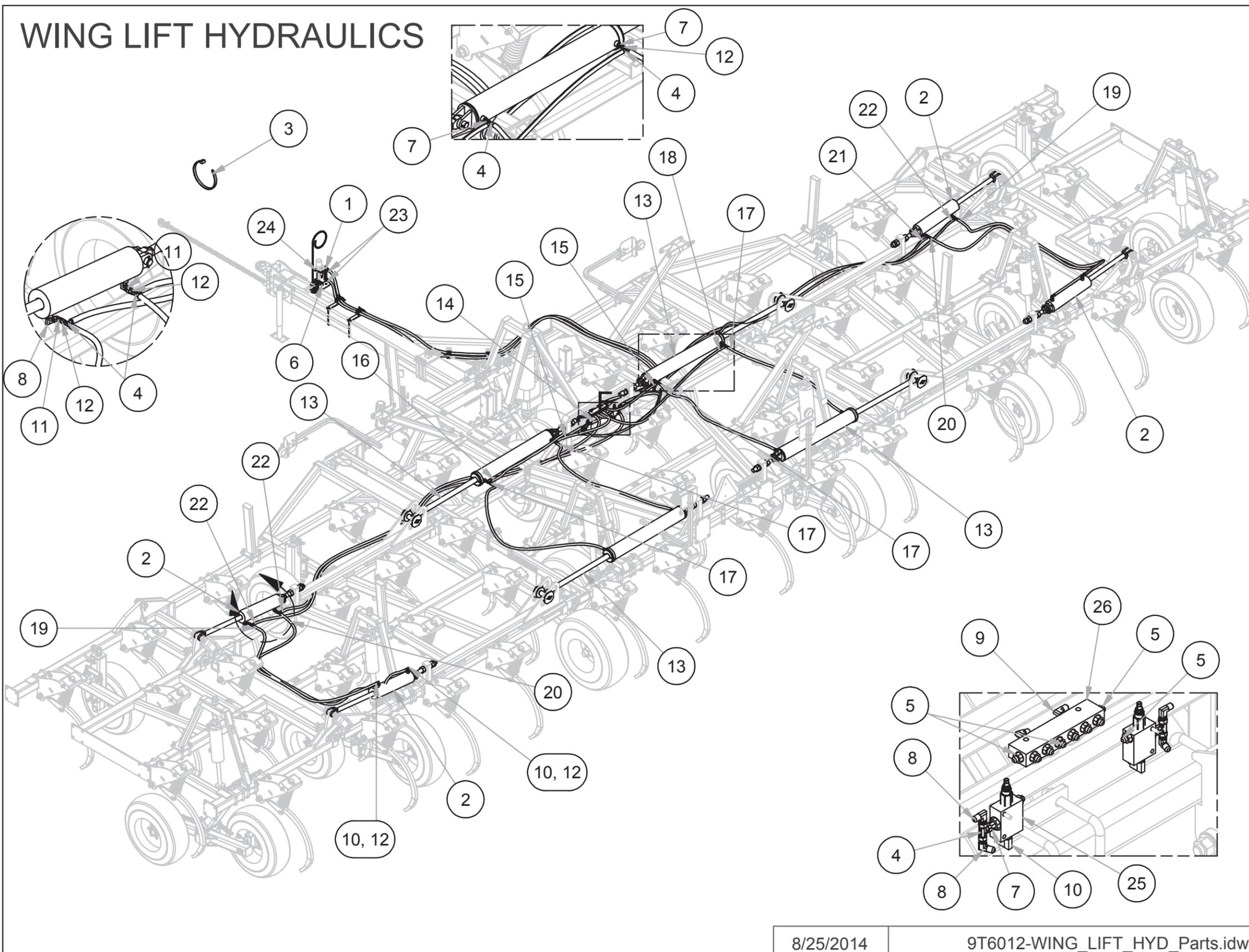
| WING LIFT HYDRAULICS PARTS LIST (50'-54') | | | | |
|---|----|--------------|-------|-------------------------------------|
| Ref | FN | Parts Number | Model | Description |
| 1 | | 8D3212 | | MALE TIP 3/4"-16 ORB PIONEER |
| 2 | | 8D9466 | | HYD CYLINDER 4" X 16" 3000PSI |
| 3 | | 8G2284 | | NYLON TIE YELLOW |
| 4 | | 8J5300 | | #6 JIC (MALE) 3X TEE |
| 5 | | 8J5500 | | 9/16"-18 ORB X #6 JIC(M) STR |
| 6 | | 8J5510 | | 3/4"-16 ORB X #6 JIC(M) STR |
| 7 | | 8J5620 | | 3/4"-16 ORB X #6 JIC(F-SW) STR |
| 8 | | 8J5700 | | #6 JIC (F-SW) X #6 JIC(M) 90° ADP |
| 9 | | 8J6000 | | 9/16"-18 ORB X #6 JIC(M) 90° ADP |
| 10 | | 8J6010 | | 3/4"-16 ORB X #6 JIC(M) 90° ADP |
| 11 | | 8J6060 | | 3/4"-16 ORB X #6 JIC(F) 90° ADP |
| 12 | | 8J7216 | | #6JIC(M) X 6JIC(F) 1/16" RSTR BLK 2 |
| 13 | | 8K9650 | | HYD CYLINDER 5" X 33" |
| 14 | | 8N3018 | | 3/8X18" HYD HOSE #6FJX3000PSI |
| 15 | | 8N3035 | | 3/8X35" HYD HOSE #6FJX3000PSI |
| 16 | | 8N3060 | | 3/8X60" HYD HOSE #6FJX3000PSI |
| 17 | | 8N3070 | | 3/8X70" HYD HOSE #6FJX3000PSI |
| 18 | | 8N3084 | | 3/8X84" HYD HOSE #6FJX3000PSI |
| 19 | | 8N3096 | | 3/8X96" HYD HOSE #6FJX3000PSI |
| 20 | | 8N3124 | | 3/8X124" HYD HOSE #6FJX3000PSI |
| 21 | | 8N3204 | | 3/8X204" HYD HOSE #6FJX3000PSI |
| 22 | | 8N3228 | | 3/8X228" HYD HOSE #6FJX3000PSI |
| 23 | | 8N3330 | | 3/8X330" HYD HOSE #6FJX3000PSI |
| 24 | | 8S3095 | | HYD CAPLUG |
| 25 | | 8T8100 | | WING FOLD SEQUENCE VALVE 99- |
| 26 | | 8W1360 | | MANIFOLD BLOCK 10PORT |

WING LIFT HYDRAULICS



8/18/2014

9T5012.iam/WING_LIFT_HYD



8/25/2014

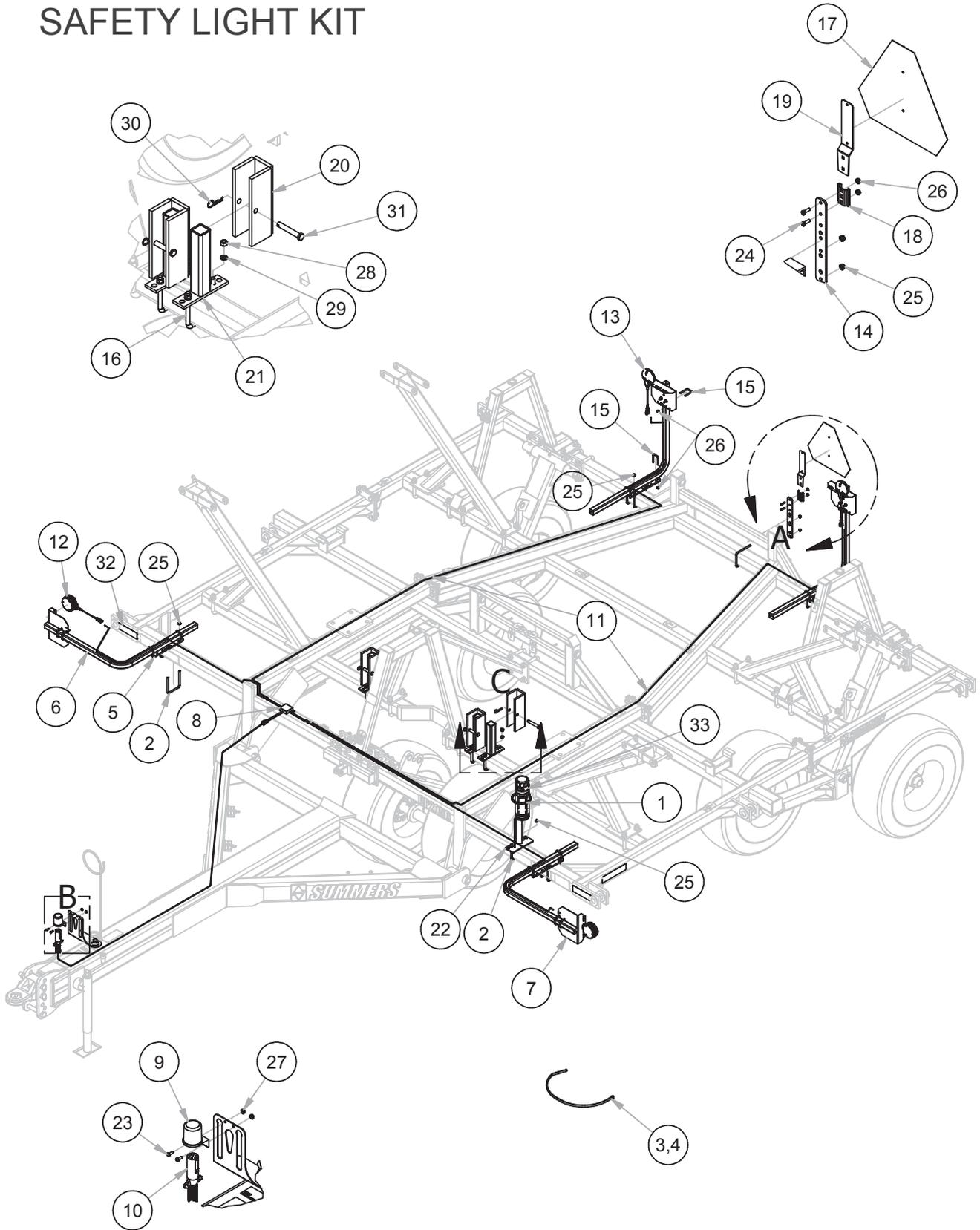
9T6012-WING_LIFT_HYD_Parts.idw/

PARTS LIST

| WING LIFT HYDRAULICS PARTS LIST (56'-60') | | | | |
|---|----|-------------|-------|--------------------------------------|
| Ref | FN | Part Number | Model | Description |
| 1 | | 8D3212 | | MALE TIP 3/4"-16 ORB PIONEER |
| 2 | | 8D9466 | | HYD CYLINDER 4" X 16" 3000PSI |
| 3 | | 8G2284 | | NYLON TIE YELLOW |
| 4 | | 8J5300 | | #6 JIC (MALE) 3X TEE |
| 5 | | 8J5500 | | 9/16"-18 ORB X #6 JIC(M) STR |
| 6 | | 8J5510 | | 3/4"-16 ORB X #6 JIC(M) STR |
| 7 | | 8J5620 | | 3/4"-16 ORB X #6 JIC(F-SW) STR |
| 8 | | 8J5700 | | #6 JIC (F-SW) X #6 JIC(M) 90° ADP |
| 9 | | 8J6000 | | 9/16"-18 ORB X #6 JIC(M) 90° ADP |
| 10 | | 8J6010 | | 3/4"-16 ORB X #6 JIC(M) 90° ADP |
| 11 | | 8J6060 | | 3/4"-16 ORB X #6 JIC(F) 90° ADP |
| 12 | | 8J7216 | | #6JIC(M) X #6JIC(F) 1/16" RSTR BLK 2 |
| 13 | | 8K9650 | | HYD CYLINDER 5" X 33" |
| 14 | | 8N3018 | | 3/8X18" HYD HOSE #6FJX3000PSI |
| 15 | | 8N3035 | | 3/8X35" HYD HOSE #6FJX3000PSI |
| 16 | | 8N3060 | | 3/8X60" HYD HOSE #6FJX3000PSI |
| 17 | | 8N3070 | | 3/8X70" HYD HOSE #6FJX3000PSI |
| 18 | | 8N3084 | | 3/8X84" HYD HOSE #6FJX3000PSI |
| 19 | | 8N3096 | | 3/8X96" HYD HOSE #6FJX3000PSI |
| 20 | | 8N3124 | | 3/8X124" HYD HOSE #6FJX3000PSI |
| 21 | | 8N3228 | | 3/8X228" HYD HOSE #6FJX3000PSI |
| 22 | | 8N3252 | | 3/8X252" HYD HOSE #6FJX3000PSI |
| 23 | | 8N3330 | | 3/8X330" HYD HOSE #6FJX3000PSI |
| 24 | | 8S3095 | | HYD CAPLUG |
| 25 | | 8T8100 | | WING FOLD SEQUENCE VALVE 99- |
| 26 | | 8W1360 | | MANIFOLD BLOCK 10PORT |

PARTS LIST

SAFETY LIGHT KIT



7/6/2015

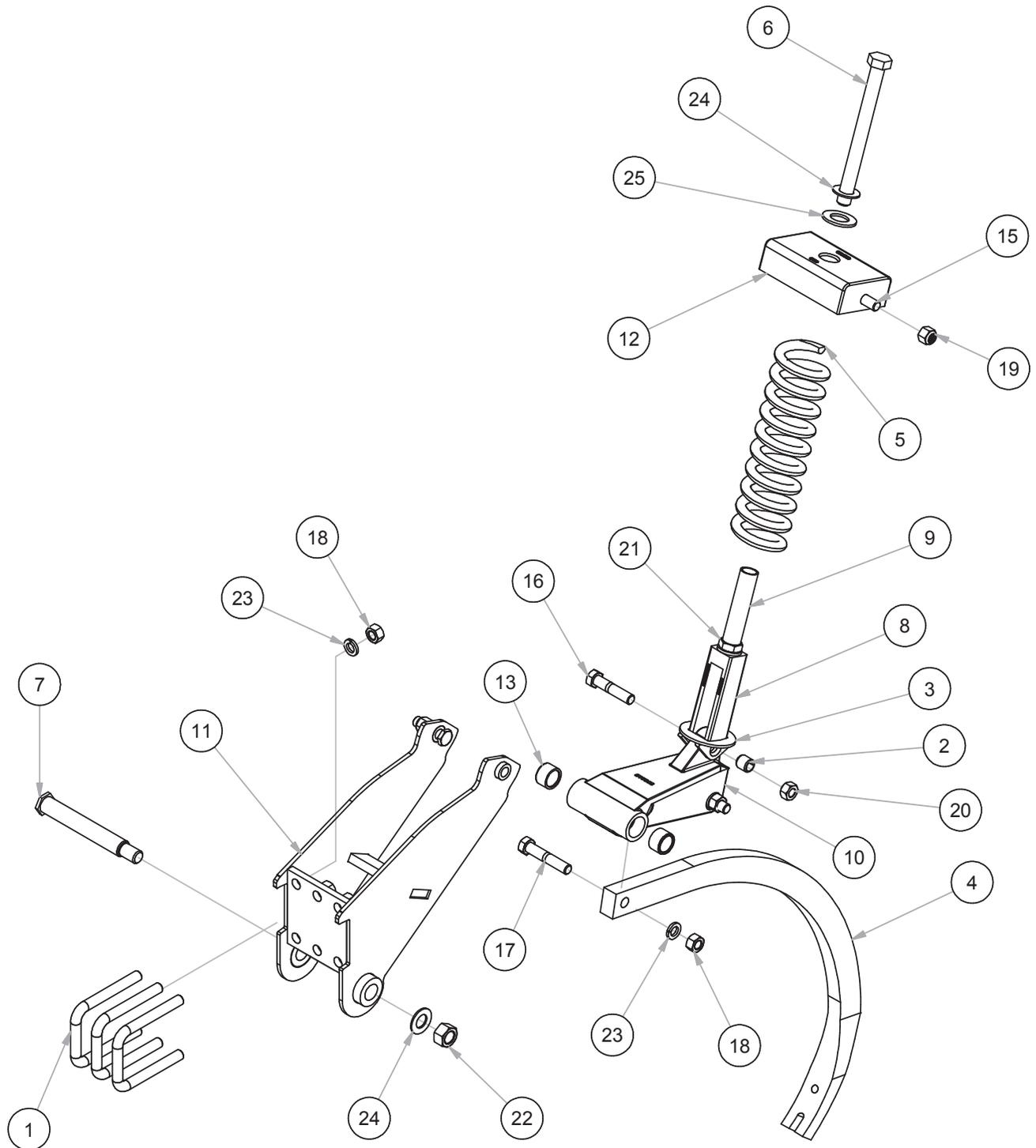
9T5012.iam/SAFETY

PARTS LIST

| SAFETY LIGHT KIT PART NUMBERS | | | | |
|-------------------------------|----|--------------|-------|--------------------------------------|
| Item | FN | Part Numbers | Model | Description |
| 1 | | 8A1004 | | CLAMP HOSE 5" #72 |
| 2 | | 8A1156 | | U-BOLT 3/8" X 4-1/16" X 5" SQ |
| 3 | | 8A4048 | | 11" NYL TIE |
| 4 | | 8A4052 | | 15-1/4" NYL TIE |
| 5 | | 8K8000 | | STL 7K2045 3/8" X3.5" PNTDLGHT |
| 6 | | 8K8010 | | TUBE LGHT BRCKT1.5" SQ55.5"00- |
| 7 | | 8K8020 | | MOUNTNG BRCKT LIGHT 00- |
| 8 | | 8K8030A | | MODULE AG ENHNCDW/BRAKE6PIN08- |
| 9 | | 8K8067 | | DUST CAP FOR 7PIN CONNECT00- |
| 10 | | 8K8070B | | 7-PIN MAIN HARNESS |
| 12 | | 8K8075A | | EXT HRNSS NONDRAWBR DEUTSCH 07- |
| 12 | | 8K8090B | | 2 WIRE LED AMBER LIGHT W/DEUTSCH |
| 13 | | 8K8095B | | 3 WIRE LED RED LIGHT W/DEUTSCH |
| 14 | | 8K8200 | | BRCKT SMV ATTCH 4-8"FRAME98- |
| 15 | | 8L0258 | | U-BOLT 5/16" X 1-1/2" X 2-1/2" SQ |
| 16 | | 8S0340 | | U-BOLT 1/2" X 4" X 5-1/4" SQ. |
| 17 | | 8S1120 | | SIGN SLOW MOVING VEHICLE(SMV) |
| 18 | | 8S1124 | | MOUNTING SOCKET SMV SIGN YZ |
| 19 | | 8S1126 | | MNT SPADE W/HRDWR SMV SIGN |
| 20 | | 8T4350 | | CYL LOCK |
| 21 | | 8T4380 | | HOLDER CYL LOCK 4"&6" MNT 96- |
| 22 | | 8T4385 | | HOLDER MANUAL-PAK |
| 23 | | 8X0000 | | BOLT 1/4"-20X3/4"FULLTHDGR5 YZ |
| 24 | | 8X0021A | | BOLT 5/16"-18NC X 1" GR5 YZ |
| 25 | | 8X0203 | | NUT 3/8"-16NC SER FLANG GR2 YZ |
| 26 | | 8X0211 | | NUT 5/16"-18NC SERFLANG GR2 YZ |
| 27 | | 8X0223 | | NUT 1/4"-20NC SER FLANG GR2 YZ |
| 28 | | 8X0240 | | NUT 1/2"-13NC HEX GR2 YZ |
| 29 | | 8X0303 | | LOCKWASHER 1/2" YLW ZNC |
| 30 | | 8X0402 | | HAIR PIN CLIP 1/8" X 2-9/16" |
| 31 | | 8X0440 | | CLEVIS PIN 5/8" X 3-7/8" YZ |
| 32 | | 8Z0800 | | REFLECTOR - YELLOW - ADHESIVE BACKED |
| 33 | | 8Z1000 | | MANUAL-PAK 3DIA X 11.75" 09- |

PARTS LIST

TRIP ASSEMBLY



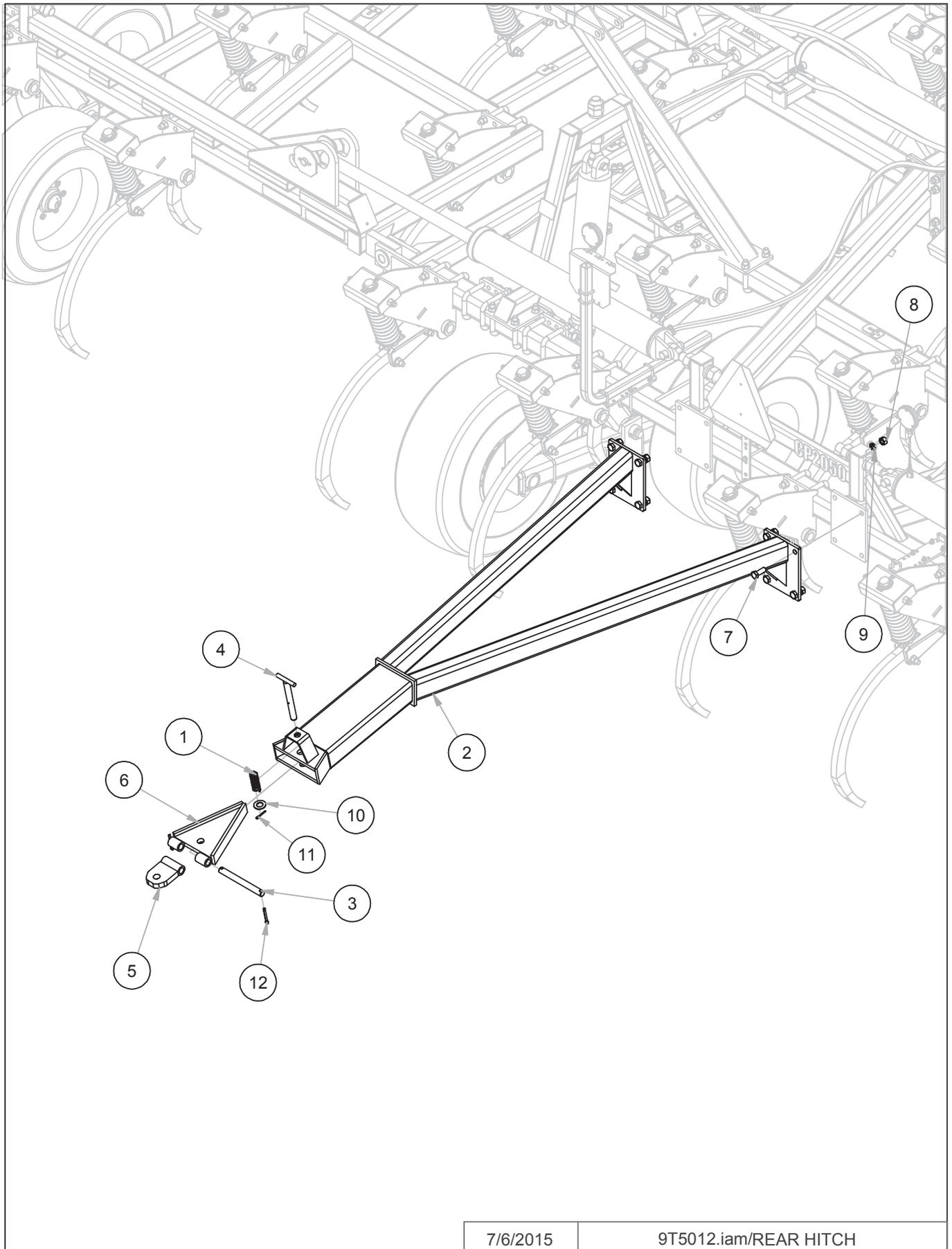
8/13/2014

Trip Assembly.iam/

PARTS LIST

| TRIP ASSEMBLY PARTS LIST | | | | |
|--------------------------|----|-------------|-------|--|
| Ref | FN | Part Number | Model | Description |
| 1 | | 8K5515 | | U-BOLT 3/4" X 4-1/16" X 6" SQ |
| 2 | | 8R6805 | | SPLIT STEEL BUSHING 1" X .75" ID- 1" |
| 3 | | 8T0100 | | WAQSHER SPRG BASE SQHL TRIP 97- |
| 4 | | 8T0500 | | SHANK CHISEL EDGE-ON |
| 5 | | 8T0600 | | SPRING CHSL TRIP 700# BLACK 96- |
| 6 | | 8T3200 | | BOLT 1"-8NC X 11" W/6.5" THD GR5 YZ |
| 7 | | 8T3300 | | BOLT PIVOT CHSL TRP & WNLFT YZ |
| 8 | | 8T5000 | | HOLDER SPRNG-TRIP ASSY CAST 96- |
| 9 | | 8T5020 | | PIPE 1" X 5" - 9-1/16" SPRG STP CP 96- |
| 10 | | 8T5050 | | HOLDER SHANK TRIP W/BSHNGS 96- |
| 11 | | 8T5150 | | BRCKT CHSL TRIP ASSY MNTNG 96- |
| 12 | | 8T5200 | | CAP SWIVEL CAST HRDND CHSL 96- |
| 13 | | 8T6810 | | PLST BSH 1-5/8" X 1.25"ID - 1" 96- |
| 14 | | 8T7500 | | SPRING CHSL TRIP 700#BLK03- |
| 15 | | 8X0106 | | BOLT 3/4" X 2.75" W/1.38" THD GR8 YZ |
| 16 | | 8X0115B | | BOLT 3/4"10NC X 3-1/2" GR8 YZ |
| 17 | | 8X0118 | | BOLT 3/4-10NC X 4" GR5 YZ |
| 18 | | 8X0260 | | NUT 3/4"-10NC HEX GR2 YZ |
| 19 | | 8X0261 | | NUT 3/4"-10NC NY-LOCK GR2 YZ |
| 20 | | 8X0264 | | NUT 3/4"-10NC BEVL CNRLCK YZ |
| 21 | | 8X0278 | | NUT 1"-8NC JAM TOPLOCK GR2 YZ |
| 22 | | 8X0282 | | NUT 1"-14TPI TOPLOCK GR8 YZ |
| 23 | | 8X0306 | | LOCKWASHER 3/4" YLW ZNC |
| 24 | | 8X0316 | | WASHER 1" SAE FLAT YZ |
| 25 | | 8X0327 | | WASHER 1-1/4" SAE FLAT YZ |

PARTS LIST



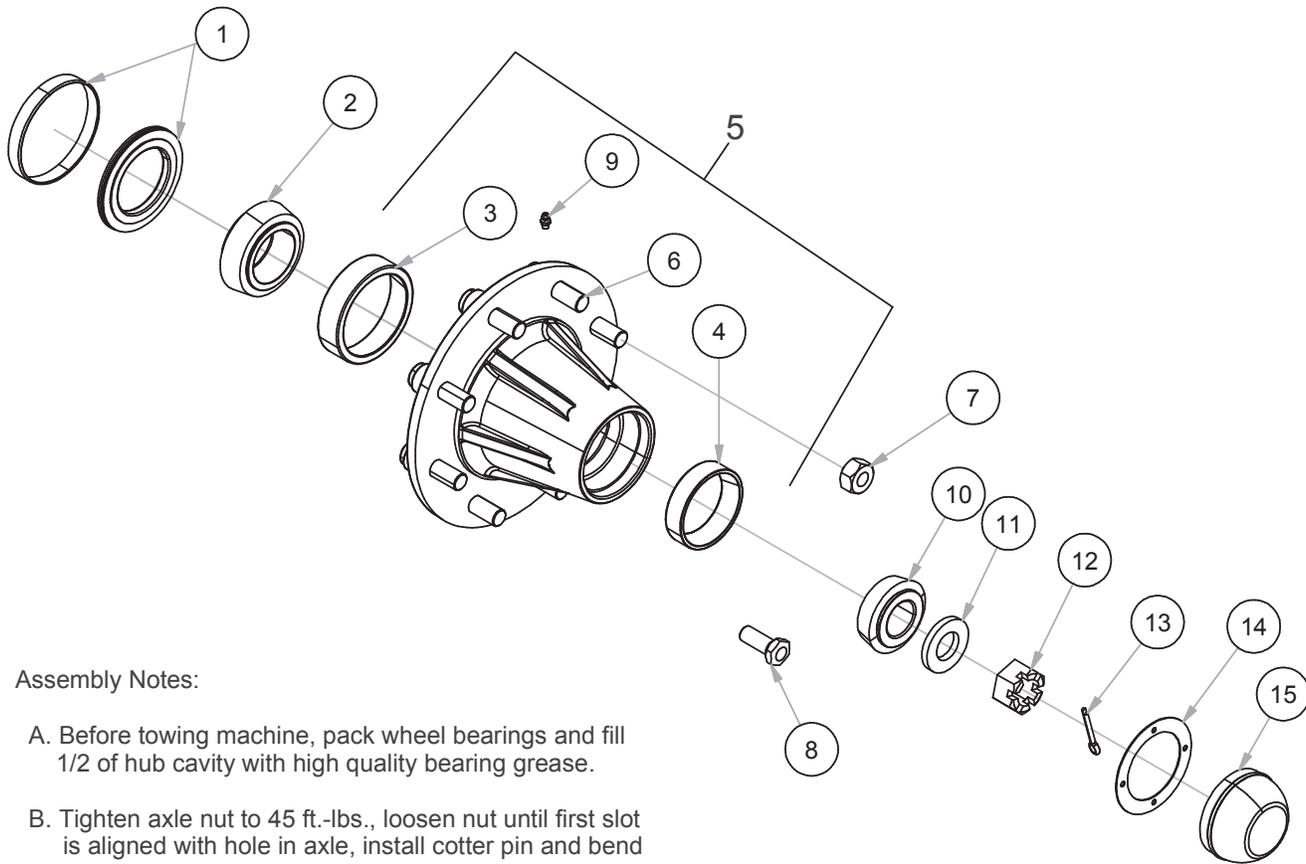
7/6/2015

9T5012.iam/REAR HITCH

PARTS LIST

| REAR HITCH PARTS LIST | | | | |
|-----------------------|----|-------------|-------|--------------------------------|
| Ref | FN | Part Number | Model | Description |
| 1 | | 8T0550 | | SPRING REAR HTCH PIN 97- |
| 2 | | 8T4510 | | FRAME REAR HITCH 98- |
| 3 | | 8T4520 | | PIN 1 X 9-11/16"REAR HTCH 98- |
| 4 | | 8T4530 | | PIN 1 X 8-1/2"RRHITCHSPRING98- |
| 5 | | 8T4540 | | SWIVEL REAR HITCH 98- |
| 6 | | 8T4550 | | SLIDE REAR HITCH 98- |
| 7 | | 8X0107 | | BOLT 3/4-10NC X 2" GR5 YZ |
| 8 | | 8X0260 | | NUT 3/4"-10NC HEX GR2 YZ |
| 9 | | 8X0306 | | LOCKWASHER 3/4" YLW ZNC |
| 10 | | 8X0316 | | WASHER 1" SAE FLAT YZ |
| 11 | | 8X0415 | | COTTER PIN 3/16 X 1-1/2" |
| 12 | | 8X0418 | | COTTER PIN 5/16 X 2-1/2" YZ |

PARTS LIST



Assembly Notes:

- A. Before towing machine, pack wheel bearings and fill 1/2 of hub cavity with high quality bearing grease.
- B. Tighten axle nut to 45 ft.-lbs., loosen nut until first slot is aligned with hole in axle, install cotter pin and bend to retain.

| HUB | 1. SEAL | 2. INNER BEARING | 3. INNER RACE | 4. OUTER RACE | 5. HUB ASSY | 6. WHEEL STUD | 7. WHEEL NUT | 8. WHEEL BOLT | 9. HUB ZERK | 10. OUTER BEARING | 11. AXLE WASHER | 12. AXLE NUT | 13. COTTER PIN | 14. HUB CAP GASKET | 15. HUB CAP | 16. HUB CAP BOLT |
|-----------|---------------------|------------------|---------------|---------------|-------------|---------------|---------------|---------------|-------------|-------------------|-----------------|--------------|----------------|--------------------|-------------|------------------|
| H211 | 8G8220 | 8G8217 | 8G8230 | 8G8230 | 8G8211 | N/A | N/A | 8D5114 | 8X0708 | 8G8217 | 8D5119 | 8D5112 | 8X0410 | N/A | 8G8211 | N/A |
| | SE10 | L44643 | 8L44610 | L44610 | HDA211 | | | WB10 | 1/4-28NF | L44643 | 3/4" ID. | 3/4"-16 | 3/16X1" | | DC11 | |
| H517 | 8D5234 | 8D5217 | 8D5332 | 8D5336 | 8D5210 | 8D5215 | 8D5214 | N/A | 8X0708 | 8D5117 | 8D5219 | 8D5212 | 8X0415 | N/A | 8D5219 | N/A |
| | 8D5236 | LM48548 | LM48510 | LM67010 | H517 | WB16 | 1/2-20UNF | | 1/4-28NF | LM67048 | 7/8" ID. | 7/8"-14 | 3/16X1-1/2" | | DC18 | |
| H611 | 8D5221 | 8D5317 | 8D5334 | 8D5336 | 8D5311-09 | N/A | N/A | 8D5114 | 8X0708 | 8D5117 | 8D5319 | 8D5312 | 8X0415 | N/A | 8D5219 | N/A |
| | SEB | LM29749 | LM29710 | LM67010 | H611 | | | 8R6914 | 1/4-28NF | LM67048 | 1" ID. | 1"-14 | 3/16X1-1/2" | | DC19 | |
| H614 | 8R6922** | 8R6917 | 8R6925 | 8D5332 | 8R6911 | N/A | N/A | 8R6914 | 8X0708 | 8D5217 | 8D5319 | 8D5312 | 8X0415 | N/A | 8R6919 | N/A |
| | SEGBGI INSTRUCTIONS | LM603049 | LM603011 | LM48510 | H614 | | | WB12 | 1/4-28NF | LM48548 | 1" ID. | 1"-14 | 3/16X1-1/2" | | DC15 | |
| HD812 | 8K7127*** | 8K7117 | 8K7130 | 8K7132 | 8K7111 | 8K7115-9/16** | 8K7116-9/16** | N/A | 8X0708 | 8K7118 | 8D5319 | 8D5312 | 8X0415 | N/A | 8K7113 | N/A |
| | SEAL SE77 | | | | | 8K7122-5/8" | 8K7123-5/8" | | | | | | | | | |
| | 8K7128*** | | | | | WB41 | WB40 | | | | | | | | | |
| | SLEEVE SE77-1 | LM3780 | LM3720 | LM2720 | HD812 | WB46 | WB18 | | 1/4-28NF | LM2790 | 1" ID. | 1"-14 | 3/16X1-1/2" | DC17 | | |
| HD817 | 8K7344 | 7K7342 | 8K7346 | 8K7347 | 8K7340 | 8K7122-5/8" | 8K7123-5/8" | N/A | 8X0708 | 8K7343 | 8X0328 | 8D5314 | 8X0414 | N/A | 8K7341 | N/A |
| | SE42 | LM387AS | 382A | LM50B10 | HD817 | WB46 | WB18 | | 1/4-28NF | LM50B49 | 1.312 ID. | 1-1/4"-12 | 1/4X2" | | DC26 | |
| H1010 LT | 8K7220 | 7K7217 | 8K7230 | 8K7232 | 8K7211 | 8K7215 | 8K7216 | N/A | 8X0708 | 8K7218 | 8X0328 | 8D5314 | 8X0414 | 8K7212 | 8K7219 | 8K7214 |
| | SE48 | 39585 | 39520 | 453A | H1010-9 | WB51 | WB52 | | 1/4-28NF | 460 | 1.312 ID. | 1-1/4"-12 | 1/4X2" | SE49 | DC27 | WB53 |
| H1010 HVY | 8K7221 | 8K7219 | 8K7231 | 8K7232 | 8K7210 | 8K7215 | 8K7216 | N/A | 8X0708 | 8K7218 | 8X0328 | 8D5314 | 8X0414 | 8K7212 | 8K7219 | 8K7214 |
| | SE67 | 33275 | 33462 | 453A | H1010-11 | WB51 | WB52 | | 1/4-28NF | 460 | 1.312 ID. | 1-1/4"-12 | 1/4X2" | SE49 | DC27 | WB53 |
| H1020 | 8K7320 | 8K7317 | 8K7330 | 8K7332 | 8K7209 | 8K7215 | 8K7216 | N/A | 8X0708 | 8K7318 | 8X0366 | 8D5318 | 8X0418 | 8K7312 | 8K7319 | 8K7214 |
| | SE55 | HM218248 | HM218210 | HM212010 | HDA1020 | WB51 | WB52 | | 1/4-28NF | HM212049 | 2.03" ID | 2"-12WB65 | 5/16 X2-1/2" | SE59 | DC28 | WB53 |

*Pre 2000

**GBGI (Not Shown), 8R6921 Triple Lip (Shown)

***Pre 2006 8K7120 (SE17)

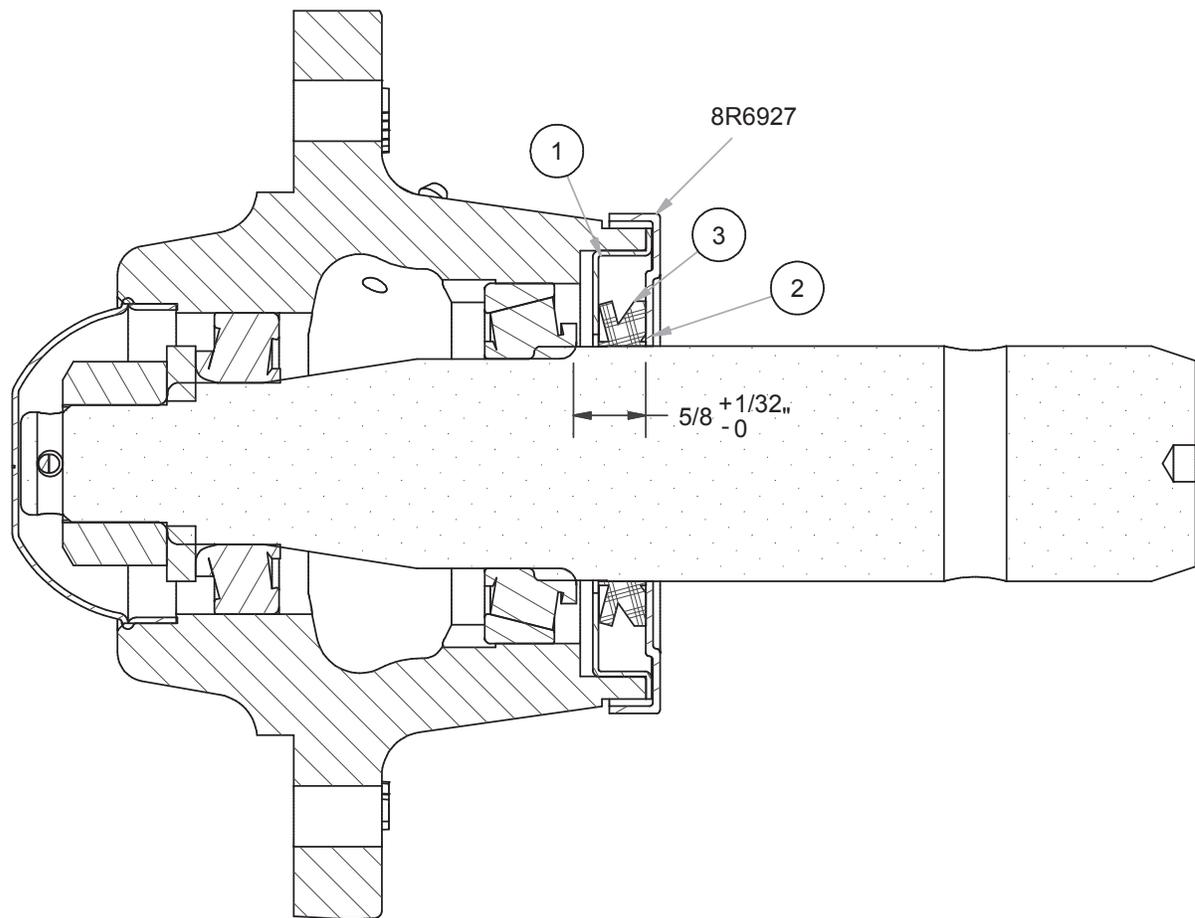
CD2\MANUALS\10 2-26 HUB-AXLE COMPONENTS

LAST REVISION: 1/17/2011

8/13/2014

8K1105S.iam/HUB&AXLE ASSY

614 HUB W/GBGI SEAL



INSTALLATION INSTRUCTIONS FOR 8R6922 SEAL ASSEMBLY (3 PIECE-GBGI) FOR H614 HUB:

SEAL SUPPORT (2 - 8R6927)

PRESS SEAL SUPPORT (2) ONTO SPINDLE $5/8"$ ($+1/32"$, $-0"$) PAST INNER BEARING RETAINING SHOULDER.

- A. IF SEAL SUPPORT IS NOT PRESSED ON SPINDLE FAR ENOUGH THE SEAL SUPPORT WILL RUB ON HUB.
- B. IF SEAL SUPPORT IS PRESSED TOO FAR ONTO SPINDLE IT WILL CAUSE IMPROPER CONTACT BETWEEN RUBBER SEAL (3) AND INNER SEAL SUPPORT (1) RESULTING IN BEARING CONTAMINATION AND FAILURE.

NOTE: APPLY THIN LAYER OF GREASE TO COUNTERFACE (1) SURFACE AT TIME OF SEAL INSTALLATION.

SEAL COUNTERFACE (1 - 8R6924)

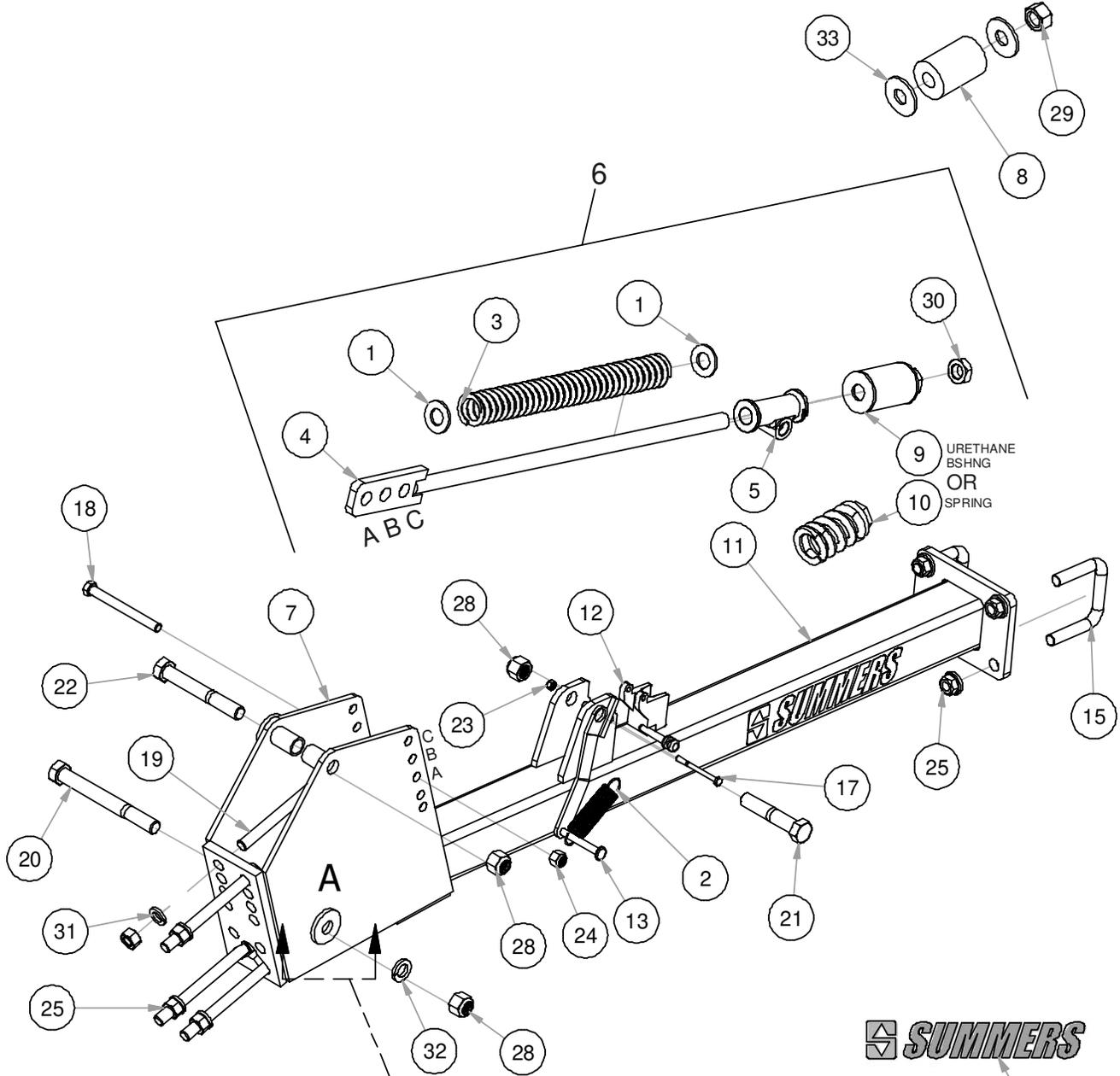
PRESS SEAL COUNTERFACE INTO HUB UNTIL SHOULDER CONTACTS HUB.

V-SEAL (3 - 8R6923 (A-994))

STRETCH V-SEAL OVER SEAL SUPPORT UNTIL ITS BACK IS SEATED AGAINST THE BACK SHOULDER OF SEAL SUPPORT AND LIES SMOOTH ALL AROUND.

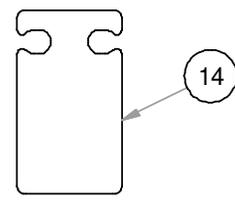
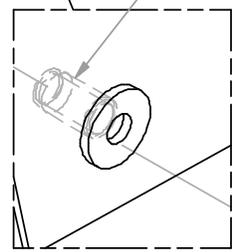
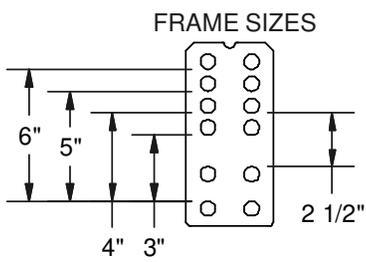
PARTS LIST

MOUNTED HARROW MOUNTING ARM



SUMMERS

MA1520



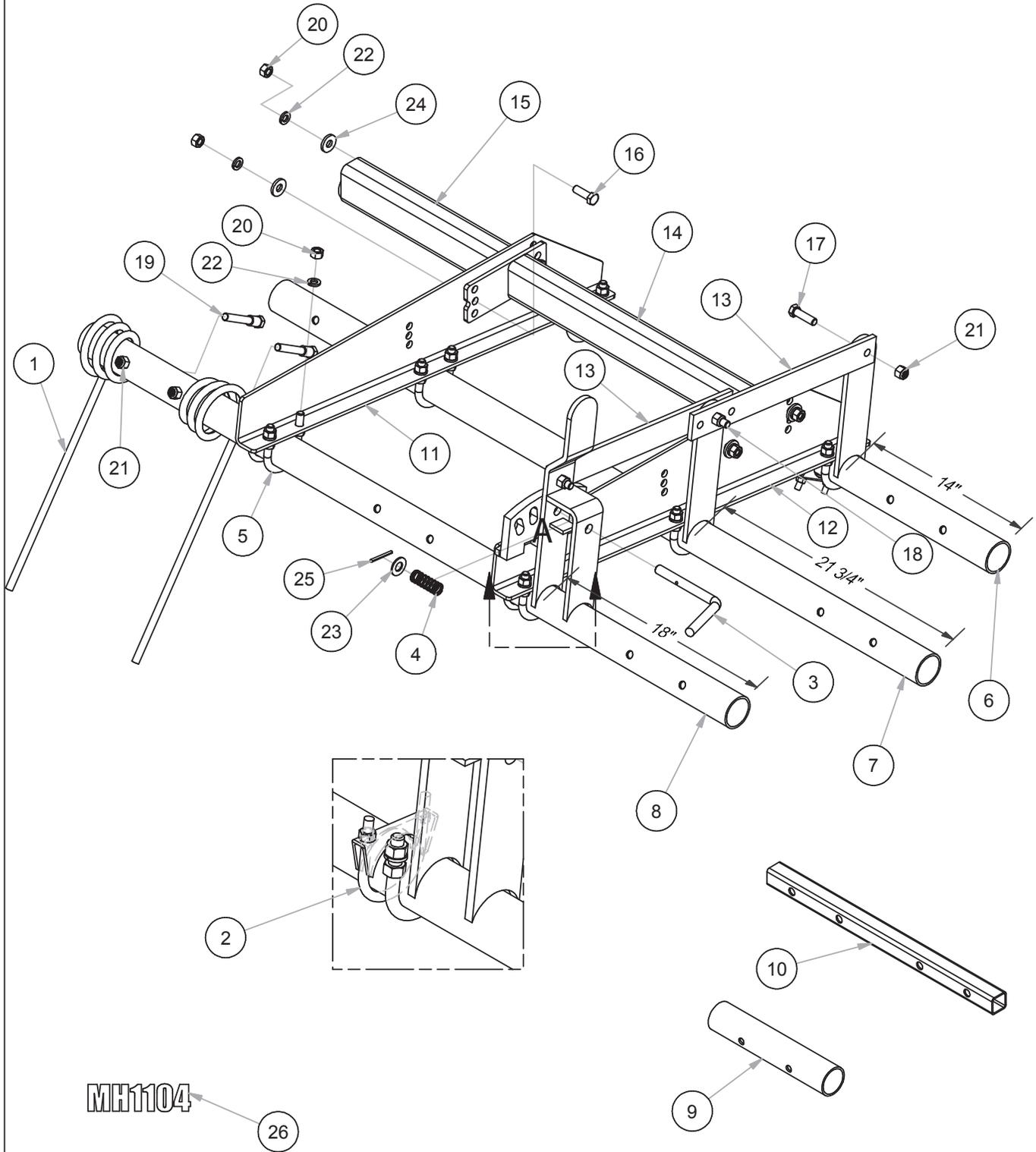
9/18/2018 | 8H2314.iam/MH MNTNG ARM ASSY

PARTS LIST

| MOUNTED HARRW MOUNTING ARM | | | | |
|----------------------------|----|----------------------------|-------|--|
| Ref | FN | Part Number | Model | Description |
| 1 | | 8D5219 | | WASHER, FLAT 1.75"ODx29/32"ID - 10GA |
| 2 | | 8H1280 | | M94 AUTO LOCK SPRING |
| 3 | | 8H1309 | | SPRING COMP 15.5"X1.65"OD PNTD |
| 4 | | 8H1315 | | SUPPORT ROD WLDD ASSY 7/8 09- |
| 5 | | 8H1327A | | SWIVEL AUSTEMPERED |
| 6 | | 8H1394 | | SUPPORT ROD ASSY 7/8" MNTD |
| 7 | | 8H2120 | | MOUNTING BRACKET M94/104/106 |
| 8 | | 8H2128 | | SPRING 2.25ODx7/8IDx3.25L POLY |
| 9 | | 8H2129 | | SPRING KIT - HI IMPCT MNTD ATTCH |
| 10 | | 8H2131A | | ADJ NUT W/WLDD SPRING 7/8 |
| 11 | | 8H2132 8H2142 8H2144 | | CARRIER ARM, 32" CARRIER ARM, 42" CARRIER ARM, 52" |
| 12 | | 8H2184 | | AUTOLOCKUP 7/8" DRLD & PNTD |
| 13 | | 8H2190 | | HANDLE W/PIN, AUTO LOCKUP 1ARM |
| 14 | | 8H2295 | | MNTNG HEAD SPACER BLOCK 12- |
| 15 | | 8W1205 | | U-BOLT 5/8" X 3 X 3" SQ |
| 16 | | 8W1897 | | NYLATRON 1"OD X .75"ID - 1-3/4" |
| 17 | | 8X0014 | | BOLT 1/4-20NC X 3" GR5 YZ |
| 18 | | 8X0073 | | BOLT 1/2-13NC X 5" GR5 YZ |
| 19 | | 8X0099 | | BOLT 5/8-11NC X 6.75" |
| 20 | | 8X0117 | | BOLT 3/4-10NC X 7" GR5 YZ |
| 21 | | 8X0118 | | BOLT 3/4-10NC X 4" GR5 YZ |
| 22 | | 8X0123 | | BOLT 3/4-10NC X 5.5" GR5 YZ |
| 23 | | 8X0222 | | NUT 1/4"-20NC NY-LOCK GR2 YZ |
| 24 | | 8X0242 | | NUT 1/2"-13NC NY-LOCK GR2 YZ |
| 25 | | 8X0250 | | NUT 5/8"-11NC HEX GR2 YZ |
| 26 | | 8X0256 | | NUT 5/8"-11NC SER FLANG GR2 YZ |
| 27 | | 8X0256 | | NUT 5/8"-11NC SER FLANG GR2 YZ |
| 28 | | 8X0261 | | NUT 3/4"-10NC NY-LOCK GR2 YZ |
| 29 | | 8X0268 | | NUT 7/8"-9NC HEX GR2 YZ |
| 30 | | 8X0269 | | NUT 7/8"-9NC JAM GR2 ZDI |
| 31 | | 8X0304 | | LOCKWASHER 5/8" YLW ZNC |
| 32 | | 8X0306 | | LOCKWASHER 3/4" YLW ZNC |
| 33 | | 8X0338 | | WASHER 7/8"IDx2.25"OD FLAT YZ |
| 34 | | 8Z0101 | | 2" SUMMERS DECAL |
| 35 | | 8Z2006 | | DECAL MA1520 52" MNTNG ARM |

PARTS LIST

3 BAR MOUNTED HARROW



7/9/2015

8HD5361.iam/3BR MNT HRRW

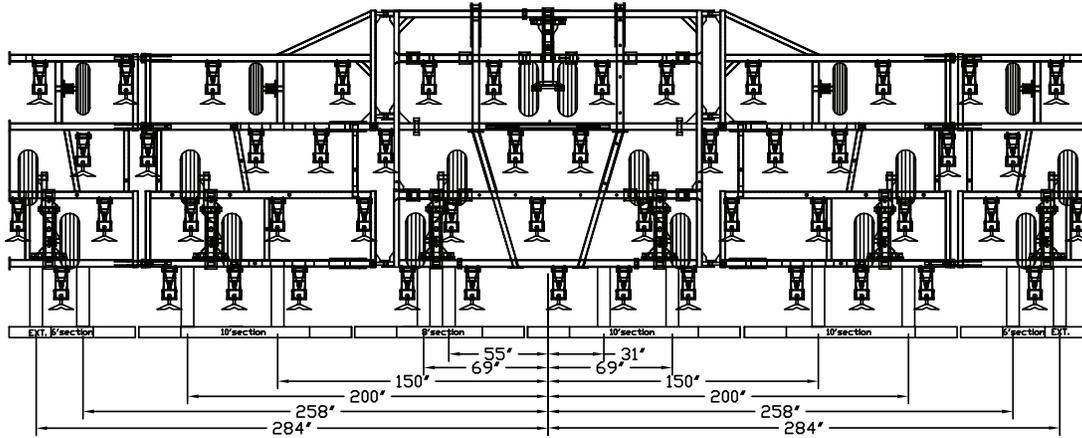
PARTS LIST

| 3 BAR MOUNTED HARROW | | | | |
|----------------------|----|--------------------|-------|---|
| Ref | FN | Part Number | Model | Description |
| 1 | | 8H1180S 8H1190S | | HARROW TOOTH 1/2 X 20" HARROW TOOTH 9/16 X 26" |
| 2 | | 8HD0080 | | PIPE CLAMP 2-1/2"ID PLATED ZDI |
| 3 | | 8HD0150 | | PIN |
| 4 | | 8HD0160 | | COMPRESSION SPRING |
| 5 | | 8HD0200 | | U-BOLT 1/2" X 2-3/8" X 3-9/16" RND |
| 6 | | 8HD5052 | | 1ST PIPE W/LVR 6' |
| | | 8HD5072 | | 1ST PIPE W/LVR 8' |
| | | 8HD5082 | | 1ST PIPE W/LVR 10' |
| 7 | | 8HD5054 | | 2ND PIPE W/LVR 6' |
| | | 8HD5074 | | 2ND PIPE W/LVR 8' |
| | | 8HD5084 | | 2ND PIPE W/LVR 10' |
| 8 | | 8HD5056Q | | 3RD PIPE W/LVR 6' (01-) |
| | | 8HD5076Q | | 3RD PIPE W/LVR 8' (01-) |
| | | 8HD5086Q | | 3RD PIPE W/LVR 10' (01-) |
| 9 | | 8HD5094 | | EXTENSION PIPE |
| 10 | | 8HD5096 | | EXTENSION TUBE |
| 11 | | 8HD5101 | | SIDE PLT 1/4"3BR 104/6 LEFT |
| 12 | | 8HD5102 | | SIDE PLT 1/4"3BR 104/6 RGHT |
| 13 | | 8HD5115 | | ADJUSTABLE CONNECTING BAR |
| 14 | | 8HD5140 | | CROSS TUBE W/FLAT 6' |
| | | 8HD5150 | | CROSS TUBE W/FLAT 8' (ALSO USED TO CONNECT (2) 6' SECTIONS) |
| | | 8HD5160 | | CROSS TUBE W/FLAT 10' |
| 15 | | 8HD5180 | | EXT. BKT. 2 ND MTG. ARM M94 & M104 |
| 16 | | 8X0063 | | BOLT 1/2-13NC X 1-1/2" GR5 YZ |
| 17 | | 8X0066 | | BOLT 1/2-13NC X 1-3/4" GR5 YZ |
| 18 | | 8X0067 | | BOLT 1/2-13NC X 2-1/4" GR5 YZ |
| 19 | | 8X0078 | | BOLT 1/2-13X3.63"SHOULDR GR2 YZ |
| 20 | | 8X0240 | | NUT 1/2"-13NC HEX GR2 YZ |
| 21 | | 8X0242 | | NUT 1/2"-13NC NY-LOCK GR2 YZ |
| 22 | | 8X0303 | | LOCKWASHER 1/2" YLW ZNC |
| 23 | | 8X0323 | | WASHER 5/8" SAE FLAT YZ |
| 24 | | 8X0330 | | WASHER 17/32"ID X 1.25"OD YZ |
| 25 | | 8X0520 | | ROLL PIN 3/16 X 2" ZINC CLEAR |
| 26 | | 8Z0114 | | MH1104 DECAL |

PARTS LIST

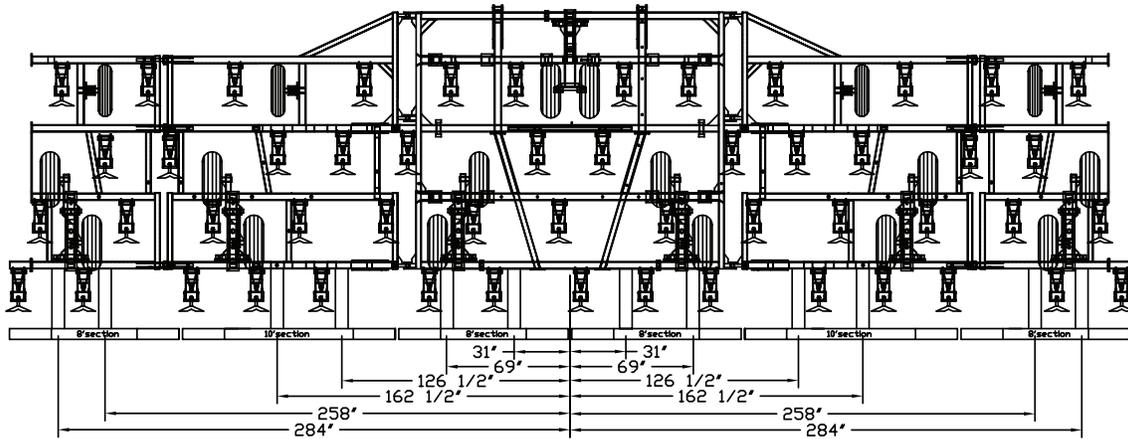
9T5012

50'



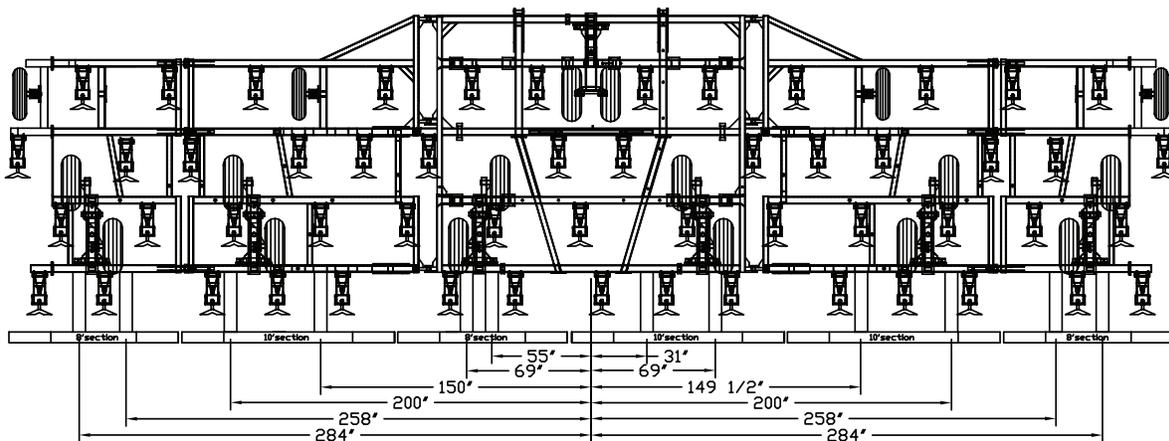
9T5012 + 8T9002

52'



9T5012 + 8T9004G

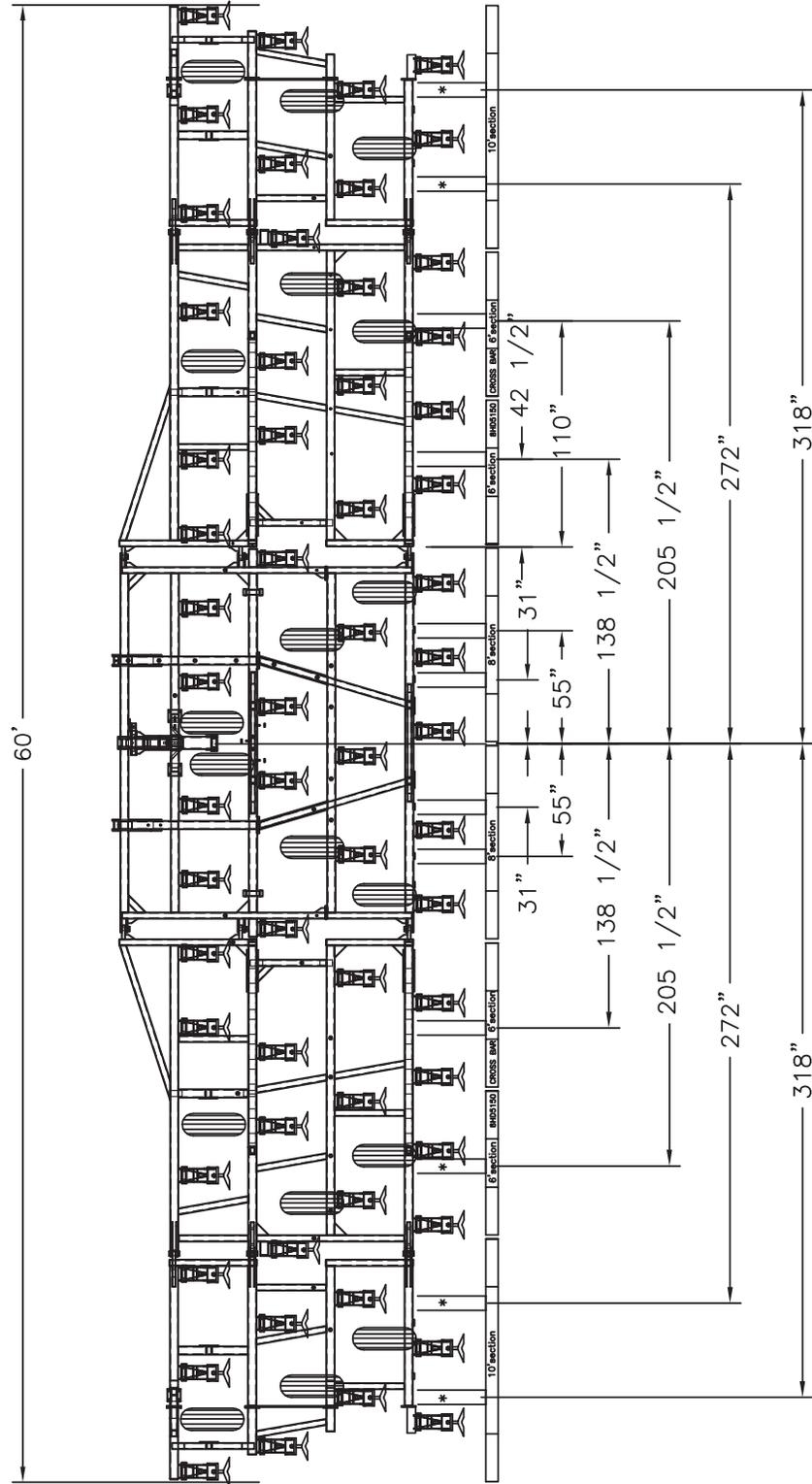
54'



5POM/5CP6-12MH 9/22/00

PARTS LIST

9T5412 + 8T9006T



* LOCATION OF 1/2 X 5" PIVOT STOP BOLT, SECURE WITH LOCKNUT, DO NOT OVER TIGHTEN.

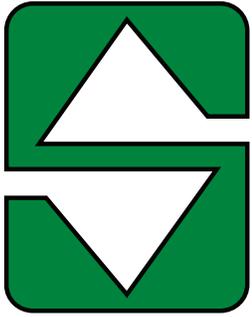
5POM\5CP6-12MH(56-60) 60' CP MNT HARROW LAYOUT

PARTS LIST

History of Summers Manufacturing Co., Inc.

- 1965 – Summers Manufacturing is founded by Harley Summers, who purchases patent rights for Goebel truck and pickup hoists from the Goebel Brothers of Lehr, ND. These hoists, produced in Harley Summers' blacksmith shop the first year, were distributed nationwide by a Cincinnati, Ohio, dealer. With increasing sales, the company soon outgrows the small shop. Summers wins the Herman harrow contract, beginning the company's Herman culti-harrow line. Summers builds a 7,200 square-foot factory in Maddock to meet the demand for truck and pickup hoists, as well as Herman harrows.
- 1969 – Firm incorporates and becomes officially known as Summers Manufacturing Company, Inc.
- 1970 – Summers purchases rights to manufacture/market the Herman Harrow.
- 1973 – Company builds new 20,000 square-foot plant and offices in Maddock, adding a 20,000 square-foot assembly plant in the fall of 1975 (completed in January 1976), bringing total square footage of Maddock factories to 47,000.
- 1977 – Summers introduces the Agri-sprayer, used in conjunction with the Herman culti-harrow to incorporate herbicides and liquid fertilizer.
- 1980 – Company purchases manufacturing and distributing rights to Crown rockpickers from Crown Manufacturers of Regina, Saskatchewan. This forces another expansion project – a 26,000 square foot factory on a 24 acre site in Devils Lake, ND Industrial Park.
- 1981 – Company establishes a branch facility in Regina, Saskatchewan.
- 1982 – Devils Lake plant begins operations in January, manufacturing supersprayers and rockpickers. The Maddock factory begins producing the Superweeder, a combination cultivator and harrow.
- 1983 – Summers buys manufacturing and distributing rights to the Fargo Field Sprayer line from Mid America Steel (formerly Fargo Foundry), Fargo. This field sprayer line is manufactured at the Devils Lake plant. Harley Summers is selected North Dakota's small-businessman of the year by the Small Business Administration.
- 1984 – Herman Diamond Disk, a disk harrow made in a diamond shape to reduce blade breakage from rocks, comes off the assembly line.
- 1985 – Summers signs a contract with Melroe Company of Bismarck to obtain exclusive manufacturing rights to the Melroe harrow line.
- 1989 – Summers purchases TorMaster Company of Hordean, Manitoba, giving the company a line of rolling packer equipment, comprised of harrow packers and hydraulic fold coil packers.
- 1992 – A new engineering office/parts department is added to the Devils Lake factory.
- 1993 – Company adds two new products: a pickup-mounted sprayer with booms of 80 and 90 feet, and the Summers Superharrow, an extra-heavy-duty residue-management tool designed for the minimum and no-till farmer.
- 1994 – a 50 by 125 foot addition to the Maddock factory is completed. Construction begins on a 24,576 square-foot addition to the Devils Lake factory, which enables the company to increase production of truck-mounted and pull-type supersprayers and rockpickers.
- 1996 – 1500 square foot office area added to the Maddock plant. Company introduces Chisel Plow with floating hitch and 700# trip assembly.
- 1997 – 16,800 square foot warehouse in Maddock purchased from local business.
- 1999 - Company introduces the Ultimate suspended boom trailer sprayer with hydraulic folding booms. Additional sizes added to the Chisel Plow line, now ranging from 28' to 54'.
- 2000 - Company introduces the Supercoulter, the innovative solution for excessive field residue management on no-till, minimum-till, and conventional-till farming operations.
- 2001 - Cold storage building completed at Devils Lake. Company extends boom lengths up to 110 feet on the Ultimate Supersprayer.
- 2002 - Company adds a warehouse and service man in Aberdeen, SD.
- 2003 - Company introduces the Ultimate NT Supersprayer featuring a bolt on axle for easier adjustment, and a new family of tanks that feature a drainable sump and a common width dimension.
- 2004 - A 124 ft. x 310 ft. addition is added onto the current Devils Lake plant.
- 2005 - The Summers Superroller is added to the "Field Tested Tough" product line. Additional sizes of 56', 58' and 60' are added to the Superchisel line. Ultimate-Ultra NT Supersprayer introduced featuring 120' & 133' booms.
- 2006 - The Summers Coulter-Chisel, Rolling Choppers and 30' Superroller were included in product line.
- 2007 - 62' & 84' 5 Section Landrollers and a 20' Coulter-Chisel were introduced.
- 2008 - Disk-Chisels, ranging from 16' to 40' widths, are added to product line.
- 2009 – M105 and M108 Mounted Harrows added to selection of Mounted Attachments. SuperHarrow 2650, 50' SuperCoulter, Hydraulic Fold Rolling Chopper and 36" diameter Landrollers introduced.
- 2010 – Rolling Basket and 47' Diamond Disk added to product line. A 124 ft. x 310 ft. addition to Devils Lake factory built for a state of the art paint system.
- 2011 – Additional Supercoulter sizes were added along with larger tires for tillage implements. Ultimate and Ultra Supersprayers received an additional tank size of 1650 gallons. Front Caster Wheel option was made available for chisel implements.
- 2012 – 41', 46' & 53' Trail Type Landroller added to product line. Additional Superchisel sizes of 16' & 20' were added.
- 2013 – DT9530 added to product line. Internal Scraper in Rolling Baskets introduced. Finishing Coulter Gang becomes standard on the Diamond Disk and 2510 DT. Corporate offices opened at Devils Lake plant. New building and location for the Aberdeen warehouse.
- 2014 – Introduced the VRT2530 (Variable Rate Tillage).
- 2015 – Introduced the VT Flex Applicator and Spray Fill Xpress.

Summers distributes on a wholesale level to dealers and distributors throughout markets in North Dakota, South Dakota, Minnesota, Montana, Iowa, Washington, Idaho, Oregon, Utah, Colorado, Kansas, Nebraska, Oklahoma, Texas, Manitoba, Saskatchewan, Alberta, British Columbia, Kazakhstan, Russia and Australia, making it an international company.



SUMMERS[®]

... Field Tested TOUGH!



Tillage



Rock Picker

Cultivators/Harrows



Mounted Attachments



Land Rollers/Packers



Sprayers

