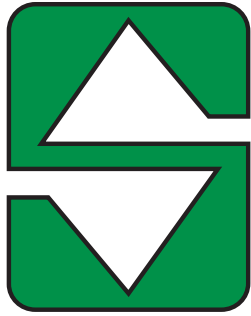


SUPERCHISEL 16'-44'

SUPERCHISEL 16'-44'



# SUMMERS®

## Operator's Manual

16' THROUGH 44' WIDTHS

# 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](http://www.summersmfg.com) for the latest version of all Summers Operator's Manuals.*

**SUMMERS MANUFACTURING CO., INC.**

**WEB SITE: [www.summersmfg.com](http://www.summersmfg.com)**

DEVILS LAKE, NORTH DAKOTA 58301..... (701) 662-5391

# 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 of purchase by the end user from Summers' dealer.

Summers' obligation is to replace free of charge any part of any product that Summers inspection shows to be defective excluding transportation charges to 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 herein 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, NORTH DAKOTA 58301**

## INTRODUCTION

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This manual provides the following information about your Summers Chisel Plow.

### SECTION CONTENTS

- Section 1 – SAFETY explains important safety precautions and familiarizes the Operator with the decals and their locations.
- Section 2 – ASSEMBLY includes step by step assembly instructions for your Summers Chisel Plow.
- Section 3 – CHISEL PLOW OPERATION provides necessary information for the operation and adjustment of the machine.
- Section 4 – MAINTENANCE covers recommended mechanical maintenance.
- Section 5 – TROUBLESHOOTING provides a quick reference to solving problems. SPECIFICATIONS lists important dimensions, capacities and other technical information.
- Section 6 – PARTS

### OTHER ITEMS OF IMPORTANCE

- A. Summers Mfg. Co., Inc. strongly recommends that each Chisel Plow Operator READ and UNDERSTAND the Operator’s Manual before using the machine. In addition, this Operator’s Manual should be REVIEWED at least ANNUALLY thereafter.**
- B. It is the policy of this company in 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 obligations to install such changes on products previously delivered.**
- C. Reference to “right” and “left” in this manual is determined when machine is viewed from the rear.**
- D. 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 back section of manual for description of each Part Number.**

<b><u>OWNER REGISTER</u></b>	
Name _____	Size _____
Address _____	Serial Number _____
City _____	<small>(located by the hitch piece)</small>
State/Prov. _____	Date Purchased _____
Mail Code _____	Dealer _____

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## **NOTES**

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## SECTION 1 - SAFETY

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### SAFETY-ALERT SYMBOL



This symbol is used to denote possible danger and care should be taken to prevent bodily injury. This symbol means:

### **ATTENTION! BECOME ALERT!** **YOUR SAFETY IS INVOLVED!**

Definition of each **Signal Word** used in conjunction with the **Safety-Alert** symbol.



indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. This signal word is limited to the most extreme situations.



indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

### **GENERAL SAFETY PRACTICES**

1. READ AND UNDERSTAND Operator's Manual before using machine. Review at least annually thereafter.
2. VERIFY 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.

## SECTION 1 - SAFETY

### SAFETY DURING TRANSPORT

1. ONLY TOW at a safe speed. Use caution when making corners or meeting traffic.
2. USE a safety chain between tractor drawbar and implement hitch when transporting on public roads.
3. ALWAYS use hydraulic cylinder transport locks when transporting on public roads.
4. FOLLOW ALL local laws governing transporting of farm machinery.
5. Frequently check for traffic from rear, especially during turns.

### SAFETY DECALS

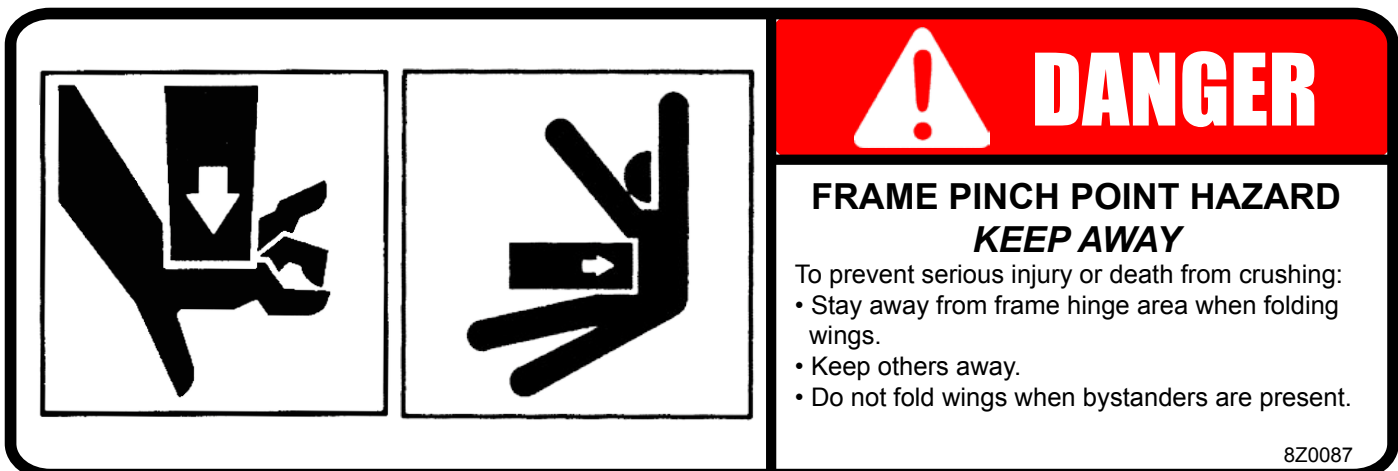
1. KEEP SAFETY DECALS CLEAN.
2. REPLACE missing or unreadable decals. New decals are available from your Summers dealer by ordering correct part number (PN) located on the decal.

### DECALS AND THEIR LOCATIONS

1. PN 8Z0075 – DECAL FOR REMOVING TRANSPORT LOCKS



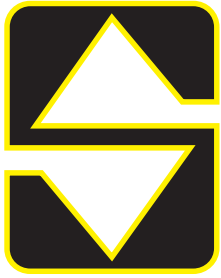
2. PN 8Z0087 – DECAL FOR PINCH POINT HAZARD







**SECTION 1 - SAFETY**

**3. PN 8Z0202 (3.5") & 8Z0204 (5.5)" – DECAL FOR COMPANY IDENTIFICATION**



**SUMMERS®**

**4. PN 8Z0276 – DECAL FOR GENERAL CAUTION**

	
	<ol style="list-style-type: none"><li>1. Read and understand Operator's Manual before using machine.</li><li>2. For Sprayers:<ol style="list-style-type: none"><li>a. Read and follow chemical manufacturers' WARNINGS, instructions and procedures before using.</li><li>b. Use recommended personal protective equipment to reduce or eliminate chemical contact.</li><li>c. Never run pump dry.</li></ol></li><li>3. Verify all safety devices and shields are in place before using machine.</li><li>4. Keep hands, feet, hair and clothing away from moving parts.</li><li>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.</li><li>6. Be careful when working around high pressure hydraulic system.</li><li>7. Do not allow riders.</li><li>8. Check all wheel bolts DAILY for tightness.</li><li>9. Refer to Operator's Manual for periodic and annual maintenance.</li><li>10. For Towed Implements, DO NOT EXCEED 20 MPH.</li></ol> <p style="text-align: right;">8Z0276</p>

**5. PN 8Z0340 – DECAL FOR REPHASING CYLINDERS**

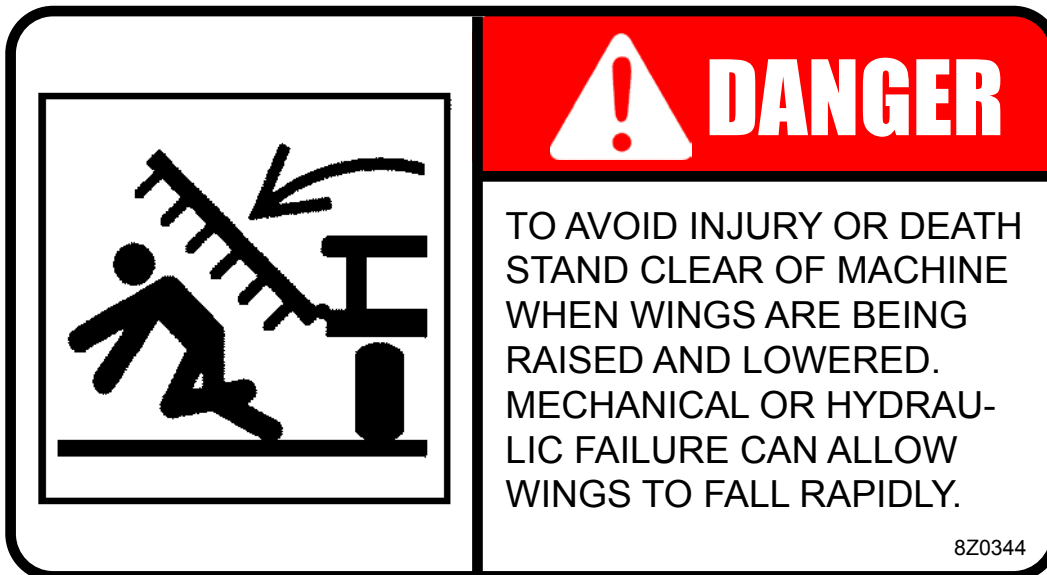
<p style="text-align: center;"><b>IMPORTANT</b></p> <p><b>TO REPHASE CYLINDERS, RAISE MACHINE AND MAINTAIN HYDRAULIC PRESSURE TEN SECONDS AFTER CYLINDERS ARE FULLY EXTENDED. QUICKLY RETRACT CYLINDERS AT LEAST 1/2". REPHASING SHOULD BE DONE EVERY HOUR OF OPERATION TO MAINTAIN UNIFORM TILLAGE DEPTH.</b></p> <p style="text-align: right;">8Z0340</p>
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SECTION 1 - SAFETY

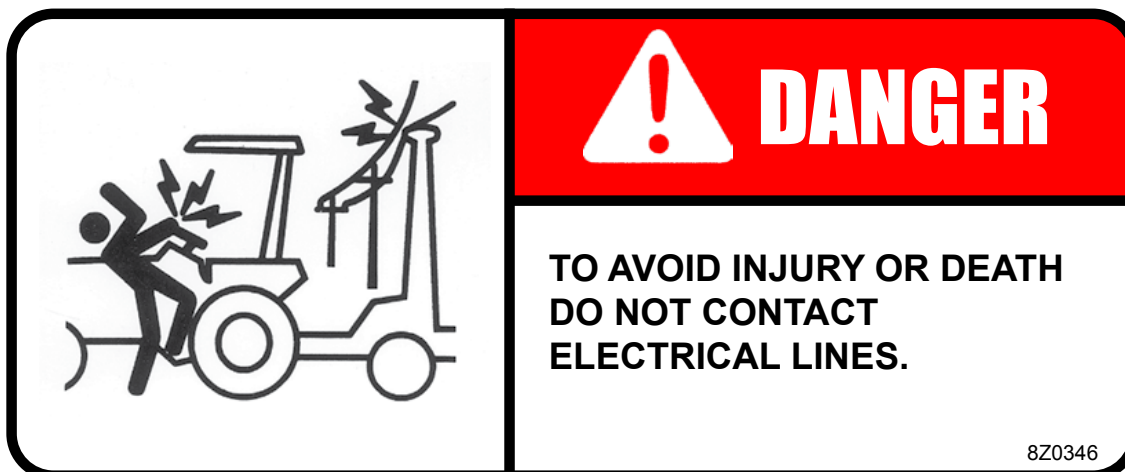
6. PN 8Z0342 – DECAL FOR INSTALLING CYLINDER LOCKS



7. PN 8Z0344 – DECAL FOR STAYING CLEAR OF WINGS



8. PN 8Z0346 – DECAL FOR ELECTROCUTION DANGER

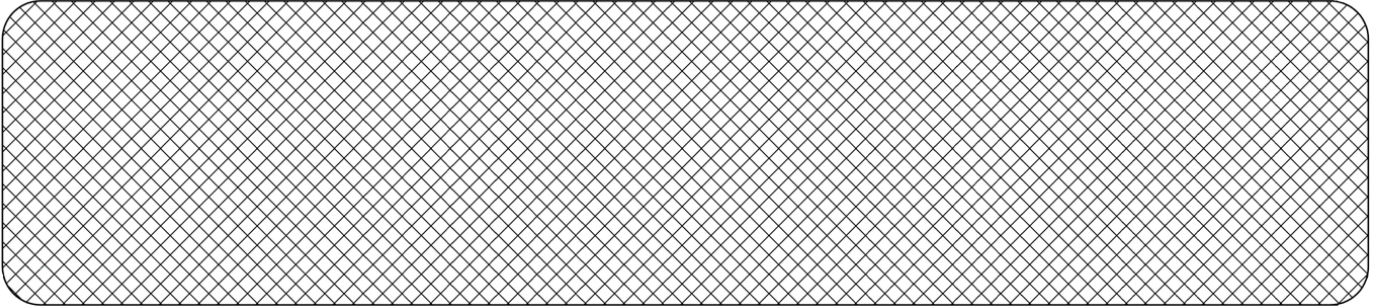


## SECTION 1 - SAFETY

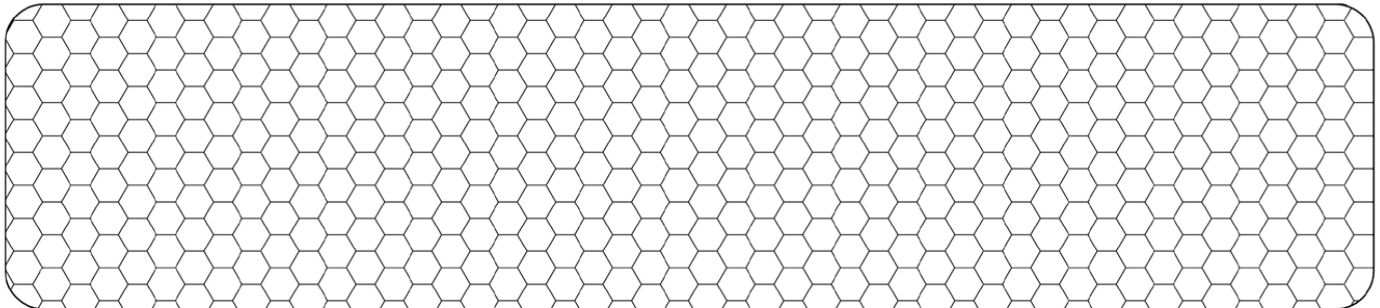
### 9. PN 8Z0348 – DECAL FOR GAUGE WHEEL DEPTH



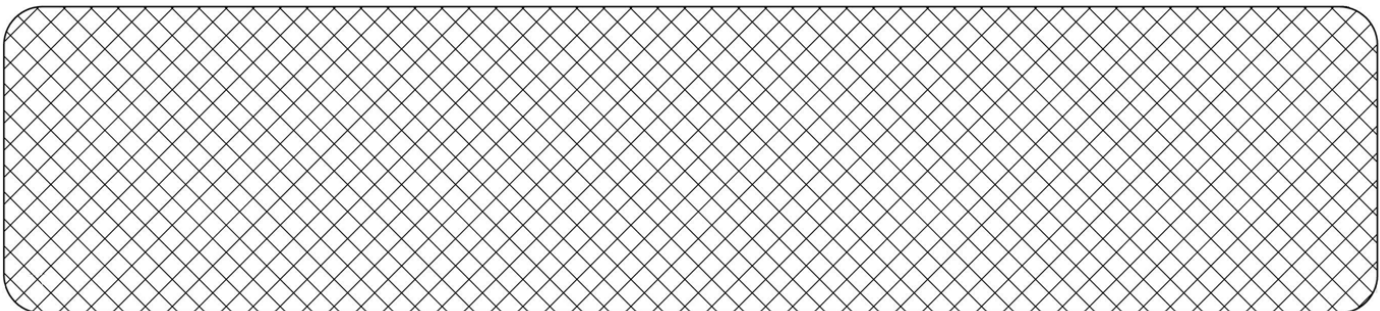
### 10. PN 8Z0800 – AMBER REFLECTOR



### 11. PN 8Z0805 – RED-ORANGE REFLECTOR



### 12. PN 8Z0810 – RED REFLECTOR



## SAFETY LIGHT OPERATION

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.

*On most towing vehicles WITHOUT brake lights:*

Amber lights will turn on with flashers or turn signals.

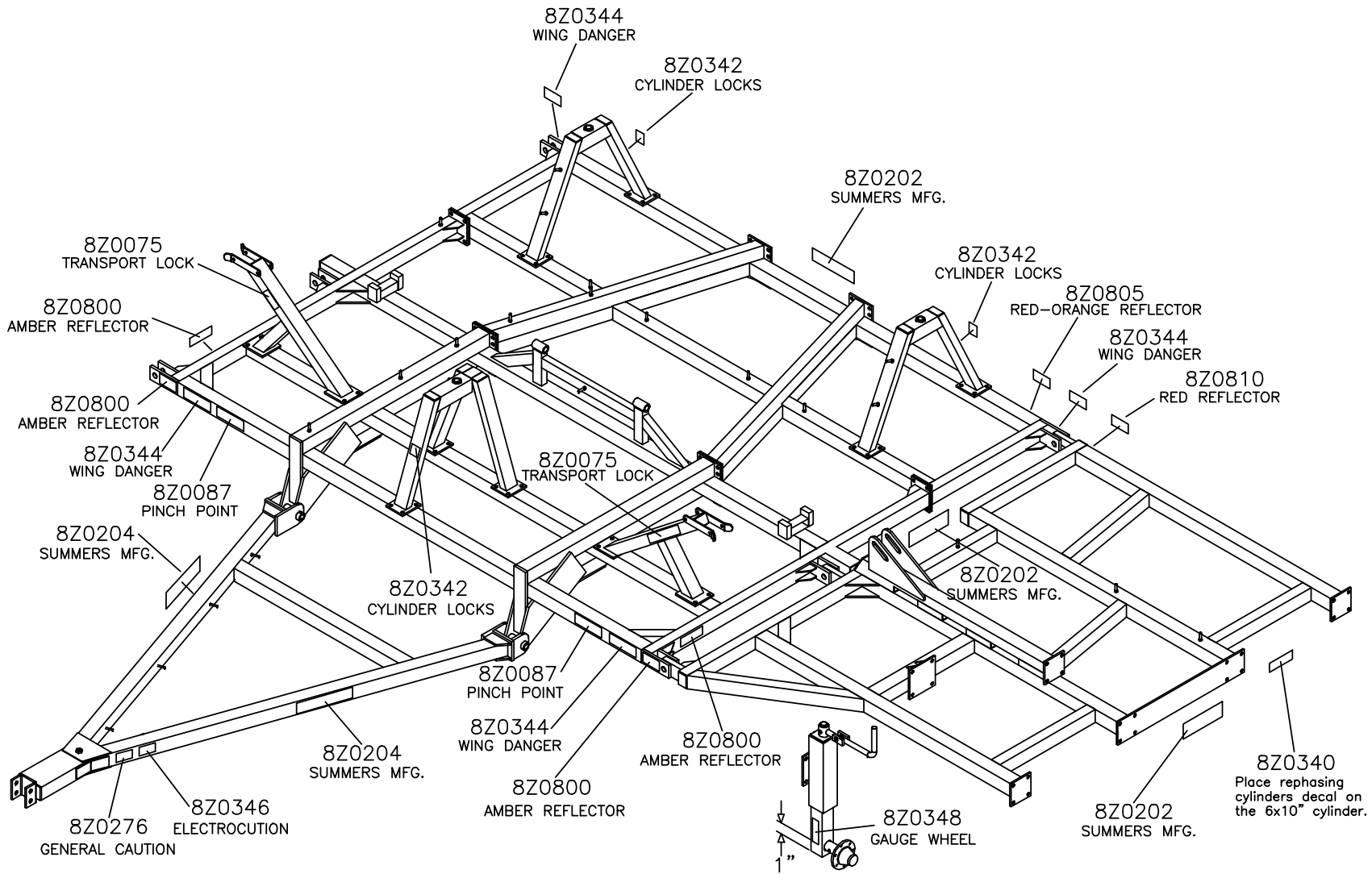
Red lights will turn on with parking, road or field lights.

*On most towing vehicles WITH brake lights:*

Amber lights will turn on with flashers, turn signals OR when brake is applied.

Red lights will turn on with parking or road lights.

DECAL LOCATIONS



1-6

SECTION 1 - SAFETY

## SECTION 2 – ASSEMBLY INTRODUCTION

---

### **GENERAL ASSEMBLY SAFETY PRACTICES**

1. READ AND UNDERSTAND Operator's Manual before assembly of machine.
2. Machine should be assembled in a horizontal (field) position only.
3. If machine is to be assembled INDOORS, check that exit door is a MINIMUM OF 20'6" WIDE. Height requirement varies from 10'8" to 18'0". 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!**

## SECTION 2 – ASSEMBLY INTRODUCTION

---

### GENERAL SAFETY PRACTICES



YOU ARE RESPONSIBLE for the safe assembly of the machine.



BLOCK UP ANY RAISED PART of the machine. Be sure machine is stable after blocking.



DO NOT ALLOW CHILDREN or other unauthorized persons within the assembly area.



ALWAYS INSPECT LIFTING CHAINS AND SLINGS for damage or wear.



WEAR PERSONAL PROTECTIVE EQUIPMENT which includes a hard hat, eye protection, work gloves and steel toed boots with slip resistant soles.



BE SURE LIFTING DEVICE IS RATED TO HANDLE THE WEIGHT.



DO NOT MODIFY the equipment or substitute parts in any way. Unauthorized modification may impair the function and/or safety of the machine.



STOP ENGINE, place all controls in neutral, set parking brakes, remove ignition key and wait for all moving parts to stop before servicing or adjusting.



USE SUITABLE LIFTING DEVICE for components which could cause personal injury.



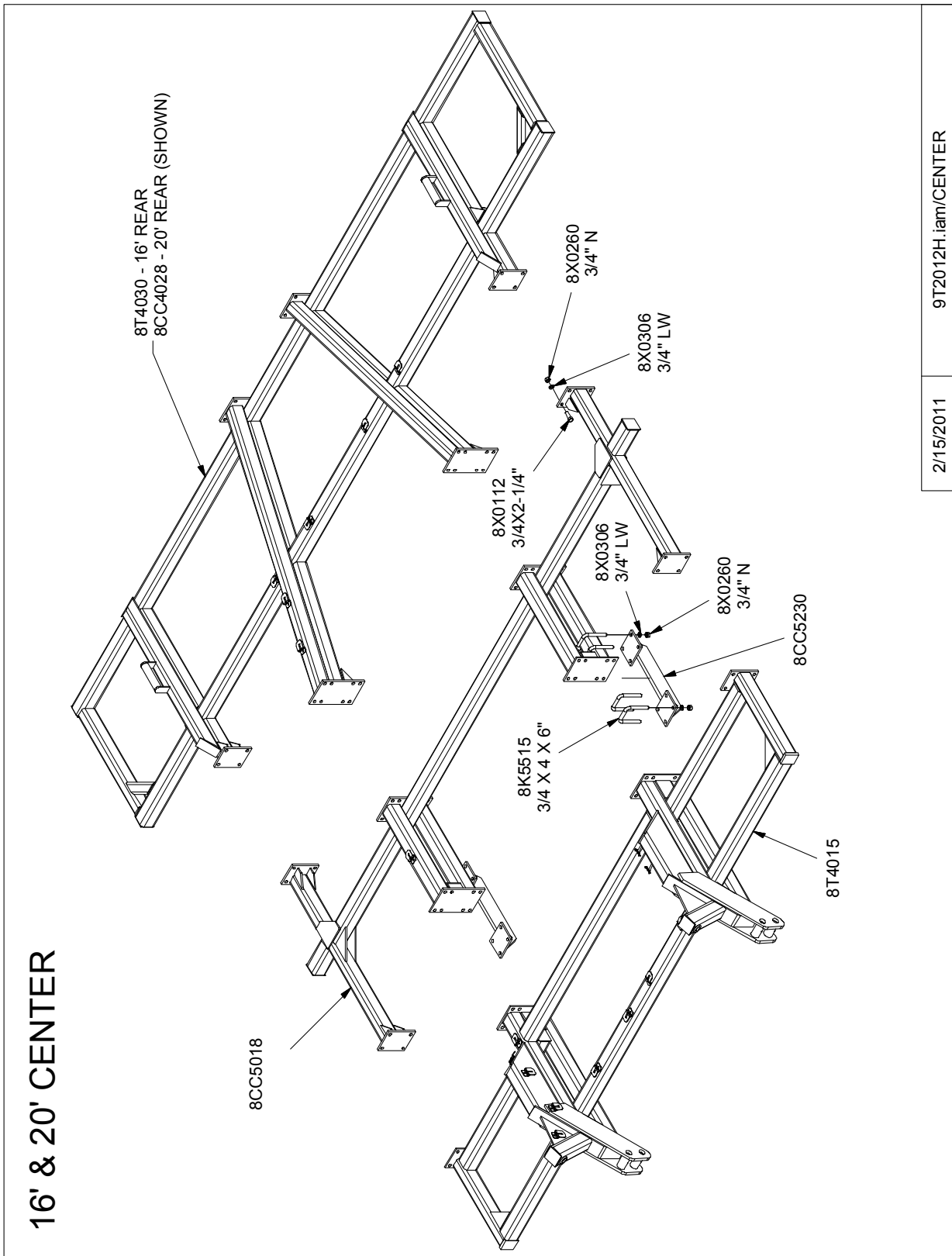
BE SURE PRESSURE IS RELIEVED from hydraulic circuits before servicing or disconnecting from tractor.

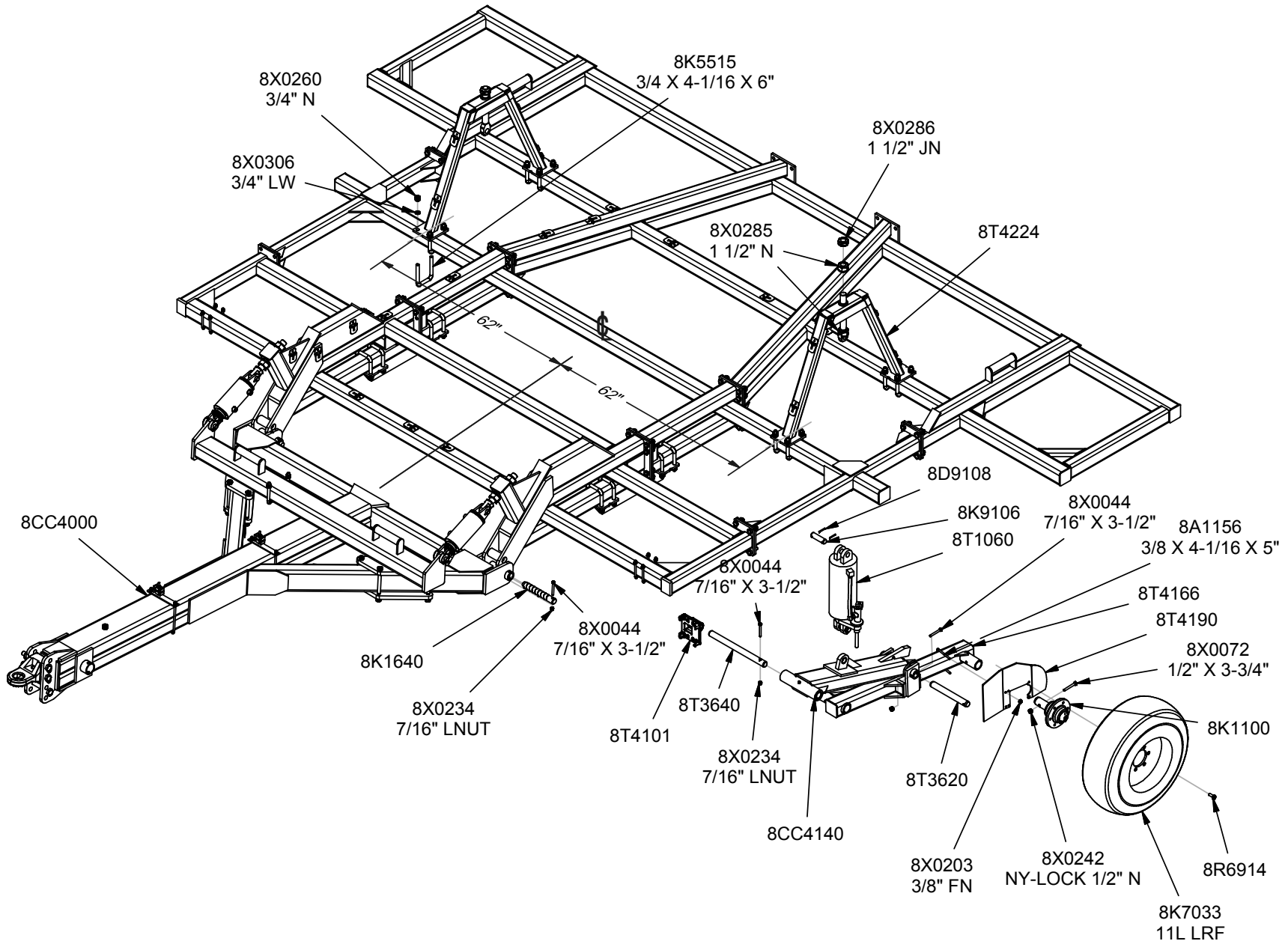


USE EXTREME CARE when assembling, servicing and adjusting.

## SECTION 2 – SET-UP OF CENTER SECTION (16'-20')

1. Place front and rear center section on floor with bolt plates facing each other.
2. ATTACH sections with 48 – 3/4x2-1/4" bolts, lock washers and nuts as shown.







## **SECTION 2 – SET-UP OF CENTER SECTION (16'-20')**

---

3. Block center frames off the floor.

4. Install cylinder attach brackets with 3/4" u-bolts.

NOTE: – Locate Rear Cylinder Attach Brackets (8T4224) 62" from frame center.

5. Insert eyebolts (8K1755) into each cylinder attach bracket.

– Tighten 1-1/2" nuts so the same amount of threads are above top nut on all eyebolts. Insure that cylinder attach holes are aligned when eyebolts are tightened.

NOTE: Drawing for steps 6 through 10 is on previous page.

6. All liftarms will be centered beneath cylinder attach brackets.

– Use 3/4" u-bolts for 4x4 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 bolts holes. Secure with lock nut.

7. Install walking tandem assemblies to bottom of rear liftarms.

– The left hand side of center frame uses 8T4166 and the right hand side uses 8T4168.

– Slide pivot pin (8T3620) through walking tandem assembly and lift arm.

– Insert 7/16 x 3-1/2" bolt in retaining bolt holes. Secure with lock nut.

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

8. Hang cylinders in correct locations.

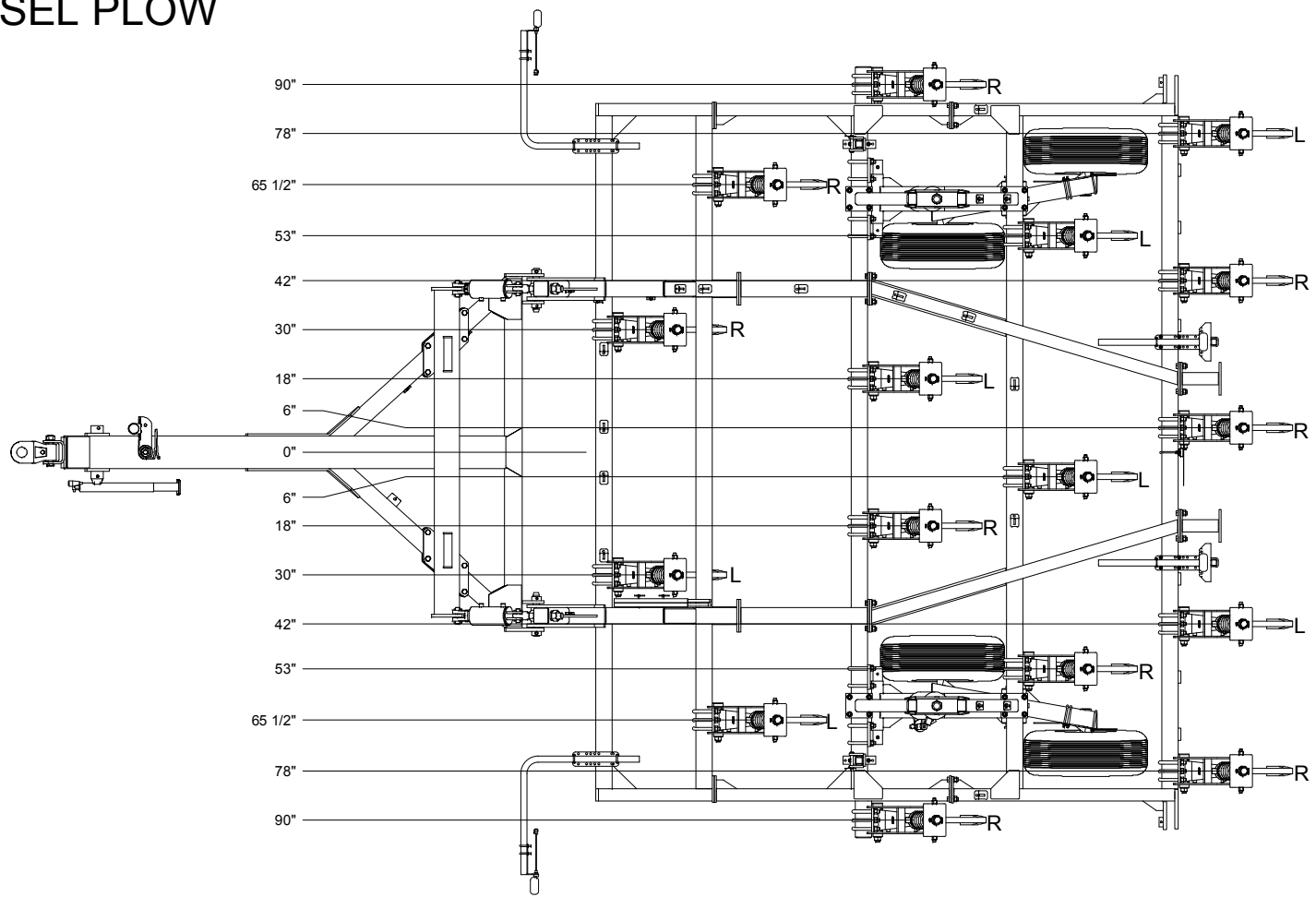
– Use pins and rollpins provided.

– Use 6" x 10" (8T1060) on left hand side of center, 5-1/2" x 10" (8T1055) on right hand side.

9. Install 8K1100 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 9/16" wheel bolts (torque required: 170 ft-lbs).

# 16' CHISEL PLOW



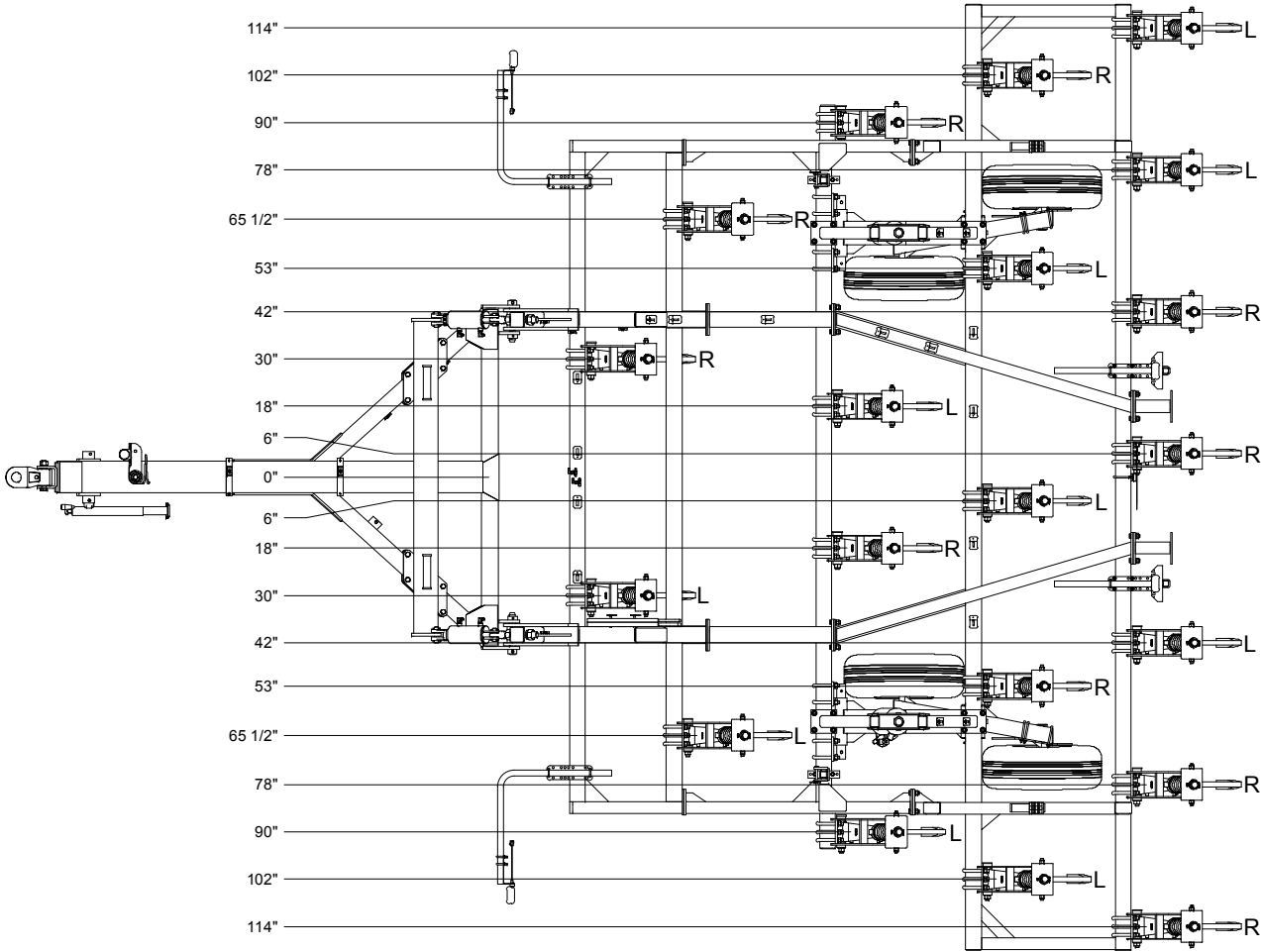
2-6

11/30/2010 9T1612H.iam/SHANK-GANGS

L -- R - SUGGESTED TWISTED SPIKE LAYOUT

## SECTION 2 - SET-UP OF CENTER SECTION (16')

# 20' CHISEL PLOW

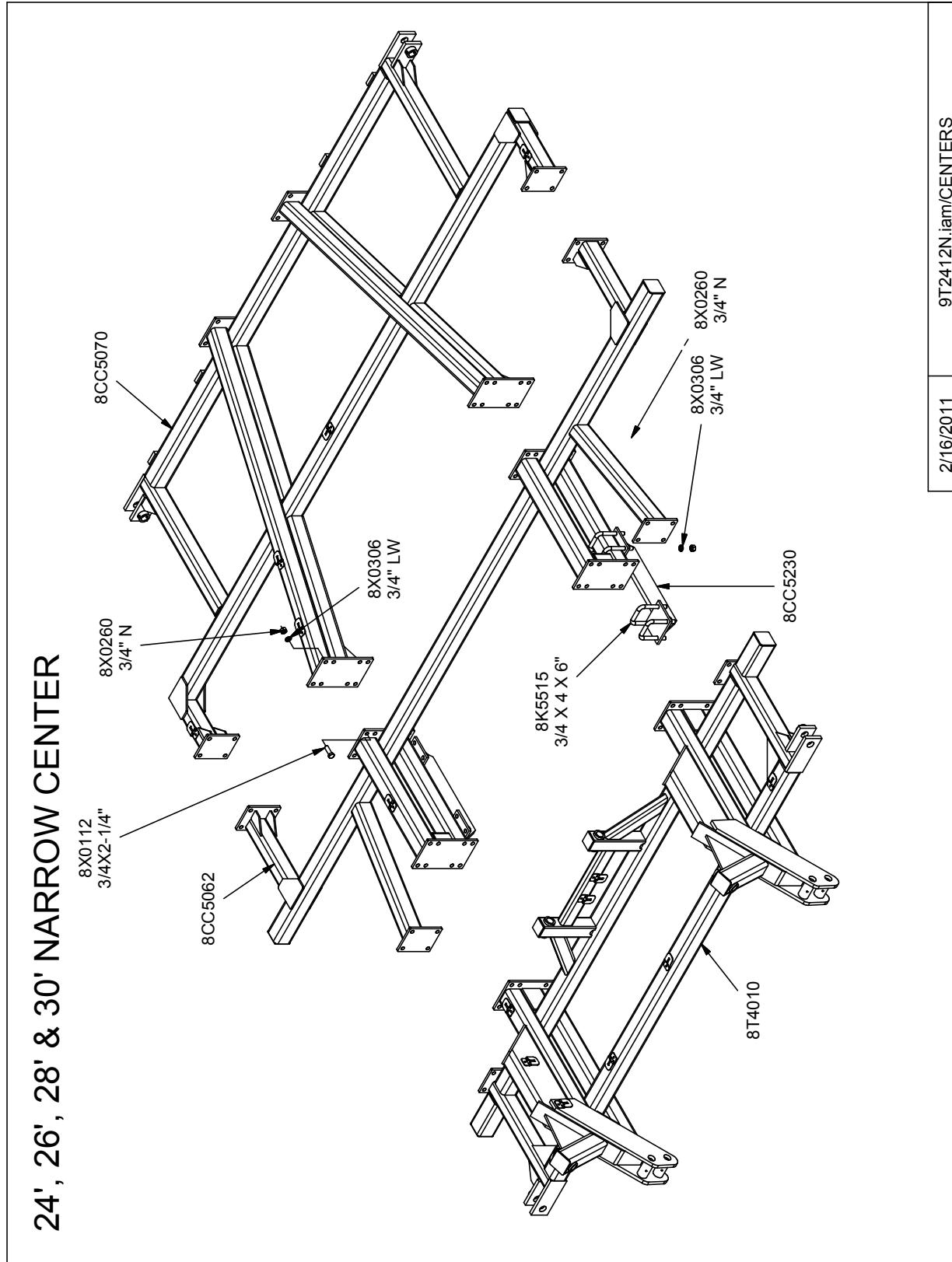


L -- R - SUGGESTED TWISTED SPIKE LAYOUT

## SECTION 2 -- SET-UP OF CENTER SECTION (20')

## SECTION 2 – SET-UP OF CENTER SECTION (24'-30' NARROW)

1. Place front and rear center section on floor with bolt plates facing each other.
2. ATTACH sections with 48 – 3/4x2-1/4" bolts, lock washers and nuts as shown.
3. Block center frames off the floor.



2/16/2011

9T2412N.iam/CENTERS

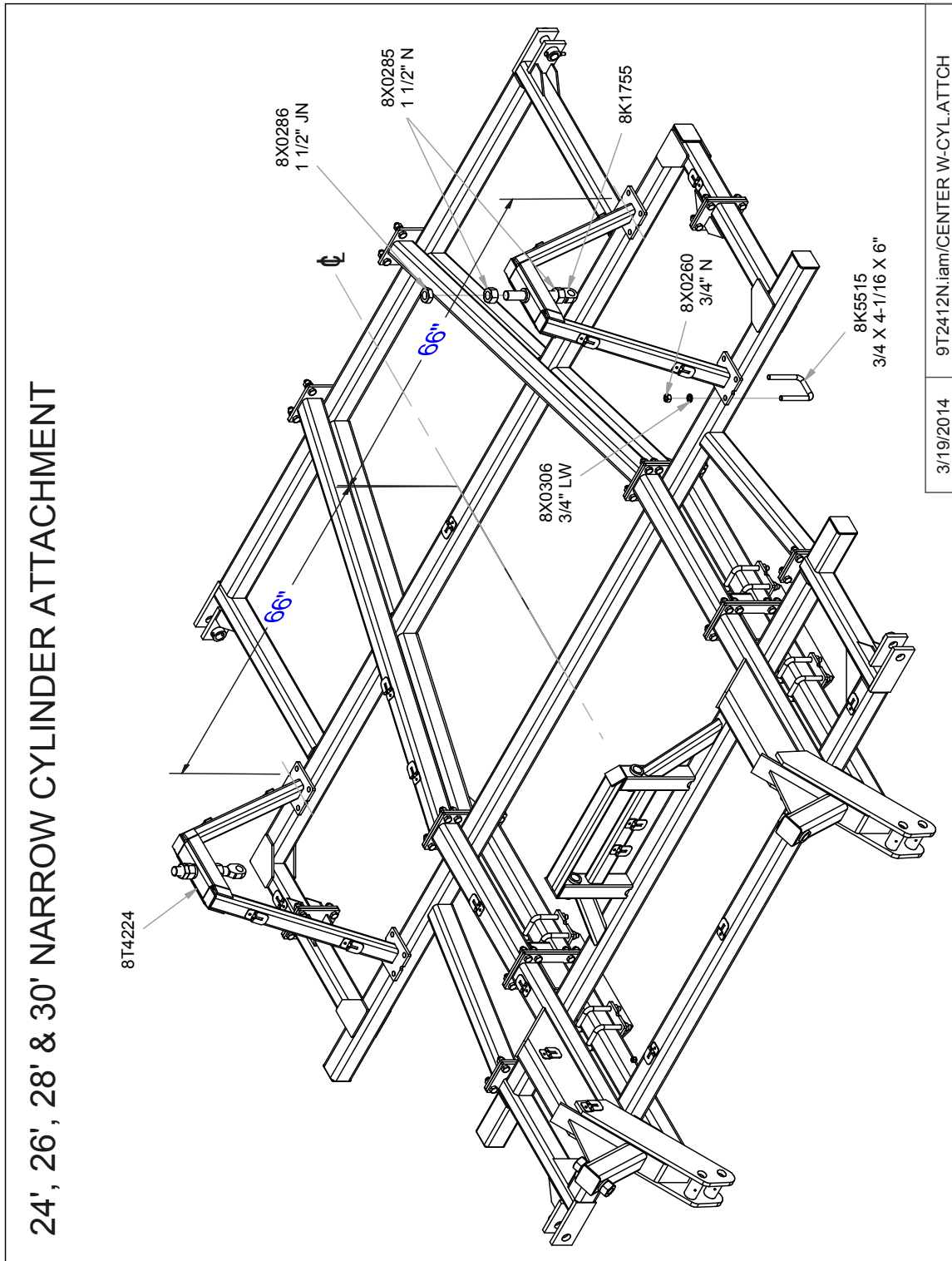
## SECTION 2 – SET-UP OF CENTER SECTION (24’-30’ NARROW)

4. Install cylinder attach brackets with 3/4” u-bolts.

NOTE: – Locate Rear Cylinder Attach Brackets (8T4224) 66” from frame center.

5. Insert eyebolts (8K1755) into each cylinder attach bracket.

– Tighten 1-1/2” nuts so the same amount of threads are above top nut on all eyebolts.  
Insure that cylinder attach holes are aligned when eyebolts are tightened.



## **SECTION 2 – SET-UP OF CENTER SECTION (24’-30’ NARROW)**

---

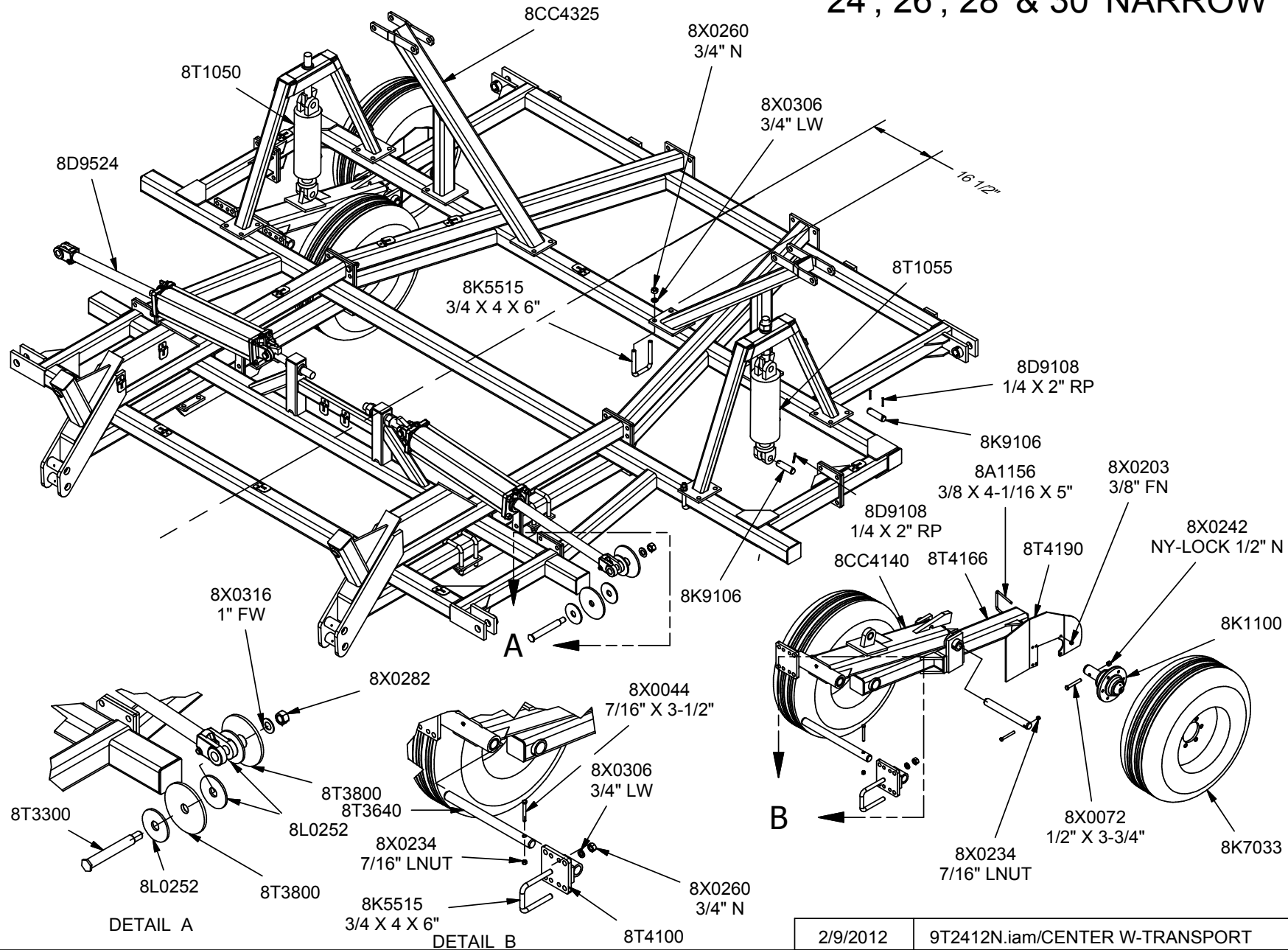
NOTE: Drawing for steps 6 through 10 is on next page.

6. All liftarms will be centered beneath cylinder attach brackets.
  - Use 3/4” u-bolts for 4x4 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 bolts holes. Secure with lock nut.
7. Install walking tandem assemblies to bottom of liftarms.
  - The left hand side of center frame uses 8T4166 and the right hand side uses 8T4168.
  - Slide pivot pin (8T3620) through walking tandem assembly and lift arm.
  - Insert 7/16 x 3-1/2” bolt in retaining bolt holes. Secure with lock nut.
  - Install 8T4190 (left) and 8T4192 (right) mud guards as shown. Secure with 3/8” u-bolts and flange nuts.
8. Hang cylinders in correct locations.
  - Use pins and rollpins provided.
  - Use 5-1/2” x 10” (8T1055) on left hand side of center, 5 x 10” (8T1050) on right hand side of center.
9. Install 8K1100 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 9/16” wheel bolts (torque required: 170 ft-lbs).
11. Attach wing transport locks to center frame with 3/4” u-bolts.
  - Locate inside edge of bolt plate 16-1/2” away from frame center.
  - Install 1/2 x 6” pins in inside storage holes of transport lock.
12. 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.
13. Attach wing lift cylinders to frame with pins and roll pins.

# 24', 26', 28' & 30' NARROW

## SECTION 2 - SET-UP OF CENTER SECTION (24'-30' NARROW)

2-11



## SECTION 2 – SET-UP OF CENTER SECTION (24’-30’ NARROW)

14. Attach hitch to center with 8K1640.

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

15. Install 7/16x3-1/2” retaining bolts through hitch pivot pins. Secure with lock nuts.

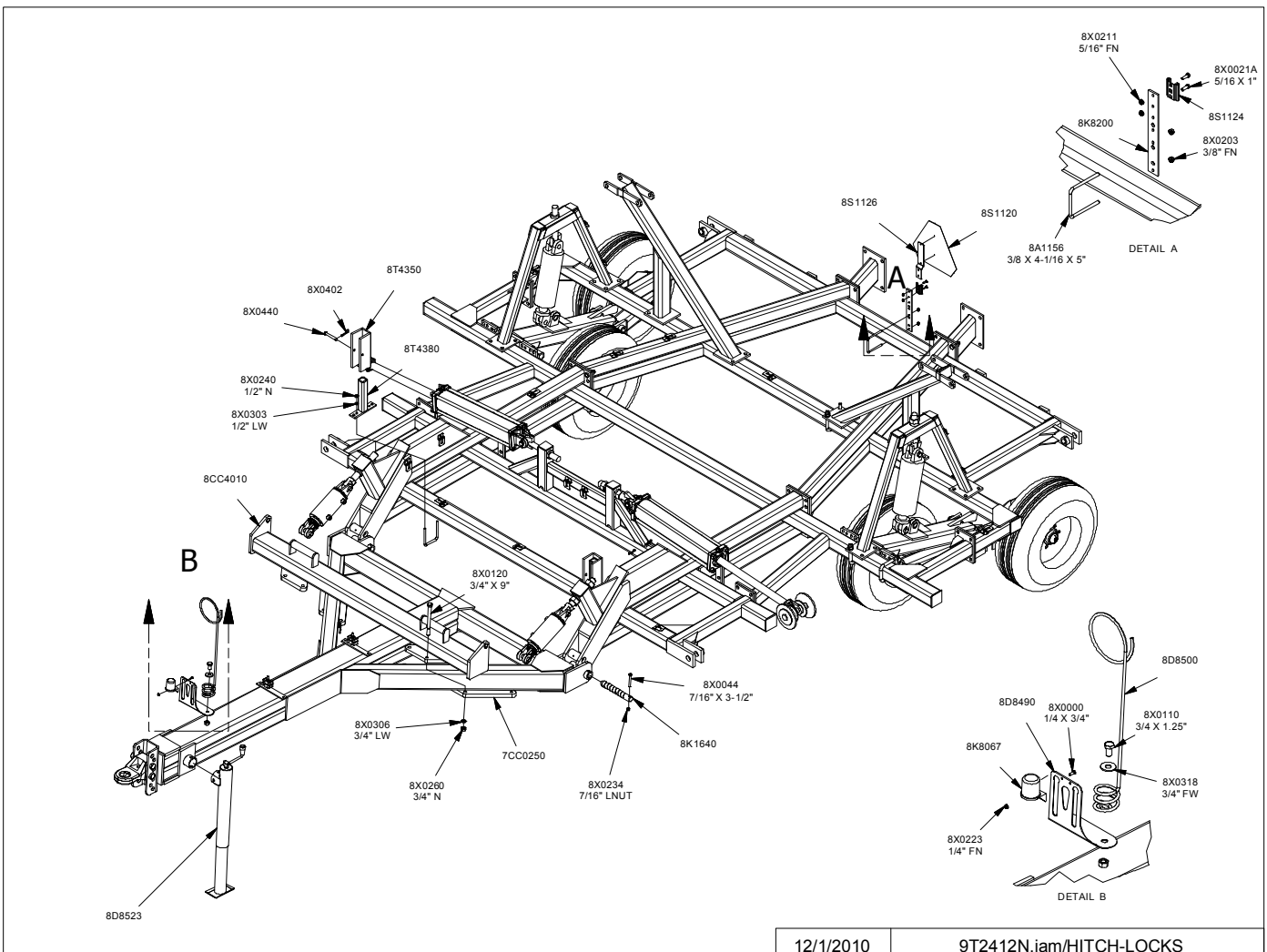
16. Attach hydraulic hose holder and tip holder with 3/4 x 1-1/4” bolt and flat washer.

17. Attach hitch jack to jack spool.

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

19. Add depth control cylinder locks and storage bases.

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



12/1/2010

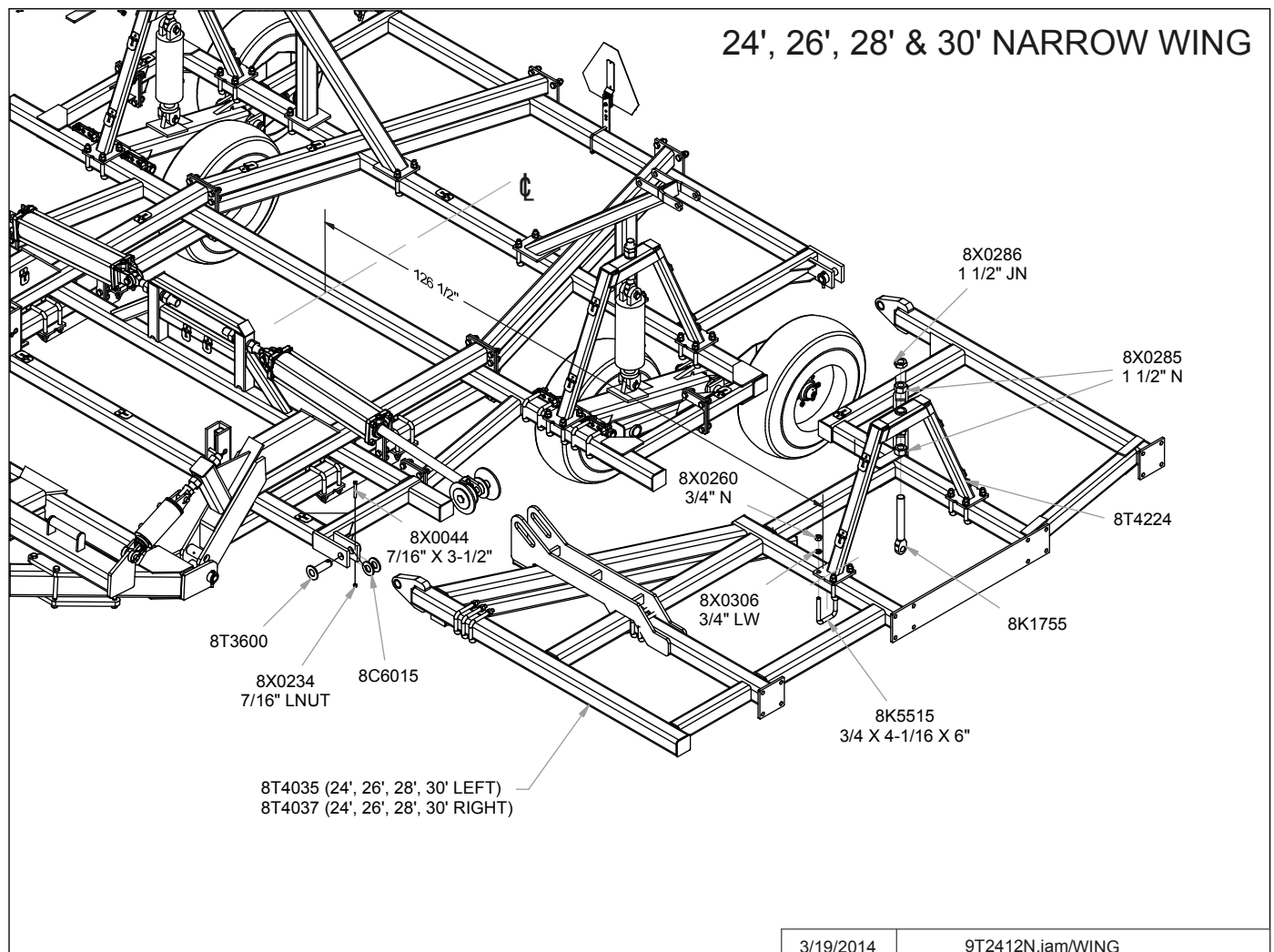
9T2412N.iam/HITCH-LOCKS



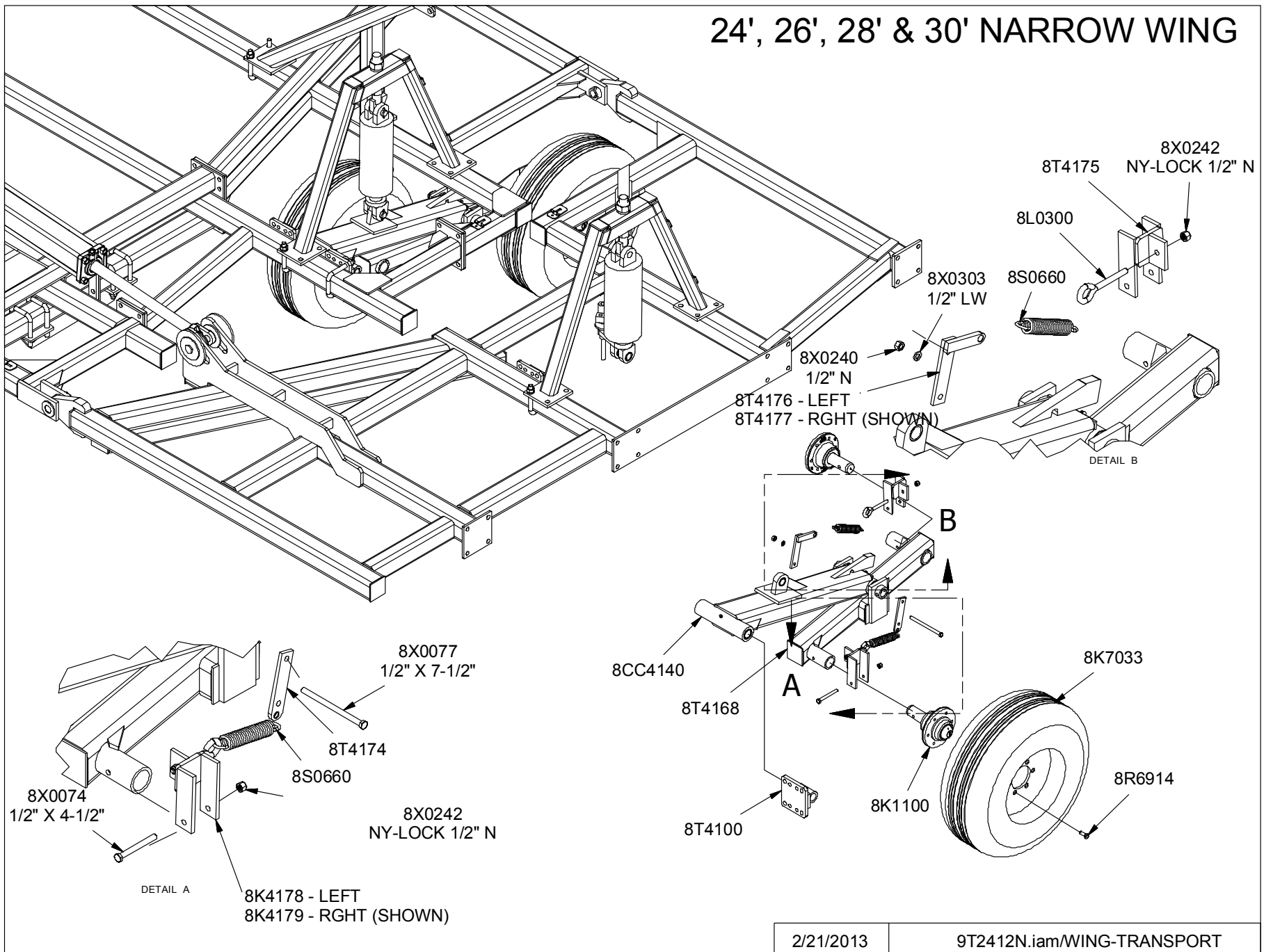
## SECTION 2 – SET-UP OF WINGS (24'-30' NARROW)

NOTE: It is recommended to set up both sides of machine at the same time. The left hand side is shown.

1. Attach wing to center section with pins, washers, bolts and locknuts.
  - Washers (8C6015) are used to center wing in hinges and prevent shift.
2. Fasten cylinder attach brackets with 3/4" u-bolts.
  - Locate brackets: 126 1/2" from center of machine.
3. Insert eyebolts (8K1755) into cylinder attach bracket.
  - Tighten 1-1/2" nuts so the same amount of threads are above top nut on all eyebolts. Insure that cylinder attach holes are aligned when eyebolts are tightened.



# 24', 26', 28' & 30' NARROW WING



2-14

SECTION 2 - SET-UP OF WINGS (24'-30' NARROW)

2/21/2013

9T2412N.iam/WING-TRANSPORT

## **SECTION 2 – SET-UP OF WINGS (24'-30' NARROW)**

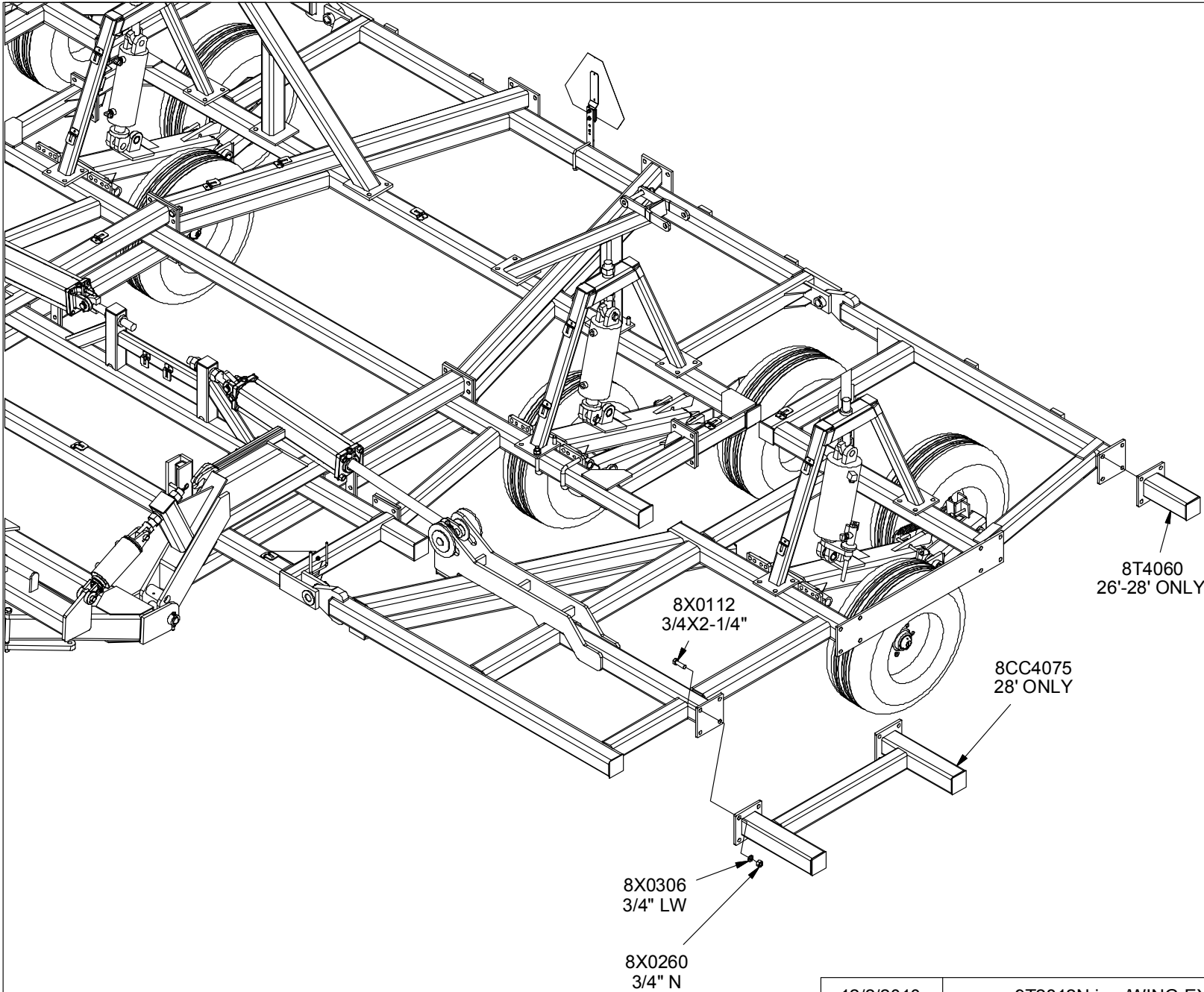
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4. Center liftarm under cylinder attach brackets.
  - Use 3/4" u-bolts for 4x4 to attach liftarm pivots (8T4100) to frame.
  - Slide pivot pin (8T3640) through liftarm and liftarm pivots.
  - Insert 7/16 x 3-1/2" bolt in retaining bolt holes. Secure with lock nut.
5. Install walking tandem assembly to bottom of liftarms.
  - The left hand wing uses an 8T4168.
  - The right hand wing uses an 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 lock nut.
6. Hang cylinders in appropriate location. Use pins and roll pins.
  - Rod end of cylinder (positioned down) attaches to lift arm.
  - Use 6 x 10" (8T1060) on left hand wing.
  - Used 4-1/2 x 10" (8T1045) on right hand wing.
7. Install 8K1100 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 wheels onto hubs with 9/16" wheel bolts (torque required: 170 ft-lbs).
9. Install optional wing extensions. One-shank extensions are used on the 26'. Both one-shank and two-shank extensions are used on the 28'.
  - One-shank extension must be placed on rear rank.
  - Two-shank extension must be placed on second and third ranks (See page 2-16).
  - Mounting bolts must point toward outside of machine. (Trip assembly interference will occur if this is not followed.)
10. Hang trip assemblies according to layout provided (See pages 2-17 through 2-19).

NOTE: Steps 10-11 can be done after cylinders are filled with oil and machine is raised.

  - Use 3/4" u-bolts for 4 x 4 tube with 3/4" lock washers and 3/4" nuts.
  - Tighten u-bolts an equal amount on top and bottom. The same amount of threads should appear on top and bottom of u-bolt.

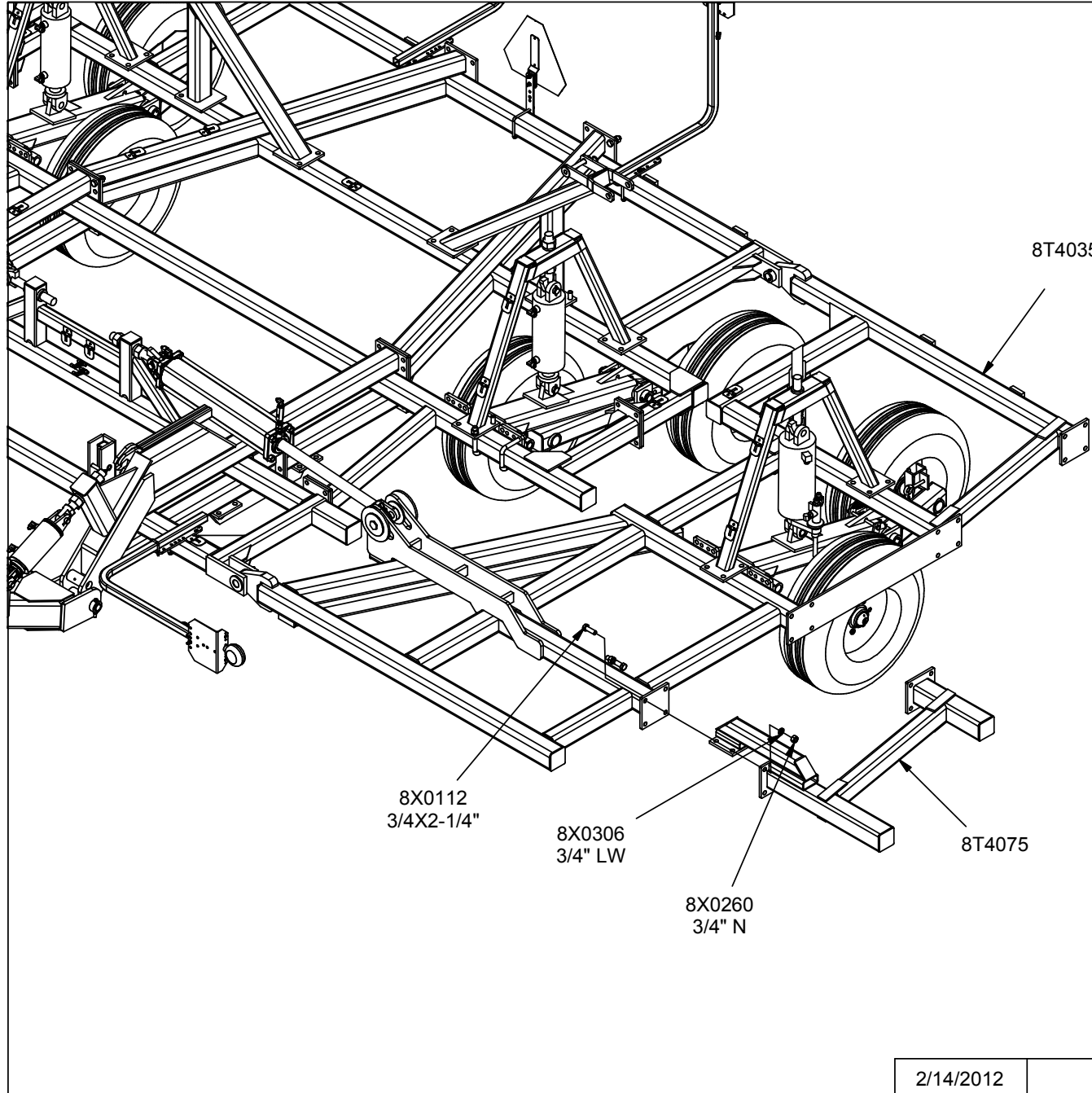
SECTION 2 - SET-UP OF WINGS (24'-30' NARROW)



12/2/2010

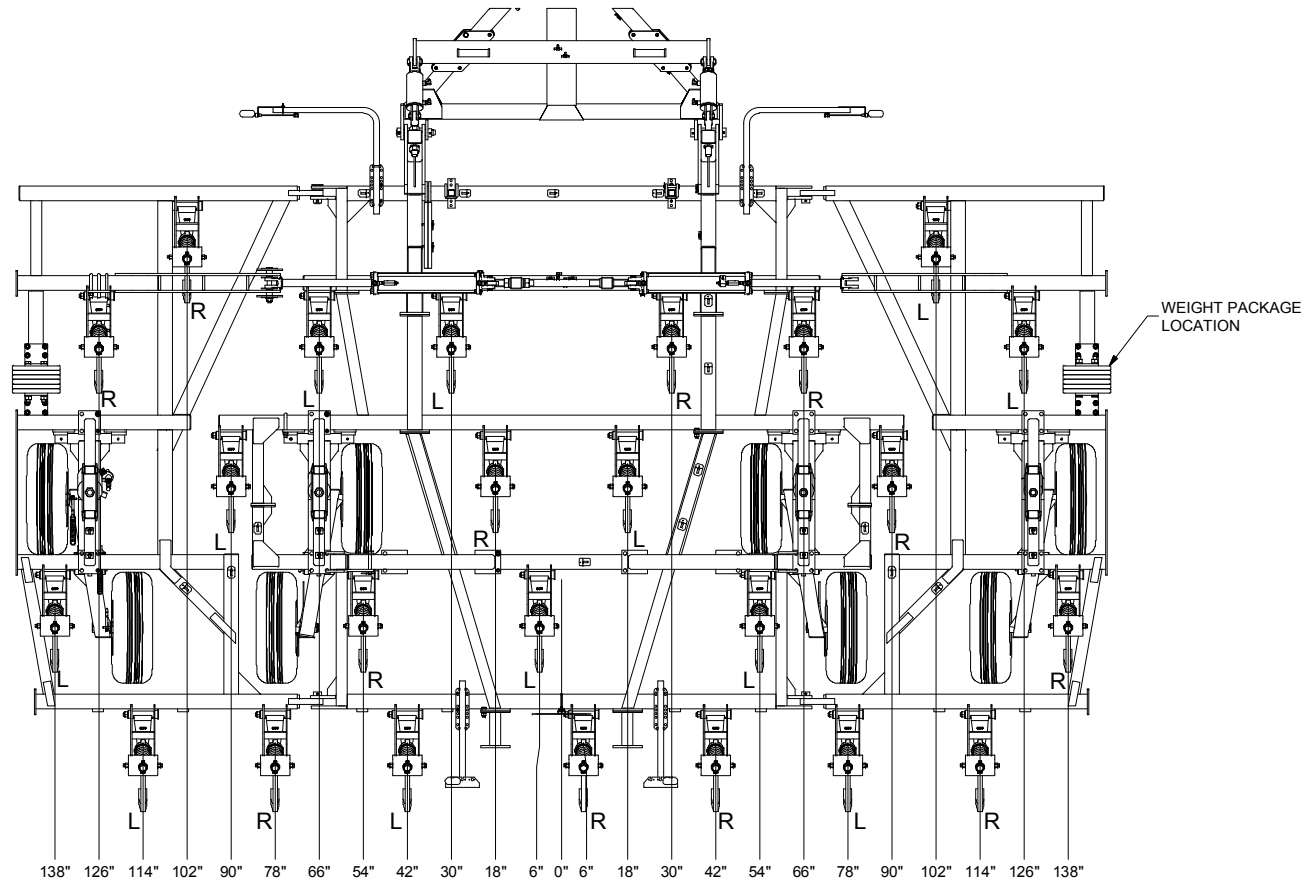
9T2812N.iam/WING-EXT

SECTION 2 - SET-UP OF WINGS (24'-30' NARROW)



2-17

# 24' NARROW CENTER CHISEL PLOW



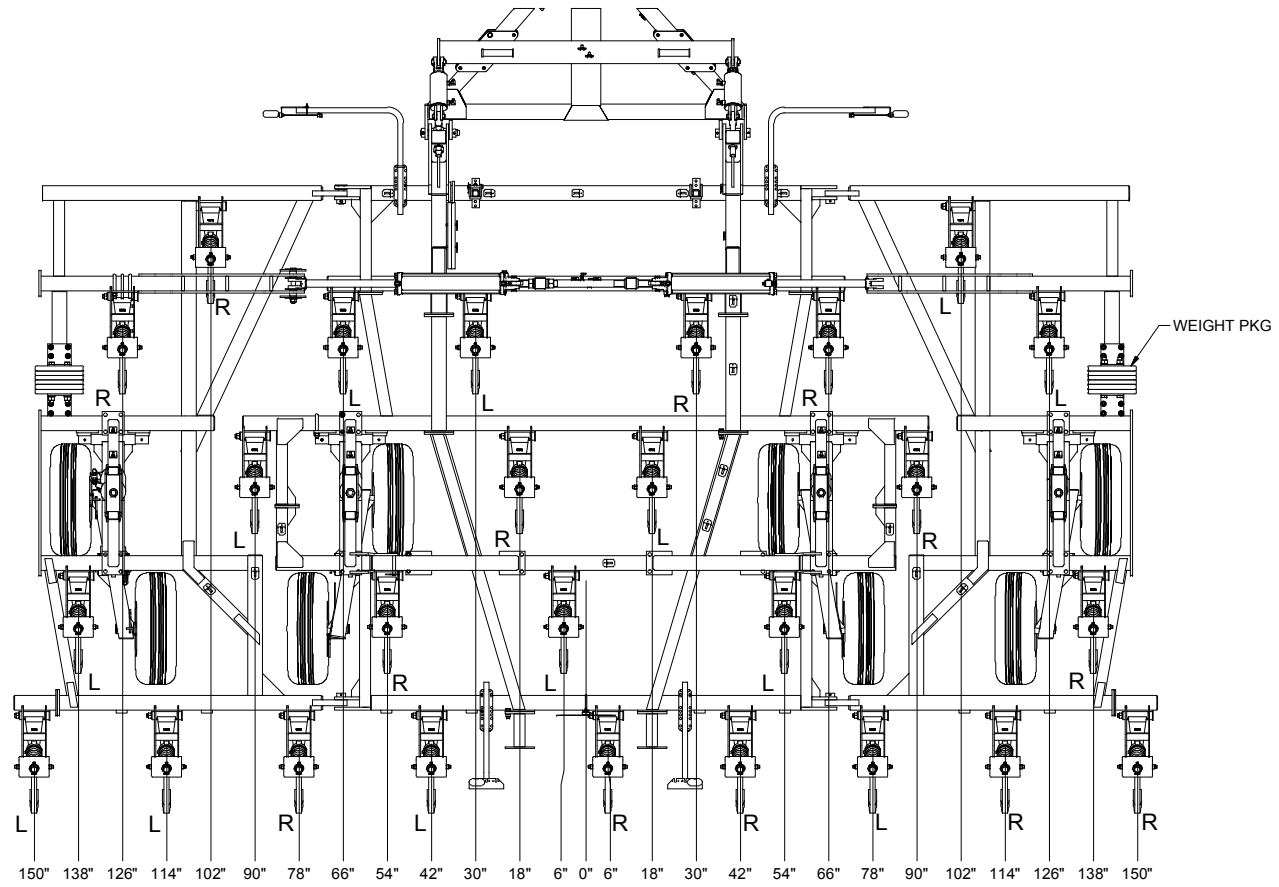
SECTION 2 - SET-UP (24'-30' NARROW)

L -- R - SUGGESTED TWISTED SPIKE LAYOUT

12/1/2010

9T2412N.iam/24' CHSL SHANKS-GANGS

# 26' CHISEL PLOW

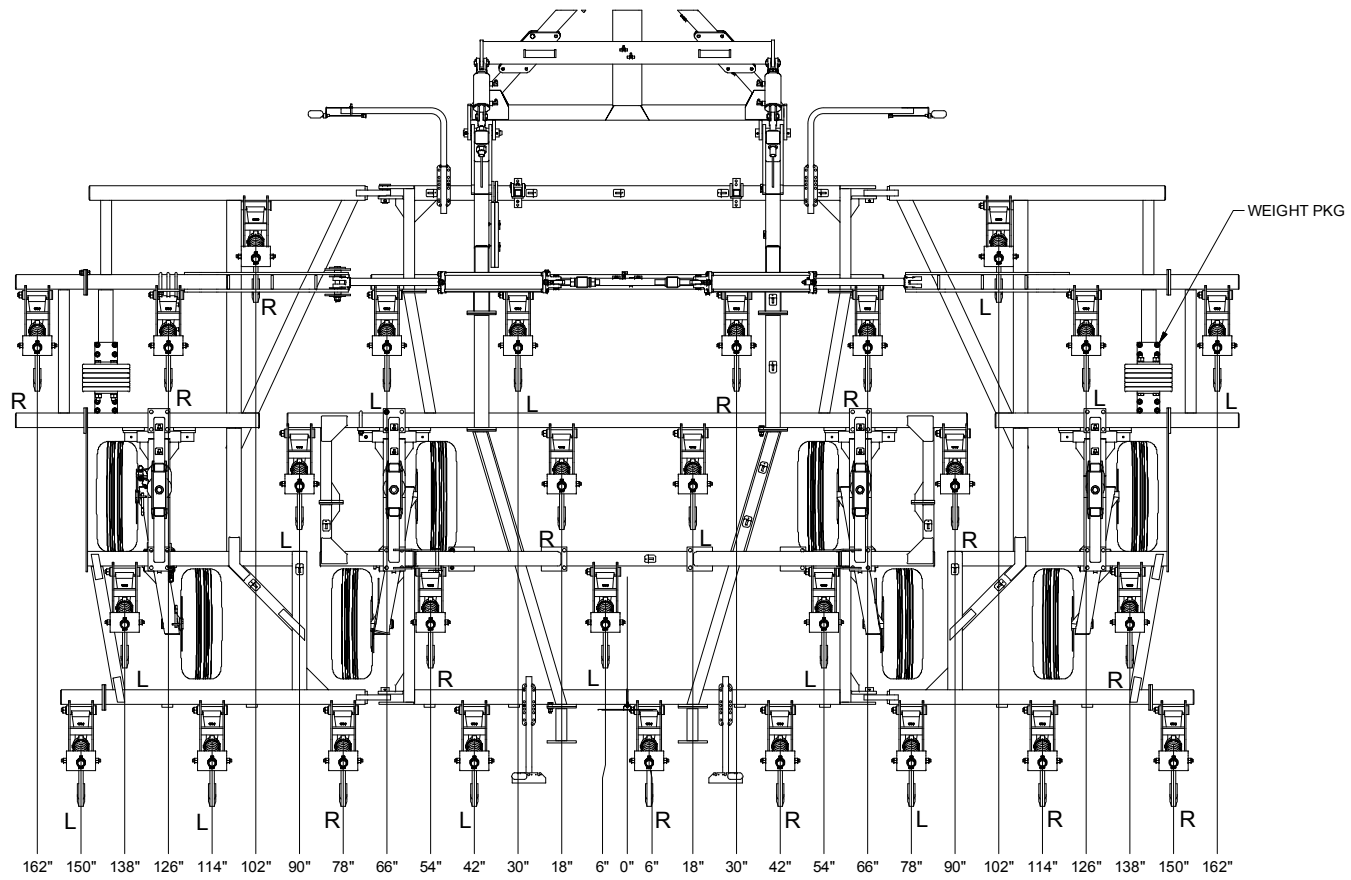


L -- R - SUGGESTED TWISTED SPIKE LAYOUT

12/2/2010

9T2612N.iam/26' CHSL SHANK LAYOUT

# 28' CHISEL PLOW



2-20

L -- R - SUGGESTED TWISTED SPIKE LAYOUT

12/2/2010

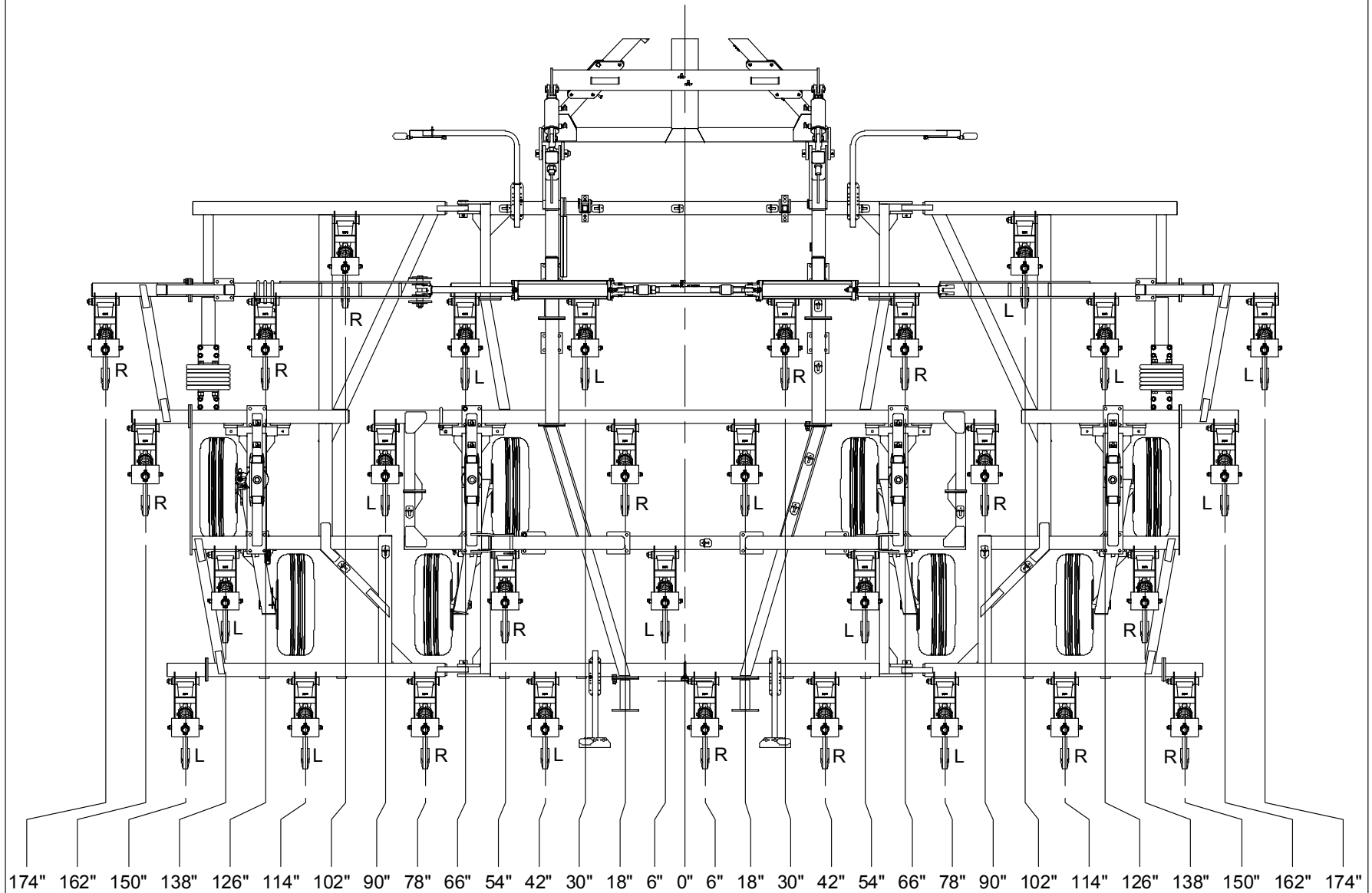
9T2812N.iam/28' CHSL SHANK LAYOUT

SECTION 2 - SET-UP (24'-30' NARROW)



30' NARROW CHISEL PLOW

SECTION 2 - SET-UP (24'-30' NARROW)



2-21

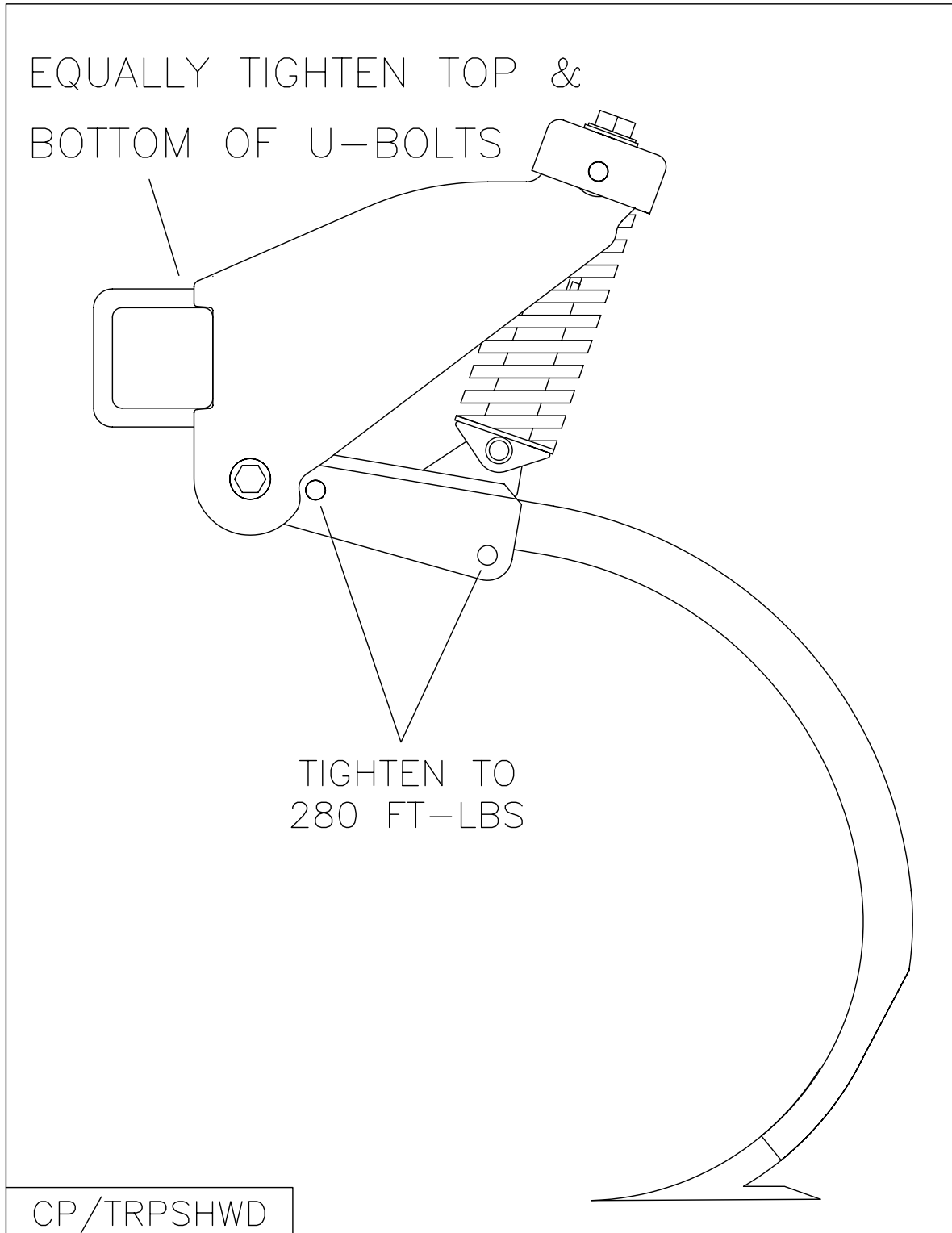
L - R - SUGGESTED TWISTED SPIKE LAYOUT

2/3/2012 9T3012N.iam/30' NRW CHSL SHANK LAYOUT

## SECTION 2 – SET-UP (24’-30’NARROW)

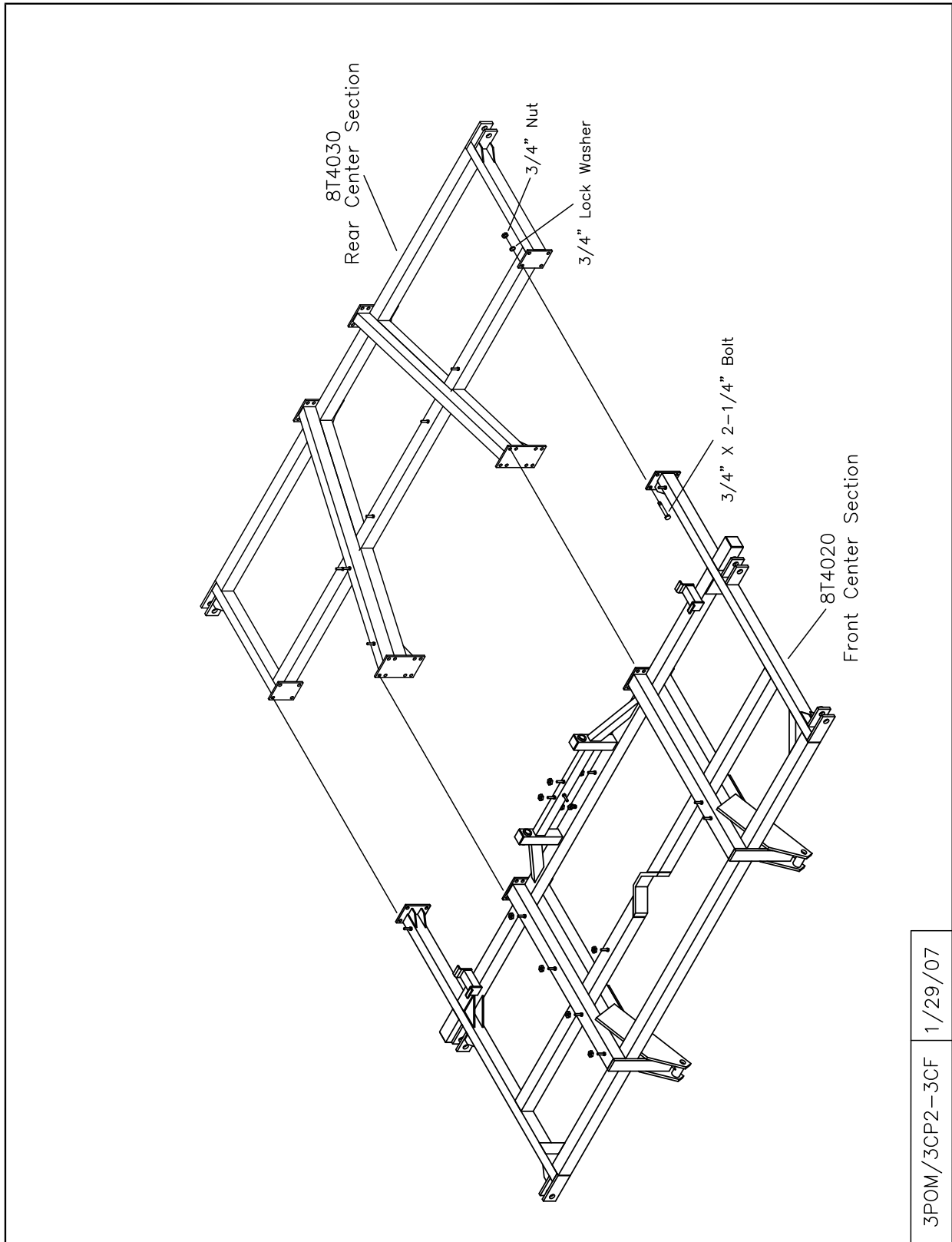
### 11. Install shanks into trip assemblies.

- Install rear 3/4 x 4” bolt. Slide shank into shank holder. Install front bolt. Securely tighten.
- Shanks will fit snugly into shank holder. If tapping bottom of shank does not work, it may be necessary to remove burr and/or paint from shank or shank holder.



## SECTION 2 – SET-UP OF CENTER SECTION (32'-44')

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 as shown.



## SECTION 2 – SET-UP OF CENTER SECTION (32'-44')

3. Block center frames off the floor.

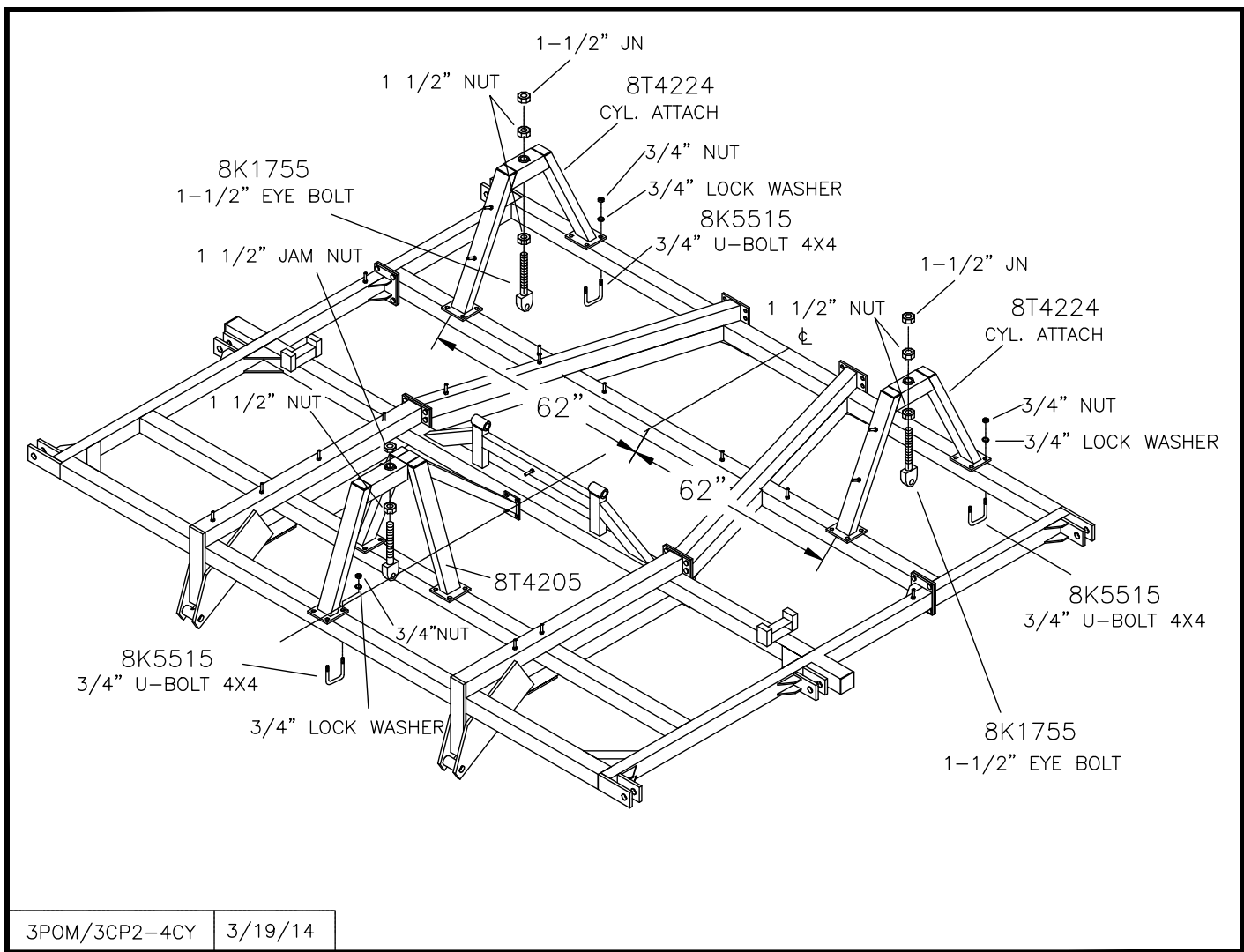
4. Install cylinder attach brackets with 3/4" u-bolts.

NOTE: – Locate Rear Cylinder Attach Brackets (8T4224) 62" from frame center.

– Locate Front Cylinder Attach Bracket (8T4205) at front center as shown.

5. Insert eyebolts (8K1755) into each cylinder attach bracket.

– Tighten 1-1/2" nuts so the same amount of threads are above top nut on all eyebolts.  
Insure that cylinder attach holes are aligned when eyebolts are tightened.



## **SECTION 2 – SET-UP OF CENTER SECTION (32'-44')**

---

NOTE: Drawing for steps 6 through 10 is on the next page.

6. All liftarms will be centered beneath cylinder attach brackets.

- Use 3/4" u-bolts for 4x4 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 bolts holes. Secure with lock nut.

7. Install walking tandem assemblies to bottom of rear liftarms.

- The left hand side of 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 lift arm.
- Insert 7/16 x 3-1/2" bolt in retaining bolt holes. Secure with lock nut.
- Install 8T4190 (left) and 8T4192 (right) mud guards as shown. Secure with 3/8" u-bolts and flange nuts.

7a. 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 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 lock nut.
- Push V-seals against walking tandem assembly and secure by placing snap ring into groove.

8. Hang cylinders in correct locations.

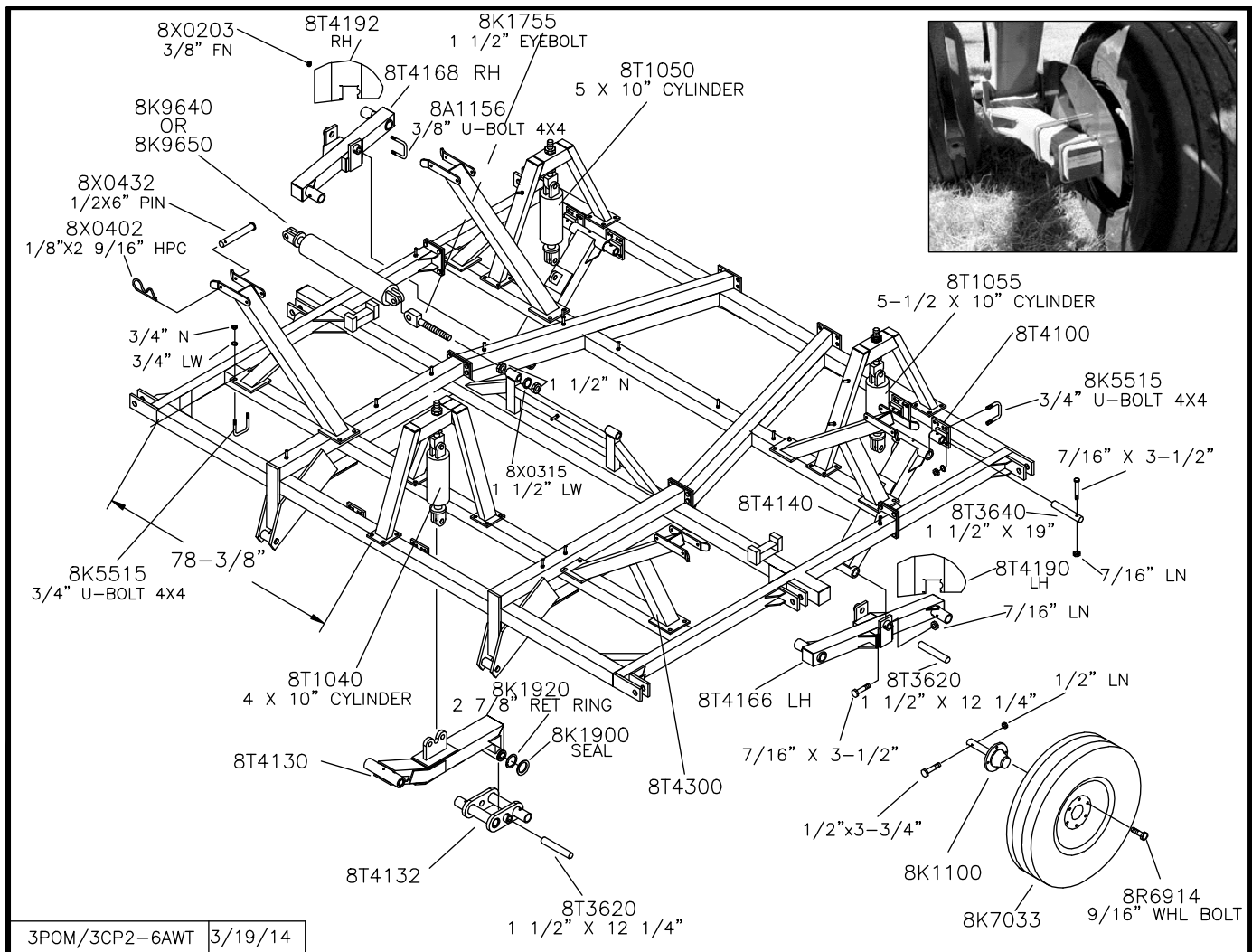
- Use pins and rollpins provided.
- Use 5-1/2" x 10" (8T1055) on left hand side of center, 5 x 10" (8T1050) on right hand side of center, and 4 x 10" (8T1040) on center wheel assembly.
- The front center lift arm (8T4130) has two cylinder attach locations. If chisel plow will have a full set of mounted 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.

9. Install 8K1100 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 9/16" wheel bolts (torque required: 170 ft-lbs).

## SECTION 2 – SET-UP OF CENTER SECTION (32’-44’)

11. Attach wing transport locks to center frame with 3/4" u-bolts.
  - Located outside edge of bolt plate 78-3/8" away from frame center.
  - Install 1/2 x 6" pins in inside storage holes of transport lock.
12. 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.
13. Attach wing lift cylinders to frame with pins and roll pins.
  - 32' through 36' machines use 4 x 36" cylinders (8K9640).
  - 38' through 44' machines use 5 x 36" cylinders (8K9650).



## SECTION 2 – SET-UP OF CENTER SECTION (32’-44’)

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

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

15. Install 7/16x3-1/2" retaining bolts through hitch pivot pins. Secure with lock nuts.

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

17. Attach hitch jack to jack spool.

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

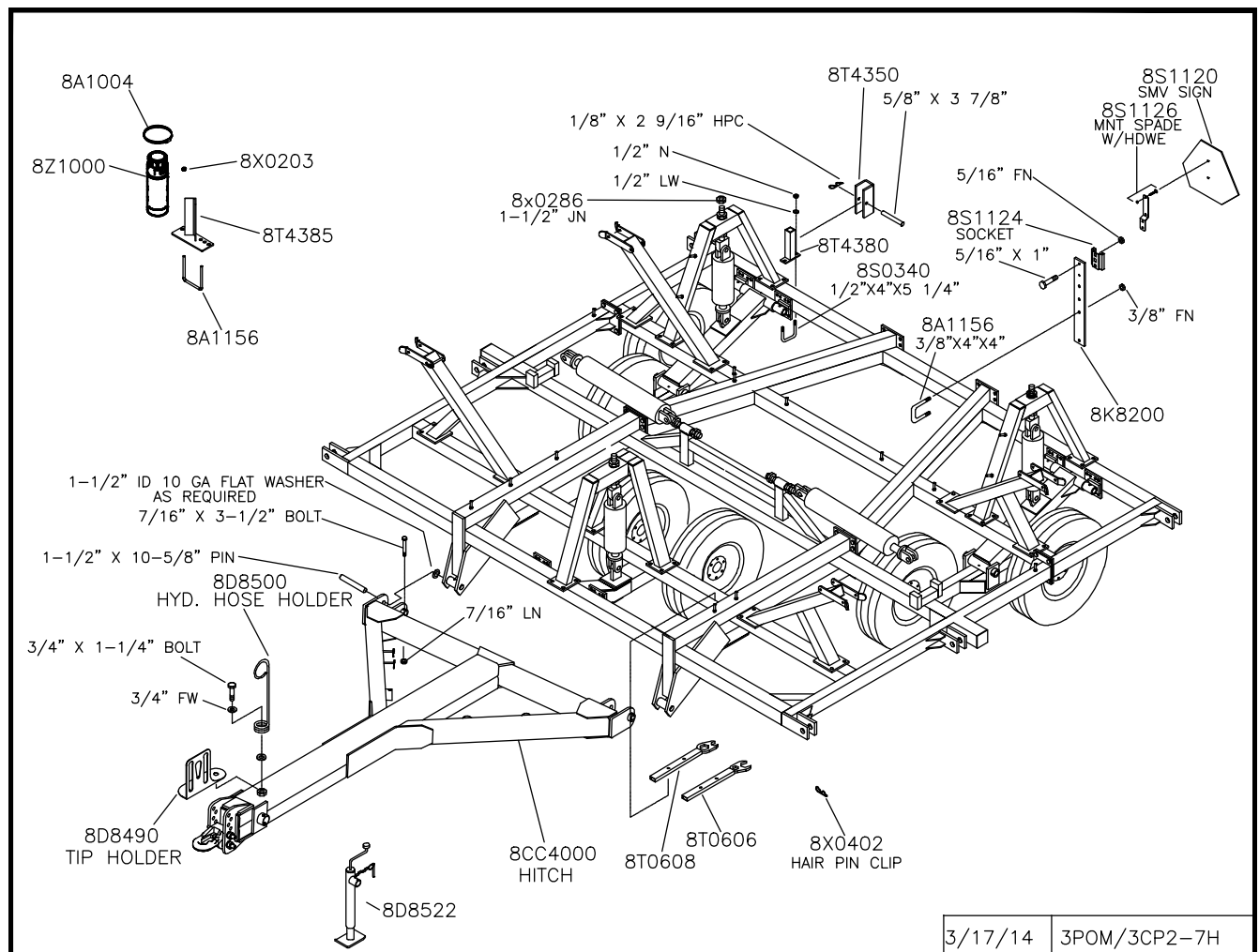
19. Add depth control cylinder locks and storage bases.

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

– Locate lock for front center cylinder on front 4 x 4 tube.

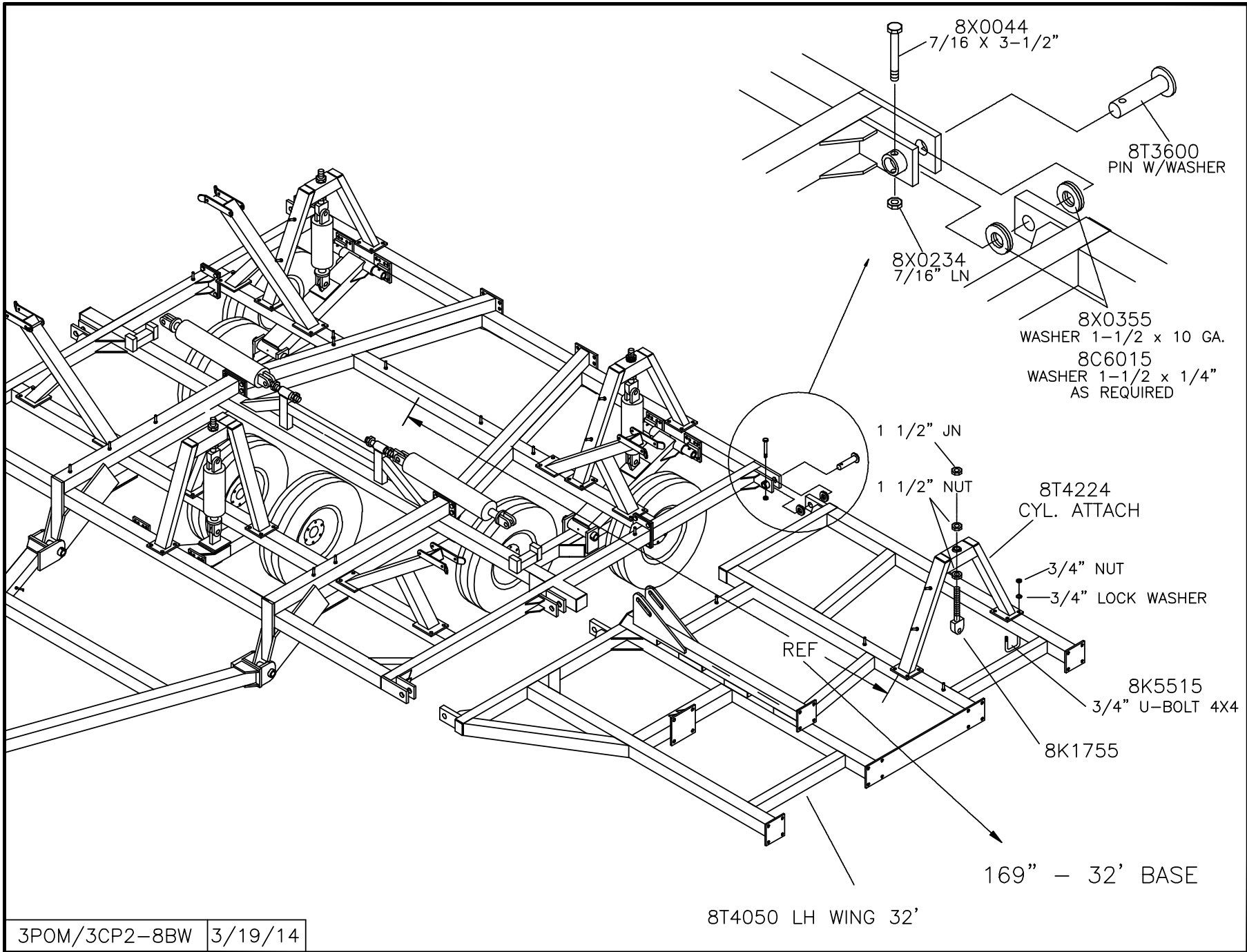
20. Install SMV sign mounting bracket and sign at center of rear rank.

21. Place adjustment wrenches on clevis pins found on left side of center section. Retain with hair pin clips.



3/17/14 | 3POM/3CP2-7H

2-28



SECTION 2 - SET-UP OF 32' BASE MACHINES (32'-38')

3POM/3CP2-8BW 3/19/14

8T4050 LH WING 32'

169" - 32' BASE



## **SECTION 2 – SET-UP OF 32' BASE MACHINES (32'-38')**

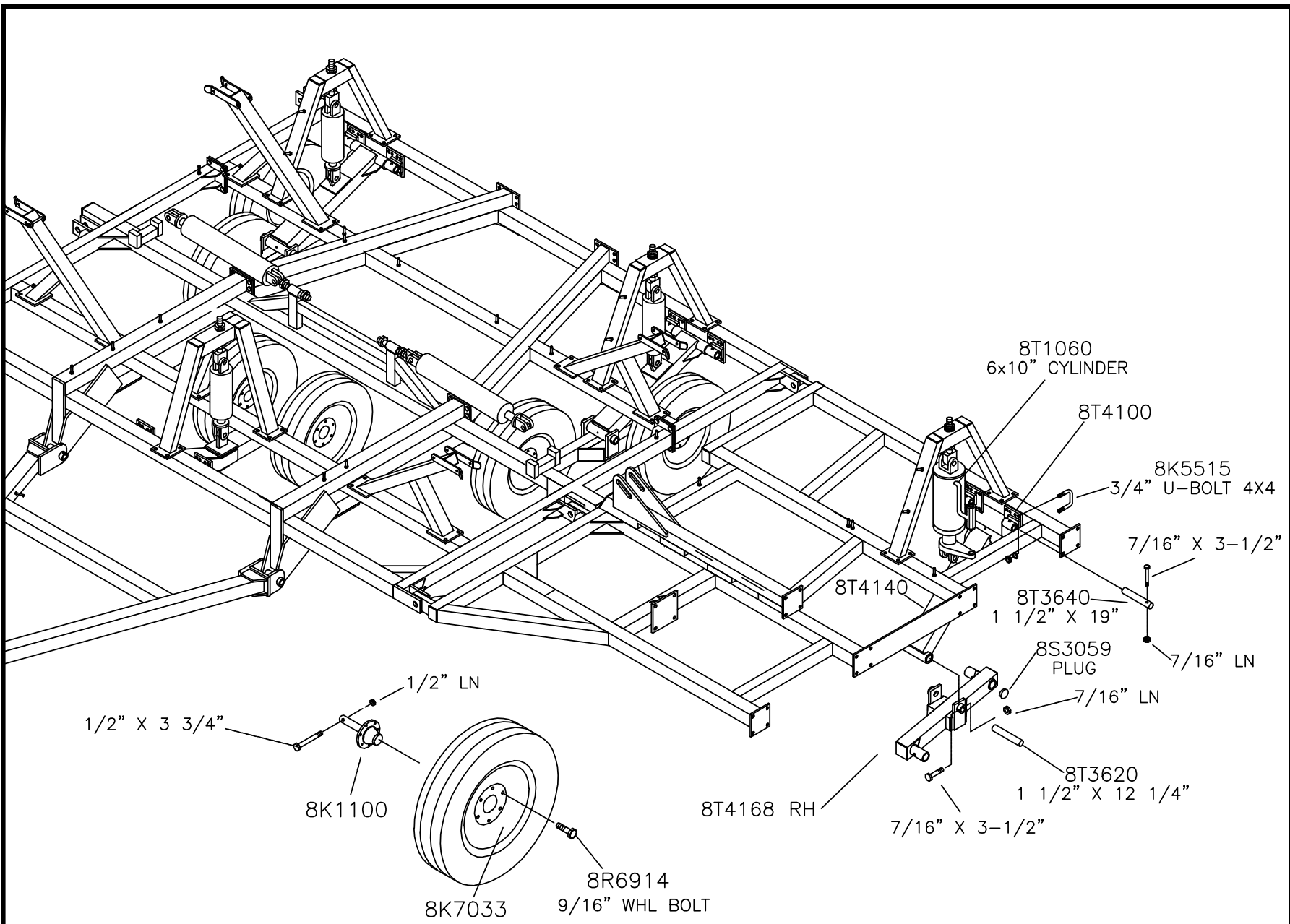
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NOTE: It is recommended to set up both sides of machine at the same time. The left hand side is shown.

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 with 3/4" u-bolts.
  - Locate brackets: 169" from center of machine for 32'-38' chisels.
3. Insert eyebolts (8K1755) into cylinder attach bracket.
  - Tighten 1-1/2" nuts so the same amount of threads are above top nut on all eyebolts. Insure that cylinder attach holes are aligned when eyebolts are tightened.
4. Center liftarm under cylinder attach brackets.
  - Use 3/4" u-bolts for 4x4 to attach liftarm pivots (8T4100) to frame.
  - The inside pivot will be attached with 3/4 x 6" bolts and a trip assembly. (See step 20)
  - Slide pivot pin (8T3640) through liftarm and liftarm pivots.
  - Insert 7/16 x 3-1/2" bolt in retaining bolt holes. Secure with lock nut.
5. Install walking tandem assembly to bottom of liftarm.
  - The left hand wing uses an 8T4168.
  - The right hand wing uses an 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 lock nut.
6. Hang cylinders in appropriate location. Use pins and roll pins.
  - Rod end of cylinder (positioned down) attaches to lift arm.
  - Use 6 x 10" (8T1060) on left hand wing.
  - Used 4-1/2 x 10" (8T1045) on right hand wing.
7. Install 8K1100 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 wheels onto hubs with 9/16" wheel bolts (torque required: 170 ft-lbs).

SECTION 2 - SET-UP OF 32' BASE MACHINES (32'-38')

2-30



## **SECTION 2 – SET-UP OF 32' BASE MACHINES (32'-38')**

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9. Install optional wing extensions.

- One-shank extension must be placed on rear rank.
- Two-shank extension must be placed on middle two ranks.
- Three-shank extension with gauge wheel plate must be attached to the first and second rank.
- Mounting bolts must point toward outside of machine. (Trip assembly interference will occur if this is not followed.)

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

NOTE: Steps 10 through 15 may have been pre-assembled at factory.

11. 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.

12. Place gauge wheel depth decal on axle holder.

- Locate decal 1" from bottom of 4 x 4 tube.
- Make sure that decal faces the front of the machine.
- Decal should be placed off to one side of axle holder to avoid seam on support tube.

13. 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.

14. Add gauge wheel screw top onto jack bolt.

- Insert 1/2 x 2-1/4" bolt into screw top and bolt, secure with locknut.

15. Attach gauge wheel jack handle to screw top.

- Install 3/8 x 2" bolt in handle and screw top. Secure with lock nut.
- Do not over tighten. Handle must pivot freely.

## SECTION 2 – SET-UP OF 32' BASE MACHINES (32'-38')

16. 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.

16a. Adjust clearance between 8T4090 and 8T4094 with 3/4" set bolts and jam nuts.

17. Install 8K1100 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.

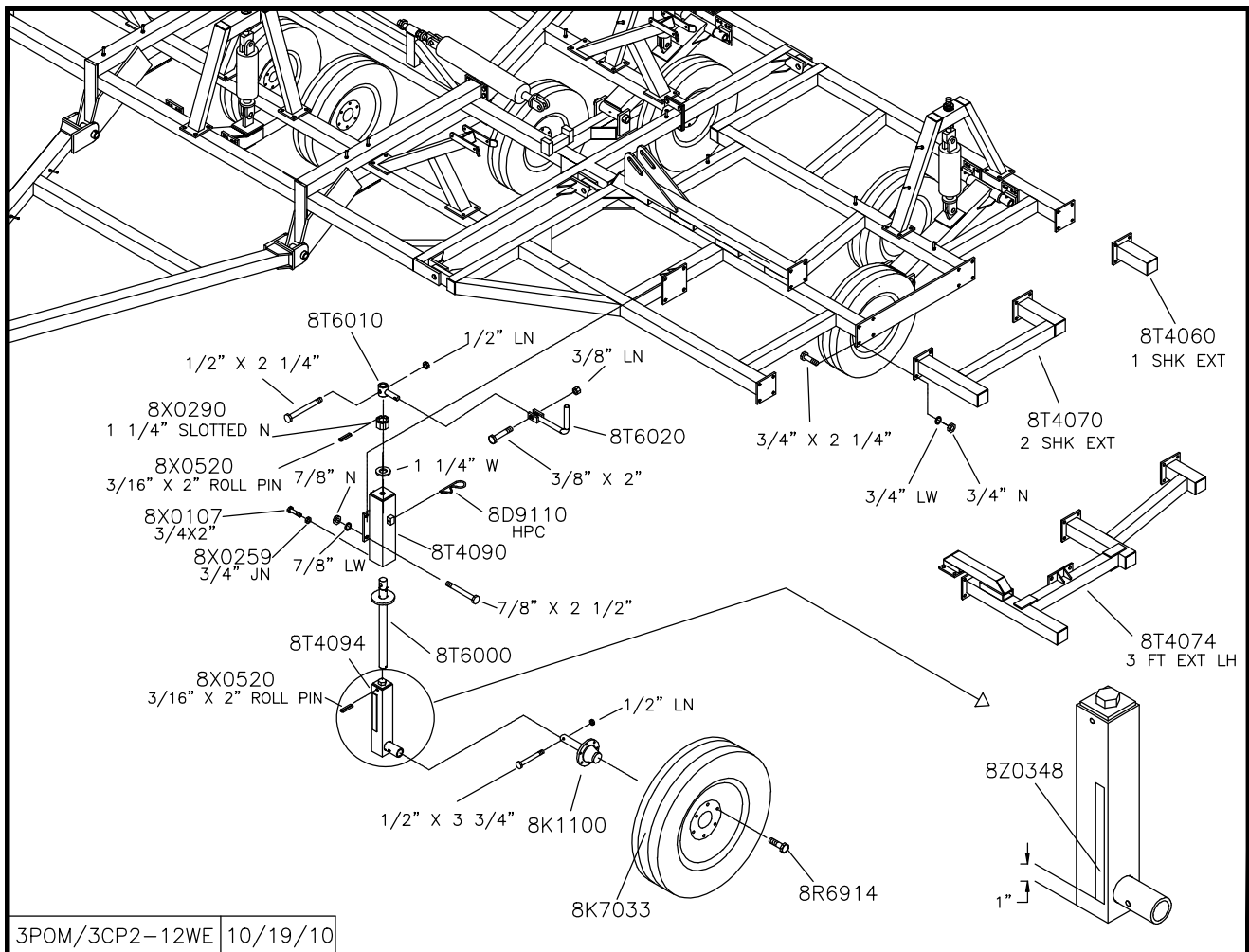
18. Attach tire/wheel to hub with 9/16" wheel bolts (torque required: 170 ft-lbs).

19. Hang trip assemblies according to layout provided.

NOTE: Steps 19-21 can be done after cylinders are filled with oil and machine is raised.

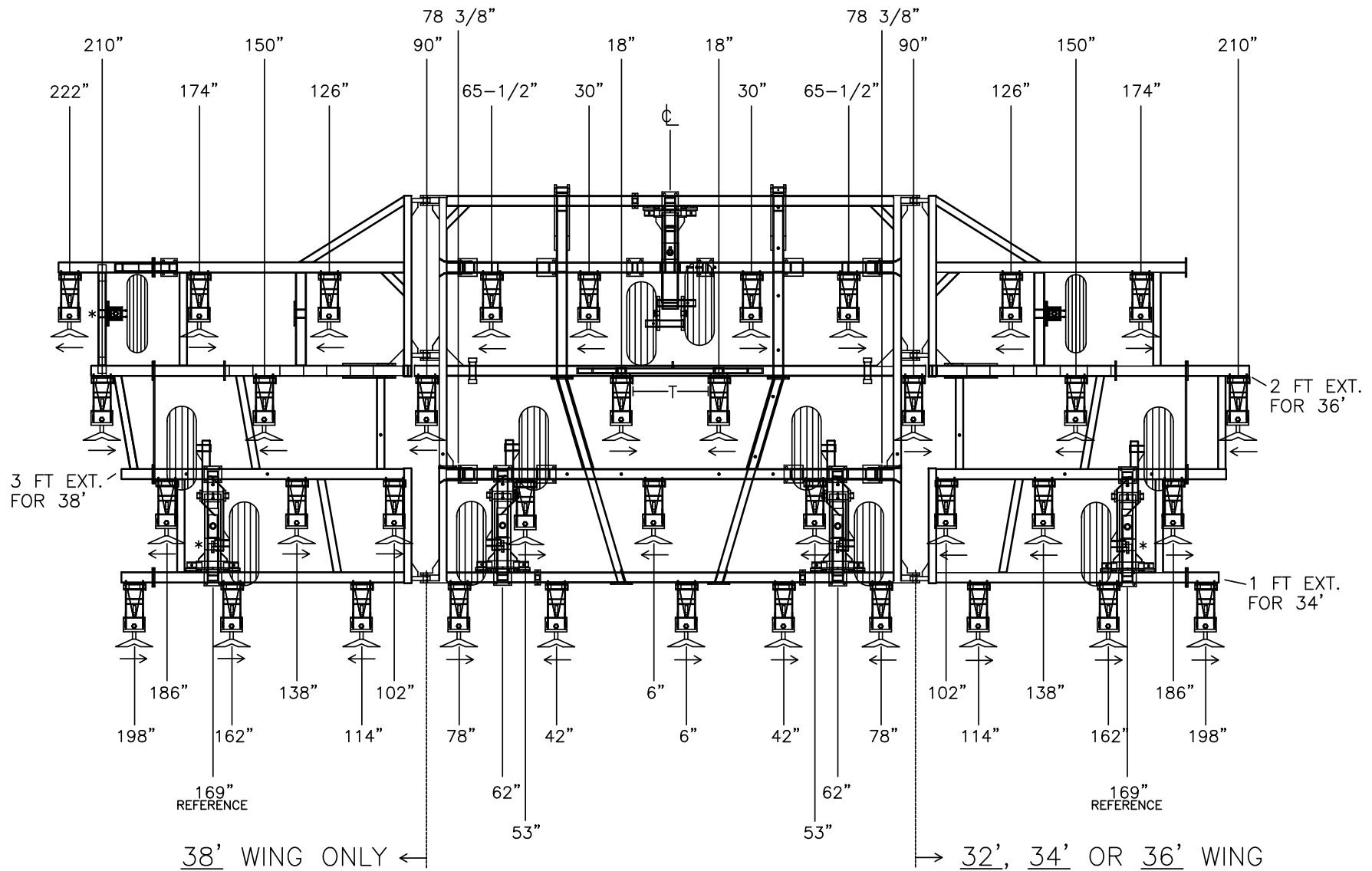
- Use 3/4" u-bolts for 4 x 4 tube with 3/4" lock washers and 3/4" nuts.
- Tighten u-bolts an equal amount on top and bottom. The same amount of threads should appear on top and bottom of u-bolt.

20. Trip assemblies located at 162" on 32' base machines will be attached with 3/4 x 6-1/2" bolts. These bolts will also hold the liftarm pivot bracket at that location.



CHISEL PLOW LAYOUT 32', 34', 36' AND 38' WITH STANDARD 700# TRIP ASSEMBLIES

2-33



T - 34" C-C W/11L, 36" C-C W/12.5L (OPTIONAL)

\* - LOCATION 8S3059 2" ID PLUG

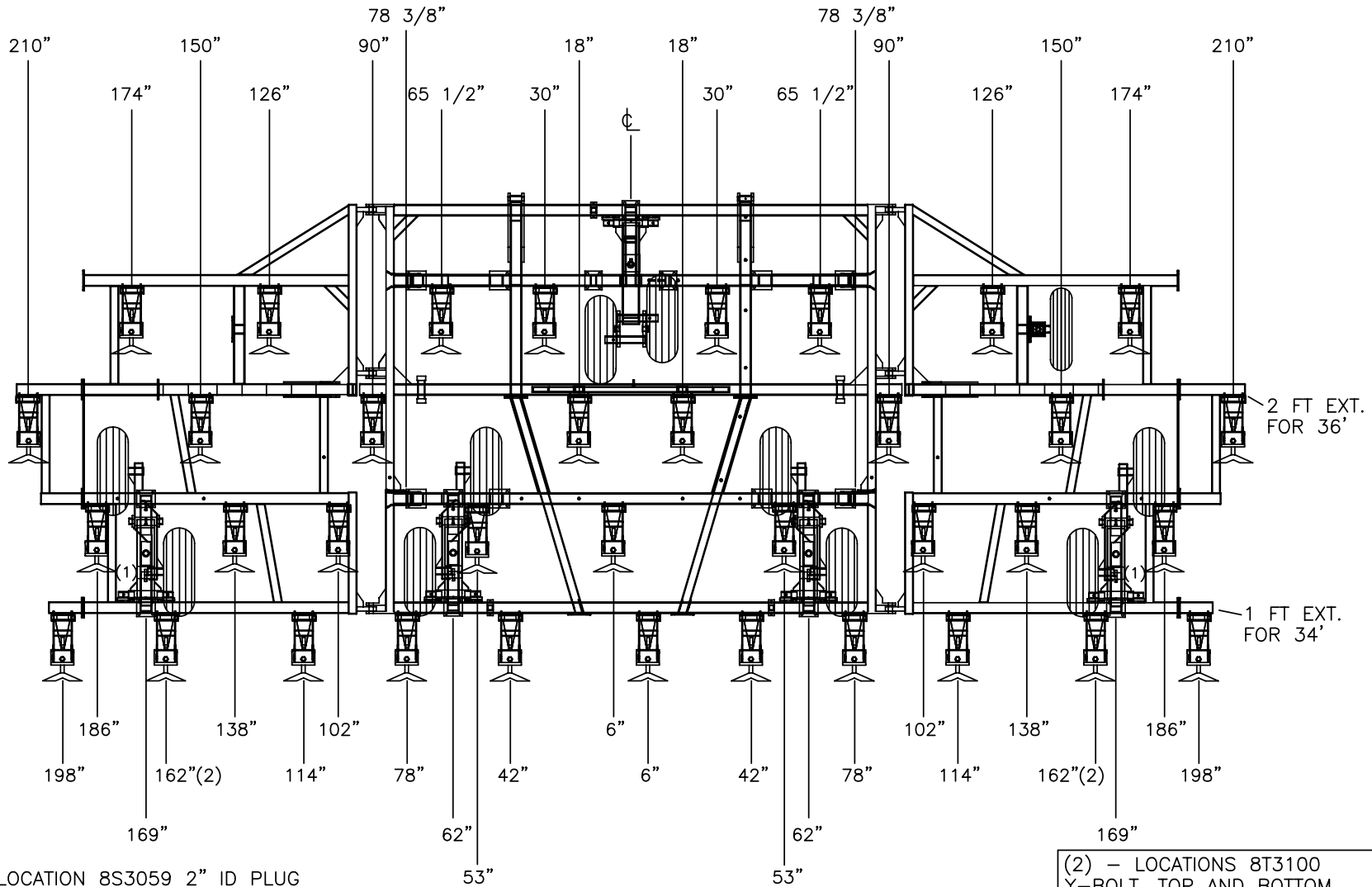
→ - SUGGESTED TWISTED SPIKE LAYOUT

DIMENSIONS SHOWN ARE FROM CENTERLINE OF MACHINE

3POM/3CP2-14SU32

SECTION 2 - SET-UP OF 32' BASE MACHINES 700# TRIP (32'-38' SHOWN)

CHISEL PLOW LAYOUT 32', 34' AND 36' WITH OPTIONAL 1050# TRIP ASSEMBLIES



(1) - LOCATION 8S3059 2" ID PLUG

DIMENSIONS SHOWN ARE FROM CENTERLINE OF MACHINE

INSTALL THREE 3/4" MOUNTING U-BOLTS (8K5515) PER TRIP ASSEMBLY EXCEPT AT LOCATIONS REFERENCED (2). USE 3/4" X 6 1/2" (8X0121) BOLTS AND Y-BOLTS (SHOWN IN PHOTO TO RIGHT) AT THESE LOCATIONS.

(2) - LOCATIONS 8T3100 Y-BOLT, TOP AND BOTTOM

NOTE:  
POSITION  
FLUSH  
SIDE OF  
8T3100  
AGAINST  
TUBE.



1/06/05 3POM/3CP2-14SU32 (1050TRP)

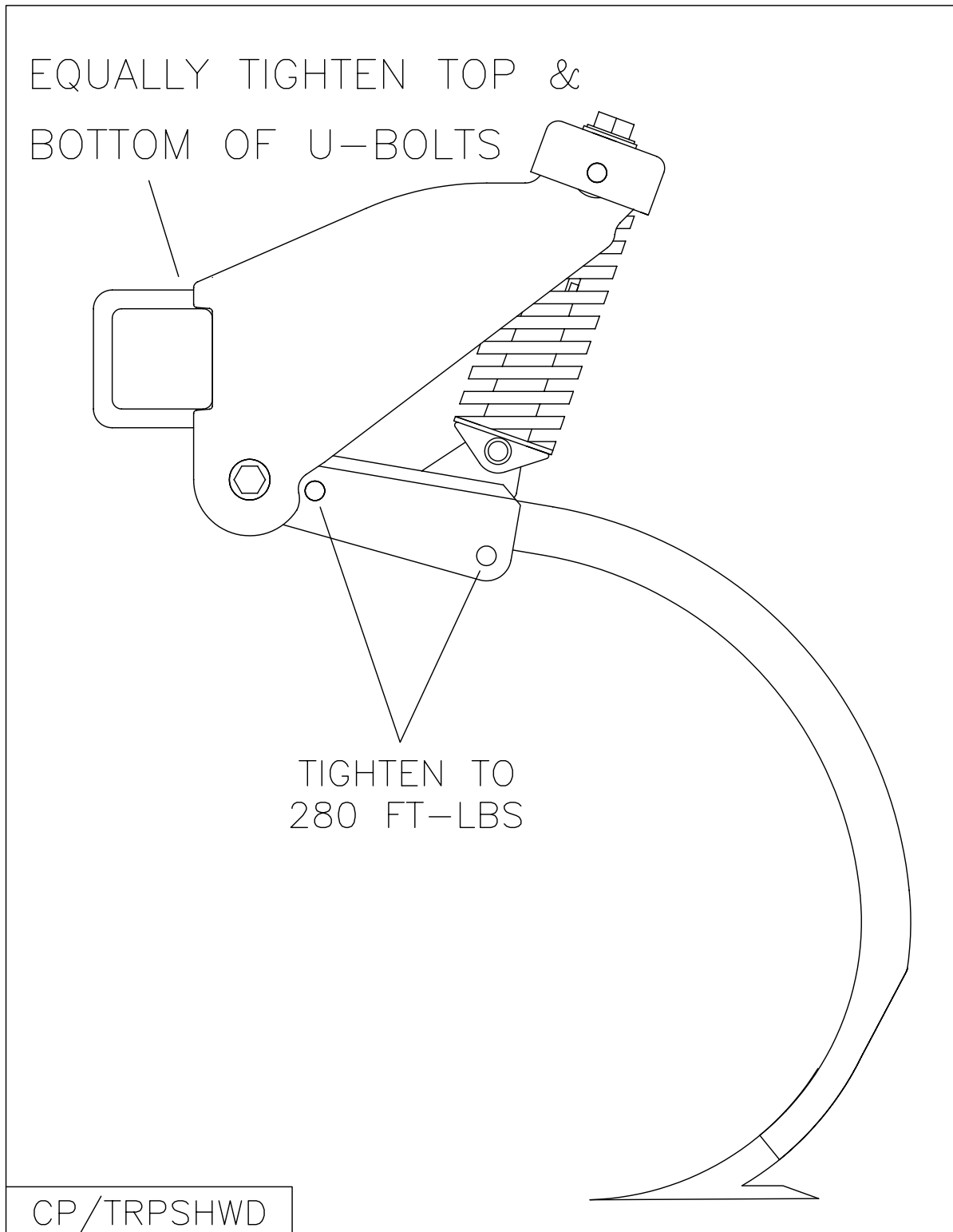
2-34

SECTION 2 - SET-UP OF 32' BASE MACHINES 1050# TRIP (32'-36' SHOWN)

## SECTION 2 – SET-UP OF 32' BASE MACHINES (32'-38')

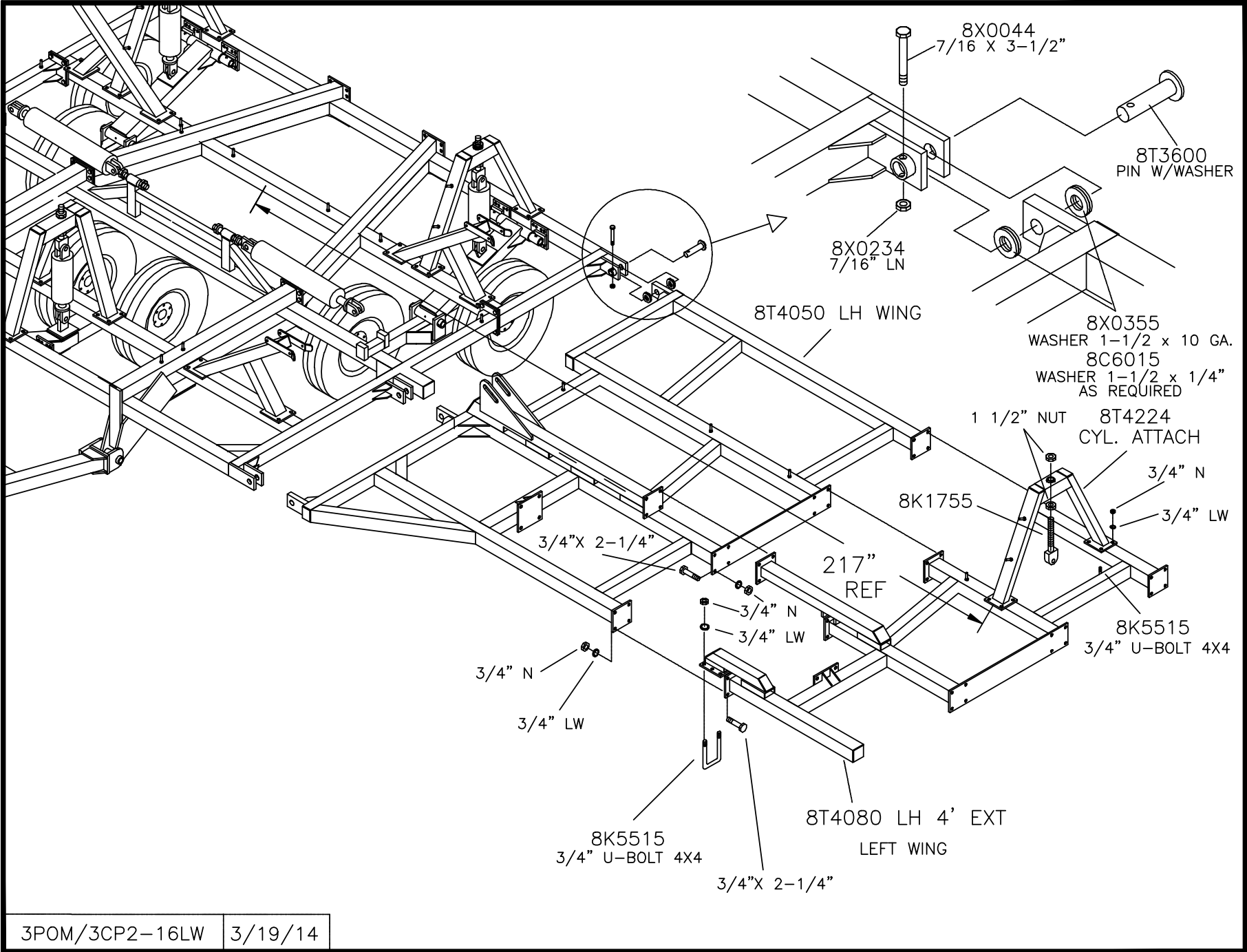
### 21. Install shanks into trip assemblies.

- Install rear 3/4 x 4" bolt. Slide shank into shank holder. Install front bolt. Securely tighten.
- Shanks will fit snugly into shank holder. If tapping bottom of shank does not work, it may be necessary to remove burr and/or paint from shank or shank holder.



SECTION 2 - SET-UP OF 40' BASE MACHINES (40'-44')

2-36





## SECTION 2 – SET-UP OF 40' BASE MACHINES (40'-44')

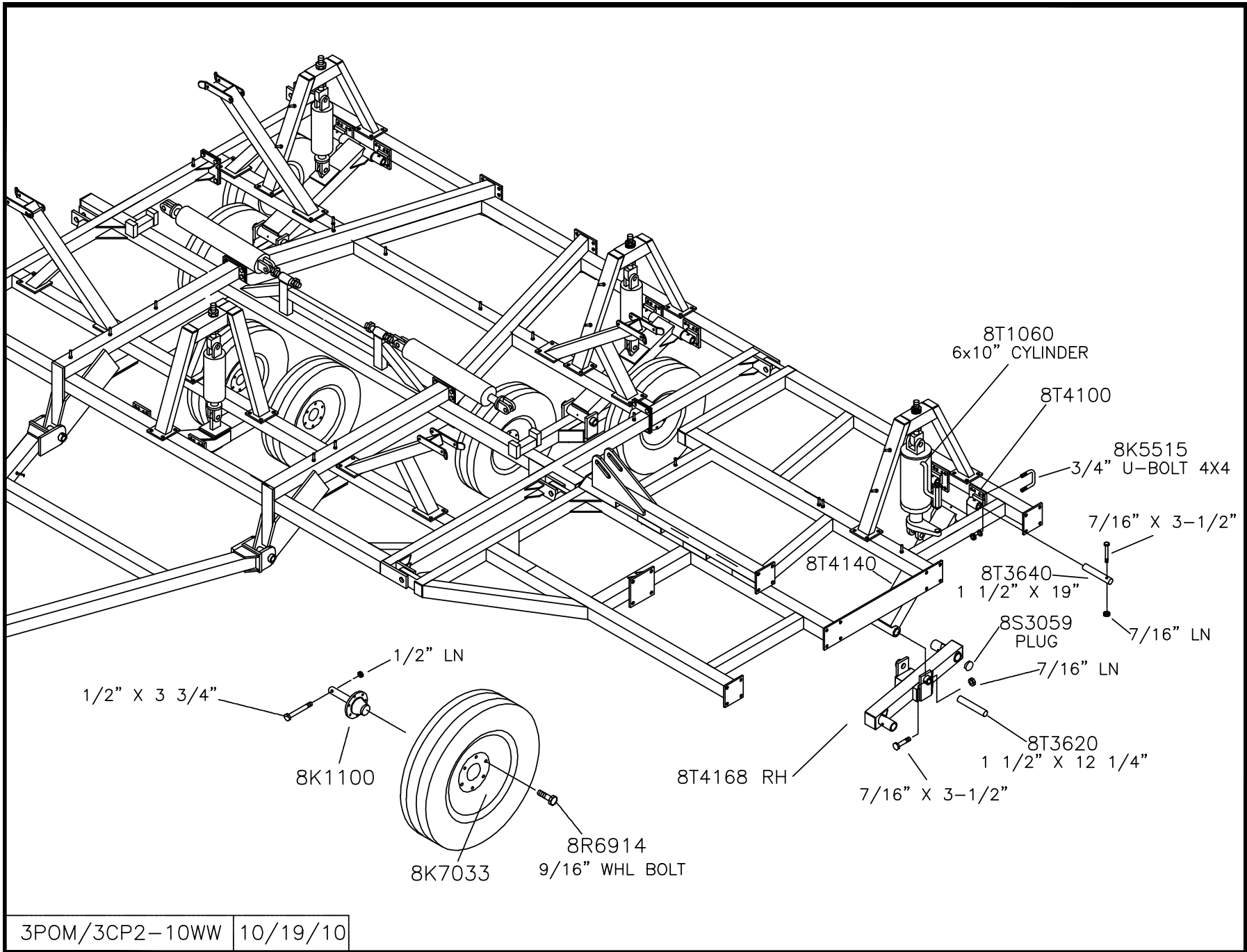
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NOTE: It is recommended to set up both sides of machine at the same time. The left hand side is shown.

1. Attach wing to center section with pins, washers, bolts and locknuts.
  - Washers are used to center wing in hinges and prevent shift.
2. Attach 4' extension to base wing. Extension braces lay on top of base wing, remaining bolt plates mate with bolt plates of base wing.
  - Mating bolt plates on back 3 ranks should have bolts pointed toward outside of machine. Bolt plate on first rank should have bolts pointed toward center of frame.
  - 3 u-bolts are used to secure front support on top of first rank.
3. Fasten cylinder attach brackets with 3/4" u-bolts.
  - Locate bracket 217" from machine center.
4. Insert eyebolts (8K1755) into cylinder attach bracket.
  - Tighten 1-1/2" nuts so the same amount of threads are above top nut on all eyebolts. Insure that cylinder attach holes are aligned when eyebolts are tightened.
5. Center liftarm under cylinder attachment brackets.
  - Use 3/4" u-bolts for 4 x 4 to attach liftarm pivots (8T4100) to frame.
  - Inside pivot will be attached with 3/4 x 6" bolts and a trip assembly. (See step 21).
  - Slide pivot pin (8T3640) through liftarm and liftarm pivots.
  - Insert 7/16 x 3-1/2" bolt in retaining bolt holes. Secure with lock nut.
6. Install walking tandem assembly to bottom of liftarm.
  - The left hand wing uses an 8T4168.
  - The right hand wing uses an 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 lock nut.
7. Hang cylinders in appropriate location. Use pins and roll pins provided.
  - Rod end of cylinder (positioned down) attaches to lift arm.
  - Use 6 x 10" (8T1060) on left hand wing.
  - Use 4-1/2 x 10" (8T1045) on right hand wing.
8. Install 8K1100 axle and hub assembly into each walking tandem. Apply good quality anti-sieze to axles before installation. Retain axle into receiver tube with 1/2 x 3-3/4" bolt and locknut.
9. Place wheels on hubs with 9/16" wheel bolts (torque required: 170 ft-lbs).

SECTION 2 - SET-UP OF 40' BASE MACHINES (40'-44')

2-38



## SECTION 2 – SET-UP OF 40' BASE MACHINES (40'-44')

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10. Install optional wing extensions.
  - One-shank extension must be placed on rear rank.
  - Two-shank extensions must be placed on middle two ranks.
  - Mounting bolts must point toward outside of machine. (Trip assembly interference will occur if this is not followed.)
11. Install gauge wheel support (8T4090) onto wing with 7/8 x 2-1/2" bolts.

NOTE: Steps 12 through 16 may have been pre-assembled at factory.
12. Apply anti-seize on 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.
13. Place gauge wheel depth decal on axle holder.
  - Locate decal 1" from bottom of 4 x 4 tube.
  - Make sure that decal faces the front of the machine.
  - Decal should be placed off to one side of axle holder to avoid seam on support tube.
14. 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.
15. Add gauge wheel screw top onto jack bolt.
  - Insert 1/2 x 2-1/4" bolt into screw top and bolt. Secure with locknut.
16. Attach gauge wheel jack handle to screw top.
  - Install 3/8 x 2" bolt in handle and screw top. Secure with lock nut.
  - Do not over tighten. Handle must pivot freely.

## SECTION 2 – SET-UP OF 40' BASE MACHINES (40'-44')

17. 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.

17a. Adjust clearance between 8T4090 and 8T4094 with 3/4" set bolts and jam nuts.

18. Install 8K1100 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.

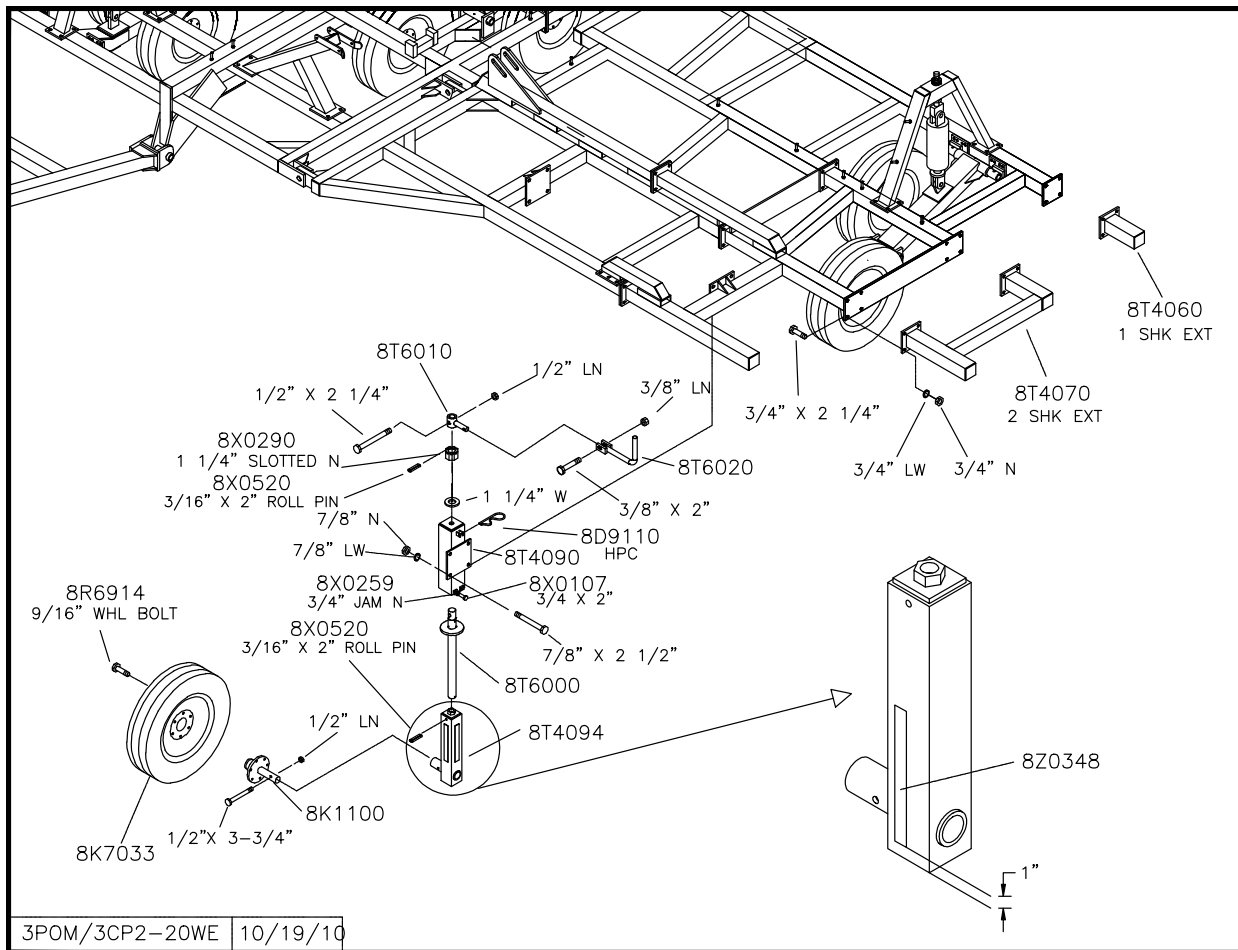
19. Attach tire/wheel to hub with 9/16" wheel bolts (torque required: 170 ft-lbs).

20. Hang trip assemblies according to layout provided.

NOTE: Steps 20-22 can be done after cylinders are filled with oil and machine is raised.

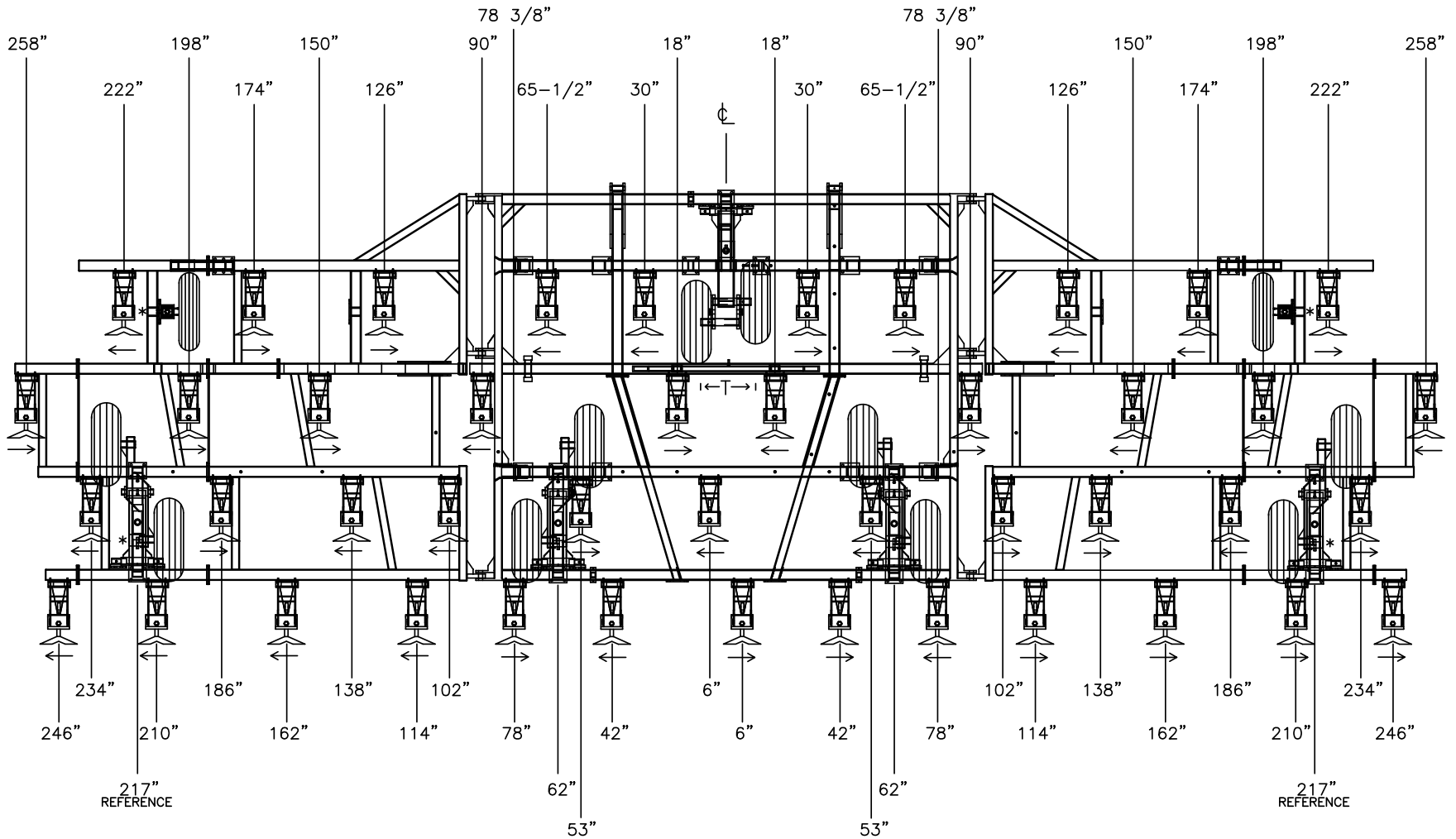
- Use 3/4" u-bolts for 4 x 4 tube with 3/4" lock washers and 3/4" nuts.
- Tighten u-bolts an equal amount on top and bottom. The same amount of threads should appear on top and bottom of u-bolt.

21. Trip assemblies located at 210" from center will be attached with 3/4" x 6-1/2" bolts. These bolts will also hold the liftarm pivot bracket at that location.



CHISEL PLOW SHANK LAYOUT 40', 42', AND 44'

2-41



SECTION 2 - SET-UP OF 40' BASE MACHINES (40'-44')

T - 34" C-C W/11L, 36" C-C W/12.5L (OPTIONAL)

\* - LOCATION 8S3059 2" ID PLUG

→ - SUGGESTED TWISTED SPIKE LAYOUT

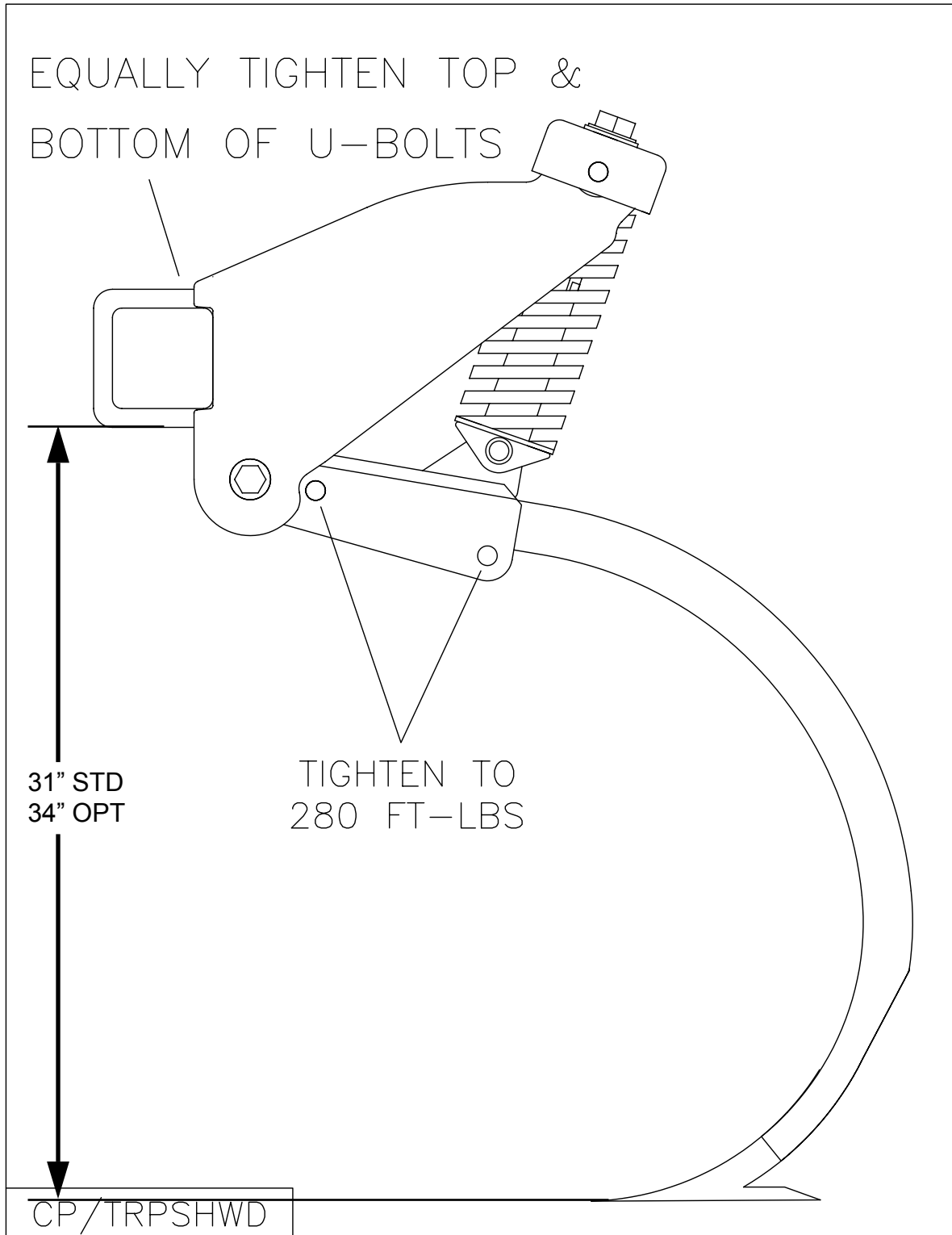
DIMENSIONS SHOWN ARE FROM CENTERLINE OF MACHINE

3POM/3CP2-21SU40

## SECTION 2 – SET-UP OF 40' BASE MACHINES (40'-44')

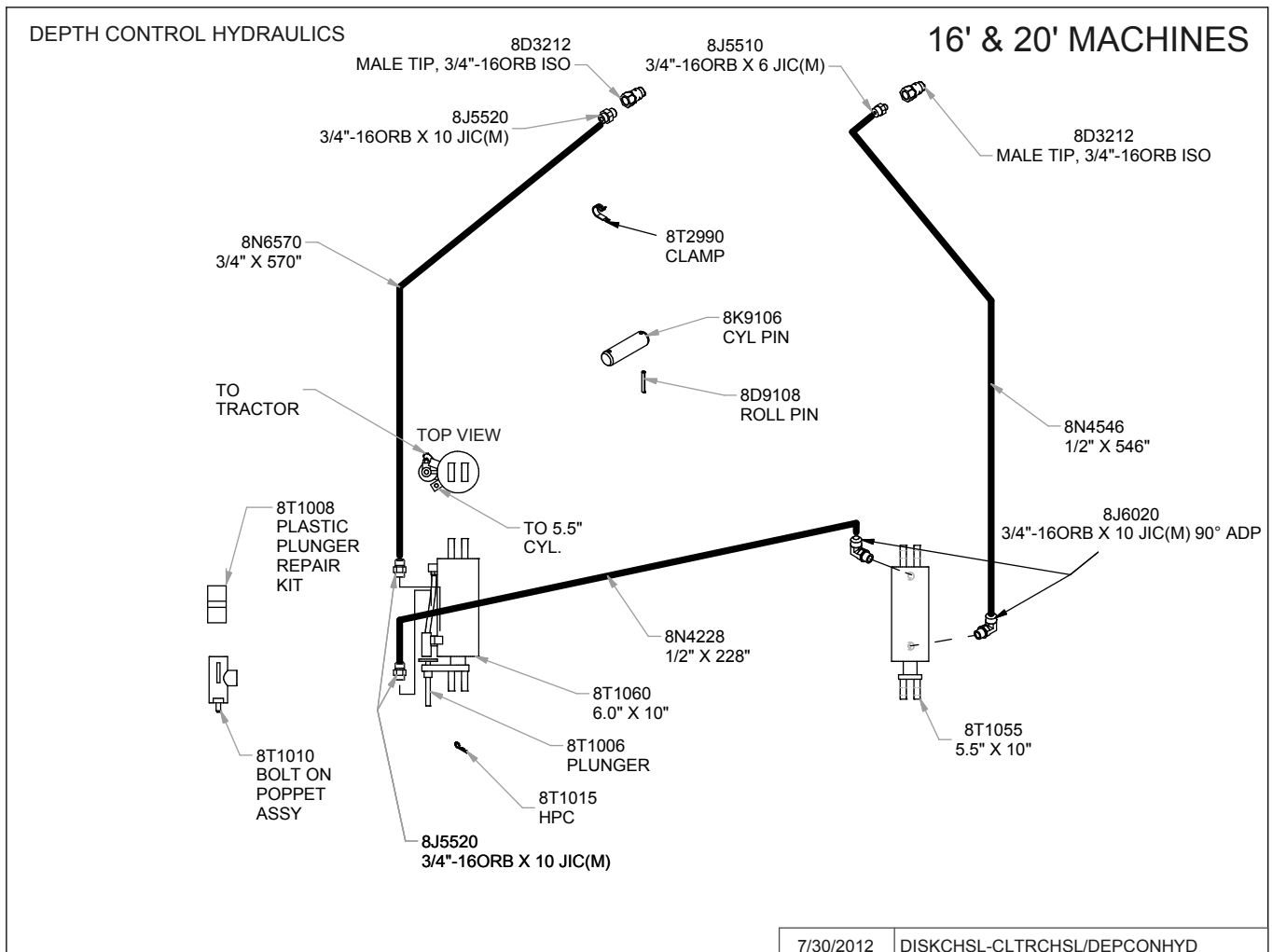
### 22. Install shanks into trip assemblies.

- Install rear 3/4 x 4" bolt. Slide shank into shank holder. Install front bolt. Securely tighten.
- Shanks will fit snugly into shank holder. If tapping bottom of shank does not work, it may be necessary to remove burr and/or paint from shank or shank holder.



## SECTION 2 – HYDRAULIC SET-UP (16’-30’ NARROW)

- Hydraulic hoses and fittings for depth control cylinders can be found on following drawings.
  - Rephasing cylinders require that oil from the rod end of first cylinder goes to base end of second cylinder and so forth. Cylinders will not operate properly unless they are connected correctly.
- Special attention should be paid to routing of hydraulic hoses. Page 2-50 shows layout of hoses for depth control cylinders.
  - It is best to start by routing the hose for the 6 x 10” cylinder. Make sure there is 60” of hose ahead of hose holder. This is usually enough hose for safe and easy hook-up to tractor.
  - Route hose along hitch frame. Use plastic clamps provided. Do not tighten until routing is complete.
    - On hitch, and a portion of main frame, 2 clamps are placed on each bolt.
    - Clamps are made to have the round surface point towards the surface that you are mounting to. DO NOT OVER TIGHTEN.**



## SECTION 2 – HYDRAULIC SET-UP (16'-30' NARROW)

C. 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 a full range of travel.

D. Continue to route hose for 6 x 10" cylinder along center section of chisel plow.

– Bolts welded to frame will help show correct routing.

E. Use care when stringing hose between center section and wing.

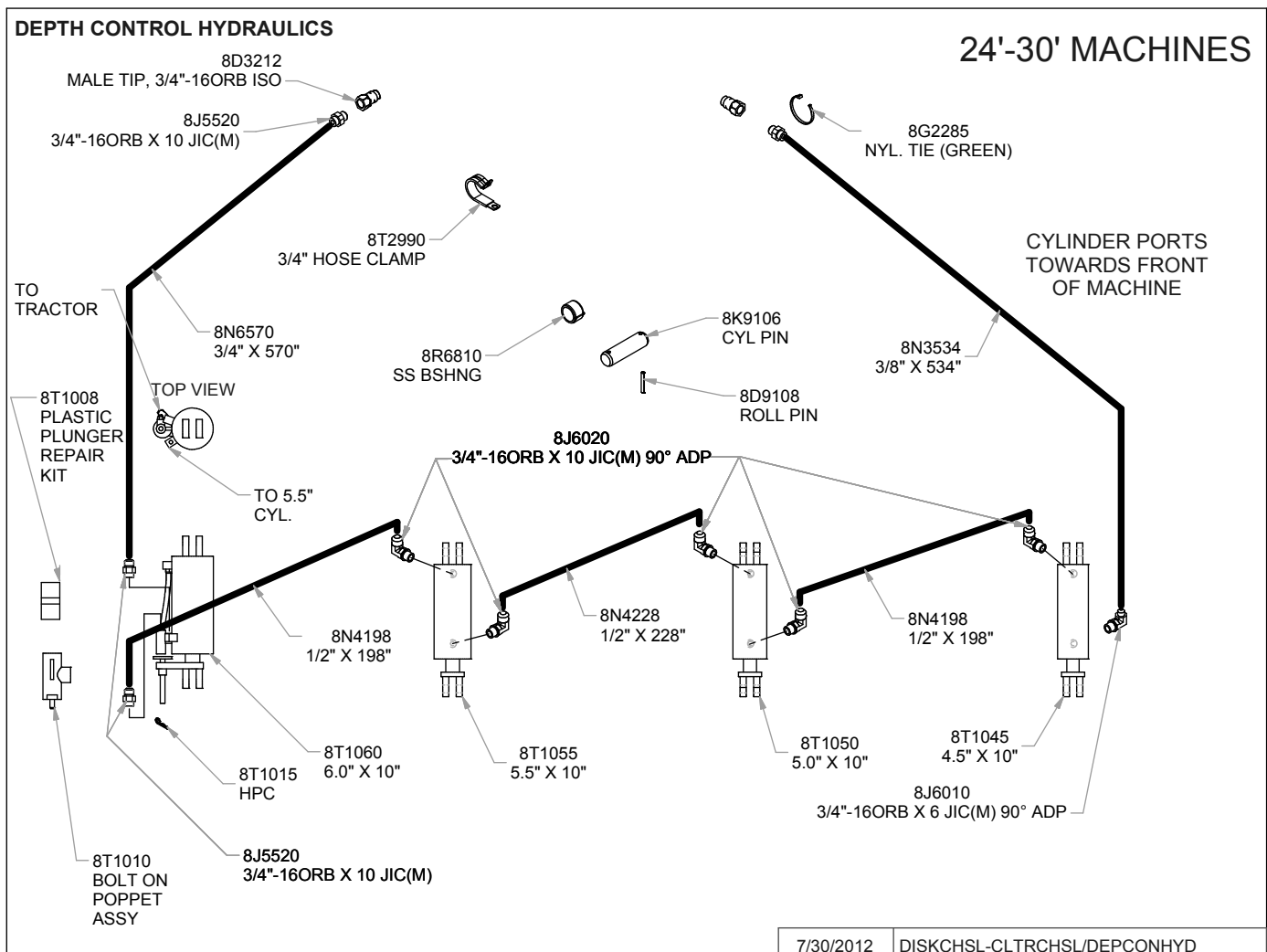
– **Leave plenty of slack between points 1 and 2 (Page 2-50) as wing pivots up and down during field operation. Hose must not stretch tight.**

F. Hose must be routed so it will not be pinched when wing is folded into transport.

– **Pull hose tight between points 2 and 3. This will prevent hose from contacting transport lock (See page 2-50).**

G. Route hose up cylinder attach to 6 x 10" cylinder.

H. Route hose from 6 x 10" to 5-1/2 x 10" cylinder along same path as first hose.





## SECTION 2 – HYDRAULIC SET-UP (16'-30' NARROW)

I. Use nylon ties to hold first hose to second hose.

– This hose must be attached to base end (top) of 5-1/2 x 10" cylinder.

J. Route 1/2 x 228" hose from 5-1/2 x 10" to 5 x 10" cylinder.

– This hose must go from rod end (bottom) of 5-1/2 x 10" to base end (top) of 5 x 10" cylinder.

K. Route 1/2" x 198" hose from 5 x 10" to 4-1/2 x 10" cylinder.

– This hose must be routed through points 1, 2 and 3 as explained in steps E and F.

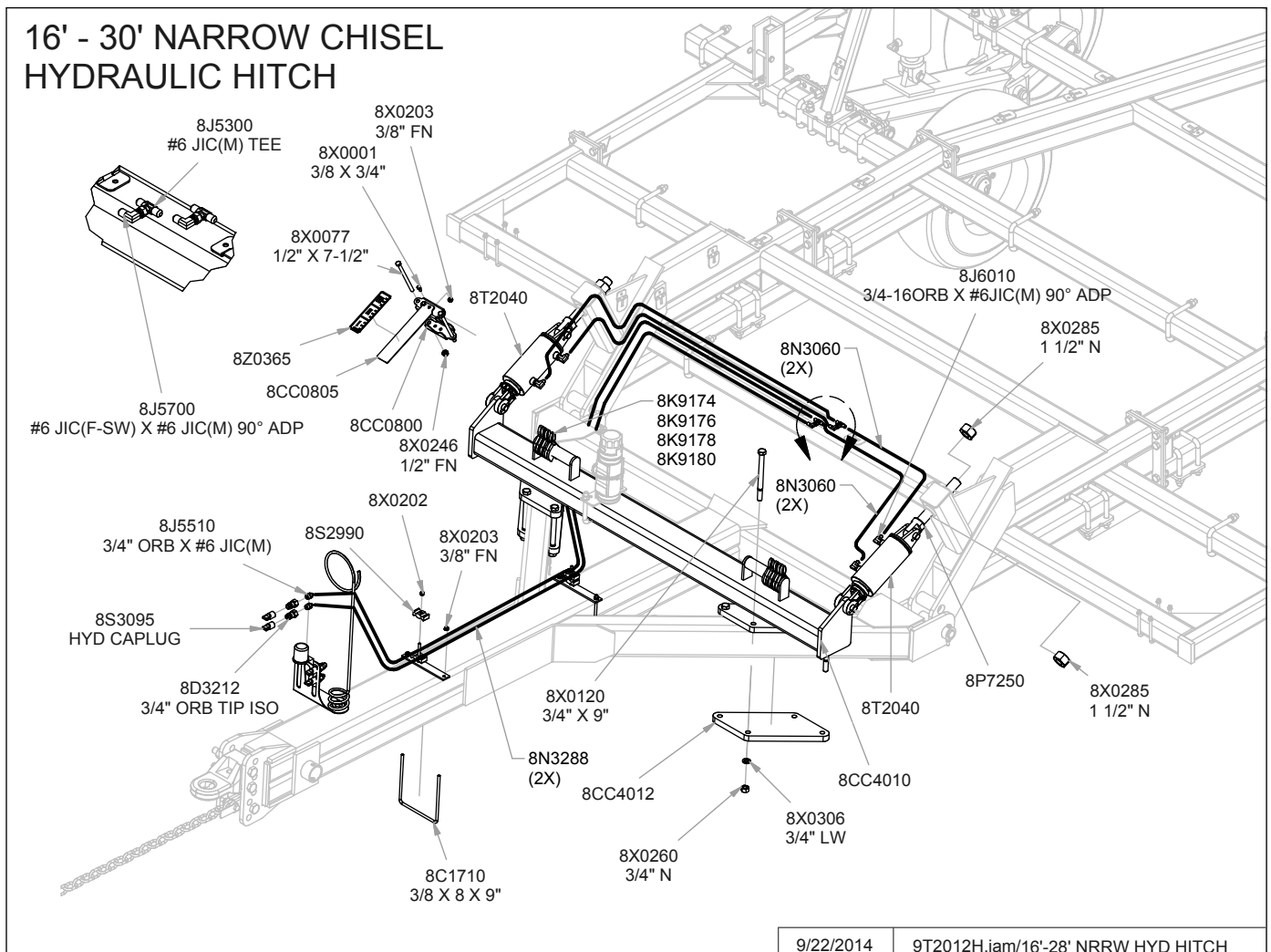
– The hose must go from rod end (bottom) of 5 x 10" to base end (top) of 4-1/2 x 10".

L. Route hose from 4-1/2 x 10" to front of hitch.

– This hose must follow the same path through points 1, 2, and 3.

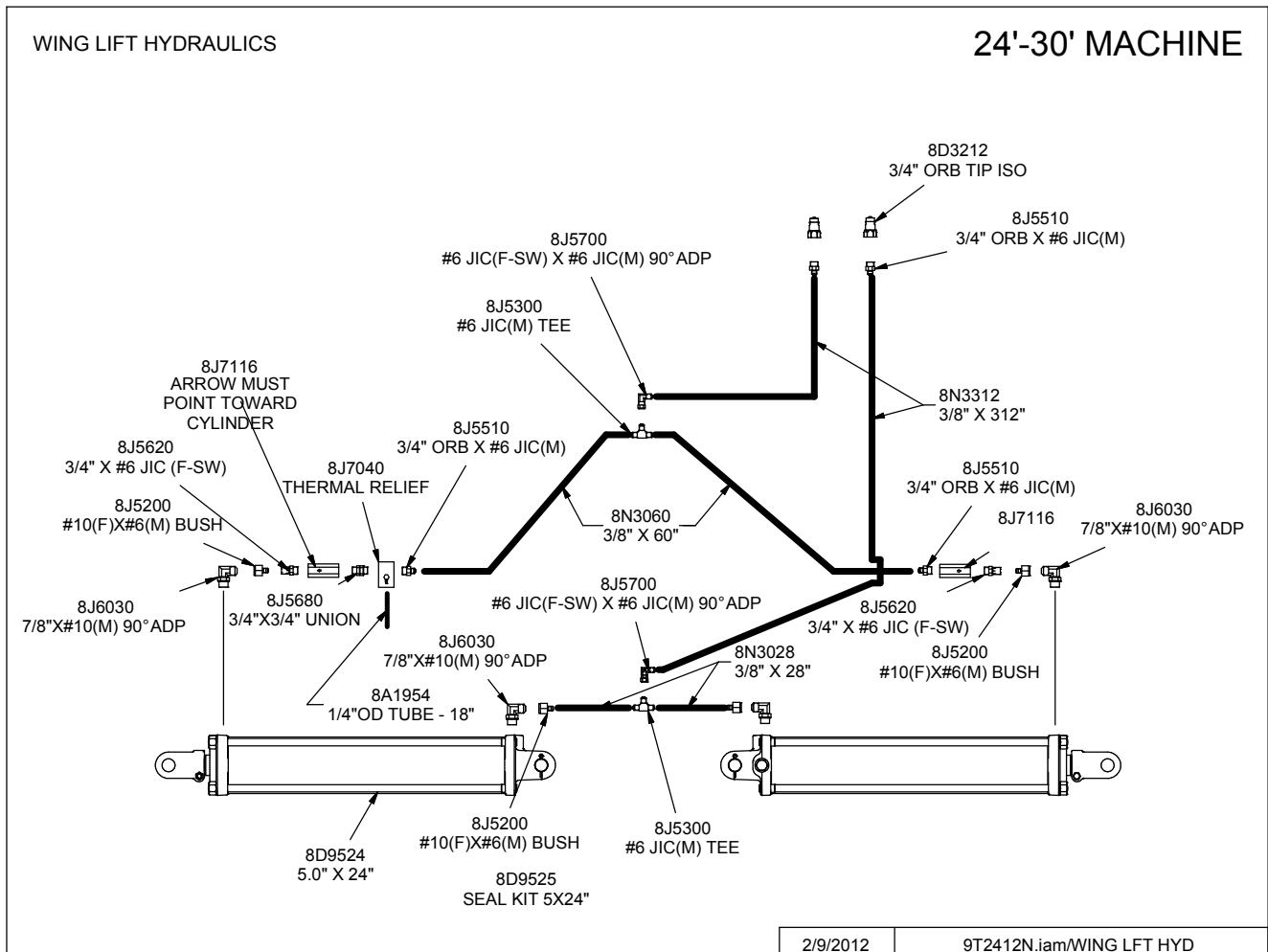
– Continue to route hose along center frame and hitch. Bolt locations will help show desired location for routing.

– Nylon ties should be used by the hose holder loop to keep hoses together.



## SECTION 2 – HYDRAULIC SET-UP (16’-30’ NARROW)

- M. Tighten all plastic hose clamps until hoses are snug but not compressed. Over tightening hose clamps will damage hydraulic hose. Hydraulic hoses enlarge and shorten when pressurized, leave slack between clamps.
- N. Charge Wing Lift Cylinders.
- Block rod end of cylinders so cylinders can extend without hitting anything.
  - Fully cycle the cylinders several times to make sure that all air has been removed from system.
  - Leave cylinders in fully extended position.
- O. Connect rod end of cylinders to wing. Follow these steps and see drawing on Page 2-52.
- Use pivot bolt, washers and collars, 1-1/4” washers, 1” washer and 1” lock nut provided.
  - 1-1/4” washers must slide freely inside wing flamecuts.
  - Do not over tighten lock nut. Pivot bolt must rotate freely.
- P. With cylinder attach eyebolts loose, raise chisel plow wings to transport position.
- Fully retract cylinders and let wings rest against transport locks.
  - Tighten each eyebolt so pivot bolt and rollers are centered in the wing lift slot.



## **SECTION 2 – HYDRAULIC SET-UP (32'-44')**

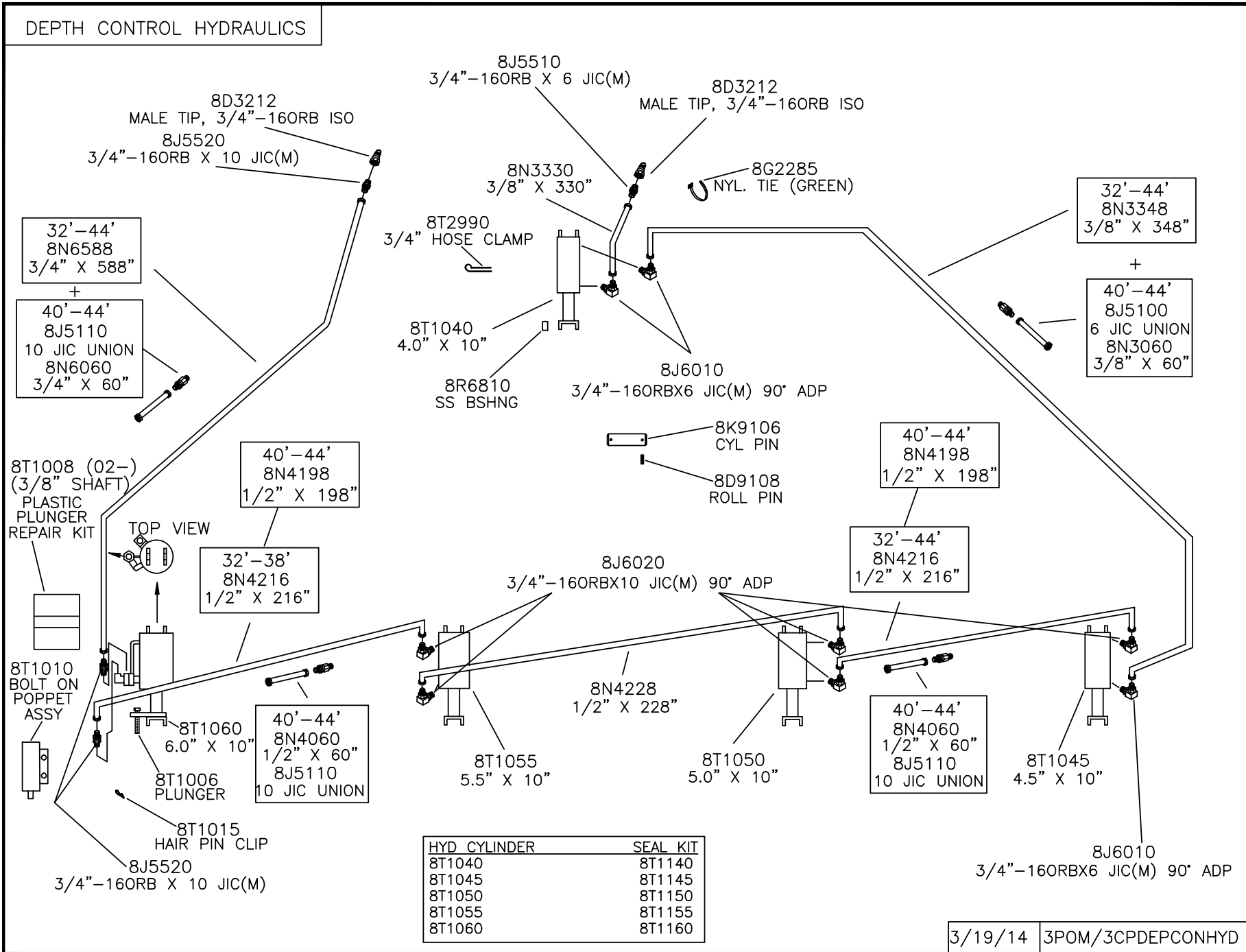
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1. Hydraulic hoses and fittings for depth control cylinders can be found on following drawing.
  - Rephasing cylinders require that oil from the rod end of first cylinder goes to base end of second cylinder and so forth. Cylinders will not operate properly unless they are connected correctly.
  - 40' and larger models require extension hoses and unions, shown on drawing below.
2. Special attention should be paid to routing of hydraulic hoses. Page 2-50 shows layout of hoses for depth control cylinders.
  - A. It is best to start by routing the hose for the 6 x 10" cylinder. Make sure there is 60" of hose ahead of hose holder. This is usually enough hose for safe and easy hook-up to tractor.
  - B. Route hose along hitch frame. Use plastic clamps provided. Do not tighten until routing is complete.
    - On hitch, and a portion of main frame, 2 clamps are placed on each bolt.
    - **Clamps are made to have the round surface point towards the surface that you are mounting to. DO NOT OVER TIGHTEN.**
  - C. 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 a full range of travel.
  - D. Continue to route hose for 6 x 10" cylinder along center section of chisel plow.
    - Bolts welded to frame will help show correct routing.
    - Route hose along top of frame by transport lock. Use nylon ties to hold hose in place once all hoses have been routed.
  - E. Use care when stringing hose between center section and wing.
    - **Leave plenty of slack between points 1 and 2 (Page 2-50) as wing pivots up and down during field operation. Hose must not stretch tight.**
  - F. Hose must be routed so it will not be pinched when wing is folded into transport.
    - **Pull hose tight between points 2 and 3. This will prevent hose from contacting transport lock.**
  - G. On 40' and larger models, a 3/4 x 60" hose is added to the 588" hose with a union.
    - Two more bolt locations will guide routing along frame on the larger model.
  - H. Route hose up cylinder attach to 6 x 10" cylinder.

DEPTH CONTROL HYDRAULICS

SECTION 2 - HYDRAULIC SET-UP (32'-44')

2-48

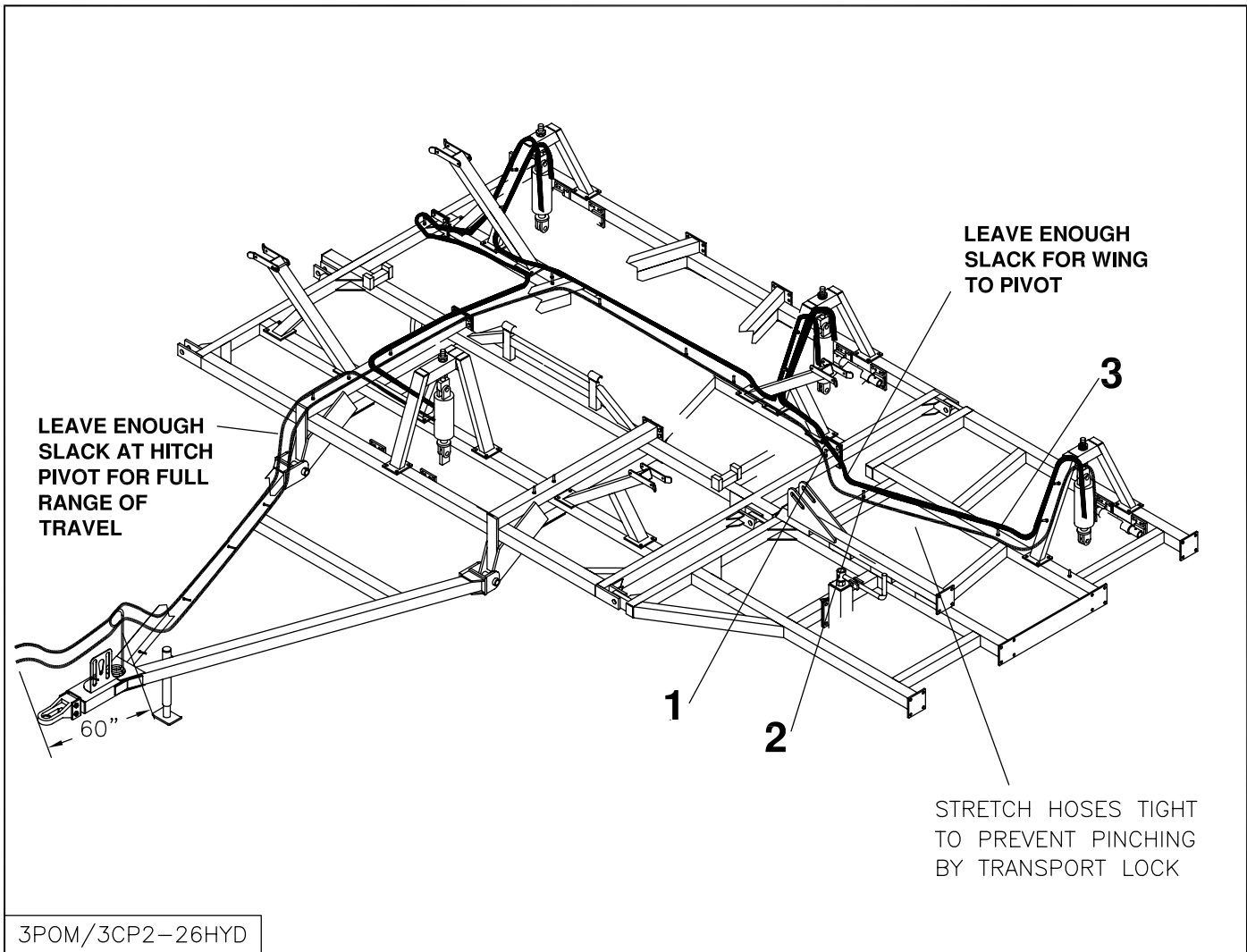


## SECTION 2 – HYDRAULIC SET-UP (32'-44')

---

- I. Route hose from 6 x 10" to 5-1/2 x 10" cylinder along same path as first hose.
- A 216" hose is used for 32', 34', 36' and 38' machines. Use a 198" and a 60" hose when setting up a 40' or larger machine.
- J. Route hose under transport lock when going from point 1 to 5-1/2 x 10" cylinder on 32' and larger machines.
- Use nylon ties to hold first hose to second hose.
  - This hose must be attached to base end (top) of 5-1/2 x 10" cylinder.
- K. Route 1/2 x 228" hose from 5-1/2 x 10" to 5 x 10" cylinder.
- This hose must go from rod end (bottom) of 5-1/2 x 10" to base end (top) of 5 x 10" cylinder.
- L. Route hose from 5 x 10" to 4-1/2 x 10" cylinder.
- A 216" hose is used for 32', 34', 36' and 38' machines. Use a 198" and a 60" hose when setting up a 40' or larger machine.
  - This hose must be routed through points 1, 2 and 3 as explained in steps E and F.
  - The hose must go from rod end (bottom) of 5 x 10" to base end (top) of 4-1/2 x 10".
- M. Route hose from 4-1/2 x 10" to 4 x 10" cylinder.
- A 348" hose is used for 32', 34', 36' and 38' machines. Add a 60" hose for 40' or larger machines.
  - This hose must follow the same path through points 1, 2, and 3.
  - Continue to route hose along center frame. Bolt locations will help show desired location for routing.
  - Hose must go from rod end (bottom) of 4-1/2 x 10" to base end (top) of 4 x 10".
- N. Route 3/8 x 330" hose from 4 x 10" to front of hitch.
- Follow same path as steps A-C.
  - Nylon ties should be used by the hose holder loop to keep hoses together.
- O. Tighten all plastic hose clamps until hoses are snug but not compressed. Over tightening hose clamps will damage hydraulic hose. Hydraulic hoses enlarge and shorten when pressurized, leave slack between clamps.

## SECTION 2 – HYDRAULIC SET-UP (32'-44')



### 3. Charge depth control cylinder system.

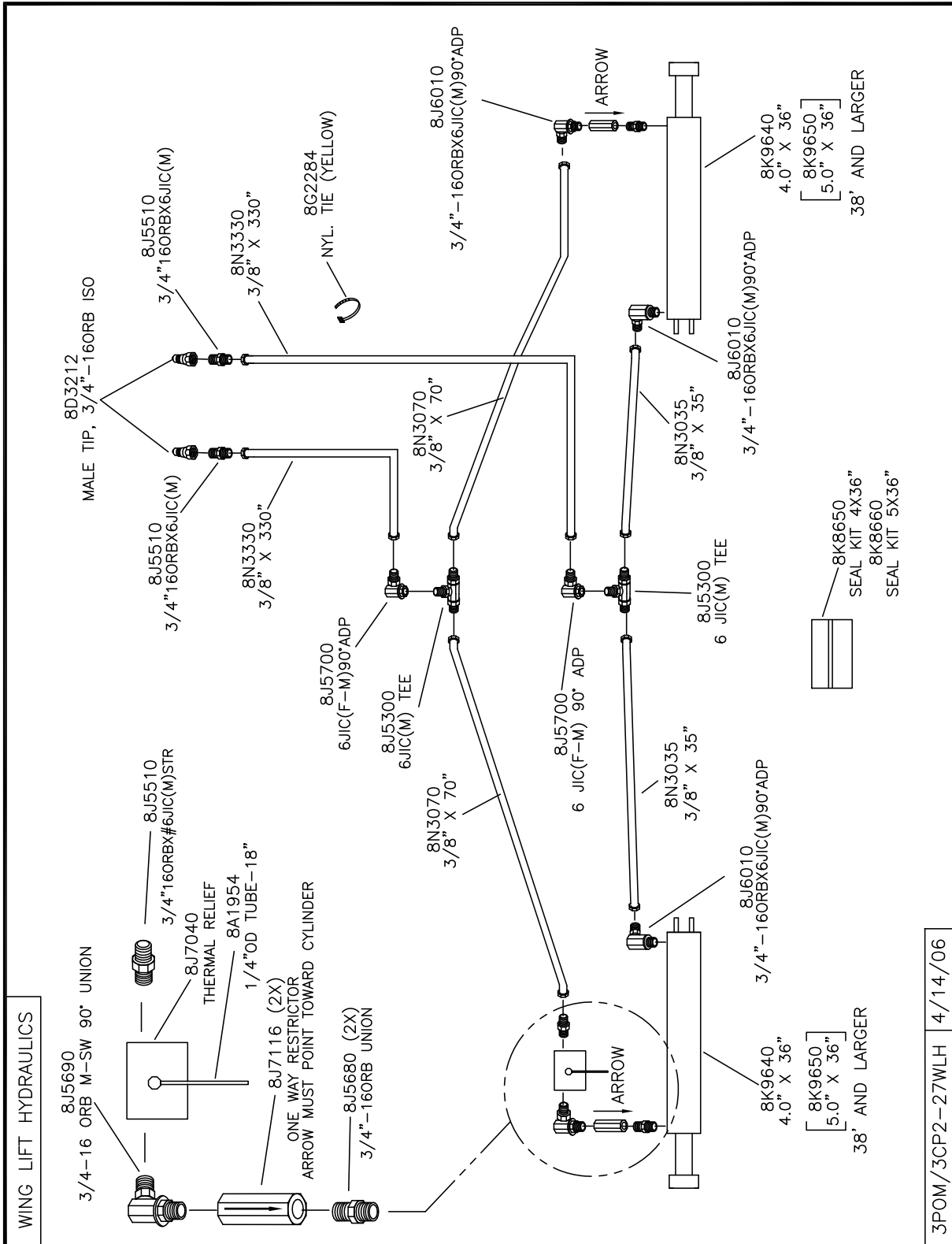
- Connect depth control cylinder hoses to tractor. Insure that tips and couplers are CLEAN.
- Raise chisel plow. One cylinder will extend at a time. Do not allow any one to stand near Chisel Plow when it is raised or lowered.
- When all cylinders are fully extended, fully cycle the circuit four times to make sure all air has been removed from system.
- Lower chisel plow before next step.

### 4. Hydraulic hoses and fittings for wing lift cylinders are shown in the following drawing.

- The wing lift hydraulic circuit is equipped with a one-way restrictor to prevent free fall of the wings when being lowered. Be sure that the restrictor is installed so the arrow points toward the cylinder. This will restrict oil flowing out of the cylinder but not flowing in.
- For 38' and larger machines, 5 x 36" cylinders are used.

## SECTION 2 – HYDRAULIC SET-UP (32'-44')

5. Route hoses along frame and hitch the same way depth control hoses are routed.
  - Stack hoses on top of depth control hoses by using two hose clamps at each bolt.
  - Leave enough slack by hitch pivot to allow full range of travel of the hitch without damage to hoses.



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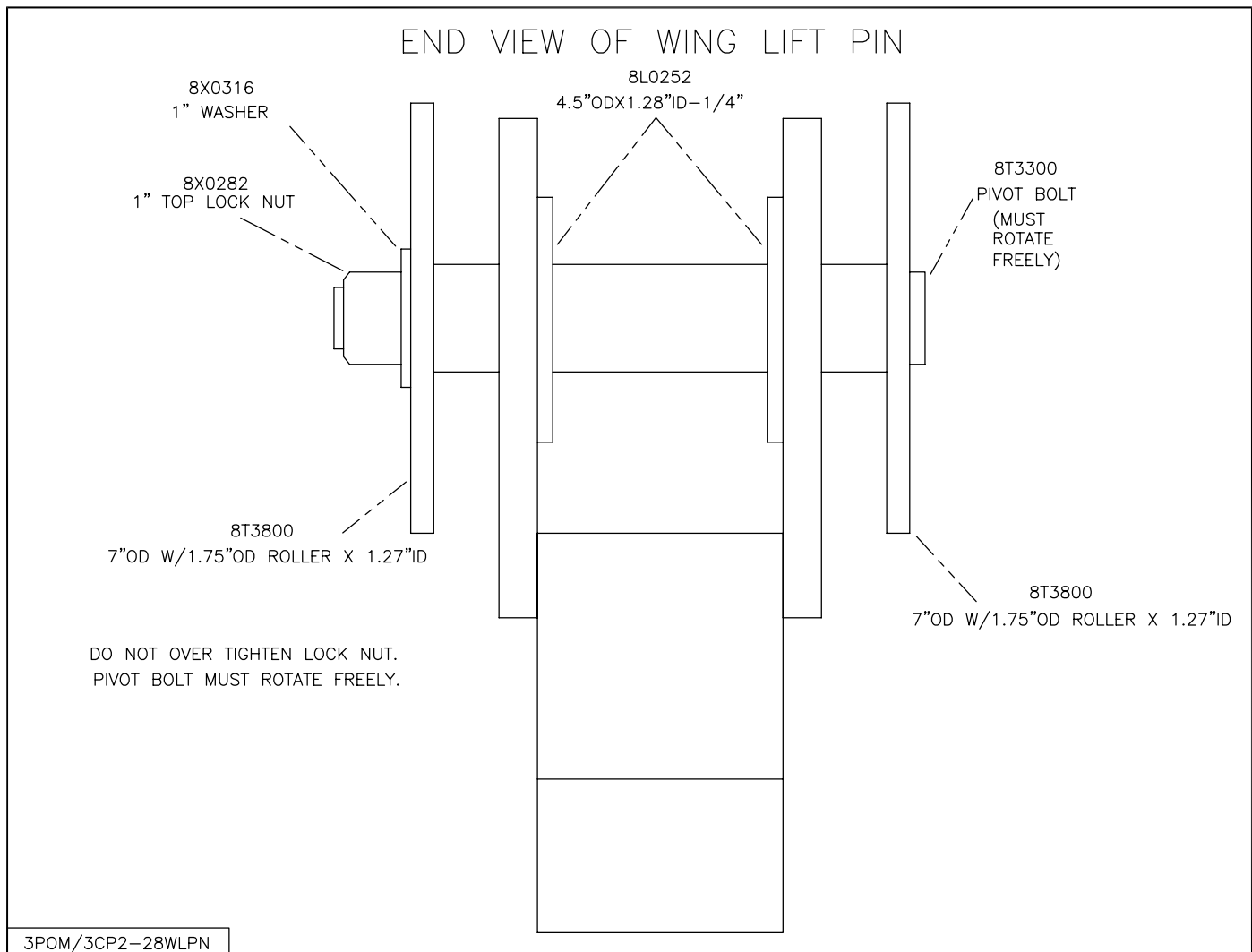
## SECTION 2 – HYDRAULIC SET-UP (32'-44')

### 6. Charge Wing Lift Cylinders.

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

### 7. Connect rod end of cylinders to wing. Follow these steps and see drawing below.

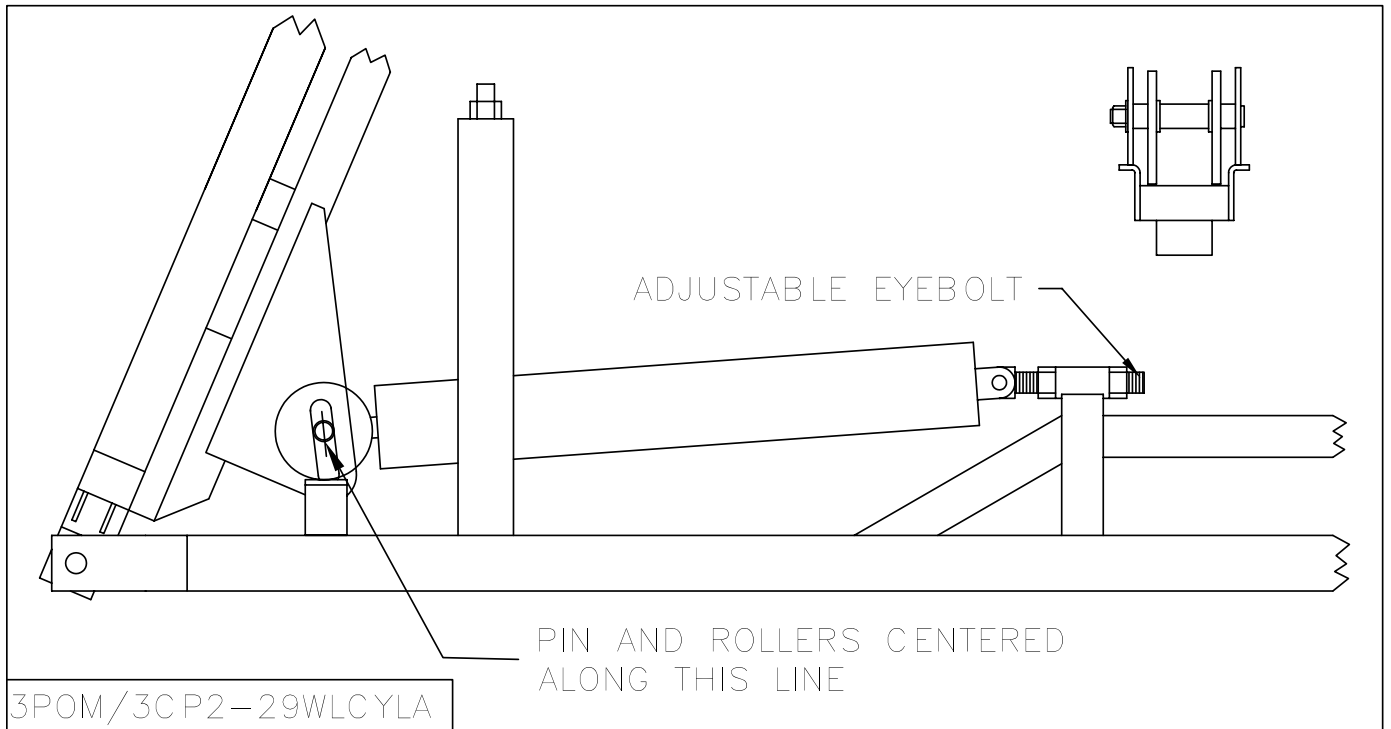
- Use pivot bolt, washers with collars, 1-1/4" washers, 1" washer and 1" lock nut provided.
- 1-1/4" washers must slide freely inside wing flamecuts.
- Do not over tighten lock nut. **Pivot bolt must rotate freely.**





## SECTION 2 – HYDRAULIC SET-UP (32'-44')

8. With cylinder attach eyebolts loose, raise chisel plow wings to transport position.
  - Fully retract cylinders and let wings rest against transport locks.
  - Tighten each eyebolt so pivot bolt and rollers are centered in the wing lift slot.



## **SECTION 2 – DECALS/OPTIONS**

---

### 1. Install danger, warning, and caution decals.

- Part numbers can be found on lower right hand corner of each decal. Match this number with number on decal location drawing on Page 1-6.
- The drawing gives approximate locations of decals. Decals must be clearly visible.
- Order replacement decals if any are damaged.

### 2. Install reflectors.

- Amber reflectors are part # 8Z0800, these should be placed on front corners and sides of machine in transport position.
- Red-orange reflectors are part # 8Z0805, these should be placed on outside back of machine in transport position.
- Red reflectors are part # 8Z0810, these should be placed on outside back of machine in transport position.

### 3. Install Safety Light Kit, see Page 6-16 for mounting layout.

## **OPTIONS**

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

## SECTION 3 – CHISEL PLOW OPERATION

---

### CHISEL PLOW 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 at the front of the hitch). 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 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 5-2) and check that wheel bolts are tight.

## SECTION 3 – CHISEL PLOW OPERATION

### INITIAL HOOKUP

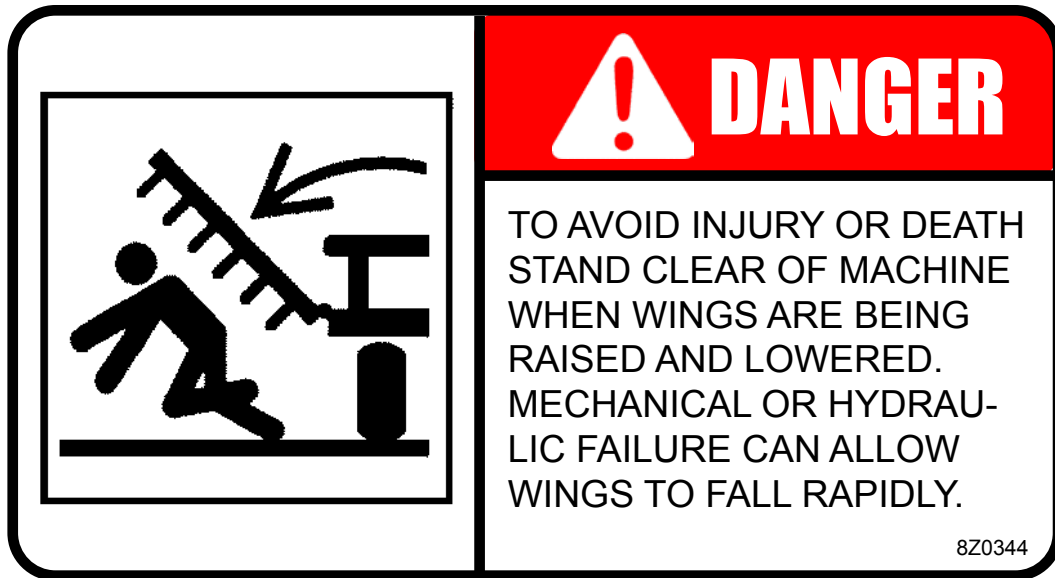
1. Make tractor to hitch connection with locking draw pin and safety chain.
2. Retract jack and rotate into storage position. Connect Safety Light Kit to 7 pin receptacle.
3. Plug wing lift hoses into desired tractor outlet. Insure that tips and couplers are CLEAN.
4. Plug depth control hoses into desired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

		 <b>DANGER</b>
<b>FRAME PINCH POINT HAZARD</b> <b>KEEP AWAY</b>		
To prevent serious injury or death from crushing: <ul style="list-style-type: none"><li>• Stay away from frame hinge area when folding wings.</li><li>• Keep others away.</li><li>• Do not fold wings when bystanders are present.</li></ul>		
8Z0087		

 <b>WARNING</b>
<b>REMOVE TRANSPORT LOCK(S) BEFORE LOWERING MACHINE. IF LOCK(S) DO NOT REMOVE FREELY, INSURE THAT CYLINDERS ARE COMPLETELY FILLED WITH HYDRAULIC FLUID AND ARE SUPPORTING THE LOAD TO BE LOWERED.</b>
8Z0075

## SECTION 3 – CHISEL PLOW OPERATION

7. Lower wings with caution. Do not raise or lower the wings when moving. Operate tractor hydraulics from operator station only. Do not allow any one near Chisel Plow when wings are raised or lowered.

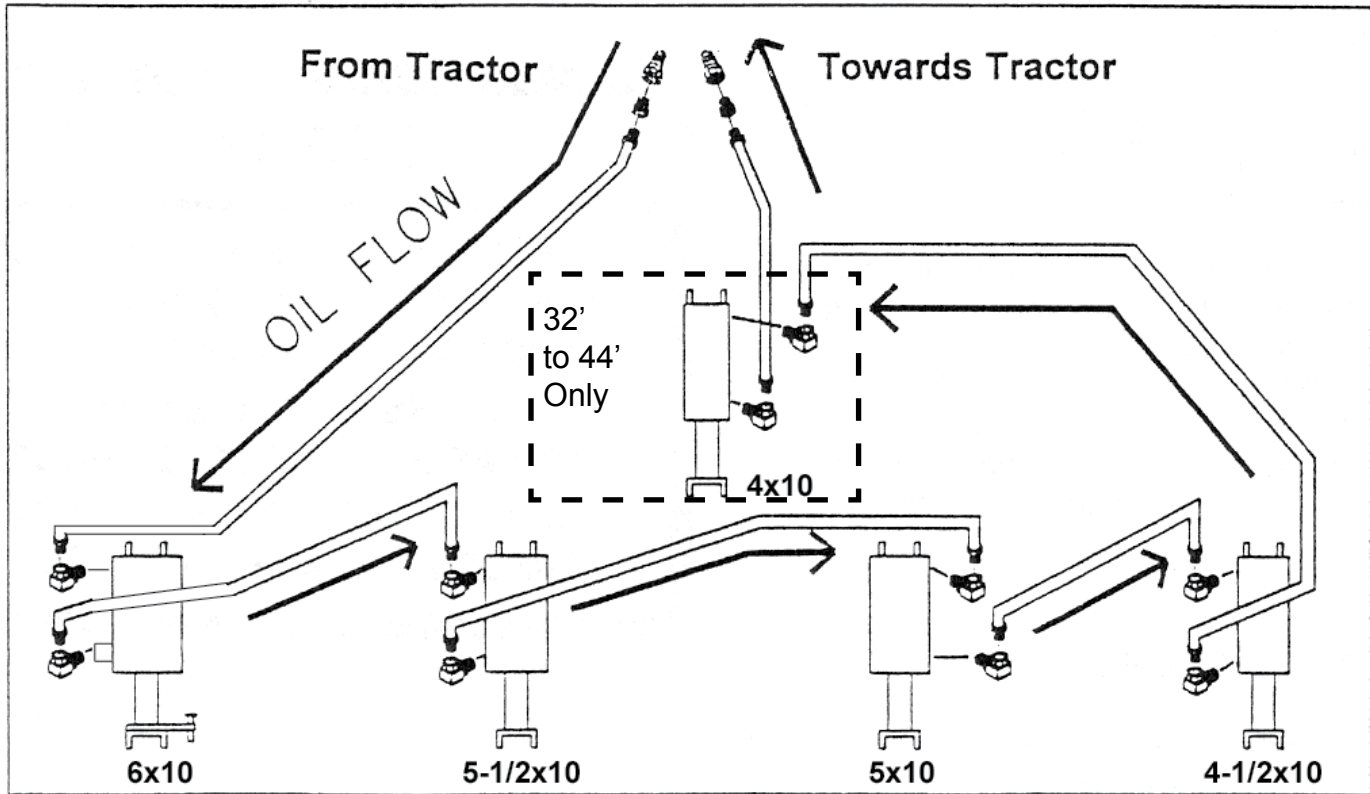


### IMPORTANT

A one-way restrictor is installed in wing lowering hydraulic circuit. This has been done to reduce chance of wing free fall. Do not remove this restrictor.

## SECTION 3 – CHISEL PLOW OPERATION

8. Fully extend depth control cylinders and maintain hydraulic pressure for 30 seconds to insure 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.



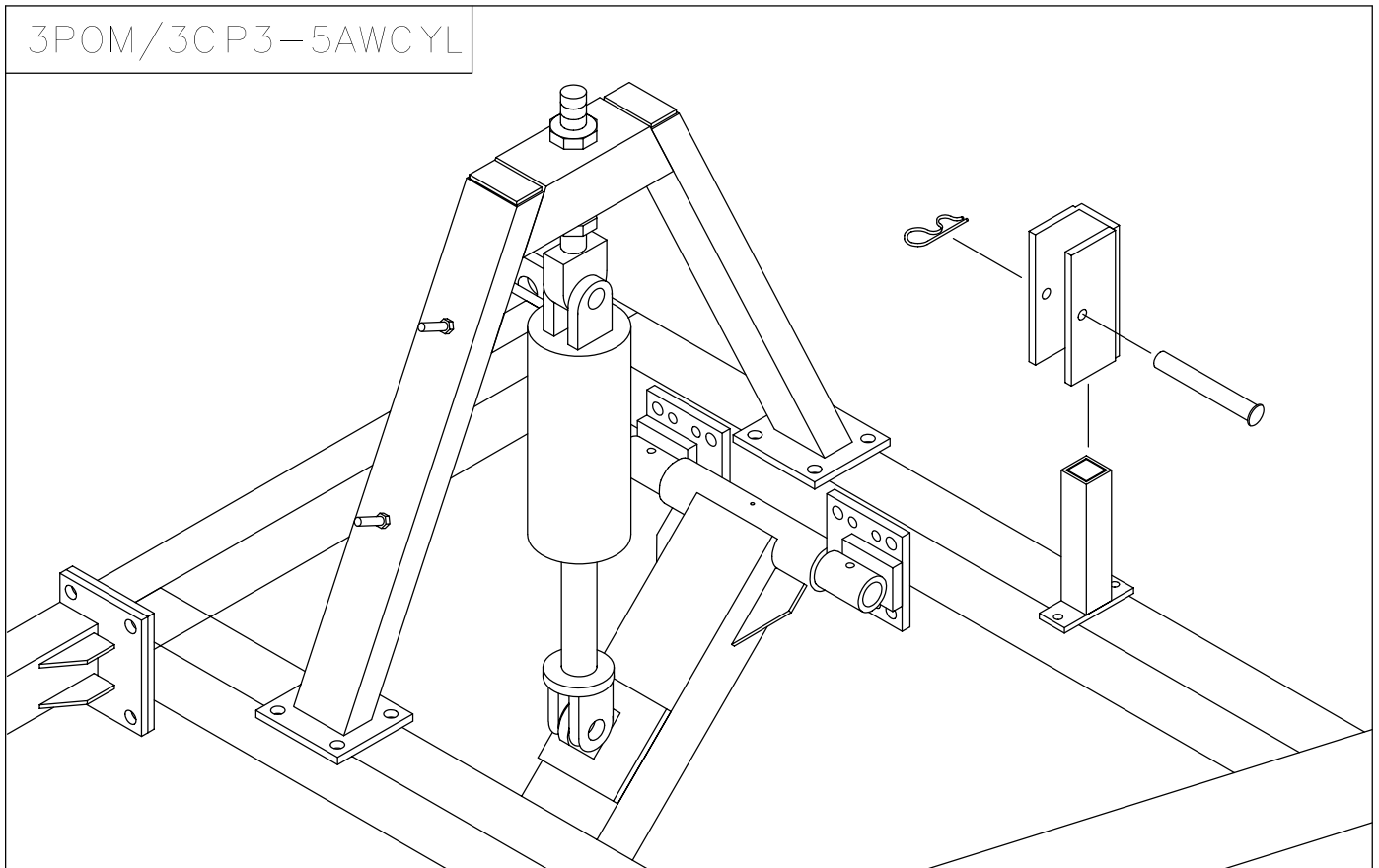
## WARNING

REMOVE TRANSPORT LOCK(S) BEFORE LOWERING MACHINE. IF LOCK(S) DO NOT REMOVE FREELY, INSURE THAT CYLINDERS ARE COMPLETELY FILLED WITH HYDRAULIC FLUID AND ARE SUPPORTING THE LOAD TO BE LOWERED.

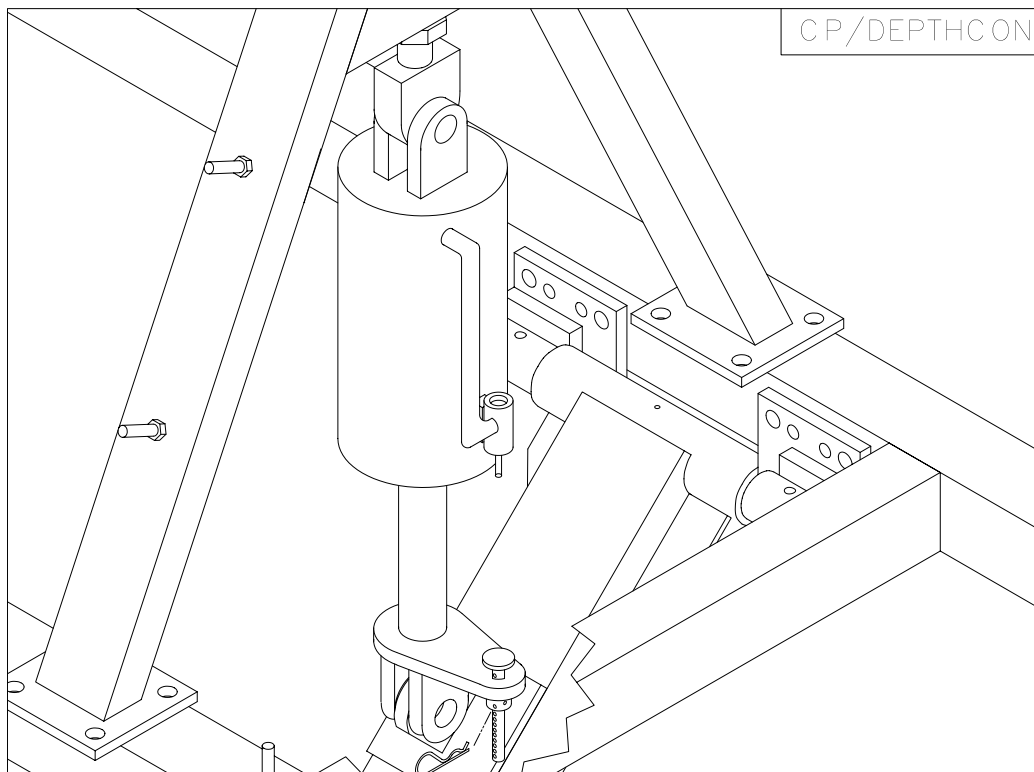
8Z0075

## SECTION 3 – CHISEL PLOW OPERATION

9. (Continued) – Store transport locks on holders.



10. Become familiar with single point depth control. Control can be found on 6 x 10 cylinder located on lefthand wing. A hairpin clip is used to hold plunger in desired location.

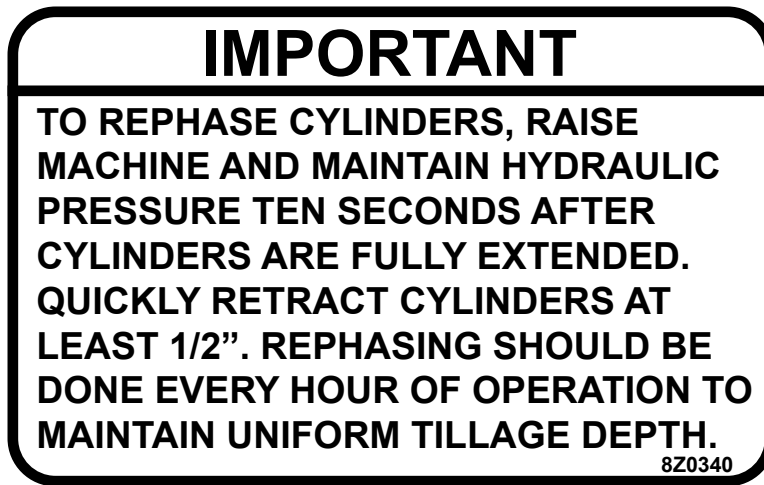


## SECTION 3 – CHISEL PLOW OPERATION

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### FIELD OPERATION

1. Rephase cylinders before starting field operation.



2. Choose a flat spot in a field to set tillage depth and level chisel plow.

### **IMPORTANT!**

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

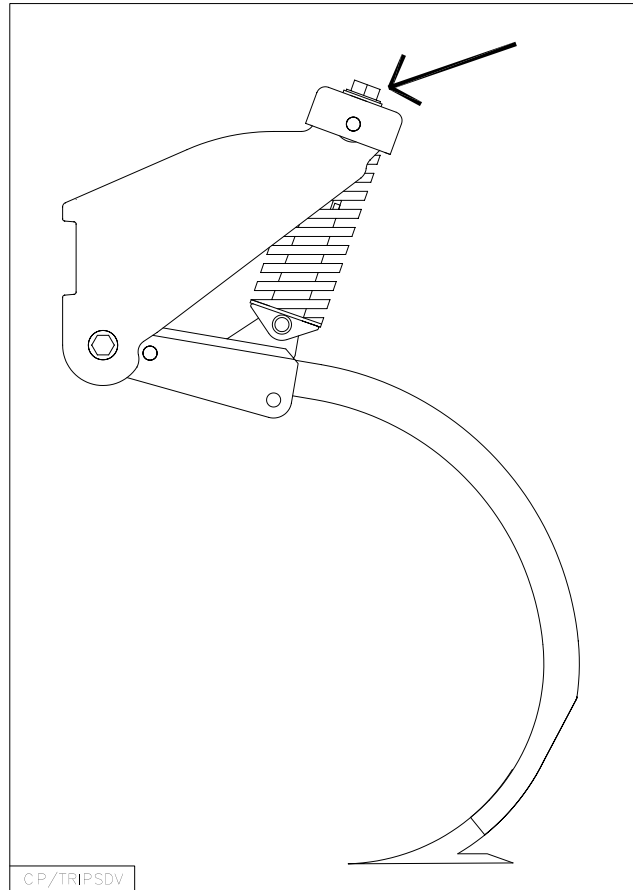
3. Determine desired tillage depth by working test strips within the field.

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



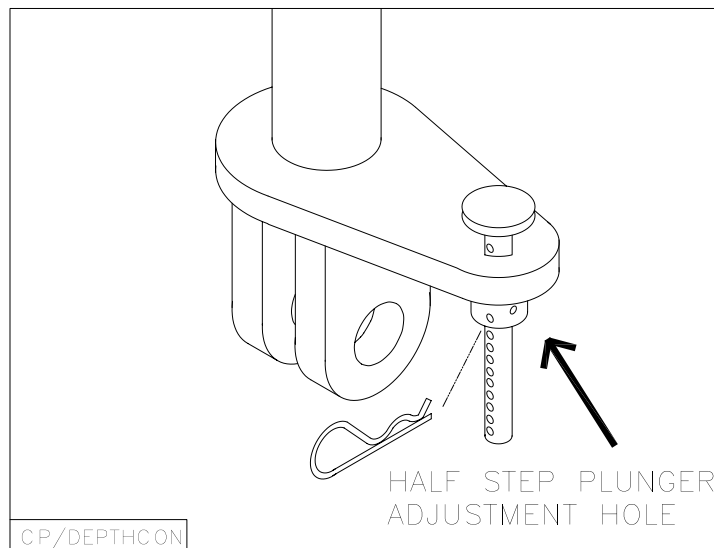
## SECTION 3 – CHISEL PLOW OPERATION

### 3. (Continued) – Trip Assembly Limit



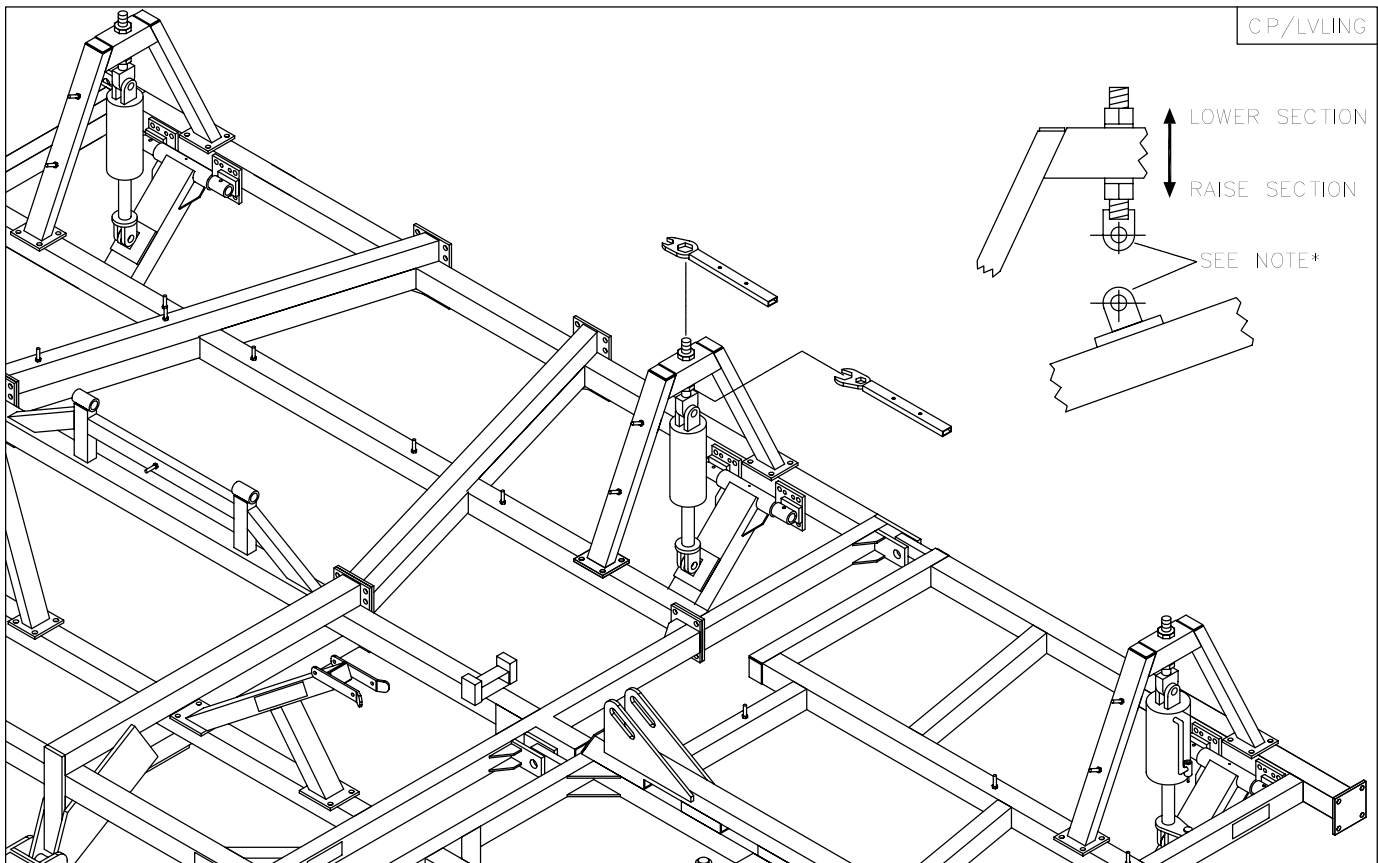
**NOTE:** Increased draft will occur if connecting bolt continually rides above trip assembly cap. This will consume horsepower as well as reduce life of trip assembly components.

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 is achieved.



## SECTION 3 – CHISEL PLOW OPERATION

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



**\*NOTE:** Insure 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.

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

## SECTION 3 – CHISEL PLOW OPERATION

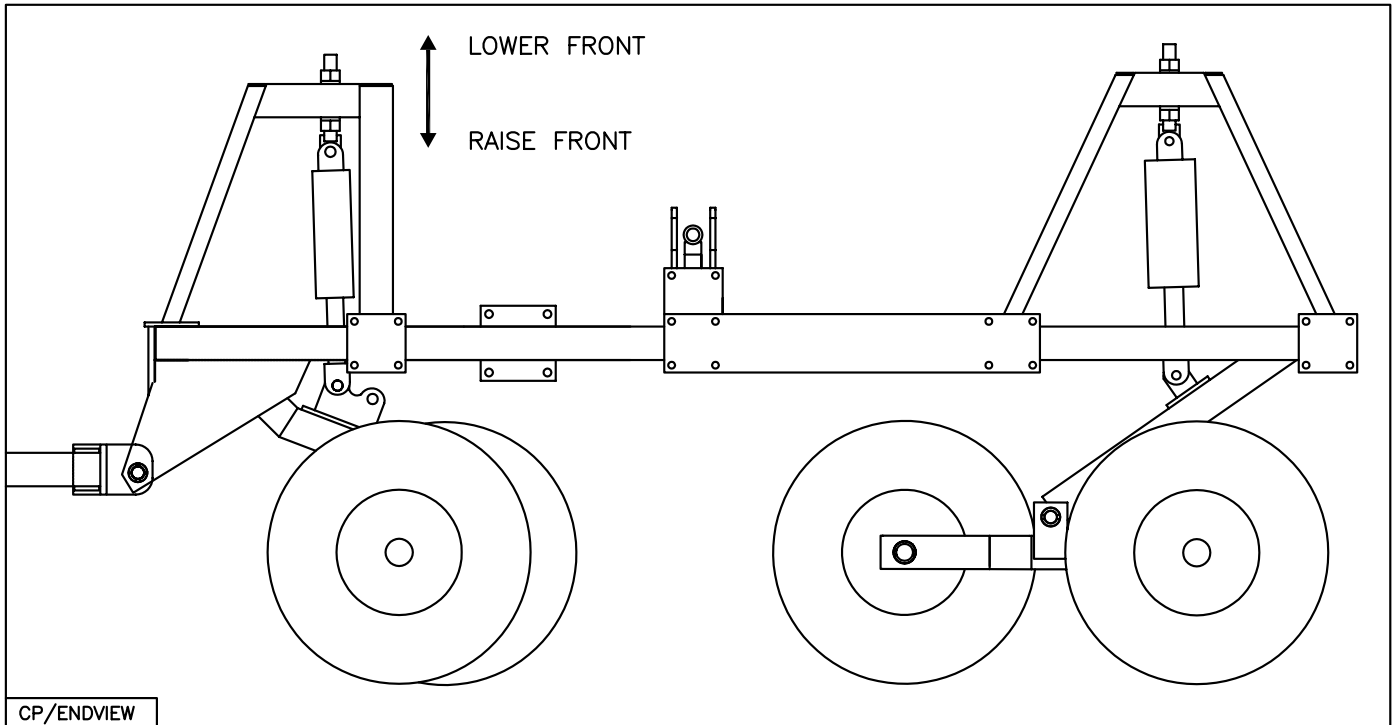
**NOTE:** It is best to check levelness of chisel plow after each adjustment by working test strips within the field.

### 6. Leveling machine from front to back.

16' - 30' Narrow: With chisel plow still in the ground, check depth of tillage in the front and the back of machine. Level with hitch tilt cylinders.

32' Standard - 44': With chisel plow still in the ground, check depth of tillage in the front and the back of machine. If leveling is necessary, use wrenches provided to adjust eyebolt on front wheel assembly up or down.

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 end of chisel plow in transport position.

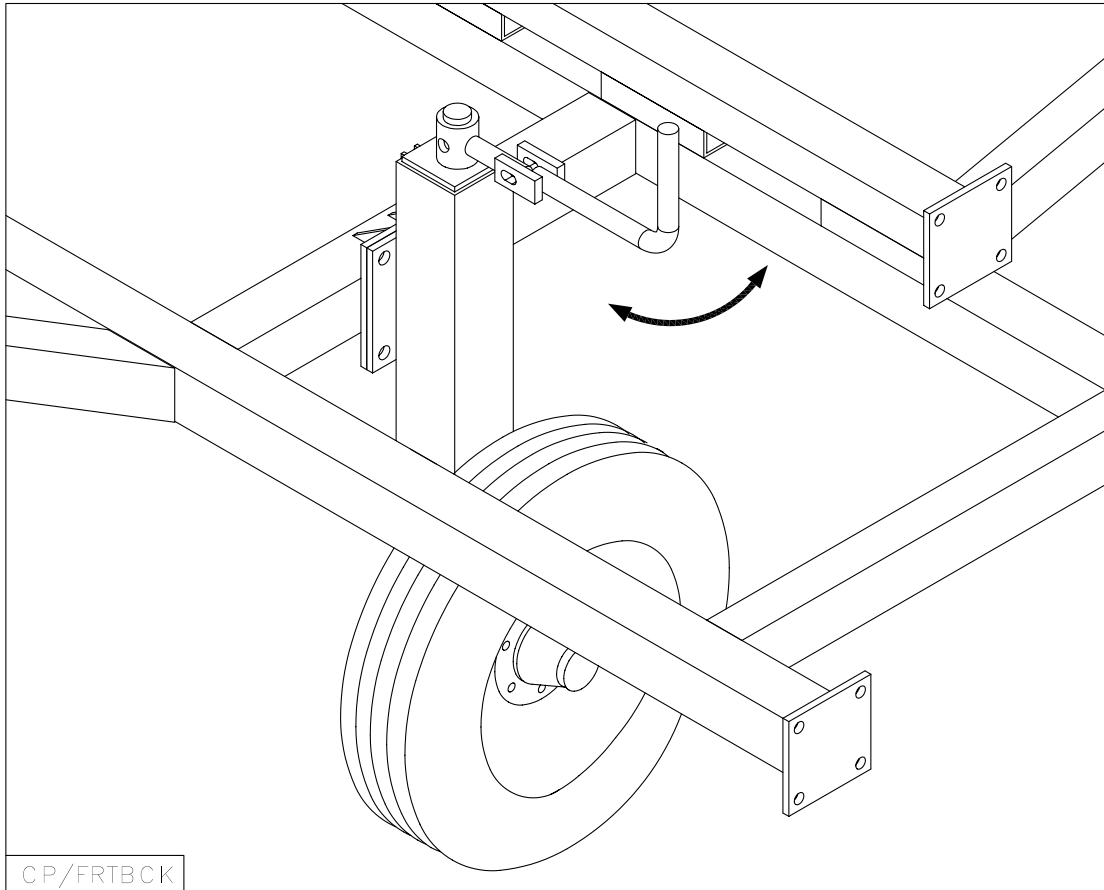


### **IMPORTANT!**

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.

## SECTION 3 – CHISEL PLOW OPERATION

7. Setting gauge wheels (32' Standard-44'). 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 wings. They should not be used to support entire weight of wings. Tough soil conditions may create “suction” on the front of the chisel plow. As long as the machine is not operated beyond trip assembly limit (see page 3-7), 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 operator in setting gauge wheels.



## SECTION 3 – CHISEL PLOW OPERATION

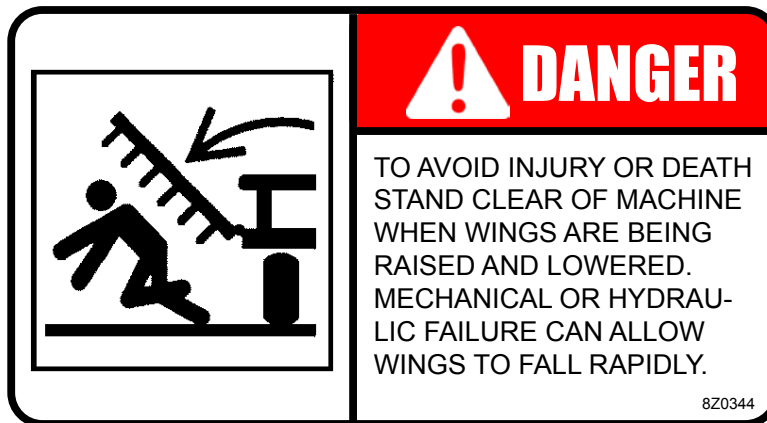
### 8. Operation “Tips”

- 32' - 44'** – The 5 solid lift arms on this machine are designed to prevent skewing from side to side. To avoid damage to lift arms and wheel assemblies, do not take sharp corners with chisel plow in the ground.
- 32' - 44'** – Floating hitch machines are designed to follow ground contours. 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.
- ALL** – Rephase cylinders every hour. If the chisel plow is raised and lowered only a small amount during operation, 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 (See Page 3-6).

**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. Operate tractor hydraulics from operator station only.

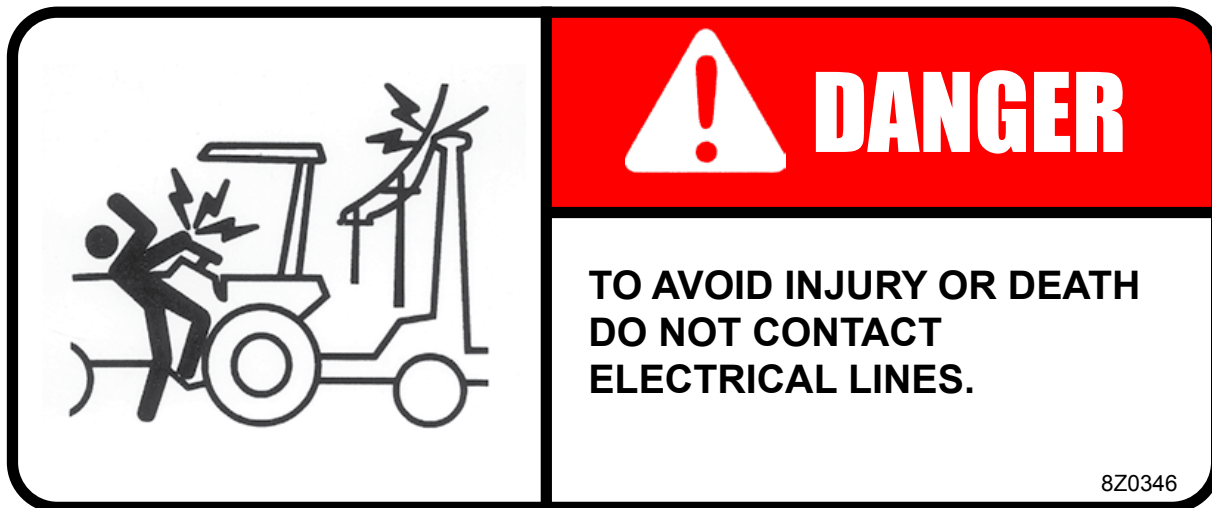


3. Install transport lock pins on wings and cylinder locks on depth control cylinders.



## SECTION 3 – CHISEL PLOW OPERATION

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 5-2).
8. Stay clear of overhead lines.



9. Avoid sharp turns on hard surfaces. Solid mounted lift arms may cause wheel assemblies to scuff. Damage to tires and machine could occur.
10. Frequently check for traffic from rear, especially during turns.

### UNHOOKING CHISEL PLOW FROM TRACTOR

1. Lower machine 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.

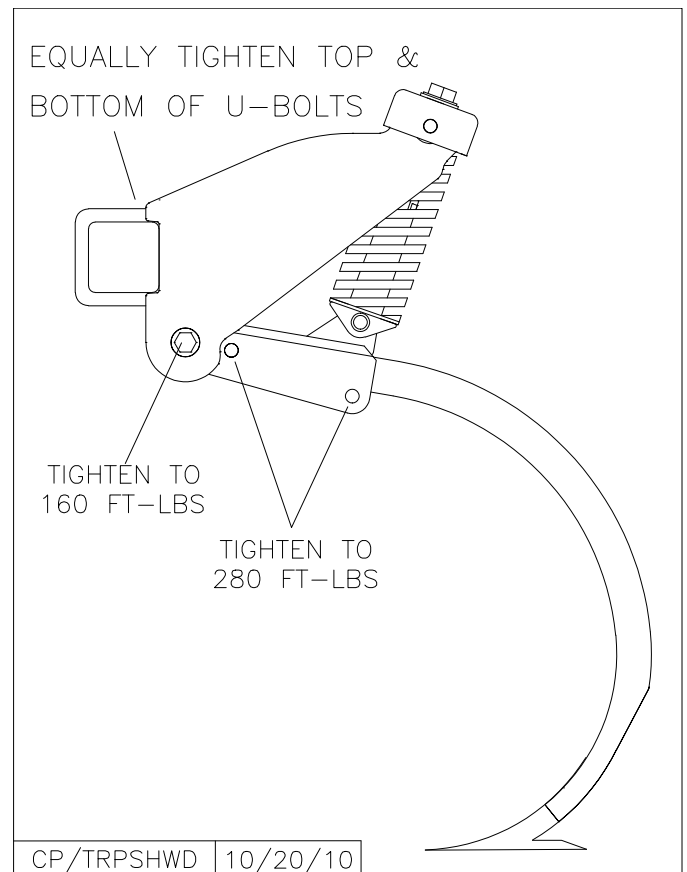
## SECTION 4 – MAINTENANCE

### 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 FOR AFTER THE FIRST DAY AND WEEK OF OPERATION

1. Grease lift arms, walking tandem assemblies, and hitch pivot. (There are a total of 12 daily grease zerks).
2. Check all hydraulic components for leaks daily.
3. Check tightness of all wheel bolts daily.
4. Check tightness of wheel bearings (See Page 6-20).
5. Check tightness of the following bolts on the trip assemblies.
6. Check tightness of all hardware. Pay special attention to the hitch bolts and all pivot retaining bolts.



## SECTION 4 – MAINTENANCE

### DAILY MAINTENANCE

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



### PERIODIC MAINTENANCE

1. Repack wheel bearings and check tightness (See Page 6-20).
2. Check tire air pressure (See specification page 5-2).
3. Check tightness of trip assembly hardware as explained under “Maintenance for after the first day and week of operation” (Page 4-1).
4. Check tightness of all hardware. Pay special attention to the 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 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.



## SECTION 5 – TROUBLESHOOTING

PROBLEM	CAUSE	CORRECTION
1. Not tilling level.	A. Depth control cylinders out of phase.	Rephase cylinders. See page 3-6.
	B. Eyebolts not adjusted properly.	Adjust with wrenches provided. See Pages 3-8 and 3-9.
	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 tilling 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 hyd. 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 resistor(s) (PN 8J7116). Arrow must point towards cylinder.
	B. Tractor hydraulics not set properly.	Reduce flow rate to Wing Lift Cylinder Circuit.

## SECTION 5 – TROUBLESHOOTING

### WIDTH, HEIGHT, WEIGHT, LENGTH

SIZE	APPROX. TRANSPORT WIDTH	APPROX TRANSPORT HEIGHT	STANDARD WEIGHT	WEIGHT W/3BAR 104 HARROWS	WEIGHT W/3BAR 106 HARROWS	LENGTH W/3 BAR 104 OR 106
16'	15'9"	8'	8,737	9,641	9,714	30'3"
20'	20'	8'	9,601	10,623	10,771	30'3"
24'	15'10"	11'4"	14,200	15,808	15,888	30'3"
26'	15'10"	11'11"	14,500	16,160	16,250	30'3"
28'	15'10"	12'11"	14,900	16,608	16,708	30'3"
30'	15'10"	13'4"	15,280	17,038	17,148	30'3"
32'	19'6"	12'6"	13,909	15,403	15,535	33'
34'	19'6"	13'5"	14,203	15,440	15,580	33'
36'	19'6"	14'4"	14,639	15,500	15,648	33'
38'	19'6"	15'3"	15,004	16,867	17,023	33'
40'	19'6"	16'2"	15,974	18,122	18,288	33'
42'	19'6"	17'1"	16,268	18,170	18,344	33'
44'	19'6"	18'0"	16,704	18,943	19,125	33'

### TIRE SPECIFICATIONS

LOCATION	TIRE SIZE	PLY RATING	INFLATION PRESSURE (PSI)
STANDARD CENTER/WINGS	11L x 15	LRF	85*
OPTIONAL CENTER/WINGS	12.5L x 15	LRF	90*

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

## SECTION 5 – TROUBLESHOOTING

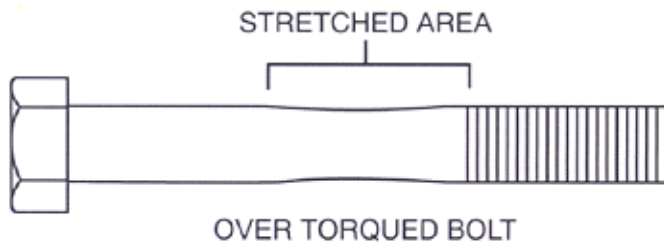
### PROPER BOLT USE

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		

\*Nylon Lock Nut

3/8/12 TILLAGE



SAE  
GRADE 5



SAE  
GRADE 8

## SECTION 5 – TROUBLESHOOTING

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### NOTES

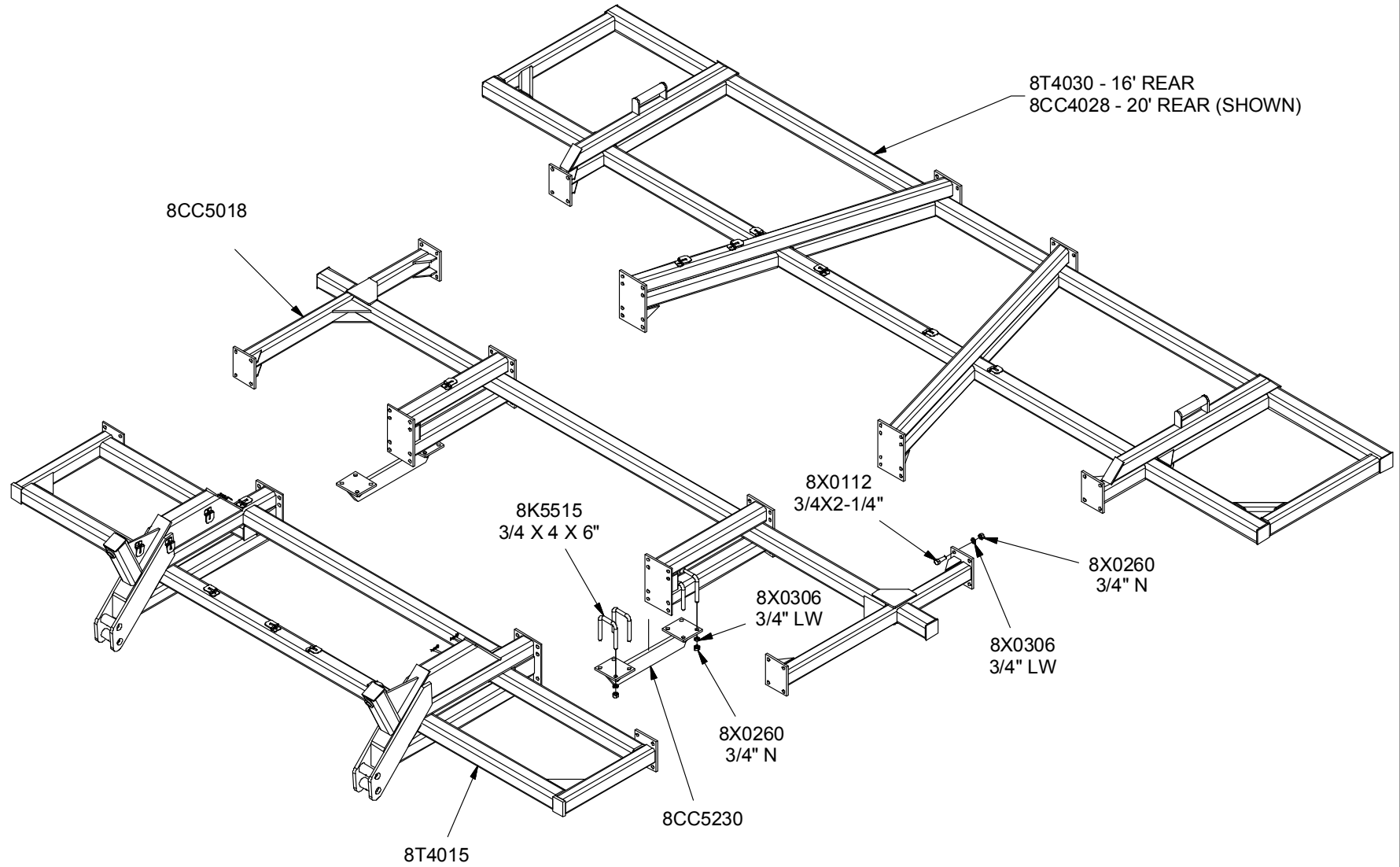
## SECTION 6 – PARTS

---

BRING YOUR OWNER REGISTER INFORMATION LOCATED AT THE BEGINNING OF THIS MANUAL WHEN ORDERING PARTS (SERIAL NUMBER IS LOCATED BY THE HITCH PIECE).

# 16' & 20' CENTER

6-2

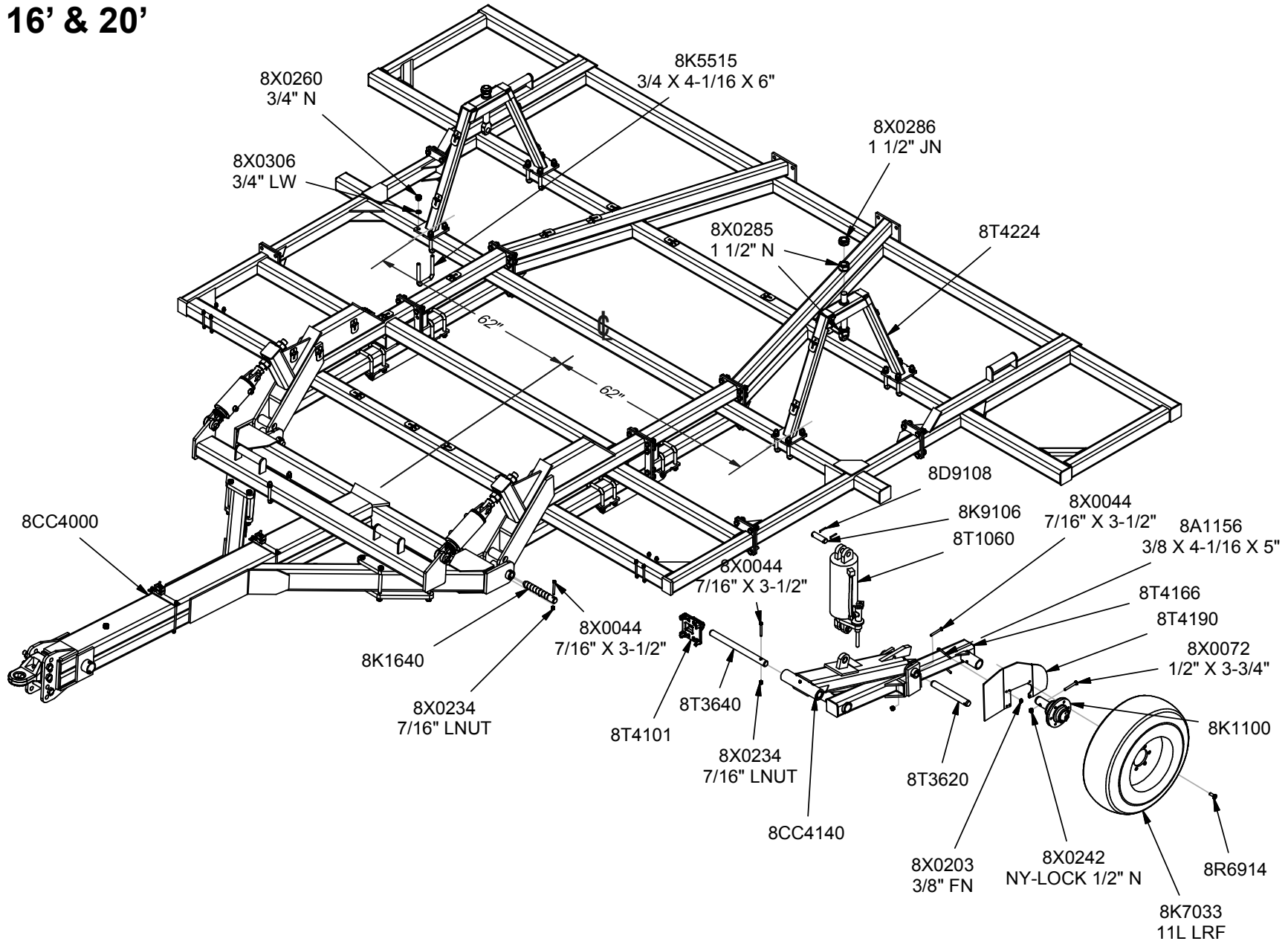


SECTION 6 - PARTS

2/15/2011

9T2012H.iam/CENTER

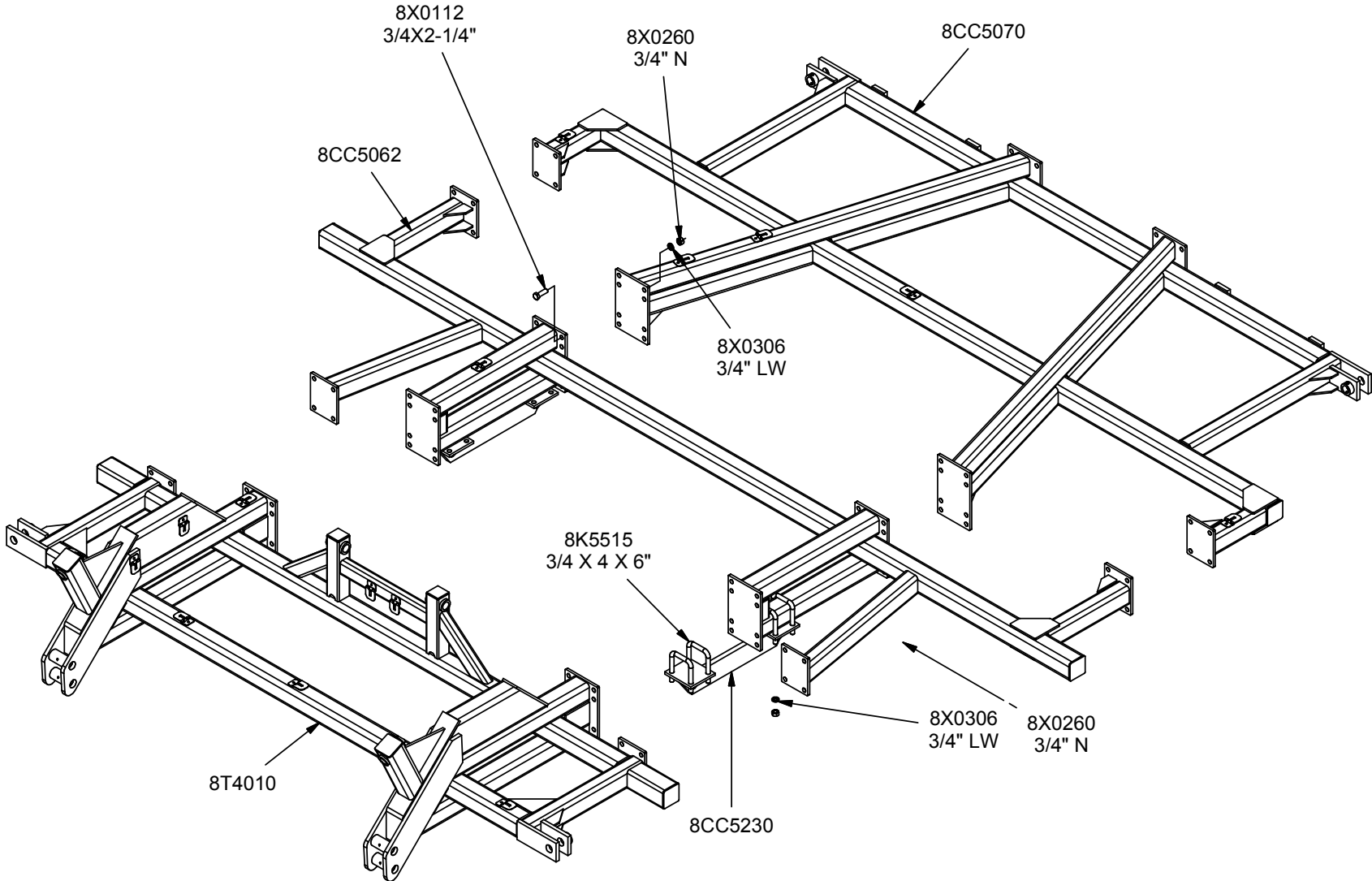
# 16' & 20'



6-3

SECTION 6 - PARTS

# 24', 26', 28' & 30' NARROW CENTER



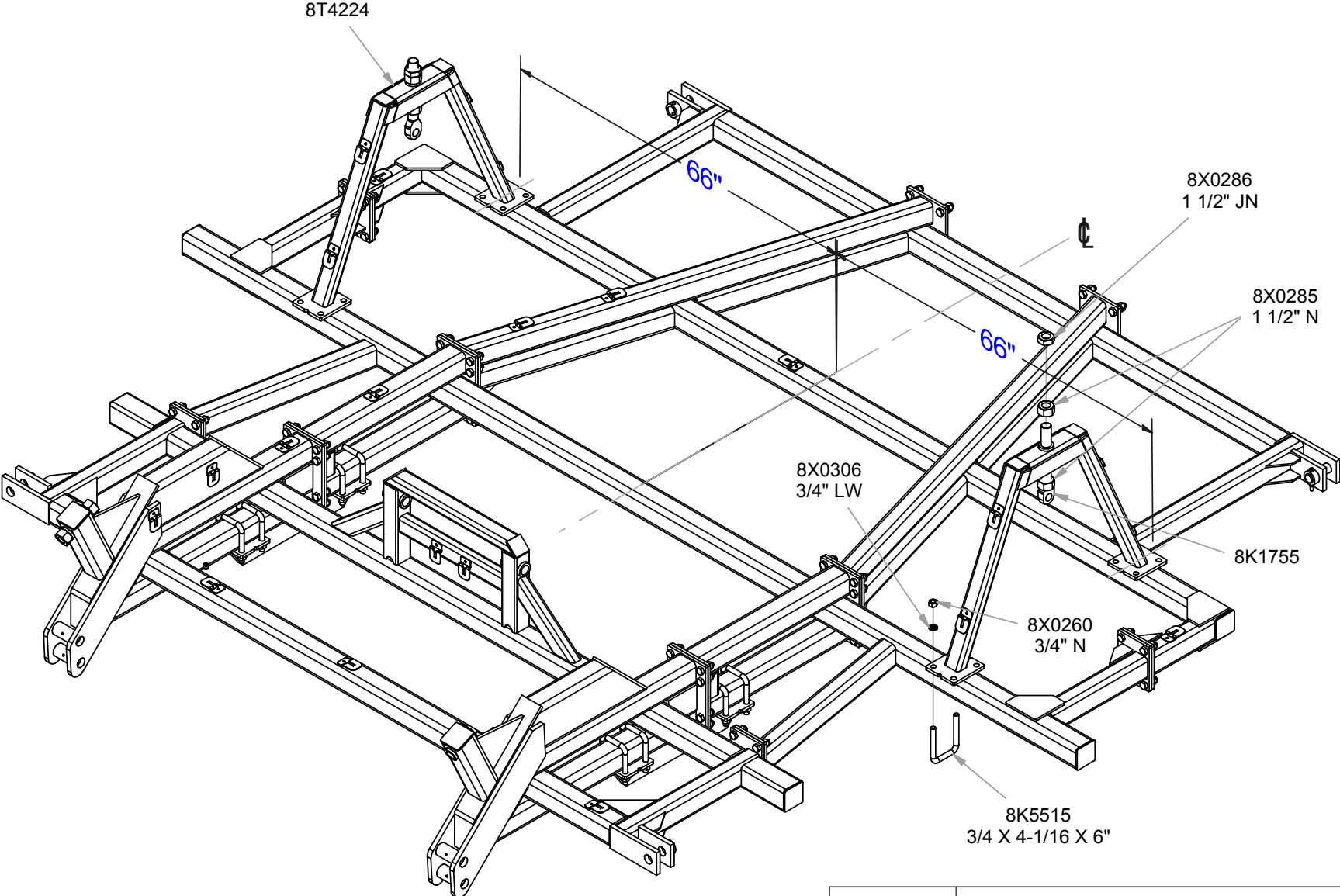
6-4

SECTION 6 - PARTS



# 24', 26', 28' & 30' NARROW CYLINDER ATTACHMENT

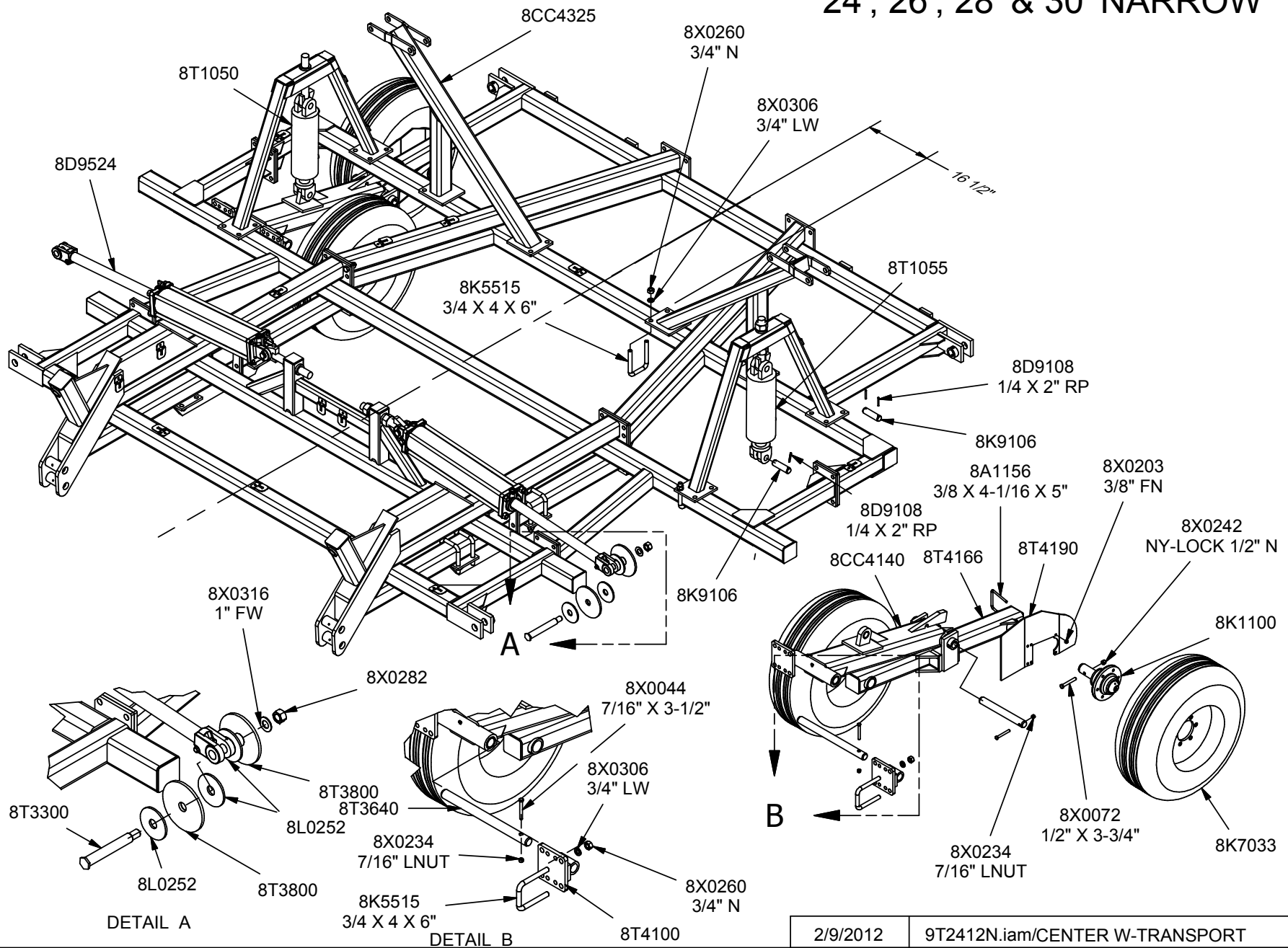
6-5



SECTION 6 - PARTS

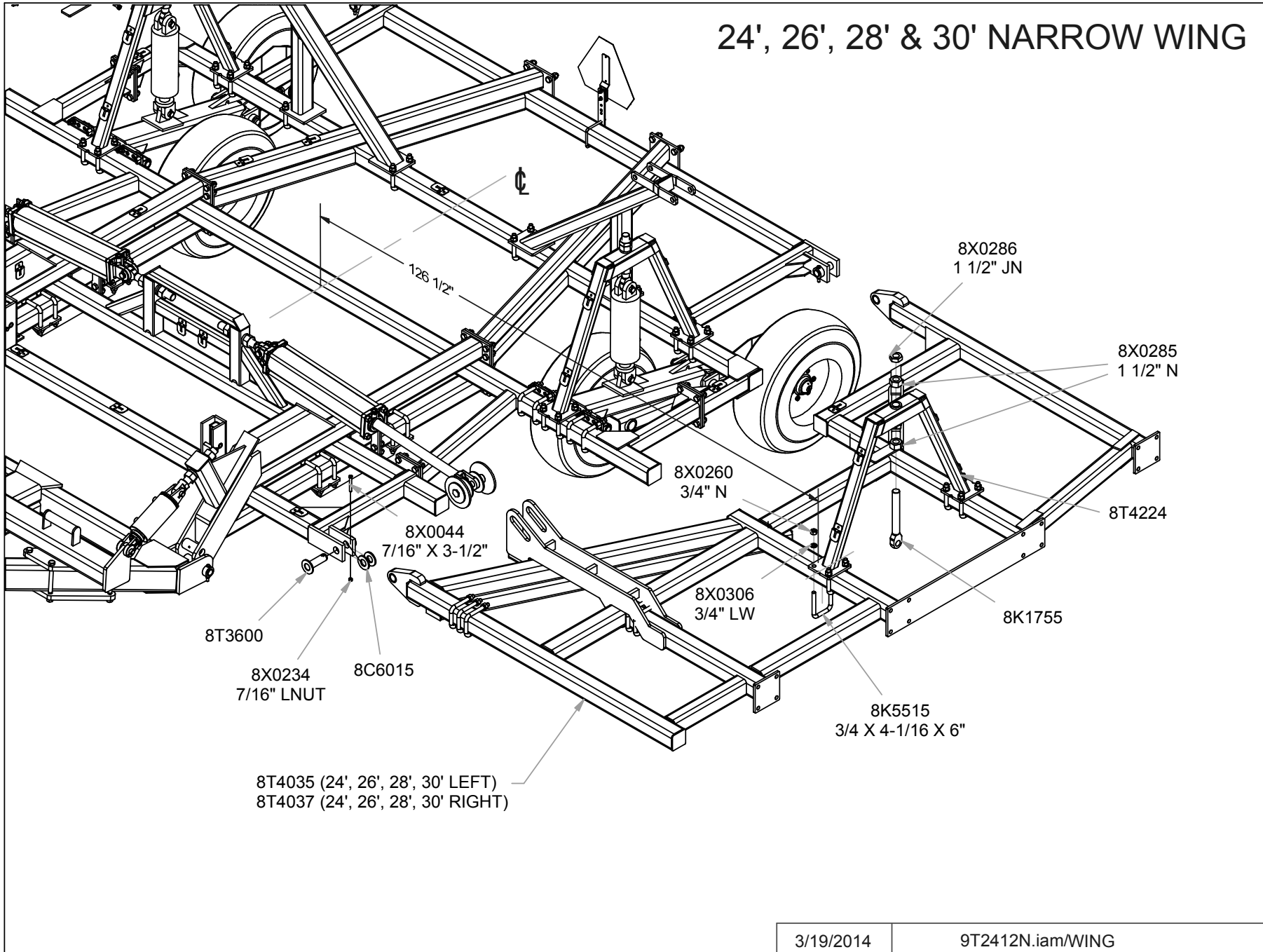
# 24', 26', 28' & 30' NARROW

## SECTION 6 - PARTS

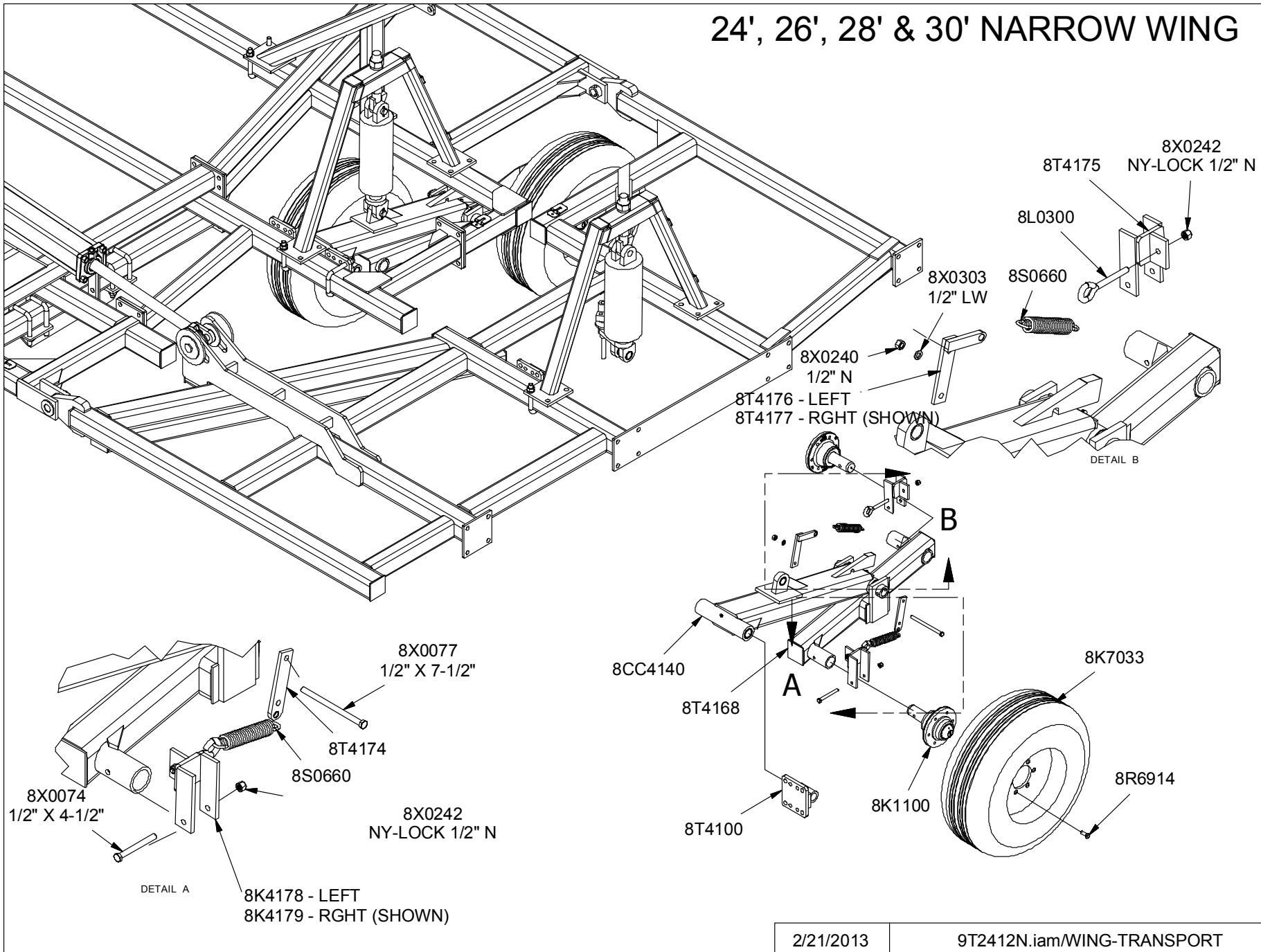


9-9

# 24', 26', 28' & 30' NARROW WING



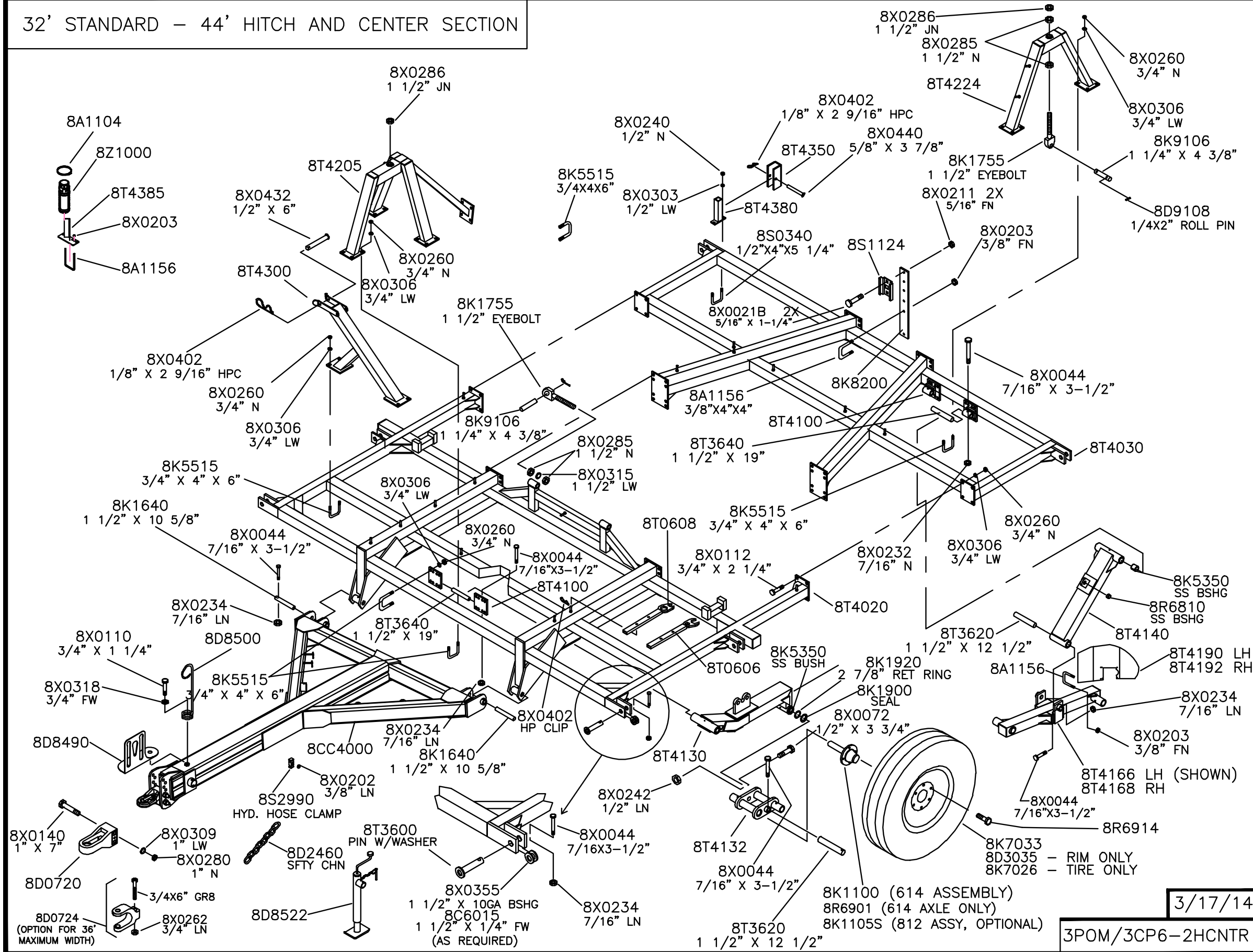
# 24', 26', 28' & 30' NARROW WING



2/21/2013

9T2412N.iam/WING-TRANSPORT

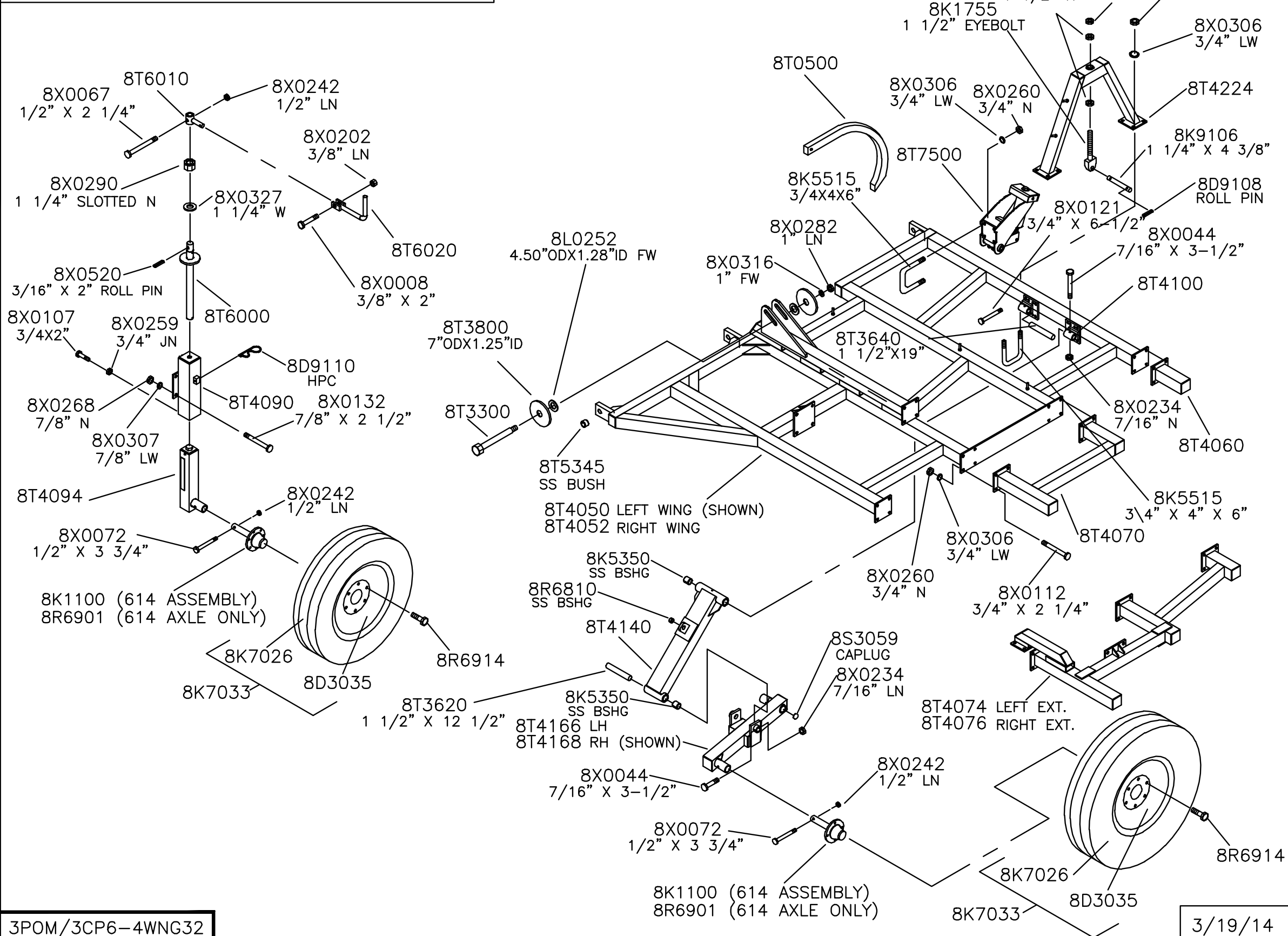
32' STANDARD - 44' HITCH AND CENTER SECTION



3/17/14

3POM/3CP6-2HCNTR

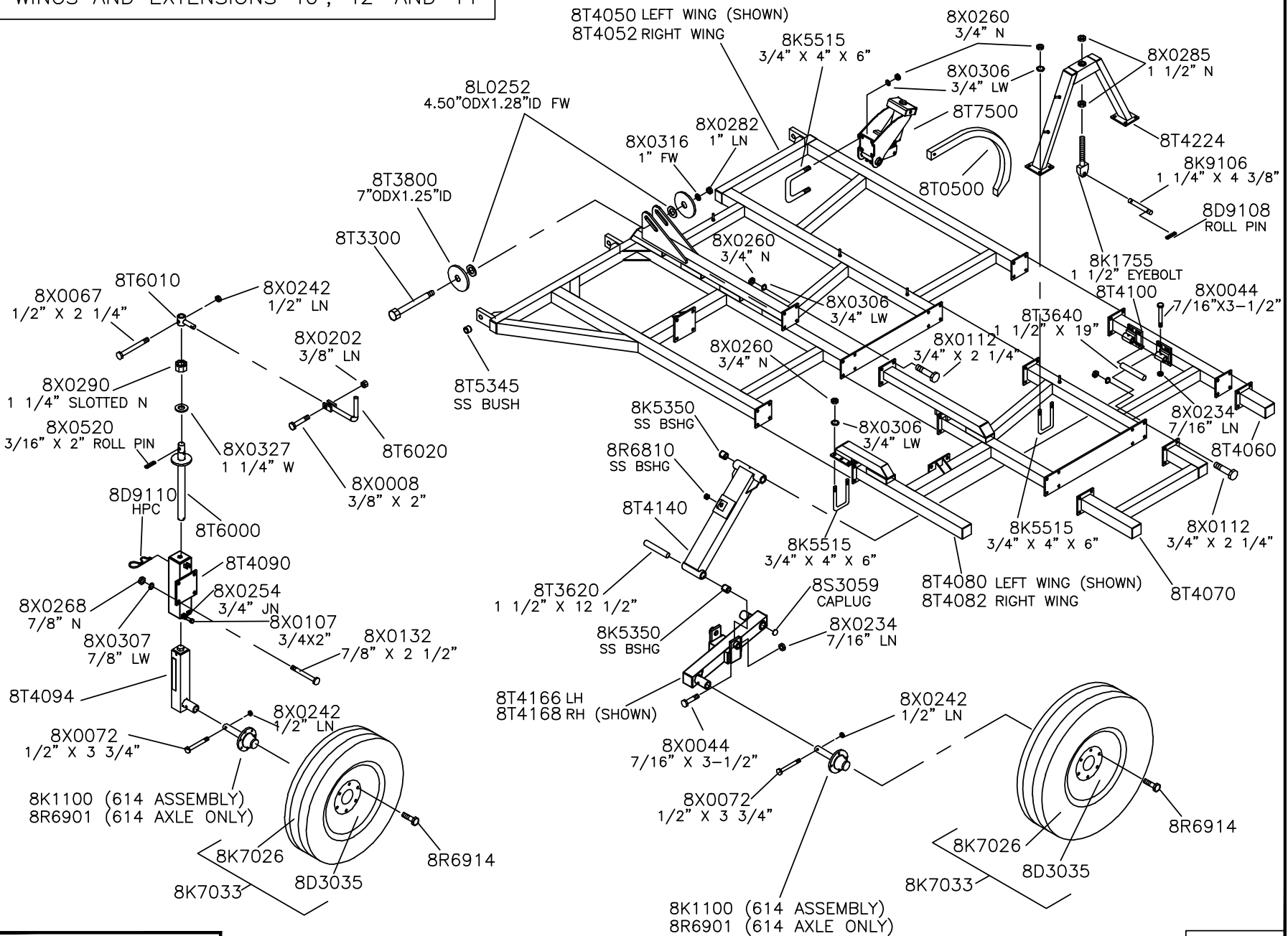
WINGS AND EXTENSIONS 32' THROUGH 38'



3POM/3CP6-4WNG32

3/19/14

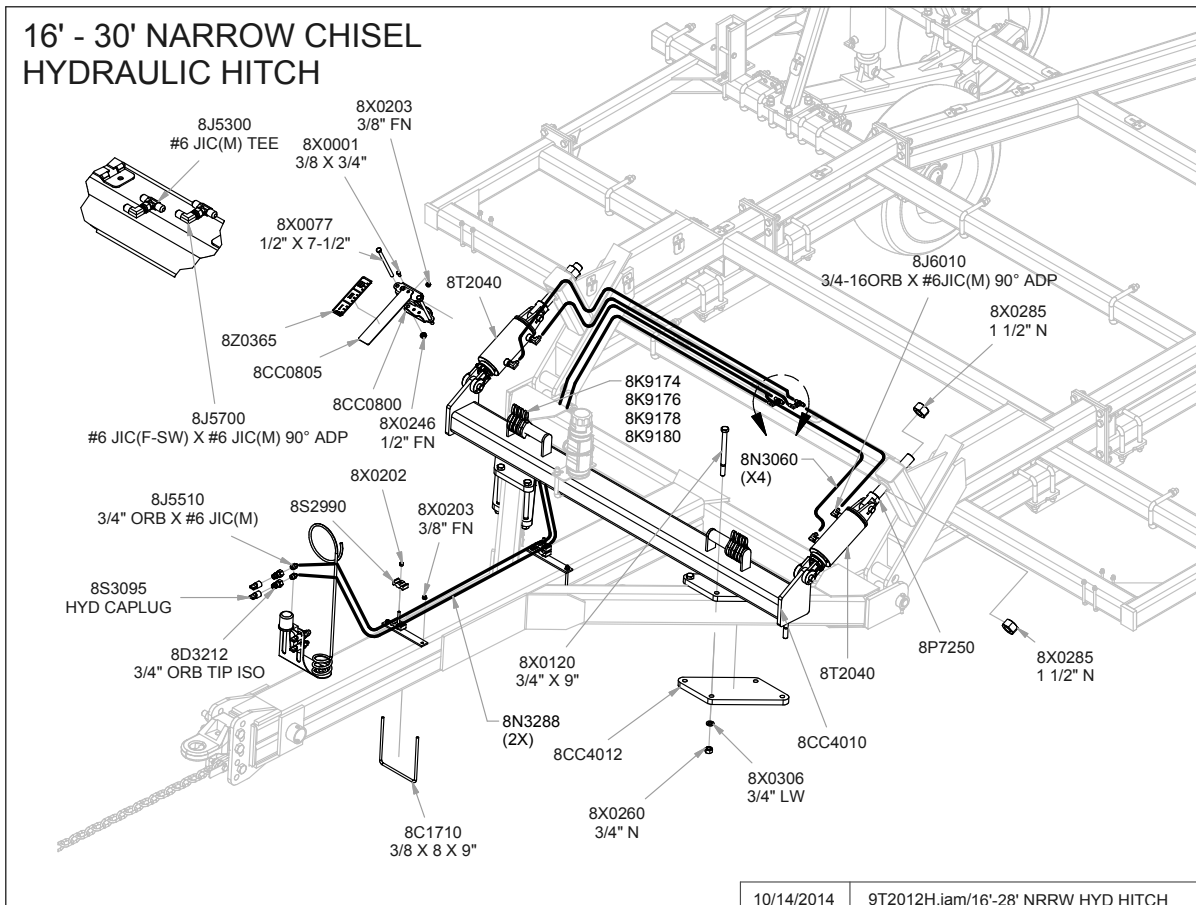
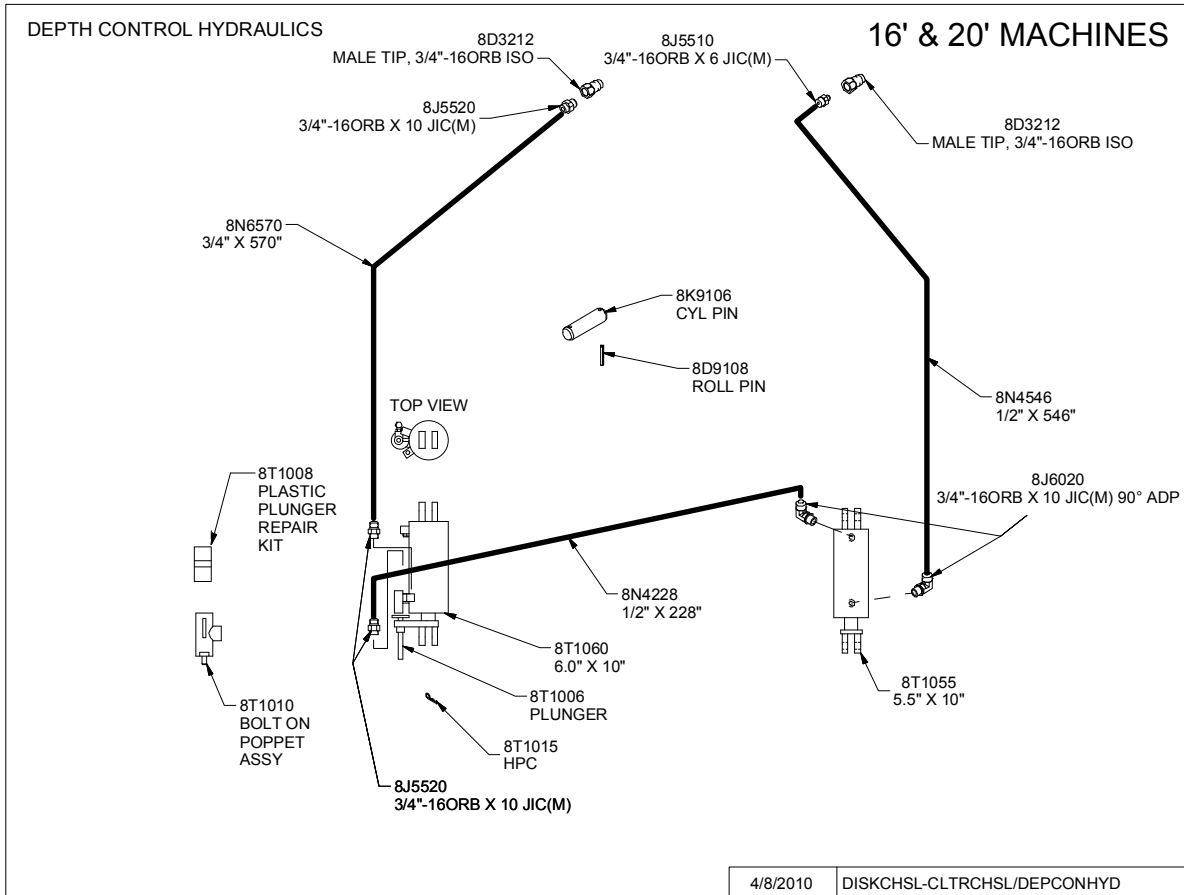
WINGS AND EXTENSIONS 40', 42' AND 44'



6-11

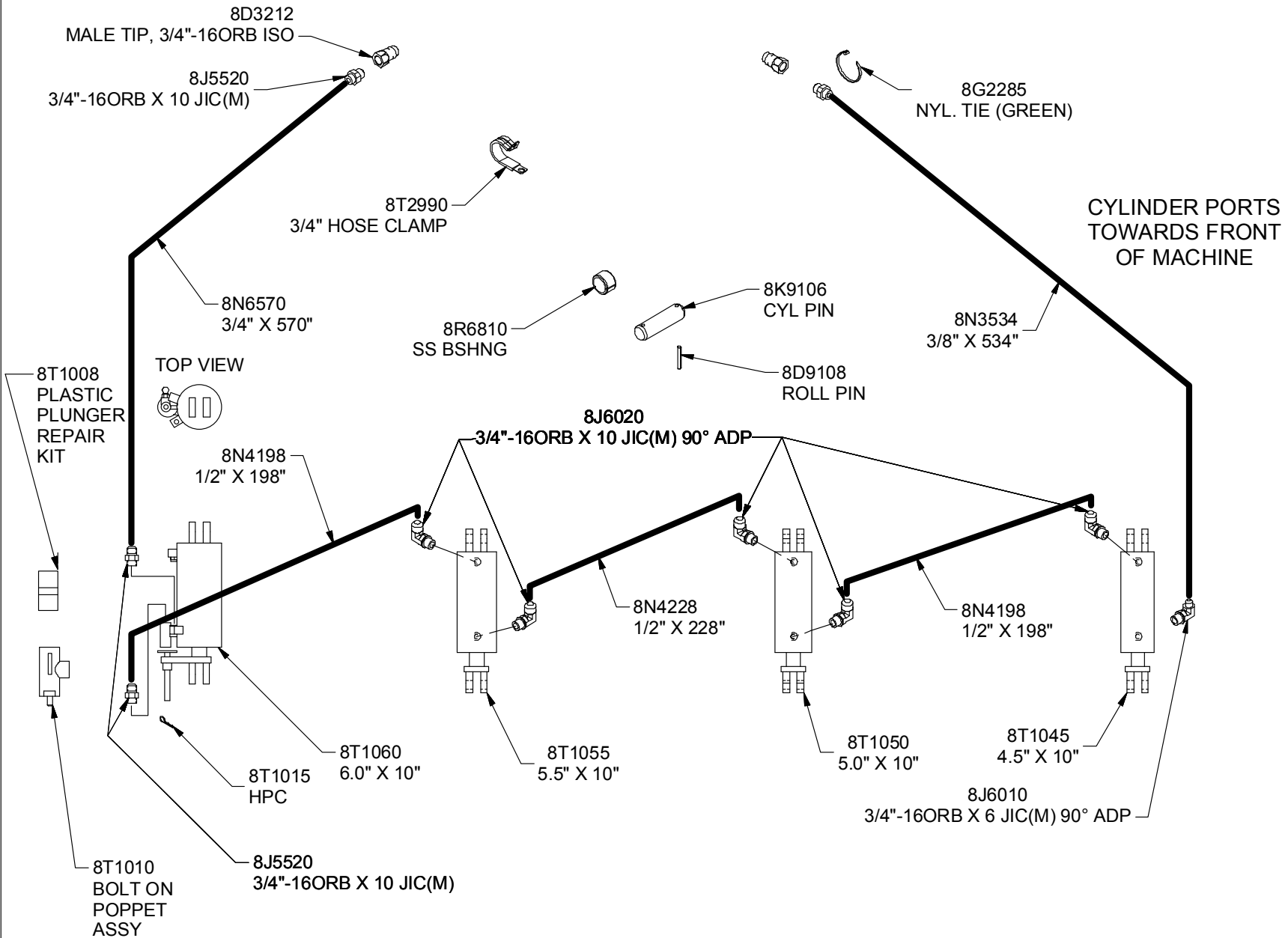
SECTION 6 - PARTS (40'-44')

## SECTION 6 – PARTS (16'-30' NARROW)





# DEPTH CONTROL HYDRAULICS



6-13

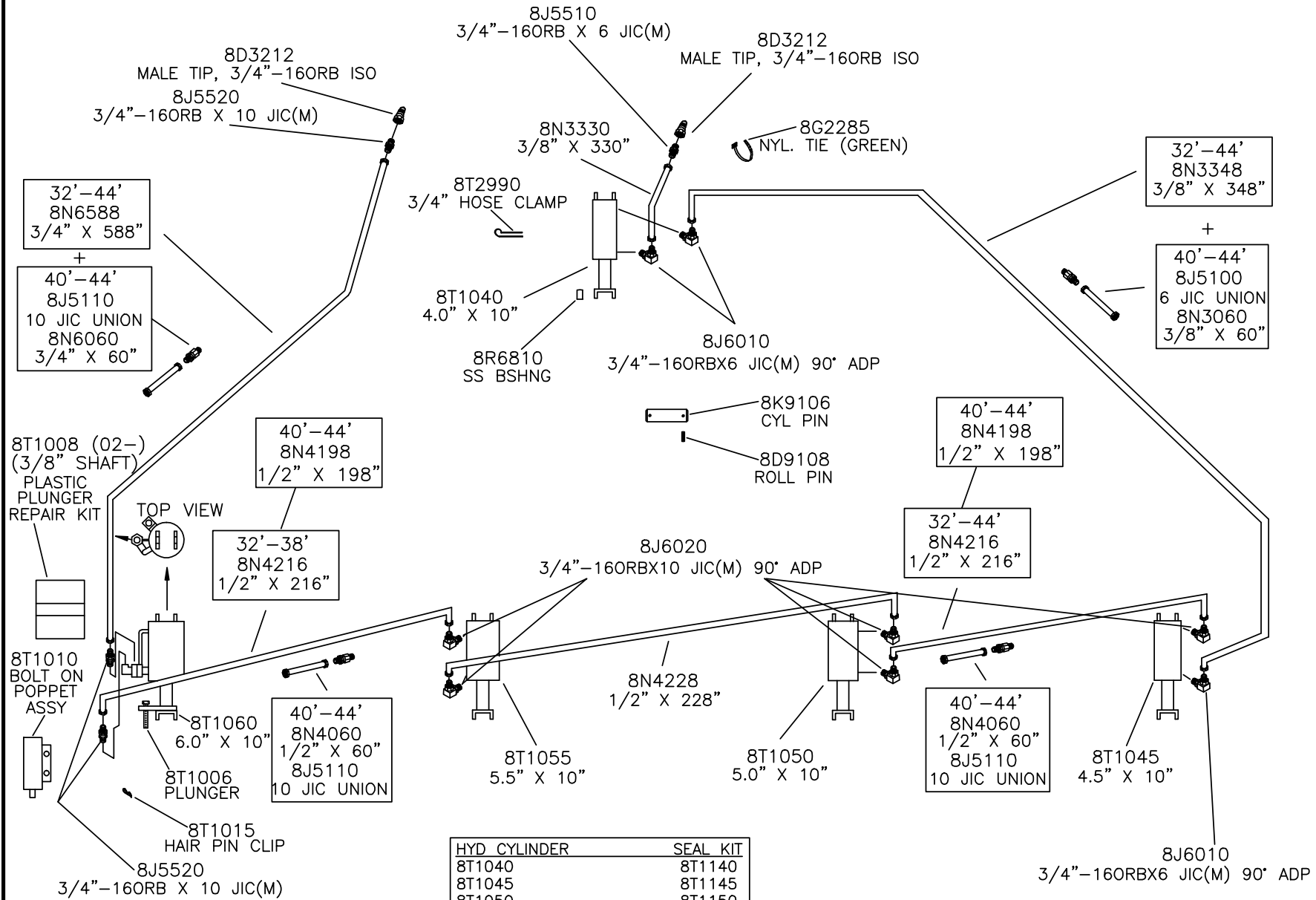
SECTION 6 - PARTS (24'-30' NARROW)

4/8/2010

DISKCHSL-CLTRCHSL/DEPCONHYD

DEPTH CONTROL HYDRAULICS

6-14



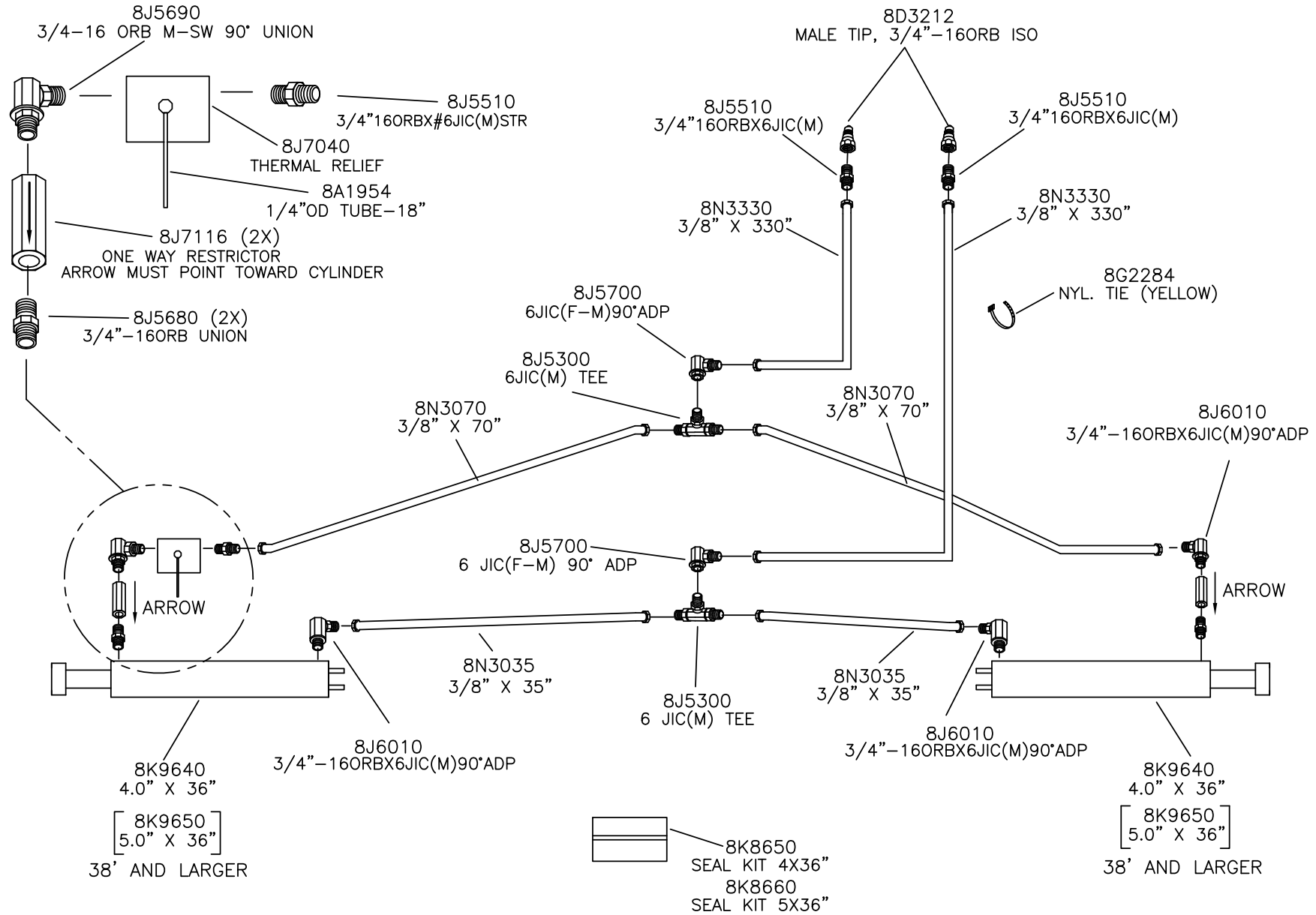
HYD CYLINDER	SEAL KIT
8T1040	8T1140
8T1045	8T1145
8T1050	8T1150
8T1055	8T1155
8T1060	8T1160

3/19/14 3POM/3CPDEPCONHYD

SECTION 6 - PARTS (32'-44' NARROW)

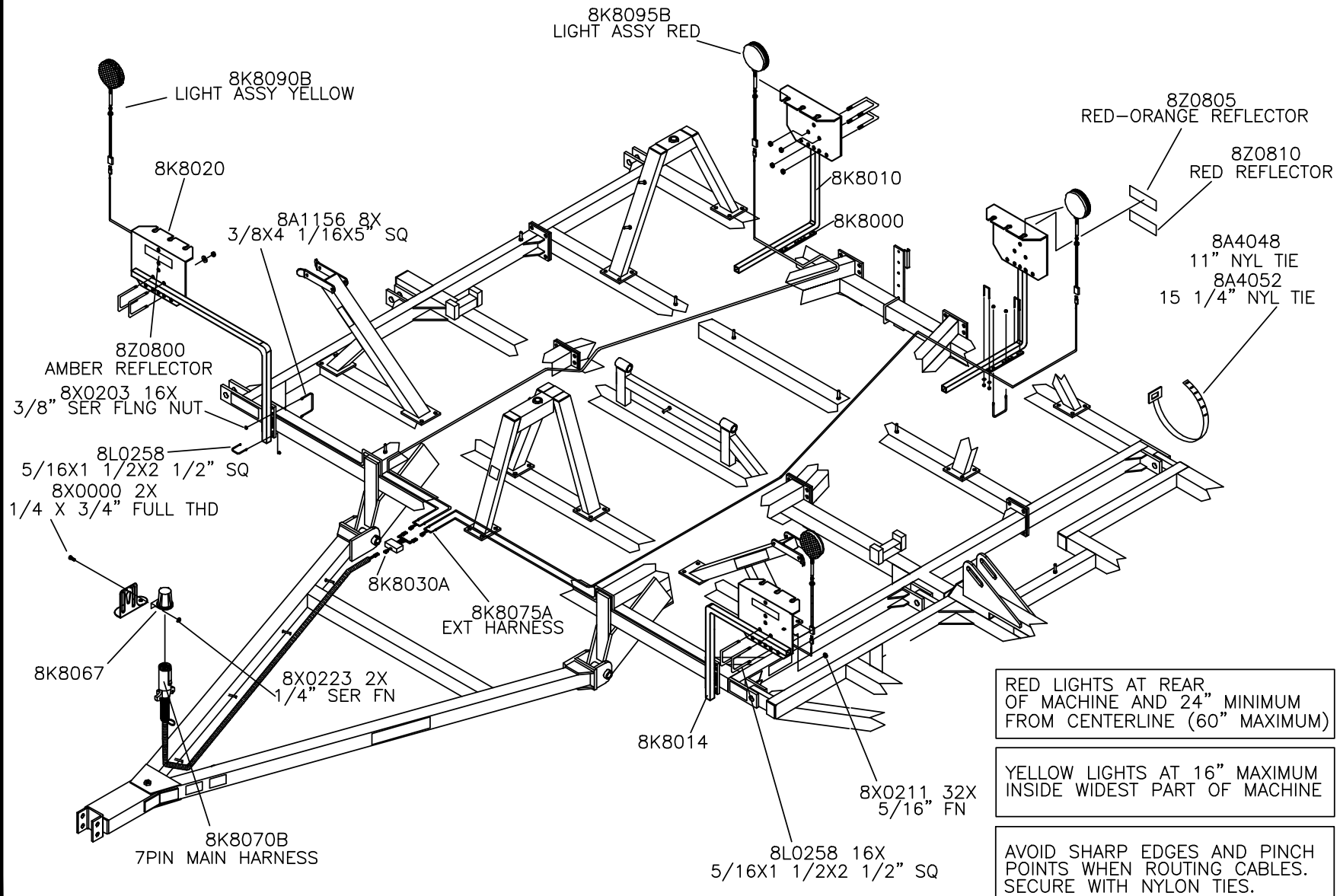
WING LIFT HYDRAULICS

6-15



SECTION 6 - PARTS (32'-44')

# SAFETY LIGHT KIT



RED LIGHTS AT REAR OF MACHINE AND 24" MINIMUM FROM CENTERLINE (60" MAXIMUM)

YELLOW LIGHTS AT 16" MAXIMUM INSIDE WIDEST PART OF MACHINE

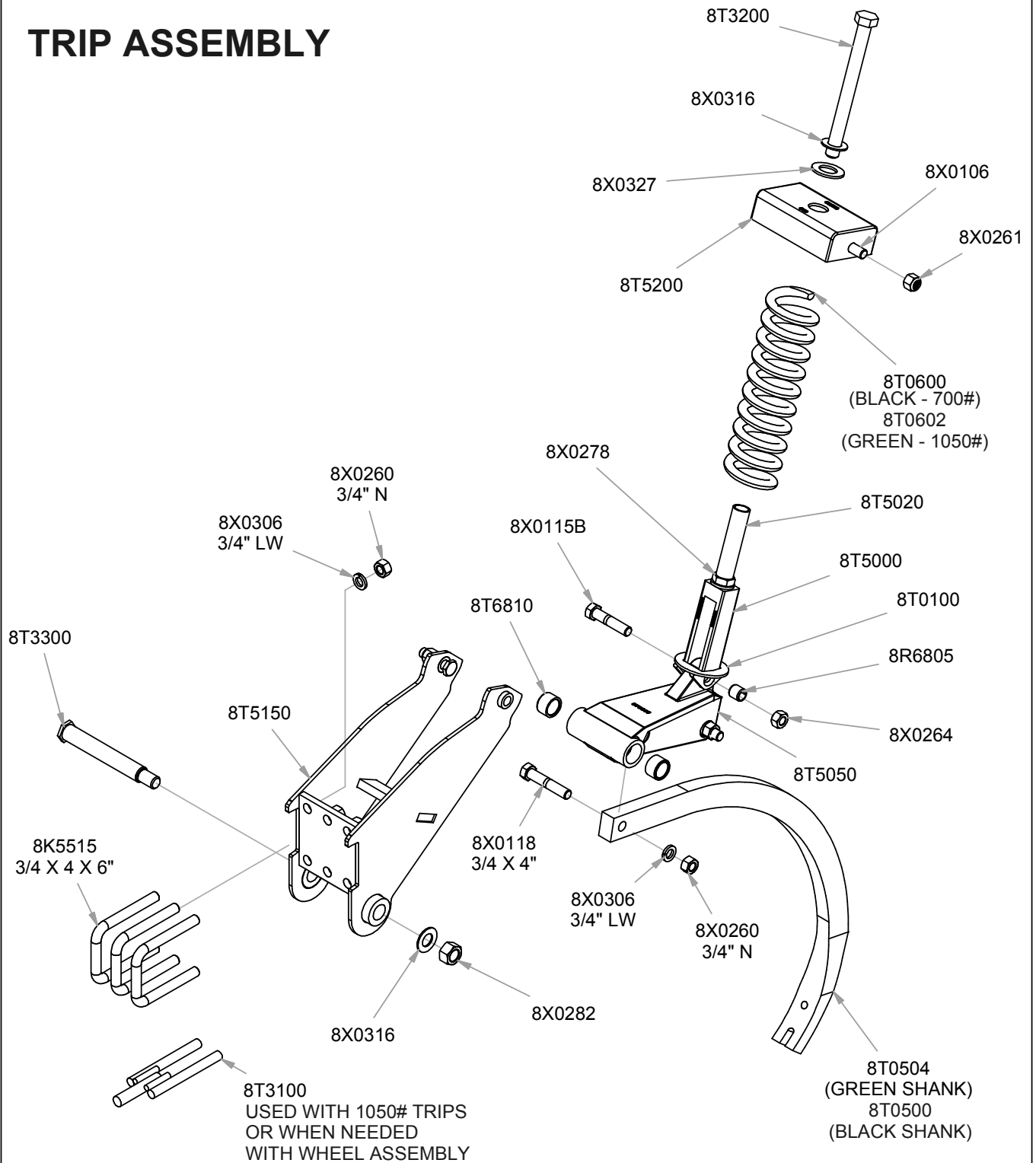
AVOID SHARP EDGES AND PINCH POINTS WHEN ROUTING CABLES. SECURE WITH NYLON TIES.

6-16

SECTION 6 - PARTS (16'-44')

**SECTION 6 – PARTS (16'-44')**

**TRIP ASSEMBLY**



**AVAILABLE ATTACHMENTS:**

- 8K6938 - SWEEP 14" 50° 1/2"BLT 2.25C-C
- 8K6940 - SWEEP 16" 50° 1/2"BLT 2.25C-C
- 8K6942 - SPIKE REVERSIBLE 4.5" WD THX1/4"
- 8K6947L - SPIKE TWISTED 3" LEFT
- 8K6947R - SPIKE TWISTED 3" RIGHT

**ATTACHMENT HARDWARE:**

- 8X0037A - PLOWBOLT 1/2 X 2.25" (2 PER)
- 8X0240 - NUT 1/2" (2 PER)
- 8X0330 - WASHER 17/32"ID (1 PER - BOTTOM ONLY)

8/13/2014

Trip Assembly.iam/

## SECTION 6 – PARTS (16'-44')

1. Attach hitch frame to rear of chisel plow.

– Use 3/4 x 2" bolts.

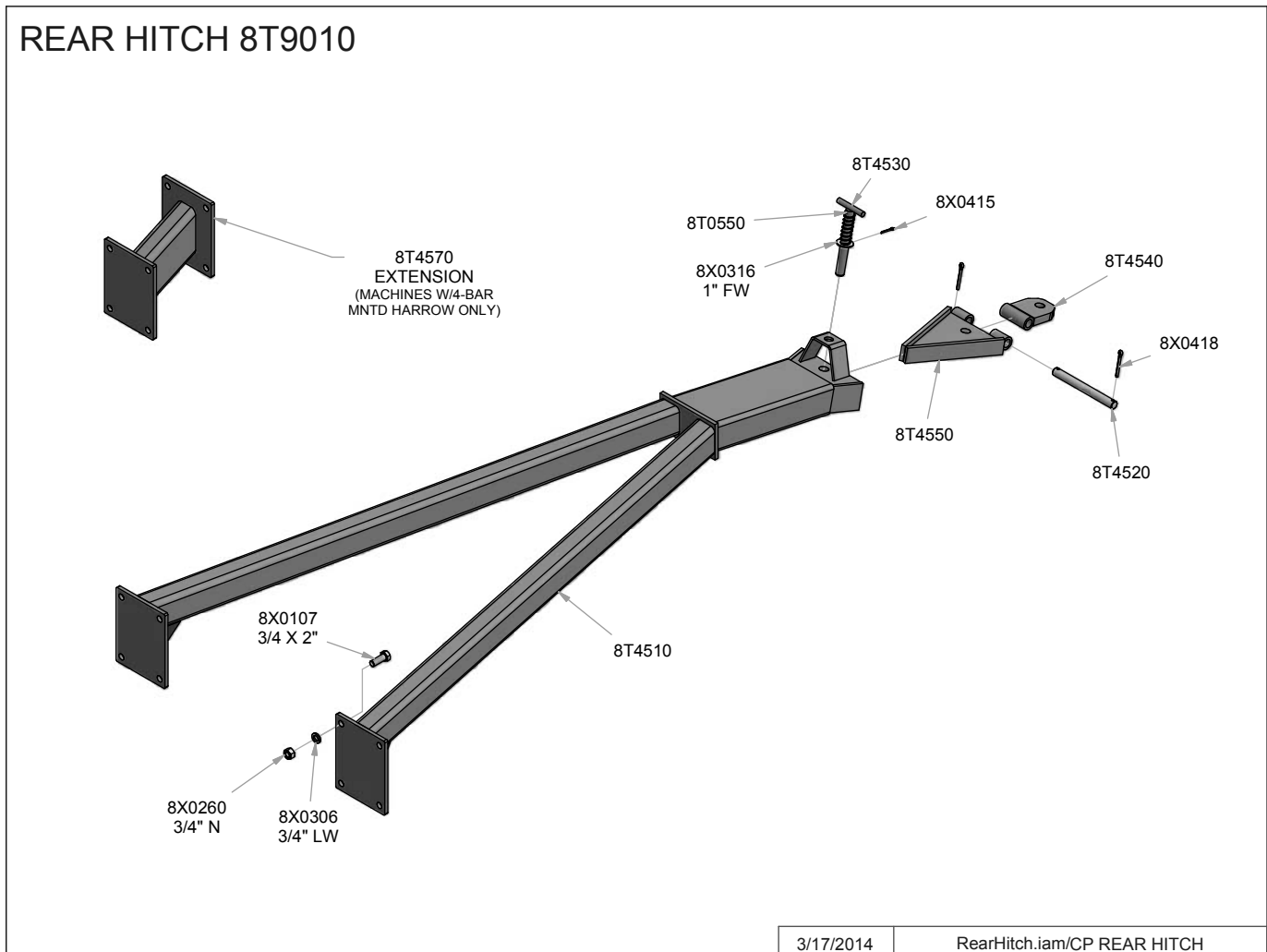
2. Slide rear hitch slide into place.

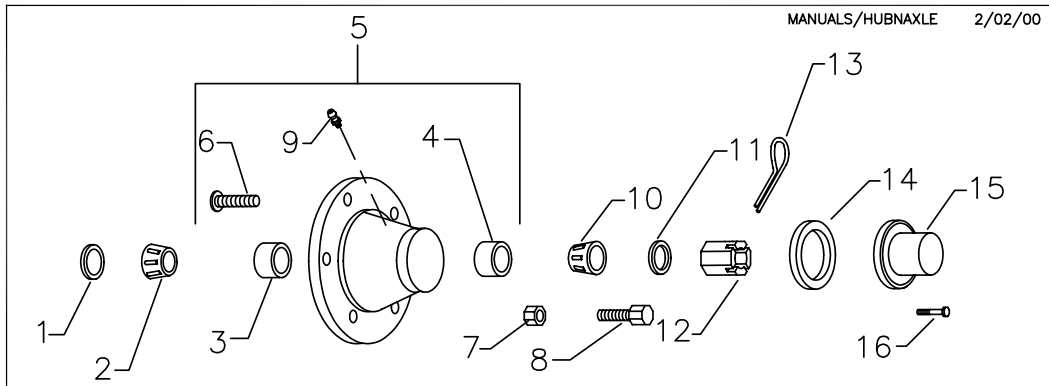
3. Insert spring load pin.

– Spring and washer will be held in place by hitch channel and 3/16" cotter pin.

4. Install rear hitch swivel.

– Use pin and cotter keys provided.





## HUB AND AXLE COMPONENTS

### Assembly Notes:

A. 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.

B. Before towing machine, pack wheel bearings and fill 1/2 of hub cavity with high quality bearing grease.

### Legend:

SMC Part Number  
INDUSTRY Part Number or Size

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
H413	8D5120	8D5117	8D5336	8D5330	M6527850	N/A	N/A	8D5114	8X0708	8D5118	8X0317	8D5112	8X0410	N/A	M6527846	N/A
	SE11	LM67048	LM67010	LM11910	H413			WB10	1/4-28NF	LM11949	3/4" I.D.	3/4"-16	8/16X1"		DC24	
H511	8D5120	8D5117	8D5336	8D5330	8D5111	N/A	N/A	8D5114	8X0721	8D5118	N/A	8D5112	8X0410	N/A	8D5113	N/A
	SE11	LM67048	LM67010	LM11910	H511			WB10	5/16-24NF	LM11949		3/4"-16	3/16X1"		DC12	
H517	8D5234	8D5217	8D5332	8D5336	8D5211	8D5215	8D5214	N/A	8X0721	8D5117	8D5219	8D5212	8X0415	N/A	8D5213	N/A
	8D5236														LM48548	
H611	8D5221	8D5317	8D5334	8D5336	8D5311	N/A	N/A	8D5114	8X0708	8D5117	8D5319	8D5312	8X0415	N/A	8D5213	N/A
	SE13	LM29749	LM29710	LM67010	H611			WB10	1/4-28NF	LM67048	1" I.D.	1"-14	3/16x1-1/2"		DC13	
H614	8R6922**	8R6917	8R6925	8D5332	8R6911	N/A	N/A	8R6914	8X0708	8D5217	8D5319	8D5312	8X0415	N/A	8R6913	N/A
	SE57	LM603049	LM603011	LM48510	H614			WB12	1/4-28NF	LM48548	1" I.D.	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	LM3780	LM3720	LM2720	HD812	WB46	WB118		1/4-28NF	LM2790	1" I.D.	1"-14	3/16X1-1/2"			
	SLEEVE SE77-1															

\*\* GBGI (Not Shown), 8R6921 Triple Lip (Shown)  
\*\*\* Pre 2006 8K7120(SE17)

# 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 AXLE  $5/8"$  ( $+1/32"$ ,  $-0"$ ) PAST INNER BEARING RETAINING SHOULDER. SUPPORT WILL CONTACT MACHINED STEP ON AXLE.

A: IF SEAL SUPPORT IS NOT PRESSED ON AXLE FAR ENOUGH, THE SEAL SUPPORT WILL RUB ON HUB.

B: IF SEAL SUPPORT IS PRESSED TOO FAR ONTO AXLE, IT WILL CAUSE IMPROPER CONTACT BETWEEN RUBBER SEAL (3) AND INNER SEAL SUPPORT (1) RESULTING IN BEARING CONTAMINATION AND FAILURE.

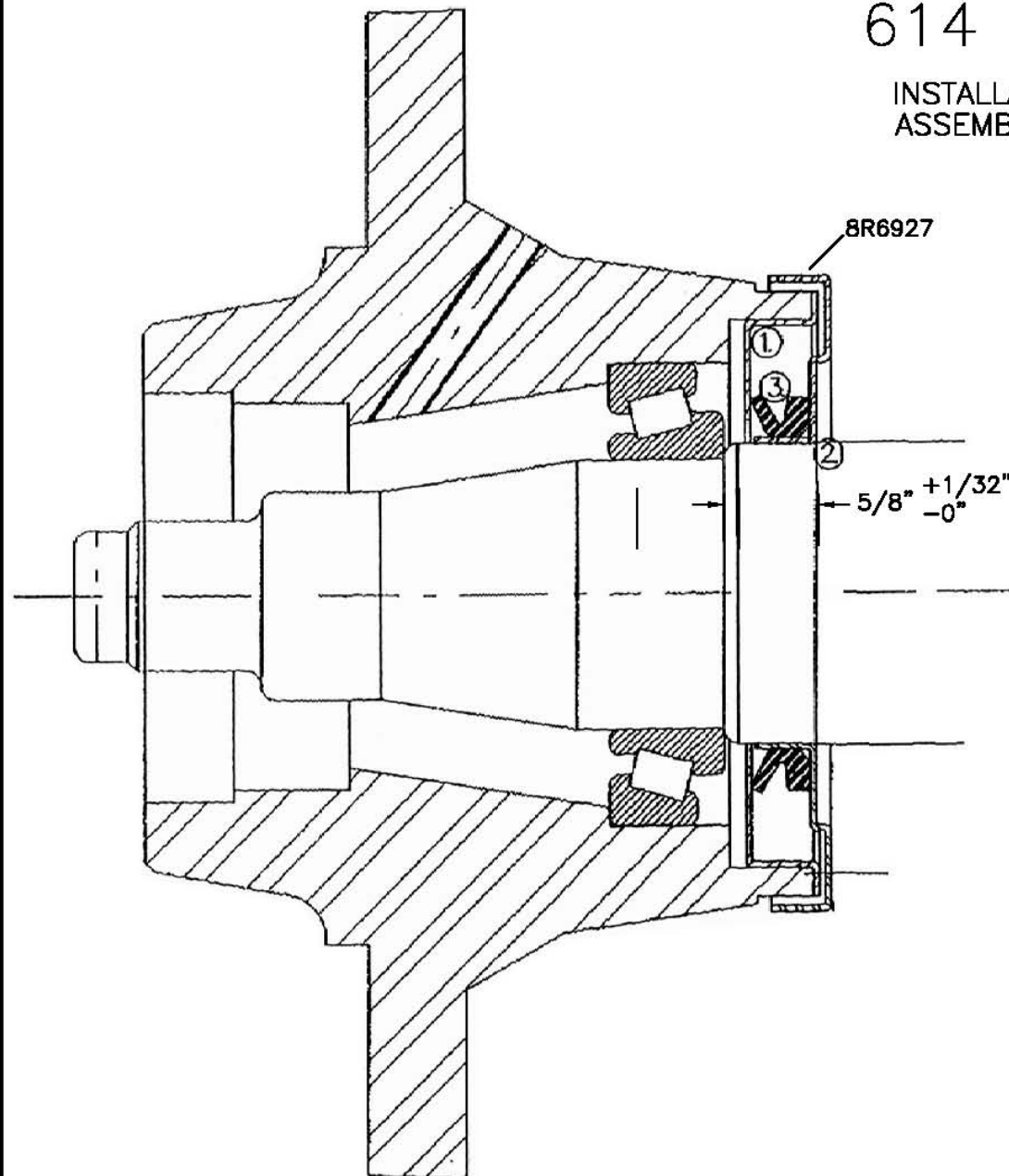
NOTE: APPLY THIN LAYER OF GREASE TO COUNTERFACE (1) SURFACE AT TIME OF SEAL INSTALLATION.

## SEAL COUNTERFACE (1 - 8R6924)

PRESS SEAL COUNTERFACE INTO HUB UNTIL SHOULDER CONTACTS HUB ( $1/2"$ ).

## 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.





## SECTION 6 – PARTS (16'-44' : OPTIONAL)

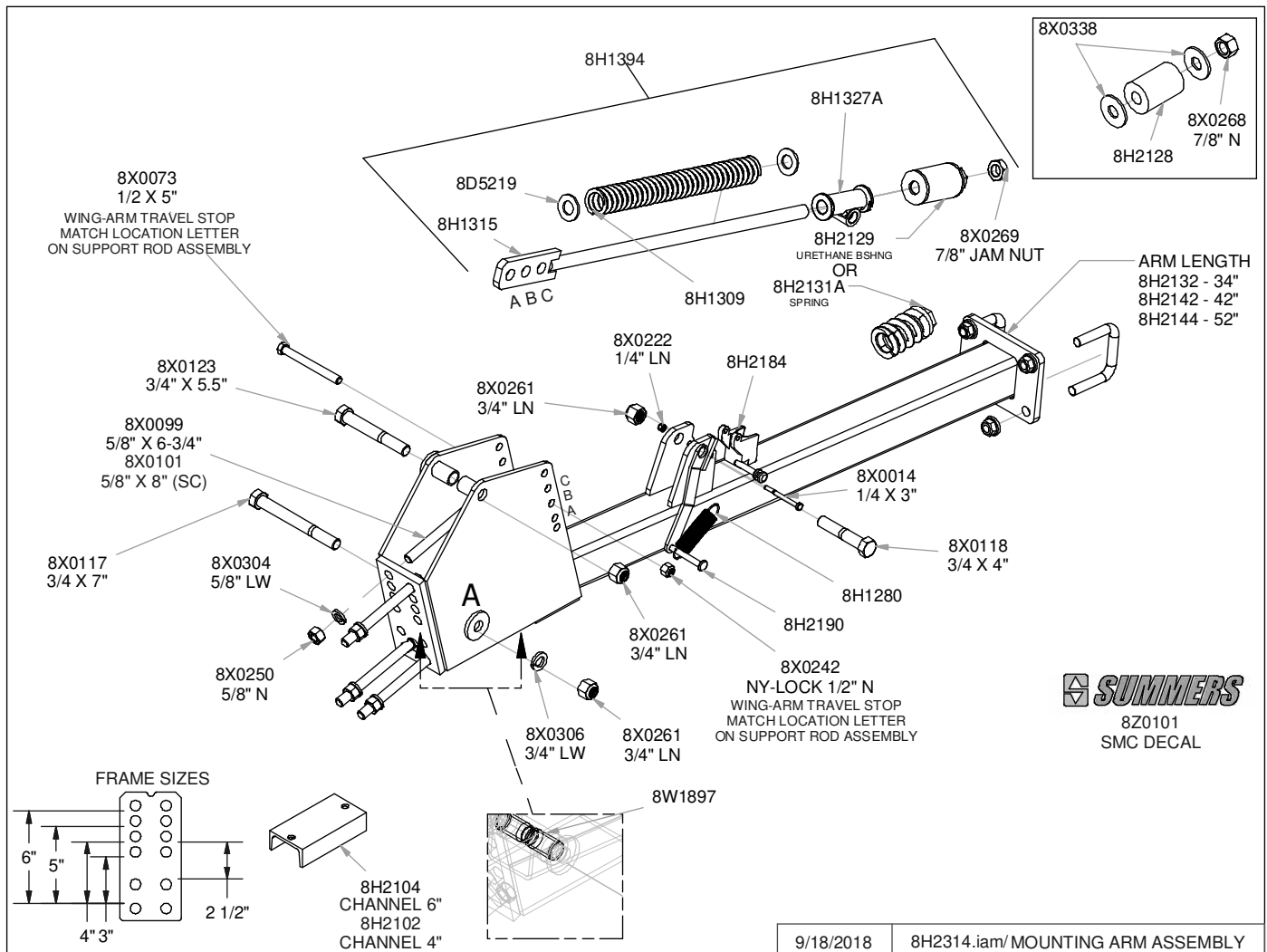
1. 52" mounting arms (PN 8H2314) should be used when attaching Summers mounted harrows.
2. Mounting arm location can be found on the following layout drawings.

– In certain locations, the mounting arm will be installed directly behind a liftarm pivot. A spacer block has been welded to the chisel plow frame so there is no interference between u-bolts and mounting head.

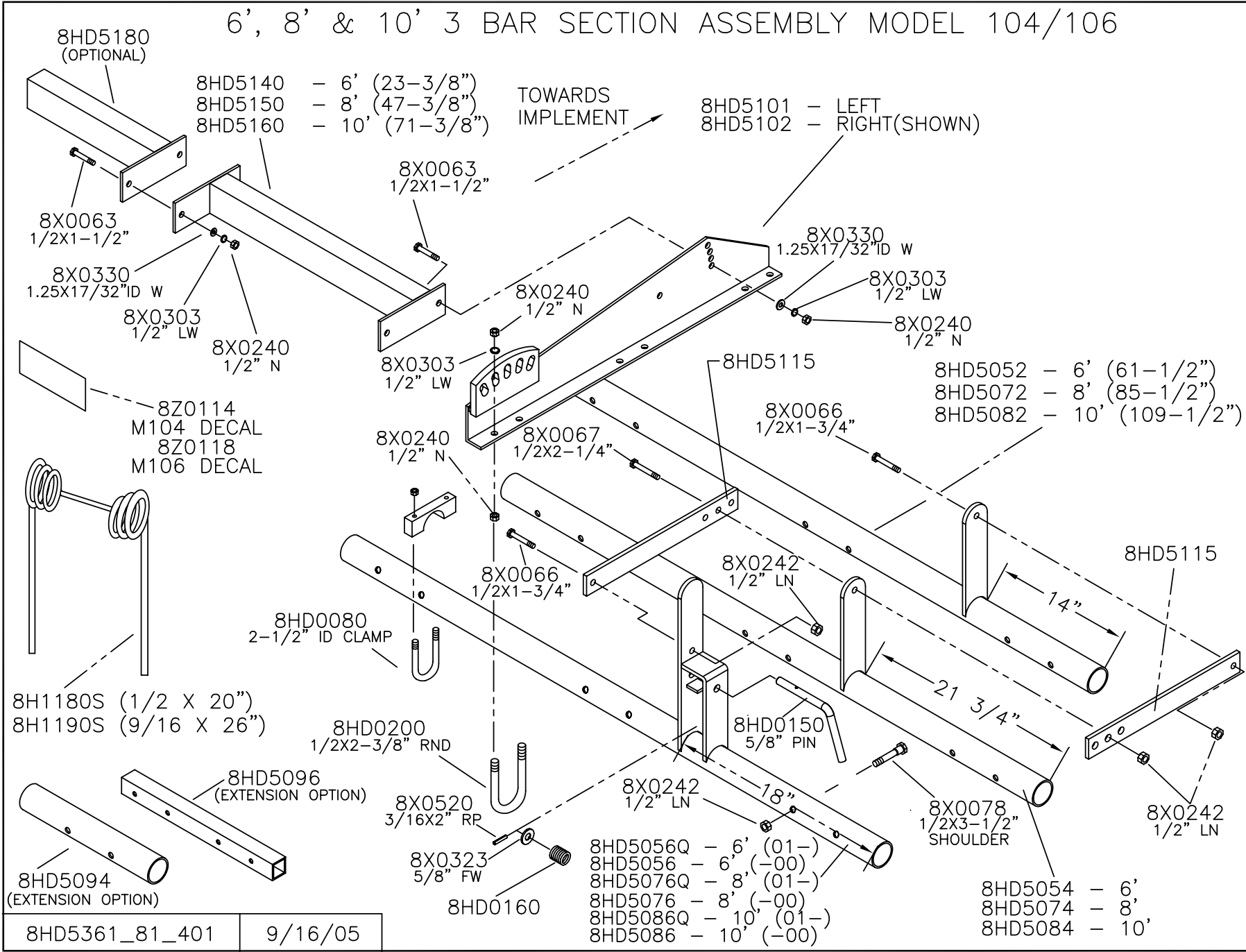
**NOTE:** Make sure that if one mounting arm rests against a spacer block, the other mounting arm, on that section, also rests against a spacer block.

3. Adjust harrows according to performance desired.

– Model 106 harrows require the mounting arm support rod (PN 8H1315) to be moved to the hole that raises the harrow most (C).



# 6', 8' & 10' 3 BAR SECTION ASSEMBLY MODEL 104/106



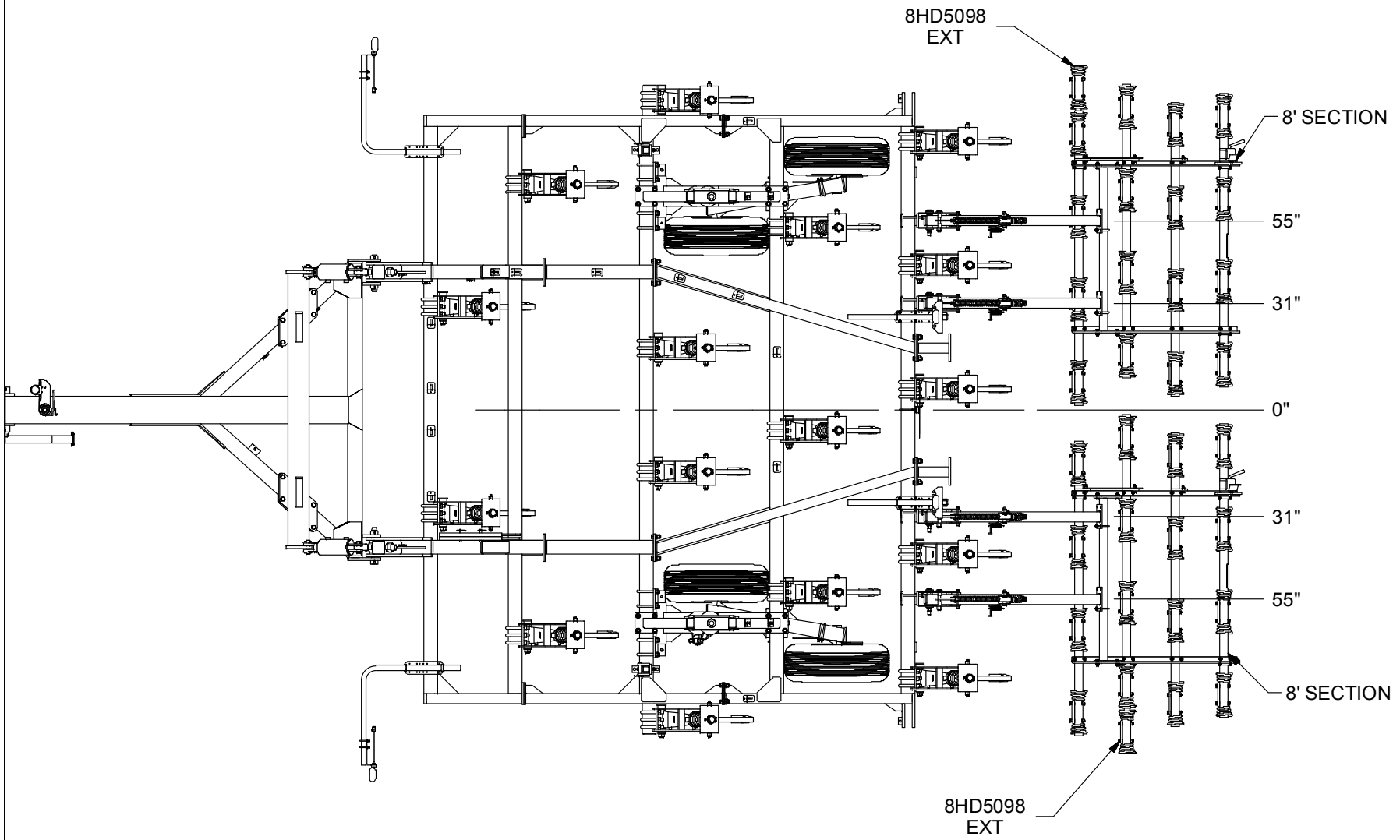
SECTION 6 - PARTS (16'-44' : OPTIONAL)

6-22

8HD5361\_81\_401      9/16/05

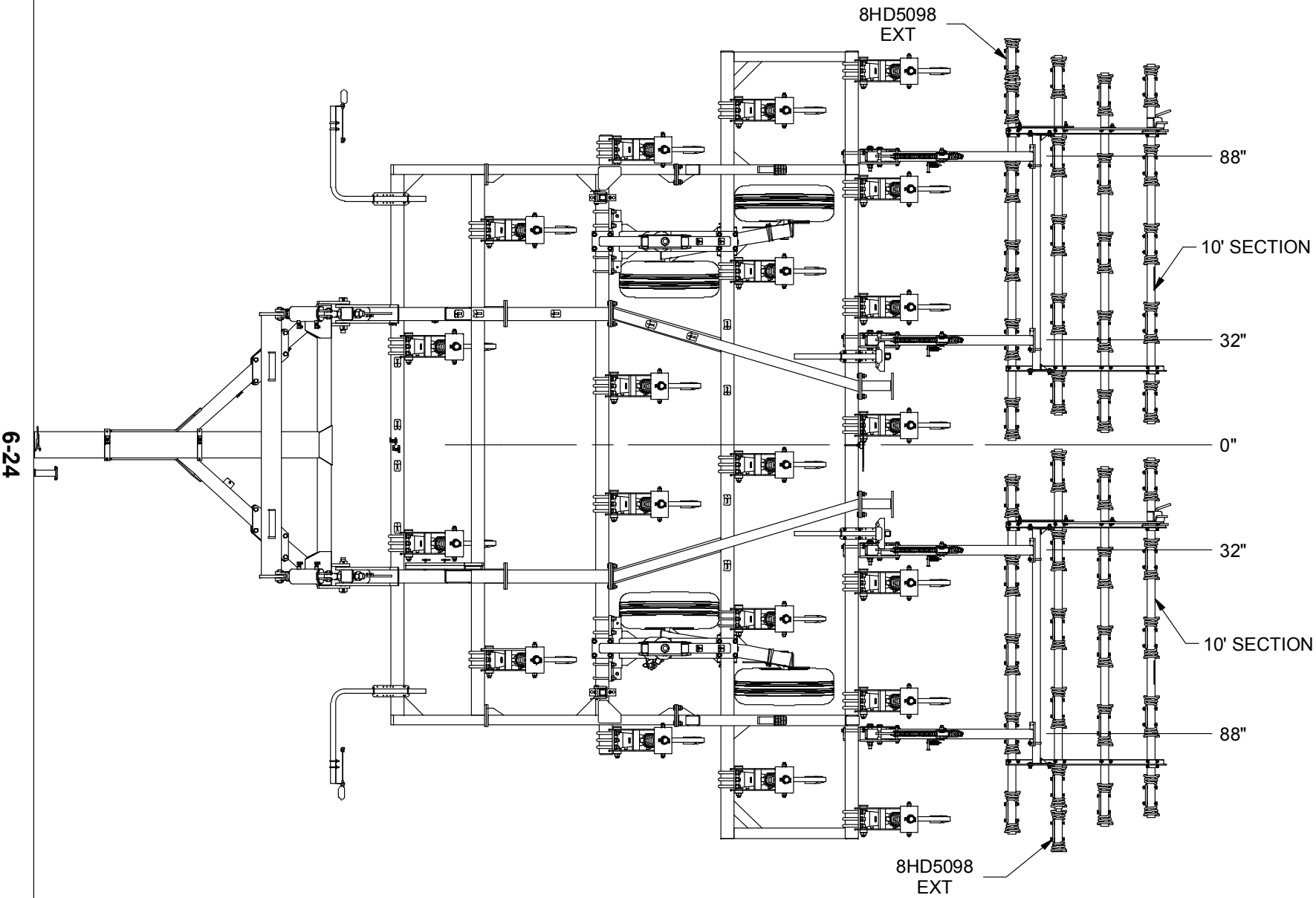
# 16' MOUNTED HARROW LAYOUT

6-23



SECTION 6 - PARTS (16'-44' : OPTIONAL)

# 20' MOUNTED HARROW LAYOUT

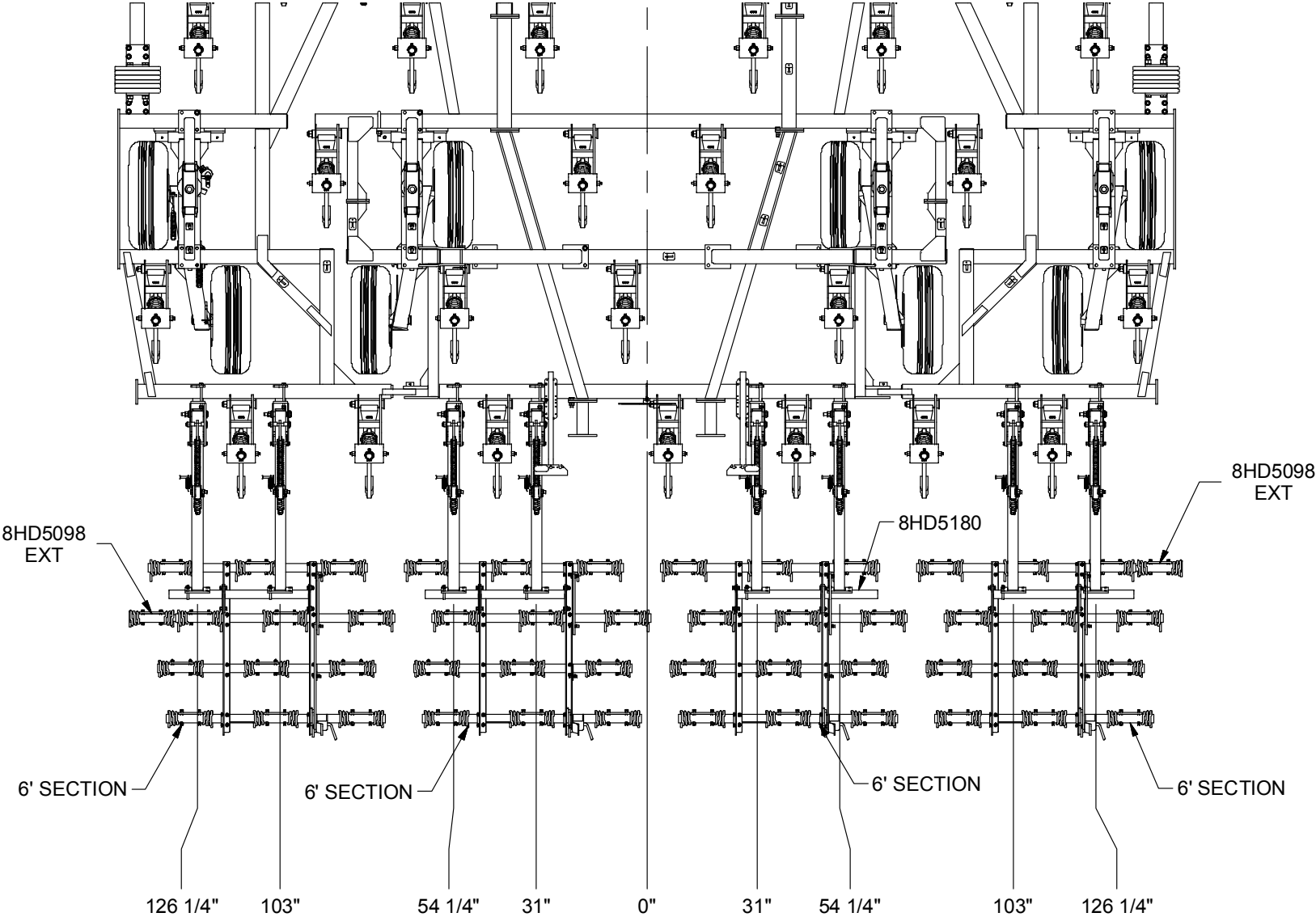


SECTION 6 - PARTS (16'-44' : OPTIONAL)

# 24' MOUNTED HARROW LAYOUT

SECTION 6 - PARTS (16'-44" : OPTIONAL)

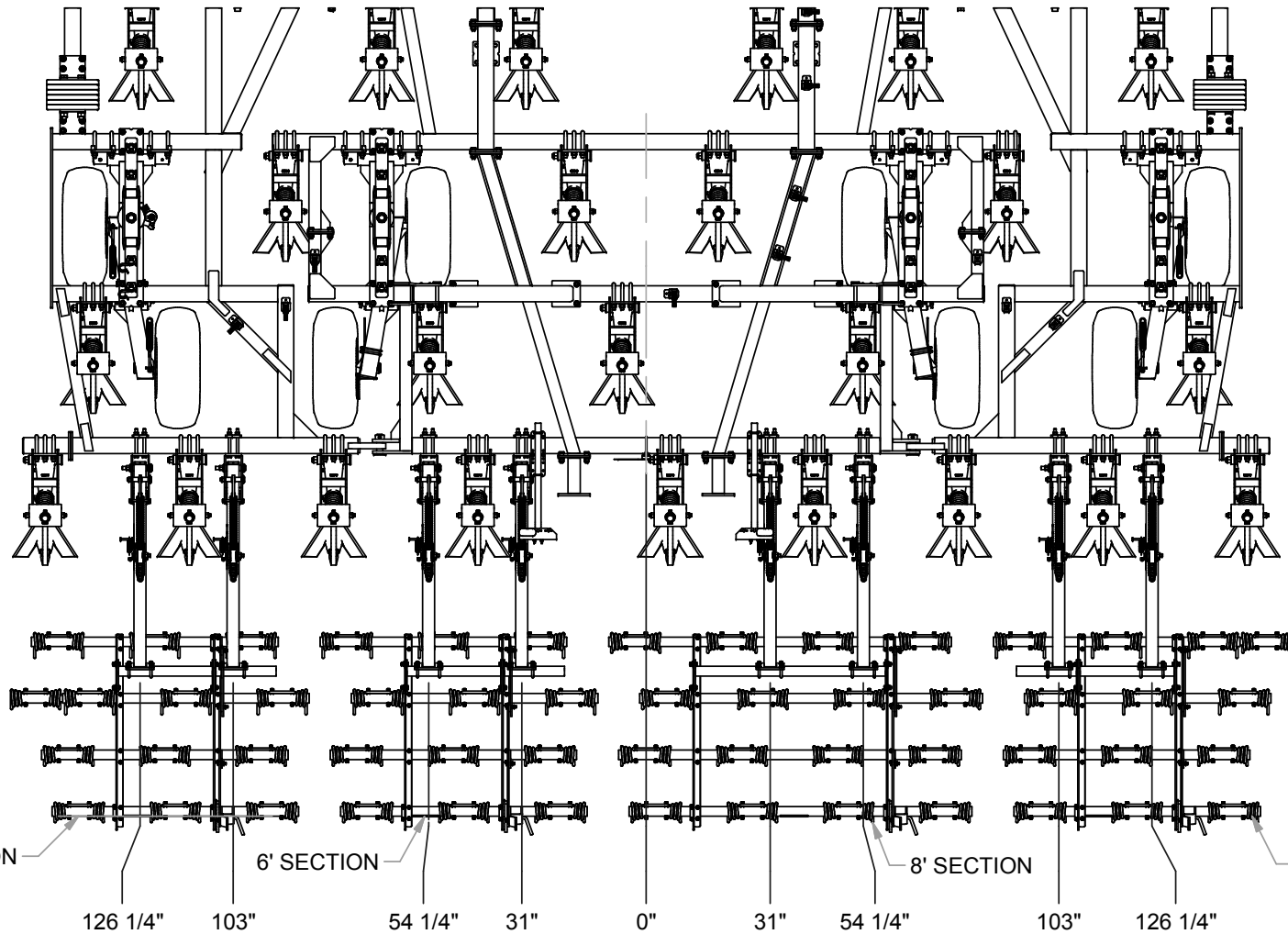
6-25



12/1/2010

9T2412N.iam/MTD HRRW LAYOUT

# 26' MOUNTED HARROW LAYOUT



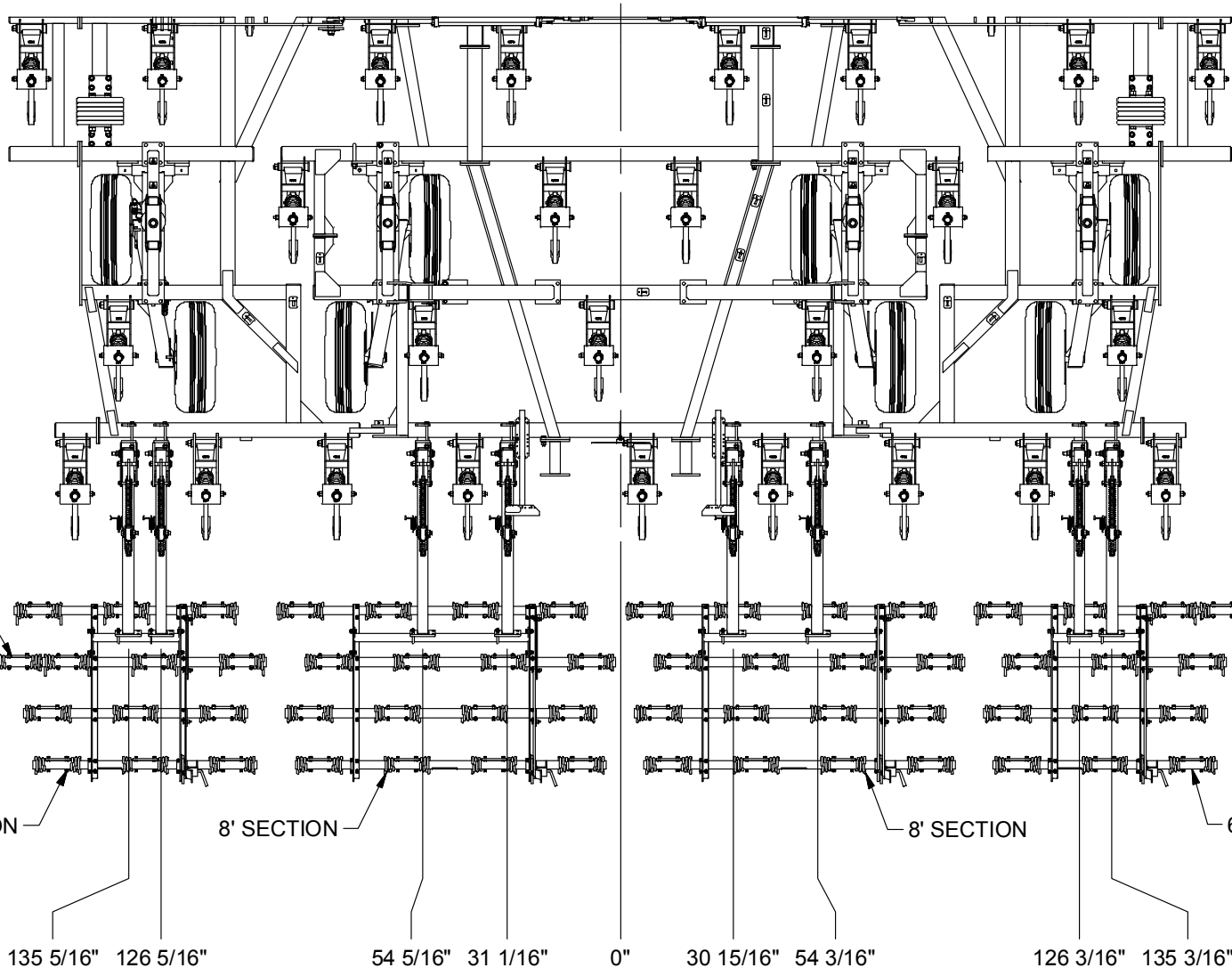
6-26

SECTION 6 - PARTS (16'-44' : OPTIONAL)

3/17/2014

9T2612N.iam/MTD HRRW LAYOUT

# 28' MOUNTED HARROW LAYOUT



8HD5098  
EXT

8HD5098  
EXT

6' SECTION

8' SECTION

8' SECTION

6' SECTION

135 5/16" 126 5/16"

54 5/16" 31 1/16"

0"

30 15/16" 54 3/16"

126 3/16" 135 3/16"

6-27

SECTION 6 - PARTS (16'-44' : OPTIONAL)

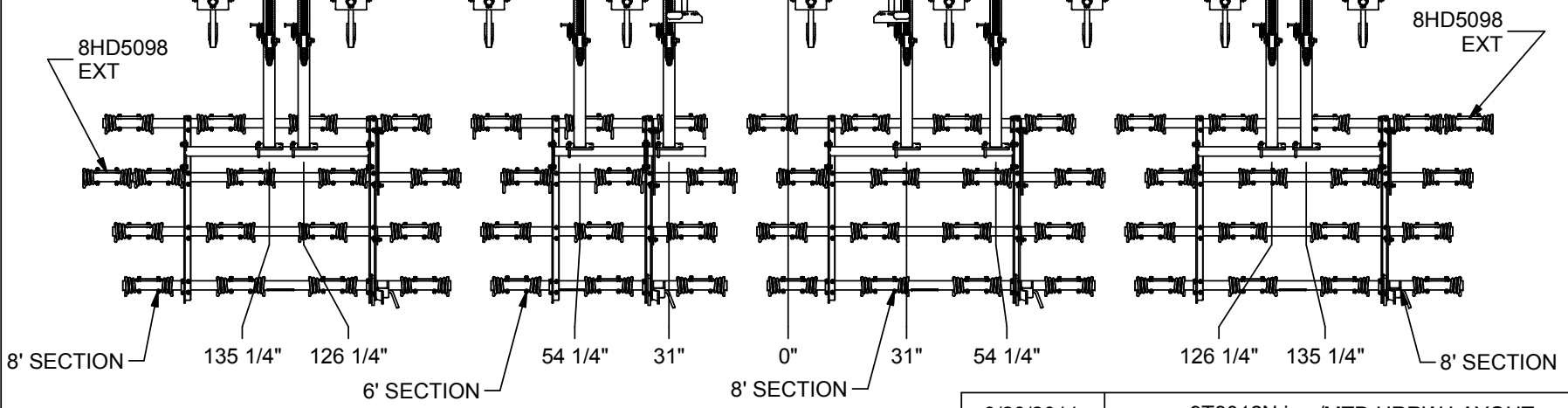
12/2/2010

9T2812N.iam/MTD HRRW LAYOUT

# 30' NRRW MOUNTED HARROW LAYOUT

SECTION 6 - PARTS (16'-44" : OPTIONAL)

6-28



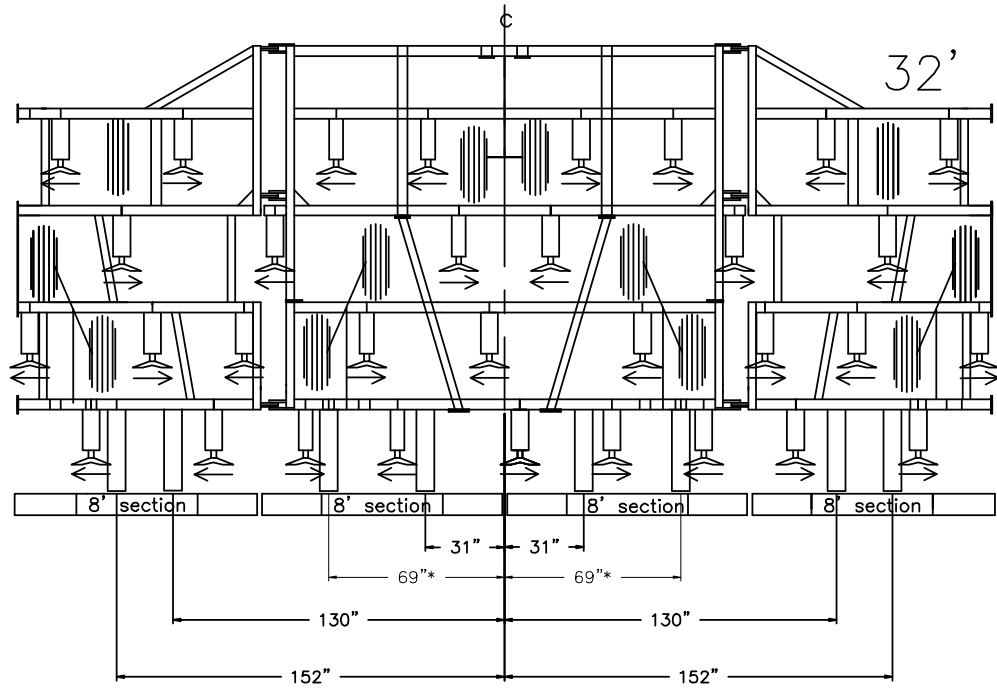
9/28/2011

9T3012N.iam/MTD HRRW LAYOUT

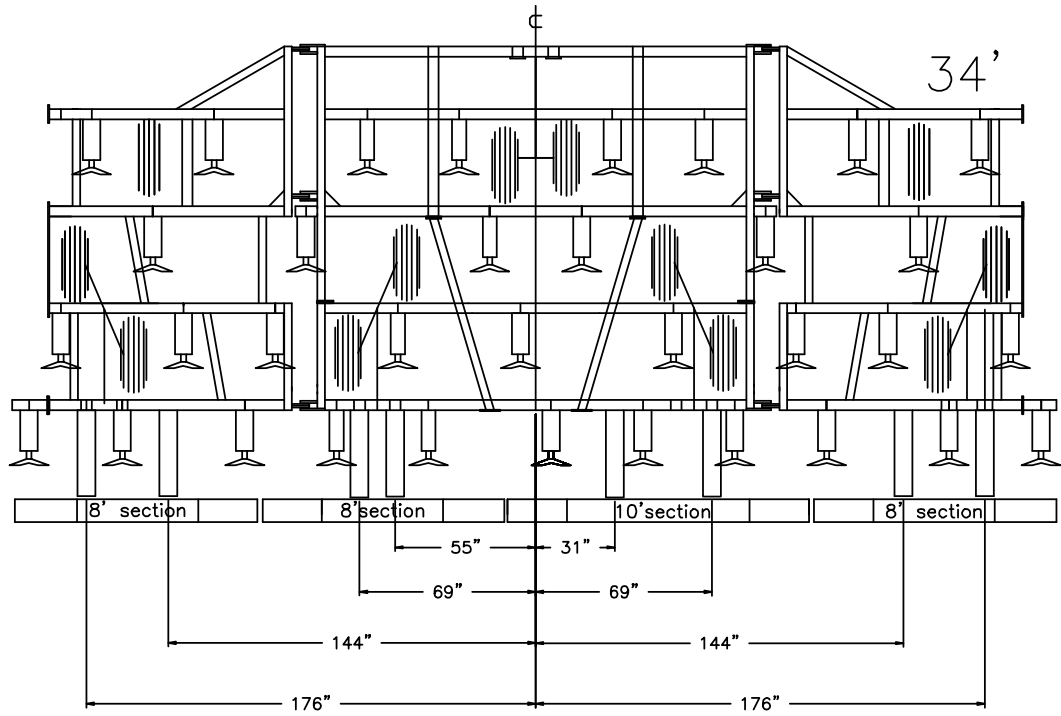


**SECTION 6 – PARTS (16'-44' : OPTIONAL)**

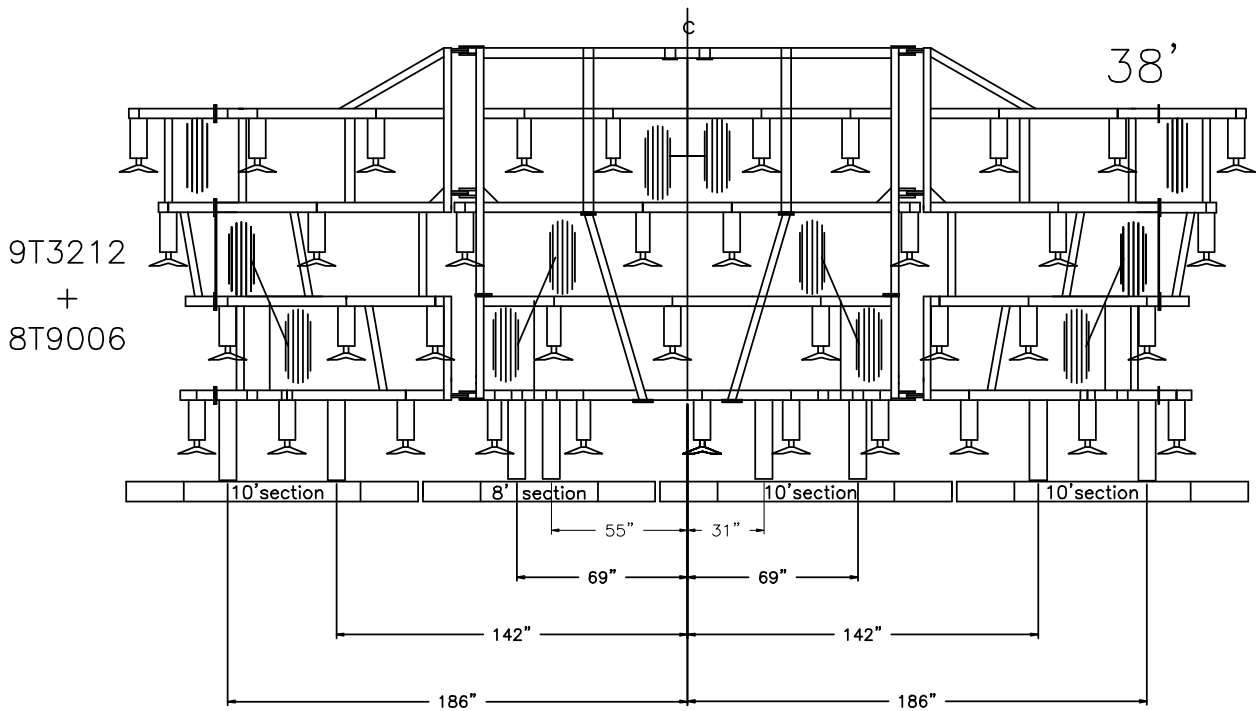
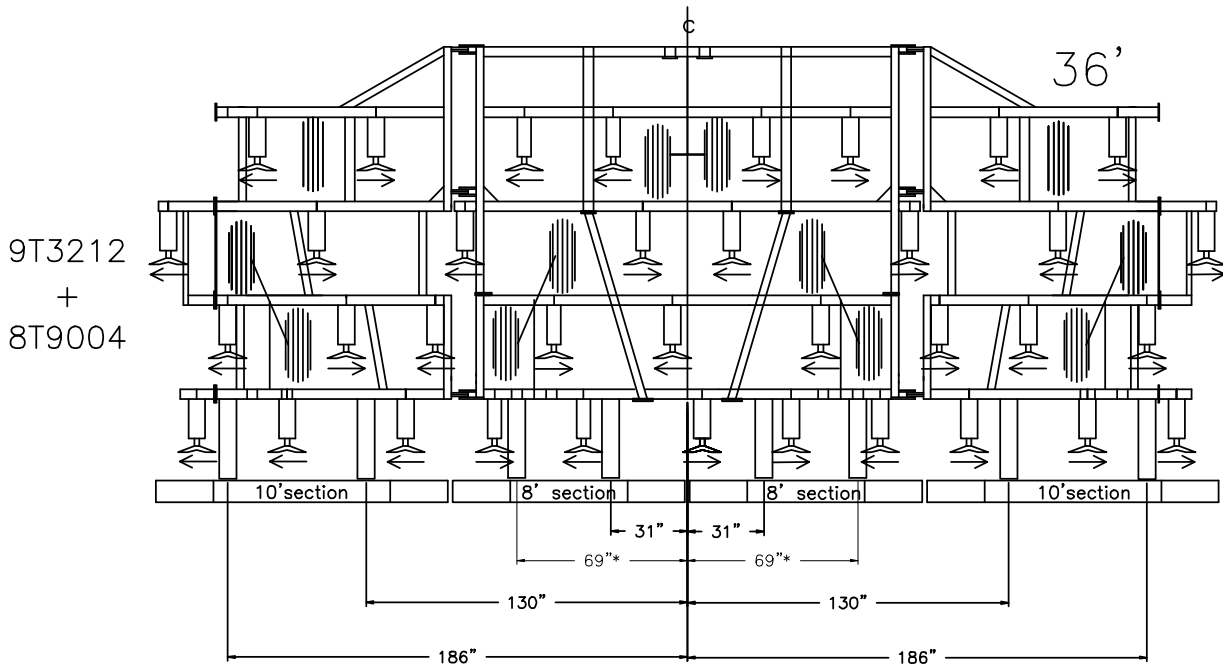
9T3212



9T3212  
+  
8T9002



**SECTION 6 – PARTS (16'-44' : OPTIONAL)**

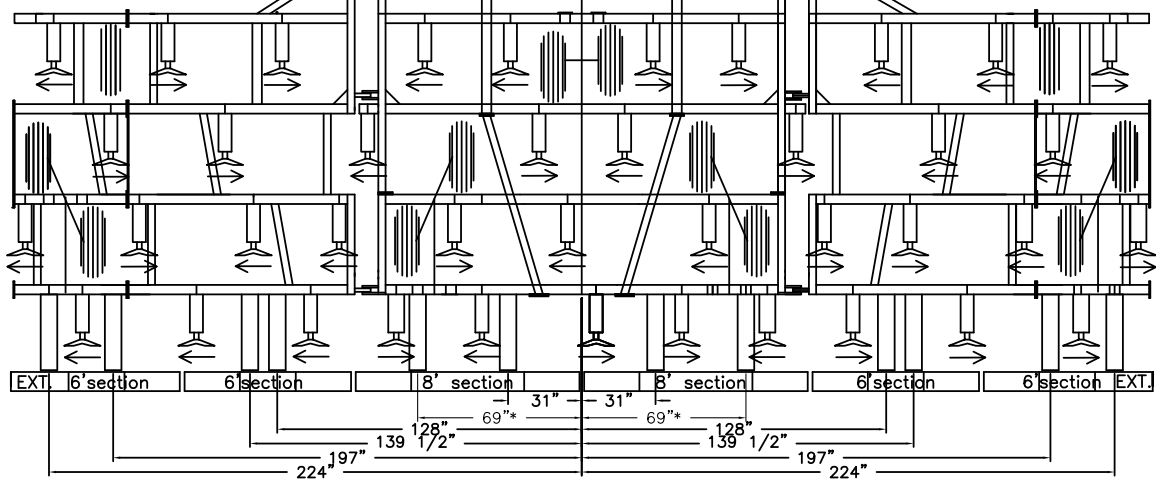


3POM/3CP6-13M104 6/6/08 \* - 55" OPTIONAL

**SECTION 6 – PARTS (16'-44' : OPTIONAL)**

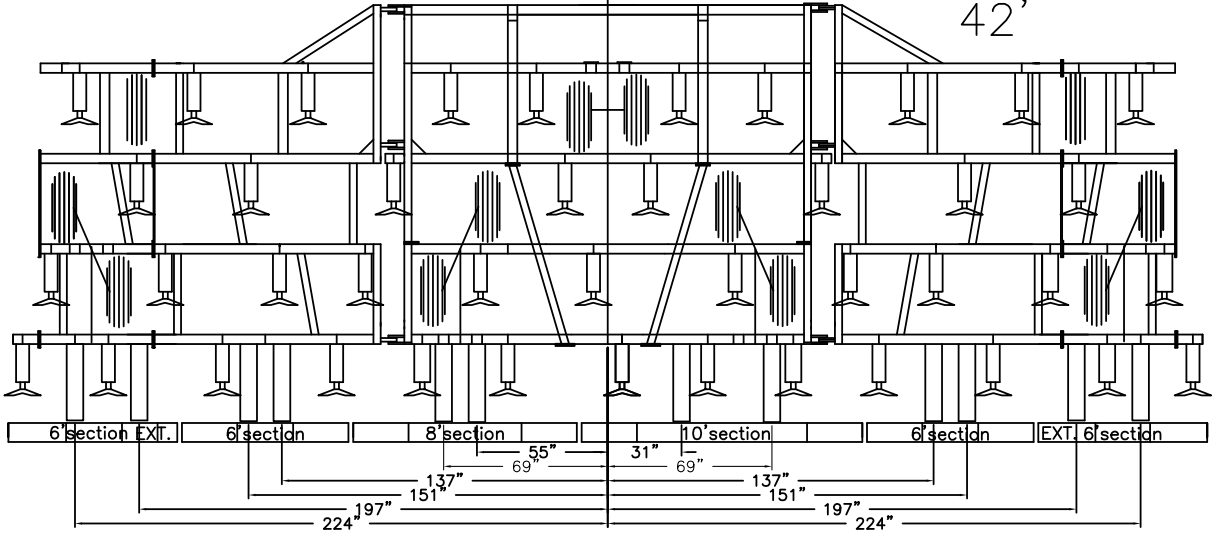
9T4012

40'



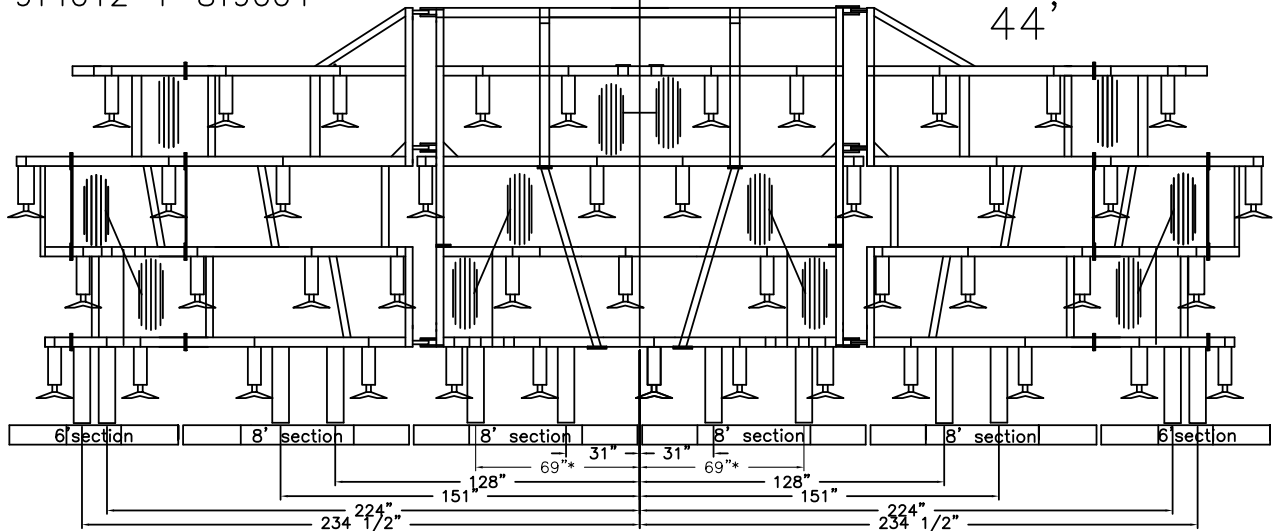
9T4012 + 8T9002

42'



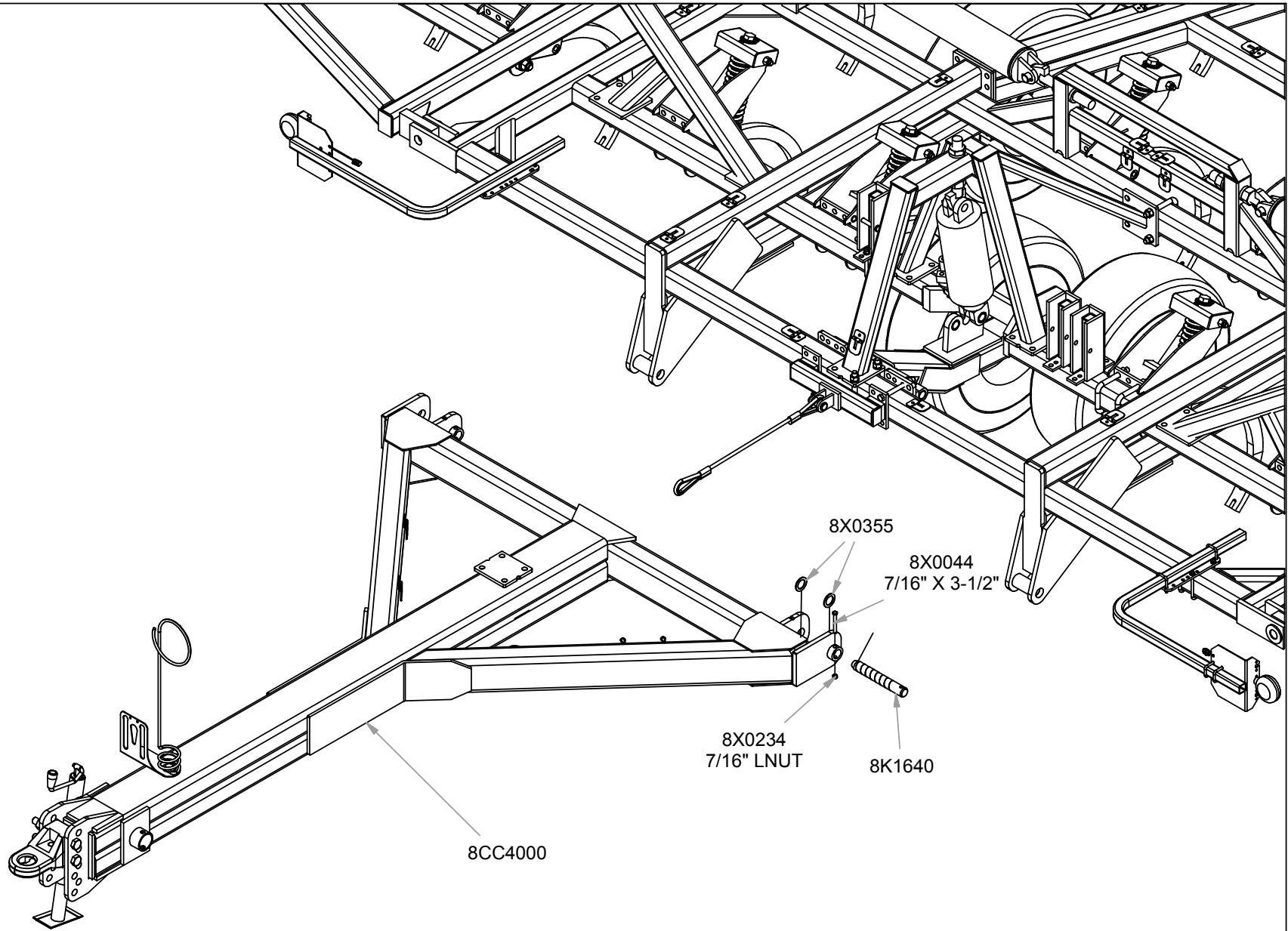
9T4012 + 8T9004

44'

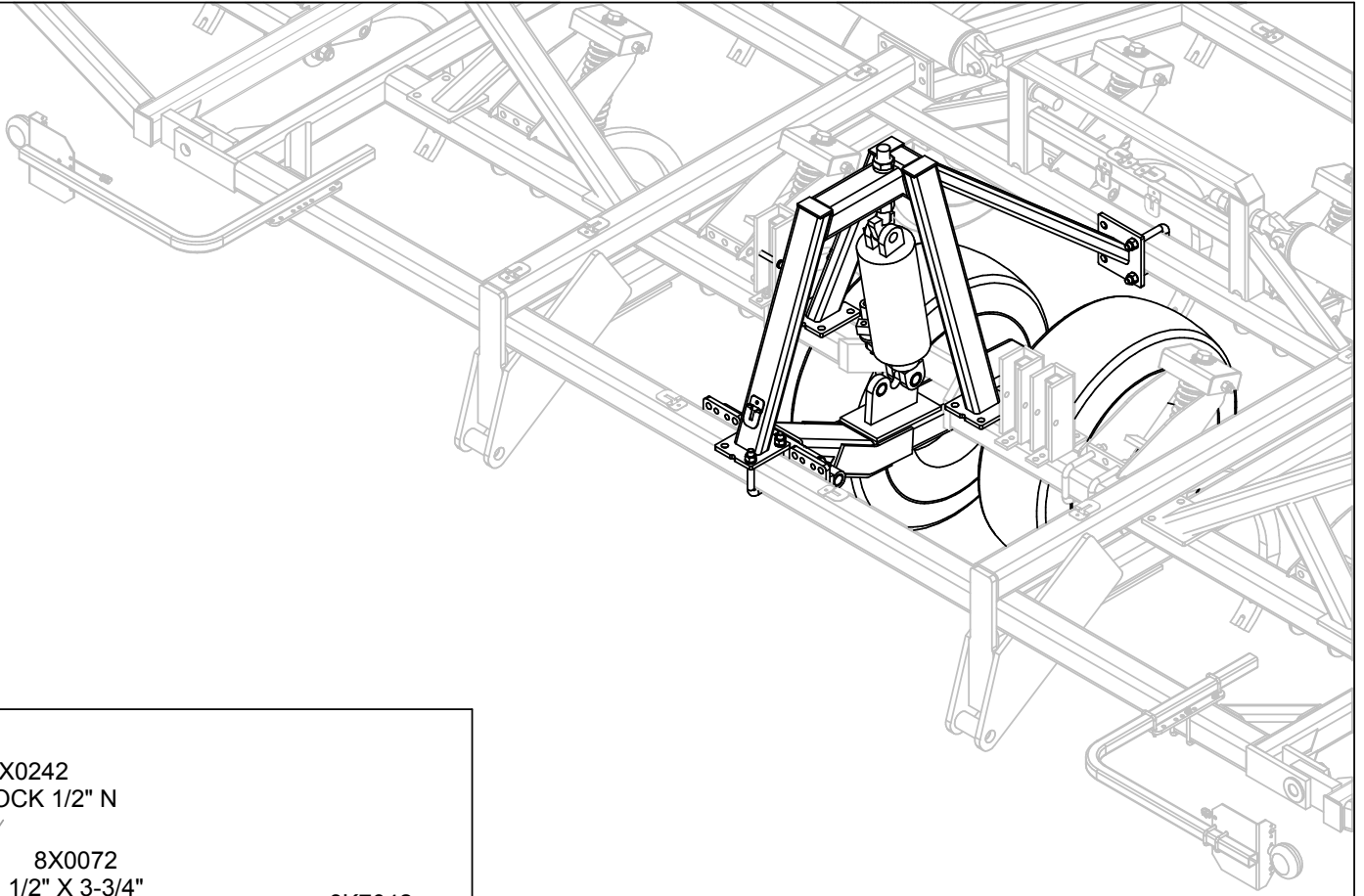


3POM/3CP6-13M104 6/6/08 \* - 55" OPTIONAL

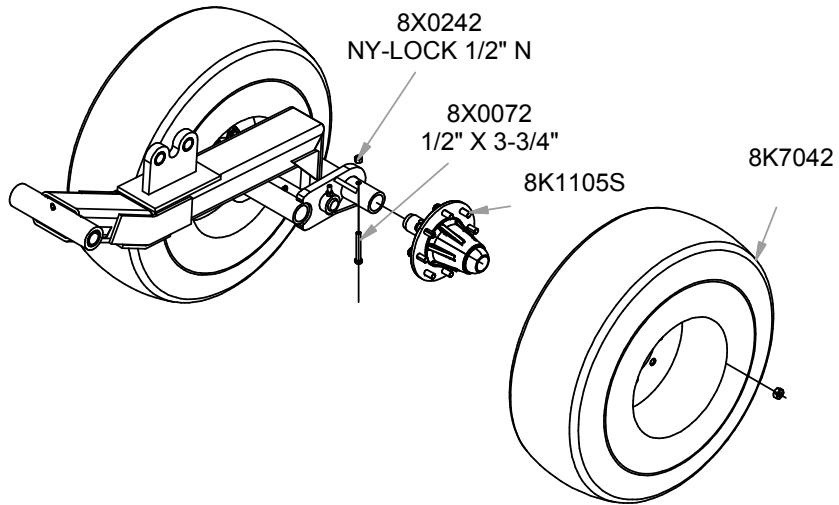
# **Installation Instructions for Front Caster Option**



REMOVE HITCH AS SHOWN



6-34

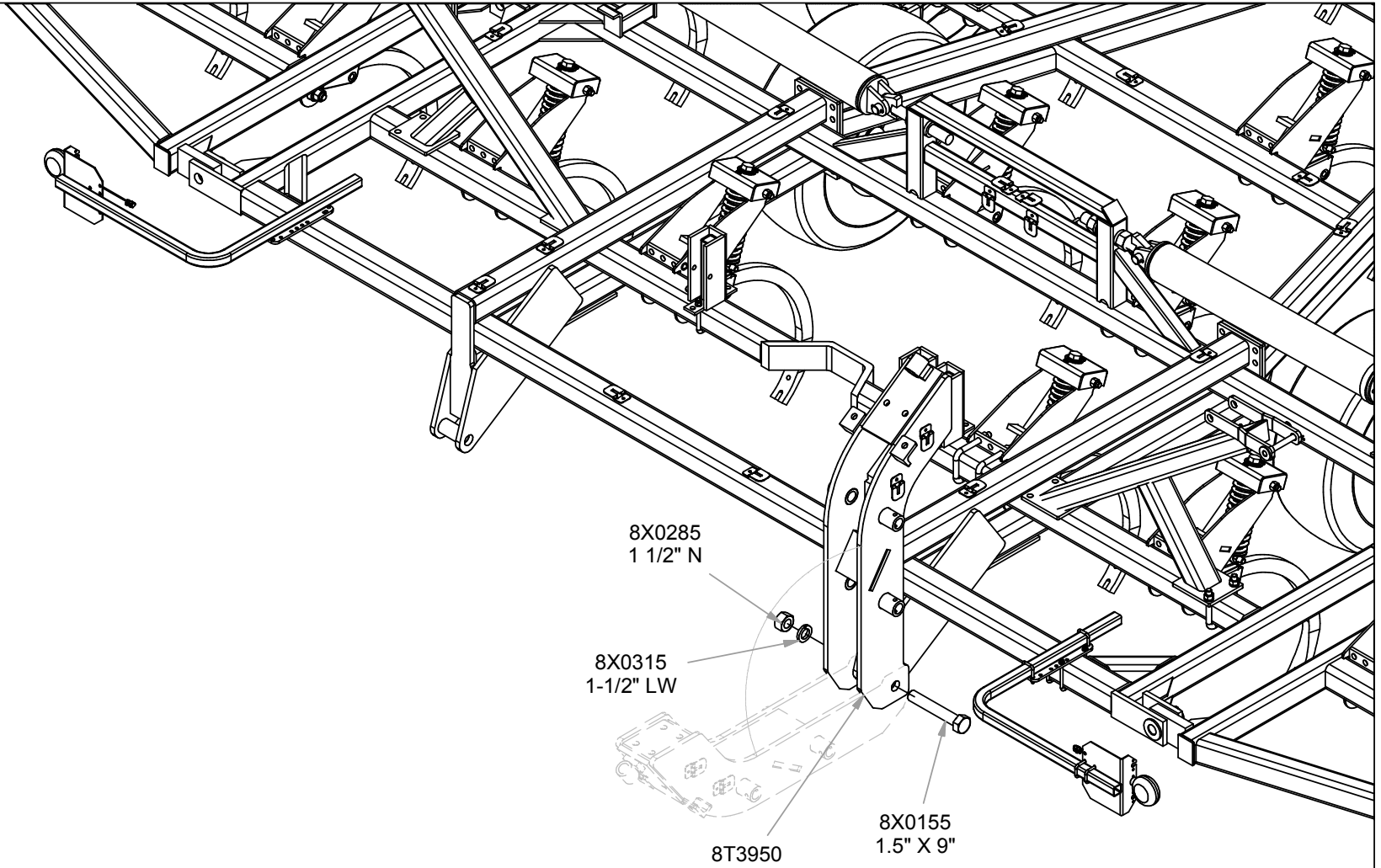


REMOVE HIGHLIGHTED COMPONENTS.  
REMOVE WHEEL/TIRE AND HUB FROM  
WALKING TANDEM.  
THESE PARTS WILL BE RE-USED

3/20/2014

9T6012.iam/WHEEL REMOVAL

SECTION 6 - PARTS (FRONT CASTER OPTION)

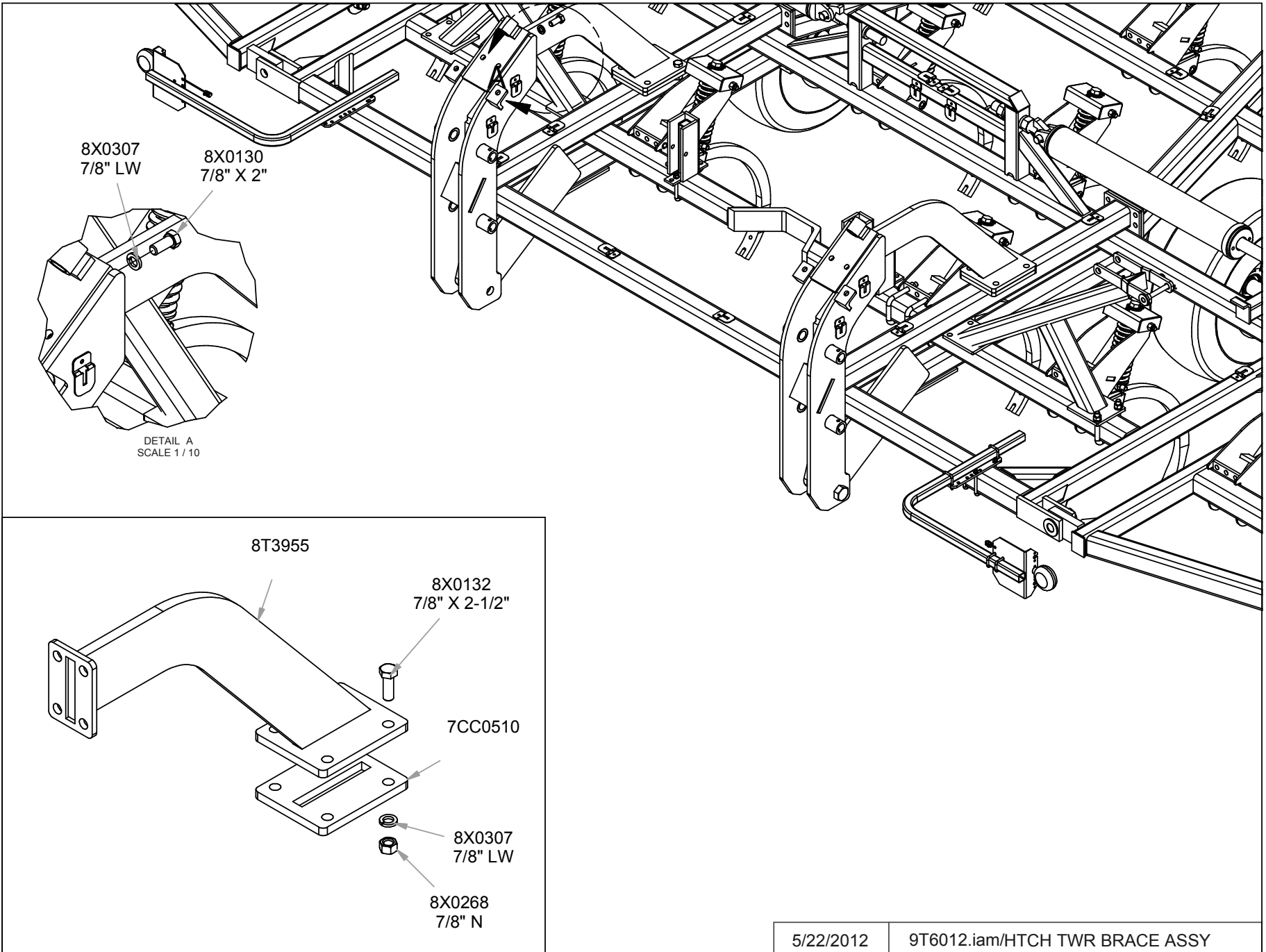


6-35

5/22/2012

9T6012.iam/HTCH TOWER ASSY

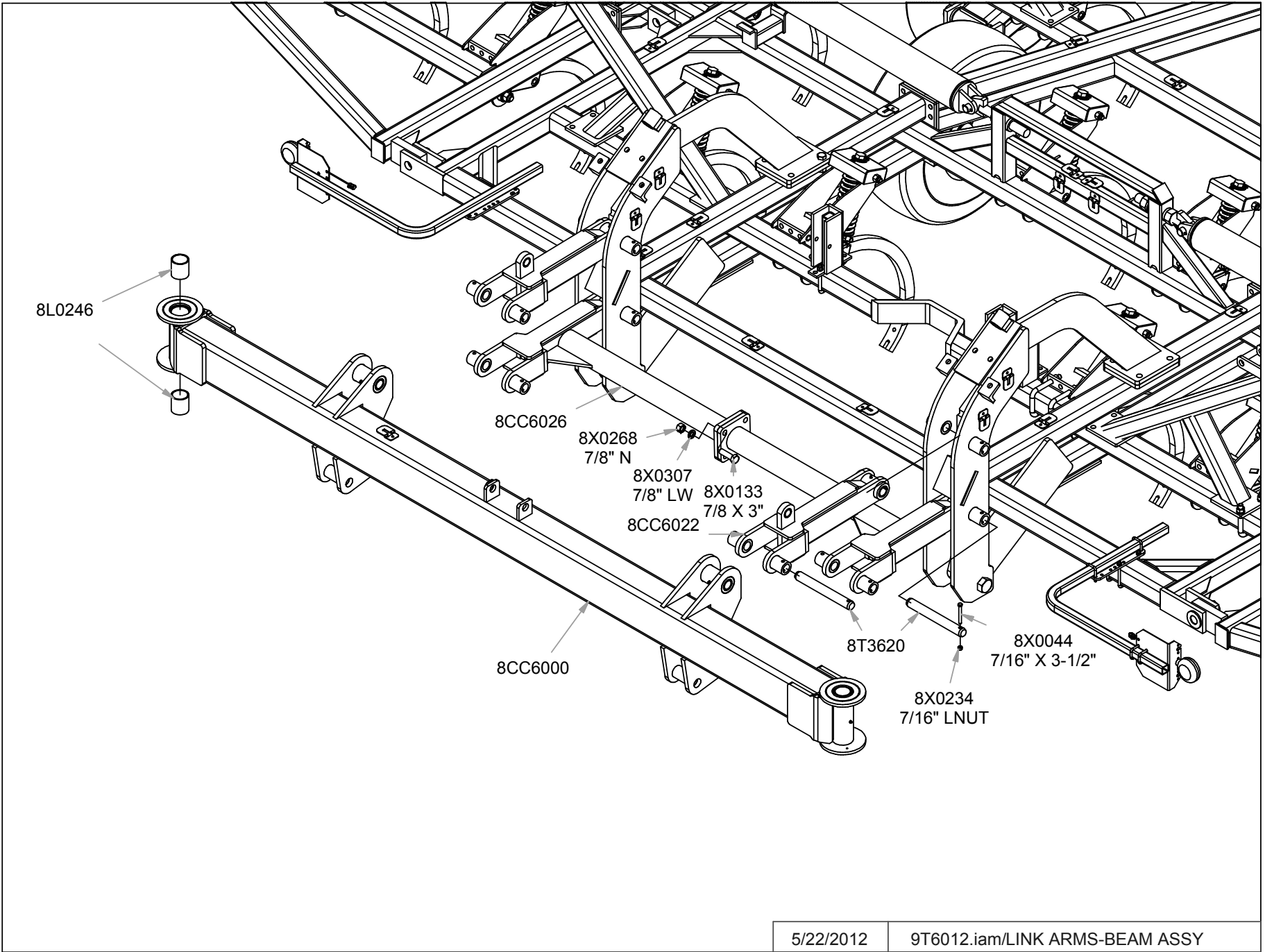
SECTION 6 - PARTS (FRONT CASTER OPTION)

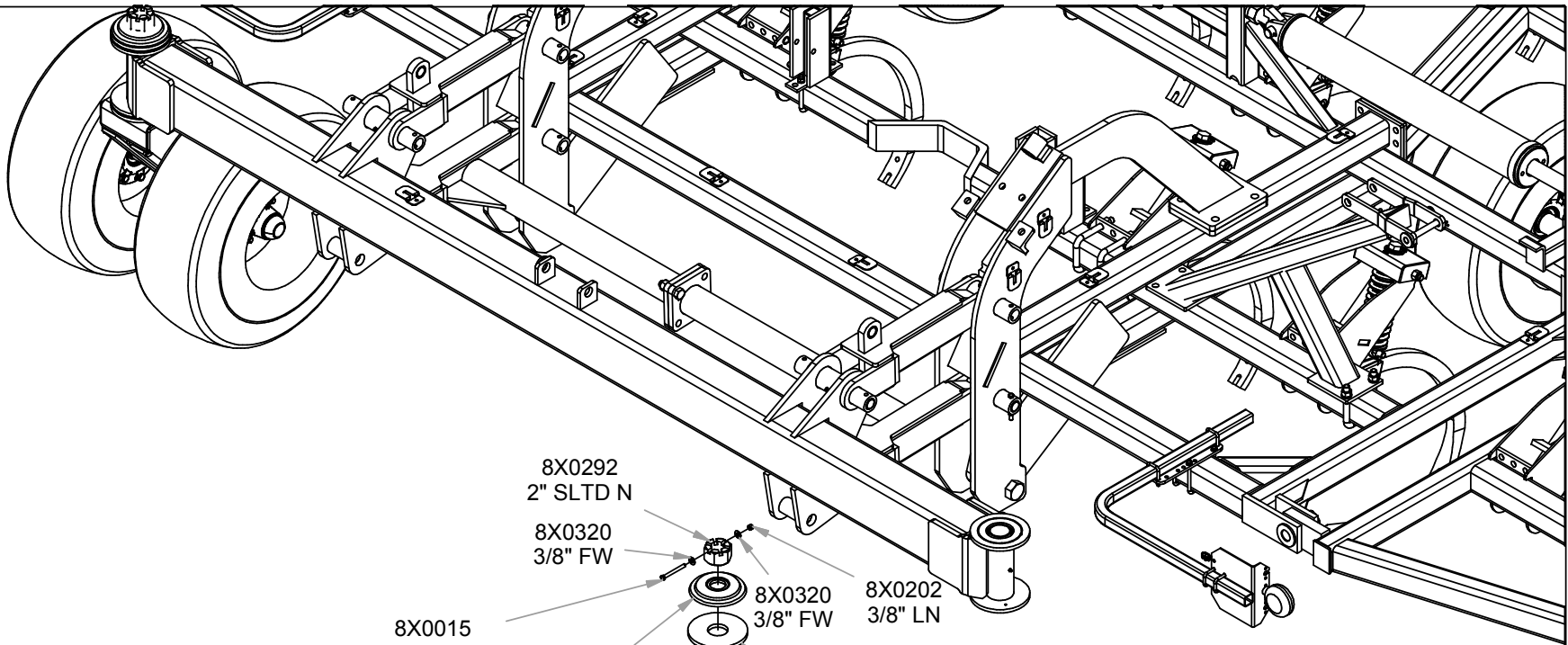


6-36



SECTION 6 - PARTS (FRONT CASTER OPTION)





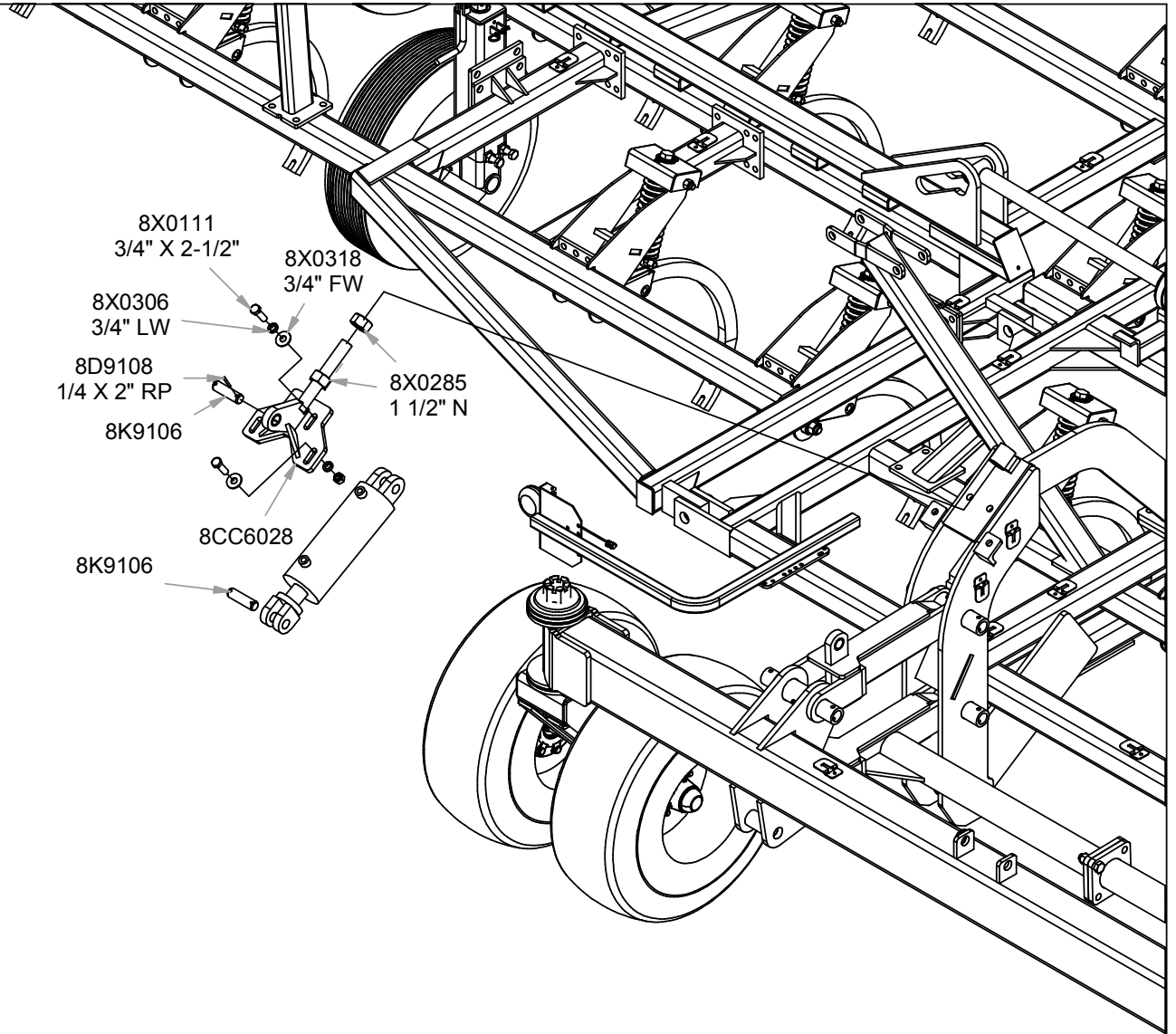
- 8X0292  
2" SLTD N
- 8X0320  
3/8" FW
- 8X0015  
3/8" X 3 3/4"
- 8K5200
- 8L0320
- 7P8530
- 8L0320
- 8K7042
- 8X0113  
3/4" X 5"
- 8CC6035
- 8X0311  
1 1/4" LW
- 8X0284  
1 1/4" N
- 8X0320  
3/8" FW
- 8X0202  
3/8" LN
- 7L2150
- 8X0261  
3/4" LN
- 8CC6030
- 8X0072  
1/2" X 3-3/4"
- 8K1105S
- 8X0242  
NY-LOCK 1/2" N

**IMPORTANT**  
 MAINTAIN CASTER WHEEL TOP  
 CASTLE NUT TORQUE AT 800  
 FT-LB. CHECK AFTER EVERY 20  
 HOURS OF OPERATION AND  
 IMMEDIATELY IF EXCESSIVE  
 TIRE MOVEMENT IS SEEN.

8Z0352

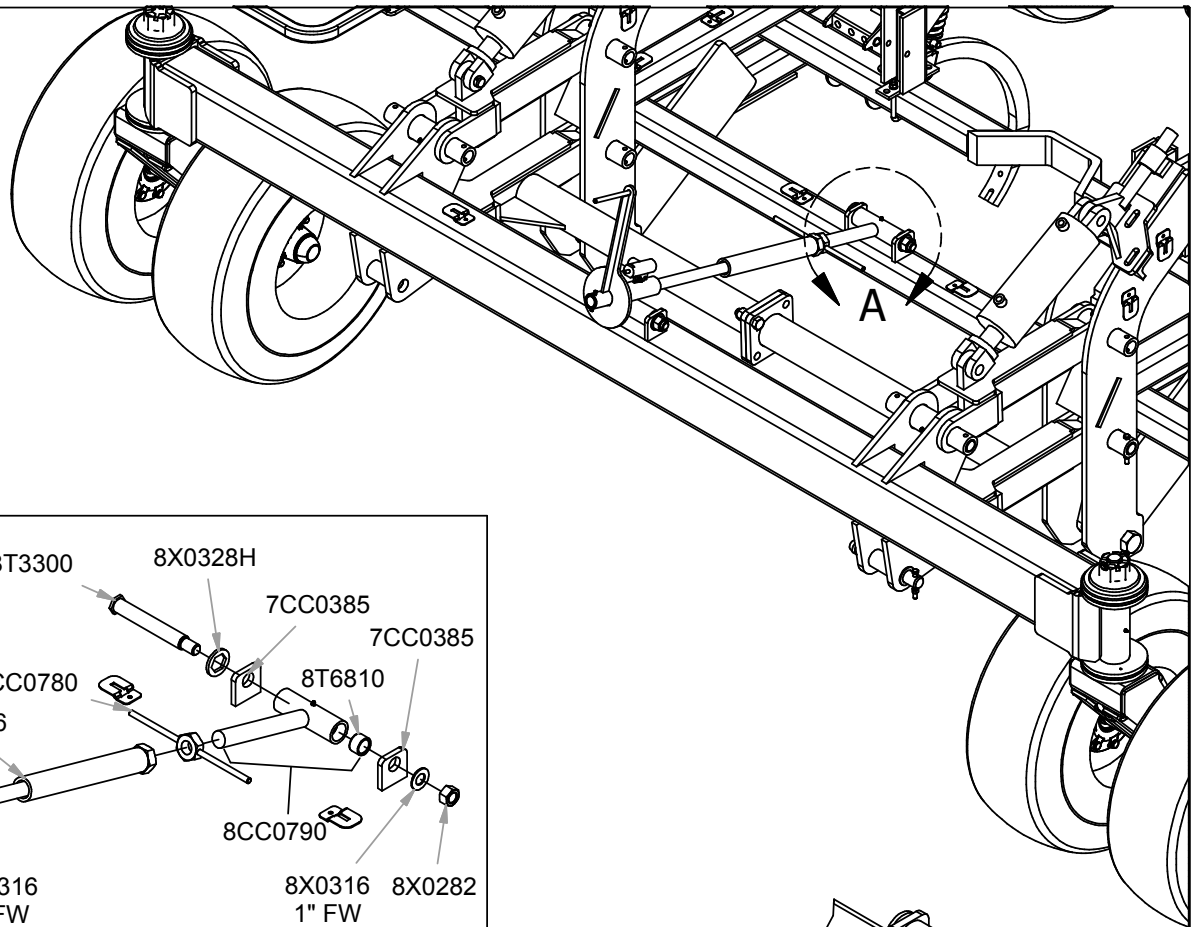
8Z0352

SECTION 6 - PARTS (FRONT CASTER OPTION)



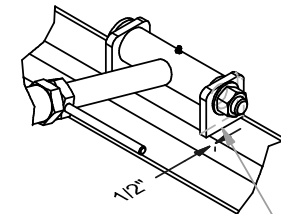
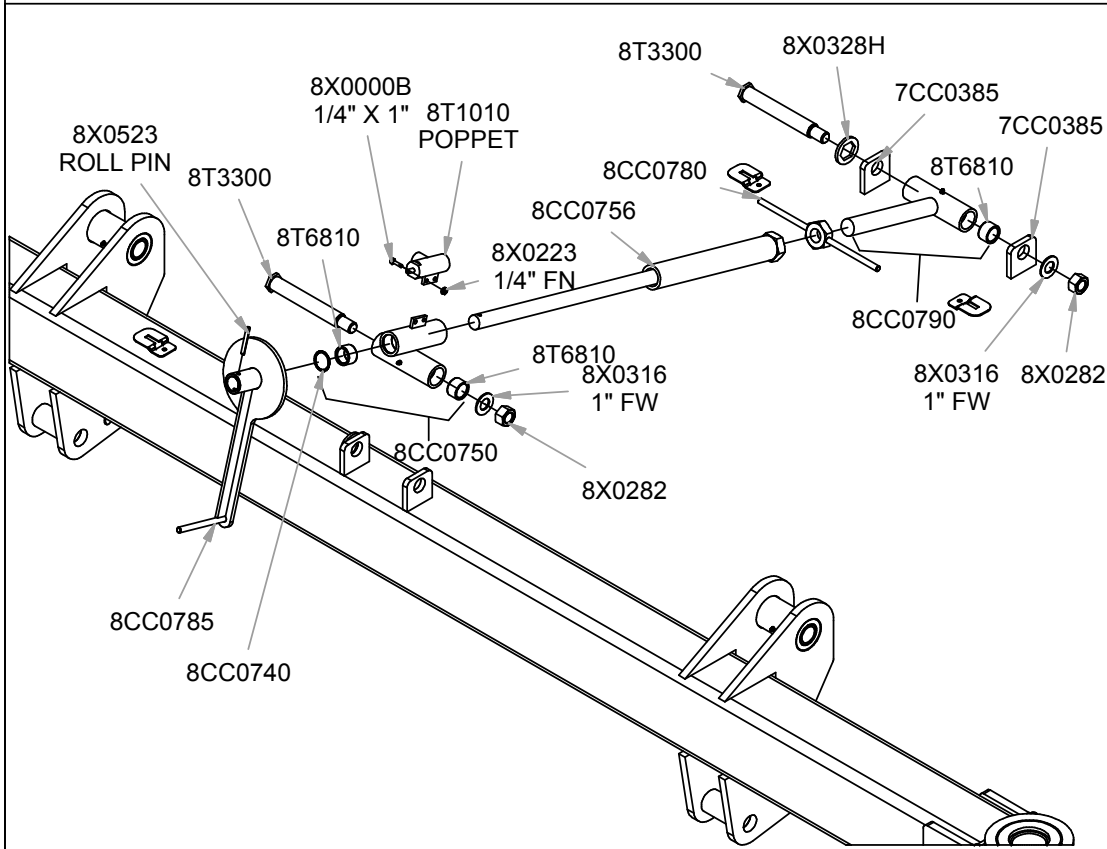
6-39

SINGLE POINT DEPTH CONTROL  
 USED ON 5-SECTION (50' - 60')  
 CHISEL PLOWS **ONLY**.



SECTION 6 - PARTS (FRONT CASTER OPTION)

6-40



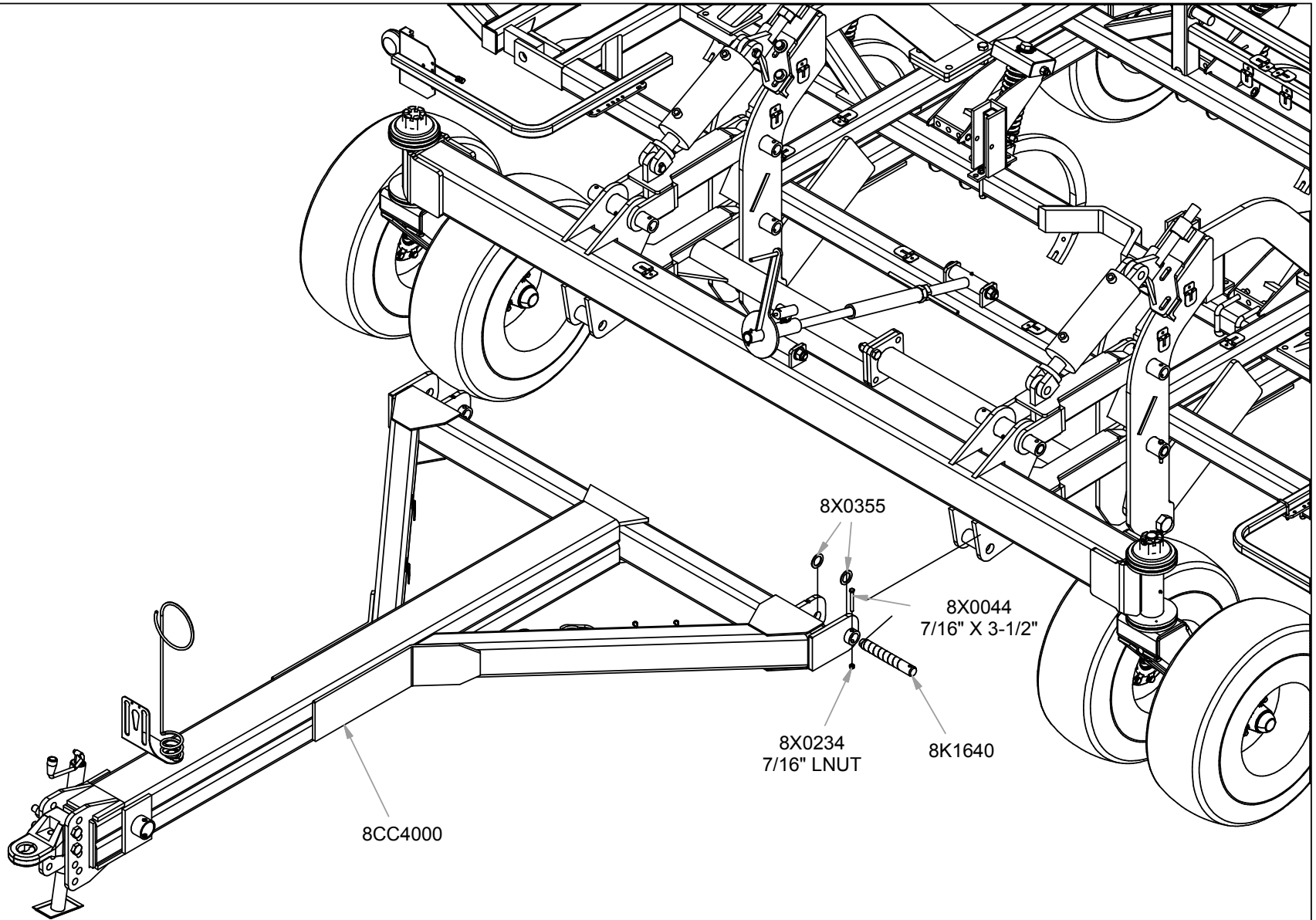
SEE NOTE

DETAIL A  
 SCALE 1/10

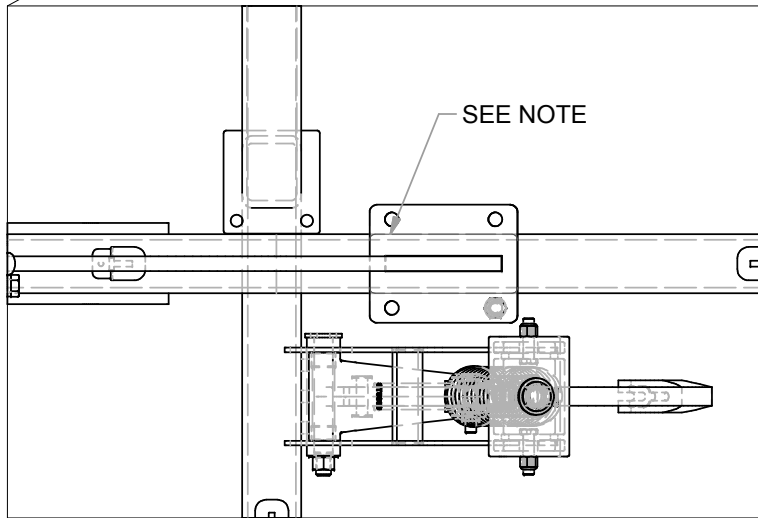
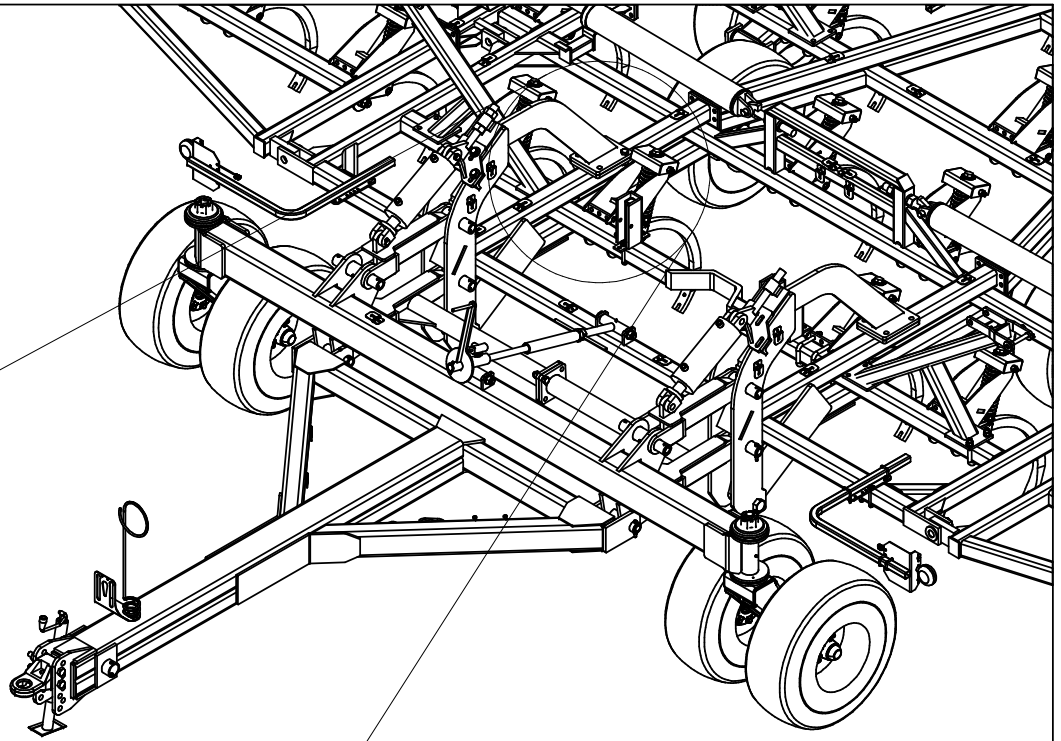
NOTE:  
 WELD BOTH SIDES OF TAB TO TUBE.  
 TABS SHOULD BE LOCATED 1/2" BACK  
 FROM FRONT FACE OF TUBE, AS SHOWN.  
 BEAD SIZE = 1/4"

5/22/2012

9T6012.iam/SNGL POINT DEPTH CNTRL



SECTION 6 - PARTS (FRONT CASTER OPTION)

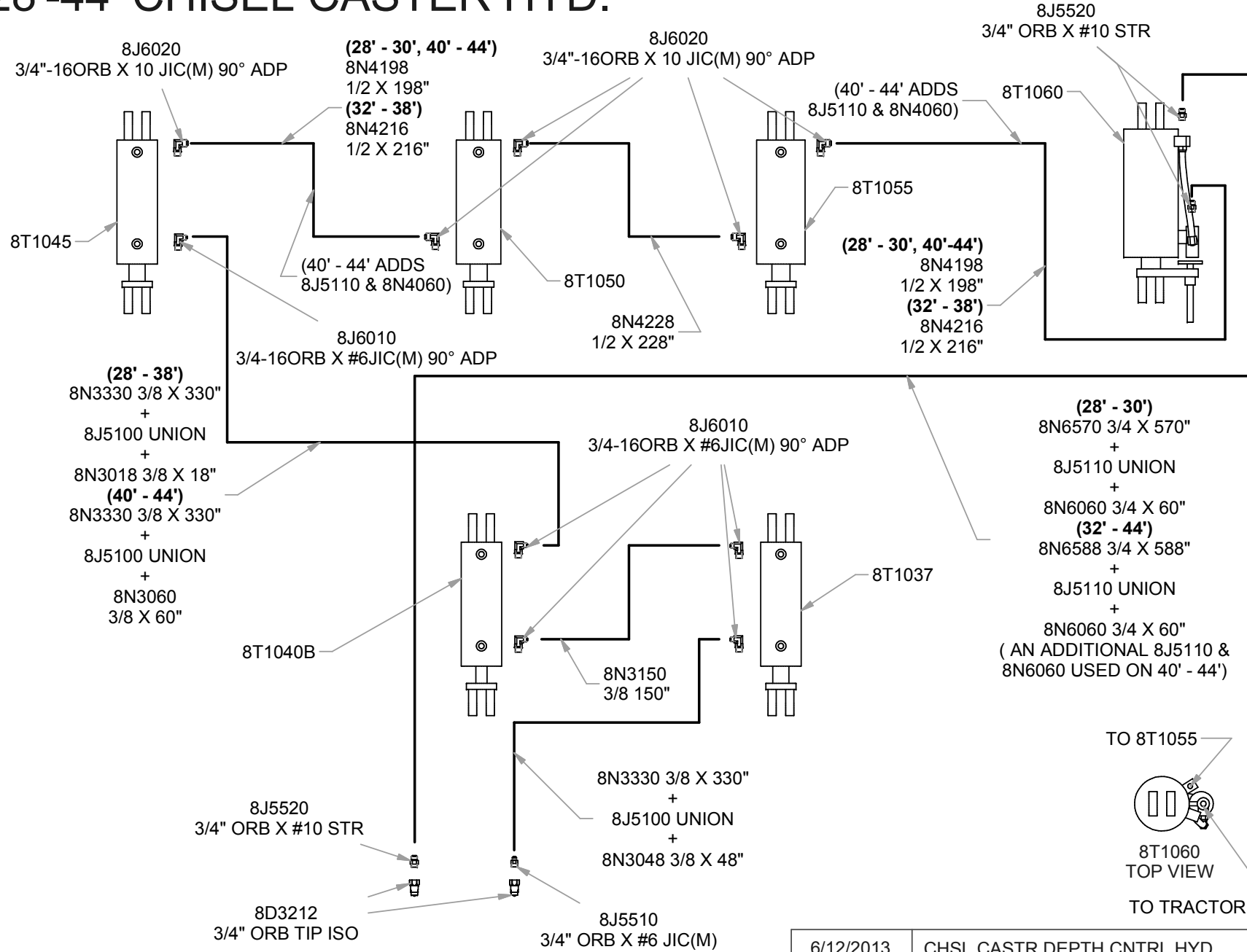


NOTE:  
WELD BOTTOM OF BOLT PLATE TO TUBE AS SHOWN.  
BEAD SIZE = 3/4". DO NOT WELD ACROSS FACE OF TUBE.

4/26/2012

9T6012.iam/BOLT PLATE WELDING

# 28'-44' CHISEL CASTER HYD.



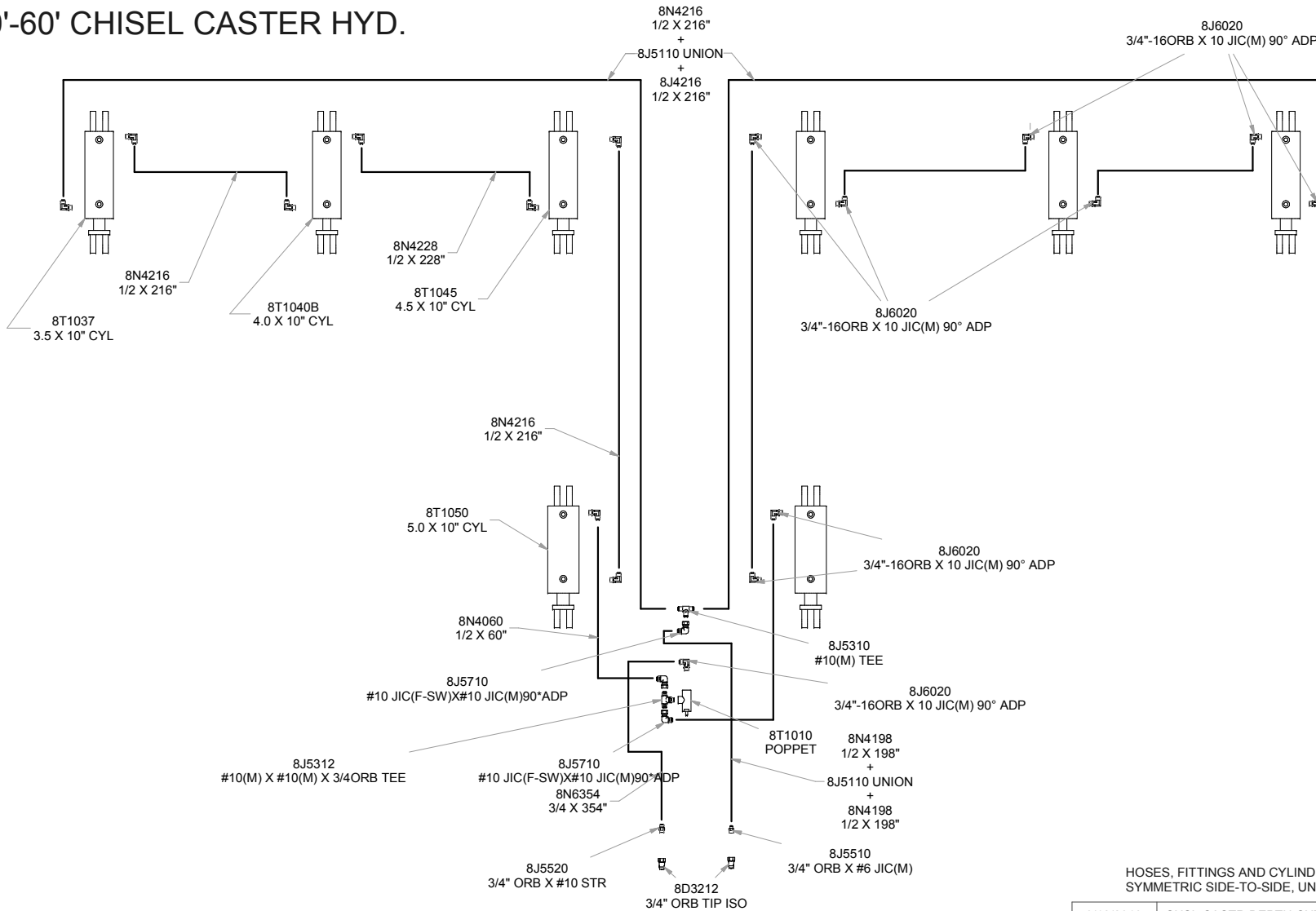
6-43

SECTION 6 - PARTS (FRONT CASTER OPTION)

6/12/2013

CHSL CASTR DEPTH CNTRL HYD

# 50'-60' CHISEL CASTER HYD.



HOSES, FITTINGS AND CYLINDERS ARE SYMMETRIC SIDE-TO-SIDE, UNLESS NOTED

6/12/2013 CHSL CASTR DEPTH CNTRL HYD



## SECTION 6 – PARTS

Stock code	Description	Stock code	Description
8A1155	U-BOLT 3/8 X 6-1/16 X 5" SQ	8D8523	JACK 8000# DROPLEG 5/8X4.25PIN
8A1156	U-BOLT 3/8 X 4-1/16 X 5" SQ	8D9108	ROLL PIN 1/4 X 2" ZINC
8A1157	U-BOLT 3/8 X 4-1/16 X 7" SQ	8D9466	HYD CYL 4.5 X 16" 3500PSI 99-
8A4048	NYLON TIE .18 X 11"	8D9468	SEAL KIT 4.5 X 16"3000&3500PSI
8A4050	NYLON TIE .30 X 8-7/8"	8G2284	NYLON TIE .187 X 7-1/2" YELLOW
8A4052	NYLON TIE .30 X 15.25"	8G2285	NYLON TIE .187 X 7-1/2" GREEN
8A4054	NYLON TIE .30 X 24" BLK	8G8010	U-BOLT 3/8 X 1-5/16 X 2-1/4"SQ
8C0270	SPLITSTEELBUSH 1.375X 1"ID- 1"	8G8020	U-BOLT 3/8 X 2-9/16 X 3-1/2"SQ
8C0650	MANIFOLD BLOCK ALUMINUM 5PORT	8H1180S	HARROW TOOTH 1/2 X 20" M104/SH
8C1700	U-BOLT 3/8 X 2 X 4-7/8" SQ	8H1184S	HARROW TOOTH 1/2X 26"M105/SH26
8C1710	U-BOLT 3/8 X 8 X 9" SQ	8H1190S	HARROW TOOTH 9/16X 26"M106/SH+
8C1718	U-BOLT 1/2 X 2-5/8 X 2-5/8" SQ	8H1195S	HARROW TOOTH 5/8 X 28" M108
8C1720	U-BOLT 1/2 X 2-5/8 X 3-3/4" SQ	8H1280	SPRING EXTENSION 1"OD X 4" YZ
8C1736	U-BOLT 1/2 X 4-1/4 X 5-1/4"RND	8H1304	SPRING HVY 1.19"ID- 2.88" PNTD
8C1740	U-BOLT 1/2 X 4-1/4 X 7-1/4"RND	8H1307	SPRING PRESS 1.63OD- 15" 91#/"
8C1751	U-BOLT 3/4 X 3-1/16 X 6" SQ	8H1309	SPRING COMP 15.5"X1.65"OD PNTD
8C1752	U-BOLT 3/4 X 3-1/16 X 7-1/2"SQ	8H1315	SUPPORT ROD WLDD ASSY 7/8 09-
8C1755	U-BOLT 3/4 X 6-1/16 X 6" SQ	8H1327A	CAST SWIVEL 3/4X7/8 MNTD ATTCH
8C1760	U-BOLT 3/4 X 8-1/16 X 6" SQ	8H1394	SUPPORT ROD ASSY 7/8" MNTD 09-
8C1780	U-BOLT 7/8 X 8-1/16 X 10" SQ	8H2100	STL 5/8 X 4- 8-3/8" PNTD 88-
8C1900	CLAMP 1/2" WIRE ROPE	8H2120	MOUNTING BRCKT M94-M108 85-
8CC0600	HOLDDWN HOSE 8" W/WRNCH HL 11-	8H2128	SPRING 2.25ODX7/8IDX3.25L POLY
8CC0740	SPIRALRING .068X1.625 INTR 11-	8H2129	SPRING KIT - HI IMPCT MNTD ATTCH
8CC0755	LINK ROD SNGL PT DPTH ADJ -13	8H2131A	SPRING W/7/8-9NC NUT 12-
8CC0810	DEPTH INDICATOR POINTER 12-	8H2132	CARRIER ARM 34" M94-M108
8CC0815	DEPTH INDICATOR POINTRCLAMP	8H2142	CARRIER ARM 42" M94-M108
8CC4000	HITCH NARROW CHSL C/D/CHSL07-	8H2144	CARRIER ARM 52" M94-M108
8CC4028	CENTER REAR 20' CHSL 07-	8H2184	AUTOLCKUP 7/8" DRLD&PNTD 09-
8CC6000	D/C CHSL&STD DSK CSTR MNT 10-	8H2190	HANDLE W/PIN AUTOLCKUP 94-108
8CC6015	D/C CHSL HTCH TOWER BRACE 10-	8H2315	EXTENSION MNT ARM 6" M94-M108
8CC6022	D/C CHSL LINK W/CYLATTCH 11-	8H2601	ENDPLATE RLNGBSKT 4SCRPR 12-
8CC6026	PARALLEL LINK W/RCKSHFT 12-	8H2634	RLLNG BSKT 4' REEL ONLY 10-
8CC6028	CYLATCH ADJ PARALLEL LINK 11-	8H2636	RLLNG BSKT 6' REEL ONLY 10-
8CC6035	WASHER 1.281"ID X 2.5 X 4" 11-	8H2660	RLLING BSKT SCRAPR MNT 12-
8D0330	U-BOLT 5/8 X 6-1/16 X 5-5/8"SQ	8H2664	4' BSKT SCRAPR (40.5") YLW 12-
8D0340	U-BOLT 3/4 X 4-1/16 X 7-3/4"SQ	8H2666	6' BSKT SCRAPR (63.5") YLW 12-
8D0350	U-BOLT 3/4 X 4-1/16 X 10" SQ	8H2702	BEARING 1-1/4" SQ FLNG4BLT
8D0720	HITCH PIECE CAST CAT.3CTD PNTD	8H2706	TUBE SQ 3 X 4T- 70" BSKT MNT
8D0722	PERFECT HTCH BACKSTOP W/HDWE	8H2708	TUBE SQ 3 X 4T- 94" BSKT MNT
8D0724	CLEVIS OPT.HITCH CAT.3CTD99-	8H2710	TUBE SQ 3 X 4T- 118" BSKT MNT
8D0730	URETHANE CUSHION PERFCTHTCH	8HD0080	PIPE CLAMP 2-1/2" ID PLATED YZ
8D0745B	HITCH PC WELDD W/BSH CAT.5 14-	8HD0150	PIN ADJSTMNT 5/8X9.75" YZ 95-
8D1770	CABLE 1/2 X 30.5"EYE-EYE 99-	8HD0160	SPRING TINE ADJ.COMP.ZINC95-
8D2460	SAFETY CHAIN 20200# 3/8" X 4'	8HD0200	U-BOLT 1/2 X 2-3/8X 3-9/16"RND
8D2470	SAFETY CHAIN 30400# 7/16" X 5'	8HD5052	1ST PIPE W/LVR 6' 104/6 3OR4BR
8D2730	PIN 1 X 2-3/4" CABLE PLATED	8HD5054	2ND PIPE W/LVR 6' 104/6 3OR4BR
8D3035	WHEEL 15 X 8" 6 BOLT-VLV GRD	8HD5056Q	3RD PIPE/LVR6' 3BR104/6QADJ00-
8D3150	U-BOLT 1/2 X 3 X 7-1/4" SQ	8HD5057	3RD PIPEW/LVR 6' 104/6 4BR 98-
8D3152	U-BOLT 1/2 X 3-3/8 X 7-1/4" SQ	8HD5058Q	4TH PIP/LVR6' 4BR104/6 QADJ02-
8D3212	MALE TIP 3/4"-16 ORB ISO	8HD5072	1ST PIPE W/LVR 8' 104/6 3OR4BR
8D8490	PIONEER/ISO TIP HLDR BNT 97-	8HD5074	2ND PIPE W/LVR 8' 104/6 3OR4BR
8D8500	HYD HOSE HOLDER PNTD BLK 91-	8HD5076Q	3RD PIP/LVR8' 3BR104/6 QADJ00-
8D8521	JACK SPOOL 3 X 2.56- 1-29/32"	8HD5077	3RD PIPEW/LVR 8' 104/6 4BR 98-
8D8522	JACK 5000# TOP CRANK 15"LIFT	8HD5078Q	4TH PIP/LVR8' 4BR104/6 QADJ02-

## SECTION 6 – PARTS

Stock code	Description	Stock code	Description
8HD5082	1ST PIPE W/LVR10' 104/6 3OR4BR	8J7116	3/4"-16 ORB(2X)1WAY 1/16"RESTR
8HD5084	2ND PIPE W/LVR10' 104/6 3OR4BR	8J7216	#6JIC(M)X6JIC(F)1/16"RSTR BLKZ
8HD5086Q	3RDPWP/LVR10' 3BR104/6 QADJ00-	8J7250	RELIEF VLV 2250PSI 9/16"-18ORB
8HD5087	3RD PIPEW/LVR10' 104/6 4BR 98-	8J7260	DUAL OUTLET FEMALE HYD COUPLER
8HD5088Q	4THPIP/LVR10' 4BR104/6 QADJ02-	8K1100	HUB&AXLE ASSY 614(GBGI-2"RCVR)
8HD5094	EXT PIPE2.375"ODX.148- 12" 01-	8K1105	HUB&AXLE ASSY HD812(2.5"RCVR)
8HD5096	EXT TUBE1.5SQ11GA-23.75" 01-	8K1105S	HUB&AXLE ASSY HD812 (2"RCVR)
8HD5101	SIDE PLT 1/4"3BR 104/6 LEFT00-	8K1106	HUB&AXLE ASSY HD817 (2.5"RCVR)
8HD5102	SIDE PLT 1/4"3BR 104/6 RGHT00-	8K1610	PIN 3/4 X 6.25" TRNSPRTLCK 84-
8HD5105	SIDE PLT5/16"4BR 104/6 LEFT00-	8K1640	PIN 1-1/2 X 10-5/8" HITCH 84-
8HD5106	SIDE PLT5/16"4BR 104/6 RGHT00-	8K1660	PIN 1-1/2 X 15-1/2" HARDEND84-
8HD5115	CONNCTNG BAR (3/8X2-17.5) 00-	8K1720	EYEBOLT 1.25DIAX1"EYE YZ 12-
8HD5120	CONNCTNG BAR (3/8X2X30.5) 93-	8K1750	EYEBOLT 1.5"DIAX1"EYE YZ 12-
8HD5140	CROSS TUBE W/FLATS 6' M104/106	8K1755	EYEBOLT 1.5"DIAX1.26EYE YZ 12-
8HD5150	CROSS TUBE W/FLATS 8' M104/106	8K1900	SEAL GBGI V WALKNG TANDM 01-
8HD5160	CROSS TUBE W/FLATS 10' M104/06	8K1920	RETAINING RING 2-7/8" INV 00-
8HD5180	EXT BRCKT M94-108 2ND ARM 15"	8K5350	SPLITSTEELBUSH 2" X 1.5"ID- 2"
8J4300	REAR LEG/JACK ATTCH BRCKT 01-	8K5400	SPLITSTEELBUSH 4 X 3.5ID- 1.5"
8J4600	BOLT 1-1/4"-7NC WING STOP 09-	8K5505	U-BOLT 3/4 X 2-1/8 X 4-1/4" SQ
8J5100	#6 JIC(M) X #6 JIC(M) UNION	8K5515	U-BOLT 3/4 X 4-1/16 X 6" SQ
8J5102	#6 ORB TO 3/8"FPT ADAPTR SWVL	8K5520	U-BOLT 3/4 X 6-1/8 X 7-1/2" SQ
8J5104	#4 ORB(M) X #6 JIC(M) ELBOW	8K6938	SWEEP 14" 50* 1/2"BLT 2.25C-C
8J5106	#4 HEX SOCKET ORB PLUG	8K6940	SWEEP 16" 50* 1/2"BLT 2.25C-C
8J5110	#10 JIC(M) X #10 JIC(M) UNION	8K6942	SPIKE REVERSIBL4.5"WDTHX1/4"
8J5150	3/8" MPT X #6JIC(M)STR ADPTR	8K6947L	SPIKE TWISTED 3" LEFT
8J5152	#8 JIC(F) X #6 JIC(M) RDCR	8K6947R	SPIKE TWISTED 3" RGHT
8J5170	1/2" MPT X #10 JIC(M)STR ADPTR	8K6950	ADJ SHANK SIDE PLATE PNTD 09-
8J5200	#10 JIC(F) X #6 JIC(M)HEX BUSH	8K7016	WHEEL 15 X 8" 8 BOLT-VLV GRD
8J5298	TEE #6 SWIVELNUTRUN(M+M+F-SW)	8K7020	WHEEL 15 X 10" 8 BOLT-VLV GRD
8J5300	TEE #6 JIC (MALE) 3X	8K7026	TIRE 11L X 15" LRF TBLS HWYSRV
8J5312	TEE #10JIC(M2X)X3/4-16ORBBRNCH	8K7028	TIRE 12.5L X 15" LRF TL HWYSRV
8J5500	9/16"-18 ORB X #6 JIC(M) STR	8K7033	11L X 15 LRF ON 15X8X6 WHEEL
8J5510	3/4"-16 ORB X #6 JIC(M) STR	8K7037	11L X 15 LRF ON 15X8X8 WHEEL
8J5520	3/4"-16 ORB X #10 JIC(M) STR	8K7042	12.5L X 15 LRF ON 15X10X8 WHL
8J5540	7/8"-14 ORB X #10 JIC(M) STR	8K7111	HUB HD812 W/CUPS&ZRK 8BLT3LIP
8J5550	1-1/16" - 12ORBX#10JIC(M)STR	8K7113	HUB CAP HD812 DC17
8J5600	9/16"-18 ORB X #6 JIC(F-SW)STR	8K7117	BEARING INNER HD812 LM3780
8J5620	3/4"-16 ORB X #6 JIC(F-SW)STR	8K7118	BEARING OUTER HD812 LM2790
8J5680	3/4"-16 ORB X 3/4"-16ORB UNION	8K7122	STUD WHEEL 5/8-18UNFX2.5"97-
8J5682	3/4"-16ORB(2X)ADJUSTABLE UNION	8K7123	NUT 5/8"-18UNF WHEEL BOLT 97-
8J5690	3/4-16X3/4-16 ORB M-SW90*UNION	8K7127	SEAL TRPL LIP EXTRNL HD812 06-
8J5700	#6 JIC(F-SW) X #6 JIC(M)90*ADP	8K7128	SEAL SLEEVE FOR 3X LIP 812 06-
8J5710	#10 JIC(F-SW)X#10 JIC(M)90*ADP	8K7130	RACE INNER HD812 LM3720
8J5800	3/8"FPT X #6 JIC (F-SW) STR	8K7132	RACE OUTER HD812 LM2720
8J5810	1/2"FPT X #10 JIC(F-SW) STR	8K7340	HUB HD817 W/CUPS&ZRK 8BLT3LIP
8J6000	9/16"-18 ORB X #6 JIC(M)90*ADP	8K7341	HUB CAP HD817 DC26
8J6002	9/16"-18ORB X #6 JIC(M)BRNCH T	8K7342	BEARING INNER HD817 LM387AS
8J6004	9/16"-18ORB X #6 JIC(M)RUN TEE	8K7343	BEARING OUTER HD817 LM501349
8J6010	3/4"-16 ORB X #6 JIC(M)90*ADP	8K7344	SEAL 3" ID HD817 SE42
8J6020	3/4"-16 ORB X #10 JIC(M)90*ADP	8K7346	RACE INNER HD817 382A
8J6030	7/8"-14 ORB X #10 JIC(M)90*ADP	8K7347	RACE OUTER HD817 LM501310
8J6060	3/4"-16ORB X #6JIC(F-SW)90*ADP	8K7349	AXLE HD817X15.25 (2.5DIA.RCVR)
8J7000	BALL VALVE HYD 9/16"-18ORB(2X)	8K8000	STL 7K2045 3/8X3.5 PNTDLGHT09-
8J7040	THERMAL RELIEF MANIFLD 4000PSI	8K8005	TUBE LGHT BRKT SHRT 1.5SQ PNTD

## SECTION 6 – PARTS

Stock code	Description	Stock code	Description
8K8010	TUBE LGHT BRCKT 1.5SQ PNTD 00-	8N3180	3/8X 180"HYD HOSE #6FJX3000PSI
8K8020	STL 12GA MNTNG BRCKT LIGHT 00-	8N3204	3/8X 204"HYD HOSE #6FJX3000PSI
8K8030A	MODULE AG ENHNCDW/BRAKE6PIN08-	8N3216	3/8X 216"HYD HOSE #6FJX3000PSI
8K8060B	EXT HRNSS 12'6PIN DEUTSCH09-	8N3228	3/8X 228"HYD HOSE #6FJX3000PSI
8K8067	DUST CAP FOR 7PIN CONNECT00-	8N3252	3/8X 252"HYD HOSE #6FJX3000PSI
8K8070B	MAIN HRNSS 7PNLNG W/BRAKE 09-	8N3276	3/8X 276"HYD HOSE #6FJX3000PSI
8K8074	2ND IMP JUMP HARNESS 09-	8N3288	3/8X 288"HYD HOSE #6FJX3000PSI
8K8075A	EXT HRNSS NONDRAWBR DTSCH 07-	8N3312	3/8X 312"HYD HOSE #6FJX3000PSI
8K8080A	EXT HRNSS DRAWBAR DEUTSCH 07-	8N3330	3/8X 330"HYD HOSE #6FJX3000PSI
8K8088	LENS ONLY AMBER GROTE LGHT 00-	8N3348	3/8X 348"HYD HOSE #6FJX3000PSI
8K8090B	LIGHT LED AMBER 2WR DTSCH 12-	8N3360	3/8X 360"HYD HOSE #6FJX3000PSI
8K8095B	LIGHT LED RED 3WIRE DTSCH 12-	8N3390	3/8X 390"HYD HOSE #6FJX3000PSI
8K8105A	EXT HARNESS 26'2WIRE DTSCH 07-	8N3408	3/8X 408"HYD HOSE #6FJX3000PSI
8K8200	BRCKT SMV ATTCH 4-8"FRAME98-	8N3432	3/8X 432"HYD HOSE #6FJX3000PSI
8K8210	BRCKT W/SCKT SMV ATCH4-8"98-	8N3462	3/8X 462"HYD HOSE #6FJX3000PSI
8K8220	BRCKT LGHT.25X1.75-18.4" 04-	8N3534	3/8X 534"HYD HOSE #6FJX3000PSI
8K8650	SEAL KIT4X36"CTD(8K9640CYL)90-	8N3570	3/8X 570"HYD HOSE #6FJX3000PSI
8K8660	SEAL KIT 5 X 32 & 36" CTD 89-	8N3606	3/8X 606"HYD HOSE #6FJX3000PSI
8K9102	PIN 1 X 4" CYL-FOR1/4"ROLL PIN	8N4016	1/2X 16"HYD HOSE#10FJX3000PSI
8K9106	PIN 1-1/4 X 4-3/8" HRDND 1/4HL	8N4060	1/2X 60"HYD HOSE#10FJX3000PSI
8K9108	PIN 1-1/4 X 5-1/8" HRDND 3/8HL	8N4114	1/2X 114"HYD HOSE#10FJX3000PSI
8K9174	STROKE CNTRL 1/2" 2"ROD 96-	8N4120	1/2X 120"HYD HOSE#10FJX3000PSI
8K9176	STROKE CNTRL 3/4" 2"ROD 96-	8N4138	1/2X 138"HYD HOSE#10FJX3000PSI
8K9178	STROKE CNTRL 1" 2"ROD 96-	8N4160	1/2X 160"HYD HOSE#10FJX3000PSI
8K9180	STROKE CNTRL 1-1/4" 2"RD 96-	8N4198	1/2X 198"HYD HOSE#10FJX3000PSI
8K9200	TRNS LCK FRMD 7.5"(2-3/8RD)10-	8N4216	1/2X 216"HYD HOSE#10FJX3000PSI
8K9220	ANGLE 6X6X1/2- 6.25"WGHTPKG99-	8N4228	1/2X 228"HYD HOSE#10FJX3000PSI
8K9230	SUITCASE WGHT PNTD 1.25"- 67#	8N4546	1/2X 546"HYD HOSE#10FJX3000PSI
8K9640	HYD CYL 4 X 36" W/3" STOP TUBE	8N4624	1/2X 624"HYD HOSE#10FJX3000PSI
8K9650	HYD CYL 5 X 36" W/3" STOP TUBE	8N5114	5/8X 114"HYD HOSE#10FJX3000PSI
8L0251	WASHER 3/4"ID X 3-1/16"ODX 1/4	8N5120	5/8X 120"HYD HOSE#10FJX3000PSI
8L0252	WASHER 1.28"IDX4.5ODX 1/4" YZ	8N5138	5/8X 138"HYD HOSE#10FJX3000PSI
8L0258	U-BOLT 5/16 X 1-1/2 X 2-1/2"SQ	8N6060	3/4X 60"HYD HOSE#10FJX3000PSI
8L0260	U-BOLT 3/8 X 1-3/4 X 3" SQ	8N6354	3/4X 354"HYD HOSE#10FJX3000PSI
8L0262	U-BOLT 5/16 X 1 X 2" SQ	8N6570	3/4X 570"HYD HOSE#10FJX3000PSI
8L0266	U-BOLT 1/2 X 3-1/2 X 5" SQ	8N6588	3/4X 588"HYD HOSE#10FJX3000PSI
8L0268	U-BOLT 5/16 X 3 X 4" SQ	8R6145	EYEBOLT 3/4"-10NC X 5/8"EYE
8L0272	U-BOLT 5/16 X 3 X 7" SQ	8R6805	SPLITSTEELBUSH 1" X .75"ID- 1"
8L0320	PLATE 2PNT&LR CASTER WEAR 96-	8R6808	SPLITSTEELBUSH 1.25X 1"ID-.75"
8L4628	EYEBOLT 1.5"DIAX1.26"EYE YZ07-	8R6810	SPLITSTEELBUSH 1.62X1.25"ID-1"
8N3018	3/8X 18"HYD HOSE #6FJX3000PSI	8R6815	SPLITSTEELBUSH 1.5X1.25"ID-1"
8N3028	3/8X 28"HYD HOSE #6FJX3000PSI	8R6820	SPLITSTEELBUSH 2.5X2.00"ID-2"
8N3035	3/8X 35"HYD HOSE #6FJX3000PSI	8R6901	AXLE H614 STR 2"CR X 10"
8N3048	3/8X 48"HYD HOSE #6FJX3000PSI	8R6911	HUB H614 W/CUPS&ZRK 6 BLT GBGI
8N3060	3/8X 60"HYD HOSE #6FJX3000PSI	8R6913	HUB CAP 517HD H614 & H618
8N3070	3/8X 70"HYD HOSE #6FJX3000PSI	8R6914	BOLT WHEEL 9/16"-18 UNF- 1.25"
8N3084	3/8X 84"HYD HOSE #6FJX3000PSI	8R6915	BOLT WHEEL 9/16"-18 UNF- 1.75"
8N3096	3/8X 96"HYD HOSE #6FJX3000PSI	8R6917	BEARING INNER 614
8N3108	3/8X 108"HYD HOSE #6FJX3000PSI	8R6921	SEAL HD 2" ID (TRPL LIP) H614
8N3124	3/8X 124"HYD HOSE #6FJX3000PSI	8R6922	SEAL ASSY GBGI H614 HUB 00-
8N3136	3/8X 136"HYD HOSE #6FJX3000PSI	8R6923	SEAL ONLY GBGI H614 HUB 00-
8N3150	3/8X 150"HYD HOSE #6FJX3000PSI	8R6924	COUNTRFACE GBGI H614 HUB 00-
8N3156	3/8X 156"HYD HOSE #6FJX3000PSI	8R6925	RACE INNER H614 LM603011
8N3160	3/8X 160"HYD HOSE #6FJX3000PSI	8R6927	SEAL SUPPORT GBGI H614 AXLE

## SECTION 6 – PARTS

Stock code	Description	Stock code	Description
8S0074	MUFFLER CLAMP HD 2-1/8" PLATED	8T2530	ROLLR#2WNGLF4.5ODX1.52"ID 00-
8S0280	U-BOLT 5/16 X 2 X 2-3/4" RND	8T2986	CLAMP 1/2"(-8)WRNG RUBBERBACK
8S0295	U-BOLT 3/8 X 2-5/8 X 4-1/4"RND	8T2988	CLAMP 3/8"(-6)WRNG RUBBERBACK
8S0315	U-BOLT 3/8 X 3 X 4-1/8" RND	8T2990	HYD HOSE CLAMP MTL/RUB BACK
8S0317	U-BOLT 3/8 X 3.63 X 5.88" RND	8T3100	Y-BOLT(3/4-10)&(5/8-11)-7-3/4"
8S0319	U-BOLT 3/8 X 3 X 4-1/8" SQ	8T3120	STL3/8X2-7.75"WTCHAINATCH 07-
8S0330	U-BOLT 1/2 X 3 X 4-1/4" SQ	8T3200	BOLT 1-8NCX11"W/6.5"THD GR5 YZ
8S0340	U-BOLT 1/2 X 4 X 5-1/4" SQ	8T3300	BOLT PIVOT CHSLTRP&WNGLF YZ
8S0345	U-BOLT 1/2 X 5 X 6-1/4" SQ	8T3400	PIN 1-1/4 X 6-11/16"5-PLEX 99-
8S0358	U-BOLT 5/8X3.06X 4.5" SQ1.25"T	8T3590	LINK PT 1 TO 2 (2 STFNR) 99-
8S0360	U-BOLT 5/8 X 6-1/16 X 4-1/2"SQ	8T3600	PIN 1-1/2 X 4-7/8" WNG PIVT98-
8S1120	SIGN SLOW MOVING VEHICLE(SMV)	8T3606	PIN 1-1/2 X 5-3/8"PRT2HNG 99-
8S1124	MOUNTING SOCKET SMV SIGN	8T3608	PIN 1-1/2 X 7-1/16"HRDND&CHROM
8S1126	MNT SPADE W/HRDWR SMV SIGN	8T3620	PIN 1-1/2 X 12-1/2" HRDND&ZINC
8S2990	HYD HOSE CLAMP-LARGE-NYLON	8T3625	PIN 1-1/2 X 12" W/WLD WSHR 00-
8S3059	CAPLUG FITS 2.067"ID TUBE96-	8T3640	PIN 1-1/2 X 19" HARDEND 98-
8T0100	WASHER SPRG BASE SQHL TRIP 97-	8T3800	WASHR7OD W/1.75OD BUSHX1.27"ID
8T0320	SHANK UPPER TWO PC. DISK 09-	8T3810	7T4286 HEX WASHER PNTD 99-
8T0322	SHANK LOWER TWO PC. DISK 09-	8T3820	WASHR7OD W/2.25OD BUSHX1.27"ID
8T0400	STL 1-1/8 X 9.5C-C LNK GRN 99-	8T4000	HITCH CHISEL PLOW 96-
8T0500	SHANK CHSL STNDRD BLACK 96-	8T4010	CNTR FRNT SPLT24'-28'CHSL 10-
8T0504	SHANK CHSL STNDRD+3" GREEN 09-	8T4035	WING LEFT 24-28' CHSL 10-
8T0550	SPRING 4" REAR HTCH PIN 97-	8T4037	WING RGHT 24-28' CHSL 10-
8T0600	SPRING CHSL TRIP 700# BLACK96-	8T4040	WING 6' PRT1 LEFT28+30' 98-12
8T0602	SPRING CHSL TRIP 1050#GREEN03-	8T4042	WING 6' PRT1 RGHT28+30' 98-12
8T0606	WRENCH 2.25" OPEN 1.5" BOX 98-	8T4046	WING 6' PRT2 LEFT 50-60' 99-
8T0608	WRENCH 1.5" OPEN 2.25" BOX 98-	8T4048	WING 6' PRT2 RGHT 50-60' 99-
8T0990	HYD PLNGR UPDATEKIT1/4TO3/8"RD	8T4050	WING 8' PRT1 LEFT 32'-44' 96-
8T1004	HYD PLNGR REPAIRKIT1/4RDRAM-02	8T4052	WING 8' PRT1 RGHT 32'-44' 96-
8T1006	PLUNGER PIN W/HLS RAM 98-	8T4054F	WING PT1 LFT FRNT 50'-54' 12-
8T1008	HYDPLNGR REPAIR KIT3/8RDRAM02-	8T4054R	WING PT1 LFT REAR 50'-54' 12-
8T1010	POPPET ASSY HD BLT-ON RAM02-	8T4056F	WING PT1 RGHT FRT 50'-54' 12-
8T1015	HAIRPIN CLIP FOR PLUNGR PIN	8T4056R	WING PT1 RGHT REAR50'-54' 12-
8T1035	HYD CYL 3.5 X 10" R35SM-10BP	8T4058	WING 13' PRT1 LEFT 56'-60' 04-
8T1037	HYD CYL 3.75 X 10"R3755M-10BP	8T4058F	WING FRONT #1 LEFT 56'-60' 07-
8T1040	HYD CYL 4.0 X 10" REPHASE 96-	8T4059	WING 13' PRT1 RGHT 56'-60' 04-
8T1040B	HYD CYL 4.0 X 10" FOR 5PLX 99-	8T4059F	WING FRONT #1 RGHT 56'-60' 07-
8T1045	HYD CYL 4.5 X 10" REPHASE 96-	8T4060	WING EXT 1 SHNK CHSL 96-
8T1050	HYD CYL 5 X 10" REPHASE 96-	8T4070	WING EXT 2 SHNK CHSL 96-
8T1055	HYD CYL 5.5 X 10" REPHASE 96-	8T4072	WING EXT 2SHNK FOR GWHL 99-
8T1060	HYD CYL 6 X10 W/STRK CNTRL 96-	8T4074	WING EXT 3SHNK LEFT CH 99-
8T1135	SEAL KIT 3.5 X 10"RAM 2" ROD	8T4076	WING EXT 3SHNK RGHT CH 99-
8T1137	SEAL KIT 3.75X8&10"RAM1-3/8ROD	8T4080	WING EXT 4SHNK LEFT CH 96-
8T1140	SEAL KIT 4.0 X 10"RAM 2" ROD	8T4082	WING EXT 4SHNK RGHT CH 96-
8T1140B	SEAL KIT 4.0 X8&10"RAM1-3/8ROD	8T4090	SUPPORT GAUGE WHEEL(5"SQ) 97-
8T1145	SEAL KIT 4.5 X 10" RAM 98-	8T4094	HOLDER GAUGE WHL AXL(4"SQ) 97-
8T1150	SEAL KIT 5.0 X 10" RAM 98-	8T4096	GAUGE WHEEL ASSY W/O HUB 04-
8T1155	SEAL KIT 5.5 X 10" RAM 98-	8T4100	CAST PIVOT W/BLTPLATE PTD 96-
8T1160	SEAL KIT 6.0 X 10" RAM 98-	8T4130	LIFTARM FRONT CNTR CHSL 98-
8T2040	HYD CYL 4 X 4" 3500PSI 09-	8T4132	WLKNG TNDM 7.5"C-C 2" ID 98-
8T2510	ROLLER#1WNGLF2.25ODX1" 99-	8T4140	LIFTARM REAR WLKNG TNDM CH 96-
8T2514	SPACER WNGLF2.25ODX9/16" 99-	8T4166	WALKING TNDM LHCNTR/RHWING 99-
8T2520	ROLLR WNGLF2.25ODX2-3/16" 99-	8T4168	WALKING TNDM RHCNTR/LHWING 99-

## SECTION 6 – PARTS

Stock code	Description	Stock code	Description
8T4174	FLAT 3/8 X 1-1/2- 6-7/8" 99-	8X0004	BOLT 3/8-16NC X 1-1/4" GR5 YZ
8T4175	REAR SPRNG BRCKT 24-30' &50-60'	8X0005	BOLT 1/4-20NC X 3-3/4" GR5 YZ
8T4176	SUPPORT-WHL SPRG LARM LEFT99-	8X0006	BOLT 3/8-16NC X 2-1/2" GR5 YZ
8T4177	SUPPORT-WHL SPRG LARM RGHT99-	8X0007	BOLT 3/8-16NC X 1-1/2" GR5 YZ
8T4178	FRONT-SPRG I-BLT ATTCH LEFT99-	8X0008	BOLT 3/8-16NC X 2" GR5 YZ
8T4179	FRONT-SPRG I-BLT ATTCH RGHT99-	8X0009	BOLT 1/4-20NC X 2" GR5 YZ
8T4190	MUD DFLCTR W/T 7T0125 BNT LEFT	8X0010	BOLT 1/4-20NC X 1-1/4" GR5 YZ
8T4192	MUD DFLCTR W/T 7T0125 BNT RGHT	8X0011	SCREW RDHD SLOT1/4-20X1.5" YZ
8T4205	CYL ATTCH FRNT CNTR CHSL 10-	8X0013	BOLT 1/4-20NC X 2-1/2" GR5 YZ
8T4224	CYL ATTCH "A" REAR CHSL 99-	8X0014	BOLT 1/4-20 X 3" GR5 ZNCOAT
8T4226	CYL ATTCH OFFST REAR 5PLX 99-	8X0015	BOLT 3/8-16NC X 3-3/4" GR5 YZ
8T4260	REST PART 2 WING 5-PLX 99-	8X0016	BOLT 3/8-16NC X 3" GR5 YZ
8T4300	LOCK TRNSPRT 32-44' WING 97-	8X0017	BOLT 3/8-16NC X 5" GR5 YZ
8T4315	REST TRNSPRT 32-44' WING 08-	8X0019	BOLT 3/8-16NC X 4-1/2" GR5 YZ
8T4325	LOCK TRNSPRT50-60'CP&SCLTR 99-	8X0020	BOLT 3/8-16X3.5"FULLTHDGR5 YZ
8T4350	TRNS LCK W/UHMW10.5"(2.4RD)96-	8X0021	BOLT 5/16-18NC X 3/4" GR5 YZ
8T4380	HOLDER CYL LOCK 4"&6" MNT 96-	8X0021A	BOLT 5/16-18NC X 1" GR5 YZ
8T4385	HOLDER MANUAL-PAK 3/4/6MNT09-	8X0021B	BOLT 5/16-18NC X 1-1/4"GR5 YZ
8T4390	HOLDER STROKE CNTRL 4&6" MNT08-	8X0022	SCKT CAP 5/16-18 X 1" GR5 YZ
8T4400	SUPPORT CABLE LIMIT/HTCH 99-	8X0023	BOLT 5/16-18NC X 2" GR5 YZ
8T4410	SUPPORT CABLE LIMIT/FRM 99-	8X0030	BOLT 5/16-18NC X 5" GR5 YZ
8T4510	FRAME REAR HITCH 98-	8X0031	BOLT 7/16-14NC X 1" GR5 YZ
8T4520	PIN 1 X 9-11/16"REAR HTCH 98-	8X0033	BOLT 7/16X1.25 5/8"THD GR5 YZ
8T4530	PIN 1 X 8-1/2"RRHTCHSPRNG98-	8X0034	BOLT 7/16-14NC X 1.75" GR5 YZ
8T4540	SWIVEL REAR HITCH 98-	8X0036	BOLT 7/16-14NC X 2" GR5 YZ
8T4550	SLIDE REAR HITCH 98-	8X0037	PLOWBOLT 1/2-13NC X 2" GR5 YZ
8T4570	EXTENSION CHISL REAR HTCH 06-	8X0037A	PLOWBOLT 1/2-13NCX2.25" GR5 YZ
8T5000	HOLDER SPRNG-TRIP ASSY CAST96-	8X0038	BOLT 7/16-14NC X 2-1/2"GR5 YZ
8T5020	PIPE 1X5-9/16" SPRG STP CP 96-	8X0041	BOLT 7/16-14NC X 3" GR5 YZ
8T5050	HOLDER SHANK TRIP W/BSHNGS 96-	8X0044	BOLT 7/16-14NC X 3-1/2"GR5 YZ
8T5150	BRCKT CHSL TRIP ASSY MNTNG 96-	8X0045	BOLT 7/16-14NC X 4-1/2"GR5 YZ
8T5200	CAP SWIVEL CAST HRDND CHSL96-	8X0046	BOLT 7/16-14NC X 7-1/4" GR5 YZ
8T5345	SPLITSTEELBUSH 2 X1.5"ID- 1.5"	8X0047	BOLT 7/16-14NC X 6" GR5 YZ
8T6000	GAUGE WHEEL JACKBLT PLTD 96-	8X0048	CRG 7/16-14NC X 3-1/2" GR5 YZ
8T6010	GAUGE WHEEL SCREW TOP 96-	8X0061	BOLT 1/2-13NC X 1-1/4" GR5 YZ
8T6020	GAUGE WHEEL JACK HANDL 96-	8X0062	BOLT 1/2-13NC X 2" GR5 YZ
8T6810	PLST BUSH 1-5/8X1.25ID-1" 96-	8X0063	BOLT 1/2-13NC X 1-1/2" GR5 YZ
8T7500	TRIP ASSY-LESS SHANK 700# 96-	8X0064	CRG 1/2-13NC X 1-1/2" GR5 YZ
8T7500H	TRIP ASSY-LESS SHNK 1050# 03-	8X0065	CRG 1/2-13NC X 2" GR5 YZ
8T8100	VALVE SEQUENCE WING FOLD 99-	8X0065L	CRG 1/2-13NC X 3" GR5 ZINC
8W1200	U-BOLT 1/2 X 2 X 3-1/4" SQ	8X0065S	SCKT CAP 1/2-13 X 1.62"GR8 PLN
8W1204	U-BOLT 1/2 X 3 X 3" SQ	8X0066	BOLT 1/2-13NC X 1-3/4" GR5 YZ
8W1357	HEX HEAD PLUG 9/16"-18 ORB	8X0067	BOLT 1/2-13NC X 2-1/4" GR5 YZ
8W1360	MANIFOLD BLOCK ALUMINUM 10PORT	8X0068	BOLT 1/2-13NC X 2-1/2" GR5 YZ
8W1380	HOLDDOWN HOSE 4&6" WDTN 81-	8X0069	BOLT 1/2-13NC X 3" GR5 YZ
8W1390	HOLDDOWN HOSE 2" WDTN 91-	8X0070	BOLT 1/2-13NC X 3-1/4" GR5 YZ
8W1398	HOLDDOWN HOSE 8" WDTN 91-	8X0071	BOLT 1/2-13X 3"SHOULDR GR2 YZ
8W1895	NYLATRON 1"ODX .76"ID- 1-1/2"	8X0072	BOLT 1/2-13NC X 3-3/4" GR5 YZ
8W1897	NYLATRON 1"ODX .76"ID- 1-3/4"	8X0073	BOLT 1/2-13NC X 5" GR5 YZ
8X0000	BOLT 1/4-20X3/4" FLLTHD GR5 YZ	8X0074	BOLT 1/2-13NC X 4-1/2" GR5 YZ
8X0000B	BOLT 1/4-20NC X 1" GR5 YZ	8X0075	BOLT 1/2-13NC X 6" GR5 YZ
8X0001	BOLT 3/8-16NC X 3/4" GR5 YZ	8X0077	BOLT 1/2-13NC X 7-1/2" GR5 YZ
8X0002	BOLT 3/8-16NC X 1" GR5 YZ	8X0078	BOLT 1/2-13X3.62" SHLDR GR2 YZ

## SECTION 6 – PARTS

Stock code	Description	Stock code	Description
8X0080	BOLT 1/2-13NC X 11" GR5 YZ	8X0203	NUT 3/8"-16NC SERFLANG GR2 YZ
8X0082	BOLT 1/2-13NC X 6-1/2" GR5 YZ	8X0204	NUT 3/8"-16NC HEX GR2 GALV
8X0083	BOLT 1/2-13NC X 8" GR5 YZ	8X0205	NUT 10-24 HEX YZ
8X0084	BOLT 1/2-13NC X 9" GR5 YZ	8X0210	NUT 5/16"-18NC HEX GR2 YZ
8X0087	BOLT 5/8-11NC X 1-1/2" GR5 YZ	8X0211	NUT 5/16"-18NC SERFLANG GR2 YZ
8X0090	BOLT 5/8-11NC X 2-1/4" GR5 YZ	8X0212	NUT 5/16"-18NC NY-LOCK GR2 YZ
8X0091	BOLT 5/8-11NC X 1-3/4" GR5 YZ	8X0218	NUT 1/4"-20NC SQ GR2 SS
8X0092	BOLT 5/8-11NC X 2-3/4" GR5 YZ	8X0220	NUT 1/4"-20NC HEX GR2 YZ
8X0093	BOLT 5/8-11NC X 2" GR5 YZ	8X0222	NUT 1/4"-20NC NY-LOCK GR2 YZ
8X0095	BOLT 5/8-11NC X 5" GR5 YZ	8X0223	NUT 1/4"-20NC SERFLANG GR2 YZ
8X0096	BOLT 5/8-11NC X 4" GR5 YZ	8X0232	NUT 7/16"-14NC HEX GR2 YZ
8X0098	BOLT 5/8-11X 3.5"FULLTHDGR5 YZ	8X0234	NUT 7/16"-14NC NY-LOCK GR2 YZ
8X0099	BOLT 5/8-11X6.75"W/3.5THDGR5YZ	8X0240	NUT 1/2"-13NC HEX GR2 YZ
8X0100	BOLT 5/8-11NC X 8" GR8 YZ	8X0242	NUT 1/2"-13NC NY-LOCK GR2 YZ
8X0101	BOLT 5/8-11NC X 8" GR5 YZ	8X0244	NUT 1/2"-13NC FLANG TOP LOCK Z
8X0102	BOLT 5/8-11NC X 9" GR5 YZ	8X0246	NUT 1/2"-13NC SERFLANG GR2 YZ
8X0106	BOLT 3/4X2.75"W/1.38THD GR8 YZ	8X0250	NUT 5/8"-11NC HEX GR2 YZ
8X0107	BOLT 3/4-10NC X 2" GR5 YZ	8X0251	NUT 5/8"-11NC JAM GR2 YZ
8X0110	BOLT 3/4-10NC X 1-1/4" GR5 YZ	8X0253	NUT 5/8"-11NC NY-LOCK GR2 YZ
8X0111	BOLT 3/4-10NC X 2-1/2" GR5 YZ	8X0256	NUT 5/8"-11NC SERFLANG GR2 YZ
8X0112	BOLT 3/4-10NC X 2-1/4" GR5 YZ	8X0259	NUT 3/4"-10NC JAM GR2 YZ
8X0113	BOLT 3/4-10NC X 5" GR5 YZ	8X0260	NUT 3/4"-10NC HEX GR2 YZ
8X0114	BOLT 3/4-10NC X 3" GR5 YZ	8X0261	NUT 3/4"-10NC NY-LOCK GR2 YZ
8X0115	BOLT 3/4-10NC X 3-1/2" GR5 YZ	8X0264	NUT 3/4"-10NC BEVL CNTRLCK YZ
8X0115A	BOLT 3/4NCX 3.5"FULLTHD GR5 YZ	8X0265	NUT 3/4"-10NC CNTRLOCK GR2 YZ
8X0115B	BOLT 3/4-10NC X 3-1/2" GR8 YZ	8X0266	NUT 3/4"-10NC SERFLANG GR2 YZ
8X0116	BOLT 3/4-10NC X 6" GR5 YZ	8X0268	NUT 7/8"-9NC HEX GR2 YZ
8X0117	BOLT 3/4-10NC X 7" GR5 YZ	8X0269	NUT 7/8"-9NC JAM GR2 YZ
8X0118	BOLT 3/4-10NC X 4" GR5 YZ	8X0270	NUT 7/8"-9NC CNTRLOCK GR2 YZ
8X0118A	BOLT 3/4-10NC X 4-1/4" GR5 YZ	8X0274	NUT 7/8"-9NC FLNG GRF YZ
8X0119	BOLT 3/4-10NC X 7-1/2" GR5 YZ	8X0277	NUT 1"-8NC JAM GR2 YZ
8X0120	BOLT 3/4-10NC X 9" GR5 YZ	8X0278	NUT 1"-8NC JAM TOPLOCK GR2 YZ
8X0121	BOLT 3/4-10NC X 6-1/2" GR5 YZ	8X0280	NUT 1"-8NC HEX GR2 YZ
8X0122	BOLT 3/4-10NC X 4-1/2" GR5 YZ	8X0281	NUT 1"-8NC NY-LOCK GR2 YZ
8X0123	BOLT 3/4-10NC X 5-1/2" GR5 YZ	8X0282	NUT 1"-14TPI TOPLOCK GR B Z
8X0125	BOLT 3/4-10NC X 10" GR5 YZ	8X0283	NUT 1-1/4"-7NC JAM GR2 YZ
8X0126	BOLT 3/4-10NC X 7-1/2" GR8 YZ	8X0284	NUT 1-1/4"-7NC HEX GR2 YZ
8X0128	BOLT 3/4-10NC X 8-1/2" GR8 YZ	8X0285	NUT 1-1/2"-6NC HEX GR2 YZ
8X0130	BOLT 7/8-9NC X 2" GR5 YZ	8X0286	NUT 1-1/2"-6NC JAM GR2 YZ
8X0132	BOLT 7/8-9NC X 2-1/2" GR5 YZ	8X0290	NUT 1-1/4"-7NC HEXSLOT GR2 YZ
8X0133	BOLT 7/8-9NC X 3" GR5 YZ	8X0292	NUT 2"-4.5 HVY HEXSLOT GR2 PLN
8X0138	BOLT 1-8NC X 5-1/2" GR5 YZ	8X0292S	NUT 2"NC HEXSLOT MACHIND 1.75"
8X0139	BOLT 1-8NC X 3" GR5 YZ	8X0299	LOCKWASHER 1/4" EXT TOOTH SS
8X0140	BOLT 1-8NCX7" W/1.5"THDGR5 YZ	8X0300	LOCKWASHER 5/16" YLW ZNC
8X0141	BOLT 1-8NC X 7.5" GR5 YZ	8X0301	LOCKWASHER 3/8" YLW ZNC
8X0142	BOLT 1-8NC X 3.5" GR5 YZ	8X0302	LOCKWASHER 7/16" YLW ZNC
8X0143	BOLT 1-8NC X 5" GR5 YZ	8X0303	LOCKWASHER 1/2" YLW ZNC
8X0145	BOLT 1-8NC X 10-1/2" GR5 YZ	8X0304	LOCKWASHER 5/8" YLW ZNC
8X0146	BOLT 1-8NC X 8-1/2" GR5 YZ	8X0306	LOCKWASHER 3/4" YLW ZNC
8X0149	BOLT 1-8NC X 18" GR5 YZ	8X0307	LOCKWASHER 7/8" YLW ZNC
8X0150	BOLT 1-8NC X 20" GR5 YZ	8X0308	LOCKWASHER 1/4" YLW ZNC
8X0201	NUT 3/8"-16NC HEX GR2 YZ	8X0309	LOCKWASHER 1" YLW ZNC
8X0202	NUT 3/8"-16NC NY-LOCK GR2 YZ	8X0311	LOCKWASHER 1-1/4" YLW ZNC

## SECTION 6 – PARTS

Stock code	Description	Stock code	Description
8X0312	WASHER 1/4" X 1-1/4" FENDER SS	8X0432	CLEVIS PIN 1/2 X 6" YZ
8X0315	LOCKWASHER 1-1/2" YLW ZNC	8X0440	CLEVIS PIN 5/8 X 3-7/8" YZ
8X0316	WASHER 1" SAE FLAT YZ	8X0462	CLEVIS PIN 3/8 X 3" W/HL YZ
8X0317	WASHER 3/4" SAE FLAT YZ	8X0480	HITCH PIN W/LYNCH 5/8X4" YZ
8X0318	WASHER 3/4"(13/16"ID)FLAT YZ	8X0520	ROLL PIN 3/16 X 2" ZINC CLEAR
8X0319	WASHER 17/32"IDX7/8ODX16GA YZ	8X0523	ROLL PIN 5/16 X 2-1/2" PLN
8X0320	WASHER 3/8"(7/16" ID)FLAT YZ	8X0528	ROLL PIN 3/8 X 2-1/2" ZINC
8X0323	WASHER 5/8" SAE FLAT YZ	8X0605	SET SCRW SQ HD 7/16-14X 1" YZ
8X0325	WASHER 3/4"(13/16"ID)FLAT PLN	8X0632	SET SCRW SCKT 7/16-14X 1.5"PLN
8X0326	WASHER 1.257"IDX2.75"OD PLN	8X0665	SET SCRW SQ HD 3/4-10X4.5" YZ
8X0327	WASHER 1-1/4" SAE FLAT YZ	8X0708	ZERK 1/4"-28 NF STR YZ
8X0328	WASHER 1.312"IDX2.5 OD-1/4" BL	8X0710	ZERK 1/4"-28 NF 90 DEG YZ
8X0329	WASHER 5/16"(3/8" ID)FLAT YZ	8X0721	ZERK 5/16"-24 NF STR YZ
8X0330	WASHER 17/32"ID X 1.25"OD YZ	8X0725	ZERK 1/8" MPT STR YZ
8X0331	WASHER 15/32"ID X 1.25"OD YZ	8X0727	ZERK 1/8" MPT 90 DEG YZ
8X0332	WASHER 1/4"(5/16" ID) FLAT YZ	8X1120	CRG 3/8-16NC X 2" GR2 ZN
8X0333	WASHER HARROW TOOTH YZ	8Z0070	DECAL "SUMMERS" 1.25 X 6"
8X0338	WASHER 7/8"IDX2.25"OD FLAT YZ	8Z0075	DECAL TRNSPRT LCK WARNING TILL
8X0354	WASHER 1-1/2"IDX2.25"X14GA YZ	8Z0079	DECAL "SUMMERS" 5 X 20"
8X0355	WASHER 1-1/2"IDX2.25"X10GA PLN	8Z0087	DECAL "WARNING"PINCH POINT03-
8X0362	WASHER 2.03IDX2-7/8ODX 9GA PLN	8Z0101	2" SUMMERS DECAL
8X0364	WASHER 2.5 IDX3.5 ODX 14GA YZ	8Z0114	DECAL MH1104 ID (M104)
8X0366	WASHER 2.03IDX2-7/8ODX 1/4"PLN	8Z0115	DECAL MH1105 ID (M105)
8X0367	WASHER 1-3/4"IDX3.25"X14GA PLN	8Z0118	DECAL MH1106 ID (M106)
8X0368	WASHER 1-1/2" SAE FLAT PLN	8Z0119	DECAL MH1108 ID (M108)
8X0370	WASHER 3.016"IDX 3.93"ODX 14GA	8Z0202	3.5" SUMMERS DECAL 14-
8X0380	WASHER 3.06"IDX4.25" X 3/16"	8Z0276	DECAL GENERAL CAUTION 91-
8X0400	HAIRPIN CLIP 1/8 X 1-15/16"	8Z0340	DECAL REPHASING CYLINDERS
8X0402	HAIRPIN CLIP 1/8 X 2-9/16"	8Z0342	DECAL INSTALL CYLINDER LOCKS
8X0410	COTTER PIN 3/16 X 1" YZ	8Z0344	DECAL WING DANGER
8X0414	COTTER PIN 1/4 X 2" YZ	8Z0346	DECAL ELECTROCUTION-TILLAGE
8X0415	COTTER PIN 3/16 X 1-1/2"	8Z0348	DECAL GAUGE WHEEL DEPTH
8X0418	COTTER PIN 5/16 X 2-1/2" YZ	8Z0800	REFLECTOR AMBER ADHSVBCK98-
8X0420	CLEVIS PIN 7/16 X 1-3/4" YZ	8Z0805	REFLCTR REDORANGE ADHSVBK99-
8X0422	CLEVIS PIN 1/2 X 2-1/4" YZ	8Z0810	REFLECTOR RED ADHSV-BACK 98-
8X0425	CLEVIS PIN 1/2 X 3" YZ	8Z1000	MANUAL-PAK 3DIA X 11.75" 09-
8X0428	CLEVIS PIN 1/2 X 5-1/4" YZ	8Z1096	OPER MANUAL CHISLPLOW 16-44'

**SECTION 6 – PARTS**

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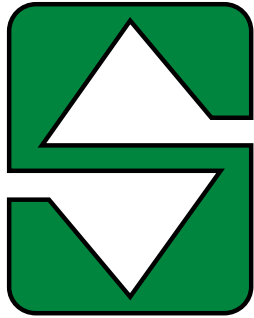
**NOTES**

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# 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.
- 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<sup>®</sup>**

*... Field Tested TOUGH!*



**Tillage**



**Rock Picker**



**Land Rollers/Packers**



**Cultivators/Harrows**



**Mounted Attachments**



**Sprayers**

