

# **4010 AIR TILL DRILL**

## **ASSEMBLY, OPERATORS & PARTS MANUAL**

# PERSONAL SAFETY IS IMPORTANT!

ALL PERSONNEL INVOLVED WITH THE ASSEMBLY AND/OR OPERATION OF THIS EQUIPMENT MUST BE INFORMED OF PROPER SAFETY PROCEDURES. OPERATOR'S/ASSEMBLY MANUALS PROVIDE THE NECESSARY INFORMATION. IF THE MANUAL IS LOST FOR A PARTICULAR IMPLEMENT, ORDER A REPLACEMENT AT ONCE. OPERATOR'S AND ASSEMBLY MANUALS ARE AVAILABLE AT NO CHARGE UPON REQUEST.

This Safety Alert symbol means **ATTENTION! BECOME ALERT, YOUR SAFETY IS INVOLVED!**



The Safety Alert symbol identifies important safety messages on your Wil-Rich DOT Disk and in this manual. When you see this symbol, be alert to the possibility of personal injury or death. Follow the instructions in the safety message.

Why is SAFETY important to you?

## 3 Big Reasons

**Accidents Disable and Kill**  
**Accidents Cost**  
**Accidents Can Be Avoided**

### SIGNAL WORDS:

Note the use of the signal words **DANGER**, **WARNING** and **CAUTION** with the safety messages. The appropriate signal word for each message has been selected using the following guidelines:

### DANGER

An immediate and specific hazard which **WILL** result in severe personal injury or death if the proper precautions are not taken.

### WARNING

A specific hazard or unsafe practice which **COULD** result in severe personal injury or death if the proper precautions are not taken

### CAUTION

Unsafe practices which **COULD** result in personal injury if proper practices are not taken, or as a reminder of good safety practices.

Remove all wires and arrange the parts conveniently.

NOTE: Always wear safety glasses or goggles and be careful when cutting wires and steel bands as they are under tension and will spring back when cut.

Wherever the terms "left" and "right" are used, it must be understood to mean from a position behind and facing the machine.

Lubricate all bearings and moving parts as you proceed and make sure they work freely.

Loosely install all bolts connecting mating parts before final tightening.

When tightening bolts, they must be torqued to the proper number of foot-pounds as indicated in the table unless specified. It is important that all bolts be kept tight.

On new machines, all nuts and bolts must be rechecked after a few hours of operation.

		GRADE 2			GRADE 5			GRADE 8		
TORQUE IN FOOT POUNDS										
BOLT DIA		3/8	1/2	5/8	3/4	7/8	1			
HEX HEAD		9/16	3/4	15/16	1-1/8	1-5/16	1-1/2			
UNC	GR2	18	45	89	160	252	320			
UNC	GR5	30	68	140	240	360	544			
UNC	GR8	40	100	196	340	528	792			
UNF	GR2	21	51	102	178	272	368			
UNF	GR5	32	70	168	264	392	572			
UNF	GR8	48	112	216	368	792	840			

**CAUTION**

**TO AVOID INJURY AND/OR MACHINE DAMAGE:**

- Refer to Operator's Manual for safety instructions.
- Do not stand or climb on machine when operating.
- Use clean hazard flashers and SMV sign when transporting.
- Observe highway traffic regulations.

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## ASSEMBLY INFORMATION

When replacing a bolt, use only a bolt of the same grade or higher. Except in shear bolt applications, where you must use the same grade bolt.

Bolts with no markings are grade 2

Grade 5 bolts furnished with the machine are identified by three radial lines on the head.

Grade 8 bolts furnished with the machine are identified by six radial lines on the head.

All U-bolts are grade 5.

THIS SYMBOL USED TO CALL YOUR ATTENTION TO INSTRUCTIONS CONCERNING YOUR PERSONAL SAFETY. BE SURE TO OBSERVE AND FOLLOW THESE INSTRUCTIONS

### Common Abbreviations

ASSY .....	Assembly
BLD .....	Blade
BLT .....	Bolt
BRKT .....	Bracket
CTR .....	Center
CP .....	Cup Point
(FF) .....	Female Female
GR .....	Grade of Bolt
HD .....	Heavy Duty
HDWE .....	Hardware
HLK .....	Hecial Lock Washer
LH .....	Left Hand
(MF) .....	Male Female
MF .....	Main Frame
MTG .....	Mounting
NC .....	National Course Thread
NF .....	National Fine Thread
NLK .....	Nylon Lock Nut
NPT .....	National Pipe Thread
PLW .....	Plow
RH .....	Right Hand
(OPT) .....	Optional
SST .....	Stainless Steel
TA .....	Tandem
TBP .....	Top Bypass
W/ .....	With
W/O .....	Without
WLDMT .....	Weldment
WSHR .....	Washer

## TO THE OWNER

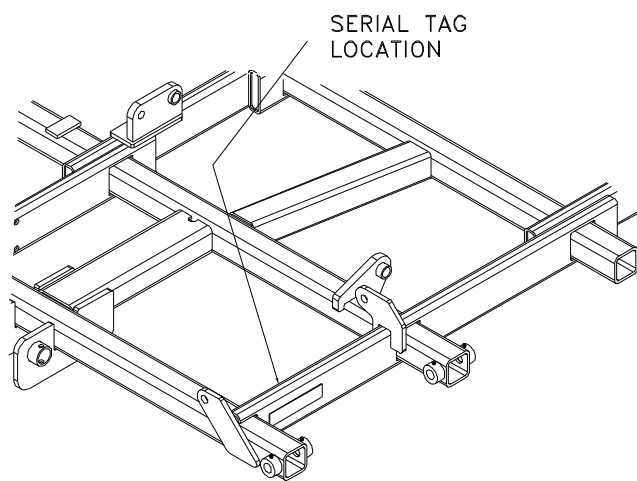
The 4010 AIR TILL DRILL has as standard equipment a clearance lighting package. If your unit is not equipped with this package, it can be ordered by contacting your local dealer or the factory directly.

It is the responsibility of the user to read the Operator's Manual and comply with the safe and correct operating procedures as pertains to the operation, lubrication and maintenance of the product according to the information outlined in the Operator's Manual.

If this machine is used by an employee or is loaned or rented, make certain that the operator(s), prior to operating, is instructed in safe and proper use and reviews and understands the Operator's Manual.

The user is responsible for inspecting his/her machine and for having parts repaired or replaced when continued use of this product would cause damage or excessive wear to the other parts. The word NOTE is used to convey information that is out of context with the manual text; special information such as specifications, techniques, reference information of supplementary nature.

When in need of parts, always specify the model and serial number. Record this information for future reference..



## MODIFICATIONS

It is company policy to improve its products whenever possible and practical to do so. We reserve the right to make changes, improvements and modifications at any time without incurring obligation to make such changes, improvements on any equipment sold previously

All equipment is equipped with a serial number tag to track the unit. The serial number tag is located on the inside of the outer frame tube in the front left corner of the main frame (SEE BELOW). Use the information on this tag to identify when ordering parts or requesting information

**READ THIS MANUAL COMPLETELY BEFORE ANY ASSEMBLY WORK IS STARTED. DO NOT TIGHTEN HARDWARE UNTIL ALL MATING AND RELATED PARTS ARE IN PLACE OR AS IS DIRECTED IN THE ASSEMBLY MANUAL. THIS MANUAL IS SET UP TO GUIDE YOU THROUGH A LOGICAL ASSEMBLY PROCESS. AS ASSEMBLY PERSONNEL BECOME FAMILIAR WITH THE UNIT BUILD OR PROCESS THEY ARE ENCOURAGED TO DEVELOP THEIR OWN APPROACH TO THE SETUP PROCEDURES THAT BEST FITS THEIR TOOLS AND SITUATION.**

## UNIT ASSEMBLY PROCEDURE

**Read and review all assembly instructions before starting assembly of this unit.**

This unit will be packed in a condensed format, usually on a packaging skid. This package may be very heavy and will require the use of some type of fork truck or material handling device to unload the package and break down the parts. Because the various frame components are arranged in a vertical manner any handling equipment must be able to safely lift and position to a height of 12 ft.

Once bundled skids have been properly delivered and positioned in a hard, flat and level area the various frame parts can be removed. **NOTE: the components are banded together in the bundling process and these bands provide the structure to maintain the package. Cutting or removing these bands can cause the components to tip or fall- make certain that the parts are properly supported before removing any bands.**

Once the bundle has been broken down into the individual components locate the main frame of the unit. Assembly of this unit will require some type of stands to support the components during assembly. These stands should be at least 36 in. tall and of adequate strength to support the components.

Position the main frame on the work stands in the center of the assembly area. **NOTE: HARDWARE TO SECURE THE COMPONENTS IS NOTED IN THE ASSEMBLY INFORMATION. UNLESS SPECIFIED ALL NUTS ARE TOP LOCK NUTS. WHEN ASSEMBLING THE COMPONENTS DO NOT TIGHTEN THE LOCK NUTS UNTIL ALL PARTS HAVE BEEN ASSEMBLED. TIGHTEN NUTS TO HOLD PARTS IN POSITION BUT STILL ALLOW ADJUSTMENTS TO BE MADE.**

Position and support the wings level with the main frame and secure with the noted hardware. Support all frames with work stands. Mount the shank assemblies in the positions shown. Mount any required stubs needed to locate all the shank assemblies. **NOTE: it may be necessary to shift the shanks laterally to allow clearance for the shank or springs to clear or to align injectors to the packer wheels. There are also a number of shanks which mount to frame components and do not use the standard top plate.**

Mount the pre-assembled wing lift assemblies to the front frame tubes as located on the shank spacing chart. Mount the front main lift wheel assemblies to the front tube of the main frame. Insert and secure hub & spindles and tires as shown. Locate the main frame and wing packer towers and attach to the rear of the frame, secure with the mast tubes noted. Assemble the center packer mount to the center packer lift bracket and secure with axle clamps and hardware. Slide the inner lift axle pivots onto the end of the center packer mount, slide the rear lift mast into position shown. Slide the center packer hanger onto the ends of the center packer mount and secure.

Attach the wing packer mounts in the same manner as noted above. Position the front part of the hitch in the center of the frame at this point and loosely secure.

Position the front part of the rear hitch and main fold anchor assembly on the top of the rear tube of the main frame and secure. Position the front wing rest/lock and secure. Locate the main frame fold bracket and secure to the wings. Attach the packer lift anchors, center in the adjustment slot, and adjustment bolt to all rear packer sections. Secure the front lift masts to the front main frame tube located laterally as noted.

Position and attach the left and right rear lift axles to the lift axle pivots as shown and secure. Insert hubs & spindles and rims and tires.

## **HYDRAULIC SYSTEM ASSEMBLY**

The drill portion of this unit requires 3 hydraulic circuits to properly operate.

### **MAIN LIFT CIRCUIT**

The main lift circuit is used to raise and lower the complete unit. It consists of a set of 8" stroke sequencing cylinders of varying diameter which, when properly connected and adjusted, will move the unit in a level manner. Unit operating depth is maintained by using stroke control collars of varying length on each lift cylinder (see operating instructions for more information).

Locate the lift cylinders and move to the lift axle areas. Refer to cylinder location instructions (34) to assemble the cylinders to the main frame and wing lift anchors and the rear packer assemblies. Cylinders are mounted with the rod ends up, secured with the pins noted or with the pins that are supplied in the cylinder boxes. Locking roll pins or cotter keys can be used to secure the pins. Locate the cylinder stop collar packages and clip to the storage rods provided at each cylinder location.

Locate the appropriate hydraulic hoses and position in the general areas of the unit as shown in the hose routing instructions. Install noted fittings in all cylinders in the circuit. As shown this system requires that the hoses connect the cylinder's in the correct sequence. Hoses are routed from the tractor to the base end of the largest cylinders, from the rod end of that cylinder to the base end of the next smaller diameter cylinder, etc. Most hoses are run down the center of the unit, secured to the noted mount points or the hose brackets mounted down the side of the rear hitch.

## **HOSE ROUTING/CLAMPING**

Hose should be generally routed as shown in the routing instruction. Since there are many variables to the routing of hoses it is recommended that hoses be routed along frame members as shown. Special attention should be paid to routing hoses away from potential pinch points when folding wings or when working. Note the need for more hose at the hinge points, route the hoses so there is additional length to move as components move. Loosely secure hoses at the hose mount points, fully tighten after final assembly.

### **WING FOLD CIRCUIT**

The wings are folded for transport by two large 5" hydraulic cylinders located at the rear of the unit. Refer to the cylinder location instructions for proper orientation of the cylinders. Attach the base ends of the main wing fold cylinders with the pins noted. Position a wood block spacer under the cylinder to hold the rod end of the cylinder above the outer wing fold linkage attach point. Support the end of the cylinders to allow room for the rods to fully extend without contacting any frame parts.

Locate the required hoses for this circuit, connect the circuit as shown, route and loosely clamp the hoses to the mount mounts.as noted.

### **TRANSPORT LIFT CIRCUIT**

There is a single set of lift cylinders that are used to lift and hold the rear of the unit in the transport position. These cylinders are connected in a simple circuit as noted. Attach the base end of the 4x16 cylinders to the rear lift mast and support the cylinder with a block to allow full extension without contacting machine elements. Locate the required hoses for this circuit, connect the circuit as shown, route and loosely secure the hose at the mounting points.



## **HYDRAULIC SYSTEM CHARGING**

Once all hydraulic circuits have been assembled as noted and the hoses have been attached it is important to properly charge the system.

**NOTE: THE SYSTEMS ON THIS UNIT WILL REQUIRE A LARGE AMOUNT OF HYDRAULIC OIL TO FULLY CHARGE AND PURGE. MAKE CERTAIN THE SYSTEM USED TO CHARGE THE CIRCUITS HAS ADEQUATE HYDRAULIC PRESSURE (2700 PSI MINIMUM) AND CAPACITY. OIL MAY NEED TO BE ADDED TO THE PUMP RESERVOIR TO COMPLETE CHARGING. ALL CIRCUITS MUST BE FULLY CHARGED BEFORE LIFTING OR FOLDING THIS UNIT**

### **CHARGING MAIN LIFT CIRCUIT**

Sequencing systems require that all cylinders be fully charged with oil. This is accomplished by forcing oil into the main or master cylinder, in this case the 5x8 cylinder located on the front hitch. When the cylinder is charged with oil and fully extended it will move into a bypass mode, oil will move out of the rod end port and to the next cylinder in the sequence. That cylinder will extend into bypass and move oil to the next, etc. This initial process can take a considerable amount of time. After all the main lift cylinders have been mounted with both the base and rod ends properly secured and the hydraulic hoses in place apply pressure to the system. Continue to hold pressure on the base 5x8 cylinder as the oil will bypass and extend the next cylinder in the circuit. Continue to apply pressure until all cylinders have been fully extended. Once all cylinders are fully extended, retract the cylinders, all cylinders should retract in sequence. If they are not in sequence fully extend the cylinders and hold pressure to bypass. Fully extend the cylinders again and check to ensure all cylinders are purged and fully extended and are moving in sequence.

**NOTE: It may require that the main lift system be re-sequenced periodically during use.**

## **CHARGING WING FOLD CIRCUIT**

Connect the wing fold circuit to the oil supply and apply pressure. The main frame wing fold cylinders will slowly extend to full extension. Make certain that the cylinders do not contact machine parts while extending and retracting.

**NOTE: the wing fold cylinders may contain a restrictor in the circuit for safety. This restrictor can make the charging of the system seem slow but is necessary. All wing fold cylinders must be fully charged and cycled before connecting the rod ends to the lift brackets.**

Once all cylinders have been charged, fully retracted and fully extended, attach the rod ends to the noted anchor points .

### **CHARGING TRANSPORT LIFT CIRCUIT**

As with the wing fold circuit, support the cylinder while extending and charging. Once the circuit has been charged and cycled, attach the rod ends of the rear transport lift cylinders to the appropriate anchor points and secure.

## **REAR PACKER ASSEMBLY**

Assemble the rear packers frames to the rear packer mounting points.. Insert the packer spring, spring retainer and spring cap. Secure with the hardware noted. Initially tighten the spring bolt to lightly compress the spring. Mount the packer wheels and securely tighten all mounting bolts. Refer to the operational information for additional information on packer settings.

## **FINAL ASSEMBLY**

Attach the front hitch components, insert and secure the all hub & spindles and mount the tire assemblies.

## OPERATIONAL INFORMATION

### INITIAL/PRE-FIELD SETTINGS

Once the unit has been fully assembled and before the unit is folded for transport check to ensure that all hardware has been properly tightened to specifications noted. Check to ensure that there are no loose parts or tools anywhere on the unit.

Attach the unit to the tractor that will be used with the unit and connect all hoses. Raise the unit to full height with the main lift cylinders and hold the lever to purge the system. Move to a flat area, preferably a level concrete surface and position the unit in an open area. Activate the transport lift circuit to raise the rear transport wheels so that the rear of the unit is carried by the rear packer wheels.

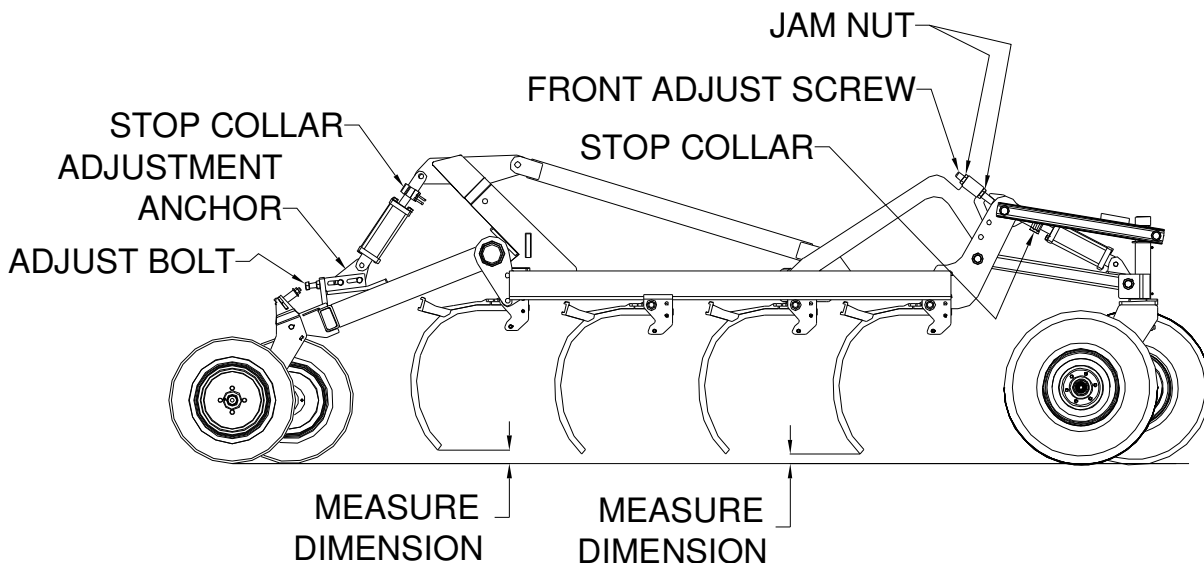
Make certain that all points or attachments are mounted on the unit before doing any pre-field settings. **NOTE: Any settings completed in the yard may need to be altered once the unit is in field use. Pre-field settings will make the final field settings less challenging.**

Once the main lift system has been purged and sequenced lower the unit down so the shanks are 1" to 2" above the ground as shown below. Measure the distance to the ground from a point of a shank on the front rank of the unit. Pick a shank on the outside of the main frame. Measure from the same point of a shank on outside rear of the unit.

If the main frame is not level front to rear an adjustment will need to be made to the rear packer anchor point. Loosen the two anchor bolts to allow the anchor to slide. Use the adjust bolt to raise or lower the rear of the main frame to level the unit.

Check the side to side level of the main frame in a similar manner. Adjust the remaining main frame rear packer anchor to level the unit side to side.

To relieve the pressure on the adjustment anchors to make the adjusting easier, lower the unit to the ground to take the load off the anchors. Adjust as required, fully extend the cylinders to properly sequence the system and lower to the unit so the shanks are 1" to 2" off the ground. Measure as before and continue to fine tune the unit level.





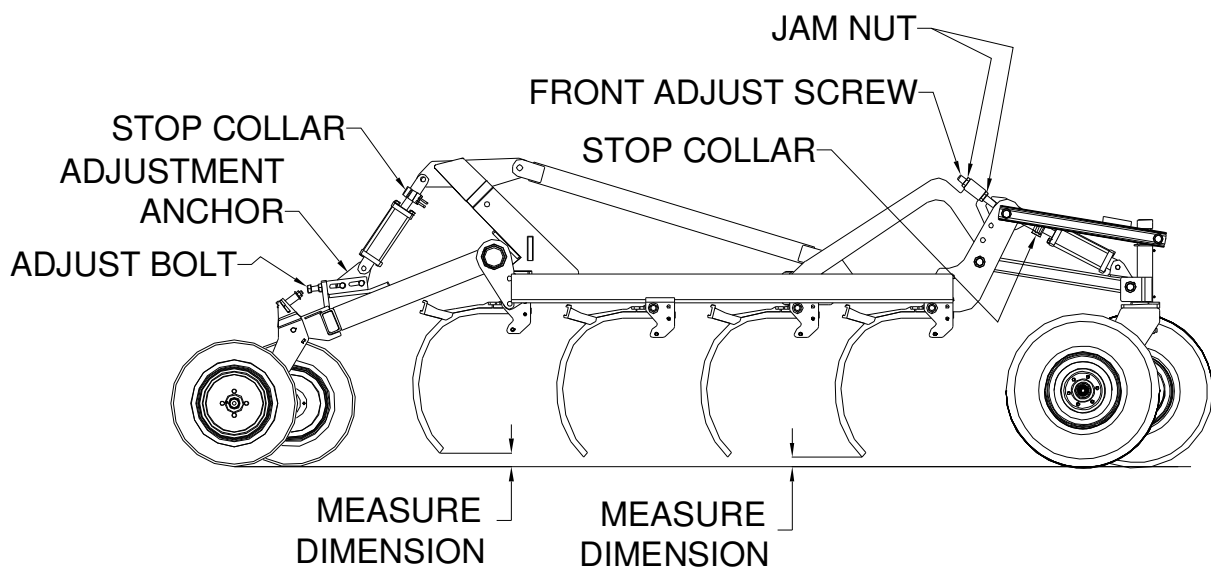
## PRE-FIELD SETTINGS - WINGS

Check the front to rear level of the main wings. As noted below the measured distance between the shank and the ground should be the same as the main frame. To adjust the level front to rear both the front lift wheel and rear packer can be adjusted. Check the distance at the front outside shank location on the wing versus the height of the main frame. If the front of the wing needs to be altered, loosen the jam nuts on the front adjust screw and adjust as required. Once the front of the wing is at the same depth as the main frame, lock the front into position. Measure the rear shank height and adjust the rear packer adjust anchor as required.

As with the main frame, lower the unit to relieve the load on the various anchors to allow easier adjustment,

Once the adjustments to the various anchors have been completed there should be minimal need to readjust these settings. When the unit has been moved to the field and dropped to the seeding depth it is important to recheck the front to rear level and depth of each section. Variations in soil type and loading will effect the operational depth and readjustments may be required.

The adjustments noted above are to level the unit. **To control the seeding depth the stop collars on each lift cylinder must be changed.** A full set of color coded stop collars of varying thickness is provided for each lift cylinder. Use these stop collars to set the seeding depth of the unit. If the seeding depth is too deep, stop collars need to be added to each cylinder. **The cylinders have been sized to allow the addition or removal of the same thickness of stop collars from each cylinder to control depth of seeding.** For example: if the unit is seeding deep all cylinders would have a stop collar of the same color added. As the unit is cycled it may require that the lift system be re-sequenced. Raise the unit and hold the cylinders in the extended position until all cylinders have been purged.



## **WING FOLDING/UNFOLDING**

After the unit has been charged and levelled it can be winged up to the transport position. Make certain that the unit is hitched to a tractor and setting on a level surface when folding the wings. If possible, move the unit to an area where the ground is not as hard but has a loose composition. Move all personnel away from the path of the wings but pay attention to the components when folding.

Before folding the wings, raise the unit to full height with the main lift circuit. Activate the rear transport lift circuit and fully extend the lift cylinders. Place the channel locks into position on these rear transport cylinders. With the front main lift wheel cylinders fully extended manually remove the hair pin from the latch rod (20) and rotate the main lift lock down and latch to the extended lower pivot pin. Place the latch rod into position to retain, securing the front lift wheels into the transport position.

**NOTE: Channel locks must be locked in position on the two rear transport lift cylinders and the front main lift cylinders must be secured before attempting to fold the wings or transporting.**

Once channel locks are in position, activate the wing fold circuit and the wings should begin to fold. When folding for the first time pay attention to the movement of hydraulic or feed hoses, it may require that hoses be moved to prevent kinking or pinching. As the inner wings begin to fold the packer wheels at the hinge point may skid. This should not be a problem when folding the unit in loose ground conditions. Skidding can be reduced by slowly moving forward with the unit as the wings are folded. Forward movement is only required when the wing packer wheels are skidding.

**NOTE: Do not allow personnel to walk under a wing at any time while it is folding or unfolding. Front gage wheels on the wings can abruptly rotate as the wings are folded.**

**NOTE: It is critical to relieve the hydraulic pressure in the wing fold circuit when storing the unit. The wing fold circuit should always be connected to a tractor float valve. After pinning the folded wings make certain there is not pressure in the wing fold circuit. Failure to relieve the pressure may cause the wings to unexpectedly unfold. Wings should always be pinned when unit is stored.**

Continue to fold the inner wings, these wings should fold to a slight over center position. Once the wings have come to rest in the wing rest clevis activate the main lift circuit and pull the packer wheels up. This is necessary to allow clearance in the center of the unit and reduce the transport width.

The front wing rest has provisions to lock or pin the wing for transport. Insert the lock pin into the rest clevis and secure with the provided spring pins.

**NOTE: The wings on this unit must be locked before transporting or storing. Insert the locking pin in the clevis on the front wing lock. Make certain that the wing is unlocked before attempting to unfold the wings. Approach the wings from the front when locking or unlocking the wings, never go into the wing fold path to lock or unlock the wings.**

To unfold the wings reverse the process. Fully extend the main fold cylinders after unpinning the wings. Unfold the wings, moving slowly forward as the packers on the inner wing contact the ground. The main frame and wing lift wheels and rear packer wheels must be on the ground to support the wings when they touch down.

Remove the transport channels from the rear lift wheel cylinders and store. Unlock the front main lift wheel cylinders by rotating the latch arms up and pinning to hold parallel to the top link arm..

## TRANSPORTING UNIT

The 4010 Air Till Drill should be fully folded with the wings locked before transporting. **NOTE: This unit should never be transported without the transport locks/pins installed in the front and rear transport cylinders.** Store the channel locks/pins on the storage bars or locations as noted. The front main frame wheel should be fully extended and the locking pins utilized whenever the unit is transported (see page 18)

When hitched to the tractor and with a seeder cart attached to the rear hitch the whole machine is quite long. Care must be taken when transporting. When turning the seeder unit will rotate about the rear transport wheels requiring a large turning radius. Never transport the complete unit at high speeds during field use or on the highway. **(MAXIMUM TRANSPORT SPEED - 25 M.P.H.)** Make certain the tractor is properly weighted to handle the heavy pull load. Use care when moving across uneven ground or poor roads. Do not transport at unsafe speeds on narrow , rough roads. Do not carry the unit off the side of the road where the right side carrying wheels are off the main roadbed. If it is necessary to move off the road to allow traffic to pass, pull off the road slowly or stop and allow traffic to pass.

Use caution when backing the unit up when attached to the seeder supply tank.

### STORAGE

Unit should be stored inside and unfolded if possible Park the unit in a flat, level area. Unfold the wings to remove the load from the main frame carrying wheels. **NOTE: Never remove the main transport channel locks and lower the unit to the ground with the main wings folded.**

If the unit is parked on a soft surface place support under the lift wheels to prevent sinking into the ground. When storing the unit at any time, if hitched to a tractor or not, always relieve the pressure to the wing fold circuit. This can be accomplished by using the float circuit of the tractor. Move the hydraulic lever to the float position to relieve pressure in the wing fold circuit before turning off or unhitching the tractor.

## FIELD OPERATIONS

Following the completion of the assemble and pre-field settings the unit can be attached to the rear seed supply system. Refer to the provided information on the supply system for setup and operational information on that portion of the seeding system.

Enter the field and unfold the wings of the unit. Pressurize the main lift hydraulic circuit to sequence the main lift cylinders. Activate the transport lift circuit, remove and store the channel locks. Fully retract the rear transport cylinders. Pull forward with the air system engaged and lower the unit into the ground. Set the initial depth of operation without using any stop collars. Stop and check the depth of operation of the main frame. Install the required amount of stop collars in the main frame cylinders to place the unit at the desired working depth. The cylinders should be fully retracted and held by stop collars. Check the front and rear and side to side depth of operation and adjust the rear packer adjustment anchor or front lift axles as noted in the PRE-FIELD SETTINGS instructions.

Once main frame is set to desired depth, raise the unit to full height and hold for 1 minute. Place the same combination of stop collars in all remaining lift cylinders. Lower the unit into the ground while moving forward and stop. Check the depth and level of the wings and readjust as noted in the PRE-FIELD SETTINGS if required.

**If main frame or wing depth needs to be changed to be level, do not add or remove stop collars from that cylinder. Readjust the various adjustment anchors.**

With a sequencing lift system if one cylinder is stopped by use of additional stop collars all cylinders in the circuit will stop and the depth settings on the remaining cylinders in the circuit will be impacted. **All lift cylinders should use the same combination or amount of stop collars.**

Move through the field and observe the general operation of the unit. Check the movement of the rear packers arms. If there is excessive vertical movement or bouncing of the packer wheels it may require that the packer compression spring be tightened. It is generally best to have limited pivoting of the packer arms when seeding. Arms should only rotate when encountering a large soil mound or rocks. Tighten the lock nut on the packer spring to increase the holding force.

As with all machinery it will be necessary to check the tightness of all hardware after 4-6 hours of use. As the various components seat there will be parts that need to be adjusted. Hardware that is retaining parts that do not rotate or move should be checked after the first day of use and weekly after that. Parts such as packer wheel pivots or parts that need to wear in or seat should be checked and adjusted more frequently.

Refer to the GREASING information on DECAL LOCATIONS/GREASE FITTING page for grease locations and frequency.

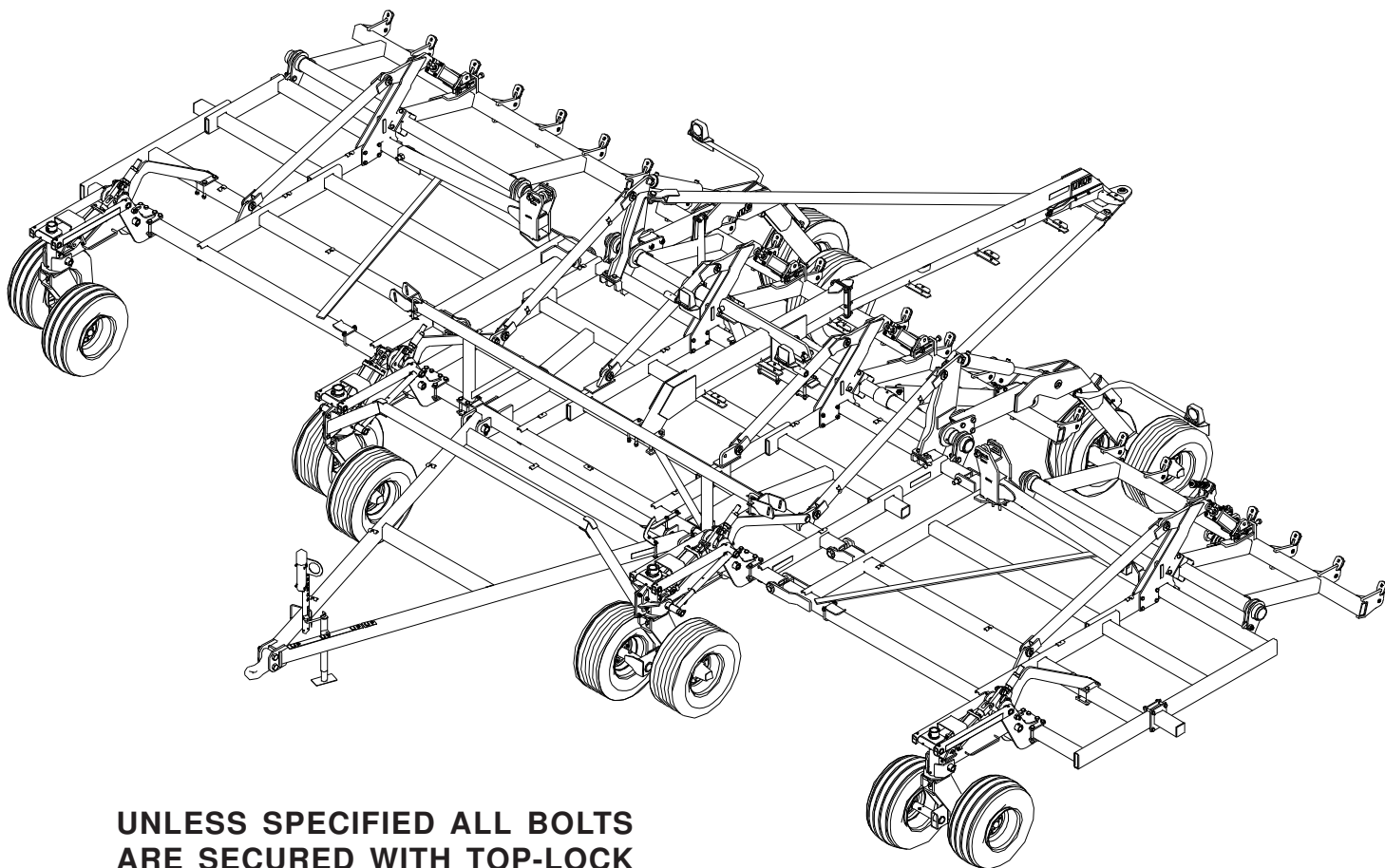
## **TIRE INFLATION**

The main frame front lift and rear transport tires (31x13.5 12 ply) should be inflated to 60-65 PSI. If there appears to be sidewall flex in these lift tires the pressure can be increased to 70-75 PSI. The wing front lift tire should be inflated to 50-60 PSI.

The rear packer tires can be set at 15-35 PSI depending on packing and load requirements. A lower setting will allow the tires to pack a somewhat wider area and shed mud, but there must be sufficient tire pressure to limit sidewall flex and support the rear weight of the unit. Set initial pressure to 15 PSI and increase or decrease as conditions dictate.

# FULL UNIT OVERVIEW

This page shows an overview of the complete unit as a reference guide to understanding the general layout of the unit. Please refer to the individual assembly instructions for specific information, some illustrations that are for reference may not exactly match the current part configurations..



**UNLESS SPECIFIED ALL BOLTS  
ARE SECURED WITH TOP-LOCK  
LOCK NUTS**

PART NO.	DESCRIPTION
88125	NUT HEX 1-8NC 5Z
88141	NUT JAM 1-8NC 5Z
88430	NUT 2POSLK 1-1/4-7NC 5Z
88622	NUT JAM 1-1/4-7NC 5Z
88658	NUT TOP LK 1-8NC 5Z
88659	NUT TOP LK 3/8-16NC 5Z
88661	NUT TOP LK 1/2-13NC 5Z
88665	NUT TOP LK 3/4-10NC 5Z
88831	NUT TOP LK 7/8-9NC 5Z
88845	NUT TOP LK 5/8-11NC 5Z



# **SAFETY**

Safety decals appear at various locations on your machine. The decals are provided for your safety and must be kept clean. Replace any decal that becomes worn, damaged, painted over or otherwise difficult to read. Replacement decals are available through your specified dealer contact.

## **BEFORE OPERATING**

Use extreme care when making adjustments.

When working under or around the machine always lower shanks to the ground. It is not recommended to set points with cast inserts on cement as the impact may break the casting. We recommend setting blocks under the shank to keep points from resting on cement. After servicing, be sure all tools, parts, or service equipment is removed from the machine.

Make sure there is no one near the machine before or during operation.

## **DURING OPERATION**

Reduce speed when cornering on field ends and when operating on or across dead furrows.

Do not attempt to remove any obstruction while the machine is in motion.

Use extreme care when operating close to ditches, fences or on hillsides.

No one other than the operator should ride on the tractor.

Before and during operation be sure no one is on or around the implement. Serious injury can result from improper use.

## **ON HIGHWAY OPERATION**

Comply with your local laws governing highway safety when moving machinery on a highway.

Reduce road speed on corners.

Drive at a responsible speed to maintain complete control of the machine at all times.

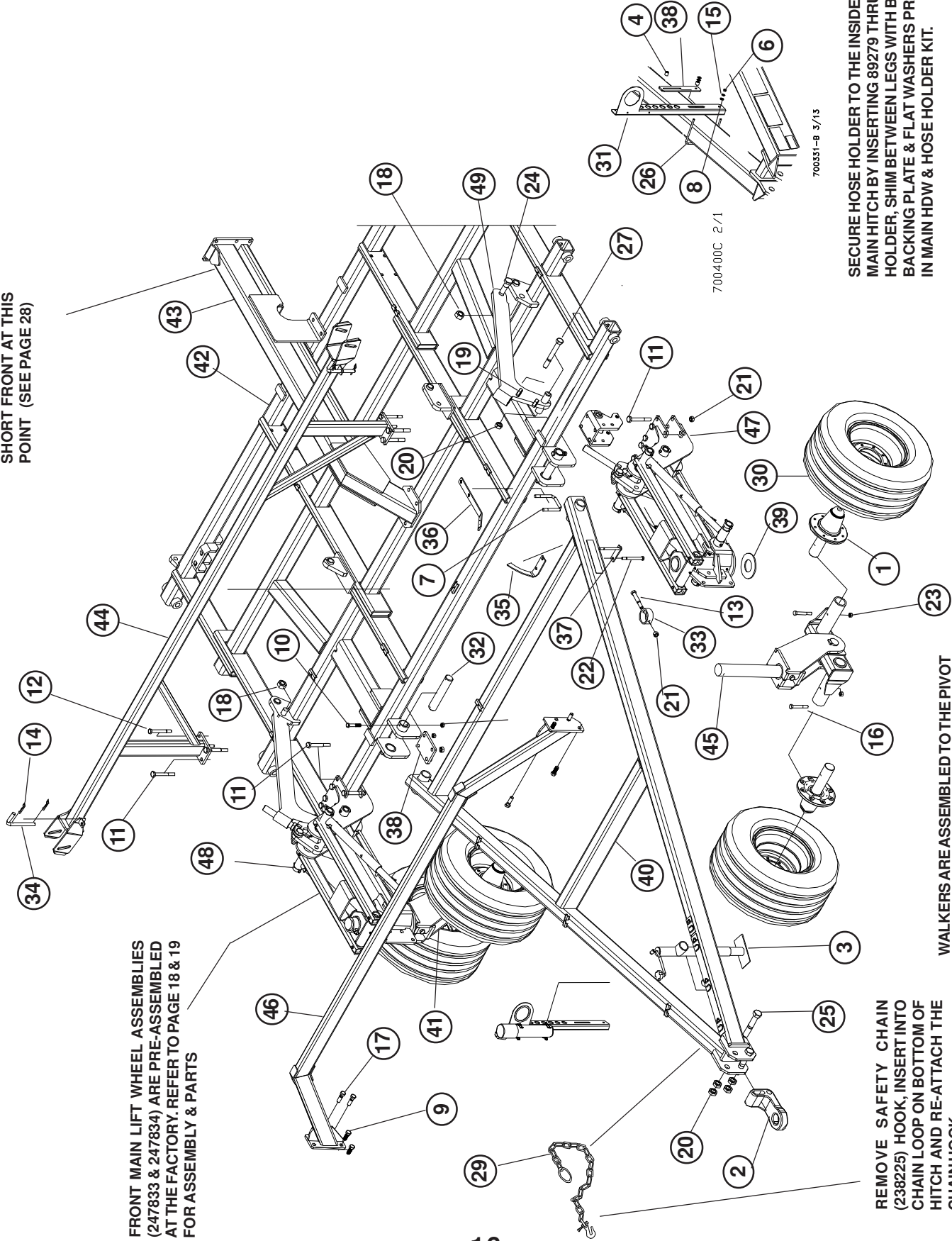
An S.M.V. emblem and safety lights must be used at all times while traveling on public roads.



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# MAIN FRAME/FRONT HITCH ASSEMBLY

POSITION AND MOUNT  
243908 ATD HITCH -  
SHORT FRONT AT THIS  
POINT (SEE PAGE 28)



FRONT MAIN LIFT WHEEL ASSEMBLIES  
(247833 & 247834) ARE PRE-ASSEMBLED  
AT THE FACTORY. REFER TO PAGE 18 & 19  
FOR ASSEMBLY & PARTS

REMOVE SAFETY CHAIN  
(238225) HOOK, INSERT INTO  
CHAIN LOOP ON BOTTOM OF  
HITCH AND RE-ATTACH THE  
CHAIN HOOK

WALKERS ARE ASSEMBLED TO THE PIVOT  
AXLE, NOTE ORIENTATION & PLACEMENT  
ON THE UNIT.

SECURE HOSE HOLDER TO THE INSIDE OF THE  
MAIN HITCH BY INSERTING 89279 THRU HOSE  
HOLDER, SHIM BETWEEN LEGS WITH BUSHING,  
BACKING PLATE & FLAT WASHERS PROVIDED  
IN MAIN HDW & HOSE HOLDER KIT.

700400C 2/1

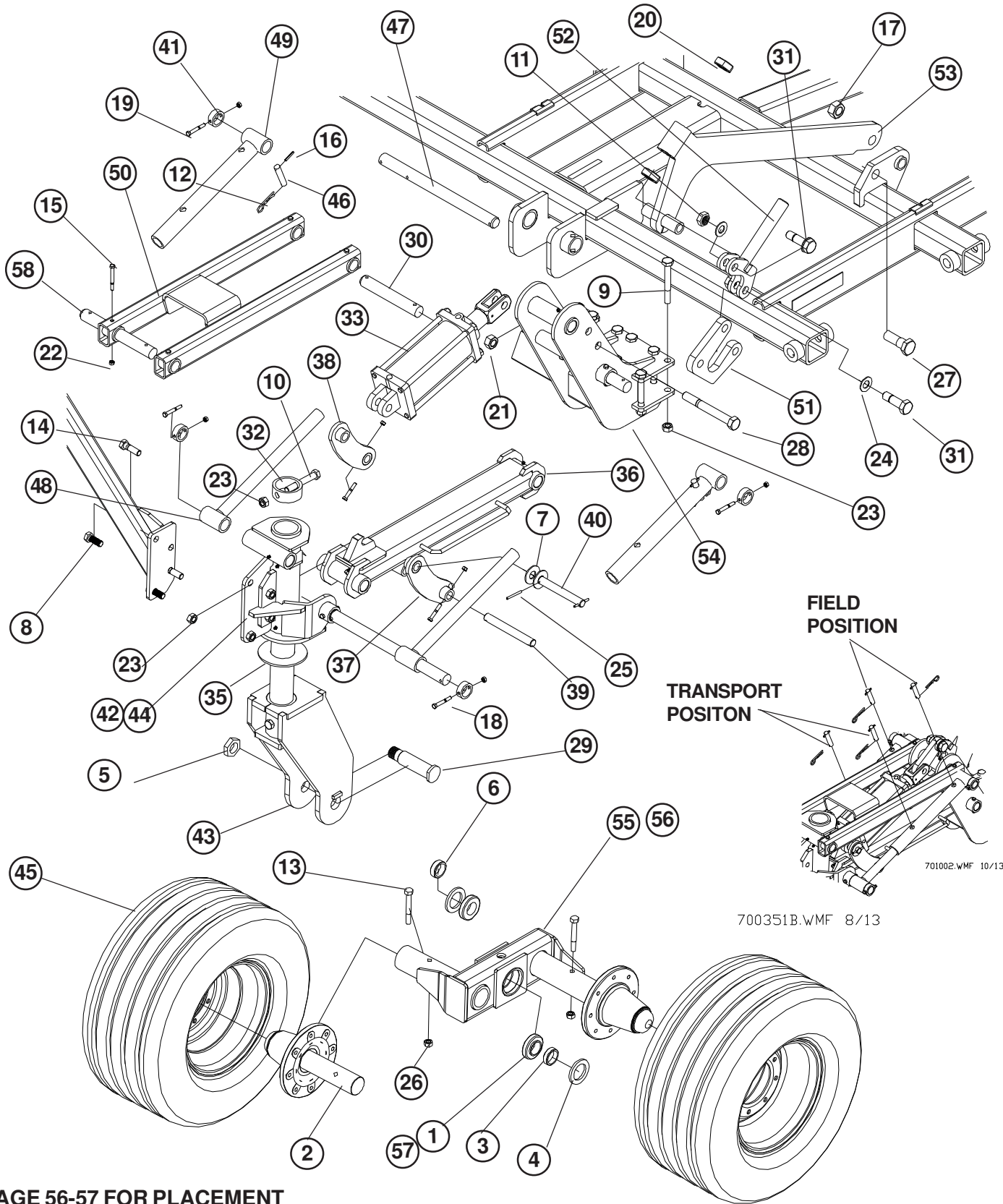
700331-B 3/13

# MAIN FRAME/FRONT HITCH ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY
1	16154	2-1/2" HUB & SPINDLE ASSY	4
2	18236	CAST DUAL HITCH	1
3	24415	JACK	1
4	59884	3/4OD X .75 IDLER BUSHING	2
5	79300	UTILITY POLE ASSEMBLY INSRUT	1
6	88103	NUT HEX 3/8-16NC 5Z	2
7	88145	BLT-U 5/8-11NC X 4 X 5-1/4 Z	1
8	88282	WSHR FLAT 3/8(7/16 X 1ACT) Z	2
9	88290	BLT HEX 3/4-10NC X 2 8YZ	4
10	88292	BLT HEX 5/8-11NC X 3-1/2 5Z	4
11	88293	BLT HEX 3/4-10NC X 6 5Z	26
12	88295	BLT HEX 5/8-11NC X 6 5Z	4
13	88305	BLT HEX 3/4-10NC X 5 5Z	2
14	88352	PIN SPRLK 3/16 X 3-1/4 PRLS6 Z	4
15	88362	WSHR HLK 3/8ID Z	2
16	88381	BLT HEX 5/8-11NC X 4-1/2 5Z	4
17	88404	BLT HEX 3/4-10NC X 2-1/2 5Z	4
18	88430	NUT 2POSLK 1-1/4-7NC 5Z	2
19	88622	NUT JAM 1-1/4-7NC 5Z	8
20	88658	NUT TOP LK 1-8NC 5Z	2
21	88665	NUT TOP LK 3/4-10NC 5Z	30
22	88676	BLT HEX 1/2-13NC X 6-1/2 5Z	2
23	88845	NUT TOP LK 5/8-11NC 5Z	10
24	89029	BLT HEX 1-1/4-7NC X 4 5Z	2
25	89134	BLT HEX 1-1/4-7NC X 7 5Z	2
26	89279	BLT-U 3/8-16NC X 7 X 6-1/4 Z	1
27	89373	BLT HEX 1-8NC X 8-1/2 8YZ	2
28	221196	MOUNT PLATE - PAINTED GRAY	1
29	238225	40K SAFETY CHAIN	1
30	246254	WHL ASSY 13.50-15FI 8B 10IN HWY	4
31	236142	FORMED CHANNEL-HYD HOSE BRKT	1
32	241547	FRONT PIN (PLATED)	2
33	241563	TOP TUBE	2
34	241652	WING LOCK PIN (PLATED)	2
35	241677	SENSOR MOUNT	1
36	241678	SENSOR PLATE	1
37	241679	TIE STRAP	1
38	241777	BACKING PLATE	1
39	242932	LARGE WEAR PLATE	2
40	243034	MAIN HITCH 40FT ATD LT	1
41	243044	RIGHT MAIN AXLE ASSY - LT	1
42	243073	MAIN FRAME - ATD - 10 INCH LT	1
43	243908	ATD HITCH - SHORT FRONT	1
44	243919	FRONT WING REST - 40FT ATD LT	1
45	243946	LEFT MAIN AXLE ASSY - LT	1
46	244523	MAIN PIVOT TIE TUBE	1
47	351545	LEFT MAIN LIFT ASSY - 4010 - 2013	1
48	351548	RIGHT MAIN LIFT ASSY - 4010 - 2013	1
49	351649	MAIN MAST BRACE - LT	2

**UNLESS SPECIFIED, ALL HARDWARE IS SECURED WITH MATCHING LOCK NUTS.  
 QUANTITIES MAY VARY BY MODEL CONFIGURATION.**

# MAIN FRAME LIFT WHEEL ASSEMBLY



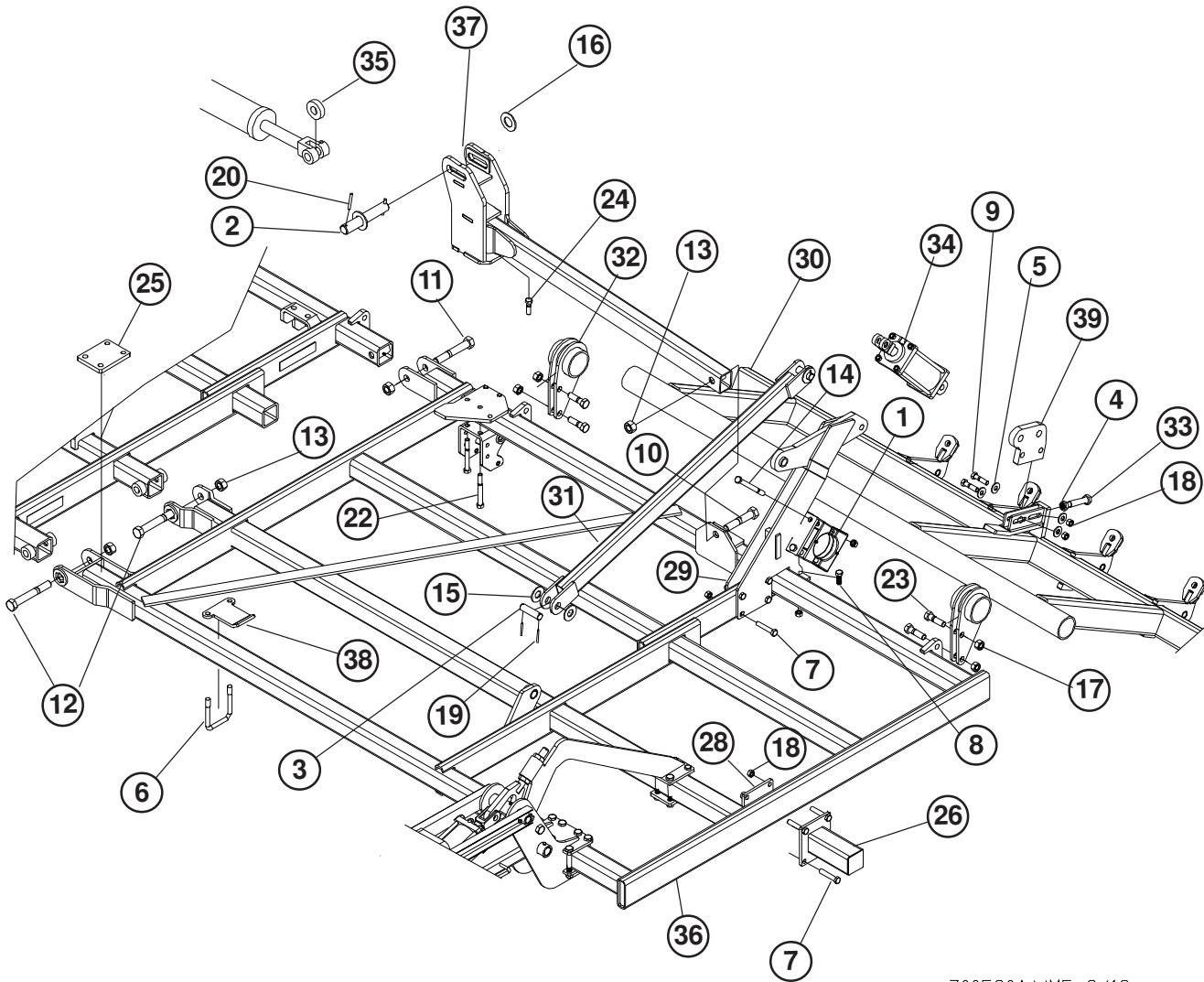
SEE PAGE 56-57 FOR PLACEMENT OF FRONT MAST MOUNTS

# MAIN FRAME LIFT WHEEL ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY
1	12103	BEARING CONE 1-3/4ID (25580)	2
2	16154	2-1/2" HUB & SPINDLE ASSY	2
3	16278	BEARING BUSHING	1
4	26120	2.25ID X 3.40 OD TRIPLE LIP SEAL	2
5	42082	NUT 1-1/2NF HYDRA JAM LOCK	1
6	54599	WALKER BEARING BUSHING	1
7	88196	WSHR FLAT 1(1-1/16 X 2-1/2ACT) Z	2
8	88290	BLT HEX 3/4-10NC X 2 8YZ	2
9	88293	BLT HEX 3/4-10NC X 6 5Z	11
10	88305	BLT HEX 3/4-10NC X 5 5Z	1
11	88348	NUT 2POSLK 1-8NC 5Z	2
12	88352	PIN SPRLK 3/16 X 3-1/4 PRLS6 Z	2
13	88381	BLT HEX 5/8-11NC X 4-1/2 5Z	2
14	88404	BLT HEX 3/4-10NC X 2-1/2 5Z	2
15	88412	BLT HEX 3/8-16NC X 3-1/2 5Z	4
16	88415	PIN ROLL 1/4DIA X 1-1/2 Z	2
17	88430	NUT 2POSLK 1-1/4-7NC 5Z	1
18	88581	BLT HEX 3/8-16NC X 2-1/4 5Z	2
19	88582	BLT HEX 3/8-16NC X 2-3/4 5Z	7
20	88623	NUT JAM 1-1/2-6NC 5Z	2
21	88658	NUT TOP LK 1-8NC 5Z	1
22	88659	NUT TOP LK 3/8-16NC 5Z	13
23	88665	NUT TOP LK 3/4-10NC 5Z	16
24	88738	WSHR FLAT 1SAE(1-1/16 X 2ACT) Z	4
25	88767	PIN ROLL 1/4DIA X 2-1/2 Z	2
26	88845	NUT TOP LK 5/8-11NC 5Z	2
27	89029	BLT HEX 1-1/4-7NC X 4 5Z	1
28	89373	BLT HEX 1-8NC X 8-1/2 8YZ	1
29	235245	TANDEM PIN	1
30	235801	PIVOT PIN (1-1/2 X 10)	2
31	237506	BLT HEX, 1 IN NC X 3-1/2 IN (1.25 IN) GR. 5	2
32	241563	TOP TUBE	1
33	241624	HYD CYL 5X8 SEQ	1
34	241654	TUBE	1
35	242932	LARGE WEAR PLATE	1
36	244500	LOWER INNER ARM	1
37	244505	TRANSPORT ARM RIGHT	1
38	244506	TRANSPORT ARM LEFT	1
39	244517	LINK PIN (ZP)	1
40	244529	PIN (1 X 7.50) ZP	1
41	244541	END COLLAR (ZINC)	4
42	244560	ATD GAGE WHEEL PIVOT - LEFT	1
43	244590	FRONT AXLE PIVOT - ATD LT	1
44	244592	ATD GAGE WHEEL PIVOT - RIGHT	1
45	246254	WHL ASSY 13.50-15FI 8B 10IN HWY	2
46	247789ZE	LOCK PIN (ZINC)	2
47	247790	MAST LOCK PIN (ZINC)	2
48	247791	LOCK BAR - MALE	2
49	247794	UPPER SLIDE TUBE	2
50	247798	UPPER LINK ARM	1
51	247808	MAST ANCHOR	1
52	247811	ANCHOR ADJUST	1
53	351649	FRONT AXLE PIVOT - ATD LT	1
54	351549	FRONT ATD MAST MOUNT - 4010-2013	1
55	221347D1	RIGHT 3X11 HD WALKING TANDEM	1
56	221347D1R	LEFT 3X11 HD WALKING TANDEM	1
57	12104	BEARING CUP 3.265OD (25520)	2
58	353665	EXTENDED PIVOT PIN	2

**UNLESS SPECIFIED, ALL HARDWARE IS SECURED WITH MATCHING LOCK NUTS.  
QUANTITIES MAY VARY BY MODEL CONFIGURATION.**

# LEFT WING ASSEMBLY



700530A.WMF 8/13

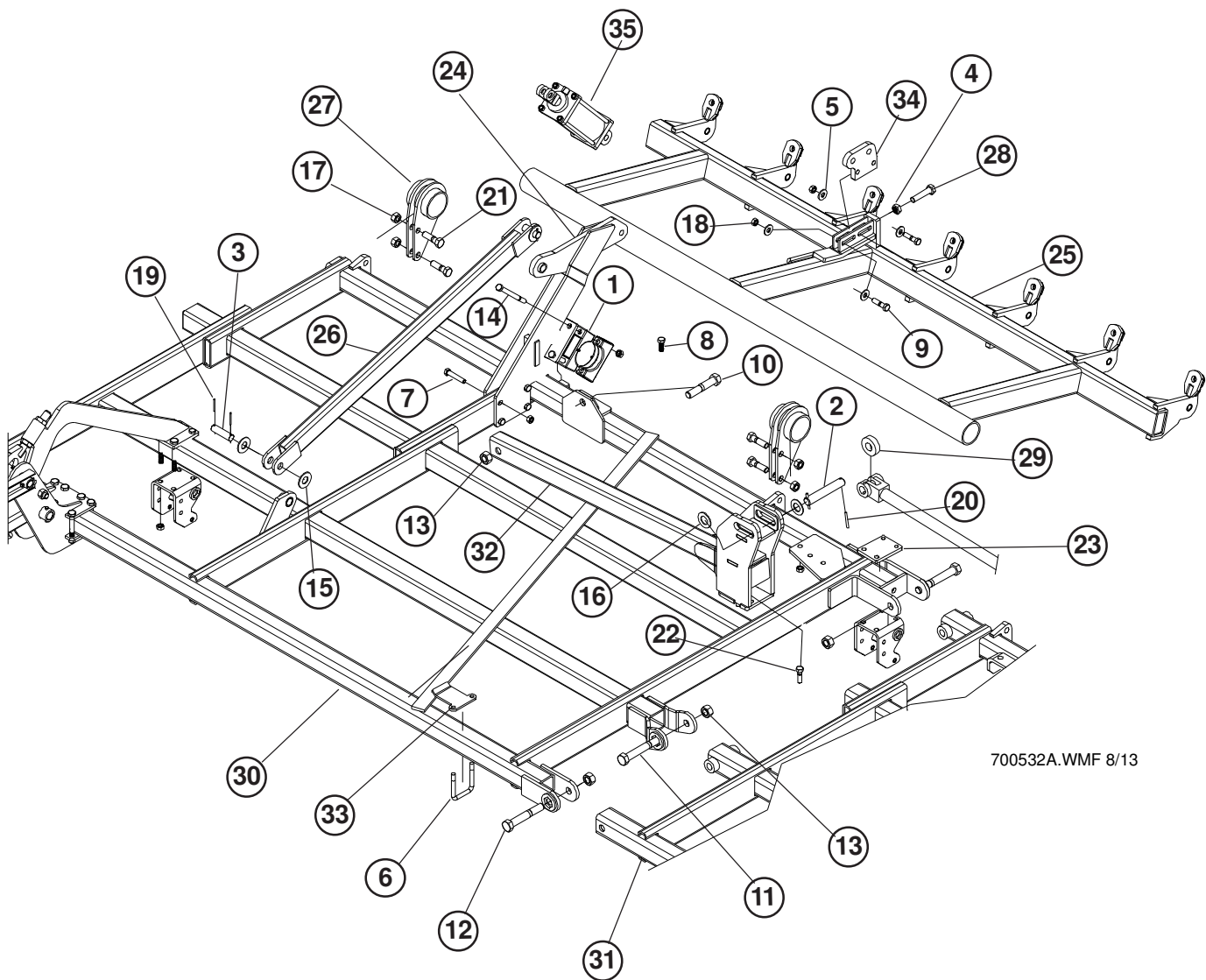
**UNLESS SPECIFIED, ALL HARDWARE IS SECURED WITH MATCHING LOCK NUTS.  
QUANTITIES MAY VARY BY MODEL CONFIGURATION.**



# LEFT WING ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY
1	34132	AXLE CLAMP ASSEMBLY (RED)	4
2	65693	HEADLESS PIN(2) 1-1/2X8-7/8	1
3	67854	HEADLESS PIN(2) 1-1/4X4-1/2	2
4	88125	NUT HEX 1-8NC 5Z	1
5	88131	WSHR FLAT 3/4(13/16 X 2ACT) Z	4
6	88145	BLT-U 5/8-11NC X 4 X 5-1/4 Z	1
7	88272	BLT HEX 3/4-10NC X 4 5Z	8
8	88290	BLT HEX 3/4-10NC X 2 8YZ	2
9	88291	BLT HEX 3/4-10NC X 3 5Z	2
10	88349	BLT HEX 1-1/4-7NC X 6-1/2 5Z	1
11	88427	BLT HEX 1-1/4-7NC X 8 5Z	1
12	88428	BLT HEX 1-1/4-7NC X 9 5Z	2
13	88430	NUT 2POSLK 1-1/4-7NC 5Z	4
14	88487	BLT HEX 3/4-10NC X 8-1/2 5Z	4
15	88602	WSHR FLAT 1-1/4(1-3/8 X 3ACT) Z	4
16	88610	WSHR FLAT 1-1/2SAE(1-9/16 X 3) Z	2
17	88658	NUT TOP LK 1-8NC 5Z	4
18	88665	NUT TOP LK 3/4-10NC 5Z	18
19	88767	PIN ROLL 1/4DIA X 2-1/2 Z	6
20	88771	PIN ROLL 3/8DIA X 3 Z	2
21	88845	NUT TOP LK 5/8-11NC 5Z	2
22	89130	BLT HEX 3/4-10NC X 6-1/2 5Z	4
23	89371	BLT HEX 1-8NC X 3-1/2 8YZ	4
24	89389	BLT HEX 3/4-10NC X 2-1/2 8YZ	1
25	221196	MOUNT PLATE - PAINTED GRAY	2
26	222193	CP SHANK STUB	1
27	222338	HEADLESS PIN(2) 1X4-1/8	1
28	233232	STUB PLATE PAINTED	1
29	240488	PACKER LIFT BRACKET	1
30	240523	RIGHT INNER WING PACKER GANG - 6010	1
31	240577	WING MAST TUBE	1
32	241513	CENTER PACKER HANGER	2
33	241572	ADJUSTMENT SCREW	1
34	241622	HYD CYL 4-1/2X8 SEQ	1
35	241699	WING FOLD ROLLER	1
36	243049	LEFT WING - 40FT ATD LT	1
37	243904	MAIN FRAME FOLD BRACKET	1
38	247840	WING FOLD STOP	1
39	350919	PACKER LIFT ANCHOR	1

# **RIGHT WING ASSEMBLY**



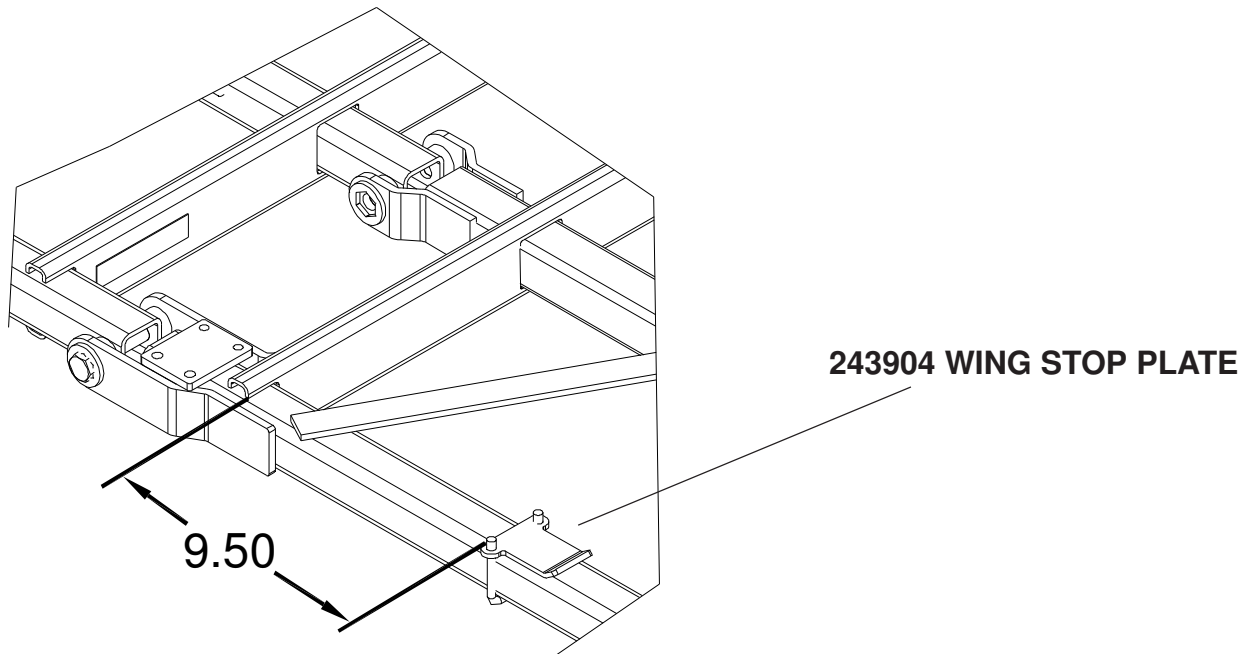
700532A.WMF 8/13

**UNLESS SPECIFIED, ALL HARDWARE IS SECURED WITH MATCHING LOCK NUTS.  
QUANTITIES MAY VARY BY MODEL CONFIGURATION.**

## RIGHT WING ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY
1	34132	AXLE CLAMP ASSEMBLY (RED)	4
2	65693	HEADLESS PIN(2) 1-1/2X8-7/8	1
3	67854	HEADLESS PIN(2) 1-1/4X4-1/2	2
4	88125	NUT HEX 1-8NC 5Z	1
5	88131	WSHR FLAT 3/4(13/16 X 2ACT) Z	4
6	88145	BLT-U 5/8-11NC X 4 X 5-1/4 Z	1
7	88272	BLT HEX 3/4-10NC X 4 5Z	4
8	88290	BLT HEX 3/4-10NC X 2 8YZ	2
9	88291	BLT HEX 3/4-10NC X 3 5Z	2
10	88349	BLT HEX 1-1/4-7NC X 6-1/2 5Z	1
11	88427	BLT HEX 1-1/4-7NC X 8 5Z	1
12	88428	BLT HEX 1-1/4-7NC X 9 5Z	2
13	88430	NUT 2POSLK 1-1/4-7NC 5Z	4
14	88487	BLT HEX 3/4-10NC X 8-1/2 5Z	4
15	88602	WSHR FLAT 1-1/4(1-3/8 X 3ACT) Z	4
16	88610	WSHR FLAT 1-1/2SAE(1-9/16 X 3) Z	2
17	88658	NUT TOP LK 1-8NC 5Z	4
18	88665	NUT TOP LK 3/4-10NC 5Z	15
19	88767	PIN ROLL 1/4DIA X 2-1/2 Z	4
20	88771	PIN ROLL 3/8DIA X 3 Z	2
21	89371	BLT HEX 1-8NC X 3-1/2 8YZ	4
22	89389	BLT HEX 3/4-10NC X 2-1/2 8YZ	3
23	221196	MOUNT PLATE - PAINTED GRAY	1
24	240488	PACKER LIFT BRACKET	1
25	240521	LEFT INNER WING PACKER GANG - 6010	1
26	240577	WING MAST TUBE	1
27	241513	CENTER PACKER HANGER	2
28	241572	ADJUSTMENT SCREW	1
29	241699	WING FOLD ROLLER	1
30	243048	RIGHT INNER ATD WING - LT	1
31	243073	MAIN FRAME - ATD - 10 INCH LT	1
32	243904	MAIN FRAME FOLD BRACKET	1
33	247840	WING FOLD STOP	1
34	350919	PACKER LIFT ANCHOR	1
35	241622	HYD CYL 4-1/2X8 SEQ	1

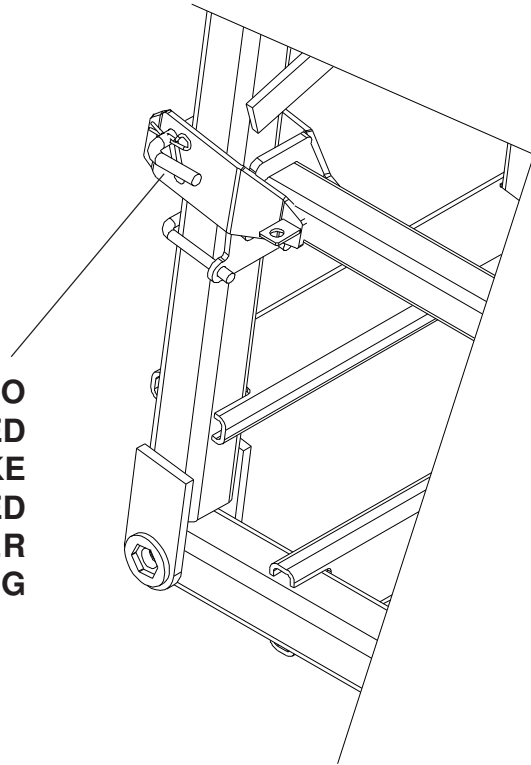
# WING FOLD STOP PLATE ASSEMBLY



700799A.WMF 1-11-11

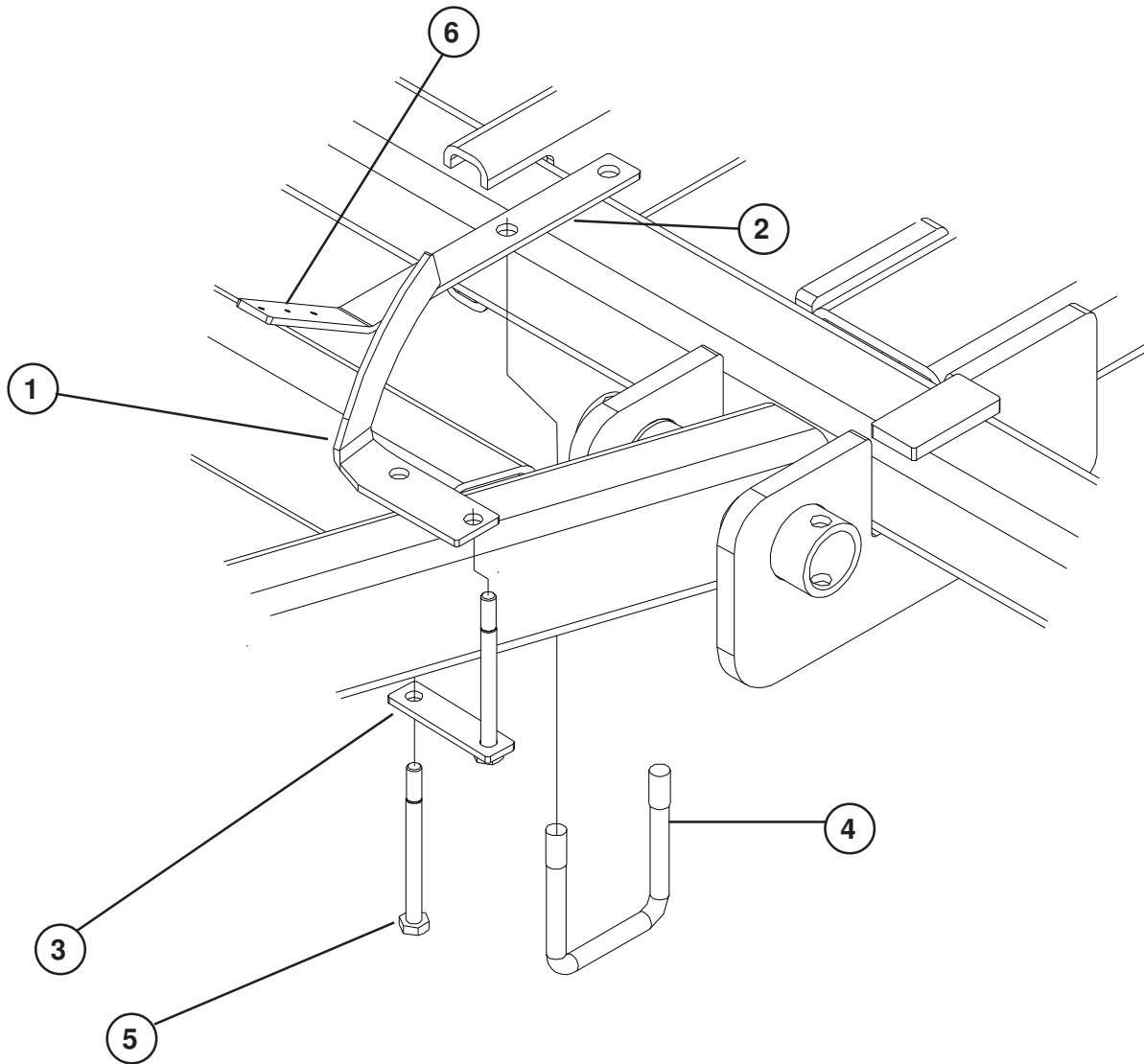
**POSITION WING STOP PLATE AS SHOWN ON BOTH WINGS. SECURE WITH 5/8 U-BOLT AND LOCK NUTS**

**STOP PLATE CAN BE MOVED SLIGHTLY TO CHANGE THE WING FOLD POSITION AS REQUIRED TO ADDRESS ANY FOLDING INTERFERENCE. MAKE CERTAIN THAT THE WING LOCK PIN CAN BE USED TO LOCK THE WING FOR TRANSPORT. NEVER TRANSPORT THE UNIT WITHOUT THE WING LOCKED.**



700799B.WMF 1-11-11

# IMPLEMENT SENSOR MOUNT ASSEMBLY

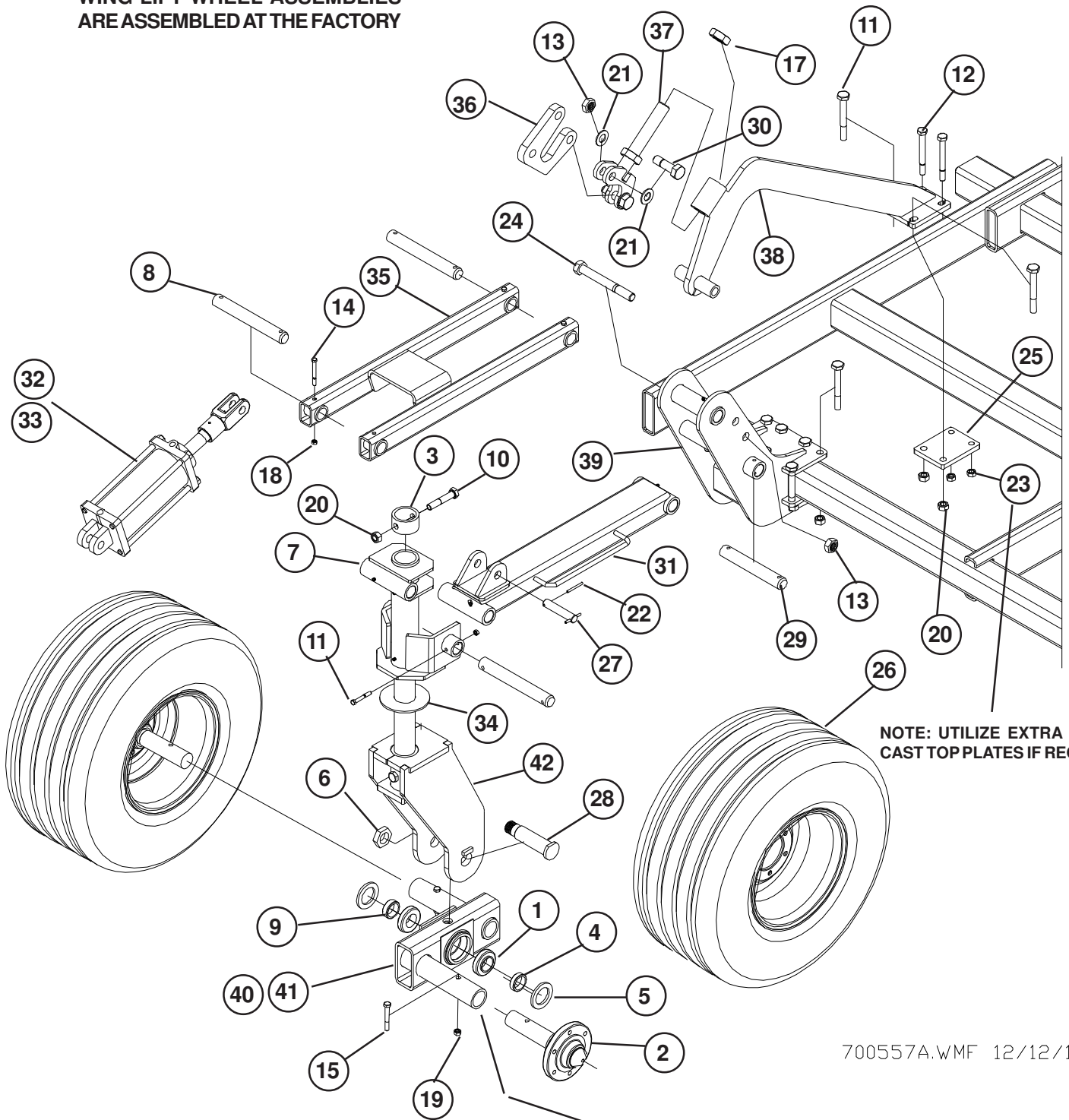


ITEM	PART NO	DESCRIPTION	QTY
1	241677	SENSOR MOUNT	1
2	241678	SENSOR PLATE	1
3	241679	TIE STRAP	1
4	88145	BLT-U 5/8-11NCX4X5-1/4 Z	1
5	88676	BLT HEX 1/2-13NC X 6-1/2 5Z	2
6	SENSOR	SENSOR MOUNT SEE PAGE 64	1

**UNLESS SPECIFIED, ALL HARDWARE IS SECURED WITH MATCHING LOCK NUTS. QUANTITIES ARE APPROXIMATE, CAN VARY BY CONFIGURATION.**

# WING LIFT WHEEL ASSEMBLY - LEFT WING SHOWN

NOTE: PORTIONS OF THE FRONT WING LIFT WHEEL ASSEMBLIES ARE ASSEMBLED AT THE FACTORY



NOTE: UTILIZE EXTRA SHANK CAST TOP PLATES IF REQUIRED

700557A.WMF 12/12/11

NOTE: PRE-ASSEMBLED WING FRONT CASTER WHEELS ARE LEFT AND RIGHT, REFER TO UNIT OVERVIEW ON PAGE 13 FOR CORRECT ORIENTATION.

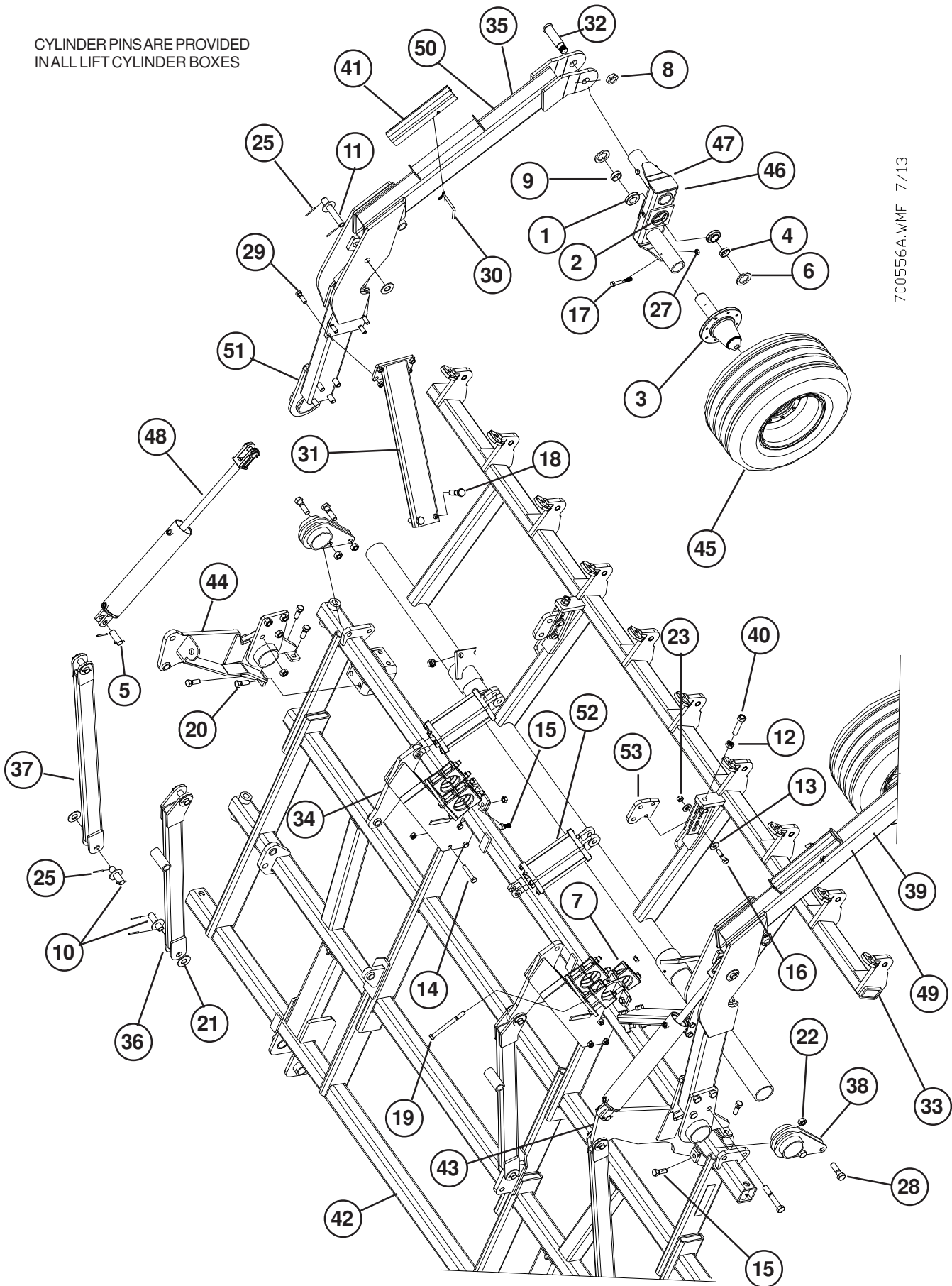


# WING LIFT WHEEL ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY
1	12103	BEARING CONE 1-3/4ID (25580)	2
2	14131	2IN HUB & SPINDLE (LG7830026) BLK	2
3	16009	COLLAR	1
4	16278	BEARING BUSHING	1
5	26120	2.25ID X 3.40 OD TRIPLE LIP SEAL	2
6	42082	NUT 1-1/2NF HYDRA JAM LOCK	1
7	54571	GAUGE WHEEL PIVOT	2
8	353665	EXTENDED PIVOT PIN	3
9	54599	WALKER BEARING BUSHING	1
10	88272	BLT HEX 3/4-10NC X 4 5Z	1
11	88293	BLT HEX 3/4-10NC X 6 5Z	9
12	88295	BLT HEX 5/8-11NC X 6 5Z	2
13	88348	NUT 2POSLK 1-8NC 5Z	3
14	88412	BLT HEX 3/8-16NC X 3-1/2 5Z	4
15	88507	BLT HEX 1/2-13NC X 3-1/2 5Z	2
16	88582	BLT HEX 3/8-16NC X 2-3/4 5Z	4
17	88623	NUT JAM 1-1/2-6NC 5Z	2
18	88659	NUT TOP LK 3/8-16NC 5Z	8
19	88661	NUT TOP LK 1/2-13NC 5Z	2
20	88665	NUT TOP LK 3/4-10NC 5Z	10
21	88738	WSHR FLAT 1SAE(1-1/16 X 2ACT) Z	4
22	88767	PIN ROLL 1/4DIA X 2-1/2 Z	2
23	88845	NUT TOP LK 5/8-11NC 5Z	2
24	89373	BLT HEX 1-8NC X 8-1/2 8YZ	1
25	221196	MOUNT PLATE - PAINTED GRAY	1
26	222087	WHL ASSY 31X13.5 6B 10" 12P GRAY	2
27	222338	HEADLESS PIN(2) 1X4-1/8	1
28	235245	TANDEM PIN	1
29	235801	PIVOT PIN (1-1/2 X 10)	1
30	237506	1NC X 3-1/2 SPECIAL HEX HEAD BOLT	2
31	237798	LOWER OUTER ARM	1
32	241663	HYD CYL 4X8 - Inner Wing	1
33	241664	HYD CYL 3-3/4X8 - Outer Wing	1
34	242933	PIVOT WEAR PLATE	1
35	247798	UPPER LINK ARM	1
36	247808	MAST ANCHOR	1
37	247811	ANCHOR ADJUST	1
38	247814	FRONT MAST SUPPORT	1
39	350923	FRONT ATD MAST - 2012	1
40	237714D1	LEFT OUTER WALKER - ATD	1
41	237714L1	RIGHT OUTER WALKER - ATD	1
42	237722D2	WING FRONT AXLE PIVOT - ATD	1

# MAIN FRAME PACKER/LIFT ASSEMBLY

CYLINDER PINS ARE PROVIDED  
IN ALL LIFT CYLINDER BOXES



700556A.WMF 7/13

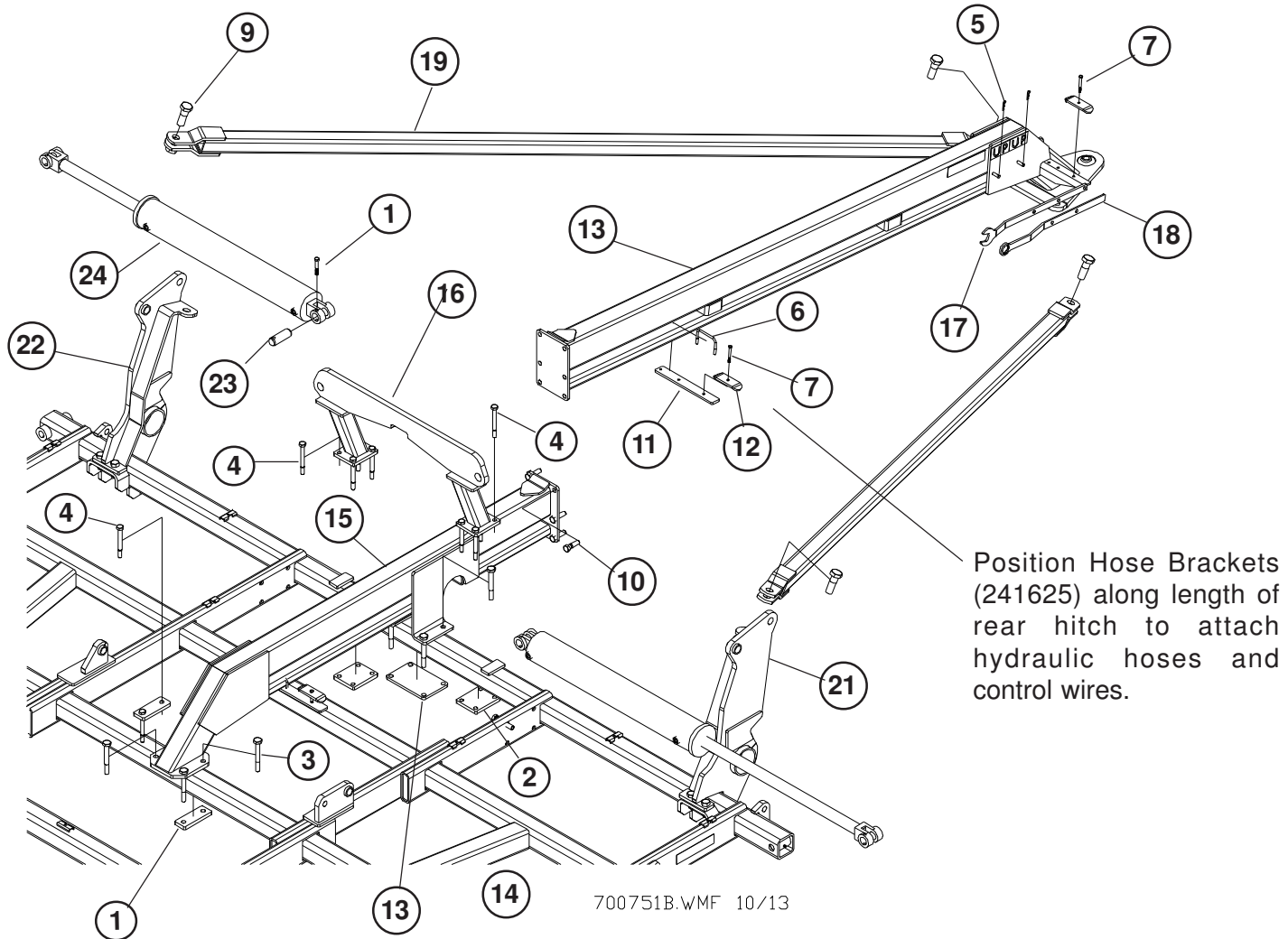
# MAIN FRAME PACKER/LIFT ASSEMBLY

ITEM	PART NO	DESCRIPTION	QTY
1	12103	BEARING CONE 1-3/4ID (25580)	4
2	12104	BEARING CUP 3.265OD (25520)	4
3	16154	2-1/2" HUB & SPINDLE ASSY	4
4	16278	BEARING BUSHING	1
5	22022	HEADLESS PIN(2) 1-1/4X2-7/16	2
6	26120	2.25ID X 3.40 OD TRIPLE LIP SEAL	2
7	34132	AXLE CLAMP ASSEMBLY	8
8	42082	NUT 1-1/2NF HYDRA JAM LOCK	1
9	54599	WALKER BEARING BUSHING	1
10	67854	HEADLESS PIN(2) 1-1/4X4-1/2	8
11	68399	HEADLESS PIN(2) 1-1/4X7-1/8	2
12	88125	NUT HEX 1-8NC 5Z	2
13	88131	WSHR FLAT 3/4(13/16 X 2ACT) Z	8
14	88272	BLT HEX 3/4-10NC X 4 5Z	8
15	88290	BLT HEX 3/4-10NC X 2 8YZ	4
16	88291	BLT HEX 3/4-10NC X 3 5Z	4
17	88381	BLT HEX 5/8-11NC X 4-1/2 5Z	4
18	88398	BLT HEX 1-8NC X 4 5Z	4
19	88487	BLT HEX 3/4-10NC X 8-1/2 5Z	8
20	88495	BLT HEX 7/8-9NC X 2-1/2 5Z	8
21	88602	WSHR FLAT 1-1/4(1-3/8 X 3ACT) Z	20
22	88658	NUT TOP LK 1-8NC 5Z	16
23	88665	NUT TOP LK 3/4-10NC 5Z	32
24	88666	BLT HEX 1-8NC X 6-1/2 5Z	8
25	88767	PIN ROLL 1/4DIA X 2-1/2 Z	24
26	88831	NUT TOP LK 7/8-9NC 5Z	8
27	88845	NUT TOP LK 5/8-11NC 5Z	4
28	89371	BLT HEX 1-8NC X 3-1/2 8YZ	4
29	89389	BLT HEX 3/4-10NC X 2-1/2 8YZ	8
30	234811	1/2 X 4 BENT PIN W/HAIRPIN	2
31	234836	REAR BRACE TUBE	2
32	235245	TANDEM PIN	2
33	240479	CENTER PACKER MOUNT - 5010/6010	1
34	240488	PACKER LIFT BRACKET	2
35	241551	RIGHT REAR LIFT AXLE ASSY	2
36	240567	MAIN MAST TUBE	2
37	240572	LIFT MAST TUBE	2
38	241513	CENTER PACKER HANGER	2
39	241550	LEFT REAR LIFT AXLE ASSY	1
40	241572	ADJUSTMENT SCREW	2
41	241584	REAR CYLINDER CHANNEL LOCK	2
42	243073	MAIN FRAME - ATD - 10 INCH LT	1
43	245697	REAR LIFT MAST - LEFT	1
44	245698	REAR LIFT MAST - RIGHT	1
45	246254	WHL ASSY 13.50-15FI 8B 10IN HWY	4
46	221347D1	RIGHT 3X11 HD WALKING TANDEM	1
47	221347D1R	LEFT 3X11 HD WALKING TANDEM	1
48	222213F1	HYD CYL 4X16 ILP #A519CY26	2
49	237756D1	REAR LIFT AXLE - LEFT	1
50	237756D1R	REAR LIFT AXLE - RIGHT	1
51	237961D1	LIFT AXLE PIVOT	4
52	241623	HYD CYL 4-3/4X8 SEQ	2
53	350919	PACKER LIFT ANCHOR	2

UNLESS SPECIFIED, ALL HARDWARE IS SECURED WITH MATCHING LOCK NUTS.  
 QUANTITIES MAY VARY BY MODEL CONFIGURATION.

# REAR HITCH/WING FOLD ANCHOR ASSEMBLY

FOR EASE OF ASSEMBLY, DO NOT ASSEMBLE REAR PULL HITCH (13) AND HITCH BRACE TUBES (19) UNTIL REAR PACKER AND REAR LIFT WHEEL COMPONENTS ARE IN PLACE.



Loosely assemble all hitch components and center hitch on main frame before tightening any hardware.

## **REAR HITCH/WING FOLD ANCHOR ASSEMBLY**

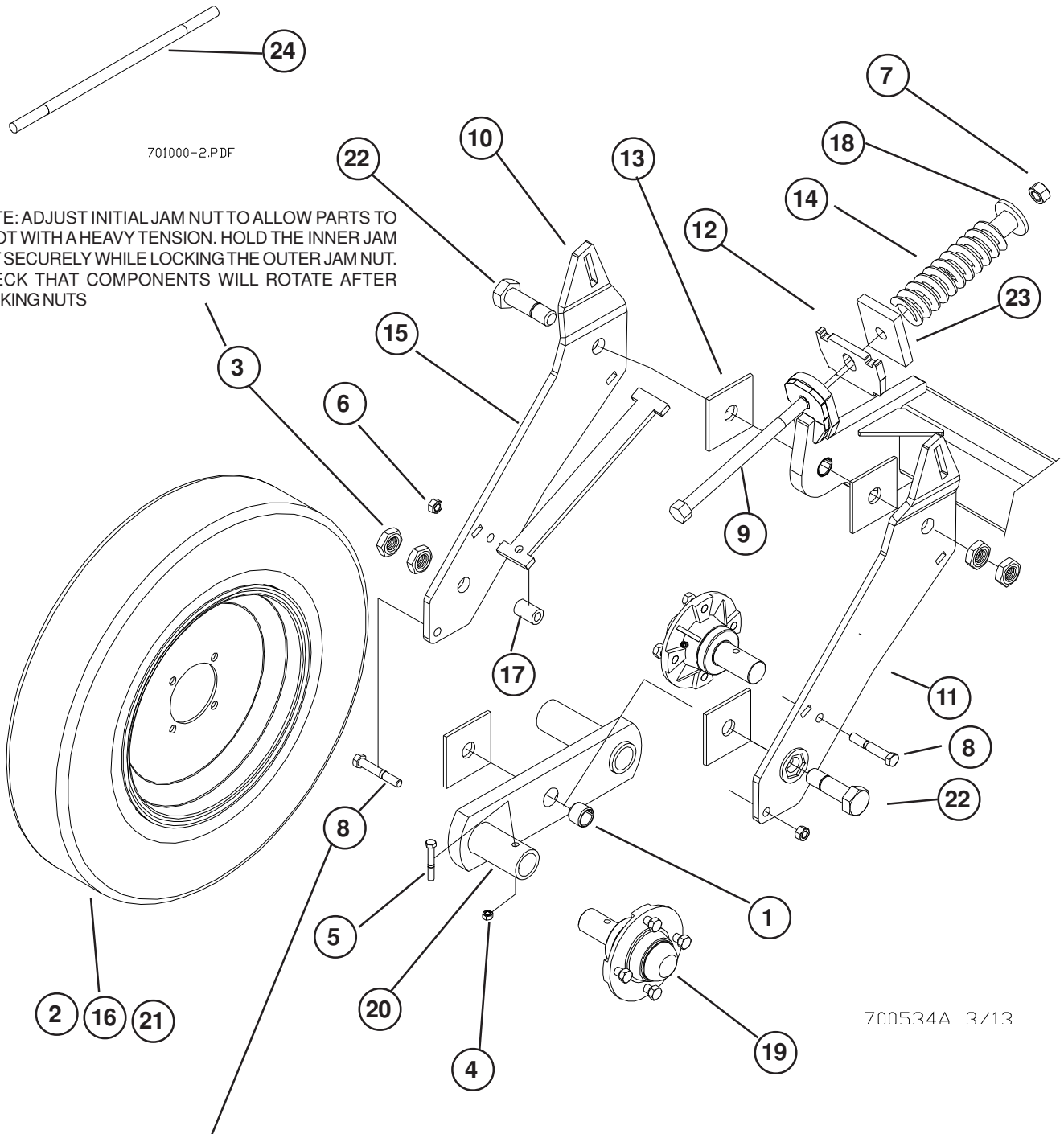
<b>ITEM</b>	<b>PART NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>
1	53419	STRAP (RED)	2
2	62271	FRAME PLATE (RED)	2
3	88293	BLT HEX 3/4-10NC X 6 5Z	7
4	88295	BLT HEX 5/8-11NC X 6 5Z	11
5	88466	CLIP HAIRPIN 1/8 DIA X 1 Z	2
6	88515	BLT-U 3/8-16NC X 4 X 2-3/4 Z	6
7	88531	BLT HEX 3/8-16NC X 3 5Z	7
8	88541	BLT HEX 1/2-13NC X 3 5Z	2
9	89029	BLT HEX 1-1/4-7NC X 4 5Z	4
10	89389	BLT HEX 3/4-10NC X 2-1/2 8YZ	6
11	241625	HOSE BRACKET	6
12	241626	HOSE CLAMP	7
13	241639	REAR HITCH PLATE (RED)	1
14	243073	MAIN FRAME - ATD - 10 INCH LT	1
15	243908	ATD HITCH - SHORT FRONT	1
16	243913	MAIN FOLD ANCHOR	1
17	243987	PACKER OPEN END WRENCH	1
18	243988	PACKER BOX END WRENCH	1
19	245695	REAR PULL HITCH - 2010	1
20	245696	REAR HITCH BRACE TUBE	2
21	245697	REAR LIFT MAST - LEFT	1
22	245698	REAR LIFT MAST - RIGHT	1
23	W104654	CYLINDER PIN	2
24	W106386	WING FOLD CYLINDER 5 X 36	2

**UNLESS SPECIFIED, ALL HARDWARE IS SECURED WITH MATCHING LOCK NUTS.  
QUANTITIES MAY VARY BY MODEL CONFIGURATION.**

# REAR PACKER ASSEMBLY

701000-2.PDF

NOTE: ADJUST INITIAL JAM NUT TO ALLOW PARTS TO PIVOT WITH A HEAVY TENSION. HOLD THE INNER JAM NUT SECURELY WHILE LOCKING THE OUTER JAM NUT. CHECK THAT COMPONENTS WILL ROTATE AFTER LOCKING NUTS



700534A 3/13

NOTE THE ORIENTATION OF THESE BOLTS - ITEM 8 QTY 2. IMPROPER ASSEMBLY CAN ALLOW THE BOLTS TO CONTACT THE PACKER TIRE AND CAUSE PROBLEMS



## **REAR PACKER ASSEMBLY**

<b>ITEM</b>	<b>PART NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>
1	33515	SPRING TENSION BUSHING (1")	2
2	57908	VALVE ASSEMBLY (STEEL)	1
3	88141	NUT JAM 1-8NC 5Z	4
4	88162	NUT 2POSLK 3/8-16NC 5P	2
5	88489	BLT HEX 3/8-16NCX2-1/2 8YZ	2
6	88661	NUT TOP LK 1/2-13NC 5Z	2
7	88665	NUT TOP LK 3/4-10NC 5Z	1
8	88680	BLT HEX 1/2-13NCX3-1/4 5Z	1
9	89462	BLT-HEX 3/4X10NCX10-1/2 8Z	1
10	233508	LEFT PACKER ARM	1
11	233509	RIGHT PACKER ARM	1
12	237986	SPRING PLATE—PAINTED BLACK	1
13	237996	WALKER PIVOT WASHER	4
14	239169	SPRING - PAINTED BLACK	1
15	241541	INNER PACKER PLATE (BLACK)	1
16	241616	PACKER RIM 4.5X15 4 BOLT	1
17	241653	PACKER SPACER (ZINC)	1
18	243953	SPRING CENTERING WASHER/TUBE	2
19	243985	2009 PACKER HUB & SPINDLE ASSY	2
20	244889	PACKER WALKER - 15 IN	1
21	241617	PACKER TIRE 26/6.50X15	1
22	350999	1NCX3-3/4 HEXHEAD - WALKER PIVOT BOLT	2
23	A34852	PLATE-TDD SPRING RETAINER	1
24	351575	DOUBLE SPRING ROD - MAIN FRAME ONLY	1

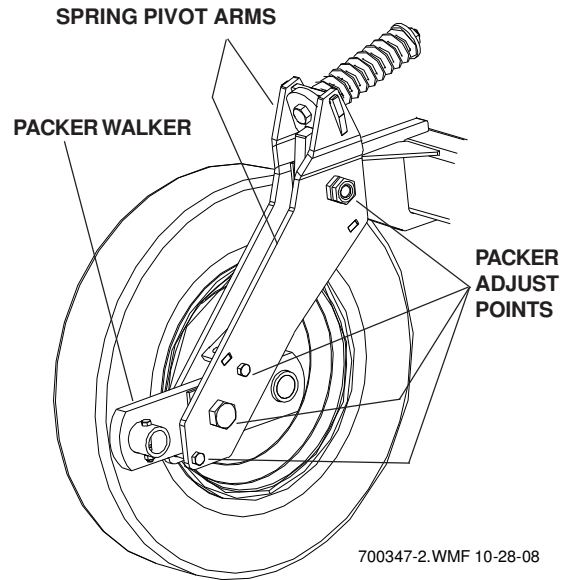
**NOTE: DO NOT FOLD OR UNFOLD THE OUTER WINGS WITHOUT MOVING THE UNIT FORWARD. IT IS RECOMMENDED THAT THE TWO PACKER WHEELS NEAREST THE OUTER WING HINGE ON EACH OUTER WING BE REMOVED IF THE UNIT IS BEING FOLDED WHILE SETTING STILL DURING ASSEMBLY. THE FOLDING PROCEDURE CAN PLACE EXCESSIVE SIDE LOADING ON THESE COMPONENTS AND CAUSE FAILURES. WHEN FOLDING AND UNFOLDING THE WINGS THE UNIT MUST ALWAYS BE MOVING TO ALLOW THE TIRES TO SLIDE INTO POSITION. ONCE UNIT IS COMPLETED, ATTACH THE PACKER WHEELS IN THESE LOCATIONS.**

## PACKER ASSEMBLY/SETTING INFORMATION

ONCE EACH PACKER ASSEMBLY HAS BEEN COMPLETED WITHOUT MOUNTING THE SPRING, IT IS CRITICAL TO PROPERLY SET THE TIGHTNESS OF THE PACKER ADJUST POINTS INDICATED. **THE SPRING LOADED PACKER ASSEMBLIES WILL NOT FUNCTION PROPERLY IF THE NOTED POINTS ARE OVER TIGHTENED. BOTH THE SPRING PIVOT ARMS AND PACKER WALKERS MUST ROTATE FREELY.**

TIGHTEN THE UPPER AND LOWER MAIN PIVOT BOLTS BY ADJUSTING THE INNER JAM NUT. CHECK TO ENSURE THE ARMS AND WALKER ARE FREE TO PIVOT. HOLD THE INNER JAM NUT WITH A WRENCH AND LOCK WITH THE OUTER JAM NUT. **DO NOT USE AN AIR WRENCH TO TIGHTEN ANY OF THE PACKER ADJUST POINTS.** ADJUST THE TWO (2) CLAMP BOLTS, CHECKING TO ENSURE THAT THE WALKER IS FREE TO PIVOT.

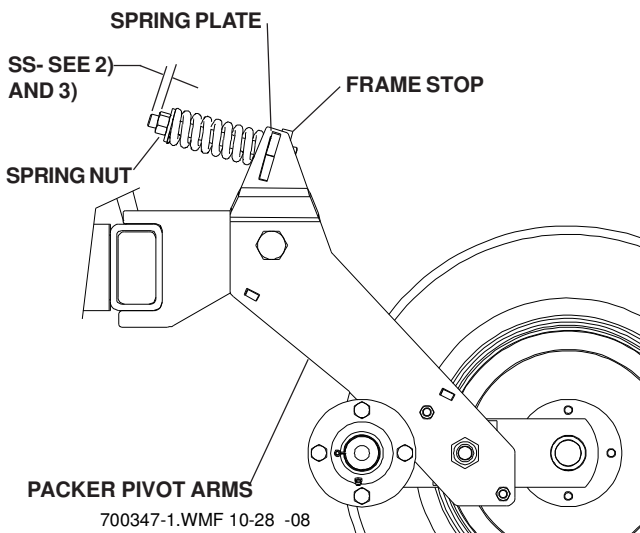
IF THE PACKER ADJUST POINTS ARE TIGHT THE SPRING WILL NOT RETURN THE SPRING ARMS TO THE CORRECT POINT AND THE DEPTH CONTROL AND PACKING OF THE REAR OF THE UNIT WILL BE INCONSISTENT. WITH THE PACKER ARMS AND WALKERS ABLE TO ROTATE AND THE SPRINGS SET AS NOTED BELOW THE PACKERS SHOULD CARRY THE REAR OF THE UNIT AT A CONSISTENT DEPTH AND ALLOW THE SPRING LOADED ARMS TO PIVOT WHEN OBSTACLES ARE ENCOUNTERED.



### PACKER SPRING SETTINGS

TO MAINTAIN PROPER REAR MACHINE DEPTH THE SPRING ON EACH PACKER ASSEMBLY MUST BE ADJUSTED TO BALANCE THE WEIGHT OF THE MACHINE AND ALLOW PROPER RELIEF OF THE PACKER WHEELS WHEN ENCOUNTERING UNEVEN TERRAIN. ONCE THE PACKER PIVOTS HAVE BEEN PROPERLY ADJUSTED AS NOTED ABOVE THE SPRING CAN BE ADDED AND THE SPRING NUTS ADJUSTED. THIS SHOULD BE DONE WHEN THE UNIT IS COMPLETELY ASSEMBLED AND LEVELLED ON A FLAT SURFACE PRIOR TO GOING TO THE FIELD. LOWER THE UNIT SO THE SHANKS OR INJECTORS JUST CLEAR THE GROUND.

ALL SPRINGS SHOULD BE SET TO MAINTAIN CONTACT BETWEEN THE SPRING PLATE AND THE FRAME STOP ON EACH PACKER PIVOT. THIS SETTING IS DEPENDENT ON THE LOAD THAT IS SEEN BY EACH PACKER. SINCE THERE IS MORE WEIGHT ON MOST OF THE MAIN FRAME PACKERS THE SPRING SETTING (SS) WILL BE GREATER THAN REQUIRED ON THE OUTER WINGS. SET THE SPRING DISTANCE (SS) ON ALL SPRINGS TO MAINTAIN THE SPRING PLATE TO FRAME STOP CONTACT WITH THE WEIGHT OF THE UNIT. WHEN PROPERLY SET THE PACKERS SHOULD NOT MOVE EXCESSIVELY UNLESS THE PACKER WHEELS ENCOUNTER UNEVEN GROUND OR AN OBSTRUCTION.



1) WITH THE MAIN FRAME LEVEL TIGHTEN THE SPRING BOLT TO A (SS) DISTANCE OF APPROXIMATELY 3/8"-1/2" ON ALL THE MAIN FRAME PACKERS.

2) TIGHTEN THE PACKER SPRINGS ON THE INNER PORTION OF THE INNER WINGS TO A (SS) DISTANCE OF 3/8"-1/2" WITH THE REMAINING WING PACKER SPRINGS TO A LESSER DISTANCE.

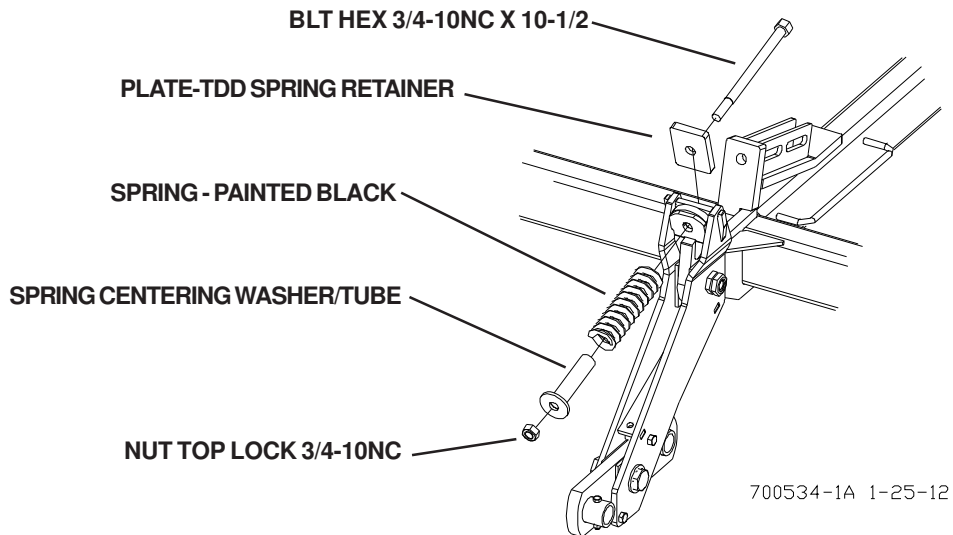
3) DEPENDING ON THE WEIGHT AND SIZE OF THE UNIT TIGHTEN THE REMAINING PACKER SPRINGS ON THE OUTER WINGS TO A 1/4" TO 3/8" DIMENSION.

4) CHECK TO ENSURE THAT THE SPRING PLATE TO FRAME STOP CONTACT IS MAINTAINED TO ENSURE THAT ALL PACKERS ARE SET TO THE SAME DEPTH.

5) PROCEED TO COMPLETING THE FIELD SETTINGS AND CHECK TO SEE THAT THE STOP CONTACT IS MAINTAINED AS THE UNIT MOVES THROUGH THE FIELD. IF THE PACKER PIVOT ARMS ARE MOVING EXCESSIVELY DUE TO NORMAL LOADING OR MORE LOADING ON SOME SECTIONS OF THE UNIT, NOT OBSTRUCTIONS, TIGHTEN THE SPRING NUTS. TIGHTEN SPRINGS ONLY TO THE POINT OF MAINTAINING SPRING PLATE TO FRAME STOP CONTACT WHILE OPERATING. EXCESS SPRING PRESSURE WILL RESTRICT RELIEF WHEN ENCOUNTERING OBSTRUCTIONS.

## REAR PACKER ASSEMBLY

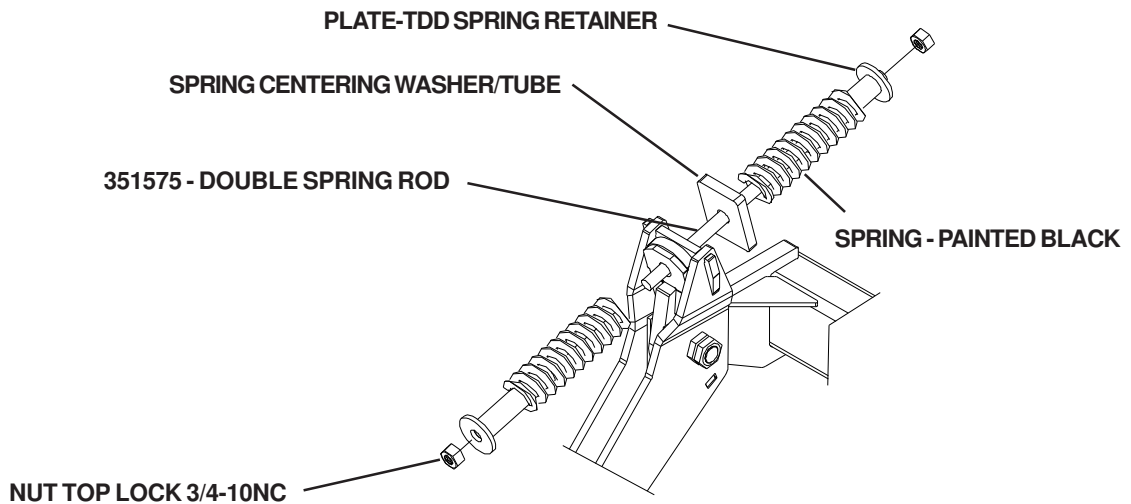
WHEN MOUNTING PACKER ARMS IN CERTAIN LOCATIONS WHERE THERE IS POTENTIAL INTERFERENCE WITH MACHINE PARTS THE SPRING CAN BE MOUNT TO THE REAR AS SHOWN BELOW. FOLLOW THE ASSEMBLY AND ADJUSTMENT INSTRUCTIONS AS NOTED FOR SPRING SETTINGS.



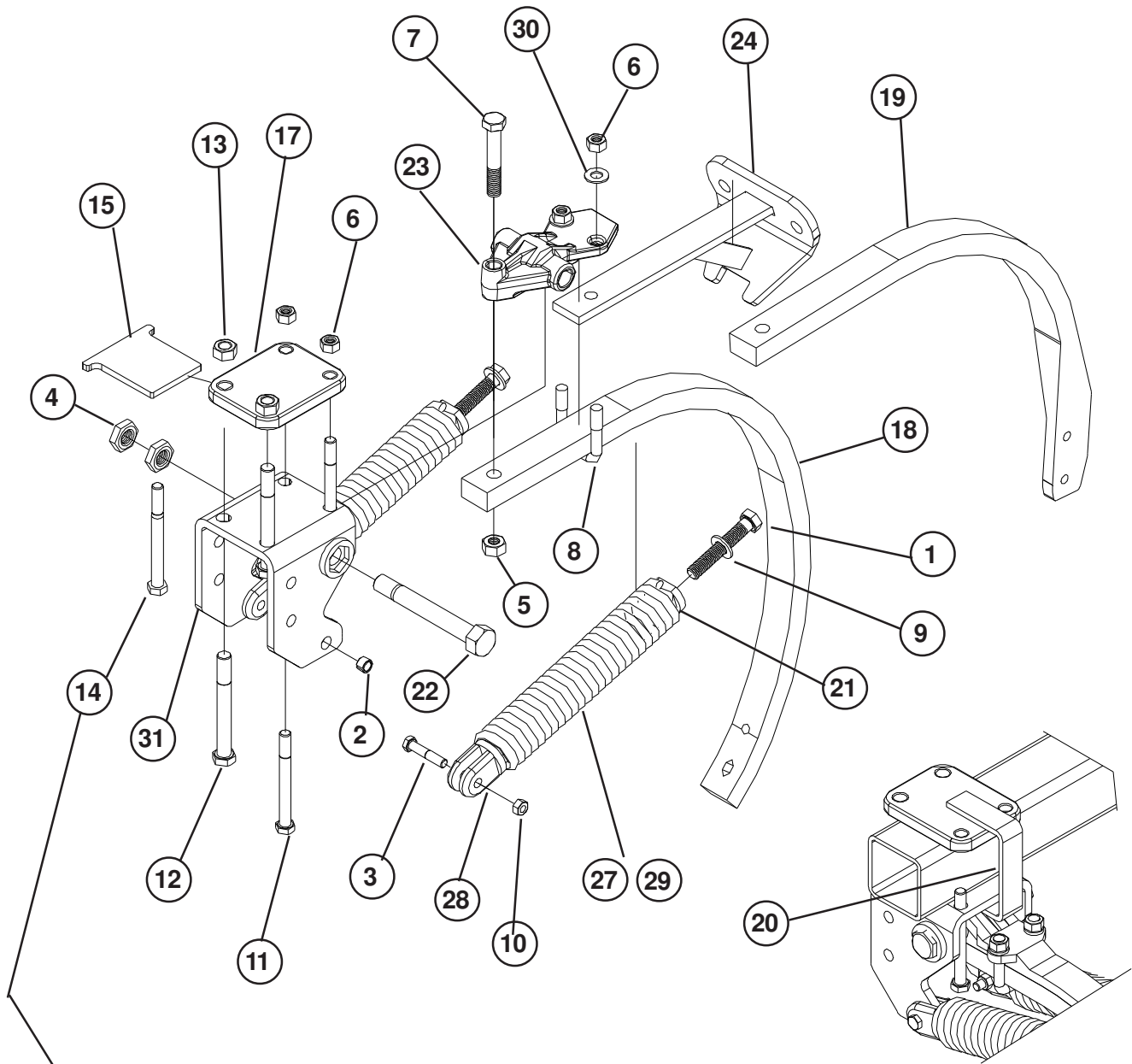
## MAIN FRAME REAR PACKER ASSEMBLY

TO COMPENSATE FOR THE ADDED WEIGHT OF THE MAIN FRAME AND ASSOCIATED COMPONENTS THE REAR PACKERS ON THE MAIN FRAME CAN UTILIZE A DOUBLE SPRING MOUNTING. USE OF THE DOUBLE SPRINGS ON THE MAIN FRAME GIVES ADDED SUPPORT TO MAINTAIN THE PROPER SPRING PLATE AND FRAME STOP CONTACT AS NOTED IN THE "PACKER SPRING SETTINGS" INSTRUCTIONS. TIGHTEN BOTH NUTS TO INCREASE THE PACKING FORCE TO MAINTAIN THE SPRING PLATE TO FRAME STOP CONTACT. THE SECOND SPRING CAN BE UTILIZED TO MAINTAIN THE SAME TRIP HEIGHT MOVEMENT BUT WILL REQUIRE THAT THE SPRINGS BE TIGHTENED MORE. CONTINUE TO TIGHTEN THE SPRINGS AS REQUIRED TO MAINTAIN THE CONTACT BETWEEN THE SPRING PLATE AND FRAME STOP.

**NOTE: AT SOME LOCATIONS, AS NOTED ABOVE, IT MAY NOT BE POSSIBLE TO MOUNT BOTH SPRINGS, USE THE SINGLE SPRING MOUNTING AS NOTED ABOVE. USE OF THE DOUBLE SPRING IS ONLY REQUIRED ON THE MAIN FRAME PACKERS**



# SHANK ASSEMBLY



89398 BOLT USED WITH 241764 SHIM  
AND 241675 SHIM KIT

700383-B.WMF 10/12

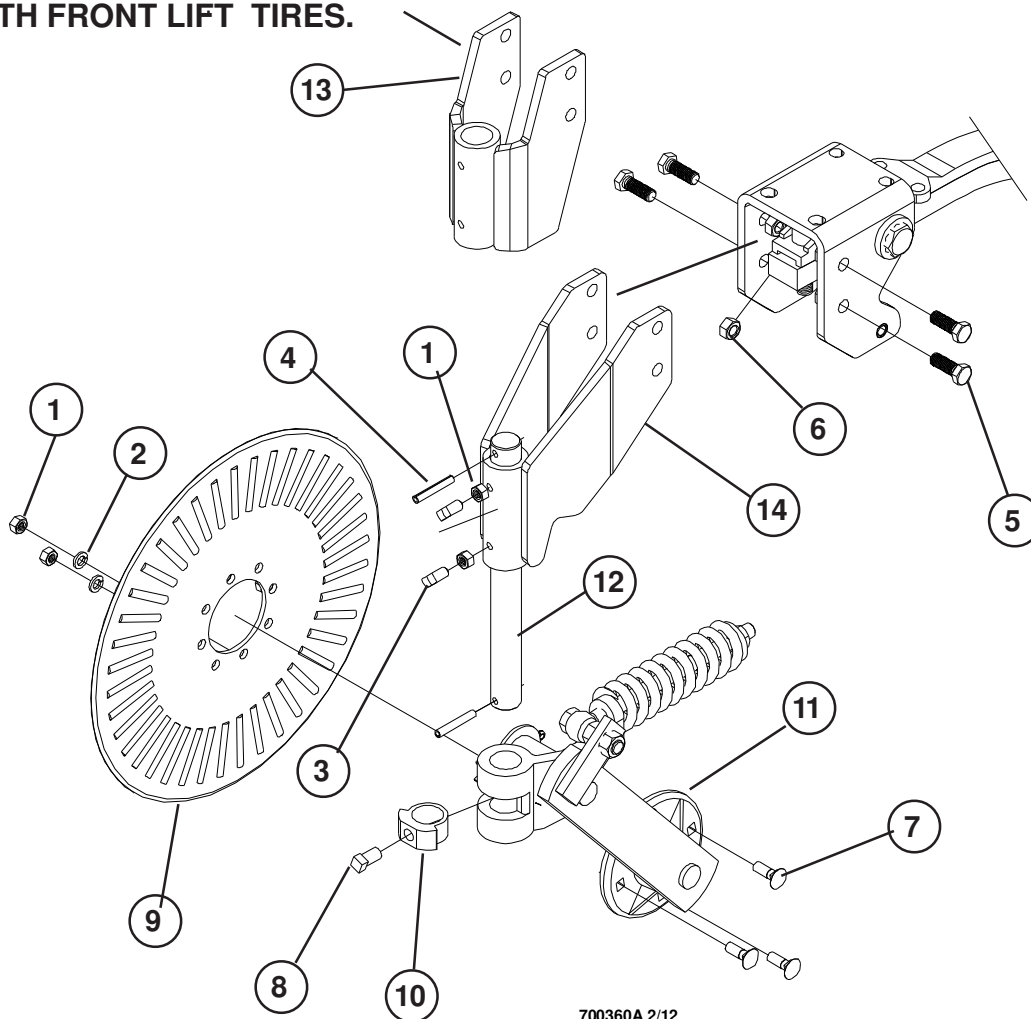
**USE BRACKET (244576) TO HOLD  
SHANK FOR ASSEMBLY**

# SHANK ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY
1	10210	ADJUSTMENT BOLT	2
2	56908	1/2" SPRING TENSION BUSHING	2
3	58032	HDN 1/2 X 2-1/2 BOLT	2
4	88141	NUT JAM 1-8NC 5Z	2
5	88356	NUT 2POSLK 3/4-10NC 5Z	1
6	88369	NUT 2POSLK 5/8-11NC 5Z	2
7	88421	BLT HEX 3/4-10NC X 4-1/2 5Z	1
8	88441	BLT-U 5/8-11NCX2X3-1/4 Z	1
9	88548	WSHR FLAT 3/4SAE(13/16 X 1-1/2) Z	2
10	88621	NUT NLK 1/2-13NC 5Z	2
11	88933	BLT HEX 5/8-11NC X 6 8YZ	2
12	89385	BLT HEX 3/4-16NF X 6-1/2 8YZ	2
13	89386	NUT NYL 3/4-16NF 8YZ	2
14	89398	BLT HEX 5/8-11NC X 6-1/2 8YZ	2
15	241674	3/8 IN SHANK SHIM (ZINC)	12
16	241675	SHANK SHIM KIT - 12 EA	1
17	243956	CAST TOP PLATE (BLACK)	1
18	243959	54 DEG 32IN CP SHK (BLACK)	1
19	243961	SHANK EDGE ON (BLACK)	1
20	244576	SHANK MOUNT TOOL	1
21	251696	CAST SPRING PLUG (BLACK)	1
22	350988	SHANK PIVOT BOLT	1
23	351550	DUCTILE PIVOT (BLACK)	1
24	351551	SHANK SPRING BRACKET (BLACK)	1
25	351662	CHISEL PLOW SHANK 650LB (BLACK)	1
26	351663	EDGE-ON CHISEL SHANK 650LB (BLACK)	1
27	351697	SPRING ASSY W/PLUGS (BLACK)	1
28	351698	CAST SPRING YOKE (BLACK)	1
29	351699	EXTENSION SPRING (BLACK)	1
30	88630	WSHR FLT 5/8SAE(21/32 X 1-5/16) Z	2
31	243957	SHANK HOLDER FRAME BRKT (BLACK)	1

# SHANK COULTER MOUNT ASSEMBLY

LOCATE SHORT MOUNTS ON SHANKS THAT INTERFERE WITH FRONT LIFT TIRES.

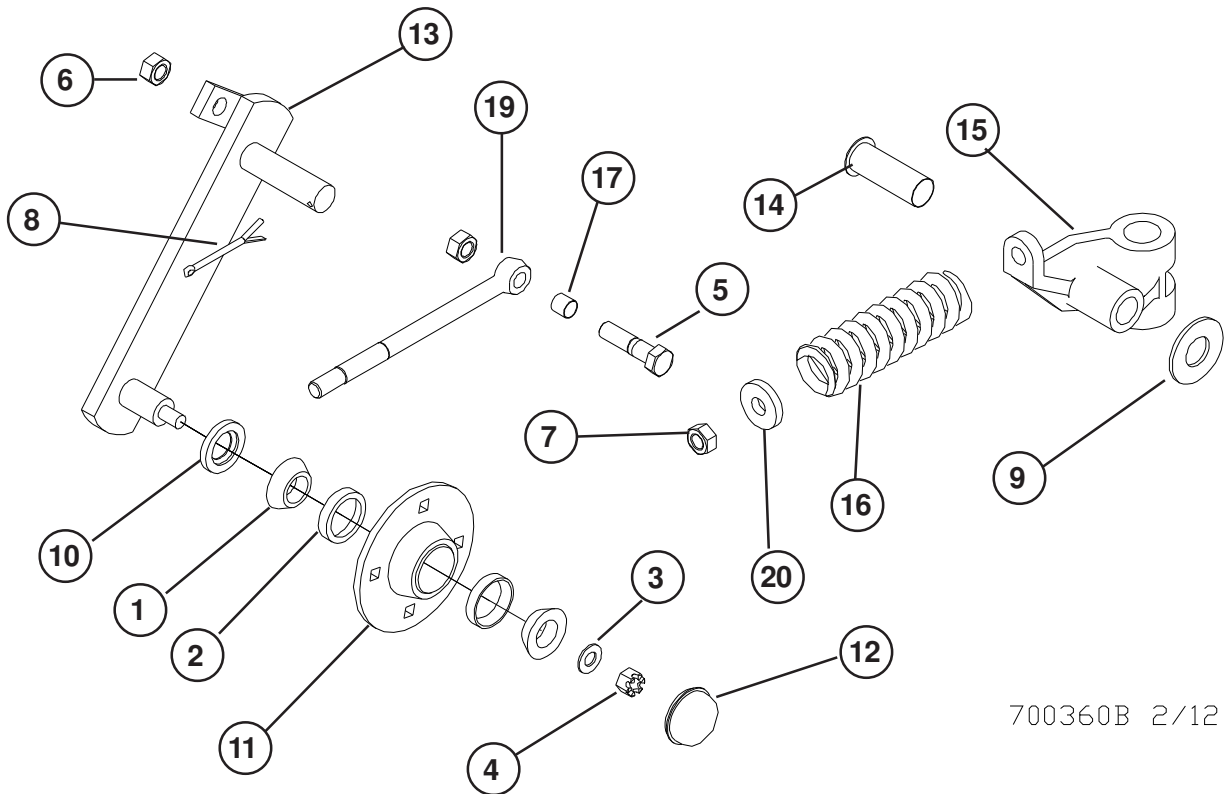


700360A 2/12

ITEM	PART NO	DESCRIPTION	QTY
1	88104	NUT HEX 1/2-13NC 5Z	6
2	88303	WSHR HLK 1/2ID(9/16ACT) Z	4
3	88446	SCR SET 1/2-13NC X 1SQHD Z	2
4	88770	PIN ROLL 3/8DIA X 2-1/2 Z	1
5	88838	BLT HEX 5/8-11NC X 1-3/4 5Z	4
6	88845	NUT TOP LK 5/8-11NC 5Z	4
7	88873	BLT CRG 1/2-13NC X 1-1/2 5Z	4
8	89382	SCR SET 5/8-11NC X 1 SQ HD P	1
9	234261	20" RIPPLE BLADE	1
10	234262	LOCKING COLLAR CLYMER COULTER	1
11	234264	CLYMER COULTER ASSY W/HARDWARE	1
12	235806	SHORT SHAFT - 1-1/2 IN DIA COULTER	1
13	350915	CP SHANK COULTER MOUNT - SHORT	1
14	351508	COULTER MOUNT 2012	1



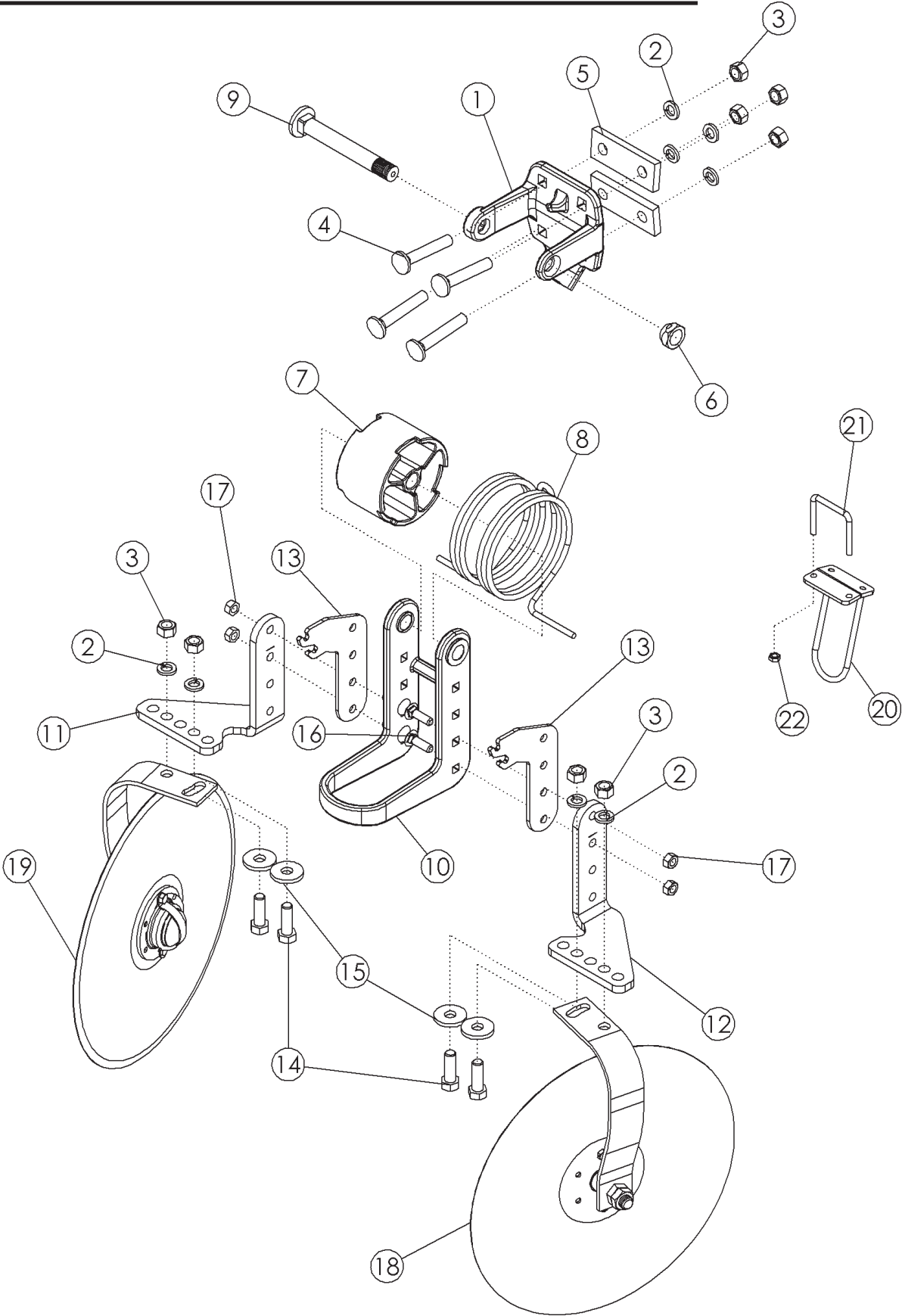
# CLYMER SHANK COULTER ASSEMBLY



700360B 2/12

ITEM	PART NO	DESCRIPTION	QTY
1	10344	BEARING CUP 2.328 OD (LM67010)	2
2	10345	BEARING CONE 1-1/4ID (LM67048)	2
3	19949	3/4ID SPINDLE WASHER	1
4	86558	NUT SLTD 5/8-18NF 5	1
5	88119	BLT HEX 3/4-16NF X 3 5Z	1
6	88306	NUT 2POSLK 3/4-16NF 5Z	2
7	88356	NUT 2POSLK 3/4-10NC 5Z	1
8	88559	PIN COT 5/32DIA X 1 Z	1
9	88602	WSHR FLAT 1-1/4(1-3/8 X 3ACT) Z	1
10	234252	2 PIECE GREASE SEAL CLYMER W40-2	1
11	234255	4-BOLT HUB CLYMER W23	1
12	234256	DUST CAP CLYMER W50	1
13	234257	SWING ARM CLYMER N347-4	1
14	234258	FLANGED BUSHING CLYMER N347-6	1
15	234259	HINGE CASTING CLYMER N347-1	1
16	234260	COULTER SPRING CLYMER S233	1
17	234263	NYLON BUSHING CLYMER N347-7	1
18	234264	CLYMER COULTER ASSY W/HARDWARE	1
19	234265	SPRING ROD CLYMER N347-5	1
20	236553	SPRING BUSHING CASTING	1

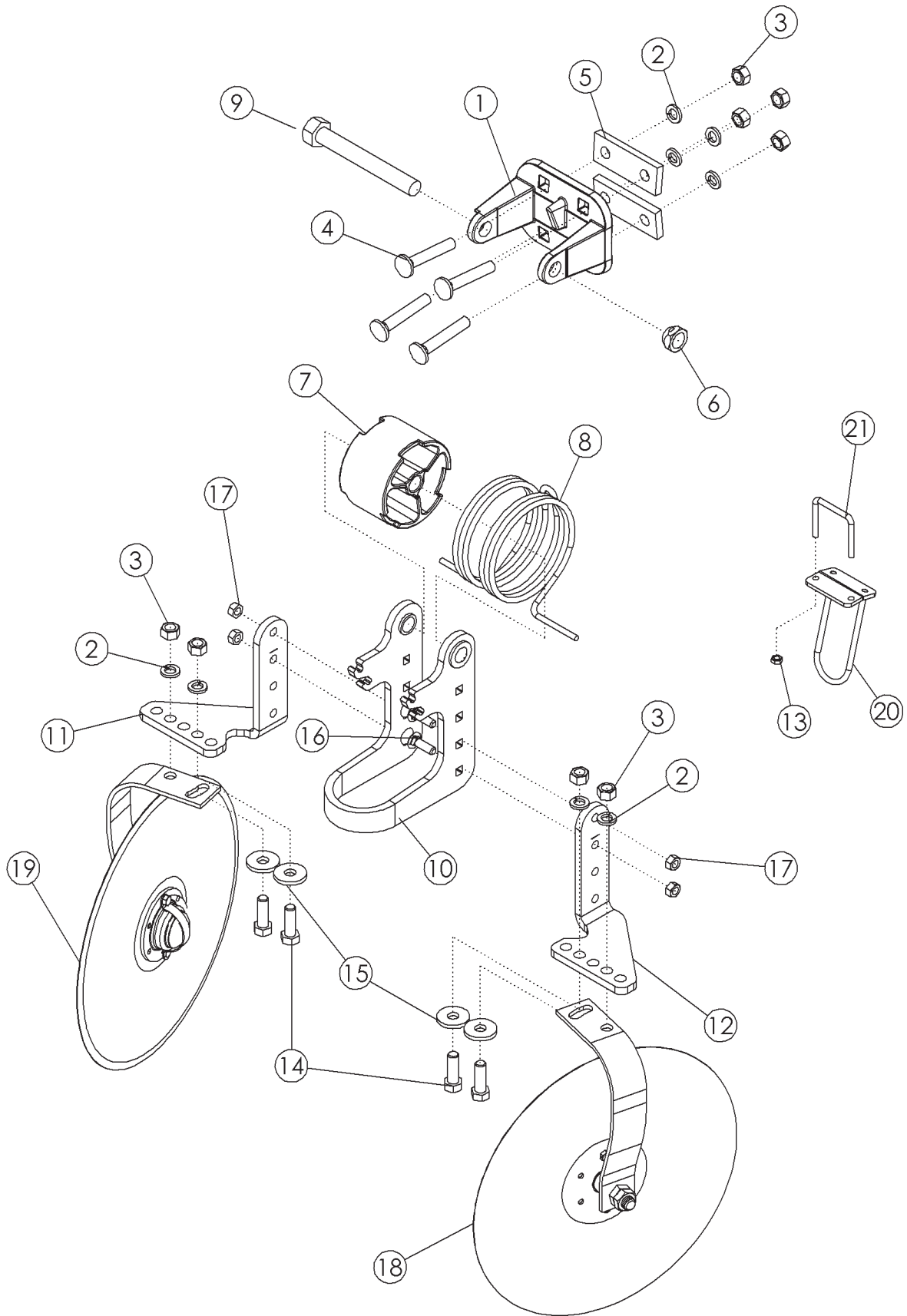
# UNIVERSAL DISC LEVELER - VERSION A



# **UNIVERSAL DISC LEVELER - VERSION A**

<b>ITEM</b>	<b>PART NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>
1	67415	CARRIER-CENTER PC	1
2	88303	WSHR HLK 1/2ID(9/16ACT) Z	8
3	88104	NUT-HEX: .50 NC ZP	8
4	67402	BOLT-CARR 1/2-13X3 1-1/2 THRD ZP	4
5	67133	PLATE-BACKING ZP	2
6	344003	NUT-CENTERLOCK LUG .75 NC ZP	1
7	67409	SPACER-CENTER CARRIER	1
8	67207	SPRING-TORSION UNIVERSAL	1
9	34820	BOLT-CRG .75 X 5.75	1
10	67482	ASSY-DISC LEVELER ARM	1
11	344042	PLATE-WING A UNIVERSAL LONG	1
12	344043	PLATE-WING B UNIVERSAL LONG	1
13	67934	ARM-SHIFTER ZP	2
14	88475	BLT HEX 1/2-13NC X 1-1/2 5Z	4
15	33036	WASHER-FLAT: .50 ZP HD	4
16	89010	BLT CRG 3/8-16NC X 1-1/4 5Z	4
17	88103	NUT HEX 3/8-16NC 5Z	4
18	66479	ASSY-RIGHT DISC ARM	1
19	66478	ASSY-LEFT DISC ARM	1
20	344105	WLDMT-HOSE HOLDER	1
21	344044	U-BOLT: .250 X 2.00 X 2 X 2.00	1
22	89501	NUT TOP LK 1/4-20NC 5Z	2

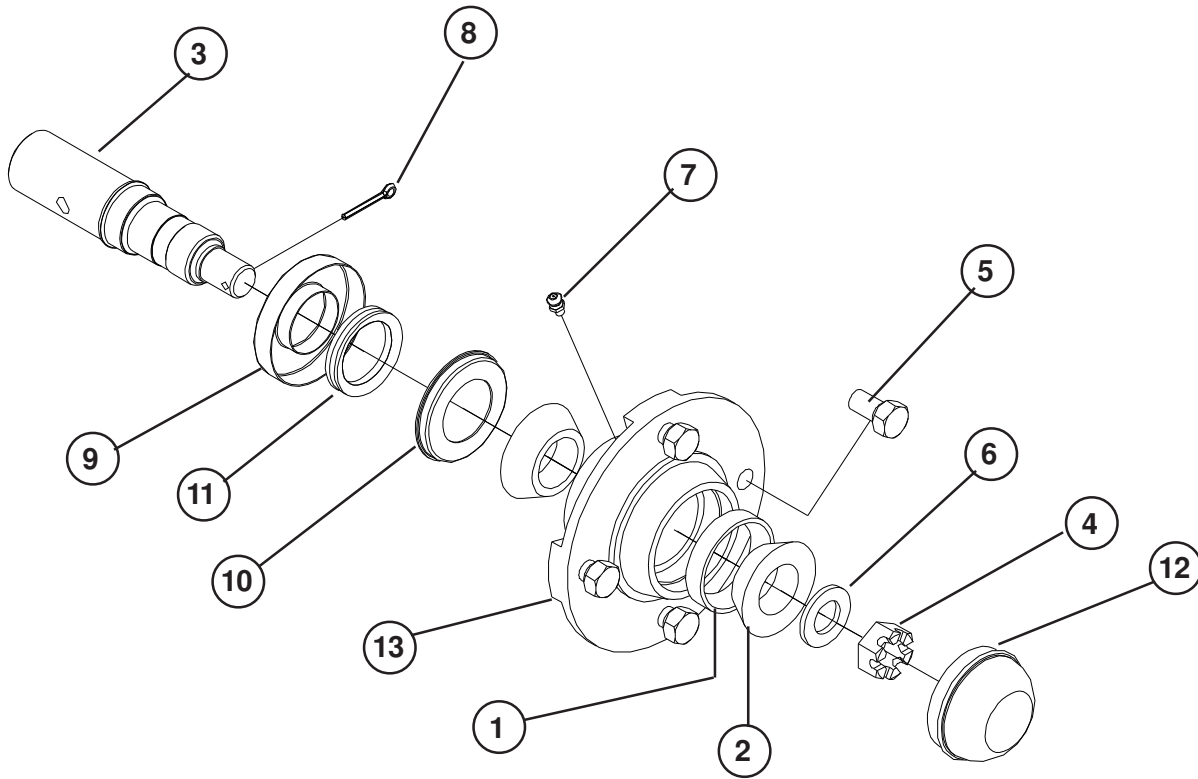
# UNIVERSAL DISC LEVELER - VERSION B



# **UNIVERSAL DISC LEVELER - VERSION B**

<b>ITEM</b>	<b>PART NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>
1	344094	CARRIER-CENTER PC	1
2	88303	WSHR HLK 1/2ID(9/16ACT) Z	8
3	88104	NUT-HEX: .50 NC ZP	8
4	67402	BOLT-CARR 1/2-13X3 1-1/2 THRD ZP	4
5	67133	PLATE-BACKING ZP	2
6	88356	NUT 2POSLK 3/4-10NC 5Z	1
7	67409	SPACER-CENTER CARRIER	1
8	67207	SPRING-TORSION UNIVERSAL	1
9	344109	BOLT-HEX: .75 X 6 X 1.00 THD NC GR5 ZP	1
10	344097	ASSY-DISC LEVELER ARM	1
11	344042	PLATE-WING A UNIVERSAL LONG	1
12	344043	PLATE-WING B UNIVERSAL LONG	1
13	89501	NUT TOP LK 1/4-20NC 5Z	2
14	88475	BLT HEX 1/2-13NC X 1-1/2 5Z	4
15	33036	WASHER-FLAT: .50 ZP HD	4
16	89010	BLT CRG 3/8-16NC X 1-1/4 5Z	4
17	88103	NUT HEX 3/8-16NC 5Z	4
18	66479	ASSY-RIGHT DISC ARM	1
19	66478	ASSY-LEFT DISC ARM	1
20	344105	WLDMT-HOSE HOLDER	1
21	344044	U-BOLT: .250 X 2.00 X 2 X 2.00	1

# 4 BOLT PACKER HUB & SPINDLE



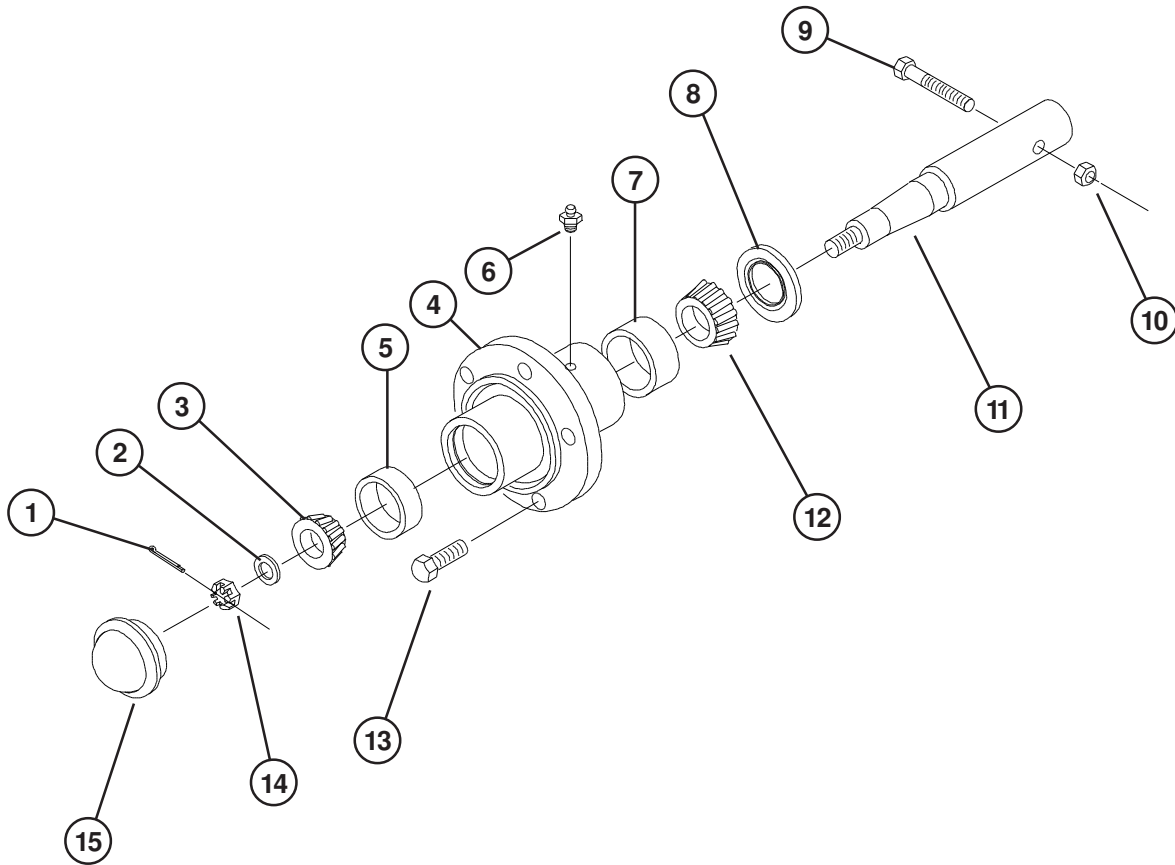
700541 1-24-12

243985 - COMPLETE HUB & SPINDLE ASSY PAINTED BLACK

ITEM	PART NO.	DESCRIPTION	QTY
1	10344	BEARING CUP 2.328 OD (LM67010)	2
2	10345	BEARING CONE 1-1/4ID (LM67048)	2
3	244585	PACKER SPINDLE	1
4	88340	NUT SLTD 7/8-14NF 5Z	1
5	89461	BLT-WHL 1/2-20 UNF X .75	4
6	88354	WSHR FLT 7/8SAE(15/16 X 1-3/4) Z	1
7	88550	FTG GRS 1/4-28 3038-B	1
8	88560	PIN COT 1/8DIA X 1-1/4 Z	1
9	A33555	SEAL RETAINER	1
10	A33556	SEAL COUNTERFACE	1
11	A33557	V-SEAL	1
12	A33879	HUB CAP	1
13	A34545	PACKER HUB	1



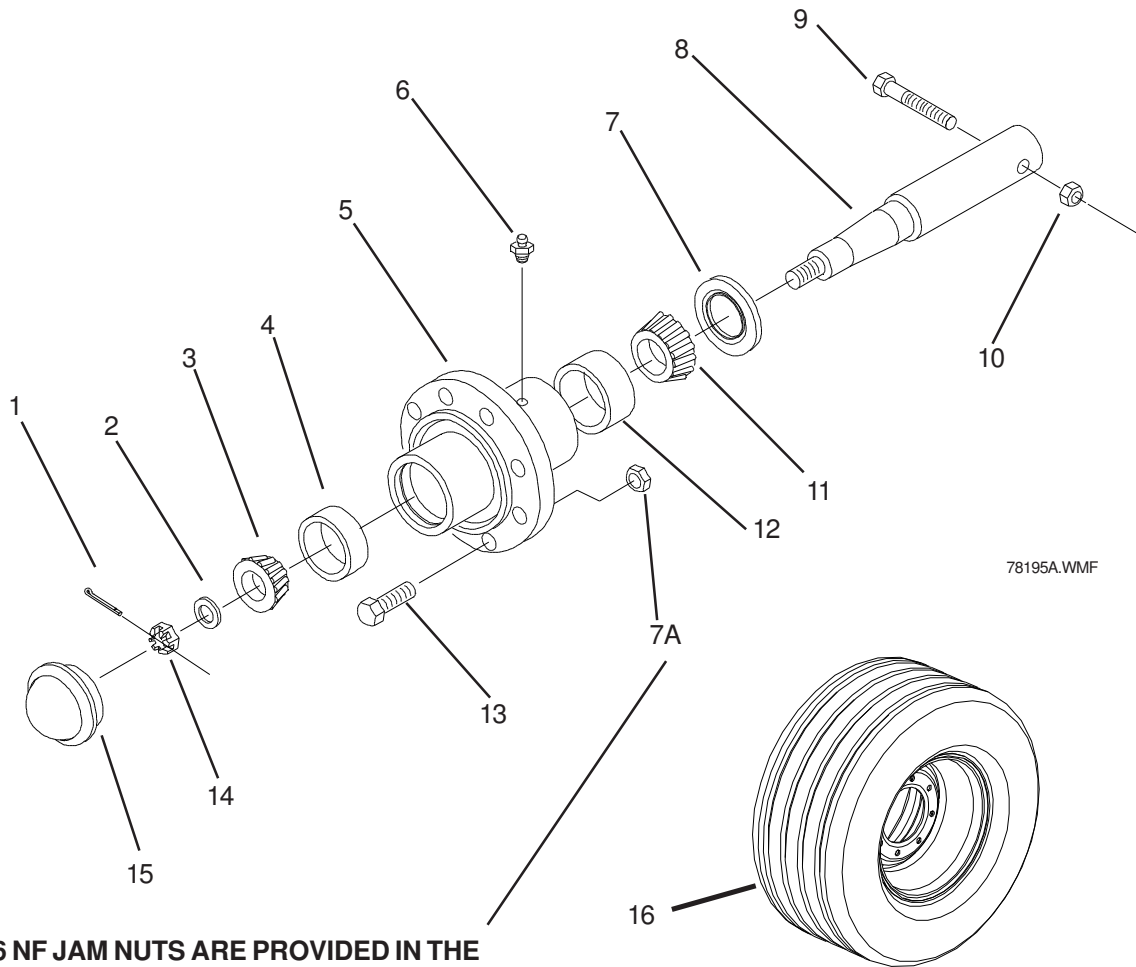
# 6-BOLT HUB & 2" SPINDLE



77836.PLT

ITEM	PART NO.	DESCRIPTION
	14131	2" HUB & SPINDLE ASSY (INCLUDES 1-8 & 11-15)
1	88301	PIN COT 3/16DIAx1-1/2
2	16094	SPINDLE WASHER 7/8ID
3	10345	BEARING CONE 1-1/4ID (LM67048)
4	24097	6-BOLT HUB W/CUPS
5	10344	BEARING CUP 2.328 OD (LM67010)
6	88263	FTG GRS 1/8NPT 1610-BL(11/16")
7	14249	BEARING CUP 2.891 OD (LM501310)
8	58546	2" TRIPLE LIP SEAL
9	88429	1/2NFx3-1/4 GR5 BOLT
10	88304	NUT 2POSLK 1/2NF
11	14251	2" AXLE SPINDLE
12	14248	BEARING CONE 1-5/8ID (LM501349)
13	88142	WHEEL BOLT 1/2NFx1 (13/16 HEAD)
14	88340	NUT SLTD 7/8NF
15	11381	DUST CAP

# 8-BOLT HUB & 2-1/2" SPINDLE



78195A.WMF

**NOTE: 9/16 NF JAM NUTS ARE PROVIDED IN THE MAIN HARDWARE KIT TO LOCK THE WHEEL BOLTS ON ALL 8 BOLT HUBS**

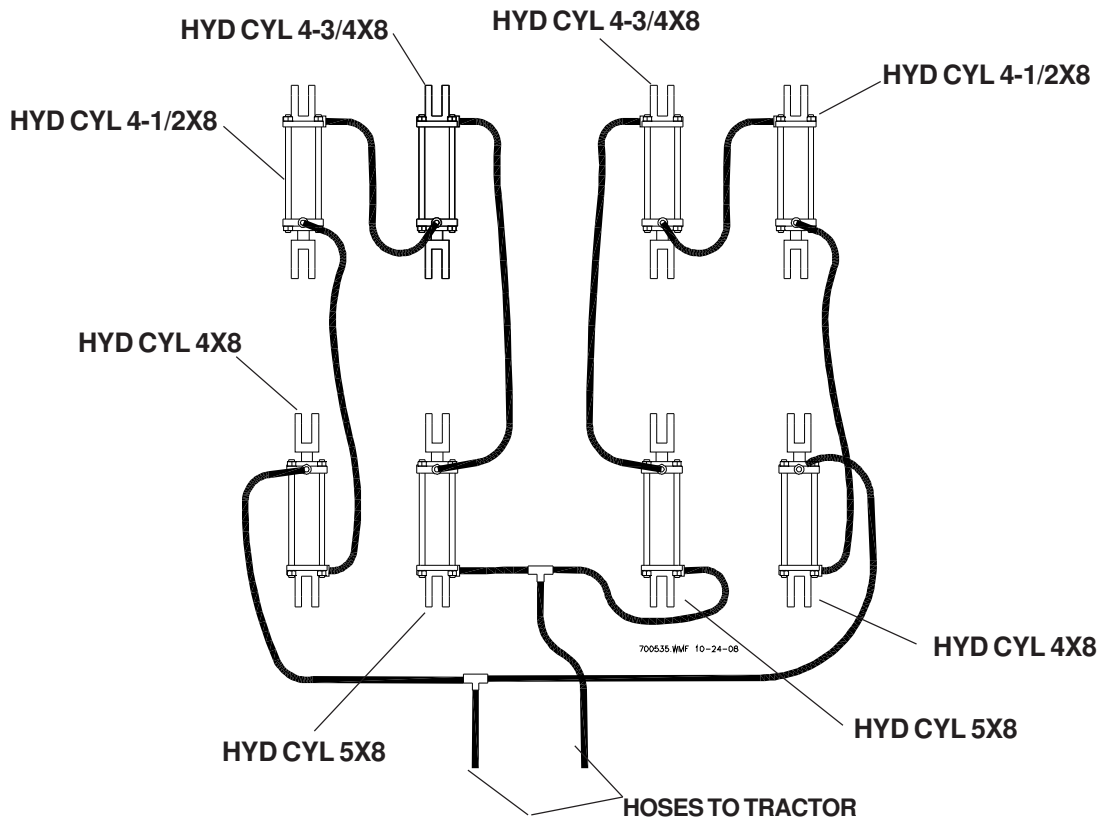
## ITEM PART NO DESCRIPTION

	16154	8-BOLT HUB & SPINDLE (RED) (INCLUDES ITEMS 1-8 & 11-15)
1	88301	3/16x1-1/2 COTTER PIN
2	64050	2-1/2ODx1-1/16ID SPINDLE WASHER
3	16081	OUTER BEARING CONE (TIMKIN# 2790)
4	16082	OUTER BEARING CUP (TIMKIN# 2720)
5	41054	8-BOLT PRESSED HUB (RED) (INCLUDES ITEMS 4, 6 & 12)
6	88143	1/4NPT GREASE FITTING
7	235298	2-1/2" TRIPLE LIP SEAL
7A	89458	NUT JAM 9/16-18 NF Z

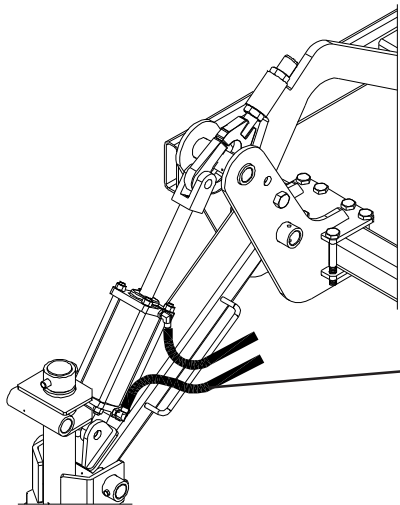
## ITEM PART NO DESCRIPTION

8	16156	2-1/2" AXLE SPINDLE (14-3/4)
9	88298	5/8NCx4 GR5 BOLT
10	88369	5/8NC LOCK NUT
11	16083	INNER BEARING CONE (TIMKIN# 3780)
12	16084	INNER BEARING CUP (TIMKIN# 3720)
13	63831	9/16NFx1-1/8 90° WHEEL BOLT
14	88299	1NF SLOTTED NUT
15	16077	DUST CAP
16	222259	31x13.5 12 PLY 8 BLT WHEEL ASSY
	203196	15x10 WHEEL RIM
	57908	VALVE ASSEMBLY
	222088	31x13.5 12PLY TIRE

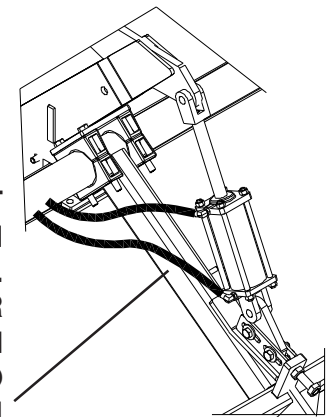
# MAIN LIFT BYPASS CYLINDER CIRCUIT



REFER TO MAIN FRAME HYDRAULIC ASSEMBLY PAGES FOR CYLINDER LOCATIONS ON THE MAIN UNIT, NOTE ORIENTATION OF FRONT CYLINDERS ON THE LEFT SIDE OF THE UNIT.

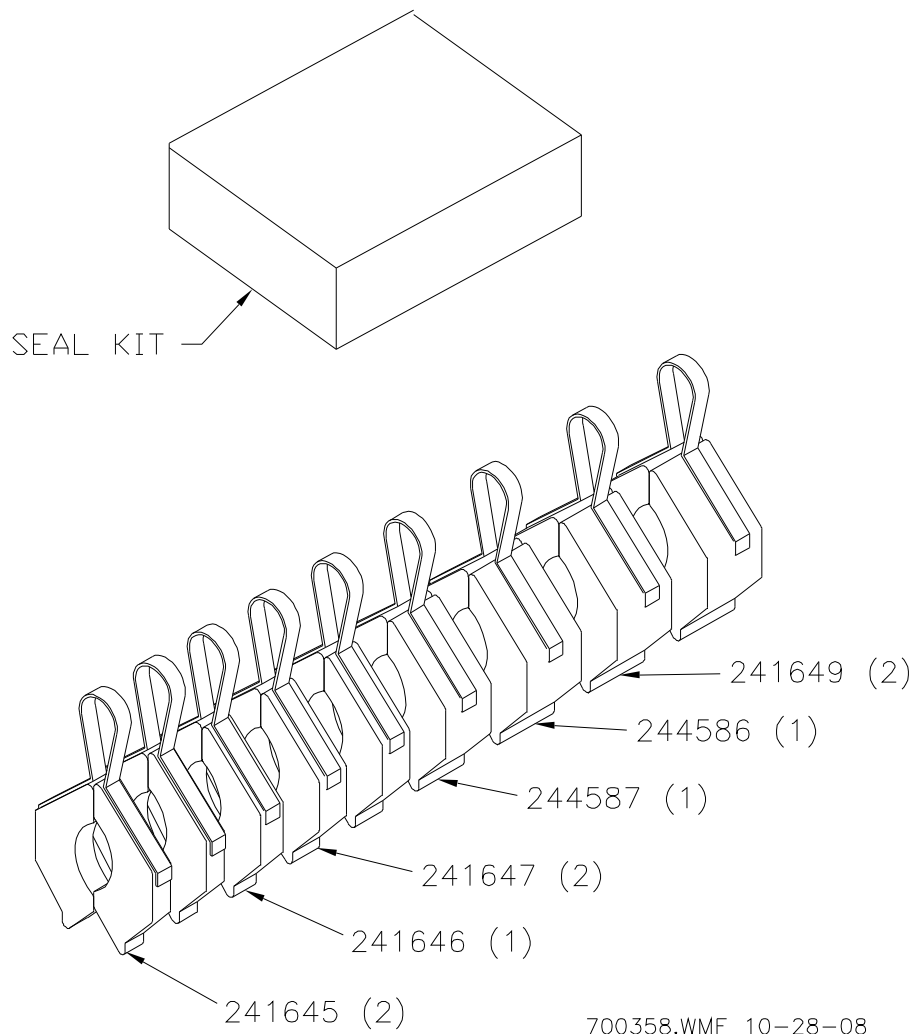


**NOTE: CYLINDERS ON FRONT LIFT AXLES MUST BE MOUNTED WITH RODS UP AND PORTS TO THE SIDE. CYLINDERS ON THE REAR PACKER LIFT SHOULD BE MOUNTED WITH THE RODS UP. FAILURE TO ORIENTATE AS INDICATED CAN CAUSE PORT INTERFERENCE, CHECK FOR INTERFERENCE BEFORE AND WHILE ACTIVATING ALL CYLINDERS.**



700388.DWG 7/11/07

# HYDRAULIC STOP COLLARS & SEAL KITS



PART NO.	DESCRIPTION	PART NO.	DESCRIPTION
243994	PAINTED STOP COLLAR KIT	244586	1-7/16IN CYLINDER STOP - BLUE
233838	SEAL KIT 4IN (FGS-SK-ACGZ4Q2Q)	241670	SEAL KIT 4IN ATD BP CYL
241645	1/2IN CYLINDER STOP - RED	241671	SEAL KIT 4-1/2IN ATD BP CYL
241646	5/8IN CYLINDER STOP - ORANGE	241672	SEAL KIT 4-3/4IN ATD BP CYL
241647	3/4IN CYLINDER STOP - YELLOW	241673	SEAL KIT 5IN ATD BP CYL
241649	1-1/2IN CYLINDER STOP - GRAY	W104625	SEAL KIT 5X36 CYL
244587	1-1/4IN CYLINDER STOP - GREEN		

# HYDRAULIC STOP COLLARS COMBINATIONS

## STOP COLLAR COMBINATIONS

TOTAL DIM	TOTAL DIM		TOTAL DIM		TOTAL DIM		TOTAL DIM		TOTAL DIM		TOTAL DIM	
1	R	R	R	R	R	R	R	R	R	R	R	R
1.12	R	O	R	R	R	R	R	R	R	R	R	R
1.25	R	Y	R	O	R	O	R	O	R	O	R	O
1.38	O	Y	R	O	R	O	R	O	R	O	R	O
1.44	B		R	B	R	B	R	B	R	B	R	B
1.5	Y	Y	R	GY	R	GY	R	GY	R	GY	R	GY
1.62	R	R	O	B	R	B	R	B	R	B	R	B
1.75	R	G	R	O	R	O	R	O	R	O	R	O
1.88	R	O	R	B	R	B	R	B	R	B	R	B
1.94	R	B	R	B	R	B	R	B	R	B	R	B
2	R	GR	R	GR	R	GR	R	GR	R	GR	R	GR
2.06	O	B	R	O	R	O	R	O	R	O	R	O
2.12	O	GY	R	GY	R	GY	R	GY	R	GY	R	GY
2.18	Y	N	R	R	R	R	R	R	R	R	R	R
2.25	Y	GY	R	GY	R	GY	R	GY	R	GY	R	GY
2.38	R	O	R	O	R	O	R	O	R	O	R	O
2.44	R	R	R	B	R	B	R	B	R	B	R	B
2.5	R	R	R	GY	R	GY	R	GY	R	GY	R	GY
2.56	R	O	R	B	R	B	R	B	R	B	R	B
2.62	R	O	R	GY	R	GY	R	GY	R	GY	R	GY
2.69	R	Y	R	B	R	B	R	B	R	B	R	B
2.75	R	Y	R	GR	R	GR	R	GR	R	GR	R	GR
2.81	O	Y	R	B	R	B	R	B	R	B	R	B
2.88	O	Y	R	GY	R	GY	R	GY	R	GY	R	GY
2.94	B	GY	R	B	R	B	R	B	R	B	R	B
3	GY	GY	R	GY	R	GY	R	GY	R	GY	R	GY
3.06	R	R	R	O	R	O	R	O	R	O	R	O
3.12	R	R	R	O	R	O	R	O	R	O	R	O

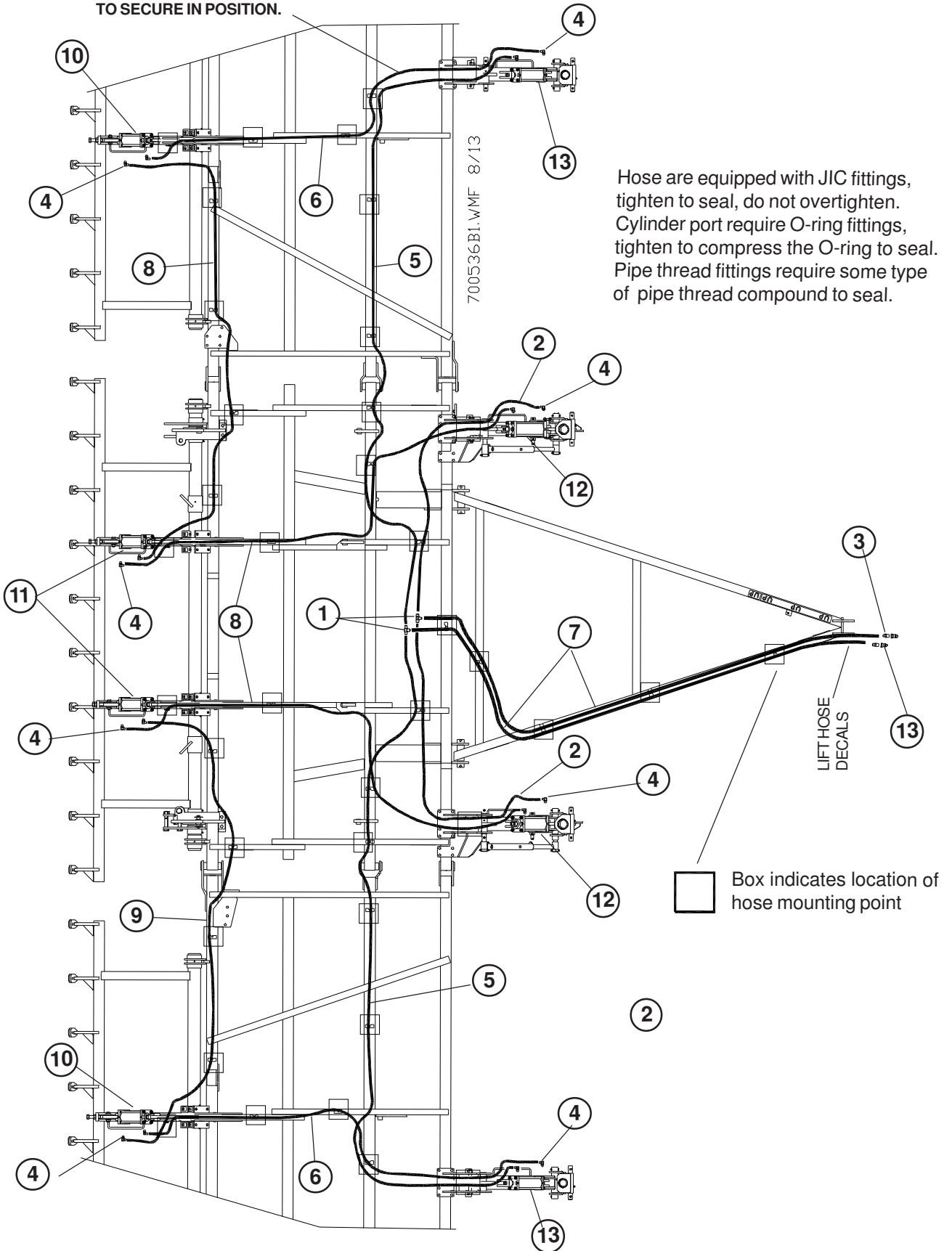
RED	R	0.5
ORANGE	O	0.625
YELLOW	Y	0.75

GREEN	GN	1.25
BLUE	B	1.438
GRAY	GY	1.5

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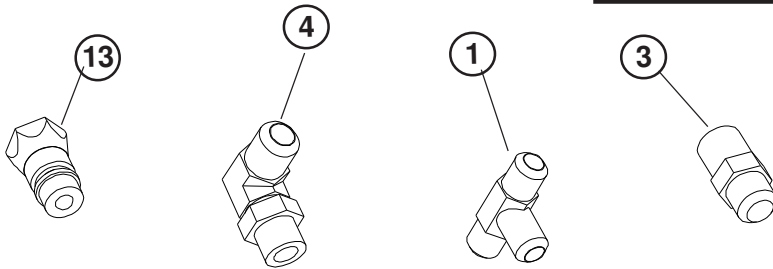
# HOSE ROUTING - MAIN LIFT

SECURE HOSES WITH NYLON TIES WHERE REQUIRED TO SECURE IN POSITION.



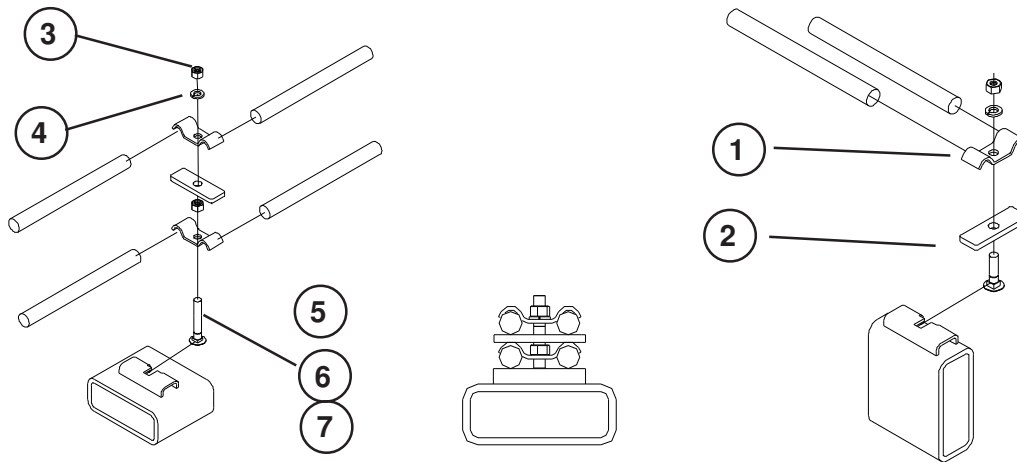


## HOSE ROUTING - MAIN LIFT



ITEM	PART NO.	DESCRIPTION	QTY
1	13238	TEE 8MJ X 8MJ X 8MJ	2
2	13482	HSE 3KPSI 3/8X108 8FJX-8FJX	2
3	24024	ADP 8MORB X 8MJ	2
4	25580	ELB 8MORB X 8MJ	16
5	233688	HSE 3KPSI 3/8X252 8FJX-8FJX	2
6	233689	HSE 3KPSI 3/8X180 8FJX-8FJX	2
7	237264	HSE 3KPSI 1/2X234 8FJX-8FJX	2
8	238204	HSE 3KPSI 3/8X210 8FJX-8FJX	4
9	241622	HYD CYL 4-1/2X8 SEQ	2
10	241623	HYD CYL 4-3/4X8 SEQ	2
11	241624	HYD CYL 5X8 SEQ	2
12	241663	HYD CYL 4X8 WITH SPACER	2
13	247425	QUICK COUPLER 8 ORB	2

## HOSE CLAMPING - ALL SYSTEMS & MODELS

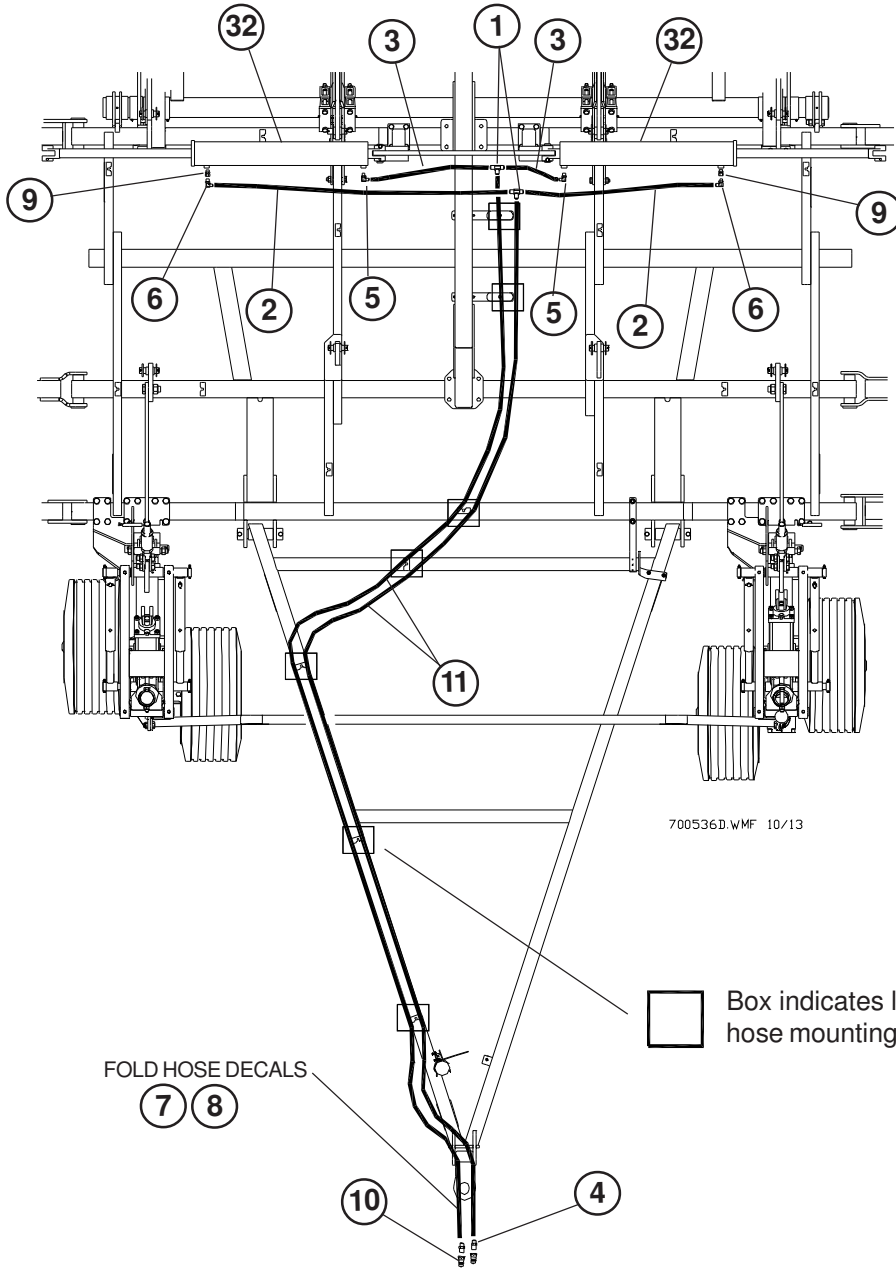


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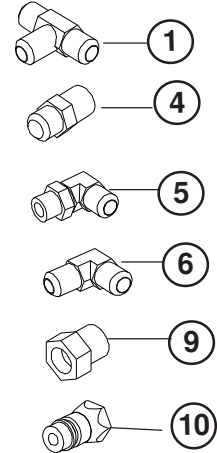
**ATTACH HOSES AS SHOWN. ROUTE ALL HOSES BEFORE ANY HARDWARE IS SECURED. QUANTITY AND COMBINATION OF HARDWARE VARIES BY MODEL**

ITEM	PART NO	DESCRIPTION
1	13215	TUBE CLAMP
2	15543	BASE PLATE - ZINC
3	88103	NUT HEX 3/8-16NC 5Z
4	88362	WSHR HLK 3/8ID Z
5	89375	BLT CRG 3/8-16NC X 1-1/2 5Z
6	89473	BLT CRG 3/8-16NC X 2-1/2 5Z
7	89494	BLT CRG 3/8-16NC X 6 5Z

# HOSE ROUTING - WING FOLD



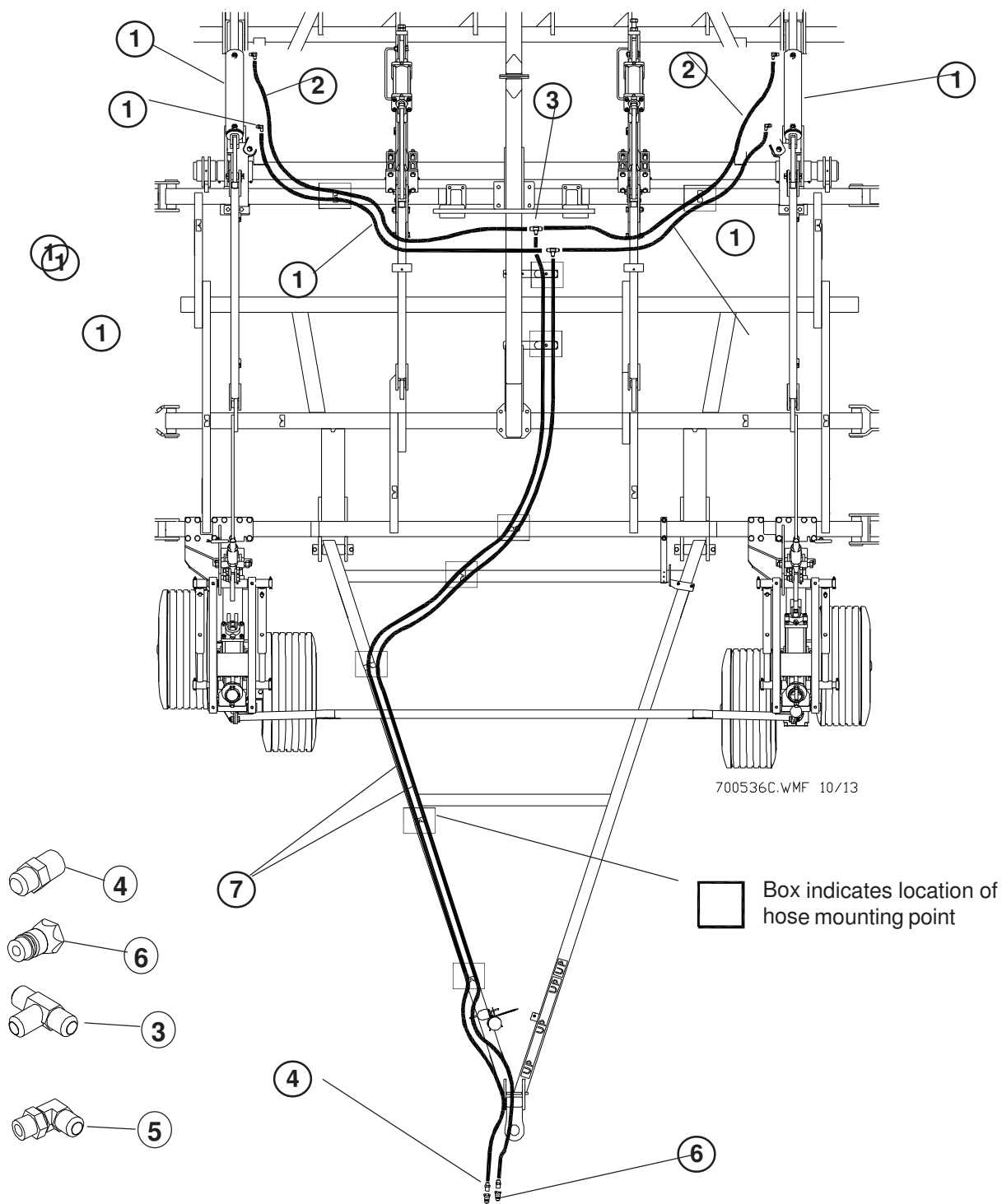
Hose are equipped with JIC fittings, tighten to seal, do not overtighten. Cylinder port require O-ring fittings, tighten to compress the O-ring to seal. Pipe thread fittings require some type of pipe thread compound to seal.



Box indicates location of hose mounting point

ITEM	PART NO.	DESCRIPTION	QTY
1	13238	TEE 8MJ X 8MJ X 8MJ	2
2	13268	HSE 3KPSI 3/8X78 8FJX-8FJX	2
3	14644	HSE 3KPSI 3/8X36 8FJX-8FJX	2
4	24024	ADP 8MORB X 8MJ	2
5	25580	ELB 8MORB X 8MJ	2
6	40215	ELB 8MJ X 8MJ	2
7	54900	WINGS UP DECAL	1
8	54901	WINGS DOWN DECAL	1
9	244575	RSTR ADP 8MORB X 8FJX (.078)	2
10	247425	QUICK COUPLER 8 ORB	2
11	A36415	HOSE: .50 X 282 8FJX-8FJX	2
12	W106386	WING FOLD CYLINDER 5 X 36	2

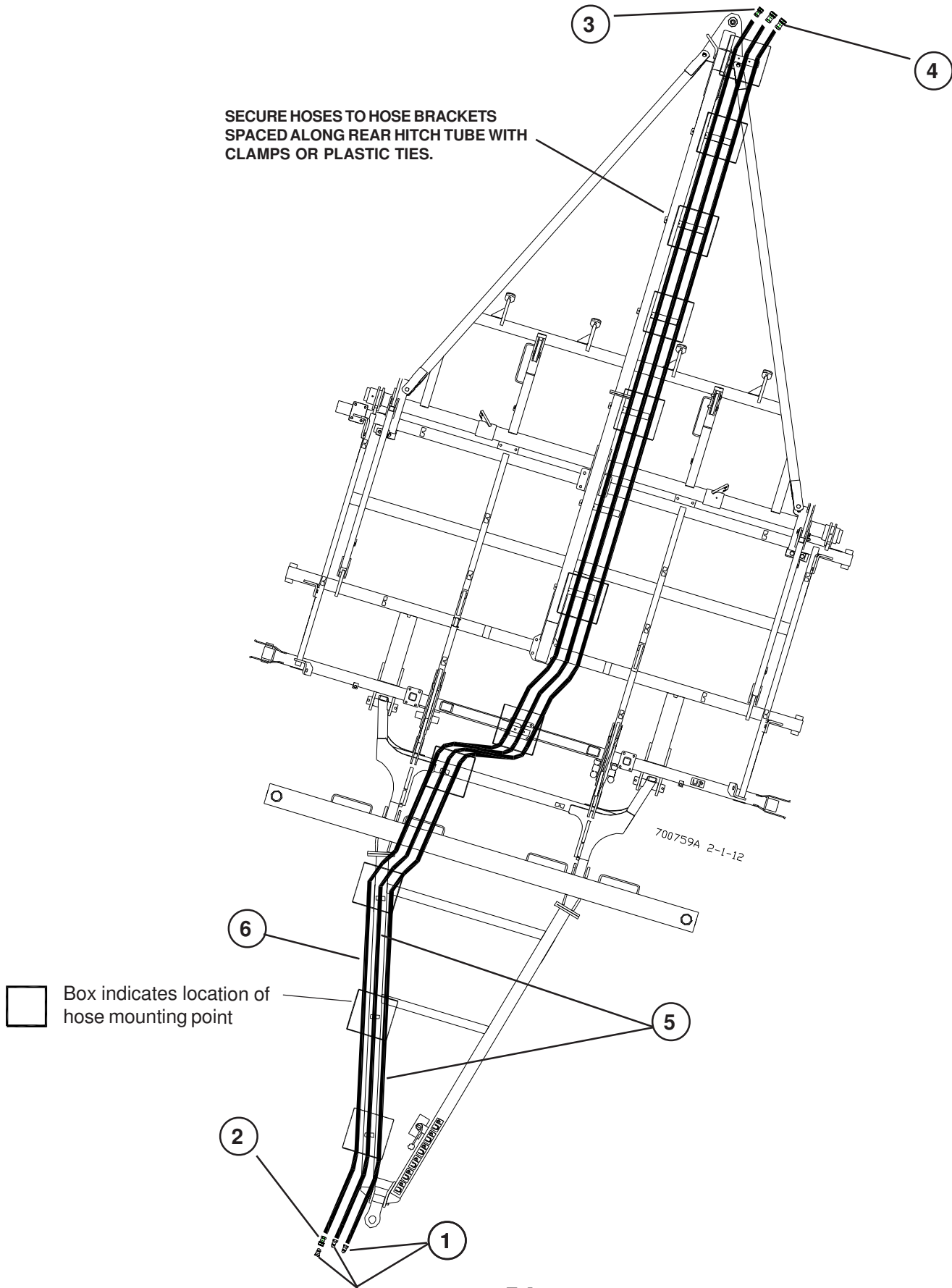
# HOSE ROUTING - TRANSPORT LIFT



ITEM	PART NO.	DESCRIPTION	QTY
1	13482	HSE 3KPSI 3/8X108 8FJX-8FJX	2
2	13483	HSE 3KPSI 3/8X120 8FJX-8FJX	2
3	13238	TEE 8MJ X 8MJ X 8MJ	2
4	24024	ADP 8MORB X 8MJ	2
5	25580	ELB 8MORB X 8MJ	4
6	222213F1	HYD CYL 4X16 ILP #A519CY26	2
7	247425	QUICK COUPLER 8 ORB	4
8	A36415	HOSE: .50 X 282 8FJX-8FJX	2

# HOSE ROUTING - REAR SEEDER SUPPLY

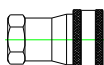
SECURE HOSES TO HOSE BRACKETS  
SPACED ALONG REAR HITCH TUBE WITH  
CLAMPS OR PLASTIC TIES.



# HOSE ROUTING - REAR SEEDER SUPPLY

ITEM	PART NO	DESCRIPTION	QTY
1	60640	QUICK DISCONNECT COUPLER	3
2	236170	DOUBLE ACTING FEMALE CPLR (4250-4P)	1
3	239899	1/2 FEMALE QUICK COUPLER	1
4	240301	3/4 QUICK FEMALE COUPLER	2
5	241747	HSE 3KPSI 3/4X456 8MPT-12MPT	2
6	241748	HSE 3KPSI 1/2X456 8MPT-8MPT	1

These hoses are equipped with male pipe threads. Pipe thread fitting require some type of liquid thread sealant to seal. Route hoses as shown, secure with hose brackets or plastic ties as required.



3/4 FEMALE COUPLER  
240301



1/2 FEMALE COUPLER  
239899

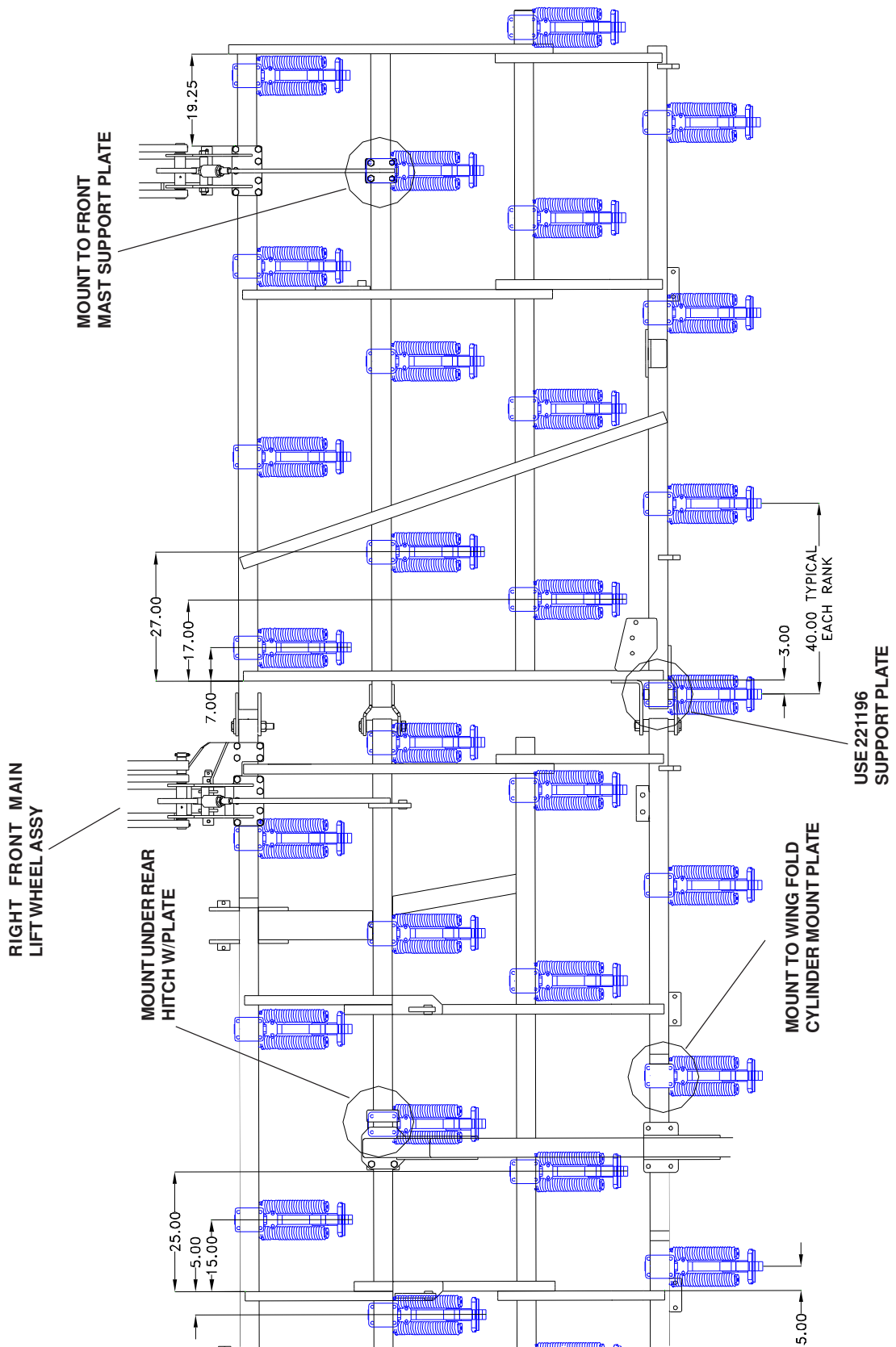


QUICK DISCONNECT MALE  
COUPLER - 60640

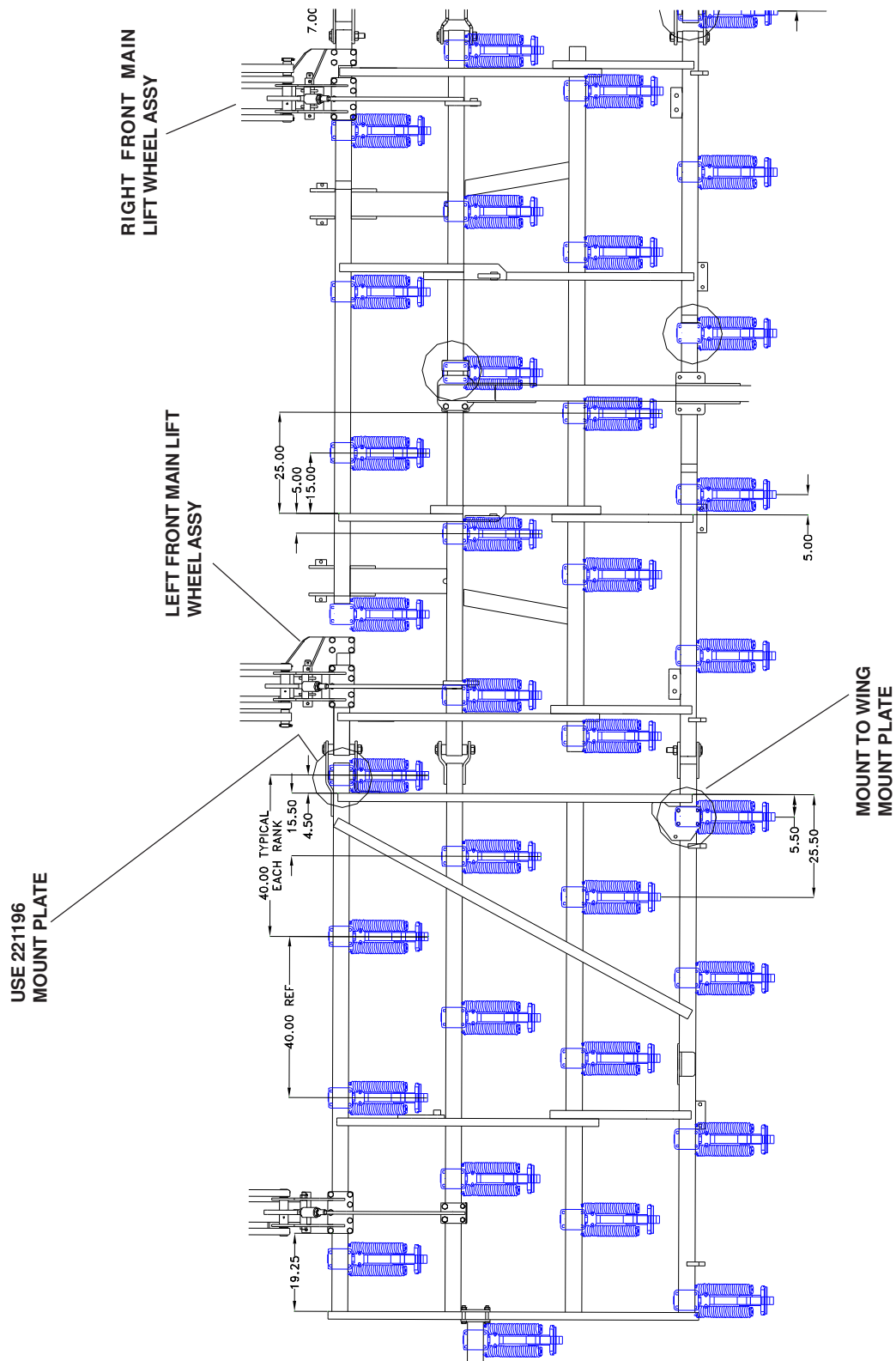


1/2 FEMALE PIONEER  
COUPLER - 236170

# RIGHT SIDE SHANK SPACINGS

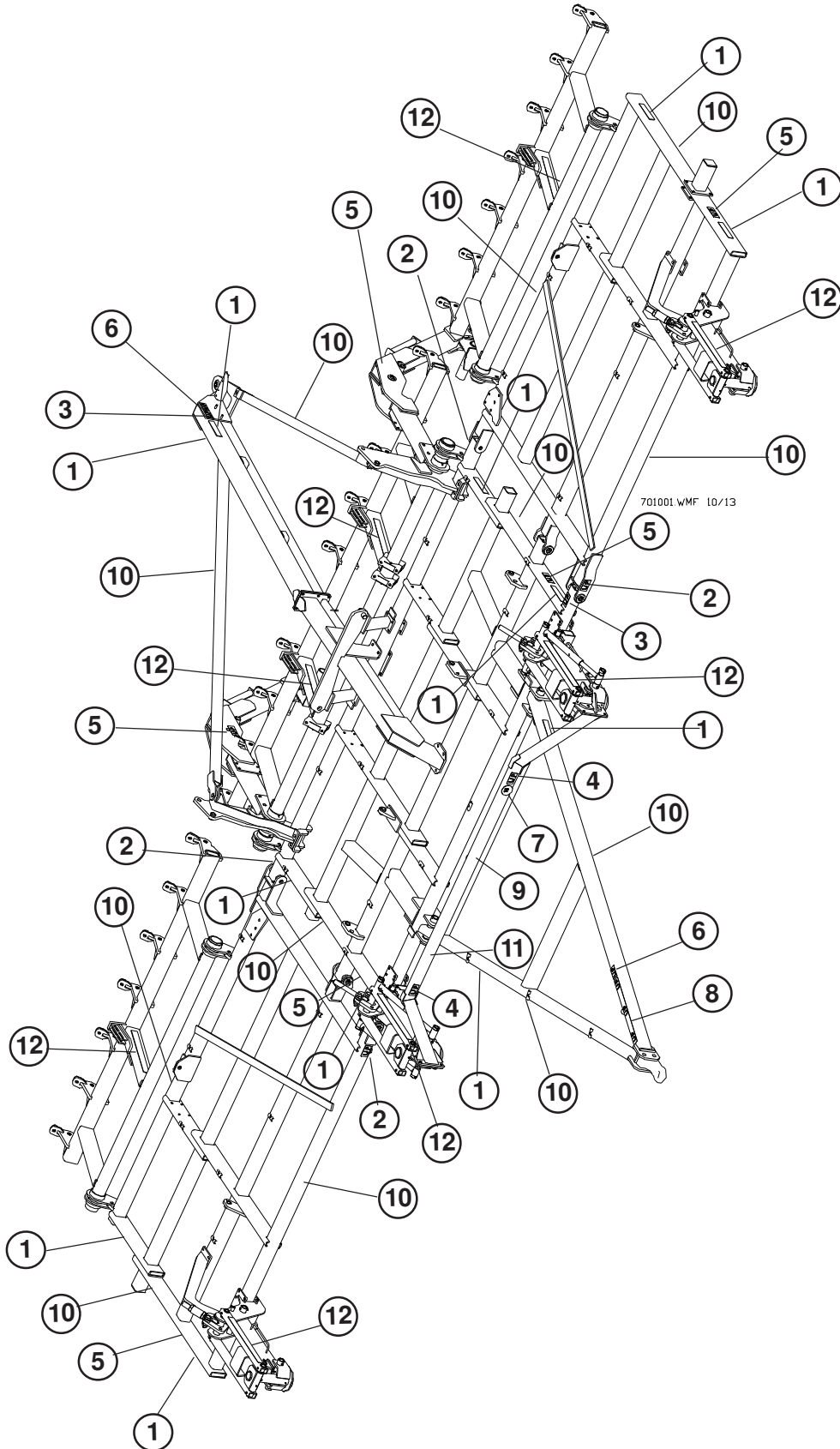


# LEFT SIDE SHANK SPACINGS





# DECAL PLACEMENT

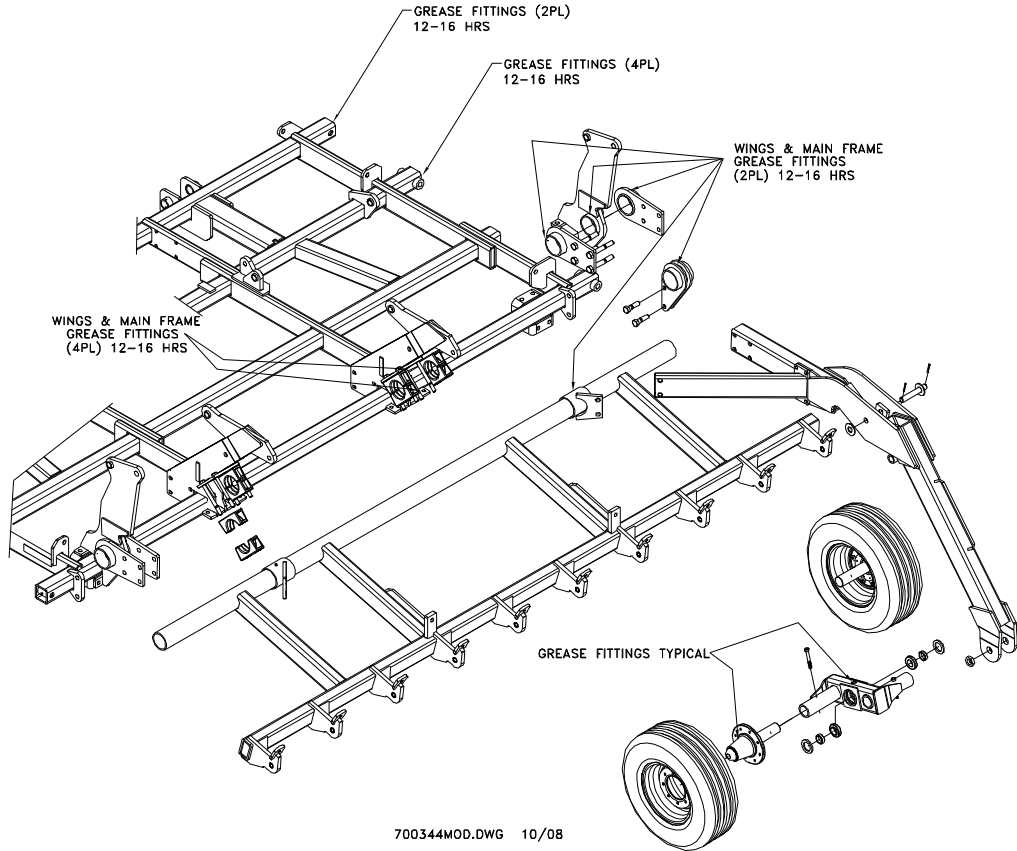


## DECAL PLACEMENT

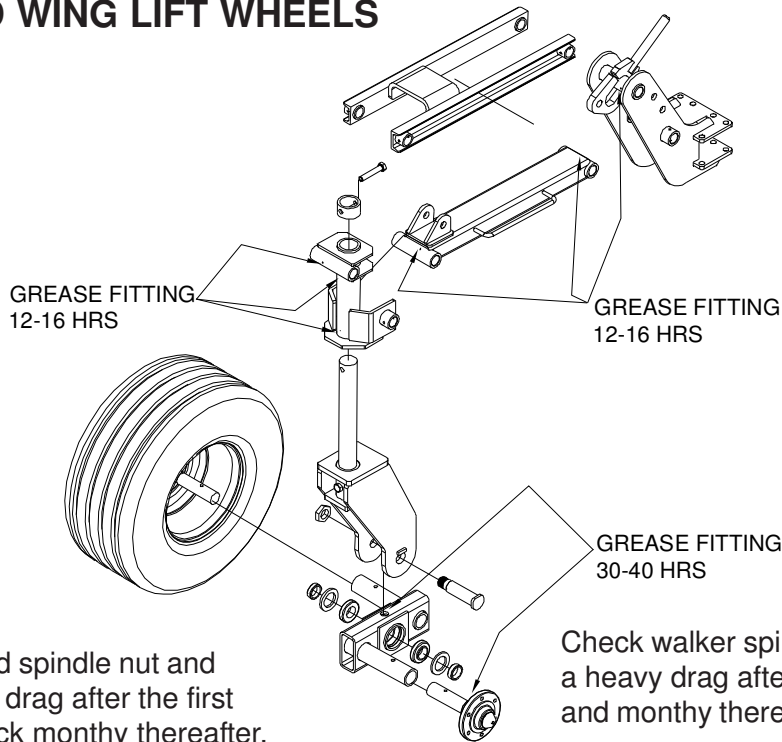
ILLUSTRATION INDICATES LOCATION OF THE VARIOUS SAFETY RELATED DECALS WHICH ARE APPLIED BY FACTORY PERSONNEL OR WILL REQUIRE PLACEMENT BY SETUP PERSONNEL. GENERAL LOCATION OF MODEL AND BRANDING DECALS ARE NOTED AND SOME MODEL COMPONENTS HAVE BEEN REMOVED FOR CLARITY. MODEL AND BRANDING DECAL QUANTITY CAN VARY BY UNIT CONFIGURATION. BASE METAL MUST NOT BE COLD TO ENSURE PROPER DECAL ADHESION.

ITEM	PART NO.	DESCRIPTION	QTY
1	22372	AMBER REFLECTOR	12
2	997854	DECAL FOLDING WINGS DANGER	4
3	997860	DECAL READ MANUAL WARNING	1
4	997863	DECAL HIGH VOLTAGE	2
5	997864	DECAL LOCKOUT WARNING	6
6	9971010	DECAL CHEMICAL HAZARD WARNING	2
7	997868	DECAL SPEED SIGN 25 MILE/HR	1
8	9971163	DECAL SAFETY SET	1
9	8888315-ADHESIVE	PLATE - SERIAL NO. (AGCO) ADHESIVE BACKED	1
10	VARIES BY MODEL	MODEL BRANDING DECAL	12
11	VARIES BY MODEL	MODEL NUMBER DECAL	1
12	A1030712	DECAL - DEPTH STOP	8

# DECAL LOCATIONS/GREASE FITTINGS



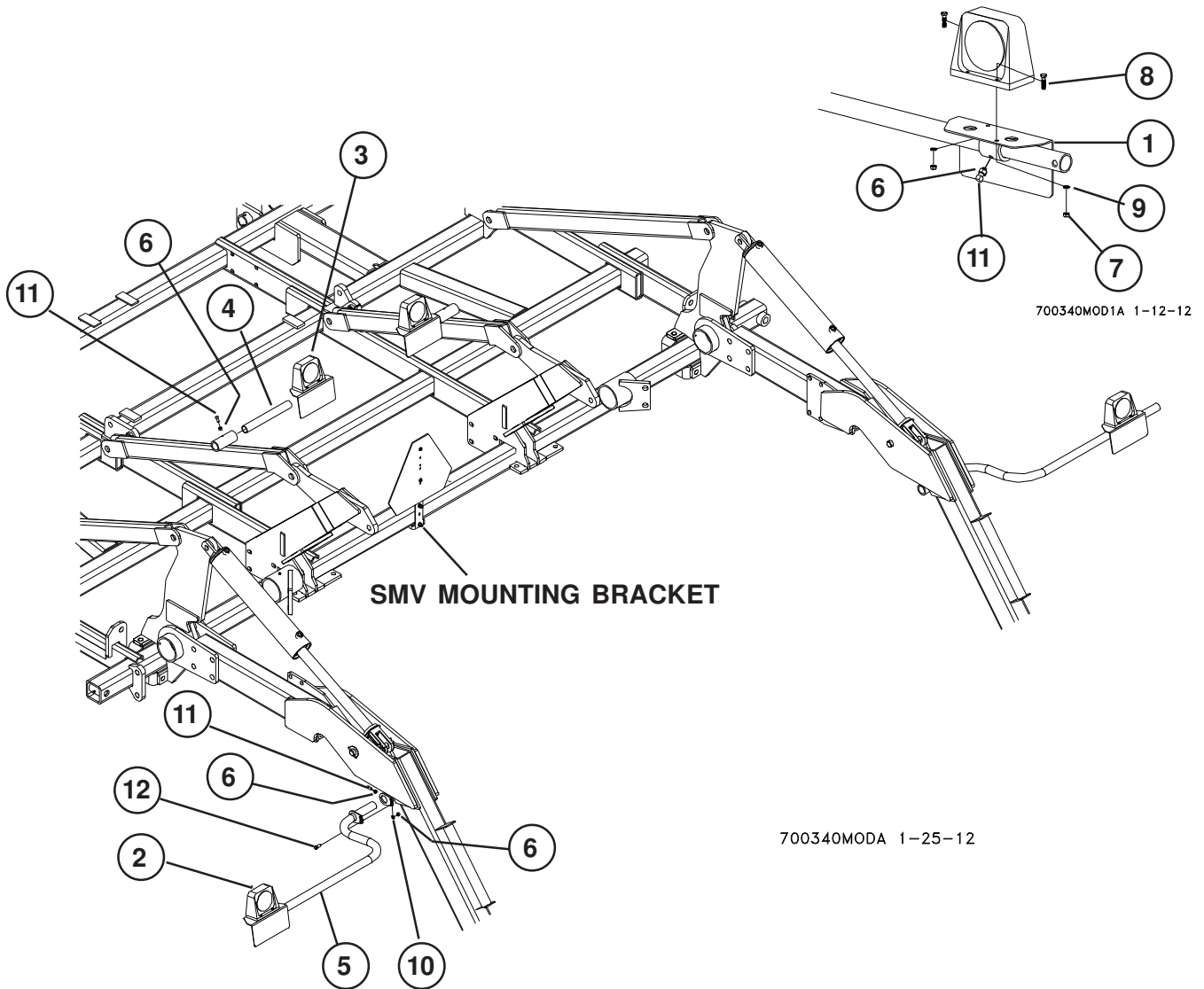
## MAIN AND WING LIFT WHEELS



Check wheel hub and spindle nut and adjust to a moderate drag after the first 40 hrs of use. Recheck monthly thereafter. Repack and re-adjust all walker and hub & spindle bearings at end of season.

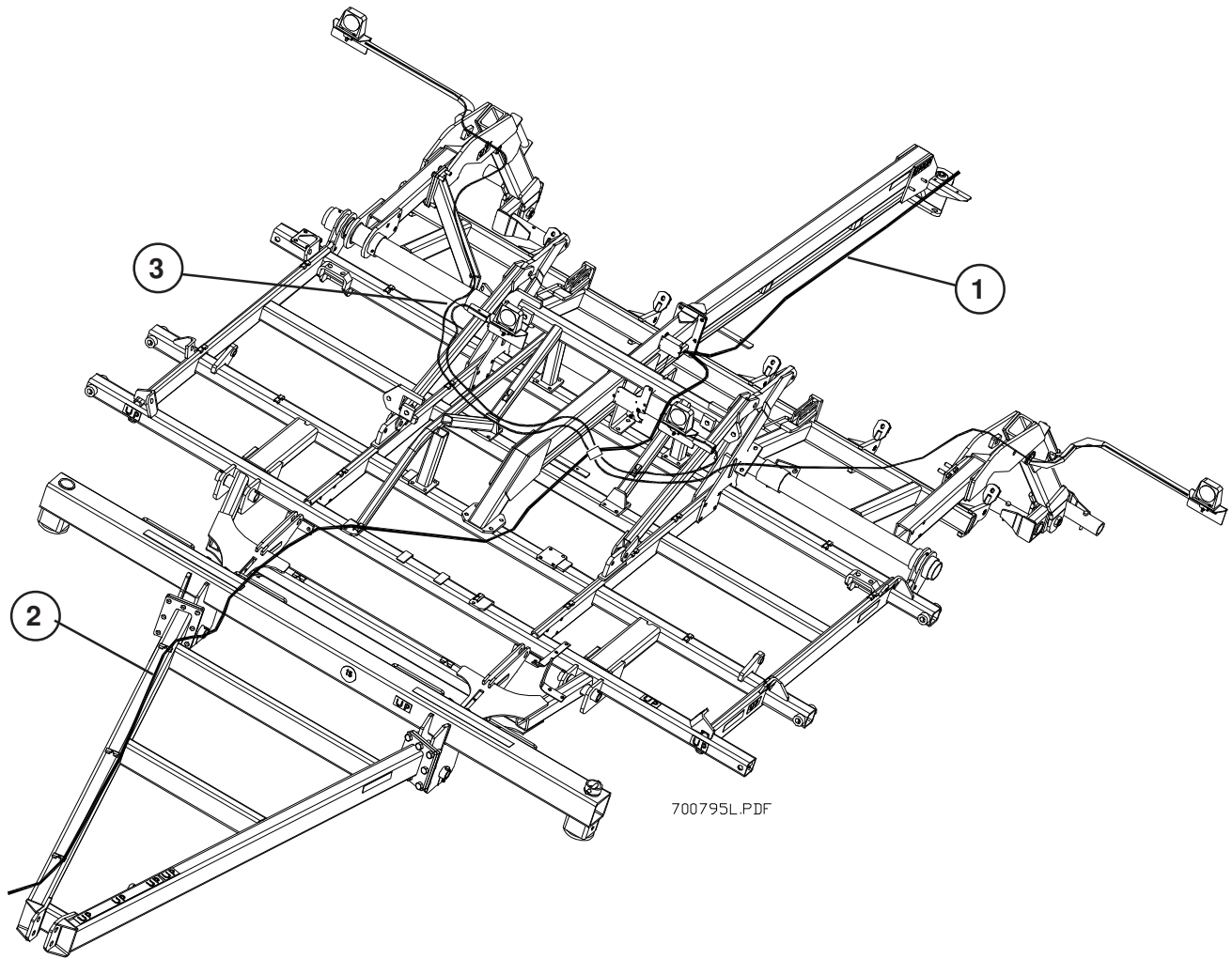
Check walker spindle nut and adjust to a heavy drag after the first 40 hrs of use and monthly thereafter.

# SAFETY LIGHTS MOUNTING



ITEM	PART NO.	DESCRIPTION	QTY
1	223126	LIGHT/REFLECTOR BRACKET	4
2	223143	AG LIGHT, SINGLE AMBER TRI-PLUG	2
3	223144	AG LIGHT, SINGLE RED TRI-PLUG	2
4	223160	12 LIGHT ARM	2
5	240238	48IN OFFSET LIGHT ARM W/LOCK	2
6	88103	NUT HEX 3/8-16NC 5Z	12
7	88172	NUT HEX 1/4-20NC 5Z	16
8	88203	BLT HEX 1/4-20NCX1 5Z	16
9	88262	WSHR HLK 1/4ID(5/16ACT) Z	16
10	88362	WSHR HLK 3/8ID Z	2
11	88702	SCR SET 3/8NCX3/4 SQHD CUP-PT P	10
12	89034	BLT HEX 3/8NC X 1 5Z	2

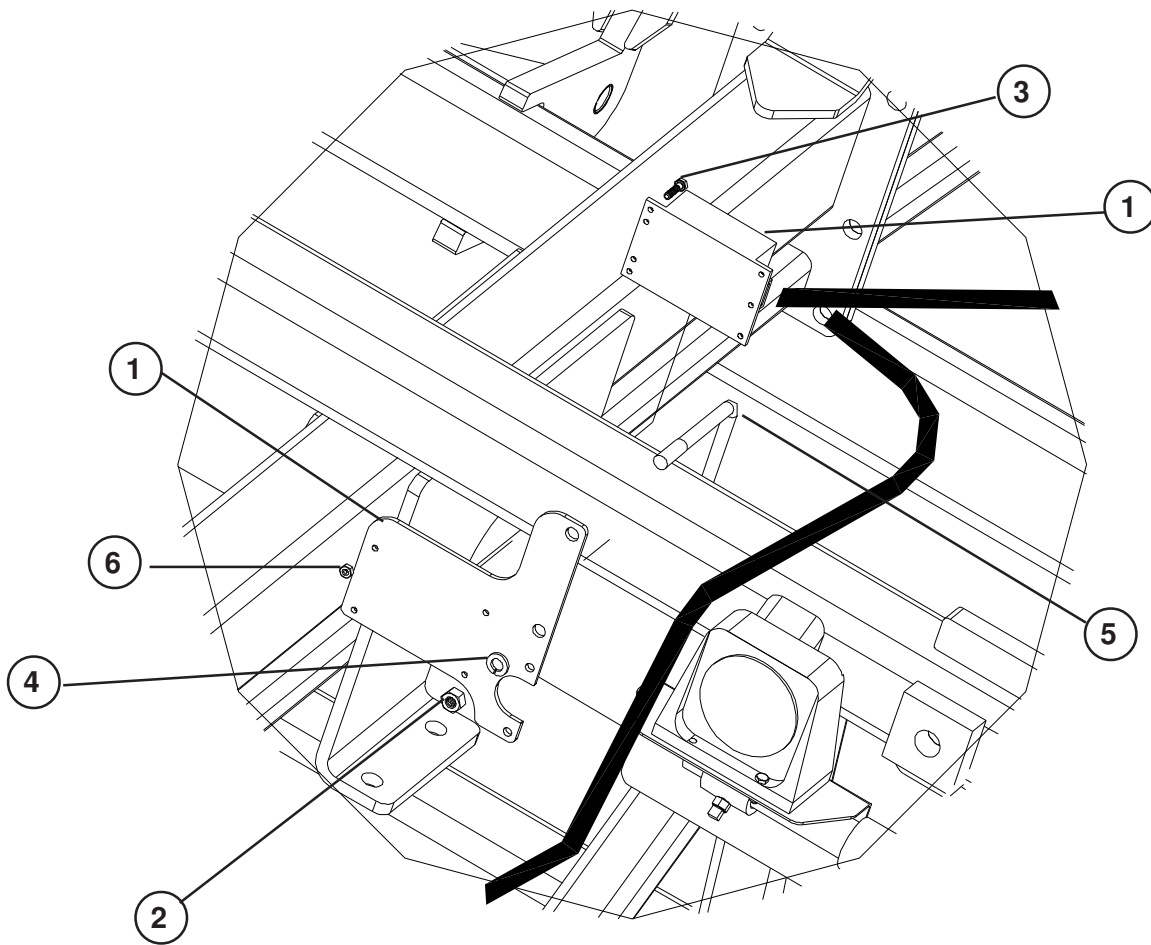
# SAFETY LIGHTS WIRE ROUTING



ITEM NO.	PART NO.	DESCRIPTION	QTY
1	A34567	HARNESS-EXT LIGHT 20'	1
2	A65340	HARNESS-SAFETY LIGHT S279.11	1
3	A65354	HARNESS-LIGHT EXTENSION	1

**Route wires along hydraulic lines, utilizing the hoses to carry the wires, securing with nylon ties. Coil excess wire as required and secure in place. Route the safety light wires through the various mounting tubes as shown.**

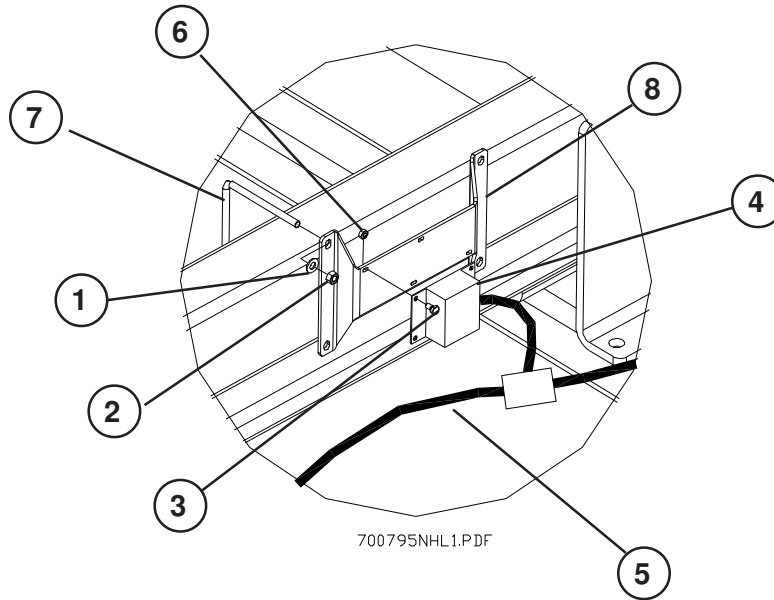
# SAFETY LIGHTS MODULE MOUNTING



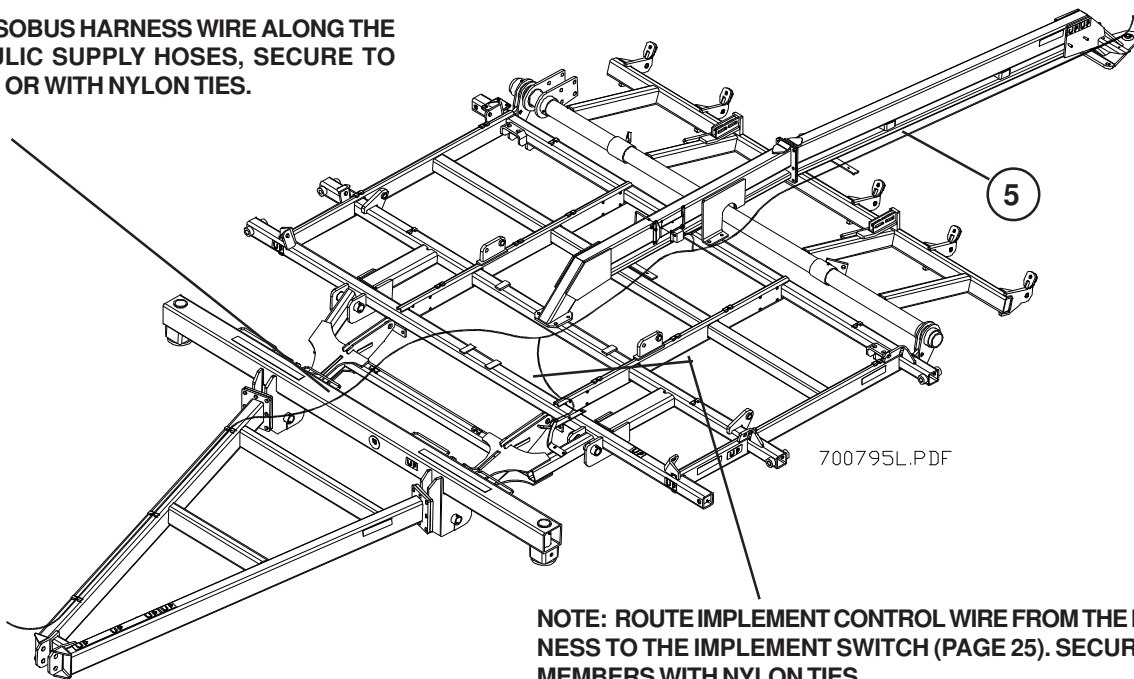
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ITEM NO.	PART NO.	DESCRIPTION	QTY
1	344112	PLATE-SAFETY LIGHT MODULE MOUNT	1
2	88104	NUT HEX 1/2-13NC 5Z	1
3	88203	BLT HEX 1/4-20NC X 1 5Z	4
4	88303	WSHR HLK 1/2ID(9/16ACT) Z	2
5	89270	BLT-U 1/2-13NC X 4 X 5-1/4 Z	1
6	89501	NUT TOP LK 1/4-20NC 5Z	4
7	A65341	MODULE-INTERFACE	1

# ISOBUS AND OPTIONAL NH3 MODULE MOUNTING



ROUTE ISOBUS HARNESS WIRE ALONG THE HYDRAULIC SUPPLY HOSES, SECURE TO CLAMPS OR WITH NYLON TIES.

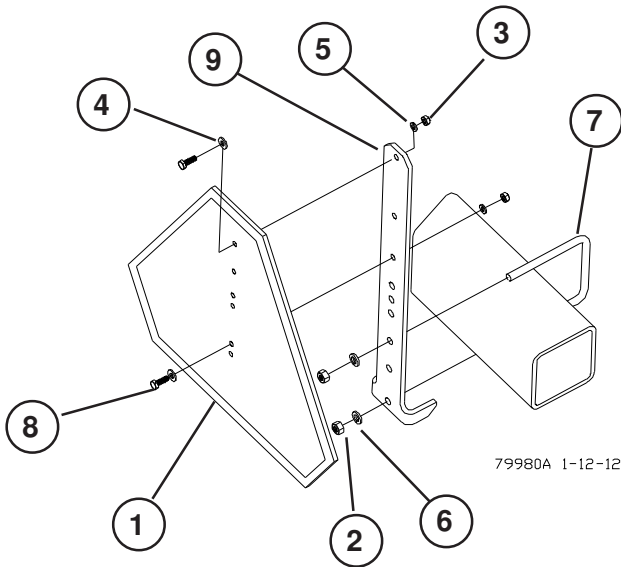


NOTE: ROUTE IMPLEMENT CONTROL WIRE FROM THE ISOBUS HARNESS TO THE IMPLEMENT SWITCH (PAGE 25). SECURE TO FRAME MEMBERS WITH NYLON TIES.

ITEM	PART NO.	DESCRIPTION	QTY
1	88282	WSHR FLAT 3/8(7/16 X 1ACT) Z	2
2	88659	NUT TOP LK 3/8-16NC 5Z	2
3	89522	SCREW-P-H: .19 X .50 NC SS	2
4	330341	MODULE-NH3 W/SW - AMD2305 V3_01	1
5	320562	HARNESS-TOOLBAR ISOBUS	1
6	1032059	NUT-K-LOCK: 18-8 SS .19 (10-24)NC	4
7	A64364	U-BOLT: .375 X 5.13 X 6 X 5.13	1
8	A67832	PLATE-MODULE MOUNT (4" & 6")	1



## SMV EMBLEM



The bracket provided is designed to mount to numerous frame sizes and can be orientated in numerous positions to avoid interference with implement components.

The SMV emblem is to be secured as near to the rear and centered, or as near to the left of center of the implement as possible.

Emblem is to be 2 to 6 feet above the ground measured from the ground edge of the emblem.

ITEM	PART NO	DESCRIPTION	QTY
1	30651	SMV EMBLEM S276.6	1
2	88103	NUT HEX 3/8-16NC 5Z	2
3	88172	NUT HEX 1/4-20NC 5Z	2
4	88261	WSHR FLAT 1/4(5/16 X 3/4ACT) Z	2
5	88262	WSHR HLK 1/4ID(5/16ACT) Z	2
6	88362	WSHR HLK 3/8ID Z	2
7	88385	BLT-U 3/8-16NCX4X5 Z	1
8	88993	BLT HEX 1/4-20NC X 3/4 5Z	2
9	350933	SMV BRACKET	1

