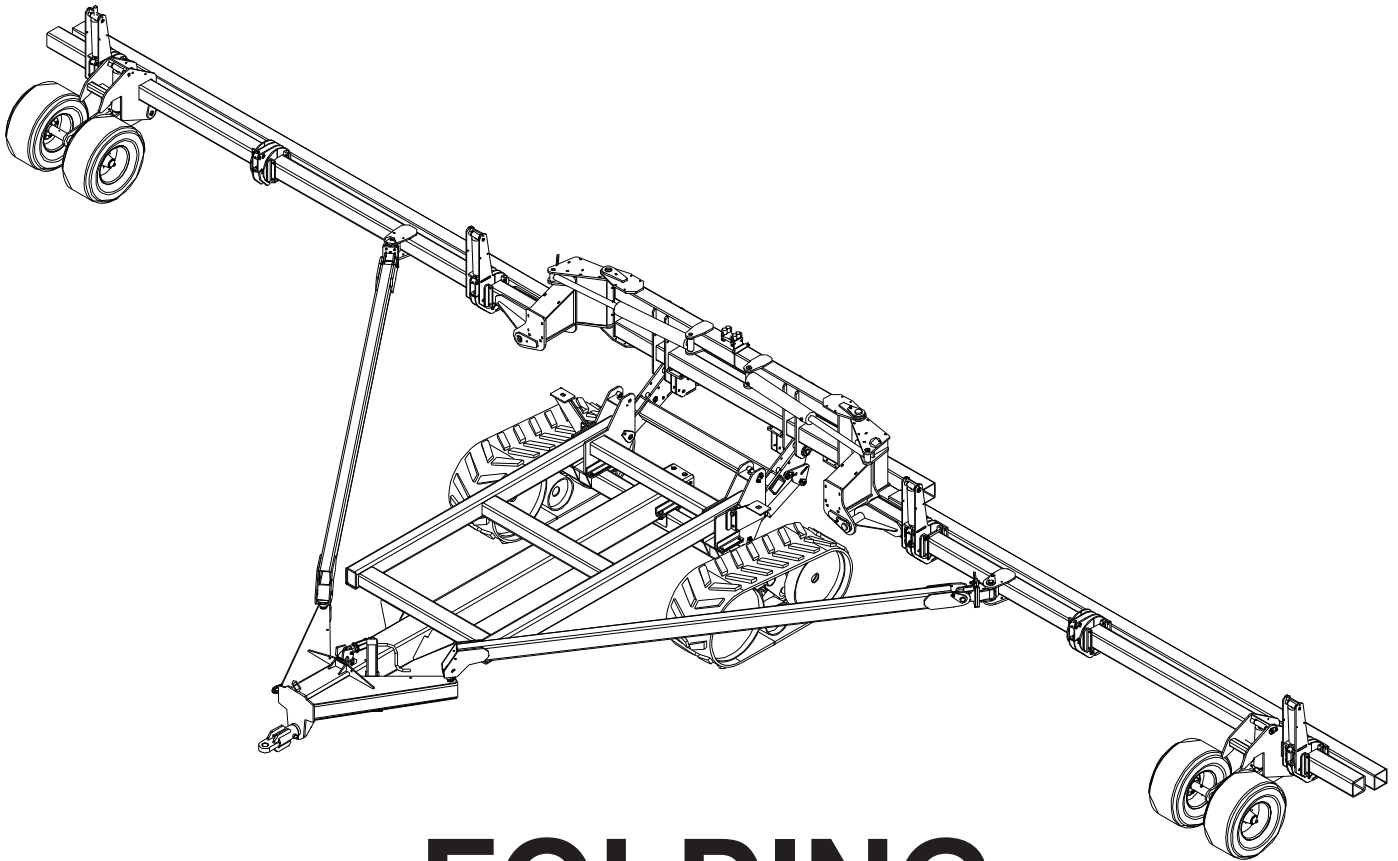




ASSEMBLY/OPERATOR'S MANUAL



FOLDING TOOLBAR

 **WIL-RICH**

PO Box 1030
Wahpeton, ND 58074
PH (701) 642-2621
Fax (701) 642-3372
www.wil-rich.com

WIL-RICH, LLC

WARRANTY

Wil-Rich's products are warranted to the original non-commercial purchaser to be free from defects in material and workmanship for a minimum period of twelve (12) months from the original date of purchase.

Additional Field Cultivator Warranty: Wil-Rich warrants to the original purchaser of each new Wil-Rich Field Cultivator unit (Excel and QuadX), and Disk Field Cultivators that the product be free from defects in material and workmanship for the period of three (3) years on the main frames and shank assemblies. All other components are covered by the twelve (12) month warranty period.

Commercial Use: Warranty for commercial, rental or custom use of any Wil-Rich product is limited to 90 days, parts and labor.

We warrant products sold by us to be in accordance with our published specifications or those specifications agreed to by us in writing at time of sale. Our obligation and liability under this warranty is expressly limited to repairing, or replacing, at our option, within 12 months after date of retail delivery, any product not meeting the specifications. **We make no other warranty, express or implied and make no warranty of merchantability or of fitness for any particular purpose.** If requested by us, products or parts for which a warranty claim is made are to be returned transportation prepaid to our factory. Any improper use, operation beyond rated capacity, substitution of parts not approved by us, or any alteration or repair by others in such manner as in our judgment affects the product materially and adversely shall void this warranty. **No employee or representative is authorized to change this warranty in any way or grant any other warranty.**

Wil-Rich reserves the right to make improvement changes on any of our products without notice.

When warranty limited or not applicable: Warranty on hydraulic hoses, hydraulic cylinders, hubs, spindles, engines, valves, pumps or other trade accessories are limited to the warranties made by the respective manufactures of these components. Rubber tires and tubes are warranted directly by the respective tire manufacturer only, and not by Wil-Rich.

This warranty shall not be interpreted to render Wil-Rich liable for injury or damages of any kind or nature to person or property. This warranty does not include claims for, or extend to the loss or damage of crops, loss because of delay in seeding/planting or harvesting, or any expense or loss incurred for labor, substitute machinery, rental, and transportation expense or for any other reason.

A Warranty Validation and Delivery Report Form must be filled out and received by Wil-Rich to initiate the warranty coverage.

WARRANTY CLAIMS PROCEDURE

1. The warranty form must be returned to Wil-Rich within thirty (30) working days from the repair date.
2. Parts returned to Wil-Rich without authorization will be refused. The parts must be retained at the dealership for ninety (90) days after the claim has been filed. If the Service Department would like to inspect the parts, a packing slip will be mailed to the dealer. The packing slip must be returned with the parts. The parts must be returned prepaid within thirty (30) days of receiving authorization. After the parts are inspected and warranty is verified, credit for the return freight will be issued to the dealer.
3. Parts that will be scrapped at the dealership will be inspected by a Wil-Rich Sales Representative, District Sales Manager or Service Representative within the ninety (90) day retaining period.

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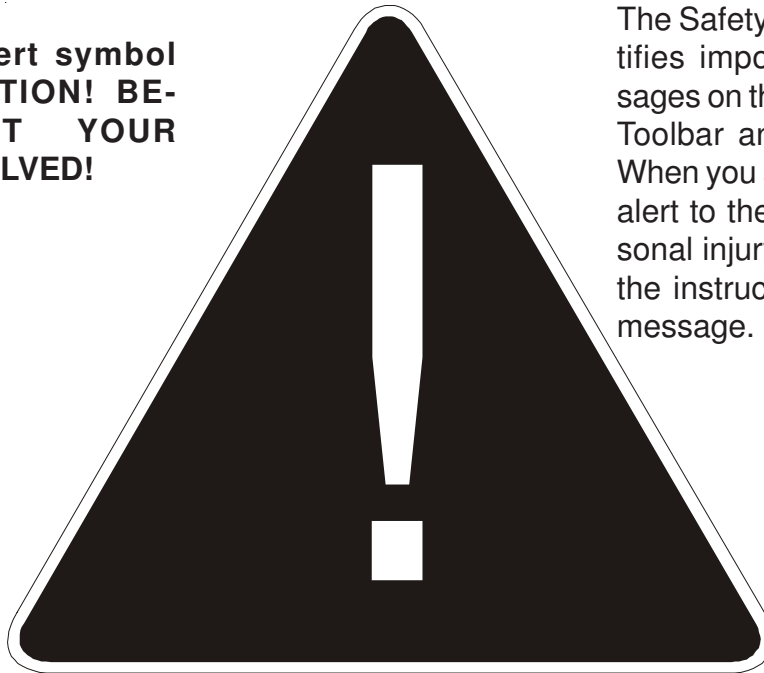
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PERSONAL SAFETY IS IMPORTANT!

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 the Wil-Rich Folding Toolbar 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.

ADDRESS INQUIRIES TO: WIL-RICH PO BOX 1030
WAHPETON, ND 58074
PH (701) 642-2621 FAX (701) 642-3372

TO THE OWNER

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.

SERIAL NUMBER

Every implement has a serial number located on the forward left corner of the main frame. These serial numbers are consecutively assigned to the implements as they are manufactured. To aid in part ordering, we reference the serial number at the point the change occurred to provide an accurate means of determining the proper parts. See page 12 for location.

WIL-RICH LLC Wahpeton, ND	
Serial Number: <input type="text"/>	
Made in USA	

When in need of parts, always specify the model and serial number. Write this number in the space provided.

MODIFICATIONS

It is the policy of **WIL-RICH** 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.



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

PREPARATION

Before operating the **WIL-RICH** Folding toolbar, a careful inspection must become routine. A check must be made to ensure that all hardware and fasteners are securely tightened and moving parts properly lubricated.

Remove all wires and/or banding material. The parts have been conveniently arranged on the pallet for ease of assembly.

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.

FASTENERS

Loosely install all bolts connecting mating parts before final tightening.

GENERAL INFORMATION

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.

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.

TIRE INFLATION

The use of proper air pressure is the most important factor in satisfactory performance and maintenance of implement tire. Underinflation will damage the cord body of the tire and cause a series of diagonal breaks in the fabric sidewall area.

If the tire buckles or wrinkles, the air pressure must be increased to the point where the sidewall remains smooth while operating.

Check the air pressure every two or three weeks and do not allow the pressure to drop to a point where buckling or wrinkling of the tire may be possible.

	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			

TORQUE.EPS

Note: Do not inflate tires beyond the specified tire pressure.

WHEEL BOLTS


It is recommended that all wheel bolts be checked for tightness before using and again after one day of use. Check periodically to be sure the wheel bolts are tight.

LUBRICATION

Make sure the Folding Toolbar is properly lubricated. See page 14 & 15

HYDRAULICS

Check wing lift and depth control cylinders for proper alignment and operation. On any machine, check that the hydraulic system has been properly charged and purged.

 **WARNING**

TO AVOID INJURY OR MACHINE DAMAGE:

- **BEFORE OPERATING;** Study Operators Manual, safety messages and safe operating procedures, read safety signs on this machine.
- **Transport on public roads -** Observe Federal, State and Local regulations; display SMV emblem: Attach proper strength implement safety chain; and limit maximum speed to 20mph (32km/h).
- **Lower or block all elevated components before servicing or leveling this machine.**

24227

Horsepower requirements will vary depending on the attachment that is bolted to the **WIL-RICH** Folding Toolbar. Two remote cylinder outlets and controls are required.

WHEELS AND TIRES

Dual tractor rear wheels are recommended for use with the Folding Toolbar. See your tractor operator's manual for tire inflation and instructions for wheel ballast where required.

METERING VALVES

The metering valve may be set to provide varying amounts of hydraulic oil flow to the cylinders (see your tractor operator's manual.)

It is recommended the wing fold cylinders run as slow as possible to prevent damage to the implement, persons and property. Turn wing fold hydraulics metering valves to slow position.

FRONT BALLAST

Tractor front end stability is necessary for safe and efficient operation. Therefore, it is important that the proper amount of weight be installed on the front of the tractor as recommended in your tractor operator's manual.



Note: Ballast recommendations provide for adequate transport stability at recommended speeds. Additional front ballast may be required for satisfactory field operation due to sudden or extreme forces on the Folding Toolbar. These forces may occur when removing the Folding Toolbar from the ground and turning at rows end, or during field transport over very rough ground.

TRACTOR REQUIREMENTS

TRANSPORTING

A SMV (Slow Moving Vehicle) emblem **must** be used at all times while traveling on public roads.

The wings on the Folding Toolbar must be tilted up 90 ° and folded forward, next wings must be lowered on the transport pads and the wing wheels pulled up off the ground when traveling on public roads. Never depend on your tractor's hydraulic system to carry the weight while transporting.



Note: Use extreme caution when working around overhead power transmission lines.

Reduce speed when cornering and when traveling over rough and/or uneven ground. Drive at a reasonable speed to maintain complete control of the machine at all times.

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

BEARING ASSEMBLIES

IMPORTANT: The spindle nuts on the wheel assemblies are preset at the factory.

Road transport and field working will seat the bearings and will require additional adjustment. After 20 hours of machine operation remove the grease cap and check the bearing tightness.

Remove the cotter pin and rotate the tire while tightening the spindle nut. Tighten until the drag on the tire stops the rotation. Locate the cotter pin hole in the spindle and loosen the spindle nut just enough to allow insertion of the cotter pin. Replace cotter pin and grease cap.

SAFETY

INFORMATION

YOU are responsible for SAFE operation and maintenance of your Wil-Rich Folding Toolbar. YOU must ensure that anyone who is going to operate, maintain or work around the Folding Toolbar be familiar with the operating and maintenance procedures and related safety information contained in this manual. This manual will take you step by step through your working day, alerts you to all good safety practices that should be adhered to while operating this equipment.



Remember, YOU are the key to safety. Good safety practices not only protect you but also the people around you. Make these practices a working part of your safety program. Be certain that EVERYONE operating this equipment is familiar with the recommended operating and maintenance procedures and follows all safety precautions. Most accidents can be prevented. Do not risk injury or death by ignoring good safety practices.

Folding Toolbar owners must give operating instructions to operators and employees before allowing them to operate the Folding Toolbar, and at least annually thereafter per OSHA regulation 1928.57.

The most important safety device on this equipment is a safe operator. It is the operator's responsibility to read and understand ALL Safety and Operating instructions in the manual and to follow them. All accidents can be avoided.

A person who has not read and understood all operating and safety instructions is not qualified to operate the machine.

An untrained operator exposes themselves and bystanders to possible serious injury or death.

Do not modify the equipment in any way. Unauthorized modifications may impair the function and/or safety and could affect the life of the equipment.

Think SAFETY! Work SAFELY!

GENERAL SAFETY BEFORE OPERATING

Read and understand the operator's manual and all safety signs before operating, maintaining or adjusting the Folding Toolbar.

Review safety related items with all operators annually.

Use extreme care when making adjustments.

When working under or around the machine, always lower the Folding Toolbar to the ground.

After servicing, install and properly secure all shields and guards before operating. Remove all tools, parts, and service equipment from the machine.

Have a first-aid kit available for use should the need arise and know how to use it.

Have a fire extinguisher available for use should the need arise and know how to use it.

Clear the area of people and remove foreign objects from the machine before starting and operating.

Always wear relatively tight and belted clothing to avoid entanglement in moving parts. Wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, and head. Wear suitable ear protection for prolonged exposure to excessive noise.

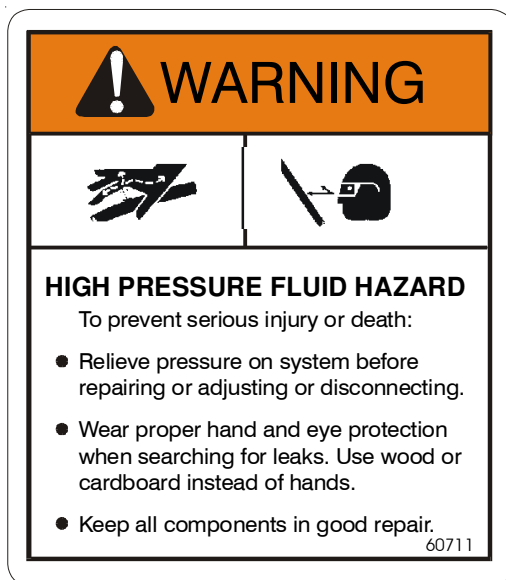
Stop tractor engine, place all controls in neutral, set park brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging. Do not attempt to remove any obstruction while machine is in motion.

HYDRAULIC SAFETY

Always place all tractor hydraulic controls in neutral before dismounting.

Make sure that all components in the hydraulic system are kept in good condition and are clean.

Relieve pressure before working on hydraulic system.



Replace any worn, cut, abraded, flattened or crimped hoses and metal lines.

Before applying pressure to the system, make sure all components are tight and that lines, hoses and couplings are not damaged.

Do not attempt any makeshift repairs to the hydraulic lines, fittings or hoses by using tape, clamps or cements. The hydraulic system operates under extremely high-pressure. Such repairs will fail suddenly and create a hazardous and unsafe condition.

Wear proper hand and eye protection when searching for high pressure leaks. Use a piece of cardboard as a backstop instead of hands to isolate and identify a leak.

If injured by a concentrated high-pressure stream of hydraulic fluid, seek medical attention immediately. Serious infection or toxic reaction can develop from hydraulic fluid piercing the skin surface.

STORAGE SAFETY

Store unit in an area away from human activity.

Do not permit children to play around the stored unit.

Store in a dry, level area. Support the base with planks if required.

WHEN NOT USING THE FOLDING TOOLBAR ALWAYS INSERT SAFETY PINS AS SHOWN ON PAGE 52.

TIRE SAFETY

Failure to follow proper procedures when mounting a tire on a wheel or rim can produce an explosion which may result in serious injury or death.

Do not attempt to mount a tire unless you have the proper equipment and experience to do the job.

Have a qualified tire dealer or repair service perform required tire maintenance.

TRANSPORT SAFETY

Read and understand ALL the information in the Operator's Manual regarding procedures and SAFETY when moving the Folding Toolbar in the field, yard or on the road.

Check with local authorities regarding transportation on public roads. Obey all applicable laws and regulations.

Always travel at a safe speed. Reduce speed and use caution when making corners or meeting traffic.

Make sure SMV (Slow Moving Vehicle) emblem and all lights and reflectors that are required by the local highway and transport authorities are in place, are clean and can be seen clearly by all overtaking and oncoming traffic

Use a drawbar pin with provisions for a mechanical retainer.

Attach a safety chain before moving (see safety chain information.)

Keep to the right and yield the right-of-way to allow faster traffic to pass. Drive on the road shoulder, if permitted by law.

Always use hazard warning flashers on tractor when transporting unless prohibited by law.

Do not allow riders.

DETACH TRACTOR IN THE TRANSPORT POSITION ONLY

DO NOT TRANSPORT WITH TANK FILLED - TANK MUST BE EMPTY DURING TRANSPORT

**BEFORE ROAD TRANSPORT INSERT SAFETY PINS AS SHOWN ON PAGE 52
MAXIMUM TRANSPORT SPEED IS 15 MPH**

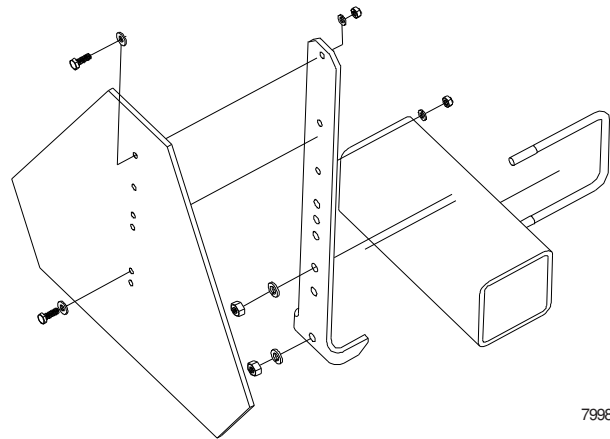
BEFORE TRANSPORTING TOOLBAR REMOVE ALL DEPTH STOP COLLARS FROM LIFT CYLINDERS AND RETRACT HYDRAULIC LIFT CYLINDERS COMPLETELY.

SMV

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

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

Emblem is to be 2 to 6 feet above the ground measured from the bottom edge of the emblem. SEE BACK OF MANUAL FOR MOUNTING INSTRUCTIONS.

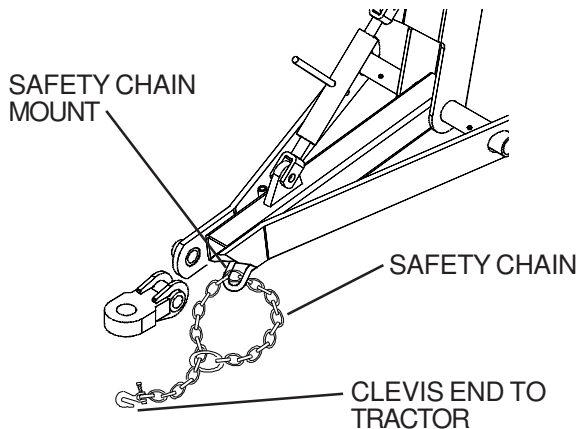


Keep safety decals clean. Replace any safety decals that are damaged, destroyed, missing, painted over or can no longer be read. Replacement safety decals are available through your dealer.

SAFETY DECALS

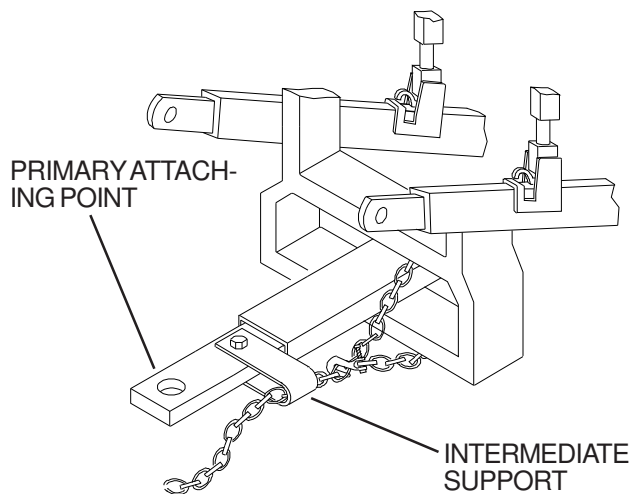
SAFETY CHAINS

The purpose of the safety chain is to provide an auxiliary attaching system to retain the connection between towing and towed machine in the event of separation of the primary attaching system.



The safety chain should be hooked long enough to permit full turns. Unnecessary slack should be taken up.

The intermediate support is to be used if there is more than 6" of unsupported chain on either side of the primary attaching point.



The intermediate support must not be mounted more than 6" from the primary attaching point (see illustration above.)

Safety decals appear at various locations on your machine. These decals are provided for your safety, your family's safety and your employee's safety. Replace any decal that becomes worn, damaged, painted over or difficult to read.

Keep safety decals and signs clean and legible at all times.

Replace safety decals and signs that are missing or have become illegible.

Replaced parts that displayed a safety sign should also display the current sign.

Safety decals or signs are available from your dealer parts department.

How to install Safety Decals:

Be sure that the installation area is clean and dry.

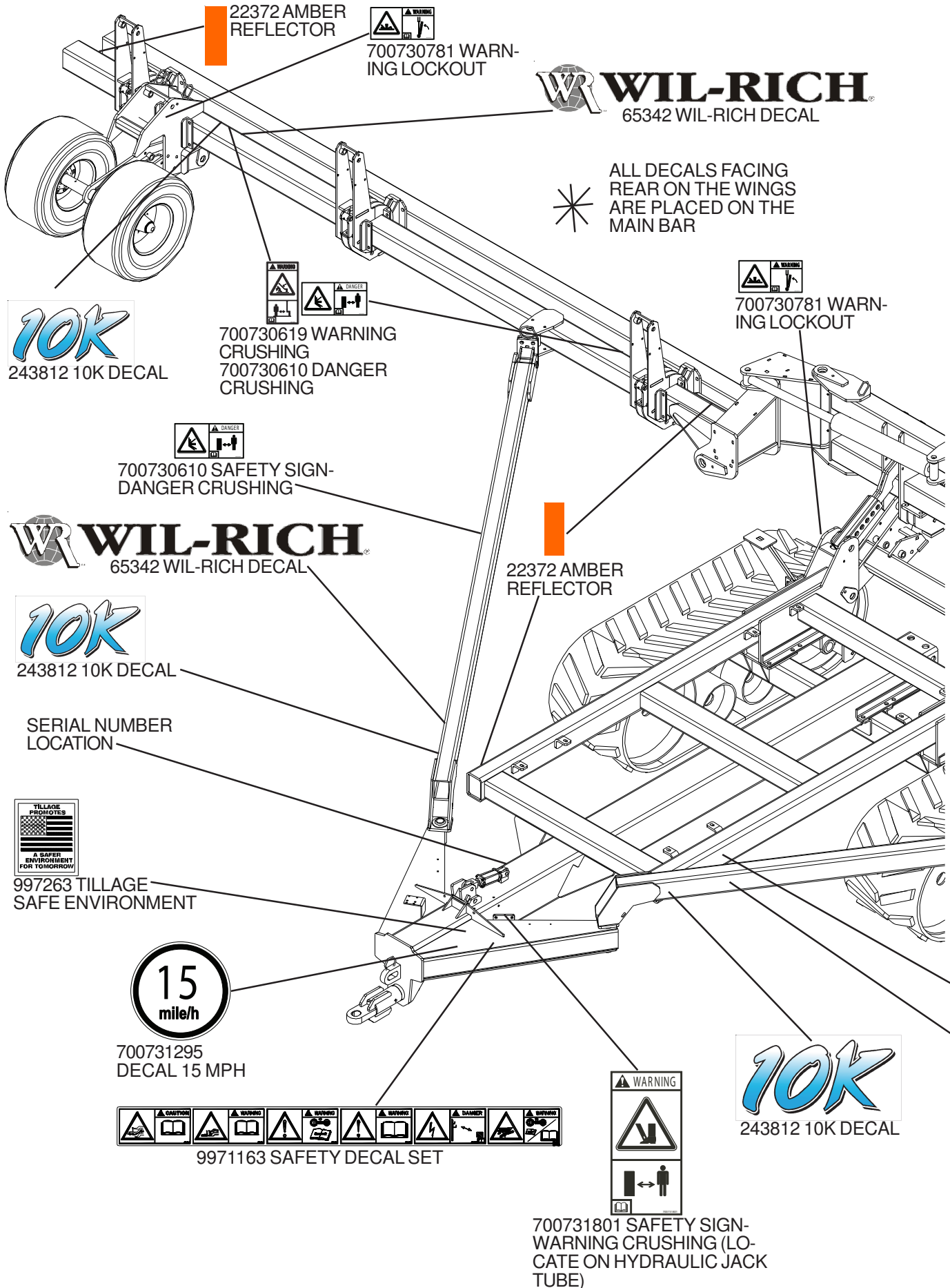
Decide on the exact position before you remove the backing paper.

Remove the smallest portion of the split backing paper.

Align the decal over the specified area and carefully press the small portion with the exposed sticky backing in place.

Slowly peel back the remaining paper and carefully smooth the remaining portion of the decal in place.

Small air pockets can be pierced with a pin and smoothed out using the piece of decal backing paper.



22372 AMBER REFLECTOR

700730781 WARNING LOCKOUT

WR WIL-RICH
65342 WIL-RICH DECAL

* ALL DECALS FACING REAR ON THE WINGS ARE PLACED ON THE MAIN BAR

10K
243812 10K DECAL

700730619 WARNING CRUSHING
700730610 DANGER CRUSHING

700730781 WARNING LOCKOUT

700730610 SAFETY SIGN-DANGER CRUSHING

WR WIL-RICH
65342 WIL-RICH DECAL

22372 AMBER REFLECTOR

10K
243812 10K DECAL

SERIAL NUMBER LOCATION



997263 TILLAGE SAFE ENVIRONMENT



700731295 DECAL 15 MPH



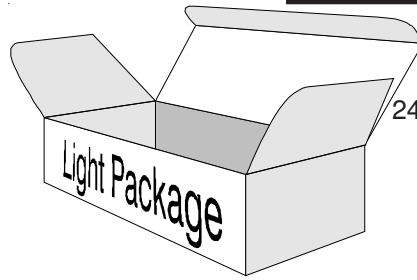
9971163 SAFETY DECAL SET



700731801 SAFETY SIGN-WARNING CRUSHING (LOCATE ON HYDRAULIC JACK TUBE)

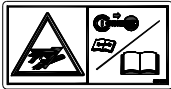
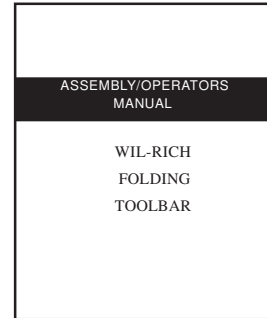
10K
243812 10K DECAL

SAFETY DECAL PLACEMENT



241426 CLEARANCE LIGHT PACKAGE

74283 ASSY/OPERATORS MANUAL

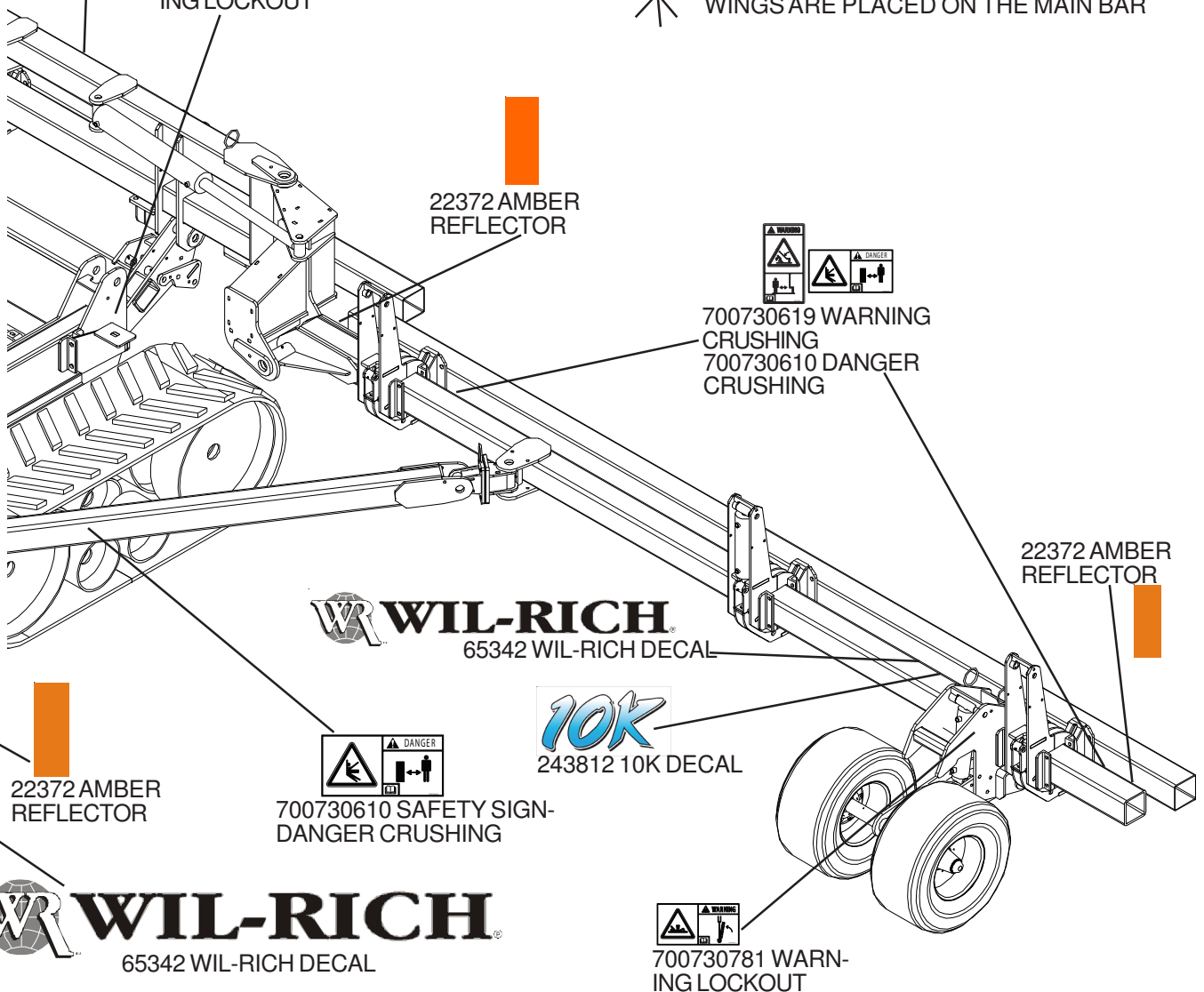


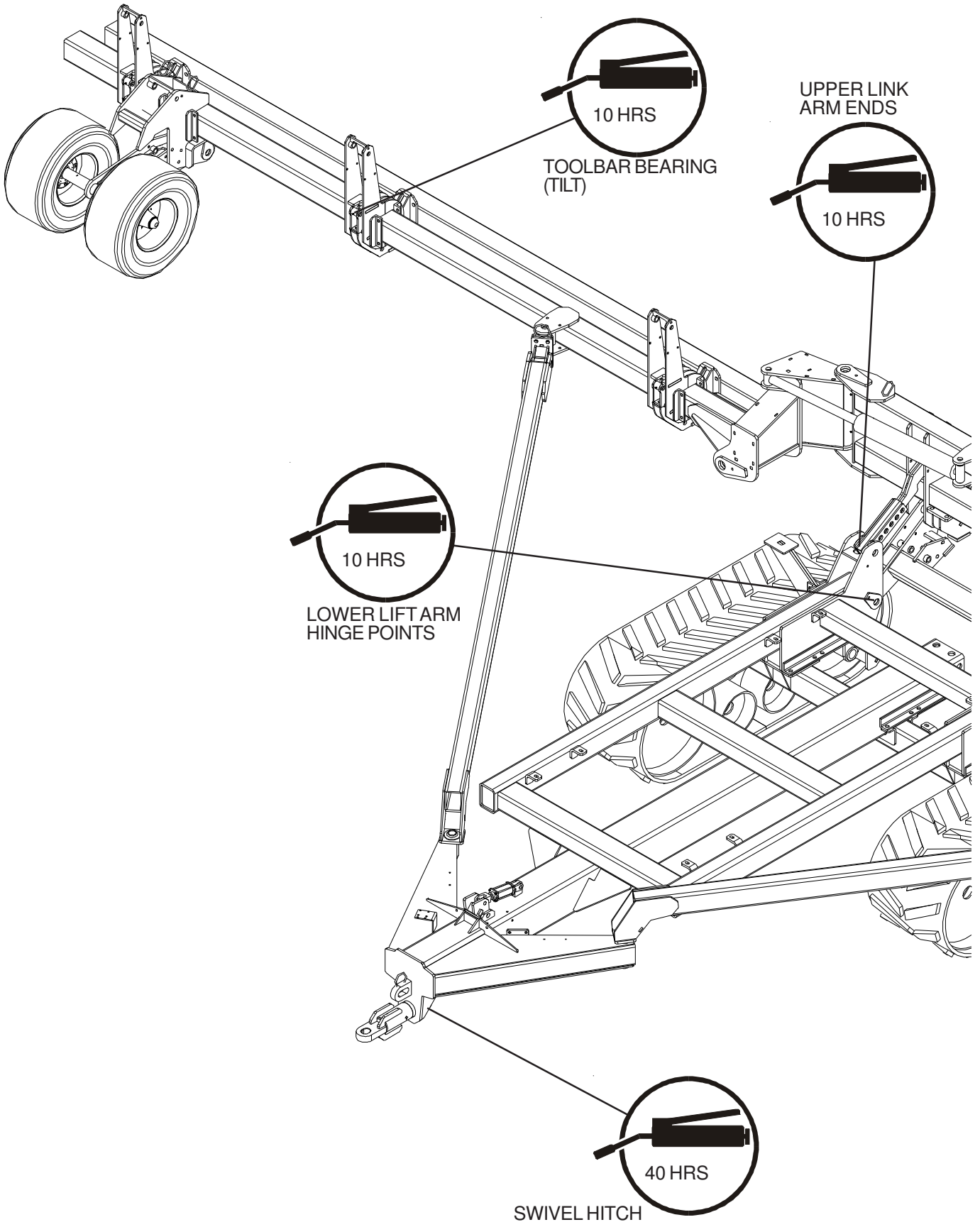
997267 FLUID UNDER PRESSURE



700730781 WARNING LOCKOUT

* ALL DECALS FACING REAR ON THE WINGS ARE PLACED ON THE MAIN BAR

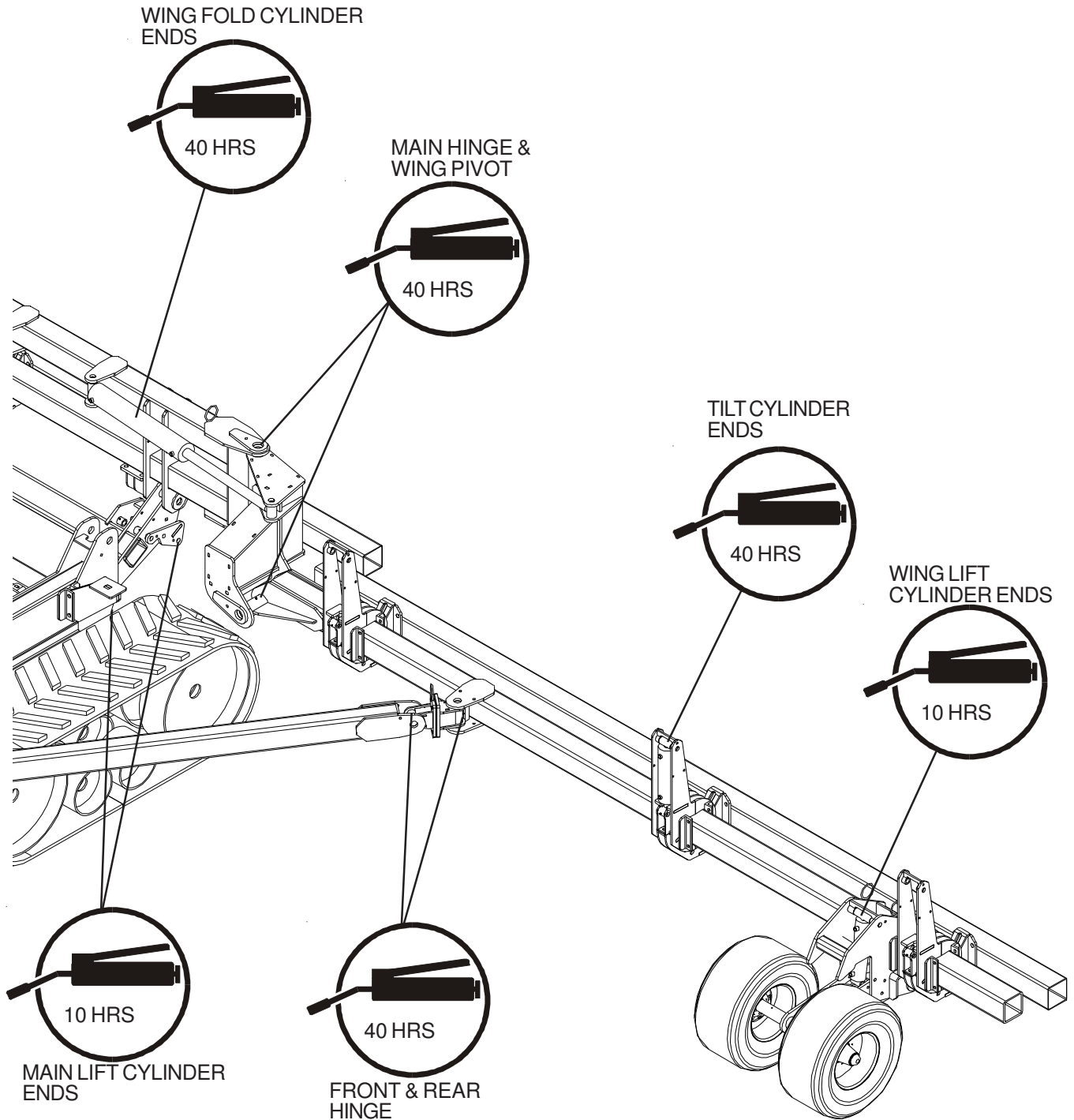




LUBRICATION

Make sure the 10K FOLDING TOOLBAR is properly lubricated. It is recommended to use **Wil-Rich 460ep Tillage Lubricant** in your 10K FOLDING TOOLBAR. It is specifically designed for the loads and conditions encountered in heavy tillage.

LUBRICATION



SIGN-OFF FORM

WIL-RICH follows the general standard specified by the American Society of Agricultural Engineers (ASAE) and the Occupational Safety and Health Administration (OSHA). Anyone who will be operating and/or maintaining the Folding Toolbar must read and understand ALL Safety, Operation, and Maintenance information presented in this manual.

Do not operate or allow anyone else to operate this equipment until such information is reviewed. Annually review this information before the season start-up.

Make periodic reviews of SAFETY and OPERATION a standard practice for all your equipment. We feel that an untrained operator is unqualified to operate this machine.

A sign-off sheet is provided for all personnel who will be working with equipment have read and understood the information in the operators manual and have been instructed in the operation of the equipment.

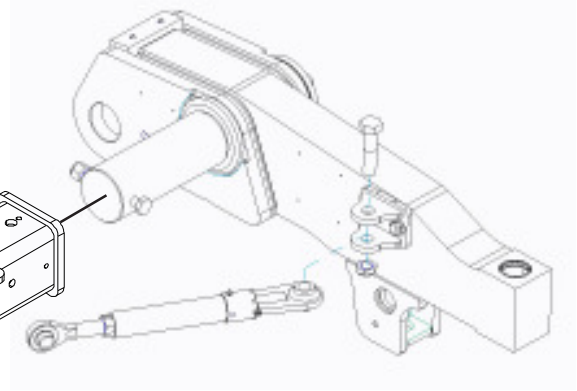
DATE	EMPLOYEE'S SIGNATURE	EMPLOYER'S SIGNATURE

ASSEMBLY SEQUENCE

- 1.) LH & RH TRACK ASSEMBLIES INTO MAIN AXLE (TREAD RUNS BACKWARDS & TURNBUCKLES FACE FRONT)
- 2.) MAINFRAME & AXLE
- 3.) SLIDE TONGUE INTO MAINFRAME
- 4.) ASSEMBLE FRONT END COMPONENTS
 - A.) HYD JACK
 - B.) TONGUE LATCH
 - C.) SWIVEL HITCH
 - D.) PARTS BOOK TUBE
 - E.) SAFETY CHAIN
- 5.) LOWER LIFT ARM
- 6.) MAIN LIFT CYLINDERS & FLOATING LINK (CENTER SECTION)
- 7.) CENTER SECTION & TOP LINK ARMS
- 8.) MAIN HINGES & FOLD CYLINDERS
- 9.) LH & RH WING TUBES
- 10.) TOWERS & BEARING ASSEMBLIES (TILTING MECHANISM)
- 11.) WING WHEEL ASSEMBLIES (TREAD RUNS BACKWARDS)
- 12.) BRACE ARMS
- 13.) HYDRAULIC HOSES
- 14.) LIGHTS, SMV & DECALS

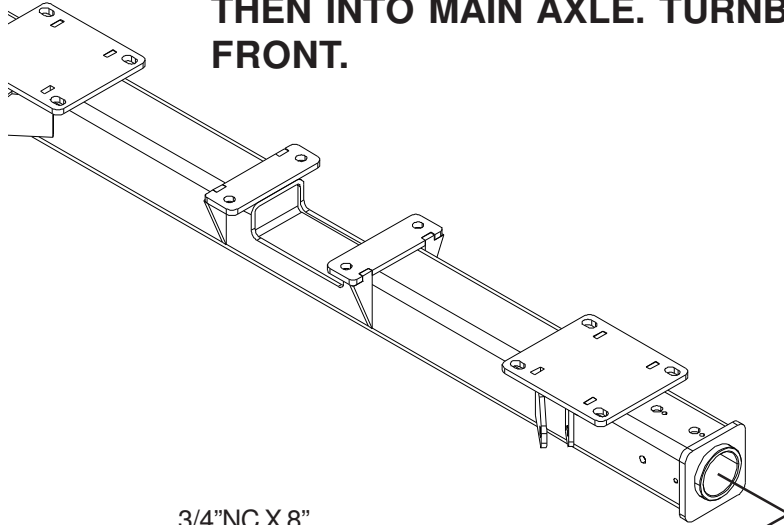
AXLE & TRACKS

MAIN AXLE
120" CENTERS (354431)



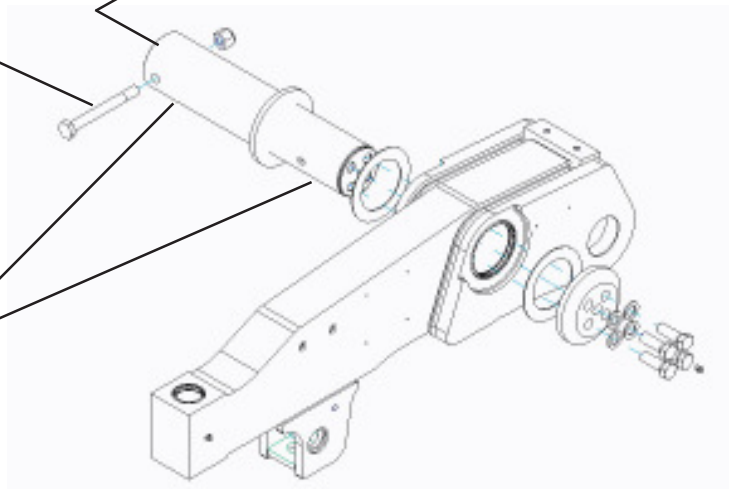
NEW AXLE 2014

ASSEMBLE AXLE PINS INTO TRACK CARRIAGE FIRST AND THEN INTO MAIN AXLE. TURNBUCKLES FACE THE FRONT.

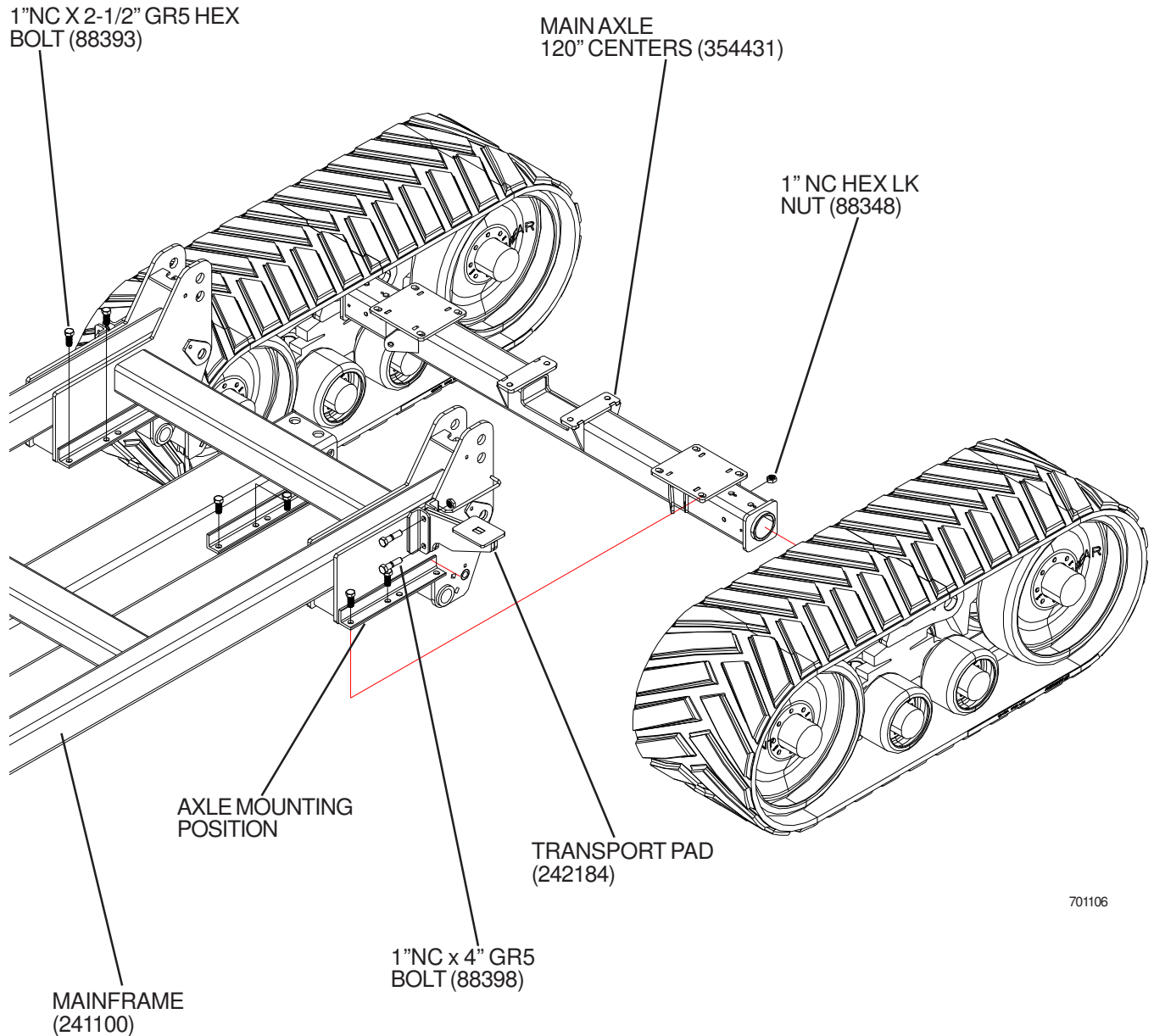


3/4"NC X 8"
GR8 HEX BOLT
(89408)

GREASE THIS SURFACE



AXLE & TRANSPORT PAD



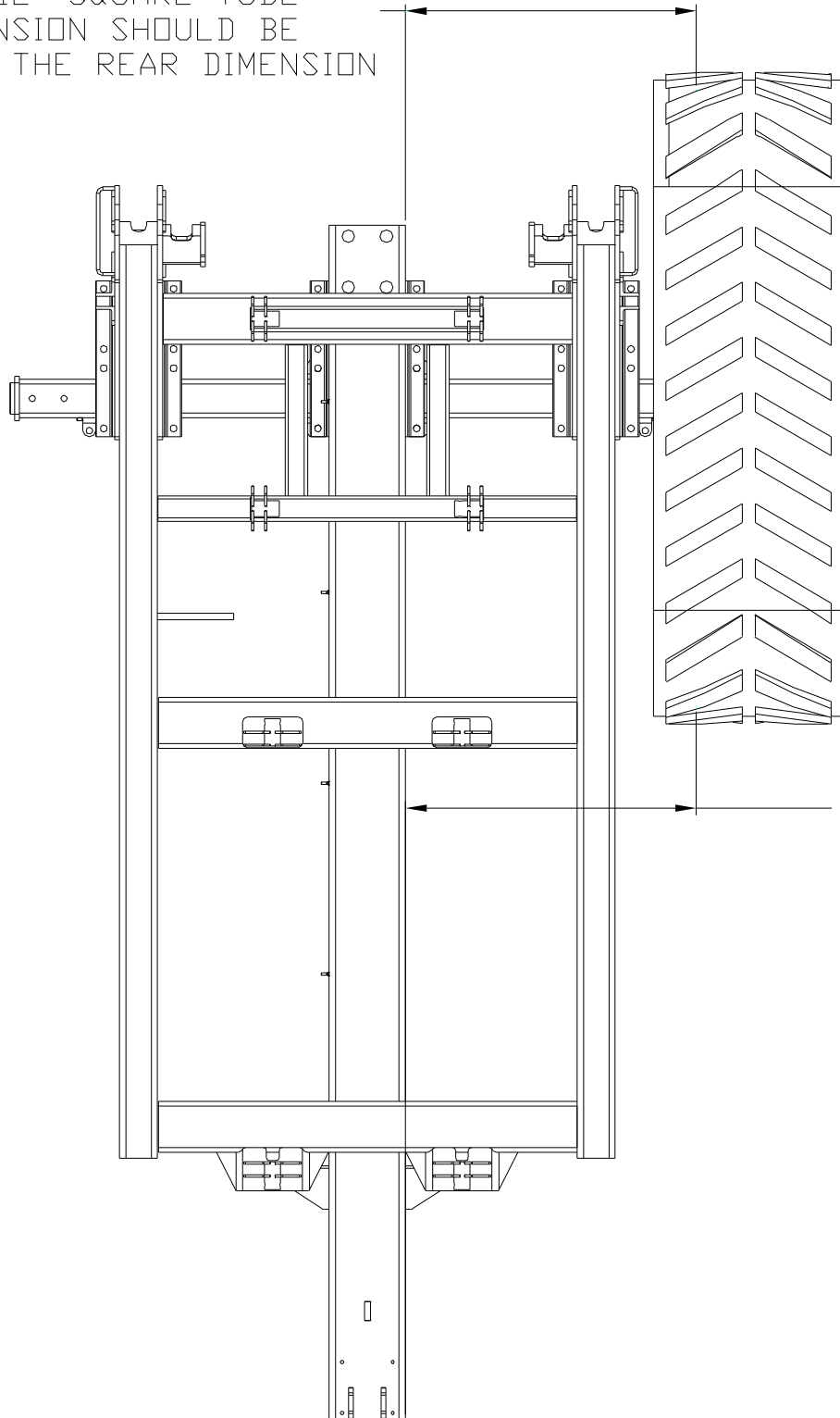
701106

STEP ONE-ASSEMBLE THE AXLE BETWEEN EACH TRACK ASSEMBLY USING THE 4-1/2" DIA PINS.

STEP TWO-SET THE MAINFRAME ON TOP OF THE AXLE.

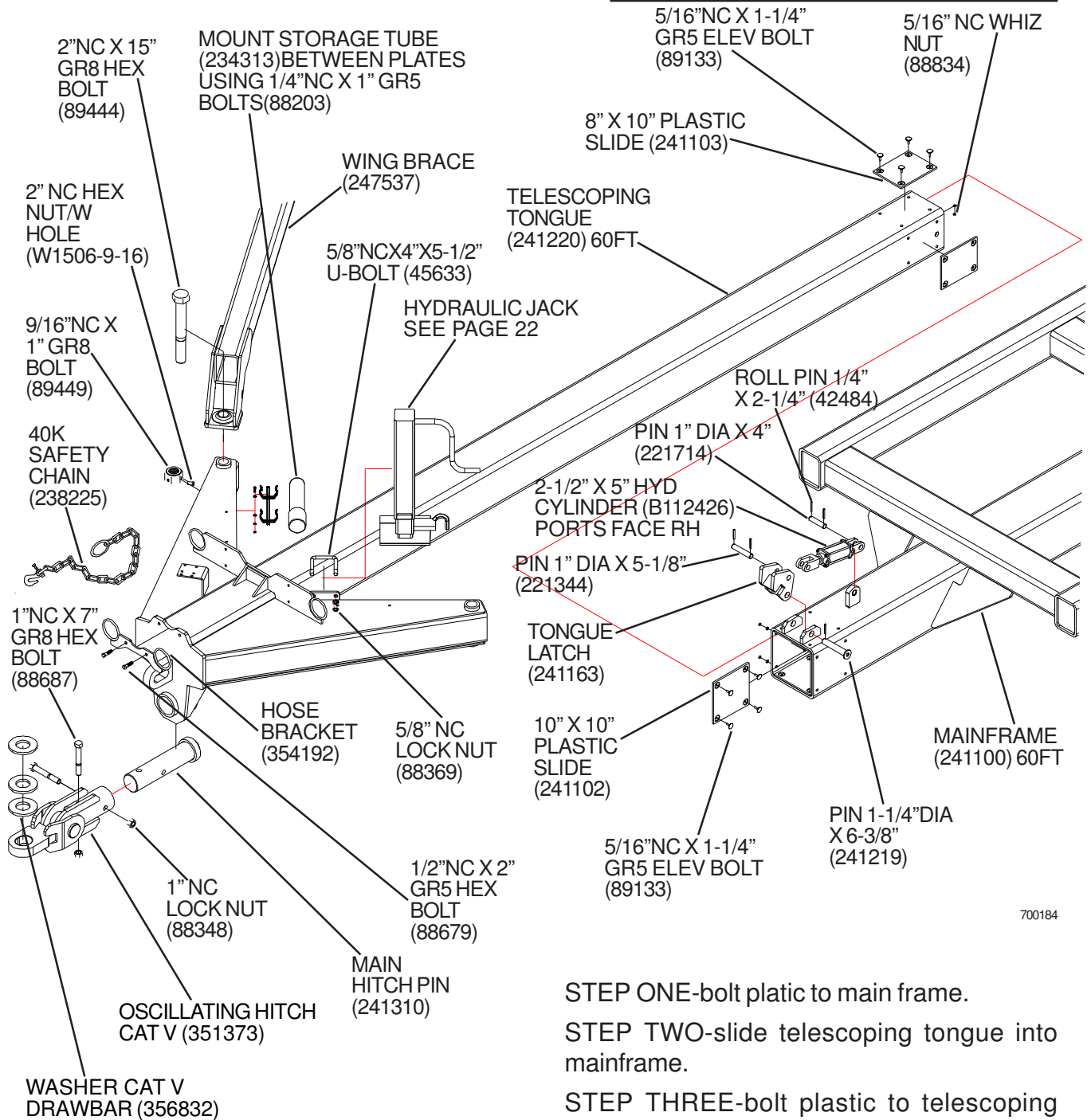
RUBBER TRACK CARRIAGE SYSTEM

DIMENSION FROM INSIDE RIM
CENTER TO 12" SQUARE TUBE
FRONT DIMENSION SHOULD BE
1/8" MORE THAN THE REAR DIMENSION



700204

TELESCOPING TONGUE



NOTE: WASHERS(356832) MUST BE PLACED BETWEEN THE HAMMER STRAP AND THE TOP OF THE TONGUE ON THE OSCILLATING HITCH TO PREVENT ANY VERTICAL(UP & DOWN) MOVEMENT. TOO MUCH VERTICAL MOVEMENT CAN LEAD TO HITCH AND TONGUE FAILURES.

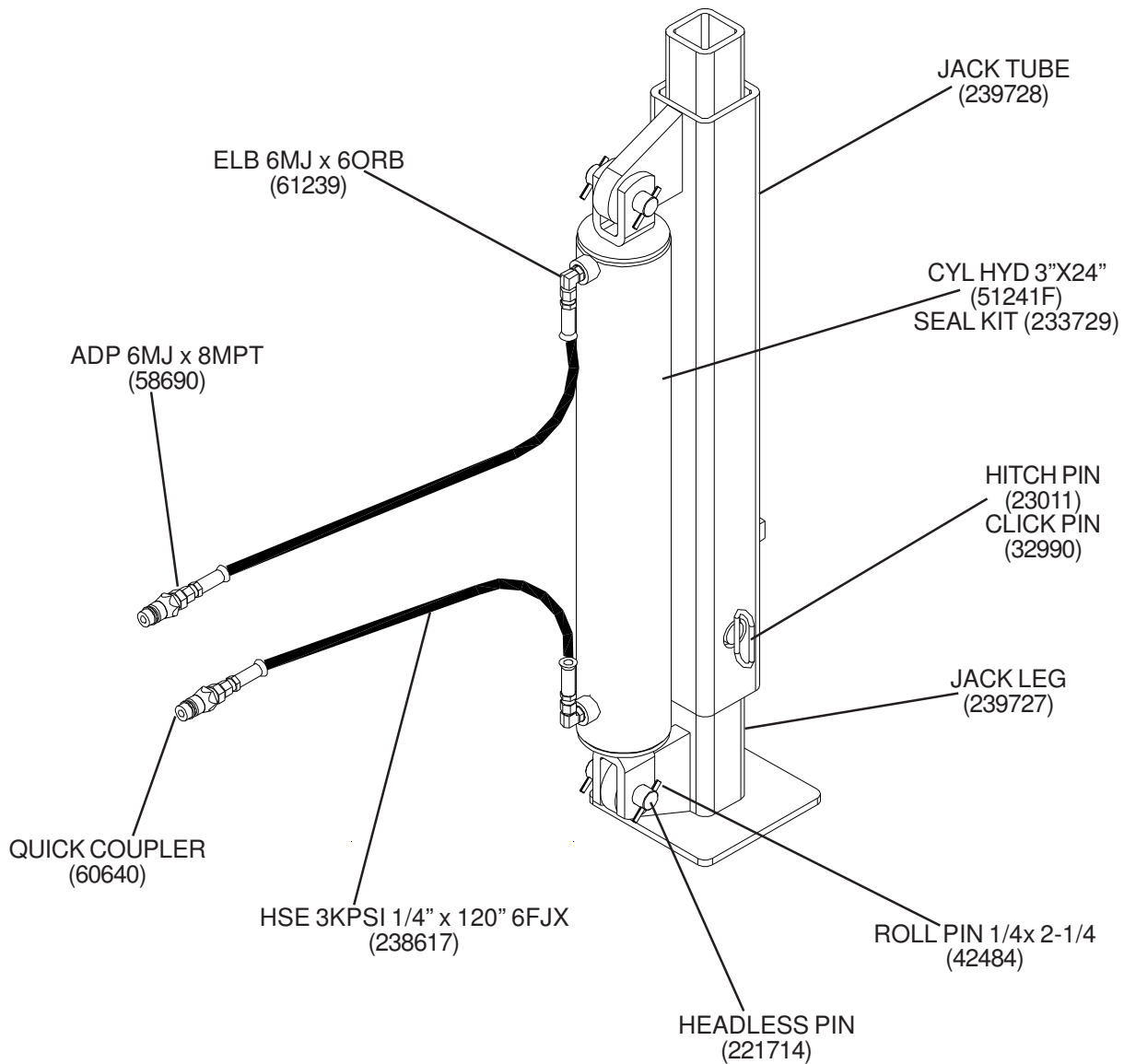
STEP ONE-bolt plastic to main frame.

STEP TWO-slide telescoping tongue into mainframe.

STEP THREE-bolt plastic to telescoping tongue using the large holes at the rear of the main frame.

2-1/2" X 5" HYD CYLINDER (B112426) PORTS FACE RH & CLEVIS BOLT MUST BE ON TOP

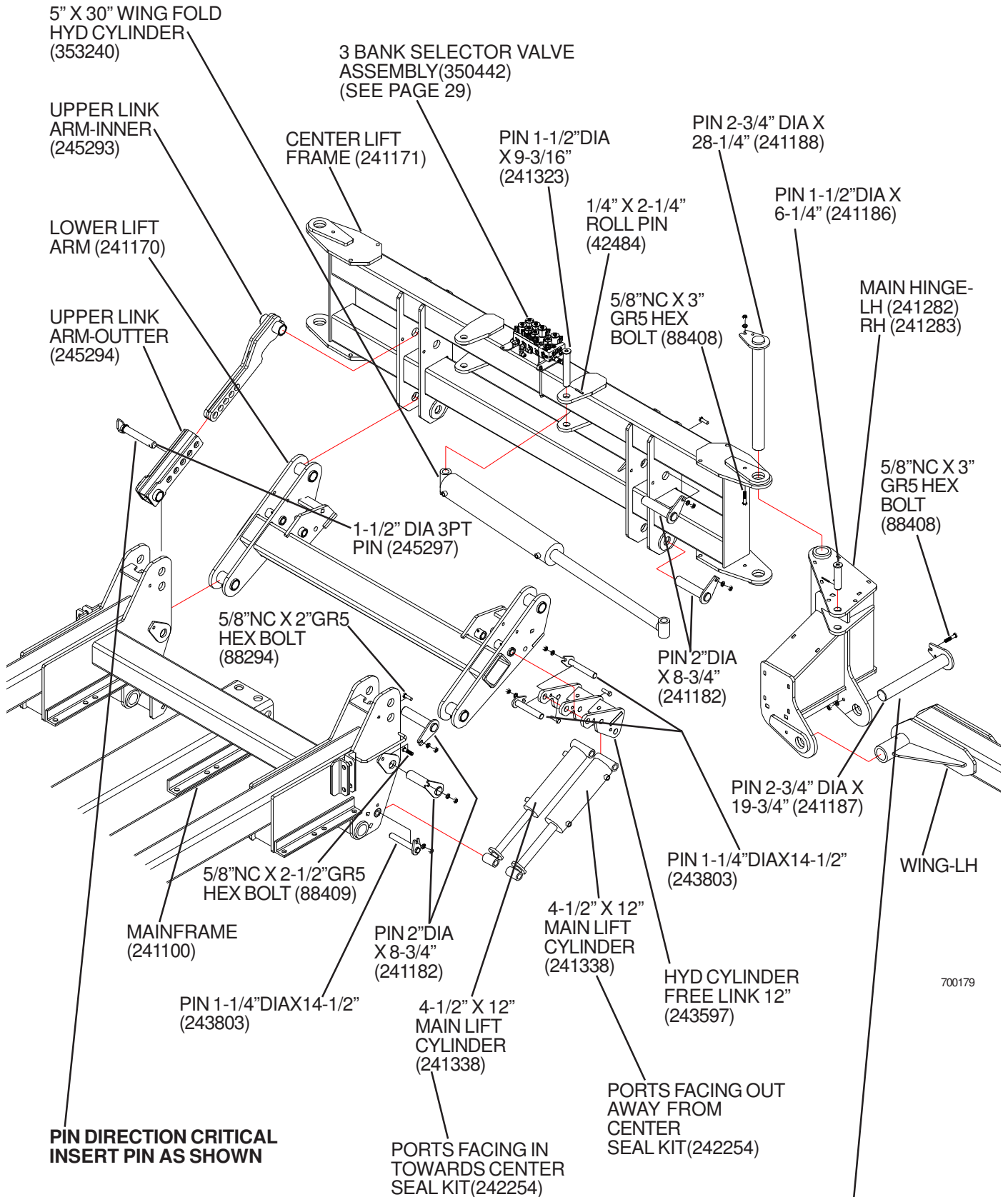
HYDRAULIC JACK



WARNING

JACK MUST BE PINNED IN THE UPPER OR LOWER POSITION AT ALL TIMES. IT SHOULD ONLY BE UNPINNED WHEN USING THE JACK FOR ATTACHING TO A TRACTOR OR SERIOUS INJURY OR DEATH MAY RESULT.

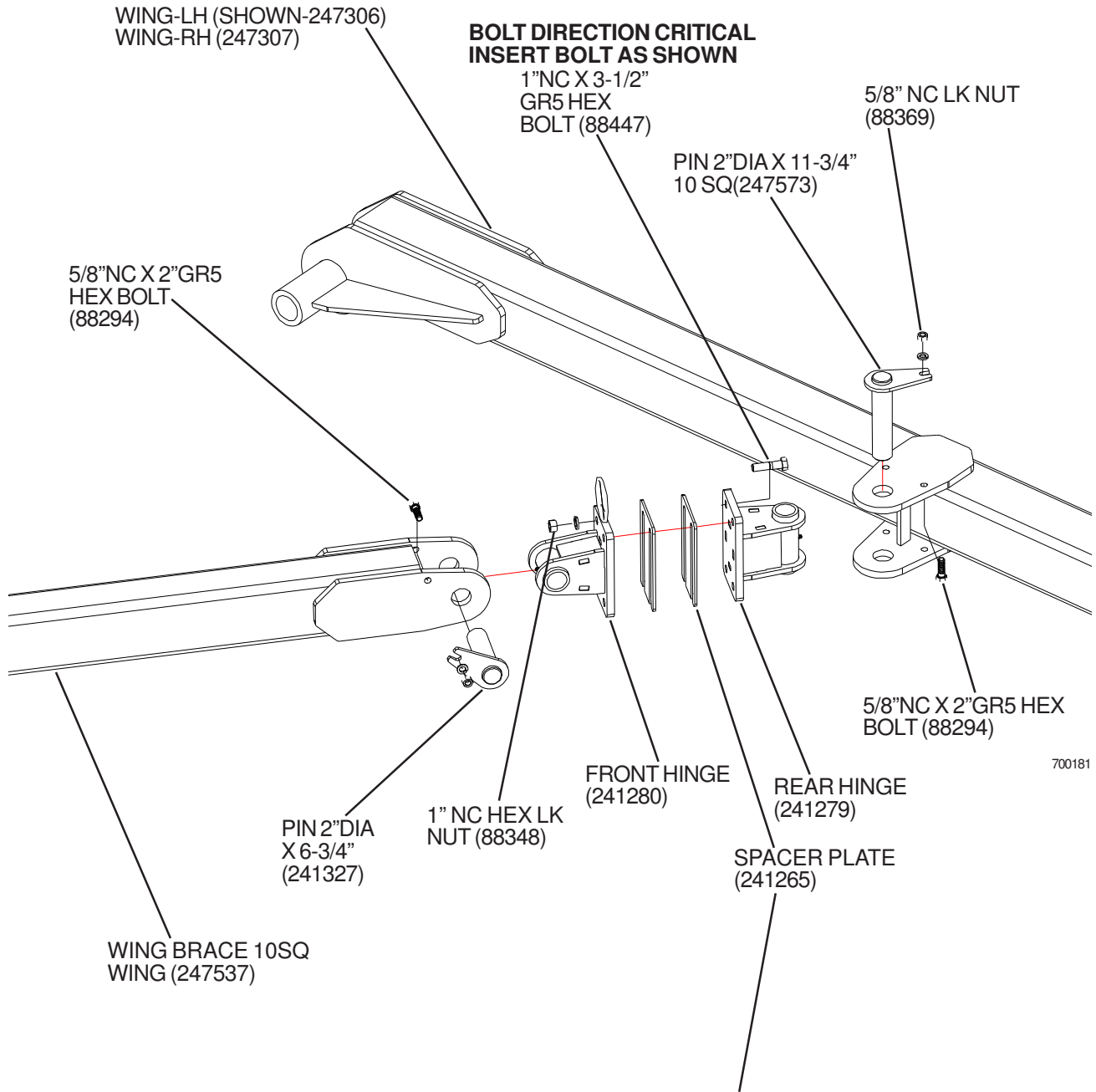
CENTER LIFT FRAME & MAIN HINGE



UPPER & OUTER LINK ARMS TO BE SET AT 30.00" PIN CENTERS

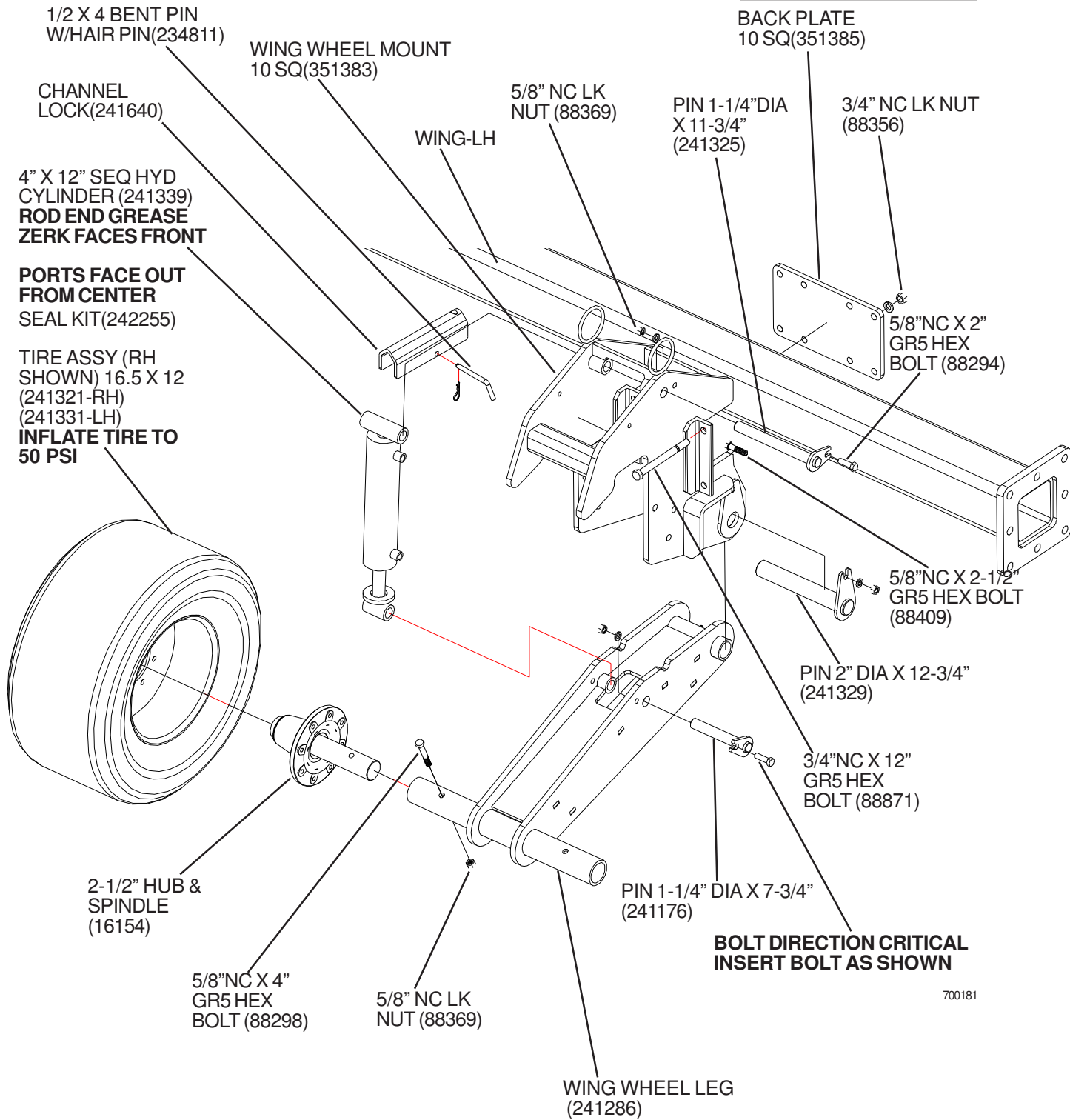
DEPTH STOP COLLARS SHOULD BE USED ON ALL LIFT CYLINDERS.

BRACE ARM HINGE



Spacer plates are used to straighten wings from front to back (parallel with center section.)

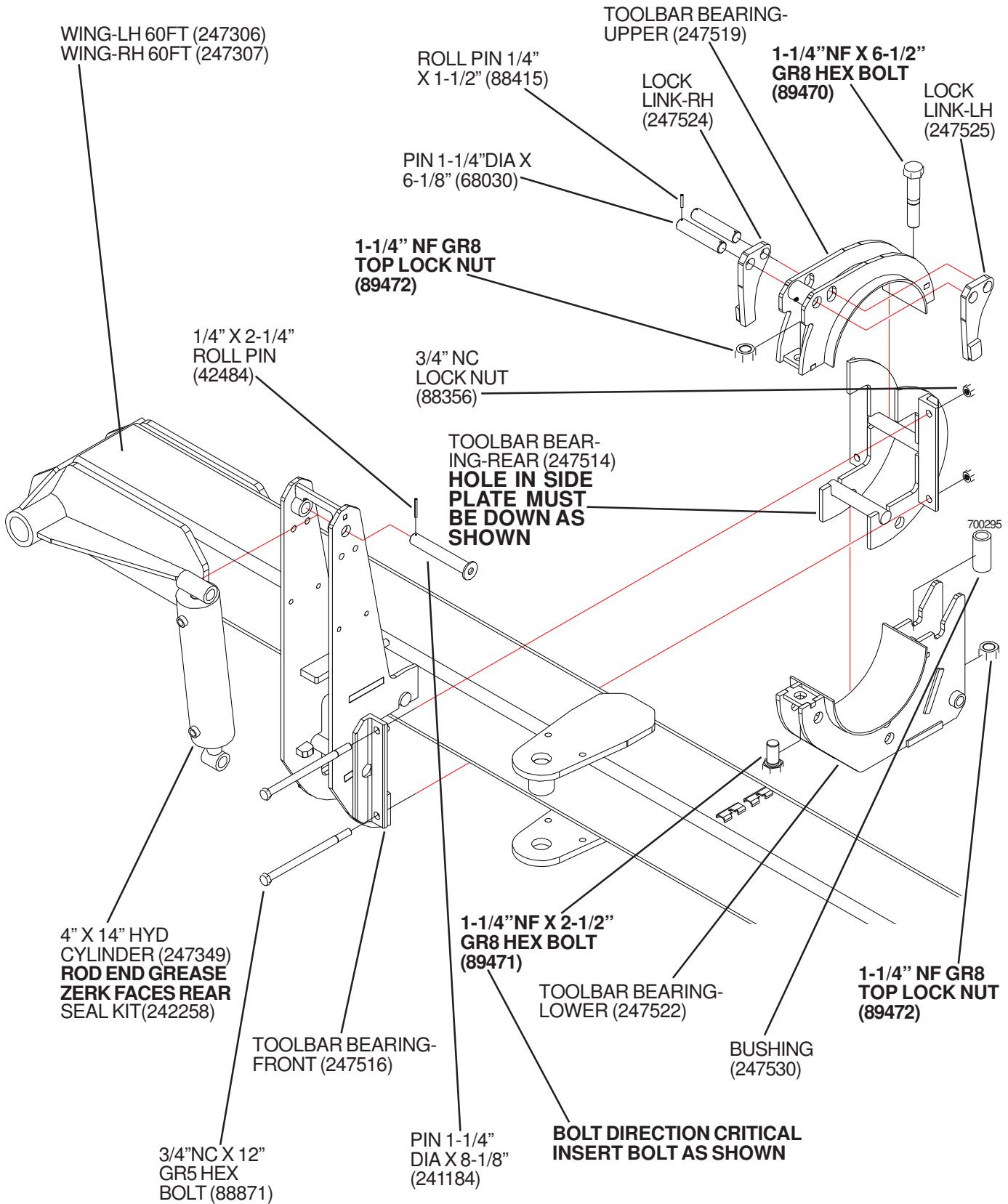
WING WHEEL



PIN (241325) TO BE INSERTED FROM THE OPPOSITE SIDE AS ITEM 247516 SEE PAGE 53

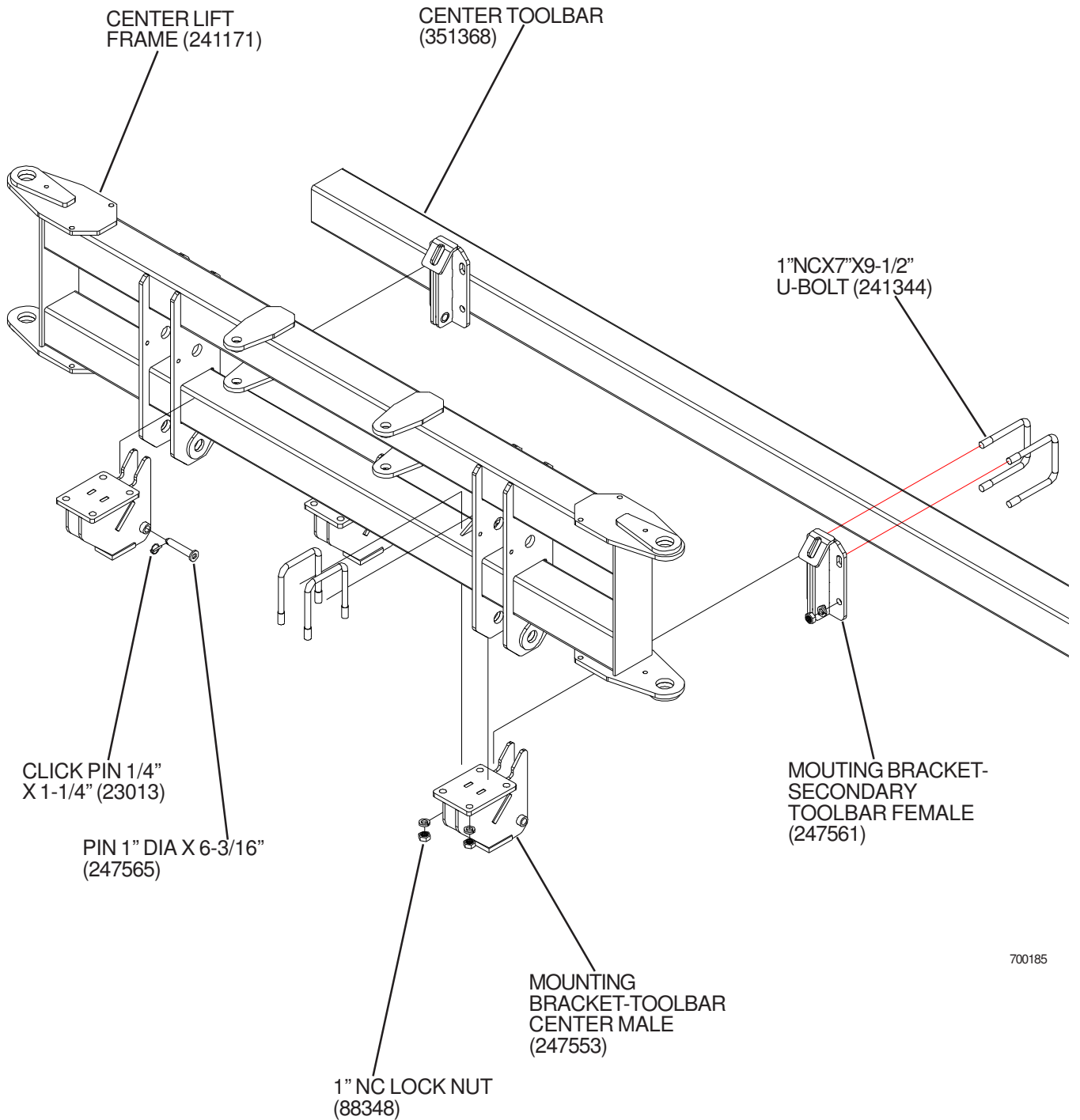
DEPTH STOP COLLARS SHOULD BE USED ON ALL LIFT CYLINDERS.

BEARING W/TILT CYLINDER 10SQ



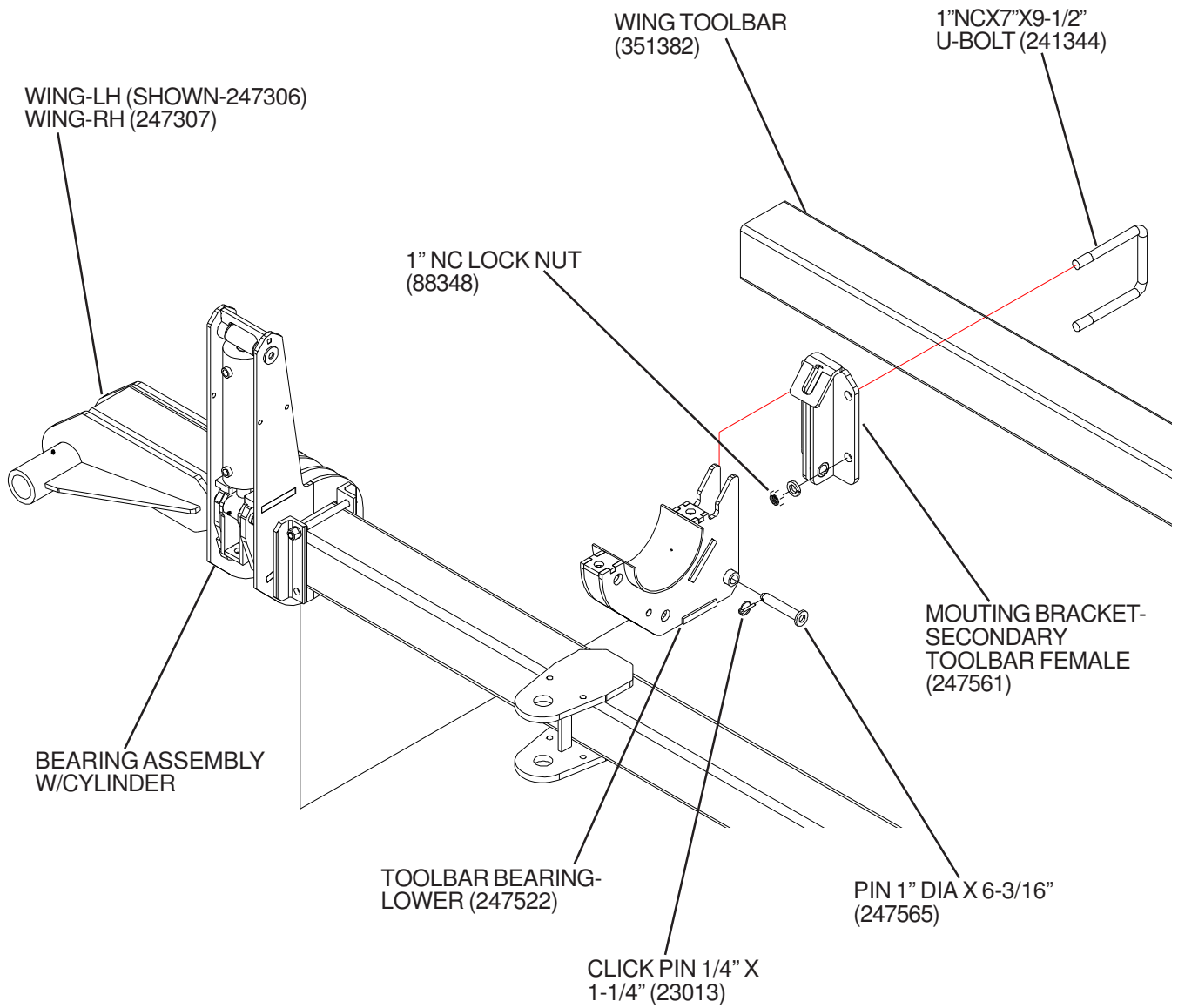
**SEE PAGE 35&36
FOR CYLINDER PORT DIRECTION**

SECONDARY TOOLBAR-CENTER



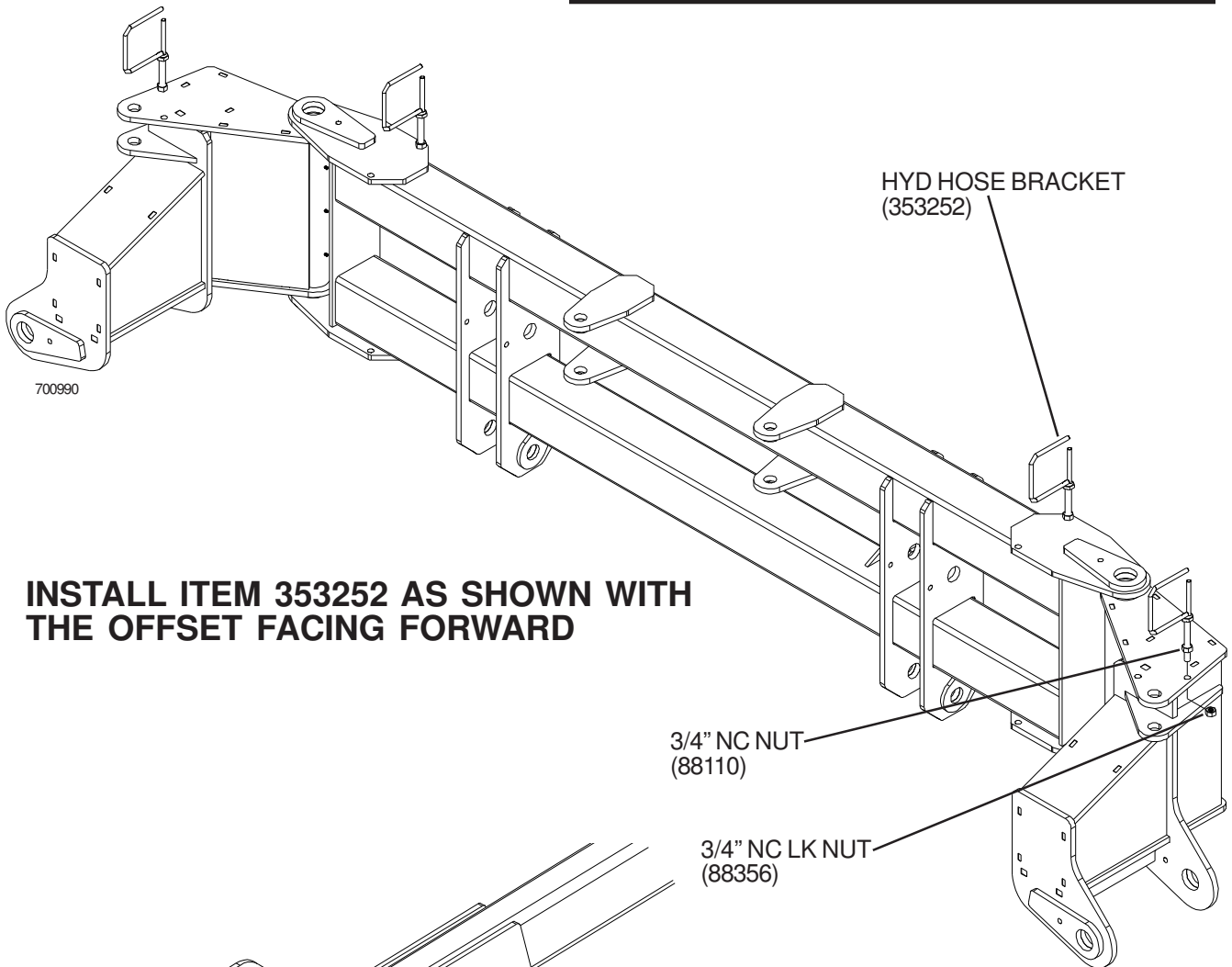
SET MOUNTING BRACKETS(247553) AS WIDE AS POSSIBLE

SECONDARY TOOLBAR-WING

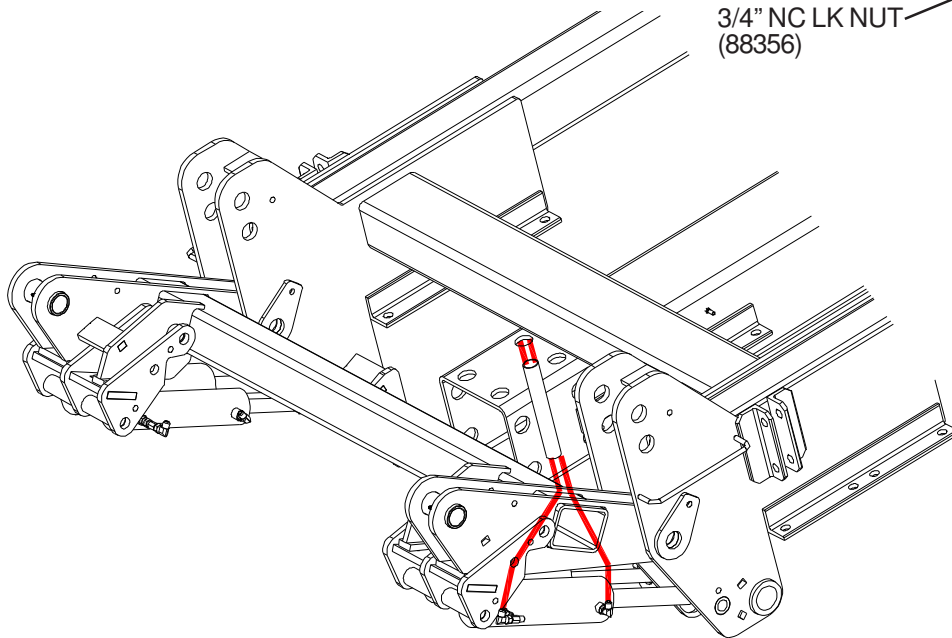


700183

HYDRAULIC HOSE BRACKETS

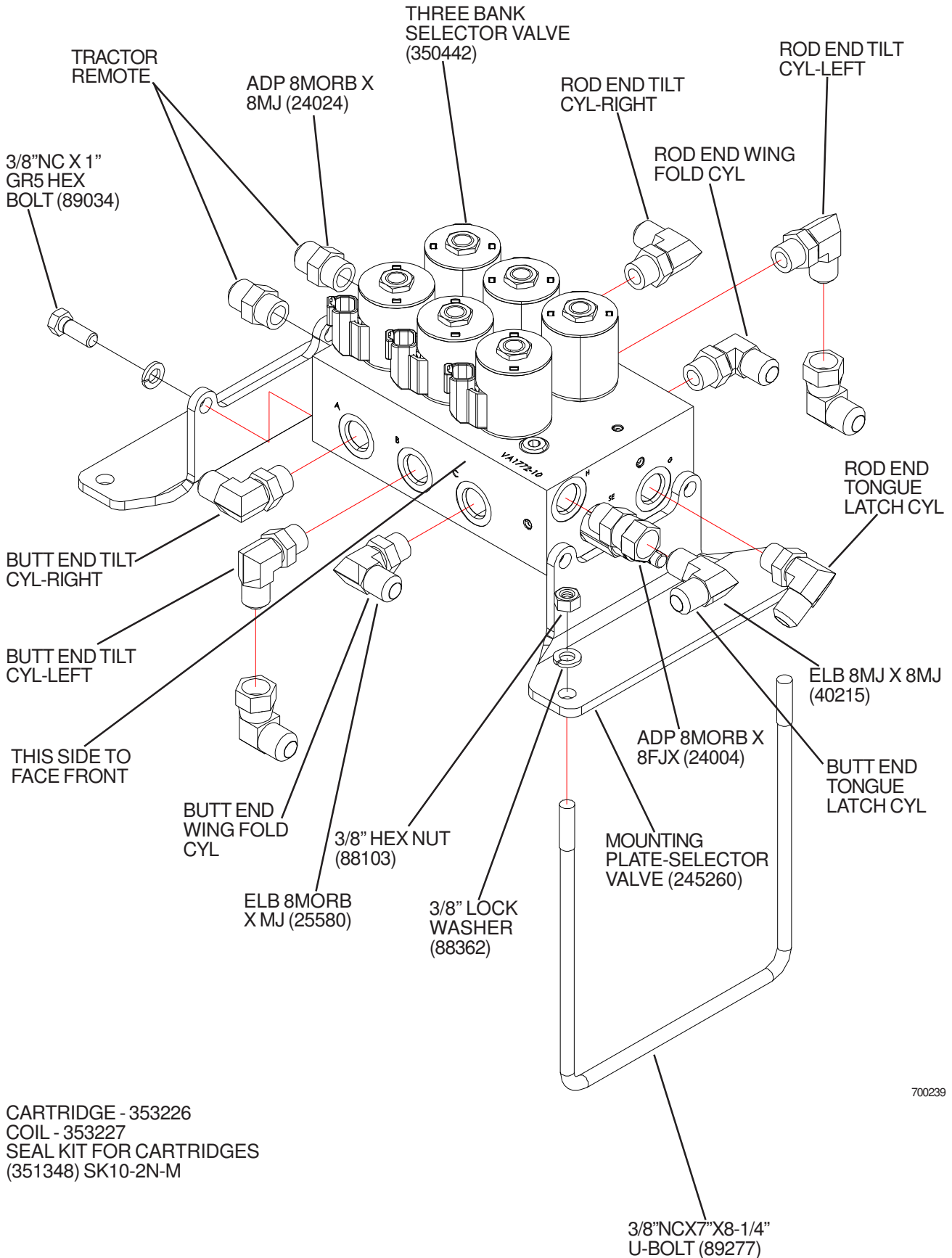


INSTALL ITEM 353252 AS SHOWN WITH THE OFFSET FACING FORWARD



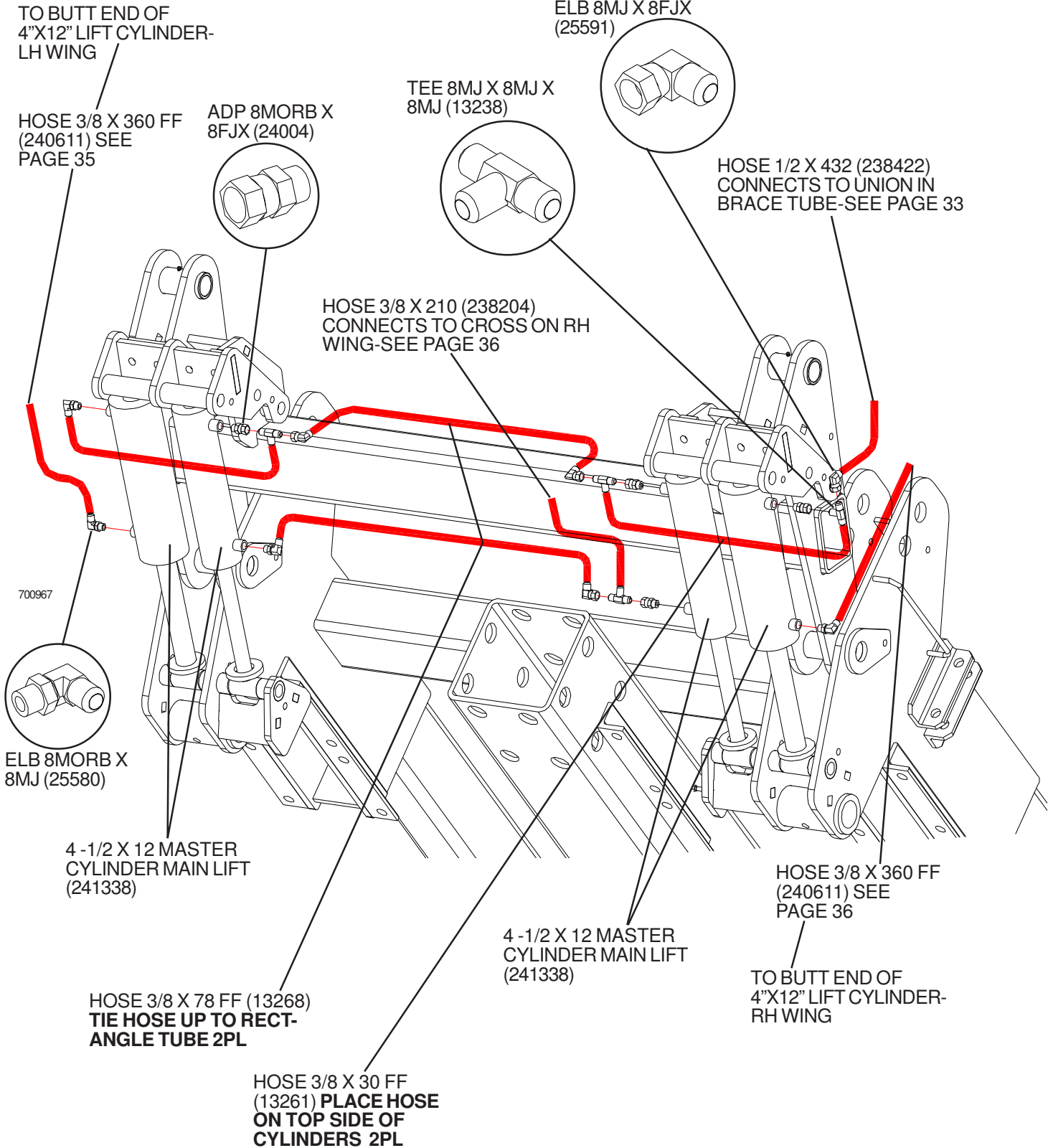
CUT A 16 INCH LONG PIECE OF HOSE FROM THE 1-1/2 DIA SEED TUBE HOSE. CUT IT THE LONG WAY AND OPEN THE 1-1/2 DIA HOSE AND WRAP IT AROUND BOTH HYDRAULIC HOSES AS SHOWN. MAKE SURE IT IS PLACED PROPERLY TO PREVENT ANY RUBBING FROM THE LOWER LIFT ARM. ATTACH A HOSE CLAMP ON BOTH ENDS TO PREVENT THE HOSE WRAP FROM SLIDING AND OPENING.

THREE BANK SELECTOR VALVE



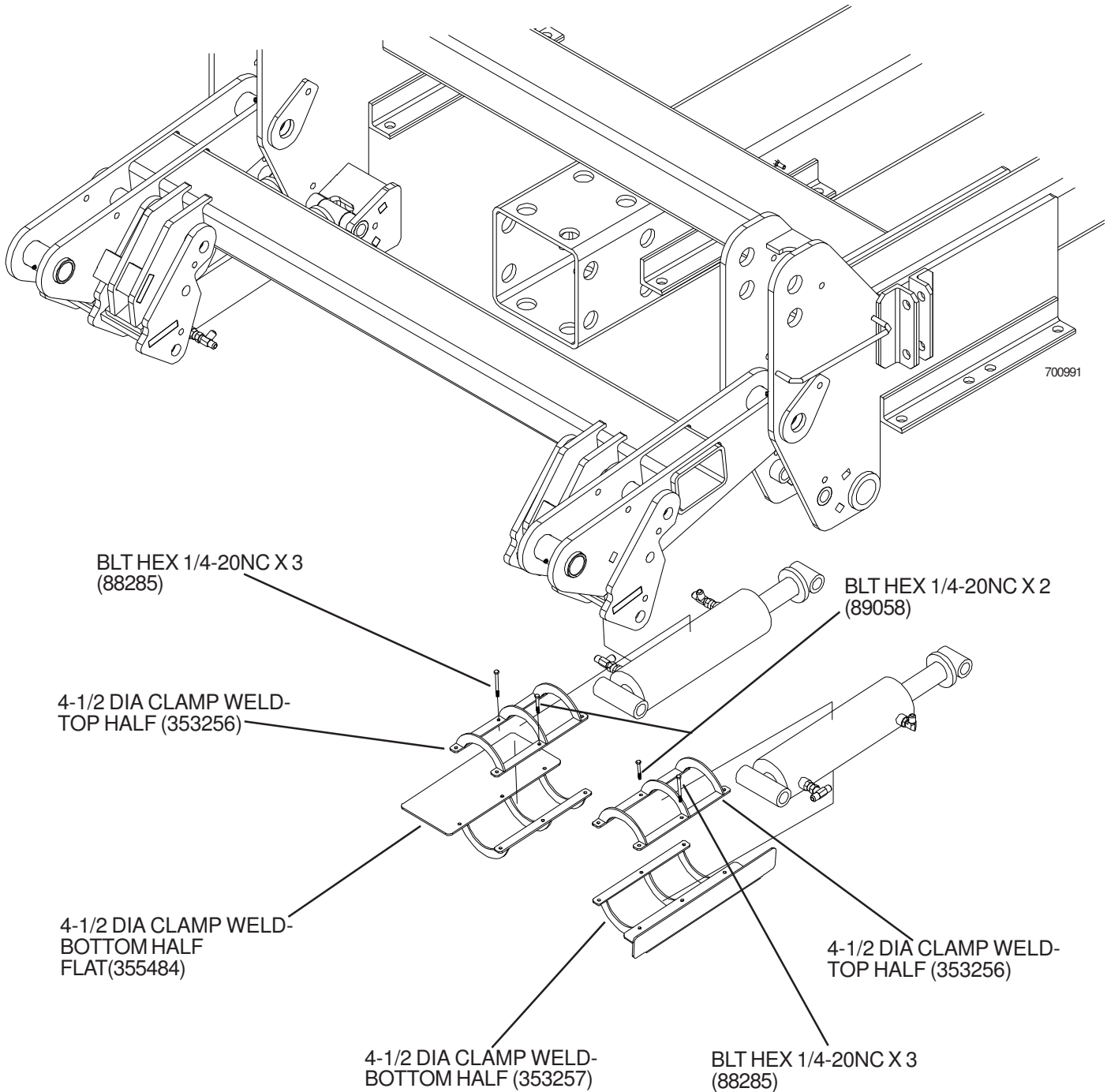
700239

HYDRAULICS-CENTER MAIN LIFT



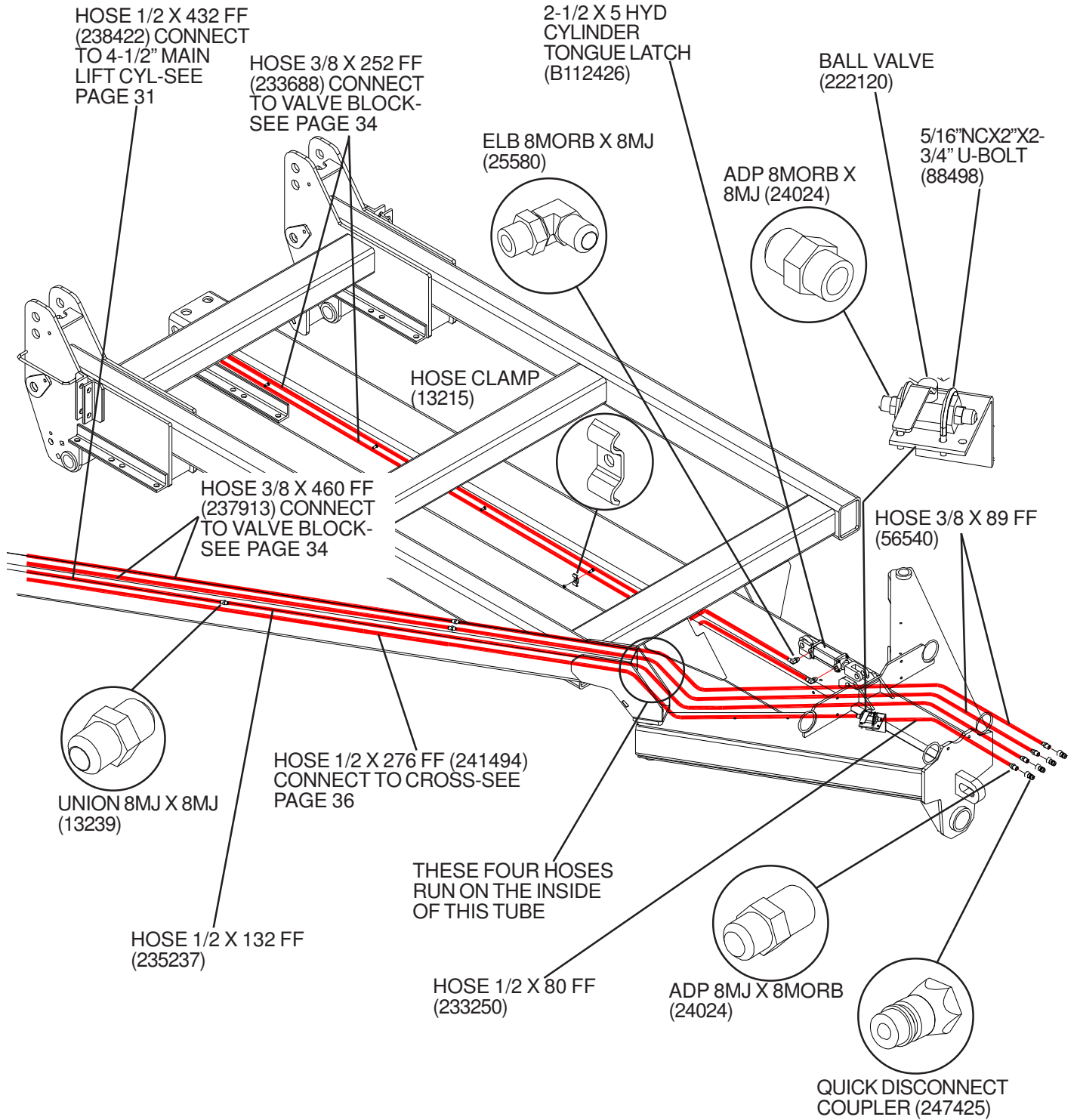
DEPTH STOP COLLARS SHOULD BE USED ON ALL LIFT CYLINDERS.

HYDRAULIC CYLINDER GUARDS



ASSEMBLE CLAMPS USING HARDWARE AS INDICATED. BOLTS ALL RUN IN BETWEEN THE PORTS ON HYDRAULIC CYLINDERS. RH SIDE SHOWN ASSEMBLE LH SIDE OPPOSITE. DEPTH STOP COLLARS SHOULD BE USED ON ALL LIFT CYLINDERS.

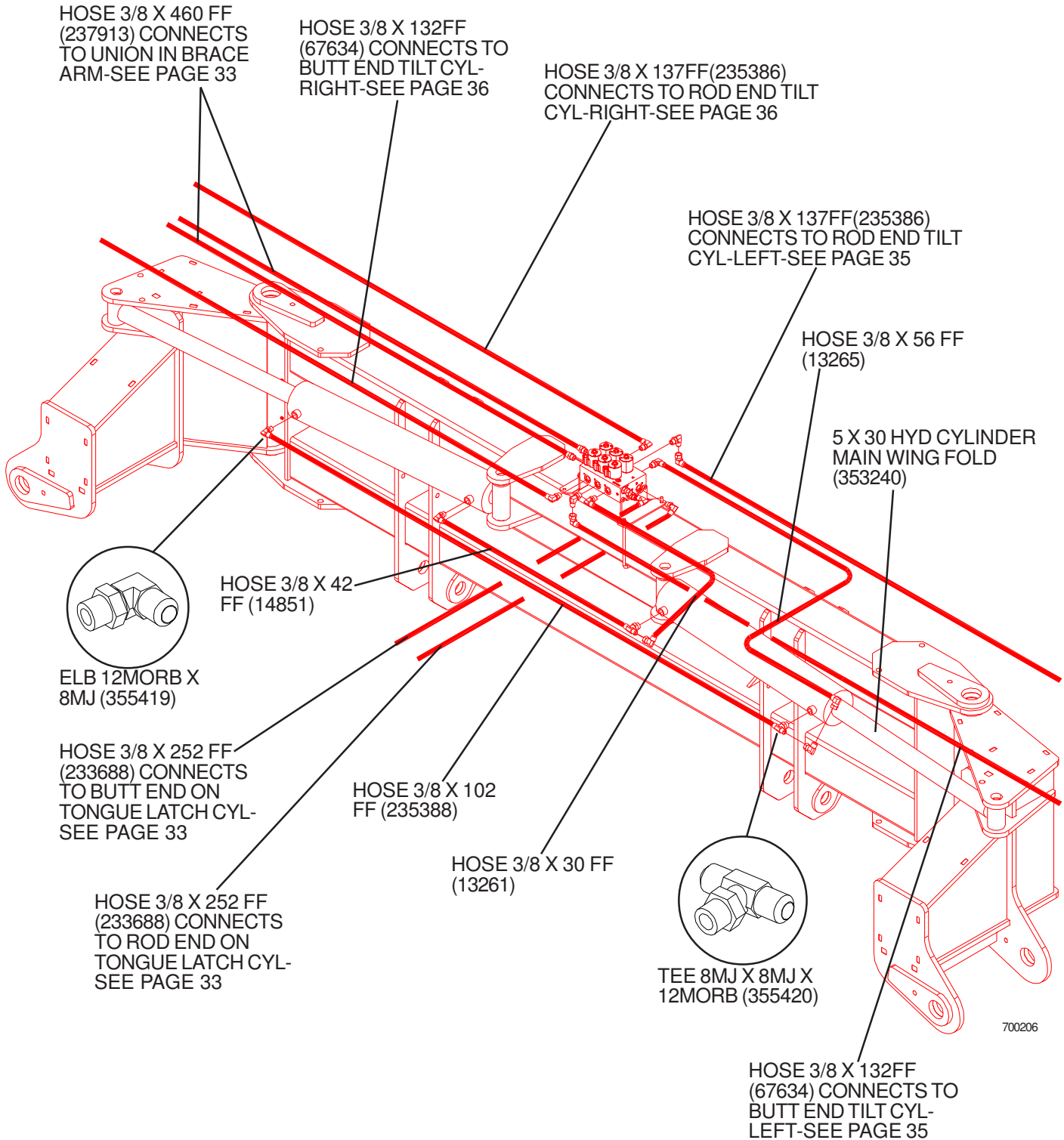
HYDRAULICS-TONGUE LATCH



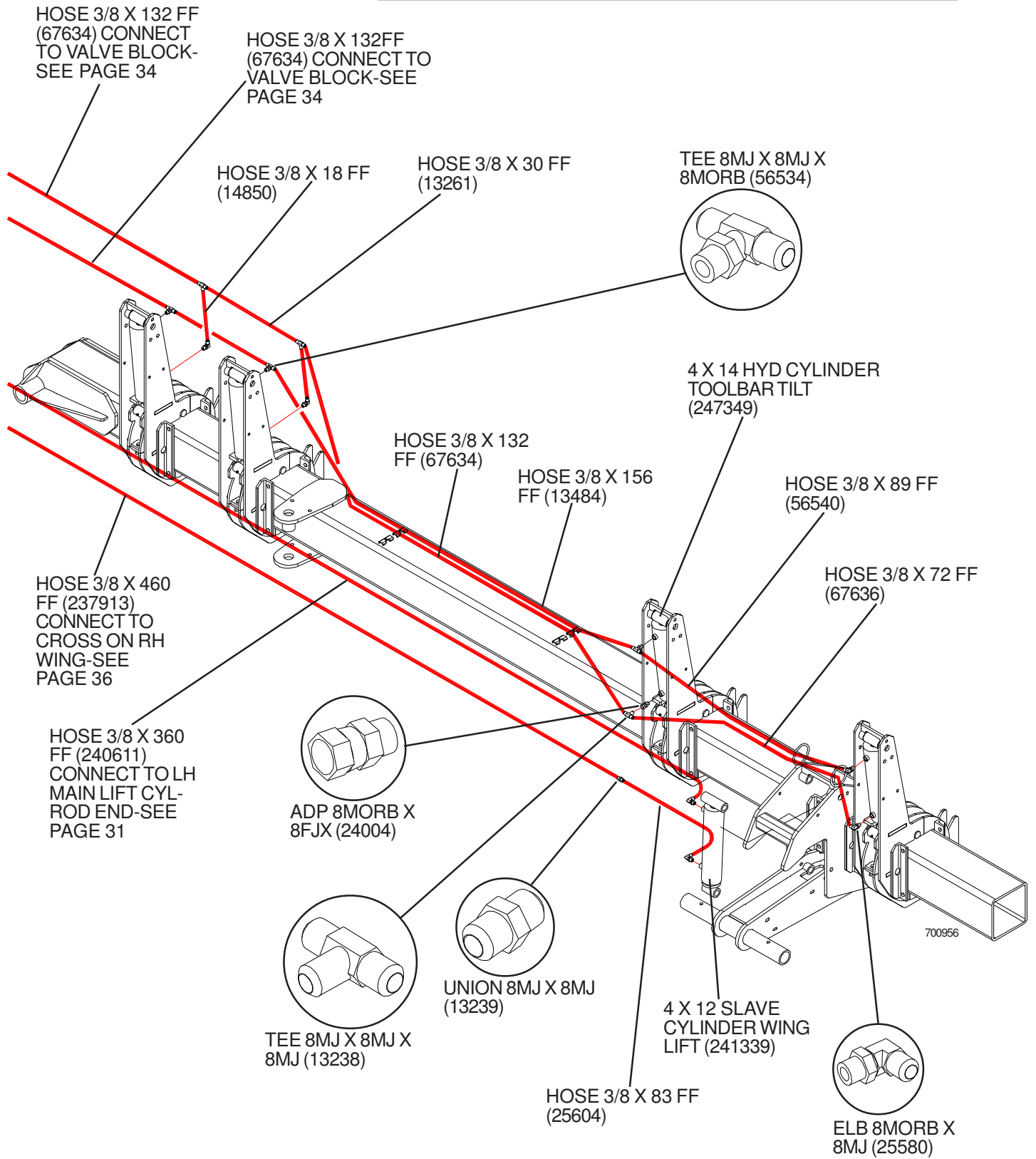
**2-1/2" X 5" HYD CYLINDER (B112426)
PORTS FACE RH & CLEVIS BOLT MUST
BE ON TOP**

700199A

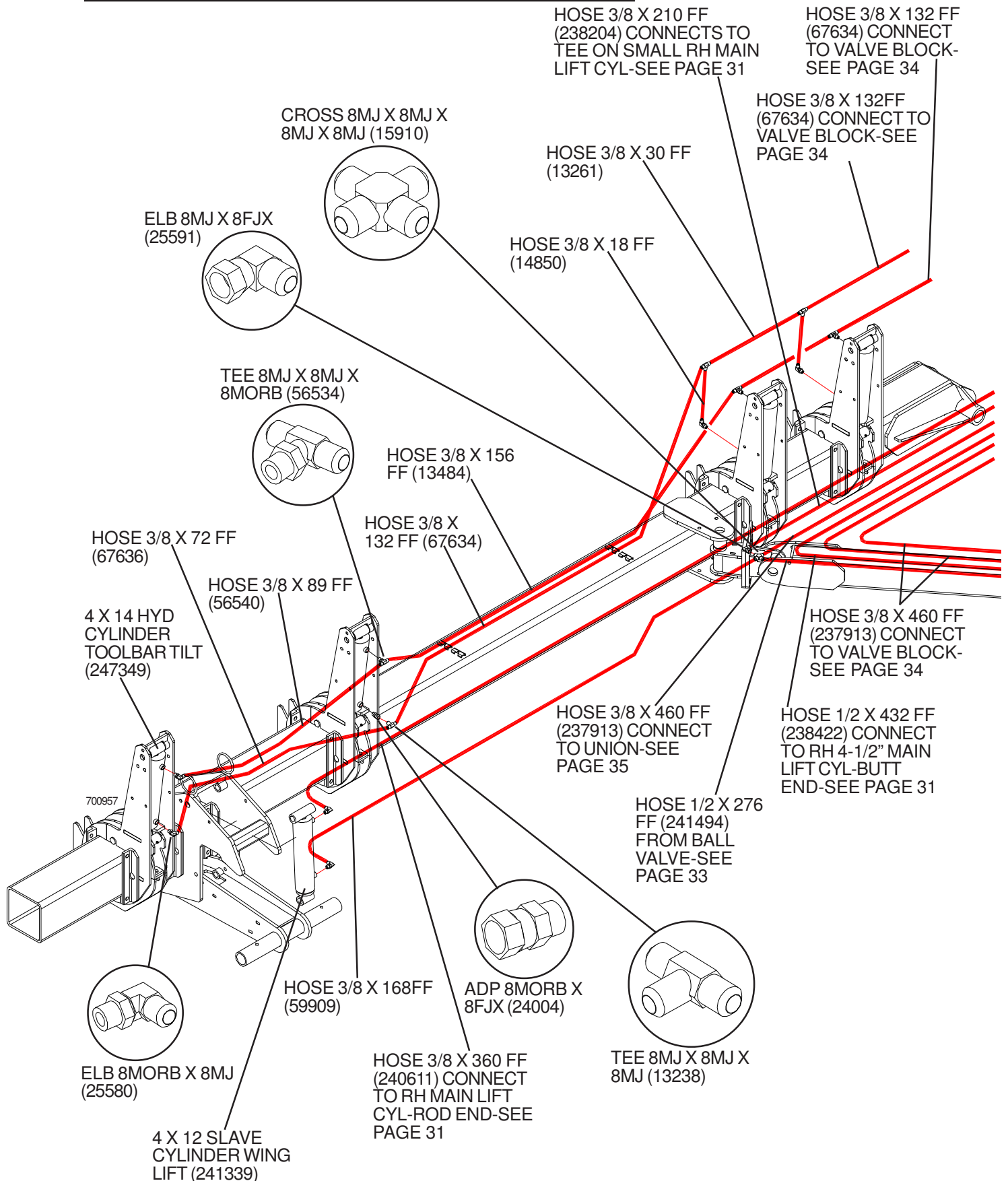
HYDRAULICS-CENTER SECTION



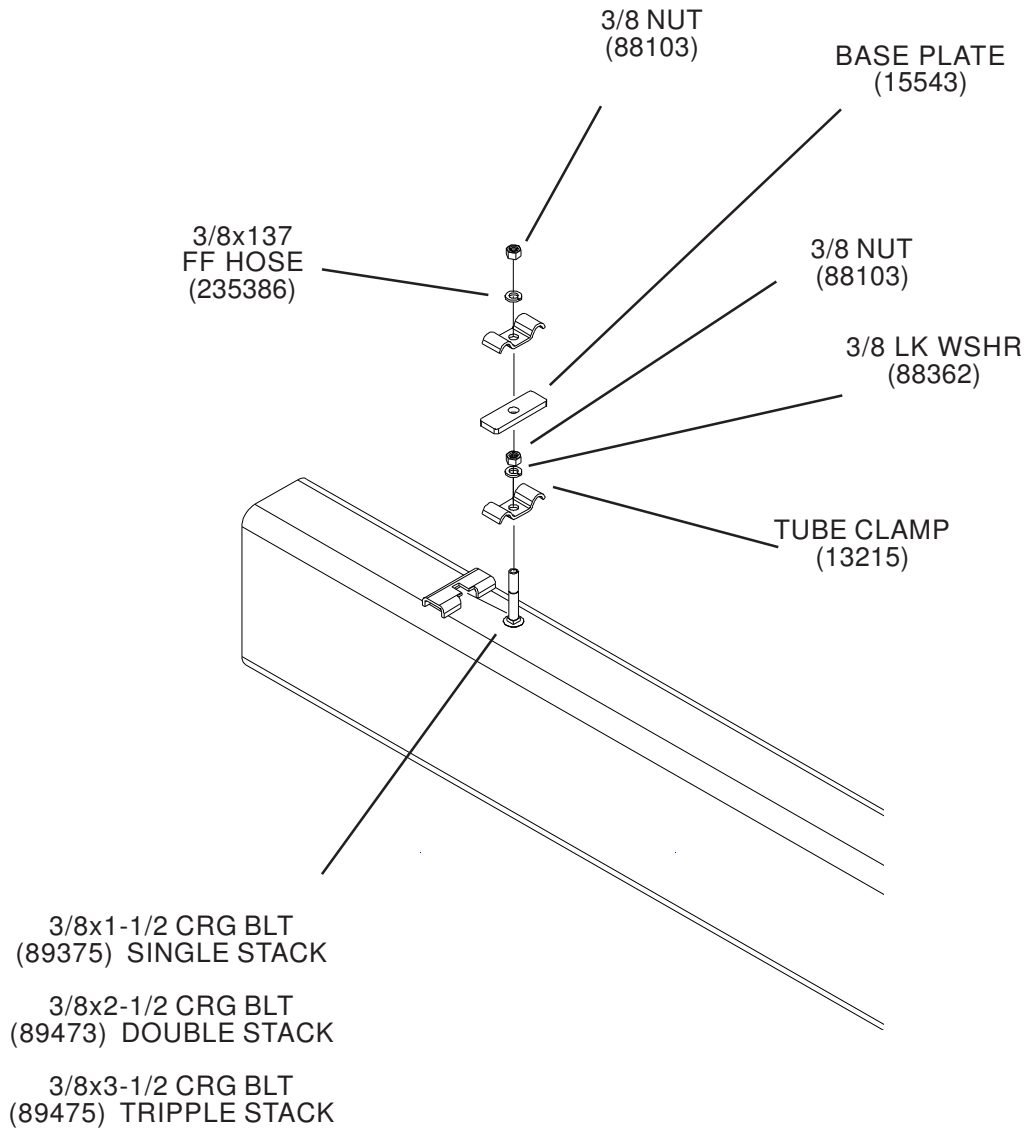
HYDRAULICS-LH WING 10SQ TUBE



HYDRAULICS-RH WING 10SQ TUBE



HOSE CLAMP ASSEMBLY



700737

Initial Assembly and Charging of Lift Systems

All WIL-RICH lift systems should be assembled as noted in the appropriate assembly manual. For best functional results the following steps should be followed.

- 1) Position the main lift cylinders in the locations and connect the hydraulic circuitry as shown. Attach the base end of all cylinders but do not connect the rod ends.
- 2) Most fittings, except the connection tips at the tractor end and some valves, are JIC or O-ring type fitting. JIC and O-ring fitting do not require any type of thread compound to seal properly. **NOTE: Take care to keep all connections, fitting, hose, etc as clean as possible.**
- 3) Where pipe threads are used a thread-sealing compound should be used. **NOTE: Do not use Teflon type tape on any hydraulic circuitry; use an appropriate liquid compound. If any tape or contaminate enters the system it can clog the bypass hole.**
- 4) With all connections secured and the cylinders supported to allow rod extension apply pressure to the system.

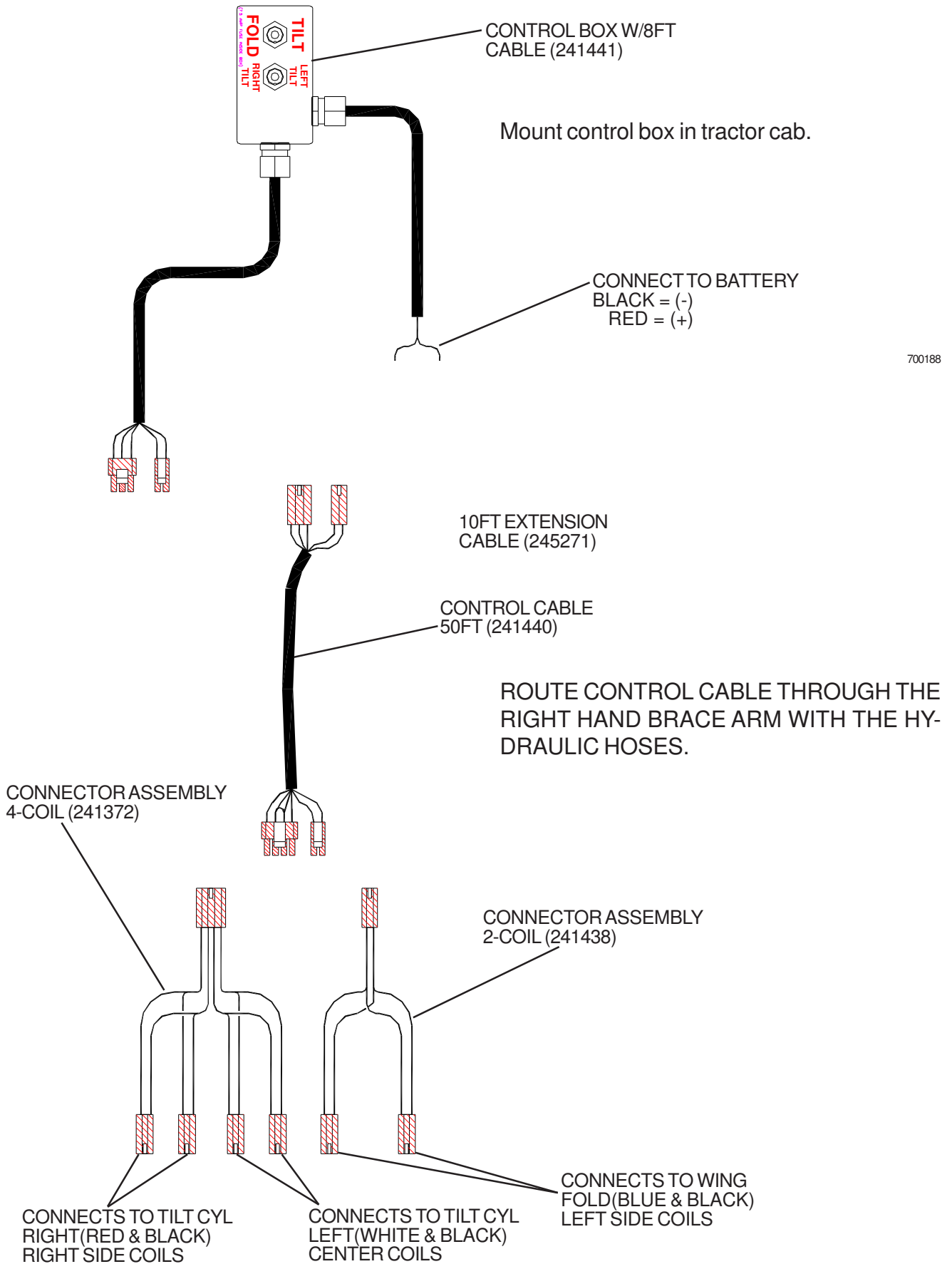
The main or base cylinder should extend as oil flows into the base of the cylinder. Because there is air in the remaining cylinders and in the connecting hoses the outer cylinders may extend quickly. Just because the cylinders are extended does not mean the system has been purged. Continue to direct oil into the system until all cylinders have extended fully. **NOTE: the cylinders will only bypass when the cylinders are fully extended.**

Keep in mind that all the oil going to the outer cylinders must be bypassed through the base cylinder bypass hole and subsequent cylinders. This will take some time, in some cases a considerable amount of time. On large unit with multiple wings and lift cylinders it will take longer to charge the system and a large amount of oil will be required. Check that your tractor has sufficient oil capacity; you may need to add oil to your reservoir. Also, because of the need to force all the oil through the by-pass holes you will need to have a system pressure of 2500-3000 psi.

Once all cylinders on the unit have been fully extended, retract the cylinders and again extend fully. Hold the cylinders in the extended (bypass) position for a few minutes, retract the cylinders and observe that the cylinders are working in sequence. Raise and lower the unit and check to ensure the unit is moving in a level manner.

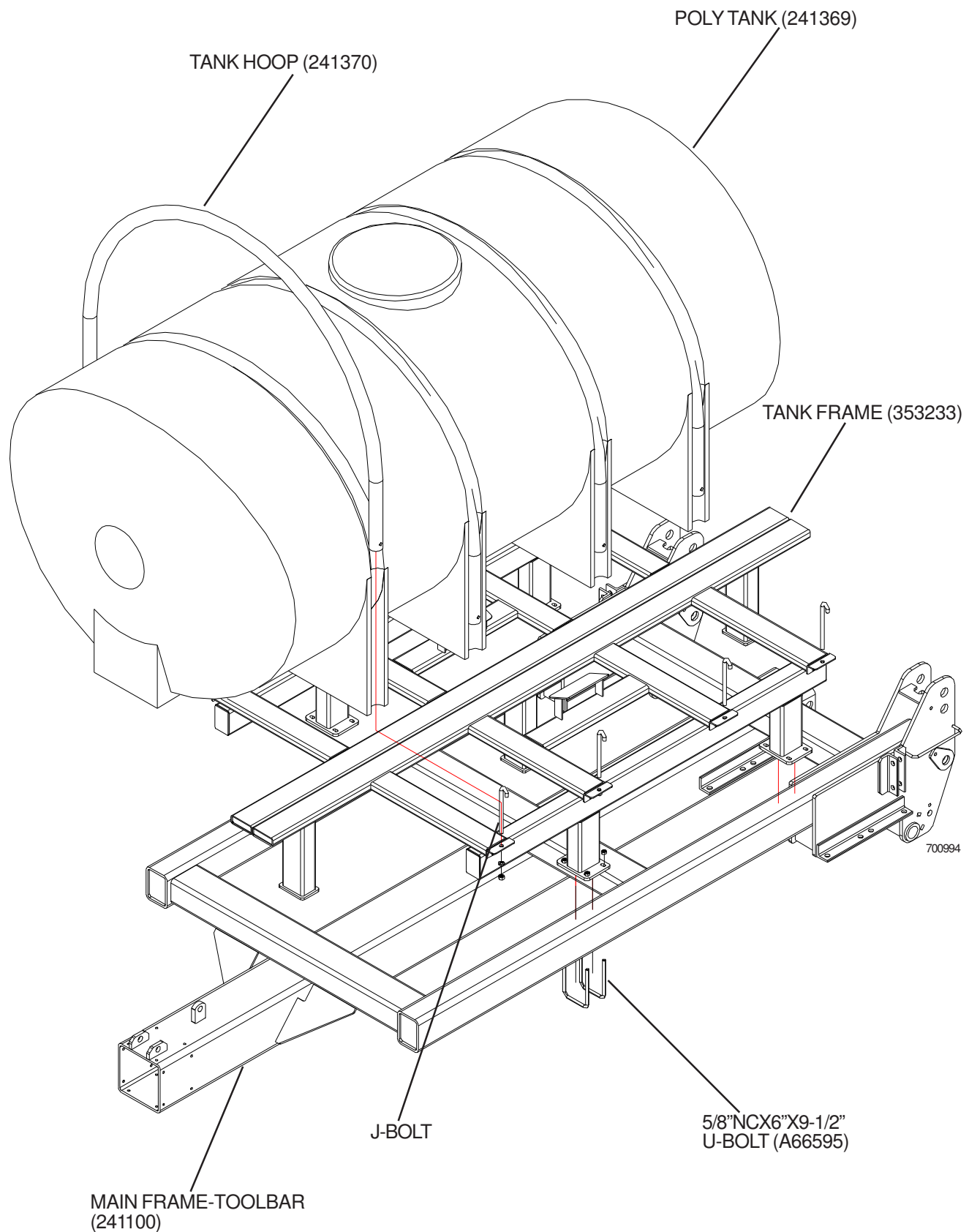
If the cylinders have been properly bypassed, all cylinders and hoses should be filled with oil with no air in the system. In actuality there will still be some air in the system as it is unlikely all air has been purged from the system. Even with some air in the system the cylinders should move in sequence and lift and control the depth of the unit. If the cylinders don't seem to be bypassing it may indicate that some debris has blocked the bypass hole. Because the hole may be blocked it is critical to maintain clean oil. Protect the complete hydraulic system at all connection points.

ELECTRICAL COMPONENTS

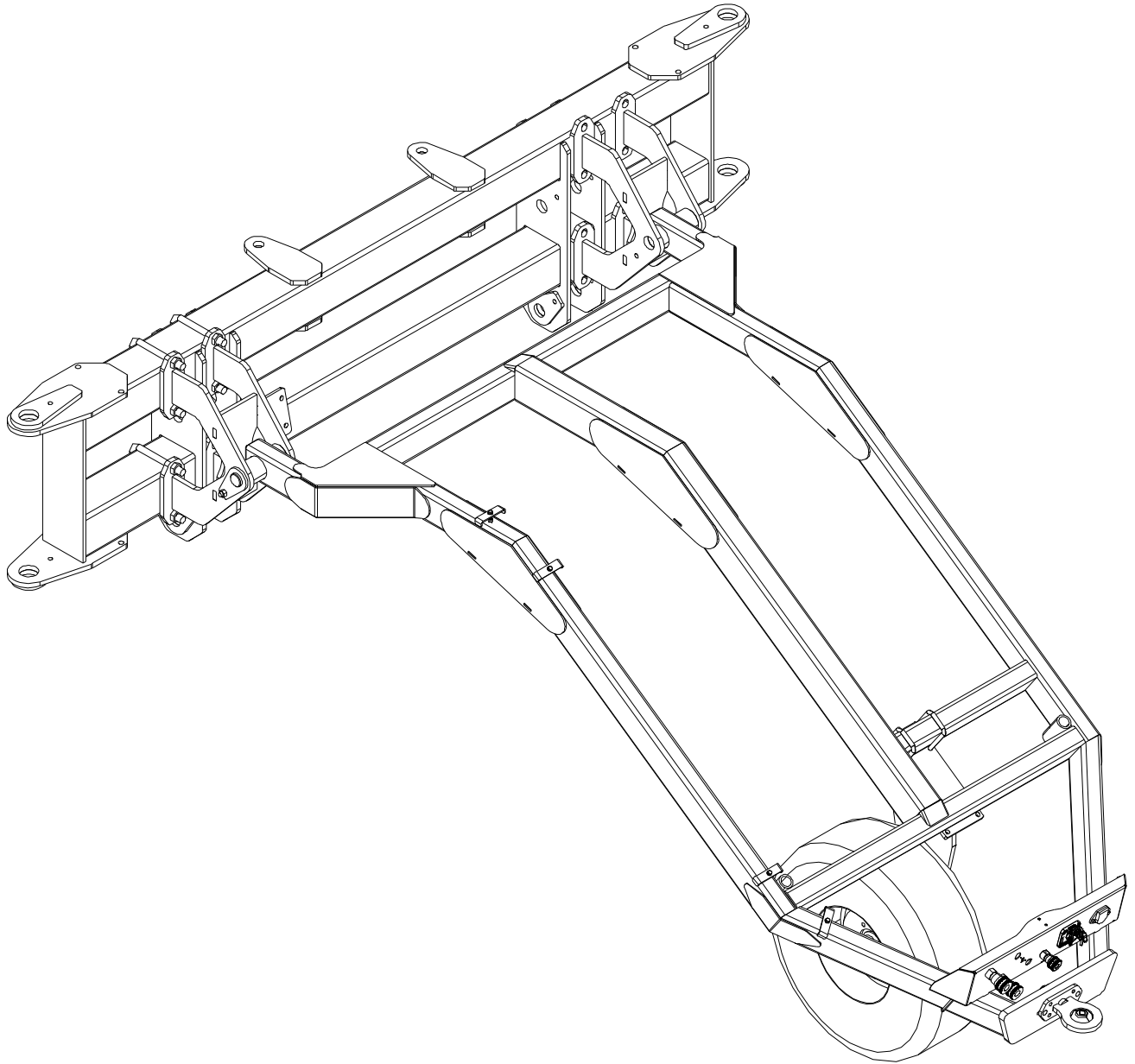


700188

2600 GALLON POLY TANK & FRAME (OPTIONAL)

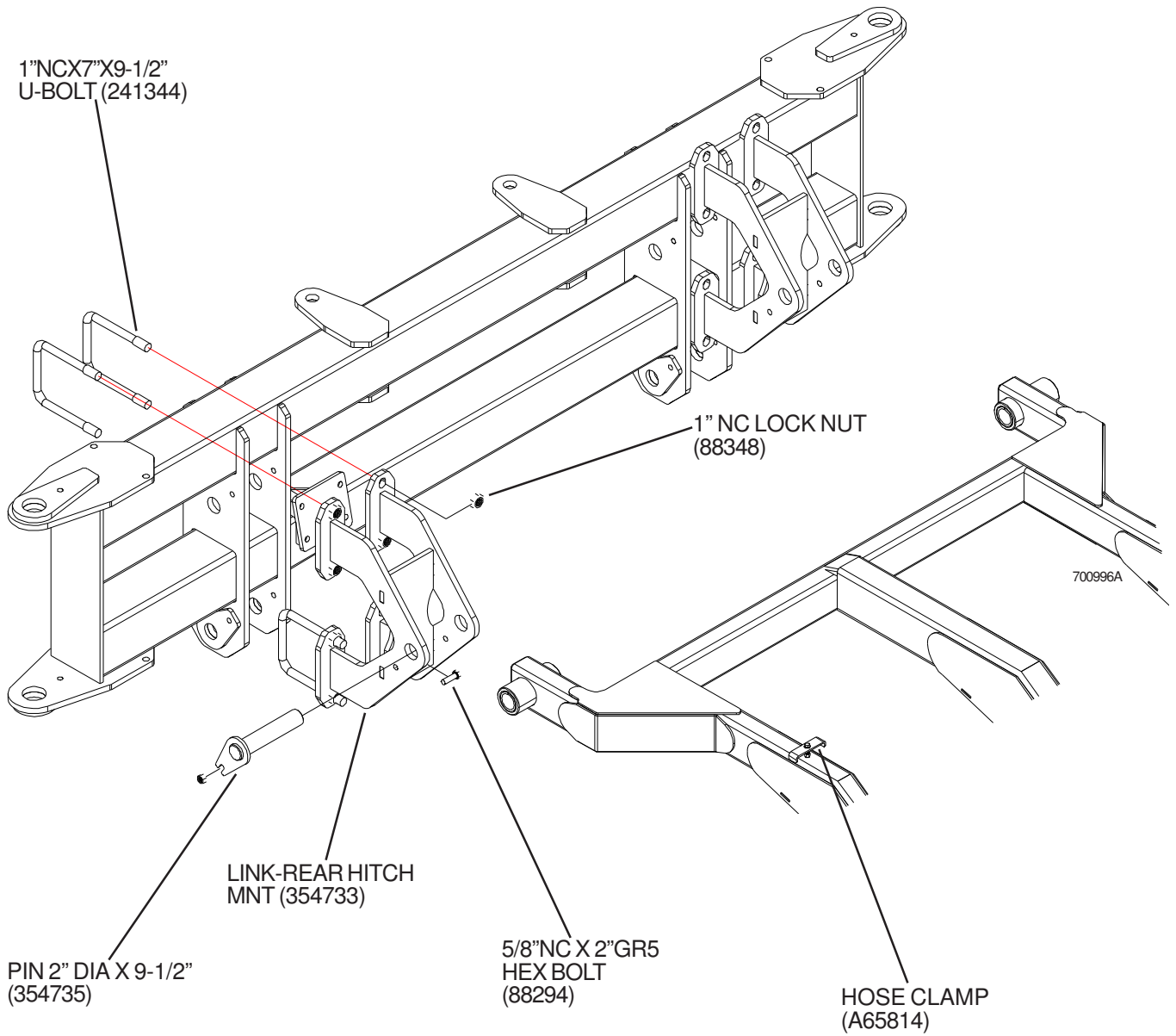


REAR HITCH (OPTIONAL)

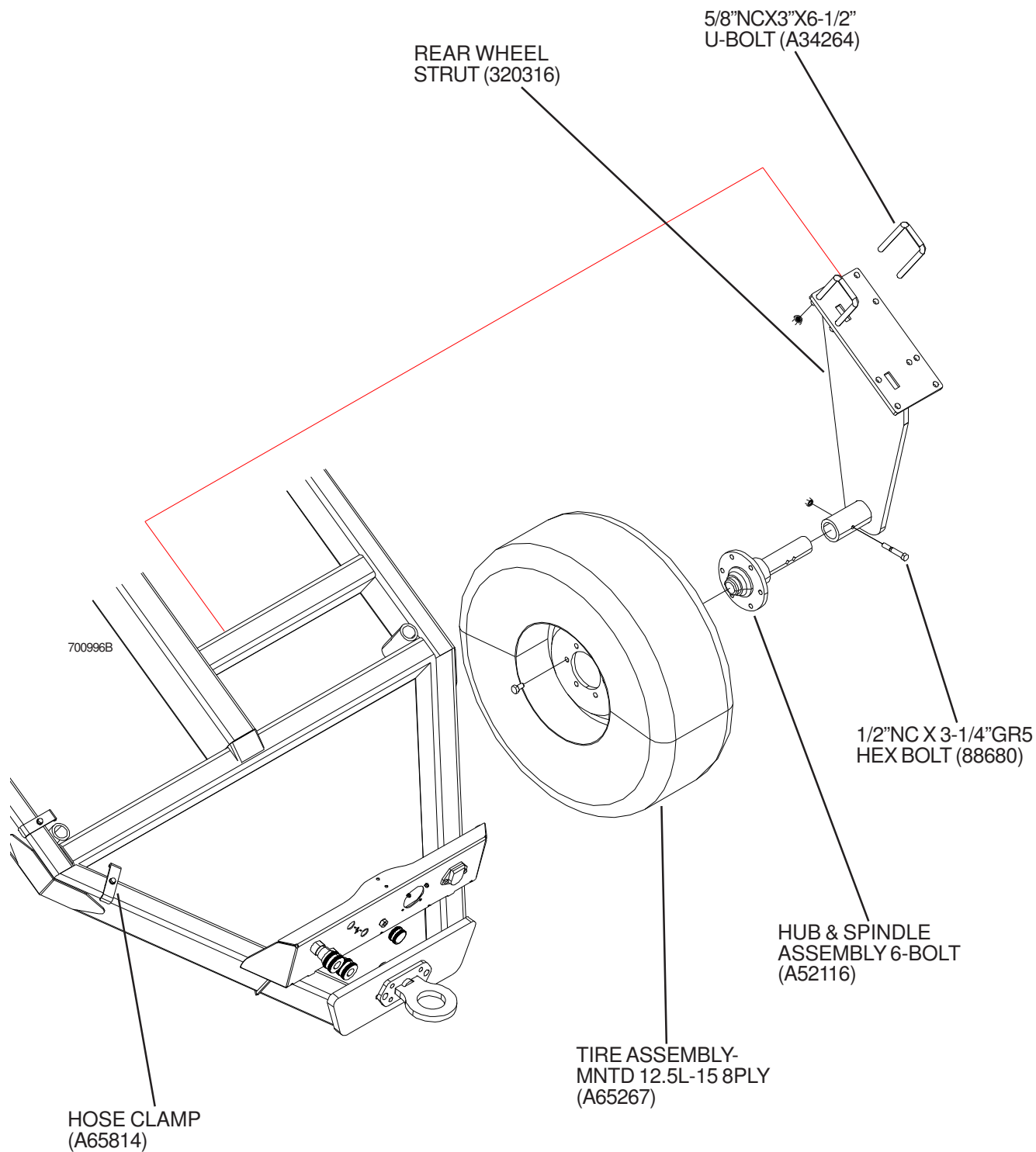


700996

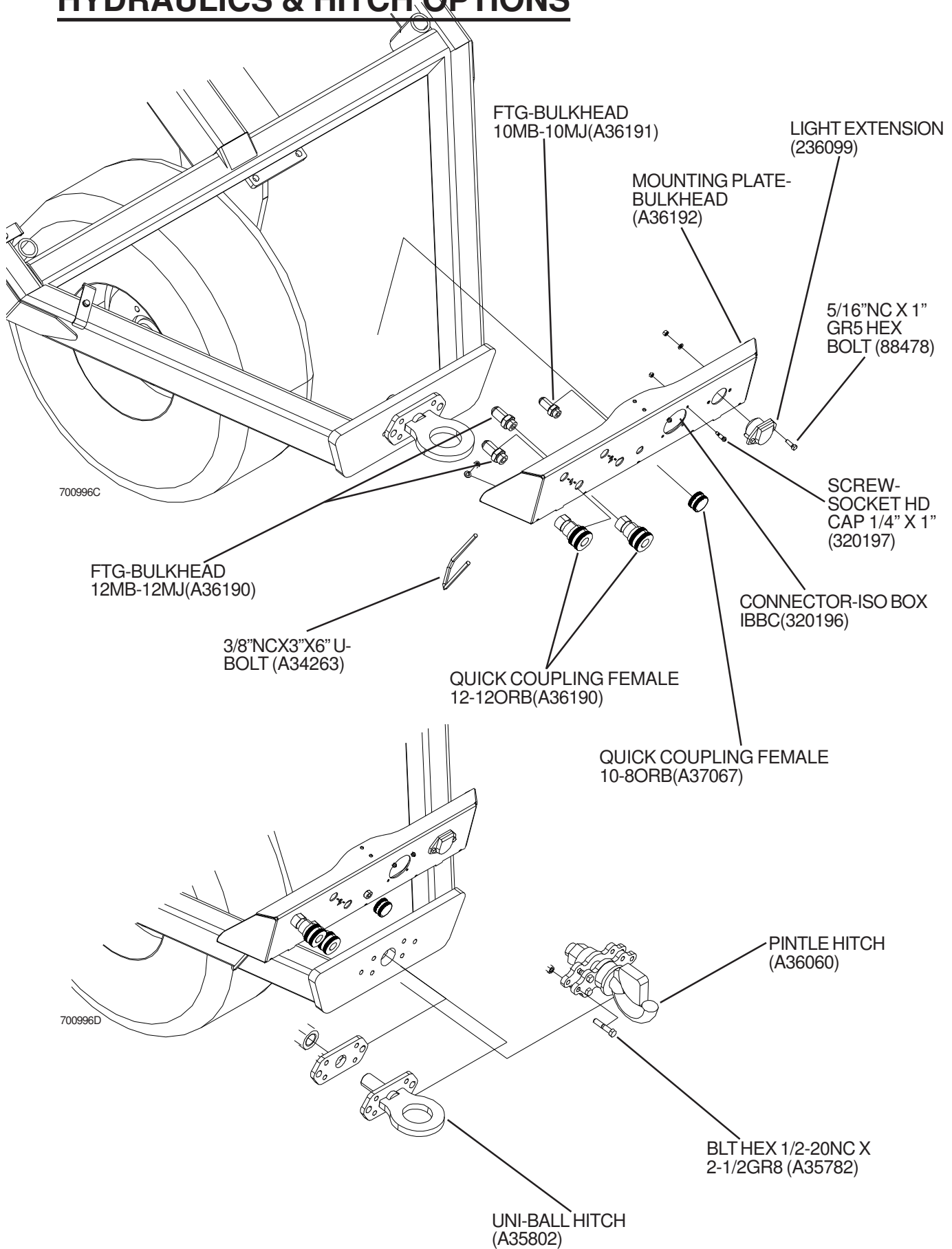
REAR HITCH-CENTER SECTION CONNECTION



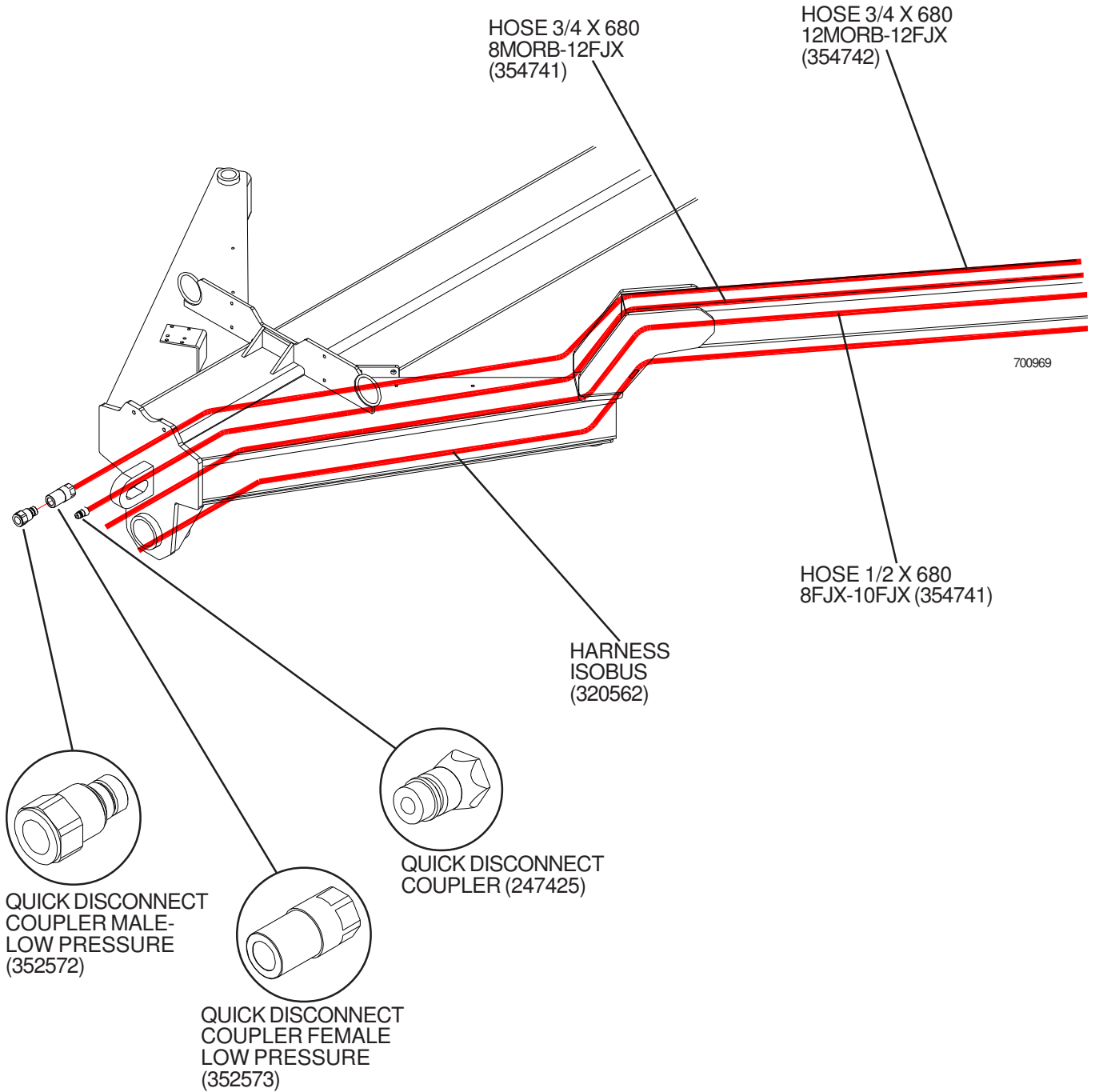
REAR HITCH-TIRE ASSEMBLY



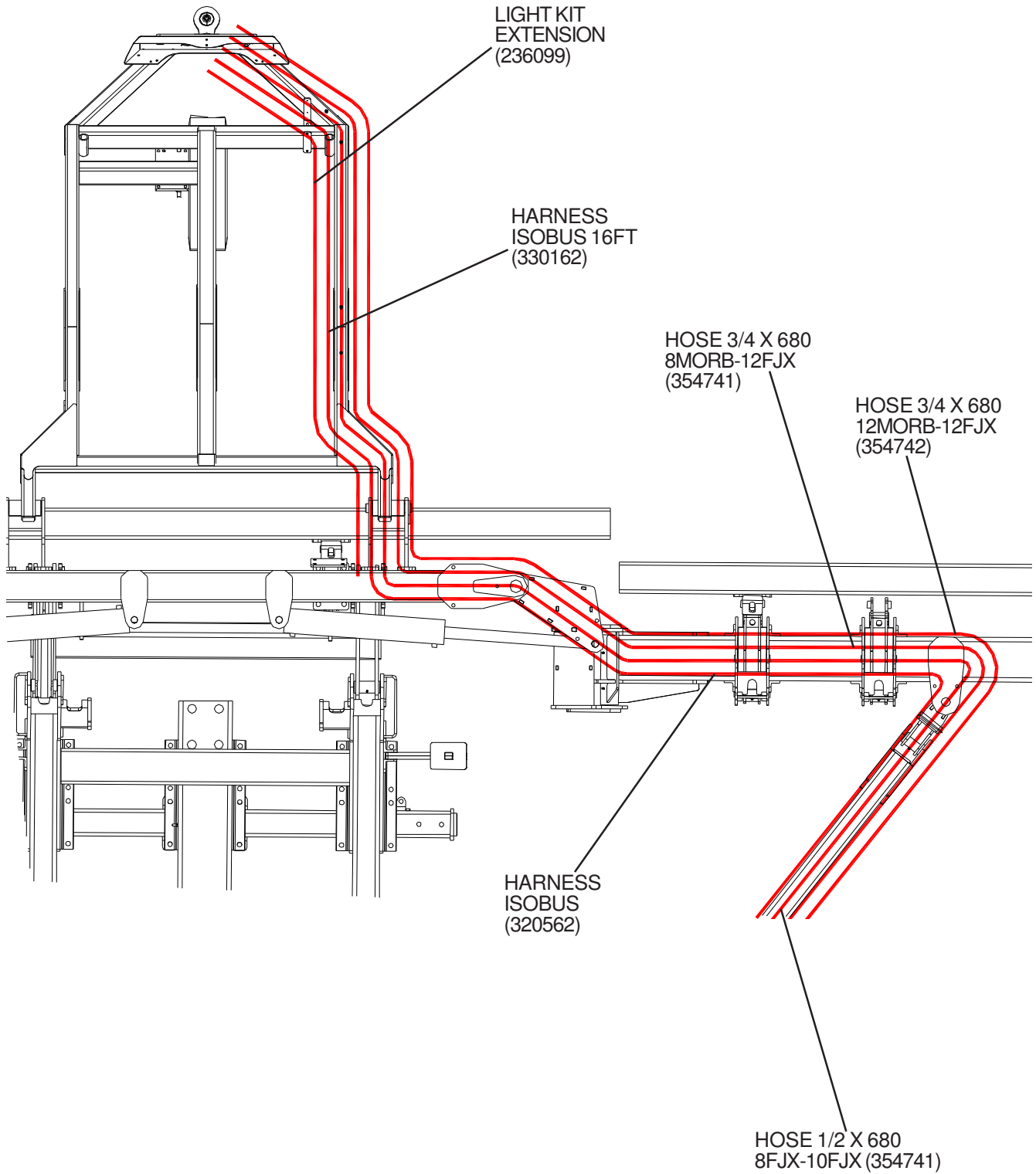
HYDRAULICS & HITCH OPTIONS

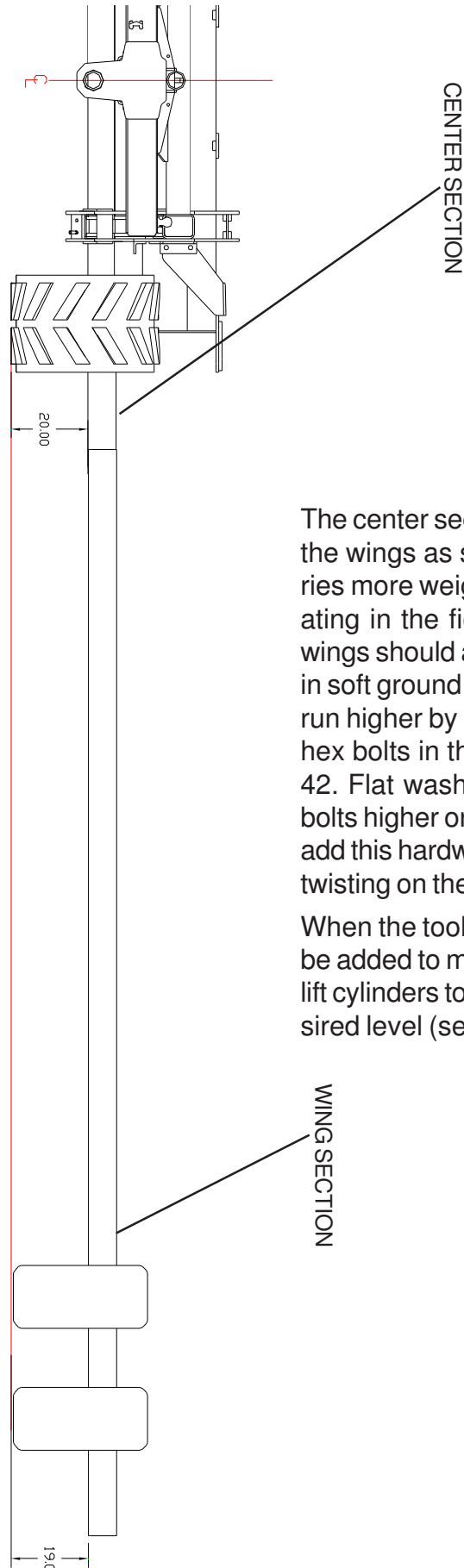


HYDRAULICS LH SIDE-REAR HITCH



HYDRAULICS LH SIDE-REAR HITCH

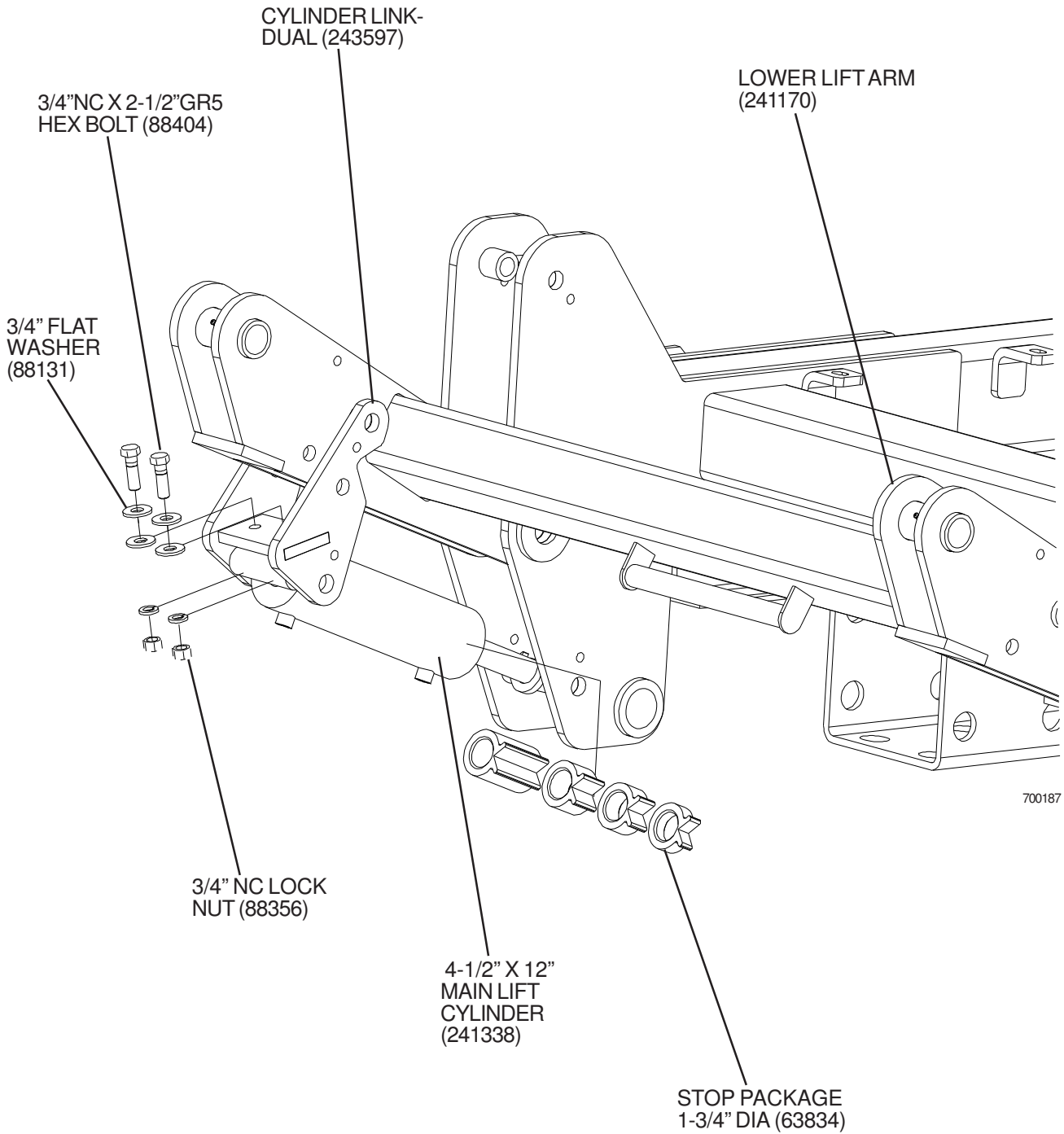




The center section is set to run 1" higher than the wings as shown. The center section carries more weight than the wings. When operating in the field the center section and the wings should all run level. If you are operating in soft ground the center section can be set to run higher by adding (4) 3/4" x 2-1/2" grade 5 hex bolts in the link arms as shown on page 42. Flat washers can be added to raise the bolts higher or lower as desired. Make sure to add this hardware to both sides to prevent any twisting on the lift arms.

When the toolbar is set level-stop collars can be added to main lift cylinders and to the wing lift cylinders to set the toolbar height to the desired level (see page 42).

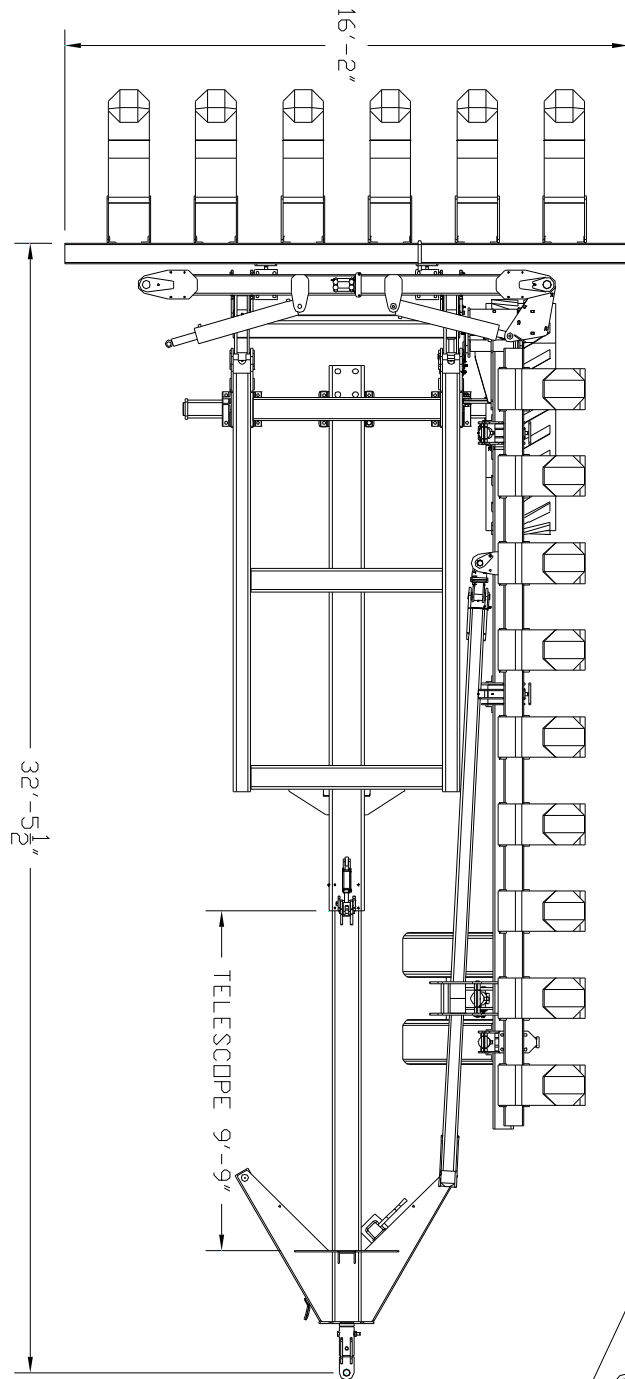
LEVELING



DEPTH STOP COLLARS SHOULD BE USED ON ALL LIFT CYLINDERS.

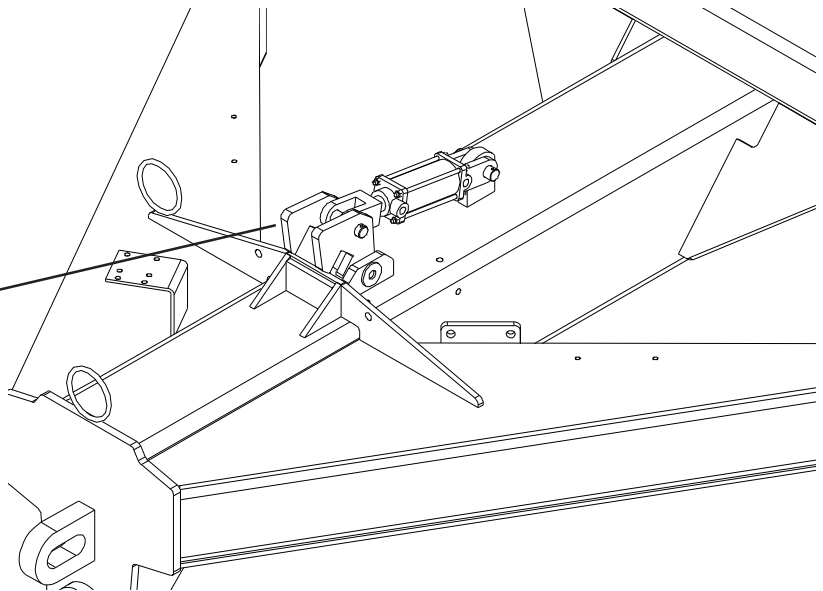
FOLDING SEQUENCE

STEP 1



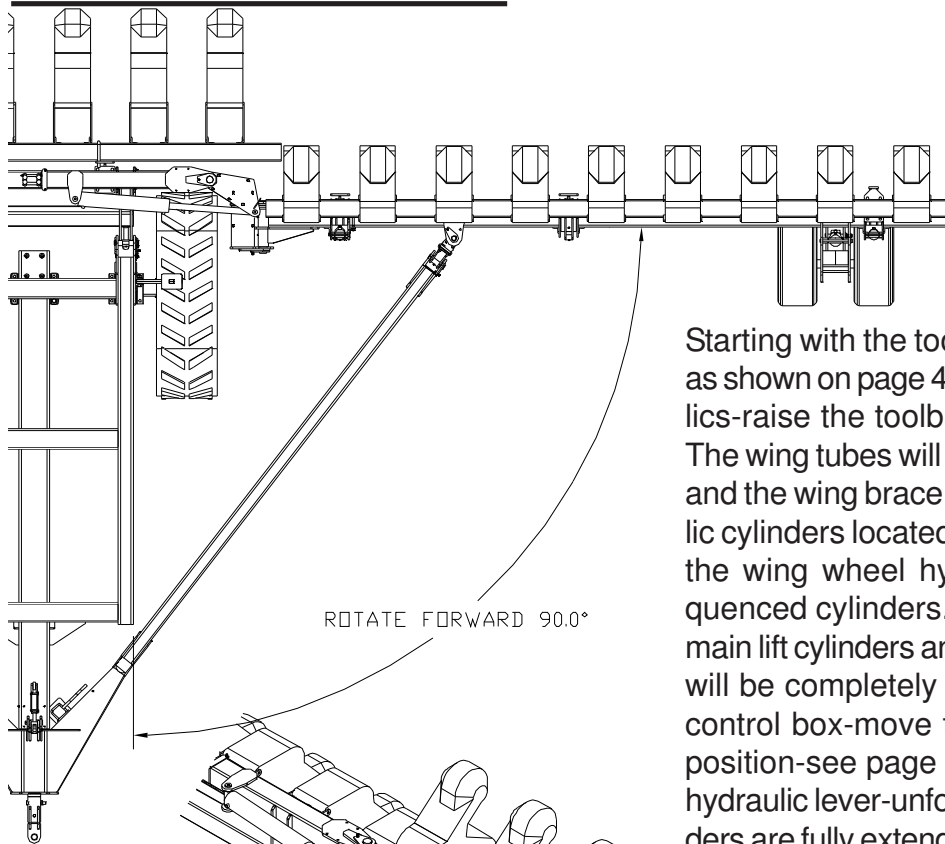
**DETACH TRACTOR IN THE
TRANSPORT POSITION
ONLY**

TONGUE LATCH
TRANSPORT POSITION

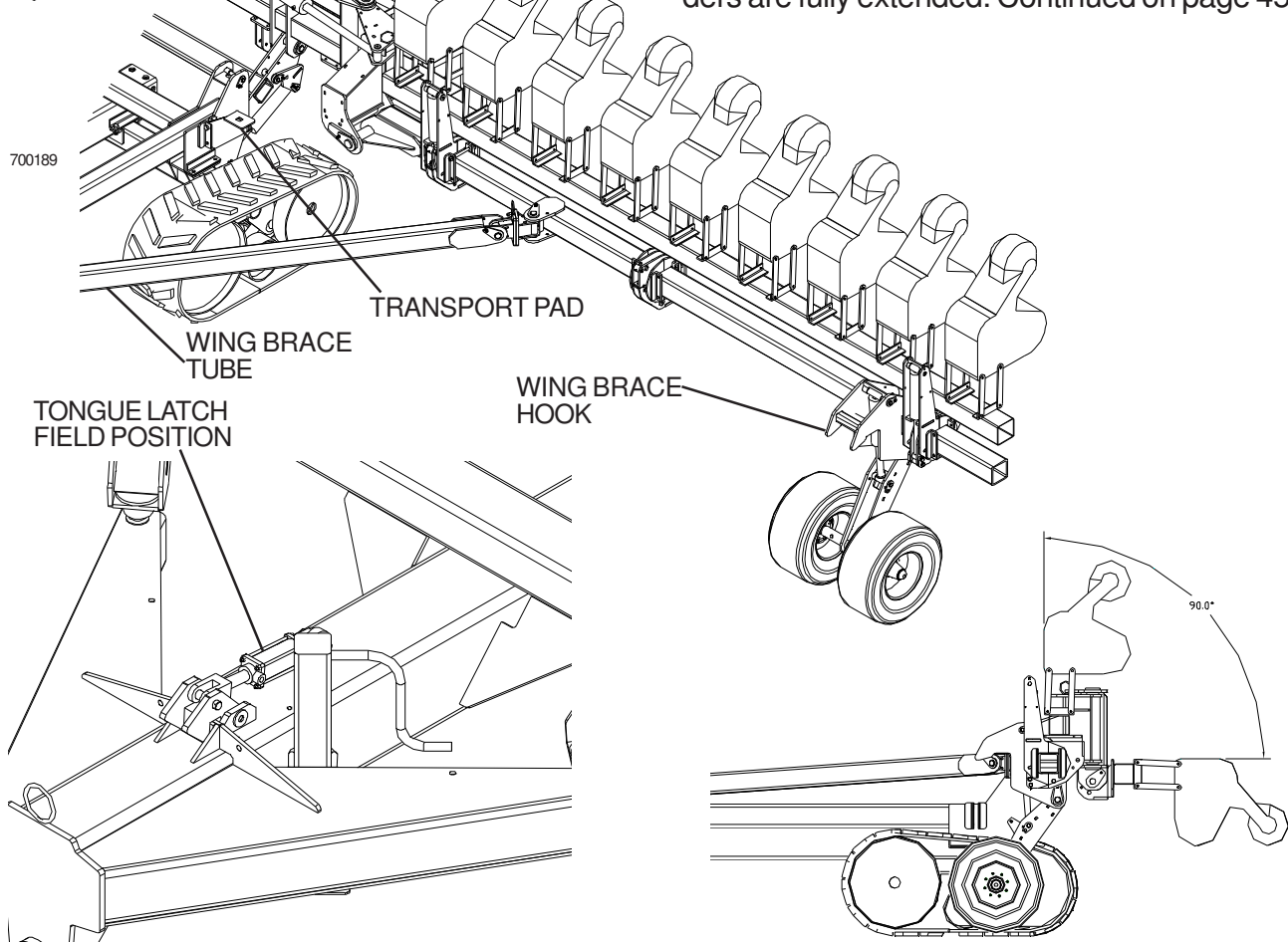


FOLDING SEQUENCE

STEP 2

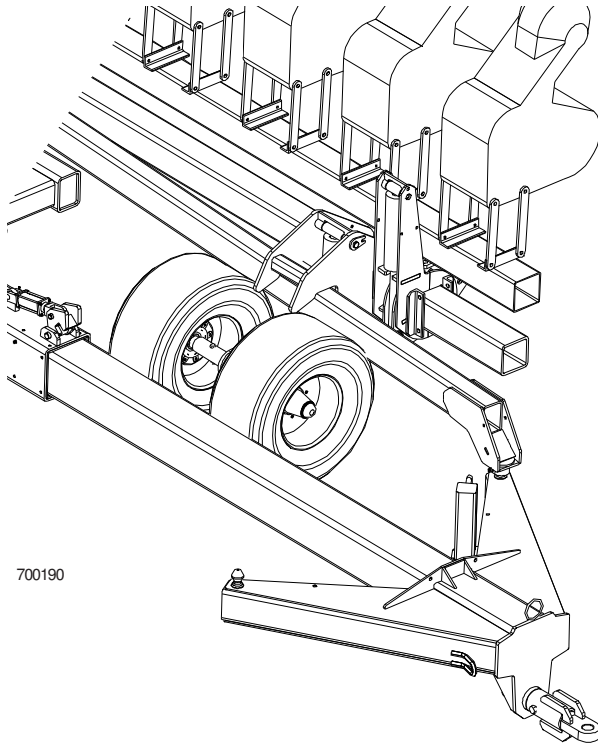


Starting with the toolbar in the folded position as shown on page 43. Using the tractor hydraulics-raise the toolbar to the highest position. The wing tubes will lift off of the transport pads and the wing brace tube. The main lift hydraulic cylinders located on the center section and the wing wheel hydraulic cylinders are sequenced cylinders. In the raised position the main lift cylinders and the wing wheel cylinders will be completely extended. Next using the control box-move the first switch to the fold position-see page 38. Using the appropriate hydraulic lever-unfold the wings until fold cylinders are fully extended. Continued on page 45.

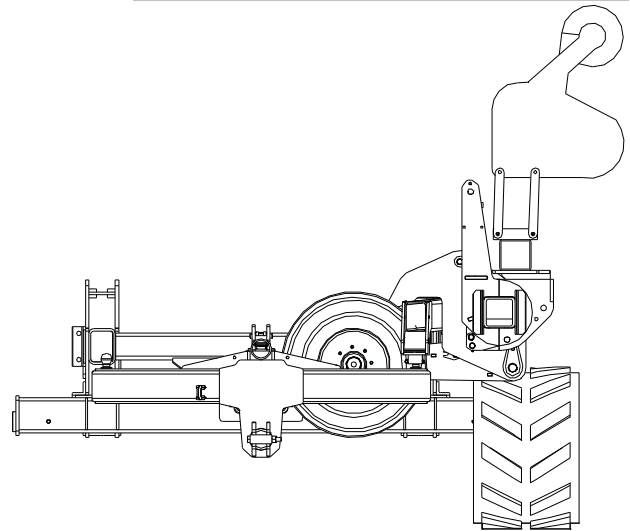
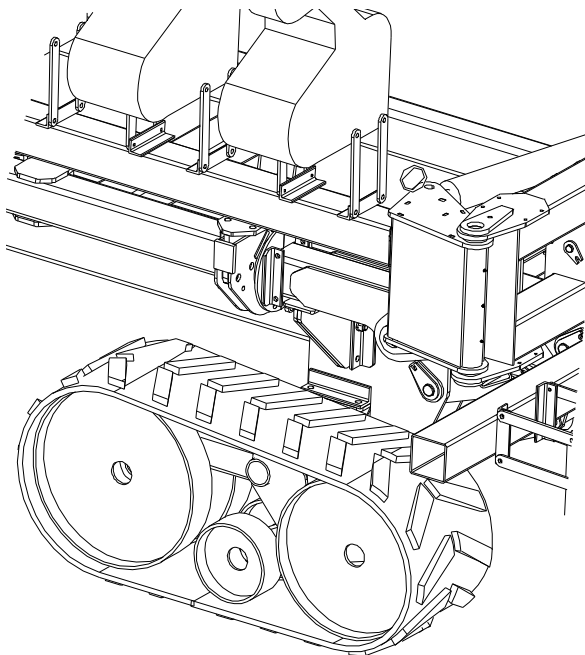


FOLDING SEQUENCE

STEP 3



DETACH TRACTOR IN THE TRANSPORT POSITION ONLY

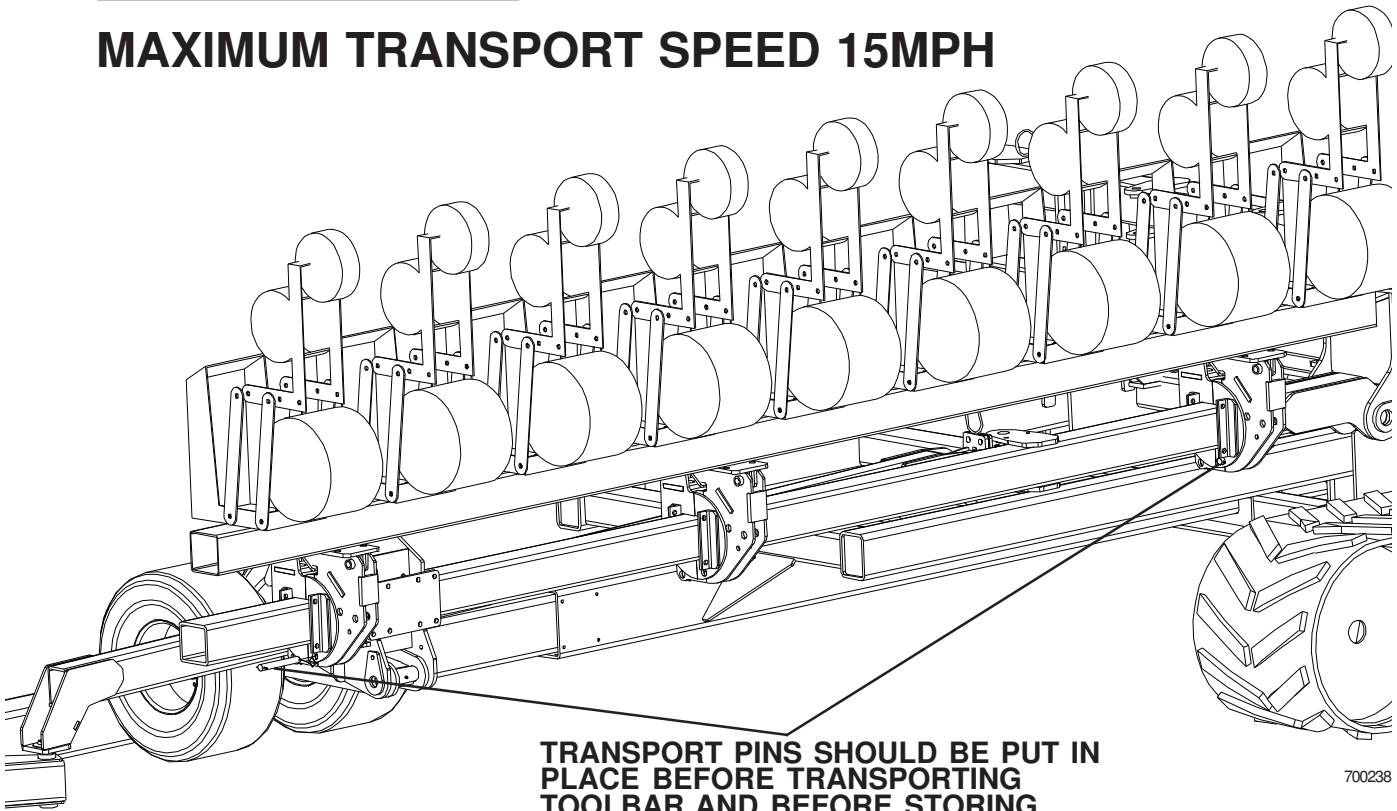


You may have to move the tractor backwards slowly to help unfold the wings. After the wing fold cylinders have fully extended continue to hold the hydraulic lever to unfold-this will activate the tongue latch cylinder to extend as shown on bottom of page 44. This will hold the tongue in place as you move through the field. Next on the control box-move switch to tilt position-this will provide power to the second switch. Move the second switch to left tilt position to rotate the left hand wing toolbar down 90° as shown on bottom of page 44 (field position). Move the second switch to tilt right to rotate the right hand toolbar down 90° (field position). **When the toolbar is not being folded make sure both switches are in the center position-any switches left on will continue to draw current.** Reverse this sequence to fold toolbar for transport. When toolbar is folded make sure wings are hooked over the wing brace tube as shown above. Also wing wheel cylinders should be fully retracted for ground clearance during transport. Rear wings and center section will rest on transport pads during transport.

WING TOOLBARS MUST BE TILTED UP 90° BEFORE FOLDING WINGS FORWARD

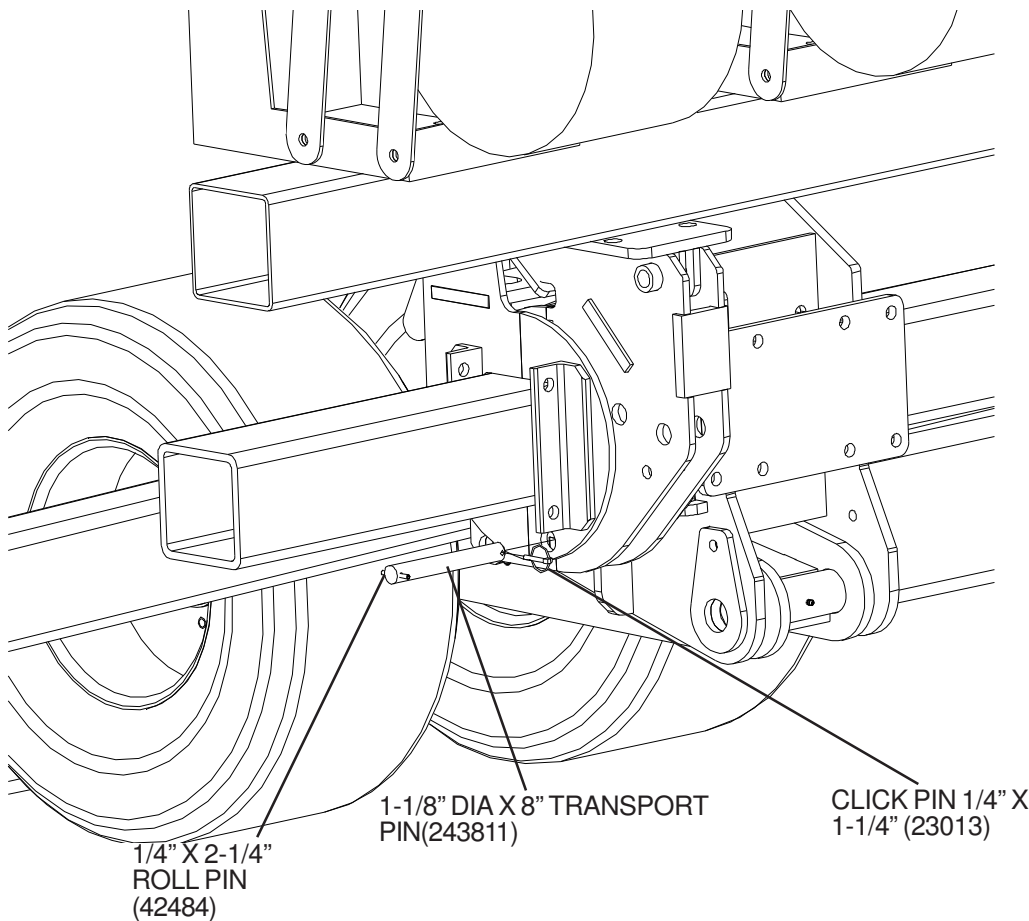
TRANSPORT PINS

MAXIMUM TRANSPORT SPEED 15MPH



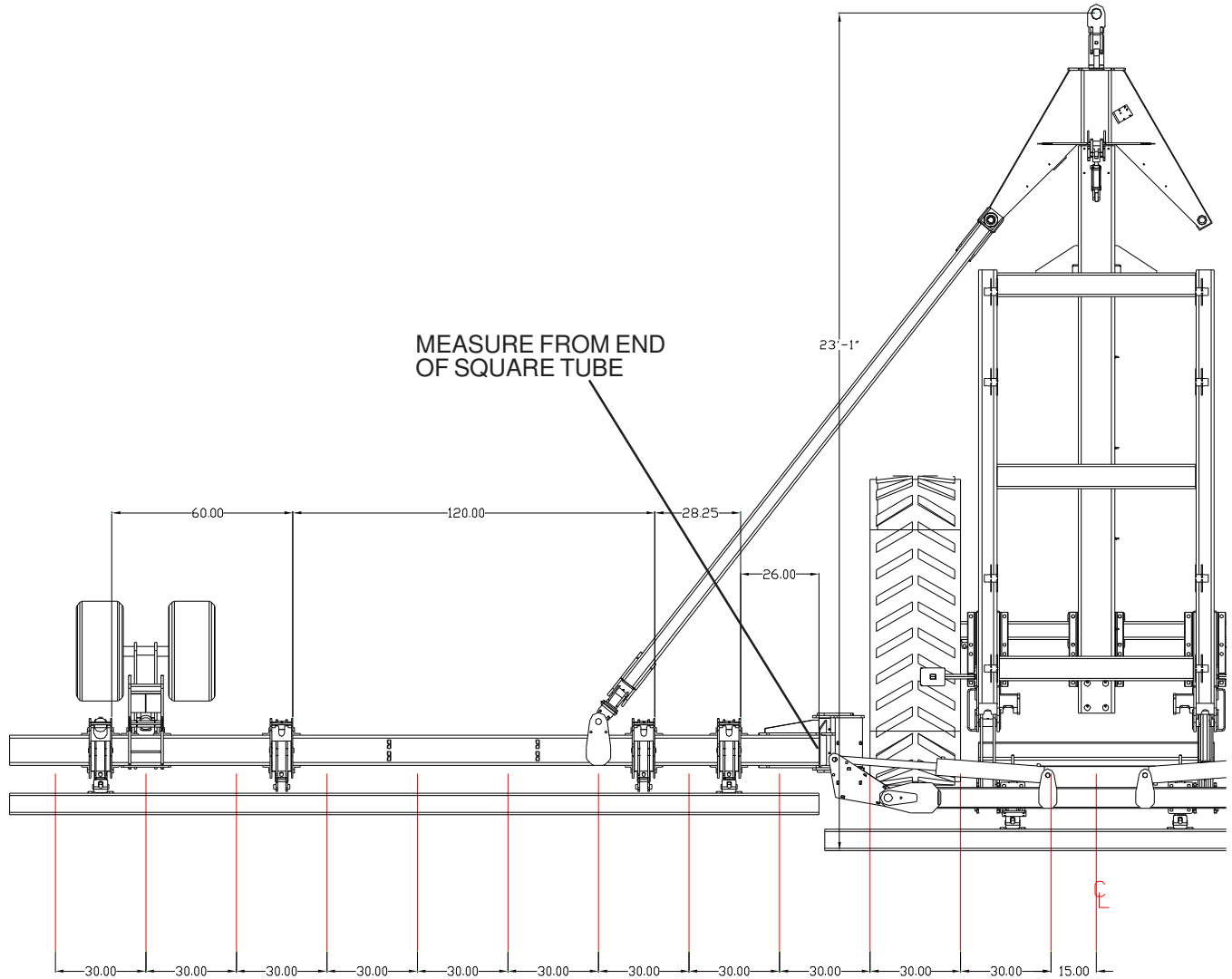
TRANSPORT PINS SHOULD BE PUT IN PLACE BEFORE TRANSPORTING TOOLBAR AND BEFORE STORING TWO PINS ON THE LEFTHAND WING TWO PINS ON THE RIFTHAND WING

700238



ASSEMBLY INFORMATION

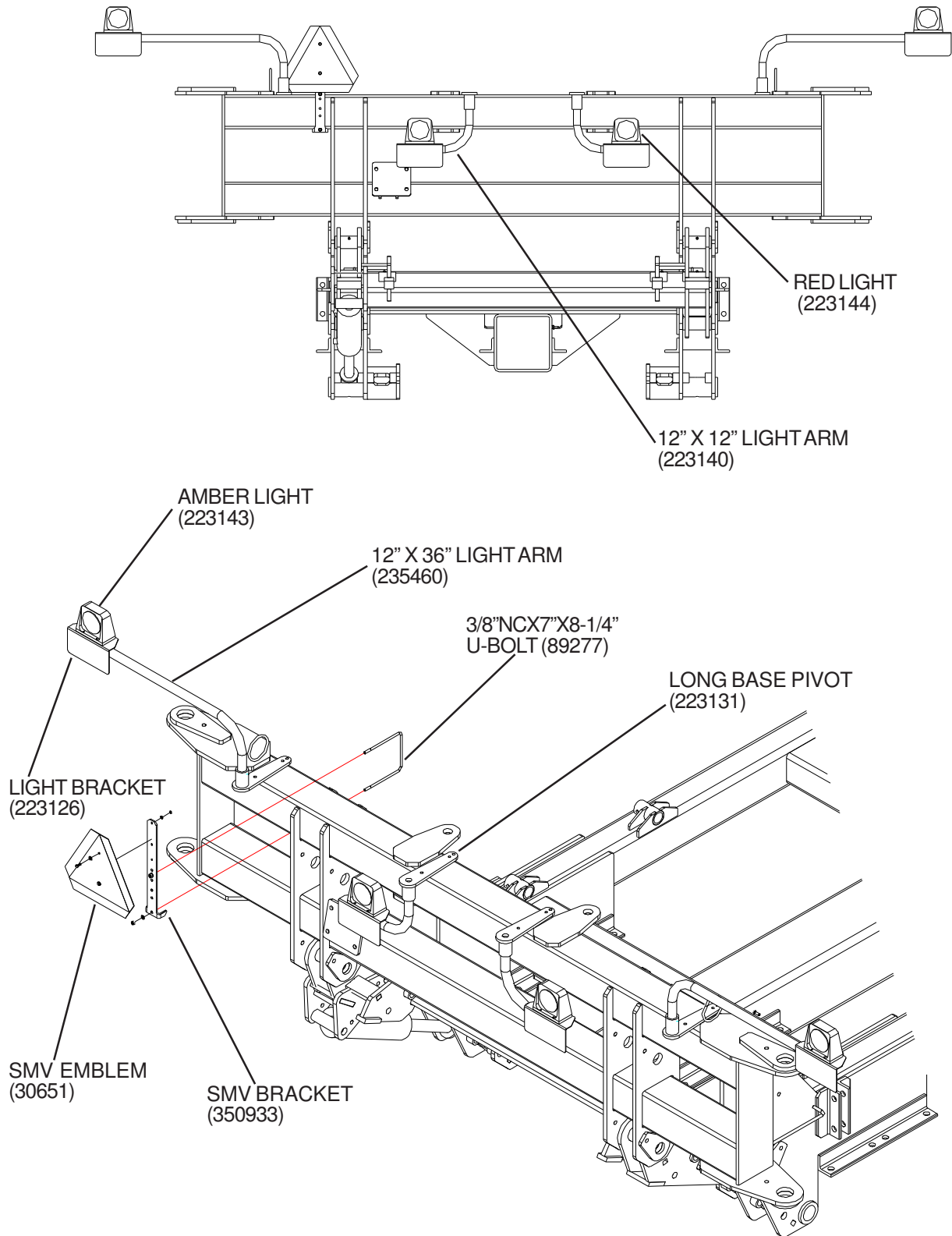
24 ROW 30" SPACING 60FT
10" SQ TUBE WITH 4
HYDRAULIC TILT CYLINDERS
ON EACH WING



700955

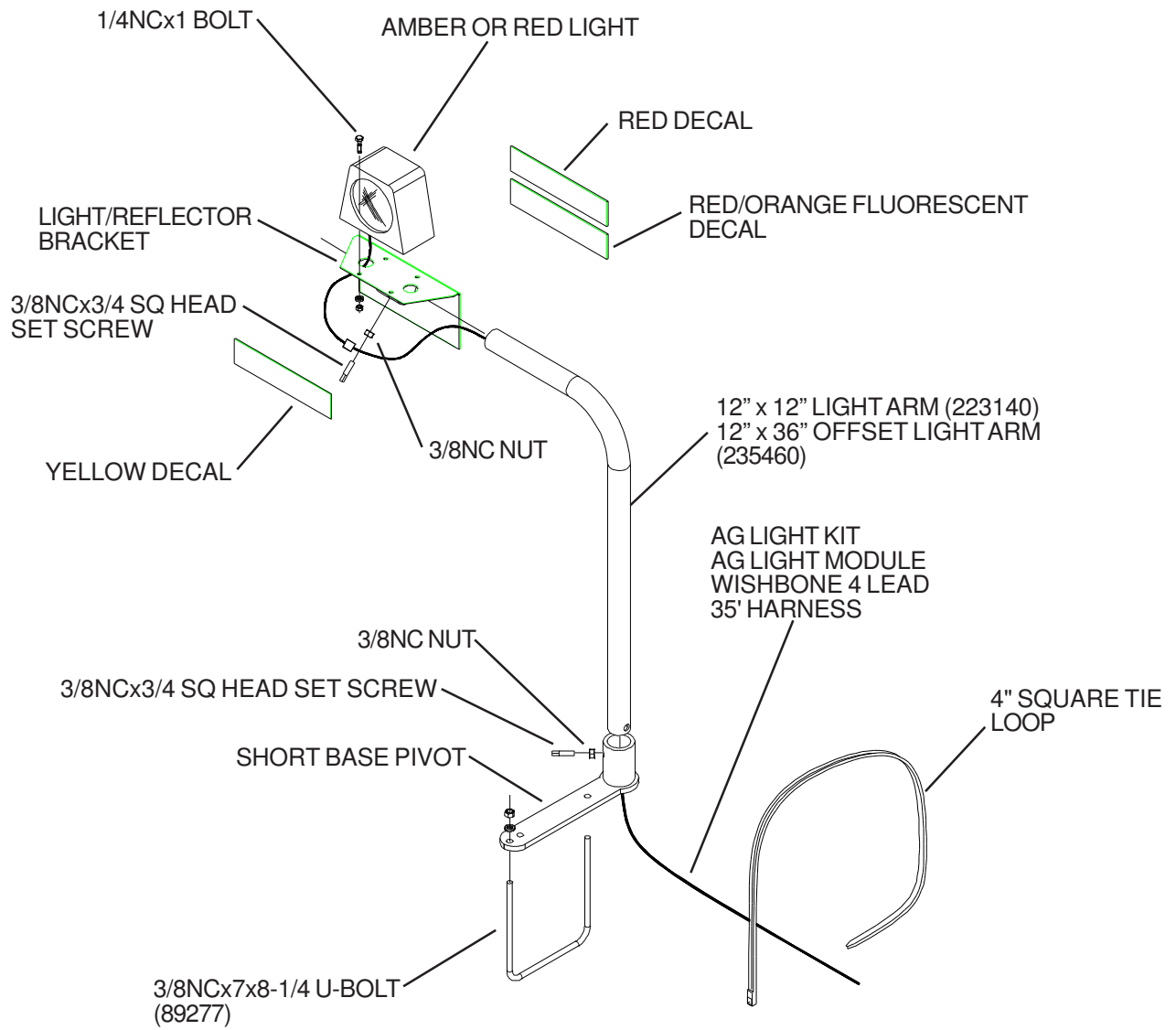
BEARING LOCATION DIMENSIONS START FROM THE END OF THE
10" SQ TUBE

LIGHTS & SMV PLACEMENT



700191

LIGHTS



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