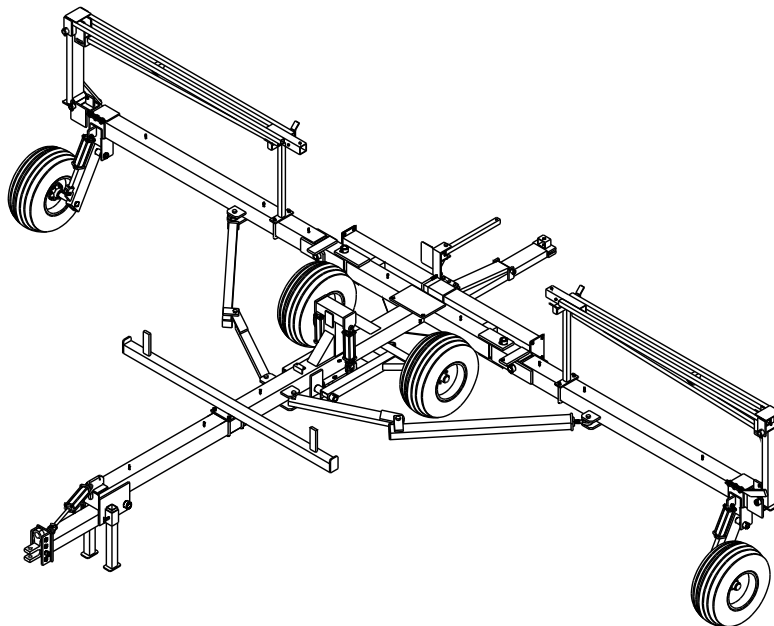


KONGSKILDE
INDUSTRIES INC.

OPERATOR'S MANUAL
30' 7200
FRONT-FOLD TOOLBAR



COME VISIT US ON THE WEB AT: www.kongskilde.com

SETUP AND OPERATION

When ordering parts, provide the complete serial and model number, as well as the desired part number and description.

For convenience and future reference, record the following information in the spaces provided below:

DATE PURCHASED: ____/____/____

DEALER NAME: _____

DEALER PHONE: _____

MODEL NUMBER: _____

SERIAL NUMBER: _____

NOTE: Throughout this manual, references of “right” or “right side” and “left” or “left side” are always from a point behind the implement facing forward, in the direction of travel.

SAFETY FIRST!

FOLLOW THESE RULES:

Comply with your state and local laws governing highway safety while moving machinery on the highway.

The SMV reflector emblem should be used at all times on public roads, and always use the flashing warning lights on your tractor.

Drive at a reasonable speed to maintain complete control of your machine at all times. Do not exceed 20 MPH (32.2 km/h) while transporting. Avoid heavily traveled roads whenever possible.

Hydraulic fluid escaping under pressure can have enough force to penetrate your skin. If you are injured by escaping fluid, see a doctor at once. Serious infection or reaction can result if medical treatment is not given immediately. Make sure all connections are tight and that hoses and lines are in good condition before applying pressure to the system. Relieve all pressure before disconnecting any lines or performing other work on the hydraulic system. To find a leak under pressure, use a small piece of cardboard or wood, NEVER use your hands.

At least once a year, inspect all hydraulic hoses for leaks, cracks, abrasions, and pinched areas. Tighten fittings or replace hoses as needed.

Always be sure the hydraulic lines and cylinders are free of air and do not leak. After connecting any new parts, replacing old parts, or servicing the hydraulic components, carefully cycle the hydraulic cylinders several times to purge trapped air from the system. Check all the connections for any leakage.

Always block up raised equipment when servicing it. NEVER rely on the hydraulic system to support the implement during servicing.

SAFETY FIRST!

FOLLOW THESE RULES:

Keep all safety equipment, such as hitch pins, chains, SMV emblems, lights, reflectors, etc... in good repair. Please note all safety decals, and keep them in place. New decals are available from your dealer.

Misuse, abuse, neglect, or modification of this machine can cause:

- mechanical breakdown
- property damage
- personal injury or death

Always use proper safety precautions and common sense. Set a good example and show your workers how to work safely, be an example, not a statistic.

Recommended Tire Pressures

Tire Size & Ply	Pressure
13.6 x 38 - 12 ply	44 PSI
12.5L x 15 - 12 ply	50 PSI
12.5L x 15 - 8 ply	36 PSI
16.5 x 16.1 - 10 ply	36 PSI
18.4 x 26 - 10 ply	26 PSI
5:30 x 12 - 6 ply	55 PSI
18 x 8:50 x 8 - 4 ply	22 PSI
4:80 x 8 - 4 ply	42 PSI

BOLT TORQUE

- 1.** Improperly tightened bolts will result in damage, breakage, expense, and lost time.
- 2.** Always replace bolts with the specified grade and type.
- 3.** Torque all fasteners to the proper value during assembly, then check after every two (2) hours of operation until they remain tight.
- 4.** Use the following torque chart as a guide to insure proper tightening of the fasteners.
- 5.** Make a daily inspection of the implement checking for loose bolts as well as leaking hoses.

BOLT Ø - TPI	 GRADE 2	 GRADE 5	 A - 325	 GRADE 8
3/8 - 16	25	35		50
7/16 - 14	35	55		80
1/2 - 13	55	85		125
9/16 - 12	75	125		175
5/8 - 11	105	170		235
3/4 - 10	185	305		425
7/8 - 9	170	445		690
1 - 8	260	670		1030
1-1/8 - 7	365	900		1460
1-1/4 - 7	515	1275		2060
1-3/8 - 6	675	1675		2700
1-1/2 - 6	900	2150		3500

TORQUE VALUES ARE IN FT./LBS. AND ARE BASED ON PLATED OR GREASE COATED HARDWARE. INCREASE VALUES 5 - 10% FOR FINE THREADS. USE 65% OF THE LISTED VALUE FOR JAM NUTS.

7200-30ft Operating Procedures

As you familiarize yourself with the 7200 NH3 applicator please take the time to read through this section completely.

All 7200 applicators (hyd. hose hookup)

The main toolbar lift hoses are plugged into the number 1-SCV valve.

The wing fold/marker seq. hoses or 3-way elect./hyd. valve into number 2-SCV valve.

The hyd. transport hitch is plugged into the number 3-SCV valve

If you do not have 3-SCV valves or you have a hyd. NH3 shutoff valve you will need a 3 way elect./hyd. multiplier valve to accommodate all the hyd. functions

If your 7200 has a 3 way elect./hyd. valve it will be wired as follows.

The first switch on the cab console will control the hyd. transport hitch.

The second switch will control the fold/seq. valve.

The third switch is left open for a hyd NH3 shutoff valve or other hyd. requirement.

Danger:

Under no circumstances should you ever plumb a hydraulic NH3 shutoff valve into the lift system of an anhydrous toolbar. This holds especially true for the 7200 because of the way it folds into transport, when the wing wheels are pulled up in the folded position it would activate the NH3 valve allowing anhydrous to flow out of the system.

Folding the 30ft-7200 for transport

- 1: Using the main lift lever, lift the 7200 to a completely raised position.
- 2: Place the yellow handle on the fold/seq. selector valve to the vertical position.
- 3: Lower the hyd. transport hitch until cyld. is completely collapsed
- 4: Fold the wings of the 7200 until they are over the wing cradles.
- 5: Lift the hyd. transport hitch to a fully raised position.
- 6: Reverse the main lift lever and pull up the wing wheels.
- 7: Place the transport lock in the hyd. transport hitch cyld.

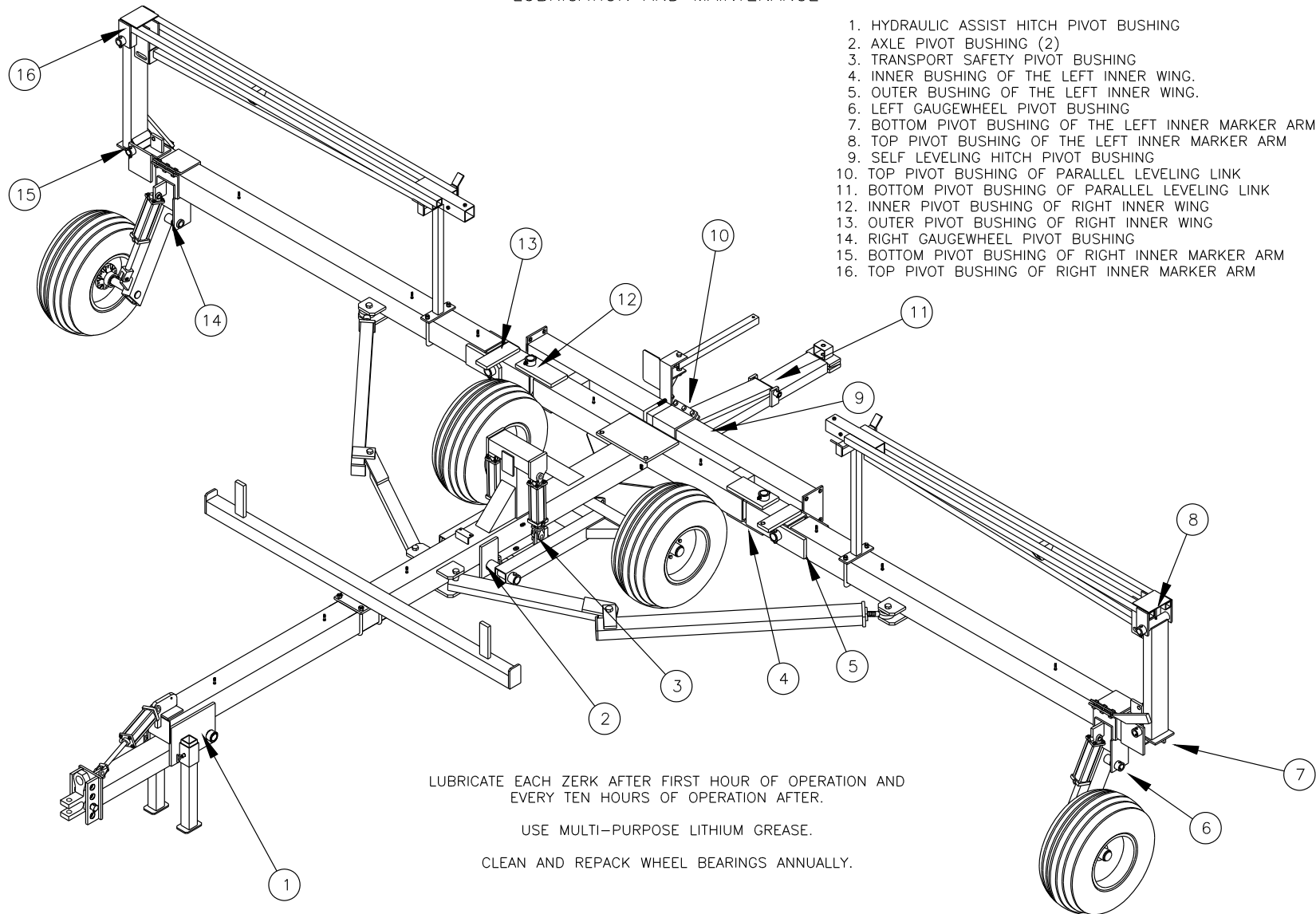
The 7200 is now ready for road transport.

To put the 7200 into operating position, simply reverse steps 1 through 7 above.

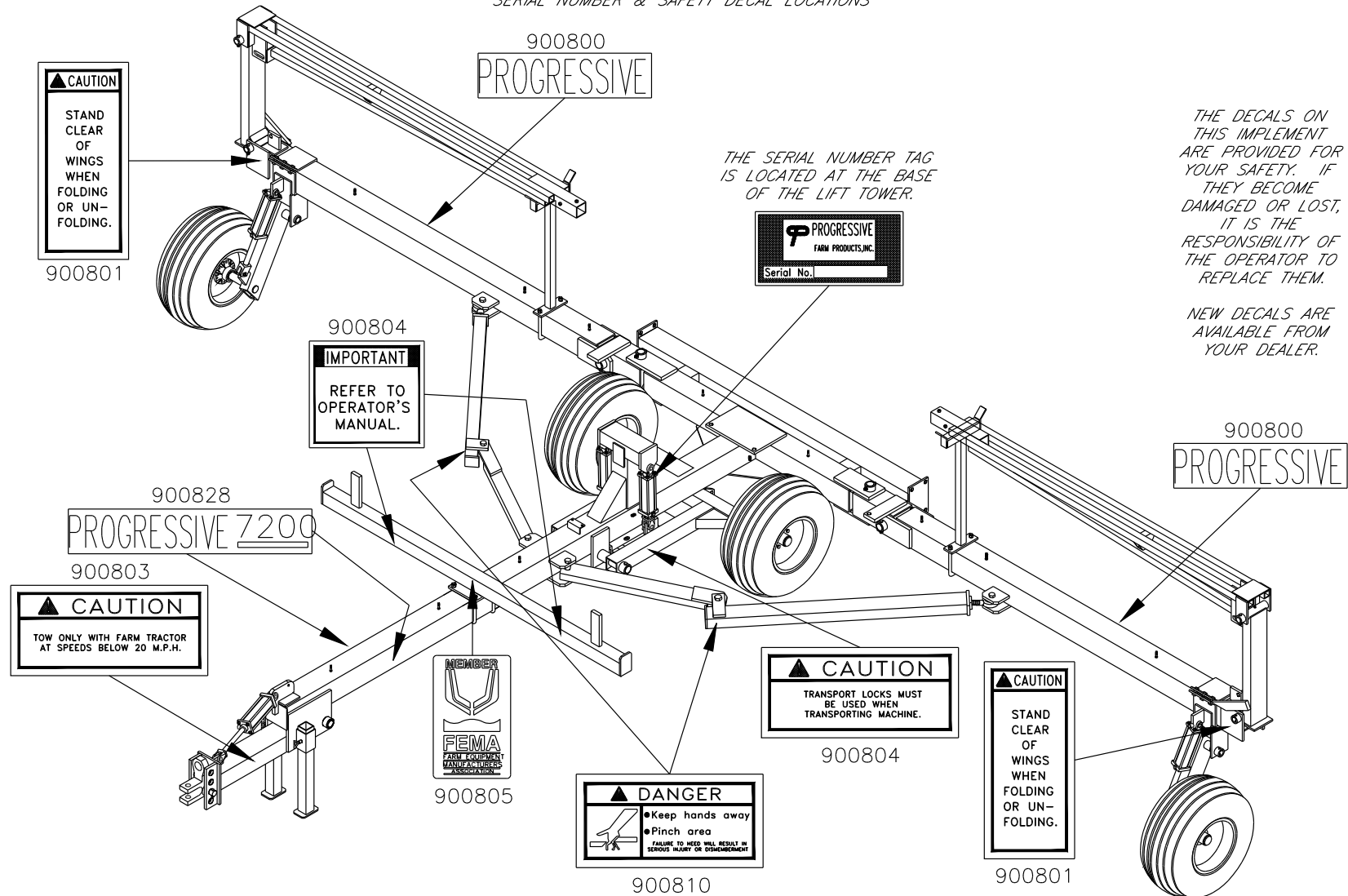
Daily Startup procedures for the 7200 NH3 applicator.

- #1 Greasing the 7200 toolbar is the single most important thing you can do to** guarantee years of trouble free operation. Dust works its way into the pivot points and hinge pins and will seize them up . The only way to keep this from happening is to keep these areas well greased, the grease will keep the dust forced out and eliminate many future problems.
- #2** Make sure all the hyd. hoses are secured to eliminate the possibility of damage during operation and turning. Maintain 32lbs of air pressure in the 12.5l x15 tires.
- #3** The 7200 toolbar was designed to run at a optimum depth between 5 and 8 inches, there are 4 stroke control kits provided with this unit to control depth on the four main lift cylinders. Please note that although this machine will operate much deeper than 8 inches, it was never intended to be a deep tillage unit.
- #4** The hyd. transport hitch needs to be in the lowered position when in operation, this will keep the hitch clevis in a straight position and reduce the clevis wear. This will also make the toolbar run slightly nose down. It is ok to use the hyd. hitch to fine tune the knife depth, but should never be more than 1/3 extended while in field operation.
- #5** Set the hyd. flow rate on your SCV. outlets to run the lift, fold and marker sequencing at a smooth rate. Excessive speed can cause damage especially to the row markers.

LUBRICATION AND MAINTENANCE



SERIAL NUMBER & SAFETY DECAL LOCATIONS

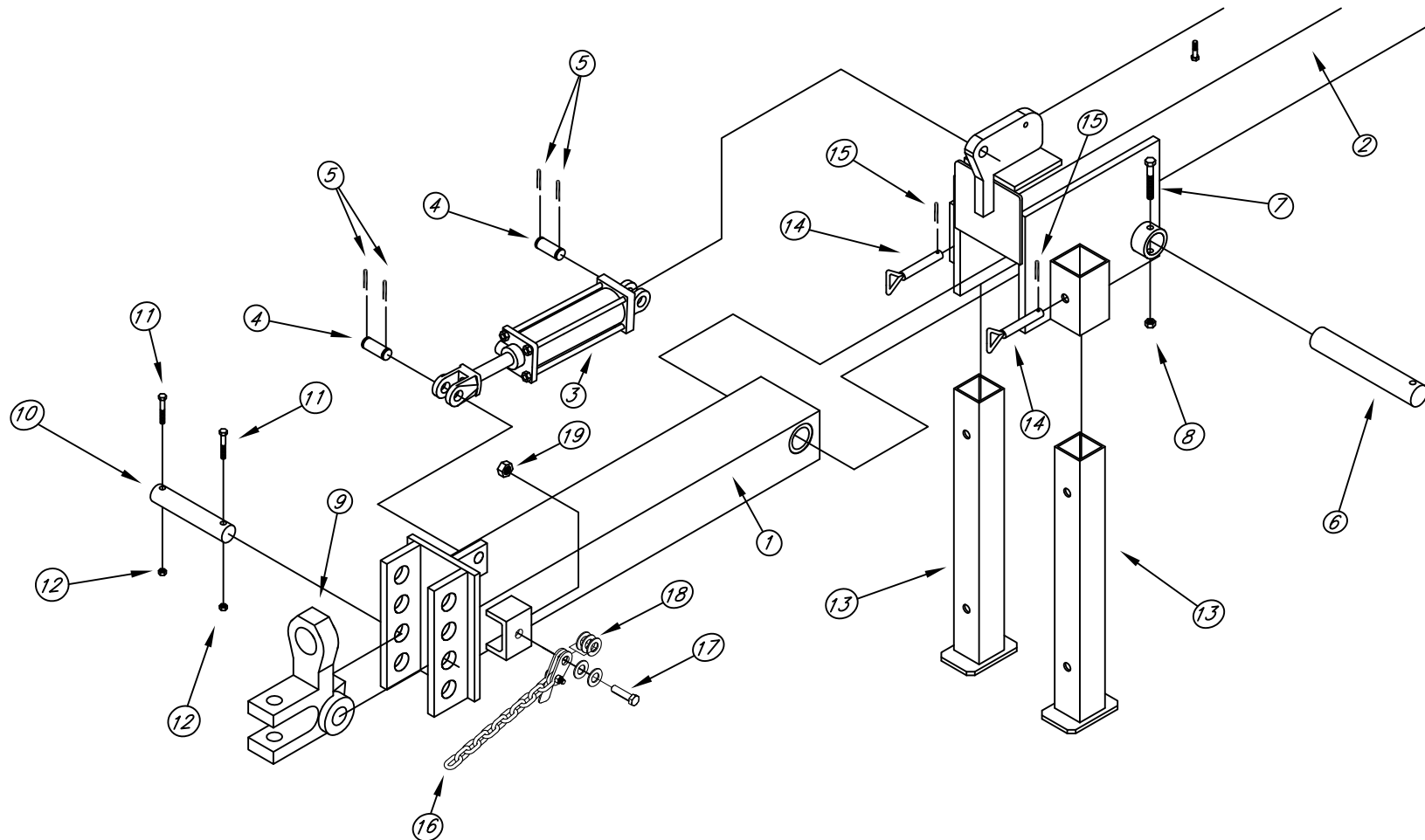


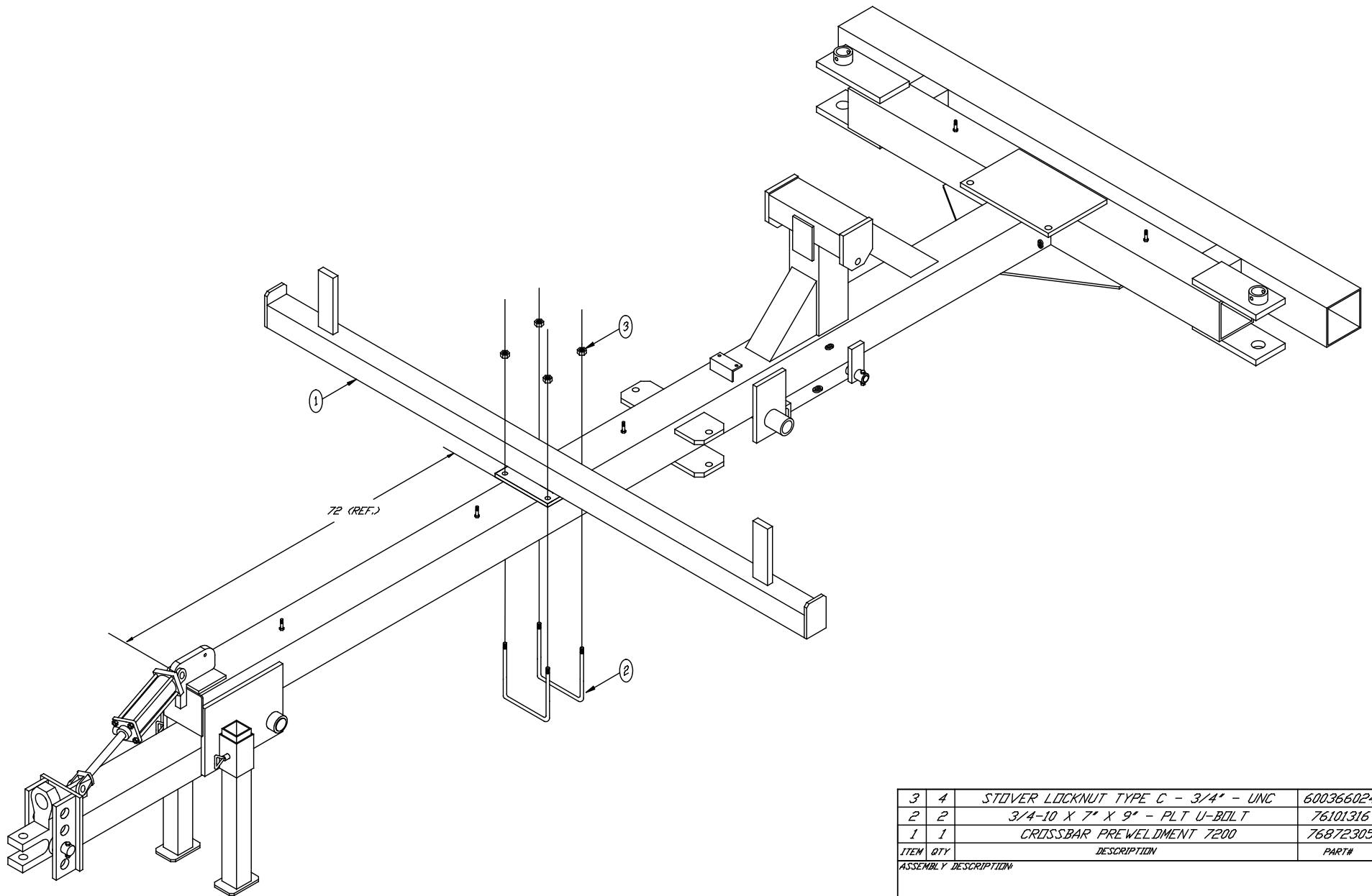
HYDRAULIC ASSIST HITCH ASSEMBLY

REF. #	QTY.	PART #	DESCRIPTION
1	1	801360	HYDRAULIC ASSIST HITCH
2	1	768017951	HITCH WELDMENT
3	1	204002	3 X 8" HYDRAULIC CYLINDER
4	2	602112	Ø1.00 X 3" CYLINDER PIN
5	4	101247	7/32 X 2" COTTER PIN
6	1	602180	Ø2.00 X 12" HINGE PIN
7	1	101152	1/2-13 X 3-1/2" HEX BOLT
8	1	101457	1/2-13 TOPLOCK NUT
9	1	450016	COMBINATION CLEVIS

REF. #	QTY.	PART #	DESCRIPTION
10	1	602178	Ø1.625 X 8-1/2" CLEVIS PIN
11	2	101128	3/8-16 X 2-1/2" HEX BOLT
12	2	101455	3/8-16 TOPLOCK NUT
13	2	801665	3 X 3" SQ. JACK STAND
14	2	801666	Ø.750 X 4-1/2" WELDED STAND PIN
15	2	101250	1/8 X 2-1/2" HAIR PIN
16	1	600461011	3/8 GR. 70 SAFETY CHAIN
17	1	600356002	BOLT 1" X 3" GR. 5
18	5	600381018	FLAT WASHER 1"
19	1	600366032	LOCK NUT 1"

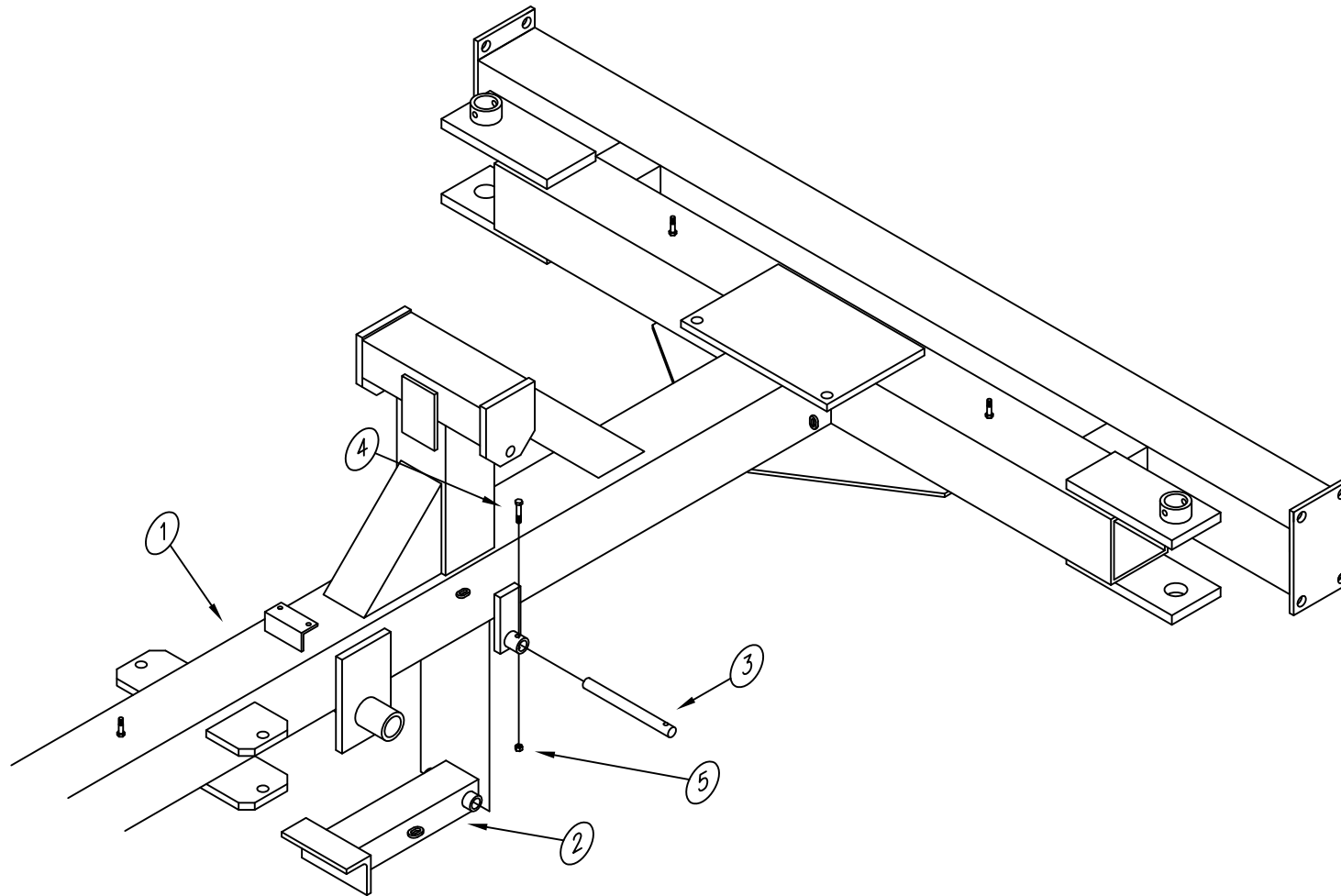
REVISED: 05/01/13





3	4	STOVER LOCKNUT TYPE C - 3/4" - UNC	600366024
2	2	3/4-10 X 7" X 9" - PLT U-BOLT	76101316
1	1	CROSSBAR PREWELDMENT 7200	76872305
ITEM	QTY	DESCRIPTION	PART#
ASSEMBLY DESCRIPTION:			
OUTER TONGUE ASSEMBLY			
REFERENCE#	SHEET#	DATE	REV
	1 OF 1	10/01/12	4/19/13 AU

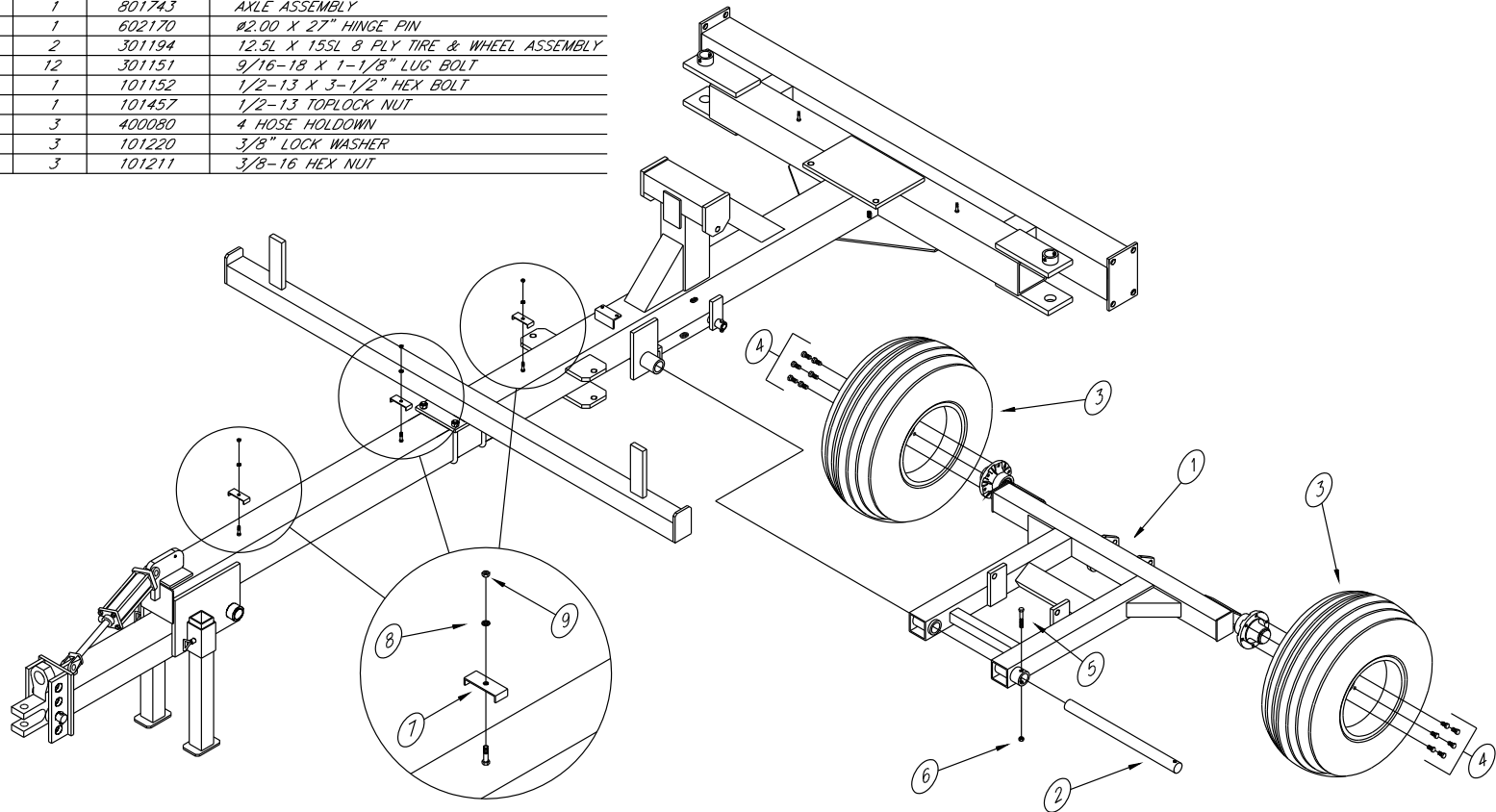
ATTACHING THE TRANSPORT SAFETY



REF. #	QTY.	PART #	DESCRIPTION
1	1	768017951	HITCH TUBE & MAINFRAME ASSEMBLY
2	1	801283	TRANSPORT SAFETY ASSEMBLY
3	1	602224	Ø 1 X 10-1/2" PIN
4	1	101127	3/8-16 X 2" HEX BOLT
5	1	101455	3/8-16 TOPLOCK NUT

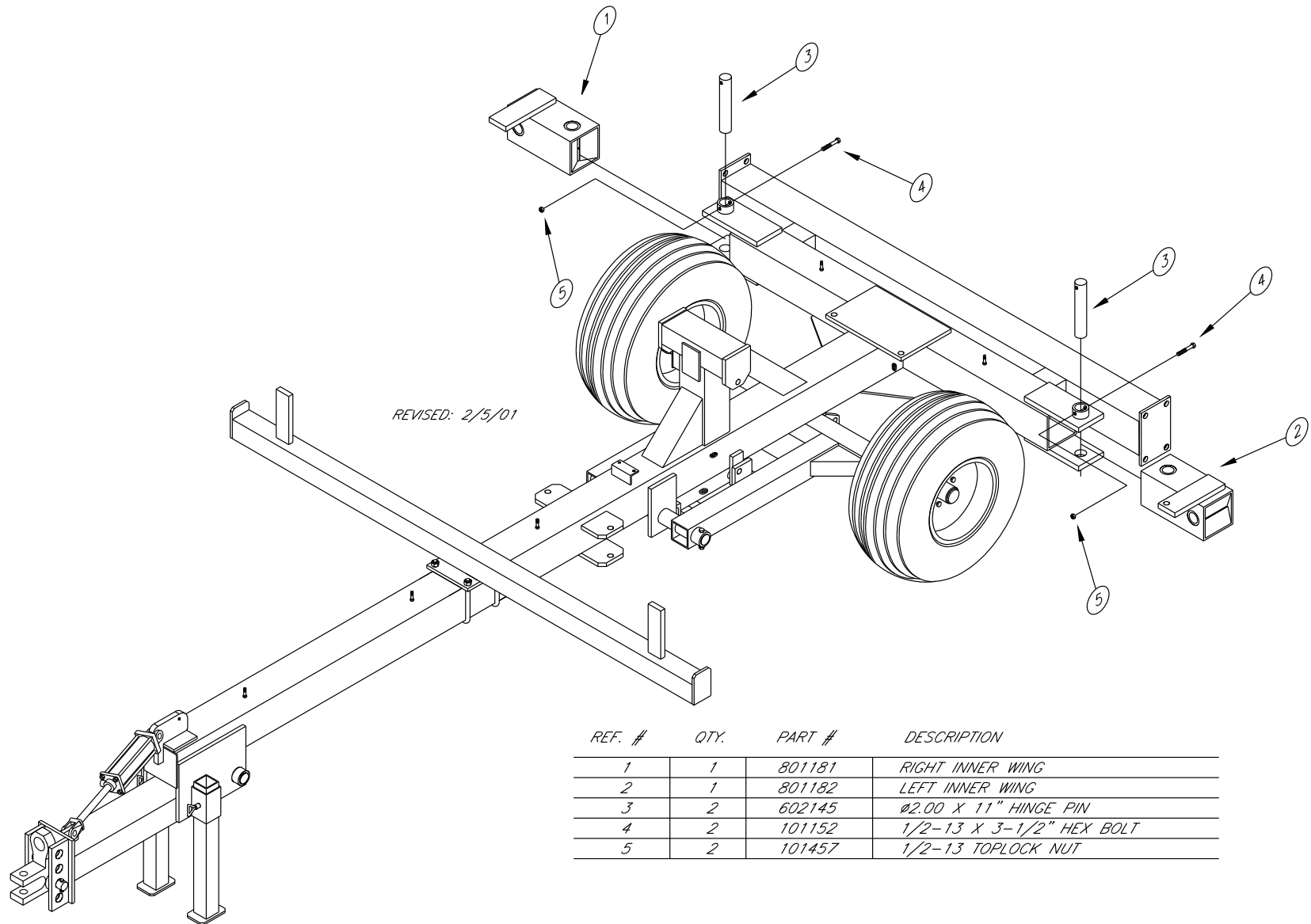
AXLE & WHEEL ASSEMBLY

REF. #	QTY.	PART #	DESCRIPTION
1	1	801743	AXLE ASSEMBLY
2	1	602170	Ø2.00 X 27" HINGE PIN
3	2	301194	12.5L X 15SL 8 PLY TIRE & WHEEL ASSEMBLY
4	12	301151	9/16-18 X 1-1/8" LUG BOLT
5	1	101152	1/2-13 X 3-1/2" HEX BOLT
6	1	101457	1/2-13 TOPLOCK NUT
7	3	400080	4 HOSE HOLDOWN
8	3	101220	3/8" LOCK WASHER
9	3	101211	3/8-16 HEX NUT



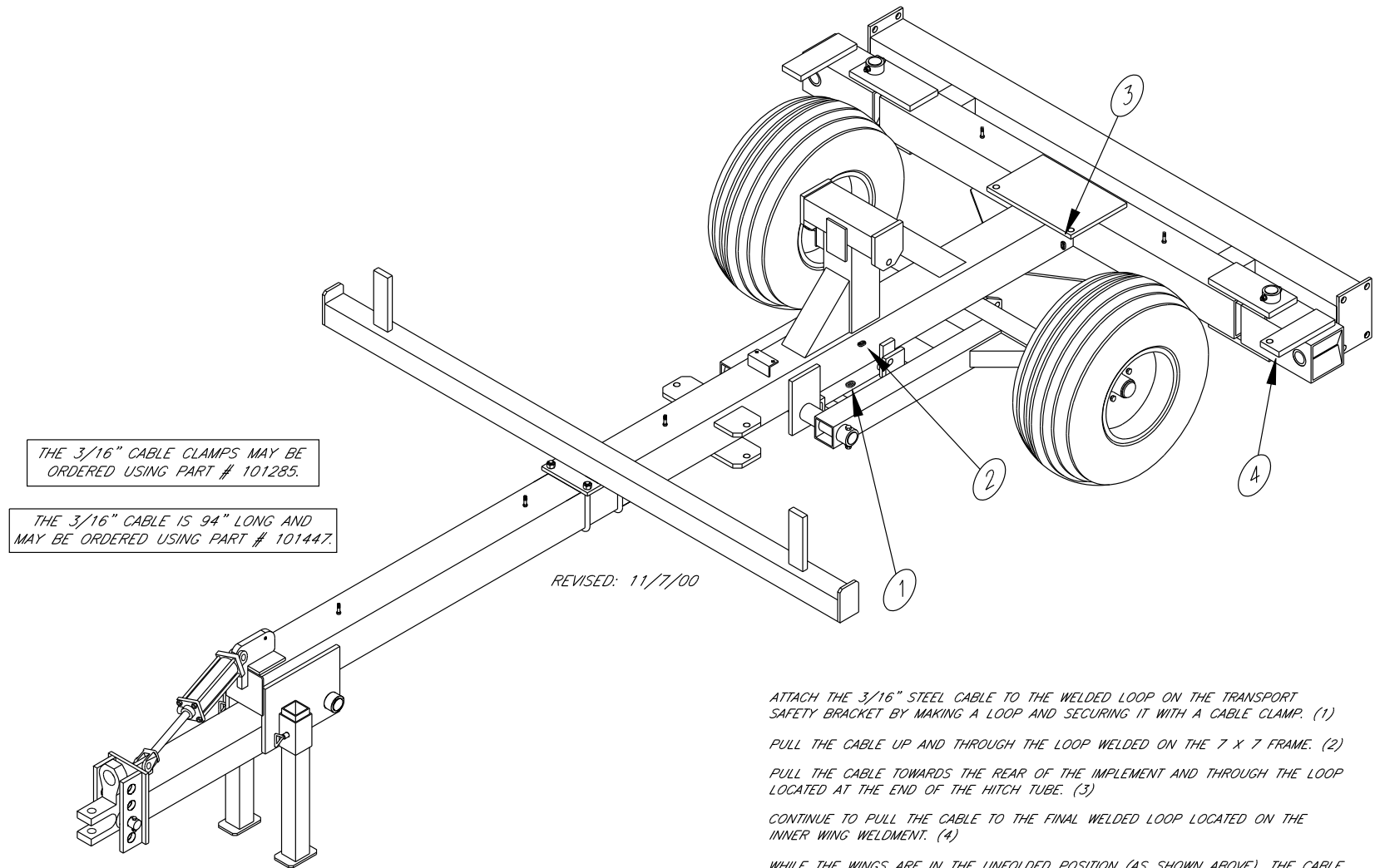
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INNER WING ASSEMBLY



REF. #	QTY.	PART #	DESCRIPTION
1	1	801181	RIGHT INNER WING
2	1	801182	LEFT INNER WING
3	2	602145	Ø2.00 X 11" HINGE PIN
4	2	101152	1/2-13 X 3-1/2" HEX BOLT
5	2	101457	1/2-13 TOPLOCK NUT

TRANSPORT SAFETY CABLE INSTALLATION



ATTACH THE 3/16" STEEL CABLE TO THE WELDED LOOP ON THE TRANSPORT SAFETY BRACKET BY MAKING A LOOP AND SECURING IT WITH A CABLE CLAMP. (1)

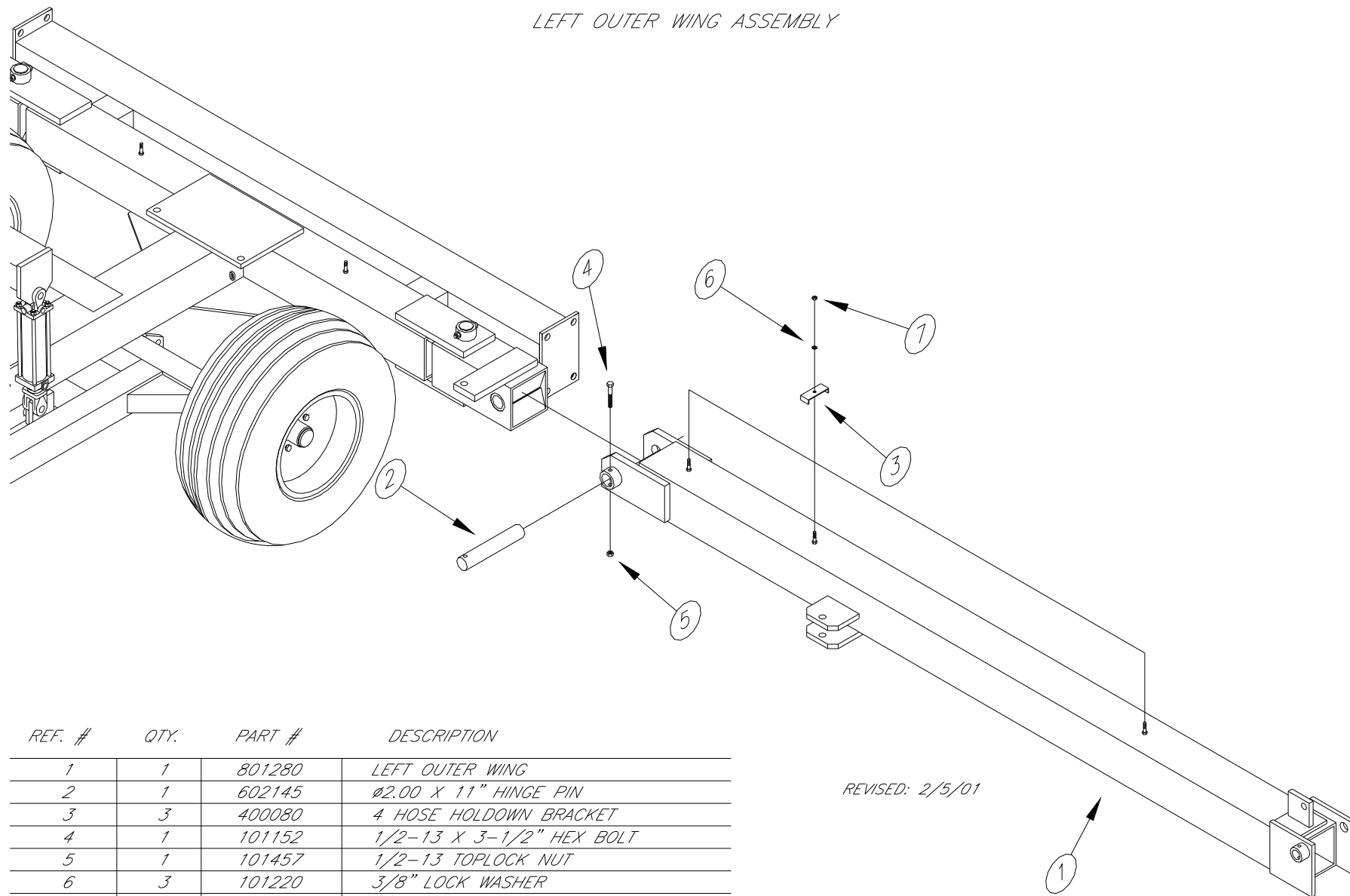
PULL THE CABLE UP AND THROUGH THE LOOP WELDED ON THE 7 X 7 FRAME. (2)

PULL THE CABLE TOWARDS THE REAR OF THE IMPLEMENT AND THROUGH THE LOOP LOCATED AT THE END OF THE HITCH TUBE. (3)

CONTINUE TO PULL THE CABLE TO THE FINAL WELDED LOOP LOCATED ON THE INNER WING WELDMENT. (4)

WHILE THE WINGS ARE IN THE UNFOLDED POSITION (AS SHOWN ABOVE), THE CABLE SHOULD BE PULLED SNUG, CAUSING THE TRANSPORT BRACKET TO CONTACT THE BOTTOM OF THE AXLE CROSSMEMBER. SECURE THE CABLE WITH A CLAMP.

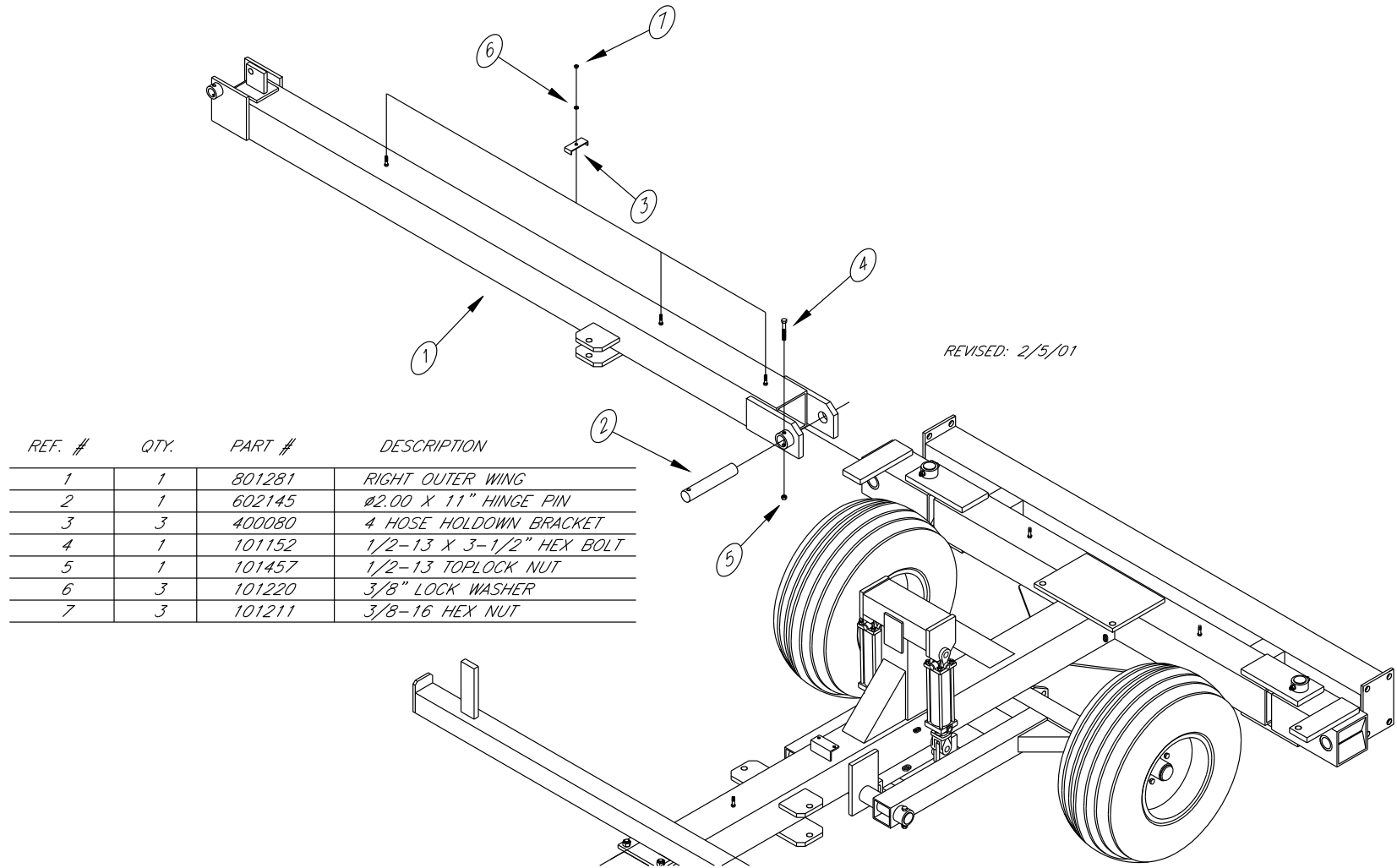
LEFT OUTER WING ASSEMBLY



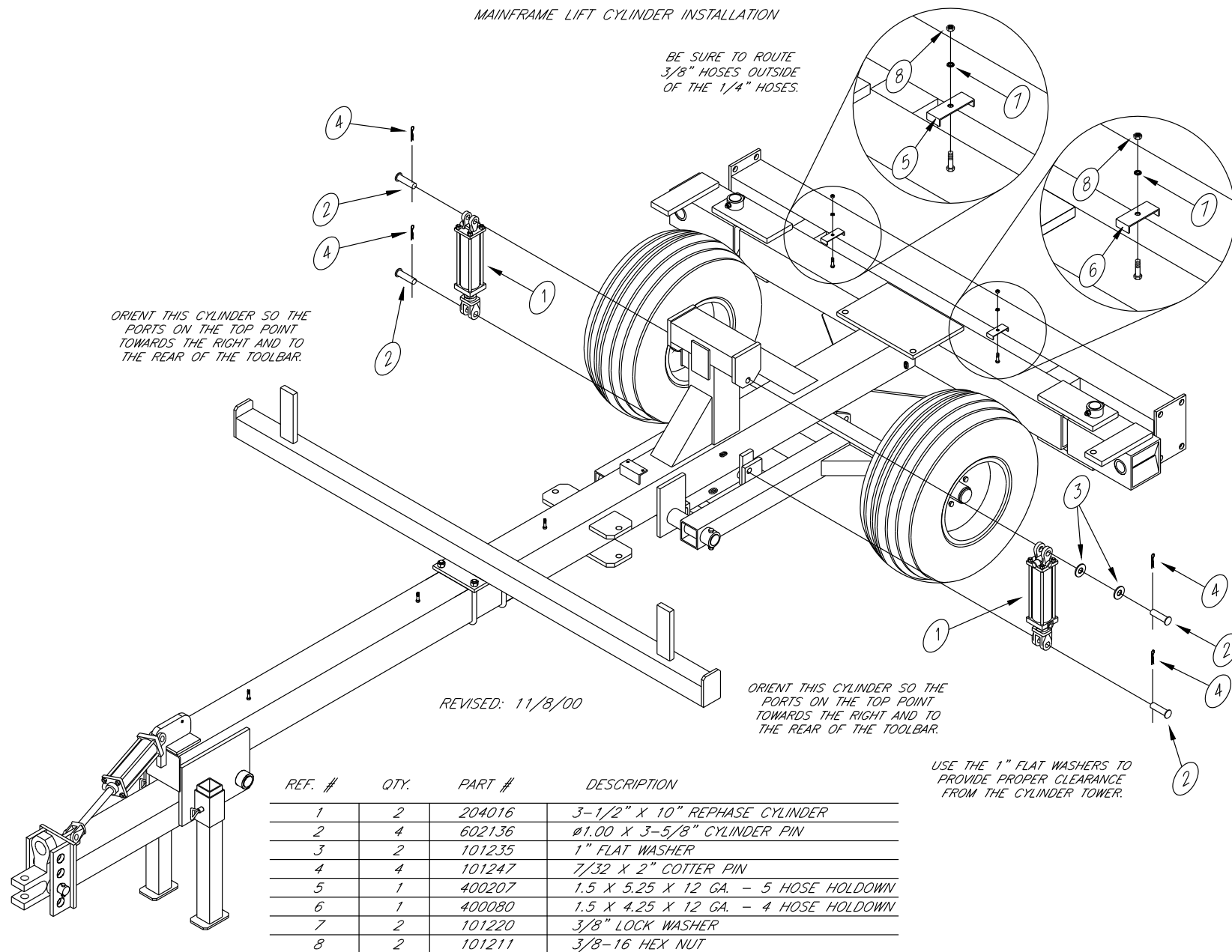
REF. #	QTY.	PART #	DESCRIPTION
1	1	801280	LEFT OUTER WING
2	1	602145	Ø2.00 X 11" HINGE PIN
3	3	400080	4 HOSE HOLDOWN BRACKET
4	1	101152	1/2-13 X 3-1/2" HEX BOLT
5	1	101457	1/2-13 TOPLOCK NUT
6	3	101220	3/8" LOCK WASHER
7	3	101211	3/8-16 HEX NUT

REVISED: 2/5/01

RIGHT OUTER WING ASSEMBLY



MAINFRAME LIFT CYLINDER INSTALLATION



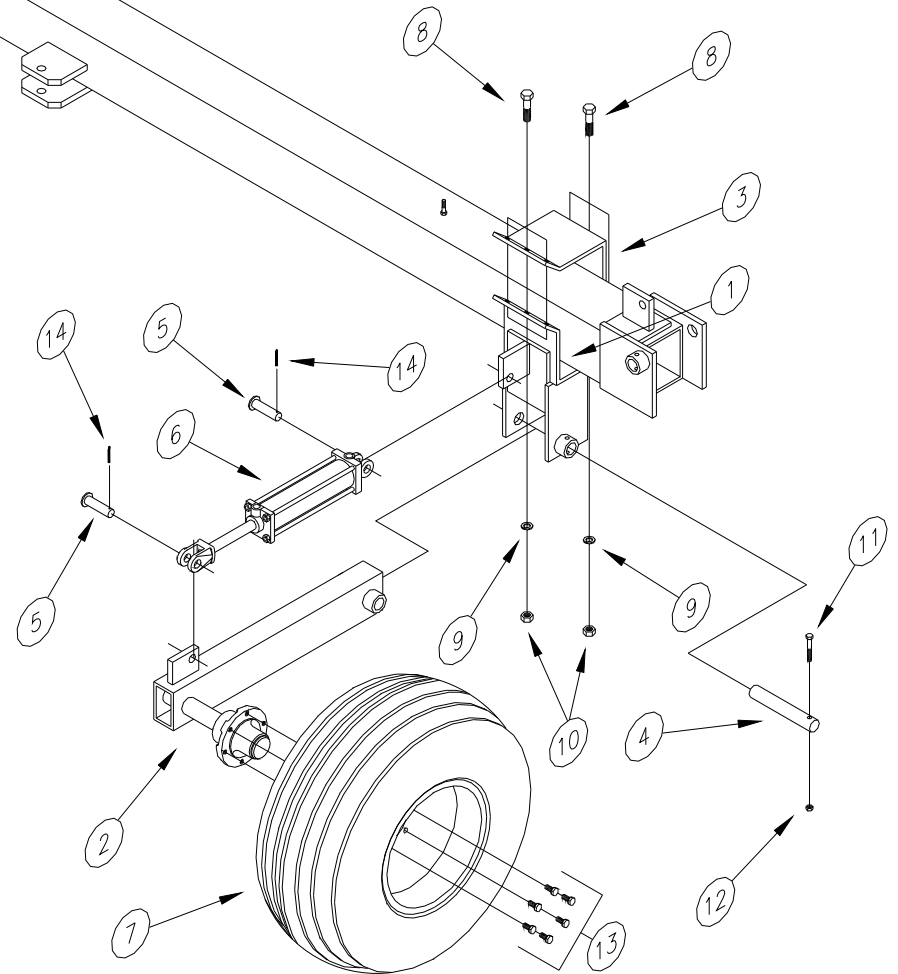
LEFT GAUGEWHEEL ASSEMBLY

ATTACH THE GAUGEWHEEL APPROXIMATELY 7" FROM THE END OF THE WING TUBE TO THE EDGE OF THE SADDLE CLAMP. BE SURE SADDLE CLAMP WILL NOT INTERFERE WITH COULTERS.

REF. #	QTY.	PART #	DESCRIPTION
1	1	801690	LEFT LOWER SADDLE CLAMP ASSEMBLY
2	1	801341	LEFT WHEEL ARM ASSEMBLY
3	1	400185	TOP SADDLE CLAMP
4	1	602213	Ø1.50 X 9-1/4" HINGE PIN
5	2	602136	Ø1.00 X 3-5/8" CYLINDER PIN
6	1	204015	3-1/4 X 10" REPHASE CYLINDER
7	1	301194	12.5L X 15SL 8 PLY TIRE & WHEEL ASSEMBLY
8	6	101173	3/4-10 X 3" HEX BOLT
9	6	101224	3/4" LOCK WASHER
10	6	101215	3/4-10 HEX NUT
11	1	101140	7/16-14 X 3" HEX BOLT
12	1	101456	7/16-14 TOPLOCK NUT
13	6	301151	9/16-18 X 1-1/8" LUG BOLT
14	2	101247	7/32 X 2" COTTER PIN

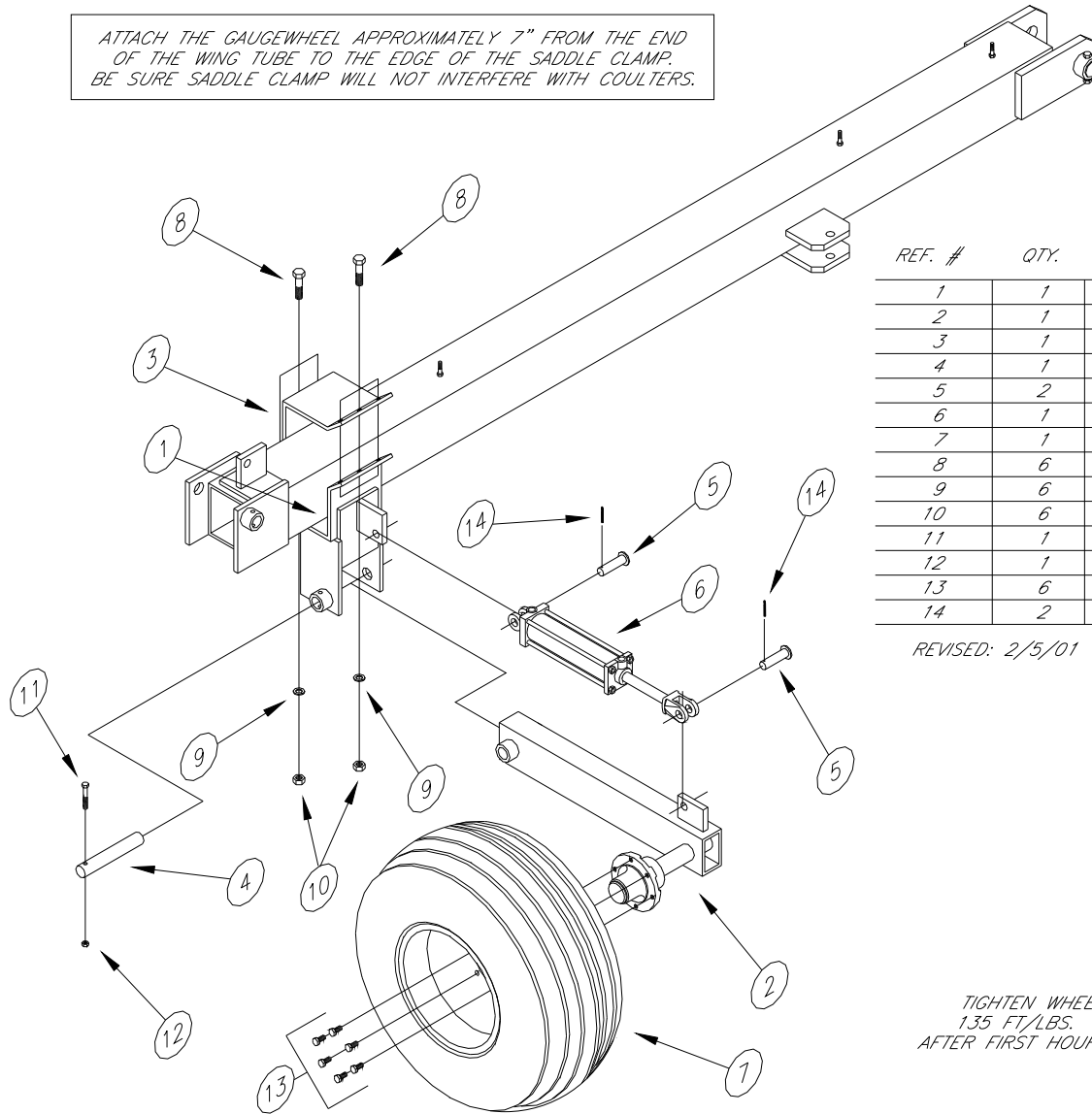
REVISED: 2/5/01

TIGHTEN WHEEL BOLTS TO 135 FT/LBS. RE-TORQUE AFTER FIRST HOUR OF OPERATION.



RIGHT GAUGEWHEEL ASSEMBLY

ATTACH THE GAUGEWHEEL APPROXIMATELY 7" FROM THE END OF THE WING TUBE TO THE EDGE OF THE SADDLE CLAMP. BE SURE SADDLE CLAMP WILL NOT INTERFERE WITH COULTERS.

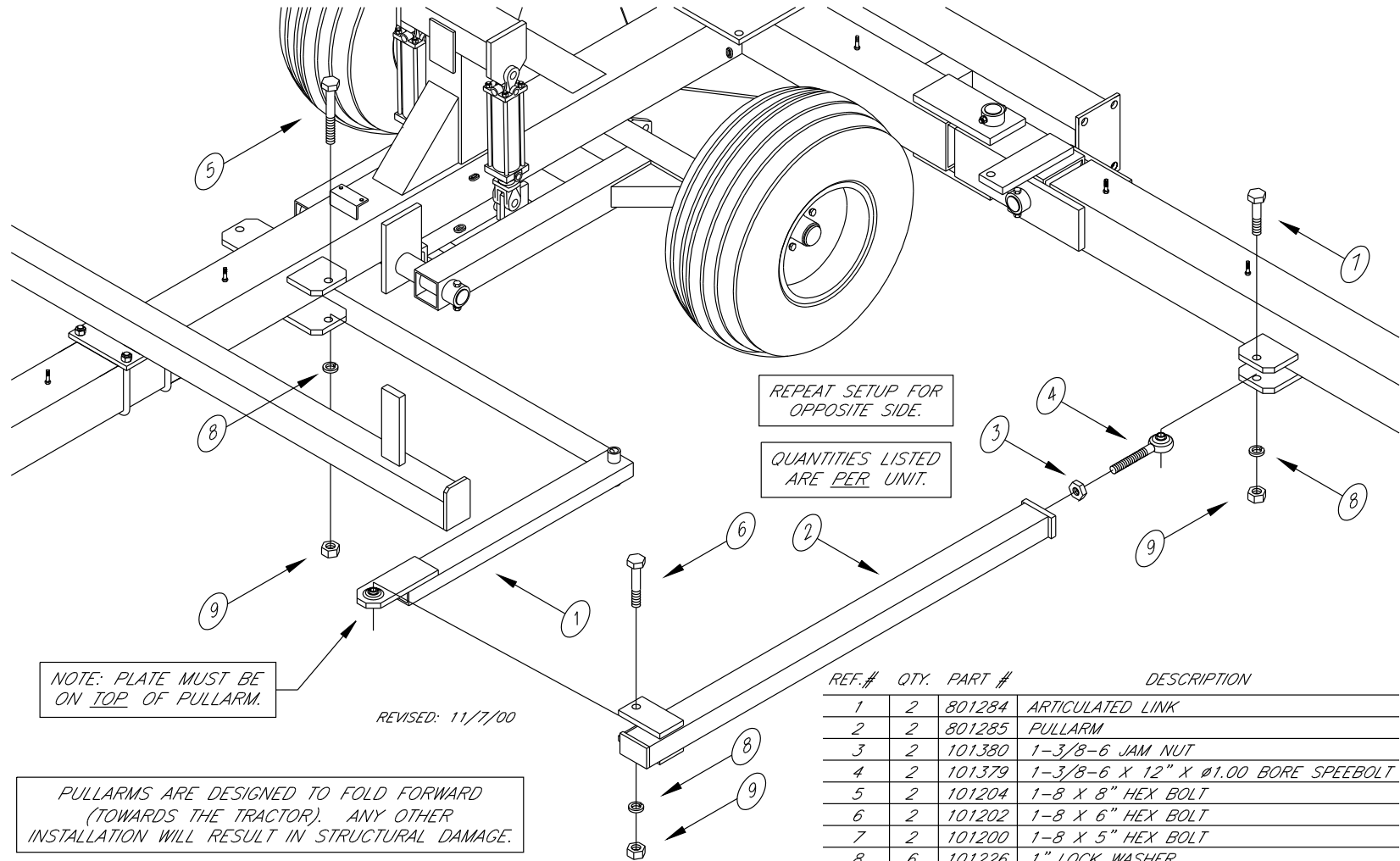


REF. #	QTY.	PART #	DESCRIPTION
1	1	801689	RIGHT LOWER SADDLE CLAMP ASSEMBLY
2	1	801342	RIGHT WHEEL ARM ASSEMBLY
3	1	400185	TOP SADDLE CLAMP
4	1	602213	Ø1.50 X 9-1/4" HINGE PIN
5	2	602136	Ø1.00 X 3-5/8" CYLINDER PIN
6	1	204015	3-1/4 X 10" REPHASE CYLINDER
7	1	301194	12.5L X 15SL 8 PLY TIRE & WHEEL ASSEMBLY
8	6	101173	3/4-10 X 3" HEX BOLT
9	6	101224	3/4" LOCK WASHER
10	6	101215	3/4-10 HEX NUT
11	1	101140	7/16-14 X 3" HEX BOLT
12	1	101456	7/16-14 TOPLOCK NUT
13	6	301151	9/16-18 X 1-1/8" LUG BOLT
14	2	101247	7/32 X 2" COTTER PIN

REVISED: 2/5/01

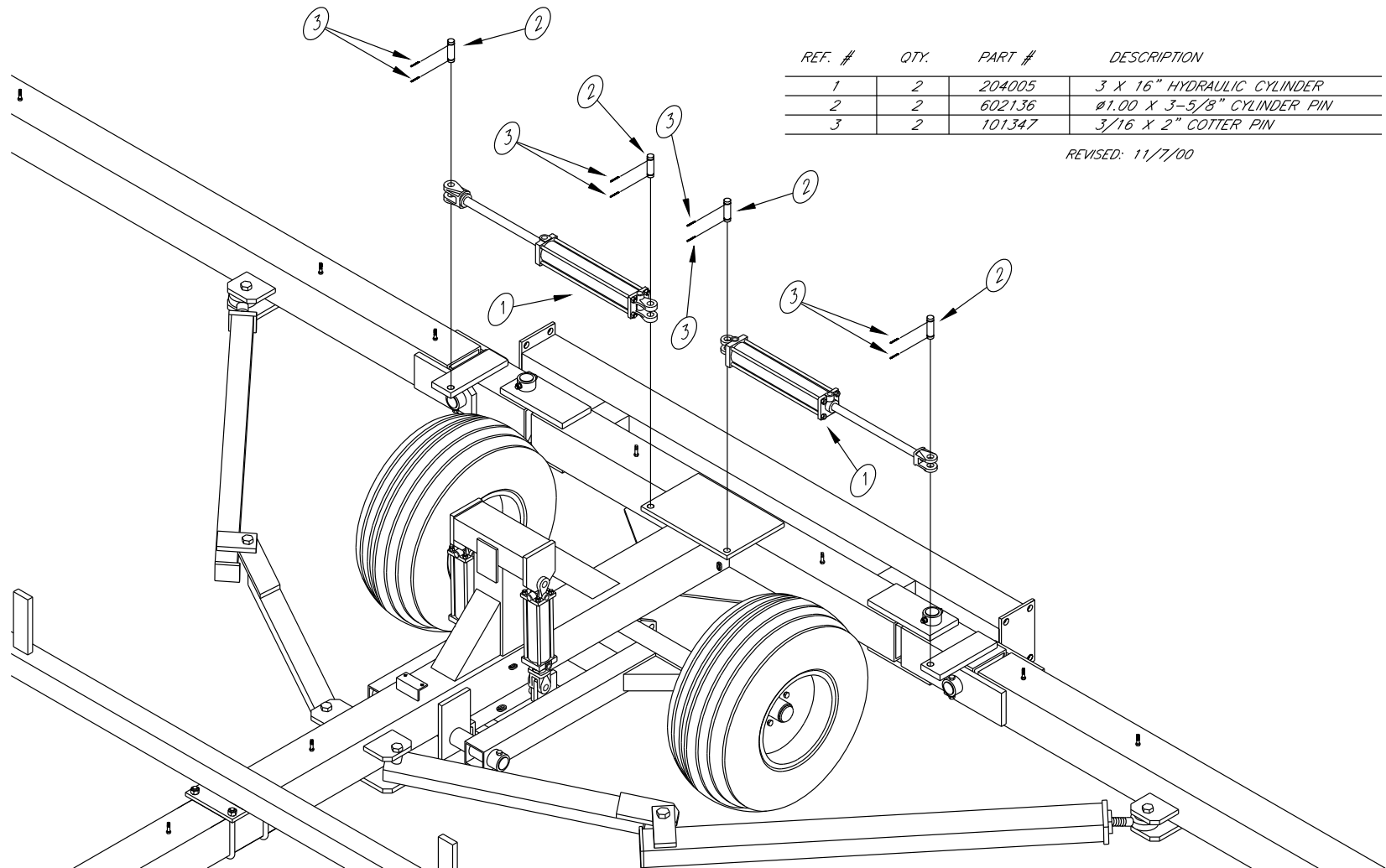
TIGHTEN WHEEL BOLTS TO 135 FT/LBS. RE-TORQUE AFTER FIRST HOUR OF OPERATION.

PULLARM ASSEMBLY

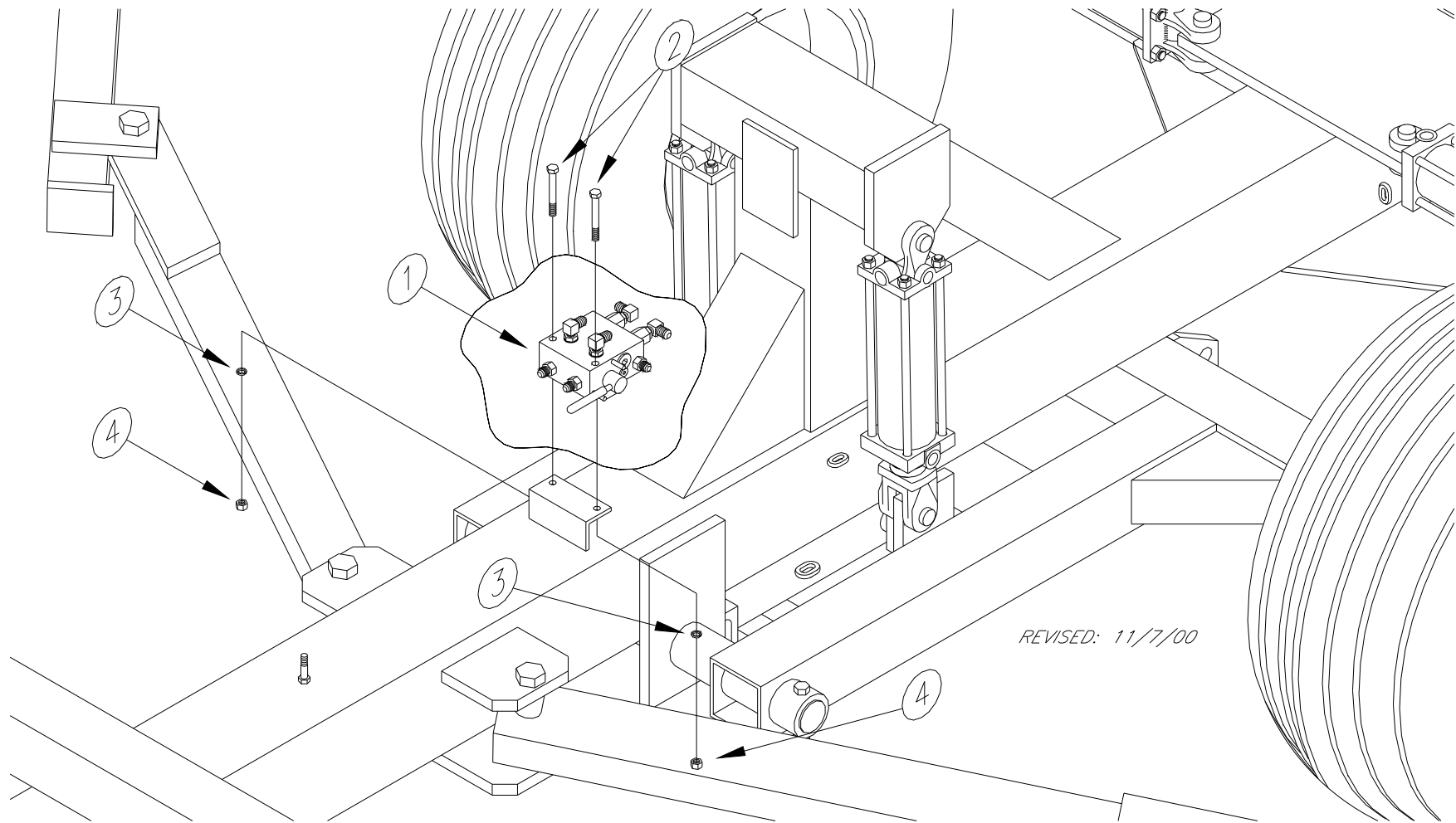


REF.#	QTY.	PART #	DESCRIPTION
1	2	801284	ARTICULATED LINK
2	2	801285	PULLARM
3	2	101380	1-3/8-6 JAM NUT
4	2	101379	1-3/8-6 X 12" X Ø1.00 BORE SPEEDBOLT
5	2	101204	1-8 X 8" HEX BOLT
6	2	101202	1-8 X 6" HEX BOLT
7	2	101200	1-8 X 5" HEX BOLT
8	6	101226	1" LOCK WASHER
9	6	101217	1-8 HEX NUT

ATTACHING THE WING FOLD CYLINDERS



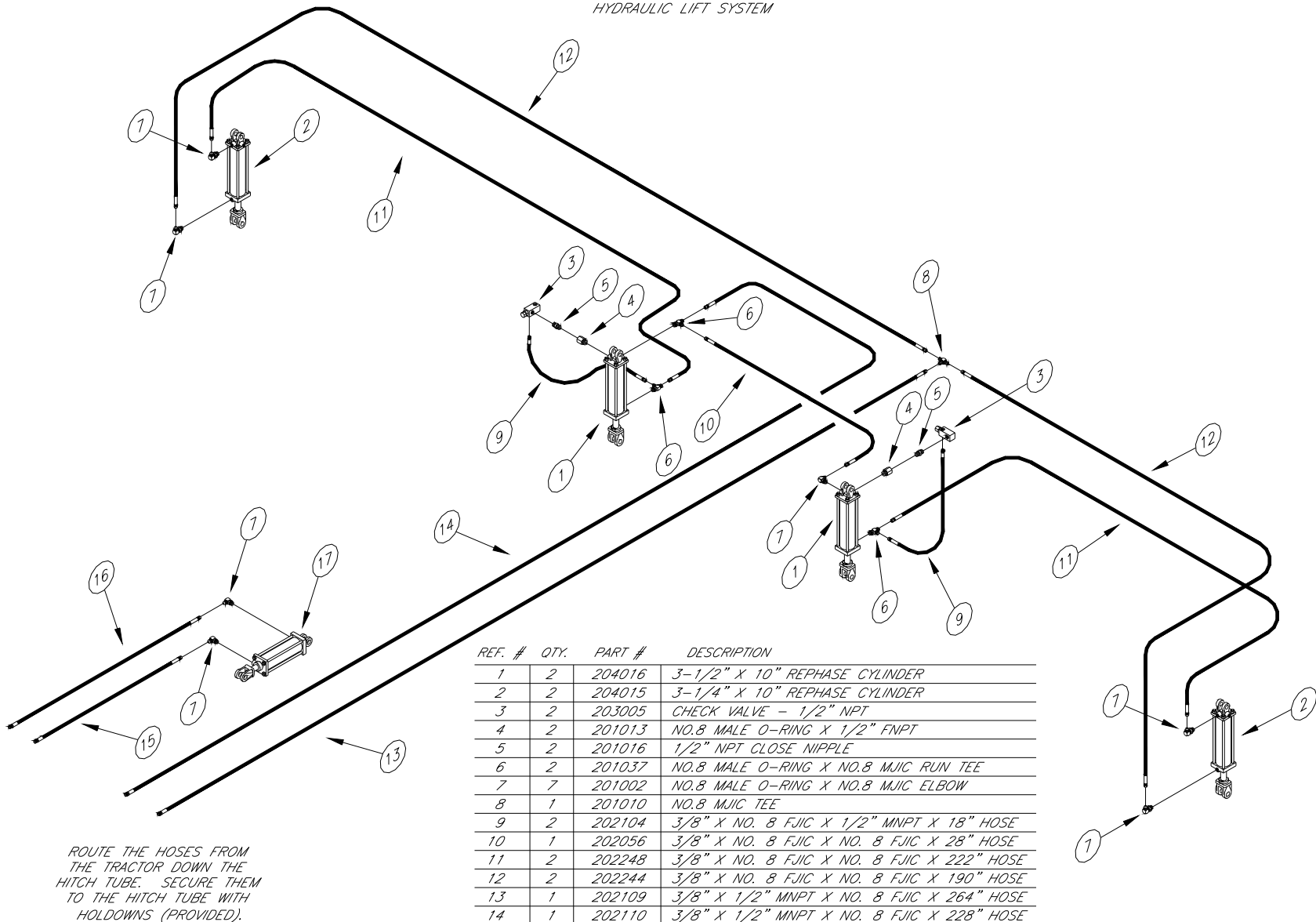
ATTACHING THE COMBINATION VALVE



REVISED: 11/7/00

REF. #	QTY.	PART #	DESCRIPTION
1	1	203008	COMBINATION - SEQUENCE & SELECTOR VALVE
2	2	101129	3/8-16 X 3" HEX BOLT
3	2	101220	3/8" LOCK WASHER
4	2	101211	3/8-16 HEX NUT

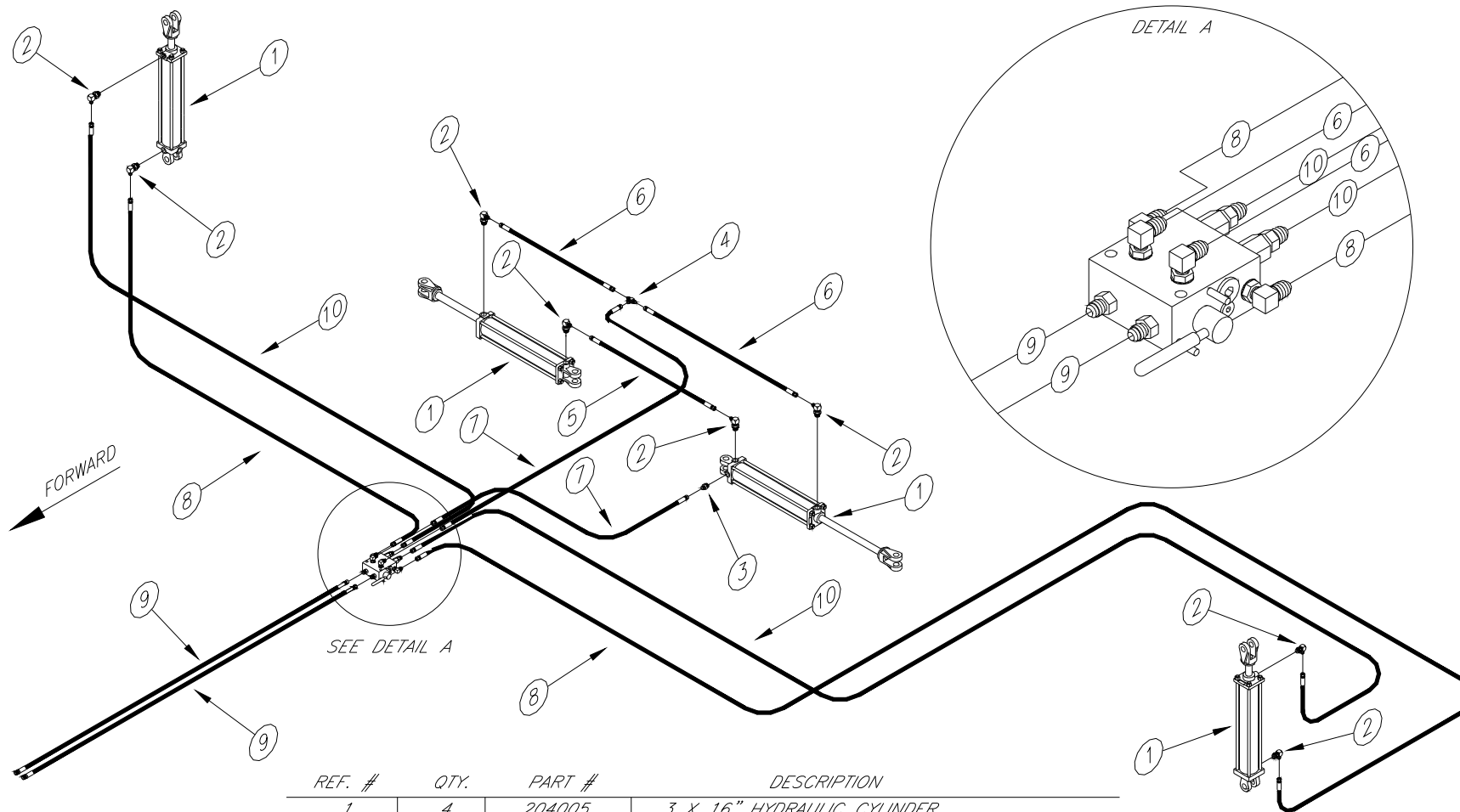
HYDRAULIC LIFT SYSTEM



REF. #	QTY.	PART #	DESCRIPTION
1	2	204016	3-1/2" X 10" REPHASE CYLINDER
2	2	204015	3-1/4" X 10" REPHASE CYLINDER
3	2	203005	CHECK VALVE - 1/2" NPT
4	2	201013	NO.8 MALE O-RING X 1/2" FNPT
5	2	201016	1/2" NPT CLOSE NIPPLE
6	2	201037	NO.8 MALE O-RING X NO.8 MJIC RUN TEE
7	7	201002	NO.8 MALE O-RING X NO.8 MJIC ELBOW
8	1	201010	NO.8 MJIC TEE
9	2	202104	3/8" X NO. 8 FJIC X 1/2" MNPT X 18" HOSE
10	1	202056	3/8" X NO. 8 FJIC X NO. 8 FJIC X 28" HOSE
11	2	202248	3/8" X NO. 8 FJIC X NO. 8 FJIC X 222" HOSE
12	2	202244	3/8" X NO. 8 FJIC X NO. 8 FJIC X 190" HOSE
13	1	202109	3/8" X 1/2" MNPT X NO. 8 FJIC X 264" HOSE
14	1	202110	3/8" X 1/2" MNPT X NO. 8 FJIC X 228" HOSE
15	1	202194	3/8" X 1/2" MNPT X NO. 8 FJIC X 60" HOSE
16	1	202195	3/8" X 1/2" MNPT X NO. 8 FJIC X 72" HOSE
17	1	204002	3 X 8" HYDRAULIC CYLINDER

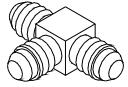
REVISED: 5/8/01

HYDRAULIC SCHEMATIC FOR WING FOLD/MARKER SYSTEM – 30 FT.

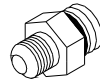


REF. #	QTY.	PART #	DESCRIPTION
1	4	204005	3 X 16" HYDRAULIC CYLINDER
2	8	201001	NO. 8 MALE O-RING X NO. 6 MJIC ELBOW
3	1	201003	NO. 8 MALE O-RING X NO. 6 MJIC STRAIGHT
4	1	201009	NO. 6 MJIC TEE
5	1	202107	1/4 X NO. 6 FJIC X NO. 6 FJIC X 21" HOSE
6	2	202117	1/4 X NO. 6 FJIC X NO. 6 FJIC X 30" HOSE
7	2	202116	1/4 X NO. 6 FJIC X NO. 6 FJIC X 62" HOSE
8	2	202115	1/4 X NO. 6 FJIC X NO. 6 FJIC X 250" HOSE
9	2	202113	1/4 X 3/8" MNPT X NO. 6 FJIC X 192" HOSE
10	2	202114	1/4 X NO. 6 FJIC X NO. 6 FJIC X 270" HOSE

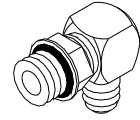
HYDRAULIC COMPONENTS



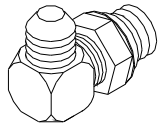
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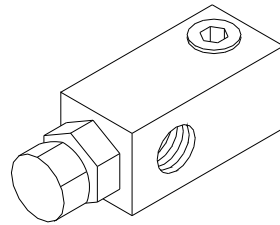
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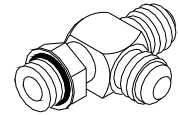
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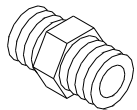
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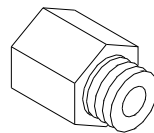
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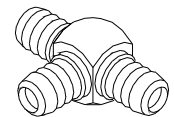
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201016



201013



201010

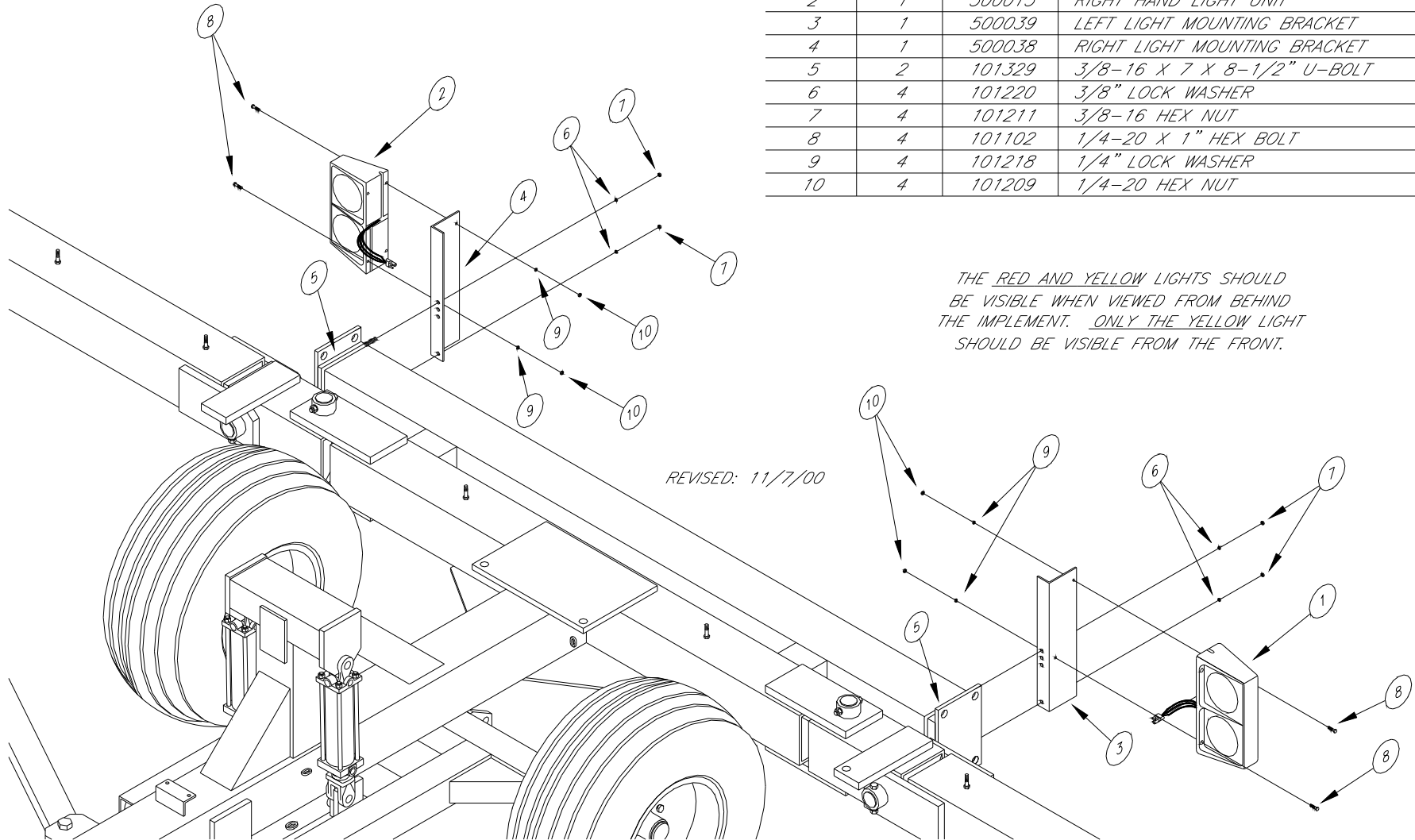
LIGHT ATTACHMENT

LIGHTS SHOULD BE MOUNTED AS FAR OUT ON THE MAINFRAME AS POSSIBLE.

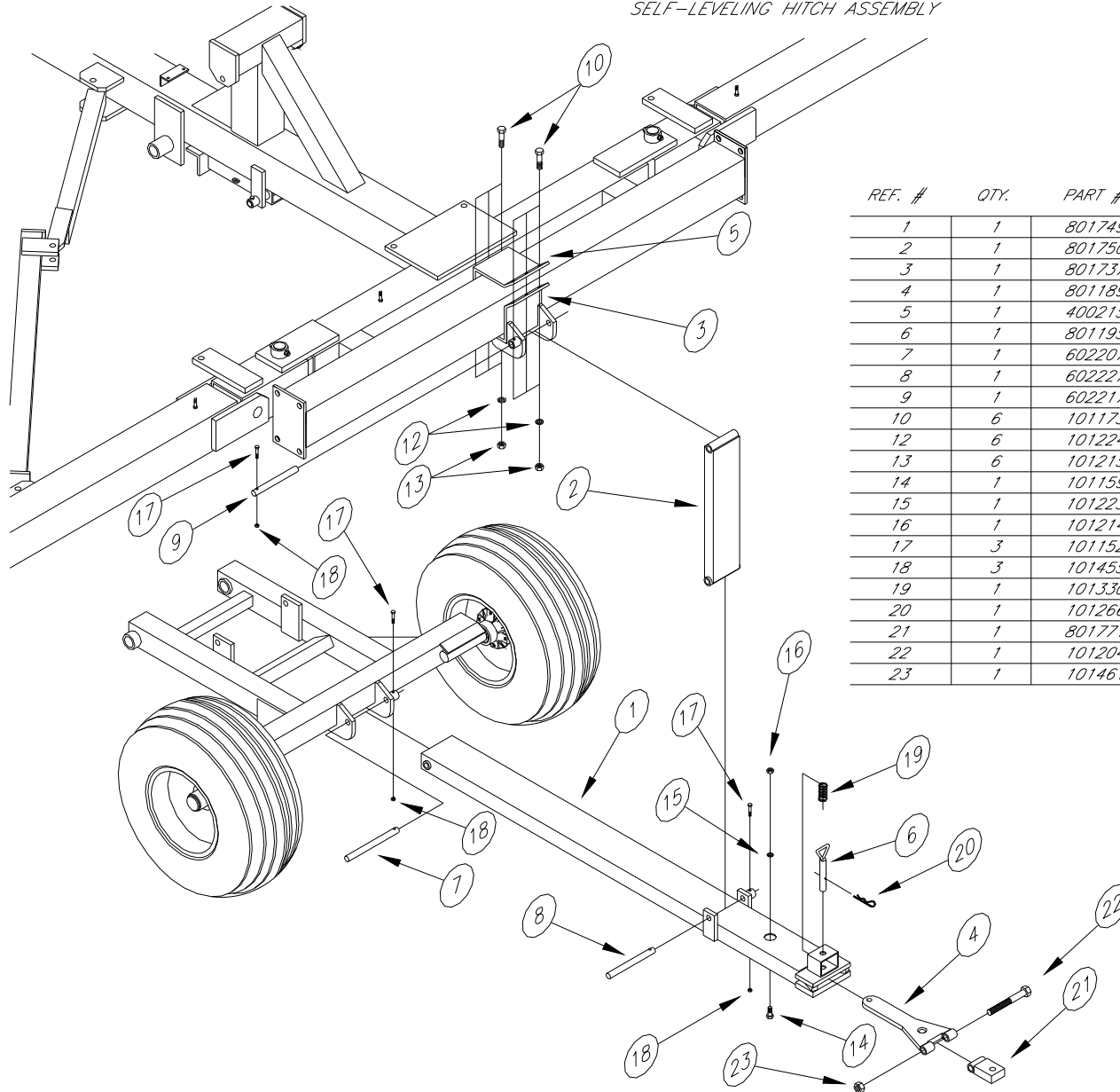
REF. #	QTY.	PART #	DESCRIPTION
1	1	500016	LEFT HAND LIGHT UNIT
2	1	500015	RIGHT HAND LIGHT UNIT
3	1	500039	LEFT LIGHT MOUNTING BRACKET
4	1	500038	RIGHT LIGHT MOUNTING BRACKET
5	2	101329	3/8-16 X 7 X 8-1/2" U-BOLT
6	4	101220	3/8" LOCK WASHER
7	4	101211	3/8-16 HEX NUT
8	4	101102	1/4-20 X 1" HEX BOLT
9	4	101218	1/4" LOCK WASHER
10	4	101209	1/4-20 HEX NUT

THE RED AND YELLOW LIGHTS SHOULD BE VISIBLE WHEN VIEWED FROM BEHIND THE IMPLEMENT. ONLY THE YELLOW LIGHT SHOULD BE VISIBLE FROM THE FRONT.

REVISED: 11/7/00



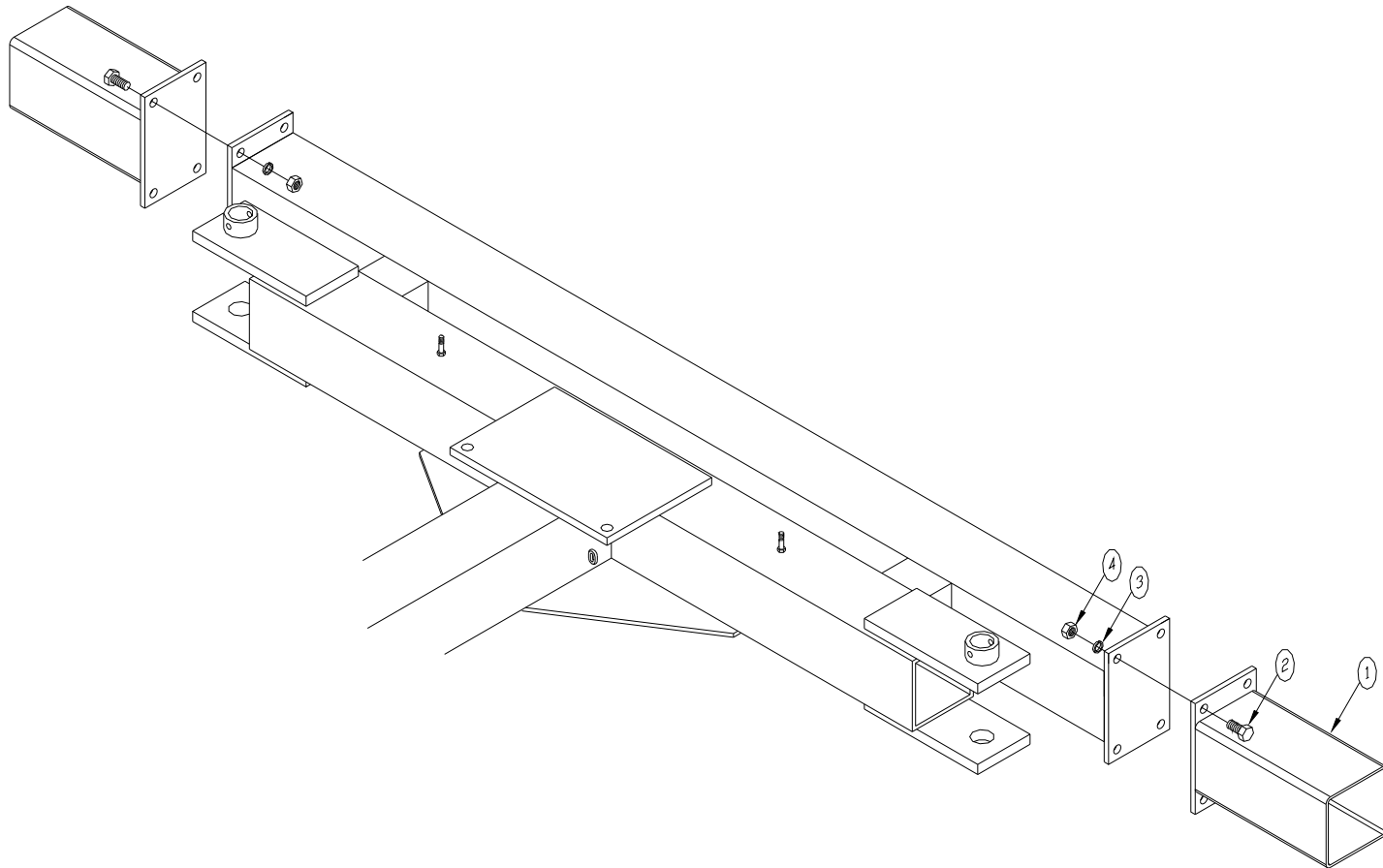
SELF-LEVELING HITCH ASSEMBLY



REF. #	QTY.	PART #	DESCRIPTION
1	1	801749	SELF-LEVELING HITCH
2	1	801750	PARALLEL LINK - 27-1/2" LONG
3	1	801737	LOWER SADDLE CLAMP ASSEMBLY
4	1	801189	DRAWBAR
5	1	400215	1/2 X 8 X 17" SADDLE CLAMP
6	1	801195	DRAWBAR PIN
7	1	602207	Ø1.00 X 11-1/2" HINGE PIN
8	1	602227	Ø1.00 X 10-1/4" HINGE PIN
9	1	602217	Ø1.00 X 9-3/4" HINGE PIN
10	6	101173	3/4-10 X 3" HEX BOLT
12	6	101224	3/4" LOCK WASHER
13	6	101215	3/4-10 HEX NUT
14	1	101159	5/8-11 X 1-1/2" HEX BOLT
15	1	101223	5/8" LOCK WASHER
16	1	101214	5/8-11 HEX NUT
17	3	101152	3/8-16 X 2" HEX BOLT
18	3	101455	3/8-16 TOPLOCK NUT
19	1	101330	COMPRESSION SPRING
20	1	101266	3/16" HAIRPIN
21	1	801771	DRAWBAR CLEVIS
22	1	101204	1-8 X 8" HEX BOLT
23	1	101461	1-8 TOPLOCK NUT

REVISED: 5/16/01

ATTACHING THE MAINFRAME EXTENSIONS

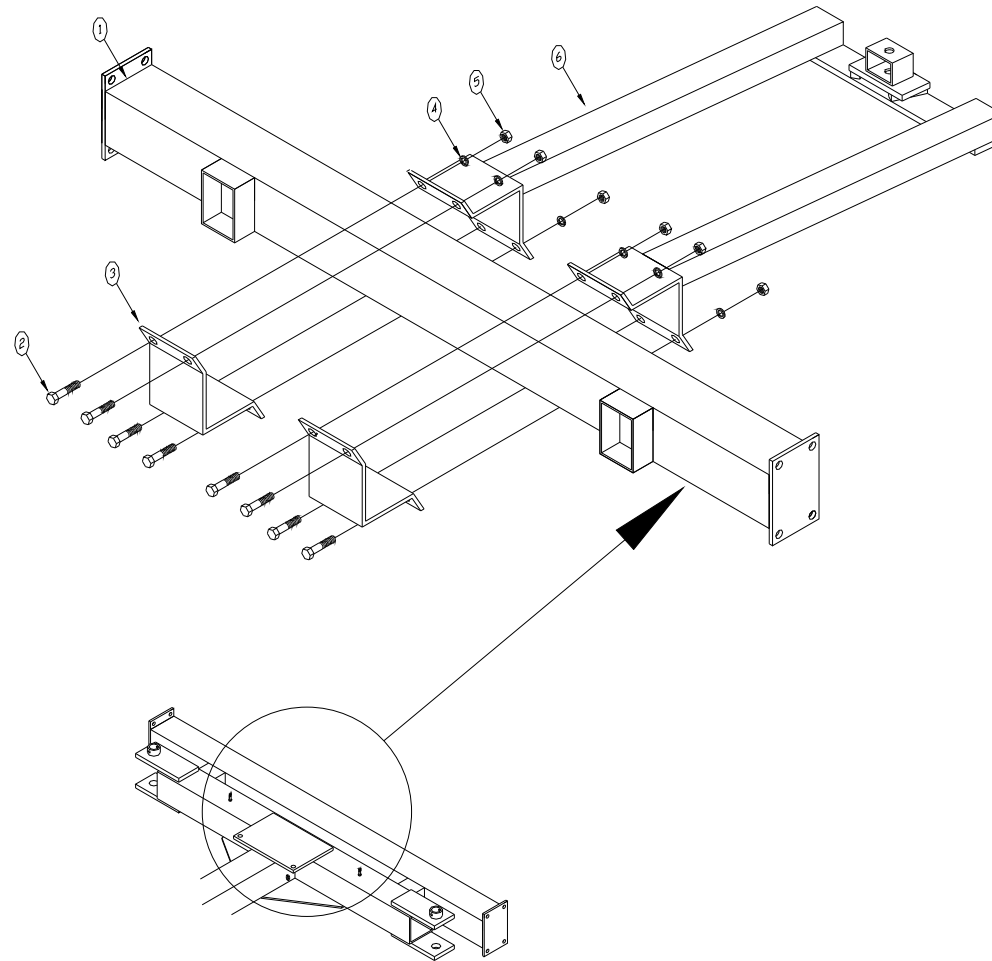


ATTACHING THE MAINFRAME EXTENSIONS

NOTES:

<i>ITEM</i>	<i>QTY</i>	<i>PART#</i>	<i>DESCRIPTION</i>
<i>1</i>	<i>2</i>	<i>768726046</i>	<i>MAINFRAME EXTENSION WELDMENT</i>
<i>2</i>	<i>8</i>	<i>76101171</i>	<i>3/4-10 X 2" PL T. GR.5</i>
<i>3</i>	<i>8</i>	<i>76101224</i>	<i>3/4" LOCKWASHER - PL T.</i>
<i>4</i>	<i>8</i>	<i>76101215</i>	<i>3/4-10 HEX NUT - PL T.</i>

REAR RIGID HITCH ATTACHMENT



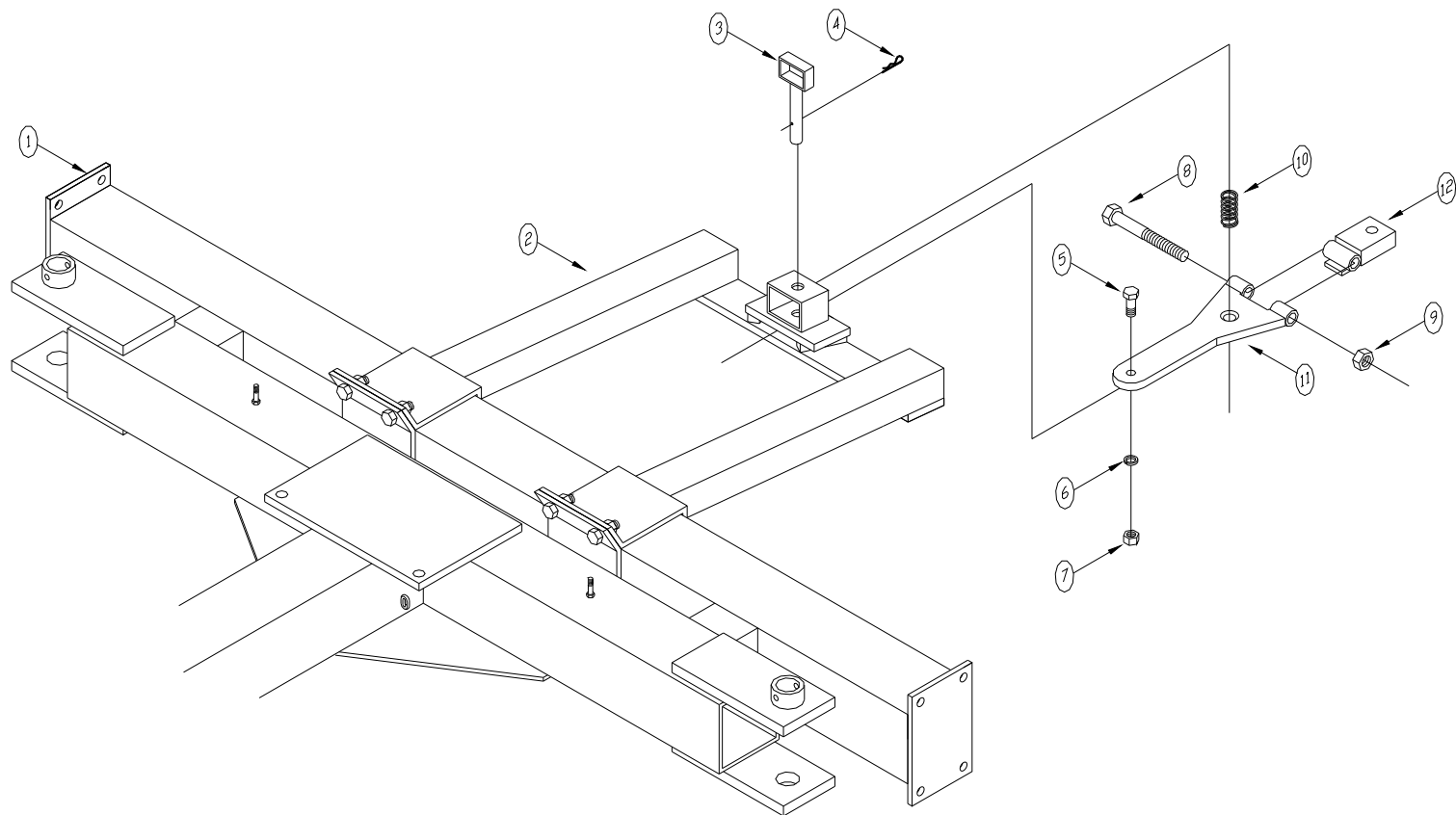
REAR RIGID HITCH ATTACHMENT

NOTES:

<i>ITEM</i>	<i>QTY</i>	<i>PART#</i>	<i>DESCRIPTION</i>
<i>1</i>	<i>1</i>	<i>-----</i>	<i>MAINFRAME</i>
<i>2</i>	<i>8</i>	<i>76101173</i>	<i>3/4-10 X 3" HEX BOLT - PL T. GR5</i>
<i>3</i>	<i>2</i>	<i>76400200</i>	<i>1/2 X 6 X 15" - SADDLE CLAMP</i>
<i>4</i>	<i>8</i>	<i>76101224</i>	<i>3/4" LOCK WASHER - PL T.</i>
<i>5</i>	<i>8</i>	<i>76101215</i>	<i>3/4-10 HEX NUT - PL T.</i>
<i>6</i>	<i>1</i>	<i>768726046</i>	<i>REAR RIGID HITCH</i>

CENTER RIGID REAR HITCH (6) ON REAR TUBE OF MAINFRAME (1).

ATTACHING THE DRAWBAR AND CLEVIS

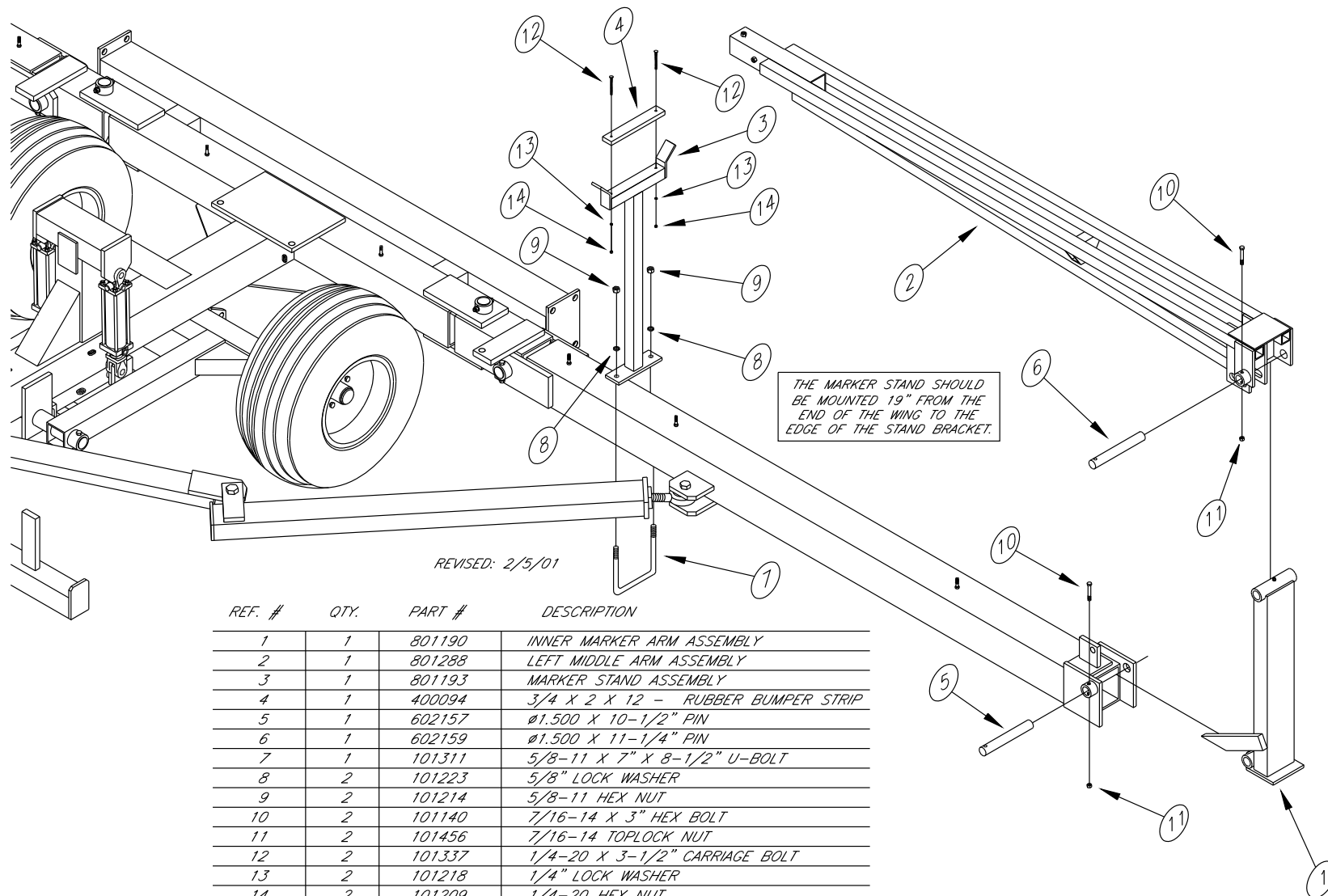


ATTACHING THE DRAWBAR AND CLEVIS

NOTES:

<i>ITEM</i>	<i>QTY</i>	<i>PART#</i>	<i>DESCRIPTION</i>
<i>1</i>	<i>1</i>	<i>-----</i>	<i>MAINFRAME</i>
<i>2</i>	<i>1</i>	<i>768726046</i>	<i>RIGID REAR HITCH</i>
<i>3</i>	<i>1</i>	<i>76801195</i>	<i>Ø1.00 X 6" WELDED PIN</i>
<i>4</i>	<i>1</i>	<i>76101266</i>	<i>3/16" HAIR PIN</i>
<i>5</i>	<i>1</i>	<i>76101171</i>	<i>3/4-10 X 2" HEX BOLT - PLT. GR5</i>
<i>6</i>	<i>1</i>	<i>76101224</i>	<i>3/4" LOCK WASHER - PLT.</i>
<i>7</i>	<i>1</i>	<i>76101215</i>	<i>3/4-10 HEX NUT - PLT.</i>
<i>8</i>	<i>1</i>	<i>76101204</i>	<i>1-8 X 8" HEX BOLT - PLT. GR5</i>
<i>9</i>	<i>1</i>	<i>76101461</i>	<i>1-8 TOP LOCK NUT - PLT.</i>
<i>10</i>	<i>1</i>	<i>76101330</i>	<i>COMPRESSION SPRING</i>
<i>11</i>	<i>1</i>	<i>76801189</i>	<i>DRAWBAR</i>
<i>12</i>	<i>1</i>	<i>76801771</i>	<i>DRAWBAR CLEVIS</i>

LEFT MARKER ASSEMBLY & STAND

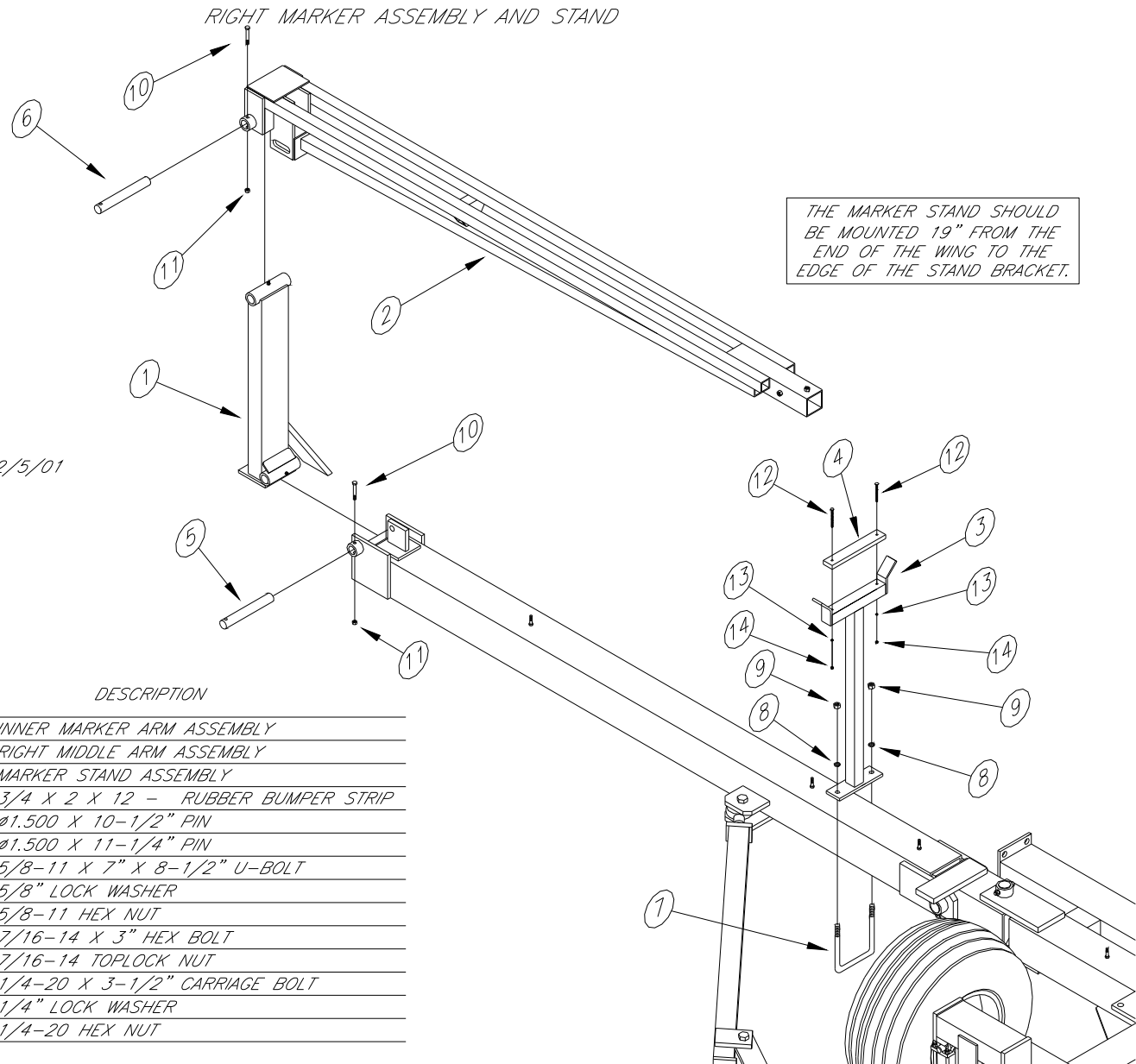


RIGHT MARKER ASSEMBLY AND STAND

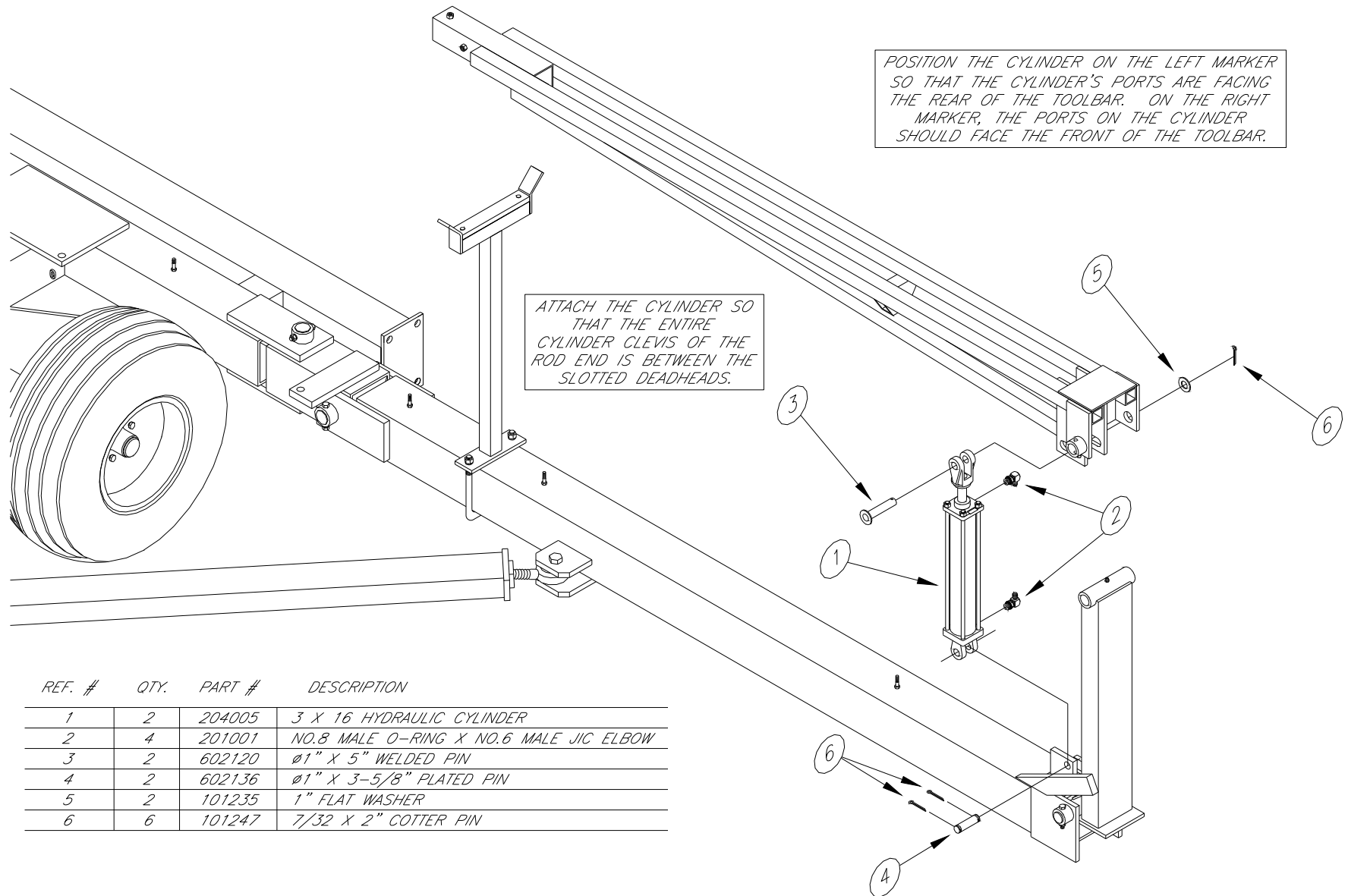
REVISED: 2/5/01

THE MARKER STAND SHOULD
BE MOUNTED 19" FROM THE
END OF THE WING TO THE
EDGE OF THE STAND BRACKET.

REF. #	QTY.	PART #	DESCRIPTION
1	1	801190	INNER MARKER ARM ASSEMBLY
2	1	801287	RIGHT MIDDLE ARM ASSEMBLY
3	1	801193	MARKER STAND ASSEMBLY
4	1	400094	3/4 X 2 X 12 - RUBBER BUMPER STRIP
5	1	602157	Ø1.500 X 10-1/2" PIN
6	1	602159	Ø1.500 X 11-1/4" PIN
7	1	101311	5/8-11 X 7" X 8-1/2" U-BOLT
8	2	101223	5/8" LOCK WASHER
9	2	101214	5/8-11 HEX NUT
10	2	101140	7/16-14 X 3" HEX BOLT
11	2	101456	7/16-14 TOPLOCK NUT
12	2	101337	1/4-20 X 3-1/2" CARRIAGE BOLT
13	2	101218	1/4" LOCK WASHER
14	2	101209	1/4-20 HEX NUT

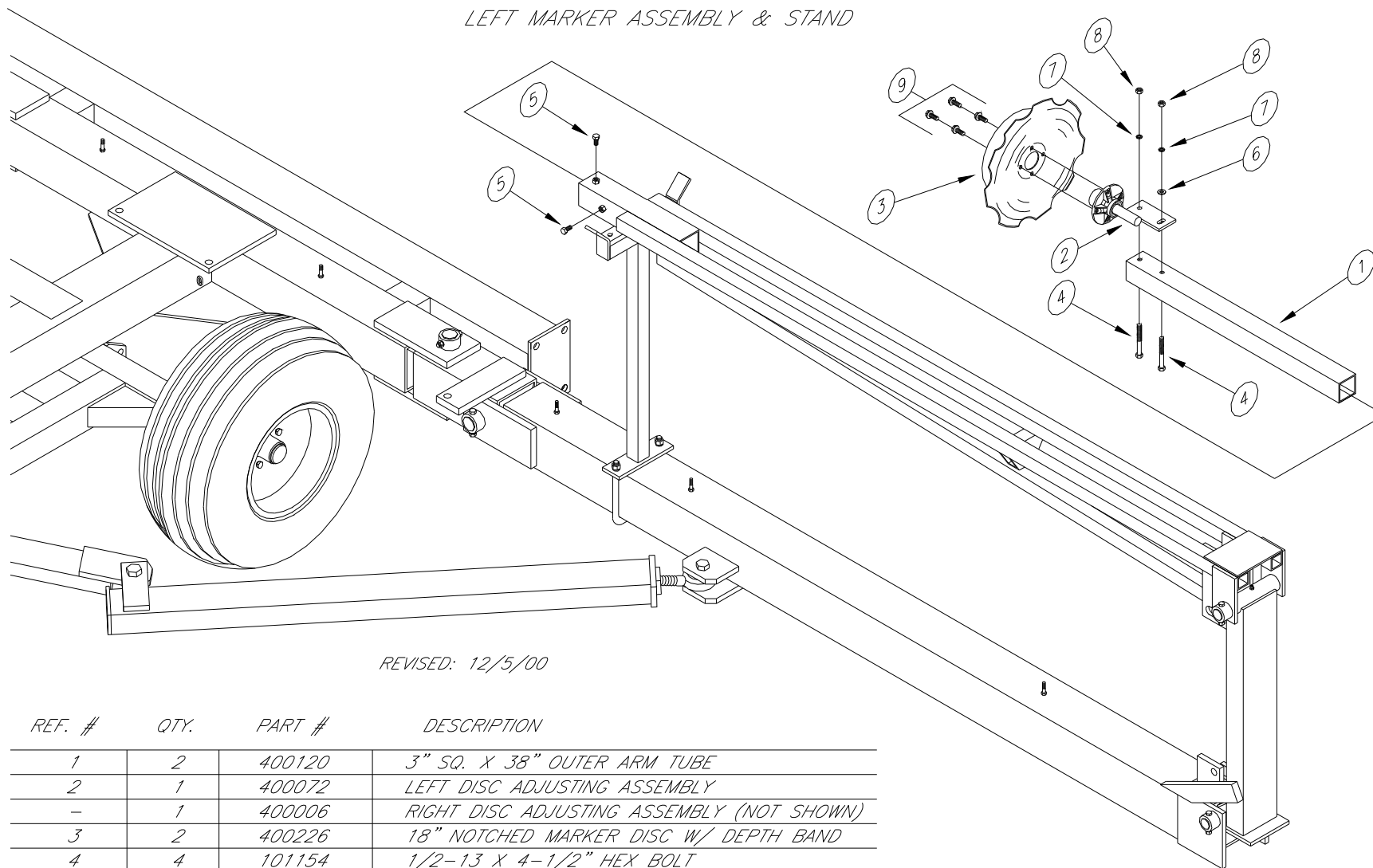


MARKER CYLINDER ATTACHMENT



REF. #	QTY.	PART #	DESCRIPTION
1	2	204005	3 X 16 HYDRAULIC CYLINDER
2	4	201001	NO.8 MALE O-RING X NO.6 MALE JIC ELBOW
3	2	602120	Ø1" X 5" WELDED PIN
4	2	602136	Ø1" X 3-5/8" PLATED PIN
5	2	101235	1" FLAT WASHER
6	6	101247	7/32 X 2" COTTER PIN

LEFT MARKER ASSEMBLY & STAND

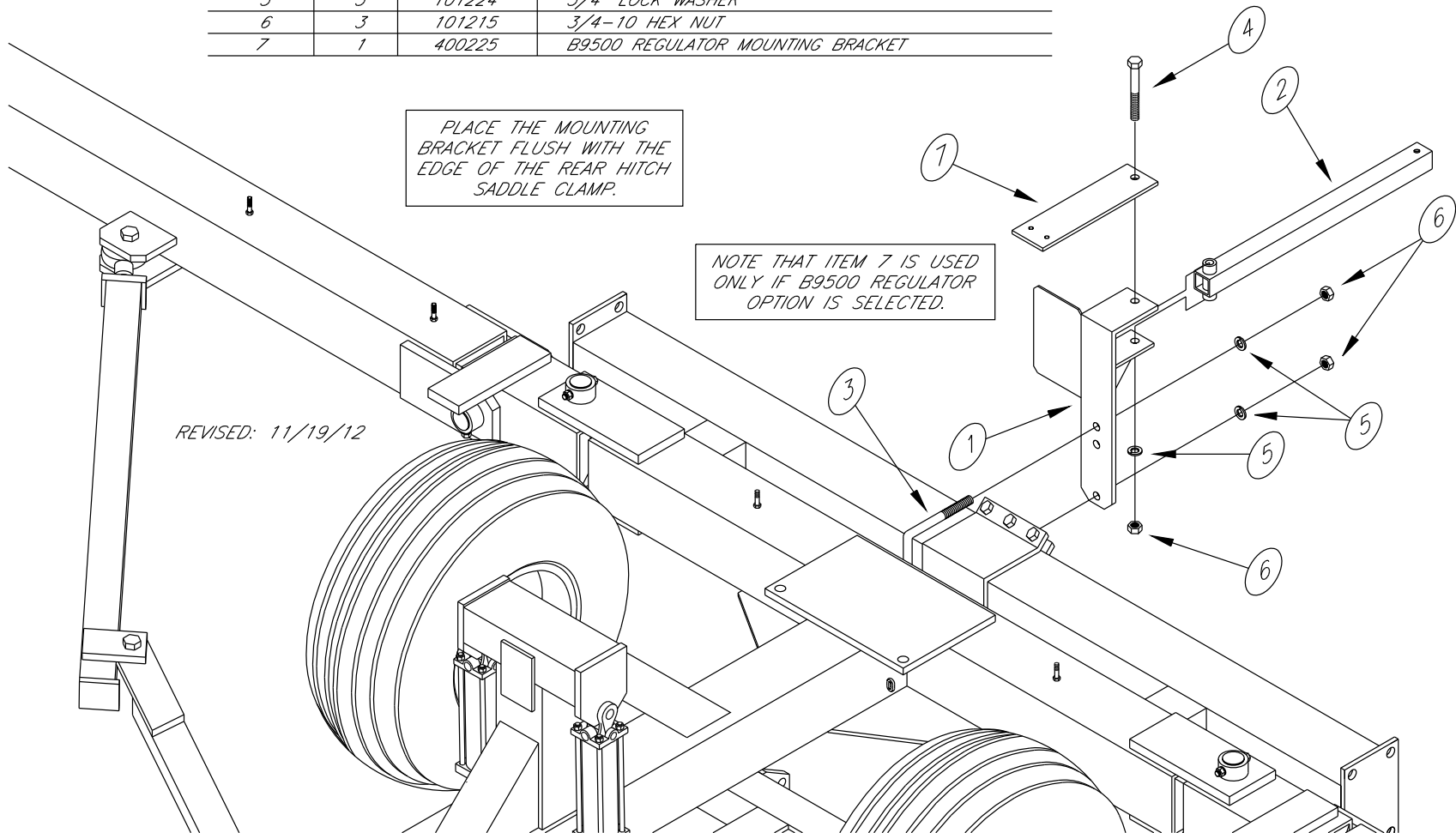


REVISED: 12/5/00

REF. #	QTY.	PART #	DESCRIPTION
1	2	400120	3" SQ. X 38" OUTER ARM TUBE
2	1	400072	LEFT DISC ADJUSTING ASSEMBLY
-	1	400006	RIGHT DISC ADJUSTING ASSEMBLY (NOT SHOWN)
3	2	400226	18" NOTCHED MARKER DISC W/ DEPTH BAND
4	4	101154	1/2-13 X 4-1/2" HEX BOLT
5	4	101147	1/2-13 X 1" HEX BOLT
6	2	101231	1/2" FLAT WASHER
7	4	101222	1/2" LOCK WASHER
8	4	101213	1/2-13 HEX NUT
9	8	301193	1/2-20 X 1-1/4" WHIZ BOLT

NH3 SWING ARM/MOUNTING BRACKET ASSEMBLY

REF. #	QTY.	PART #	DESCRIPTION
1	1	801683	SWING ARM MOUNTING BRACKET
2	1	801276	NH3 SWING ARM WELDMENT
3	1	101386	3/4-10 X 7 X 8-1/2" U-BOLT
4	1	101179	3/4-10 X 6" HEX BOLT
5	3	101224	3/4" LOCK WASHER
6	3	101215	3/4-10 HEX NUT
7	1	400225	B9500 REGULATOR MOUNTING BRACKET

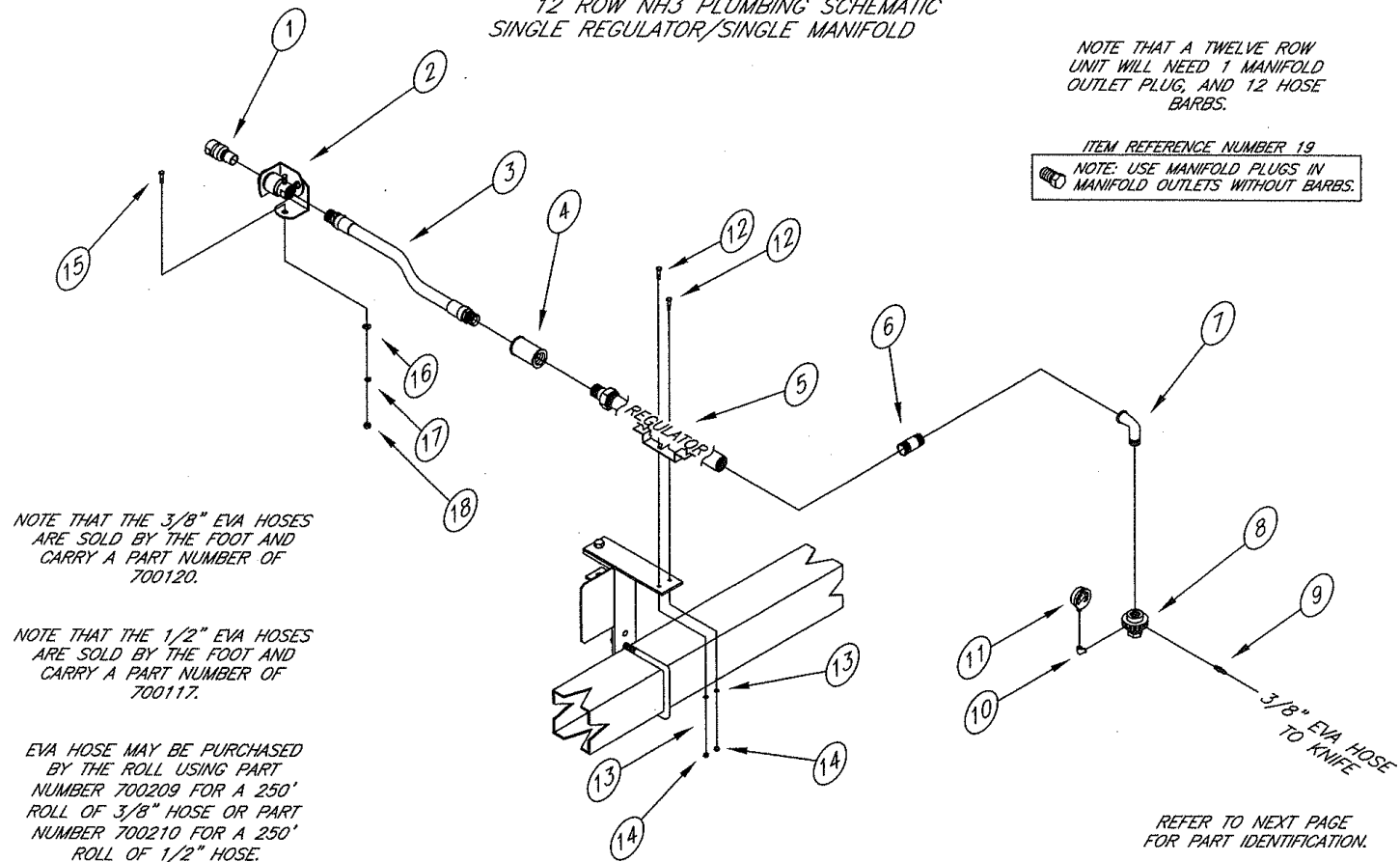


12 ROW NH₃ PLUMBING SCHEMATIC
SINGLE REGULATOR/SINGLE MANIFOLD

NOTE THAT A TWELVE ROW
UNIT WILL NEED 1 MANIFOLD
OUTLET PLUG, AND 12 HOSE
BARBS.

ITEM REFERENCE NUMBER 19

NOTE: USE MANIFOLD PLUGS IN
MANIFOLD OUTLETS WITHOUT BARBS.



REVISED: 10/01/01

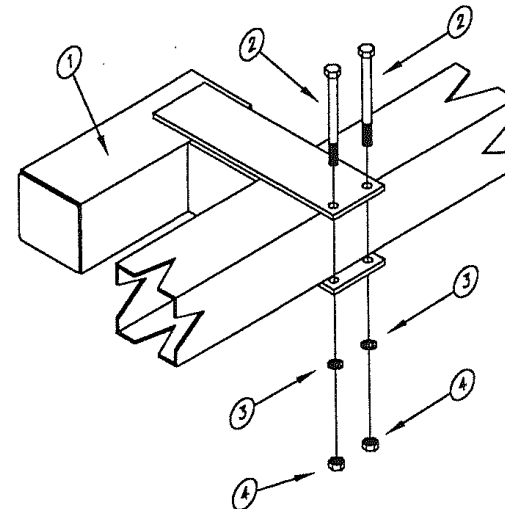
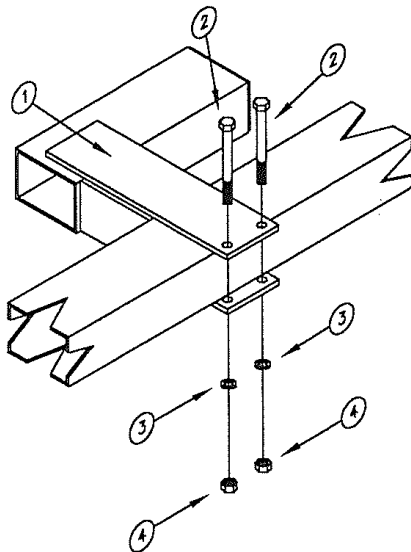
*12 ROW NH3 PLUMBING SCHEMATIC
SINGLE REGULATOR/SINGLE MANIFOLD*

<i>REF. #</i>	<i>QTY.</i>	<i>PART #</i>	<i>DESCRIPTION</i>
<i>1</i>	<i>1</i>	<i>700278</i>	<i>1-1/4" MALE COUPLER TIP (NH3)</i>
<i>2</i>	<i>1</i>	<i>700276</i>	<i>1-1/4" QUICK COUPLER ASSEMBLY</i>
<i>3</i>	<i>1</i>	<i>700301</i>	<i>1-1/4" AA HOSE X 120" LONG</i>
<i>4</i>	<i>1</i>	<i>700275</i>	<i>1-1/4" SCHEDULE 80 COUPLER</i>
<i>5</i>	<i>1</i>	<i>700273</i>	<i>NH3/B9500 METER W/ HYDRAULIC SHUT-OFF</i>
<i>6</i>	<i>1</i>	<i>700257</i>	<i>1" CLOSE NIPPLE - BLACK PIPE</i>
<i>7</i>	<i>1</i>	<i>700256</i>	<i>1" ST. ELBOW - BLACK PIPE</i>
<i>8</i>	<i>1</i>	<i>700272</i>	<i>NH3 MANIFOLD - 14 OUTLET</i>
<i>9</i>	<i>12</i>	<i>700277</i>	<i>1/4 MNPT X 3/8" HOSE BARB</i>
<i>-</i>	<i>12</i>	<i>700208</i>	<i>1/4 MNPT X 1/2" HOSE BARB</i>
<i>10</i>	<i>1</i>	<i>700254</i>	<i>1/4" MNPT X 1/4" FNPT ELBOW - BLACK PIPE</i>
<i>11</i>	<i>1</i>	<i>700235A</i>	<i>2-1/2" NH3 GAUGE 0-120 psi</i>
<i>12</i>	<i>2</i>	<i>101125</i>	<i>3/8-16 X 1" HEX BOLT</i>
<i>13</i>	<i>2</i>	<i>101220</i>	<i>3/8" LOCK WASHER</i>
<i>14</i>	<i>2</i>	<i>101211</i>	<i>3/8-16 HEX NUT</i>
<i>15</i>	<i>1</i>	<i>101148</i>	<i>1/2-13 X 1-1/2" HEX BOLT</i>
<i>16</i>	<i>1</i>	<i>101231</i>	<i>1/2" FLAT WASHER</i>
<i>17</i>	<i>1</i>	<i>101222</i>	<i>1/2" LOCK WASHER</i>
<i>18</i>	<i>1</i>	<i>101213</i>	<i>1/2-13 HEX NUT</i>
<i>19</i>	<i>1</i>	<i>700211</i>	<i>1/4" MNPT X 1/2" MANIFOLD PLUG</i>

OFFSET BRACKET ASSEMBLY

REF #	QTY	PART #	DESCRIPTION
1	1	801731	OFFSET BRACKET FOR 7 X 5 TUBE
2	2	101438	3/4-10 X 7-1/2" HEX BOLT
3	2	101224	3/4" LOCK WASHER
4	2	101215	3/4-10 HEX NUT

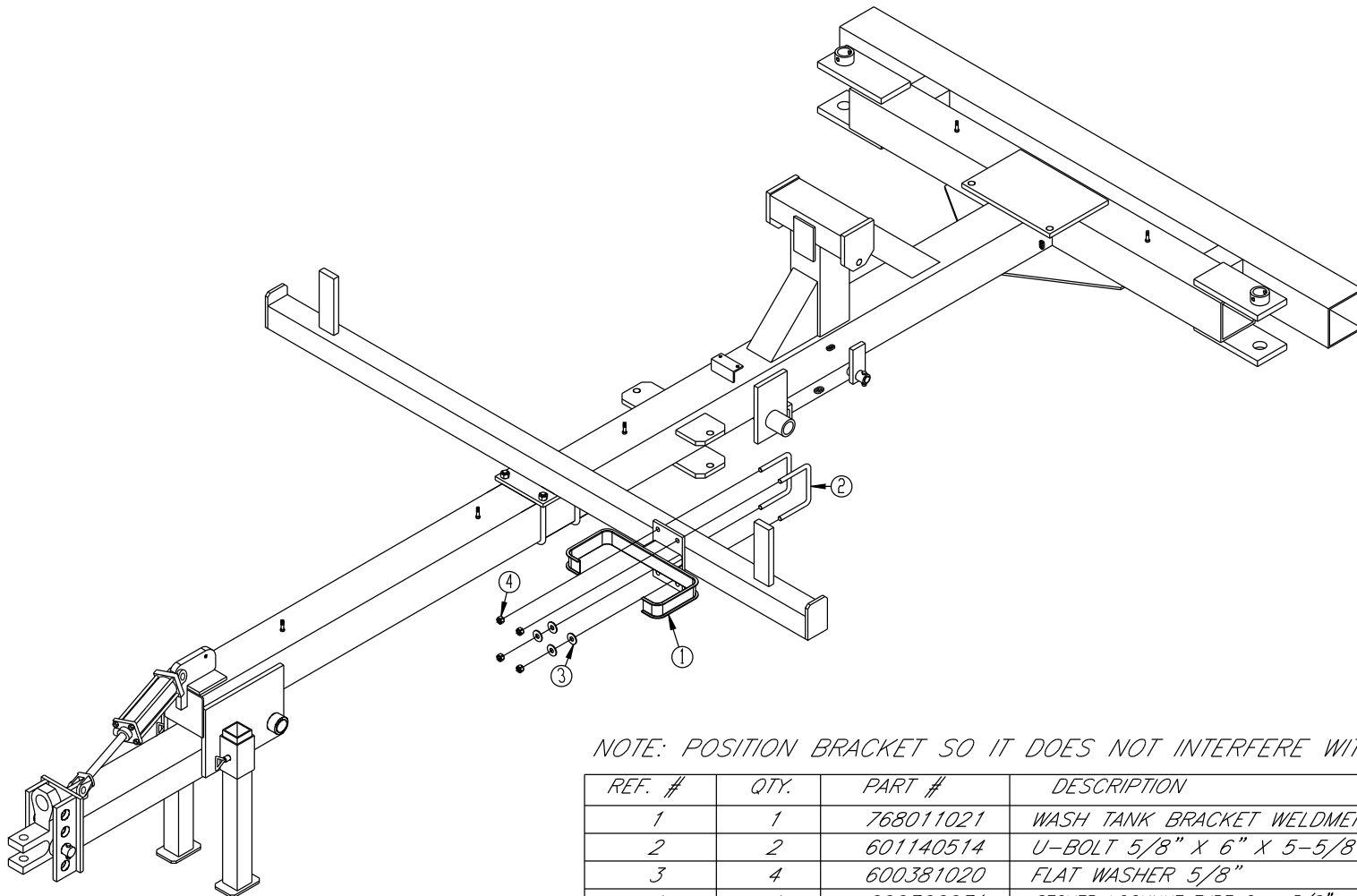
ENTIRE ASSEMBLY (ITEMS 1-4) MAY BE
ORDERED USING PART # 900072.



REF #	QTY	PART #	DESCRIPTION
1	1	801730	OFFSET BRACKET FOR 7 X 7 TUBE
2	2	101182	3/4-10 X 9" HEX BOLT
3	2	101224	3/4" LOCK WASHER
4	2	101215	3/4-10 HEX NUT

ENTIRE ASSEMBLY (ITEMS 1-4) MAY BE
ORDERED USING PART # 900074.

ATTACHING THE WASH TANK BRACKET WELDMENT

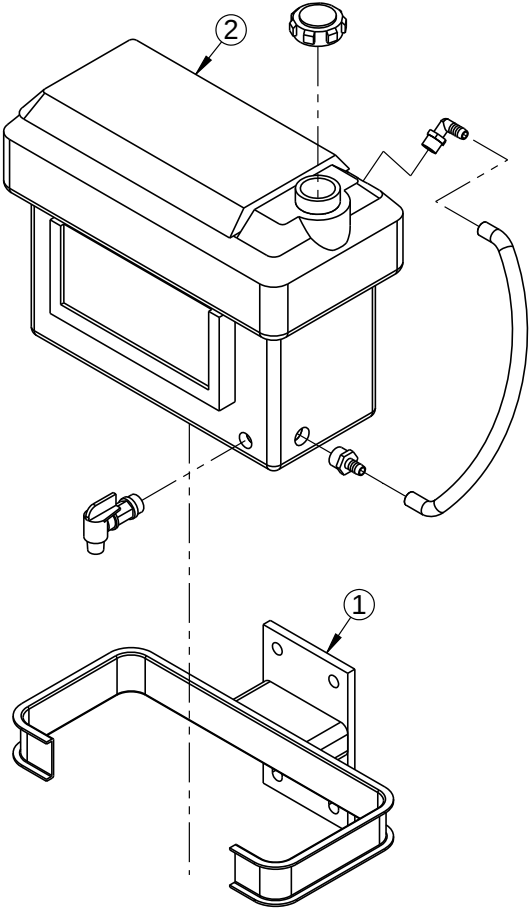


NOTE: POSITION BRACKET SO IT DOES NOT INTERFERE WITH ROW UNITS

REF. #	QTY.	PART #	DESCRIPTION
1	1	768011021	WASH TANK BRACKET WELDMENT
2	2	601140514	U-BOLT 5/8" X 6" X 5-5/8"
3	4	600381020	FLAT WASHER 5/8"
4	4	600366031	STOVER LOCKNUT TYPE C - 5/8" -UNC

ATTACHING THE WASH TANK

ITEM NO.	PART NUMBER	Description1	QTY.
1	768011021	WASH TANK BRACKET WELDMENT	1
2	767500030	WASH TANK - COMPLETE	1



HEAVY DUTY 4 BOLT HUB & SPINDLE

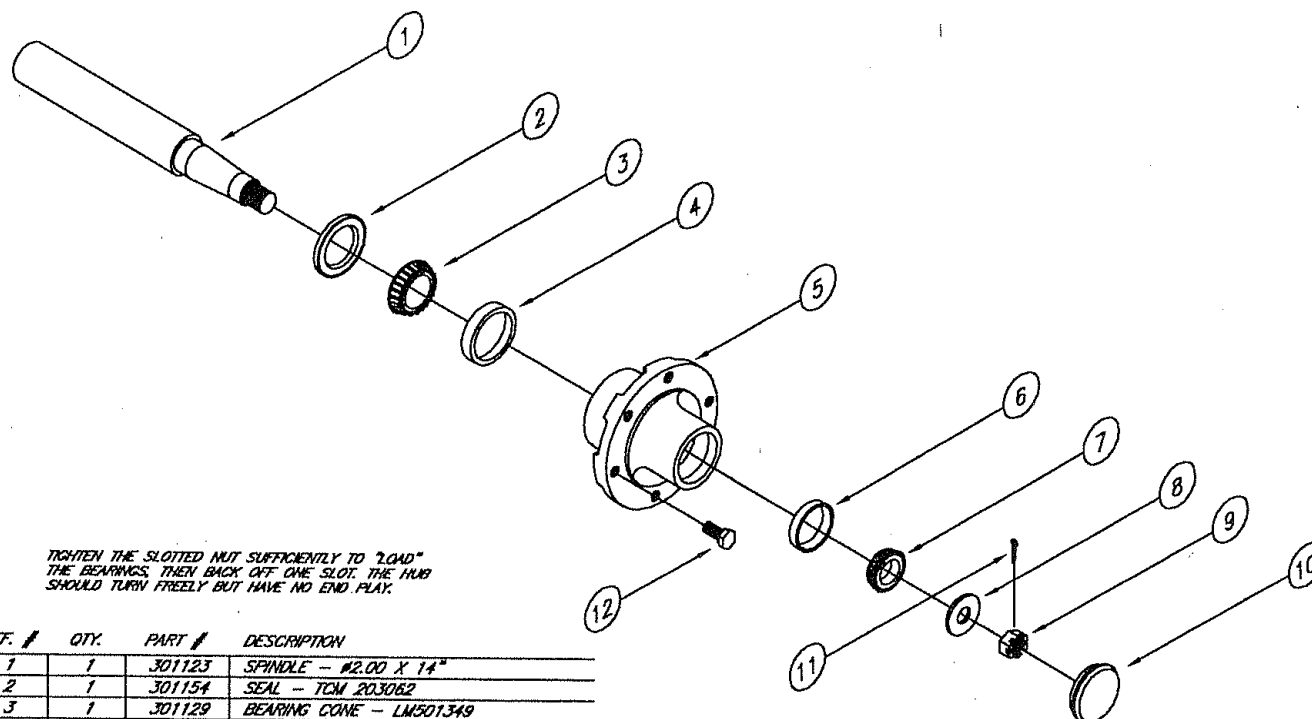
HUB ASSEMBLY COMPLETE INCLUDES:
 SEAL - 301183
 BEARING CONE - 301132
 BEARING CUP - 301134
 HUB - 301182
 BEARING CUP - 301184
 BEARING CONE - 301185
 DUST CAP - 301186
 LUG BOLTS - 301150 (4)

REF. #	QTY.	PART #	DESCRIPTION
1	1	301181	SPINDLE - $\varnothing 1.625" \times 8.0"$
2	1	301183	SEAL - CR 14975
3	1	301132	BEARING CONE - LM 67048
4	1	301134	BEARING CUP - LM 67010
5	1	301182	HUB - 4 BOLT W/ 5" BOLT CIRCLE
6	1	301184	BEARING CUP - LM 11910
7	1	301185	BEARING CONE - LM 11949
8	1	301142	THRUST WASHER - 1.5" O.D. X .8125" I.D.
9	1	301153	CASTELLATED NUT - 3/4-16 UNF
10	1	301152	COTTER PIN - 5/32" X 1-3/4"
11	1	301186	DUST CAP
12	4	301150	LUG BOLT - 1/2-20 UNF X 1"
13	1	301188	SPINDLE ASSEMBLY - COMPLETE
14	1	301187	HUB ASSEMBLY - COMPLETE

SPINDLE ASSEMBLY COMPLETE INCLUDES:
 SPINDLE - 301181
 WASHER - 301142
 CASTELLATED NUT - 301153
 COTTER PIN - 301152

REVISED 09/08/93

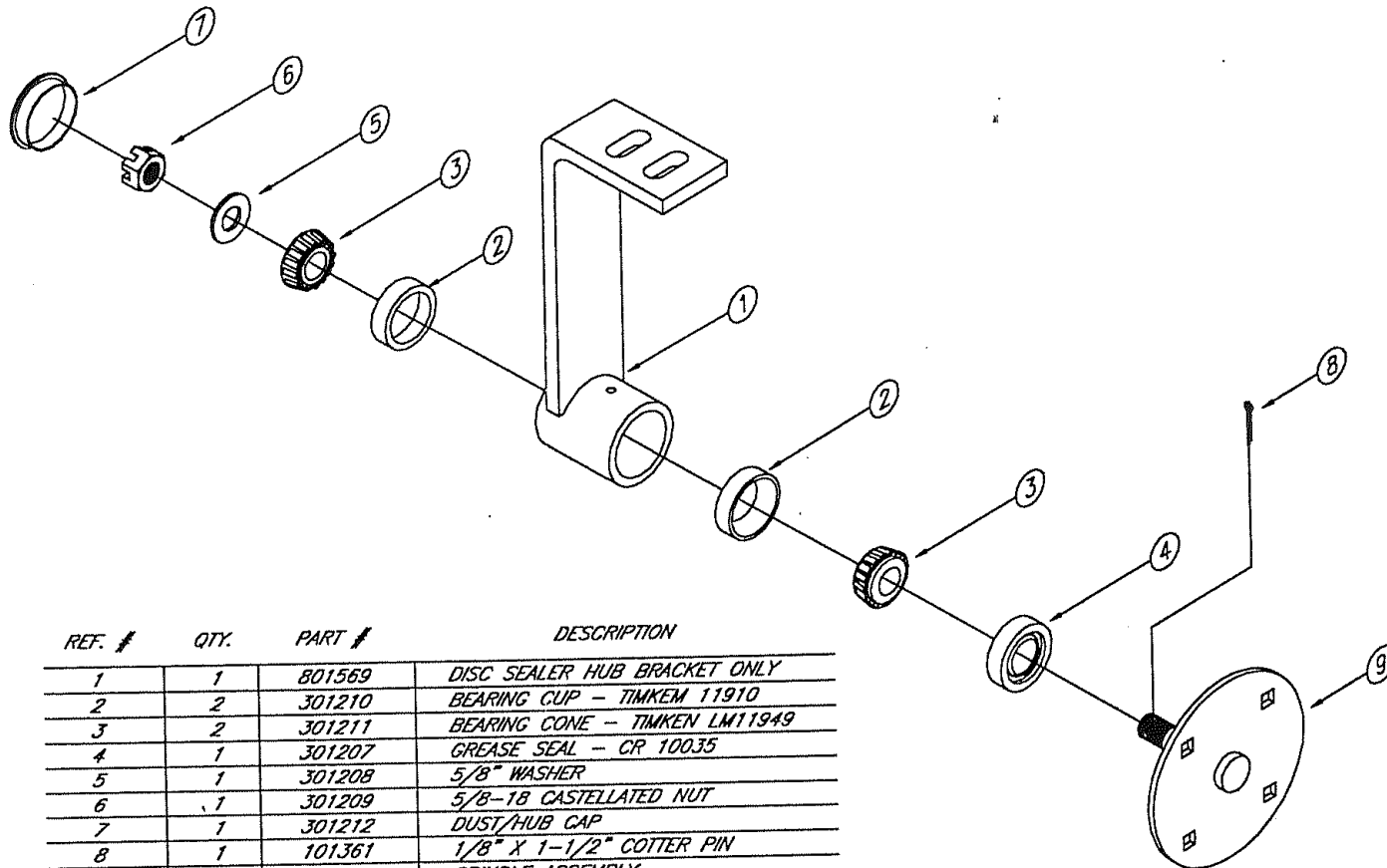
6 BOLT HUB & SPINDLE



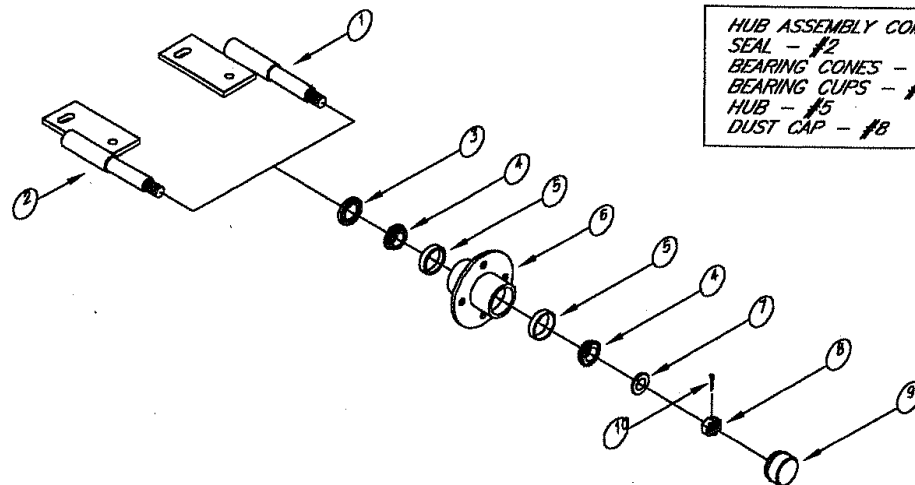
TIGHTEN THE SLOTTED NUT SUFFICIENTLY TO "LOAD" THE BEARINGS, THEN BACK OFF ONE SLOT. THE HUB SHOULD TURN FREELY BUT HAVE NO END PLAY.

REF. #	QTY.	PART #	DESCRIPTION
1	1	301123	SPINDLE - #2.00 X 14"
2	1	301154	SEAL - TCM 203062
3	1	301129	BEARING CONE - LM501349
4	1	301135	BEARING CUP - LM501310
5	1	301126	6 BOLT HUB - 6" BOLT CIRCLE
6	1	301134	BEARING CUP - LM67010
7	1	301132	BEARING CONE - LM67048
8	1	301157	WASHER - 2" O.D. X 13/16" I.D.
9	1	301153	SLOTTED NUT - 3/4-16 UNF
10	1	301143	DUST CAP
11	1	101249	COTTER PIN - 5/32 X 1-3/4"
12	6	301151	LUG BOLT - 9/16-18 UNF X 1-1/8"
-	1	301164	SPINDLE ASSEMBLY - COMPLETE
-	1	301160	HUB ASSEMBLY - COMPLETE

DISC SEALER HUB ASSEMBLY



REF. #	QTY.	PART #	DESCRIPTION
1	1	801569	DISC SEALER HUB BRACKET ONLY
2	2	301210	BEARING CUP - TIMKEN 11910
3	2	301211	BEARING CONE - TIMKEN LM11949
4	1	301207	GREASE SEAL - CR 10035
5	1	301208	5/8" WASHER
6	1	301209	5/8-18 CASTELLATED NUT
7	1	301212	DUST/HUB CAP
8	1	101361	1/8" X 1-1/2" COTTER PIN
9	1	301213	SPINDLE ASSEMBLY

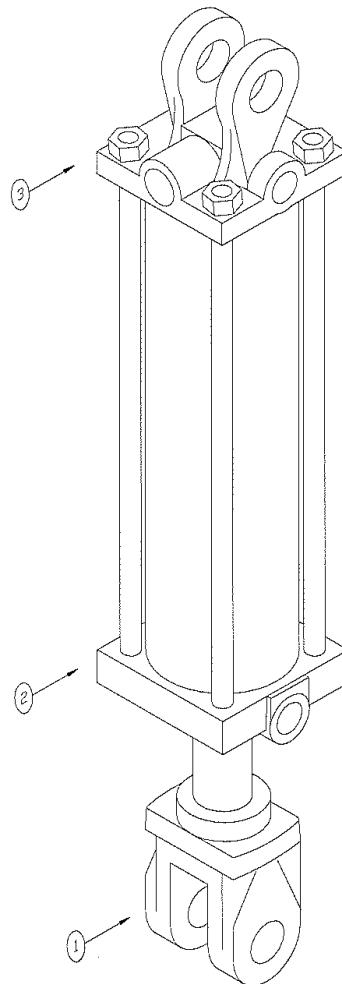


HUB ASSEMBLY COMPLETE INCLUDES:
 SEAL - #2
 BEARING CONES - #3 (2)
 BEARING CUPS - #4 (2)
 HUB - #5
 DUST CAP - #8

REVISED: 7/12/99

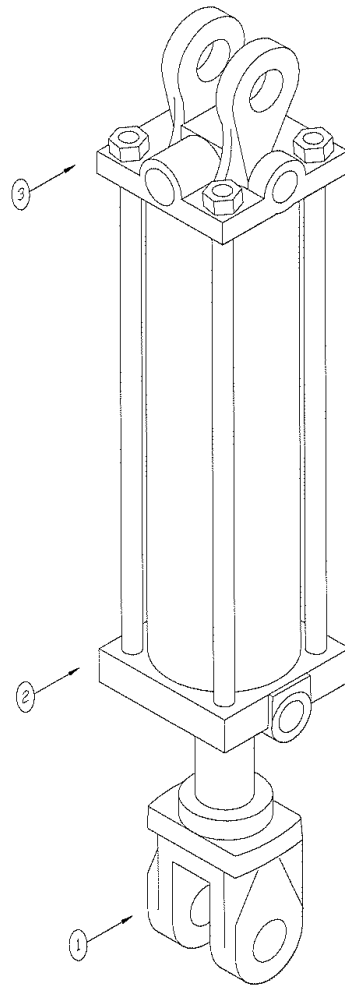
REF. #	QTY.	PART #	DESCRIPTION
1	1	801323	LEFT SPINDLE WELDMENT
2	1	801324	RIGHT SPINDLE WELDMENT
3	1	301148	SEAL - CR 12437
4	2	301133	BEARING CONE - L44643
5	2	301138	BEARING CUP - L44610
6	1	301146	4 BOLT HUB - 4" BOLT CIRCLE
7	1	301142	WASHER - 1-1/2" O.D. X 13/16" I.D.
8	1	301153	SLOTTED NUT - 3/4-16UNF
9	1	301149	DUST CAP
10	1	101249	COTTER PIN - 5/32" X 2"
11	1	301159	HUB ASSEMBLY - COMPLETE

3-1/4 X 10" REPHASE CYLINDER



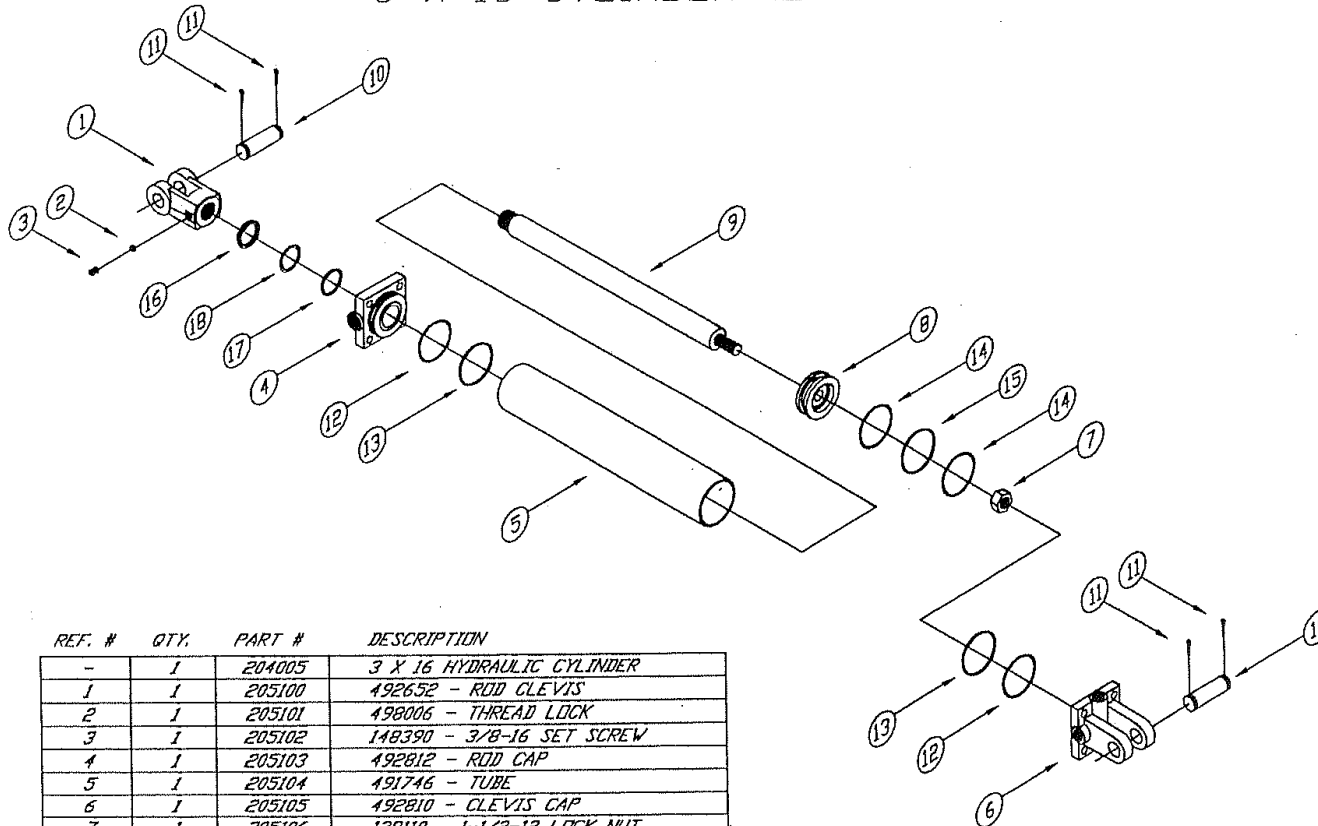
ITEM	QTY	PART#	DESCRIPTION
1	1	205181	RDD CLEVIS
2	1	205182	RDD CAP
3	1	205183	CLEVIS CAP
-	1	204015	3-1/4 X 10" REPHASE CYLINDER
-	1	205178	SEAL KIT

3-1/2 X 10" REPHASE CYLINDER



ITEM	QTY	PART#	DESCRIPTION
1	1	205184	ROD CLEVIS
2	1	205185	ROD CAP
3	1	205186	CLEVIS CAP
-	1	204016	3-1/2X 10" REPHASE CYLINDER
-	1	205179	SEAL KIT

LION 2500 TL SERIES 3 X 16 CYLINDER (EXPLODED)



REF. #	QTY.	PART #	DESCRIPTION
-	1	204005	3 X 16 HYDRAULIC CYLINDER
1	1	205100	492652 - ROD CLEVIS
2	1	205101	498006 - THREAD LOCK
3	1	205102	148390 - 3/8-16 SET SCREW
4	1	205103	492812 - ROD CAP
5	1	205104	491746 - TUBE
6	1	205105	492810 - CLEVIS CAP
7	1	205106	129110 - 1-1/2-12 LOCK NUT
8	1	205107	492520 - PISTON
9	1	205108	492873 - ROD
10	2	602136	#1' X 3-5/8" PLATED CYLINDER PIN
11	4	101266	#3/16" HAIRPIN
12	2	205017	#40 O-RING B.U.
13	2	205018	#10 O-RING
14	2	205019	#14 O-RING B.U.

REF. #	QTY.	PART #	DESCRIPTION
15	1	205020	#12 O-RING
16	1	205021	#13 WIPER
17	1	205022	#11 ROD O-RING
18	1	205023	#24 ROD B.U.
-	1	205016	SEAL KIT COMPLETE

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WARRANTY

Main Frame, Wings, Wheel Supports Three (3) Years
All Other Components, except tiresOne (1) Year

Progressive Farm Products Inc. (PFP, Inc.) warrants each new PFP, Inc. product to be free from defects in material and workmanship. This warranty is in effect from the date of delivery to the original purchaser and is applicable only for the normal life expectancy of the machine or components, not to exceed the time periods listed above. Tires on PFP, Inc. equipment are warranted through the respective tire manufacturer. Contact a dealer of the manufacturer in your local area.

Under no circumstances will it cover any merchandise or components thereof which, in the opinion of the company, has been subjected to negligent handling, misuse, alternation, an accident, or if repairs have been made with parts other than those obtainable through PFP, Inc.

Our obligation under this warranty shall be limited to repairing or replacing, free of charge to the original purchaser any part that in our judgement shall show evidence of such defect, provided further that such part shall be returned within thirty (30) days from date of failure to PFP, Inc. through a dealer from whom the purchase was made, transportation charges prepaid.

This warranty shall not be interpreted to render us liable for injury or damages of any kind of nature, direct, consequential, or contingent to person or property. This warranty does not extend to loss of crops, loss because of delay or any expense of loss incurred for labor, supplies, substitute machinery, rental, or for any other reason.

There are no warranties, either expressed or implied, of merchantability of fitness for particular purpose intended or fitness for any other reason.

This warranty is subject to any existing conditions of supply, which may directly affect our ability to obtain materials or manufacture replacement parts.

PFP, Inc. reserves the right to make improvements in design or changes in specifications at any time without incurring any obligations to owners of units previously sold.

No one is authorized to alter, modify, or enlarge this warranty nor the exclusions, limitations, and reservations.

**Progressive Farm Products Warranty does not include
cost of travel time, mileage, hauling, or labor.**