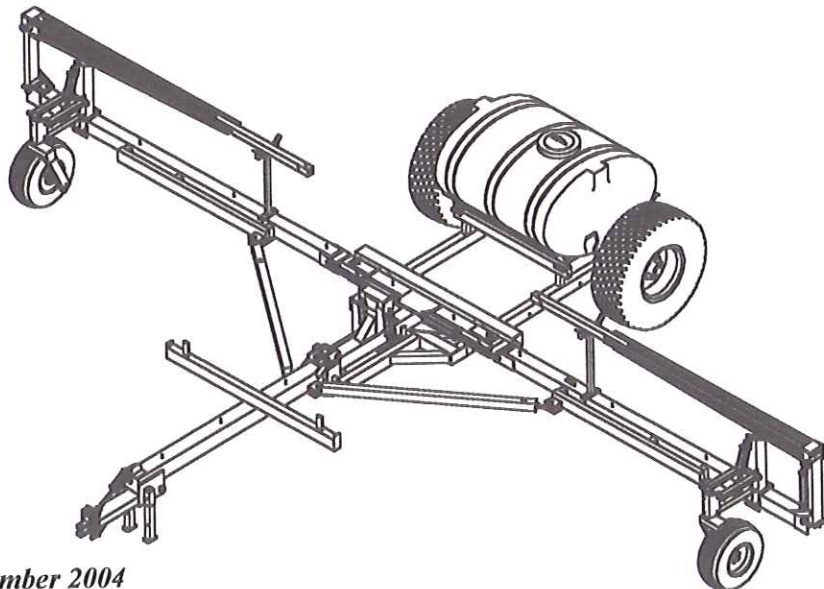




PROGRESSIVE
FARM PRODUCTS, INC.

OPERATOR'S MANUAL
40' 6200 FRONT-FOLD TOOLBAR
LIQUID FERTILIZER APPLICATION



November 2004

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

SETUP AND OPERATION

When ordering parts, provide the complete serial 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:

1. Comply with your state and local laws governing highway safety while moving machinery on the highway.
2. The SMV reflector emblem should be used at all times on public roads, and always use the flashing warning lights on your tractor and implement.
3. 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.
4. 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.
5. At least once a year, inspect all hydraulic hoses for leaks, cracks, abrasions, and pinched areas. Tightened fittings or replace hoses as needed.
6. 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 connections for any leakage.
7. 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 on 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

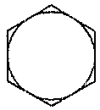
Always use proper safety precautions and common sense. Set a good example and show your workers how to work safely. Be an example, not a statistic.

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 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.

BOLTØ - 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.

PROGRESSIVE FARM PRODUCTS

APPLICATION RATE: GALLONS PER ACRE

PUMP SPROCKET (18 TEETH) WHEEL SPROCKET (36 TEETH) LOADED RADIUS: 7.5" TIRE: 4.80 X 8

JOHN BLUE 4455 (SINGLE PISTON) PUMP

PUMP SETTING	SWATH WIDTH (INCHES)										
	180	200	220	240	260	280	300	320	340	360	480
1.0	11	10	9	8	8	7	7	6	6	6	N/A
1.5	17	15	14	13	12	11	10	9	9	8	N/A
2.0	22	20	18	17	15	14	13	13	12	11	N/A
2.5	28	25	23	21	19	18	17	16	15	14	10
3.0	33	30	27	25	23	21	20	19	18	17	13
3.5	39	36	32	30	27	25	24	22	21	20	15
4.0	45	41	37	34	31	29	27	25	24	23	17
4.5	51	46	41	38	35	33	30	28	27	25	19
5.0	56	51	46	42	39	36	34	32	30	28	21
5.5	62	56	50	46	43	40	37	35	33	31	23
6.0	67	61	55	50	47	43	40	38	36	34	25
6.5	73	66	60	55	51	47	44	41	39	37	28
7.0	78	71	64	59	54	50	47	44	41	39	30
7.5	84	76	69	63	58	54	50	47	44	42	32
8.0	89	81	73	67	62	58	54	50	47	45	35
8.5	95	86	78	71	66	61	57	53	50	48	37
9.0	101	91	83	76	70	65	61	58	54	51	39
9.5	107	96	87	80	74	69	64	60	58	53	41
10.0	112	101	92	84	78	72	67	63	59	56	43

JOHN BLUE 4955 (DOUBLE PISTON) PUMP

PUMP SETTING	SWATH WIDTH (INCHES)										
	180	200	220	240	260	280	300	320	340	360	480
1.0	22	20	18	17	15	14	13	13	12	11	N/A
1.5	33	30	27	25	23	21	20	19	18	17	N/A
2.0	44	40	36	33	31	29	27	25	24	22	N/A
2.5	56	50	45	42	38	36	33	31	29	28	20
3.0	67	60	55	50	46	43	40	38	36	33	25
3.5	79	71	65	59	55	51	47	44	42	39	30
4.0	90	81	74	68	62	58	54	51	48	45	35
4.5	101	91	83	76	70	65	61	57	54	51	39
5.0	112	101	92	84	78	72	67	63	59	56	43
5.5	123	111	101	93	85	79	74	69	65	62	47
6.0	134	121	110	101	93	86	81	76	71	67	51
6.5	147	132	120	110	102	94	88	83	78	73	54
7.0	157	141	128	118	108	101	94	88	83	78	60
7.5	168	151	137	126	116	108	101	94	89	84	63
8.0	179	161	146	134	124	115	107	101	95	89	69
8.5	190	171	155	143	132	122	114	107	101	95	72
9.0	202	182	165	152	140	130	121	114	107	101	78
9.5	213	192	175	160	148	137	128	120	113	107	82
10.0	224	202	184	168	155	144	135	126	119	112	86

6200-40ft Operating Procedures

As you familiarize yourself with the 6200 dual placement applicator please take the time to read through this section completely.

Please note that the hydraulic hose hookup is different for a 6200 with a liquid fertilizer system than it is for a 6200 with a dry fertilizer system.

All 6200 dry units must have the ½" hyd. pressure line (tip painted blue) plugged into the pressure side of the number 1- SCV outlet or a power beyond outlet, as these are the priority outlets. (refer to fan drive section in operators manual if you are unsure)

The ½" return line (hyd. Fan drive) must be plugged into an unrestricted hyd return port in the tractors rear end, **do not run return line through SCV valve.**

The main toolbar lift hoses are plugged into the number 2- SCV valve.

The wing fold/marker seq. hoses or the 3 way elect. valve to number 3-SCV. valve.

The hyd. transport hitch is plugged into the number 4-SCV valve.

If you do not have 4-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.

All 6200 liquid units will take one less SCV outlet to operate the unit, unless you are using a hyd. agitation pump to keep the fertilizer in suspension.

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

The wing fold/marker seq. hoses or the 3-way elect. valve to 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 6200 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 6200 because of the way it folds into transport, when the wing castor wheels are pulled up in the folded position it would activate the NH3 valve allowing anhydrous to flow out of the system.

Folding the 40ft- 6200 for transport

- 1: Using the main lift lever, lift the 6200 to a completely raised position.
- 2: Place transport lock in hyd. cyld. on dry drive or liquid pump drive.
- 3: Place the yellow handle on the fold/seq. selector valve to the vertical position.
- 4: Position tractor straight with 6200 and leave transmission in neutral.
(It is better if tractor is allowed to move during folding and unfolding)
- 5: Lower the hyd. transport hitch until cyld. is completely collapsed.
- 6: Fold the wings of the 6200 until they are over the wing cradle.
- 7: Lift the hyd. transport hitch to a fully raised position.
- 8: Reverse the main lift lever and pull up the wing castor wheels.
- 9: Place the transport lock in the hyd. transport hitch cyld.

The 6200 is now ready for road transport.

To put the 6200 into operating position, simply reverse steps 1 through 8 above.

Daily Startup procedures for the 6200 with a dry fertilizer system.

#1 Greasing the 6200 toolbar is the single most important thing you can do to guarantee years of trouble free operation. Dry fertilizer puts off a very fine dust that 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.

#3 When starting the blower fan for the first time on a tractor, make certain that you dial the tractors hyd. oil flow down to a minimum setting, then engage the hyd. outlet, next dial the oil flow up to the level that is required (see rate chart) to achieve the proper air setting on the magnehelic gauge. Once you have this set, it will not be necessary to do so again unless you change tractors. (CAUTION –excessive oil flow can damage fan motor)

#4 Always start the blower fan and let it run for 15 minutes before operating the fertilizer unit. This will insure that any condensation in the hoses and knives is completely dried before introducing fertilizer to the system.

#5 The 6200 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.

#6 The hyd. transport hitch needs to be in the lowered position when in use, this will 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.

#7 It is imperative that your fertilizer is absolutely dry and is screened through the screen on the top of the 6 ton stainless steel hopper. If you need a larger screen area more screens can be placed on the top of the hopper.

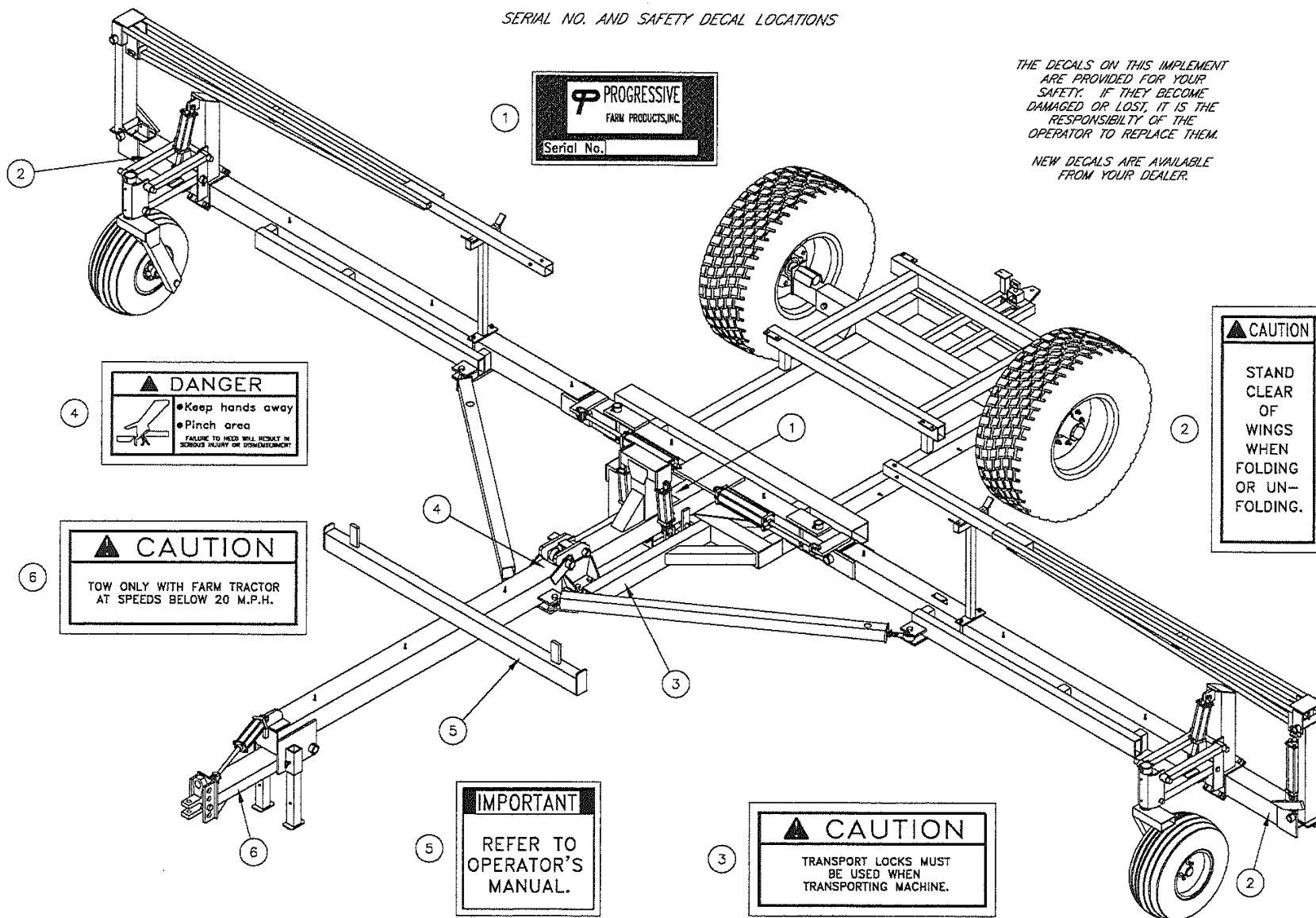
#8 It is not advised to run or transport the dry fertilizer unit with the tarp off, as leaves and branches from low trees can get into the hopper and create problems with the metering system.

#9 For most fertilizer rates the air pressure setting (magnehelic gauge) should be between 18 and 20.

#10 Try not to let fertilizer set in the hopper for extended periods of time, as the fertilizer will tend to draw moisture and get hard. If this does happen, the next time you get the hopper empty pop the v trough out and make sure there is not any hard material around the metering auger. (see metering system assy.)

#11 Periodically remove the wheel hub on the dry fertilizer drive tire and apply Never Seize or lubricant to the spindle. This is the shear pin protection for the fertilizer metering auger, and needs to be able to turn freely if pin were to shear.

SERIAL NO. AND SAFETY DECAL LOCATIONS



THE DECALS ON THIS IMPLEMENT ARE PROVIDED FOR YOUR SAFETY. IF THEY BECOME DAMAGED OR LOST, IT IS THE RESPONSIBILITY OF THE OPERATOR TO REPLACE THEM.

NEW DECALS ARE AVAILABLE FROM YOUR DEALER.

LUBRICATION AND MAINTENANCE

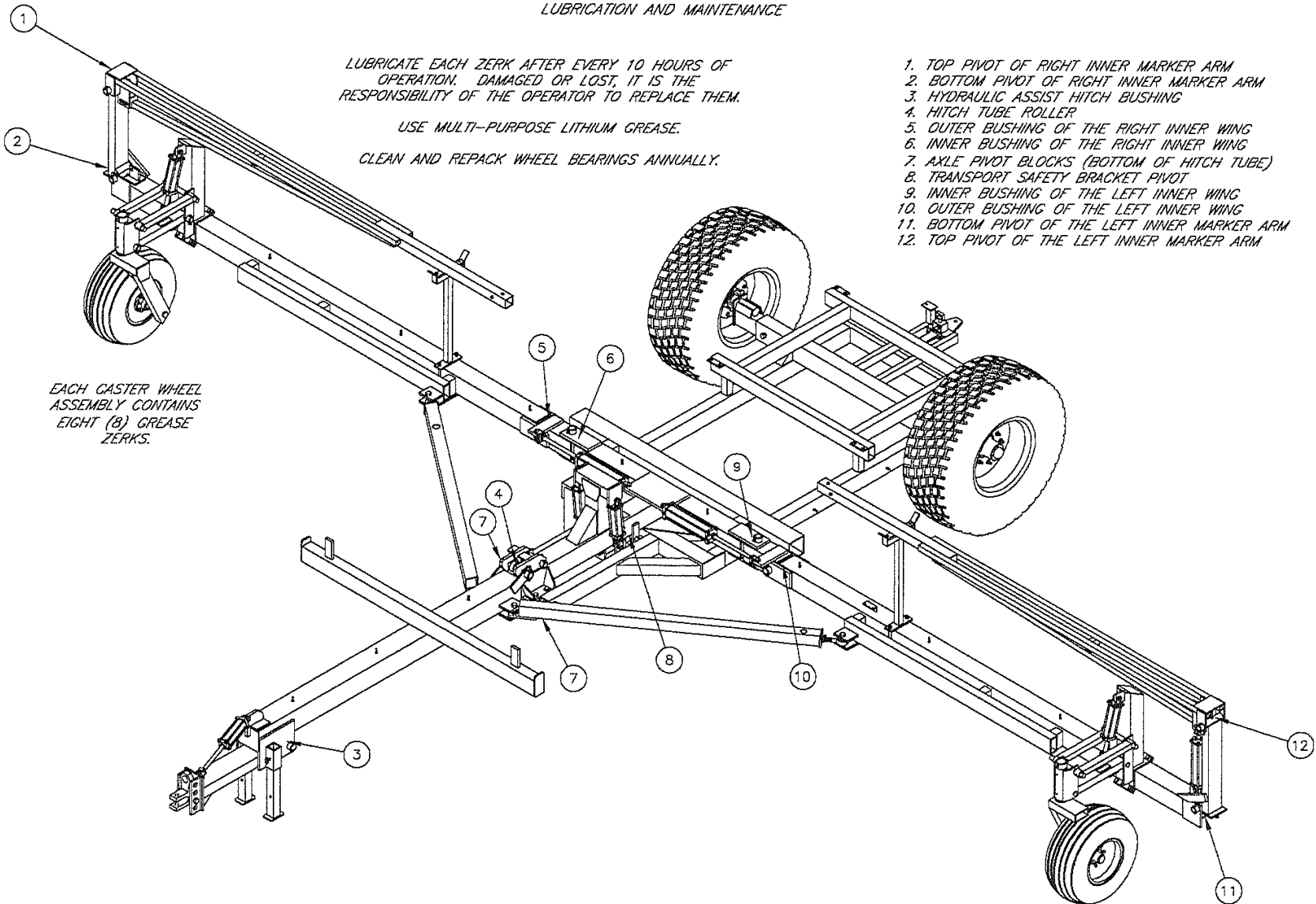
LUBRICATE EACH ZERK AFTER EVERY 10 HOURS OF OPERATION. DAMAGED OR LOST, IT IS THE RESPONSIBILITY OF THE OPERATOR TO REPLACE THEM.

USE MULTI-PURPOSE LITHIUM GREASE.

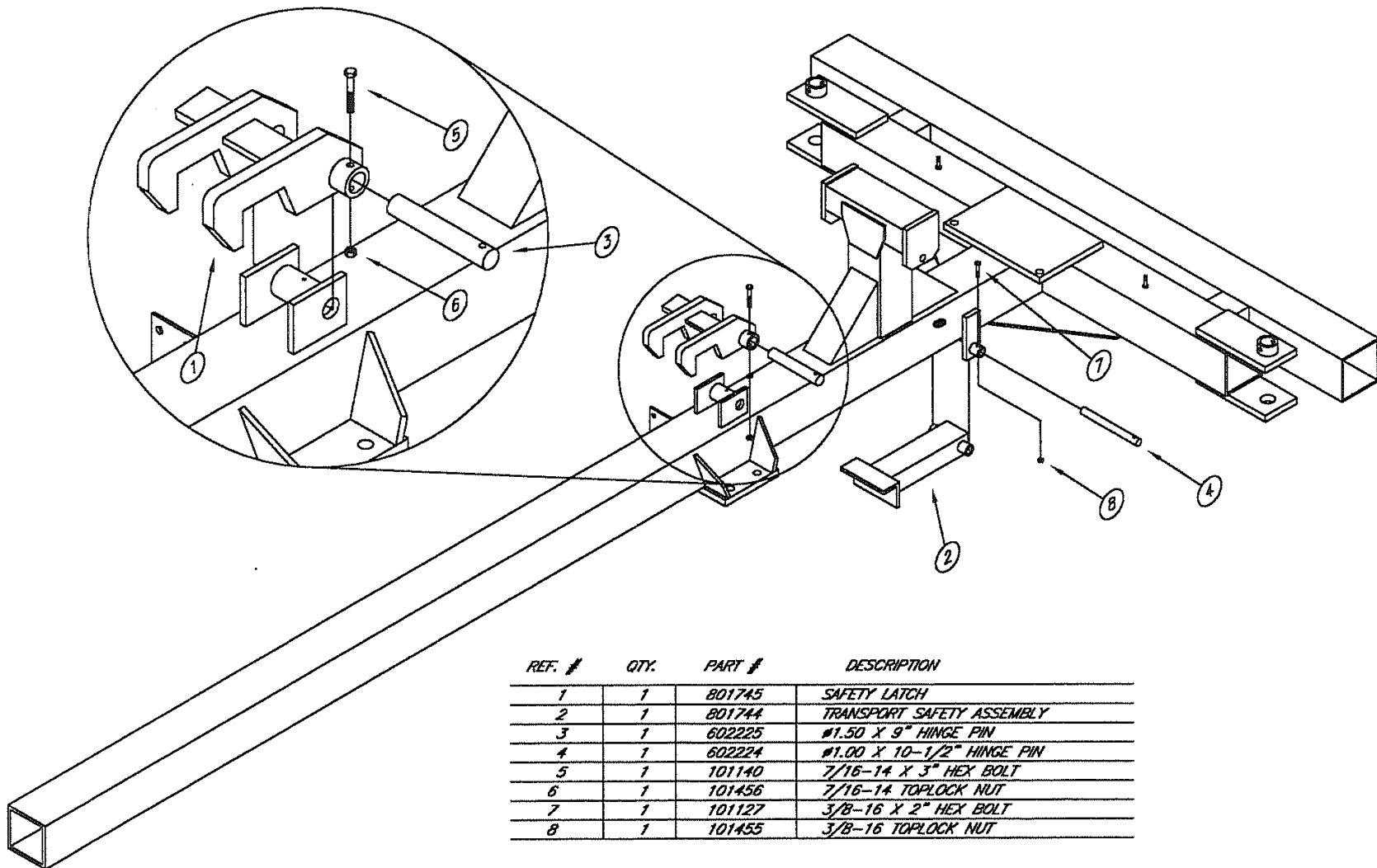
CLEAN AND REPACK WHEEL BEARINGS ANNUALLY.

1. TOP PIVOT OF RIGHT INNER MARKER ARM
2. BOTTOM PIVOT OF RIGHT INNER MARKER ARM
3. HYDRAULIC ASSIST HITCH BUSHING
4. HITCH TUBE ROLLER
5. OUTER BUSHING OF THE RIGHT INNER WING
6. INNER BUSHING OF THE RIGHT INNER WING
7. AXLE PIVOT BLOCKS (BOTTOM OF HITCH TUBE)
8. TRANSPORT SAFETY BRACKET PIVOT
9. INNER BUSHING OF THE LEFT INNER WING
10. OUTER BUSHING OF THE LEFT INNER WING
11. BOTTOM PIVOT OF THE LEFT INNER MARKER ARM
12. TOP PIVOT OF THE LEFT INNER MARKER ARM

EACH CASTER WHEEL ASSEMBLY CONTAINS EIGHT (8) GREASE ZERKS.

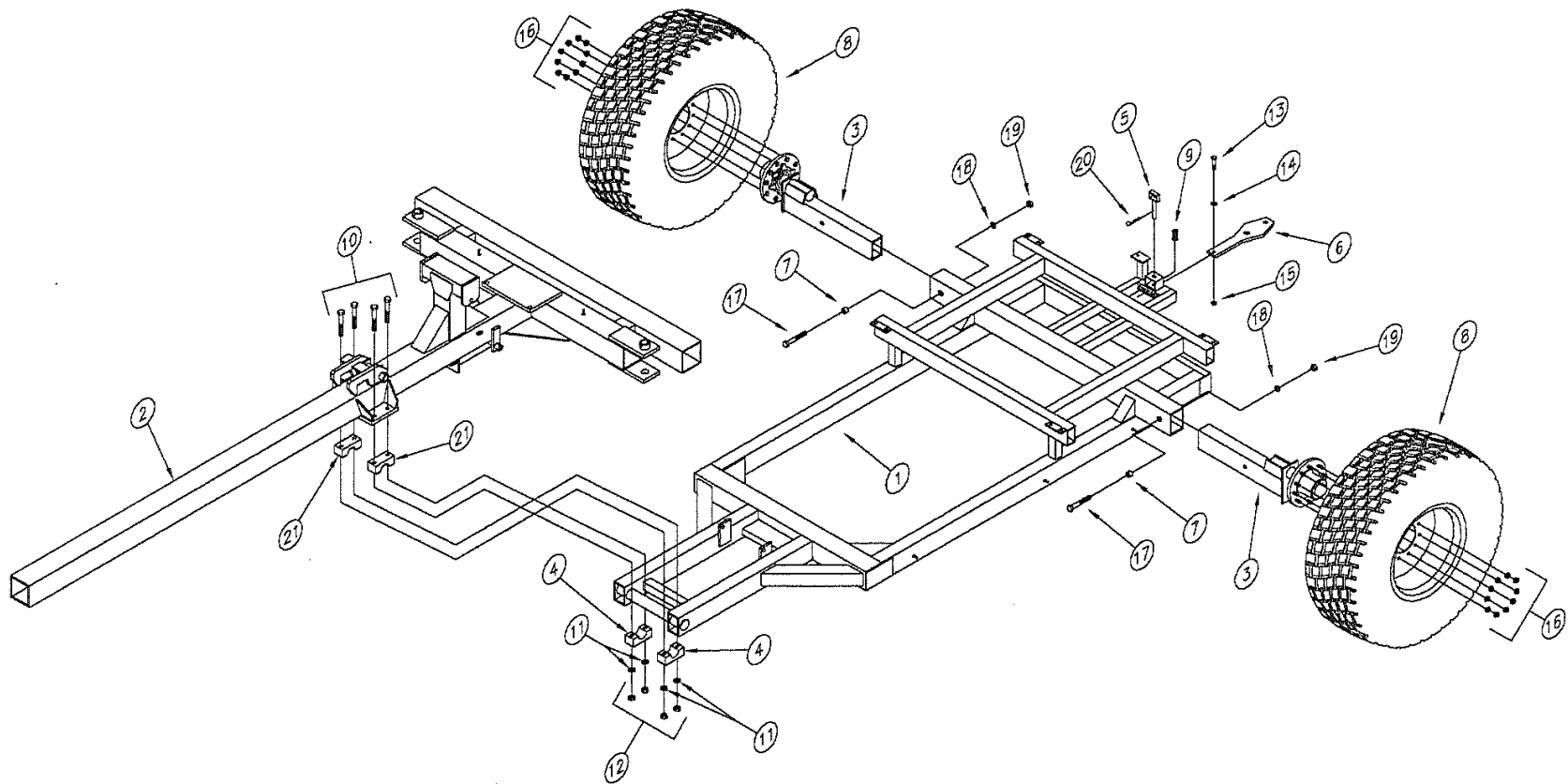


TRANSPORT SAFETY & SAFETY LATCH INSTALLATION



REF. #	QTY.	PART #	DESCRIPTION
1	1	801745	SAFETY LATCH
2	1	801744	TRANSPORT SAFETY ASSEMBLY
3	1	602225	#1.50 X 9" HINGE PIN
4	1	602224	#1.00 X 10-1/2" HINGE PIN
5	1	101140	7/16-14 X 3" HEX BOLT
6	1	101456	7/16-14 TOPLOCK NUT
7	1	101127	3/8-16 X 2" HEX BOLT
8	1	101455	3/8-16 TOPLOCK NUT

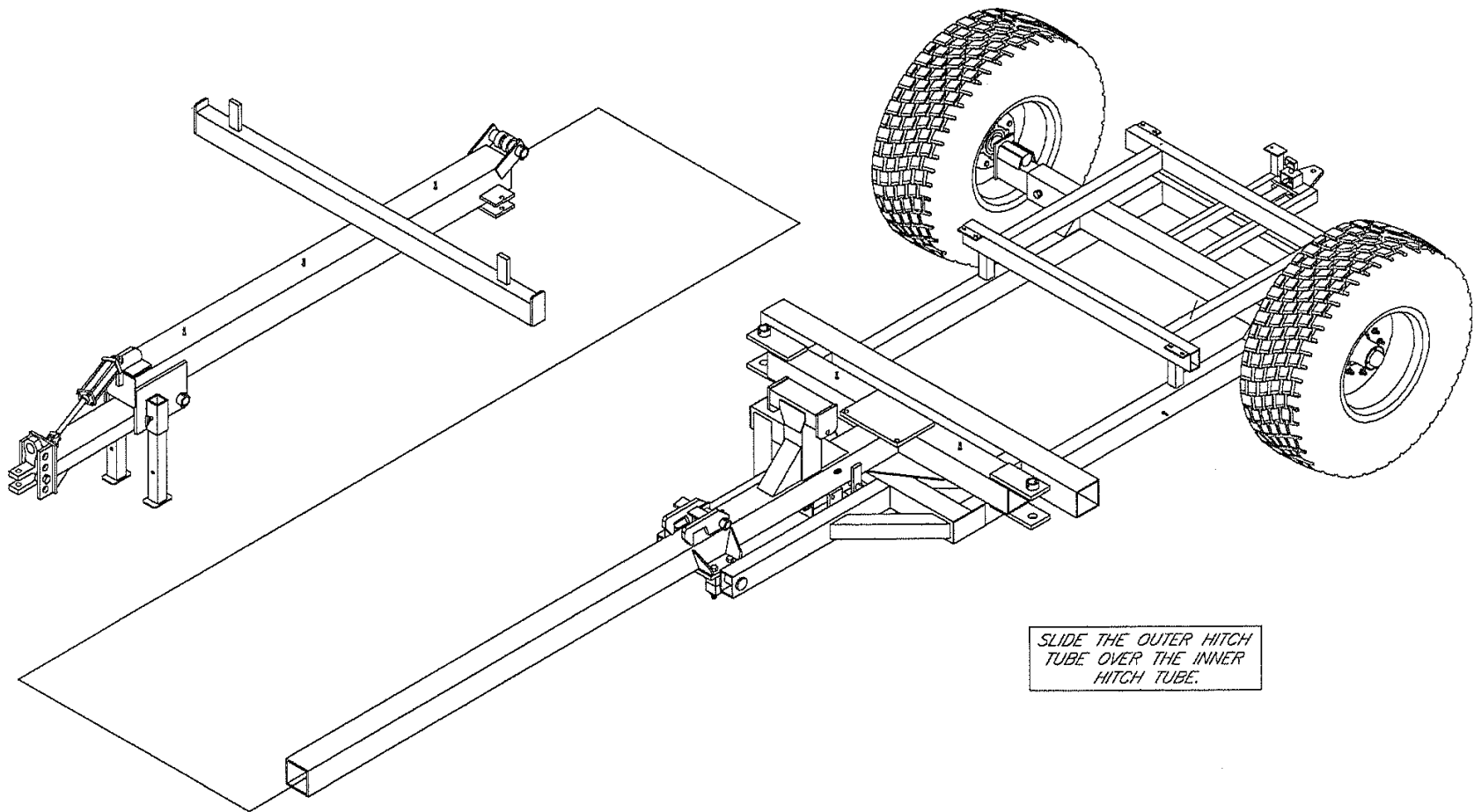
INNER HITCH TUBE/MAINFRAME & CARGO FRAME ASSEMBLY



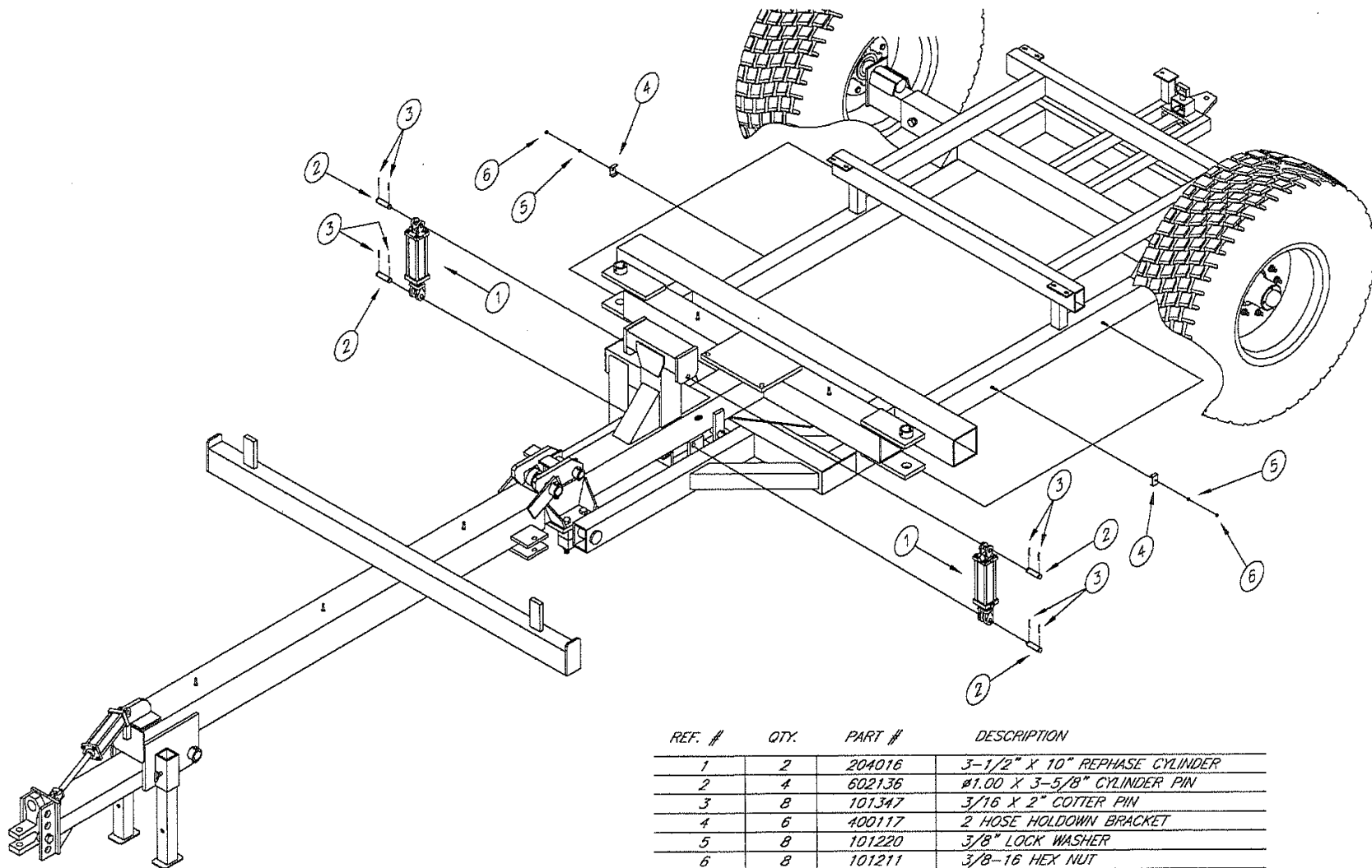
INNER HITCH TUBE/MAINFRAME & CARGO FRAME ASSEMBLY PARTS LIST

<i>REF. #</i>	<i>QTY.</i>	<i>PART #</i>	<i>DESCRIPTION</i>
<i>1</i>	<i>1</i>	<i>801319</i>	<i>CARGO FRAME ASSEMBLY – COMPLETE</i>
<i>2</i>	<i>1</i>	<i>801768</i>	<i>INNER HITCH/MAINFRAME ASSEMBLY</i>
<i>3</i>	<i>2</i>	<i>801552</i>	<i>STUB AXLE</i>
<i>4</i>	<i>2</i>	<i>400237</i>	<i>ZERKED 3" PIN BLOCK</i>
<i>5</i>	<i>1</i>	<i>801195</i>	<i>DRAWBAR PIN</i>
<i>6</i>	<i>1</i>	<i>801293</i>	<i>TELESCOPING DRAWBAR</i>
<i>7</i>	<i>2</i>	<i>602191</i>	<i>1.500 O.D. X 1.00 I.D. X 1" – BUSHING</i>
<i>8</i>	<i>2</i>	<i>301196</i>	<i>18.4 X 26 TIRE & WHEEL ASSEMBLY</i>
<i>9</i>	<i>1</i>	<i>101330</i>	<i>COMPRESSION SPRING</i>
<i>10</i>	<i>4</i>	<i>101482</i>	<i>1-8 GRD. 8 BOLT</i>
<i>11</i>	<i>4</i>	<i>101484</i>	<i>1" LOCK WASHER</i>
<i>12</i>	<i>4</i>	<i>101483</i>	<i>1-8 HEX NUT</i>
<i>13</i>	<i>1</i>	<i>101171</i>	<i>3/4-10 X 2" HEX BOLT</i>
<i>14</i>	<i>1</i>	<i>101233</i>	<i>3/4" FLAT WASHER</i>
<i>15</i>	<i>1</i>	<i>101242</i>	<i>3/4-10 SELF-LOCKING HEX NUT</i>
<i>16</i>	<i>20</i>	<i>301189</i>	<i>3/4-16 UNF LUG NUT</i>
<i>17</i>	<i>2</i>	<i>101203</i>	<i>1-8 X 7" HEX BOLT</i>
<i>18</i>	<i>2</i>	<i>101226</i>	<i>1" LOCK WASHER</i>
<i>19</i>	<i>2</i>	<i>101217</i>	<i>1-8 HEX NUT</i>
<i>20</i>	<i>1</i>	<i>101266</i>	<i>3/16" HAIRPIN</i>
<i>21</i>	<i>2</i>	<i>400245</i>	<i>3" PIN BLOCK</i>

OUTER & INNER HITCH TUBE/MAINFRAME ASSEMBLY

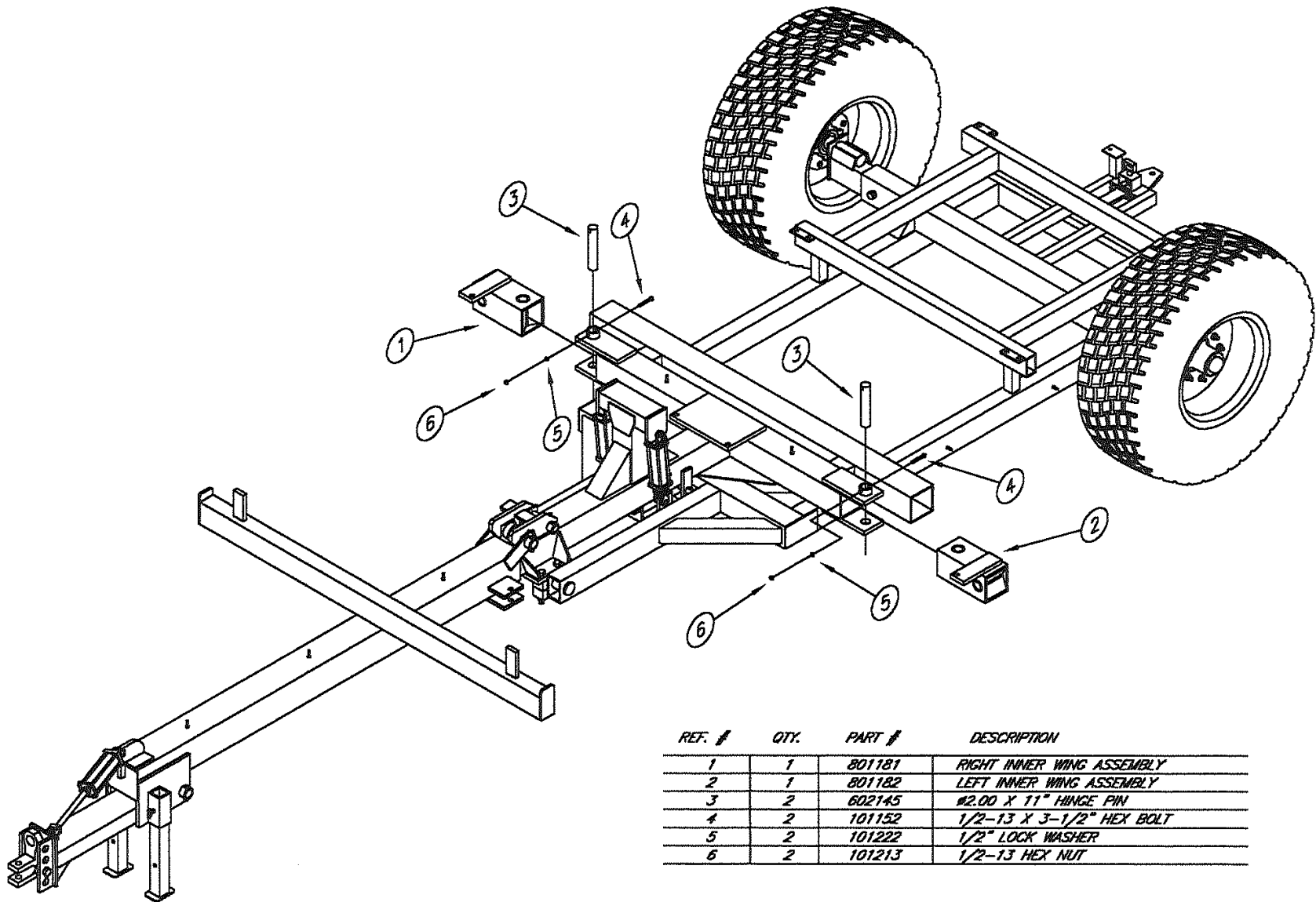


MAINFRAME HYDRAULIC LIFT CYLINDER INSTALLATION



REF. #	QTY.	PART #	DESCRIPTION
1	2	204016	3-1/2" X 10" REPHASE CYLINDER
2	4	602136	#1.00 X 3-5/8" CYLINDER PIN
3	8	101347	3/16 X 2" COTTER PIN
4	6	400117	2 HOSE HOLDOWN BRACKET
5	8	101220	3/8" LOCK WASHER
6	8	101211	3/8-16 HEX NUT

INNER WING ASSEMBLY



REF. #	QTY.	PART #	DESCRIPTION
1	1	801181	RIGHT INNER WING ASSEMBLY
2	1	801182	LEFT INNER WING ASSEMBLY
3	2	602145	#2.00 X 11" HINGE PIN
4	2	101152	1/2-13 X 3-1/2" HEX BOLT
5	2	101222	1/2" LOCK WASHER
6	2	101213	1/2-13 HEX NUT

INSTALLING THE TRANSPORT SAFETY CABLE

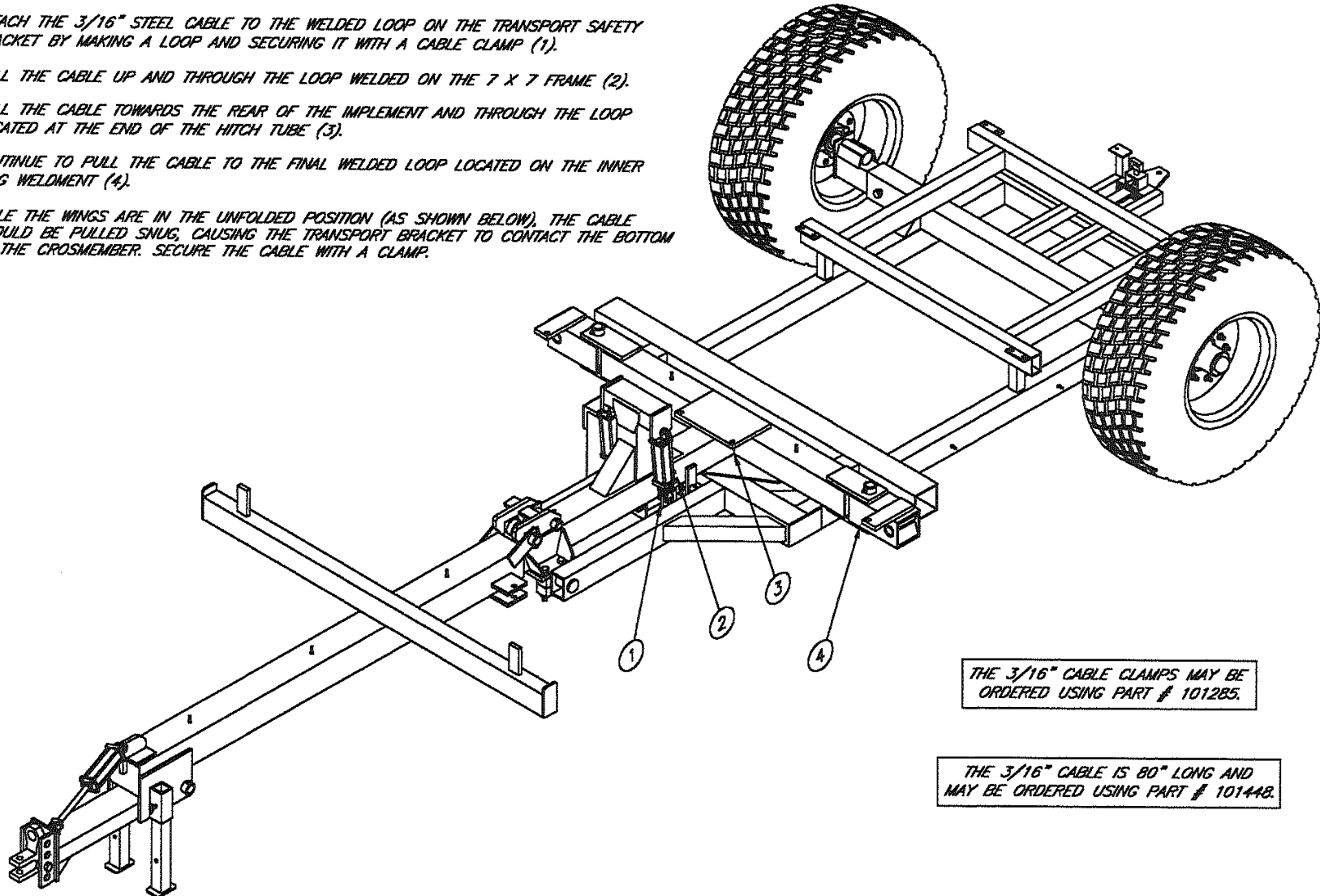
ATTACH THE 3/16" STEEL CABLE TO THE WELDED LOOP ON THE TRANSPORT SAFETY BRACKET BY MAKING A LOOP AND SECURING IT WITH A CABLE CLAMP (1).

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).

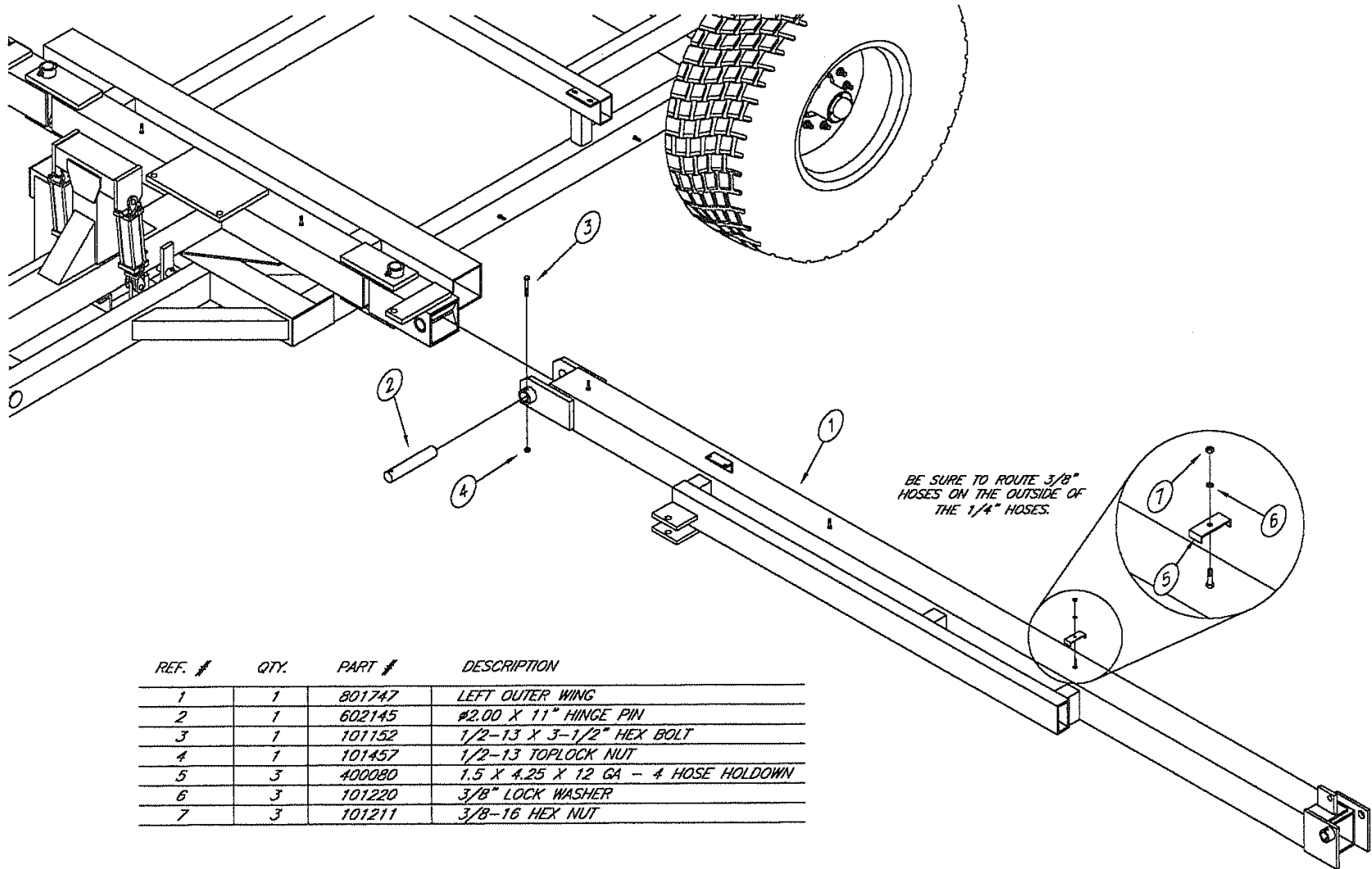
WHILE THE WINGS ARE IN THE UNFOLDED POSITION (AS SHOWN BELOW), THE CABLE SHOULD BE PULLED SNUG, CAUSING THE TRANSPORT BRACKET TO CONTACT THE BOTTOM OF THE CROSMEMBER. SECURE THE CABLE WITH A CLAMP.



THE 3/16" CABLE CLAMPS MAY BE ORDERED USING PART # 101285.

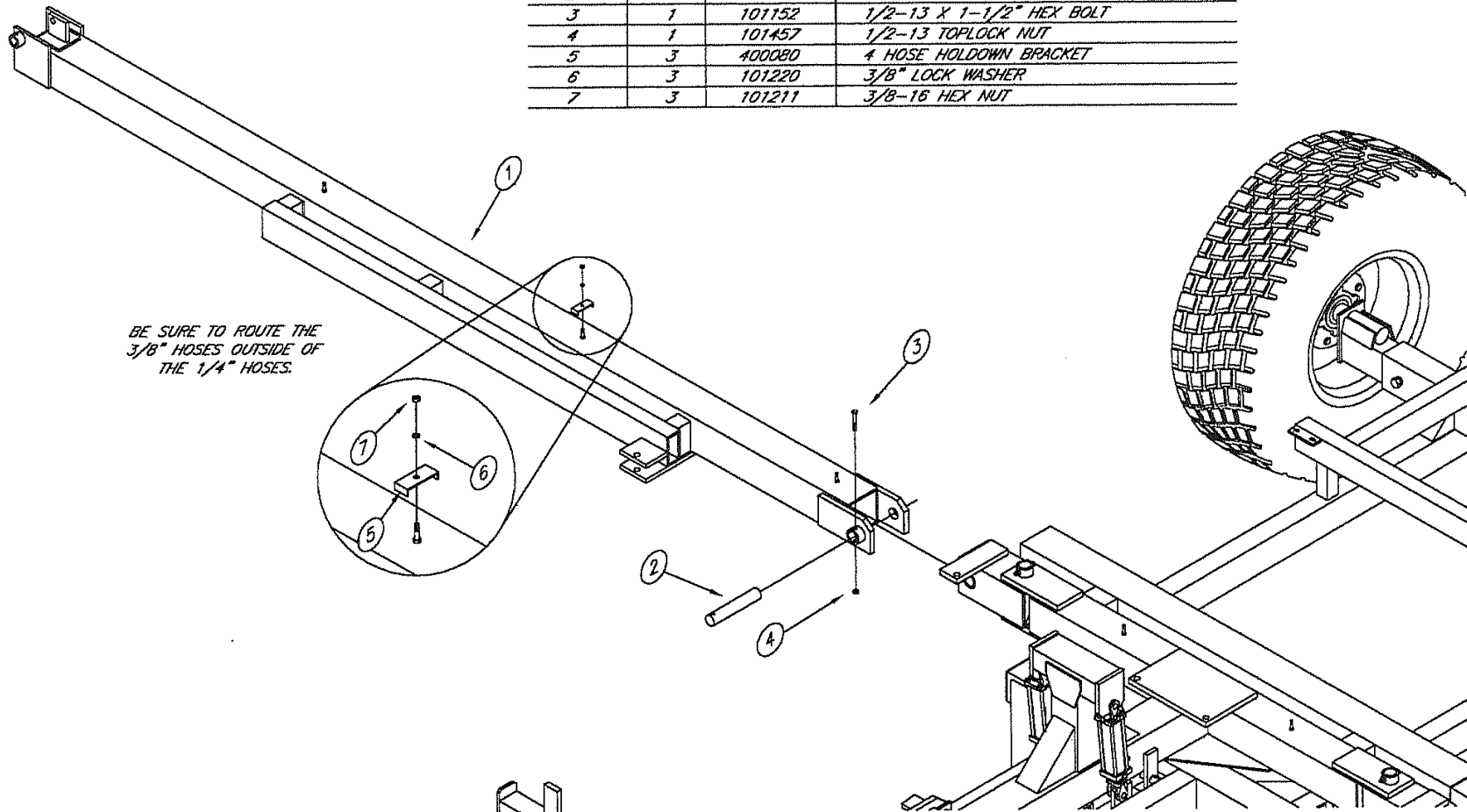
THE 3/16" CABLE IS 80" LONG AND MAY BE ORDERED USING PART # 101448.

LEFT OUTER WING ASSEMBLY

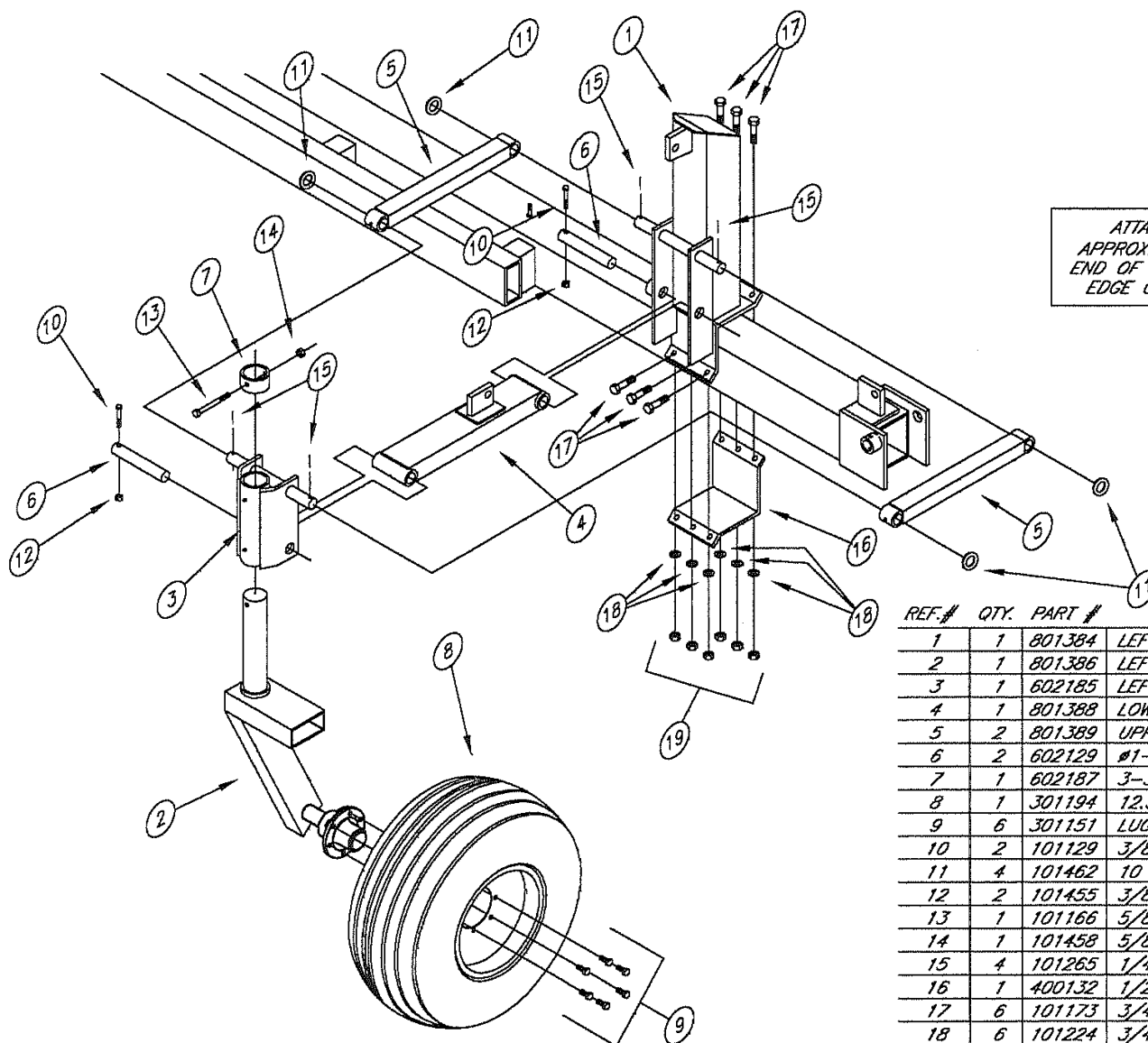


RIGHT OUTER WING ASSEMBLY

REF. #	QTY.	PART #	DESCRIPTION
1	1	801746	RIGHT OUTER WING
2	1	602145	#2.00 X 11" HINGE PIN
3	1	101152	1/2-13 X 1-1/2" HEX BOLT
4	1	101457	1/2-13 TOPLOCK NUT
5	3	400080	4 HOSE HOLDOWN BRACKET
6	3	101220	3/8" LOCK WASHER
7	3	101211	3/8-16 HEX NUT



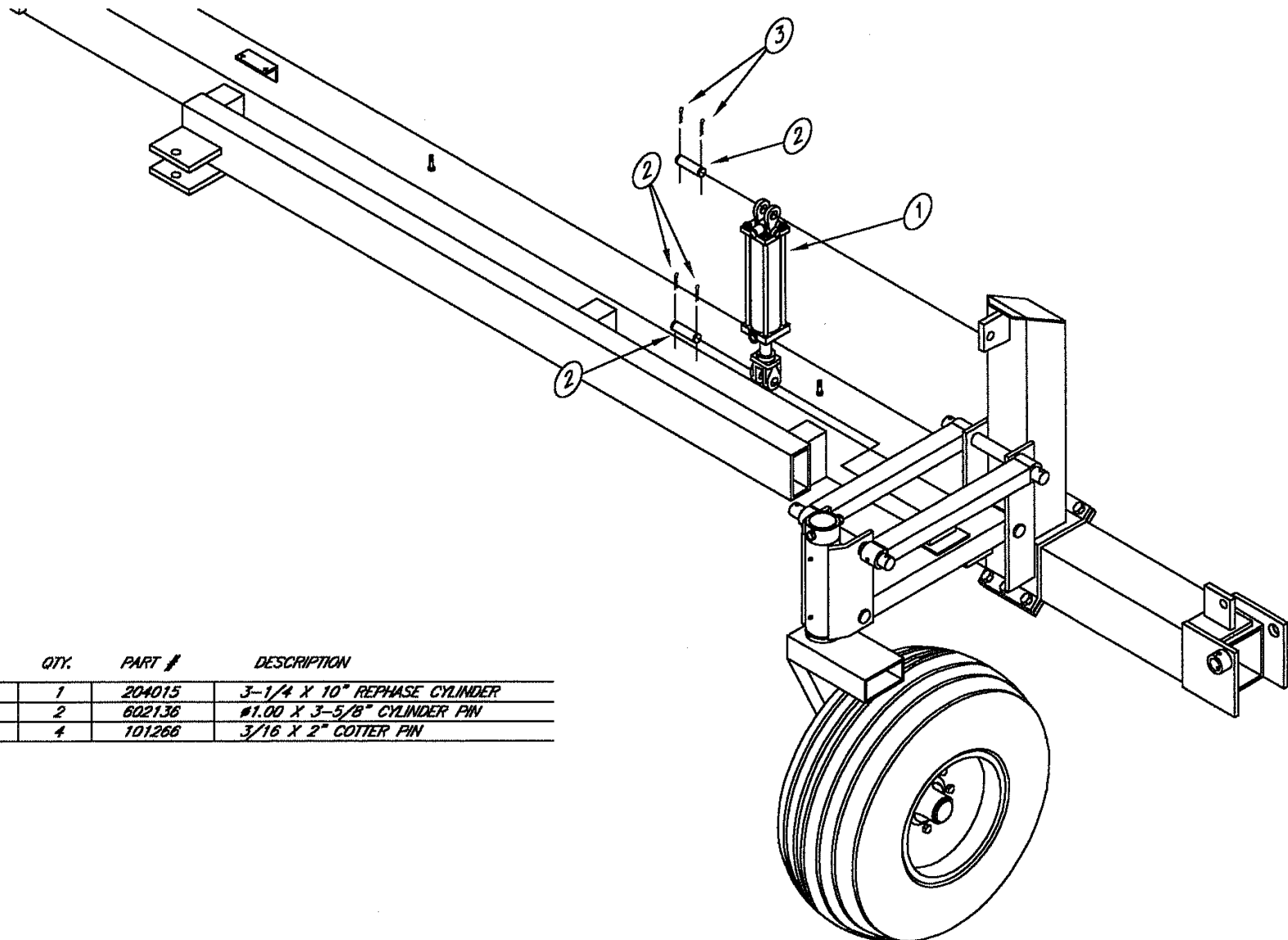
LEFT CASTERWHEEL ASSEMBLY



ATTACH SADDLE CLAMPS
APPROXIMATELY 32" FROM THE
END OF THE WING TUBE TO THE
EDGE OF THE SADDLE CLAMP.

REF.#	QTY.	PART #	DESCRIPTION
1	1	801384	LEFT CYLINDER TOWER
2	1	801386	LEFT CASTER WHEEL UNIT
3	1	602185	LEFT CASTER BUSHING
4	1	801388	LOWER PARALLEL ARM
5	2	801389	UPPER PARALLEL ARM
6	2	602129	#1-1/2 X 9" - PARALLEL ARM PIN
7	1	602187	3-3/4 O.D.X 3 I.D.X 2" - COLLAR
8	1	301194	12.5L X 15SL 8-PLY&10 X 15 ASSEM.
9	6	301151	LUG BOLT - 9/16-18 UNF X 1-1/8"
10	2	101129	3/8-16 X 3" HEX BOLT
11	4	101462	10 GA. X 1-1/2" MACHINE WASHER
12	2	101455	3/8-16 TOPLOCK NUT
13	1	101166	5/8-11 X 5" HEX BOLT
14	1	101458	5/8-11 TOPLOCK NUT
15	4	101265	1/4 X 2" COTTER PIN
16	1	400132	1/2 X 8 X 17" - SADDLE CLAMP
17	6	101173	3/4-10 X 3" HEX BOLT
18	6	101224	3/4" LOCK WASHER
19	6	101215	3/4-10 HEX NUT

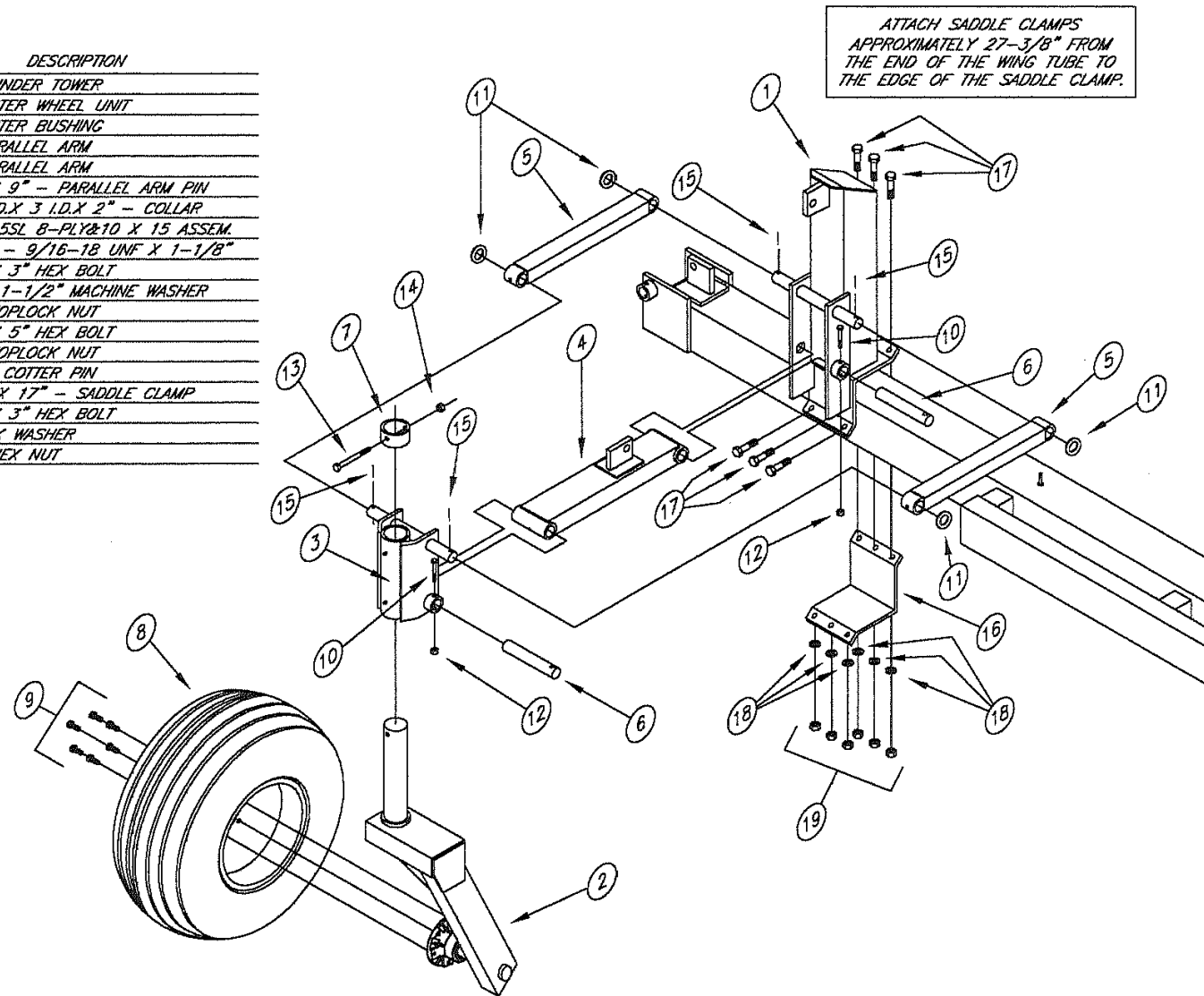
ATTACHING THE LEFT CASTERWHEEL CYLINDER



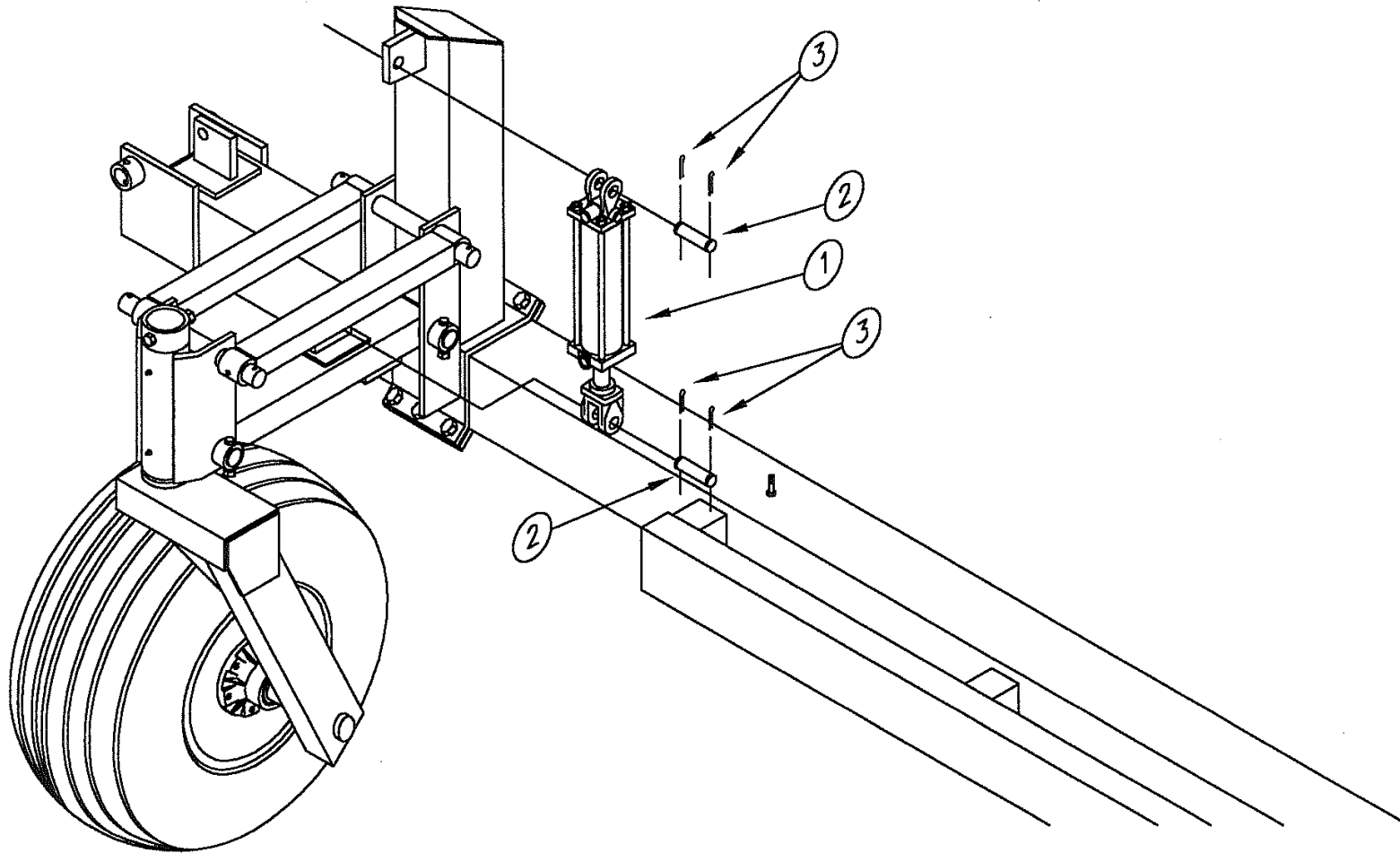
REF. #	QTY.	PART #	DESCRIPTION
1	1	204015	3-1/4 X 10" REPHASE CYLINDER
2	2	602136	#1.00 X 3-5/8" CYLINDER PIN
3	4	101266	3/16 X 2" COTTER PIN

RIGHT CASTERWHEEL ASSEMBLY

REF. #	QTY.	PART #	DESCRIPTION
1	1	801385	RIGHT CYLINDER TOWER
2	1	801387	RIGHT CASTER WHEEL UNIT
3	1	602186	RIGHT CASTER BUSHING
4	1	801388	LOWER PARALLEL ARM
5	2	801389	UPPER PARALLEL ARM
6	2	602129	#1-1/2 X 9" - PARALLEL ARM PIN
7	1	602187	3-3/4 O.D. X 3 I.D. X 2" - COLLAR
8	1	301194	12.5L X 15SL 8-PLY X 10 X 15 ASSEM.
9	6	301151	LUG BOLT - 9/16-18 UNF X 1-1/8"
10	2	101129	3/8-16 X 3" HEX BOLT
11	4	101462	10 GA. X 1-1/2" MACHINE WASHER
12	2	101455	3/8-16 TOPLOCK NUT
13	1	101166	5/8-11 X 5" HEX BOLT
14	1	101458	5/8-11 TOPLOCK NUT
15	4	101247	1/4 X 2" COTTER PIN
16	1	400132	1/2 X 8 X 17" - SADDLE CLAMP
17	6	101173	3/4-10 X 3" HEX BOLT
18	6	101224	3/4" LOCK WASHER
19	6	101215	3/4-10 HEX NUT



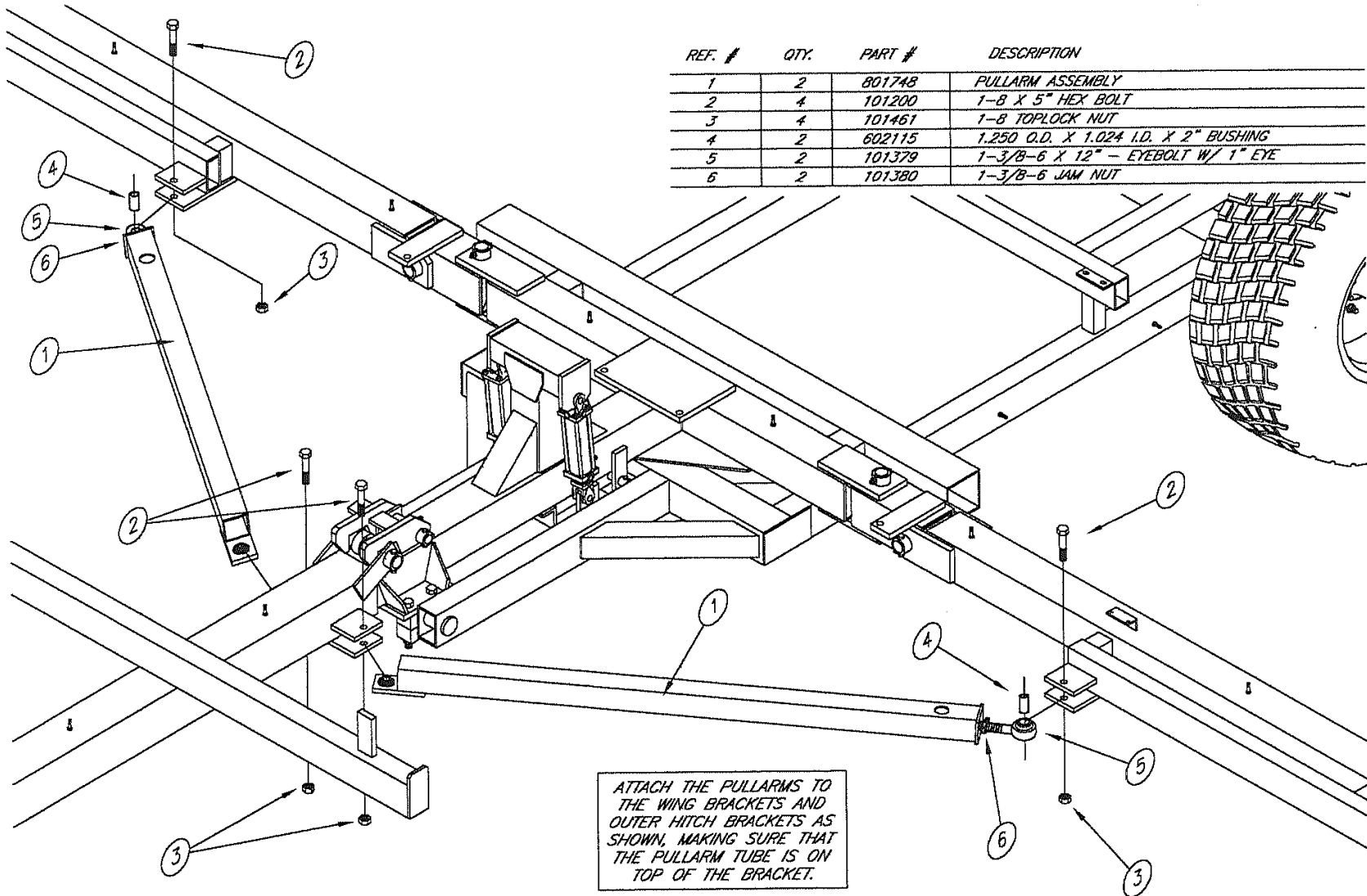
ATTACHING THE RIGHT CASTERWHEEL CYLINDER



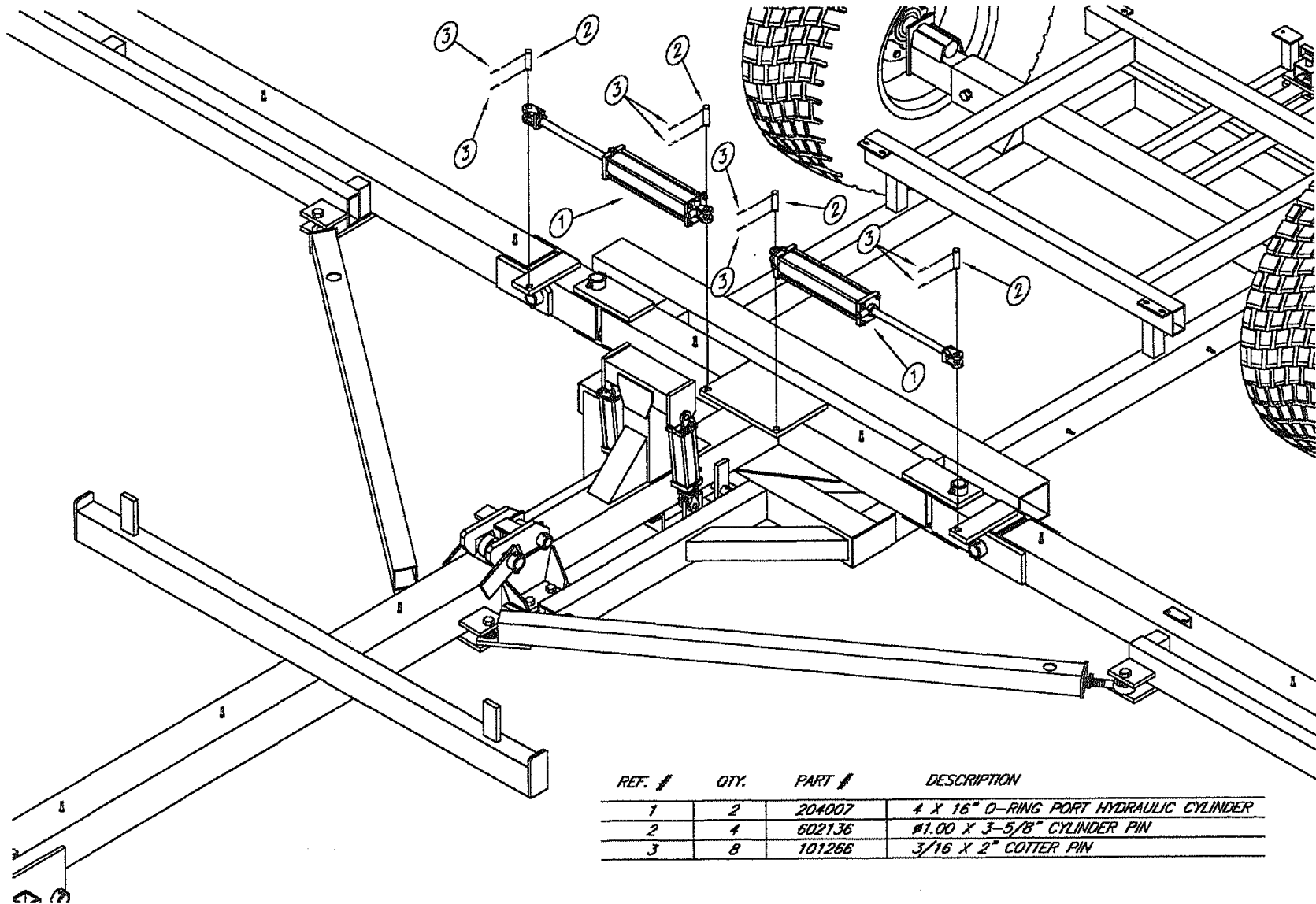
REF. #	QTY.	PART #	DESCRIPTION
1	1	204015	3-1/4 X 10" REPHASE CYLINDER
2	2	602136	#1.00 X 3-5/8" CYLINDER PIN
3	4	101266	3/16 X 2" COTTER PIN

ATTACHING THE PULLARM ASSEMBLIES

REF. #	QTY.	PART #	DESCRIPTION
1	2	801748	PULLARM ASSEMBLY
2	4	101200	1-8 X 5" HEX BOLT
3	4	101461	1-8 TOPLOCK NUT
4	2	602115	1.250 O.D. X 1.024 I.D. X 2" BUSHING
5	2	101379	1-3/8-6 X 12" - EYEBOLT W/ 1" EYE
6	2	101380	1-3/8-6 JAM NUT



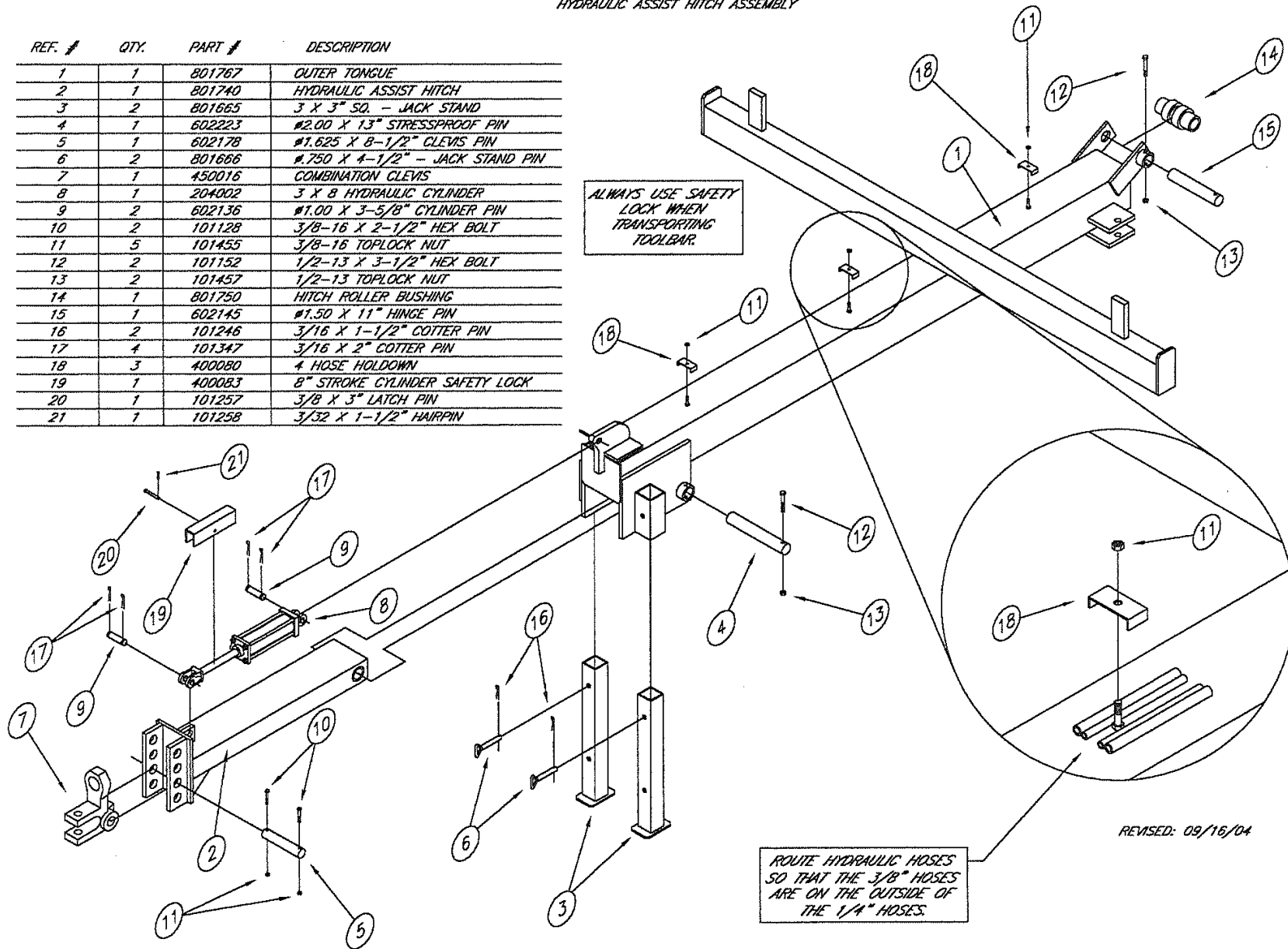
HYDRAULIC WING-FOLD CYLINDER ATTACHMENT



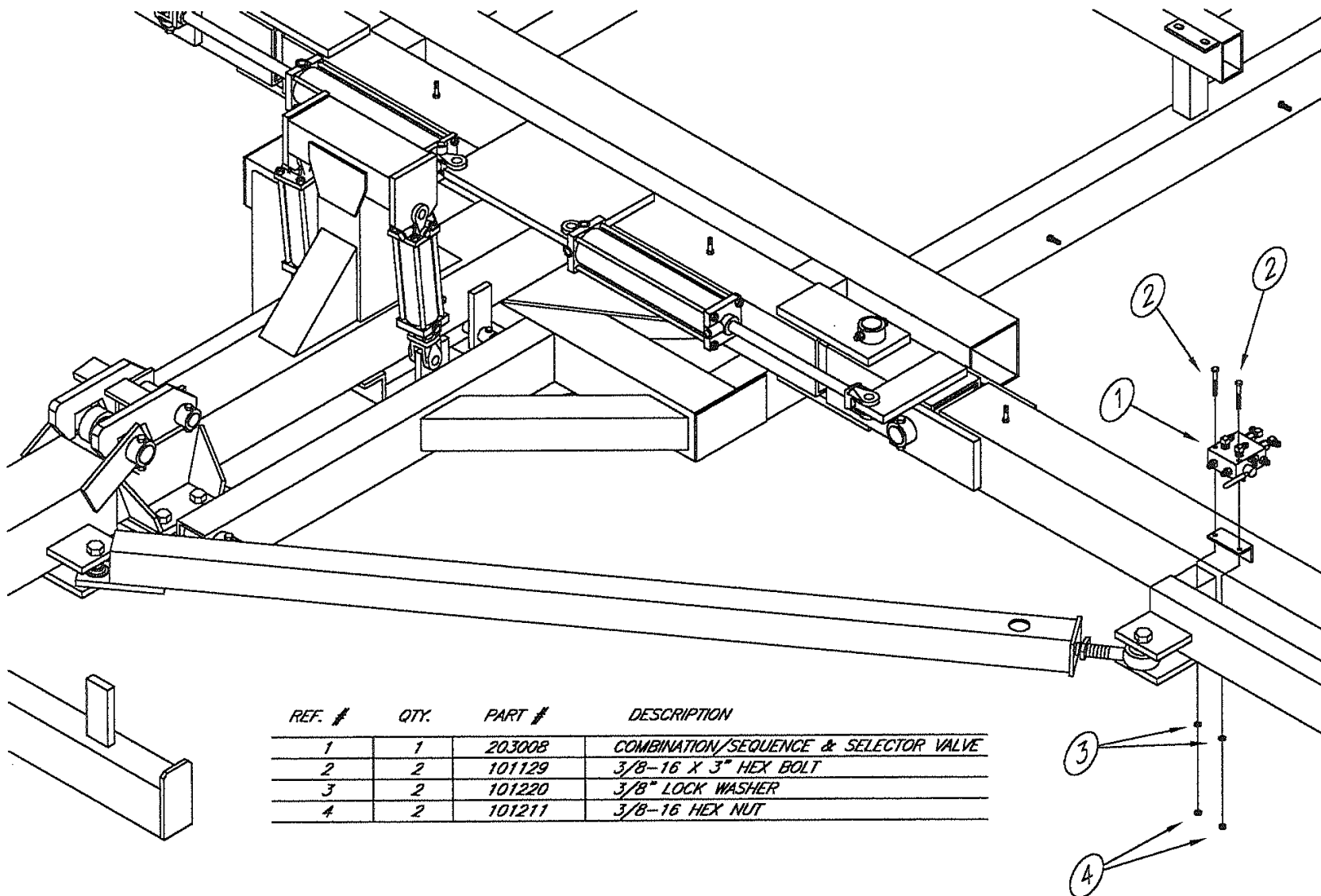
REF. #	QTY.	PART #	DESCRIPTION
1	2	204007	4 X 16" O-RING PORT HYDRAULIC CYLINDER
2	4	602136	#1.00 X 3-5/8" CYLINDER PIN
3	8	101266	3/16 X 2" COTTER PIN

HYDRAULIC ASSIST HITCH ASSEMBLY

REF. #	QTY.	PART #	DESCRIPTION
1	1	801767	OUTER TONGUE
2	1	801740	HYDRAULIC ASSIST HITCH
3	2	801665	3 X 3" SQ. - JACK STAND
4	1	602223	#2.00 X 13" STRESSPROOF PIN
5	1	602178	#1.625 X 8-1/2" CLEVIS PIN
6	2	801666	#.750 X 4-1/2" - JACK STAND PIN
7	1	450016	COMBINATION CLEVIS
8	1	204002	3 X 8 HYDRAULIC CYLINDER
9	2	602136	#1.00 X 3-5/8" CYLINDER PIN
10	2	101128	3/8-16 X 2-1/2" HEX BOLT
11	5	101455	3/8-16 TOPLOCK NUT
12	2	101152	1/2-13 X 3-1/2" HEX BOLT
13	2	101457	1/2-13 TOPLOCK NUT
14	1	801750	HITCH ROLLER BUSHING
15	1	602145	#1.50 X 11" HINGE PIN
16	2	101246	3/16 X 1-1/2" COTTER PIN
17	4	101347	3/16 X 2" COTTER PIN
18	3	400080	4 HOSE HOLDOWN
19	1	400083	8" STROKE CYLINDER SAFETY LOCK
20	1	101257	3/8 X 3" LATCH PIN
21	1	101258	3/32 X 1-1/2" HAIRPIN



ATTACHING THE COMBINATION VALVE

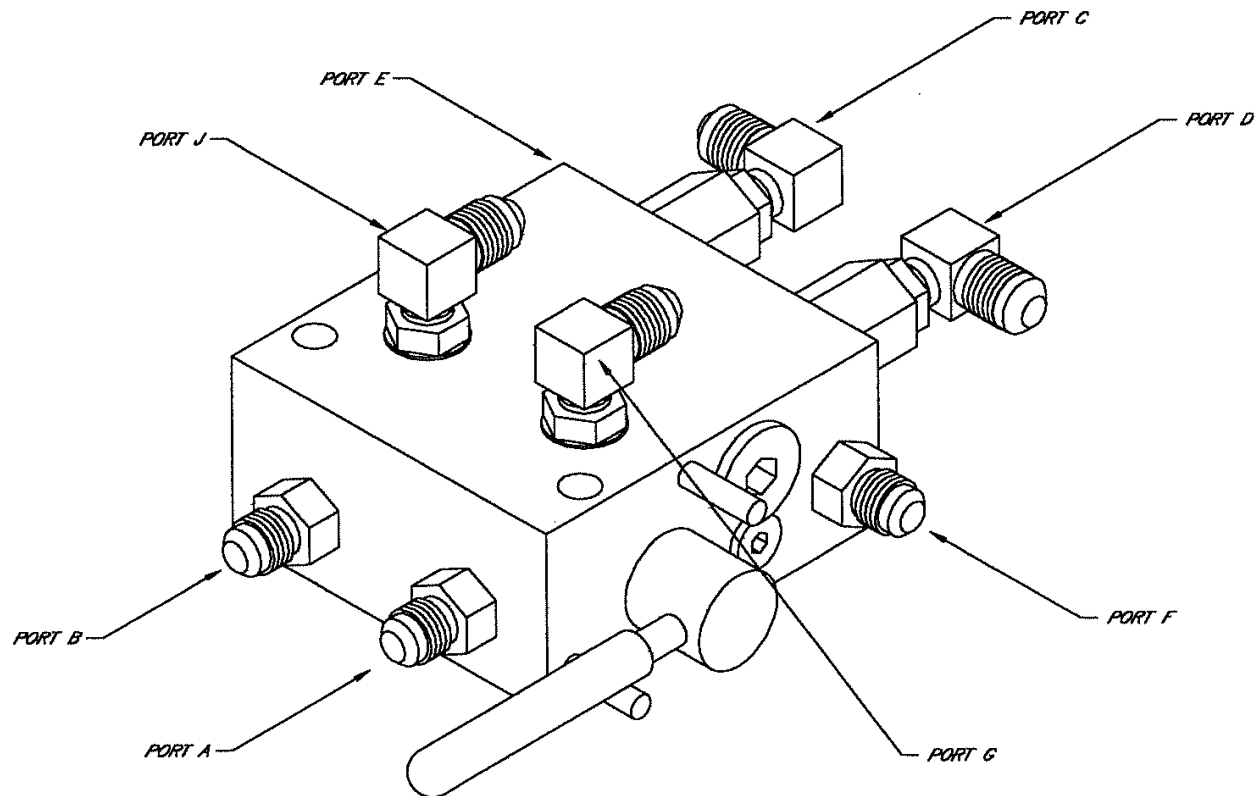


COMBINATION VALVE PORT IDENTIFICATION AND FUNCTION

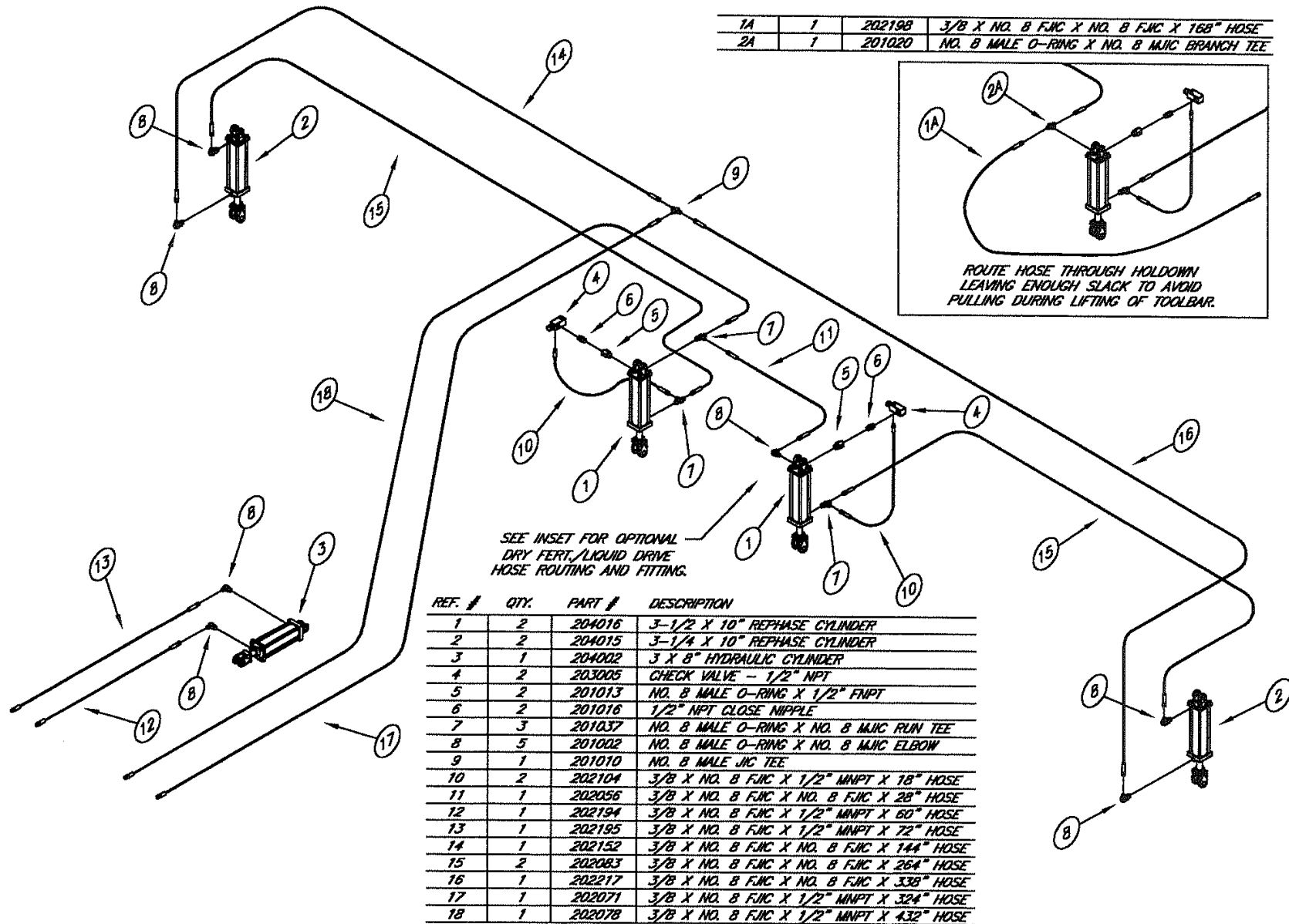
ALL PORTS ARE NO.6 MALE JIC FITTINGS.

PORTS C,D,E, AND F ARE OPERATIONAL WHEN THE VALVE HANDLE IS HORIZONTAL AS SHOWN BELOW. PORTS C,D,E, AND F ARE ALL MARKER FUNCTION PORTS.

PORTS J AND G ARE OPERATIONAL WHEN THE VALVE HANDLE IS VERTICAL. PORTS J AND G ARE FOLD FUNCTION PORTS.



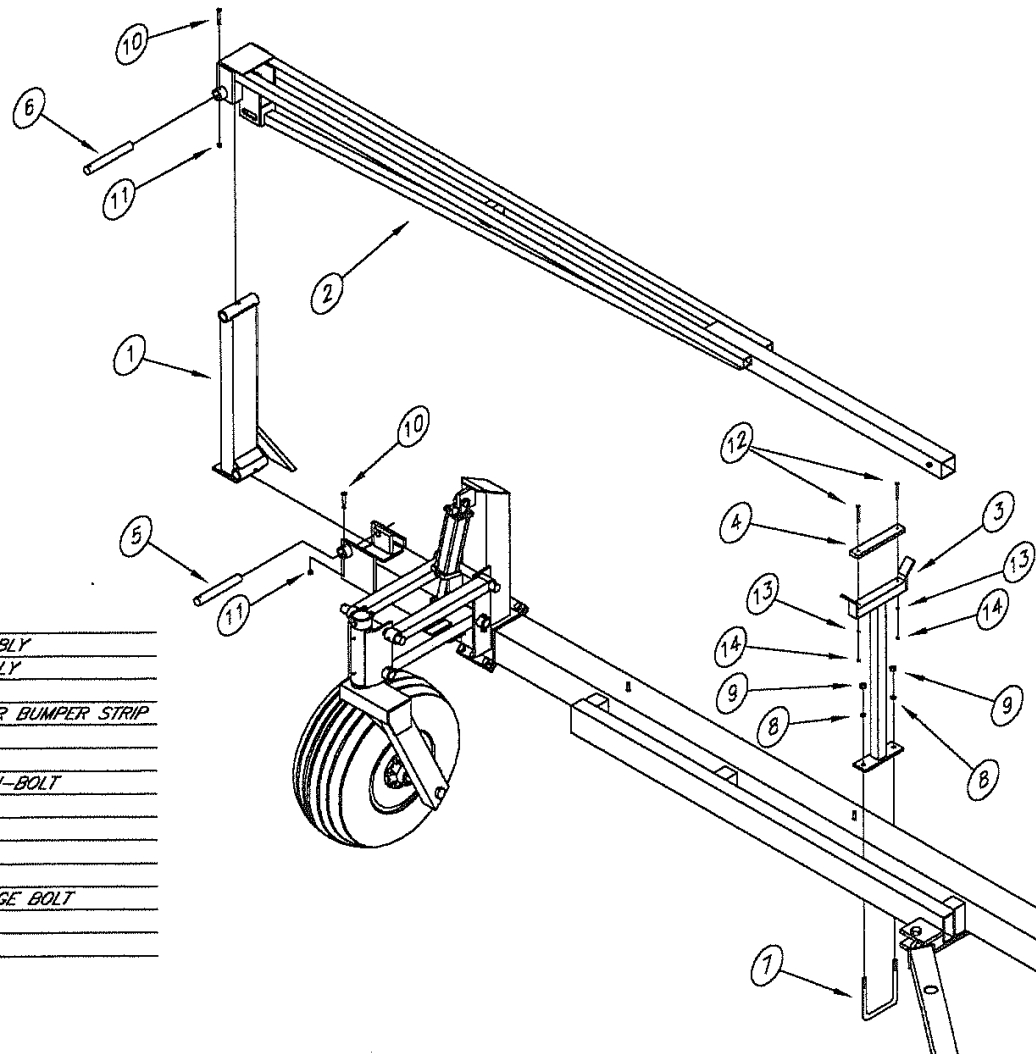
HYDRAULIC LIFT SYSTEM



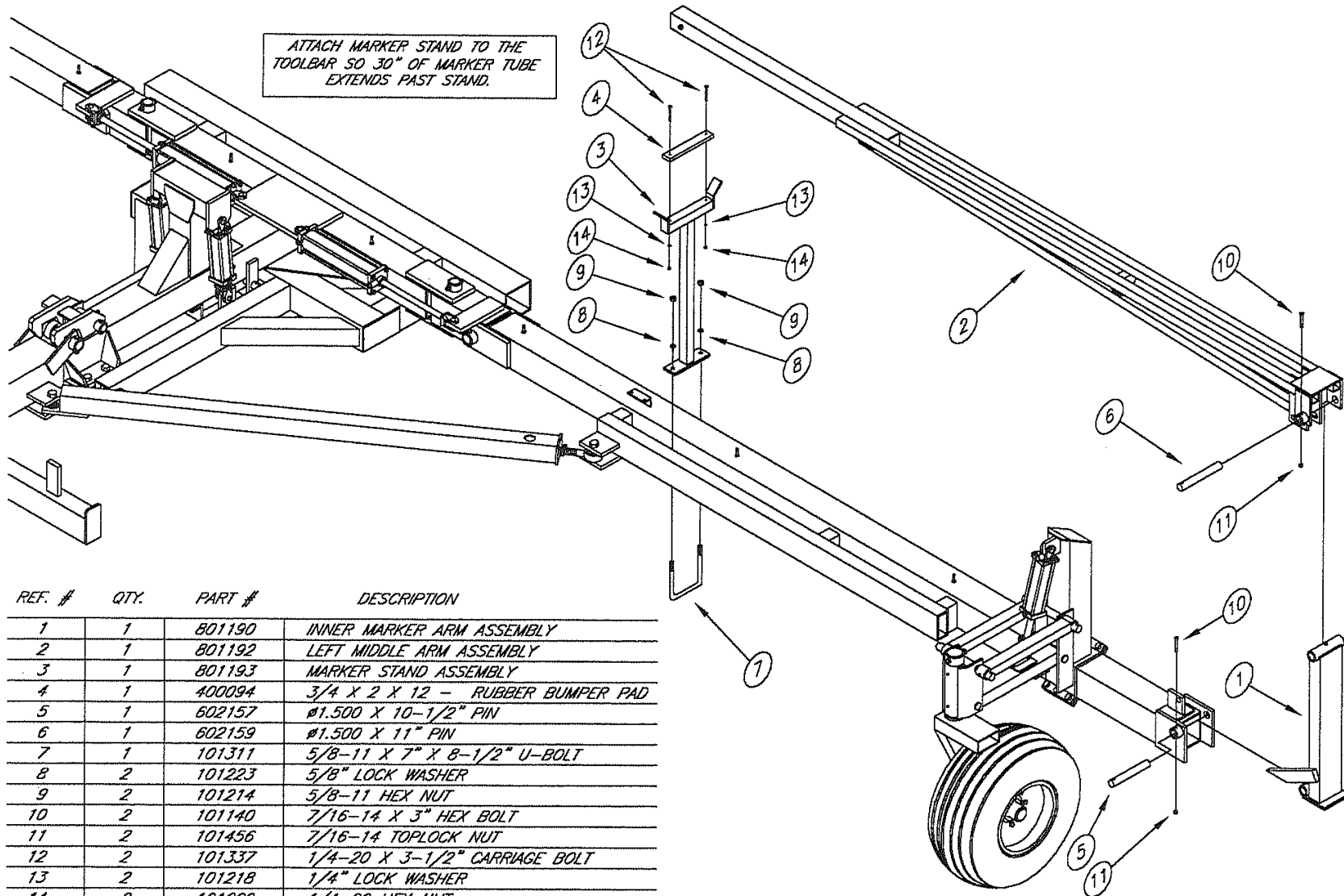
RIGHT MARKER & MARKER STAND ASSEMBLY

ATTACH MARKER STAND TO THE
TOOLBAR SO 30" OF MARKER TUBE
EXTENDS PAST STAND.

REF. #	QTY.	PART #	DESCRIPTION
1	1	801190	INNER MARKER ARM ASSEMBLY
2	1	801191	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	#1.500 X 10-1/2" PIN
6	1	602159	#1.500 X 11" 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

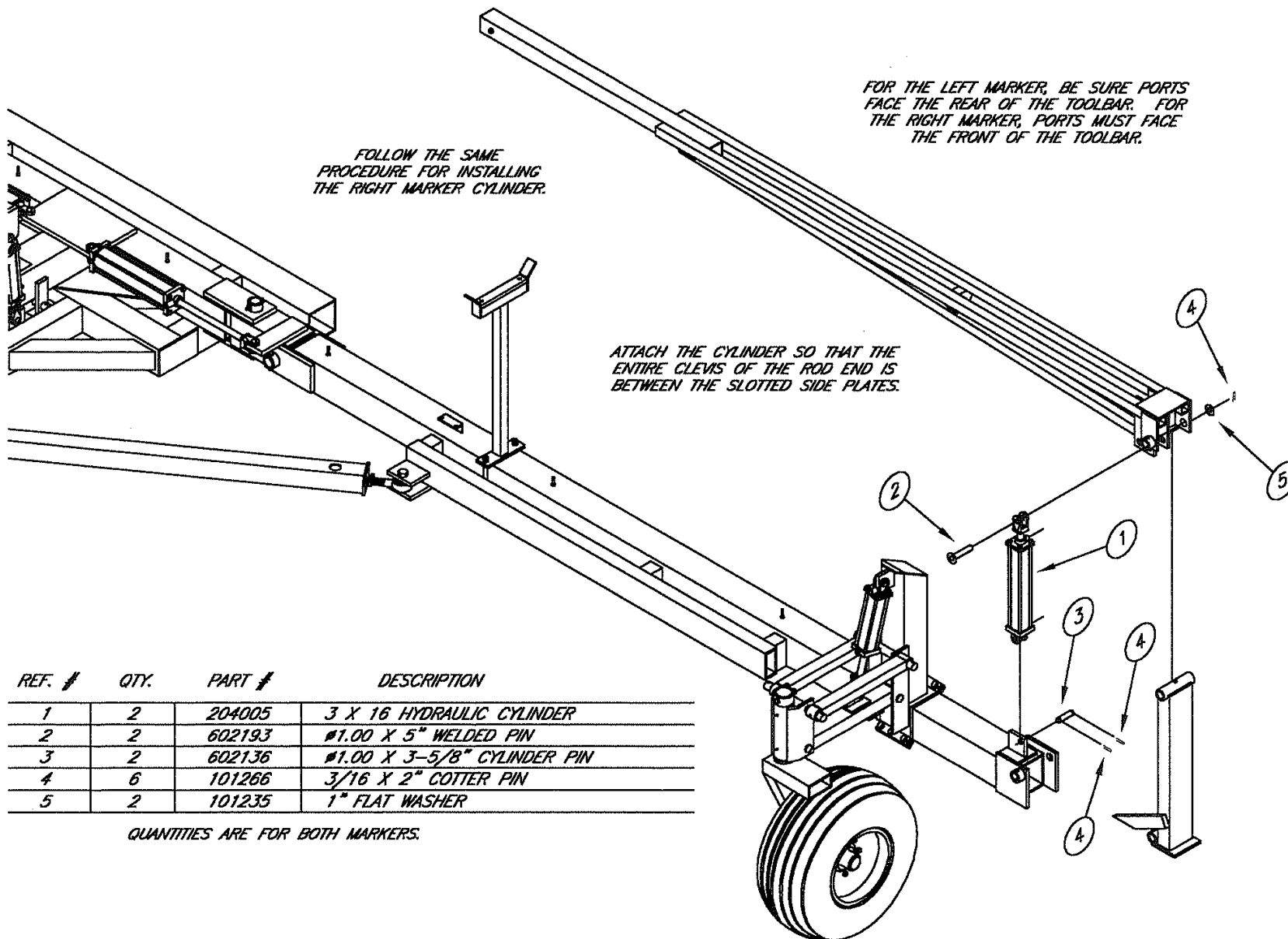


LEFT MARKER ASSEMBLY AND STAND



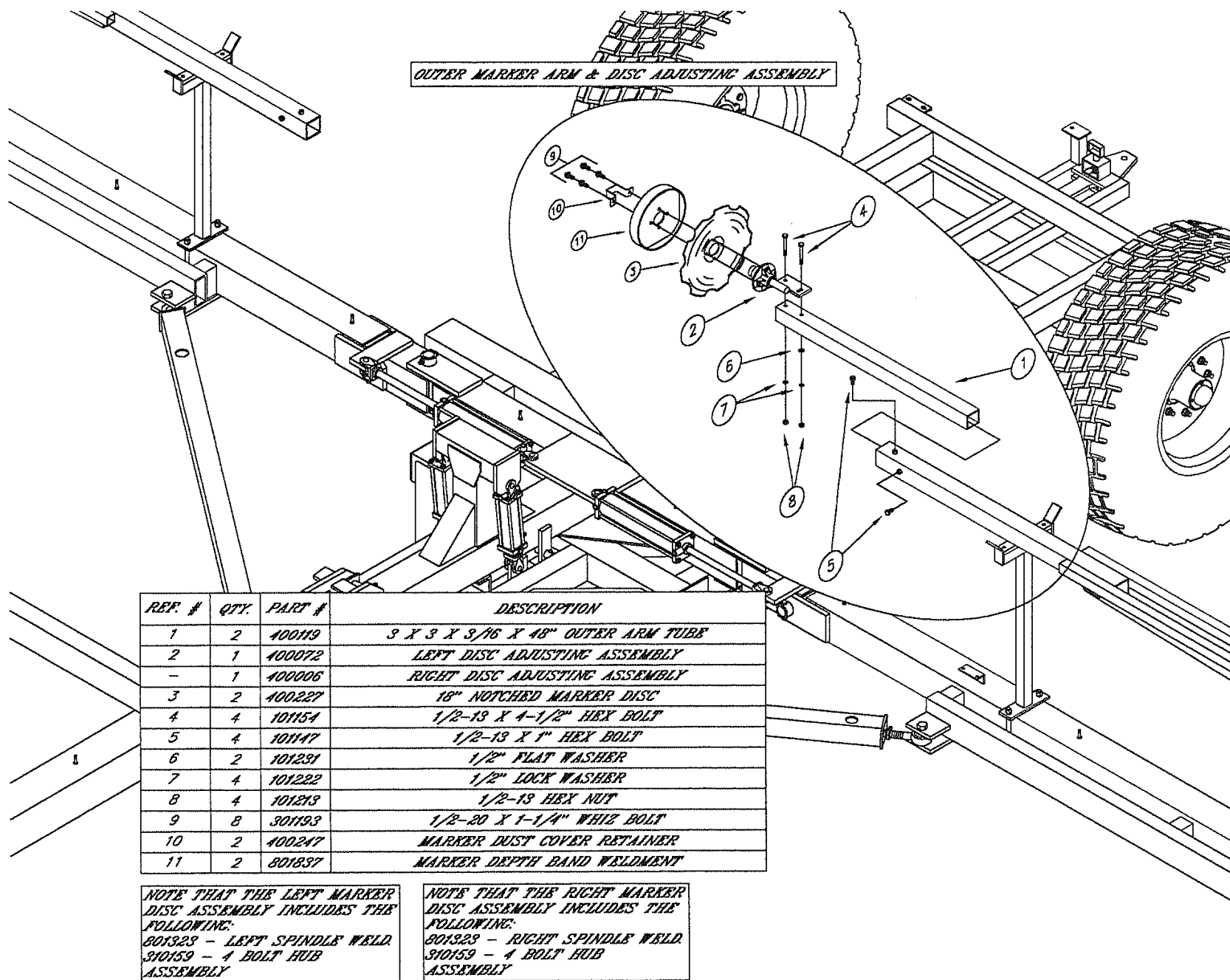
REF. #	QTY.	PART #	DESCRIPTION
1	1	801190	INNER MARKER ARM ASSEMBLY
2	1	801192	LEFT MIDDLE ARM ASSEMBLY
3	1	801193	MARKER STAND ASSEMBLY
4	1	400094	3/4 X 2 X 12 - RUBBER BUMPER PAD
5	1	602157	#1.500 X 10-1/2" PIN
6	1	602159	#1.500 X 11" PIN
7	1	101311	5/8-11 X 7" X 8-1/2" U-BOLT
8	2	101223	5/8" LOCK 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 INSTALLATION

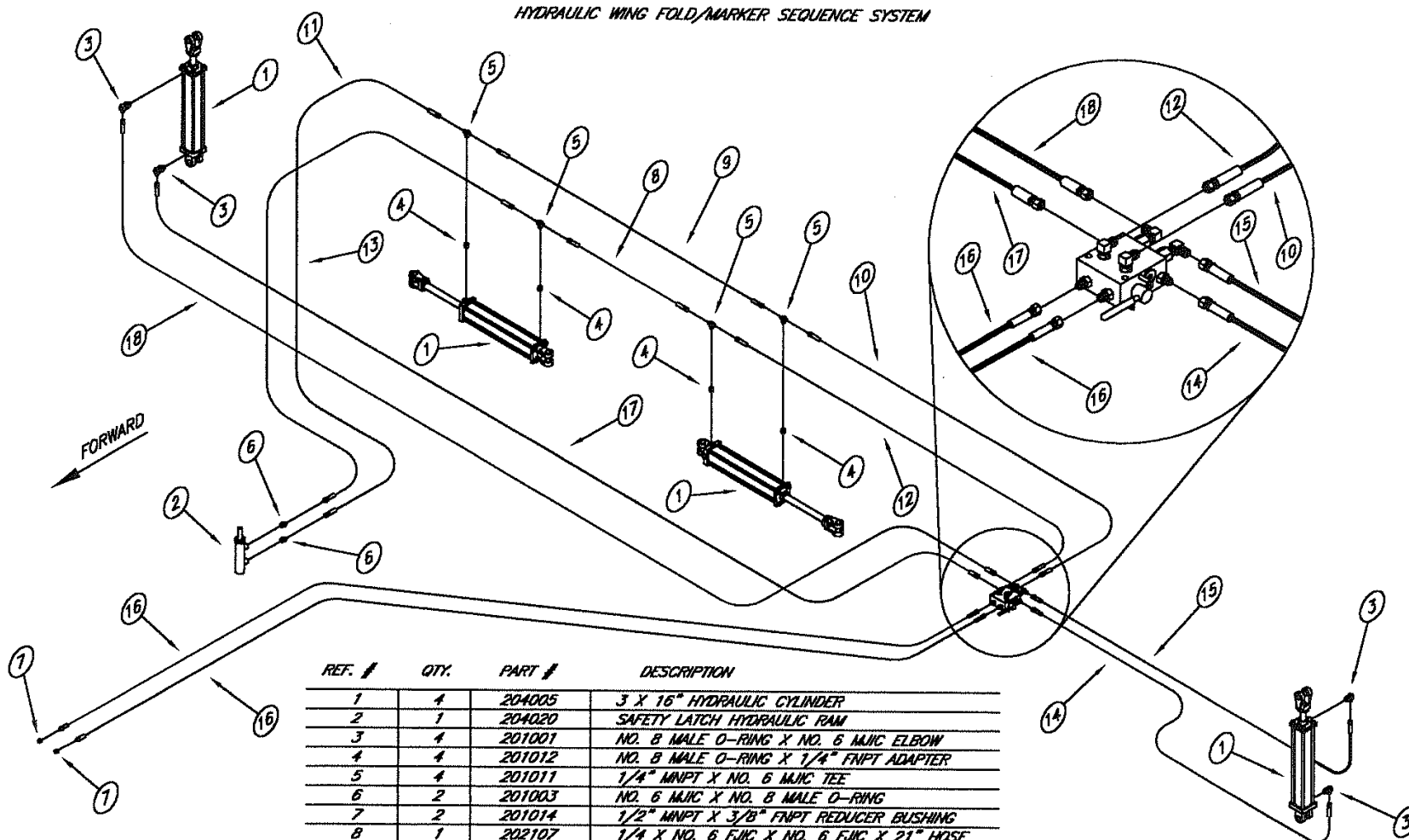


REF. #	QTY.	PART #	DESCRIPTION
1	2	204005	3 X 16 HYDRAULIC CYLINDER
2	2	602193	#1.00 X 5" WELDED PIN
3	2	602136	#1.00 X 3-5/8" CYLINDER PIN
4	6	101266	3/16 X 2" COTTER PIN
5	2	101235	1" FLAT WASHER

QUANTITIES ARE FOR BOTH MARKERS.



HYDRAULIC WING FOLD/MARKER SEQUENCE SYSTEM



ROUTE THE 1/4" HOSES FROM THE TRACTOR DOWN THE HITCH TUBE, THEN THRU THE LEFT PULLARM TUBE TO THE COMBINATION VALVE AS SHOWN.

REF. #	QTY.	PART #	DESCRIPTION
1	4	204005	3 X 16" HYDRAULIC CYLINDER
2	1	204020	SAFETY LATCH HYDRAULIC RAM
3	4	201001	NO. 8 MALE O-RING X NO. 6 MALE ELBOW
4	4	201012	NO. 8 MALE O-RING X 1/4" FNPT ADAPTER
5	4	201011	1/4" MNPT X NO. 6 MALE TEE
6	2	201003	NO. 6 MALE X NO. 8 MALE O-RING
7	2	201014	1/2" MNPT X 3/8" FNPT REDUCER BUSHING
8	1	202107	1/4 X NO. 6 FHC X NO. 6 FHC X 21" HOSE
9	1	202089	1/4 X NO. 6 FHC X NO. 6 FHC X 59" HOSE
10	1	202006	1/4 X NO. 6 FHC X NO. 6 FHC X 72" HOSE
11	1	202007	1/4 X NO. 6 FHC X NO. 6 FHC X 84" HOSE
12	1	202122	1/4 X NO. 6 FHC X NO. 6 FHC X 92" HOSE
13	1	202226	1/4 X NO. 6 FHC X NO. 6 FHC X 104" HOSE
14	1	202038	1/4 X NO. 6 FHC X NO. 6 FHC X 162" HOSE
15	1	202039	1/4 X NO. 6 FHC X NO. 6 FHC X 180" HOSE
16	2	202236	1/4 X 3/8" MNPT X NO. 6 FHC X 312" HOSE
17	1	202087	1/4 X NO. 6 FHC X NO. 6 FHC X 354" HOSE
18	1	202086	1/4 X NO. 6 FHC X NO. 6 FHC X 372" HOSE

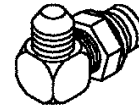
HYDRAULIC COMPONENTS



201010



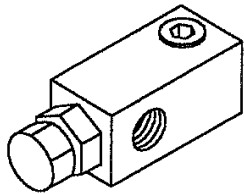
201020



201002



201014



203005



201037



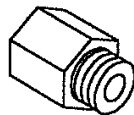
201003



201012



201016



201013



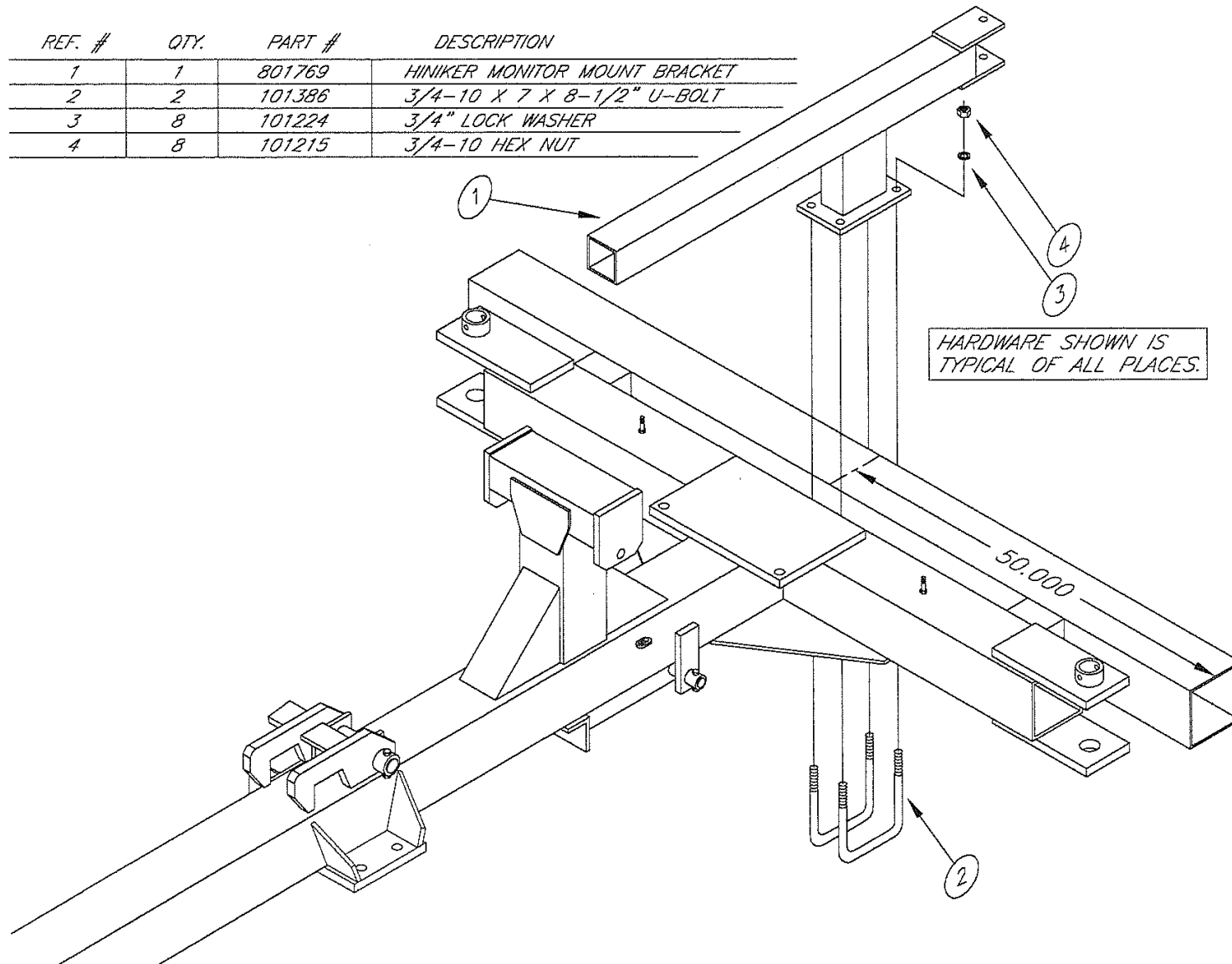
201001



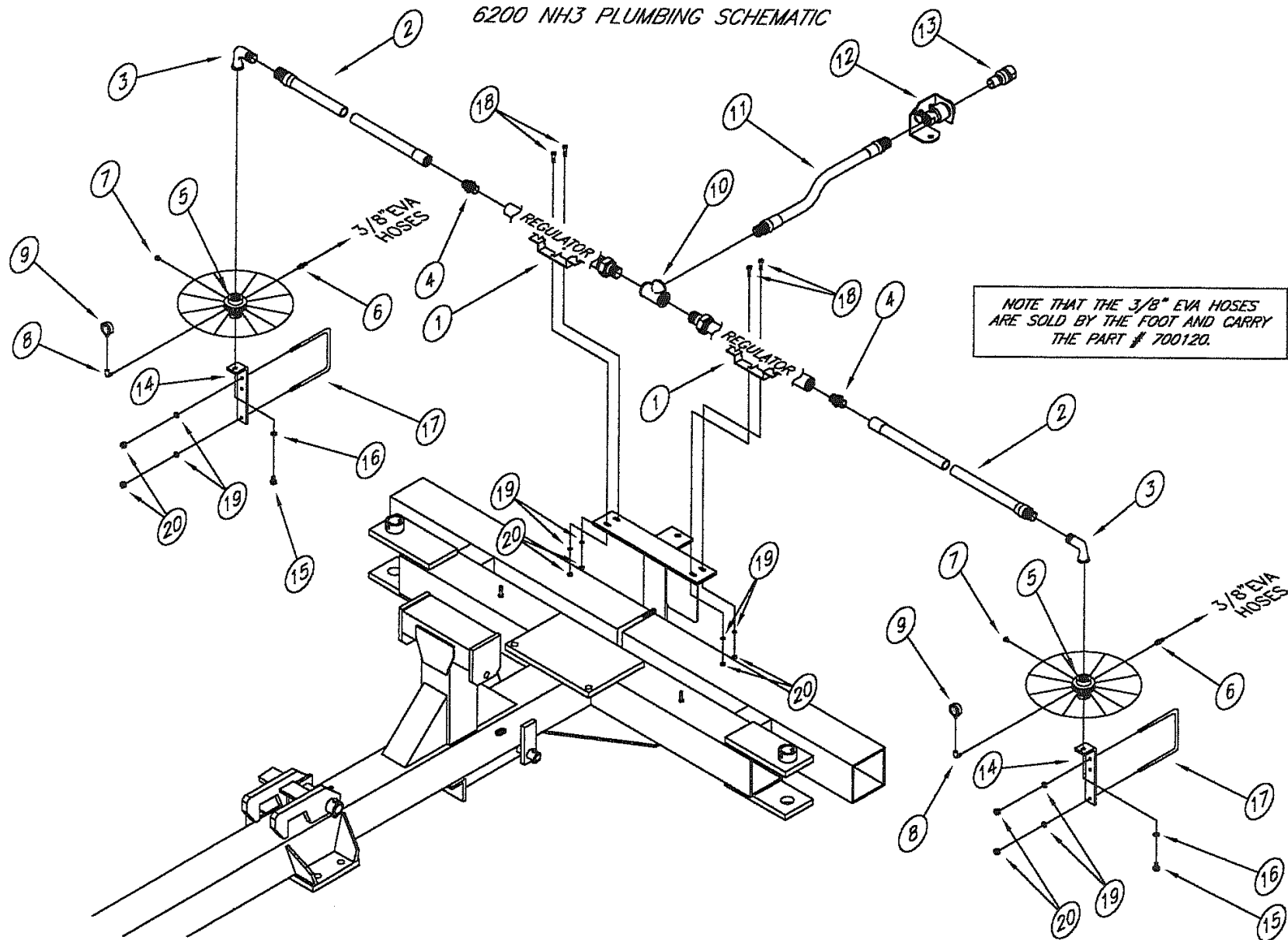
201011

HINIKER MONITOR BRACKET ASSEMBLY

REF. #	QTY.	PART #	DESCRIPTION
1	1	801769	HINIKER MONITOR MOUNT BRACKET
2	2	101386	3/4-10 X 7 X 8-1/2" U-BOLT
3	8	101224	3/4" LOCK WASHER
4	8	101215	3/4-10 HEX NUT



6200 NH3 PLUMBING SCHEMATIC



6200 NH3 PLUMBING SCHEMATIC

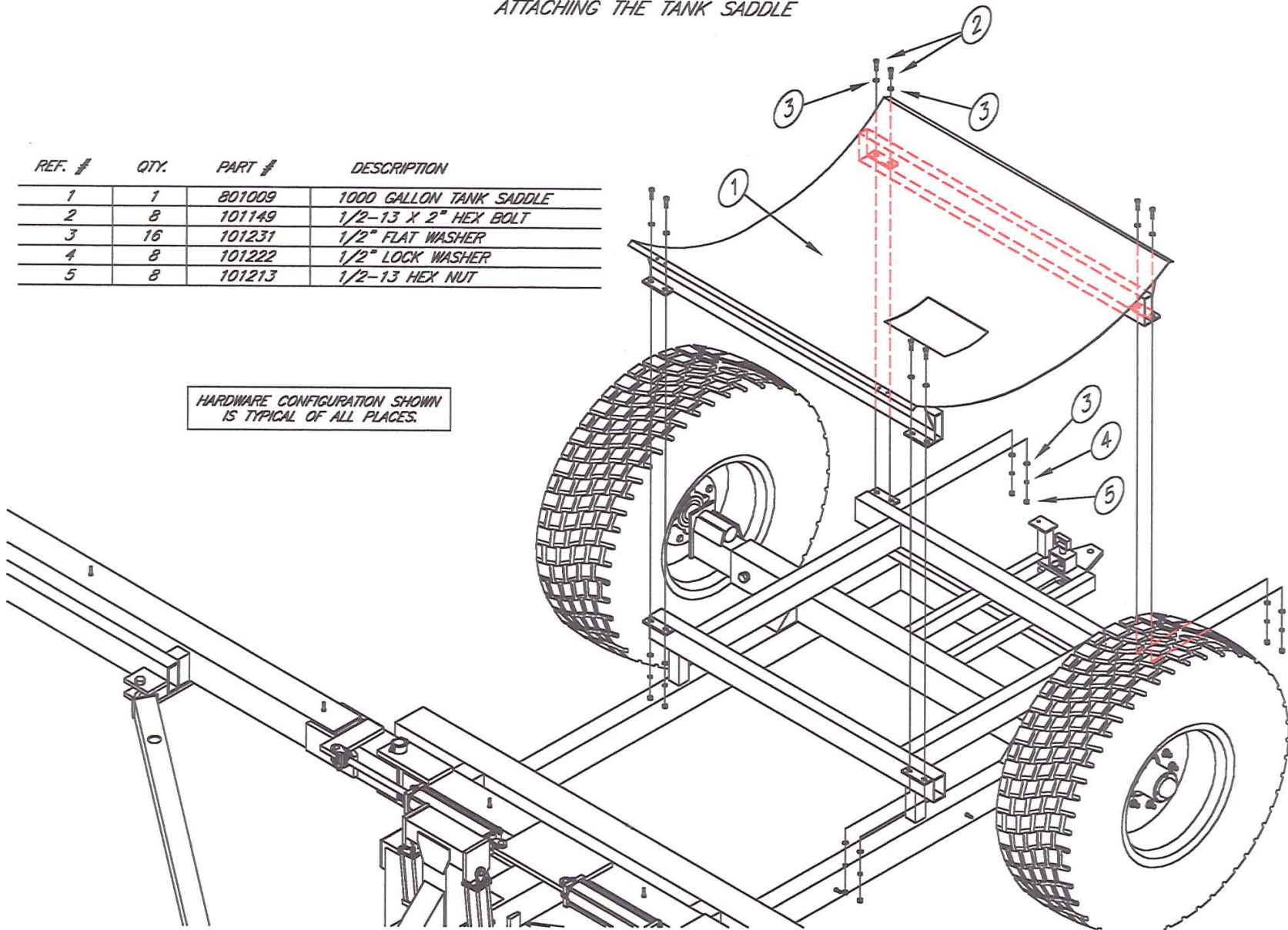
REF. #	QTY.	PART #	DESCRIPTION
1	2	700273	NH3/B9500 METER W/ HYDRAULIC SHUT-OFF
2	2	700274A	1" AA HOSE X 120" LONG
3	2	700256	1" ST. ELBOW - BLACK PIPE
4	2	700306	1" MNPT X 1" FNPT SWIVEL COUPLER
5	2	700272	NH3 MANIFOLD - 14 OUTLET
6	16	700277	1/4" MNPT X 3/8" HOSE BARB
7	10	700211	1/4" MNPT X 1/2" PLUG
8	2	700254	1/4" MNPT X 1/4" FNPT BLACK ELBOW
9	2	700235A	2.5" STAINLESS GAUGE - 0-100 PSI
10	1	700076	1-1/4" BLACK MI TEE
11	1	700274	1-1/4" AA HOSE X 32" LONG
12	1	700276	1-1/4" QUICK-COUPLER ASSEMBLY
13	1	700278	1-1/4" MALE COUPLER TIP (NH3)
14	2	400142	3/8 X 2 X 12-1/2" - MANIFOLD BRACKET
15	2	101397	1/2-13 X 3/4" HEX BOLT
16	1	101222	1/2" LOCK WASHER
17	2	101329	3/8-16 X 7 X 8-1/2" U-BOLT
18	4	101125	3/8-16 X 1" HEX BOLT
19	8	101220	3/8" LOCK WASHER
20	8	101211	3/8-16 HEX NUT

COMPLETE NH3 SYSTEM MAY BE ORDERED USING PART # 900056. THE SYSTEM INCLUDES: THE ANHYDROUS BRACKET, THE NH3 PLUMBING KIT, THE NH3 PRESSURE GAUGE ASSEMBLY, AND TWO B9500 CONTINENTAL REGULATORS. NOTE THAT EVA HOSES ARE NOT INCLUDED AND MUST BE ORDERED SEPARATELY AT THE DESIRED LENGTH.

ATTACHING THE TANK SADDLE

REF. #	QTY.	PART #	DESCRIPTION
1	1	801009	1000 GALLON TANK SADDLE
2	8	101149	1/2-13 X 2" HEX BOLT
3	16	101231	1/2" FLAT WASHER
4	8	101222	1/2" LOCK WASHER
5	8	101213	1/2-13 HEX NUT

HARDWARE CONFIGURATION SHOWN
IS TYPICAL OF ALL PLACES.



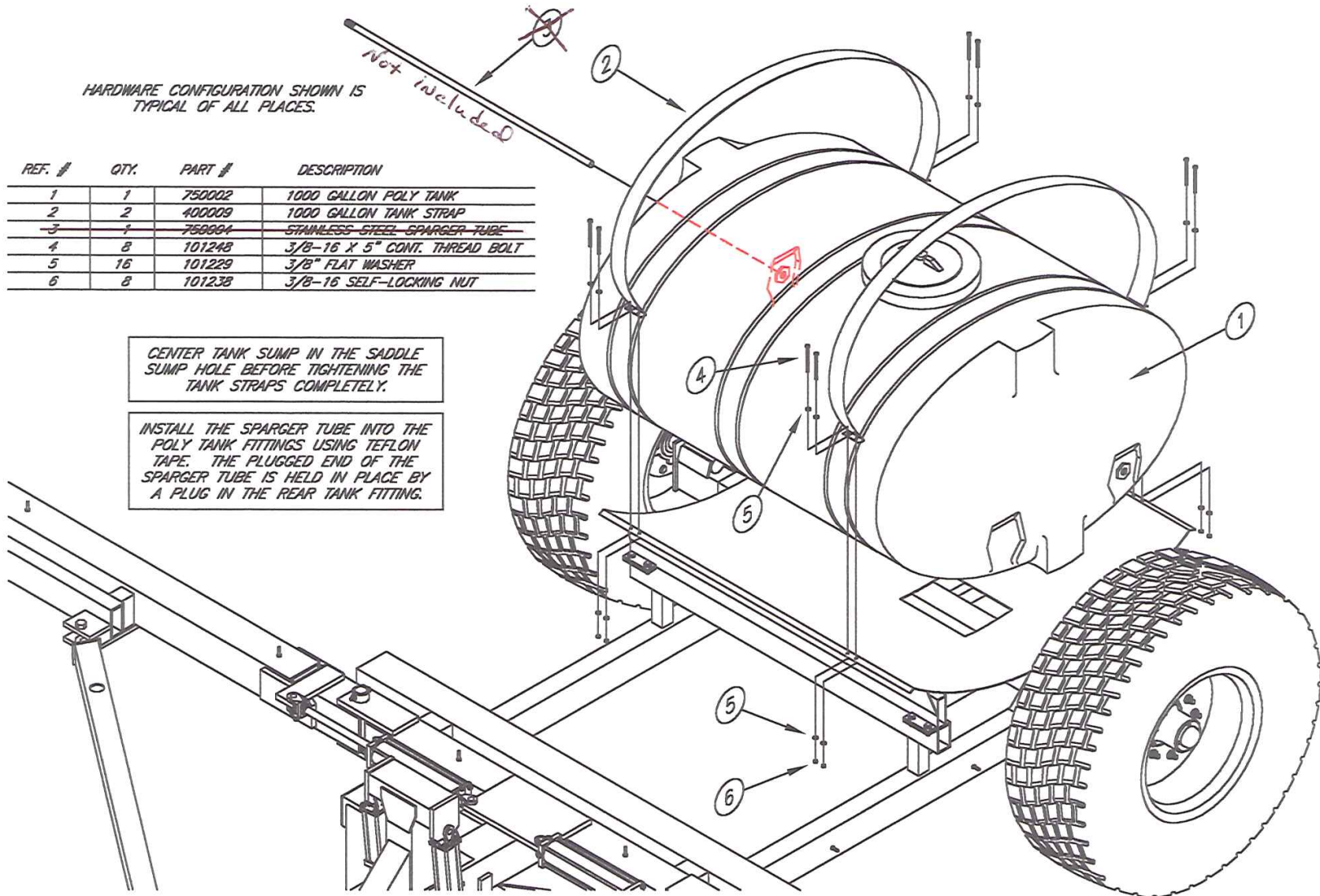
ATTACHING THE 1000 GALLON TANK

HARDWARE CONFIGURATION SHOWN IS
TYPICAL OF ALL PLACES.

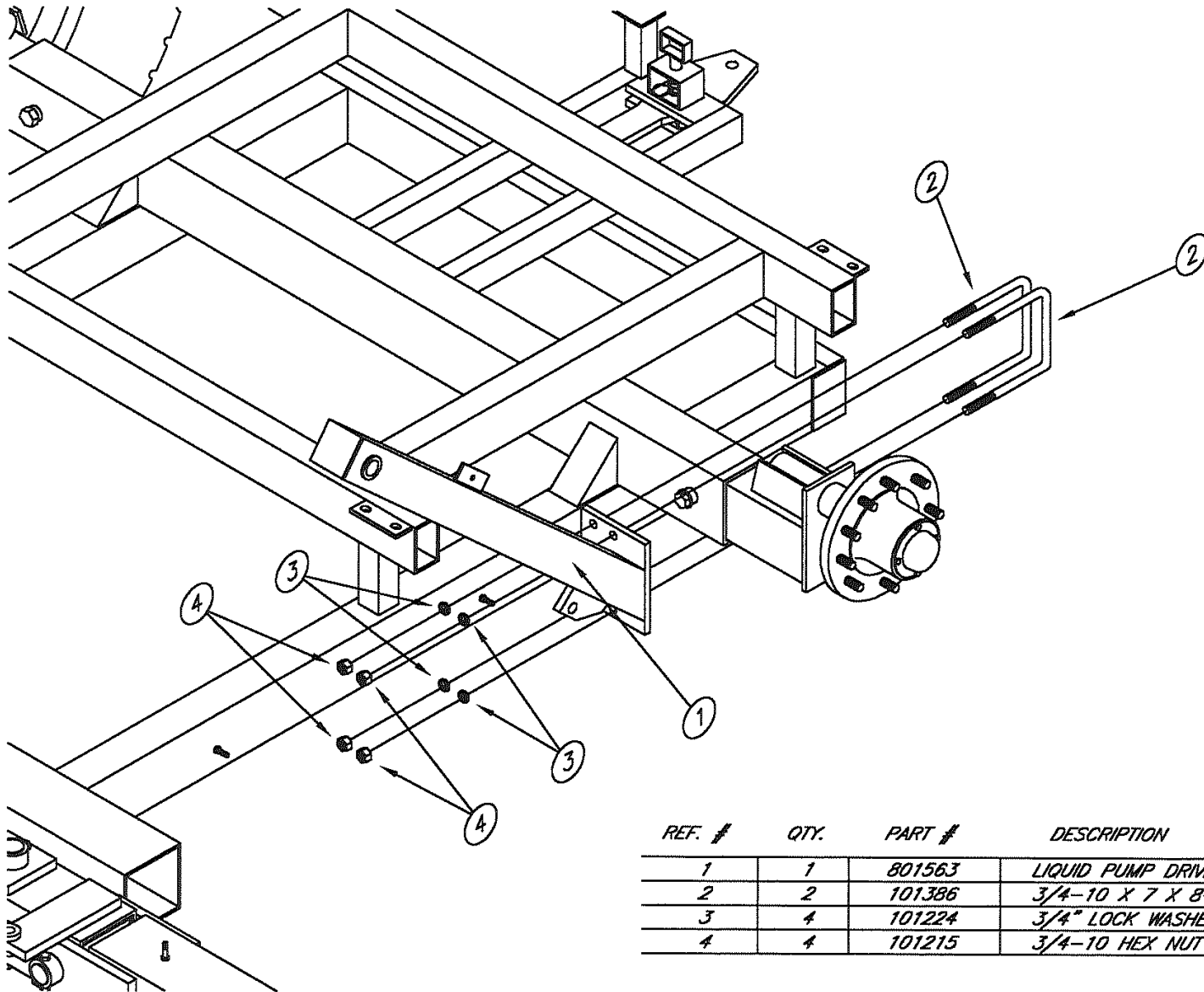
REF. #	QTY.	PART #	DESCRIPTION
1	1	750002	1000 GALLON POLY TANK
2	2	400009	1000 GALLON TANK STRAP
3	1	750004	STAINLESS-STEEL SPARGER TUBE
4	8	101248	3/8-16 X 5" CONT. THREAD BOLT
5	16	101229	3/8" FLAT WASHER
6	8	101238	3/8-16 SELF-LOCKING NUT

CENTER TANK SUMP IN THE SADDLE
SUMP HOLE BEFORE TIGHTENING THE
TANK STRAPS COMPLETELY.

INSTALL THE SPARGER TUBE INTO THE
POLY TANK FITTINGS USING TEFLON
TAPE. THE PLUGGED END OF THE
SPARGER TUBE IS HELD IN PLACE BY
A PLUG IN THE REAR TANK FITTING.

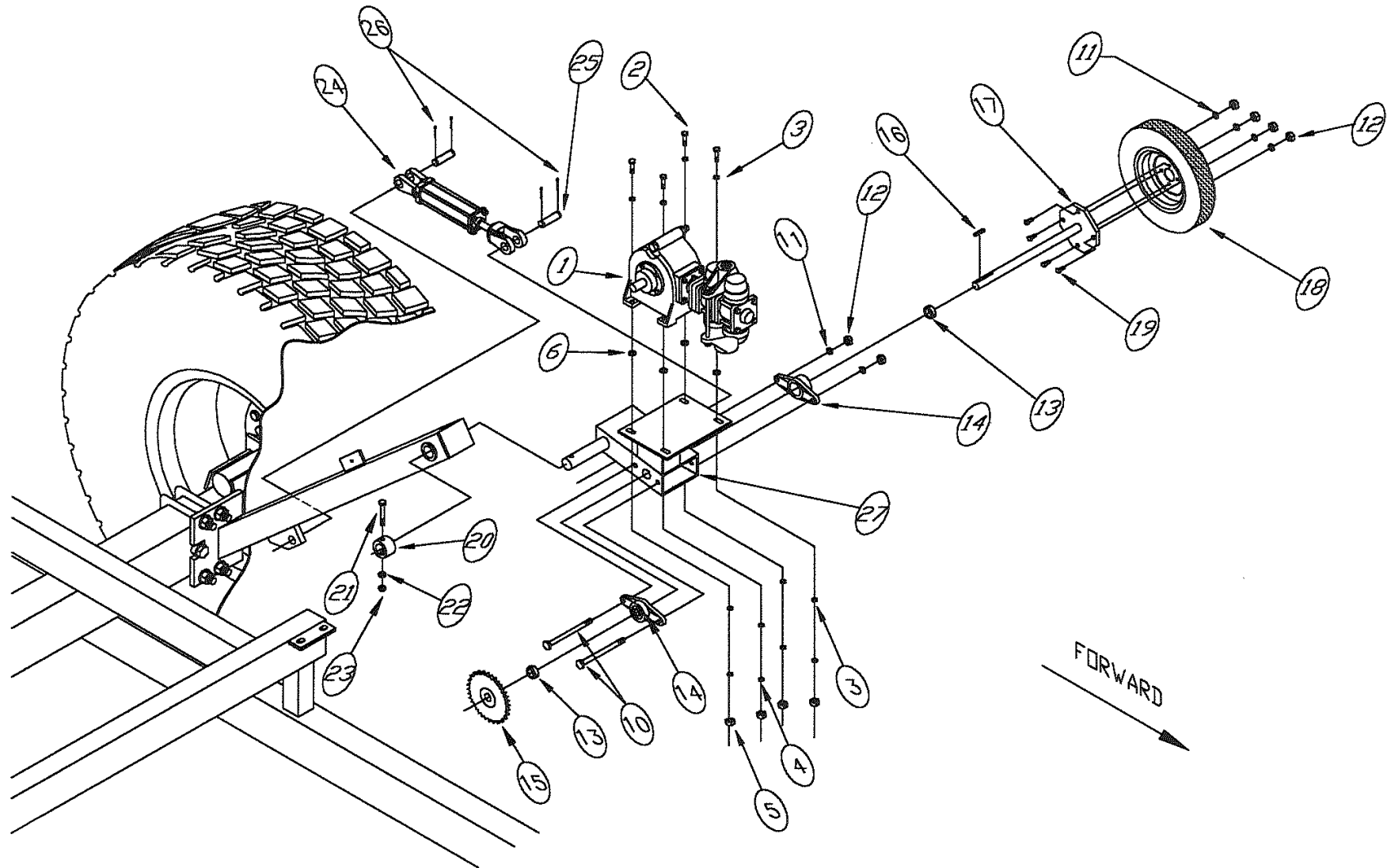


LIQUID PUMP DRIVE ARM ASSEMBLY



REF. #	QTY.	PART #	DESCRIPTION
1	1	801563	LIQUID PUMP DRIVE ARM UNIT
2	2	101386	3/4-10 X 7 X 8-1/2" U-BOLT
3	4	101224	3/4" LOCK WASHER
4	4	101215	3/4-10 HEX NUT

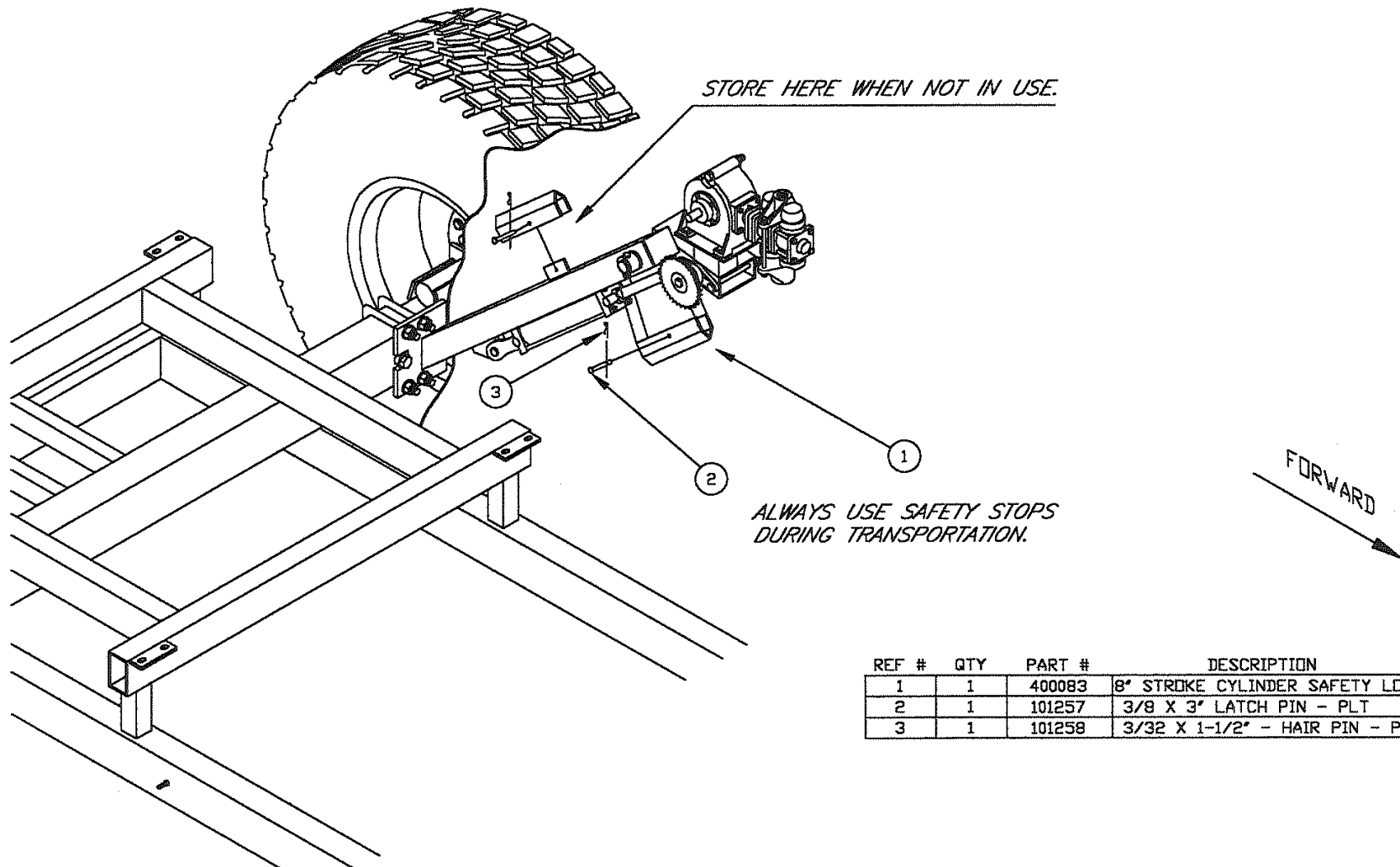
GROUND DRIVE PUMP ASSEMBLY



REF #	QTY	PART #	DESCRIPTION
1	1	750013	JOHN BLUE PUMP - MODEL LM4455
2	4	101126	3/8-16 X 1-1/2" - HEX BOLT PLT.
3	8	101229	3/8" - FLAT WASHER PLT.
4	4	101220	3/8" - LOCK WASHER PLT.
5	4	101211	3/8-16 - HEX NUT PLT.
6	4	* N/A	RUBBER MOUNTING WASHER
7	1	101294	NO. 50 - ROLLER CHAIN 36" LONG **
8	1	101295	NO. 50 - ROLLER CHAIN 1/2 LINK **
9	1	101296	NO. 50 - ROLLER CHAIN MASTER LINK **
10	2	101353	1/2-13 X 8" - HEX BOLT PLT.
11	6	101222	1/2" - LOCK WASHER PLT.
12	6	101213	1/2-13 - HEX NUT PLT.
13	2	450008	1" BORE LOCK COLLAR
14	2	450017	CAST 2 BOLT BEARING HOLDER FOR 1" BEARING
15	1	450009	50 X 32 X 1" BORE SPROCKET
16	1	450010	1/4 X 1/4 X 1-1/2" - SQUARE KEY
17	1	801108	DRIVE SHAFT
18	1	301192	TIRE AND WHEEL ASSEMBLY
19	4	101148	1/2-13 X 1-1/2" - HEX BOLT PLT.
20	1	602126	2.250 O.D. X 1.500 I.D. X 1-1/2" - PIN COLLAR
21	1	101140	7/16-14 X 3" - HEX BOLT PLT.
22	1	101221	7/16" - LOCK WASHER PLT.
23	1	101212	7/16-14 - HEX NUT PLT.
24	1	204001	2 X 8" - HYDRAULIC CYLINDER
25	2	602136	1" CYLINDER PIN
26	4	101249	5/32 X 2" - COTTER PIN
27	1	801393	GROUND DRIVE PUMP MOUNT WELDMENT

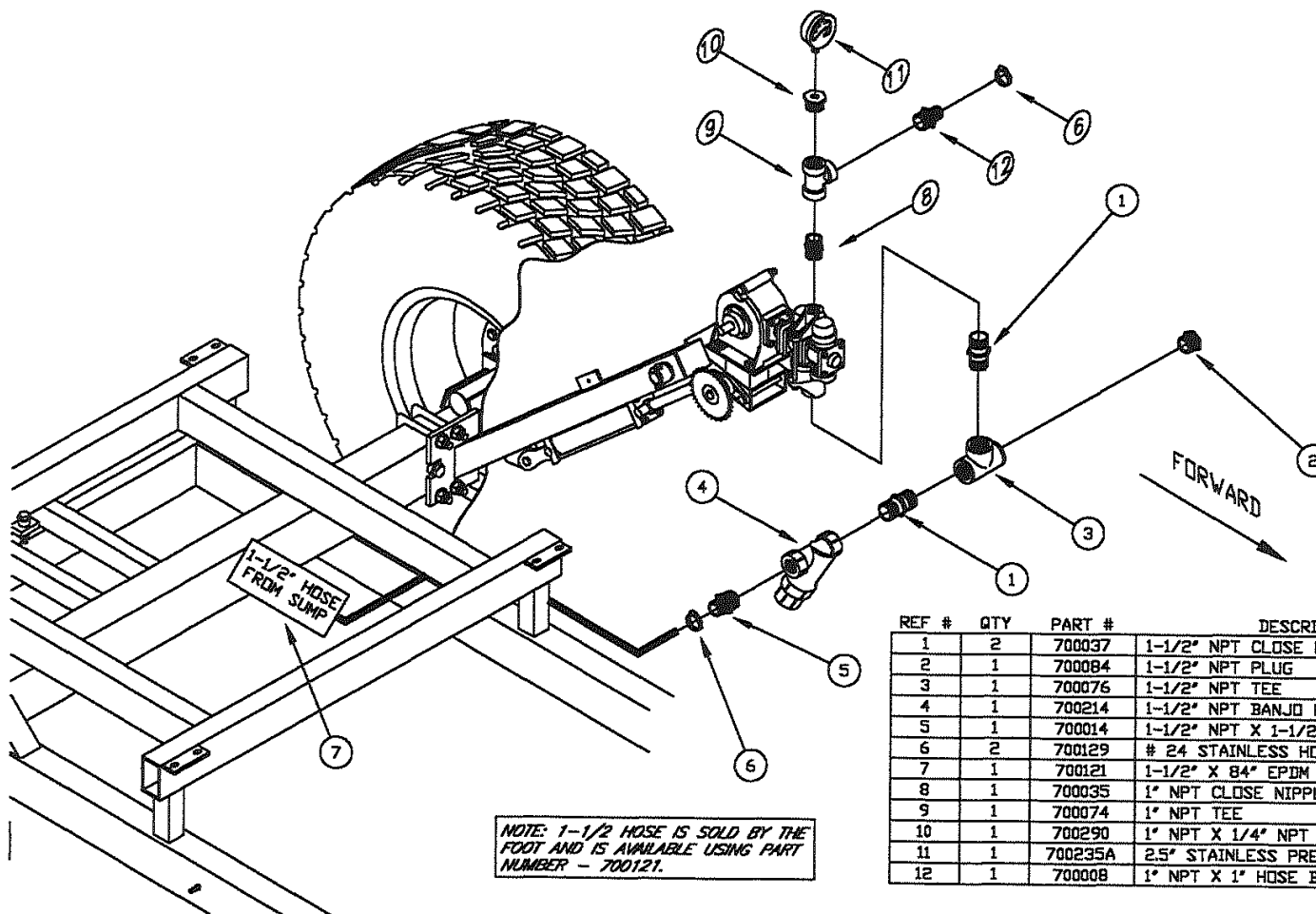
** - NOT SHOWN * - INCLUDED WITH JB PUMP

SAFETY STOP USE AND STORAGE



REF #	QTY	PART #	DESCRIPTION
1	1	400083	8" STROKE CYLINDER SAFETY LOCK
2	1	101257	3/8 X 3" LATCH PIN - PLT
3	1	101258	3/32 X 1-1/2" - HAIR PIN - PLT

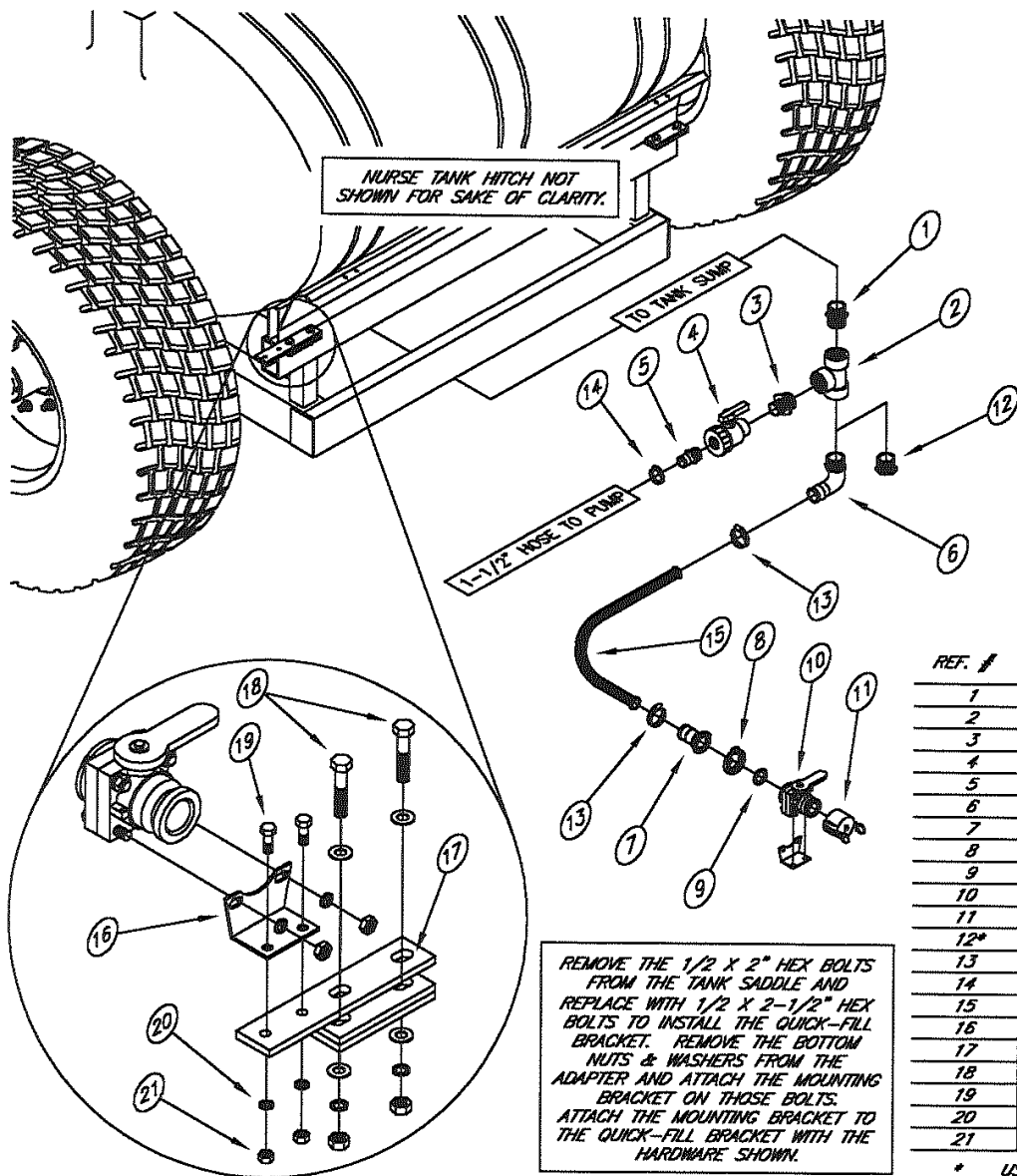
JOHN BLUE PUMP PLUMBING SCHEMATIC



NOTE: 1-1/2 HOSE IS SOLD BY THE FOOT AND IS AVAILABLE USING PART NUMBER - 700121.

REF #	QTY	PART #	DESCRIPTION
1	2	700037	1-1/2" NPT CLOSE NIPPLE
2	1	700084	1-1/2" NPT PLUG
3	1	700076	1-1/2" NPT TEE
4	1	700214	1-1/2" NPT BANJO FILTER
5	1	700014	1-1/2" NPT X 1-1/2" HOSE BARB
6	2	700129	# 24 STAINLESS HOSE CLAMP
7	1	700121	1-1/2" X 84" EPDM HOSE
8	1	700035	1" NPT CLOSE NIPPLE
9	1	700074	1" NPT TEE
10	1	700290	1" NPT X 1/4" NPT REDUCING BUSHING
11	1	700235A	2.5" STAINLESS PRESSURE GAUGE
12	1	700008	1" NPT X 1" HOSE BARB

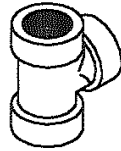
OPTIONAL QUICK-FILL PLUMBING SCHEMATIC



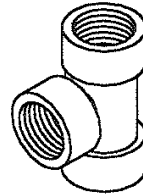
PLUMBING COMPONENTS



700035



700074



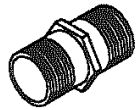
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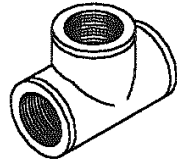
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700008



700037



700076



700084



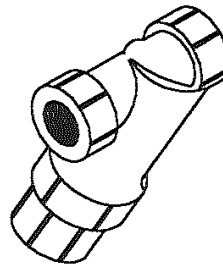
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700085



700186



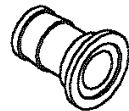
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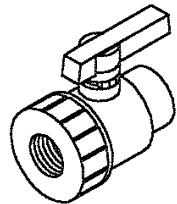
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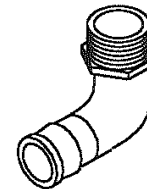
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700187



700171A



700027



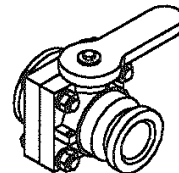
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700129



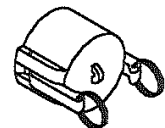
700188



700190



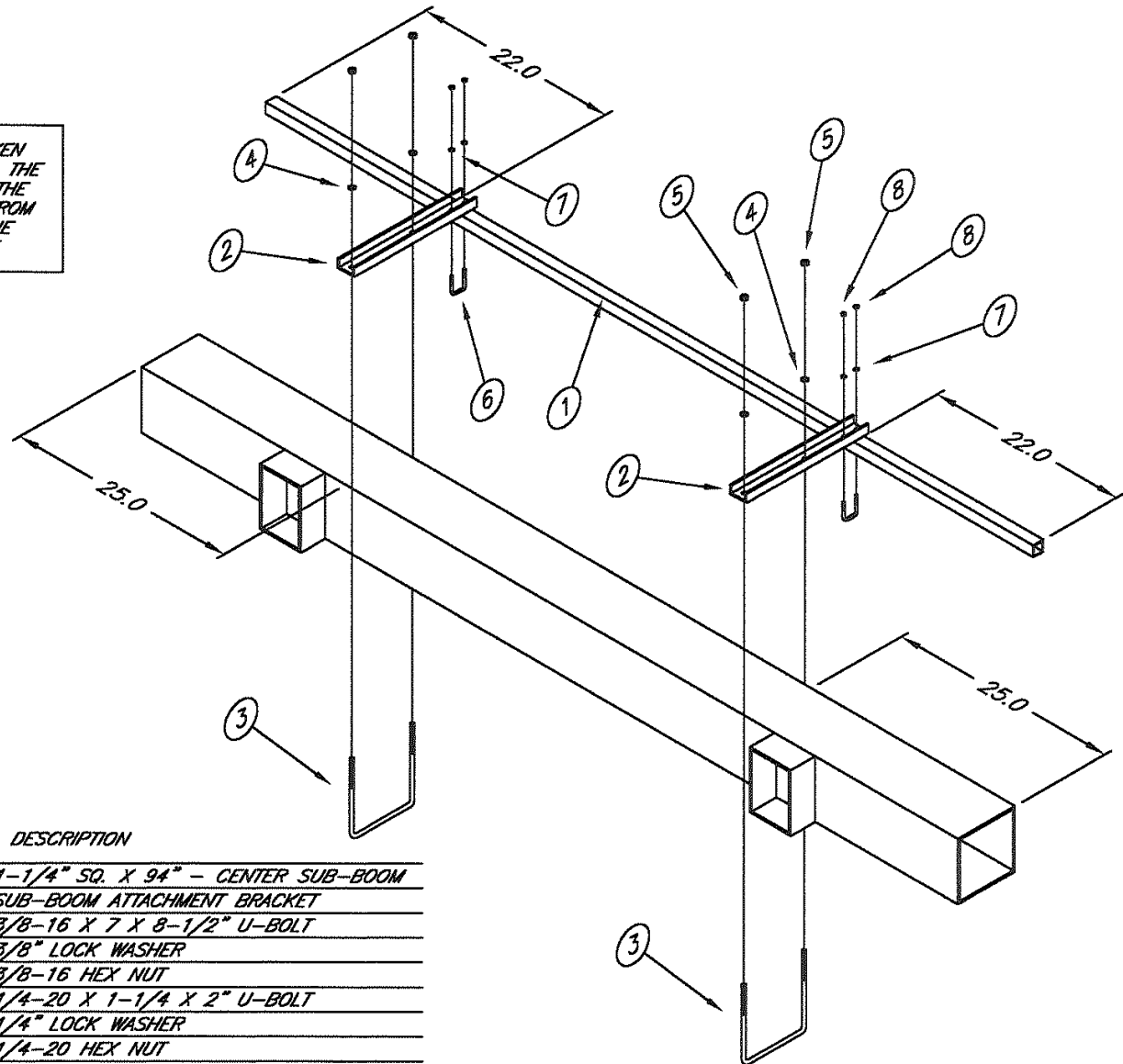
700290



700191

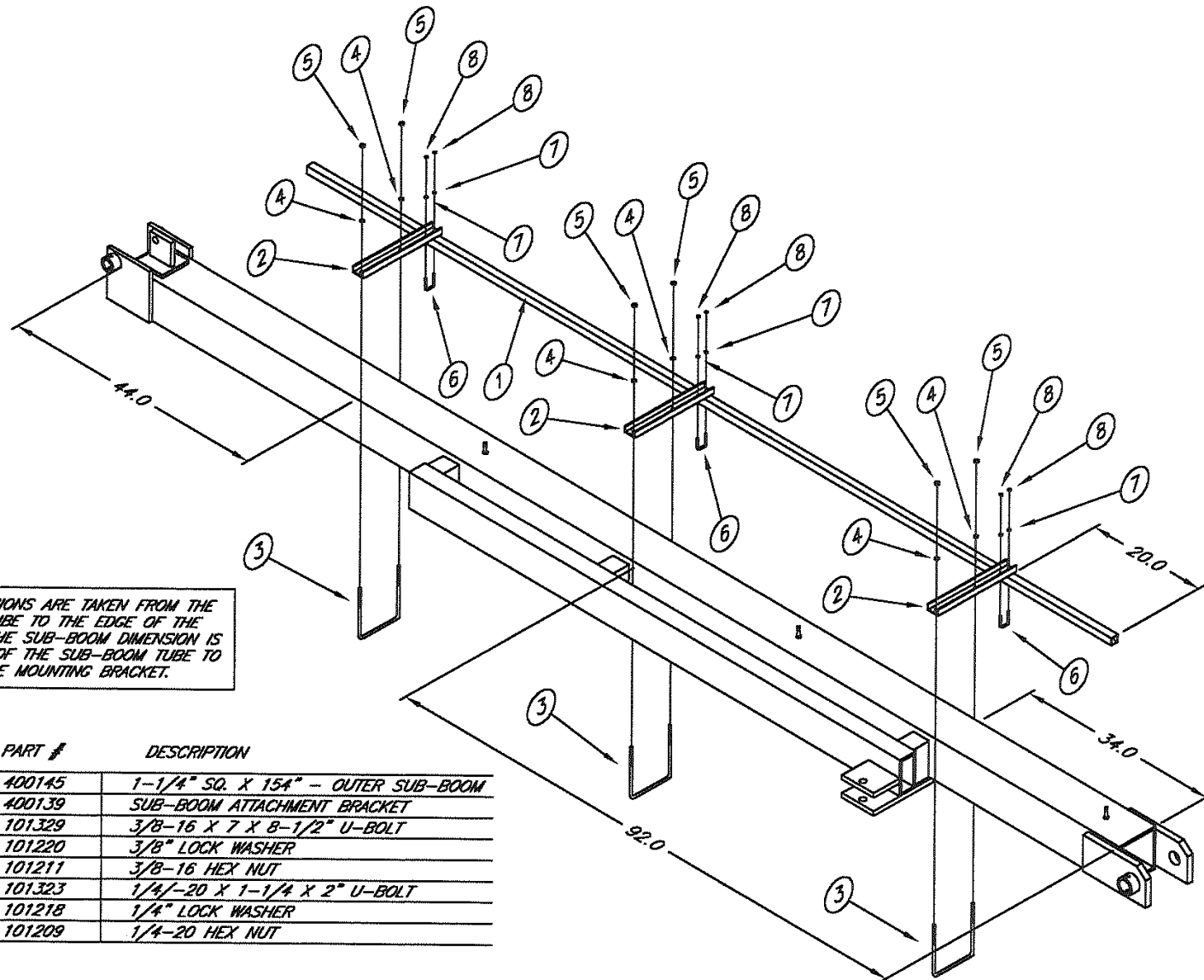
CENTER SECTION SUB-BOOM ATTACHMENT

NOTE: BRACKET DIMENSIONS ARE TAKEN FROM THE END OF THE MAINFRAME TO THE EDGE OF THE MOUNTING BRACKET. THE SUB-BOOM DIMENSIONS ARE TAKEN FROM THE END OF THE SUB-BOOM TO THE EDGE OF THE MOUNTING BRACKET.



REF. #	QTY.	PART #	DESCRIPTION
1	1	400144	1-1/4" SQ. X 94" - CENTER SUB-BOOM
2	2	400139	SUB-BOOM ATTACHMENT BRACKET
3	2	101329	3/8-16 X 7 X 8-1/2" U-BOLT
4	4	101220	3/8" LOCK WASHER
5	4	101211	3/8-16 HEX NUT
6	2	101323	1/4-20 X 1-1/4 X 2" U-BOLT
7	4	101218	1/4" LOCK WASHER
8	4	101209	1/4-20 HEX NUT

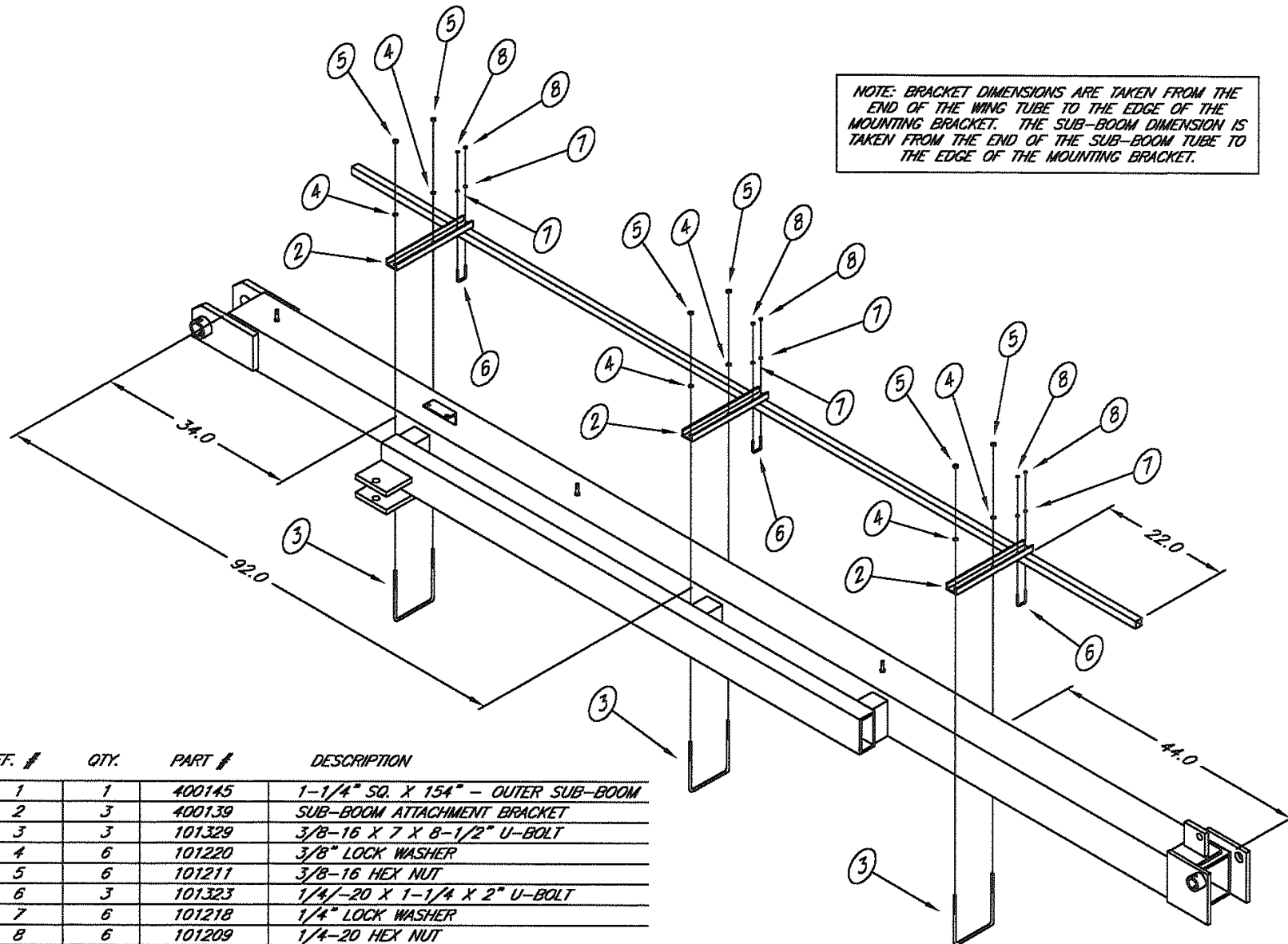
RIGHT WING SUB-BOOM ATTACHMENT



NOTE: BRACKET DIMENSIONS ARE TAKEN FROM THE END OF THE WING TUBE TO THE EDGE OF THE MOUNTING BRACKET. THE SUB-BOOM DIMENSION IS TAKEN FROM THE END OF THE SUB-BOOM TUBE TO THE EDGE OF THE MOUNTING BRACKET.

REF. #	QTY.	PART #	DESCRIPTION
1	1	400145	1-1/4" SQ. X 154" - OUTER SUB-BOOM
2	3	400139	SUB-BOOM ATTACHMENT BRACKET
3	3	101329	3/8-16 X 7 X 8-1/2" U-BOLT
4	6	101220	3/8" LOCK WASHER
5	6	101211	3/8-16 HEX NUT
6	3	101323	1/4-20 X 1-1/4 X 2" U-BOLT
7	6	101218	1/4" LOCK WASHER
8	6	101209	1/4-20 HEX NUT

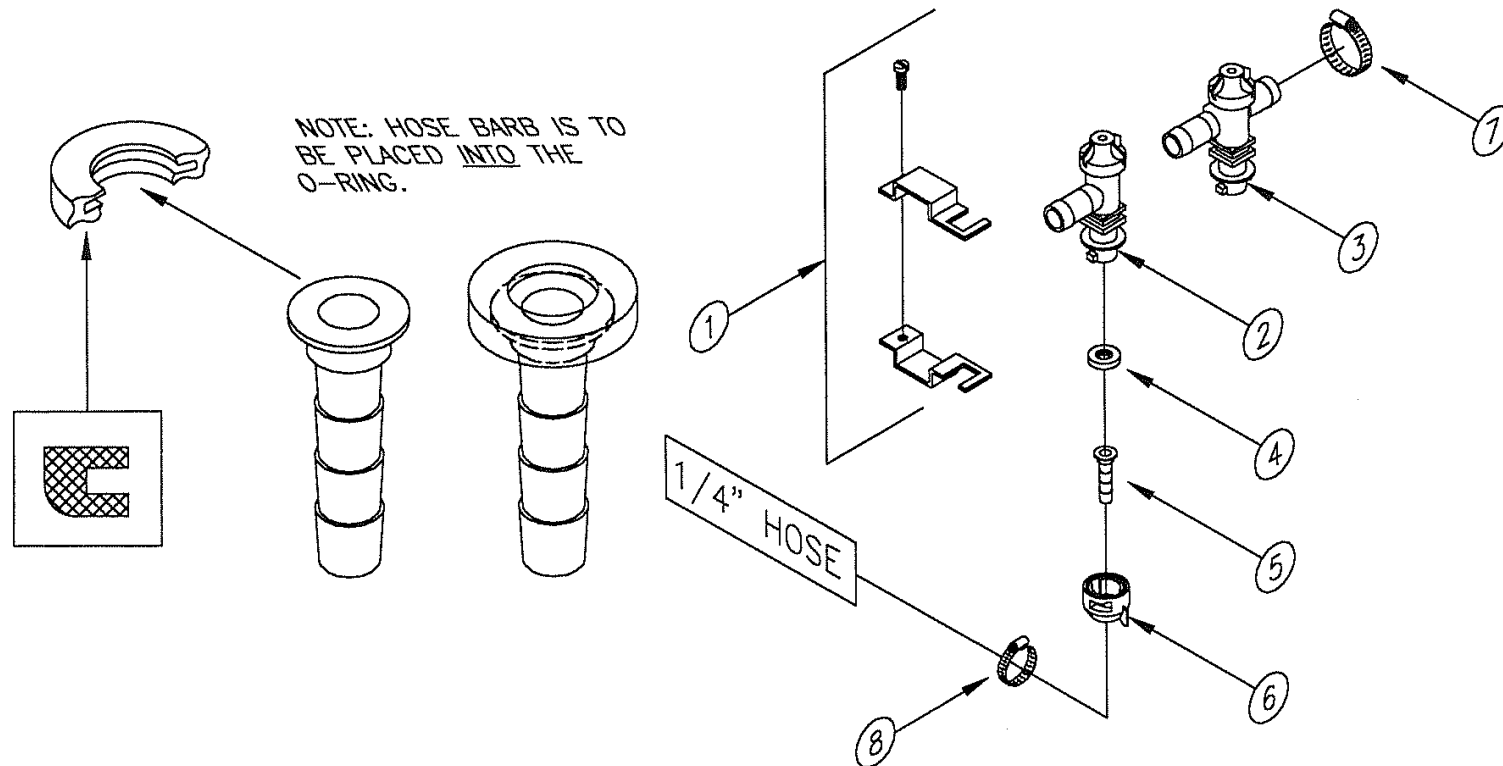
LEFT WING SECTION SUB-BOOM ATTACHMENT



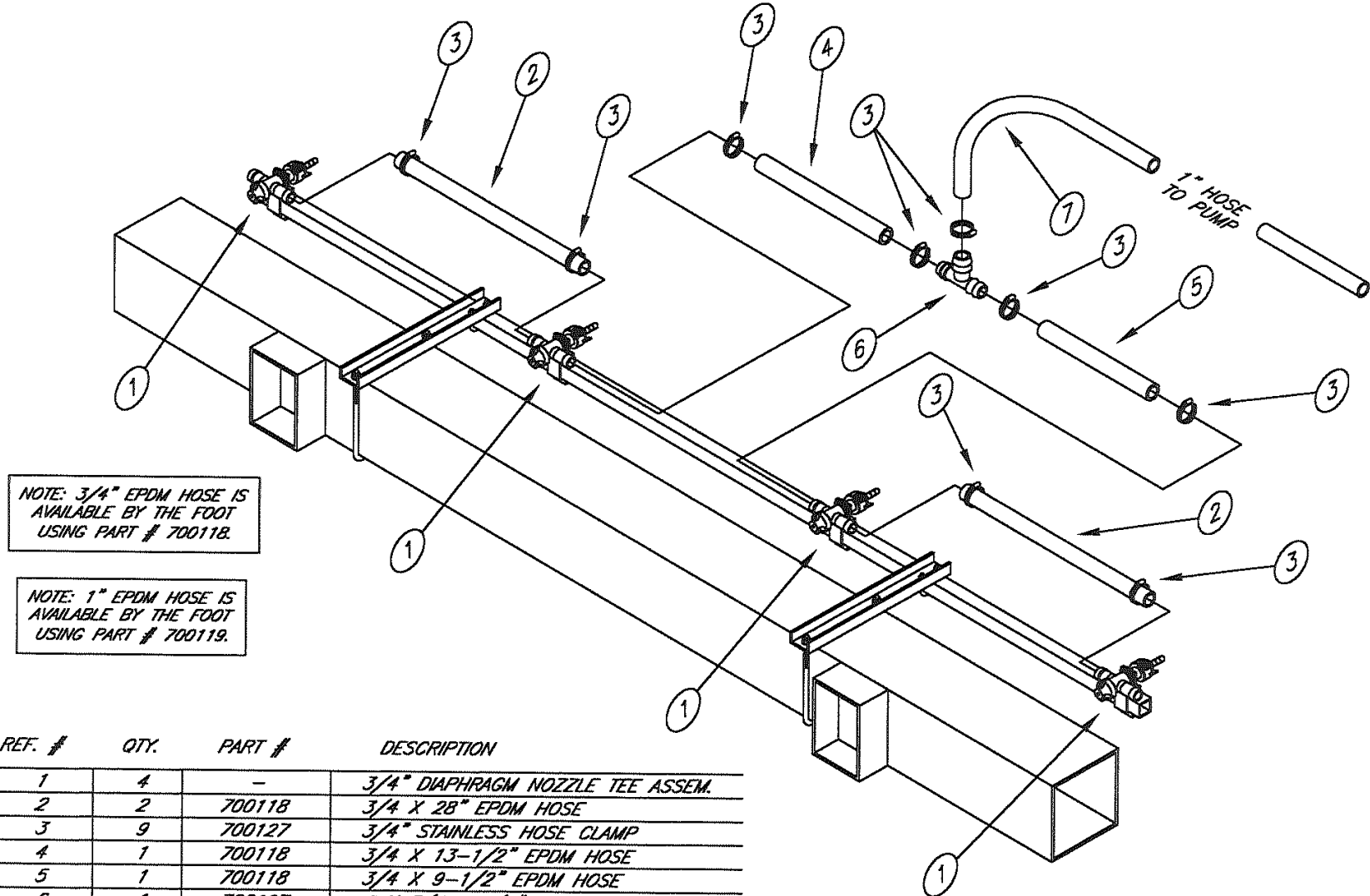
REF. #	QTY.	PART #	DESCRIPTION
1	1	400145	1-1/4" SQ. X 154" - OUTER SUB-BOOM
2	3	400139	SUB-BOOM ATTACHMENT BRACKET
3	3	101329	3/8-16 X 7 X 8-1/2" U-BOLT
4	6	101220	3/8" LOCK WASHER
5	6	101211	3/8-16 HEX NUT
6	3	101323	1/4-20 X 1-1/4 X 2" U-BOLT
7	6	101218	1/4" LOCK WASHER
8	6	101209	1/4-20 HEX NUT

NOZZLE ASSEMBLY (EXPLODED)

REF. #	QTY.	PART #	DESCRIPTION
1	16	700203	1-1/4" SQUARE NOZZLE CLAMP
2	2	700199	3/4" DIAPHRAGM NOZZLE ELBOW
3	14	700201	3/4" DIAPHRAGM NOZZLE TEE
4	16	700305	SPLIT HOSE BARB O-RING
5	16	700302	1/4" HOSE BARB FOR NOZZLE CAP
6	16	700303	NOZZLE CAP - BLUE
7	32	700127	#12 STAINLESS STEEL HOSE CLAMP
8	16	700126	STAINLESS STEEL HOSE CLAMP

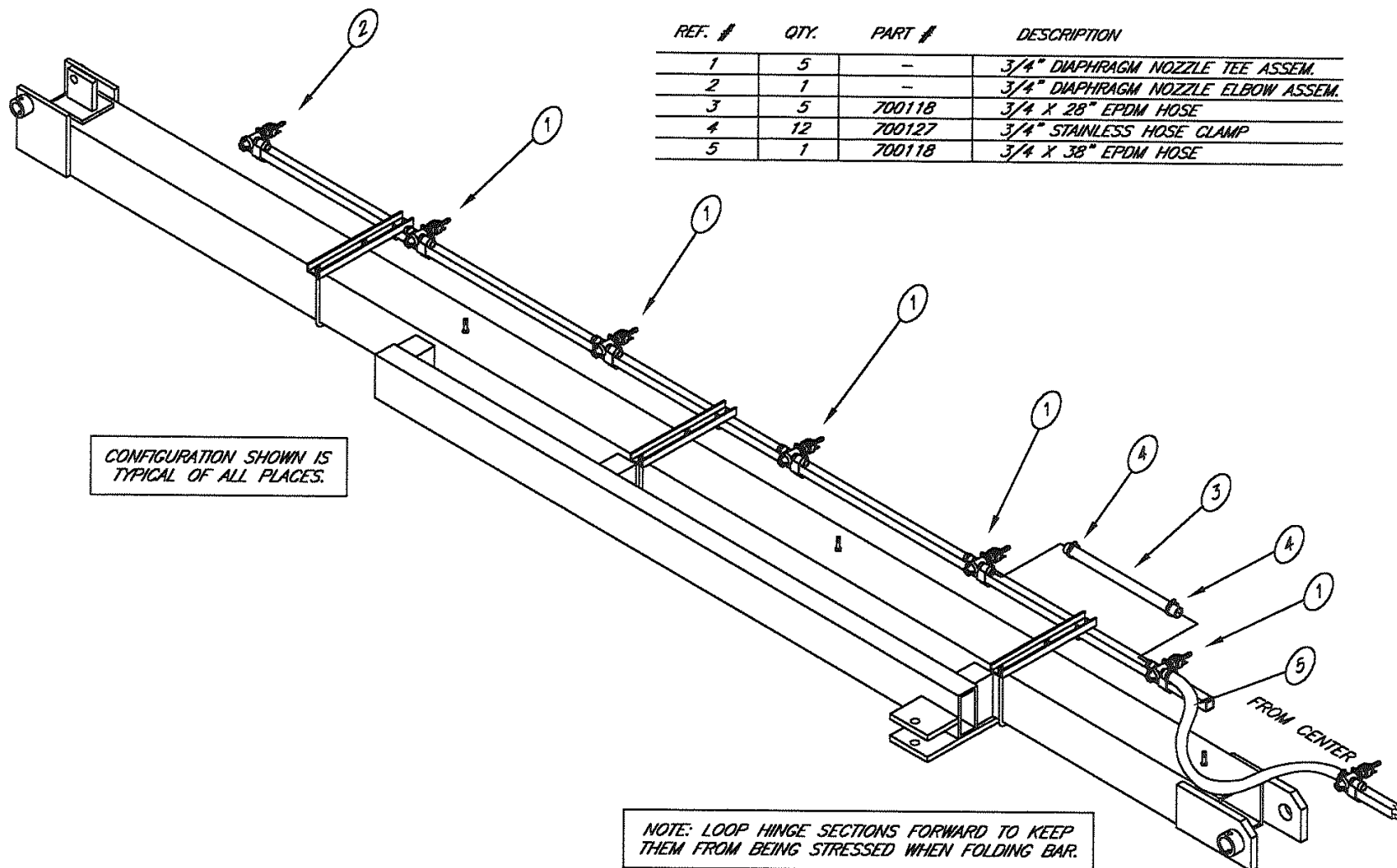


CENTER SECTION NOZZLE CONFIGURATION

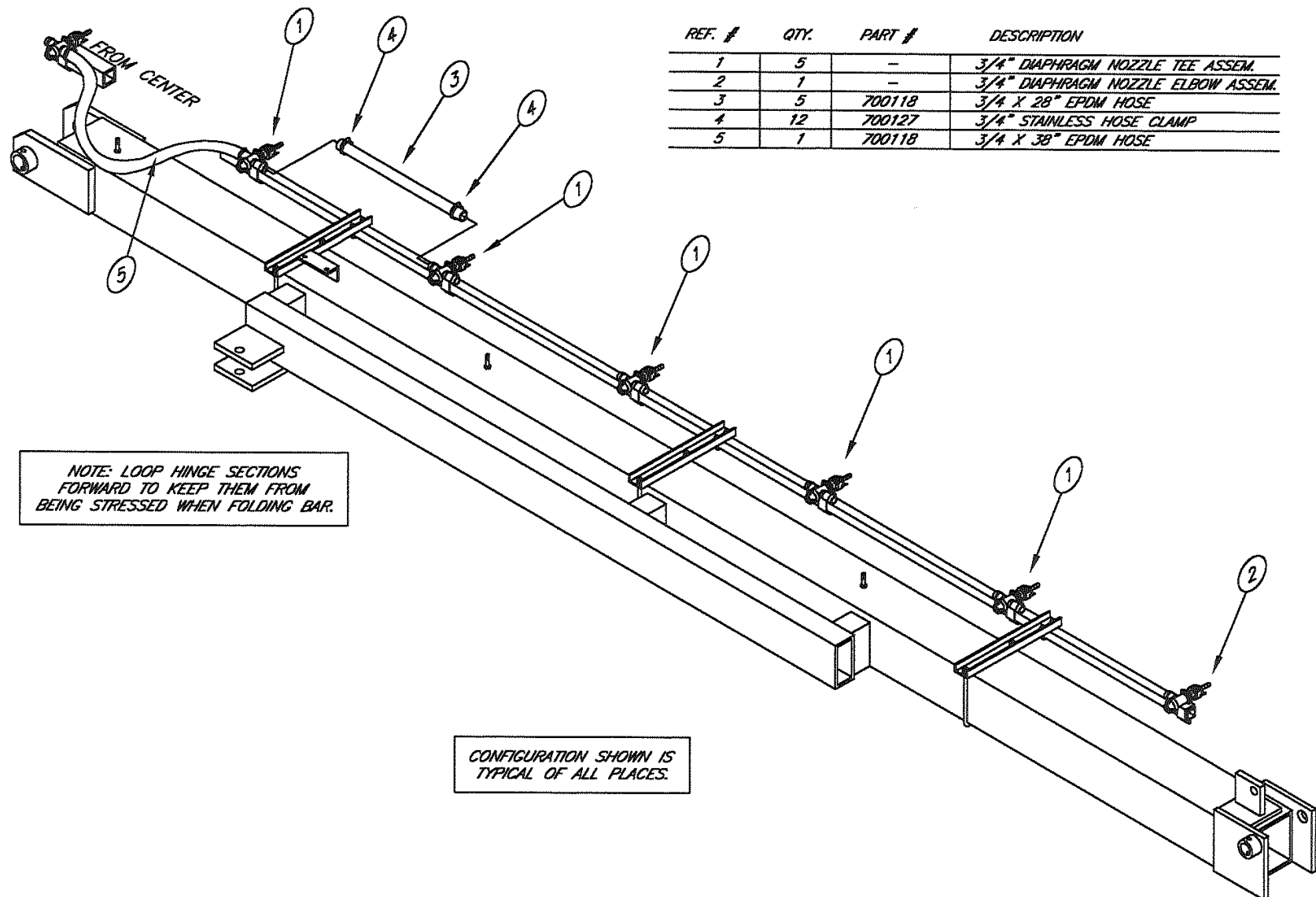


REF. #	QTY.	PART #	DESCRIPTION
1	4	-	3/4" DIAPHRAGM NOZZLE TEE ASSEM.
2	2	700118	3/4 X 28" EPDM HOSE
3	9	700127	3/4" STAINLESS HOSE CLAMP
4	1	700118	3/4 X 13-1/2" EPDM HOSE
5	1	700118	3/4 X 9-1/2" EPDM HOSE
6	1	700197	1 X 3/4 X 3/4" BARB TEE
7	1	700119	1 X 84" EPDM HOSE

RIGHT WING SECTION SUB-BOOM PLUMBING



LEFT WING SECTION SUB-BOOM PLUMBING

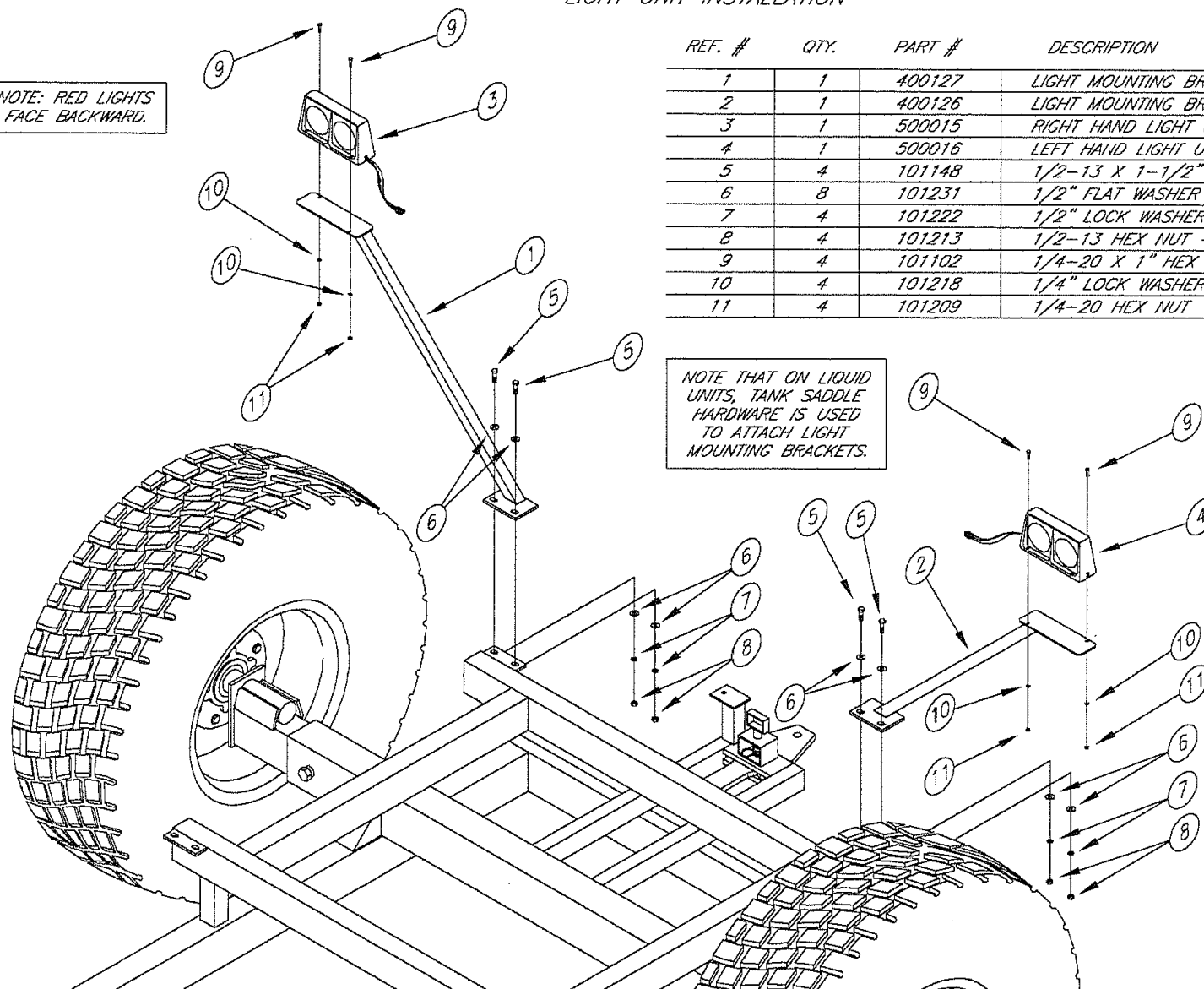


LIGHT UNIT INSTALLATION

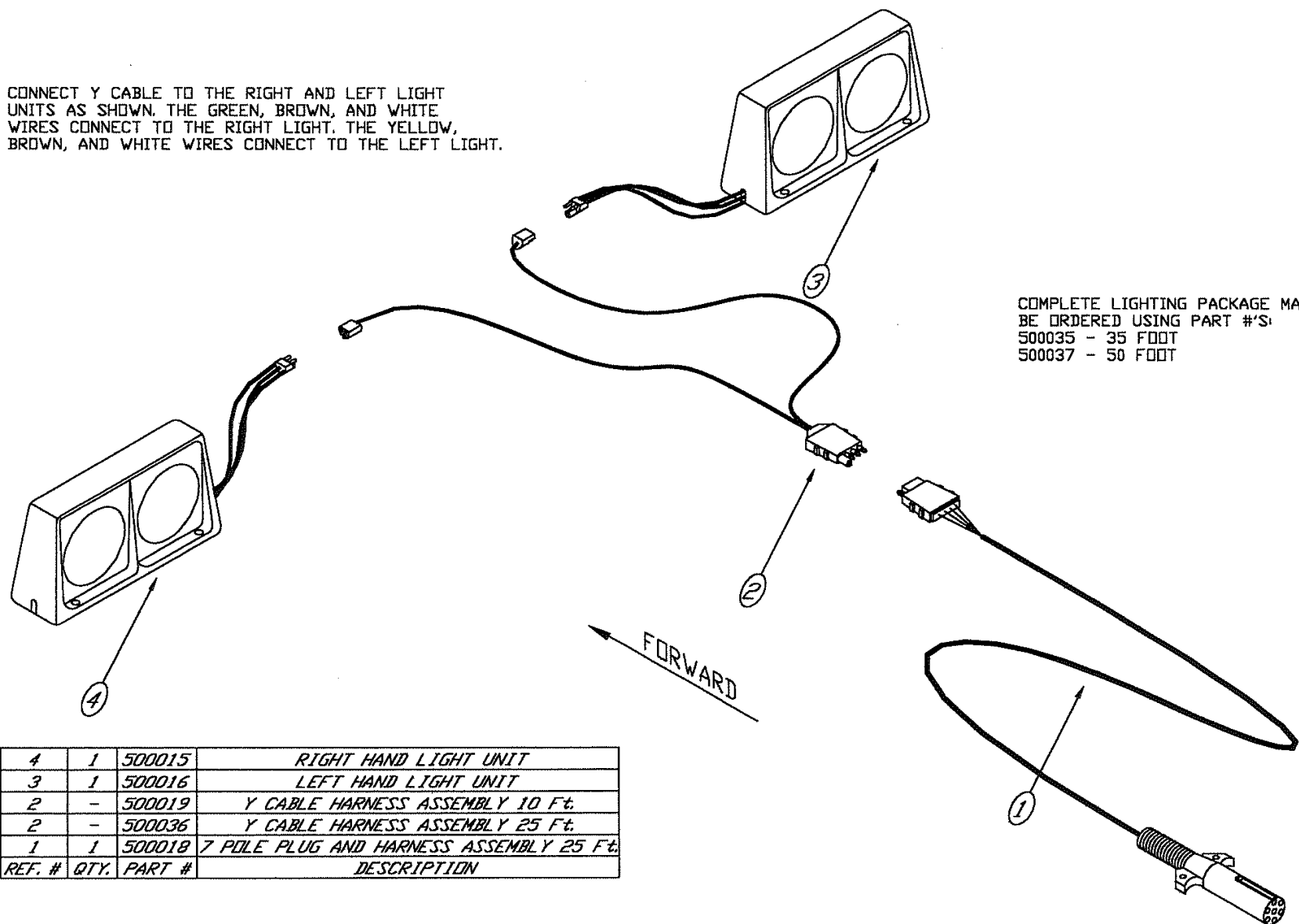
NOTE: RED LIGHTS
FACE BACKWARD.

REF. #	QTY.	PART #	DESCRIPTION
1	1	400127	LIGHT MOUNTING BRACKET (RIGHT)
2	1	400126	LIGHT MOUNTING BRACKET (LEFT)
3	1	500015	RIGHT HAND LIGHT UNIT
4	1	500016	LEFT HAND LIGHT UNIT
5	4	101148	1/2-13 X 1-1/2" BOLT - PLT.
6	8	101231	1/2" FLAT WASHER - PLT.
7	4	101222	1/2" LOCK WASHER - PLT.
8	4	101213	1/2-13 HEX NUT - PLT.
9	4	101102	1/4-20 X 1" HEX BOLT
10	4	101218	1/4" LOCK WASHER
11	4	101209	1/4-20 HEX NUT

NOTE THAT ON LIQUID
UNITS, TANK SADDLE
HARDWARE IS USED
TO ATTACH LIGHT
MOUNTING BRACKETS.



CONNECT Y CABLE TO THE RIGHT AND LEFT LIGHT
UNITS AS SHOWN. THE GREEN, BROWN, AND WHITE
WIRES CONNECT TO THE RIGHT LIGHT. THE YELLOW,
BROWN, AND WHITE WIRES CONNECT TO THE LEFT LIGHT.



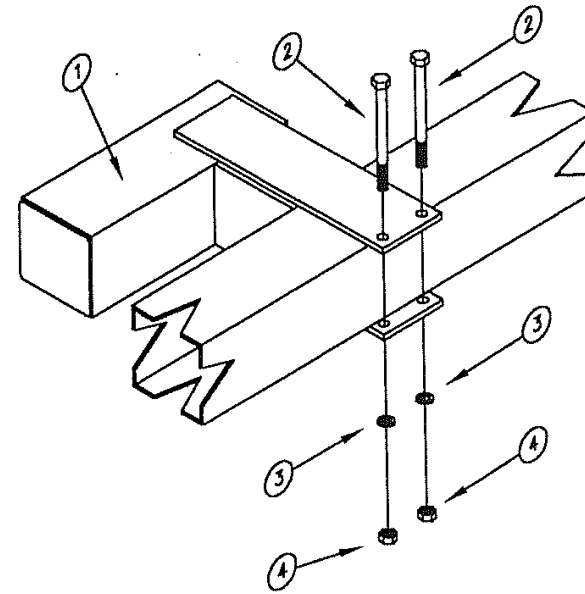
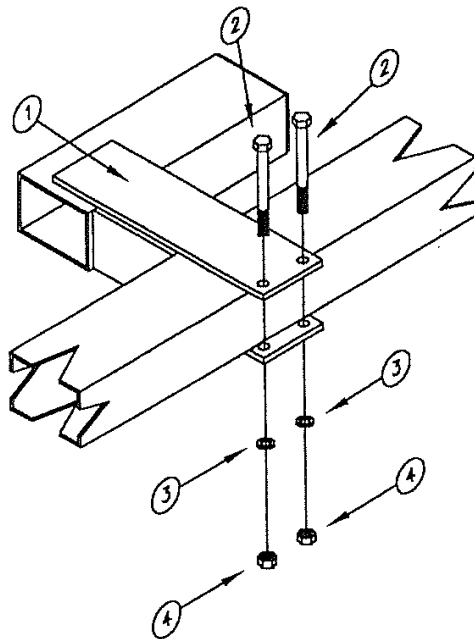
COMPLETE LIGHTING PACKAGE MAY
BE ORDERED USING PART #'S:
500035 - 35 FOOT
500037 - 50 FOOT

4	1	500015	RIGHT HAND LIGHT UNIT
3	1	500016	LEFT HAND LIGHT UNIT
2	-	500019	Y CABLE HARNESS ASSEMBLY 10 Ft.
2	-	500036	Y CABLE HARNESS ASSEMBLY 25 Ft.
1	1	500018	7 POLE PLUG AND HARNESS ASSEMBLY 25 Ft.
REF. #	QTY.	PART #	DESCRIPTION

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

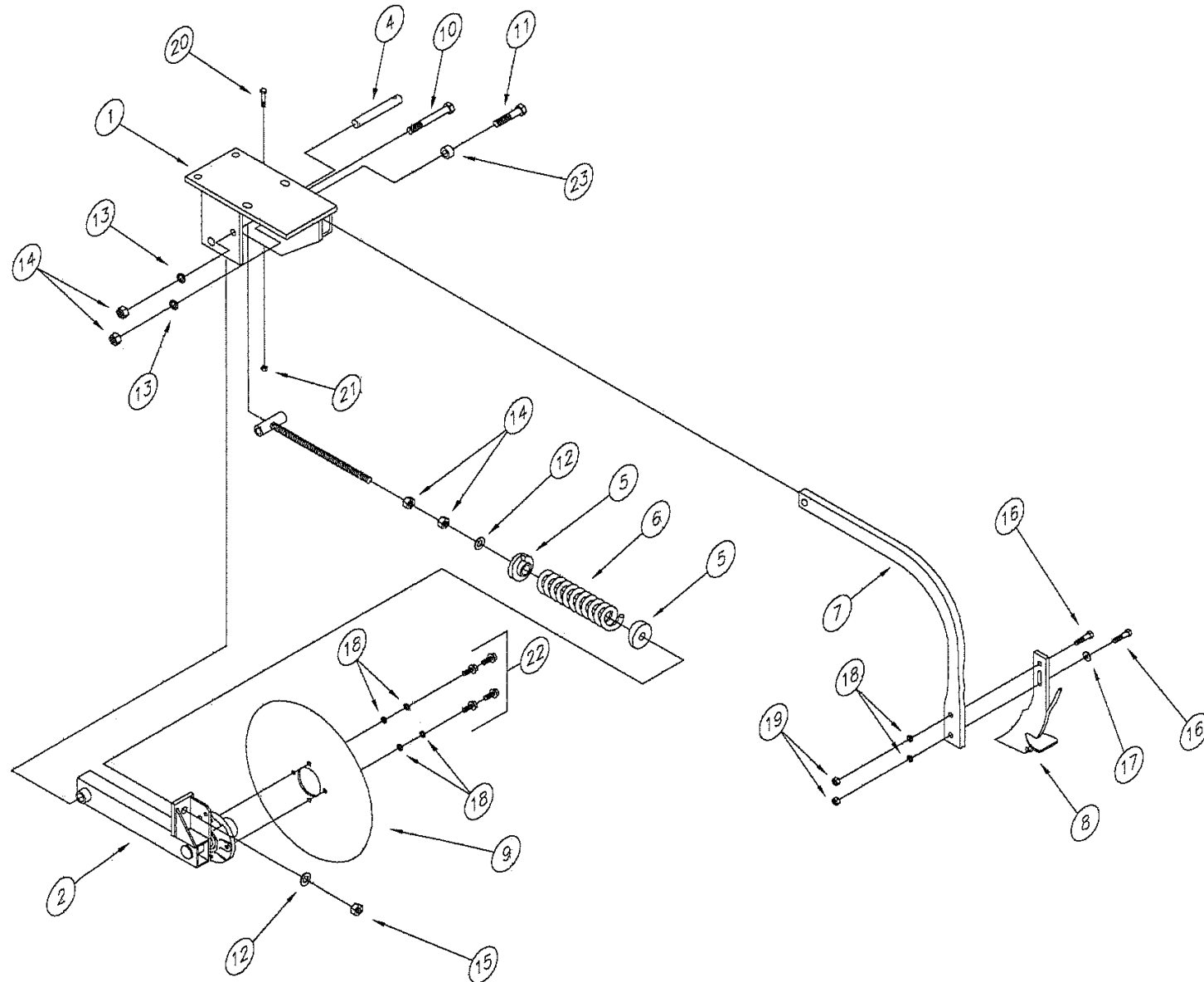
ENTIRE ASSEMBLY (ITEMS 1-4) MAY BE ORDERED USING PART # 900072.



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.

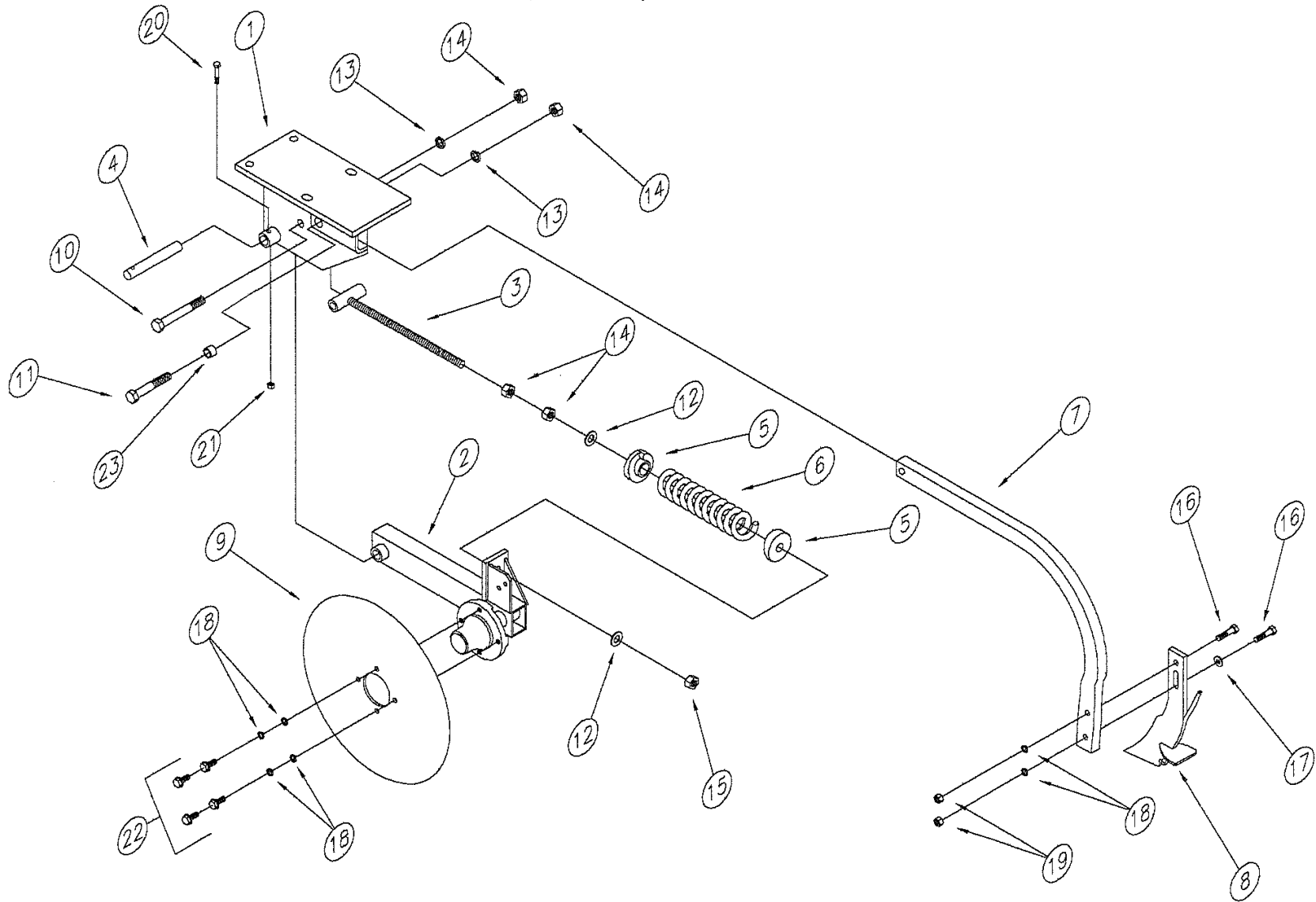
SINGLE (EDGE BENT) COLTER AMMONIA APPLICATION ASSEMBLY - RIGHT



RIGHT (EDGE BENT) COLTER ASSEMBLY COMPLETE – 900134R

<i>REF. #</i>	<i>QTY.</i>	<i>PART #</i>	<i>DESCRIPTION</i>
<i>1</i>	<i>1</i>	<i>801829</i>	<i>EDGE BENT SHANK MOUNTING BRKT. – RIGHT</i>
<i>2</i>	<i>1</i>	<i>801203</i>	<i>RIGHT SPINDLE TUBE & BUSHING ASSEMBLY</i>
<i>3</i>	<i>1</i>	<i>801198</i>	<i>SPRING TENSION ROD WELDMENT</i>
<i>4</i>	<i>1</i>	<i>602163</i>	<i>Ø1.00 X 7" PIN</i>
<i>5</i>	<i>2</i>	<i>400096</i>	<i>SPRING RETAINER CASTING</i>
<i>6</i>	<i>1</i>	<i>400095</i>	<i>COMPRESSION SPRING</i>
<i>7</i>	<i>1</i>	<i>900135</i>	<i>EDGE BENT SHANK</i>
<i>8</i>	<i>1</i>	<i>–</i>	<i>AMMONIA KNIFE – SEE KNIFE OPTION PAGE</i>
<i>9</i>	<i>1</i>	<i>400097</i>	<i>20" SMOOTH COLTER</i>
<i>10</i>	<i>1</i>	<i>101179</i>	<i>3/4–10 X 6" HEX BOLT</i>
<i>11</i>	<i>1</i>	<i>101480</i>	<i>3/4–10 X 3–1/2" HEX BOLT – GR 8 YEL. ZINC</i>
<i>12</i>	<i>2</i>	<i>101233</i>	<i>3/4" FLAT WASHER</i>
<i>13</i>	<i>2</i>	<i>101224</i>	<i>3/4" LOCK WASHER</i>
<i>14</i>	<i>4</i>	<i>101215</i>	<i>3/4–10 HEX NUT</i>
<i>15</i>	<i>1</i>	<i>101459</i>	<i>3/4–10 TOPLOCK NUT</i>
<i>16</i>	<i>2</i>	<i>101149</i>	<i>1/2–13 X 2" HEX BOLT</i>
<i>17</i>	<i>1</i>	<i>101231</i>	<i>1/2" FLAT WASHER</i>
<i>18</i>	<i>6</i>	<i>101222</i>	<i>1/2" LOCK WASHER</i>
<i>19</i>	<i>2</i>	<i>101213</i>	<i>1/2–13 HEX NUT</i>
<i>20</i>	<i>1</i>	<i>101127</i>	<i>3/8–16 X 2" HEX BOLT</i>
<i>21</i>	<i>1</i>	<i>101455</i>	<i>3/8–16 TOPLOCK NUT</i>
<i>22</i>	<i>4</i>	<i>301193</i>	<i>1/2–20 X 1–1/4" WHIZ BOLT</i>
<i>23</i>	<i>1</i>	<i>602233</i>	<i>1–1/4 O.D. X .774 I.D. X 3/4" BUSHING</i>
<i>–</i>	<i>2</i>	<i>101316</i>	<i>3/4–10 U–BOLT (NOT SHOWN)</i>
<i>–</i>	<i>4</i>	<i>101224</i>	<i>3/4" LOCK WASHER (NOT SHOWN)</i>
<i>–</i>	<i>4</i>	<i>101215</i>	<i>3/4–10 HEX NUT (NOT SHOWN)</i>

SINGLE (EDGE BENT) COLTER AMMONIA APPLICATION ASSEMBLY – LEFT



LEFT (EDGE BENT) COLTER ASSEMBLY COMPLETE – 900134L

<i>REF. #</i>	<i>QTY.</i>	<i>PART #</i>	<i>DESCRIPTION</i>
<i>1</i>	<i>1</i>	<i>801830</i>	<i>EDGE BENT SHANK MOUNTING BRKT. – LEFT</i>
<i>2</i>	<i>1</i>	<i>801204</i>	<i>LEFT SPINDLE TUBE & BUSHING ASSEMBLY</i>
<i>3</i>	<i>1</i>	<i>801198</i>	<i>SPRING TENSION ROD WELDMENT</i>
<i>4</i>	<i>1</i>	<i>602212</i>	<i>Ø1.00 X 7-1/4" PIN</i>
<i>5</i>	<i>2</i>	<i>400096</i>	<i>SPRING RETAINER CASTING</i>
<i>6</i>	<i>1</i>	<i>400095</i>	<i>COMPRESSION SPRING</i>
<i>7</i>	<i>1</i>	<i>900135</i>	<i>EDGE BENT SHANK</i>
<i>8</i>	<i>1</i>	<i>–</i>	<i>AMMONIA KNIFE – SEE KNIFE OPTION PAGE</i>
<i>9</i>	<i>1</i>	<i>400097</i>	<i>20" SMOOTH COLTER</i>
<i>10</i>	<i>1</i>	<i>101179</i>	<i>3/4-10 X 6" HEX BOLT</i>
<i>11</i>	<i>1</i>	<i>101480</i>	<i>3/4-10 X 3-1/2" HEX BOLT – GR 8 YEL. ZINC</i>
<i>12</i>	<i>2</i>	<i>101233</i>	<i>3/4" FLAT WASHER</i>
<i>13</i>	<i>2</i>	<i>101224</i>	<i>3/4" LOCK WASHER</i>
<i>14</i>	<i>4</i>	<i>101215</i>	<i>3/4-10 HEX NUT</i>
<i>15</i>	<i>1</i>	<i>101459</i>	<i>3/4-10 TOPLOCK NUT</i>
<i>16</i>	<i>2</i>	<i>101149</i>	<i>1/2-13 X 2" HEX BOLT</i>
<i>17</i>	<i>1</i>	<i>101231</i>	<i>1/2" FLAT WASHER</i>
<i>18</i>	<i>6</i>	<i>101222</i>	<i>1/2" LOCK WASHER</i>
<i>19</i>	<i>2</i>	<i>101213</i>	<i>1/2-13 HEX NUT</i>
<i>20</i>	<i>1</i>	<i>101127</i>	<i>3/8-16 X 2" HEX BOLT</i>
<i>21</i>	<i>1</i>	<i>101455</i>	<i>3/8-16 TOPLOCK NUT</i>
<i>22</i>	<i>4</i>	<i>301193</i>	<i>1/2-20 X 1-1/4" WHIZ BOLT</i>
<i>23</i>	<i>1</i>	<i>602233</i>	<i>1-1/4 O.D. X .774 I.D. X 3/4" BUSHING</i>
<i>–</i>	<i>2</i>	<i>101316</i>	<i>3/4-10 U-BOLT (NOT SHOWN)</i>
<i>–</i>	<i>4</i>	<i>101224</i>	<i>3/4" LOCK WASHER (NOT SHOWN)</i>
<i>–</i>	<i>4</i>	<i>101215</i>	<i>3/4-10 HEX NUT (NOT SHOWN)</i>

LEFT AUTO RESET COULTTER ASSEMBLY

NOTE: ITEM # 4 TAKES TWO GREASE ZERKS.

REVISED: 2/26/01

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LEFT AUTO RESET COULTER ASSEMBLY COMPLETE - 900082L

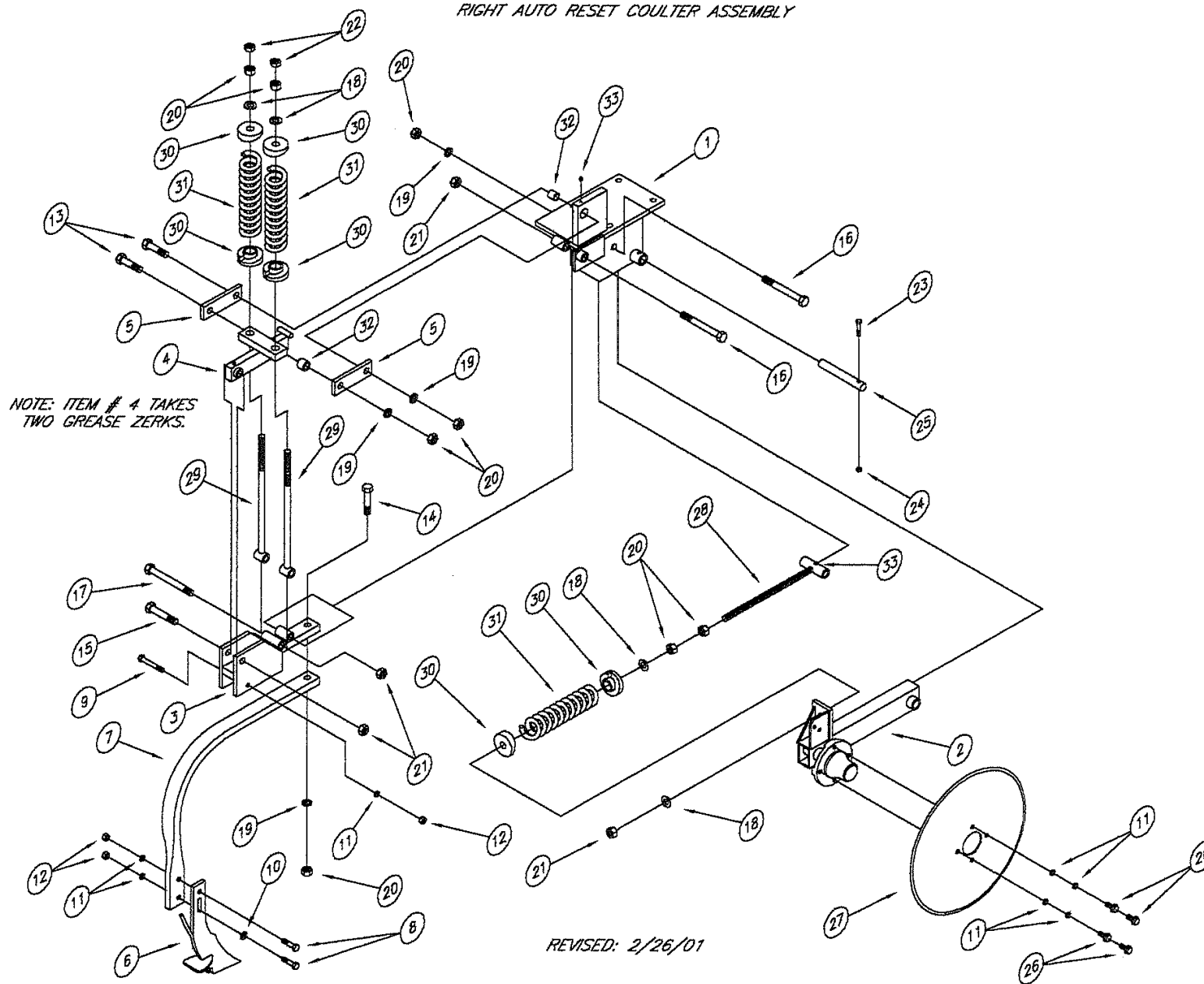
REFERENCE #	QUANTITY	PART #	DESCRIPTION
1	1	801684	LEFT MOUNTING BRACKET
2	1	801204	LEFT SPINDLE TUBE & BUSHING ASSEM.
3	1	801686	SHANK MOUNTING BRACKET
4	1	801687	AUTO RESET BRACKET
5	2	400201	1/2 X 2 X 6-1/8" PIVOT PLATE
6	1	900036	AMMONIA KNIFE WITH SEALER
7	1	900037	SIDE MOUNT SHANK
8	2	101149	1/2-13 X 2" HEX BOLT PLT.
9	1	101153	1/2-13 X 4" HEX BOLT PLT.
10	1	101231	1/2" FLAT WASHER PLT.
11	7	101222	1/2" LOCK WASHER PLT.
12	3	101213	1/2-13 HEX NUT PLT.
13	2	101173	3/4-10 X 3" HEX BOLT PLT.
14	1	101422	3/4-10 X 3" HEX BOLT - GR 8 YELLOW ZINC
15	1	101175	3/4-10 X 4" HEX BOLT PLT.
16	2	101179	3/4-10 X 6" HEX BOLT PLT.
17	1	101180	3/4-10 X 7" HEX BOLT PLT.
18	4	101233	3/4" FLAT WASHER PLT.
19	4	101224	3/4" LOCK WASHER PLT.
20	8	101215	3/4-10 HEX NUT PLT.
21	4	101459	3/4-10 TOPLOCK NUT PLT.
22	2	101382	3/4-10 JAM NUT PLT.
23	1	101127	3/8-16 X 2" HEX BOLT PLT.
24	1	101455	3/8-16 TOPLOCK NUT PLT.
25	1	602212	#1.00 X 7-1/4" PIN
26	4	301193	1/2-20 X 1-1/4" WHIZ BOLT PLT.
27	1	400097	20" SMOOTH COULTER BLADE
28	1	801198	SPRING TENSION ROD - 15" LONG
29	2	801688	SPRING TENSION ROD - 17-1/2" LONG
30	6	400096	SPRING RETAINER CASTING
31	3	400095	COMPRESSION SPRING
32	2	602211	1.250" O.D. X .774" I.D. X 1-1/16" BUSH.
33	4	101252	1/4-28 STRAIGHT GREASE ZERK
-	2	**	3/4-10 U-BOLT PLT. (NOT SHOWN)
-	4	101224	3/4" LOCK WASHER PLT. (NOT SHOWN)
-	4	101215	3/4-10 HEX NUT PLT. (NOT SHOWN)

REVISED: 2/26/01

** FOR 7 X 7 BAR, USE 3/4-10 X 7 X 9" U-BOLT - PART # 101316.

** FOR 7 X 5 BAR, USE 3/4-10 X 7 X 6-1/2" U-BOLT - PART # 101315.

RIGHT AUTO RESET COULTER ASSEMBLY



RIGHT AUTO RESET COULTER ASSEMBLY COMPLETE - 900082R

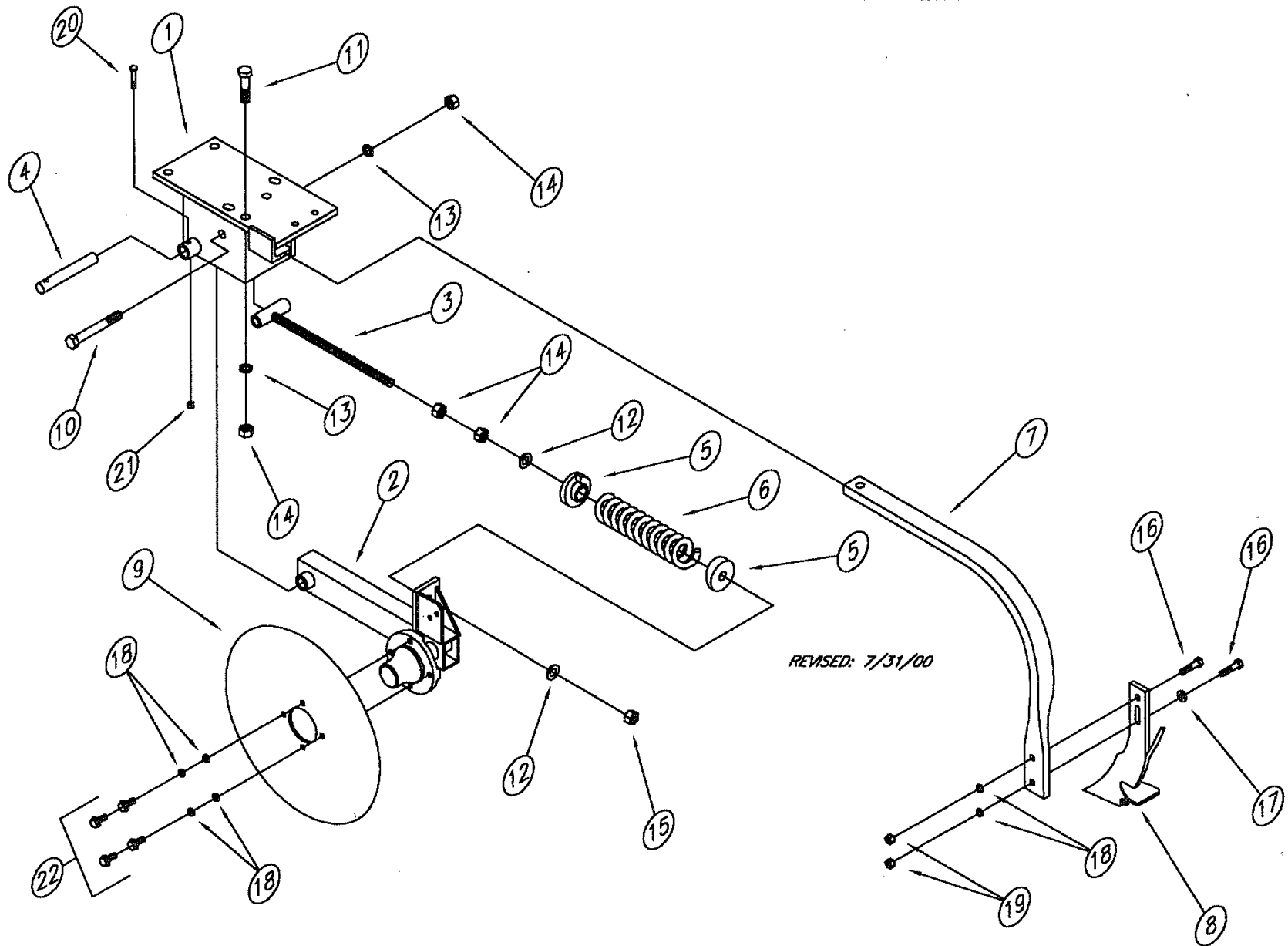
REFERENCE #	QUANTITY	PART #	DESCRIPTION
1	1	801685	RIGHT MOUNTING BRACKET
2	1	801203	RIGHT SPINDLE TUBE & BUSHING ASSEM.
3	1	801686	SHANK MOUNTING BRACKET
4	1	801687	AUTO RESET BRACKET
5	2	400201	1/2 X 2 X 6-1/8" PIVOT PLATE
6	1	900036	AMMONIA KNIFE WITH SEALER
7	1	900037	SIDE MOUNT SHANK
8	2	101149	1/2-13 X 2" HEX BOLT PLT.
9	1	101153	1/2-13 X 4" HEX BOLT PLT.
10	1	101231	1/2" FLAT WASHER PLT.
11	7	101222	1/2" LOCK WASHER PLT.
12	3	101213	1/2-13 HEX NUT PLT.
13	2	101173	3/4-10 X 3" HEX BOLT PLT.
14	1	101422	3/4-10 X 3" HEX BOLT - GR 8 YELLOW ZINC
15	1	101175	3/4-10 X 4" HEX BOLT PLT.
16	2	101179	3/4-10 X 6" HEX BOLT PLT.
17	1	101180	3/4-10 X 7" HEX BOLT PLT.
18	4	101233	3/4" FLAT WASHER PLT.
19	4	101224	3/4" LOCK WASHER PLT.
20	8	101215	3/4-10 HEX NUT PLT.
21	4	101459	3/4-10 TOPLOCK NUT PLT.
22	2	101382	3/4-10 JAM NUT PLT.
23	1	101127	3/8-16 X 2" HEX BOLT PLT.
24	1	101455	3/8-16 TOPLOCK NUT PLT.
25	1	602212	#1.00 X 7-1/4" HINGE PIN
26	4	301193	1/2-20 X 1-1/4" WHIZ BOLT PLT.
27	1	400097	20" SMOOTH COULTER BLADE
28	1	801198	SPRING TENSION ROD - 15" LONG
29	2	801688	SPRING TENSION ROD - 17-1/2" LONG
30	6	400096	SPRING RETAINER CASTING
31	3	400095	COMPRESSION SPRING
32	2	602211	1.250" O.D. X .774" I.D. X 1-1/16" BUSH.
33	4	101252	1/4-28 STRAIGHT GREASE ZERK
-	2	**	3/4-10 U-BOLT PLT. (NOT SHOWN)
-	4	101224	3/4" LOCK WASHER PLT. (NOT SHOWN)
-	4	101215	3/4-10 HEX NUT PLT. (NOT SHOWN)

REVISED: 2/26/01

** FOR 7 X 7 BAR, USE 3/4-10 X 7 X 9" U-BOLT - PART # 101316.

** FOR 7 X 5 BAR, USE 3/4-10 X 7 X 6-1/2" U-BOLT - PART # 101315.

SINGLE COLTER AMMONIA APPLICATION ASSEMBLY – LEFT



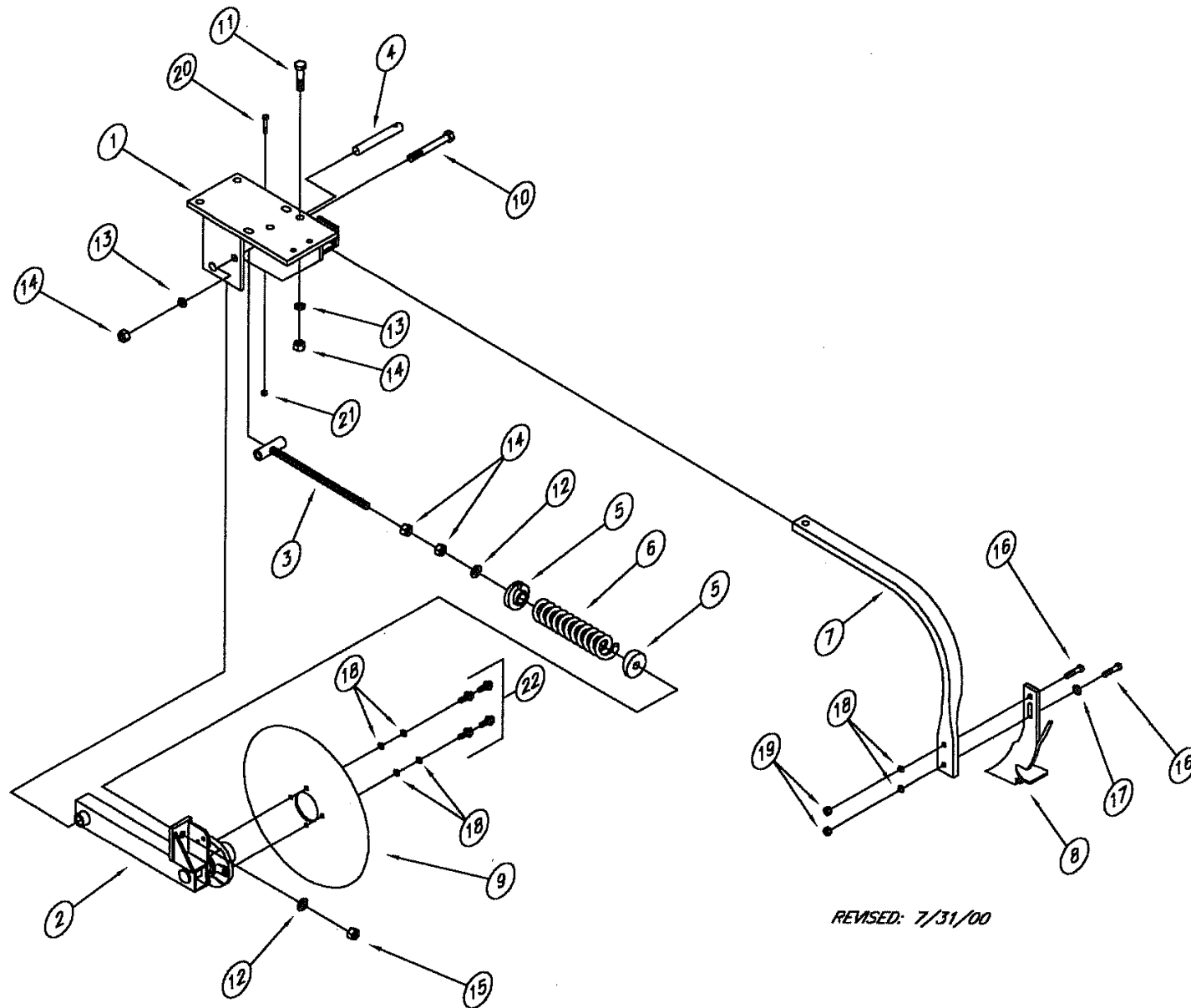
LEFT COLTER ASSEMBLY COMPLETE - 900011L

<i>REF. #</i>	<i>QTY.</i>	<i>PART #</i>	<i>DESCRIPTION</i>	<i>REVISED: 8/1/00</i>
<i>1</i>	<i>1</i>	<i>801325</i>	<i>UNIVERSAL AMMONIA MOUNTING BRACKET - LEFT</i>	
<i>2</i>	<i>1</i>	<i>801204</i>	<i>LEFT SPINDLE TUBE & BUSHING ASSEMBLY</i>	
<i>3</i>	<i>1</i>	<i>801198</i>	<i>SPRING TENSION ROD WELDMENT</i>	
<i>4</i>	<i>1</i>	<i>602212</i>	<i>Ø1.00 X 7-1/4" PIN</i>	
<i>5</i>	<i>2</i>	<i>400096</i>	<i>SPRING RETAINER CASTING</i>	
<i>6</i>	<i>1</i>	<i>400095</i>	<i>COMPRESSION SPRING</i>	
<i>7</i>	<i>1</i>	<i>900037</i>	<i>SIDE MOUNT SHANK</i>	
<i>8</i>	<i>1</i>	<i>900036</i>	<i>AMMONIA KNIFE WITH SEALER</i>	
<i>9</i>	<i>1</i>	<i>400097</i>	<i>20" SMOOTH COLTER</i>	
<i>10</i>	<i>1</i>	<i>101179</i>	<i>3/4-10 X 6" HEX BOLT</i>	
<i>11</i>	<i>1</i>	<i>101422</i>	<i>3/4-10 X 3" HEX BOLT - GR 8 YELLOW ZINC</i>	
<i>12</i>	<i>2</i>	<i>101233</i>	<i>3/4" FLAT WASHER</i>	
<i>13</i>	<i>2</i>	<i>101224</i>	<i>3/4" LOCK WASHER</i>	
<i>14</i>	<i>4</i>	<i>101215</i>	<i>3/4-10 HEX NUT</i>	
<i>15</i>	<i>1</i>	<i>101242</i>	<i>3/4-10 SELF-LOCKING HEX NUT</i>	
<i>16</i>	<i>2</i>	<i>101149</i>	<i>1/2-13 X 2" HEX BOLT</i>	
<i>17</i>	<i>1</i>	<i>101231</i>	<i>1/2" FLAT WASHER</i>	
<i>18</i>	<i>6</i>	<i>101222</i>	<i>1/2" LOCK WASHER</i>	
<i>19</i>	<i>2</i>	<i>101213</i>	<i>1/2-13 HEX NUT</i>	
<i>20</i>	<i>1</i>	<i>101127</i>	<i>3/8-16 X 2" HEX BOLT</i>	
<i>21</i>	<i>1</i>	<i>101238</i>	<i>3/8-16 LOCK NUT</i>	
<i>22</i>	<i>4</i>	<i>301193</i>	<i>1/2-20 X 1-1/4" WHIZ BOLT</i>	
<i>-</i>	<i>2</i>	<i>**</i>	<i>3/4-10 U-BOLT (NOT SHOWN)</i>	
<i>-</i>	<i>4</i>	<i>101224</i>	<i>3/4" LOCK WASHER (NOT SHOWN)</i>	
<i>-</i>	<i>4</i>	<i>101215</i>	<i>3/4-10 HEX NUT (NOT SHOWN)</i>	

*** FOR 7 X 7 TUBE, USE 3/4-10 X 7 X 9" U-BOLT - PART # 101316.*

*** FOR 7 X 5 TUBE, USE 3/4-10 X 7 X 6-1/2" U-BOLT - PART # 101315.*

SINGLE COLTER AMMONIA APPLICATION ASSEMBLY – RIGHT



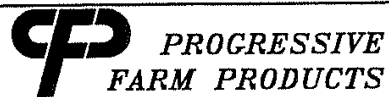
REVISED: 7/31/00

RIGHT COLTER ASSEMBLY COMPLETE - 900011R

<i>REF. #</i>	<i>QTY.</i>	<i>PART #</i>	<i>DESCRIPTION</i>	<i>REVISED: 7/31/00</i>
<i>1</i>	<i>1</i>	<i>801326</i>	<i>UNIVERSAL AMMONIA MOUNTING BRACKET - RIGHT</i>	
<i>2</i>	<i>1</i>	<i>801203</i>	<i>RIGHT SPINDLE TUBE & BUSHING ASSEMBLY</i>	
<i>3</i>	<i>1</i>	<i>801198</i>	<i>SPRING TENSION ROD WELDMENT</i>	
<i>4</i>	<i>1</i>	<i>602163</i>	<i>Ø1.00 X 7" PIN</i>	
<i>5</i>	<i>2</i>	<i>400096</i>	<i>SPRING RETAINER CASTING</i>	
<i>6</i>	<i>1</i>	<i>400095</i>	<i>COMPRESSION SPRING</i>	
<i>7</i>	<i>1</i>	<i>900037</i>	<i>SIDE MOUNT SHANK</i>	
<i>8</i>	<i>1</i>	<i>900036</i>	<i>AMMONIA KNIFE WITH SEALER</i>	
<i>9</i>	<i>1</i>	<i>400097</i>	<i>20" SMOOTH COLTER</i>	
<i>10</i>	<i>1</i>	<i>101179</i>	<i>3/4-10 X 6" HEX BOLT</i>	
<i>11</i>	<i>1</i>	<i>101422</i>	<i>3/4-10 X 3" HEX BOLT - GR 8 YELLOW ZINC</i>	
<i>12</i>	<i>2</i>	<i>101233</i>	<i>3/4" FLAT WASHER</i>	
<i>13</i>	<i>2</i>	<i>101224</i>	<i>3/4" LOCK WASHER</i>	
<i>14</i>	<i>4</i>	<i>101215</i>	<i>3/4-10 HEX NUT</i>	
<i>15</i>	<i>1</i>	<i>101242</i>	<i>3/4-10 SELF-LOCKING HEX NUT</i>	
<i>16</i>	<i>2</i>	<i>101149</i>	<i>1/2-13 X 2" HEX BOLT</i>	
<i>17</i>	<i>1</i>	<i>101231</i>	<i>1/2" FLAT WASHER</i>	
<i>18</i>	<i>6</i>	<i>101222</i>	<i>1/2" LOCK WASHER</i>	
<i>19</i>	<i>2</i>	<i>101213</i>	<i>1/2-13 HEX NUT</i>	
<i>20</i>	<i>1</i>	<i>101127</i>	<i>3/8-16 X 2" HEX BOLT</i>	
<i>21</i>	<i>1</i>	<i>101238</i>	<i>3/8-16 LOCK NUT</i>	
<i>22</i>	<i>4</i>	<i>301193</i>	<i>1/2-20 X 1-1/4" WHIZ BOLT</i>	
<i>-</i>	<i>2</i>	<i>**</i>	<i>3/4-10 U-BOLT (NOT SHOWN)</i>	
<i>-</i>	<i>4</i>	<i>101224</i>	<i>3/4" LOCK WASHER (NOT SHOWN)</i>	
<i>-</i>	<i>4</i>	<i>101215</i>	<i>3/4-10 HEX NUT (NOT SHOWN)</i>	

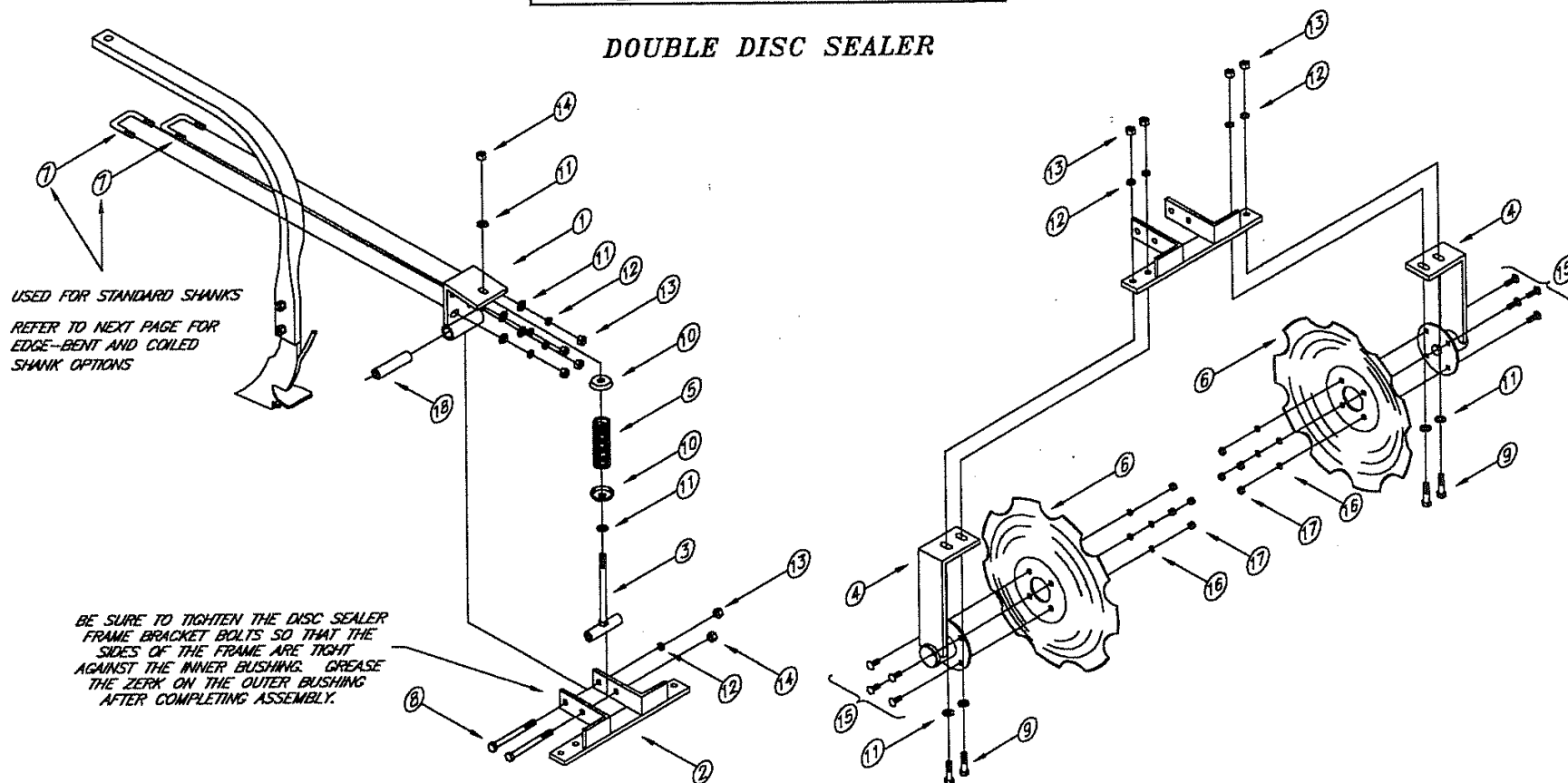
**** FOR 7 X 7 TUBE, USE 3/4-10 X 7 X 9" U-BOLT - PART # 101316.**

**** FOR 7 X 5 TUBE, USE 3/4-10 X 7 X 6-1/2" U-BOLT - PART # 101315.**



PROGRESSIVE
FARM PRODUCTS

DOUBLE DISC SEALER



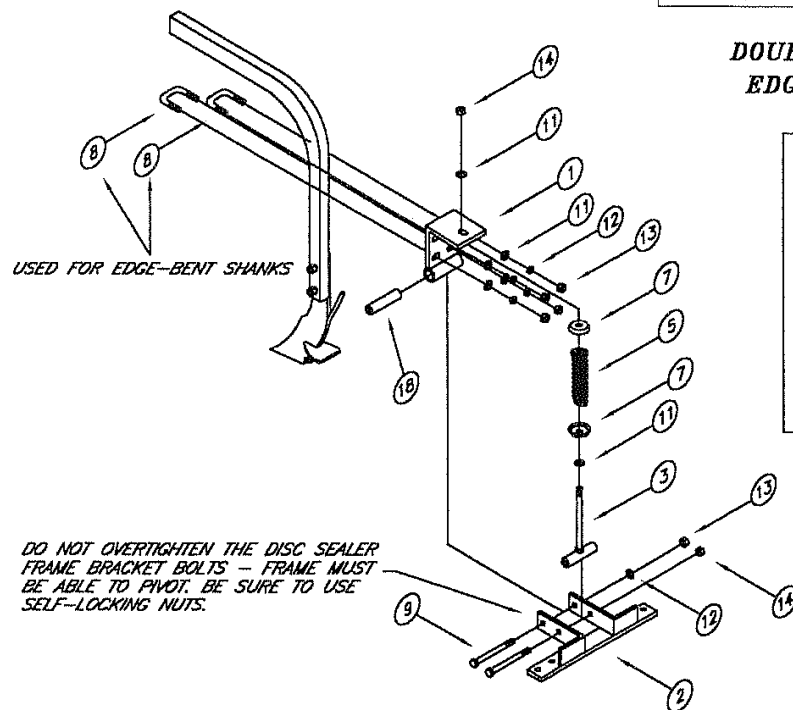
REF. #	QTY.	PART #	DESCRIPTION
1	1	801694	SHANK MOUNTING BRACKET
2	1	801327	DISC SEALER FRAME BRACKET
3	1	801329	SPRING PIVOT BOLT & BUSHING ASSEMBLY
4	2	801330	SEALER ARM ASSEMBLY
5	1	400123	COMPRESSION SPRING
6	2	400107	18" NOTCHED DISC
7	2	101355	1/2-13 X 2" X 2-1/2" U-BOLT
8	2	101156	1/2-13 X 5-1/2" HEX BOLT
9	4	101149	1/2-13 X 2" HEX BOLT

REF. #	QTY.	PART #	DESCRIPTION
10	2	101299	5/8" CUP WASHER
11	10	101231	1/2" FLAT WASHER
12	9	101222	1/2" LOCK WASHER
13	9	101213	1/2-13 HEX NUT
14	2	101240	1/2-13 SELF-LOCKING HEX NUT
15	8	101357	3/8-16 X 1" CARRIAGE BOLT
16	8	101220	3/8" LOCK WASHER
17	8	101211	3/8-16 HEX NUT
18	1	602214	1.000 O.D. X .524 I.D. X 4-1/8" BUSHING



PROGRESSIVE
FARM PRODUCTS

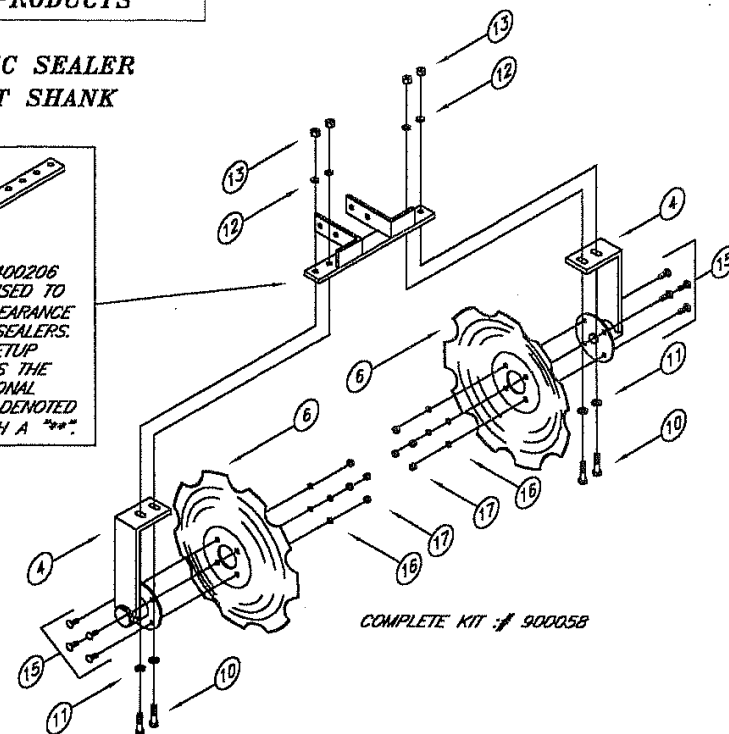
DOUBLE DISC SEALER EDGE-BENT SHANK



DO NOT OVERTIGHTEN THE DISC SEALER
FRAME BRACKET BOLTS - FRAME MUST
BE ABLE TO PIVOT. BE SURE TO USE
SELF-LOCKING NUTS.

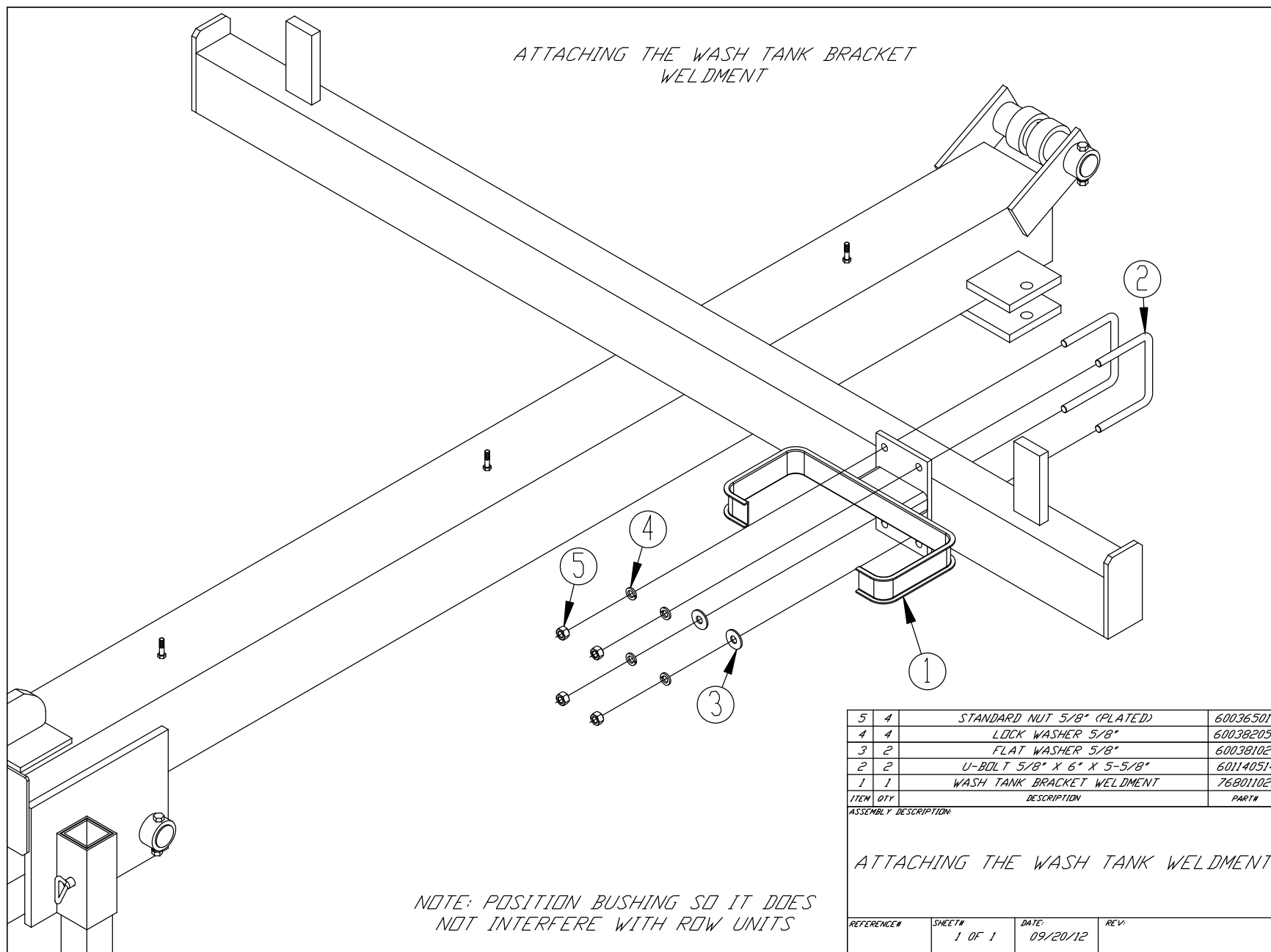
REF. #	QTY.	PART #	DESCRIPTION
1	1	801694	SHANK MOUNTING BRACKET
2	1	801327	DISC SEALER FRAME BRACKET
3	1	801329	SPRING PIVOT BOLT & BUSHING ASSEMBLY
4	2	801330	SEALER ARM ASSEMBLY
5	1	400123	COMPRESSION SPRING
6	2	400107	18" NOTCHED DISC
7	2	101299	5/8" CLIP WASHER
8	2	101365	1/2-13 X 3-1/2" U-BOLT-PLT.
9	2	101156	1/2-13 X 5-1/2" HEX BOLT
10	4	101149	1/2-13 X 2" HEX BOLT
11	10	101231	1/2" FLAT WASHER

PART # 400206
MAY BE USED TO
GAIN 4" CLEARANCE
BETWEEN SEALERS.
THIS SETUP
REQUIRES THE
ADDITIONAL
HARDWARE DENOTED
BELOW WITH A "**".



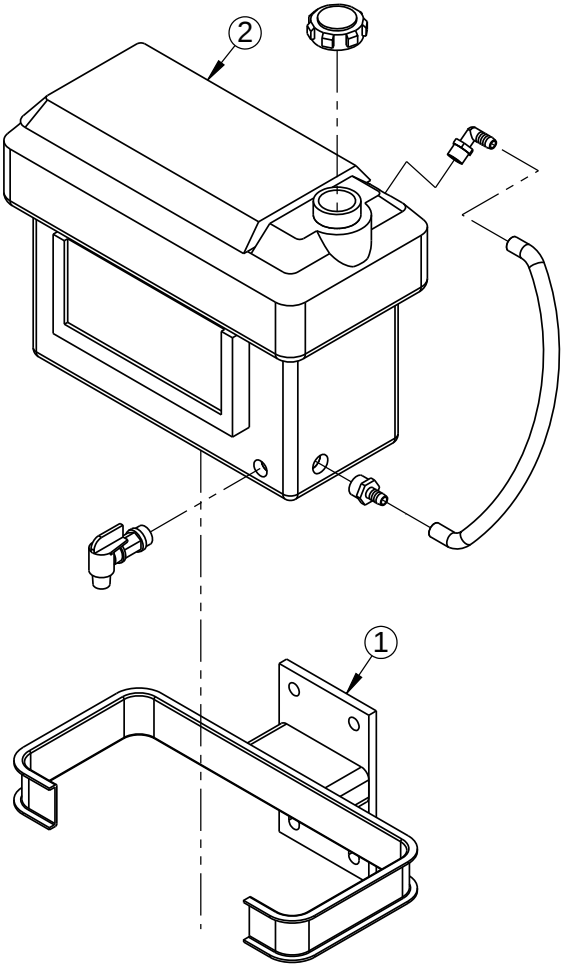
COMPLETE KIT # 900058

REF. #	QTY.	PART #	DESCRIPTION	REVISED: 1/22/01
12	9	101222	1/2" LOCK WASHER	
13	9	101213	1/2-13 HEX NUT	
14	2	101457	1/2-13 TOPLOCK NUT	
15	8	101357	3/8-16 X 1" CARRIAGE BOLT	
16	8	101220	3/8" LOCK WASHER	
17	8	101211	3/8-16 HEX NUT	
18	1	602214	1.000 O.D. X .524 I.D. X 4-1/8" BUSHING	
**	2	101150	1/2-13 X 2-1/2" HEX BOLT	
**	2	101222	1/2" LOCK WASHER	
**	2	101213	1/2-13 HEX NUT	

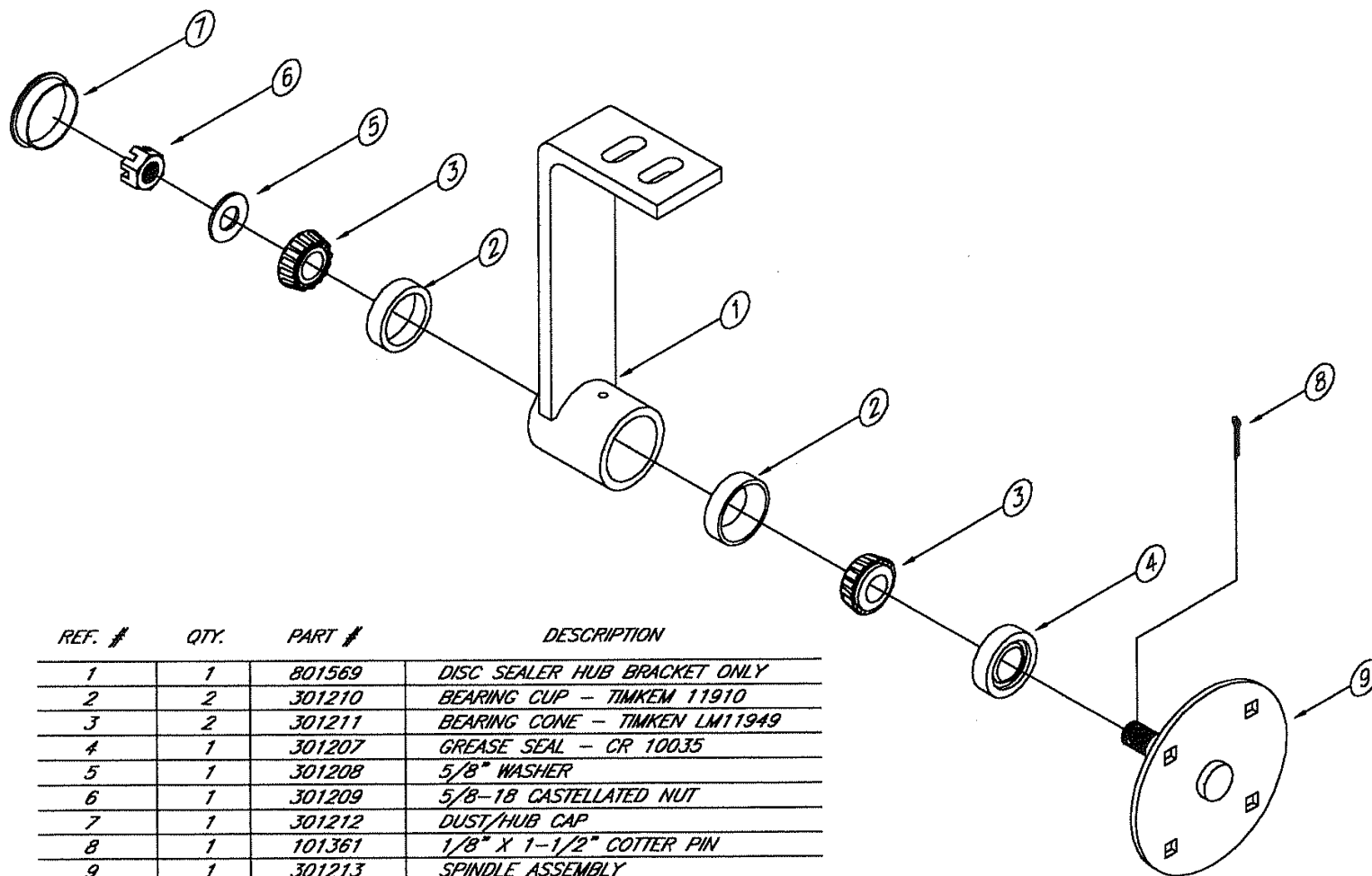


ATTACHING THE WASH TANK

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



DISC SEALER HUB ASSEMBLY



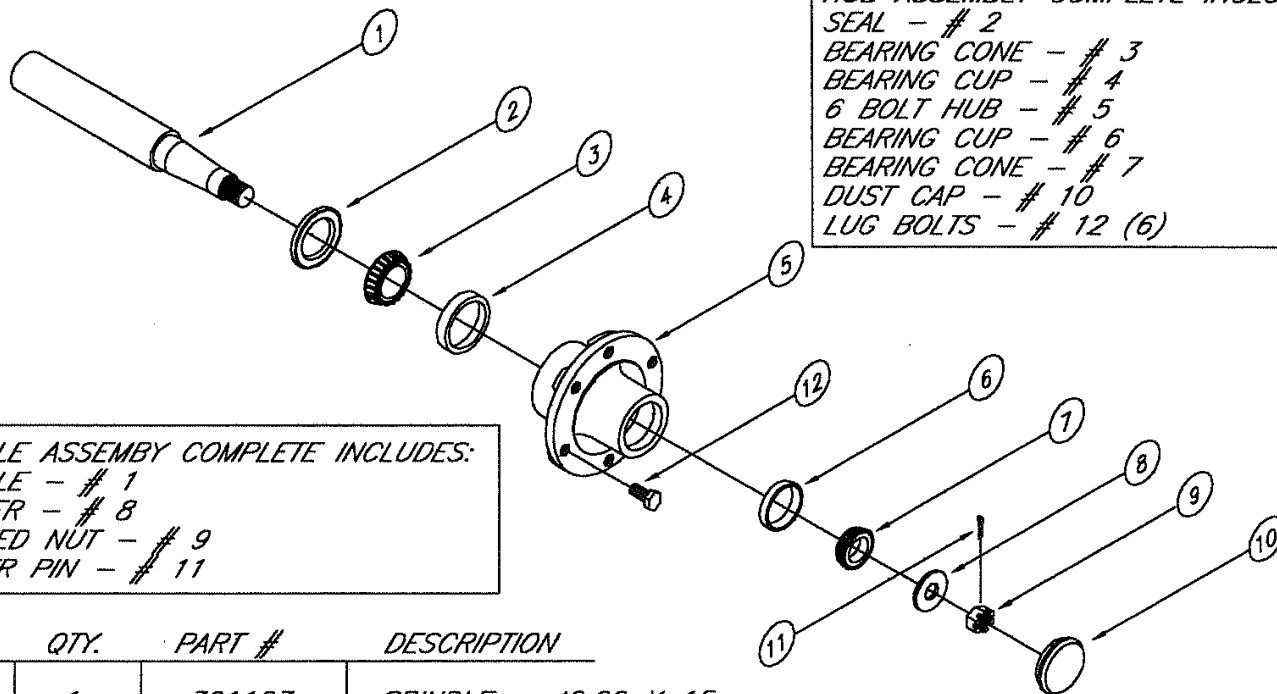
HEAVY DUTY 4 BOLT HUB & SPINDLE

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 - $\phi 1.625" \times 8.0"$
2	1	301183	SEAL - GR 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

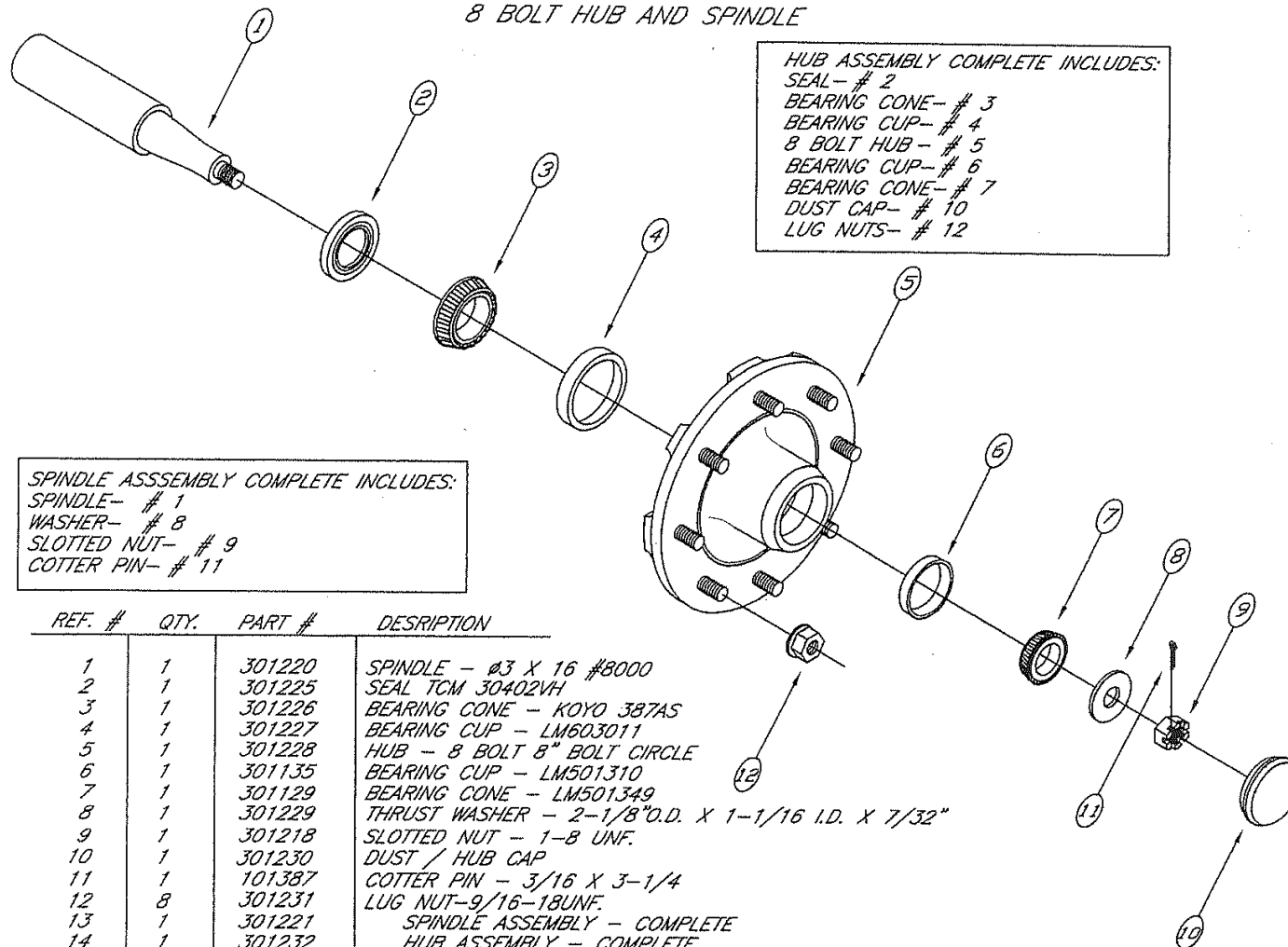


HUB ASSEMBLY COMPLETE INCLUDES:
 SEAL - # 2
 BEARING CONE - # 3
 BEARING CUP - # 4
 6 BOLT HUB - # 5
 BEARING CUP - # 6
 BEARING CONE - # 7
 DUST CAP - # 10
 LUG BOLTS - # 12 (6)

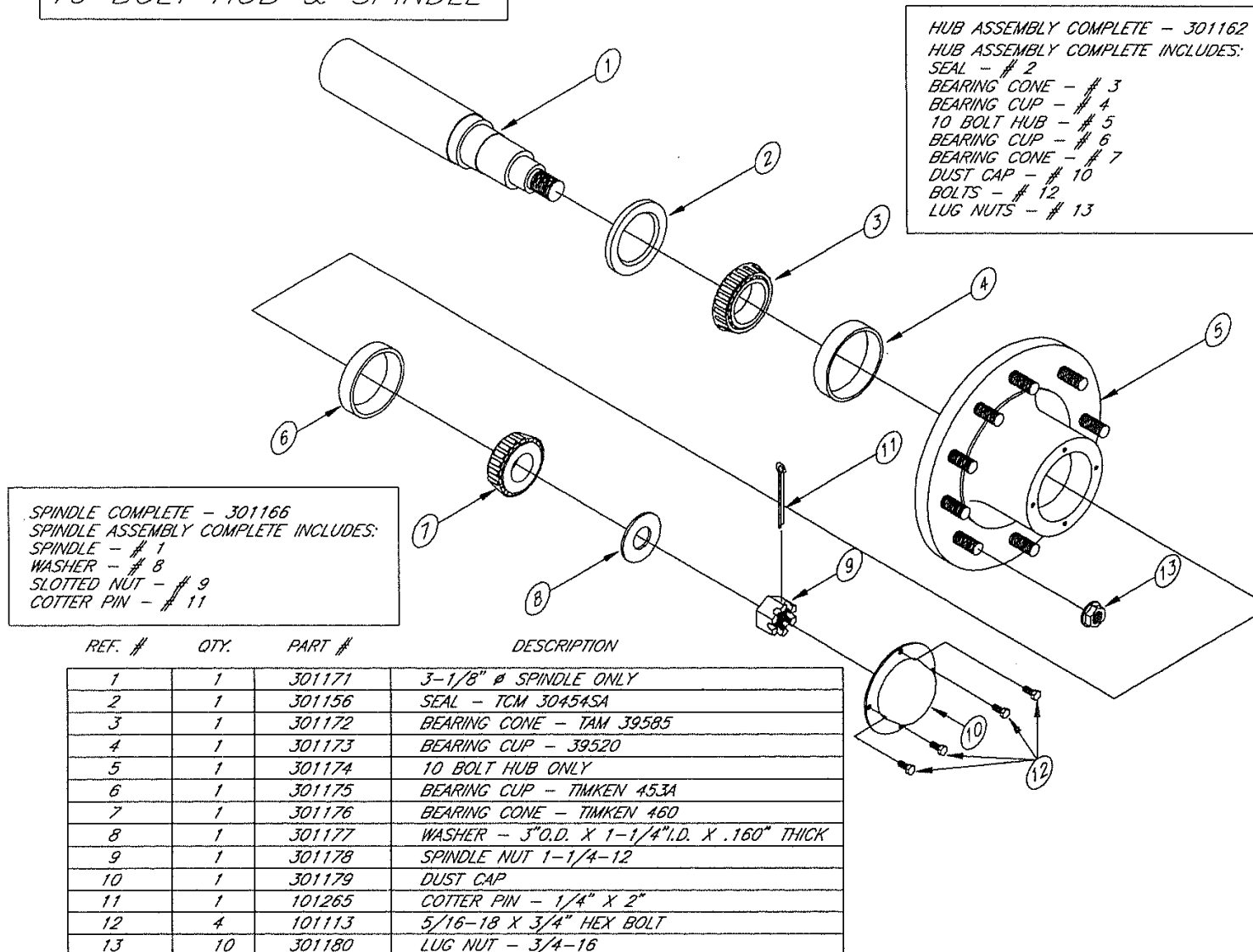
SPINDLE ASSEMBY COMPLETE INCLUDES:
 SPINDLE - # 1
 WASHER - # 8
 SLOTTED NUT - # 9
 COTTER PIN - # 11

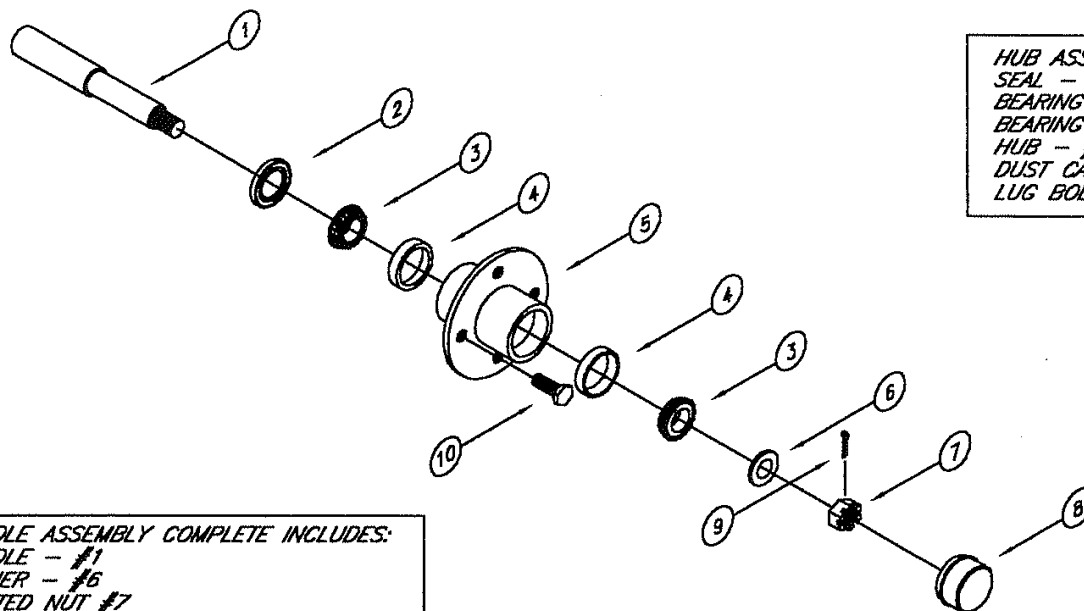
REF. #	QTY.	PART #	DESCRIPTION
1	1	301123	SPINDLE - $\varnothing 2.00 \times 15$
2	1	301154	SEAL - TCM 203062
3	1	301129	BEARING CONE - LM501349
4	1	301135	BEARING CUP - LM501310
5	1	301126	6 BOLT HUB - 6" BOLT CIRCLE
6	1	301134	BEARING CUP - LM67010
7	1	301132	BEARING CONE - LM67048
8	1	301157	WASHER - 2" O.D. $\times$ 13/16" I.D.
9	1	301153	SLOTTED NUT - 3/4 - 16UNF.
10	1	301143	DUST CAP
11	1	301152	COTTER PIN - 5/32 $\times$ 1 3/4
12	6	301151	LUG BOLT - 9/16 - 18UNF. $\times$ 1 1/8 LG.
13	1	301164	SPINDLE ASSEMBLY - COMPLETE
14	1	301160	HUB ASSEMBLY - COMPLETE

8 BOLT HUB AND SPINDLE



10 BOLT HUB & SPINDLE





SPINDLE ASSEMBLY COMPLETE INCLUDES:
 SPINDLE - #1
 WASHER - #6
 SLOTTED NUT #7
 COTTER PIN - #9

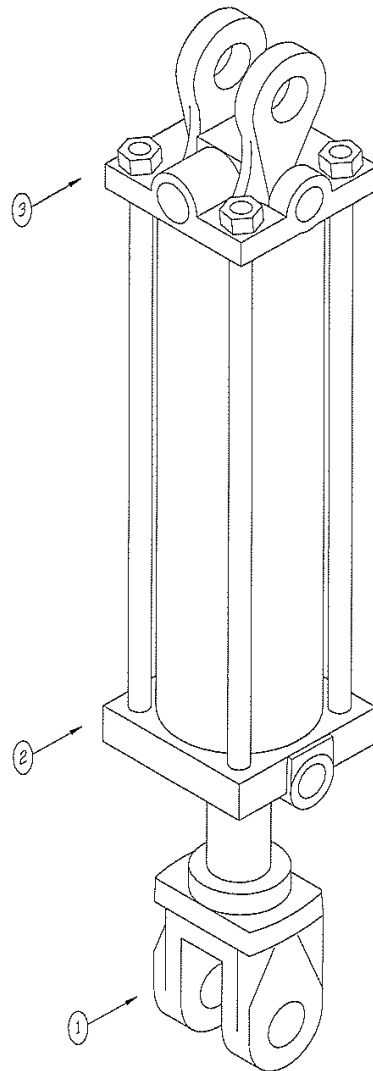
HUB ASSEMBLY COMPLETE INCLUDES:
 SEAL - #2
 BEARING CONES - #3 (2)
 BEARING CUPS - #4 (2)
 HUB - #5
 DUST CAP - #8
 LUG BOLTS - #10 (4)

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	301145	SPINDLE - #1.25" X 8.5"
2	1	301148	SEAL - CR 12437
3	2	301133	BEARING CONE - L44643
4	2	301138	BEARING CUP - L44610
5	1	301146	4 BOLT HUB - 4" BOLT CIRCLE
6	1	301142	WASHER - 1-1/2" O.D. X 13/16" D.
7	1	301153	SLOTTED NUT - 3/4-16 UNF
8	1	301149	DUST CAP
9	1	301152	COTTER PIN - 5/32" X 1-3/4"
10	4	301150	LUG BOLT - 1/2-20 UNF X 1"
11	1	301163	SPINDLE ASSEMBLY - COMPLETE
12	1	301159	HUB ASSEMBLY - COMPLETE

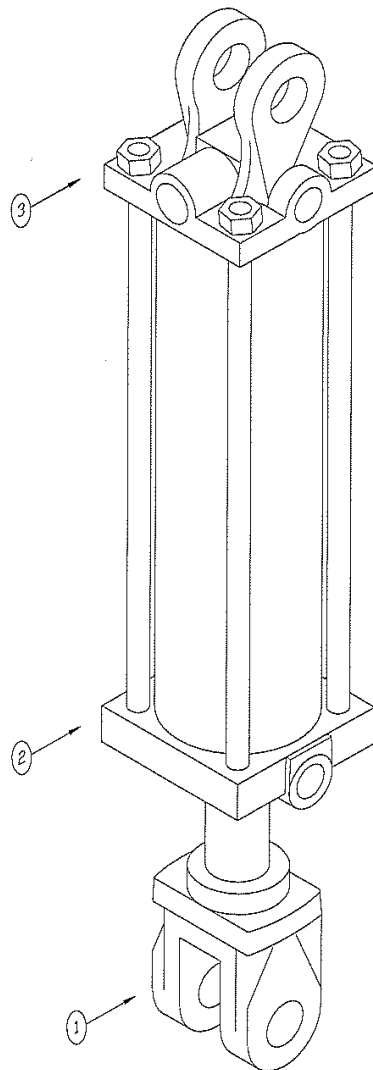
REVISED: 2/21/00

3-1/4 X 10" REPHASE CYLINDER



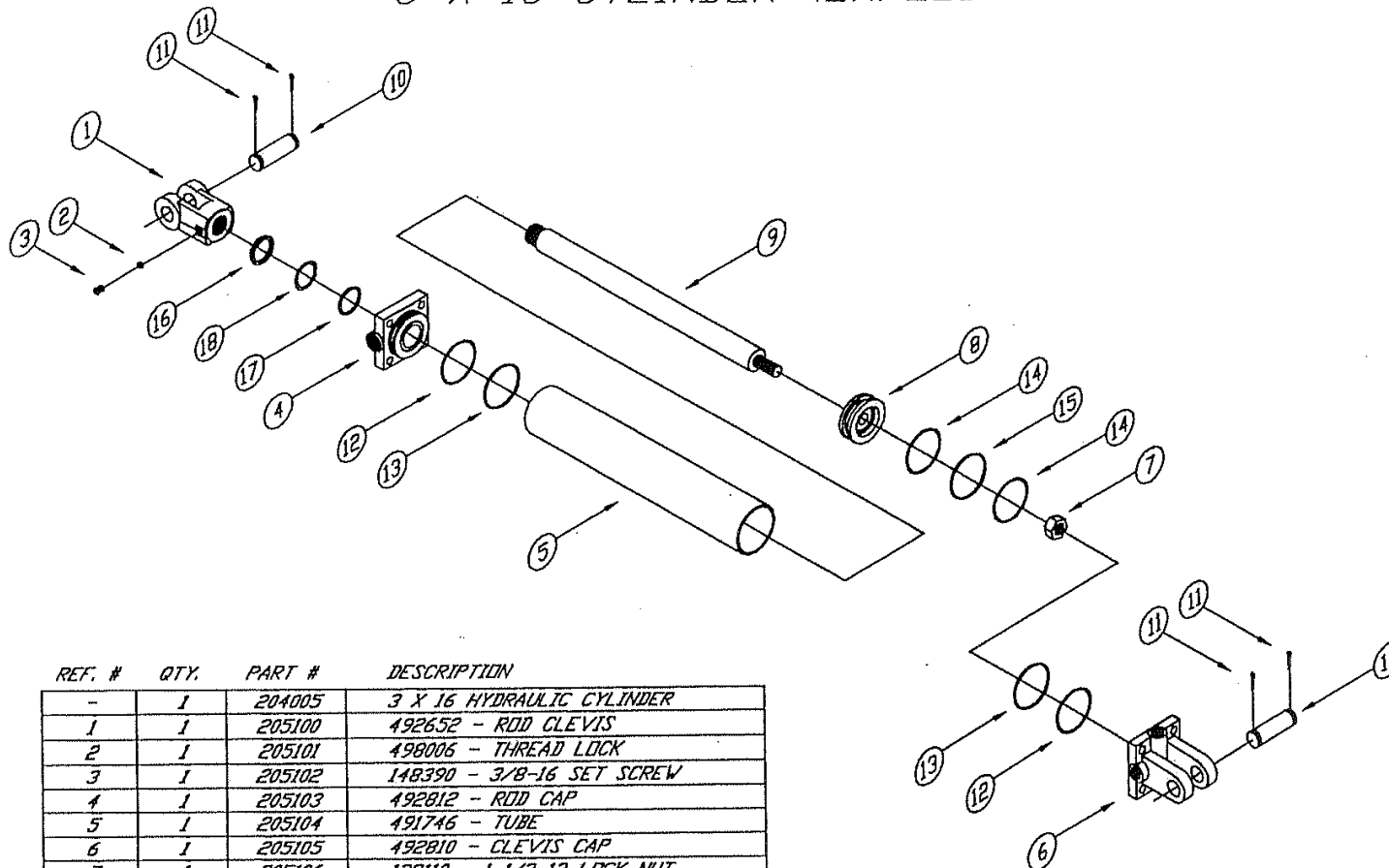
ITEM	QTY	PART#	DESCRIPTION
1	1	205181	ROD CLEVIS
2	1	205182	ROD CAP
3	1	205183	CLEVIS CAP
-	1	204015	3-1/4 X 10" REPHASE CYLINDER
-	1	205178	SEAL KIT

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

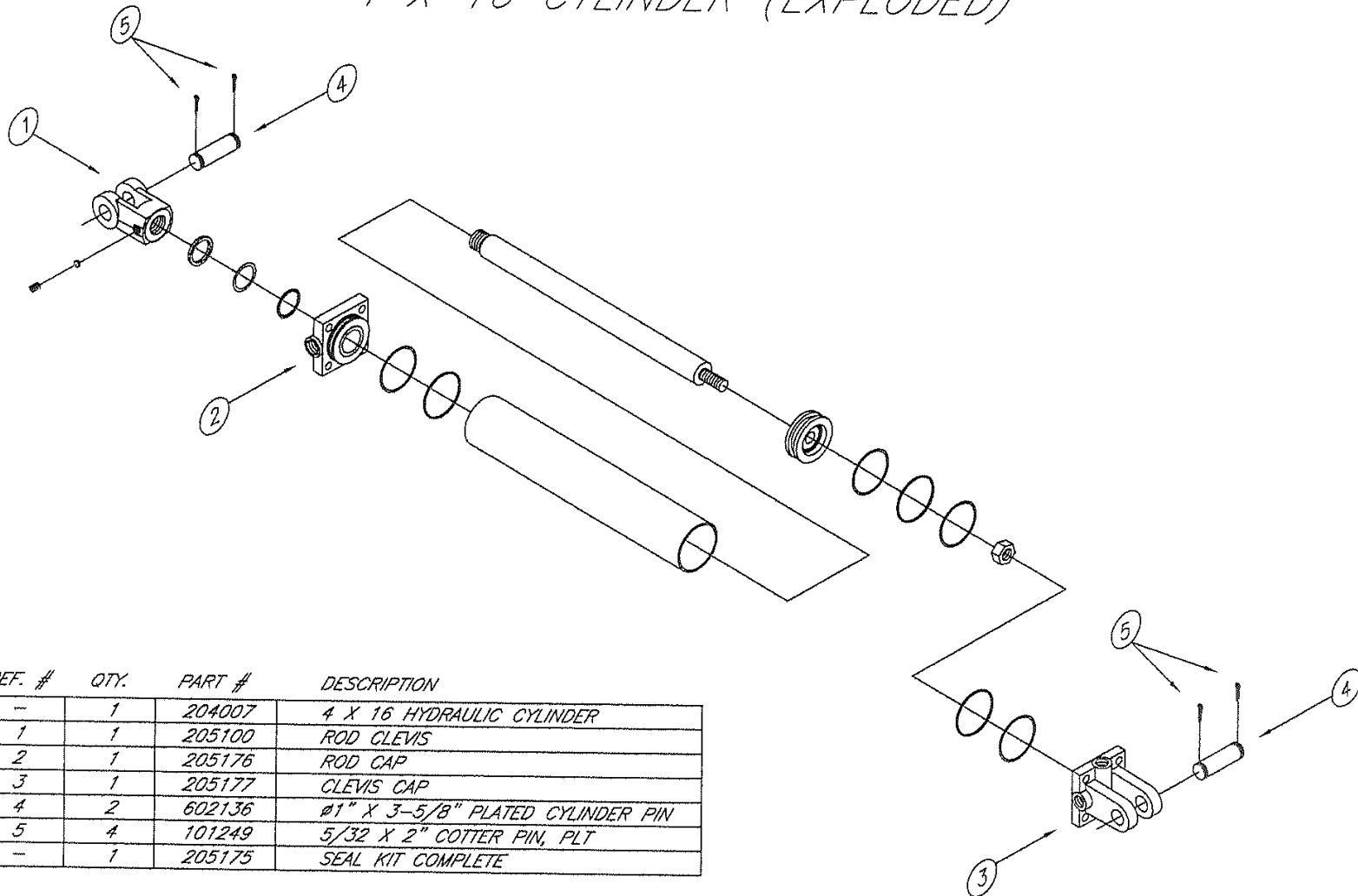
LION 2500 TL SERIES 3 X 16 CYLINDER (EXPLODED)



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

LION 2500 SERIES 4 X 16 CYLINDER (EXPLODED)



REF. #	QTY.	PART #	DESCRIPTION
—	1	204007	4 X 16 HYDRAULIC CYLINDER
1	1	205100	ROD CLEVIS
2	1	205176	ROD CAP
3	1	205177	CLEVIS CAP
4	2	602136	Ø1" X 3-5/8" PLATED CYLINDER PIN
5	4	101249	5/32 X 2" COTTER PIN, PLT
—	1	205175	SEAL KIT COMPLETE



Progressive Farm Products



19500 N 1425 East Road • Hudson, IL 61748-9450 • (309) 454-1564 • FAX (309) 452-1610

WARRANTY

Main Frame, Wings, Wheel Supports Three (3) Years
All Other Components, except tires One (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.**