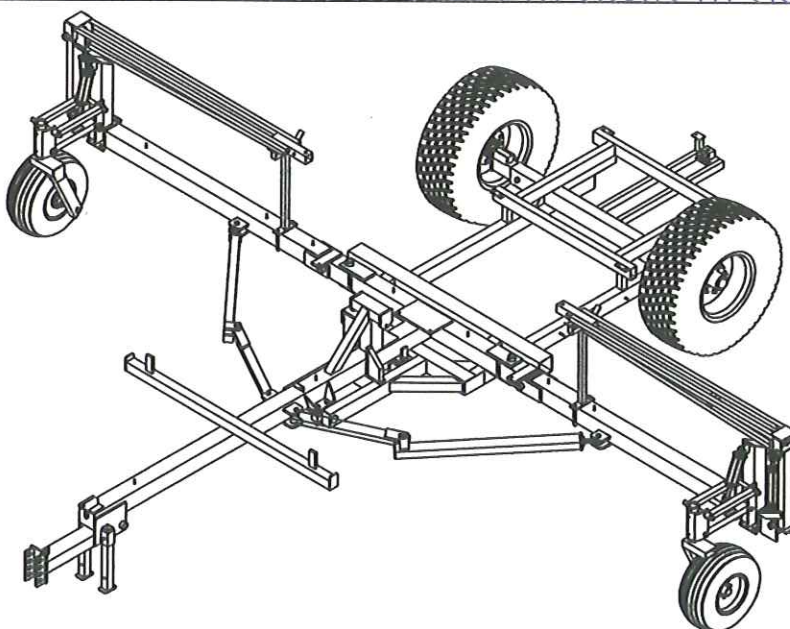




*PROGRESSIVE
FARM PRODUCTS, INC.*

OPERATOR'S MANUAL
30' 6200 FRONT-FOLD TOOLBAR



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

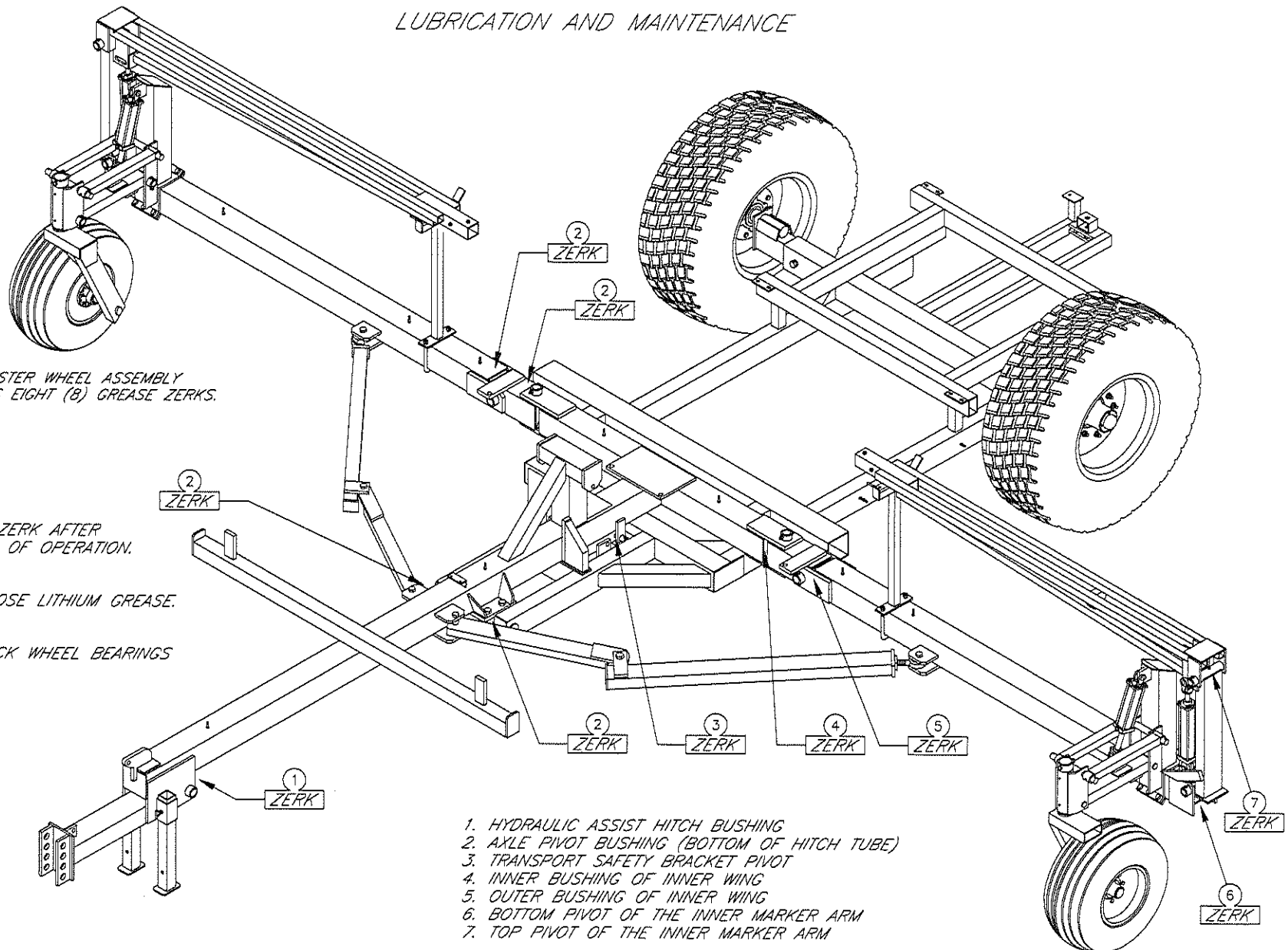
BOLT TORQUE

- 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.

LUBRICATION AND MAINTENANCE



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

LUBRICATE EACH ZERK AFTER
EVERY 10 HOURS OF OPERATION.

USE MULTI-PURPOSE LITHIUM GREASE.

CLEAN AND REPACK WHEEL BEARINGS
ANNUALLY.

1. HYDRAULIC ASSIST HITCH BUSHING
2. AXLE PIVOT BUSHING (BOTTOM OF HITCH TUBE)
3. TRANSPORT SAFETY BRACKET PIVOT
4. INNER BUSHING OF INNER WING
5. OUTER BUSHING OF INNER WING
6. BOTTOM PIVOT OF THE INNER MARKER ARM
7. TOP PIVOT OF THE INNER MARKER ARM

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

Operating Procedures

30' - Model 6200 Dry Fertilizer Applicator

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

All 6200 dry units must have the 1/2" hydraulic 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. Note: refer to fan drive section in operator's manual if you are unsure.

The 1/2" return line (hydraulic fan drive) must be plugged into an unrestricted hydraulic return port in the tractor's rear end. **Note: Do not run the return line through a SCV valve.**

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

The wing fold/marker sequence hoses or the 3 way electric valve to number 3 SCV valve.

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

If you do not have 4 SCV valves or you have a hydraulic NH₃ shutoff valve you will need a 3-way electric/hydraulic multiplier valve to accommodate all the hydraulic functions.

If your 6200 has a 3-way electric/hydraulic multiplier valve it will be wired as follows:

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

The second switch will control the fold/sequence (wing fold & markers) valve.

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

Warning!

Under no circumstances should you ever plumb a hydraulic NH₃ shutoff valve into the lift system of any 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.

Unfolding the 30' – 6200 for use

1. Using the main lift lever, lift the 6200 to a completely raised position. Continue holding the lever until the wing castor wheels are completely extended. **Note:** Always make sure the unit is raised completely before unfolding or else the transport safety cable could be stretched or snapped.
2. Raise the hydraulic transport hitch to a fully raised position and remove the transport lock. Store the transport lock on the adjustable hitch cylinder lug, located at the end of the main frame.
3. Lower the adjustable transport hitch until the cylinder is completely collapsed. This will allow the wings to raise out of the cradle.
4. Unfold the wings until the wing cylinders are completely extended.
5. After unfolding the 6200 for field operation, make sure the 2" dry fertilizer hoses are in a flat or level operating position. The rises and tight bends will hinder the flow of the fertilizer.
6. Place the yellow handle on the fold/sequence valve to the horizontal position. (This will allow for the operation of the markers).
7. Remove the transport lock from the dry drive hydraulic cylinder.

Folding the 30' - 6200 for transport

1. Using the main lift lever, lift the 6200 to a completely raised position.
2. Place transport lock on the dry drive hydraulic cylinder.
Note: The transport lock must be used when transporting the 6200 down the road. It is possible the cylinder could retract, causing the drive wheel to come into contact with the transport tire. This could cause release of fertilizer or damage to the dry drive unit.
3. Place the yellow handle on the fold/sequence selector valve to the vertical position.
4. Lower the hydraulic transport hitch until cylinder is completely collapsed.
5. Fold the wings of the 6200 until they are over the wing cradles.
6. Lift the hydraulic transport hitch to a fully raised position.
7. Reverse the main lift lever and pull up the wing castor wheels.
8. Place the transport lock in the transport hitch hydraulic cylinder.

The 6200 is now ready for road transport.

Set-up Instructions for Shank Mounts/Disk Sealers

Coulter and Shank Assembly

1. Select the proper exploded view drawings (Rigid Shank or Auto-Reset Shank). Use hardware from bag #102053 for rigid shank or #102054 for auto reset for assembly and installation of shank mounts.
2. On rigid shank mounts, be sure to leave one inch of threads below the lock nut of the spring loaded T-Rod and a distance of 1-1/2" between the bottom of the "T" and the 3/4" nut.
3. On auto reset shanks, be sure to leave 1/2" of threads below the lock nut of the spring loaded T-Rod and a distance of 1-7/8" – 2" between the bottom of the "T" and the 3/4" nut. The spring should be compressed to approximately 9-1/2" to 9-3/4". **Note: These measurements are approximate. Field conditions may cause the need for further adjustments.**
4. Refer to the coulter spacing drawings in the back of the book for correct locations/placement of shank mounts.
5. Note there are left and right shank assemblies. When placing an assembly, notice that the shank will line up with either the left or right u-bolt.

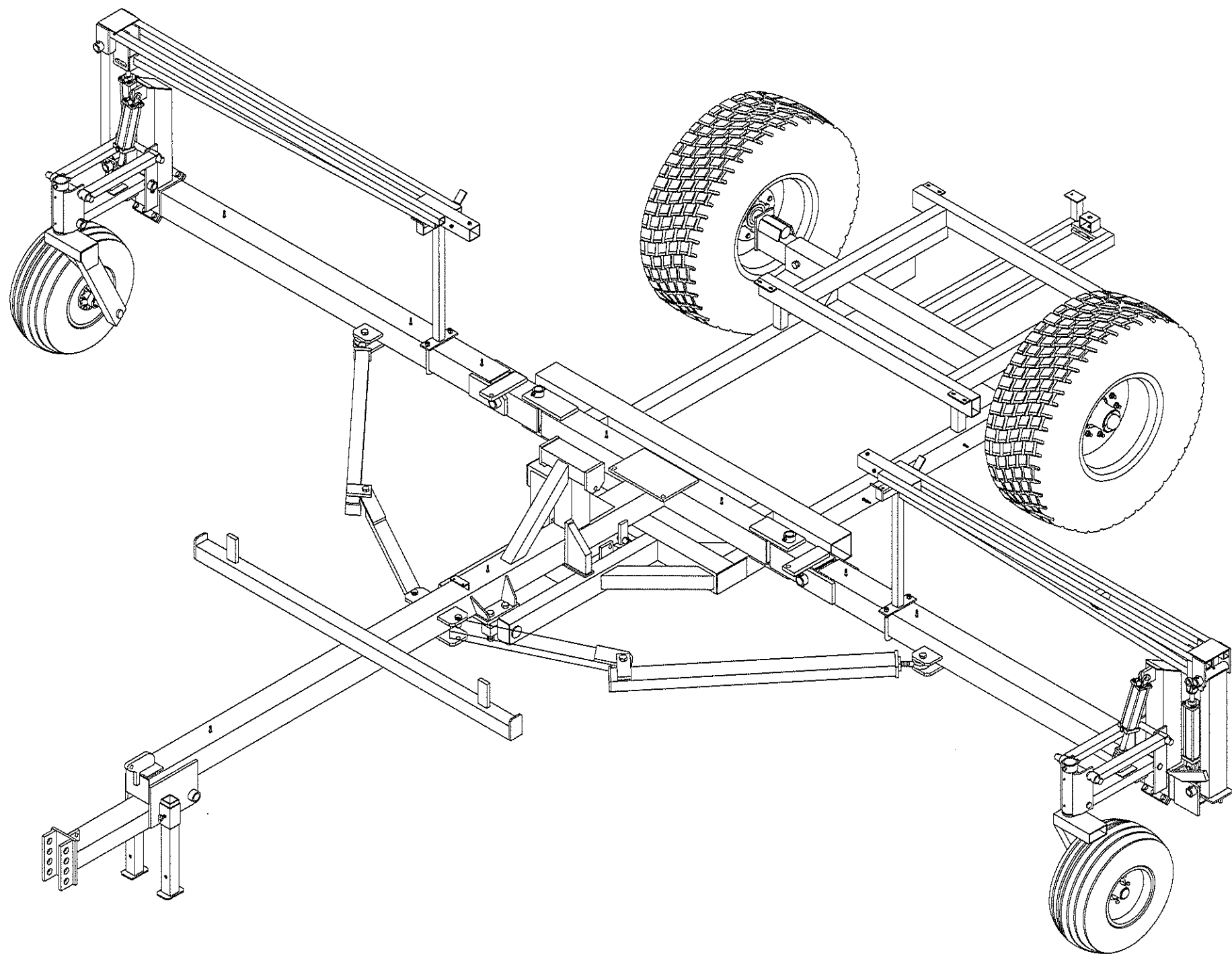
Disk Sealers

1. Use hardware from bag #102029 to assemble and mount the disk sealers to the shank.
2. For Rigid Shank Mounts, measurement (when tightened down) should be approximately 15-1/2" from the back edge of the shank mount to the back side (at the bend) of the disk sealer shank mounting bracket (part #801694).
3. For Auto Reset Shank Mounts, measurement (when tightened down) should be approximately 6" from the back edge of the shank mount to the back side (at the bend) of the disk sealer shank mounting bracket (part #801694).
Note: Measurements are approximate. Adjustments may need to be made depending upon the depth the knives are running in the ground. For optimum performance, do not run the sealer blades any more than 2-3 inches in the ground.

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 hydraulic hoses are secured to eliminate the possibility of damage during operation and turning.
3. Maintain 25 lbs. of air pressure in the 18.4 x 26" cargo carrier tires.
4. When starting the blower fan for the first time on a tractor, make certain that you dial the tractor's hydraulic oil flow down to a minimum setting. Then engage the hydraulic 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)
5. 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.
6. The 6200 toolbar was designed to run at an optimum depth between 5 and 8 inches. There are 4 stroke control kits provided with this unit to control the 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.
7. The hydraulic 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 hydraulic hitch to fine tune the knife depth, but should never be more than 1/3 extended while in field operation.
8. 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 a larger screen area is needed, more screens can be placed on the top of the hopper.
9. Do not operate 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.
10. The air pressure setting (magnehelic gauge) for most fertilizer rates should be between 18 and 20.

11. Do not let fertilizer set in the hopper for extended periods of time. The fertilizer will tend to draw moisture and get hard. If this happens, the hopper needs to be emptied. When the hopper is empty, remove the stainless auger cover and make sure there is not any hardened material around the metering auger that could hinder fertilizer flow to the metering screw (See "Metering System Assembly - page).
12. 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.
13. When making rate changes it may be necessary to add or take out links on the #40 stainless steel drive chains in order to keep the idler sprockets at the proper tension.
14. After unfolding the 6200 for field operation, make sure the 2" dry fertilizer hoses are in a flat or level operating position. As rises and tight bends hinder the flow of the fertilizer.
15. Set the hydraulic 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.

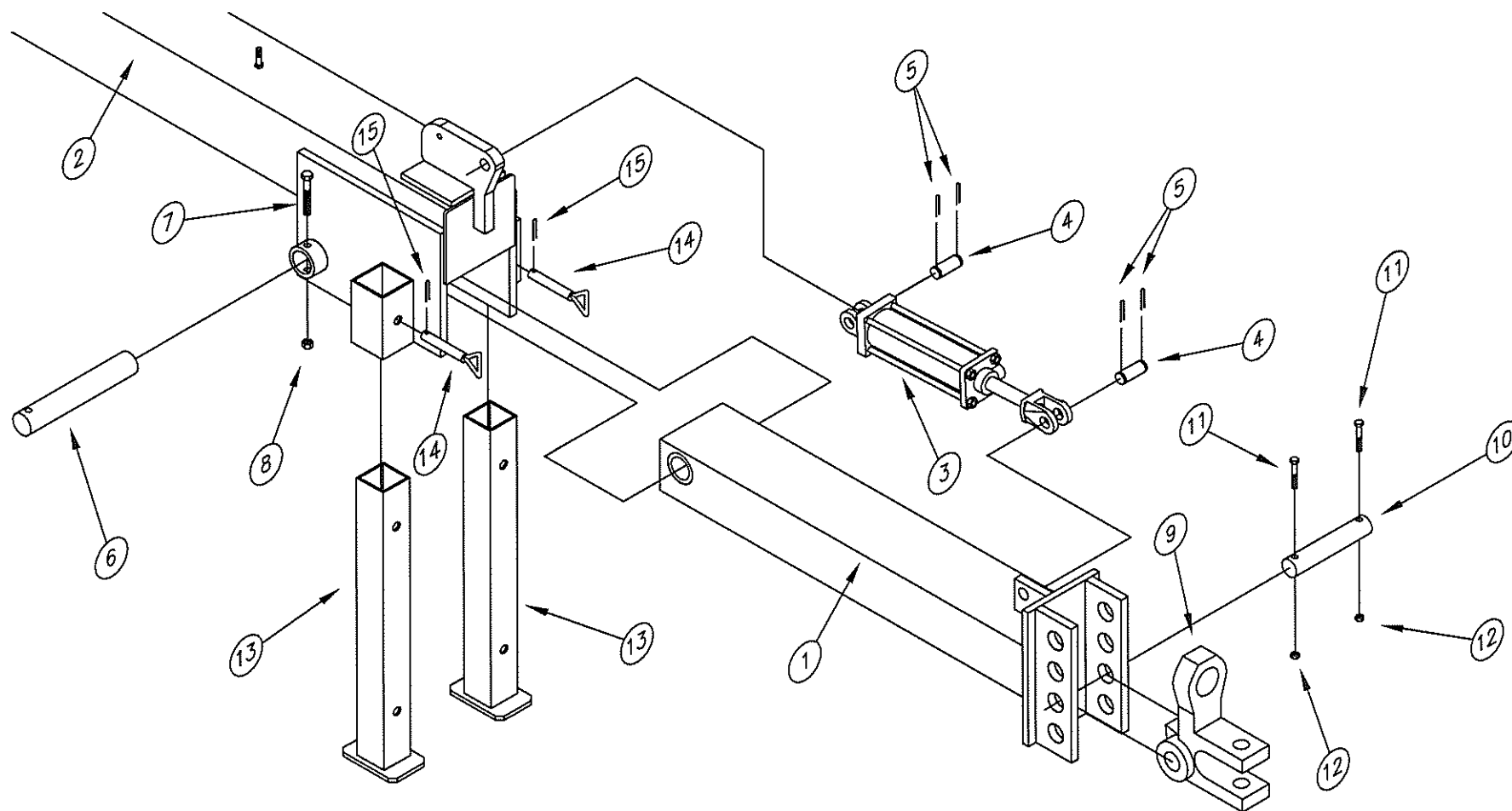


HYDRAULIC ASSIST HITCH ASSEMBLY

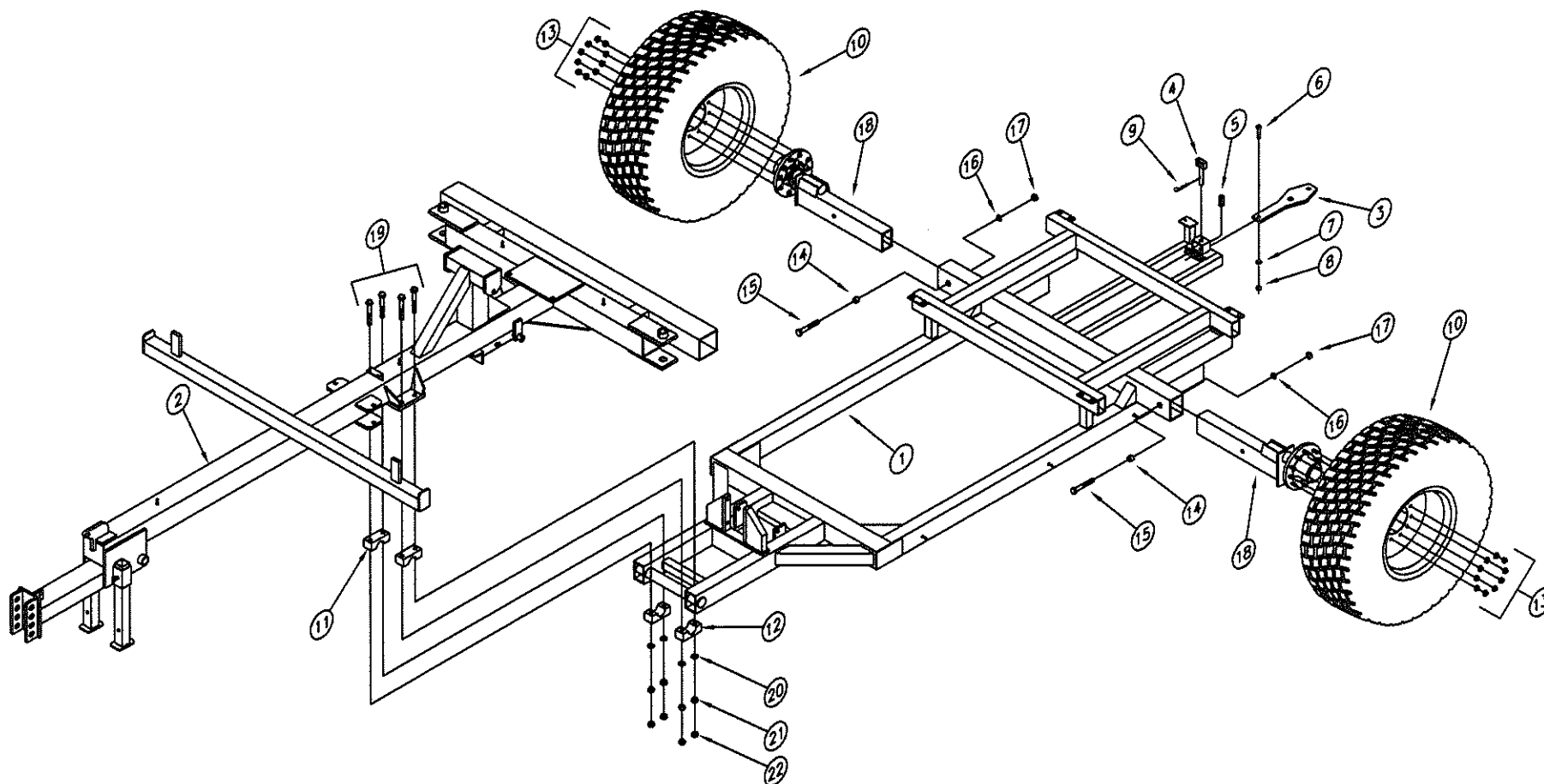
REF. #	QTY.	PART #	DESCRIPTION
1	1	801360	HYDRAULIC ASSIST HITCH
2	1	801179A	HITCH WELDMENT
3	1	204002	3 X 8" HYDRAULIC CYLINDER
4	2	602112	Ø1.00 X 3" CYLINDER PIN
5	4	101247	7/32 X 2" COTTER PIN
6	1	602180	Ø2.00 X 12" HINGE PIN
7	1	101152	1/2-13 X 3-1/2" HEX BOLT
8	1	101457	1/2-13 TOPLOCK NUT

REF. #	QTY.	PART #	DESCRIPTION
9	1	450016	COMBINATION CLEVIS
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	101266	3/16" HAIR PIN

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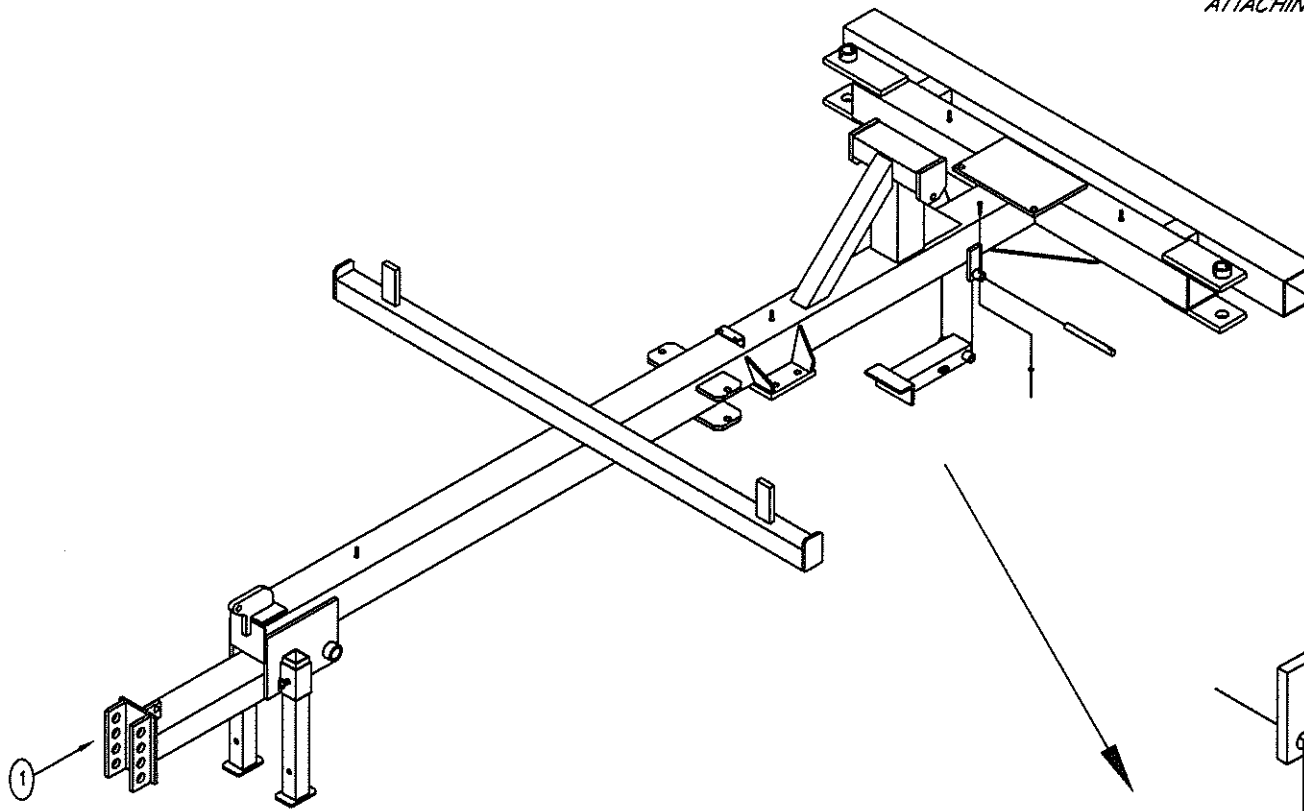


INNER HITCH TUBE/MAINFRAME & CARGO FRAME ASSEMBLY



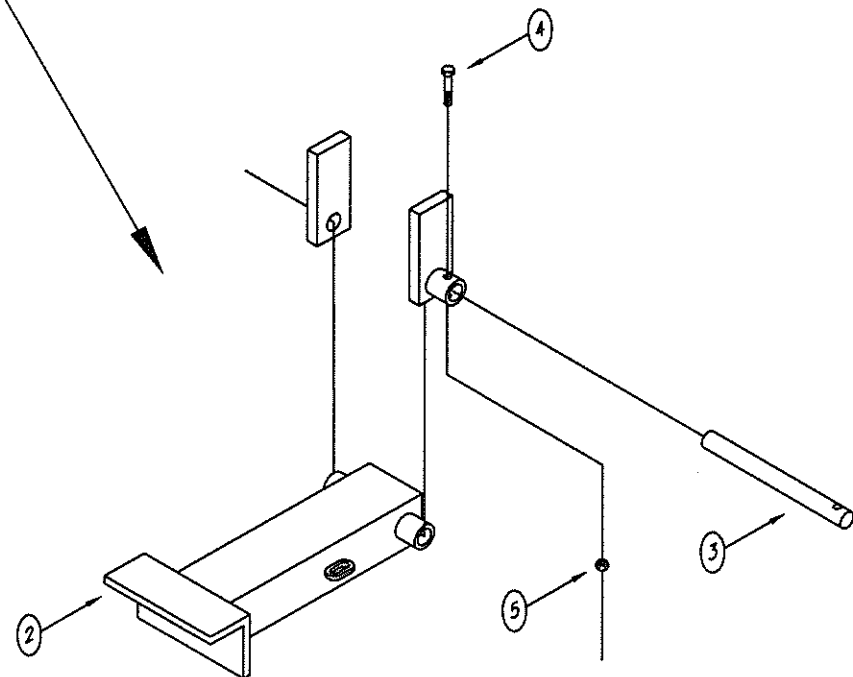
REF. #	QTY.	PART #	DESCRIPTION	REF. #	QTY.	PART #	DESCRIPTION
1	1	801319	CARGO FRAME ASSEMBLY - COMPLETE	10	2	301196	18.4 X 26 TIRE & WHEEL ASSEMBLY
2	1	801179A	HITCH TUBE AND MAINFRAME ASSEMBLY	11	2	400255	3" PIN BLOCK (NO ZERK)
3	1	801293	TELESCOPING DRAWBAR	12	2	400254	ZERKED 3" PIN BLOCK
4	1	801195	DRAWBAR PIN	13	20	301189	3/4-16 LUG NUT
5	1	101330	COMPRESSION SPRING	14	2	602191	1.5 O.D. X 1.0 I.D. X 1" STUB AXLE BUSHING
6	1	101171	3/4-10 X 2" HEX BOLT	15	2	101203	1-8 X 7" HEX BOLT
7	1	101224	3/4" LOCK WASHER	16	2	101226	1" LOCK WASHER
8	1	101215	3/4-10 HEX NUT	17	2	101217	1-8 HEX NUT
9	1	101266	3/16" HAIRPIN	18	2	801552	STUB AXLE WELDMENT
				19	4	101482	1-8 X 8" - GRB. HEX BOLT - YELLOW ZINC
				20	4	101226	1" LOCK WASHER - ZINC PLT.
				21	4	101217	1-8 HEX NUT - ZINC PLT.
				22	4	101483	1-8 JAM NUT - ZINC PLATED

ATTACHING THE TRANSPORT SAFETY



REF. #	QTY.	PART #	DESCRIPTION
1	1	801179A	HITCH TUBE & MAINFRAME ASSEMBLY
2	1	801283	TRANSPORT SAFETY ASSEMBLY
3	1	602224	# 1 X 10-1/2" PIN
4	1	101127	3/8-16 X 2" HEX BOLT - PLATED
5	1	101455	3/8-16 TOPLOCK NUT

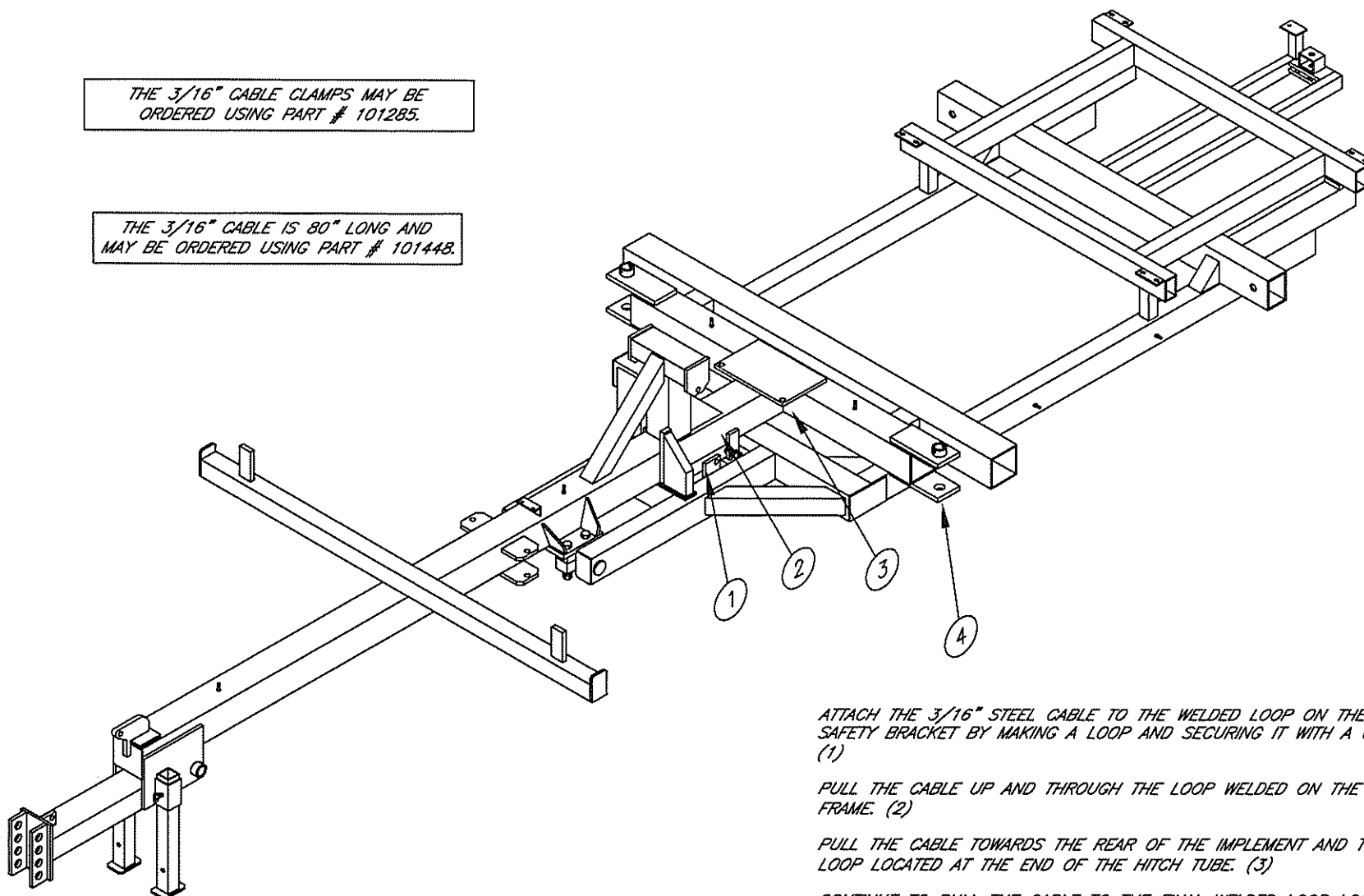
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INSTALLING THE TRANSPORT SAFETY CABLE

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.



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)

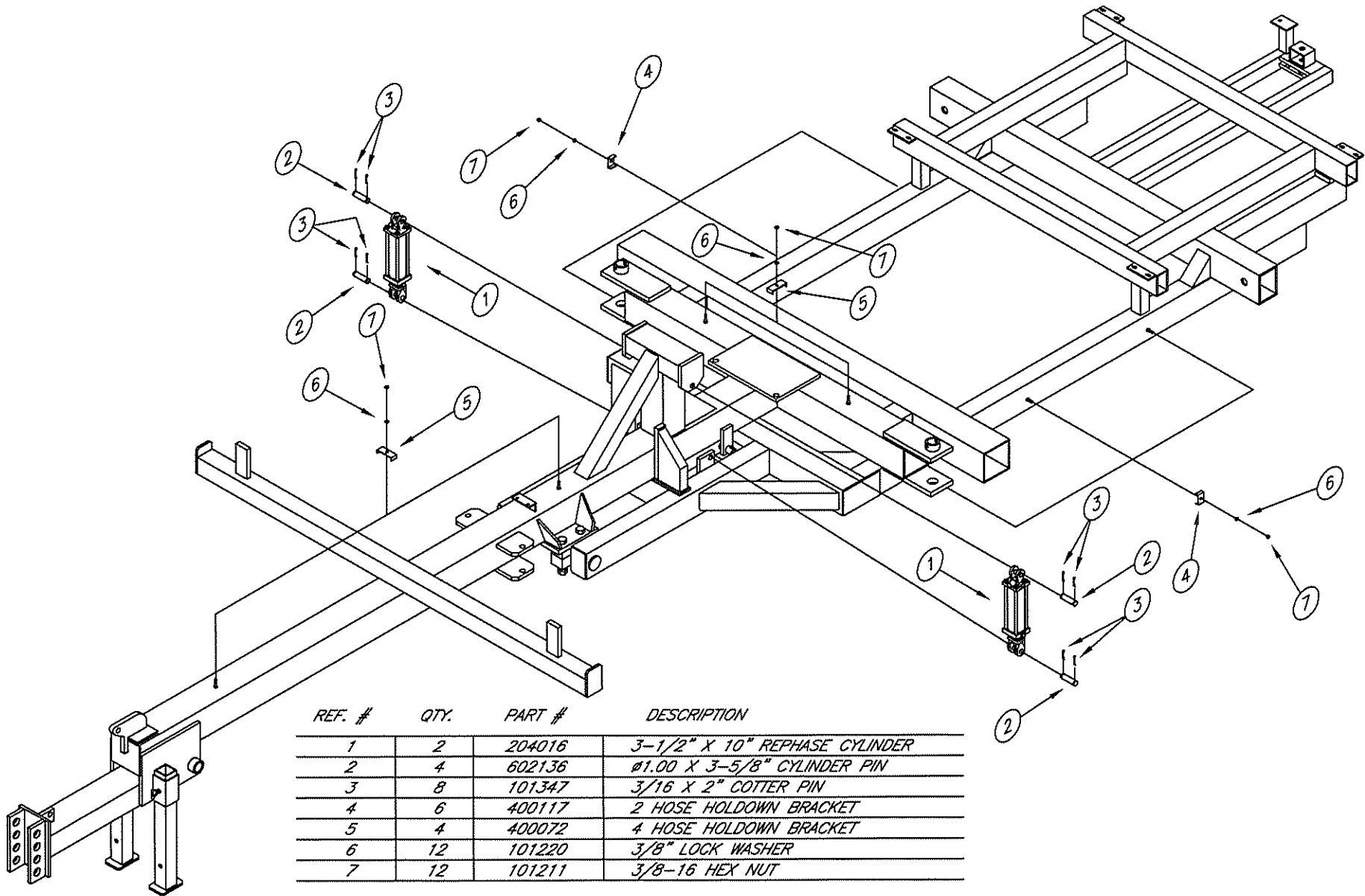
PULL THE CABLE UP AND THROUGH THE LOOP WELDED ON THE 7 X 7 FRAME. (2)

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, THE CABLE SHOULD BE PULLED SNUG, CAUSING THE TRANSPORT BRACKET TO CONTACT THE BOTTOM OF THE CROSSMEMBER. SECURE THE CABLE WITH A CLAMP.

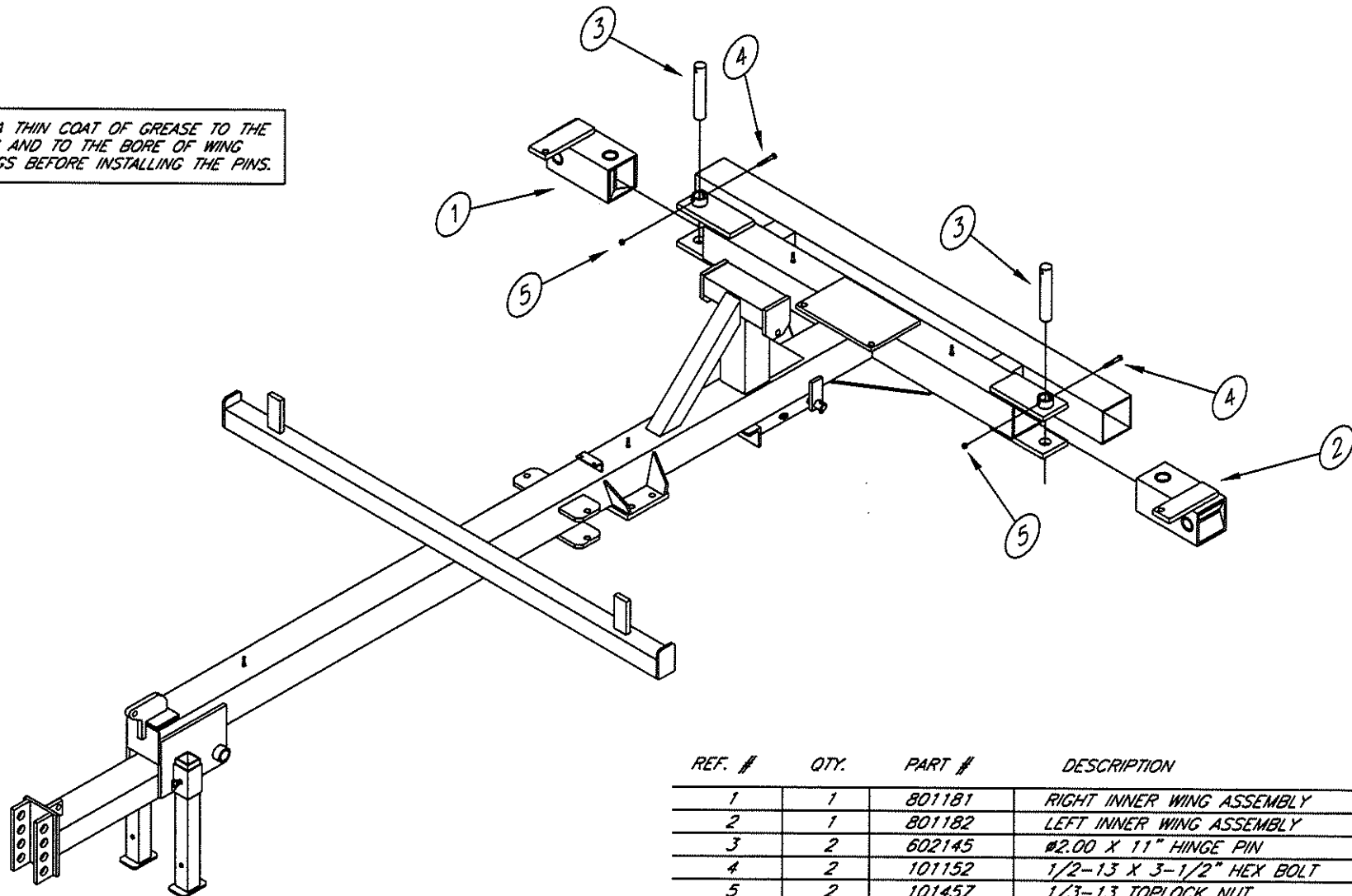
MAINFRAME HYDRAULIC CYLINDER INSTALLATION



REF. #	QTY.	PART #	DESCRIPTION
1	2	204016	3-1/2" X 10" REPHASE CYLINDER
2	4	602136	Ø1.00 X 3-5/8" CYLINDER PIN
3	8	101347	3/16 X 2" COTTER PIN
4	6	400117	2 HOSE HOLDOWN BRACKET
5	4	400072	4 HOSE HOLDOWN BRACKET
6	12	101220	3/8" LOCK WASHER
7	12	101211	3/8-16 HEX NUT

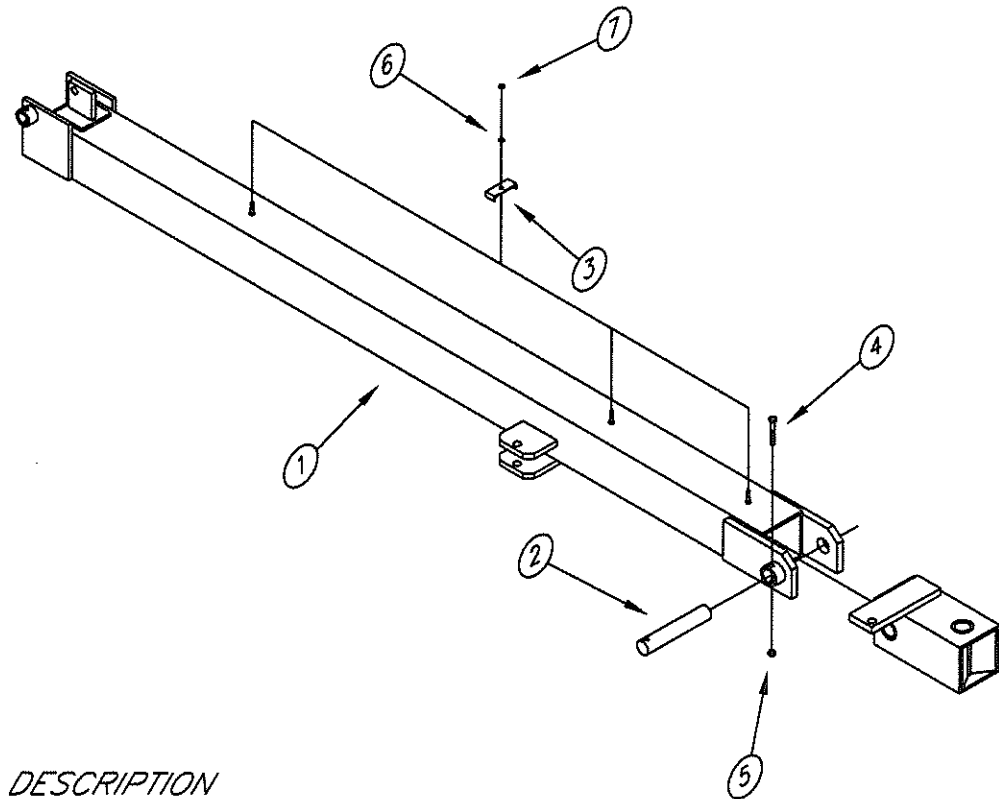
ATTACHING THE INNER WINGS

APPLY A THIN COAT OF GREASE TO THE PINS AND TO THE BORE OF WING BUSHINGS BEFORE INSTALLING THE PINS.



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	101457	1/3-13 TOPLOCK NUT

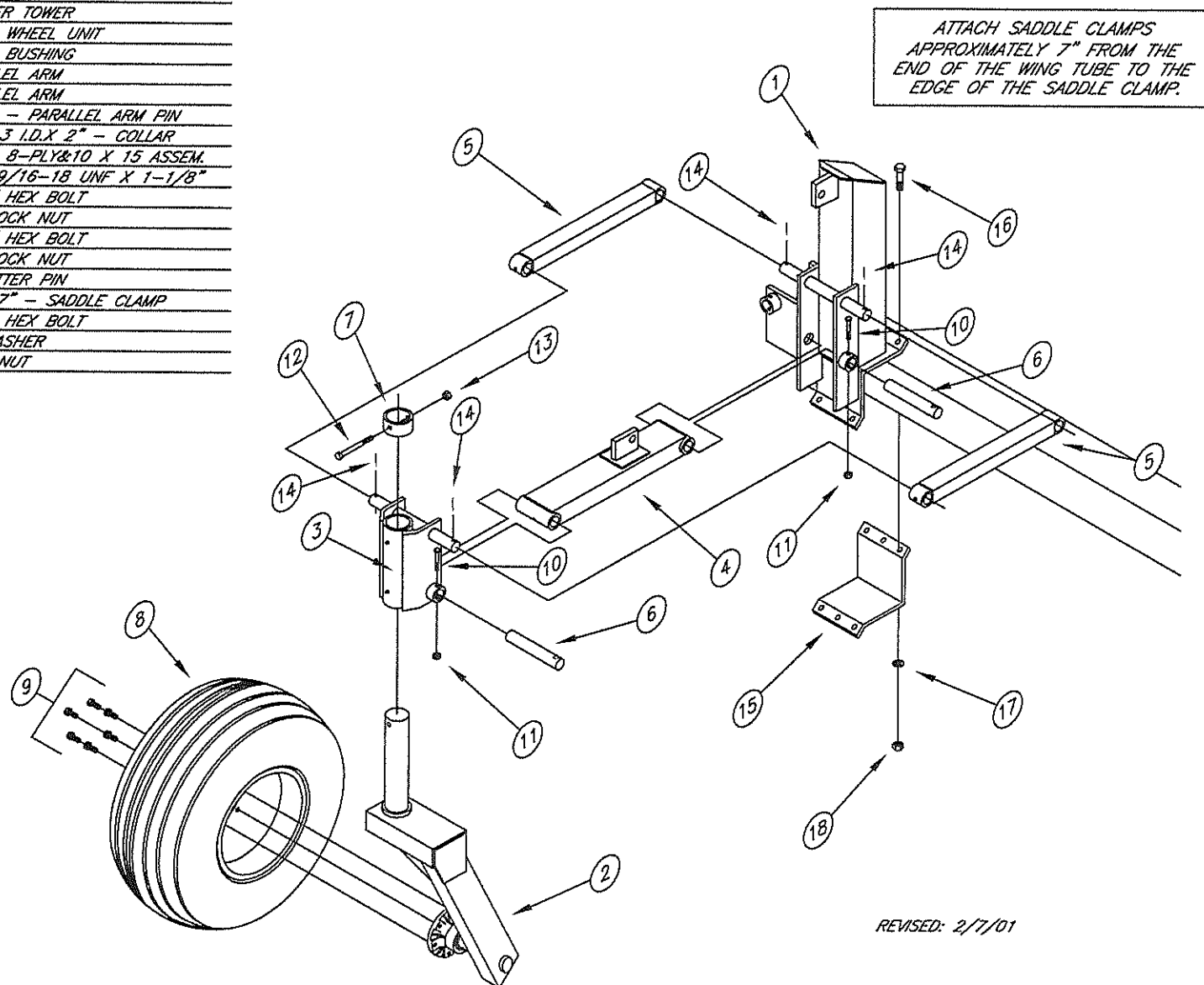
RIGHT OUTER WING ASSEMBLY



REF. #	QTY.	PART #	DESCRIPTION
1	1	801281	RIGHT 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

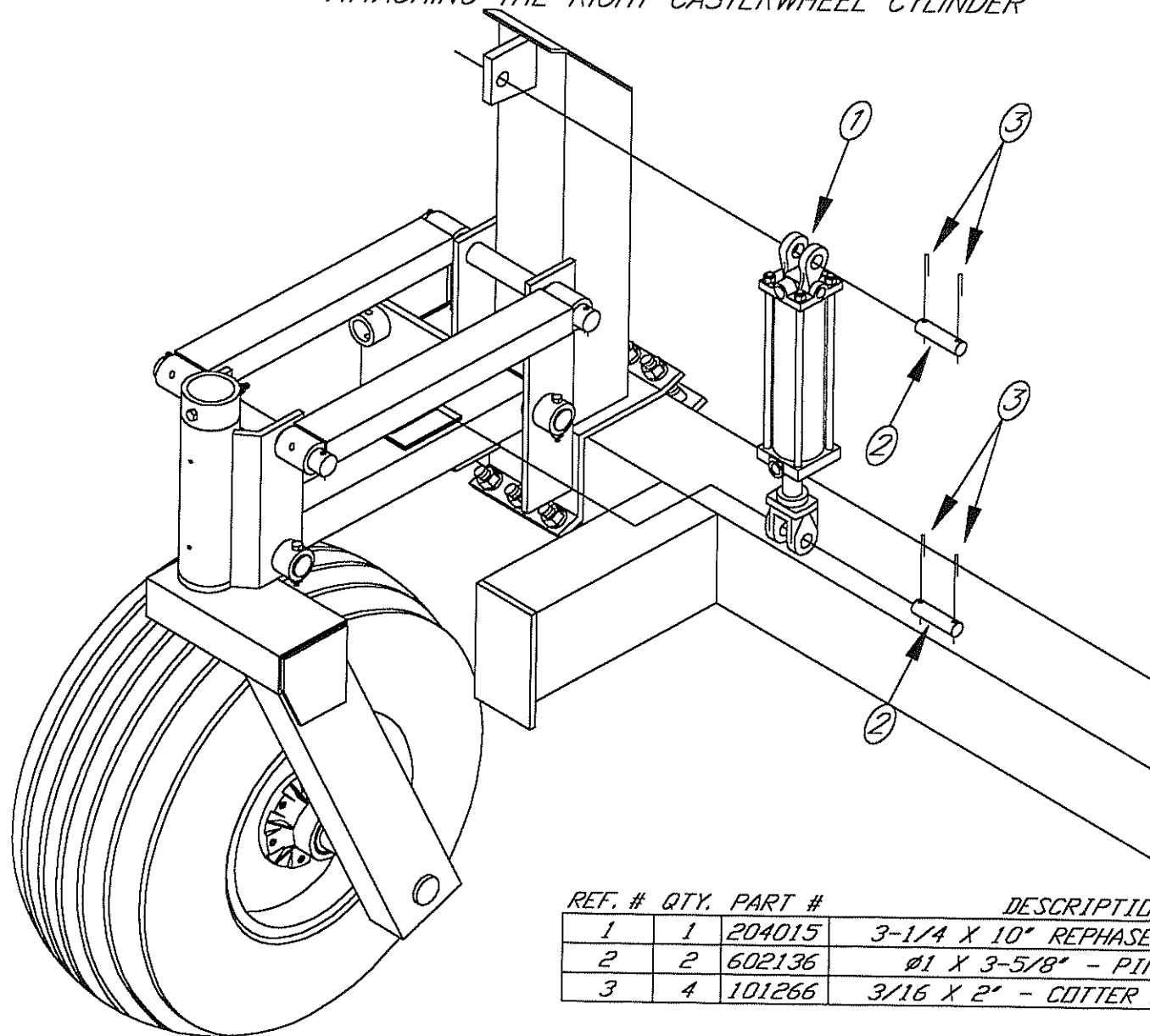
REF.#	QTY.	PART #	DESCRIPTION
1	1	801385	RIGHT CYLINDER TOWER
2	1	801387	RIGHT CASTER WHEEL UNIT
3	1	602186	RIGHT CASTER BUSHING
4	1	801388	LOWER PARALLEL ARM
5	2	801389	UPPER PARALLEL ARM
6	2	602129	#1-1/2 X 9" - PARALLEL ARM PIN
7	1	602187	3-3/4 O.D.X 3 I.D.X 2" - COLLAR
8	1	301194	12.5L X 15SL 8-PLY&10 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	2	101455	3/8-16 TOPLOCK NUT
12	1	101166	5/8-11 X 5" HEX BOLT
13	1	101458	5/8-11 TOPLOCK NUT
14	4	101265	1/4 X 2" COTTER PIN
15	1	400132	1/2 X 8 X 17" - SADDLE CLAMP
16	6	101173	3/4-10 X 3" HEX BOLT
17	6	101224	3/4" LOCK WASHER
18	6	101215	3/4-10 HEX NUT

RIGHT CASTERWHEEL ASSEMBLY



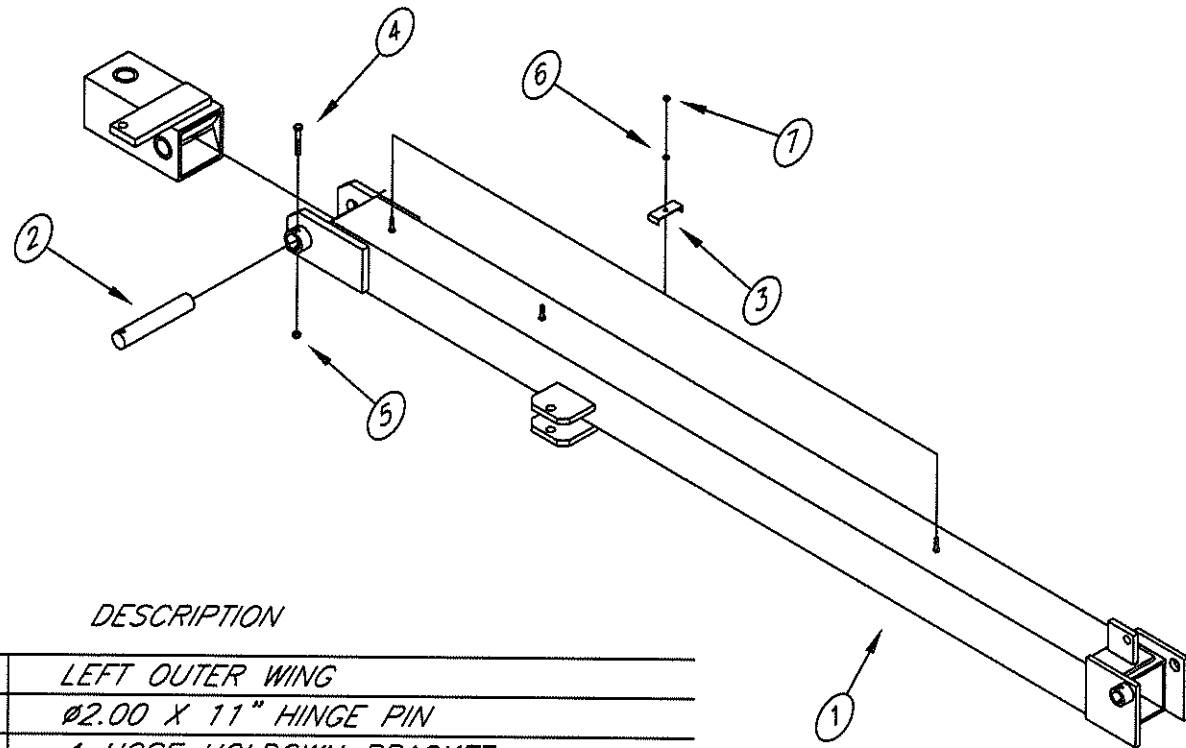
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ATTACHING THE RIGHT CASTERWHEEL CYLINDER



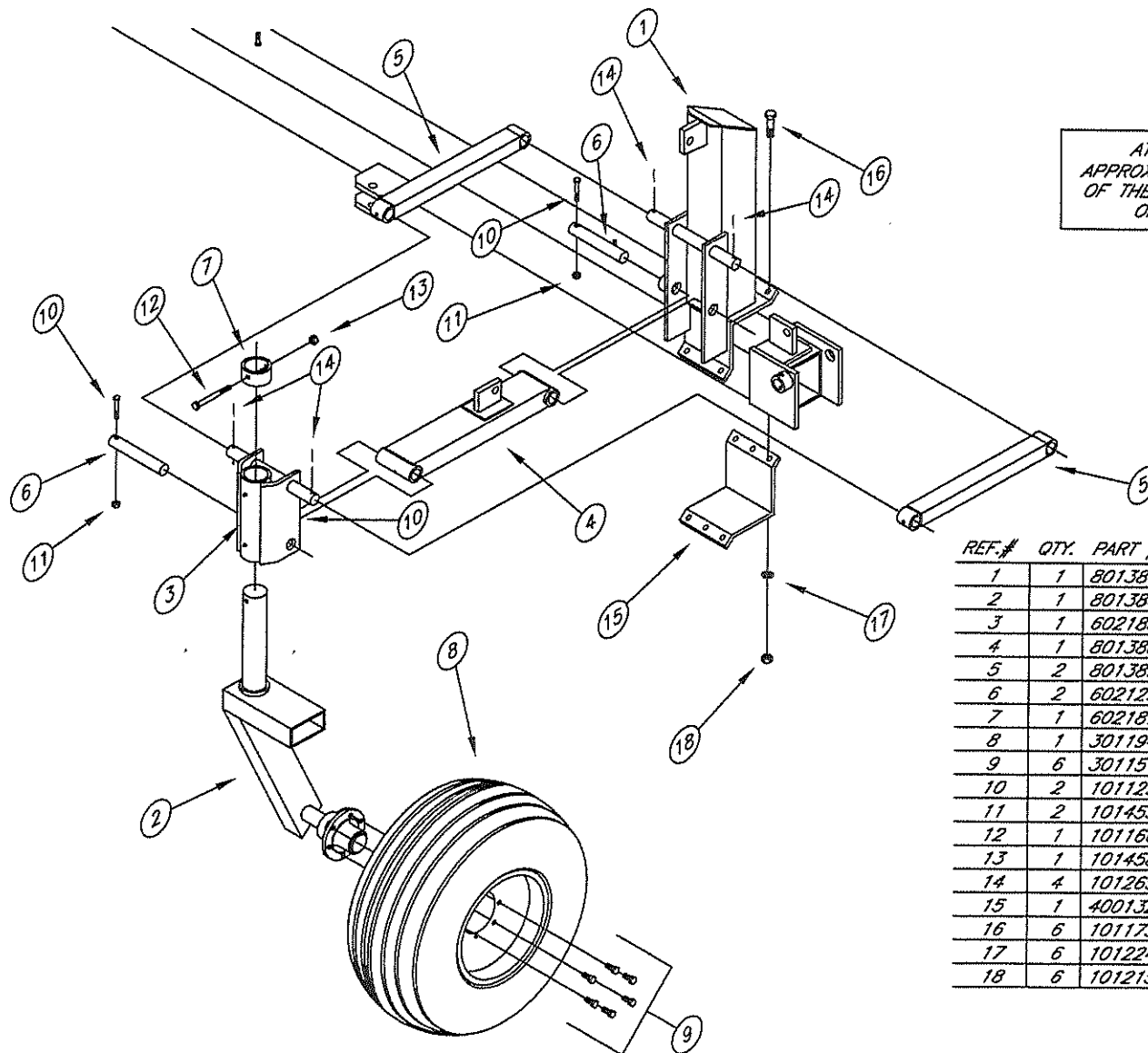
REF. #	QTY.	PART #	DESCRIPTION
1	1	204015	3-1/4 X 10" REPHASE CYLINDER
2	2	602136	Ø1 X 3-5/8" - PIN - PLT
3	4	101266	3/16 X 2" - COTTER PIN - PLT

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

LEFT CASTERWHEEL ASSEMBLY

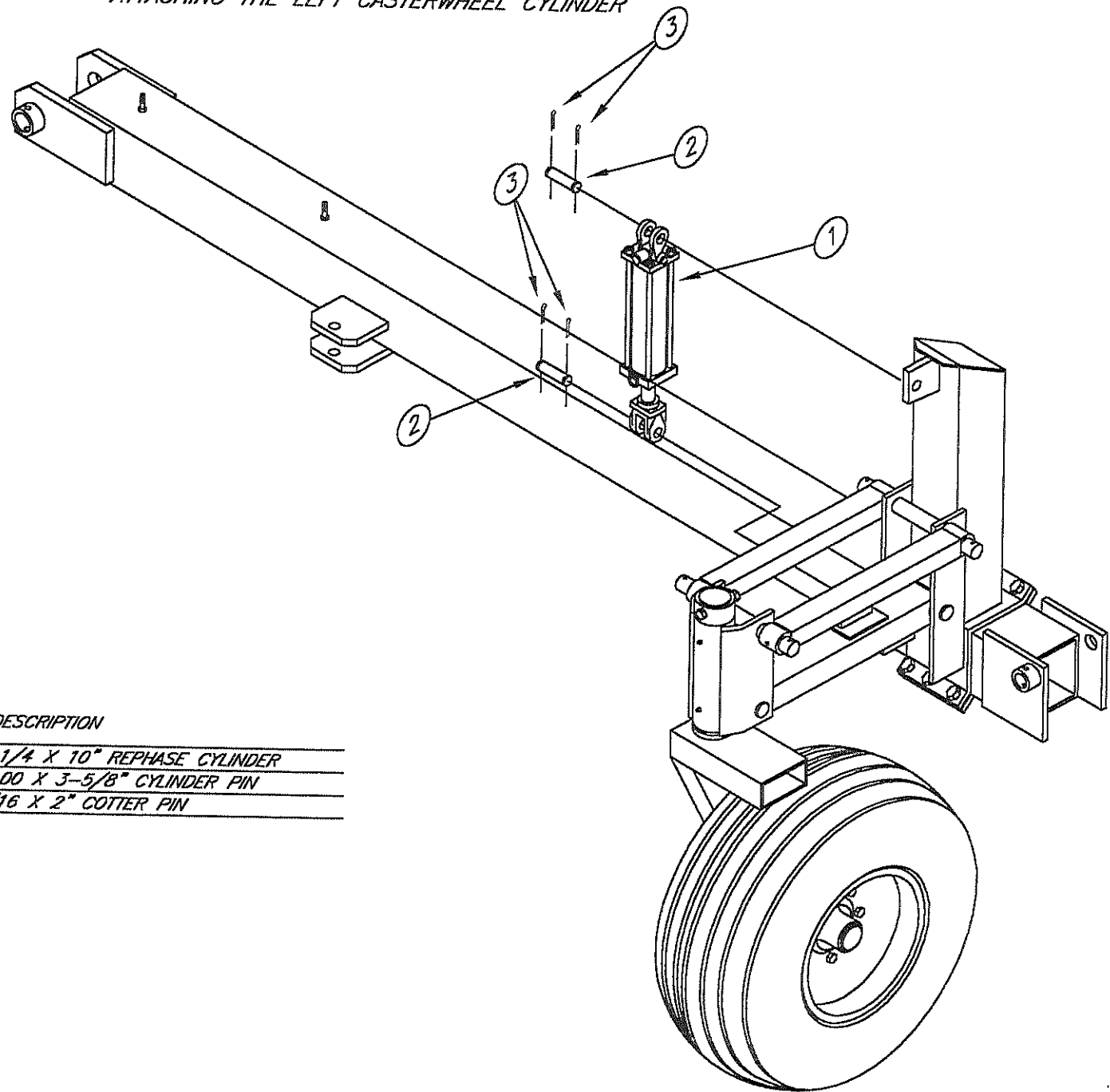


ATTACH SADDLE CLAMPS
APPROXIMATELY 7" FROM THE END
OF THE WING TUBE TO THE EDGE
OF THE SADDLE CLAMP.

REVISED: 2/7/01

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	Ø1-1/2 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	2	101455	3/8-16 TOPLOCK NUT
12	1	101166	5/8-11 X 5" HEX BOLT
13	1	101458	5/8-11 TOPLOCK NUT
14	4	101265	1/4 X 2" COTTER PIN
15	1	400132	1/2 X 8 X 17" - SADDLE CLAMP
16	6	101173	3/4-10 X 3" HEX BOLT
17	6	101224	3/4" LOCK WASHER
18	6	101215	3/4-10 HEX NUT

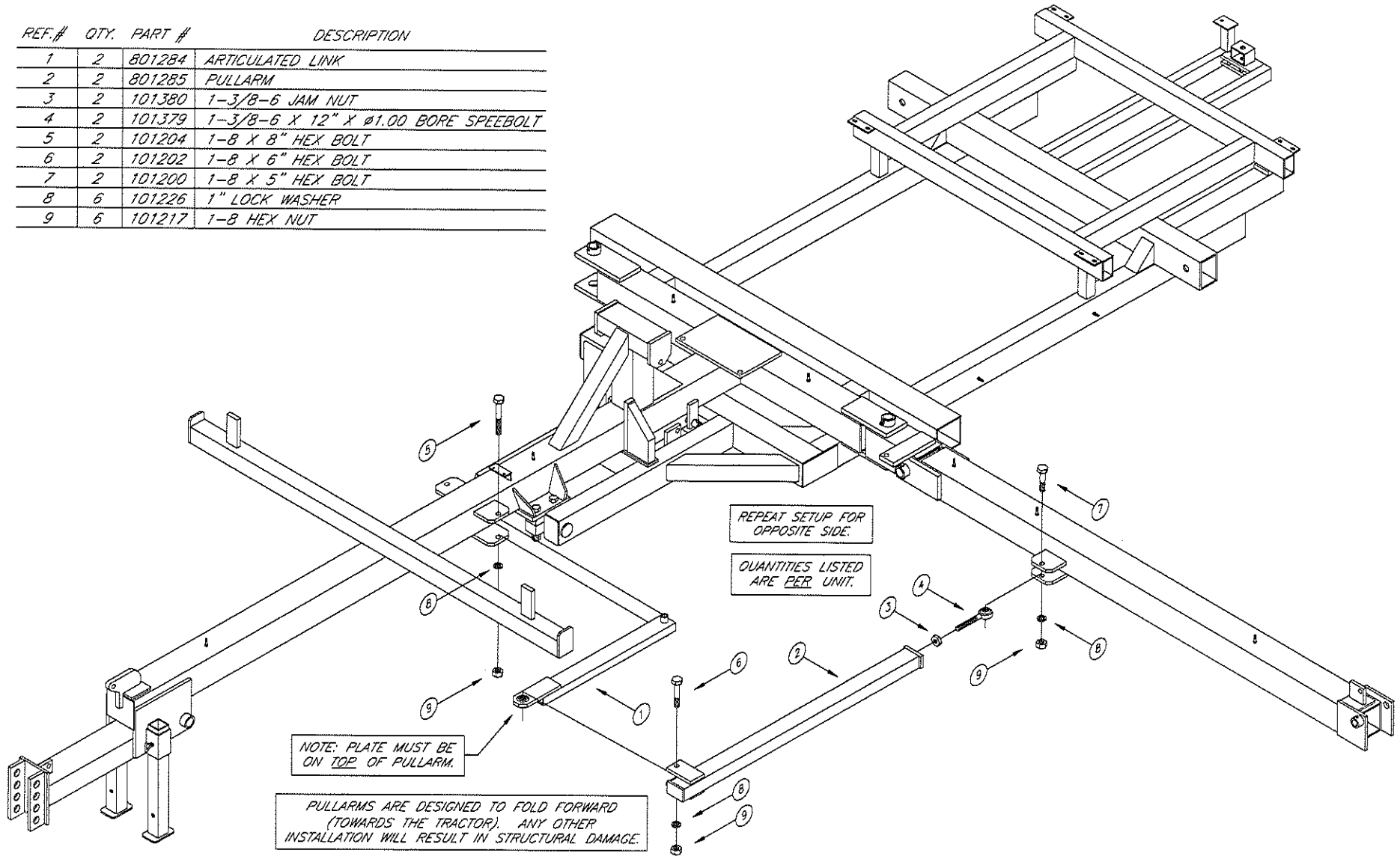
ATTACHING THE LEFT CASTERWHEEL CYLINDER



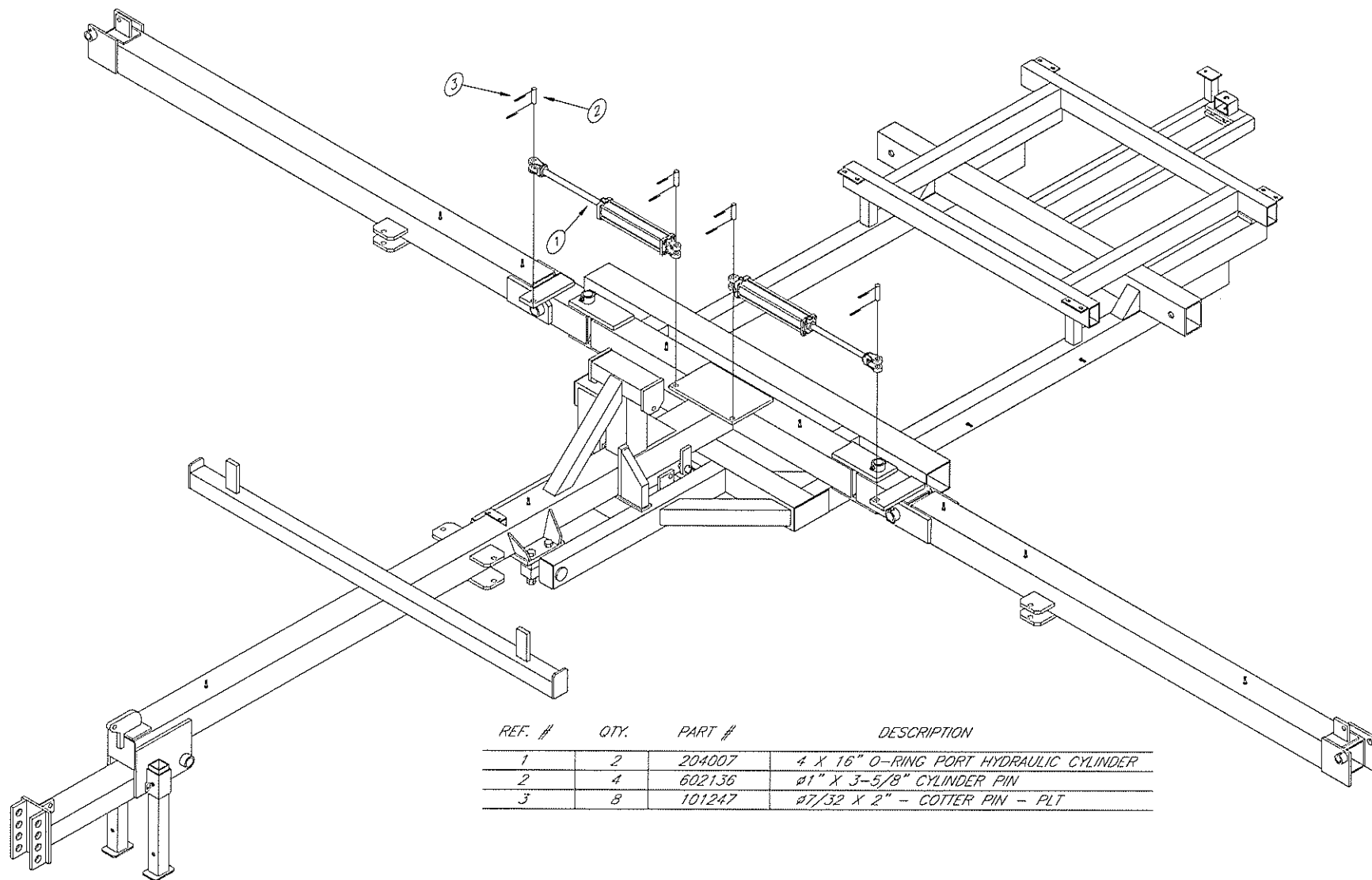
REF. #	QTY.	PART #	DESCRIPTION
1	1	204015	3-1/4 X 10" REPHASE CYLINDER
2	2	602136	#1.00 X 3-5/8" CYLINDER PIN
3	4	101266	3/16 X 2" COTTER PIN

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



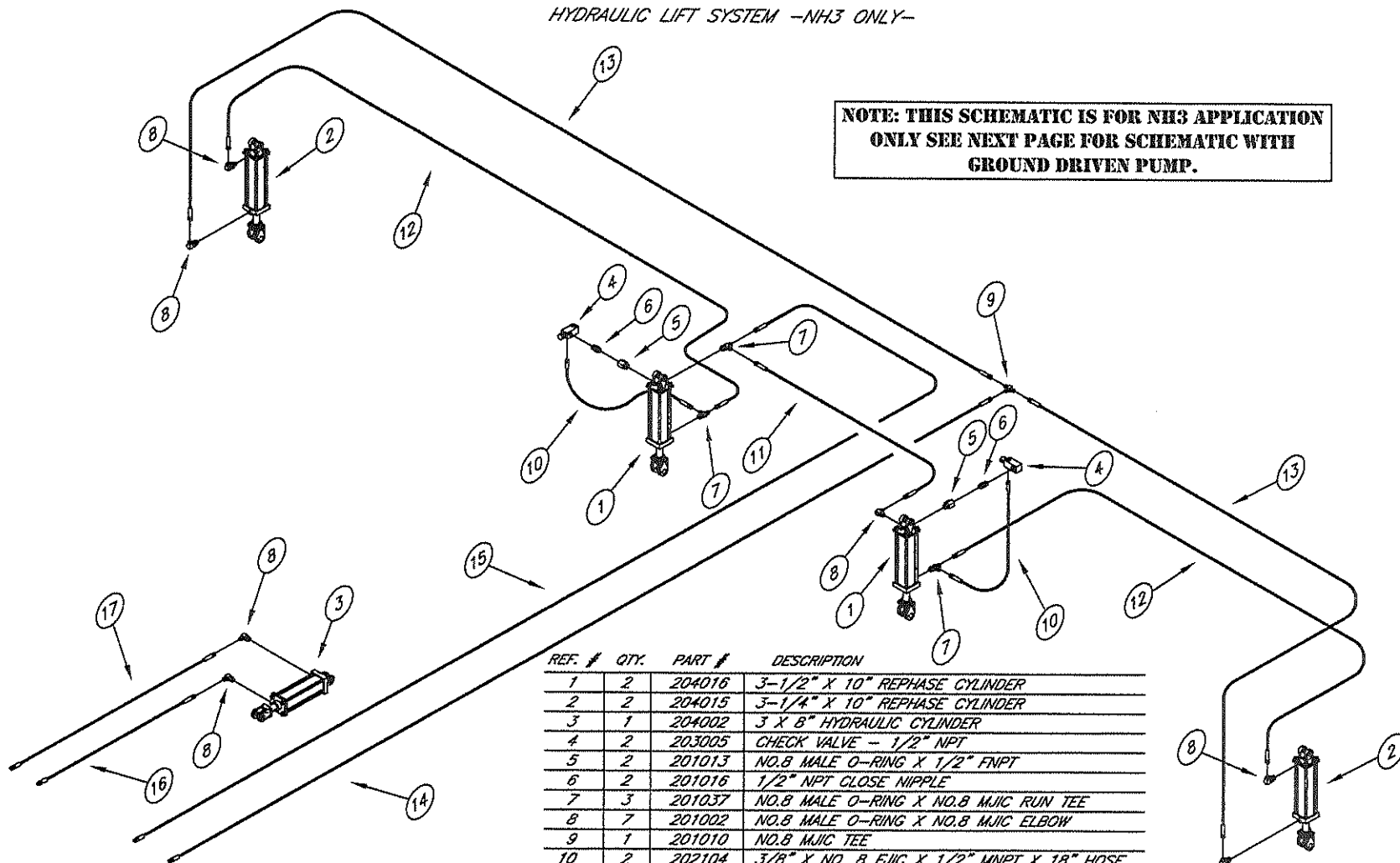
HYDRAULIC WING-FOLD CYLINDER INSTALLATION



REF. #	QTY.	PART #	DESCRIPTION
1	2	204007	4 X 16" O-RING PORT HYDRAULIC CYLINDER
2	4	602136	Ø1" X 3-5/8" CYLINDER PIN
3	8	101247	Ø7/32 X 2" - COTTER PIN - PLT

HYDRAULIC LIFT SYSTEM -NH3 ONLY-

**NOTE: THIS SCHEMATIC IS FOR NH3 APPLICATION
ONLY SEE NEXT PAGE FOR SCHEMATIC WITH
GROUND DRIVEN PUMP.**



ROUTE THE HOSES FROM
THE TRACTOR DOWN THE
HITCH TUBE. SECURE THEM
TO THE HITCH TUBE WITH
HOLDOWNS (PROVIDED).

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	1	204002	3 X 8" HYDRAULIC CYLINDER
4	2	203005	CHECK VALVE - 1/2" NPT
5	2	201013	NO.8 MALE O-RING X 1/2" FNPT
6	2	201016	1/2" NPT CLOSE NIPPLE
7	3	201037	NO.8 MALE O-RING X NO.8 MJIC RUN TEE
8	7	201002	NO.8 MALE O-RING X NO.8 MJIC ELBOW
9	1	201010	NO.8 MJIC TEE
10	2	202104	3/8" X NO. 8 FJIC X 1/2" MNPT X 18" HOSE
11	1	202056	3/8" X NO. 8 FJIC X NO. 8 FJIC X 28" HOSE
12	2	202111	3/8" X NO. 8 FJIC X NO. 8 FJIC X 216" HOSE
13	2	202244	3/8" X NO. 8 FJIC X NO. 8 FJIC X 190" HOSE
14	1	202109	3/8" X 1/2" MNPT X NO. 8 FJIC X 264" HOSE
15	1	202110	3/8" X 1/2" MNPT X NO. 8 FJIC X 228" HOSE
16	1	202194	3/8" X 1/2" MNPT X NO. 8 FJIC X 60" HOSE
17	1	202195	3/8" X 1/2" MNPT X NO. 8 FJIC X 72" HOSE
--	4	450061	STROKE CONTROL KIT

HYDRAULIC LIFT SYSTEM --HYDRAULIC GROUND DRIVE--

**NOTE: THIS SCHEMATIC IS FOR NH₃ APPLICATION
ALONG WITH LIQUID OR DRY FERTILIZER
WITH A GROUND DRIVEN PUMP.**

ROUTE THE HOSES FROM
THE TRACTOR DOWN THE
HITCH TUBE. SECURE THEM
TO THE HITCH TUBE WITH
HOLDOWNS (PROVIDED).

ROUTE HOSES THROUGH HOLDOWNS
LEAVING ENOUGH SLACK TO AVOID
PULLING DURING LIFTING OF TOOLBAR.

REF. # QTY. PART # DESCRIPTION

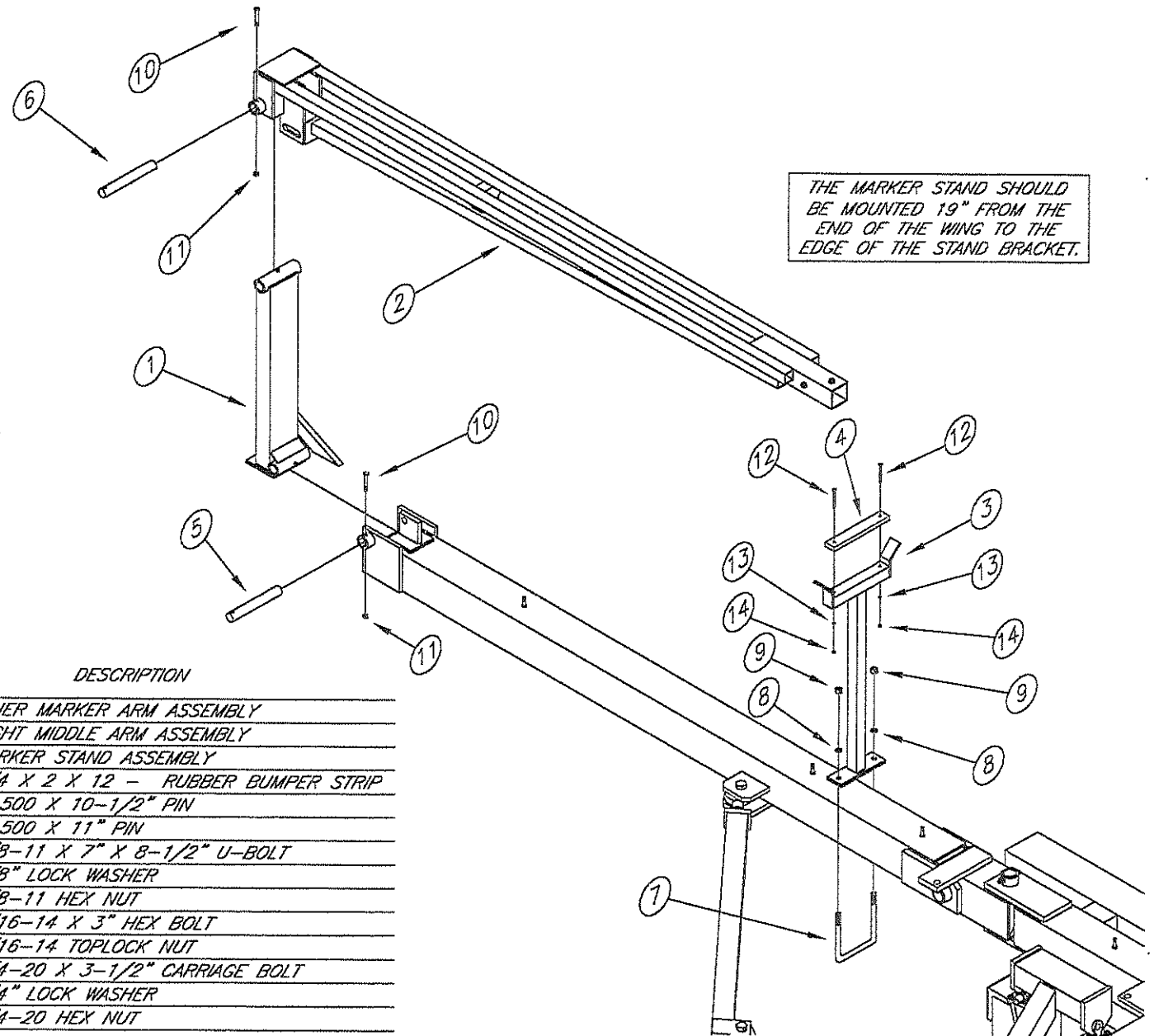
1	2	204016	3-1/2" X 10" REPHASE CYLINDER
2	2	204015	3-1/4" X 10" REPHASE CYLINDER
3	1	204002	3 X 8" HYDRAULIC CYLINDER
4	2	203005	CHECK VALVE - 1/2" NPT
5	2	201013	NO.8 MALE O-RING X 1/2" FNPT
6	2	201016	1/2" NPT CLOSE NIPPLE
7	2	201037	NO.8 MALE O-RING X NO.8 MJIC RUN TEE
8	7	201002	NO.8 MALE O-RING X NO.8 MJIC ELBOW
9	2	201010	NO.8 MJIC TEE
10	2	202104	3/8" X NO. 8 FJIC X 1/2" MNPT X 18" HOSE

REF. # QTY. PART # DESCRIPTION

11	1	202056	3/8" X NO. 8 FJIC X NO. 8 FJIC X 28" HOSE
12	3	202111	3/8" X NO. 8 FJIC X NO. 8 FJIC X 216" HOSE
13	2	202244	3/8" X NO. 8 FJIC X NO. 8 FJIC X 190" HOSE
14	1	202109	3/8" X 1/2" MNPT X NO. 8 FJIC X 264" HOSE
15	1	202110	3/8" X 1/2" MNPT X NO. 8 FJIC X 228" HOSE
16	1	202194	3/8" X 1/2" MNPT X NO. 8 FJIC X 60" HOSE
17	1	202195	3/8" X 1/2" MNPT X NO. 8 FJIC X 72" HOSE
18	1	202047	3/8" X NO. 8 FJIC X NO. 8 FJIC X 6" HOSE
19	1	202198	3/8" X NO. 8 FJIC X NO. 8 FJIC X 168" HOSE
---	1	450061	STROKE CONTROL KIT

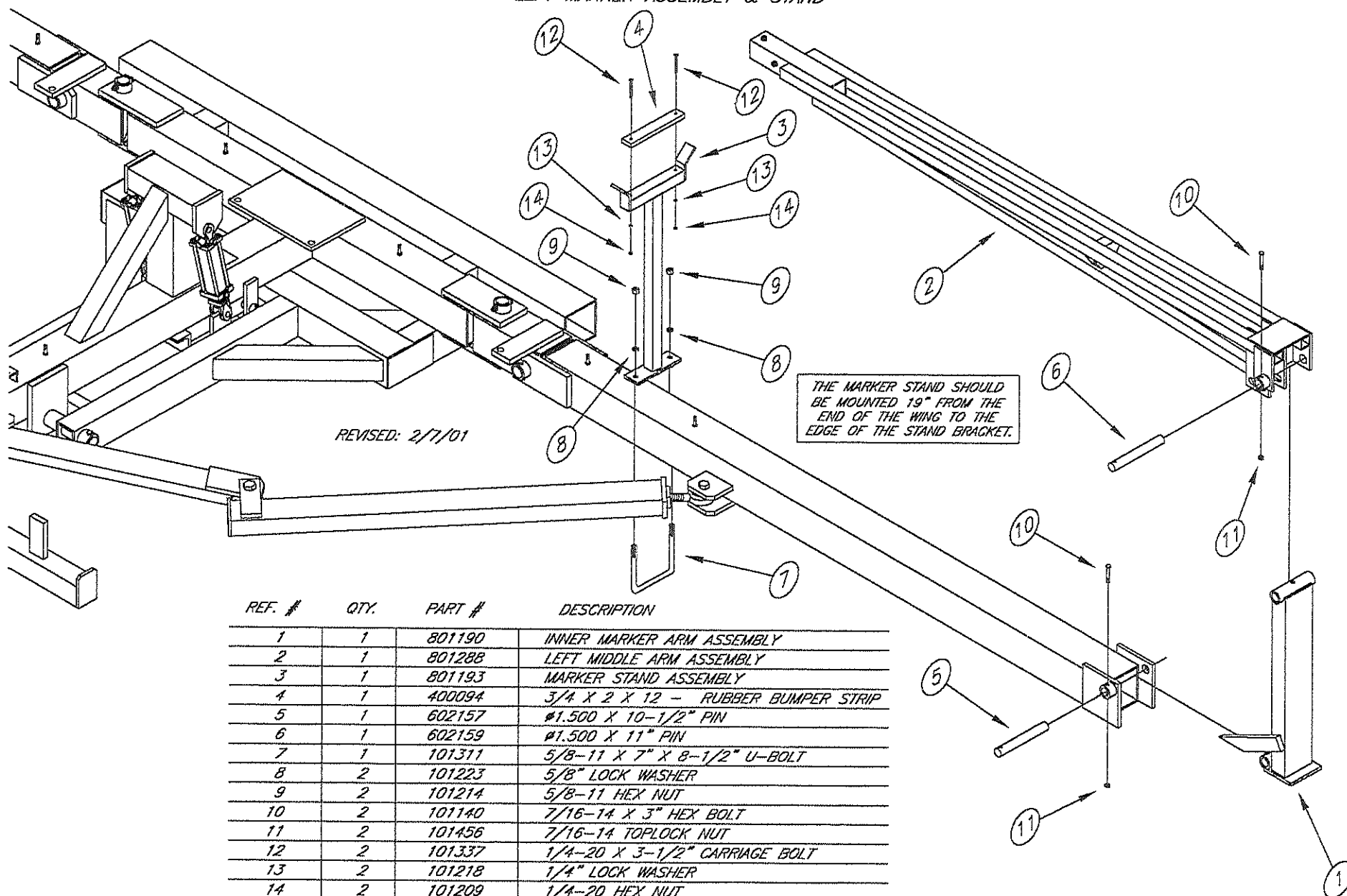
RIGHT MARKER ASSEMBLY AND STAND

REVISED: 2/7/01

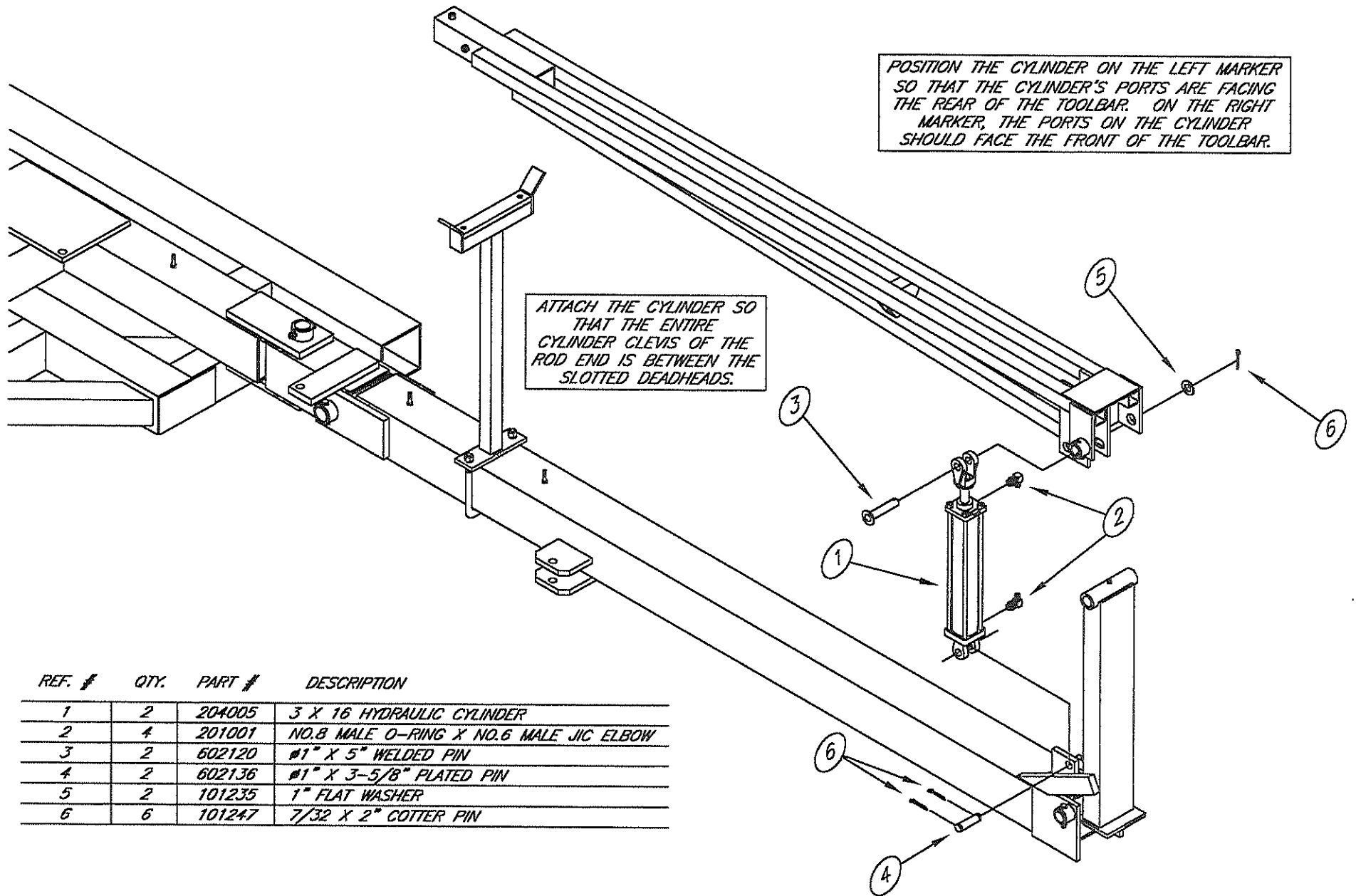


REF. #	QTY.	PART #	DESCRIPTION
1	1	801190	INNER MARKER ARM ASSEMBLY
2	1	801287	RIGHT MIDDLE ARM ASSEMBLY
3	1	801193	MARKER STAND ASSEMBLY
4	1	400094	3/4 X 2 X 12 - RUBBER BUMPER STRIP
5	1	602157	Ø1.500 X 10-1/2" PIN
6	1	602159	Ø1.500 X 11" PIN
7	1	101311	5/8-11 X 7" X 8-1/2" U-BOLT
8	2	101223	5/8" LOCK 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 & STAND



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	#1" X 5" WELDED PIN
4	2	602136	#1" X 3-5/8" PLATED PIN
5	2	101235	1" FLAT WASHER
6	6	101247	7/32 X 2" COTTER PIN

OUTER MARKER ARM & DISC ADJUSTING ASSEMBLY

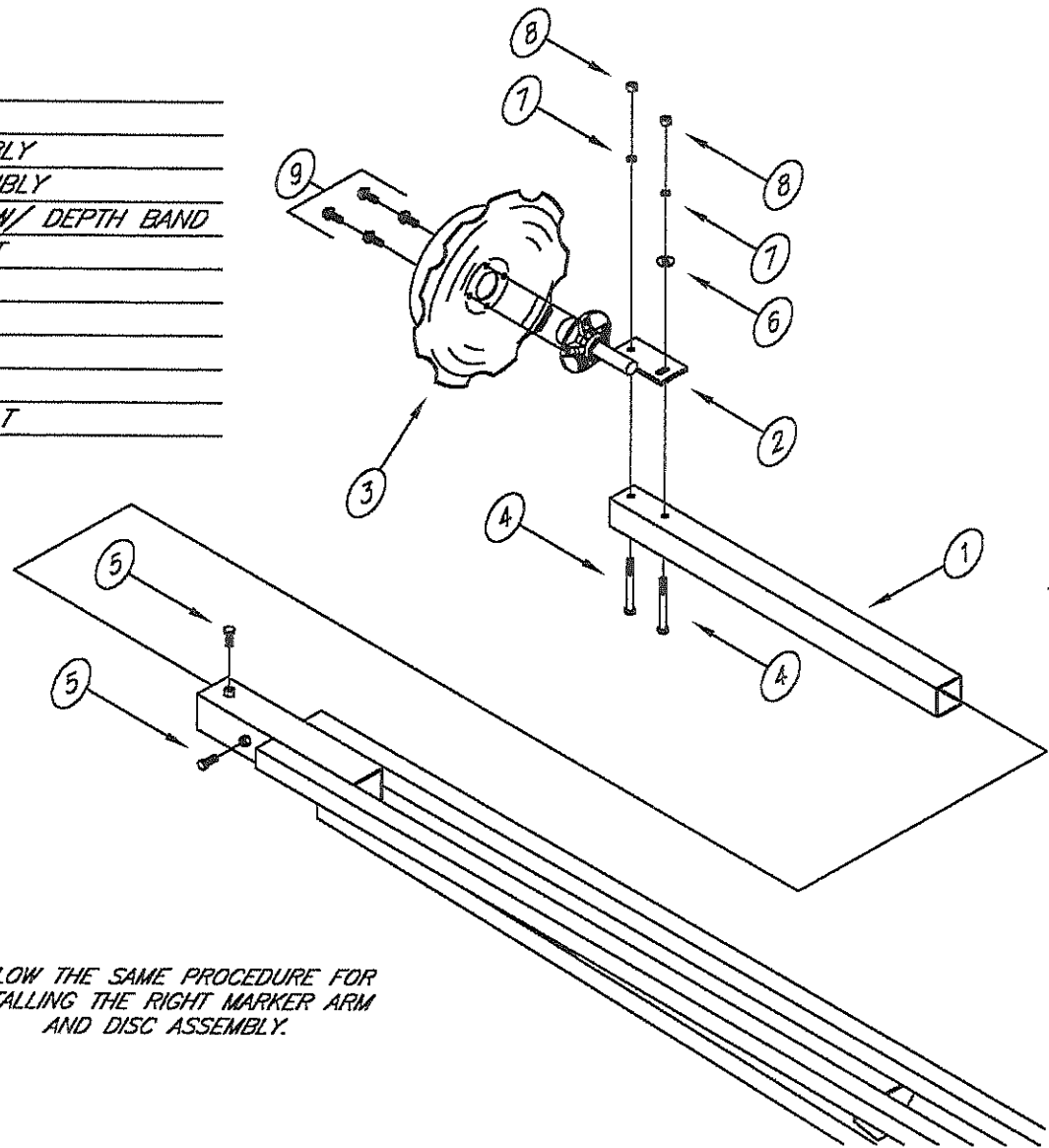
REF. #	QTY.	PART #	DESCRIPTION
1	2	400120	OUTER ARM TUBE - 38"
2	1	400072	LEFT DISC ADJUSTING ASSEMBLY
-	1	400006	RIGHT DISC ADJUSTING ASSEMBLY
3	2	400226	18" NOTCHED MARKER DISC W/ DEPTH BAND
4	4	101154	1/2-13 X 4-1/2" HEX BOLT
5	4	101147	1/2-13 X 1" HEX BOLT
6	2	101231	1/2" FLAT WASHER
7	4	101222	1/2" LOCK WASHER
8	4	101213	1/2-13 HEX NUT
9	8	301191	1/2-20 X 1-1/4" WHIZ BOLT

REVISED: 12/12/00

NOTE THAT THE LEFT MARKER DISC ASSEMBLY INCLUDE THE FOLLOWING:
801323 - LEFT SPINDLE WELDMENT
310159 - 4 BOLT HUB ASSEMBLY

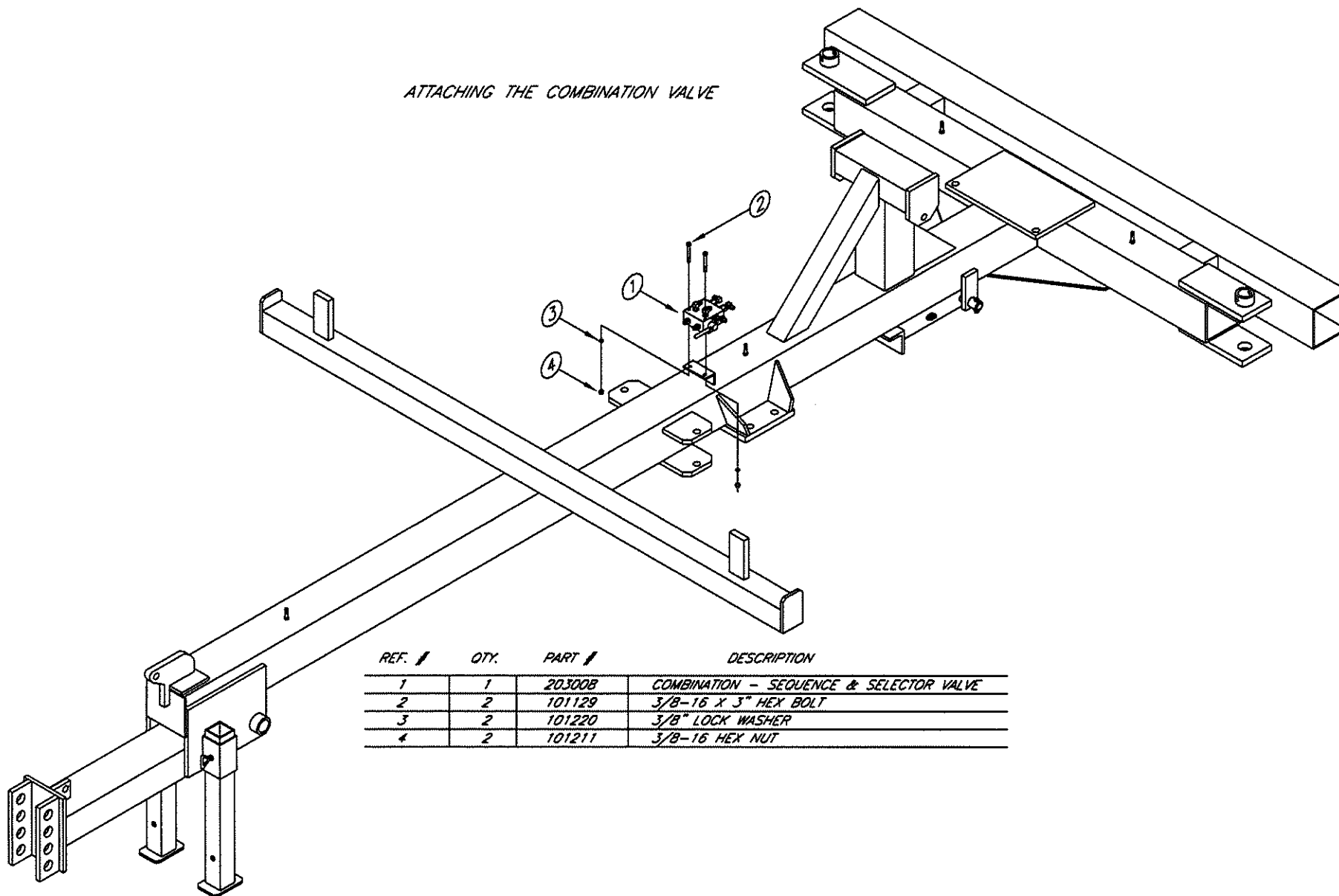
NOTE THAT THE RIGHT MARKER DISC ASSEMBLY INCLUDE THE FOLLOWING:
801324 - RIGHT SPINDLE WELDMENT
310159 - 4 BOLT HUB ASSEMBLY

MARKERS COME STANDARD WITH THE 18" NOTCHED BLADES WITH DEPTH BANDS. TO ORDER 18" NOTCHED BLADES WITHOUT THE DEPTH BANDS, USE PART NUMBER 400227.



FOLLOW THE SAME PROCEDURE FOR INSTALLING THE RIGHT MARKER ARM AND DISC ASSEMBLY.

ATTACHING THE COMBINATION VALVE



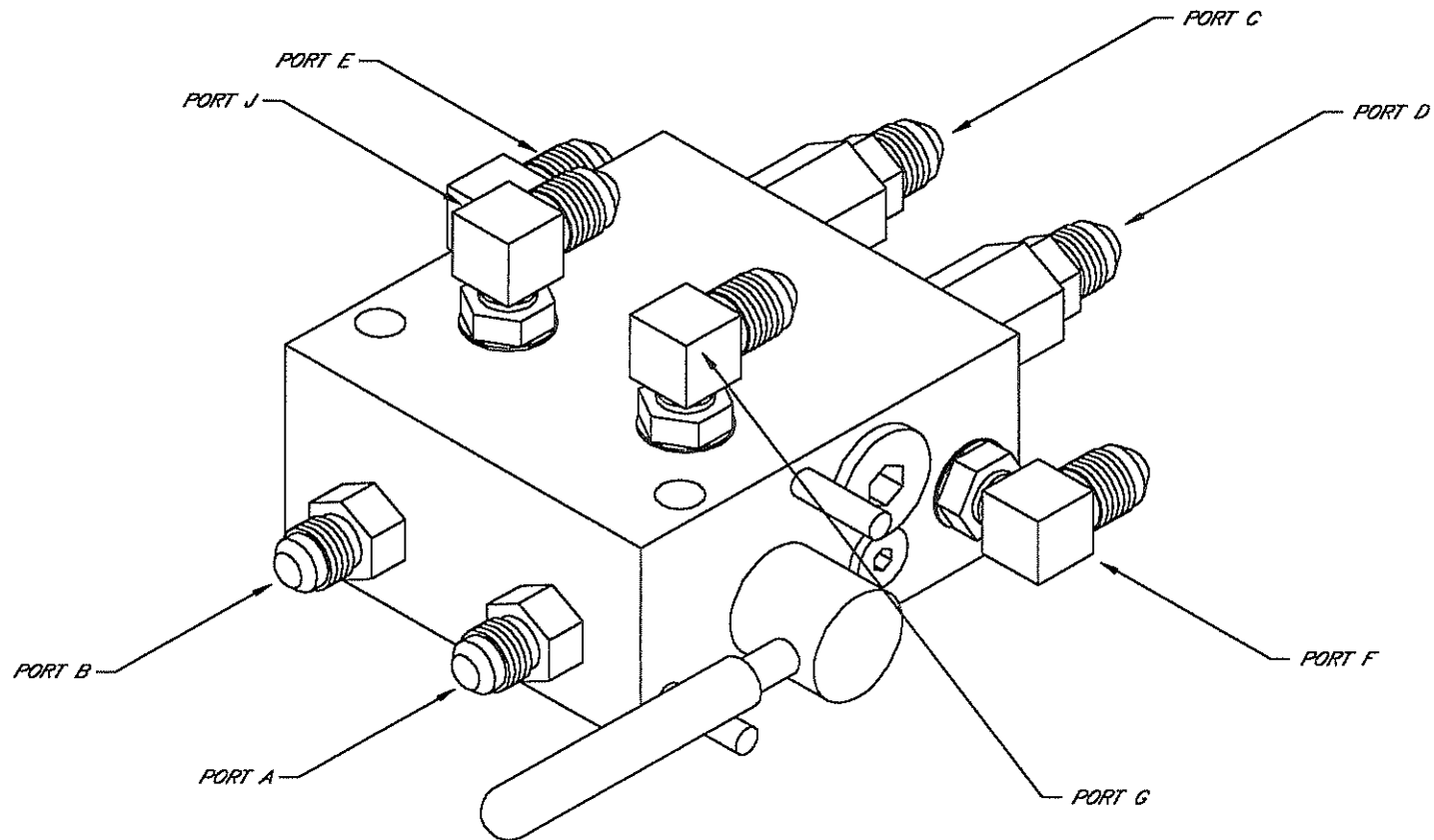
REF. #	QTY.	PART #	DESCRIPTION
1	1	20300B	COMBINATION - SEQUENCE & SELECTOR VALVE
2	2	101129	3/8-16 X 3" HEX BOLT
3	2	101220	3/8" LOCK WASHER
4	2	101211	3/8-16 HEX NUT

*COMBINATION VALVE PORT IDENTIFICATION AND FUNCTION
FOR THE 30' 6200 FRONT FOLD TOOLBAR*

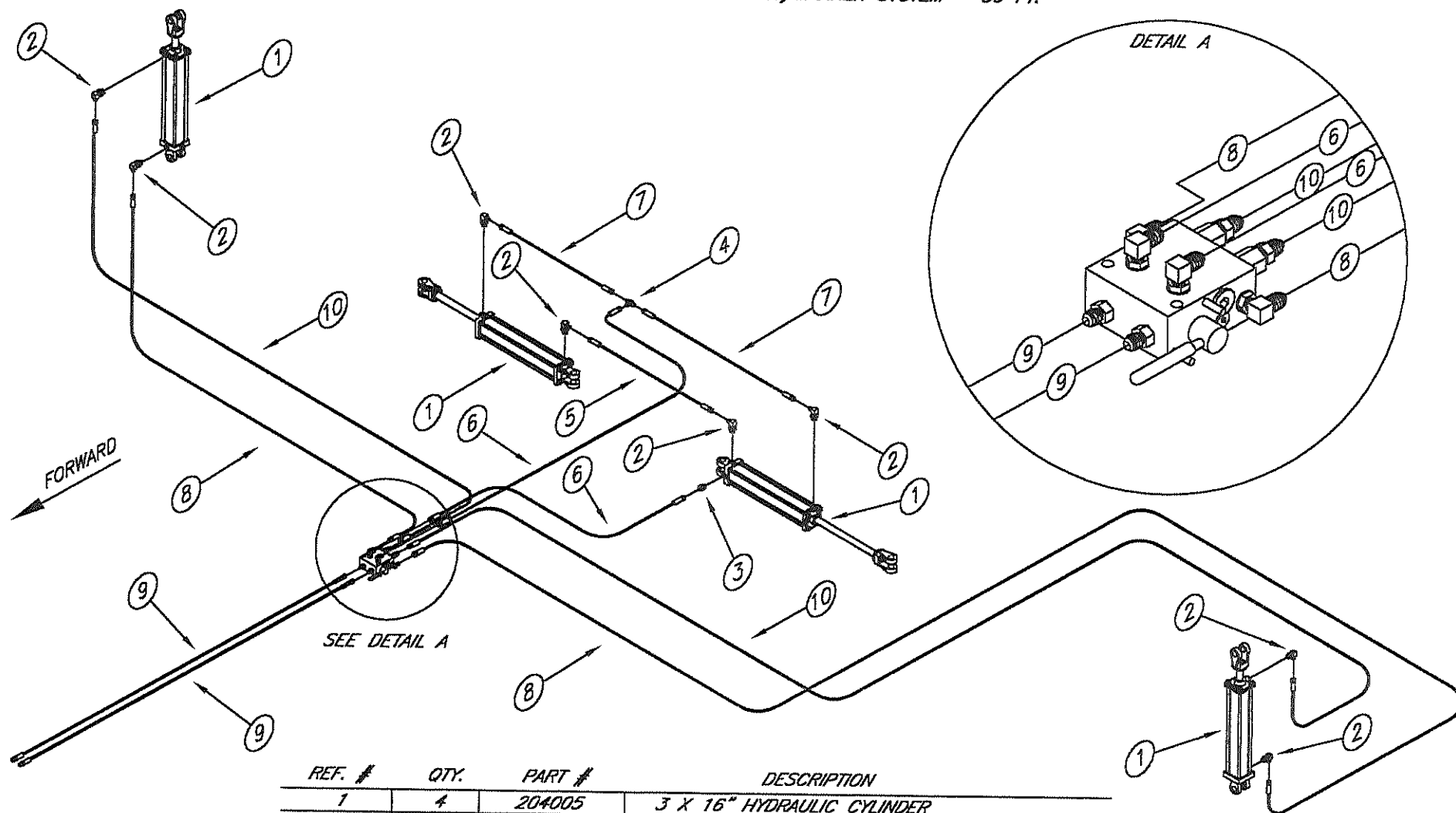
ALL PORTS ARE NO.6 MALE JIC FITTINGS.

*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.*

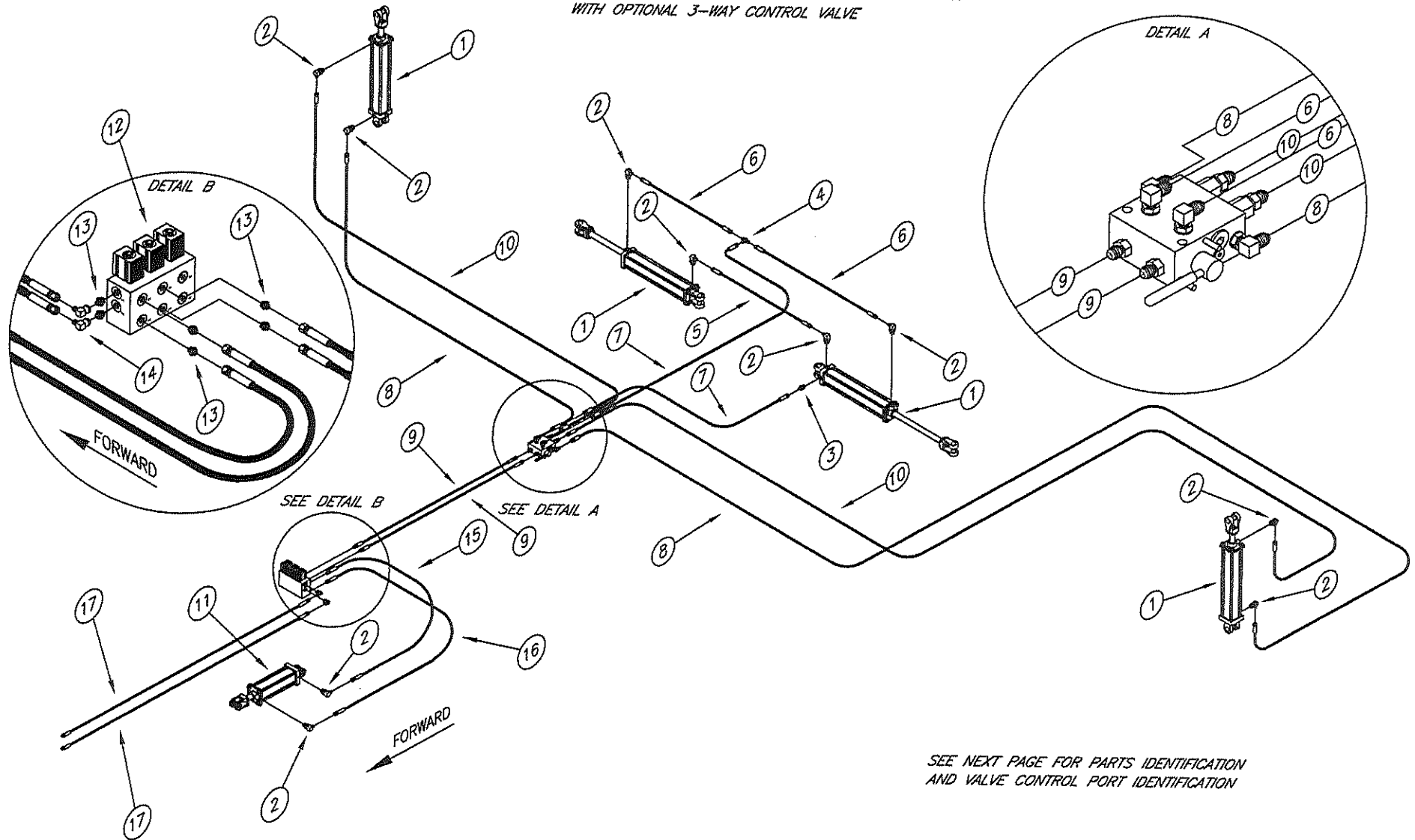


HYDRAULIC SCHEMATIC FOR WING FOLD/MARKER SYSTEM - 30 FT.

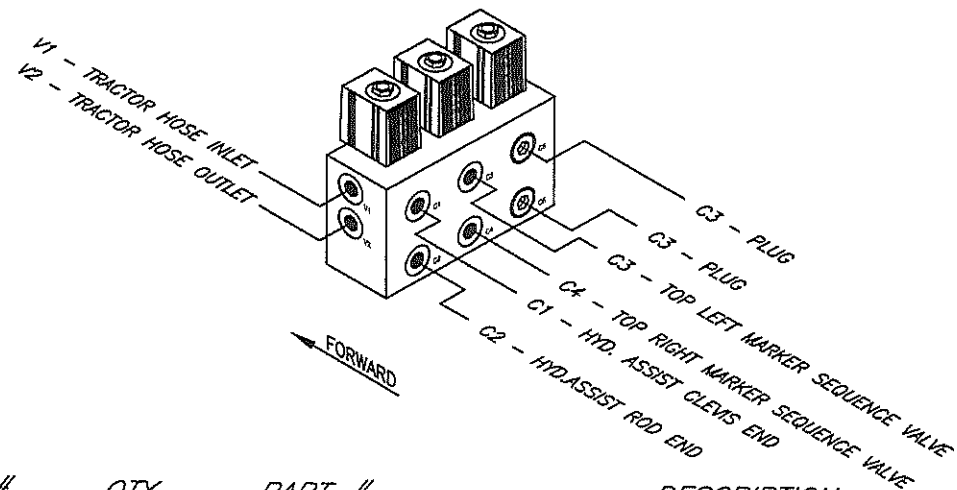


REF. #	QTY.	PART #	DESCRIPTION
1	4	204005	3 X 16" HYDRAULIC CYLINDER
2	8	201001	NO. 8 MALE O-RING X NO. 6 MJIC ELBOW
3	1	201003	NO. 8 MALE O-RING X NO. 6 MJIC STRAIGHT
4	1	201009	NO. 6 MJIC TEE
5	1	202001	1/4 X NO. 6 FJIC X NO. 6 FJIC X 20" HOSE
6	2	202117	1/4 X NO. 6 FJIC X NO. 6 FJIC X 30" HOSE
7	2	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 SCHEMATIC FOR WING FOLD/MARKER SYSTEM - 30 FT.
WITH OPTIONAL 3-WAY CONTROL VALVE

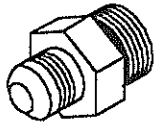


3-WAY ELECTRONIC CONTROL VALVE
PORT IDENTIFICATION

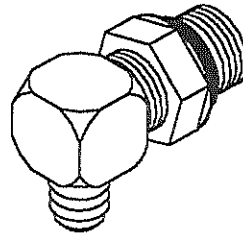


REF. #	QTY.	PART #	DESCRIPTION
1	4	204005	3 X 16" HYDRAULIC CYLINDER
2	10	201001	NO. 8 MALE O-RING X NO. 6 MJIC ELBOW
3	1	201003	NO. 8 MALE O-RING X NO. 6 MJIC STRAIGHT
4	1	201009	NO. 6 MJIC TEE
5	1	202107	1/4 X NO. 6 FJIC X NO. 6 FJIC X 21" HOSE
6	2	202117	1/4 X NO. 6 FJIC X NO. 6 FJIC X 30" HOSE
7	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	202009	1/4 X NO. 6 FJIC X NO. 6 FJIC X 104" HOSE
10	2	202114	1/4 X NO. 6 FJIC X NO. 6 FJIC X 270" HOSE
11	1	204002	3 X 8 HYDRAULIC CYLINDER
12	1	203123	3-WAY ELECTRONIC CONTROL VALVE
13	6	201003	NO. 6 MJIC X NO. 8 MALE O-RING
14	2	201029	NO. 6 FJIC X NO. 6 MJIC SWIVEL 90°
15	1	202141	1/4 X NO. 6 FJIC X NO. 6 FJIC X 32" HOSE
16	1	202058	1/4 X NO. 6 FJIC X NO. 6 FJIC X 42" HOSE
17	2	202250	1/4 X 3/8 MNPT X NO. 6 FJIC X 80" HOSE

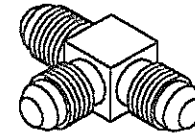
HYDRAULIC COMPONENTS



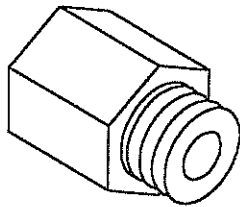
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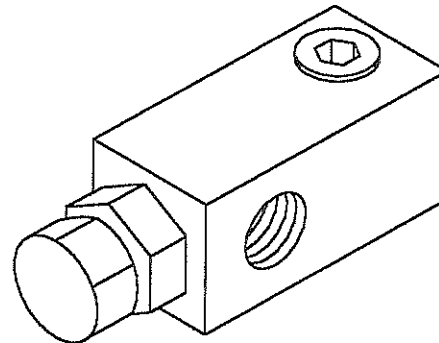
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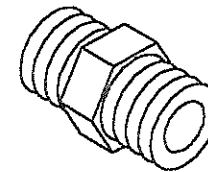
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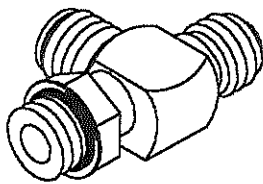
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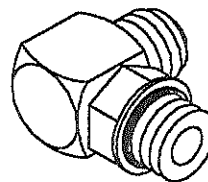
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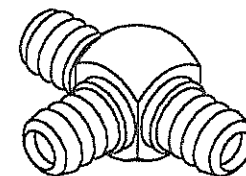
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201037



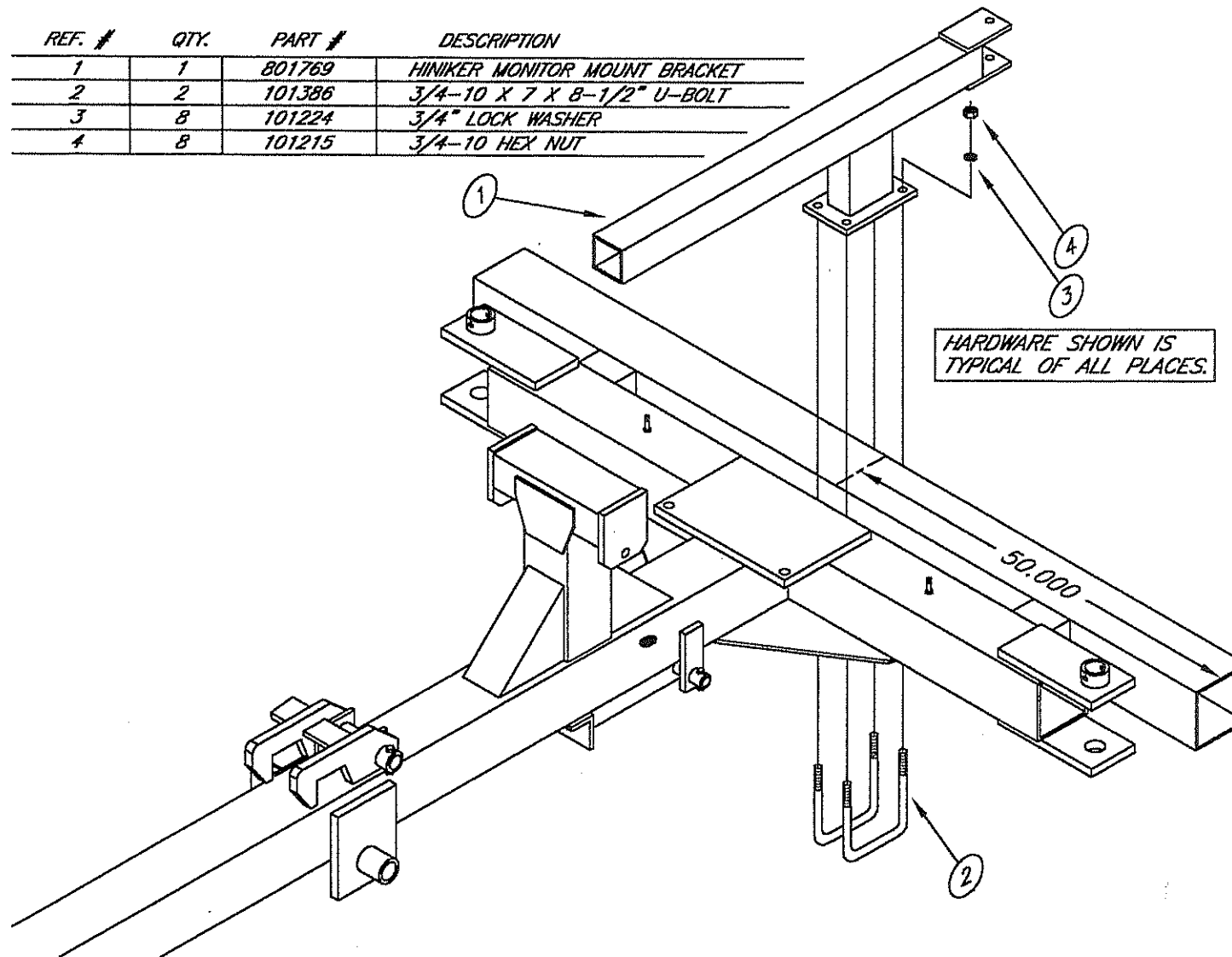
201002



201010

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

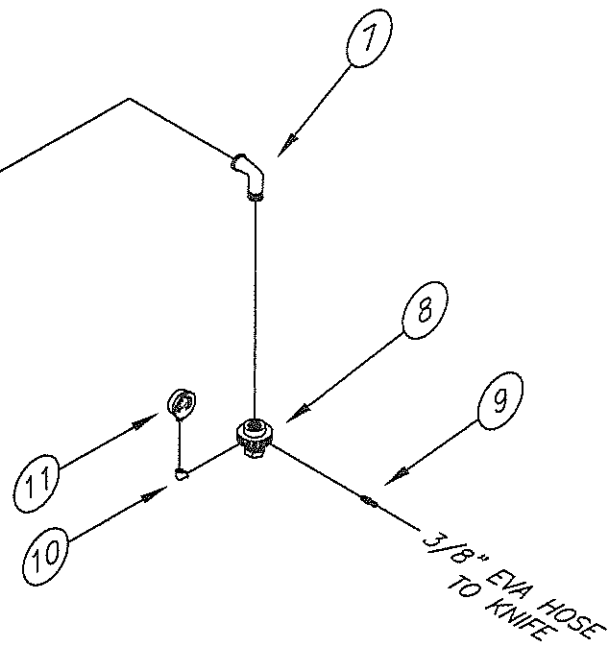
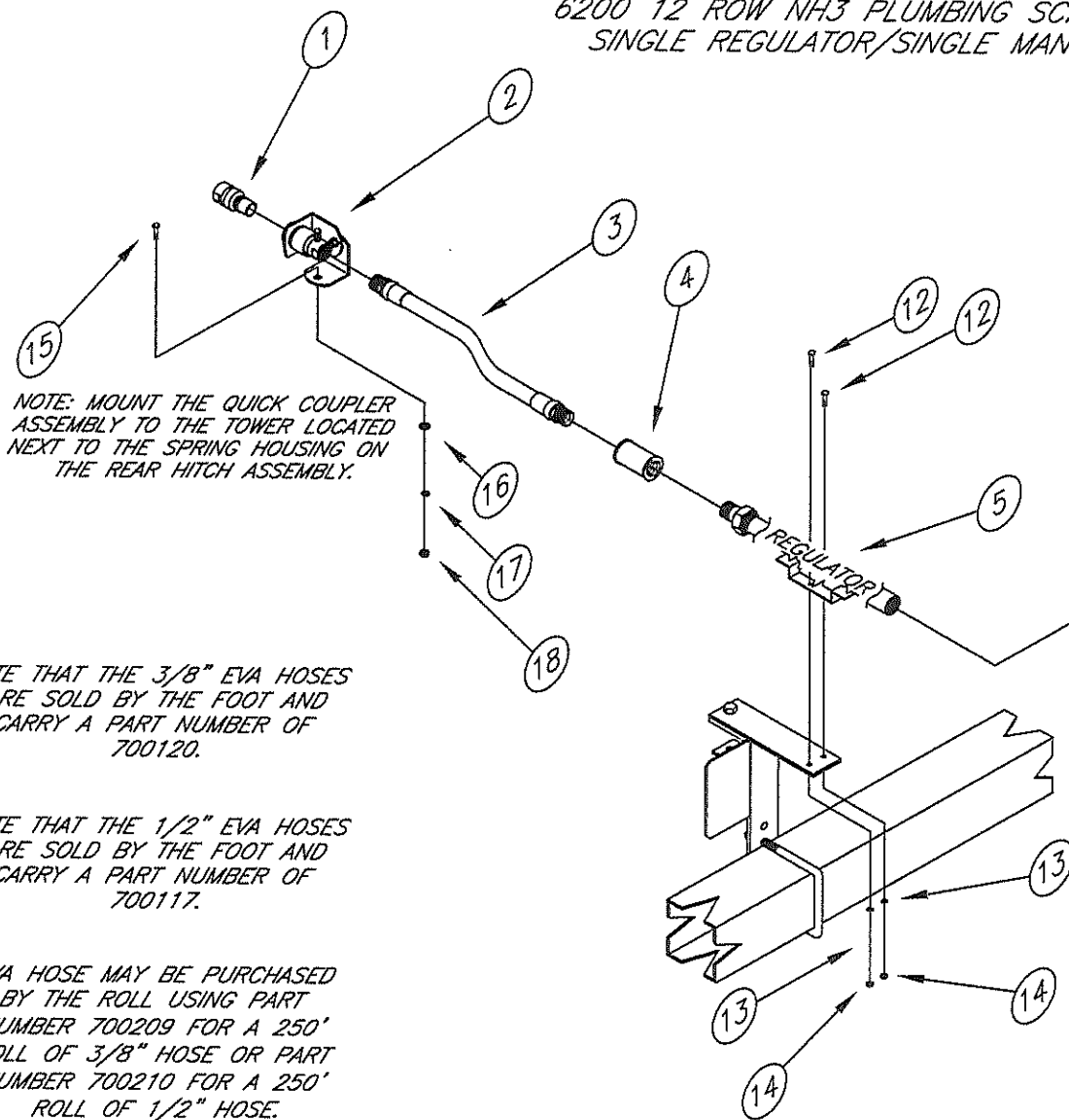


6200 12 ROW NH3 PLUMBING SCHEMATIC SINGLE REGULATOR/SINGLE MANIFOLD

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.



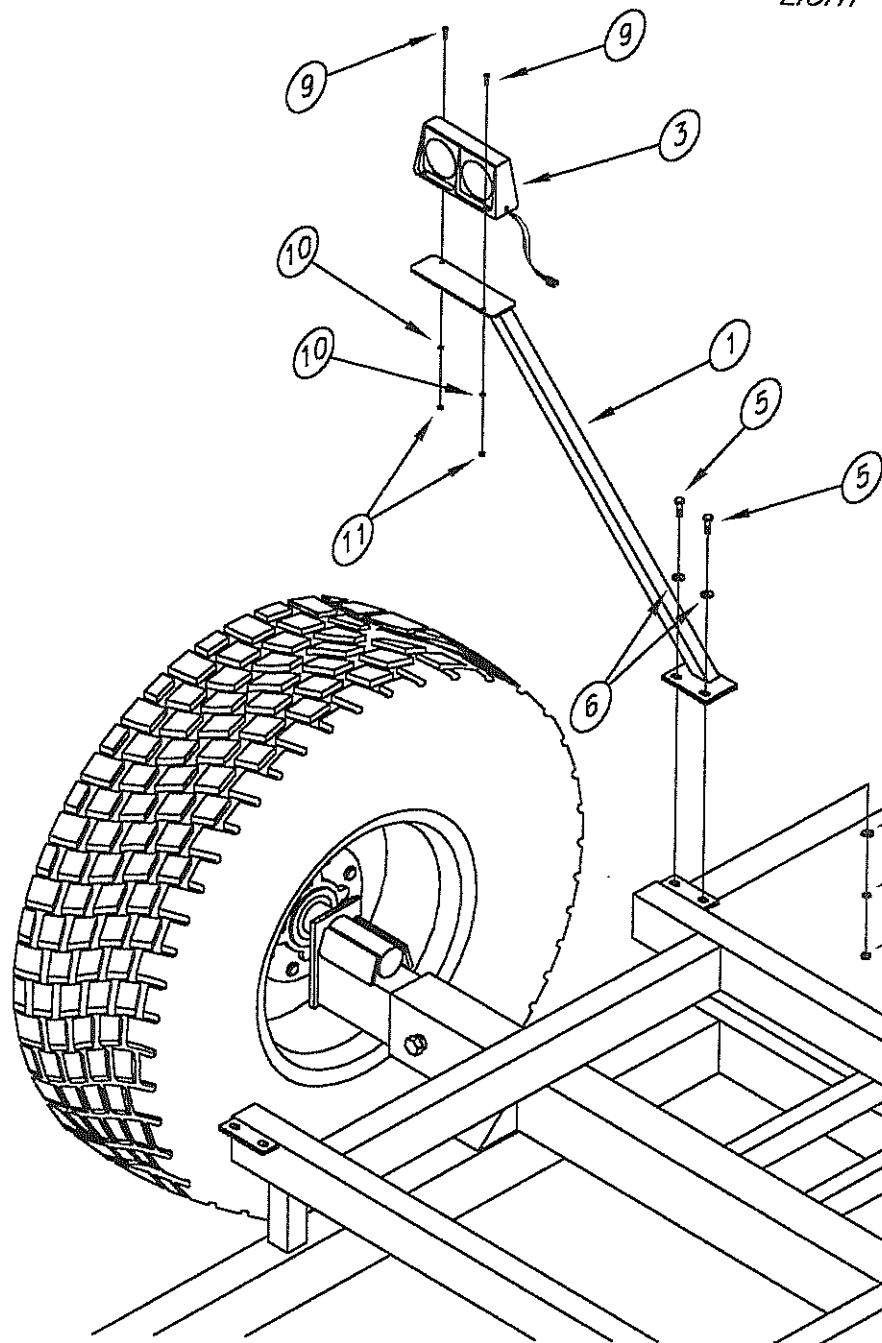
REFER TO NEXT PAGE
FOR PART IDENTIFICATION.

REVISED: 10/01/01

*6200 12 ROW NH3 PLUMBING SCHEMATIC
SINGLE REGULATOR/SINGLE MANIFOLD*

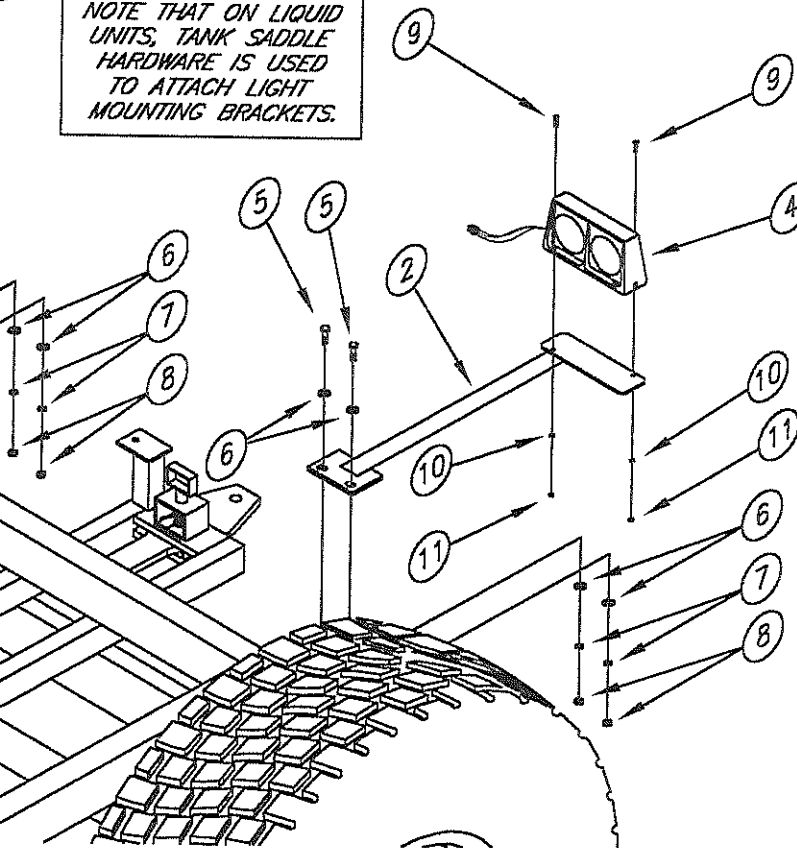
<i>REF. #</i>	<i>QTY.</i>	<i>PART #</i>	<i>DESCRIPTION</i>
<i>1</i>	<i>1</i>	<i>700278</i>	<i>1-1/4" MALE COUPLER TIP (NH3)</i>
<i>2</i>	<i>1</i>	<i>700276</i>	<i>1-1/4" QUICK COUPLER ASSEMBLY</i>
<i>3</i>	<i>1</i>	<i>700301</i>	<i>1-1/4" AA HOSE X 120" LONG</i>
<i>4</i>	<i>1</i>	<i>700275</i>	<i>1-1/4" 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>

LIGHT UNIT INSTALLATION

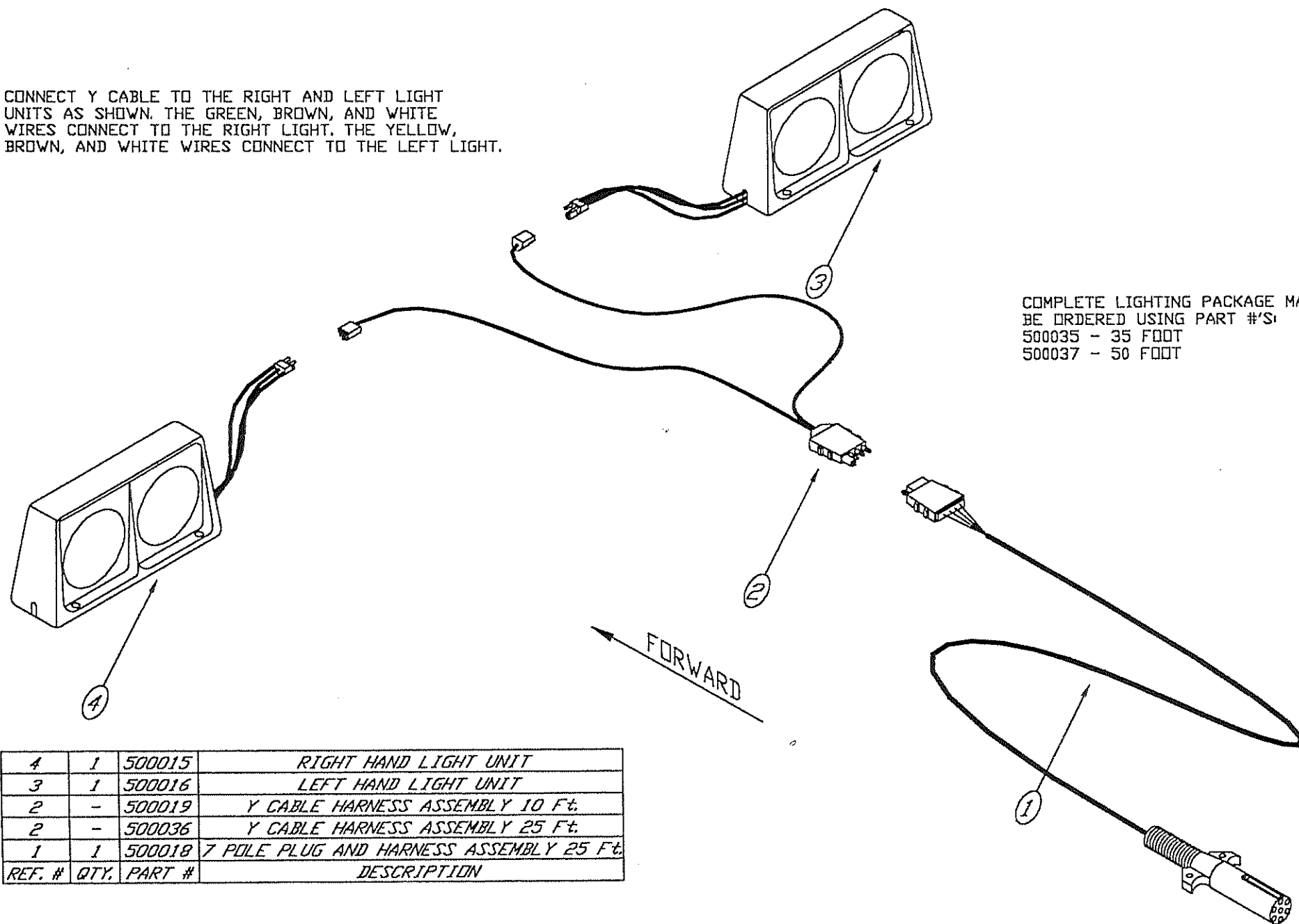


REF. #	QTY.	PART #	DESCRIPTION
1	1	400127	LIGHT MOUNTING BRACKET (RIGHT)
2	1	400126	LIGHT MOUNTING BRACKET (LEFT)
3	1	500015	RIGHT HAND LIGHT UNIT
4	1	500016	LEFT HAND LIGHT UNIT
5	4	101137	7/16-14 X 1-1/2" HEX BOLT
6	8	101230	7/16" FLAT WASHER
7	4	101221	7/16" LOCK WASHER
8	4	101212	7/16-14 HEX NUT
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.

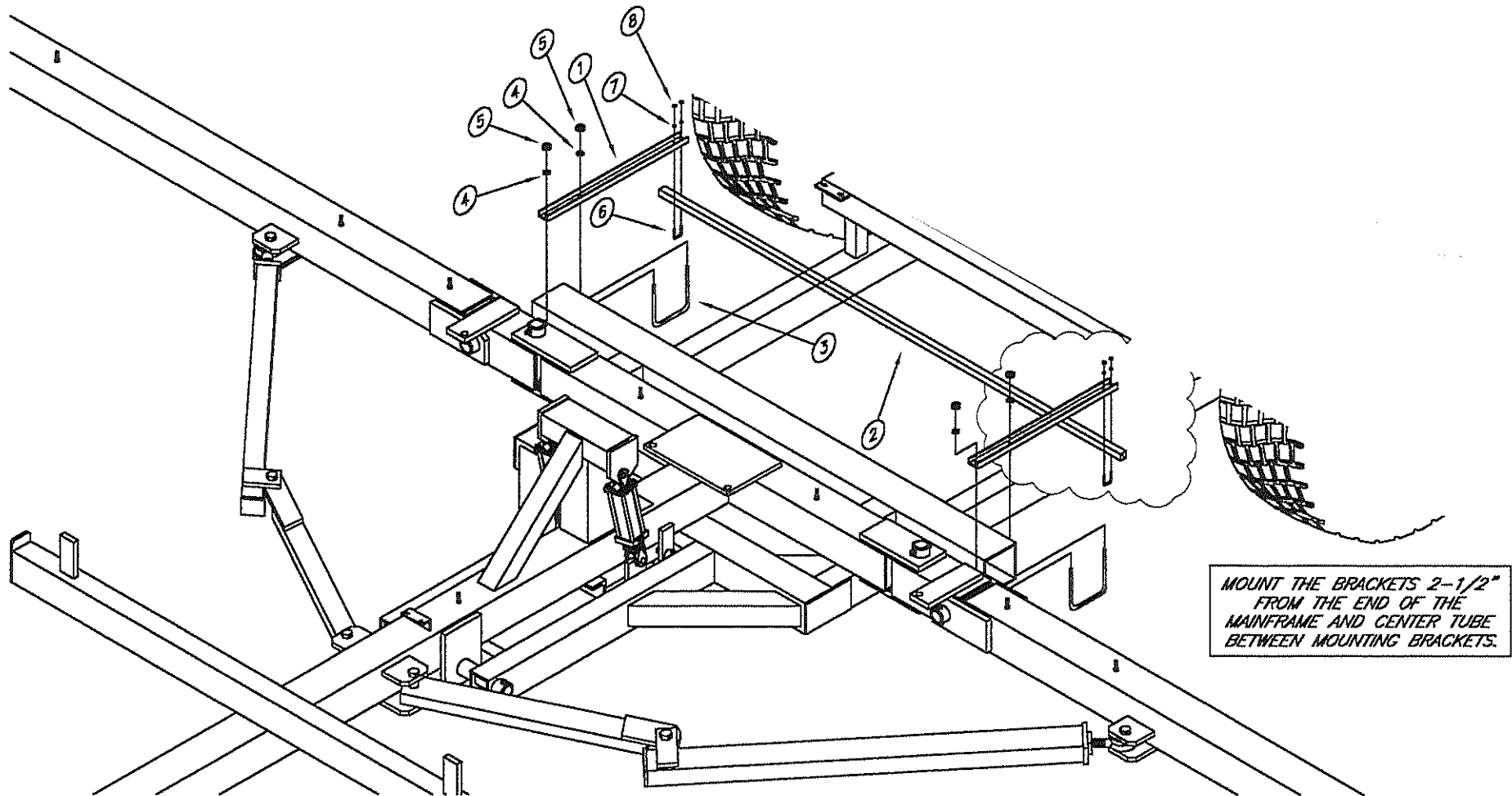


COMPLETE LIGHTING PACKAGE MAY
BE ORDERED USING PART #'S:
500035 - 35 FOOT
500037 - 50 FOOT

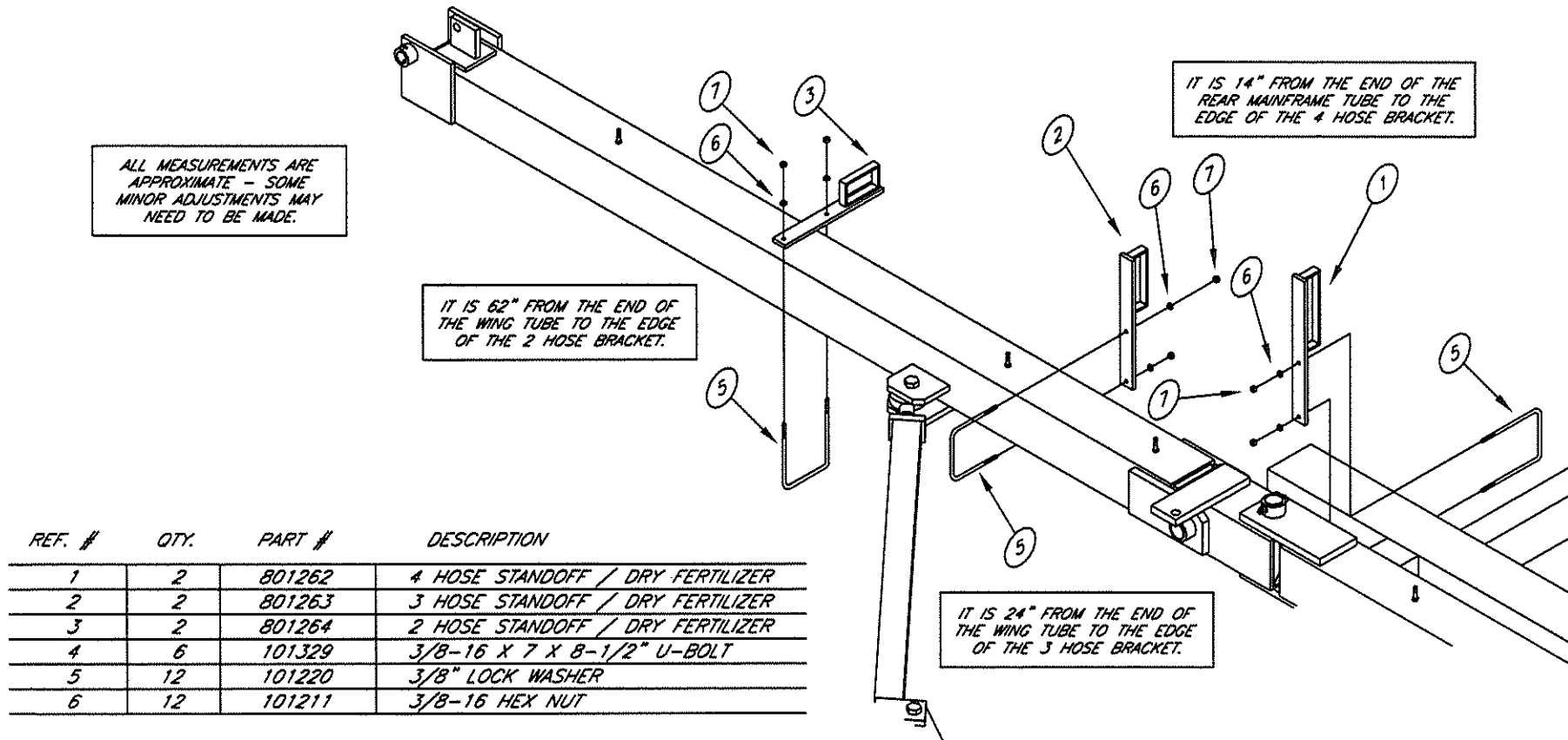
4	1	500015	RIGHT HAND LIGHT UNIT
3	1	500016	LEFT HAND LIGHT UNIT
2	-	500019	Y CABLE HARNESS ASSEMBLY 10 Ft.
2	-	500036	Y CABLE HARNESS ASSEMBLY 25 Ft.
1	1	500018	7 POLE PLUG AND HARNESS ASSEMBLY 25 Ft.
REF. #	QTY.	PART #	DESCRIPTION

DRY FERTILIZER HOSE SUPPORT TUBE

REF. #	QTY.	PART #	DESCRIPTION
1	2	400165	1 X 2 X 3/16 X 31" - MOUNTING BRACKET
2	1	400166	1-1/4" SQ. X 102" - HOSE TUBE
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

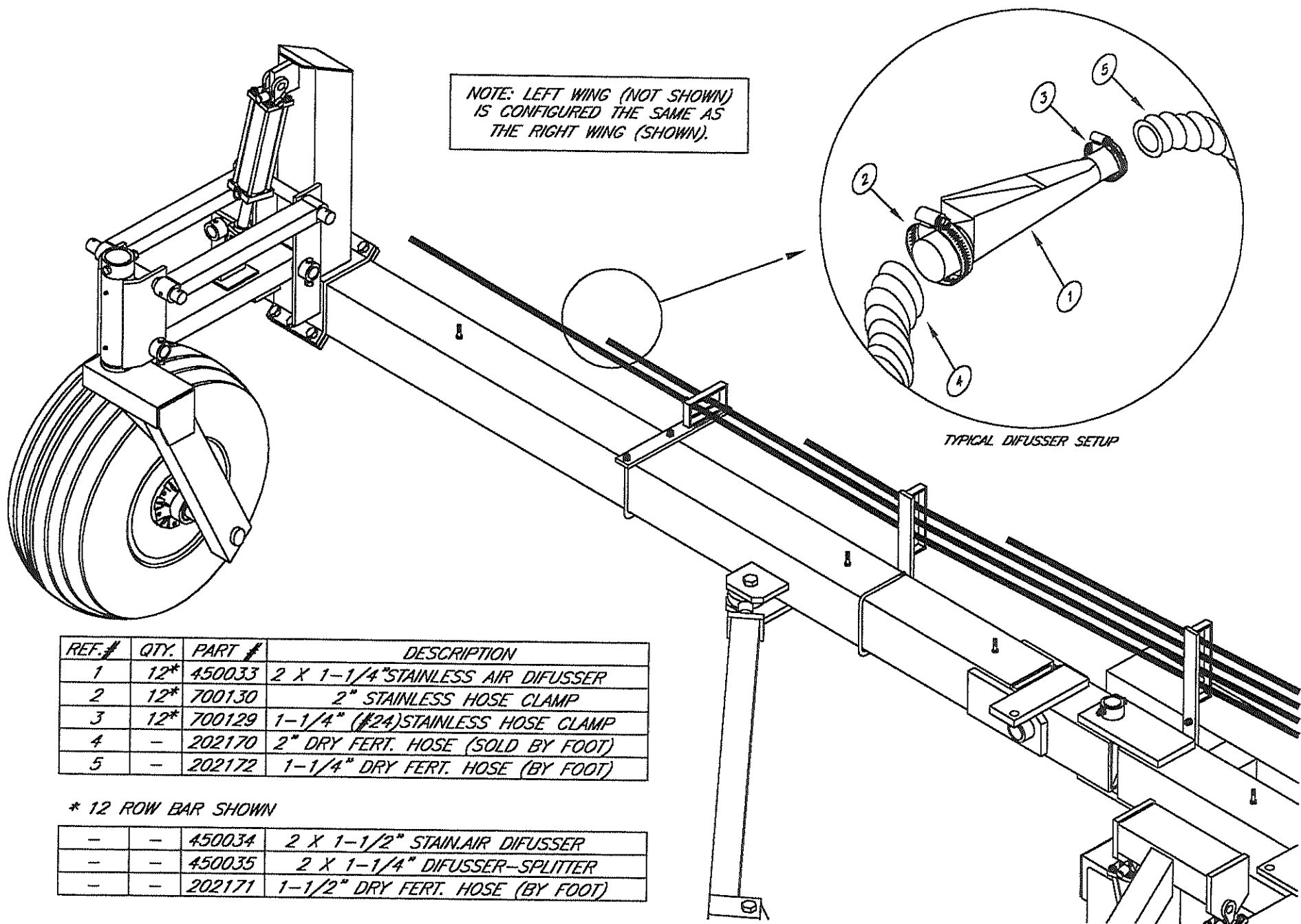


OPTIONAL DRY FERTILIZER HOSE BRACKET ASSEMBLY



NOTE: QUANTITIES ARE PER UNIT AND INCLUDE RIGHT & LEFT WINGS & MAINFRAME.

NOTE: LEFT WING (NOT SHOWN) IS CONFIGURED THE SAME AS THE RIGHT WING (SHOWN).



SERIAL NUMBER 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.

900807
QTY: 1

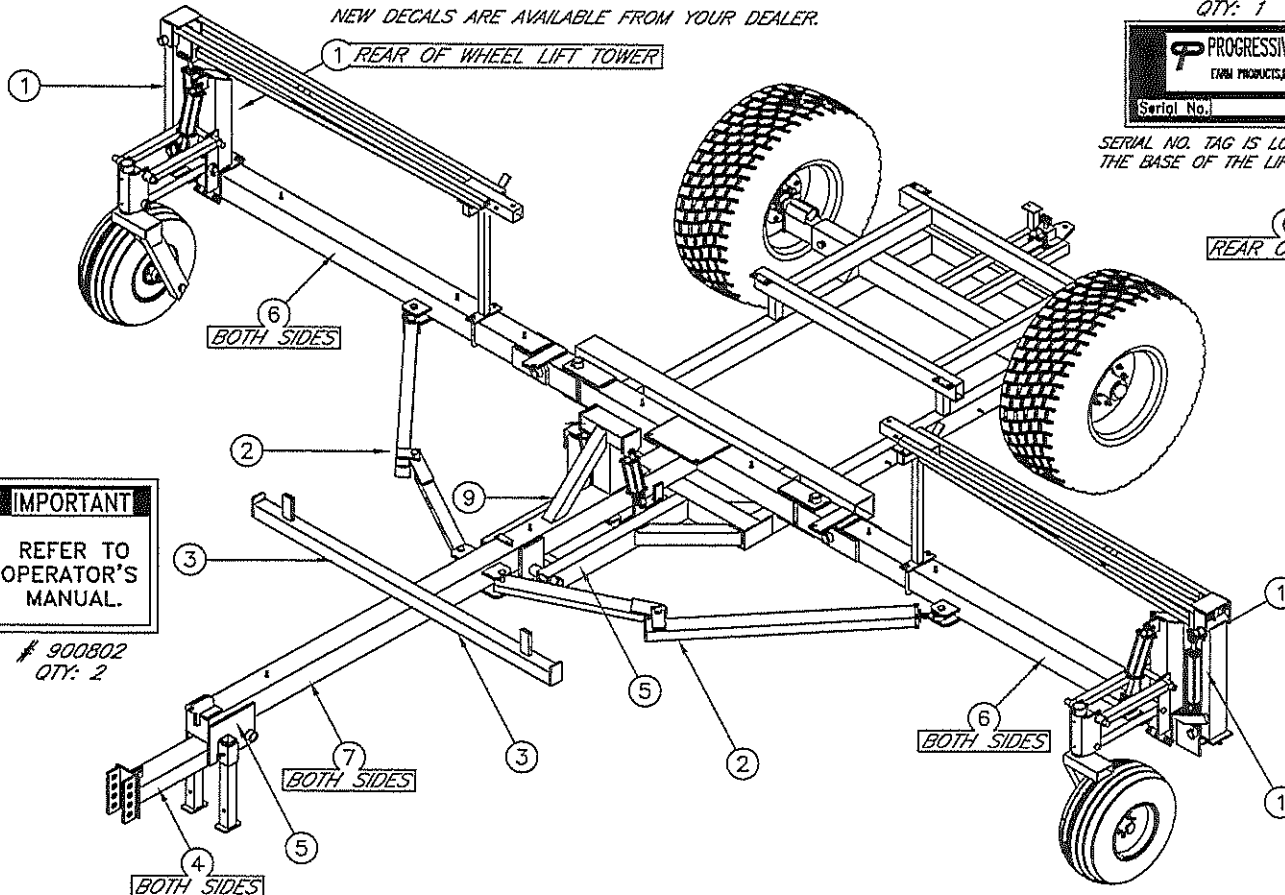


SERIAL NO. TAG IS LOCATED AT THE BASE OF THE LIFT TOWER.

6 REAR OF TANK

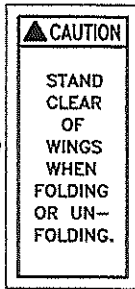
1 REAR OF TOWER

9 U.S. PATENT
5,009,914
900812
QTY: 1



6 **PROGRESSIVE**
900800
QTY: 5

7 **PROGRESSIVE 6200**
900827
QTY: 2



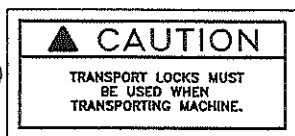
900801
QTY: 4



900810
QTY: 2



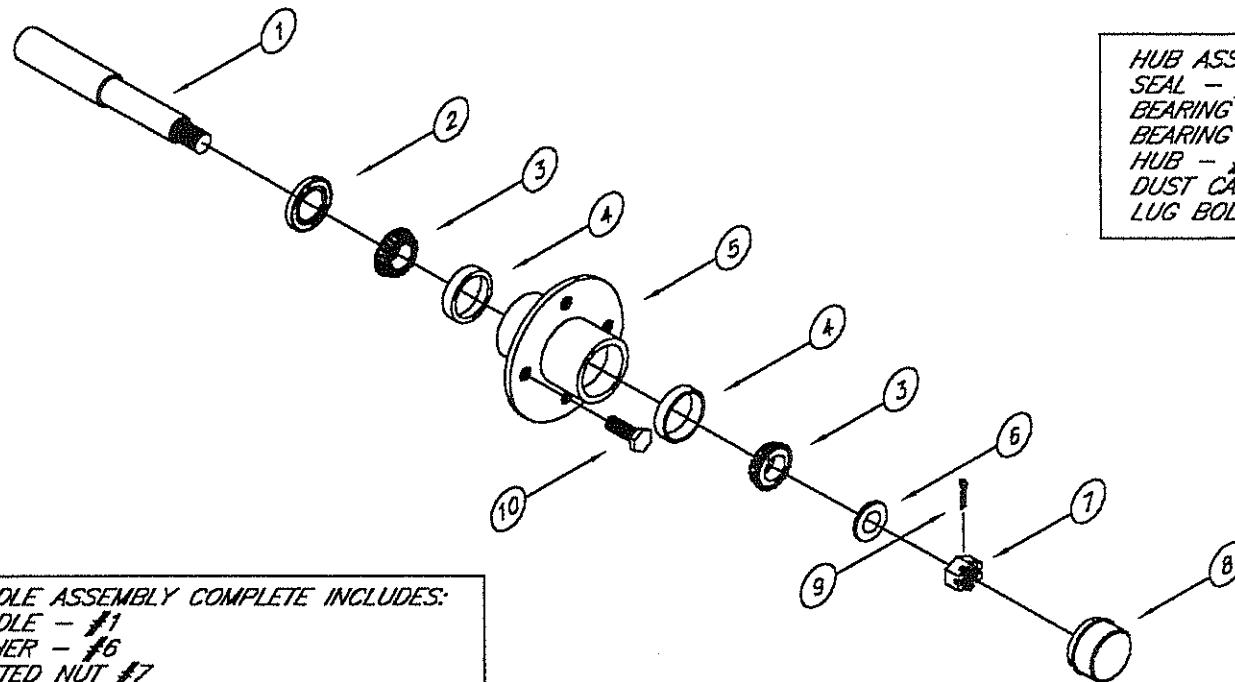
900803
QTY: 2



900804
QTY: 2



900802
QTY: 2



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

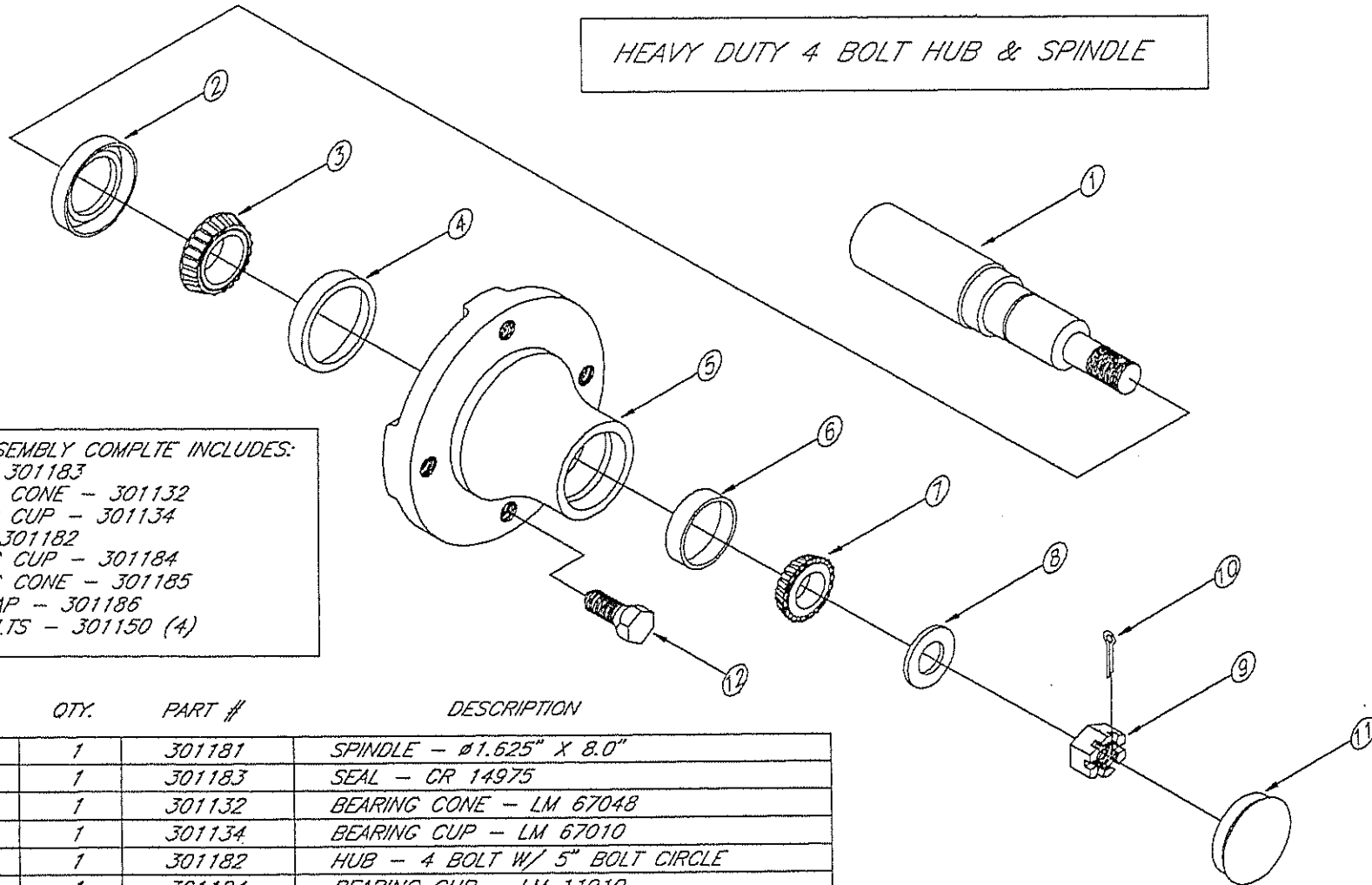
SPINDLE ASSEMBLY COMPLETE INCLUDES:
 SPINDLE - #1
 WASHER - #6
 SLOTTED NUT #7
 COTTER PIN - #9

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" I.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

HEAVY DUTY 4 BOLT HUB & SPINDLE

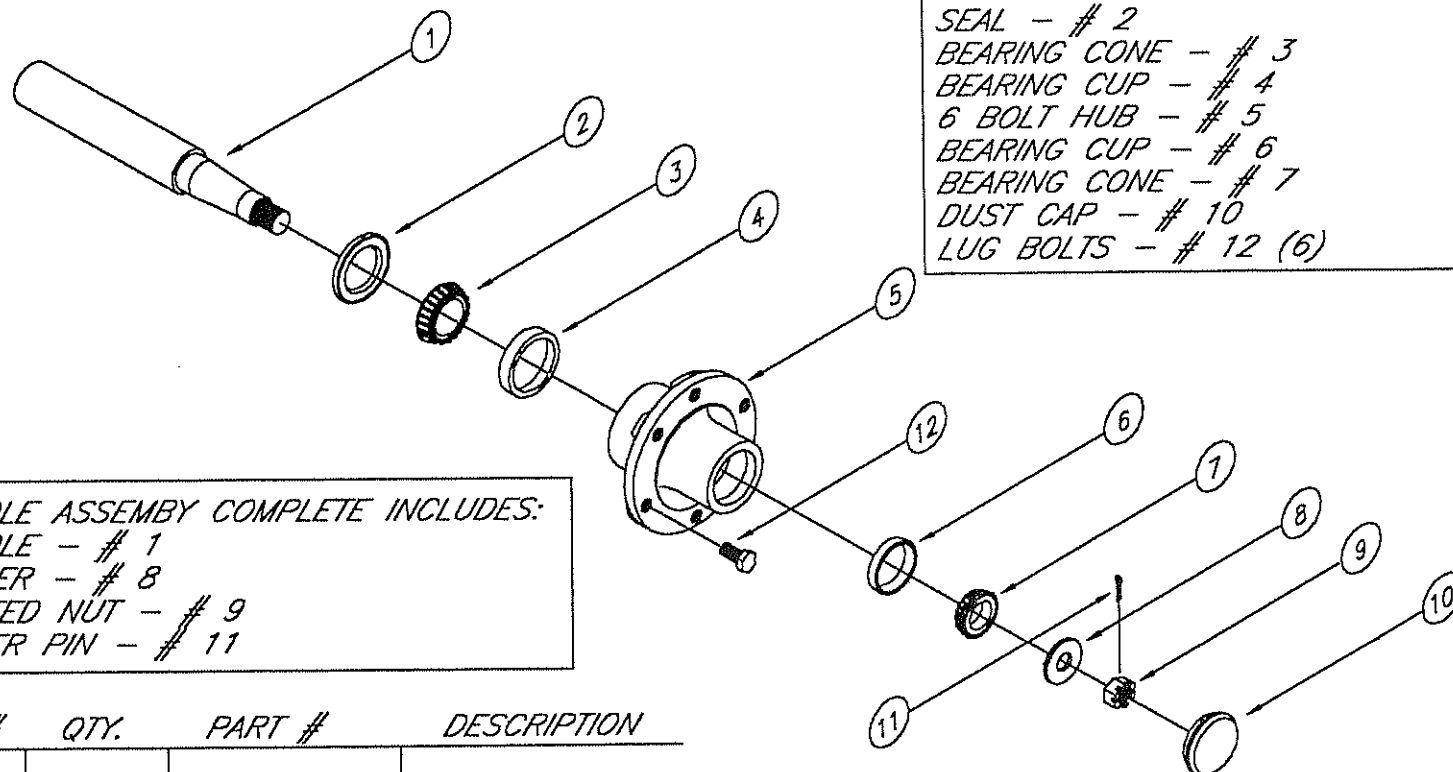


HUB ASSEMBLY COMPLETE INCLUDES:
 SEAL - 301183
 BEARING CONE - 301132
 BEARING CUP - 301134
 HUB - 301182
 BEARING CUP - 301184
 BEARING CONE - 301185
 DUST CAP - 301186
 LUG BOLTS - 301150 (4)

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

REVISED 09/08/93

REF. #	QTY.	PART #	DESCRIPTION
1	1	301181	SPINDLE - $\phi 1.625" \times 8.0"$
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



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

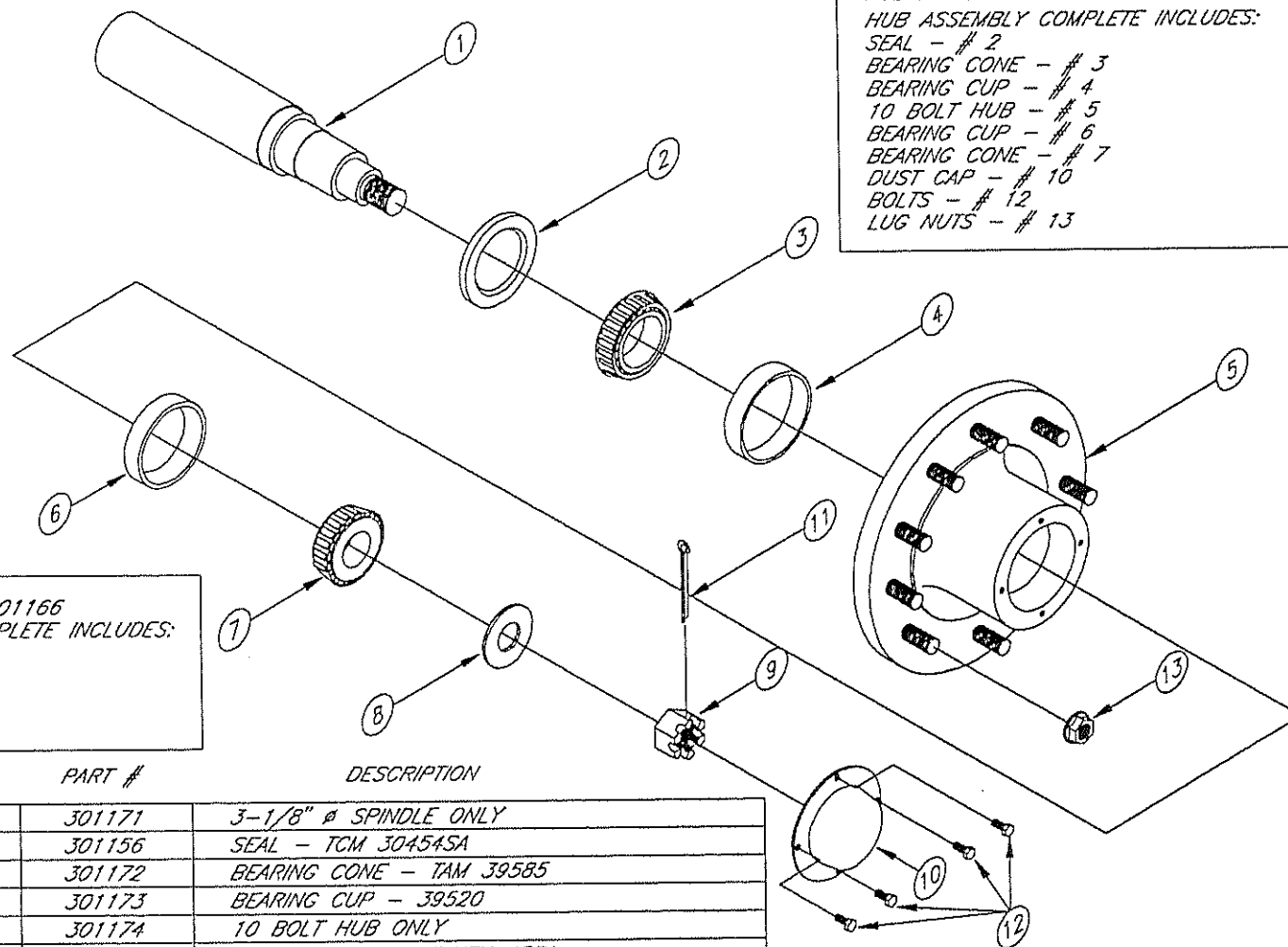
REF. #	QTY.	PART #	DESCRIPTION
1	1	301123	SPINDLE - $\varnothing 2.00 \times 15$
2	1	301154	SEAL - TCM 203062
3	1	301129	BEARING CONE - LM501349
4	1	301135	BEARING CUP - LM501310
5	1	301126	6 BOLT HUB - 6" BOLT CIRCLE
6	1	301134	BEARING CUP - LM67010
7	1	301132	BEARING CONE - LM67048
8	1	301157	WASHER - 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

10 BOLT HUB & SPINDLE

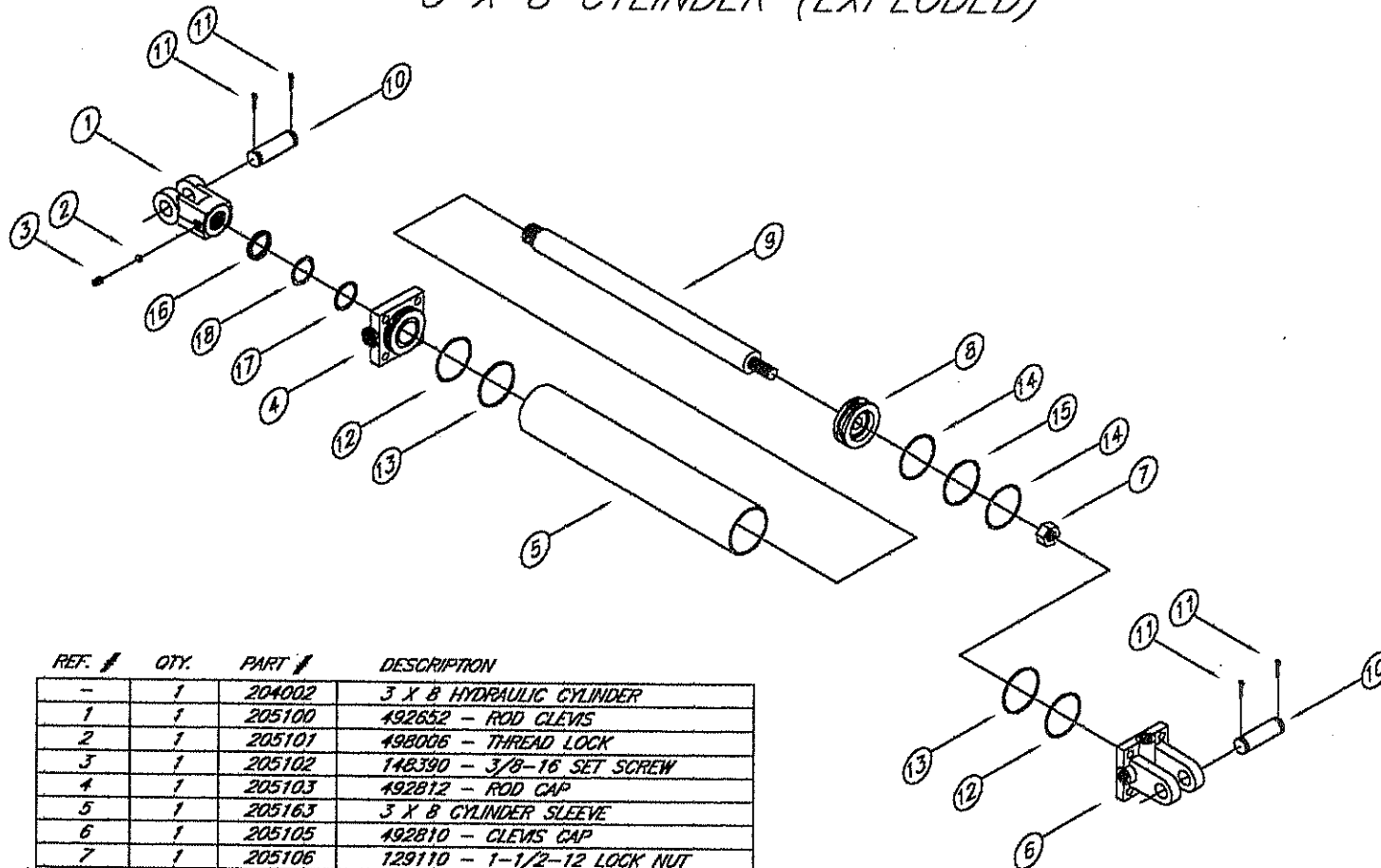
HUB ASSEMBLY COMPLETE - 301162
 HUB ASSEMBLY COMPLETE INCLUDES:
 SEAL - # 2
 BEARING CONE - # 3
 BEARING CUP - # 4
 10 BOLT HUB - # 5
 BEARING CUP - # 6
 BEARING CONE - # 7
 DUST CAP - # 10
 BOLTS - # 12
 LUG NUTS - # 13

SPINDLE COMPLETE - 301166
 SPINDLE ASSEMBLY COMPLETE INCLUDES:
 SPINDLE - # 1
 WASHER - # 8
 SLOTTED NUT - # 9
 COTTER PIN - # 11

REF. #	QTY.	PART #	DESCRIPTION
1	1	301171	3-1/8" Ø SPINDLE ONLY
2	1	301156	SEAL - TCM 304545A
3	1	301172	BEARING CONE - TAM 39585
4	1	301173	BEARING CUP - 39520
5	1	301174	10 BOLT HUB ONLY
6	1	301175	BEARING CUP - TIMKEN 453A
7	1	301176	BEARING CONE - TIMKEN 460
8	1	301177	WASHER - 3"O.D. X 1-1/4" I.D. X .160" THICK
9	1	301178	SPINDLE NUT 1-1/4-12
10	1	301179	DUST CAP
11	1	101265	COTTER PIN - 1/4" X 2"
12	4	101113	5/16-18 X 3/4" HEX BOLT
13	10	301180	LUG NUT - 3/4-16



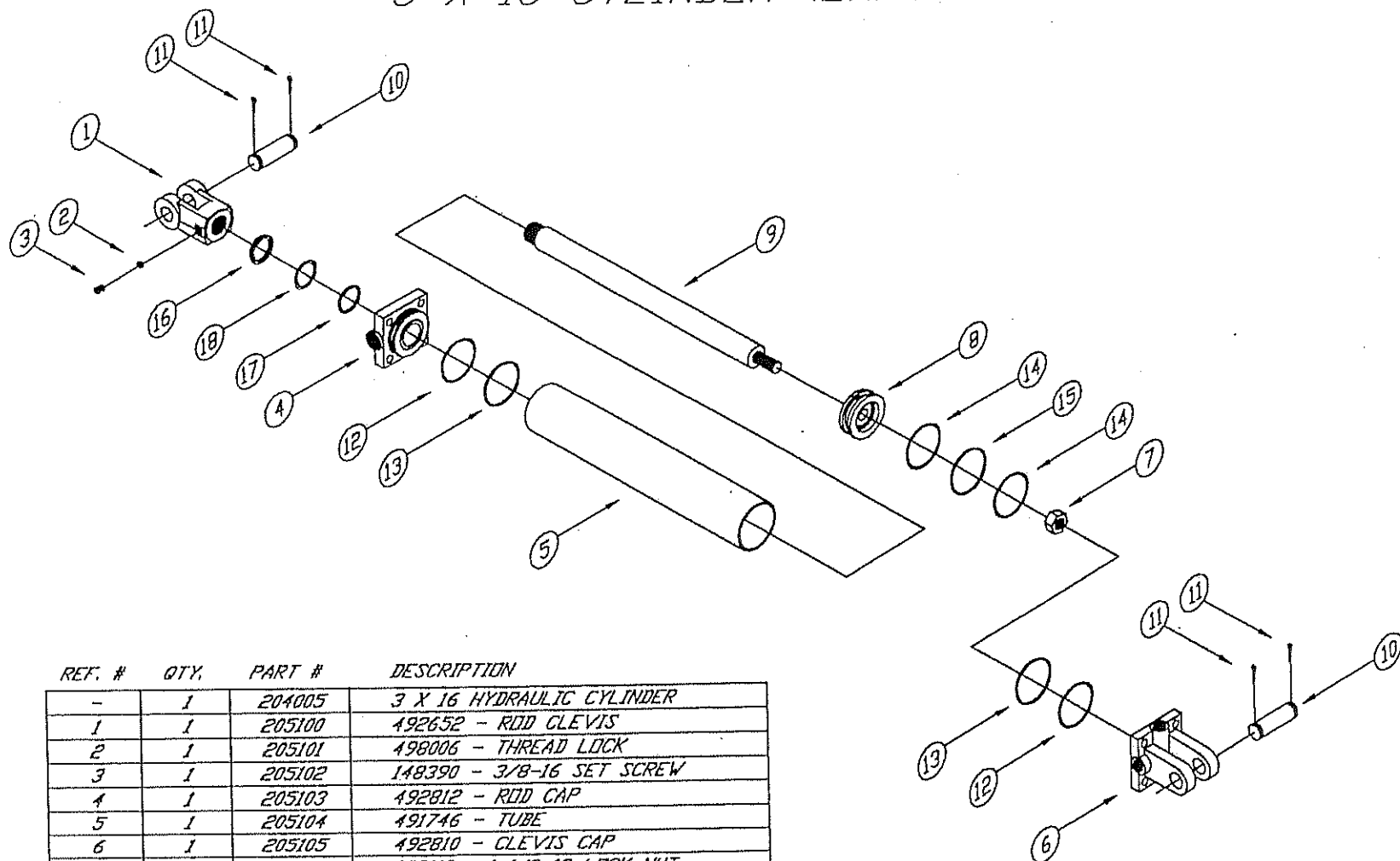
LION 2500 TL SERIES 3 X 8 CYLINDER (EXPLODED)



REF. #	QTY.	PART #	DESCRIPTION
-	1	204002	3 X 8 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	205163	3 X 8 CYLINDER SLEEVE
6	1	205105	492810 - CLEVIS CAP
7	1	205106	129110 - 1-1/2-12 LOCK NUT
8	1	205107	492520 - PISTON
9	1	205162	3 X 8 CYLINDER 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

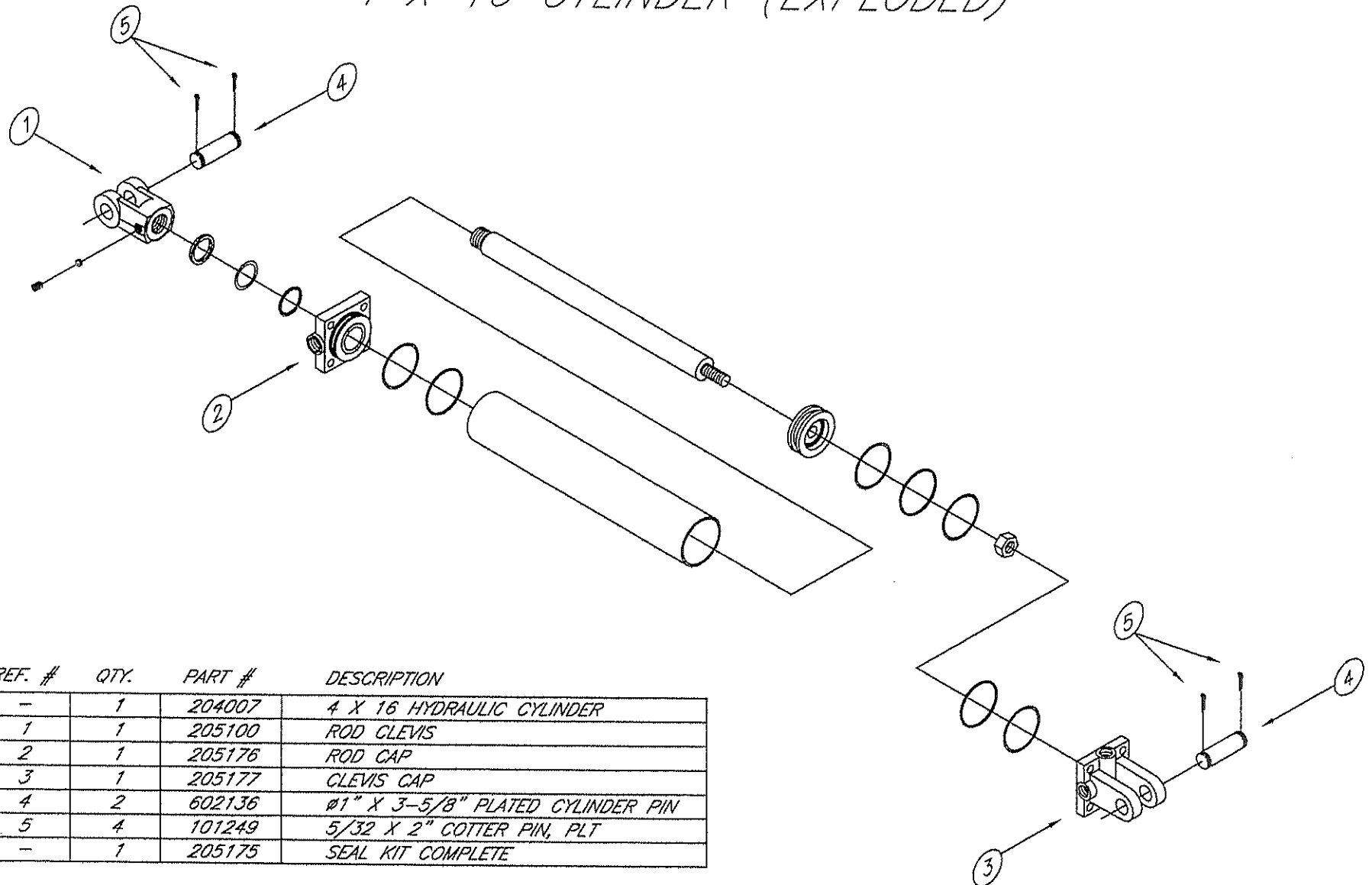
LION 2500 TL SERIES 3 X 16 CYLINDER (EXPLODED)



REF. #	QTY.	PART #	DESCRIPTION
-	1	204005	3 X 16 HYDRAULIC CYLINDER
1	1	205100	492652 - ROD CLEVIS
2	1	205101	496006 - THREAD LOCK
3	1	205102	148390 - 3/8-16 SET SCREW
4	1	205103	492612 - ROD CAP
5	1	205104	491746 - TUBE
6	1	205105	492610 - CLEVIS CAP
7	1	205106	129110 - 1-1/2-12 LOCK NUT
8	1	205107	492520 - PISTON
9	1	205108	492673 - 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.

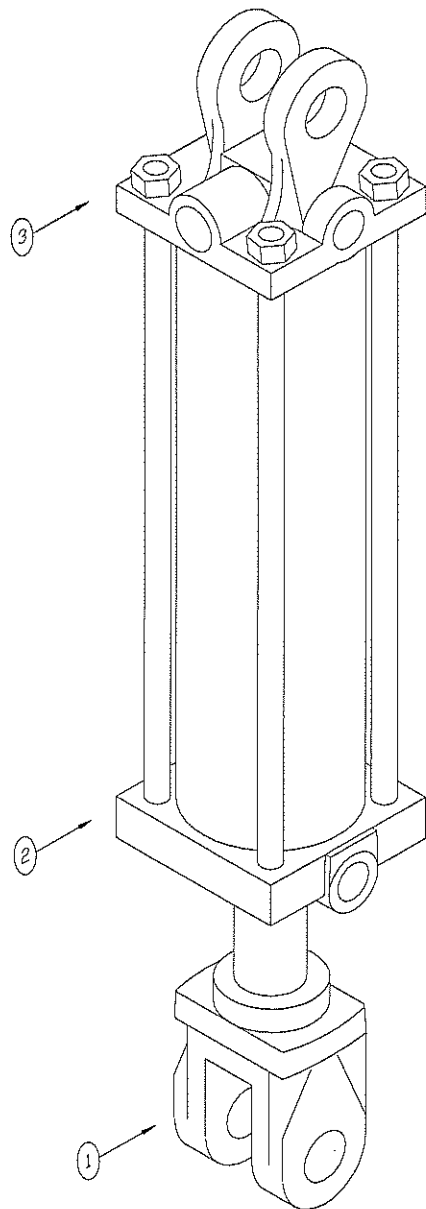
REF. #	QTY.	PART #	DESCRIPTION
15	1	205020	#12 O-RING
16	1	205021	#13 WIPER
17	1	205022	#11 ROD O-RING
18	1	205023	#24 ROD B.U.
-	1	205016	SEAL KIT COMPLETE

LION 2500 SERIES 4 X 16 CYLINDER (EXPLODED)



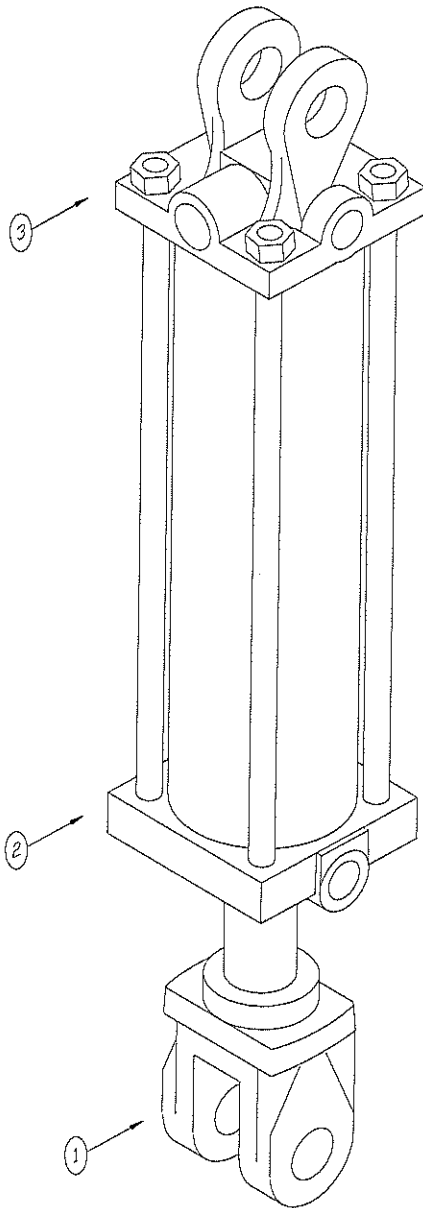
REF. #	QTY.	PART #	DESCRIPTION
-	1	204007	4 X 16 HYDRAULIC CYLINDER
1	1	205100	ROD CLEVIS
2	1	205176	ROD CAP
3	1	205177	CLEVIS CAP
4	2	602136	Ø1" X 3-5/8" PLATED CYLINDER PIN
5	4	101249	5/32 X 2" COTTER PIN, PLT
-	1	205175	SEAL KIT COMPLETE

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

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 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.**