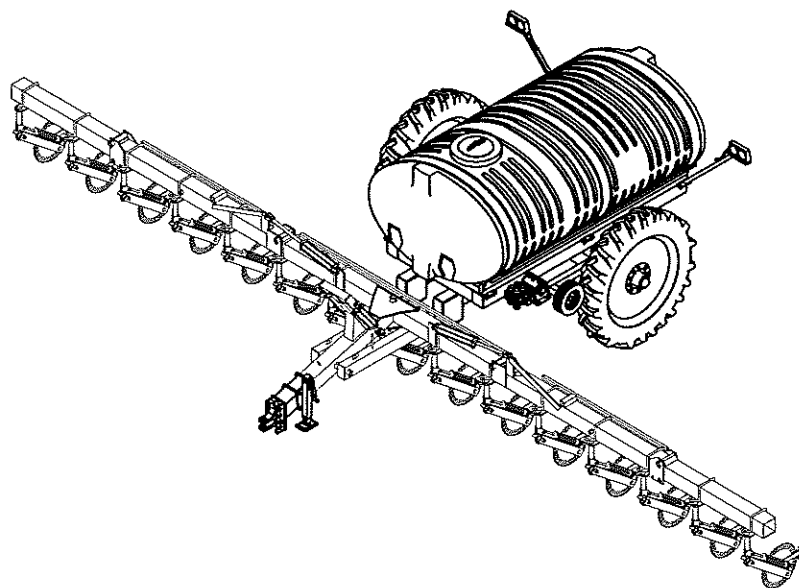




PROGRESSIVE
FARM PRODUCTS, INC.

OPERATOR'S MANUAL
1600 GALLON 2450 SERIES
SIDE DRESS APPLICATOR



2009

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.

Introduction

The purpose of this manual is to assist in the assembly, operation, and maintenance of your 2450 Sidedress Applicator. The extra care given by the operator will compliment the efficient and economical use of this machine for years to come.

During the assembly process, it will be necessary to attach components together using pins and shaft of various sizes. Please take the extra time required to remove excess paint from the pins and shafts as well as the bushing bores they will be placed through. Anti-seize or an equivalent product should be applied to all non-greaseable joints and pins. The time and effort spent now will be well rewarded in time savings.

Follow the assembly sequence provided in the illustrations and part descriptions. Before you begin assembly, read this manual and become acquainted with the various components of this implement. Thank You.

SAFETY FIRST!

FOLLOW THESE RULES:

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

The SMW 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 cylinder 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 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

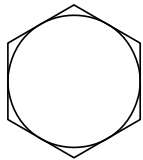
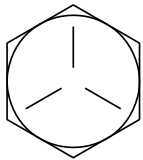
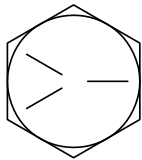
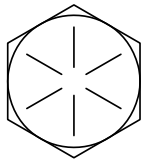
Always use proper safety precautions and common sense. Set a good example and show your workers how to work safely. Be an example, not a statistic.

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
9.5L x 15 - 8 ply	35 PSI
16.5 x 16.1 - 10 ply	36 PSI
18.4 x 26 - 10 ply	26 PSI
14.9R x 46 - 8* radial	68 PSI
5.30 x 12 - 6 ply	55 PSI
16 x 6.50 x 8 - 4 ply	28 PSI
4.80 x 8 - 4 ply	41 PSI

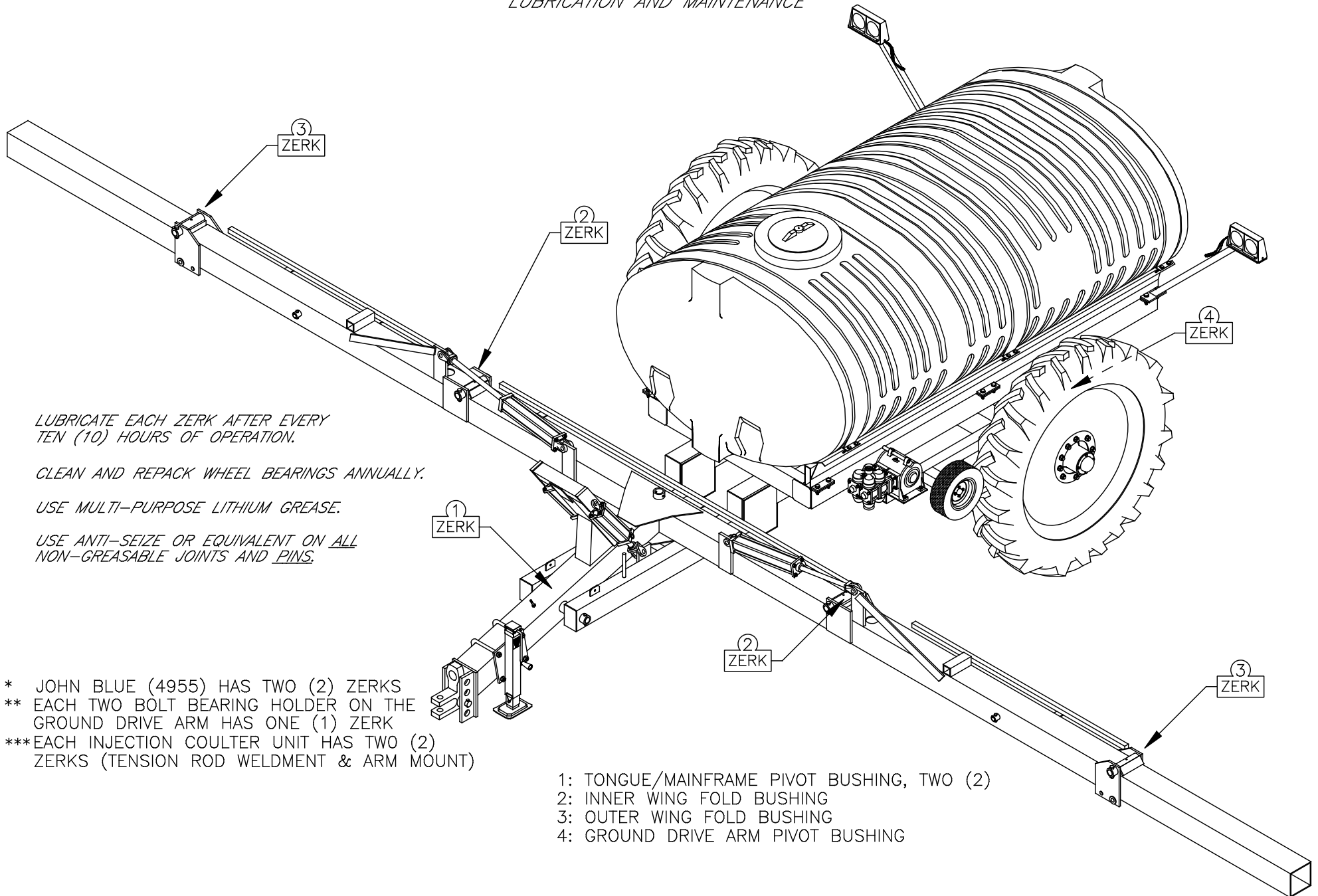
BOLT TORQUE

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.

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



LUBRICATE EACH ZERK AFTER EVERY TEN (10) HOURS OF OPERATION.

CLEAN AND REPACK WHEEL BEARINGS ANNUALLY.

USE MULTI-PURPOSE LITHIUM GREASE.

USE ANTI-SEIZE OR EQUIVALENT ON ALL NON-GREASABLE JOINTS AND PINS.

- * JOHN BLUE (4955) HAS TWO (2) ZERKS
- ** EACH TWO BOLT BEARING HOLDER ON THE GROUND DRIVE ARM HAS ONE (1) ZERK
- *** EACH INJECTION COULTER UNIT HAS TWO (2) ZERKS (TENSION ROD WELDMENT & ARM MOUNT)

- 1: TONGUE/MAINFRAME PIVOT BUSHING, TWO (2)
- 2: INNER WING FOLD BUSHING
- 3: OUTER WING FOLD BUSHING
- 4: GROUND DRIVE ARM PIVOT BUSHING

PROGRESSIVE FARM PRODUCTS

19500N, 1425E Rd HUDSON IL. 61748

NOZZLES FOR USE WITH LIQUID INJECTOR KIT

(Order 1 per row)

SPRAY NOZZLES Progressive Part # Tip #	PSI	Capacity One Nozzle in GPM	Gal. per acre - 30" Centers			
			4 MPH	6 MPH	8 MPH	
701006 TP0004-SS	10	0.20	9.9	6.6	5	
	20	0.28	13.9	9.2	6.9	
	30	0.35	17.3	11.6	8.7	
	40	0.40	19.8	13.2	9.9	
701007 TP0008-SS	10	0.30	14.9	9.9	7.4	
	20	0.42	21	13.9	10.4	
	30	0.52	26	17.2	12.9	
	40	0.60	30	19.8	14.9	
701005 TP0008-SS	10	0.40	19.8	13.2	9.9	
	20	0.57	28	18.8	14.1	
	30	0.69	34	23	17.1	
	40	0.80	40	26	19.8	
701000 TP0010-SS	10	0.50	25	16.5	12.4	
	20	0.71	35	23	17.6	
	30	0.87	43	29	22	
	40	1.00	50	33	25	
701001 TP0015-SS	10	0.75	37	25	19	
	20	1.06	52	35	26	
	30	1.30	64	43	32	
	40	1.50	74	50	37	
701002 TP0020-SS	10	1.00	50	33	25	
	20	1.41	70	47	35	
	30	1.73	86	57	43	
	40	2.00	99	66	50	
701003 TP0030-SS	10	1.50	74	50	37	
	20	2.12	105	70	52	
	30	2.60	129	86	64	
	40	3.00	149	99	74	
701004 TP0040-SS	10	2.00	99	66	50	
	20	2.83	140	93	70	
	30	3.46	171	114	86	
	40	4.00	198	132	99	

ORIFICE PLATES FOR USE WITH LIQUID KNIFE KIT

(Order 1 per row)

To determine the orifice plate needed, use the following equations:

$$\text{GPM (Per Nozzle)} = \frac{\text{GPA} \times \text{MPH} \times \text{W (Row Spacing)}}{5940}$$

$$\text{GPA} = \frac{5,940 \times \text{GPM (Per Nozzle)}}{\text{MPH} \times \text{W}}$$

ORIFICE PLATES				ORIFICE PLATES			
Progressive Part # Orifice #	Gallons per minute (GPM)			Progressive Part # Orifice #	Gallons per minute (GPM)		
	20 PSI	30 PSI	40 PSI		20 PSI	30 PSI	40 PSI
701015 CP4916-65	0.369	0.452	0.522	701019 CP4916-125	1.390	1.700	1.960
701016 CP4916-72	0.453	0.544	0.640	701013 CP4916-128	1.440	1.770	2.040
701009 CP4916-78	0.544	0.667	0.770	701017 CP4916-151	2.080	2.550	2.940
701010 CP4916-86	0.664	0.813	0.939	701014 CP4916-156	2.200	2.690	3.110
701012 CP4916-95	0.808	0.990	1.140	701018 CP4916-182	2.950	3.610	4.170
701011 CP4916-107	1.040	1.270	1.470				

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 NGP-7055 (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 NGP-9055 (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

Assembly Instructions

2450 – 1600 Gallon Sidedress Applicator

Be sure to remove excess paint from pins and bushing bores. Apply a thin coat of grease to pins before installing them. Use anti-seize or equivalent on all non-greasable joints and pins. Never directly strike a pin with a hammer – always use a block to absorb the shock if a pin does not easily fit. Striking a pin directly will cause the end of the pin to spread.

Be sure to lubricate all grease zerks. Refer to lubrication drawing for all zerk locations.

Chassis and Mainframe/Hitch Assembly

1. Use hardware from bag #102009.
2. Lay the chassis on the ground, centering the mainframe on top of it.
3. Line up the hitch and chassis so that the hinge pin can be installed. It may be necessary to raise the chassis in the air slightly to attain proper alignment.
4. Install the hinge pin using the attached hardware. **Do not install the implement jack at this point, as it could result in damage to the jack. The jack will not be installed until the wings and all hydraulics is assembled on the bar. Let the hitch rest on the ground.**

Stub Axle, Pump Arm and Wheel Assembly

1. Use hardware from bag #102259.
2. From the rear of the chassis, raise it in the air enough to install the stub axles. Allow the hitch to rest on the ground.
3. Install the stub axles. Note that the left stub axle has a tube on the top of it for the pump arm. **Do not install the wheels at this point!**
4. Locate the pump arm and install it on the left stub axle. This must be done before the tire is installed to avoid clearance problems.
5. Raise the chassis higher in the air and install the tire/wheel assemblies.
6. Lower the chassis. It should now rest on the tires. Allow the hitch to rest on the ground.

Pump Arm Installation

1. Hardware for mounting the pump arm is located in the Wheel Option hardware bag #102260. Hardware for the pump is located in bag #102261 (John Blue NGP7055 Single Piston Pump) or #102262 (John Blue NGP9055 Double Piston Pump).
2. Locate the pump and ground drive package. Assemble the ground drive package and pump as shown in the ground drive pump assembly drawing.

Attaching the Tank Saddle and Tank

1. Use hardware from hardware bag #102257 for attaching the tank saddle to the frame and tank to the saddle. The 2" Quick-fill hardware is in bag #102258.
2. Place the tank saddle on the chassis. Be sure to place the sump hole on the right side of the chassis.
3. Locate the quick-fill bracket (Bag #102258). Place it beneath the right rear saddle tab and attach the saddle as shown.
4. Place the tank in the saddle so that the sump is centered in the hole in the saddle. Use the tank straps provided to secure the tank to the saddle.

NOTE: Make sure the tank strap bolts are checked regularly for proper tightness to prevent slippage of tank in saddle.

Inner Wing Assembly

1. Lift one of the wings into the air, making sure to find a good balance point.
2. Using the hardware included on the wing, attach the wing to the mainframe as shown.
3. Remove the lift and repeat for the opposite wing.

Outer Wing Assembly

1. Place the outer wings upside down on top of the inner wings.
2. Line up the hinge point and install the pin as shown.

Inner Wing Cylinder Installation

1. Locate the 4" x 16" cylinders. Using the hardware shown, attach the cylinders to the mainframe leaving the clevis end (rod end) unattached.
2. Be sure to attach the butt end of the cylinder to the mainframe cylinder lug.

Outer Wing Cylinder Installation

1. Use the hardware from bag #213011 and the hydraulic hoses from package #212011.
2. Attach the hoses to the 3" x 16" cylinders. Note that the fitting used on the butt end of the cylinder needs to be rotated up at approximately 45 degrees to allow the cylinder pin proper clearance on the hose.
3. Attach the drag link and roller wheels to the clevis end as shown. Be sure that the welded end of the cylinder pin faces the front of the bar.
4. Feed a long piece of wire through the access hole in the inner wing and out the end of the inner wing.
5. Attach the wire to the hydraulic hoses. You should now be able to feed the hoses back through the inner wing and out the access hole.
6. Once you have the hoses pulled through the access hole, route the hoses through the 2" x 1' white hose. Slip the white hose into the access hole

- (approximately 6" of hose inside and outside of the wing access hole). This will prevent the hydraulic hoses from wearing on the edge of the access hole.
7. Line up the cylinder with the bushings in the inner wing and install pin.
 8. Be sure to use anti-seize to keep this pin from locking up.
 9. Be sure the cylinder is in the extended position so the clevis sticks out of the inner wing.
 10. Leave the drag link loose until the cylinders have been primed with oil.
 11. Be sure to route the hydraulic hoses through a short piece of 2" plastic hose at the hole in the inner wing to prevent chaffing on the hoses.

Lift Cylinder and Pump Arm Cylinder Installation

1. Locate the 3" x 8" cylinders. Using the hardware shown, attach the cylinders to the lift tower and chassis as shown.
2. Be sure the butt end of the cylinder is attached to the hitch tower.
3. Attach the 2" x 8" cylinder to the pump arm (rod end to the pump arm cylinder lug and the butt end to the mainframe cylinder lug).

Lift Cylinder/Pump Arm Cylinder Hydraulic Hose Installation

1. Use hardware from bag #213011 (for the lift cylinders), #102260 (for the pump cylinder) and hoses from hose package #212011.
2. Referring to the hydraulic schematic drawings lay out the hoses in their approximate location.
3. Use the fittings shown in the schematic to attach the hoses to their respective cylinders.
4. Locate the hose holddowns, nuts, and washers from bag #213011 and attach to the bolts welded to the frame. Run the hoses as shown through each holddown. Do not tighten down holddowns at this point.
5. Hook up the bar to a hydraulic unit and charge all cylinders with oil to purge the air from the cylinders/hoses. Run the cylinders through at least three full cycles to ensure that all air is purged from the cylinders/hoses. Tighten down the hose holddowns at this point.
6. Attach the clevis end of the wing fold cylinders to the wings as shown.
7. Extend the lift/pump arm cylinders and install the transport locks. Raise the hitch in the air and install the implement jack (use hardware in bag #102009). Lower the hitch. The bar should now rest on the implement jack.

Swivel Coulter Assembly/Installation

1. Use the hardware from bag #102044 for mounting the coulter assemblies with mounts and bag #102045 for the center coulter assembly.
2. Referring to the exploded view drawing of the swivel coulter in the back of the book, assemble the swivel coulters (leaving the coulter blade off to simply the attachment to the bar).
3. Be sure to leave 1-1/2" of thread visible at the top of the T-rod and 1/2" of thread at the bottom to achieve proper tension of the compression spring (outside to outside measurement of spring casting is 9-3/4").

4. Following the exploded view, install the center swivel coulters as shown.
5. Starting from the center of the center coulters swivel coulters pin, measure out and mark in 30", 36", or 38" (depending on row spacing) intervals in the bar.
6. At each mark, install a swivel coulters assembly, making sure that the u-bolt is centered on the mark.
7. After all coulters assemblies are installed, the coulters blades may be attached using the hardware shown.

Quick-Fill Plumbing

1. Referring to the quick-fill plumbing schematic, attach all fittings and hoses as shown. Hardware is in bag #102235.
2. Remove the bottom nuts and washers from the ball valve and attach the mounting bracket using these bolts.
3. Attach the mounting bracket to the quick-fill bracket on the right rear of the tank saddle.

Pump Assembly and Plumbing

1. Locate the ground drive pump and remove the upper plug and the lower drain plug. Replace the upper plug with the vented plug (located in pump box) as shown. Replace the lower drain plug with the "Allen Head" drain plug (located in pump box) as shown.
2. Install the pump on the ground drive. The mounting hardware is in bag #102261 (Single Piston Pump) or #102262 (Double Piston Pump).
3. Install the ground drive wheel assembly and chain as shown in the schematic. This hardware is in bag #102260.
4. Attach all plumbing components as shown in the pump plumbing schematic.

Nozzle Assembly/Manifold Plumbing

1. For the manifolds, use hardware from bag #102238 (11 coulters) or #102240 (15 coulters), #102264 (21 coulters), or 102266 (29 coulters).
2. For the liquid injector kit, the hardware is in bag #102255 and #102256 for the liquid knife kit.
3. Referring to the nozzle assembly drawing, assemble all nozzles as shown. Be sure to place the hose barb inside of the slotted o-ring as shown.
4. Attach nozzles to the sub-booms as shown in the plumbing drawings. Each nozzle should fall directly behind the u-bolt for the coulters assembly except for the far outer nozzle on the outer wings.
5. Install the 3/4" EPDM hose using the 3/4" hose clamps as shown in the plumbing drawings. Be sure to install the gate valve in the proper direction between the inner and out wings. **Note: Do not cut the 3/4" EPDM hose before the nozzle assemblies have been mounted to the manifold bar! Hose lengths shown are approximate.**

6. Attach the liquid injectors or liquid knife kit as shown in the schematic drawing. **NOTE: When installing the knife, make sure the knife is no more than 1/32" away from the rippled coulter blade.**

Light Kit Assembly

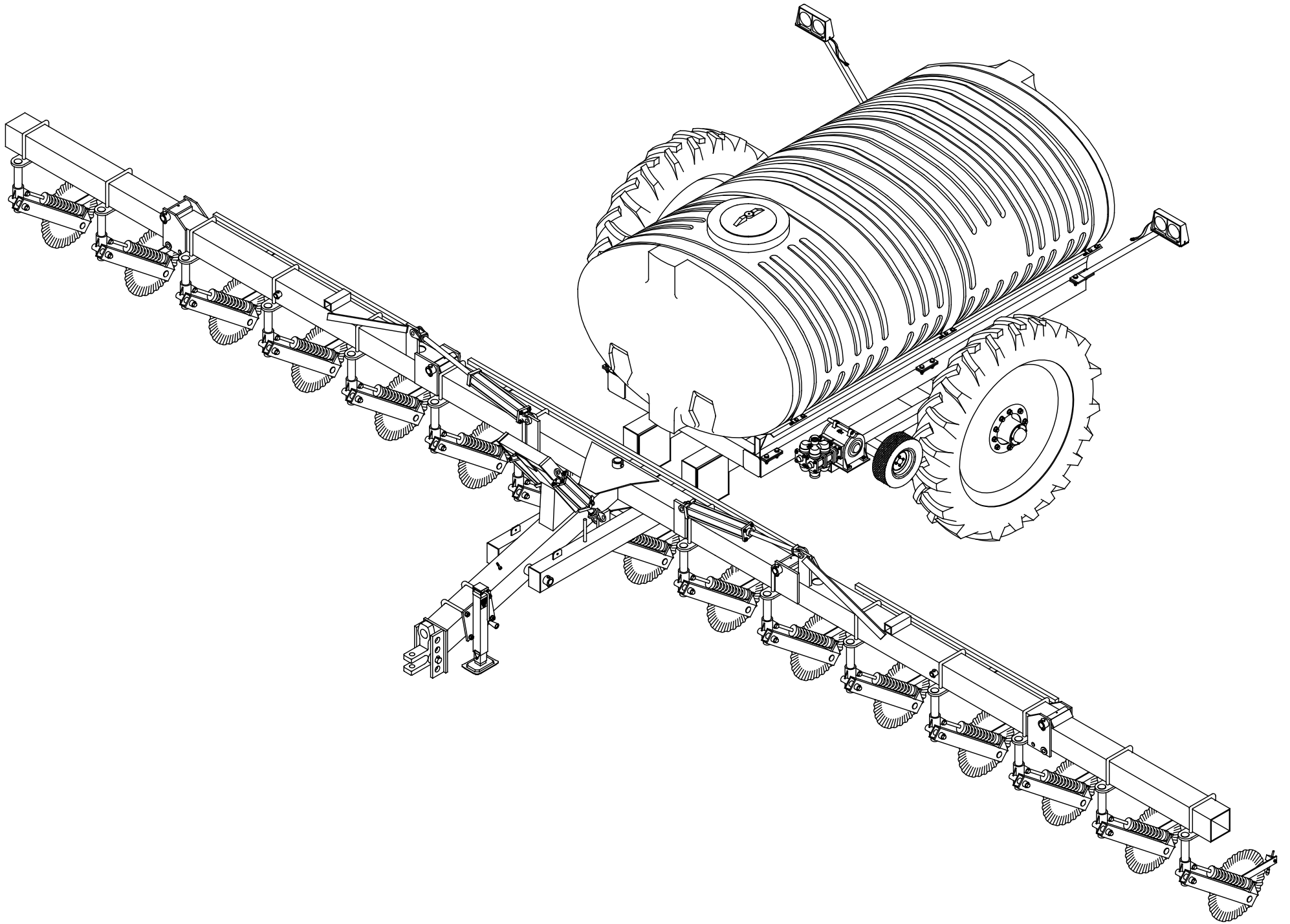
1. Use the hardware from bag #102056 to install the light kit to the bar.
2. Attach the light brackets to the tank mounting brackets as shown.
3. Attach the lights to the light brackets. Be sure that both the red and yellow lights are visible from behind the implement.
4. Route the wires along the mainframe and down the hitch. Bundle the hydraulic hoses and light wires together using zip strips (not provided).

Decal Installation

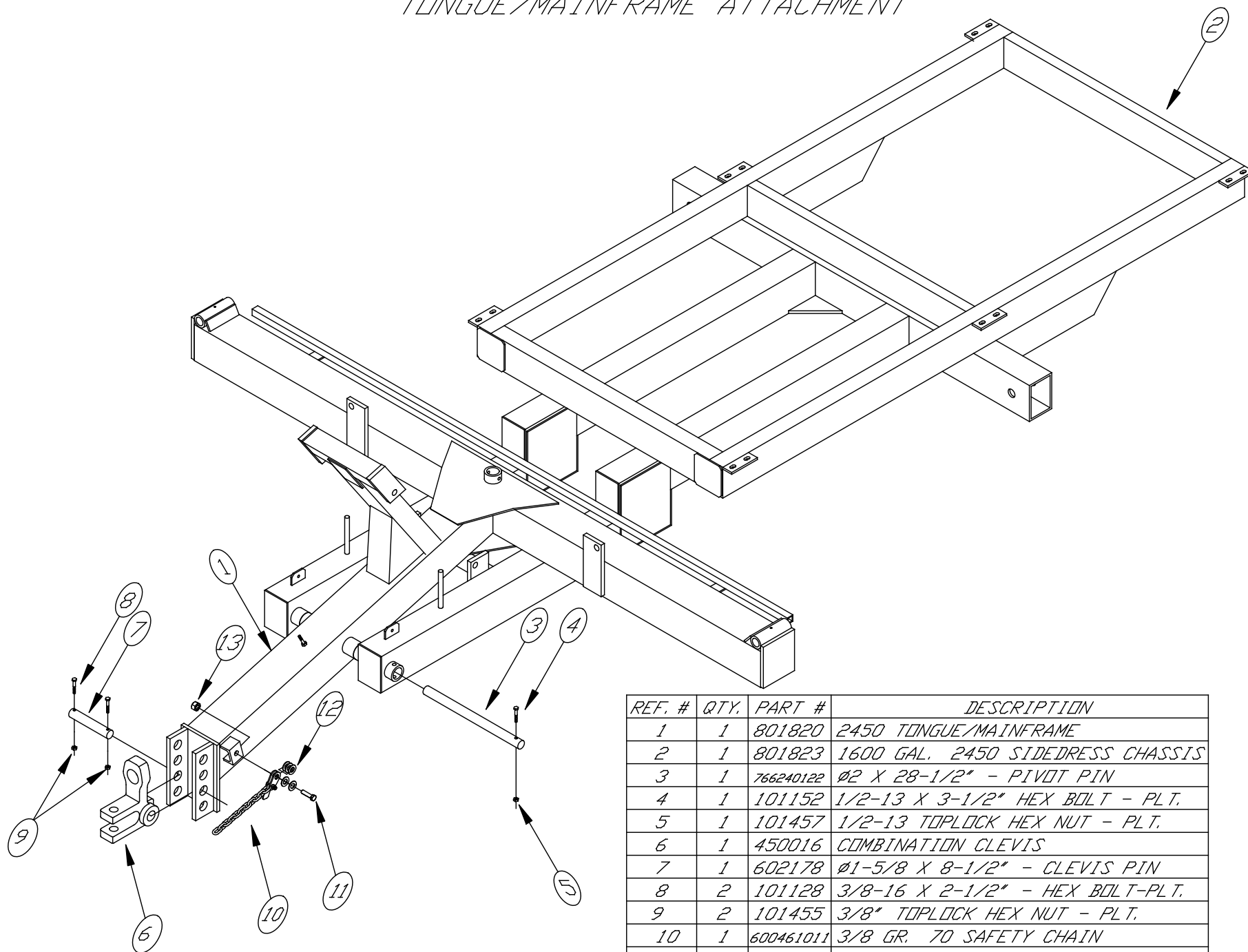
1. Referring to the safety decal drawing, attach the safety decals in the proper locations. These decals are provided for your safety and should be replaced if lost or damaged. **Note: The decals must be attached to the unit!** Replacement decals may be ordered from your dealer.

Lubrication

1. Referring to the lubrication drawing at the beginning of the book, lubricate all grease zerks. Note location of zerks on the pump, ground drive arm, and each coulter unit.
2. Lubricate each zerk after every ten (10) hours of operation.
3. Clean and re-pack wheel bearings annually.
4. Use only multi-purpose lithium grease.
5. Use anti-seize or equivalent on all non-greasable joints or pins.

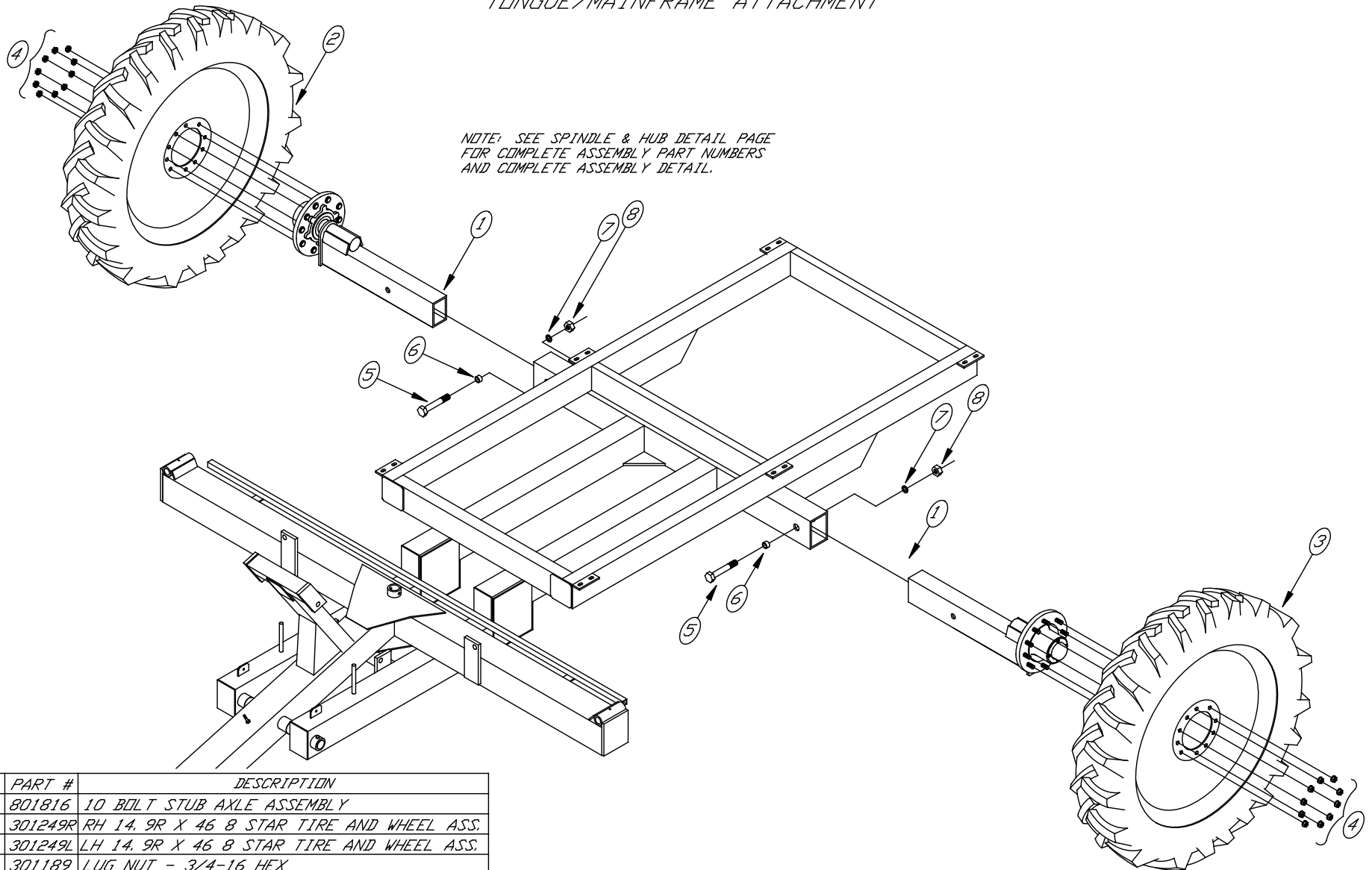


TONGUE/MAINFRAME ATTACHMENT



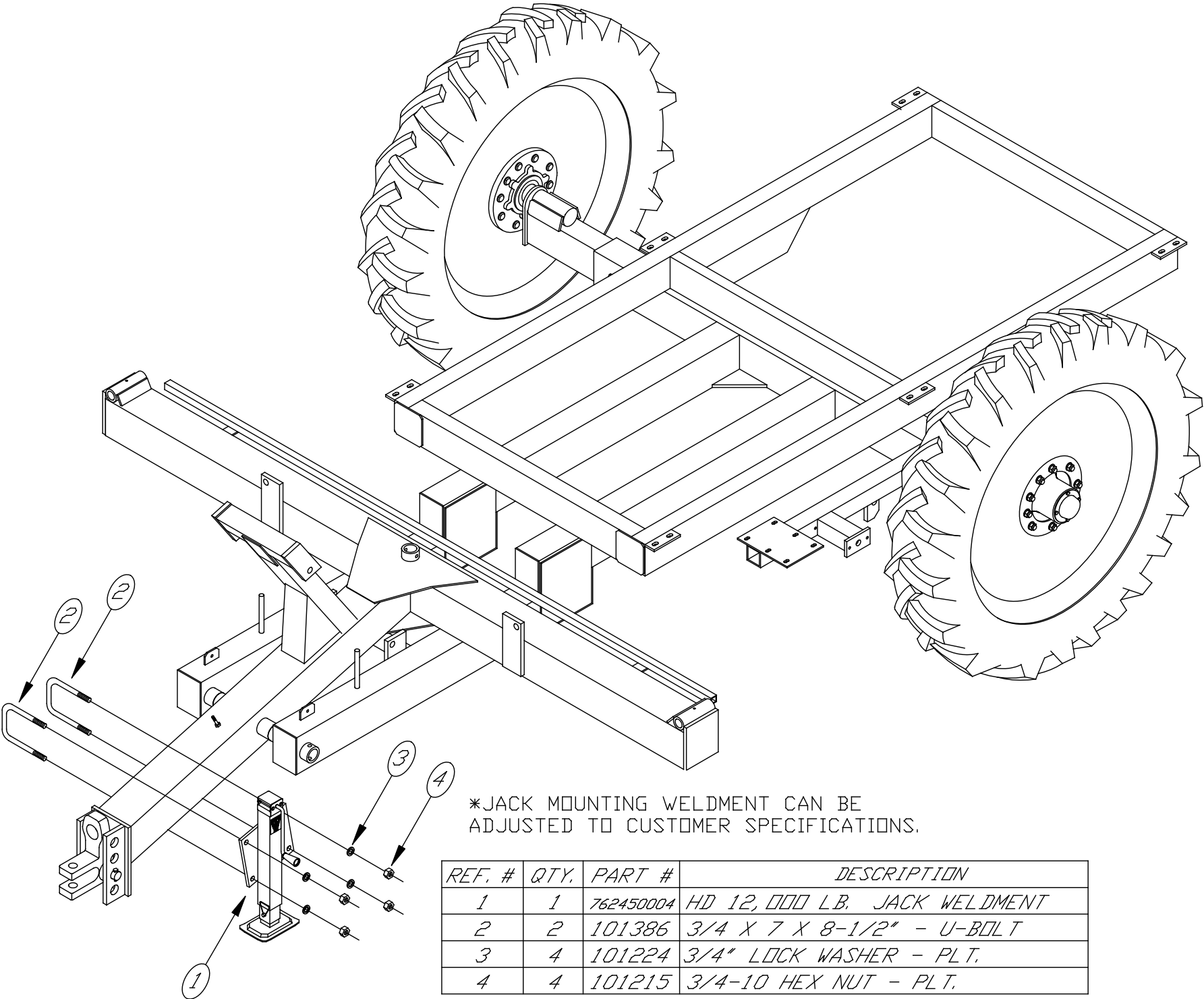
REF. #	QTY.	PART #	DESCRIPTION
1	1	801820	2450 TONGUE/MAINFRAME
2	1	801823	1600 GAL. 2450 SIDEDRESS CHASSIS
3	1	766240122	Ø2 X 28-1/2" - PIVOT PIN
4	1	101152	1/2-13 X 3-1/2" HEX BOLT - PLT.
5	1	101457	1/2-13 TOPLOCK HEX NUT - PLT.
6	1	450016	COMBINATION CLEVIS
7	1	602178	Ø1-5/8 X 8-1/2" - CLEVIS PIN
8	2	101128	3/8-16 X 2-1/2" - HEX BOLT-PLT.
9	2	101455	3/8" TOPLOCK HEX NUT - PLT.
10	1	600461011	3/8 GR. 70 SAFETY CHAIN
11	1	600356002	BOLT 1" X 3" GR. 5
12	5	600381018	FLATWASHER 1"
13	1	600366032	LOCKNUT 1"

TONGUE/MAINFRAME ATTACHMENT



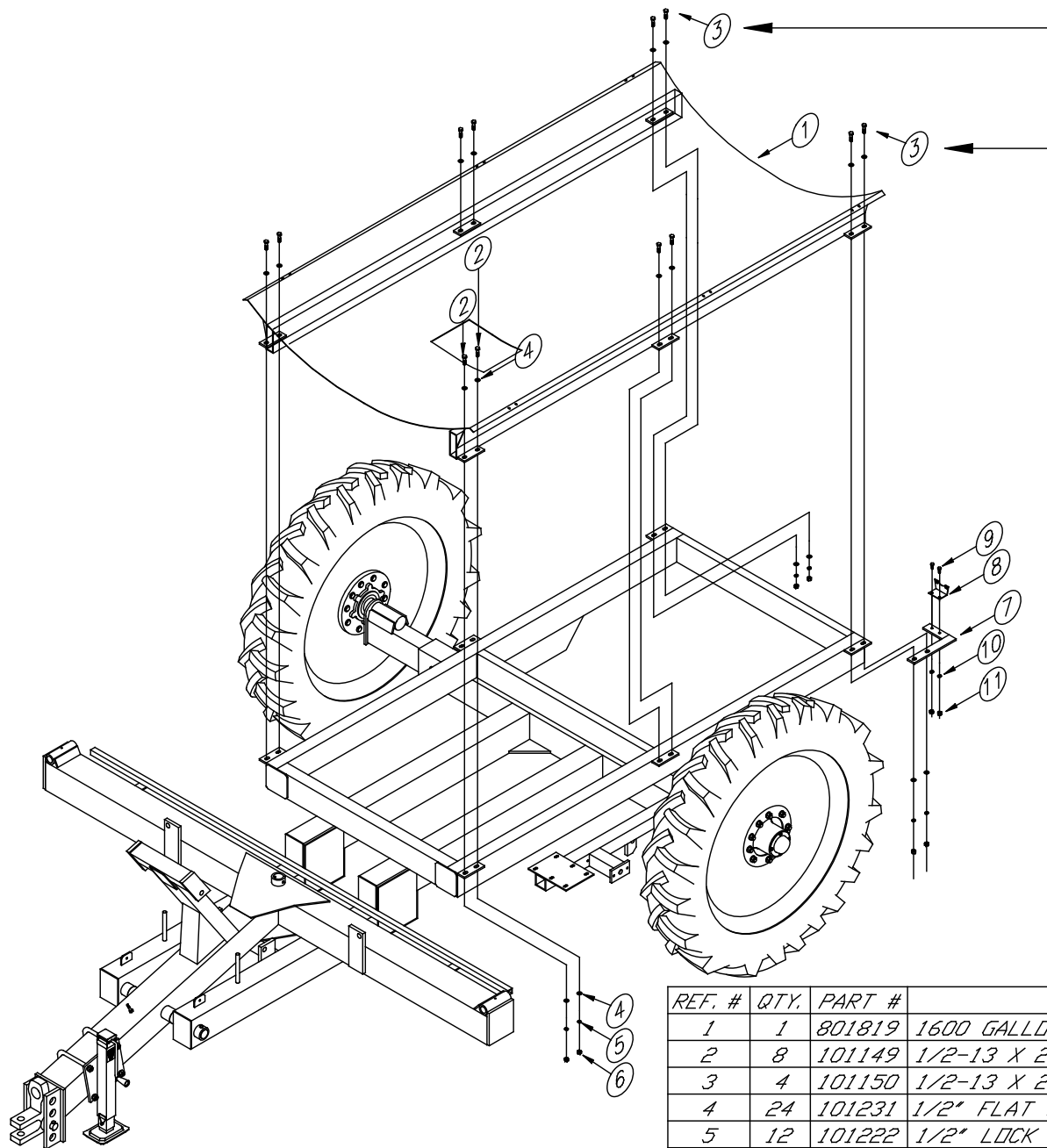
REF. #	QTY.	PART #	DESCRIPTION
1	2	801816	10 BOLT STUB AXLE ASSEMBLY
2	1	301249R	RH 14, 9R X 46 8 STAR TIRE AND WHEEL ASS.
3	1	301249L	LH 14, 9R X 46 8 STAR TIRE AND WHEEL ASS.
4	20	301189	LUG NUT - 3/4-16 HEX
5	2	101203	1-8 X 7" - HEX BOLT - PLT.
6	2	602104	SPACER BUSHING
7	2	101226	1" LOCK WASHER - PLT.
8	2	101217	1-8 HEX NUT - PLT.

ATTACHING THE DROP LEG JACK



REF. #	QTY.	PART #	DESCRIPTION
1	1	762450004	HD 12, 000 LB. JACK WELDMENT
2	2	101386	3/4 X 7 X 8-1/2" - U-BOLT
3	4	101224	3/4" LOCK WASHER - PLT.
4	4	101215	3/4-10 HEX NUT - PLT.

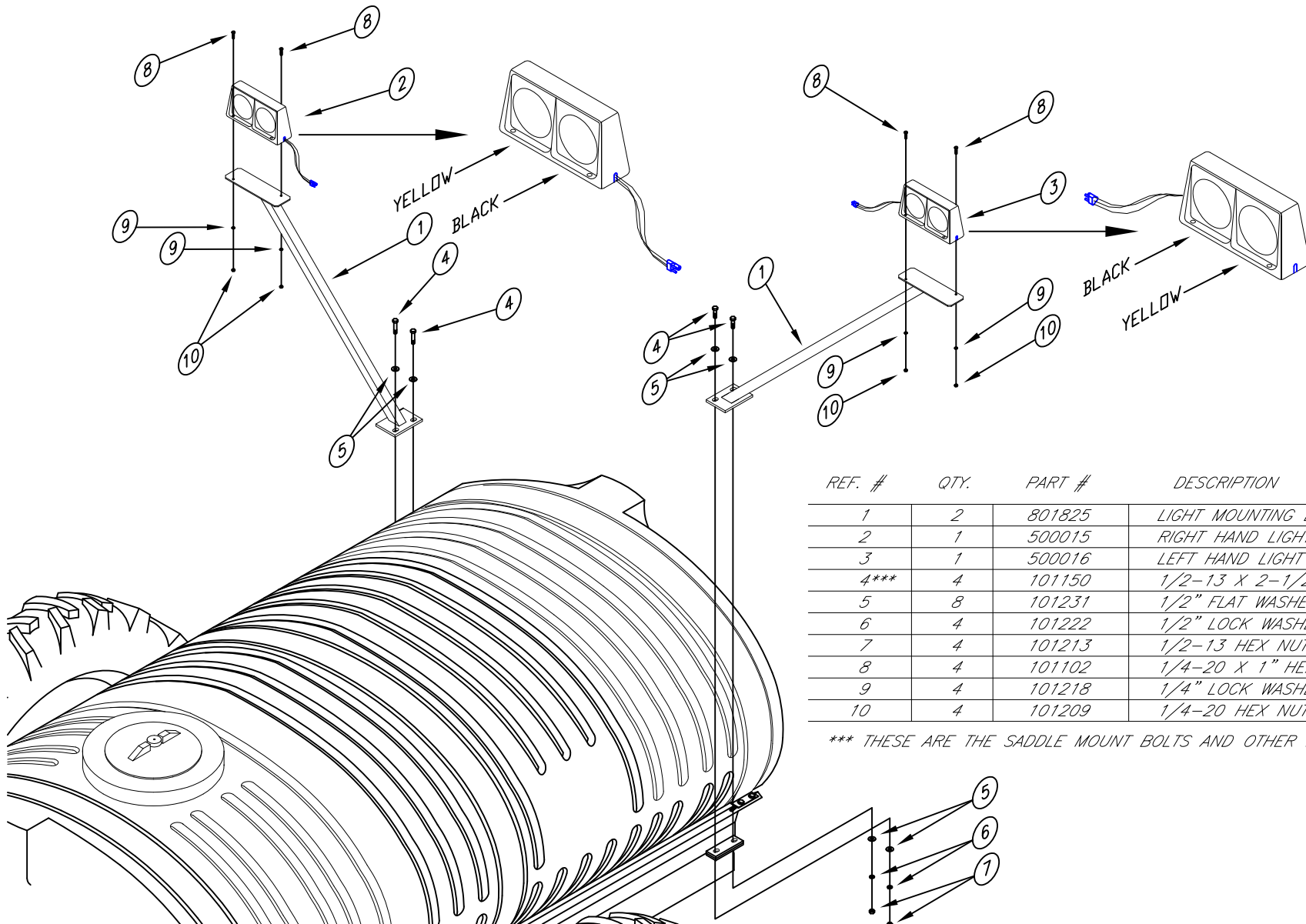
TANK SADDLE ATTACHEMENT



IF INSTALLING LIGHT KITS,
LEAVE 2-1/2" BOLTS FINGER TIGHT.
TIGHTEN FULLY AFTER LIGHT KIT INSTALL.

REF. #	QTY.	PART #	DESCRIPTION
1	1	801819	1600 GALLON TANK SADDLE
2	8	101149	1/2-13 X 2"-HEX BOLT-PLT. GR. 5
3	4	101150	1/2-13 X 2-1/2"-HEX BOLT-PLT. GR. 5
4	24	101231	1/2" FLAT WASHER - PLT.
5	12	101222	1/2" LOCK WASHER - PLT.
6	12	101213	1/2-13 HEX NUT - PLT.
7	1	802000	QUICK-FILL L-BRACKET WELDMENT
8	1	700192	90 DEGREE S. S. MOUNTING BRACKET
9	2	101125	3/8-16 X 1" - HEX BOLT
10	2	101220	3/8" LOCK WASHER - PLT.
11	2	101211	3/8-16 HEX NUT - PLT. GR5

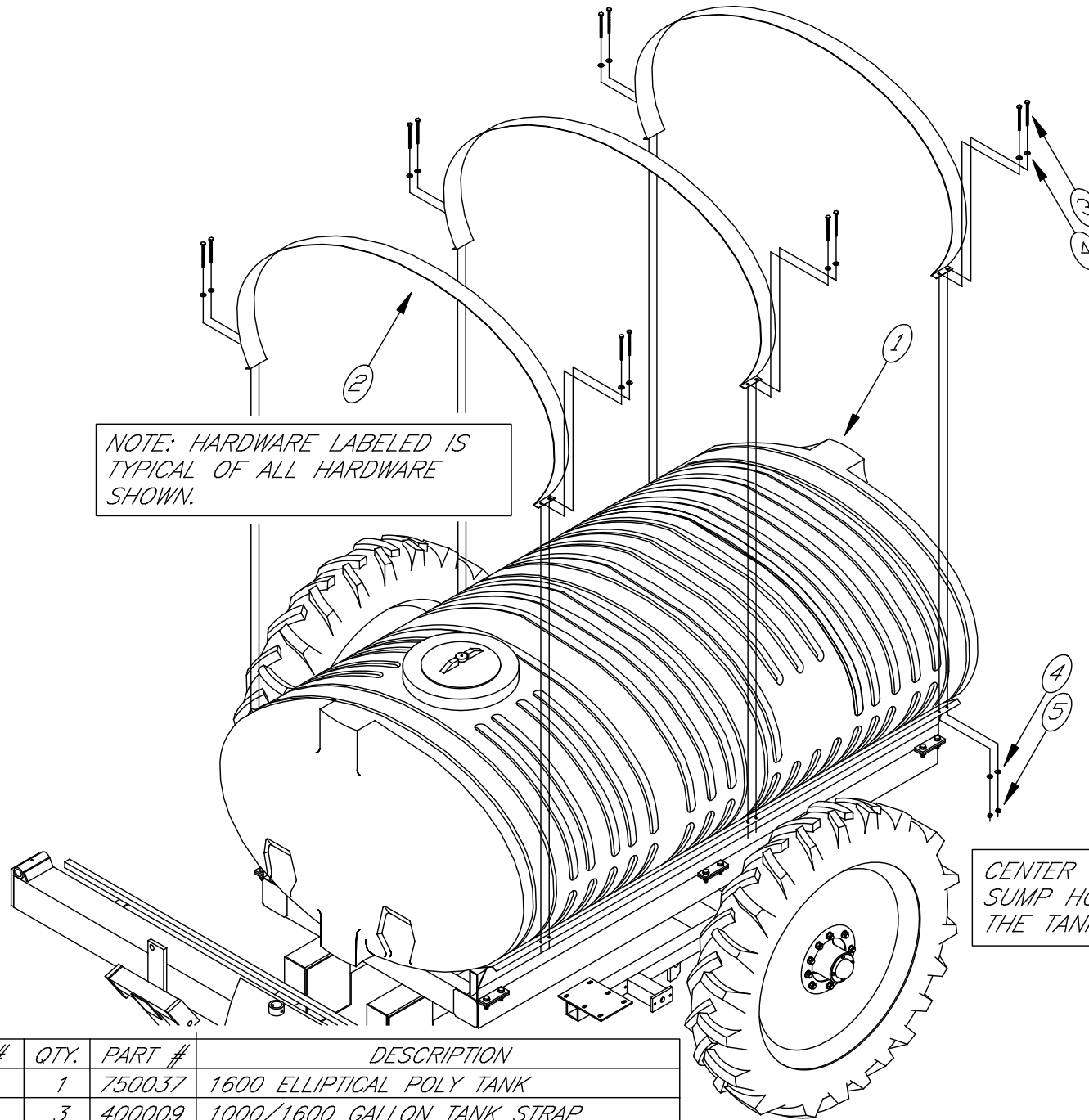
LIGHT KIT ATTACHMENT



REF. #	QTY.	PART #	DESCRIPTION
1	2	801825	LIGHT MOUNTING BRACKET
2	1	500015	RIGHT HAND LIGHT UNIT
3	1	500016	LEFT HAND LIGHT UNIT
4***	4	101150	1/2-13 X 2-1/2" HEX BOLT - PLT.
5	8	101231	1/2" FLAT WASHER - PLT.
6	4	101222	1/2" LOCK WASHER - PLT.
7	4	101213	1/2-13 HEX NUT - PLT.
8	4	101102	1/4-20 X 1" HEX BOLT
9	4	101218	1/4" LOCK WASHER
10	4	101209	1/4-20 HEX NUT

*** THESE ARE THE SADDLE MOUNT BOLTS AND OTHER HARDWARE.

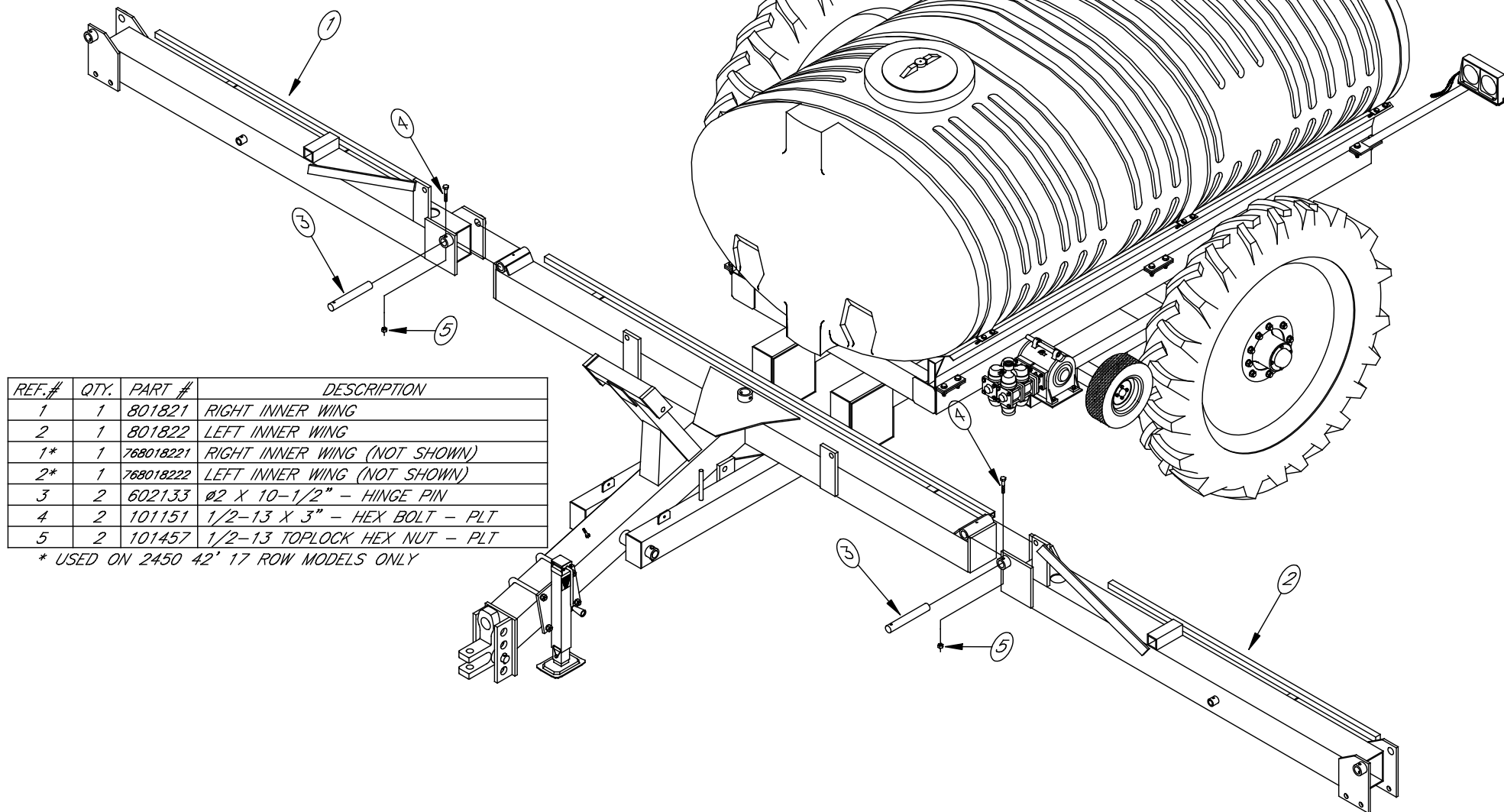
ATTACHING THE 1600 GALLON TANK



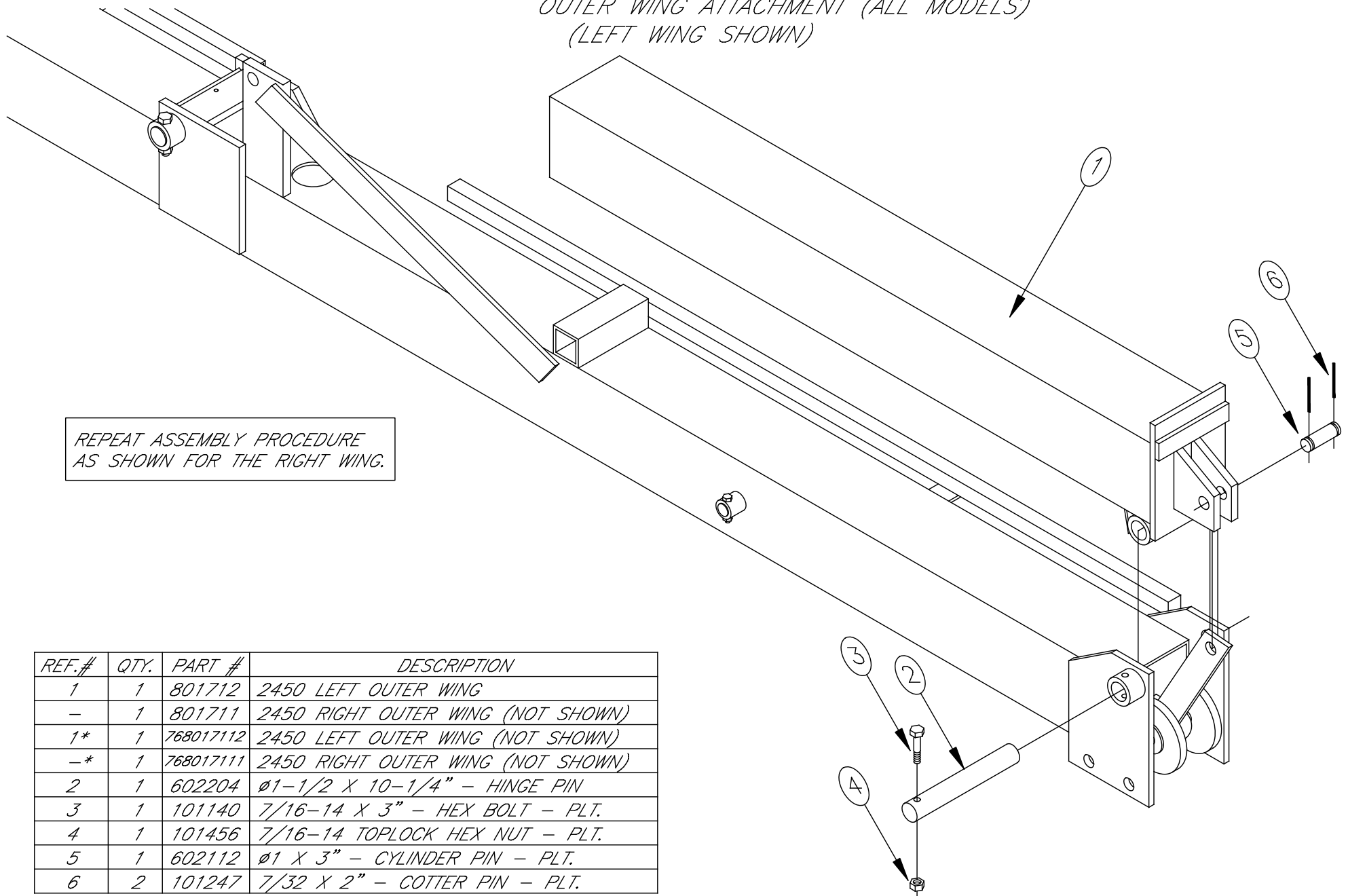
REF.#	QTY.	PART #	DESCRIPTION
1	1	750037	1600 ELLIPTICAL POLY TANK
2	3	400009	1000/1600 GALLON TANK STRAP
3	12	801838	7/16-14 X 5" - WELDED BOLT
4	24	101230	7/16" FLAT WASHER - PLT.
5	12	101456	7/16-14 TOP LOCK NUT - PLT. GR. C

NOTE: TANK LID MAY BE ORDERED USING PART # 750033.

ATTACHING THE INNER WINGS (ALL MODELS)



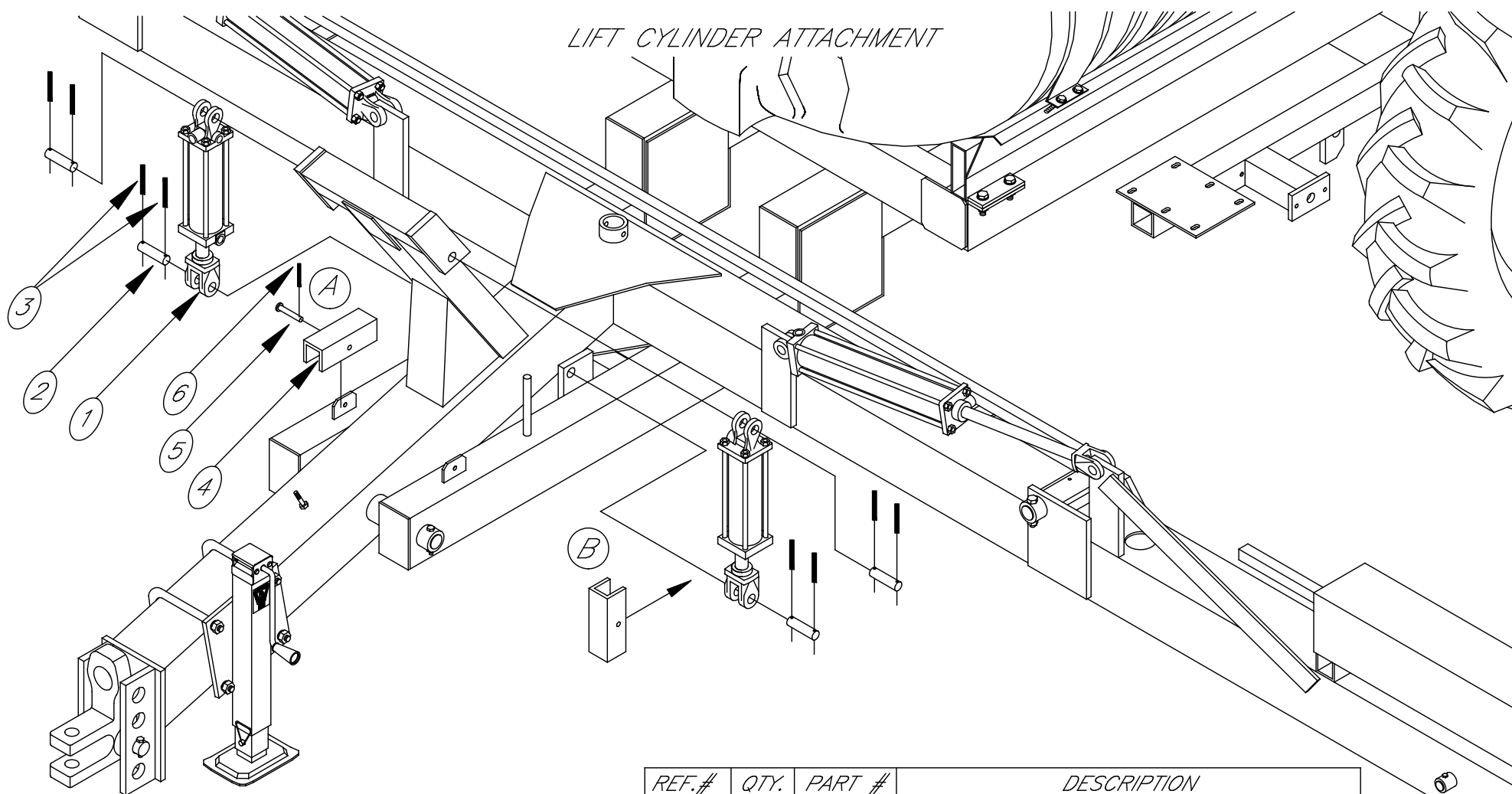
OUTER WING ATTACHMENT (ALL MODELS)
(LEFT WING SHOWN)



REF.#	QTY.	PART #	DESCRIPTION
1	1	801712	2450 LEFT OUTER WING
-	1	801711	2450 RIGHT OUTER WING (NOT SHOWN)
1*	1	768017112	2450 LEFT OUTER WING (NOT SHOWN)
-*	1	768017111	2450 RIGHT OUTER WING (NOT SHOWN)
2	1	602204	Ø1-1/2 X 10-1/4" - HINGE PIN
3	1	101140	7/16-14 X 3" - HEX BOLT - PLT.
4	1	101456	7/16-14 TOPLOCK HEX NUT - PLT.
5	1	602112	Ø1 X 3" - CYLINDER PIN - PLT.
6	2	101247	7/32 X 2" - COTTER PIN - PLT.

* USED ON 2450 42' 17 ROW MODELS ONLY

LIFT CYLINDER ATTACHMENT

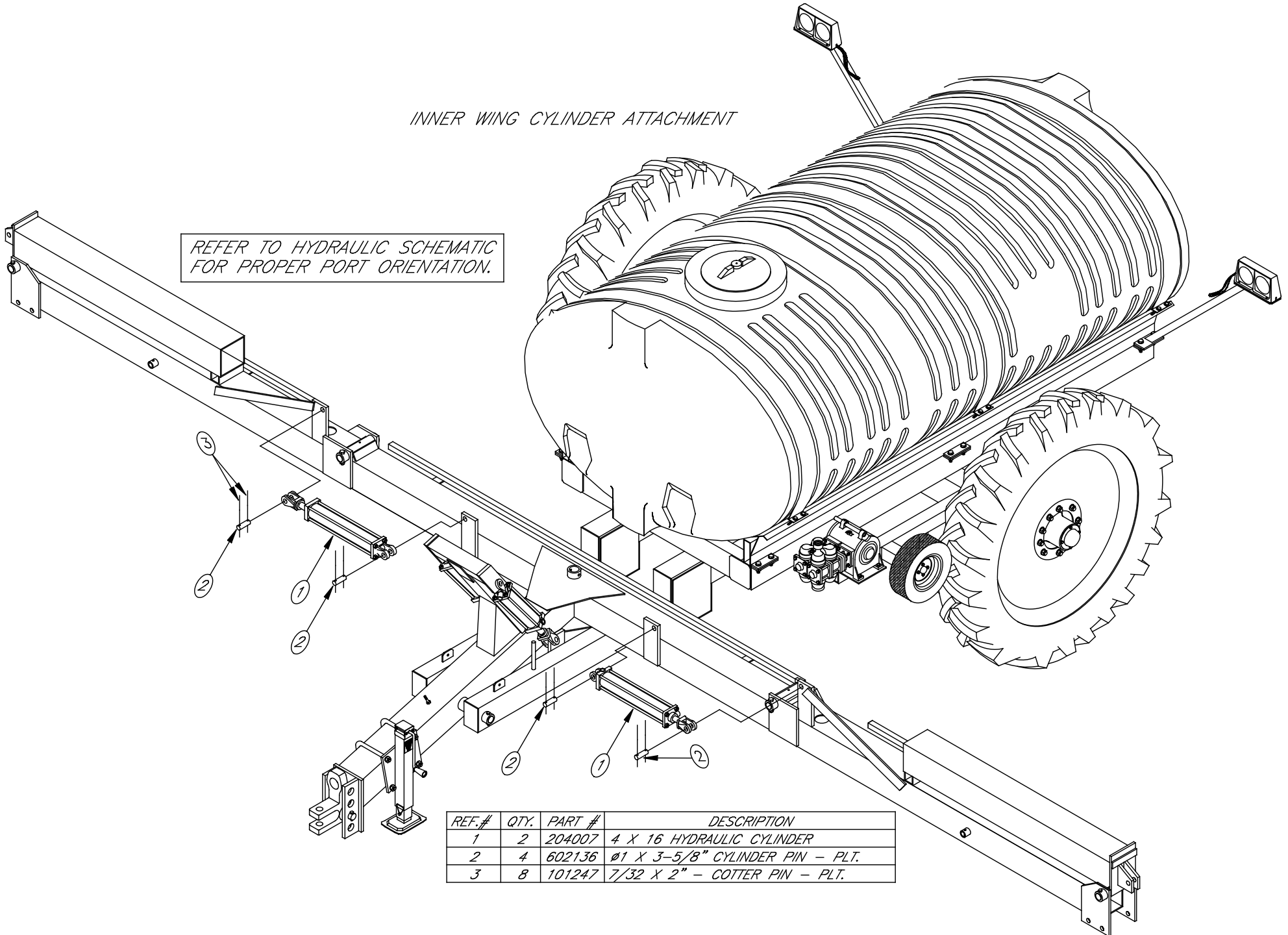


- (A) STORE HERE WHEN NOT IN USE.
- (B) ALWAYS USE SAFETY STOPS DURING TRANSPORT.

REF.#	QTY.	PART #	DESCRIPTION
1	2	204002	3 X 8 HYDRAULIC CYLINDER
2	4	602112	Ø1 X 3" CYLINDER PIN - PLT.
3	8	101247	7/32 X 2" - COTTER PIN - PLT.
4	2	400083	8" STROKE CYLINDER SAFETY LOCK
5	2	101257	3/8 X 3" - LATCH PIN - PLT.
6	2	101258	3/32 X 1-1/2" - HAIR PIN - PLT.

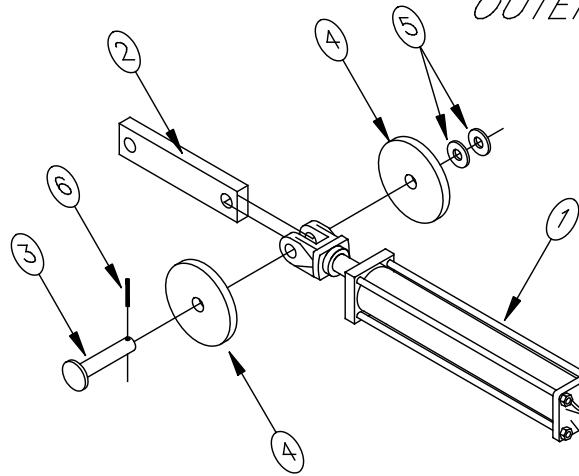
INNER WING CYLINDER ATTACHMENT

REFER TO HYDRAULIC SCHEMATIC
FOR PROPER PORT ORIENTATION.



REF.#	QTY.	PART #	DESCRIPTION
1	2	204007	4 X 16 HYDRAULIC CYLINDER
2	4	602136	Ø1 X 3-5/8" CYLINDER PIN - PLT.
3	8	101247	7/32 X 2" - COTTER PIN - PLT.

OUTER WING FOLD CYLINDER ATTACHMENT



ASSEMBLE DRAG LINK ASSEMBLY
BEFORE INSTALLING CYLINDER.

OUTER WING REMOVED FOR
SAKE OF CLARITY.

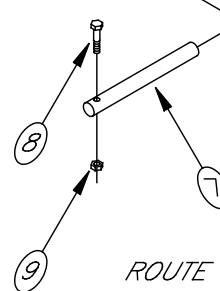
REF.#	QTY.	PART #	DESCRIPTION
1	1	204005	3 X 16 HYDRAULIC CYLINDER
2	1	400050	1 X 2-1/2 X 11" - DRAG LINK
3	1	602193	Ø1 X 5" - WELDED CYLINDER PIN
4	2	400204	5/8 X Ø6" - ROLLER
5	2	101235	1" FLAT WASHER - PLT.
6	1	101246	3/16 X 1-1/2" - COTTER PIN-PLT.
7	1	602166	1 X 10" - STRESSPROOF PIN
8	1	101127	3/8-16 X 2" - HEX BOLT - PLT.
9	1	101238	3/8-16 - SELF-LOCK NUT GR. C

REPEAT ASSEMBLY PROCEDURE
AS SHOWN FOR THE LEFT WING.

BE CERTAIN TO PLUMB CYLINDER BEFORE INSTALLATION
ROUTING HOSES THROUGH ACCESS HOLE IN WING.
ROUTE HYDRAULIC HOSES THROUGH DRY FERTILIZER HOSE
TO PREVENT CHAFFING ON WING TUBE ACCESS HOLE.

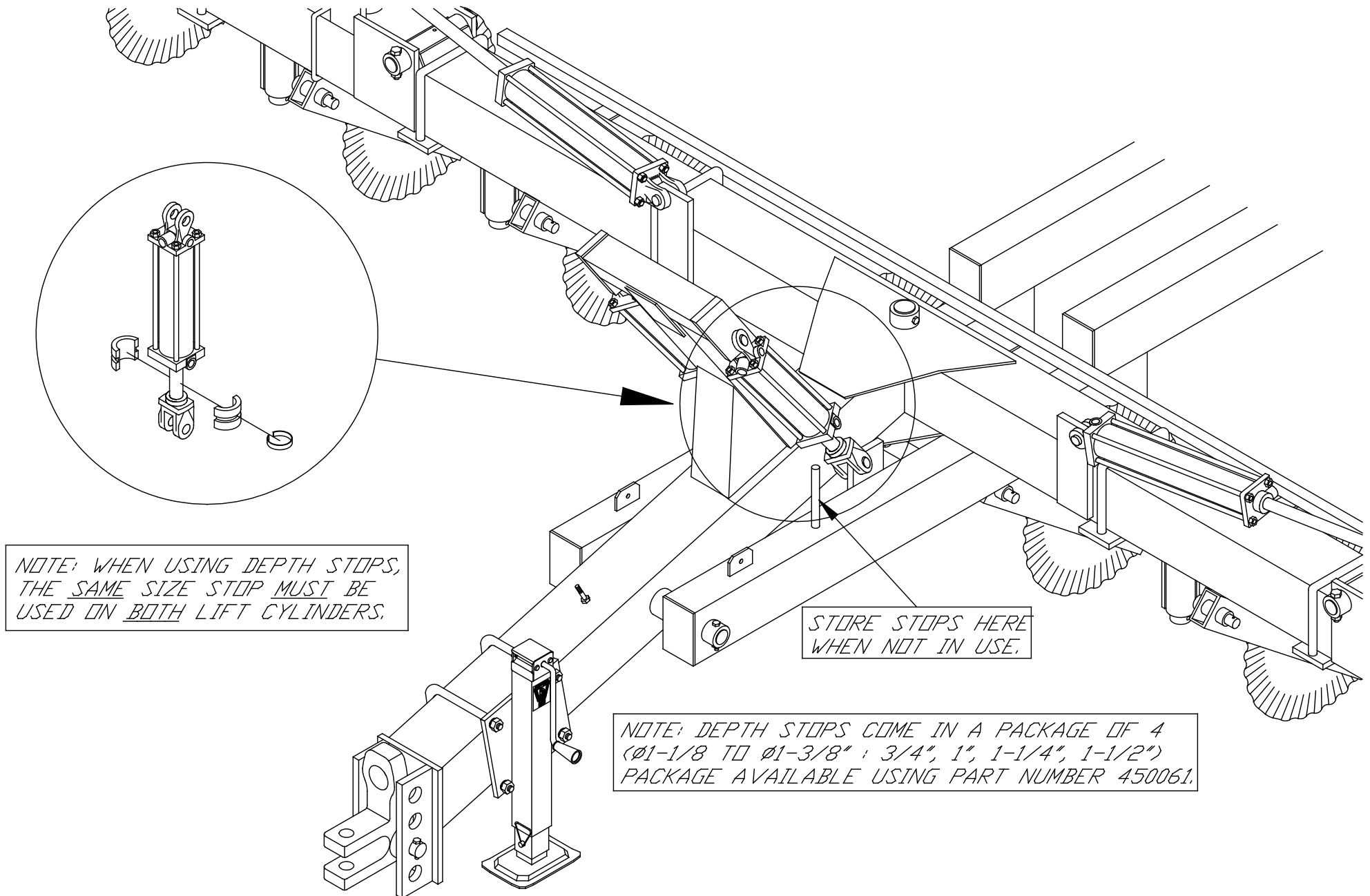
* DRY FERTILIZER HOSE IS SOLD BY THE FOOT, PART # 202170

REFER TO HYDRAULIC SCHEMATIC
FOR PROPER CYLINDER PLUMBING.

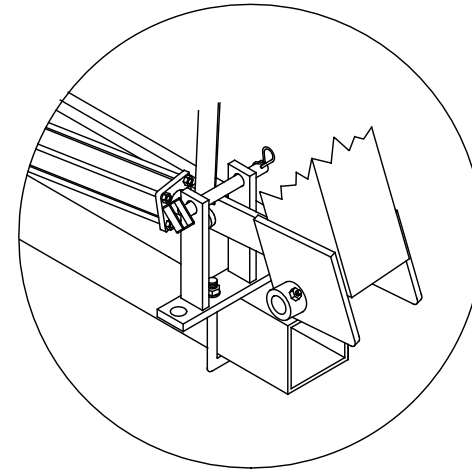
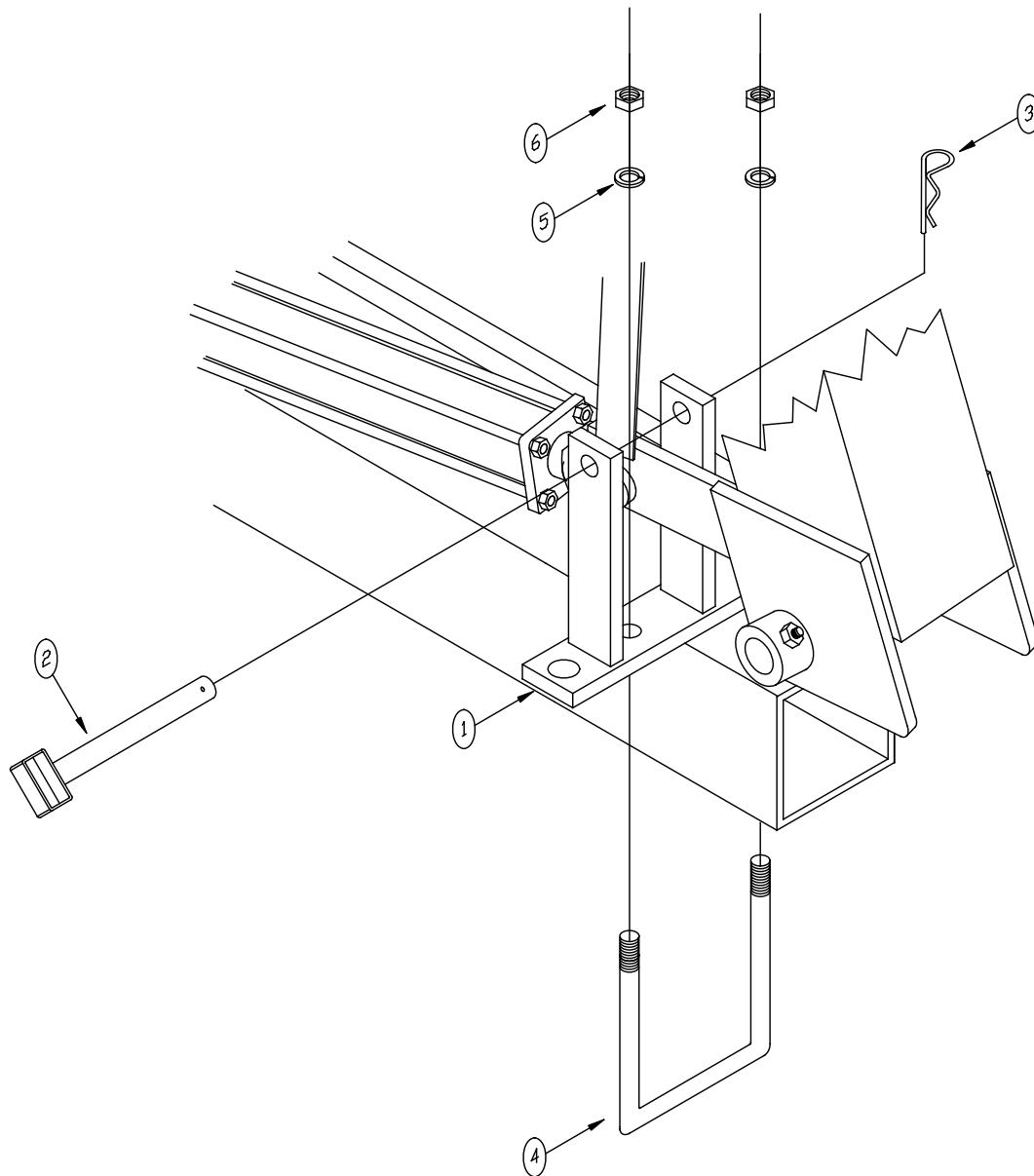


ROUTE HYDRAULIC HOSES UNDER THE
CYLINDER PIN BUSHING INSIDE THE WING.

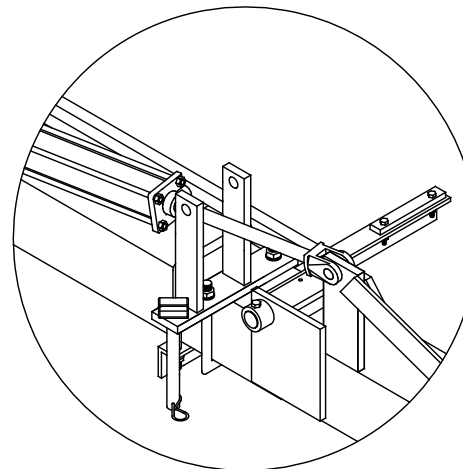
CYLINDER DEPTH STOP USE



LOCKING PIN ASSEMBLY



*DETAIL B:
FOLDED VIEW*



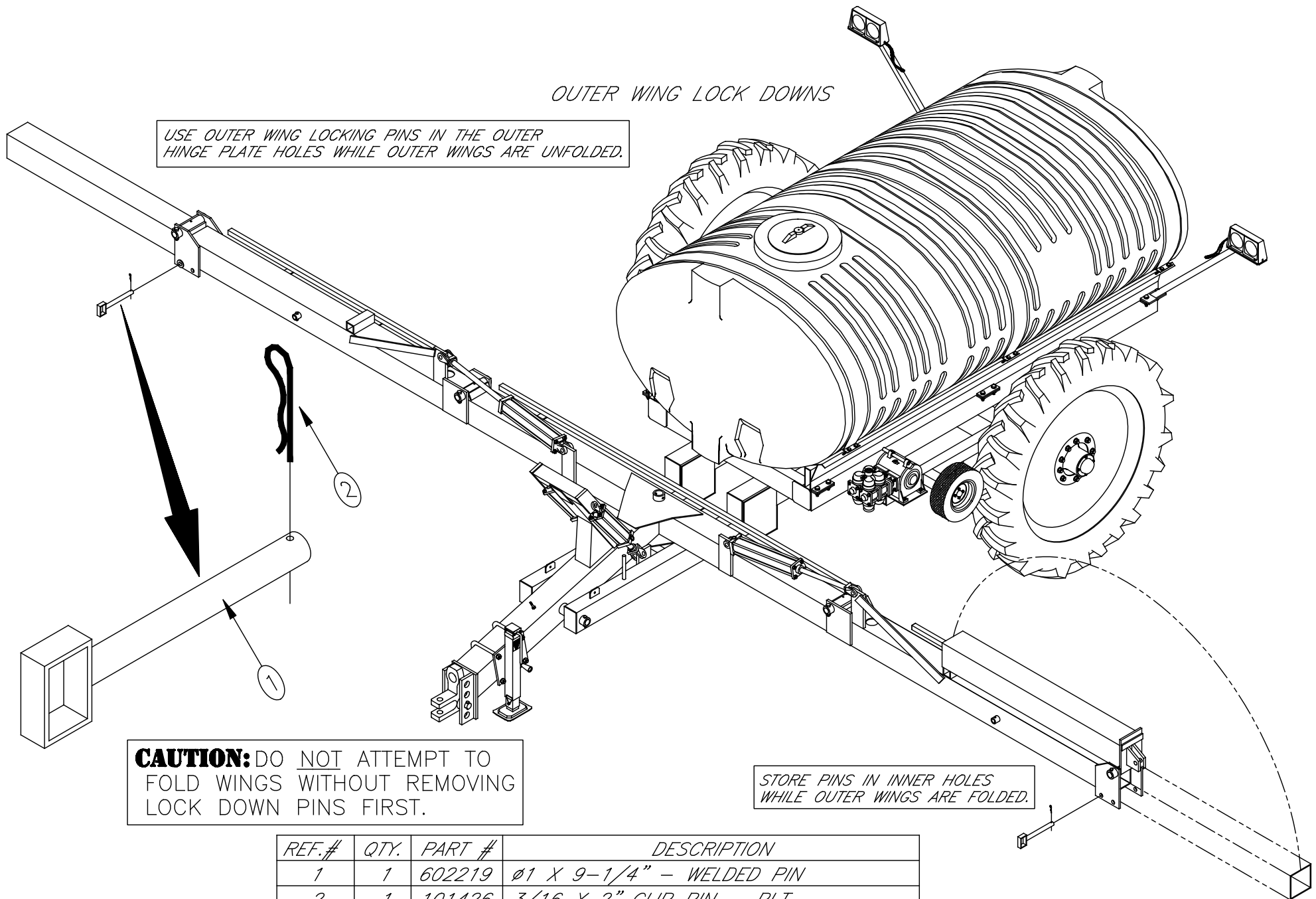
*DETAIL A:
UNFOLDED VIEW*

LOCKING PIN ASSEMBLY

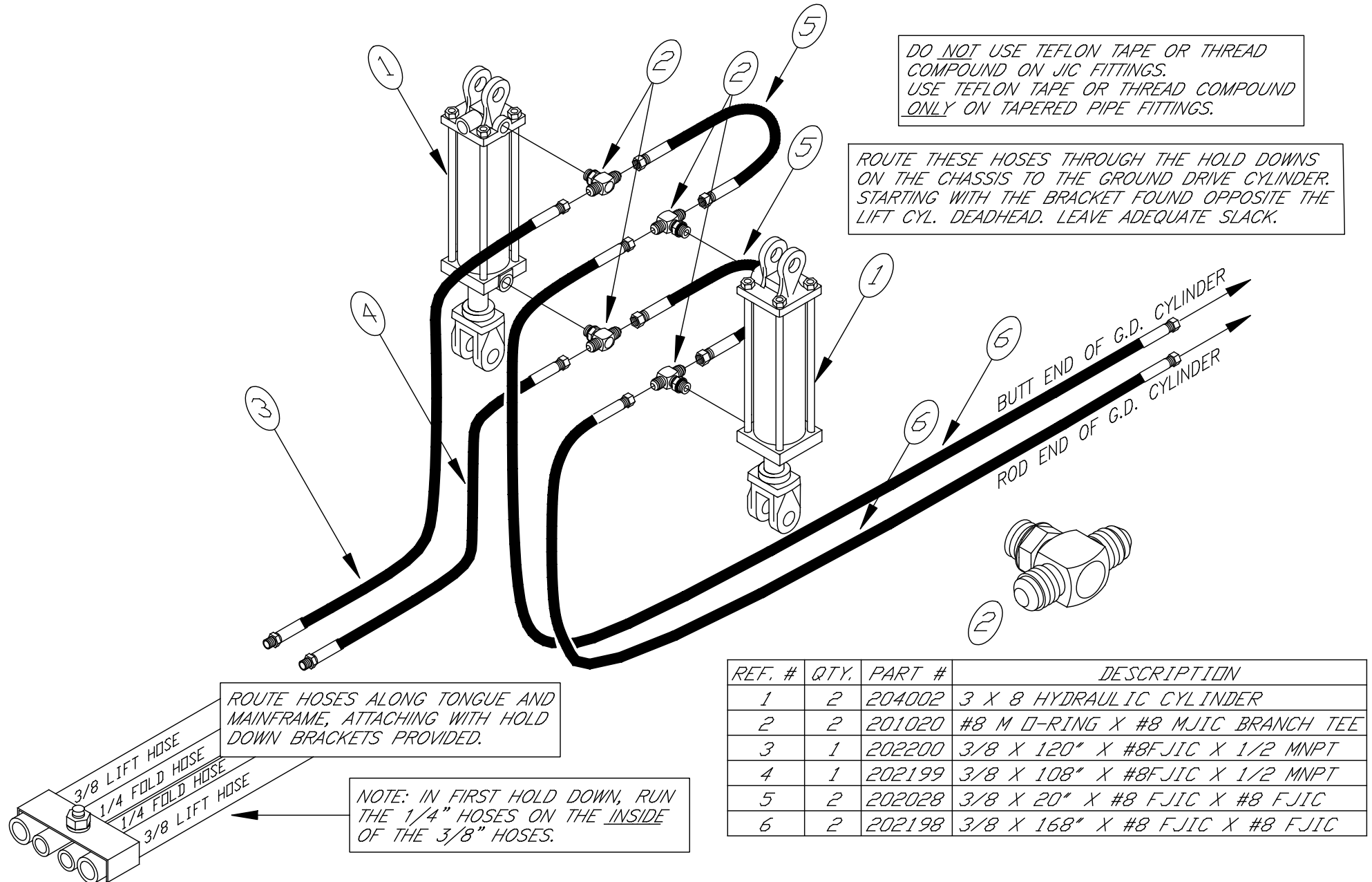
NOTES:

ITEM	QTY	PART#	DESCRIPTION
1	1	801828	2400/2450 SAFETY WING WELDMENT
2	1	602219	Ø1 X 9-1/4", WELDED PIN
3	1	101426	3/16 X 2" CLIP PIN, PLT
4	1	101316	3/4-10 X 7 X 9" U-BOLT
5	2	101224	3/4" LOCK WASHER
6	2	101215	3/4"-10 HEX NUT

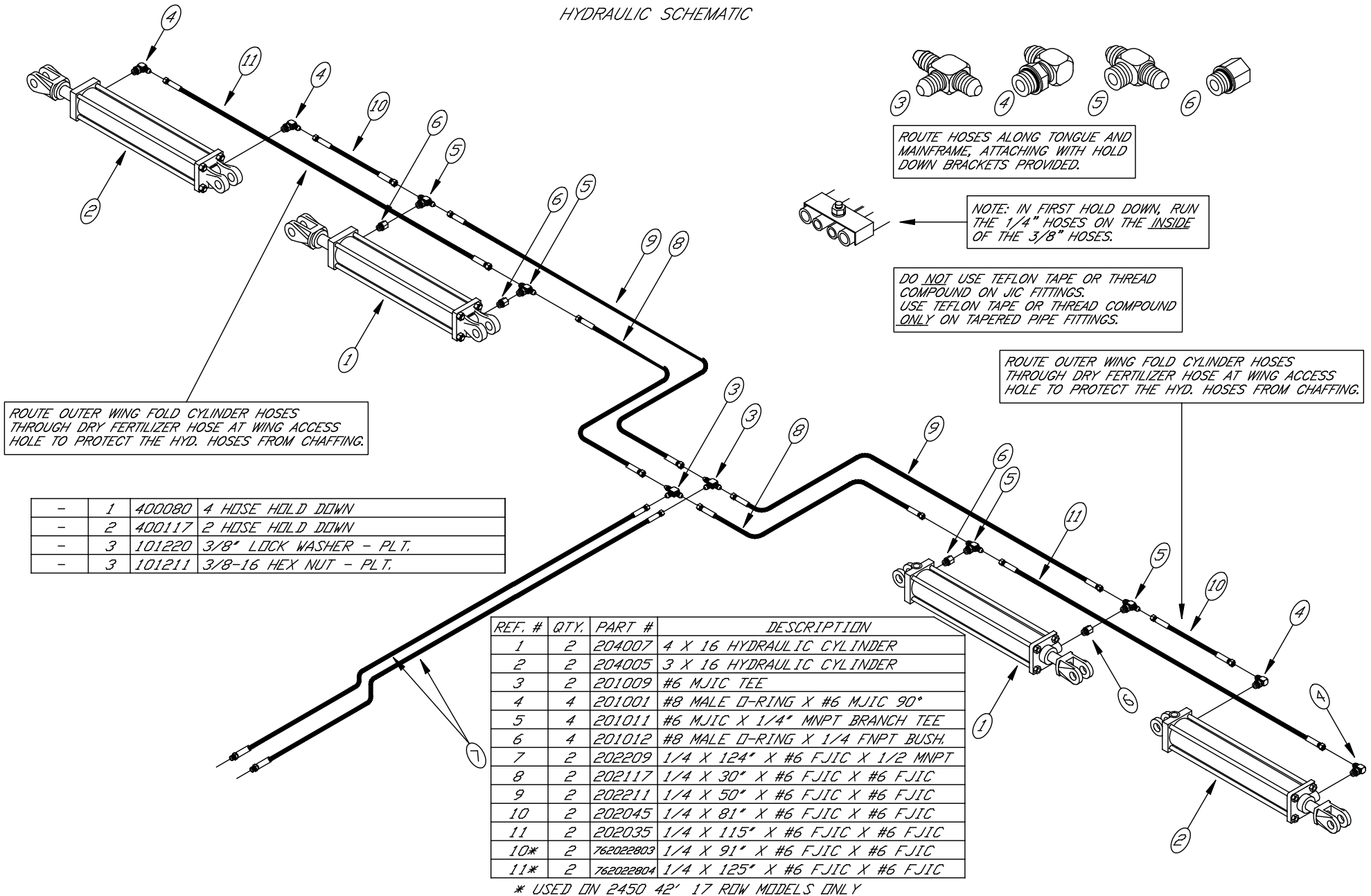
DETAIL A: SAFETY WING WELDMENT
SHOULD BE 4" OFF INNER EDGE OF
HINGE PLATE.



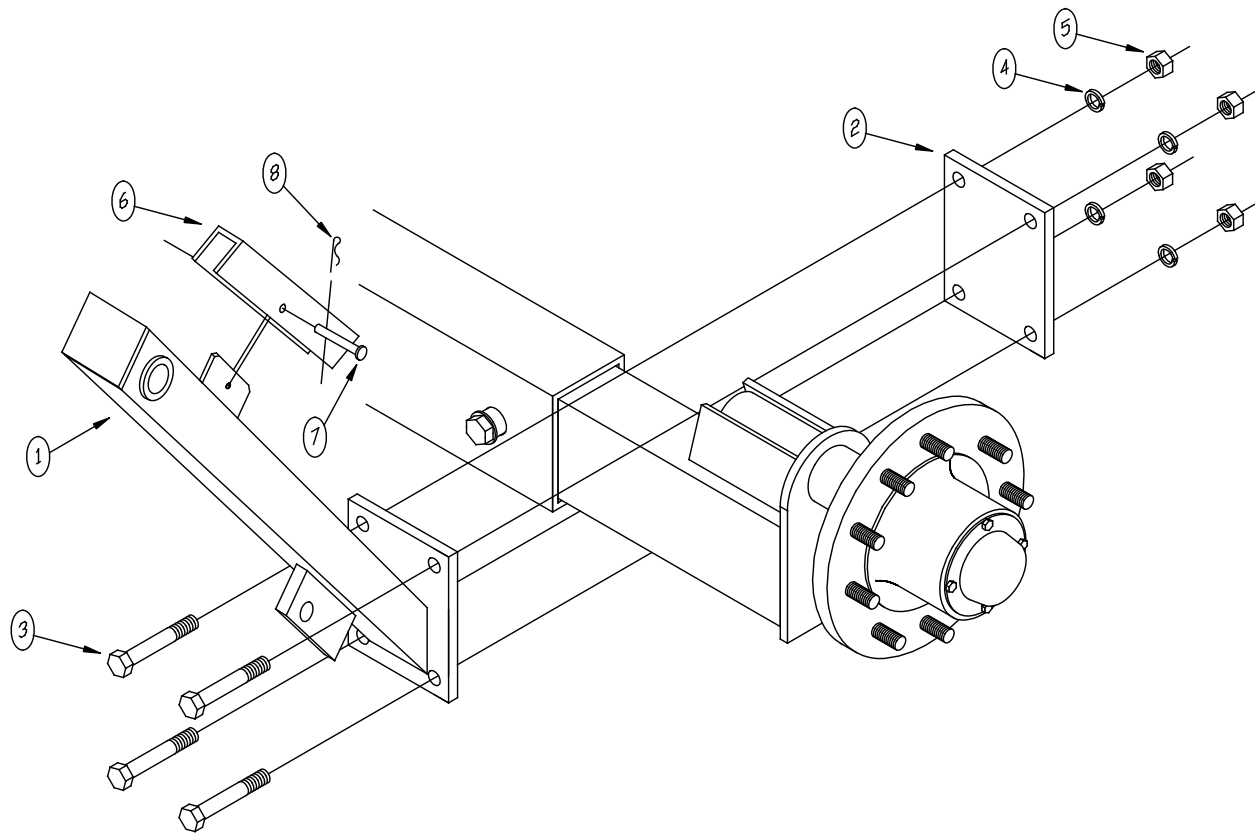
LIFT TOWER HYDRAULIC SCHEMATIC



HYDRAULIC SCHEMATIC



PUMP DRIVE ARM ASSEMBLY



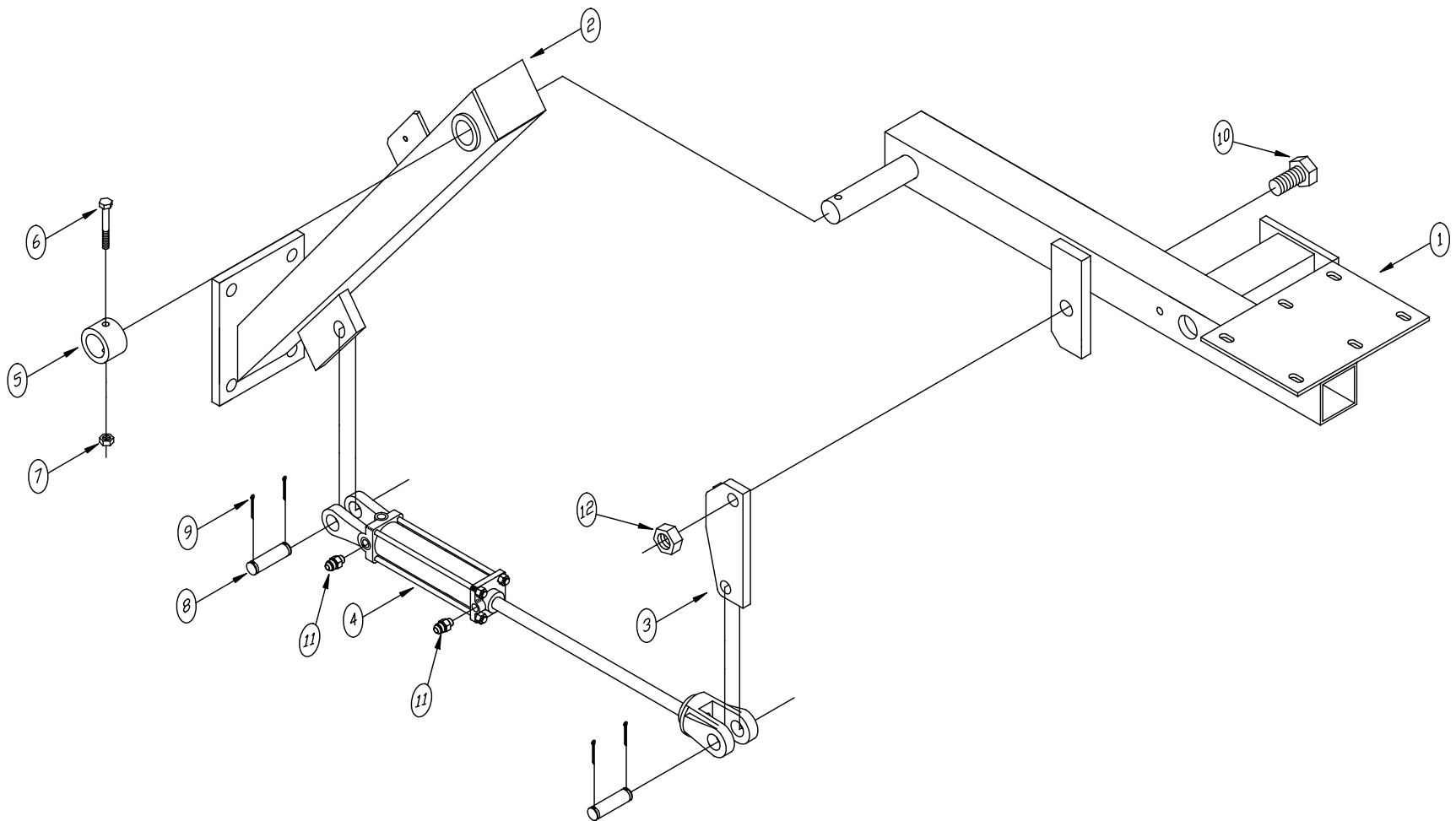
PUMP DRIVE ARM ASSEMBLY

NOTES:

<i>ITEM</i>	<i>QTY</i>	<i>PART#</i>	<i>DESCRIPTION</i>
<i>1</i>	<i>1</i>	<i>76802067</i>	<i>PUMP DRIVE ARM</i>
<i>2</i>	<i>1</i>	<i>762453041</i>	<i>PUMP DRIVE ARM PLATE</i>
<i>3</i>	<i>4</i>	<i>101276</i>	<i>3/4-10 X 6-1/2" HEX BOLT - PLT, GR5,</i>
<i>4</i>	<i>4</i>	<i>101224</i>	<i>3/4" LOCK WASHER - PLT,</i>
<i>5</i>	<i>4</i>	<i>101215</i>	<i>3/4-10 HEX NUT - PLT,</i>
<i>6</i>	<i>1</i>	<i>400083</i>	<i>CYLINDER SAFETY LOCK</i>
<i>7</i>	<i>1</i>	<i>101257</i>	<i>3/8 X 3" - LATCH PIN - PLT,</i>
<i>8</i>	<i>1</i>	<i>101258</i>	<i>3/32 X 1-1/2" - HAIR PIN - PLT,</i>

*ATTACH PUMP DRIVE ARM TO LEFT
AXLE TUBE BEFORE MOUNTING TIRE.*

PUMP MOUNT ARM ASSEMBLY

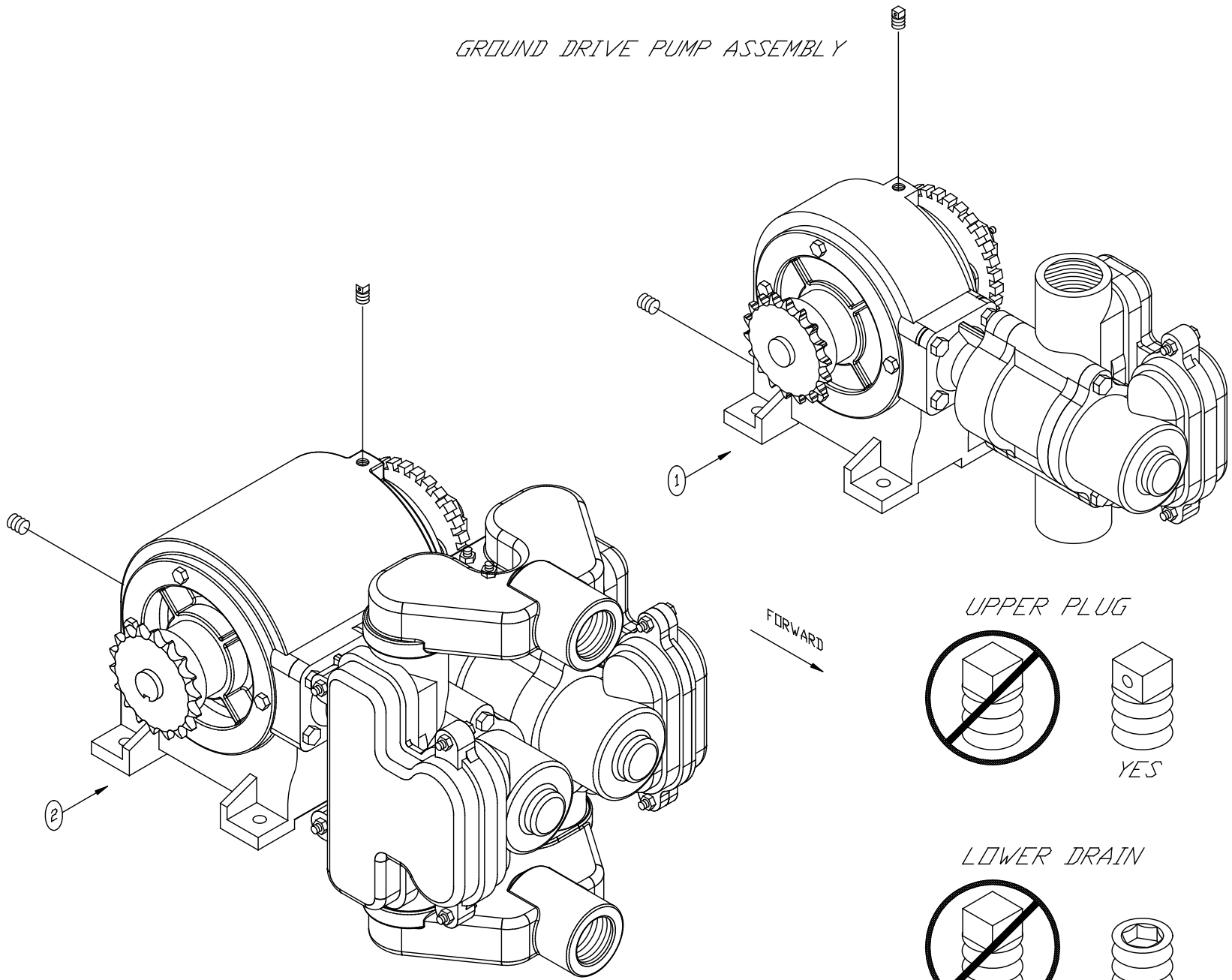


PUMP MOUNT ARM ASSEMBLY

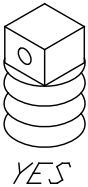
NOTES:

<i>ITEM</i>	<i>QTY</i>	<i>PART#</i>	<i>DESCRIPTION</i>
<i>1</i>	<i>1</i>	<i>802068</i>	<i>PUMP MOUNT ARM</i>
<i>2</i>	<i>1</i>	<i>802067</i>	<i>PUMP DRIVE ARM</i>
<i>3</i>	<i>1</i>	<i>802069</i>	<i>CYLINDER LINKAGE</i>
<i>4</i>	<i>1</i>	<i>204001</i>	<i>2 X 8 HYDRAULIC CYLINDER</i>
<i>5</i>	<i>1</i>	<i>602168</i>	<i>2.25 O.D. X 1.5 I.D. X 1.5" - COLLAR</i>
<i>6</i>	<i>1</i>	<i>101142</i>	<i>7/16-14 X 3" HEX BOLT - PLT, GR5</i>
<i>7</i>	<i>1</i>	<i>101456</i>	<i>7/16" TOPLOCK HEX NUT - PLT,</i>
<i>8</i>	<i>2</i>	<i>602112</i>	<i>Ø1 X 3" CYLINDER PIN - PLT,</i>
<i>9</i>	<i>4</i>	<i>101247</i>	<i>7/32 X 2" COTTER PIN - PLT,</i>
<i>10</i>	<i>1</i>	<i>600356002</i>	<i>BOLT 1" X 3" GR. 5</i>
<i>11</i>	<i>2</i>	<i>76201008</i>	<i>NØ.8 MJIC X NØ.6 MALE ORING STRAIT,</i>
<i>12</i>	<i>1</i>	<i>600366032</i>	<i>STOVER LOCKNUT TYPE C - 1" - UNC</i>

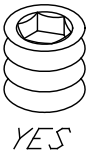
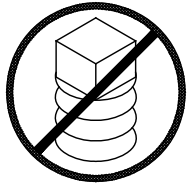
GROUND DRIVE PUMP ASSEMBLY



UPPER PLUG



LOWER DRAIN



GROUND DRIVE PUMP ASSEMBLY

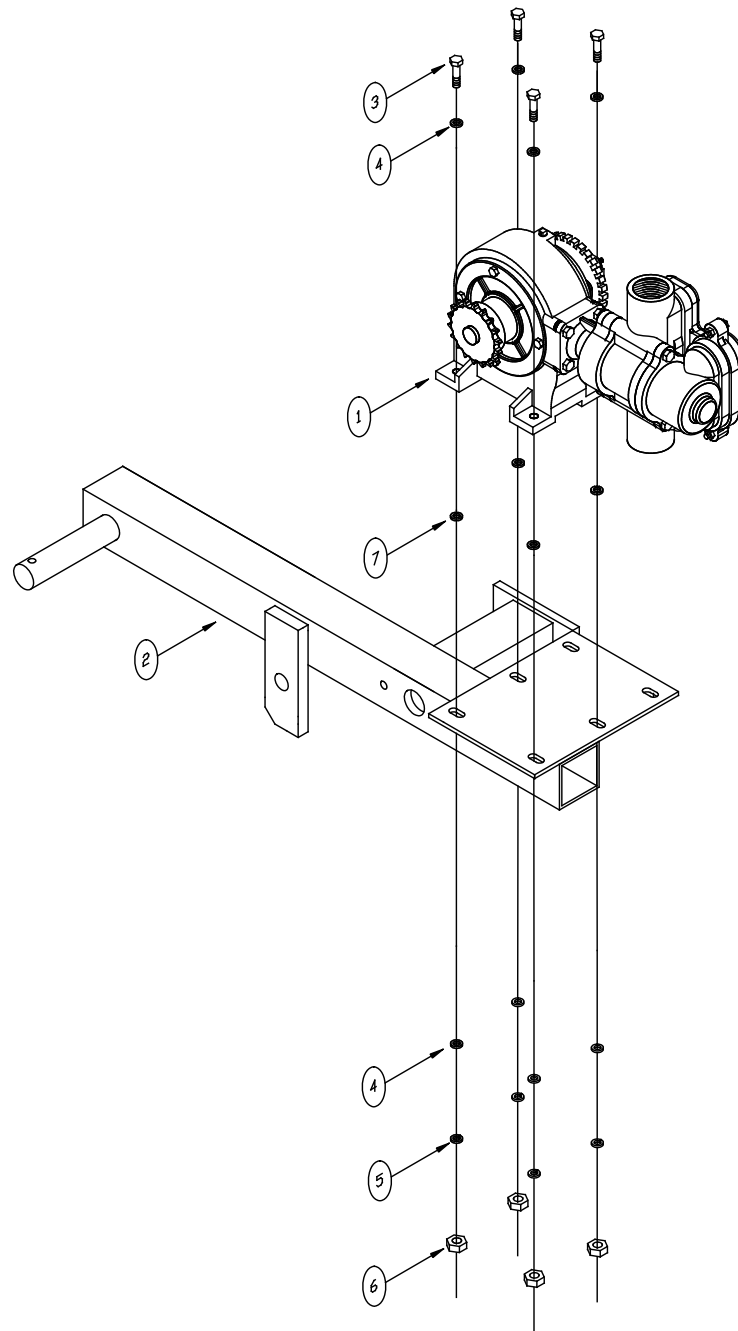
REFERENCE#	DATE	REV
GNDRVPLG	01/08/07	

NOTES:

ITEM	QTY	PART#	DESCRIPTION
1	1	750040	SINGLE PISTON JOHN BLUE PUMP
2	1	750041	DOUBLE PISTON JOHN BLUE PUMP

REPLACE THE UPPER MOST PLUG
WITH THE VENTED PLUG PROVIDED, ALSO,
REPLACE THE SQUARE HEAD DRAIN PLUG
WITH THE ALLEN HEAD DRAIN PLUG.

ATTACHING THE SINGLE PISTON JOHN BLUE PUMP



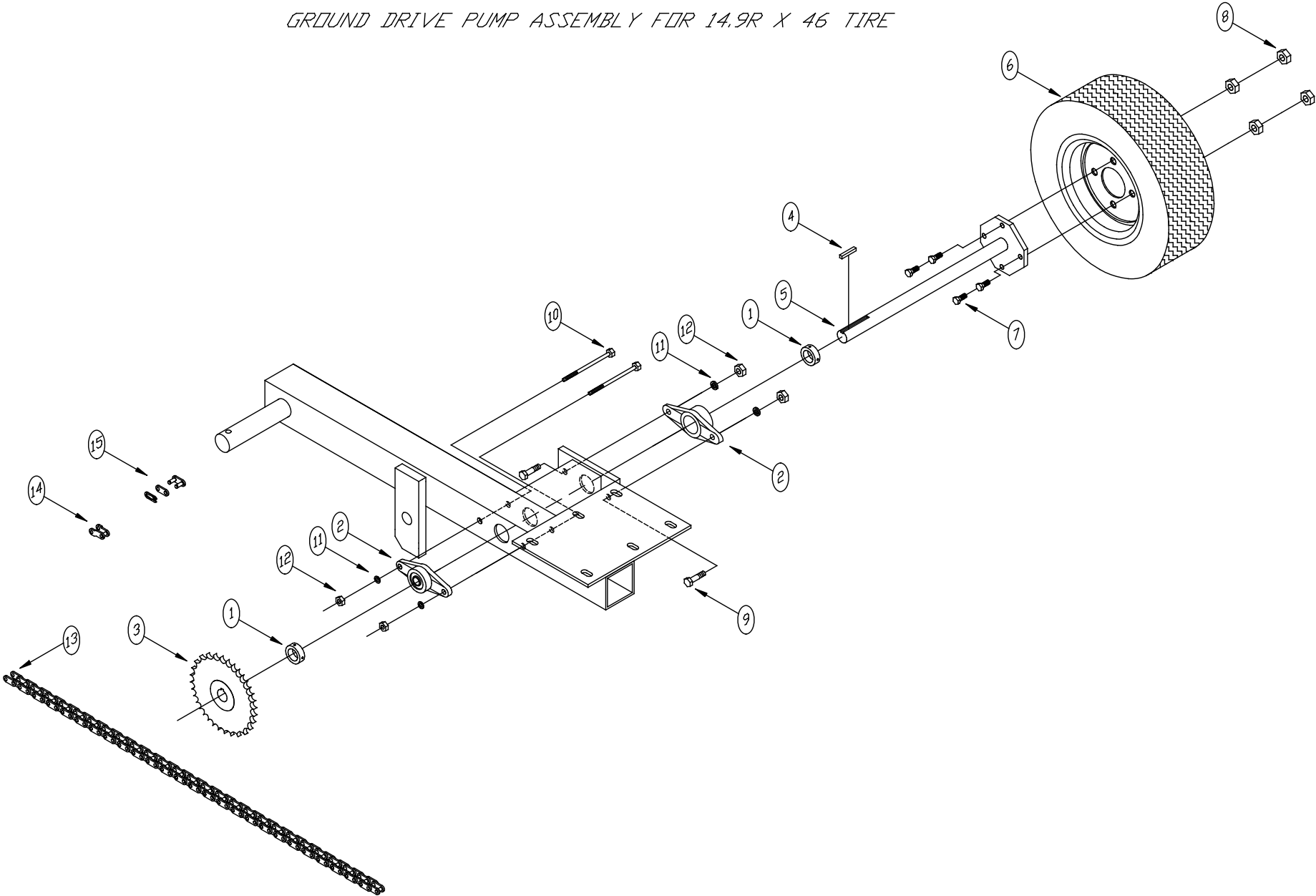
ATTACHING THE SINGLE PISTON JOHN BLUE PUMP

NOTES:

<i>ITEM#</i>	<i>QTY.</i>	<i>PART #</i>	<i>DESCRIPTION</i>
<i>1</i>	<i>1</i>	<i>750040</i>	<i>JOHN BLUE PUMP – MODEL NGP-7055</i>
<i>1</i>	<i>–</i>	<i>750041</i>	<i>JOHN BLUE PUMP – MODEL NGP-9055 (NOT SHOWN)</i>
<i>2</i>	<i>1</i>	<i>802068</i>	<i>PUMP MOUNT WELDMENT</i>
<i>3</i>	<i>4</i>	<i>101126</i>	<i>3/8-16 X 1-1/2" HEX BOLT-PLT.GR.5</i>
<i>4</i>	<i>8</i>	<i>101229</i>	<i>3/8" FLAT WASHER – PLT.</i>
<i>5</i>	<i>4</i>	<i>101220</i>	<i>3/8" LOCK WASHER – PLT</i>
<i>6</i>	<i>4</i>	<i>101211</i>	<i>3/8-16 HEX NUT – PLT.</i>
<i>7</i>	<i>4</i>	<i>----</i>	<i>RUBBER MOUNTING WASHER</i>

ITEM #7 INCLUDED WITH JOHN BLUE PUMP.

GROUND DRIVE PUMP ASSEMBLY FOR 14.9R X 46 TIRE

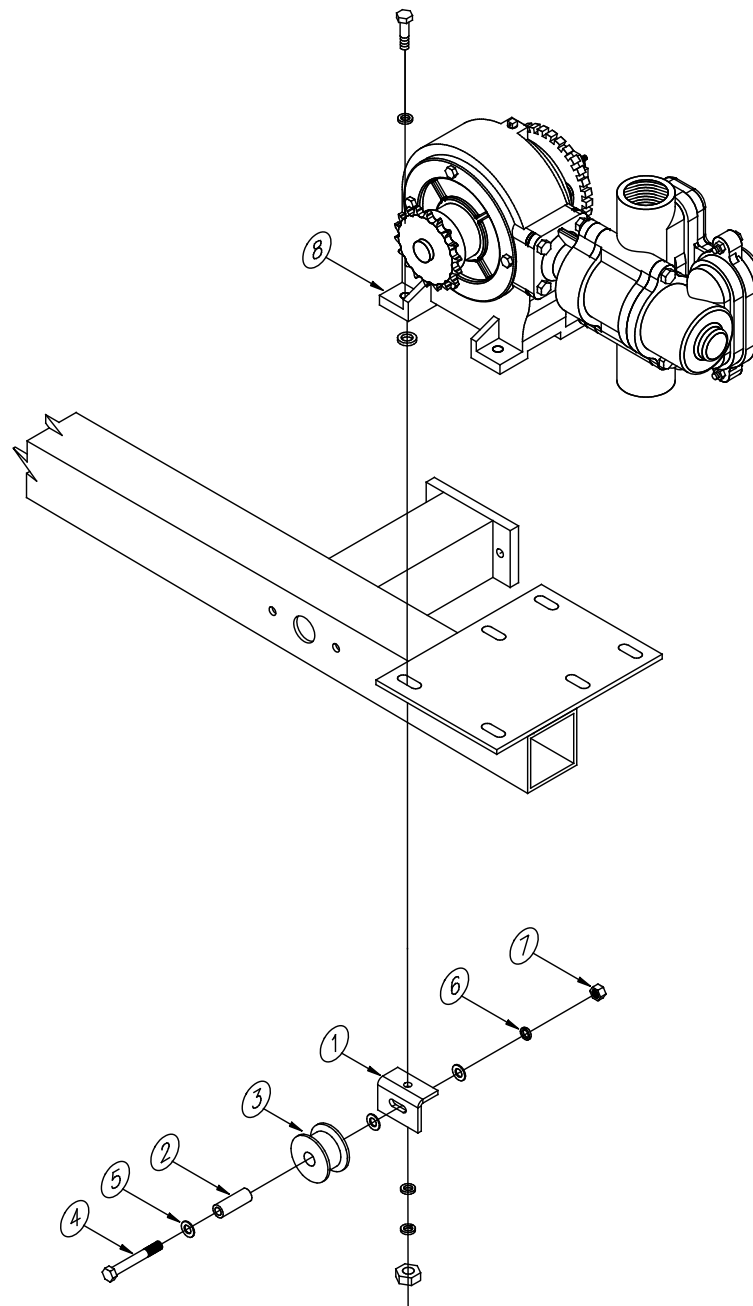


GROUND DRIVE PUMP ASSEMBLY FOR 14.9R X 46 TIRE

NOTES:

ITEM#	QTY	PART #	DESCRIPTION
1	2	450066	1-1/4" BORE LOCK COLLAR
2	2	450067	CAST 2 BOLT BEARING HOLDER FOR 1-1/4" BEARING
3	1	450065	36 X 50 X 1-1/4" BORE SPROCKET
4	1	450010	1/4 X 1/4 X 1-1/2" - SQUARE KEY
5	1	801779	Ø1-1/4 X 18" DRIVE SHAFT
6	1	301248	16 X 6.5 X 8 4-PLY TIRE AND WHL. ASSEMBLY
7	4	301193	1/2-20 X 1-1/4" - WHIZ BOLT
8	4	301243	1/2-20 LUG NUT
9	2	101138	7/16-14 X 2" - HEX BOLT PLT.
10	2	101143	7/16-14 X 4-1/2" - HEX BOLT PLT.
11	4	101221	7/16-14 - LOCK WASHER PLT.
12	4	101212	7/16-14 - HEX NUT PLT.
13	1	101432	NO. 50 - STAINLESS ROLLER CHAIN(42-1/4 INCHES)
14	1	101430	NO. 50 - STAINLESS ROLLER CHAIN 1/2 LINK
15	1	101429	NO. 50 - STAINLESS ROLLER CHAIN MASTER LINK

CHAIN IDLER ARM ATTACHMENT



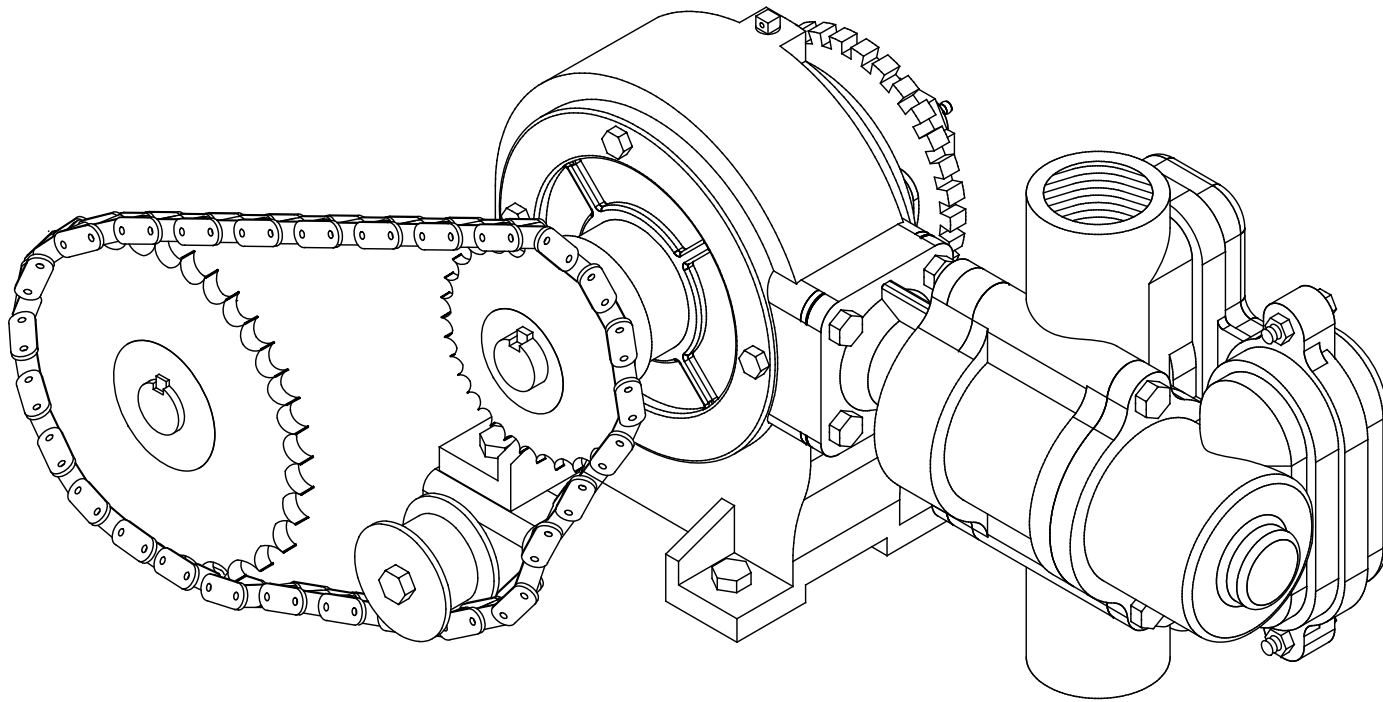
CHAIN IDLER ARM ATTACHMENT

NOTES:

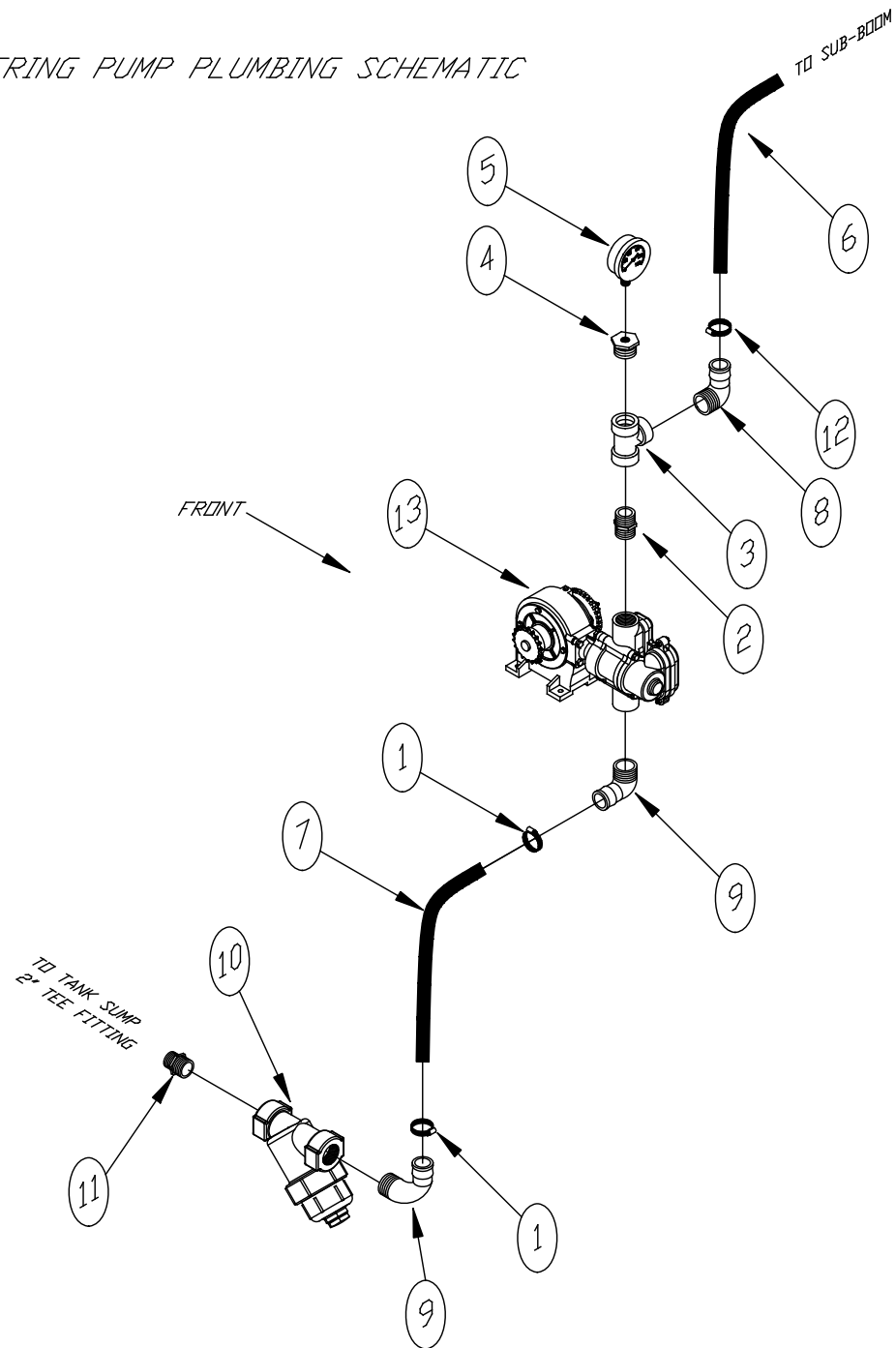
<i>ITEM</i>	<i>QTY</i>	<i>PART#</i>	<i>DESCRIPTION</i>
<i>1</i>	<i>1</i>	<i>760000121</i>	<i>CHAIN IDLER ARM</i>
<i>2</i>	<i>1</i>	<i>76400053</i>	<i>ROLLER BUSHING</i>
<i>3</i>	<i>1</i>	<i>76400054</i>	<i>CHAIN ROLLER</i>
<i>4</i>	<i>1</i>	<i>76101129</i>	<i>3/8-16 X 3" HEX BOLT - PLATED</i>
<i>5</i>	<i>3</i>	<i>76101229</i>	<i>3/8" FLAT WASHER - PLATED</i>
<i>6</i>	<i>1</i>	<i>76101220</i>	<i>3/8" LOCK WASHER - PLATED</i>
<i>7</i>	<i>1</i>	<i>76101211</i>	<i>3/8-16 HEX NUT - PLATED</i>
<i>8</i>	<i>1</i>	<i>76750040</i>	<i>NGP-7055 SINGLE PISTON PUMP</i>
<i>8</i>	<i>-</i>	<i>76750041</i>	<i>NGP-9055 DOUBLE PISTON PUMP (NOT SHOWN)</i>

USE PUMP HARDWARE TO MOUNT CHAIN IDLER ARM.

METERING PUMP CHAIN ROUTING



SINGLE METERING PUMP PLUMBING SCHEMATIC



SINGLE METERING PUMP PLUMBING SCHEMATIC

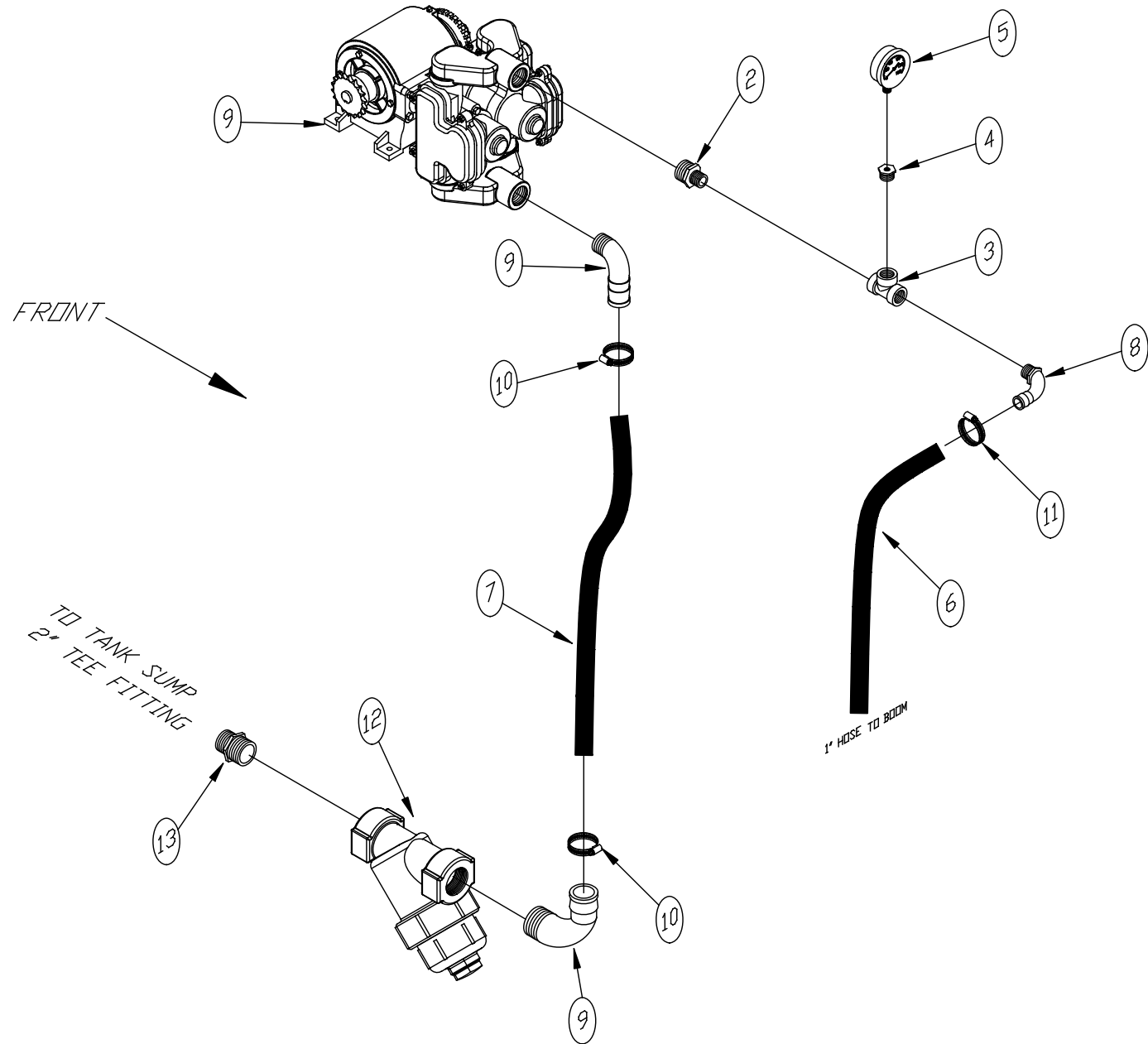
NOTES:

<i>ITEM #</i>	<i>QTY.</i>	<i>PART #</i>	<i>DESCRIPTION</i>
<i>1</i>	<i>2</i>	<i>700129</i>	<i>1-1/2" STAINLESS HOSE CLAMP</i>
<i>2</i>	<i>1</i>	<i>700066</i>	<i>1-1/2 X 1" - REDUCER BUSHING</i>
<i>3</i>	<i>1</i>	<i>700074</i>	<i>1" NPT TEE</i>
<i>4</i>	<i>1</i>	<i>700290</i>	<i>1" NPT X 1/4" NPT REDUCING BUSHING</i>
<i>5</i>	<i>1</i>	<i>700237</i>	<i>4" GLYCERIN FILLED PRESSURE GAUGE</i>
<i>6</i>	<i>1</i>	<i>700119</i>	<i>1" X 48" - EPDM HOSE</i>
<i>7</i>	<i>1</i>	<i>700121</i>	<i>1-1/2" X 96" - EPDM HOSE</i>
<i>8</i>	<i>2</i>	<i>700022</i>	<i>1 NPT X 1" HOSE BARB - 90</i>
<i>9</i>	<i>2</i>	<i>700026</i>	<i>1-1/2 NPT X 1-1/2" BARB - 90</i>
<i>10</i>	<i>1</i>	<i>76700214</i>	<i>1-1/2" NPT BANJO FILTER</i>
<i>11</i>	<i>1</i>	<i>76700186</i>	<i>2" MNPT X 1-1/2" MNPT REDUCER NIPPLE</i>
<i>12</i>	<i>1</i>	<i>76700128</i>	<i>1" STAINLESS STEEL HOSE CLAMP</i>
<i>13</i>	<i>1</i>	<i>76750040</i>	<i>NGP-7055 SINGLE PISTON PUMP</i>

ITEM 6 IS SOLD BY THE FOOT AND IS AVAILABLE USING PART NUMBER - 700118.

ITEM 7 IS SOLD BY THE FOOT AND IS AVAILABLE USING PART NUMBER - 700121.

DOUBLE PISTON METERING PUMP PLUMBING



DOUBLE PISTON METERING PUMP PLUMBING

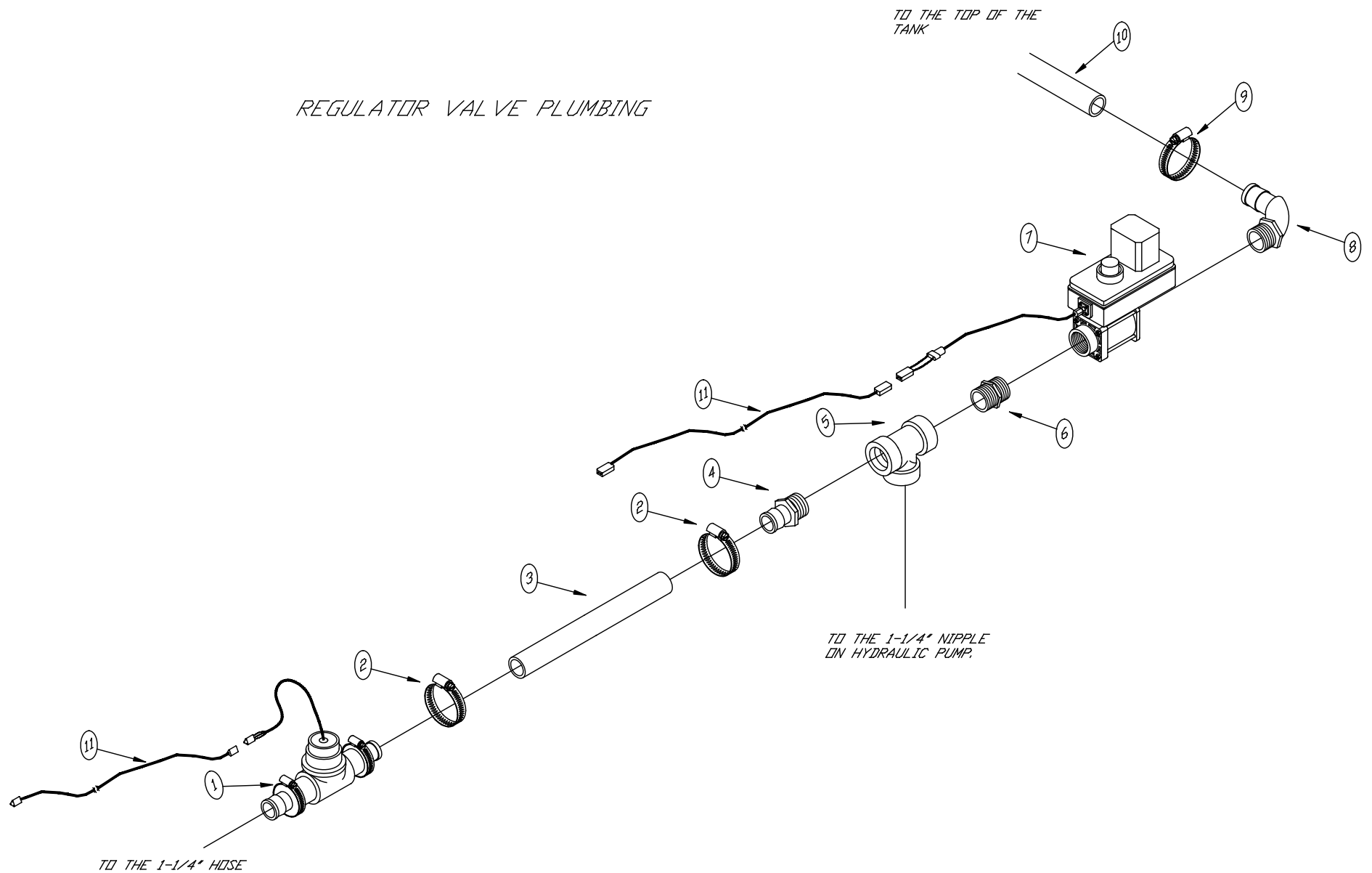
NOTES:

<i>ITEM #</i>	<i>QTY.</i>	<i>PART #</i>	<i>DESCRIPTION</i>
<i>1</i>	<i>1</i>	<i>750041</i>	<i>NGP-9055 DOUBLE PISTON PUMP</i>
<i>2</i>	<i>1</i>	<i>700066</i>	<i>1-1/2 X 1" - REDUCER BUSHING</i>
<i>3</i>	<i>1</i>	<i>700074</i>	<i>1" NPT TEE</i>
<i>4</i>	<i>1</i>	<i>700290</i>	<i>1" NPT X 1/4" NPT REDUCING BUSHING</i>
<i>5</i>	<i>1</i>	<i>700237</i>	<i>4" GLYCERIN FILLED PRESSURE GAUGE</i>
<i>6</i>	<i>1</i>	<i>700119</i>	<i>1" X 48" - EPDM HOSE</i>
<i>7</i>	<i>1</i>	<i>700121</i>	<i>1-1/2" X 96" - EPDM HOSE</i>
<i>8</i>	<i>1</i>	<i>700022</i>	<i>1 NPT X 1" HOSE BARB - 90</i>
<i>9</i>	<i>1</i>	<i>700026</i>	<i>1-1/2 NPT X 1-1/2" BARB - 90</i>
<i>10</i>	<i>1</i>	<i>700129</i>	<i>1-1/2" - STAINLESS HOSE CLAMP</i>
<i>11</i>	<i>1</i>	<i>700128</i>	<i>1" - STAINLESS HOSE CLAMP</i>
<i>12</i>	<i>1</i>	<i>76700214</i>	<i>1-1/2" NPT BANJO FILTER</i>
<i>13</i>	<i>1</i>	<i>76700186</i>	<i>2" MNPT X 1-1/2" MNPT REDUCER NIPPLE</i>

ITEM 6 IS SOLD BY THE FOOT AND IS AVAILABLE USING PART NUMBER - 700118.

ITEM 7 IS SOLD BY THE FOOT AND IS AVAILABLE USING PART NUMBER - 700121.

REGULATOR VALVE PLUMBING



REGULATOR VALVE PLUMBING

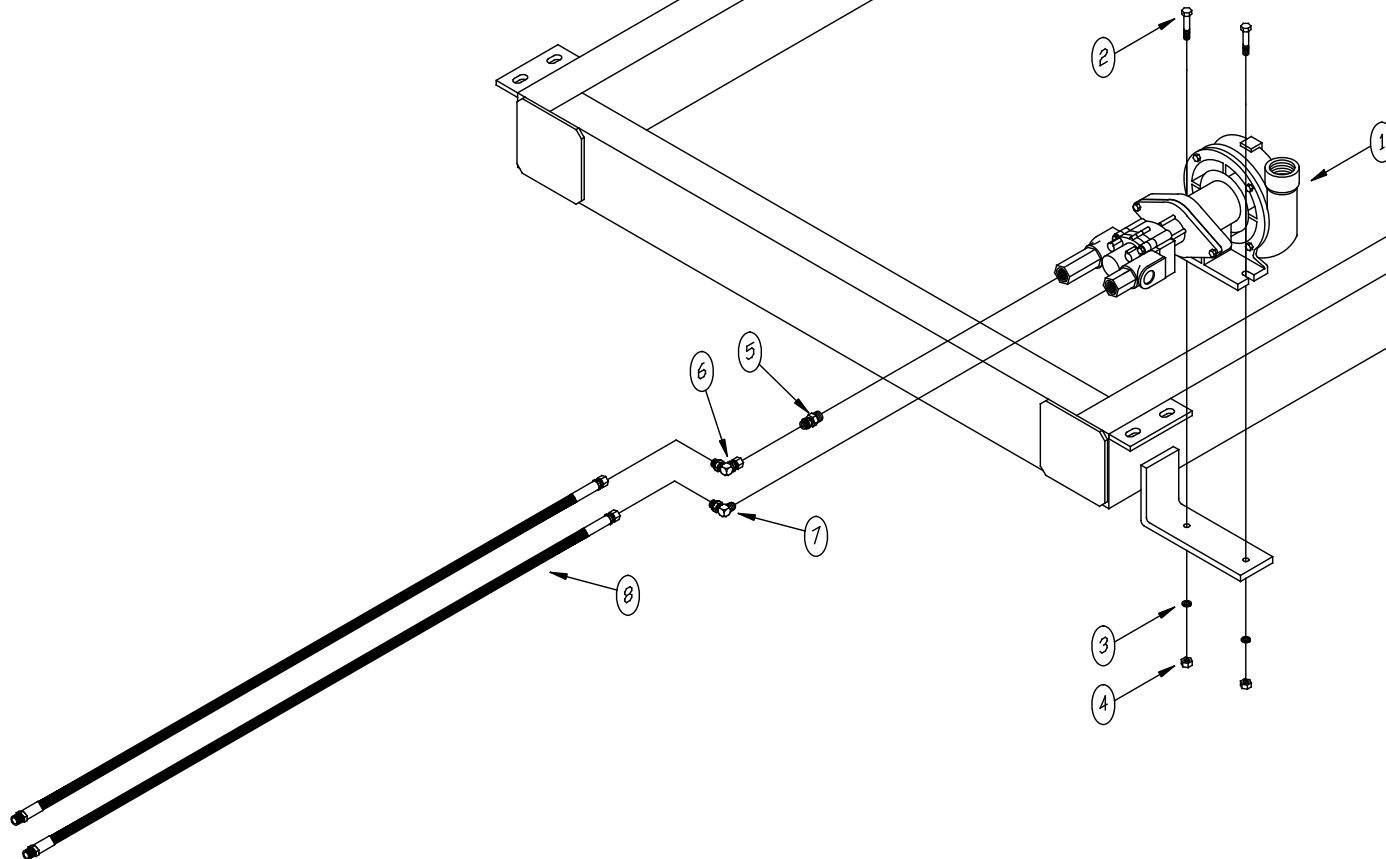
NOTES:

<i>ITEM</i>	<i>QTY</i>	<i>PART#</i>	<i>DESCRIPTION</i>
<i>1</i>	<i>1</i>	<i>767800371</i>	<i>1-1/4" FLOW METER</i>
<i>2</i>	<i>2</i>	<i>767800128</i>	<i>1-1/4" STAINLESS STEEL HOSE CLAMP</i>
<i>3</i>	<i>1</i>	<i>767001191</i>	<i>1-1/4" EPDM HOSE (30")</i>
<i>4</i>	<i>1</i>	<i>76700011</i>	<i>1-1/4" NPT X 1-1/4" BARB - STRAIGHT</i>
<i>5</i>	<i>1</i>	<i>76700075</i>	<i>1-1/4" NPT FEMALE TEE</i>
<i>6</i>	<i>1</i>	<i>76700115</i>	<i>1-1/4" X 1" REDUCING NIPPLE</i>
<i>7</i>	<i>1</i>	<i>76780038</i>	<i>REGULATOR VALVE</i>
<i>8</i>	<i>1</i>	<i>76700021</i>	<i>1" NPT X 3/4" - 90</i>
<i>9</i>	<i>1</i>	<i>76700127</i>	<i>3/4 - 1" STAINLESS STEEL HOSE CLAMP</i>
<i>10</i>	<i>1</i>	<i>76700118</i>	<i>3/4 X 76" - EDPM HOSE</i>
<i>11</i>	<i>2</i>	<i>76780035</i>	<i>EXTENSION CABLE 15'</i>

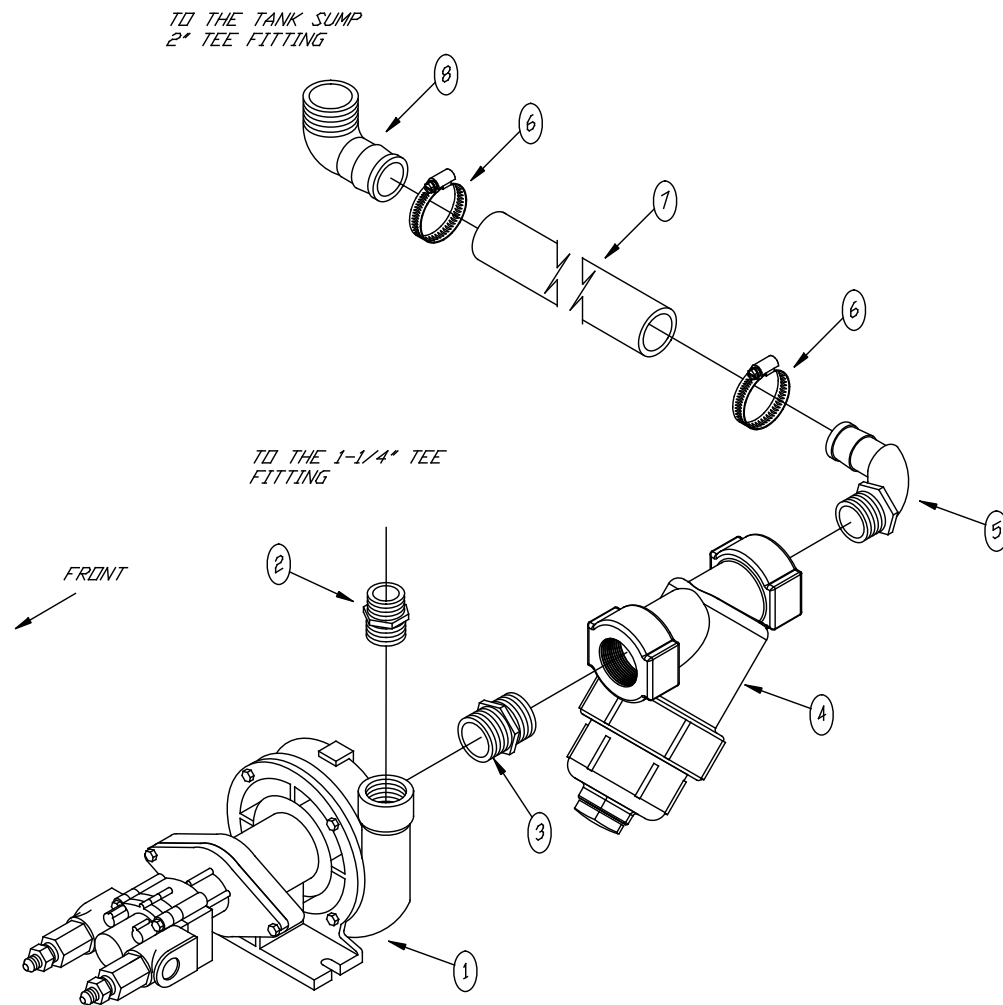
ASSEMBLY DESCRIPTION

HYDRAULIC PUMP ASSEMBLY

ITEM	QTY	DESCRIPTION	PART#
1	1	HYDRAULIC PUMP	750039
2	2	3/8-16 X 2" HEX BOLT - PLT, GR5	101127
3	2	3/8" LOCK WASHER - PLT	101220
4	2	3/8-16 HEX NUT - PLT	101211
5	1	#8 MJIC X 1/2" MNPT STRAIGHT	201057
6	1	#8 MJIC X #8 FJIC SWIVEL 90	201059
7	1	#8 MJIC X 1/2" MNPT 90	201034
8	2	1/2" X 186" X #8 FJIC X #8 MNPT	762022802



HYDRAULIC PUMP PLUMBING



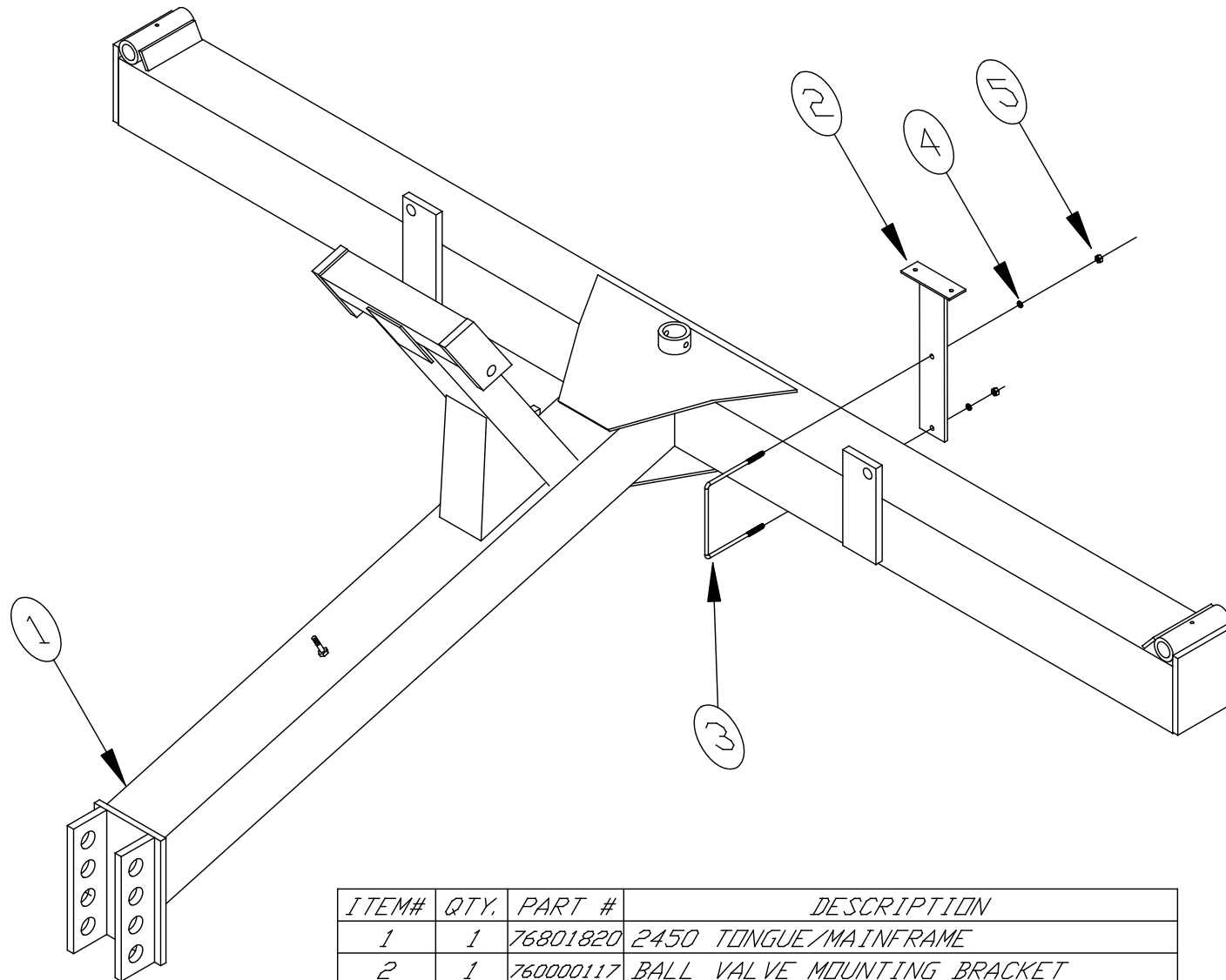
HYDRAULIC PUMP PLUMBING

NOTES:

<i>ITEM</i>	<i>QTY</i>	<i>PART#</i>	<i>DESCRIPTION</i>
<i>1</i>	<i>1</i>	<i>7670039</i>	<i>HYDRAULIC PUMP</i>
<i>2</i>	<i>1</i>	<i>76700036</i>	<i>1-1/4" NPT CLOSE NIPPLE</i>
<i>3</i>	<i>1</i>	<i>76700037</i>	<i>1-1/2" NPT CLOSE NIPPLE</i>
<i>4</i>	<i>1</i>	<i>76700214</i>	<i>1-1/2" NPT BANJO FILTER</i>
<i>5</i>	<i>1</i>	<i>76700026</i>	<i>1-1/2" NPT X 1-1/2" BARB 90</i>
<i>6</i>	<i>2</i>	<i>76700130</i>	<i>1-1/2" STAINLESS STEEL HOSE CLAMP</i>
<i>7</i>	<i>1</i>	<i>767000121</i>	<i>1-1/2 X 42" - EPDM HOSE</i>
<i>8</i>	<i>1</i>	<i>76700186</i>	<i>2" MNPT X 1/2" BARB 90</i>

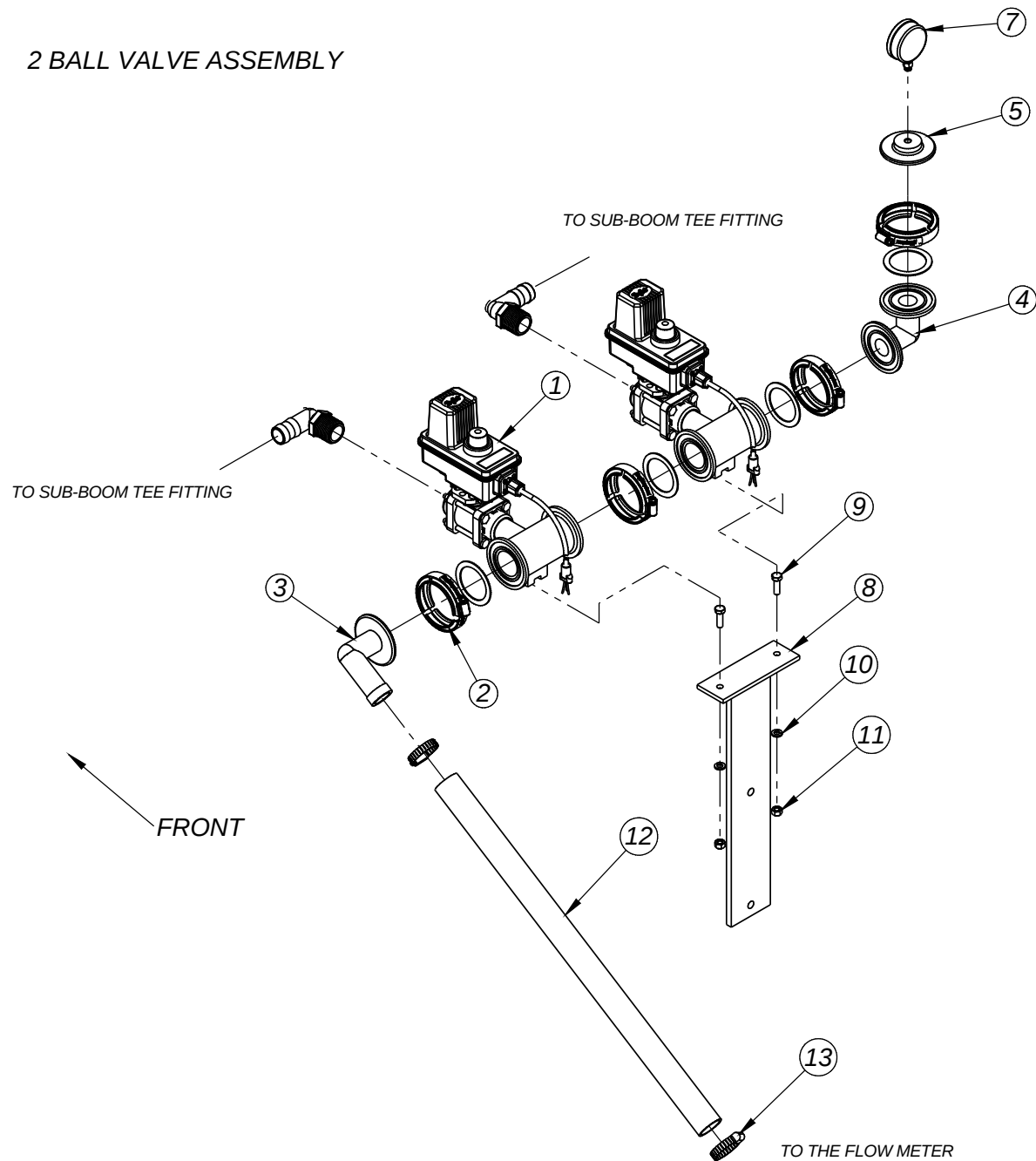
BALL VALVE BRACKET ATTACHMENT

*HYDRAULIC PUMP MODELS ONLY



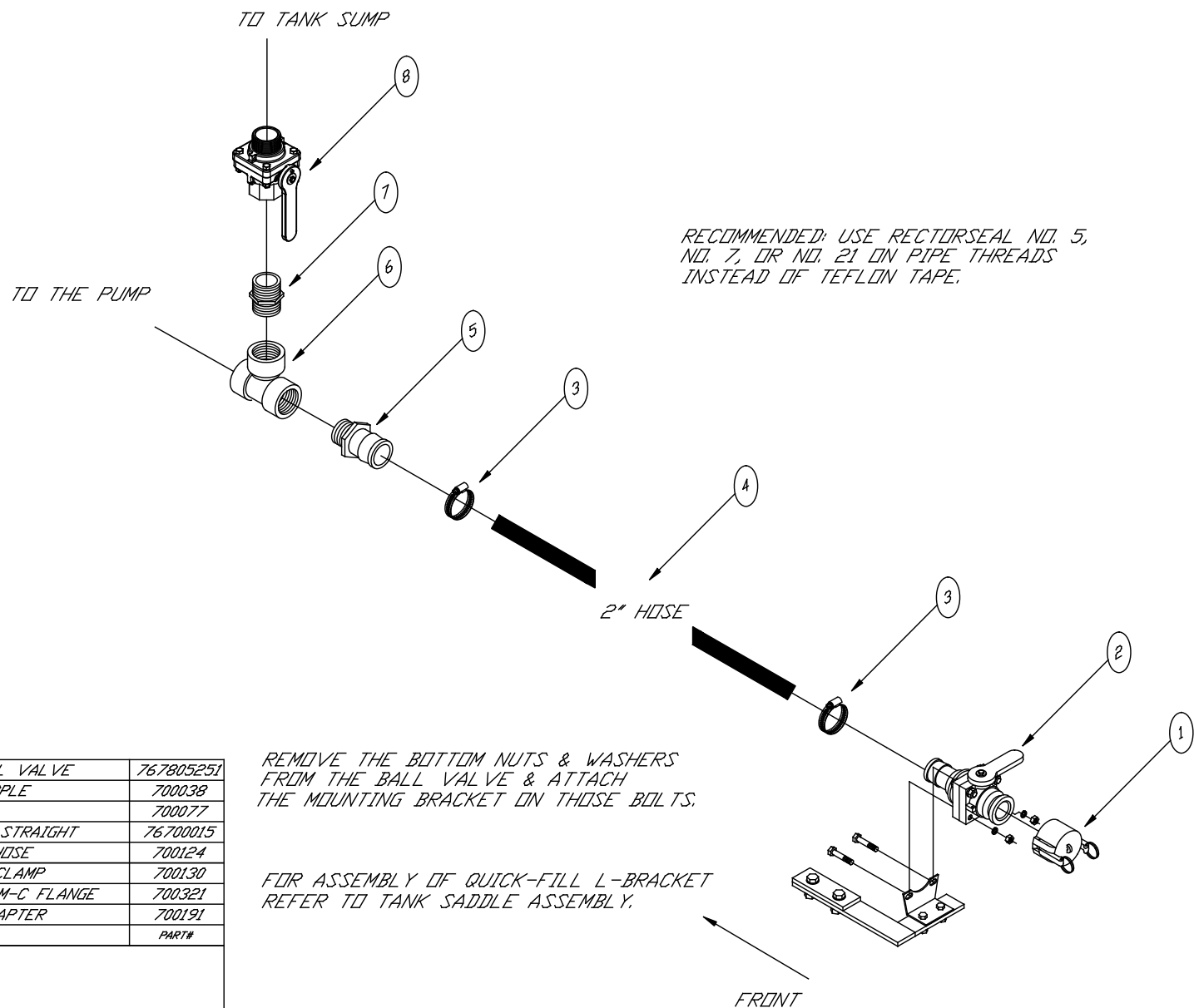
ITEM#	QTY.	PART #	DESCRIPTION
1	1	76801820	2450 TONGUE/MAINFRAME
2	1	760000117	BALL VALVE MOUNTING BRACKET
3	1	76101329	3/8"-16 X 7" X 8.5" U-BOLT-PLT
4	2	76101220	3/8" LOCK WASHER - PLT.
5	2	76101211	3/8"-16 HEX NUT-PLT

2 BALL VALVE ASSEMBLY



2 BALL VALVE ASSEMBLY**NOTES**

<i>ITEM NO.</i>	<i>PART NUMBER</i>	<i>Description1</i>	<i>QTY.</i>
<i>1</i>	<i>767800362</i>	<i>BALL VALVE (1) - 451</i>	<i>2</i>
<i>2</i>	<i>767002904</i>	<i>S.S. FLANGE CLAMP</i>	<i>4</i>
<i>3</i>	<i>767002901</i>	<i>1-1/4" BARB ELBOW FLANGE</i>	<i>1</i>
<i>4</i>	<i>767002902</i>	<i>1-1/4" FLANGE ELBOW</i>	<i>1</i>
<i>5</i>	<i>767002903</i>	<i>1-1/4" FLANGE ADAPTER</i>	<i>1</i>
<i>6</i>	<i>76700022</i>	<i>1" NPT X 1" BARB - 90</i>	<i>2</i>
<i>7</i>	<i>76700237</i>	<i>4" PRESSURE GAUGE (0-100 PSI)</i>	<i>1</i>
<i>8</i>	<i>760000117</i>	<i>VALVE MOUNT</i>	<i>1</i>
<i>9</i>	<i>76101114</i>	<i>5/16"-18 X 1"-PLT-GR5</i>	<i>2</i>
<i>10</i>	<i>76101219</i>	<i>5/16" LOCK WASHER-PLT</i>	<i>2</i>
<i>11</i>	<i>76101210</i>	<i>5/16"-18 HEX NUT-PLT</i>	<i>2</i>
<i>12</i>	<i>767001191</i>	<i>1-1/4" EPDM HOSE</i>	<i>7 ft</i>
<i>13</i>	<i>76700129</i>	<i>1-1/2" HOSE CLAMP</i>	<i>2</i>

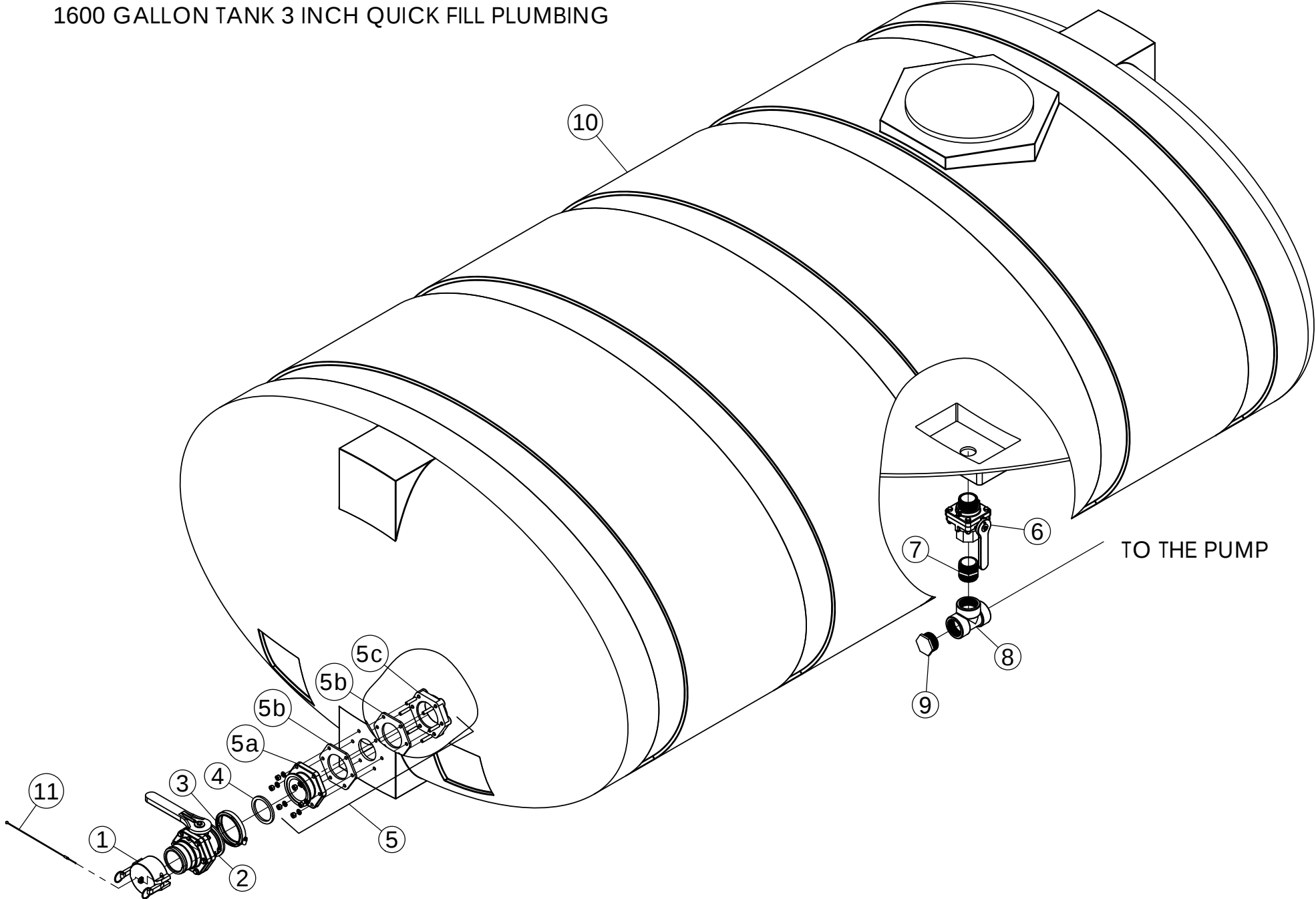


8	1	2" MNPT X 2" FNPT BALL VALVE	767805251
7	1	2" NPT CLOSE NIPPLE	700038
6	1	2" NPT TEE	700077
5	1	2" NPT X 2" HOSE BARB STRAIGHT	76700015
4	1	2" X 108" - EDPM HOSE	700124
3	2	2" STAINLESS HOSE CLAMP	700130
2	1	2" M-M BALL VALVE X 2" M-C FLANGE	700321
1	1	2" CAP FOR MALE ADAPTER	700191
ITEM	QTY	DESCRIPTION	PART#

ASSEMBLY DESCRIPTION:

2" QUICK FILL PLUMBING SCHEMATIC

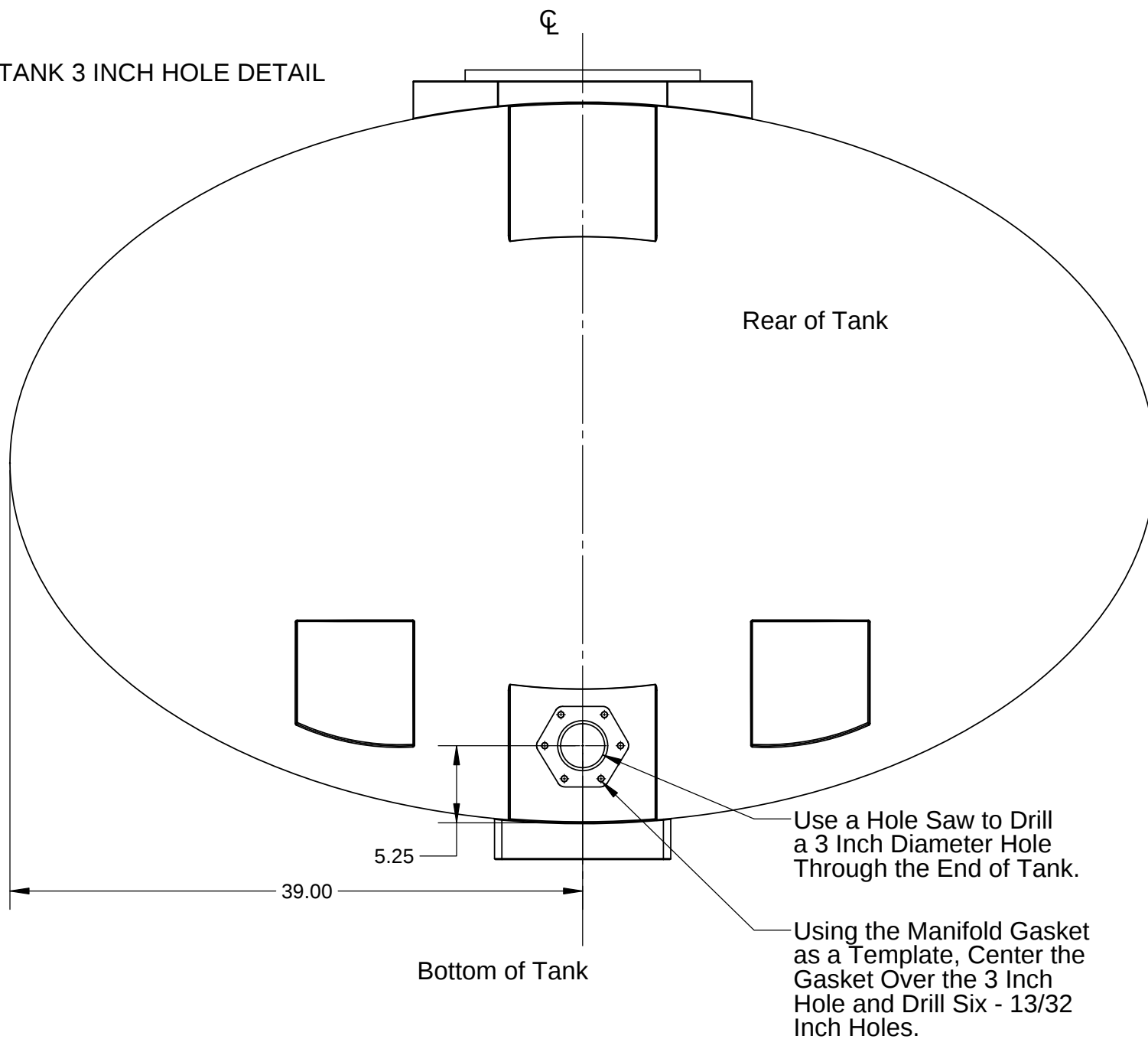
1600 GALLON TANK 3 INCH QUICK FILL PLUMBING



1600 GALLON TANK 3 INCH QUICK FILL PLUMBING

ITEM NO.	PART NUMBER	Description1	Default/QTY.
1	76700320	3" CAP	1
2	76700316	3" STUBBY VALVE, 3" MANIFOLD FLANGE X 3" MALE ADAPTER	1
3	76700318	3" WORM SCREW CLAMP	1
4	76700317	3" GASKET	1
5	76700319	3" MANIFOLD TANK FLANGE X FEMALE THREAD	1
5a	-	MANIFOLD ENDPLATE	1
5b	-	MANIFOLD GASKET	2
5c	-	MANIFOLD BLIND HOLE ENDPLATE	1
6	767805251	2" MNPT X 2" FNPT X BALL VALVE	1
7	76700038	2" MNPT CLOSE NIPPLE	1
8	76700077	2" FNPT TEE	1
9	76700085	2" MNPT PLUG	1
10	76750037	1600 Gallon Poly Tank	1
11	76450064	Lanyard For Male Adapter Cap	1

1600 GALLON TANK 3 INCH HOLE DETAIL

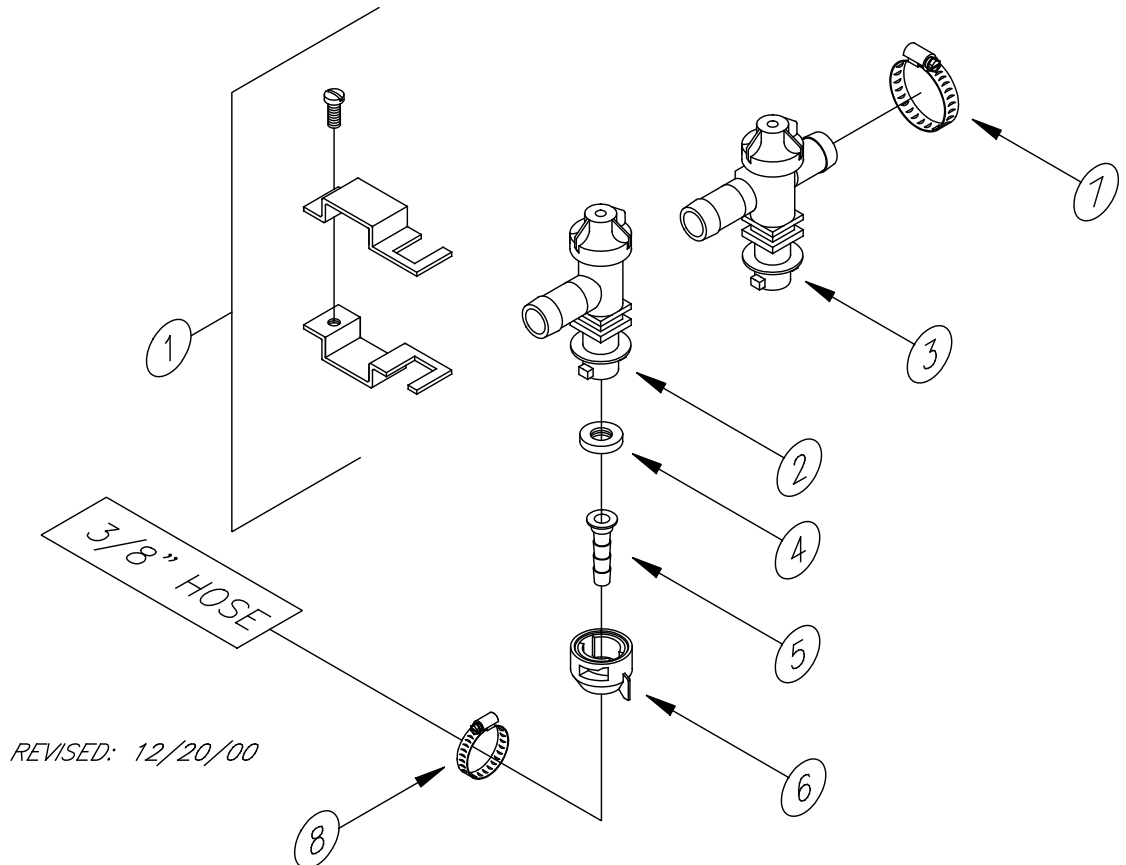
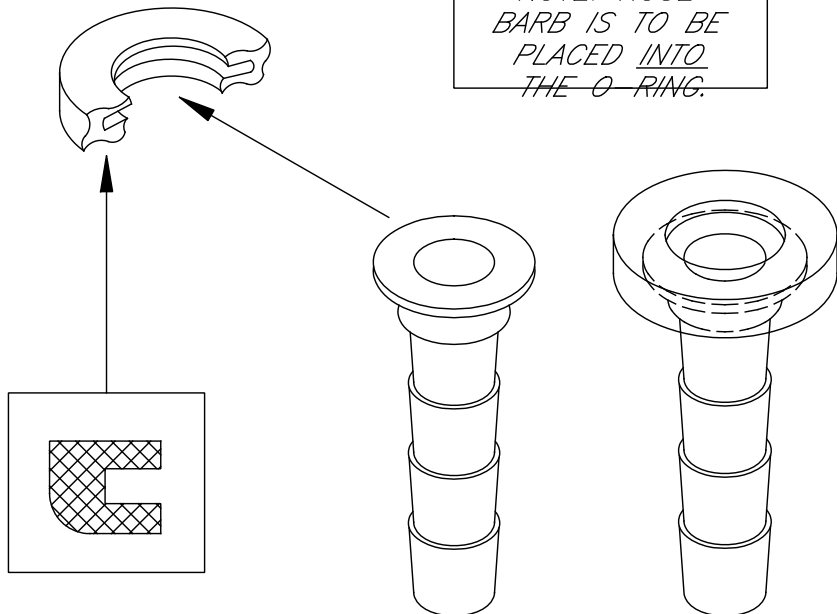


NOZZLE ASSEMBLY (EXPLODED)

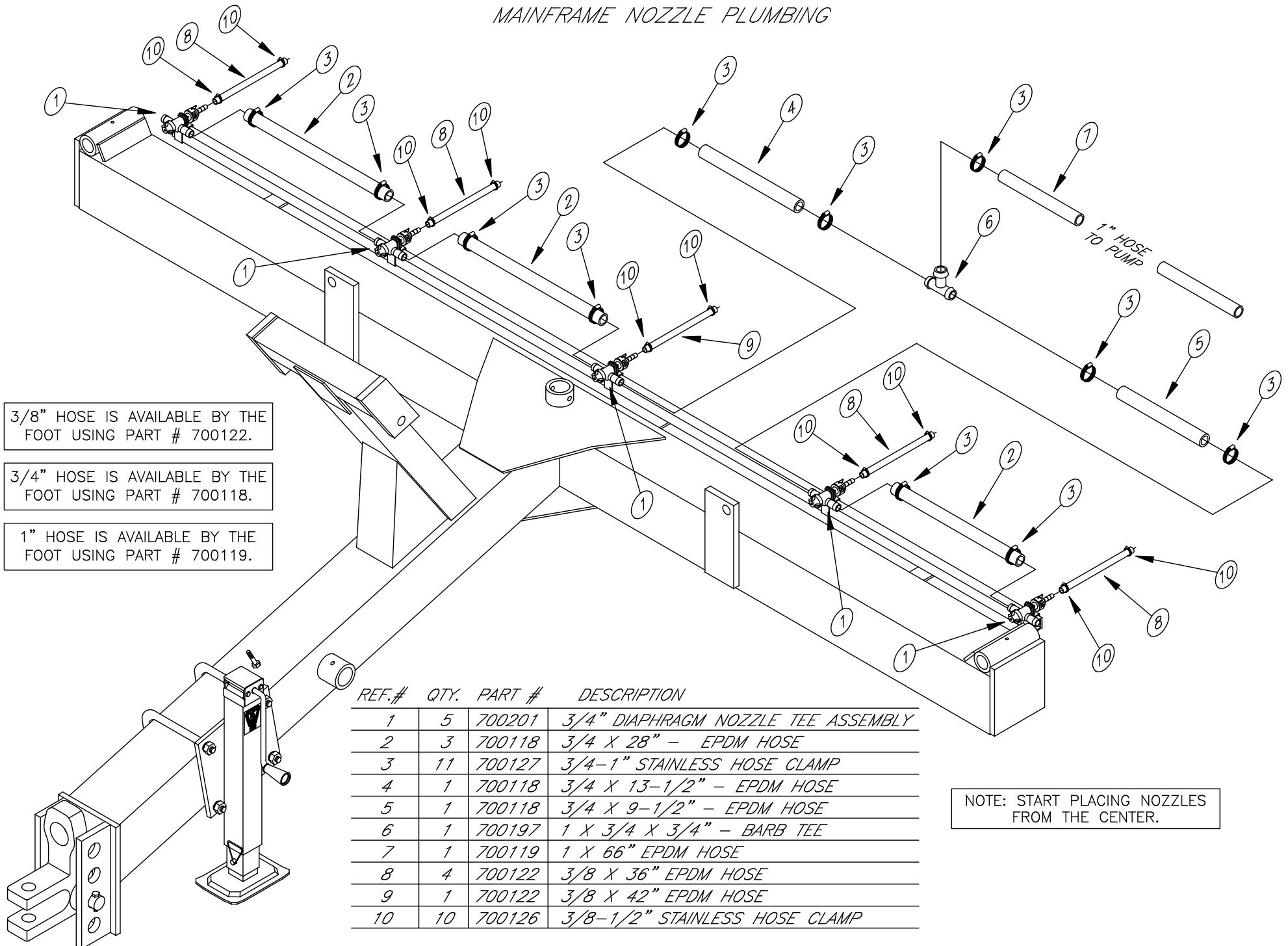
REF. #	QTY.	PART #	DESCRIPTION
1	1	700203	1-1/4" SQUARE NOZZLE CLAMP
2	1	700199	3/4" DIAPHRAGM NOZZLE ELBOW
3	1	700201	3/4" DIAPHRAGM NOZZLE TEE
4	1	700305	SPLIT HOSE BARB O-RING
5	1	700302	1/4" HOSE BARB FOR NOZZLE CAP
6	1	700303	NOZZLE CAP - BLUE
7	1-2	700127	3/4" STAINLESS HOSE CLAMP
8	1	700126	3/8-1/2"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

NOTE: QUANTITIES LISTED ARE FOR ONE (1) NOZZLE ONLY.

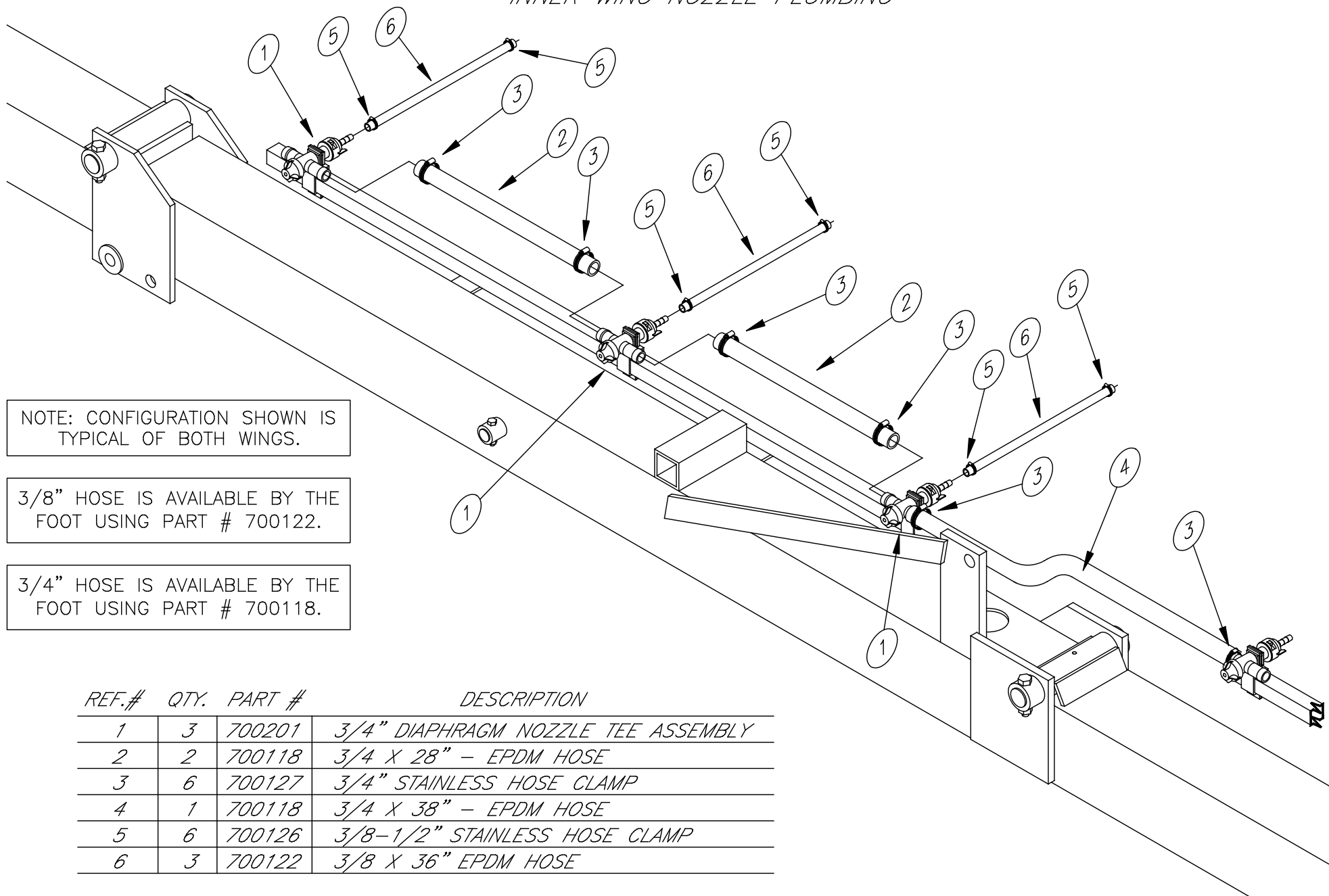
NOTE: HOSE BARB IS TO BE PLACED INTO THE O-RING.



MAINFRAME NOZZLE PLUMBING



INNER WING NOZZLE PLUMBING



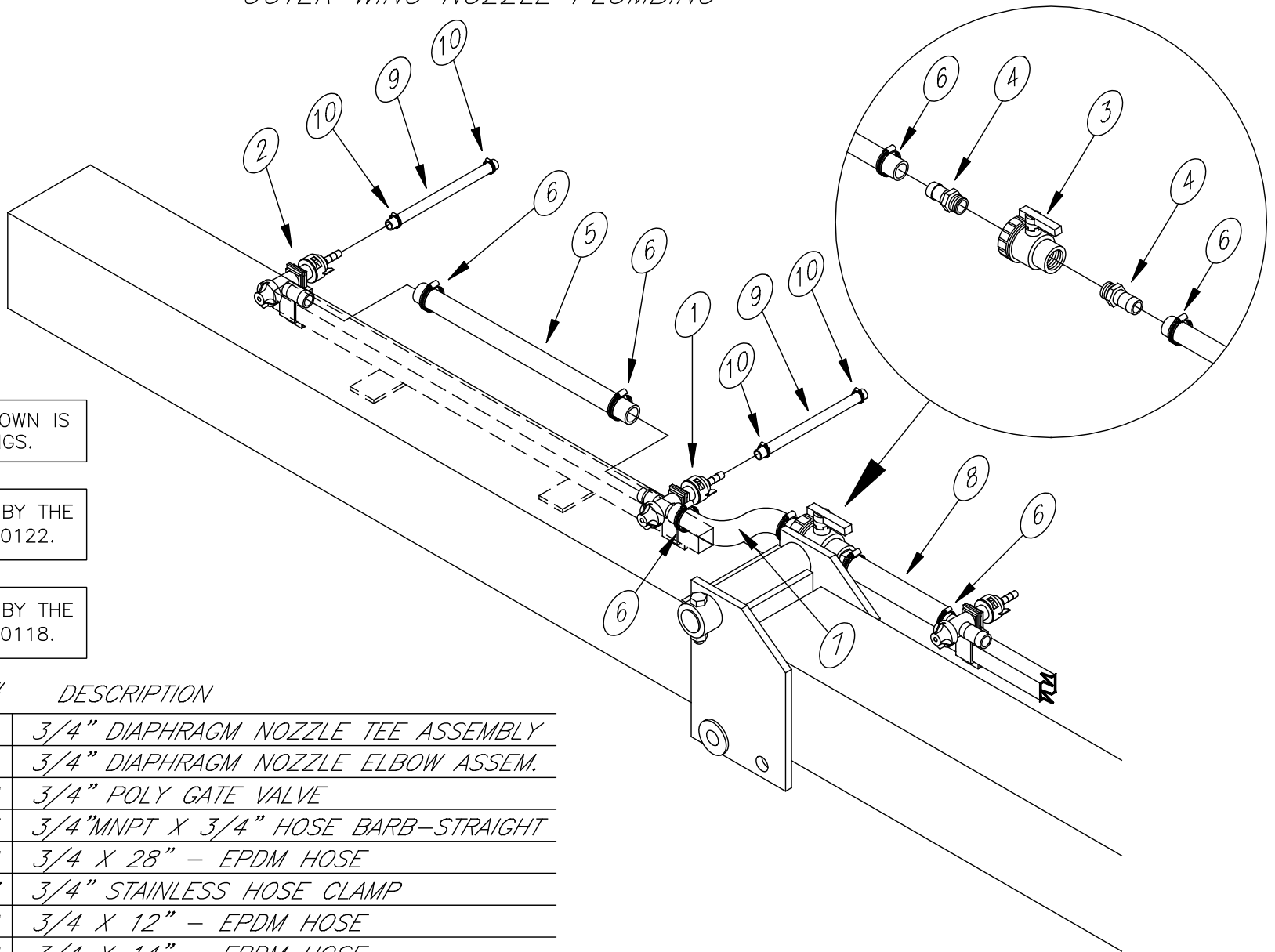
NOTE: CONFIGURATION SHOWN IS
TYPICAL OF BOTH WINGS.

3/8" HOSE IS AVAILABLE BY THE
FOOT USING PART # 700122.

3/4" HOSE IS AVAILABLE BY THE
FOOT USING PART # 700118.

REF.#	QTY.	PART #	DESCRIPTION
1	3	700201	3/4" DIAPHRAGM NOZZLE TEE ASSEMBLY
2	2	700118	3/4 X 28" - EPDM HOSE
3	6	700127	3/4" STAINLESS HOSE CLAMP
4	1	700118	3/4 X 38" - EPDM HOSE
5	6	700126	3/8-1/2" STAINLESS HOSE CLAMP
6	3	700122	3/8 X 36" EPDM HOSE

OUTER WING NOZZLE PLUMBING



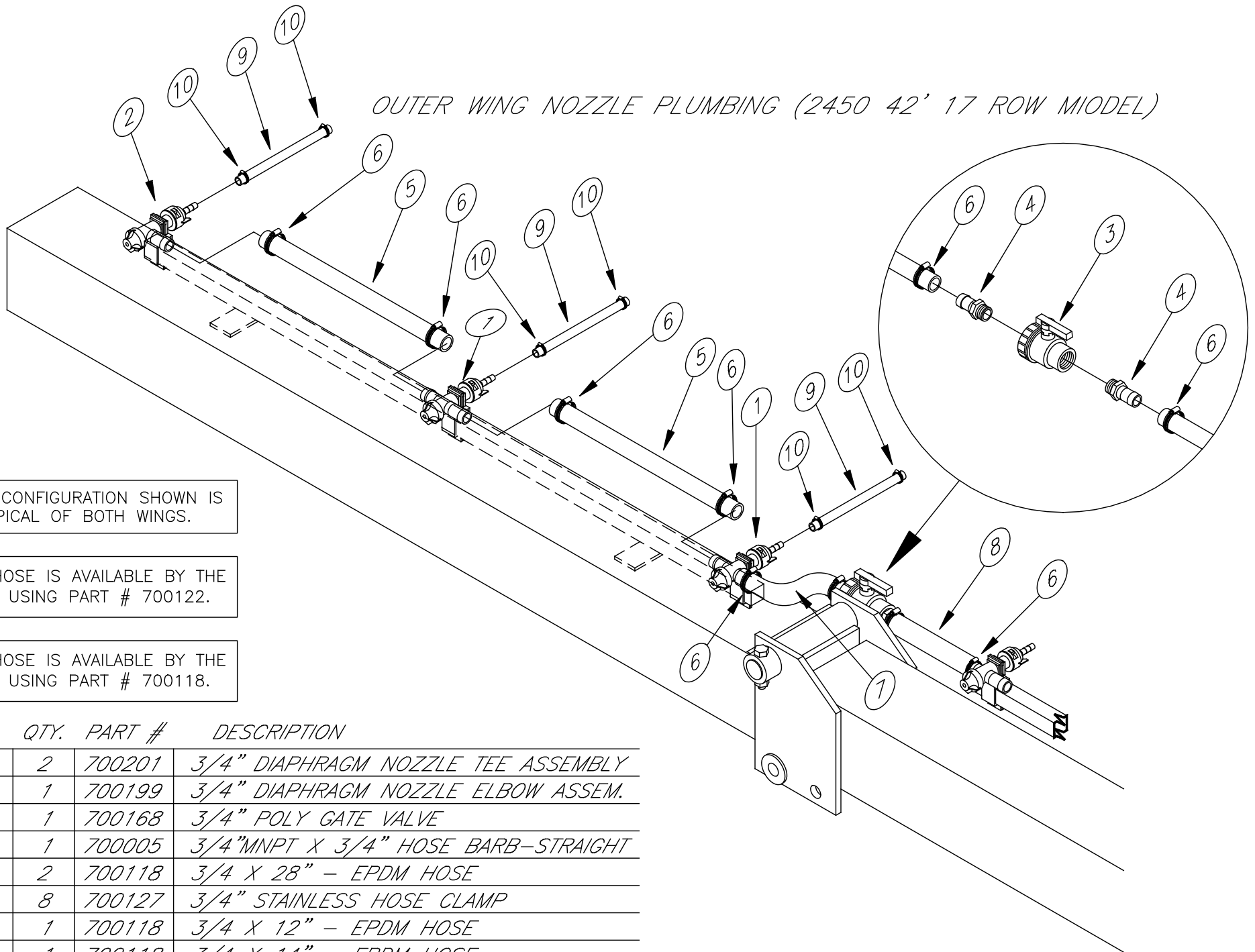
NOTE: CONFIGURATION SHOWN IS
TYPICAL OF BOTH WINGS.

3/8" HOSE IS AVAILABLE BY THE
FOOT USING PART # 700122.

3/4" HOSE IS AVAILABLE BY THE
FOOT USING PART # 700118.

REF.#	QTY.	PART #	DESCRIPTION
1	1	700201	3/4" DIAPHRAGM NOZZLE TEE ASSEMBLY
2	1	700199	3/4" DIAPHRAGM NOZZLE ELBOW ASSEM.
3	1	700168	3/4" POLY GATE VALVE
4	1	700005	3/4" MNPT X 3/4" HOSE BARB-STRAIGHT
5	1	700118	3/4 X 28" - EPDM HOSE
6	6	700127	3/4" STAINLESS HOSE CLAMP
7	1	700118	3/4 X 12" - EPDM HOSE
8	1	700118	3/4 X 14" - EPDM HOSE
9	2	700122	3/8 X 36" EVA HOSE
10	4	700126	3/8-1/2" STAINLESS HOSE CLAMP

OUTER WING NOZZLE PLUMBING (2450 42' 17 ROW MODEL)



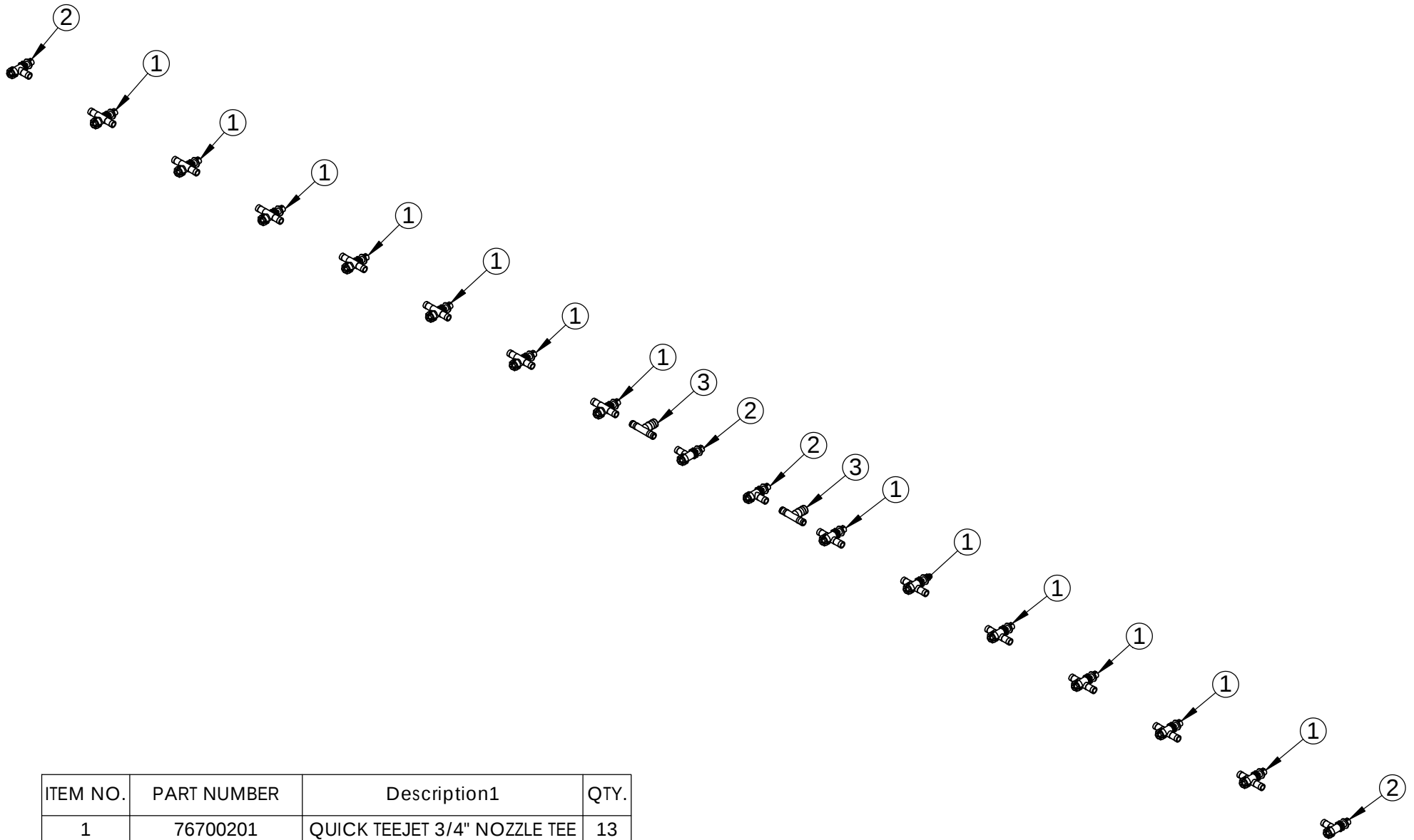
NOTE: CONFIGURATION SHOWN IS
TYPICAL OF BOTH WINGS.

3/8" HOSE IS AVAILABLE BY THE
FOOT USING PART # 700122.

3/4" HOSE IS AVAILABLE BY THE
FOOT USING PART # 700118.

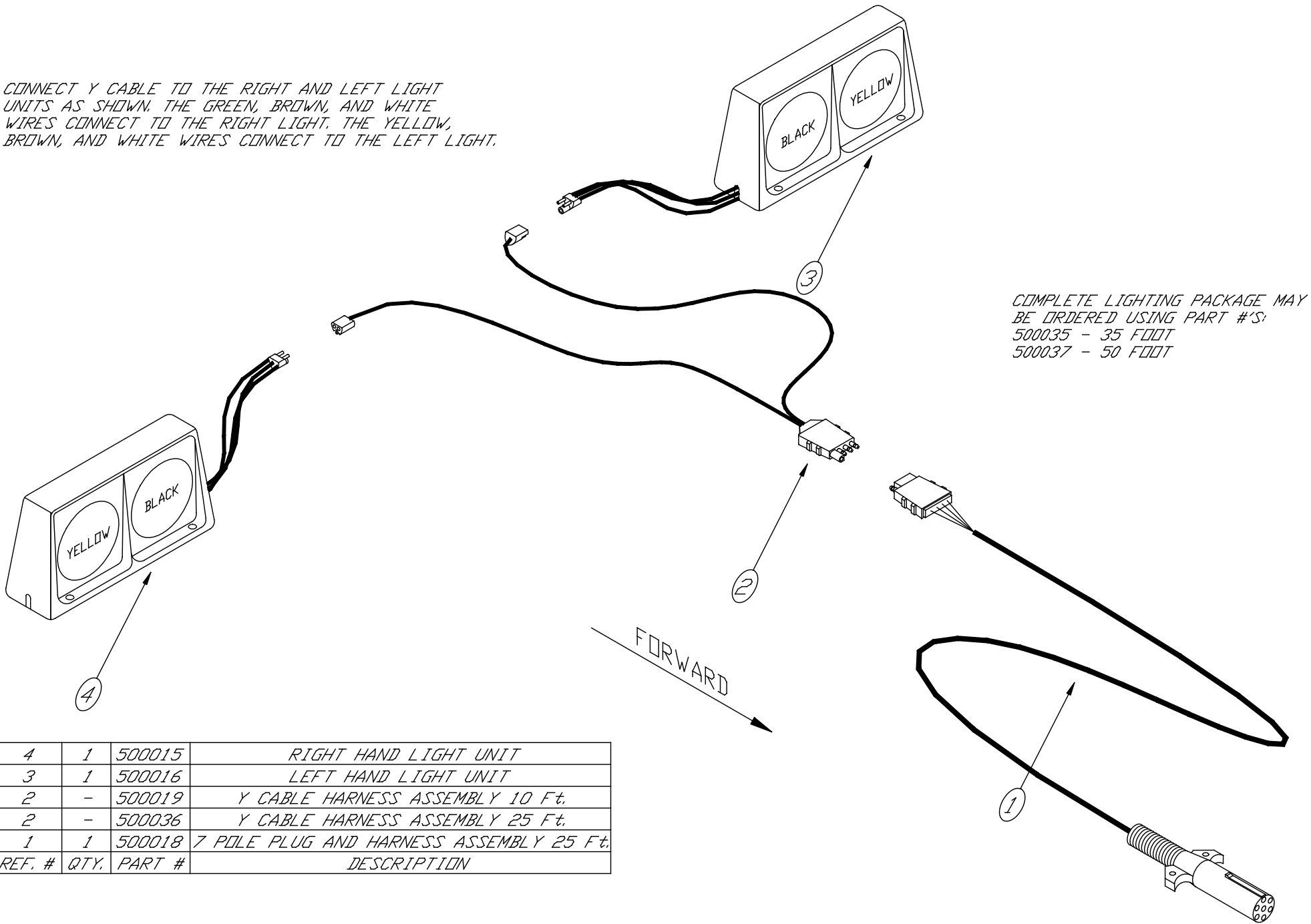
REF.#	QTY.	PART #	DESCRIPTION
1	2	700201	3/4" DIAPHRAGM NOZZLE TEE ASSEMBLY
2	1	700199	3/4" DIAPHRAGM NOZZLE ELBOW ASSEM.
3	1	700168	3/4" POLY GATE VALVE
4	1	700005	3/4" MNPT X 3/4" HOSE BARB-STRAIGHT
5	2	700118	3/4 X 28" - EPDM HOSE
6	8	700127	3/4" STAINLESS HOSE CLAMP
7	1	700118	3/4 X 12" - EPDM HOSE
8	1	700118	3/4 X 14" - EPDM HOSE
9	3	700122	3/8 X 36" EVA HOSE
10	6	700126	3/8-1/2" STAINLESS HOSE CLAMP

Typical Nozzle Layout For 2 Ball Valves - 17-30 Inch Rows



ITEM NO.	PART NUMBER	Description1	QTY.
1	76700201	QUICK TEEJET 3/4" NOZZLE TEE	13
2	76700199	QUICK TEEJET 3/4" NOZZLE ELBOW	4
3	76700197	1" x 3/4" x 3/4" - BARB TEE	2

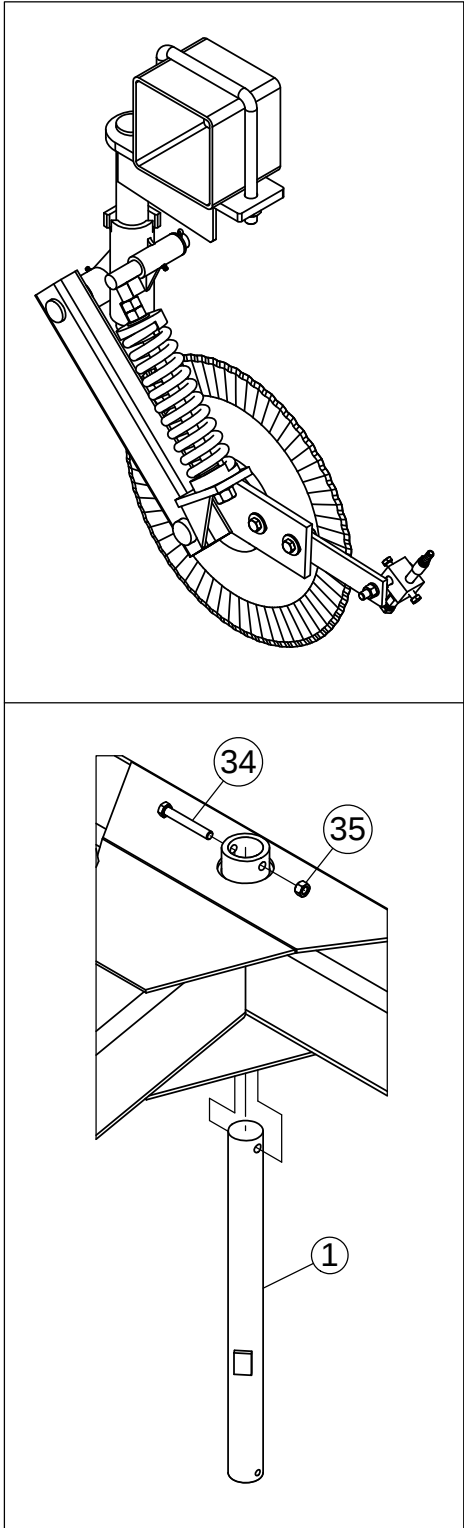
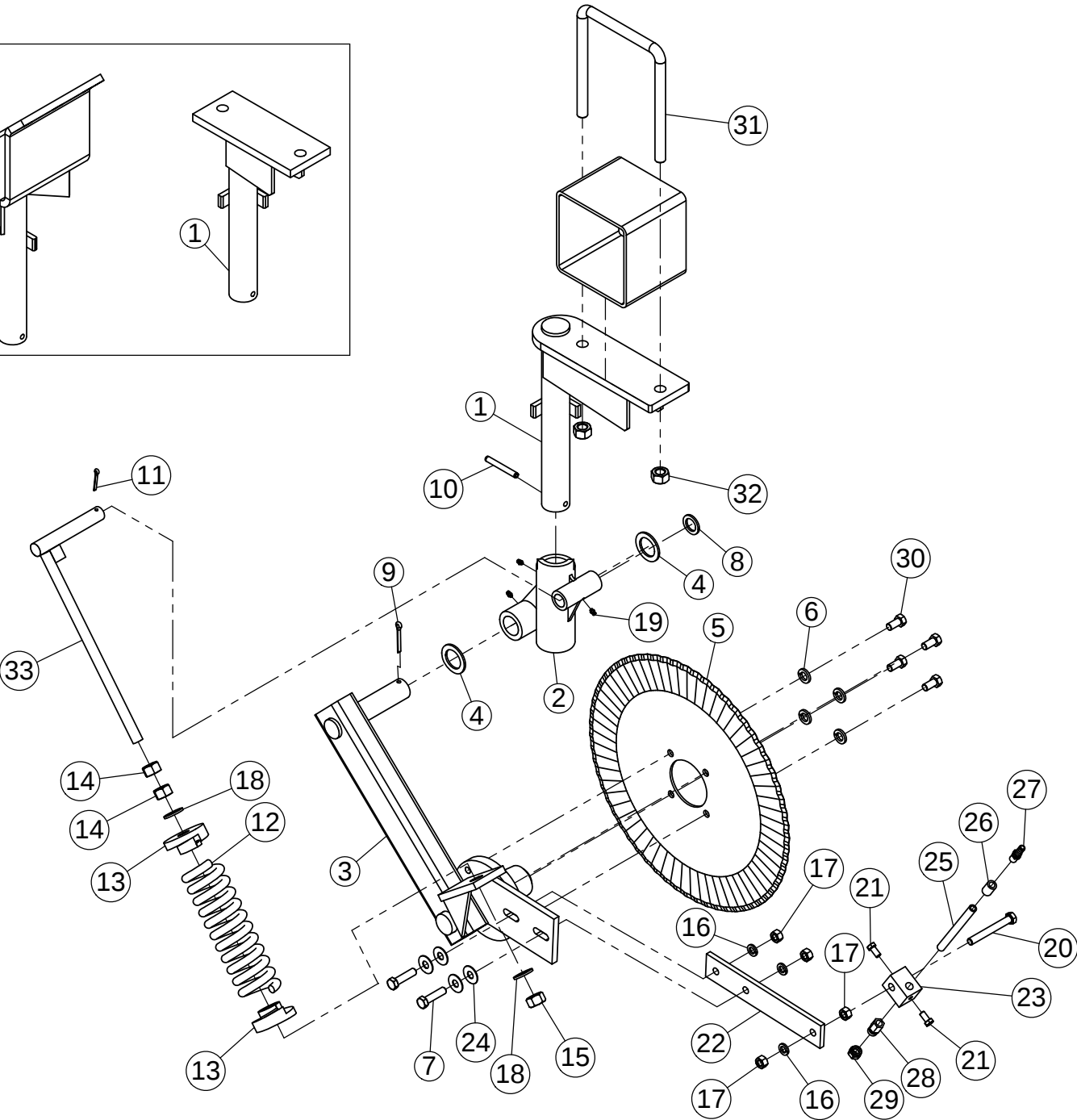
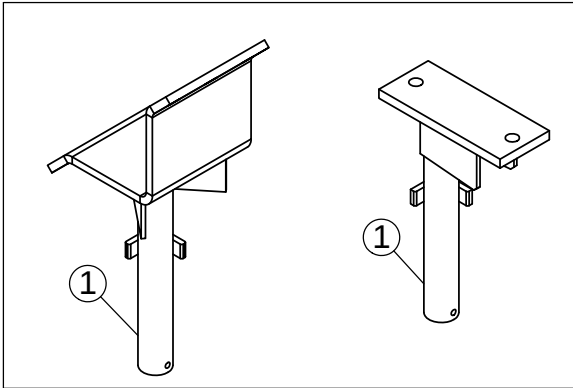
CONNECT Y CABLE TO THE RIGHT AND LEFT LIGHT
UNITS AS SHOWN. THE GREEN, BROWN, AND WHITE
WIRES CONNECT TO THE RIGHT LIGHT. THE YELLOW,
BROWN, AND WHITE WIRES CONNECT TO THE LEFT LIGHT.



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

LIQUID INJECTION SWIVEL COULTER ASSEMBLY

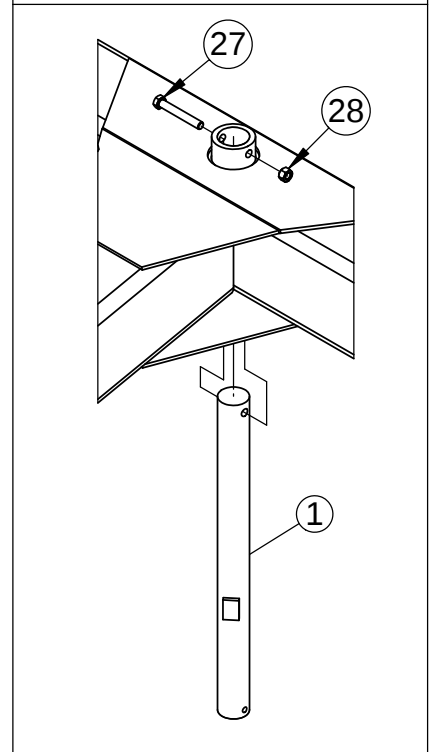
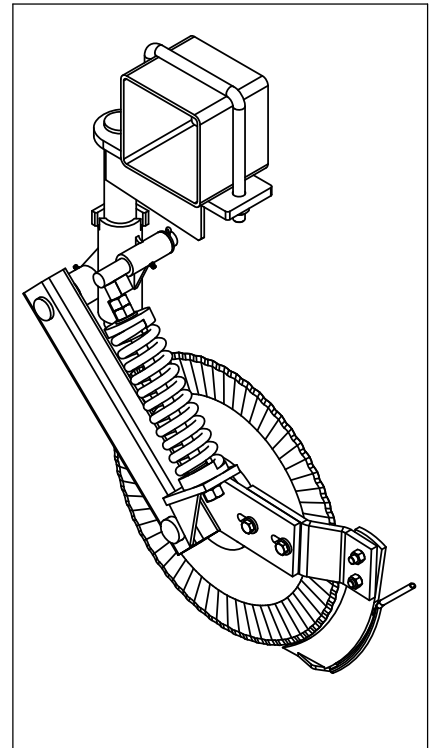
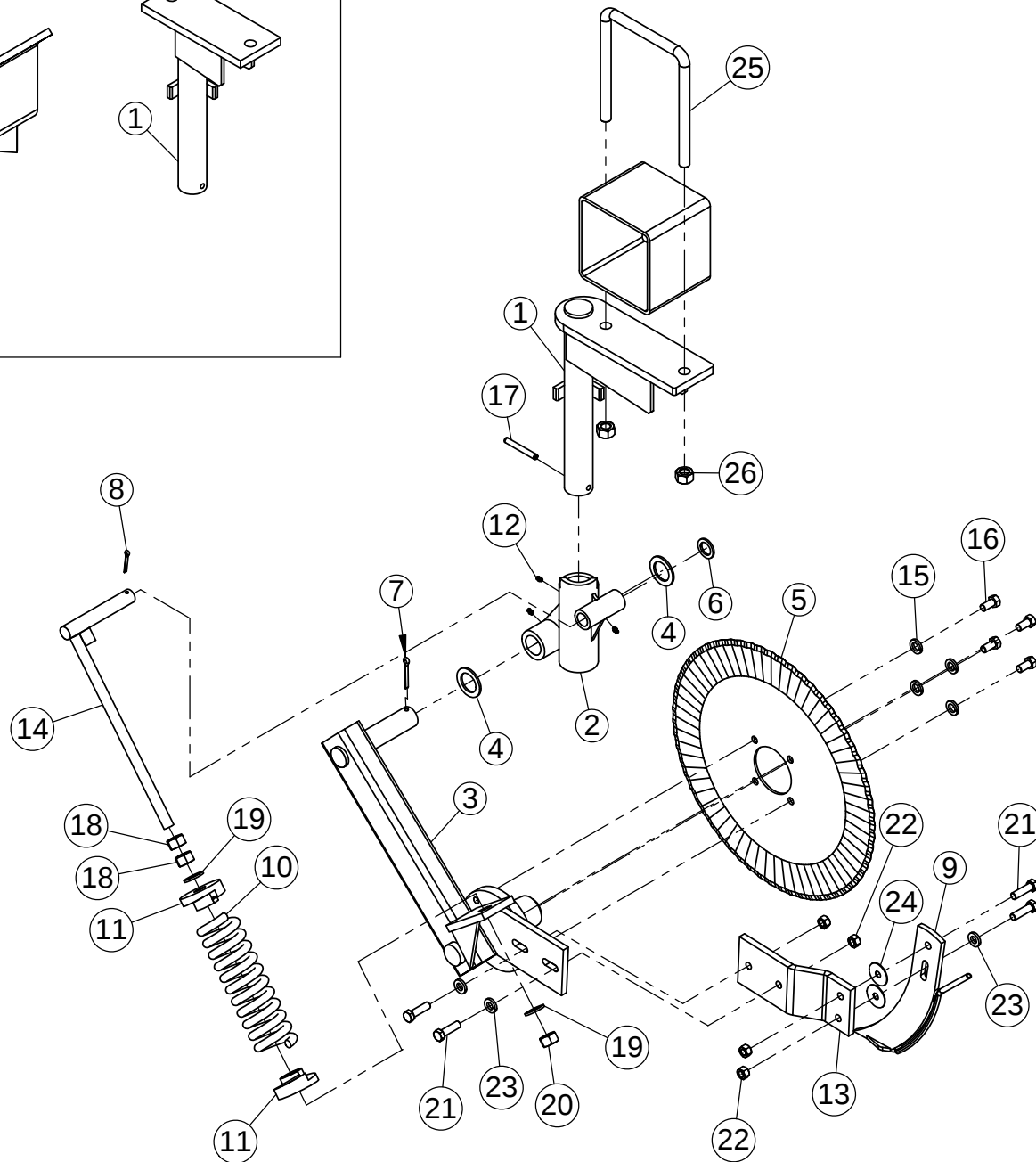
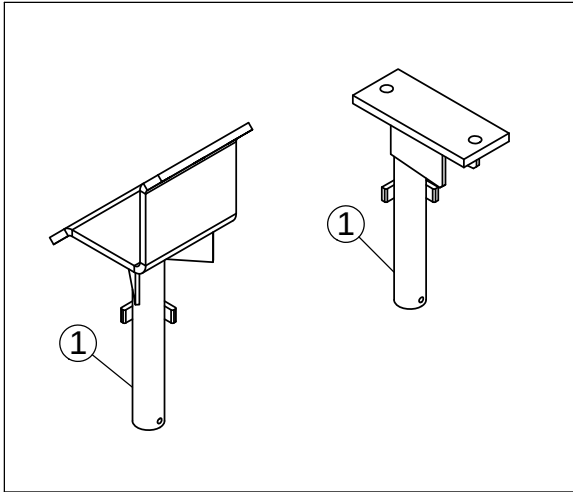


LIQUID INJECTION SWIVEL COULTER ASSEMBLY

NOTES:

ITEM NO.	PART NUMBER	Description1	QTY.
1	76801698	Swivel Coulter Mounting Bracket Weldment	1
-	76802076	SWIVEL COULTER OFFSET MOUNT	-
-	76801884	WHEEL CLAMP WELDMENT	-
-	76801701	CENTER SWIVEL COULTER PIN WELDMENT	-
2	76450063	LIQUID COULTER CAST SWIVEL	1
3	768017881	LIQUID COULTER ARM WELDMENT	1
4	76101462	10 GA. X 1-1/2" MACHINE WASHER (ZINC PLATED)	2
5	76400101	20" RIPPLE COULTER BLADE STRAIGHT	1
-	764000097	20" SMOOTH COULTER - BLACK (NOT SHOWN)	-
6	600382054	LOCK WASHER 5/8"	4
7	76101149SS	1/2"-13 X 2" HEX BOLT SS	2
8	76101435	10 GA. X 1" MACHINE WASHER	1
9	76101265	1/4" X 2" Cotter Pin	1
10	76101425	3/8" X 3" ROLL PIN	1
11	76101246	3/16" X 1-1/2" COTTER PIN	1
12	76400095	10 1/4" COULTER COMPRESSION SPRING - BLACK	1
13	76400096	SPRING CASTING FOR OUR#400095 - BLACK	2
14	76101215	3/4"-10 HEX NUT-PLT	2
15	600365019	STANDARD NUT 3/4"	1
16	76101222SS	1/2" LOCK WASHER-STAINLESS STEEL	3
17	76101213SS	1/2"-13 HEX NUT-STAINLESS STEEL	4
18	76101233	3/4" FLAT WASHER-PLT	2
19	76101252	1/4"-28 STRAIGHT GREASE ZERK	3
20	76101153SS	1/2"-13 X 4" HEX BOLT SS	1
21	76101281SS	3/8"-16 X 3/4" HEX BOLT SS	2
22	760000136	COULTER INJECTION ARM	1
23	76400103	INJECTION TUBE MOUNTING BLOCK	1
24	76101231SS	1/2" FLAT WASHER-STAINLESS STEEL	4
25	76700279	1/4 NPT X 6 STAINLESS STEEL NIPPLE"	1
26	76700307	1/4" FNPT STAINLESS BUSHING	1
27	76700277	1/4 NPT X 3/8 HOSE BARB"	1
28	76700289	TEEJET T-BODY FITTING	1
29	76700288	TEEJET CAP S.S. - CP1325-SS	1
30	76301150	LUG BOLT - 1/2"-20 X 1"	4
31	76101316	3/4"-10 X 7" X 9" U-BOLT-PLT	1
32	600366024	STOVER LOCKNUT TYPE C - 3/4" - UNC	2
33	76801789	TENSION ROD WELDMENT FOR CAST	1
34	600356137	BOLT 1/2" X 3 1/2" GR. 5	1
35	600366030	STOVER LOCKNUT TYPE C - 1/2" - UNC	1

LIQUID SIDEDRESS SWIVEL COULTER ASSEMBLY



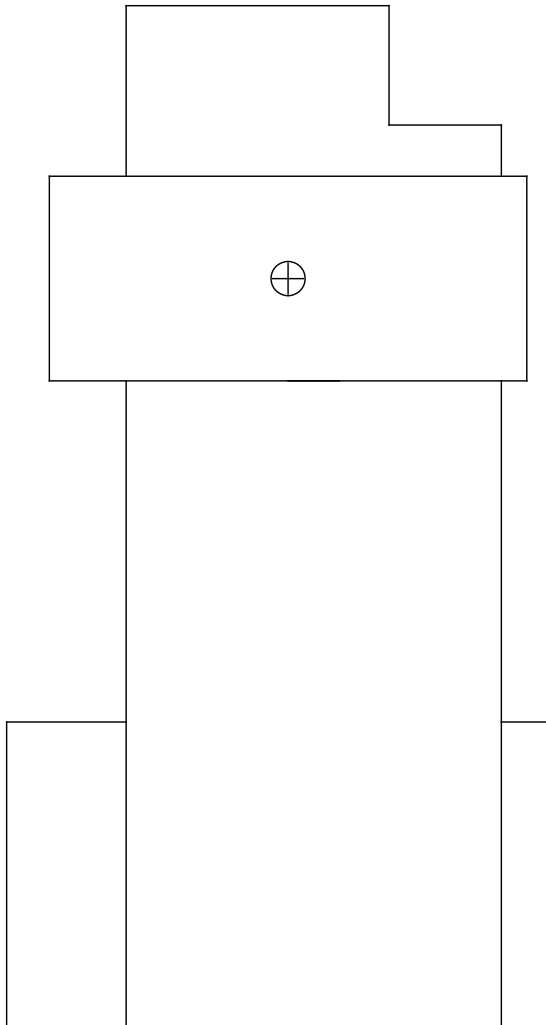
LIQUID SIDEDRESS SWIVEL COULTER ASSEMBLY

NOTES: IF NEEDED, USE SHIM(S) (24)
SO KNIFE IS TRUE WITH BLADE

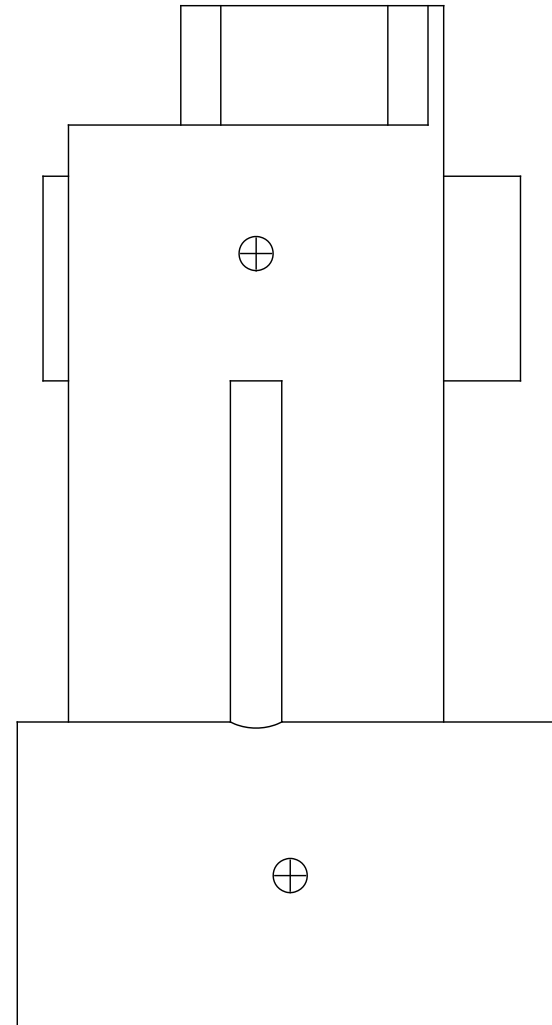
ITEM NO.	PART NUMBER	Description1	QTY.
1	76801698	Swivel Coulter Mounting Bracket Weldment	1
-	76802076	SWIVEL COULTER OFFSET MOUNT	-
-	76801884	WHEEL CLAMP WELDMENT	-
-	76801701	CENTER SWIVEL COULTER PIN WELDMENT	-
2	76450063	LIQUID COULTER CAST SWIVEL	1
3	768017881	LIQUID COULTER ARM WELDMENT	1
4	76101462	10 GA. X 1-1/2" MACHINE WASHER (ZINC PLATED)	2
5	76400101	20" RIPPLE COULTER BLADE STRAIGHT	1
-	764000097	20" SMOOTH COULTER - BLACK (NOT SHOWN)	-
6	76101435	10 GA. X 1" MACHINE WASHER	1
7	76101265	1/4" X 2" Cotter Pin	1
8	76101246	3/16" X 1-1/2" COTTER PIN	1
9	76450078	LIQUID SIDEDRESS KNIFE	1
10	76400095	10 1/4" COULTER COMPRESSION SPRING - BLACK	1
11	76400096	SPRING CASTING FOR OUR#400095 - BLACK	2
12	76101252	1/4"-28 STRAIGHT GREASE ZERK	3
13	760000134	KNIFE BRACKET	1
14	76801789	TENSION ROD WELDMENT FOR CAST	1
15	600382054	LOCK WASHER 5/8"	4
16	76301150	LUG BOLT - 1/2"-20 X 1"	4
17	76101425	3/8" X 3" ROLL PIN	1
18	76101215	3/4"-10 HEX NUT-PLT	2
19	76101233	3/4" FLAT WASHER-PLT	2
20	600365019	STANDARD NUT 3/4"	1
21	7600356139	1/2"-20 X 1-3/4" HEX BOLT PLT. GR.5 UNF	4
22	7600366050	STOVER LOCK NUT 1/2" TYPE C PLATED UNF	4
23	7600381055	FLAT WASHER 1/2" (.172" THICK)	3
24	7600381015	FLAT WASHER 1/2" X 1-3/4" O.D. X .062" THICKNESS	2
25	76101316	3/4"-10 X 7" X 9" U-BOLT-PLT	1
26	600366024	STOVER LOCKNUT TYPE C - 3/4" - UNC	2
27	600356137	BOLT 1/2" X 3 1/2" GR. 5	1
28	600366030	STOVER LOCKNUT TYPE C - 1/2" - UNC	1

GREASE ZERK LOCATION FOR SWIVEL COULTER CASTING

BACK

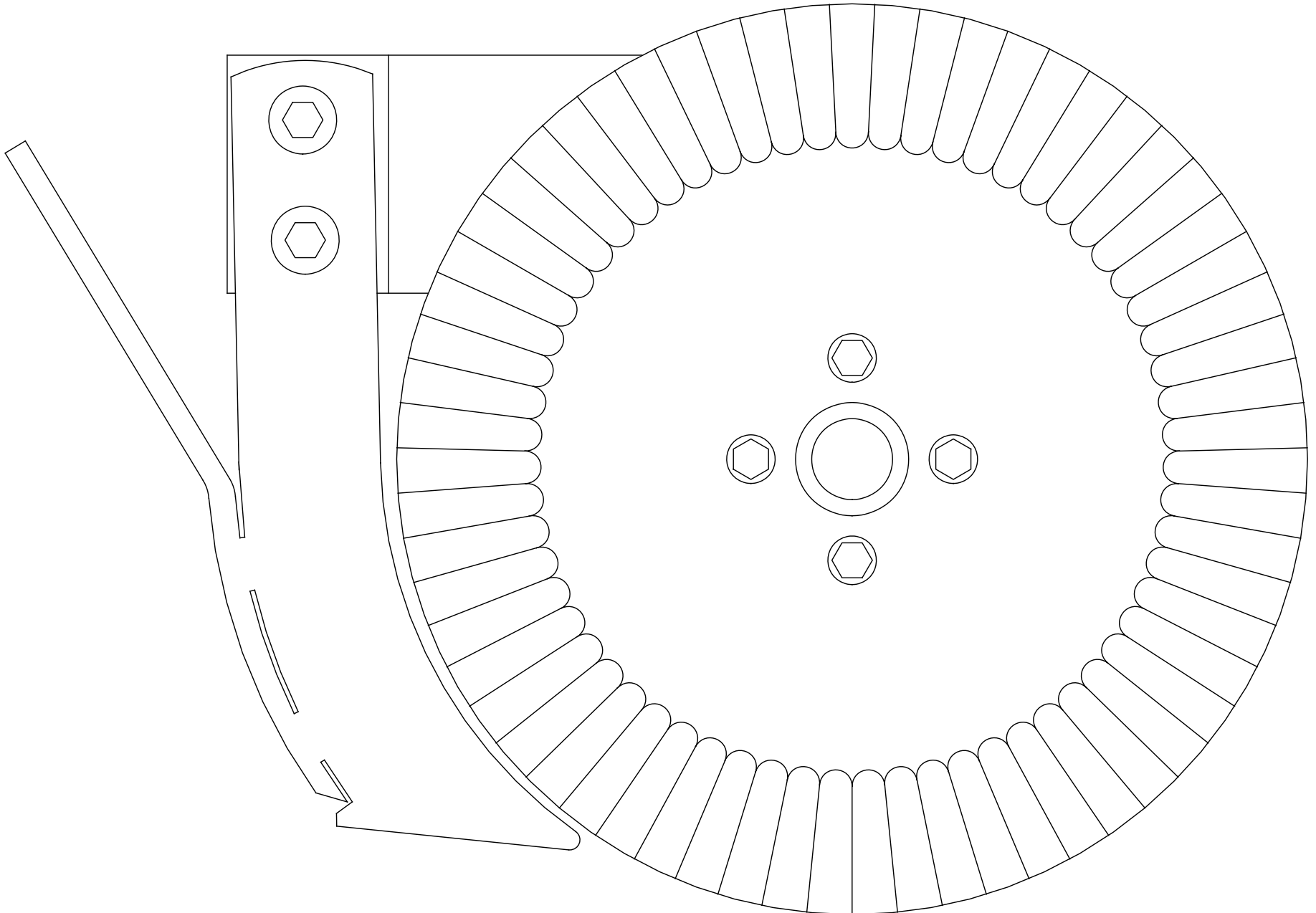


FRONT

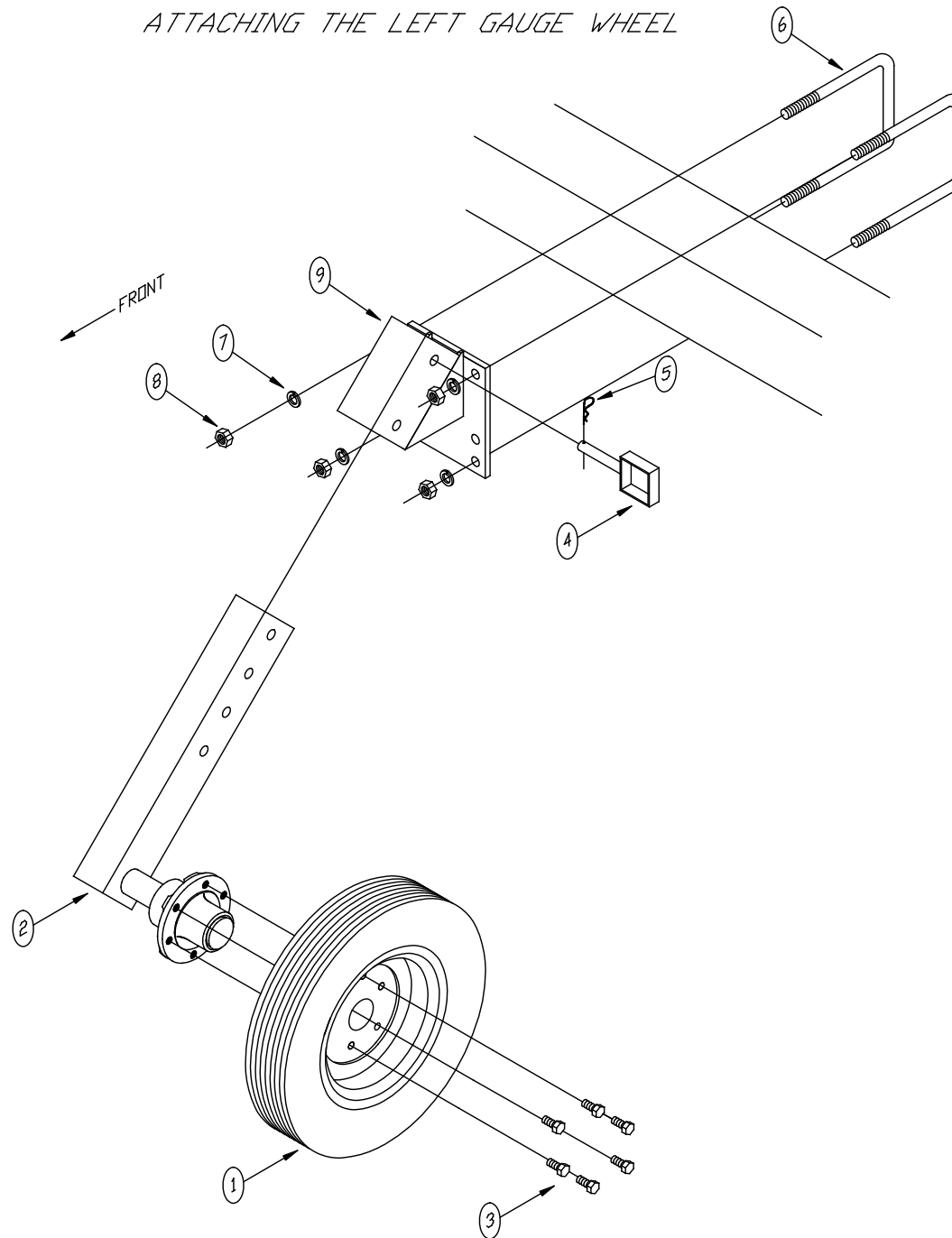


INJECTOR KNIFE PLACEMENT (2450InJ/KnPlc)

PLACE POINT OF KNIFE AS CLOSE TO DISC AS
POSSIBLE WITHOUT TOUCHING, THEN MOVE TOP OF KNIFE BACK 1/4".
BE SURE KNIFE IS CENTERED WITH DISC BLADE.



ATTACHING THE LEFT GAUGE WHEEL



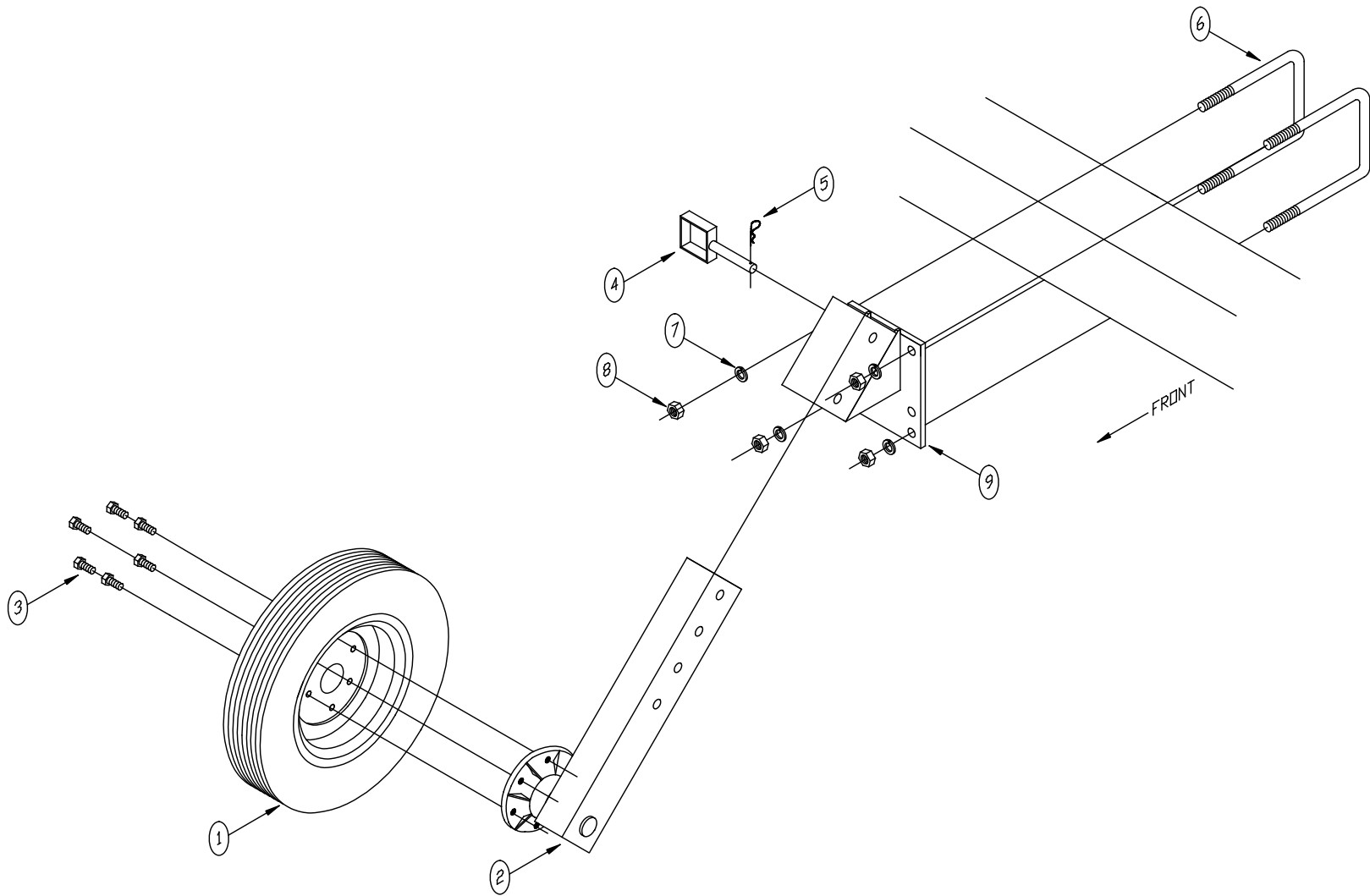
ATTACHING THE LEFT GAUGE WHEEL

NOTES:

<i>ITEM</i>	<i>QTY</i>	<i>PART#</i>	<i>DESCRIPTION</i>
<i>1</i>	<i>1</i>	<i>301259</i>	<i>9.5L15 8 PLY TIRE & 6X15-6 HOLE WHEEL ASS.</i>
<i>2</i>	<i>1</i>	<i>763012661</i>	<i>LEFT GAUGE WHEEL ASSEMBLY</i>
<i>3</i>	<i>6</i>	<i>301151</i>	<i>9/16-18 UNF. X 1-1/8" - LUG BOLT</i>
<i>4</i>	<i>1</i>	<i>802046</i>	<i>GAUGE WHEEL PIN</i>
<i>5</i>	<i>1</i>	<i>101265</i>	<i>1/4 X 2" - COTTER PIN</i>
<i>6</i>	<i>2</i>	<i>76101316</i>	<i>3/4-10 X 7 X 9" - U-BOLT PLT.</i>
<i>7</i>	<i>4</i>	<i>101224</i>	<i>3/4" LOCK WASHER - PLT.</i>
<i>8</i>	<i>4</i>	<i>101215</i>	<i>3/4-10 HEX NUT - PLT.</i>
<i>9</i>	<i>1</i>	<i>802045</i>	<i>GAUGE WHEEL MOUNTING BRACKET</i>

THE GAUGE WHEEL MOUNTING BRACKET (ITEM #9) ATTACHES TO THE OUTER WING.

ATTACHING THE RIGHT GAUGE WHEEL



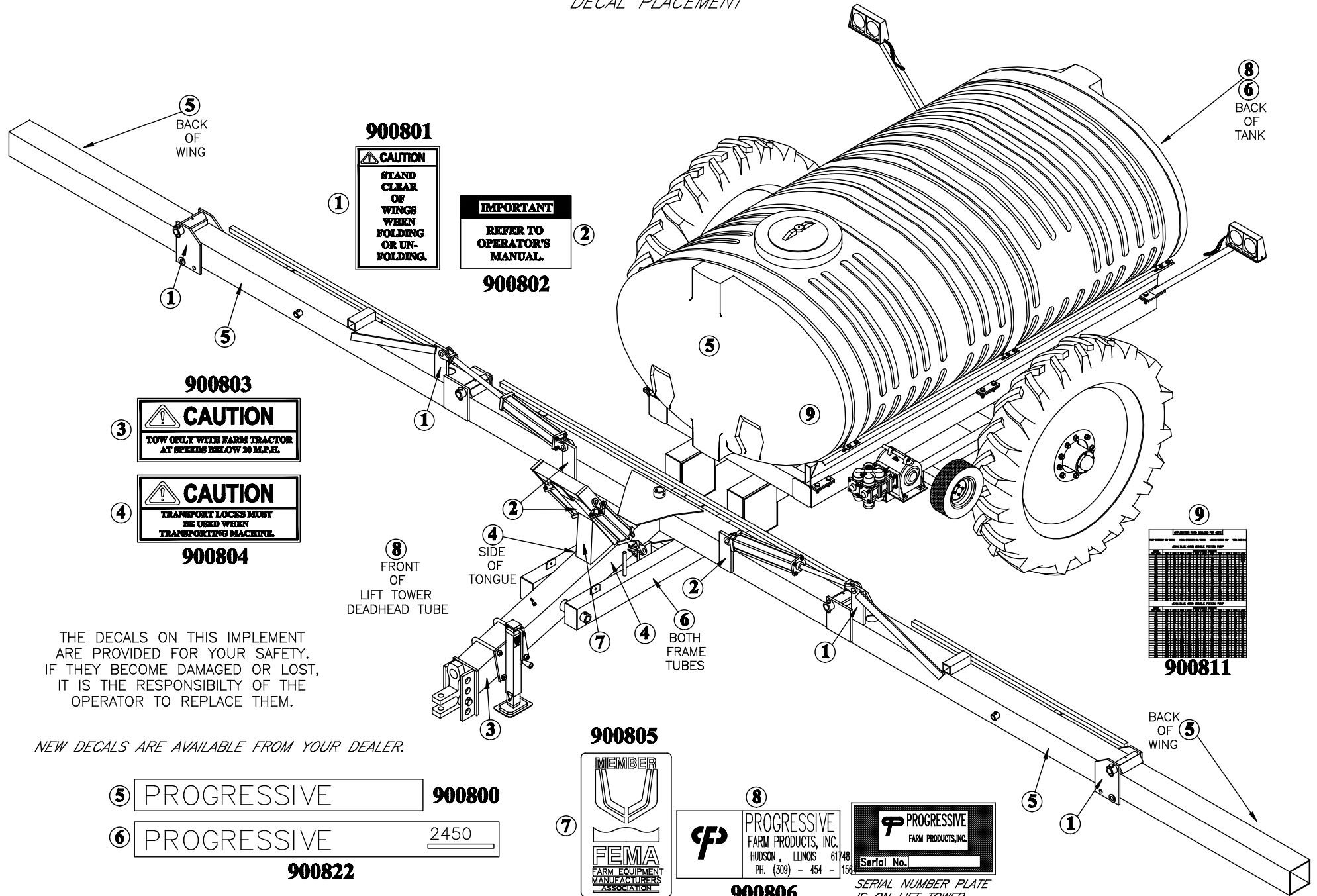
ATTACHING THE RIGHT GAUGE WHEEL

NOTES:

<i>ITEM</i>	<i>QTY</i>	<i>PART#</i>	<i>DESCRIPTION</i>
<i>1</i>	<i>1</i>	<i>301259</i>	<i>9.5L15 8 PLY TIRE & 6X15-6 HOLE WHEEL ASS.</i>
<i>2</i>	<i>1</i>	<i>763012661</i>	<i>RIGHT GAUGE WHEEL ASSEMBLY</i>
<i>3</i>	<i>6</i>	<i>301151</i>	<i>9/16-18 UNF. X 1-1/8 - LUG BOLT</i>
<i>4</i>	<i>1</i>	<i>802046</i>	<i>GAUGE WHEEL PIN</i>
<i>5</i>	<i>1</i>	<i>101265</i>	<i>1/4 X 2" - COTTER PIN</i>
<i>6</i>	<i>2</i>	<i>76101316</i>	<i>3/4-10 X 7 X 9" - U-BOLT PLT.</i>
<i>7</i>	<i>4</i>	<i>101224</i>	<i>3/4" LOCK WASHER - PLT.</i>
<i>8</i>	<i>4</i>	<i>101215</i>	<i>3/4-10 HEX NUT - PLT.</i>
<i>9</i>	<i>1</i>	<i>802045</i>	<i>GAUGE WHEEL MOUNTING BRACKET</i>

THE GAUGE WHEEL MOUNTING BRACKET (ITEM #9) ATTACHES TO THE OUTER WING.

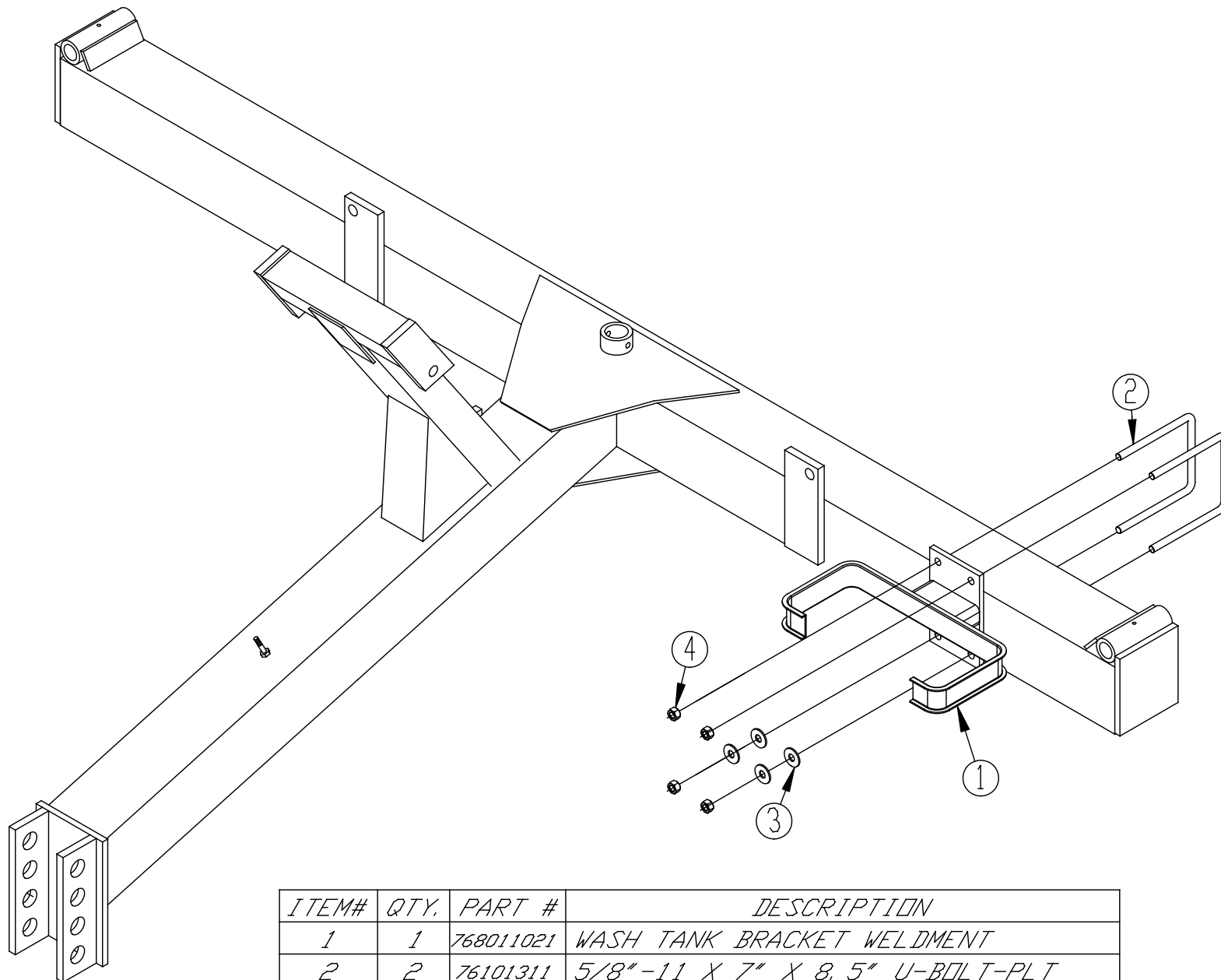
DECAL PLACEMENT



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.

ATTACHING THE WASH TANK BRACKET WELDMENT

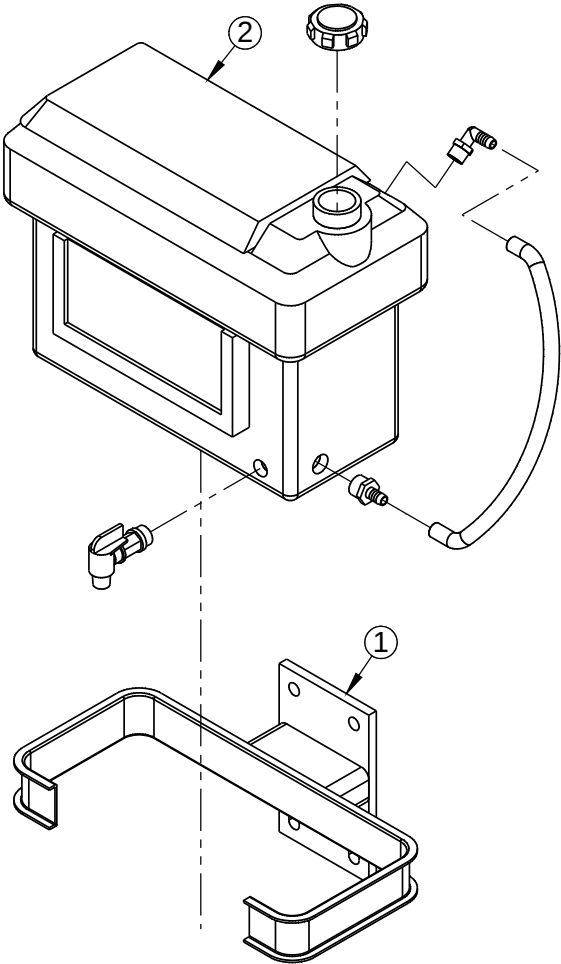


<i>ITEM#</i>	<i>QTY.</i>	<i>PART #</i>	<i>DESCRIPTION</i>
1	1	768011021	WASH TANK BRACKET WELDMENT
2	2	76101311	5/8"-11 X 7" X 8, 5" U-BOLT-PLT
3	4	600381020	FLAT WASHER 5/8"
4	4	600366031	STOVER LOCKNUT TYPE C - 5/8" -UNC

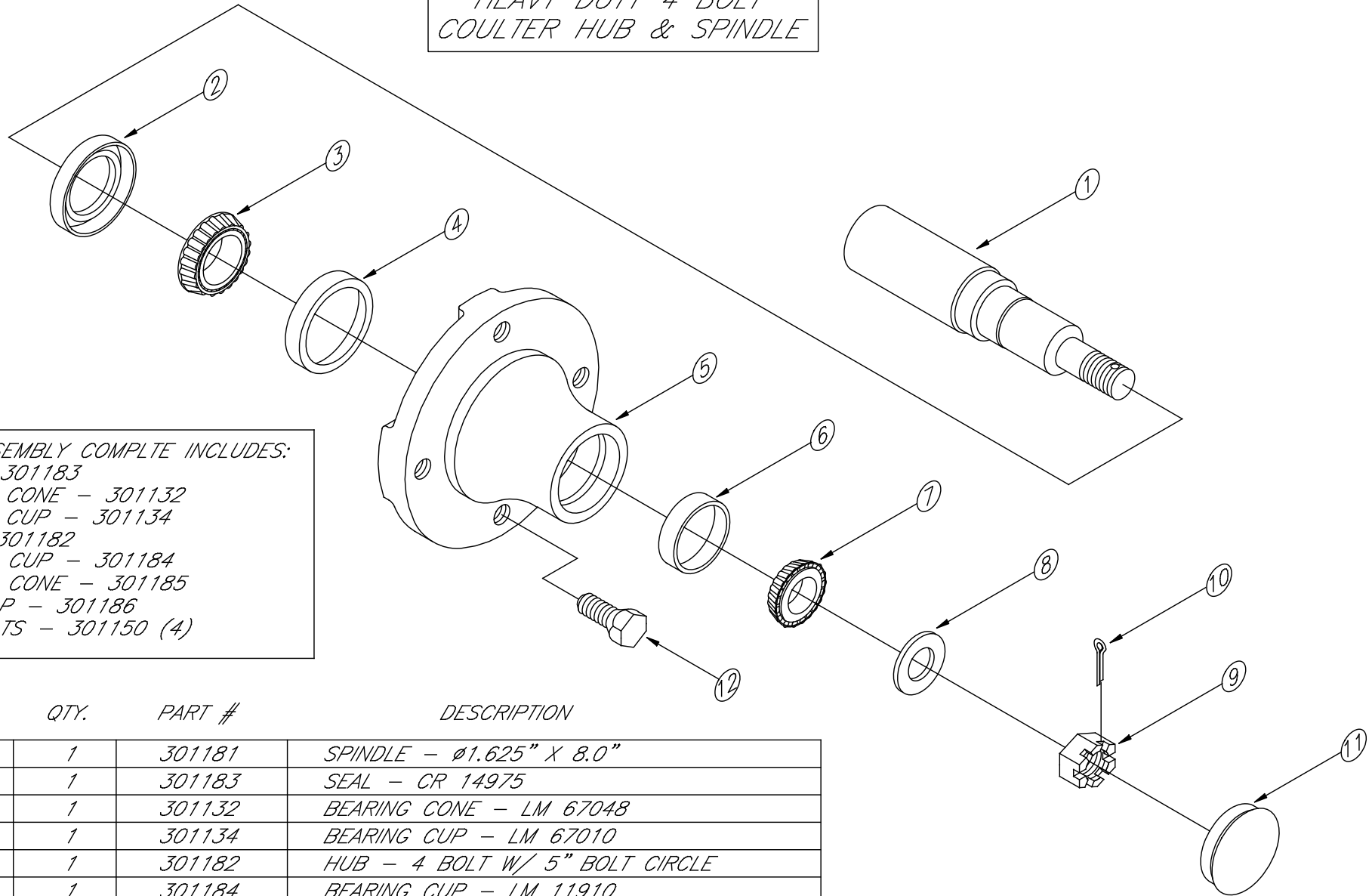
NOTE: POSITION BRACKET SO IT DOES NOT INTERFERE WITH ROW UNITS

ATTACHING THE WASH TANK

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



HEAVY DUTY 4 BOLT COULTER HUB & SPINDLE



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

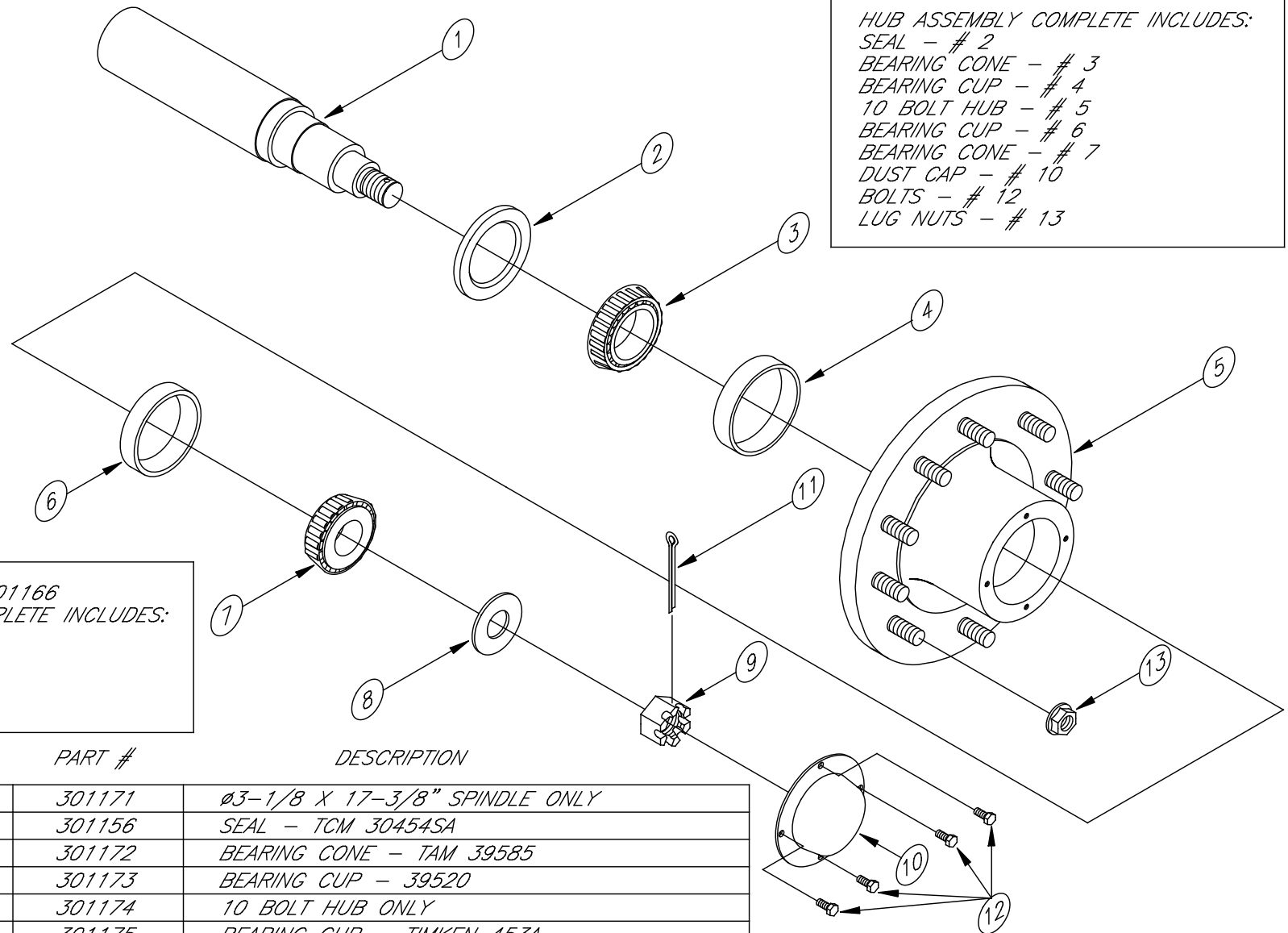
SPINDLE ASSEMBLY COMPLETE INCLUDES:
SPINDLE - 301181
WASHER - 301142
CASTELLATED NUT - 301153
COTTER PIN - 301152

REF. #	QTY.	PART #	DESCRIPTION
1	1	301181	SPINDLE - Ø1.625" X 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

10 BOLT HUB & SPINDLE

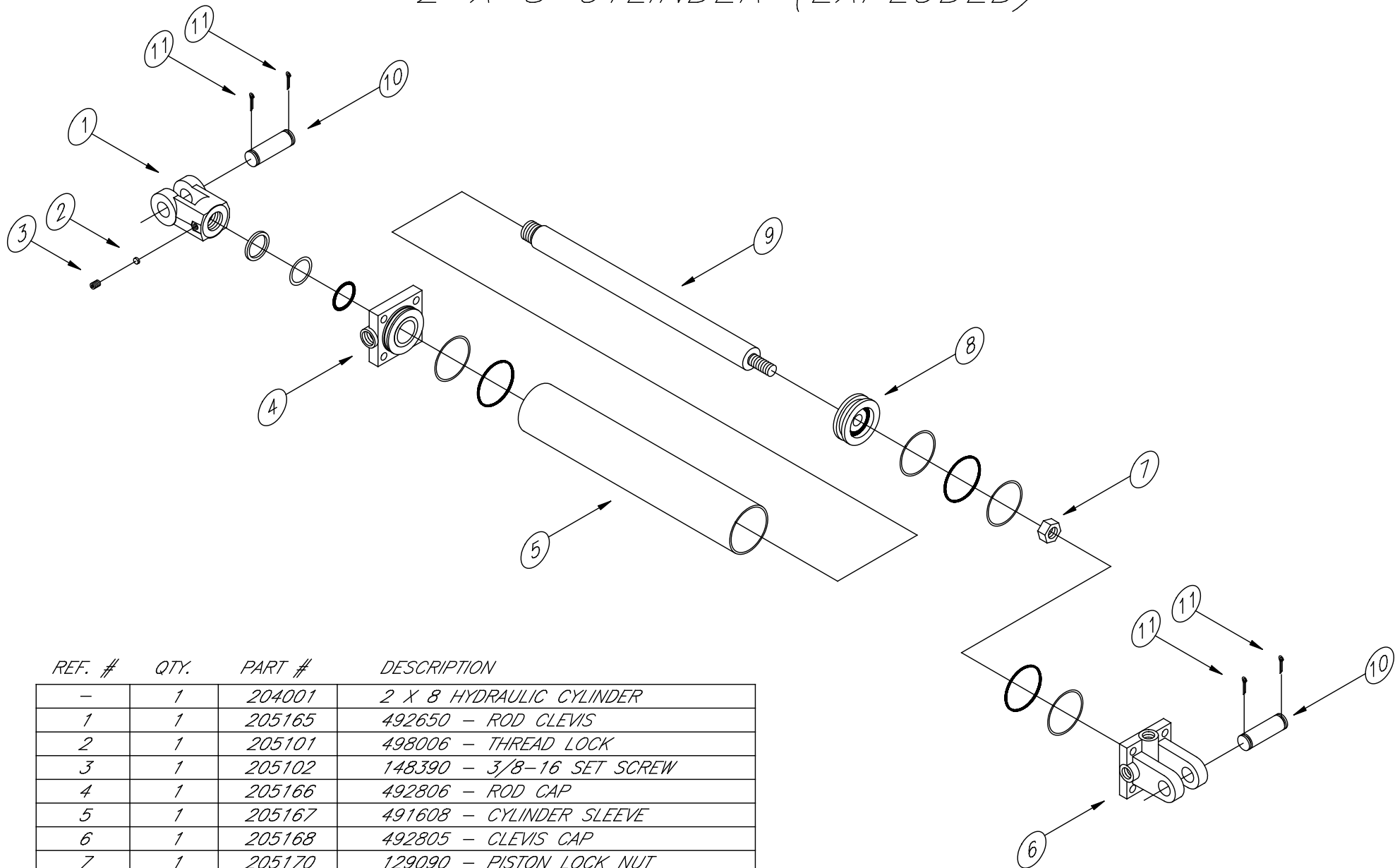
HUB ASSEMBLY COMPLETE - 301162
HUB ASSEMBLY COMPLETE INCLUDES:
SEAL - # 2
BEARING CONE - # 3
BEARING CUP - # 4
10 BOLT HUB - # 5
BEARING CUP - # 6
BEARING CONE - # 7
DUST CAP - # 10
BOLTS - # 12
LUG NUTS - # 13

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



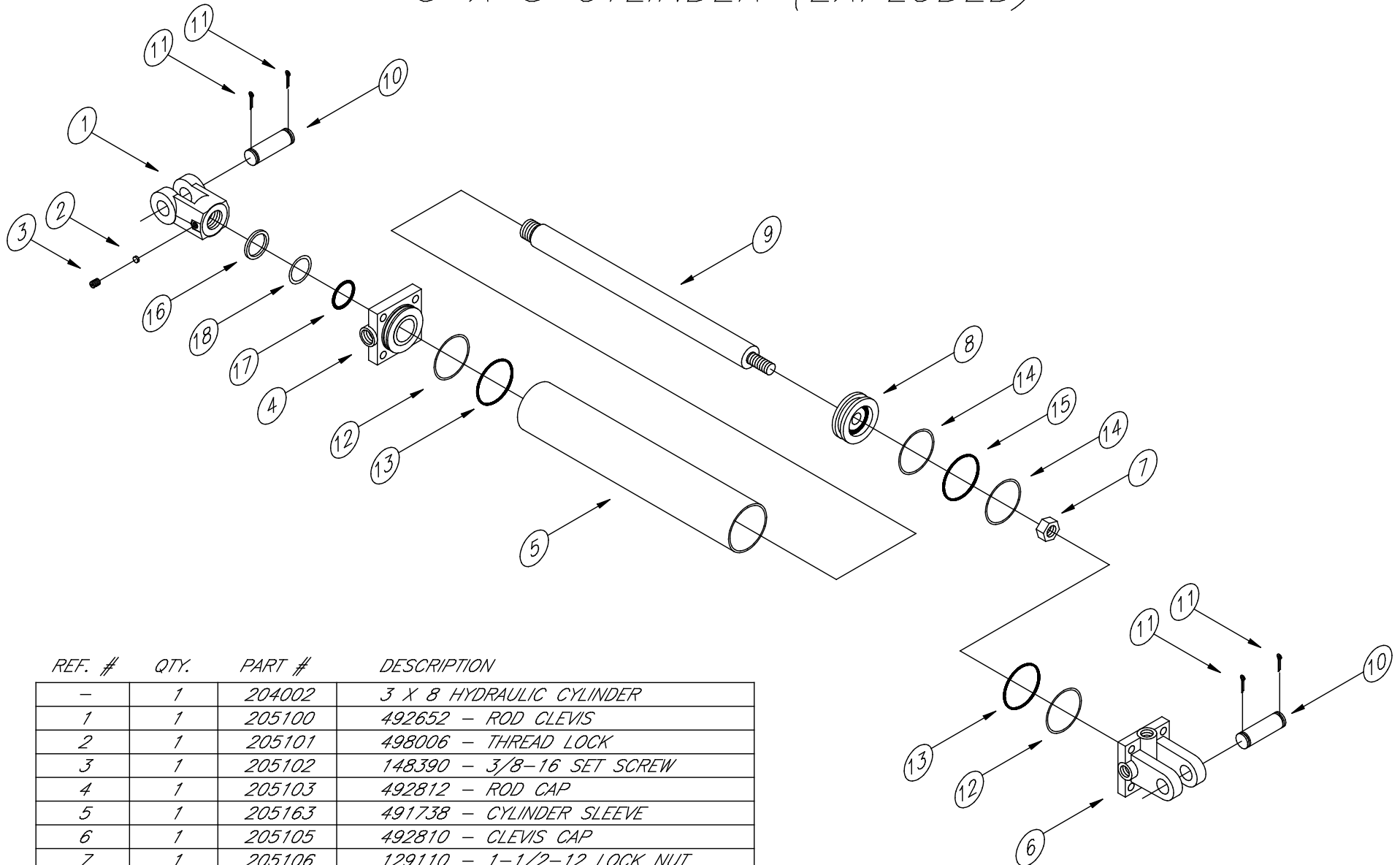
REF. #	QTY.	PART #	DESCRIPTION
1	1	301171	Ø3-1/8 X 17-3/8" SPINDLE ONLY
2	1	301156	SEAL - TCM 30454SA
3	1	301172	BEARING CONE - TAM 39585
4	1	301173	BEARING CUP - 39520
5	1	301174	10 BOLT HUB ONLY
6	1	301175	BEARING CUP - TIMKEN 453A
7	1	301176	BEARING CONE - TIMKEN 460
8	1	301177	WASHER - 3"O.D. X 1-1/4".I.D. 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	301189	LUG NUT - 3/4-16

LION 2500 TL SERIES 2 X 8 CYLINDER (EXPLODED)



REF. #	QTY.	PART #	DESCRIPTION
—	1	204001	2 X 8 HYDRAULIC CYLINDER
1	1	205165	492650 — ROD CLEVIS
2	1	205101	498006 — THREAD LOCK
3	1	205102	148390 — 3/8-16 SET SCREW
4	1	205166	492806 — ROD CAP
5	1	205167	491608 — CYLINDER SLEEVE
6	1	205168	492805 — CLEVIS CAP
7	1	205170	129090 — PISTON LOCK NUT
8	1	205169	492548 — PISTON
9	1	205171	492699 — CYLINDER ROD
10	2	602136	Ø1" X 3-5/8" PLATED CYLINDER PIN
11	4	101249	5/32 X 2" — COTTER PIN-PLT.
—	1	205172	639572 — SEAL KIT COMPLETE

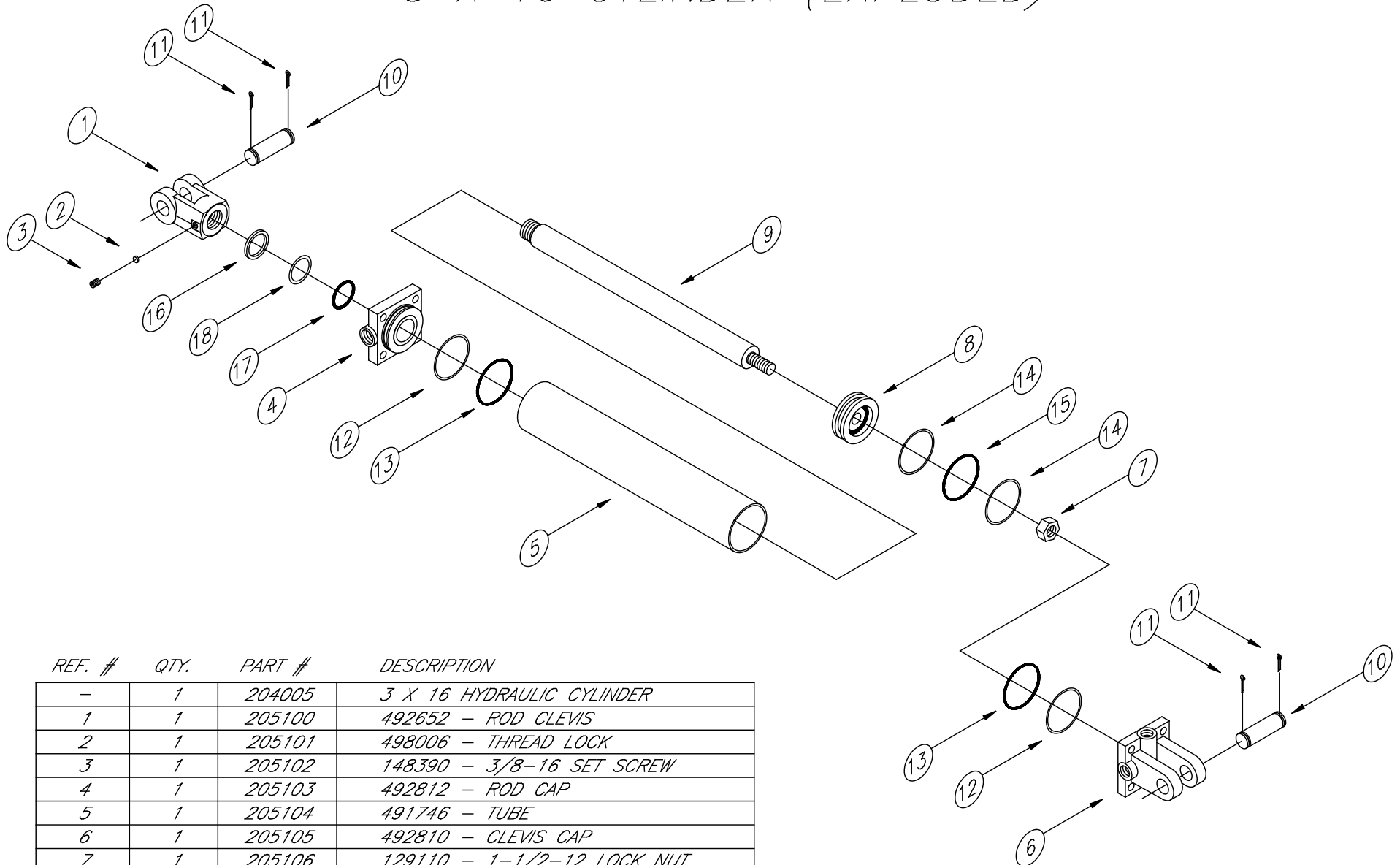
LION 2500 TL SERIES 3 X 8 CYLINDER (EXPLODED)



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	491738 — 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	492700 — CYLINDER ROD
10	2	602136	Ø1" X 3-5/8" PLATED CYLINDER PIN
11	4	101266	Ø3/16" 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

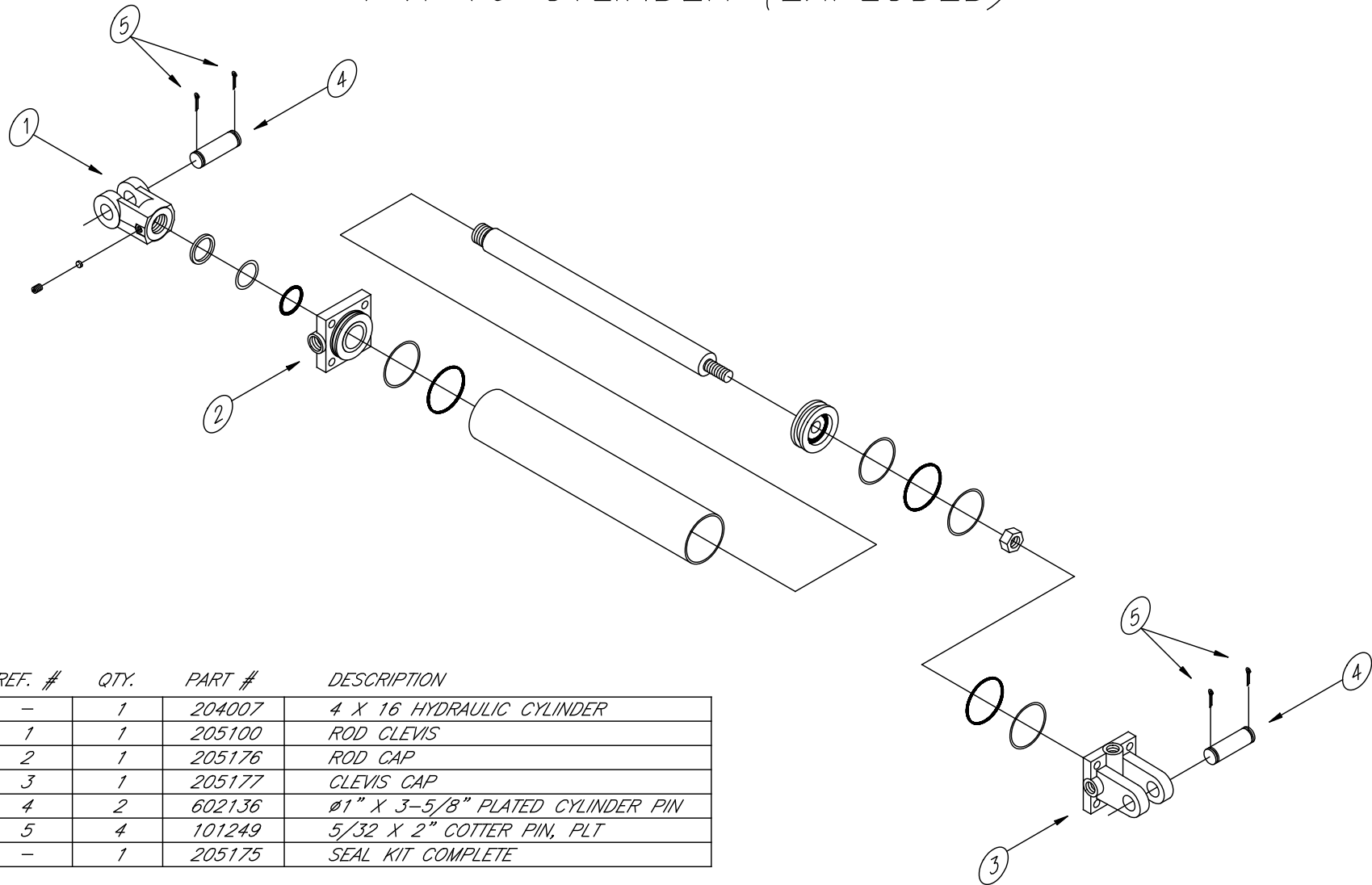
LION 2500 TL SERIES 3 X 16 CYLINDER (EXPLODED)



REF. #	QTY.	PART #	DESCRIPTION
—	1	204005	3 X 16 HYDRAULIC CYLINDER
1	1	205100	492652 — ROD CLEVIS
2	1	205101	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	Ø1" X 3-5/8" PLATED CYLINDER PIN
11	4	101266	Ø3/16" 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.**