



240I and 241I

Owner's Manual

&

Parts Book

Purchase Date
Serial Number
Model Number
Tractor Model
Dealer

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To The Owner

This manual contains information concerning the operation, adjustment, and maintenance of the 240 blade assembly. You have purchased dependable, long lasting equipment, but only by proper care and operation can you expect to receive the performance and long service built into our products. Please have all operators read this manual carefully and keep the manual available for ready reference. If you have any questions or concerns, contact Grouser Products.

Maintenance

Due to the harsh environment many of our equipment operates in, the following tasks should be performed every 10 hours or less.

- Inspect all equipment before operation for existing or potential damages.
- Lubricate all joints with high quality grease.
- Inspect and tighten all bolts to torque specifications on page 3.
- Check replaceable cutting edge for wear ensuring there is enough material to prevent permanent damage to the blade.
- Make sure all non-rotating pins are secured properly.
- Check hydraulic cylinders and hoses for damage or leaks. For replacement parts, see hydraulic pages for your specific system.
- Check skid shoes for wear and replace if necessary. For adjustment, see page 4.
- Inspect all tilt-ways for aggressive wear. See page 4 for tilt plate adjustment.

Safety Precautions

A careful operator is the best operator. Most accidents can be avoided by observing certain precautions. To help prevent accidents, read and take the following precautions before operating this equipment. In addition to these precautions, please follow all safety and operational instructions of your tractor manufacturer.

The Dozer:

1. The 240I and 241I Dozer should be operated only by those who are responsible and instructed to do so.
2. Read the owner's manual carefully before using this equipment. Lack of operating knowledge can lead to accidents.
3. Keep the dozer maintained in reliable and satisfactory condition to ensure your safety.
4. Make sure the area is clear of people before moving any equipment.
5. Do not modify or permit anyone else to modify or alter the equipment and its components without first consulting Grouser Products.

Servicing the Dozer:

1. Read and follow all safety instructions provided by the tractor manufacturer.
2. Always use proper personal safety gear when performing maintenance on equipment.
3. Before servicing, relieve hydraulic pressure, stop engine and fully engage parking brake.
4. Escaping hydraulic fluid under pressure can penetrate skin causing serious injury. If fluid is injected into skin, obtain medical attention immediately.
 - DO NOT use your hand to check for leaks. Use a piece of cardboard or paper to search for leaks.
 - Stop the engine and relieve pressure before connecting or disconnecting lines.
 - Tighten all connections before starting the engine or pressurizing lines.

Storing the Dozer:

1. Thoroughly clean the inside and outside of the dozer before storage. Use paint where necessary to prevent rust.
2. Check the dozer for worn or damaged parts. Install new parts as required.
3. Lubricate all pins and joints.

Torque Specifications

All bolts should be tightened to the specifications that are stated. If specifications are not stated, follow torque charts below.

	Torque - Dry (ft-lbs)			
	SAE Grade 5		SAE Grade 8	
Size	UNC	UNF	UNC	UNF
5/16	17	19	24	27
3/8	30	35	45	50
7/16	50	55	70	80
1/2	75	85	110	120
9/16	110	120	150	170
5/8	150	170	210	240
3/4	260	300	380	420
7/8	430	470	600	670
1	640	720	910	1020

	Torque - Dry (ft-lbs)
Size	Grade 10.9
M18 x 2.50	284
M20 x 2.50	401
M22 x 2.50	547
M24 x 3.00	694

Skid Shoe and Tilt Plate Adjustment

Skid Shoe Adjustment:

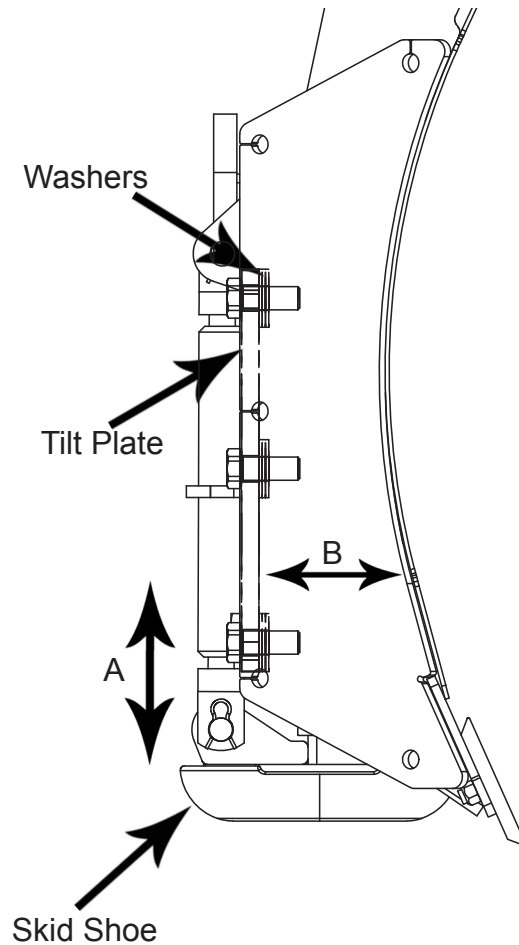
1. Use the ratchet jack to raise and lower the skid shoes in direction 'A'.
2. Store the ratchet jack handle in the manual holder on the top arm.
3. When skid shoes are worn down, replace with new skid shoes.

Tilt Plate Adjustment:

1. Remove bolts and tilt plates.

Note: Don't remove all of the bolts at the same time.

2. Add or remove washers as needed to adjust tilt-way clearance to have 1/16" - 1/8" of clearance in direction 'B' shown.
3. Once the tilt-way clearance is set, tighten bolts to 640 ft-lbs.



Angle / Tilt Function Abbreviation Key

HAHT	Hydraulic Angle - Hydraulic Tilt	6-Way
HANT	Hydraulic Angle - No Tilt	4-Way
NAHT	No Angle - Hydraulic Tilt	4-Way
NANT	No Angle - No Tilt	2-Way

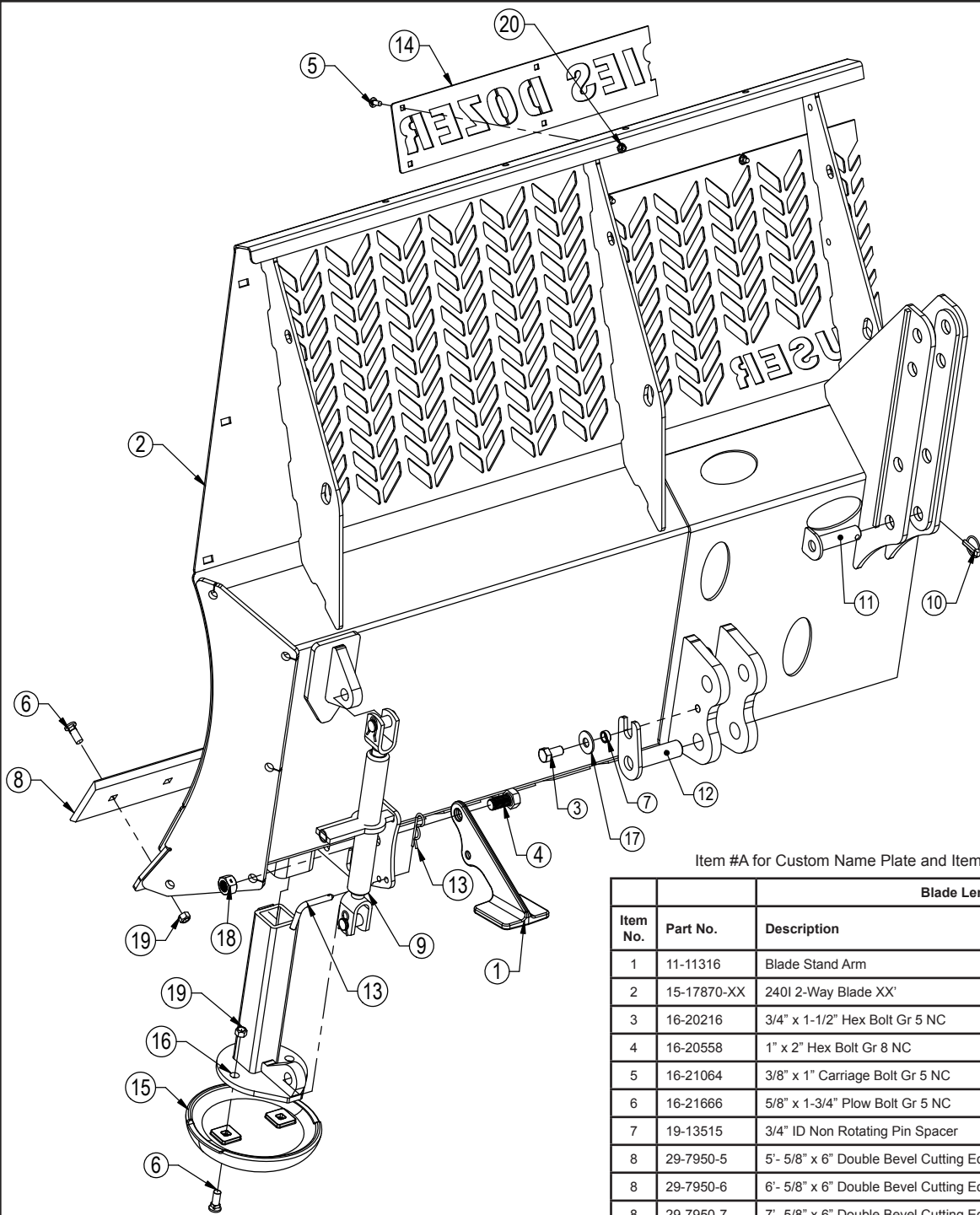
Relief Valve Instructions

Set the safety relief valve at a higher pressure than tractor: To increase the pressure of the relief valve, install a 0-5,000 psi pressure gauge into the base end of right angle cylinder (see page 21). Loosen the jam nut on the safety valve and tighten the Allen screw 1/2 turn. Next, extend the right side cylinder out until the safety valve activates, while the safety valve is in function, record the pressure reading on the gauge. Continue to tighten the Allen screw in 1/2 turn increments and record the pressure until a high enough relief setting is obtained. **Do not exceed the 3,000-psi operating pressure of the cylinders.** Tighten the jam nut and remove the gauge. Follow the same steps for the left side cylinder.

Automatic lever release: In certain newer model tractors, the hydraulic control lever will automatically release and instantly stop oil flow once the end of the stroke is reached.

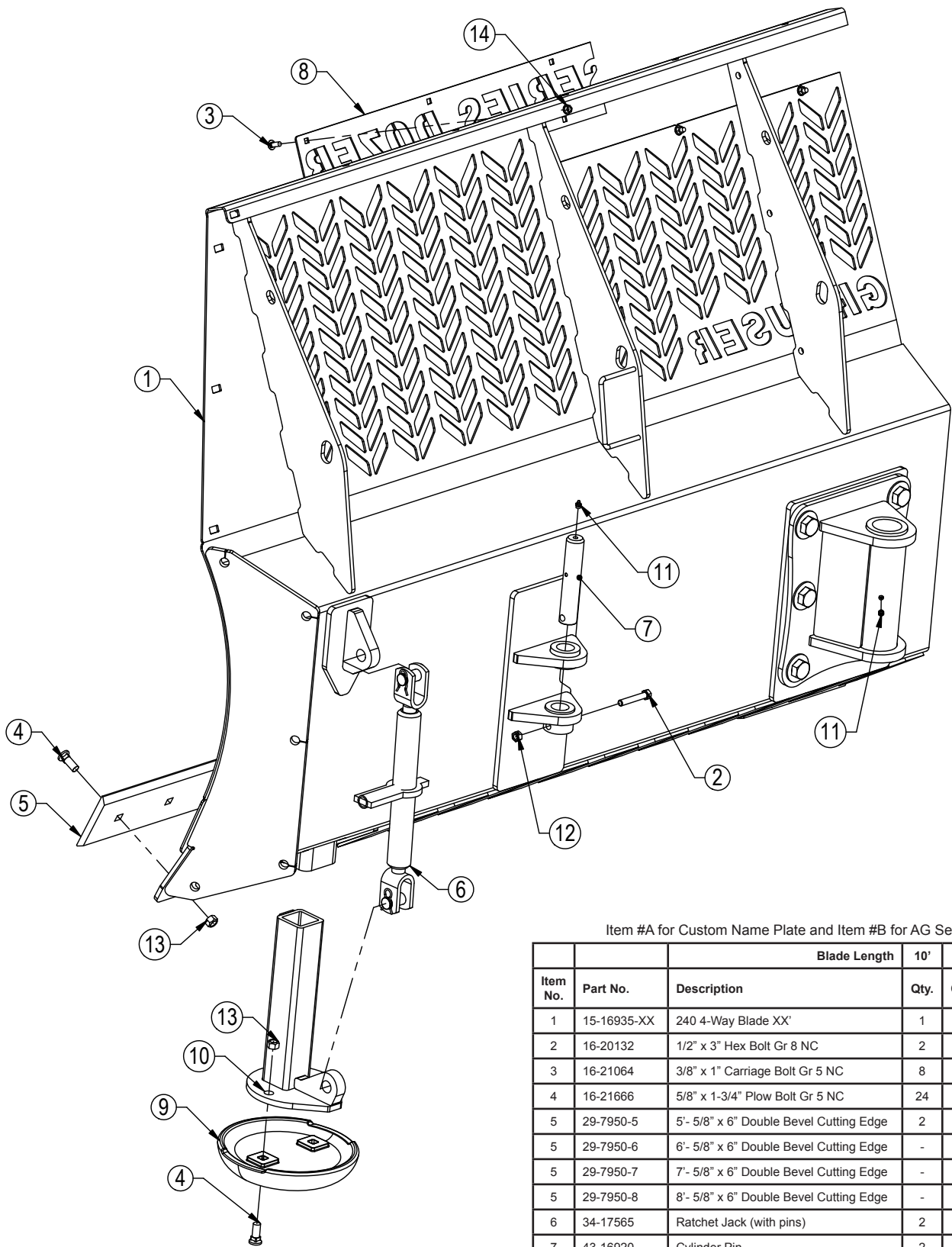
CAUTION: Do not bypass the safety relief valve and plumb each cylinder to separate valves on the tractor.

Please contact Grouser Products with any questions by:
Phone - 701-282-7710 or 800-747-6182; Fax - 701-282-8131



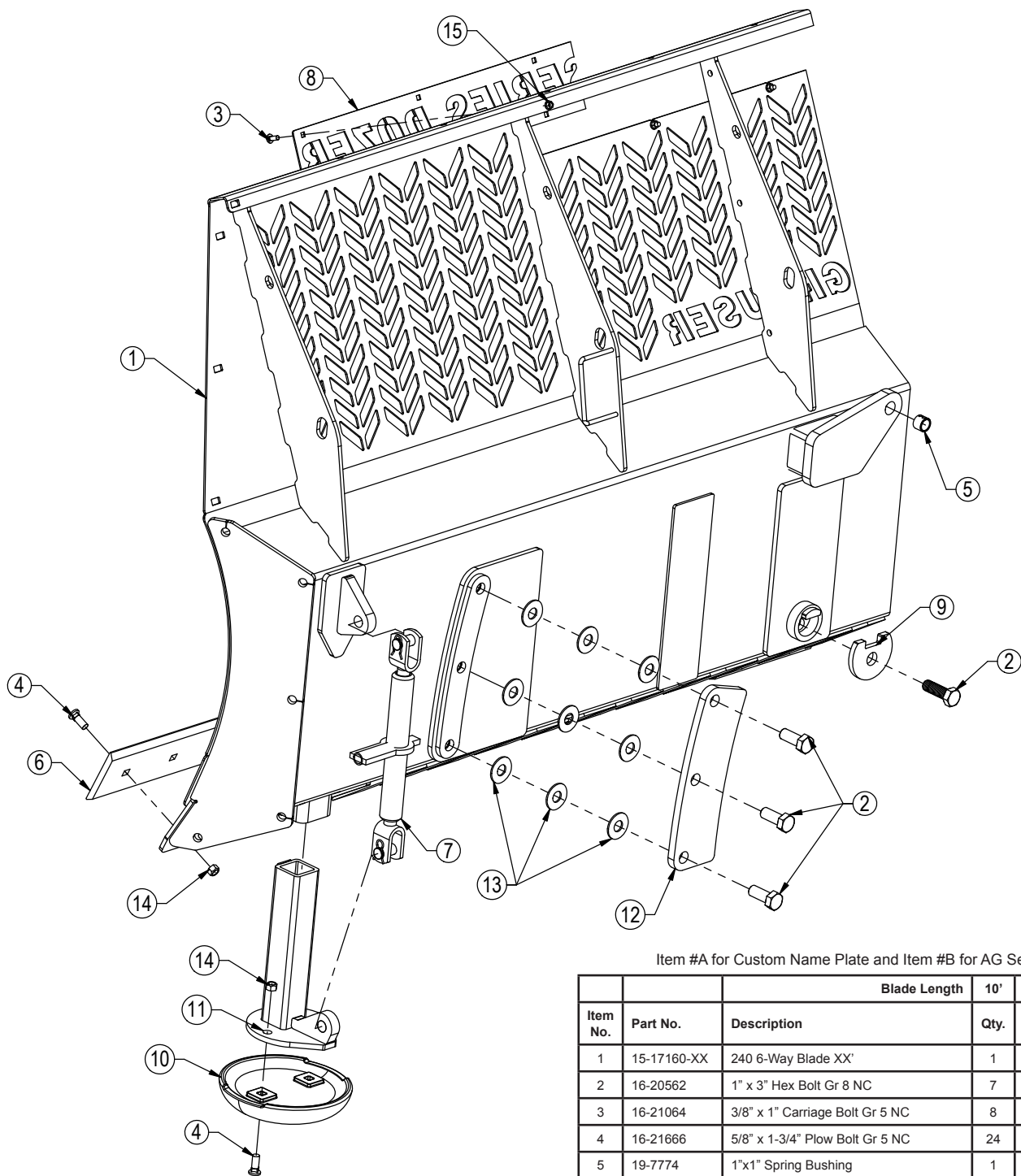
Item #A for Custom Name Plate and Item #B for AG Series Name Plate

		Blade Length	10'	12'	14'	16'
Item No.	Part No.	Description	Qty.	Qty.	Qty.	Qty.
1	11-11316	Blade Stand Arm	2	2	2	2
2	15-17870-XX	240I 2-Way Blade XX'	1	1	1	1
3	16-20216	3/4" x 1-1/2" Hex Bolt Gr 5 NC	2	2	2	2
4	16-20558	1" x 2" Hex Bolt Gr 8 NC	2	2	2	2
5	16-21064	3/8" x 1" Carriage Bolt Gr 5 NC	8	8	8	8
6	16-21666	5/8" x 1-3/4" Plow Bolt Gr 5 NC	24	28	32	36
7	19-13515	3/4" ID Non Rotating Pin Spacer	2	2	2	2
8	29-7950-5	5'- 5/8" x 6" Double Bevel Cutting Edge	2	-	-	-
8	29-7950-6	6'- 5/8" x 6" Double Bevel Cutting Edge	-	2	-	-
8	29-7950-7	7'- 5/8" x 6" Double Bevel Cutting Edge	-	-	2	-
8	29-7950-8	8'- 5/8" x 6" Double Bevel Cutting Edge	-	-	-	2
9	34-17565	Ratchet Jack (with pins)	2	2	2	2
10	43-16764	7/16" x 1-3/4" Lynch Pin	1	1	1	1
11	43-3287	Top Link Pin	1	1	1	1
12	43-3289	Lower Lift Pin	2	2	2	2
13	43-9582	Bent Claw Pin with Clip Pin	2	2	2	2
14A	44-14830	Custom Name Plate	1	1	1	1
14B	44-15150	AG Pro Name Plate	1	1	1	1
15	50-15458	12" Round Mushroom Skid Shoe	2	2	2	2
16	50-17545	240 Skid Shoe Mount - Mushroom	2	2	2	2
17	57-20747	3/4" Flat Washer	2	2	2	2
18	70-20609	1" Hex Center Lock Nut	2	2	2	2
19	70-20646	5/8" Hex Top Lock Nut Gr 5 NC	24	28	32	36
20	70-20622	3/8" Flange Nut	8	8	8	8



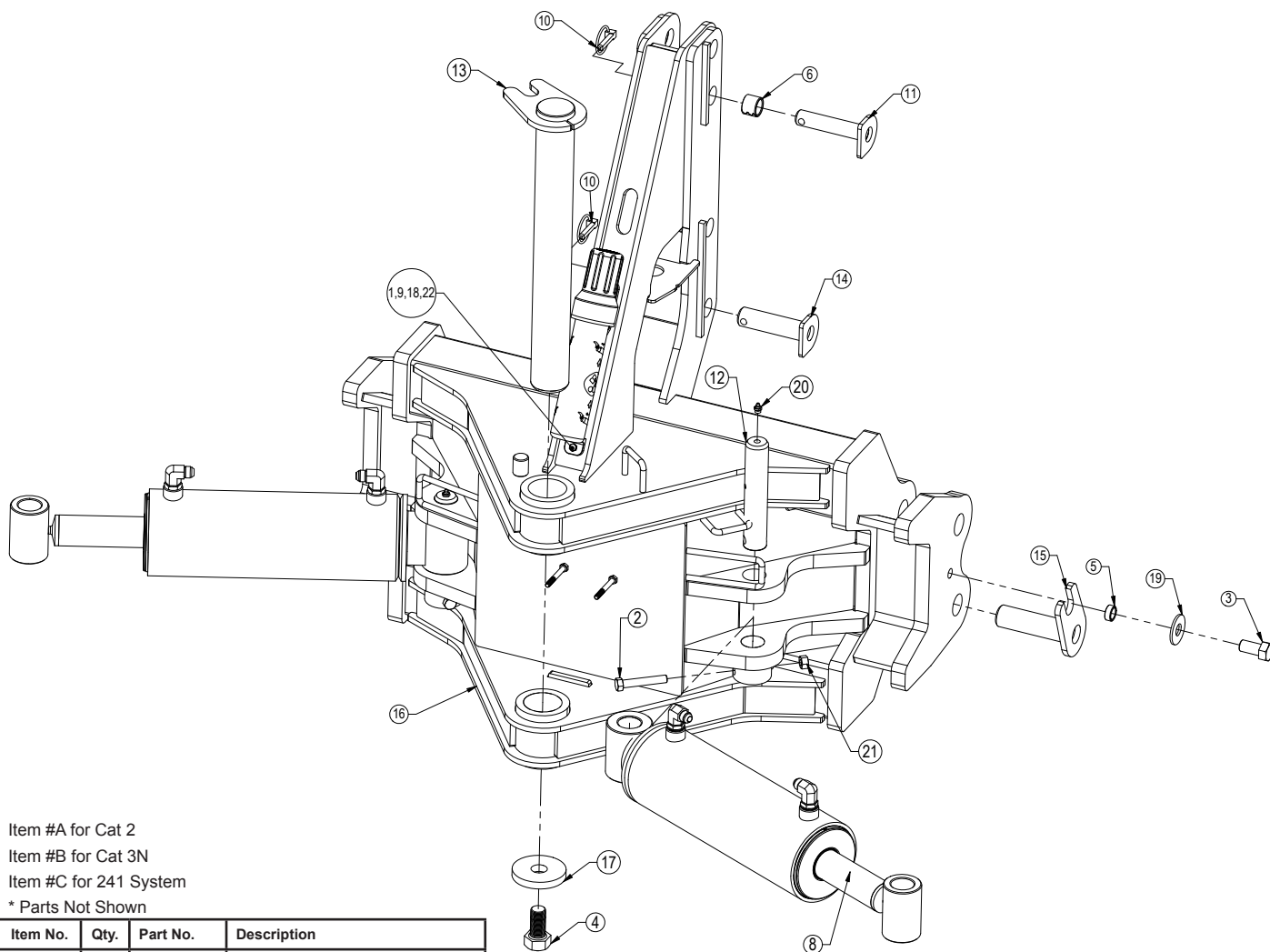
Item #A for Custom Name Plate and Item #B for AG Series Name Plate

Item No.	Part No.	Description	Blade Length			
			10'	12'	14'	16'
1	15-16935-XX	240 4-Way Blade XX'	Qty. 1	Qty. 1	Qty. 1	Qty. 1
2	16-20132	1/2" x 3" Hex Bolt Gr 8 NC	2	2	2	2
3	16-21064	3/8" x 1" Carriage Bolt Gr 5 NC	8	8	8	8
4	16-21666	5/8" x 1-3/4" Plow Bolt Gr 5 NC	24	28	32	36
5	29-7950-5	5'- 5/8" x 6" Double Bevel Cutting Edge	2	-	-	-
5	29-7950-6	6'- 5/8" x 6" Double Bevel Cutting Edge	-	2	-	-
5	29-7950-7	7'- 5/8" x 6" Double Bevel Cutting Edge	-	-	2	-
5	29-7950-8	8'- 5/8" x 6" Double Bevel Cutting Edge	-	-	-	2
6	34-17565	Ratchet Jack (with pins)	2	2	2	2
7	43-16920	Cylinder Pin	2	2	2	2
8A	44-14830	Custom Name Plate	1	1	1	1
8B	44-15150	AG Pro Name Plate	1	1	1	1
9	50-15458	12" Round Mushroom Skid Shoe	2	2	2	2
10	50-17545	240 Skid Shoe Mount - Mushroom	2	2	2	2
11	58-9369	Grease Zerk 1/8" NPT Straight	3	3	3	3
12	70-20604	1/2" Hex Center Lock Nut	2	2	2	2
13	70-20646	5/8" Hex Top Lock Nut Gr 5 NC	24	28	32	36
14	70-20622	3/8" Flange Nut	8	8	8	8



Item #A for Custom Name Plate and Item #B for AG Series Name Plate

Item No.	Part No.	Description	Blade Length			
			10'	12'	14'	16'
1	15-17160-XX	240 6-Way Blade XX'	1	1	1	1
2	16-20562	1" x 3" Hex Bolt Gr 8 NC	7	7	7	7
3	16-21064	3/8" x 1" Carriage Bolt Gr 5 NC	8	8	8	8
4	16-21666	5/8" x 1-3/4" Plow Bolt Gr 5 NC	24	28	32	36
5	19-7774	1"x1" Spring Bushing	1	1	1	1
6	29-7950-5	5'- 5/8" x 6" Double Bevel Cutting Edge	2	-	-	-
6	29-7950-6	6'- 5/8" x 6" Double Bevel Cutting Edge	-	2	-	-
6	29-7950-7	7'- 5/8" x 6" Double Bevel Cutting Edge	-	-	2	-
6	29-7950-8	8'- 5/8" x 6" Double Bevel Cutting Edge	-	-	-	2
7	34-17565	Ratchet Jack (with pins)	2	2	2	2
8A	44-14830	Custom Name Plate	1	1	1	1
8B	44-15150	AG Pro Name Plate	1	1	1	1
9	44-15339	240 Backdrag Brace Plate	1	1	1	1
10	50-15458	12" Round Mushroom Skid Shoe	2	2	2	2
11	50-17545	240 Skid Shoe Mount - Mushroom	2	2	2	2
12	52-17265	240 Tilt Plate	2	2	2	2
13	57-20749	1" Flat Washer	18	18	18	18
14	70-20646	5/8" Hex Top Lock Nut Gr 5 NC	24	28	32	36
15	70-20622	3/8" Flange Nut	8	8	8	8



Item #A for Cat 2

Item #B for Cat 3N

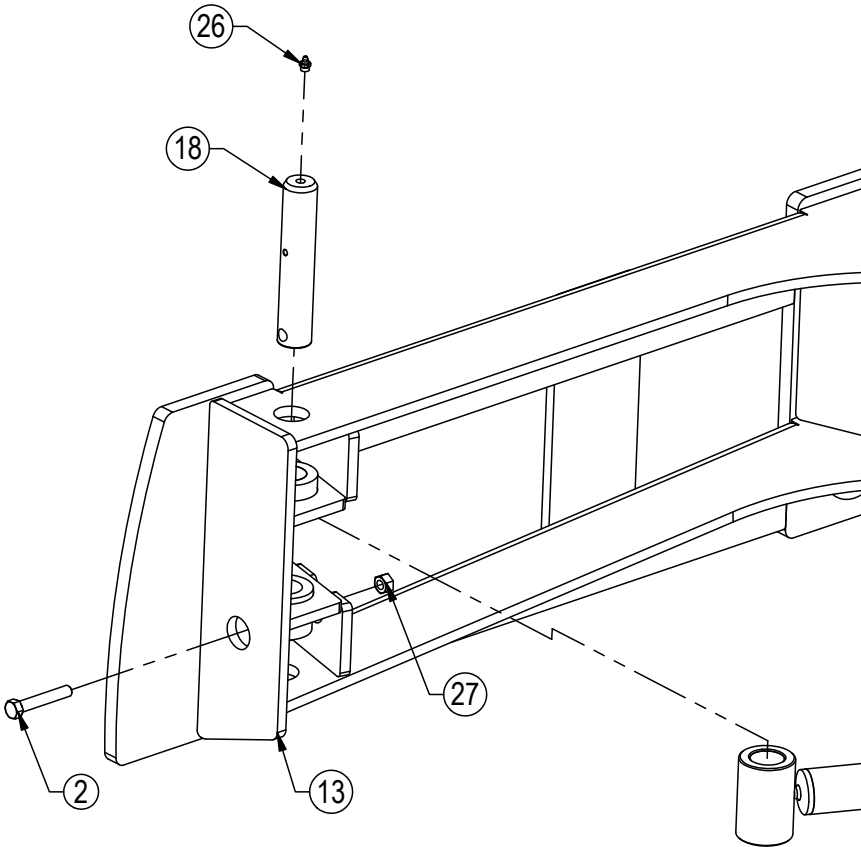
Item #C for 241 System

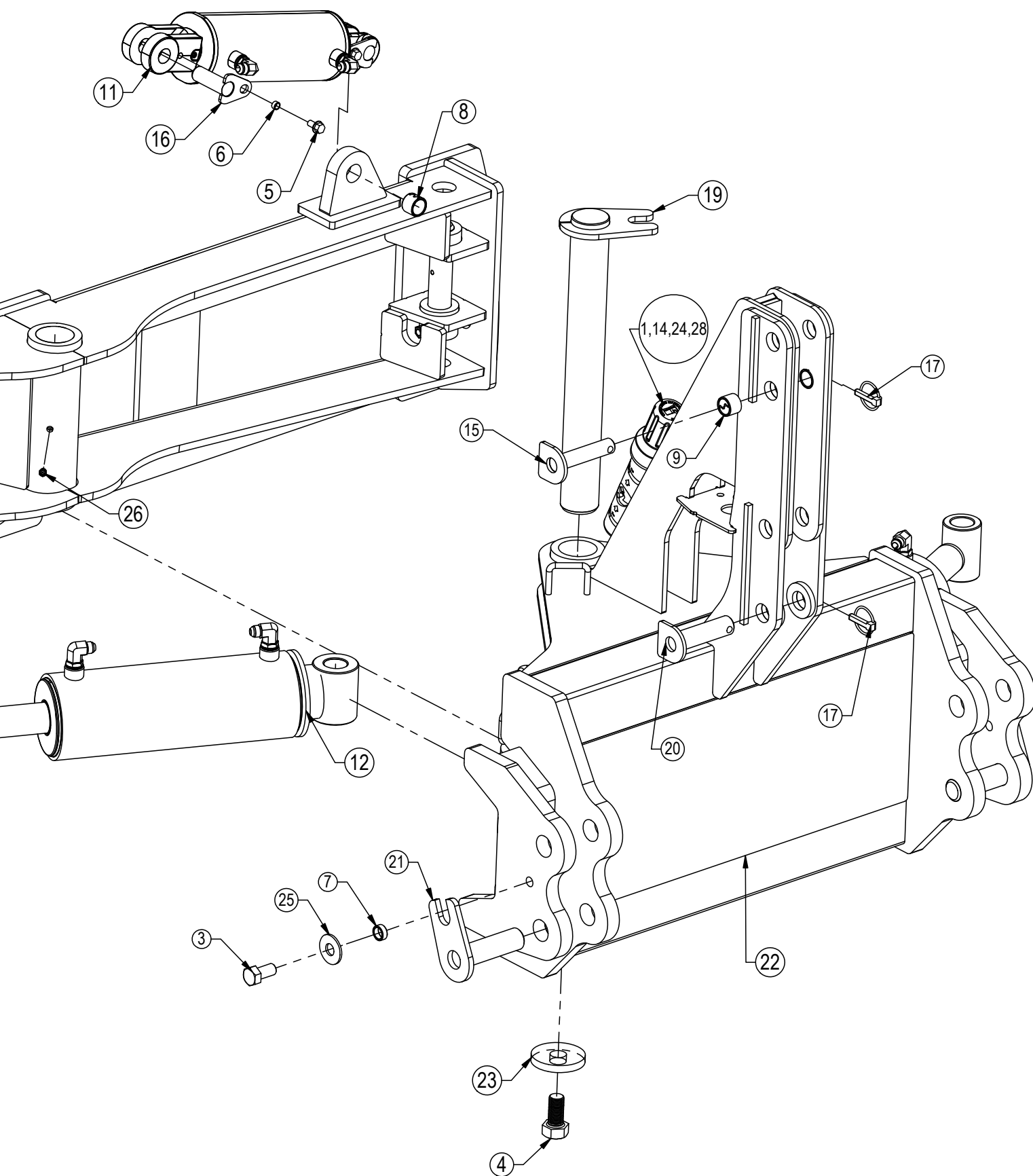
* Parts Not Shown

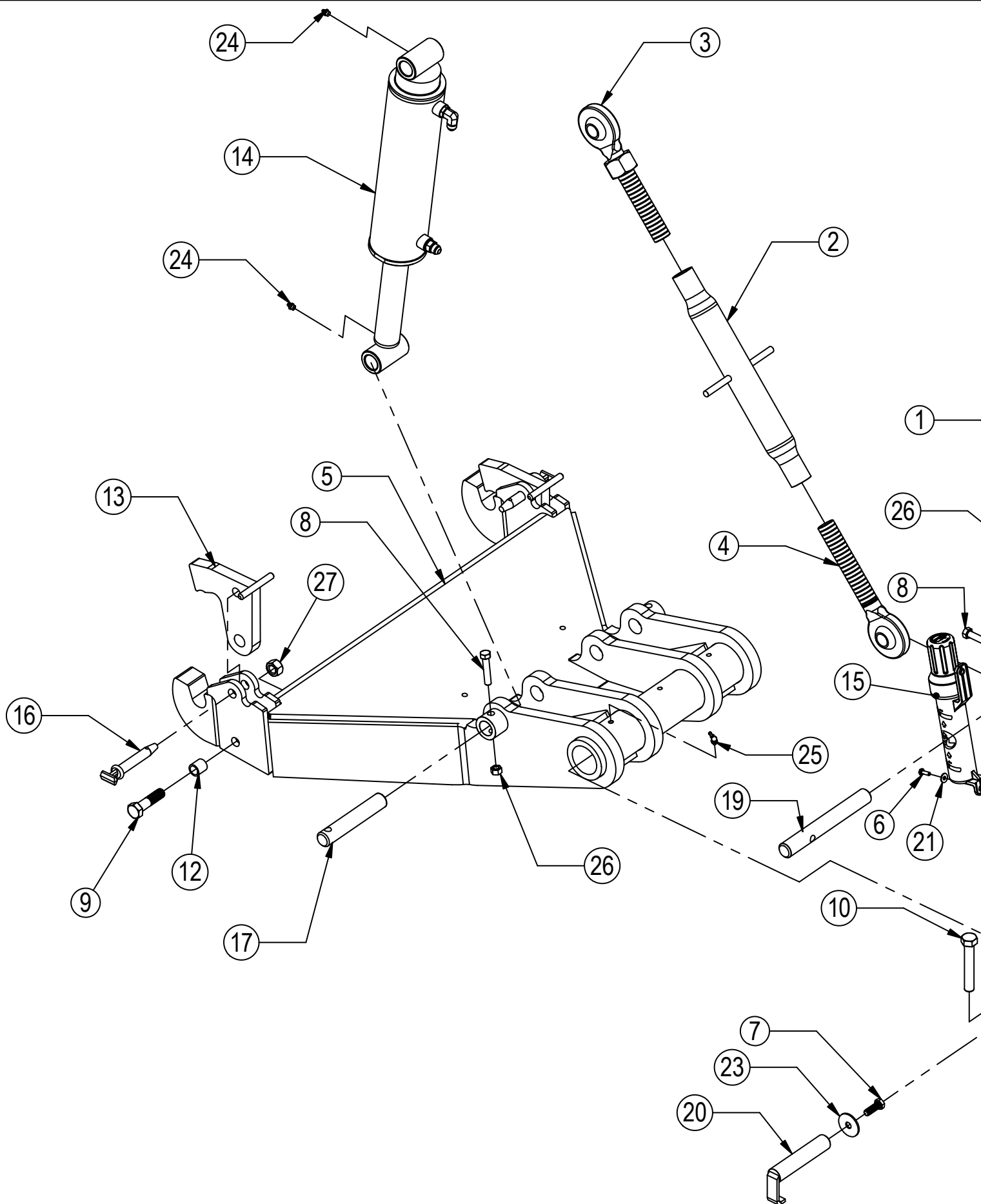
Item No.	Qty.	Part No.	Description
1	2	16-20002	1/4" x 3/4" Hex Bolt Gr 5 NC
2	2	16-20132	1/2" x 3" Hex Bolt Gr 5 NC
3	2	16-20216	3/4" x 1-1/2" Hex Bolt Gr 5 NC
4	1	16-20558	1" x 2" Hex Bolt Gr 8 NC
5	2	19-13515	3/4" ID Non Rotating Pin Spacers
6A	2	19-7774	1" x 1" Spring Bushing
7C*	2	22-8813	Quick Claw Uni Ball
8	2	26-34744	5 x 12 Cylinder Tube Ends (675155)
9	1	34-14961	Manual Canister
10	1	43-16764	7/16" x 1-3/4" Lynch Pin
11A	1	43-11665	Top Link Pin - Cat 2
12	2	43-16920	Cylinder Pin
13	1	43-16925	Angle Pin
14B	1	43-3287	Top Link Pin - Cat 3N
15	2	43-3289	Lower Lift Pin
16	1	45-17400	ISO Angle Frame
17	1	57-16928	3.50" OD x 1.06" ID Washer
18	2	57-20740	1/4" Flat Washer
19	2	57-20747	3/4" Flat Washer
20	3	58-9369	Grease Zerk 1/8" NPT Straight
21	2	70-20604	1/2" Hex Center Lock Nut NC
22	2	70-20610	1/4" Nyloc Hex Nut

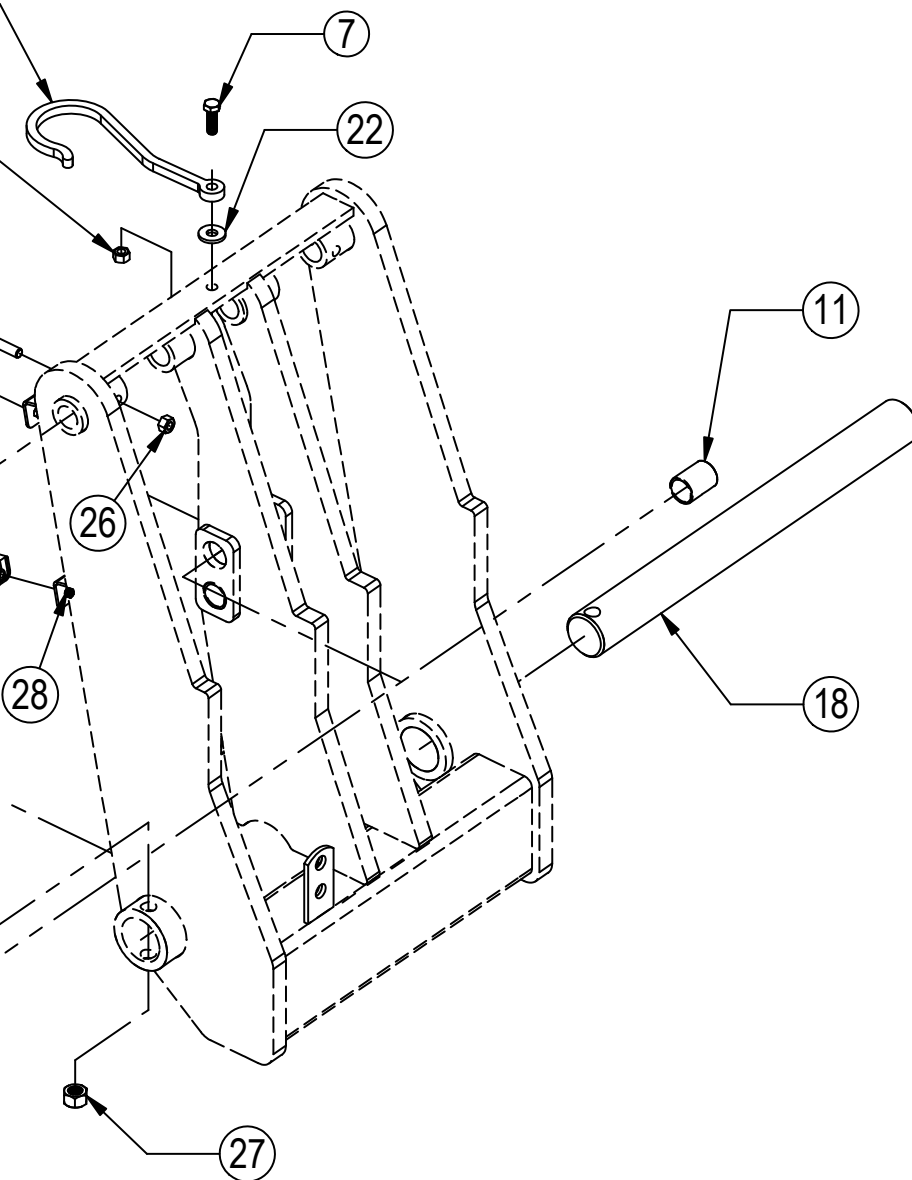
Item #A for Cat 2
 Item #B for Cat 3N
 Item #C for 241 System
 * Parts Not Shown

Item No.	Qty.	Part No.	Description
1	2	16-20002	1/4" x 3/4" Hex Bolt Gr 5 NC
2	4	16-20132	1/2" x 3" Hex Bolt Gr 5 NC
3	2	16-20216	3/4" x 1-1/2" Hex Bolt Gr 5 NC
4	1	16-20558	1" x 2" Hex Bolt Gr 8 NC
5	2	16-35C612	3/8" x 3/4" Flanged Bolt
6	2	16-13577	NR Pin Spacer Clevis End
7	2	19-13515	3/4" ID Non Rotating Pin Spacers
8	1	19-7774	1"x1" Spring Bushing
9A	2	19-7774	1" x 1" Spring Bushing
10C*	2	22-8813	Quick Claw Uni Ball
11	1	26-34711	4 x 8 Cylinder w/ Cast Clevis Ends (647134)
12	2	26-34744	5 x 12 Cylinder Tube Ends (675155)
13	1	32-16400	Tilt Frame
14	1	34-14961	Manual Canister
15A	1	43-11665	Top Link Pin - Cat 2
16	2	43-13580	1" Clevis Bolt in Pin
17	1	43-16764	7/16" x 1-3/4" Lynch Pin
18	4	43-16920	Cylinder Pin
19	1	43-16925	Angle Pin
20	1	43-3287	Top Link Pin - Cat 3N
21	2	43-3289	Lower Lift Pin
22	1	45-17400	ISO Angle Frame
23	1	57-16928	3.50" OD x 1.06" ID Washer
24	2	57-20740	1/4" Flat Washer
25	2	57-20747	3/4" Flat Washer
26	5	58-9369	Grease Zerk 1/8" NPT Straight
27	4	70-20604	1/2" Hex Center Lock Nut NC
28	2	70-20610	1/4" Nyloc Nut



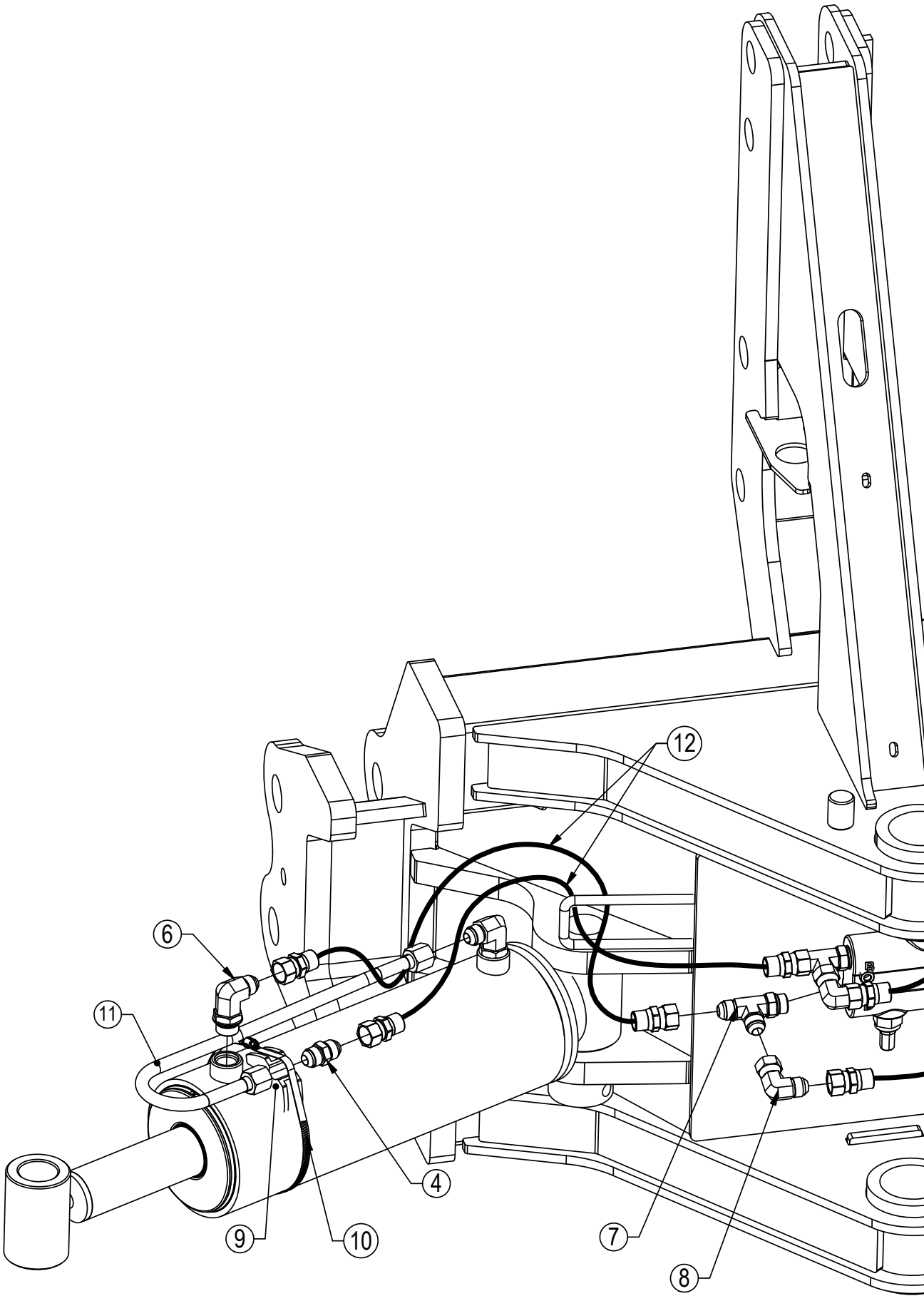






Item No.	Qty.	Part No.	Description
1	1	11-1455	FH-400 Top Arm Hook
2,3,4	1	11-11135	FH-400 Pitch Control Top Arm Link
2	1	11-11137	FH-400 Pitch Control Arm Housing
3	1	11-11136RH	FH-400 Pitch Control Arm Screw Assy- Right Hand
4	1	11-11136LH	FH-400 Pitch Control Arm Screw Assy - Left Hand
5	1	11-15710	FH-400 Solid Lower Arm - V2
6	2	16-20002	1/4" x 3/4" Hex Bolt Gr 5 NC
7	2	16-20126	1/2" x 1-1/2" Hex Bolt Gr 5 NC
8	4	16-20130	1/2" x 2-1/2" Hex Bolt Gr 5 NC
9	2	16-20222	3/4" x 3" Hex Bolt Gr 5 NC
10	1	16-20227	3/4" x 4-1/2" Hex Bolt Gr 5 NC
11	4	19-3774	1.5"x1.25"x2.00" Spring Bushing (150125200)
12	2	19-15711	Lower Lift Arm Bushing
13	2	22-15701	FH-400 Solid Lower Arm Latch
14	2	26-34728	4 x 12 Cylinder Tube Ends
15	1	34-14961	Manual Canister
16	2	43-15712	3/4" x 3-1/4" Safety Hitch Pin
17	2	43-8234	Rod End Lift Cylinder Pin (1-1/4" x 7.25")
18	1	43-8322	Main Lift Arm Pin (2-7/16" x 25")
19	2	43-9334	Base Cylinder Pin (1-1/4" x 10.03")
20	1	43-11471	Top Arm/UC Pin
21	2	57-20740	1/4" Flat Washer
22	1	57-20744	1/2" Flat Washer
23	1	57-20794	1/2" Fender Washer (2.00" ODX .500"ID x .125")
24	4	58-9369	Grease Zerk 1/8" NPT Straight
25	3	58-9371	Grease Zerk 1/8" NPT 45°
26	5	70-20604	1/2" Hex Center Lock Nut Gr 2 NC
27	3	70-20607	3/4" Hex Center Lock Nut Gr 2 NC
28	2	70-20610	1/4" Nyloc Hex Nut Gr 5 NC

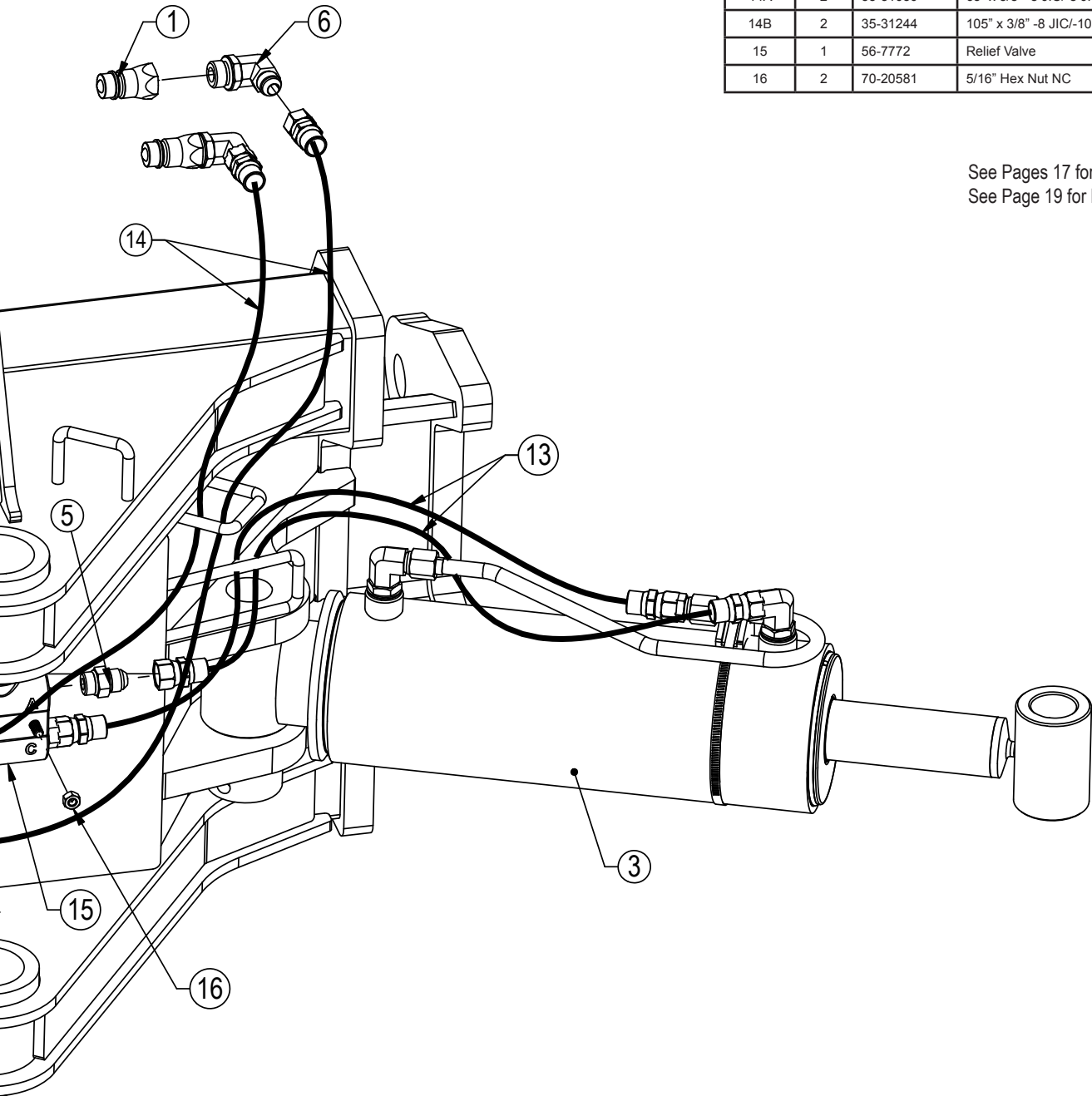
Hoses Not Drawn To Scale

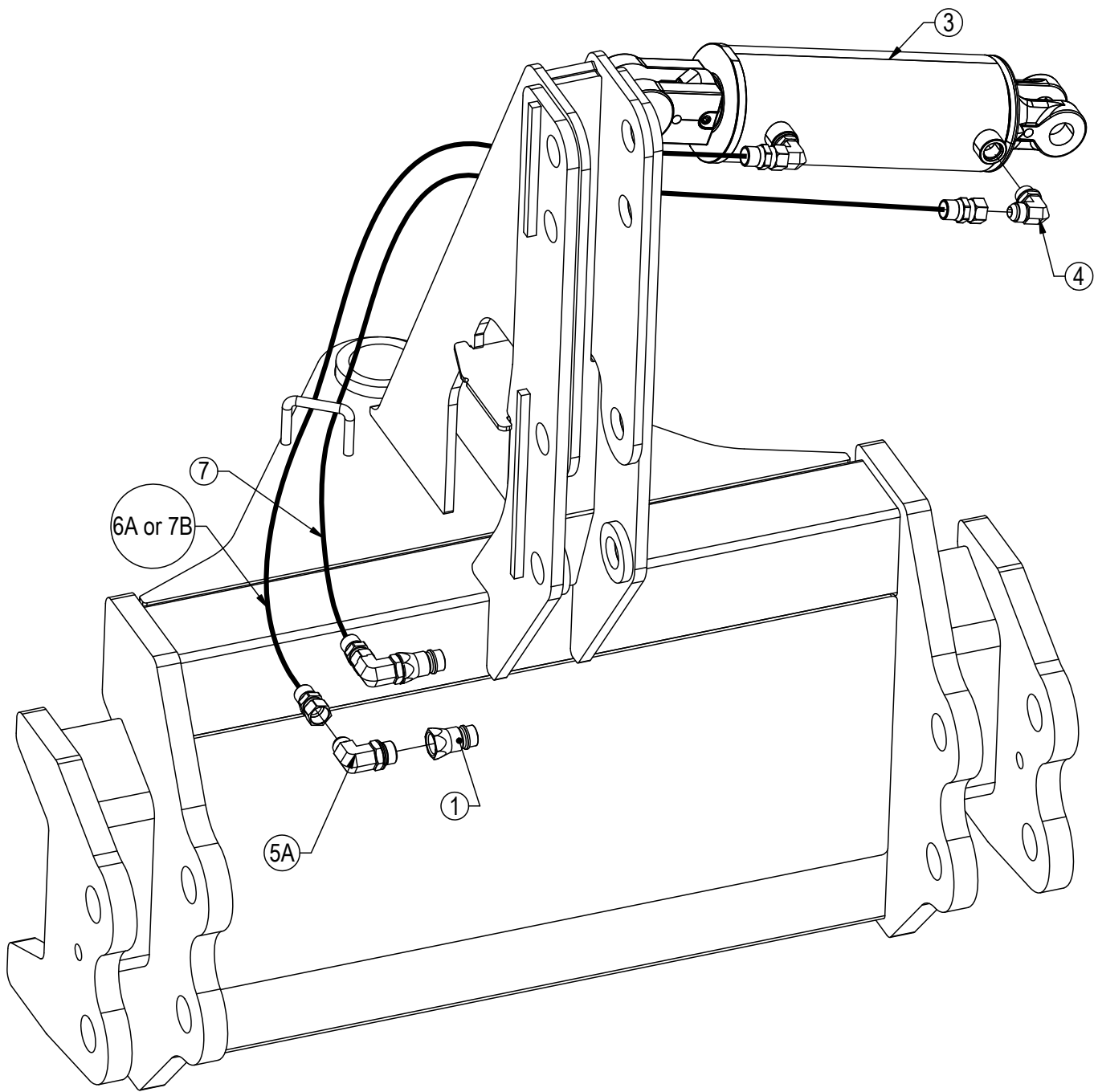


Item No.	Qty.	Part No.	Description
1	2	25-34342	Tappet Quick Coupler - Male
2*	2	25-3455	Pioneer Dust Cap Angle (Red)
3	2	26-34744	5 x 12 Cylinder W/ Tube Ends
4	2	31-11699-8-8	JIC Union (2403-8-)
5	2	31-34040	Straight JIC x O-Ring (6400-8-8)
6A	6	31-34051	Straight Thread Elbow 90° JIC x O-Ring (6801-8-10)
6B	4	31-34051	Straight Thread Elbow 90° JIC x O-Ring (6801-8-10)
7	2	31-34070	Run Tee JIC x O-Ring (6804-8-8-8)
8	2	31-34100	Swivel Nut Elbow 90° JIC (6500-8-8)
9	2	34-12932	Cylinder Saddle
10	2	34-12933	Hose Clamp (SAE 96)
11	2	35-17260	240 Formed Steel Line
12	2	35-31010	25" x 3/8" -8 JIC/-8 JIC Hose w/ Cordura (4M)
13	2	35-31013	28" x 3/8" -8 JIC/-8 JIC Hose w/ Cordura (4M)
14A	2	35-31030	63" x 3/8" -8 JIC/-8 JIC Hose w/ Cordura (4M)
14B	2	35-31244	105" x 3/8" -8 JIC/-10 MB Hose w/ Cordura (4M)
15	1	56-7772	Relief Valve
16	2	70-20581	5/16" Hex Nut NC

Item #A for 240 System
Item #B for 241 System
* Parts Not Shown

See Pages 17 for the remaining hydraulics.
See Page 19 for hydraulic schematic.





Item #A for 240 System
Item #B for 241 System
* Parts Not Shown
Hoses Not Drawn To Scale

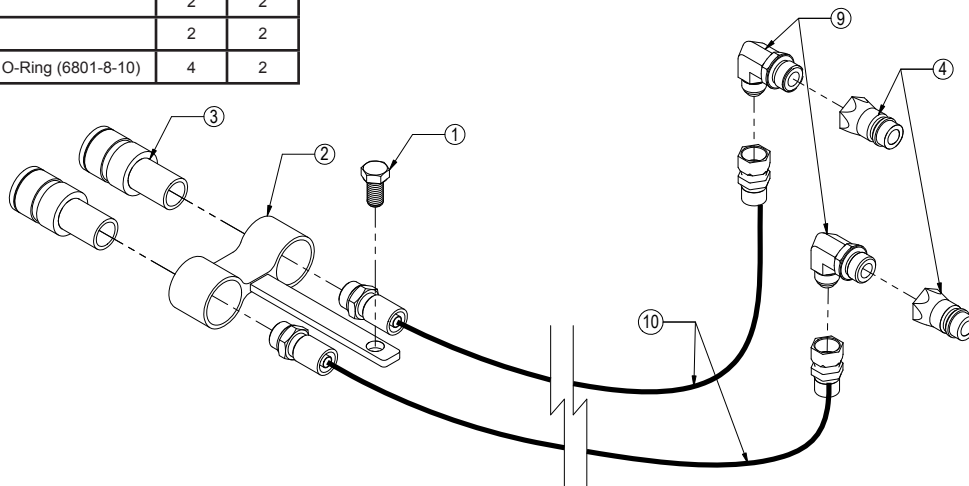
Item No.	Qty.	Part No.	Description
1	2	25-34342	Tappet Quick Coupler - Male
2*	2	25-3453	Pioneer Dust Cap Tilt (Green)
3	1	26-34711	4 x 8 Cylinder W/ Cast Clevis Ends
4	2	31-34050	Straight Thread Elbow 90° JIC x O-Ring (6801-8-8)
5A	2	31-34051	Straight Thread Elbow 90° JIC x O-Ring (6801-8-10)
6A	1	35-31030	63" x 3/8" -8 JIC/-8 JIC Hose w/ Cordura (4M)
7A	1	35-31032	69" x 3/8" -8 JIC/-8 JIC Hose w/ Cordura (4M)
7B	2	35-31244	105" x 3/8" -8 JIC/-10 MB Hose w/ Cordura (4M)

See Pages 17 for the remaining hydraulics.
See Page 19 for hydraulic schematic.

		Configuration	HAHT	HANT
Item No.	Part No.	Description	Qty.	Qty.
1	16-20126	1/2" x 1-1/2" Hex Bolt Gr 5 NC	2	1
2	18-8973	Coupler Mounting Bracket	2	1
3	25-34321	Tappet Quick Coupler Female	4	2
4	25-34342	Tappet Quick Coupler - Male	4	2
5*	25-3453	Pioneer Dust Cap Tilt (Green)	2	-
6*	25-3454	Pioneer Dust Plug Tilt (Green)	2	-
7*	25-3455	Pioneer Dust Cap Angle (Red)	2	2
8*	25-3456	Pioneer Dust Plug Angle (Red)	2	2
9	31-34051	Straight Thread Elbow 90° JIC x O-Ring (6801-8-10)	4	2

* Parts Not Shown

Hoses Not Drawn to Scale



See Page 19 for hydraulic schematic.

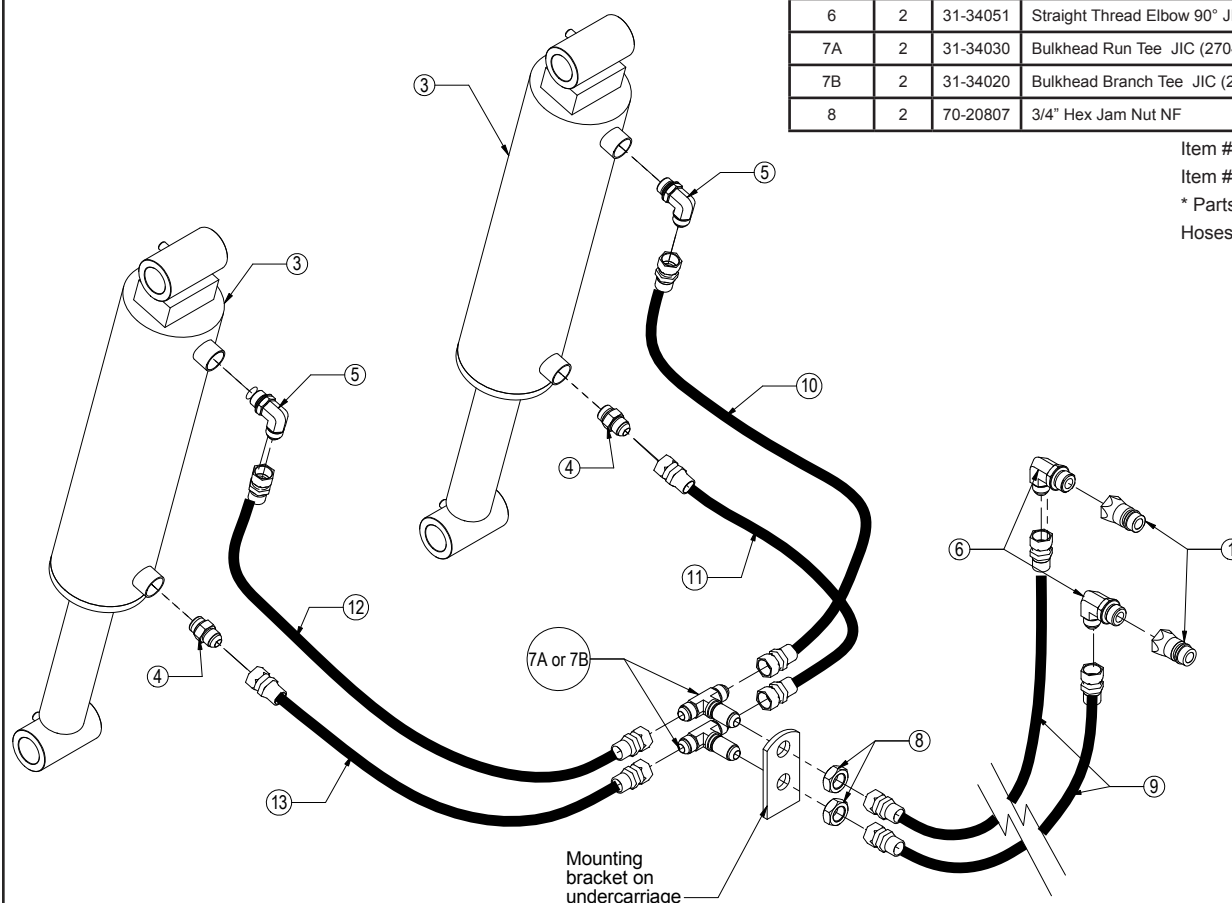
Item No.	Qty.	Part No.	Description
1	2	25-34342	Tappet Quick Coupler - Male
2*	2	25-3457	Pioneer Dust Cap Lift (Orange)
3	2	26-34728	4 x 12 Cylinder W/ Tube Ends
4	2	31-34040	Straight JIC x O-Ring (6400-8-8)
5	2	31-34050	Straight Thread Elbow 90° JIC x O-Ring (6801-8-8)
6	2	31-34051	Straight Thread Elbow 90° JIC x O-Ring (6801-8-10)
7A	2	31-34030	Bulkhead Run Tee JIC (2704-8-8-8)
7B	2	31-34020	Bulkhead Branch Tee JIC (2703-8-8-8)
8	2	70-20807	3/4" Hex Jam Nut NF

Item #A for 240 System

Item #B for 241 System

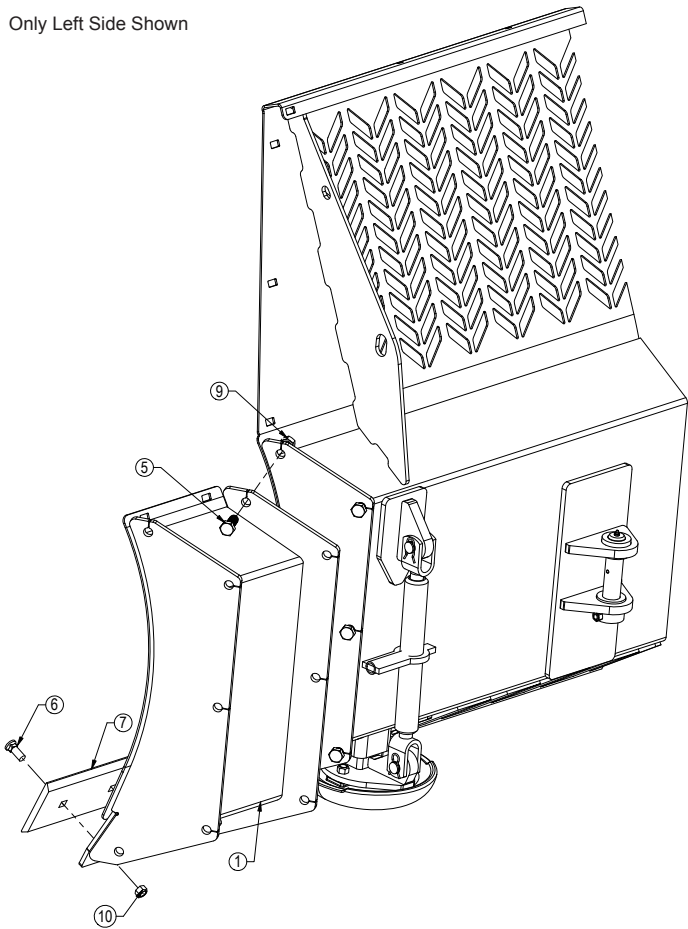
* Parts Not Shown

Hoses Not Drawn To Scale



End Extensions

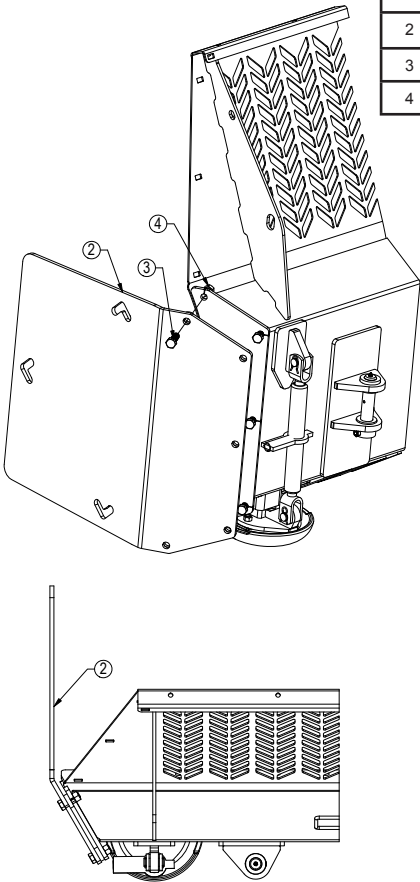
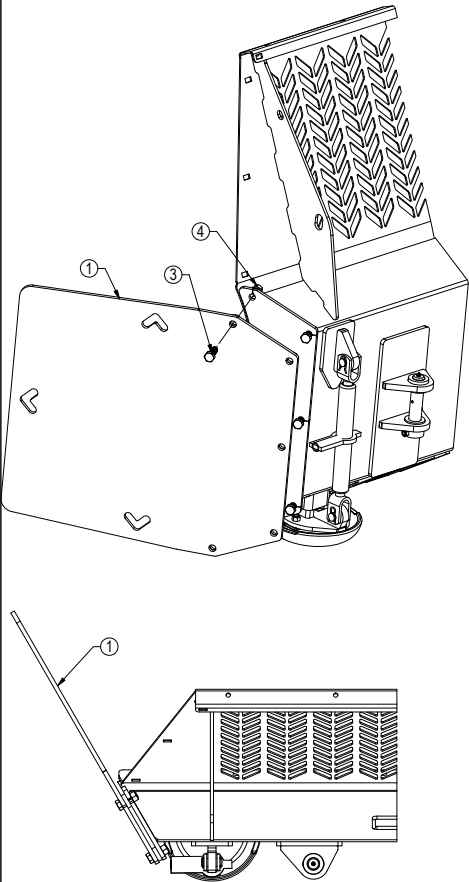
Only Left Side Shown



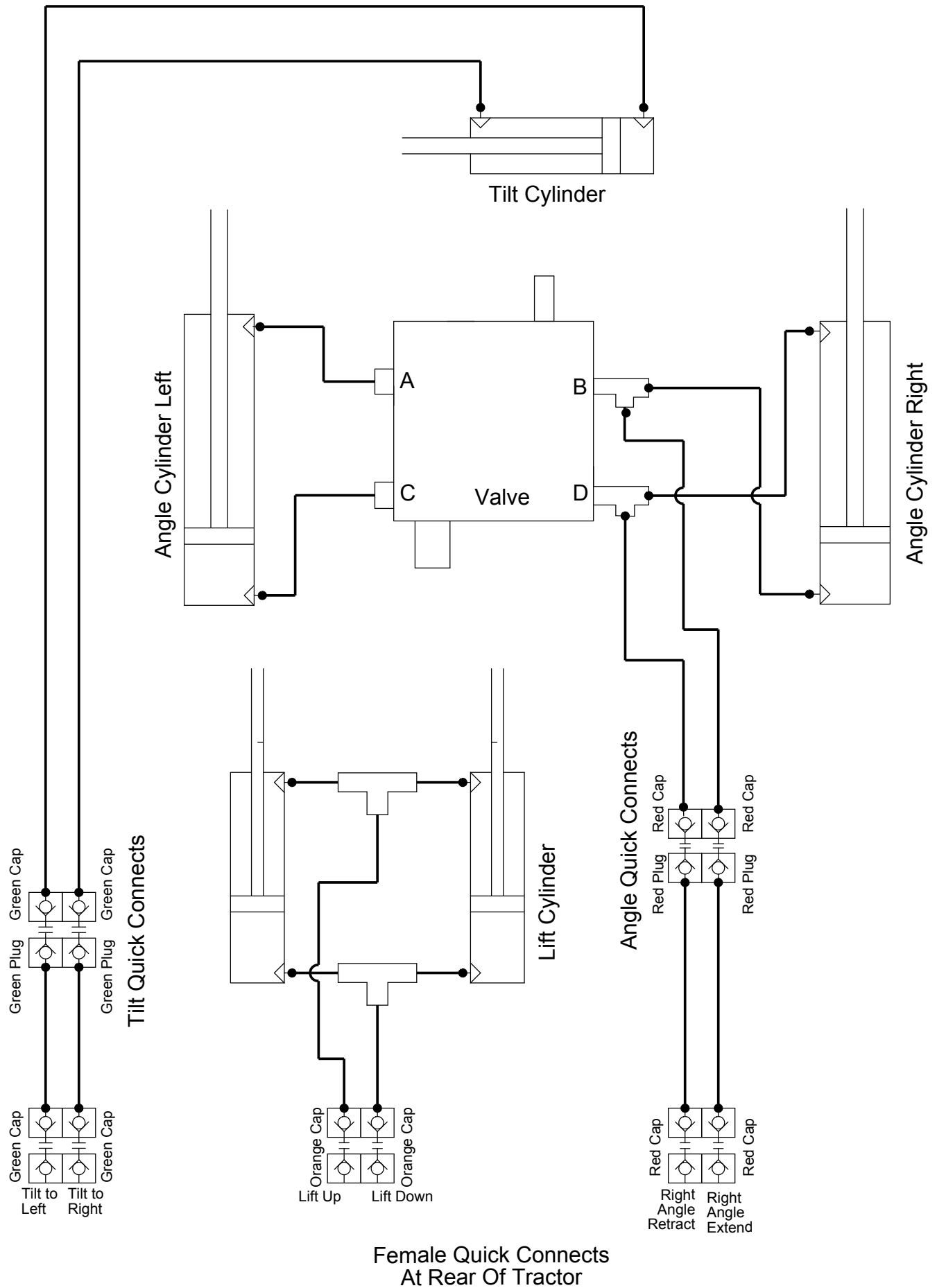
End Extension Length			1'	2'
Item No.	Part No.	Description	Qty.	Qty.
1	15-17525-1-L	1' End Extension - Left	1	-
2*	15-17525-1-R	1' End Extension - Right	1	-
3*	15-17525-2-L	2' End Extension - Left	-	1
4*	15-17525-2-R	2' End Extension - Right	-	1
5	16-20218	3/4" x 2" Hex Bolt Gr 5 NC	10	10
6	16-21666	5/8" x 1-3/4" Plow Bolt Gr 5 NC	4	8
7	29-7950-1	1'- 5/8" x 6" Double Bevel Cutting Edge	2	-
8*	29-7950-2	2'- 5/8" x 6" Double Bevel Cutting Edge	-	2
9	70-20607	3/4" Hex Center Lock Nut Gr 2 NC	10	10
10	70-20646	5/8" Hex Top Lock Nut Gr 5 NC	4	8

* Parts Not Shown

End Plates



Item No.	Qty.	Part No.	Description
1	2	44-17175	240 - 1/2" Box End Plates (U-End)
2	2	44-17197	240 - 1/2" Box End Plates (Straight)
3	10	16-20219	3/4" x 2-1/4" Hex Bolt Gr 5 NC
4	16	70-20607	3/4" Hex Center Lock Nut Gr 2 NC



Contact Us

As always, if you have any questions about your 240I & 241I Dozer or other products made by Grouser, feel free to contact us.

Grouser Products

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Improvements

Grouser Products Inc. is continually striving to improve its products. We reserve the right to change prices, specification, or equipment at any time without notice. We also reserve the right to make improvements or changes when it becomes practical and possible to do so without incurring any obligation to make changes or additions to the equipment sold previously.

Warranty

Grouser Products warrants to the original purchaser of each item that the product be free from defects in material and workmanship under normal use and service for a period of one year. If such equipment is found to be defective within one year, it is the obligation of Grouser Products under this warranty to repair or replace (exclusive of the cost of labor and transportation), any equipment or parts, in the judgment of Grouser Products to be defective in material or workmanship.

All equipment or parts claimed to be defective in material or workmanship must be made available for inspection at the place of business of a dealer authorized to handle the equipment covered by this warranty, or, upon request by Grouser Products, shipped to the Grouser Products factory in West Fargo, North Dakota. Grouser Products shall have no obligation to bear the cost of labor or transportation in connection with replacement or repair of any such defective parts in the setup process.

This warranty covers only defects in material and workmanship. It does not cover depreciation or damage caused by normal wear, accident, improper assembly, improper adjustments, improper maintenance including lack of proper lubrication, or improper use. Therefore, Grouser Products liability under this warranty shall not be effective or actionable unless the equipment is assembled, maintained and operated in accordance with the operating instructions accompanying the equipment. Grouser Products shall have no liability if the equipment has been altered or reworked without the written authorization of Grouser Products.

Grouser Products' parts, which are furnished under this warranty and properly installed, shall be warranted to the same extent as the original parts under this warranty if, and only if, such parts are found to be defective within the original warranty period covering the original equipment.

