

240 Owner's Manual & Parts Book

Purchase Date

Serial Number

Model Number

Tractor Model

Dealer

Description	Page
To The Owner, Maintenance	2
Safety Precautions & Torque Specifications	3
Skid Shoe and Tilt Plate Adjustment	4
Angle / Tilt Function Abbreviation Key	4
Relief Valve Instructions	5
NANT Blade Assy	6
HANT Blade Assy	7
HAHT Blade Assy	8
Hydraulic Angle - No Tilt System	9
Hydraulic Angle - Hydraulic Tilt System	10-11
Lift System	12-13
Quick Attach System	14
Hydraulic Tilt Hose Routing	15
Hydraulic Angle Hose Routing	16-17
Tractor Side Hydraulics	18-19
End Extensions & End Plates	20
Hydraulic Schematic	21
Notes	22-23
Contact Us, Improvements, & Warranty	24

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 240 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.

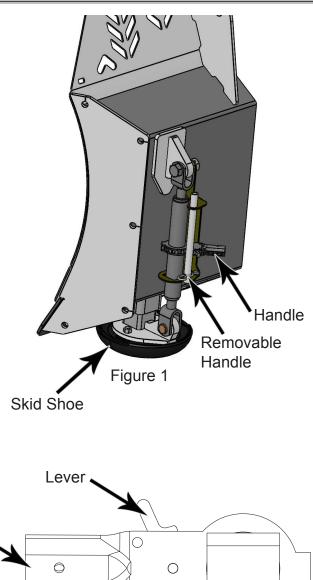
	Torque - Dry (ft–lbs)							
	SAE Grade 5 SAE Grade							
Size	UNC	UNF	UNC	UNF				
5/16	17	19	24	27				
3/8	30	35	45	50				
7/16	50	55	70	80				
1/2	75	85	110	120				
9/16	110	120	150	170				
5/8	150	170	210	240				
3/4	260	300	380	420				
7/8	430	470	600	670				
1	640	720	910	1020				

	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. Remove the handle from the ratchet keeper by pulling the hitch clip pin and insert into the handle on the ratchet jack.
- 2. Loosen the locking nut on the ratchet jack.
- 3. Hold the body of the ratchet jack and rotate the ratchet jack handle to raise or lower the skid shoes.
- If the skid shoe is not moving in the proper direction, move the forward/reverse lever on the handle (see Figure 2). Rotate the ratchet jack handle again to move the skid shoe in the direction needed.
- 5. After skid shoe is adjusted, rotate the ratchet jack handle until it rests up against the ratchet keeper. Return the removable handle to the ratchet keeper ensuring that the ratchet jack handle is captured by the removable handle and the ratchet keeper. Secure the handle to the ratchet keeper with a hitch clip pin.
- 6. Tighten the locking nut against the ratchet jack body to keep it from moving.
- 7. When skid shoes are worn, replace with new skid shoes.



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Figure 2

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 tiltway clearance to have 1/16" - 1/8" of clearance.
- Once the tilt-way clearance is set, tighten bolts to 640 ft-lbs.

Angle / Tilt Function Abbreviation Key

Handle .

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

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* Parts Not Shown

Item #A for Custom Name Plate and Item #B for AG Se	eries Name Plate
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Item #A for Custom Name Plate and Item #B for AG Series Name Plate									
		10'	12'	14'	16'				
ltem No.	Part No.	Description	Qty.	Qty.	Qty.	Qty.			
1	11-11316	Blade Stand Arm	2	2	2	2			
2	15-17850-XX	240 2-Way Blade XX'	1	1	1	1			
3	16-18945	1" x 3" Hex Bolt Gr 5 NC - Short Thread - YZ	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*	18-18498-R	Ratchet Keeper - Right	1	1	1	1			
8	18-18498-L	Ratchet Keeper - Left	1	1	1	1			
9	29-7950-5	5'- 5/8" x 6" Double Bevel Cutting Edge	2	-	-	-			
9	29-7950-6	6'- 5/8" x 6" Double Bevel Cutting Edge	-	2	-	-			
9	29-7950-7	7'- 5/8" x 6" Double Bevel Cutting Edge	-	-	2	-			
9	29-7950-8	8'- 5/8" x 6" Double Bevel Cutting Edge	-	-	-	2			
10	34-17565	Ratchet Jack	2	2	2	2			
11	34-17567	Ratchet Jack - Handle	2	2	2	2			
12	43-9582	Bent Claw Pin with Clip Pin	2	2	2	2			
13	43-7767	Hitch Clip Pin	4	4	4	4			
14	43-18463	1" x 2.75" Pin (S57190400)	2	2	2	2			
15	43-18943	3/16" x 1-1/2" Cotter Pin	2	2	2	2			
16A	44-14830	Custom Name Plate	1	1	1	1			
16B	44-16880	AG Series Name Plate	1	1	1	1			
17	50-15458	12" Round Mushroom Skid Shoe	2	2	2	2			
18	50-17545	240 Skid Shoe Mount - Mushroom	2	2	2	2			
19	70-18999	1" Hex Center Lock Nut Gr 2 NC - YZ	2	2	2	2			
20	70-20609	1" Hex Center Lock Nut	2	2	2	2			
21	70-20646	5/8" Hex Top Lock Nut Gr 5 NC	24	28	32	36			
22	70-20622	3/8" Flange Nut	8	8	8	8			

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4)-	* Parts Not Shown
Item #A for Custom Name Plate and	Item #B for AG Series Name Plate

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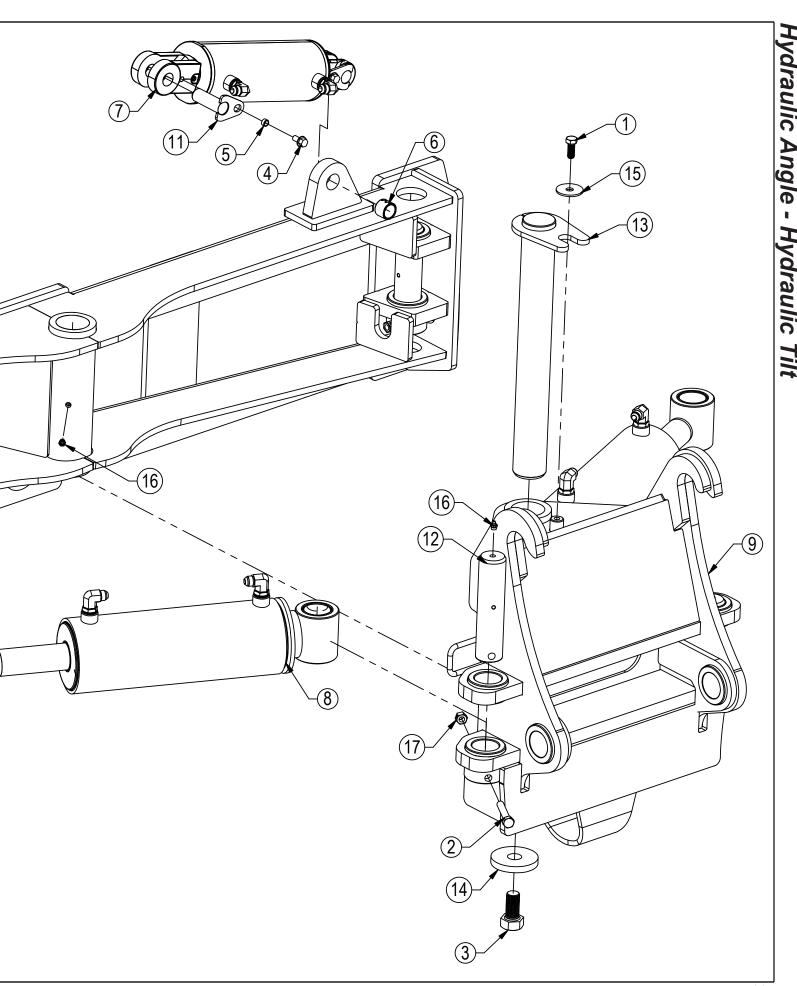
Item #A for Custom Name Plate and Item #B for AG Series Name Plate Blade Length 10' 12' 14' 16'										
		10'	12'	14'	16'					
ltem No.	Part No.	Description	Qty.	Qty.	Qty.	Qty.				
1	15-18560-XX	240 4-Way Blade XX' (3.0)	1	1	1	1				
2	16-20134	1/2" x 3-1/2" Hex Bolt Gr 8 NC	2	2	2	2				
3	16-18945	1" x 3" Hex Bolt Gr 5 NC - Short Thread - YZ	2	2	2	2				
4	16-20559	1" x 2-1/4" Hex Bolt Gr 8 NC	8	8	8	8				
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*	18-18498-R	Ratchet Keeper - Right	1	1	1	1				
8	18-18498-L	Ratchet Keeper - Left	1	1	1	1				
9	29-7950-5	5'- 5/8" x 6" Double Bevel Cutting Edge	2	-	-	-				
9	29-7950-6	6'- 5/8" x 6" Double Bevel Cutting Edge	-	2	-	-				
9	29-7950-7	7'- 5/8" x 6" Double Bevel Cutting Edge	-	-	2	-				
9	29-7950-8	8'- 5/8" x 6" Double Bevel Cutting Edge	-	-	-	2				
10	34-17565	Ratchet Jack	2	2	2	2				
11	34-17567	Ratchet Jack - Handle	2	2	2	2				
12	43-18405	Cylinder Pin (2")	2	2	2	2				
13	43-7767	Hitch Clip Pin	2	2	2	2				
14	43-18463	1" x 2.75" Pin (S57190400)	2	2	2	2				
15	43-18943	3/16" x 1-1/2" Cotter Pin	2	2	2	2				
16A	44-14830	Custom Name Plate	1	1	1	1				
16B	44-16880	AG Series Name Plate	1	1	1	1				
17	50-15458	12" Round Mushroom Skid Shoe	2	2	2	2				
18	50-17545	240 Skid Shoe Mount - Mushroom	2	2	2	2				
19	57-20819	1" Flat Washer Heavy Duty Gr 8 (USS)	8	8	8	8				
20	58-9369	Grease Zerk 1/8" NPT Straight	2	2	2	2				
21	58-9371	Grease Zerk 1/8" NPT 45°	1	1	1	1				
22	70-18999	1" Hex Center Lock Nut Gr 2 NC - YZ	2	2	2	2				
23	70-20604	1/2" Hex Center Lock Nut	2	2	2	2				
24	70-20646	5/8" Hex Top Lock Nut Gr 5 NC	24	28	32	36				
25	70-20622	3/8" Flange Nut	8	8	8	8				

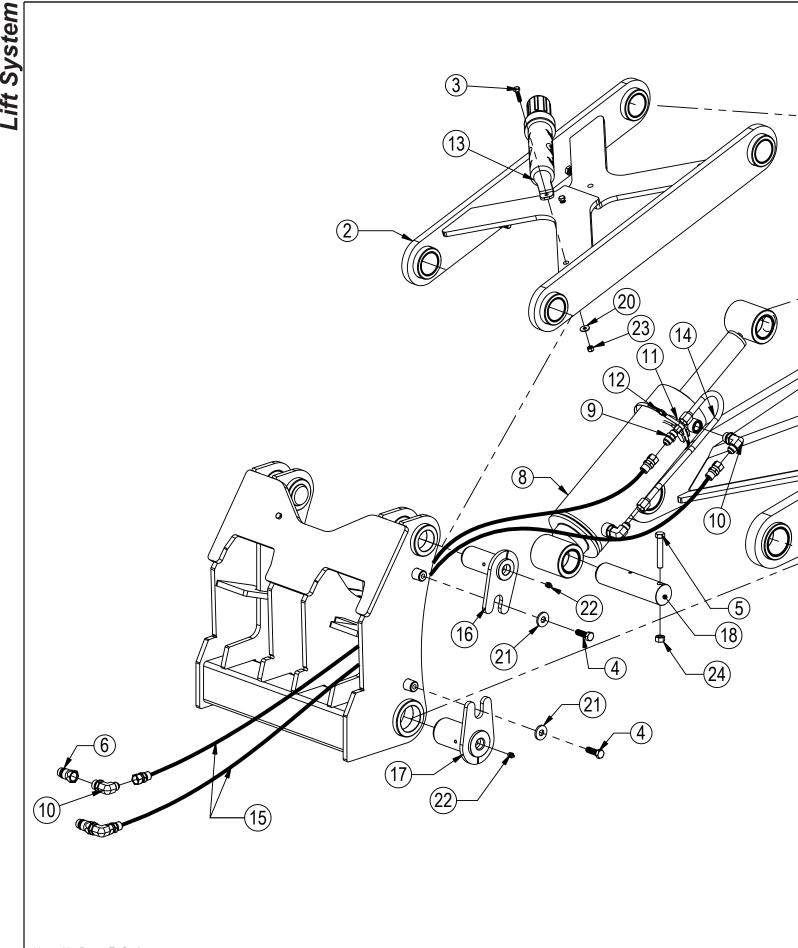
(23) (15) 4 1/ ٢ 2 A 1 0) 8 (21) Ha 2 (16) Ø Ø 3 (5) (0) 10 D (12) 6 (9) 6 7 T (0 (20 * Parts Not Shown S (22) 10 (19) Item #A for Custom Name Plate and Item #B for AG Series Name Plate Blade Length 10' 14' 16' 12' (22) Item Part No. Description Qty. Qty. Qty. Qty. No. (18) 1 15-17160-XX 240 6-Way Blade XX' 1 1 1 1 (17) 2 16-18945 1" x 3" Hex Bolt Gr 5 NC - Short Thread - YZ 2 2 2 2 (14) 3 16-20562 1" x 3" Hex Bolt Gr 8 NC 7 7 7 7 4 16-21064 8 8 8 3/8" x 1" Carriage Bolt Gr 5 NC 8 (5 5 16-21666 5/8" x 1-3/4" Plow Bolt Gr 5 NC 24 28 32 36 6* 1 18-18498-R Ratchet Keeper - Right 1 1 1 7 18-18498-L 1 Ratchet Keeper - Left 1 1 1 8 19-7774 1"x1" Spring Bushing 1 1 1 1 9 29-7950-5 5'- 5/8" x 6" Double Bevel Cutting Edge 2 -9 29-7950-6 6'- 5/8" x 6" Double Bevel Cutting Edge -2 --2 9 29-7950-7 7'- 5/8" x 6" Double Bevel Cutting Edge _ _ 9 29-7950-8 8'- 5/8" x 6" Double Bevel Cutting Edge 2 10 34-17565 Ratchet Jack 2 2 2 2 11 34-17567 Ratchet Jack - Handle 2 2 2 2 2 2 2 2 12 43-7767 Hitch Clip Pin 13 43-18463 1" x 2.75" Pin (S57190400) 2 2 2 2 14 43-18943 3/16" x 1-1/2" Cotter Pin 2 2 2 2 15A 44-14830 Custom Name Plate 1 1 1 1 15B 44-16880 AG Series Name Plate 1 1 1 1 44-15339 1 16 240 Backdrag Brace Plate 1 1 1 17 50-15458 2 12" Round Mushroom Skid Shoe 2 2 2 240 Skid Shoe Mount - Mushroom 18 50-17545 2 2 2 2 19 52-17265 240 Tilt Plate 2 2 2 2 20 57-20749 1" Flat Washer 18 18 18 18 21 70-18999 1" Hex Center Lock Nut Gr 2 NC - YZ 2 2 2 2 22 70-20646 5/8" Hex Top Lock Nut Gr 5 NC 24 28 32 36 23 70-20622 3/8" Flange Nut 8 8 8 8

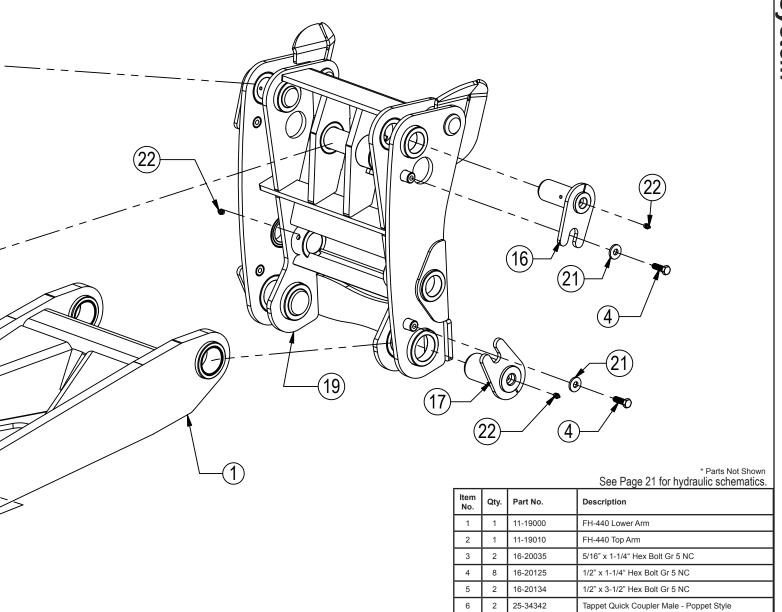
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Item No.	Qty.	Part No.	Description	1			
1	2	16-20134	1/2" x 3-1/2" Hex Bolt Gr 5 NC	1			
2	1	16-20558	1" x 2" Hex Bolt Gr 8 NC	1			
3	2	26-34748	5 x 12 Cylinder Tube Ends (2.0") (658378)	1			
4	1	32-18410	Angle Frame (2.0")	4			
5	2	43-18405	Cylinder Pin (2")	4			
				4	NOTE: Wh	en ordering	g cylinder seal kits, the part number on the ne number is stamped on the base end of the
6	1	43-16925	Angle Pin	4	cylinder op	posite of th	he hydraulic ports.
7	1	57-16928	3.50" OD x 1.06" ID Washer	4	No. On	Part No.	Description
8	2	58-9369	Grease Zerk 1/8" NPT Straight	4	Cylinder		
9	2	70-20604	1/2" Hex Center Lock Nut NC		26-34748	49-12272	Monarch Seal Kit 5 x 12 (649246) Nitrided Rod

			(
Item No.	Qty.	Part No.	Description	1 \-2)	<u>(10)</u>	
1	1	16-20125	1/2" X 1-1/4" Hex Bolt Gr 5 NC	-			
2	4	16-20120	1/2" x 3-1/2" Hex Bolt Gr 5 NC	{			
3	1	16-20558	1" x 2" Hex Bolt Gr 8 NC	1			
4	2	16-35C612	3/8" x 3/4" Flanged Bolt	1			
5	2	16-13577	NR Pin Spacer Clevis End	1			
6	1	19-7774	1"x1" Spring Bushing	1			
7	1	26-34711	4 x 8 Cylinder w/ Cast Clevis Ends (647134)	1			
8	2	26-34748	5 x 12 Cylinder Tube Ends (2.0") (658378)	1			
9	1	32-18410	Angle Frame (2.0")	1			
10	1	32-18400	Tilt Frame (2.0")	1			
11	2	43-13580	1" Clevis Bolt in Pin	1			
12	4	43-18405	Cylinder Pin (2")		on order!-	a outlinder applicite the part number of the	
13	1	43-16925	Angle Pin	cylinder is	needed. TI	g cylinder seal kits, the part number on the ne number is stamped on the base end of the	
-	1	57-16928	3.50" OD x 1.06" ID Washer	cylinder op	posite of the	ne hydraulic ports.	1
14	<u> </u>	57-20794	1/2" Fender Washer	No. On Cylinder	Part No.	Description	
14 15	1	57-20794			1		1
14 15 16	1	58-9369	Grease Zerk 1/8" NPT Straight	26-34748	49-12272	Monarch Seal Kit 5 x 12 (649246) Nitrided Rod]

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					1	
			9	1	31-11699-8-8	JIC Union (2403-8-8)
			10	4	31-34051	Straight Thread Elbow 90° JIC x O-Ring (6801-8-10)
			11	1	34-12932	Cylinder Saddle (ZR518)
			12	1	34-12933	Hose Clamp
			13	1	34-14961	Manual Canister
			14	1	35-17260	240 Formed Steel Line
				2	35-17721-280-1	280" x 1/2" -8JIC/-8JIC Hose W/ 36" Cordura
			16	4	43-16385	240 Upper Pin
		-	17	4	43-16390	240 Lower Pin
			18	2	43-18405	240 Cylinder Pin (2.0")
			19	1	45-18300	240 Quick Attach (2.0")
NOTE: When ordering cylinder seal kits, the part number on the					57-20741	5/16" Flat Washer
,	needed. The number is stamped on the base end of the posite of the hydraulic ports.			8	57-20794	1/2" Fender Washer
No. On			22	10	58-9369	Grease Zerk 1/8" NPT Straight
Cylinder	Part No.	Part No. Description	23	2	70-20611	5/16" Nyloc Nut
26-34748	49-12272	Monarch Seal Kit 5 x 12 (649246) Nitrided Rod	24	2	70-20604	1/2" Hex Center Lock Nut NC
		-		0		13

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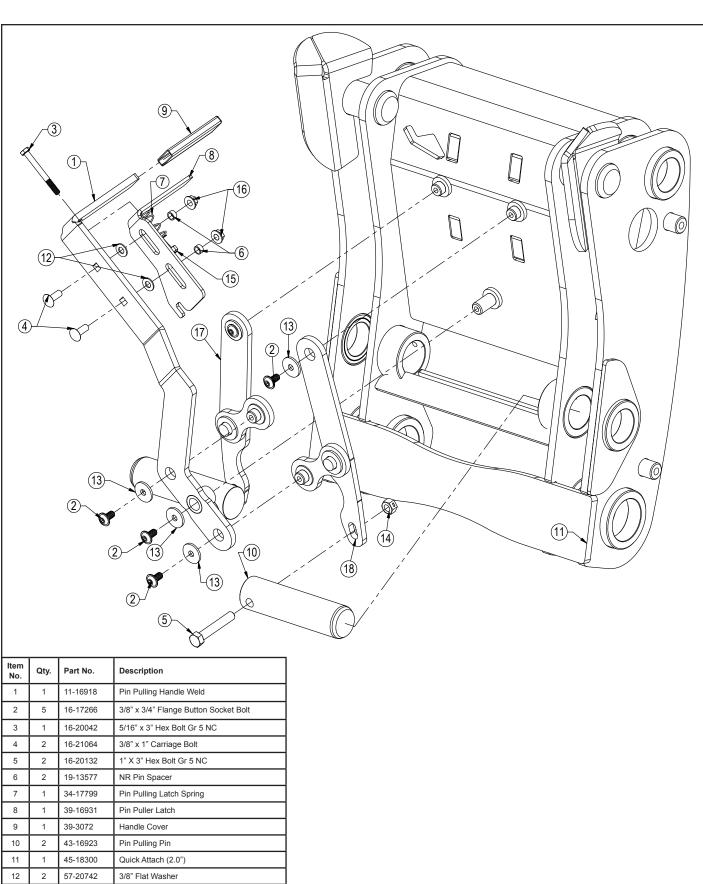
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Pioneer Dust Cap Lift (Orange)

5 x 12 Cylinder Tube Ends (2.0") (658378)



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57-20792

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70-20622

75-16915-R

75-16915-L

3/8 Fender Washer (1.25" OD)

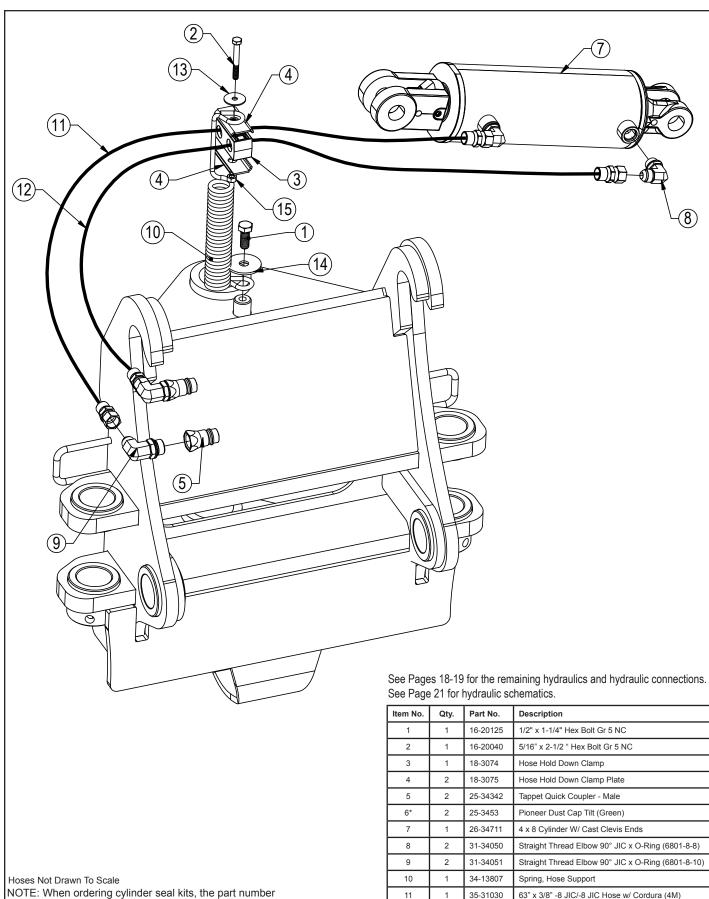
1/2" Hex Center Lock Nut NC

5/16" Nyloc Hex Nut Gr 5 NC

3/8" Flange Nut

Link Weld - Right

Link Weld - Left



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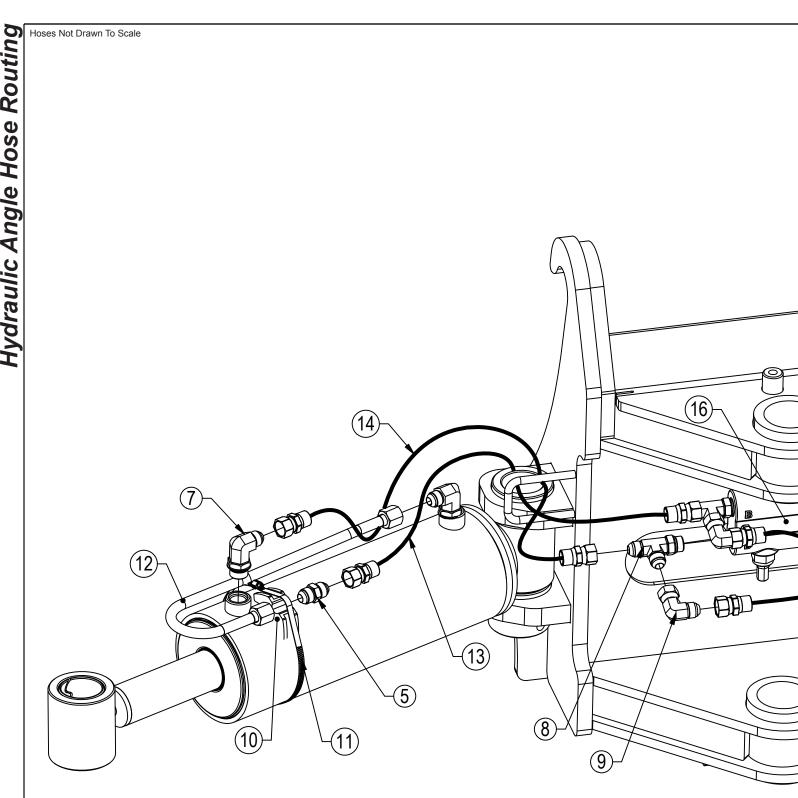
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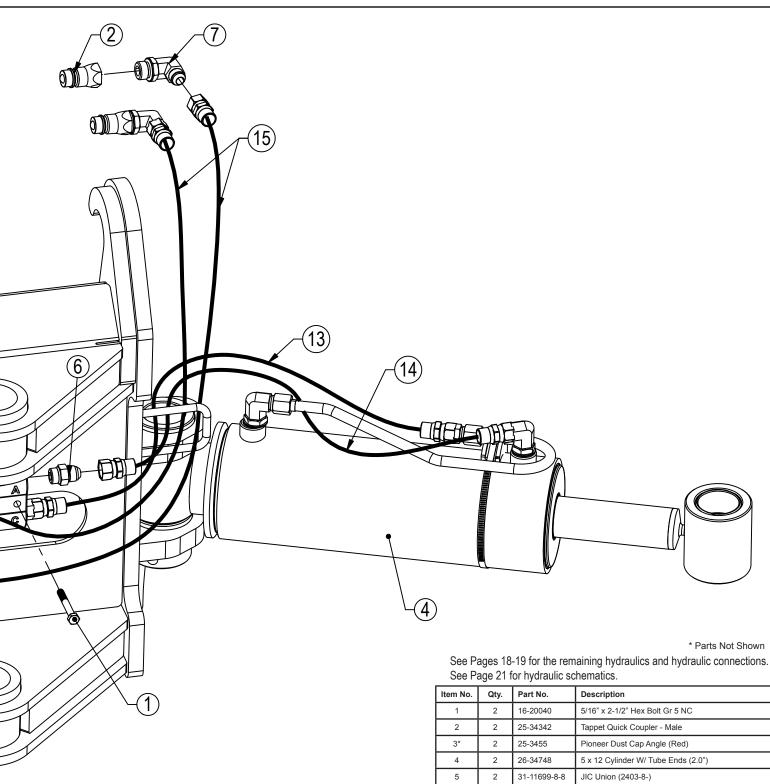
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on the cylinder is needed. The number is stamped on the base end of the cylinder opposite of the hydraulic ports.

base end of the cylinder opposite of the hydraulic ports.						FT 00704	5/407 5 1 14/ 1	
No. On			13	1	57-20791	5/16" Fender Washer		
Cylinder	Part No.	Description		14	1	57-20794	1/2" Fender Washer	
26-34711	49-12271	Seal Kit 4 x 8 (647135) Nitrided Rod, Clevis Ends		15	1	70-20581	5/16" Hex Nut NC	

69" x 3/8" -8 JIC/-8 JIC Hose w/ Cordura (4M)





1				Item No.	Qty.	Part No.	Description		
J				1	2	16-20040	5/16" x 2-1/2" Hex Bolt Gr 5 NC		
			1 2 16-20040 2 2 25-34342 3* 2 25-3455 4 2 26-34748 5 2 31-34040 7 6 31-34051 8 2 31-34070 9 2 31-34070 9 2 31-34100 10 2 34-12932 11 2 34-12932 11 2 35-31010 12 2 35-31010 14 2 35-31012		Tappet Quick Coupler - Male				
					2	25-3455	Pioneer Dust Cap Angle (Red)		
					2	26-34748	5 x 12 Cylinder W/ Tube Ends (2.0")		
				5	2	31-11699-8-8	JIC Union (2403-8-)		
			6	2	31-34040	Straight JIC x O-Ring (6400-8-8)			
			7	6	31-34051	Straight Thread Elbow 90° JIC x O-Ring (6801-8-10)			
			8	2	31-34070	Run Tee JIC x O-Ring (6804-8-8-8)			
			9	2	31-34100	Swivel Nut Elbow 90° JIC (6500-8-8)			
				10	2	34-12932	Cylinder Saddle		
				11	2	34-12933	Hose Clamp (SAE 96)		
	NOTE: When ordering cylinder seal kits, the part number on the				2	35-17260	240 Formed Steel Line		
	cylinder is needed. The number is stamped on the base end of the cylinder opposite of the hydraulic ports.		13	2	35-31010	25" x 3/8" -8 JIC/-8 JIC Hose w/ Cordura (4M)			
	No. On	Part No.		14	2	35-31013	28" x 3/8" -8 JIC/-8 JIC Hose w/ Cordura (4M)		
	Cylinder			15	2	35-31022	39" x 3/8" -8 JIC/-8 JIC Hose w/ Cordura (4M)		
	26-34748	49-12272	Monarch Seal Kit 5 x 12 (649246) Nitrided Rod	16	1	56-7772	Relief Valve		
		0				0			

See Page 21	for hydraulic	schematics
Occi aye zi	ior riyuraulic	somernatios.

		Configuration	НАНТ	HANT
Item No.	Part No.	Description	Qty.	Qty.
1	16-35C612	3/8" x 3/4" Flanged Bolt	4	2
2	18-3074	Hose Hold Down Clamp	2	1
3	18-3075	Hose Hold Down Clamp Plate	1	1
4	25-34321	Tappet Quick Coupler - Female	4	2
5	25-34342	Tappet Quick Coupler - Male	4	2
6*	25-3453	Pioneer Dust Cap Tilt (Green)	2	-
7*	25-3454	Pioneer Dust Plug Tilt (Green)	2	-
8*	25-3455	Pioneer Dust Cap Angle (Red)	2	2
9*	25-3456	Pioneer Dust Plug Angle (Red)	2	2
10	31-34051	Straight Thread Elbow 90° JIC x O-Ring (6801-8-10)	8	4
11	35-17722-280-1	280" (23.3') x 3/8" -8JIC/-8JIC Hose w/21" Cordura & Collar	2	2
12	35-17722-280-2	280" (23.3') x 3/8" -8JIC/-8JIC Hose w/18.5" Cordura & Collar	2	-
13	44-14734	Remale Coupler Retainer	2	1
14	44-16236	Female Coupler Mount	1	1
15	70-20581	5/16" Hex Nut	1	1
16	70-20622	3/8" Flange Hex Nut	4	2
17	70-20604	1/2" Hex Center Lock Nut	2	2

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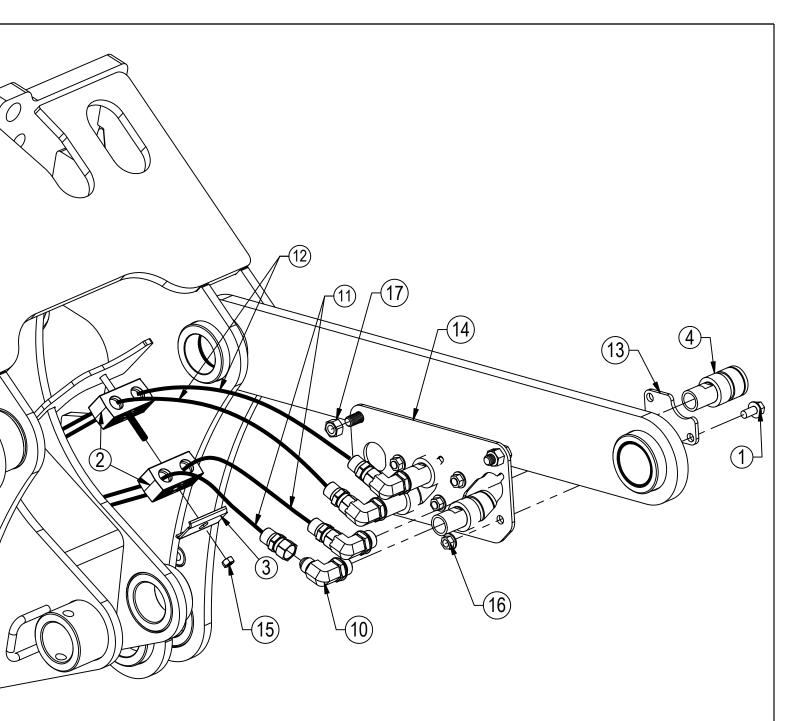
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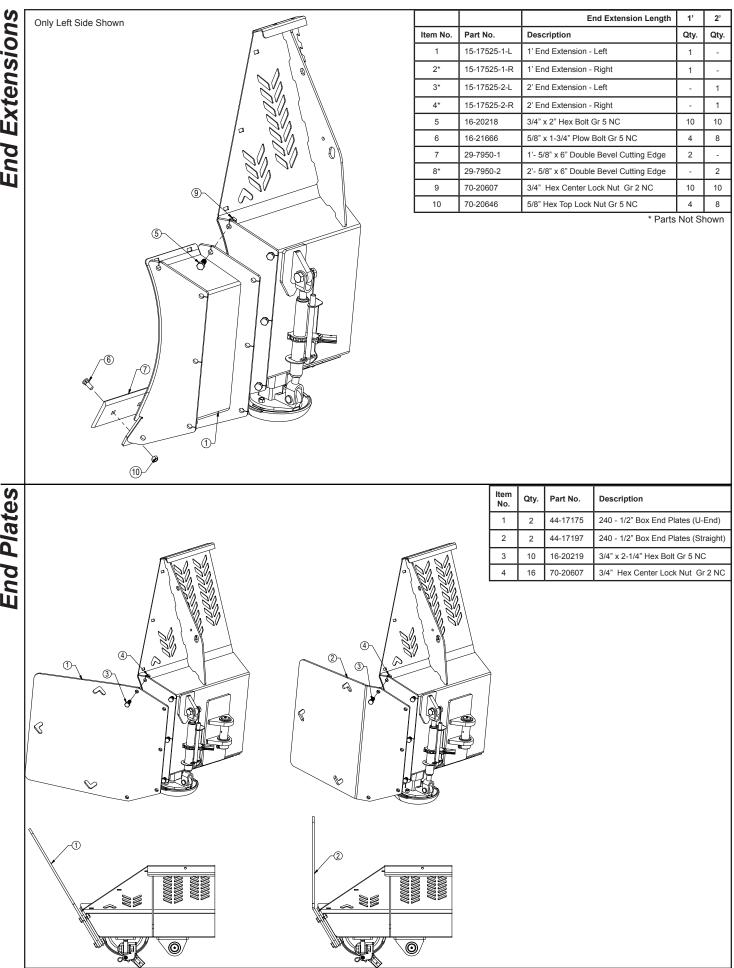
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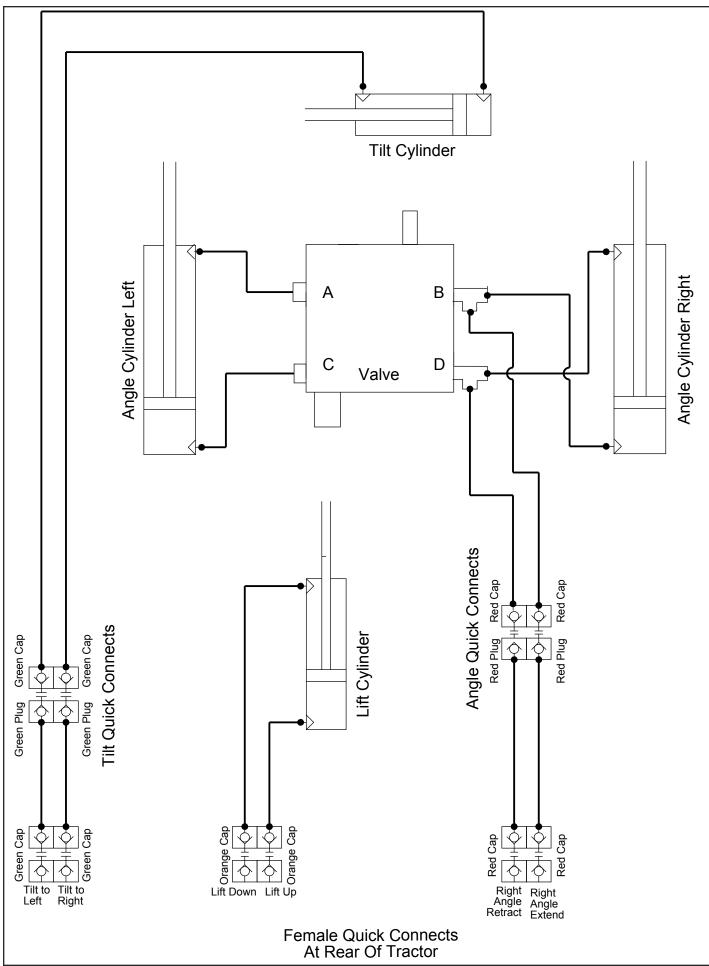
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Hydraulic Schematic

Contact Us

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

Grouser Products 755 2nd Ave NW - West Fargo, ND 58078 Phone: 1-800-747-6182 Fax: 1-701-282-8131 E-mail: grouser@grouser.com Website: www.grouser.com



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.

