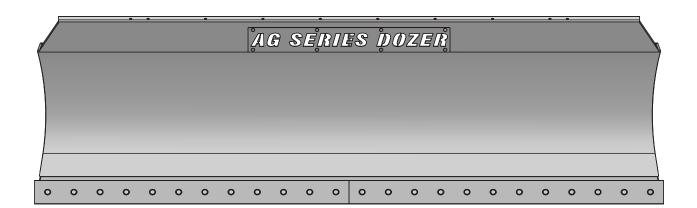


# Ag 241I w/Snow Wheel Owner's Manual & Parts Book



#### **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 Purchase Date
Serial Number
Model Number
Tractor Model
Dealer

PN: 44644

Serial Number: 10208814-Current

Description	Page
Welcome To The Owner & Torque Specifications	2
Welcome To The Owner & Torque Specifications         Safety Precautions, Maintenance & Pre-Installation         Top Arm Adjustment & Tilt Plate & Snow Wheel Adjustment	
Top Arm Adjustment & Tilt Plate & Snow Wheel Adjustment	4-5
12'-14' Hydraulic Angle - Hydraulic Tilt Blade Assembly	6-7
Hydraulic Angle - Hydraulic Tilt	
Hydraulic Angle System	10
Hydraulic Tilt Hose Routing	11
Hydraulic Angle Hose Routing	12-13
Tractor Side Hydraulics	14
Replacement Wear Parts	14
Hydraulic Schematic	15
Multi-Coupler Maintenance	16-17
Notes	18-19
Contact Us, Improvements, & Warranty	20

Thank you for your recent purchase of a Grouser Ag 240I and 241I Dozer. Welcome to the family of satisfied Grouser blade owners. Grouser Products is committed to offering quality products to help professionals in their daily jobs. We are also committed to providing you the highest level of customer satisfaction possible. Again, thank you for your patronage. We look forward to serving you.

This manual contains information concerning the operation, adjustment, safety and maintenance of the Ag 240I and 241I Dozer. You have purchased a dependable, long lasting piece of equipment. You can expect to receive long lasting performance and long service built into our products with proper care and operation. Please have all operators read and understand this manual carefully. Keep the manual available for reference. If, for any reason, you have questions or comments, we would be happy to hear from you. Call our number, 701-282-7710, or send us an e-mail at info@grouser.com. You can expect us to respond to your e-mail in a timely manner.

Tighten all bolts to the values listed below unless otherwise noted. Refer to the parts lists for proper length and grade of the bolts.

	Torque - Dry (ft–lbs)			
	SAE G	rade 5	SAE G	irade 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-Ibs)
Size	Grade 10.9
M18 x 2.50	284
M20 x 2.50	401
M22 x 2.50	547
M24 x 3.00	694

**Torque Specifications** 

Maintenance

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, please follow all safety and operational instructions of your tractor manufacturer.

# The Ag 241I Dozer:

- 1. The Ag 2411 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 Ag 2411 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.

6. Lower the blade to the ground when not in use.

# Servicing the Ag 2411 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 Ag 241I:

- 1. Thoroughly clean the Ag 2411 Dozer before storage. Use paint where necessary to prevent rust.
- 2. Check the Ag 2411 Dozer for worn or damaged parts. Install new parts as required.
- 3. Lubricate all pins and joints.

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

- · Inspect all equipment before operation for existing or potential damage.
- Lubricate all joints with high quality grease.
- Inspect all bolts, and tighten any loose bolts to torque specifications on page 2.
- Check replaceable cutting edge for wear ensuring there is enough material to prevent permanent damage to the Ag 240I and 241I Dozer. For cutting edge information, see pages 14.
- Check hydraulic cylinders and hoses for damage or leaks. For replacement parts, see hydraulic pages 11-14.
- Make sure all non-rotating pins are secured properly.
- Inspect all decals and order replacement decals from your dealer if any are damaged or worn.
- Inspect all tilt-ways for wear. See page 4 for tilt plate adjustment.
- · Replace parts with original parts only.

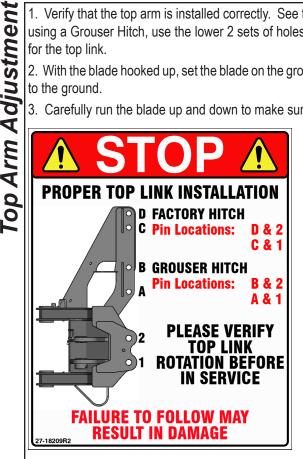
Install undercarriage per the tractor specific mounting instructions.

Pre-Installation

1. Verify that the top arm is installed correctly. See the picture of the decal that is on the angle frame below for reference. If you are using a Grouser Hitch, use the lower 2 sets of holes for the top link. If you are using a Factory Hitch, use the upper 2 sets of holes for the top link.

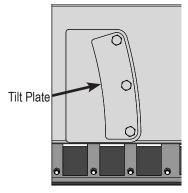
2. With the blade hooked up, set the blade on the ground. Adjust the top arm until the the center angle pin is vertical and perpendicular to the ground.

Carefully run the blade up and down to make sure that the top link doesn't collide with anything.



#### Note: Do not remove all of the bolts at the same time.

- 1. The preferred blade position for adjusting the tilt plates is laying face down on blocks.
- 2. Remove the top and bottom bolts from each tilt plate.
- 3. Add or remove washers as needed to adjust tilt-way clearance to 1/16" - 1/8".
- 4. Reinstall top and bottom bolts.
- 5. Follow Steps #2-4 for the center bolts.
- 6. Once the tilt-way clearance is set, torque bolts to 640 ft-lbs.



Tilt Plate



1. Place boards under angle frame until center pivot pin (A) is vertical.



Put boards underneath end plate skid shoes and cutting edges. Thickness of poards is dependent on what you would like for clearance.

3. Adjust end plate skid shoes **(B)** by loosening bolts and adjust skid shoes until touching boards from Step #2. Tighten bolts to secure skid shoes.



- 4. Turn snow shoe crank until wheels touch the ground.
- 5. If you run out of thread adjustment for turning wheels down, remove hardware

(C) and move full skid shoe mount down a set of holes and replace hardware.

ITEM NO.	PART NO.	12' Qty.	14' Qty.	DESCRIPTION
1	11-18640-L	1	1	End Plate Brace
2	11-18640-R	1	1	End Plate Brace
3	15-44510-12	1	-	240 Airport Blade
3	15-44510-14	-	1	240 Airport Blade
4	16-20188	24	24	5/8" X 2" Hex Bolt Gr 5 NC CZ
5	16-20190	4	4	5/8" X 2-1/2" Hex Bolt Gr 5 NC CZ
6	16-20509	12	12	3/4" X 2-1/4" Hex Bolt Gr 8 NC YZ
7	16-20514	2	2	3/4" X 3-1/2" Hex Bolt Gr 8 NC YZ
8	16-20562	7	7	1" X 3" Hex Bolt Gr 8 NC YZ
9	16-21064	8	8	3/8" x 1" Carriage Bolt Gr 5 NC CZ
10	16-21666	20	24	5/8" X 1-3/4" Plow Bolt Gr 5 NC (#3 Flat Head)
11	16-22220	8	8	3/4" X 2-1/2" Hex Bolt Gr 8 NC YZ
12	19-7774	1	1	1" x 1" Spring Bushing
13	27-17262	1	1	Ag 240 Decal
14	27-40962	1	1	Warning Prop 65 Decal
16	27-9505	2	2	Grouser Vertical Decal
17	29-7950-6	2	-	Cutting Edge

00

8

(10)-

(17)

0

S

V.

9

P

ALLA PRILA

12

(19)

-(8)

Ø

.32

Ċ

A8240

Ø

Bagaage

24)

00

8

(27)

4

0

ହତ୍ତ୍ର କ୍ରତ୍ର ଜ

26

31 27

29

31

11

22

(18)

9

(13)

3

29

(16)

de la

---25) --7) 0

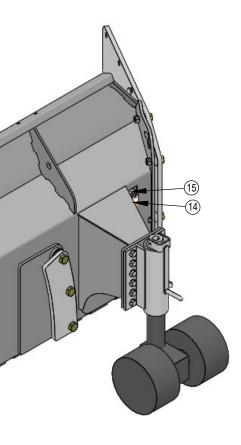
29

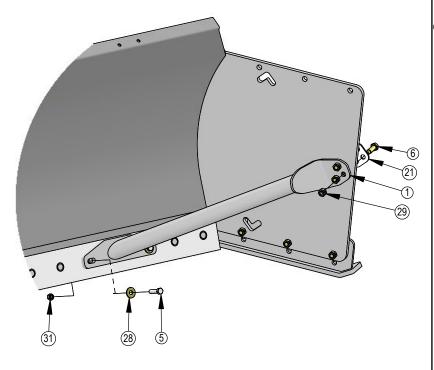
23

25

6)

ITEM NO.	PART NO.	12' Qty.	14' Qty.	DESCRIPTION
17	29-7950-7	-	2	Cutting Edge
18	44-14830	1	1	Plate
19	44-15339	1	1	Back Drag Plate
20	44-16880	1	1	Ag Series Name Plate
21	44-18645	2	2	Lift Hook Washer
22	44-44520	2	2	240 U'd End Plate
23	50-44518	2	2	Skid Shoe, 240 U-End
24	52-17265	2	2	240 Tilt Plate
25	57-19088	8	8	3/4" x 1.68" x .18" HD Washer YZ
26	57-20749	18	18	1" Flat Washer CZ
27	57-20756	48	48	5/8" SAE Hardened Flat Washer - 1-5/16" OD
28	57-20816-CZ	4	4	5/8" Flat Washer Grade 8 (USS) CZ
29	70-20607	18	18	3/4" Hex Center Lock Nut Gr 5 NC CZ
30	70-20622	8	8	3/8" Flange Hex Nut Gr 5 NC CZ
31	70-20646	48	56	5/8" Hex Top Lock Nut Gr 5 NC CZ
32	99-43464	2	2	4400 Snow Wheel System





DWG. NO.: 44510-XX-A

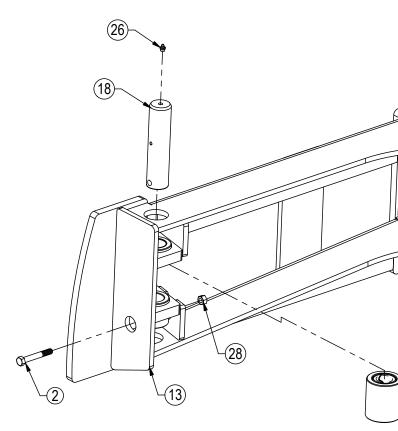
Item #A for Cat 2

Item #B for Cat 3N

Item #C for 241 System

Item #D is for Challenger 1000 and Fendt 1000 Tractors

* Parts N	ot Sho	wn	
Item No.	Qty.	Part No.	Description
1	2	16-20034	5/16" x 1" Hex Bolt Gr 5 NC
2	4	16-20134	1/2" x 3-1/2" 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	26-34748	5 x 12 Cylinder Tube Ends (658378)
12D	2	26-34759	5 x 10 Cylinder Tube Ends
13	1	32-18400	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	43-18405	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	45-18420	ISO Angle Frame
23	1	57-16928	3.50" OD x 1.06" ID Washer
24	4	57-20741	5/16" Flat Washer
25	2	57-20747	3/4" Flat Washer
26	4	58-9369	Grease Zerk 1/8" NPT Straight
27	1	58-9369	Grease Zerk 1/8" NPT 45°
28	4	70-20604	1/2" Hex Center Lock Nut NC
	1		



NOTE: When ordering cylinder seal kits, the part number on the cylinder is needed. The number is stamped on the base end of the cylinder opposite of the hydraulic ports.

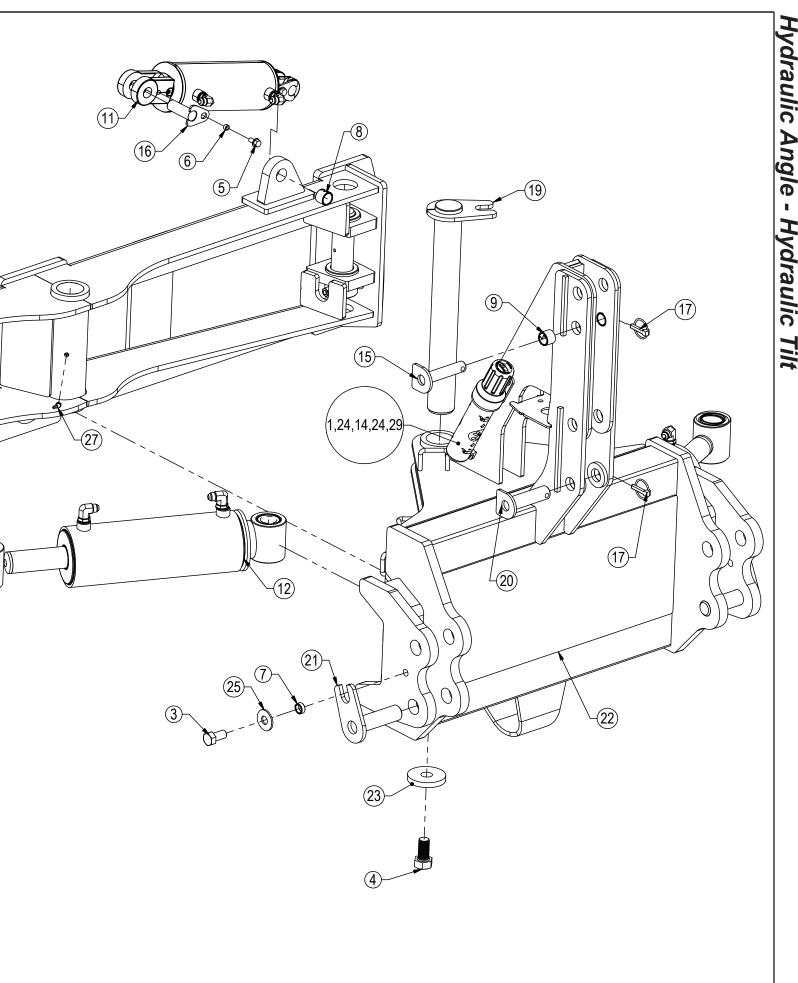
No. On		
Cylinder	Part No.	Description
26-34748	49-12272	Monarch Seal Kit 5 x 12 (649246) Nitrided Rod
26-34711	49-12271	Seal Kit 4 x 8 (647135) Nitrided Rod, Clevis Ends

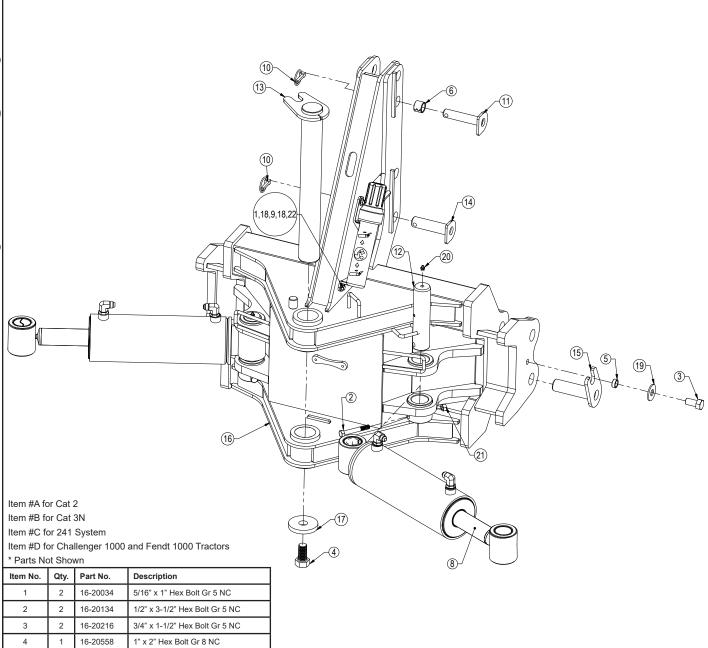
29

2

70-20611

5/16" Nyloc Nut





NOTE: When ordering cylinder seal kits, the part numbe	r on the
cylinder is needed. The number is stamped on the base	end of the
cylinder opposite of the hydraulic ports.	

No. On Cylinder	Part No.	Description
26-34748	49-12272	Monarch Seal Kit 5 x 12 (649246) Nitrided Rod

5

6A

7C\*

8

8D

9

10

11A

12

13

14B

15

16

17

18

19

20

21

22

2

2

2

2

2

1

1

1

2

1

1

2

1

1

4

2

2

2

2

19-13515

19-7774

22-8813

26-34748

26-34759

34-14961

43-16764

43-11665

43-18405

43-16925

43-3287

43-3289

45-18420

57-16928

57-20741

57-20747

58-9369

70-20604

70-20611

3/4" ID Non Rotating Pin Spacers

1" x 1" Spring Bushing

5 x 12 Cylinder Tube Ends

5 x 10 Cylinder Tube Ends

7/16" x 1-3/4" Lynch Pin

Top Link Pin - Cat 2

Top Link Pin - Cat 3N

Cylinder Pin

Lower Lift Pin

ISO Angle Frame 3.50" OD x 1.06" ID Washer

5/16" Flat Washer

3/4" Flat Washer

5/16" Nyloc Hex Nut

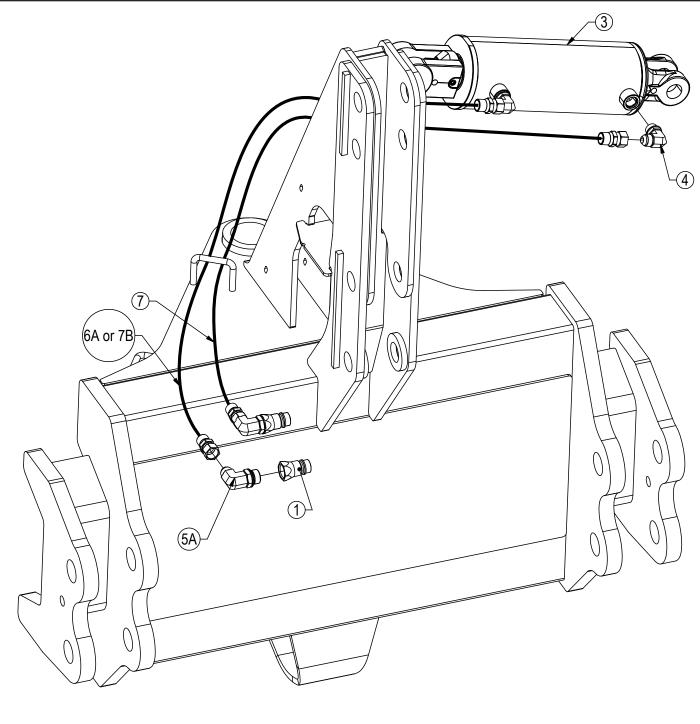
Grease Zerk 1/8" NPT Straight

1/2" Hex Center Lock Nut NC

Angle Pin

Quick Claw Uni Ball

Manual Canister



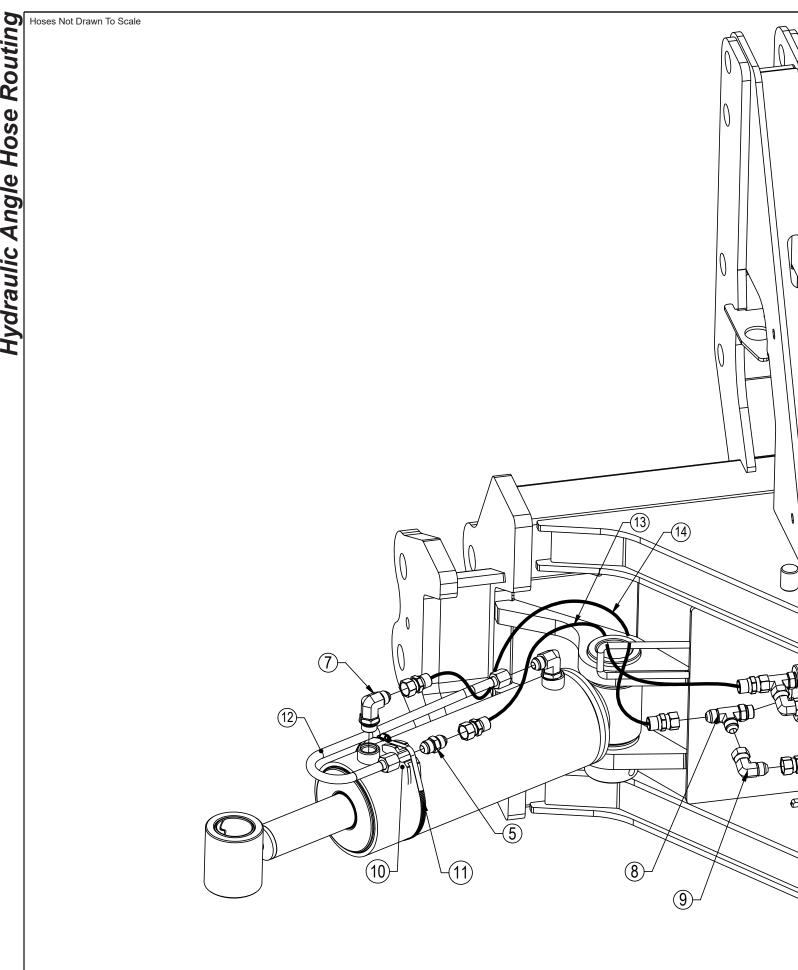
Item #A for 240 System
Item #B for 241 System
* Parts Not Shown
Hoses Not Drawn To Scale

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 or TB	1	35-44629-0980	98"" x 3/8" -8 JIC/-8 JIC Hose (4M)
7	2	35-44629-1050	105" x 3/8" -8 JIC/-8 JIC Hose (4M)

See Pages 12-14 for the remaining hydraulics. See Page 15 for hydraulic schematic.

NOTE: When ordering cylinder seal kits, the part number on the cylinder is needed. The number is stamped on the base end of the cylinder opposite of the hydraulic ports.

No. On Cylinder	Part No.	Description
26-34711	49-12271	Seal Kit 4 x 8 (647135) Nitrided Rod, Clevis Ends



tem No.	Qty.	Part No.	Description
1	2	16-20040	5/16" X 2 1/2 " Hex Bolt Gr 5 NC
2	2	25-34342	Tappet Quick Coupler - Male
3*	2	25-3455	Pioneer Dust Cap Angle (Red)
4	2	26-34748	5 x 12 Cylinder W/ Tube Ends
4C	2	26-34759	5 x 10 Cylinder W/ Tube Ends
5	2	31-11699-8-8	JIC Union (2403-8-)
6	2	31-34040	Straight JIC x O-Ring (6400-8-8)
7A	6	31-34051	Straight Thread Elbow 90° JIC x O-Ring (6801-8-10)
7B	4	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)
12	2	35-17260	240 Formed Steel Line
13	2	35-31010	25" x 3/8" -8 JIC/-8 JIC Hose w/ Cordura (4M)
14	2	35-31013	28" x 3/8" -8 JIC/-8 JIC Hose w/ Cordura (4M)
15	1	35-44629-0920	92" x 3/8" -8 JIC/-8 JIC Hose (Port B)
15	1	35-44629-0935	93.5" x 3/8" -8 JIC/-8 JIC Hose (Port D)
16	1	56-7772	Relief Valve

7

(13)

(14)

4

2

(15

(6)

0HD

3

(16)

1

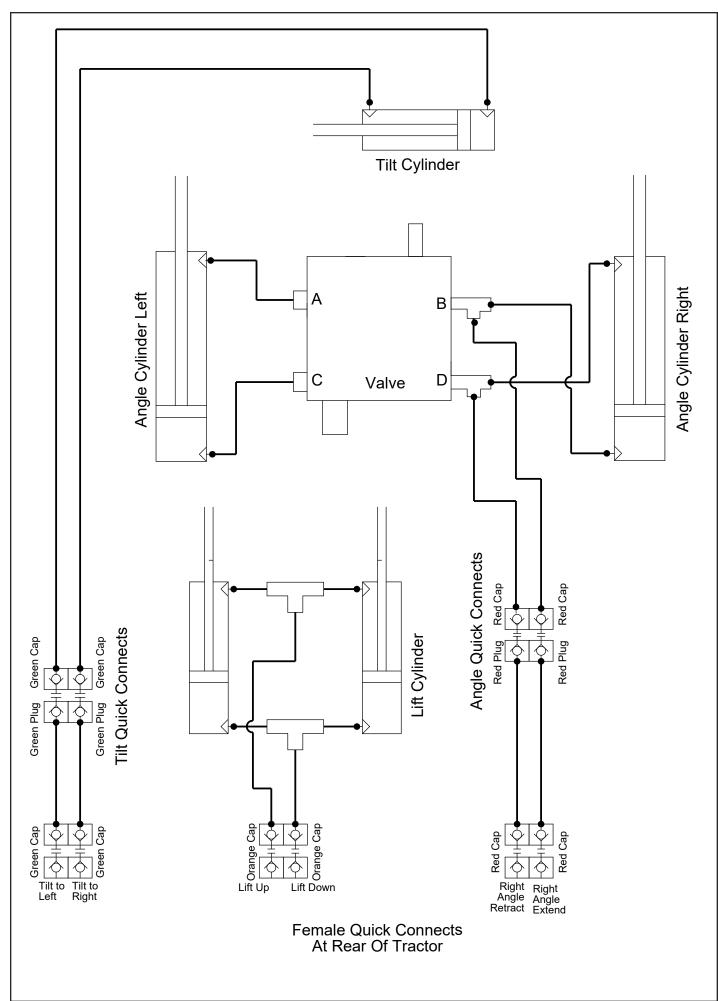
See Pages 11 and 14 for the remaining hydraulics. See Page 15 for hydraulic schematic.

> Item #A for 240 System Item #B for 241 System Item #C is for Challenger 1000 and Fendt 1000 Tractors \* Parts Not Shown

NOTE: When ordering cylinder seal kits, the part number on the cylinder is needed. The number is stamped on the base end of the cylinder opposite of the hydraulic ports.

No. On Cylinder	Part No.	Description
26-34748	49-12272	Monarch Seal Kit 5 x 12 (649246) Nitrided Rod

			Configuration	HAHT	HANT	
Item No	Part	t No.	Description	Qty.	Qty.	•
1		20126	1/2" x 1-1/2" Hex Bolt Gr 5 NC	2 2	1 u	
2		3973	Coupler Mounting Bracket	2	1	
3		34321	Tappet Quick Coupler Female	4	2	
4		34342	Tappet Quick Coupler - Male	4	2	
5*	25-3		Pioneer Dust Cap Tilt (Green)	2	-	
6*	25-3		Pioneer Dust Plug Tilt (Green)	2	-	
7*	25-3		Pioneer Dust Cap Angle (Red)	2	2	
8*	_	3456	Pioneer Dust Plug Angle (Red)	2	2	
9		34051	Straight Thread Elbow 90° JIC x O-Ring (6801-8-10)	4	2	
10		14629-2280	228" x 3/8" -8JIC x -8JIC Hose	4	2	
* Parts I	_			(3)		
			< label{eq:constraint}	Ò-		
			e w/ Hardware Kit - 7950-6K Description			
	Qty.	Cutting Edg Part No. 16-21666	Description			
<b>Item</b>		Part No. 16-21666	Description 5/8" x 1-3/4" Plow Bolt Gr 5 NC			
<b>Item</b> 1 2	<b>Qty.</b> 12 1	Part No. 16-21666 29-7950-6	Description           5/8" x 1-3/4" Plow Bolt Gr 5 NC           6'- 5/8" x 6" Double Bevel Cutting Edge			
Item           1           2           3	<b>Qty.</b> 12 1 12	Part No.           16-21666           29-7950-6           70-20646	Description           5/8" x 1-3/4" Plow Bolt Gr 5 NC           6'- 5/8" x 6" Double Bevel Cutting Edge           5/8" Hex Top Lock Nut Gr 5 NC			
Item           1           2           3           7' - 5/8'	<b>Qty.</b> 12 1 12 12 <b>x 6" C</b>	Part No. 16-21666 29-7950-6 70-20646 Cutting Edg	Description           5/8" x 1-3/4" Plow Bolt Gr 5 NC           6'- 5/8" x 6" Double Bevel Cutting Edge           5/8" Hex Top Lock Nut Gr 5 NC           e w/ Hardware Kit - 7950-7K			
Item       1       2       3       7' - 5/8'       Item	Qty. 12 1 12 'x 6" C Qty.	Part No.           16-21666           29-7950-6           70-20646           Cutting Edg           Part No.	Description         5/8" x 1-3/4" Plow Bolt Gr 5 NC         6'- 5/8" x 6" Double Bevel Cutting Edge         5/8" Hex Top Lock Nut Gr 5 NC         e w/ Hardware Kit - 7950-7K         Description			
Item       1       2       3       7' - 5/8'       Item       1	Qty.           12           1           12           1           12           Y x 6" C           Qty.           12	Part No.           16-21666           29-7950-6           70-20646           Cutting Edg           Part No.           16-21666	Description           5/8" x 1-3/4" Plow Bolt Gr 5 NC           6'- 5/8" x 6" Double Bevel Cutting Edge           5/8" Hex Top Lock Nut Gr 5 NC           e w/ Hardware Kit - 7950-7K           Description           5/8" x 1-3/4" Plow Bolt Gr 5 NC			
Item           1           2           3           7' - 5/8'           Item           1           2           3	Qty.           12           1           12           Y x 6" C           Qty.           12           14	Part No.           16-21666           29-7950-6           70-20646           Cutting Edg           Part No.           16-21666           29-7950-7           70-20646	Description         5/8" x 1-3/4" Plow Bolt Gr 5 NC         6'- 5/8" x 6" Double Bevel Cutting Edge         5/8" Hex Top Lock Nut Gr 5 NC         e w/ Hardware Kit - 7950-7K         Description			



Hydraulic Schematic



#### Cleaning The Male Interface Seal:

1. Make sure the coupling is securely fastened into the plate or place in a vice.

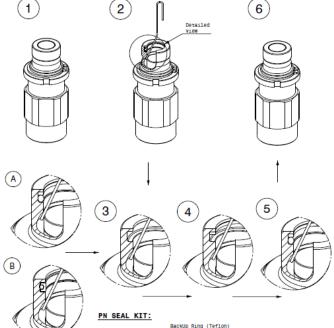


- Using a blunt, non-marring tool, depress the valve face until the seal is exposed. Insert a bent metal wire between the valve face and the body of the coupling. <u>Use caution not to damage or scratch the seal when inserting</u> <u>the wire.</u>
- Inspect the seal and interior surfaces for contamination.
- In case of contamination, carefully wipe surfaces with a soft cloth, or use compressed air to blow the contamination out. Do Not press hard on the seal as contamination can scratch the seal surface.
- Using a non-marring tool, depress the valve face and remove the metal wire. Release the valve to the flush position.

#### **Cleaning The Female Bushing:**

- 1. Make sure the coupling is securely fastened into the plate or place in a vice.
- Using a non-marring tool, depress the outer ring to expose the bushing. There is no need to expose the valve seal, so stop pressing before the valve is opened.
- 3. Inspect the interior body and bushing surfaces for contamination.
- In case of contamination, carefully wipe surfaces with a soft cloth, or use compressed air to blow the contamination out.
- 5. Release the outer ring so that it returns to the flush position.

#### MALE FAP - REPAIR KIT INSTRUCTIONS



Oring (NBR)

#### DISASSEMBLING STEPS (see figures)

- 1. Place the coupling in a vice.
- 2. Bend positioning clip as shown.
- Using a blunt, non marring object, depress valve face until seals are exposed. Insert the positioning clip between valve face and body, captivating the valve face
- Using an O-ring pick or similar device, remove the seal from retaining groove. Clean properly the retaining groove with a clean cloth.

Note: Some M FAP are originaly assembled with different seal technologies (see figures A and B) but both used O-ring and backUp ring as repalcement kit.

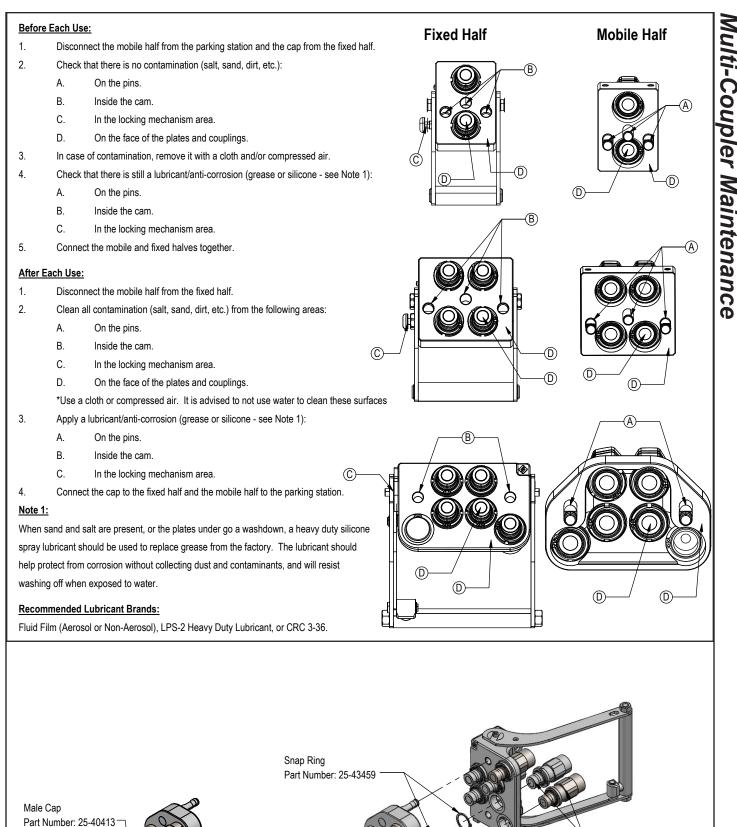
#### ASSEMBLING STEPS (see figures)

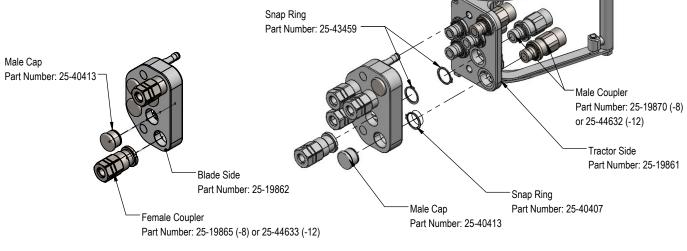
- 4. Insert the backup ring (4) in the seat and even with the use of a non sharpen
- tool. Place the BackUp ring on the superior shoulder of the seat in order to leave space for the O-ring (see figure 4).
- Lubricate the O-ring with a fluid compatible with the seals compound. Warning: using non compatible fluid would compromise the efficency of the coupling.
- 6. Push the piston with a blunt, non marring tool and take the metal clip out. Release the piston.

#### FUNCTIONING CHECK

Assemble the male coupling with the female in order to check the functioning and check for leaks.

BY REPLACING THE SEALS, YOU REMOVE THE WARRANTY AND BECOME RESPONSIBLE FOR THE SAFETY AND THE EFFICIENCY OF THE COUPLING!





	Ŋ
	Ċ
1	Ĭ
	0
h	-
1	
٢	
Î	

Notes

# 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 two (2) years for Agriculture Series Blades and one (1) year for Heavy Duty Series from date of original retail delivery.

## The obligation of the consumer under this warranty:

- 1. To read the operators manual and to operate, lubricate, maintain and store equipment in accordance with the instructions listed in the operators manual.
- 2. To inspect equipment and if any part needs repair or replacement when continued use would cause damage or wear to other parts or safety.
- 3. 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.

## The obligation of the dealer under this warranty:

- 1. Complete warranty registration form and submit within 30 days of sale.
- 2. Contact Grouser Products for authorization prior to performing any warranty repairs or part replacement.
- 3. Complete warranty request form and submit with photos and supporting documentation.

## The obligation of Grouser Products under this warranty:

- 1. Repair or replace, any equipment or parts, in the judgment of Grouser Products to be defective in material or workmanship.
- 2. Grouser Products will cover the cost of parts and ground shipping at dealer invoice only.
- 3. 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.

## This warranty does not cover:

- 1. Depreciation or damage caused by normal wear, accident, improper assembly, improper adjustments.
- 2. Improper maintenance including lack of proper lubrication, or improper use. Including loose bolts, nuts, or fitting due to over tightening or vibration after 20 hours of operation.
- 3. Repairs or alterations without authorization from a Grouser Products representative.
- 4. 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.

### NO EMPLOYEE OR REPRESENTATIVE OF GROUSER PRODUCTS IS AUTHORIZED TO CHANGE THE WARRANTY IN ANY WAY OR GRANT ANY OTHER WARRANTY.

# Contact Us

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

