



FH-400 Front 3-Point Hitch 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 FH-400 Front 3-Point Hitch. 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 a lot of our equipment operates in, the following tasks should be performed every 10 hours or less.

- Inspect 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.
- Make sure all non-rotating pins are secured properly.
- Check hydraulic cylinders and hoses for damage or leaks.

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 FH-400 Front 3-Point Hitch:

1. The FH-400 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 front hitch 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 or a Grouser dealer.

Servicing the FH-400 Front 3-Point Hitch:

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 FH-400 Front 3-Point Hitch:

1. Thoroughly clean 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 specifications set by the manufacturer or previously stated amounts. If neither of these can be found the following torque chart should be used.

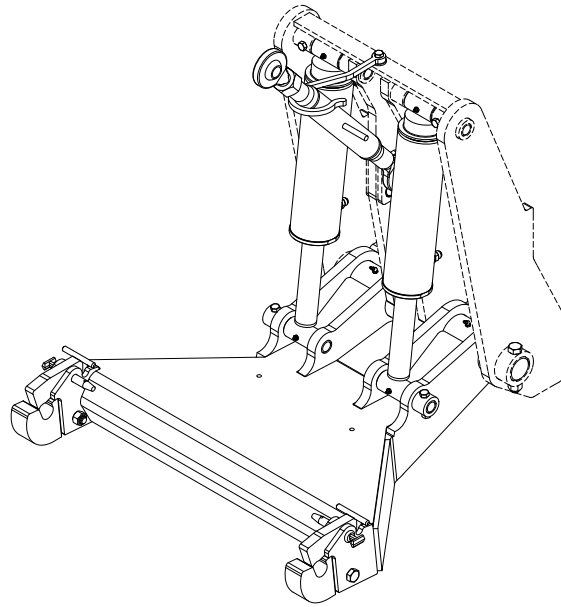
Size	Torque (ft-lbs)			
	SAE Grade 5		SAE Grade 8	
	UNC	UNF	UNC	UNF
5/16	17	19	24	27
3/8	30	35	45	50
7/16	50	55	70	80
1/2	75	85	110	120
9/16	110	120	150	170
5/8	150	170	210	240
3/4	260	300	380	420
7/8	430	470	600	670
1	640	720	910	1020

Size	Torque (ft-lbs)	
	Grade 8.8	Grade 10.9
M18 x 2.50	202	284
M20 x 2.50	286	401
M22 x 2.50	388	547
M24 x 3.00	493	694


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Solid Lower Arm Lift System

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
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	16-20126	1/2" x 1-1/2" Hex Bolt Gr. 5 NC
7	4	16-20130	1/2" x 2-1/2" Hex Bolt Gr. 5 NC
8	2	16-20222	3/4" x 3" Hex Bolt Gr. 5 NC
9	1	16-20227	3/4" x 4-1/2" Hex Bolt Gr. 5 NC
10	4	19-3774	1.5" x 1.25" x 2.00" Spring Bushing (150125200)
11	2	19-15711	Lower Lift Arm Bushing
12	2	22-15701	FH-400 Solid Lower Arm Latch
13	2	26-34728	4" x 12" Cylinder w/ Tube Ends
14	2	43-15712	3/4" x 3-1/4" Safety Hitch Pin and Clip
15	2	43-8234	1-1/4" x 7-1/4" NR Pin
16	1	43-8322	2-7/16" x 25" NR Pin
17	2	43-9334	1-1/4" x 10" NR Pin
18	1	43-11471	FH-400 Top Arm Pin
19	1	57-20744	1/2" Flat Washer
20	1	57-20794	1/2" Fender Washer (2.00" x .500" x .125")
21	4	58-9369	Grease Zerk 1/8" NPT Straight
22	3	58-9371	Grease Zerk 1/8" NPT 45°
23	5	70-20604	1/2" Center Lock Hex Nut NC
24	3	70-20607	3/4" Hex Center Lock Nut NC



Refer to Page 5 for hydraulic components and hoses.



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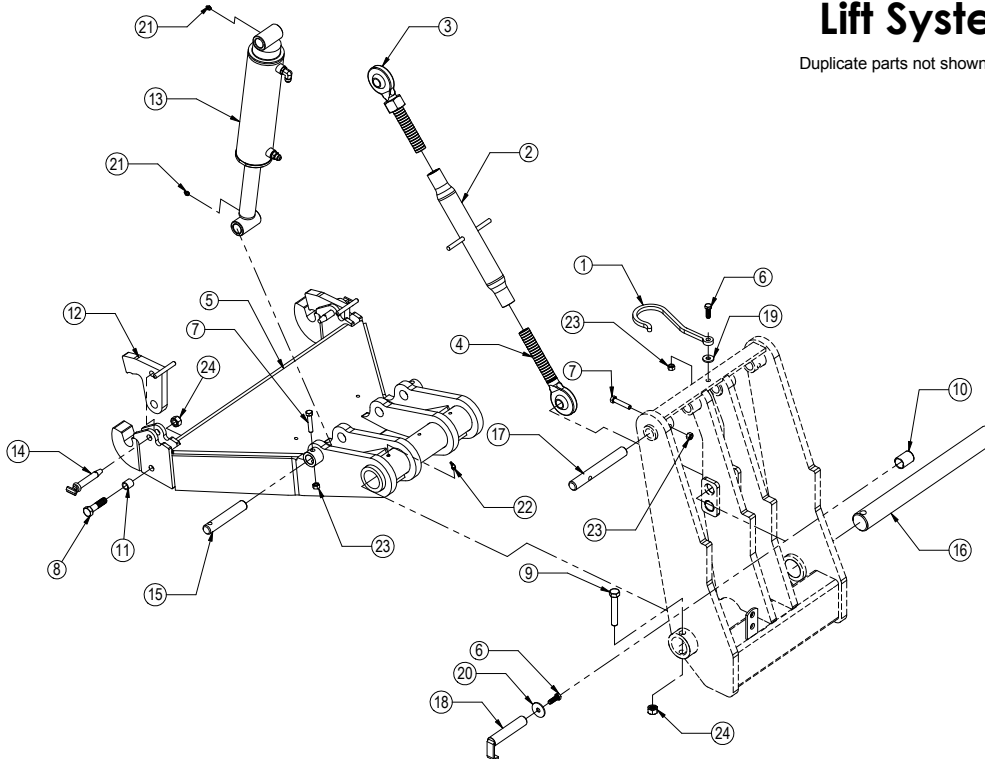
TITLE: Solid Lower Arm Lift System


Date: 6-29-2012

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Solid Lower Arm Lift System

Duplicate parts not shown for clarity.





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TITLE: Solid Lower Arm Lift System

Date: 6-29-2012

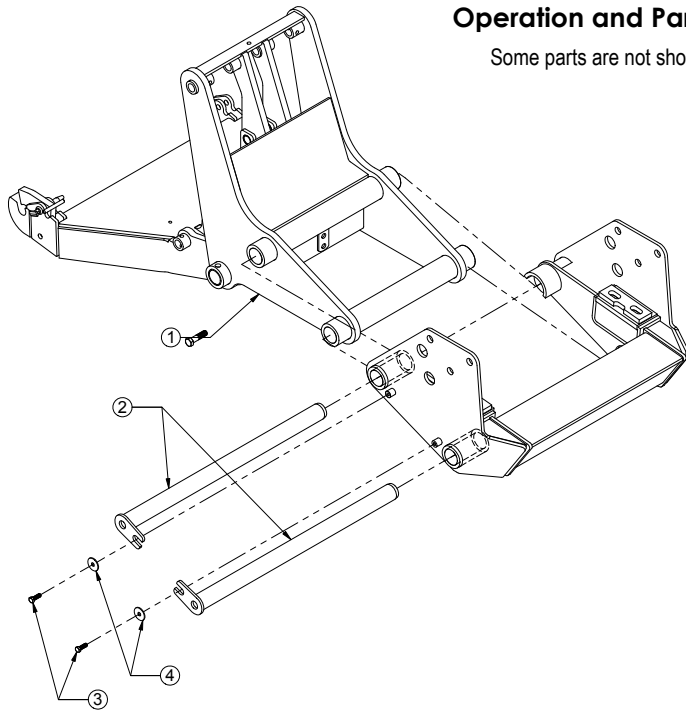
Note: If Item #10 is not present, use PN: 43-9335 (1-1/4" x 6" NR Pin) and PN: 43-9360 (7/16" Lynch Pin) in place of Item #6, #18, and #20.

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FH-400 Kneeler

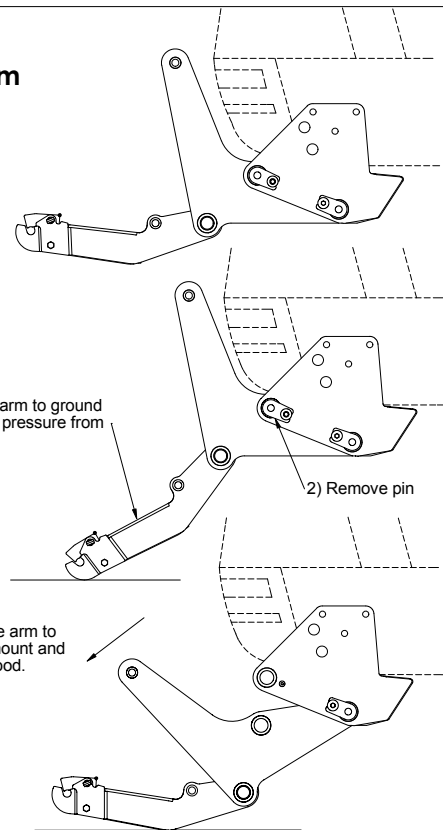
Operation and Parts Diagram

Some parts are not shown for clarity.



Hose routing for kneeler is similar to standard lift system, however hose lengths may vary.
Standard hoses for kneeler lift system are included but not shown:
2- 20" -8JIC-8JIC Hose (PN 35-30005) - Bottom port (rod end) of cylinders
2- 30" -8JIC-8JIC Hose (PN 35-30015) - Top port (base end) of cylinders

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	17-9610	FH-400 Kneeler Mount
2	2	43-1355	2-3/8" X 39" NR Pin
3	2	16-20126	1/2" X 1-1/2" Hex Bolt Gr. 5 NC
4	2	57-20794	1/2" Fender Washer

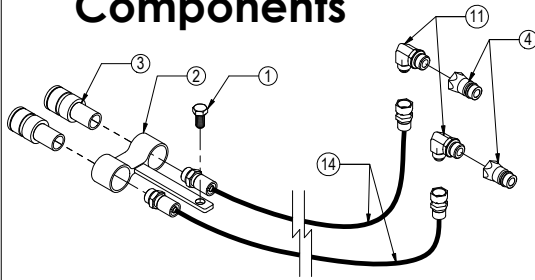


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TITLE: FH-400 Kneeler	Date: 8-21-2006
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Auxiliary Hydraulic Components



Hoses not drawn to scale

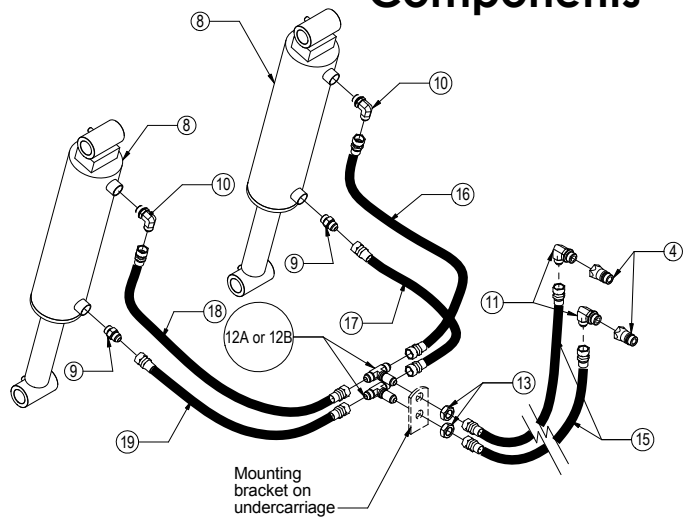
*Part not shown.

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.

Hose lengths vary per tractor model. Please contact Grouser if hose length is needed for Item 14, 15, 16, 17, 18, or 19.

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	2	16-20124	1/2" x 1" Hex Bolt Gr 5 NC
2	1	18-8973	Coupler Mounting Bracket
3	2	25-34321	Tappet Quick Coupler Female
4	4	25-34322	Tappet Quick Coupler Male
5*	2	25-3455	Pioneer Dust Cap Angle (Red)
6*	2	25-3456	Pioneer Dust Plug Angle (Red)
7*	2	25-3457	Pioneer Dust Cap Lift (Orange)
8	2	26-34728	4" X 12" Cylinder w/ Tube Ends
9	2	31-34040	8MB-8MJ Straight (6400-8-8)
10	2	31-34050	8MB-8MJ 90° (6400-8-8)
11	4	31-34051	10MB-8MJ 90° (6801-8-10)
12A	2	31-34030	8MJ-8BH-8MJ BH Run Tee
12A	2	31-34020	8MJ-8MJ-8MJ BH Tee (2703-8-8-8)
13	2	70-20807	3/4" Hex Jam Nut NF

FH-400 Hydraulic Components



Note 1: If tee mounting bracket is towards left side of frame, use parts labeled with 'A'. For center mounted bracket, use parts labeled with 'B'.

No. on Cylinder	Part No.	Description
26-34728	49-12272	Seal Kit 4" Bore x 2" Rod Nitrided Rod
C40-182A10	49-1535	Seal Kit 4x2" (SKC40-162A)

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TITLE: FH-400 Hydraulic Components	Date: 8-21-2006
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Contact Us

As always, if you have any questions about your FH-400 System 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.

