



Belly Blade

Installation Instructions

New Holland Boomer 50 - Direct Lift
With Factory Loader

Purchase Date
Serial Number
Model Number
Tractor Model
Dealer

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Bolt Torque Specifications

Bolt Dia. (inch)	Thread per inch	Grade 5	Grade 8
		Torque (ft·lbs.)	Torque (ft·lbs.)
1/4	20	8	12
1/4	28	10	14
5/16	18	17	25
5/16	24	19	29
3/8	16	30	45
3/8	24	35	50
7/16	14	50	70
7/16	20	55	80
1/2	13	75	110
1/2	20	90	120
9/16	12	110	150
9/16	18	120	170
5/8	11	150	220
5/8	18	180	240
3/4	10	260	380
3/4	16	300	420
7/8	9	430	600
7/8	14	470	660
1	8	640	900
1	12	710	990

Bolt Dia. (mm)	Pitch	Grade 8.8	Grade 10.9
		Torque (ft·lbs.)	Torque (ft·lbs.)
4	0.70	2	
5	0.80	4	
5	1.00	7	11
7	1.00	12	
8	1.25	17	26
8	1.00	18	
10	1.50	35	51
10	1.20	37	
10	1.00	39	
12	1.75	59	88
12	1.50	62	
12	1.25	65	
14	2.00	94	139
14	1.50	101	
16	2.00	146	210
18	2.50	210	
20	2.50	292	
22	2.50	398	
44	3.00	503	

Kit Inventory

Qty.	PN	Description
2	16-812525	8mm x 1.25mm x 25mm Metric Hex Bolt Gr 10.9
6	16-1420050	14mm x 2.00mm x 50mm Metric Hex Bolt Gr 10.9 Coarse
3	16-20062	3/8" x 3/4" Hex Bolt Gr 5 NC 57-20762
4	16-20190	5/8" X 2 1/2" Hex Bolt Gr 5 NC
6	16-21218	3/4" x 2" Carriage Bolt Gr 5 NC
6	16-21222	3/4" x 3" Carriage Bolt GR 5 NC
1	17-19830	200 NH Boomer 50 Valve Mount
1	18-10248	2.50" U-Clamp
1	18-19825-L	200 NH Boomer 50 Rear Bracket - Left
1	18-19825-R	200 NH Boomer 50 Rear Bracket - Right
2	18-19835	200 NH Boomer 50 Front Bracket (Loader)
2	31-34052	Straight Thread Elbow 90° JIC x O-Ring (6801-10-10)
1	31-34053	Straight Thread Elbow 90° JIC x O-Ring (6801-10-8)
1	35-30927	54" x 5/8" -10 JIC / -10 JIC (4m)
1	35-30929	60" x 5/8" -10 JIC / -10 JIC (4m)
1	35-30930	63" x 5/8" -10 JIC / -10 JIC (4m)
5	39-10199	Belly Blade Control Handles
1	43-7995	Pin 1" x 2.125"
1	43-7767	Cylinder Hitch Pin Clip
1	44-19824	200 NH Boomer 50 Valve Mount Support
1	54-19820	200 NH Boomer 50 Undercarriage Weld
1	56-10280-B	Belly Blade 5 Section Valve System
4	57-20746	5/8" Flat Washer
10	57-20747	3/4" Flat Washer
2	57-20757	3/4" SAE Hardened Flat Washer - 1-1/2" OD
2	57-20821	8mm Flat Washer
6	57-20824	14mm Flat Washer
10	59-34950	Zip / Cable Tie 120# 29"
12	70-20607	3/4" Hex Center Lock Nut Gr 2 NC
4	70-20646	5/8" Hex Top Lock Nut Gr 5 NC

Blade Assembly - Shipment includes one of the following

Qty	PN	Description
1	15-10300-6	6 ft. Moldboard
1	15-10300-7	7 ft. Moldboard
1	15-10300-8	8 ft. Moldboard
1	15-10300-9	9 ft. Moldboard
1	15-10300-10	10 ft. Moldboard

General Information

Locate the Belly Blade assembly identification number and record the information on the front of this manual. This may be needed when contacting your service center or dealer.



Using Your Manual

Read this manual completely prior to assembling to help you and others avoid injuries. This manual provides information on the proper way of installing the Belly Blade to prevent injuries and any machine damage.

All references to the tractor or undercarriage are taken from the view at the tractor's seat.

Your machine may vary slightly from the machine in this manual, but the same installation procedure will be compatible.

Important Messages

This manual contains messages that will bring attention to potential safety concerns and machine damage. Read all of the information carefully and thoroughly to avoid injury and machine damage. Below is an example.

⚠Caution⚠

Avoid injury! This text will explain the possible hazards or death to the bystanders or the operator if the correct procedures are ignored.

Safety Information

1. Wear protective eye wear.
2. Always block tractor safely.
3. Engage parking brake before raising the tractor.
4. Follow all tractor manufacturing safety recommendations when working on the tractor.

Accident Prevention

An accident prevention program can be successful when a responsible equipment operator is cooperating. An operator can prevent accidents when they accept a full measure of their responsibility. The designers, manufacturers, and engineers can help, but a single careless act by the operator can outweigh all of their efforts.

No equipment can be safer than the person running the controls. A careful, informed operator is the best safety device.

Preparing Tractor For Installation

1. Park the tractor on a smooth, level surface.
2. Set parking brake and block front tires to keep from rolling.
3. Disconnect the battery.

IMPORTANT: Raise the tractor high enough for the undercarriage to fit under the rear axle when installing the undercarriage.

4. Raise the back of the tractor and use jack stands that are recommended for your tractor to support the tractor safely. Keep enough distance between the jack stands, so the undercarriage will fit.
5. Remove the rear tires. The 2 stud bolts on each side can be left in.
6. Line up the wheel spacer to the original stud bolts on the axle hub. 2 holes on each spacer are machined lower so the original stud bolts, washers and nuts will fit. In all the remaining holes, install a new 16mm x 40mm bolt (PN: 16-1615040) and 16mm lock washer (PN: 57-20835).

NOTE: To ease assembly, keep the rear tires off.

7. The Belly Blade will arrive on a pallet. Unwrap and set the blade aside. Remove the undercarriage assembly from the pallet.
8. Check the inventory and ensure that all parts are included with the Belly Blade Kit. If any parts are missing, contact your dealer.

Plumbing

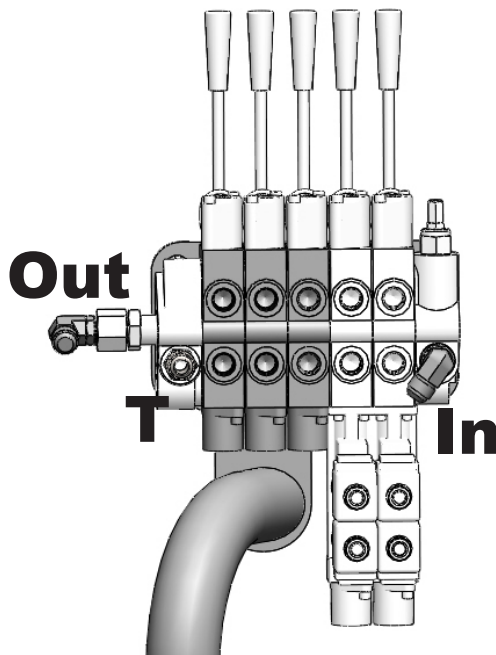
- Note:**
1. Have an oil pan available to collect hydraulic oil when removing hydraulic lines.
 2. Before removing any hydraulic lines, release all hydraulic pressure with the engine off.



Caution



Avoid injury! Hydraulic oil that is under pressure will penetrate the skin and cause a serious injury. If this occurs, it needs to be surgically removed by a doctor familiar with this type of injury within a few hours or gangrene may result.

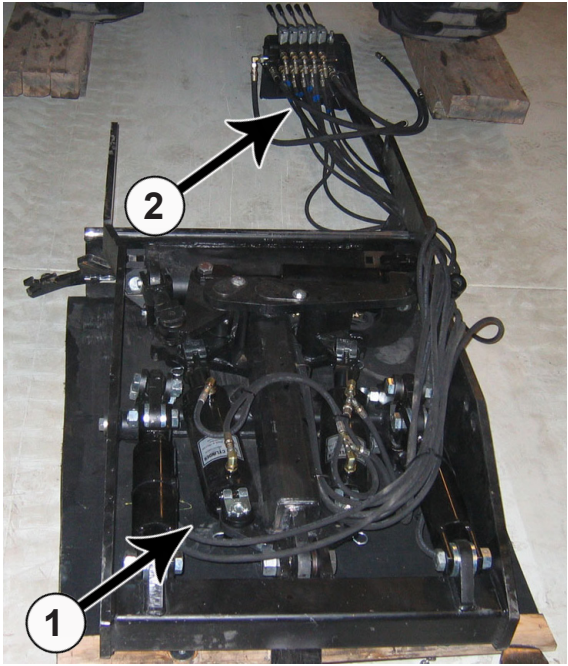


9. Prepare the tractor for connecting the hydraulics before installing the undercarriage.

NOTE: For Steps # 10-12, only connect hoses on the tractor. Connect them to the valve after undercarriage and valve are installed.

10. Connect a hose from the Tank Port on the belly blade control valve to the Tank on the tractor. Either install a T-fitting on the tractor or go directly into Tank.
11. Connect a hose from the In Port on the belly blade control valve to the Power Beyond on the tractor.
12. Connect a hose from the Out Port on the belly blade control valve to the Return on the tractor.

Placing Undercarriage Under Tractor



13. Align the undercarriage (1) behind the tractor. Lay out the valve and hoses in front of the undercarriage (2). The hoses should be over the right undercarriage arm.

14. Guide the undercarriage and the valve stand under the tractor. Make sure that the valve and valve stand exit the right side of the tractor between the front and rear tires.

Bracket Installation

15. Remove the loader braces.

16. Install the rear brackets where the loader braces were removed. Refer to diagram on Page 10.

17. Install the front brackets to the loader bracket and center brace where the loader braces were removed.

Installing Undercarriage

NOTE: When jacking up the undercarriage, make sure to not jack too high or you may hit other parts of the tractor.

NOTE: When raising the undercarriage, properly guide the hoses to avoid pinching them between the tractor frame and the undercarriage.

NOTE: Do not tighten hardware until all mounting bolts have been installed.



Caution



Avoid injury! Watch for pinch points when raising the undercarriage.

18. Use jacks to raise the undercarriage until the undercarriage holes line up with the holes on the rear bracket.

19. Once the rear holes are aligned, insert carriage bolts from the inside. Refer to Page 10 for correct hardware.

20. Once the bolts are through, attach with a 3/4" flat washer and a 3/4" nut on each bolt.

21. Raise the front of the undercarriage and attach the front brackets to the undercarriage with carriage bolts. Insert the carriage bolts from the bottom. Install a 3/4" flat washer and 3/4" nut on each bolt.

22. Push the undercarriage back and up until it is pushing against the tractor axle.

23. Torque all fasteners to the correct specifications after all bolts and nuts have been installed.

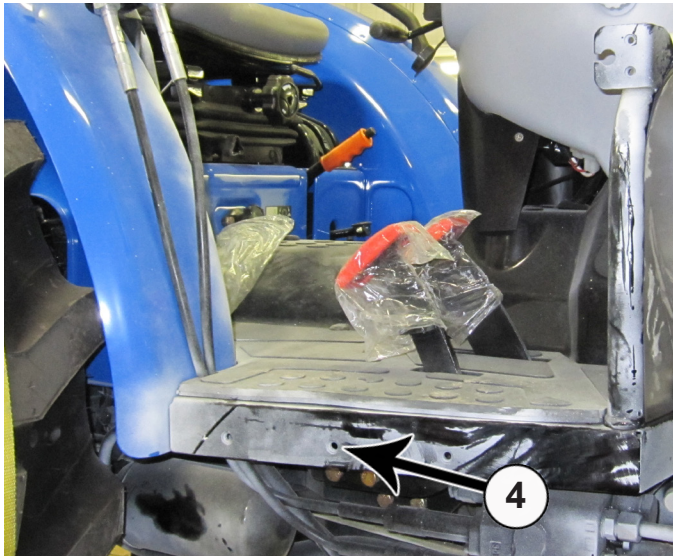
24. Remove the jacks.

Control Valve and Stand Installation

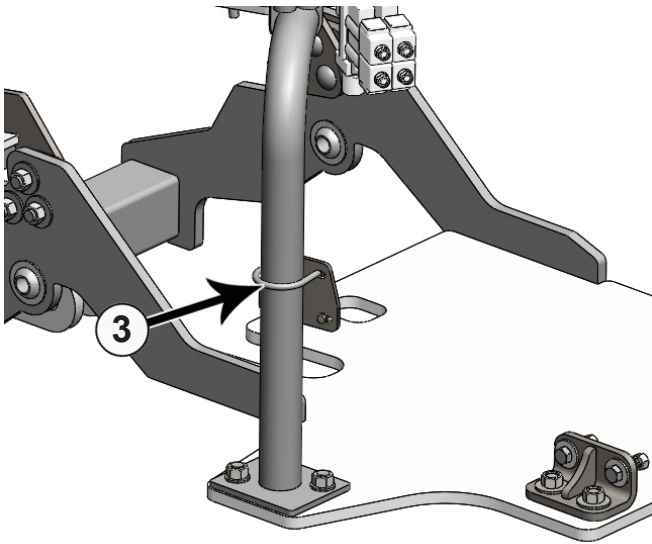
NOTE: Make sure that the hoses stay above the undercarriage bracket on the right side of the tractor to keep them away from the blade.

25. Route the hoses from the belly blade to control valve. If there is enough room, route the hoses above the right side of the rear axle. Keep hoses away from any moving parts and secure hoses with zip ties.

26. Attach the valve stand to the top of the undercarriage. Install with 3/4" carriage bolts from the bottom and attach with a 3/4" flat washer and 3/4" nut on each bolt.



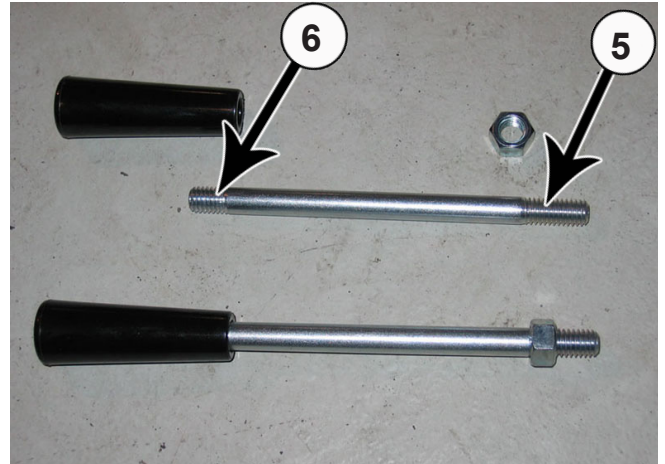
NOTE: Photo to show where the valve mount support will be installed (4).



27. Attach the valve mount support to the operator platform with 8mm bolts and a 8mm washer on each bolt. Attach the valve stand to the valve mount support with a U-bolt (PN: 18-10248) (3). Torque all bolts to the correct specification.

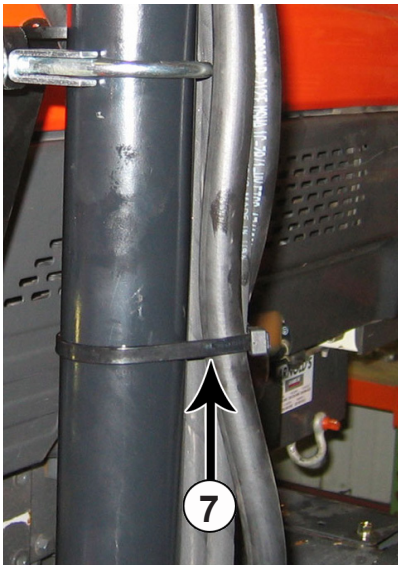
28. Attach the control valve to the valve stand with three 3/8" x 3/4" bolts (PN: 16-20062) and lock washers (PN: 57-20762).

29. Connect the hoses from Page 5 to the control valve.



30. Assemble control valve handles (PN: 39-10199). Put the nut on the side of the bolt that has longer threads (5). Put the black handle on the other end that has shorter threads (6).

31. Insert assembled handles into belly blade control valve. Tighten the nut on each (5).



32. Make sure all hoses underneath the tractor are clear of any moving parts on the Belly Blade and tractor. Ensure that all hoses are above the undercarriage. Group hoses together and secure hoses with zip ties (7) (PN: 59-34950).

33. Install the tires to the new wheel spacer. The holes on the tractor rim may need to be opened up a little to fit the new 18mm bolts. Attach with new 18mm bolts and a 18mm lock washer on each bolt.

34. The undercarriage installation is complete.

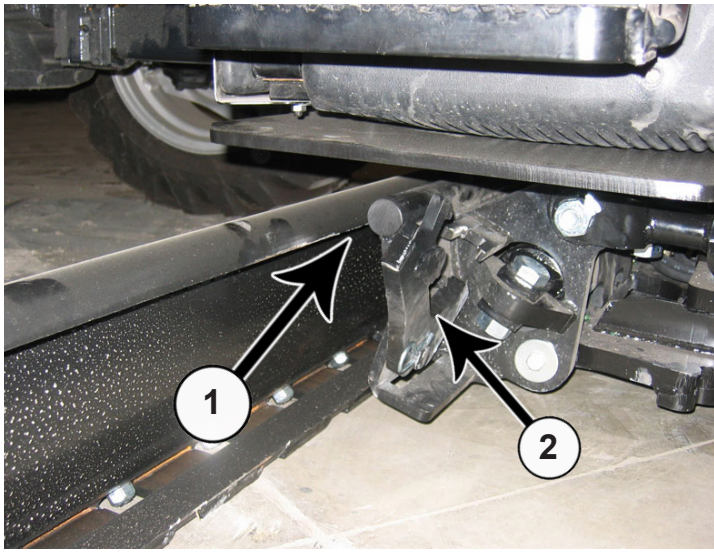
35. Reconnect the battery.

36. Start the tractor and run the controls to check for any leaks.

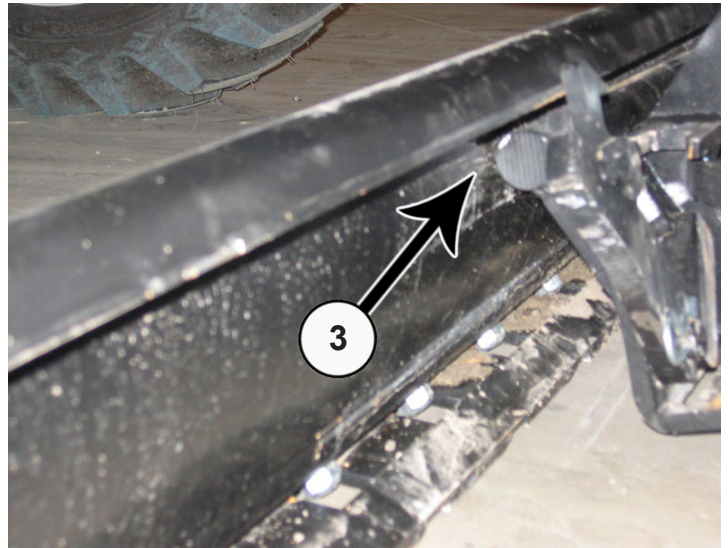
Note: Watch the blade carefully for any collisions when running the controls.

37. Check the hydraulic fluid level in the tractor. Refer to the tractor owner's manual for the correct fluid level. Add oil as recommended.

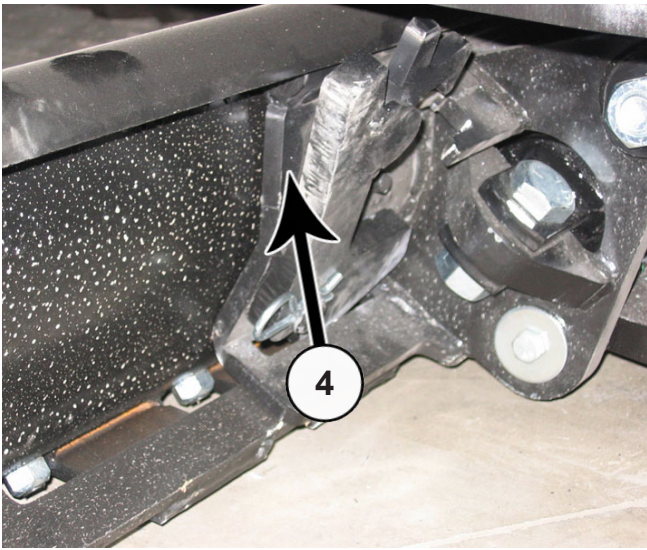
Blade Installation



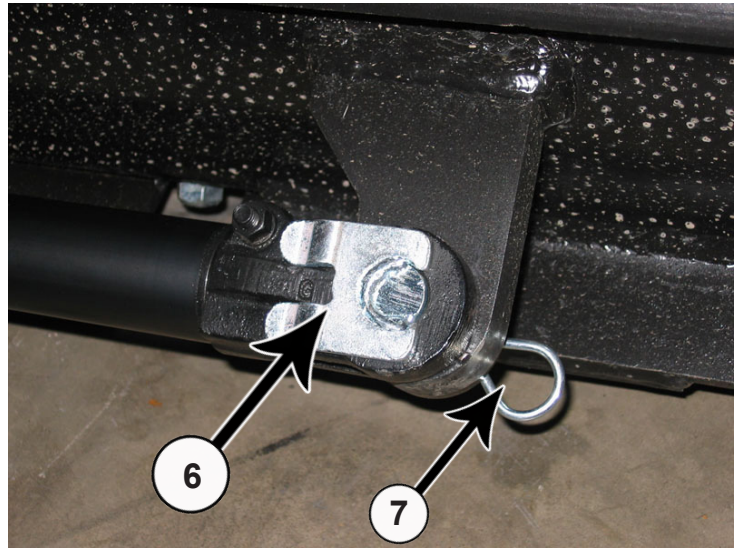
38. Slide blade under tractor until the quick attach is in line with the center of the blade (1). Make sure that the quick attach locking levers are still up (2) .



39. Pitch the male quick attach forward. Position the blade so the top round bar will hook under blade lip (3).



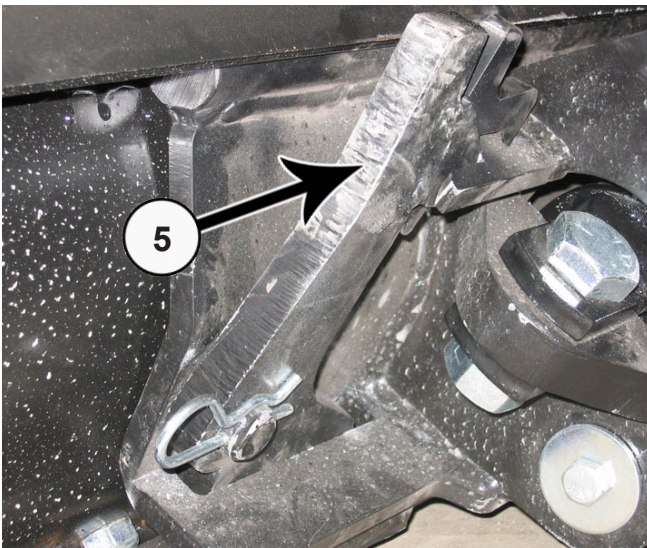
40. Pitch the male quick attach back to lift the blade off the ground (4).



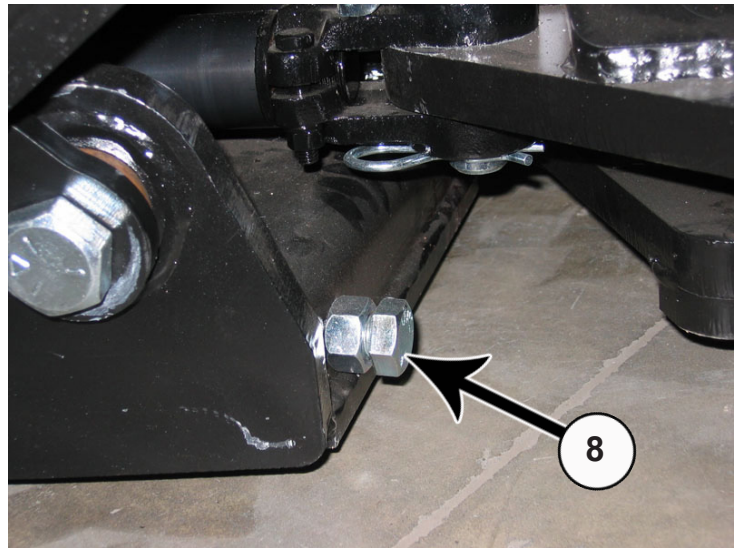
42. Extend the side shift cylinder out to the cylinder connector. Insert pin (PN: 43-7995) (6) and the clip pin (PN: 43-7767) on the bottom (7).

43. After mounting the blade, apply up and down pressure to verify proper blade installation.

44. Cycle through blade functions checking for interferences.



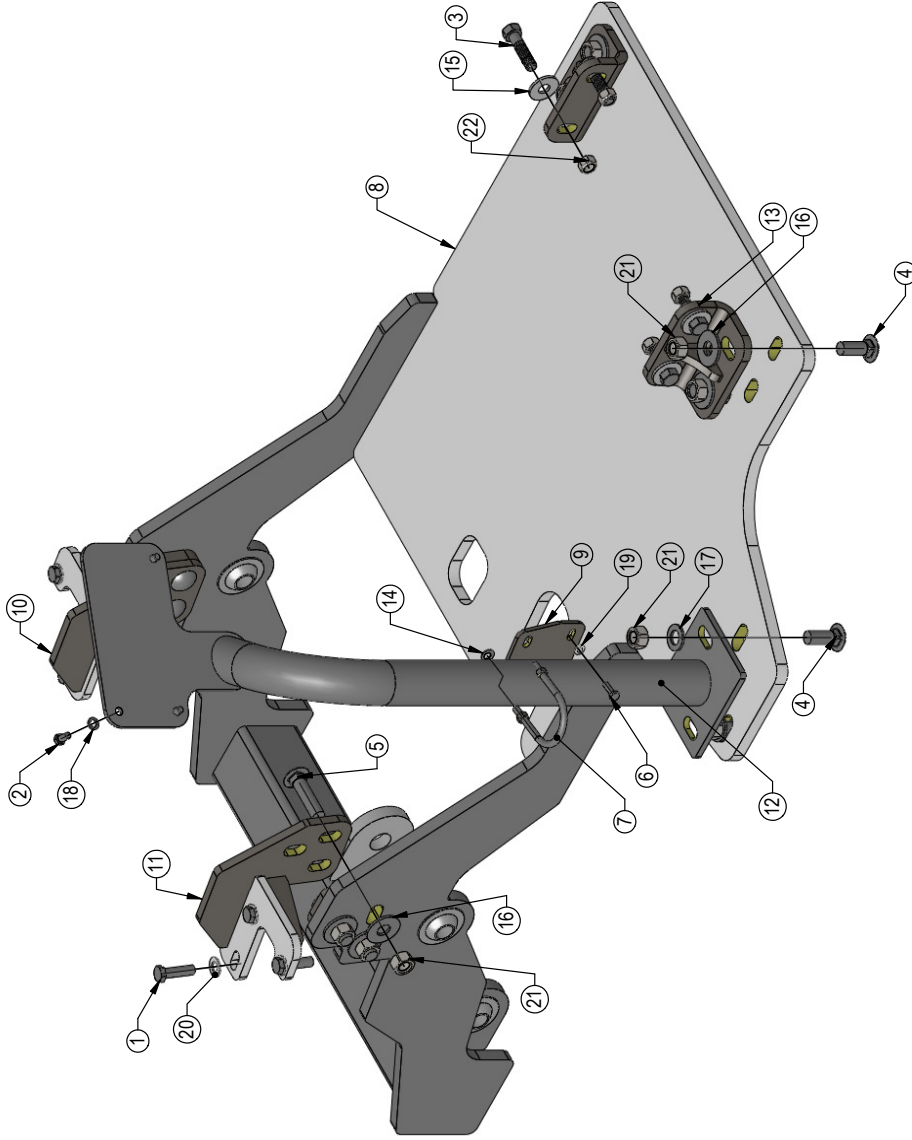
41. Lock the quick attach lever on each side (5). Verify that the lever engaged the corresponding slot on the bottom of the blade.



45. Adjust angle stops (8) so blade does not interfere with tires during angle of blade. Use a wrench to loosen the nut and to the turn the bolt either in or out depending if the blade is hitting the tire. After adjustment, tighten the nut.

46. Tractor and blade are ready for use. Refer to the blade operator's manual for safety, operation, and maintenance information.

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ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	6	16-1420050	14mm x 2.00mm x 50mm Metric Hex Bolt Gr 10.9 Coarse
2	3	16-20062	3/8" x 3/4" Hex Bolt Gr 5 NC
3	4	16-20190	5/8" X 2-1/2" Gr.5 Hex Bolt
4	6	16-21218	3/4" x 2.00" Carriage Bolt Gr.5
5	6	16-21222	3/4" x 3.00" Carriage Bolt Gr.5
6	2	16-812525	8mm x 1.25mm x 25mm Metric Hex Bolt Gr 10.9 Coarse
7	1	18-10248	2-1/2" Tube Clamp Assy
8	1	54-19820	Undercarriage Weld
9	1	44-19824	Plate, Support
10	1	18-19825-L	Rear Axle Bracket
11	1	18-19825-R	Rear Axle Bracket
12	1	17-19830	Valve Mount Weld
13	2	18-19835	Bracket, Front
14	2	57-20742	3/8 Flat Washer
15	4	57-20746	5/8" Flat Washer-1.75" OD
16	10	57-20747	3/4" Flat Washer
17	2	57-20757	3/4" Flat Washer - 1-1/2" OD
18	3	57-20762	3/8" Lock Washer
19	2	57-20821	8mm Flat Washer
20	6	57-20824	14mm Flat Washer
21	12	70-20607	3/4" Hex Center Lock Nut NC
22	4	70-20646	5/8" Hex Top Lock Nut Gr 5 NC



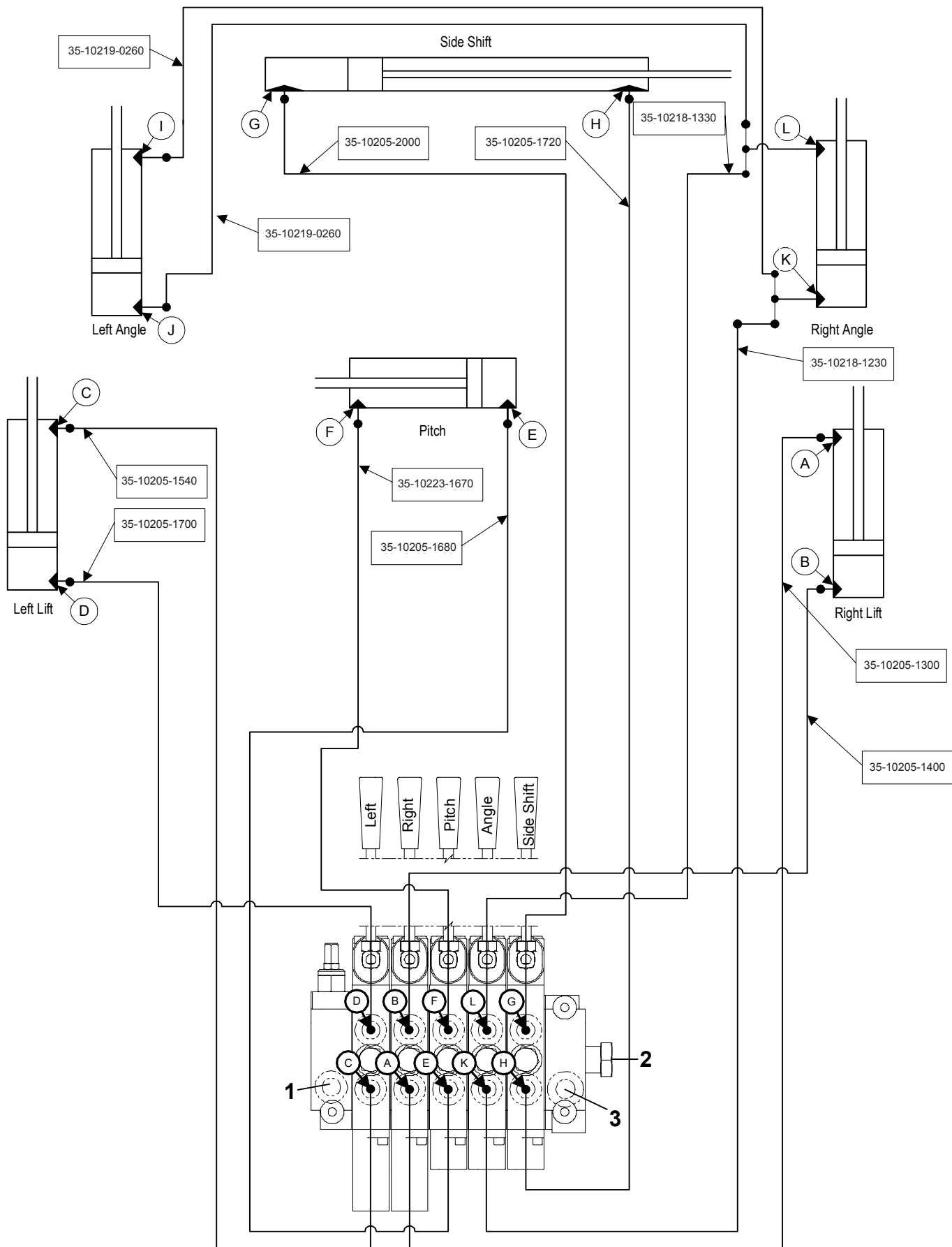
GROUSER PRODUCTS INC.

755 2nd Ave NW
West Fargo, ND 58078

Phone 701.282.7710
Fax 701.282.8131

Finish:	TITLE		DWG. NO.
	Mat:	Boomer 50	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:	Drawn:	Scale:	Quantity Used On:
DECIMALS .XX ± .06	Date:	1:10	Sheet:
ANGLES ± 2°			1

Hydraulic Schematic



As Viewed From Drivers Seat

Warranty Statement

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 years. If such equipment is found to be defective within two years, 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. Grouser Products will pay \$35 / hr. on the modification or repair of defective parts in the setup procedure.

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.

Contact Information

1-800-747-6182 or 1-701-282-7710

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