



Belly Blade

Installation Instructions

Kubota L5030 - L4330 - L4630
With and Without 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	

Blade Assembly - Shipment includes one of the following

Qty	PN	Description
1	15-10270-60	6 ft. Moldboard
1	15-10270-70	7 ft. Moldboard
1	15-10270-80	8 ft. Moldboard

Kit Inventory

Qty.	PN	Description
1	44-10247	Kubota No Loader Valve Manifold Block
3	49-10246	O-Ring Size 20
10	16-20190	5/8" X 2-1/2" Hex Bolt Gr 5 NC
2	16-20218	3/4" X 2" Hex Bolt Gr 5 NC
3	16-20062	3/8" x 3/4" Hex Bolt Gr 5 NC
4	57-11451	Kubota Washer
4	57-11452	Kubota Washer
3	57-20762	3/8" Lock Washer
4	57-20746	5/8" Flat Washer
10	70-20606	5/8" Hex Center Lock Nut Gr 5 NC
2	70-20607	3/4" Hex Center Lock Nut Gr 5 NC
1	54-10230-A	Undercarriage Assembly
10	59-34950	Zip Ties (large)
1	16-10249	3/8" x 2.50" U-Clamp (UDO250-A1)
1	56-10280-B	Belly Blade Valve System
5	39-10199	Belly Blade Control Handles
1	43-10198	100 Pin 1" x 2.125"
1	43-7767	Cylinder Hitch Pin Clip
1	17-10235	Valve Mount

No Loader Parts:

Qty.	PN	Description
2	31-34159	Male Connector JIC x Pipe (2404-8-6)
2	31-34100	Swivel Nut Elbow 90° JIC (6500-8-8)
1	31-34170	Male Elbow 90° JIC x Pipe (2501-8-6)
3	35-30124	45" x 1/2" -8JIC/-8JIC Hose
1	18-10241	100 Kubota Grand L No Loader UC Bracket (Left)
1	18-10240	100 Kubota Grand L No Loader UC Bracket (Right)
1	18-10238	100 Kubota Grand L No loader Valve Support Bracket
8	16-1615040	16mm x 1.50mm x 40mm Metric Hex Bolt Gr 10.9 Fine
2	16-20126	1/2" X 1-1/2" Hex Bolt Gr 5 NC
2	70-20604	1/2" Hex Center Lock Nut Gr 5 NC

Loader Parts:

Qty.	PN	Description
1	16-21366	3/8" X 1-1/2" Hex Bolt Gr 5 NC
1	18-10237	100 Kubota Grand LW/Loader Valve Support Bracket
1	31-34090	Swivel Nut Run Tee JIC (6602-8-8-8)
2	31-34100	Swivel Nut Elbow 90° JIC (6500-8-8)
1	35-30127	54" x 1/2" -8JIC/-8JIC Hose
1	35-30009	24" X 3/8" -8JIC - 8JIC Hose (4MR16)
2	57-20742	3/8" Flat Washer
1	70-20582	3/8" Hex Nut Gr 5 NC

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.

These instructions show the Belly Blade installation process with the tractor on a hoist. 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.

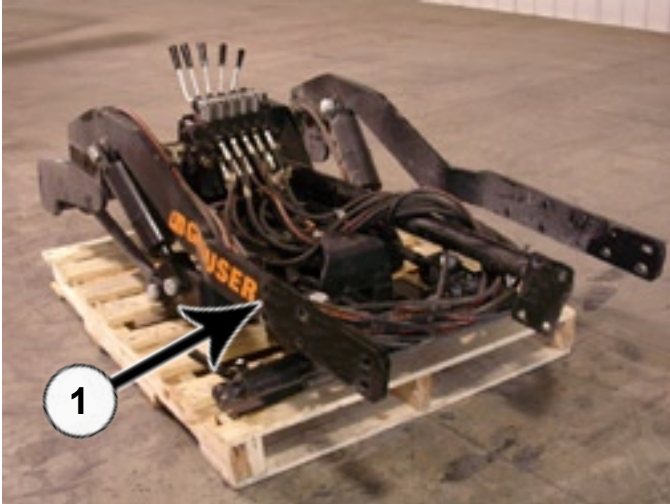
No equipment can be safer than the person running the controls. A careful, informed operator is the best safety device.

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.

NOTE: To ease assembly, remove rear tires and support the tractor safely.

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



4. The Belly Blade will arrive on a pallet. Unwrap and set the blade aside. Remove the undercarriage assembly from the pallet (1).

5. Check the inventory and ensure that all parts are included with the Belly Blade Kit. If any parts are missing, contact your dealer.

6. If the rear tires are not removed, raise the back of tractor, and place blocks safely underneath the tractor tires or use an appropriate hoist. Keep enough distance between the blocks, so the undercarriage will fit.

7. If the rear tires are removed, 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.

NOTE: If tractor has a loader, remove front loader arm brace.



8. Lift the hood (1) of the tractor and remove the right side panel (2).

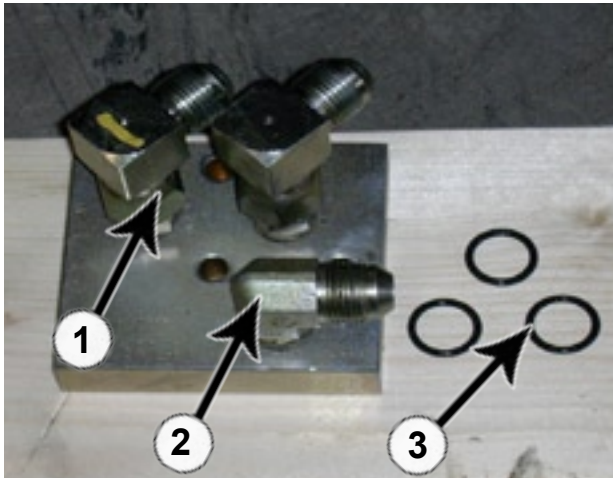
Plumbing

- 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.

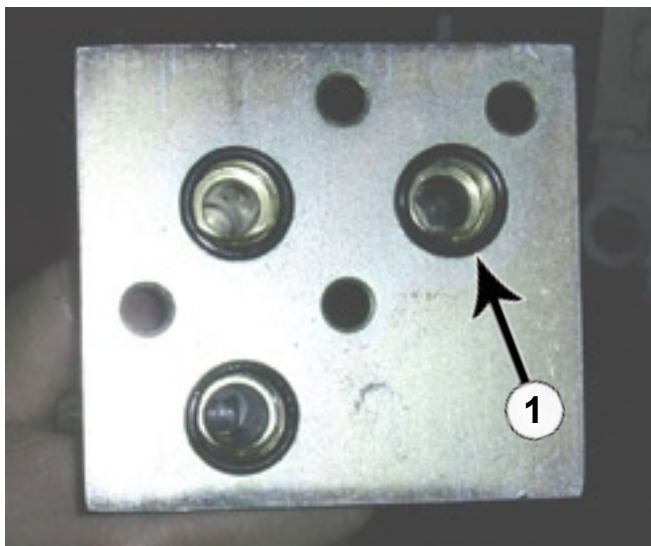
Caution

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.

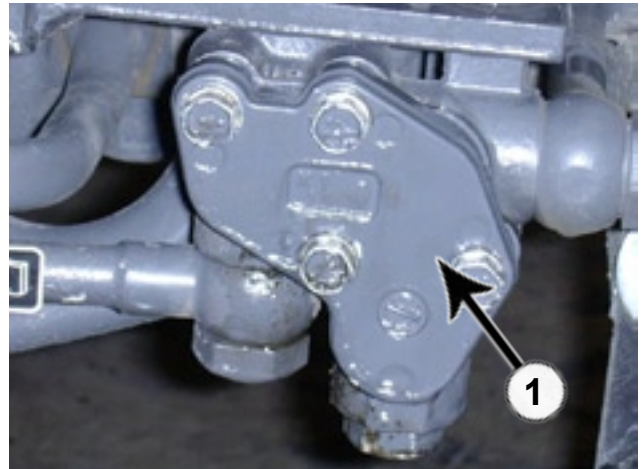
Note: If tractor has loader, skip steps 9-18.



9. On the new manifold cover, install two straight fittings (PN: 31-34159) with a 90° fitting (PN: 31-34100) in the top two holes (1) and a 90° fitting (PN: 31-34170) in the bottom hole (2). Three O-rings (PN: 49-10246) (3) will be used on the back of the new manifold cover.

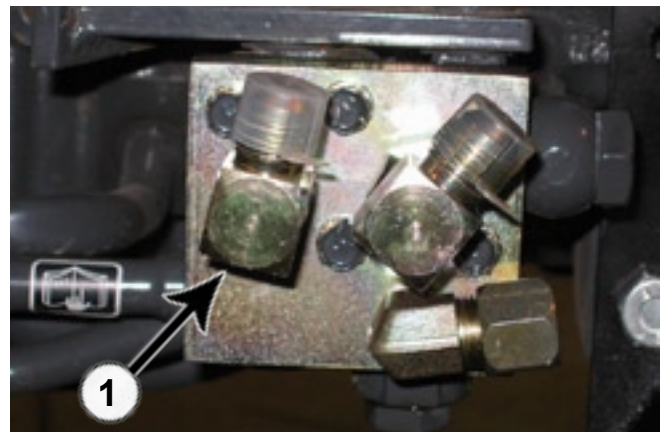


10. The back of the manifold cover (PN: 44-10247) with the three O-rings in place (1).



11. Remove the manifold cover and O-rings from the hydraulic supply manifold located under the operator's platform.

NOTE: Oil will run from the manifold until the new manifold cover is installed and the bottom fitting on the new cover is plugged.

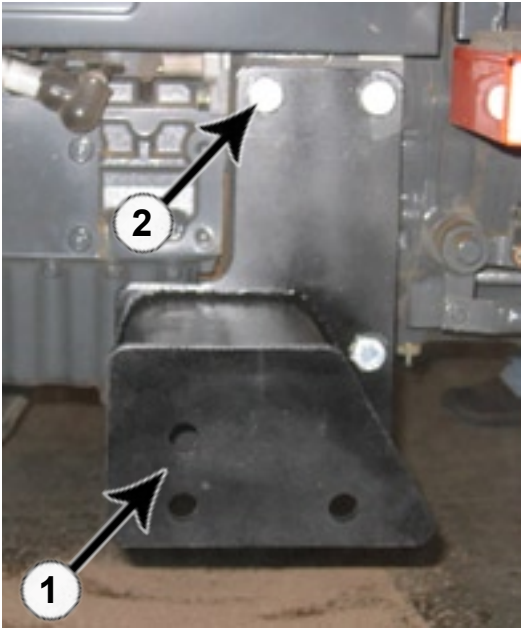


12. Install the manifold cover to the manifold with the 4 bolts from the previously removed cover (1). Verify that O-rings are still in place. Tighten bolts to 19-23 ft.-lbs.

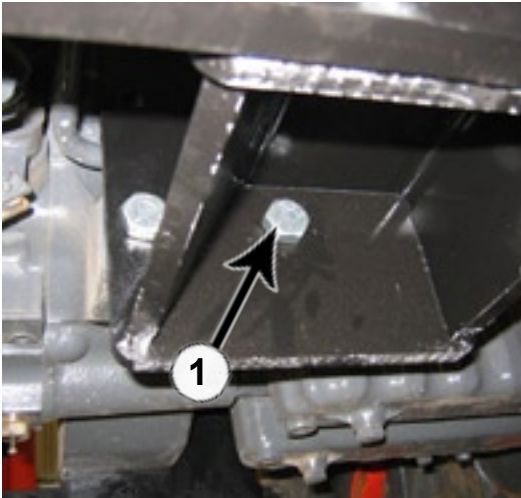
13. Attach a 45" hose to each fitting. Lay the other ends of the hoses on the operator's platform to keep them out of the way for installing the undercarriage. The hoses will be attached later in Step #38,39,40.

NOTE: Cap fitting not supplied.

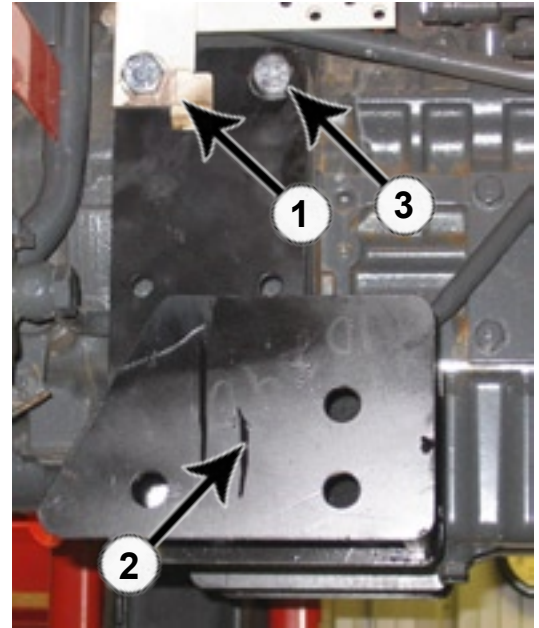
Bracket Installation



14. Install the left undercarriage bracket (PN: 18-10241) (1) with four 16mm x 1.50mm x 40mm bolts (PN: 16-1615040) (2).



15. One lower bolt is inside the mounting bracket (1).

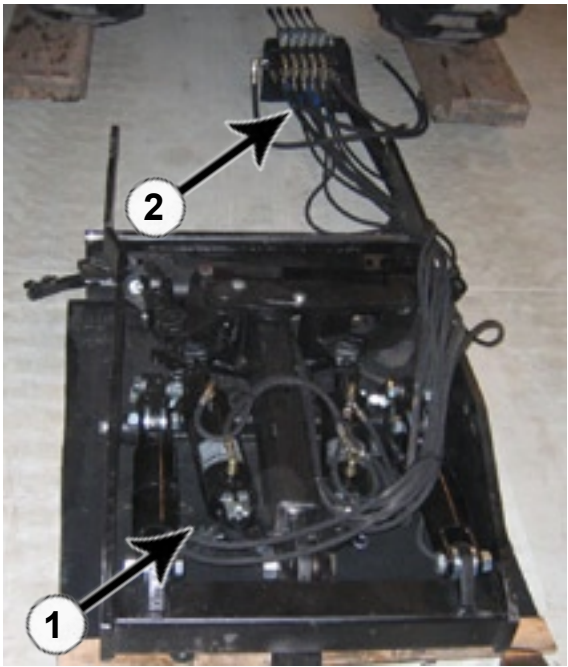


16. Remove and discard the right side hood bracket bolt, washer and spacer (1). The hood bracket will be reinstalled in the following step.

17. Install the right undercarriage bracket (PN: 18-10240) (2) along with the hood bracket with four 16mm x 1.50mm x 40mm bolts (PN: 16-1615040) (3).

18. Torque all bolts to the correct specifications after all 8 bolts have been installed.

Placing Undercarriage Under Tractor



19. 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.

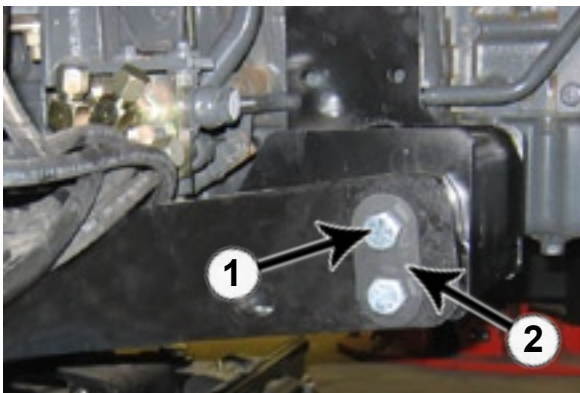


20. Guide the undercarriage and the valve stand under the tractor. Make sure that the valve and valve stand exit the right side of the tractor between the front and rear tires (1).

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: Photos show no loader bracket, the same installation procedure is still compatible for tractors with a loader.

21. Use jacks to raise the undercarriage until the undercarriage holes line up with the holes on the tractor bracket. The use of a block in the front will ensure that both arms are raised at the same time.

Caution

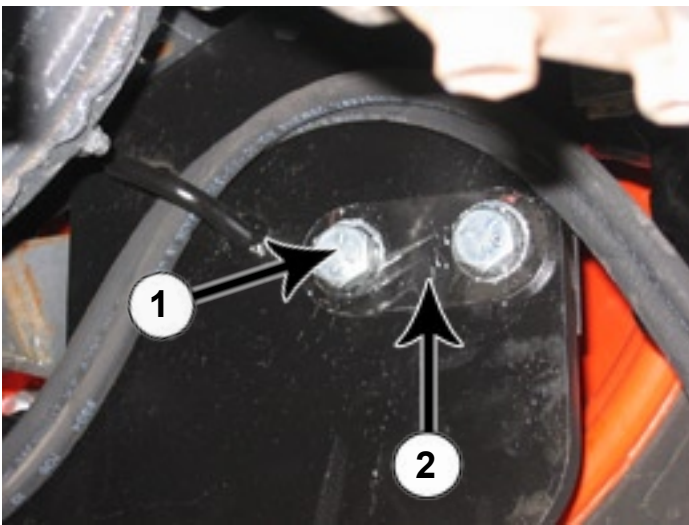
Avoid injury! Watch for pinch points when raising the undercarriage.

22. Once the front holes are aligned, insert two 5/8" x 2-1/2" bolts (1) (PN: 16-20190) with a 2 hole washer (2) (PN: 57-11451) into the left and right undercarriage arms.

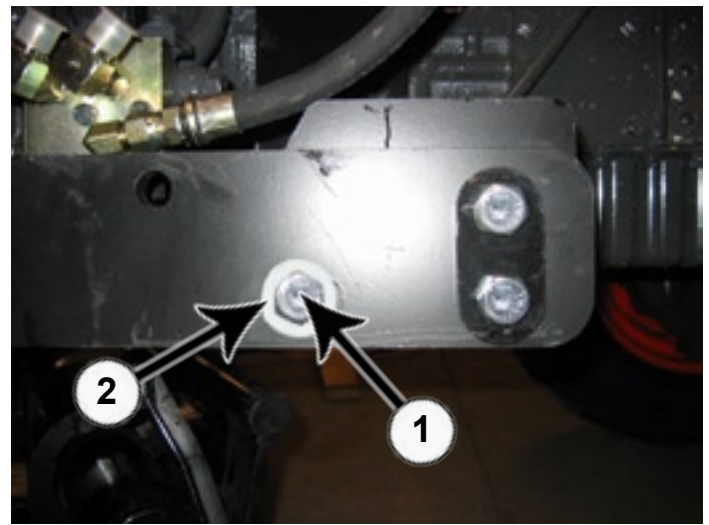
23. Install a 2 hole washer (PN: 57-11451) and a 5/8" center lock nut (PN: 70-20606) on the bolts.

24. Raise the rear of the undercarriage until the holes on the undercarriage line up with the holes on the tractor.

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



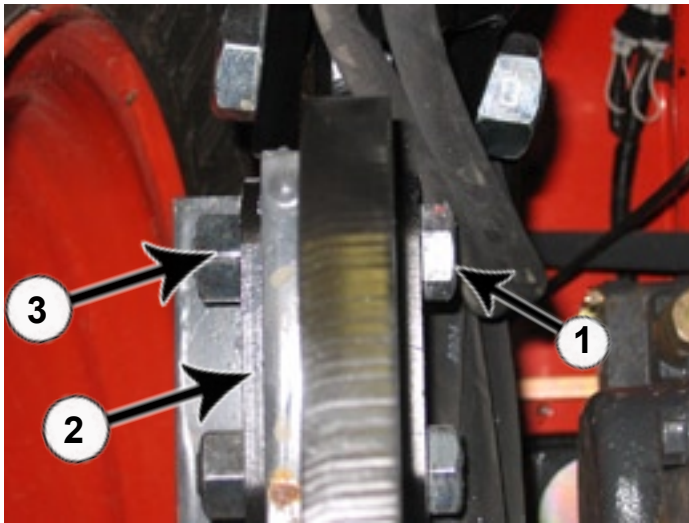
25. For the left and right side, insert two 5/8" x 2-1/2" bolts (1) (PN: 16-20190) with a 2 hole washer (2) (PN: 57-11452).



28. For the left and right undercarriage arms, insert a 5/8" x 2-1/2" bolt (PN: 16-20190) (1) with a 5/8" flat washer (PN: 57-20746) (2) into the final hole of the undercarriage arm along with a 5/8" flat washer and 5/8" center lock nut (PN: 70-20606) on the back side.

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

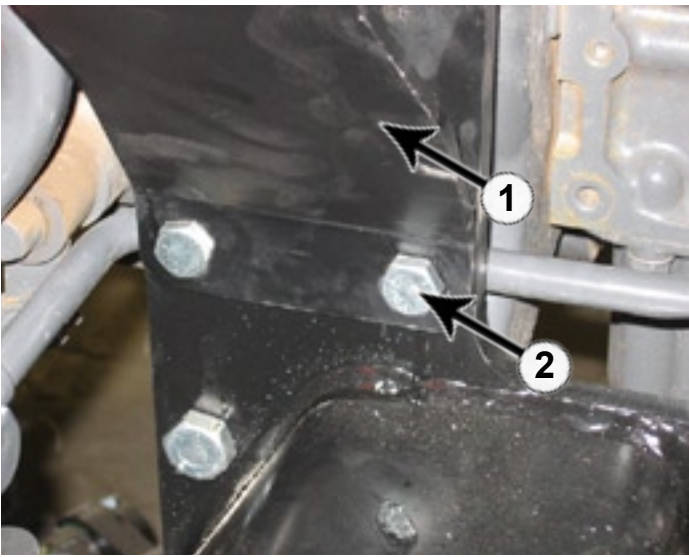
31. Remove the jacks.



26. The heads of the bolts should be facing the inside of the tractor (1).

27. Put a 2 hole washer (PN: 57-11452) (2) and a 5/8" center lock nut (PN: 70-20606) (3) on the bolts.

Installing Valve Mount Bracket

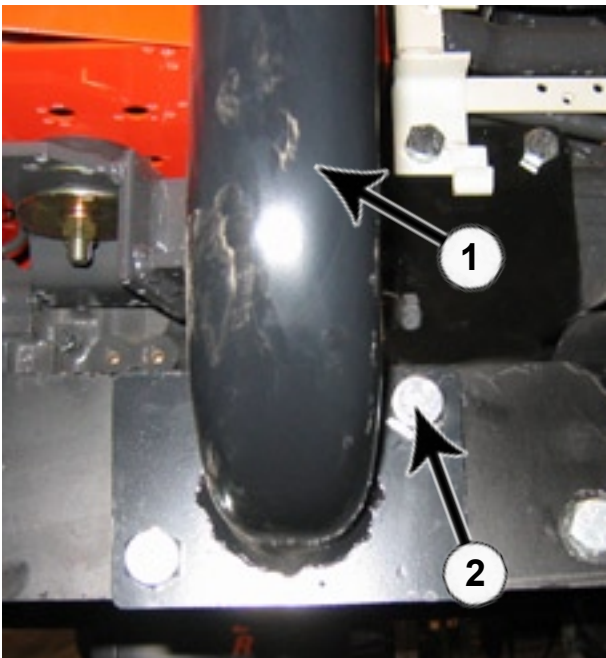


32. Attach valve mount bracket (PN: 18-10238) (1) to the right undercarriage bracket with two 1/2" x 1-1/2" bolts (PN: 16-20126) (2) and two 1/2" center lock nuts (PN: 70-20604).

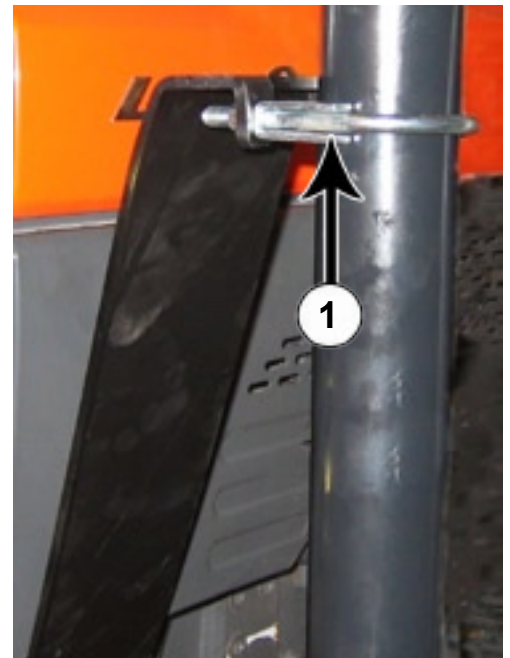
NOTE: If the tractor has a loader, install the loader valve mount bracket (PN: 18-10237) instead of the one in Step #32. Use a 3/8" bolt (PN: 16-21366, 2 - 3/8" washers (PN: 57-20742), and a 3/8" nut (PN: 70-20582). Bolt the bracket to the back side of the loader bracket on the right side of the tractor.

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.



33. Align the valve stand (PN: 17-10235) (1) with the undercarriage. Use two 3/4" x 2" bolts (PN: 16-20218) (2) with two 3/4" center lock nuts (PN: 70-20607) to securely attach the stand to the undercarriage.



34. Attach the valve stand to the valve mount bracket with a U-bolt (PN: 16-10249) (1). Torque all bolts to the correct specification.

35. Attach the right side panel onto the tractor. Close hood.

NOTE: Photo shows the no loader valve mount bracket. The same installation procedure is the same for a loader.



36. Attach the control valve (PN: 56-10280-B) to the valve stand with three 3/8" x 3/4" bolts (PN: 16-20062) and lock washers (PN: 57-20762) (1).



NOTE: If tractor has loader, skip steps #37-39. Refer to extra attached sheet for the proper location of the hydraulic components and hose routing.

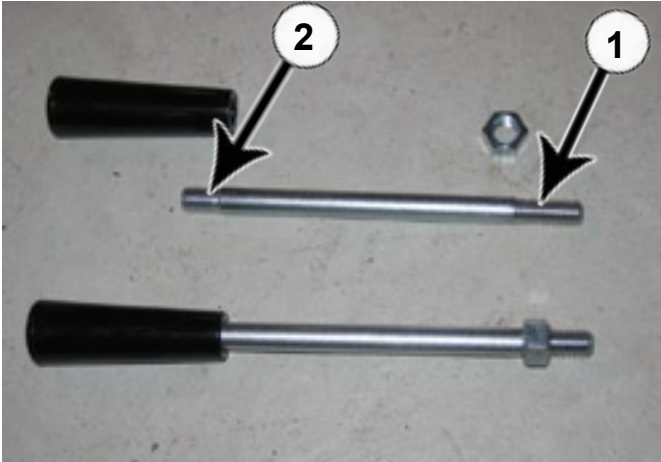
37. Attach the hose from the **T** labeled fitting on the manifold cover to the **Tank** port on the control valve.

38. Attach the hose from the **PB** labeled fitting on the manifold cover to the **Out** port on the control valve.

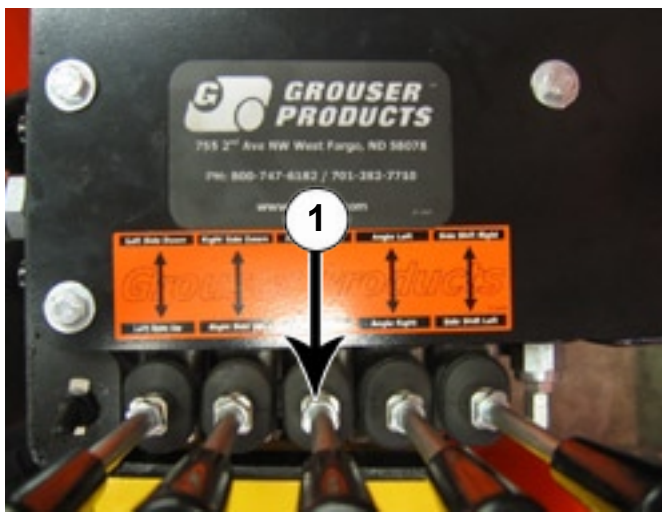
39. Attach the hose from the **P** labeled fitting on the manifold cover to the **In** port on the control valve.



40. After all hoses are in place, group hoses together and secure hoses with zip ties (1) (PN: 59-34950).



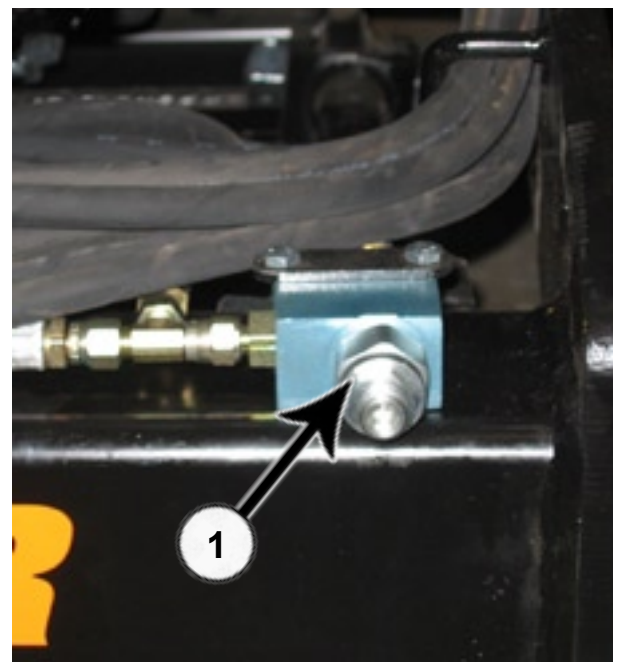
41. Assemble control valve handles (PN: 39-10199). Put the nut on the side of the bolt that has longer threads (1). Put the black handle on the other end that has shorter threads (2).



42. Insert assembled handles into belly blade control valve. Tighten the nut on each (1).

43. Reinstall tires on the tractor and lower the tractor. The undercarriage installation is complete.

44. Reconnect the battery.



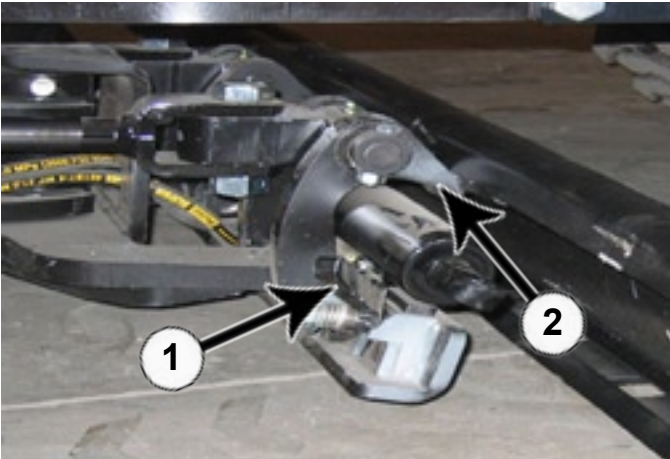
45. Start tractor and run controls on the lift, side shift, and pitch controls to bleed the air, check for leaks and repair as necessary.

46. To bleed the air from the angle system, loosen the locking nut on the valve (1) located at the back of the undercarriage. Turn the allen head out two turns and run the controls until the hydraulic cylinders are extending and contracting fully.

47. After all air has been bled and the system is operating correctly, extend the angle until the left side of quick attach is as far forward as possible. Turn the allen head in two turns and tighten the locking nut.

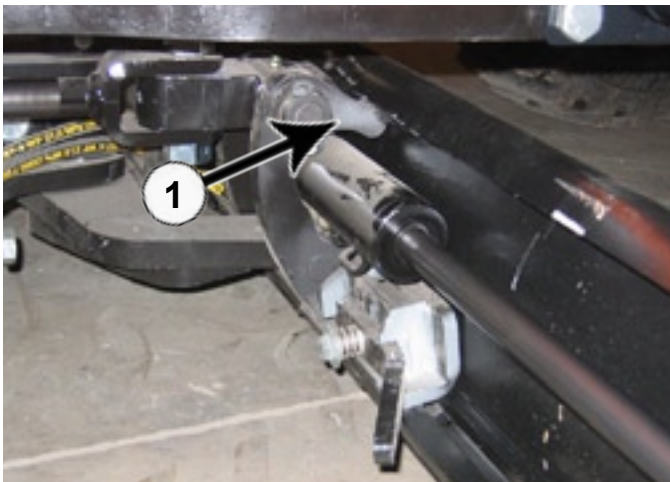
48. Check the hydraulic fluid level in the tractor. Refer to the tractor owner's manual for the correct fluid level. Add oil as recommended.

Blade Installation



49. Drive over blade or slide blade under tractor until the quick attach is in line with the center of the blade. Make sure that the quick attach locking levers are still up (1)

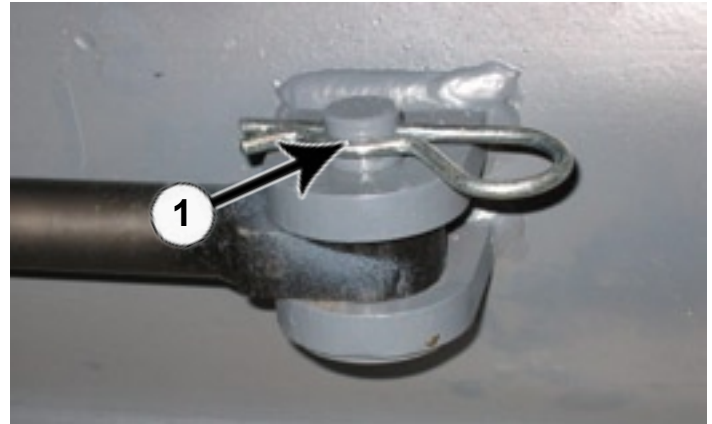
50. Pitch the male quick attach forward. Position the blade so the top round bar will hook under blade lip (2).



51. Pitch the male quick attach back to lift the blade off the ground (1).



52. Lock the quick attach lever on each side (1). Verify that the lever engaged the corresponding slot on the bottom of the blade.



53. Extend the side shift cylinder out to the cylinder connector. Insert pin (PN: 43-10198) and the clip pin (PN: 43-7767) on the bottom (1).

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

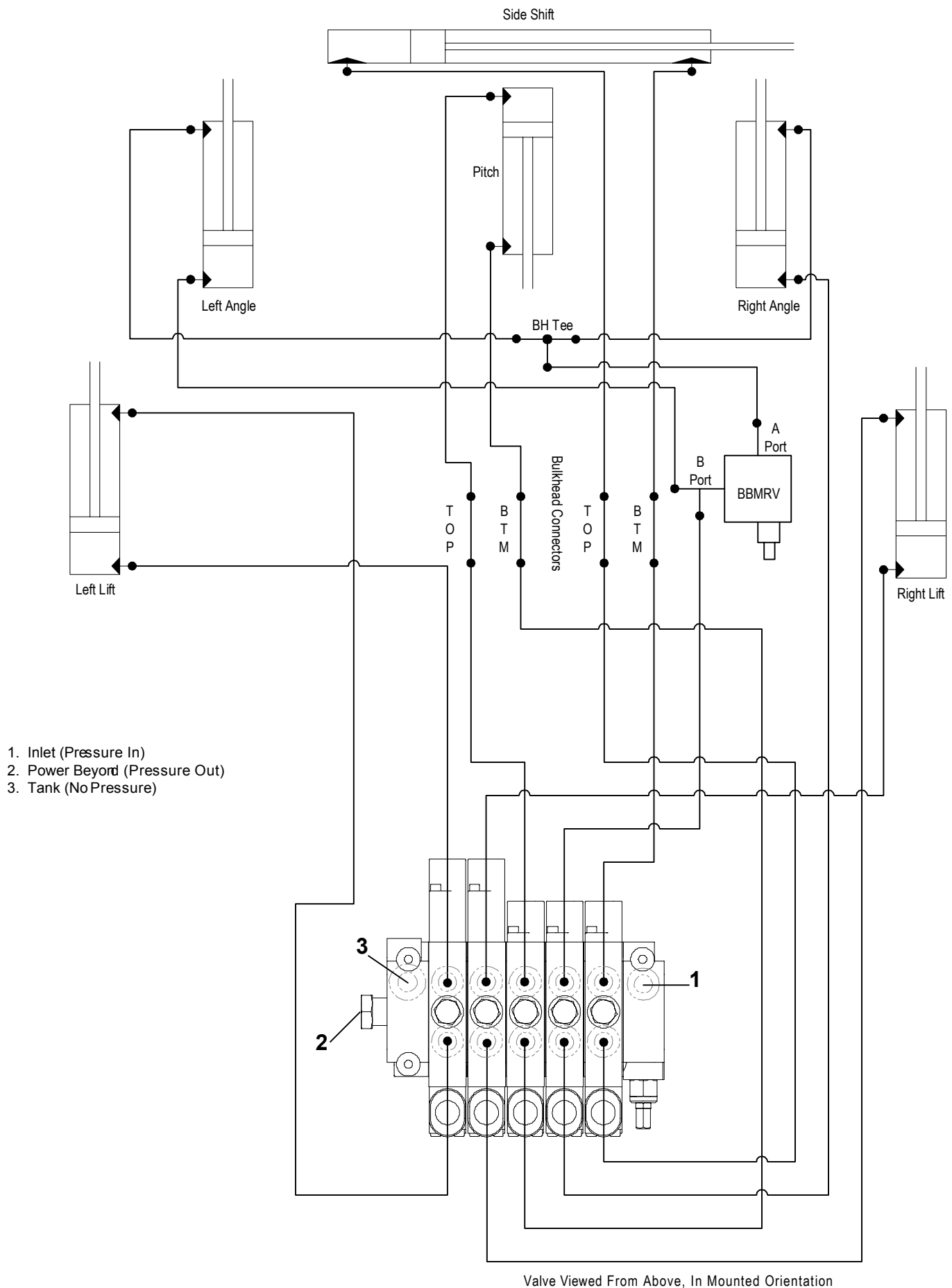
55. Cycle through blade functions checking for interferences.



56. Adjust angle stops (1) so blade does not interfere with tires during angle of blade. Use a wrench to loosen the nut and to turn the bolt either in or out depending if the blade is hitting the tire. After adjustment, tighten the nut.

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

Hydraulic Schematic



Notes

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 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. 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

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