



Belly Blade

Installation Instructions

Kubota L4240 - L4740 - With Cab
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	

Kit Inventory

Qty.	PN	Description
1	11-11782	Kubota Brake Lever
4	16-20190	5/8" x 2-1/2" Hex Bolt Gr 5 NC
2	31-11798	Straight JIC x BSPP (-8-6)
1	31-34040	Straight JIC x O-Ring (6400-8-8)
2	31-34045	Straight JIC x O-Ring (6400-10-12)
1	31-34050	Straight Thread Elbow 90° JIC x O-Ring (6801-8-8)
1	31-34054	Straight Thread Elbow 90° JIC x O-Ring (6801-10-12)
1	31-34080	Swivel Nut Branch Tee JIC (6600-8-8-8)
1	31-34090	Swivel Nut Run Tee JIC (6602-8-8-8)
1	31-34100	Swivel Nut Elbow 90° JIC (6500-8-8)
3	31-34101	Swivel Nut Elbow 90° JIC (6500-10-10)
1	35-10206-0260	-8 FJIC x -8 FJIC - 26"
2	35-3970-30	Velcro Cordura (24")
1	43-7995	Pin 1" x 2.125"
1	43-7767	Cylinder Hitch Pin Clip
2	49-11800-6	British Bonded Seal (-6)
1	49-11801-20	Metric Bonded Seal (20mm)
1	54-15630	Kubota Undercarriage
1	56-10280-F	Electric Valve System
4	57-11452	Kubota Washer
10	59-34950	Zip Ties (large)
4	70-20606	5/8" Hex Center Lock Nut Gr 5 NC

No Loader Parts:

Qty.	PN	Description
6	16-1615040	16mm x 1.50mm x 40mm Metric Hex Bolt Gr 10.9 Fine
6	16-20190	5/8" x 2-1/2" Hex Bolt Gr. 5 NC
1	18-10241	100 Kubota Grand L No Loader UC Bracket (Left)
1	18-10240	100 Kubota Grand L No Loader UC Bracket (Right)
4	57-11451	Kubota Washer
4	57-20746	5/8" Flat Washer
6	70-20606	5/8" Hex Center Lock Nut Gr 5 NC

Loader Parts:

Qty.	PN	Description
6	16-20190	5/8" x 2-1/2" Hex Bolt Gr. 5 NC
4	57-11451	Kubota Washer
4	57-20746	5/8" Flat Washer
6	70-20606	5/8" Hex Center 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

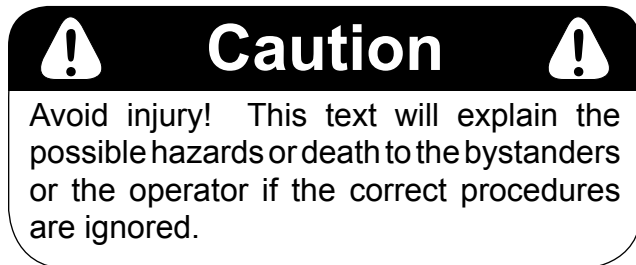
Read this manual completely prior to assembling to help you and others avoid injuries. This manual provides information on the proper way of installing the Belly Blade to prevent injuries and any machine damage.

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.



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.

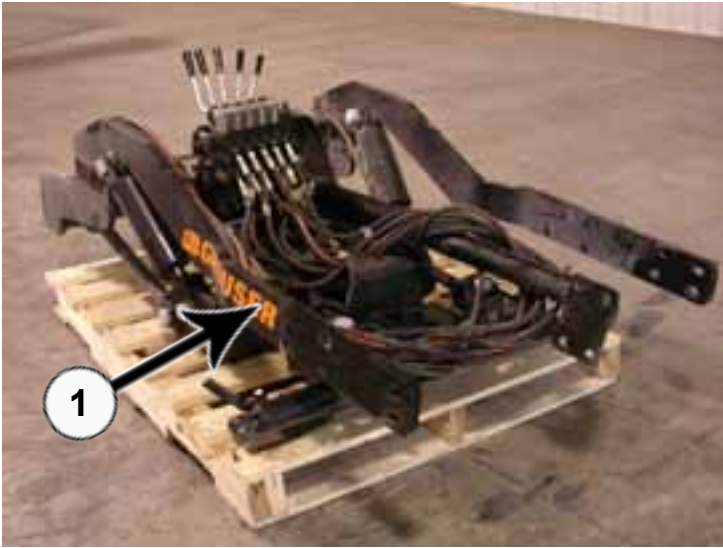
No equipment can be safer than the person running the controls. A careful, informed operator is the best safety device.

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. Remove step or cut step if necessary so it won't be caught by the blade.

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.

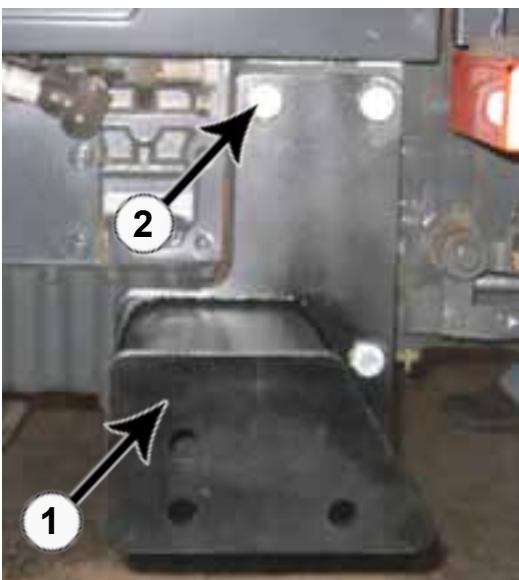
6. If the rear tires are not removed, raise the back of tractor, and place blocks safely underneath the tractor tires or use an appropriate hoist. Keep enough distance between the blocks, so the undercarriage will fit.

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.

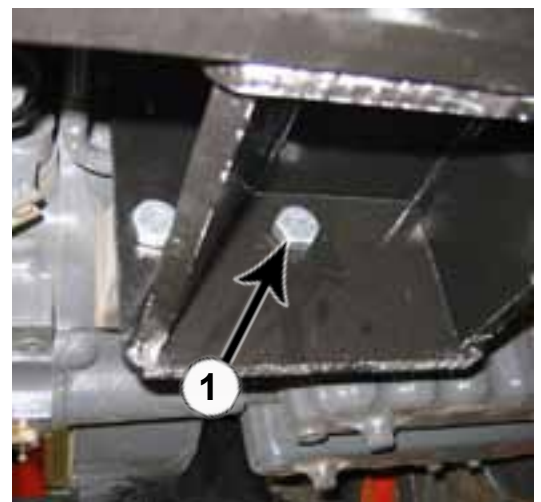
NOTE: If tractor has a loader, remove front loader arm brace.

No Loader Bracket Installation

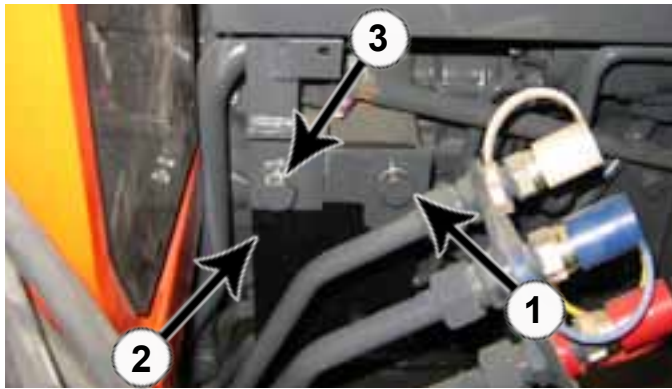
NOTE: If tractor has loader, remove front loader arm brace and skip steps 8-12.



8. Install the left loader bracket (PN: 18-15642) (1) with four 16mm x 1.50mm x 40mm bolts (PN: 16-1615040) (2).



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



10. Remove and discard the spacers behind the hood bracket (1).

11. Install the right loader bracket (PN: 18-15640) (2) behind the hood bracket in place of the spacers previously removed with the same bolts from the tractor (3). Use 2 - 16mm x 1.50mm x 40mm (PN: 16-1615040) bolts for the bottom two holes.

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

Brake Lever Installation



13. Remove the left brake lever and replace with new brake lever (PN: 11-11782) (1).

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



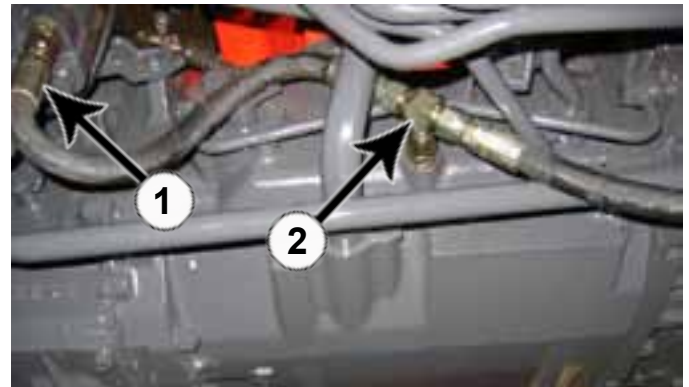
Avoid injury! Hydraulic oil that is under pressure will penetrate the skin and cause a serious injury. If this occurs, it needs to be surgically removed by a doctor familiar with this type of injury within a few hours or gangrene may result.



14. Remove fitting and hydraulic line from the tank port on the loader control valve (1). Plug the end of the hydraulic line. The other end of the hydraulic line will be removed in Step #17.

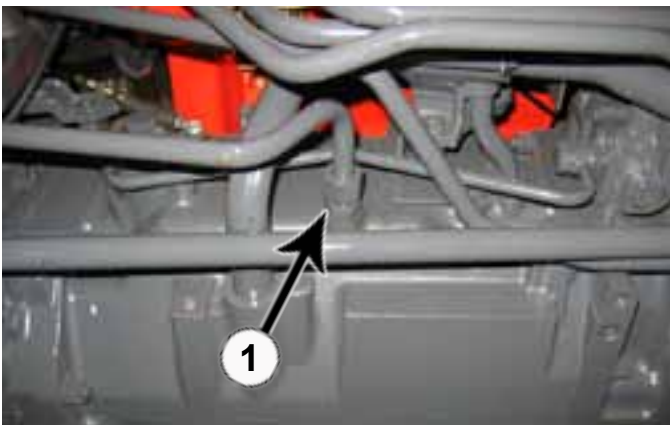
NOTE: Oil will run from the tractor tank port through the hydraulic line until all fittings and hoses are connected.

NOTE: The pictures in Step #14-21 shows the hydraulics for a L5740, but the installation is compatible for a L4240.

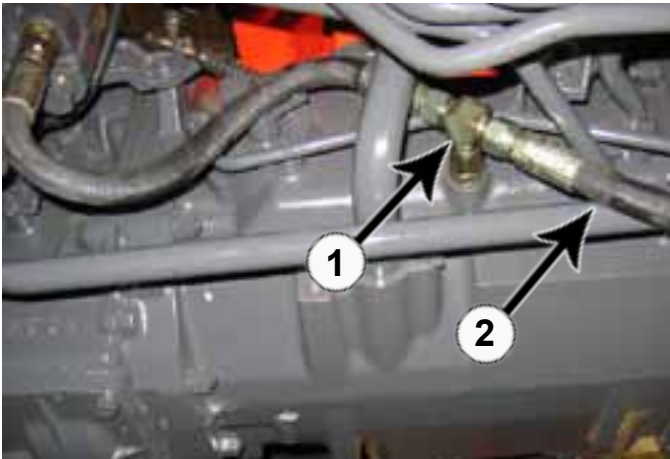


15. Install a straight fitting (PN: 31-34040), a 90° fitting (PN: 31-34100), and a 10" hose (PN: 35-10206-0100) (1) in the tank port on the loader control valve.

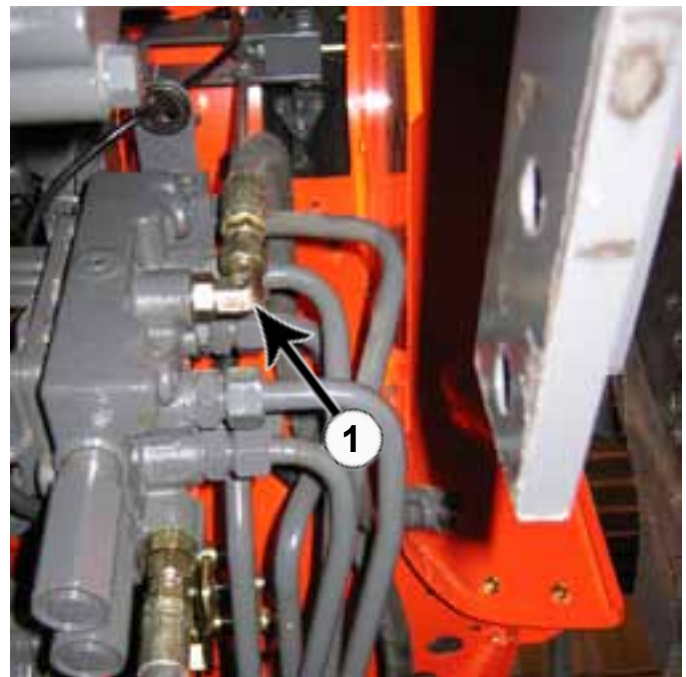
16. Install a T-fitting (PN: 31-34080 or a PN: 31-34090 depending on what fits better) and a 58" hose on the other end of the 10" hose. T-fitting will be installed to tractor in Step #18.



17. Finish removing the hydraulic line from Step #14 by removing the fitting and hydraulic line from the tractor tank port (1).



18. Install a JIC x British fitting (PN: 31-11798) including the seal (PN: 49-11800-6) in place of the fitting removed in Step #17. Attach the T-fitting that was installed in Step #16 to the JIC x British fitting (1). Lay the other end of the 58" side of the hose on the operator's platform (2). The hose will be attached later to the electric valve in Step #37.



19. Remove fitting and hydraulic line from the Power Beyond port on the loader control valve. Replace with a 90° fitting (PN: 31-34050), a bonded seal (PN: 49-11801-20), and a 53" hose (1). Lay the other end of the hose on the operator's platform. The hose will be attached later to the electric valve in Step #38.



20. Remove the operator seat to get at the Return port on the tractor (1).

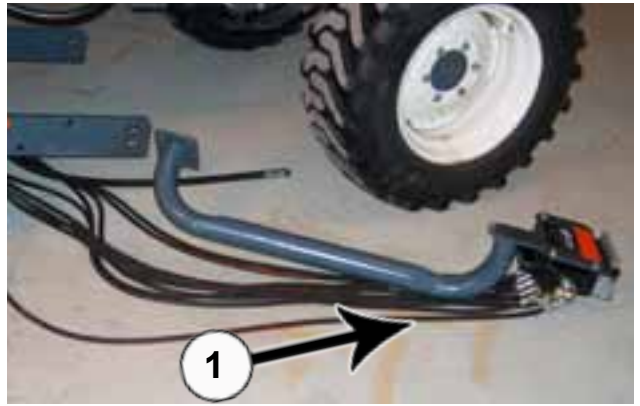
21. Remove fitting and hydraulic line from the Return port on the tractor. Replace with a straight fitting (PN: 31-11798) and a 45" hose (1). Route the hose down towards the previously installed hoses and lay the other end of the hose on the operator's platform. The hose will be attached later to the electric valve in Step #39.

NOTE: Keep hose away from all sharp edges and strap the hose securely to the tractor.

Placing Undercarriage Under Tractor



22. Align the undercarriage (1) behind the tractor. The hoses should be over the right undercarriage arm.



23. Guide the undercarriage under the tractor. Make sure the hoses exit the right side of the tractor (1). This may be different if tractor has a cab. Route hoses to the valve.

24. Pull drawbar out to allow room for undercarriage. After undercarriage is installed, adjust drawbar to operator's preferred location.

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.

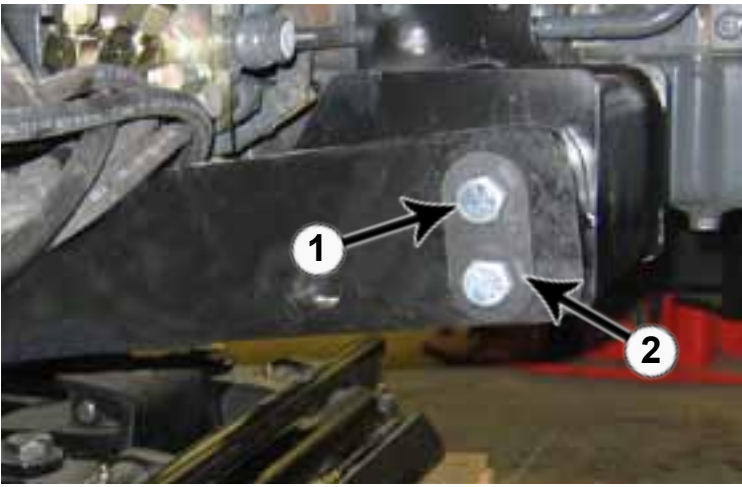


NOTE: Photos show "No Loader Bracket", the same installation procedure is still compatible for tractors with a loader.

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

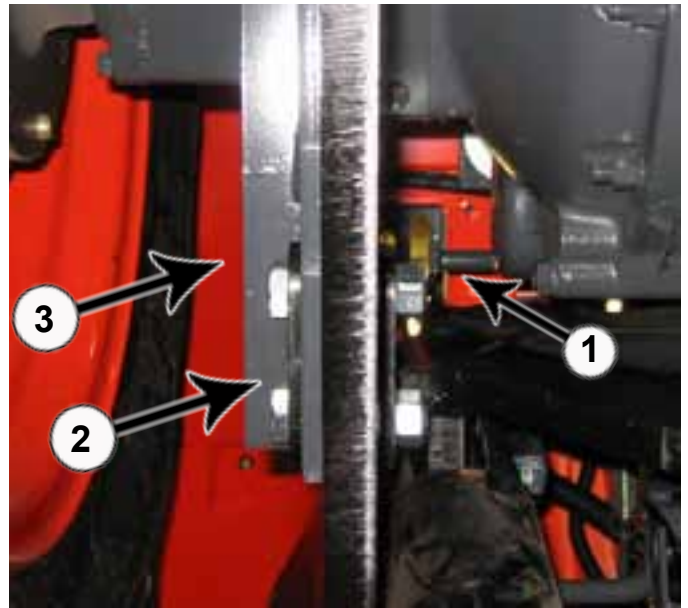
25. Use jacks to raise the undercarriage until the front undercarriage holes line up with the holes on the tractor bracket. The use of a block in the front will ensure that both arms are raised at the same time.

NOTE: If tractor has a loader, place spacers between undercarriage arms and the loader bracket. Use 5/8" x 5" bolts (PN: 16-20198) in place of the bolts in Step #28 & #33. Follow all remaining instructions.

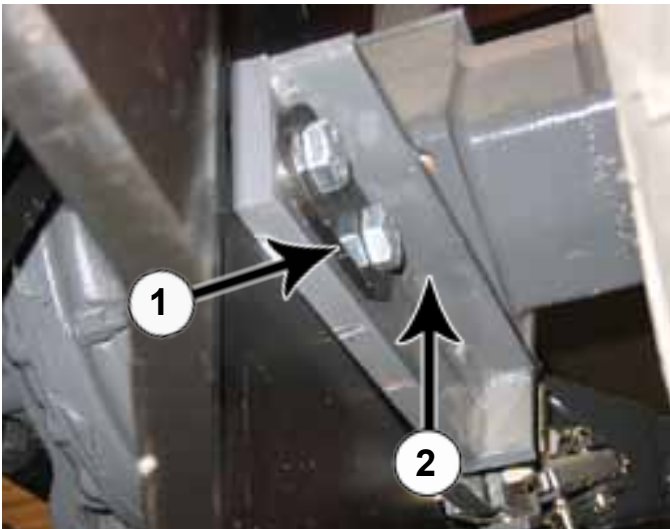


26. Once the front holes are aligned, insert two 5/8" x 2-1/2" bolts (1) (PN: 16-20190) with a 2 hole washer (2) (PN: 57-11451) into the left and right undercarriage arms.

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



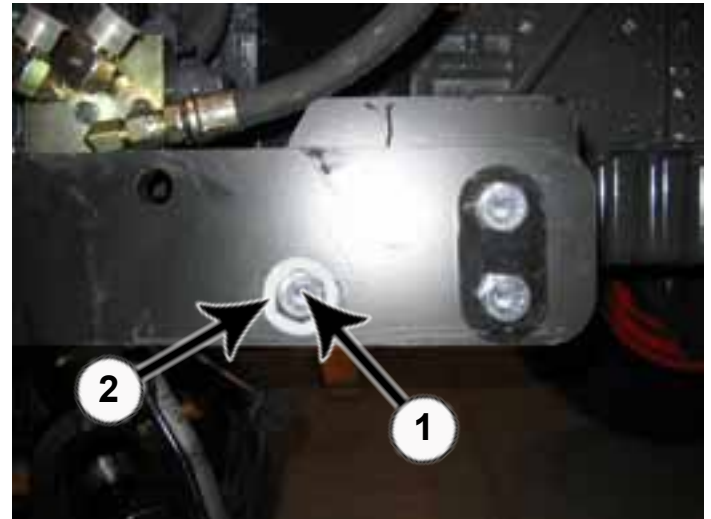
30. Put a 2 hole washer (PN: 57-11452) (2) and a 5/8" center lock nut (PN: 70-20606) (3) on the bolts.



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

29. 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).

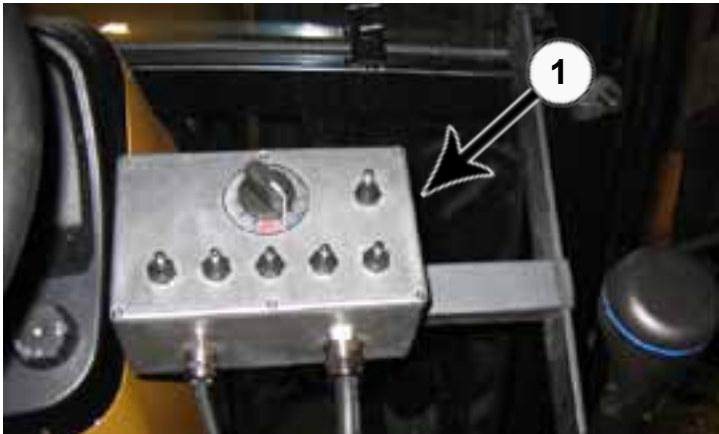
NOTE: If cylinder hits the bolt heads when operating, use the carriage bolts that were supplied without the washer.



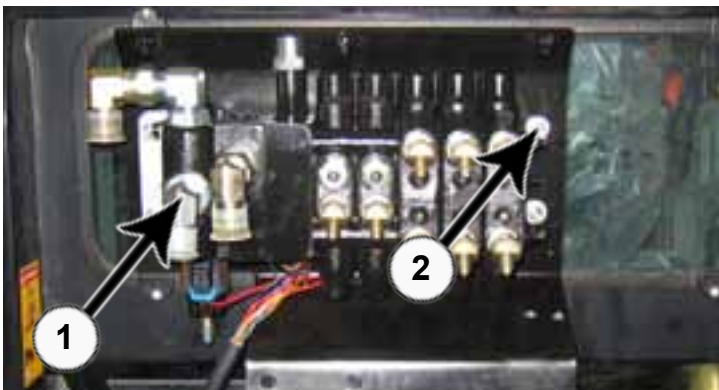
31. For the left and right undercarriage arms, insert a 5/8" x 2-1/2" bolt (PN: 16-20190) (1) with a 5/8" flat washer (PN: 57-20746) (2) into the final hole of the undercarriage arm along with a 5/8" flat washer and 5/8" center lock nut (PN: 70-20606) on the back side.

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

Electric Valve



33. Attach the valve controller at a location in the cab that is preferred by the operator.

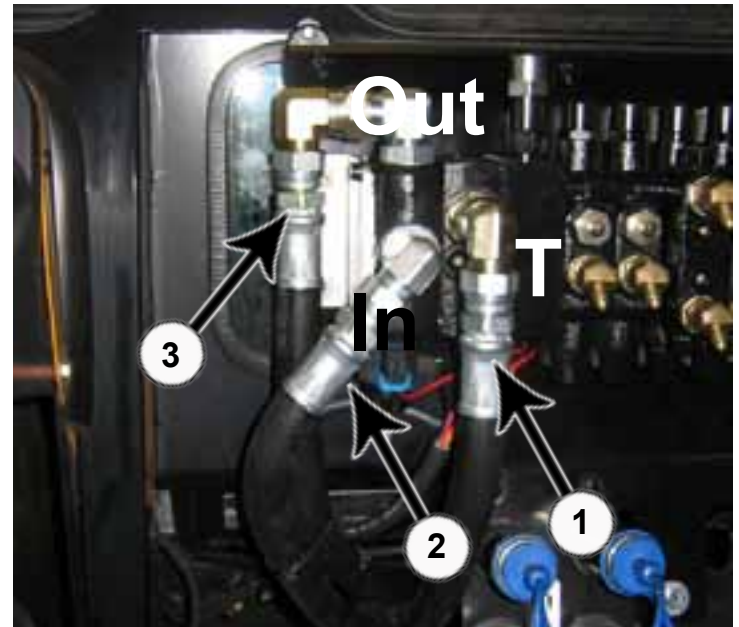


34. Connect the colored wires from the wire harness to their corresponding port on the back of the electric valve (1). Refer to the schematics on Page 13-14 for further information on the wiring.



35. Remove the slow moving vehicle sign and bracket. Attach the valve bracket to the rear of the tractor where the sign bracket was attached and drill 2 more holes next to the original set. Use the bracket as a guide. The left side of the bracket will go on the outside of the tube frame. You'll need to drill holes and attach to these tubes or weld the bracket to the frame if you prefer to do that.

36. Attach the electric valve (PN: 56-11925) to the installed bracket with 5/16" x 1" bolts, 5/16" flat washers, and 5/16" nyloc nuts. Verify that nothing will hit the valve when in operation.



37. If hydraulic fittings are not installed, install a straight fitting (PN: 31-34045) and a 90° swivel fitting (PN: 31-34101) in the **Tank and IN** Ports on the electric valve (1). Attach the 58" hose from Step #18 to the 90° swivel fitting in the **Tank** Port of the electric valve (1).

38. Attach the 53" hose from Step #19 to the 90° fitting in the **In** Port of the electric valve (2).

39. If hydraulic fittings are not installed, install a 90° fitting (PN: 31-34054) and a 90° swivel fitting (PN: 31-34101) in the **Out** Port on the electric valve (3). Attach the remaining end of the 45" hose from Step #21 to the 90° swivel fitting in the **Out** Port of the electric valve (3).

40. After all hoses are in place, group hoses together and secure hoses with zip ties .

41. Attach the valve cover (PN: 44-15634) to the valve bracket with 3/8" x 3/4" bolts, 3/8" flat washers, and 3/8" Nyloc nuts.

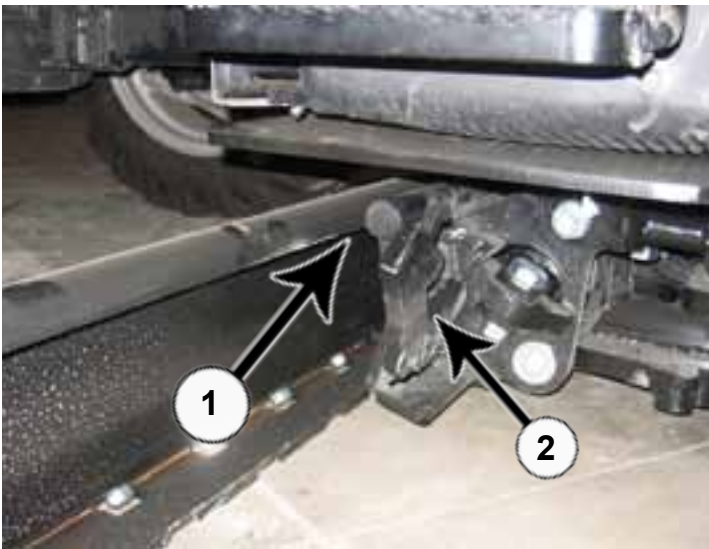
42. Reinstall tires on the tractor and lower the tractor. Remove the jacks. The undercarriage installation is complete.

43. Reconnect the battery.

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

45. 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



46. 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) .



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



47. Pitch the male quick attach forward. Position the blade so the top round bar will hook under blade lip (1).



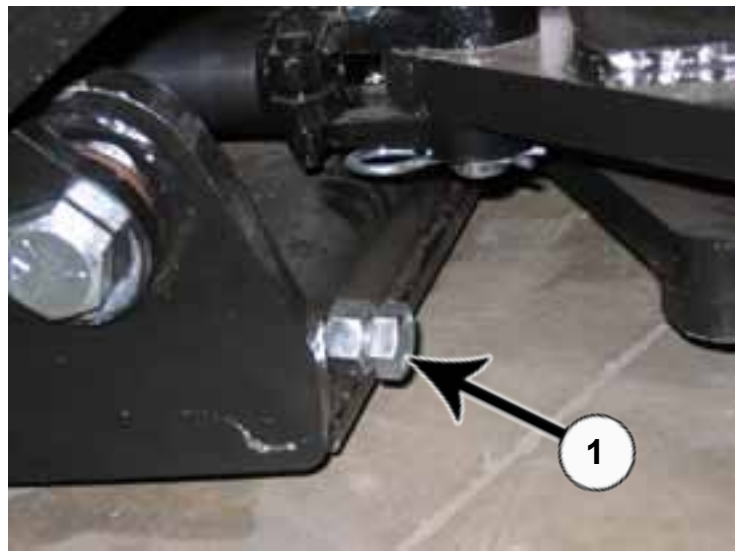
49. Lock the quick attach lever on each side (1). Verify that the lever engaged the corresponding slot on the bottom of the blade.



50. Extend the side shift cylinder out to the cylinder connector. Insert pin (PN: 43-7995) (1) and the clip pin (PN: 43-7767) on the bottom (2).

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

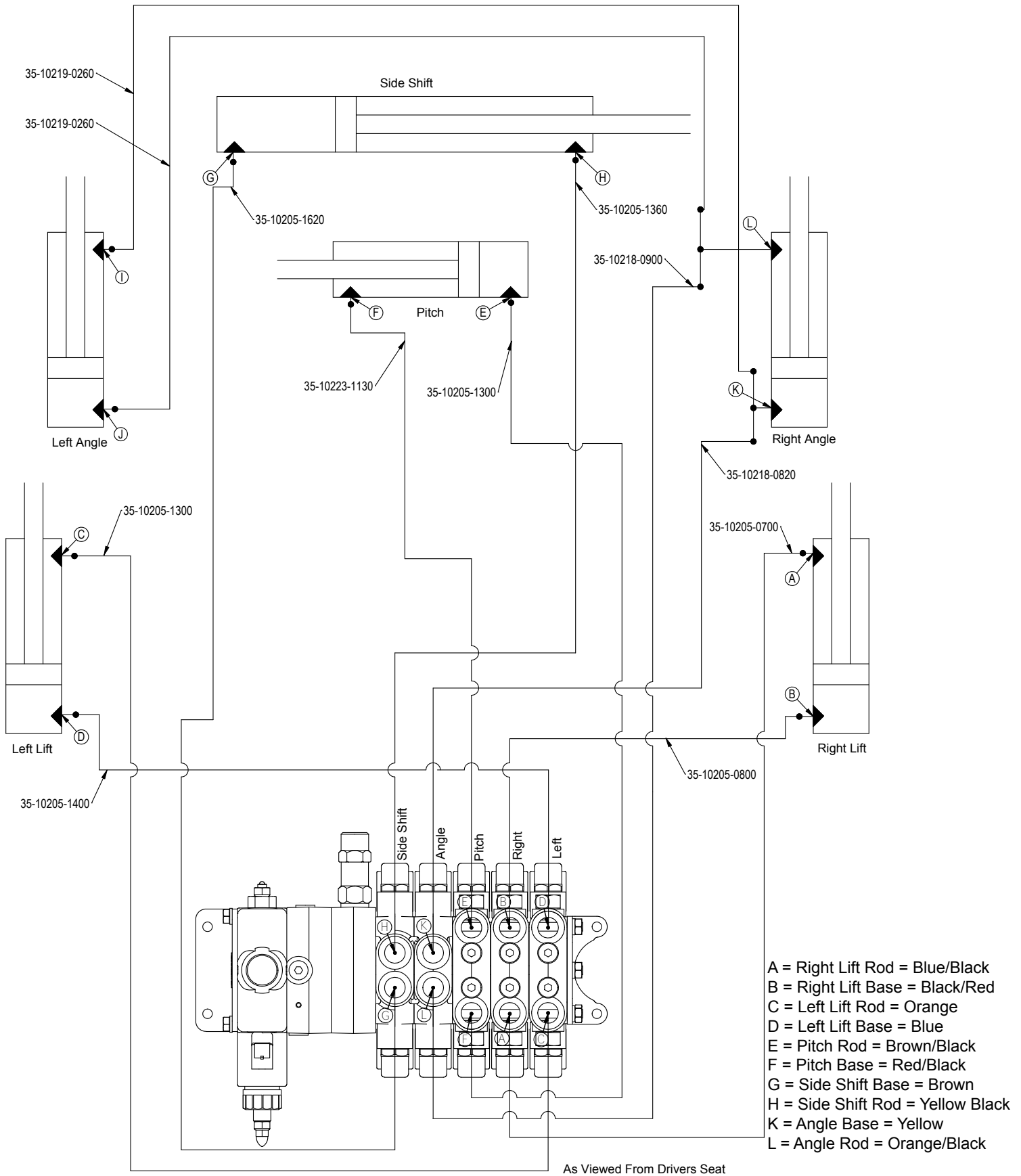
52. Cycle through blade functions checking for interferences.



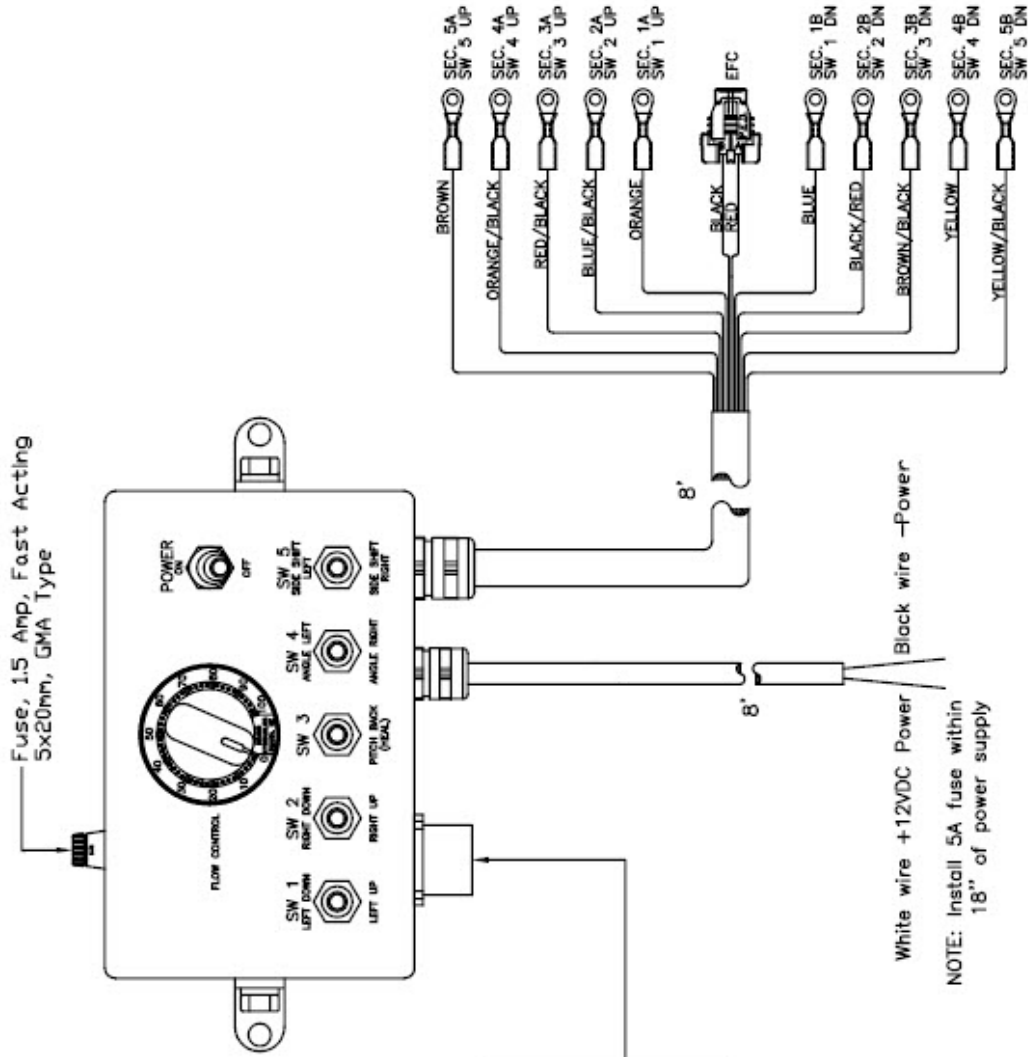
53. Adjust angle stops (1) so blade does not interfere with tires during angle of blade. Use a wrench to loosen the nut and to the turn the bolt either in or out depending if the blade is hitting the tire. After adjustment, tighten the nut.

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

Hydraulic Schematic



Electric Control Box Schematic



Manufacture: DDK
Part Number: DMS3102R-18P-1P

Pin	Function	Control Switch Desc.	Output Cable Wire Color	Valve Section Callout
A	Left Up	SW1, Down Direction	Blue	Sec 1B
B	Left Down	SW1, Up Direction	Orange	Sec 1A
C	-	Not Used	-	-
E	-	Not Used	-	-
F	Right Down	SW2, Up Direction	Blue/Black	Sec 2A
G	Right Up	SW2, Down Direction	Black/Red	Sec 2B
H	-	Not Used	-	-
I	-	System Ground	-	-
J	-	System Ground	-	-

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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