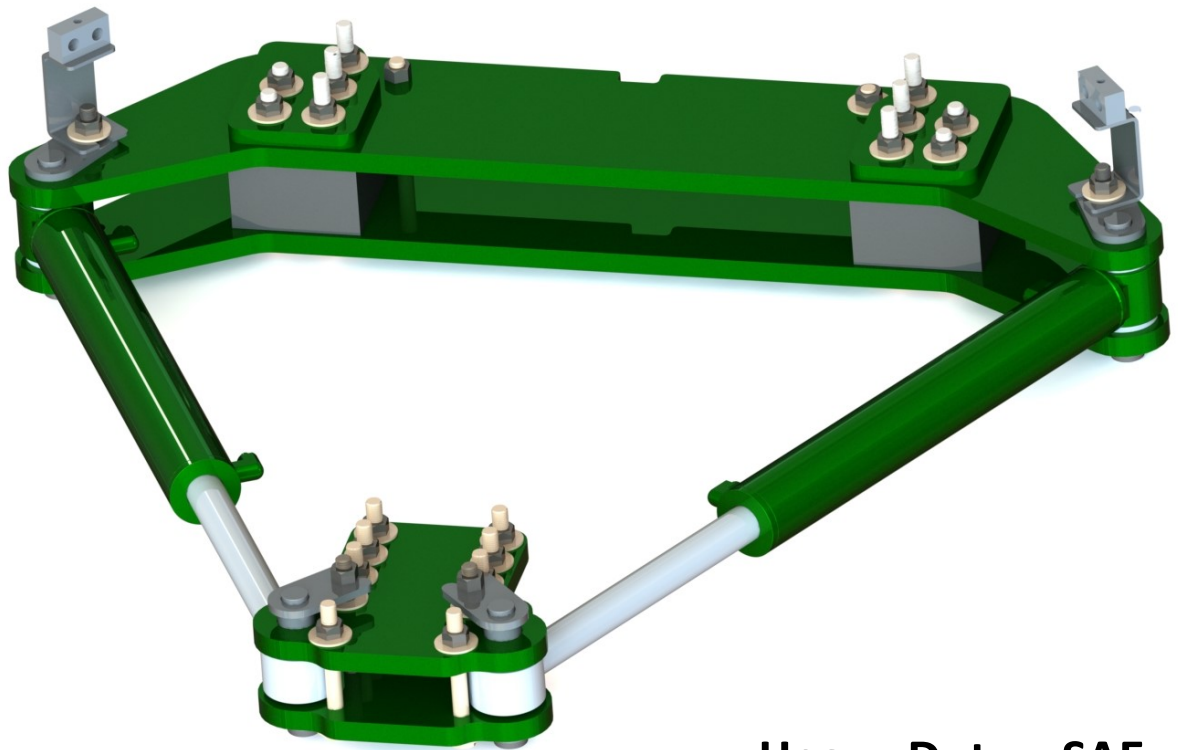


# INTERSTATE STEER HITCH

## Hydraulic Drawbar Controller



Heavy Duty—SAE

## Manual

## Preface

This manual contains information pertaining to the operation, maintenance, installation and adjustment of your Steer Hitch. To obtain the maximum service, read the manual thoroughly. Your Steer Hitch is designed to give you years of satisfaction. Taking the time to protect it against rust, wear and by replacing worn parts will add longer life and trade-in value to your product.

## Disclaimer

Interstate Equipment's policy is to improve and develop our products on a continuing basis. We reserve the right to make changes or add improvements at anytime without incurring any obligation to make such changes on products previously sold.

Interstate Equipment recommends that operators READ and UNDERSTAND the manual before using the machine and should review the manual annually.

## Contact Information

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Email: [interstate.fergusfalls@gmail.com](mailto:interstate.fergusfalls@gmail.com)

## Owner Registration Information

Bring this information when ordering parts.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State/Prov. \_\_\_\_\_

Mail Code \_\_\_\_\_

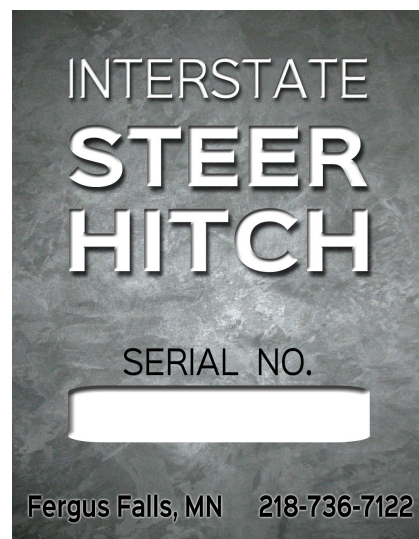
Product Steer Hitch

Serial Number \_\_\_\_\_

Date Purchased \_\_\_\_\_

Dealer \_\_\_\_\_

(If applicable)



Serial Number emblem can be  
found on the Drawbar Plate

## GENERAL INFORMATION

The Steer Hitch is for use on any John Deere 9T tracked tractor with a wide free swinging drawbar. The drawbar controller uses two cylinders on either side of the drawbar to control drawbar movement from inside the tractor cab.

Stabilizing the swinging drawbar hydraulically eliminates the pitfalls of a swinging drawbar while maintaining the advantages. It will eliminate the erratic side to side motion that can occur with an un-stabilized drawbar, increases drawbar control to keep the implement inline on hillsides, increases steering control of heavy draft loads while minimizing soil berm or crop damage to end rows, allows for quick maneuverability of the implement around low spots or obstacles, eliminates track interference, and maintains the benefit of reduced stress on the implement tongue.

The hydraulic drawbar controller can be used in three different modes: flotation, hydraulic control, or neutral position. Flotation should be used to eliminate unwanted lateral movement of the swinging drawbar. Hydraulic control will be used to control lateral movement of the drawbar to create side draft. Neutral position locks the drawbar in place. It is recommended that the neutral center position be used for road travel.

### Mechanical Maintenance

After 10 hours of use:

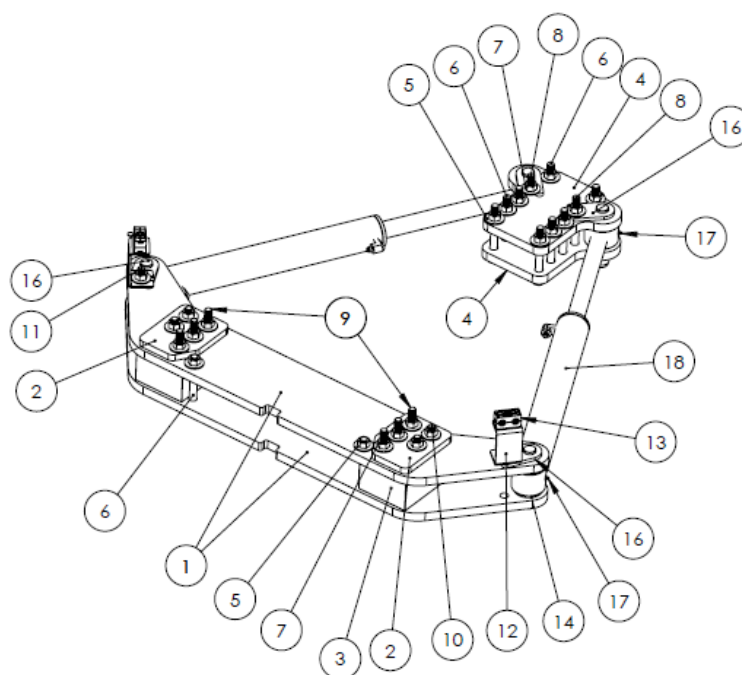
- Re-torque all M-20 mm bolts that attach the hitch assembly to tractor frame rails. Re-torque to 610 Nm (450 ft. lbs.).
- Re-torque all 3/4" bolts on hitch assembly.

### Grease Intervals

Four grease zerks are available. Two are located at the base of each cylinder, and two are located on the rod end of each cylinder. The recommended grease interval is after 50 hours of normal operation and after 10 hours if submerged in water or exposed to other extreme conditions.

### Tractor Maintenance Using Cone Stands

If Cone Stands are needed for tractor maintenance, there is no need to remove the drawbar controller. Simply remove the two bolts that are needed to mount the cone stands and mount to the tractor through the drawbar controller.



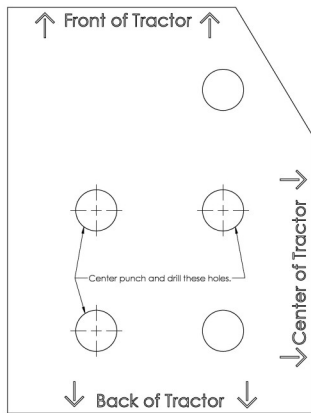
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	126746	Hydraulic Hitch Frame Plate	2
2	126747	Hydraulic Hitch Clamp Plate	2
3	126748	Hydraulic Hitch Frame Block	2
4	126749	Hydraulic Hitch Drawbar Plate	2
5	120153	WASHER FLAT 3/4" PLTD	48
6	121150	BOLT 3/4-10 X 6-1/2 GR5 PLTD	10
7	120143	Hex Nut 3/4-10 Grade 5 Plated	24
8	120118	Bolt 3/4-10 x 7 GR5 PLTD	2
9	126753	Bolt 3/4-10 x 8-1/2 Grade 5 Plated	6 *
10	126754	Bolt 3/4-10 x 7-1/2 Grade 5 Plated	4 *
11	121779	Bolt 3/4-10 x 3 Grade 5 Plated	2
12	126755	Hose Clamp Riser	2
13	121256	Plastic Twin Clamp .625	4
14	126898	UHMW Cushion Washer 3 x 1.75 X .50	4
15	126756	Hyd Drawbar Hose Kit	1
16	126750	Hydraulic Hitch Pin	4
17	123387	Zerk Grease ST 1/8-27NPT	4
18	126853	CYL 3 x 20 x 1-3/4 Welded	2

\* Subject to M-20 metric bolts being used in holes on tractor frame from factory.

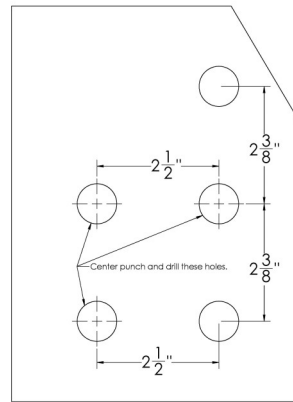
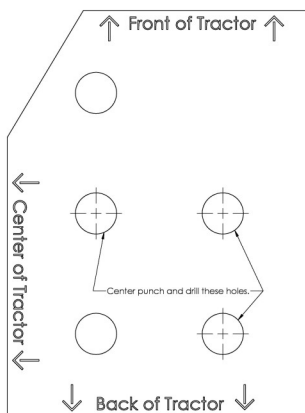
# Installation Instructions

To begin the installation process, find the four M-20 threaded holes located in the gusset in front of the rear axle of the tractor. Thoroughly clean the threaded holes.

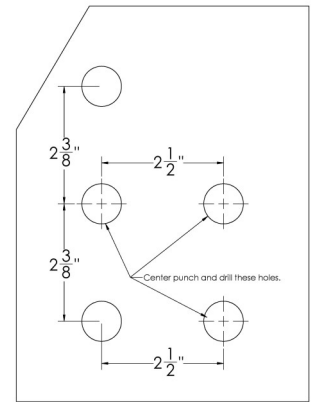
1. Pin the provided template to the gussets using #8x Cap Plugs in the M-20 threaded holes.
2. Mark around the edge of the template. Later, when the template is removed, the area under it will be sanded to create a bare metal surface.



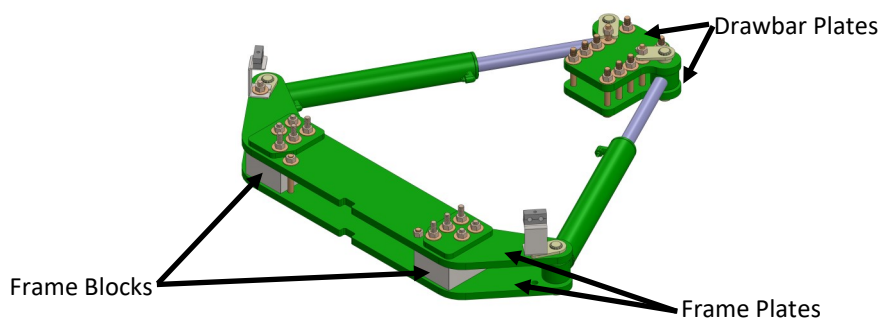
Template Orientation



Template Hole Dimensions

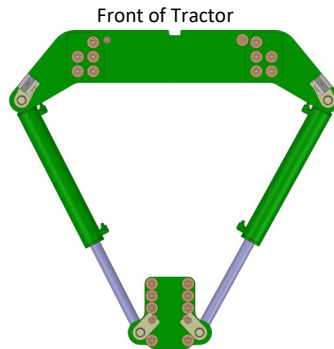


3. Center punch template hole locations. *Note: The hole locations have a small tolerance for error. Prior to center punching, double check that the template is on a flat surface and is centered in the correct position with the capplugs. If unsure, use the drawbar controller to locate holes, by bolting it into position using the four existing holes.*
4. Using a magnetic base drill (recommended) or hand drill, pre-drill a 1/4" or 3/8" hole at center punch mark locations. Since drilling is taking place from underneath, use a spray drill lubricant to reduce the risk of dulling and/or breaking the drill bit.
5. Drill 7/8" clearance holes at pre-drill locations.
6. In the next step, sanding is required under the template as well as between the Steer Hitch Frame Plates and the Frame Blocks.
  - a) Remove the template and sand the paint off of the previously marked area.
  - b) Remove the Frame Blocks and sand the contact surfaces on the blocks as well as the on the Frame Plates.
  - c) Clean the bare metal surfaces and holes following sanding to remove any oil or debris.
  - d) Reassemble the Frame Blocks.

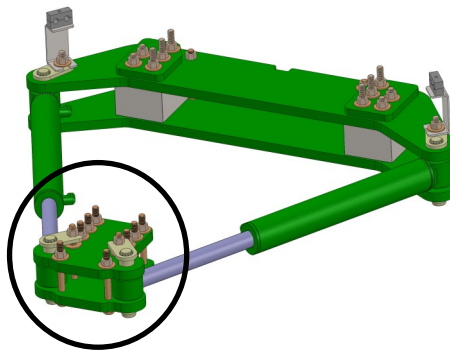


## Installation Instructions

7. Remove the drawbar pivot pin from the front of the drawbar.
8. Using a M-24 wrench or socket, remove the retaining screws for the drawbar pivot pin.
9. Pull the drawbar toward the back of the tractor to create approximately a one foot gap in front of the drawbar. DO NOT pull the drawbar completely out of roller hanger assembly. Pin the hanger roller assembly to the center.
10. Place the drawbar controller on a jack under the tractor with the following orientation:



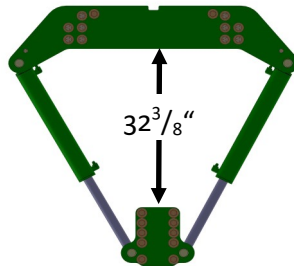
11. There are two marked holes on the drawbar controller assembly. Line these holes up with the two threaded holes in the tractor frame that were located in the introductory paragraph.
12. Lift the drawbar controller assembly into position. Use four M-20 bolts to attach the drawbar controller assembly to the tractor frame using the threaded holes. Leave the M-20 bolts loose so that the assembly can be adjusted as needed.
13. Check that an M20 bolt can fit and freely rotate in the remaining through-holes. If the bolts can not move freely, either adjust the assembly accordingly or ream the hole(s) that are causing issues.
14. Finish attaching this section of the drawbar controller using four M-20 bolts in the previously drilled holes. Put a washer under both the head of the bolt and under the nut. To protect the threads of the bolt, point the threads upward.
15. Tighten all of the M-20 bolts to 610Nm (450 ft-lbs). Re-torque bolts after 10 hours of use.
16. Loosen, but don't remove, the 8 bolts in the Drawbar Plate.



17. Remove the nuts holding the Hydraulic Hitch Pins.

## Installation Instructions

18. Confirm the tractor drawbar is pinned in the neutral position.
19. Lift the drawbar controller hydraulic hoses above the tractor drawbar.
20. Slide the tractor drawbar between the Drawbar Plates and the Frame Plates.
21. Reattach the drawbar to the tractor at the drawbar pivot location and install pivot pin that was removed in Step 7.
22. Replace the drawbar pivot retaining screws that were removed in step 8. Torque the bolts to 310 Nm (230 ft. lbs.).
23. Band the hydraulic crossover hoses together about an inch above the drawbar using heavy duty zip ties.
24. Open the hydraulic hose couplers to allow the cylinders to move freely.
25. Space the Frame Plates and the Drawbar Plates  $32\frac{3}{8}$ " apart.



26. Tighten the nuts in both the Drawbar Plates. *Reminder: For all bolts, threads should be pointed upward and there should be washers under both the nut and the head of the bolt.*
27. Stretch the hydraulic hoses along the chassis of the tractor.
28. Remove the drawbar stops.
29. Connect the hydraulic hoses to the SCVs of choice.
30. Start the tractor and set the engine to idle.
31. Set the selected SCVs for the hydraulic drawbar controller to the lowest flow mode. Slowly move the drawbar while watching closely for any interferences.
32. Move the drawbar several times both directions to its fullest extent. This will purge any air from the system.  
*Note: while moving the drawbar back and forth, observe the side to side stroke of the drawbar (i.e. whether the drawbar can move past its fullest extent or can't reach its fullest extent.)*
33. Adjust the Drawbar Plate, located on the rod-end of the cylinder, to lengthen or shorten the stroke of the drawbar.
34. Re-install the drawbar stops that were removed earlier. Move the drawbar into the stops to assure the system is working correctly.
35. Torque all bolts in the Hydraulic Hitch Plates to 610 Nm (450 ft. lbs.).
36. Remove the drawbar stops.

*Congratulations! Your hydraulic drawbar controller is ready to use!*