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# ***HYDRA BD 2200***

**BOLT DOWN**



*Bolt Down Bale Handler For An Existing Flatbed*

***TRIPLE C***  
**INC**

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# **HYDRA BD 2200<sup>TM</sup> Owner's Manual**

As with any device designed to handle large round bales, some precautions are in order. Keep this manual with your **HYDRA BD 2200<sup>TM</sup>** at all times. Refer to it regularly.

**NEVER** exceed the manufacturers gross vehicle weight or gross axle weight rating for your vehicle.

**NEVER** exceed the tire manufacturers gross weight rating.

**NEVER** allow yourself or anyone else to go near a bale or any other object that is suspended by any means, hydraulic, mechanical or other.

**NEVER** increase or decrease the factory relief valve setting. This action automatically voids all warranties and could endanger the operator and/or bystanders.

**NEVER** operate the vehicle and **HYDRA BD 2200<sup>TM</sup>** on other than level ground.

**NEVER** allow children or other unauthorized personnel access to the controls for your **HYDRA BD 2200<sup>TM</sup>**.

**ALWAYS** use sound judgment and common sense when operating your vehicle and **HYDRA BD 2200<sup>TM</sup>**.

**ALWAYS** attach trailers or equipment only to properly installed gooseneck hitch or rear drop hitch.

**ALWAYS** respect the weight of the load you are carrying and allow more stopping distance than normal.

**ALWAYS** make certain that there is no foreign material in the arm receiving areas and/or the area where the arm-cross tube assembly comes to rest. Hydraulic pressure will be sufficient to cause damage if the arm assembly is placed in the stowed position over foreign material.

# **HYDRA BD 2200™** Operating Instructions

**OPERATING INSTRUCTIONS** for the loading and unloading of 1 or 2 large round bales weighing up to 2200 pounds each. (See cautions about exceeding gross vehicle weight, gross axle weight and /or gross tire weights.)

1. Make sure there is nothing lying on the arms and/or cross tube.
2. Move main control to the "Unload" position. The complete arm assembly will raise out of the stowage areas and rotate rearward.
3. When the outer ends of the bale grabbing arms are at the center of the bale to be lifted, center main control. Arms will stop their motion.
4. To grip bale, move arm control to the "Grip" position until arms have gripped bale sufficiently. Then center arm control.
5. To raise bale, move main control to "Load" position until bale is resting solidly on the **HYDRA BD 2200™**. Center main control.
6. If you desire to haul a second bale, repeat steps 2 through 5.
7. To unload bales, reverse the previous steps 2 through 5.
8. To unroll bale, insert spinners in bushings near the outer end of the bale gripping arms. Lock in place with lynch pins provided.
9. Grip bale in fashion previously described, making sure that the points of the spinners enter the bale at its center.
10. Load the bale as previously described.
11. Proceed to the unrolling site and unload the bale as previously described.
12. With bale suspended just off the ground, remove twine or wrap from bale.
13. Drive forward while lowering the bale. Rate of unrolling may be controlled by ground speed, ground contact of bale, bale unrolling direction in relation to baling direction and gripping pressure.

CAUTION: BEFORE RETURNING ARMS TO THE STOWAGE POSITION, MAKE CERTAIN THAT THERE ARE NO BYSTANDERS NEAR THE **HYDRA BD 2200™**, ESPECIALLY IN THE AREA WHERE THE ARMS AND REAR CROSS TUBES WILL COME TO REST. To return arms to their stowage areas, make certain that all hay and other foreign material is cleared from bed and cross tube area. Move arm control in the appropriate direction until arms are 90 degrees to the cross tube. Move main control lever to the "Load" position until arms are stowed.

The bale squeezing arms on your **HYDRA BD 2200™** are activated by rephasing hydraulic cylinders. This feature insures that the arms will always move simultaneously and equally. If, at any time, the arms get out of synchronization with each other, follow these steps to restore the correct spacing. Refer to drawing BD22-50D.

1. Hydraulically move arms until they are vertical (straight up).
2. Activate "Grip" control to bring arms completely together.
3. Hold control in "Grip" position for 10 to 30 seconds. This will rephase the cylinders and restore arms to correct relationship.
4. If at any time the arms do not rephase correctly after completing steps 1 through 3, check for foreign material in the arm base socket area. Refer to drawing BD22-50A. Rocks, dirt or hay may be preventing the arm from full movement. Wash this area out thoroughly and repeat steps 1, 2, and 3 to restore correct synchronization.

Maintain hydraulic oil level within 2 inches of top of reservoir.

Any unauthorized modification or change to your **HYDRA BD 2200™** is done entirely at the owners risk and will void the warranty on all components.

Your **HYDRA BD 2200™** features a free-floating mechanism to facilitate unrolling frozen or lopsided bales. This same mechanism, by its design, does not allow the **HYDRA BD 2200™** to exert downward pressure with its arms. Do not attempt to exert downward pressure with your **HYDRA BD 2200™**.

CAUTION: Failure to follow these directions may result in damage to your **HYDRA BD 2200™** and/or hydraulic system. Any such damage, whether caused by neglect, abuse or misuse is NOT covered by any warranty.

## ***HYDRA BD 2200*<sup>™</sup> Installation Instructions**

1. Center the ***HYDRA BD 2200*<sup>™</sup>** side to side on the flatbed with the rear drop flange in contact with the rear edge of the bed.
2. Refer to drawing BD22-50F, figs 1, 2 & 3 to choose the mounting configuration that best suits your installation.
3. Use 1/2" diameter grade 8 bolts to bolt the unit down securely utilizing the supplied backing plate. You will have (2) bolts minimum in each of (4) ***HYDRA BD 2200*<sup>™</sup>** frame members.
5. Drill (4) holes through the pre-punched mounting holes at the back of the ***HYDRA BD 2200*<sup>™</sup>** and bolt to the rear of the flat bed using 1/2" grade 8 bolts and the provided backing plates and shims if applicable. If necessary, the backing plates may be shortened for clearance. Refer to drawing BD22-50F fig 4.

## ***HYDRA BD 2200*<sup>™</sup> Wiring Instructions**

1. Route the jacketed parallel cable PRIOR to making ANY connections to either the unit battery, or the vehicle battery.
2. When routing and securing the jacketed parallel cable, avoid ANY contact with rotating, hot or abrasive chassis & engine components. If the cable must be routed through any metal surfaces, either through an existing or newly drilled hole, protect the cable from damage caused by contact with the edges of said hole.
3. Secure jacketed parallel cable to flat, projection free surfaces at close intervals to avoid any sag or future interference.
4. Connect the unit-end BLACK jacketed parallel cable terminal to the NEGATIVE (-) post on the pump motor.
5. Connect the engine-end BLACK jacketed parallel cable terminal to the NEGATIVE (-) clamp bolt on the vehicle battery.
6. Temporarily insulate the unit-end RED jacketed parallel cable terminal so that it cannot make electrical contact with ANY other item.
7. Connect the engine-end RED jacketed parallel cable terminal to the POSITIVE (+) clamp bolt on the vehicle battery.

8. Remove the insulation installed in step (6) from the unit-end RED jacketed parallel cable terminal and connect it to the POSITIVE (+) stud of the solenoid on the pump motor.

**NOTE:** THIS CABLE TERMINAL NOW CARRIES 12 VOLTS. DANGEROUS SHORTING WILL OCCUR IF ANY CONTACT IS MADE TO UNIT OR VEHICLE AT ANY POINT OTHER THAN THE POSITIVE SOLENOID STUD!

9. Drill a 1" hole through rear of cab. (It may be necessary to use a right angle drill for this operation)

10. Route switching cable from **HYDRA BD 2200™** to cab through 1" hole.

11. Install rubber grommet in hole and connect plug to mating plug on control box.

12. Recheck all cable routing, securing methods and connections.

13. After providing adequate ventilation, start the vehicle and operate the unit through 3 complete cycles. Turn off the engine, and check all electrical connections for heating or other signs of improper connections.

# **HYDRA BD 2200™ Trouble Shooting Guide**

Your **HYDRA BD 2200™** is designed for years of trouble free use. Uninterrupted electrical power and control signals are essential to it's proper function. Should you experience operational difficulties, the following check list will assist you in systematically locating problems.

- 1. 12 Volt power on both sides of *HYDRA BD 2200™* fuse**
- 2. Battery cable connections clean & tight**
- 3. Switch box cable & plug properly connected**
- 4. 12 Volt power at all locations of *HYDRA BD 2200™* wiring harness when switched:**
  - "Load" control energizes White lead at all wiring harness locations**
  - "Unload" control energizes Green lead at all wiring harness locations**
  - "Grip" control energizes Orange lead at all wiring harness locations**
  - "Release" control energizes Blue lead at all wiring harness locations**
- 5. Hydraulic oil at correct level, within 2 inches of top of reservoir.**

Your **HYDRA BD 2200™** has been designed with MANUAL OVERRIDES to provide operation in the event of a wiring/electrical malfunction. Refer to drawings BD22-50B and BD22-50C for MANUAL OVERRIDE locations.

## **WARNING: USE EXTREME CAUTION WHEN USING MANUAL OVERRIDES.**

1. Locate the appropriate MANUAL OVERRIDE hole and insert a flat blade screwdriver or like object into the hole.
2. While pressing the appropriate control button on the switch pendant to activate the pump motor, depress the MANUAL OVERRIDE button for the appropriate operation.

## **WARNING: USE EXTREME CAUTION WHEN USING MANUAL OVERRIDES.**

Using MANUAL OVERRIDES will create body crush points. Be extremely cautious when working with MANUAL OVERRIDES and suspended loads. DO NOT position your body between truck and **HYDRA BD 2200™** bale handling arms.