

bühler inland



Model 4000

For serial number 02BM4000001 and later

**Operator's and Parts Manual
Hayliner Bale Carrier**

29985

03/05/03

INTRODUCTION

Your new bale carrier is designed as tractor drawn machine to pick-up up to eight rectangular hay or straw bales measuring approximately 48" (1.22 m) x 48" (1.22 m) x 96" (2.44 m) and stack them up to 4 high. These are considered "large" square bales. Various other dimensions of smaller rectangular bales may also be accommodated by making appropriate adjustments.

The term "Dry Hay" refers to bales having a moisture content of less than 20% at time of baling.

The 4000 Bale Carrier should not be used to load, transport and stack High Moisture Bales Commonly referred to as Baled Silage or Baleage. High moisture bales are not solid and will not retain their shape to support a stable stack of one bale on top of the other. The bottom bales will deform and the stack will fall over.

Successful retrieval and stacking requires good operator skills. This manual contains useful information regarding operation, safety, and maintenance.

Keep this manual handy for reference and to pass on to new operators or owners.

Call your bale carrier dealer if you need assistance, information, or additional copies of the manual.

Note: Right and Left designations are determined from the operator's position, facing forward.



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SAFETY

SAFETY ALERT SYMBOL



This safety alert symbol indicates important safety messages in this manual and on safety signs on the bale carrier.

This symbol means:

**ATTENTION !
BECOME ALERT !
YOUR SAFETY IS INVOLVED !**

Carefully read and follow the safety message accompanying this symbol.

Why is SAFETY important to you? THREE BIG REASONS:

- ! ACCIDENTS DISABLE AND KILL
- ! ACCIDENTS COST
- ! ACCIDENTS CAN BE AVOIDED

SIGNAL WORDS

Note the use of the signal words DANGER, WARNING, and CAUTION with safety messages. The appropriate signal word for each message has been selected using the following guidelines:



Indicates an imminently hazardous situation that, if not avoided, WILL result in death or serious injury. This signal word is limited to the most extreme situations, typically for machine components that, for functional purposes, cannot be guarded.



Indicates a potentially hazardous situation that, if not avoided, COULD result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.



Indicates a potentially hazardous situation that, if not avoided, MAY result in minor or moderate injury. It may also be used to alert against unsafe practices.

SAFETY SIGNS

The safety signs reproduced below appear on the bale carrier at the locations listed. Make sure all safety signs are clearly legible. Signs that have become illegible should be replaced. New signs can be purchased from your dealer or directly from the manufacturer. If new parts are installed, make sure that the appropriate signs are in place, if applicable.

To install safety signs:

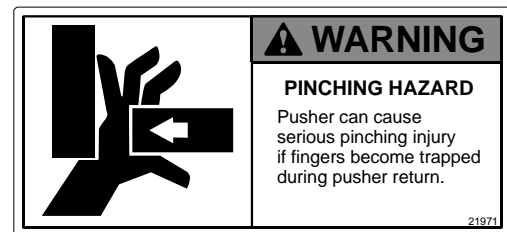
1. Be sure the installation area is clean and dry.
2. Decide on the exact location before you remove the decal backing paper.
3. Remove the smaller portion of the split backing paper.
4. Place the sign in position and slowly peel back the remaining paper, smoothing the sign as it is applied.
5. Small air pockets can be smoothed out or pricked with a pin.



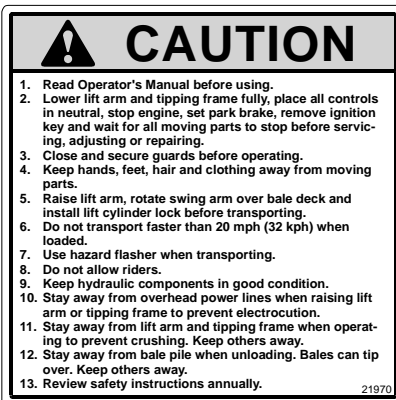
FRONT SPROCKET SHIELD



FRAME (over VALVE BANK)



PUSHER



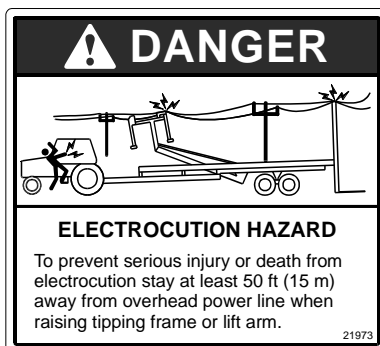
FRAME (front)



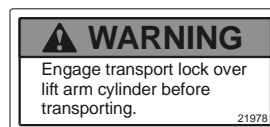
LEFT and RIGHT CARRIER BEAM and MAIN ARM



LEFT and RIGHT CARRIER BEAM



FRAME (front)



RIGHT CARRIER BEAM (over LIFT ARM CYLINDER)

GENERAL SAFETY



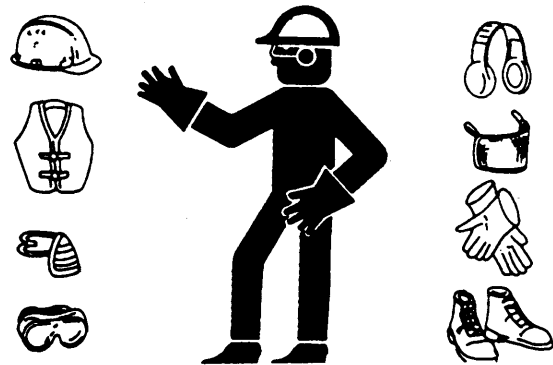
The following are general farm safety precautions that should be part of your operating procedure for all types of machinery.

1. Protect yourself.

When assembling, operating and servicing machinery, wear all the protective clothing and personal safety devices that COULD be necessary for the job at hand. Don't take chances.

You may need:

- a hard hat.
- protective shoes with slip resistant soles.
- protective glasses or goggles.
- heavy gloves.
- wet weather gear.
- respirator or filter mask.
- hearing protection. Be aware that prolonged exposure to loud noise can cause impairment or loss of hearing. Wearing a suitable hearing protective device such as ear muffs (A) or ear plugs (B) protects against objectionable or loud noises.



PROTECT YOURSELF



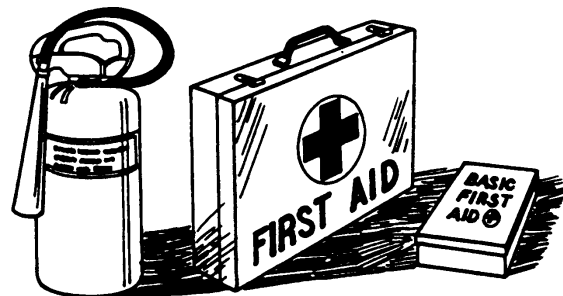
PROTECT AGAINST NOISE

2. Provide a first-aid kit for use in case of emergencies.

3. Keep a fire extinguisher with the machine. Be sure the extinguisher is properly maintained and be familiar with its proper use.

4. Keep young children away from machinery at all times.

5. Be aware that accidents often happen when the operator is tired or in a hurry to get finished. Take the time to consider the safest way. Never ignore warning signs of fatigue.



BE PREPARED FOR EMERGENCIES

6. Wear close-fitting clothing and cover long hair. Never wear dangling items such as scarves or bracelets.

7. Keep hands, feet, clothing and hair away from moving parts. Never attempt to clear obstructions or objects from a machine while the engine is running.

8. Keep all shields in place. Never alter or remove safety equipment.

9. Use only service and repair parts made or approved by the equipment manufacturer. Substituted parts may not meet strength, design, or safety requirements.

10. Do not modify the machine. Unauthorized modifications may impair the function and/or safety and affect machine life.

11. Stop engine and remove key from ignition before leaving operator's seat for any reason. A child or even a pet could engage an idling machine.

12. Keep the area used for servicing machinery clean and dry. Wet or oily floors are slippery. Wet spots can be dangerous when working with electrical equipment. Be sure all electrical outlets and tools are properly grounded.

13. Use adequate light for the job at hand.

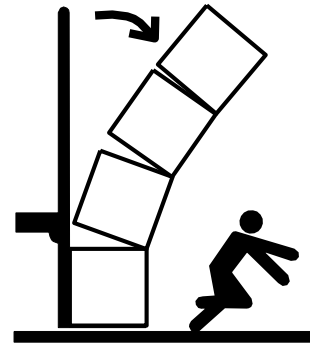
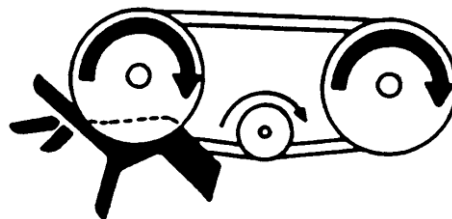
14. Keep machinery clean. Straw and chaff on a hot engine are a fire hazard. Do not allow oil or grease to accumulate on service platforms, ladders or controls. Clean machines before storage.

15. Never use gasoline, naphtha or any volatile material for cleaning purposes. These materials may be toxic and/or flammable.

16. When storing machinery, cover sharp or extending components to prevent injury from accidental contact.



NEVER WEAR LOOSE OR DANGLING CLOTHES



KEEP AWAY FROM HAZARDS



KEEP SERVICE AREA CLEAN AND DRY

SPECIFICATIONS

DIMENSIONS:

Length: 42' 8" (13.0 m)
Usable Deck Length: 34' (10.36 m)
Transport Width: 10' 2" (3.1 m)
Weight (empty): 9485 lbs. (4302 kg)
Drawbar Vertical Load (empty): 2475 lbf (11009 N)

TIRES:

12.5L x 15, load range F
Farm Highway Service.
6 bolt hubs, heavy duty hubs
8 tires

BALE CAPACITY:

GVW: 25 000 lbs. (11 340 kg)
8 - 48 x 48 x 96" nominal (1.22 x 1.22 x 2.44 m)
10 - 32 x 35 x 96" nominal (.81 x .88 x 2.44 m)
16 - 36 x 48 x 96" nominal (.91 x 1.22 x 2.44 m) (requires optional second layer kit)

STACKING UP TO 16 feet (4.8 m) HIGH:

example: 48 x 48 x 96" - 4 high	Large Bales
32 x 35 x 96" - 5 high	Intermediate Bales
36 x 48 x 96" - 4 high	Intermediate Bales

HYDRAULICS:

Recommended range - 12 to 15 US gpm (45 to 56 lpm) @ 2500 psi – closed center (open center requires optional open center kit).

- 1 - LIFT ARM CYLINDER - 4 x 18 – 27" retracted
- 1 - SQUEEZE CYLINDER - 3 x 16 – 24" retracted
- 1 - ROTATION CYLINDER - 3 x 16 – 24" retracted
- 2 - TIPPING CYLINDER – 3-1/2 x 36 – 44" retracted

Max. recommended pressure: 2900 psi Min. recommended pressure: 2000 psi

Dual 22.2 cu. in. hydraulic motors.

2 speed valve.

5 bank main control valve.

Control module - operator initiated automatic loading as well as a manual setting where each function is manually controlled.

Electrical - Power 12 volt - neg. ground

Fuse 15 amp

TRACTOR POWER REQUIRED:

Minimum 100 hp with adequate braking capacity to safely control 25,000 lbs. (11,340 kg) GVW trailing load. Do not tow over 32 km/h (20 mph). Towing unit should weigh 7575 kg (16,700 lbs) or approximately 67% of GVW.

1 pair remote outlets required with variable flow control setting (system should be set at approximately 13 to 14 gpm). Control valve is restricted to approximately 17 gpm.

WARRANTY

Buhler Manufacturing products are warranted for a period of twelve (12) months from original date of purchase, by original purchaser and 90 days from date of purchase by a commercial operation, to be free from defects in material and workmanship under correct, normal agricultural use and proper applications.

Buhler Manufacturing's obligations under this warranty shall be limited to the repair or exchange, at Buhler Manufacturing's option, of any Buhler Manufacturing product or part which proves to be defective as provided. Buhler Manufacturing reserves the right to either inspect the product at the buyer's location or have it returned to the factory for inspection.

The above warranty does not extend to goods damaged or subject to accident, abuse or misuse after shipment from Buhler Manufacturing's factory, nor to goods altered or repaired by anyone other than an authorized Buhler Manufacturing representative.

Buhler Manufacturing makes no Express Warranties other than those, which are specifically described. Any description of goods, including any references and specifications in catalogues, circulars and other written material published, is for the sole purpose of identifying goods and shall conform to such descriptions. Any sample or model is for illustrative purposes only and does not create an Express Warranty that the goods conform to sample or model shown.

The purchaser is solely responsible for determining suitability of goods sold. This warranty is expressly in lieu of all other warranties expressed or implied. Buhler Manufacturing will in no event be liable for any incidental or consequential damages whatsoever. Nor for any sum in excess of the price received for the goods for which liability is claimed.

WARRANTY CLAIMS:

Warranty requests must be prepared on Buhler Manufacturing Warranty Claim Forms with all requested information properly completed. Warranty Claims must be submitted within a thirty (30) day period from date of failure repair.

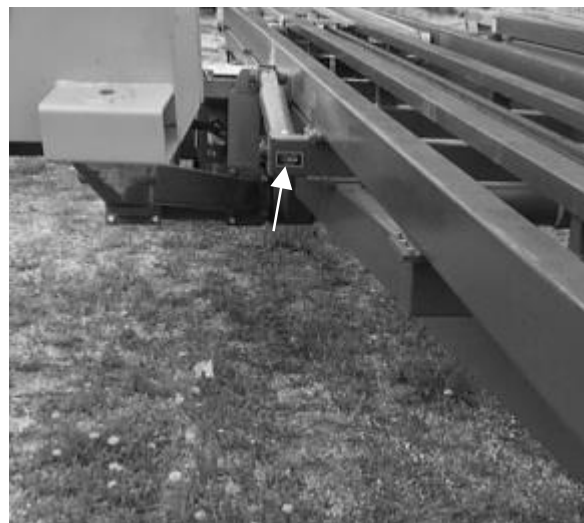
WARRANTY LABOR:

Any labor subject to warranty **must** be authorized by Buhler Manufacturing. The labor rate for replacing defective parts, where applicable, will be credited at a rate determined by the Company, Buhler Manufacturing.

SERIAL NUMBER LOCATION

The serial number plate is located on the FRAME in front of the LIFT ARM CYLINDER. Please record the serial number in the space provided.

4000 Bale Carrier: _____



OPERATION

YOUR RESPONSIBILITIES AS AN OWNER/OPERATOR

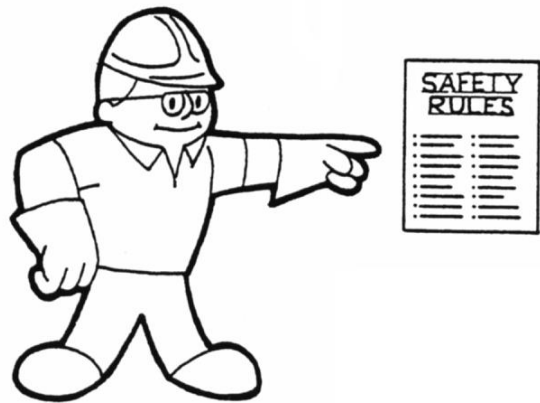


CAUTION:

1. It is your responsibility to read and understand this manual completely before operating the bale carrier. Contact your dealer if an instruction is not clear to you.
2. Follow all safety messages in the manual and on safety signs on the machine.
3. Remember that **YOU** are the key to safety. Good safety practices protect you and the people around you.
4. Before allowing anyone to operate the machine, for however short a time or distance, make sure they have been instructed in its safe and proper use.
5. Review the manual and all safety related items with all operators annually.
6. Be alert for other operators not using recommended procedures or not following safety precautions. Correct these mistakes immediately, before an accident occurs.
7. Maintain the bale carrier correctly. Be sure all controls are functioning properly before use.
8. Do not modify or remove shields. Unauthorized modifications may impair the function and/or safety and affect machine life.
9. The safety information given in this manual does not replace safety codes, insurance needs, or laws governing your area. Be sure your machine meets the standards set by these regulations.



READ THE OPERATOR'S MANUAL



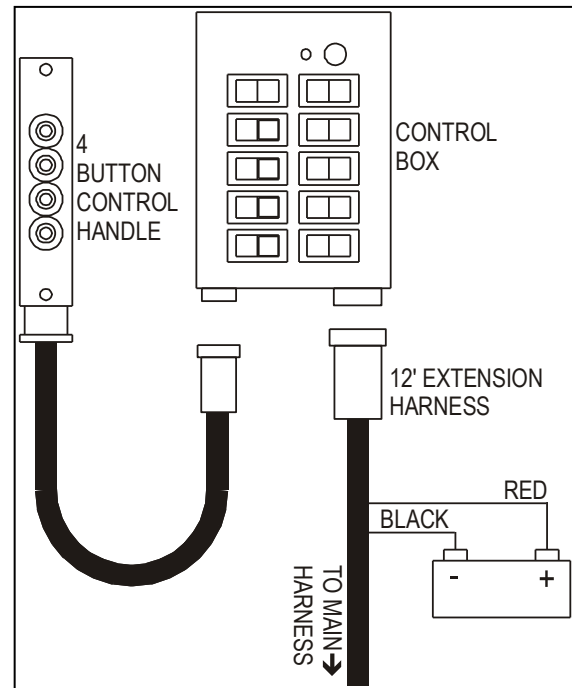
FOLLOW SAFETY RULES

TO THE NEW OPERATOR

It's natural for an operator to be anxious to get started with a new machine. Please take the time to familiarize yourself with the bale carrier by reading this manual and all safety signs before attempting operation. Study the operating procedures so you will know what to expect.

CONTROL BOX INSTALLATION

- Mount the electrical CONTROL BOX in a convenient location.
- Attach 12' EXTENSION HARNESS to CONTROL BOX (the HARNESS is intended to stay with the tractor).
- Battery connections:
Attach red and black leads (from the EXTENSION HARNESS) to the battery or main tractor power posts:
Red to positive terminal
Black to negative
Note: incorrect polarity will result in erratic functioning of the automatic loading cycle.
- Attach 4 BUTTON CONTROL HANDLE to CONTROL BOX.



CONTROL BOX HOOK-UP

ATTACHING BALE CARRIER TO TRACTOR

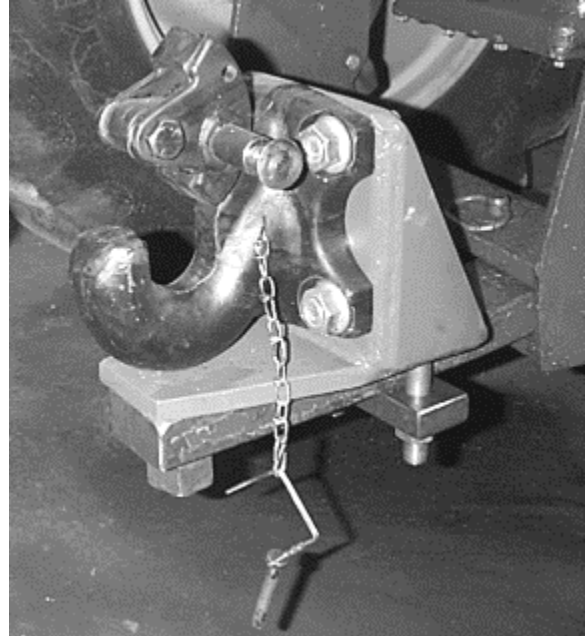


CAUTION: Shut off tractor, engage parking brake and remove key before working around hitch.



WARNING: Never attach bale carrier to rear axle or three point hitch arms. Use only the drawbar. Make sure tractor size is adequate (100 hp or greater) and drawbar is capable of supporting the torque whether empty or loaded.

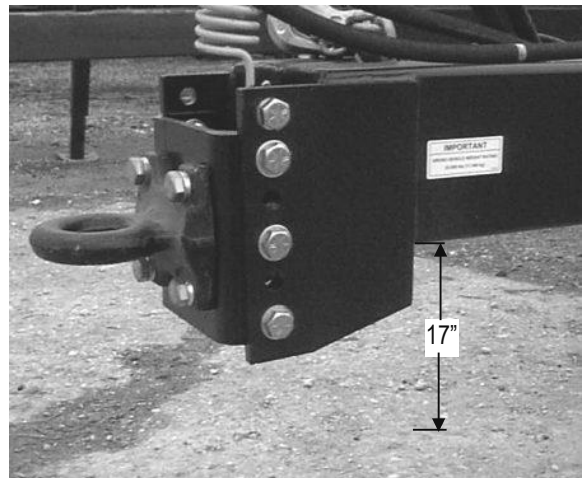
1. Install the PINTLE HITCH/HITCH MOUNT assembly on the tractor drawbar as shown (torque the 1-1/4" hex nut to approximately 225 ft-lbs). Note: it may be convenient to offset tractor drawbar to the right.



PINTLE HITCH/HITCH MOUNT

2. TOW RING/CLEVIS adjustment: For most conditions, the hitch height should be adjusted on firm level ground so that, when the TIPPING FRAME is vertical on level ground, there is a 0" to 1" (0 to 2.5 cm) clearance at ground level. Note: if more convenient, adjust CLEVIS so that bottom of HITCH BEAMS (at the point where the beams are joined to each hitch bolt plate) is approximately 17" (43 cm) from the ground.

The objective in adjusting the hitch height is to drop the TIPPING FRAME firmly on the ground when unloading, but not hard enough to transfer excessive weight of the machine onto the TIPPING FRAME.

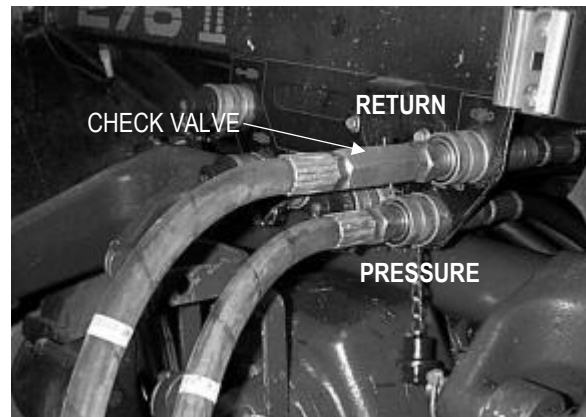


TOW RING/CLEVIS ASSEMBLY

3. Using TOP WIND JACK, raise TOW RING above HITCH PINTLE. Position tractor, lower TOW RING onto PINTLE using the jack, and lock safety latch in place. Secure latch with retainer pin. Raise JACK and stow it in the transport position.
4. Route SAFETY CHAIN around the hitch clevis, around drawbar support and back hook. **IMPORTANT:** Adjust CHAIN length to remove all slack except what is needed for turns.
5. Do not use intermediate support on drawbar as attaching point.
6. Store SAFETY CHAIN off the ground when not in use. If safety chain is damaged in any way, contact your dealer for a replacement.
7. A single pair of remote outlets with variable flow control setting is required to operate the bale carrier. Closed center systems should be set to about 13 to 14 gpm (open center systems require the optional open center kit). Connect quick couplers to tractor remote outlets so that tractor graphics correspond with oil flow. The pressure is the "IN" port on the valve bank, return line is "OUT" port.



SAFETY CHAIN



CONNECT QUICK COUPLERS

8. Connect EXTENSION HARNESS to MAIN HARNESS.
9. Connect lighting coupler.



WARNING: Engage LIFT CYLINDER LOCK over lift arm cylinder before transporting.

NOTE: The LIFT CYLINDER LOCK is installed by extended lift cylinder far enough to insert lock, inserting lock (the notched end fits over the cylinder's rod pineye and between the pin plates), attaching chain hook to the gusset above the pin plates, and retracting cylinder until lock is secured in place.



LIFT CYLINDER LOCK

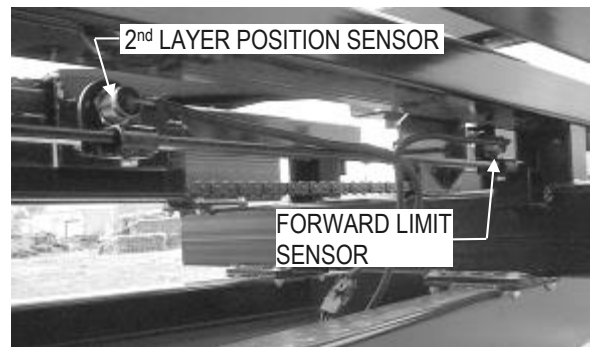
AUTOMATIC SEQUENCING ADJUSTMENTS

Automatic sequencing is controlled by pressure switches, proximity sensors, and mechanical switches working in concert. The automatic loading cycle has been tested and adjusted for 14.5 US gpm at 2500 psi at the factory. It may be necessary to re-adjust the various settings to ensure that the automatic loading/unload sequence performs correctly. Follow the procedures outlined below.

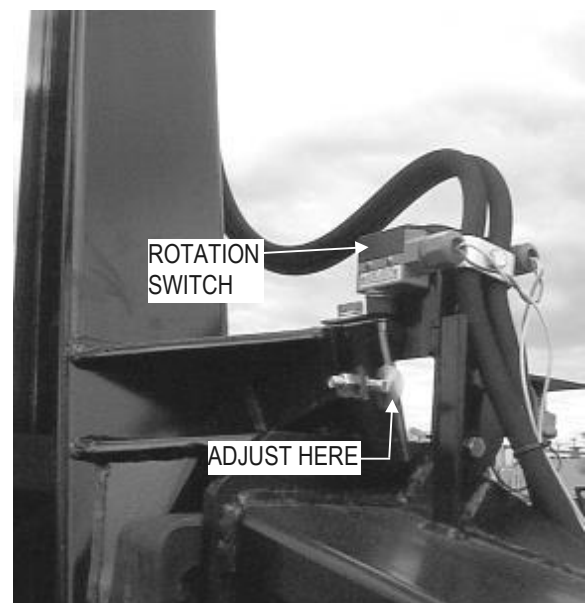


WARNING: Stop engine, set park brake, remove ignition key and wait for all movement to stop before making any adjustments.

1. Hitch height is important to the unloading process. See the instructions in the “Attaching Bale Carrier to Tractor” section of this manual.
2. PUSHER 2nd layer position sensor – Used for two-row loading. Adjust position so that PUSHER pushes bottom row bale far enough back to accept top row bale (i.e. the top and bottom rows should be flush or slightly offset from one another).
3. PUSHER forward limit sensor – position so that PUSHER forward travel is halted about 2” (5 cm) before hitting the front stop. If not properly positioned, PUSHER return relay will remain engaged.
4. Rotation switch – located at hinge point between the MAIN ARM and the SWING ARM. The elevator bolt must engage the switch before rotation of the SWING ARM bottoms out at 90°.

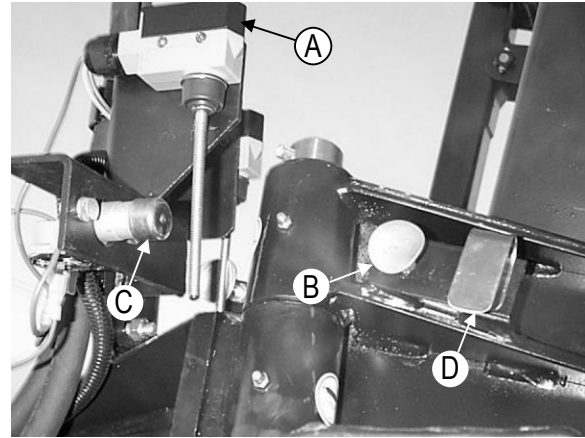


PUSHER LIMIT SENSORS



ROTATION SWITCH ADJUSTMENT

5. Relay switch (A) – also located at hinge point between the MAIN ARM and the SWING ARM. Adjust elevator bolt (B) so that the switch is activated as arms bottom out in forward position, but not so far that switch is damaged. This switch signals the MAIN ARM to descend.
6. An automotive type switch (C) at the hinge point controls the one row-two row relay in the RELAY BOX. The DIMMER SWITCH ACTIVATOR (D) is used to turn switch on just before rotation is completed – similar to #5.



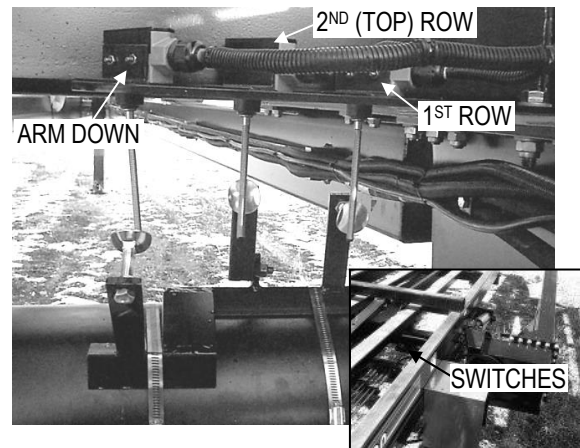
RELAY SWITCH ADJUSTMENT

7. Arm down switch – located over the ARM PIVOT'S axle. Adjust elevator bolt so that switch is normally engaged before lift arm cylinder fully retracts (1/16" of cylinder rod should be left exposed). Can also be used to adjust the point at which the MAIN ARM stops.



LIFT ARM CYLINDER

8. Top (2nd) row switch – located next to arm down switch. Adjust MAIN ARM'S upper stopping position so that second row bale clears first row by about 6" (15 cm).
9. Bottom (1st) row switch – located next to top row switch. Adjust MAIN ARM'S lower (first row) stopping position so that when a bale is lift and rotated over the carrier deck, the bottom of the bale clears the top of the PUSHER by about 6" (15 cm).



ARM AND ROW SWITCH ADJUSTMENTS
(REAR VIEW)

NOTE: The settings should be verified to ensure they are correct by completing at least one automatic loading cycle. If the automatic loading cycle does not respond as expected, recheck the settings then consult the "Troubleshooting" section of this manual for possible solutions.

CARRIER OPERATION



WARNING: When transporting on public roadways, use amber flashers day or night. Do not tow over 20 mph (32 km/h) when loaded.



CAUTION: Before proceeding to the field, become thoroughly familiar with the operating controls. Although the loading arms' cycling is virtually automatic, the operator needs to be aware of some important features.

CARRIER CONTROLS

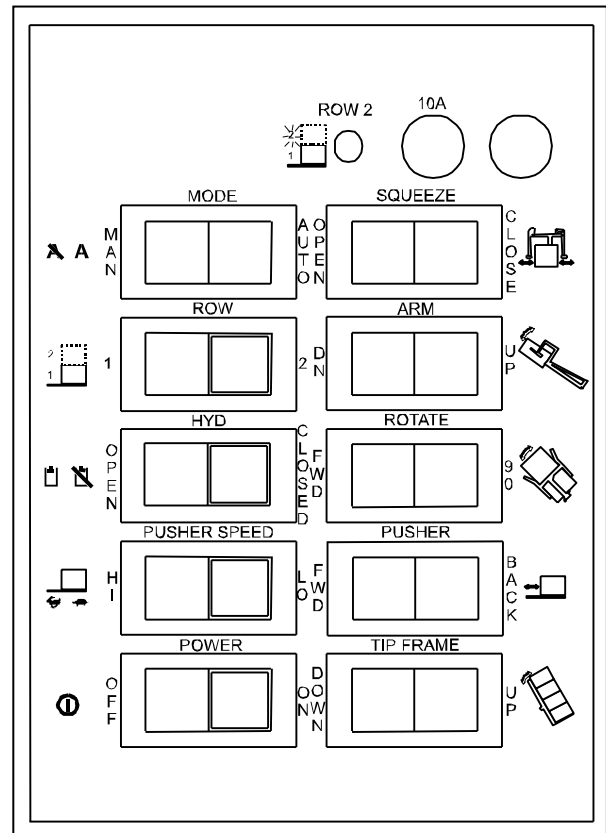
The CONTROL BOX is fitted with one (1) normal and four (4) lighted rocker switches along the left side of the panel face, five (5) momentary contact rocker switches along the right side, one (1) fuse holder with 15 amp fuse, and one (1) indicator light.

Switches on the left side of the CONTROL BOX are "set-up" or selector switches and the power switch. These switches are normally set only once at the beginning of the field operation. They function as follows:

A MODE: select *MAN* for manual mode of operation or *AUTO* for automatic. In manual mode all automatic controls are by-passed; therefore, it should be used with caution. Generally, It should only be used to put the lift arm into the transport position and to set the arm to the loading position to reset the automatic cycle.

ROW: select *1* when loading large bales (48" x 48" x 96") or *1* or *2* (switch lights green when *2* is selected) when loading intermediate bales. When *2* is selected, arm will alternately stop at the one and two row levels. (Second row option requires the optional second layer kit).

HYD: Select *CLOSED* to operate in the closed center mode to match tractors with closed systems (switch lights green) or *OPEN* to operate in the open center mode to match tractors with open systems (requires the optional open center kit).

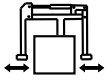


CONTROL BOX

PUSHER SPEED: select *HI* to operate pusher motors in series at high speed or *LOW* (switch lights green) to operate in parallel at low speed. Torque is doubled at low speed.

POWER: main power switch (switch lights green when *ON* is selected). Select *OFF* when not in use. *OFF* may also be used as an emergency switch to immediately stop all movement on the carrier.

Switches on the right provide the operator with the functional control of the carrier's loading and unloading systems. Their function is determined in part by the mode selected.



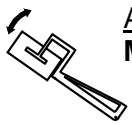
SQUEEZE:

Manual mode – depress and hold

- CLOSE to squeeze bale.
- OPEN to release bale.

Auto mode – depress and hold

- CLOSE to capture bale and start automatic loading cycle, release when cycle is initiated.

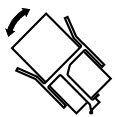


ARM:

Manual mode – depress and hold

- UP to raise lift arm.
- DN to lower lift arm.

Auto mode – unused.



ROTATE:

Manual mode – depress and hold

- 90 to rotate SWING ARM over carrier (counter clockwise)
- FWD to rotate forward (clockwise).

Auto mode – unused.



PUSHER:

Manual mode – depress and hold

- BACK to move PUSHER back.
- FWD to bring PUSHER forward.

Auto mode, one row setting – depress and hold

- BACK to move PUSHER back, release to automatically move PUSHER to front.

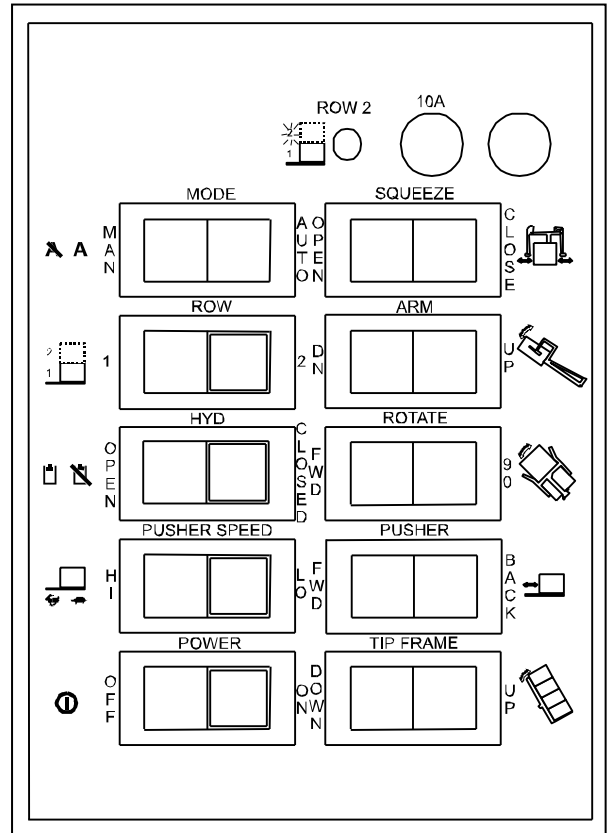
Auto mode, two row setting – depress and hold

- BACK to move PUSHER to 2nd layer position switch when ROW 2 indicator light is lit, release to automatically move PUSHER to front. When ROW 2 light is not lit,

depress and hold

- BACK to move PUSHER back, release to automatically move PUSHER to front.

NOTE: depressing BACK when TIPPING FRAME is up will lower frame before moving PUSHER.



CONTROL BOX



TIP FRAME:

Manual mode – depress and hold

- UP to raise TIPPING FRAME vertically.
- DOWN to lower tipping frame (toward carrier deck).

Auto mode – depress and hold

- UP to raise TIPPING FRAME. Release to stop.
- DOWN to lower TIPPING FRAME. Release to stop.



The ROW 2 indicator light is used in auto mode when the two row loading option is selected.

The 4 BUTTON CONTROL HANDLE is supplied as a remote controller to duplicate the *SQUEEZE*, *PUSHER*, and *TIP FRAME* switches when in auto mode. The CONTROL HANDLE is fitted with four (4) button type switches which function as follows:



1st (top) button: depress and hold to capture bale and start automatic loading cycle. Release switch once cycle is started (loading arm raising).



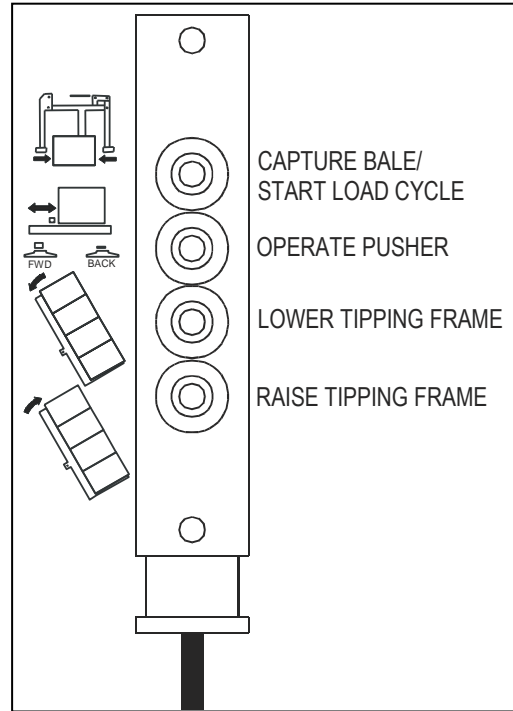
2nd button: Depress and hold to move *PUSHER* back. Release button to move *PUSHER* to front.



3rd button: depress and hold to lower the tipping frame vertically. Release button to stop.



4th (bottom) button: depress and hold to raise tipping frame vertically. Release button to stop.



4 BUTTON CONTROL HANDLE

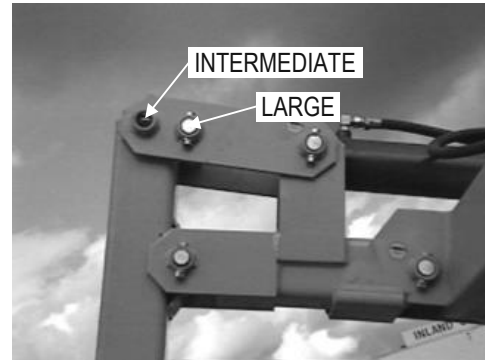
A number of safety features are designed into the control system.

1. To prevent bale damage, the *TIPPING FRAME* must be fully down (on carrier deck) to allow *PUSHER BACK* function to operate. A pressure switch sensing *DOWN* pressure closes the switch allowing the *PUSHER* to function. If *PUSHER BACK* does not respond, make sure *TIPPING FRAME* is down.
2. In auto mode, the *PUSHER* automatically returns to the front when switch is released to prevent a bale from dropping in front of it.
3. *SQUEEZE* will not respond unless *PUSHER* is fully forward.
4. Lock valves are supplied on all hydraulic circuits, except the *PUSHER* circuit.
5. The lift arm will only lower when the tractor is running and the hydraulics activated (the lift arm will **not** drop by gravity alone).

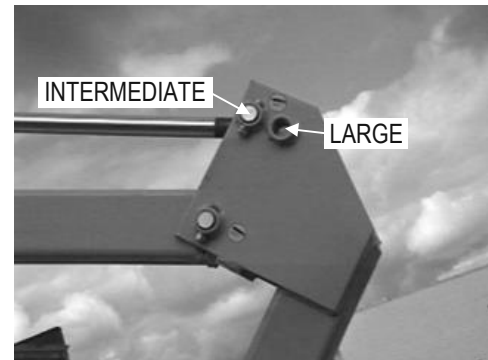
ADJUSTING FOR BALE SIZE

Basically, four adjustments will allow the carrier to load and unload most intermediate and large square bales:

1. The LEFT GRAB ARM has two pin positions. Select the wide setting for large bales (4' x 4') and the narrow setting for intermediate bales.
2. The RIGHT GRAB ARM has a similar adjustment for accommodating various bale sizes.
3. An adjustable BALE STOP is provided to stop the bale at a point where it will be centered on the bed when released. Bales longer than 8' (2.44 m) will require the stop to be fully retracted.



LEFT GRAB ARM ADJUSTMENT



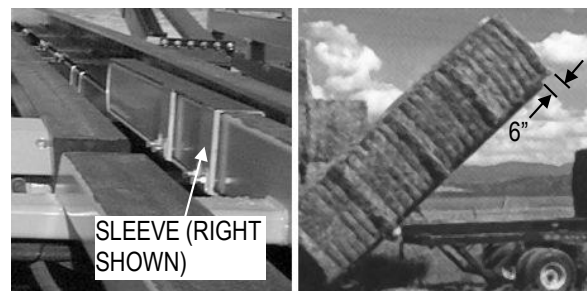
RIGHT GRAB ARM ADJUSTMENT

3. An adjustable BALE STOP is provided to stop the bale at a point where it will be centered on the bed when released. Bales longer than 8' (2.44 m) will require the stop to be fully retracted.



ADJUST BALE STOP

4. The BALE EXTENSION SLEEVES need to be adjusted about 6" (15 cm) shorter than the intended total stack height of the bales.



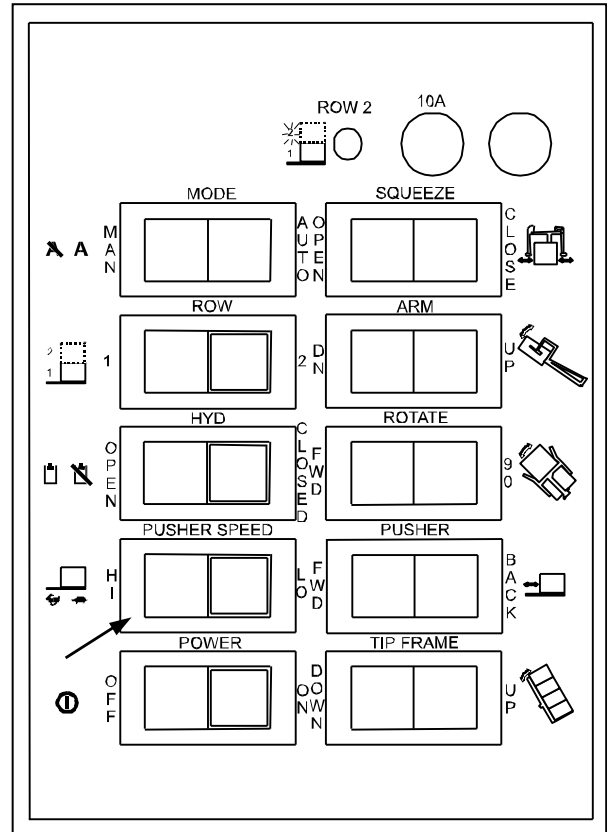
BALE EXTENSION SLEEVES
ADJUSTMENT

TWO SPEED PUSHER CONTROL

*H*I speed setting pushes lighter loads quickly. *L*O*W* speed setting pushes heavier loads more slowly.

With the auto pusher return feature in place, the high speed feature may not be quite as important; therefore, all operations could be done in low speed.

Motors run in series for high speed and parallel for low speed (torque is doubled at low speed).



CONTROL BOX

PRE-START CHECKLIST

Check the following areas daily before operating the bale carrier. This should ensure that the bale carrier functions properly and avoid breakdowns and accidents.

1. Check that all component and assemblies are complete and that all shields are in place.
2. Check for missing fasteners and replace if necessary (it is normally not necessary to retighten fasteners on a daily basis).
3. Tighten loose wheel bolts, especially if tire has been removed recently (wheel bolts do not normally require daily inspection).
4. Clean bale carrier of any foreign material that may have accumulated from previous runs, especially the areas where signal switches are located (the automatic loading cycle will not function properly if the switches are interfered with).
5. Lubricate all points requiring daily lubrication.
6. Check and maintain proper tire pressure.
7. Ensure that the bale carrier has been correctly set for the intended bale size (see the section "Adjusting for Bale Size" in this manual).

8. Ensure that the automatic loading cycle has been adjusted for the intended hydraulic flow rate and pressure, especially if a different tractor is used (see the section “Automatic Sequencing Adjustments” in this manual).

LOADING



WARNING: Stay away from lift arm or tipping frame when operating to prevent crushing. Keep others away.

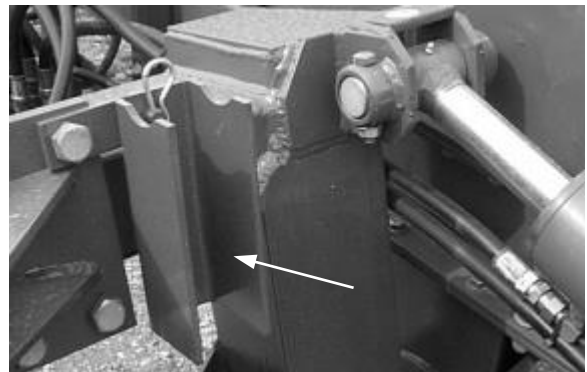


DANGER: Stay away from overhead power lines when raising lift arm or tipping frame to prevent electrocution.

INITIAL PREPARATION

Moving loading arm from transport to operational position:

1. Set *POWER* switch to *ON* position and *MODE* switch to *MAN*
2. Raise loading arm approximately 12”, by operating the *ARM* switch *UP*.
3. Set *POWER* switch on the *CONTROL BOX* to *OFF*. Shut off tractor and apply parking brake.
4. Remove *LIFT CYLINDER LOCK* from lift arm cylinder, place it on its holder and secure with clip pin.



LIFT CYLINDER LOCK (IN STORAGE)

LOADING OPERATION

1. Set *POWER* switch to *ON*. Set *MODE* switch to *MAN*. Depress and hold *ROTATE FWD* until *SWING ARM* is in forward position (parallel to *MAIN ARM*). Depress and hold *ARM DN* until lift arm is parallel to the ground. If necessary, use the *SQUEEZE* switch to adjust the position of the *GRAB ARMS* so that *LEFT GRAB ARM* is vertical or nearly vertical and the distance between both arms is large enough to accommodate the bale. Lift arm is now in the loading position.
2. Set *MODE* switch to *AUTO* (note: arm must be down to start automatic loading cycle). Set *ROW* switch to *1* for large (48 x 48 x 96” or 1.2 x 1.2 x 2.4 m) and intermediate bales or *2* if loading two rows of intermediate bales.



LOADING POSITION

IMPORTANT: Do not attempt to load two rows of large (4' x 4' x 8') bales. Doing so would exceed the gross vehicle weight of the carrier.

NOTE: Before loading bale, **PUSHER** must be positioned at the front of the carrier deck (**SQUEEZE** will not work if **PUSHER** is not fully forward).

3. Approach bales from the narrow side (parallel to the baling direction). Approach in a straight line parallel to the bale, not at an angle. When rear of bale strikes **BALE STOP**, stop tractor and depress and hold **SQUEEZE CLOSE** (or the 1st button on the 4 **BUTTON CONTROL HANDLE**) until **MAIN ARM** begins to raise, release switch. The automatic loading cycle is now engaged. Lift arm should continue to rise to the one row level, **SWING ARM** rotates 90°, bale is released onto carrier deck. **SWING ARM** rotates forward, and returns back down to the loading position. Proceed to next bale.



DIRECTION OF APPROACH

4. **ONE ROW MODE:** Depress and hold **PUSHER BACK** (or the 2nd button on the 4 **BUTTON CONTROL HANDLE**) until the bale is well back. Release switch to return **PUSHER** to the front. You are now ready to load the next bale.



PUSH BALE BACK

b) **FOR TWO ROW MODE:** The **ROW 2** indicator light on the **CONTROL BOX** should now be lit. Depress and release **PUSHER BACK** (or the 2nd button on the 4 **BUTTON CONTROL HANDLE**). **PUSHER** will move back to the 2nd layer position sensor that then registers that the bottom bale is in the proper location to receive the top bale. Load the next bale. When the second row bale has been placed, the arm returns to the loading position (indicator light is now off). Depress and hold **PUSHER BACK** (or the 2nd button on the 4 **BUTTON CONTROL HANDLE**) until the bale is well back. Release switch to return **PUSHER** to the front. You are now ready to load the next bale at the one row level.

NOTE: When four bales (if loading a single layer) have been picked up (or two layers with five intermediate-sized bales each), push the entire load back against the TAIL STOPS at the back of TIPPING FRAME to minimize hitch load.

5. Continue loading bales until bale carrier is fully loaded. When the last bale is loaded, set *POWER* switch to *OFF* just before the arm rotates forward and goes down. Note: If you miss, set *MODE* switch to *MAN* and park arm in transport position (MAIN ARM is up and SWING ARM is rotated over the carrier deck).

Once the loading techniques are mastered, pick-up can be done on the go.

UNLOADING OR STACKING



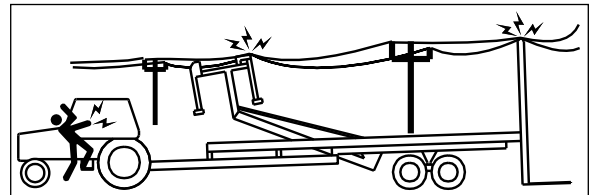
WARNING: Stay away from lift arm or tipping frame when operating to prevent crushing. Keep others away.



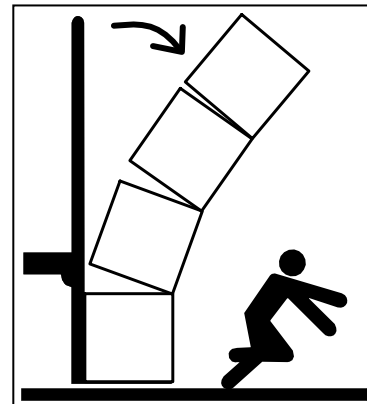
DANGER: Stay away from overhead power lines when raising lift arm or tipping frame to prevent electrocution.



DANGER: Stay away from bale stack when unloading. Bales can tip over. Keep others away. Stacking should be attempted on level ground only.



STAY AWAY FROM OVERHEAD POWER LINES

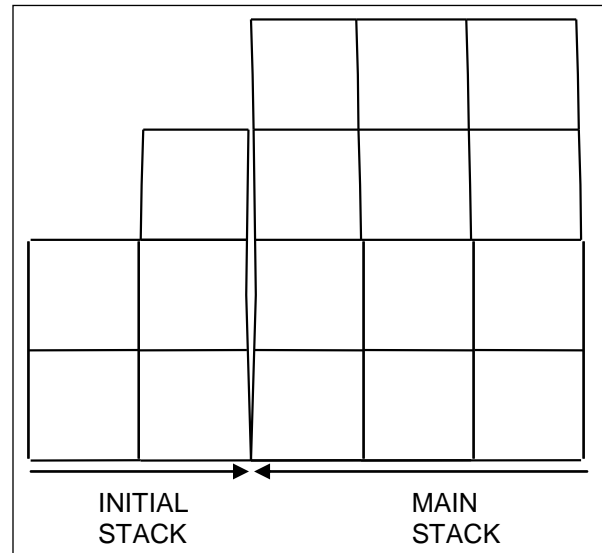


STAY AWAY FROM BALE STACK

The most stable bale stack is achieved by stacking bales with the most dense side facing outward. Gravity virtually assures that as the bale forms in the baler, heavier particles end up in the bottom half of the bale making the lower half denser (heavier) than the top. The lighter side of the bale may “sag” over time. This will result in the stacked bales leaning in towards the stack.

STARTING A STACK

If possible, start a stack less than full height for the first load to allow the bales to support each other. This is best achieved by loading only 5 bales for the first load (i.e. load 3 bales first, push these all the way to the rear, then load two additional bales. Unload the first stack of 3 bales, drive forward, and then unload the remaining stack of 2 bales against the first stack). Lay the main stack in from the opposite end to the direction of the initial stack.



BALE STACKS

1. NOTE: The unloading procedure outlined below assumes that the *MODE* switch is set to *AUTO*.
2. Press and hold *TIP FRAME UP* (or the 4th button on the 4 BUTTON CONTROL HANDLE) until TIPPING FRAME is vertical.
3. Slowly drive the tractor forward until the stack eases off the TAIL STOPS and onto the ground.
4. **SECOND STAGE UNLOADING:** Drive the tractor forward until there is enough room to safely lower the TIPPING FRAME onto the carrier deck. Depress and hold *TIP FRAME DOWN* (or the 3rd button on the 4 BUTTON CONTROL HANDLE) until TIPPING FRAME is lowered fully onto carrier deck. Depress and hold *PUSHER BACK* (or the 2nd button on the 4 BUTTON CONTROL HANDLE). Release switch when rear bale hits TAIL STOPS. PUSHER will now return to front.



RAISE TIPPING FRAME



LOWER TIPPING FRAME

NOTE: Alternatively, the *TIP FRAME DOWN* and *PUSH BACK* buttons can be depressed and held simultaneously to lower the TIPPING FRAME and move the PUSHER rearward in one step.

5. Raise the TIPPING FRAME and repeat the unloading procedure, placing the second stack as close as possible to the first.

NOTE: TIPPING FRAME will go about 5° past vertical when TIPPING CYLINDERS are fully extended. This feature is useful to straighten out a leaning stack.

TRANSPORTING CARRIER

1. A tractor with a minimum of 100 hp and adequate braking capacity to safely control 25,000 lbs. (11,340 kg) GVW trailing load is required to tow the bale carrier.
2. The towing unit should weigh 16,700 lbs. (7575 kg) or approximately 67% of the carrier's GVW.



WARNING:

3. Do not tow over 20 mph (32 kph) when loaded.
4. Turn on flashing lights when transporting on public roadways.
5. Obey local regulations regarding road transport.
6. Raise lift arm to transport position and engage LIFT CYLINDER LOCK over lift arm cylinder before transporting.
7. If the bale carrier is equipped with the optional second layer kit, close the rear stack stabilizer sufficiently to reduce its width prior to transporting.



LIFT CYLINDER LOCK

MAINTENANCE

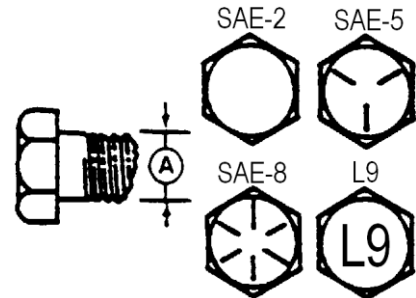


WARNING: Place all controls in neutral, stop engine, set parking brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting or repairing bale carrier.

The following sections detail regular inspections and adjustments. **IMPORTANT:** Service intervals should be increased when operating in extreme or difficult conditions.

FASTENERS

The tables below list the correct torque values for various bolts and capscrews used on the bale carrier. Tighten **all** bolts to specified values unless otherwise noted.



BOLT DIAMETER "A"	BOLT TORQUE							
	SAE 2		SAE 5		SAE 8		L9	
	lb-ft	N.m	lb-ft	N.m	lb-ft	N.m	lb-ft	N.m
1/4"	6	8	9	12	12	17	10	13
5/16"	10	13	19	25	27	36	19	26
3/8"	20	27	33	45	45	63	30	41
7/16"	30	41	53	72	75	100	55	75
1/2"	45	61	80	110	115	155	85	115
9/16"	70	95	115	155	165	220	120	163
5/8"	95	123	160	215	220	298	170	231
3/4"	155	225	290	390	400	540	265	360
7/8"	170	230	420	570	650	880	475	645
1"	225	305	630	850	970	1320	550	746

LOCATION	lb-ft	N.m
WHEEL HUB BOLTS	125	170
HITCH MOUNT 1-1/4" HEX NUT	225	305
ALL CARRIAGE BOLTS	33	45

1. Check all bolts for tightness after the first 10 hours of operation and every 50 hours thereafter.
2. Periodically inspect for broken or missing fasteners. Replace with those designated in the "Parts" section of this manual.

HYDRAULIC SYSTEM

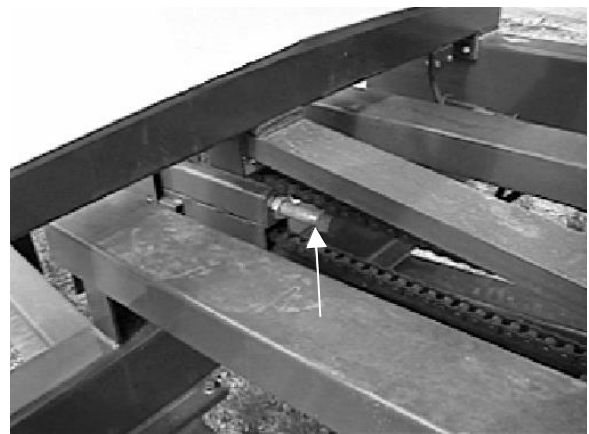


WARNING: To prevent serious injury or death from high-pressure fluid:

- **Relieve pressure on system before repairing, adjusting or disconnecting hydraulic components.**
 - **Wear proper hand and eye protection when searching for leaks. Use wood or cardboard instead of hands.**
 - **Seek immediate medical attention if injured by hydraulic fluid piercing the skin.**
1. Keep the hydraulic components clean to prevent contaminants from entering the system.
 2. Regularly check the fluid level in the tractor reservoir and follow the maintenance procedures in the tractor Operator's Manual.
 3. Regularly inspect cylinders, hoses and fittings for leaks, crimps and abrasions or other signs of wear and tear or impending failure.
 4. Replace cut, worn or crimped hoses and metal lines.
 5. Check that all components are in good working condition. Tighten any loose components.
 6. Avoid makeshift repairs to the hydraulic system such as clamping or taping fittings or hoses. The system operates at high pressure and failure of such repairs can happen suddenly and without warning resulting in unsafe or hazardous conditions.
 7. Hydraulic lines and cylinders must be free of air to function correctly. Air can be bled from the hydraulic system by parking the bale carrier in the field position on a level surface with the tractor engine running and cycling the system.

CHAIN/SPROCKETS

1. Inspect and tighten chain and sprockets after the first 10 hours and every 50 hours thereafter.
2. The **PUSHER ROLLER CHAIN** can be tightened by turning **SPROCKET TENSION BOLT** clockwise (it should be tightened until there is little or no slack in the **CHAIN**). If no more adjustment is possible, shorten **ROLLER CHAIN** by removing one link.
3. Apply a SAE light machine oil (or equivalent) with a brush to **ROLLER CHAIN** several times during the season and especially before out of season storage.
4. Repaint top of **CARRIER BEAMS** regularly with Slip Plate™ to reduce friction, especially when handling heavier bales.

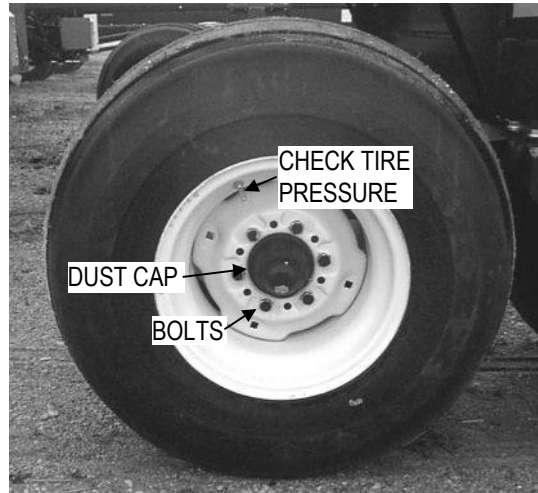


SPROCKET TENSION BOLT

WHEELS/TIRES

Check HUB BOLTS regularly for tightness.

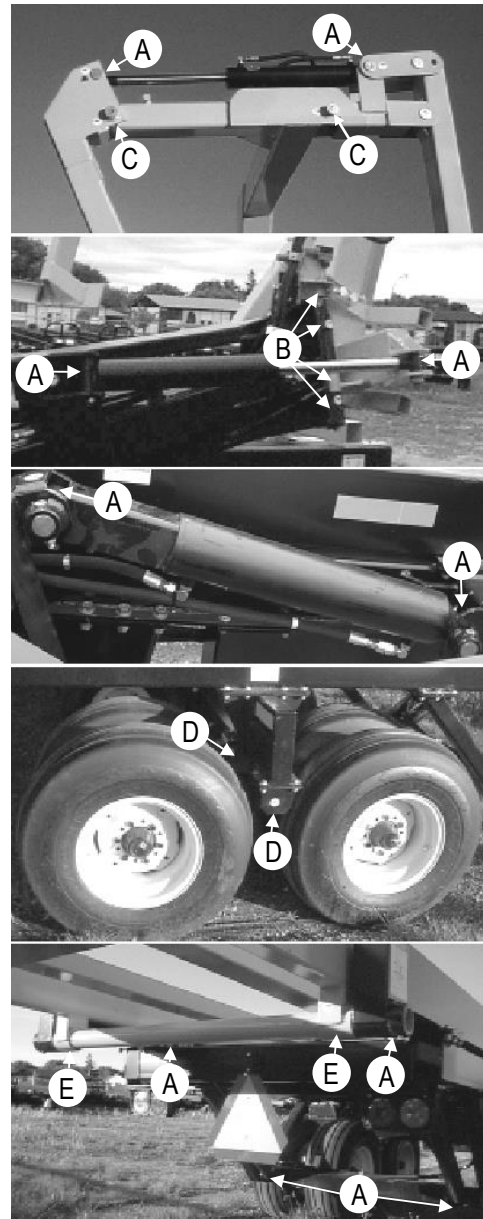
1. Ensure that DUST CAPS are firmly in place.
2. Check tire pressure regularly: 90 psi (620 kPa).
3. The wheel bearings should be inspected and re-packed annually with a SAE multi purpose type grease. When reinstalling the wheels, the HUB BOLTS should be torqued to 125 ft-lbs. (note: the valves should be facing away from the HUBS). A thread locking compound such as Locktite 271 is recommended for the HUB BOLTS.



WHEELS AND TIRES

LUBRICATION

1. All grease fittings should be lubricated before operating the bale carrier at the start of the season and daily during the season. Use a SAE multi purpose lubricant or equivalent. There are 22 fittings to lubricate:
 - At both ends of each HYDRAULIC CYLINDER - 10 fittings (A).
 - At position where SWING ARM is joined to MAIN ARM - 4 fittings (B).
 - At position where GRAB ARMS are joined to SWING ARM - 2 fittings (C).
 - On each AXLE BEARING - 4 fittings (D).
 - At position where TIPPING FRAME is joined to FRAME - 2 fittings (E).



LUBRICATION POINTS

SPECIAL CARE CONDITIONS

To assure trouble free service, keep the machine free of any build up of hay or straw, especially areas where signal switches are located. Obviously, any interference with the switches will render the auto loading inoperative.

The switches are protected as much as possible, but the operator's attention to detail is important and absolutely necessary.

Follow the lubrication instructions regularly as indicated.

To prevent rust on the CARRIER BEAMS, repaint regularly with a graphite paint such as Slip Plate™. This should be done especially before placing machine in storage and several times during season of use.

STORAGE

END OF SEASON

1. Check for worn or damaged parts and replace, if necessary. To avoid costly delays, please contact your dealer for replacement parts long before the start of the next season.
2. Store the bale carrier in a clean, dry, sheltered area.
3. Replace all missing or broken bolts with those designated in the “Parts” section of this manual.
4. Clean the bale carrier thoroughly. Dirt draws moisture that rusts metal.
5. Repaint chipped or worn areas. Paint is available from your dealer.
6. Clean ROLLER CHAIN and brush with SAE light machine oil (or equivalent) to prevent rust.
7. Repaint the top of the CARRIER BEAMS with a graphite paint such as Slip Plate™ to prevent rust.

START OF SEASON

1. Clean and inspect the bale carrier when taking it out of storage. Ensuring that the bale carrier is in optimum condition at the start of the season reduces the chances of a costly breakdown during the season.
2. Clean and inspect ROLLER CHAIN for excessive wear or stiffness. Check for proper adjustment and alignment.
3. Lubricate entire bale carrier. Ensure that all grease fittings are in place and taking grease properly.
4. Inspect and repack wheel bearings with a SAE multi purpose type grease.
5. Check that tires are properly inflated.
6. Check all bolts for tightness. Replace lost or worn bolts.
7. Replace and secure safety shields. Review safety regulations.
8. Operate the bale carrier for a short time. Check that all moving parts are operating freely and that automatic loading cycle is operating as expected. Check for hydraulic leaks.
9. Review the Operator’s Manual.

DURING THE SEASON

1. At the end of each day of operation park the bale carrier in a clean, dry, sheltered area.
2. Lubricate areas requiring daily lubrication.
3. Remove any build up of hay or straw, especially in areas where signal switches are located.

STACK STORAGE

1. Stacks should be placed in an open, flat and well-drained area. The area should have safe and easy access for bale handling and transportation equipment.

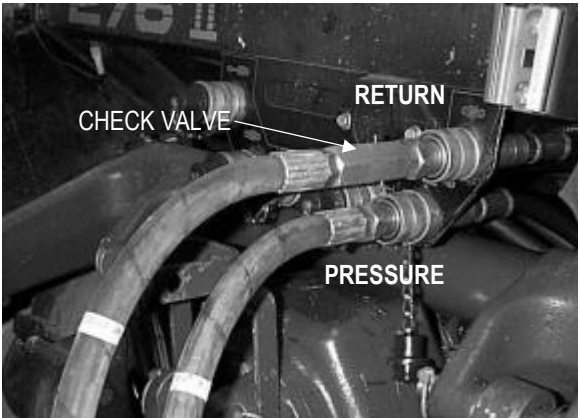


WARNING: Take all necessary steps to prevent children or unauthorized personnel from entering storage area. Keep a fire extinguisher handy because of the flammable nature of the baled material.

2. Use caution when retrieving stacks or bales. Do not extend bale-lifting equipment beyond its capacity or move more bales than the equipment is designed for.

TROUBLESHOOTING

This section contains solutions to common problems or malfunctions. If a problem arises that is not listed in this section, or if a problem remains after trying the recommended solution(s), please contact your dealer for further assistance.

PROBLEM	SUGGESTED REMEDIES
1. No response to any switch command.	1. a) A check valve at the quick coupler will not permit reverse oil flow. Make sure tractor hydraulic lever is in correct position (i.e. try reversing the oil flow).  <p data-bbox="956 1020 1357 1052">CHECK VALVE AT COUPLER</p> b) No electrical power; the <i>POWER</i> switch should be lighted when set to <i>ON</i> . If there is no light, check the fuse. Use a 15 amp fuse.

PROBLEM

3. Hydraulic functions respond when in manual mode but one or more of the automatic functions do not respond.

STEP-BY-STEP

- a) Press *SQUEEZE CLOSE*, no response.

- b) *SQUEEZE* responds but arm will not lift.

- c) *SQUEEZE* responds, arm rises too high.

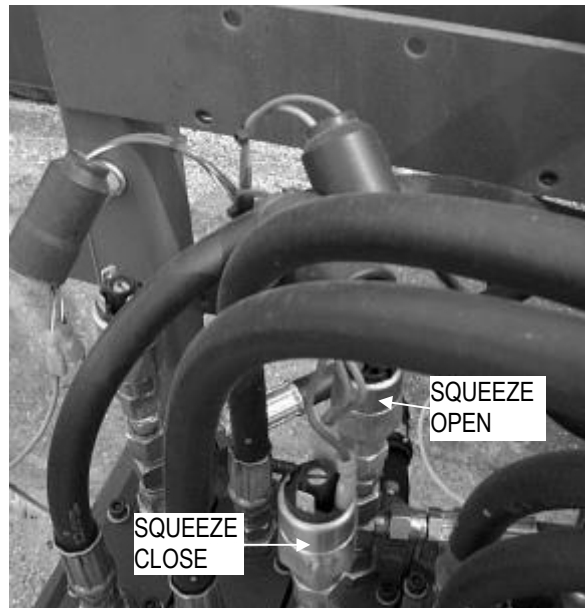
SUGGESTED REMEDIES

3. In auto mode, consider which function is not responding, then go to the switch that should be sending the signal to determine why there is no response.

STEP-BY-STEP

- a) Check *PUSHER* position. *PUSHER* must be fully forward to complete ground circuit for squeeze function. If *PUSHER* is fully forward check that front *PROXIMITY SENSOR* is activated when *PUSHER SWITCH ACTIVATOR* is lined up with the sensor (a small light around the wires at the rear of the sensor should be lit).

- b) Arm lift solenoid gets its signal from pressure switch in hydraulic line. Bale must be clamped and pressure 1800 psi or more for switch to close. Reduce the cut-in pressure setting by turning the adjusting screw counter-clockwise 1/8 turn at a time (screw is located at the top of the switch). If arm rises too soon, (*Squeeze Close*) switch pressure is set too low. NOTE: Wires are connected to terminals 1 and 4 of pressure switch.



SQUEEZE PRESSURE SWITCHES

- c) Adjust top or bottom row switch setting (see #8 or #9 in the “Adjusting Automatic Sequencing” section of this manual).

PROBLEM

d) Arm rises but SWING ARM will not rotate to 90°.

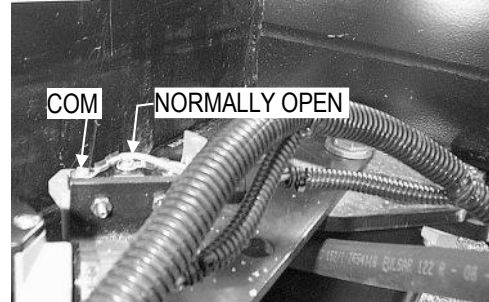
e) SWING ARM rotates 90° but GRAB ARMS do not release the bale.

f) SWING ARM rotates 90° but GRAB ARMS do not release the bale, process stops.

g) GRAB ARMS release bale but SWING ARM does not rotate forward.

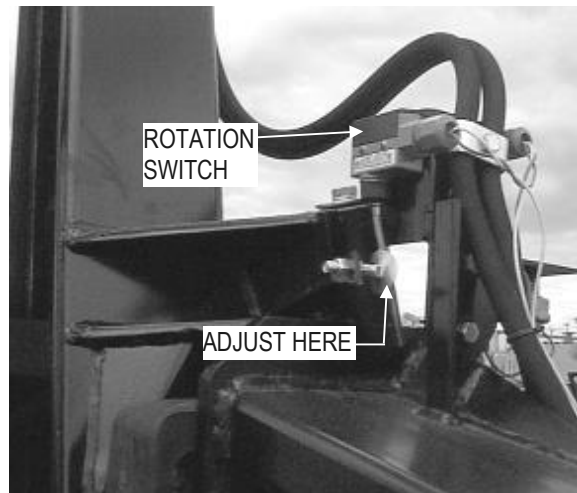
SUGGESTED REMEDIES

d) Check normally "open" terminal on top or bottom row switch (depending on whether the ROW 2 or ROW 1 mode is selected). This terminal must be closed to signal SWING ARM to rotate.



SWITCH TERMINALS

e) Check and adjust rotation switch on inside of arm. This switch stops rotation and turns on release solenoid (internal switch connections COM – NO should be closed when switch is activated).



ADJUST ROTATION SWITCH

If adjustment does not work, ensure switch is not defective by removing wires (to prevent feedback) and checking switch with continuity tester. NOTE: This applies to all switches.

f) Check arm down switch. See i) on page 36.

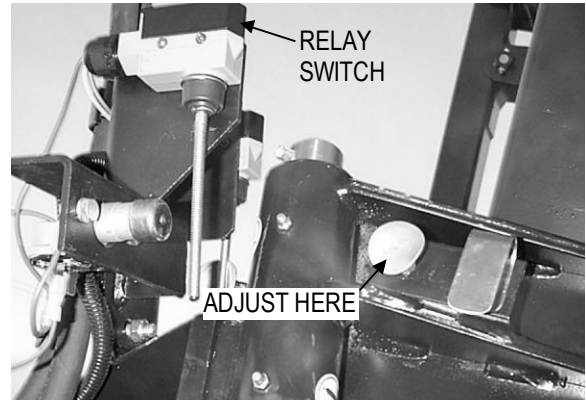
g) Forward rotation is initiated when pressure rises in the squeeze pressure switch (Squeeze Open) as the squeeze cylinder is fully retracted. Adjust setting of Squeeze Open pressure switch – see b) on page 34.

PROBLEM

h) SWING ARM rotates forward and stops, but lift arm does not go down.

SUGGESTED REMEDIES

h) Check if relay switch on front of arm is engaged when SWING ARM is forward (internal switch connections COM – NO should be closed when switch is activated). This switch provides the signal to send the arm down.



RELAY SWITCH

i) Arm goes down but then nothing else works.

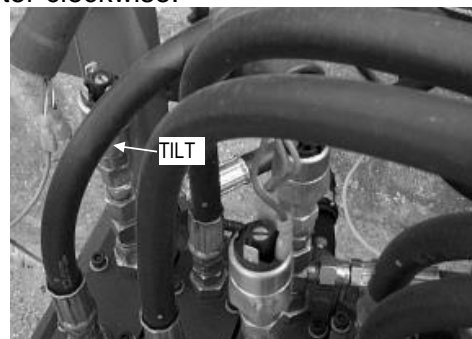
i) The arm down switch must engage (internal switch connections COM – NC should be open) to disconnect release cycle and turn on loading cycle. Adjust so that lift arm cylinder does not quite bottom when arm is down. 1/16" of unused cylinder rod travel should be visible.



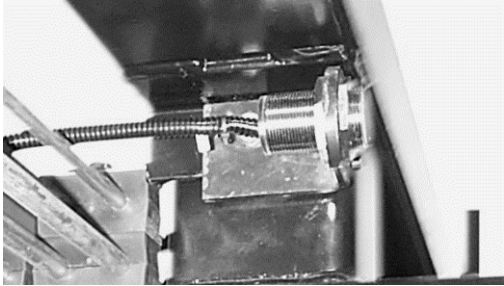

LIFT ARM CYLINDER

4. *PUSHER BACK* switch does not respond in auto mode.

4. a) Check tilt pressure switch. *TIPPING FRAME* must be down and under pressure to energize *PUSHER BACK*. Pressure switch is set too high – decrease setting by turning adjusting screw counter-clockwise.



TILT PRESSURE SWITCH

PROBLEM	SUGGESTED REMEDIES
	<p>b) Check rear PROXIMITY SENSOR. A defective sensor may cause a “disconnect” signal to cut power to pusher solenoid. Unplug sensor from main harness and try <i>PUSHER BACK</i>. If <i>PUSHER</i> moves back, sensor may need replacing.</p>  <p>REAR PROXIMITY SENSOR</p>
<p>5. <i>PUSHER</i> moves back in auto mode before <i>TIPPING FRAME</i> is down.</p>	<p>5. Tilt pressure switch is set too low. Increase setting by turning tilt pressure switch adjusting screw clockwise.</p>
<p>6. <i>PUSHER</i> fails to stop at proximity switch location.</p>	<p>6. Proximity sensors cannot sense <i>PUSHER SWITCH ACTIVATOR</i> (the maximum gap possible between the sensor and the activator is only 3/8”). Insert one or more spacers between the activator and the <i>PUSHER</i> to bring the activator as close as possible to the sensors without contacting them (a lamp built into the rear of the sensor will light up when sensor is activated).</p>  <p>PUSHER SWITCH ACTIVATOR</p>
<p>7. <i>PUSHER</i> lacks power to push back full load of heavy bales.</p>	<p>7. Power is limited by available tractor hydraulics.</p> <p>When load is half full, push bales all the way back. Do not attempt to push more than a half load at once. Switch to low speed. This will double torque.</p>

PROBLEM	SUGGESTED REMEDIES
8. PUSHER will not move back in either manual or automatic mode.	8. Unplug rear PROXIMITY SENSOR HARNESS. If PUSHER then operates, replace rear PROXIMITY SENSOR. A properly functioning harness will “light up” around the wire entrance when a ferrous metal object comes within 3/8” of the sensor (the SENSOR then sends a signal to energize the appropriate relay in the relay box). The rear PROXIMITY SENSOR prevents the PUSHER from traveling too far to the rear.
9. Above remedies fail to solve problem.	9. Exchange tractor control module and/or relay box on the machine. Check for damaged wiring harness.
10. The pins inserted at the points where the SWING ARM is joined to the MAIN ARM and the RIGHT/LEFT GRAB ARMS are joined to the SWING ARM are excessively “slack” or loose.	10. Specialized bushings are inserted into the main joints to help reduce friction. These bushings can wear down and may need to be replaced occasionally (see the “Parts” section of this manual for replacement part numbers).

OPEN CENTER KIT (OPTIONAL)

The open center kit option permits the bale carrier's hydraulics to operate in open center mode or closed center mode to match the tractor's hydraulic system (bale carriers are factory equipped to be operated with tractors having CLOSED center hydraulic systems).

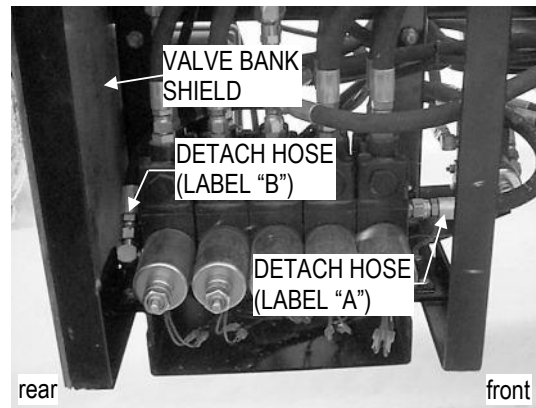
The kit consists of an "open center" valve, hydraulic hoses, fittings, a connection wire, and a mounting bracket. When installed, the "open center" valve redirects oil flow from the carrier's SOLENOID VALVE BANK and provides a continuous oil loop from the tractor's system, back to the tractor.

INSTALLATION



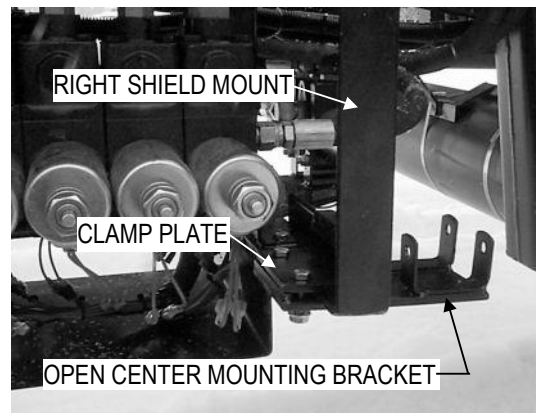
WARNING: Relieve pressure on system before disconnecting hydraulic components.

1. Remove the VALVE BANK SHIELD. Slacken hose at each end of the SOLENOID VALVE BANK to relieve hydraulic pressure and remove it from its fitting (leave the fittings attached to the VALVE BANK). Label the hose removed from the *front* of the VALVE BANK "A" and the hose removed from the *rear* "B".



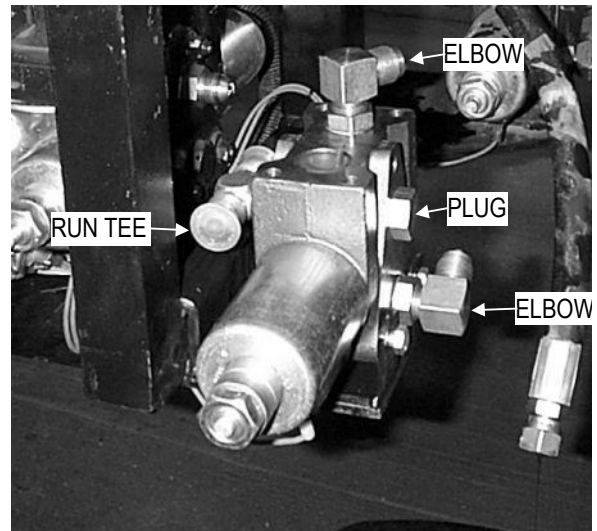
SOLENOID VALVE BANK

2. Attach OPEN CENTER MOUNTING BRACKET to the RIGHT SHIELD MOUNT. Secure it in place by bolting it to the CLAMP PLATE with 5/16" x 1-1/4" bolts and 5/16" flanged locknuts.



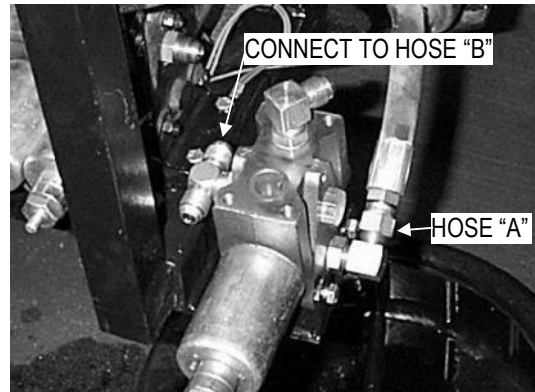
ATTACH OPEN CENTER MOUNTING BRACKET

3. Remove the protective caps from the fittings and the SERIES PARALLEL VALVE ports. Install a #8 ORB x 1/2" JIC MALE/MALE 90° ADJUSTABLE ELBOW in the *top-left* and *front-bottom* ports and a #8 ORB x 1/2" JIC RUN TEE in the *rear-top* port as shown. Install a #8 ORB PLUG in the remaining open ports.
4. Attach SERIES PARALLEL VALVE to OPEN CENTER MOUNTING BRACKET with 5/16" x 3" bolts and 5/16" cone locknuts.



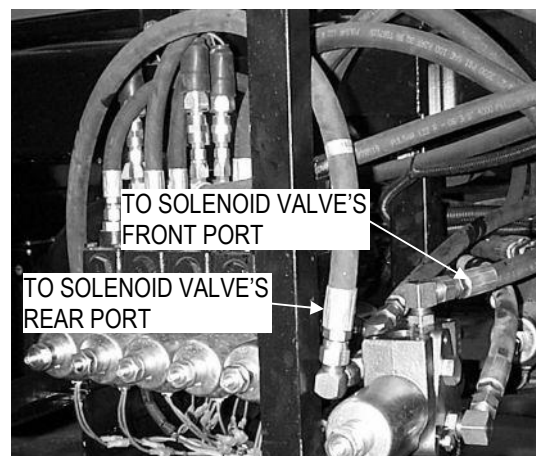
SERIES PARALLEL VALVE

5. Connect the hose labeled "A" from step 1 (the "PRESSURE" hose) to the elbow in the PARALLEL valve's *front-bottom* port and the hose labeled "B" (the "RETURN" hose) to the RUN TEE in the *rear-top* port.



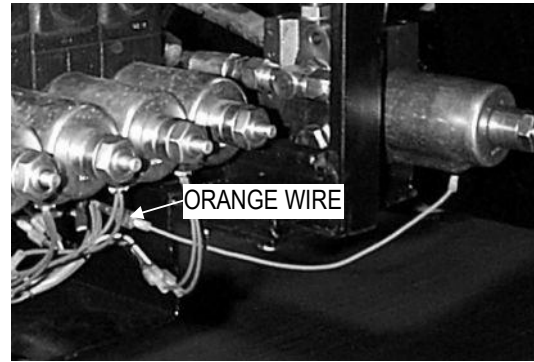
CONNECT HOSES "A" & "B"

6. Attach a #8 JIC x #8 FEMALE SWIVEL ELBOW ADAPTER to the RUN TEE in the PARALLEL VALVE'S *rear-top* port. Connect a 1/2" x 34" HYDRAULIC HOSE from this ELBOW ADAPTER to the fitting in the SOLENOID VALVE BANK'S *rear* port.
7. Attach the remaining #8 JIC x #8 FEMALE SWIVEL ELBOW ADAPTER to the fitting in the carrier SOLENOID VALVE BANK'S *front* port. Connect a 1/2" x 34" HYDRAULIC HOSE from this ELBOW ADAPTER to the fitting in the PARALLEL VALVE'S *top-left* port.



CONNECT TO SOLENOID VALVE

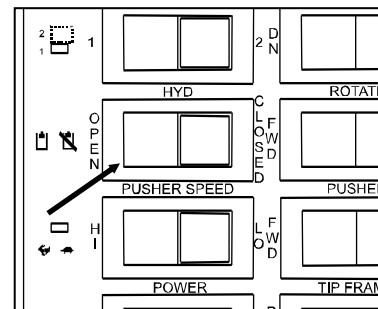
8. Attach VALVE CONNECTION WIRE to the SERIES PARALLEL VALVE and the unconnected *orange wire* from the MAIN VALVE AND PRESSURE SWITCH HARNESS.
9. Reattach the VALVE BANK SHIELD.



CONNECT VALVE CONNECTION WIRE

OPERATION

A lighted rocker switch on the CONTROL BOX allows the operator to select the correct mode. Select *CLOSED* to operate in the closed center mode to match tractors with closed systems (switch lights green) or *OPEN* to operate in the open center mode to match tractors with open systems. NOTE: the mode can be selected before or after the CONTROL BOX is powered on (but it should be selected before any other functions are used).



HYDRUALIC MODE SWITCH

IMPORTANT: Incorrectly selecting the mode will result in erratic functioning of the bale carrier's hydraulic system.

Open center hydraulic systems have full oil flow being supplied under low pressure, from the tractor, out to the carrier and require a continuous open return back to the tractor. The "open center" valve is used to provide an oil passage way (through) the valve for the continuous oil loop from the tractor system, back to the tractor.

In *CLOSED* system mode the "open center" valve is constantly energized. Direct power from the *HYD CLOSED* switch in the CONTROL BOX.

In *OPEN* system mode the "open center" valve is only energized (to divert oil flow into the carrier's valve bank) whenever a carrier function is selected. Power is supplied.

In *MAN* mode (*OPEN* center) power is supplied to the "open center" valve from each function switch as it is activated.

In *AUTO* mode (*OPEN* center) power is constantly supplied to the "open center" valve keeping it energized whenever a function is operating. In rest (bale ready) position the valve is de-energized.

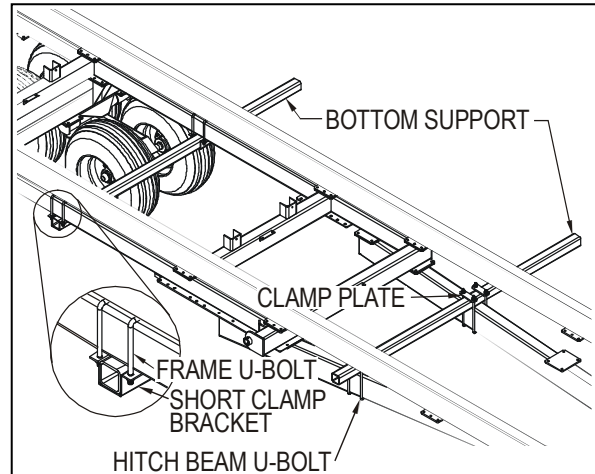
SECOND LAYER KIT (OPTIONAL)

The second layer kit is an optional upgrade designed to aid the loading and stacking of intermediate sized bales in a two layer configuration. The kit consists of two components: a rear stack stabilizer which holds the double row stack when unloading and a front bale stabilizer which stabilizes the top layer during the loading process.

INSTALLATION

FRONT BALE STABILIZER

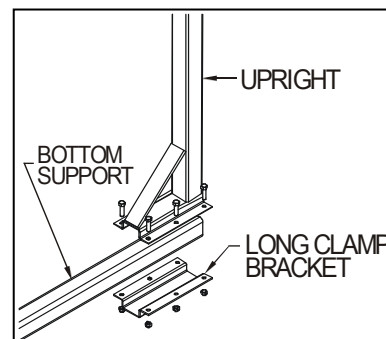
1. Attach a **BOTTOM SUPPORT** to the underside of the **FRAME** with **SHORT CLAMP BRACKETS**, **FRAME U-BOLTS**, $\frac{1}{2}$ " hex nuts (fine thread), and $1\frac{17}{32}$ " x $\frac{1}{16}$ " x $.094$ " flatwashers. The **SUPPORT** should be placed $43\frac{1}{2}$ " (110.5 cm) from the center of the **TANDEM AXLE** and offset 35 " (89 cm) to the left of the **FRAME**.
2. Attach the second **BOTTOM SUPPORT** to the topside of the **HITCH BEAMS** with **HITCH BEAM U-BOLTS**, **CLAMP PLATES**, $\frac{1}{2}$ " hex nuts (fine thread), and $1\frac{17}{32}$ " x $1\frac{1}{16}$ " x $.094$ " flatwashers. The **SUPPORT** should be placed $111\frac{3}{8}$ " (283 cm) from the first **SUPPORT** (as measured from the center of both) and also offset 35 " (89 cm) to the left of the **FRAME**.
3. Affix **FRONT UPRIGHT** to the front **BOTTOM SUPPORT** and the **REAR UPRIGHT** to the rear **BOTTOM SUPPORT** with a **LONG CLAMP BRACKET**, $\frac{1}{2}$ " x $1\frac{3}{4}$ " bolts and $\frac{1}{2}$ " locknuts. **NOTE:** The **REAR UPRIGHT** is $1\frac{3}{4}$ " (4 cm) higher than the **FRONT UPRIGHT**.



INSTALL BOTTOM SUPPORTS

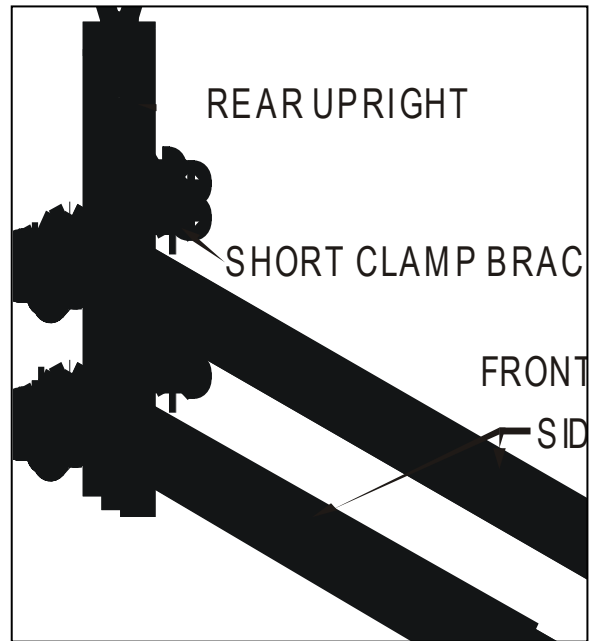


POSITION BOTTOM SUPPORTS



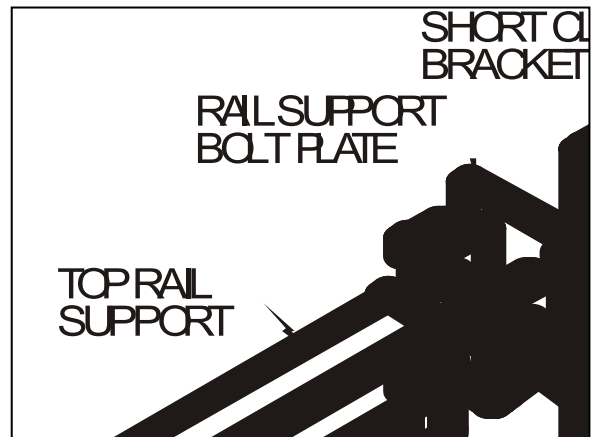
INSTALL UPRIGHTS

- Attach the SIDE RAILS to the FRONT and REAR UPRIGHTS with SHORT CLAMP BRACKETS, 1/2" x 1-3/4" bolts and 1/2" locknuts (the rear of the SIDE RAILS should be flush with the rear of the REAR UPRIGHT). The vertical placement of the SIDE RAILS is determined by the size of the bales loaded (one RAIL is used to stabilize each layer of bales).



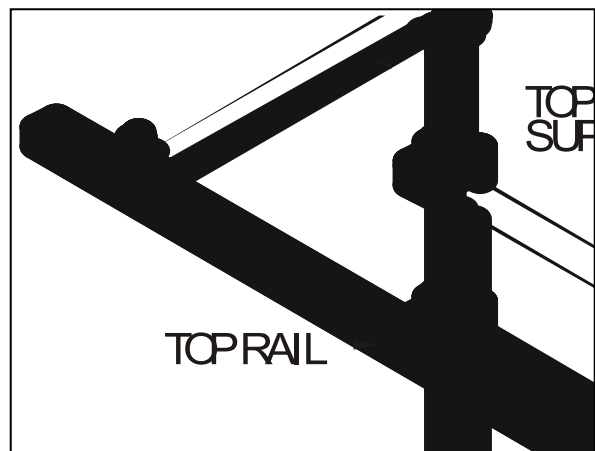
ATTACH SIDE RAILS

- Affix a RAIL SUPPORT BOLT PLATE to each UPRIGHT with a SHORT CLAMP BRACKET, 1/2" x 1-3/4" bolts and 1/2" locknuts. The vertical placement of the RAIL SUPPORT BOLT PLATES is determined by the height of the bales loaded.
- Attach a TOP RAIL SUPPORT to each RAIL SUPPORT BOLT PLATE with a TOP RAIL SUPPORT PIN. Secure the PINS with cotter pins.



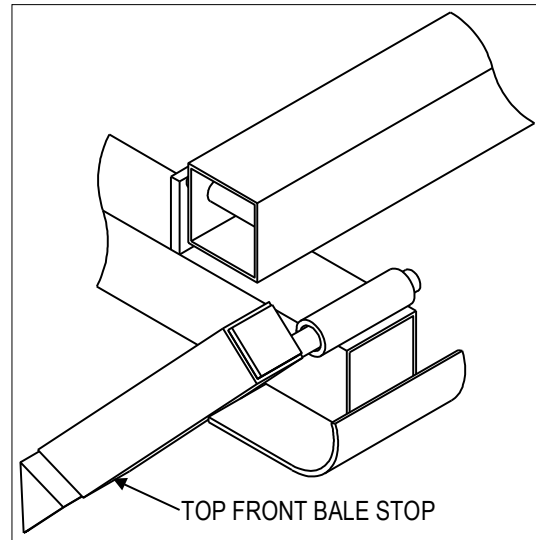
INSTALL TOP RAIL SUPPORT

- Attach TOP RAIL to the TOP RAIL SUPPORTS and secure with cotter pins.



ATTACH TOP RAIL

8. Insert the rod on the TOP FRONT BALE STOP into the bushing at the front of the TOP RAIL and secure with cotter pin. This BALE STOP is designed to prevent the top bale from falling forward during the loading process.



INSTALL TOP FRONT BALE STOP

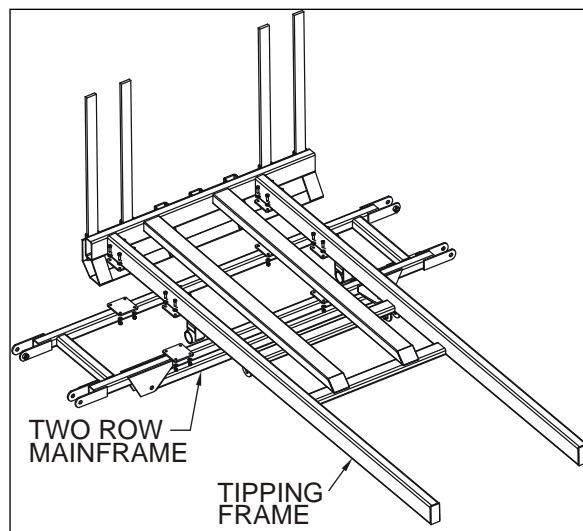
9. Insert the TOP REAR BALE STOP into the rear of the TOP RAIL. The BALE STOP must be adjusted to prevent the top bale from falling forward after the initial load has been pushed to the rear. A set screw is provided to keep the STOP in place.



INSERT TOP REAR BALE STOP

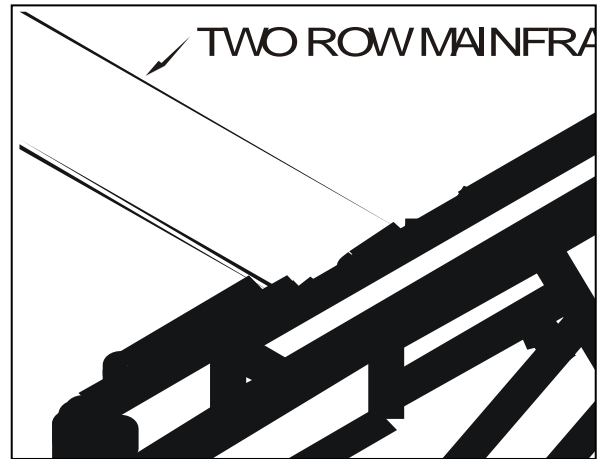
REAR STACK STABILIZER

1. Hoist TWO ROW MAINFRAME into position and attach it to the bolt plates on the bottom of the TIPPING FRAME with 1/2" x 1-1/2" bolts, 1/2" flatwashers (place one under each bolt head and above each nut) and 1/2" locknuts.



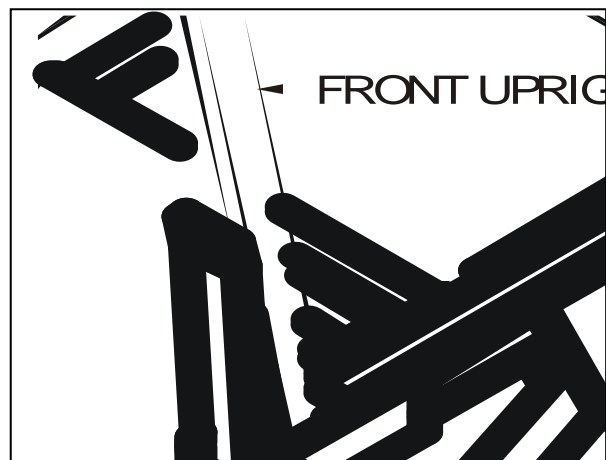
ATTACH TWO ROW MAINFRAME

2. Attach a 2" x 8" HYDRAULIC CYLINDER to the cylinder plates at each end of the TWO ROW MAINFRAME with a BASE CYLINDER PIN. Secure the CYLINDER PIN in place with a 3/8" x 2" bolt and 3/8" locknut. NOTE: The CYLINDERS should be installed with the ports facing down.



INSTALL HYDRAULIC CYLINDER

3. Install a FRONT UPRIGHT to each side of the TWO ROW MAINFRAME with a BUSHING HINGE PIN. Secure the HINGE PIN in place with a 3/8" x 2" bolt and 3/8" locknut.
4. Use a CYLINDER ROD PIN to attach the rod end of each cylinder to the FRONT UPRIGHT. Secure the ROD PIN in place with a 3/8" x 2" bolt and 3/8" locknut.



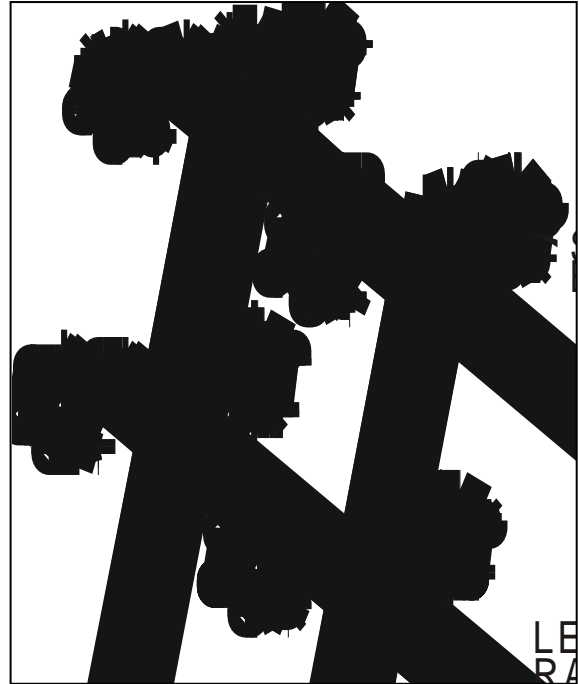
INSTALL FRONT UPRIGHT

5. Install a BACK UPRIGHT to each side of the TWO ROW MAINFRAME with a BUSHING HINGE PIN. Secure the CYLINDER PIN in place with a 3/8" x 2" bolt and 3/8" locknut.
6. Install a grease zerk at both ends of each CYLINDER and at the points where the UPRIGHTS are joined to the TWO ROW MAINFRAME (if not previously installed). Thoroughly lubricate the PINS with a SAE multi purpose lubricant (or equivalent) before operating. Lubricate daily thereafter.



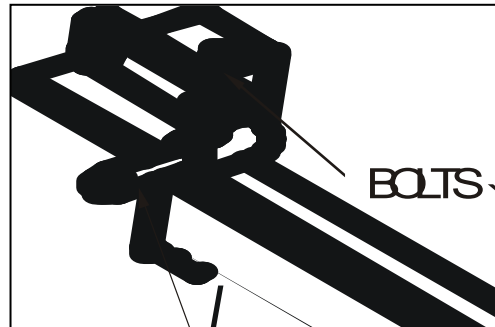
INSTALL BACK UPRIGHT

7. Attach LEFT GRAB RAIL WELDMENT to the FRONT and BACK UPRIGHTS on the left side of the bale carrier with SHORT CLAMP BRACKETS, 1/2" x 1-3/4" bolts and 1/2" locknuts. Repeat for the right side using RIGHT GRAB RAIL WELDMENT.
8. Attach a GRAB RAIL WELDMENT to the UPRIGHTS on each side the carrier.
9. The placement of the SIDE RAILS is determined by the size of the bales loaded (one RAIL is used to stabilize each layer of bales).



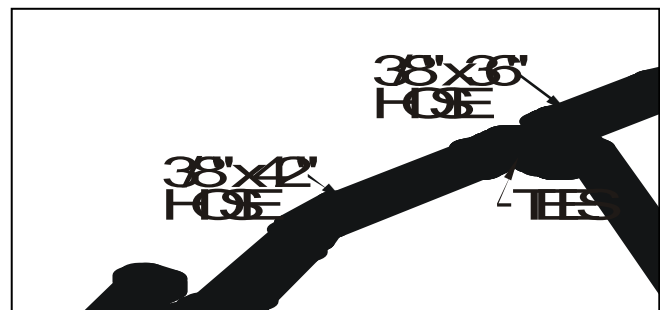
INSTALL GRAB RAIL WELDMENTS

10. Insert the POINTERS into the bushings at the top of the LEFT and RIGHT GRAB RAIL WELDMENTS. Affix each POINTER in place with a 3/8" x 3/4" bolt. The POINTERS are designed to provide additional support when unloading stacks by gripping the bottom (when stack is vertical) bale. They can be adjusted according to the amount of support required.



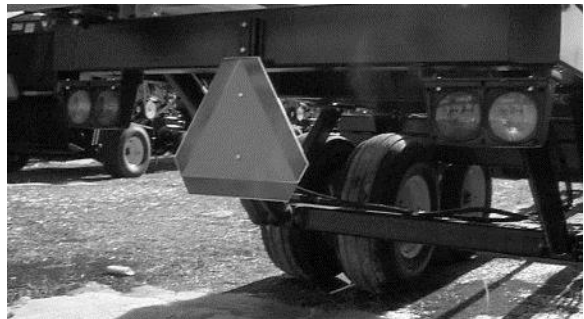
INSERT POINTERS

11. Insert a #6 ORB x 3/8" JIC M/M 90° ADJUSTABLE ELBOW into each of the HYDRAULIC CYLINDERS' ports.
12. Attach a 3/8" x 42" HYDRAULIC HOSE to the ADJUSTABLE ELBOW in the right CYLINDER'S clevis end port. Attach the remaining 3/8" x 42" HOSE to the ELBOW in the left CYLINDER'S rod end port.
13. Attach 3/8" x 50" HYDRAULIC HOSE to the ELBOW in the right CYLINDER'S rod end port. Attach 3/8" x 36" HOSE to the ELBOW in the left CYLINDER'S clevis end port.

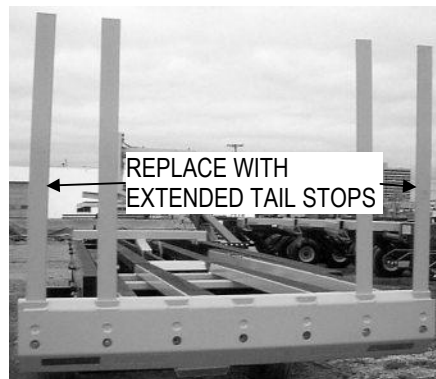


HYDRAULIC ASSEMBLY

14. Connect HOSE from each clevis port together with a #6 TEE JIC TUBE. Use the remaining TEE to connect the HOSES from each rod port together.
15. Connect a 3/8" x 45' HYDRAULIC HOSE to each TEE. Carefully thread these HOSES to the front of the bale carrier (tie wraps are provided to hold the HOSES in place). Ensure that there is sufficient slack in the HOSES to prevent crimping when operating the TIPPING FRAME. Attach 3/4" - 16 ORB PIONEER MALE COUPLING to each hose.
16. Disconnect DUAL LAMP LEFT and RIGHT HAND couplers from REAR CROSSMEMBER HARNESS and detach LAMPS from the bale carrier (retain the fasteners for step 17).
17. Attach the LAMPS to the bottom of the TWO ROW MAINFRAME in the same orientation (i.e. red lamps visible from the rear). Connect each LIGHTING EXTENSION HARNESS to the coupler on each LAMP and to the REAR CROSSMEMBER HARNESS. Secure the EXTERNSION HARNESSES in place with the tie wraps provided.
18. Replace the existing outside standard TAIL STOPS with the two EXTENDED TAIL STOPS provided (the standard TAIL STOPS can be moved to inside positions instead of removed).



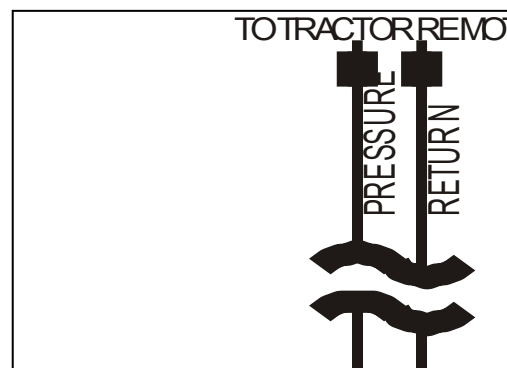
LAMPS (ORIGINAL POSITION)



TAIL STOPS

OPERATION

A single pair of remote outlets is required to operate the rear stack stabilizer (in addition to the pair required to operate the bale carrier). Connect quick couplers to tractor remote outlets so that tractor graphics correspond with oil flow.

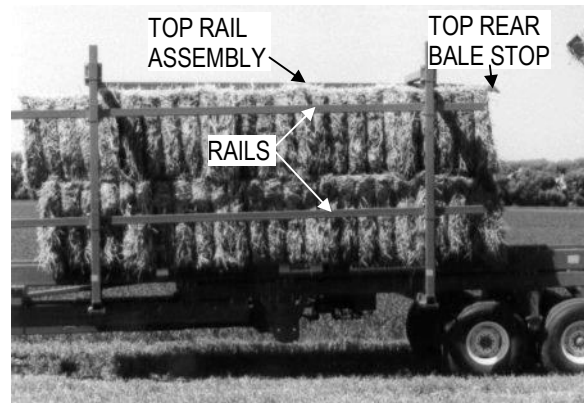


HYDRAULIC HOOK-UP

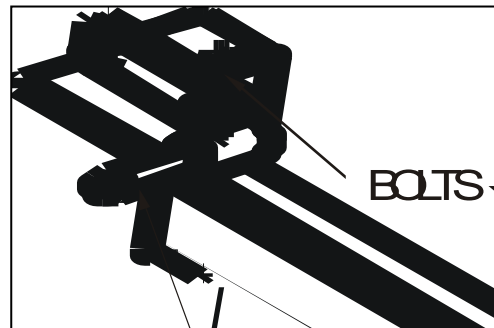
ADJUSTMENTS

The second layer kit can be adjusted to accommodate most intermediate sized bales.

1. **GUIDE RAILS/GRAB RAIL WELDMENTS:** Adjust according to the height of the bales. Each RAIL should be in contact with one layer of bales.
2. **TOP RAIL ASSEMBLY:** Adjust so that the **TOP FRONT** and **REAR BALE STOPS** are allowed to penetrate the top bales. The **TOP FRONT BALE STOP** prevents the top front bale from failing forward after the load has been pushed one bale length to the rear. The **TOP REAR BALE STOP** prevents the top front baling from failing forward after the initial load of ten bales (two layers with five bales each) has been pushed all the way to the rear. The **TOP REAR BALE STOP** can also be adjusted horizontally according to bale width.
3. **POINTERS:** Adjust so that they penetrate the bottom (when stack is vertical) bale sufficiently to help prevent the stack from tipping backwards when unloading.



ADJUSTING FOR BALE SIZE



ADJUST POINTERS

LOADING/UNLOAD

NOTE: Consult the relevant sections of this manual for detailed operating instructions on loading and unloading the bale carrier.

1. Prior to loading bales, operate the appropriate tractor hydraulic lever and fully “open” the rear stack stabilizer to prevent possible damage to the bales when they are pushed back.
2. Load the bales using the two row mode as described in the “Loading” section of this manual. When you are ready to begin stacking, operate the tractor hydraulic lever and “close” the rear stack stabilizer enough to gently squeeze the stack and prevent it from tumbling backwards when unloading.
3. Once the **TIPPING FRAME** is raised to the vertical position, fully “open” the rear stack stabilizer and slowly drive the tractor forward until the stack eases off the **TAIL STOPS** and onto the ground.
4. Drive forward, lower the **TIPPING FRAME** onto the deck, and repeat the unloading procedure for the remaining load.



WARNING: Close the rear stack stabilizer sufficiently to reduce the width of the bale carrier prior to transporting.

MAINTENANCE

NOTE: Consult the "Maintenance" section of this manual for detailed maintenance procedures and safety information.

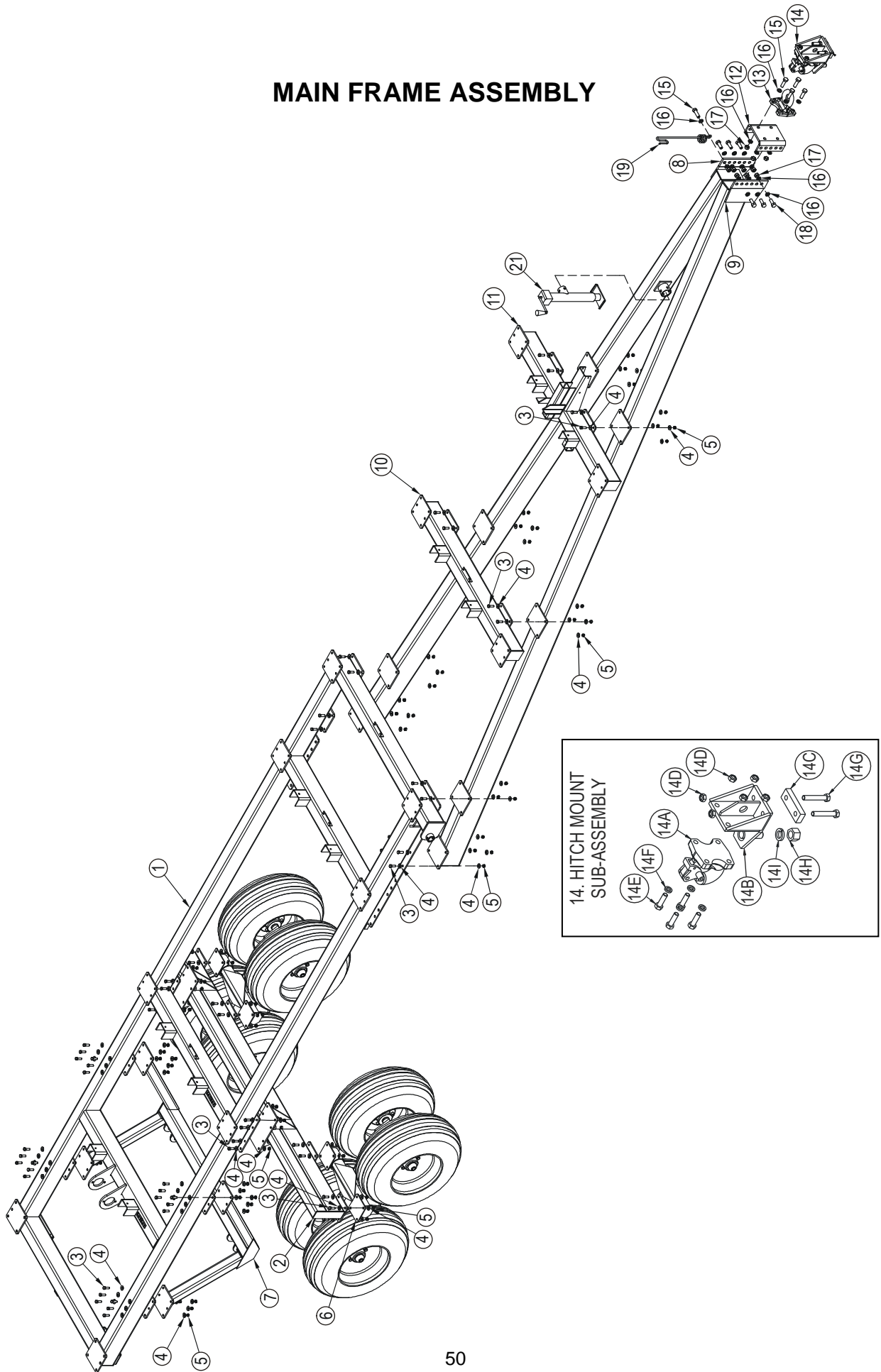
1. Lubricate the grease fittings prior to the start of each season and daily during the season (a grease fitting is located at each end of each cylinder and at the points where the UPRIGHTS join the TWO ROW MAINFRAME).



GREASE FITTINGS (RIGHT SIDE SHOWN)

2. Regularly inspect cylinders, hoses and fittings for leaks, crimps and abrasions or other signs of wear and tear or impending failure.

MAIN FRAME ASSEMBLY



MAIN FRAME ASSEMBLY

REF	PART NUMBER	DESCRIPTION	QTY	SERIAL NUMBER
1	C2700-00	MAIN FRAME	1	
2	C2721-00	AXLE BEAM	1	
3	967274	BOLT HEX 0.500NC X 1.50GR8 PL	86	
4	84048	WASHER FLAT SAE 0.500 BS PL	172	
5	813663	NUT LOCK (STEEL) 0.500NC GRCPL	86	
6	A2700-01	TANDEM AXLE ASSEMBLY (SEE PAGE 64)	2	
7	C2719-00	REAR CYLINDER MOUNT	1	
8	C2854-00	LEFT HITCH BEAM	1	
9	C2855-00	RIGHT HITCH BEAM	1	
10	C2705-00	SECOND CROSSMEMBER	1	
11	C2704-00	FRONT CROSSMEMBER	1	
12	C2852-00	CLEVIS	1	
13	26051	TOW RING	1	
14	A2700-13	HITCH MOUNT SUB-ASSEMBLY	1	
14A	26050	PINTLE HITCH	1	
14B	C2796-00	HITCH MOUNT	1	
14C	E2850-00	HITCH MOUNT SPACER	1	
14D	813648	NUT LOCK (STEEL) 0.750NC GRCPL	6	
14E	813515	BOLT HEX 0.750NC X 2.50GR8 PL	4	
14F	813590	WASHER FLAT 1.25X0.781X0.25 PL	4	
14G	813516	BOLT HEX 0.750NC X 4.50GR8 PL	2	
14H	813527	NUT HEX 1.250NF GR8 PL	1	
14I	812780	WASHER LOCK 1.250 PL	1	
15	813515	BOLT HEX 0.750NC X 2.50GR8 PL	5	
16	84050	WASHER FLAT SAE 0.750 BS PL	22	
17	813648	NUT LOCK (STEEL) 0.750NC GRCPL	11	
18	967286	BOLT HEX 0.750NC X 2.00GR8 PL	6	
19	B2363-01	HOSE SUPPORT	1	
21	31045	7000lb TOP WIND JACK	1	-1068G
	813685	HITCH JACK 5 TON	1	02BM4000001-

SERIAL NUMBER BREAKS

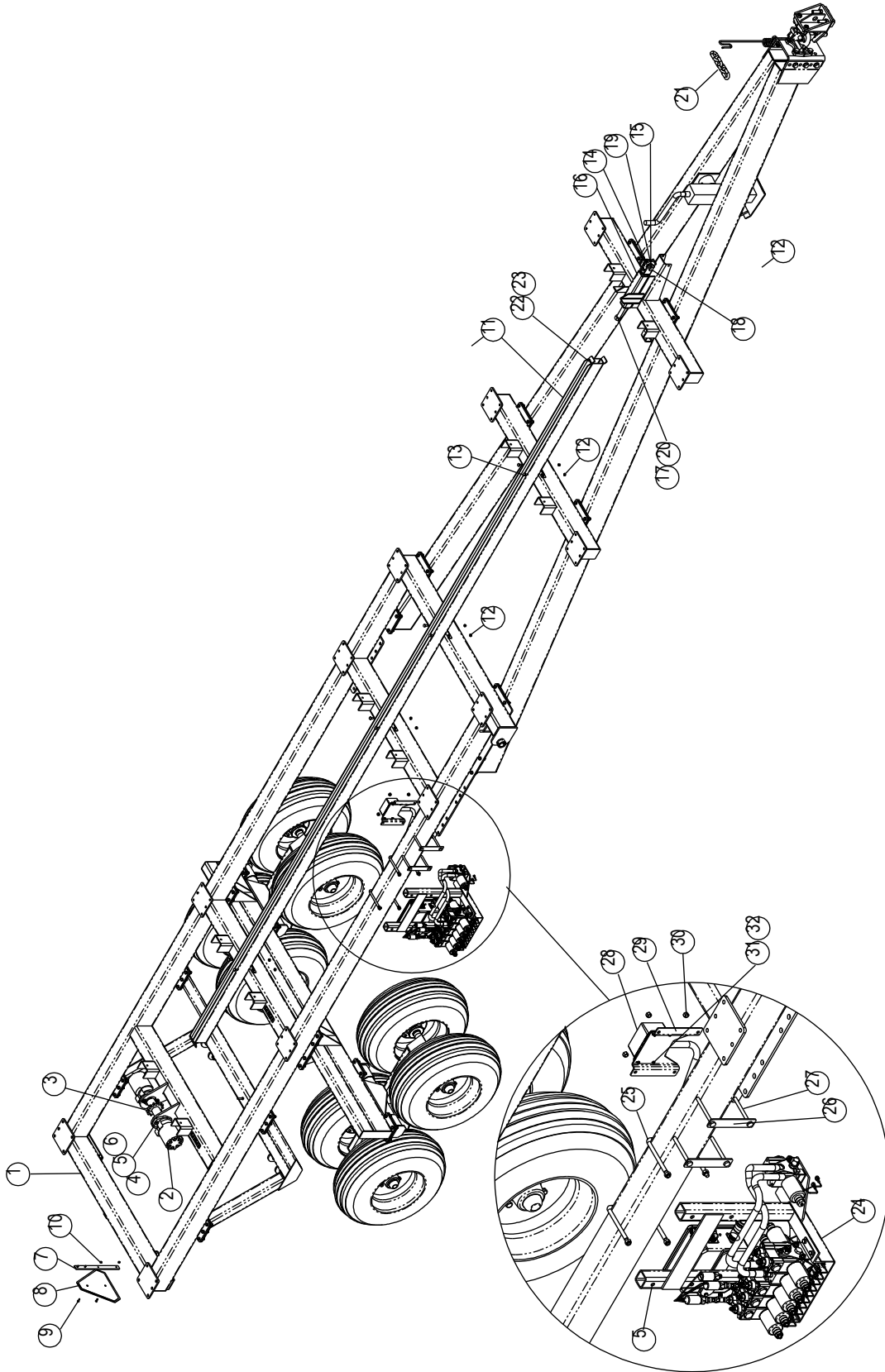
The side of the serial number on which the dash (-) appears determines whether the part is used "up to" or "after" the serial number given.

Example: -1068G Used on machines up to and including serial number 1068G

02BM4000001- Used on machines including and after serial number 02BM4000001

BOLDED PART NUMBERS INDICATE CHANGE FROM LAST PRODUCTION

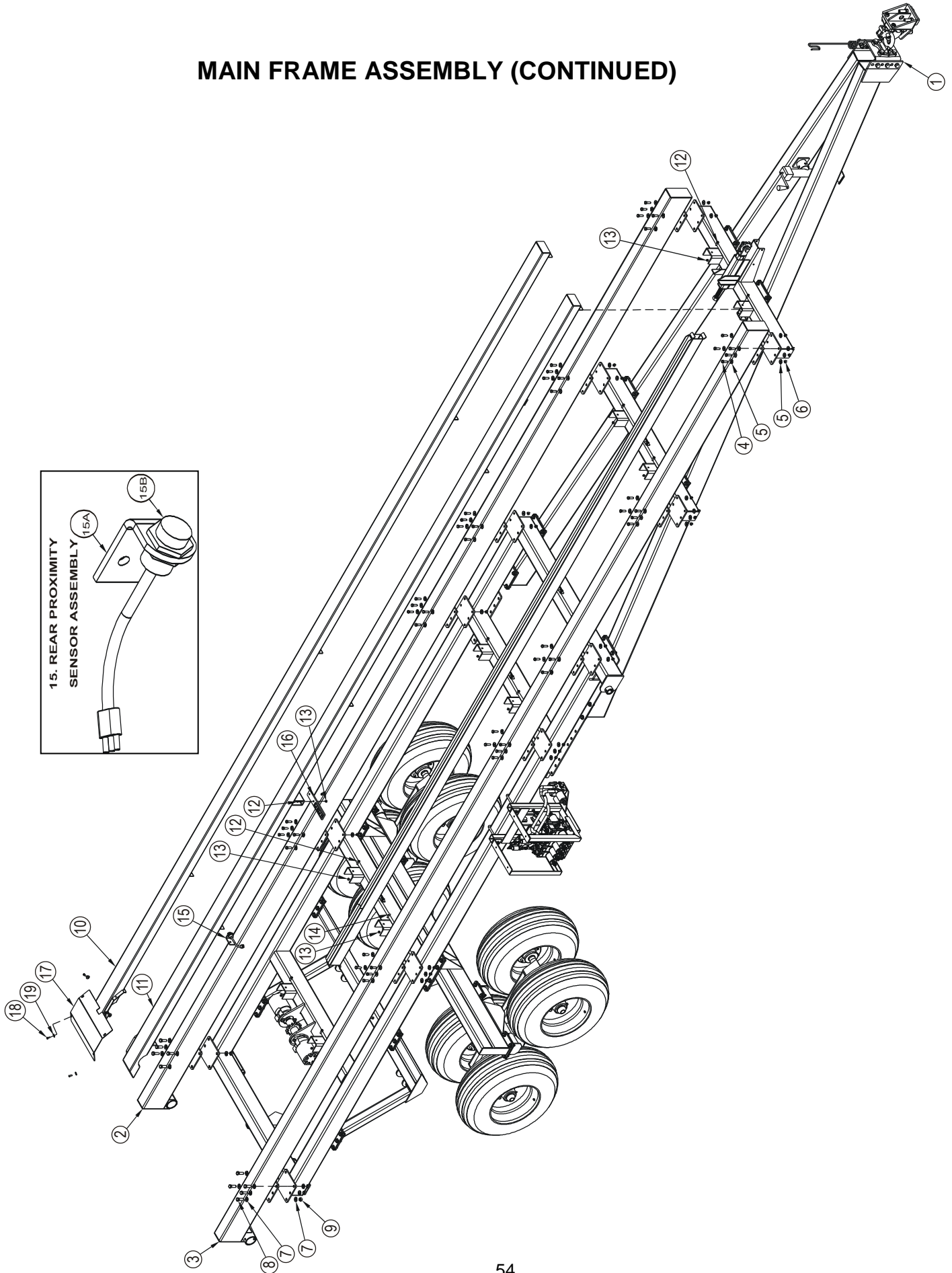
MAIN FRAME ASSEMBLY (CONTINUED)



MAIN FRAME ASSEMBLY (CONTINUED)

REF	PART NUMBER	DESCRIPTION	QTY	SERIAL NUMBER
1		MAIN FRAME ASSEMBLY	1	
2	B2799-00	22.2 CU.IN. HYD. MOTOR	2	
2a	X2725	SEAL KIT/ ROSS HYD MOTOR		
3	C2770-00	REAR SPROCKET WELD'T	1	
4	813686	BOLT HEX 0.500NC X 1.75GR8 PL	4	
5	813663	NUT LOCK (STEEL) 0.500NC GRCPL	8	
6	84048	WASHER FLAT SAE 0.500 BS PL	4	
7	E2795-00	SMV BRACKET	1	
8	967066	SMV SIGN	1	
9	81525	BOLT HEX 0.250NC X 0.75GR5 PL	4	
10	84498	NUT LOCK (STEEL) 0.250NC GRBPL	4	
11	C2772-00	CHAIN GUIDE RAIL	1	
12	812363	NUT LOCK (STEEL) 0.375NC GRBPL	8	
13	81914	BOLT CARR 0.375NC X 1.00GR5 PL	8	
14	31119	IDLER SPROCKET #80/12 TOOTH C/W 6204DDU BEARING	1	
15	E2777-00	PIN BUSHING	2	
16	C2726-00	FRONT SPROCKET HOLDER	1	
17	C2768-00	FRONT SPROCKET ADJUSTING BOLT	1	
18	E2771-00	FRONT SPROCKET BOLT	1	
19	813648	NUT LOCK (STEEL) 0.750NC GRCPL	1	
20	84051	NUT HEX JAM 1.000NC GR2 PL	1	
21	813641	SAFETY CHAIN	1	
22	21443	PUSHER CHAIN #80 CHAIN 53'-4"	1	
23	813643	C2080H CONNECTOR LINK, HD	2	
24	A2700-16	VALVE BANK ASSEMBLY (SEE PAGE 70)	1	
25	E2700-16	6" X 7" U-BOLT/VALVE BANK	2	
26	E2936-01	BACK PLATE, SNUBBER UNIT	2	
27	811830	BOLT HEX 0.375 NC GR5 PL	4	
28	813951	HAYLINER 4000 SNUBBER UNIT	1	
29	E2936-00	PLATE SNUBBER	1	
30	81344	NUT LOCK (NYLOCK) 0.375NC GR 5 PL	4	
31	813958	SCREW MACH #8-32 X 0.75	4	
32	812537	NUT LOCK (NYLOCK) #8-32	4	

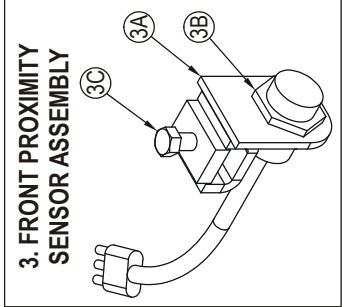
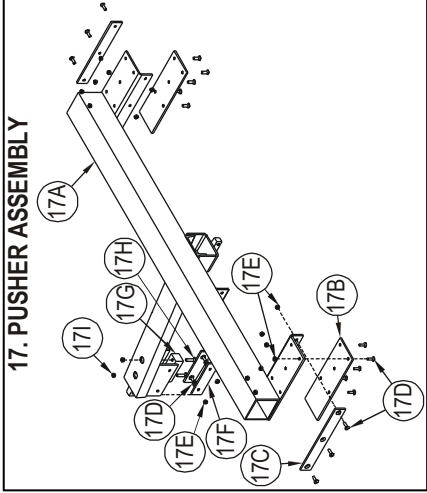
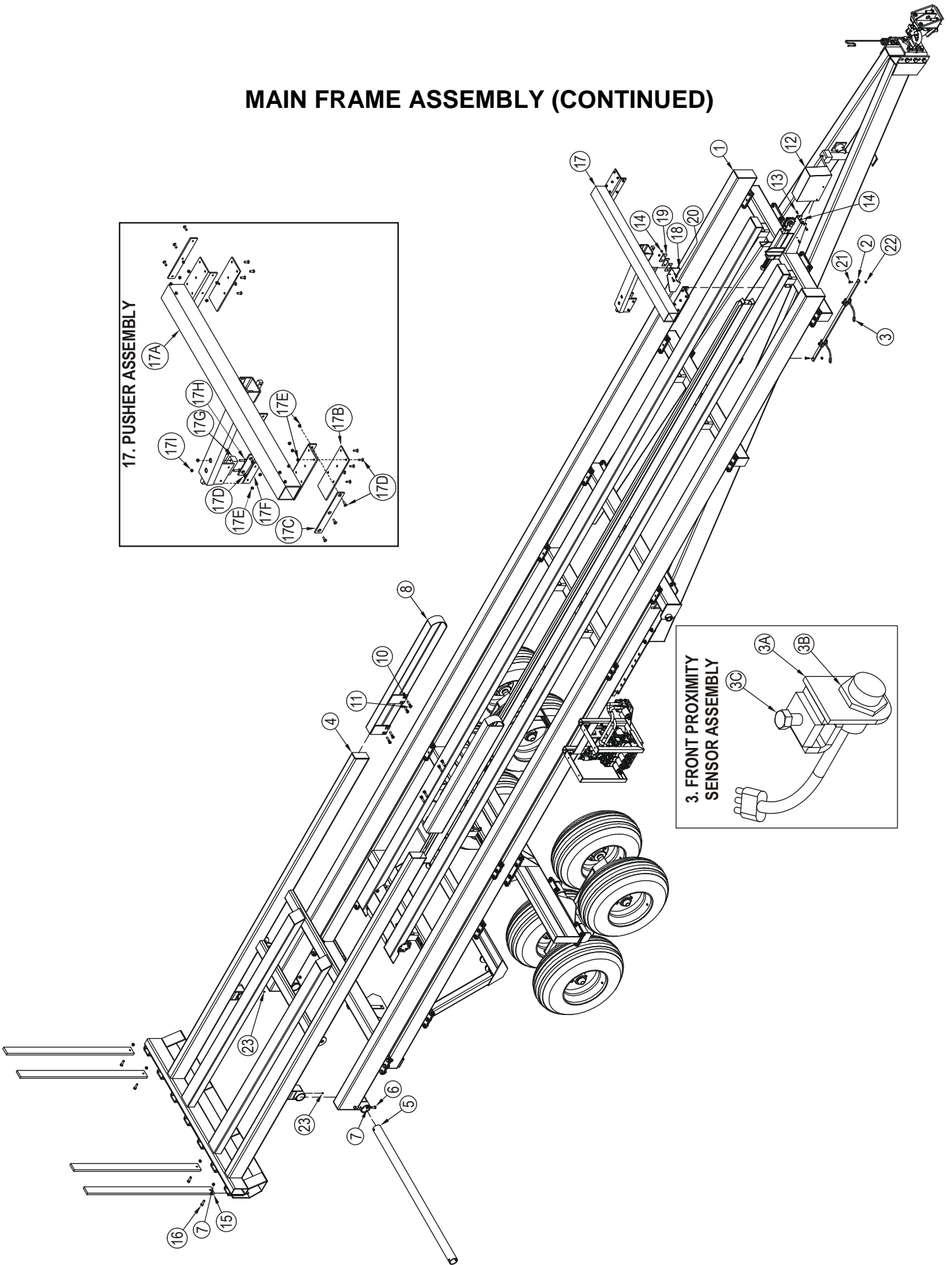
MAIN FRAME ASSEMBLY (CONTINUED)



MAIN FRAME ASSEMBLY (CONTINUED)

REF	PART NUMBER	DESCRIPTION	QTY	SERIAL NUMBER
1		MAIN FRAME ASSEMBLY (2 nd STAGE) (SEE PAGE 52)	1	
2	C2701-00	LEFT CARRIER BEAM	1	
3	C2702-00	RIGHT CARRIER BEAM	1	
4	967274	BOLT HEX 0.500NC X 1.50GR8 PL	49	
5	84048	WASHER FLAT SAE 0.500 BS PL	49	
6	813663	NUT LOCK (STEEL) 0.500NC GRCPL	49	
7	812639	WASHER FLAT SAE 0.625 BS PL	20	
8	967285	BOLT HEX 0.625NC X 1.75GR8 PL	10	
9	813529	NUT LOCK (STEEL) 0.625NC GRCPL	10	
10	C2706-00	LEFT SLIDER BEAM	1	
11	C2766-00	RIGHT SLIDER BEAM	1	
12	86170	BOLT HEX 0.375NC X 1.00GR5 PL	11	
13	812363	NUT LOCK (STEEL) 0.375NC GRBPL	12	
14	86171	BOLT HEX 0.375NC X 1.25GR5 PL	1	
15	A2700-18	REAR PROXIMITY SENSOR ASSEMBLY	1	
15A	E2864-00	PROBE MOUNT	1	
15B	E2870-00	PROXIMITY SENSOR ONLY / HONEYWELL 992AA30AN-A2	1	
16	C2858-00	HARD LINE MOUNTING PLATE	1	
17	E2776-00	REAR SPROCKET SHIELD	1	
18	813550	SCREW SELFTAP 0.313NC X0.75 PL	4	
19	81570	WASHER FLAT STD 0.375 HS PL	4	

MAIN FRAME ASSEMBLY (CONTINUED)



MAIN FRAME ASSEMBLY (CONTINUED)

REF	PART NUMBER	DESCRIPTION	QTY	SERIAL NUMBER
1		MAIN FRAME ASSEMBLY (3 rd STAGE) (SEE PAGE 54)	1	
2	E2857-00	PROXIMITY SENSOR MOUNT SLIDE	1	
3	A2700-17	FRONT PROXIMITY SENSOR ASSEMBLY	2	
3A	C2861-00	SWITCH MOUNT WELD'T	1	
3B	E2870-00	PROXIMITY SENSOR ONLY / HONEYWELL 992AA30AN-A2	1	
3C	84072	BOLT HEX 0.375NC X 0.75GR5 PL	1	
4	C2720-00	TIPPING FRAME	1	
5	E2748-00	REAR TILT ROD	1	
6	812768	BOLT HEX 0.500NC X 1.25GR8 PL	4	
7	813663	NUT LOCK (STEEL) 0.500NC GRCPL	10	
8	C2736-00	BALE EXTENSION SLEEVE LH	1	
9	C2737-00	BALE EXTENSION SLEEVE RH	1	
10	813547	SETSCREW SQHDCUP .500NCX1.50PL	8	
11	984077	NUT HEX JAM 0.500NC GR2 PL	8	
12	C2853-00	FRONT SPROCKET SHIELD	1	
13	81549	BOLT HEX 0.313NC X 0.75GR5 PL	4	
14	812362	NUT LOCK (STEEL) 0.313NC GRBPL	6	
15	E2723-00	TAIL STOP	6	
16	813686	BOLT HEX 0.500NC X 1.75GR8 PL	6	
17	A2700-05	PUSHER ASSEMBLY COMPLETE	1	
17A	C2703-00	PUSHER WELD'T	1	
17B	E2749-00	TOP SLIDER, PUSHER / FRONT	2	
17C	E2750-00	SIDE SLIDER, PUSHER / FRONT	2	
17D	813558	SCREW MACH M8 X 20 FLHD BRASS	20	
17E	813561	NUT HEX M8 BRASS	20	
17F	E2794-00	SIDE SLIDER, PUSHER / REAR	2	
17G	E2792-00	TOP SLIDER, PUSHER / REAR	1	
17H	813728	SCREW MACH 0.313NC X 1.25 FLHD	2	
17I	812362	NUT LOCK (STEEL) 0.313NC GRBPL	2	
18	E2851-00	PUSHER SWITCH ACTIVATOR	1	
19	E2866-00	SHIM	3	
20	81552	BOLT HEX 0.313NC X 1.25GR5 PL	2	
21	86170	BOLT HEX 0.375NC X 1.00GR5 PL	2	
22	812363	NUT LOCK (STEEL) 0.375NC GRBPL	2	
23	813646	GREASE FITTING 1/4 NF DRIVEN	2	

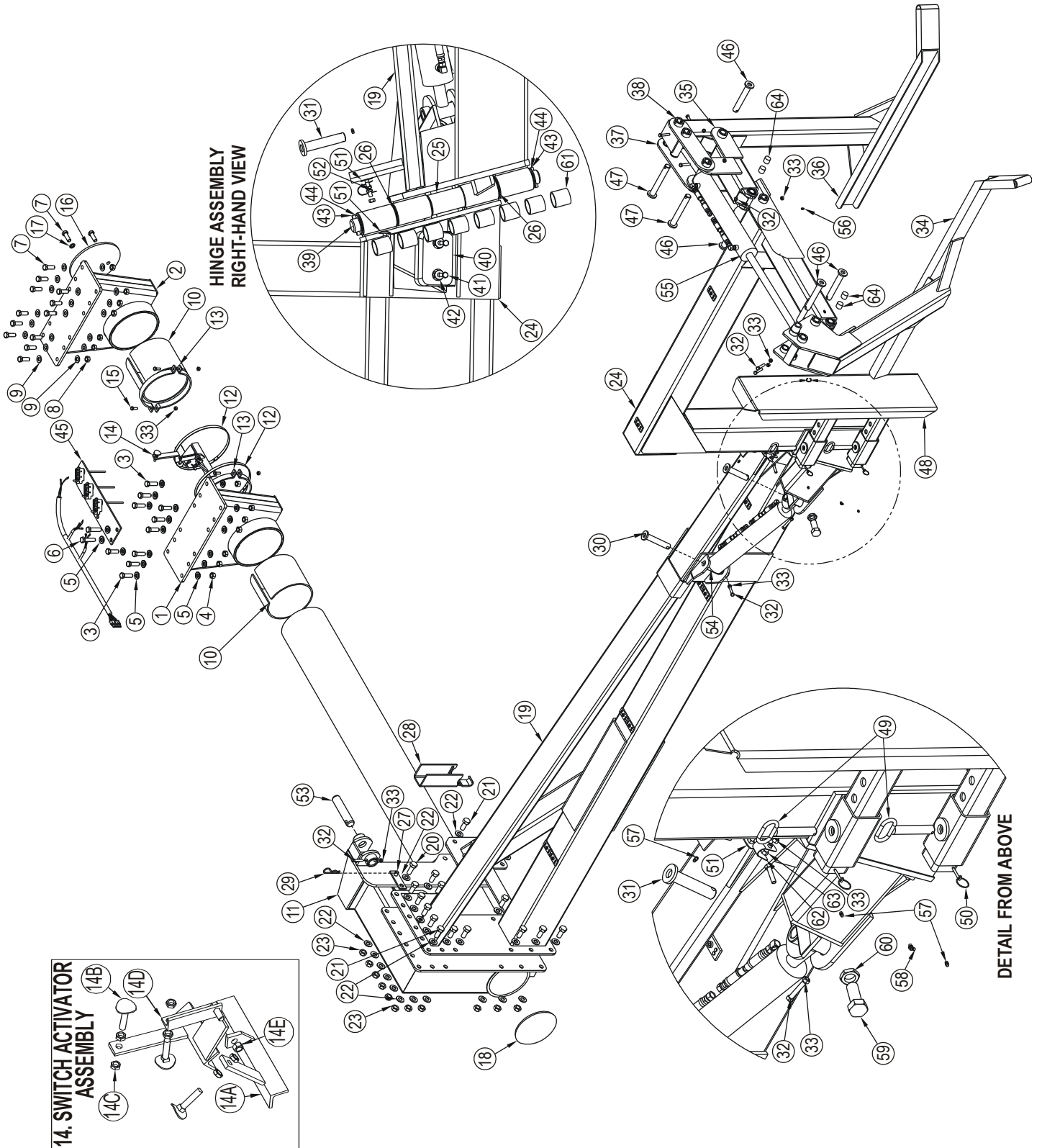
MAIN FRAME ASSEMBLY (CONTINUED)



MAIN FRAME ASSEMBLY (CONTINUED)

REF	PART NUMBER	DESCRIPTION	QTY	SERIAL NUMBER
1		MAIN FRAME ASSEMBLY (4 th STAGE) (SEE PAGE 56)	1	
2	E2733-00	CYL. PIN – CLEVIS END / MAIN ARM LIFT	1	
3	812363	NUT LOCK (STEEL) 0.375NC GRBPL	5	
4	811795	BOLT HEX 0.375NC X 2.00GR5 PL	5	
5		ARM ASSEMBLY (SEE PAGE 60)	1	
6	A2700-25	HYD. CYL. ASSEMBLY / PIVOT ARM LIFT (SEE PAGE 68)	1	
7	A2700-39	HYD. CYL. ASSEMBLY LH / TIPPING FRAME (SEE PAGE 68)	1	
8	A2700-38	HYD. CYL. ASSEMBLY RH / TIPPING FRAME (SEE PAGE 68)	1	
9	C2893-00	HYD. CYL. PIN	2	
10	E2787-00	VALVE BANK SHIELD	1	
11	81549	BOLT HEX 0.313NC X 0.75GR5 PL	5	
12	81546	WASHER FLAT STD 0.313 HS PL	5	
13	812362	NUT LOCK (STEEL) 0.313NC GRBPL	5	
14	C2731-00	HYD. CYL. PIN	2	-1068G
	E2912-00	HYD. CYL. PIN	2	02BM4000001-

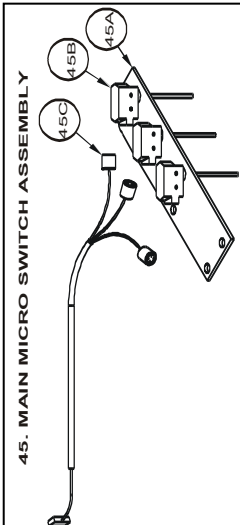
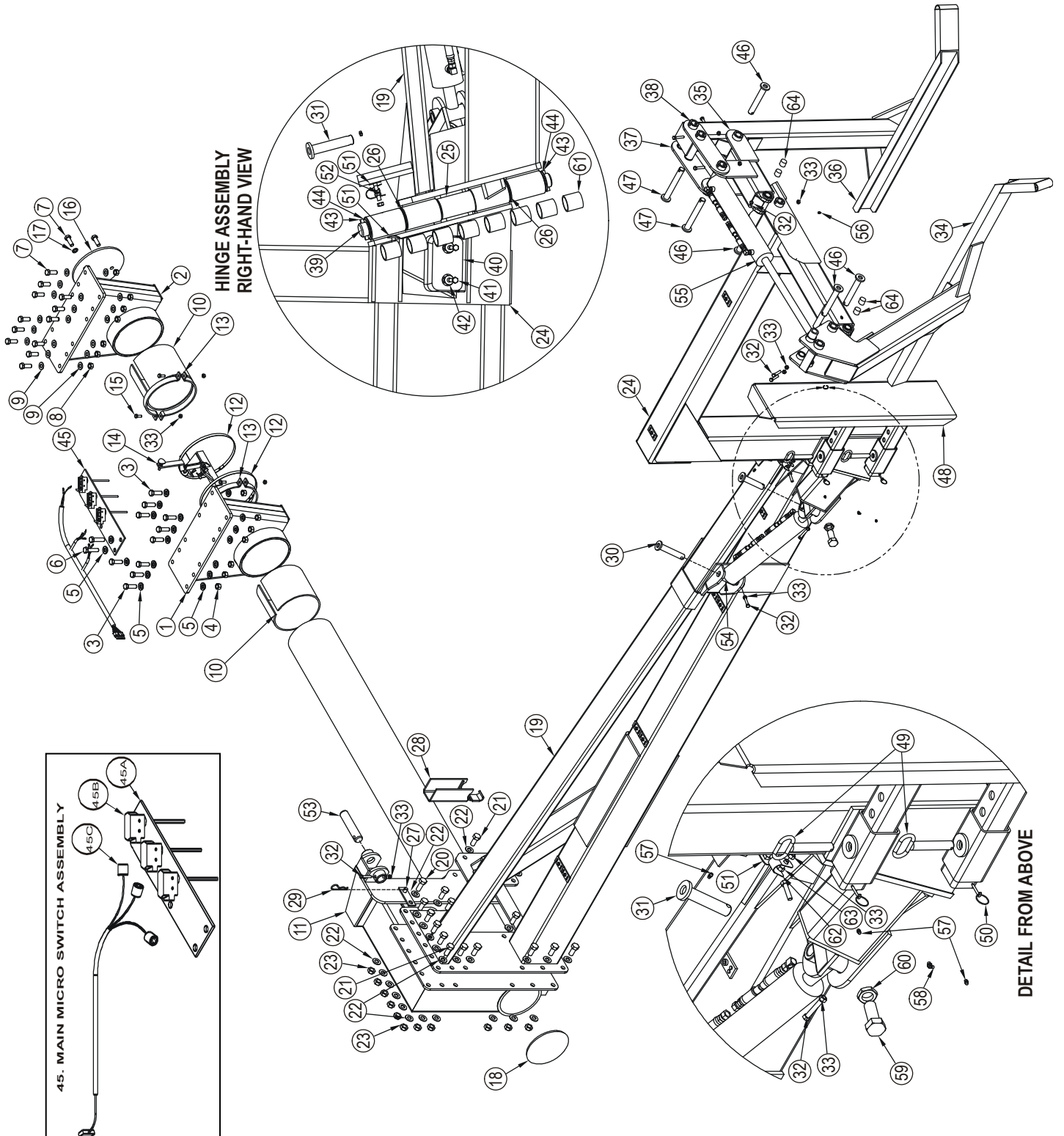
ARM ASSEMBLY



ARM ASSEMBLY

REF	PART NUMBER	DESCRIPTION	QTY	SERIAL NUMBER
1	C2790-00	PIVOT HOLDER RH	1	
2	C2875-00	PIVOT HOLDER LH	1	
3	813729	BOLT HEX 0.625NC X 2.00L9PL	10	
4	813731	NUT LOCK 0.625NC L9 PL	12	
5	813730	WASHER FLAT 0.625 L9 PL	24	
6	813732	BOLT HEX 0.625NC X 2.50 L9PL	2	
7	967285	BOLT HEX 0.625NC X 1.75GR8 PL	14	
8	813529	NUT LOCK (STEEL) 0.625NC GRCPL	12	
9	812639	WASHER FLAT SAE 0.625 BS PL	24	
10	E2791-00	SPLIT BUSHING	2	
11	C2711-00	PIVOT ARM	1	
12	20675	8-10" GEAR CLAMP	2	
13	E2746-00	CLAMP / PIVOT ARM	4	
14	A2700-22	SWITCH ACTIVATOR ASSEMBLY	1	
14A	C2859-00	SWITCH ACTIVATOR MOUNT	1	
14B	E2865-00	SWITCH ACTIVATOR	3	
14C	986045	NUT HEX JAM 0.375NC GR2 PL	6	
14D	C2909-00	ADJUSTABLE MOUNT BRACKET	1	
14E	812363	NUT LOCK (STEEL) 0.375NC GRBPL	1	
15	86171	BOLT HEX 0.375NC X 1.25GR5 PL	4	
16	B2724-00	END CAP LH/PIVOT ARM	1	
17	81677	WASHER LOCK 0.625 PL	2	
18	26026	8" CHROME HUB CAP	1	
19	C2712-00	MAIN LIFT ARM WELD'T	1	
20	967286	BOLT HEX 0.750NC X 2.00GR8 PL	1	
21	813514	BOLT HEX 0.750NC X 1.75GR8 PL	19	
22	84050	WASHER FLAT SAE 0.750 BS PL	40	
23	813648	NUT LOCK (STEEL) 0.750NC GRCPL	20	
24	C2896-00	SWING ARM WELD'T	1	
25	E2745-00	HINGE SPACER	1	
26	813598	WASHER FLAT 2.19X1.5X0.061 HST	2	
27	C2863-00	LIFT CYL. LOCK HOLDER	1	
28	C2862-00	LIFT CYL. LOCK	1	
29	12779	HAIR PIN CLIP # 9 WESTERN WIRE	1	
30	C2731-00	HYD. CYL. PIN	1	
31	C2878-00	HYD. CYL. PIN/SWING ARM	1	
32	811795	BOLT HEX 0.375NC X 2.00GR5 PL	9	
33	812363	NUT LOCK (STEEL) 0.375NC GRBPL	13	
34	C2882-00	RIGHT GRAB ARM WELD'T	1	
35	C2895-00	GRAB ARM LINK WELD'T	1	
36	C2881-00	LEFT GRAB ARM WELD'T	1	
37	C2896-00	REAR ARM EXTENSION WELD'T	1	
38	C2716-00	FRONT ARM EXTENSION	1	
39	E2873-00	HINGE PIN/SWING ARM	1	
40	E2860-00	RUBBER BUMPER/SWING ARM	1	

ARM ASSEMBLY (CONTINUED)



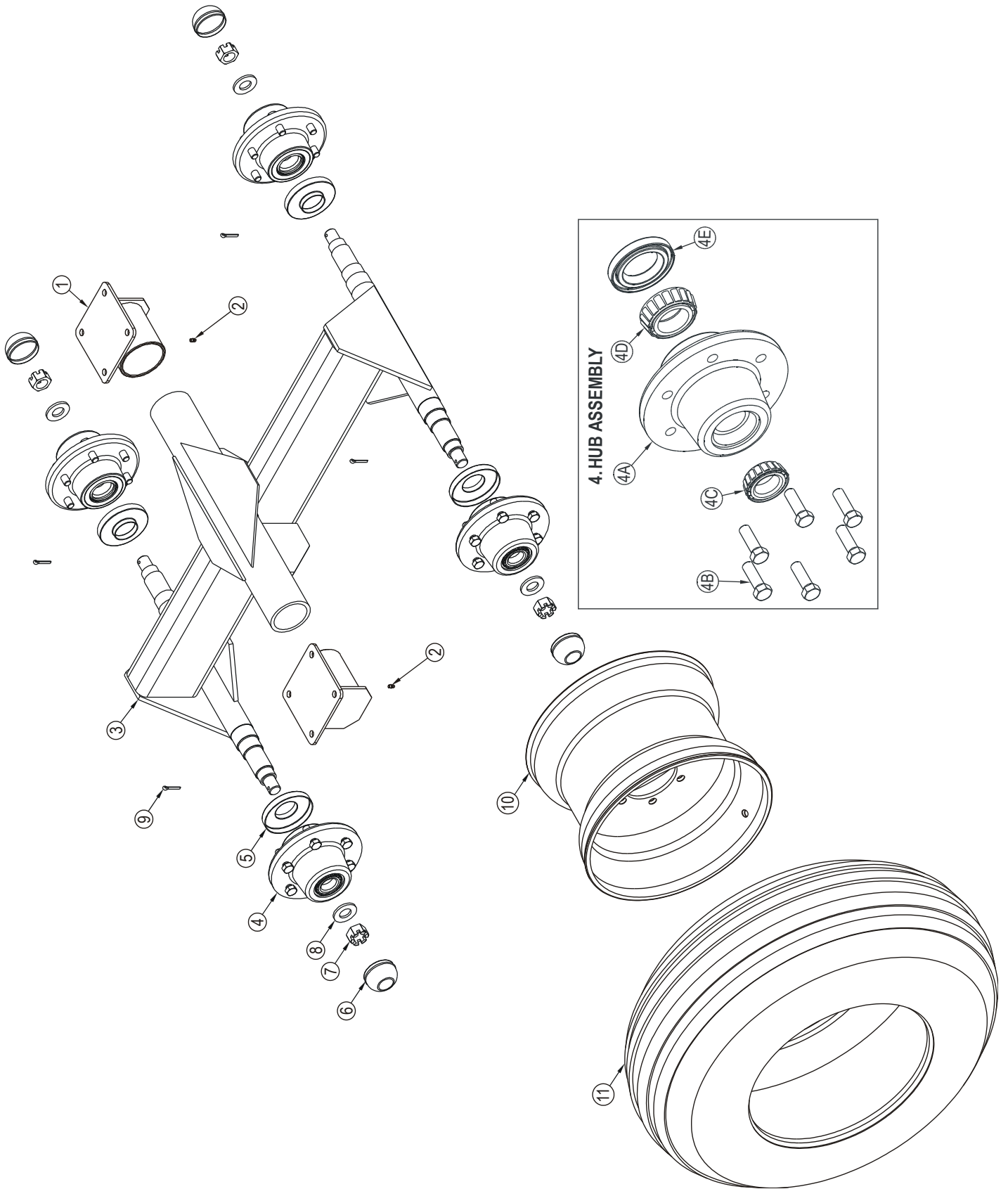
**HINGE ASSEMBLY
RIGHT-HAND VIEW**

DETAIL FROM ABOVE

ARM ASSEMBLY (CONTINUED)

REF	PART NUMBER	DESCRIPTION	QTY	SERIAL NUMBER
42	84039	WASHER FLAT SAE 0.375 BS PL	2	
43	936201	3/8"X2 1/4" ROLL PIN (#1080SB)	2	
44	813600	WASHER FLAT 2.13X1.531X0.062PL	2	
45	A2700-15	MAIN MICRO SWITCH ASSEMBLY	1	
45A	C2743-00	MAIN MICRO SWITCH MOUNT	1	
45B	25034	MICRO SWITCH / HONEYWELL BZE62RN18	3	
45C	22132	ARM HEIGHT CONTROL HARNESS	1	
46	C2879-00	PIN / GRAB ARM LINK	4	
47	C2880-00	PIN / REAR ARM EXTENTION	2	
48	C2718-00	BALE STOP / SWING ARM	1	
49	C2753-00	PIN / BALE STOP	2	
50	810577	KLIK PIN 3/16 DANUSER #7637	2	
51	E2865-00	SWITCH ACTIVATOR	2	
52	986045	NUT HEX JAM 0.375NC GR2 PL	6	
53	E2732-00	CYL. PIN – ROD END / MAIN ARM LIFT	1	
54	A2700-23	HYD. CYL. ASSEMBLY / SWING ARM (SEE PAGE 68)	1	
55	A2700-24	HYD. CYL. ASSEMBLY / GRAB ARM (SEE PAGE 68)	1	
56	813646	GREASE FITTING 1/4 NF DRIVEN	2	
57	84062	GREASE FITTING 1/4 NF STRAIGHT	3	
58	21812	GREASE FITTING 1/4 NF 90 DEG	1	
59	81729	BOLT HEX 1.000NC X 2.50GR5 PL	1	
60	84051	NUT HEX JAM 1.000NC GR2 PL	1	
61	20251	BUSHING 1.75 OD X 1.5 ID BRZ	8	02BM4000001-
62	E2911-00	ACTIVATOR – DIMMER SWITCH	1	
63	84072	BOLT HEX 0.375NC X 0.75GR5 PL	1	
64	113577	BUSHING 1" ID X 1-1/4" OD X 1-3/8"	4	02BM4000001-

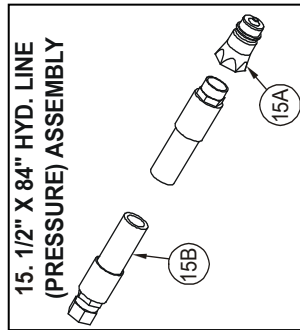
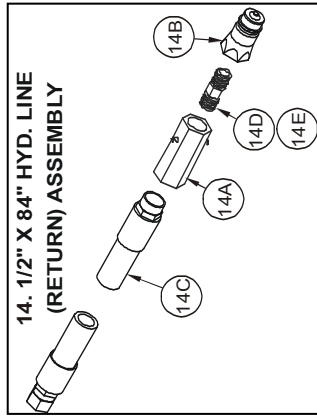
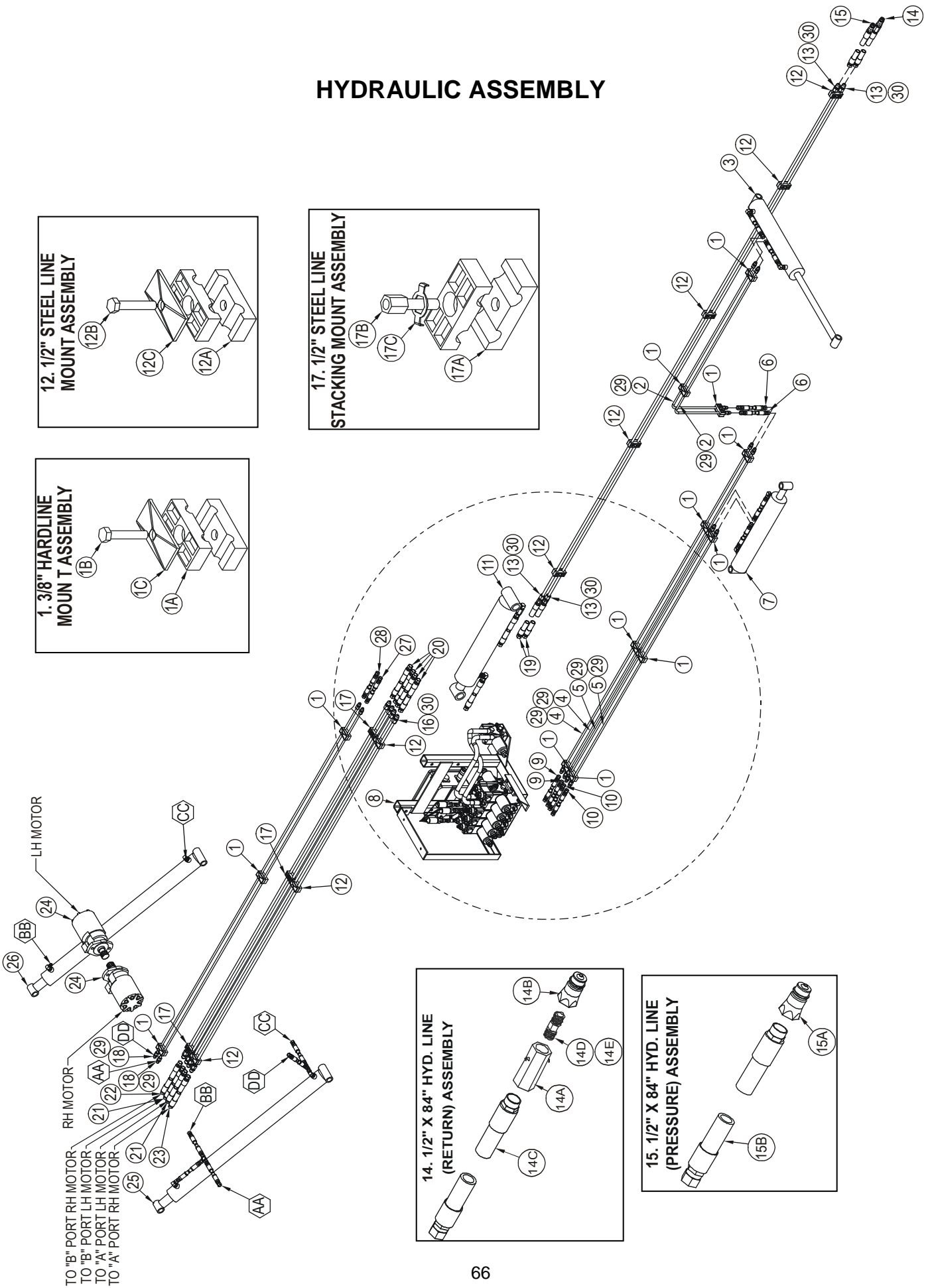
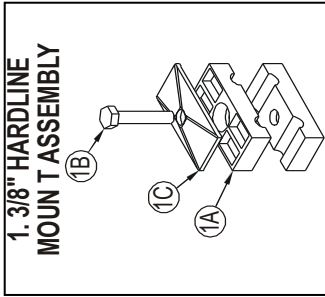
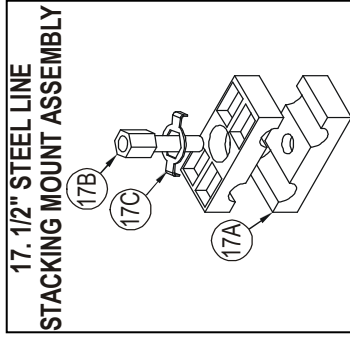
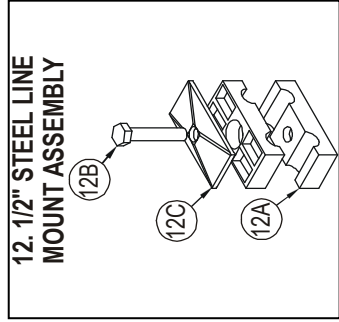
TANDEM AXLE ASSEMBLY



TANDEM AXLE ASSEMBLY

REF	PART NUMBER	DESCRIPTION	QTY	SERIAL NUMBER
1	C2322-00	AXLE BEARING WELD'T	2	
2	813646	GREASE ZERK 1/4" SELF TAPPING	2	
3	C2722-00	TANDEM AXLE WELD'T	1	
4	C2339-00	HUB ASSEMBLY	4	
4A	813652	6 BOLT WHEEL HUB	1	
4B	813653	9/16" HUB BOLT	6	
4C	967205	OUTER BEARING	1	
4D	967208	INNER BEARING	1	
4E	967204	OIL SEAL SE-30	1	
5	813649	DUST SHIELD	4	
6	813650	DUST CAP	4	
7	813673	HEX NUT SUPPLIED WITH SPINDLE	4	
8	813651	1-1/32" X 2" X .188" FLATWASHER BLK.	4	
9	81206	3/16" X 1-1/2 " COTTER PIN BLK.	4	
10	813655	15 X 10lb X 6 BOLT P65 RIM	4	
	813656	TR-416-MS VALVE STEM WITH CAP	4	
11	813657	12.5 X 15FI TIRE	4	

HYDRAULIC ASSEMBLY

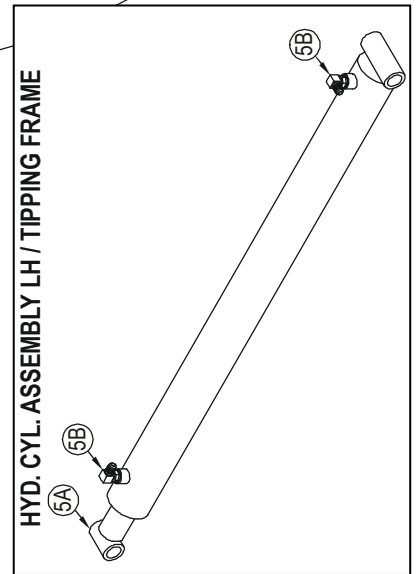
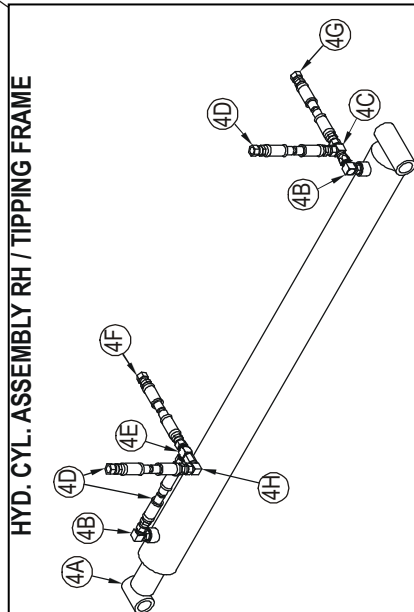
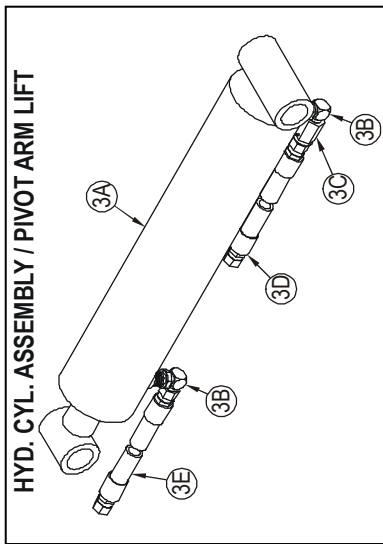
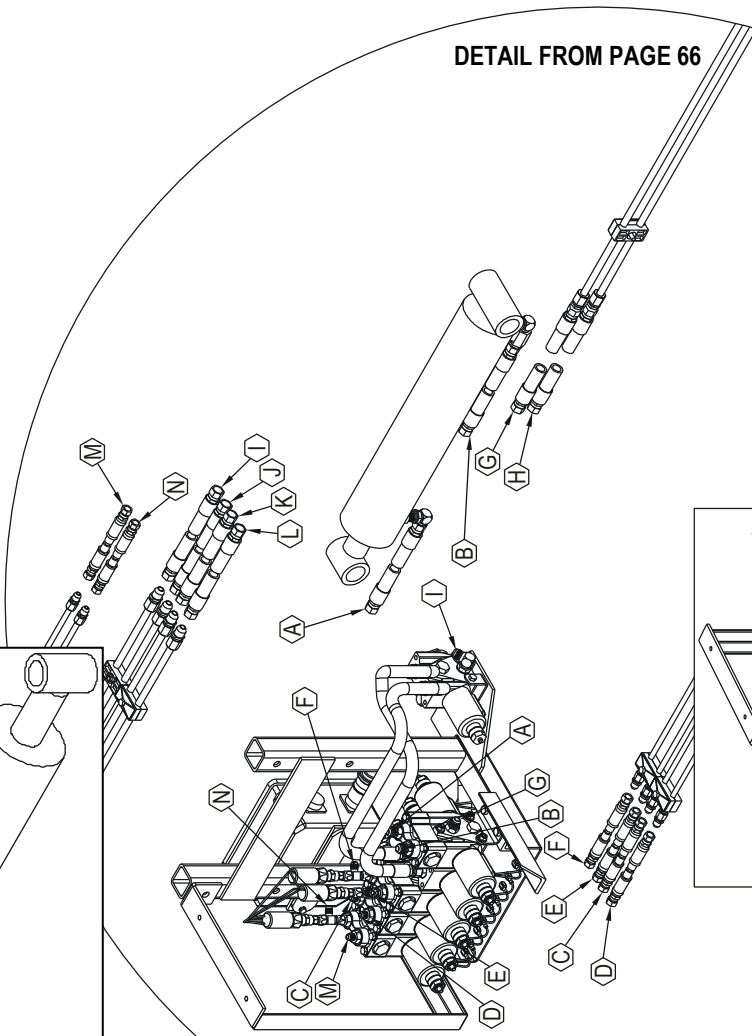
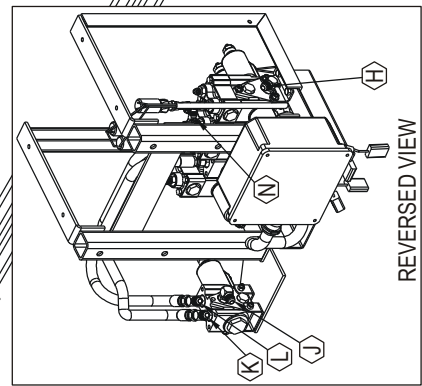
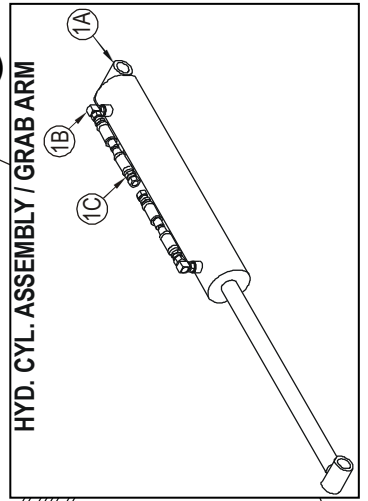
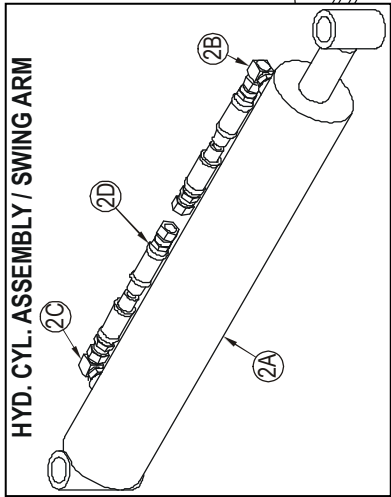


HYDRAULIC ASSEMBLY

REF	PART NUMBER	DESCRIPTION	QTY	SERIAL NUMBER
1	A2700-26	3/8" HARDLINE MOUNT ASSEMBLY	13	
1A	29250	3/8" STEEL LINE MOUNT	2	
1B	29255	MOUNTING BOLT	1	
1C	29256	COVER PLATE	1	
2	A2700-30	3/8" HYDRAULIC LINE TUBING / JIC STANDARD	2	
3	A2700-24	HYD. CYL. ASSEMBLY / GRAB ARM (SEE PAGE 68)	1	
4	A2700-31	HYD HARDLINE ASSY 0.375X93	2	
5	A2700-32	HYD HARDLINE ASSY .375 X 72	2	
6	812179	HOSE3/8X60 9/16SWFJIC	2	
7	A2700-23	HYD. CYL. ASSEMBLY / SWING ARM (SEE PAGE 68)	1	
8	A2700-16	VALVE BANK ASSEMBLY (SEE PAGE 70)	1	
9	29146	HOSE3/8X62 9/16SWFJIC	2	
10	812175	HOSE3/8X72 9/16SWFJIC	2	
11	A2700-25	HYD. CYL. ASSEMBLY / PIVOT ARM LIFT (SEE PAGE 68)	1	
12	A2700-27	1/2" STEEL LINE MOUNT ASSEMBLY	8	
12A	29251	1/2" STEEL LINE MOUNT	2	
12B	29255	MOUNTING BOLT	1	
12C	29256	COVER PLATE	1	
13	A2700-33	HYD HARDLINE ASSY 0.50X204	2	
14	A2700-34	1/2" X 84" HYD. LINE (RETURN) ASSEMBLY	1	
14A	813666	LINE CHECK VALVE 3/4ORB PORTS	1	
14B	812841	MALE TIP 0.5 BODY 0.75 ORB	1	
14C	115315	HOSE1/2X84 3/4MORB X 3/4SWFJIC	1	
14D	813119	ADAPTOR STR 3/4MORB X 3/4MORB	1	
15	A2700-35	1/2" X 84" HYD. LINE (PRESSURE) ASSEMBLY	1	
15A	812841	MALE TIP 0.5 BODY 0.75 ORB	1	
15B	115315	HOSE1/2X84 3/4MORB X 3/4SWFJIC	1	
16	A2700-36	HYD HARDLINE ASSY 0.50X108	4	
17	A2700-28	1/2" STEEL LINE STACKING MOUNT ASSEMBLY	3	
17A	29251	1/2" STEEL LINE MOUNT	2	
17B	29254	STACKING BOLT	1	
17C	29253	BOLT LOCK	1	
18	A2700-37	HYD HARDLINE ASSY 0.375X108	2	
19	29166	HOSE1/2X77 3/4SWFJIC X SWFJIC	2	
20	812449	HOSE1/2X36 3/4SWFJIC	4	
21	29163	HOSE1/2X38 3/4SWFJIC X 7/8MORB	2	
22	115001	HOSE1/2X24 3/4SWFJIC X 7/8MORB	1	
23	29162	HOSE1/2X36 3/4SWFJIC X 7/8MORB	1	
24	B2799-00	22.2 CU.IN. HYD. MOTOR	2	
25	A2700-38	HYD. CYL. ASSEMBLY RH / TIPPING FRAME (SEE PAGE 68)	1	
26	A2700-39	HYD. CYL. ASSEMBLY LH / TIPPING FRAME (SEE PAGE 68)	1	
27	29142	HOSE3/8X38 9/16SWFJIC X SWFJIC	1	
28	812213	HOSE3/8X48 9/16SWFJIC	1	
29	29261	#6 FERLULOK 3/8" TUBE 3/8" JIC	16	
30	29260	#8 FERULOK M JIC COMPLETE	12	

HYDRAULIC ASSEMBLY (CONTINUED)

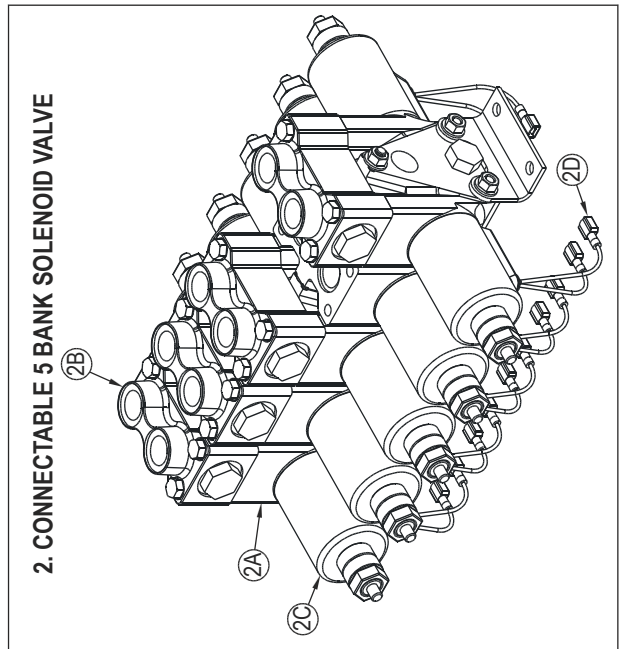
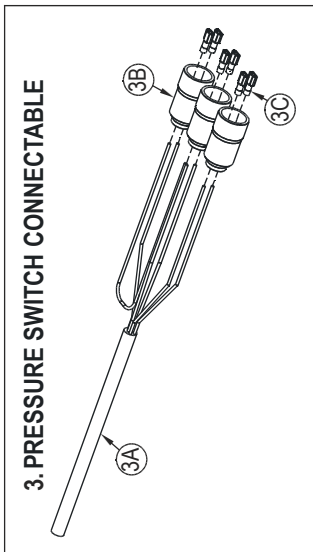
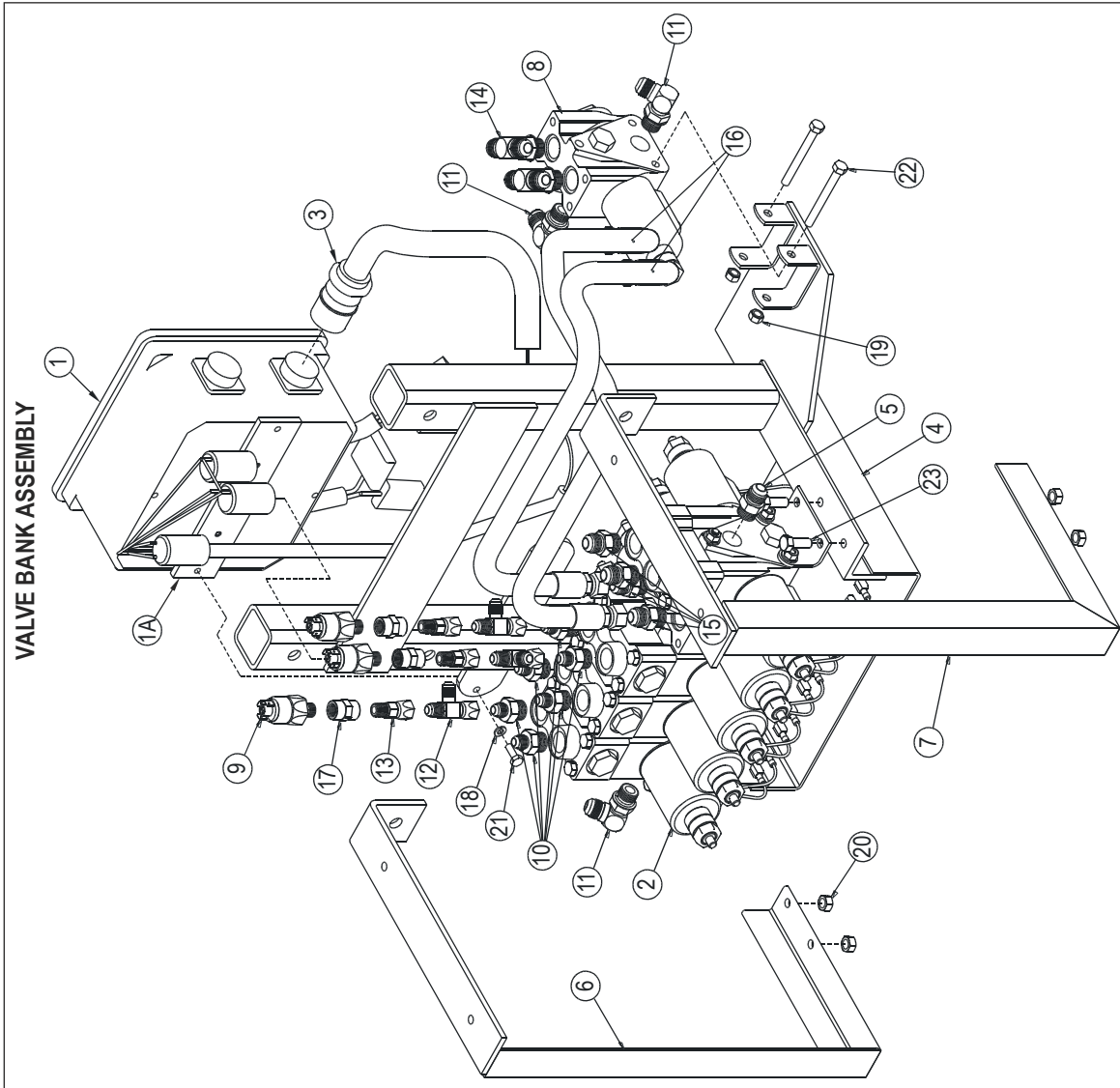
DETAIL FROM PAGE 66



HYDRAULIC ASSEMBLY (CONTINUED)

REF	PART NUMBER	DESCRIPTION	QTY	SERIAL NUMBER
1A	22510	CYL 3.0 DIA X 16.0 INLAND	1	
	22510-01	SEAL KIT FOR 22510 (SHUR-LIFT)		-1068G
	X2504	SEAL KIT FOR 22510 (ALLIED)		02BM4000001-
1B	813640	ELBOW 90 9/16MORB X 3/8MJIC	2	
1C	29140	HOSE3/8X28 9/16SWFJIC X SWFJIC	2	
2A	22510	CYL 3.0 DIA X 16.0 INLAND	1	
	22510-01	SEAL KIT FOR 22510 (SHUR-LIFT).		-1068G
	X2504	SEAL KIT FOR 22510 (ALLIED)		02BM4000001-
2B	E2872-00	MALE ELBOW ADAPTER W/RESTRICTOR	1	
2C	813640	ELBOW 90 9/16MORB X 3/8MJIC	1	
2D	29140	HOSE3/8X28 9/16SWFJIC X SWFJIC	2	
	22511	4" X 18" STROKE HYD. CYL.		
3A	22511-02	SEAL KIT FOR 22510 (SHUR-LIFT).	1	-1068G
	24879	4" X 18" STROKE HYD. CYL.		
	X2315	SEAL KIT FOR 24879(ALLIED)		02BM4000001-
3B	811414	ELBOW 90 3/4 MORB X 3/4 MJIC	2	
3C	22170	LINE THROTTLE VALVE 0.75-16UNF	1	
3D	811749	HOSE1/2X60 3/4SWFJIC	1	
3E	29164	HOSE1/2X44 3/4SWFJIC X SWFJIC	1	
	22509	3" X 36" STROKE HYD. CYL.		
4A	22509-01	SEAL KIT FOR 22509 (SHUR-LIFT).	1	-1068G
	24876	CYL 3.5 DIA X 36.0 INLAND		
	X2314	SEAL KIT FOR 24876(ALLIED)	1	02BM4000001-
4B	813640	ELBOW 90 9/16MORB X 3/8MJIC	2	
4C	887572	TEE 9/16 MJIC X 9/16 SWFJIC	1	
4D	812909	HOSE3/8X36 9/16SWFJIC	3	
4E	29035	TEE RUN 9/16MJIC X 9/16MJIC	1	
4F	113448	HOSE3/8X84 9/16SWFJIC	1	
4G	29118	HOSE3/8X42 9/16SWFJIC X SWFJIC	1	
4H	812837	ELBOW 90 9/16SWFJIC X 9/16MJIC	1	
	22509	3" X 36" STROKE HYD. CYL.		
5A	22509-01	SEAL KIT FOR 22509 (SHUR-LIFT).	1	-1068G
	24876	CYL 3.5 DIA X 36.0 INLAND		
	X2314	SEAL KIT FOR 24876(ALLIED)	1	02BM4000001-
5B	813640	ELBOW 90 9/16MORB X 3/8MJIC	2	

HYDRAULIC ASSEMBLY (CONTINUED)



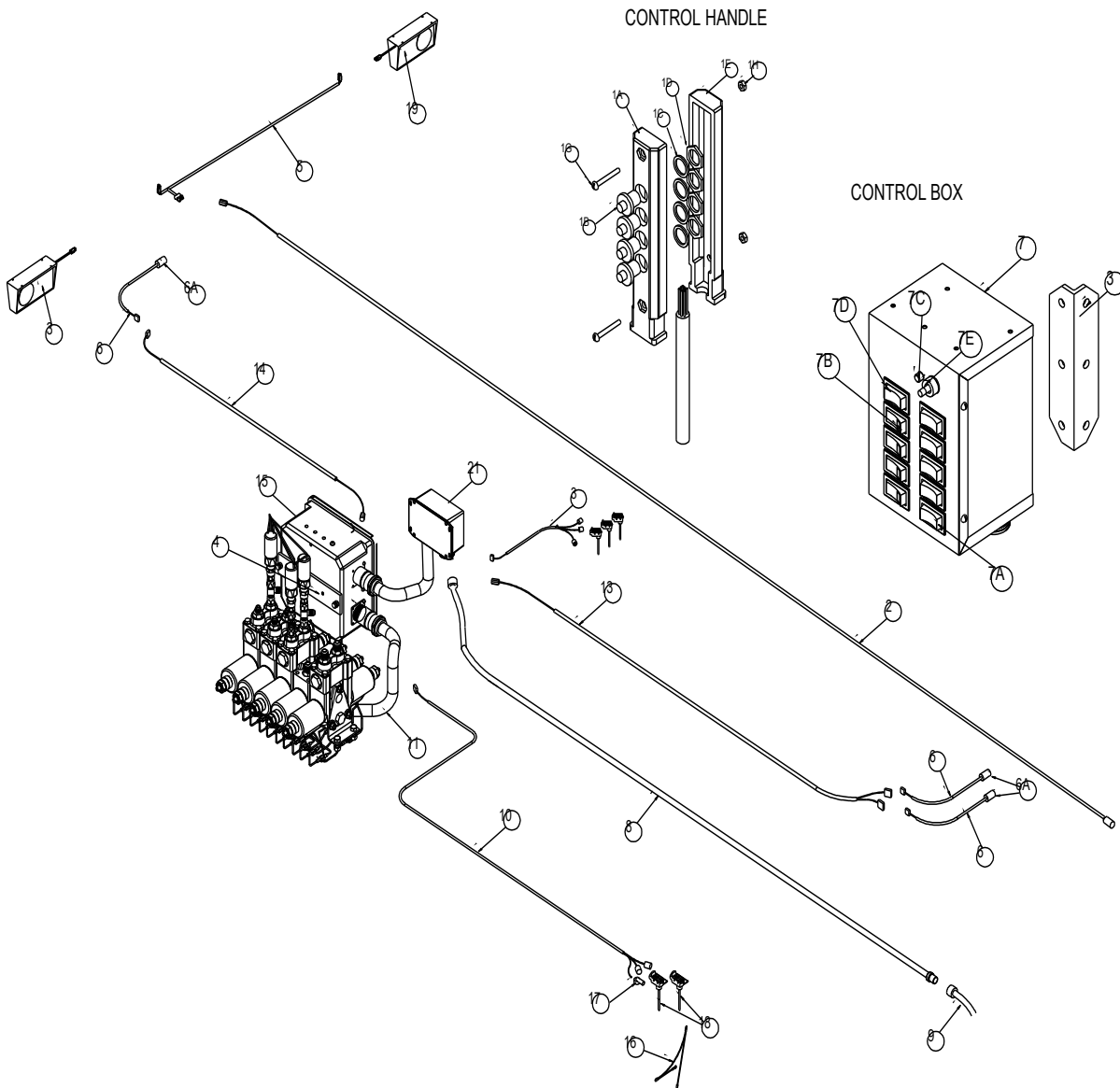
HYDRAULIC ASSEMBLY (CONTINUED)

REF	PART NUMBER	DESCRIPTION	QTY	SERIAL NUMBER
1	A2700-19	RELAY BOX ASSY.	1	
1A	E2856-00	RELAY BOX REINFORCER	1	
	81545	WASHER LOCK 0.250 PL.	2	
	81530	BOLT HEX 0.250NC X 1.75GR5 PL	2	
2	A2700-20	CONNECTABLE 5 BANK SOLENOID VALVE	1	
	22208	5 BANK SOLENOID VALVE (COMPLETE W/O CONECTORS)	1	
2A	22208-01	MV4-17 SPOOL SECTION	5	
2B	22208-02	MV4-A LOCK VALVE	4	
2C	22208-04	CO7-12LA COIL	10	
	22208-05	MV4-BK5 BOLT KIT	1	
	22208-06	MV4-AK1 ACCESS BOLT KIT	4	
2D	25069	CONNECTOR SPADE M INSULATED	10	
3	A2700-21	PRESSURE SWITCH CONNECTABLE	1	
3A	22131	HARNESS PRESSURE SWITCH	1	
3B	22212-01	PRESSURE SWITCH BONNET	3	
3C	25074	CONNECTOR SPADE FM	6	
4	C2738-00	VALVE BANK MOUNT	1	
5	E2781-00	FLOW RESTRICTOR	1	
6	C2785-00	LEFT SHIELD MOUNT	1	
7	C2786-00	RIGHT SHIELD MOUNT	1	
8	813664	SERIES PARALLEL VALVE (LOW & HIGH SPEED)	1	
9	22212	PRESSURE SWITCH SUCCO	3	
10	29005	ADAPTOR STR 9/16MJIC X 3/4MORB	6	
11	811414	ELBOW 90 3/4 MORB X 3/4 MJIC	3	
12	887572	TEE 9/16 MJIC X 9/16 SWFJIC	3	
13	29039	ADAPTOR STR 1/4MNPT X 9/16FJIC	3	
14	813667	TEE RUN 1/2MJIC X 3/4MORB	2	
15	812080	ADAPTOR STR 3/4MORB X3/4MJIC STR.	4	
16	812449	HOSE1/2X36 3/4SWFJIC	2	
17	29204	ADAPTOR STR 1/4FSAEP X1/4FSAEP	3	
18	81545	WASHER LOCK 0.250 PL	2	
19	812362	NUT LOCK (STEEL) 0.313NC GRBPL	6	
20	81525	BOLT HEX 0.250NC X 0.75GR5 PL	2	
21	810582	BOLT HEX 0.313NC X 3.00GR5 PL	2	
22	812026	BOLT HEX 0.313NC X 1.00GR5 PL	4	

ELECTRICAL ASSEMBLY

Snubber unit is designed to protect the momentary control switches. The snubber minimizes coil voltage discharge during the de-energizing of the valve solenoid coils. There are no serviceable parts within the unit.

WARNING Read and understand the safety messages listed in the Hayliner operator manual. Shut off all power to unit before inspecting, servicing, adjusting or repairing the Hayliner.




ELECTRICAL ASSEMBLY

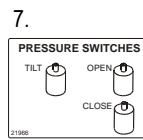
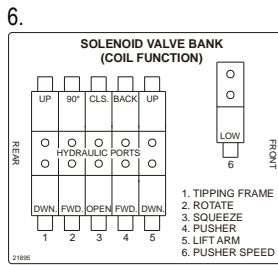
REF	PART NUMBER	DESCRIPTION	QTY	SERIAL NUMBER
	A2700-14	4 BUTTON CONTROL HANDLE COMPLETE	1	
1A	E2393-00	4 BUTTON CONTROL HANDLE HALF	1	
1B	22094	SWITCH	4	
1C	22094-01	WASHER	4	
1D	22094-02	NUT	4	
1E	22096-03	CONTROL HANDLE HALF	1	
1F				
1G	813542	#10-24 X 1-1/4" RD. HD. SLOT MACHINE SCREW	2	
1H	81286	#10-24 HEX NUT ZPL.	2	
2	E2779-00	MAIN HARNESS	1	
3	E2788-00	CONTROL BOX MOUNTING BRACKET	1	
	81547	BOLT HEX 0.313NC X 0.50GR5 PL	3	
	81568	BOLT HEX 0.313NC X 0.50GR5 PL	3	
	81569	WASHER LOCK 0.313 PL	3	
	81546	WASHER FLAT STD 0.313 HS PL	3	
4	E2856-00	RELAY BOX REINFORCER	1	
5	E2868-00	REAR CROSSMEMBER HARNESS	1	
6	E2870-00	PROXIMITY SENSOR HARNESS W/ SENSOR	3	
6A	25035	PROXIMITY SENSOR ONLY / HONEYWELL 992AA30AN-A2	3	
7	A2700-08	CONTROL BOX COMPLETE (For 4 button remote control)	1	
7A	813742	SWITCH ROCKER ON OFF ON MOM	5	
7B	813751	CARLINGSWITCH ON OFF	4	
7C	813743	LIGHT PILOT IND.	1	
7D	813741	SWITCH ROCKER ON OFF ON	1	
7E	813744	FUSE HOLDER (15 amp)	1	
8	E2919-00	MAIN HARNESS 25'	1	
9	E2924-00	EXTENSION HARNESS 12'	1	
10	E2920-00	LOADING ARM HARNESS	1	
11	A2700-21	MAIN VALVE AND PRESSURE SWITCH HARNESS	1	
12	22132	ARM HEIGHT CONTROL HARNESS	1	
13	E2921-00	PUSHER CONTROL HARNESS	1	
14	E2922-00	REAR SENSOR HARNESS	1	
15	A2700-19	CENTRAL RELAY JUNCTION BOX	1	
16	E2923-00	GROUNDING HARNESS	1	
17	25033	SELECTOR SWITCH	1	
18	25034	MICRO SWITCH / HONEYWELL BZE62RN18	5	
19	967067	DUAL LAMP LEFT HAND	1	
20	967054	DUAL LAMP RIGHT HAND	1	
21	813951	SNUBBER UNIT 4000	1	

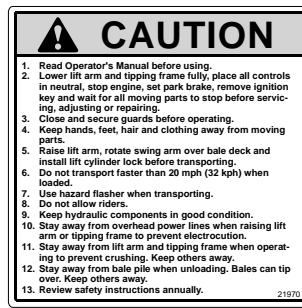
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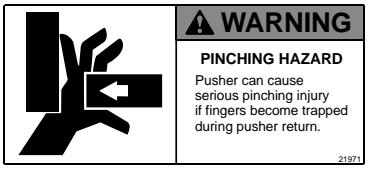
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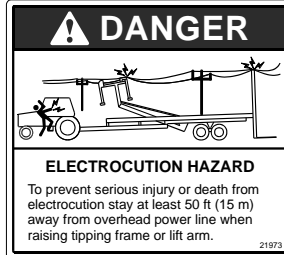
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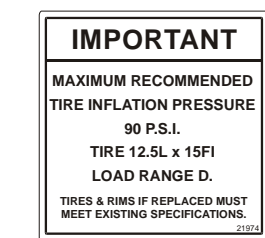


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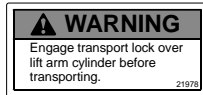
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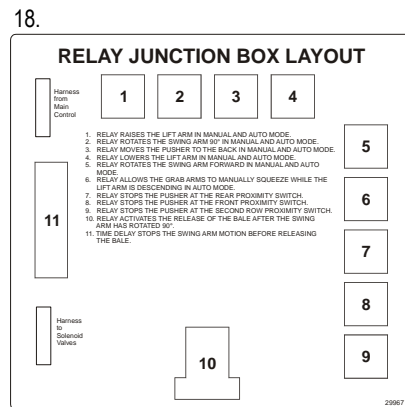
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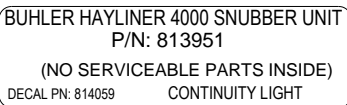
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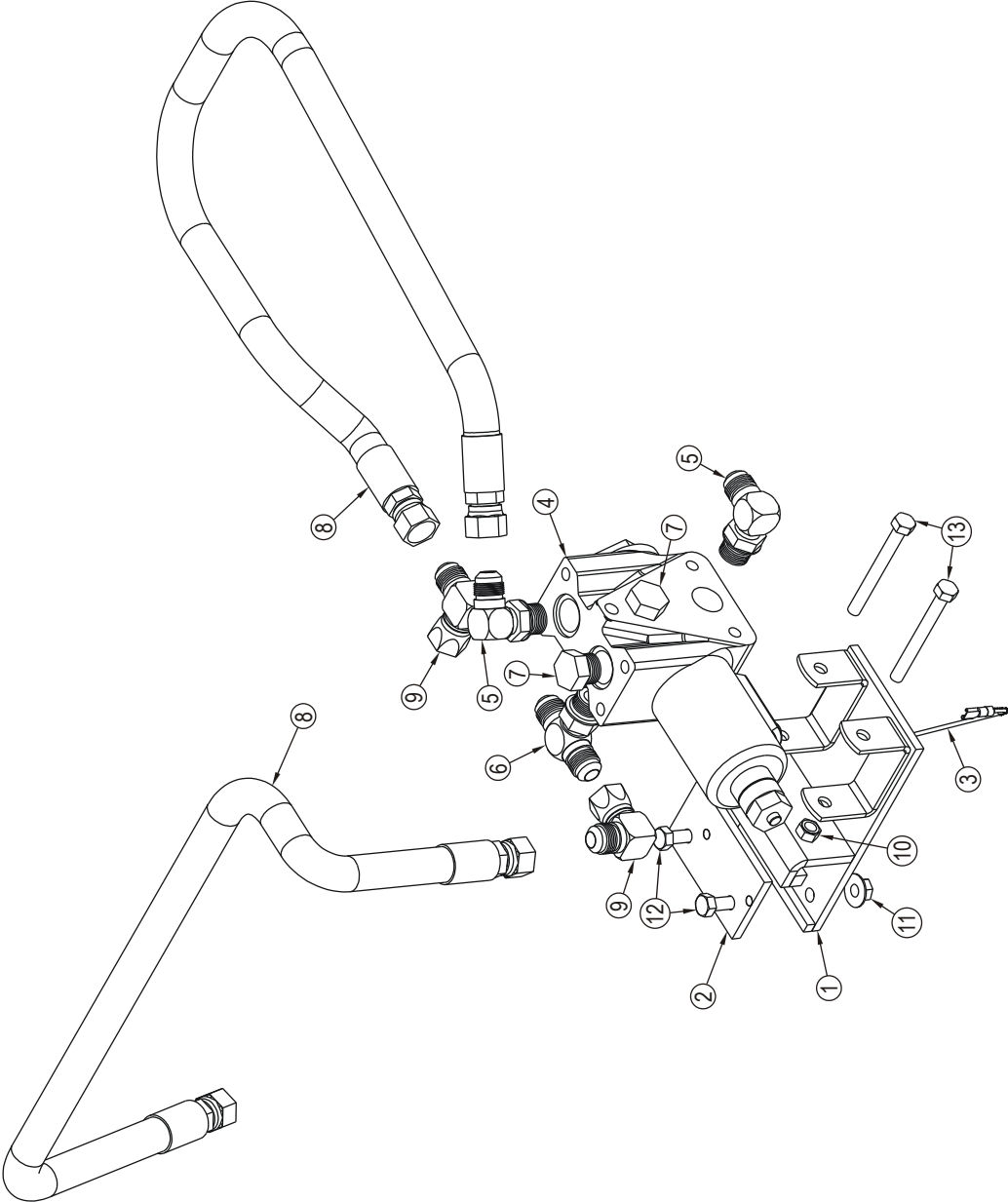


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DECALS

REF	PART NUMBER	DESCRIPTION	QTY	SERIAL NUMBER
1	21833	ARM & ROW SWITCHES DECAL	1	
	21867	LUBRICATION DAILY DECAL	22	
3	21980	INLAND DECAL	2	
4	21878	WARNING MOVING PARTS HAZARD DECAL	1	
5	21983	HAYLINER 4000 DECAL	2	
6	21895	SOLENOID VALVE BANK DECAL	1	
7	21966	PRESSURE SWITCH DECAL	1	
	967055	AMBER REFLECTIVE DECAL 2" X 9"	10	
	967053	RED REFLECTIVE DECAL 2" X 9"	3	
	813631	RED/ORANGE FLUORESCENT DECAL 2" X 9"	3	
8	21970	CAUTION DECAL	1	
9	813632	WARNING PINCHING HAZARD DECAL	1	
10	813736	WARNING PINCHING/CRUSHING HAZARD DECAL	4	
11	21973	DANGER ELECTROCUTION HAZARD DECAL	1	
12	21974	IMPORTANT TIRE INFLATION PRESSURE DECAL	2	
13	21975	IMPORTANT GROSS VEHICLE WEIGHT DECAL	1	
14	21976	DANGER FALLING BALE HAZARD DECAL	2	
15	813635	WARNING HIGH PRESSURE FLUID HAZARD DECAL	1	
16	21978	WARNING TRANSPORT LOCK DECAL	1	
17	21962	FOUR BUTTON HANDLE FUNCTION DECAL	1	
18	29967	RELAY JUNCTION BOX DECAL	1	
19	814059	DECAL SNUBBER UNIT 4000	1	

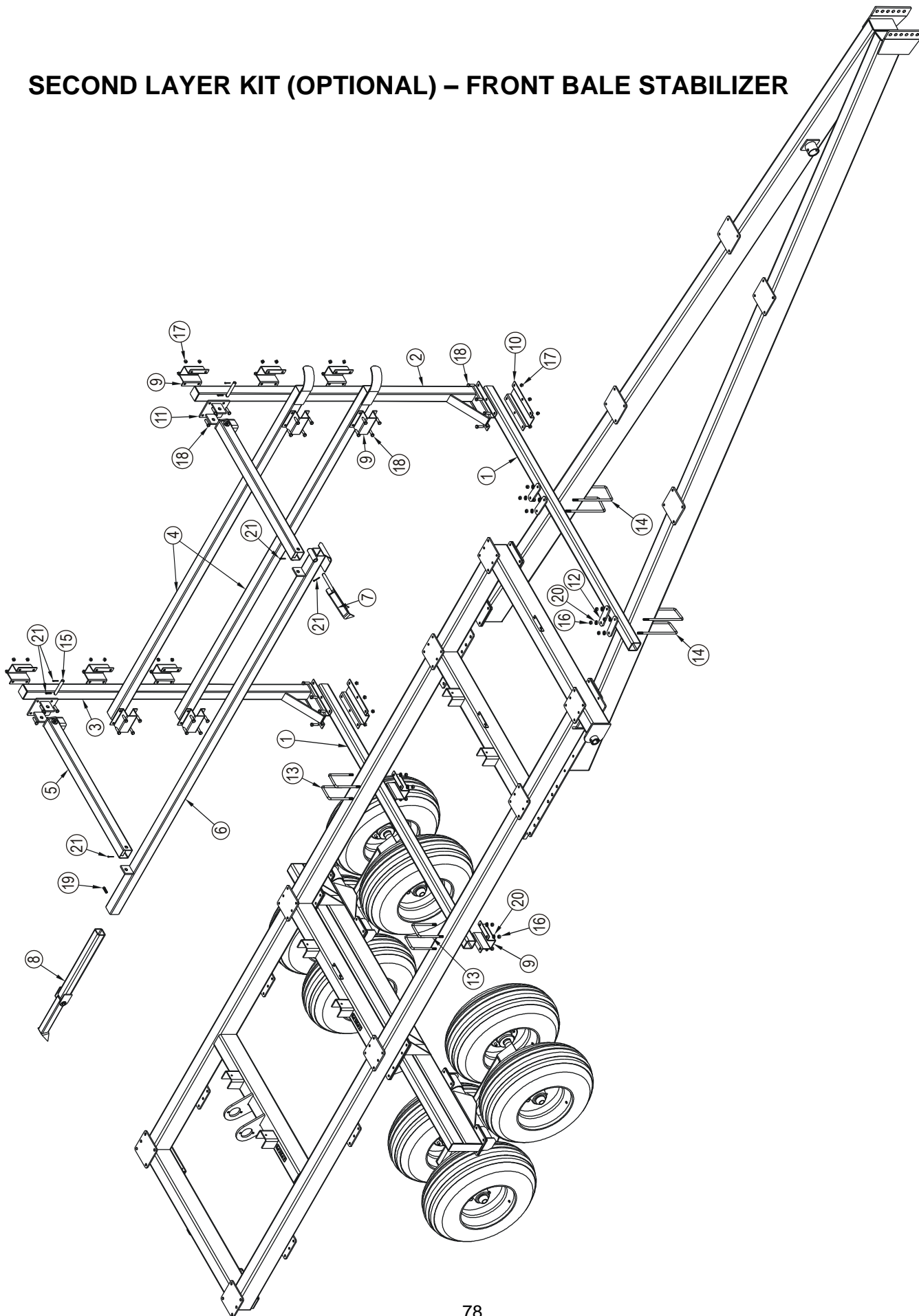
OPEN CENTER KIT (OPTIONAL)



OPEN CENTER KIT (OPTIONAL)

REF	PART NUMBER	DESCRIPTION	QTY	SERIAL NUMBER
1	C2883-00	OPEN CENTRE MOUNTING BRACKET	1	
2	E2884-00	CLAMP PLATE	1	
3	A2898-00	VALVE CONNECTION WIRE	1	
4	B7010-00	SERIES PARALLEL VALVE	1	
5	811414	ELBOW 90 3/4 MORB X 3/4 MJIC	2	
6	813667	TEE RUN 1/2MJIC X 3/4MORB	1	
7	812081	PLUG 3/4 MORB STL.721-FS0-08	3	
8	812449	HOSE1/2X36 3/4SWFJIC	2	
9	29200	ELBOW 90 3/4 FMJIC X 3/4 MJIC	2	
10	812362	NUT LOCK (STEEL) 0.313NC GRBPL	2	
11	813530	NUT LOCK (MAC) 0.313NC GRFPL	2	
12	81552	BOLT HEX 0.313NC X 1.25GR5 PL	2	
13	810582	BOLT HEX 0.313NC X 3.00GR5 PL	2	

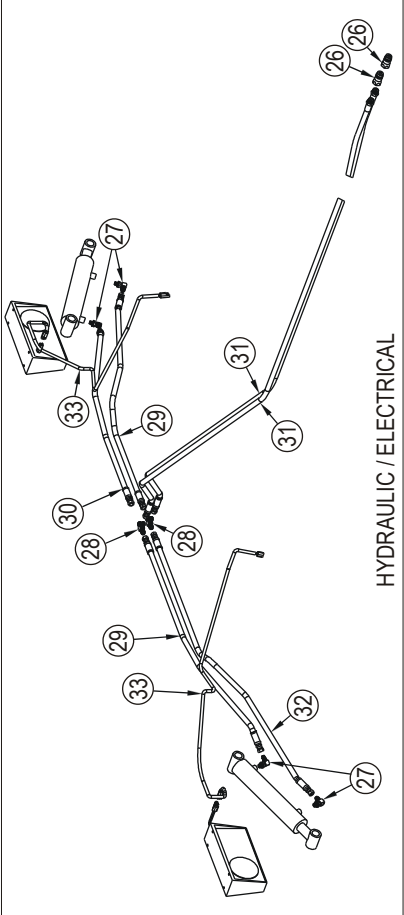
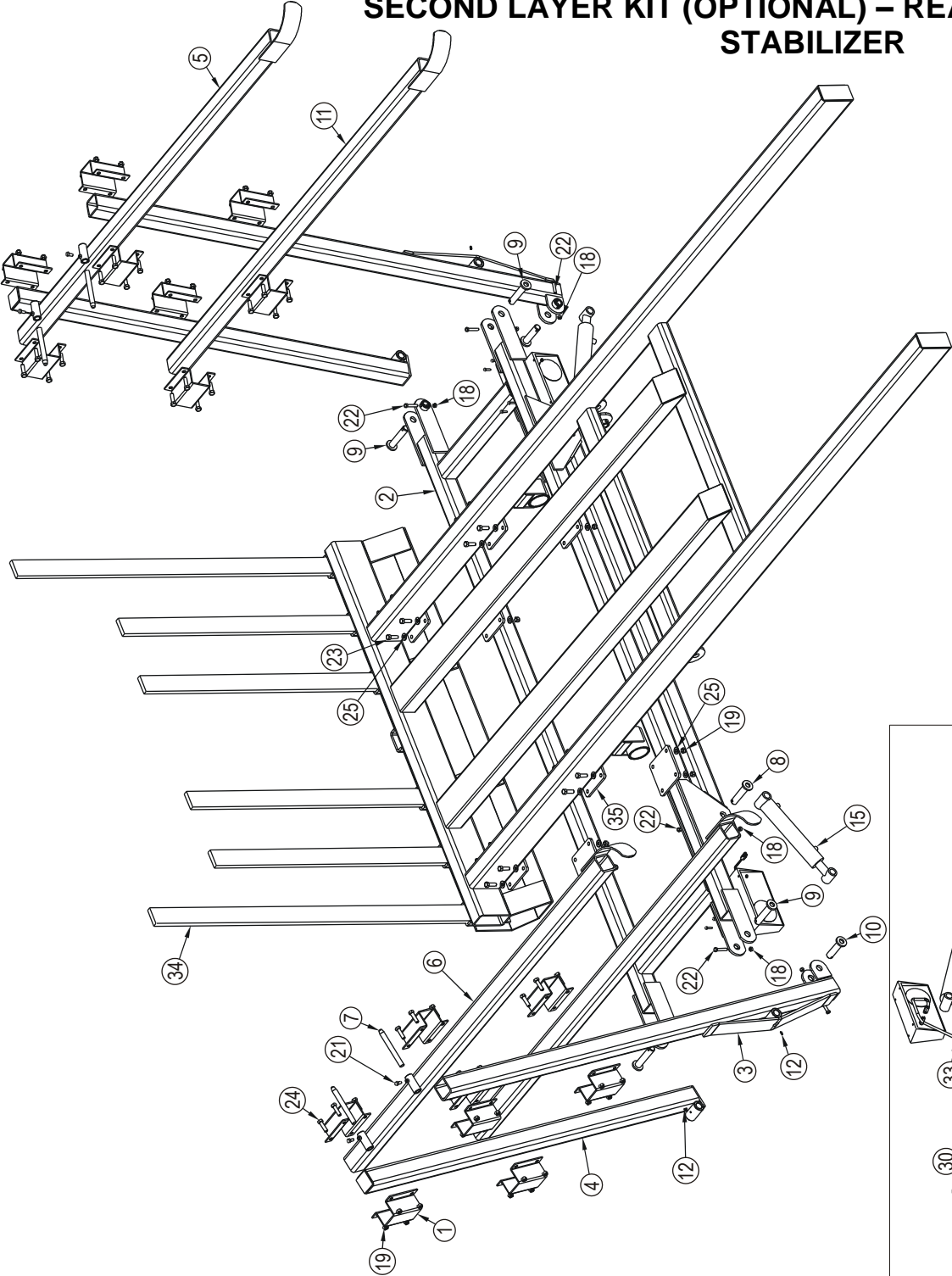
SECOND LAYER KIT (OPTIONAL) – FRONT BALE STABILIZER



SECOND LAYER KIT (OPTIONAL) – FRONT BALE STABILIZER

REF	PART NUMBER	DESCRIPTION	QTY	SERIAL NUMBER
	A2700-04	SECOND LAYER KIT COMPLETE		
1	E2825-00	BOTTOM SUPPORT	2	
2	C2826-00	FRONT UPRIGHT	1	
3	C2827-00	REAR UPRIGHT	1	
4	C2828-00	SIDE RAIL	2	
5	C2829-00	TOP RAIL SUPPORT	2	
6	C2830-00	TOP RAIL	1	
7	C2831-00	TOP FRONT BALE STOP	1	
8	C2832-00	TOP REAR BALE STOP	1	
9	E2833-00	SHORT CLAMP BRACKET	12	
10	E2834-00	LONG CLAMP BRACKET	2	
11	C2835-00	RAIL SUPPORT BOLT PLATE	2	
12	E2836-00	CLAMP PLATE	4	
13	E2837-00	FRAME U-BOLT	4	
14	E2838-00	HITCH BEAM U-BOLT	4	
15	E2840-00	TOP RAIL SUPPORT PIN	2	
16	813752	NUT HEX TALL 0.50NF GR5	16	
17	813663	NUT LOCK (STEEL) 0.500NC GRCPL	36	
18	813686	BOLT HEX 0.500NC X 1.75GR8 PL	36	
19	813547	SETSCREW SQHDCUP .500NCX1.50PL	1	
20	813583	WASHER FLAT 1.06X0.531X0.094PL	16	
21	812681	COTTER PIN 0.188 X 1.50 ZNPL	7	

SECOND LAYER KIT (OPTIONAL) – REAR STACK STABILIZER

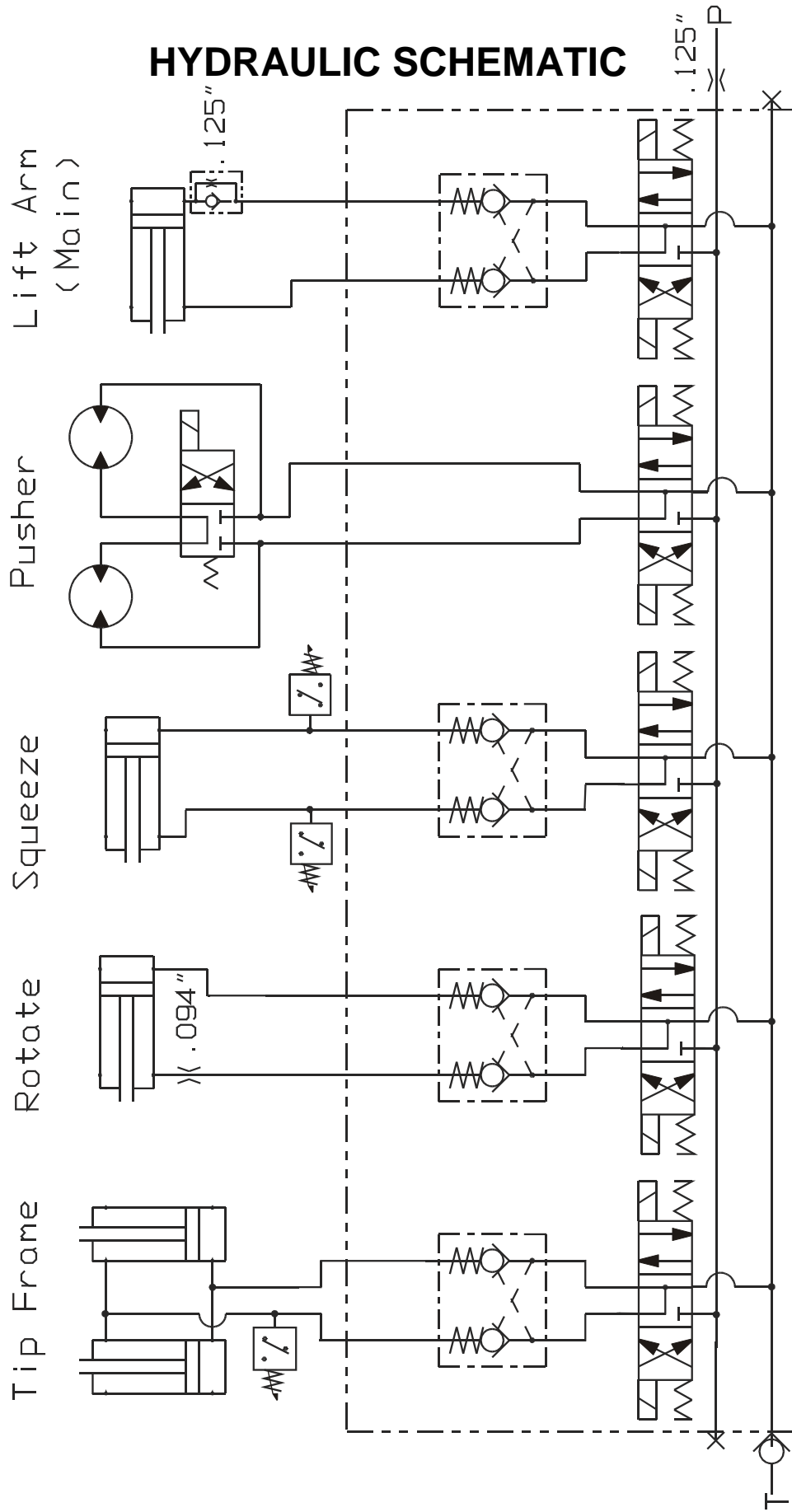


HYDRAULIC / ELECTRICAL

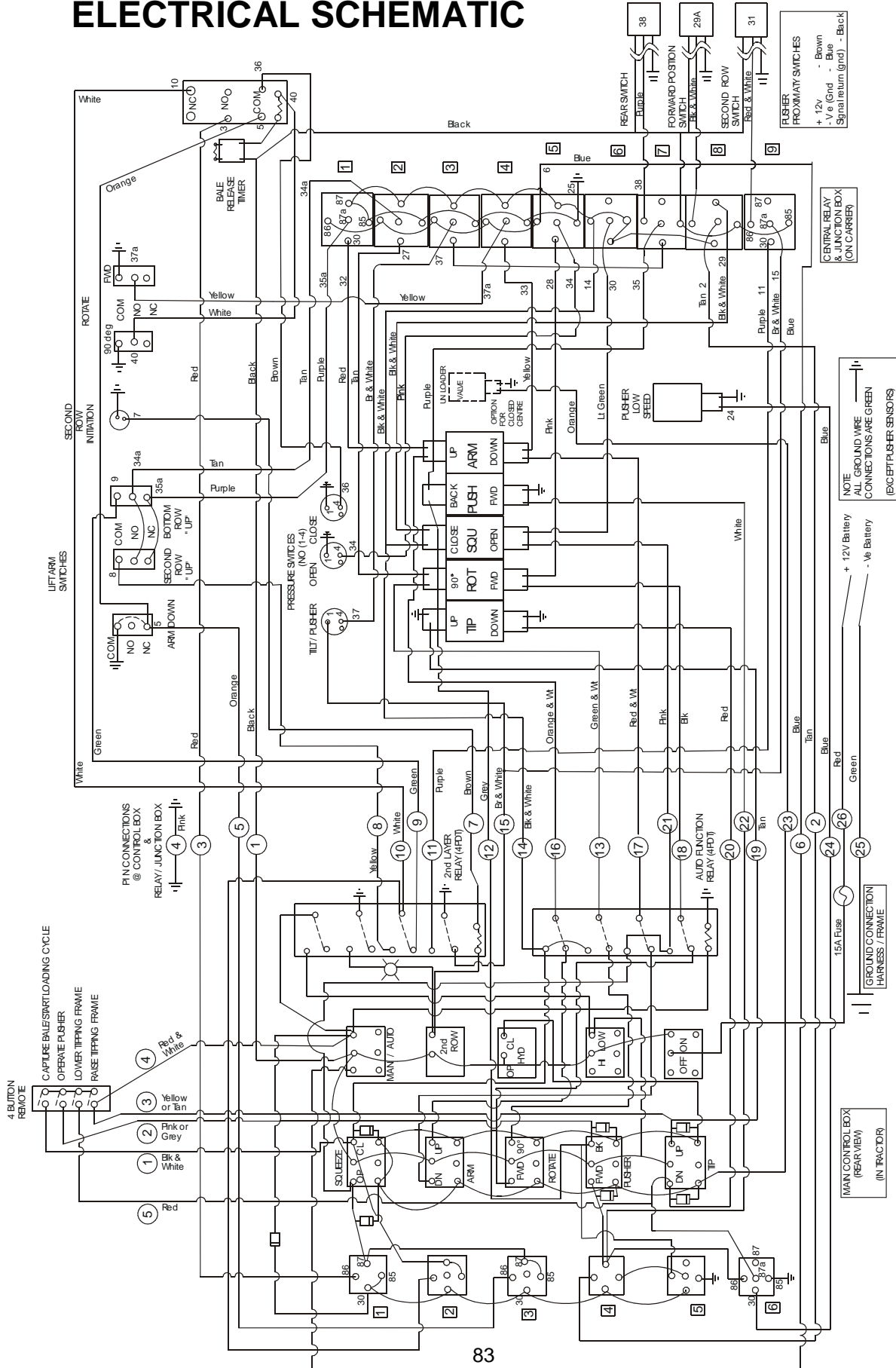
SECOND LAYER KIT (OPTIONAL) – REAR STACK STABILIZER

REF	PART NUMBER	DESCRIPTION	QTY	SERIAL NUMBER
1	E2833	SHORT CLAMP BRACKET	16	
2	C2885-00	TWO ROW MAINFRAME	1	
3	C2886-00	FRONT UPRIGHT	2	
4	C2887-00	BACK UPRIGHT	2	
5	C2888-00	LEFT GRAB RAIL WELDMENT	1	
6	C2889-00	RIGHT GRAB RAIL WELDMENT	1	
7	E2890-00	POINTER	4	
8	C2891-00	BASE CYLINDER PIN	2	
9	C2892-00	BUSHING HINGE PIN	4	
10	C2893-00	CYLINDER ROD PIN	2	
11	C2894-00	GRAB RAIL WELDMENT	2	
12	813646	GREASE FITTING 1/4 NF DRIVEN	4	
15	24891	CYL 2.0 DIA X 8.00 INLAND	2	
	X2357	SEAL KIT FOR 24891		
18	812363	NUT LOCK (STEEL) 0.375NC GRBPL	8	
19	813663	NUT LOCK (STEEL) 0.500NC GRCPL	48	
21	84072	BOLT HEX 0.375NC X 0.75GR5 PL	4	
22	811795	BOLT HEX 0.375NC X 2.00GR5 PL	8	
23	967274	BOLT HEX 0.500NC X 1.50GR8 PL	16	
24	813686	BOLT HEX 0.500NC X 1.75GR8 PL	32	
25	84048	WASHER FLAT SAE 0.500 BS PL	32	
26	812841	3/4" - 16 ORB PIONEER MALE COUPLING	2	
27	813640	ELBOW 90 9/16MORB X 3/8MJIC	4	
28	29035	TEE RUN 9/16MJIC X 9/16MJIC	2	
29	29118	HOSE3/8X42 9/16SWFJIC X SWFJIC	2	
30	812909	HOSE3/8X36 9/16SWFJIC	1	
31	29168	HOSE3/8X540 9/16SWFJICX3/4MORB	2	
32	812213	HOSE3/8X48 9/16SWFJIC	1	
33	A2899-00	LIGHTING EXTENSION HARNESS	2	
34	E2793-00	EXTENDED TAIL STOP	2	
35	INE2401-01	BOLT PLATE (for carriers built prior to 2000 production)	4	

HYDRAULIC SCHEMATIC



ELECTRICAL SCHEMATIC



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Fax: (204) 822-6348

Allied Factory
1201 Regent Ave. W.
Box 1003
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R3C 2W5
Ph.: (204) 661-8711
Fax: (204) 654-2503

Inland Factory
675 Washington Ave.
Winnipeg, MB
R2K 1M4
Ph.: (204) 667-7854
Fax: (204) 669-2599

CANADIAN WAREHOUSES

B.C., Abbotsford
(604) 864-2665

AB, Edmonton
(403) 962-6991

SK, Regina
(306) 781-2300

ON, Woodstock
(519) 539-0435

ON, Jasper
(613) 283-1758

PQ, Dorion
(405) 455-7946

OFFSHORE WAREHOUSES

Burando Hill
Kantanning
W. Australia

John Kerr Equipment Ltd.
Wilcoxholm Farm
Linlithgow, W. Lothian
Scotland

Praneda b.v.
Nijmegen
Holland

Canagro
6238 Hofheim-Wallau
Rathausstrobe, Germany

Tafe Access Ltd.
Madras
India

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675 Washington Ave.
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