Bale Stacker

FaStack 1800/1200

Operator Manual

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Highline MANUFACTURING
A DIVISION OF BOURGAULT INDUSTRIES LTD.

E22890_A

FaStack Bale Stacker 1800
FaStack Bale Stacker 1200

Operator Manual

From Serial Number FS4493701

Highline Manufacturing
HWY #27, P.O. Box 307
Vonda, SK S0K 4N0
Canada
Phone: 306.258.2233
Fax: 306.258.2010
Toll Free: 1.800.665.2010

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Highline Team Message

*Congratulations on your purchase of the **FaStack Bale Stacker 1800/1200** manufactured by Highline Manufacturing.*

This Operator's Manual has been prepared to provide information necessary for the safe and efficient operation of your Bale Stacker. In the manual you will find safety procedures, maintenance routines and detailed operational instructions.

If you find that you require information not covered in this manual, please feel free to consult your local dealer. Your dealer is always able to contact Highline for this technical information.

Highline Manufacturing thanks and congratulates you for selecting a FaStack Bale Stacker 1800/1200 as your machine of choice.

Highline Manufacturing

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GENERAL DESCRIPTION OF FASTACK BALE STACKER 1800/1200

The FaStack Bale Stacker 1800 and FaStack Bale Stacker 1200 are designed to pick up square bales while driving in the field without the need to stop to pick up a bale.

The number of bales that can be loaded on the stacker is determined by the size of bale, weight of the bales and the orientation of the bale. The FaStack can load the bales "On" or "Off" the strings. The bale clamp can be adjusted for different sizes of bales and for the conditions of the bales.

The bale lift arm is lowered and positioned by the tractor driver to clamp around the bale. The lift arm is raised for the bale to be placed on the front table. The lift arm can turn the bales 90 degrees from the field orientation when lifting onto the front table. The lift arm can also use a flipper to keep the bale in the same orientation that it is in the field. This allows the choice of either "On Strings" or "Off Strings" loading.

The front table lifts the bales onto the rear bale table. As the bales are loaded onto the rear table, the bales are moved back. The FaStack 1200 has the option to rotate the bales before loading onto the rear table. Rotating the bales gives the 1200 the ability to stack bales at the end of a stack. Rotating also always the bales to be "tie stacked". The user has more flexibility as to where the bales can be stacked whether it be in the field or in a shed.

For unloading the bale stack, the rear table is lifted. Once the rear table is lifted, the FaStack is driven forward and the bale stack is unloaded. The 1200 has pushoffs to assist in the unloading of the stack.

The Bale Stacker utilizes electronic controls to control the hydraulic functions. The hydraulic and electrical power is supplied by the tractor.

The operator of the Bale Stacker is located in the tractor cab where they drive the tractor, control the speed of driving and the operation of the bale lift arm and tables.

The Bale Stacker is transported with the bale arm lifted and locked in position and the tables lowered.

INTENDED USE OF THE FASTACK BALE STACKER

- The Bale Stacker is designed to pick up square bales that are in the field and move them to a storage location where they are unloaded.
- Pickup bales that have previously been made using a square baler.
- The Bale Stacker is intended for use in field farming applications.
- The Bale Stacker is intended for use in locations that are not near people or animals who could be harmed by the movement of the bale lifting arm or the unloading of bales from the tables.

Any uses of the Bale Stacker other than the above stated Intended Uses shall be considered misuse of the Bale Stacker. This misuse shall included (but not limited to):

- Using the Bale Stacker around people or in public places.
- Moving materials other than square bales from fields.
- Using the bale lift arm to lift objects other than square bales.

Always use the Bale Stacker according to the instructions contained in this Operator Manual and the safety and instruction decals on the machine.

Perform regular maintenance and repair to ensure that the Bale Stacker operates safely and efficiently.

FaStack 1800

222232

FaStack 1200

222344

SERIAL NUMBER

Your serial number is found on the serial number plate (1) attached to the left hand side of the main frame below the rear table of the FaStack.

Serial Plate Location 219187C

It is important to record the serial number for proof of ownership and for any service or maintenance assistance.

Serial Number _____

Owner _____

Model _____

Date of Purchase _____

SAFETY SIGN-OFF FORM

Highline Manufacturing follows the general Safety Standards specified by the American Society of Agricultural and Biological Engineers (ASABE) and the Occupational Safety and Health Administration (OSHA). Anyone who will be operating and/or maintaining the Highline FaStack should read and clearly understand all Safety, Operating and Maintenance information presented in this manual.

Do not operate or allow someone to operate this equipment until this information has been reviewed. This information should be reviewed by all operator's before the season start-up.

This sign-off sheet is provided for record keeping to indicate that the person working with the equipment has read and understood the information in the Operator's Manual and has been instructed in the safe operation of the equipment.

Date	Employee's Signature	Employer's Signature

SAFETY ALERT SYMBOL

The Safety Alert Symbol means:

ATTENTION!
BECOME ALERT!
YOUR SAFETY IS INVOLVED!

The Safety Alert Symbol combined with a Signal Word alert to the presence of a hazard and the degree of possible injury.

Indicates an imminently hazardous situation that, if not avoided, WILL result in DEATH OR SERIOUS INJURY. The color is Red with White lettering.

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 or unsafe practices. The color is Orange with Black lettering.

Indicates a potentially hazardous situation that, if not avoided, MAY result in MINOR INJURY. The color is Yellow with Black lettering.

GENERAL SAFETY

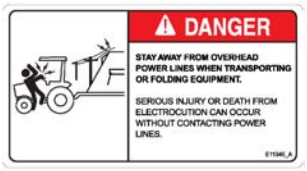
1. Ensure that anyone who is going to operate, maintain or work near the FaStack is familiar with the recommended operating, maintenance procedures and safety information contained in this manual and follows all the safety precautions.

2. In addition to the design and configuration of the equipment, hazard control and accident prevention are dependant upon the awareness, concern, prudence and proper training of personnel involved in the operation, transport, maintenance and storage of the FaStack.

3. The FaStack shall not be operated without all the guards in place.

SAFETY DECALS

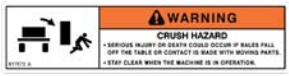
1. Keep decals and signs clean and legible at all times.
2. Replace decals and signs that are damaged, missing or have become illegible.
3. Replaced parts that displayed a decal should also display the current decal.
4. Decals are available from the Highline Parts Department.
5. Be familiar with the decals, the type of warning and the area or function(s) related to the area(s) that requires your awareness.



STAY AWAY FROM OVERHEAD POWER LINES

Stay away from power lines when transporting or folding equipment.
Electrocution can occur without contacting power lines.

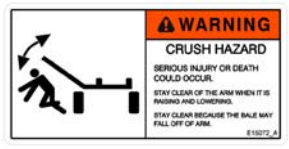
Contact with power lines will result in serious injury or death.



KEEP PEOPLE BACK WHEN LOADING BALES

Stay clear when loading bales which could fall.
Stay clear of machine when in operation.

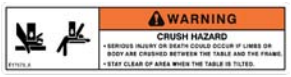
Crushing could cause serious injury or death.

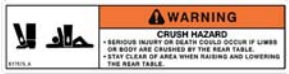


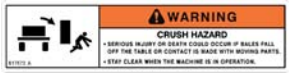
STAND CLEAR OF THE BALE LIFT ARM

Moving lift arm can cause serious injury or death.
Never stand under lift arms when lowering or raising.
Do not allow people near the lift arms when being moved.
Lift arms must be fully retracted and locked in place before servicing.

Crushing could cause serious injury or death.







STAY CLEAR OF REAR TABLE WHEN RAISING OR LOWERING

There is a crushing hazard if limbs or body is placed between the table and ground or surrounding objects when the table is raised or lowered.

Stay clear when unloading bales which could fall.

Stay clear of the table when it is lowering.

Crushing could cause serious injury or death.

STAY CLEAR OF FRONT TABLE WHEN IT IS TILTED

There is a crushing hazard if limbs or body is placed between the front and rear table.

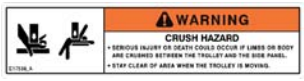
Stay clear of area when the front table is tilted.

Stay clear when front table is lifted because bales could fall.

Stay clear of the table when it is lowering.

Crushing could cause serious injury or death.

STAY CLEAR OF AREA WHEN TROLLEY IS MOVING



There is a crushing hazard if limbs or body is placed between the trolley and side panels.

Crushing could cause serious injury or death.

STAND CLEAR OF ROTATING FRONT TABLE

(FaStack 1200 Only)

Stand clear of front table when rotating. Front table can rotate rapidly.

Contact with rotating table could cause serious injury or death.

UPENDING HAZARD

The hitch can rise rapidly when there are bales are being unloaded for stacking.

Use a clevis on the towing vehicle.

Ensure implement is attached to machine before hydraulics are activated.

Contact with the hitch could cause serious injury or death.

DO NOT RIDE ON MACHINE

Falling from the moving machine can cause serious injury or death.

Falling from the operating machine could cause being entangled under the machine or being injured by the machine.

USE PAPER OR CARDBOARD TO CHECK FOR HYDRAULIC LEAKS

To prevent serious injury or death:
Relieve pressure on hydraulic system before repairing, adjusting or disconnecting.
Wear proper hand and eye protection when searching for leaks.
Use wood or cardboard instead of hands.
Keep all components in good repair.

Fluid injected under the skin must be removed immediately by a surgeon familiar with this type of injury.

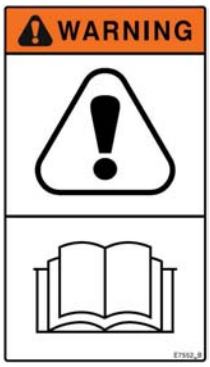
DO NOT CONTACT MOVING CHAIN

Contacting moving chain or parts on the rear table may cause serious injury or death.

Never attempt to manually remove bales while hydraulic cylinder is moving the trolley/chain.

Always shut off tractor, remove key, set park brake and wait for all parts to stop moving before servicing.

READ, UNDERSTAND, AND FOLLOW SAFETY INSTRUCTIONS



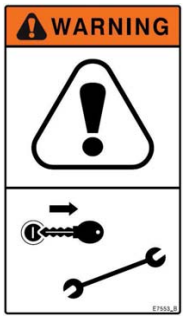
Read, understand and follow all instructions and safety messages included in this manual and on decals attached to the machine.

Allow only responsible, properly instructed individuals to operate and service the machine.

Failure to follow the instructions and safety messages in this manual and on the decals attached to the machine could result in serious injury or death.

Keep all safety and instruction decals in good condition. Replace any missing or damaged decals.

STOP TRACTOR BEFORE GOING NEAR MACHINE



Always shut off tractor, remove key, set park brake and wait for all parts to stop turning before servicing.

Turn off the control box if it is connected to tractor power that is always on.

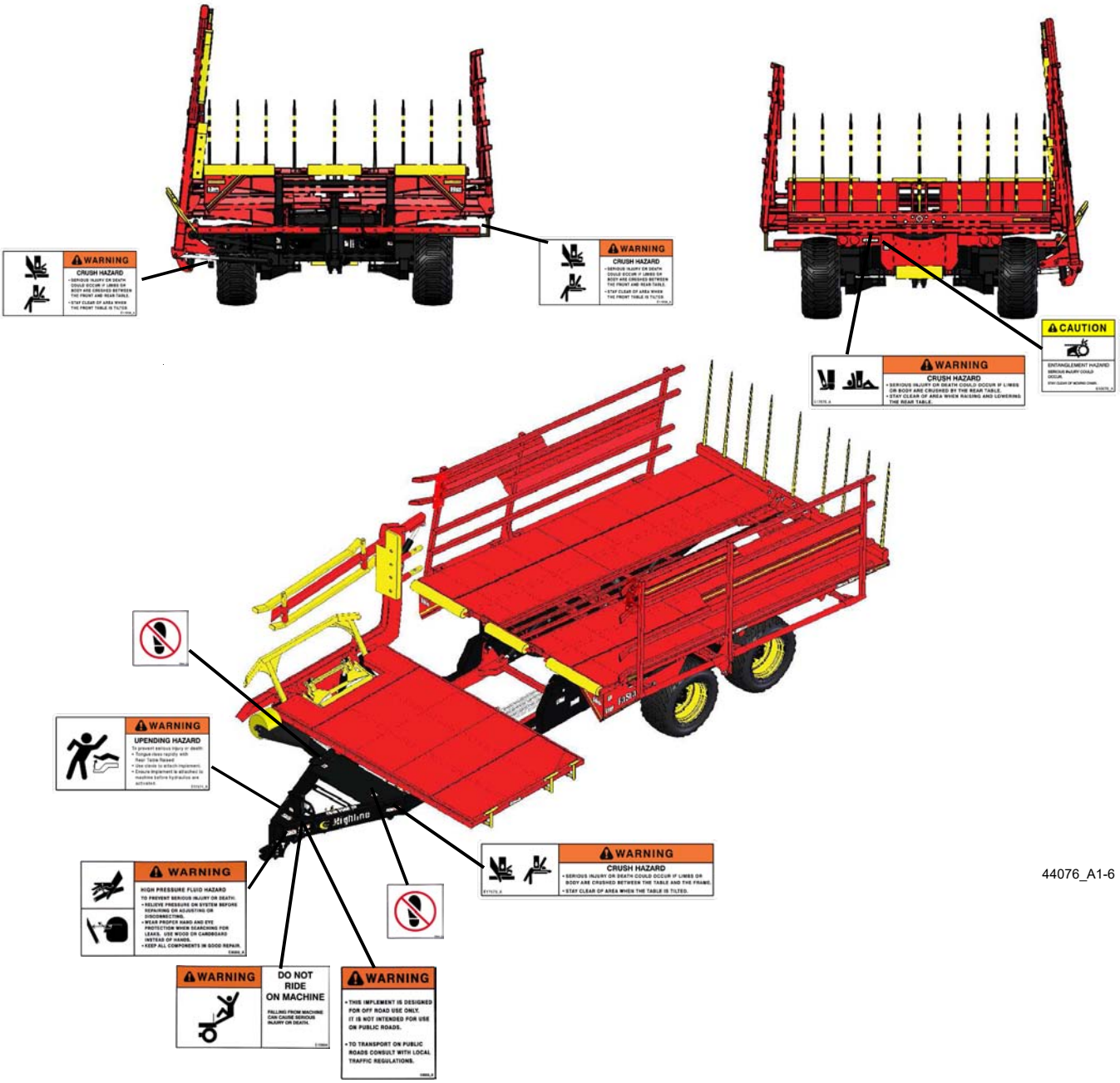
Failure to stop the tractor and wait for all moving parts to stop could result in serious injury or death.

ENSURE SLOW MOVING VEHICLE SIGN IS IN PLACE

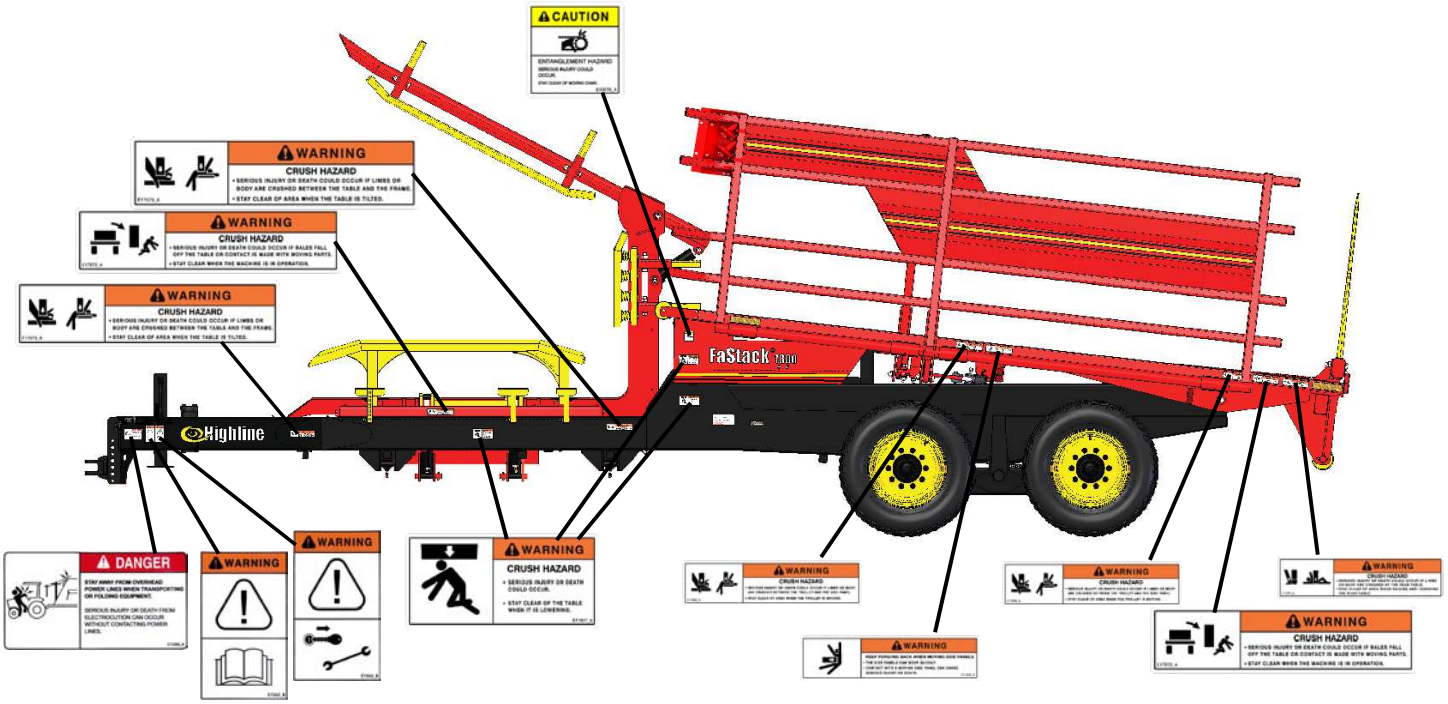
Ensure the Slow Moving Vehicle sign is in place, clean and easily visible.

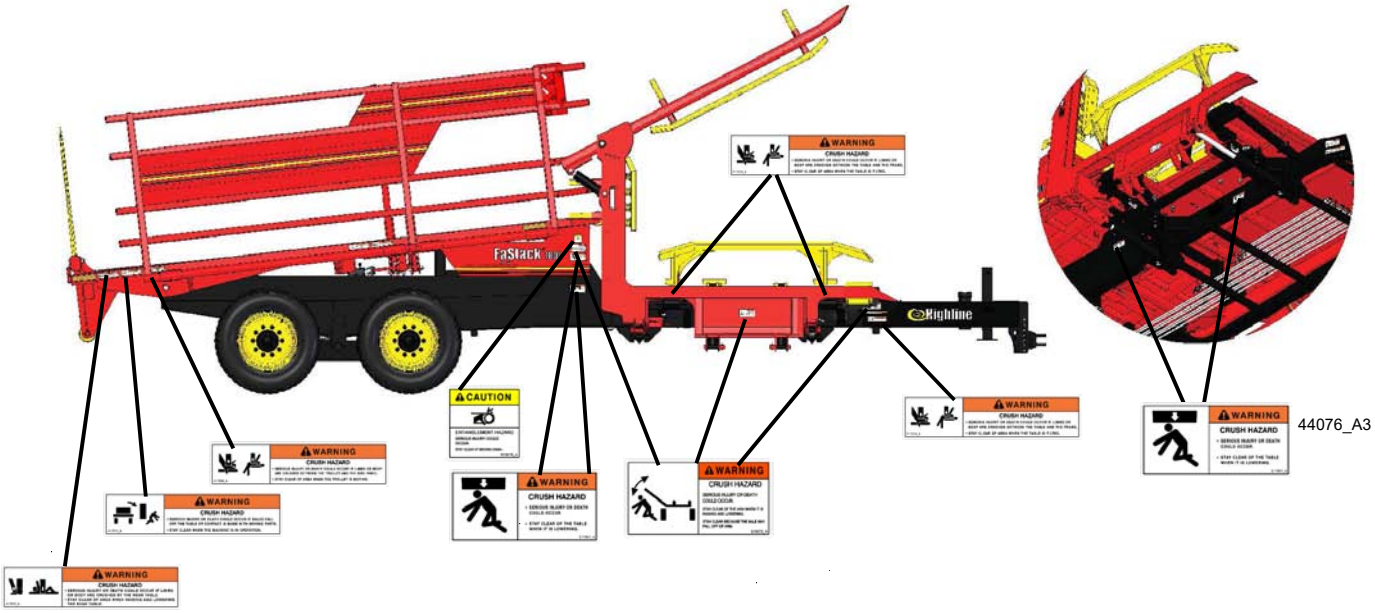
Ensure the reflectors are in place, clean and easily visible.

SAFETY DECAL LOCATIONS - FaStack 1800 - 1 of 2



SAFETY DECAL LOCATIONS FaStack 1800 - 2 of 2





SAFETY DECAL LOCATIONS - FaStack 1200 - 1 of 2

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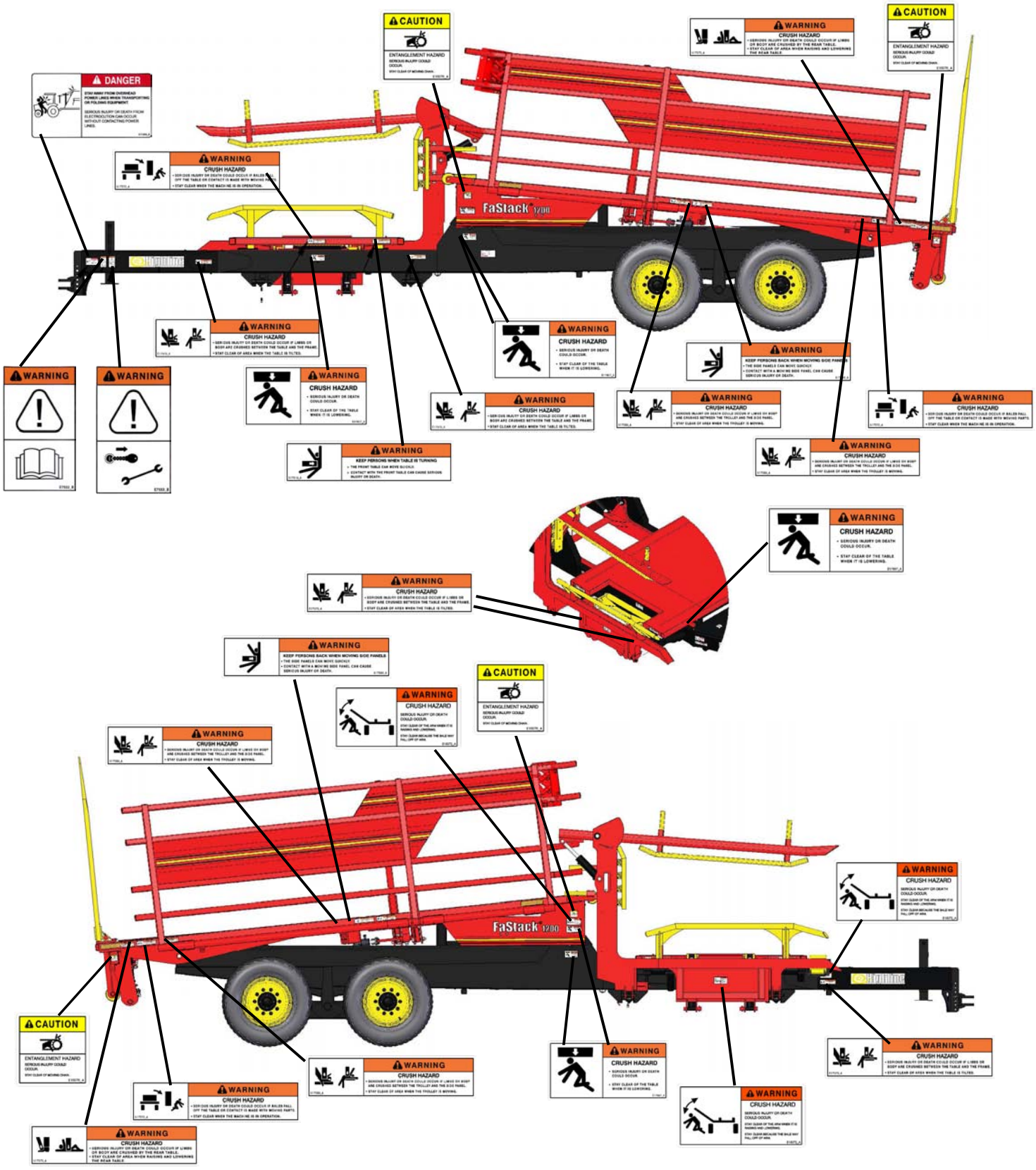
SAFETY DECAL LOCATIONS - FaStack 1200 - 2 of 2



FaStack Display

The FaStack display is used in the cab for making operation choices and viewing the status/operation of the machine.

The display is a touch screen but also has buttons on the side that can be used for making screen choices.

There is a home page and a menu for choosing additional screens. In the other screens the user can adjust settings, find operation information and view the status of sensors.

FaStack Display - Main Page 219162

Joystick

The FaStack uses a joystick which the operator uses in the cab. The joystick controls loading and unloading operations.

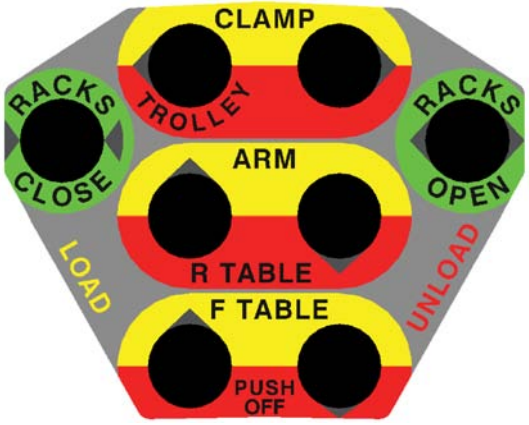
The joystick buttons are color coded for dual function.

Load = Yellow
When the Load mode is selected on the display, the joystick buttons will control the item in the yellow color.

Unload = Red
When the Unload mode is selected on the display, the joystick buttons will control the item in the red color.

The grey arrows on the side of the button indicate the direction of operation.

Some operations of the FaStack can be done in an "Automatic" mode in which preset operation sequences are chosen on the display and activated on the joystick with a push of a single button.



Joystick Control E15884_A

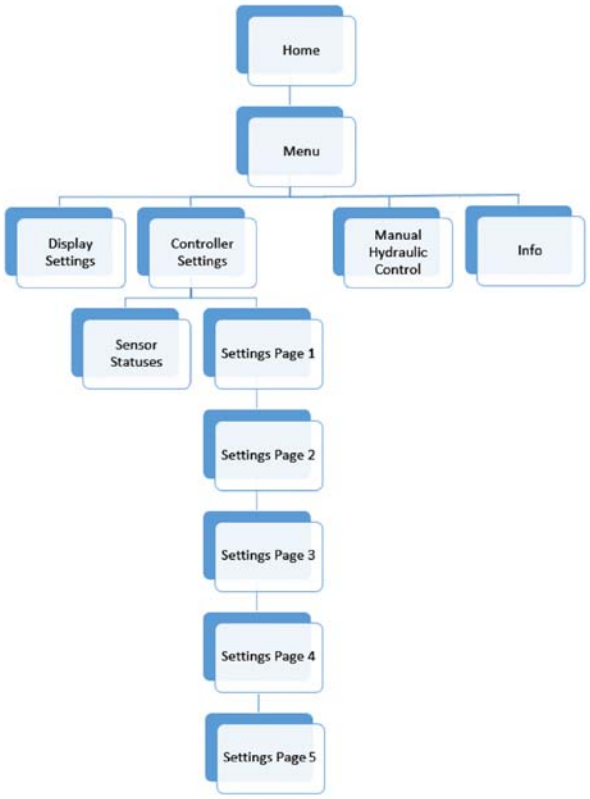
Software Menu Tree

The software is designed to show a number of display screens. The screens offer operational choices and also the option to advance to additional screens.

The software menu tree is a visual representation of the display screens.

This menu tree can be used a reference to navigate to the various screens.

The information given below gives further information about each screen and the choices made on that screen.



Software Menu Tree 219028

Startup of the Display

When the display starts up it shows a WARNING screen.

Read the Warning carefully about the Operator's responsibility to understand the automated sequences and the safe operation on the machine before activating the hydraulics and enabling the display.

Press the green HOME button to enable the control system.

A second screen will appear requiring the pushing of the Green Arrow button to enable the system.

Press to Enable System 219167

Home Screen for 1800 and 1200
The software in the controller is set for the model of FaStack it is installed on.

The Home Screen will show the functions available based on the machine.

When a button is active the box inside the button will have a check mark.

The Home Screen for the 1200 will show additional information regarding the front table rotate and the push off cylinders.

The button is active when the box inside the button has a check mark.

The # OF BALES is a counter that can be reset for indicating the daily bale count day or field count.

- Pressing will reset the counter to zero.

TRANSPORT MODE is used to move the loading arm to the raised position.

- This button is used when the rear table is full and the machine is ready for transporting to the unloading site.

- Transport mode works with the front table raised or lowered.

- Loading Arm Auto needs to be checked.
  - Press the Transport Mode button on the display to activate it.

- If the front table is raised when the Transport Mode button is pushed, the front table will remain raised and the loading arm will rise to the transport position.

FaStack 1800 Home Screen 219164

FaStack 1200 Home Screen 219163

FaStack 1200 Home Screen 219163

- If the front table is lowered when the Transport Mode button is pushed, the front table will remain lowered and the loading arm will rise to the transport position.

- The TRANSPORT MODE button will flash red while the loading arm is up.

- When disabling Transport Mode, the loading arm will need to be lowered manually (even if the Arm Auto is turn on) by pressing the lower arm button on the joystick.

The menu button opens a display of options with additional options under it.

Pressing STOP will stop any signal to a hydraulic valve and therefore stop the operation in progress.

- A pop-up message will come up on the display indicating that the operator will need to press an Enable System button to reactivate the outputs.

Only press the ENABLE SYSTEM button when all persons are away from the machine and moving parts.

FaStack 1800 Home Screen 218199

Reactivate System after Pushing Stop 219167

<u>For 1800 and 1200</u>

The loading arm can be manually controlled with the joystick buttons.

LOADING ARM AUTO is the option to have the bale loading arm sequence automated through a single button push on the joystick once the bale is positioned into the loading arm.

FaStack 1200 Home Screen 219163

- Pushing the button ARM UP on the joystick will automate the following:
  - Close the clamp arm.
  - Position the bale according to the bale turn selection.
  - Lift the arm.
  - Place the bale onto the front table.
  - Lower the loading arm to the ready position.
  - Open the clamp for the next bale.

Note: Loading Arm Auto needs to be checked for the Transport Mode button to work.

See Section 5 for Operational Information on using the Loading Arm Auto.

AUTO SEQUENCE ACTIVE

Any time the LOADING ARM AUTO or the FRONT TABLE AUTO has been activated the AUTO SEQUENCE ACTIVE green light will come on to indicate that a sequence is in process.

- Once the automated sequence is complete the light will go out.

FaStack 1200 Home Screen 219163

<u>For 1800 Only</u>

The front table can be controlled manually with the joystick buttons.

- FRONT TABLE AUTO is the option to have the front table rising to place the bales onto the rear table and the front table lowering automated with a single button push.

FaStack 1800 Front Auto Table 219164-1

- The push of the joystick button Front Table Up will start the following:

  - Check if the loading arm is lowered out of the way.
  - Open the side racks.
  - Raise the front table to move bales onto the rear table.
  - Close the side racks.
  - Lower the front table.

See Section 5 for Operational Information on using Front Table Auto.

For 1200 Only

The front table can be controlled manually with the joystick buttons.

The FRONT TABLE AUTO is the option to have the front table rising to place the bales onto the rear table and the front table lowering automated with a single button push.

FRONT TABLE AUTO sequence will depend if the FRONT TABLE ROTATE option has been selected.

- FRONT TABLE AUTO with no table rotate
  - The push of the joystick button Front Table Up will start the following:
    - Check if the loading arm is lowered out of the way.
    - Open side racks.
    - Raise the front table to move bales onto the rear table.
    - Close side racks.
    - Lower the front table.

See Section 5 on Operational Information on using Front Table Auto with no table rotate.

FaStack 1200 - Front Table Auto 219163-1

- FRONT TABLE AUTO + FRONT TABLE ROTATE
  - The push of the joystick button Front Table Up will start the following:
    - Check if the loading arm is lowered out of the way.
    - Raise the front table about 8".
    - Rotate the front table 90 degrees
    - Raise the front table to move bales onto the rear table.
    - Lower the front table while also rotating the front table back to the bale loading position.

FaStack 1200 - Front Table Auto + Front Table Rotate 219163-2

See Section 5 for Operational Information on using Front Table Auto + Front Table Rotate.

SIMULTANEOUS PICKING

This feature allows the user to lower the bale loading arm to pick a bale while the front table is raising or lowering.

Note: Both functions can slow down when operating at the same time. The speed is variable on tractor flow.

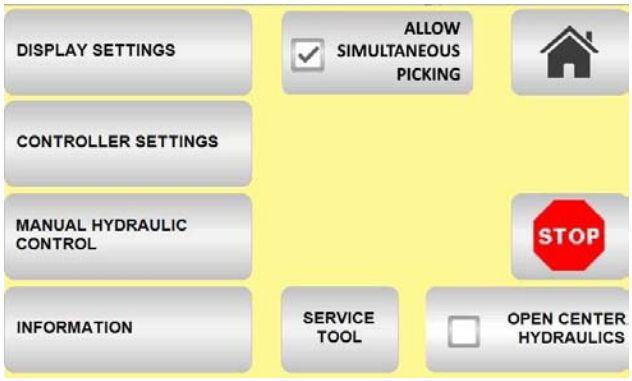
If the Bale Loading Auto button is selected, the bale loading arm will load the bale and move to the ready position.

When the front table comes back to the frame and rotated into the home position (1200 only), then the loading arm will automatically load the bale in the loading arm onto the front table.

To enable Simultaneous Picking with automatic arm and table movement:

- Select LOADING ARM AUTO.
- Select FRONT TABLE AUTO.
- On the FaStack 1200 - Select FRONT TABLE ROTATE - if desired.
- Press the MENU button.
- Press ALLOW SIMULTANEOUS PICKING.

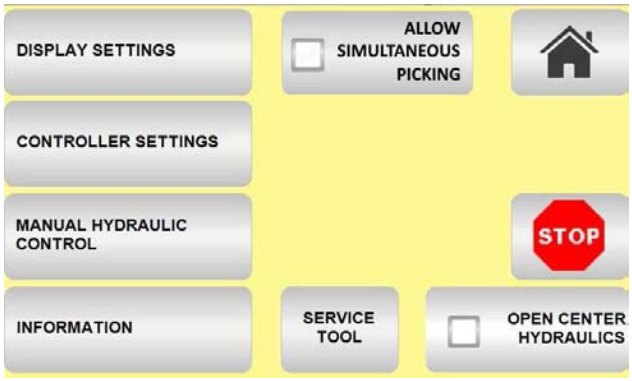
Select Arm, Table and Rotate Options (If Desired) 219163-4



Press Allow Simultaneous Picking 222087

Menu Screen Selections

The Menu Screen gives a number of selections.

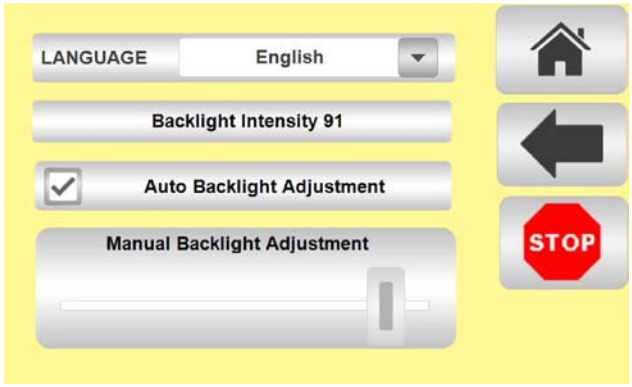


Menu Screen 222279

DISPLAY SETTINGS

The Display Settings button allows:

- Select the Language for the display.
- Selection of Auto Backlight Adjustment.
  - This selection will increase/ decrease the screen brightness depending on the amount of ambient light present.
- Manual Adjustment of the backlight intensity of the display.
  - Remove the check mark from the Auto Backlight Adjustment.
  - Move the Manual Adjustment slider to the desired backlight intensity



Display Settings Page 219171

The Home Page button will return the display to the Home Page.

The Back Button will return the display to the Menu screen.

Pressing STOP will stop any signal to a hydraulic valve and therefore stop the operation in progress.

CONTROLLER SETTINGS

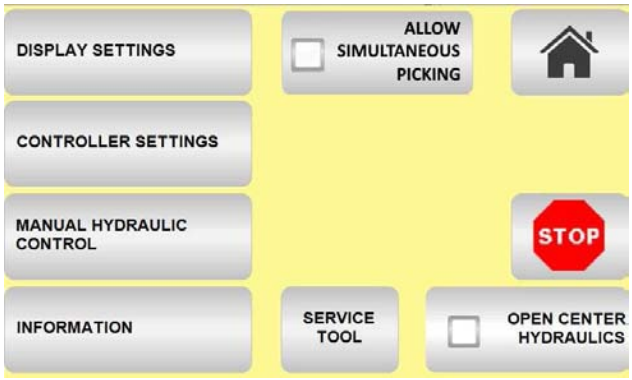
The Controller Settings button allows:

- Sensor Statuses button brings up a screen that shows the status of the sensors.
- Adjust Setpoints button brings up screens to adjust the set points of the sensors.
  - See the section "Adjust Set Points" for more information.
- The Restore Default Settings buttons restores the default settings to the sensors.
- The Service Tool button is only to be used with the assistance of the Service Department. A pass code is required for this diagnostic mode.

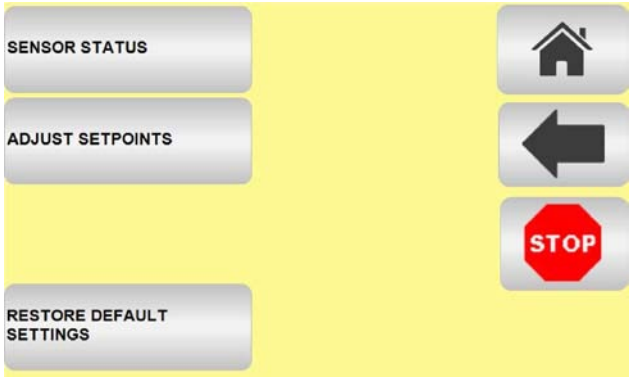
The Home Page button will return the display to the Home Page.

The Back Button will return the display to the Menu screen.

Pressing STOP will stop any signal to a hydraulic valve and therefore stop the operation in progress.



Menu Screen 222279



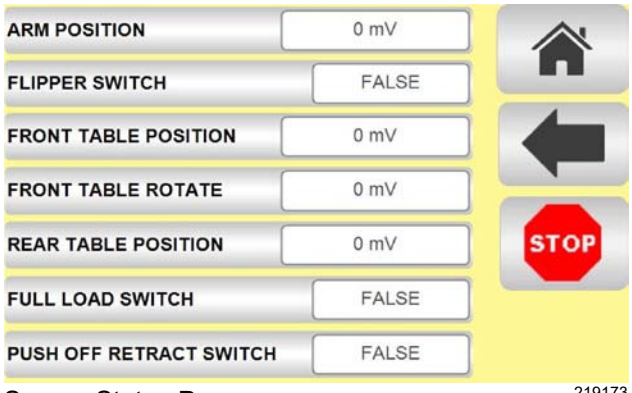
Controller Settings Page 219172

SENSOR STATUSES

The Sensor Status screen gives information on the function of the rotary sensors (readout in millivolts) and which switches are turned on/off.

Note: Statuses will only show for the model of FaStack. There are additional statuses for the FaStack 1200.

- Display the output voltage of the:
  - Arm Position
  - Front Table Position
  - Front Table Rotate (1200 only)
  - Rear Table Position



Sensor Status Page (For FaStack 1200 shown) 219173

- Check if:
  - Flipper Switch is showing TRUE or FALSE
  - Full Load Switch is showing TRUE or FALSE
  - Push Off Retract Switch is showing TRUE or FALSE (1200 only)
- If any of the sensors are not showing voltage or TRUE or FALSE then check the sensor and connections.
  - Press the Home button to return to the Home screen.

ADJUST SETPOINTS

The Setpoints determine the limits and action points of the arm, clamp, tables and side racks.

- The Setpoints are pre-set in the software that is installed at the factory.

There are 5 pages of setpoints. To move to the next page press the button

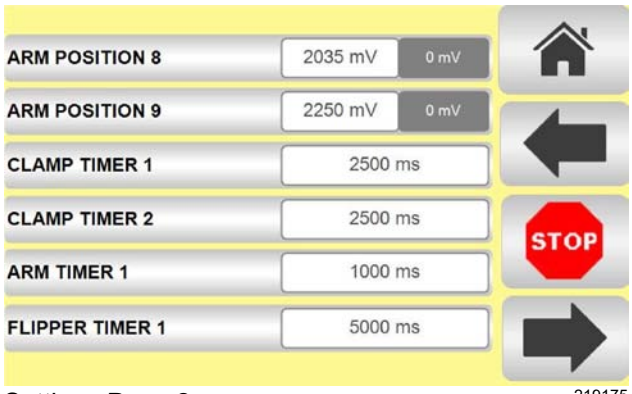
Note: Settings will only show for the model of FaStack.

If wanting to make to make adjustments to any of the setpoints because of the way the bales are loading, the adjustments can be made by selecting which value to change.

Be aware that adjusting these values will modify the operation of the machine. Ensure you have a full understanding of the effect of the changes. Contact Highline for assistance.

Note: Descriptions of the setpoints are given in the table on page 2-12.

Settings Page 1 219174



Settings Page 2 219175

- When a setting is tapped to make an adjustment a calculator style keypad will show on the display.

    - Use the keypad to enter a new value.
        - Press the enter button ↵ to register the new setpoint value.

    - The change will be retained when the system is powered off.

The Default Settings for all the setpoints can be restored by pressing the back button ← until at the Controller Settings page and tapping the RESTORE DEFAULT SETTINGS.

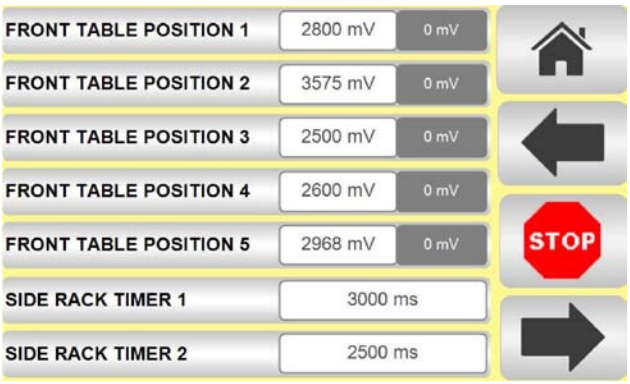
The CODE ENTRY is only used when a setting change is desired to be written as the new default. The change will over-write the previous default setting.

- A password code is required to over-write the default settings. Contact Highline for assistance.

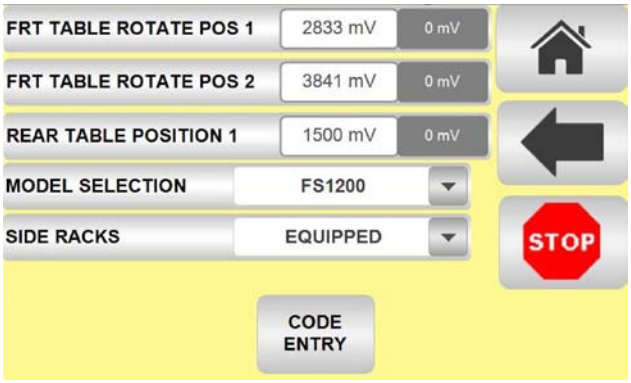
Once the pass code is entered a new page will come up showing the settings changes.

- The option to write WRITE DEFAULT SETPOINTS is given.

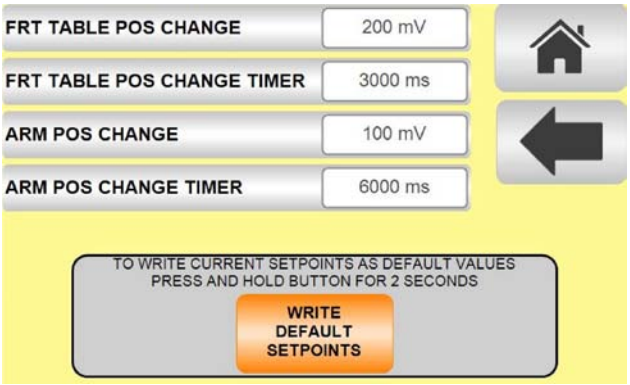
Note: Once the changes have been written as the new default setpoints it is not possible to go back to the factory defaults without further Service assistance from Highline.



Settings Page 3 (For FaStack 1200 shown) 219176



Settings Page 4 (For FaStack 1200 Shown) 219025



Settings Page 5 - Over Write Defaults 219178

Adjust Setpoint Descriptions

Adjust Setpoint	Sensor	Description
ARM POSITION 1	Arm rotary sensor	Position at which the flipper up starts activating during the arm raise cycle with bale turn off.
ARM POSITION 2	Arm rotary sensor	Position at which the arm stops prior to lowering quickly in the "stutter step" of the arm lift cycle.
ARM POSITION 3	Arm rotary sensor	Position to which the arm lowers to during the stutter step during the arm raise cycle with bale turn off.
ARM POSITION 4	Arm rotary sensor	Position at which the flipper continues during the arm raise cycle with bale turn off.
ARM POSITION 5	Arm rotary sensor	Arm upper limit.
ARM POSITION 6	Arm rotary sensor	Position at which the flipper down starts activating during the arm lower cycle with bale turn off.
ARM POSITION 7	Arm rotary sensor	Position at which the flipper must have reached the flipper position proximity sensor during the arm lower cycle with bale turn off.
ARM POSITION 8	Arm rotary sensor	Arm lower limit.
ARM POSITION 9	Arm rotary sensor	Position below which the front table is allowed to raise and lower and rotate.
CLAMP TIMER 1		Time that the clamp closes during the automated arm raise cycle.
CLAMP TIMER 2		Time that the clamp opens during the automated arm raise cycle.
ARM TIMER 1		Time that the arm pauses at the top end of the loading cycle
FLIPPER TIMER 1		Time that the flipper continues to lower after the arm had reached the lower limit to ensure the flipper is all the way down.
FRONT TABLE POSITION 1	Front table up/down rotary sensor	Position at which the side racks open to accept the next row of bales.

FRONT TABLE POSITION 2	Front table up/down rotary sensor	Upper limit of front table.
FRONT TABLE POSITION 3	Front table up/down rotary sensor	Lower limit of front table.
FRONT TABLE POSITION 4 (FaStack 1200 only)	Front table up/down rotary sensor	Position at which the front table starts rotating in the raise cycle. Also position at which the front table cannot be lowered past if the front table is not rotated to its home position.
FRONT TABLE POSITION 5 (FaStack 1200 only)	Front table up/down rotary sensor	Front table position at which the front table starts rotating in the lower cycle.
SIDE RACK TIMER 1		Time that the side racks open during the automated front table raise cycle.
SIDE RACK TIMER 2		Time that the side racks close during the automated front table raise cycle.
FRONT TABLE ROTATE POSITION 1 (FaStack 1200 only)	Front table rotate rotary sensor	Front table home position.
FRONT TABLE ROTATE POSITION 2 (FaStack 1200 only)	Front table rotate rotary sensor	Front table fully rotated position.
REAR TABLE POSITION 1 (FaStack 1200 only)	Rear table up/down rotary sensor	Position above which the extension of the push off cylinders is allowed.
MODEL SELECTION		Which model of FaStack the display is connected to.
SIDE RACKS	If side racks are installed the machine.	This option is only available on the FaStack 1200.

Loading Arm Stutter Step

The bale lifting arm stutter step can be useful for sticky bales, heavy bales and wet conditions that prevent a bale from easily loading onto the front table.

In stutter step mode the loading arm places the bale onto the front table just before the kicker on the arm activates. The loading arm drops down between 6 - 8 inches and then moves up toward the table to give the bale an extra push onto the front table.

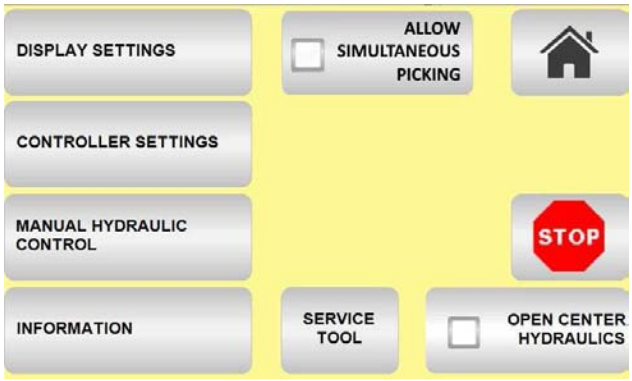
To Activate the Stutter Step :

- Put Loading Arm Auto into manual mode.
  - Press until the check mark is removed.

Put Loading Arm into Manual Mode
Select Menu Button 219164-1

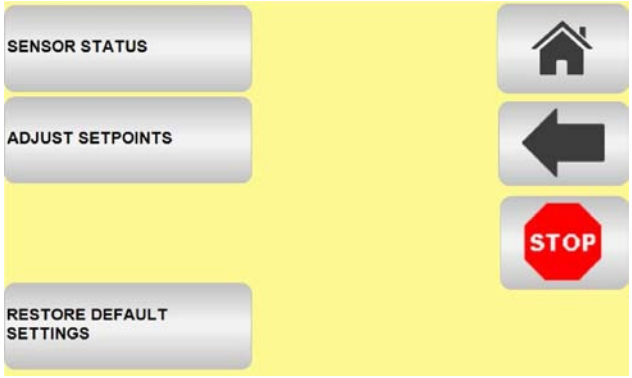
- Select  from the Home Screen.

- Select Controller Settings



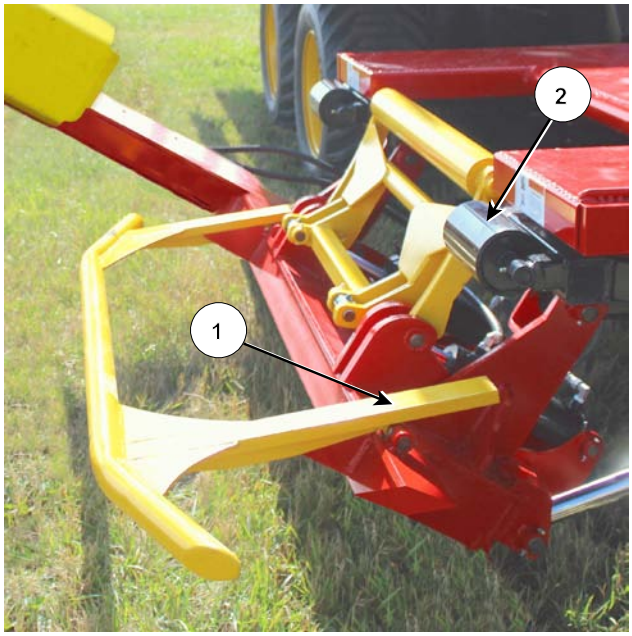
Select Controller Settings 222279

- Select Adjust Set Points



Select Adjust Set Points 219172

- Use the joystick to lift the loading arm but stop the arm just before the bale kicker arms (1) contact the rollers (2) on the frame.



Lift Arm for the Stutter Step Setting 222092C

- On the Display, read the number in the grey box for Arm Position 2 and enter it into the box for Arm Position 2.

- Change the white box number of Arm Position 3 to be the calculated number of Arm Position 2 (just entered) minus 150 mV.

Example from diagrams:
Arm Position 2 = 2642 mV
Arm Position 3 = 2642 mV - 150 mV = 2492 mV

Setting the Stutter Step 222090

Note: If an auto calibration is done after the stutter step is activated, the stutter step values will be over-written and will need to be re-entered by using the process described above.

To Deactivate the Stutter Step :

- Use the joystick to lift the arm but stop it just before the bale kicker arms (1) contact the rollers (2) on the frame.

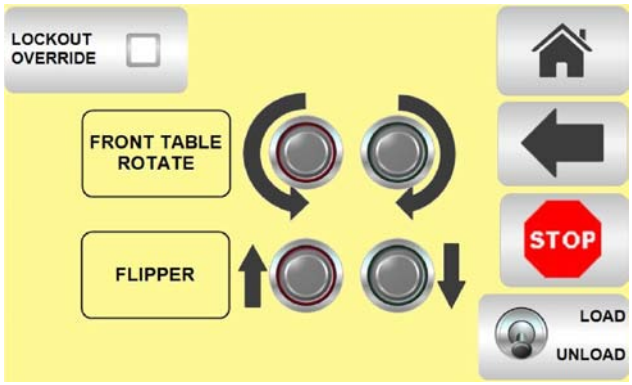
- On the Display, read the number in the grey box for Arm Position 2 and enter it into the box for Arm Position 2.

- Change the number of Arm Position 3 to be the <u>same</u> as the number of Arm Position 2.

Deactivating the Stutter Step 222091

MANUAL HYDRAULIC CONTROL

Manual Hydraulic Controls are used when there is a sensor failure or some other unanticipated event.



Manual Hydraulic Control Screen 219179

FRONT TABLE ROTATE

The Manual Hydraulic Control allows for manual rotation of the front table on the FaStack 1200.

- The buttons on the display show the direction of table rotation. Pushing the button activates the hydraulic valve and moves the table.

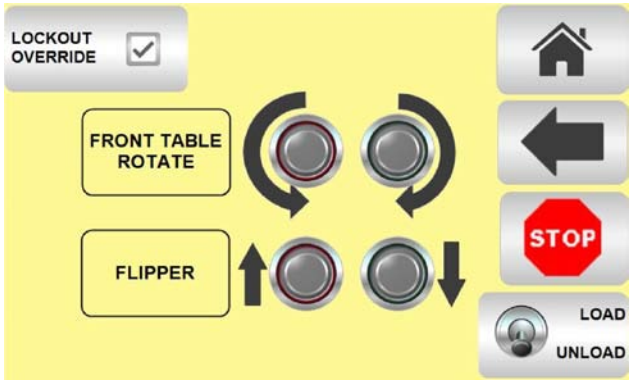
FLIPPER

The Manual Hydraulic Control allows for manual movement of the flipper on the loading arm on the both models.

- The buttons on the display show the direction of flipper movement. Pushing the button activates the hydraulic valve and moves the flipper.

LOCKOUT OVERRIDE (Rarely used)

The Lockouts are used to prevent machine damage from machine parts contacting other parts. When the Lockout OverRide is activated, all the buttons on the joystick operate their respective functions without regard of the lockout conditions that are programmed in the software.



Lockout Over-Ride 219179-1

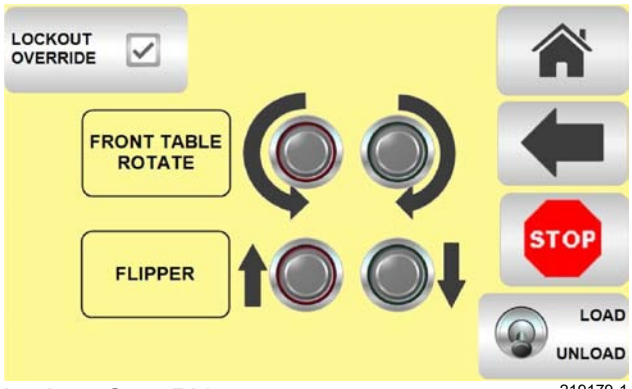
Note: Caution must be used in the Lockout OverRide function as it is possible to cause machine damage.

- The software has lockouts to prevent parts of the machine from interfering with the movement of other parts.
- When Lockout OverRide is activated the software that prevents machine damage are turned off.
  - Parts of the machine could be moved into the path of other parts of the machine causing damage.

When the Lockout OverRide is activated the Loading Arm Automation, the Front Table Automation, and the Front Table Rotate are turned off as well.

The Lockout is toggled with the button on the display.

- When tapped the user must select Yes or No before it turns on. Deactivating can be done instantly with a button push.



Lockout Over-Ride 219179-1

INFORMATION

The Information Screen provides information the number of bales picked and the version of the software in the controller and the display.

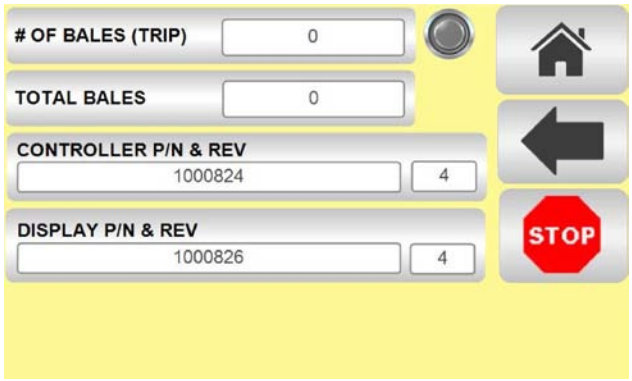
OF BALES (TRIP) is a resettable counter for the bales stacked in a field or over a time period. The resettable counter is the same as the counter on the Home page of the display.

- Pressing the button will reset the counter to zero.

TOTAL BALES gives the count of the bales stacked since the machine was manufactured.

CONTROLLER P/N AND REV gives the information on the machine mounted controller.

DISPLAY P/N AND REV gives the information on the display.



Information Screen 219180

Auto Calibration of the Arm and Table Set Points

This feature allows for the calibration of the loading arm set points and the front and rear table set points by raising, lowering or rotating and having the software record the set point values. The Auto Calibration then automatically fills in the remaining set points.

Auto Calibration can be done when a sensor or a part of the machine has been bumped or replaced.

Auto Calibration can also be done to refresh the settings for continued good operation.

See Section 8 "Troubleshooting" for the procedures to do an Auto Calibration.

3.0 Transporting the Bale Stacker

Only tow the unloaded Bale Stacker on public roads behind a properly sized and equipped tractor or vehicle which has a weight of 27,000 lbs (12247 kg) or more.

Shut off the tractor engine before attaching the bale stacker or hydraulics.

Do not allow children or other people to ride on the tractor or bale stacker. Falling off can result in serious injury or death.

1. Tractor requirements.
   - Roll Over Protection System (ROPS)
   - Working seatbelts
   - 1 Spool Control Valve (SCV)
   - 12 volt power

   Note: See Section 5 for a chart indicating the category of tractor hitch required based on the weight of the bales being loaded.

   Note: It is the operator's responsibility to ensure the appropriate tractor is used that can handle the vertical hitch loads as listed.

2. Lift the hitch.
   - Lift the hitch with the jack.

   Note: The hitch has a 2 jacking speeds.
   - Pull the handle out to access the low speed.
   - Push the handle in to access the high speed.

   - Do not attempt to lift the hitch without using the jack.

Lift the Hitch 221106

- Lift the hitch until the frame is 22" (559 mm) off the ground.

Note: This frame height is important in order for the bale clamp to operate properly. If the frame is too low, the clamp contacts the ground and damage can occur.

3. Adjust the position of the hitch tongue to maintain the bale stacker frame height of 22" (559 mm) off the ground.

4. Connect the hitch to the tractor drawbar.

Note: It is important to use a clevis drawbar as there is upward force on the hitch at certain stages of bale loading.

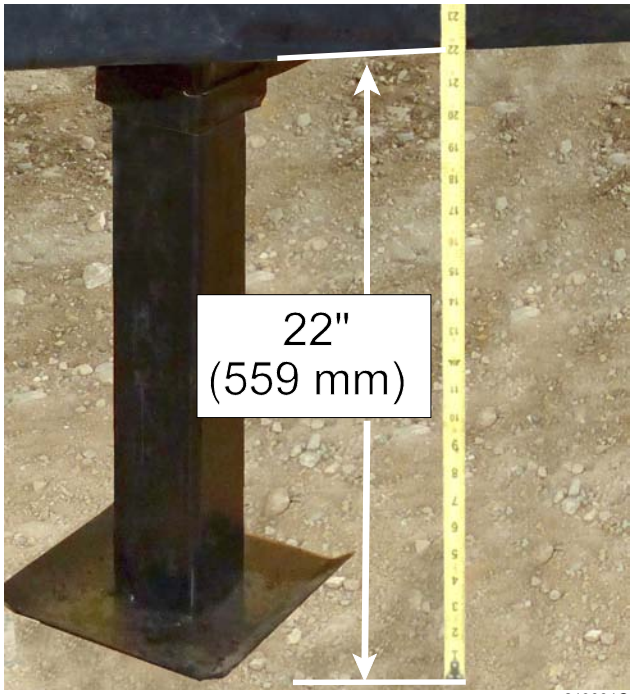
- Use at least a 1-1/4" (31.75 mm) pin.

5. Connect the safety chain to the tractor and fasten securely.

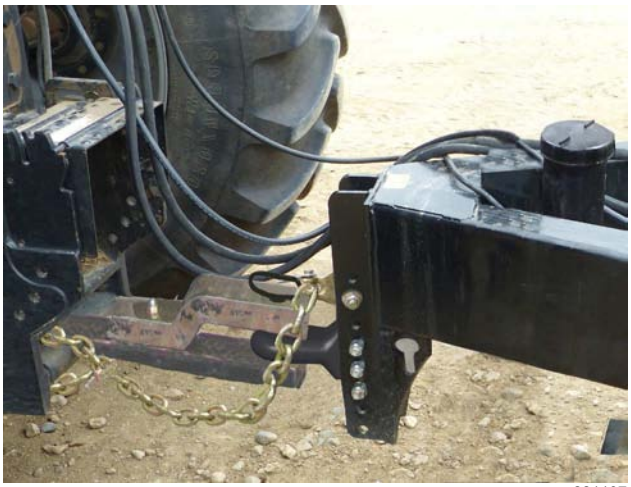
6. Place the hitch jack in the storage position.

- Raise the jack foot by pulling on the lock pin and raising the foot to the highest position.

- Turn the jack handle to remove all weight from the jack.



Frame at 22" (559 mm) 219031C


Adjust Tongue. Connect Hitch and Safety Chain 221107


Place Jack in the Storage Position 221107-1

7. Tractor tire width settings.
   - When working on inclines or rough ground, use the largest tractor wheel width possible to maintain tractor stability.

8. Attach the hydraulic hoses.

   - Clean the end of the hoses and the connection.

   - The hose going into the mark "P" on the block (2) must plug into the pressure port from the tractor.

   - The hose going into the mark "T" on the block (3) must plug into the return port from the tractor.

   - Firmly push the hoses into the tractor receptacle.

   - Route the hoses so they do not interfere with moving parts.

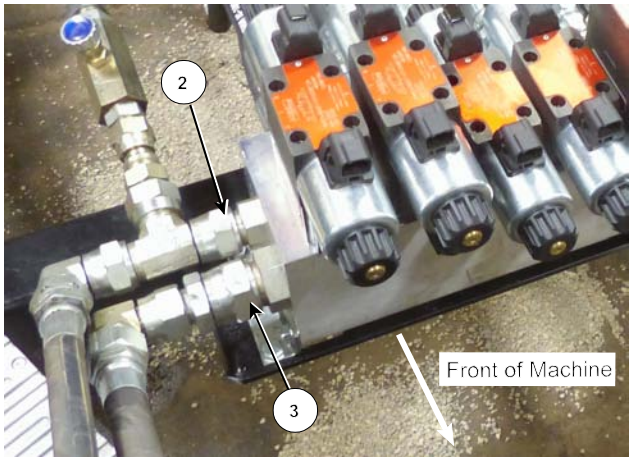
9. Connect the lighting cable to the electrical connection on the tractor.

10. Route the cab harness to the hitch harness of the stacker.

    - Connect to the harness on the hitch harness of the stacker.

    - Ensure the cable does not interfere with or contact moving parts.

11. Place the joystick and display in the tractor cab.
    - Mount the display and joystick holder using the supplied suction cup mount.



Hoses on the Valve Block 219056C


Attach Hydraulics


Joystick 217084-1

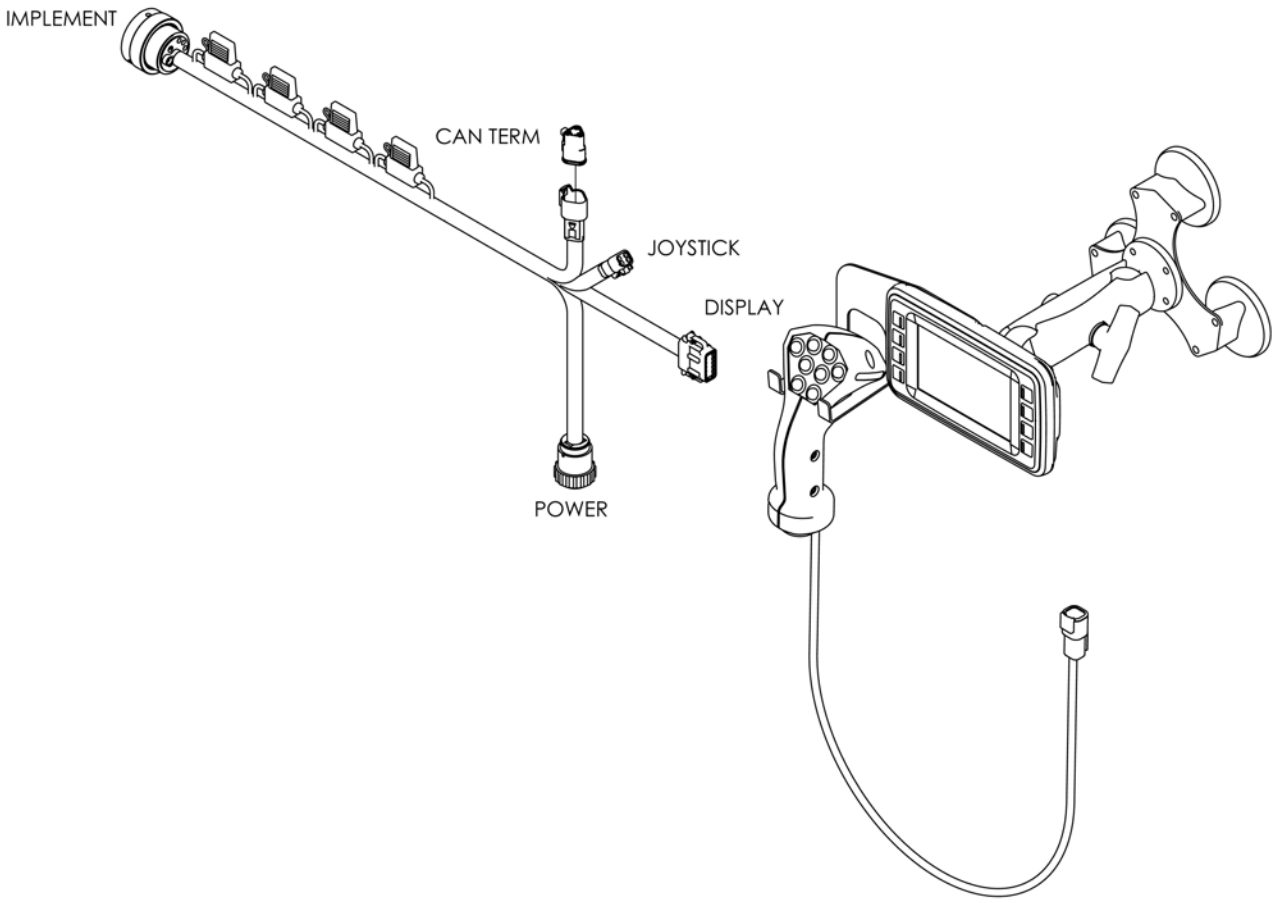
FaStack Display
(Joystick Holder not shown) 219162

12. Connect the joystick to the harness connection.

13. Connect the display to the harness connection.

14. Connect the power cord into the keyed and constant 12V DC power supply of the tractor.

    - Connect the round connector power connector into the tractor power receptacle.



Cab Harness, Power, Display and Joystick Connections

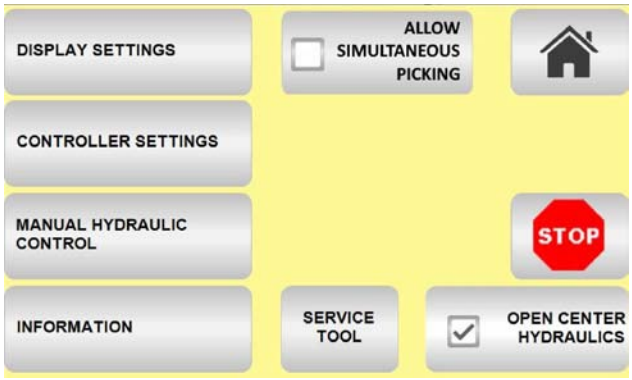
43543_B

15. If needed, select for Open Center Hydraulics.

    - To select Open Center hydraulics
      - Touch the Menu button on the display home screen.
      - Touch Open Center Hydraulics.
        - There should be a check mark in the small box to indicate it is turned on.

    Note: If changing between open and closed center tractors then some of the hydraulic flow valves will need to be adjusted because of the way the different hydraulic systems operate. See Section 4 for valve adjustment details.

Display Home Screen 219181



Select Open Center Hydraulics - Menu Screen 219170-1

15. Press the Home button on the display to go back to the Home Screen.

16. Touch the Load button on the Home Screen to turn on the loading functions of the machine and joystick buttons.
    - The toggle switch should be up to indicate it is turned to load mode.

    Note: Touching the button a second time will toggle to the Unload mode.

Turn on the Load Function 219163-3

17. Activate the hydraulics and lock the control valve to the open position.

    - The hydraulic functions of the stacker will be controlled with the joystick and display.

18. If the lift arm cylinder locks are installed:

    - Raise the lift arm using the joystick button to relieve any pressure on the locks.

    Before getting out of the tractor:
    - Touch STOP button on the display.
    - Shut off hydraulics.
    - Shut down the tractor.

    - Remove the front and rear cylinder locks (1) by removing the poins (2).
    - Place the locks in the storage positions.

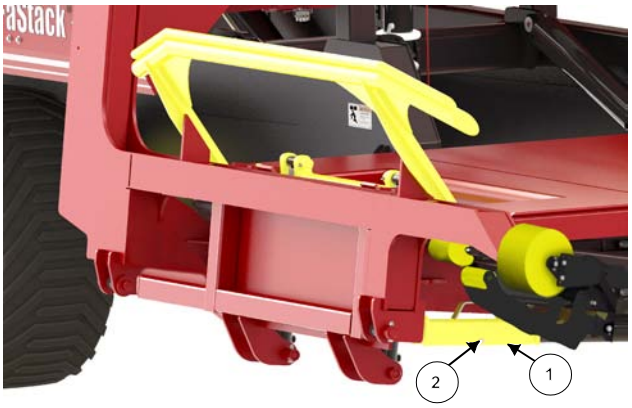
19. Lower the lift arm to allow the rear and front tables to be lowered.

    - Use the joystick button to lower the lift arm.

    Stand Clear of the Lift Arm.

    A moving lift arm can cause serious injury or death.
    Never stand under the lift arm when lowering or raising.
    Do not allow people near the lift arm when being moved.

20. Open the clamp.



Remove the Front Lift Arm Transport Lock 218040-1C

Remove the Rear Lift Arm Transport Lock 218041-1C

Lower the Lift Arm 221108

21. Lower the front table.

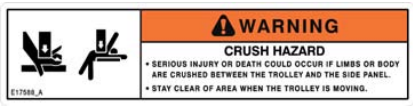
Lower the Front Table 222286

22. Touch the Unload button on the display to turn on the unloading functions of the machine and joystick buttons.
    - The toggle switch should be down to indicate it is turned to unload mode.

    Note: Touching the button a second time will toggle to the Load mode.

Turn On the Unload Function 219181

23. Lower the rear table.



Stay clear when raising or lowering the bale table.

Serious injury or death could occur from crushing or pinching by the table.

- Use the joystick to control the cylinders for rear table movement.

Lower the Rear Table 222286

24. Check the condition of all the tires.

    - Ensure tires are inflated to the 41 psi (283 kPa).

Check Condition of All the Tires 217147

    - Ensure that the flat portion of the wheel stud washer is against the wheel rim.

    - Torque the lug nuts to 170 lb-ft (230 Nm).

Flat of Washer Against Rim, Torque the Nuts 217100

25. Touch the Load button on the display to turn on the loading functions of the machine and joystick buttons.
    - The toggle switch should be up to indicate it is turned to Load mode.

26. Close the clamp using the joystick button.

Close the Clamp 221108

27. Raise the lift arm using the joystick button.

Stand Clear of the lift arm.

A moving lift arm can cause serious injury or death.
Never stand under the lift arm when lowering or raising.
Do not allow people near the lift arm when being moved.

- Use the joystick to control the cylinders to lift the lift arm.

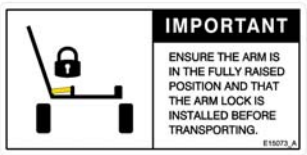
Raise the Bale Lift Arm 222331

28. Turn off the hydraulics.
- Turn off the tractor.
- Set the park brake on the tractor before getting out of the tractor.

29. Remove the front lift arm transport lock (1) from the storage position.

Always use the transport locks when transporting the FaStack on public roads. The lift arm may descend rapidly if hydraulic pressure is lost to the lift cylinders.

- Remove the clip pin (2) from the storage tab.

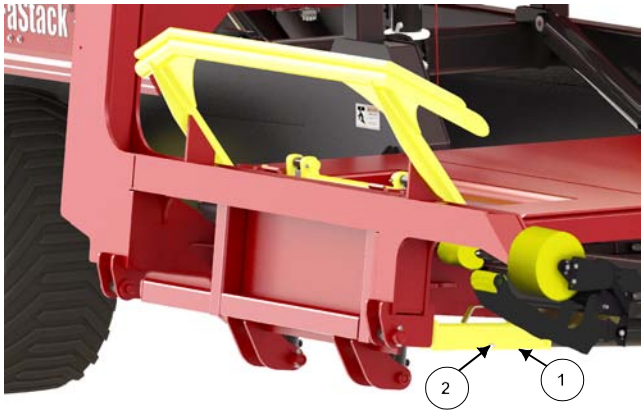


Remove Front Lift Arm Lock from Storage 218042-3C

Do not walk under the raised lift arm until the front and rear locks are secured in place.

30. Install the front lift arm transport lock (1) onto the front cylinder.

- Fasten in place with the clip pin (2).

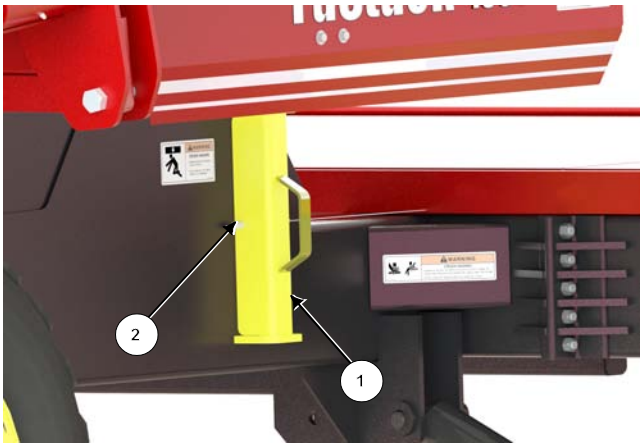


Install the Front Lift Arm Transport Lock 218040-1C

31. Remove the rear lift arm transport lock (1) from the storage position.

    - Remove the clip pin (2) from the storage tab.

Do not walk under the raised lift arm until the front and rear locks are secured in place.



Remove Rear Lift Arm Lock from Storage 218071-1C

32. Install the rear lift arm transport lock (1) onto the front cylinder.

    - Fasten in place with the clip pin (2).

Install the Rear Lift Arm Transport Lock 218041-1C

33. Move the bale trolley to the front of the table.

    - Touch the Unload button on the display.

    - Use the joystick button to move the trolley forward.

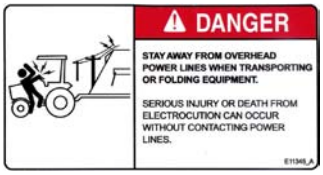
Move Trolley to the Front of the Rear Table. 217149

34. Ensure that the Slow Moving Vehicle (SMV) sign and signal lights are clean and visible.

35. Ensure the lights are working.

Ensure SMV is Visible and Lights Are Working 217149

Stay away from overhead power lines. Electrocution can occur without contacting power lines



36. Transport on public roads

Do not tow behind a truck or other type of vehicle.

Check with local traffic regulations to transport on public roads.

Travel On Roadways 217150

- Transport with the stacker empty.
- Transport with a tractor which has a weight of 27,000 lbs (12247 kg) or more.
- Do not exceed 20 mph (32 km/h).
- Disengage the hydraulic control lever.

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4.0 Preparing the Bale Stacker

1. Park the tractor and bale stacker on level ground. Engage the tractor parking brake.

Shut down the tractor and remove the key before repairing, servicing, lubricating or cleaning the machine.
Relieve all hydraulic pressure in the hoses. Disconnect the hydraulic hoses from the tractor before going near the machine.

2. Ensure all decals are clean and in place.

3. Check that the frame is 22" (559 mm) off the ground.

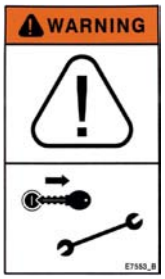
   Note: This frame height is important in order for the bale clamp to operate properly. If the frame is too low, the bale clamp will come into contact with the ground and damage can occur.

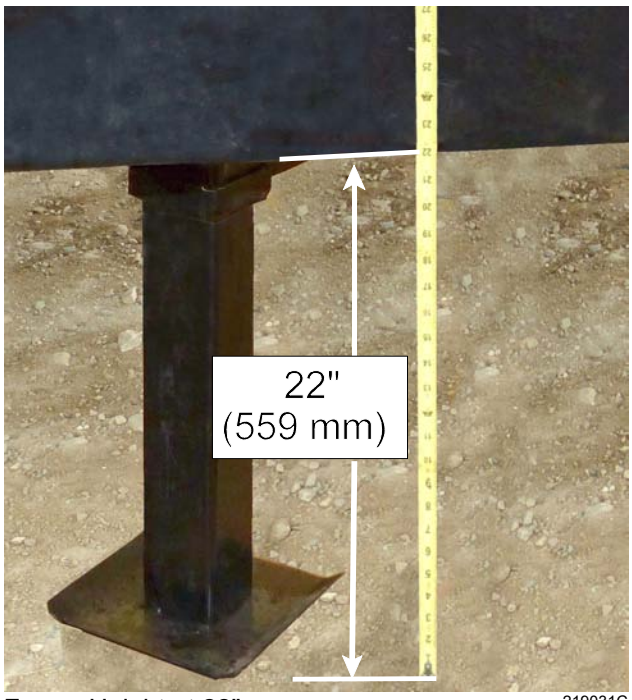
   - Adjust the hitch clevis for the frame to be 22" (559 mm) off the ground when connected to the tractor drawbar.

4. Attach the hydraulic hoses.

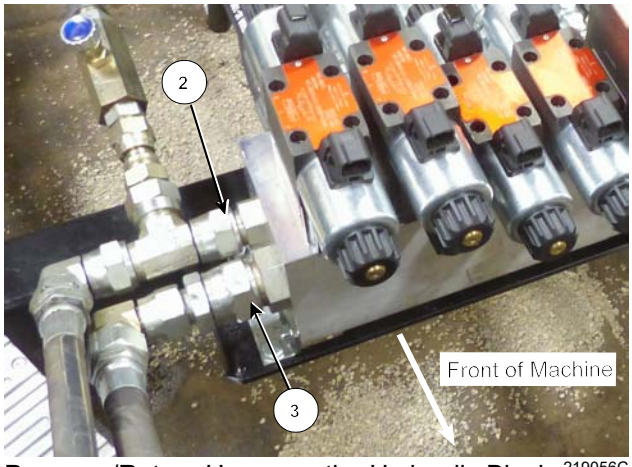
   - The hose going into the mark "P" on the block (2) must plug into the pressure port from the tractor.

   - The hose going into the mark "T" on the block (3) must plug into the return port from the tractor.





Frame Height at 22" 219031C



Pressure/Return Hoses on the Hydraulic Block 219056C

- Clean the end of the hoses and the connection.

- Firmly push the hoses into the tractor receptacle.

- Route the hoses so they do not interfere with moving parts.

5. Connect the lighting cable to the electrical connection on the tractor.

6. Remove the front transport lock (1) from the bale lift arm cylinder.
   - The lift arm may need to be raised slightly to remove any pressure that is on the transport lock.
     - On the display touch the Load button and use the joystick button to raise the arm.

Before getting out of the tractor:
- Touch STOP button on the display.
- Shut off hydraulics.
- Shut down the tractor.

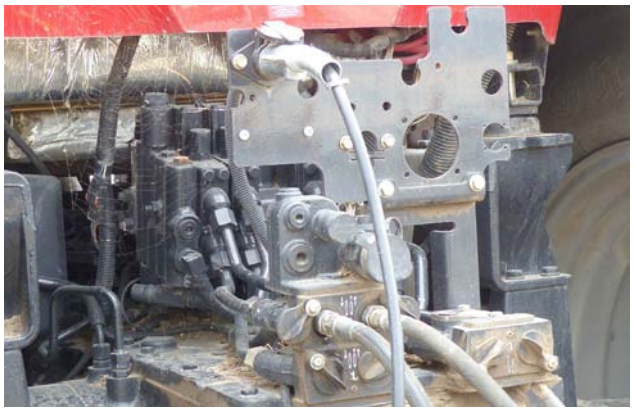
Note: Do not lower the lift arm when the transport locks are in position or damage to the machine will occur.

- Place the lock in the storage position.
  - Fasten with the clip pin (2).

7. Remove the rear transport lock (1) from the bale lift arm cylinder.

- Place the lock in the storage position.
  - Fasten with the clip pin (2).

Note: Do not lower the lift arm when the transport lock is in position or damage to the machine will occur.



Attach Hydraulics and Lighting Cable 108008-1

Remove Front Lock, Place In Storage 218042-3C

Remove Rear Lock, Place In Storage 218043C

8. Connect the tractor harness to the stacker harness located on the hitch.

    - See Section 3 for display and joystick connections.

    - Ensure the harness does not interfere with or contact moving parts.

9. Connect the power cord into the keyed and constant 12V DC power supply of the tractor.

    - Connect the round power connector into the tractor power receptacle.

10. If needed, select for Open Center Hydraulics.

    - The Open Center Hydraulics button will need to be selected on the display.

    - Two hydraulic valves will need to be adjusted to compensate for flow and pressure differences between the two systems.

<u>To select Open Center Hydraulics on the display</u>:

- Touch the Menu button on the display home screen.

- Touch Open Center Hydraulics.
    - There should be a check mark in the small box to indicate it is turned on.

- Touch the Home Screen button to return to the Home Screen.

Display Home Screen 219164

Select Open Center Hydraulics - Menu Screen 222329

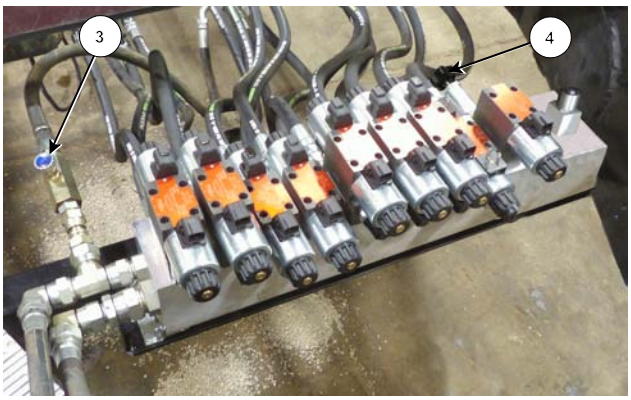
To adjust the two hydraulic valves:

- At the Home Screen touch the Unload button.

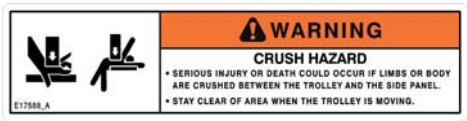
- Set the tractor engine to the speed for operating the hydraulics.

- Adjust the boost cylinder bleed valve (3).
  - Close the valve completely.
  - Engage the tractor hydraulics.
  - Open the valve just enough so the boost cylinder does not raise the rear table.

- Adjust the trolley pressure valve (4).
  - Move the trolley to the front of the rear table.
  - Close the trolley valve adjustment knob.
  - Completely raise the rear table.
  - Open the trolley adjustment knob just enough so the trolley begins to creep down the table. (This is an initial setting and may need to be adjusted depending on how well the bales are loading onto the rear table.)
  - Secure the valve adjustment knob in place.



Adjust Boost Bleed Valve and Trolley Valve 219034C



13. Touch the Load button on the Home Screen to turn on the loading functions of the machine and joystick buttons.
  - The toggle switch should be up to indicate it is turned to Load mode.

  Note: Touching the button a second time will toggle to the Unload mode.

Turn on the Load Function 2191641

14. Use the joystick button to lower the lift arm.

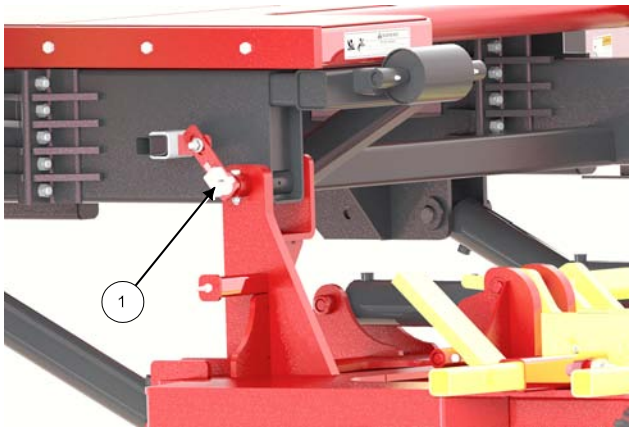
Stand Clear of the lift arm.
A moving lift arm can cause serious injury or death.
Never stand under the lift arm when lowering or raising.
Do not allow people near the lift arm when being moved.

Note: Do not lower the lift arm when the transport locks are in position or damage to the machine will occur.

Lower the Lift Arm 222293

15. Check the condition of the rotation sensor (1) mounted on the rear of the lift arm.

- Check that the sensor (1) is in good condition.
- Check that the area around the sensor is free from debris.
- Check that the electrical connector is tight.
- See Section 6 for more information on rotation sensor adjustment.



Check the Condition of the Rotation Sensor 218045C

16. Adjust the lift arm for the size of the bales.

- Remove the bolts from the adjustable holder (1) on the clamp.
  - For 3' x 3' (0.9 m) bales, move the adjustable holder (1) toward the front table. Place the bolts in the tube holes (2).
  - For:
    - 3' x 4' (0.9 m x 1.2m) bales with 4' [1.2m] side on the ground
    - 4' x 4' (1.2 m x 1.2 m) bales
    - Move the adjustable holder (1) away from the front table. Place the bolts in the tube holes (3).
  - Fasten in place with the bolts.

Adjust Arm for 3 Foot (0.9 m) Bales 222294C

Adjust Arm for 4 Foot (1.2 m) Bales 222295C

17. On the FaStack 1200 adjust the spring loaded bar (4) on the lift arm for the length of the bales.

- It is important to adjust this bar so the bale will be centered on the front table in the front to back position.
- After the front table is rotated the bale will be centered on the rear table.

Adjust the Spring Bar to Center Bale on the Front Table 217180-1C

Bale Centered on Rear Table 217180-2

- To adjust the spring loaded bar:
  - Remove the bolts in the adjustment tubes (2).
  - Slide the bar to the desired location for the size of bale being loaded.
  - Fasten in place with the bolts (2).

18. Use the joystick buttons to check that the lift arm operates freely.
    - It is normal operation if the lift arm quickly moves downward during its cycle.

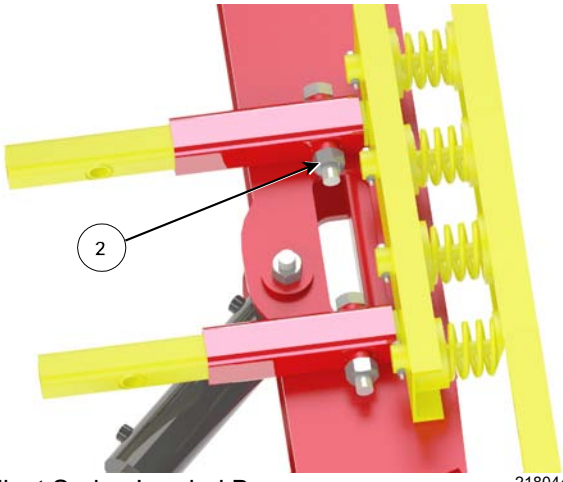
Stand Clear of the Bale Lift Arm
A moving lift arm can cause serious injury or death.

- Never stand under the lift arm when lowering or raising.

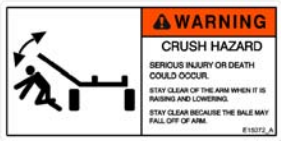
- Do not allow people near the lift arm when the being moved.

19. Check that the flipper (2) moves up completely when the bale turn selection is turned OFF on the display.

20. Check that the bale assist (1) finishes the upward cycle at the same time as the flipper (2) upward cycle.
    - The bale assist and flipper only work when the bale turn selection on the display is OFF.
    - To adjust the timing of the bale assist (1):
      - Set the tractor engine to the speed for bale loading operation in the field.
      - Adjust the bale assist flow control valve under the front table.
        - The flow control valve is located in the hydraulic circuit to the bale assist cylinder.



Adjust Spring Loaded Bar 218044-1C



Check Lift Arm and Flipper Operate Freely 222292C

Check the Bale Assist Works
(When Bale Turn OFF) 222290C

21. On the FaStack 1200 check that the front table rotates freely.

Stay clear of the table when turning. The front table can move quickly. Contact with the front table can cause serious injury or death.

- Lower the lift arm.
- On the display touch FRONT TABLE ROTATE.
- Use the joystick buttons to raise the front table.
  - As it is rising the table should rotate.

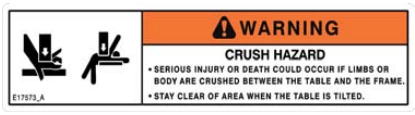
Push Front Table Rotate Button 219182


Check the Front Table Rotates (FS1200) 218074

22. Check that the front table raises and lowers freely.

Stay clear when raising or lowering the tables. Serious injury or death could occur from contact with the moving table.

- Lower the lift arm.
- Press the Load button on the display.
- Use the joystick buttons to raise and lower the front table.

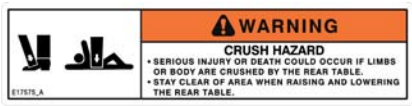



Check The Front Table Raises and Lowers 217154

23. Check that the rear table raises and lowers freely.

Stay clear when raising or lowering the table. Serious injury or death could occur from contact with the moving table.

- Lower the lift arm.
- Lower the front table.
- Press the Unload button on the display.
- Use the joystick buttons to raise and lower the rear table.



Check The Rear Table Raises and Lowers 217155

24. FaStack 1200 - Check that the pushoffs fully extend and retract.

    - Push the Unload button on the display.

    - Raise the rear table to 90 degrees.

    - Push the joystick buttons to extend and retract the pushoff cylinders.

    - When the cylinders are extended the light on the display beside PUSH OFF EXTENDED should come on.
      - When the cylinders are fully retracted the light will go off.

    - Lower the rear table.
      Note: If the joystick button to lower the rear table is pushed while the pushoffs are extended, the pushoffs will retract before the table is able to lower.

25. Check that the bale trolley on the rear table operates freely.

    Keep clear of the machine when moving the trolley.
    Contact with the moving trolley or the moving chain could cause serious injury or death.

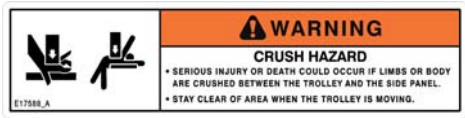
    - Push the Unload button on the display.

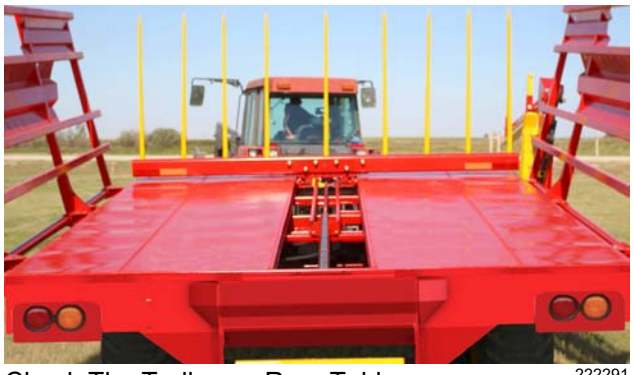
    - Push the joystick button to move the trolley toward the front of the table.

      - To move the trolley to end of the rear table, raise the rear table. The trolley will move down under its own weight.

Check the Pushoffs Extend/Retract (FS 1200 only) 216057

Push Off Extended Warning Light 219181-1





Check The Trolley on Rear Table 222291

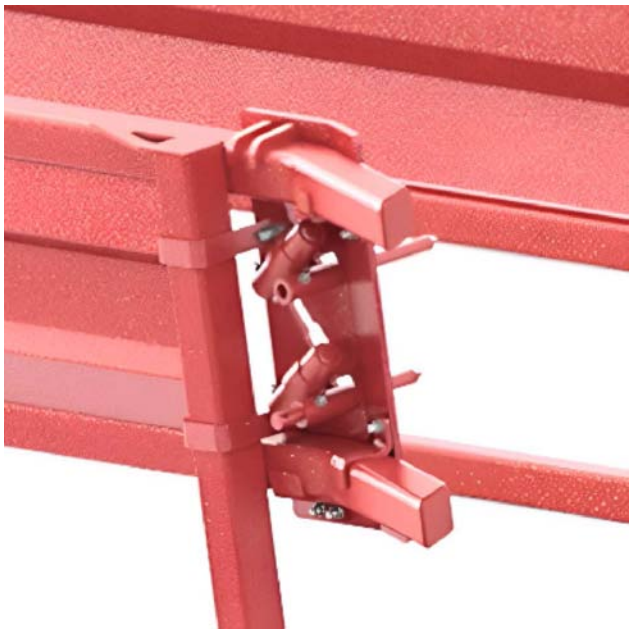
26. Check that the side racks open and close.

Keep persons back when moving the side panels. The side racks can move quickly. Contact with a moving side rack can cause serious injury or death.

- Push the Unload button on the display.
- Use the joystick buttons to open and close the side rack.

Check that the Side Racks Open and Close 222291

27. At the front of both side racks, check that the bale spikes move freely.



Check that the Side Rack Bale Spikes Freely Move 222308

28. Check the condition of the tires.
    - Ensure tires are inflated to the 41 psi (283 kPa).
    - Torque the lug nuts to 170 lb-ft (230 Nm).
    - Inspect the wheels and tires for damage or foreign objects. Repair or replace as necessary.


Check the Condition of the Tires 217147

29. Inspect all the hydraulic cylinders and hoses.

Use a piece of cardboard or heavy paper to check for leaks. Do not use your hand. Wear proper hand and eye protection when searching for leaks.
Relieve pressure on hydraulic system before repairing, adjusting or disconnecting.

Note: If fluid is injected under the skin, it must be removed immediately by a surgeon familiar with this type of injury.

Do not go under a raised table. Serious injury or death could occur from the table lowering.

- Visually inspect all the hydraulic hoses and fittings.
    - See Section 6 for conditions indicating that hose replacement is needed.
- Ensure the proper size cylinder pins are in place and secured.


Check All Hydraulic Connections 217073

30. Lubricate all grease fittings. (See Section 6).

5.0 Operating the Bale Stacker

Do not allow anyone to ride on the bale stacker. Falling from the machine can cause injury.

Stay clear of overhead power lines. Electrocution can occur without contacting the power lines.

Tractor Hitch Category Requirement

The category of tractor hitch that is required will be determined by the weight of the bales being loaded. The weights of the bales influence the vertical hitch load.

Note: It is the operator's responsibility to ensure the appropriate tractor is used that can handle the vertical hitch loads as listed.

See the chart for the category of tractor hitch required for the listed bale sizes and weights.

FaStack 1800				
Hitch Category	Maximum Bale Weight for Maximum Number of Loaded Bales			
4	4x4: 1400 lbs (635 kg)	3x4 Off String: 1100 lbs (499 kg)	3x4 On String: 1400 lbs (635 kg)	3x3: 1000 lbs (454 kg)
	Vertical Hitch Load: 7150 lbs (3243 kg)	Vertical Hitch Load: 7340 lbs (3329 kg)	Vertical Hitch Load: 7300 lbs (3311 kg)	Vertical Hitch Load: 7410 lbs (3361 kg)

FaStack 1200		
Hitch Category	Maximum Bale Weight for Maximum Number of Loaded Bales	
3	4x4 or 3x4 Off String: 1200 lbs (544 kg)	3x4 On String or 3x3: 1000 lbs (454 kg)
	Vertical Hitch Load: 5940 lbs (2694 kg)	Vertical Hitch Load: 5840 lbs (2649 kg)
4	4x4 or 3x4 Off Strings: 1800 lbs (816 kg)	3x4 On String: 1600 lbs (726 kg)
	Vertical Hitch Load: 7250 lbs (3289 kg)	Vertical Hitch Load: 7360 lbs (3338 kg)

Number of Bales Capacity

The number of bales that can be stacked is determined by the size of the bale and the orientation of the bale.

The FaStack can stack the bales "On Strings" (strings down) or "Off Strings" (strings on the side).

FaStack 1800

- 24 bales of 3' x 3' bales
- 18 bales of 3' x 4' bales on strings
- 16 bales of 3' x 4' bales off stings
- 12 bales on 4' x 4' bale on or off strings

Note: The number of bales that can be loaded is also determined by the bale weight and the category of tractor hitch used. See Section 9 for more information.

FaStack 1200

Fastack 1200 has the ability to stack bales from the end of the stack giving the user more flexibility as to where the bales can be stacked whether it is in the field or in a shed. The rotating front table allows stacking along the long side of the bale.

- 12 bales of 3' x 4' on strings
- 8 bales of 4' x 4' on or off strings
- 8 bales of 3' x 4' off stings

Note: The number of bales that can be loaded is also determined by the bale weight and the category of tractor hitch used. See Section 9 for more information.

FaStack 1800 Bale Capacity

24 Bales of 3'x3' 217163
On of Off Strings

18 Bales of 4'x3' 217164
On Strings

16 Bales 4'x3' 217165
Off Strings

12 Bales of 4'x4' 217166
On or Off Strings

FaStack 1200 Bale Capacity

12 Bales 3'x4'
On Strings 217167

8 Bales 4'x4' 217168
On or Off Strings

8 Bales 3'x4'
Off Strings 217169

"On Strings" or "Off Strings" Stacking

The position of the bale strings when loaded on the front table will be the same position of the strings in the unloaded stack.

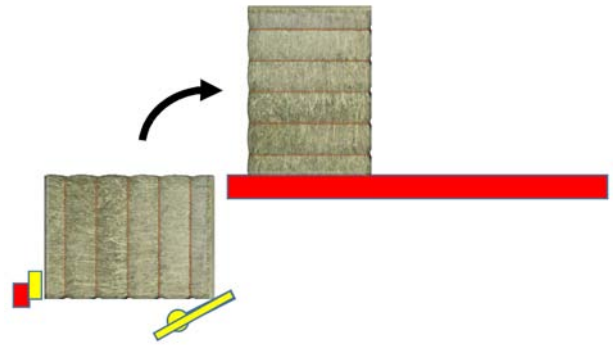
The unloaded stacking of "On Strings" (strings down) or "Off Strings" (strings on the side) is determined by two factors while loading:

1. The position of the bale strings when the bale is on the ground.

2. Whether or not the bale is turned when loading onto the front table.

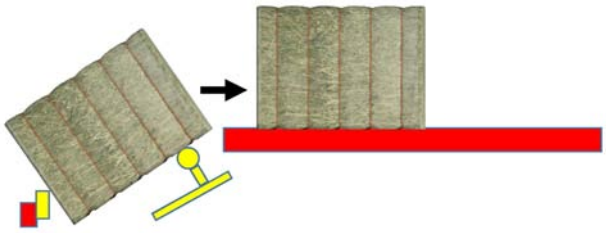
The bale is handled in the following way depending on the display choice:

- Bale Turn On = Bale is rotated (turned) 90° from field position when loading.



Bale Turn On 217172-2

- Bale Turn Off = Bale is loaded in the same orientation as field position.



Bale Turn Off 217172-1

Before picking up bales determine the position of the bale strings in the field and the desired way of stacking.

- If Bale Turn is desired touch the BALE TURN button on the display.
  - There should be a check mark in the small box to indicate it is turned on.

Bale Turn Button On 219182-1

LOADING BALES IN THE FIELD

1. Drive the bale stacker into the field area.

2. Park on level ground.

3. Engage the hydraulic lever and lock it in the open position.

4. On the display touch the Load Button so the joystick buttons operate the functions required to pick up the bales.

   - The toggle switch should be up to indicate it is turned to load mode

5. Raise the lift arm to remove any pressure that may be on the transport locks.

   Before getting out of the tractor:
   - Touch the STOP button on the display.
   - Shut off hydraulics.
   - Shut down the tractor.

6. Remove the front transport lock (1) from the bale lift arm cylinder.

   Note: Do not lower the lift arm when the transport lock is in position or damage to the machine will occur.

   - Place the lock in the storage position.
     - Fasten with the clip pin (2).

7. Remove the rear transport lock (1) from the bale lift arm cylinder.

   - Place the lock in the storage position.
     - Fasten with the clip pin (2).

   Note: Do not lower the lift arm when the transport lock is in position or damage to the machine will occur.

Touch Load Button 219164

Remove Front Lock, Place In Storage 218042-3C

Remove Rear Lock, Place In Storage 218043C

Loading the Front Table

There are two options for loading the Front table:

- Loading Arm Manual Control
  - See page 5-5
- Loading Arm Auto Control
  - See page 5-7

Loading the Front Table
Loading Arm Manual Control

- Ensure the Loading Arm Auto on the display is off.

- Push the joystick button to ensure the front the table is completely down.
  - This will allow the lift arm to raise.

- Push the joystick button to lower the lift arm.

Stay clear when lowering the lift arm to avoid serious injury or death.

- The lift arm should be a few inches above the ground to avoid contacting the ground.

  Note: If the arm is contacting the ground, adjust the frame height by moving the hitch tongue. See Section 4 for information.

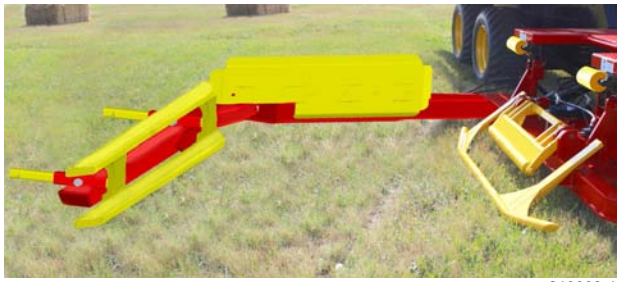
- Push the joystick button to open the clamp arm.

- Drive up to the bale and position the lift arm until it is around the bale.

  Note: Avoid putting loose bales into the first couple of rows. Loose bales on the bottom or middle of the stack could make the stack less stable.

Lower Front Table ,Lower Lift Arm 222286

Loading Arm Auto Off 219164



Open the Clamp Arm 219038-1

Drive Up to the Bale Until Arm is Around Bale 221111

- Drive forward until the bale is fully against the spring bar at the back of the lift arm.

- The bale stacker may be operated at field speeds of 3 - 4 mph (4 - 6 km/h).

    - It is not required to stop to pick up a bale.

- Push the joystick button to close the clamp arm.

Note: If the clamp arm pushes the bales to far up onto the arm causing the bale to wedge against the front table, adjust the clamp arm cylinder position.

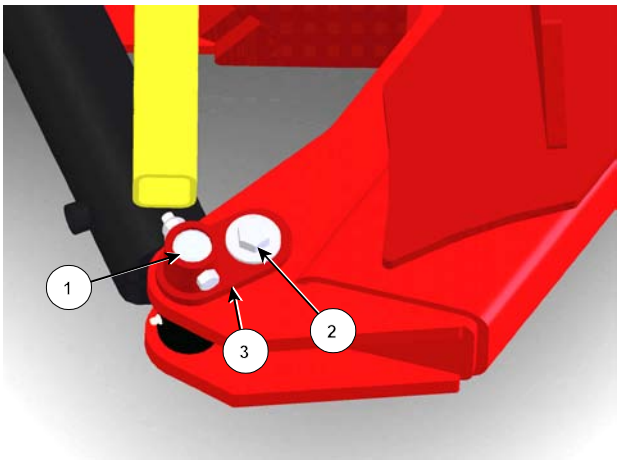
- Remove the fastener (2) and bushing.
- Remove the fastener holding the cylinder pin (1).
- Remove the pin holder (3).
- Move the cylinder pin (1) to the other hole (2).
    - Reverse the pin holder.
- Install the cylinder pin (1) and install the pin holder (3).
- Install the bushing and fastener (2).

- Push the joystick button to raise the lift arm and place the bale on the front table.

Stay clear when lowering the lift arm to avoid serious injury or death.

Stay clear when lifting bales. If a bale falls off it can cause serious injury or death.

Close the Lift Clamp 219040-1



Move Cylinder to Reduce Bale Wedging 221112C

Raise the Lift Arm to Place Bale on the Table 219042-1

Loading the Front Table

Loading Arm Auto Control

The Loading Arm Auto feature enables using two single button presses to pick a bale.

Keep people clear of the machine when in Auto mode. Parts of the machine will move without operator control and move unexpectedly.

Note: The Auto function can be stopped at anytime by pressing the joystick button or the STOP button.

- Press the LOADING ARM AUTO on the display.
  - There should be a check mark in the small box to indicate it is turned on.
- On the joystick press the Arm Down button.
  - This moves the loading arm down from the ready position to the loading position. The clamp will also open.
    Note: The "Ready" position is the arm raised about 30 degrees from the ground with the clamp open.
- Drive so the bale is inside the arm.
- On the joystick press the Arm Up button.
  - The Auto Sequence Active light will come on to show that the Loading Arm Auto is in process.
  - The clamp will close and lift the bale onto the table.
    - If the Bale Turn has been turned on at the display the bale will be turned in the sequence.
  - The loading arm will then move back to the Ready position.

Enable Loading Arm Auto 219182-2

Press Arm Down - Arm Lowered And Clamp Open 219038-1

Drive Up to the Bale Until Arm is Around Bale 221111

Press Arm Up- Bale Placed on the Table 219042

FaStack 1800 Front Table Raise

There are two options for the FaStack 1800 Front table raise:

- Front Table Manual Raise Control
  - See page 5-8
- Front Table Auto Raise Control
  - See page 5-9

FaStack 1800 Front Table Raise Manual Control

Note: The display should not have the Front Table Auto checked.

- Lower the arm before lifting the front table.

- Use the joystick button to raise the front table up to move the bales onto the rear table.
  - As the front table is being raised, the side racks will open to allow the bales to move onto the rear table.

Stay clear when raising or lowering the tables. Serious injury or death could occur from contact with the moving table. There is a crushing hazard if limbs or body is placed between the hitch and table when the table deck is lowered.

Stay clear when the front table is lifted because bales could fall.

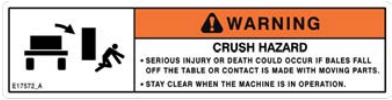
- As the bales are pushed onto the rear table the bales already on the table are pushed back and the trolley will also be pushed back.

- The side racks will close.

- Use the joystick button to lower the front table.

Lower Arm Before Lifting Front Table 222285

Lift Front Table 217177



Fully Raise Front Table, Close Side Racks 222307

FaStack 1800 Front Table
Auto Raise

The Front Table Auto feature enables using a single button press to load the bales from the front table onto the rear table and then lower the front table.

Keep people clear of the machine when in Auto mode. Parts of the machine will move without operator control and move unexpectedly.

Note: The Auto function can be stopped at anytime by pressing the joystick button or the STOP button.

- Select Front Table Auto on the display.
  - There should be a check mark in the box to indicate it is turned on.

- Lower the lift arm.

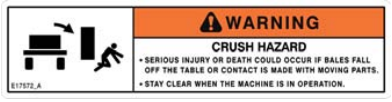
- On the joystick press the Front Table Up button.
  - The Auto Sequence Active light will come on to show that the Front Table Auto is in process.
  - The front table will rise and the side racks will open.

  Stay clear when raising or lowering the tables. Serious injury or death could occur from contact with the moving table. There is a crushing hazard if limbs or body is placed between the hitch and table when the table deck is lowered.

  Stay clear when the front table is lifted because bales could fall.

  - The bales will be moved onto the rear table.
  - The side racks will close.
  - The front table will lower.

Press Front Table Auto 219164-1




Press Front Table Up - Raise Front Table 217177

- With the final load of bales, the front table will go to the vertical position to push the bales onto the rear table (1).

- The front table will then relax and move away from the rear table a small amount to allow the final row of bales to seat (2) onto the rear table.

- The front table will then move toward the bales and stay in the raised position (3) for transporting.

Front Table Moves to Seat Bale
In Auto Front Table Mode

222093C

FaStack 1200 Front Table Raise

There are four options for the FaStack 1200 Front table raise:

- Front Table Raise Manual Control without rotating the bales.
  - See page 5-11

- Front Table Raise Manual Control with rotating the bales.
  - See page 5-12

- Front Table Raise Auto Control without rotating the bales.
  - See page 5-13

- Front Table Raise Auto Control with rotating the bales.
  - See page 5-15

The factors for choosing to rotate bales depends on stacking location and the choice of "On Strings" or "Off Strings" stacking.

FaStack 1200 Front Table Raise
Manual Control Without Rotating Bales

Stay clear when raising or lowering the tables. Serious injury or death could occur from contact with the moving table. There is a crushing hazard if limbs or body is placed between the hitch and table when the table deck is lowered.

Stay clear when the front table is lifted because bales could fall.

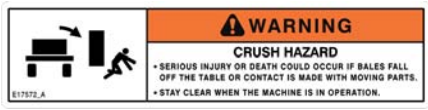
- Ensure the Front Table Rotate on the display is off.

- Lower the lift arm before raising the front table.

- On the joystick press the front table up button to raise the table and move the bales onto the rear table.
  - The side racks will open as the front table is lifted.

- Pause while lifting the front table to allow the bales to move so they are resting on the rollers of the rear table.

- As the bales are pushed onto the rear table the bales on the table are pushed backs and the trolley will also be pushed back.



Front Table Rotate Turned Off 219163-3

Note: For FaStack 1200 - If the bales are hitting against the side racks when being lifted, adjust the bale stops (1) on the front table.

- Remove the pin from the stops (1).
- Move the stops as needed.
- Replace the pin.

- Use the joystick button to lower the front table.

Adjust Front Table Stops 218072C

FaStack 1200 Front Table Raise Manual Control <u>With</u> Rotating Bales

- Lower the lift arm before raising the front table.

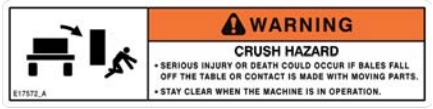
- Ensure the Front Table Rotate on the display is on.
  - There should be a check mark in the small box to indicate it is turned on.

Turn On Front Table Rotate 219182

Stay clear of the table when rotating. The front table can move quickly. Contact with the front table can cause serious injury or death.

Stay clear when raising or lowering the tables. Serious injury or death could occur from contact with the moving table. There is a crushing hazard if limbs or body is placed between the hitch and table when the table deck is lowered.

Stay clear when the front table is lifted because bales could fall.



- On the joystick press the front table up button to raise the table.
  - As the table rises the front table will rotate.

- Fully raise the table and move the bales onto the rear table.
  - The side racks will open as the front table is lifted.

- Use the joystick button to lower the front table.

  - While lowering the front table it will rotate to be ready for loading more bales.

Table Will Rotate as Being Raised 219049

Table will Rotate While Being Lowered 218074

FaStack 1200 Front Table Raise
Auto Control <u>Without</u> Rotating the Bales

Stay clear when raising or lowering the tables. Serious injury or death could occur from contact with the moving table. There is a crushing hazard between the hitch and table when the table deck is lowered.

Stay clear when front table is lifted because bales could fall.

- Lower the arm before lifting the front table.

- Ensure the Front Table Rotate on the display is off.

- Press the Front Table Auto to be on.
  - There should be a check mark in the small box to indicate it is turned on.

Keep people clear of the machine when in Auto mode. Parts of the machine will move without operator control and move unexpectedly.

Note: The Auto function can be stopped at anytime by pressing the joystick button or the STOP button.

- On the joystick press the Front Table Up button to raise the table.
  - The Auto Sequence Active light will turn on.
  - The front table will rise and the side racks will open.
  - The bales will be moved to the rear table and the trolley will be pushed back.
  - The front table will lower.
  - The side racks will close.

Note: For FaStack 1200 - If the bales are hitting against the side racks when being lifted, adjust the bale stops (1) on the front table.

  - Remove the pin from the stops (1).
  - Move the stops as needed.
  - Replace the pin.

Front Table Auto - No Table Rotate 219183

Adjust Front Table Stops 218072C

- With the final load of bales, the front table will go to the vertical position to push the bales onto the rear table (1).

- The front table will then relax and move away from the rear table a small amount to allow the final row of bales to seat (2) onto the rear table.

- The front table will then move toward the bales and stay in the raised position (3) for transporting.

Front Table Moves to Seat Bale
In Auto Front Table Mode 222306C

FaStack 1200 Front Table Raise
Auto Control <u>With</u> Rotating the Bales

- Ensure the Front Table Rotate on the display is on.
  - There should be a check mark in the box to indicate it is turned on.

- Press the Front Table Auto to be on.
  - There should be a check mark in the small box to indicate it is turned on.

Keep people clear of the machine when in Auto mode. Parts of the machine will move without operator control and move unexpectedly.

Note: The Auto function can be stopped at anytime by pressing the joystick button or the STOP button.

Front Table Auto with Table Rotate 219184

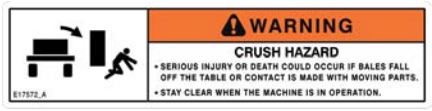
- Lower the arm before lifting the front table.

- On the joystick press the Front Table Up button to raise the table.
  - The Auto Sequence Active light will turn on.
  - The front table will rise and rotate. The side racks will open.

Table Will Rotate as Being Raised 219049

Stay clear when raising or lowering the tables. Serious injury or death could occur from contact with the moving table. There is a crushing hazard between the hitch and table when the table deck is lowered.

Stay clear when front table is lifted because bales could fall.



Stay clear of the table when turning. The front table can move quickly. Contact with the front table can cause serious injury or death.

- The bales will be moved to the rear table.

- The front table will then lower and rotate.


Table will Rotate While Being Lowered 218074

Note: For FaStack 1200 - If the bales are hitting against the side racks when being lifted, adjust the bale stops (1) on the front table.

- Remove the pin from the stops (1).
- Move the stops as needed.
- Replace the pin.

Adjust Front Table Stops 218072C

- With the final load of bales, the front table will go to the vertical position to push the bales onto the rear table (1).

- The front table will then relax and move away from the rear table a small amount to allow the final row of bales to seat (2) onto the rear table.

- The front table will then move toward the bales and stay in the raised position (3) for transporting.

Front Table Moves to Seat Bale In Auto Front Table Mode 222306C

Rear Table Full Load

- When the rear table has a full load the red light "Full Load" will come on the display.

  - Fully raise the front table.
    - The front table against the bales gives added stability while traveling to the stacking site.

Full Load Indicator Light 219184

Transport Mode

Transport Mode is used for moving the loading arm to the raised position for driving to the stacking location.

Transport mode works with the front table raised or lowered.

- The Loading Arm Auto button on the display needs to have a check mark in it.

- Push the Transport Mode button to move the lift arm to the raised position.
  - The Transport Mode will blink a red color.

- If the front table is raised when the Transport Mode button is pushed, the front table will remain raised and the loading arm will rise to the transport position.

- If the front table is lowered when the Transport Mode button is pushed, the front table will remain lowered and the loading arm will rise to the transport position.

- After disabling Transport Mode, the loading arm will need to be lowered manually (even if the Arm Auto is turned on) by pressing the lower arm button on the joystick.

Loading Arm Auto On for Transport Mode 219163

- Drive to the stacking storage site.

    - Ensure the side racks are closed.

    - Ensure the bales are secure in the stacker.

        - Adjust the travel speed to suit the terrain to maintain load stability.

Note: The maximum rated travel speed of the machine is 20 mph (32 kmh) when at the full load rating and the required tire pressure of 41 psi (283 kPa) is maintained.

- The full load rating is 42,000 pounds (19,051 kg) GVW as noted in the Specifications sheet in Section 9.

- Exceeding 20 mph (32 kmh) when fully loaded will lead to premature tire damage or failure.

Drive to the Stacking Site - Front Table Raised 222333

Recommended Procedures for Starting A Bale Stack with:

- FaStack 1800 & FaStack 1200 Bales Not Rotated - this page
- FaStack 1200 With Bales Rotated
  - see page 5-22
- FaStack 1200 Tie Stacking the Bales
  - see page 5-25

FaStack 1800 & FaStack 1200 Bales Not Rotated

Note: On FaStack 1200 this is only for bales that are loaded with the 4' side of the bale resting on the table.

1. The stacking location must be free of mole hills, rough ground and debris.
   - The location must be level or at a slight incline.
     - If the stacking location has a slight incline, unload with the tractor pointed uphill.
       - When the tractor is pointed uphill, gravity will help to keep the top of the stack in place and prevent bales from falling forward as the tractor pulls away or between loads.

2. Position the stacker to unload the first load (1).

   Note: It may be helpful to start by placing a partial load (1) ("stair step") to give stability to the stack as larger loads are stacked.

Optional Partial First Load For Stack Stability 218077-1C

- Keep the side racks closed while raising the stack.

- Press Unload button on the display.

- Raise the rear table so that it is vertical or slightly past vertical.
  - The end of the forks must be on the ground.

- Open the side racks.

- Slowly pull the tractor away from the stack.

3. For the second load (2) position the stacker beside the previous stack (1).

   - Position the stacker so that when the rear table is upright the stack (2) will be close to the previous stack and the bales in line.

   - Raise the rear table so that it is vertical or slightly past vertical.

   Note: During unloading of the FaStack 1200, once the rear table has been raised to 40 degrees a banner will appear on the top of the display that will indicate the angle that the rear table is raised. This angle readout will help for more precise unloading of the bales from the rear table.

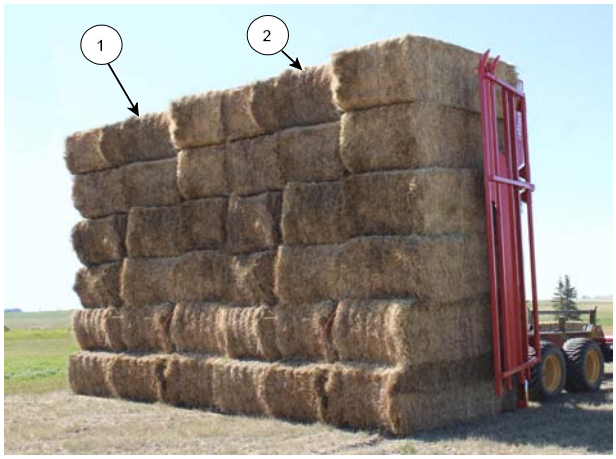
   - The end of the forks must be on the ground.

   - Open the side racks.

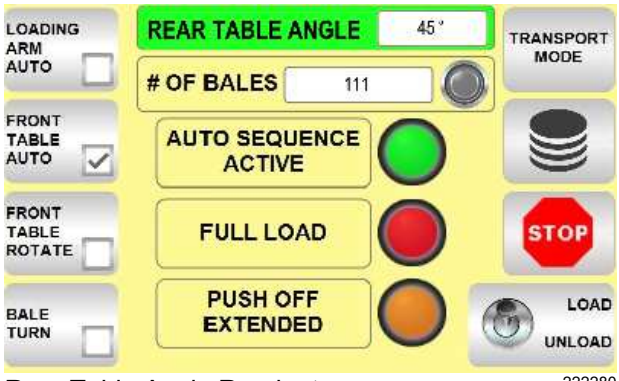
   - Slowly pull the tractor away from the stack.

4. Additional loads of bales can be placed beside or up against the stack.

Full Load as First Load 218077C2



Second Load Beside Previous Stack 218077C



Rear Table Angle Readout 222280

- **FaStack 1200 <u>With</u> Bales Rotated**

1. The stacking location must be free of mole hills, rough ground and debris.
   - The location must be level or at a slight incline.
     - If the stacking location has a slight incline, unload with the tractor pointed uphill.
     - When the tractor is pointed uphill, gravity will help to keep the top of the stack in place and prevent bales from falling forward or between loads.

2. Begin the stack in a "stair step" method by stacking partial loads..
   - This method helps to create stability for additional bale loads and to aid in the unloading of more bales.

   - When stacking bales of 3' high (ex. 3'x4' bales being stacked on-string), it is recommended to make the first stack 4 bales high, the second stack 5 bales high, and the third stack 6 bales high.

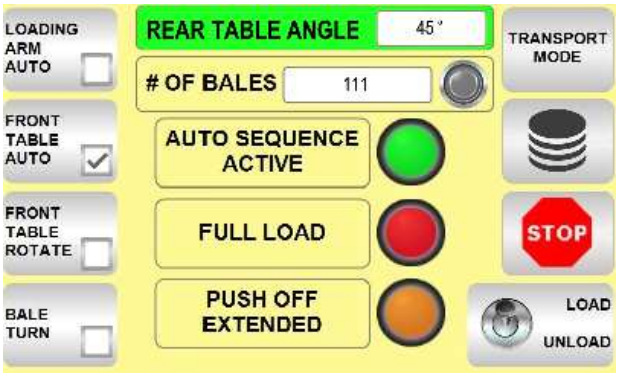
3. Place the stacker in position to unload the first stack of 4 bales.

   - Press Unload button on the display.

   - Raise the rear table so that it is vertical or slightly past vertical.

     Note: During unloading of the FaStack 1200, once the rear table has been raised to 40 degrees a banner will appear on the top of the display that will indicate the angle that the rear table is raised. This angle readout will help for more precise unloading of the bales from the rear table.

FS1200 Rotated Bales - Create Staircase for Stability 218076C



Rear Table Angle Readout 222280

- The end of the forks must be on the ground.

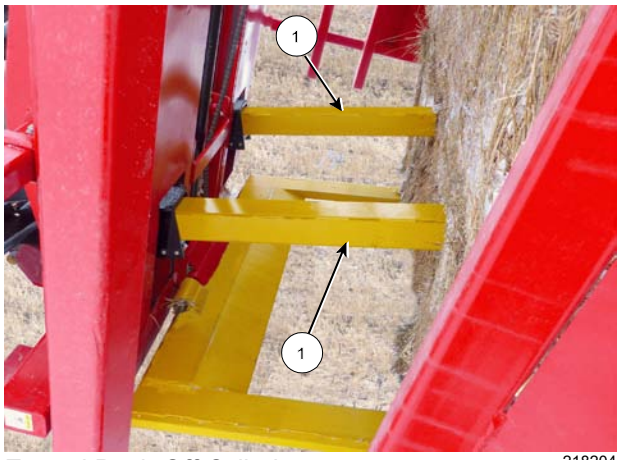
- Open the side racks when the table is fully raised.

- Use the joystick button to extend the pushoffs (1) to push the stack to near the end of the forks.

Note: If the bales are compressing and/or falling towards the machine during unload adjust the push-off pressure applied to the bales. See Section 6 for the procedure.

- Slowly pull the tractor away.

- Retract the pushoffs.



Extend Push Off Cylinders 218204

4. For the second load of 5 bales, position the stacker with the tractor facing away from the stack and the tractor and stacker as straight as possible.

   - If on an incline, the tractor should be facing uphill whenever possible.

5. Raise the rear table to around 45 degrees from the ground.

6. Back up the tractor until it is possible to see the bottom corners of the previously placed stack. This can be used as a guide to align the stacks.

7. Continue raising the rear table until it is raised to around 60 degrees from the ground.

8. Continue backing up until gentle contact is made with the previous placed stack.
   - The can be accomplished by clutching the tractor and rolling back into the stack.

   Note: When unloading the second stack use caution to avoid knocking over the first stack.

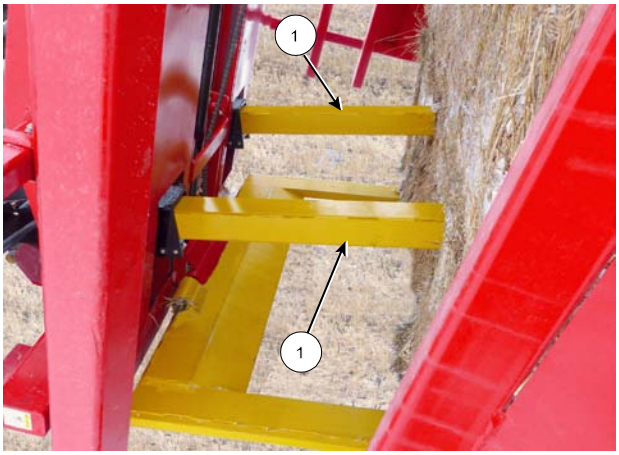
9. Continue raising the rear table until it is 90 degrees with the ground or slightly over.
   - Do not allow the tractor to creep forward while raising the table.

10. Keep foot on the tractor brakes.

11. Extend the pushoffs (1).

12. Pull the tractor ahead very slowly while extending the pushoffs until the forks are out from under the stack.

    If stacking on level ground or with the tractor pointed slightly downhill:
    - The rear table can be extended over 90 degrees in order to compress the top of the stack. This helps in preventing the stack from falling forward when pulling away.



Extend Push Off Cylinders 218204

13. Fully retract the pushoffs until the Push Off Extended light on the display goes out.

    - The recommended procedure is to fully retract the pushoffs before pulling the tractor away from the stack.

      - Watch the top of the stack for falling bales.

Retract Push Off Cylinders Until Light Out 219181

14. Drive the tractor away from the stack.

15. Finishing the stack by "stair stepping" the last loads that are placed in a stack.
    - When stacking bales that are 3' high (ex. 3'x4' bales being stacked on-string), a typical procedure is to make the second last stack 5 bales high and the last stack 4 bales high.

FS1200 Rotated Bales - Finish Staircase for Stability 218076

Tie Stacking the Bales with the FaStack 1200

With the FaStack 1200 there is the option to tie stack the bales to give greater stability to the stack.

Tie stacking involves the following:

- Loading some bales onto the rear table while not rotating the front table
- Loading some bales with the front table rotated.
- Loading more bales with the table not rotated.

- The order of rotating/not rotating of bales is the operator's preference.

A Tie Stacked Stack of Bales 222278

Unloading Bales

1. To disable Transport Mode push the Transport Mode button.

   - The loading arm will need to be lowered manually (even if the Arm Auto is turned on) by pressing the lower arm button on the joystick.

2. Fully lower the front table.

3. Position the stacker for unloading using one of the recommended stacking procedures listed above.

Disable Transport Mode 219163

4. Select Unload on the display.
   - This setting will cause the joystick buttons to operate in the Unload mode as shown on the joystick decal.

5. Open the side racks a small amount.
   - Use the joystick buttons on the FS1800.
   - Use the joystick buttons on the FS1200 (if the optional side racks are present).

Select Unload on the Display 219181

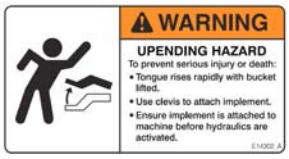
6. Use the joystick button to begin to raise the rear table.

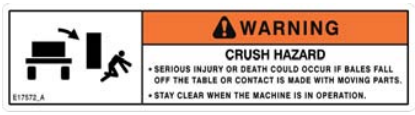

Begin to Raise the Rear Table 217183

Do not disconnect the hitch when the rear table is lifted. There is an upending hazard at the hitch when the rear table is lifted.

Ensure the area is clear of people or animals before unloading. The bales may fall and could result in death or serious injury.

Stay clear of the rear table when raising. There is a crushing hazard if limbs or body is placed between the table and ground or surrounding objects when the table is raised.





7. Stop raising the table when the bales start to slide.

    - Often the trolley is not entirely at the back of the table and the load will move further back on the table as it rises.

    - Open the side racks slightly to allow the bales to settle to the bottom of the table.
        - This is especially important when unloading partial loads.

    - Tighten the side racks.


Raise Table, Let Bales Slide, Open Side Rails 217182

8. Continue raising the table again with pauses while raising.

   Note: As the rear table approaches the upright position there can be quite a bit of momentum developed. The momentum can cause the top of the stack to pick up speed.

   - If there is no pausing to allow the bales to settle it is possible for the stack to continue to go over and fall.

   - Pausing while raising will allow the bales to settle and also reduces the momentum.

   - Pausing while raising also ensures that the bales will all be stacked together.

Use Pauses While Lifting the Table 217184

9. Lift the rear table to the fully raised position.

10. Open the side racks when the table is raised.

    - If unloading beside a stack, only open the racks a small amount.

Raise Table, Open Side Racks 217187

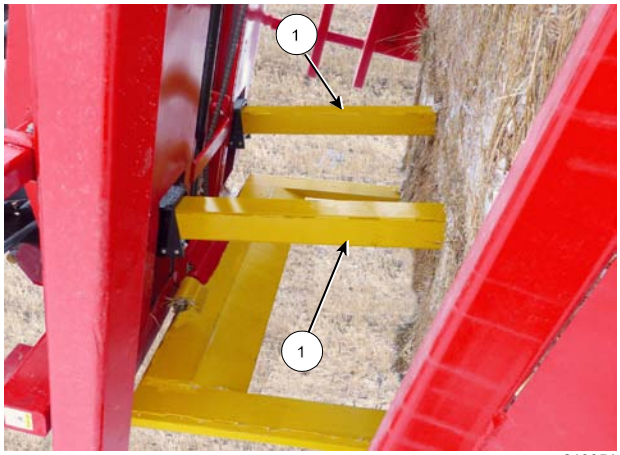
11. Slowly drive forward as the bales are unloading.

    - On the FaStack 1200 activate the pushoffs (1) to help push the bales off the forks.

      - Push the joystick button to extend the pushoffs (1) drive forward slowly.

    Note: If the bales are compressing and/or falling towards the machine during unload adjust the push-off pressure applied to the bales. See Section 6 "Maintaining the Bale Stacker" for the procedure.

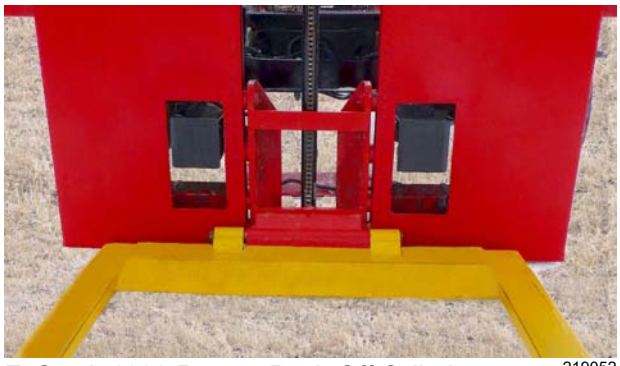
      - Retract the pushoffs (1) while driving away.



Activate the Push offs to Unload Bales (FS1200) 219051

12. When the bales are unloaded and clear of the machine, use the joystick button to lower the table completely.

    Note: On the FS1200, if the joystick button to lower the rear table is pushed while the pushoffs are extended then the pushoffs will retract before the table is able to lower.


FaStack 1200 Retract Push Off Cylinders 219052

Stay clear when raising or lowering the rear table.

Serious injury or death could occur from crushing or pinching by the table.


Lower The Table 222330

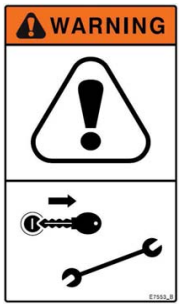
13. Use the joystick button to close the side racks.

14. Push the joystick button to bring the trolley forward in preparation for loading more bales.

6.0 Maintaining the Bale Stacker

Shutdown Procedure

For your safety and the safety of others, this procedure must be followed before dismounting from the tractor for repairing, servicing, cleaning or lubricating the bale stacker.



Step 1: Reduce the engine speed to idle.
Step 2: Fully lower bale lift arm.
Step 3: Touch STOP button on the display.
Step 4: Disengage hydraulic lever.
Step 5: Set the tractor park brake.
Step 6: Shut off tractor engine and remove the key.
Step 7: Relieve hydraulic pressure and disconnect hydraulic hoses.

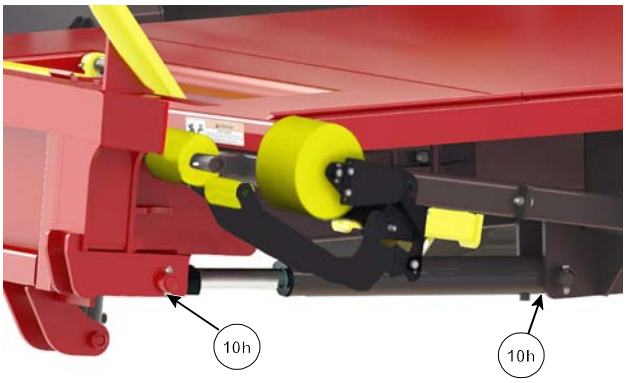
Lubrication

Lubricate all grease fittings with a quality lithium complex, extreme pressure NLGI Grade 2 grease.

Grease Every 10 Hours

Install the transport lock when the lift arm is raised. A raised lift arm could lower which could result in death or serious injury.

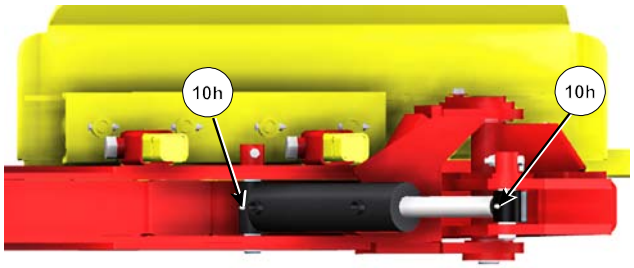
- Main Lift Arm Cylinders
  - 2 cylinders with 2 points each.



Grease Both Main Lift Arm Cylinders 218042-3C2

- Lift Clamp Arm and Cylinder

  - 2 points on the cylinder.



Grease Lift Clamp Arm and Cylinder 221113C

- Grease the bale turn cylinders

  - 2 cylinders with 2 points each.

Grease the Bale Turn Cylinders 217189-2C2

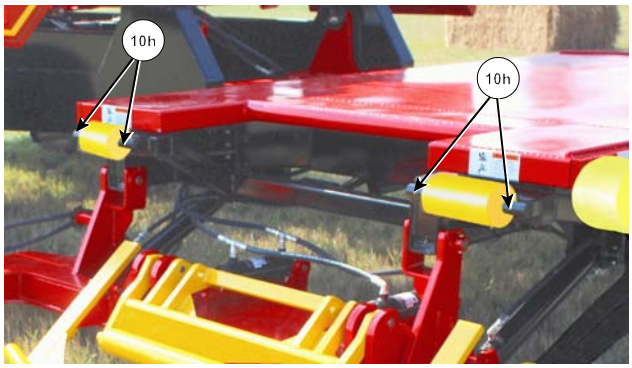
- Grease the bale support arm pivots

  - 2 points on the arm.

Grease the Bale Support Arm Pivots 217189C

- Grease the rollers at the front table

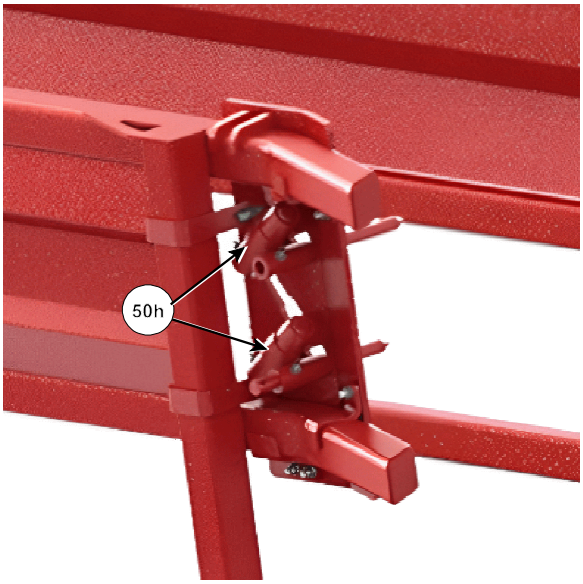
  - 2 rollers with 2 points each.



Grease Rollers Under Front Table 222334C

- Grease the bale spikes at the front of both side racks.

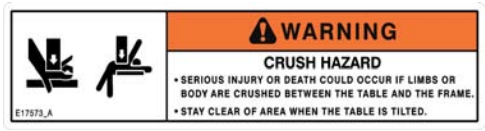
  - 4 points
    - 2 points at each set of bale spikes.



Grease the Bale Spikes at Front of Side Racks 222308C

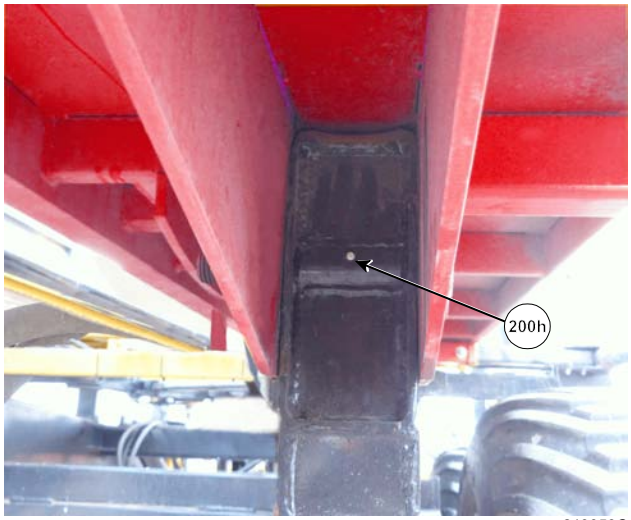
Grease Every 200 Hours

Do not raise the tables to do the greasing. A raised table could lower which could result in death or serious injury.



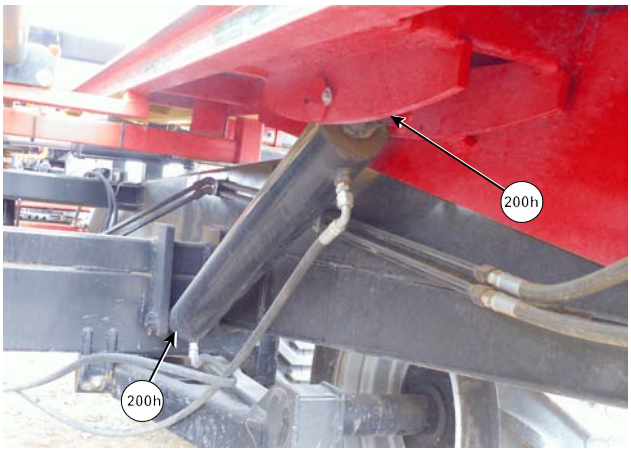
- Grease the rear table pivots at the back of the machine

  - 1 point on each side of table



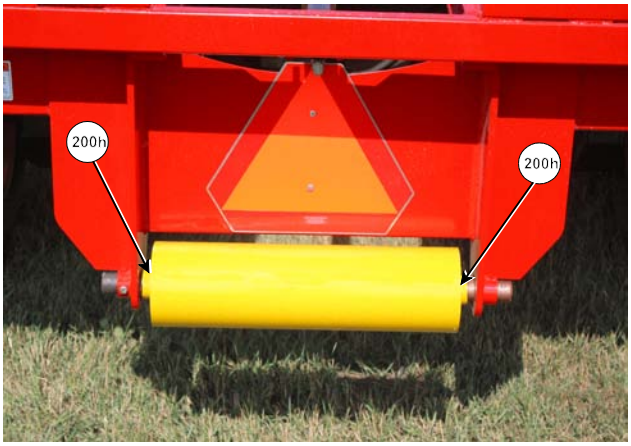
Grease Rear Table Pivots (Right Side Shown) 219053C

- Grease the rear table cylinders
  - 2 cylinders with 2 points each



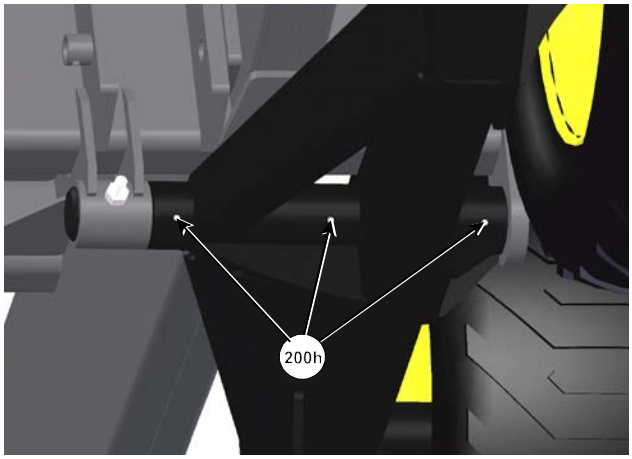
Grease Rear Table Cylinders 217123C

- Grease the rear table roller
  - 1 roller with 2 points



Grease Rear Table Rear Roller 217191C

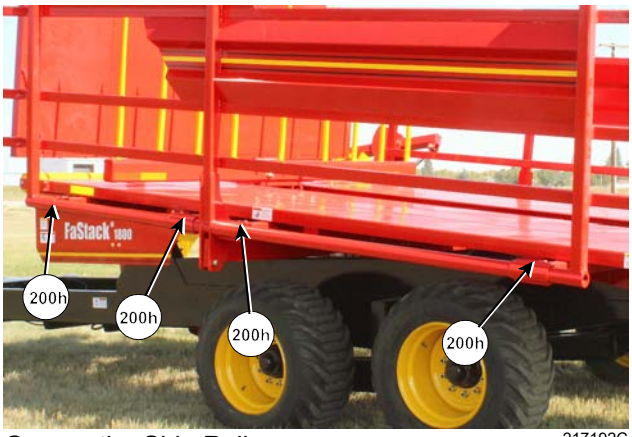
- Grease the axle walking beams
  - 2 axles with 3 points each



Grease the Axle Walking Beams
(Viewed from under frame) 221114C

- Grease the side rails on each side of the machine

  - 4 points on each side rail



Grease the Side Rails 217192C

- Grease the side rail linkage on each side of the machine

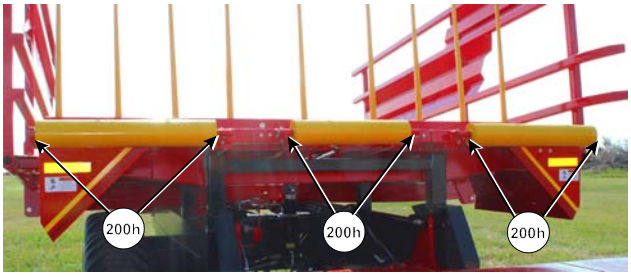
  - 1 point on linkage on each side

Grease the Side Rail Linkage 217192C2

- Grease the front rollers on the rear table

  - 2 points on each roller

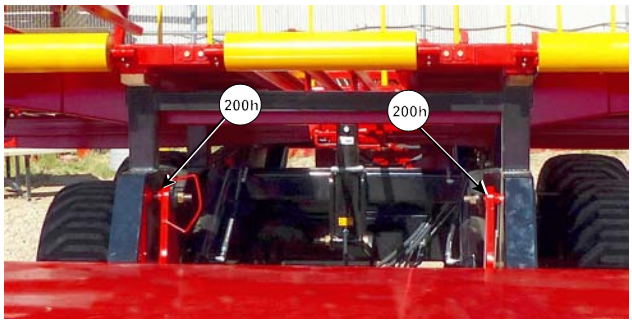
    - 3 rollers on FaStack 1800
    - 2 rollers on FaStack 1200



Grease Front Rollers on Rear Table 217193C

- Grease the front table pivots

  - 1 point on each pivot

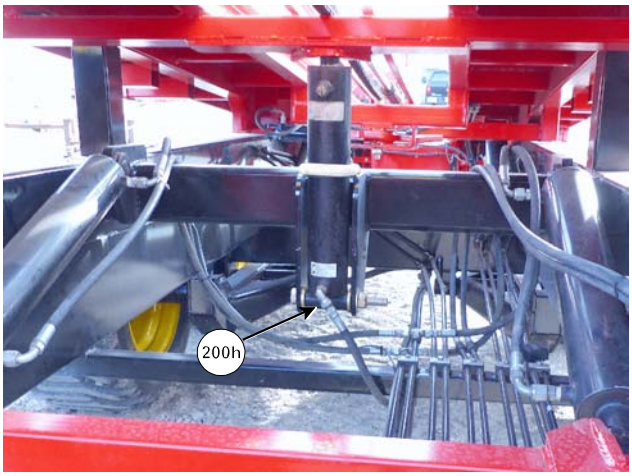


Grease Front Table Pivots 217194C

- Grease the front table cylinders
  - 2 cylinders.
    - 1 point on each cylinder.

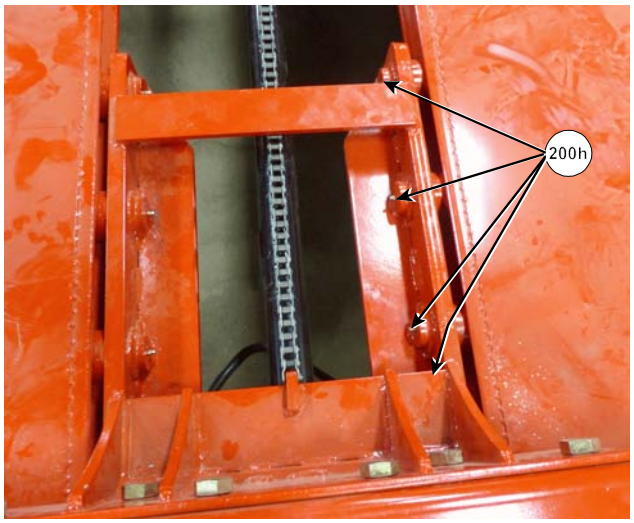
Grease Front Table Cylinders 217195C

- Grease the rear table boost cylinder
  - 1 point.



Grease the Rear Table Boost Cylinder 217196C

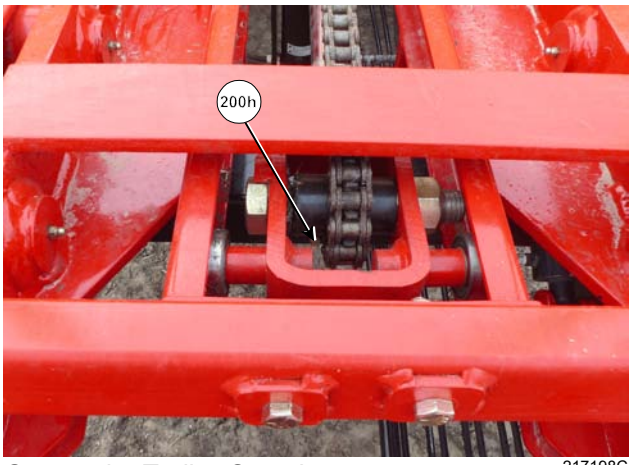
- Grease the trolley carriage
  - 8 points on the carriage
    - 4 points on each side of the carriage



Grease the Trolley Carriage 217197C

- Grease the trolley sprocket

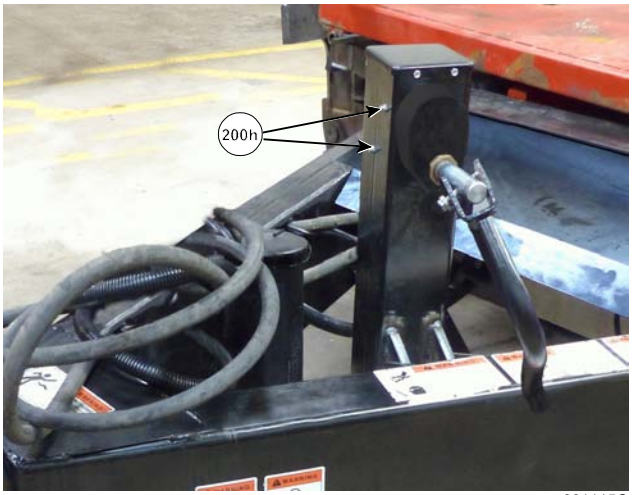
  - 1 point.



Grease the Trolley Sprocket 217198C

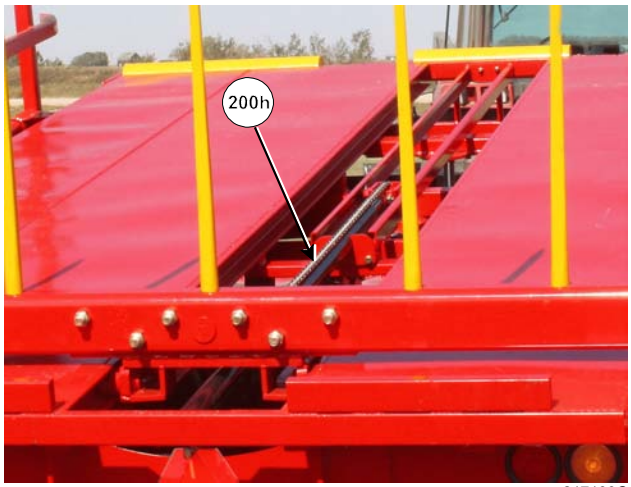
- Grease the hitch jack

  - 2 points.



Grease the Hitch Jack 221115C

- Lubricate the trolley chain with a quality chain oil.



Lubricate the Trolley Chain 217199C

Check the Lift Arm Rotation Sensor

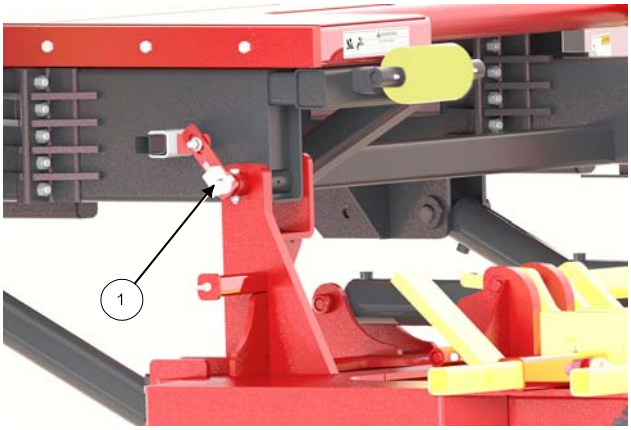
- Visually inspect rotation sensor (1) mounted on the rear of the lift arm.

- Check that the sensor (1) is in good condition.
  - Check that the area around the sensor is free from debris.

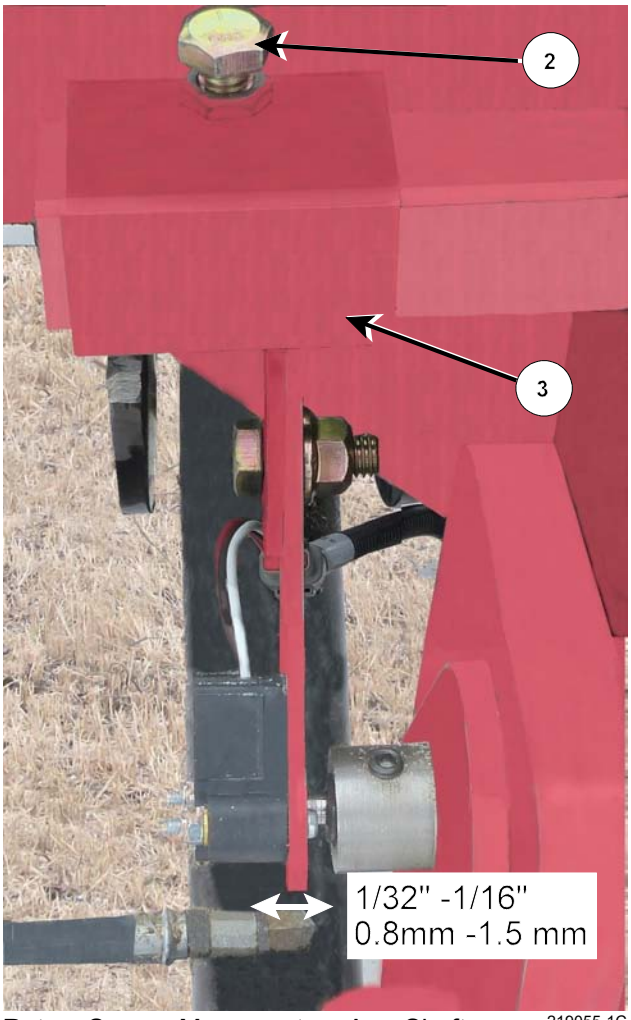
- Check that the electrical connector is tight.

- Check that the sensor can be moved back and forth along the shaft.
  - The movement along the shaft should be 1/32" to 1/16" (0.8 mm - 1.5 mm).
    - This movement will prevent any damage that might be caused by movement of the lift arm.

  - To adjust the movement loosen the bolt (2) holding the slide tube (3).
    - Move the tube to allow for the sensor movement of 1/32" to 1/16" (0.8 mm - 1.5 mm)
    - Tighten the bolt on the sliding tube.



Check the Condition of the Rotation Sensor 218045C



Rotary Sensor Movement on Arm Shaft 219055-1C

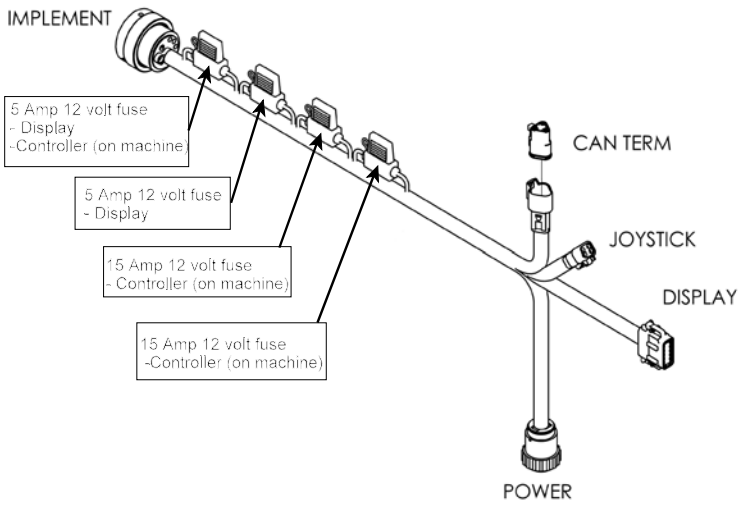
Check the Condition of the Proximity Sensors

Location of the switches:
- Retract on the pushoffs
- Flipper on the lift arm
- Full load sensor (trolley)

- Check that they are free of debris and the wiring is in good condition.

Replacing An Electrical Fuse

The fuses are located in the tractor cable. The fuse size is located on the fuse holder. The fuses and what they protect are indicated in the diagram.



Fuses In Tractor Cable

43543_B2C

Visually Inspect Hydraulic Hoses/Fittings

Shut down the machine and replace the hydraulic hose assembly if any of the following conditions exist:

- Fitting slippage on hose.
- Damaged, cracked, cut or abraded cover (any reinforcement exposed).
- Hard, stiff, heat cracked or charred hose.
- Cracked, damaged or badly corroded fittings.
- Leaks at fitting or in hose.
- Kinked, crushed, flattened or twisted hose.
- Blistered, soft, degraded or loose cover.

Avoid Machine Damage If Welding

Disconnect all electrical connections before welding on the machine.
Attach the ground cable of the welder as close as possible to the part being welded.

Protect hoses during welding as weld splatter may burn a hole or weaken the hose allowing the loss of oil.

Adjusting the Push Off Cylinder Pressure - For 1200 Only

There is a pressure relief valve and pressure gauge in the push off cylinder hydraulic circuit. These are to adjust the pressure applied to the bales while unloading.

The initial pressure for the push off cylinders should be should be set at 1600 psi when pushing against the bales.

If the bales are compressing and/or falling towards the machine during unload, then reduce the pressure relief by 200 psi and try the unload process again. Adjust the pressure relief until satisfied with the results.

If the bales are not sliding off the forks as the tractor is driving away, then increase the pressure by 200 psi and try the unload process again. Adjust the pressure relief until satisfied with the results.

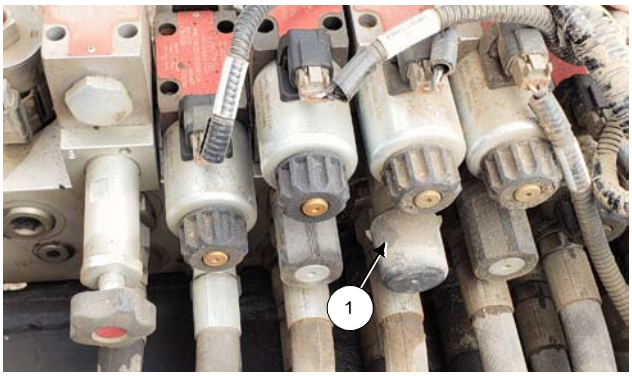
Pressure Gauge Behind the Valve Block 222132

<u>To change the pressure of the push-offs:</u>

- Trace the hydraulic line with the gauge back to the valve in the valve block.

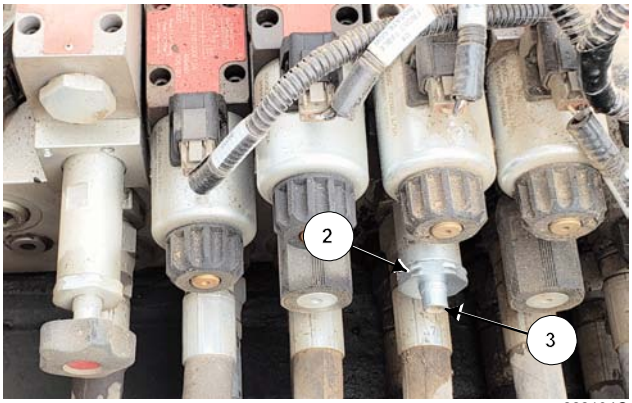
Trace the Hydraulic Line with the Pressure Gauge to the Valve 222132

- Remove the rubber valve cap (1).



Remove the Rubber Cap for Pressure Adjustment 222133C

- Loosen the jam nut (2) on the pressure relief set screw.
- Turn the set screw (3) to decrease/increase the pressure.
- Tighten the jam nut (2) on the set screw.
- Replace the rubber valve cap (1).



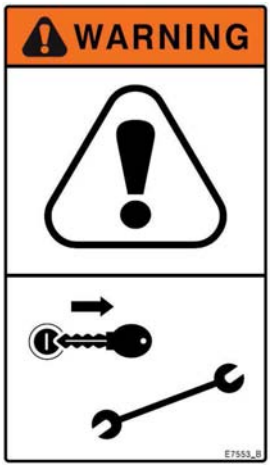
Loosen Jam Nut, Adjust Pressure 222134C

Tire Changing Procedure

Before beginning, make sure the tractor is turned off and the parking brake is set.

Securely block the bale stacker before any work is done around or under the machine.

Relieve hydraulic pressure and disconnect the hydraulic hoses.



Note: Before beginning to change a tire, lower the lift arm, lower the front table and lower the rear table.

1. Have the hitch of the bale stacker attached to the tractor.
2. Block the bale stacker tires on the opposite side to prevent movement of the bale stacker.
3. Place a jack under the spindle tube of the tire to be changed.
4. Lift the machine for sufficient clearance to remove the tire
5. Put the new tire in place.
   - Ensure that the flat portion of the wheel stud washer is against the wheel rim.
6. Fasten the tire with the lug nuts.
   - Torque the lug nuts to 170 lb-ft (230 Nm).

Jack Under Spindle Tube to Change Tire 217200

Flat of Washer Against Rim, Torque the Nuts 217100

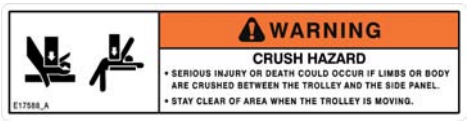
Tire Pressure

Ensure tires are inflated to the 41 psi (283 kPa).

7.0 STORING THE BALE STACKER

1. Clean all the debris off the bale stacker.
2. Lubricate all bale stacker grease points (See Section 6).
3. Lubricate the bale trolley chain to keep it from weather exposure.
4. Tighten all bolts to the recommended torque.
5. Check the bale stacker for worn and damaged parts. Replace as needed.
6. Touch-up the paint to prevent rusting.
7. Park the bale stacker on level ground.
8. Raise the rear table to make the trolley drop so the cylinder rod is not exposed to the weather.
    - Touch the Unload button on the display.
    - Use the joystick to raise the rear table.

Park on Level Ground 222331



There is a crushing hazard if limbs or body are placed between the deck and ground or surrounding objects when the deck is raised.

There is a crushing hazard if limbs or body is placed between the trolley and side panels.

Raise Rear Table To Drop Trolley 218075

9. Lower the rear table to be resting on the frame.

Stay clear of the table when raising or lowering.

There is a crushing hazard if limbs or body is placed between the deck and ground or surrounding objects when the deck is raised or lowered.

Lower Rear Table onto the Frame 222286

10. Lower the front table to be resting on the frame.

- Touch the Load button on the display.
- Use the joystick button to lower the front table.

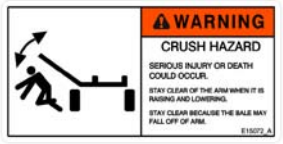
Stay clear of the table when raising or lowering.

Stay clear of the table when turning.

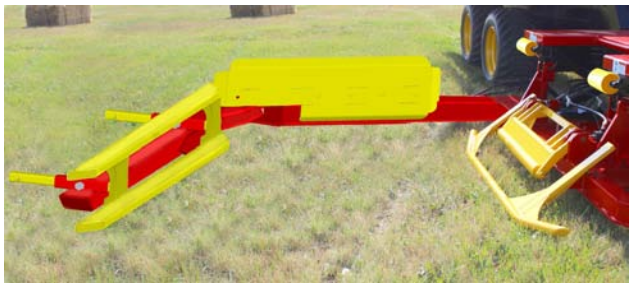
- The table should be lowered during long periods of storage so the cylinders are in the retracted position.
  - The retracted position prevents the rod from being exposed to the weather.

Lower Front Table onto the Frame 222286

11. Lower the lift arm.



Stand clear of the bale lift arm.
The moving lift arm can cause serious injury or death.
Never stand under lift arm when lowering or raising.
Do not allow people near the lift arm when being moved.


Lower Lift Arm, Open Clamp Arm 219038-1

- The lift arm should be lowered during long periods of storage so that the cylinders are in the retracted position.
  - The retracted position will prevent the rod from being exposed to the weather.
  - Touch the Load button on the display.
  - Use the joystick button to lower the lift arm.

12. Open the clamp arm with the joystick button so the cylinder is in the retracted position to prevent the rod being exposed to the weather.

13. Lower the hitch jack until the weight is supported by the jack.
  - Pull the pin to have the jack foot drop.
  - Ensure that the jack is resting on solid level ground or resting on a wood block.
  - Crank the handle to raise the hitch.


Lower the Hitch Jack to Support the Weight 221106

14. Relieve the pressure on the hydraulic hoses and disconnect them.

15. Disconnect the electrical connections.


Disconnect Hydraulics and Lighting Cable 217082

16. Disconnect the tractor cable from the hitch harness.

17. Secure the hydraulic hoses and electrical connector on the hitch to keep them off the ground and clean.

18. Disconnect the hitch from the tractor.

19. Disconnect the safety chain.

Disconnect Hitch and Safety Chain 221106

8.0 TROUBLESHOOTING

Lift Arm

Symptom	Problem	Solution
Lift Arm Not Lifting	Front table is up	Lower the front table
	Hydraulics not turned on	Engage control valve in the tractor
	Hydraulic flow	Lever in the tractor wrong way for hydraulic flow
	Hydraulics	Check the hydraulic connections to the hydraulic block and the lift cylinder
	Electrical	Select "Load" on the display
		Check the wiring to the controller and to the hydraulic block for power to the solenoid
		Check the fuses are supplying power to the control module and display
	Rotation Sensor	Check the condition of the rotation sensor on the lift arm. Check Section 2 "SENSOR STATUSES" and also "ADJUST SETPOINTS" for more information
	Solenoid on Hydraulic Block	Check for power to the solenoid on the hydraulic block while the button is pressed

Symptom	Problem	Solution
Bale Clamp Not Opening/Closing	Hydraulics	Check the hydraulic connections to the hydraulic block and the clamp cylinder
	Electrical	Select "Load" on the display.
		Check the wiring to the controller and to the hydraulic block for power to the solenoid
		Check the fuses are supplying power to the control module and display
	Clamp not opening/closing in Loading Arm Auto mode	Switch to loading arm manual mode and check for clamp control
		Check Section 2 "ADJUST SETPOINTS" for Clamp Timer 1 & 2 seconds
	Solenoid on Hydraulic Block	Check for power to the solenoid on the hydraulic block
"On/Off" Strings Not Working (Flipper)	Hydraulics	Check the hydraulic connections to the hydraulic block and the bale turn cylinder
	Electrical	Select "Load" on the display
		Check the wiring to the controller and to the hydraulic block for power to the solenoid
		Check the fuses are supplying power to the control module and display
		See Section 2 "SENSOR STATUSES" to check if the flipper sensor is registering

Symptom	Problem	Solution
		Check Section 2 "MANUAL HYDRAULIC CONTROL" for manual control of the flipper
		Check section 2 "ADJUST SETPOINTS" for "Flipper Timer 1" seconds
	Solenoid on Hydraulic Block	Check for power to the solenoid on the hydraulic block
Flipper does not stop at bale lift position while lifting	Proximity Switch	Check the proximity switch located on the flipper arm. A light will be on when the switch senses metal near. The switch will send a signal to the controller. A piece of scrap metal (not aluminum) brought near the switch may be used to check if the switch light turns on indicating it is operating

Front Table

Symptom	Problem	Solution
Front Table Will Not Go Up or Down	Lift arm is raised	Lower the lift arm
	Hydraulics not turned on	Engage the control valve in the tractor
	Hydraulic flow	Lever in the tractor wrong way for hydraulic flow
	Hydraulics	Check the hydraulic connections to the hydraulic block and the lift cylinders

Symptom	Problem	Solution
	Electrical	Select "Load" on the display
		Check the wiring to the control box and to the hydraulic block for power to the solenoid
		Check the fuses are supplying power to the control module and display
	Rotation Sensor	Check the condition of the rotation sensor on the front table lift cylinders
		Check Section 2 "SENSOR STATUSES" for Front Table Position reading.
	Table not raising/lowering in Front Table Auto mode	Switch to front table manual mode and check for front table control
		Check Section 2 "ADJUST SETPOINTS" for more information on Front Table Position
	Lift arm	Lower the lift arm
Front Table Will Not Rotate (1200 only)	Hydraulics	Check the hydraulic connections to the hydraulic block and the table rotate cylinder
	Electrical	Select "Load" on the display
		Select "Front Table Rotate" on the display
		Check the wiring to the control module and to the hydraulic block for power to the solenoid
		Check the fuses are supplying power to the control module and display

Symptom	Problem	Solution
		Check Section 2 "MANUAL HYDRAULIC CONTROL" for manual control of the table rotation
	Rotation Sensor	Check the condition of the rotation sensor on the front table
		Check Section 2 "SENSOR STATUSES" for Front Table Position reading.
		Check Section 2 "ADJUST SETPOINTS" for Front Table Rotate Position 1 & 2

Rear Table

Symptom	Problem	Solution
Rear Table Will Not Go Up or Down	Hydraulics not turned on	Engage the control valve in the tractor
	Hydraulic flow	Lever in the tractor wrong way for hydraulic flow
	Hydraulics	Check the hydraulic connections to the hydraulic block and the lift cylinders
	Boost cylinder not lifting	Close the boost cylinder bleed valve a small amount. See Section 4
	Display	Select "Unload" on the display
		Check the wiring to the controller and to the hydraulic block for power to the solenoid
	Front Table Raised	Lower the front table

Symptom	Problem	Solution
	Front Table Rotation Sensor	Check that Rotation sensor is not damaged and free of debris so it gives a signal that the front table is out of the way of the rear table
	Electrical	Check the fuses are supplying power to the control module and display
		Check the wiring to the hydraulic block for power to the solenoid
		Check Section 2 "SENSOR STATUSES" for Rear Table Position
		Check Section 2 "ADJUST SETPOINTS" for Rear Table Position 1
Pushoffs (1200 only)	Pushoffs are extended	Retract the pushoffs to allow the rear table to move
		Check Section 2 "SENSOR STATUSES" for Push Off Retract Switch
Rear Table Creeps Up	Boost Cylinder	Open the boost cylinder bleed valve so the table does not go up. See Section 4

Rear Table Trolley

Symptom	Problem	Solution
Trolley does not move back when bales are loaded	Trolley Pressure	Adjust the trolley pressure on the trolley control valve. See Section 4
Trolley moves back too easily	Trolley Pressure	Adjust the trolley pressure on the trolley control valve. See Section 4

Symptom	Problem	Solution
Trolley return speed too fast/slow	Trolley Return Speed Adjust	Turn the trolley return adjust valve for the desired return speed. See below for valve location

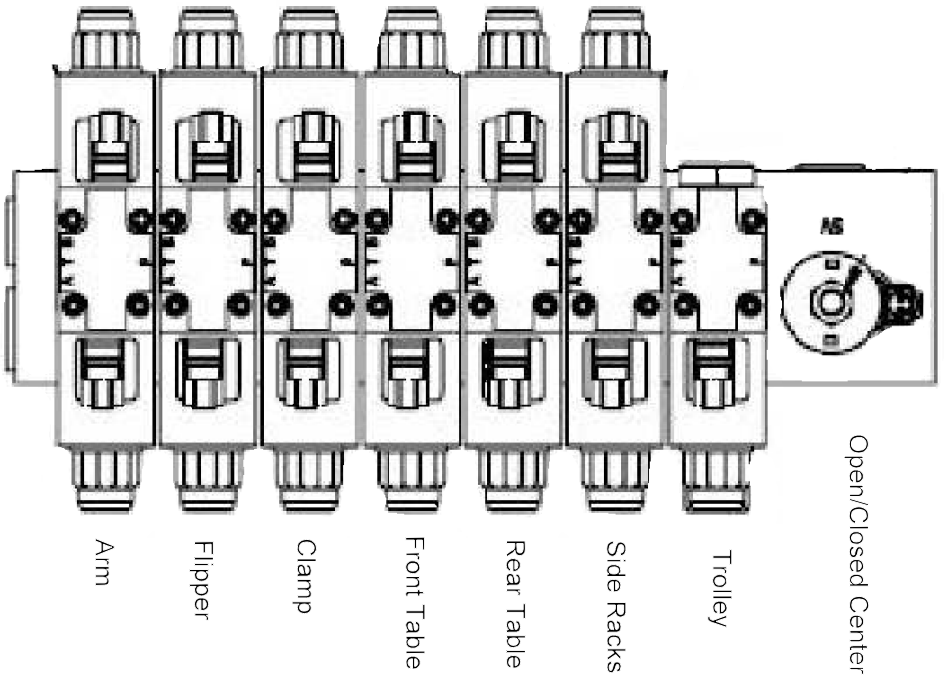
Side Racks

Symptom	Problem	Solution
Side Racks Will Not Open or Close	Hydraulics not turned on	Engage the control valve in the tractor
	Hydraulic Flow	Lever in the tractor wrong way for hydraulic flow
	Hydraulics	Check the hydraulic connections to the hydraulic block and the cylinder
		Check the hydraulic connections to the rack cylinder
	Electrical	Check the wiring to the controller and to the hydraulic block for power to the solenoid
		Check the wiring to the hydraulic block for power to the solenoid
		Check the fuses are supplying power to the control module and display
		Use the joystick buttons to check for side racks opening and closing
	Front Table Rotation Sensor	Check the condition of the Front Table rotation sensor which gives a signal to open the racks when the front table is raised

Symptom	Problem	Solution
	Side Rack Timer	Check Section 2 "ADJUST SETPOINTS" for Side Rack Timer
	Links Connected to Cylinder	Check that the links to the rack cylinder are connected
		Check that the racks move freely
Bales Hitting Side Racks When Loading	Front Table Bale Stops	Adjust the front table bale stops so the bales do not hit the side rack

Hydraulic Block and Valves

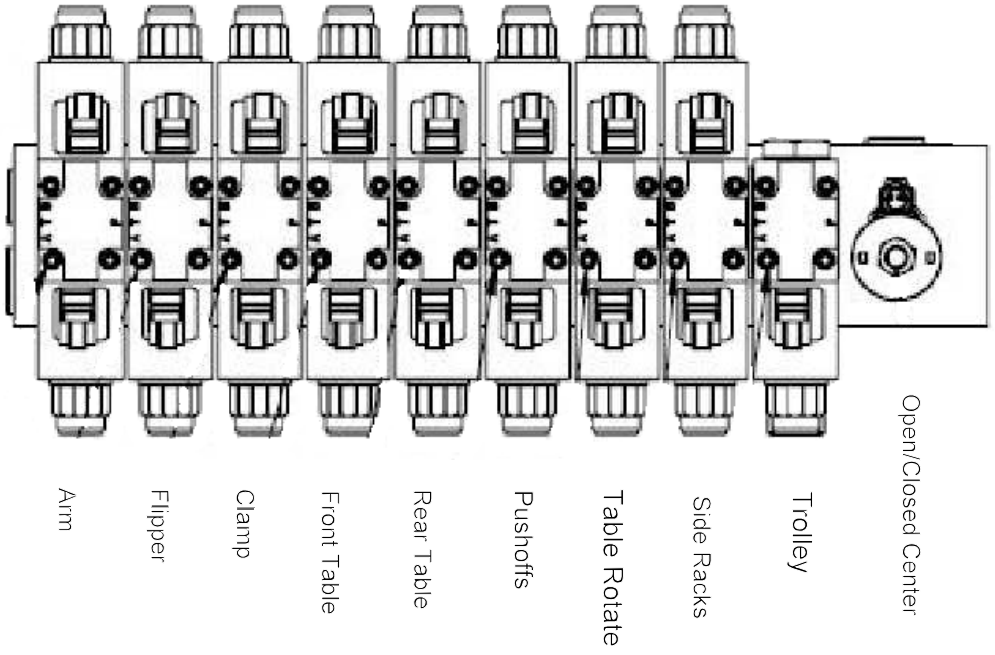
FaStack 1800



FaStack 1800 Valve Block

44533_AC

FaStack 1200



FaStack 1200 Valve Block

44534_AC

Auto Calibration of the Arm and Table Set Points

This feature allows for the calibration of the loading arm set points and the front and rear table set points by raising, lowering or rotating and having the software record the set point values. The Auto Calibration then automatically fills in the remaining set points.

This procedure can be done when a sensor or a part of the machine has been replaced or bumped.

Auto Calibration can also be done to refresh the settings for continued good operation.

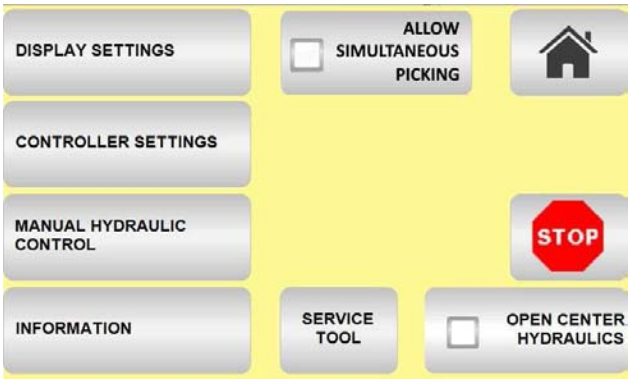
Note: Manual adjusting of each set point is still available if desired.

To do an Auto Calibration:

- Select  from the home screen.

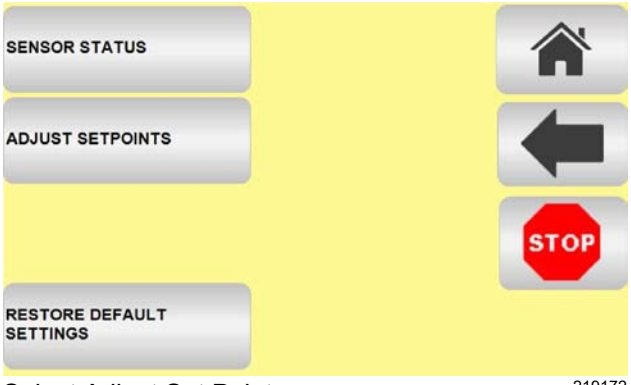
Select Menu 219163-4

- Select Controller Settings



Select Controller Settings 222279

- Select Adjust Set Points



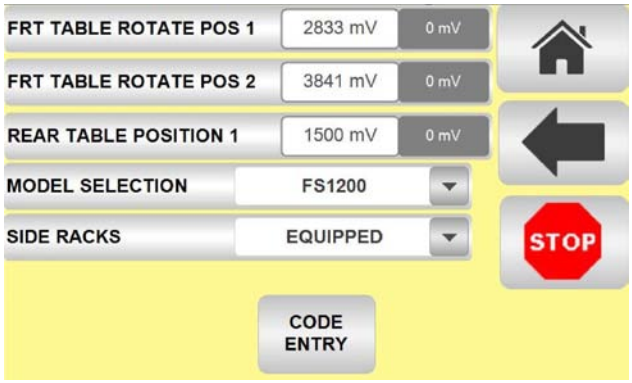
Select Adjust Set Points 219172

- Use  to go the last screen of set points (until the Code Entry button appears).

Use Arrow to Go to Last Page 219174

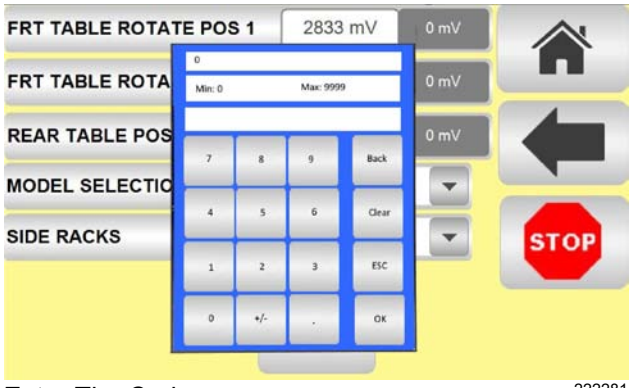
- Press Code Entry to access the Auto Calibration screen.

  Note: Contact the dealer or phone Highline Customer Service for the code and for assistance.



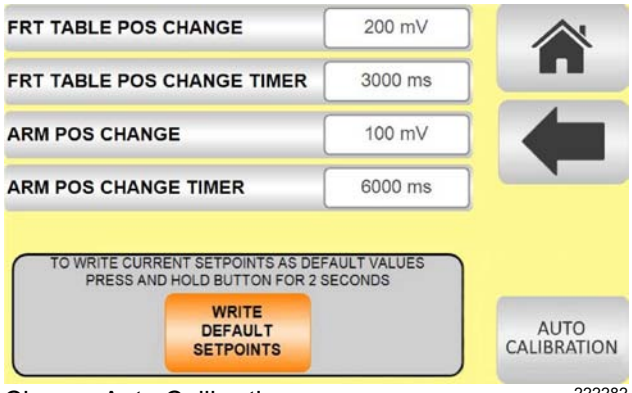
Settings Page 4 (For FaStack 1200 Shown) 219177

- Use the keypad to enter the code.



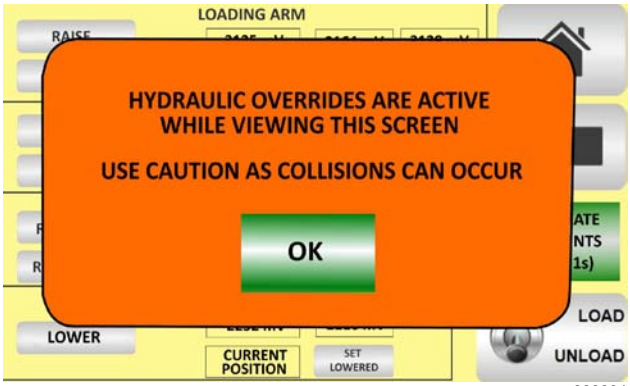
Enter The Code 222281

- Choose Auto Calibration



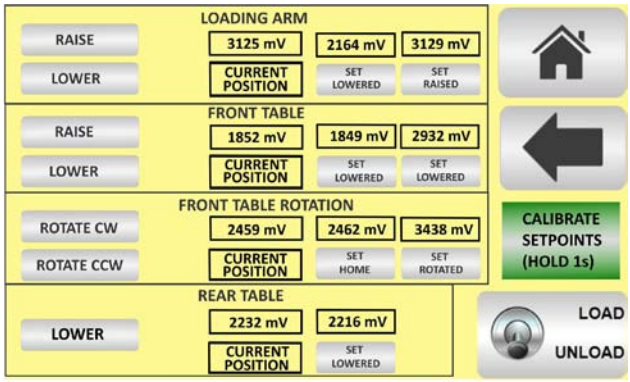
Choose Auto Calibration 222282

- A warning screen will come up to indicate that the hydraulic overrides and the safety set points are disabled. Caution must be used to not move parts of the machine that may crash into each other.
  - Press OK to acknowledge an understanding of the need for caution when Auto Calibrating.



Warning - Hydraulic Overrides Active 222284

- For Loading Arm Auto Calibration:
  - Press and hold RAISE on the screen to raise the arm to the highest point.
    - The joystick button can be used to raise the arm.
  - When the arm is raised to the highest point, press and hold SET RAISED for 2 seconds.
  - Press and hold LOWER on the screen to lower the arm to the lowest point.
    - The joystick button can be used to lower the arm.
  - When the arm is lowered to the lowest point, press and hold SET LOWERED for 2 seconds.



Auto Calibration Screen 222283

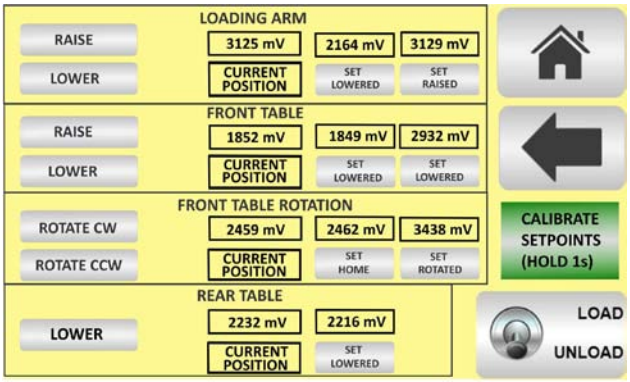
- For Front Table Auto Calibration:
  - Press and hold RAISE on the screen to raise the front table to the highest point.
    - The joystick button can be used to raise the front table.
  - When the table is raised to the highest point, press and hold SET RAISED for 2 seconds.
  - Press and hold LOWER on the screen to lower the front table to the lowest point.
    - The joystick button can be used to lower the front table.
  - When the table is lowered to the lowest point, press and hold SET LOWERED for 2 seconds.

- For Front Table Rotate Auto Calibration (1200 only):

  - Raise the front table 12"-18" to prevent collision with the frame.
  - Fully lower the loading arm.
  - Press and hold ROTATE CW on the screen to rotate the front table toward the rear table.
  - When the front table is fully rotated press and hold SET ROTATED for 2 seconds.

  - Press and hold ROTATE CCW on the screen to rotate the table to the bale loading position (Home).
  - When the front table is fully rotated to the bale loading position press and hold SET HOME for 2 seconds.

- For Rear Table Auto Calibration (1200 Only):
  - Press and hold LOWER to lower the rear table.
  - When the rear table is fully lowered press SET LOWERED on the screen for 2 seconds.

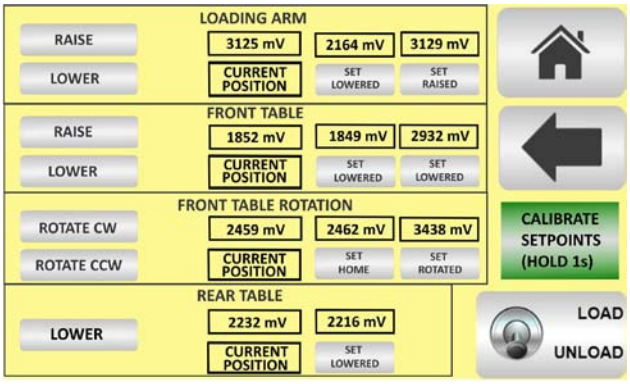


Auto Calibration Screen 222283

- When all the set points have been auto calibrated, press and hold the CALIBRATE SET POINTS for 1 second.

  - This will enter all the values for:
    - The arm positions (page 1 & 2 of Setpoints)
    - The front table positions (page 3 of Setpoints)
    - The front table rotate position (page 4 of Setpoints) - 1200 only.
    - The rear table position(page 4 of Setpoints) - (1200 only).

  Note: Any values that were previously changed will be over-written and will need to be readjusted.



Press and Hold To Calibrate the Set Points 222283

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FASTACK SPECIFICATIONS

	1800		1200	
Weight (Unloaded) - Calculated	18142 lb (8229 kg)		20717 lb (9397 kg)	
Tongue Weight (unloaded) - Calculated	3696 lb (1678 kg)		3651 lb (1658 kg)	
Maximum Load Capacity	25200 lb (11441 kg)		19200 lb (8709 kg)	
Max. Bales (Cat. 3 Hitch)	N/A		4'x4' 3'x4' Off String 3'x4' On String 3'x3'	8 @1200 lbs (544 kg) 8 @1200 lbs (544 kg) 12 @ 1000 lbs (454 kg) 12 @ 1000 lbs (454 kg)
Max. Bales (Cat. 4 Hitch)	4' x 4' 3'x4' Off String 3'x4' On String 3'x3'	12 @ 1400 lbs (635 kg) 16 @ 1100 lbs (499 kg) 18 @ 1400 lbs (635 kg) 24 @ 1000 lbs (454 kg)	4'x4' 3'x4' Off String 3'x4' On String 3'x3'	8 @ 1800 lbs (816 kg) 8 @ 1800 lbs (816 kg) 12 @ 1600 lbs (726 kg) 12 @ 1600 lbs (726 kg)
Maximum Length of Bales	8' (2.44 m)		8' (2.44 m)	
GVW	41996 lb (19,066 kg)		34356 lb (15,584 kg)	

Tractor Hitch Category Required

FaStack 1800				
Hitch Category	Maximum Bale Weight			
4	4x4: 1400 lbs (635 kg)	3x4 Off String: 1100 lbs (499 kg)	3x4 On String: 1400 lbs (635 kg)	3x3: 1000 lbs (454 kg)
	Vertical Hitch Load: 7150 lbs (3243 kg)	Vertical Hitch Load: 7340 lbs (3329 kg)	Vertical Hitch Load: 7300 lbs (3311 kg)	Vertical Hitch Load: 7410 lbs (3361 kg)

FaStack 1200		
Hitch Category	Maximum Bale Weight	
3	4x4 or 3x4 Off String: 1200 lbs (544 kg)	3x4 On String or 3x3: 1000 lbs (454 kg)
	Vertical Hitch Load: 5940 lbs (2694 kg)	Vertical Hitch Load: 5840 lbs (2649 kg)
4	4x4 or 3x4 Off Strings: 1800 lbs (816 kg)	3x4 On String or 3x3: 1600 lbs (726 kg)
	Vertical Hitch Load: 7250 lbs (3289 kg)	Vertical Hitch Load: 7360 lbs (3338 kg)

	1800	**1200**
Overall Length (Tables Lowered)	31" 11-1/8" (9.73 m)	34' ½" (10.38 m)
Overall Length Rear Table Raised	35" 1" (10.69 m)	38' 3/4" (11.60 m)
Transport Width	13" 7" (4.14 m)	10' 6-1/2" (3.21 m)
Width Arm Lowered (Clamp Closed)	18' 8" (5.69 m)	15' 7-1/2" (4.76 m)
Transport Height (Max)	10" 8-3/4" (3.27 m)	10' 11-1/2" (3.34 m)
Height with Rear Table Raised	17" 8-3/4" (5.40 m)	19' 5" (5.92 m)
Minimum Shed Height	N/A	23' (7.01 m)
Tires	500 (or 550) x 45 x 22.5 Floatation Tires	
Tire Pressure	41 psi (283 kPa)	
Maximum speed	20 mph (32 kmh) when fully loaded	
Horsepower Recommended	180 hp (134 kW)	
Hydraulic Outlets	1	
Hydraulic Flow	25 gpm @ 2300 psi	
Electronics	12 volt required - Electric Over Hydraulics with Joystick	

Highline New Equipment Limited Warranty Policy

One (1) Year / 12 Months - Parts and Labour

Highline Mfg. (hereinafter "Highline") warrants this new product of Highline's manufacturer to be free from defects in material and workmanship, under normal use and service for one (1) full year after initial purchase/retail sale. Highline will warrant its product for one (1) year parts and labour, if performed by a qualified Dealer. This Limited Warranty shall apply only to complete machines of Highline's manufacture. Parts are covered by a separate Limited Warranty.

EQUIPMENT AND ACCESSORIES NOT OF HIGHLINE'S MANUFACTURE ARE WARRANTED ONLY TO THE EXTENT OF THE ORIGINAL MANUFACTURER'S WARRANTY AND SUBJECT TO THEIR ALLOWANCE TO HIGHLINE ONLY IF FOUND DEFECTIVE BY SUCH MANUFACTURER.

During the Limited Warranty period specified above, any defect in material or workmanship in any warranted item of Highline Equipment not excluded below shall be repaired or replaced at Highline's option without charge by any authorized independent Highline Dealer. An authorized Dealer must make the warranty repair or replacement. Labour in accordance with Highline's labour reimbursement policy. Highline reserves the right to supply remanufactured replacement parts as it deems appropriate.

RETAIL PURCHASER RESPONSIBILITY

This Limited Warranty requires proper maintenance and periodic inspections of the Equipment as indicated in the Operator's Manual furnished with each new Equipment. The cost of routine or required maintenance and services is the responsibility of the retail purchaser. The retail purchaser is required to keep documented evidence that these services were performed. This Highline New Equipment Limited Warranty may be subject to cancellation if the above requirements are not performed.

EXCLUSIONS AND LIMITATIONS

The warranties contained herein shall NOT APPLY TO:

1. Any defect which was caused (in Highline's sole judgement) by other than normal use and service of the Equipment, or by any of the following:
    a. accident
    b. misuse or negligence
    c. overloading
    d. of reasonable and proper maintenance
    e. improper repair or installation
    f. unsuitable storage
    g. non-Highline approved alteration or modification
    h. natural calamities
    i. vandalism
    j. parts or accessories installed on Equipment which were not manufactured or installed by Highline authorized Dealers
    k. the elements
    l. collision or other accident
2. Any Equipment whose identification numbers or marks have been altered or removed.
3. Any Equipment which any of the required or recommended periodic inspection or services have been performed using parts not manufactured or supplied by Highline or meeting Highline Specifications including, but without limitation, lubricants (oil, grease), belt lacings, and hydraulic fluids.
4. Any Equipment used in demonstrations not performed by a Highline Dealer. Warranty will be at the discretion of Highline for all other demonstration warranty.
5. New Equipment delivered to the retail purchaser in which the warranty registration has not been completed and returned to Highline within thirty (30) days from the date of purchase.
6. Any defect that was caused (in Highline's sole judgement) by operation of the Equipment not abiding by standard operating procedures outlined in the Operator's Manual.
7. Tire Limited Warranties and support are the responsibility of the respective product's manufacturer.
8. Transportation costs, if any, of transporting to the Highline Dealer.
9. In no event shall Highline's liability exceed the purchase price of the product.
10. Highline shall not be liable to any person under any circumstances for any incidental or consequential damages (including but not limited to, loss of profits, out of service time and damage to equipment which this equipment may be attached) occurring for any reason at any time.

11. Diagnostic and overtime labour premiums are not covered under this Limited Warranty Policy.
12. Depreciation damage caused by normal wear, lack of reasonable and proper maintenance, failure to follow operating instructions, misuse, and/or lack of proper protection during storage.
13. Accessory systems and electronics not of Highline's manufacture are warranted only to the extent of such manufacturer's respective Limited Warranty if any.
14. Wear items which are listed by product group below:

COMMON WEAR ITEMS

Roller chain, sprockets, clutches, shear bolts, clutch components, chains, gearbox housings bolts/torqued parts, flails, feed roller belting, coupler chain, DRV couplers, bogie wheels, apron tines and hoses, blades and blade pans, blade bolts and nuts, skid shoes, chain guards, clutches and clutch components.

PARTS WARRANTY

Parts replaced in the warranty period will receive the balance of the one year New Equipment Limited Warranty. Replacement parts after the original machine warranty are warranted to be free from defects of material for ninety (90) days or the part will be repaired or replaced, without labour coverage for removal and reinstallation.

EXCLUSION OF WARRANTIES

UNLESS OTHERWISE REQUIRED BY LAW, AND EXCEPT FOR THE WARRANTIES EXPRESSLY AND SPECIFICALLY MADE HEREIN, HIGHLINE MAKES NO OTHER WARRANTIES, AND ANY POSSIBLE LIABILITY OF HIGHLINE HEREIN UNDER IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, IMPLIED, OR STATUTORY, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANT ABILITY OR FITNESS FOR A PARTICULAR PURPOSE. HIGHLINE RESERVES THE RIGHT TO MODIFY, ALTER AND IMPROVE ANY PRODUCT WITHOUT INCURRING ANY OBLIGATION TO REPLACE ANY PRODUCT PREVIOUSLY SOLD WITH SUCH MODIFICATION. NO PERSON IS AUTHORIZED TO GIVE ANY OTHER WARRANTY, OR TO ASSUME ANY ADDITIONAL OBLIGATION ON HIGHLINE'S BEHALF.