

1250/1255 PLANTER FRAME CONTROL BOX

Installation and Operation Manual



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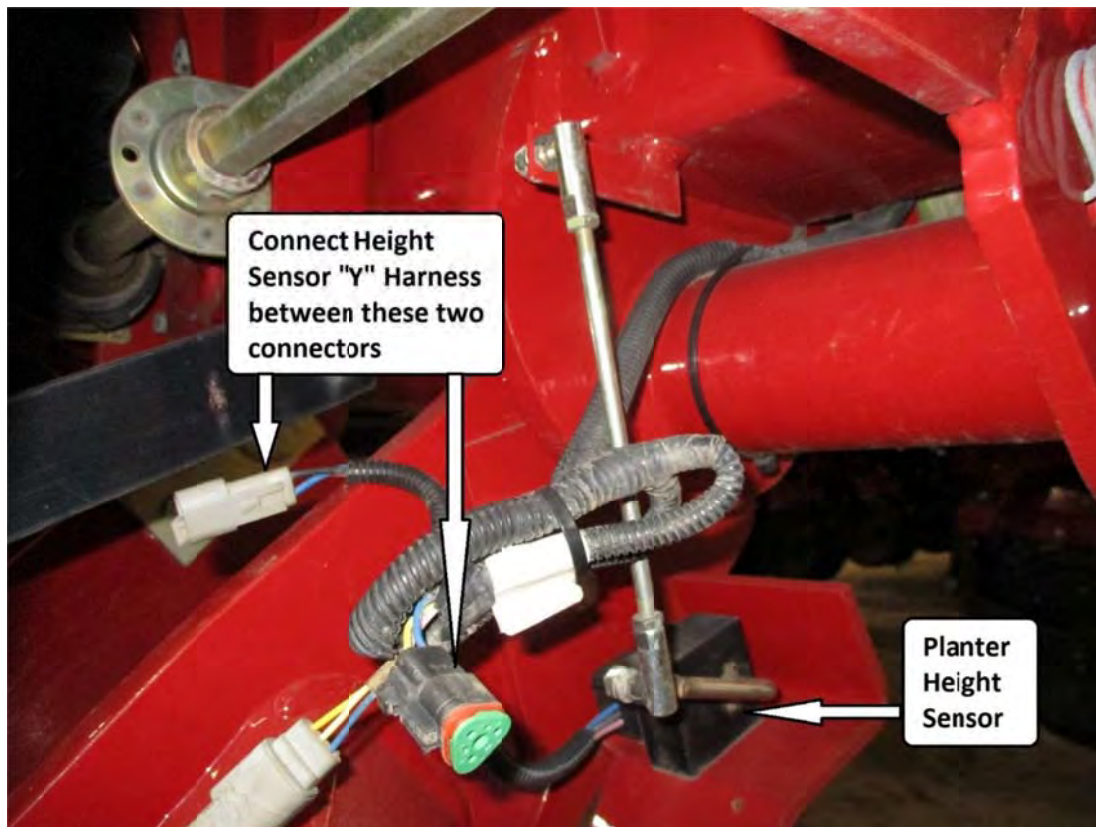
INSTALLATION

Frame Control Harness Routing

The new frame control harness should be routed from the hitch point at the tractor, along the left hand draft tube. When the harness reaches the point where the draft tube attaches to the wing, the harness should be routed onto the wing. Route the harness at the hinge point in a way that it will not become stretched or pinched when the planter frame is folding or flexing. Once the harness is routed onto the wing it can be routed to the hydraulic valve block in the center of the planter, to the valve block for the markers, to the planter height switch, and to the safety switch.

Height Sensor Harness Connection

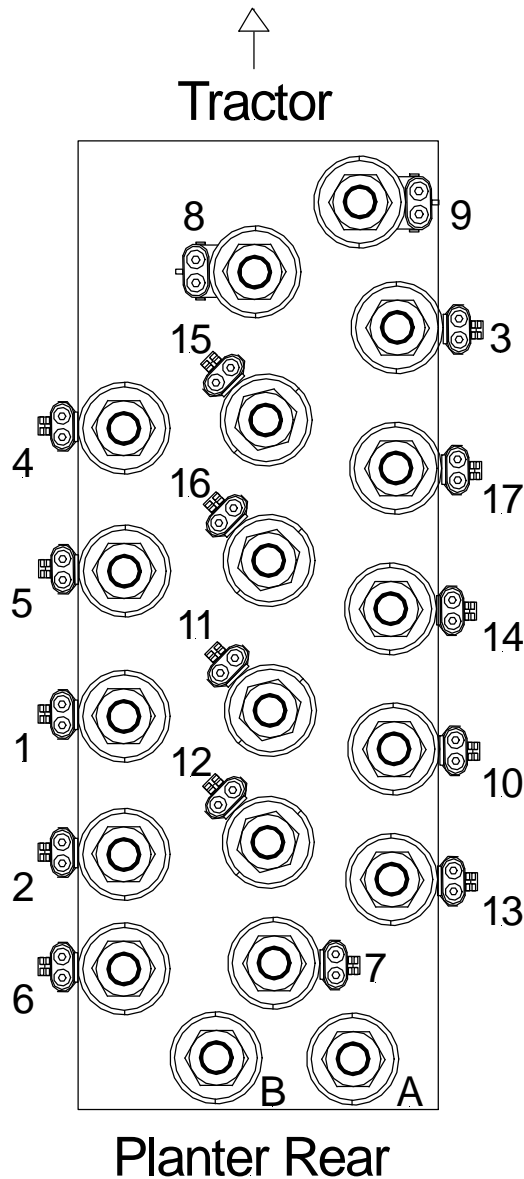
The wiring harness for the frame controller has an integrated “Y” so it can be connected in line, between the factory wiring and the planter height sensor. The height sensor is located near the right hand wheels in the center section. Be sure the wiring to the height sensor is routed only on the center section of the planter, never route the wiring on the wing.



Hydraulic Valve Block Connections

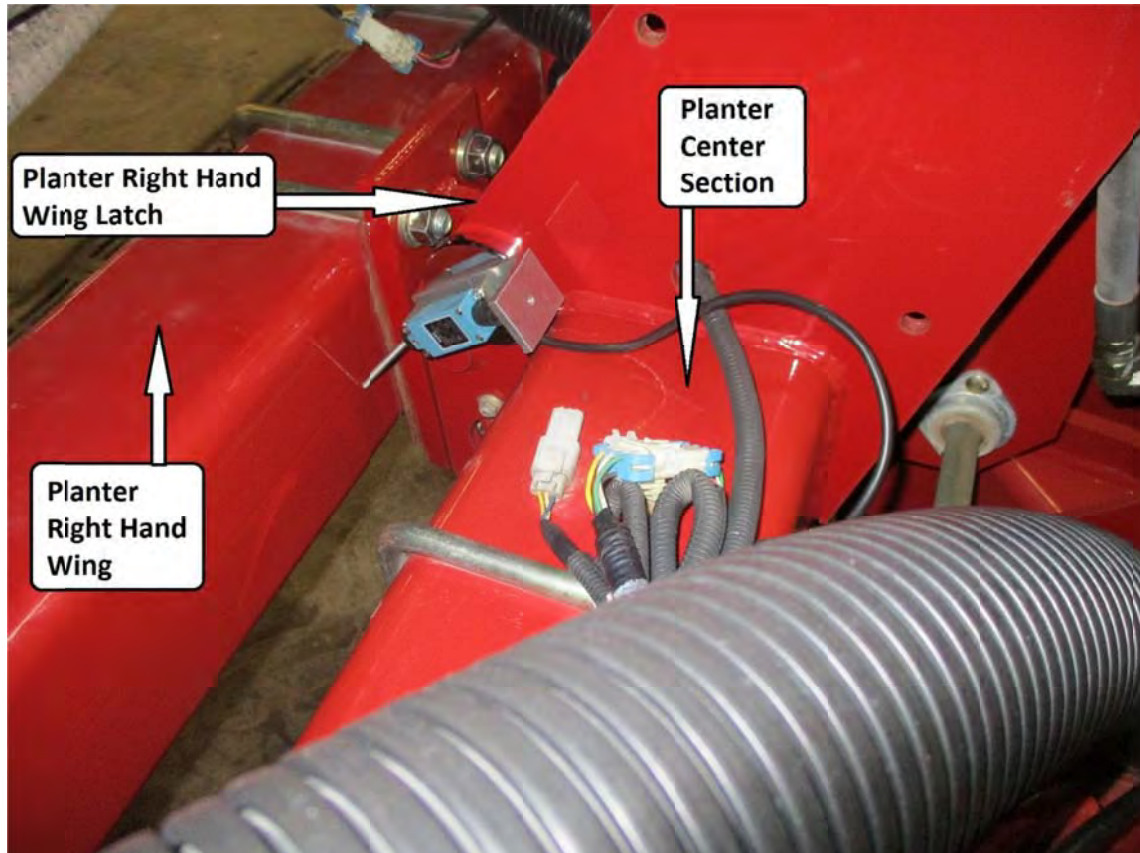
Once the frame control harness has been routed from the hitch to the hydraulic valve block, the solenoid valve connections can be made. The original frame control module harness will need to be disconnected and moved out of the way. The new frame control harness has labels on each lead that correspond with the solenoid valve that the lead is designed to be connected to. The wiring on each solenoid valve should have a label that you can match up to the labeling on the new harness. If the label on the solenoid valve wiring is missing or damaged, you may use the following diagram to identify where the harness connections are to be made.

NOTE: The two solenoids for the left and right marker controls are not shown in this diagram as they are on a separate valve block near the main valve block.



Safety Switch Installation

The frame control system is equipped with a safety switch that will prohibit movement of the markers when the planter is not fully set in the “Plant” position. The safety switch has a magnetic mount for ease of installation. The switch should be installed on the planter center section near the right hand wing latch, as shown in the image below. Place the safety switch in such a manner that it will be engaged only when the planter right hand wing has been fully extended and is in contact with the planter center section. Be sure to route wiring to safety switch only on the center section of the planter, never route the wiring on the wing.



Connecting Power

The console has been fitted with a 12 foot, 2-Conductor cable fused at 30-Amps. This cable needs to be connected to a 12V DC power source capable of providing a constant 25-Amp source. Connect the red wire to the positive source and connect the black wire to ground. The highest current draw will occur when in the “Plant” mode. This current load can range from 15-Amps to 24-Amps depending on the planter model.

OPERATION



SWITCH FUNCTIONS

To operate the 12xx Planter Control console, the user will need to understand the following switch and potentiometer functions:

Power

When in the “**Off (Transport)**” position, this switch disconnects power to all of the planter solenoids and to the controller circuit board. This is the recommended setting when transporting the planter or when the tractor engine is not running.

When in the “**On**” position, this switch turns on power to the internal circuit board and allows it to perform the functions listed below. The power light on the face of the console will light solid if there are no errors to report. If the power light does not illuminate or is flashing, see the section of this manual that describes planter safety features.

Mode

When in the “**Fold/Unfold**” position, this switch enables partial toolbar height and fold control. This switch is used together with the “Wheels” switch to enable independent raising/lowering of the wing wheels or raising/lowering of the center wheels via tractor hydraulics. The User may also choose to fold or unfold (set) the wings of the planter via tractor hydraulics.

NOTE: For more information on these functions see “Wheels” switch description

When in the “**Plant**” position, this switch enables the full toolbar (both the wing and center wheels) to be raised and lowered together by the User via the tractor’s hydraulics.

NOTE: When being raised in “Plant” mode, the toolbar will stop at the User’s plant height setting unless the “8 Sec. Override” button has been pressed.

Wheels – The “Wheels” switch functions are only enabled when the “Mode” switch is in the “Fold/Unfold” position

When in the “**Center Wheels**” position, this switch enables only the center planter wheels to be raised and lowered by the User via the tractor’s hydraulics.

When in the “**Wing Wheels**” position, this switch enables only the wing planter wheels to be raised and lowered by the User via the tractor’s hydraulics.

When in the “**Wings (Set/Fold)**” position, this switch enables only the planter wings to be folded and unfolded (set) by the User via the tractor’s hydraulics.

NOTE: This function is disabled if the planter height is below the plant raise height setting, as set by the “Height Adjust” potentiometer. To enable this function, use the tractor hydraulics to raise the planter to full height.

Height

Height Adjust – The “Height Adjust” potentiometer is a single turn potentiometer that is used to set how high the planter toolbar will raise while in plant mode. This is designed to speed up turn-around times when the end of field has been reached. This should also help to get the markers raised more quickly. This setting is intended to be set as needed and then left unchanged. This has been designed without a knob so that it will not be accidentally bumped or adjusted without the User’s knowledge. The potentiometer should be adjusted using a small screwdriver when needed.

NOTE: This setting also affects the “Wings Set/Fold” function when in “Fold/Unfold” mode. If the planter center section is lower than the height set by this potentiometer, the Wings Set/Fold function will not be enabled.

8 Sec. Override – The “8 Sec. Override” push button, when pressed and released, starts an 8-Second timer that disengages the planter height limit setting (for 8-Seconds) and allows the User to raise the toolbar beyond the plant raise height limit, to maximum raise height if needed. (continued on page 2-3)

8 Sec. Override (continued from page 2-2) - This function is intended to be used if crossing a ditch or obstacle that will cause damage to the planter if not fully raised or if the User wants to raise the toolbar to a higher height for folding or service.

Markers

On/Off – When in the “On” position, this switch enables the User to control the markers via tractor hydraulics. The marker function will only be enabled if the safety switch on the toolbar is also engaged, indicating wings are fully set. If markers will not functions make sure the wings are fully in the “Set” (plant) position and the safety switch is being engaged.

Right/Left – Sets which marker is to be moved (raised/lowered) when the toolbar is being raised or lowered via the tractor’s hydraulics.

Section

Left Off / Both On / Right Off – This switch enables the User to disable the Right or Left section clutches for planting or to keep both sections on (Normal mode).

NOTE: This function only works with planters equipped with right and left section clutches.

Safety Features:

Wings Set/Fold Disable – If the controller sees that the planter is not at or above the planter height raise limit setting, as set by the “Height Adjust” potentiometer, it will turn off the solenoid that enables the “Wings Set/Fold” function. It will also flash the power light and pulse the alarm in a ½-second “on” then ½-second “off” repeating pattern.

Marker Disable – If the controller sees that the planter toolbar is not fully set (unfolded), it will not allow the markers to be moved (extended or retracted). The controller can only determine that the planter toolbar is fully set if the safety switch has been engaged. This safety feature has been incorporated to prevent accidental extending, via tractor hydraulics, of the markers while the planter is in the folded (transport) position.

30-Minute Shut-Down – In the event that the power switch on the controller is left in the “On” position but the implement is not in use, the controller will switch into “Low Power Mode” after 30 minutes of inactivity. The controller uses two criteria to determine that the implement is inactive:

- 1- there has not been any switch activity at the console for 30 minutes
- 2- the planter toolbar has not been raised to the planter height raise limit setting, as set by the “Height Adjust” potentiometer, for 30 minutes

When in low power mode, power will be disabled to all of solenoids and the power relay. At the console, the power light will flash and the alarm will sound in a ¼-second “on” then 5-seconds “off” repeating pattern. To get the console out of this mode and back to normal operation, the User can toggle any switch or button on the face-plate/panel of the controller. This feature was implemented to help prevent the battery of the tractor from being drained if the controller is left powered on when the implement is inactive or in storage. The unit should not be intentionally left in this state as it will still slowly drain the battery of the tractor.

Error Codes:

Error conditions are indicated by specific repeating patterns of the alarm and power light

See the “Safety Features” section of this manual for further explanation of these error conditions and what will need to be done to eliminate the error condition that is being indicated

- Alarm and power light - on ½ second, off ½ second, repeating = Wings Set/Fold Disabled
- Alarm and power light – on ¼ second, off 5 seconds, repeating = 30 Minute Shut-Down

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