

FM100 Float Module 10V CONVERTER KIT (MD #B6421) INSTALLATION INSTRUCTIONS

New Holland combines with a 10 V system require a 10 V adapter for proper calibration of the auto header height control (AHHC) feature. This instruction explains how to install the 10V Converter kit on a MacDon FM100 Float Module for use with New Holland combines.

A list of parts included in the kit is provided.

NOTE: Keep your MacDon publications up-to-date. The most current version of this instruction can be downloaded from our Dealer-only site (<https://portal.macdon.com>) (login required).

Installation Time

This kit takes approximately 30 minutes to install.

Conventions

The following conventions are followed in this document:

- Right and left are determined from the operator's position. The front of the float module is the side that faces the crop; the back is the side that connects to the combine.
- Unless otherwise noted, use the standard torque values provided in the D1 or FD1 Series operator's manual and technical manual.

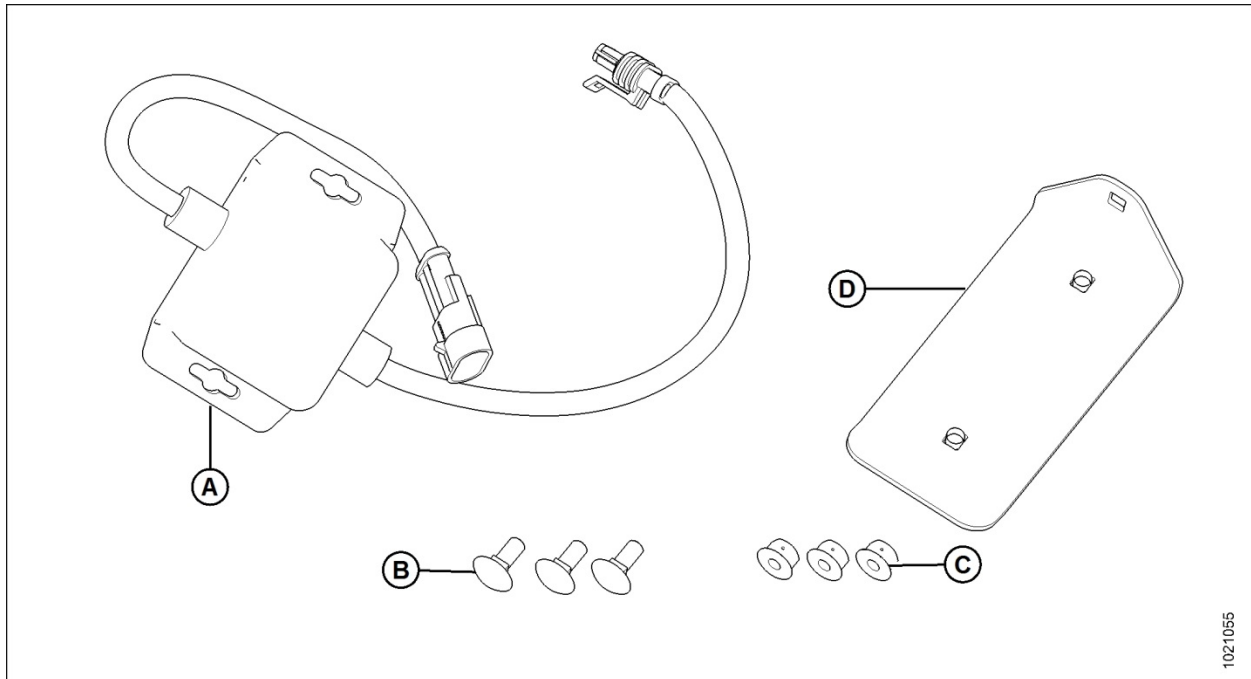
Contents

Installation Time.....	1
Conventions	1
Part List	2
Installation Instructions.....	3
Adjusting Voltage Limits	5
Calibrating the Auto Header Height Control	7

**FM100 Float Module
10V CONVERTER KIT (MD #B6421)
INSTALLATION INSTRUCTIONS**

Part List

This kit includes the following parts:



Ref	Part Number	Description	Quantity
A	276759	ADAPTER – 10V	1
B	136748	BOLT– RHSN M6 X 1 X 16-8.8-A2L	3
C	152668	NUT– HEX FLG CTR LOC M6 X 1-8-A2L	3
D	NSS ¹	PLATE – MOUNT	1

¹ Not sold separately.

FM100 Float Module 10V CONVERTER KIT (MD #B6421) INSTALLATION INSTRUCTIONS

Installation Instructions

To install the 10V Converter kit, follow these steps:



CAUTION

To avoid bodily injury or death from unexpected startup of machine, always stop engine and remove key before making adjustments to machine.

1. Lower header to the ground, shut down engine, and remove key.
2. Secure the 10V adapter (A) (MD #276759) to the mounting plate (B) using two bolts (C) (MD #136748) and nuts (D) (MD #152668).
3. Torque hardware to 5.5–6.5 Nm (54–67 lbf·in).

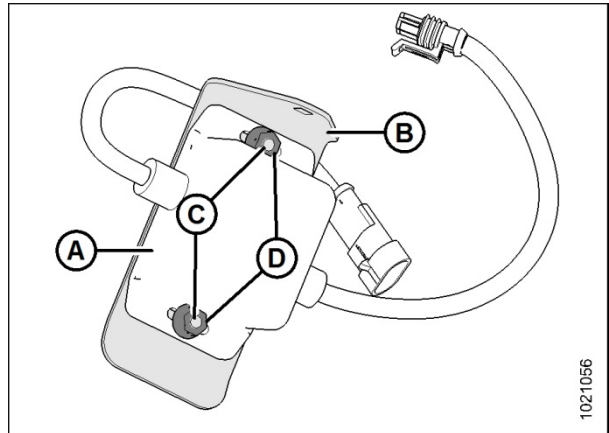


Figure 1: 10V Adapter Assembly

4. Position the 10V adapter assembly (A) at the back of the float indicator box (B) as shown.
5. Secure the 10V adapter assembly (A) with bolt (C) (MD #136748) and nut (MD #152668), then torque to 4–10 Nm (35–88 lbf·in).
6. Ensure mounting plate (D) is tight against FM100 backtube (E). Adjust bolt (C), if necessary.

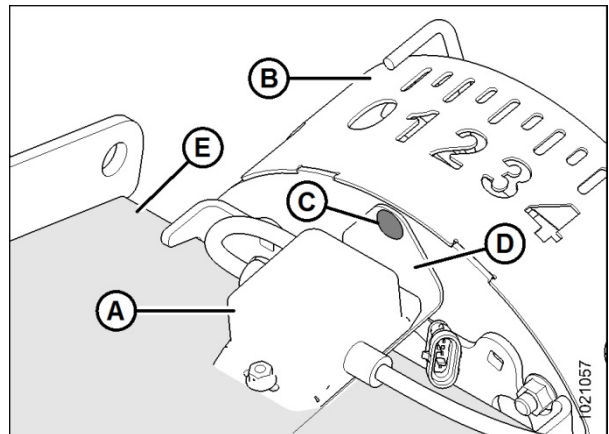


Figure 2: 10V Adapter Assembly Attached to Float Indicator Box

FM100 Float Module
10V CONVERTER KIT (MD #B6421)
INSTALLATION INSTRUCTIONS

7. Unplug existing harness connector (A) from auto header height control sensor (AHHC) (B).

NOTE: This harness was installed in the factory.

8. Plug 10V adapter harness (C) into AHHC sensor (B).
9. Plug existing harness (A) into the female end (D) of the 10V adapter.

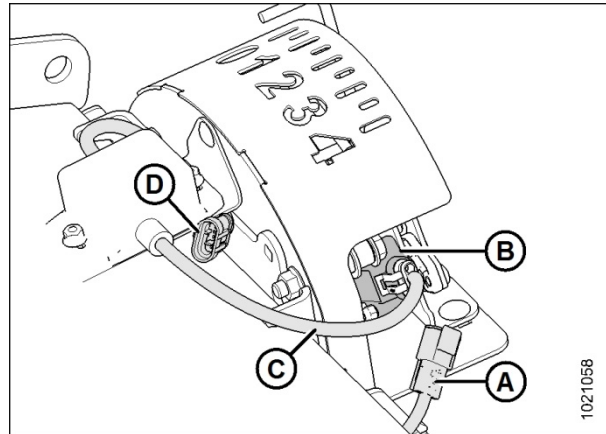


Figure 3: 10V Adapter Harness Plugged to AHHC Sensor

FM100 Float Module 10V CONVERTER KIT (MD #B6421) INSTALLATION INSTRUCTIONS

Adjusting Voltage Limits

The auto header height control (AHHC) sensor output must be within a specific voltage range for the AHHC feature to work properly.

Table 1 Voltage Limits

10V New Holland CX	Low Voltage Limit	High Voltage Limit	Voltage Range
	2.8 V	7.2 V	4.1–4.4 V



CAUTION

To avoid bodily injury or death from unexpected startup of machine, always stop engine and remove key before making adjustments to machine.

1. Follow these steps to adjust the high voltage limit:
 - a. Extend guard angle fully; the header angle indicator should be at D.
 - b. Position header 152–254 mm (6–10 in.) above the ground; the float indicator should be at 0.
 - c. Check the high voltage limit on the combine side of the 10V adapter using the combine display or voltmeter. The reading should be at or slightly below 7.2 V.
 - d. If the reading is too high or too low, loosen sensor mounting nuts (A).
 - e. Slide mounting bracket (B) outboard to increase high voltage limit and inboard to decrease it.
 - f. Tighten bracket mounting nuts (A).

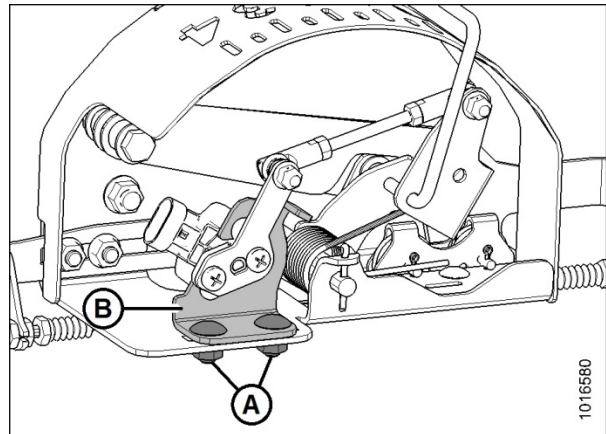


Figure 4: AHHC Sensor Assembly

**FM100 Float Module
10V CONVERTER KIT (MD #B6421)
INSTALLATION INSTRUCTIONS**

2. Follow these steps to adjust the low voltage limit:
 - a. Extend guard angle fully; the header angle indicator should be at D.
 - b. Fully lower header to the ground; the float indicator should be at 4.
 - c. Check the low voltage limit on the combine side of the 10V adapter using the combine display or voltmeter. The reading should be 2.8 V or slightly higher.
 - d. If the reading is too high or too low, loosen sensor mounting nuts (A).
 - e. Rotate sensor (B) counterclockwise to increase low voltage limit and clockwise to decrease it.
 - f. Tighten sensor mounting nuts (A).

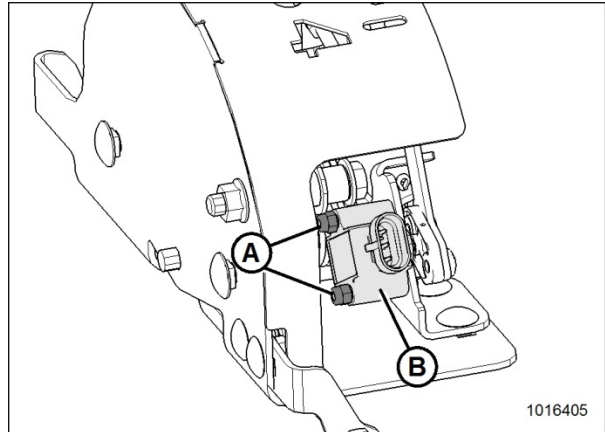


Figure 5: AHC Sensor Assembly

3. After making adjustments, recheck both the higher and lower voltage limits on the combine side of the adapter to make sure they are within voltage limits of 7.2 and 2.8 V, and to make sure that the range between the high and low limits is 4.1 to 4.4 V. Repeat steps if necessary.

FM100 Float Module 10V CONVERTER KIT (MD #B6421) INSTALLATION INSTRUCTIONS

Calibrating the Auto Header Height Control

NOTE: Changes may have been made to the combine controls or display since this document was published.



CAUTION

Check to be sure all bystanders have cleared the area.

Check the following conditions before starting the header calibration procedure:

- The header is attached to the combine.
- The combine is on level ground, with the header level to the ground.
- The header is on down stops, and the center-link is set to D.
- The engine is running.
- The combine is not moving.
- No faults have been received from the Header Height Controller (HHC) module.
- Header/feeder is disengaged.
- Lateral flotation buttons are NOT pressed.
- ESC key is NOT pressed.

To calibrate the AHHC, follow these steps:

1. Select CALIBRATION on the combine display, and press the right arrow navigation key to enter the information box.
2. Select HEADER (A), and press ENTER. The CALIBRATION dialog box opens.

NOTE: You can use the up and down navigation keys to move between options.

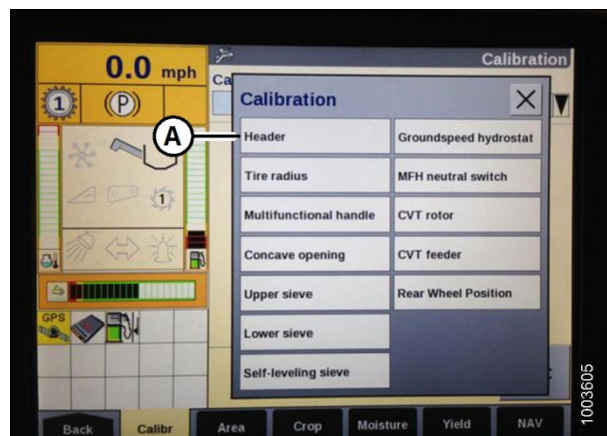


Figure 6: New Holland Combine Display

FM100 Float Module 10V CONVERTER KIT (MD #B6421) INSTALLATION INSTRUCTIONS

3. Follow the calibration steps in the order in which they appear in the dialog box. As you proceed through the calibration process, the display will automatically update to show the next step.

NOTE: Pressing the ESC key during any of the steps or letting the system sit idle for more than 3 minutes will cause the calibration procedure to stop.

NOTE: Refer to the combine operator's manual for explanation of any error codes.

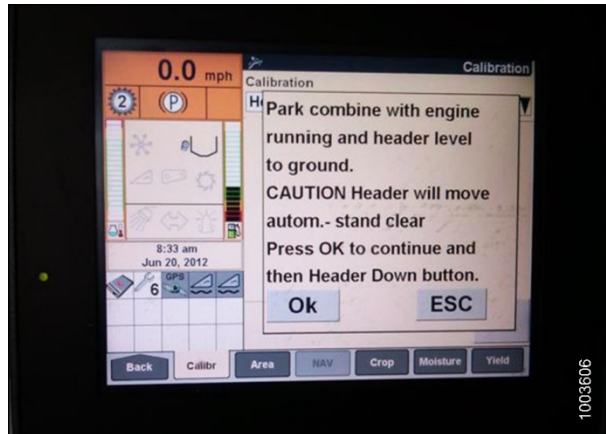


Figure 7: New Holland Combine Display

4. When all steps have been completed, CALIBRATION SUCCESSFUL message is displayed on the page. Exit the CALIBRATION menu by pressing the ENTER or ESC key.

NOTE: If float was set heavier to complete ground calibration procedure, adjust to recommended operating float after the calibration is complete.
5. If the unit does not function properly, conduct the maximum stubble height calibration. Refer to the header operator's manual.