

**Case IH SPX for 4440, 4430, 4420,
3340, 3330, 3240, 3230, 2240 and
Model Years 2009 and Newer
AccuBoom Installation Manual**

P/N 016-1001-082 Rev D 06/15

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CHAPTER

1

Important Safety Information

Important Safety Information

NOTICE

Read this manual and the operation and safety instructions included with your implement and/or controller carefully before installing the AccuBoom™ system.

- Follow all safety information presented within this manual.
- If you require assistance with any portion of the installation or service of your Raven equipment, contact your local Raven dealer for support.
- Follow all safety labels affixed to the AccuBoom system components. Be sure to keep safety labels in good condition and replace any missing or damaged labels. To obtain replacements for missing or damaged safety labels, contact your local Raven dealer.

When operating the machine after installing AccuBoom, observe the following safety measures:

- Be alert and aware of surroundings.
- Do not operate AccuBoom or any agricultural equipment while under the influence of alcohol or an illegal substance.
- Remain in the operator's position in the machine at all times when AccuBoom is enabled.
- Disable AccuBoom when exiting the operator's seat and machine.
- Do not drive the machine with AccuBoom enabled on any public road.
- Determine and remain a safe working distance from other individuals. The operator is responsible for disabling AccuBoom when the safe working distance has diminished.
- Ensure AccuBoom is disabled prior to starting maintenance on AccuBoom or the machine.

CAUTION

- To prevent electrical shock, disconnect the machine's battery connections before installing AccuBoom.
- Always verify that the power leads are connected to the correct polarity as marked. Reversing the power leads could cause severe damages to the equipment.
- Ensure that the power cable is the last cable to be connected.

CHAPTER

2

Introduction

Introduction

Congratulations on your purchase of the Raven AccuBoom system! This system was designed to provide accurate and cost-efficient application by avoiding no-spray zones and eliminating wasteful overlaps.

This manual applies to the following machines. For future reference, write the serial number of the machine in the space below.

MAKE: CaseIH
MODEL: 4420/xx30/xx40
YEAR: 2009 and Newer
SERIAL NUMBER:

Recommendations

Raven Industries recommends the following best practices when installing the AccuBoom system:

- Use part numbers to identify parts.
- Do not remove the plastic wrap from a part until it is necessary for installation.
- Use recommended cable routing practices:
 - Locate available switched and battery power sources before installation.
 - Map out the best available cable route before installation.
 - Ensure cables are able to rest in a relaxed state and are not pinched, kinked, or stretched.
 - Route cables away from moving parts and excessive heat sources.

Tools Needed

The following tools are recommended for installation of the AccuBoom system:

- SAE standard-sized wrenches
- Cable ties
- Set of tools

Preparing for Installation

Before installing AccuBoom, park the machine on a clean, level, and dry surface. Leave the machine turned off for the duration of the installation process.

During the installation process, follow good safety practices. Be sure to carefully read the instructions in this manual as you complete the installation process.

Point of Reference

The instructions in this manual assume that you are standing behind the machine, looking toward the cab.

Updates

Software and manual updates are available on the Raven Applied Technology web site:

www.ravenhelp.com

At Raven Industries, we strive to make your experience with our products as rewarding as possible. One way to improve this experience is to provide us with feedback on this manual.

Your feedback will help shape the future of our product documentation and the overall service we provide. We appreciate the opportunity to see ourselves as our customers see us and are eager to gather ideas on how we have been helping or how we can do better.

To serve you best, please send an email with the following information to

techwriting@ravenind.com

-Case IH SPX 4420, xx30, xx40 and Model Year 2009 and Newer

-Manual No. 016-1001-082 Rev. D

-Any comments or feedback (include chapter or page numbers if applicable).

-Let us know how long have you been using this or other Raven products.

We will not share your email or any information you provide with anyone else. Your feedback is valued and extremely important to us.


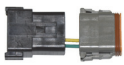




Thank you for your time.

AccuBoom Kit Contents

This section contains a list of the components that are included in the AccuBoom kit. Before beginning the AccuBoom installation, compare the items in the AccuBoom kit with the components on this list. If you have questions about the kit, contact your local Raven dealer.

Important: In addition to the following kit components, an AccuBoom CAN node (P/N 063-0172-316) is required for the operation of the AccuBoom system. Also, if a CAN system is not currently installed on the machine, a CAN terminator/power tee kit (P/N 117-0159-923) is required.

TABLE 1. AccuBoom Installation Kit (P/N 117-1004-082)

Picture	Item Description	Part Number	Qty.
Not Pictured	Manual - CaseIH SPX 4420/xx30/xx40 AccuBoom Installation	016-1001-082	1
	Cable - CaseIH 3230/3330/4420 CAN AccuBoom	115-1001-045	1
	Cable - CaseIH 3230/3330/4420 Fence Row Adapter	115-1001-048	1
	Plate - Node Mounting	107-0171-951	1
	U-Bolt - 2-1/16" W x 3" L x 3/8" Thread	107-0171-609	2
	Bolt - 3/8"-16 UNC 1-1/4" Zinc Plated Hex	311-0054-106	3
	Nut - 3/8"-16 Zinc Flanged Lock	312-1001-164	7

CHAPTER

3

AccuBoom Installation

These instructions are designed to assist in the installation of the AccuBoom system on the CaseIH SPX 4420, xx30, and xx40 series machines. Refer to the Installation & Operation manual for the specific field computer being used for instructions on setting up the software and using the AccuBoom system.

Install the AccuBoom Node

FIGURE 1. AccuBoom Node Installed



1. Mount the node (P/N 063-0172-316) to the node mounting plate (P/N 107-0171-951) using three 3/8"-16 UNC x 1-1/4" zinc plated hex bolts (P/N 311-0054-106) and three 3/8"-16 zinc flanged lock nuts (P/N 312-1001-164).
2. Mount the node mounting plate on the left side of the machine's center rack cross member using two 2-1/16" W x 3" L x 3/8" thread U-bolts (P/N 107-0171-609) and four 3/8"-16 zinc flanged lock nuts (P/N 312-1001-164).

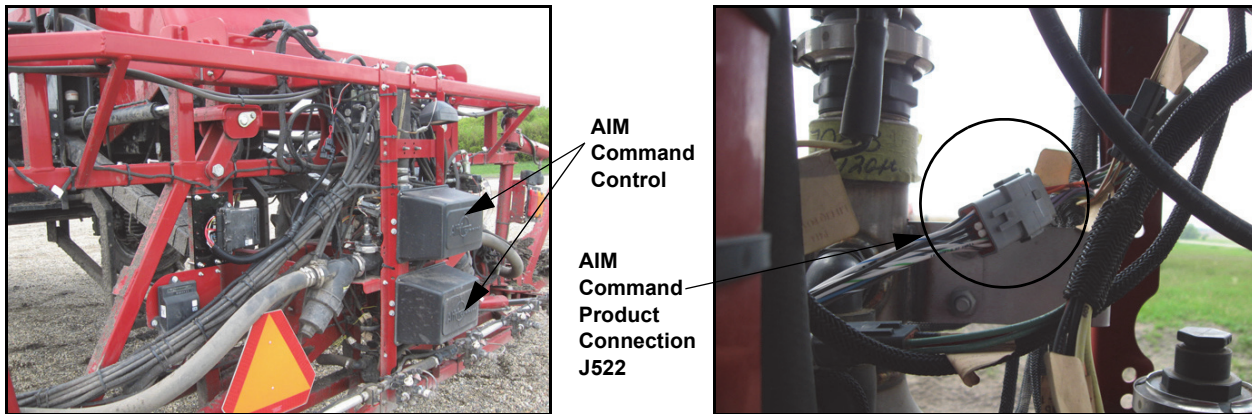
Note: Mount the plate so that the node cable connectors face down.

3. Connect the large, rectangular node connectors of the CaseIH SPX 3230/3330/4420 CAN AccuBoom cable (P/N 115-1001-045) into the correct ports of the AccuBoom node.
4. Tighten the bolts on the node connectors to secure the connections.

Connect the AccuBoom Cable to the Machine's Harness Cable

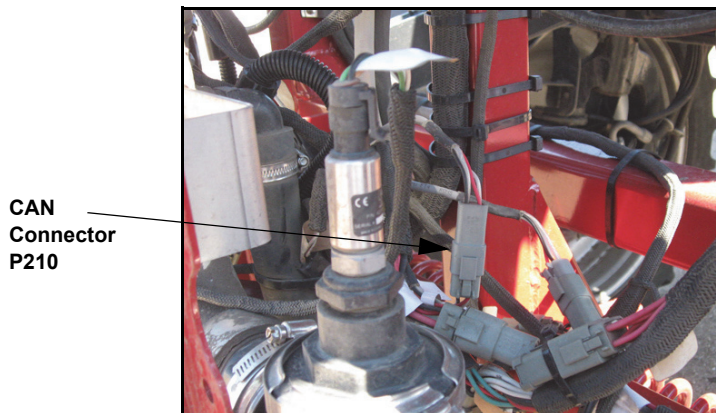
Machines with AIM Command

FIGURE 2. AccuBoom Harness Cable Connected



1. Locate and unplug the CaseIH AIM interface boom cable 12-pin Deutsch connector located in the middle of the center boom section, just to the left of the spray Y-pipe.
2. Connect the 12-pin Deutsch connectors from the AccuBoom harness cable (P/N 115-1001-045) to the machine's 12-pin connectors.

FIGURE 3. Machine's CAN Connector



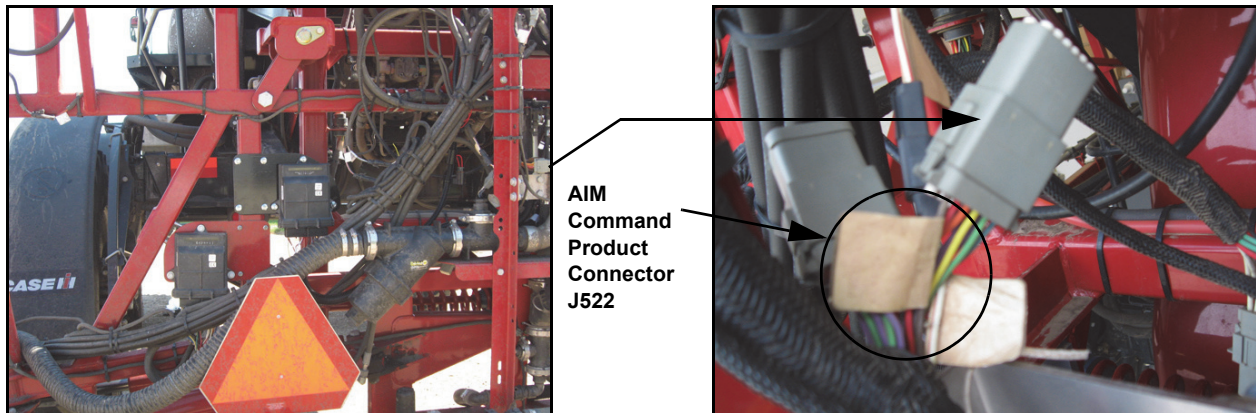
3. Locate the machine's CAN connector located near the pressure transducer, behind the machine spray line on the center boom section.
4. Remove the existing CAN terminator from the machine's CAN connector.

Note: If the machine is equipped with AutoBoom, unplug the CAN connection and install the AccuBoom between the CAN connection and the AutoBoom cable.

5. Connect the AccuBoom harness cable to the CAN connection.
6. Install the terminator or CAN connection removed in step 4 on the AccuBoom cable.

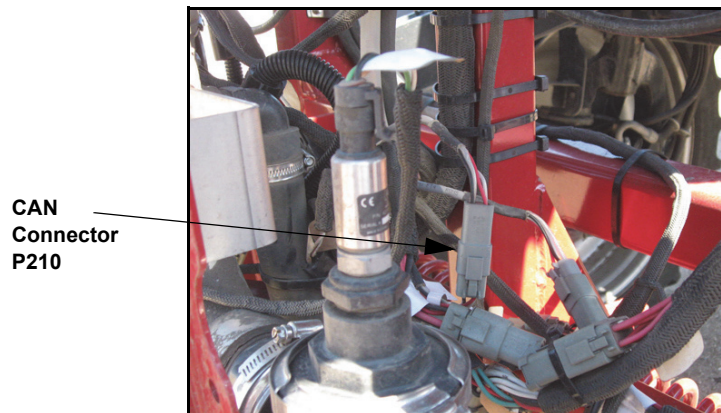
Machines Without AIM Command

FIGURE 4. 12-Pin Deutsch Connection from AccuBoom Harness



1. Remove the cap from the 12-pin Deutsch connector on the AccuBoom harness cable (P/N 115-1001-045).
2. Connect the connector into the machine's AIM interface connection, located in the middle of the center boom section, just to the left of the spray Y-pipe.
3. Place the cap removed in step 1 on the open 12-pin connector on the AccuBoom harness cable.

FIGURE 5. Machine's CAN Connector



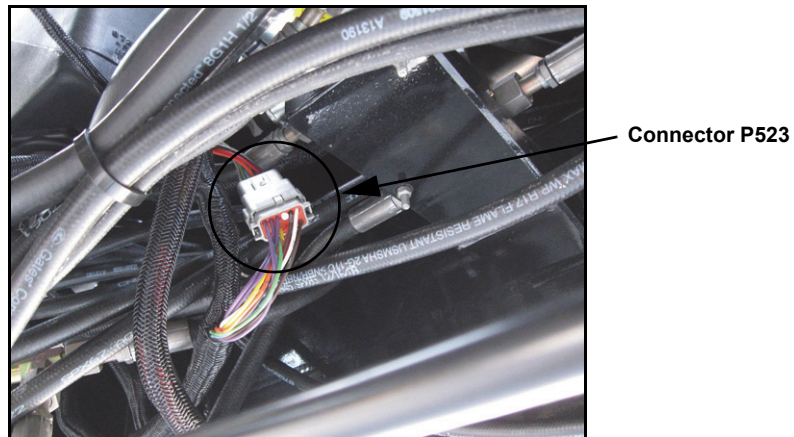
4. Locate the machine's CAN connector located near the pressure transducer, behind the machine spray line on the center boom section.
5. Remove the existing CAN terminator from the machine's CAN connector.

Note: *If the machine is equipped with AutoBoom, unplug the CAN connection and install the AccuBoom between the CAN connection and the AutoBoom cable.*

6. Connect the AccuBoom harness cable to the CAN connection.
7. Install the terminator or CAN connection removed in step 4 on the AccuBoom cable.

Connect the Fence Row Nozzle

FIGURE 6. Fence Row Nozzle Connection



1. Locate and disconnect the 12-pin Deutsch Case boom cable connection, located directly behind the cab.

FIGURE 7. Fence Row Adapter Cable Installed



2. Connect the fence row adapter cable (P/N 115-1001-048) to the corresponding connections on the machine's harness cable.

Install the Logic Power and Ground Connections

FIGURE 8. Power/Ground Connections



1. Locate the power/ground connection on the AccuBoom harness cable (P/N 115-1001-045).
2. Locate and disconnect the machine's logic power 2-pin Deutsch connector on top of the machine's center rack..
3. Connect the Logic Pwr/Gnd connectors from the AccuBoom harness cable to the machine's logic power connections.

CHAPTER

4

***Section Mapping
Setup***

This section contains section mapping settings that are used to program the AccuBoom controller. Refer to the Installation & Operation Manual and the appropriate section in this chapter for the specific field computer being used for programming and section mapping settings.

Envizio Pro

5, 6, or 7 Section	
Boom	Section Label
1	1
2	2
3	3
4	4
5	5
6	6
7	7

Viper Pro

7 Section		
Boom	Wired As	Display As
1	L	*
2	1	1
3	2	2
4	3	3
5	4	4
6	5	5
7	6	6
8	7	7
9	R	*

CHAPTER

5

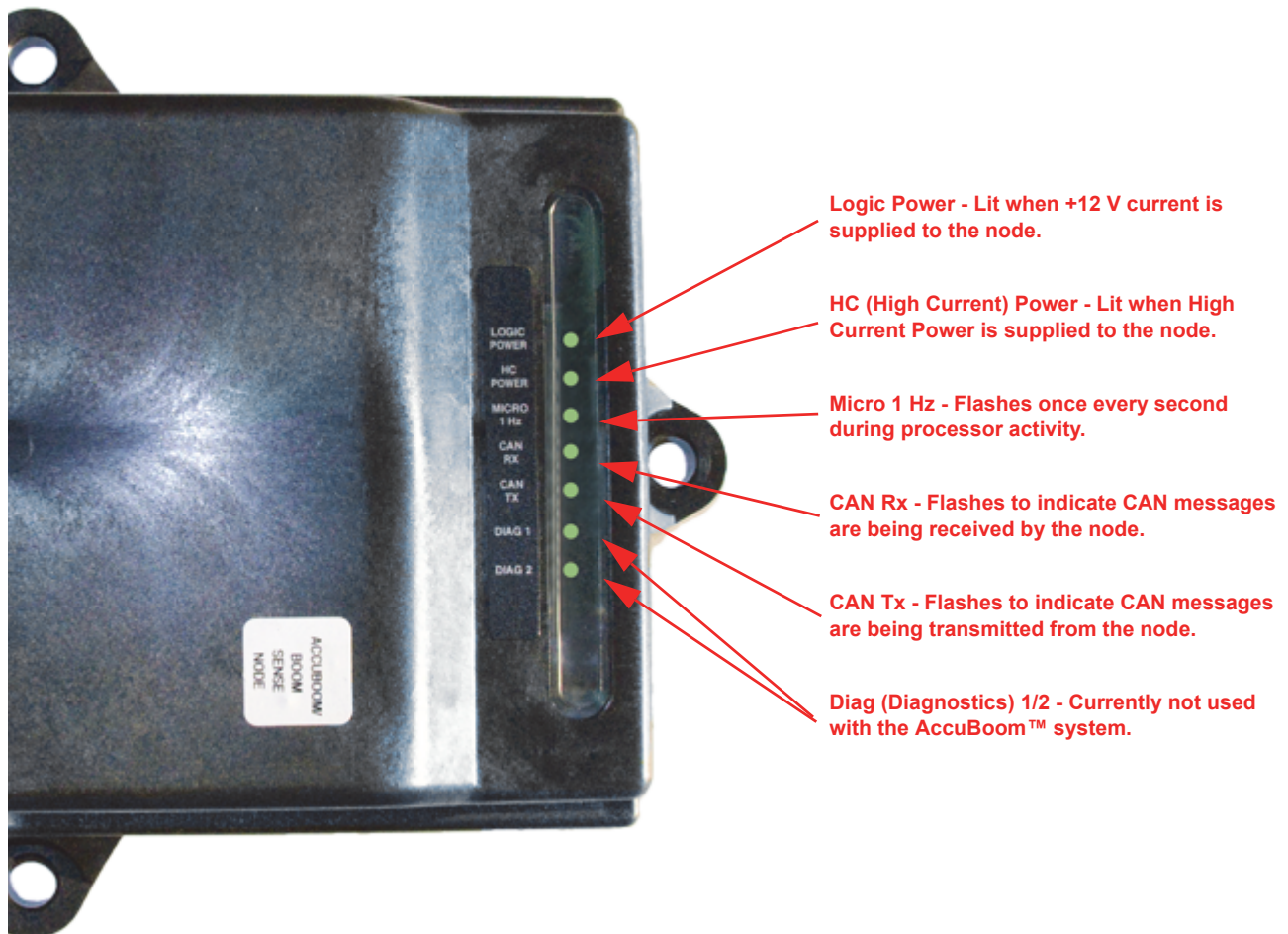
Troubleshooting

The AccuBoom CAN control node (P/N 063-0172-316) features several green light-emitting diodes (LEDs) which may be used to diagnose issues within the AccuBoom system.

Note: If the LEDs are not displayed as outlined in the figure below, check the CAN connections and the control cable connections on the node. If the issue persists, contact your local Raven dealer for additional technical support.

Note: All boom switches must remain in the On position while AccuBoom control is in operation.

FIGURE 1. AccuBoom CAN Control Node LEDs



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RAVEN

Limited Warranty

What Does this Warranty Cover?

This warranty covers all defects in workmanship or materials in your Raven Applied Technology Division product under normal use, maintenance, and service when used for intended purpose.

How Long is the Coverage Period?

Raven Applied Technology products are covered by this warranty for 12 months from the date of retail sale. In no case will the Limited Warranty period exceed 24 months from the date the product was issued by Raven Industries Applied Technology Division. This warranty coverage applies only to the original owner and is non-transferable.

How Can I Get Service?

Bring the defective part and proof of purchase to your Raven dealer. If the dealer approves the warranty claim, the dealer will process the claim and send it to Raven Industries for final approval. The freight cost to Raven Industries will be the customer's responsibility. The Return Materials Authorization (RMA) number must appear on the box and all documentation (including proof of purchase) must be included inside the box to be sent to Raven Industries.

What Will Raven Industries Do?

Upon confirmation of the warranty claim, Raven Industries will (at our discretion) repair or replace the defective product and pay for the standard return freight, regardless of the inbound shipping method. Expedited freight is available at the customer's expense.

What is not Covered by this Warranty?

Raven Industries will not assume any expense or liability for repairs made outside our facilities without written consent. Raven Industries is not responsible for damage to any associated equipment or products and will not be liable for loss of profit, labor, or other damages. The obligation of this warranty is in lieu of all other warranties, expressed or implied, and no person or organization is authorized to assume any liability for Raven Industries.

Damages caused by normal wear and tear, misuse, abuse, neglect, accident, or improper installation and maintenance are not covered by this warranty.



Extended Warranty

What Does this Warranty Cover?

This warranty covers all defects in workmanship or materials in your Raven Applied Technology Division product under normal use, maintenance, and service when used for intended purpose.

Do I Need to Register My Product to Qualify for the Extended Warranty?

Yes. Products/systems must be registered within 30 days of retail sale to receive coverage under the Extended Warranty. If the component does not have a serial tag, the kit it came in must be registered instead.

Where Can I Register My Product for the Extended Warranty?

To register, go online to www.ravenhelp.com and select Product Registration.

How Long is the Extended Warranty Coverage Period?

Raven Applied Technology products that have been registered online are covered for an additional 12 months beyond the Limited Warranty for a total coverage period of 24 months from the date of retail sale. In no case will the Extended Warranty period exceed 36 months from the date the product was issued by Raven Industries Applied Technology Division. This Extended Warranty coverage applies only to the original owner and is non-transferable.

How Can I Get Service?

Bring the defective part and proof of purchase to your Raven dealer. If the dealer approves the warranty claim, the dealer will process the claim and send it to Raven Industries for final approval. The freight cost to Raven Industries will be the customer's responsibility. The Return Materials Authorization (RMA) number must appear on the box and all documentation (including proof of purchase) must be included inside the box to be sent to Raven Industries. In addition, the words "Extended Warranty" must appear on the box and all documentation if the failure is between 12 and 24 months from the retail sale.

What Will Raven Industries Do?

Upon confirmation of the product's registration for the Extended Warranty and the claim itself, Raven Industries will (at our discretion) repair or replace the defective product and pay for the standard return freight, regardless of the inbound shipping method. Expedited freight is available at the customer's expense.

What is Not Covered by the Extended Warranty?

Raven Industries will not assume any expense or liability for repairs made outside our facilities without written consent. Raven Industries is not responsible for damage to any associated equipment or products and will not be liable for loss of profit, labor, or other damages. Cables, hoses, software enhancements, and remanufactured items are not covered by this Extended Warranty. The obligation of this warranty is in lieu of all other warranties, expressed or implied, and no person or organization is authorized to assume any liability for Raven Industries.

Damages caused by normal wear and tear, misuse, abuse, neglect, accident, or improper installation and maintenance are not covered by this warranty.