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AccuBoom Installation Manual



**Case IH SPX 3150, ('03 & Older) 3185 & 3200, 3200B,
& ('00 & Older) 4260
Patriot Cabs with CAN Product Control, with or without AIM Command**

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Congratulations on your purchase of the Raven AccuBoom™ system! This system is designed to provide worry free turn on and turn off of your booms with respect to the as-applied coverage map. The following instructions are designed to assist you in the proper installation of the AccuBoom™ system. See your Console Operation Manual for instructions on setting up the software and using the AccuBoom™ system.

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

Required Components

The following components are required for complete installation of the Raven AccuBoom™ system.

Component	Part Number
CAN, Node, AccuBoom™ Control	063-0172-316
Cable, AccuBoom™ Control, Case IH SPX 3150, ('03 & Older) 3185 & 3200, 3200B, & ('00 & Older) 4260 Patriot Cabs and CAN Product Control, w/wo AIM Command	115-1001-036
Cable, CAN, Adapter Tee, 24'	115-0171-363
Manual, AccuBoom™ Installation, Case IH SPX 3150, ('03 & Older) 3185 & 3200, 3200B, & ('00 & Older) 4260 Patriot Cabs and CAN Product Control, w/wo AIM Command	016-1001-020

Note: If a CANbus system is not already installed on your machine, the CANbus Power Adapter Tee and Terminator Kit (P/N 117-0159-923) will be required to complete the AccuBoom™ installation.

Safety Requirements

NOTICE

Read this manual 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 machine or implement. Be sure to keep safety labels in good condition and replace any missing or damaged labels.

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

- 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 from the operator's seat and machine.
- Do not drive the machine with AccuBoom™ enabled on any public thorough-fare or main road.
- Determine and remain a safe working distance from other individuals. The operator is responsible for disabling AccuBoom™ boom section control when the safe working distance has diminished.
- Ensure AccuBoom™ is disabled prior to starting any maintenance work on the machine.

Please review the operation and safety instructions included with your implement and/or controller.

CAUTION

Do not reverse the battery leads. Doing so will cause severe damage to the electrical equipment. Read and follow installation instructions carefully when connecting lead wires to the battery.

CHAPTER

2

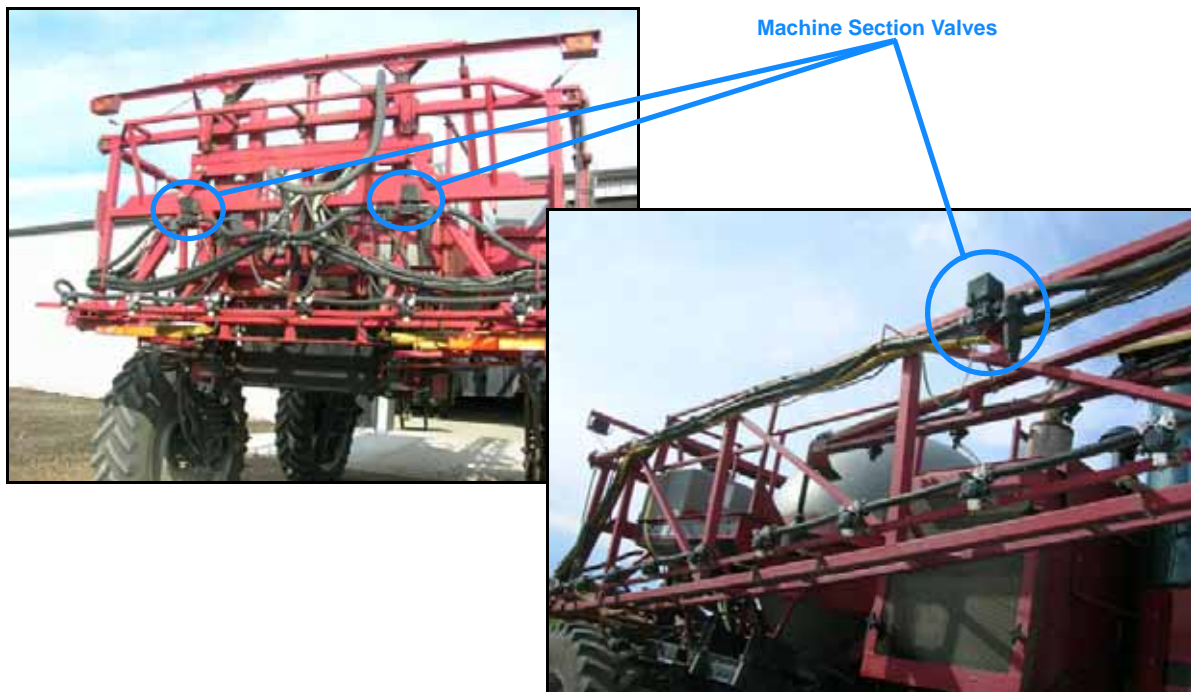
Installation

Use the following procedure to properly install the AccuBoom™ system on Case IH SPX 3150, ('03 & Older) 3185 & 3200, 3200B, & ('00 & Older) 4260 sprayers with Patriot Cabs (w/wo AIM Command).

Boom Valve Connections

1. Center the AccuBoom™ Control Cable (P/N 115-1001-036) on the machine's center rack.
2. Locate the existing section hoses and valves on the center rack and each boom of the machine.

FIGURE 1. Section Valve Locations



3. Route the individual boom section connectors from the center rack to the appropriate boom section valves.

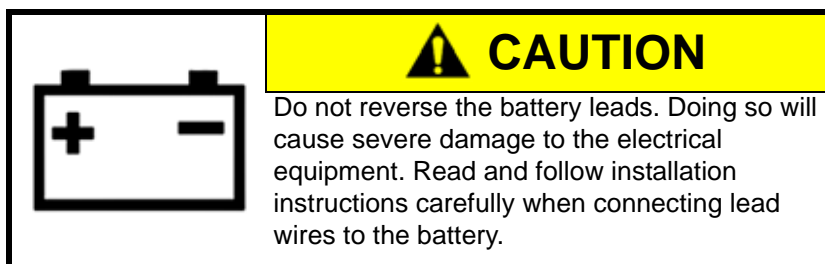
Note: *Route the AccuBoom™ Control Cable away from moving components to avoid pinching or breaking the cable during machine operation and to allow folding or unfolding the booms.*

4. Connect the AccuBoom™ Control Cable (P/N 115-1001-036):
 - a. Disconnect the existing cable connection from the machine's boom section valve.
 - b. Remove the dust caps from the AccuBoom™ Control Cable connectors and insert existing cable connectors to the appropriate section connector.
 - c. Insert the AccuBoom™ Control Cable connectors to the machine's boom valves.

AccuBoom™ Node Installation

1. Select a location on the machine's center rack to mount the AccuBoom™ CAN Control Node (P/N 063-0172-316). When selecting a mounting location, keep the following in mind:
 - a. Length and routing of the AccuBoom™ Control Cable. Mounting the node toward the right side of the center rack provides for convenient routing to the vehicle cab.
 - b. Keep the cable away from moving components to avoid pinching or breaking the cable during machine operation due to rack movement.
 - c. Node must be mounted with the rectangular connectors pointing toward the ground to avoid collecting moisture or debris.
 - d. Node should not be subjected to heavy pressure washing. Select a location away from sprayer components which may require direct pressure washing.
2. Mount the AccuBoom™ Control Node securely to the machine's center rack.

AccuBoom™ Node Power



1. Insert the large rectangular connectors on the AccuBoom™ Control Cable (P/N 115-1001-036) to the AccuBoom™ CAN Control Node (P/N 063-0172-316).

FIGURE 2. AccuBoom™ Node Connections



Note: Do not force the connectors. The node and cable are designed to only connect if the plug and connector are in the correct orientation.

2. Route the red and white power leads on the AccuBoom™ Control Cable (P/N 115-1001-036) along the right side of the vehicle's frame toward the vehicle cab.
3. Route power leads into the cable compartment located on the right side of the machine cab.

FIGURE 3. Cable Compartment on Patriot Cabs

Patriot Cab Cable
Compartment



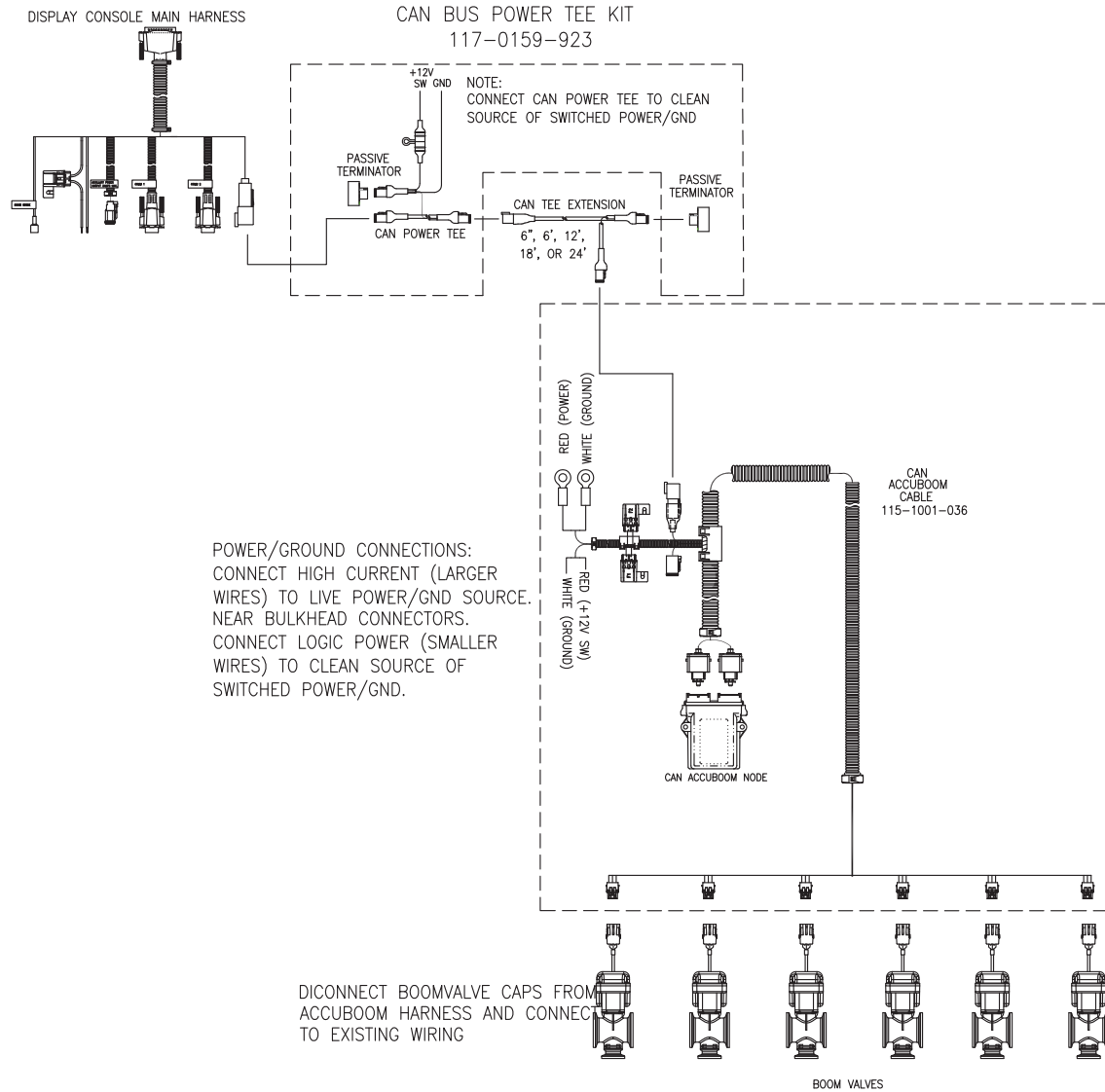
4. Connect the switched power leads (16 gauge) as follows:
 - a. Connect the red power lead to a clean source of switched +12 V power.
 - b. Connect the white ground lead directly to the battery ground.
5. Connect the battery power leads (12 gauge) as follows:
 - a. Connect the red power wire to a clean source of battery power.
 - b. Connect the white ground lead to directly to the battery ground.

Connecting AccuBoom™ to an Existing CANbus System

1. In the vehicle cab, locate and remove a CAN Passive Terminator (P/N 063-0172-369) from the cable connected to the console.
2. Connect the supplied CAN Adapter Tee Cable (P/N 115-0171-363) to the 4-Pin Deutsch connector from which the Terminator was disconnected.
3. Route the CAN Adapter Tee Cable out of the vehicle cab and back to the AccuBoom™ Control Node.
4. Connect the CAN Adapter Tee Cable to the connector labeled "To CANbus" on the AccuBoom™ Control Cable (P/N 115-1001-036).
5. Install the CAN Passive Terminator (removed in Step 1) to the remaining plug on the CAN Adapter Tee Cable.

Note: *If the machine is not equipped with a CAN system, refer to CHAPTER 3, Installing a CANbus System for instructions on installing the CANbus Power Adapter Tee and Terminator Kit (P/N 117-0159-923).*

FIGURE 4. AccuBoom™ System Connections



Notes:

CHAPTER

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Installing a CANbus System

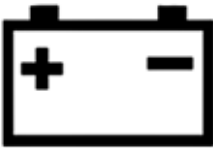
If your machine is not currently equipped with a Raven CANbus System, a CANbus Power Adapter Tee and Terminator Kit (P/N 117-0159-923) must be installed to complete the AccuBoom™ installation.

The Power Adapter Tee and Terminator Kit contains the following components:

Component	Part Number
Cable, CAN Adapter Tee with Power	115-0171-368
CAN, Passive Terminator (X2)	063-0172-369

CAN Power

1. Locate a convenient source for switched power and ground near the control system.
2. Route the red and white lead wires on the CAN Adapter Tee with Power Cable (P/N 115-0171-368) to the power source located in step 1.

	<p>⚠ CAUTION</p> <p>Do not reverse the battery leads. Doing so will cause severe damage to the electrical equipment. Read and follow installation instructions carefully when connecting lead wires to the battery.</p>
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- a. Connect the red power lead to a clean source of switched +12 V power.
- b. Connect the white ground lead directly to the battery ground.

FIGURE 1. CAN Adapter Tee Cable with Power (P/N 115-0171-368)



3. Install one of the supplied CAN Passive Terminators (P/N 063-0172-369) to the Adapter Tee with Power.

FIGURE 2. Power Tee Cable with Passive Terminator (P/N 063-0172-369) Installed



Note: To provide the most robust CANbus System, Raven recommends connecting the CAN Passive Terminator (P/N 063-0172-369) to the 4-Pin Deutsch connector nearest to the power leads.

4. Connect one of the remaining 4-Pin Deutsch connectors on the Adapter Tee with Power Cable (P/N 115-0171-368) to the existing controller cable.

FIGURE 3. Power Tee Cable Connections



5. Additional CAN Tee cables and nodes can now be connected to the remaining 4-Pin Deutsch connector on the CAN Adapter Tee Cable to expand the CANbus System.

Note: *Be sure to install a second CAN Passive Terminator (P/N 063-0172-369) to the remaining 4-Pin Deutsch connector after the AccuBoom™ Control Node or after additional CAN extension cables and nodes have been installed. A proper CANbus System will always have two Passive Terminators in the system.*

Notes:

CHAPTER

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*Troubleshooting the
AccuBoom™ System*

The AccuBoom™ CAN Control Node (P/N 063-0172-316) enclosure features several green LED lights which may be used to diagnose issues within the AccuBoom™ system.

FIGURE 1. AccuBoom™ CAN Control Node (P/N 063-0172-316)



Note: If the LED lights are not displayed as described in the figure above, 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.

Notes:

RAVEN

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Limited Warranty

What Does this Warranty Cover?

This warranty covers all defects in workmanship or materials in your Raven Flow Control Product under normal use, maintenance, and service.

How Long is the Coverage Period?

Raven Flow Control Products are covered by this warranty for 12 months after the date of purchase. This warranty coverage applies only to the original owner and is non-transferrable.

How Can I Get Service?

Bring the defective part and proof of purchase to your Raven Dealer. If your Dealer agrees with the warranty claim, the Dealer will send the part and proof of purchase to their distributor or to Raven Industries for final approval.

What Will Raven Industries Do?

Upon confirmation of the warranty claim, Raven Industries will, at our discretion, repair or replace the defective part and pay for return freight.

What is not Covered by this Warranty?

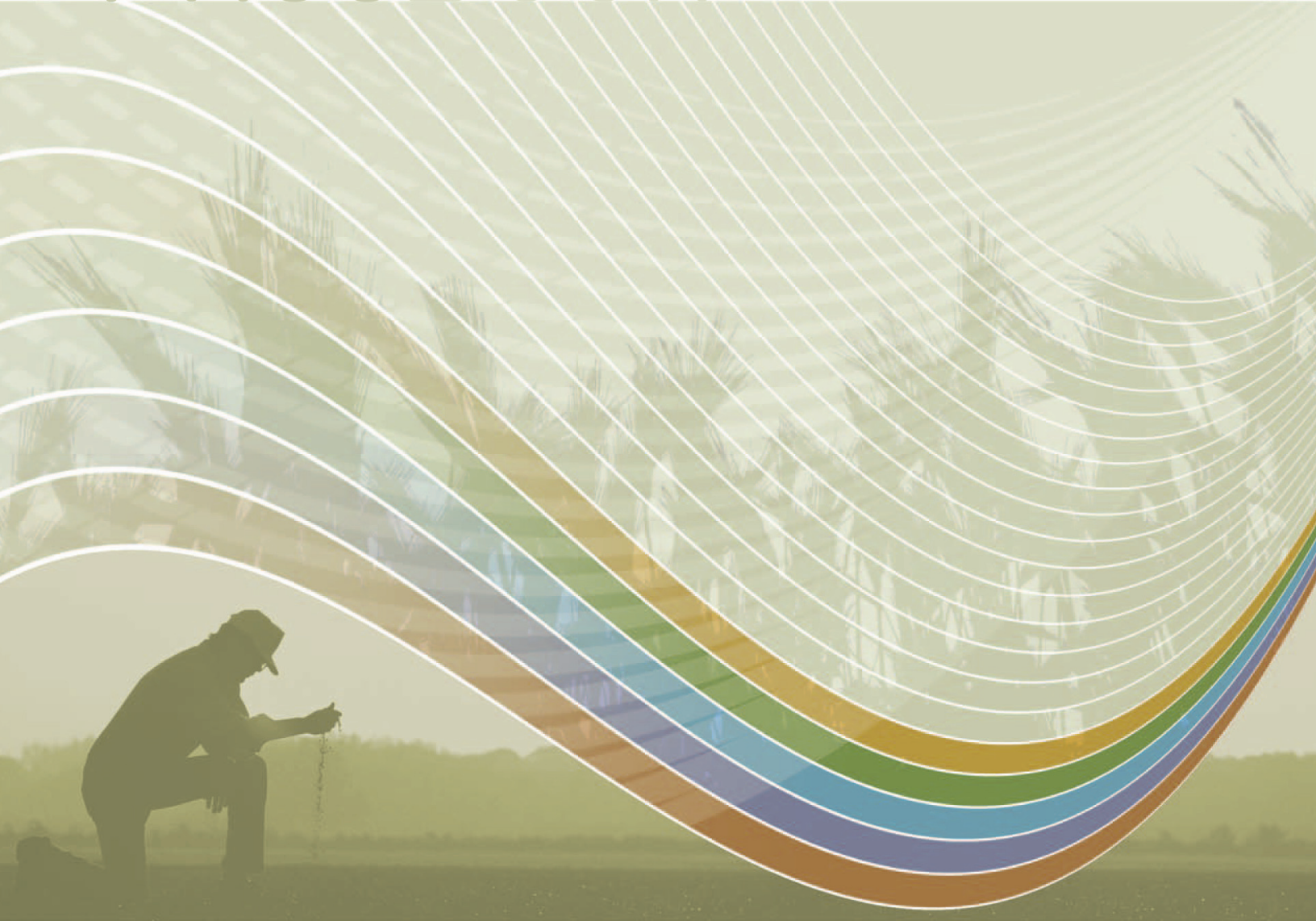
Raven Industries will not assume any expense or liability for repairs made outside our facilities without written consent. Raven Industries is not responsible for damage to any associated equipment or products and will not be liable for loss of profit or other special damages. The obligation of this 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



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Patriot Cabs with CAN Product Control, with or without AIM Command
AccuBoom Installation Manual
(P/N 016-1001-020 Rev A 11/08)



Raven Industries
Flow Controls Division
P.O. Box 5107
Sioux Falls, SD 57117-5107

Toll Free (U.S. and Canada): (800)-243-5435
or Outside the U.S. :1 605-575-0722
Fax: 605-331-0426
www.ravenprecision.com
fcinfo@ravenind.com