INSTALLATION INSTRUCTIONS

Field-IQ Crop Input Control System

Generic installations

Section Control Only - 12 Sections

Rate and Section Control -12 Sections

Trailed Sprayers Rate and Section Control

Signal Input Module (SIM) Kit

Section Control Kit - More than 12 Sections

Version 1.00
Revision A
August 2011
Part Number 99104-05-ENG

Trimble

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Class B Statement – Notice to Users. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes and modifications not expressly approved by the manufacturer or registrant of this equipment can void your authority to operate this equipment under Federal Communications Commission rules.

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For product recycling instructions and more information, please go to: www.trimble.com/ev.shtml

Recycling in Europe: To recycle Trimble WEEE, Call

+31 497 53 2430, and ask for the "WEEE Associate"

Or

Mail a request for recycling instructions to:

Trimble Europe BV
c/o Menlo Worldwide Logistics

Meerheide 45
5521 DZ Eersel, NL

Safety Information

Always follow the instructions that accompany a Warning or Caution. The information they provide is intended to minimize the risk of personal injury and/or damage to property. In particular, observe safety instructions that are presented in the following format:

WARNING – This alert warns of a potential hazard, which, if not avoided, can cause severe injury.

CAUTION – This alert warns of a hazard or unsafe practice which, if not avoided, can cause injury or damage.

***Note** – An absence of specific alerts does not mean that there are no safety risks involved.*

Warnings

WARNING – When you are working on the vehicle's hydraulic systems, vehicle attachments that are suspended can drop. If you are working around the vehicle, you could suffer serious injury if an attachment dropped on you. To avoid this risk, lower all vehicle attachments to the ground before you begin work.

WARNING – If someone else attempts to drive the vehicle while you are working on or under it, you can suffer serious or fatal injuries. To avoid this possibility, install a lockout box on the battery terminal to prevent the battery from being reconnected, remove the key from the vehicle's ignition switch, and attach a "Do not operate" tag in the cab.

WARNING – Agricultural chemicals can pose serious health risks. If the vehicle has been used to apply agricultural chemicals, steam clean the vehicle to remove any chemical residue from the areas of the vehicle where you will be working.

WARNING – Vehicle cabs can be quite high in the air. To avoid potentially serious injury through falling from this height, always use the steps and handrails, and face the vehicle, when you enter or exit it.

WARNING – When the vehicle has been running, parts of the vehicle, including the engine and exhaust, can become extremely hot and can cause serious burns. To avoid burns, allow hot machine parts to cool before you begin working on them.

WARNING – The system installation may bring you into contact with chemical substances, such as oil, which can cause poisoning. Wash your hands thoroughly after you finish working on the system.

WARNING – Battery posts, terminals, and related accessories contain lead and lead compounds, which can cause serious illness. To avoid ingesting lead, wash your hands thoroughly after touching the battery.

WARNING – Always wear protective equipment appropriate to the job conditions and the nature of the vehicle. This includes wearing protective glasses when you use pressurized air or water, and correct protective welder's clothing when welding. Avoid wearing loose clothing or jewelry that can catch on machine parts or tools.

WARNING – Parts of the vehicle may be under pressure. To avoid injury from pressurized parts, relieve all pressure in oil, air, and water systems before you disconnect any lines, fittings, or related items. To avoid being sprayed by pressurized liquids, hold a rag over fill caps, breathers, or hose connections when you remove them. Do not use your bare hands to check for hydraulic leaks. Use a board or cardboard instead.

WARNING – Do not power wash on, or near the Field-IQ™ crop input control system modules.

WARNING – Folding and unfolding the applicator booms can result in damage; make sure there are no people or objects in the path of travel of the booms.

WARNING – Do not alter cable lengths and connections. If you must alter the length of the power cable do not remove the fuse and fuse holder from the cable.

WARNING – Most application equipment have pressurized cabs. If you need to drill a hole in the cab, reseal the hole to maintain the pressurization of the cab; sealing puddy is one option to seal the cab. Trimble recommends Sealing Gum, Size 2 pounds, Permagum Block Grainger item # 4E307, or Virginia KMP, manufacturer's model PP-22. These are available from www.grainger.com.

WARNING – Damage will result to the cable if it is not routed correctly. When routing cables be sure to route them free from areas that may result in damage to the cables including pinching, stretching and rubbing.

Cautions

CAUTION – Be sure to install the hitch connection and cables so they are free of areas that could result in damage to the cable or the Field-IQ system.

CAUTION – Damage to important components can be caused by the drill and/or screws. When mounting the rate and section control module, first verify that there is nothing located behind the area where module is to be installed.

CAUTION – To prevent rain damage, do not mount the Rate and Section Control module with the connectors pointing upwards.

Contents

CHAPTER

1

Introduction

- Technical assistance
- Required components
- Preparing the vehicle for installation
- Additional pre-application steps

This manual describes how to install the Trimble® Field-IQ™ Crop Input Control System.

Even if you have used other Global Positioning System (GPS), or application control products before, Trimble recommends that you spend some time reading this manual to learn about the special features of this product. If you are not familiar with GPS, visit the Trimble website (www.trimble.com) for an interactive look at Trimble and GPS.

Technical assistance

If you have a problem and cannot find the information you need in the product documentation, contact Trimble technical support:

1. Go to the Trimble website (www.trimble.com).
2. Click the **Support & Training** link at the top of the screen, select *Support* and then select *Support A–Z list of products*.
3. Scroll to the bottom of the list.
4. Click the *submit an inquiry* link. A form appears.
5. Complete the form and then click **Send**.

Required components

Section control only

Kits required	Part number	Special tools
Field-IQ system cab kit FM750/FM1000	80811-00	¼" socket or ¼" nut driver
Field-IQ system 12 section switch box (required for FM-750)	80600-00	Volt meter
Section control only (12 sections)	99104-09	

Rate and section control: in-cab installations

Kits required	Part number	Special tools
Field-IQ system cab kit FM750/FM1000	80811-00	¼" socket or ¼" nut driver
Field-IQ system 12 section switch box (required for FM-750)	80600-00	Volt meter
Rate and section control (12 sections)	99104-05	

Rate and section control: trailed-sprayer installations

Kits required	Part number	Special tools
Field-IQ system cab kit FM750/FM1000	80811-00	¼" socket or ¼" nut driver
Field-IQ system 12 section switch box (required for FM-750)	80600-00	Volt meter
Rate and section control (12 sections)	99104-06	

Signal input module

Kits required	Part number	Special tools
Signal input module (SIM) kit	99104-07	¼" socket or ¼" nut driver Volt meter

More than twelve sections

Kits required	Part number	Special tools
+12 sections kit	99104-08	¼" socket or ¼" nut driver Volt meter

Preparing the vehicle for installation

WARNING – To avoid potentially serious personal injury or illness, and to prevent damage to equipment, make sure that you read and understand the Safety Information chapter.

1. Park the vehicle on a hard, level surface. Block the front and rear wheels.
2. Align the steering straight ahead. On an articulated vehicle, install the articulation locks.
3. Remove all dirt and debris from the areas of the vehicle where the Field-IQ system will be installed.
4. Open all kit boxes and check the contents of the box against the packing list/s. Lay all of the parts out on a clean workbench.

Note – *The left and right sides of the vehicle are referenced while standing behind the unit, facing the normal direction of travel.*

Additional pre-application steps

1. Turn on the display and the system and verify communication has been established between the display and the module.
2. Configure the implement and controllers settings.
3. Calibrate the sprayer system to verify correct application.

CHAPTER

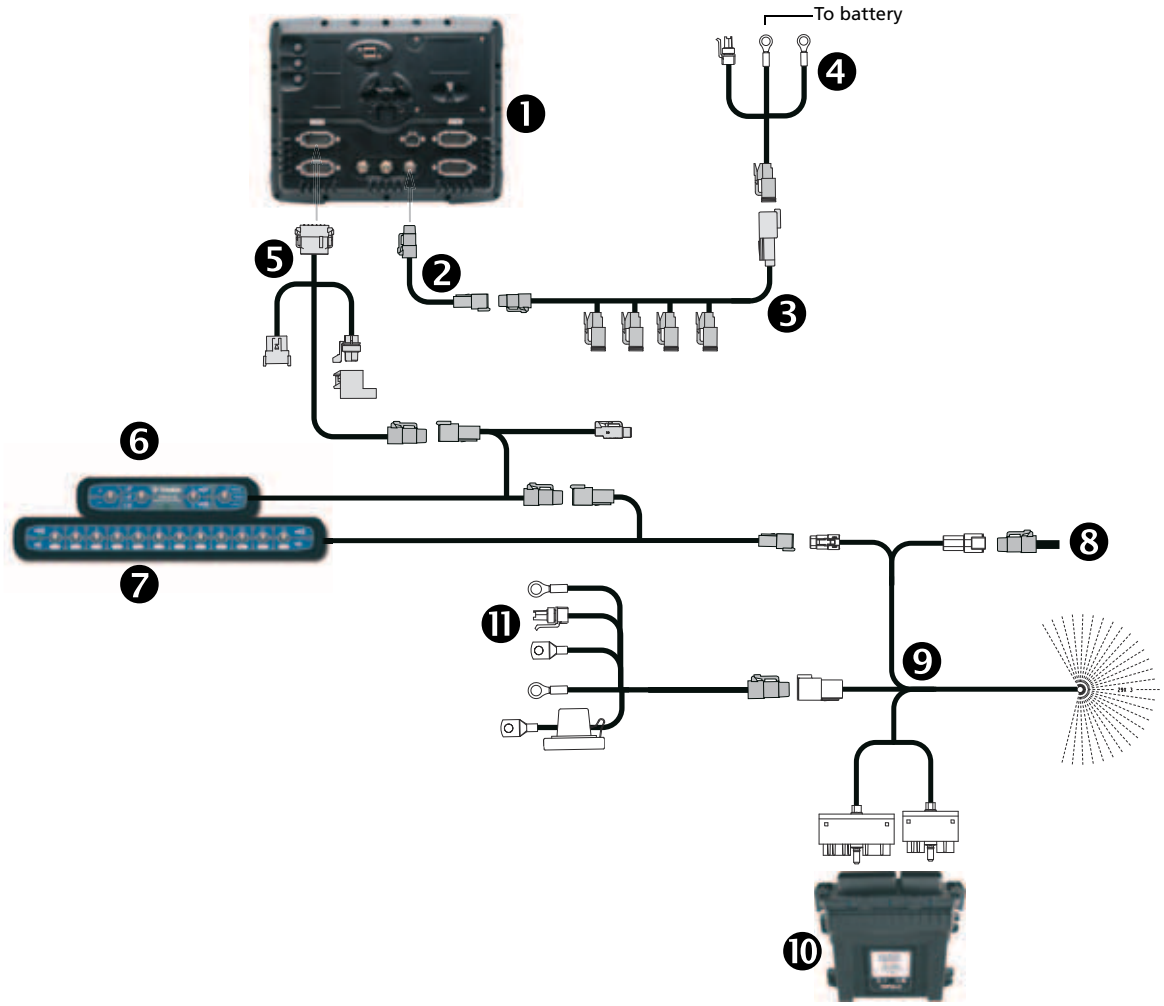
2

Cable Diagrams

In this chapter:

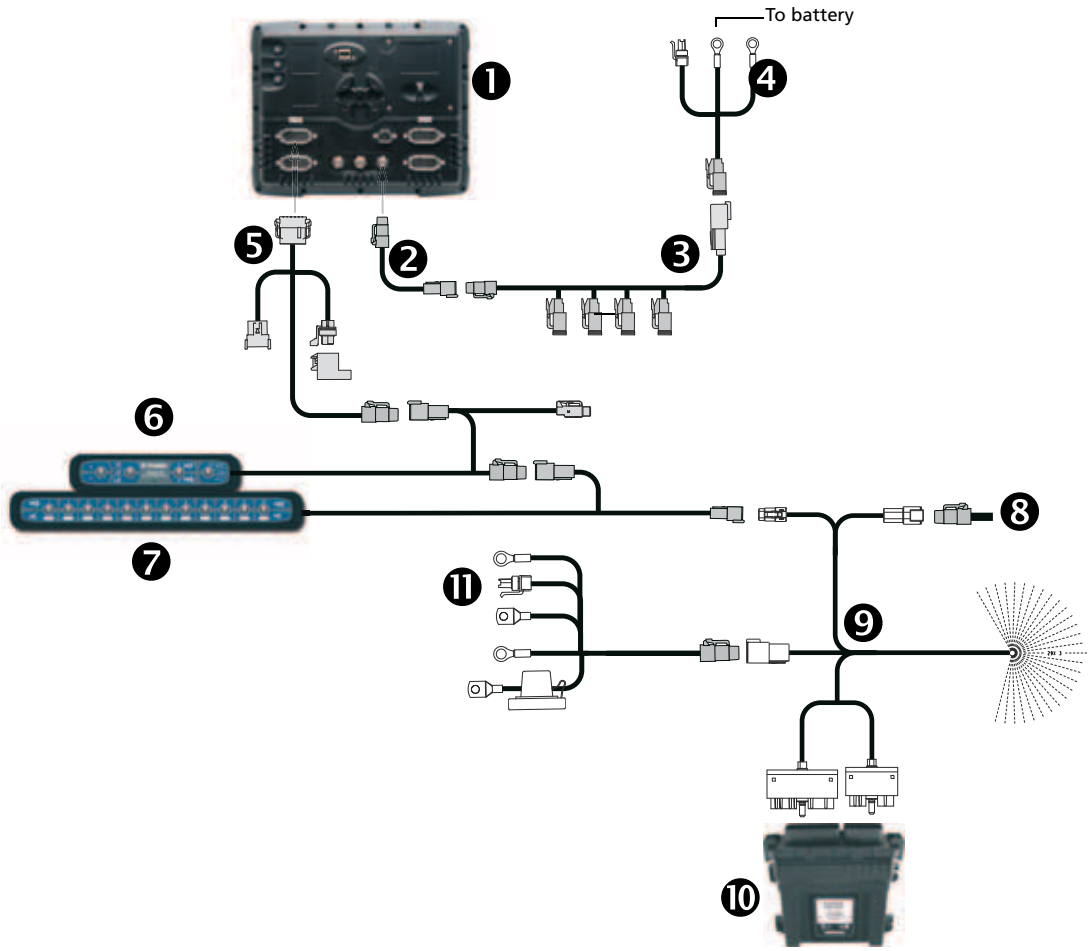
The system cabling provides power to, and connects, the system hardware. This chapter provides cable diagrams for the various Field-IQ crop input control systems.

Field-IQ system: Section control only (P/N 99104-09)



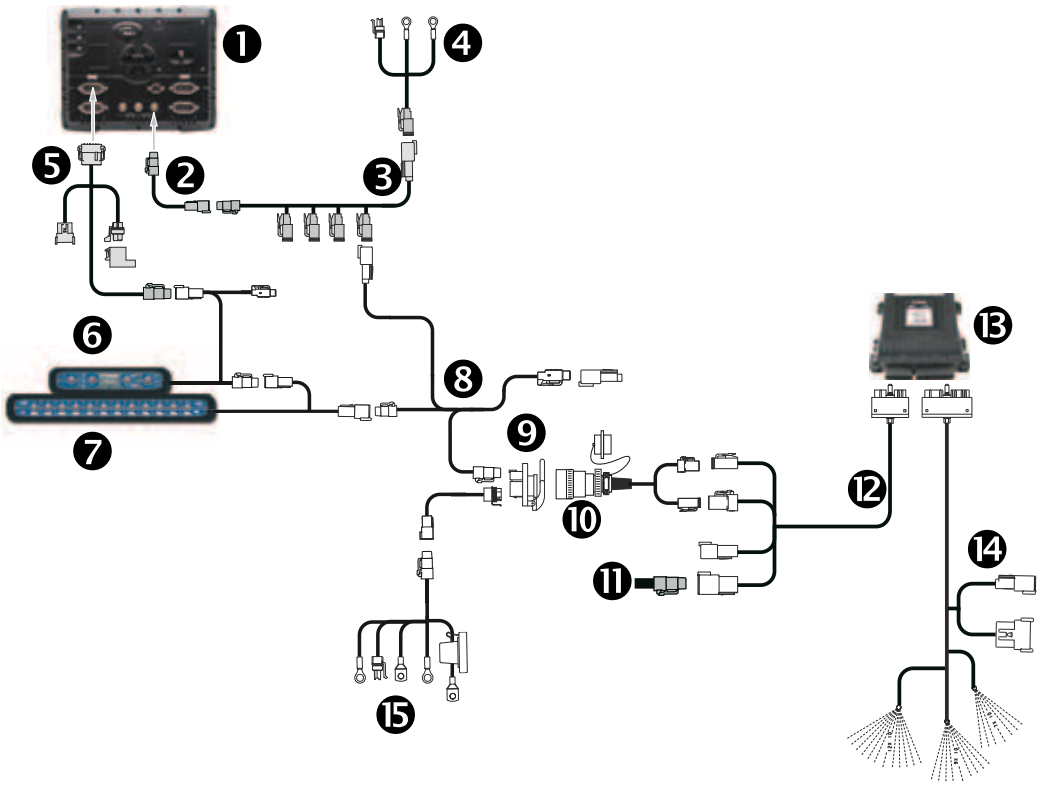
	Description	Trimble P/N
❶	FmX integrated display	93100-xx
❷	FmX power cable	66694
❸	Power bus	67259
❹	Basic power cable	67258
❺	Display to Field-IQ cable	75834
❻	Field-IQ master switch box	75050-01
❼	Optional: 12-section switch box	75060-01
❽	CAN terminator	59783
❾	Cable Assembly, Field-IQ rscm in-cab breakout	84026
❿	Rate and Section Control module	75774-10
⓫	Power-to-cab cable	76941

Field-IQ system: Rate and section control, 12 sections (P/N 99104-05)



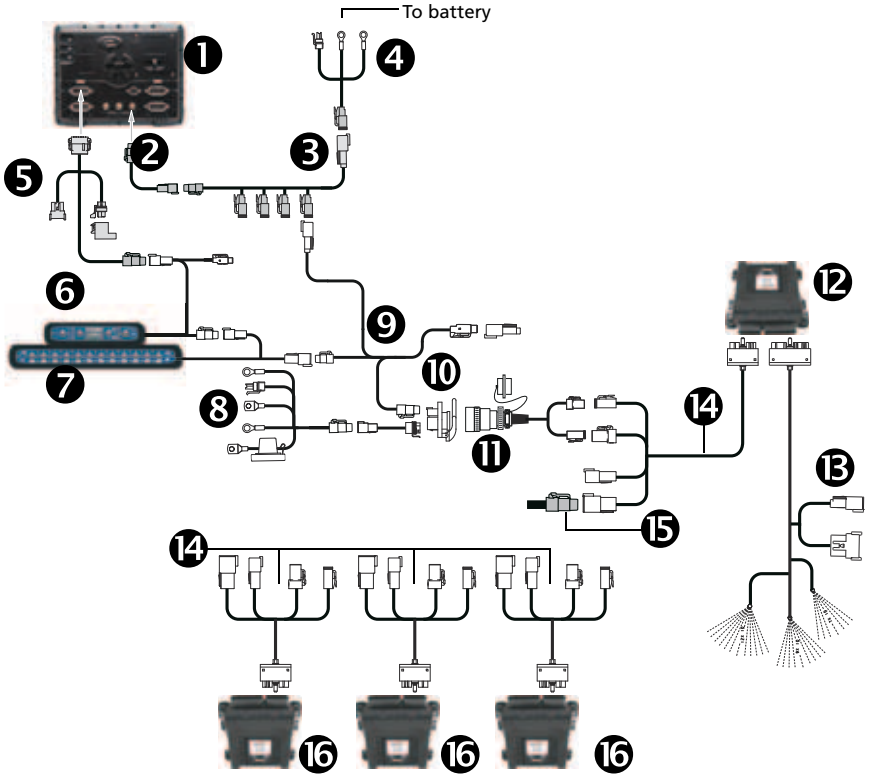
	Description	Trimble P/N
❶	FmX integrated display	93100-xx
❷	FmX power cable	66694
❸	Power bus	67259
❹	Basic power cable	67258
❺	Display to Field-IQ cable	75834
❻	Field-IQ master switch box	75050-01
❼	Optional: 12-section switch box	75060-01
❽	CAN terminator	59783
❾	Cable Assembly, Field-IQ system rscm in-cab breakout	84026
❿	Rate and Section Control module	75774-00
⓫	Power-to-cab cable	79514

Field-IQ system: Generic trailed sprayers rate and section control (P/N 99104-06)



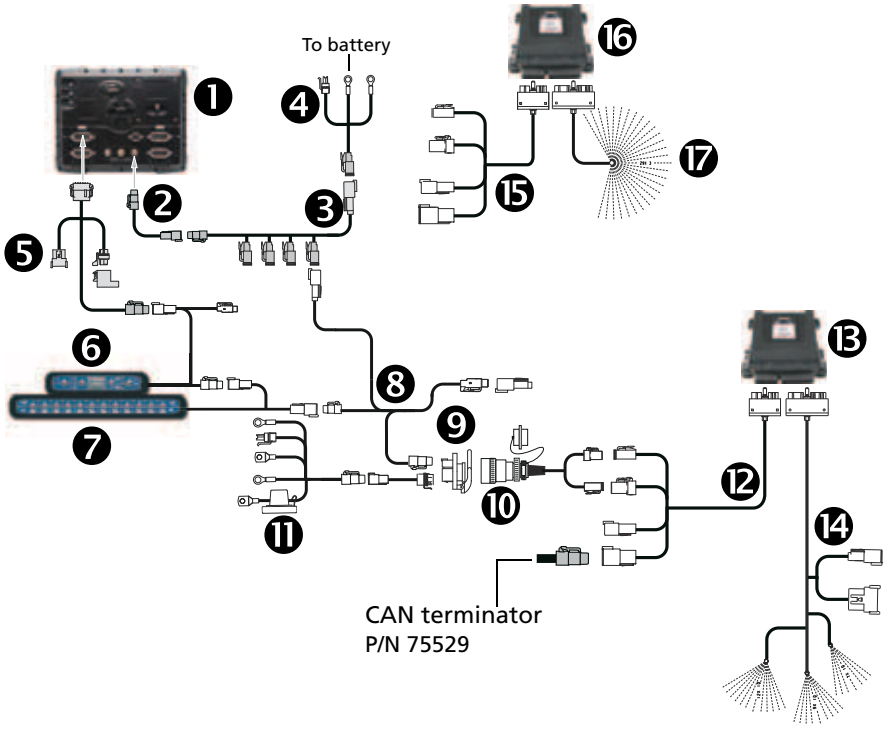
	Description	Trimble P/N
❶	FmX integrated display	93100-xx
❷	FmX power cable	66694
❸	Power bus	67259
❹	Basic power cable	67258
❺	Cable assembly, display to Field-IQ	75834
❻	Field-IQ master switch box	75050-01
❼	Optional: 12-section switch box	75060-01
❽	Cable assembly, CAN - cab to hitch, Field-IQ	77368
❾	Optional: Powell quick disconnect, tractor side	77413
❿	Optional: Implement harness (Powell adapter), implement side	77611-01
⓫	CAN terminator	75529
⓬	Cable assembly, rate/section module tee	75526
⓭	Rate and section control module	75774-00
⓮	Generic - for trailed sprayers rate and section	84020
⓯	Power-to-cab cable	76941

Field-IQ system: Generic 12-plus kit (P/N 99104-08)



	Description	Trimble P/N
❶	FmX integrated display	93100-xx
❷	FmX power cable	66694
❸	Power bus	67259
❹	Basic power cable	67258
❺	Display to Field-IQ cable	75834
❻	Field-IQ master switch box	75050-01
❼	Optional: 12-section switch box	75060-01
❽	Power-to-cab cable	76941
❾	Cable assembly, CAN - cab to hitch, Field-IQ	77368
❿	Optional: Powell quick disconnect, tractor side	77413
⓫	Optional: Implement harness (Powell adapter), implement side	75774-00
⓬	Rate and Section Control module	75774-00
⓭	Generic - for trailed sprayers Rate and Section	84020
⓮	Cable assembly rate/section module tee	75526
⓯	CAN terminator	75529
⓰	Section control module	75774-10

Field-IQ system: Generic SIM kit (P/N 99104-07)



	Description	Trimble P/N
❶	FmX integrated display	93100-xx
❷	FmX power cable	66694
❸	Power bus	67259
❹	Basic power cable	67258
❺	Display to Field-IQ cable	75834
❻	Field-IQ master switch box	75050-01
❼	Optional: 12-section switch box	75060-01
❽	Cab to hitch CAN cable	77368
❾	Optional: Powell quick disconnect, tractor side	77413
❿	Implement harness (Powell adapter), implement side	77611-01
⓫	Power-to-cab cable	76941
⓬	Cable assembly rate/section module tee	75526
⓭	Rate and Section Control module	75774-00
⓮	Generic - for trailed sprayers Rate and Section	84020
⓯	Cable assemby, Field-IQ system generic switch input module	84025
⓰	Section input module	76774-00
⓱	Cable assembly	84023

CHAPTER

3

Connecting the Generic Field-IQ Solutions

In this chapter:

This chapter describes how to connect and install the Field-IQ modules and generic cables.

Mounting the module

CAUTION – Damage to important components can be caused by the drill and/or screws. When mounting the rate and section control module, first verify that there is nothing located behind the area where module is to be installed.

CAUTION – To prevent rain damage, ***do not*** mount the rate and section control module with the connectors pointing upwards.

Step 1

Locate the rate and section control module mounting bracket and hardware.

Step 2

Use the supplied hardware to mount the rate and section control module to the bracket.

Note – *Torque the mounting screws to a maximum of 10 – 12 in/lbs (1.13 – 1.36 Nm).*

Step 3

Use one of the bracket's mounting tabs to mount the rate and section control module in a secure location in the cab.

Section control only

Use the following steps to connect the section control only module to the Field-IQ system generic section control cables.

Step 1

Locate the section control module and the adapter cable.

Step 2

Use a ¼" socket or nut driver to connect the 18-pin connector on the adapter cable to the module.

Note – *Torque the bolt to a maximum of 15 – 20 in-lbs (1.70 – 2.26 Nm).*

Step 3

Use a ¼" socket or nut driver to connect the 30-pin connector on the adapter cable to the module.

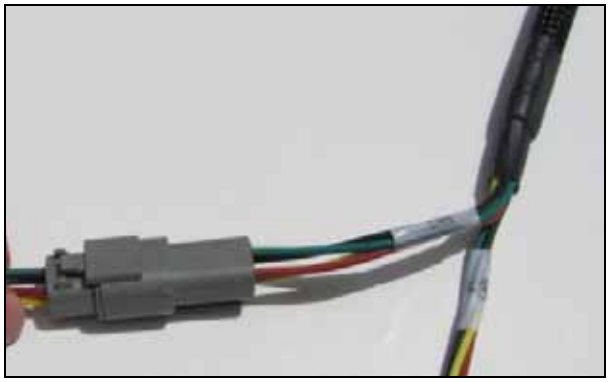
Note – *Torque the bolt to a maximum of 15 – 20 in-lbs (1.70 – 2.26 Nm).*

Step 4

Connect the CAN terminator to P5.

Step 5

Connect R1 to the 12 section switchbox or Field-IQ system master switchbox.



Step 6

Connect the individual section control wires to the correct signal connection on the section valve. Each wire is labeled with the section number. If the labels are missing, see Table 3.1.

Note – *High current power and ground is also terminated in this group. Some section valves may require power and ground in addition to the signal.*

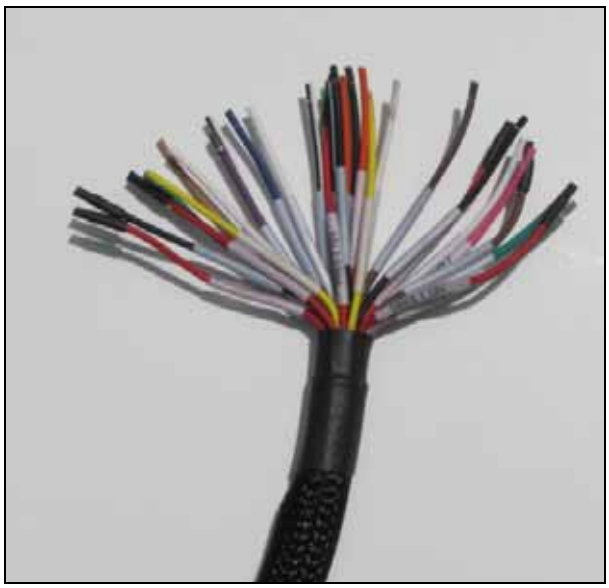


Table 3.1 Connecting the section control wires

Function	Wire color	P2 position
Section 1	Brown	K1
Section 2	Pink	J1
Section 3	Orange	H1
Section 4	Yellow	G1
Section 5	Green	F1
Section 6	Black	K2
Section 7	Blue	J2
Section 8	Violet	H2
Section 9	Grey	G2
Section 10	White	F2
Section 11	Tan	K3
Section 12	Orange	J3
High Current Power	Red	H3
High Current Ground	Black	G3

Step 7

Connect the power and ground to battery power.

Rate and section control: In-cab solution

Use the following steps to connect the rate and section control module and generic Field-IQ system cables, for an in-cab installation.

Step 1

Locate the rate and section control module and the generic section control cable.

Step 2

Use a ¼" socket or nut driver to connect the 18-pin connector on the adapter cable to the rate and section control module.

Note – *Torque the bolt to a maximum of 15 – 20 in-lbs (1.70 – 2.26 Nm).*

Step 3

Use a ¼" socket or nut driver to connect the 30-pin connector on the adapter cable to the rate and section control module.

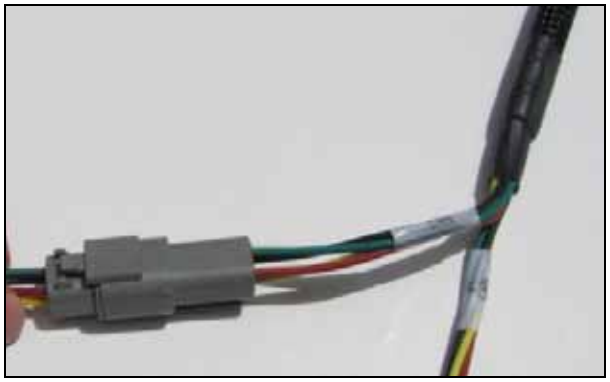
Note – *Torque the bolt to a maximum of 15 – 20 in-lbs (1.70 – 2.26 Nm).*

Step 4

Connect the CAN terminator to P5.

Step 5

Connect R1 to the 12 section switchbox or Field-IQ system master switchbox.



Step 6

Connect the individual wires to the machine specific connectors for each control component. Each wire is labeled with the section number. If the labels are missing, see Table 3.2, Table 3.3, Table 3.4 and Table 3.5.

Note – *High current power and ground is also terminated in this group. Some section valves may require power and ground in addition to the signal.*

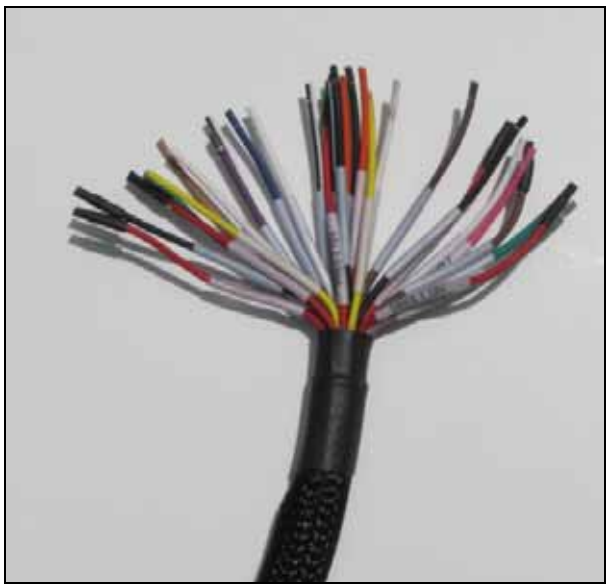


Table 3.2 Connecting the machine specific connectors - section control

	Section control	
Function	**Wire color**	**P2 position**
Section 1	Brown	K1
Section 2	Pink	J1
Section 3	Orange	H1
Section 4	Yellow	G1
Section 5	Green	F1
Section 6	Black	K2
Section 7	Blue	J2
Section 8	Violet	H2
Section 9	Grey	G2
Section 10	White	F2
Section 11	Tan	K3
Section 12	Orange	J3
High Current Power	Red	H3
High Current Ground	Black	G3

Table 3.3 Connecting the machine specific connectors - rate control

	Rate control	
Function	**Wire color**	**P2 position**
Valve increase	Yellow	E1
Valve decrease	Green	E2
Flow Sensor 5V+	Red	C1

Rate control (continued)		
Function	**Wire color**	**P2 position**
Flow Sensor Signal	White	C2
Flow Sensor Ground	White/Black	C3

Table 3.4 Connecting the machine specific connectors - pressure sensor input

Pressure Sensor Input		
Pressure 1 12V+	Red	A1
Pressure 1 Signal	White	A2
Pressure 1 Ground	Black	A3
Pressure 2 12V+	Red	B1
Pressure 2 Signal	White	B2
Pressure 2 Ground	Black	B3

Table 3.5 Connecting the machine specific connectors - accessories

Accessory		
Pump arming	Brown	F3
Aux. master in	White/Black	D3
Implement switch 5V+	Red/White	D1
Implement switch in	Black/White	D2

Step 7

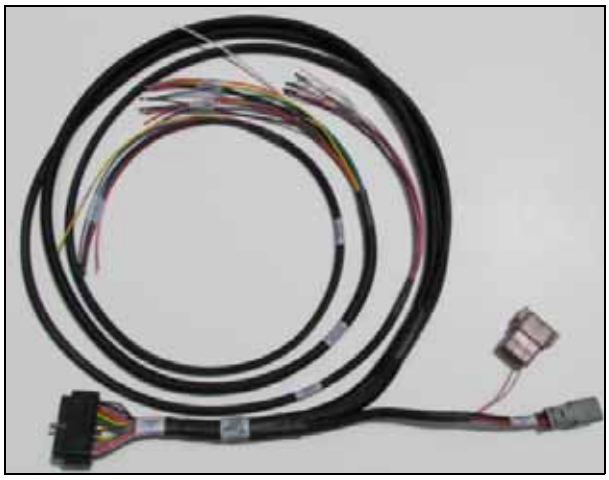
Connect the power and ground to battery power.

Rate and section control: Tow-behind solution

Use the following steps to connect the rate and section control module and generic Field-IQ system cables for a tow-behind or remote installation.

Step 1

Locate the rate and section control module and the generic section control cable.



Step 2

Connect the 18-pin cinch connector on the CAN backbone adapter cable to the module.

Use a ¼" socket or nut driver to tighten the connector.

WARNING – Do not exceed 15-20 in/lbs torque.

Step 3

Connect the 30-pin cinch connector on the system adapter cable to the module.

Use a ¼" socket or nut driver to tighten the connector.

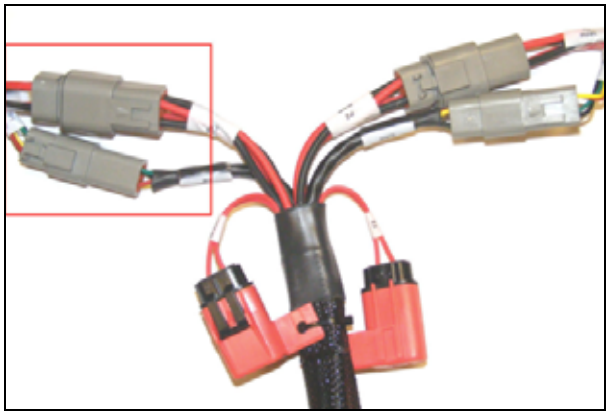
WARNING – Do not exceed 15-20 in/lbs torque.

Step 4

Connect the 4-pin DT and 4-pin DTP connectors to the CAN extension harness.

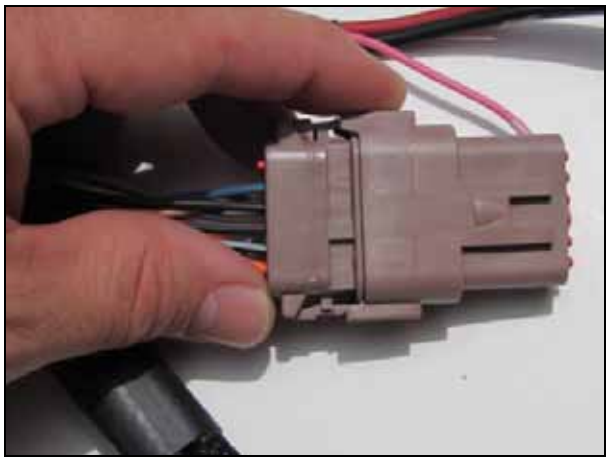
Repeat these steps for each module required for the implement.

Note – *If the module is the last module to be added to the CAN system the CAN terminator cable must be installed.*



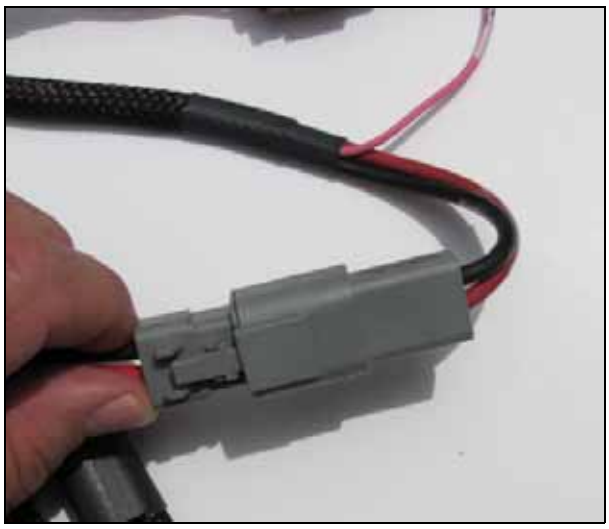
Step 5

Connect R2 of the 84020 to P4 of the CAN adapter tee.



Step 6

Connect R1 of the 84020 to P5 of the CAN adapter tee.



Step 7

Connect the individual wires to the signal input for each section control valve. If the wire labels are missing, see Table 3.6.

Note – *High current power and ground is also terminated in this group. Some section valves may require power and ground in addition to the signal.*

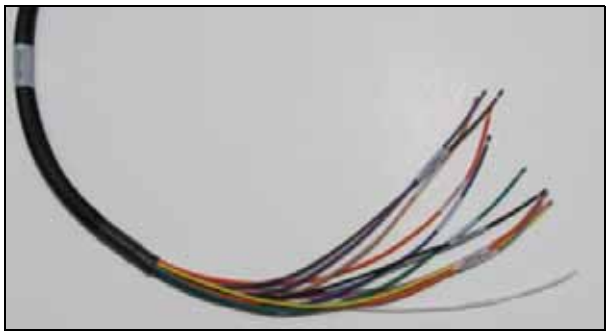


Table 3.6 Connecting the section control wires

Function	Wire color	P2 position
Section 1	Brown	K1
Section 2	Pink	J1
Section 3	Orange	H1
Section 4	Yellow	G1
Section 5	Green	F1
Section 6	Black	K2
Section 7	Blue	J2
Section 8	Violet	H2
Section 9	Grey	G2
Section 10	White	F2
Section 11	Tan	K3
Section 12	Orange	J3

Step 8

Connect the individual wires in the control/master section of the cable to the flow control valve, implement switch and master/dump valve. If the wire labels are missing, see Table 3.7.

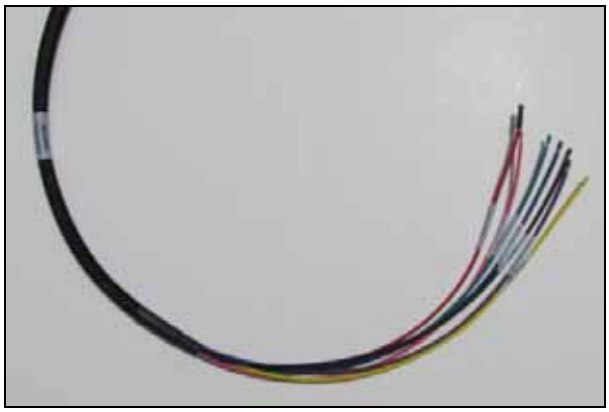


Table 3.7 Connecting the control/master wires

	Rate control	
Function	**Wire color**	**P2 position**
Valve increase	Yellow	E1
Valve decrease	Green	E2
12V out	Red	H3
Ground	Black	G3
Implement Switch 5V+	BU	D1
Implement Switch in	Violet	D2
Master/dump	Pink	

Step 9

Connect the individual wires in the flow/pressure section of the cable to the flow meter, and up to two pressure sectors. If the wire labels are missing, see Table 3.8.

Table 3.8 Connecting the flow/section wires

Pressure Sensor Input		
Pressure 1 12V+	Red/White	A1
Pressure 1 Signal	White	A2
Pressure 1 Ground	Black/White	A3
Pressure 2 12V+	Red/White	B1
Pressure 2 Signal	White	B2
Pressure 2 Ground	Black/White	B3
Flow Sensor 5V+	Red	C1
Flow Sensor Signal	White	C2
Flow Sensor Ground	Red/White	C3

CAN terminator installation

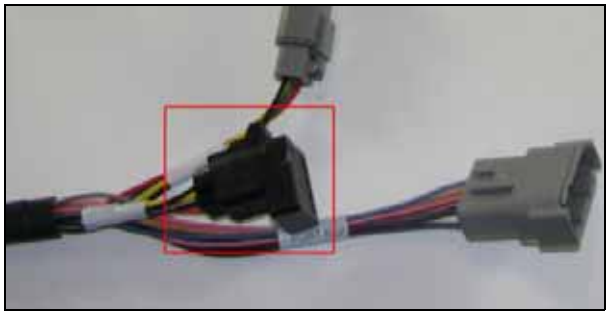
The Field-IQ system requires two CAN terminators. The first terminator is located in the vehicle cab. Use the following steps to install the second CAN terminator that is located on the implement.

Step 1

Locate the CAN terminator, cable and protective 4-pin DTP cap.

Step 2

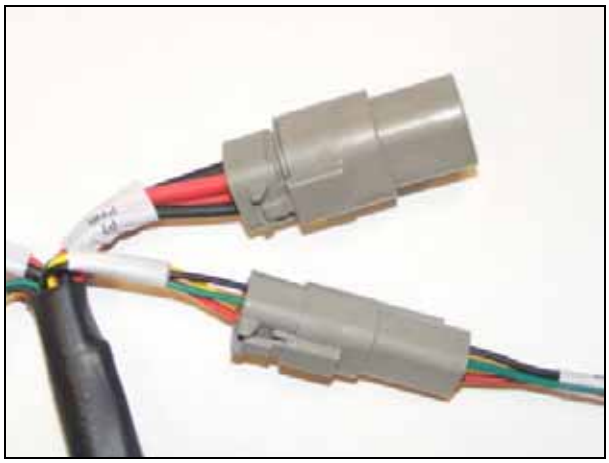
Verify the CAN terminator is connected on the CAN adapter cable.



Step 3

Connect the 4-pin DT receptacle on the CAN adapter cable to the 4-pin DT plug on the CAN backbone cable.

Connect the 4-pin DTP protective cap to the 4-pin DTP plug on the CAN/power backbone cable.



Step 4

Secure the cable to prevent damage to the cable and system.

Installing the Powell connector

The Powell connector provides a robust mounting and connection option for the implement. Use the steps below to add the Powell connector option to the cab kit.

CAUTION – Use only the connectors supplied with this option. The connectors used for the Powell connector option are different than the hitch connectors on some vehicles.

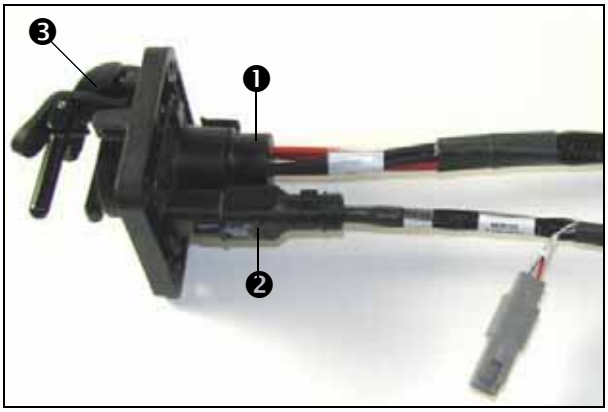
Step 1

Install the Powell connector on the vehicle in a secure location that allows for easy access to the connector.

Step 2

Connect the 4-pin DT plug (❶ shown in the picture) on the CAN cab harness to the 4-pin DT receptacle on the Powell connector (❸ shown in the picture).

Connect the IBRC plug connector (❷ shown in the picture) to the receptacle on the Powell connector (❸ shown in the picture).



Step 3

Connect the 4-pin DTP plug on the power harness to the 4-pin DTP receptacle on the Powell adapter cable.

Step 4

Connect the implement Powell adapter to the vehicle.

Step 5

Connect the 4-Pin DT and 4-Pin DTP connectors to the implement CAN/Power harness. The implement harness will then connect the vehicle to the Field-IQ system control modules that are mounted on the implement.

Signal input module

The signal input module (SIM) senses the switch input. The cables are designed for up to 16 switch inputs and an implement switch. The following steps show how to connect the SIM and cables.

Step 1

Locate the Field-IQ system SIM tee cable (P/N 84025),

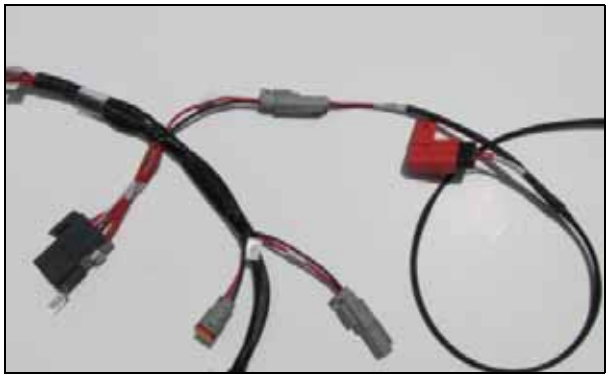
Step 2

Use a ¼" socket or nut driver to tighten the 18 pin cinch connector to the SIM.

Note – *Torque the nut to a maximum of 15-20 in. lbs. (1.70 - 2.26 Nm).*

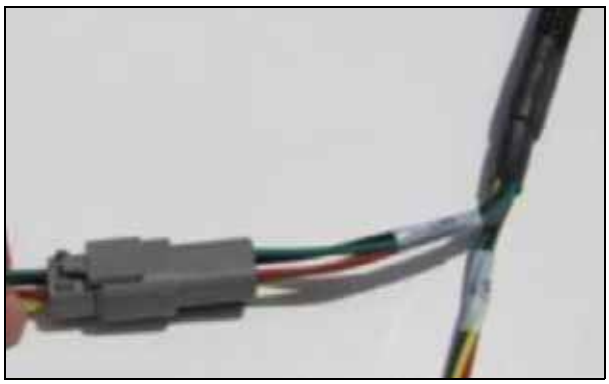
Step 3

Connect R2 Power to the power bus cable (P/N 67259).



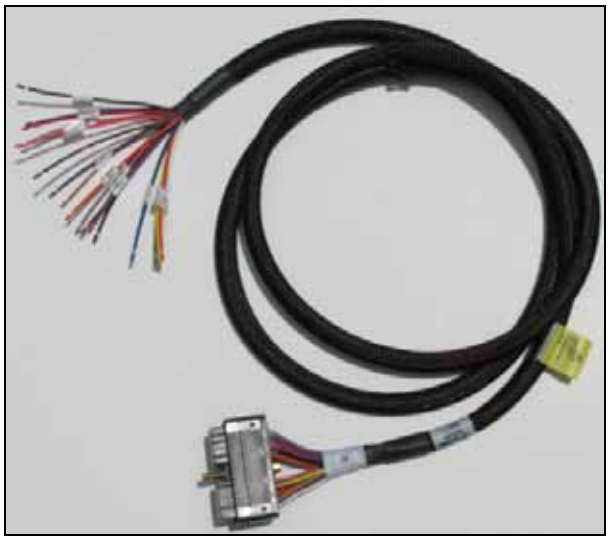
Step 4

Connect the 4-pin CAN connectors to the Field-IQ system master switch box and the 4-pin CAN connector on the cable to the rate and section or section control only modules.



Step 5

Locate the Field-IQ system switch interface cable (P/N 84023).



Step 6

Use a ¼" socket or nut driver to tighten the 30-pin cinch connector to the SIM.

Note – *Torque the nut to a maximum of 15-20 in. lbs. (1.70 - 2.26 Nm).*

Step 7

Connect the individual switch sense wires to the output side of the switch. To signal the Field-IQ system, the SIM must be able to sense the change in switch position.

If the wire labels are missing, see Table 3.9.

Table 3.9 Connecting the switch sense wires

	Switch input	
Function	**Wire color**	**P1 position**
Section 1	Brown	K1
Section 2	Pink	J1
Section 3	Orange	H1
Section 4	Yellow	G1
Section 5	Green	F1
Section 6		
Section 7		
Section 8		
Section 9		
Section 10		
Section 11		
Section 12		
Section 13		
Section 14		
Section 15		
Master SW In		
Implement SW Out		
Implement SW In		

12 plus section control

Use the following steps to add section control only modules to an existing in-cab or tow-behind system, for up to 48 sections.

Step 1

Locate the section control module and the CAN adapter tee (P/N 75526).

Use a ¼" socket or nut driver to tighten the 18 pin cinch connector to the section control module.

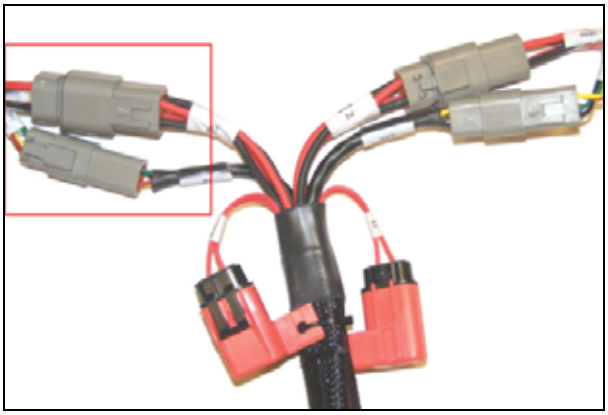
Note – *Torque the nut to a maximum of 15-20 in. lbs. (1.70 - 2.26 Nm).*

Step 2

Connect the 4-pin DT and 4-pin DTP connectors to the CAN extension harness.

Repeat these steps for each module required for the implement.

Note – *If the module is the last module to be added to the CAN system the CAN terminator cable must be installed.*



Step 3

Locate the section only cable (P/N 84018).

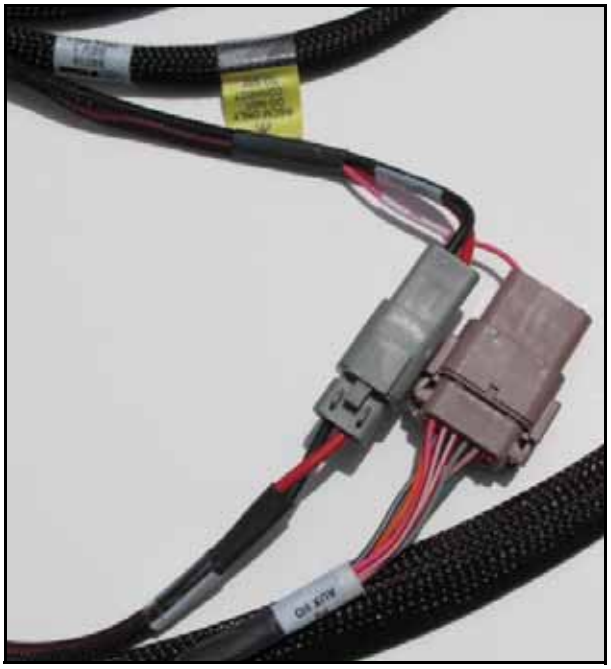
Step 4

Use a ¼" socket or nut driver to tighten the 30-pin cinch connector to the section control module.

Note – *Note: Torque the nut to a maximum of 15-20 in. lbs. (1.70 - 2.26 Nm).*

Step 5

Connect the R1 and R2 on the P/N 84018 cable to the P4 and P5 on the CAN adapter tee cable.



Step 6

Connect the individual section control wires to the correct signal connection on the section valve. Each wire is labeled with the section number.

If the wire labels are missing, see Table 3.10.

Note – *High current power and ground is also terminated in this group. Some section valves may require power and ground in addition to the signal*

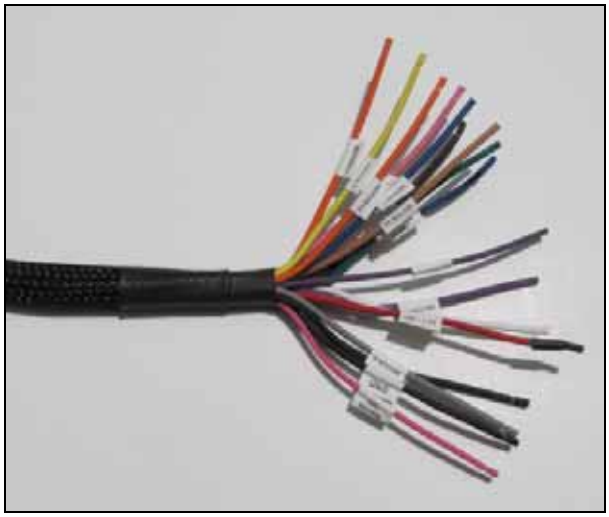


Table 3.10 Connecting the section control wires

Function	Wire color	P2 position
Section 1	Brown	K1
Section 2	Pink	J1
Section 3	Orange	H1
Section 4	Yellow	G1
Section 5	Green	F1
Section 6	Black	K2
Section 7	Blue	J2
Section 8	Violet	H2
Section 9	Grey	G2
Section 10	White	F2
Section 11	Tan	K3
Section 12	Orange	J3
High current power	Red	H3
High current ground	Black	G3
Master out	Pink	R2-1
Implement switch in	Violet	D2
Implement switch out	Blue	D1

Additional steps for in-cab solutions

Step 1

Connect the small 4-pin CAN connector on the P/N 77368 cable to the 4-pin connector coming from the Field-IQ system cab kit or rate and section control module.

Step 2

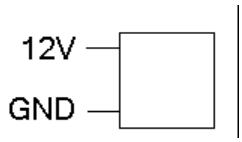
Connect the large 4-pin CAN connector on the P/N 77368 cable to the 4-pin CAN connection on the CAN tee cable (P/N 75526).

Step 3

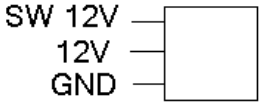
Connect the power cable P/N 76941 to the battery, and the 4-pin Deutsch connector to the power connector on the CAN tee cable (P/N 75526).

Connecting to an on/off valve

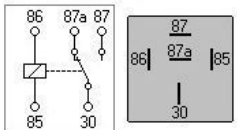
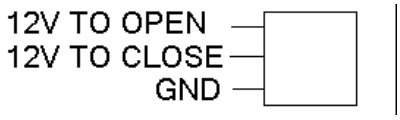
Connect to a two-pin standard on/off valve

Cable pinouts	Valve pinouts
Section x to 12V HC Ground to GND	

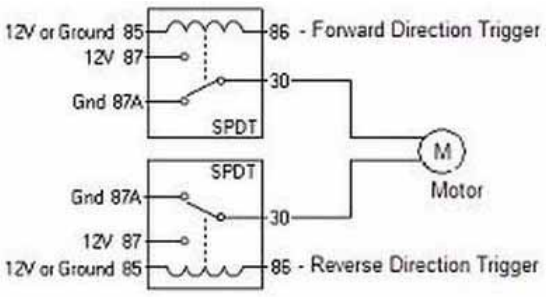
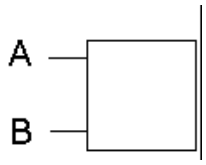
Connect to a three-pin standard on/off valve

Cable pinouts	Valve pinouts
Section x SW 12V HC power to 12V HC ground to GND	

Connect to a three-pin motorized on/off valve

Cable pinouts	Change over relay	Valve pinouts
Section x 85 HC power to 30 HC ground to86		 87a and 87 to valve; one is for open, one is for close

Connect to a three-pin reverse polarity on/off valve

Cable pinouts	Two change over relays	Valve pinouts
First relay: Section x to 85 HC Power to 87 HC Ground to 87a;86 **Second relay:** Section x to 85 HC Power to 87a HC Ground to 87; 86		 30 to A and B

Reverse polarity explained

	A	B
OFF	12V	GND
ON	GND	12V

For more information

For more information and machine specific instructions, see Cable Diagrams, page 11.

CHAPTER

4

Display Installation

In this chapter:

This chapter describes how to install the display.

Note – *This chapter is not required if the display was installed earlier.*

Preparing the FmX integrated display

WARNING – To avoid potentially serious personal injury or illness, and to prevent damage to equipment, make sure that you read and understand the Safety Information chapter.

Step 1

Locate the FmX integrated display, the RAM mount, and the RAM mount clamp.

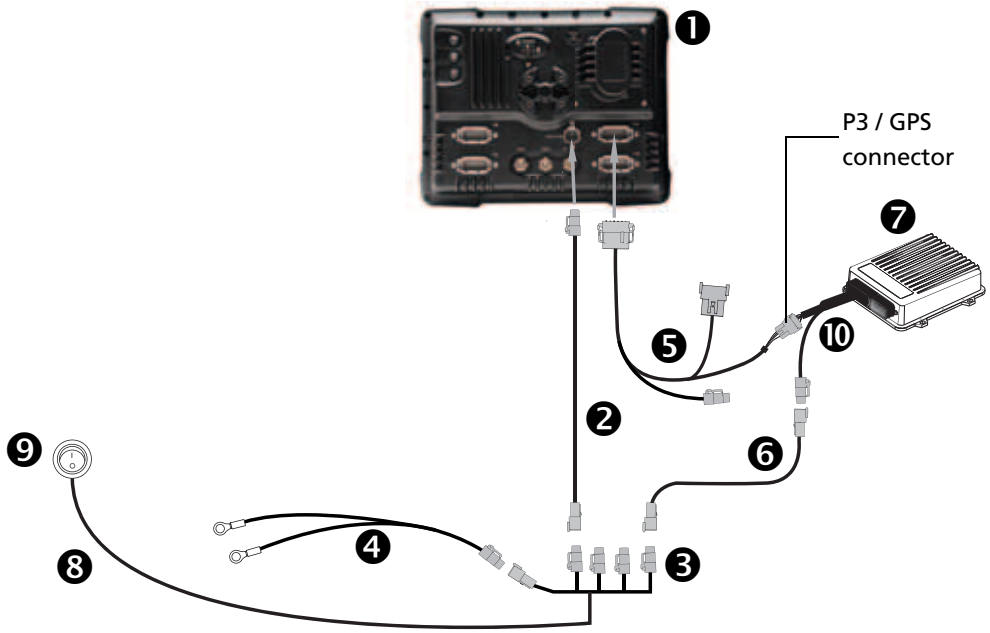
Step 2

Use the provided metric hardware to attach the RAM mount to the rear of the display.

Installing the display power harness

WARNING – To avoid potentially serious personal injury or illness, and to prevent damage to equipment, make sure that you read and understand the Safety Information chapter.

FmX integrated display power components



Item	Description	Trimble part number
❶	FmX integrated display	93100-xx
❷	FmX power cable	66694
❸	FmX power cable with relay and switch (power bus)	67259
❹	Basic power cable	67258
❺	FmX to NavController II cable with port replicator	65522
❻	2 pin DTM to 2 pin DT power adapter	67095
❼	NavController II	55563-00
❽	External switch cable included with kit	Part of 67259
❾	External switch included with kit	Part of 67259
❿	Main NavController II cable	54601

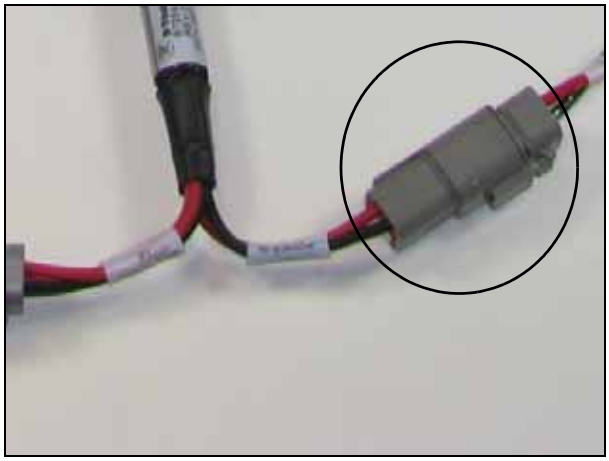
Power bus installation

Step 1

Connect the basic power cable to the vehicle battery and then route the cable into the cab.

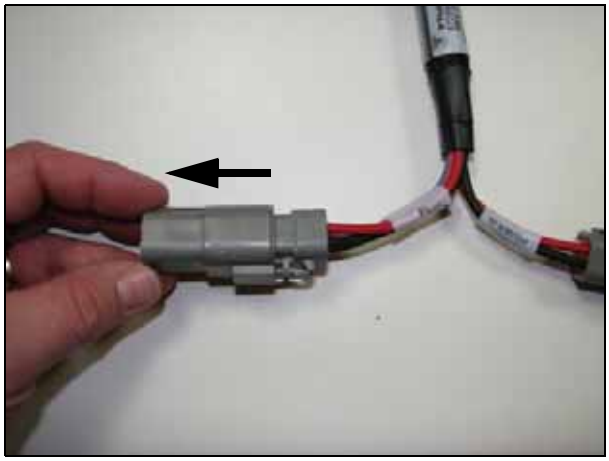
Step 2

Locate and connect the 4-pin Deutsch DTP receptacle on the power bus to the 4-pin Deutsch DTP plug on the basic power cable.



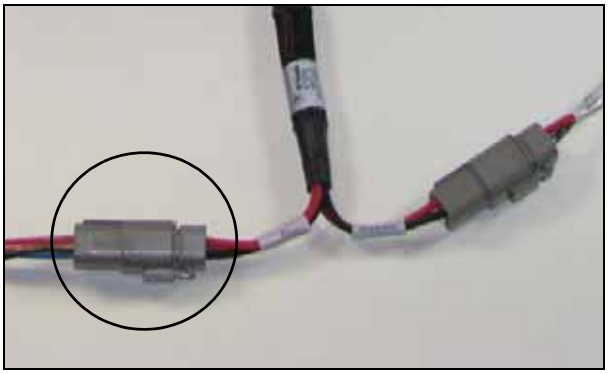
Step 3

Remove the protective receptacle from the power bus.



Step 4

Locate and connect the 4-pin Deutsch DTP receptacle on the FmX integrated display power adapter to the 4-pin Deutsch DTP plug on the power bus.



Step 5

Route the FmX integrated display power adapter to the display mounting location and then connect it to the display.

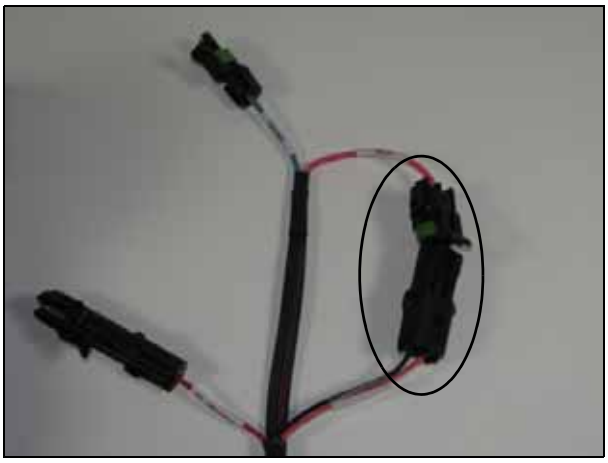
Configuring the power bus options for the display

When you use the power bus cable, use one of the following configuration methods to turn on the system:

- the FmX integrated display power button
- an external switch

Using the FmX integrated display power button to turn on the system

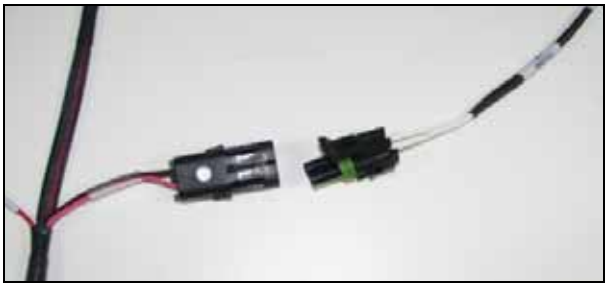
Connect the 2 pin connectors labeled R2 and P2 on the power bus.



Using the external switch to turn on the FmX integrated display

Step 1

Connect the R7 cable switch (included with the power bus) to the P2 connector on the power bus.



Step 2

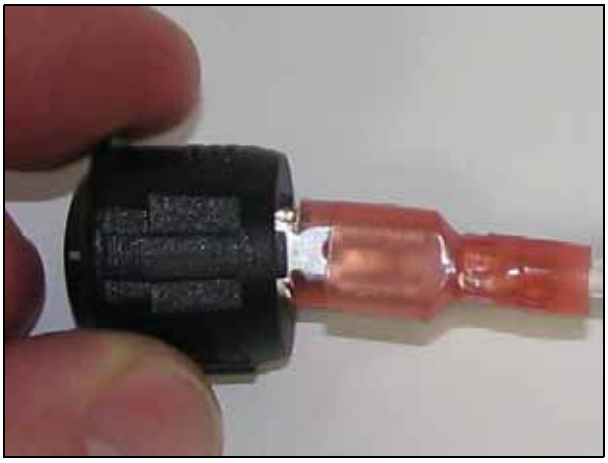
Route the R7 cable to a switch location.

Note – *To install the switch provided, drill a ¾" hole.*

Step 3

Connect the R7 cable to the switch pins.

Note – *Polarity is not important.*



CHAPTER

5

Switch Box Installation

In this chapter:

This chapter describes how to install the cab components of the Field-IQ application control system.

Installing the Field-IQ system switch boxes

WARNING – To avoid potentially serious personal injury or illness, and to prevent damage to equipment, make sure that you read and understand the Safety Information chapter.

The Field-IQ system requires that a 4-switch master switch box is connected and installed. The master switch box is used to control the system.

The optional 12 section switch box is not required. This switch box allows for manual control of individual sections.

Installing the master switch box

Step 1

Locate the master switch box and mounting hardware.

Step 2

Use a Phillips screwdriver to secure the two mounting brackets to the master switch box with the supplied screws.

Step 3

Use a Phillips screwdriver to secure the master switch box to the bottom of the display with the supplied screws.

If the display does not have the mounting option on the bottom of the display, use the flat mounting brackets to secure the switch boxes to the top of the display.

Note – *The image shows both the master switch box and the optional 12-section switch box.*

Installing the optional 12-section switchbox

Step 1

Locate the 12-section switch box and installation hardware.

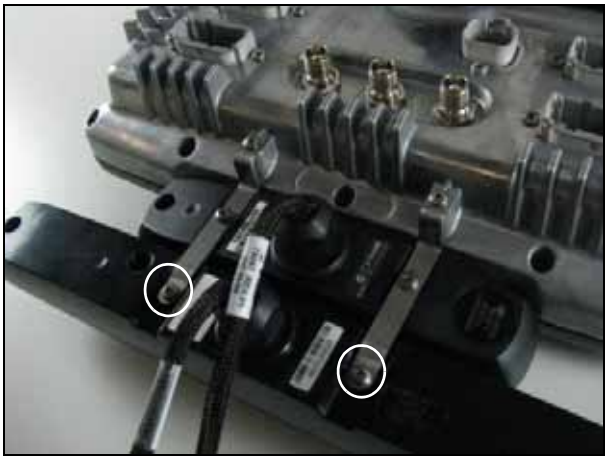
Step 2

Use a Phillips screwdriver to secure the mounting hardware to the switch box with the supplied screws.

Step 3

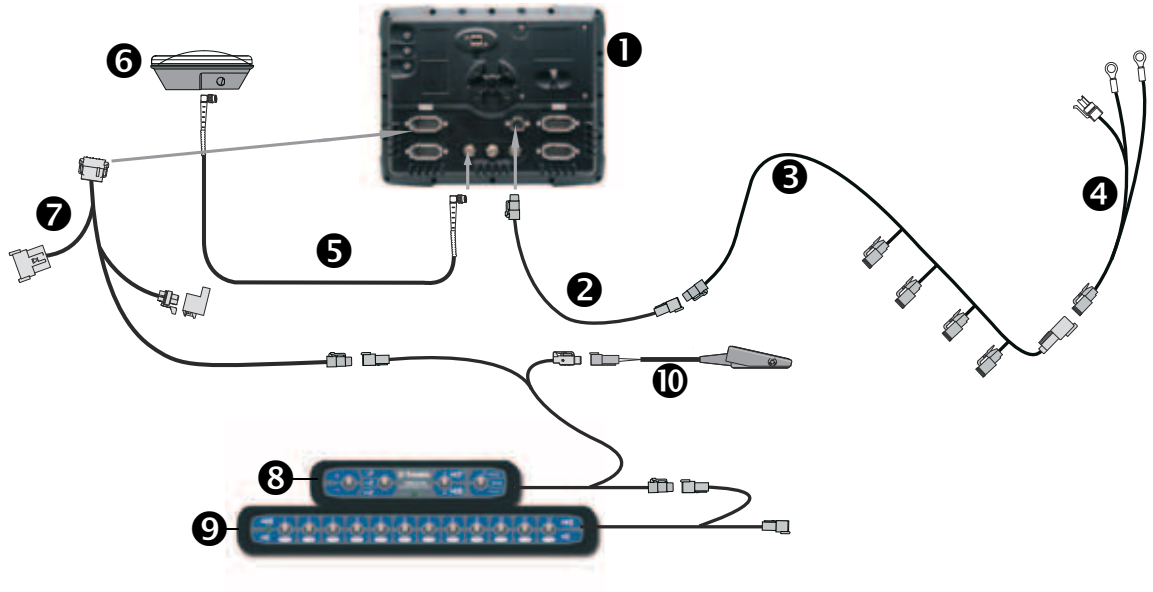
Use a Phillips screwdriver to secure the 12-section switch box to the master switch box.

You must remove the screws from the master switch box to mount the 12-section switch box.



Field-IQ system cab kit installation

The procedure describes how to install the Field-IQ system cab kit for the FmX integrated display.



Item	Description	Trimble part number
❶	FmX integrated display	93100-xx
❷	FmX power cable	66694
❸	Power bus	67259
❹	Basic power cable	67258
❺	8 m GPS TNC/TNC RT angle cable	50449
❻	Ag25 GNSS antenna	68040-00S
❼	Cable assembly, display to Field-IQ	75834
❽	Field-IQ system master switch box	75050-01
❾	Optional: 12-section switch box	75060-01
❿	Optional: Remote foot switch	78150

Note – *This procedure provides general guidance for connecting the cables. Cable routing depends on the vehicle and individual preference and is not described.*

CAUTION – When routing the Field-IQ system cables be sure to avoid areas of the vehicle that may cause damage to the cable and possibly the Field-IQ system.

To connect the FmX integrated display and switch boxes to the Field-IQ system components, do the following:

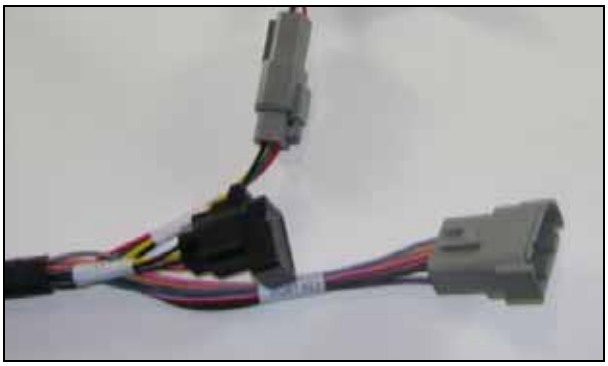
Step 1

Connect the 12-pin DTM plug on the display harness to the rear of the display.

Ensure that the harness is plugged into either the A or B port.

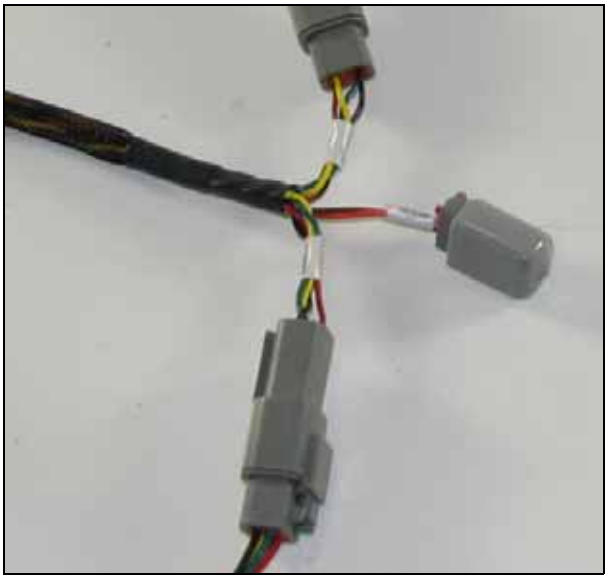
Step 2

Connect the CAN terminator to the R2 connector on the display cable.



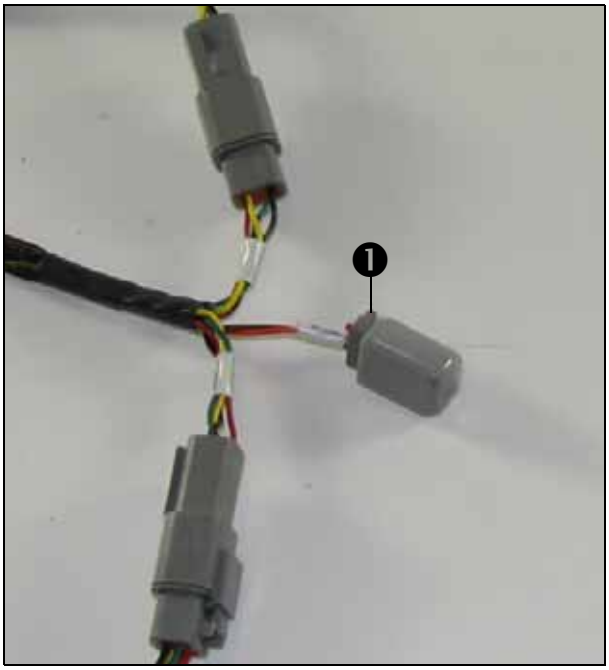
Step 3

Locate the 4-pin CAN plug connection on the display cable and then insert the connector into the 4-pin receptacle on the master switch box harness.



Optional step

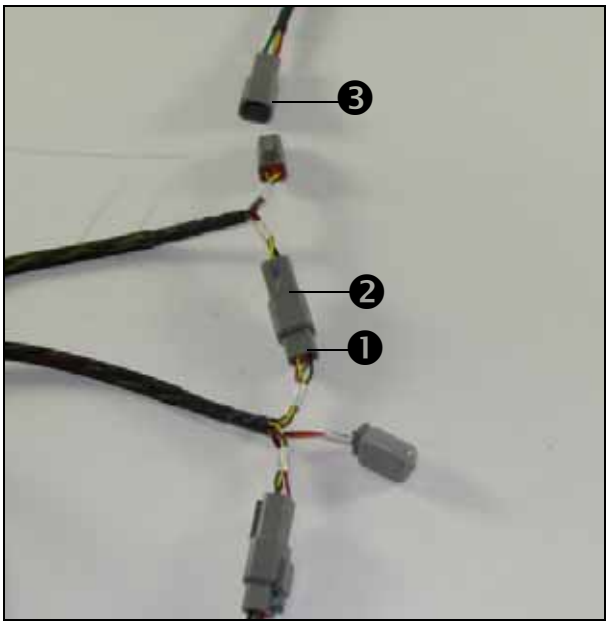
Connect the optional remote foot switch to the P4 connector ❶ on the master switch box harness. You can use the foot switch to remotely control the master on/off switch.



Step 4

If the 12-section switchbox is used, you must connect the P3 4-pin plug ❶ on the master switch box harness connector to the 4-pin receptacle ❷ on the 12 section switch box harness.

Note – *If the 12-section switch box is not required, connect the 4-pin plug to the R1 4-pin receptacle ❸ located on the Rate and Section Control module adapter harness.*



CHAPTER

6

Final Machine Check

In this chapter:

This chapter describes how to perform a final check of the vehicle.

Performing the final machine check

WARNING – To avoid potentially serious personal injury or illness, and to prevent damage to equipment, make sure that you read and understand the Safety Information chapter.

Step 1

Connect the battery.

Step 2

Run system to verify operation. Use the steps in the display User Guide to calibrate the system.