



INSTALLATION INSTRUCTIONS

92721987

UNIVERSAL TELEMATICS KIT, PCM4

Software Version 06.xxx

APPROXIMATE INSTALLATION TIME: 3.0 hours

DRAFT

47942660 - UNIVERSAL TELEMATICS KIT

CASE IH

Processing and Connectivity Module
(PCM) – AM53 Replacement

NEW HOLLAND

Processing and Connectivity Module
(PCM) – AM53 Replacement

DRAFT

1 - SAFETY INFORMATION

Safety rules [24688354 - V8 - 14 May 2024]

Personal safety



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible death or injury.

Throughout this manual you will find the signal words DANGER, WARNING, and CAUTION followed by special instructions. These precautions are intended for the personal safety of you and those working with you.

Read and understand all the safety messages in this manual before you operate or service the machine.

 DANGER indicates a hazardous situation that, if not avoided, will result in death or serious injury.

 WARNING indicates a hazardous situation that, if not avoided, could result in death or serious injury.

 CAUTION indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

FAILURE TO FOLLOW DANGER, WARNING, AND CAUTION MESSAGES COULD RESULT IN DEATH OR SERIOUS INJURY.

Machine safety

NOTICE: Notice indicates a situation that, if not avoided, could result in machine or property damage.

Throughout this manual you will find the signal word Notice followed by special instructions to prevent machine or property damage. The word Notice is used to address practices not related to personal safety.

Information

NOTE: Note indicates additional information that clarifies steps, procedures, or other information in this manual.

Throughout this manual you will find the word Note followed by additional information about a step, procedure, or other information in the manual. The word Note is not intended to address personal safety or property damage.

2 - KIT CONTENT

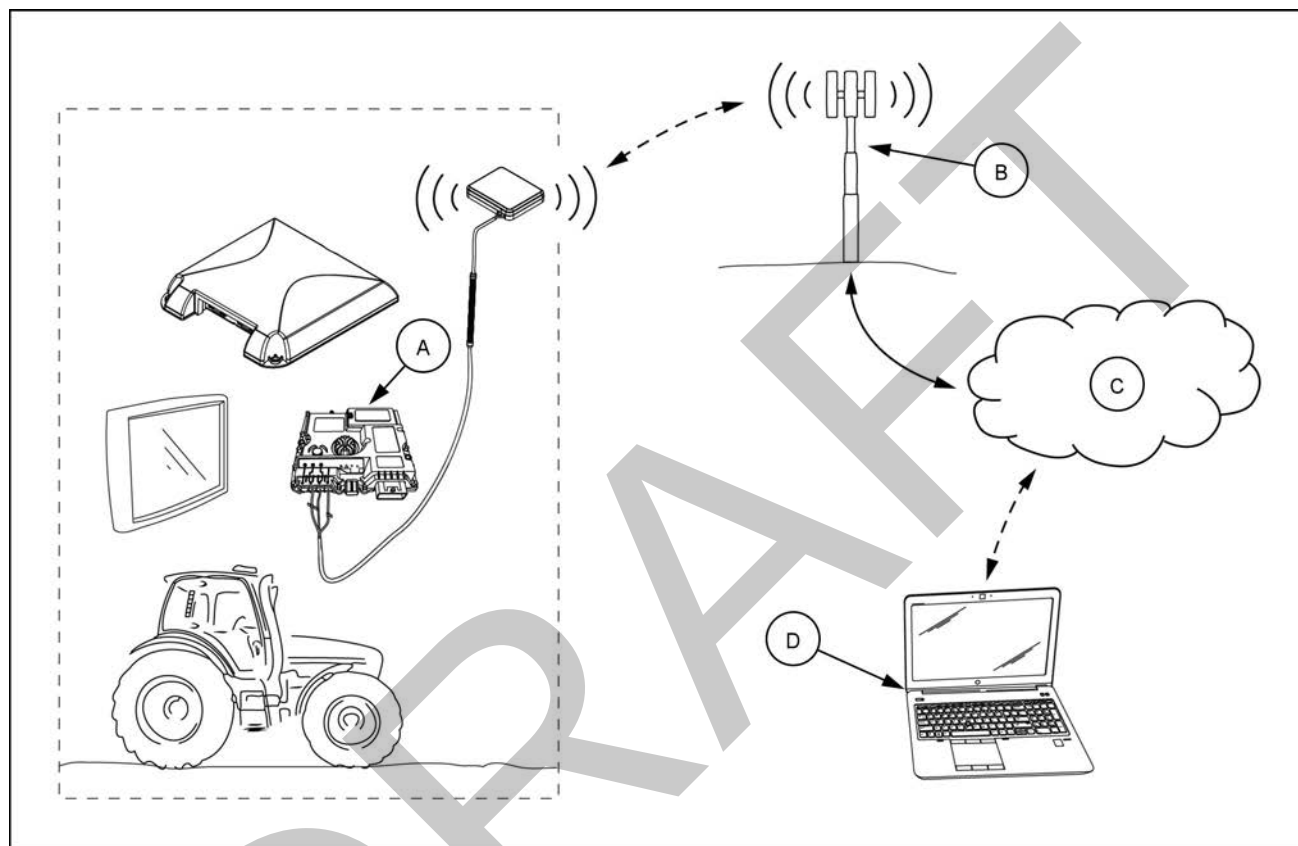
Introduction [113776681 - V2 - 21 May 2025]

This equipment is not suitable for use in locations where children are likely to be present.

Brand: CNH

Product Name: Processing and Connectivity Module (PCM)

Model number: PCM4



NHIL19PLM0270FA 1

Telematics system overview

The telematics system on a vehicle is used for vehicle and fleet management.

The telematics system contains the following items:

- The Processing and Connectivity Module (PCM) **(A)** installed in the vehicle to collect and transmit data.
- The wireless cellular network **(B)** and internet infrastructure **(C)** to exchange data between devices.
- A back-end cloud infrastructure to manage and store your data, and to deliver subscriptions wirelessly.
- An internet-connected computer **(D)** to remotely access and manage your data through the connect portal.

Once installed and activated with a valid subscription, the PCM can be used for:

- Telematics features such as track-and-trace geolocation, messaging, curfews, vehicle status reporting, geofences, error code reporting, and CAN alerts through the associated FieldOps portal account.
- File transfer to-and-from the display and the associated FieldOps portal account.

NOTE: Using the PCM for file transfer also requires an additional file transfer wiring harness that must be ordered in addition to the universal telematics kit.

- Cellular-delivered differential guidance corrections through Networked Transport of RTCM via Internet Protocol (NTRIP).

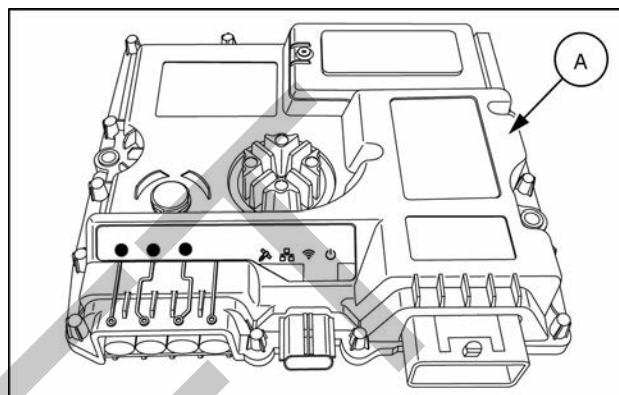
NOTE: Differential corrections via NTRIP requires certain display unlocks and activations to function on the display, as well as a compatible cellular RTK+ network for communication of the correction signals. Using the PCM for NTRIP corrections also requires an additional NTRIP wiring harness that must be ordered in addition to the universal telematics kit.

For more information on the optional wiring harnesses, see 4-34.

Kit overview [113776683 - V1 - 21 May 2025]

The universal telematics kit provides the necessary wiring harnesses and instruction to install an aftermarket Processing and Connectivity Module (PCM) (A) onto a vehicle that is not factory-fitted with a PCM.

You must order the PCM in addition to the universal telematics kit to complete the installation.



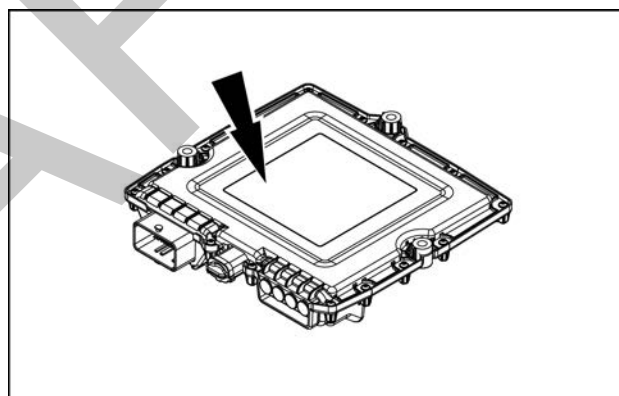
NHIL19PLM0519AA 1

The Telematics Dealer Activation Code (TDAC) number is required to activate the PCM in the Vehicle Management System (VMS). The TDAC number is also used for silent Over-The-Air (OTA) software updates, if the PCM is not programmed with the Vehicle Identification Number (VIN).

The TDAC number is unique and is printed on the label on the back side of the PCM.

Record the TDAC number on the line below and retain for reference while activating the device.

Telematics Dealer Activation Code (TDAC) number:

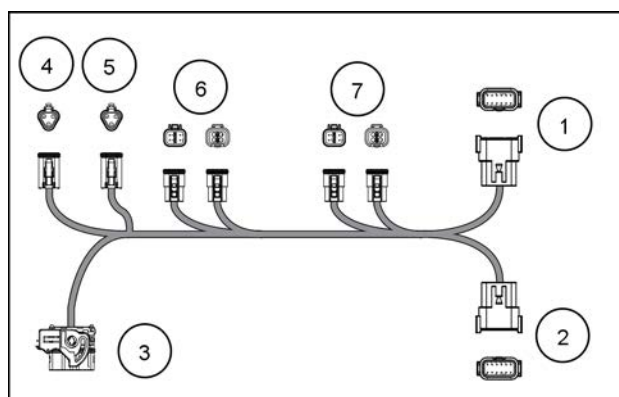


NHIL19PLM0495AA 2

Your vehicle may not require installation of the universal telematics kit.

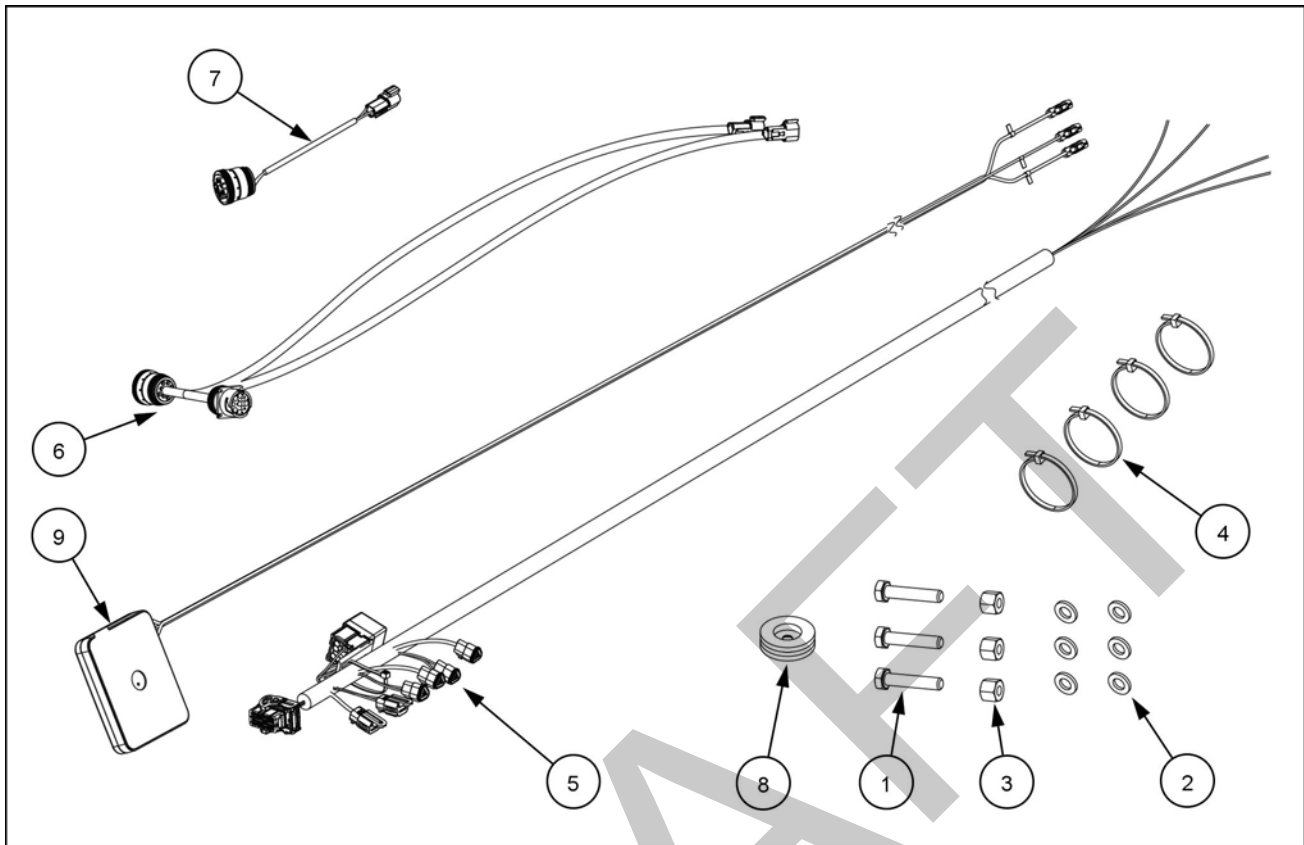
If the vehicle is pre-wired for telematics with or without the AM53 modem, then you can order and install wiring harness 51547843 to connect directly to the file transfer connector (1) and NTRIP connector (2) on your vehicle wiring harness and the PCM (3).

The wiring harness 51547843 also includes connectors for CAN 3 (4), CAN 4 (5), RS232-1 (6), and RS232-2 (7).



NHIL19PLM0838AA 3

Kit contents [113776685 - V1 - 21 May 2025]



NHIL19PLM0258FA 1

Kit contents

Item	Description	Quantity
(1)	Bolt, M6 x 30, Class (CL) 10.9	3
(2)	Washer, flat, 6.6 x 12 x 1.6 mm	6
(3)	Locknut, M6	3
(4)	Cable tie	4
(5)	Wiring harness, universal telematics	1
(6)	Wiring harness, dual CAN-to-diagnostic	1
(7)	Wiring harness, single CAN-to-diagnostic	1
(8)	Grommet, M14	1
(9)	Antenna with adhesive mount	1

3 - GENERAL INFORMATION

Foreword - Important notice regarding equipment servicing [100543316 - V2 - 16 February 2024]

All repair and maintenance work listed in this manual must be carried out only by qualified dealership personnel, strictly complying with the instructions given, and using, whenever possible, the special tools.

Anyone who performs repair and maintenance operations without complying with the procedures provided herein shall be responsible for any subsequent damages.

The manufacturer and all the organizations of its distribution chain, including - without limitation - national, regional, or local dealers, reject any responsibility for damages caused by parts and/or components not approved by the manufacturer, including those used for the servicing or repair of the product manufactured or marketed by the manufacturer. In any case, no warranty is given or attributed on the product manufactured or marketed by the manufacturer in case of damages caused by parts and/or components not approved by the manufacturer.

The manufacturer reserves the right to make improvements in design and changes in specifications at any time without notice and without incurring any obligation to install them on units previously sold. Specifications, descriptions, and illustrative material herein are as accurate as known at time of publication but are subject to change without notice.

In case of questions, refer to your CNH Industrial Sales and Service Networks.

Product conformity [113776661 - V1 - 17 June 2025]

Hereby, CNH Industrial America LLC declares that the PCM4 is in compliance with the essential requirements (radio performance, electromagnetic compatibility and electrical safety) and other relevant provisions of DIRECTIVE 2014/53/EU. Therefore, the equipment is labeled with the following CE-marking.



FCC Regulatory Compliance

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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 communications. 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 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.

ISED Compliance Statements

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference.
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- (1) L'appareil ne doit pas produire de brouillage;
- (2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

RF Exposure Compliance

This equipment complies with FCC/IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

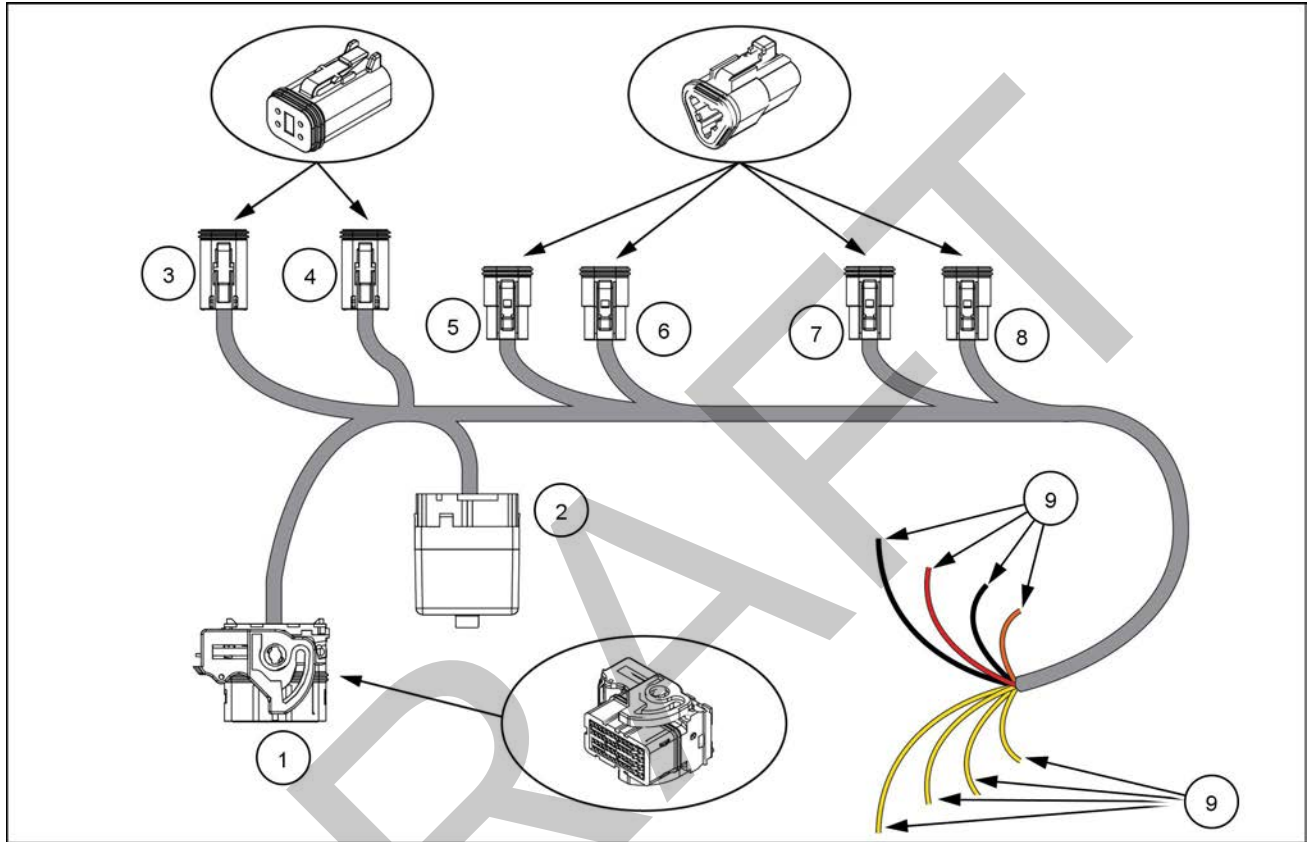
Cet équipement est conforme aux limites d'exposition aux radiations IC CNR-102 établies pour un environnement non contrôlé. Cet émetteur ne doit pas être colocalisé ou fonctionner en conjonction avec une autre antenne ou un autre émetteur. Cet équipement doit être installé et utilisé avec une distance minimale de 20cm entre le radiateur et votre corps.

4 - ASSEMBLY

UNIVERSAL TELEMATICS KIT

Wiring harness identification [113776713 - V1 - 21 May 2025]

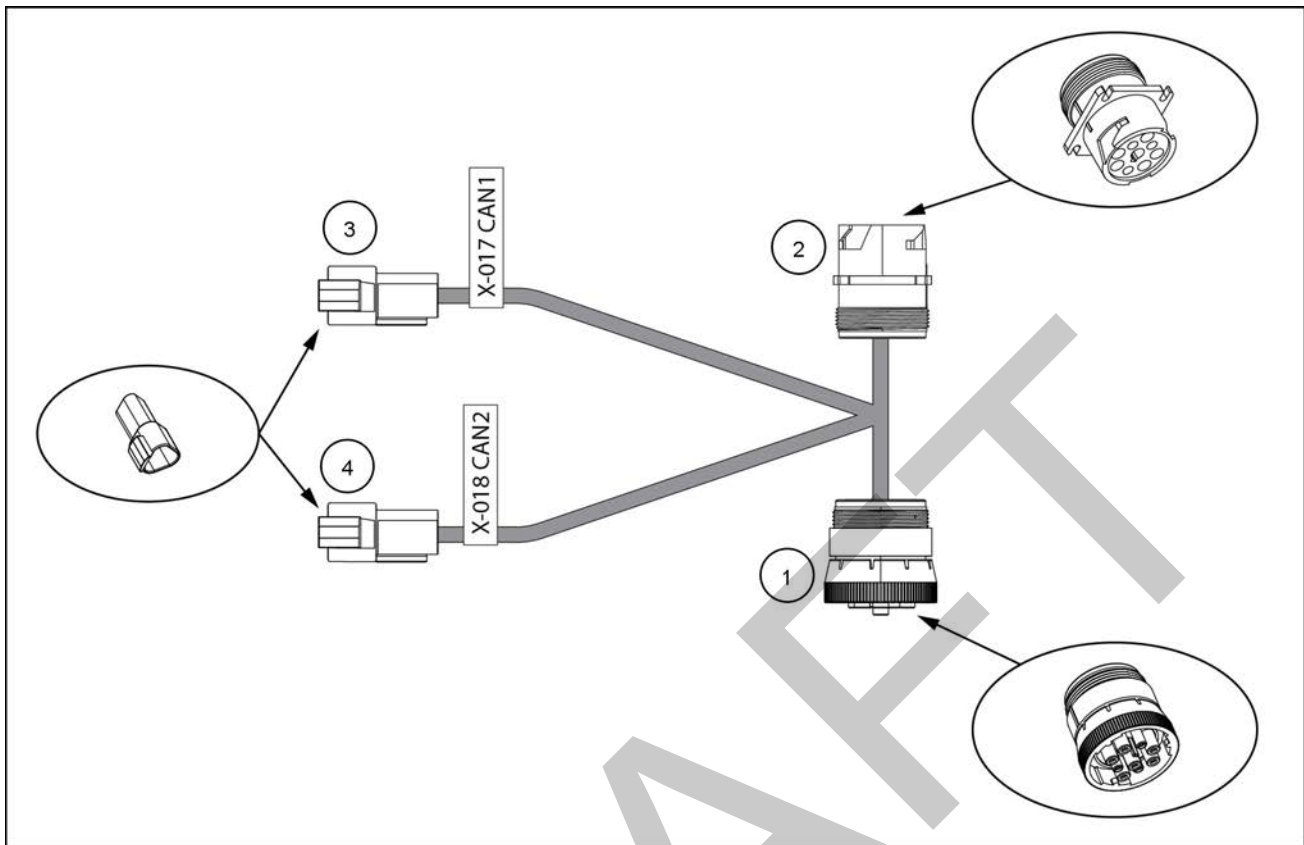
Universal telematics wiring harness



NHIL19PLM0286FA 1

Item	Identifier	Description	Usage
(1)	X-101	PCM	Connects to the Processing and Connectivity Module (PCM)
(2)	X-102	FUSES	Contains two 5 A fuses
(3)	X-103	RS232-1	If equipped, connects to the receiver via the NTRIP wiring harness for differential corrections delivered via cellular signal
(4)	X-104	RS232-2	If equipped, connects to the display via the file transfer wiring harness for wireless data transfer to the connect portal
(5)	X-105	CAN1	Communication with the vehicle on CAN 1
(6)	X-106	CAN2	Communication with the vehicle on CAN 2
(7)	X-107	CAN3	Communication with the vehicle on CAN 3
(8)	X-108	CAN4	Communication with the vehicle on CAN 4
(9)	Red wire	B+	Connects to a 12 V battery power source
	Black wire	CLEAN GND	Connects to clean battery ground
	Black wire	CHASSIS GND REF.	Connects to a reference ground location on the vehicle NOTE: If the machine is equipped with a positive-side battery disconnect switch or no disconnect switch, the chassis ground reference wire is not required.
	Orange wire	SW B+	Connects to a switched 12 V battery power source
	Yellow wires	INPUT #	Not used for this application

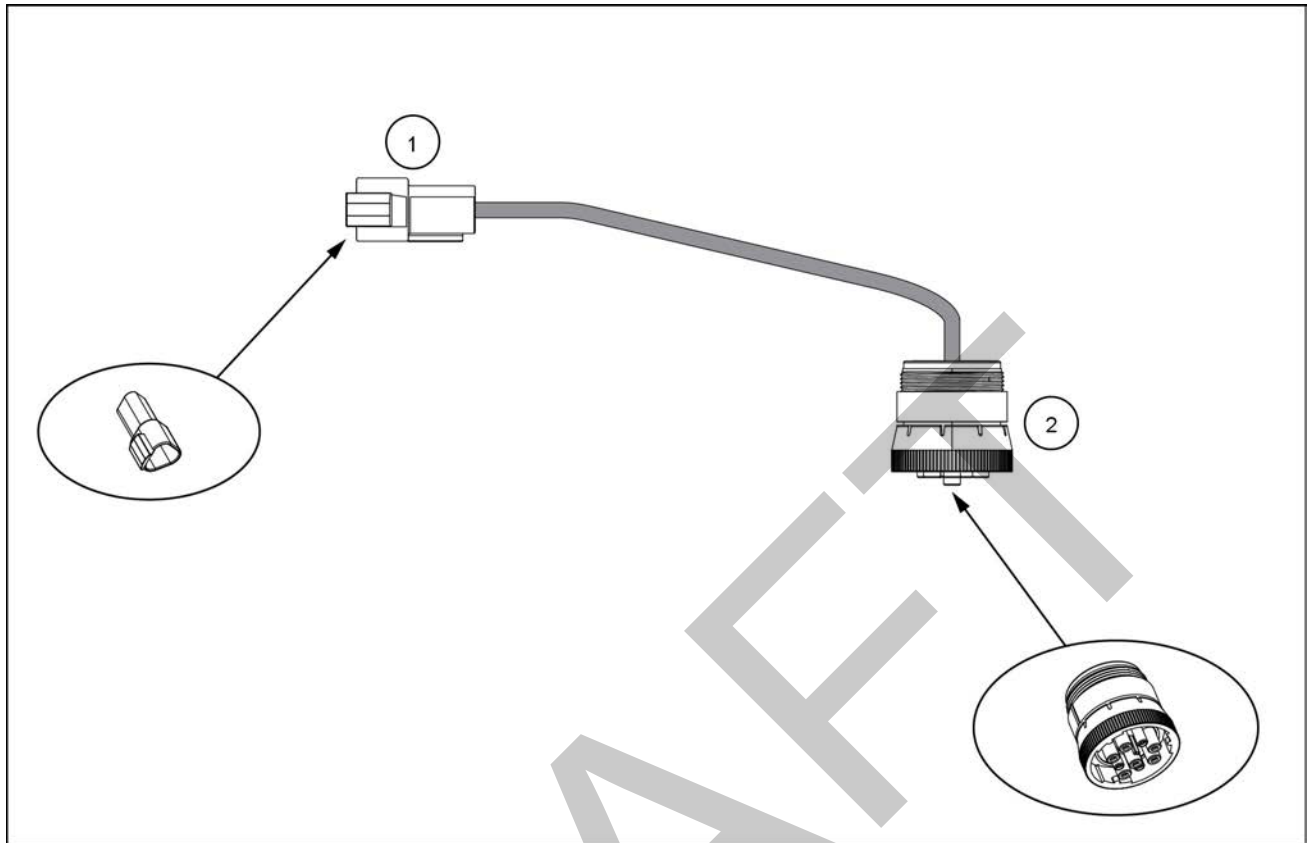
Dual CAN-to-diagnostic wiring harness



NHIL19PLM0273FA 2

Item	Identifier	Description	Usage
(1)	X-015	MACHINE DIAGNOSTIC PORT CONNECTOR	Connects to the diagnostic port on the vehicle, to communicate with the display over CAN 1 and/or CAN 2
(2)	X-016	PASS-THRU CONNECTOR FOR EST	Provides a new diagnostic port for use with the Electronic Service Tool (EST)
(3)	X-017	CAN 1	Connects to the X-005 CAN 1 connector on the universal telematics wiring harness
(4)	X-018	CAN 2	Connects to the X-006 CAN 2 connector on the universal telematics wiring harness

NOTE: Always confirm the pinout of the vehicle diagnostic connector before attaching the dual CAN-to-diagnostic wiring harness. While connector X-017 is labeled “CAN1” and connector X-018 is labeled “CAN2”, always check the wiring at the vehicle diagnostic connector to see which wires are for which CAN bus line. You may need to swap the connections for CAN 1/CAN 2 at the universal harness if the wiring to the diagnostic connector is reversed.

Single CAN-to-diagnostic wiring harness

NHIL19PLM0274FA 3

Item	Identifier	Description	Usage
(1)	X-002	MACHINE DIAGNOSTIC PORT CONNECTOR	Connects to the diagnostic port on the vehicle, to communicate with the display over a single CAN bus line
(2)	X-001	CAN	Connects to one of the CAN connectors on the universal telematics wiring harness

Wiring harness installation [113776711 - V1 - 21 May 2025]

Overview

NOTE: While inspecting the vehicle wiring to ensure proper connections to the universal telematics wiring harness, CAN 1 may be labeled as the primary CAN, and CAN 2 may be labeled as the secondary CAN.

To ensure proper operation of the telematics system, follow the instructions for the option that applies to the specific vehicle for Controller Area Network (CAN) communication.

- Option 1: No CAN bus connection – Typically used for older, legacy vehicles that do not have a CAN bus.
- Option 2: Two CAN bus lines on a single diagnostic connector – Typically used for combines, forage harvesters, and CASE IH **Patriot**® sprayers where you can access both CAN 1 and CAN 2 from a single diagnostic connector.

NOTE: Check the wiring to the vehicle diagnostic connector to see which wires are for which CAN bus line. You may need to swap the connections for CAN 1/CAN 2 at the universal harness if the wiring to the diagnostic connector is reversed.

- Option 3: Two CAN bus lines on two separate diagnostic connectors – Typically used on tractors, where you must access CAN 1 and CAN 2 on separate diagnostic connectors.
- Option 4: Three CAN bus lines on multiple diagnostic connectors – Typically used on tractors that communicate on three CAN bus lines across multiple diagnostic connectors.

Prepare the machine

WARNING

Electrical shock hazard!

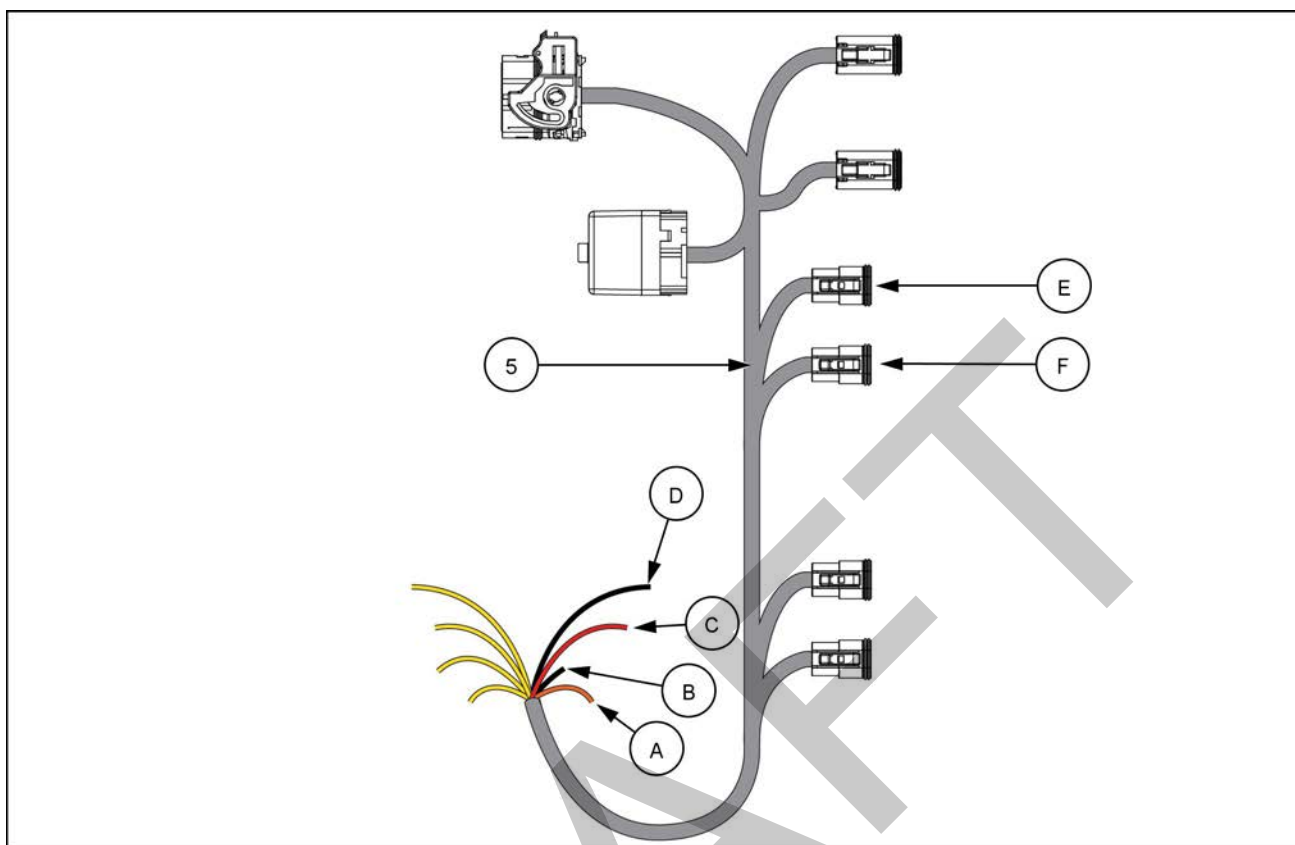
Before working on any part of the electrical system, disconnect the battery ground cable. Complete all electrical work before connecting the cable.

Failure to comply could result in death or serious injury.

W0129A

Prepare the machine and work area before installation of the universal telematics kit.

1. Park the machine on a firm, level surface.
2. Lower all attachments to the ground.
3. Apply the parking brake.
4. Stop the engine and remove the key.
5. Disconnect the battery ground cable from the negative (–) terminal of the battery.

Option 1: No CAN connection**Wiring diagram – No CAN bus connection**

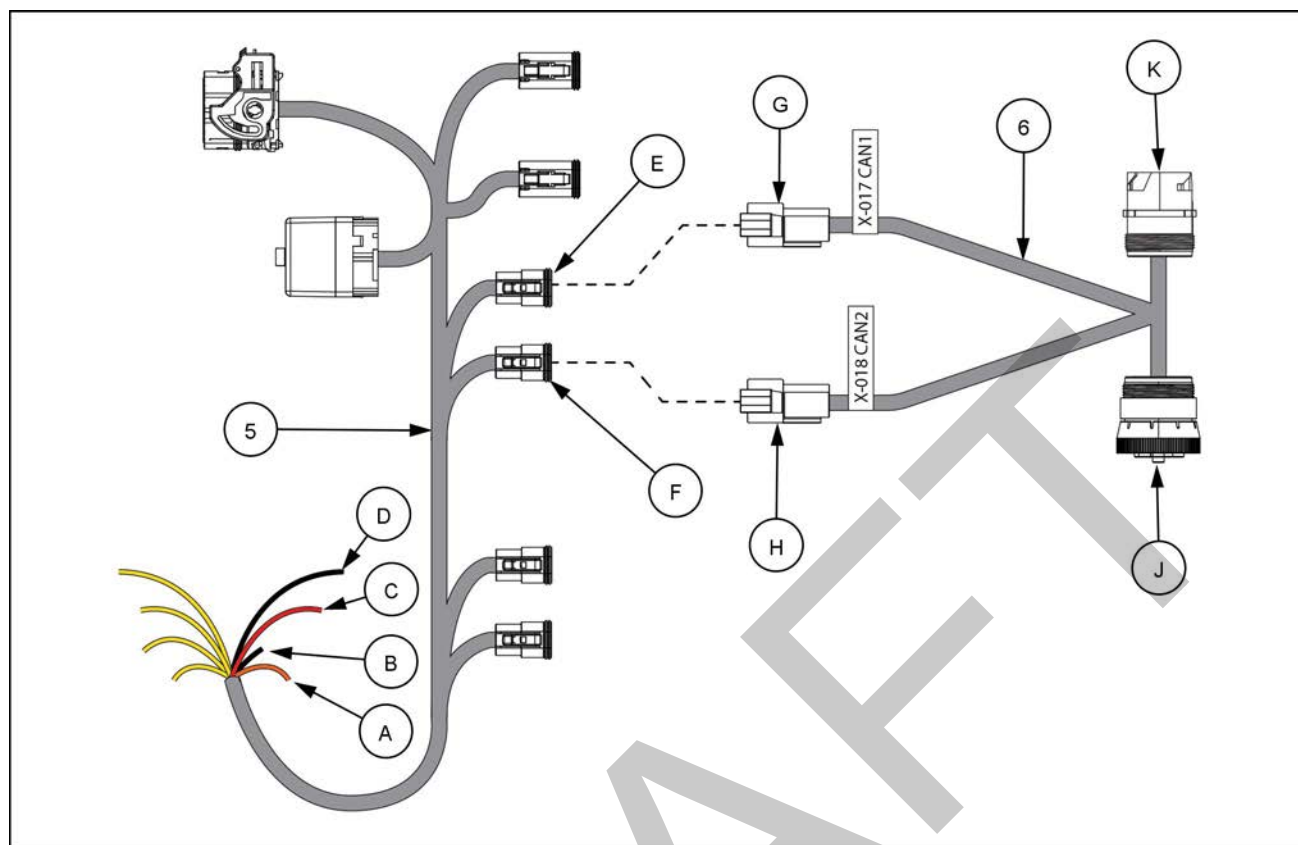
If the vehicle does not have a CAN bus, then you will only need to install the universal telematics harness (5).

NOTE: In this scenario, the CAN 1 connector (E) and the CAN 2 connector (F) are unused.

Connect the four bare wires to the vehicle power source:

- Orange wire (A) – Switched **12 V** battery power (SW B+)
- Black wire (B) – Clean ground
- Red wire (C) – Unswitched **12 V** battery power (B+)
- Black wire (D) – Chassis ground, if required

Option 2: Two CAN bus lines on a single diagnostic connector



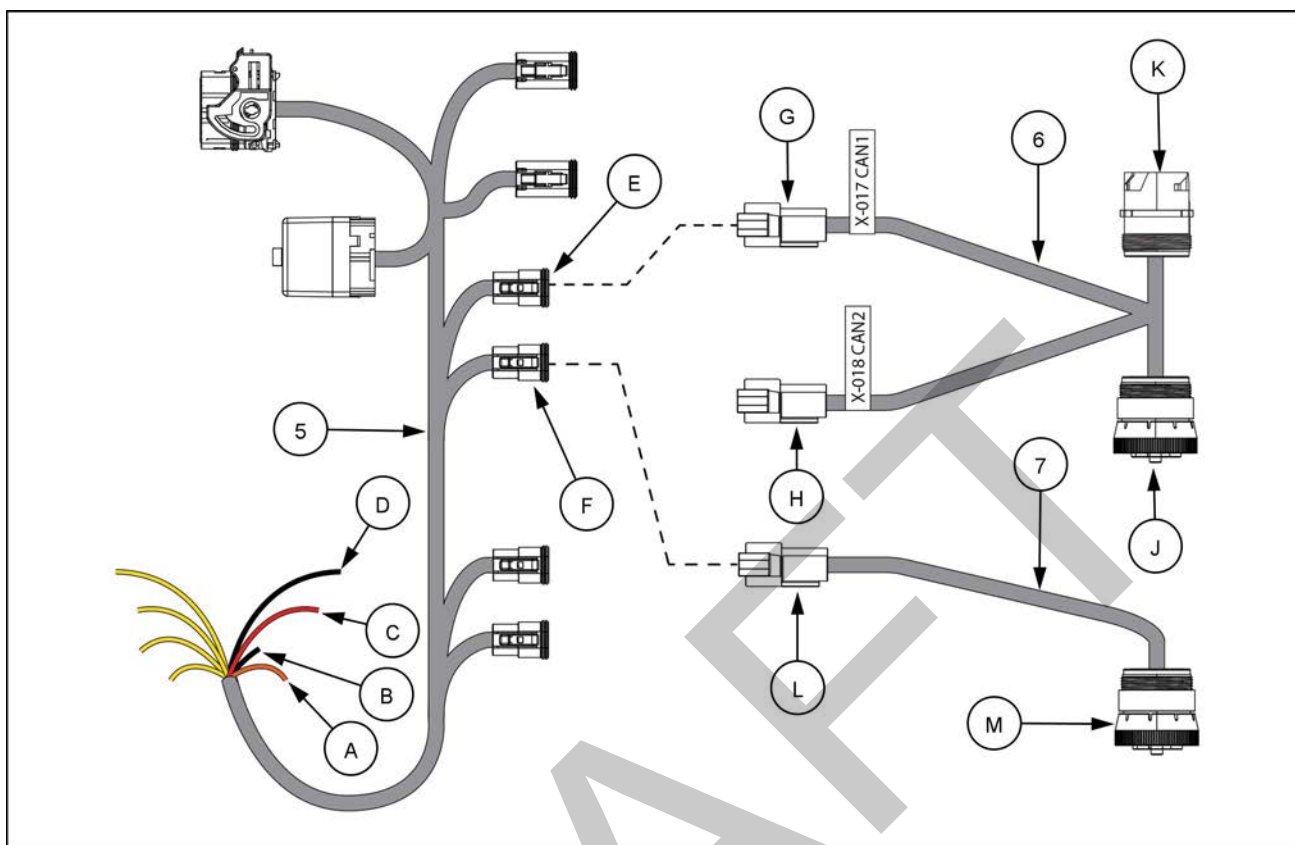
NHIL19PLM0261FA 2

If the installation is on a vehicle that has two CAN bus lines on a single diagnostic connector:

1. Install the universal telematics wiring harness **(5)** and the dual CAN-to-diagnostic wiring harness **(6)**.
 - A. Connect the CAN 1 connector **(E)** on the universal telematics wiring harness to the connector labeled "X-017 CAN1" **(G)** on the dual CAN-to-diagnostic wiring harness.
 - B. Connect the CAN 2 connector **(F)** on the universal telematics wiring harness to the connector labeled "X-018 CAN2" **(H)** on the dual CAN-to-diagnostic wiring harness.
 - C. Connect the diagnostic connector **(J)** on the dual CAN-to-diagnostic wiring harness to the factory diagnostic connector in the cab of the vehicle.
2. Connect the four bare wires to the vehicle power source:
 - Orange wire **(A)** – Switched **12 V** battery power (SW B+)
 - Black wire **(B)** – Clean ground
 - Red wire **(C)** – Unswitched **12 V** battery power (B+)
 - Black wire **(D)** – Chassis ground, if required

The dual CAN-to-diagnostic wiring harness **(6)** provides access to the CAN 1 and CAN 2 lines through a replicated factory diagnostic connector **(K)**.

Option 3: Two CAN bus lines on two separate diagnostic connectors



NHIL19PLM0266FA 3

If the installation is on a vehicle that has two CAN bus lines on two separate diagnostic connectors:

1. Install the universal telematics wiring harness (5) and the dual CAN-to-diagnostic wiring harness (6).
 - A. Connect the CAN 1 connector (E) on the universal telematics wiring harness to the connector labeled "X-017 CAN1" (G) on the dual CAN-to-diagnostic wiring harness.
 - B. Leave the connector labeled "X-018 CAN2" (H) on the dual CAN-to-diagnostic wiring harness unconnected.
 - C. Connect the diagnostic connector (J) on the dual CAN-to-diagnostic wiring harness to the factory CAN 1 diagnostic connector in the cab of the vehicle.

NOTE: The factory diagnostic connector must have CAN 1 on pins C and D. If CAN 1 is on pins H and J, then you must use connector X-018 to interface with the universal telematics wiring harness.

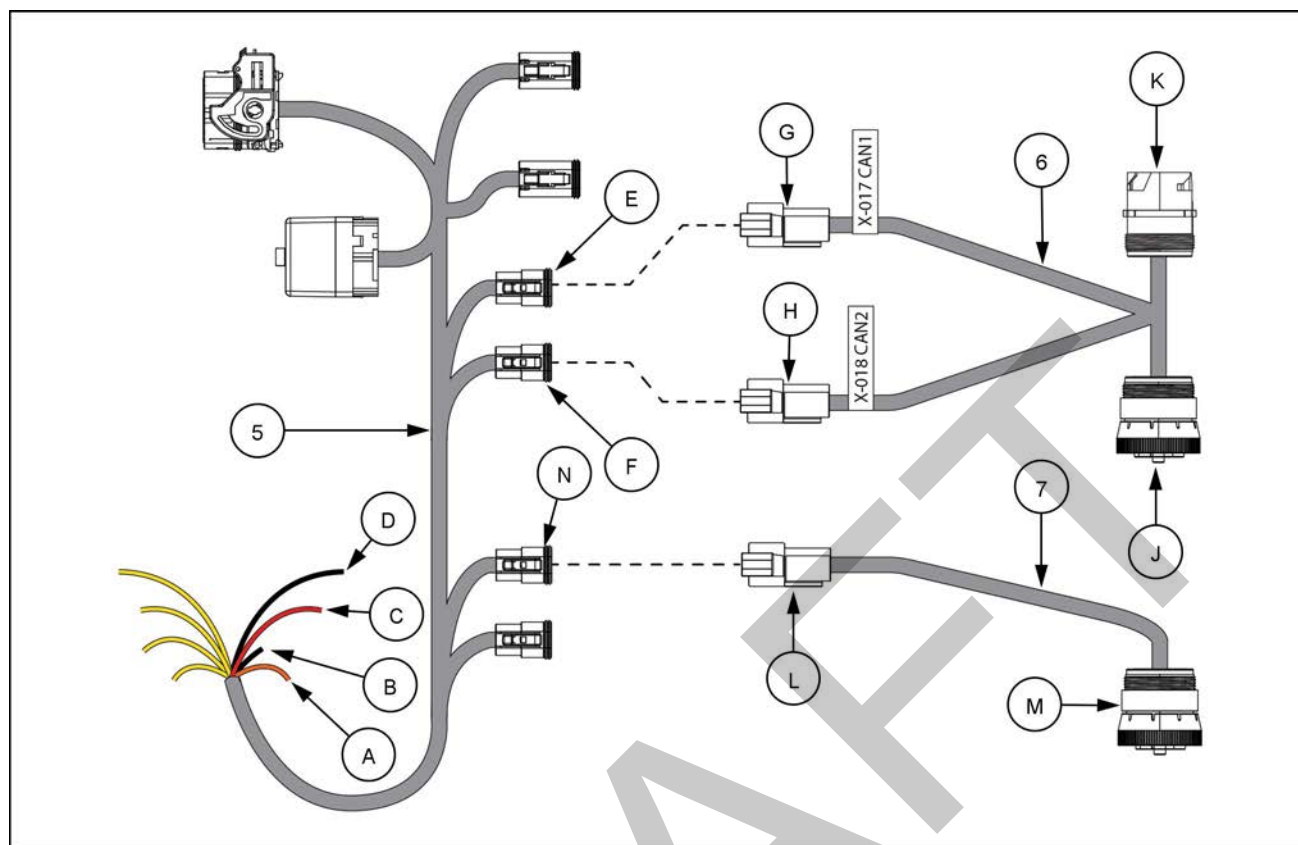
2. Install the single CAN-to-diagnostic wiring harness (7).
 - A. Connect the CAN 2 connector (E) on the universal telematics wiring harness to the connector (L) on the single CAN-to-diagnostic wiring harness.
 - B. Connect the diagnostic connector (M) on the single CAN-to-diagnostic wiring harness to the factory CAN 2 diagnostic connector in the cab of the vehicle.

NOTE: This factory diagnostic connector must have CAN 2 on pins C and D.

3. Connect the four bare wires to the vehicle power source:
 - Orange wire (A) – Switched 12 V battery power (SW B+)
 - Black wire (B) – Clean ground
 - Red wire (C) – Unswitched 12 V battery power (B+)
 - Black wire (D) – Chassis ground, if required

The dual CAN-to-diagnostic wiring harness (6) provides access to the CAN 1 line through a replicated factory diagnostic connector (K). To access the CAN 2 line, you must disconnect the diagnostic connector (M) on the single CAN-to-diagnostic wiring harness (7), or use an additional breakout wiring harness.

Option 4: Three CAN bus lines on multiple diagnostic connectors



NHIL19PLM0263FA 4

If the installation is on a vehicle that has three CAN bus lines on two separate diagnostic connectors:

1. Install the universal telematics wiring harness (5) and the dual CAN-to-diagnostic wiring harness (6).
 - A. Connect the CAN 1 connector (E) on the universal telematics wiring harness to the connector labeled "X-017 CAN1" (G) on the dual CAN-to-diagnostic wiring harness.
 - B. Connect the CAN 2 connector (F) on the universal telematics wiring harness to the connector labeled "X-018 CAN2" (H) on the dual CAN-to-diagnostic wiring harness.
 - C. Connect the diagnostic connector (J) on the dual CAN-to-diagnostic wiring harness to the factory diagnostic connector in the cab of the vehicle.

NOTE: The factory diagnostic connector must have CAN 1 on pins C and D, and CAN 2 on pins H and J, otherwise you may need to swap connectors at the universal telematics wiring harness.

2. Install the single CAN-to-diagnostic wiring harness (7).
 - A. Connect the CAN 3 connector (N) on the universal telematics wiring harness to the connector (L) on the single CAN-to-diagnostic wiring harness.
 - B. Connect the diagnostic connector (M) on the single CAN-to-diagnostic wiring harness to the factory CAN 3 diagnostic connector in the cab of the vehicle.

NOTE: This factory diagnostic connector must have CAN 3 on pins C and D.

3. Connect the four bare wires to the vehicle power source:
 - Orange wire (A) – Switched 12 V battery power (SW B+)
 - Black wire (B) – Clean ground
 - Red wire (C) – Unswitched 12 V battery power (B+)
 - Black wire (D) – Chassis ground, if required

The dual CAN-to-diagnostic wiring harness **(6)** provides access to the CAN 1 and CAN 2 lines through a replicated factory diagnostic connector **(K)**. To access the CAN 3 line, you must disconnect the diagnostic connector **(M)** on the single CAN-to-diagnostic wiring harness **(7)**, or use an additional breakout wiring harness.

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Mounting information [113776709 - V1 - 21 May 2025]

Processing and Connectivity Module (PCM)

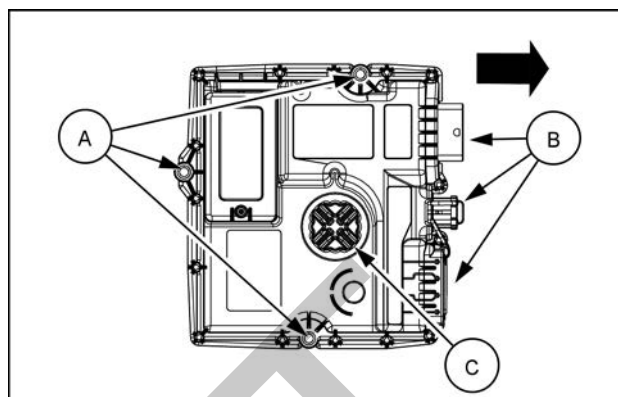
The universal telematics kit provides three M6 x 30 bolts, washers, and M6 nuts to mount the Processing and Connectivity Module (PCM) to your vehicle. The PCM has three mounting holes (A) to secure the module to the vehicle or vehicle-specific bracket.

NOTICE: To prevent damage to the PCM, do not torque the bolts more than **10 N·m (89 lb in)**.

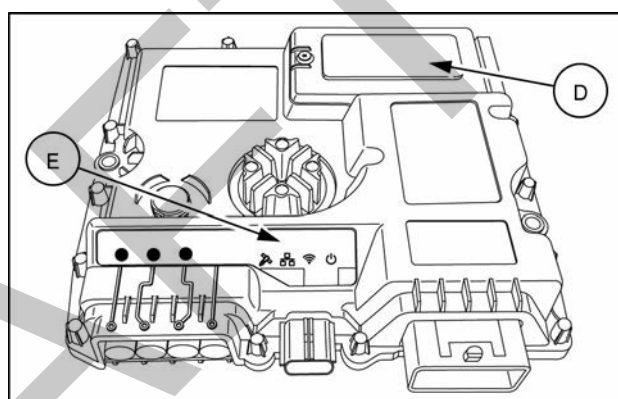
You can mount the PCM inside or outside of the vehicle cab. If you mount the PCM inside of the cab, a horizontal or vertical mounting position is sufficient.

If you mount the PCM outside of the cab, mount the PCM in the vertical position, Figure 1, with the connectors facing to the right. This position prevents water from collecting on the connectors (B) and debris from collecting on the heatsink (C).

When you mount the PCM on the vehicle, make sure that the mounting location allows for access to the internal battery compartment (D) and the front Light-Emitting Diode (LED) indicators (E). The PCM contains an internal backup battery with a minimum service life of five years and may require replacement during the service life of the vehicle.



NHIL19PLM0267AA 1



NHIL19PLM0519AA 2

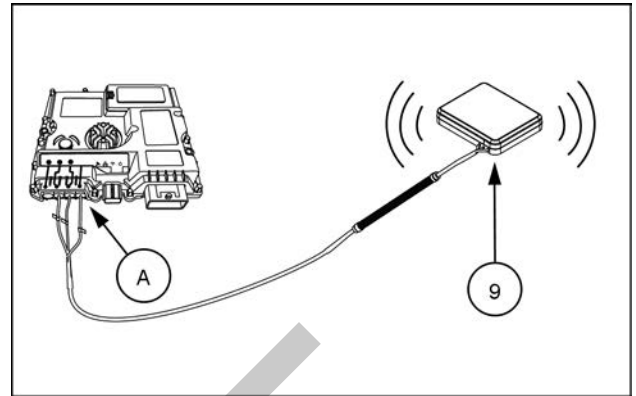
Dual-mode antenna

The PCM requires an external dual-mode antenna **(9)** for use with cellular networks. Mount the dual-mode antenna with the provided adhesive pads in a suitable location:

- The dual-mode antenna can be placed under plastic or fiberglass surfaces, but not metallic surfaces. Mounting the antenna in a storage compartment inside the cab is acceptable, as long as the antenna is in a location that would not be shielded by a metal surface (such as that found on the cab of tractors that use a loader).
- The dual-mode antenna should not be mounted near obstructions that could produce shadowing or signal degradation. Consider mounting the antenna away from radios (such as AM/FM or CB radios) to avoid interference.
- Make sure that the dual-mode antenna is not too close to the PCM. The minimum distance varies, based on the PCM variant for the cellular network.
 - Mount the dual-mode antenna at least **90 mm (3-1/2 in)** away from the 3G PCM.
 - Mount the dual-mode antenna at least **107 mm (4.2 in)** away from the 4G PCM.

The connectors for the dual-mode antenna attach to the antenna ports **(A)** on the front of the PCM. The dual-mode antenna has three connectors:

Color	Function
Blue	GNSS
Carmin Red	Cellular – Diversity (4G)
Bordeaux	Cellular – Main



NHIL19PLM0271AA 3

Component installation [113776707 - V1 - 21 May 2025]

1. Install the dual-mode antenna **(9)** in a horizontal position in a place that ensures open sky conditions during operation. Avoid places covered by metallic surfaces that might filter the GNSS signal.

NOTE: The dual-mode antenna mounted externally on the cab roof will suffice for most applications.

2. Route the connectors for the dual-mode antenna to the installation location of the PCM.

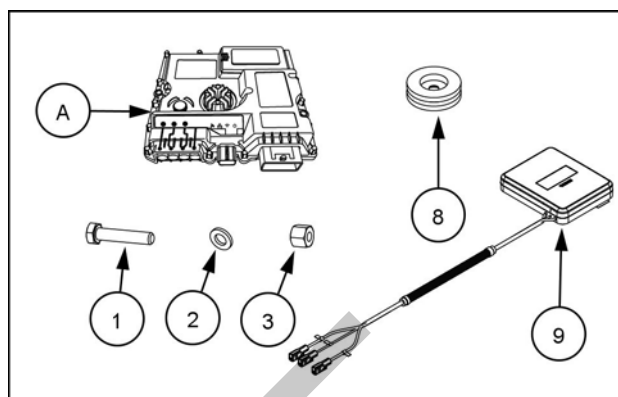
NOTE: Use the provided grommet **(8)**, if necessary, to pass the connectors through into the vehicle cab.

3. Install the PCM **(A)** with the three M6 x 30 bolts **(1)**, washers **(2)**, and nuts **(3)** in a suitable location on the vehicle. See "Mounting information" (**Mounting information (55.991)**) for more information.

4. Torque the nuts to a maximum of **10 N·m (89 lb in)**.

NOTICE: To prevent damage to the PCM, do not over-torque the nuts.

5. Make sure that the wiring harnesses provided with the kit are installed per the instructions in "Wiring harness installation" (**Wiring harness installation (55.991)**).
6. Make sure that the bare wires are connected to the appropriate power, switched power, and ground sources.
7. Connect the three dual-mode antenna connectors to the PCM.
8. Connect the PCM connector on the universal telematics wiring harness to the PCM, and then pivot the connector lock to secure the connector.



NHIL19PLM0276AA 1

Programming the Processing and Connectivity Module (PCM) [113776703 - V1 - 21 May 2025]

The Processing and Connectivity Module (PCM) must be programmed with the correct software before first use. The PCM is programmed with a Universal Serial Bus (USB) stick.

You must have Electronic Service Tool (EST) version 9.3.0.0 Update 3 or above.

If using the AFS AccuSync / IntelliField feature, you must install PCM software version 31.36 or above.

NOTE: Use only the CNH Industrial approved USB memory device 47962967 (4 GB) or 90484784 (64 GB) to program the PCM controller.

NOTICE: The PCM controller can continue to temporarily operate after the vehicle key is turned OFF. When cycling key power, make sure the lights on the PCM controller are all OFF before turning the vehicle key back ON.



RAIL20PLM1211AA 1

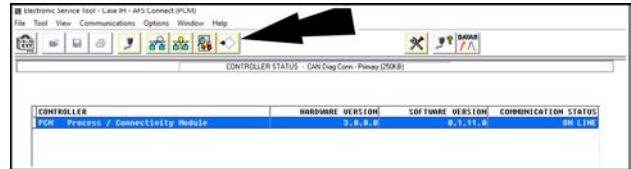
NOTE: You can shorten the amount of time this process takes by disabling file transfer in the display. Navigate to Toolbox > Telematics. Select the "Disabled" option in the "File Transfer Enabled" window.

Telematics	
Telematics Installed	Telematics CAN Node
PCM ▼	CAN A ▼
File Transfer Enabled	
Disabled ▼	
Fuel Tank Size	Fuel Theft Delta
0 gal	5 %
Fwd Info Alarms	Fwd Warning Alarms
Enabled ▼	Enabled ▼
Fwd Stop Danger Alarm:	
Enabled ▼	

RAIL20PLM1776BA 2

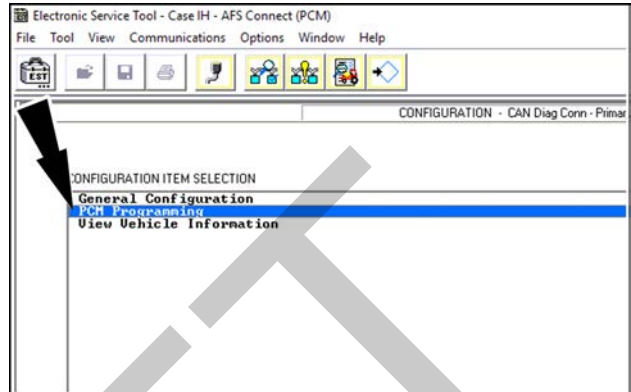
1. Follow these instructions to use the Electronic Service Tool (EST) to create a bootable USB memory device with the correct firmware.
2. In the EST "Equipment Selection" screen, select "PCM (AM53 Replacement)" or "MYPLMCONNECT (AM53 Replacement)."
3. When the Vehicle Connector Selection window appears, select the connector that is on the CAN bus for the PCM module. The CAN bus for the PCM controller varies between vehicle models.
4. Select the baud rate of "250KB."
5. Verify that the PCM controller is online.

6. Click the "Configuration" button . The "Configuration" screen appears.



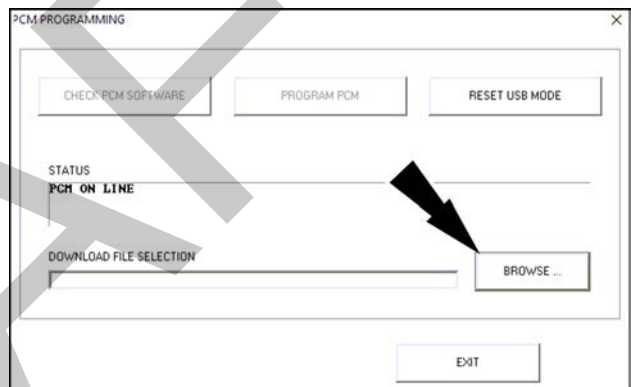
RAIL19DSP0015FA 3

7. In the "Configuration Item Selection" menu, select the "PCM Programming" menu item. The "PCM Programming" window appears.



RAIL19PLM0044AA 4

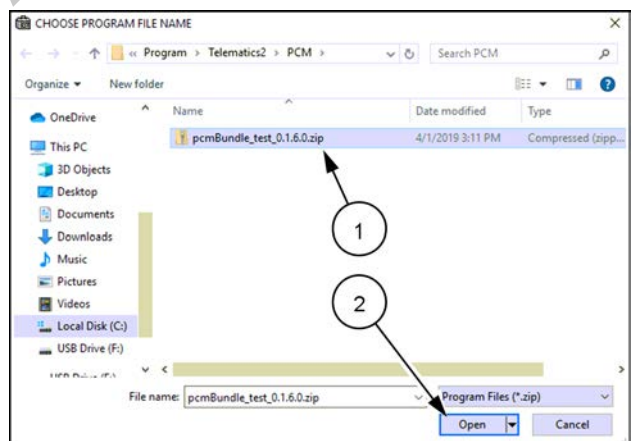
8. Click the "Browse" button. The "Choose Program File Name" window appears.



RAIL19PLM0045AA 5

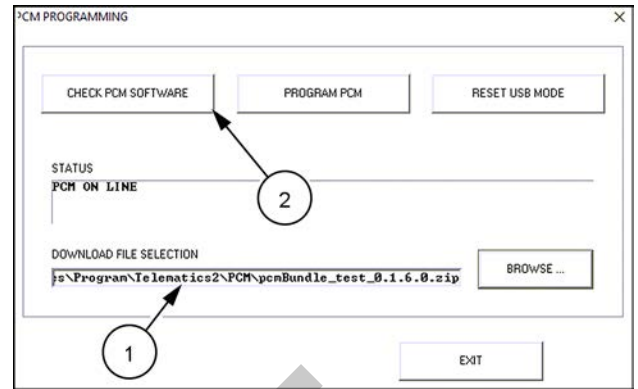
9. Select the desired file (1). Click the "Open" button (2). The "Choose Program File Name" window closes and the "PCM Programming" window appears.

NOTE: The PCM file must be a compressed (*.zip) file.



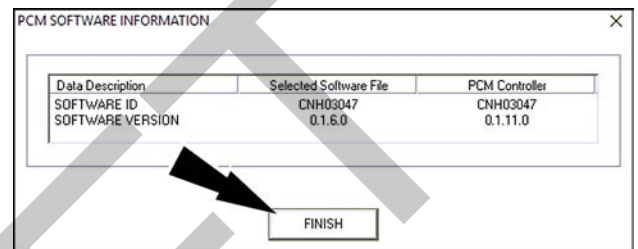
RAIL19PLM0588BA 6

10. The “PCM Programming” window shows the “Download File Selection” section (1) populated with the subdirectory and the selected filename. If you wish to confirm the software version, click the “Check PCM Software” button (2). The PCM Software Information window appears.



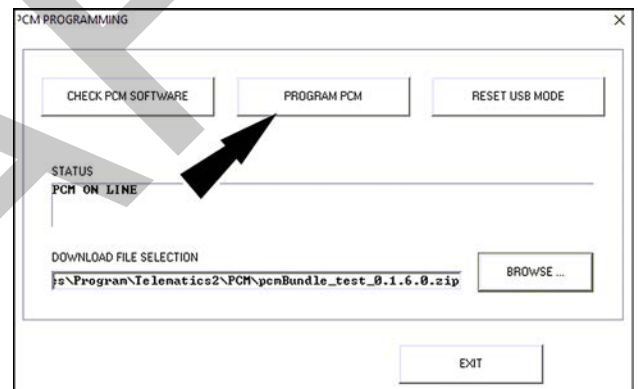
RAIL19PLM0041AA 7

11. If you clicked the “Check PCM Software” button in the previous step, review the information in the “PCM Software Information” window. Click the “Finish” button to close the “PCM Software Information” window and return to the “PCM Programming” window.



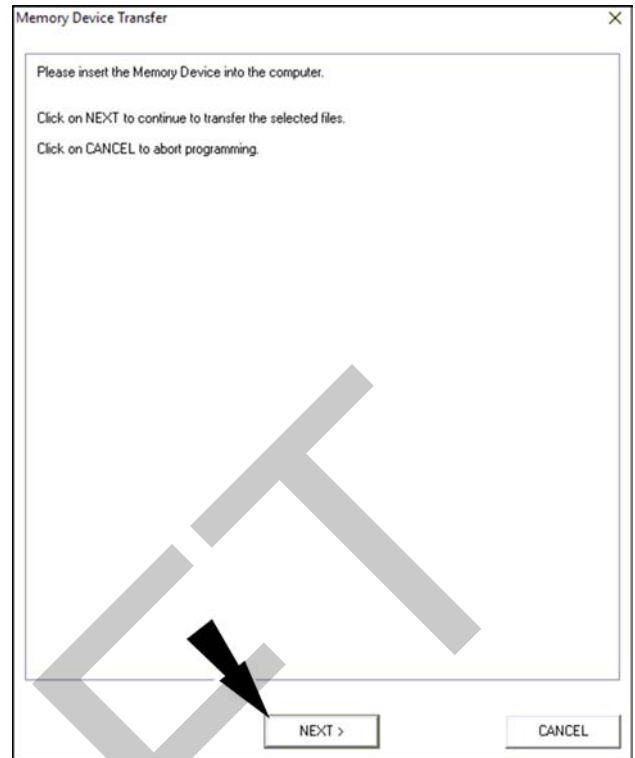
RAIL19PLM0040AA 8

12. Click the “Program PCM” button. A “Memory Device Transfer” window appears.



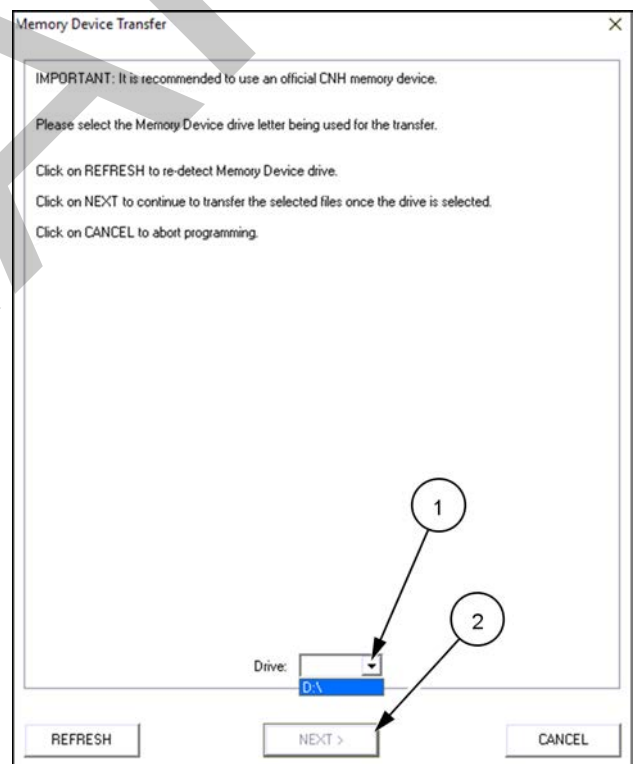
RAIL19PLM0041AA 9

13. Follow the instructions that appear in the “Memory Device Transfer” windows. In this step insert the USB memory device into the computer, if not already accomplished. With the memory device inserted, click the “Next” button.



RAIL19PLM0587BA 10

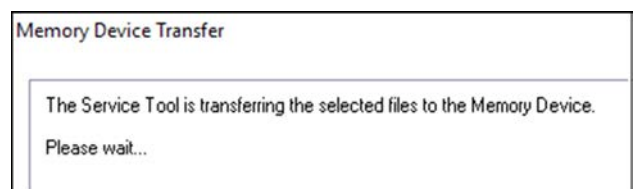
14. Allow the EST computer to detect the memory device. This is indicated by the presence of the “Drive” drop-down menu (1). Use the “Drive” drop-down menu to select the drive letter that the EST computer assigned to the memory device. The “Next” button (2) activates. Click the “Next” button.



RAIL19PLM0586BA 11

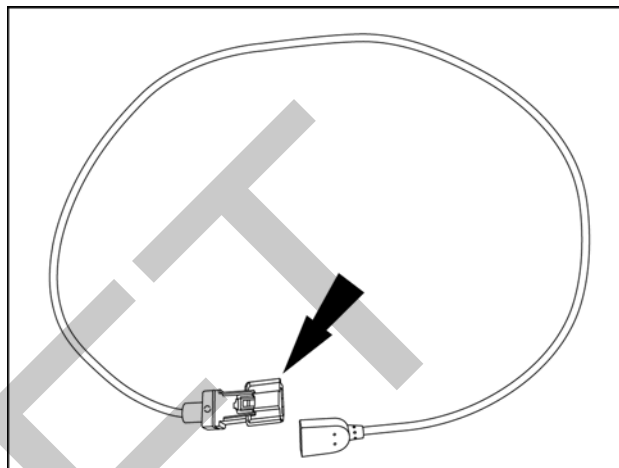
15. Allow the EST computer to transfer the file to the memory device.

NOTE: The files may take several minutes to transfer.

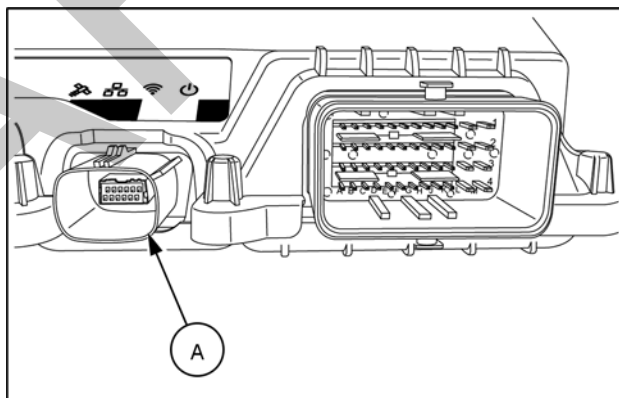


RAIL19PLM0046AA 12

16. When the EST computer completes the file transfer, instructions appear in the "Memory Device Transfer" window. The instructions are given in the following steps:
17. Remove the memory device from the EST computer.
18. Turn the vehicle key to the OFF position to remove power from the PCM controller.
19. Attach the PCM programming cable **380003493** to the molex connector (**A**) on the front of the PCM controller.

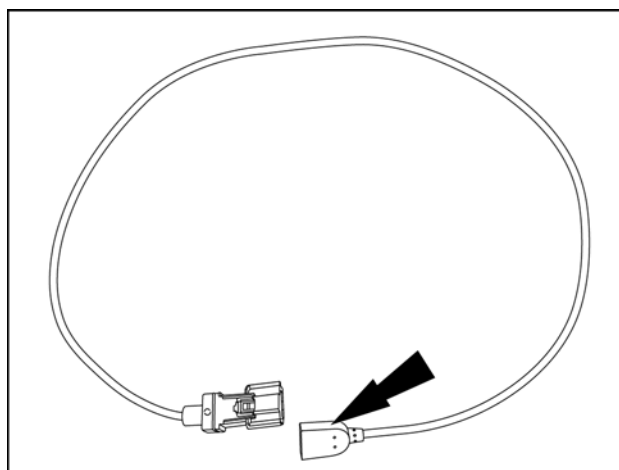


RAIL19DSP0103BA 13



NHIL19PLM0520AA 14

20. Insert the memory device into the USB-A receptacle on the PCM programming cable **380003493**.

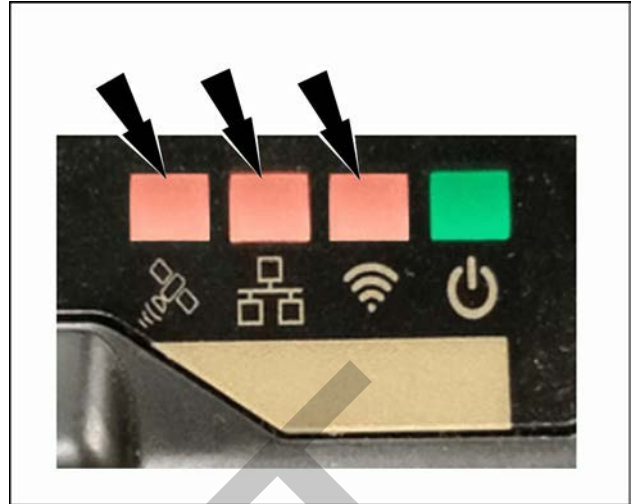


RAIL19DSP0103BA 15

NOTICE: Do not deviate from the procedure given below. Allow the process to finish. Do not turn key power OFF or remove the USB memory device from the programming cable until instructed below. Do not disconnect the EST computer from the vehicle or close the EST base software until the procedure is complete.

NOTE: Ensure the lights on the PCM controller are all extinguished before turning the key ON in the following step.

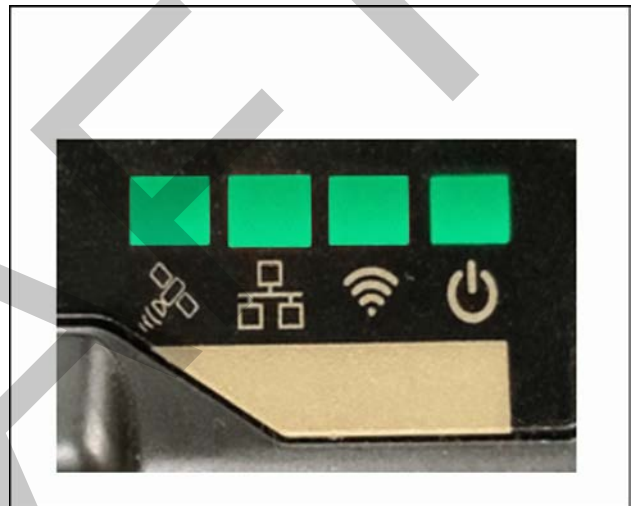
21. Turn the vehicle key to the ON position to apply power to the PCM controller. The PCM controller is now in USB mode. The GPS, CAN network, and wireless indicator lights on the PCM controller start flashing orange.



RAIL20PLM1760BA 16

22. Do not remove power from the PCM controller or remove the USB memory device during firmware installation. The controller programming process can take several minutes. Do not disconnect the EST computer or close the EST base software. The update is complete when all four indicator lights are solid green.

NOTE: See "Indicator light behavior" below if you wish to observe the progress of the installation.

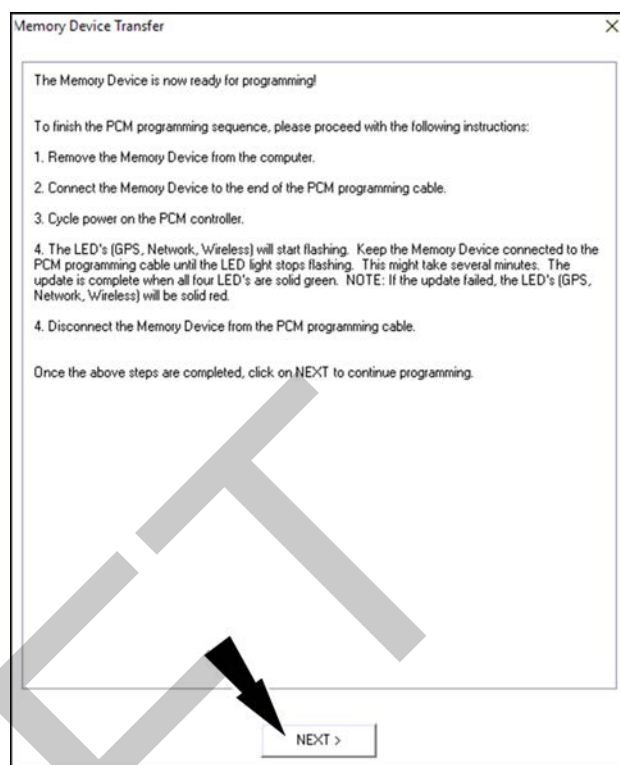


RAIL20PLM1761BA 17

NOTICE: Do not remove the memory device from the PCM programming cable until you have ensured that all four lights on the PCM controller are on solid green.

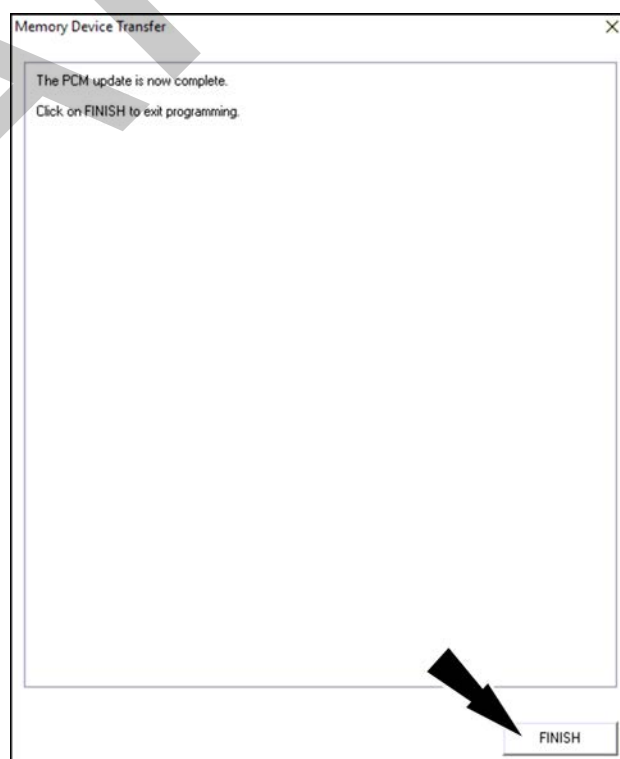
23. Disconnect the USB memory device from the PCM controller.

24. Click the “Next” button to open the next screen in the EST base software.



RAIL19PLM0585BA 18

25. The “Memory Device Transfer” window states that programming is complete. Click the “Finish” button to exit the programming procedure.



RAIL19PLM0584BA 19

26. Use the “Controller Faults” screen in the EST base software to look at the Diagnostic Trouble Code (DTC) errors. If DTC error 5210006.13 is active, the correct applications did not install into the PCM controller. If this occurs, perform the programming procedure again in its entirety. If DTC error 5210006.13 is not active, the update was successful.

Indicator light behavior

Indicator light behavior during PCM controller programming

There are five steps of a PCM controller update. During each step the indicator lights on the PCM controller indicate the current step. The steps are:

- Update preparation (2 substeps) – Validating the software bundle and transferring the file to an internal update directory

NOTE: The light behavior in the update preparation step can vary, depending upon the software version currently in the PCM controller. If you are updating the software from a version prior to 31.36 to version 31.36, the steps transition from 1 to 2 about halfway through the procedure. If you are updating the PCM controller when it already has version 31.36 or above, there are only three flashing lights during update preparation.

- Update the base software – The base software that operates the PCM controller is being updated.
- Automatic boot – Once the firmware installation is complete, the PCM controller automatically boots with the new base software.
- Update applications – The user applications in the software bundle are updated and installed.
- Update complete – Indicates either a success or failure

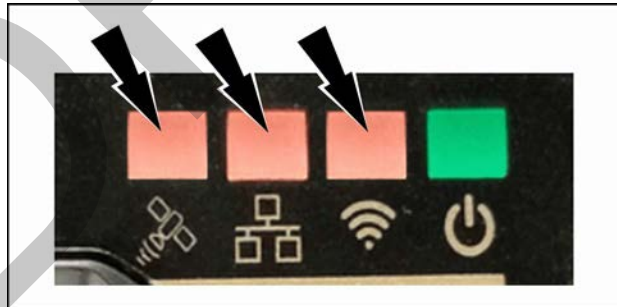
1. Update preparation (1 of 2)



RAIL20PLM1773BA 20

NOTE: This step only occurs if the currently installed software in the PCM controller is prior to version 31.36. In the first half of the update preparation, the GNSS light flashes orange rapidly. The remaining lights are not affected.

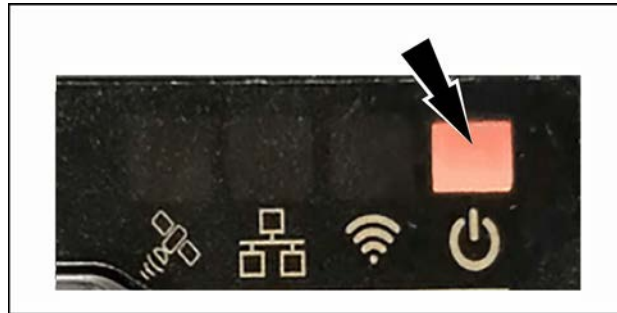
Update preparation (2 of 2)



RAIL20PLM1773BA 21

NOTE: This step occurs immediately if the currently installed software in the PCM controller is version 31.36 or later. In the second half of the update preparation, the GNSS, CAN, and wireless lights flash orange rapidly in sequence four times. Then the sequence repeats.

2. Update the base software



RAIL20PLM1768BA 22

While the base software updates, the power light flashes orange.

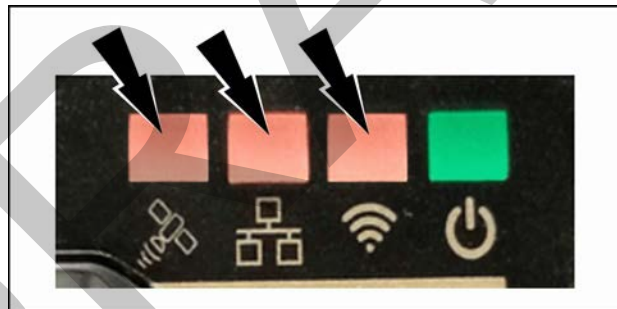
3. Boot



RAIL20PLM1769BA 23

During boot the power light flashes green.

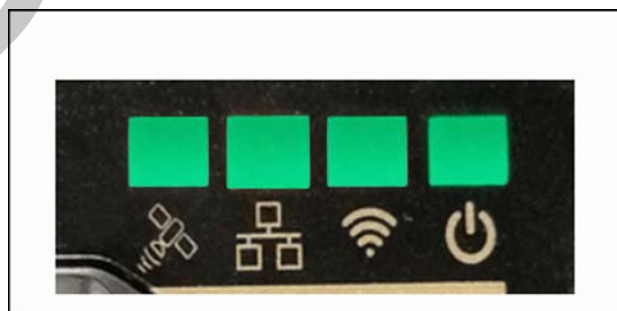
4. Update applications



RAIL20PLM1773BA 24

The GNSS, CAN, and wireless lights flash orange in sequence.

5. Update completed successfully



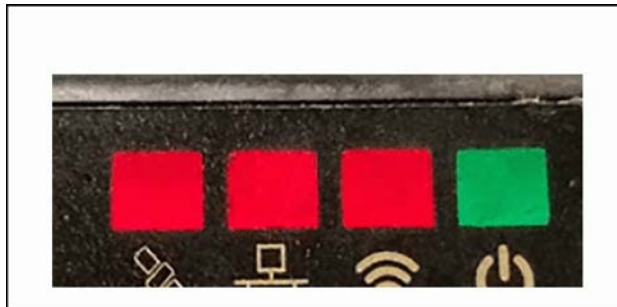
RAIL20PLM1774BA 25

The GNSS, CAN, and wireless lights turn solid green. They remain solid green until the memory device is removed. After the memory device is removed, the PCM lights behave normally.

Installation error

Indicator light behavior when there is an installation error

Update complete – failed



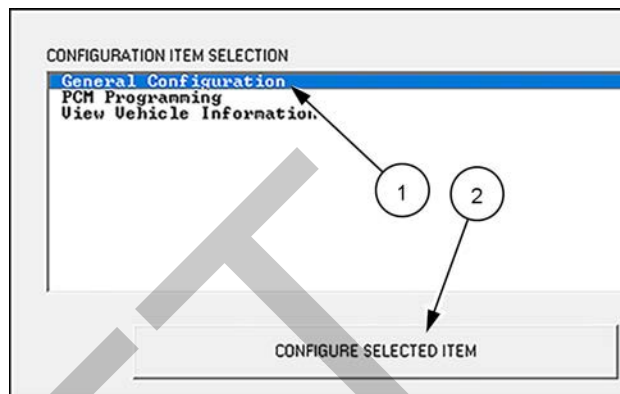
RAIL20PLM1771BA 26

The GNSS, CAN, and wireless lights turn solid red until the memory device is removed.

Programming the Vehicle Identification Number (VIN) [113776705 - V1 - 21 May 2025]

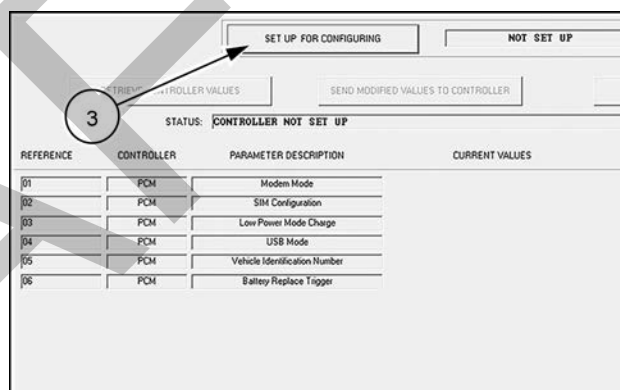
CNH Industrial recommends that you program the Processing and Connectivity Module (PCM) with the Vehicle Identification Number (VIN) on vehicles that use the PCM for telematics purposes. Programming the VIN allows the PCM to communicate with the back-end servers for silent Over-The-Air (OTA) updates.

1. With the Electronic Service Tool (EST) connected to the vehicle, open the EST base software and select the "AFS Connect (PCM)" or "MYPLMCONNECT (PCM)" model from the "Equipment Selection" page.
2. Open the "Configuration" screen. Select the "General Configuration" menu item (1).
3. Click the "Configure Selected Item" button (2). The "General Configuration" window appears.



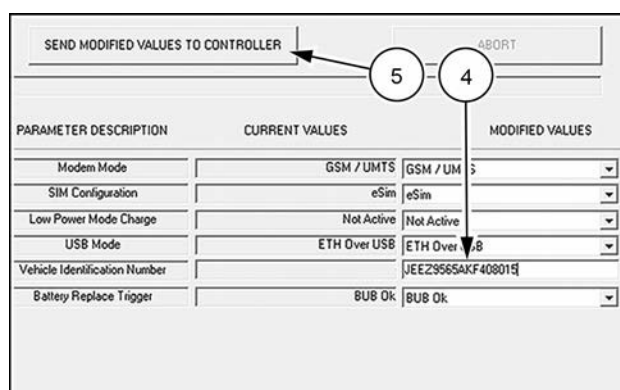
NHIL19PLM0839AA 1

4. Click the "Set Up For Configuring" button (3). The "Current Values" and "Modified Values" columns populate with the information in the vehicle.



NHIL19PLM0840AA 2

5. Enter the VIN (4) into the "Modified Values" column for parameter "Vehicle Identification Number."
6. Click the "Send Modified Values To Controller" button (5). The VIN is now programmed into the PCM.



NHIL19PLM0841AA 3

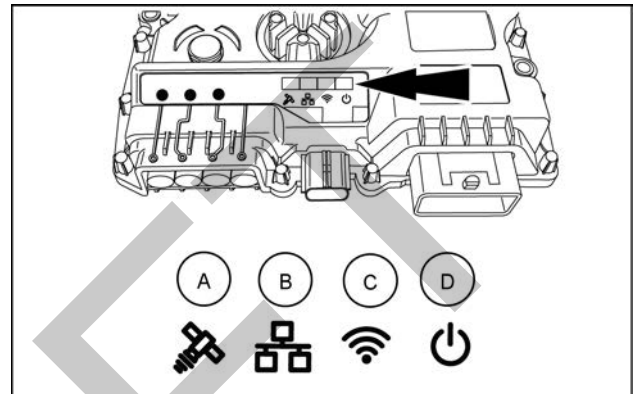
Start-up test [113776701 - V1 - 21 May 2025]

The Processing and Connectivity Module (PCM) activation and subscription purchase must be completed before utilizing the telematics system.

You must have display software version 31.26 or higher to use the PCM for telematics.

1. If applicable, turn the battery disconnect switch to the ON position.
2. Switch the ignition key to the ON position, and wait for the PCM to fully boot.
3. Check the four Light-Emitting Diode (LED) indicators **(1)** on the front of the PCM:

Item	Function	Color	State
(A)	GNSS	Green (steady)	Position acquired
(B)	Network	Green (fast blink)	All CAN bus lines ok
(C)	Wireless	Green (single 50 ms blink)	Modem connected
(D)	Power	Green (steady)	Ready

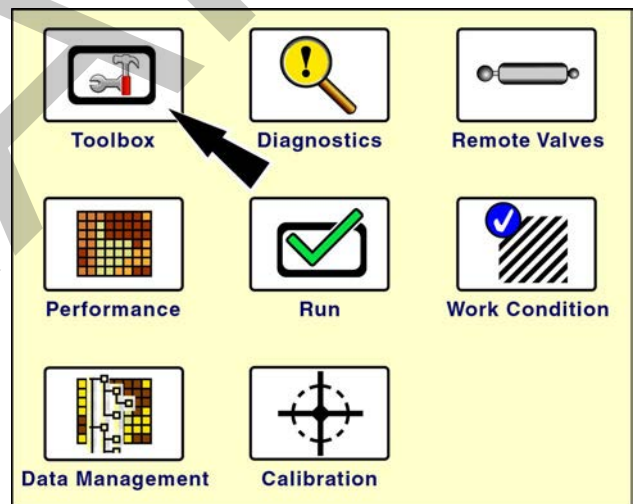


NHIL19PLM0277AA 1

NOTE: If the wiring harnesses are installed per "option 1" on a vehicle with no CAN bus lines, then the "Network" LED indicator will fast blink red.

4. Configure the tractor display for telematics operation with the PCM:

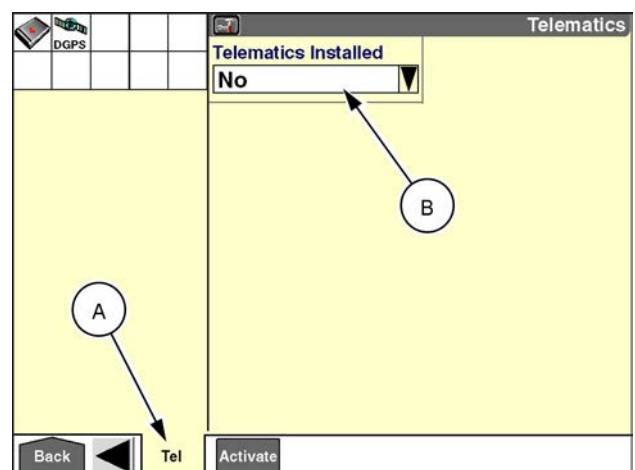
A. Press the "Toolbox" button on the home screen.



NHIL19PLM0278AA 2

B. Press the "Tel" icon **(A)** on the navigation bar to access the "Telematics" screen. The "Telematics" screen displays.

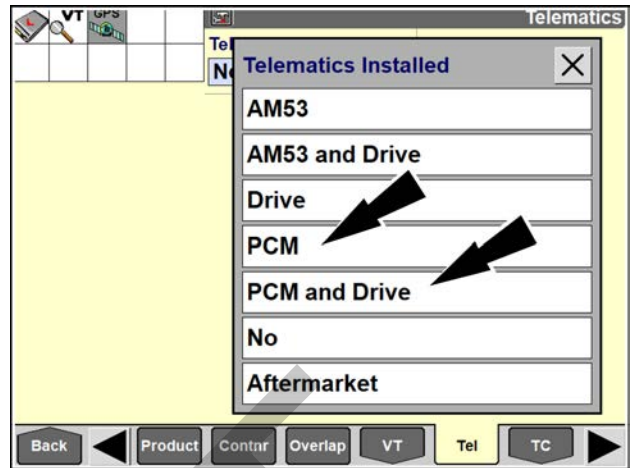
C. Press the "Telematics Installed" drop-down menu **(B)**.



RAIL12DSP1429BA 3

- D. Select the “PCM” option or the “PCM and Drive” option to enable the “Telematics” application for your vehicle.

NOTE: The “PCM and Drive” option is used if you have the **FieldView® Drive™** module installed for guidance line sharing across the vehicle fleet. For more information, see the autoguidance software operating guide.

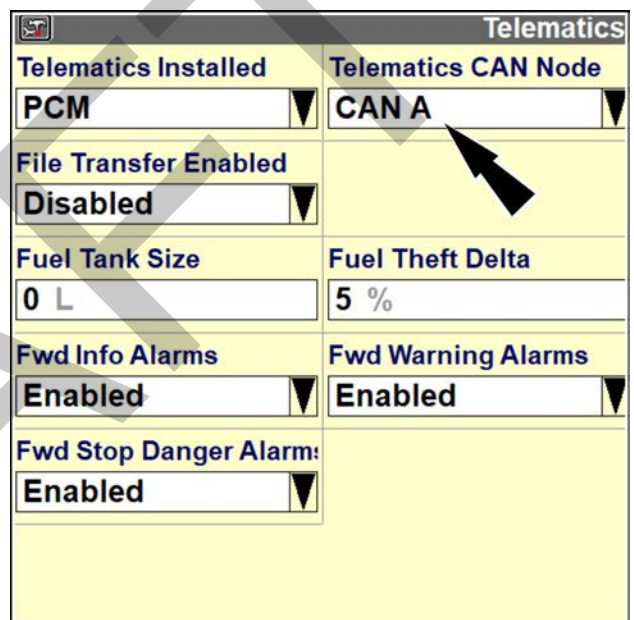


RAIL19PLM1521BA 4

- E. Press the “Telematics CAN Node” drop-down menu and select the appropriate CAN channel for the vehicle. For a cross reference of the correct CAN channel setting, see “Vehicle-specific wiring diagrams” (**Vehicle-specific wiring diagrams (55.991)**).



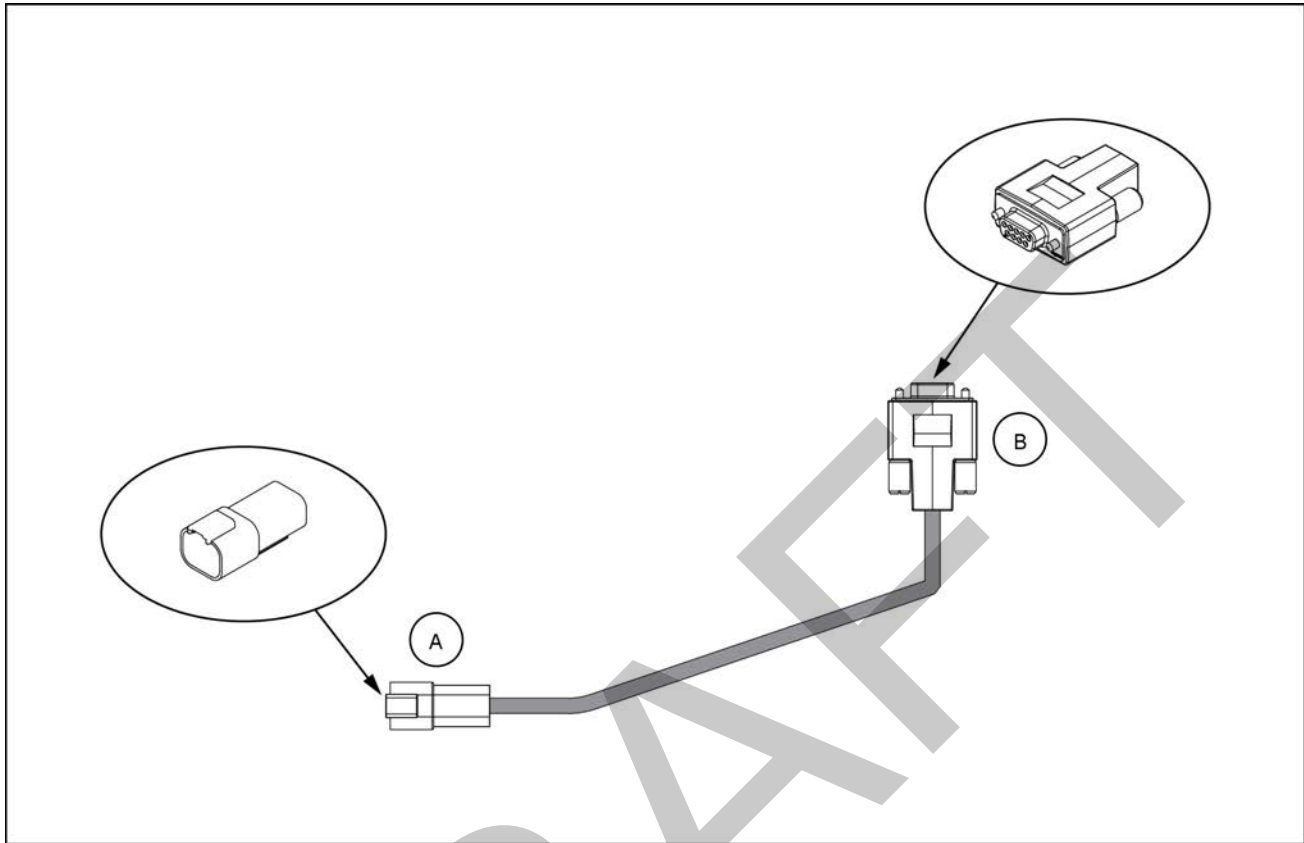
When the “Telematics” application is enabled with the PCM, the “Telematics” icon displays in the status and warning icon area. The number of bars (0-3) indicates the current strength of the cellular signal.



NHIL20PLM1632AA 5

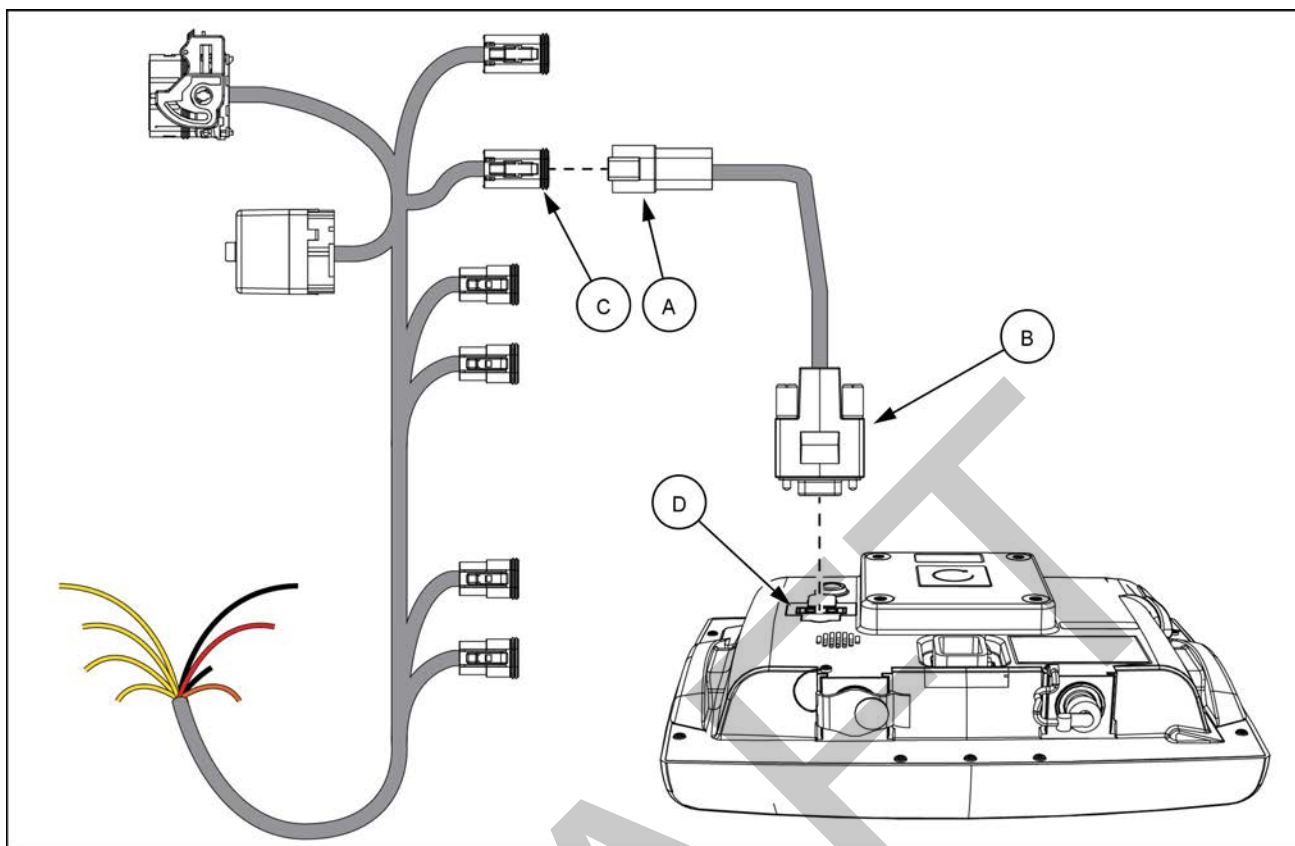
Optional wiring harnesses [113776699 - V1 - 21 May 2025]

File transfer wiring harness



NHIL19PLM0280FA 1

Item	Identifier	Description	Usage
(A)	X-020	RS-232 TO TELEMATICS	Connects to the file transfer (RS232-2) connector on the universal telematics wiring harness.
(B)	X-021	RS-232 TO DISPLAY	Connects to the RS-232 port on the back of the display.



NHIL19PLM0281FA 2

1. Procure the file transfer wiring harness, part number 90397867 (replaces 47754176), through your service parts dealer.

2. Connect the file transfer wiring harness to the universal telematics wiring harness.

A. Attach the connector **(A)** on the file transfer wiring harness to the RS232-2 connector **(C)** on the universal telematics wiring harness.

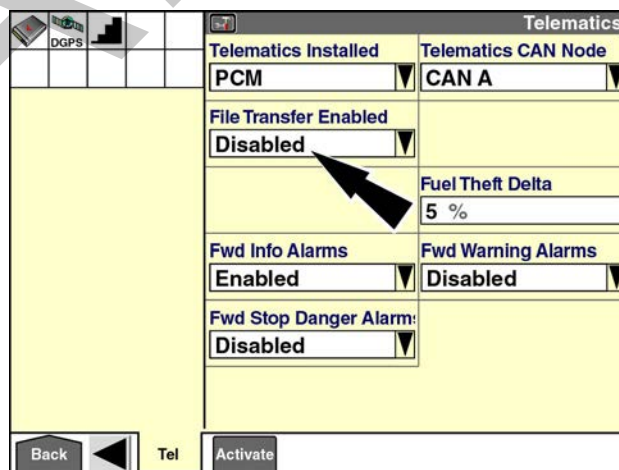
B. Attach the RS-232 connector **(B)** on the file transfer wiring harness to the RS-232 port **(D)** on the back of the display.

3. Enable file transfer in the display:

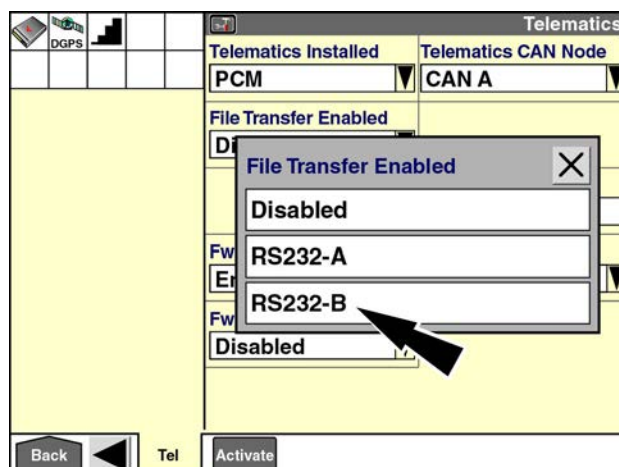
A. Navigate to the "Toolbox" > Telematics" screen.

B. Press the drop-down menu for the "File Transfer Enabled" option.

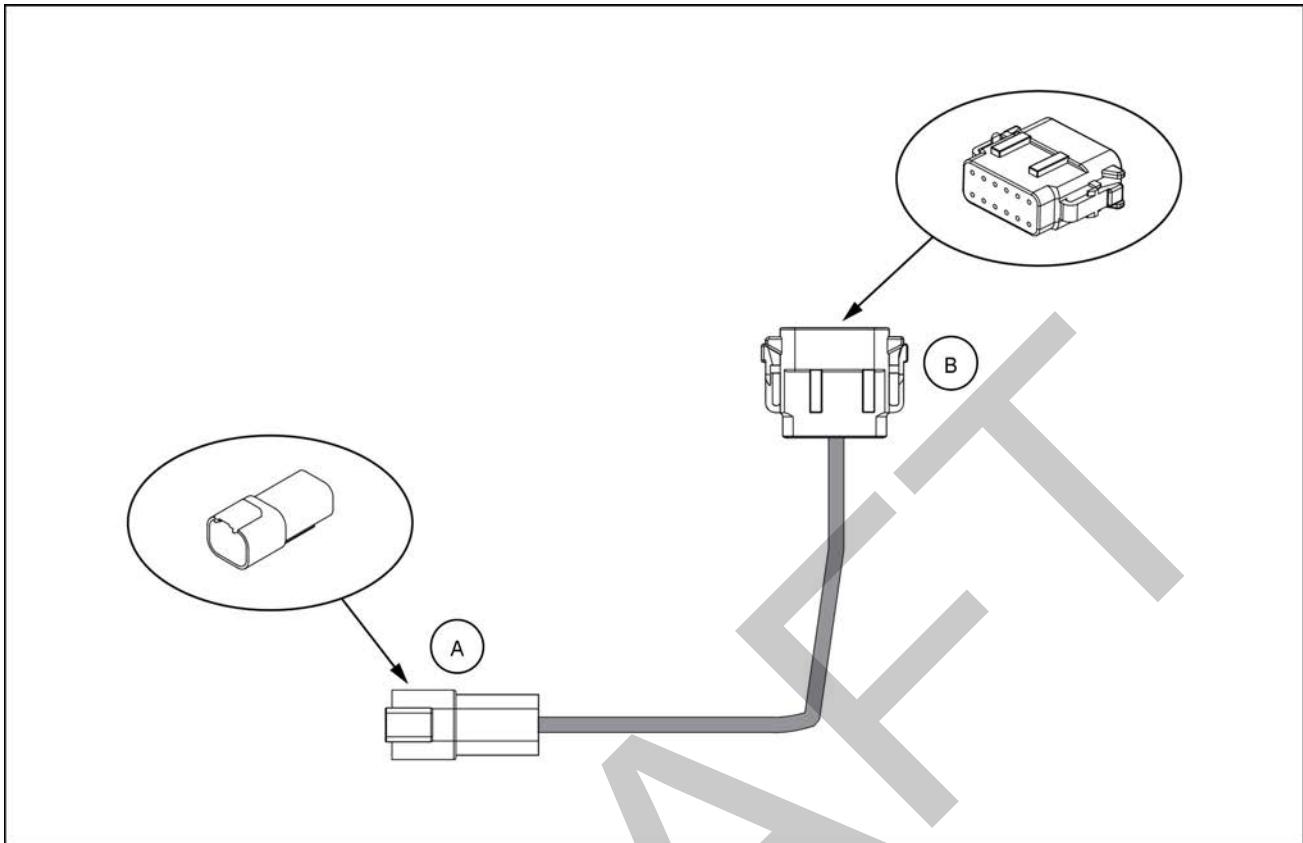
C. Select the "RS232-B" option.



NHIL19PLM0282AA 3

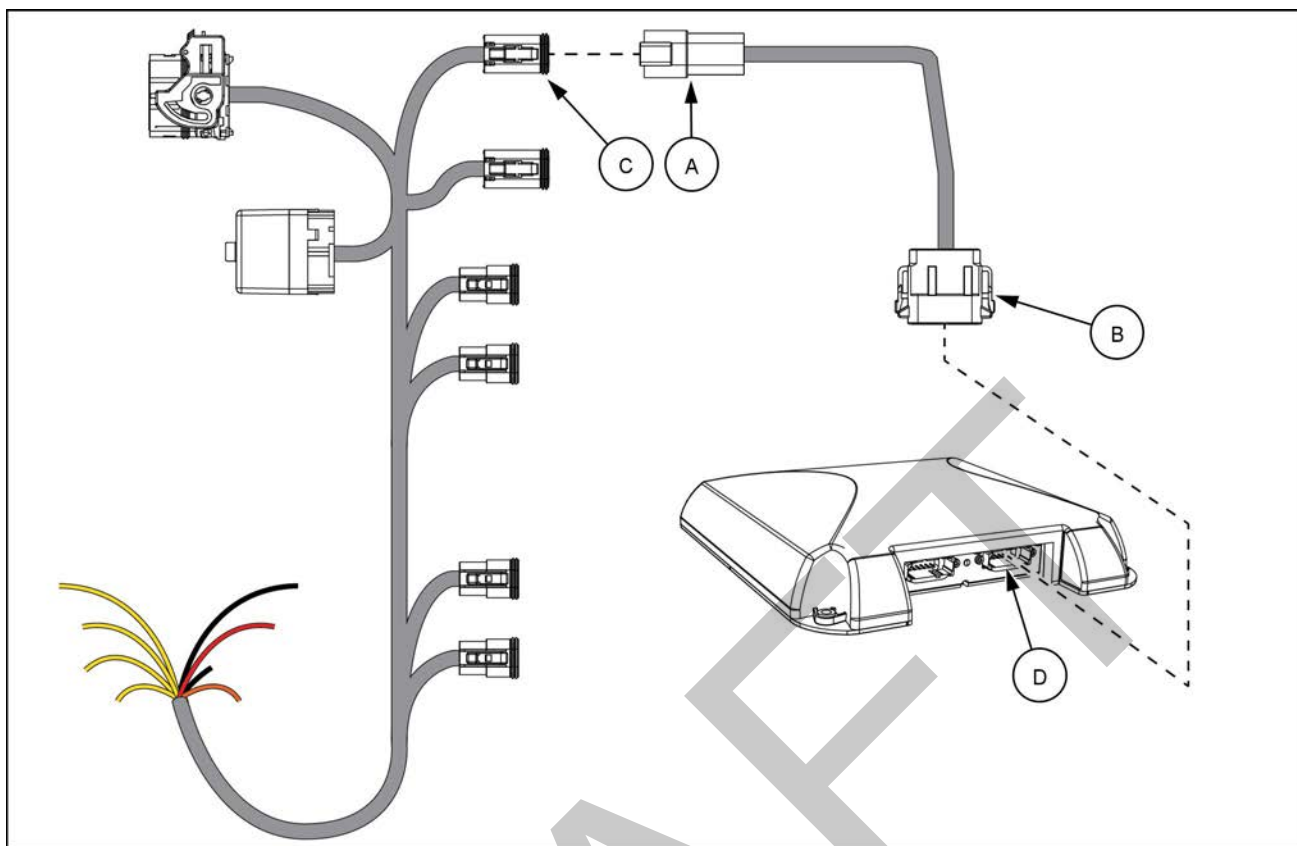


NHIL19PLM0283AA 4

NTRIP wiring harness for the 372

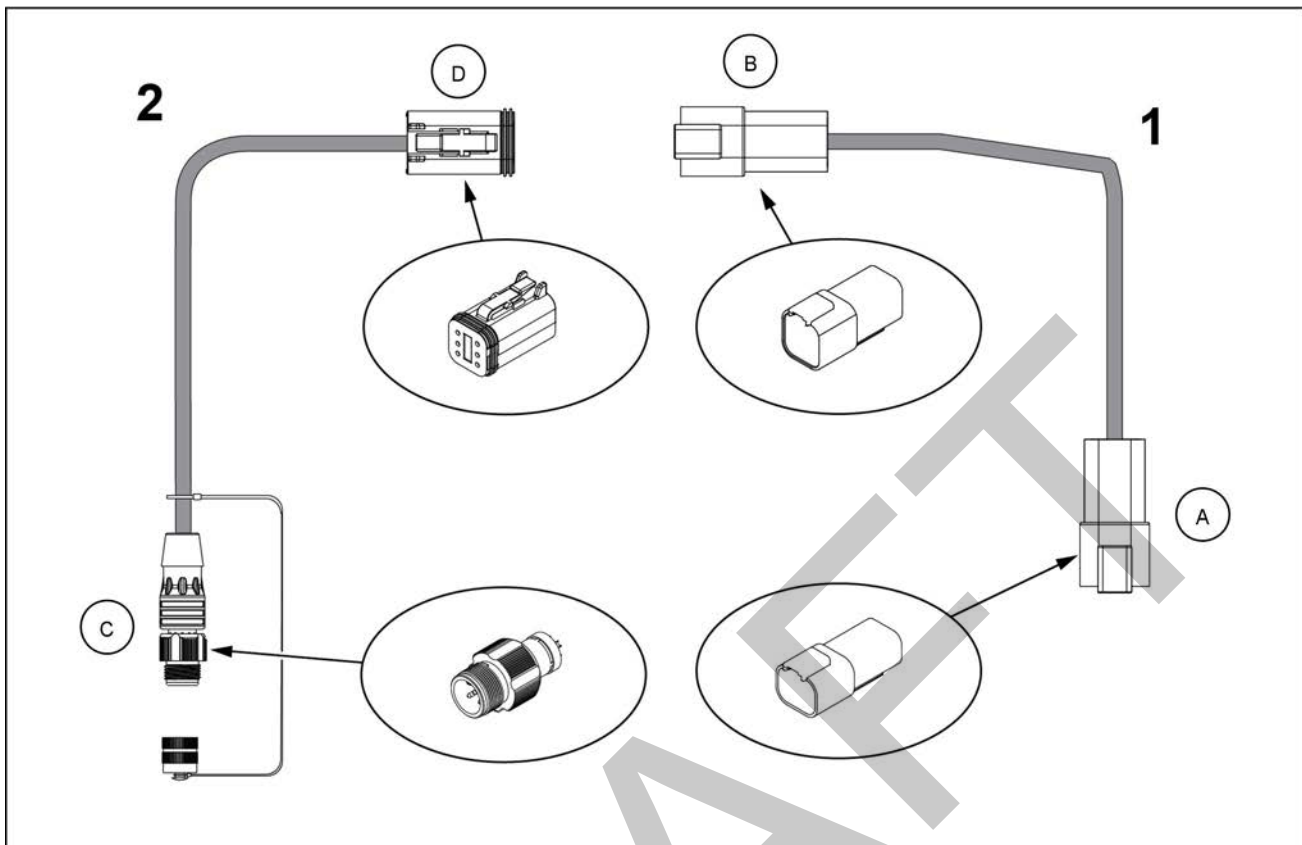
NHIL19PLM0284FA 5

Item	Identifier	Description	Usage
(A)	X-001	RS-232 TO RECEIVER	Connects to port "B" port on the back of the receiver.
(B)	X-002	RS-232 TO TELEMATICS	Connects to the NTRIP (RS232-1) connector on the universal telematics wiring harness.



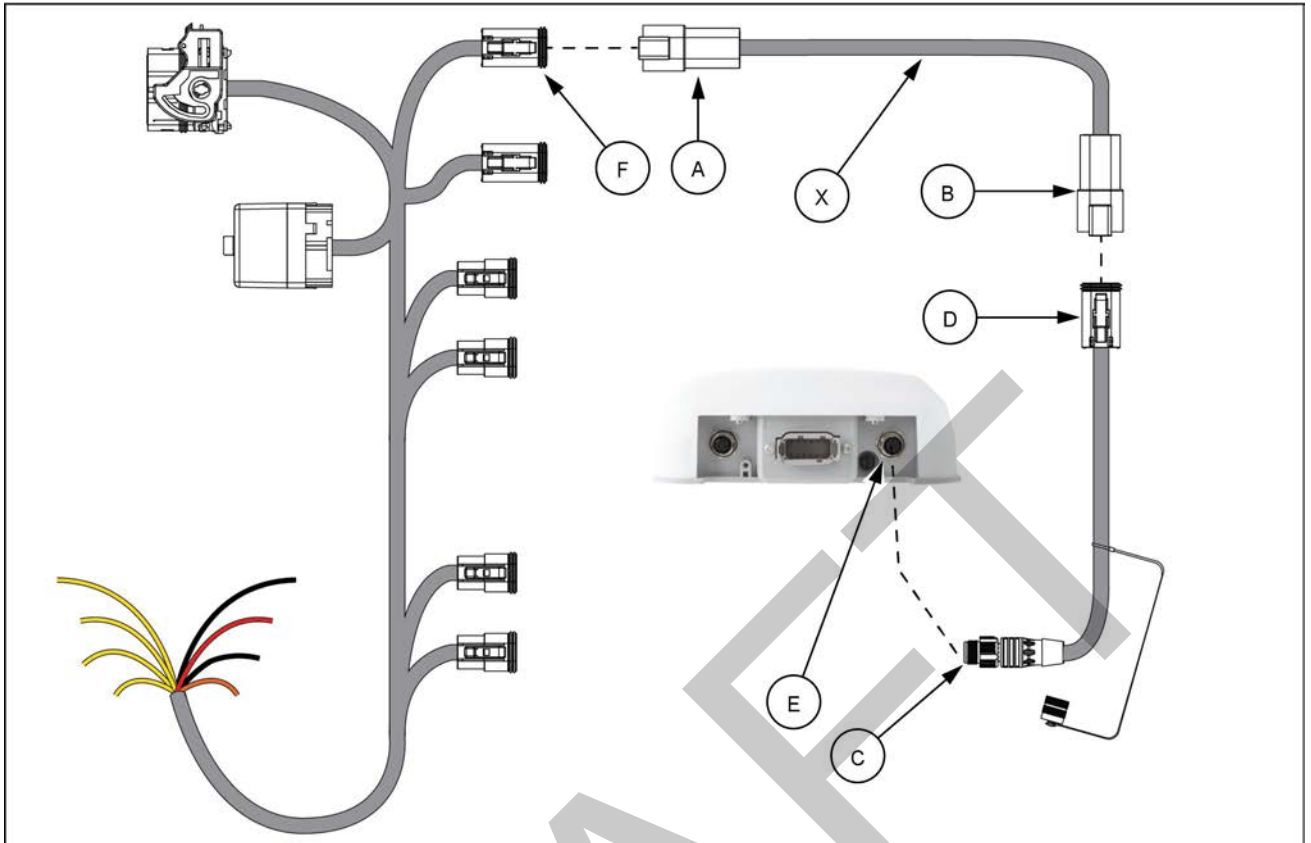
NHIL19PLM0285FA 6

1. Procure the NTRIP wiring harness, part number 90397861 (replaces 47769980), through your service parts dealer.
2. Connect the NTRIP wiring harness to the universal telematics wiring harness.
 - A. Attach the connector **(A)** on the NTRIP wiring harness to the RS232-1 connector **(C)** on the universal telematics wiring harness.
 - B. Attach the connector **(B)** on the NTRIP wiring harness to port "B" **(D)** on the back of the receiver.

NTRIP wiring harness for the NAV900 / 392

NHIL20PLM0878FA 7

Item	Identifier	Description	Usage
(1)	NAV900/PCM wiring harness		
(A)	X-210	TO PCM HARNESS	Connects to the RS232-1 port on the universal telematics wiring harness.
(B)	X-211	TO NAV900 HARNESS	Connects to the P2 connector on the NAV900 NTRIP wiring harness.
(2)	NAV900 NTRIP wiring harness		
(C)	P1	TO NAV900	Connects to the RTK Radio port on the NAV-900 guidance receiver.
(D)	P2	TO NAV900/PCM HARNESS	Connects to the NAV900/PCM wiring harness.



NHIL20PLM0877FA 8

1. Use the NAV900/PCM wiring harness, part number 90384147, and the NAV900 NTRIP wiring harness, part number ZTN110544, to connect the PCM to the NAV900 or the 392 receiver.
2. Attach the four-way connector **(A)** on the NAV900/PCM wiring harness to the RS232-1 connector **(F)** on the universal telematics wiring harness.
3. Attach the six-way connector **(B)** on the NAV900 NTRIP wiring harness to the six-way connector **(D)** on the NAV900/PCM wiring harness.
4. Attach the five-way connector **(C)** to the port **(E)** on the back of the NAV900 or the 392 receiver.

For NTRIP corrections with either the 372 receiver, the 392 receiver, or the NAV900 guidance controller, you must enable "NTRIP" in the display:

- Navigate to the "Toolbox" > "GPS" screen.
- Press the drop-down menu for the "Correction Type" option, and select "RTK" (1).
- Press the drop-down menu for the "Correction Level" option, and select "Modem" (2).
- Press the "Edit" button (3) under the "NTRIP Account" window and configure your NTRIP account information.

NOTE: The NTRIP information is typically provided by your RTK network administrator.

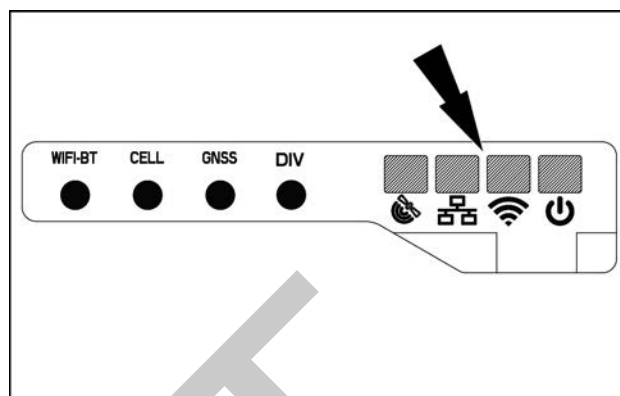
The screenshot shows the "GPS Setup" screen. It has a yellow background with a grid of settings. Callout 1 points to the "Correction Type" dropdown menu, which is set to "RTK". Callout 2 points to the "Correction Level" dropdown menu, which is set to "Modem". Callout 3 points to the "Edit" button under the "NTRIP Account" section. The "NTRIP Account" section also includes an "Edit" button. Other settings visible include "DGPS Alarm" (No), "Backup Source" (None), "Correction Format" (RTK Link), "GPS Location" (Custom), "Forward Offset" (1.270 m), "Height Offset" (3.302 m), and "Right Offset" (0.000 m). The bottom of the screen has a navigation bar with buttons: Back, GPS, PF, Marks, Manual, Product, and Contr.

RAIL16DSP0837BA 9

Light Emitting Diode (LED) status indicators [113776697 - V1 - 21 May 2025]

The Processing and Connectivity Module (PCM) has four tri-color Light-Emitting Diode (LED) indicators for diagnostics on the following functions:

- Global Navigation Satellite System (GNSS)
- Network
- Wireless
- Power



RAIL19PLM1077AA 1

Icon	Function		State / color	Description
	GNSS		None	Off
			Red (solid)	Fault
			Orange (medium blink)	Getting position
			Green (solid)	Position acquired
	Network		Off	No activity
			Red (fast blink)	One or more CAN bus lines fault
			Orange (fast blink)	One or more CAN bus lines off or message missing
			Green (fast blink)	All CAN bus lines ok
	Wireless	Modem	Red (single blink)	Error
		Modem	Orange (single blink)	Connecting
		Modem	Green (single blink)	Connected
	Wireless	WiFi	Red (double blink)	Error
		WiFi	Orange (double blink)	Connecting / scanning
		WiFi	Green (double blink)	Connected
	Wireless	Bluetooth®	Red (triple blink)	Error
		Bluetooth®	Orange (triple blink)	Connecting
		Bluetooth®	Green (triple blink)	Connected
	Power		None	Off
			Red (solid)	Power fault
			Orange (very slow blink)	Standby – Battery backup
			Orange (medium blink)	Firmware update
			Green (very slow blink)	Standby – External power
			Green (medium blink)	Booting
			Green (solid)	Ready

APPENDIX

Power and ground connections [108464289 - V2 - 24 November 2023]

If the vehicle is equipped with a battery disconnect switch, install the power and ground wires per the following recommendation:

- Connect the clean ground wire directly to the negative battery terminal.
- If the machine is equipped with a negative-side battery disconnect switch, connect the chassis ground reference wire to make sure that the PCM operates as expected with the battery disconnect switch open.
- If the machine is equipped with a positive-side battery disconnect switch or no disconnect switch, the chassis ground reference wire is not required.
- The B+ wire should always be connected directly to the positive battery terminal, if possible.

DIN 9680 power port

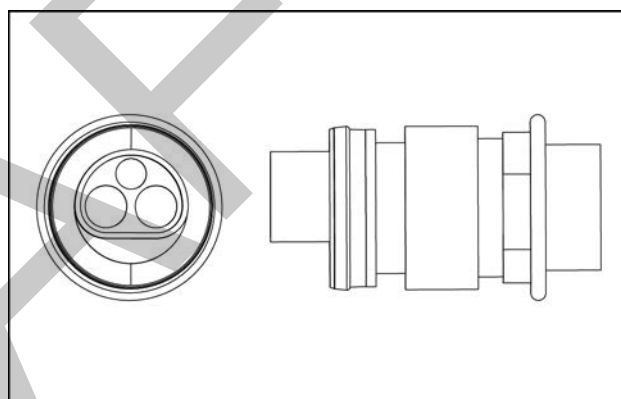
If the vehicle has an accessible **DIN 9680** power port near the mounting location of the PCM, procure the appropriate connector housing to connect the universal telematics wiring harness to the vehicle power source.

Description	Quantity	Part number
DIN 9680 3-way connector housing	1	82013449
6.3 mm female blade terminal	2	N/A
4.8 mm female blade terminal	1	N/A

Crimp the blade terminals onto the ends of the wires labeled "B+", "SW B+", and "CLEAN GND" on the universal telematics wiring harness.

Populate the connector housing according to the pin table.

Pin	Wire	Wire color
82	SW B+	Orange
30	B+	Red
31	CLEAN GND	Black



NHIL20PLM1597AA 1

CPC power port

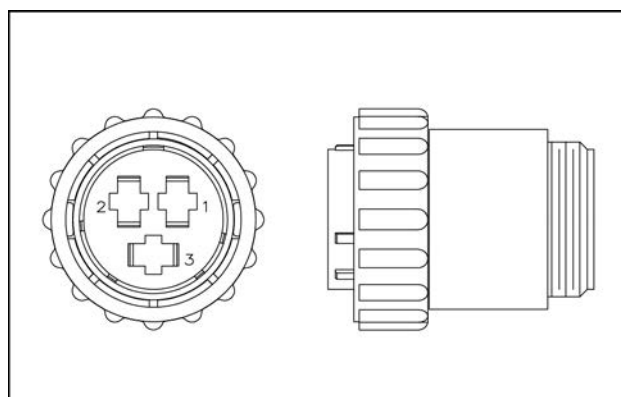
If the vehicle has an accessible CPC power port near the mounting location of the PCM, procure the appropriate connector housing to connect the universal telematics wiring harness to the vehicle power source.

Description	Quantity	Part number
AMP CPC CPC 3-way connector housing	1	87675194
AMP CPC terminal	3	87681942

Crimp the AMP terminals onto the ends of the wires labeled "B+", "SW B+", and "CLEAN GND" on the universal telematics wiring harness.

Populate the connector housing according to the pin table.

Pin	Wire	Wire color
1	SW B+	Orange
2	B+	Red
3	CLEAN GND	Black



NHIL20PLM1596AA 2

Radio Frequency (RF) band specifications [113776688 - V2 - 17 June 2025]

For detailed Wi-Fi, Bluetooth, and cellular setup instructions, see the appropriate display software operating guide that covers the setup and operation of your specific display.

Wi-Fi (2.4 Ghz Only)

Frequency:

EU: 2.4 GHz to 2.483 GHz

FCC/ISED: 2.4 GHz to 2.473 GHz

UKCA: 2.4 GHz to 2.483 GHz

MIC: 2.4 GHz to 2.483 GHz

RCM: 2.4 GHz to 2.483 GHz

Transmit Power:

< 20 dBm (EIRP)

Bluetooth

Frequency:

EU: 2.4 GHz to 2.483 GHz

FCC/ISED: 2.4 GHz to 2.473 GHz

UKCA: 2.4 GHz to 2.483 GHz

MIC: 2.4 GHz to 2.483 GHz

RCM: 2.4 GHz to 2.483 GHz

Transmit Power:

< 10 dBm (EIRP)

Cellular

FDD-LTE: bands 1, 2, 3, 4, 5, 7, 8, 12, 13, 18, 19, 20, 26, 28, 66

TD-LTE: bands 38, 40

UMTS (WCDMA/FDD): bands 1, 2, 3, 4, 5, 6, 8, 19

Vehicle-specific wiring diagrams [113776695 - V1 - 21 May 2025]

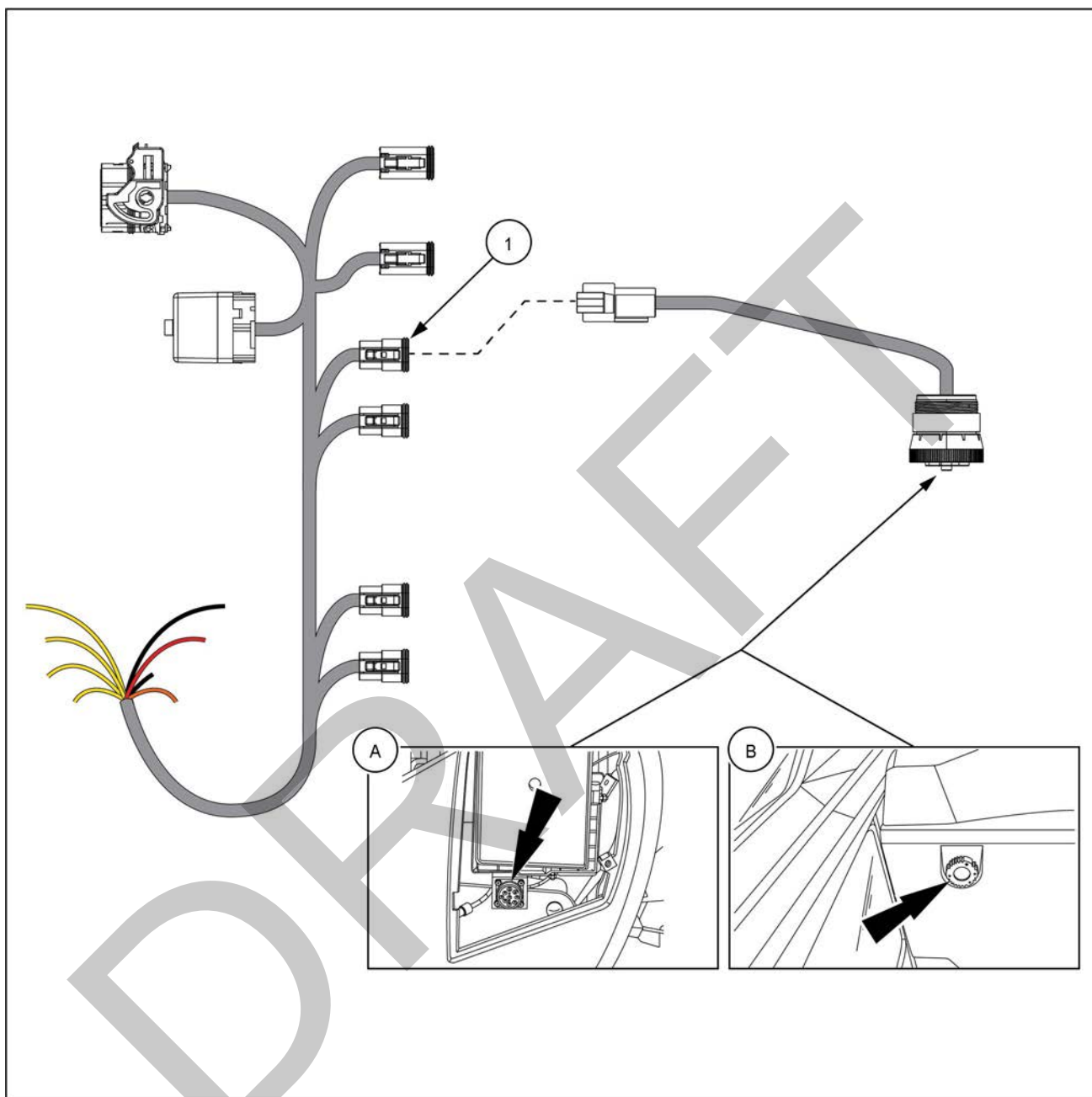
The following section provides installation diagrams for the most common vehicle-specific universal telematics installations. If your vehicle is not listed in this section, check to see if there is a vehicle-specific telematics kit that is available. For older models, refer to the “Cable help” documentation under the specific vehicle series in the Electronic Service Tool (EST) for the location and identification of the diagnostic connectors used in the telematics kit installation.

Type	Product series	Wiring harnesses	Telematics CAN node ¹	Reference
Agricultural tractor	T6 / Maxxum ® Tier 4B / Stage V	Dual CAN Single CAN	CAN-A	Figure 4
Agricultural tractor	T7 / Puma ®	Dual CAN Single CAN	CAN-A	Figure 5
Agricultural tractor	T7 HD / Optum ®	Dual CAN Single CAN	CAN-A	Figure 6
Agricultural tractor	T8 / Magnum ™ Tier 4A	Dual CAN Single CAN	CAN-A	Figure 7
Agricultural tractor	T9 / Steiger ® Tier 4A	Dual CAN Single CAN	CAN-A	Figure 8
Utility tractor	PowerStar ™, T4, T5 / Farmall ® C	Dual CAN Single CAN	CAN-A	Figure 1
All purpose (low) tractor	T5 / Farmall ® U, Luxxum ™	Dual CAN Single CAN	CAN-A	Figure 2
Specialty tractor	T4.LP , FB, F, N, V, T4000F, N, V / Quantum CL, F, N, V	Dual CAN Single CAN	CAN-A	Figure 3
Combine	Axial-Flow ® 140, 150 series	Dual CAN	CAN-A	Figure 10
Self-propelled windrower	Speedrower ® / WD4	Dual CAN	CAN-A	Figure 11
Self-propelled forage harvester	FR9. / FR9000	Dual CAN	CAN-A	Figure 12
Self-propelled sprayer	Guardian ™	Dual CAN	CAN-B	Figure 13
Self-propelled sprayer	Patriot ®	Dual CAN	CAN-B	Figure 14
Self-propelled sugarcane harvester	Austoft ® 8000	Dual CAN	CAN-B	Figure 15

NOTE: ¹ The Telematics CAN node setting is set on the “Telematics” screen (Home > Toolbox > Tel) of the display.

Utility tractors – PowerStar™, T4, T5 / Farmall® C series

NOTE: * Applies to T4.55, T4.65, T4.75, T4.90, T4.100, T4.110, T4.120, T5.90, T5.100, T5.110, T5.120 and **Farmall®** 55C, 65C, 75C, 90C, 100C, 110C, 120C models.



NHIL20PLM1696GA 1

Diagnostic connector:

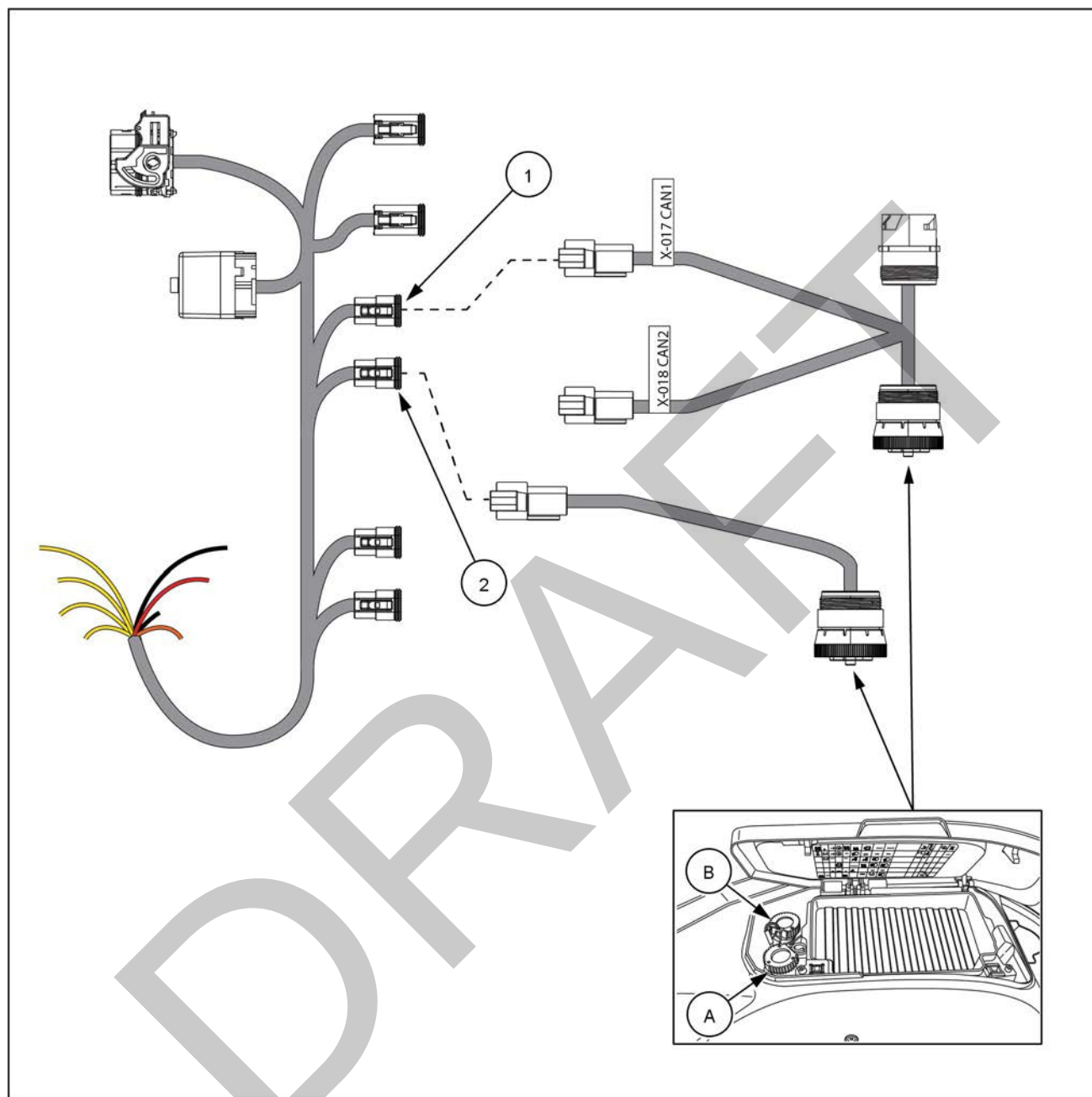
The primary diagnostic connector is located on the left-hand side of the center console on ROPS models **(A)** and the left-hand side of the operator's seat on cab models **(B)**.

Instructions:

1. Attach the single CAN-to-diagnostic wiring harness connector to the "CAN1" connector **(1)** on the universal telematics wiring harness.
2. Attach the single CAN-to-diagnostic wiring harness to the primary diagnostic connector **(A)**.

All purpose (low) tractors – T5 / Farmall® U, Luxxum™ series

NOTE: * Applies to T5.100, T5.110, T5.120 (Tier 4B with **Electro Command™**), **Farmall®** 110U, 120U (Tier 4B), and **Luxxum** 100, 110, 120 (Tier 4B) models.



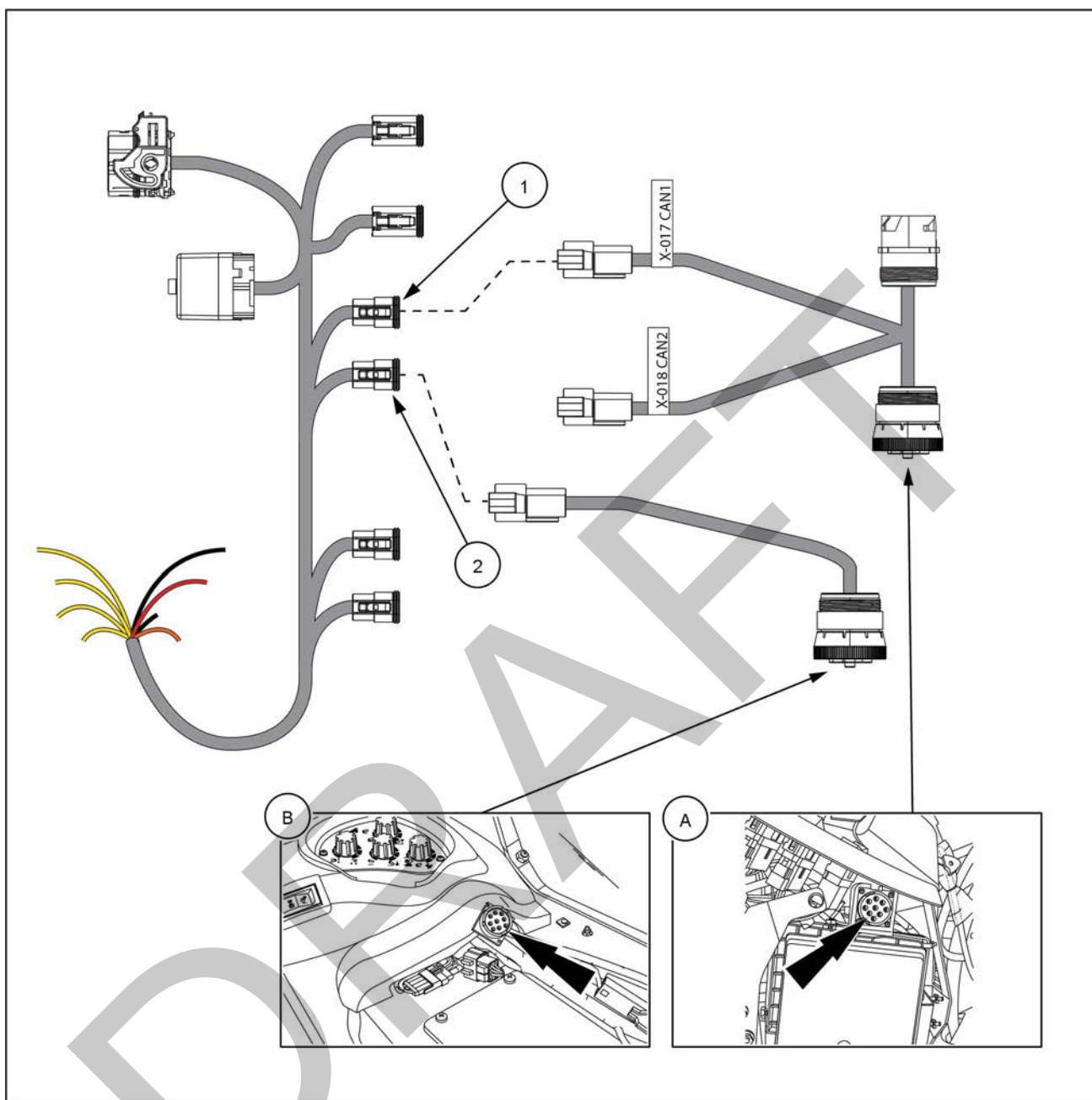
NHIL20PLM1697GA 2

Diagnostic connectors:

The primary **(A)** and secondary **(B)** diagnostic connectors are located in the left-hand storage tray.

Instructions:

1. Attach the dual CAN-to-diagnostic wiring harness connector "X-017 CAN1" to the "CAN1" connector **(1)** on the universal telematics wiring harness. Leave connector "X-018 CAN2" disconnected.
2. Attach the single CAN-to-diagnostic wiring harness connector to the "CAN2" connector **(2)** on the universal telematics wiring harness.
3. Attach the dual CAN-to-diagnostic wiring harness to the primary diagnostic connector **(A)**.
4. Attach the single CAN-to-diagnostic wiring harness to the secondary diagnostic connector **(B)**.

Specialty tractors – T4.LP , FB, F, N, V, T4000F, N, V / Quantum CL, F, N, V series


NHIL20PLM1698GA 3

Diagnostic connectors:

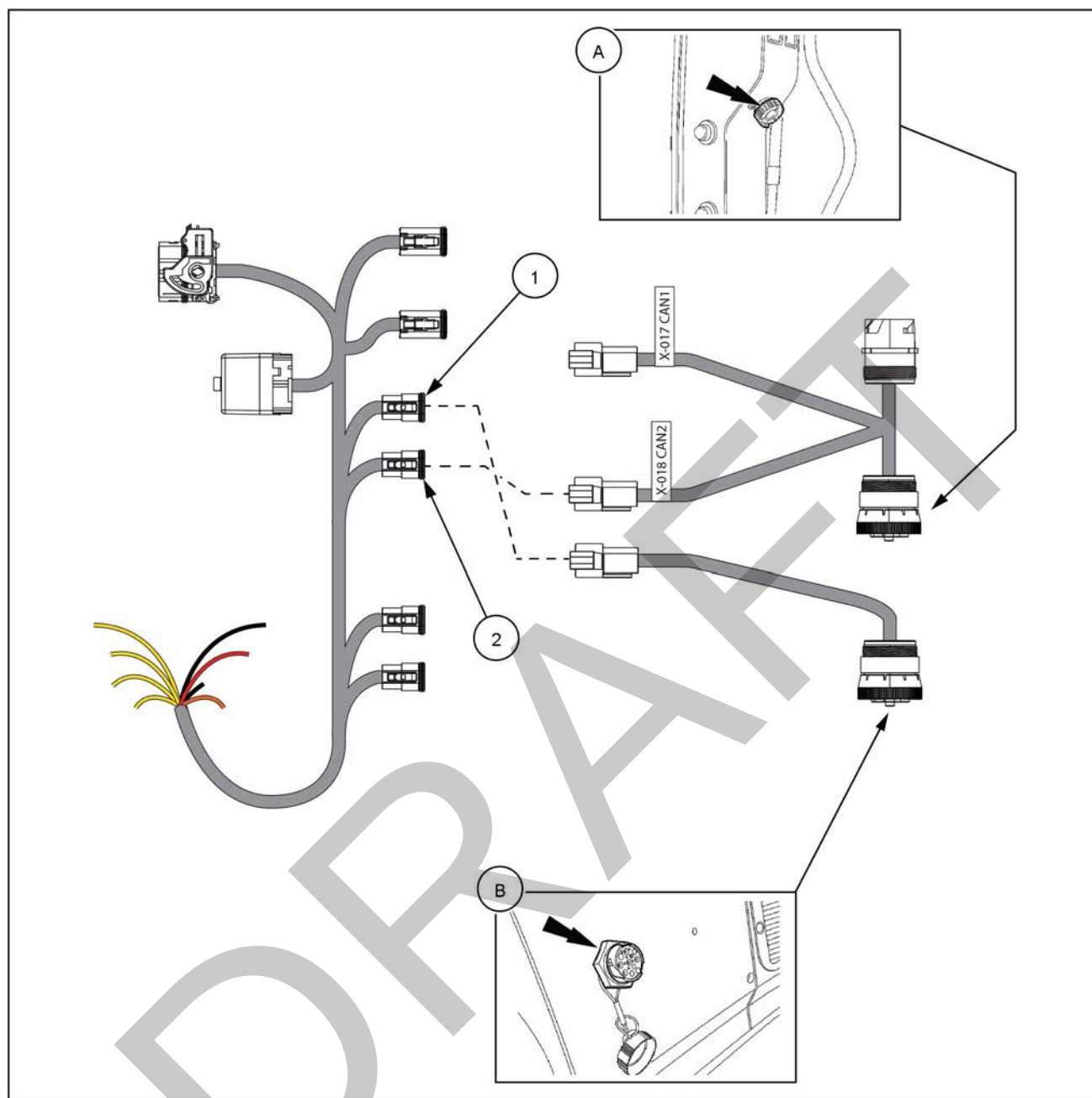
The primary diagnostic connector **(A)** is located on the left-hand side of the steering column.

The secondary diagnostic connector **(B)** is located on the right-hand side of the operator's seat.

Instructions:

1. Attach the dual CAN-to-diagnostic wiring harness connector "X-017 CAN1" to the "CAN1" connector **(1)** on the universal telematics wiring harness. Leave connector "X-018 CAN2" disconnected.
2. Attach the single CAN-to-diagnostic wiring harness connector to the "CAN2" connector **(2)** on the universal telematics wiring harness.
3. Attach the dual CAN-to-diagnostic wiring harness to the primary diagnostic connector **(A)** on the C-pillar.
4. Attach the single CAN-to-diagnostic wiring harness to the secondary diagnostic connector **(B)** on the back wall of the cab.
5. Attach the single and dual CAN-to-diagnostic wiring harnesses to the vehicle diagnostic connectors.

Agricultural tractors – T6 / Maxxum® series (Tier 4B / Stage V)



NHIL22PLM0202GA 4

NOTE: Install the vehicle-specific telematics kit for this product line, if available. The instructions below are only applicable if the universal telematics kit is installed.

Diagnostic connectors:

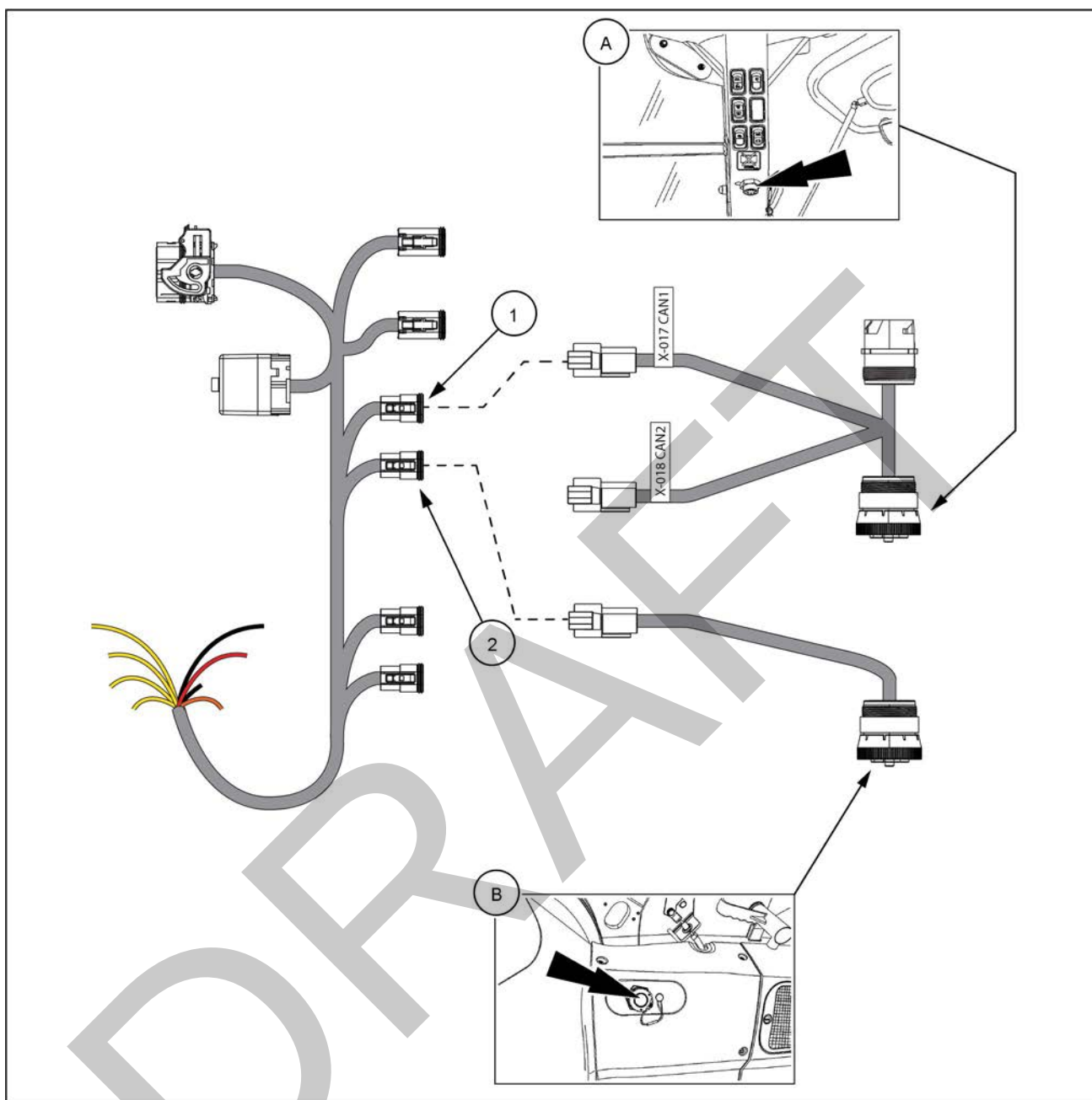
The primary diagnostic connector **(A)** is located on the C-pillar.

The secondary diagnostic connector **(B)** is located behind the operator's seat.

Instructions:

1. Attach single CAN-to-diagnostic wiring harness connector to "CAN1" connector **(1)** on universal telematics wiring harness.
2. Attach single CAN-to-diagnostic wiring harness to primary diagnostic connector **(A)** on the C-pillar.
3. Attach dual CAN-to-diagnostic wiring harness connector "X-018 CAN2" to "CAN2" connector **(2)** on universal telematics wiring harness. Leave connector "X-017 CAN1" disconnected.
4. Attach dual CAN-to-diagnostic wiring harness to primary secondary connector **(B)** behind the operator's seat.

Agricultural tractors – T7 / Puma® series



NHIL20PLM1598GA 5

Diagnostic connectors:

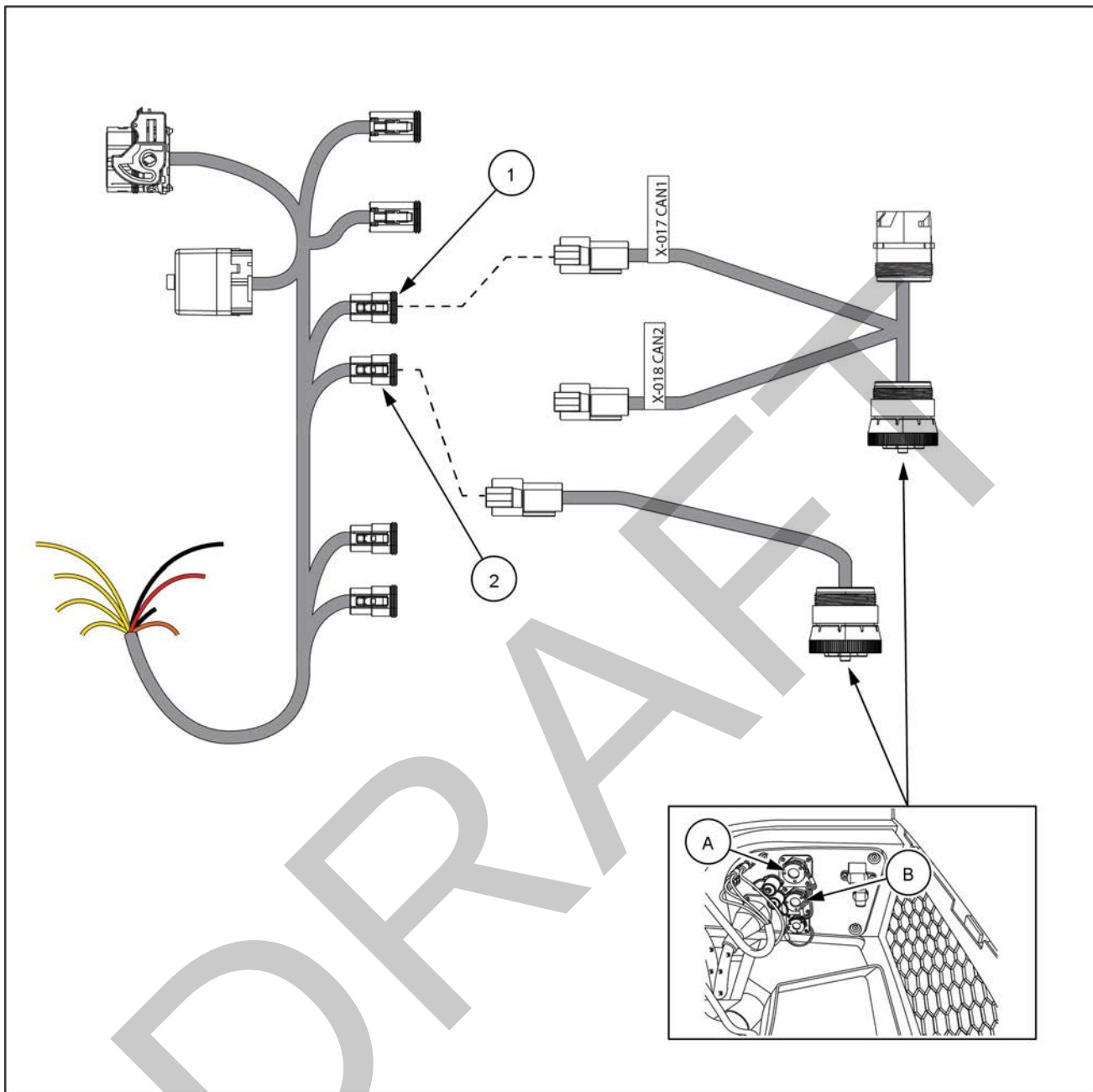
The primary diagnostic connector **(A)** is located on the C-pillar.

The secondary diagnostic connector **(B)** is located behind the operator's seat, on the right-hand side.

Instructions:

1. Attach dual CAN-to-diagnostic wiring harness connector "X-017 CAN1" to "CAN1" connector **(1)** on universal telematics wiring harness. Leave connector "X-018 CAN2" disconnected.
2. Attach single CAN-to-diagnostic wiring harness connector to "CAN2" connector **(2)** on universal telematics wiring harness.
3. Attach dual CAN-to-diagnostic wiring harness to primary diagnostic connector **(A)** on the C-pillar.
4. Attach single CAN-to-diagnostic wiring harness to secondary diagnostic connector **(B)** on the back wall of the cab.

Agricultural tractors – T7 HD / Optum® series



NHIL20PLM1699GA 6

Diagnostic connectors:

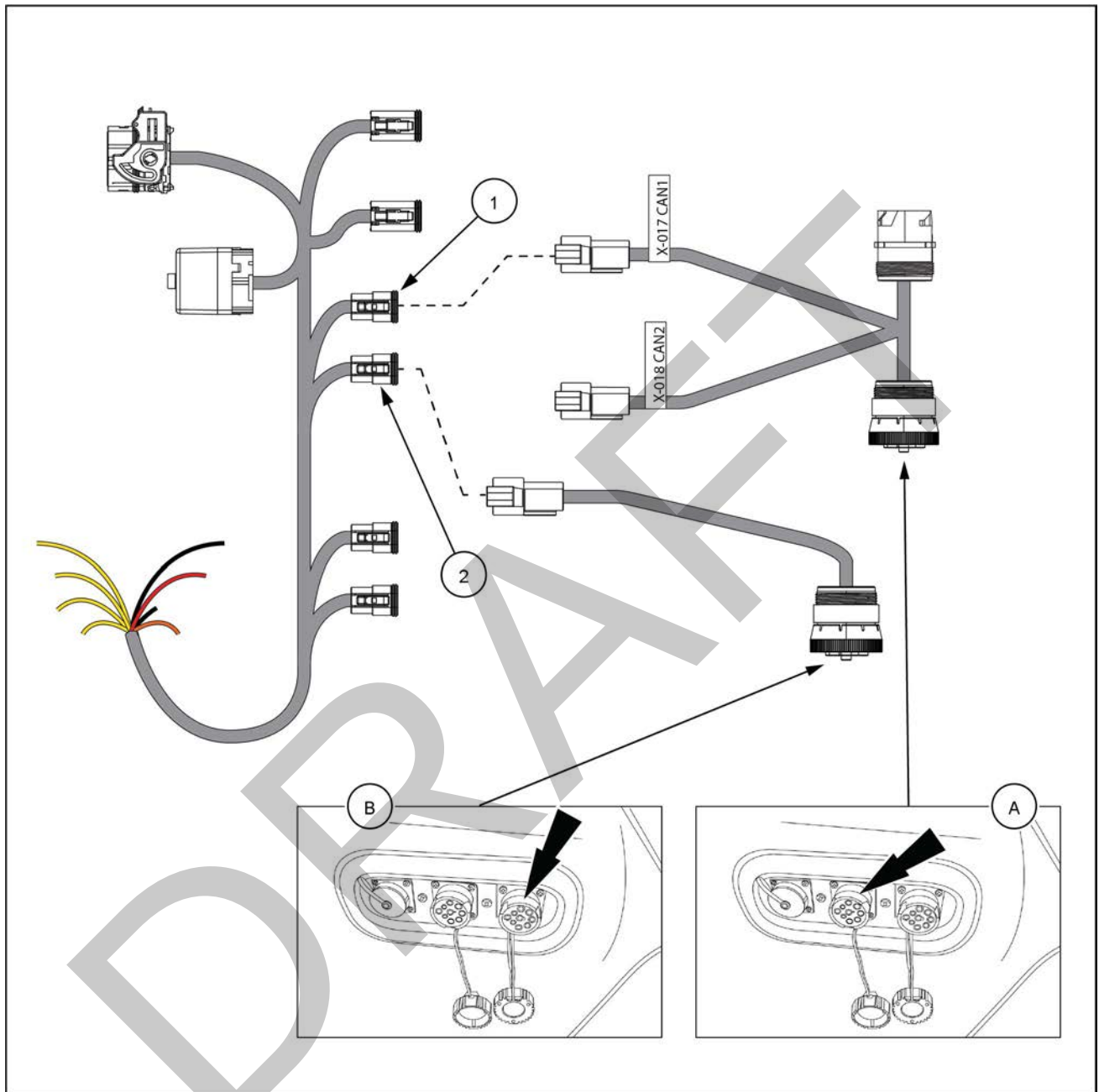
The primary diagnostic connector **(A)** and the secondary diagnostic connector **(B)** are located behind the operator's seat on the back wall of the cab.

Instructions:

1. Attach dual CAN-to-diagnostic wiring harness connector "X-017 CAN1" to "CAN1" connector **(1)** on universal telematics wiring harness. Leave connector "X-018 CAN2" disconnected.
2. Attach single CAN-to-diagnostic wiring harness connector to "CAN2" connector **(2)** on universal telematics wiring harness.
3. Attach dual CAN-to-diagnostic wiring harness to primary diagnostic connector **(A)** on the C-pillar.
4. Attach single CAN-to-diagnostic wiring harness to secondary diagnostic connector **(B)** on the back wall of the cab.

Agricultural tractors – T8 / Magnum™ Tier 4A series

(T8.275, T8.300, T8.330, T8.360, T8.390 / **Magnum™ 325, Magnum™ 260, Magnum™ 290, Magnum™ 315, Magnum™ 340**)



NHIL22PLM0306GA 7

Diagnostic connector:

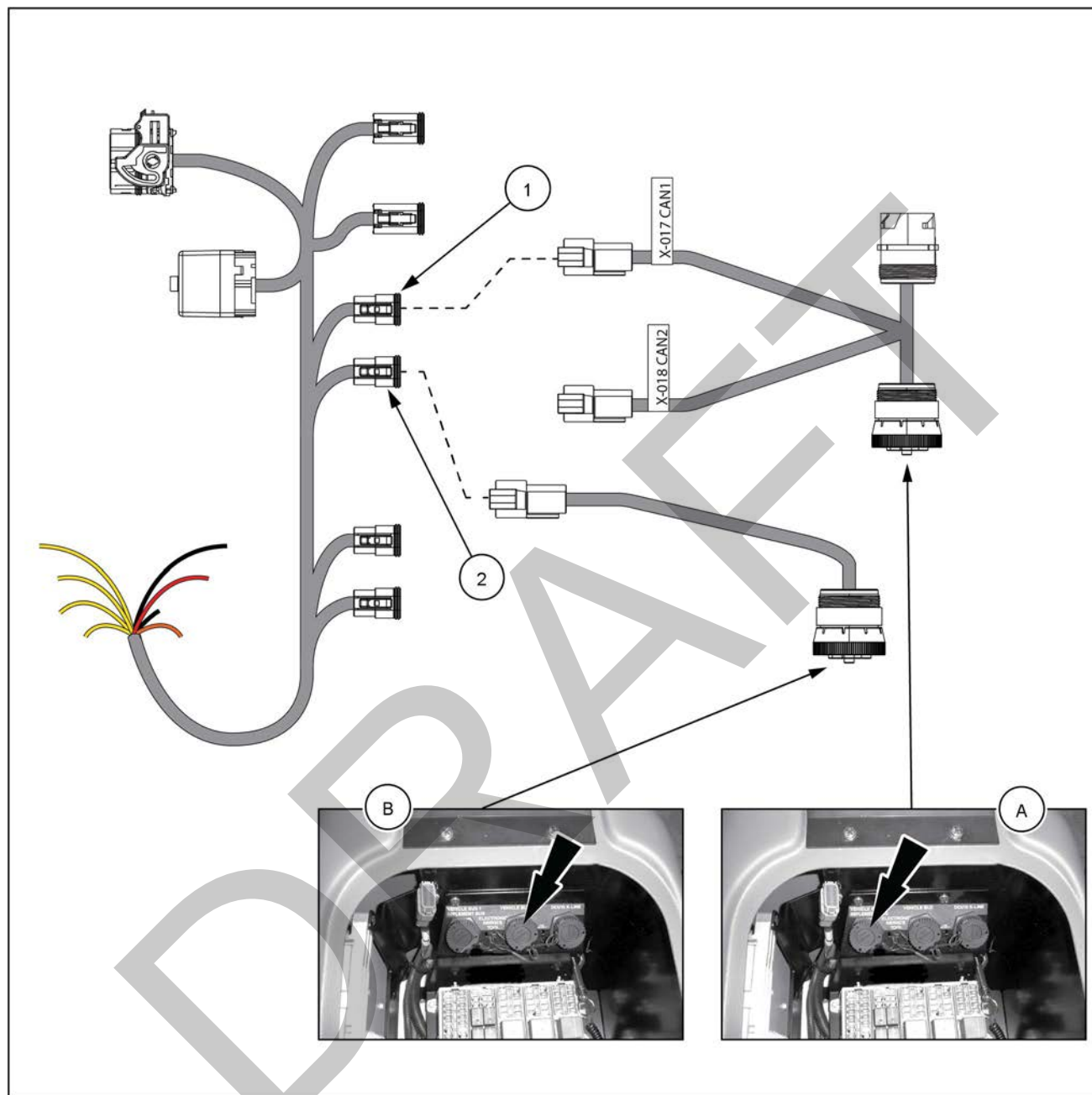
The diagnostic connectors are located forward of and below the right-hand console.

Instructions:

1. Attach dual CAN-to-diagnostic wiring harness connector "X-017 CAN1" to "CAN1" connector **(1)** on universal telematics wiring harness. Leave connector "X-018 CAN2" disconnected.
2. Attach single CAN-to-diagnostic wiring harness connector to "CAN2" connector **(2)** on universal telematics wiring harness.
3. Attach dual CAN-to-diagnostic wiring harness to primary diagnostic connector **(A)**.
4. Attach single CAN-to-diagnostic wiring harness to secondary diagnostic connector **(B)**.

Agricultural tractors – T9 / Steiger® Tier 4A series

(T9.390, T9.450, T9.505, T9.560, T9.615, T9.670 / **Steiger® 350**, **Steiger® 400**, **Steiger® 450**, **Steiger® 500**, **Steiger® 550**, **Steiger® 600**, prior to PIN ZEF139999)



NHIL22PLM0304GA 8

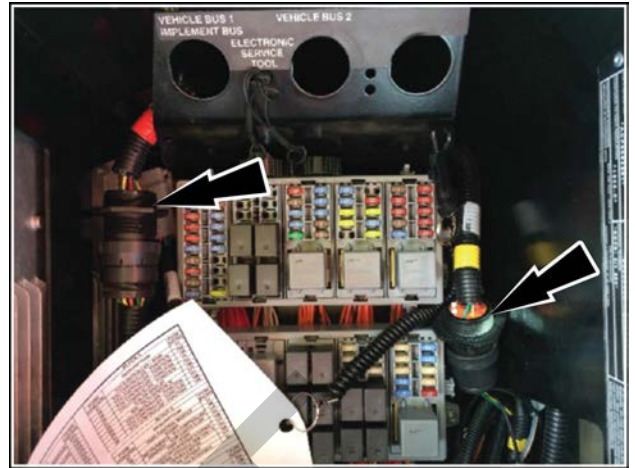
Diagnostic connector:

The diagnostic connectors are located under the instructor's seat.

Instructions:

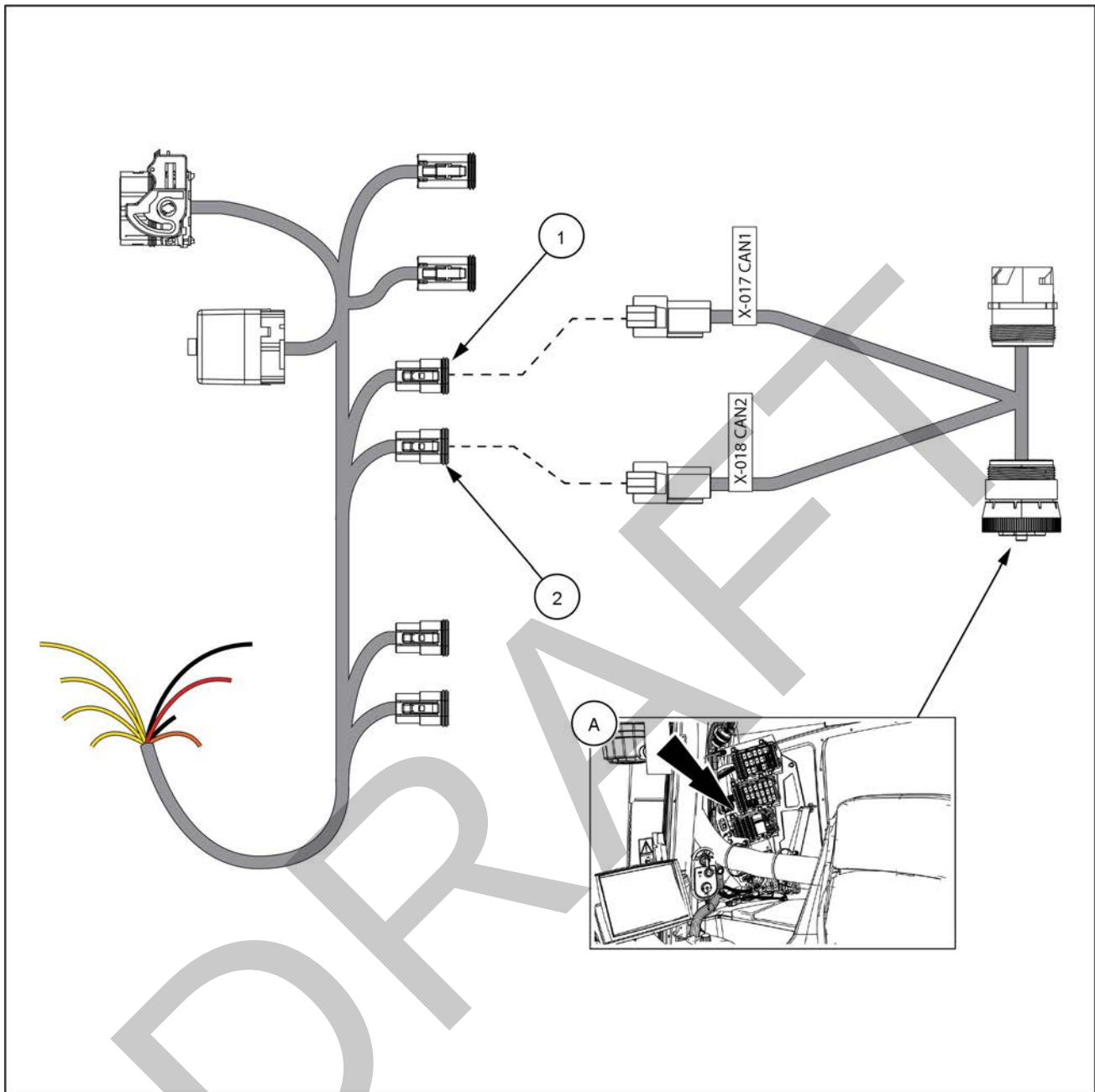
1. Attach dual CAN-to-diagnostic wiring harness connector "X-017 CAN1" to "CAN1" connector **(1)** on universal telematics wiring harness. Leave connector "X-018 CAN2" disconnected.
2. Attach single CAN-to-diagnostic wiring harness connector to "CAN2" connector **(2)** on universal telematics wiring harness.
3. Attach dual CAN-to-diagnostic wiring harness to primary diagnostic connector **(A)** (vehicle bus 1).
4. Attach single CAN-to-diagnostic wiring harness to secondary diagnostic connector **(B)** (vehicle bus 2).

NOTE: To install the storage container again, remove the diagnostic connectors from the mounting plate and route them next to the fuse panel. Make sure that the primary and secondary diagnostic connectors are labeled.



NHIL22PLM0305TA 9

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Combines – Axial-Flow® 140, 150 series

NHIL20PLM1611GA 10

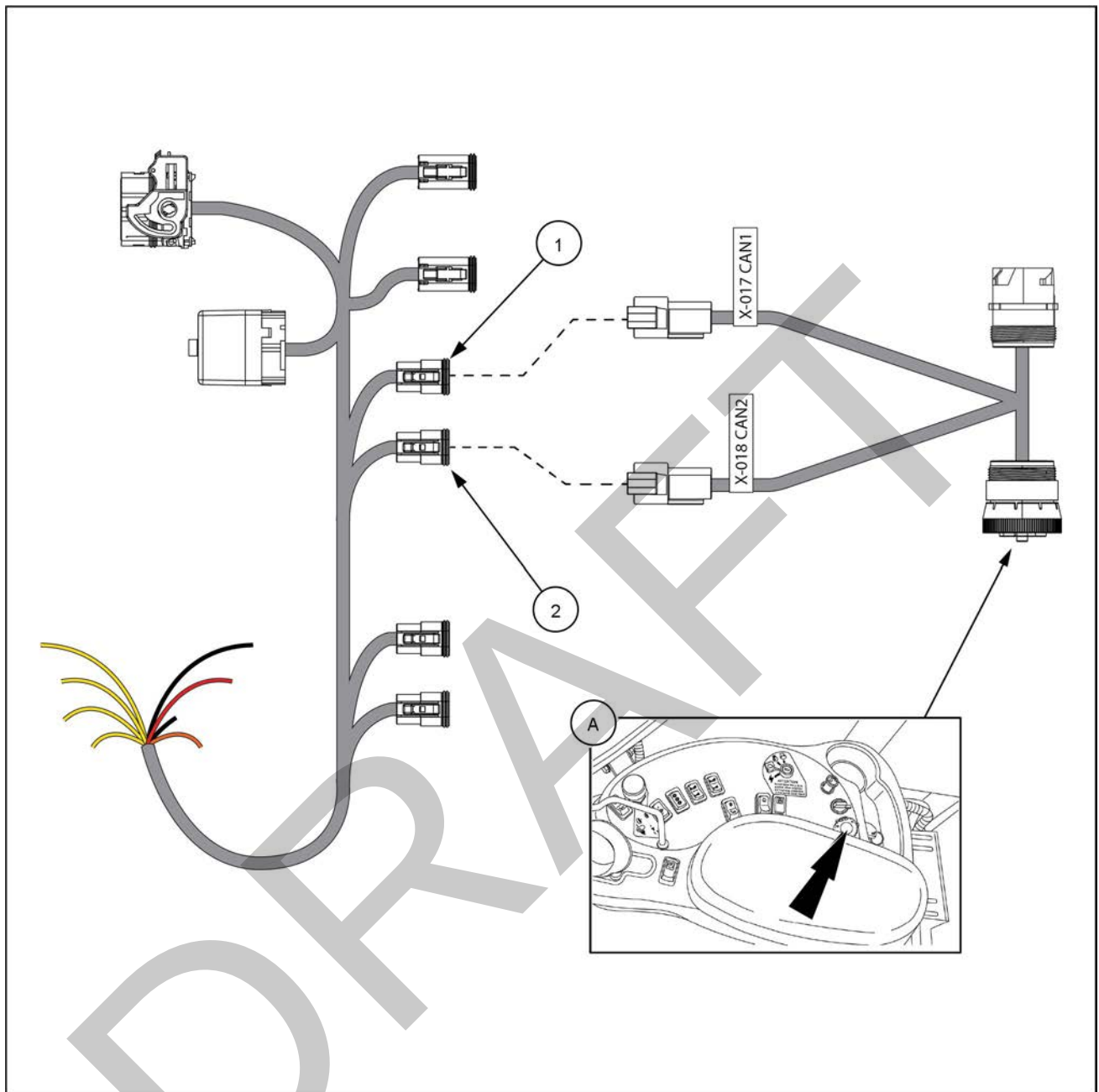
Diagnostic connector:

The primary diagnostic connector **(A)** is located in the fuse panel. This port provides access to both the CAN 1 and CAN 2 lines.

Instructions:

1. Attach the dual CAN-to-diagnostic wiring harness connector "X-017 CAN1" to the "CAN1" connector **(1)** on the universal telematics wiring harness.
2. Attach the dual CAN-to-diagnostic wiring harness connector "X-018 CAN2" to the "CAN2" connector **(2)** on the universal telematics wiring harness.
3. Attach the dual CAN-to-diagnostic wiring harnesses to the vehicle diagnostic connector.

Self-propelled windrowers – Speedrower® / WD4 series



NHIL20PLM1600GA 11

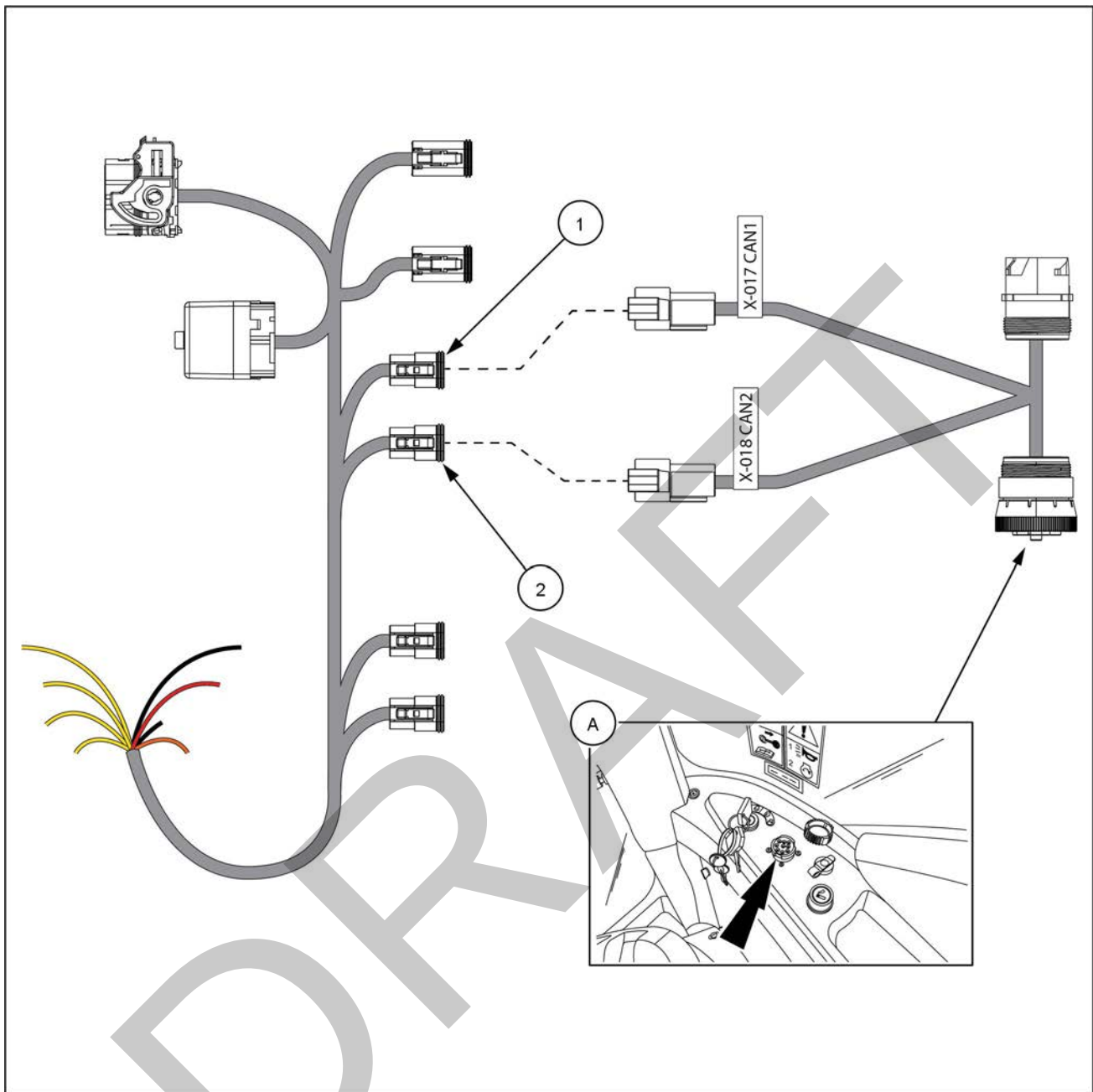
Diagnostic connector:

The primary diagnostic connector **(A)** is located on the right-hand console.

Instructions:

1. Attach the dual CAN-to-diagnostic wiring harness connector "X-017 CAN1" to the "CAN1" connector **(1)** on the universal telematics wiring harness.
2. Attach the dual CAN-to-diagnostic wiring harness connector "X-018 CAN2" to the "CAN2" connector **(2)** on the universal telematics wiring harness.
3. Attach the single CAN-to-diagnostic wiring harness to the primary diagnostic connector on the vehicle.
4. Attach the dual CAN-to-diagnostic wiring harnesses to the vehicle diagnostic connector.

Power and ground sources can be accessed by connecting the wires to X-028P (Pin 1: Unswitched B+) and X-369A (Pin 1: Switched B+, Pin 2: Ground) in the Right-Hand Console (RHC).

Self-propelled forage harvesters – FR9. / FR9000 series

NHIL20PLM1700GA 12

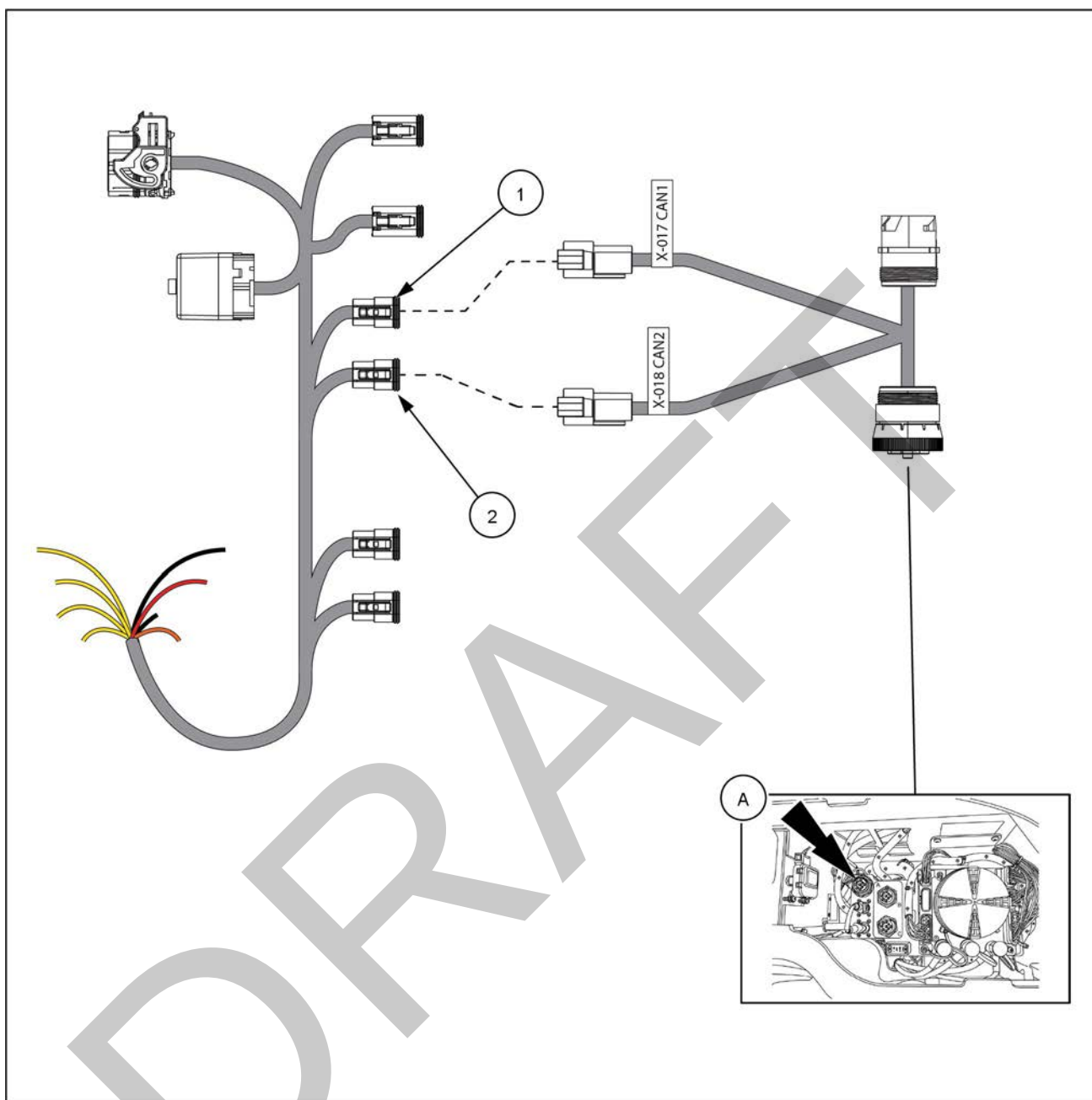
Diagnostic connector:

The primary diagnostic connector **(A)** is located by the ignition switch. This port provides access to both the CAN 1 and CAN 2 lines.

Instructions:

1. Attach the dual CAN-to-diagnostic wiring harness connector "X-017 CAN1" to the "CAN1" connector **(1)** on the universal telematics wiring harness.
2. Attach the dual CAN-to-diagnostic wiring harness connector "X-018 CAN2" to the "CAN2" connector **(2)** on the universal telematics wiring harness.
3. Attach the dual CAN-to-diagnostic wiring harnesses to the vehicle diagnostic connector.

Self-propelled sprayers – Guardian™ series



NHIL20PLM1630GA 13

Diagnostic connectors:

The primary diagnostic connector **(A)** is located under the instructor's seat.

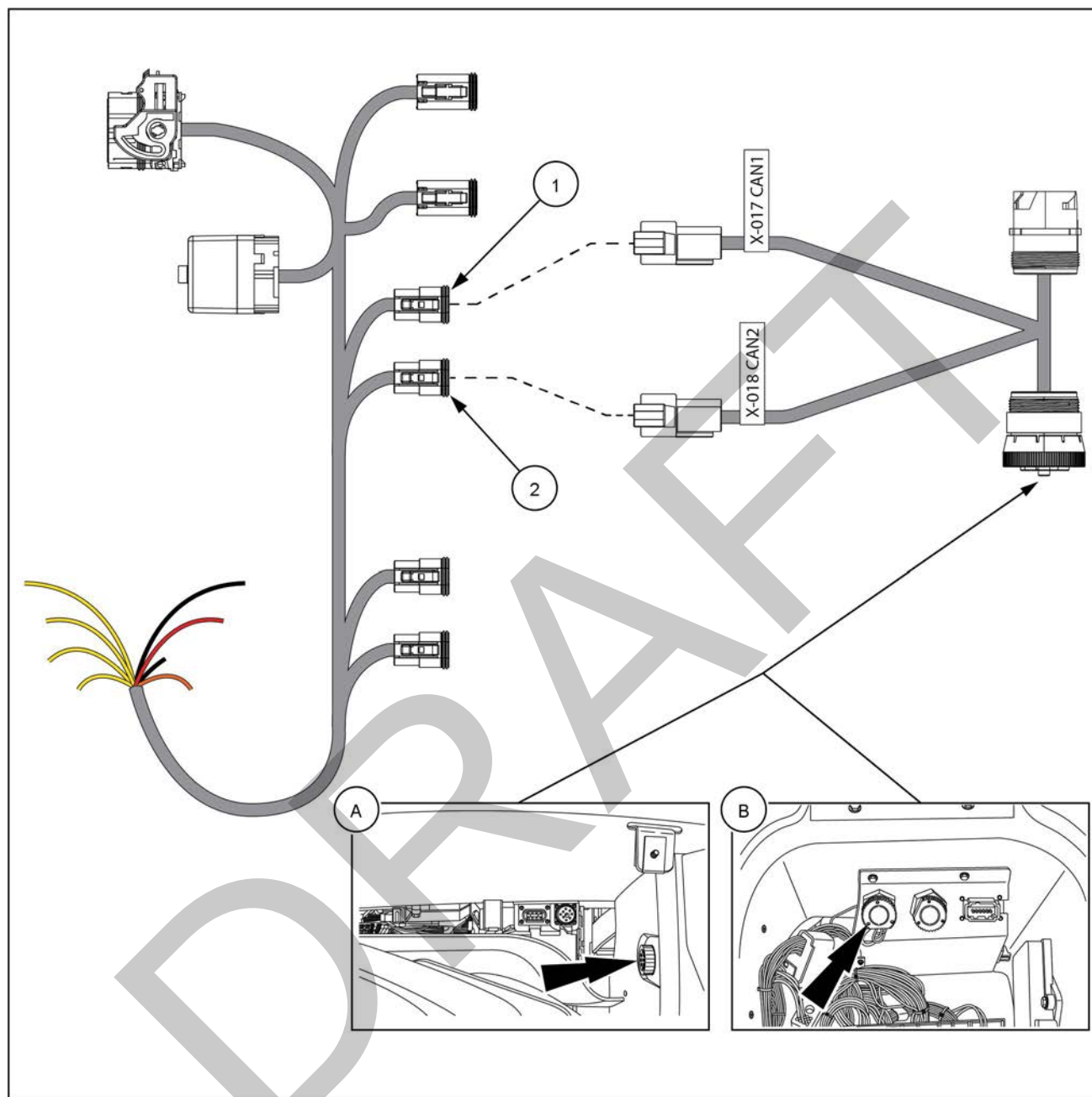
Instructions:

1. Attach the dual CAN-to-diagnostic wiring harness connector "X-017 CAN1" to the "CAN1" connector **(1)** on the universal telematics wiring harness.
2. Attach the dual CAN-to-diagnostic wiring harness connector "X-018 CAN2" to the "CAN2" connector **(2)** on the universal telematics wiring harness.
3. Attach the dual CAN-to-diagnostic wiring harness to the vehicle diagnostic connector.

NOTE: On **Guardian™** sprayers, set the "Telematics CAN Node" setting to "CAN-B".

Self-propelled sprayers – Patriot® series

NOTE: * Applies to **Patriot®** 250, 300, 350, 2230, 3230, 3330, 2240, 3240, 3340, 4440, 2250 models, with Product Identification Number (PIN) YHT037992 and above.



NHIL20PLM1701GA 14

Diagnostic connector:

Patriot® 2240 – The diagnostic connector **(A)** is located under the upper trim panel behind the operator's seat.

Patriot® 250, 300, 350, 2230, 3230, 3330, 3240, 3340, 4440, 2250 – The diagnostic connector **(B)** is located under the instructor's seat. This port provides access to both the CAN 1 and CAN 2 lines.

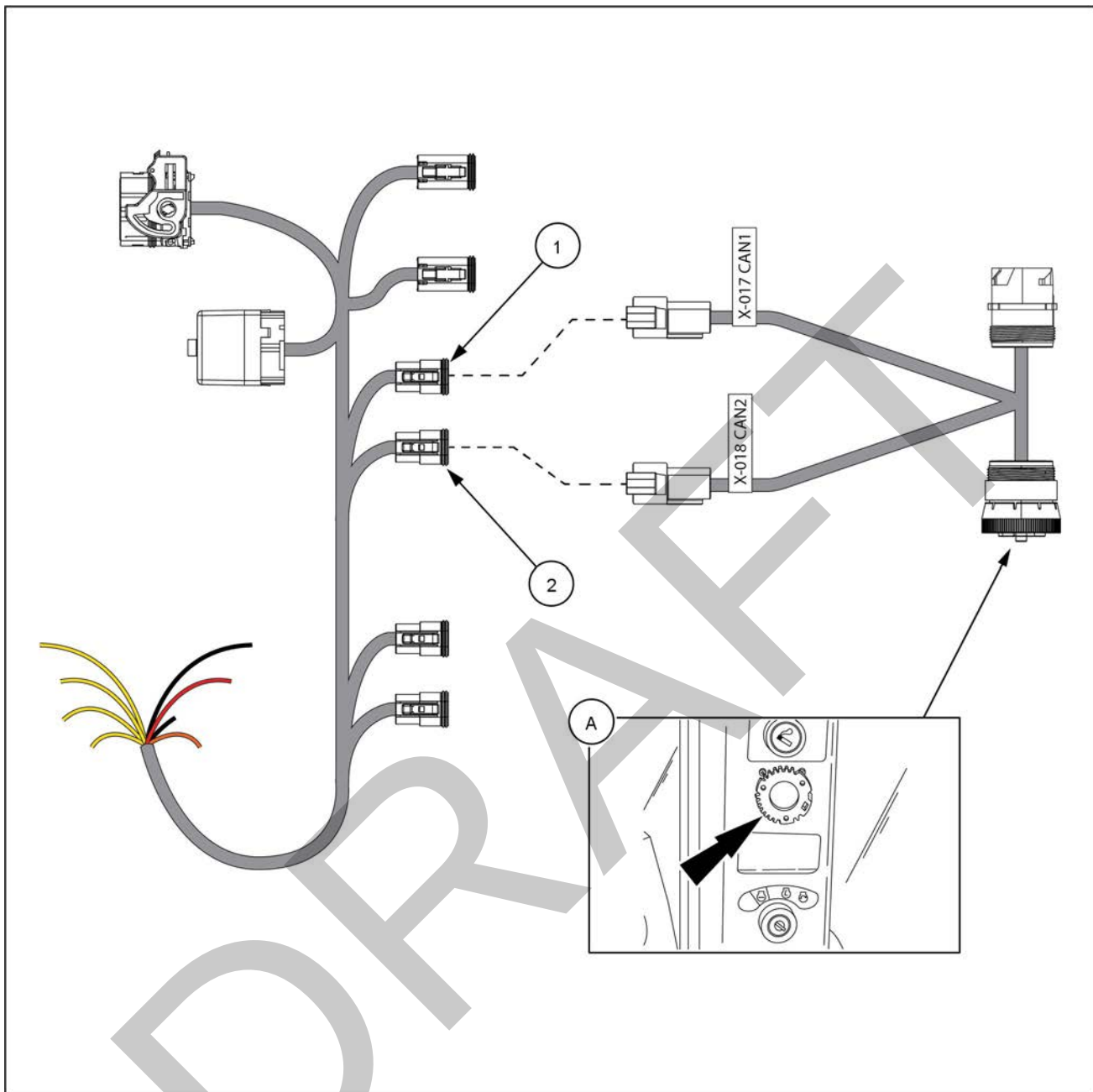
Instructions:

1. Attach the dual CAN-to-diagnostic wiring harness connector "X-017 CAN1" to "CAN1" connector **(1)** on the universal telematics wiring harness.
2. Attach the dual CAN-to-diagnostic wiring harness connector "X-018 CAN2" to "CAN2" connector **(2)** on the universal telematics wiring harness.
3. Attach the dual CAN-to-diagnostic wiring harness to the vehicle diagnostic connector.

NOTE: On **Patriot®** sprayers, set the “Telematics CAN Node” setting to “CAN-B”.

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Self-propelled sugar cane harvesters – Austoft® 8000 series



NHIL20PLM1702GA 15

Diagnostic connector:

The primary diagnostic connector **(A)** is located above the ignition switch. This port provides access to both the CAN 1 and CAN 2 lines.

Instructions:

1. Attach the dual CAN-to-diagnostic wiring harness connector "X-017 CAN1" to the "CAN1" connector **(1)** on the universal telematics wiring harness.
2. Attach the dual CAN-to-diagnostic wiring harness connector "X-018 CAN2" to the "CAN2" connector **(2)** on the universal telematics wiring harness.
3. Attach the dual CAN-to-diagnostic wiring harnesses to the vehicle diagnostic connector.

NOTE: On **Austoft®** sugarcane harvesters, set the "Telematics CAN Node" setting to "CAN-B".

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