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Installation Instructions

PinPoint™ III ENVELOP on Hagie STS

Parts List

Part Number	Description	Parts Drawing Description	Qty
116301-014	Pressure Transducer	PRESSURE TRANSDUCER ASSY	1
118606-506	Shut-off Valve Harness	HN SHUTOFF HAGIE 9 SEC 120'	1
118640-132	Envelop Hub Mounting Hardware Kit	KIT, PINPOINT HUB MOUNT HAGIE	1
118700-001	Power/Ground Harness	HN POWER DISCONNECT PP/SSRS	1
123000-150	Envelop Hub	ASSY, POWER HUB PPIII	1
123100-020	Adapter Harness, Hub Side	HARNESS, PPIII HAGIE ADAPTER	1
123100-021	Adapter Harness, Cab Side	HARNESS, PPIII HAGIE ADAPTER	1
708000-051	Teflon Tape	TAPE TEFLON	1
715005-136	Battery Terminal	TERMINAL RING, 8GA, 1/4"	1
716008-306	Nipple Fitting	FITTING NIPPLE 1/4" MPT X	1
716008-314	Tee-Fitting	TEE 1/4" FPT SS	1

Background Info

- Hagie machines went to full ISOBUS wiring for the 2018 model year.
- Regardless of the brand of rate controller, an identical connection under the floorboard of the cab is available for all ISOBUS rate controllers.
- Prior to 2018 select rate controllers supplied their own ISOBUS connection in the same location, but the pinout of the connection is not the same. Minor integration work will be needed for these machine platforms.
- A port labeled "third party precision signals" carries:
    - Flowmeter power, ground, signal
    - PWM valve signals
    - Pressure sensor signals
- The third-party plug is available for all rate controllers to interface the critical rate control functions.
- In 2018 Hagie went to the new "hybrid" boom design for their 120' and 132' boom that used a fixed center section, steel inner sections, and aluminum outer boom sections.
- Through 2020, they used their older steel boom design for all of their 90' and 100' booms.
- In 2021, the 90' and 100' booms went to the "hybrid" design, with center and inner sections staying the same as the 120' boom, only the outer sections changed.

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Envelop Hub Installation

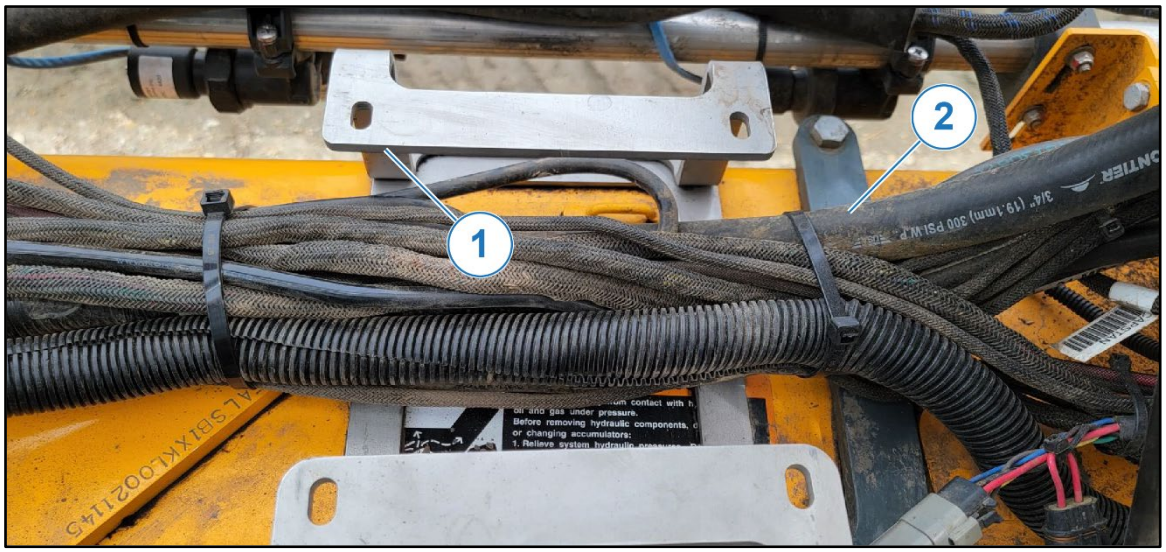

Figure 1 — Envelop Hub Mounting Location

1. *Figure 1:* Attach Envelop Hub mounting bracket (1) to main boom frame beneath existing hoses and wiring (2).

   Note: *Figure 2:* Only one mounting bracket bar may be used on Model Year 2021 machines with a boom stand option (1). On older models, both mounting bracket bars may be used, or a combination of one mounting bracket bar (2) and one set of existing boom stand holes (3) may be used to mount Envelop Hub bracket.

MY 2021 MY 2018 to 2020

Figure 2 — Envelop Hub Mounting Brackets

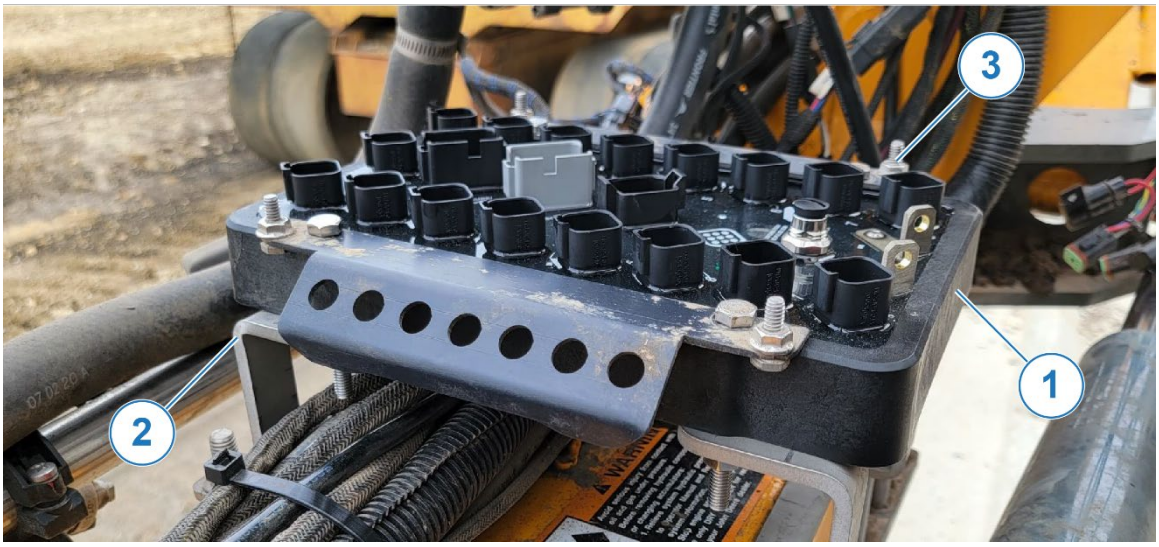

Figure 3 — Envelop Hub Installation

2. *Figure 3:* Install Envelop Hub (1) to mounting bracket (2) with supplied hardware (3).

PinPoint III Hagie Adapter Harness (Hub Side) Installation

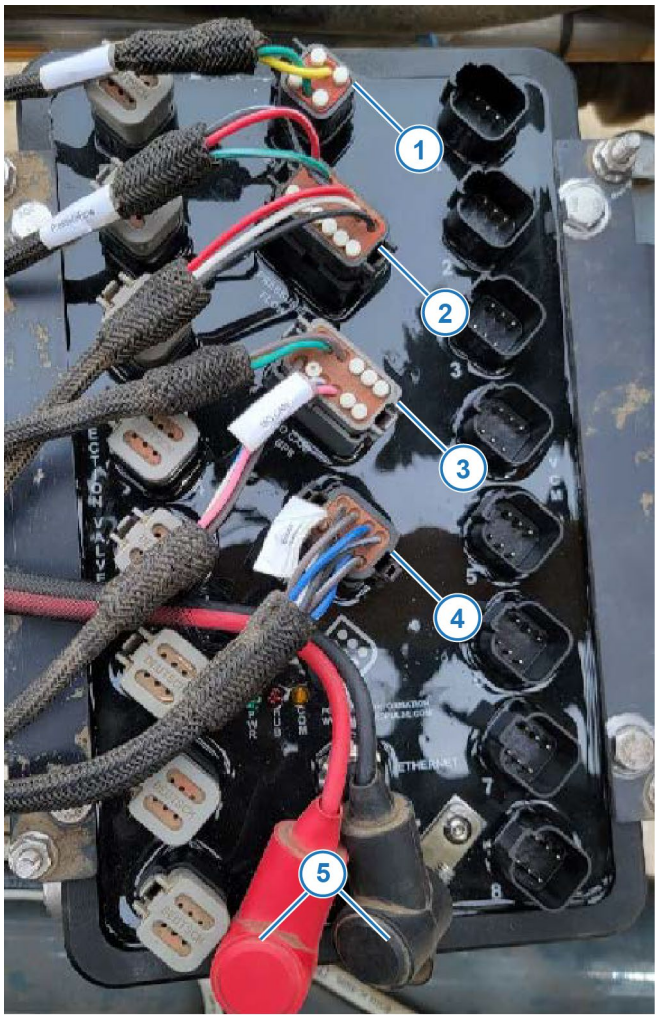

Figure 4 — Chassis Harness-Envelop Hub Connections

3. *Figure 4:* Make the following adapter harness connections at the Envelop Hub, but do not secure at this time.
   (1) Servo
   (2) Pressure/Flow
   (3) ISO CAN BUS/GPS
   (4) Boom Switch and Shut-off Adapter

4. Connect Power (Red) and Ground (Black) battery cables (5) to Envelop Hub.

Figure 5 — 9-Section Shut-off Harness

5. *Figure 5:* Connect 9-Section Shut-off Harness P/N 118606-506 (1) to Boom Switch and Shut-off Adapter Chassis Harness connector (2).

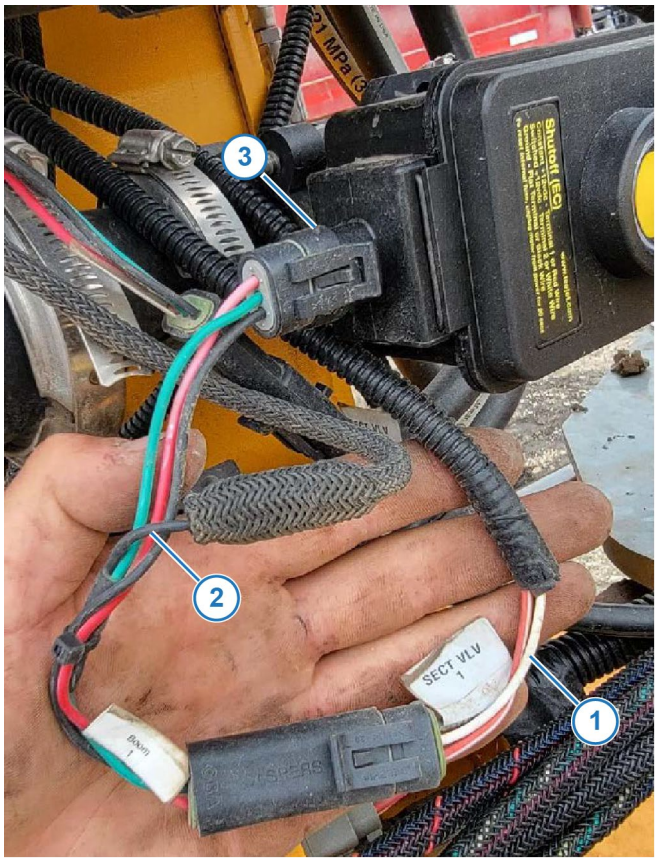

Figure 6 — Section Valve Connections

6. Remove each machine harness plug (1) from its section valve (3).

7. Connect each set of plugs of 9-Section Shut-off Harness (2) in line with appropriate section valve machine harness.

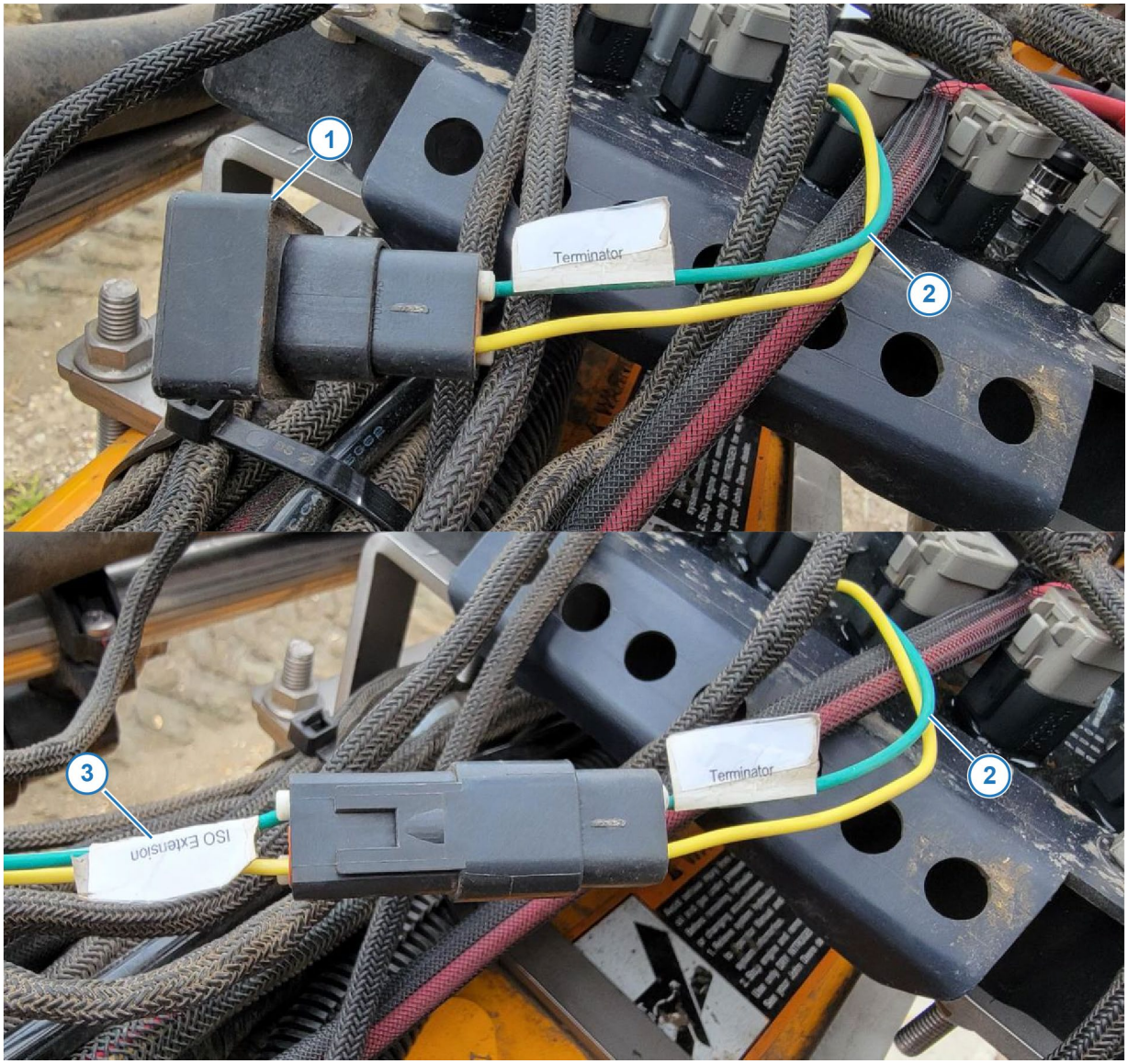

Figure 7 — ISO CAN BUS Harness

8. *Figure 7:* Most machines are not equipped with a direct chemical injection system however some machines may have this system installed. Use the appropriate procedure:

    - If machine DOES NOT have a direct chemical injection system, leave Terminator (1) plugged into Terminator plug harness (2). Leave ISO Extension plug dust capped.

    - On machines which DO use a direct chemical injection system, remove Terminator from Terminator harness and connect ISO Extension harness (3) to Terminator plug.

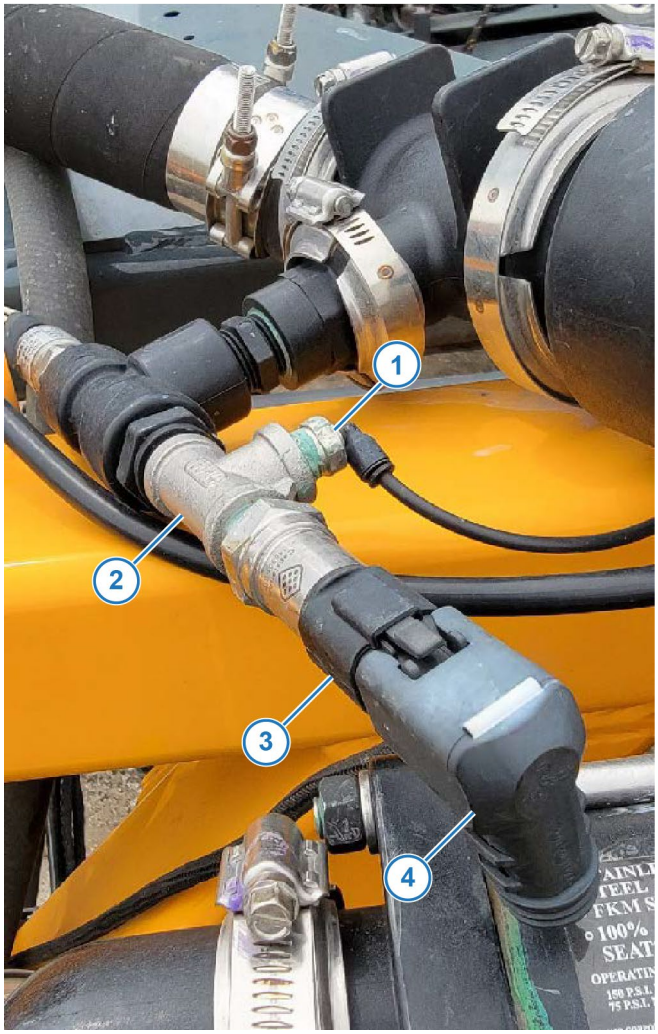

Figure 8 — Pressure Transducer

9. *Figure 8:* Remove machine OEM pressure sensor. (1)
10. Install T-fitting (2) in place of OEM pressure sensor.
11. Install machine OEM pressure sensor in one port of the T-fitting and PinPoint III pressure sensor (3) in the other port.
12. Connect pressure sensor connector (4) of adapter harness to the PinPoint III pressure sensor.

PinPoint III Hagie Adapter Harness (Cab Side) Installation

Figure 9 — Hagie Cab Connector

13. *Figure 9:* Connect 12-pin Deutsch connector marked Hagie Cab (2) of PinPoint III Adapter Harness (Cab Side) to green 12-pin Deutsch connector beneath cab floorboard (2).

    Note: Verify Machine is Model Year 2018 or newer. Earlier models used a similar port, pinned differently.

    Note: This port will typically be occupied by machine's existing rate controller. Disconnect this connector and replace it with PinPoint III adapter harness connector

    Note: It is possible to plug this connector in backwards if too much force is applied. Be sure to note position of the electrical contacts within connector to ensure they line up with contacts in machine plug.

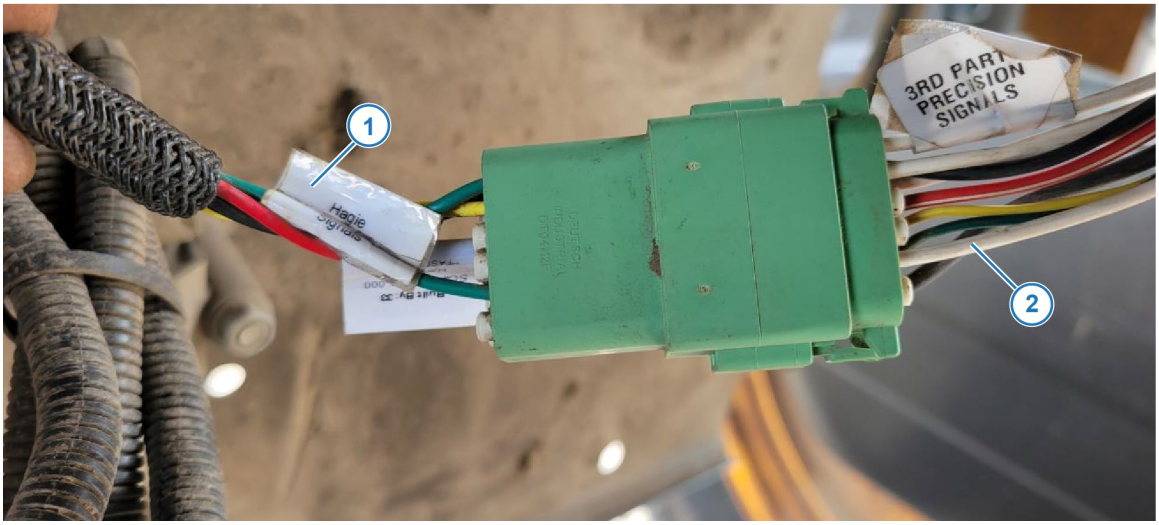

Figure 10 — Hagie Signals Connector

14. *Figure 10:* Connect 12-pin Deutsch connector marked Hagie Signals (1) of Adapter Harness to green 12-pin Deutsch connector hanging near center of belly pan (2).

    Note: This port will typically be occupied by machine's existing rate controller. Disconnect this connector and replace it with PinPoint III adapter harness connector.

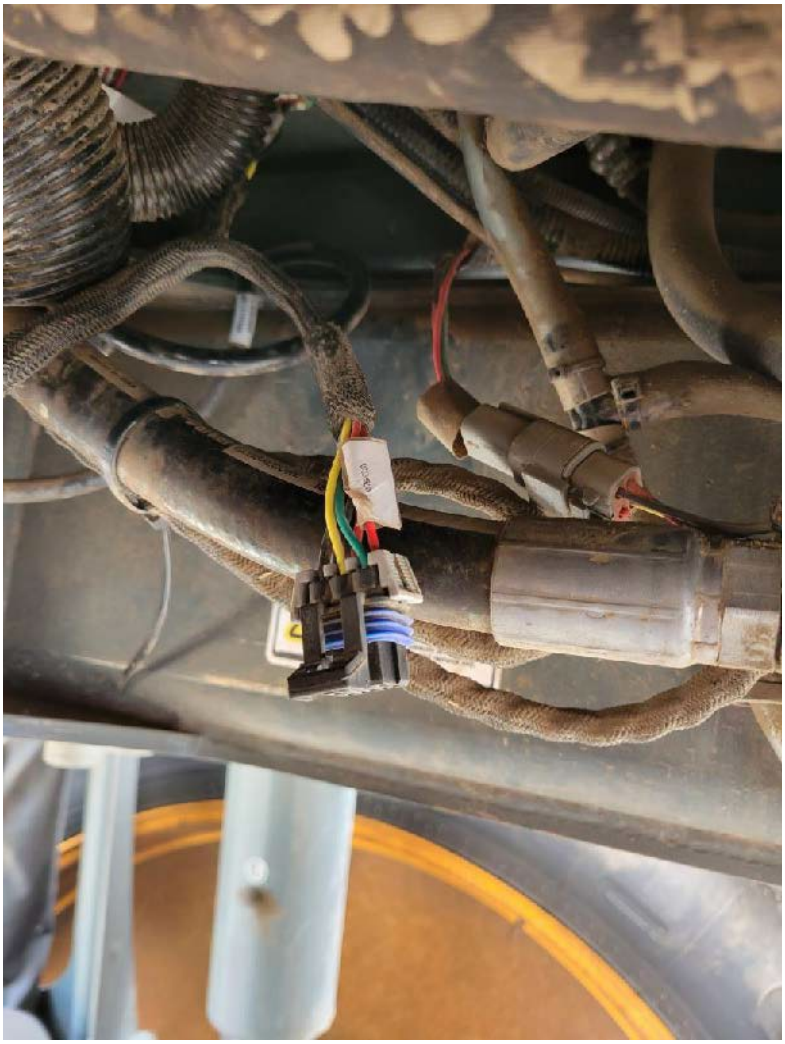

Figure 11 — ISO CAN BUS Interface Plug

15. *Figure 11:* Most machines are not equipped with a direct chemical injection system however some machines may have this system installed. Use the appropriate procedure:

    - If machine DOES NOT have a direct chemical injection system, leave ISO BUS connector on adapter harness and 6-pin ISO CAN BUS Interface connector under the machine cab unplugged and dust capped.

    - If machine DOES use a direct chemical injection system, plug ISO BUS connector on the adapter harness into 6-pin ISO CAN BUS Interface connector under machine cab.

PinPoint III Hagie Adapter Harness Routing

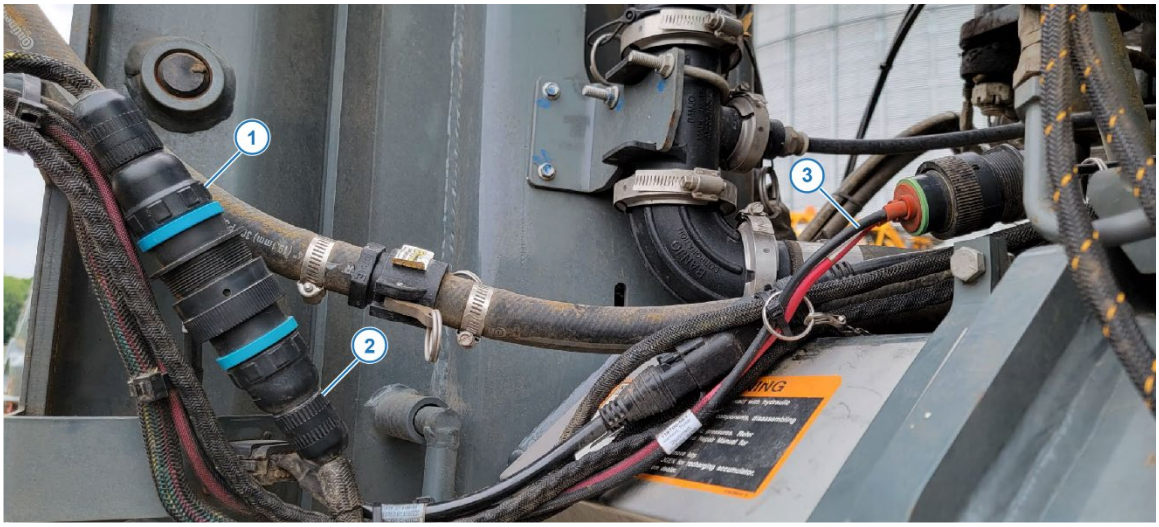

Figure 12 — Chassis Harness Routing

16. *Figure 12:* Route hub side of the adapter harness (1) and battery power and ground cables (3) down lower right-hand lift arm of boom and towards tractor/boom attachment point.

17. Route cab side of the adapter harness (2) under machine and up toward the tractor/boom attachment point.

18. Join two halves of the adapter harness at tractor/boom attachment point.

    Note: Ensure that connection is secure in an area which will not be affected by tall crop spraying.

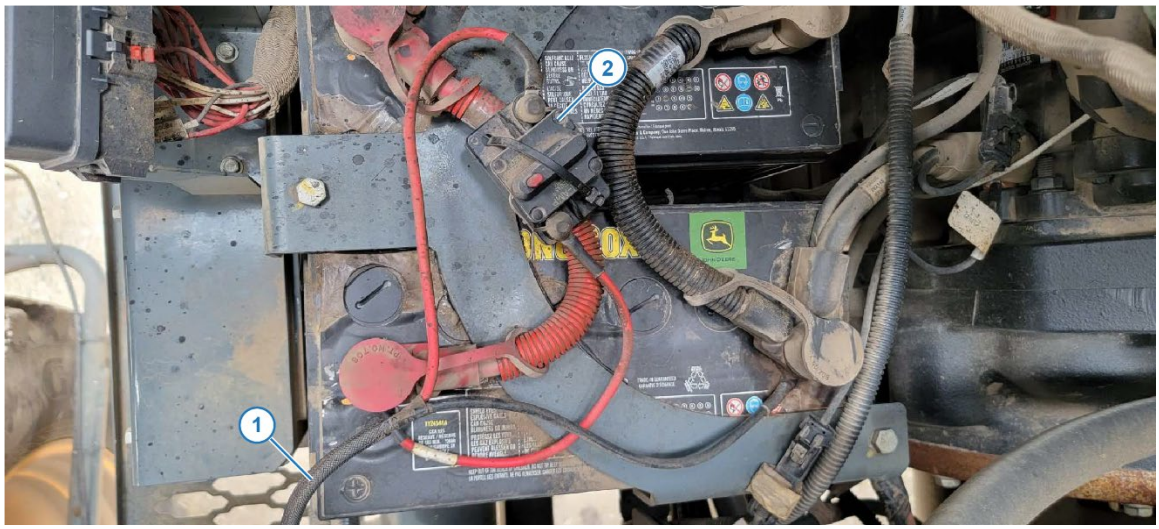

Figure 13 — Power and Ground Harness

19. *Figure 13:* Route Power and Ground harness (1) so that circuit breaker box (2) can be secured either with zip-ties or by drilling holes and mounting in an appropriate manner.

20. Connect power and ground leads directly to positive and negative battery terminals, respectively.