


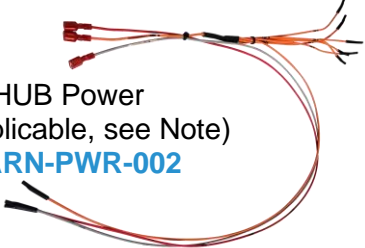





Sensor Base Kit – Model Year 2024 or newer

Items Included in the Kit

Unpack the kit and review its contents (general images shown for reference only, actual part may vary).

<p>HUB/Controller Kit Quantity: 1 DF Part Number: BASE-100</p> 	<p>WiFi/Bluetooth to CAN Bridge Kit Quantity: 1 DF Part Number: GEN-103</p> 
<p>M12 Cordset, 2M Cable Kit Quantity: 1 (if applicable, see Note) DF Part Number: GEN-104</p>  <p>Note: M12 Cordset is pre-installed in a HARN-PWR-005 harness.</p>	<p>Harness, Controller/HUB Power Kit Quantity: 1 (if applicable, see Note) DF Part Number: HARN-PWR-002</p>  <p>Note: Power wiring is pre-installed in the HARN-PWR-003 and Elite harnesses.</p>
<p>Male Terminals DF Part Number: GEN-110</p> 	<p>Female Terminals DF Part Number: GEN-101</p> 

CAN Bus Harness: One of the following harnesses are included (truck specific).

<p>Harness, Chassis CAN Kit Quantity: 1 (if applicable) DF Part Number: HARN-CAN-001</p> 	<p>Harness, Chassis CAN Kit Quantity: 1 (if applicable) DF Part Number: HARN-CAN-FDM</p> 	<p>Harness, Chassis CAN Kit Quantity: 1 (if applicable) DF Part Number: HARN-BLK-OBD-J1939</p> 
<p>Harness, Chassis CAN Kit Quantity: 1 (if applicable) DF Part Number: HARN-CAN-003</p> <p>(Harness includes a terminating resistor preinstalled.)</p>   <p>Terminating Resistor</p>	<p>Harness, Chassis CAN Kit Quantity: 1 (if applicable) DF Part Number: HARN-BECK-001</p>  <p>w3s-j1939 Wedglock Dt06-3s Connector</p> 	<p>Harness, Chassis CAN Kit Quantity: 1 (if applicable) DF Part Number: HARN-PWR-003</p>  <p>Harness includes connectors for chassis PWR, IGN, and GND.</p>

Mixer CAN Harness: One of the following harnesses are included (truck specific).

Harness, Mixer CAN

Kit Quantity: 1 (if applicable)

DF Part Number: [HARN-CAN-005](#)



Terminating Resistor



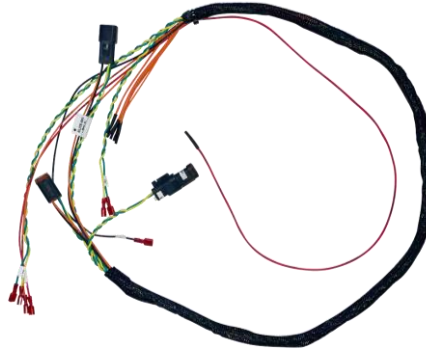
Terminating Resistor

Harness, Mixer CAN

Kit Quantity: 1 (if applicable)

DF Part Number: [HARN-ELITE-001](#)

(Only for trucks **with** a Mixer CAN Control System.)



Tools for the Job (not included)

- #2 Phillips screwdriver (or screw gun with #2 Philips end)
- Flat/Torq/Square screwdrivers or screw gun bits (alternate dashes)
- Wire crimpers
- Wire strippers
- Side cutters
- Light
- Drill/bits (holes to run wiring through dash)

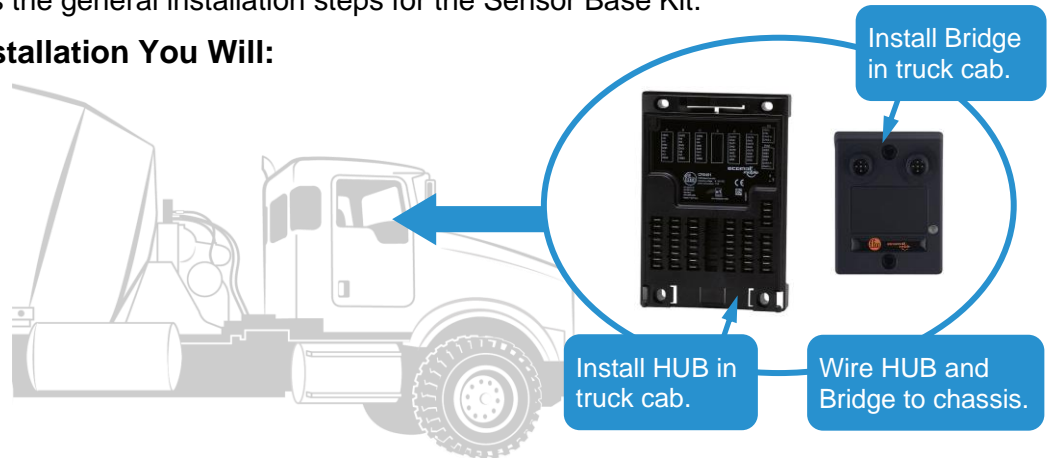
Additional Items Needed (not included)

- Grommets, bushings, hole plugs (to pass wiring through dash/firewall)
- Wire ties
- Colored tape (to mark cables)
- Screws/fasteners

Installation – Sensor Base Kit

This section covers the general installation steps for the Sensor Base Kit.

During Installation You Will:



INSTALLATION

The Sensor Base Kit is tailored to your truck (model/make/year).

- Step 1.** Turn engine off, but leave battery connected (battery power is connected in a later step).
- Step 2.** Locate truck’s wiring connections (CAN, battery power, ground, and ignition)—see **Chassis CAN and Power Connections** section for typical locations.
- Step 3.** Remove appropriate panel(s) to access connections.
- Step 4.** Select the Wire Diagram (from table below) that matches your kit harness configuration:

Wire Diagrams are located at end of this Sensor Base Kit section.

Mixer Type	If your kit includes Harness(es):			Use Sensor Base Wire Diagram:	Dia. No.
	Chassis CAN	Power	Mixer CAN		
Rear	HARN-CAN-001	HARN-PWR-002	HARN-CAN-005	Sensor Base - Standard	1
				Sensor Base (Flex or Raven) Use for mixer harness to connect to dash harness MC20 on FLEX, or MC17 on Raven	2
				Sensor Base (Kimble K2200) Use for mixer harness to connect to cab box, 3-way DT splitter on Kimble K2200	3
	HARN-CAN-003	HARN-PWR-002	HARN-CAN-005	Sensor Base (Kimble Cyclone)	4
	HARN-CAN-001	HARN-ELITE-001		Sensor Base (ELITE)	5
	HARN-BECK-001	HARN-PWR-002	HARN-CAN-005	Sensor Base Beck Electric	6
	HARN-PWR-003		HARN-CAN-005	Sensor Base - Freightliner/Western Star 2023 or newer	7
Front	HARN-CAN-003	HARN-PWR-002	HARN-CAN-005	Sensor Base (Terex Advance) 2019 or newer	8
				Sensor Base (Terex Advance) 2016–2019 (no Mixer CAN)	9
	HARN-BLK-OBD-J1939	HARN-PWR-002	HARN-CAN-005	Sensor Base (Terex Advance) 2016 or older (no Mixer CAN)	10
	HARN-CAN-003	HARN-PWR-002	HARN-CAN-005	Sensor Base (Oshkosh S Series Flex 2.0)	11
				Sensor Base (Oshkosh S-Series Non Flex) (no Mixer CAN) 3-way Chassis CAN connector	12
	HARN-CAN-FDM	HARN-PWR-002	HARN-CAN-005	Sensor Base (Oshkosh S-Series Non Flex) (no Mixer CAN) 6-way Chassis CAN connector	13
N/A	HARN-PWR-002	HARN-CAN-005	Sensor Base (Oshkosh S-Series Non Flex) Glider (no Chassis/Mixer CAN)	14	

Important Note: When wiring, always make the chassis power/ground connection to the Hub last. If mounting the Hub or Bridge to a panel, fasten it before starting any wiring.

Step 5. Install Sensors (if applicable—Drum, Slump, Water Add, Washout, Quad)


To install and wire a new sensor—reference the appropriate sensor installation section.

To wire a preinstalled sensor to the Hub—use the wiring instructions from the appropriate DF+ sensor installation section.


For Example: To wire a preinstalled slump sensor, reference wiring instructions in the DF+ Slump Kit section.


Step 6. Install the DF+ Tablet Charger to the Hub, reference the Tablet Installation section.

To wire a preinstalled charger to the Hub—use the wiring instructions from the Tablet Installation section.

Step 7.  Use Wire Diagram selected from table on previous page as reference for next steps.
Important: Route cables safely—avoid moving parts, pinch points, and sharp edges. Use a grommet or bushing on pass-thru holes as needed.

7.1. Wire Hub to Chassis CAN Bus—see Wire Diagram .

7.2. Connect Bridge to Hub—see Wire Diagram .

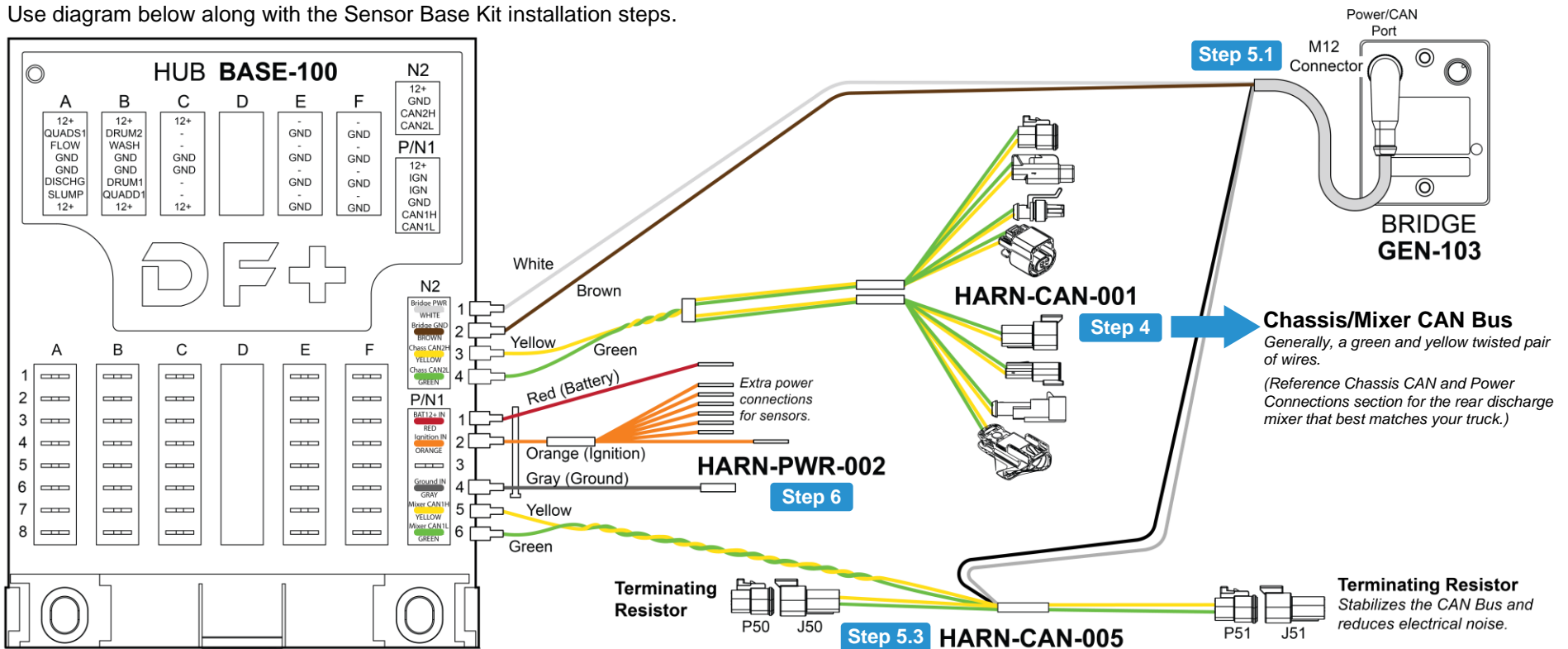
7.3. Connect Hub to chassis ignition, ground, and power—see Wire Diagram .

Step 8. When installation is complete, make sure all wiring connections are securely fastened.**Step 9.** Verify the DF System is connected and functioning properly, reference the DF+ Verification Instructions (navigates the digital verification process).

For installation questions, please call DF+ Support at 630.518.4606.

Wire Diagram 1 Sensor Base, Standard

Use diagram below along with the Sensor Base Kit installation steps.



Step 4. Connect Hub to Chassis CAN Bus (use HARN-CAN-001)

- 4.1. Locate chassis CAN connector (connector is labeled)—reference Chassis CAN and Power Connections section for the rear discharge mixer that best matches your truck.
- 4.2. Plug HARN-CAN-001 into CAN Bus—use the pair of connectors that fits your chassis, see diagram.
- 4.3. **Plug remaining non-used pairs together to prevent water intrusion.**
- 4.4. Plug HARN-CAN-001 into Hub, see diagram.

Important: When routing wires to Hub, follow an existing wire path, or remove a rubber hole plug—watch for sharp edges, use a grommet or bushing on holes to prevent wire damage.

Step 5. Install HARN-CAN-005 Connect Bridge to Hub

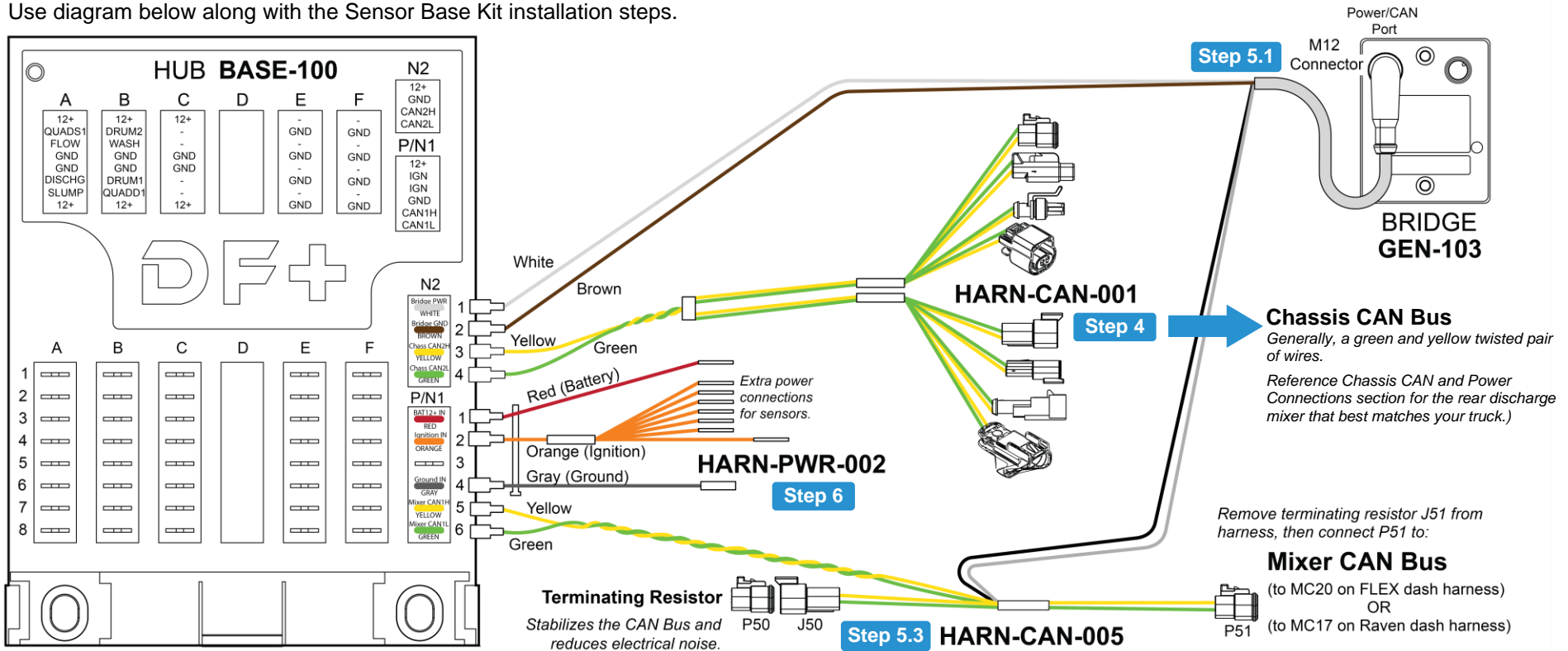
- 5.1. Plug M12 Connector into Power/CAN port on Bridge. (Align the key, do not force a connection—thread lock ring onto port until hand tight.)
- 5.2. Plug white and brown wires into Hub, see diagram: White to N2-1; Brown to N2-2
- 5.3. Plug HARN-CAN-005 into Hub, see diagram: Yellow to N1-5; Green to N1-6
- 5.4. Truck **does not** have a mixer CAN Bus—a terminating resistor is preinstalled in each connector (do not remove), see diagram.

Step 6. Connect Hub to Chassis Power, Ignition, and Ground (use HARN-PWR-002)

- 6.1. Locate chassis connections for battery power, ignition, and ground—connections are labeled. **Always connect power or ground to Hub last.**
- 6.2. Long harness wires (red, orange, and gray) have a TE terminal end (for a splice block). If needed, cut terminal off, strip end, and crimp on appropriate terminal provided in kit (i.e., ring terminal).
Note: Extra orange wires are provided for sensors, if needed. Connect sensors before connecting battery power to Hub (see sensor section).
- 6.3. Connect **long wire ends** to truck connectors (i.e., splice blocks, terminal posts, bullet connections): Orange (to IGN); Gray (to GND); Red (to PWR)
- 6.4. Connect female terminal ends to Hub, see diagram: Orange (IGN) to N1-2; Gray (GND) to N1-4; Red (Battery PWR) to N1-1

Wire Diagram 2 Sensor Base (Flex or Raven)

Use diagram below along with the Sensor Base Kit installation steps.



Step 4. Connect Hub to Chassis CAN Bus (use HARN-CAN-001)

- 4.1. Locate chassis CAN connector (connector is labeled)—reference Chassis CAN and Power Connections section for the rear discharge mixer that best matches your truck.
- 4.2. Plug HARN-CAN-001 into CAN Bus—use the pair of connectors that fits your chassis, see diagram.
- 4.3. **Plug remaining non-used pairs together to prevent water intrusion.**
- 4.4. Plug HARN-CAN-001 into Hub, see diagram.

Important: When routing wires to Hub, follow an existing wire path, or remove a rubber hole plug—watch for sharp edges, use a grommet or bushing on holes to prevent wire damage.

Step 5. Install HARN-CAN-005 Connect Bridge to Hub

- 5.1. Plug M12 Connector into Power/CAN port on Bridge. (Align the key, do not force a connection—thread lock ring onto port until hand tight.)
- 5.2. Plug white and brown wires into Hub, see diagram: White to N2-1; Brown to N2-2

Connect HUB to Mixer CAN

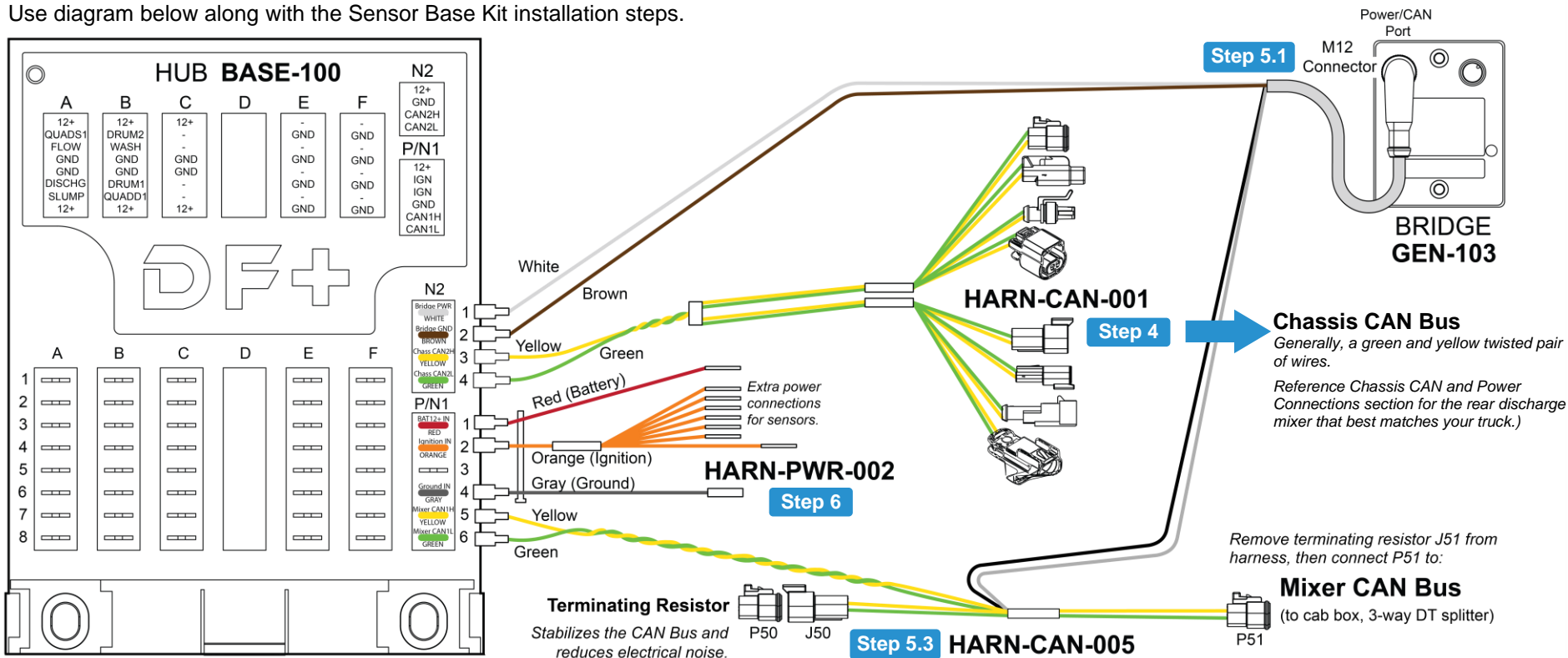
- 5.3. Plug HARN-CAN-005 into Hub, see diagram: Yellow to N1-5; Green to N1-6
- 5.4. Remove terminating resistor J51 from P51 on HARN-CAN-005, see diagram.
- 5.5. Locate mixer CAN Bus connector in dash (MC20 or MC17)—plug HARN-CAN-005 (P51) into the CAN Bus connector, see diagram.
- 5.6. **A terminating resistor must be** plugged into the remaining connector on the harness.

Step 6. Connect Hub to Chassis Power, Ignition, and Ground (use HARN-PWR-002)

- 6.1. Locate chassis connections for battery power, ignition, and ground—connections are labeled. **Always connect power or ground to Hub last.**
- 6.2. Long harness wires (red, orange, and gray) have a TE terminal end (for a splice block). If needed, cut terminal off, strip end, and crimp on appropriate terminal provided in kit (i.e., ring terminal).
Note: Extra orange wires are provided for sensors, if needed. Connect sensors before connecting battery power to Hub (see sensor section).
- 6.3. Connect **long wire ends** to truck connectors (i.e., splice blocks, terminal posts, bullet connections): Orange (to IGN); Gray (to GND); Red (to PWR)
- 6.4. Connect female terminal ends to Hub, see diagram: Orange (IGN) to N1-2; Gray (GND) to N1-4; Red (Battery PWR) to N1-1.

Wire Diagram 3 Sensor Base (Kimble K2200)

Use diagram below along with the Sensor Base Kit installation steps.



Step 4. Connect Hub to Chassis CAN Bus (use HARN-CAN-001)

- 4.1. Locate chassis CAN connector (connector is labeled)—reference Chassis CAN and Power Connections section for the rear discharge mixer that best matches your truck.
- 4.2. Plug HARN-CAN-001 into CAN Bus—use the pair of connectors that fits your chassis, see diagram.
- 4.3. **Plug remaining non-used pairs together to prevent water intrusion.**
- 4.4. Plug HARN-CAN-001 into Hub, see diagram.

Important: When routing wires to Hub, follow an existing wire path, or remove a rubber hole plug—watch for sharp edges, use a grommet or bushing on holes to prevent wire damage.

Step 5. Install HARN-CAN-005 Connect Bridge to Hub

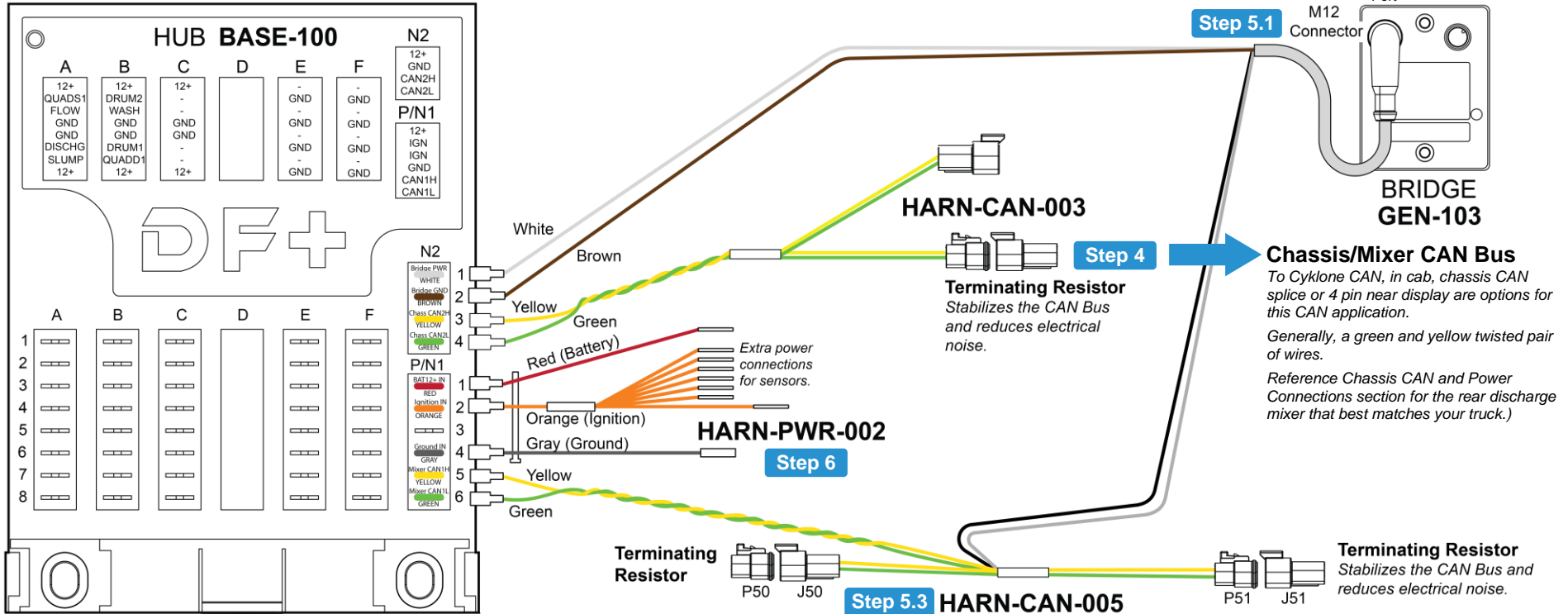
- 5.1. Plug M12 Connector into Power/CAN port on Bridge. (Align the key, do not force a connection—thread lock ring onto port until hand tight.)
 - 5.2. Plug white and brown wires into Hub, see diagram: White to N2-1; Brown to N2-2
- ### Connect Hub to Mixer CAN Bus
- 5.3. Plug HARN-CAN-005 into Hub, see diagram: Yellow to N1-5; Green to N1-6
 - 5.4. Remove terminating resistor J51 from P51 on HARN-CAN-005, see diagram.
 - 5.5. Locate mixer CAN Bus connector in cab box (3-way, DT splitter)—plug HARN-CAN-005 (P51) into the CAN Bus connector, see diagram.
 - 5.6. **A terminating resistor must be plugged into the remaining connector on the harness.**

Step 6. Connect Hub to Chassis Power, Ignition, and Ground (use HARN-PWR-002)

- 6.1. Locate chassis connections for battery power, ignition, and ground—connections are labeled. **Always connect power or ground to Hub last.**
- 6.2. Long harness wires (red, orange, and gray) have a TE terminal end (for a splice block). If needed, cut terminal off, strip end, and crimp on appropriate terminal provided in kit (i.e., ring terminal).
Note: Extra orange wires are provided for sensors, if needed. Connect sensors before connecting battery power to Hub (see sensor section).
- 6.3. Connect **long wire ends** to truck connectors (i.e., splice blocks, terminal posts, bullet connections): Orange (to IGN); Gray (to GND); Red (to PWR)
- 6.4. Connect female terminal ends to Hub, see diagram: Orange (IGN) to N1-2; Gray (GND) to N1-4; Red (Battery PWR) to N1-1.

Wire Diagram 4 Sensor Base (Kimble Cyclone)

Use diagram below along with the Sensor Base Kit installation steps.



Step 4. Connect Hub to Chassis CAN Bus (use HARN-CAN-003)

- 4.1. Locate chassis CAN connector (connector is labeled)—reference Chassis CAN and Power Connections section for the rear discharge mixer that best matches your truck.
- 4.2. Plug HARN-CAN-003 into CAN Bus connection, see diagram.
- 4.3. **Plug a terminating resistor** into remaining connector on the harness.
- 4.4. Plug HARN-CAN-003 into Hub, see diagram.

Important: When routing wires to Hub, follow an existing wire path, or remove a rubber hole plug—watch for sharp edges, use a grommet or bushing on holes to prevent wire damage.

Step 5. Install HARN-CAN-005 Connect Bridge to Hub

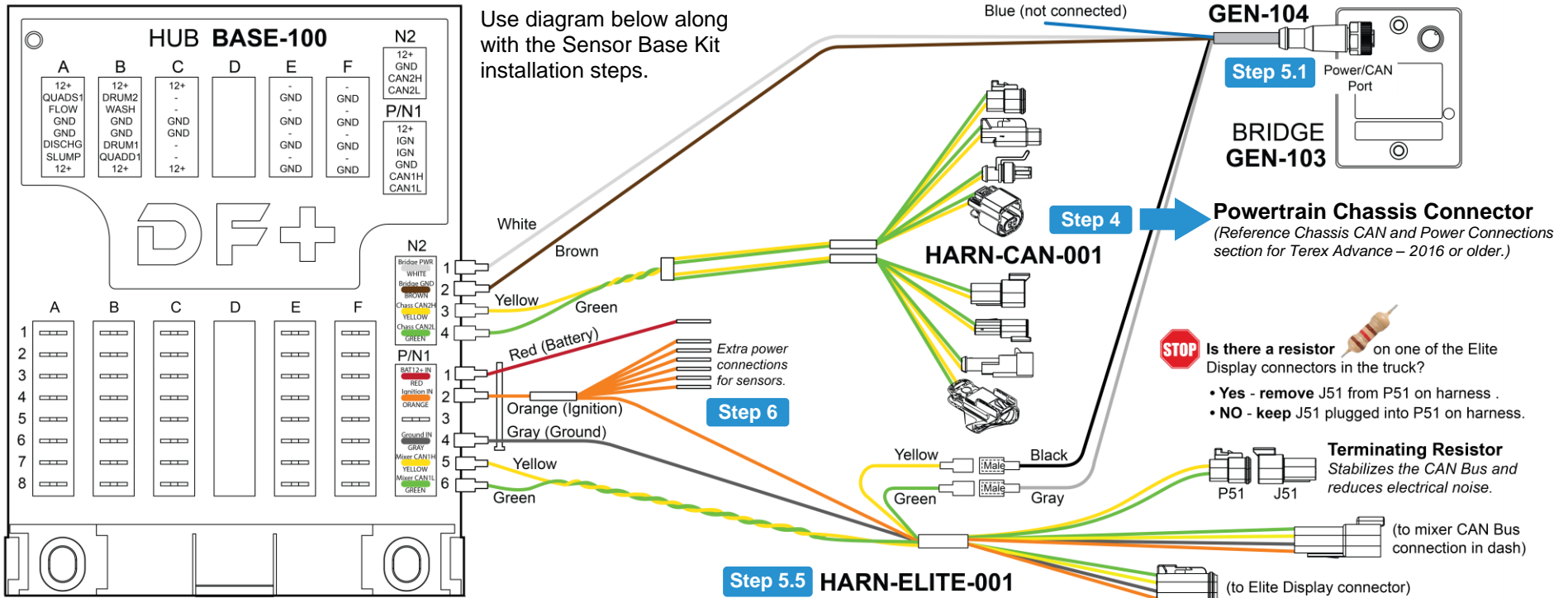
- 5.1. Plug M12 Connector into Power/CAN port on Bridge. (Align the key, do not force a connection—thread lock ring onto port until hand tight.)
 - 5.2. Plug white and brown wires into Hub, see diagram: White to N2-1; Brown to N2-2
- ### Connect HARN-CAN-005 to Hub
- 5.3. Plug HARN-CAN-005 into Hub, see diagram: Yellow to N1-5; Green to N1-6
 - 5.4. Truck **does not** have a mixer CAN Bus—a terminating resistor is preinstalled in each connector (do not remove), see diagram.

Step 6. Connect Hub to Chassis Power, Ignition, and Ground (use HARN-PWR-002)

- 6.1. Locate chassis connections for battery power, ignition, and ground—connections are labeled. **Always connect power or ground to Hub last.**
- 6.2. Long harness wires (red, orange, and gray) have a TE terminal end (for a splice block). If needed, cut terminal off, strip end, and crimp on appropriate terminal provided in kit (i.e., ring terminal).

Note: Extra orange wires are provided for sensors, if needed. Connect sensors before connecting battery power to Hub (see sensor section).
- 6.3. Connect **long wire ends** to truck connectors (i.e., splice blocks, terminal posts, bullet connections): Orange (to IGN); Gray (to GND); Red (to PWR)
- 6.4. Connect female terminal ends to Hub, see diagram: Orange (IGN) to N1-2; Gray (GND) to N1-4; Red (Battery PWR) to N1-1.

Wire Diagram 5 Sensor Base (Elite)



Step 4. Connect Hub to Chassis CAN Bus (use HARN-CAN-001)

- 4.1. Locate chassis CAN connector (connector is labeled)—reference Chassis CAN and Power Connections section for the rear discharge mixer that best matches your truck.
- 4.2. Plug HARN-CAN-001 into CAN Bus—use the pair of connectors that fits your chassis, see diagram.
- 4.3. **Plug remaining non-used pairs together** to prevent water intrusion.
- 4.4. Plug HARN-CAN-001 into Hub, see diagram.

Important: When routing wires to Hub, follow an existing wire path, or remove a rubber hole plug—watch for sharp edges, use a grommet or bushing on holes to prevent wire damage.

Step 5. Connect Bridge to Hub (use GEN-104)

- 5.1. Plug GEN-104 into Power/CAN port on Bridge.
- 5.2. Blue wire not used.
- 5.3. Strip remaining wires—crimp on terminals.

Use diagram below along with the Sensor Base Kit installation steps.

- white/brown—female terminals (GEN-101)
- black/gray—male terminals (GEN-110)

- 5.4. Plug white and brown wires into hub, see diagram.
- 5.5. Connect black and gray wires to HARN-ELITE-001.
- 5.6. **Plug harness into mixer CAN Bus:**

- a. Unplug the 4-pin connector from back of Elite Display (this is the mixer CAN Bus connection).
- b. Plug the matching HARN-ELITE-001, 4-pin connector into the Elite Display, see diagram.
- c. Plug the remaining HARN-ELITE-001, 4-pin connector into the mixer CAN Bus connection, see diagram.



Look at the two 4-pin connectors from the Elite Display—does one have a **resistor** attached?

YES—remove J51 terminating resistor from P51 on the HARN-ELITE-001 harness, see diagram.

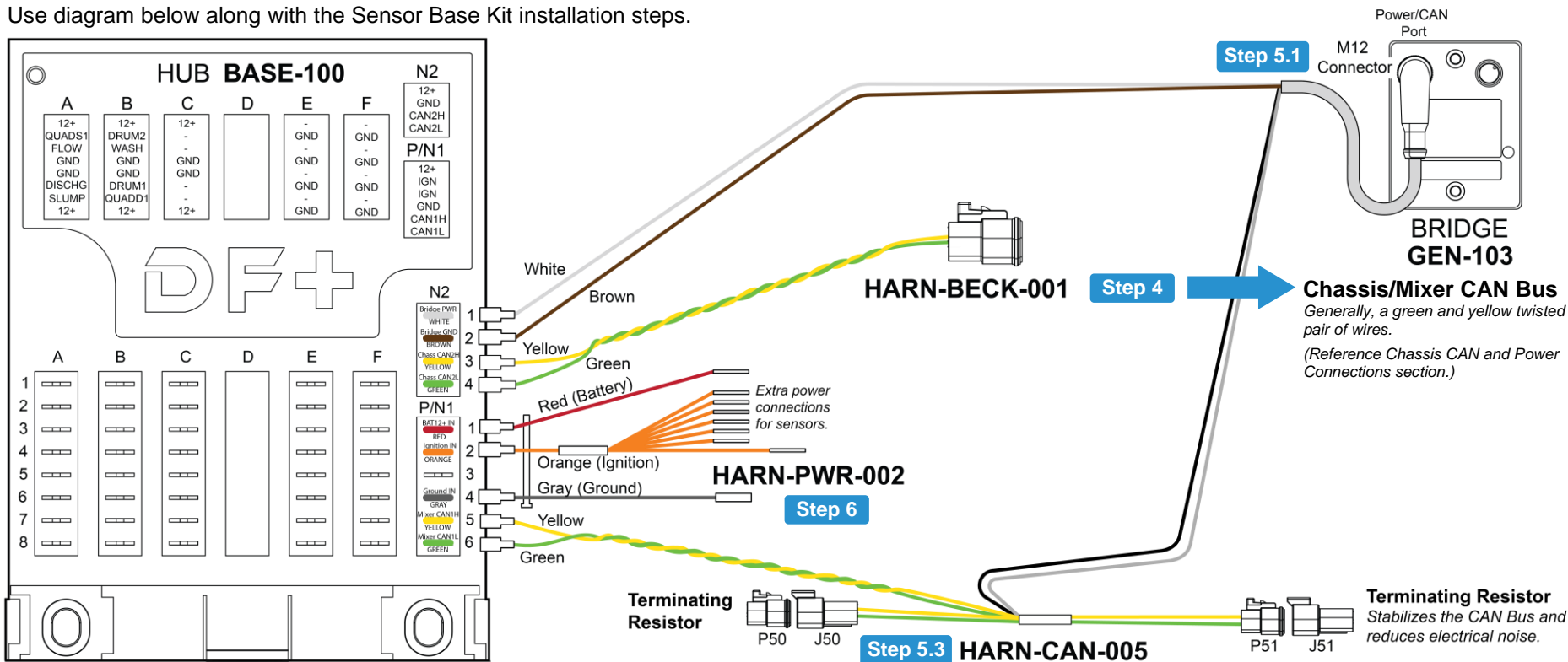
NO—make sure J51 terminating resistor is plugged into P51 on HARN-ELITE-001, see diagram.

Step 6. Connect Chassis Power, Ignition, and Ground to Hub

- 6.1. Locate chassis connection for battery power. **Always connect power or ground to Hub last.**
- 6.2. The long red harness wire has a TE terminal end (for a splice block). If needed, cut terminal off, strip end, and crimp on appropriate terminal provided in kit (i.e., ring terminal).
Note: Extra orange wires are provided for added sensors, if needed. Make sensor connections before connecting power (see sensor section).
- 6.3. Connect **long red harness wire** to truck battery power connection.
- 6.4. Connect remaining female terminal ends of harness to Hub, see diagram: Orange (IGN) to N1-2; Gray (GND) to N1-4; Red (Battery PWR) to N1-1.

Wire Diagram 6 Sensor Base Beck Electric

Use diagram below along with the Sensor Base Kit installation steps.



Step 4. Connect Hub to Chassis/Mixer CAN Bus (use HARN-BECK-001)

- 4.1. Locate chassis CAN connector (connector is labeled)—reference Chassis CAN and Power Connections section for the rear discharge mixer that best matches your truck.
- 4.2. Plug HARN-CAN-001 into CAN Bus—use the pair of connectors that fits your chassis, see diagram.
- 4.3. **Plug remaining non-used pairs together** to prevent water intrusion.
- 4.4. Plug HARN-CAN-001 into Hub, see diagram.

Important: When routing wires to Hub, follow an existing wire path, or remove a rubber hole plug—watch for sharp edges, use a grommet or bushing on holes to prevent wire damage.

Step 5. Install HARN-CAN-005

Connect Bridge to Hub

- 5.1. Plug M12 Connector into Power/CAN port on Bridge. (Align the key, do not force a connection—thread lock ring onto port until hand tight.)
- 5.2. Plug white and brown wires into Hub, see diagram: White to N2-1; Brown to N2-2

Connect HARN-CAN-005 to Hub

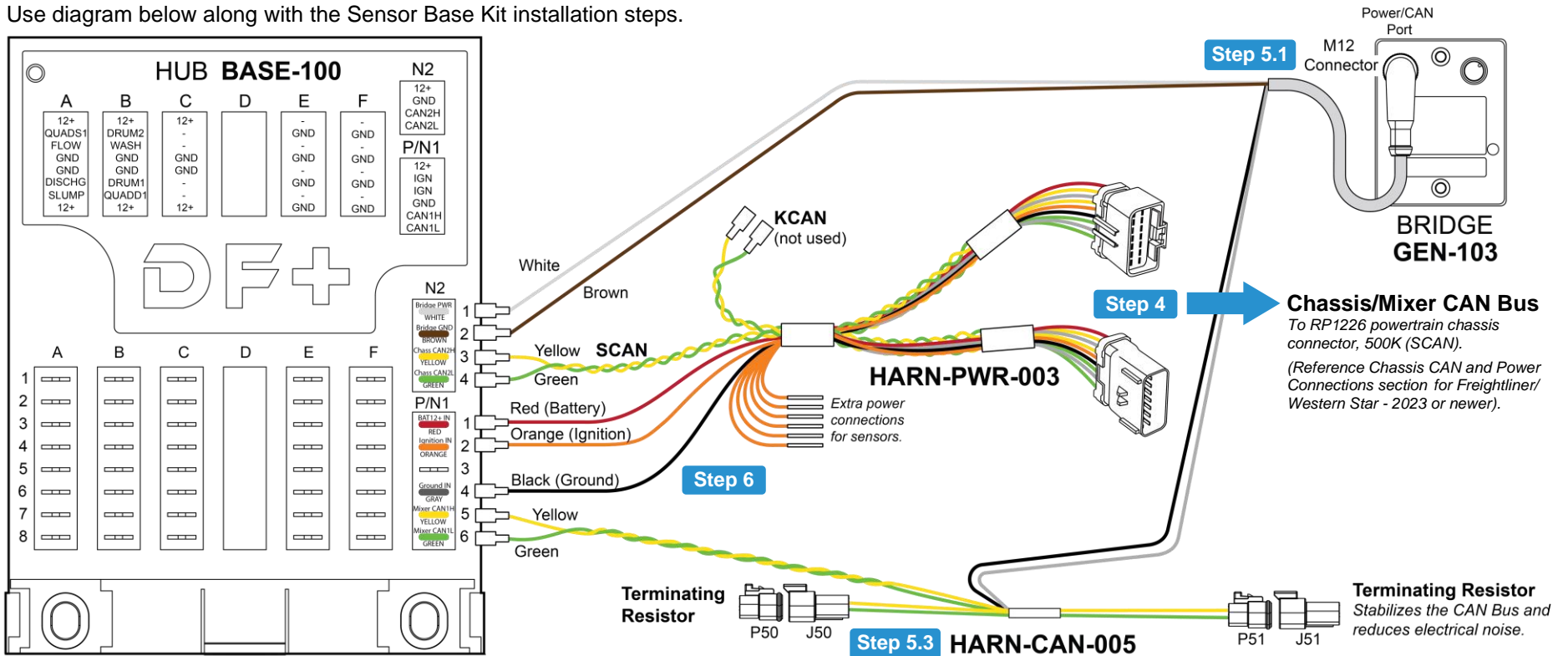
- 5.3. Plug HARN-CAN-005 into Hub, see diagram: Yellow to N1-5; Green to N1-6
- 5.4. Truck **does not** have a mixer CAN Bus—a terminating resistor is preinstalled in each connector (do not remove), see diagram.

Step 6. Connect Chassis Power, Ignition, and Ground to Hub

- 6.1. Locate chassis connection for battery power. **Always connect power or ground to Hub last.**
- 6.2. The long red harness wire has a TE terminal end (for a splice block). If needed, cut terminal off, strip end, and crimp on appropriate terminal provided in kit (i.e., ring terminal).
Note: Extra orange wires are provided for added sensors, if needed. Make sensor connections before connecting power (see sensor section).
- 6.3. Connect **long red harness wire** to truck battery power connection.
- 6.4. Connect remaining female terminal ends of harness to Hub, see diagram: Orange (IGN) to N1-2; Gray (GND) to N1-4; Red (Battery PWR) to N1-1.
- 6.5. (Battery PWR) to N1-1.

Wire Diagram 7 Sensor Base – Freightliner/Western Star 2023 or newer

Use diagram below along with the Sensor Base Kit installation steps.



Step 4. Connect Hub to Chassis/Mixer CAN Bus (use HARN-PWR-003)

- 4.1. Locate chassis CAN connector RP1226 (connector is labeled)—reference Chassis CAN and Power Connections section for Freightliner/Western Star - 2023 or newer.
- 4.2. Unplug the RP1226 chassis connector; then plug **both** ends into HARN-PWR-003, see diagram.
- 4.3. Plug HARN-PWR-003 into Chassis CAN on Hub (N2-3 and N2-4), see diagram. Use the yellow and green twisted pair of wires marked for **SCAN** to connect to the HUB (KCAN not used).

Power wires are connected to Hub in a later step.

Important: When routing wires to Hub, follow an existing wire path, or remove a rubber hole plug—watch for sharp edges, use a grommet or bushing on holes to prevent wire damage.

Step 5. Install HARN-CAN-005

Connect Bridge to Hub

- 5.1. Plug M12 Connector into Power/CAN port on Bridge. (Align the key, do not force a connection—thread lock ring onto port until hand tight.)
- 5.2. Plug white and brown wires into Hub, see diagram: White to N2-1; Brown to N2-2

Connect HARN-CAN-005 to Hub

- 5.3. Plug HARN-CAN-005 into Hub, see diagram: Yellow to N1-5; Green to N1-6
- 5.4. Truck **does not** have a mixer CAN Bus—a terminating resistor is preinstalled in each connector (do not remove), see diagram.

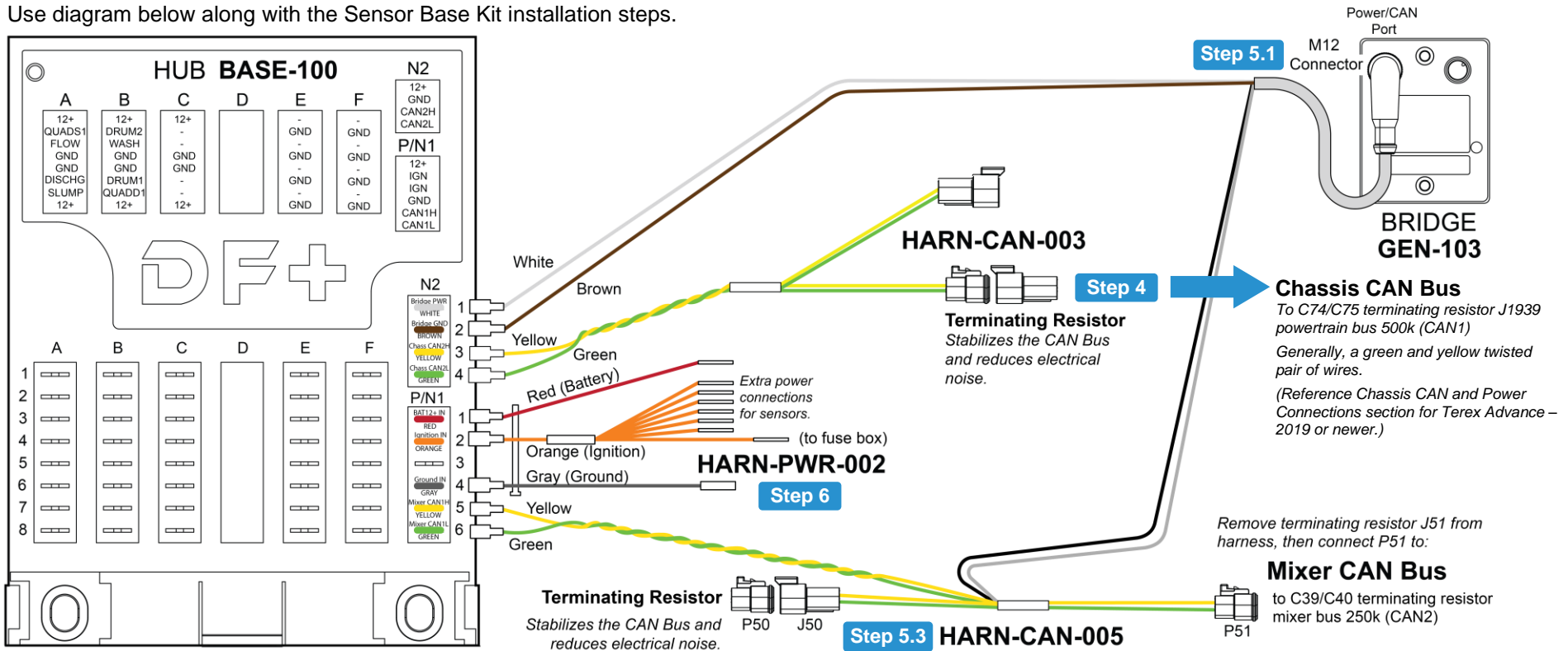
Step 6. Connect Hub to Chassis Power, Ignition, and Ground (use HARN-PWR-003)

Always connect power or ground to Hub last.

- 6.1. Connect Orange (IGN) wire with female terminal end to N1-2.
Note: Extra orange wires are provided for sensors, if needed. Connect sensors before connecting battery power to Hub (see sensor section).
- 6.2. Connect Black (GND) wire with female terminal end to N1-4; connect Red (Battery PWR) wire with female terminal end to N1-1.

Wire Diagram 8 Sensor Base (Terex Advance): 2019 or newer

Use diagram below along with the Sensor Base Kit installation steps.



Step 4. Connect Hub to Chassis CAN Bus (use HARN-CAN-003)

- 4.1. Chassis and Mixer are on the same CAN Bus—locate the C74/C75 powertrain (CAN1) connection (connector is labeled); reference Chassis CAN and Power Connections section for Terex Advance – 2019 or newer.
- 4.2. Plug HARN-CAN-003 into C74/75 CAN Bus connection, see diagram.
- 4.3. **Plug a terminating resistor** into remaining connector on the harness.
- 4.4. Plug HARN-CAN-003 into Hub, see diagram.

Important: When routing wires to Hub, follow an existing wire path, or remove a rubber hole plug—watch for sharp edges, use a grommet or bushing on holes to prevent wire damage.

Step 5. Install HARN-CAN-005 Connect Bridge to Hub

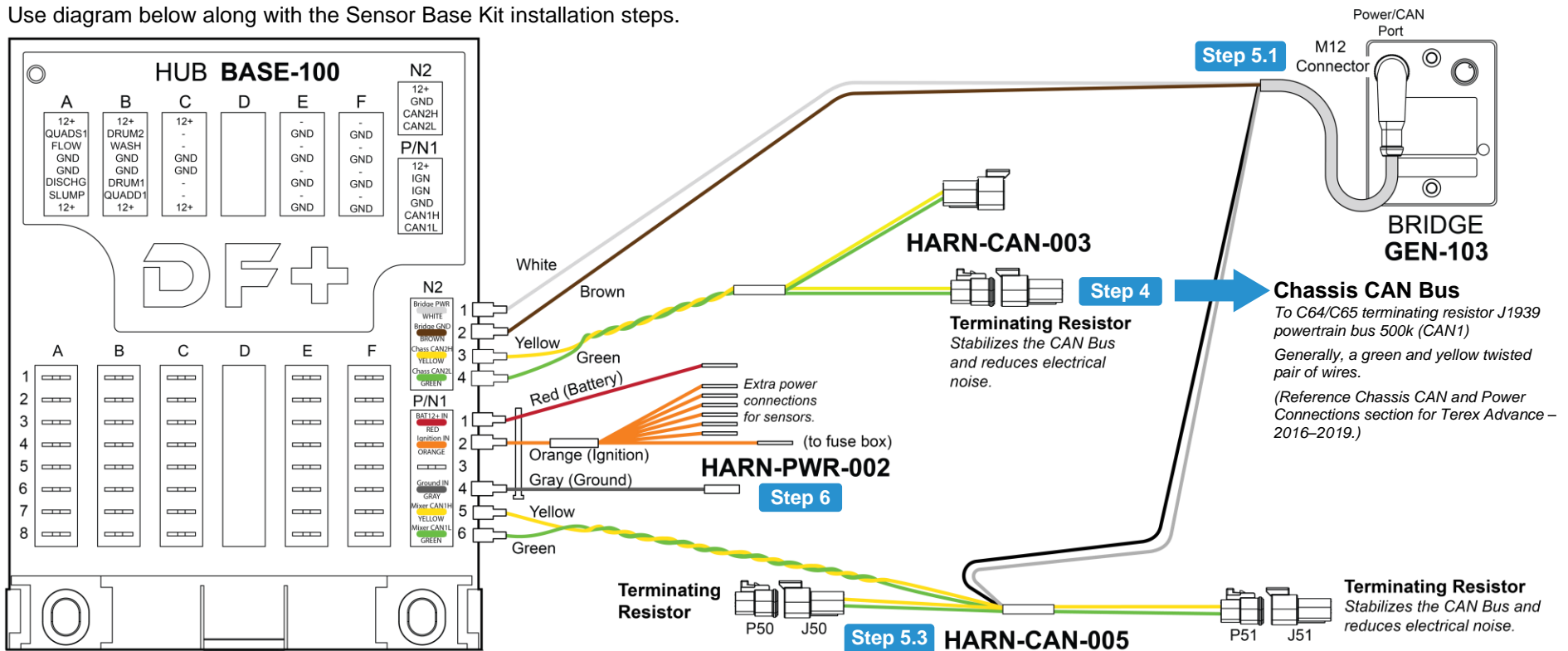
- 5.1. Plug M12 Connector into Power/CAN port on Bridge. (Align the key, do not force a connection—thread lock ring onto port until hand tight.)
 - 5.2. Plug white and brown wires into Hub, see diagram: White to N2-1; Brown to N2-2
- #### Connect HARN-CAN-005 to Hub
- 5.3. Plug HARN-CAN-005 into Hub, see diagram: Yellow to N1-5; Green to N1-6
 - 5.4. Remove terminating resistor J51 from P51 on HARN-CAN-005, see diagram.
 - 5.5. Locate C39/C40 mixer bus (CAN2) connector in truck—plug HARN-CAN-005 (P51) into the CAN Bus connector, see diagram.
 - 5.6. **A terminating resistor must be** plugged into the remaining connector on the harness.

Step 6. Connect Hub to Chassis Power, Ignition, and Ground (use HARN-PWR-002)

- 6.1. Locate chassis connections for battery power, ignition, and ground—connections are labeled. **Always connect power or ground to Hub last.**
 - 6.2. Long harness wires (red, orange, and gray) have a TE terminal end (for a splice block). If needed, cut terminal off, strip end, and crimp on appropriate terminal provided in kit (i.e., ring terminal).
- Note:** Extra orange wires are provided for sensors, if needed. Connect sensors before connecting battery power to Hub (see sensor section).
- 6.3. Connect **long wire ends** to truck connectors (i.e., splice blocks, terminal posts, bullet connections): Orange (to IGN); Gray (to GND); Red (to PWR)
 - 6.4. Connect female terminal ends to Hub, (see diagram: Orange (IGN) to N1-2; Gray (GND) to N1-4; Red (Battery PWR) to N1-1.

Wire Diagram 9 Sensor Base (Terex Advance): 2016–2019 (no Mixer CAN)

Use diagram below along with the Sensor Base Kit installation steps.



Step 4. Connect Hub to Chassis CAN Bus (use HARN-CAN-003)

- 4.1. Chassis and Mixer are on the same CAN Bus—locate the C64/C65 powertrain (CAN1) connection (connector is labeled); reference Chassis CAN and Power Connections for Terex Advance – 2016–2019.
- 4.2. Plug HARN-CAN-003 into C64/65 CAN Bus connection, see diagram.
- 4.3. **Plug a terminating resistor** into remaining connector on the harness.
- 4.4. Plug HARN-CAN-003 into Hub, see diagram.

Important: When routing wires to Hub, follow an existing wire path, or remove a rubber hole plug—watch for sharp edges, use a grommet or bushing on holes to prevent wire damage.

Step 5. Install HARN-CAN-005 Connect Bridge to Hub

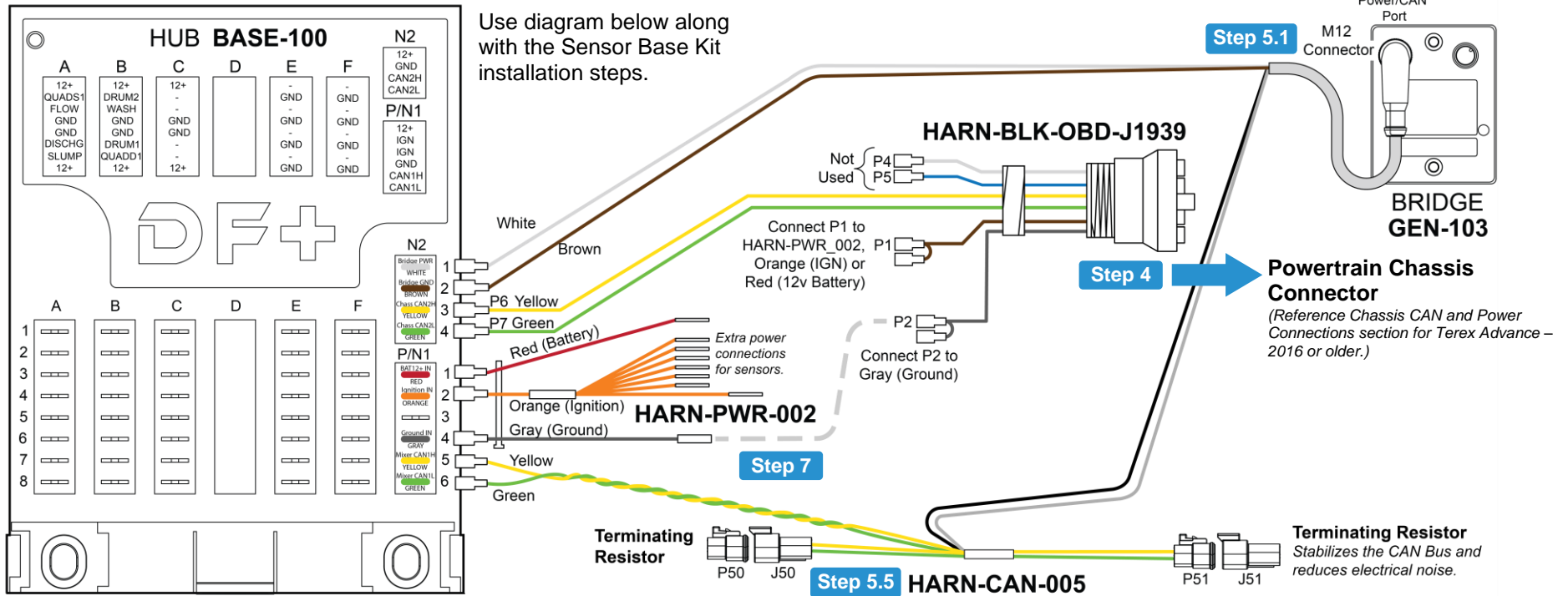
- 5.1. Plug M12 Connector into Power/CAN port on Bridge. (Align the key, do not force a connection—thread lock ring onto port until hand tight.)
 - 5.2. Plug white and brown wires into Hub, see diagram: White to N2-1; Brown to N2-2
- ### Connect HARN-CAN-005 to Hub
- 5.3. Plug HARN-CAN-005 into Hub, see diagram: Yellow to N1-5; Green to N1-6
 - 5.4. Truck **does not** have a mixer CAN Bus—a terminating resistor is preinstalled in each connector (do not remove), see diagram.

Step 6. Connect Hub to Chassis Power, Ignition, and Ground (use HARN-PWR-002)

- 6.1. Locate chassis connections for battery power, ignition, and ground—connections are labeled. **Always connect power or ground to Hub last.**
- 6.2. Long harness wires (red, orange, and gray) have a TE terminal end (for a splice block). If needed, cut terminal off, strip end, and crimp on appropriate terminal provided in kit (i.e., ring terminal).

Note: Extra orange wires are provided for sensors, if needed. Connect sensors before connecting battery power to Hub (see sensor section).
- 6.3. Connect **long wire ends** to truck connectors (i.e., splice blocks, terminal posts, bullet connections): Orange (to IGN); Gray (to GND); Red (to PWR)
- 6.4. Connect female terminal ends to Hub, see diagram: Orange (IGN) to N1-2; Gray (GND) to N1-4; Red (Battery PWR) to N1-1.

Wire Diagram 10 Sensor Base (Terex Advance): 2016 or older (no Mixer CAN)



Use diagram below along with the Sensor Base Kit installation steps.

Step 4. Connect Hub to Chassis Powertrain Connector (use HARN-BLK-OBD-J1939)

1. Locate the diagnostic port in truck cab; reference Chassis CAN and Power Connections section for Terex Advance – 2016 or older.

If diagnostic port is currently in use (or used by service technicians), use a splitter (sold separately) to keep the port available when the OBD harness is plugged in.

2. Plug HARN-BLK-OBD-J1939 into diagnostic port.
3. Plug HARN-BLK-OBD-J1939 wires (P6 yellow and P7 green) into Hub, see diagram.

Important: When routing wires to Hub, follow an existing wire path, or remove a rubber hole plug—watch for sharp edges, use a grommet or bushing on holes to prevent wire damage.

Step 5. Install HARN-CAN-005

Connect Bridge to Hub

- 5.1. Plug M12 Connector into Power/CAN port on

Bridge. (Align the key, do not force a connection—thread lock ring onto port until hand tight.)

- 5.2. Plug white and brown wires into Hub, see diagram: White to N2-1; Brown to N2-2

Connect HARN-CAN-005 to Hub

- 5.3. Plug HARN-CAN-005 into Hub, see diagram: Yellow to N1-5; Green to N1-6
- 5.4. Truck **does not** have a mixer CAN Bus—a terminating resistor is preinstalled in each connector (do not remove), see diagram.

Step 6. Test for Chassis Power or Ignition Connection

- 6.1. **Use a Test Light** (or multimeter) to determine if you will connect to ignition or 12v constant power.

With OBD harness plugged into diagnostic port:

 - a. Put one Test Light lead into HARN-BLK-OBD-J1939 (P1) 12v battery power wire end.
 - b. Put the other Test Light lead into HARN-OBD-001 (P2) ground wire end.

- c. If light goes ON and OFF when key is turned on and off, connect to ignition.
- d. If light stays ON when key is turned off, connect to 12v battery power).

Step 7. Connect Hub to Chassis Ground and to either Power or Ignition (use HARN-PWR-002)

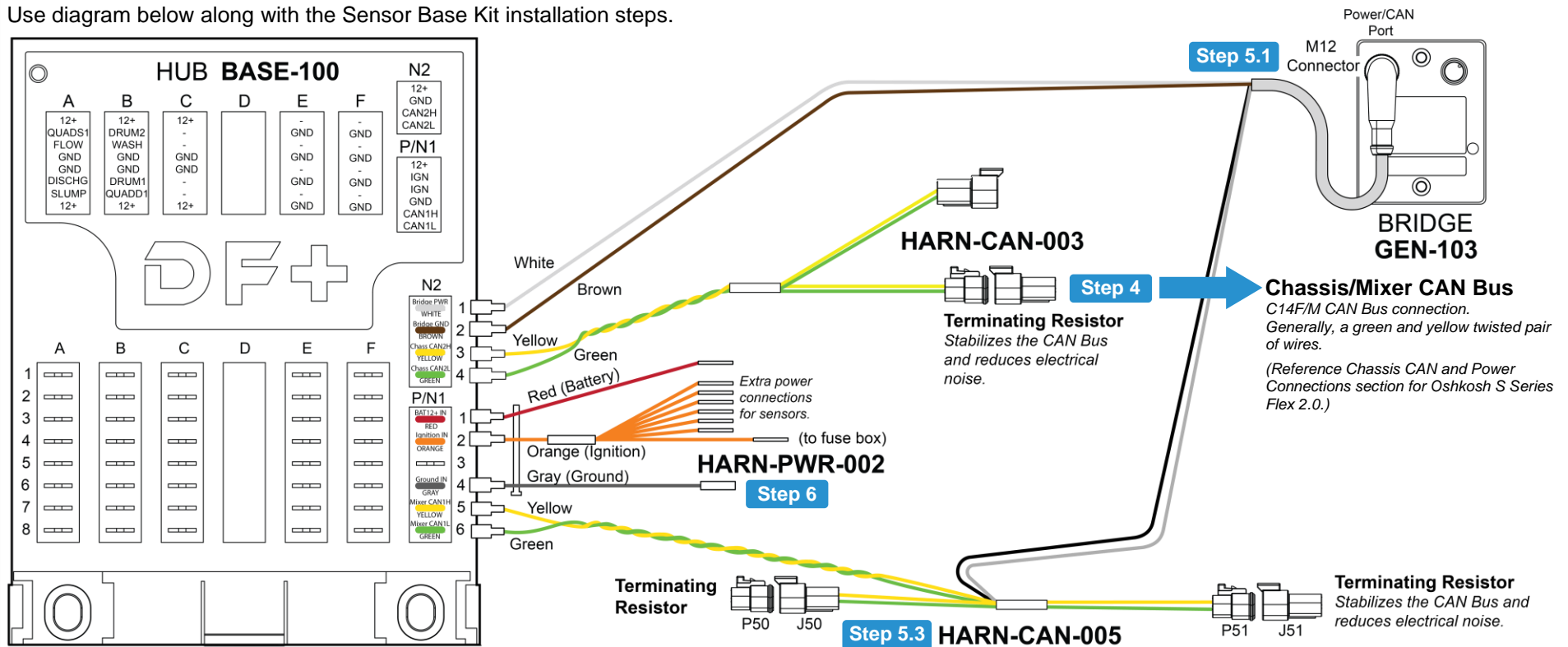
- 7.1. Long harness wires (red, orange, and gray) have a TE terminal end (for a splice block). Cut terminal end off, strip end, and crimp on male terminals (GEN-110).

Note: Extra orange wires are provided for sensors, if needed. Connect sensors before connecting battery power to Hub (see sensor section).

- 7.2. Connect the **female** terminal ends to Hub, see diagram: Orange (IGN) to N1-2; Gray (GND) to N1-4; Red (Battery PWR) to N1-1.
- 7.3. Connect the Gray (GND) **long wire end** to P2 Gray (GND wire) on OBD harness, see diagram.
- 7.4. Connect EITHER the Red (Battery PWR) or Orange (IGN) **long wire end** to P1 power wire on OBD harness as determined by Step 6 test, see diagram.

Wire Diagram 11 Sensor Base (Oshkosh S Series Flex 2.0)

Use diagram below along with the Sensor Base Kit installation steps.



Step 4. Connect Hub to Chassis/Mixer CAN Bus (use HARN-CAN-003)

- 4.1. Chassis and Mixer are on the same CAN Bus—look for the C14F/M CAN Bus connection, by the driver's left leg (connector is labeled); reference Chassis CAN and Power Connections section for Oshkosh S Series Flex 2.0.
- 4.2. Plug HARN-CAN-003 into C14F/M CAN Bus connection, see diagram.
- 4.3. **Plug a terminating resistor** into remaining connector on the harness.
- 4.4. Plug HARN-CAN-003 into Hub, see diagram.

Important: When routing wires to Hub, follow an existing wire path, or remove a rubber hole plug—watch for sharp edges, use a grommet or bushing on holes to prevent wire damage.

Step 5. Install HARN-CAN-005 Connect Bridge to Hub

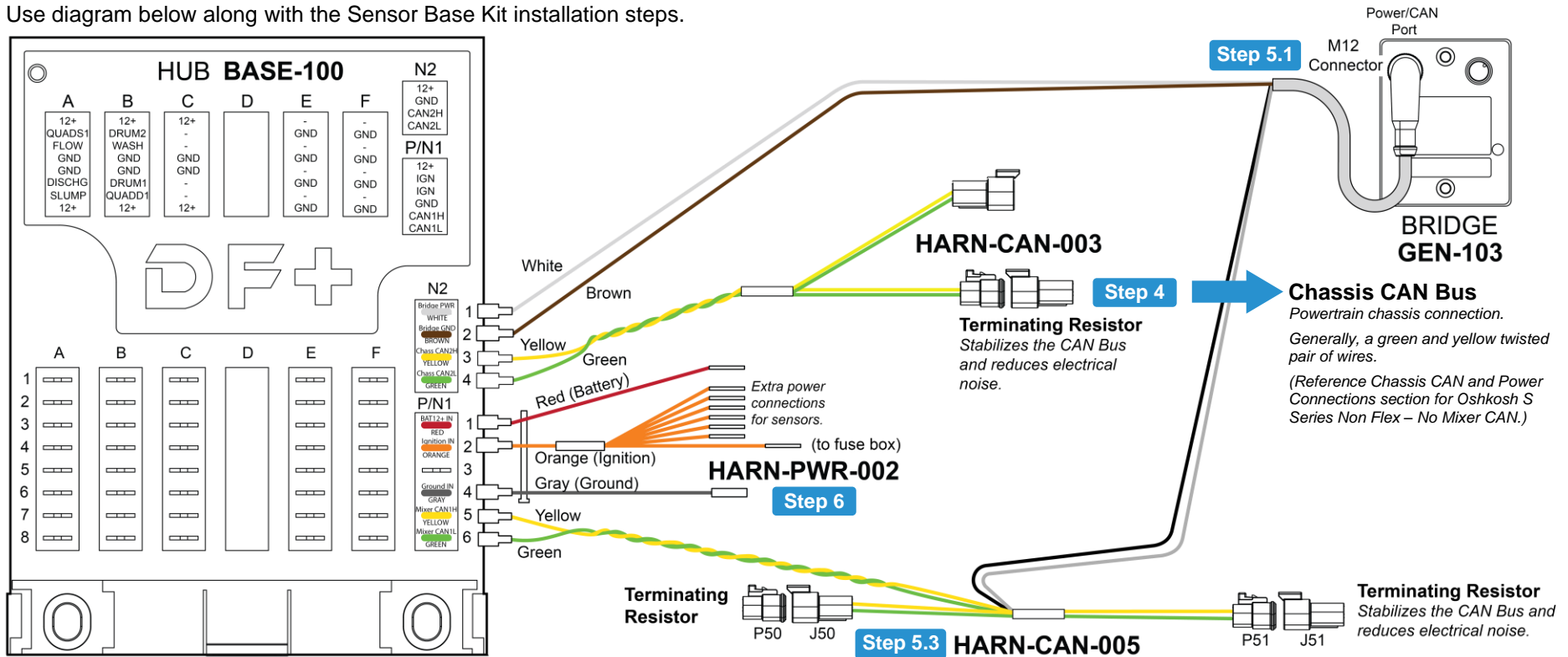
- 5.1. Plug M12 Connector into Power/CAN port on Bridge. (Align the key, do not force a connection—thread lock ring onto port until hand tight.)
 - 5.2. Plug white and brown wires into Hub, see diagram: White to N2-1; Brown to N2-2
- ### Connect HARN-CAN-005 to Hub
- 5.3. Plug HARN-CAN-005 into Hub, see diagram: Yellow to N1-5; Green to N1-6
 - 5.4. Truck **does not** have a mixer CAN Bus—a terminating resistor is preinstalled in each connector (do not remove), see diagram.

Step 6. Connect Hub to Chassis Power, Ignition, and Ground (use HARN-PWR-002)

- 6.1. Locate chassis connections for battery power, ignition, and ground—connections are labeled. **Always connect power or ground to Hub last.**
 - 6.2. Long harness wires (red, orange, and gray) have a TE terminal end (for a splice block). If needed, cut terminal off, strip end, and crimp on appropriate terminal provided in kit (i.e., ring terminal).
- Note:** Extra orange wires are provided for sensors, if needed. Connect sensors before connecting battery power to Hub (see sensor section).
- 6.3. Connect **long wire ends** to truck connectors (i.e., splice blocks, terminal posts, bullet connections): Orange (to IGN); Gray (to GND); Red (to PWR)
 - 6.4. Connect female terminal ends to Hub, see diagram: Orange (IGN) to N1-2; Gray (GND) to N1-4; Red (Battery PWR) to N1-1.

Wire Diagram 12 Sensor Base (Oshkosh S Series Non Flex): 3-way (no Mixer CAN)

Use diagram below along with the Sensor Base Kit installation steps.



Step 4. Connect Hub to Chassis CAN Bus (use HARN-CAN-003)

- 4.1. Locate the powertrain chassis connector (connector is labeled)—reference Chassis CAN and Power Connections section for Oshkosh S Series Non Flex – No Mixer CAN.
- 4.2. Plug HARN-CAN-003 into powertrain chassis connection, see diagram.
- 4.3. **Plug a terminating resistor** into remaining connector on the harness.
- 4.4. Plug HARN-CAN-003 into Hub, see diagram.

Important: When routing wires to Hub, follow an existing wire path, or remove a rubber hole plug—watch for sharp edges, use a grommet or bushing on holes to prevent wire damage.

Step 5. Install HARN-CAN-005 Connect Bridge to Hub

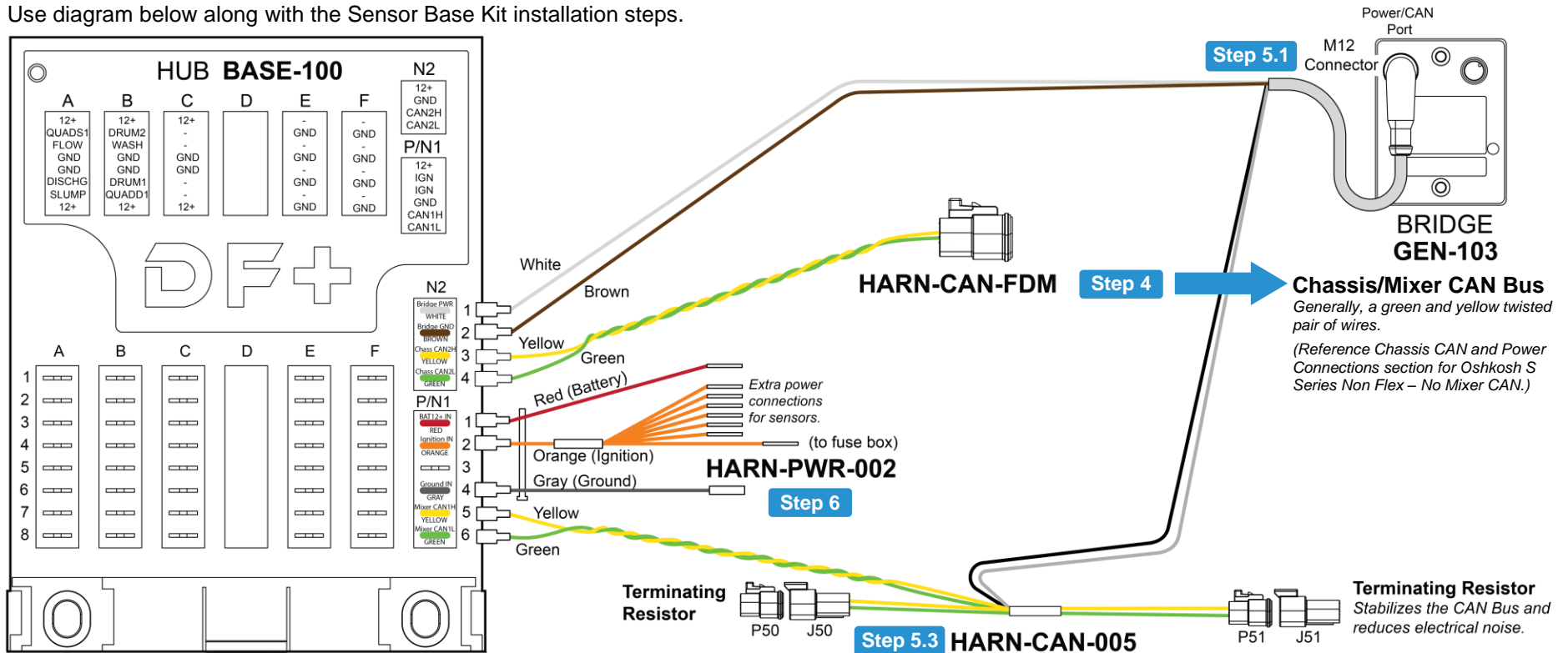
- 5.1. Plug M12 Connector into Power/CAN port on Bridge. (Align the key, do not force a connection—thread lock ring onto port until hand tight.)
 - 5.2. Plug white and brown wires into Hub, see diagram: White to N2-1; Brown to N2-2
- ### Connect HARN-CAN-005 to Hub
- 5.3. Plug HARN-CAN-005 into Hub, see diagram: Yellow to N1-5; Green to N1-6
 - 5.4. Truck **does not** have a mixer CAN Bus—a terminating resistor is preinstalled in each connector (do not remove), see diagram.

Step 6. Connect Hub to Chassis Power, Ignition, and Ground (use HARN-PWR-002)

- 6.1. Locate chassis connections for battery power, ignition, and ground—connections are labeled. **Always connect power or ground to Hub last.**
 - 6.2. Long harness wires (red, orange, and gray) have a TE terminal end (for a splice block). If needed, cut terminal off, strip end, and crimp on appropriate terminal provided in kit (i.e., ring terminal).
- Note:** Extra orange wires are provided for sensors, if needed. Connect sensors before connecting battery power to Hub (see sensor section).
- 6.3. Connect **long wire ends** to truck connectors (i.e., splice blocks, terminal posts, bullet connections): Orange (to IGN); Gray (to GND); Red (to PWR)
 - 6.4. Connect female terminal ends to Hub, see diagram: Orange (IGN) to N1-2; Gray (GND) to N1-4; Red (Battery PWR) to N1-1.

Wire Diagram 13 Sensor Base (Oshkosh S Series Non Flex): 6-way (no Mixer CAN)

Use diagram below along with the Sensor Base Kit installation steps.



Step 4. Connect Hub to Chassis CAN Bus (use HARN-CAN-FDM)

- 4.1. Locate chassis CAN connector (connector is labeled)—reference Chassis CAN and Power Connections section for Oshkosh S Series Non Flex – No Mixer CAN.
- 4.2. Plug HARN-CAN-FDM into CAN Bus connection, see diagram.
- 4.3. Plug HARN-CAN-FDM into Hub, see diagram.

Important: When routing wires to Hub, follow an existing wire path, or remove a rubber hole plug—watch for sharp edges, use a grommet or bushing on holes to prevent wire damage.

Step 5. Install HARN-CAN-005 Connect Bridge to Hub

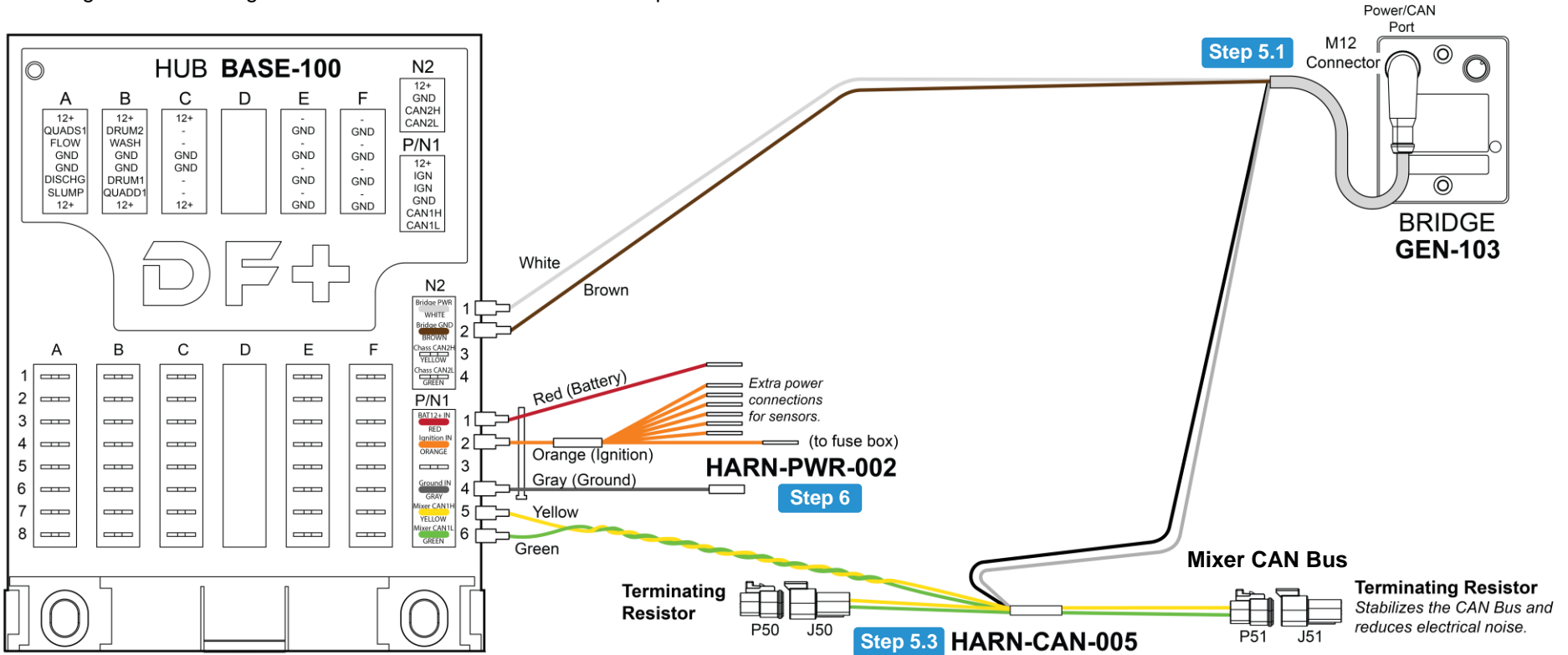
- 5.1. Plug M12 Connector into Power/CAN port on Bridge. (Align the key, do not force a connection—thread lock ring onto port until hand tight.)
 - 5.2. Plug white and brown wires into Hub, see diagram: White to N2-1; Brown to N2-2
- ### Connect HARN-CAN-005 to Hub
- 5.3. Plug HARN-CAN-005 into Hub, see diagram: Yellow to N1-5; Green to N1-6
 - 5.4. Truck **does not** have a mixer CAN Bus—a terminating resistor is preinstalled in each connector (do not remove), see diagram.

Step 6. Connect Hub to Chassis Power, Ignition, and Ground (use HARN-PWR-002)

- 6.1. Locate chassis connections for battery power, ignition, and ground—connections are labeled. **Always connect power or ground to Hub last.**
- 6.2. Long harness wires (red, orange, and gray) have a TE terminal end (for a splice block). If needed, cut terminal off, strip end, and crimp on appropriate terminal provided in kit (i.e., ring terminal).
Note: Extra orange wires are provided for sensors, if needed. Connect sensors before connecting battery power to Hub (see sensor section).
- 6.3. Connect **long wire ends** to truck connectors (i.e., splice blocks, terminal posts, bullet connections): Orange (to IGN); Gray (to GND); Red (to PWR)
- 6.4. Connect female terminal ends to Hub, see diagram: Orange (IGN) to N1-2; Gray (GND) to N1-4; Red (Battery PWR) to N1-1.

Wire Diagram 14 Sensor Base (Oshkosh S Series Non Flex): Glider (no Chassis/Mixer CAN)

Use diagram below along with the Sensor Base Kit installation steps.



Step 4. Glider without Chassis CAN

No CAN harness required.

Step 5. Install HARN-CAN-005

Connect Bridge to Hub

- 5.1. Plug M12 Connector into Power/CAN port on Bridge. (Align the key, do not force a connection—thread lock ring onto port until hand tight.)
- 5.2. Plug white and brown wires into Hub, see diagram: White to N2-1; Brown to N2-2

Connect HARN-CAN-005 to Hub

- 5.3. Plug HARN-CAN-005 into Hub, see diagram: Yellow to N1-5; Green to N1-6

- 5.4. Truck **does not** have a mixer CAN Bus—a terminating resistor is preinstalled in each connector (do not remove), see diagram.

Step 6. Connect Hub to Chassis Power, Ignition, and Ground (use HARN-PWR-002)

- 6.1. Locate chassis connections for battery power, ignition, and ground—connections are labeled. **Always connect power or ground to Hub last.**
- 6.2. Long harness wires (red, orange, and gray) have a TE terminal end (for a splice block). If needed, cut terminal off, strip end, and crimp on appropriate terminal provided in kit (i.e., ring terminal).

Note: Extra orange wires are provided for sensors, if needed. Connect sensors before connecting battery power to Hub (see sensor section).

- 6.3. Connect **long wire ends** to truck connectors (i.e., splice blocks, terminal posts, bullet connections): Orange (to IGN); Gray (to GND); Red (to PWR)
- 6.4. Connect female terminal ends to Hub, see diagram: Orange (IGN) to N1-2; Gray (GND) to N1-4; Red (Battery PWR) to N1-1