

PREVOST

Instruction Sheet

IS-17071A

Volvo ELD interface kit for OBD Vehicles

Revision A Connection to A45 module – simplified procedure

03-15-2019

APPLICATION

| Model | VIN |
|---|--|
| H3 Series Vehicles Model Year : 2013 to 2018 | From 2PCH33499 <u>DC712364</u> up to 2PCH33496 <u>JC710082</u> |
| X3 Series Vehicles Model Year : 2014 to 2018 | From 2PCG33497 <u>EC735459</u> up to 2PCCS3491 <u>JC736280</u> |

MATERIAL

Kit #069800 includes the following parts:

| Part No. | Description | Qty |
|----------|--------------------------------------|-----|
| 061890 | ELD Harness OBD | 1 |
| 20890176 | Control Unit FMS Gateway | 1 |
| 380120 | Connector Bracket | 1 |
| 380121 | FMS Gateway Bracket | 1 |
| 390038 | ELD Decal | 1 |
| 390039 | OBD Decal | 1 |
| 500855 | Washer Flat N500 .188X.438X.049 | 2 |
| 502868 | Screw TC TR PH N500 #10-16 X 1/2 | 6 |
| 504637 | Cable tie Nylon STD Black | 20 |
| 566004 | Panel Nut Size 18 | 1 |
| 566006 | Lock Washer for Panel Nut | 1 |
| 560587 | Ground terminal – Round (16-14) 1/4" | 1 |
| FI-17071 | Instruction Sheet (FR) | 1 |
| IS-17071 | Instruction Sheet (EN) | 1 |

Equipment required:

| Description | Qty |
|--|-----|
| Laptop with PTT (Premium TechTool, latest version installed) & related cables. | 1 |

NOTE

Material can be obtained through regular channels.

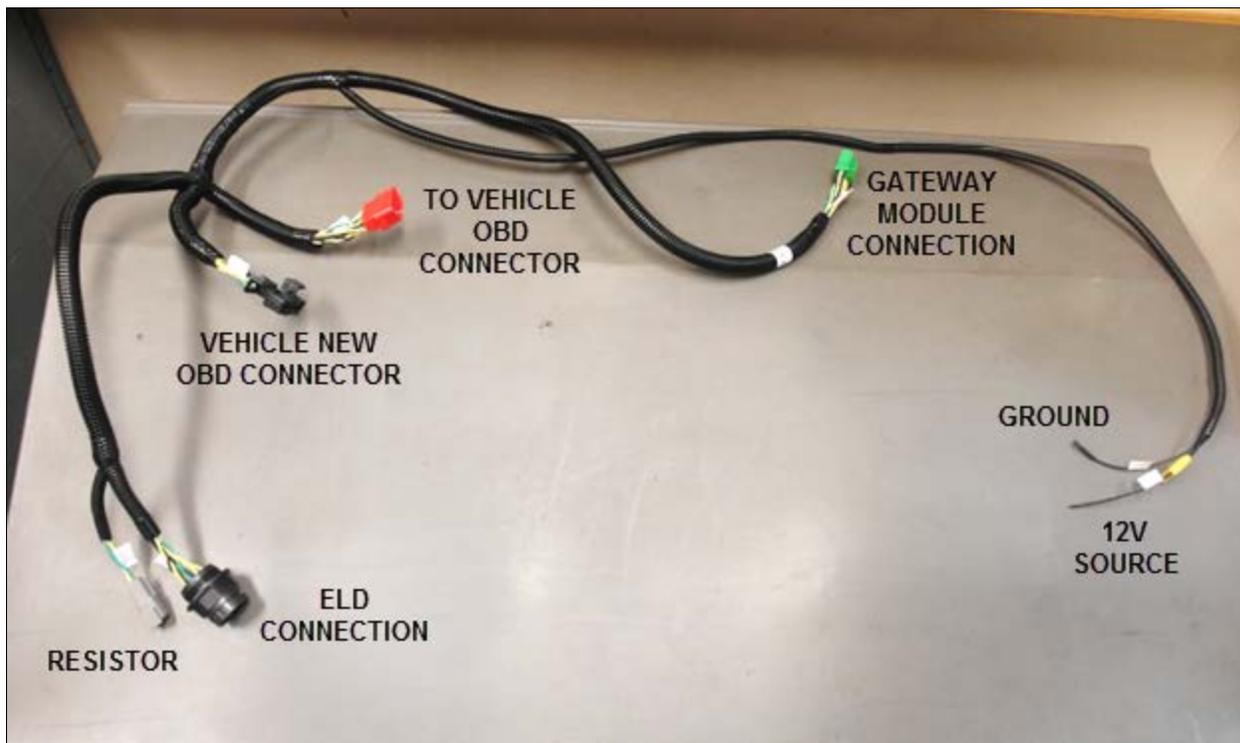
PROCEDURE



DANGER

Park vehicle safely, apply parking brake, stop engine. Prior to working on the vehicle, set the ignition switch to the OFF position and trip the main circuit breakers equipped with a trip button.

PART 1: FMS GATEWAY MODULE AND HARNESS INSTALLATION



HARNESS CONNECTION IDENTIFICATION

1. Open the vehicle front electrical compartment door and remove/open the junction box protective panel.



FRONT JUNCTION BOX PROTECTIVE PANEL (H3 VEHICLE SHOWN)

2. Locate the future ELD gateway module (**20890176**) position at the left corner of the front junction box.



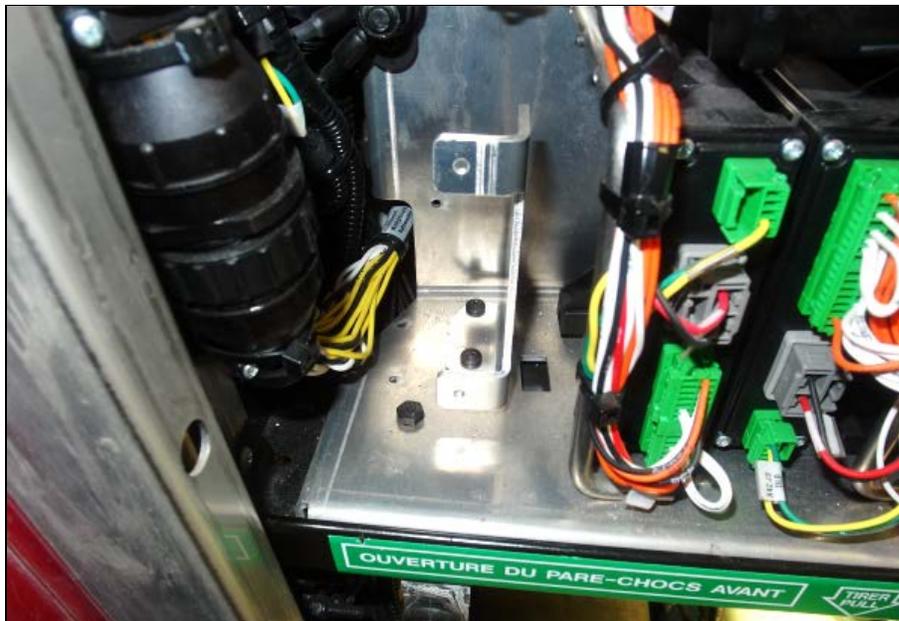
MODULE POSITION IN FRONT JUNCTION BOX (H3 SHOWN, X3 SIMILAR LOCATION)

3. Install the gateway module bracket (**380121**) on the “floor” of the junction box.
 - Bracket should be positioned as far rearward as possible (temporary install the module on the bracket – module should almost touch the back panel).

NOTE

Late production vehicles may already have two pre-drilled holes for bracket installation – Make sure holes are positioned properly (far back) to clear vehicle harness and plastic protective panel before securing bracket/module.

- If no holes are factory drilled or if holes are not positioned properly, mark the bracket lower tab and screw holes positions with a sharpie and drill the two screw holes using an angle drill and a 9/64" (3mm) drill bit.
- Secure the bracket on the junction box floor using two of the supplied #10 screws (**502868**).



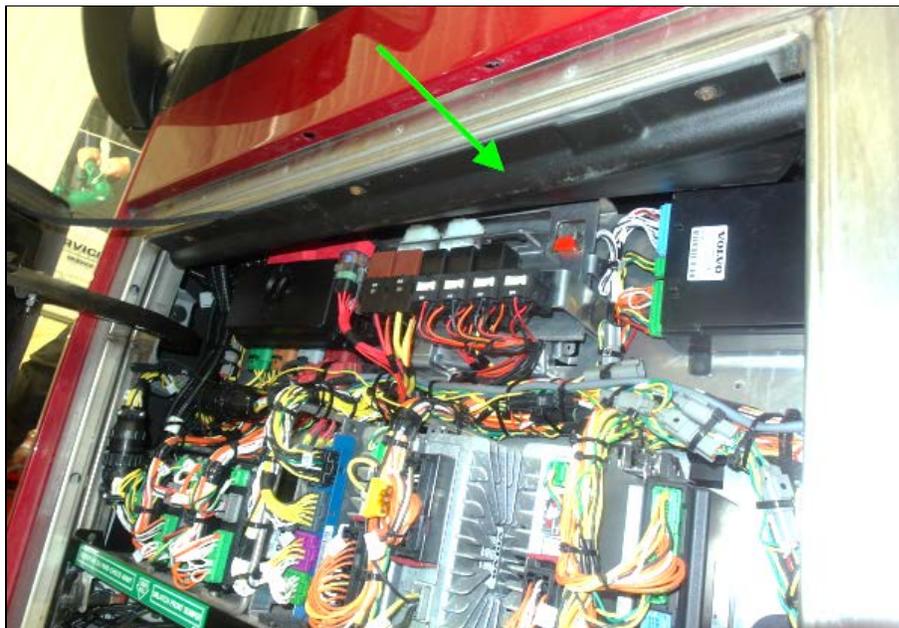
EXAMPLE OF REPOSITIONED BRACKET VS ORIGINAL HOLES POSITION

4. Secure the gateway module to the bracket using two supplied screws (**502868**) and flat washers (**500855**).



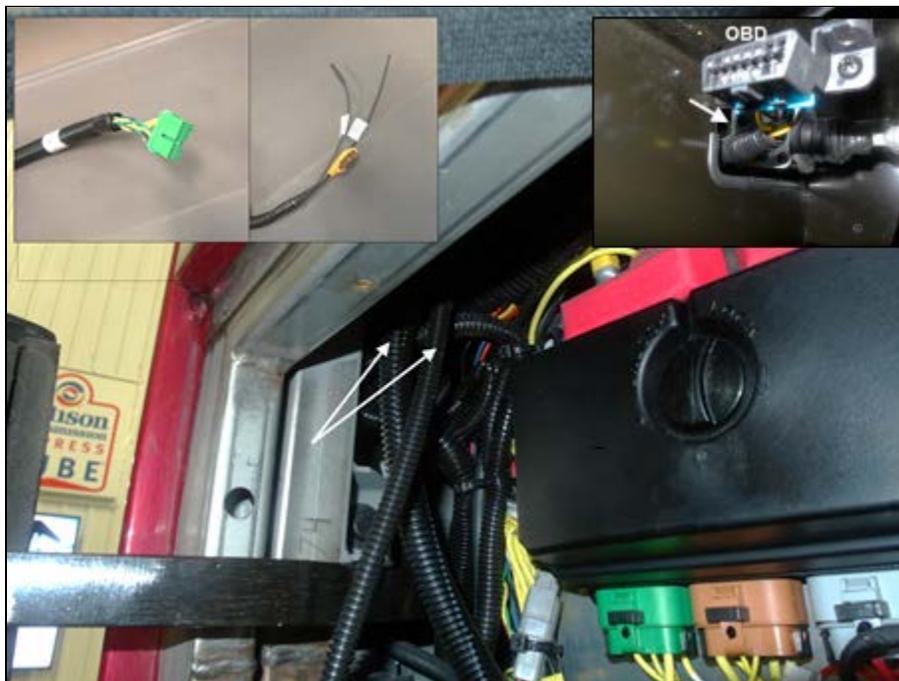
GATEWAY MODULE ON BRACKET – USE FLAT WASHERS

5. On H3 vehicles, remove the front junction box plastic gutter panel to allow direct access to the under dash area.



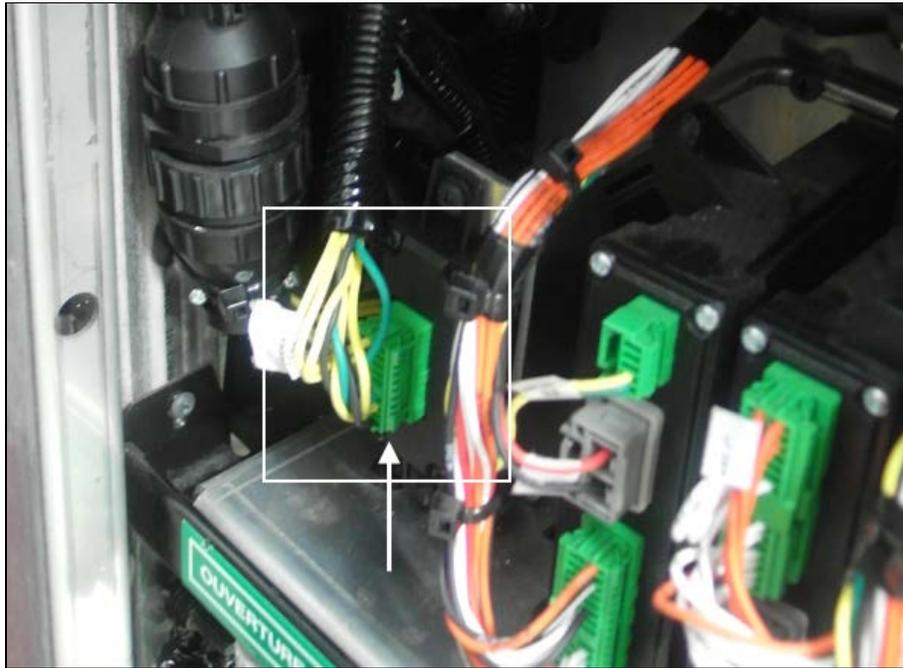
GUTTER PANEL; H3 VEHICLES ONLY

6. From under the dash, route the supplied harness (061890) so the gateway module connector (green) and the module power wires (black and yellow wires without connectors) can reach the front junction box area.



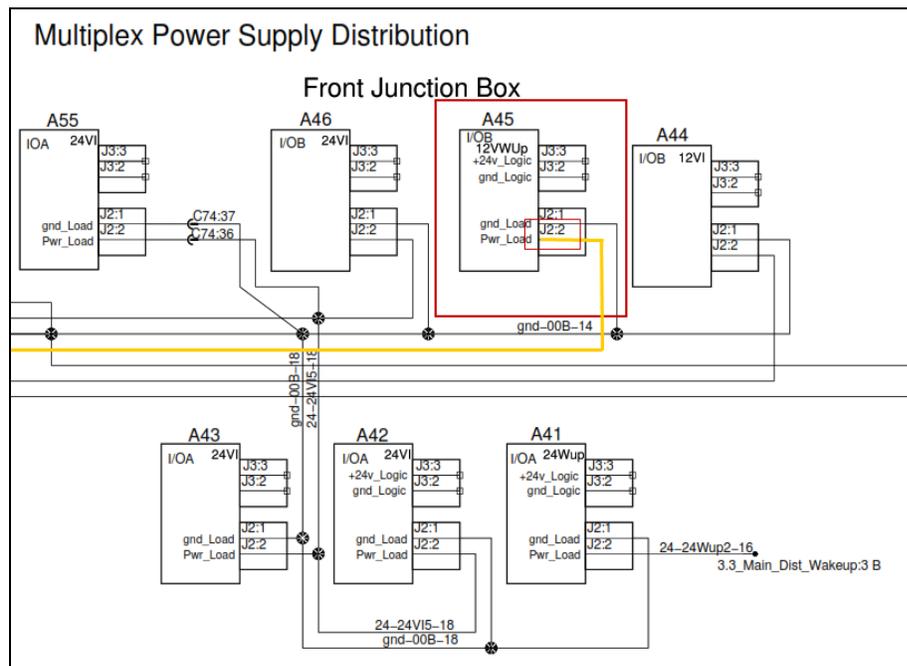
ELD HARNESS –MODULE CONNECTOR & POWER WIRES (H3 SHOWN)

7. Connect the green harness connector to the gateway module.



CONNECTED GATEWAY MODULE

8. Connect the 12V supply wire (fused - yellow wire) to the J2:2 wire of the A45 module connector.



A45 MODULE & WAKE UP 12V POWER

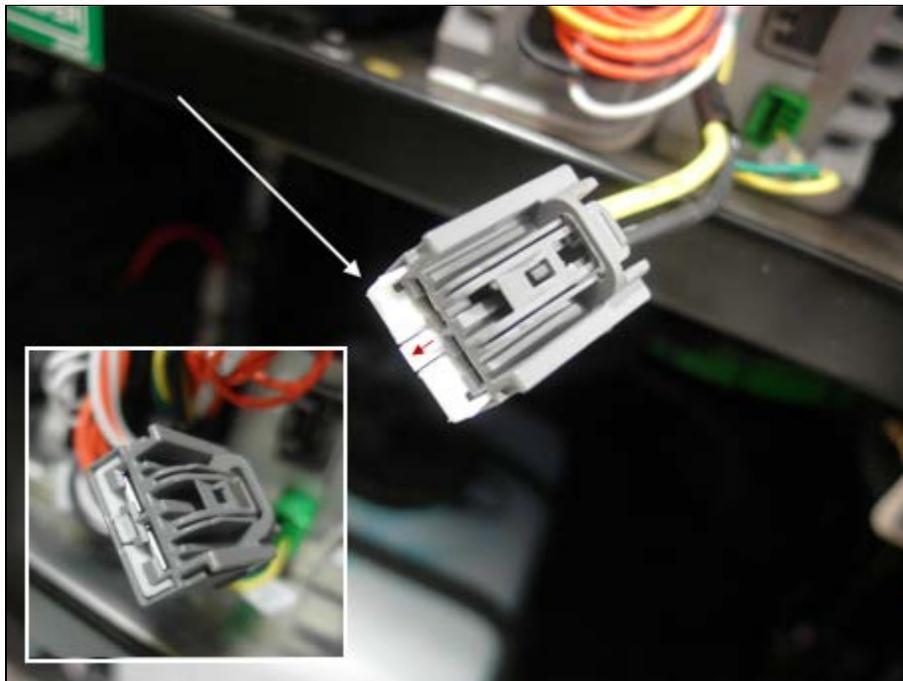
D061340 p 7.1

- Disconnect the A45 module power (12V wake-up) connector (grey plug with yellow & black wires).



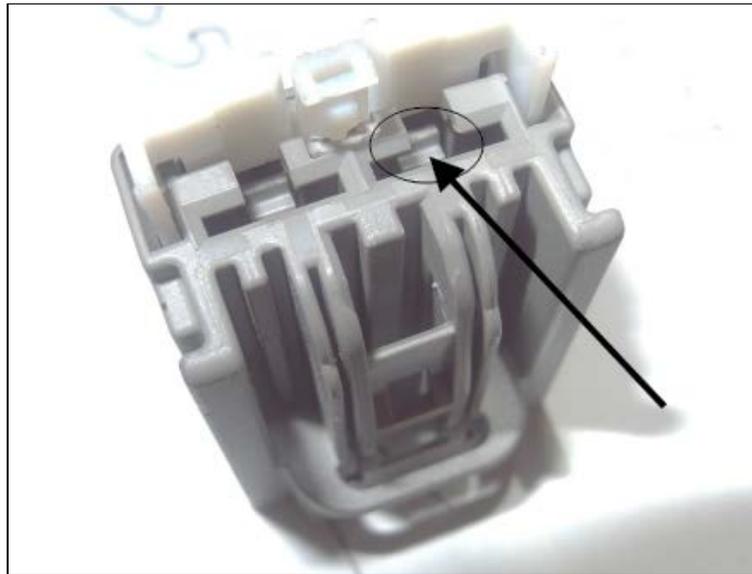
A45 MODULE AND GREY CONNECTOR (12V WAKE-UP)

- Lift the white locking bar located at the tip of the gray connector.



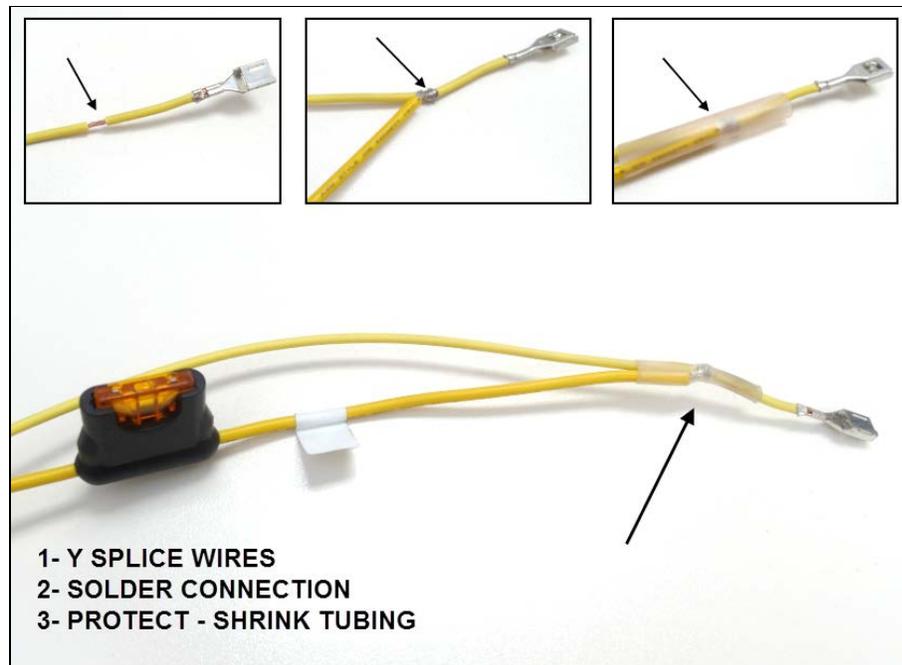
A45 MODULE CONNECTOR LOCKING BAR

- With a small flat screwdriver, press on the small tab located behind the locking bar to free the *J2:2 yellow wire terminal*.



PRESS ON TAB TO FREE TERMINAL

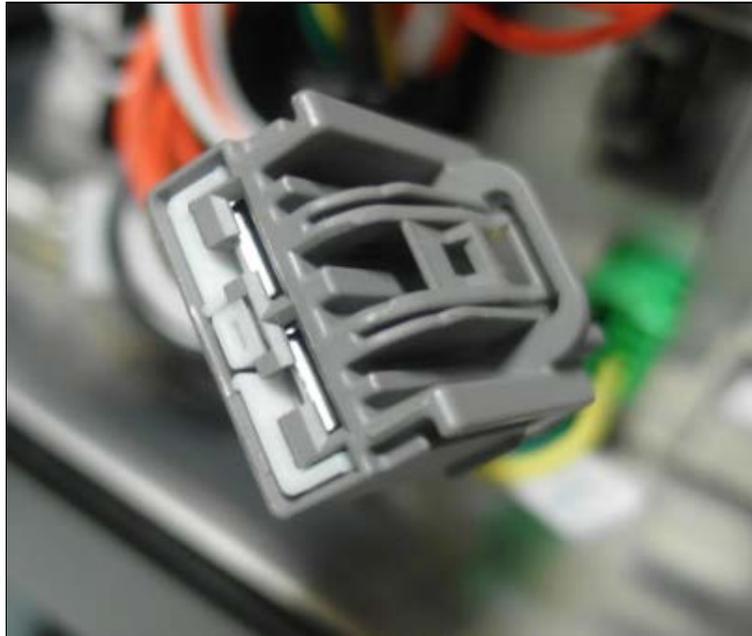
- Cut a small section of the *J2:2 yellow wire insulator* +/- one inch below the terminal and splice it (Y-splice) with the ELD harness fused wire end. Solder the connection and add some heat shrink tubing to protect the connection.



- 1- Y SPLICE WIRES
- 2- SOLDER CONNECTION
- 3- PROTECT - SHRINK TUBING

J2:2 WIRE & ELD FUSED WIRE JOINTED TOGETHER

- Reinsert terminal in the grey A45 module connector and push back the white locking bar.



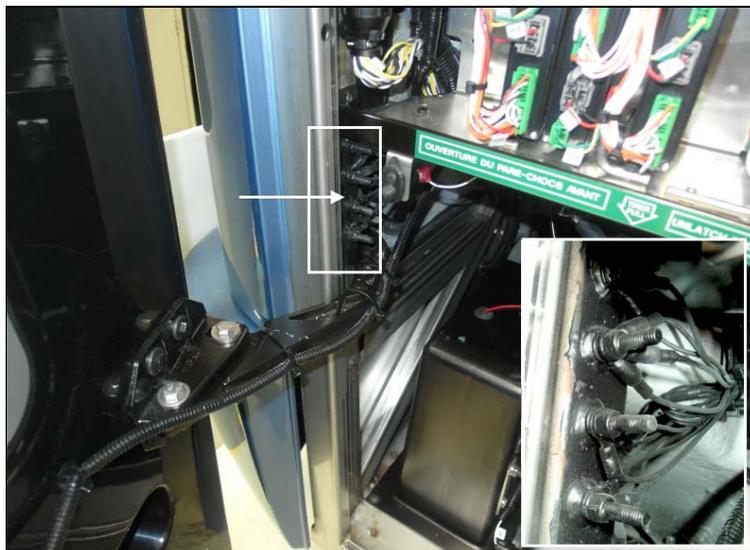
INSERT TERMINAL & LOCK

- Reconnect the A45 module.

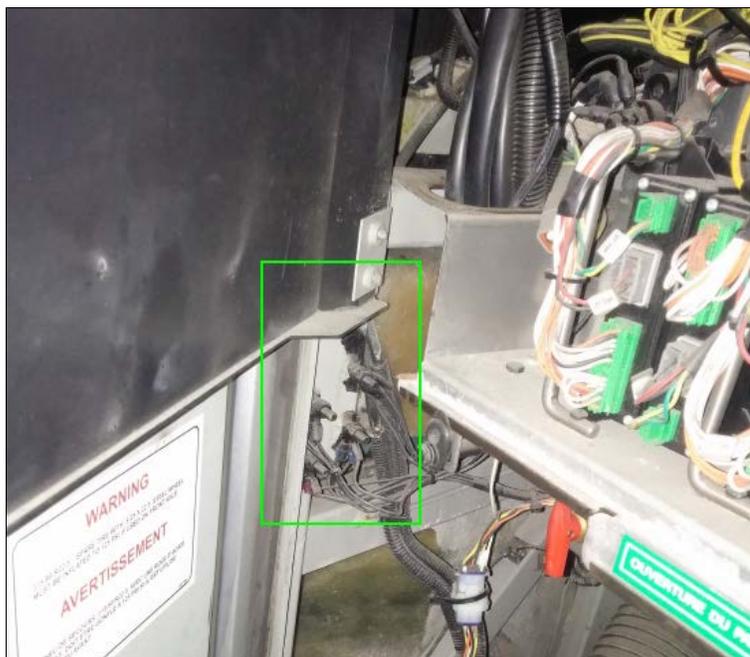


A45 MODULE & ELD GATEWAY MODULE CONNECTION

9. Connect the ground (black) wire to one of the ground stud provided in the electrical compartment.
 - Locate ground studs located on the frame; above the compartment door lower hinge for the H3 Vehicles and just below the junction box floor for the X3 Vehicles.



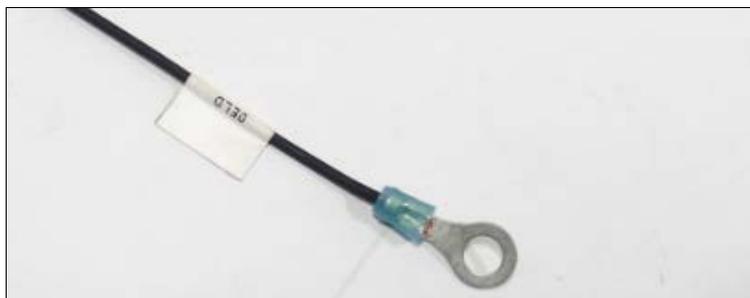
GROUND STUDS LOCATION IN FRONT COMPARTMENT (H3 VEHICLES)



GROUND STUDS LOCATION IN FRONT COMPARTMENT (X3 VEHICLES)

- Clean one of the ground studs (remove black rubber guard protector).

- Crimp the supplied round terminal (**560587**) to the ELD harness black ground wire (cut/adjust length of the wire before crimping).



ROUND TERMINAL ON GROUND WIRE

- Connect the black wire to the chosen ground stud (re-apply rubber guard protector).



GROUND WIRE CONNECTED

10. Secure the harness in several places inside the front junction box using some of the supplied cable ties (**504637**). Harness should follow closely original harness in the front junction box and not hang or rub against components (pay close attention to contact between harness and upper door hinge).



CHECK FOR CONTACT BETWEEN HINGE AND HARNESS (H3 SHOWN)

11. Reinstall the gutter panel on H3 vehicles. Check for interferences/contact between the ELD harness and the panel.



AVOID CONTACT HERE ON H3 VEHICLES

12. Put back/close the junction box protective panel (make sure the panel does not interfere with the gateway module wires and connector).



CHECK FOR INTREFERENCE – INSIDE PANEL & MODULE HARNESS

13. Inside the vehicle, install the ELD connector support bracket (**380120**) under the dashboard (left side close to the steering column) using the remaining #10 screws.



BRACKET POSITION UNDER DASH

14. Secure the ELD connector to the bracket using the provided plastic panel nut (**566004**) and washer (**566006**).



ELD CONNECTOR & BRACKET

15. Remove the two screws holding the OBD connector to the dash.



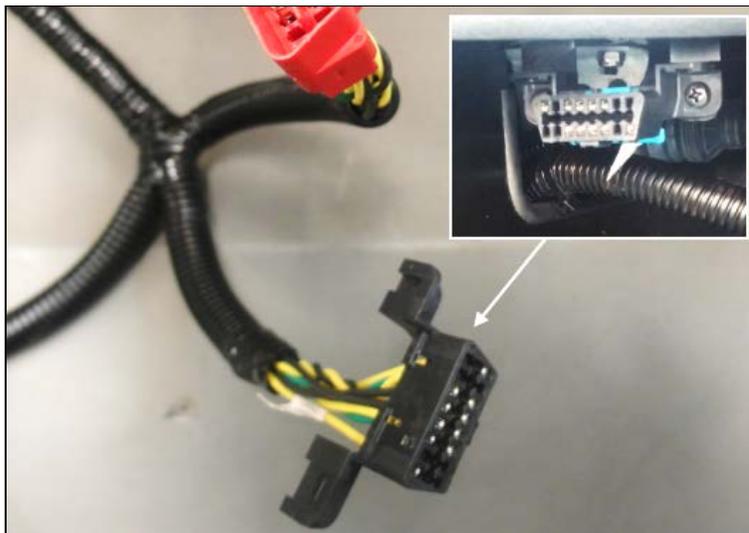
OBD CONNECTOR SCREWS

16. Connect the ELD harness OBD (red) connector to the vehicle OBD connector previously unscrewed from the dash.



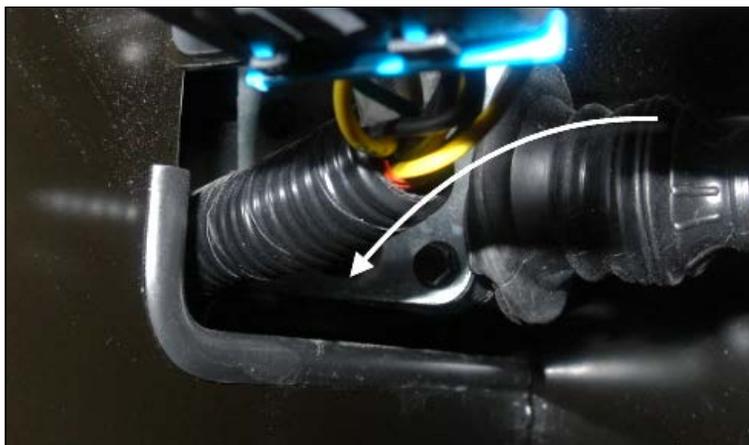
RED HARNESS CONNECTOR – TO VEHICLE OBD CONNECTOR

17. Secure the ELD harness OBD connector (black) where the original vehicle OBD connector was screwed to the dash. This connector will now be used for OBD diagnostic procedure.



ELD HARNESS OBD CONNECTOR – SECURE UNDER DASH

18. Pass the vehicle OBD connector and ELD harness red connector through the opening leading to the front junction box to put both connectors out of the way.



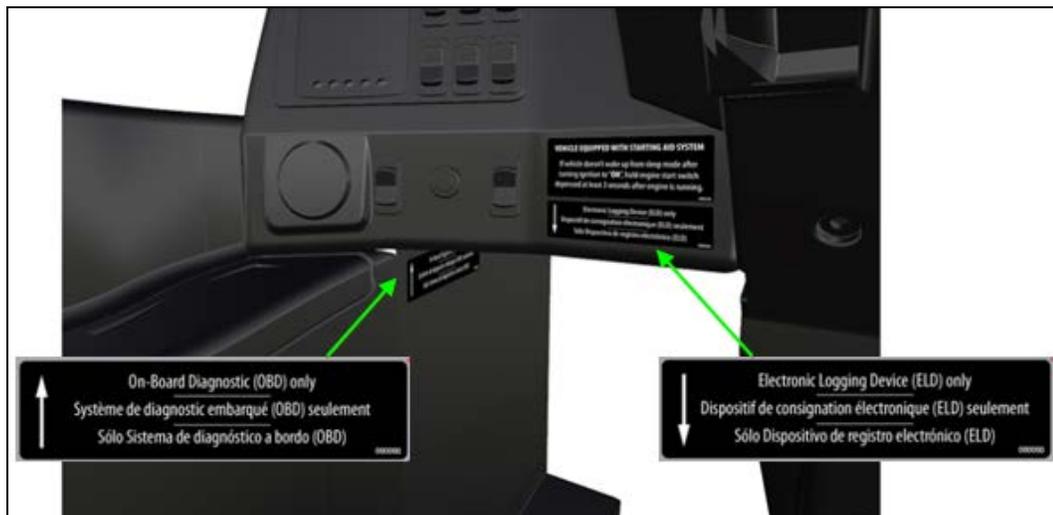
OPENING UNDER DASH AREA

19. Secure the ELD harness under the dash with the remaining cable ties so no part of it is hanging.



SECURE HARNESS UNDER DASH

- Apply ELD decal (**390038**) on the dash just over the ELD connection and apply the OBD decal (**390039**) on the left molding, close to the OBD connector to finish the module and harness installation.



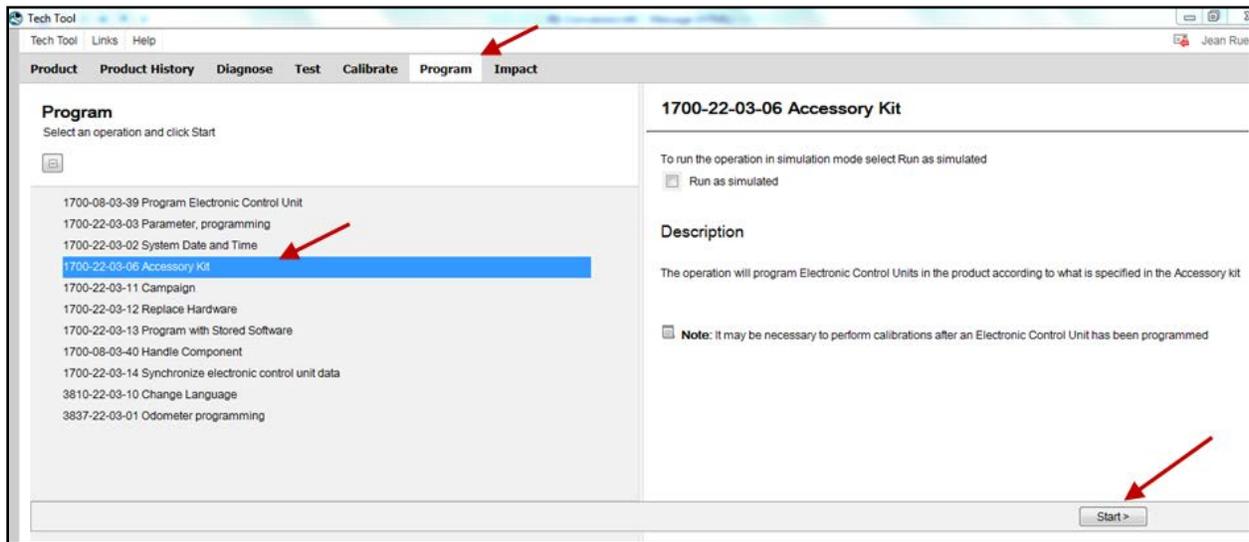
OBD & ELD DECALS

PART 2: FMS GATEWAY MODULE PROGRAMMING

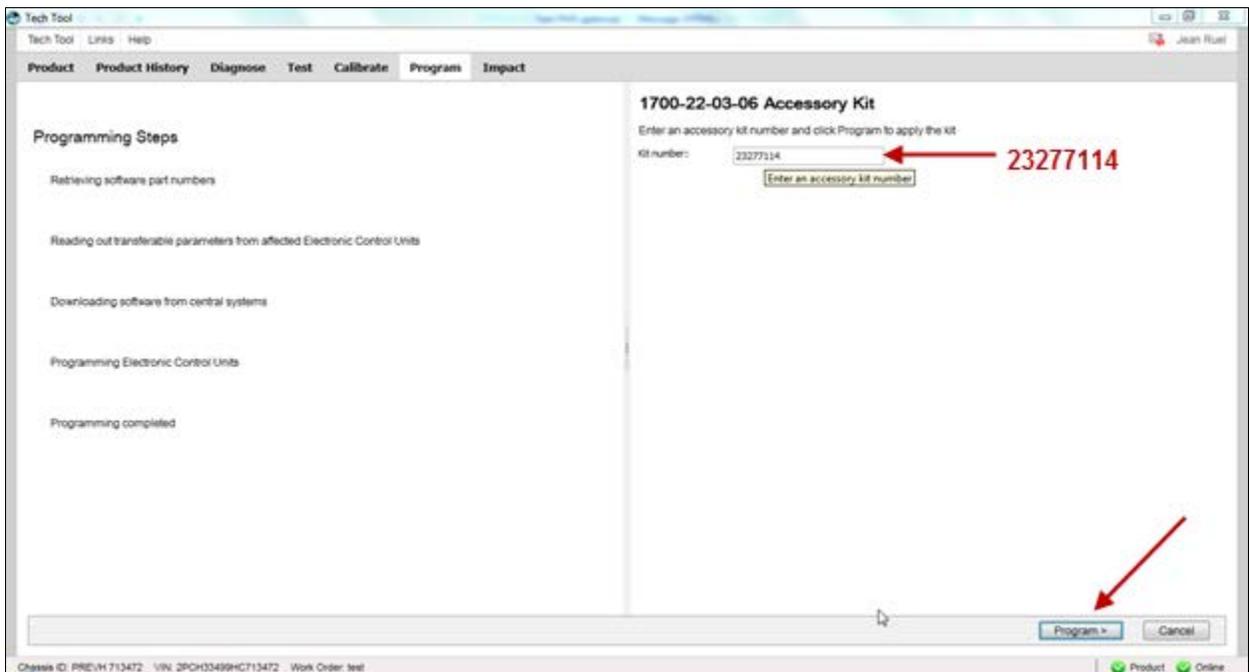
- Connect to PTT (Premium Tech Tool) and confirm in the product tab that the FMS gateway (MID 179) is present in the Product Data but not in the Central Data.

| Control Unit | Product Data | Central Data | Hardware | Sub hardware | Software |
|-------------------------------------|--------------|--------------|----------|--------------|----------|
| Telematics GateWay (TGW) | ✓ | ✓ | ✓ | ✓ | ✓ |
| Aftertreatment Control Module (ACM) | ✓ | ✓ | ✓ | ✓ | ✓ |
| Engine Control Module (EMS) | ✓ | ✓ | ✓ | ✓ | ✓ |
| FMS Gateway (MID 179) | ✓ | ✗ | ✓ | ✓ | ✓ |
| Radio (MID 206) | ✓ | ✓ | ✓ | ✓ | ✓ |
| Information display (MID 142) | ✓ | ✓ | ✓ | ✓ | ✓ |
| Vehicle ECU (MID 144) | ✓ | ✓ | ✓ | ✓ | ✓ |

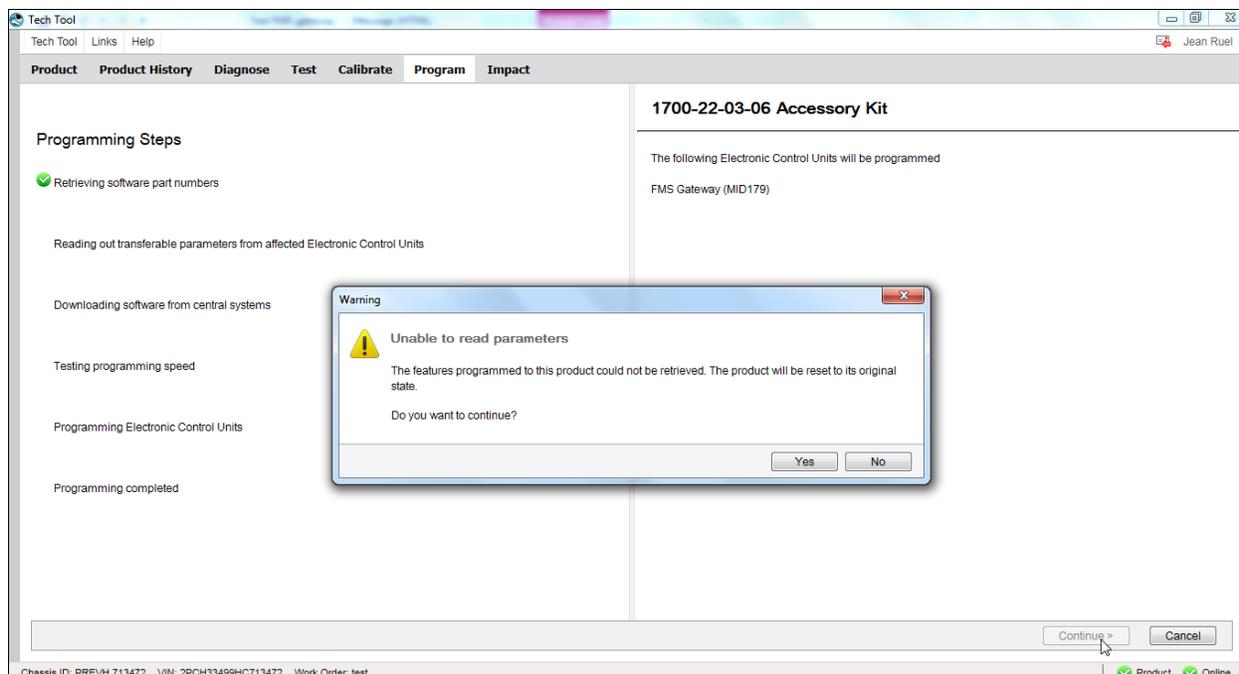
- In Premium TechTool, select PROGRAM tab. In PROGRAM tab, select operation 1700-22-03-06 Accessory Kit then clicks START.



- Enter Accessory kit number **23277114** Click on PROGRAM button below and then follow the instructions. The programming process will start.



- Click YES on the following message.

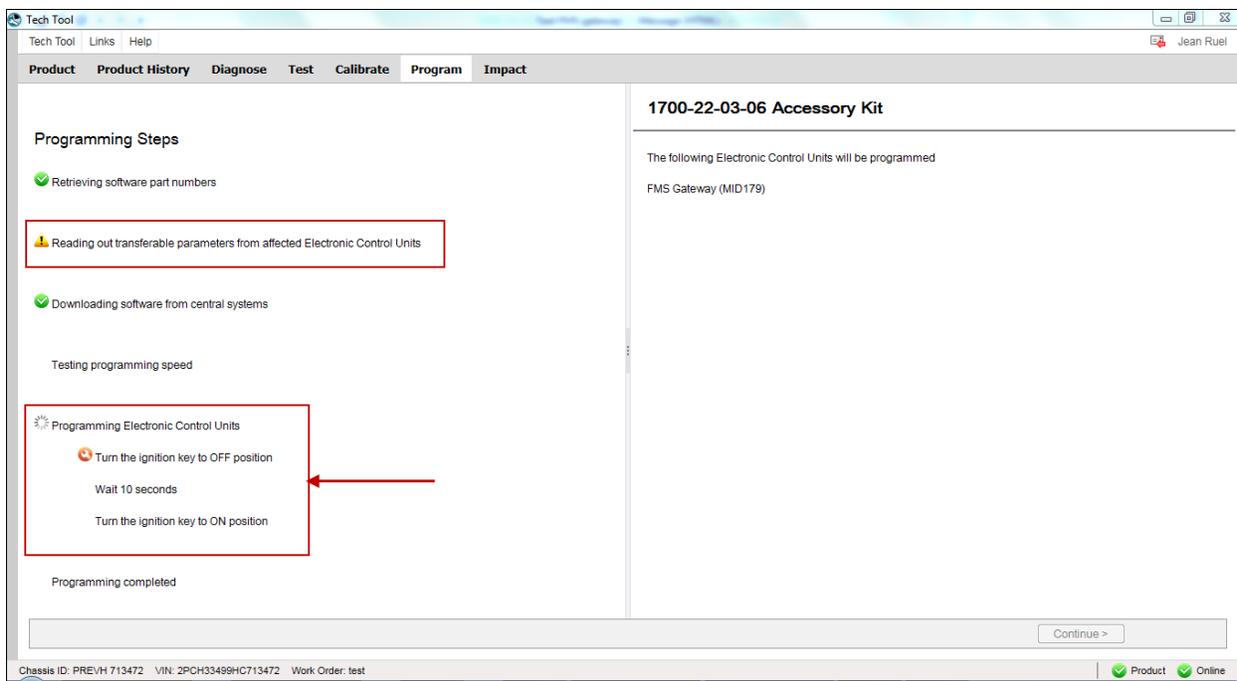


5. When prompted, proceed with the following actions:

- Turn the ignition key to the OFF position.
- Wait 10 seconds.
- Turn the ignition key to the ON position.

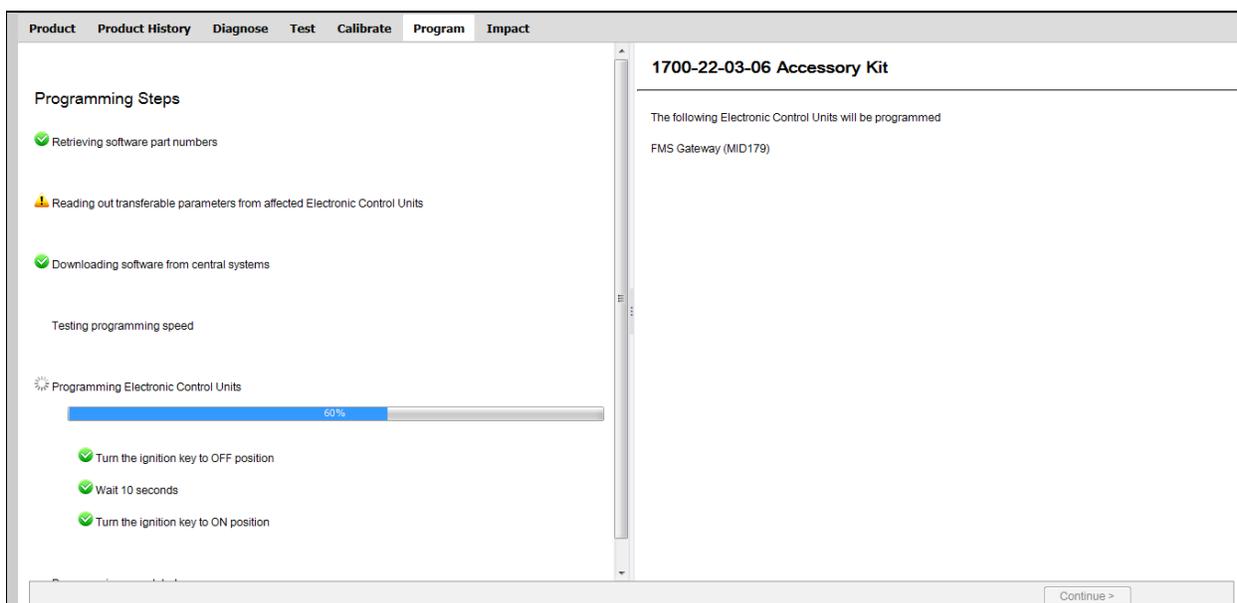
NOTE

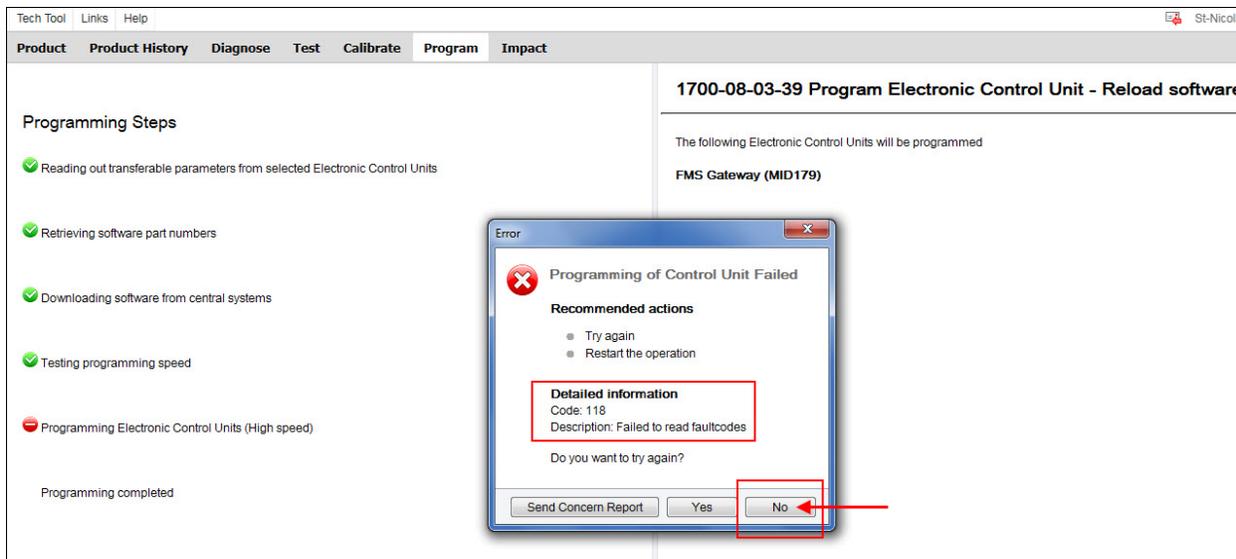
Second programming step "Reading out transferable parameters from affected Electronic Control Units" will show as incomplete with this symbol ; This is normal with a new module installation.



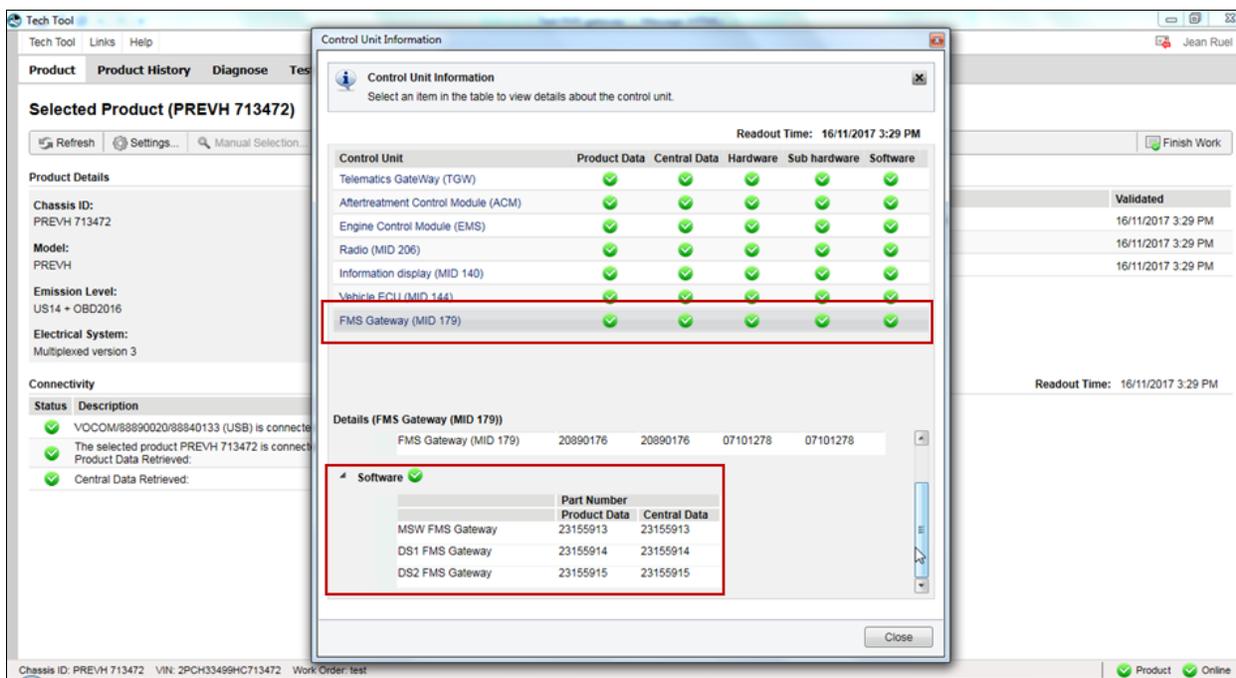
6. Wait for the program to upload; this can take a few minutes.

IMPORTANT - If an error message regarding code 118 "Failed to read fault codes" shows up, click NO. This will not affect the programming although programming will mark as failed.





7. Once completed, make sure the FMS gateway is now visible in the Central Data and all other related sections as shown below.



8. Refresh and delete codes.

PARTS / WASTE DISPOSAL

Discard waste according to applicable environmental regulations (Municipal/State[Prov.]/ Federal)