INSTRUCTION TO SERVICE

ITS: 61613	3/11/2026
SECTION:	260 – Battery Compartment
SUBJECT:	Re-wire traction inverter supply voltages and flash traction inverter
ISSUE:	Traction inverter requires program update
SUMMARY:	Change traction inverter supply and ignition voltages to 12 V for programming

ITS61613

Ref. NHTSA Recall No.	Ref. Transport Canada Recall No.
Not Applicable	Not Applicable

THIS ITS DOCUMENT SHOULD BE RETAINED AND REFERRED TO FOR FUTURE MAINTENANCE UNTIL THE NEW FLYER PARTS AND/OR SERVICE MANUAL IS UPDATED TO REFLECT WORK DONE AS A RESULT OF THIS DOCUMENT. ENSURE THAT THIS DOCUMENT IS AVAILABLE FOR PARTS AND MAINTENANCE STAFF GOING FORWARD.

PROCEDURE:

1. Set-park brake and chock wheels.
2. Turn the main battery disconnect switch to the “OFF” position.
3. Open the curbside LV fuse box. Find and remove fuse F50EP. Store it nearby for reinstallation later.
4. Terminate one end of a 50 cm length of 16-gauge wire with a 16-gauge terminal. Terminate the other end with an alligator clip. Repeat this for a total of 2 jumpers.
5. Insert the terminal end of the first jumper into bottom of socket F50EP.
6. Connect alligator clip ends of the jumper used above to 12 V bus bar in LV junction box (12VBATFB). See Figure 1 below.

Figure 1: Connect F50EP to 12 V bus bar

7. Enter the bus and gain access to the rear rack.
8. Locate node 14 and disconnect the black J4 connector.
9. De-pin J4-11 INVERTER_ENA_SIG. Reconnect J4 connector with J4-11 removed.

10. Attach terminal end of the second jumper to end of previously disconnected INVERTER_ENA_SIG wire (10EP87E). Do not connect alligator clip end, see figure 2 below.

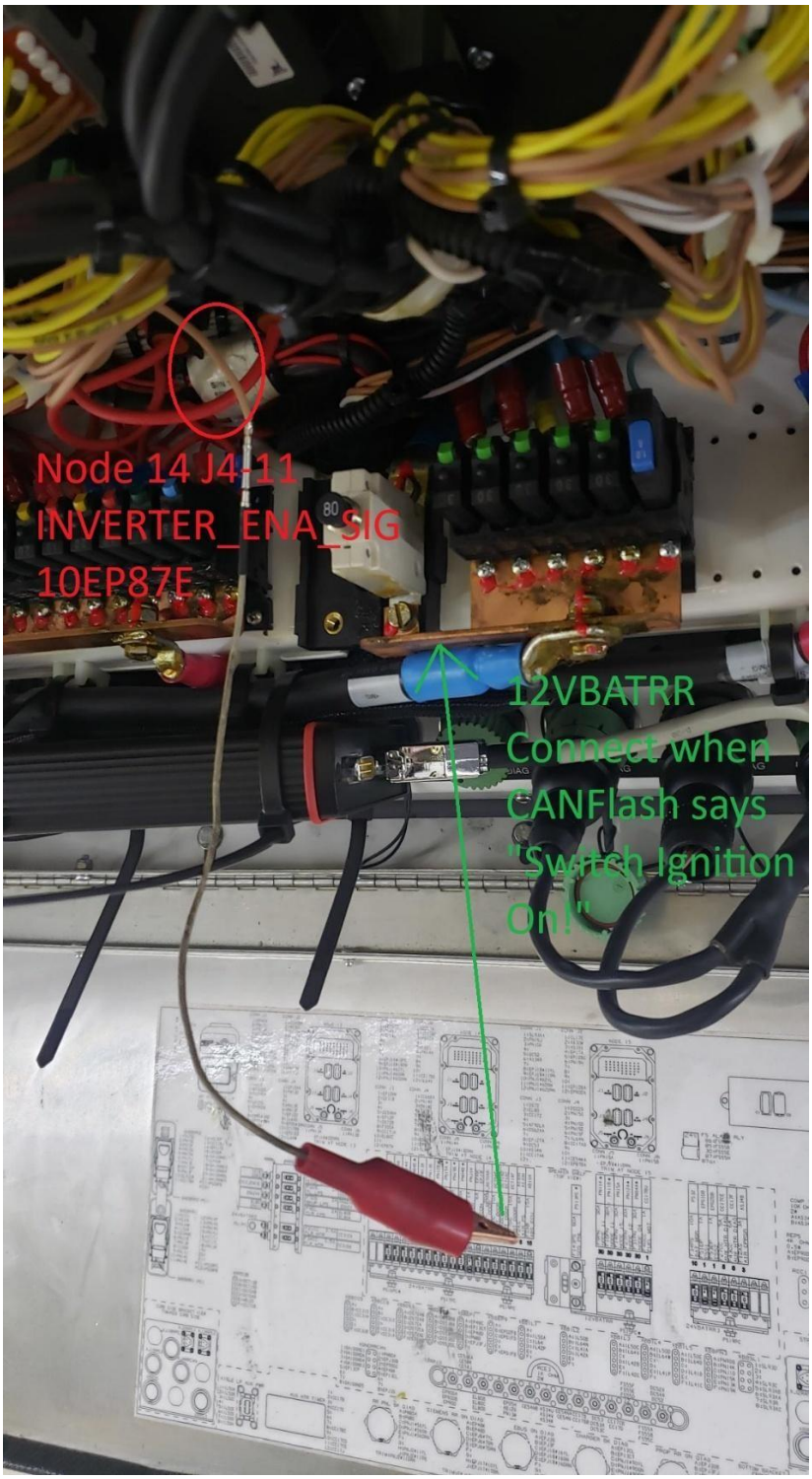

Figure 2: Connect jumper harness to wire 10EP87E

11. Turn the main battery disconnect switch to the “ON” position.

☞ **NOTE: Consult the table below prior to connecting the PCAN. Use rear propulsion port channel 2 (H and J) unless otherwise noted in the table below.**

SR	Diag Port For Inverter Flash
SR-2590	Prop Diag CAN1
SR-2591	Prop Diag CAN1
SR-2592	Prop Diag CAN1

12. Open the curbside rear advertisement panel and gain access to the Transtech voltage regulator. Disconnect the CAN connector from it.
13. Gain access to the rear panel of the vehicle. Connect the Deutsch 9-pin end of PN 711447 to the rear propulsion port unless otherwise noted in the table above.
14. Connect USB end of PCAN tool to laptop USB port 1.
15. Connect male DB9 end of PCAN tool to female DB9 connector on CAN 2 (H and J) cable of 711447.
16. Turn the hazard switch to the ON position.
17. Open supplied CANFlash program on laptop
18. Once CANFlash is open, select **P-CAN** under the Vendor drop-down menu. Select **PCAN_USBBUS1** under the Port drop-down menu (see figure 3 below). It’s important to ensure the physical connection to the laptop matches the same port as dictated by the CANFlash setup. Click **Next** when complete.

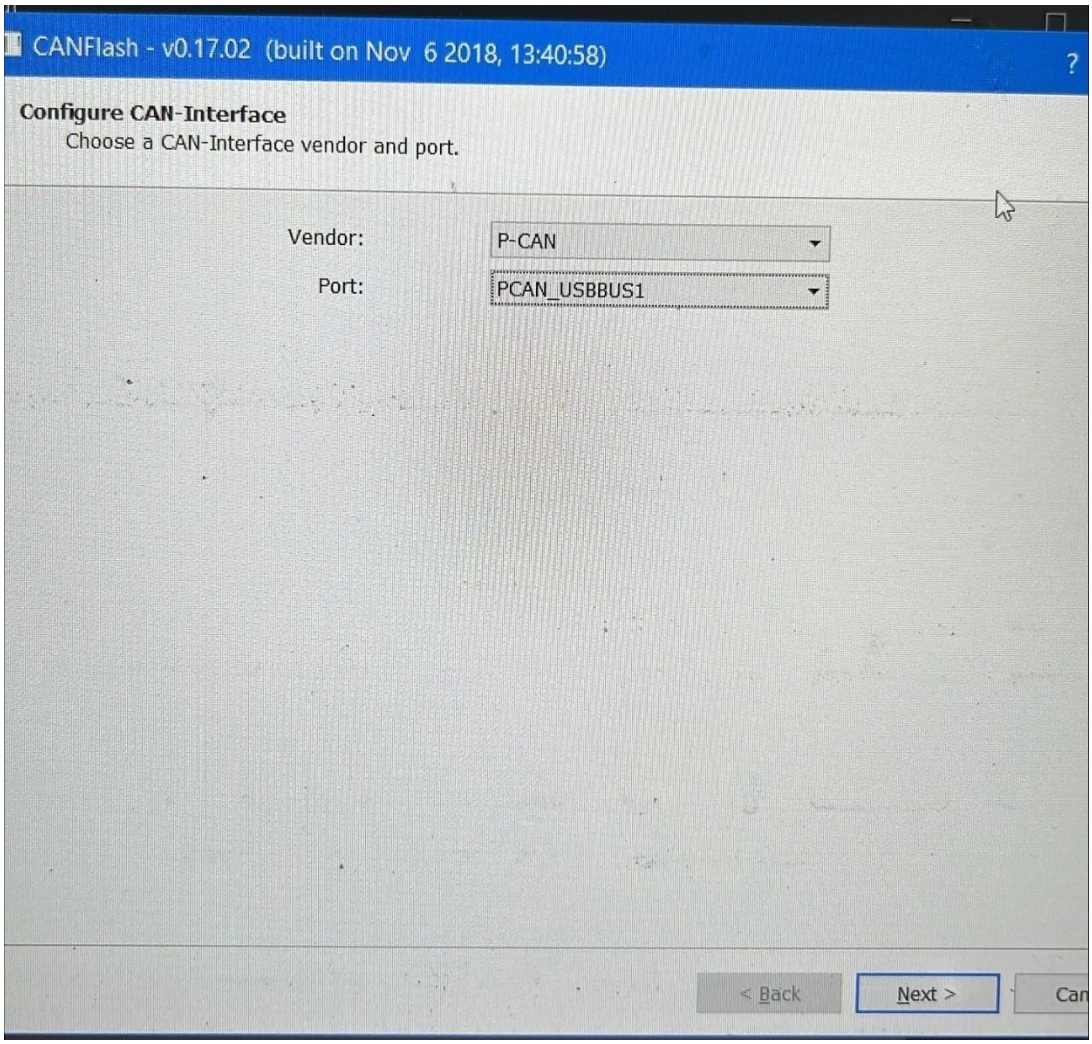

Figure 3: CANFlash PCAN setting

19. Click **Load zip file**. Select zip file IPMCTRL_NFL_XE40_STD_1DB2016_V1_X4S06126060 (see figure 4 below). **Ensure this file is located in the Downloads folder.** Click **Next** when complete.

☞ **NOTE: DO NOT UNZIP THE FILES. CANFlash will handle all the required processes.**

☞ **NOTE: Each inverter has a separate file. Do not mix and match unknown programs. If you are uncertain which program is required by a specific vehicle, ask your New Flyer representative for assistance.**

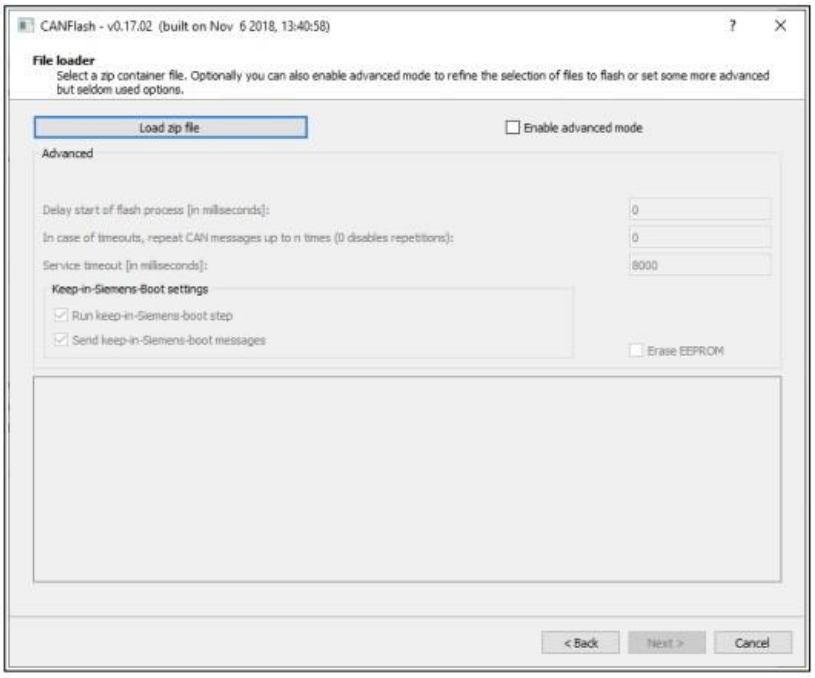

Figure 4: Load zip file in CANFlash

20. Click the **Enable advanced mode** button. Change the **Delay start of flash process** box to 30000. Change the **repeat CAN messages** box to 5 (see figure 5 below). Click Next when complete.

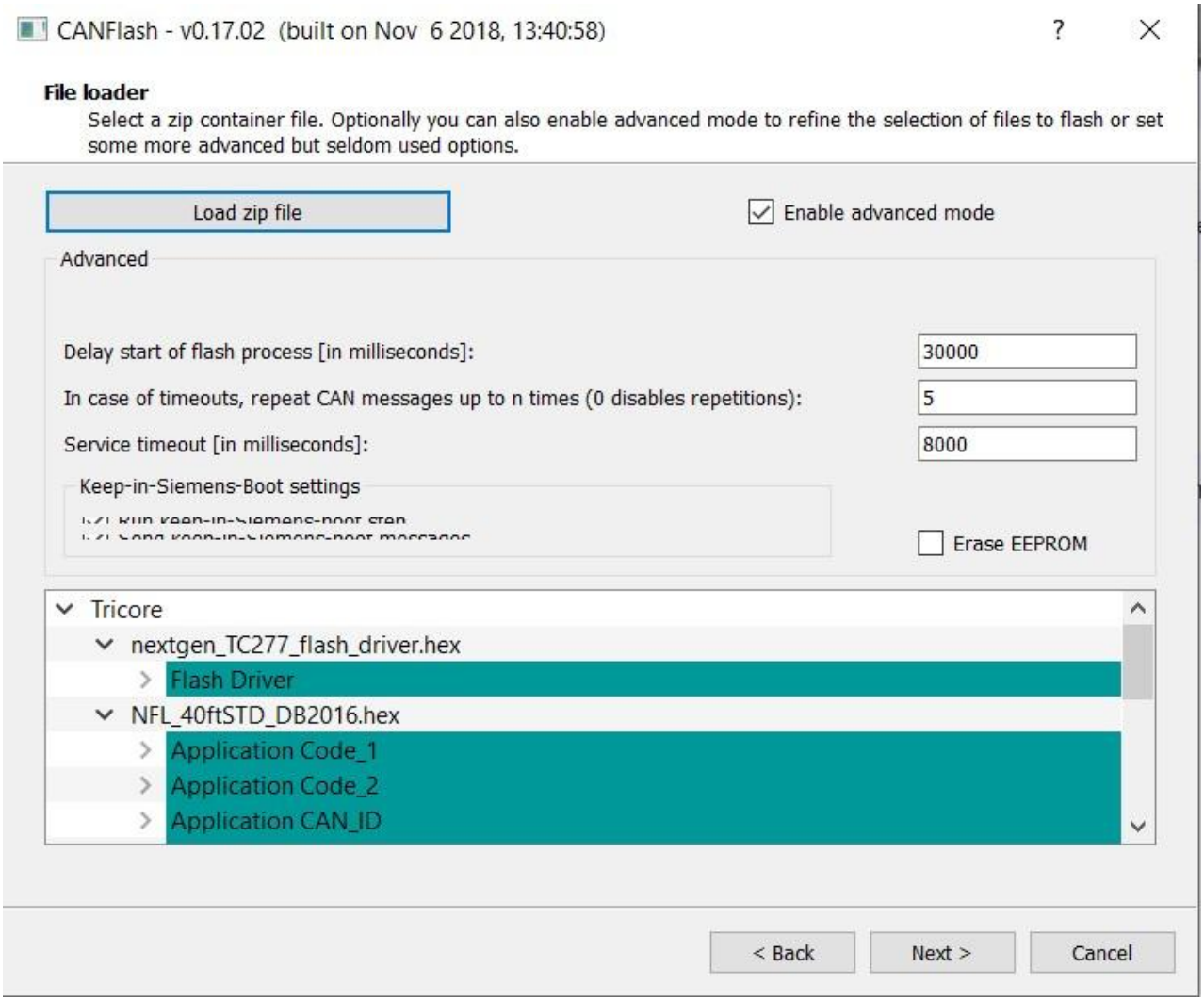

Figure 5: Advanced settings for CANFlash

21. Connect alligator clip end of 10EP87E wire to 12 V bus bar 12VBATRR when CANFlash says **Switch IGN on**!
22. The flashing process will start automatically. When the process is complete, CANFlash will show 100% and a message saying **All tasks finished** will appear. Take a screenshot of the Flashing Finished! box, ensuring the progress bar is at 100%. Pressing **Finish** will close CANFlash.
23. Wait for 1 minute after flashing has completed, keeping alligator clip end of wire 10EP87E attached to bus bar 12VBATRR. Disconnect alligator clip after 1 minute has passed.
24. Disconnect PN 711447, PCAN and laptop.
25. Reconnect Transtech CAN connector disconnected in step 12.

26. Turn hazard switch to off position.
27. Turn the main battery disconnect switch to the “OFF” position.
28. Disconnect alligator clip end of 10EP87E jumper from 12 V bus bar, then disconnect terminal end from wire 10EP87E.
29. Disconnect node 14 black J4 connector and re-insert wire 10EP87E into socket 11 (J4-11). Reconnect J4 connector once complete.
30. Disconnect alligator clip end of LV fuse box jumpers from 12VBATFB.
31. Disconnect terminal end of LV fuse box jumpers from F50EP socket. Re-install fuse F50EP removed in step 3.
32. Remove all tools and debris from work area.
33. Turn the main battery disconnect switch to the “ON” position.
34. Turn the MRS to Day Run. Check IP cluster for Stop System indicators.
35. If Stop System indicator is present, check wiring reconnected during steps 26-28.
36. If no Stop System indicator is present, place bus in EV mode. Ensure vehicle can move forward and backwards under driver command, not just creepage torque.
37. If bus cannot move check wiring reconnected during steps 26-28.
38. Once bus can move normally and no Stop System indicators are present apply interlocks and parking brake, place bus in neutral, then turn MRS OFF.

LABOUR ESTIMATE				
	Operation	Number of Technician(s)	Hours	Labor Time T X HR
1	Re-wire traction inverter supply voltages and program traction inverters	1	0.5	0.5

PARTS REQUIRED					
Item	Part Number	Description	Qty. per Coach	Units	Notes
1			1	EA	

SPECIAL TOOLS REQUIRED					
Item	Part Number	Description	Qty.	Units	Notes
1	711447	SIEMENS PCAN INTERFACE CABLE	1	EA	Per SR