



INSTRUCTION TO SERVICE

ITS: 59080	
SECTION:	219-Engine
WRITTEN BY:	Kalman Takacs
SUBJECT:	NABI - Install Jumper Harness so the New Engine ECM will Work with Dash Lamps

ITS59080

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SAFETY PRECAUTIONS MUST BE FOLLOWED ACCORDING TO ACCEPTED INDUSTRY STANDARDS AND LOCAL/PROPERTY REQUIREMENTS.

Issue: “Stop Eng”, Check ENG” and “Gas PSI” dash lights stay on after a new engine ECM has been installed.

Solution: Install new jumper harness with relays to convert the new 24V ECM output back to previously expected 12V signals.

PROCEDURE:

☞ **NOTE:** Perform this update after a new engine ECM was installed and the “Stop Eng”, Check ENG” and “Gas PSI” dash lights stay on all the time.

1. Park bus on a flat surface and apply the parking brake.
2. Turn the main battery disconnect switch to the “OFF” position.
3. Reference B-zone decal, schematics and street side main front harness to locate B2 module in the B-zone.

Refer to Figure 1.

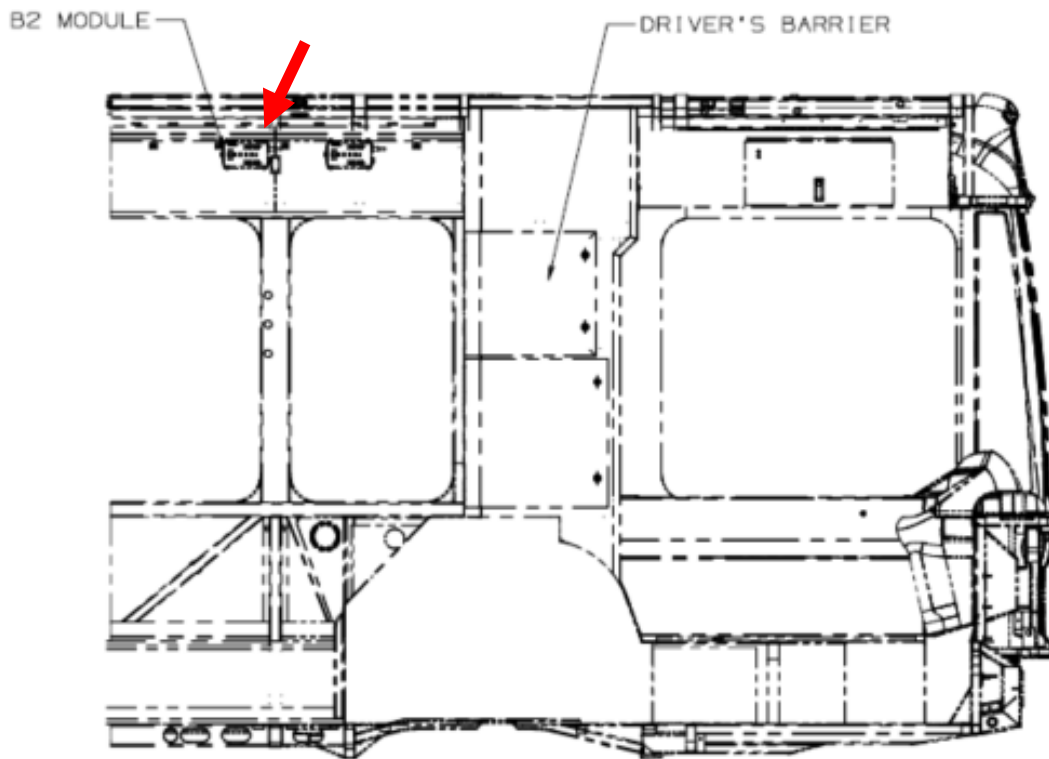


Figure 1: Locations of the B2 module

- Open light panel to get access to the B2 module. Refer to Figure 2.



Figure 2: B2 I/O module

- Disconnect wire B2P1 from B2 module.
- Using the new jumper harness assembly (PN **859845**), connect jumper B2P1A and B2P1B between B2 module and B2P1. Refer to Figure 3.

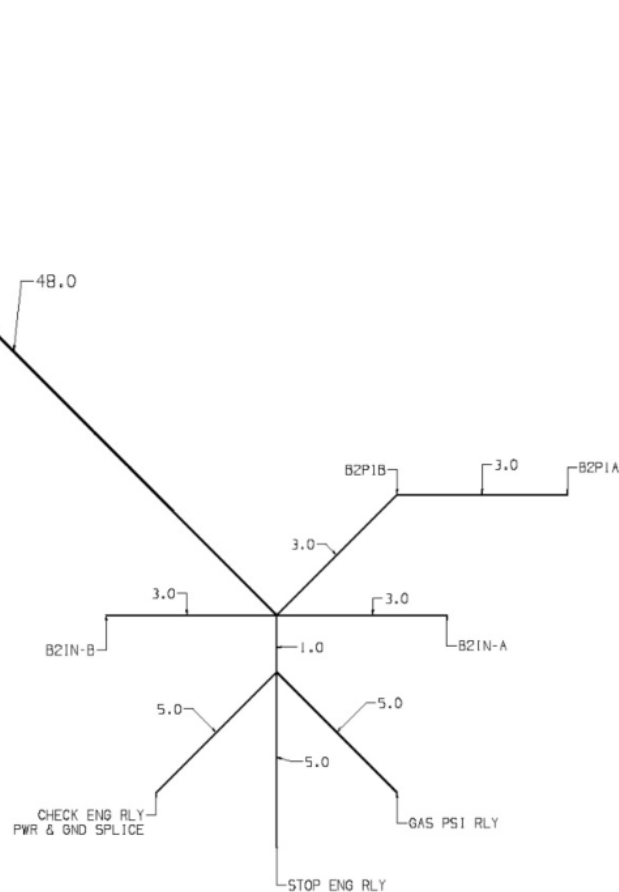


Figure 3: New jumper harness assembly with relays (PN 859845)



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7. Disconnect B2IN from B2 module.
8. Using the new jumper harness assembly, connect jumper B2IN_A and B2IN_B between B2 module and B2IN.
9. Using the new jumper harness assembly, route GND ring terminal to bus grounds at the back of the B-zone and connect.
10. Mount bus bar (PN **523928**) to the light panel hanger (slotted bar). Use ¼-20x1" hex head bolt (PN **10B04016**) with flat washer (PN **10W04000**) and locknut (PN **40N04000**). Refer to Figure 4.
11. Secure the relay holders to the bus bar by using #10x1/2LG screws (PN **14s00008**) and #10 size flat washers (PN **659000**). Refer to Figure 4.

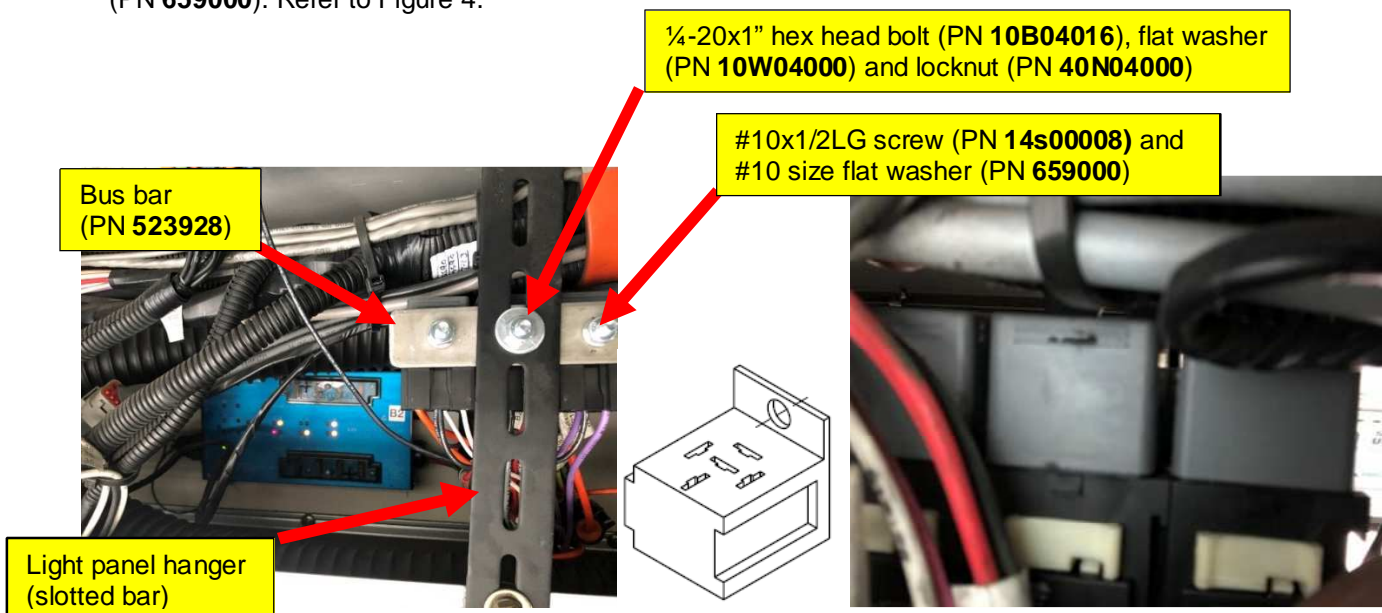


Figure 4: Secure relays to slotted bar

12. Ensure electrical cables are secured and not rubbing on any other components.
13. Check for completeness of work.
14. Close light panel.
15. Remove tools and unused parts from work area.
16. Turn the main battery disconnect switch to the "ON" position.
17. Start engine and ensure the dash lamps are working correctly.



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LABOUR ESTIMATE

	Operation	Men	Hours	Labor Time M X HR
1	Install jumper harness and relays per this ITS	1	1.0	1.0

PARTS REQUIRED

Item	Part Number	Description	Qty. per Coach	Units	Notes
1	859845	ASSY-HRNS JUMPER ECM SIG B-ZONE	1	EA	
2	10B04016	BOLT HEX 1/4" 20 UNC X 1" LG	1	EA	
3	40N04000	LOCKNUT 1/4" 20 UNC	1	EA	
4	10W04000	WASHER-FLAT 1/4 NOM	1	EA	
5	523928	BUS BAR-12POS. GROUND	1	EA	
6	14s00008	Screw, Machined, #10x1/2	3	EA	
7	659000	Washer, Flat, SST 10	3	EA	

SPECIAL TOOLS REQUIRED

Item	Part Number	Description	Qty. per Coach	Units	Notes