

REFERENCE:	Nova Bus Manuals
SECTION:	18 : Articulation Hinge
RS N°:	MQR 7621-838 and 871
EFFECTIVE IN PROD.:	N/A

APPLICATION DEADLINE: 2017FE14
CLAIM REFERENCE NUMBER: WB-3518

SUBJECT:	EGS power cables and components issues
JUSTIFICATION:	Cable lugs may break and chaffing issues in EGS

LEVEL	DESCRIPTION	DIRECT CHARGES		TIME
		LABOUR	MATERIAL	
1	Install new flexible cables with heavy duty lugs. Replace worn hoses and secure all EGS components.	Nova Bus	Nova Bus	9 h
2	–	–	–	–

MATERIAL

QTY	PART N°	REV.	DESCRIPTION	REPLACES PART N°
LEVEL 1				
1	N83720-02	–	24-volt Cable ASM C817 0 AWG BK-RD	N69598
1	N83719-02		HVAC Cable ASM C818 0 AWG BK-RD	N82247-01
66	G5007996	–	Cable Tie	–
2	2011898		Fitting Elbow 45 NTA-6, M-NPT-8 (3/8")	
8 ft	8860103		Nylon Air Tubing Black (3/8")	
8 ft	8861154		Nylon Air Tubing Green (5/8")	
10	N33735		Screw M6 x 30	
10	N44890		Nut M6	
2	N48664		Fitting Elbow 45 NTA-10 / M-NPT-8 (5/8")	
10	N57040		Tie Cable Mount	
10	N81066		Stripe Wear Energy Guding (White UHMV Block)	
10	N76954		Panduit Cable Tie 24.7 in. long	
1	N74177		Hose 1.25 in. ID x 200 in. with loom	
LEVEL 2				
–	–	–	–	–

Materials will be available within 56 days. To order, please contact Prevost Parts by phone at 1-800-771-6682, by fax at 1-888-668-2555 or by email at prevostparts.commandes@volvo.com. Specify document number, quantity of parts required and shipping address.

DISPOSAL OF PARTS

REMOVED PARTS ARE:	DISCARDED *	RETAINED	* Dispose of the unused parts and the defective parts in accordance with local environmental standards in effect.
	Yes	–	

REVISION HISTORY

REV.	DATE	CHANGE DESCRIPTION	WRITTEN BY
NR	2015DEC18	Initial release	André Pelletier

CLIENT	ORDER	ROAD NUMBER		VIN (2NVY/4RKY...)		QTY
		FROM	TO	FROM	TO	
Austin - CMTA - Texas	L635	5001	5001	S92U7C4 [REDACTED]	S92U7C4 [REDACTED]	1
Austin - CMTA - Texas	L636	5002	5022	S92U1D4 [REDACTED]	S92U0D4 [REDACTED]	21

**WARNING**

Follow your internal safety procedures.

**WARNING**

Before starting any work, make sure the vehicle is completely and securely stationary. Place the battery disconnect switch in the off position. The 24-volt and HVAC cables are continuously live. Ask for a qualified electrician to disconnect the battery.

PROCEDURE

PREPARATION FOR ACCESS

- 1.1. Remove the articulation ceiling cover curtains from the inside of the bus in order to access the Energy Guidance System (EGS) components. Retain parts for re-installation.



Figure 1 - EGS Location (some items removed for clarity)

**NOTE**

Take note of the positions of the parts during disassembly to make installation easier.

REPLACING THE HVAC AND 24-VOLT CABLES

- 1.2. Push back the red protective boots and remove the 24-volt and HVAC power cables routed in the upper left trays. See Figures 2 and 3 (some parts removed for clarity).

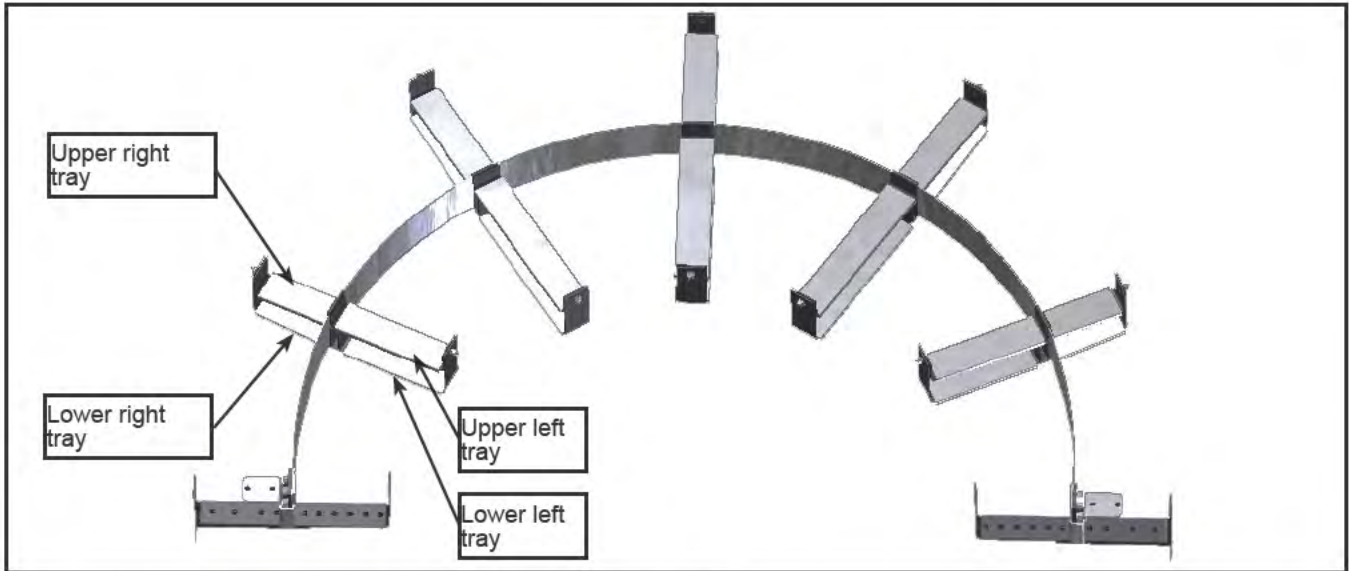


Figure 2 - EGS Trays

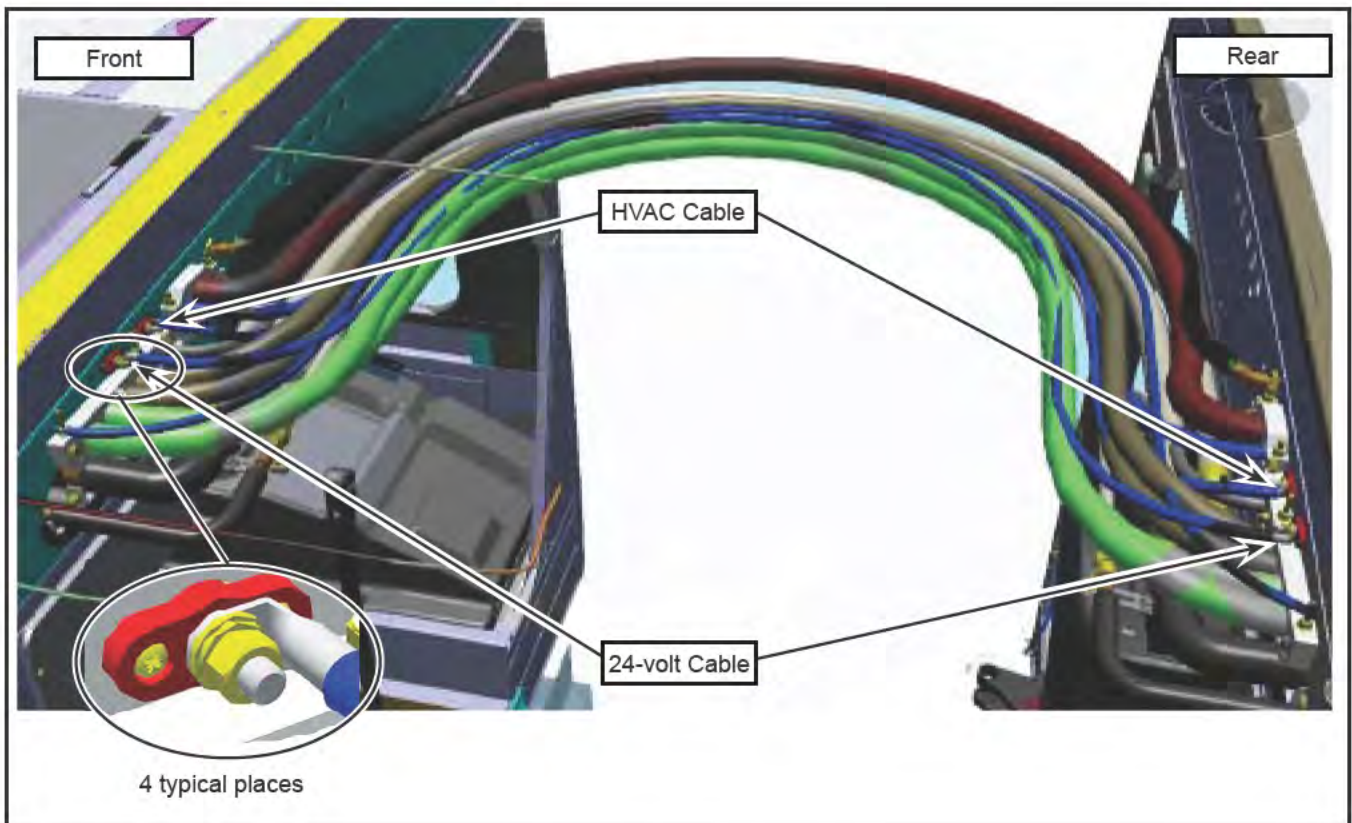


Figure 3 - Remove Cables

- 2.1. Inspect the coolant hoses. If required, replace them with N74177. Follow the instructions in manual section 09 : **Engine Cooling System** for the draining procedure.
- 2.2. Install the new HVAC cable N83719-02 and 24-volt cable N83720-02. Route 3 cable ties as shown in Figure 4. Cable ties will keep the cables loosely in place (do not tighten them yet). Typical for the 6 places shown in Figure 5.
- 2.3. Using the middle of the EGS system as the starting point, route the two cables evenly toward the front and the rear.
- 2.4. Fix each cable lug on the appropriate terminal block. Torque the nut to 11 lb-ft (15 N•m).
- 2.5. Apply anti-tamper seal.
- 2.6. Apply a corrosion protector such as Loctite Maxi-Coat N35450 or equivalent.
- 2.7. Push the red protective boots over the lugs.

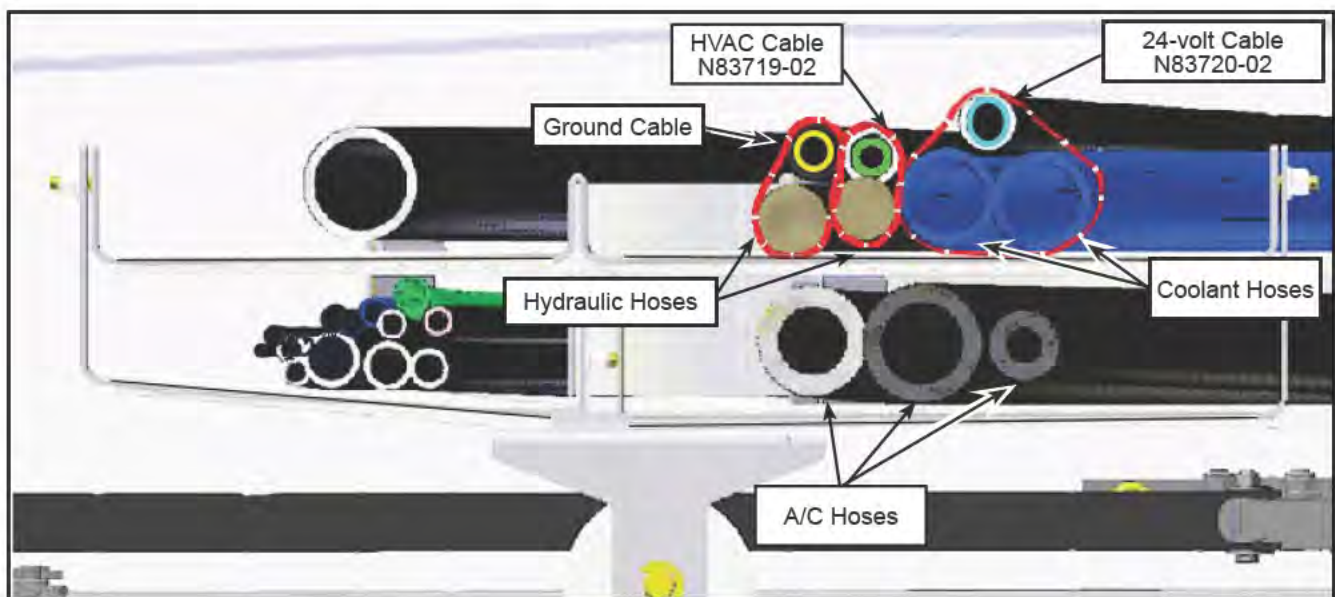


Figure 4 - Cable Tie Positions

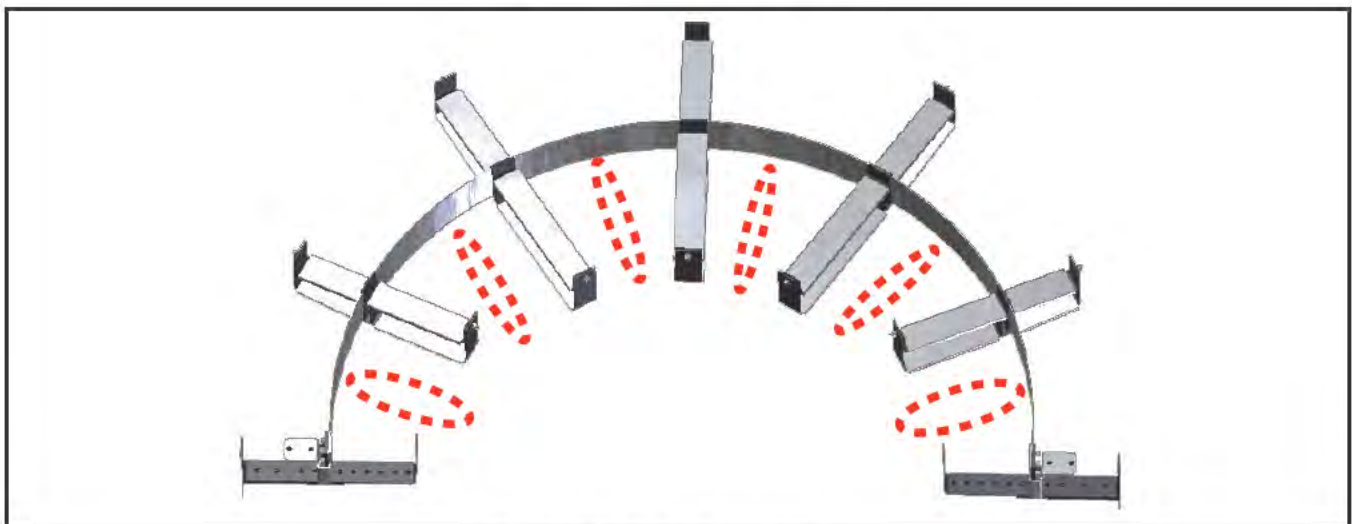


Figure 5 - 6 Cable Tie Locations

- 2.8. Use cable ties to attach the hoses from the lower left tray to the components of the upper left tray. See Figure 6 for the 2 locations and Figure 7 for the routing of the cable ties.
- 2.9. Tighten all the cable ties including the ones installed in step 2.2, starting from the center of the EGS.

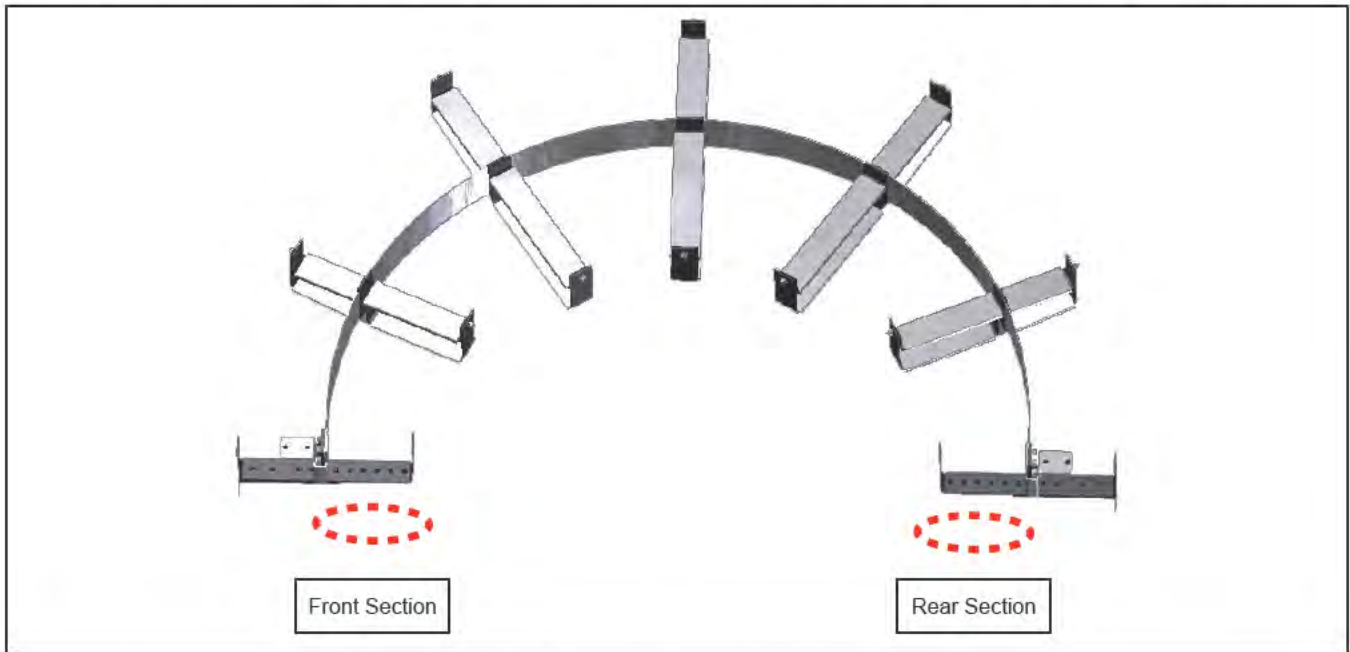


Figure 6 - Attach Upper Hoses to the Lower Ones at These Two Places

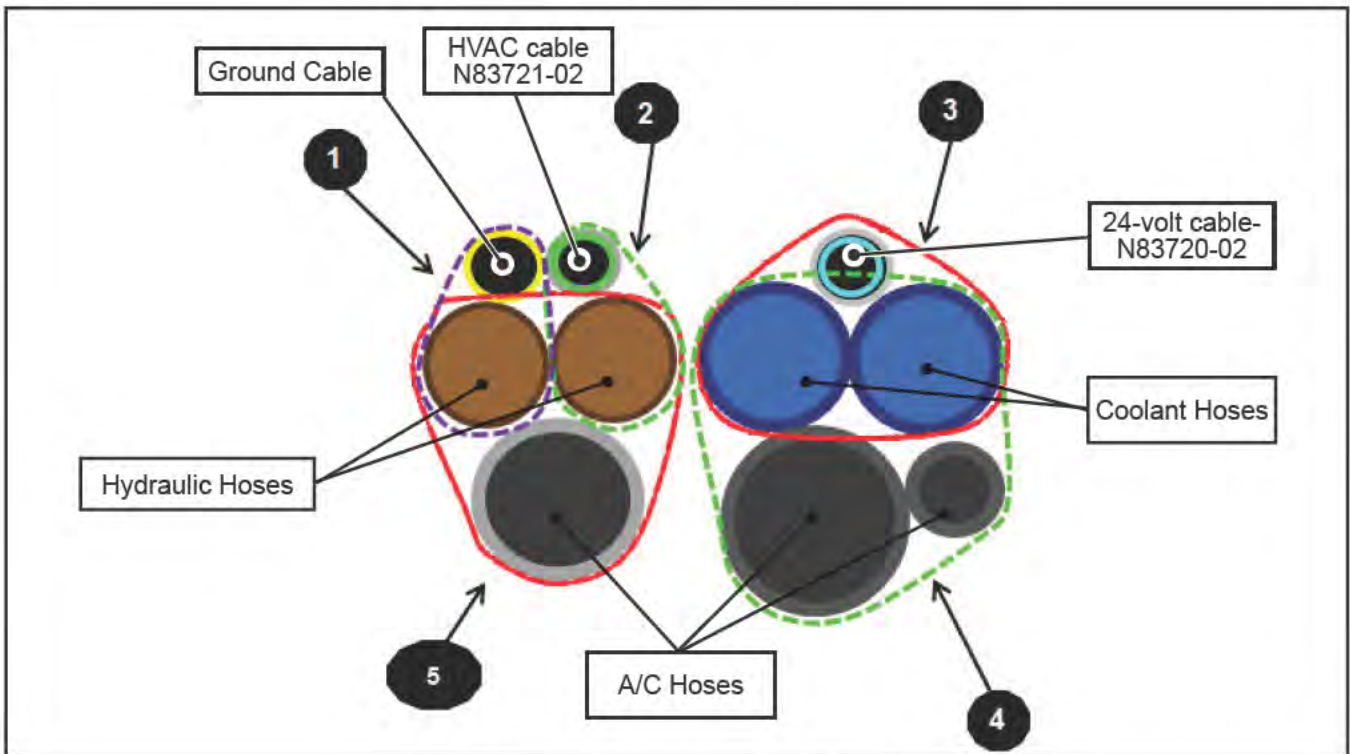


Figure 7 - Use Five Cable Ties, Front Section View (typical for the rear)

REPLACING OF THE PNEUMATIC HOSES

- 3.1. Remove the black 3/8" original hose from the right lower tray and discard. Cut the 5/8" green hose at both ends but leave it in the lower right tray and use it as a backbone to stiffen the routing installation for the electrical and communication cables.
- 3.2. Put 16 cable ties (2 per location) around electrical and communications cables, including the rejected 5/8" green pneumatic hose from the previous step. See Figure 8 for the locations of the cable ties.
- 3.3. Route the 2 new pneumatic hoses supplied in the right upper trays.
- 3.4. Put 16 cable ties in position, 2 cable ties per location. See Figure 8. Cable ties will keep the hoses loosely in place (do not tighten them yet). Keep the hoses away from the main harness.

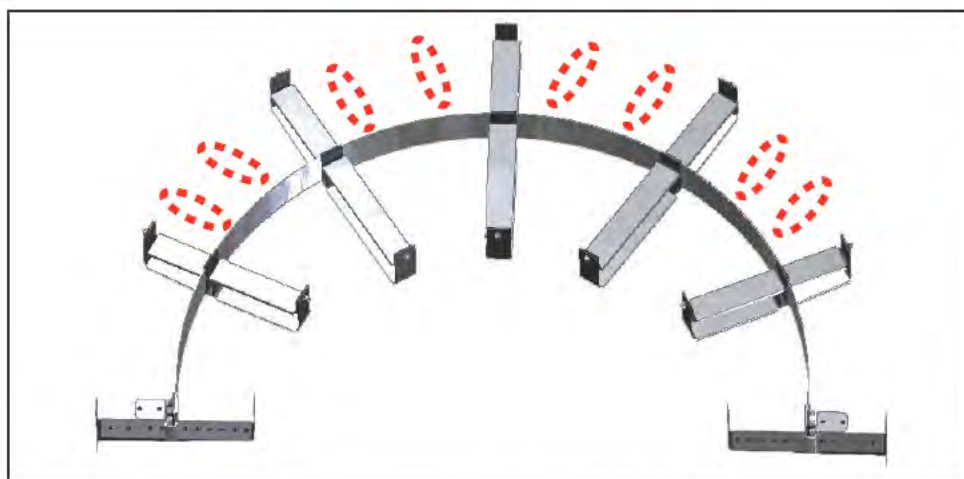


Figure 8 - Cable Tie Locations for the Right Tray Components

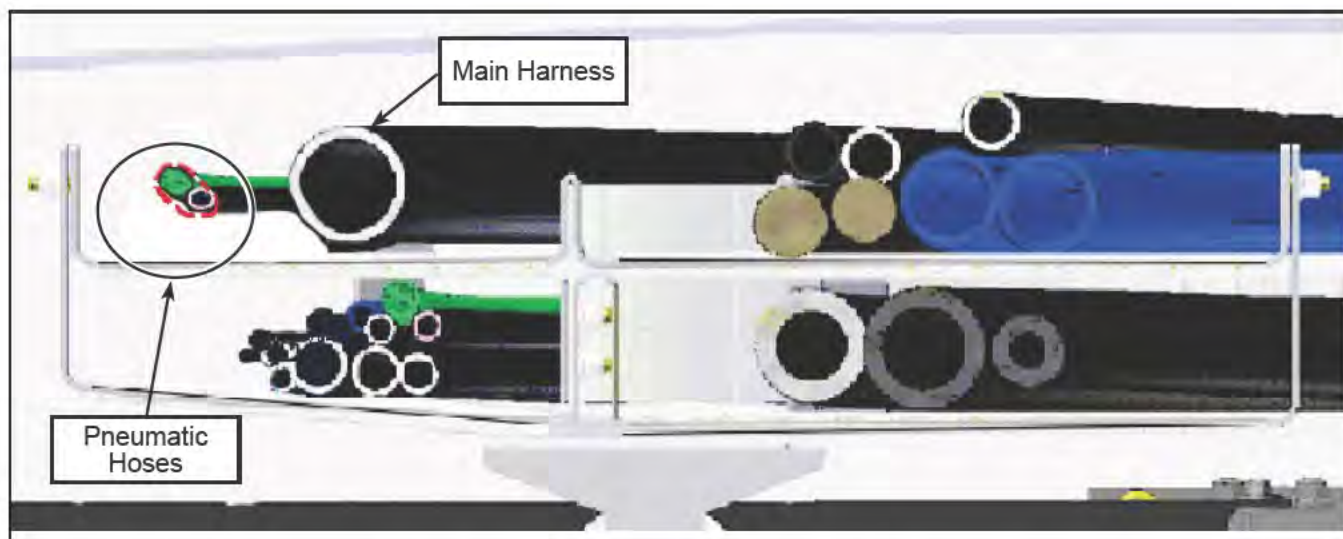


Figure 9 - New Pneumatic Hoses Bundle in the Right Upper Tray

- 3.5. Replace all the fittings for the pneumatic hoses with the new ones fittings supplied (two per hose, for the front and the rear). Connect all hoses.
- 3.6. Tighten all the cable ties previously placed in position. Start tightening from the center of the EGS. Keep the hoses away from the main electrical harness.
- 3.7. Use a cable tie to fix the main electrical harness to the short upper stage bracket. See Figures 10 and 11.

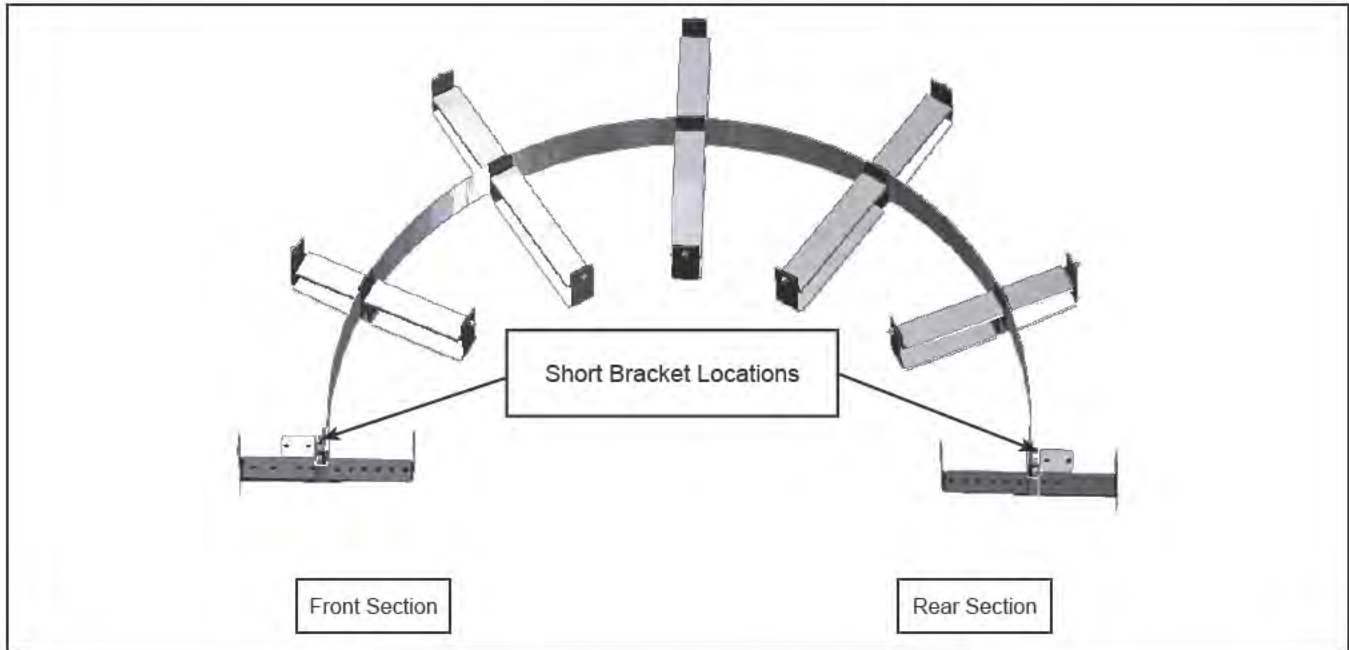


Figure 10 - Bracket Locations for the Main Harness

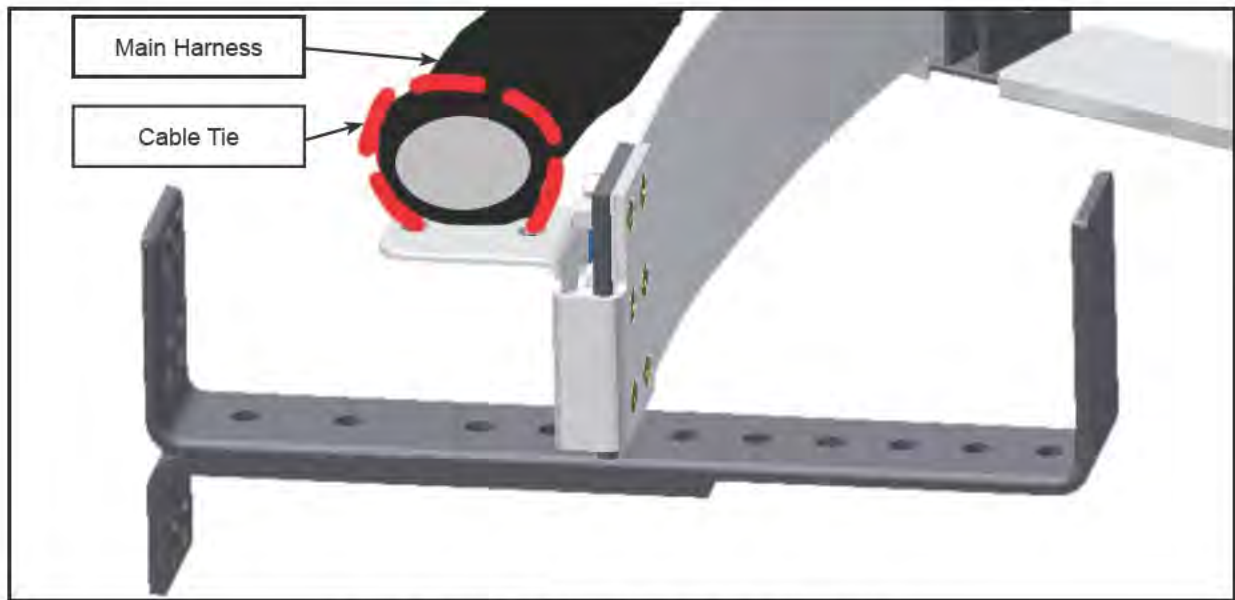


Figure 11 - Fix the Main Harness on the Bracket,
View of Front Section, Typical for the Rear

INSTALL PROTECTIVE BLOCKS AND THE RETAINER SYSTEM

- 4.1. For each end of upper trays tips, remove and discard the M6 screws and nuts. Install a tie cable mount N57040 with a protective stripe wear block N81066. Use the new longer bolts N33735 and nuts N44890 supplied. See Figure 12 and 13.

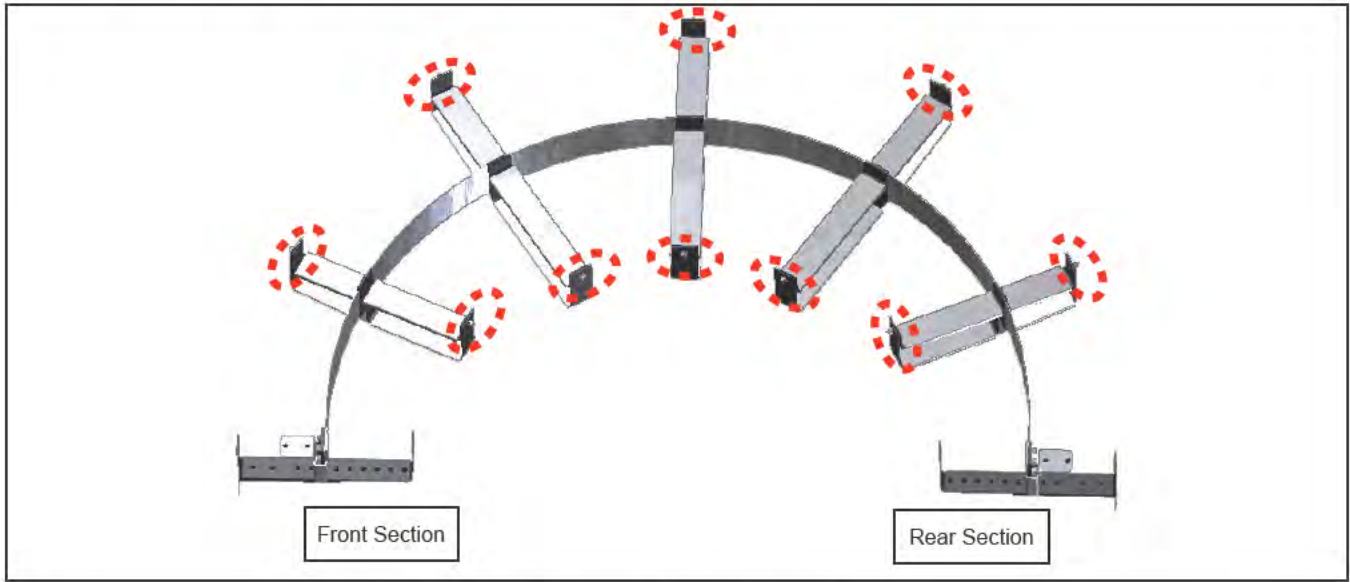


Figure 12 - Location of the 10 Blocks N81066

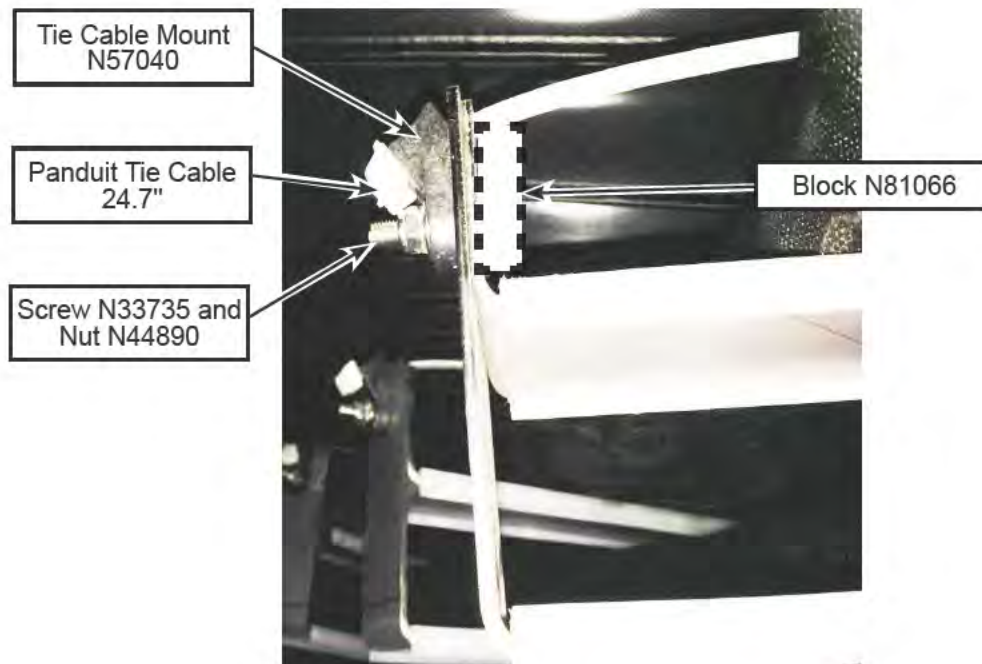


Figure 13 - Block N81066 Installation

- 4.2. Insert a long cable tie N76954 in the cable tie mount, see Figure 13, to use it as a retaining device for the components in the upper trays. Put the smooth side facing down. Lock it with a second cable tie N76954 in the mount on the other side of the tray. Do not put too much tension, do not squeeze the components. Cut off the excess. See Figure 14.

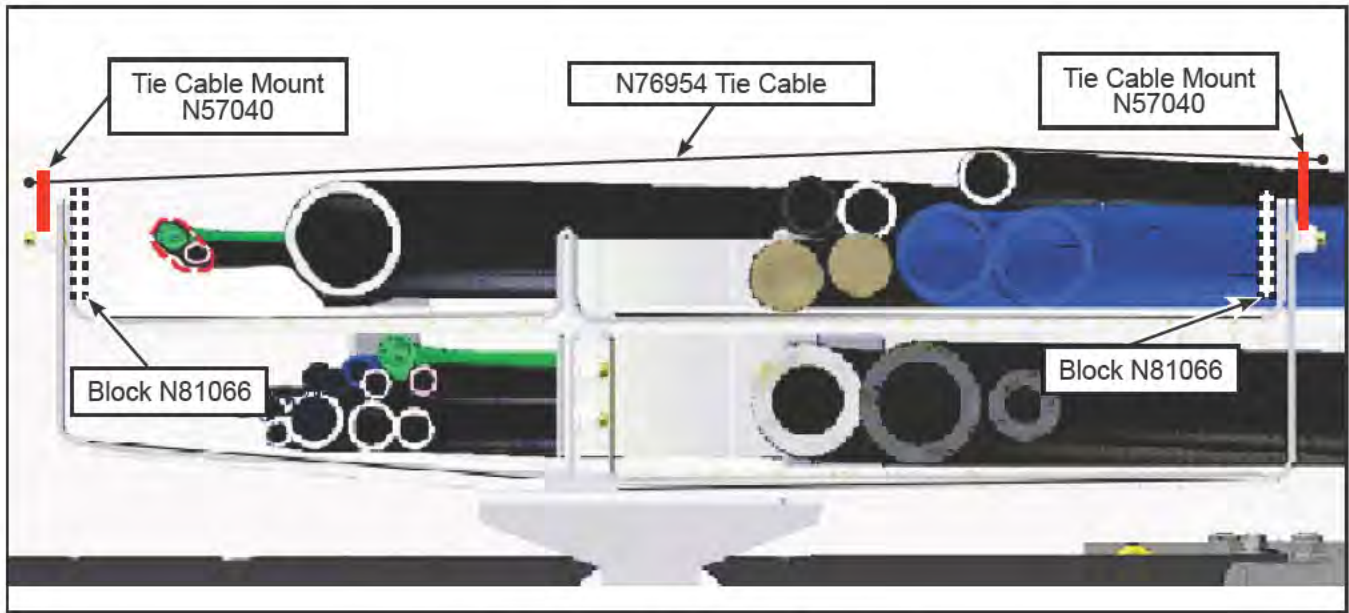


Figure 14 - Cable Ties N76954 Installation

- 4.3. If the coolant hoses were replaced, refill the system as indicated in manual section 09 : **Engine Cooling System**. Inspect for leakage.
- 4.4. Install the curtains and the parts removed for access. ❖