

REFERENCE:	Nova Bus Manuals
SECTION:	09: T-Drive engine and accessories
RS N°:	MQR 7621-1519
EFFECTIVE IN PROD.:	LB08 (2018NO)

APPLICATION DEADLINE:N/A

SUBJECT:	Engine cradle
JUSTIFICATION:	An inadequate assembly sequence of the engine cradle may cause cracks in certain cases

LEVEL	DESCRIPTION	DIRECT CHARGES		TIME
		LABOUR	MATERIAL	
1	Repairs only cracks present on the engine cradle	Client	Client	45 min
2	—	—	—	—

MATERIAL

QTY	PART N°	REV.	DESCRIPTION	REPLACES PART N°
LEVEL 1				
—	—	—	—	—
LEVEL 2				
—	—	—	—	—

DISPOSAL OF PARTS

REMOVED PARTS ARE:	DISCARDED	RETAINED	
	—	—	

REVISION HISTORY

REV.	DATE	CHANGE DESCRIPTION	WRITTEN BY
NR	2018OC26	Initial release	Luc Carignan

APPROVED BY:

PAGE 1 OF 7

CLIENT	ORDER	ROAD NUMBER		VIN (2NVY/4RKY...)		QTY
		FROM	TO	FROM	TO	
Arrow Coach Line - Arkansas	L494	—	—	L82U793000397	L82U793000397	1
Clemson Area Transit - South Carolina	L617	—	—	S92U5C4500002	S92U5C4500002	1
CT Transit - Connecticut	L571	1101	1110	S92YXB4000144	S92Y4B4000169	10
Duke University - North Carolina	L651	—	—	S92Y1B4000145	S92Y3B4000146	2
Honolulu - Hawaii	L559	201	224	L82U6A4000113	L82U7A4000136	24
Marketing Sales Demo - MSD 6 Houston	L628	—	—	L82U8C4500003	L82UXC4500004	2
New York City Transit - New York	L536	1200	1201	S92U793000490	S92U993000491	2
New York City Transit - New York	L545	1202	1289	S92U5A4000001	S92U0A4000098	88
New York City Transit - New York	L621	8075	8089	L82U9B4000124	L82U9B4000138	15
New York City Transit - New York	L643	5895	5895	S92U1B4000143	S92U1B4000143	1
New York City Transit - New York	L670	5770	5894	S92U9B4000147	S92UXC4500061	125
University of Alabama - Alabama	L573	—	—	L82U9A4000137	L82U0A4000138	2
University of Alabama - Alabama	L640	—	—	L82U9B4000141	L82UOB4000142	2
University of Colorado - Colorado	L627	—	—	S92UXB4000139	S92U6B4000140	2
Walt Disney World - Florida	L535	1204	1213	L82UXA4000003	L82U0A4000012	10

**WARNING**

FOLLOW YOUR INTERNAL SAFETY PROCEDURES.

PROCEDURE

- 1.1. Open the rear engine access door. See Figure 1.



Figure 1 - Rear Engine Access Door

- 1.2. Open the battery compartment access door and put the battery disconnect switch in the OFF position. The ENABLE light should extinguish. See Figure 2.

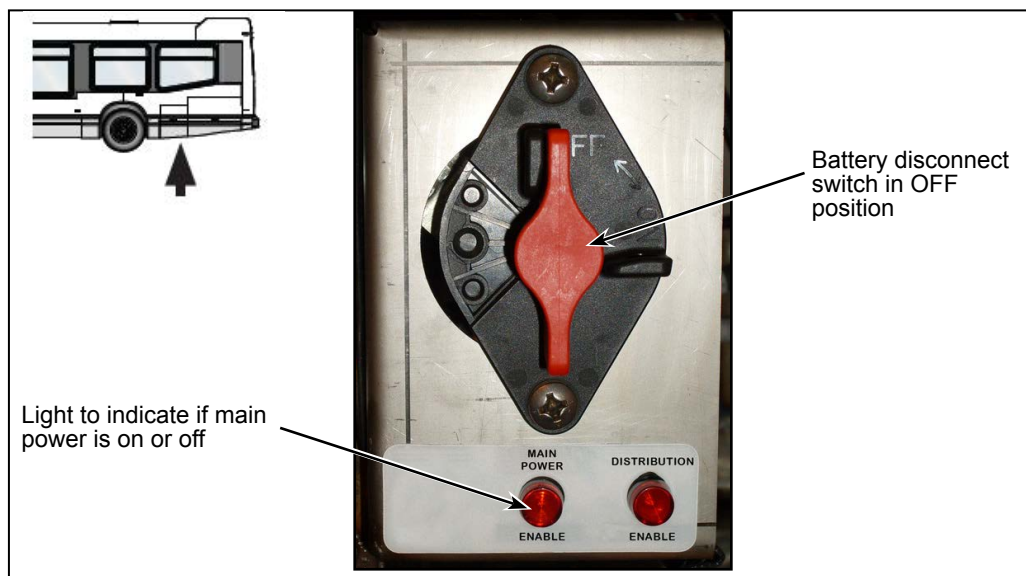


Figure 2 - Battery Disconnect Switch

- 1.3. Remove the engine belt guard and, if needed the HVAC compressor belt. See Figure 3.

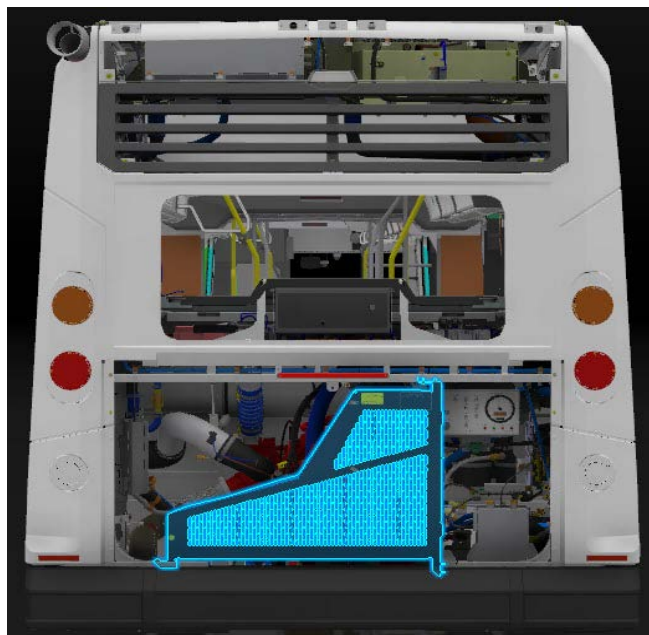


Figure 3 - Engine Belt Guard

- 1.4. The cracks are normally located on the right and left rear corners of the engine cradle. If a crack is present, perform the necessary repair. See Figure 4.

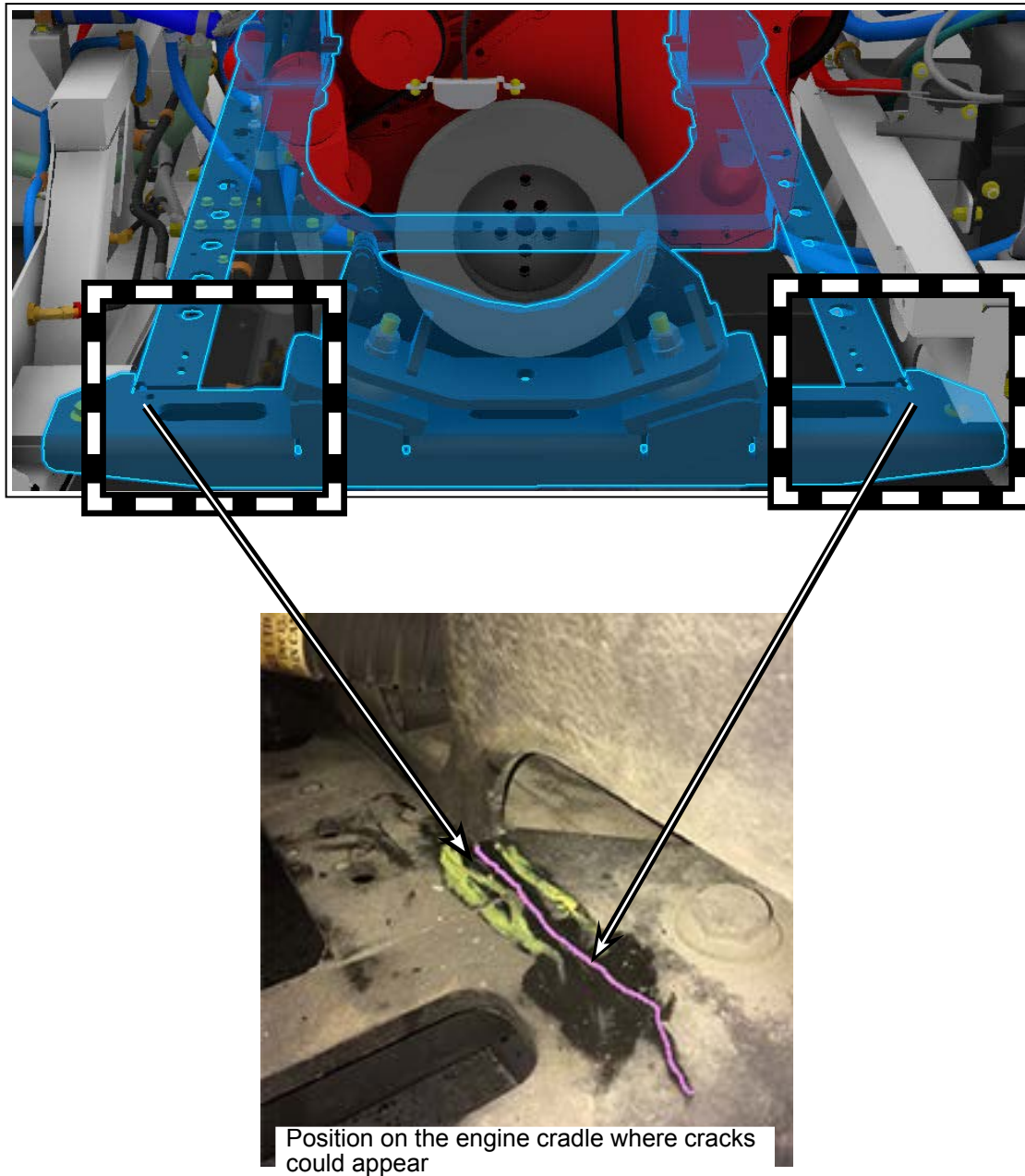


Figure 4 - Typical Crack on Engine Cradle

- 1.5. Remove the rear bumper. See Figure 5.

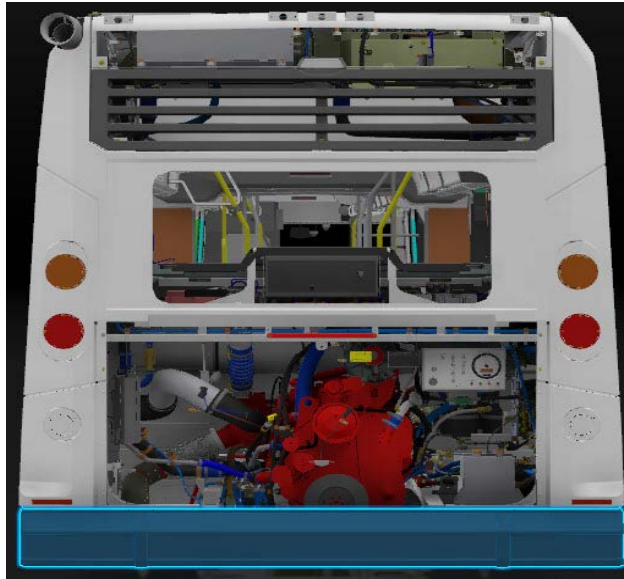


Figure 5 - Rear Bumper



CAUTION

Microprocessor-based control modules are extremely sensitive to voltage surges, such as those that can occur during electric arc welding or plasma cutting of any kind, anywhere on the vehicle. Before attempting any electric arc welding or plasma cutting, disconnect both the 12 volt and 24-volt power at the battery compartment switches and all control modules to prevent damage to their components.

- 1.6. Clean the area to repair.
- 1.7. Drill a stop hole 1/8 in. (3 mm) in diameter at both ends of the crack. If the crack ends at the edge of structural part do not drill this end. See Figure 6.

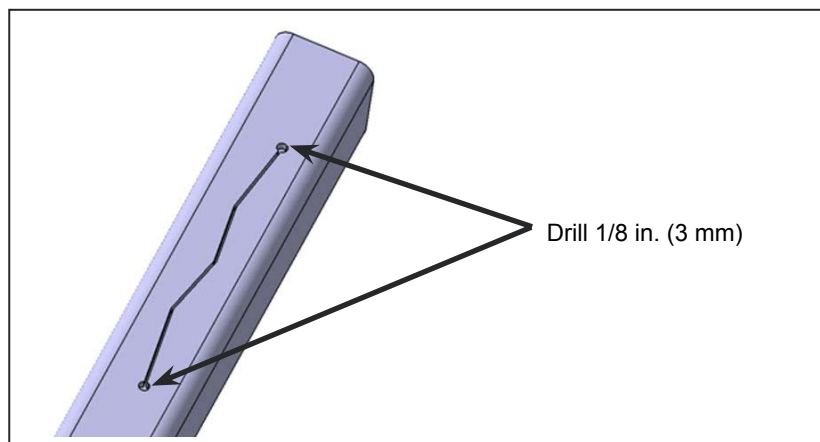


Figure 6 - Typical Crack Drilled at Each End

- 1.8. With a grinder chamfer the crack at an angle of 45° and a depth that doesn't exceed half the thickness of the engine cradle metal plate.
- 1.9. Start the weld from the stop hole and continue until the end of the cracked part.
- 1.10. Slightly grind the weld.



CAUTION

Do not grind the weld down to obtain a flush surface. Intense grinding may weaken and affect the integrity of the steel.

- 1.11. Clean the repaired area to ensure good painting adhesion.
- 1.12. Apply an epoxy resin-based black primer. The percentage of solid, in weight, should be 16 to 20% at the application.
- 1.13. Install the rear bumper.
- 1.14. Install the HVAC compressor belt and the engine belt guard.
- 1.15. Put the battery disconnect switch in the **ON** position. The **ENABLE** light should come **ON**. Close the battery compartment door. ❖