

REFERENCE:	Nova Bus Manuals
SECTION:	18: Articulation system
RS N°:	MQR 7621-1505
EFFECTIVE IN PROD.:	LB29
TC RECALL N°:	2018-594
NHTSA RECALL N°:	18V829

APPLICATION DEADLINE: NA
CLAIM REFERENCE NUMBER: SR-4422

SUBJECT:	Hübner articulation
JUSTIFICATION:	Due to a new fault code added to the engine ECU, the articulation software needs to be updated in order to avoid an articulation instability.

LEVEL	DESCRIPTION	DIRECT CHARGES		TIME
		LABOUR	MATERIAL	
1	Reprogram the articulation control unit (ACU).	Nova Bus	Nova Bus	30 min
2	–	–	–	–

MATERIAL

QTY	PART N°	REV.	SOFTWARE UPDATE	REPLACES PART N°
LEVEL 1				
1	N68707	C	ACU_34_44_NOV_TO3_0490.hex	–
1	N71606	B	ACU_34_44_NOV_TO3_0786.hex	–
1	N78337	E	ACU_34_44_NOV_TO3_07D9.hex	–
1	N78346	C	ACU_34_44_NOV_TO3_048E.hex	–
1	N82498	A	ACU_34_44_NOV_TO3_055B.hex	–
1	N78948	C	ACU_34_44_NOV_TO3_0773.hex	–
LEVEL 2				
–	–	–	–	–

Contact your Nova Bus customer support manager to get the applicable software version, see next pages.

DISPOSAL OF PARTS

REMOVED PARTS ARE:	DISCARDED	RETAINED	
	–	–	

REVISION HISTORY

REV.	DATE	CHANGE DESCRIPTION	WRITTEN BY
NR	2018DE19	Initial release	André Pelletier

APPROVED BY:

PAGE 1 OF 8

CLIENT	ORDER	ROAD NUMBER		VIN (2NVY/4RKY...)		QTY	ACU SOFTWARE	PART N°
		FROM	TO	FROM	TO			
Ames Transportation Agency - Iowa	L904	6101	6104	S92J1G9775221	S92J7G9775224	4	ACU_34_44_NOV_TO3_055B. hex	N82498
Austin - CMTA - Texas	LA17	5101	5107	S92J2H9775763	S92J3H9775769	7	ACU_34_44_NOV_TO3_055B. hex	N82498
Clemson Area Transit - South Carolina	L769	—	—	S92U1D4500418	S92U1D4500418	1	ACU_34_44_NOV_TO3_0786. hex	N71606
CT Transit - Connecticut	L815	1426	1429	S92L0E4500709	S92L0E4500712	4	ACU_34_44_NOV_TO3_07D9. hex	N78337
CT Transit - Connecticut	L814	1462	1473	S92LXE4500717	S92L4E4500728	12	ACU_34_44_NOV_TO3_07D9. hex	N78337
Duke University - North Carolina	LA39	—	—	S92LXH9775995	S92LXH9775995	1	ACU_34_44_NOV_TO3_07D9. hex	N78337
Houston - Texas	L952	1580	1580	S92J5G9775318	S92J5G9775318	1	ACU_34_44_NOV_TO3_048E. hex	N78346
Houston - Texas	L982	1581	1582	S92J5G9775514	S92J7G9775515	2	ACU_34_44_NOV_TO3_048E. hex	N78346
Houston - Texas	L982	1583	1583	S92J9G9775516	S92J9G9775516	1	ACU_34_44_NOV_TO3_048E. hex	N78346
Houston - Texas	L982	1584	1586	S92J2G9775518	S92J4G9775522	3	ACU_34_44_NOV_TO3_048E. hex	N78346
Houston - Texas	L982	1587	1587	S92J8G9775524	S92J8G9775524	1	ACU_34_44_NOV_TO3_048E. hex	N78346
Houston - Texas	L982	1588	1599	S92J1G9775526	S92J5G9775545	12	ACU_34_44_NOV_TO3_048E. hex	N78346
LYNX - Florida	L785	—	—	S92L6E4500505	S92L8E4500506	2	ACU_34_44_NOV_TO3_07D9. hex	N78337
MTD - Santa Barbara, California	L730	—	—	S92J8E4500567	S92J1E4500569	3	ACU_34_44_NOV_TO3_048E. hex	N78346
New York City Transit - New York	L958	5439	5442	S92J9G9775533	S92J9G9775631	4	ACU_34_44_NOV_TO3_0773. hex	N78948
New York City Transit - New York	L959	5443	5443	S92J0H9776118	S92J0H9776118	1	ACU_34_44_NOV_TO3_0773. hex	N78948
New York City Transit - New York	LB59	5444	5484	S92J7H9776195	S92J6H9776379	41	ACU_34_44_NOV_TO3_0773. hex	N78948
New York City Transit - New York	LA23	5485	5530	S92J5J9776380	S92J6J9776517	46	ACU_34_44_NOV_TO3_0773. hex	N78948
Niagara Falls Ontario - Metrolinx	LA98	1809	1810	S92J7J3751003	S92J9J3751004	2	ACU_34_44_NOV_TO3_055B. hex	N82498
SEPTA - Pennsylvania	L749	7302	7354	S92Y7D4500409	S92L2E4500470	53	ACU_34_44_NOV_TO3_07D9. hex	N78337
SEPTA - Pennsylvania	L742	7371	7414	S92L6E4500729	S92L7E4500772	44	ACU_34_44_NOV_TO3_07D9. hex	N78337
SEPTA - Pennsylvania	L745	7415	7415	S92L0F4500873	S92L0F4500873	1	ACU_34_44_NOV_TO3_07D9. hex	N78337
SEPTA - Pennsylvania	L746	7416	7454	S92L7F4500952	S92L8F4501012	39	ACU_34_44_NOV_TO3_07D9. hex	N78337
SEPTA - Pennsylvania	L861	7300	7484	S92L5G9775188	S92L8G9775220	32	ACU_34_44_NOV_TO3_07D9. hex	N78337

CLIENT	ORDER	ROAD NUMBER		VIN (2NVY/4RKY...)		QTY	ACU SOFTWARE	PART N°
		FROM	TO	FROM	TO			
St. Catharines Ontario - Metrolinx	L898	1560	1560	S92J4F3001663	S92J4F3001663	1	ACU_34_44_NOV_TO3_055B. hex	N82498
St. Catharines Ontario - Metrolinx	LB06	1860	1862	S92J1J3751000	S92J5J3751002	3	ACU_34_44_NOV_TO3_048E. hex	N78346
Toronto Transit Commission - TTC - Ontario	L777	9027	9152	S92J7E3001123	S92J6E3001372	126	ACU_34_44_NOV_TO3_048E. hex	N78346
Walt Disney World - Florida	L763	—	—	S92U0D3001019	S92U4D3001024	6	ACU_34_44_NOV_TO3_0490. hex	N68707
York Regional Transit - Ontario	L964	1770	1774	S92J6G3750420	S92J3G3750424	5	ACU_34_44_NOV_TO3_055B. hex	N82498

**WARNING**

Follow your internal safety procedures.

PROCEDURE

- 1.1. Open the RF9 panel door located at the rear interior ceiling of the vehicle.
- 1.2. Locate the Hübner Articulation Control Unit (ACU). See Figure 1.

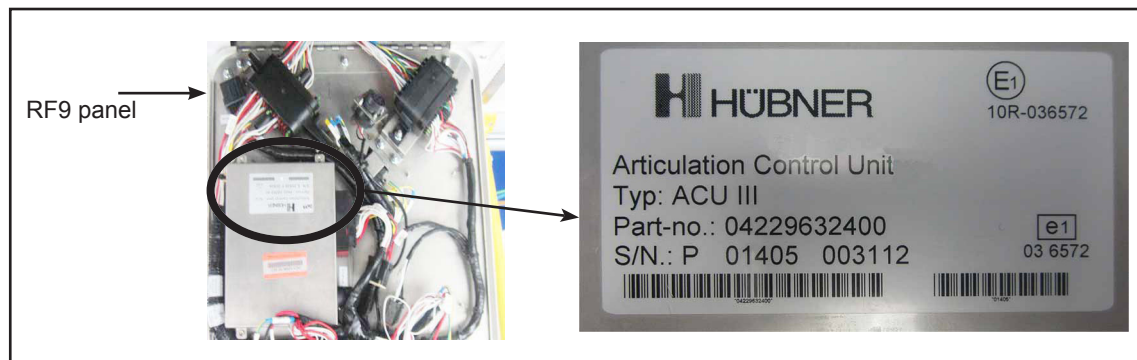


Figure 1 - Location of the Hübner Articulation Control Unit (ACU) in the RF9 Panel

- 1.3. You will have to use the **HÜBNER SERVICE INTERFACE** to connect your computer to the vehicle's ACU. See Figure 2.



Figure 2 - Hübner Service Interface (Part N° N8900610)

**NOTE**

The HÜBNER SERVICE INTERFACE is not supplied for this campaign.

1.4. Locate the ACU's 9-pin connector. See Figure 3.



Figure 3 - ACU 9-pin Connector Location in the RF9 Panel

- 1.5. Connect the Hübner service interface to the ACU's 9-pin connector in the RF9 panel. See Figures 2 and 3.
- 1.6. Connect the Hübner service interface USB plug to your computer.
- 1.7. Set the vehicle's master control switch to the RUN position. The interface's red light will come on to indicate it is powered.
- 1.8. Identify the file corresponding to the vehicle you have to update. See client list on page 2 of this document. Save the file in your computer.
- 1.9. Start the Hübner software by clicking the icon. See Figure 4.

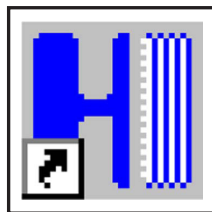


Figure 4 - Hübner Software Icon

1.10. Click on the **CONNECT** button. See Figure 5. The interface's green light will come on to indicate it is connected.



Figure 5 - Hübner Software Top Menu

1.11. A pop-up window will appear to identify the already installed ACU software. See Figure 6. Click OK.

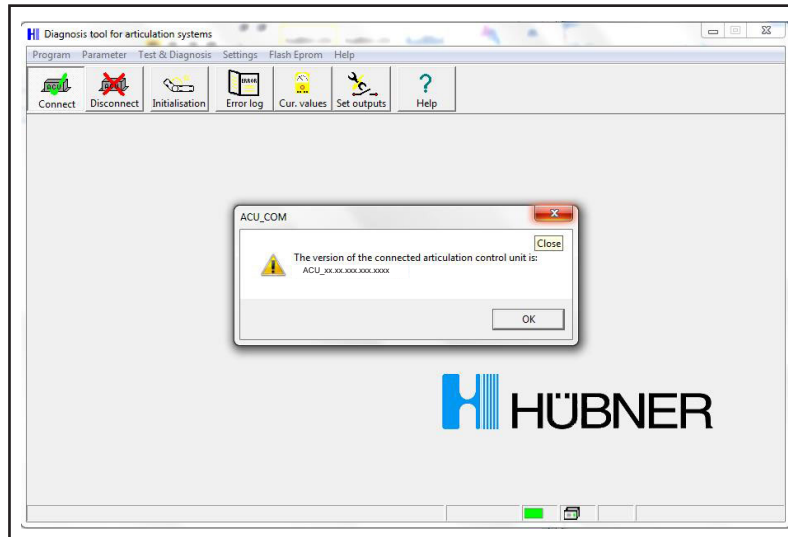


Figure 6 - Typical Window Identifying the Already Installed ACU Software

1.12. Select **FLASH EPROM** (1) from the Hübner software top menu. See Figure 7.

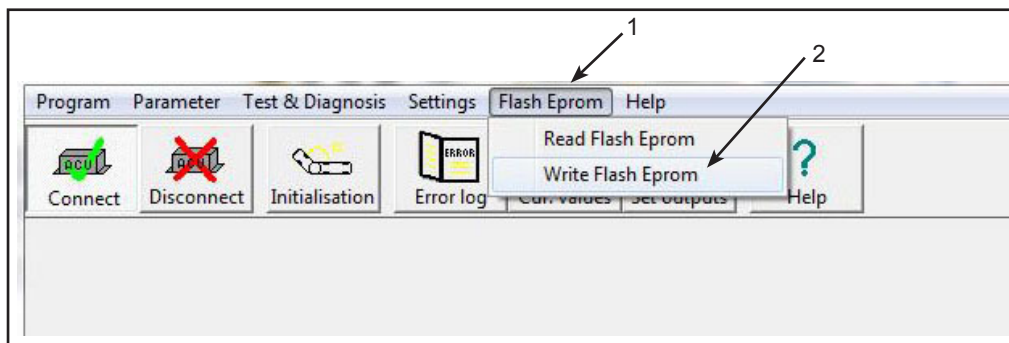


Figure 7 - Hübner Software Top Menu

1.13. Click on **WRITE FLASH EPROM** (2) in the sub-menu. See Figure 7.



NOTE

If you can't access **WRITE FLASH EPROM** (2), (see Figure 7), contact your Nova Bus customer support manager.

1.14. In the open window, choose the updated file you downloaded for your vehicle at step 1.8.

- 1.15. A progress window will appear. See Figure 8.

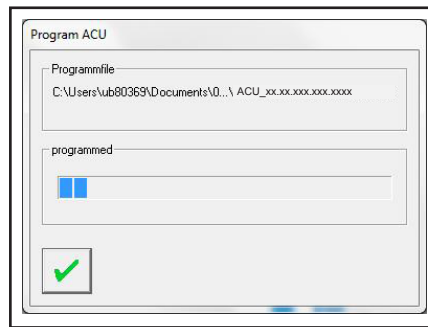


Figure 8 - Typical Progress Window

- 1.16. When the upload is finished, a pop-up window will appear to confirm that the unit is now programmed and the ACU that should be restarted. See Figure 9. Click OK.

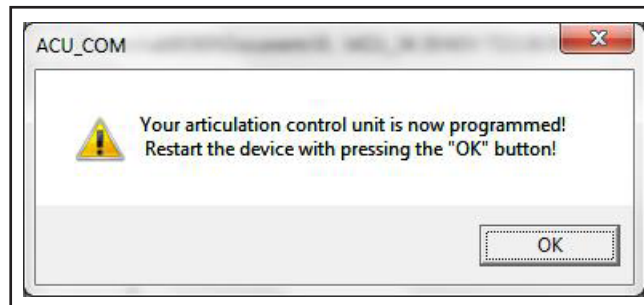


Figure 9 - Upload Completed and ACU Restart Window

- 1.17. A second pop-up window will appear to confirm the ACU software version. See Figure 10. Compare the version in the pop-up with the one you uploaded. If the two versions are identical, click OK. If not, redo the procedure from step 1.8.



Figure 10 - Typical Software Version Window

1.18. A third pop-up window will appear, asking whether to keep the initialisation values. See Figure 11. Click **YES**.

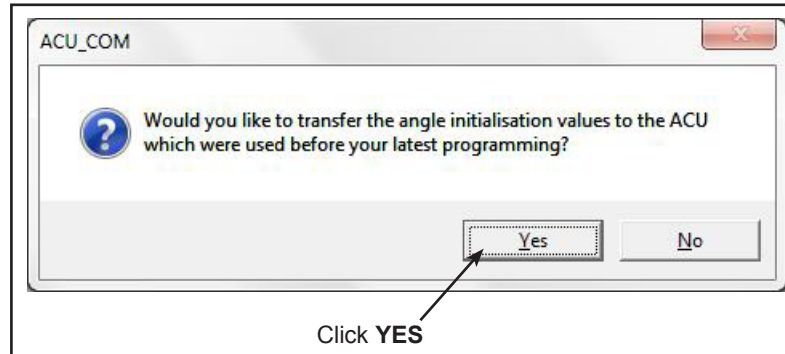


Figure 11 - Initialisation Values Pop-Up Window

1.19. Click on the **DISCONNECT** button from the Hübner software top menu. See Figure 12.



Figure 12 - Hübner Software Top Menu

- 1.20. Set the vehicle's master control switch to the **STOP** position.
- 1.21. Disconnect the Hübner service interface USB cable from your computer.
- 1.22. Disconnect the 9-pin connector from the RF9 panel plug.
- 1.23. Close the RF9 panel door.
- 1.24. The vehicle may be returned to service. ❖