FT5191 Coolant Pipe Leaks at Solder Joint

Technical writer name
Devanand

Manual section 14

First Level Parts		
Part Description	**Part Number**	**QTY**
-	-	-

Nb hours Level 1 1 hr

MQR 7621-2375

Second Level Parts		
Part Description	**Part Number**	**QTY**
-	-	

Disposal of parts

Removed parts are:		When the retained check box is check, the parts must be retained and returned in accordance with the usual warranty procedure to be reimbursed.
Discarded	Retained	
-	-	

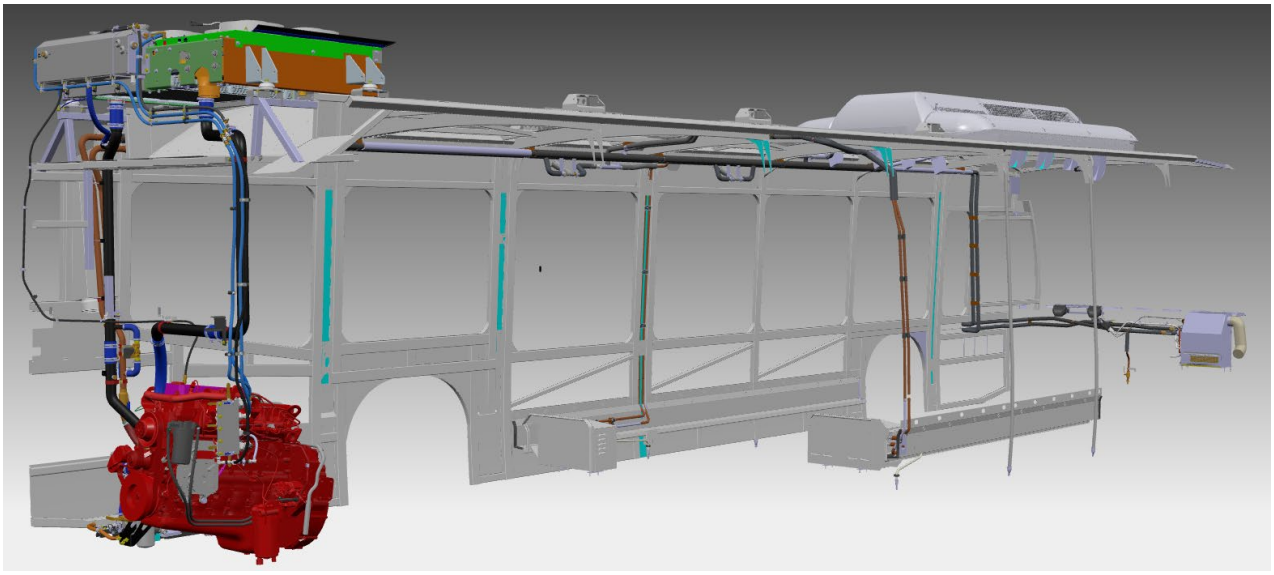
Client	Order	Road numbers		VIN		QTY	Lang.	Customer	Target market	Plant	Engine Config	Model	NR	R1
New York City Transit New York - NYCT	LC79	9623	9628	L82L1M9777782	L82L0M9777787	6	E	NYCT	US	PLB	TD	40	x	
New York City Transit New York - NYCT	LC79	9636	9637	L82LXM9777795	L82L1M9777796	2	E	NYCT	US	PLB	TD	40	x	
New York City Transit New York - NYCT	LC79	9639	9639	L82L5M9777798	L82L5M9777798	1	E	NYCT	US	PLB	TD	40	x	
New York City Transit New York - NYCT	LC79	9644	9644	L82L5M9777803	L82L5M9777803	1	E	NYCT	US	PLB	TD	40	x	
New York City Transit New York - NYCT	LC79	9648	9648	L82L2M9777807	L82L2M9777807	1	E	NYCT	US	PLB	TD	40	x	
New York City Transit New York - NYCT	LC79	9650	9650	L82L6M9777809	L82L6M9777809	1	E	NYCT	US	PLB	TD	40	x	
New York City Transit New York - NYCT	LC79	9652	9654	L82L4M9777811	L82L8M9777813	3	E	NYCT	US	PLB	TD	40	x	
New York City Transit New York - NYCT	LC79	9656	9676	L82L1M9777815	L82L7M9777835	21	E	NYCT	US	PLB	TD	40	x	
New York City Transit New York - NYCT	LC79	9678	9683	L82L0M9777837	L82L4M9777842	6	E	NYCT	US	PLB	TD	40	x	
New York City Transit New York - NYCT	LC79	9691	9691	L82L3M9777850	L82L3M9777850	1	E	NYCT	US	PLB	TD	40	x	
New York City Transit New York - NYCT	LC79	9694	9694	L82L9M9777853	L82L9M9777853	1	E	NYCT	US	PLB	TD	40	x	
New York City Transit New York - NYCT	LC79	9698	9702	L82L6M9777857	L82L8M9777861	5	E	NYCT	US	PLB	TD	40	x	
New York City Transit New York - NYCT	LC79	9707	9707	L82L7M9777866	L82L7M9777866	1	E	NYCT	US	PLB	TD	40	x	
New York City Transit New York - NYCT	LC79	9710	9715	L82L2M9777869	L82L8M9777875	6	E	NYCT	US	PLB	TD	40	x	
New York City Transit New York - NYCT	LC79	9717	9721	L82L1M9777877	L82L3M9777881	5	E	NYCT	US	PLB	TD	40	x	
New York City Transit New York - NYCT	LC79	9723	9725	L82L7M9777883	L82L0M9777885	3	E	NYCT	US	PLB	TD	40	x	
New York City Transit New York - NYCT	LC79	9727	9728	L82L4M9777887	L82L6M9777888	2	E	NYCT	US	PLB	TD	40	x	
New York City Transit New York - NYCT	LC79	9730	9736	L82L4M9777890	L82L9M9777903	7	E	NYCT	US	PLB	TD	40	x	
New York City Transit New York - NYCT	LC79	9738	9740	L82L2M9777905	L82L6M9777907	3	E	NYCT	US	PLB	TD	40	x	
New York City Transit New York - NYCT	LC79	9742	9742	L82LXM9777909	L82LXM9777909	1	E	NYCT	US	PLB	TD	40	x	
New York City Transit New York - NYCT	LC79	9744	9746	L82L8M9777911	L82L1M9777913	3	E	NYCT	US	PLB	TD	40	x	
New York City Transit New York - NYCT	LC79	9748	9780	L82L5M9777915	L82L7M9777950	33	E	NYCT	US	PLB	TD	40	x	
New York City Transit New York - NYCT	LC79	9782	9784	L82L0M9777952	L82L4M9777954	3	E	NYCT	US	PLB	TD	40	x	

Jean-Nicolas Fournier

Digitally signed by Jean-Nicolas Fournier
DN: cn=Jean-Nicolas Fournier, o=Nova Bus, email=jean-nicolas.fournier@volvo.com, c=CA
Date: 2021.09.30 07:45:58 -04'00'

Interim Action Plan

Hybrid Engine Coolant Leak Test



Aug. 2021

NOVA CADEMY

Introduction

Objective

The purpose of this Interim Action Plan is to asset in finding coolant leaks on LC79 and LD64 HYBRID by pressurizing the Engine cooling system and check for leaks. This document does not take precedence over any maintenance procedures, manuals or Local policies. The maintenance manual and local policy and procedures take precedence over all the information contained in this Action Plan. Please refer to the maintenance manual and local policy for all specific values and safety guidelines when performing any tasks.

Engine Coolant Check

When checking the engine coolant level the place the front run switch in the off position and check from the engine rear run box. Place the run switch in the rear run position you now may check the coolant level through the display on the Tachometer:

a. When the engine coolant level is appropriate, a message will appear **Cold Coolant Leve**l on the display.

b. When the engine coolant is below the multiplex level detector on the engine coolant purge tank, the rear gauge will flash and a readout will appear **Low Coolant Leve**l. This indicate, that the coolant level is low.

Maintenance and Service

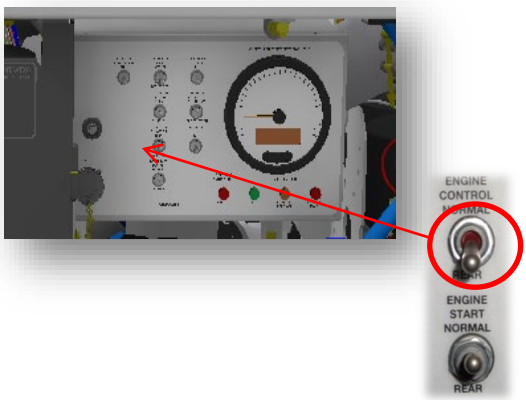
When the coolant level is low, coolant needs to be added. Low coolant level does not necessarily mean there is a leak in the system. However, it is very important to check the cooling system for leaks as soon as possible, and to make repairs, if necessary.

Pressure Tester

Hybrid Engine Coolant Leak Test

First you will need to validate the bus is low in coolant by checking on the rear run box. After waking the bus You need to:

1. **Ensure** that the Master switch, located on the driver side console is in the **Off** position.	

2. **Place** the **engine control** switch, located on the engine control box, in the **rear run** position.	

Hybrid Engine Coolant Leak Test

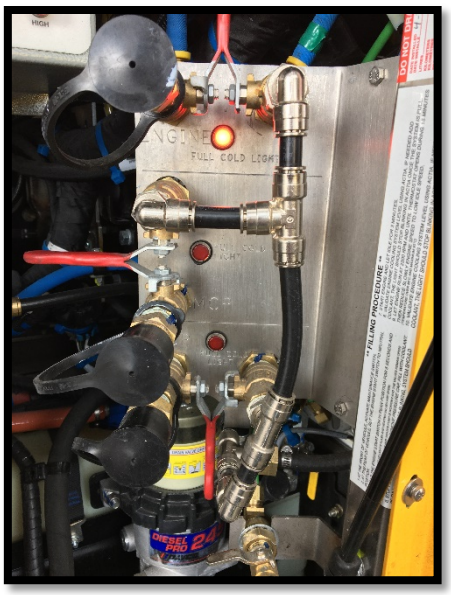
3. **Validate** the engine cooling system level using **ACTIA.** The display screen will display the Engine coolant level state it will state **Low Cold Level**.

Full Cold Level
Or
Low Cold Level

Also by looking at the **Fill Port Console** these lights are used for full and low signals:

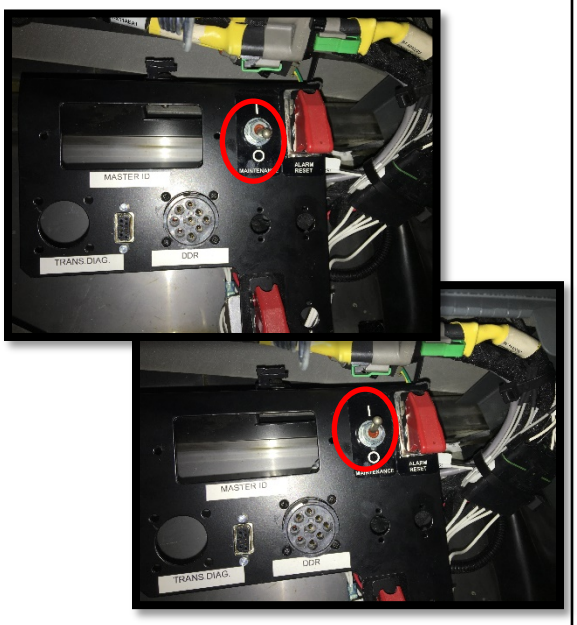
If coolant level is on or under the low level, the light illuminates

If coolant level is on full level, the light extinguishes

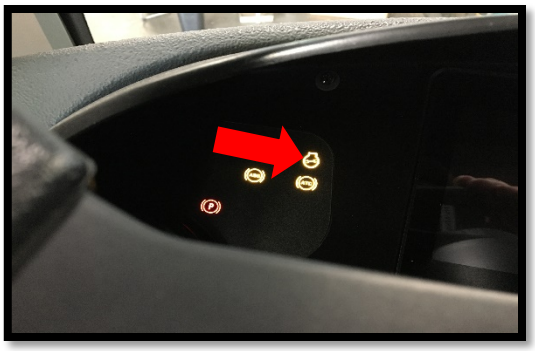


HEV Engine Coolant Leak test

Before performing this test we must open the coolant valve with use of the VBEA maintenance test program. With the Master run switch in the off position.

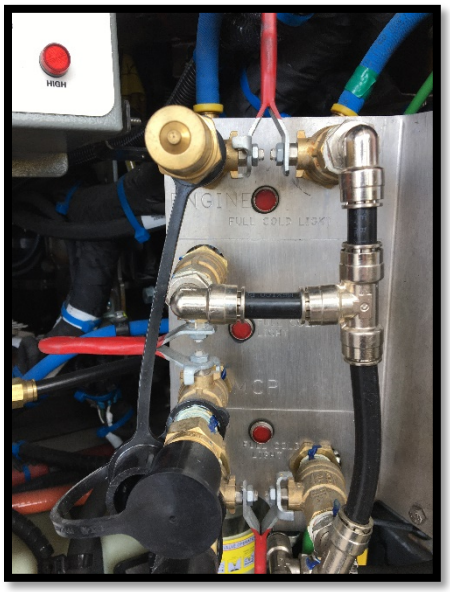
4. **Open** the overhead console and locate the Maintenance switch and switch it to the **(I)** Maintenance mode.	

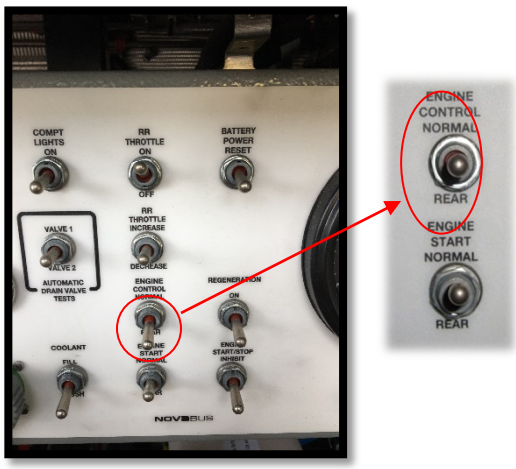
To **Verify** if the bus is in Maintenance Mode check on the dash and see if you see the **Wrench symbol** on the dash.



5. **Place** the **Heater Defroster Control** valve in the fully open position.	

Move to the rear engine run box to proceed to open the coolant valves through VBEA test mode.

6. **Ensure** on the full control panel that all fill valves are in the closed position	

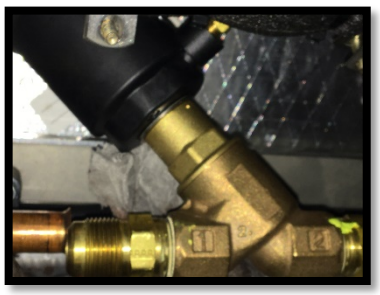
7. **Set** the engine control switch located on the rear engine control box to the **Center** position.	

Hybrid Engine Coolant Leak Test

8. **Press down** the engine start switch on the rear engine control box for **5 seconds** and **release**. **Press down** again on engine start switch for **I second** and release.	

Check the backup lights and center stop light for blink (every 4 seconds) to confirm that the sequence has been activated.

A this time the heating coolant valves are fully open!



Hybrid Engine Coolant Leak Test

Now that the defroster heating valve and the floor heater valves are fully open move to the radiator surge tank located on the left/rear side of radiator to perform the Pressure test.

9. **Remove** Engine surge tanks cap and install Pressure tester.	

10. **Pump the pressure up to 20 to 21 psi and check to see if pressure holds. Check for leaks.**	

Hybrid Engine Coolant Leak Test

11. **Wait** 20 minutes and **Check** whether the pressure regulator gauge shows a decrease in pressure. If there is a decrease in pressure a leak check must be performed (see leak checking below)	

NOTE

A decrease in the gauge pressure indicates a leak in the engine coolant system. If there is no decrease in pressure indicated on the gauge, the engine cooling system is good and posable air was trapped in the system

Leak Checking

Leak test with engine coolant empty.
If the gauge shows a decrease in pressure, there is a possible leak in the system. You will need to pressurize the engine cooling system with air, to the same pressure you used to check for leaks. Spray the cooling system with the use of a spray bottle with soap-water solution and check for leaks.
Leak test with engine coolant.
For system with coolant still in the system look for a coolant leaking from the fitting and hose's.

Hybrid Engine Coolant Leak Test

Leak Check Location