



SAFETY RECALL

SR19-31C

 DATE :
 December 2019
 SECTION : 01 ENGINE

 SUBJECT:
 ENGINE CONTROL MODULE (ECM) SOFTWARE UPDATE - Engine Cooling Strategy in High Altitude Operation

Revision C

VIN range in application box rearranged for H3 coaches

Nov 23-21

APPLICATION

IMPORTANT NOTICE TO SERVICE CENTERS

Verify vehicle eligibility by checking warranty bulletin status with **SAP** or via **ONLINE WARRANTY SYSTEM** available on Parts and Service / Warranty tab of Prevost's website.

Model	
X3-45 VIP motorhomes Model Year: 2017 & 2019	2PCBS349X <u>H</u> C73 <u>6199</u> 2PCBS3499 <u>K</u> C73 <u>6377</u>
X3-45 VIP commercial use Model Year: 2017 - 2020	Specific vehicles within the following range From 2PCCS3498HC73 <u>6187</u> up to 2PCCS3492LC73 <u>6517</u> incl.
X3-45 coaches Model Year: 2017 - 2020	Specific vehicles within the following range From 2PCG33491HC73 <u>6188</u> up to 2PCG33494LC73 <u>6520</u> incl. From 4RKG33494J973 <u>7448</u> up to 4RKG33490L973 <u>7689</u> incl. and 2PCS33496 <u>J</u> C73 <u>6297</u>
X3-45 Commuter Model Year: 2019	2PCJ33491 <u>K</u> C73 <u>6432</u>
H3-41, H3-45 coaches Model Year: 2018 - 2020	Specific vehicles within the following range From 2PCH33493 <u>J</u> C71 <u>0086</u> up to 2PCH33493 <u>J</u> C71 <u>0184</u> incl. From 2PCH33493 <u>K</u> C71 <u>0185</u> up to 2PCH33494LC72 <u>0922</u> incl.
H3-45 VIP motorhomes Model Year: 2019 - 2020	2PCVS3498 <u>K</u> C71 <u>0477</u> 2PCVS3494 <u>K</u> C72 <u>0651</u> 2PCVS3491 <u>K</u> C71 <u>0501</u> 2PCVS3497 <u>L</u> C72 <u>0838</u> 2PCVS349X <u>K</u> C72 <u>0573</u>
been modified before delivery. Th	sarily apply to all the above-mentioned vehicles, some vehicles may have the owners of the vehicles affected by this recall will be advised by a letter on Number (VIN) of each vehicle concerned.

PART 1 – ENGINE SOFTWARE UPDATE

DESCRIPTION – PART 1

Part 1 of this safety recall applies to all the vehicles listed in the application table of the front page <u>on which a notification identified SR19-31: PART 1- ENGINE</u> <u>SOFTWARE UPDATE exists</u>.

On determined vehicles equipped with Green House Gas 17 (GHG17) or OBD18 Volvo D13 engine, perform the latest software update of the Engine Control Module.

Please contact your nearest Prevost Service Center or Prevost service manager and schedule an appointment to have the required software update applied.

SOFTWARE TOOL NEEDED

Description

Latest version of Premium Tech Tool (PTT) with appropriate communication interface equipment

PROCEDURE



Park vehicle safely, apply parking brake, stop the engine.

Lock out & Tag out (LOTO) must be performed during set-up, maintenance or repair activities. Refer to your local procedure for detailed information regarding the control of hazardous energy.

- 1. Connect the vehicle's battery charger to a 120-Volt outlet.
- 2. Connect Premium Tech Tool (PTT) to the vehicle On-Board Diagnostics connector (OBD). Connect the PC to a functional LAN or Wi-Fi connection and a power source.

- 3. Turn the ignition switch to "ON". Activate the hazard warning flashers to prevent the vehicle from entering sleep mode.
- 4. Log in to PTT.
- 5. On **Product** tab (item A), identify the vehicle (item B).

Produc	t Product History Diagnose Test Cal	ibrate Program Impact				
Selected Product (PREVH 720635)						
🌀 Re	fresh 🛛 🛞 Settings	test Selections B OBD/LVD -				
Product	Details			Product Status		
Chassi	a ID:	VIN:		Status Description		
	720635	2PCH33493KC720635		No DTCs with status Active.		
Model:		Company:		Control unit information. Details >>		
PREVH		Volvo Buses		 Current battery level: 14.1 V. 		
US17 + Electric	Emission Level: US17 + OBD2016 Electrical System: Multiplexed version 3					
Connect	ivity			Campaigns (0)		
Status	Description			There are no available campaigns for this product.		
S	VOCOM I (USB) is connected to the computer.					
v	The selected product PREVH 720635 is connected. Product Data Retrieved:		2019-05-21 14:30:17			
0	Central Data Retrieved:		2019-05-21 14:30:22			

6. Select Program tab and then 1700-08-03-39 Program Electronic Control Unit. Click Start.

Program	1700-08-03-39 Program Electronic Control Unit
Select an operation and click Start Select an operation and click Start T700-08-03-39 Program Electronic Control Unit T700-22-03-09 Parameter, programming T700-22-03-09 Parameter, programming T700-22-03-10 Secessory Kit T700-22-03-11 Campaign T700-22-03-12 Replace HardWare T700-22-03-12 Replace HardWare T700-22-03-13 Program with Stored Software T700-08-03-40 Handle Component T700-22-03-14 Synchronize electronic control unit data 3810-22-03-10 Change Language 3837-22-03-01 Odometer programming	To run the operation in simulation mode, select Run as simulated
	Note: It may be necessary to perform calibrations after an Electronic Control Unit has been programmed It is necessary to perform a DTC readout on the complete product after the operation in order to secure that no new active DTC has occured Start >

- 7. Select ENGINE CONTROL MODULE (EMS).
- 8. Select the following programming option "Update Electronic Control Unit with latest software".
- 9. Click **Program** button.

	1700-08-03-39 Program Electronic Control Unit
Select an Electronic Control Unit	
Control Unit	Programming Options
Information display (MID 140)	
Vehicle ECU (MID 144)	Update Electronic Control Unit with latest software
FMS Gateway (MID 179)	Reload Electronic Control Unit with existing software
Aftertreatment Control Module (ACM)	
Engine Control Module (EMS)	
Telematics GateWay (TGW)	
	Program > Cancel

- 10. Certain conditions must be met to allow programing:
 - I. battery voltage above 10 Volts;
 - II. parking brake applied;
 - III. ignition key in ON position and the engine is <u>not</u> running.

When all conditions have been met, click **Continue** to proceed with programming.

	1700-08-03-39 Program Electronic Control Unit - Update softwa
$1 \xrightarrow{} > 10 \vee 13.1 \vee 2$ $2 \xrightarrow{} (P) \xrightarrow{} (P$	Automatically checked conditions 1 Battery voltage above 10 V 2 Parkney poind 3 ignition key in ON position. Engline not running

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- 11. Wait until all Programming Steps check turn to green color (Programming completed).
- 12. When the programing is complete, click **Exit** button.

	1700-08-03-39 Program Electronic Control Unit - Update software
Programming Steps	The following Electronic Control Units have been programmed
Reading out transferable parameters from selected Electronic Control Units	Engine Control Module (EMS)
Retrieving software part numbers	
Cownloading software from central systems	
Programming Electronic Control Units and restoring transferable parameters	
Programming completed	
	Exit>
•	

- 13. Clear any diagnostic trouble codes (DTC).
- 14. Enter the Work Order Number information and then click Start Work.

Vork Order Number			
Enter a work order number or select a recently used work order number in the list.			
Enter work order	number:		
Select a recently	used work order:		
Work Order No	User ID Date		
Enter Notes:			
	Start Work Cancel		
	Start Work Cancel		

WARRANTY – PART 1

Part 1 of this safety recall is covered by Prevost's normal warranty. We will reimburse 1/2 hour (0.5) of labor upon receipt of a warranty claim. Please submit claims via our Online Warranty System, available at <u>www.prevostcar.com</u> (under Service \ Warranty section). Use Claim Type: "Bulletin/Recall" and select "Warranty Bulletin SR19-31".

OTHER

VBC Bulletin	N/A	
Fail Code	01.00-2	
Defect Code	49	
Syst. Cond	R	technical
Causal Part	3092091	subject t

Access all our Service Bulletins on http://techpub.prevostcar.com/en/ or scan the QR-Code with your smart phone.

Are you a vehicle owner? E-mail us at

technicalpublications_prev@volvo.com and type "ADD" in the subject to receive warranty bulletins applicable to your vehicle(s) by e-mail.



PART 2 – CYLINDER LINER AND PISTON REPLACEMENT

DESCRIPTION – PART 2

PART 2 of this safety recall applies only to the vehicles listed in the application table of the front page <u>on which a notification identified SR19-312*: PART 2-LINERS & PISTONS REPLAC exists</u>. These vehicle mileage equals or exceeds 100 000 miles (160 000 km) at the launch of this campaign.

* SR19-312 stands for SR19-31Part2

IMPORTANT NOTICE TO SERVICE CENTERS

Verify vehicle eligibility by checking warranty bulletin status with **SAP** or via **ONLINE WARRANTY SYSTEM** available on Parts and Service / Warranty tab of Prevost's website.

On determined vehicles equipped with Green House Gas 17 (GHG17) or OBD18 Volvo D13 engine, perform the replacement of the **liner and piston of all six (6) cylinders**.

Refer to Impact for the procedures, torque and good practice guidelines.

Suggested procedures:

ID 2171-03-02-01 Oil Pan, Replacement

ID 2131-03-03-01 Cylinder Liners and Pistons, Replacement (All)

ID 2111-03-03-03 Cylinder Head, Replacement

Other procedures found on Impact that may be useful:

2515-03-03-02 Exhaust Manifold, Replacement

2115-03-03-01 Sealing Strip, Valve Cover, Replacement

2373-08-03-04 Common Rail, Fuel Leak Test

Kit SR19-31 includes the following parts:

#	STEP	DESCRIPTION	PART NO	QTY
OIL	_ PAN	Use the following Impact procedure for reference: 2171-03-02-01 Oil Pan, Replacement		
1	3	oil pan seal	21293367	1
2		gasket, magnetic plug	20579690	1
	IERS & TONS	Use the following Impact procedure for reference: 2131-03-03-01 Cylinder Liners and Pistons, Replacement (All)		
3	6	cylinder liner kit (for 6 cylinders)	22724238 or 23775630	1
		or cylinder liner kit (for 1 cylinder)	22565407	6
4	23	bolt, piston jet	994445	6
5	25	fastener, stiffening frame	969445	24
6	25	gasket, oil pickup tube	22275838	2
7	25	fastener, oil pickup tube	994451	3
8	25	sealing ring, oil circuit, pipe on stiffening frame	21092243	4
9		connecting rod bearing shells kit	21610676	6
CYL HEA	INDER \D	Use the following Impact procedure for reference: 2111-03-03-03 Cylinder Head, Replacement		
10	187	gasket, cylinder head	21510072	1
11	196	screw, cylinder head	21345131	38
12	201	Timing gear plate screw	994447	6
13	209	seal, engine brake control valve	20526428	1
14	227	screw, sensor wheel	8192804	8
15	236	O-ring, injector kit (upper grove O-ring violet)	276948	6
16	241	screw, injector	21344774	6
17	268	pressure pipe, common rail	23000880	1
18	270	pressure pipe, common rail right	23000879	3
19	268	pressure pipe, common rail left	23000870	3
20	281	gasket, timing gear cover	21447682	1
21	295	O-ring, impulse sensor cam speed sensor	20966752	1
22	301	pipe, Volvo engine brake	22782247	1
23	339	gasket, valve cover & spacer	22777560	2
24	350	seal, thermostat	21503575	1
25	350	seal, thermostat I-Shift	975675	2

#	STEP	DESCRIPTION	PART NO	QTY
26	356	gasket, water manifold	21298915	1
27		sealing ring, water manifold	1547254	2
28	365	plane gasket, starter element, mixing camber	3979639	2
29	381	gasket, EGR valve	20850815	1
30	381	sealing ring, EGR valve	20841816	2
31	383	screw & sleeve, EGR valve	21528673	4
32	385	O-ring, EGR valve oil return hose	976014	1
33	385	seal/gasket, EGR valve oil supply hose	976014	1
34		O-ring, EGR coolant return pipe	1547253	2
35	389	V-clamp, EGR valve	20755169	2
36	392	seal, oil return pipe	21940615	1
37	395	turbocharger installation kit	85137676	1
38		seal, banjo coolant turbo act supply	947281	2
39		sealing ring, rubber (use as required)	1547252	1
40		sealing ring, banjo fitting (use as required)	20852765	2
41		V-clamp EGR crossover hot side	20504408	2
42		O-ring EGR crossover hot side	967343	2
43		V-clamp turbo to CAC pipe interface	20592787	1
44		O-ring, V-clamp turbo to CAC pipe interface	21096684	1
45		seal, transmission dipstick	571662	1
46		straight coupling, EGR crossover pipe	22889034	1
OTH	IER			
PAR	TS			
47		V-clamp, on Prevost exhaust pipe at flexible & at DPF	21021850	3
48		seal ring, on Prevost exhaust pipe at flexible & at DPF	21095726	3
49		oil filter, bypass	21707132	1
50		oil filter, long life	21707133	2
51		cable tie, nylon BLK (STD)	504637	30
52		cable tie, nylon (50 POUNDS)DOUBLE LOOP	507664	20
53		cable tie, nylon	G5007996	40
54		V-clamp, turbo outlet diffuser interface with Prevost pipe	21060426	1
55		gasket, turbo outlet diffuser interface with Prevost pipe	21095721	1
56		gasket, inlet elbow interface with mixing box	1675066	1
57		V-clamp inlet elbow interface with mixing box	20592783	1

NOTE

Material can be obtained through regular channels.

PART DISPOSITION

DO NOT RETURN THE REPLACED PARTS. Discard waste according to applicable environmental regulations (Municipal/State[Prov.]/ Federal)

WARRANTY - PART 2

This modification is covered by Prevost's normal warranty. We will reimburse you the parts and up to 50 hours of labor upon receipt of a completed A.F.A. Please submit claim via our Online Warranty System, available at www.prevostcar.com (under service \ warranty section). Use Claim Type: "Bulletin/Recall" and select 'Safety Recall SR19-31 ".

Should you only wish to close the safety recall (without reimbursement), fill-in the "Safety Recall Certification Sheet" provided with this bulletin and return it to our warranty department by email at prevost.onlinewarranty@volvo.com or by fax at 418-831-9301.

OTHER

VBC Bulletin	N/A	Access all our Service Bulletins on	
Fail Code	01.00-2	http://techpub.prevostcar.com/en/	드린전설님
Defect Code	09	or scan the QR-Code with your smart phone. E-mail us at technicalpublications prev@volvo.com and	- 836.419
Syst.Cond	R	type "ADD" in the subject to receive our warranty bulletins by e-	
Causal Part	22724238	mail.	





Safety Recall Certification Sheet (Ref: SR19-31)

VEHICLE SERIAL NUMBER:

1								

PERFORMED BY	OWNER/OPERATOR				
We hereby certify that Safety Recall Instructions with regard to Safety Recall SR19-31 have been performed.					
Name:	Name:				
Add:	Add:				
Phone:	Phone:				
Fax:	Fax:				
Signature :	Signature :				
Date:	Date:				

If the information mentioned above is incorrect or you are not the owner of this vehicle anymore, please fill this section and return to sender.

NEW OWNER:

BUSINESS:

ADDRESS (including County):

TELEPHONE: F.

Please return this completed document with your A.F.A. form