

REFERENCE:	Nova Bus Manuals
SECTION:	14: Auxiliary heater
RS N°:	PIP100

APPLICATION DEADLINE:N/A

SUBJECT:	Auxiliary heater
JUSTIFICATION:	Auxiliary heater Thermo 300 is discontinued. The Thermo Plus unit will replace the current unit only if the whole unit needs to be replaced. There is no need to retrofit any buses with the new Thermo Plus units. Replacement parts are available for the current Thermo/Thermo-S units already installed. Please refer to the spare part list for those heaters. If required, contact your local customer support manager for more information.

LEVEL	DESCRIPTION	DIRECT CHARGES		TIME
		LABOUR	MATERIAL	
1	This procedure will outline the necessary changes and parts required to install a Thermo Plus heater.	Client	Client	2h
2	–	–	–	–

MATERIAL

QTY	PART N°	REV.	DESCRIPTION	REPLACES PART N°
LEVEL 1				
1	N94477	A	HEATER THERMO PLUS 30 kW	N34000
1	N8908392	–	CABLE HARNESS THERMO PLUS (with integrated relay)	–
914 mm	N28083-07	–	SLIT CONVOLUTED CONDUIT	–
3	N57807	C	MOUNT FIR TREE CABLE TIE	–
2	N37749	B	DUAL CLAMP TIE	–
1	N56836	A	SPACER DUAL SWIVEL SADDLE	–
1	N44881-02	B	SCREW M6X25 H YZ TRIV 96H 8.8	–
1	N44887	B	NUT LOCKNYL M6 YZ TRIV 96H C8	–
4	G5007996	–	CABLE TIE	–
LEVEL 1 SHOP SUPPLIES				
1500 mm	N74787	A	TAPE ELEC CLOTH 19 X 0.27 THK (1 roll for 16 buses)	–
LEVEL 2				
–	–	–	–	–

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	2020SE28	Initial release	André Pelletier
R1	2020OC13	Page 1, details added to the justification. Page 1 and 5, N94477 replaces N34000	André Pelletier

APPROVED BY:

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CLIENT	ORDER	ROAD NUMBER		VIN (2NVY/4RKY...)		QTY
		FROM	TO	FROM	TO	
Airdrie Transit - Alberta	L664	—	—	L82U2B3000507	L82U2B3000507	1
Airdrie Transit - Alberta	L759	—	—	L82U0D3000928	L82U0D3000928	1
Arrow Coach Line - Arkansas	L494	—	—	L82U793000397	L82U793000397	1
BC Transit - BCT - British Columbia	L463	9319	9333	L82U093000273	L82U093000287	15
BC Transit - BCT - British Columbia	L481	9334	9353	L82U794000004	L82U094000023	20
BC Transit - BCT - British Columbia	L484	9370	9403	L82U494000090	L82U494000123	34
BC Transit - BCT - British Columbia	L486	9354	9369	L82U294000024	L82U494000039	16
BC Transit - BCT - British Columbia	L487	9404	9433	L82U094000149	L82U794000178	30
BC Transit - BCT - British Columbia	L604	9434	9434	L82U5C3000597	L82U5C3000597	1
BC Transit - BCT - British Columbia	L735	9435	9440	L82U4C3000848	L82U8C3000853	6
BC Transit - BCT - British Columbia	L736	9441	9446	L82U8D3000854	L82U7D3000859	6
Belleville Transit - Ontario	L542	—	—	L82UXA3000088	L82U8A3000090	3
Belleville Transit - Ontario	L598	—	—	L82U5A3000581	L82U7A3000582	2
Belleville Transit - Ontario	L655	—	—	L82U3B3000385	L82U3B3000385	1
Belleville Transit - Ontario	L702	—	—	L82U4D3000706	L82U4D3000706	1
Bow Valley Transit - Alberta	L712	5	6	L82U6C3000804	L82U8C3000805	2
Brampton - Ontario	L501	0917	0926	L82U893000506	L82U893000523	10
Brantford - Ontario	L547	10101	10105	L82X6A3000082	L82X3A3000086	5
Brantford - Ontario	L663	10121	10121	L82U1B3000532	L82U1B3000532	1
Brantford - Ontario	L718	10123	10125	L82U5C3000826	L82U9C3000828	3
Brantford - Ontario	L775	10131	10132	L82U1D3000999	L82U2D3001000	2
Calgary Transit - Alberta	L601	8101	8114	L82U5A4000099	L82U4A4000112	14
Calgary Transit - Alberta	L607	8115	8130	L82UXA3000477	L82U6A3000492	16
Calgary Transit - Alberta	L615	8131	8158	L82U1B4000019	L82U4B4000046	28
Calgary Transit - Alberta	L624	—	—	L82U4B4000077	L82U6B4000078	2
Calgary Transit - Alberta	L637	8161	8180	L82U7B3000356	L82U2B3000376	20
Calgary Transit - Alberta	L709	8181	8200	L82UXC3000806	L82U3C3000825	20
Central Oklahoma Transportation Authority	L619	—	—	L82X7C3000367	L82X7C3000367	1
CMBC (TransLink) - British Columbia	L412	9401	9401	L82X993000136	L82X993000136	1
CMBC (TransLink) - British Columbia	L454	9402	9470	L82X793000359	L82XX93000453	69
CMBC (TransLink) - British Columbia	L455	9471	9491	L82X093000459	L82X993000489	21
CMBC (TransLink) - British Columbia	L482	9492	9517	L82X894000040	L82X094000064	25
CMBC (TransLink) - British Columbia	L483	9518	9542	L82X294000065	L82X594000089	25
CMBC (TransLink) - British Columbia	L532	9543	9551	L82U093000497	L82U693000505	9
CMBC (TransLink) - British Columbia	L533	9552	9573	L82U193000511	L82U093000537	22
CMBC (TransLink) - British Columbia	L534	9574	9590	L82U694000124	L82U894000139	16
CMBC (West Vancouver) - British Columbia	L539	901	909	L82U494000140	L82U994000148	9
Fredericton - New Brunswick	L672	8111	8112	L82U0B3000540	L82U2B3000541	2
Fredericton - New Brunswick	L688	8113	8113	L82U8C3000643	L82U8C3000643	1
Fredericton - New Brunswick	L774	8131	8131	L82U7D3000960	L82U7D3000960	1
Grand River Transit - GRT - Ontario	L464	20901	20913	L82U193000296	L82U493000308	13
Grand River Transit - GRT - Ontario	L560	21001	21009	L82U2A3000246	L82U1A3000254	9

CLIENT	ORDER	ROAD NUMBER		VIN (2NVY/4RKY...)		QTY
		FROM	TO	FROM	TO	
Grand River Transit - GRT - Ontario	L599	21116	21118	L82X9B3000465	L82X2B3000467	3
Grand River Transit - GRT - Ontario	L631	21119	21121	L82X4B3000468	L82X2B3000470	3
Grand River Transit - GRT - Ontario	L633	21101	21115	L82U7B3000289	L82U8B3000303	15
Grand River Transit - GRT - Ontario	L668	21201	21220	L82U6C3000737	L82UXC3000756	20
Greater Toronto Airports Authority - GTAA - Ontario	L432	432-1	432-1	L82U793000061	L82U793000061	1
Greater Toronto Airports Authority - GTAA - Ontario	L477	L477-1	L477-1	L82U194000001	L82U194000001	1
Greater Toronto Airports Authority - GTAA - Ontario	L616	—	—	L82U4C4500001	L82U4C4500001	1
Guelph - Ontario	L579	221	224	L82UXA3000401	L82U5A3000404	4
Guelph - Ontario	L669	225	228	L82U9B3000536	L82U4B3000539	4
Guelph - Ontario	L715	234	235	L82U3C3000792	L82U5C3000793	2
Guelph - Ontario	L767	237	239	L82UXD3000967	L82U3D3000969	3
Halifax - Nova Scotia	L693	526	534	L82U8C3000657	L82U7C3000665	9
Halifax - Nova Scotia	L710	1160	1161	L82U7C3000780	L82U9C3000781	2
Kings Transit - Nova Scotia	L581	—	—	L82U2B3000054	L82U2B3000054	1
Krapf's Coaches - Pennsylvania (ref. L833)	L754	—	—	L82U4D4500405	L82U4D4500405	1
Lethbridge - Alberta	L489	165	169	L82U493000454	L82U193000458	5
Minnesota Valley Transit Authority - MVTA	L706	4252	4258	L82U4C4500127	L82UXC4500133	7
Moncton (Codiac) - New Brunswick	L358	358-1	358-1	L82U093000001	L82U093000001	1
Moncton (Codiac) - New Brunswick	L361	361-1	361-1	L82U293000002	L82U293000002	1
Moncton (Codiac) - New Brunswick	L569	—	—	L82U4B4000001	L82U4B4000001	1
Moncton (Codiac) - New Brunswick	L570	—	—	L82U6B4000002	L82U6B4000002	1
Niagara Falls - Ontario	L499	2986	2989	L82U093000564	L82U693000567	4
Niagara Falls - Ontario	L653	—	—	L82U9C3000618	L82U9C3000621	5
Niagara Falls - Ontario	L771	1396	1397	L82U9D3000958	L82U0D3000959	2
Niagara Parks Commission - Ontario	L656	—	—	L82U0C3000653	L82U2C3000654	2
Peterborough - Ontario	L490	—	—	L82UX93000345	L82U593000348	4
Peterborough - Ontario	L770	55	60	L82U0D3000993	L82UXD3000998	6
Red Deer - Alberta	L726	—	—	L82UXC3000840	L82U1C3000841	2
Red Deer - Alberta	L766	1104	1105	L82U7D3001025	L82U9D3001026	2
Regina - Saskatchewan	L356	356-1	356-1	L82U883000150	L82U883000150	1
Regina - Saskatchewan	L360	—	—	L82U283000290	L82U283000290	1
Regina - Saskatchewan	L476	625	628	L82U893000313	L82U393000316	4
Regina - Saskatchewan	L561	631	644	L82U8B4000003	L82UXB4000018	14
Regina - Saskatchewan	L639	645	654	L82U1B3000336	L82U2B3000345	10
Regina - Saskatchewan	L748	655	662	L82U3D3000874	L82U0D3000881	8
Regina - Saskatchewan	L776	663	669	L82U4D3001001	L82U5D3001007	7
Saskatoon - Saskatchewan	L359	—	—	S92U583000289	S92U583000289	1
Saskatoon - Saskatchewan	L690	1201	1204	L82U6C3000690	L82U1C3000693	4
Sault Ste-Marie Transit Services - Ontario (ref. L751)	L754	—	—	L82U7D4500284	L82U7D4500284	1
St. John - New Brunswick	L272	—	—	S92U483000011	S92U483000011	1
St. John - New Brunswick	L273	—	—	S92U383000050	S92U383000050	1
St. John's - Newfoundland	L503	1066	1066	L82U4A3000071	L82U4A3000071	1
St. John's - Newfoundland	L687	1201	1209	L82U7C3000598	L82U2C3000606	9

CLIENT	ORDER	ROAD NUMBER		VIN (2NVY/4RKY...)		QTY
		FROM	TO	FROM	TO	
St. John's - Newfoundland	L731	1310	1314	L82U3C3000842	L82U2C3000847	5
Stratford - Ontario	L493	—	—	L82U2A3000019	L82U2A3000019	1
Stratford - Ontario	L634	—	—	L82UXB3000352	L82UXB3000352	1
Stratford - Ontario	L752	—	—	L82U9D3000863	L82U9D3000863	1
Strathcona County Transit - Alberta	L523	2010	2010	L82U693000603	L82U693000603	1
Strathcona County Transit - Alberta	L524	3005	3010	L82X593000604	L82X493000609	6
Strathcona County Transit - Alberta	L580	2011	2023	L82U1A3000464	L82U8A3000476	13
Strathcona County Transit - Alberta	L659	2024	2028	L82U7B3000440	L82U4B3000444	5
Sudbury - Ontario	L465	791	795	L82U593000317	L82U793000321	5
Sudbury - Ontario	L552	801	808	L82U3A3000238	L82U0A3000245	8
Sudbury - Ontario	L632	811	817	L82U9B3000326	L82U4B3000332	7
Sudbury - Ontario	L740	831	833	L82U1D3000887	L82U5D3000889	3
Thunder Bay - Ontario	L488	—	—	L82U193000332	L82U593000334	3
Thunder Bay - Ontario	L614	—	—	L82UXB3000061	L82U3B3000063	3
Thunder Bay - Ontario	L662	20168	20168	L82U3B3000533	L82U7B3000535	3
Thunder Bay - Ontario	L739	—	—	L82U3D3000860	L82U7D3000862	3
Timmins - Ontario	L475	—	—	L82U493000311	L82U693000312	2
Timmins - Ontario	L550	—	—	L82U8A3000171	L82UXA3000172	2
Timmins - Ontario	L661	—	—	L82U9B3000486	L82U9B3000486	1
Timmins - Ontario	L720	12-98	12-98	L82U0C3000829	L82U0C3000829	1
Timmins - Ontario	L783	—	—	L82U8D3001017	L82UXD3001018	2
University of Alabama - Alabama	L479	479-1	479-1	L82U394000002	L82U394000002	1
University of Alabama - Alabama	L480	480-1	480-1	L82U594000003	L82U594000003	1
University of Alabama - Alabama	L573	—	—	L82U9A4000137	L82U0A4000138	2
University of Alabama - Alabama	L640	—	—	L82U9B4000141	L82U0B4000142	2
University of Alabama - Alabama	L671	7024	7025	L82U5C4500119	L82U1C4500120	2
University of Alabama - Alabama	L727	7026	7027	L82U4D4500310	L82U6D4500311	2
University of Colorado - Colorado	L427	—	—	S92U693000027	S92U693000027	1
University of Colorado - Colorado	L428	—	—	S92U893000028	S92U893000028	1
Whitehorse - Yukon	L563	38	41	L82U3A3000255	L82U9A3000258	4
Whitehorse - Yukon	L784	43	43	L82U9D3001057	L82U9D3001057	1
Woodstock - Ontario	L460	—	—	L82U693000309	L82U693000309	1
Woodstock - Ontario	L492	—	—	L82U4A3000040	L82U6A3000041	2
Woodstock - Ontario	L778	—	—	L82U2D3001014	L82U2D3001014	1

**WARNING**

FOLLOW YOUR INTERNAL SAFETY PROCEDURES.

**NOTE**

The Thermo 300 heaters N34000 are discontinued. If a full heater retrofits is required, the new Thermo Plus 300 heater N94477 requires to add a harness with an integrated relay as per the procedure below.

PROCEDURE

- 1.1. Park the vehicle on an even surface the with transmission in neutral.
- 1.2. Apply the parking brake and set the master control switch to the **stop** position.
- 1.3. Set the battery disconnect switch in the battery compartment to the **off** position.
- 1.4. Remove the auxiliary heater and install the new one. More information in your maintenance manual section **14: Auxiliary heater**.

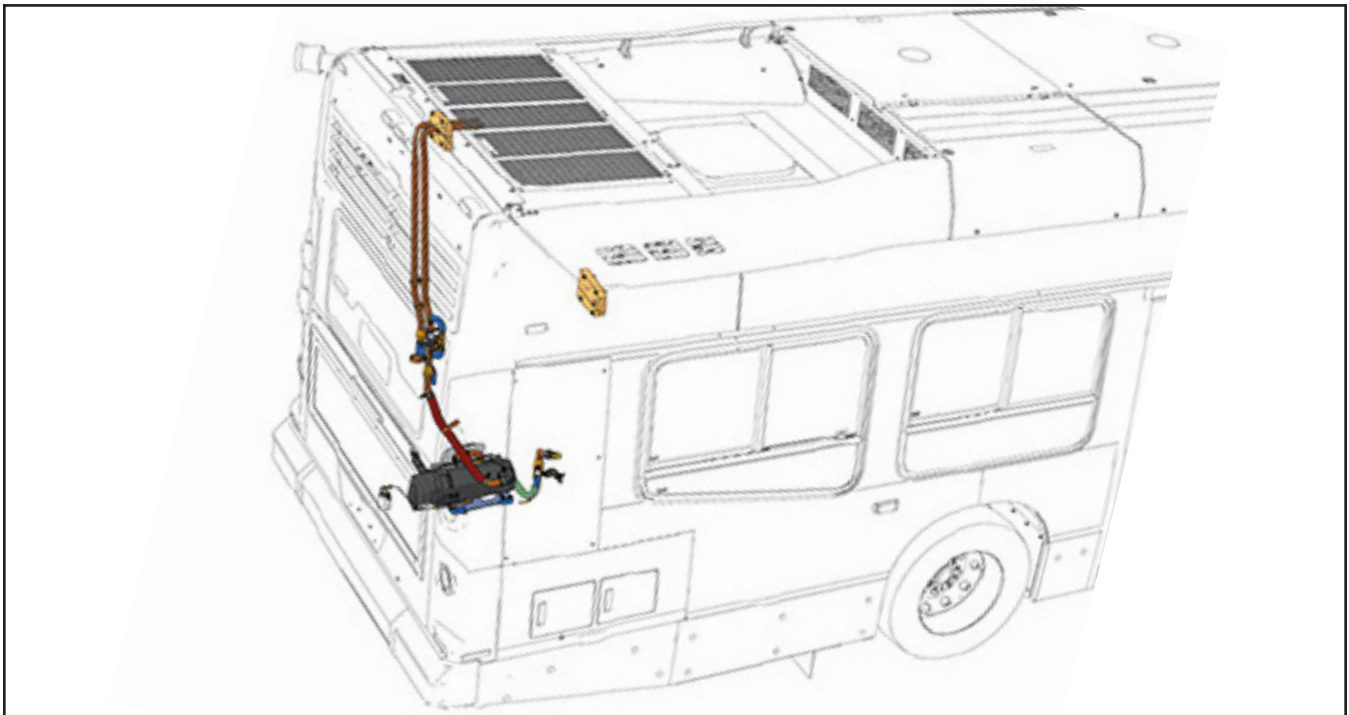


Figure 1 - Auxiliary Heater Location

**NOTE**

The new Thermo Plus unit requires the new harness from the material list to be connected to the existing NovaBus harness. Two holes will be required in the cradle.

- 1.5. Carefully drill the two holes as per the Figure below. The 6,6 mm hole will be used to bolt on the relay, the 9 mm hole for a fir tree mount N57807. It is recommended to apply paint or a corrosion protector on the bare metal.

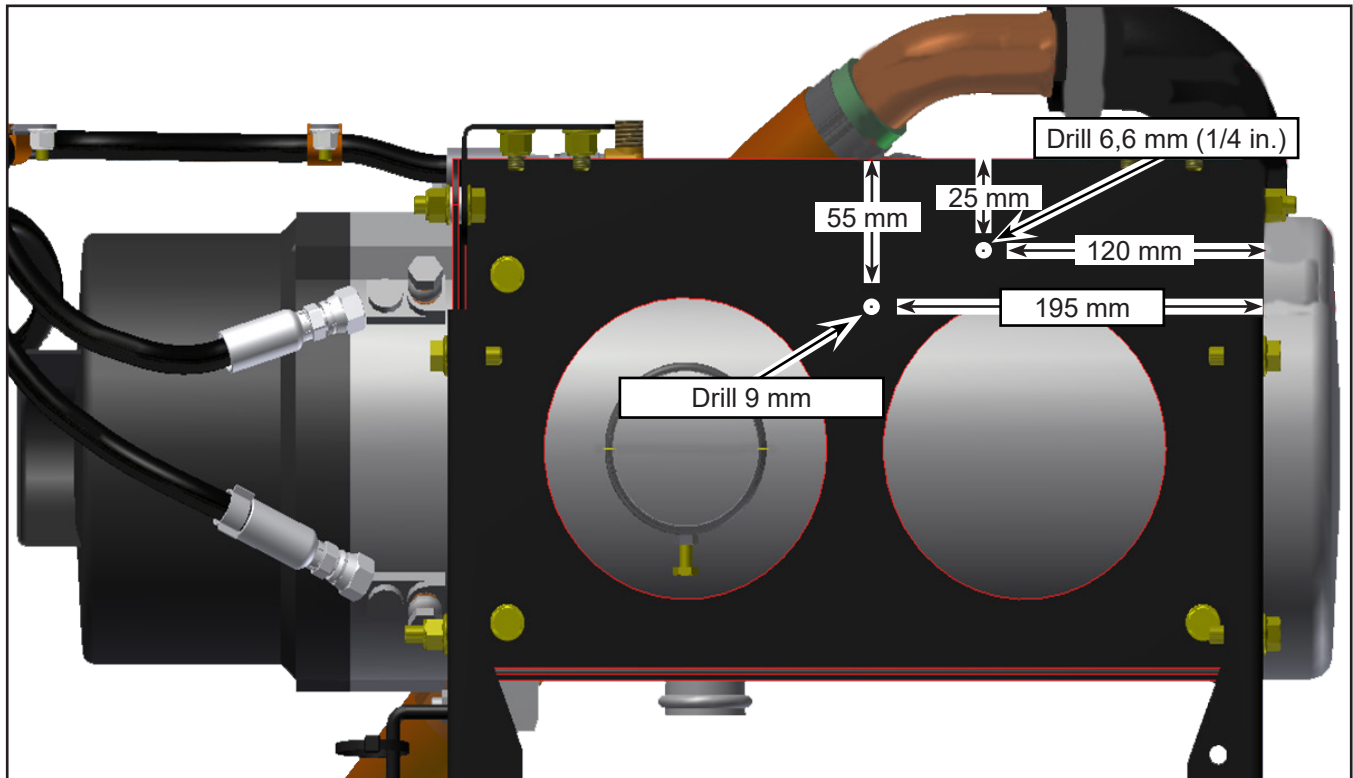


Figure 2 - Drill the Two Holes in the Cradle (Bottom View)

- 1.6. Install the slit convoluted conduit on the new harness and wrap it with the cloth tape.
- 1.7. Use two cable ties G5007996 to secure the harness on both sides of the relay.

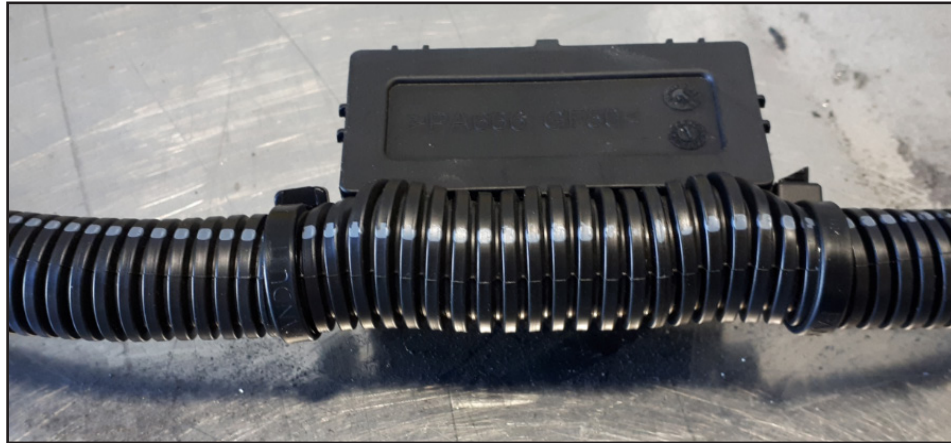


Figure 3 - Secure the Relay

- 1.8. Route the new harness from the auxiliary heater unit head to the existing engine harness. Secure the harness relay on the engine cradle using the holes drilled in the previous step.
- 1.9. Your bus configuration may differ for the zone "A". Use a dual clamp tie N37749 to secure the harness to the fuel line to avoid interference with the cradle pivot.

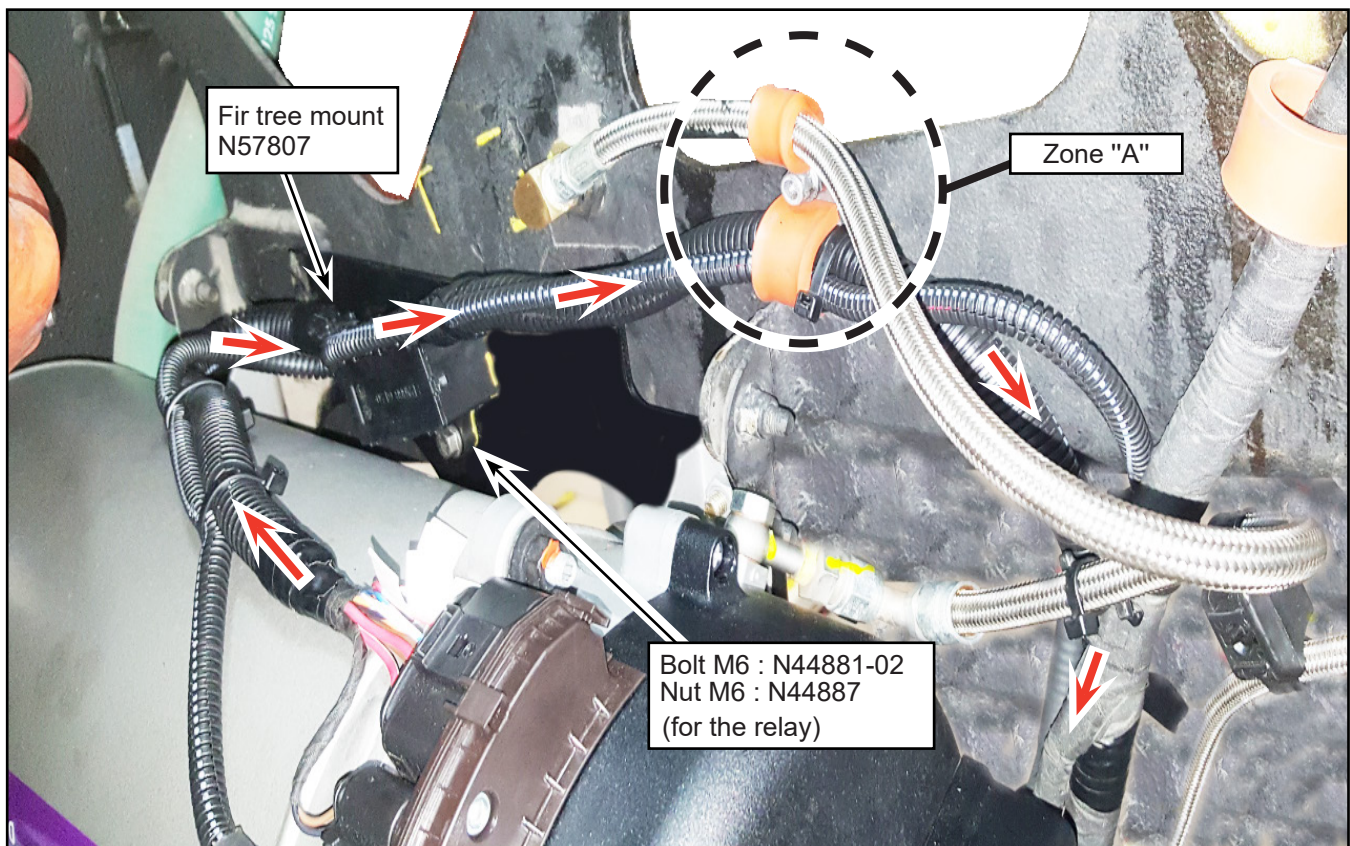


Figure 4 - Route and Secure the Harness (View With the Cradle Pivoted Downward)

- 1.10. Finish securing the harness with fir tree mounts N57807.

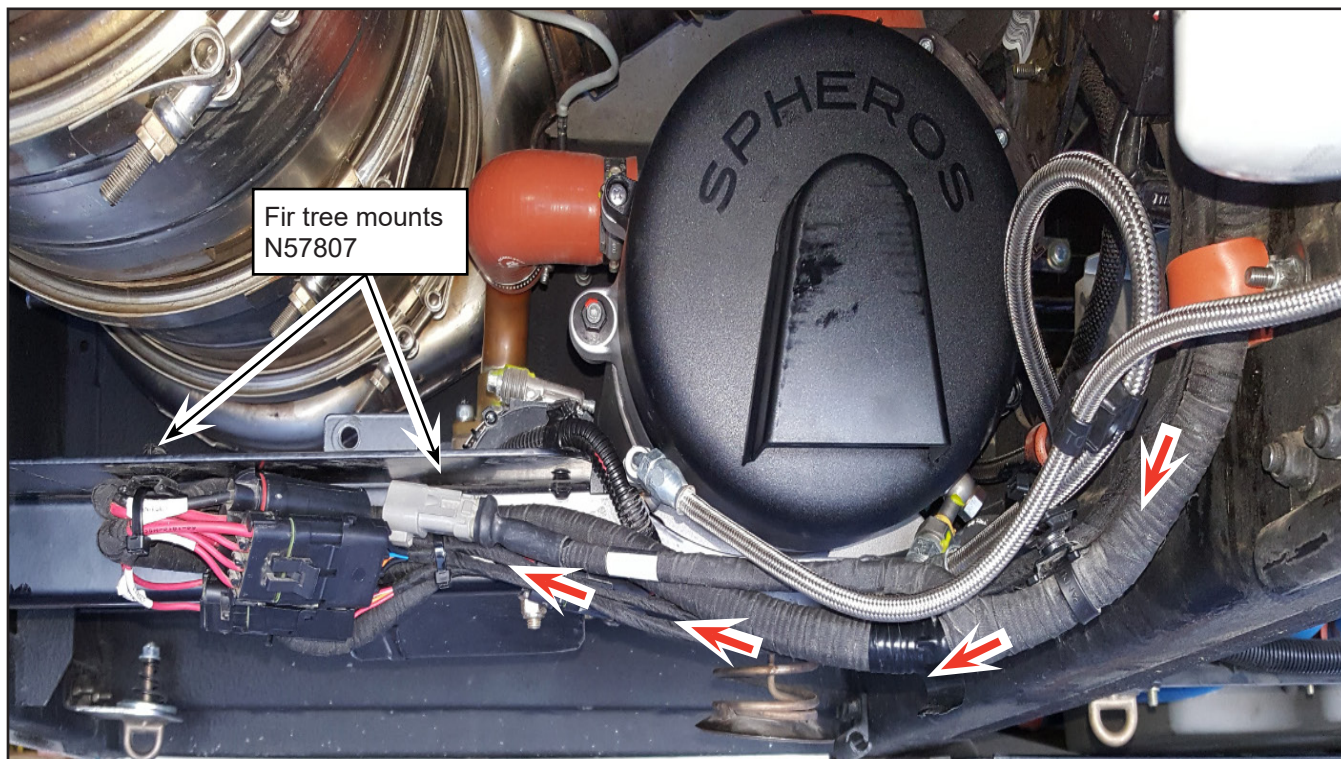


Figure 5 - Route and Secure the Harness (View With the Cradle Bolted in Place)

- 1.11. Complete the installation, including the procedure to refill the coolant as per your maintenance manual section **14: Auxiliary heater**.
- 1.12. Set the battery disconnect switch in the battery compartment to the **on** position.



CAUTION

The heater must never be run in an enclosed space (e.g., garages, workshops), unless it is connected to an exhaust suction circuit. To prevent a fire in the exhaust pipe, provisions must be made to siphon fresh air between the unit and the hose.

- 1.13. Start the heater to verify the functionality.
- 1.14. The vehicle can return in service.

