

REFERENCE:	Nova Bus Manuals
SECTION:	09: Engine starting circuit
RS N°:	7621-2321

APPLICATION DEADLINE: N/A

SUBJECT:	Air cooled ductless (Almott) alternator, power cable and hardware kit to replace the Delco-Remy oil-cooled alternator.
JUSTIFICATION:	The Delco-Remy alternator is obsolete.

LEVEL	DESCRIPTION	DIRECT CHARGES		TIME
		LABOUR	MATERIAL	
1	Replace Delco-Remy alternator, power cables and related hardware by a ductless air-cooled (Almott) alternator.	Client	Client	4.5h
2	–	–	–	–

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	2023FE10	Initial release	Devanand

APPROVED BY:

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MATERIAL

QTY	PART N°	REV.	DESCRIPTION
LEVEL 1			
1	19402173	-	ALTERNATOR, 450 AMP, 24 VOLT
1	0444620	A	PLUG M-NPT-1/4
1	3678923	-	THREADED PLUG
1	N8951321	-	PLUG CAP
1	12010996	-	CONNECTOR
1	561577	-	CONNECTOR
1	561578	-	TERMINAL FEMALE WEATHER PACK
1	12124582	-	TERMINAL MALE WEATHER PACK
2	561840	-	BLUE SEAL 10 AWG
2	N16755	Y	BOLT M6X70 YP GR8.8 DIN931
4	N17543	X	BOLT M6X35 HEX YZ TRIV 96H 8.8
2	N17904	X	WASHER LOCK EDG M6 YP DIN128A
2	N20779	X	WASHER FLAT OVS M6 ZP DIN9021
1	N34500-01	C	BRACKET-90°
6	N37749	B	DUAL CLAMP TIES
1	N43233	A	NUT HEX M8 FLANGED WITH INSERT
6	N44881-02	B	SCREW M6X25 H YZ TRIV 96H 8.8
12	N44887	B	NUT LOCKNYL M6 YZ TRIV 96H C8
3	N48107	A	BUSHING OD 15.9 ID 6.35 X 11 THK
3	N84090-01	-	P-CLAMP ID 0.3125"THK 0.030"M8
11	N84090-05	-	P-CLAMP ID 0.750"THK 0.030"M8
1	N86311-06	-	CLAMP BODY DOUBLE SMOOTH 18MM
1	N86311-07	-	CLAMP BODY SIMPLE SMOOTH 18MM
2	N86342	A	NUT LOCKNYL M5 FL SSA2 C70
1	N92950	A	BRACKET SUPPORT
1	N93466-03	-	COVER PLATE DP
1	N93470-02	-	COVER PLATE GD
1	N94733-01	A	CABLE ASSY C1136 4/0 AWG BK
1	N94734-01	A	CABLE ASSY C1135 4/0 AWG BK-RD
1	N98150	-	BRACKET STRAIN-RELIEF EMP ASSY
1	N107247-01	-	CABLE ASSY C1546 4/0 AWG BK-RD
3	N81450	-	SCREW HEX 1/2-13 X 1-1/4 ZPGR5
4	0120384	-	WASHER LOCK SPR 1/2" ZP
1	504751	-	SPACER DUAL SWIVEL SADDLE
4	G5007994	-	CABLE TIE
1	N75180	-	ELBOW 45 SW JIC4-M, JIC4-F STL
1	3936876	-	GASKET CUMMINS
1	N55828-06	-	TERMINAL BOOT

MATERIAL REQUIRED PER VEHICLE

QTY	PART N°	REV.	DESCRIPTION
LEVEL 2			
12	N71311	–	WIRE CLAMPING CABLE TIE (FIRE SUPP LTD WIRE)
SHOP SUPPLIES			
5 ml	N37086	A	LOCTITE THREAD SEALANT WHITE (cartridge of 50 ml)
2	N30734	–	CAP NUT F-JIC-4 (Re-usable step 1.43)

To order, please contact novabus.parts@volvo.com

Or by phone for CANADA 1-800-771-6682, for USA 1-877-999-8808

Specify document number, quantity of parts required and shipping address.

CLIENT	ORDER	ROAD NUMBER		VIN (2NVY/4RKY...)		QTY
		FROM	TO	FROM	TO	
Academy Busline - New Jersey	LA13	—	—	L82J4G9775611	L82J5G9775620	10
Academy Busline - New Jersey	LC95	—	—	L82J2L9777559	L82J9L9777560	2
Airdrie Transit - Alberta	L759	—	—	L82U0D3000928	L82U0D3000928	1
Airdrie Transit - Alberta	LD26	—	—	S92J9L3752852	S92J0L3752853	2
Airdrie Transit - Alberta	LD27	—	—	L82J3L3752854	L82J7L3752856	3
Airdrie Transit Alberta	LB10	3718	3718	L82J1J9776464	L82J1J9776464	1
Airdrie Transit Alberta	LC17	3725	3726	L82J3K3751850	L82J5K3751851	2
Ames Transportation Agency - Iowa	L707	660	661	S92U5C4500159	S92U1C4500160	2
Ames Transportation Agency - Iowa	L904	6101	6104	S92J1G9775221	S92J7G9775224	4
Austin - CMTA - Texas	L635	5001	5001	S92U7C4500163	S92U7C4500163	1
Austin - CMTA - Texas	L636	5002	5022	S92U1D4500306	S92U0D4500328	21
Austin - CMTA - Texas	L704	5051	5068	L82J7E4500471	L82J2E4500488	18
Austin - CMTA - Texas	LA17	5101	5107	S92J2H9775763	S92J3H9775769	7
Austin - CMTA - Texas	LA18	5151	5158	L82J0H9775770	L82J3H9775777	8
Barrie Ontario - Metrolinx	L878	1501	1504	L82JXF3001691	L82J6F3001719	4
Barrie Ontario - Metrolinx	L955	1601	1604	L82J7G9775408	L82J9G9775412	4
Barrie Ontario - Metrolinx	LA31	1701	1705	L82J0H9775817	L82J2H9775821	5
Barrie Ontario - Metrolinx	LA49	1706	1713	L82J7H3750855	L82J4H3750862	8
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	L702	—	—	L82U4D3000706	L82U4D3000706	1
Belleville Transit - Ontario - Metrolinx	LD69	—	—	L82J4M3752914	L82JXM3752917	4
Bow Valley Transit - Alberta	LB86	N/A	N/A	L82J8K9777001	L82J1K9777003	3
Bow Valley Transit - Alberta	L712	5	6	L82U6C3000804	L82U8C3000805	2
Bow Valley Transit - Alberta	L993	—	—	L82JXG3750329	L82J6G3750330	2
Bow Valley Transit - Alberta	LA26	—	—	L82J4H3750473	L82J4H3750473	1
Bow Valley Transit - Alberta	LA28	—	—	L82J6H9776308	L82J4H9776310	3
Brampton - Ontario	L789	1401	1408	L82J4E3001216	L82J1E3001223	8
Brampton - Ontario	L816	1409	1415	L82J3E3001224	L82J9E3001230	7
Brampton - Ontario	L864	1501	1510	L82JXF3001500	L82J6F3001509	10
Brampton - Ontario	L865	1511	1519	L82JXF3001514	L82J9F3001522	9
Brampton - Ontario	L942	1601	1613	L82J6G3750070	L82J4G3750083	13
Brampton - Ontario	L941	1614	1623	L82J1G3750123	L82J2G3750132	10
Brampton Ontario	LC23	1901	1907	L82J3K3751878	L82J9K3751884	7
Brampton Ontario	LC54	1908	1916	L82J0K3751885	L82JXK3751893	9
Brantford - Ontario	L718	10123	10125	L82U5C3000826	L82U9C3000828	3
Brantford - Ontario	L928	10151	10153	L82J7F3001793	L82J0F3001795	3
Brantford - Ontario	LA03	10161	10612	L82J0G3750369	L82J7G3750370	2
Brantford - Ontario	LB64	101808	101810	L82J2J3751465	L82J6J3751467	3
Burlington - Ontario	L887	7017-15	7025-15	L82J7F3001681	L82J8F3001723	9
Burlington - Ontario	LB35	7033-18	7036-18	L82J9J3751432	L82J0J3751433	2

CLIENT	ORDER	ROAD NUMBER		VIN (2NVY/4RKY...)		QTY
		FROM	TO	FROM	TO	
Burlington Ontario - metrolinx	LC18	1901	1907	L82J9K3752095	L82J0K3752101	7
Calgary Transit - Alberta	L709	8181	8200	L82UXC3000806	L82U3C3000825	20
Cape Breton Nova Scotia	LA12	7092	7093	L82J8H3750587	L82JXH3750588	2
Cape Breton Nova Scotia	LB92	7112	7113	L82J3K3751766	L82J5K3751767	2
Cape Breton Nova Scotia	LC90	—	—	L82J1L3752383	L82J1L3752383	1
Cape Breton Nova Scotia	LD22	N/A	N/A	L82J7L3752632	L82J7L3752632	1
Capital Area Rural Transportation System (CARTS)	L980	—	—	L82J1G9775565	L82J9G9775569	3
Cold Lake	LA99	5013	5014	L82J7J3751302	L82J9J3751303	2
Duke University - North Carolina	L938	—	—	L82L8G9775399	L82L0G9775400	2
Duke University - North Carolina	LA38	—	—	L82L9H9775994	L82L9H9775994	1
Duke University - North Carolina	LA39	—	—	S92LXH9775995	S92LXH9775995	1
Durham Region Transit Ontario - Metrolinx	L872	8551	8553	L82J0F3001523	L82J4F3001525	3
Durham Region Transit Ontario - Metrolinx	L888	8554	8559	L82J2F3001703	L82J1F3001708	6
Durham Region Transit Ontario - Metrolinx	L996	8560	8563	L82J1G3750414	L82J7G3750417	4
Durham Region Transit Ontario - Metrolinx	LA19	8564	8565	L82J9G3750418	L82J0G3750419	2
Durham Region Transit Ontario - Metrolinx	LA50	8566	8578	L82JXH3750901	L82J1H3750916	13
Durham Region Transit Ontario - Metrolinx	LB11	8579	8589	L82J2H9776354	L82J0H9776367	11
Durham Region Transit Ontario - Metrolinx	LB36	6100	6112	L82J2J3751417	L82J7J3751431	13
Durham Region Transit Ontario - Metrolinx	LB60	7100	7103	L82J5J3751539	L82J5J3751542	4
Durham Region Transit Ontario - metrolinx	LC36	6113	6116	L82J2K3752102	L82J8K3752105	4
Durham Region Transit Ontario - Metrolinx	LC62	9100	9105	S92J7L3752333	S92J6L3752338	6
Durham Region Transit Ontario - Metrolinx	LD57	6117	6119	L82J8L9777775	L82J1L9777777	3
Fredericton - New Brunswick	L688	8113	8113	L82U8C3000643	L82U8C3000643	1
Fredericton - New Brunswick	L812	—	—	L82J4E3001202	L82J4E3001202	1
Fredericton - New Brunswick	L836	8143	8143	L82J9E3001390	L82J9E3001390	1
Fredericton - New Brunswick	L901	8151	8151	L82J7F3001602	L82J7F3001602	1
Fredericton - New Brunswick	L968	8161	8162	L82J1G3750218	L82J3G3750219	2
Fredericton - New Brunswick	LA15	8171	8174	L82J1H3750589	L82J1H3750592	4
Fredericton - New Brunswick	LA33	8181	8184	L82J6H3750944	L82J1H3750947	4
Grand River Transit - GRT - Ontario	L668	21201	21220	L82U6C3000737	L82UXC3000756	20
Grande Prairie Alberta	L834	—	—	L82J7E3001386	L82J2E3001389	4
Guelph - Ontario	L715	234	235	L82U3C3000792	L82U5C3000793	2
Guelph - Ontario	L835	240	243	L82J0E3001391	L82J6E3001394	4
Guelph - Ontario	L927	244	247	L82J1F3001756	L82J9F3001763	4
Guelph - Ontario	L985	248	251	L82J7G3750255	L82J2G3750258	4
Guelph - Ontario	LA54	252	275	L82J1H3750849	L82J0H3750891	24
Guelph Ontario	LC88	276	280	L82J8L3752378	L82JXL3752382	5
Halifax - Nova Scotia	L693	526	534	L82U8C3000657	L82U7C3000665	9
Halifax - Nova Scotia	L710	1160	1161	L82U7C3000780	L82U9C3000781	2
Halifax - Nova Scotia	L708	742	761	S92UXC3000782	S92U3C3000803	20
Houston - Texas	L737	1510	1510	S92U4D4500297	S92U4D4500297	1
Houston - Texas	L755	1511	1579	S92U4D4500333	S92U8D4500402	69

CLIENT	ORDER	ROAD NUMBER		VIN (2NVY/4RKY...)		QTY
		FROM	TO	FROM	TO	
Kingston - Ontario	LB34	1821	1841	L82J3J3751412	L82J0J3751416	5
Kingston - Ontario Metrolinx	L880	1502	1502	L82JXF3001786	L82JXF3001786	1
Kingston - Ontario Metrolinx	L925	1504	1510	L82J5F3001808	L82J5F3001811	4
Kingston - Ontario Metrolinx	L889	1687	1689	L82J1G3750252	L82J5G3750254	3
Kingston - Ontario Metrolinx	L954	1683	1686	L82J4G3750259	L82J4G3750262	4
Kingston - Ontario Metrolinx	LA60	1825	1837	L82J7H3750922	L82J8H3750931	6
Kingston - Ontario Metrolinx	LA59	1803	1818	L82JXH3750932	L82J4H3750943	11
Kingston Ontario - metrolinx	LB68	1901	1901	L82J1K3751913	L82J1K3751913	1
Kingston Ontario - metrolinx	LB69	1920	1951	L82J3K3751914	L82J0K3751918	5
Kingston Ontario - Metrolinx	LD74	2106	2106	L82J4M3752864	L82J4M3752864	1
Kingston Ontario - Metrolinx	LD65	2101	2105	L82J6M3752865	L82J3M3752869	5
Lethbridge - Alberta	L868	—	—	L82J2F3001510	L82J2F3001510	1
Lethbridge - Alberta	L997	181	186	L82J5G9775570	L82JXG9775578	6
Lethbridge Alberta	LB95	193	198	L82J1K3751894	L82J0K3751899	6
LYNX - Florida	L785	—	—	S92L6E4500505	S92L8E4500506	2
Milton - Ontario	LB33	1804	1804	L82J7J3751543	L82J7J3751543	1
Milton - Ontario - Metrolinx	L884	1701	1702	L82J0G3750338	L82J2G3750339	2
Milton - Ontario - Metrolinx	LA51	1801	1803	L82J3H3750917	L82J7H3750919	3
Milton Ontario - Metrolinx	LC71	1901	1902	L82J1K3752270	L82J3K3752271	2
Milton Ontario - Metrolinx	LD62	2001	2001	L82J2L9777769	L82J2L9777769	1
Minnesota Valley Transit Authority - MVTA	L706	4252	4258	L82U4C4500127	L82UXC4500133	7
Moncton (Codiac) - New Brunswick	LA06	—	—	L82J3G9775552	L82JXG9775564	9
Moncton (Codiac) - New Brunswick	LA42	—	—	L82J8H9776066	L82J0H9776076	11
Moncton (Codiac) - New Brunswick	LA58	—	—	L82J2J9776389	L82J2J9776389	1
Moncton (Codiac) - New Brunswick	LB84	N/A	N/A	L82J3K9777004	L82J3K9777004	1
MTD - Santa Barbara, California	L730	—	—	S92J8E4500567	S92J1E4500569	3
NFTA - Buffalo, New York	LA30	1717	1724	L82J8H9775838	L82J5H9775845	8
NFTA - Buffalo, New York	LB21	1817	1824	L82J9J9776518	L82J8J9776526	8
Niagara Falls - Ontario	L652	—	—	S92U3C3000607	S92U6C3000617	11
Niagara Falls - Ontario	L653	—	—	L82U9C3000618	L82U9C3000621	5
Niagara Falls - Ontario	L987	1601	1604	L82J6G3750344	L82J1G3750347	4
Niagara Falls Ontario - 60' metrolinx	LB98	1935	1936	S92J9K3752106	S92J0K3752107	2
Niagara Falls Ontario - 60' metrolinx	LC61	1937	1938	S92J2K3752108	S92J4K3752109	2
Niagara Falls Ontario - Metrolinx	LA97	1805	1808	L82J0J3750993	L82J6J3750996	4
Niagara Falls Ontario - Metrolinx	LB13	1811	1811	L82J8J3750997	L82J8J3750997	1
Niagara Falls Ontario - Metrolinx	LA98	1809	1810	S92J7J3751003	S92J9J3751004	2
Niagara Falls Ontario - metrolinx	LC89	1930	1934	L82J2L9777528	L82J4L9777532	5
Niagara Falls Ontario - Metrolinx	LD63	2112	2115	L82J5L9777765	L82J0L9777768	4
Niagara Falls Ontario - Metrolinx	LD53	2116	2119	S92J7L9777761	S92J2L9777764	4
Niagara Parks Commission - Ontario	L685	—	—	S92U9C3000644	S92U8C3000652	9
Niagara Parks Commission - Ontario	L656	—	—	L82U0C3000653	L82U2C3000654	2
North Bay - Ontario	L895	784	785	L82J7F3001678	L82J9F3001679	2

CLIENT	ORDER	ROAD NUMBER		VIN (2NVY/4RKY...)		QTY
		FROM	TO	FROM	TO	
North Bay - Ontario	L979	786	787	L82J4G3750312	L82J6G3750313	2
North Bay - Ontario	LB48	788	790	L82J7J3751395	L82J0J3751397	3
North Bay Ontario - metrolinx	LC38	792	793	L82J3K3752092	L82J7K3752094	2
North Bay Ontario - Metrolinx	LD52	794	794	L82J0L9777771	L82J0L9777771	1
Oakville Ontario - Metrolinx	L874	—	—	L82J6F3001526	L82JXF3001531	6
Oakville Ontario - Metrolinx	L881	—	—	L82J2F3001717	L82J8F3001740	5
Oakville Ontario - Metrolinx	L945	—	—	L82J9G3750211	L82JXG3750217	7
Orillia Ontario - Metrolinx	L965	1722	1724	L82J3G3750320	L82J7G3750322	3
Orillia Ontario - Metrolinx	LA61	1825	1826	L82J2J3751031	L82J4J3751032	2
Peterborough - Ontario	L870	61	63	L82JXF3001612	L82J3F3001614	3
Peterborough - Ontario	L919	64	66	L82J6F3001767	L82JXF3001769	3
Peterborough - Ontario	L966	67	71	L82J2G3750230	L82JXG3750234	5
Peterborough - Ontario	LA41	7217	7617	L82J1H3750706	L82J3H3750710	5
Peterborough - Ontario	LB20	7819	8019	L82J2K3751919	L82J0K3751921	3
Peterborough Ontario - Metrolinx	LD72	—	—	L82J4M3752993	L82J3M3752998	6
Red Deer - Alberta	L726	—	—	L82UXC3000840	L82U1C3000841	2
Red Deer - Alberta	L772	1106	1108	L82J2E3001120	L82J6E3001122	3
Red Deer - Alberta	L813	10008	10009	L82J2E3001361	L82J4E3001362	2
Red Deer - Alberta	L869	—	—	L82J9F3001570	L82J0F3001571	2
Red Deer - Alberta	L926	—	—	L82J2F3001796	L82J4F3001797	2
Regina - Saskatchewan	L748	655	662	L82U3D3000874	L82U0D3000881	8
Regina - Saskatchewan	L807	671	685	L82J8E3001137	L82J2E3001151	15
Regina - Saskatchewan	L892	686	691	L82J5F3001484	L82J4F3001489	6
Regina - Saskatchewan	L949	692	696	L82J3G3750205	L82J0G3750209	5
Regina - Saskatchewan	L992	—	—	L82J6G3750294	L82J3G3750298	5
Regina - Saskatchewan	LA44	814	829	L82J0H3750776	L82J7H3750791	16
Regina - Saskatchewan	LB16	830	830	L82J0H3750793	L82J0H3750793	1
Regina - Saskatchewan	LB17	831	831	L82J2H3750794	L82J2H3750794	1
Regina - Saskatchewan	LB18	832	832	L82J4H3750795	L82J4H3750795	1
Sarnia Ontario	L873	151	152	L82J0F3001599	L82J0F3001600	2
Sarnia Ontario	L883	153	153	L82J4G3750021	L82J4G3750021	1
Sarnia Ontario	L963	162	162	L82J7G3750305	L82J7G3750305	1
Sarnia Ontario	LA36	171	172	L82J8H3750752	L82JXH3750753	2
Sarnia Ontario - Metrolinx	LD56	201	202	L82J7M3752874	L82J9M3752875	2
Saskatoon - Saskatchewan	L690	1201	1204	L82U6C3000690	L82U1C3000693	4
Saskatoon - Saskatchewan	L831	1401	1405	L82J7E3001307	L82J9E3001311	5
Saskatoon - Saskatchewan	L894	1501	1510	L82J0F3001490	L82J7F3001499	10
Saskatoon - Saskatchewan	L953	1601	1610	L82J9G3750158	L82JXG3750167	10
Saskatoon - Saskatchewan	LA29	1701	1711	L82J7H9775846	L82JXH9775856	11
Saskatoon - Saskatchewan	LA92	1718	1732	L82J0H9776319	L82J8H9776343	15
Saskatoon - Saskatchewan	LB73	1901	1907	L82J6K9776977	L82J1K9776983	7
Sault Ste. Marie Ontario	L934	—	—	L82JXG3750038	L82JXG3750038	1

CLIENT	ORDER	ROAD NUMBER		VIN (2NVY/4RKY...)		QTY
		FROM	TO	FROM	TO	
Sault Ste. Marie Ontario	LC06	—	—	L82J3K3751900	L82J5K3751901	2
St. Catharines Ontario - Metrolinx	L879	1501	1504	L82J4F3001587	L82J4F3001590	4
St. Catharines Ontario - Metrolinx	L898	1560	1560	S92J4F3001663	S92J4F3001663	1
St. Catharines Ontario - Metrolinx	L882	1601	1605	L82J9G3750225	L82J9G3750229	5
St. Catharines Ontario - Metrolinx	LB06	1860	1862	S92J1J3751000	S92J5J3751002	3
St. Catharines Ontario - Metrolinx	LB09	1740	1740	L82J6J3751033	L82J6J3751033	1
St. Catharines Ontario - Metrolinx	LA62	1801	1813	L82J8J3751034	L82J4J3751046	13
St. Catharines Ontario - metrolinx	LC84	2040	2043	L82J6L9777533	L82J1L9777536	4
St. Catharines Ontario - Metrolinx	LD54	2140	2140	S92J8L9777770	S92J8L9777770	1
St. Catharines Ontario - Metrolinx	LD67	2101	2112	L82J8M3752981	L82J2M3752992	12
St. John - New Brunswick	L871	40585	40586	L82J8F3001592	L82JXF3001593	2
St. John - New Brunswick	L939	40687	40687	L82J0G3750078	L82J0G3750078	1
St. John - New Brunswick	LB05	38888	38899	L82J8J3750983	L82J1J3750999	12
St. John's - Newfoundland	L687	1201	1209	L82U7C3000598	L82U2C3000606	9
St. John's - Newfoundland	L731	1310	1314	L82U3C3000842	L82U2C3000847	5
St. John's - Newfoundland	L808	1415	1419	L82J4E3001152	L82J1E3001156	5
St. John's - Newfoundland	L875	1520	1525	L82JXF3001478	L82J3F3001483	6
St. John's - Newfoundland	L930	1626	1630	L82J7F3001826	L82J9F3001830	5
Stratford - Ontario	L752	—	—	L82U9D3000863	L82U9D3000863	1
Stratford - Ontario	L893	—	—	L82J9F3001584	L82J0F3001585	2
Stratford - Ontario	LB19	—	—	L82J3J3751183	L82J5J3751184	2
Stratford Ontario - Metrolinx	LD66	—	—	L82JXM3752870	L82J5M3752873	4
Sudbury - Ontario	L740	831	833	L82U1D3000887	L82U5D3000889	3
Sudbury - Ontario	L890	851	855	L82JXF3001609	L82J6F3001641	5
Sudbury - Ontario	L994	861	865	L82J1G3750364	L82J9G3750368	5
Sudbury - Ontario	LA46	871	873	L82J1H3750821	L82J5H3750823	3
Sudbury - Ontario	LB27	881	883	L82J9J3751382	L82J2J3751384	3
Thunder Bay - Ontario	L739	—	—	L82U3D3000860	L82U7D3000862	3
Thunder Bay - Ontario	L806	—	—	L82J6E3001170	L82J8E3001171	2
Thunder Bay - Ontario	L863	—	—	L82J8F3001558	L82J6F3001560	3
Thunder Bay Ontario - Metrolinx	L944	—	—	L82J6G3750084	L82JXG3750086	3
Thunder Bay Ontario - Metrolinx	LA01	—	—	L82J5H3750448	L82J7H3750449	2
Thunder Bay Ontario - Metrolinx	LA57	—	—	L82J8H3750895	L82J8H3750928	12
Timmins - Ontario	L720	12-98	12-98	L82U0C3000829	L82U0C3000829	1
Timmins - Ontario	L839	—	—	L82J8E3001395	L82J8E3001395	1
Timmins - Ontario	L995	—	—	L82JXG3750377	L82JXG3750377	1
Timmins - Ontario Metrolinx	LD70	—	—	L82J2M3752913	L82J2M3752913	1
Timmins Ontario	LB07	—	—	L82J1J3751005	L82J3J3751006	2
Timmins Ontario	LC02	—	—	L82JXK3751926	L82JXK3751926	1
Toronto Transit Commission - TTC - Ontario	L729	9000	9000	S92U9D3000905	S92U9D3000905	1
Toronto Transit Commission - TTC - Ontario	L738	9001	9026	S92J6D3001094	S92J7D3001119	26
Toronto Transit Commission - TTC - Ontario	L777	9027	9152	S92J7E3001123	S92J6E3001372	126

CLIENT	ORDER	ROAD NUMBER		VIN (2NVY/4RKY...)		QTY
		FROM	TO	FROM	TO	
Toronto Transit Commission - TTC - Ontario	L859	8400	8400	L82J5F3001405	L82J5F3001405	1
Toronto Transit Commission - TTC - Ontario	L860	8401	8504	L82J0F3001554	L82JXF3001805	104
Toronto Transit Commission - TTC - Ontario	L937	8510	8617	L82J9G3750001	L82J3G3750401	108
Toronto Transit Commission - TTC - Ontario	L998	8620	8716	L82J3H3750545	L82J4H3750683	97
Toronto Transit Commission - TTC - Ontario	LA68	8920	8964	L82J6H3750796	L82JXH3750848	45
Toronto Transit Commission - TTC - Ontario	LA69	9200	9239	L82J9J9776390	L82JXJ9776429	40
Toronto Transit Commission - TTC - Ontario	LB45	3100	3179	L82J8J3751163	L82J8J3751244	80
Toronto Transit Commission - TTC - Ontario	LB28	3180	3329	L82J0J9776584	L82J4J9776815	150
Toronto Transit Commission - TTC - Ontario	LB75	3330	3369	L82J6J9776816	L82J5J9776886	40
Toronto Transit Commission - TTC - Ontario	LA67	8720	8919	L82J4H9775996	L82J3H9776248	200
University of Alabama - Alabama	L671	7024	7025	L82U5C4500119	L82U1C4500120	2
University of Alabama - Alabama	L727	7026	7027	L82U4D4500310	L82U6D4500311	2
University of Alabama - Alabama	L787	7028	7029	L82J2E4500507	L82J4E4500508	2
University of Alabama - Alabama	L902	7030	7030	L82J2F4500993	L82J4F4500994	2
University of Alabama - Alabama	L961	7032	7033	L82J7G9775294	L82J9G9775295	2
University of Alabama - Alabama	LA02	7034	7037	L82J8G9775546	L82JXG9775550	4
Welland Ontario - Metrolinx	L866	—	—	L82J9F3001648	L82J9F3001648	1
Welland Ontario - Metrolinx	L933	—	—	L82J1G3750011	L82J1G3750011	1
Welland Ontario - Metrolinx	L991	—	—	L82J9G3750287	L82J9G3750287	1
Welland Ontario - Metrolinx	LA52	—	—	L82J2H3750911	L82J4H3750912	2
Welland Ontario - Metrolinx	LA93	—	—	L82J6H3750913	L82J6H3750913	1
Welland Ontario - metrolinx	LC19	—	—	L82J2K3751922	L82J4K3751923	2
Welland Ontario - metrolinx	LC37	—	—	L82J6K3751924	L82J8K3751925	2
Welland Ontario - metrolinx	LC85	—	—	L82J0L9777527	L82J0L9777527	1
Whitehorse - Yukon	LA04	—	—	L82J2G3750390	L82J4G3750391	2
Whitehorse - Yukon	LB03	—	—	L82J9H9776352	L82J0H9776353	2
Windsor - Ontario	LB24	8025	8026	L82JXJ3751424	L82J1J3751425	2
Windsor Ontario - Metrolinx	L886	570	577	L82J8F3001818	L82J5F3001825	8
Windsor Ontario - Metrolinx	LA56	578	601	L82J5J3751007	L82J0J3751030	24
Windsor Ontario - metrolinx	LC21	8027	8045	L82J3L9777540	L82J0L9777558	19
Woodstock - Ontario	L832	—	—	L82J9E3001342	L82J9E3001342	1
Woodstock - Ontario	L923	15-16	15-16	L82J9F3001746	L82J9F3001746	1
Woodstock - Ontario	LA08	17-08	17-08	L82J3H3750514	L82J3H3750514	1
Woodstock - Ontario	LB04	18-04	18-14	L82J3H9776363	L82J5H9776364	2

**WARNING**

FOLLOW YOUR INTERNAL SAFETY PROCEDURES.

PROCEDURE

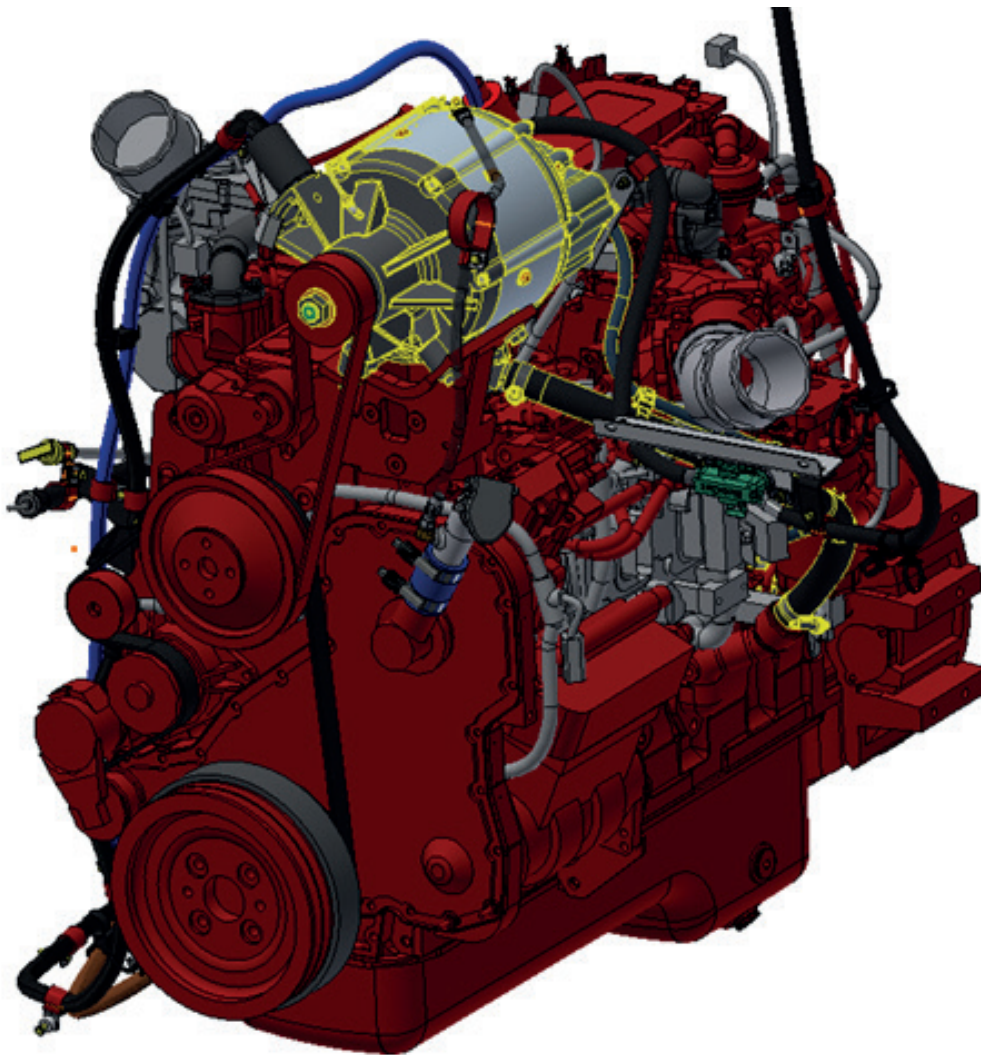


Figure 1 - Original Oil Cooled Delco Generator (Some Parts Removed for Clarity)

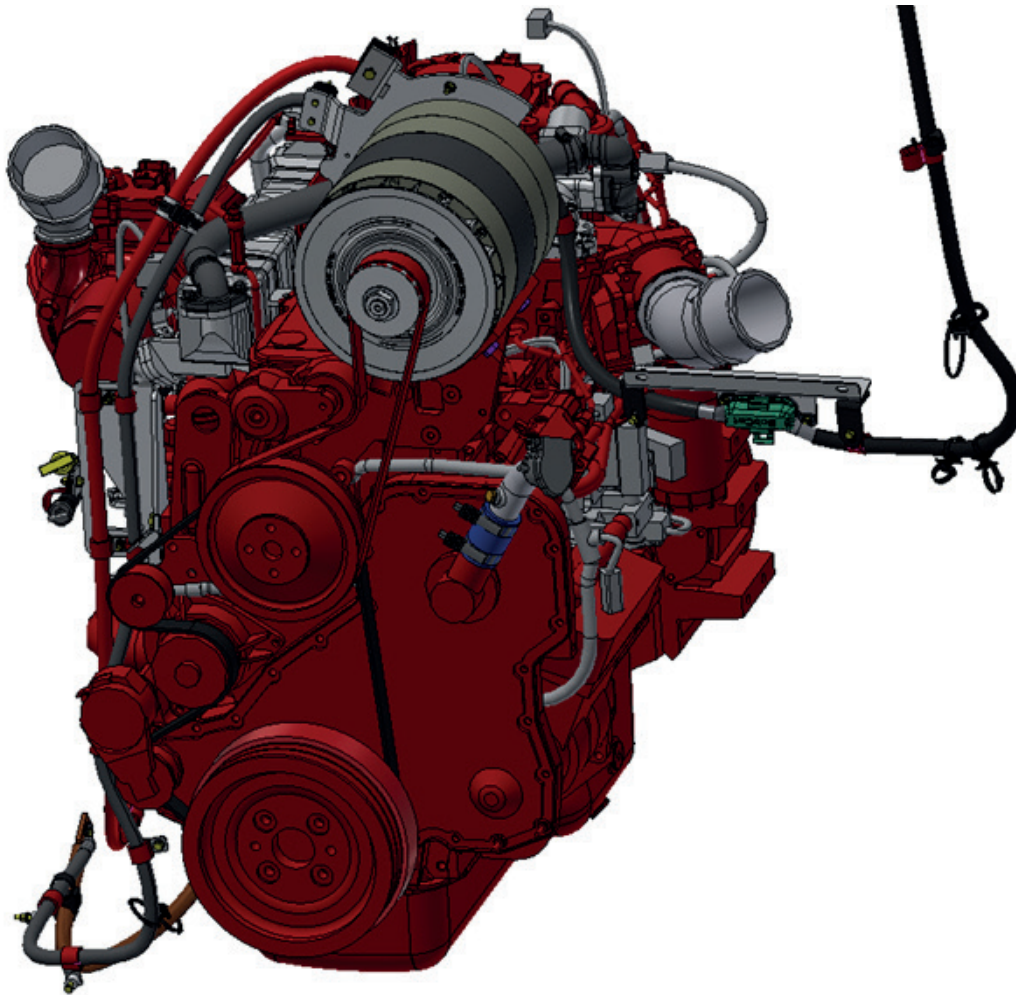


Figure 2 - New Air Cooled Alcott Generator (Some Parts Removed for Clarity)



WARNING

Before starting any work on the vehicle, make sure the vehicle is completely and securely stationary.



WARNING

Follow your internal safety procedures.

- 1.1. Park the vehicle on an even surface with the transmission on 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. Disconnect the starting circuit on the control box at the rear of the vehicle and place the battery disconnect switches in the off position.

REMOVE GENERATOR OIL COOLING SYSTEM PARTS

**CAUTION**

For information on hoisting and towing of the vehicle, see section 18: *HOISTING AND TOWING* in the Nova Bus maintenance manual. Use appropriate hoisting equipment for your protection and to prevent damage to the vehicle.

- 1.5. Raise the vehicle.
- 1.6. Remove the dust pans.
- 1.7. Disconnect the hoses coming from the generator at the engine and be careful to collect the oil.
- 1.8. Remove and discard the hoses once the oil has completely drained.

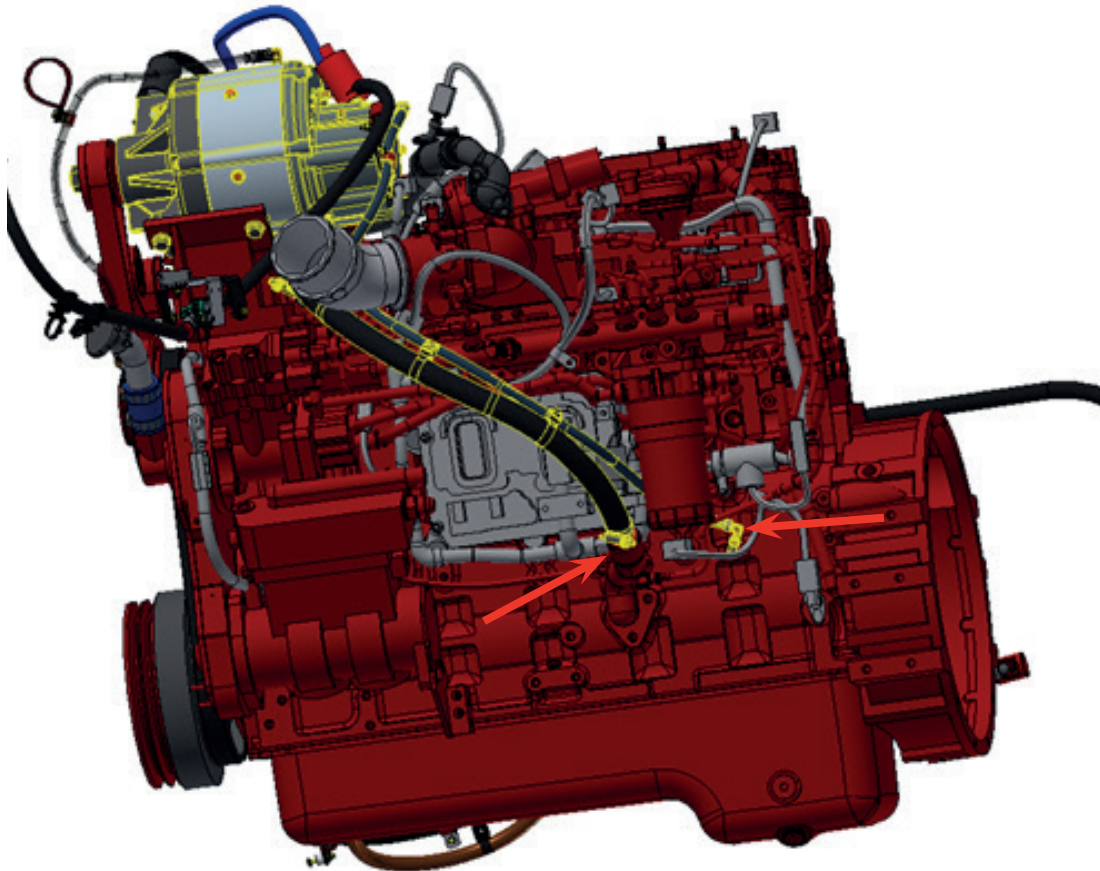


Figure 3 - Drain the Oil and Discard the Hoses

- 1.9. Remove and discard the port fittings on the engine that were used for the oil hoses.
- 1.10. Install a plug 3678923 into the port for the supply line. Install cap plug 4962608 and 3936876 gasket on the oil hose.

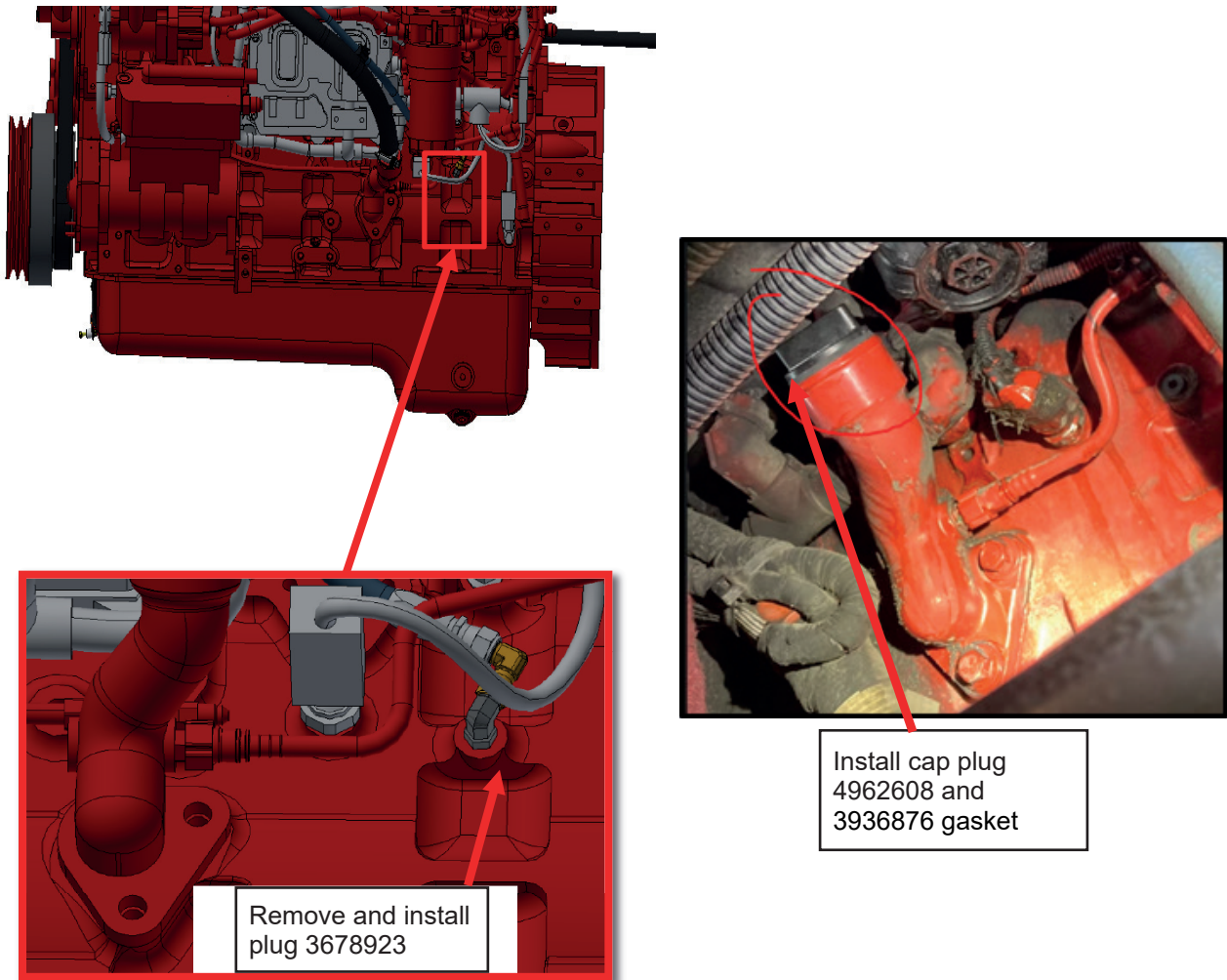


Figure 4 - Remove Oil Ports Fittings

1.11. Remove the hose and the hardware for the breather hose.

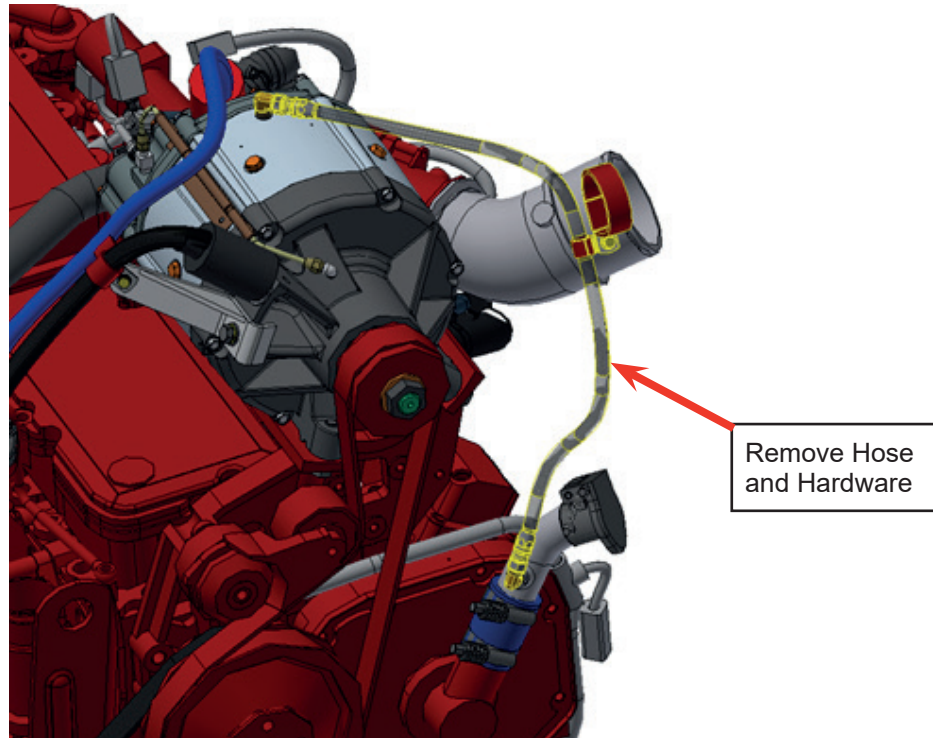


Figure 5 - Remove Hose and Hardware

1.12. Install a plug 0444620.

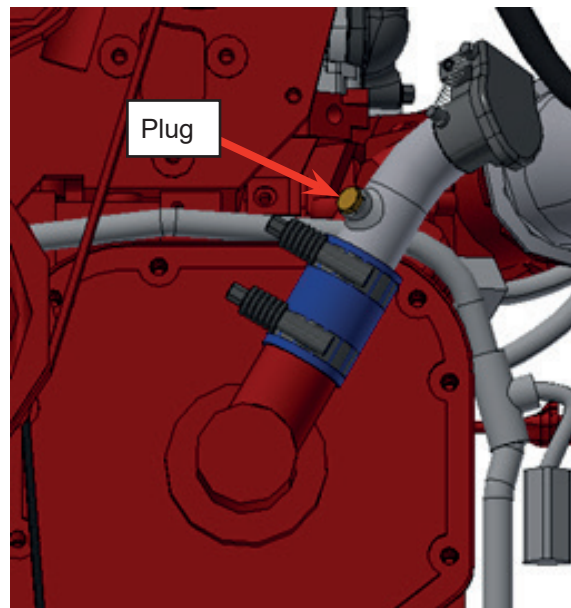


Figure 6 - Installation of Plug

REMOVE GENERATOR CABLES

- 1.13. Remove and discard bracket N66892.
- 1.14. Remove and discard cables N76193-01 and N80190-04.
- 1.15. Remove and discard bracket N83016. Retain mounting hardware and dipstick hardware.
- 1.16. Discard all hardware.

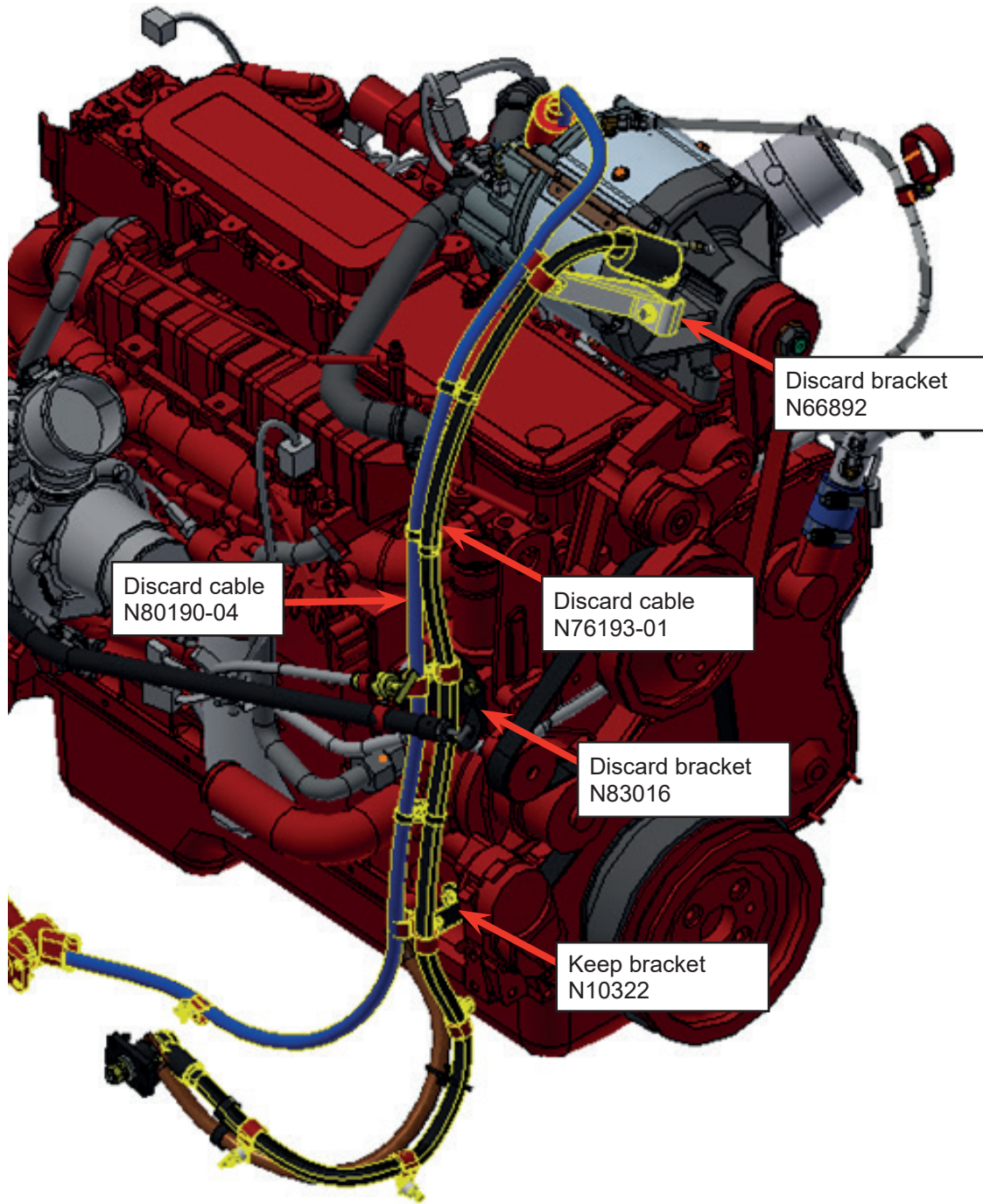


Figure 7 - Remove Cables and Brackets

- 1.17. Remove the fan supply cable on alternator N76667-01. Discard bracket and hardware securing radiator fan cable to the alternator. Retain fuse holder and fuse holder bracket.

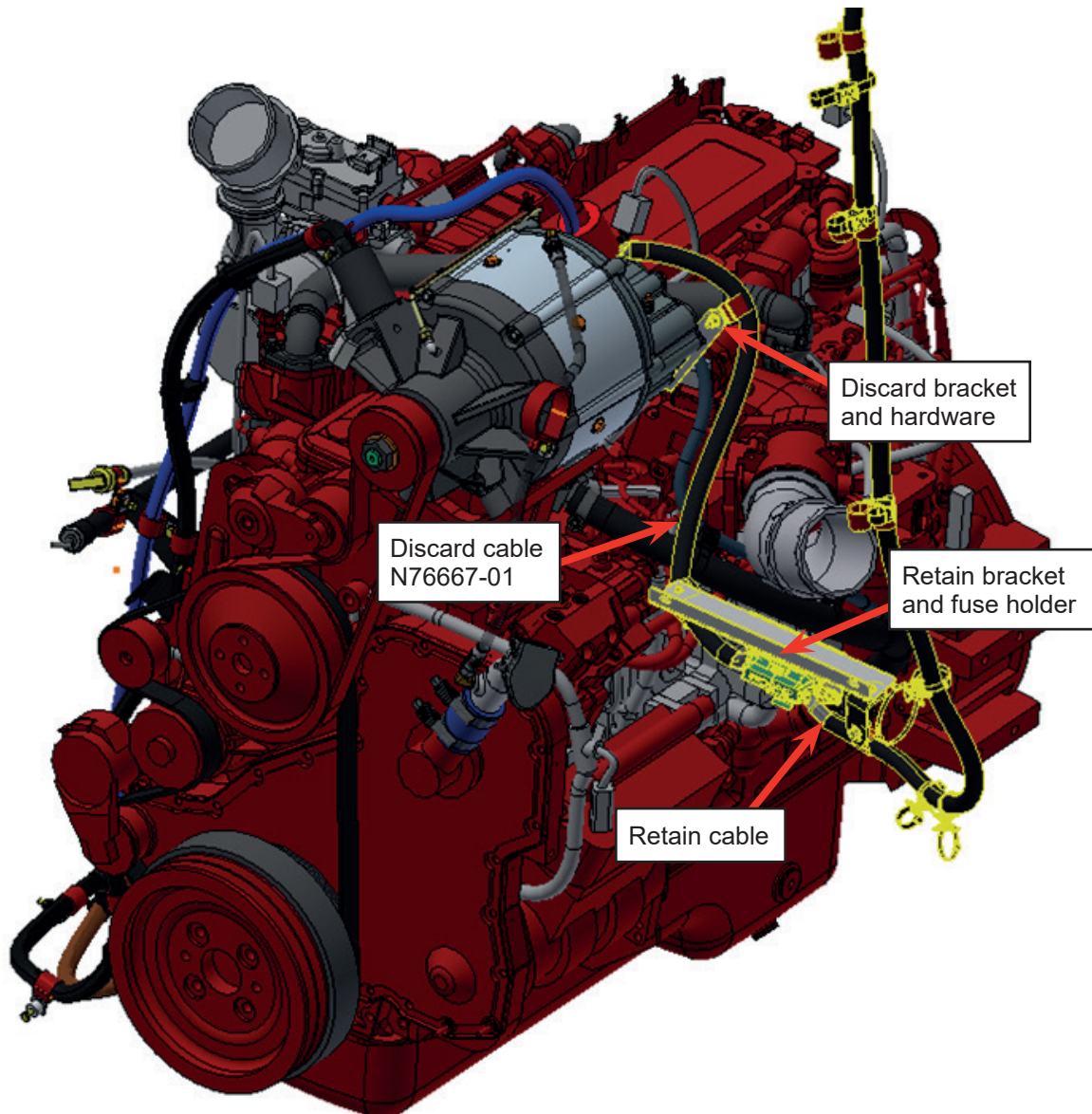


Figure 8 - Fan Cable Removal

GENERATOR REPLACEMENT

**WARNING**

Before unbolting the generator from its bracket, make sure it is held in place by a safety clip.

- 1.18. Lift up the retractor arm and pulley to remove the drive belt from the generator. Keep the belt for later reinstallation.
- 1.19. Remove and retain the pulley from the old alternator, discard hardware.
- 1.20. Remove the bolts attaching the generator to the engine mounting bracket.
- 1.21. Remove and discard the mounting bolts, except for the shorter bolt on the street side, retain for installation of new alternator.
- 1.22. Install the new generator. Due to its size, it might be easier to install the new generator from the inside of the bus. Use the inside engine access door from the seats located in the interior rear of the vehicle. Torque screws N81450 with washers 0120384 to 69 ± 4 lb-ft (94 ± 6 N•m). The front streetside bolt can be re-used due to space constraints.
- 1.23. Install pulley from old alternator and torque to 270 ± 26 Nm. Reinstall belt. See section 09: ALTERNATOR AND VOLTAGE REGULATOR.

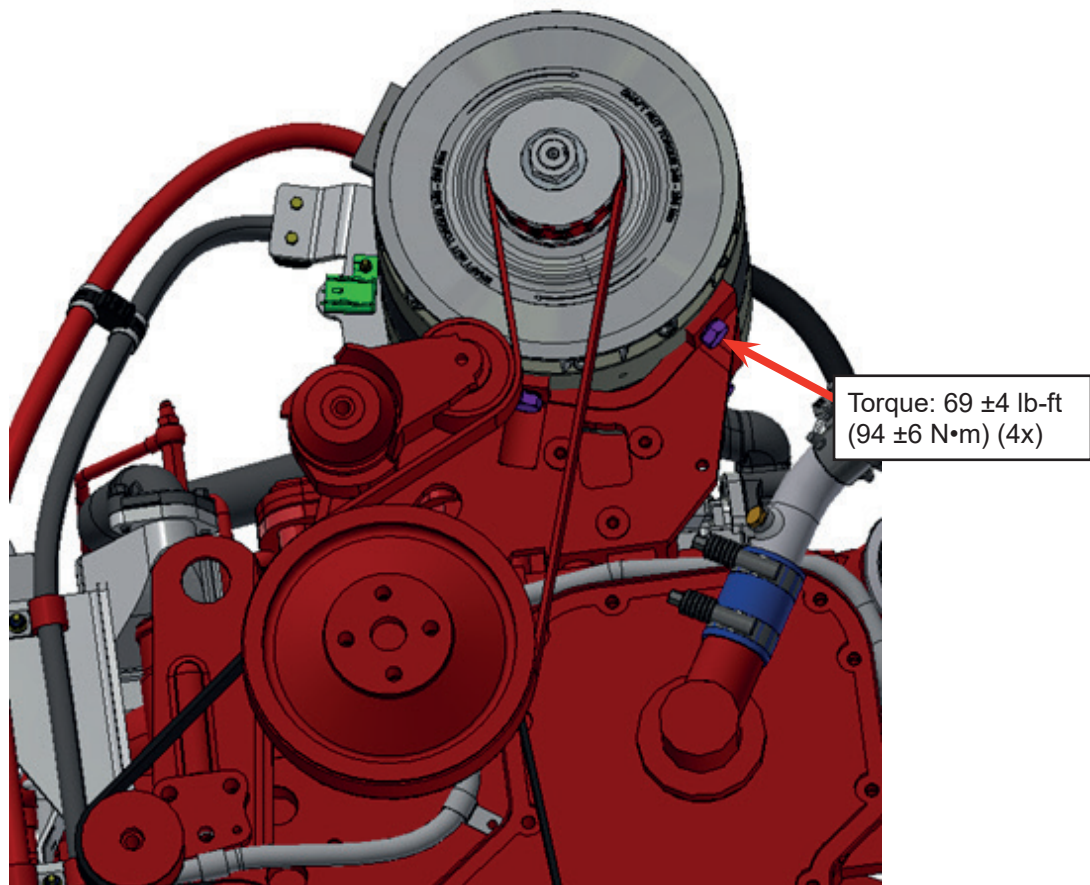


Figure 9 - Torque Generator

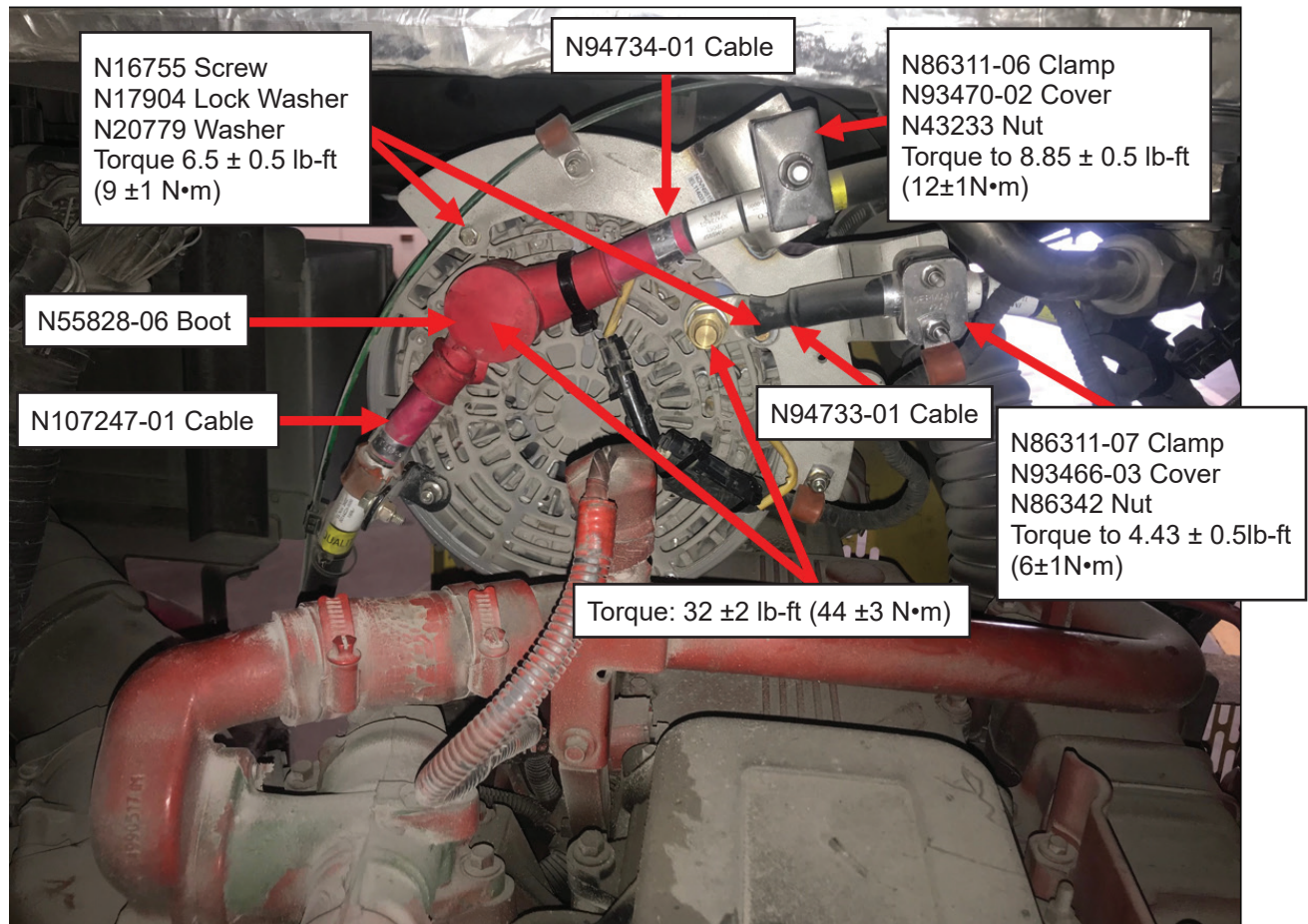
INSTALLATION OF CABLES AND BRACKETS



NOTE

Use a product like NOCO NCP-2 N67314 to inhibit the corrosion on electrical connections. Whenever torque seal is applied, it must be done after the torque is applied and after the application of the anticorrosion product.

- 1.24. Install bracket N98150 on the back of the alternator.
- 1.25. Install all (3) cables on the back of the alternator and leave the connection loose.
- 1.26. Install split blocks to support cables and secure them to support cables.
- 1.27. Install L bracket for cable going to the radiator fans.
- 1.28. Torque all joints on the back of the alternator. Install red lug protector.



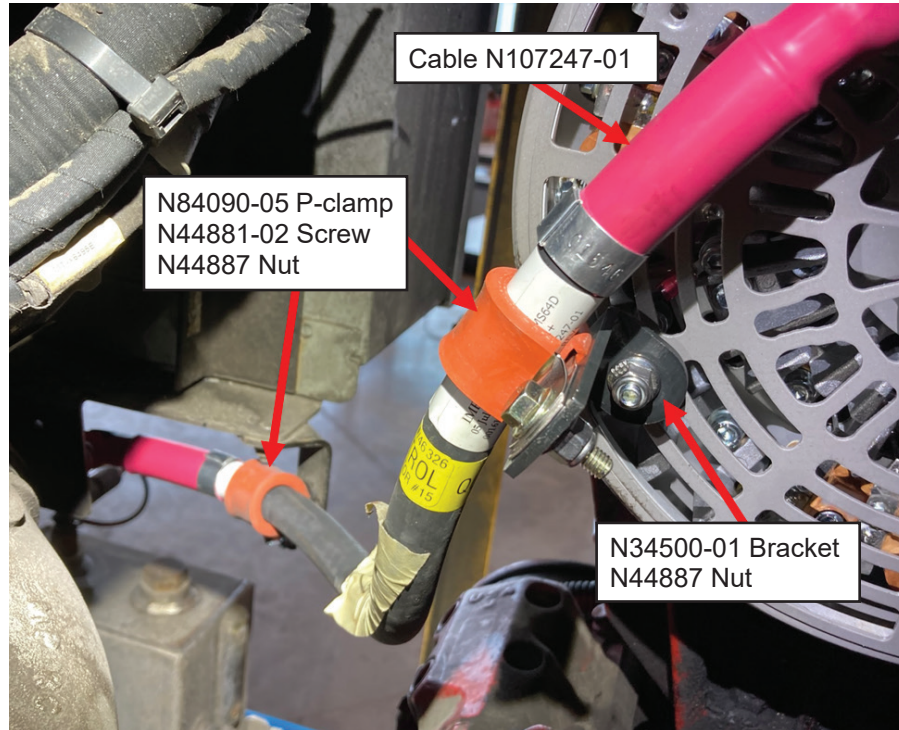


Figure 10 - Installation of Cables and Brackets

1.29. Cut ring terminals off of regulator wires, crimp on the proper terminals and connector.

WIRE MARKER	AWG	COLOR	TERMINAL	SEAL	CONNECTOR
64-1546	14	RD	12124582	15324981	12010996

WIRE MARKER	AWG	COLOR	TERMINAL	SEAL	CONNECTOR
64-2096	16	WH	12124580	15324981	12015791

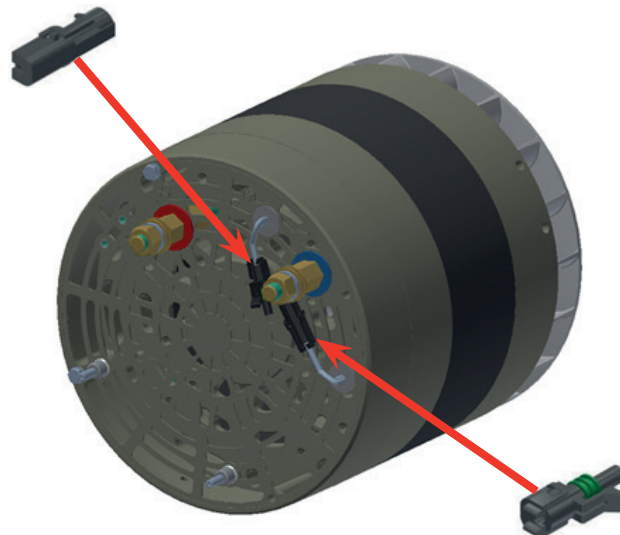


Figure 11 - Crimp Terminals and Connectors

1.30. Secure routing with (2) P-clamps at back of alternator.

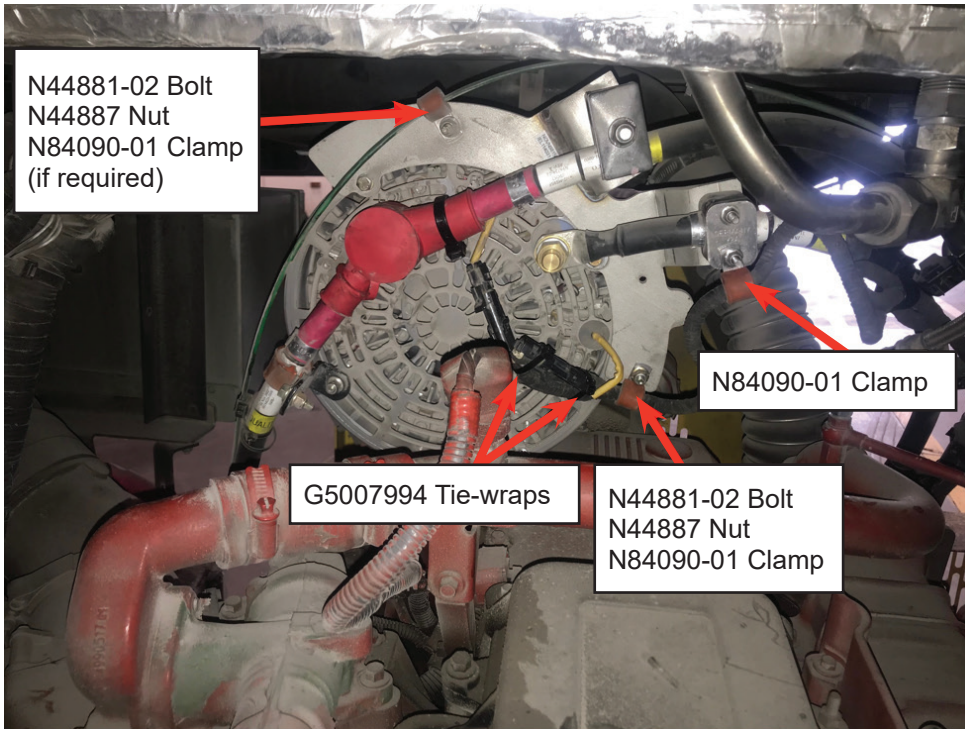


Figure 12 - Secure the Harness

- 1.31. Secure power cable for radiator fans on the fuse holder. Torque lug on fuse holder to 8 ± 0.5 lb-ft (11 ± 1 N•m).
- 1.32. Before installing the new bracket N92950, make sure that the bolt head for the breeze clamp on the thermostat hose beside will be accessible (reposition it if required).
- 1.33. Install new bracket N92950 and Reuse hardware from old bracket.
- 1.34. Secure cables with provided P-Clamps and M6 lock nuts.
- 1.35. Install dipstick on the bracket. Use new bolt N44881-02 and nut N44887 if required.

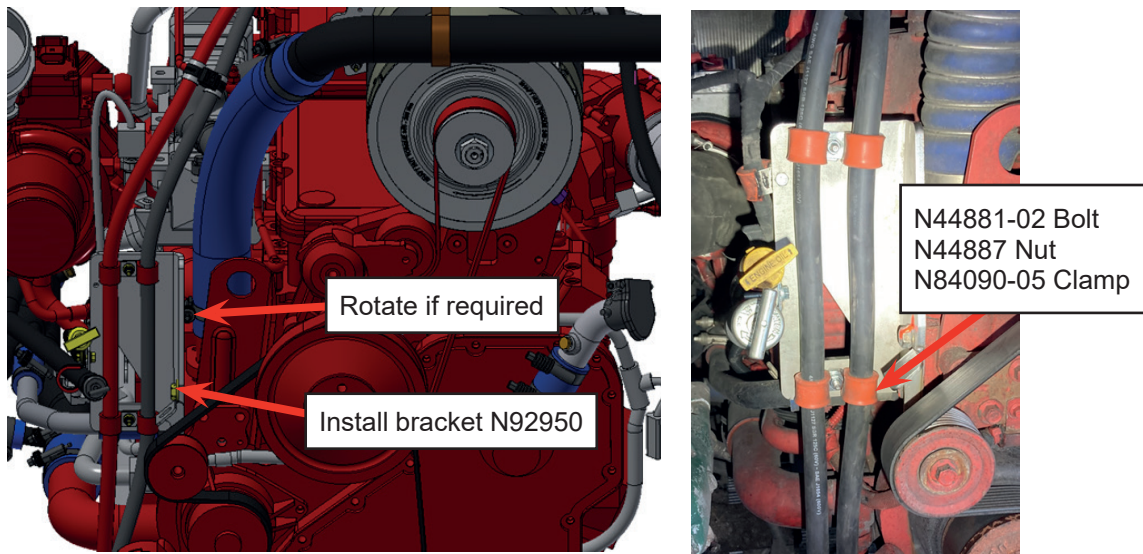


Figure 13 - Installation of Bracket

- 1.36. Connect cables to junction blocks and torque.
- 1.37. Install new cables N94734-01 and N94773-01. Use the white tapes for proper positioning lined up with the supports.
- 1.38. Install P-Clamps and stand-offs on the engine cradle to support cable routing.
- 1.39. Secure P-Clamps in the lower bracket already installed on the engine.

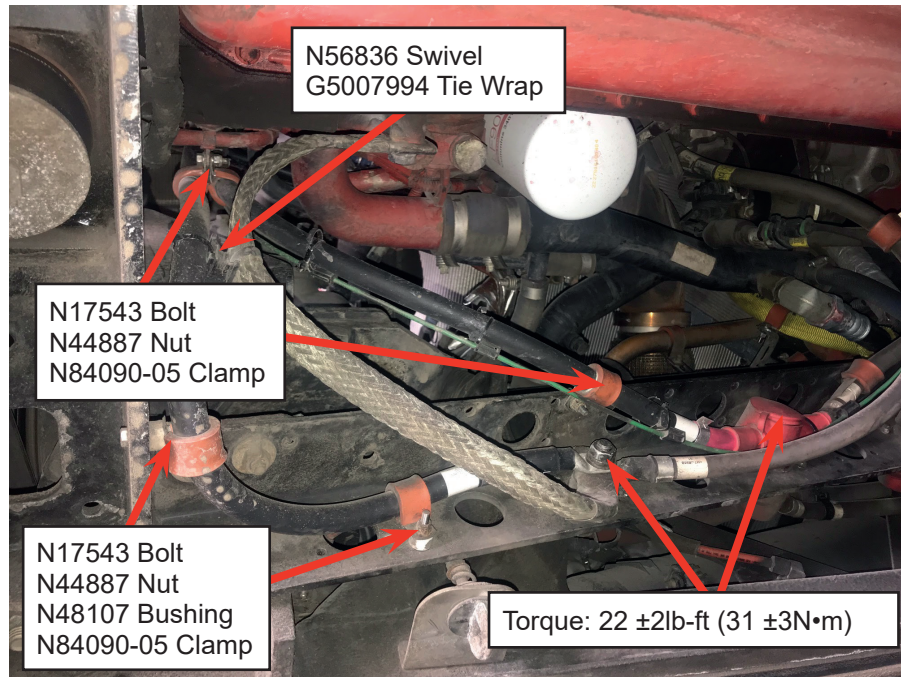


Figure 14 - Installation of Cables and P-clamps

- 1.40. Install new dual clamp ties N37749 on power cables.

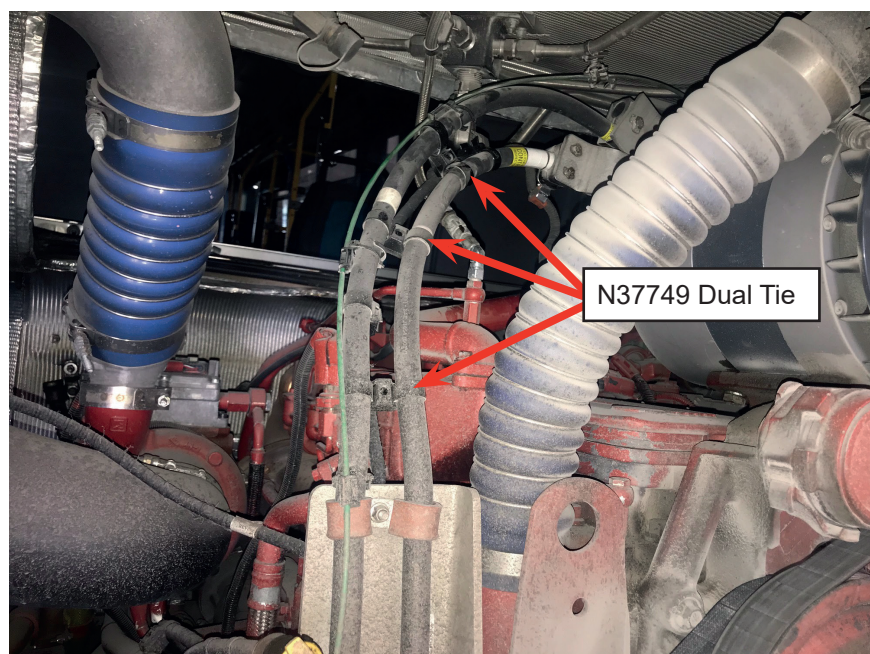


Figure 15 - Installation of Dual Clamp tie

- 1.41. Secure harness with tie wraps along power cables.



Figure 16 - Installation of Dual Clamp tie

- 1.42. If required and not already present, install the angled fitting N75180 to re-orient the Cummins coolant vent line to avoid contact with the power cables.
- 1.43. Undo the fitting and drain excess coolant from the vent line into a bucket. Temporarily cap the engine head with cap nut N30734 if required until angled fitting is installed.

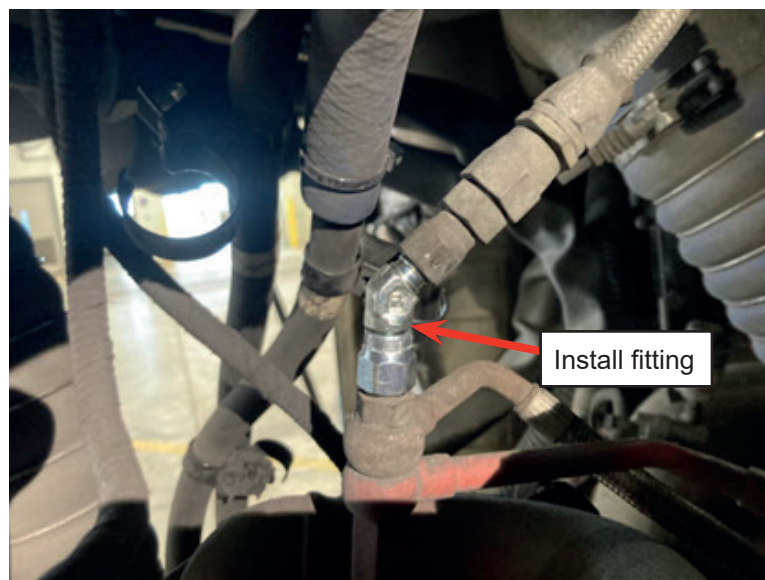


Figure 17 - Installation of Fitting

**NOTE**

Clean terminals and use a product like NCP-2 N67314 to inhibit the corrosion on electrical connections. Whenever torque seal is applied, it must be done after the torque is applied and after the application of the anticorrosion product.

1.44. The vehicle can be put back into service.❖