

PREVOST

Instruction Sheet

IS-19907

BOSCH TO DELCO REMY ALTERNATOR INSTALLATION, VOLVO 9700

First Release

05-29-2019

MATERIAL

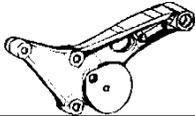
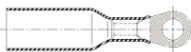
Order Main Kit **IS19907**, which contains

Part No.	Description	Qty
0610086	Alternator Mechanical Kit, Right	1
0610088	Adaptation Kit, Right, Volvo 9700	1
IS-19907	Instruction Sheet	1
FI-19907	Feuille d'instructions	1

0610086 Alternator Mechanical Kit, Right

Part No.	Description		Qty
560720	Alternator Remy 55SI 24V-250A PadMount		1
069892	Pulley 8PK, 83 DOB		1
069894	Bracket, Alternator Remy		1
506065	Belt Poly V 8PK1435 EPDM QT+Aramide		2
5001308	SCR CAP HEXF N500 M10-1.5X40 G10.9		4
5002091	SCR CAP HEXF N500 M10-1.5X120 G10.9		4
5001137	WSH FL SS .203X.438X.06 (M5,#10)		2
5001180	NUT HEX NYRT SS 10-24		2
500411	WSH FL SS .260X.697X.05 (M6,1/4)		1
5001341	WSH FL SS 8.4X17X1.6 (M8,5/16)		1
500685	NUT HEX NYRT 5/16-18 SS		1

0610088 Adaptation Kit, Volvo 9700 / Prevost US10

Part No.	Description		Qty
010116	TENSIONNER SUPPORT		1
0610034	Ground Cable		1
5001801	SCR CAP HEXF N500 M10-1.5X55 G10.9		2
500796	SCR CAP HEXF N500 M8 X 50 CL10.9		1
994445	FLANGE SCREW M8x16		1
563870	RING TERMINAL 5MM / 16-14 / DURASEAL		3
563548	Shrink tubing		12"

Other parts not provided in the kit; shop supplies

Part No.	Description		Qty
504016	CABLE TIE, 5/16" X 14"1/2		A/R
507664	CABLE TIE, DOUBLE LOOP		A/R
509491	CABLE TIE, WIDE 13MM x 383MM		A/R
504637	CABLE TIE / 3/16" x 13"		A/R
684013	COLOR GUARD RUBBER COATING, 14.5 OZ CAN		A/R
680038	LOCTITE 243, BLUE,50ml		A/R
680100	LOCTITE 271, RED, 250ml		A/R
-	Brake cleaner		A/R

NOTE

Material can be obtained through regular channels.

TOOLS

<p>15/16" THIN WALL ADAPTER. CROWFOOT</p> 	<p>METRIC OPEN END WRENCH SET</p> 	<p>RATCHET AND SOCKET SET - METRIC</p> 
<p>HEX BIT SOCKET SET - METRIC</p> 	<p>TORQUE WRENCH</p> 	<p>SOFT FACED HAMMER</p> 
<p>1 5/8" OPEN END WRENCH</p> 	<p>BELT TENSION GAUGE</p> 	<p>1/2" SQUARE DRIVE BREAKER BAR</p> 
<p>VOLTMETER / MULTIMETER</p> 	<p>CUTTING PLIERS</p> 	

PROCEDURE



DANGER

Park vehicle safely, apply parking brake, stop engine. Prior to working on the vehicle, set the ignition switch to the OFF position and trip the main circuit breakers equipped with a trip button. On Commuter type vehicles, set the battery master switch (master cut-out) to the OFF position. Apply vehicle lockout procedures according to local policies.

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OVERVIEW

The procedure involves removing the existing Bosch alternators, their corresponding brackets and harnesses and replacing them with a DelcoRemy 55SI alternator.

The alternator requires new brackets and harnesses.

First time users should read the procedure before starting work on a vehicle. Best viewed in color.

ELECTRICAL SCHEMATICS

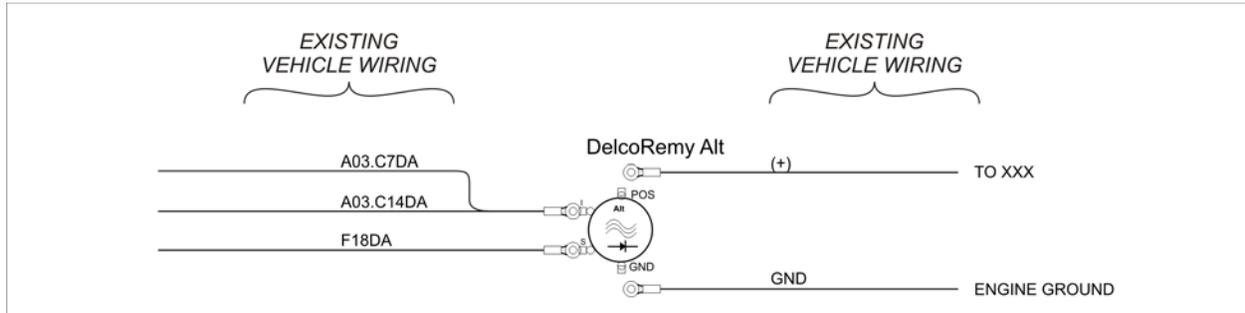


FIGURE 1: ALTERNATOR CONNECTIONS

ALTERNATOR REMOVAL AND INSTALLATION



WARNING

There should not be electrical power to the alternator terminals. Using a multimeter, probe the alternator **B1+** terminal and the ground terminal. Make sure that the voltage reading is 0 volt prior disconnecting the alternator cables.

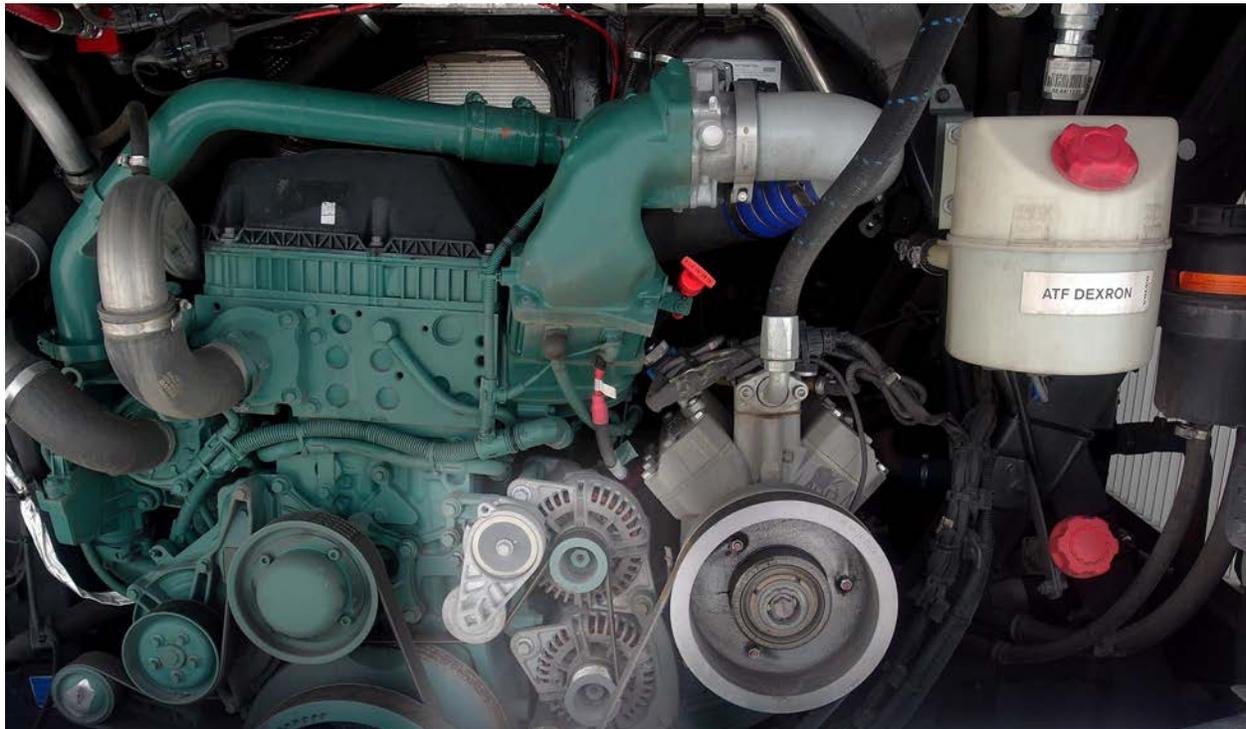


FIGURE 2: BOSCH ALTERNATORS ON ENGINE

1. Remove the tensioner and mounting bracket.

Keep hardware and tensioner for re-use.

Discard bracket.



FIGURE 3

2. Remove the existing alternators. To do so, unscrew the four (4) mounting bolts identified on Figure 4. Discard bolts and alternators.

3. Also remove the idler at the bottom. Discard idler and hardware.

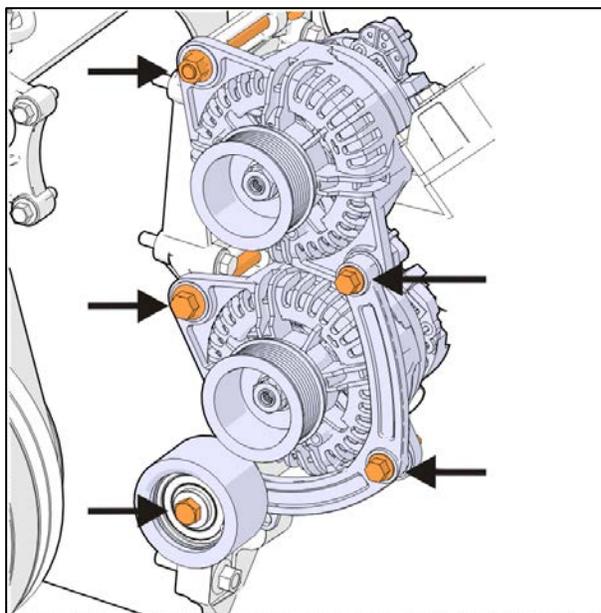


FIGURE 4

4. Remove the alternator support bolted on the engine. Discard support and bolts.

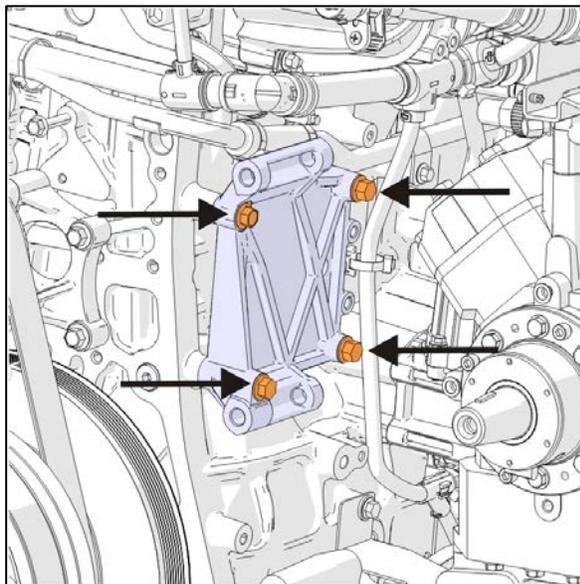


FIGURE 5

5. Installing the alternator pulley.

Place 560720 alternator flat on a bench with the shaft horizontal.

Required tools:

- 15/16" crowfoot adapter
- 8mm hex bit

Clean shaft and pulley with brake cleaner.

Slide pulley 069892 on shaft by hand.

Hand thread nut on shaft until snug.

Using 15/16" adapter and 8mm hex bit to block shaft rotation, tighten to **70-80 lb-ft.**

Apply torque seal

Never use power tools to install pulley and nut.

Note: Do not apply any pressure to end of the shaft. Internal damage may occur if the shaft is pushed back and turned.

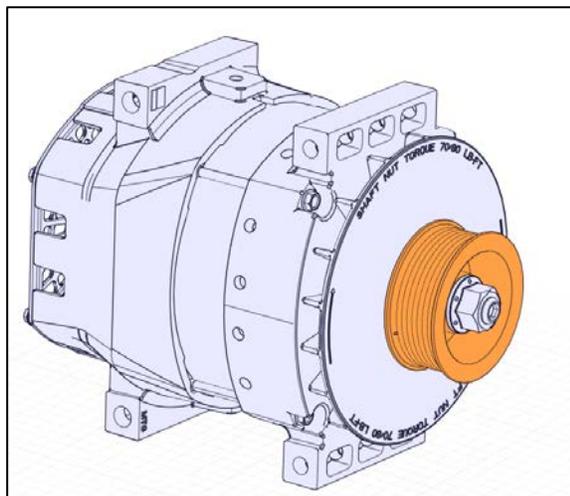


FIGURE 6

6. Install bracket 069894 on engine with four (4) 5001308 M10x40 bolts.
Apply blue Loctite 680038
Tighten to **35 lb-ft.**
Apply torque seal.

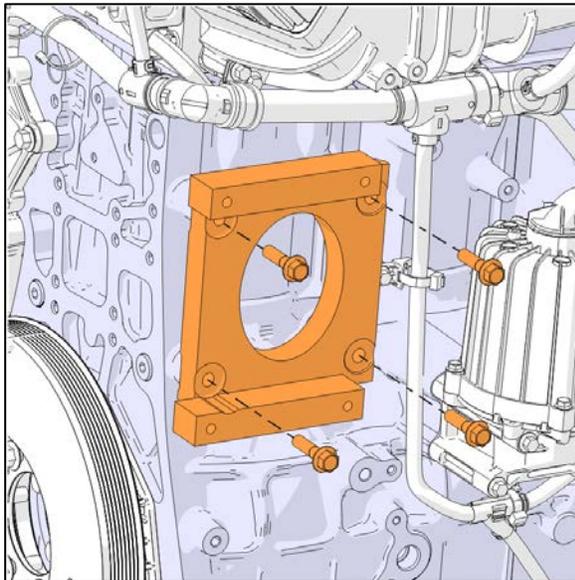


FIGURE 7

7. Install alternator on engine with four (4) 5002091 M10x120 bolts.
Apply blue Loctite 680038
Tighten to **48 lb-ft**
Apply torque seal.

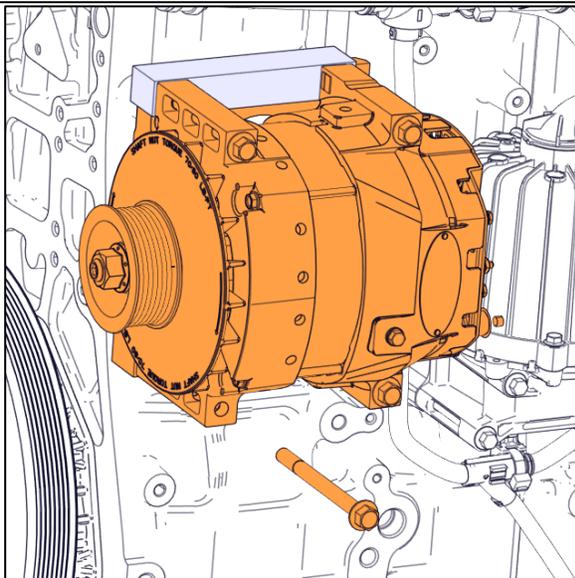


FIGURE 8

ALTERNATOR CONNECTIONS

8. Locate the former Bosch alternator connectors G03 and G02.
Some wires will be used on the new installation. The other wires should be *sealed* with double wall heat shrink. Refer to ELECTRICAL SCHEMATICS.

Original Connector : Pin	Wire	Action
G02:2	A03.C7DA	Cut; 563870 terminal Crimp ring
G02:3	F18DA	<i>Cut; Heat shrink seal</i>
G02:4	R4	<i>Cut; Heat shrink seal</i>
G03:2	A03.C14DA	Cut; 563870 terminal Crimp ring
G03:3	F18DA	Cut; 563870 terminal Crimp ring
G03:4	R4	<i>Cut; Heat shrink seal</i>

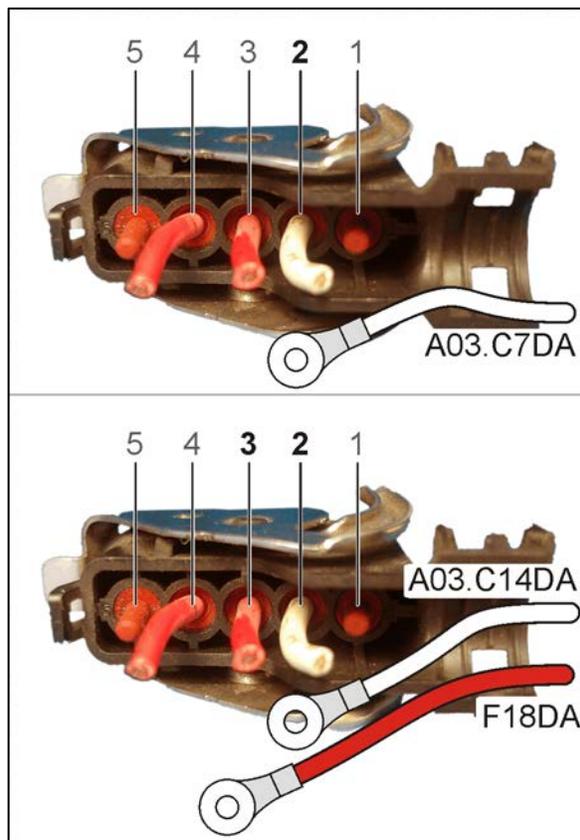


FIGURE 9

9. Connect control wires.
Refer to ELECTRICAL SCHEMATICS.
Connect F18DA to *Sense*.
Connect A03.C7DA/A03.C14DA to *Indicator*.
Use 5001180 10-24 Nylon lock nuts and 5001137 washers.
Tighten to the following torque values:
Sense: 25-45 lb-in (3.0 5.0 N-m)
Indicator: 25-45 lb-in (3.0 5.0 N-m)
Apply color guard 684013 on connections.

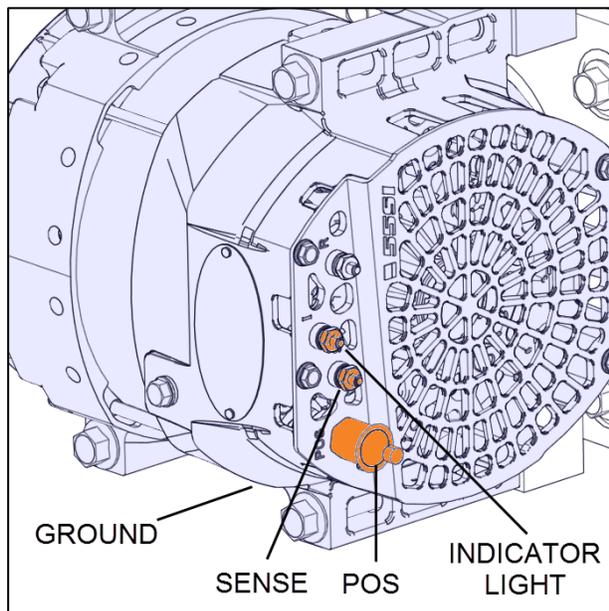


FIGURE 10

10. Install power cable on alternator. Reuse the existing cable.
See **NOTE** below
Use 500685, 5/16-18 nylon lock nut and 5001341, 8.4x17.0x1.6 SS washer.
Tighten to **80-125 lb-in (9.0-14.0 N-m)**
Apply color guard 684013 on connections.

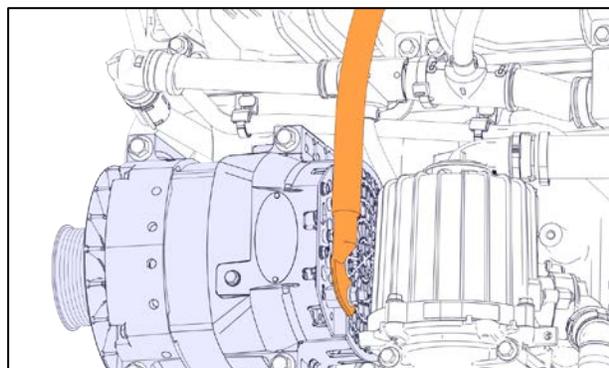


FIGURE 11

NOTE on positive stud :

Early versions of the alternator have a shorter positive stud.

Nut 500685 does not thread fully on the shorter stud to allow the locking nylon lock to grip on the threads.

In this situation, use the *nut and lock washer* provided with the alternator.

Tighten to: **80-125 lb-in (9.0-14.0 N-m)**.

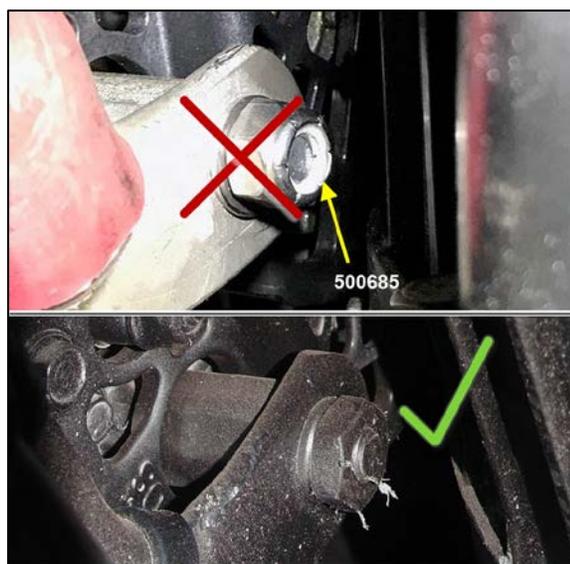


FIGURE 12: HARDWARE TO USE WITH EARLY VERSIONS

11. Early versions of kit 0610088 have received bracket 012656 which requires a minor modification. If you have received bracket 010116, it is already modified and you may skip the next step.
12. Prepare the alternator belt tensioner bracket 012656 by creating a relief by grinding the back of the tensioner mounting pad to clear the alternator fan.

See image for dimensions.

Aim for a smooth surface finish and contour.

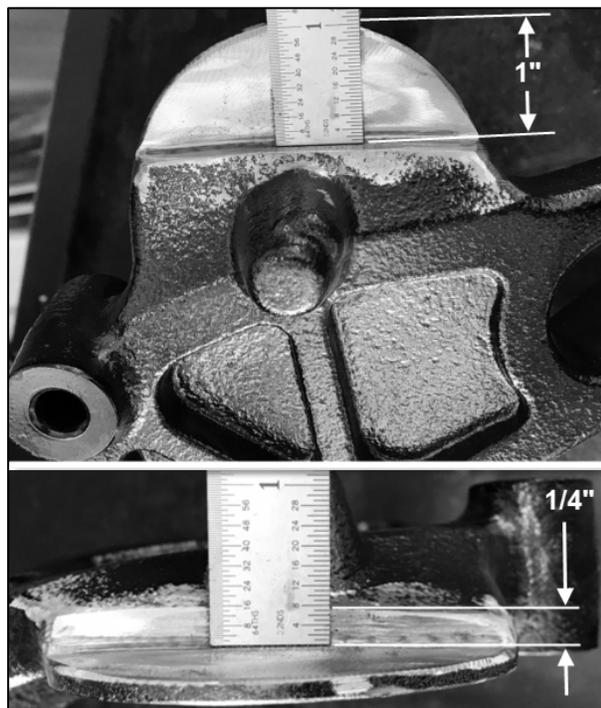
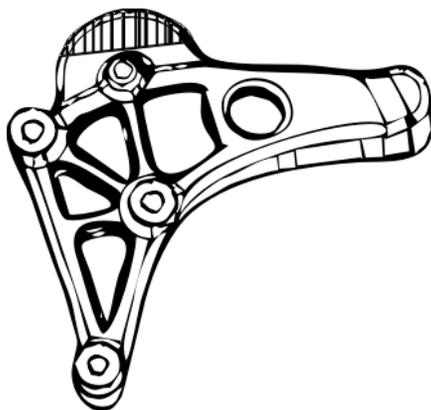


FIGURE 13

13. Install bracket on engine.

A: 500796, M8-1.25x50: **22 lb-ft**

B: 5001801, M10-1.5x55 (2x): **43 lb-ft**



FIGURE 14

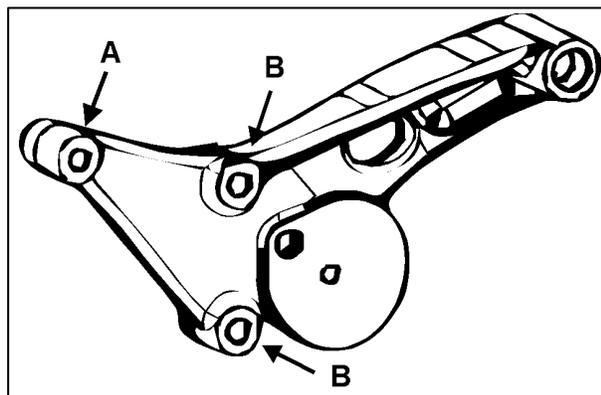


FIGURE 15

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14. Install ground cable on alternator upper ground pad. Reuse the existing cable.
- Use the screw and lock washer supplied with alternator. Add 500411 SS washer.
- Ground: **50-60 lb-in (5.6-6.8 N-m)**
- Apply color guard 684013 on connections.



FIGURE 16

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15. Place ground cable on the tensioner bracket.
- Tighten to **240 lb-in.**
- Apply color guard 684013 on connections.



FIGURE 17

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16. Install the alternator belt tensioner with hardware reserved earlier.
- Tighten to **48 lb-ft.**
- Apply torque seal

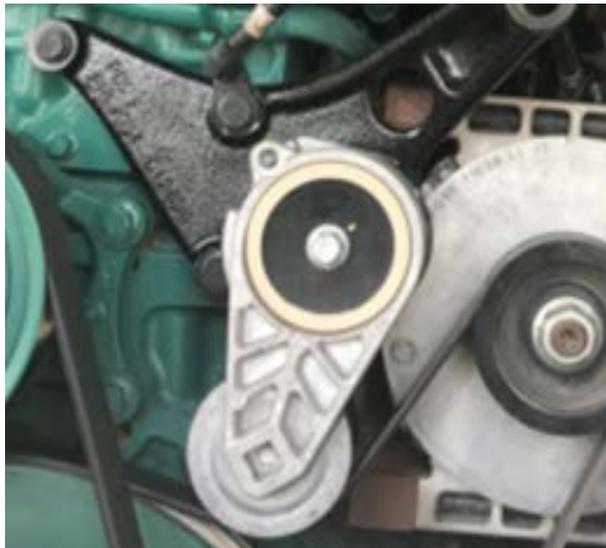


FIGURE 18

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17. Install alternator belt 506065. To do so, rotate the automatic belt tensioner using a ½ square drive breaker bar.

Keep the spare belt in the vehicle.

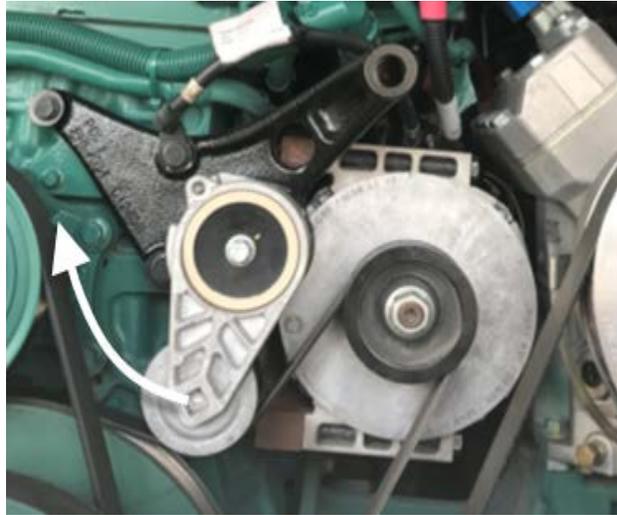


FIGURE 19

FUNCTIONAL TESTING

18. Reset main circuit breakers if applicable. Set the battery master switch (master cut-out) to the ON position and start the engine. Make sure that the charging system is working normally.

On the instruments cluster, the alternator telltale  illuminates if the alternators are not charging.

LABOR REFERENCE TABLE

Table for reference only.

Actual times will vary depending on vehicle condition.

	<i>Operation</i>	<i>Approximate labor (hours)</i>
Step 1	BOSCH ALTERNATORS REMOVAL, RIGHT HAND SIDE	1h
Step 2	INSTALLING THE RIGHT HAND ALTERNATOR. (includes wiring)	2h
Step 3	FUNCTIONAL TESTING	0.5h
	Total	3.5 hours

PARTS / WASTE DISPOSAL

Discard waste according to applicable environmental regulations (Municipal/State[Prov.]/ Federal)
