

# Special Bulletin

# SP13-328F

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REVISION F THIS REVISION SUPERSEDES THE PREVIOUS VERSION.  
Alternator pulley flanged nut torque was 58 lbf-ft, changed for 75 lbf-ft.

## BOSCH HD10 ALTERNATOR REPLACEMENT Prevost vehicles

### DESCRIPTION

On the vehicles affected by this bulletin, the Bosch HD10 alternators need to be replaced.

### MODEL YEAR(S) AND VEHICLES INVOLVED

Model	VIN
NYCT X3-45 Commuter coaches Model Year : 2012	From 2PCG33495CC73 <u>5053</u> up to 2PCG33495CC73 <u>5232</u> incl.  Except: 2PCG33498CC73 <u>5208</u> & 2PCG33495CC73 <u>5229</u>
<i>The above list of VIN was valid at the time of publishing this document. Please refer to SAP for most recent information about outstanding vehicles</i>	

### MATERIAL

Order the following parts:

Part No.	Description	Qty
564119	ALTERNATOR, BOSCH HD10 120 AMP	2
502573	WASHER, FLAT M6 STAINLESS STEEL	2
564590	ADAPTER	1
5001182	NUT, M6 STAINLESS STEEL	2
5001341	WASHER, FLAT M8 STAINLESS STEEL	3
5001787	NUT, M8 STAINLESS STEEL	2

Other parts or products that might be required

Part No.	Description
684013	COLOR GUARD RUBBER COATING, 14.5 OZ CAN

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## REQUIRED TOOLS

**RATCHET AND SOCKET SET - METRIC**



**TORQUE WRENCH**



## SPECIAL TOOLS REQUIRED TO TIGHTEN THE ALTERNATOR PULLEY MOUNTING NUT



**METRIC 10mm 12-POINTS SPLINE DRIVE LONG (CARLYLE SLTS3810M AVAILABLE FROM NAPA )**



**OFFSET 7/8 WRENCH (CYLINDER HEAD WRENCH), SNAP-ON PART NUMBER M4201**



**7/8 SOCKET (PART NUMBER WA28-28A)**



**OFFSET 7/8 WRENCH FITTED WITH 7/8 SOCKET AND 10mm 12-POINTS SPLINE DRIVE**

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USING THE CYLINDER HEAD WRENCH WITH A RATCHET AND A FLEX SOCKET WRENCH

## PROCEDURE



### DANGER

Park vehicle safely, apply parking brake, stop engine. In the battery box, set the battery cut-off switch to the OFF position prior to working on the vehicle.

1. Remove the A/C compressor belts and then remove A/C compressor idler pulley bracket assembly (3 bolts to be removed, figure 1).



FIGURE 1

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2. Remove the alternator belt (figure 2).
3. Unscrew the alternator pulley mounting nut (figure 2).
4. Remove the alternator pulley (2 pulleys) (figure 2).

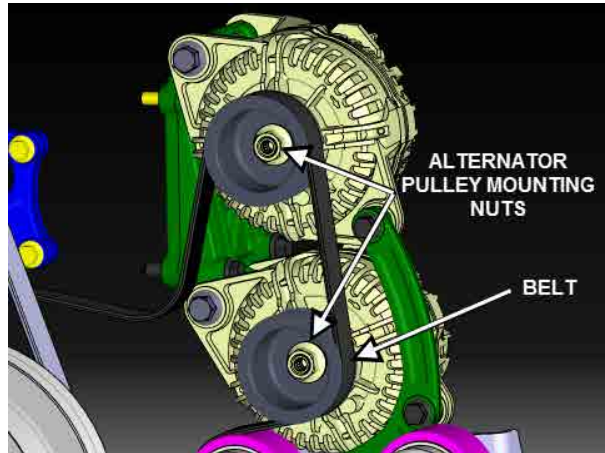


FIGURE 2

5. Remove the existing alternators. To do so, unscrew identified mounting bolts on figure 3.
6. Identify alternator cables and then disconnect cables. Properly clean alternator stud terminals and cable ring terminals.

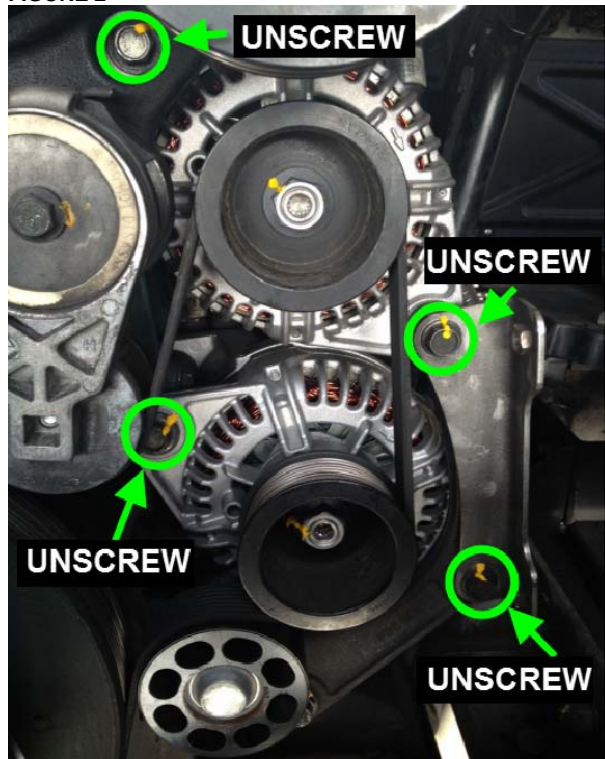


FIGURE 3



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7. Install new alternators. Fix lower and upper alternators loosely to alternator supports using bolts **C**. Also, mount arched support loosely onto alternators using bolts **B**. If applicable, install stone guard. Use Loctite 243 blue on threads (figure 4).

8. In order to assure proper installation, it is important to tighten the alternator mounting bolts in proper sequence. Use Loctite 243 blue on threads (figure 4).

1<sup>st</sup> Bolt/Nut B, 43 lbf-ft (2x).

2<sup>nd</sup> Bolt/Nut C, 74 lbf-ft (2x).

For reference:

C= nut M12 #5001728

B= nut M10 #5001727

9. Mount pulley onto alternators (figure 5). Use Loctite 243 blue on threads. Tighten pulley mounting nut to **75 lbf-ft** using Prevost tool and a M10 12-points spline drive mounted on a torque wrench (refer to the end of this document for details concerning special tools).

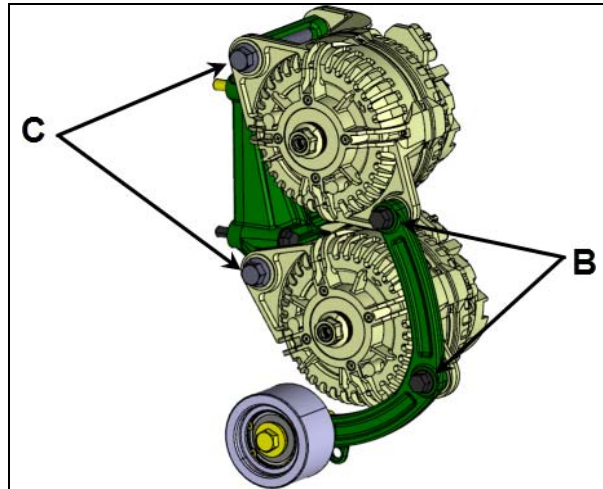


FIGURE 4

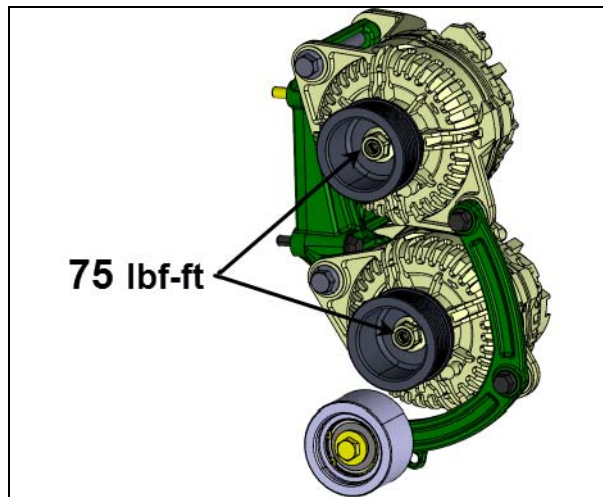


FIGURE 5

10. Install the alternator belt (figure 6)

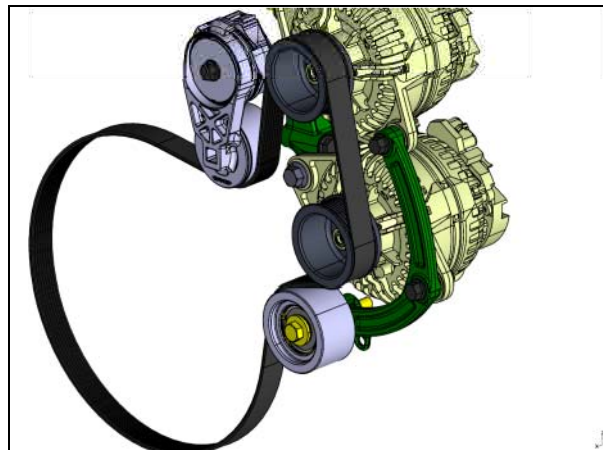


FIGURE 6

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11. Cable connection overview. Upper and lower alternator (figure 7).

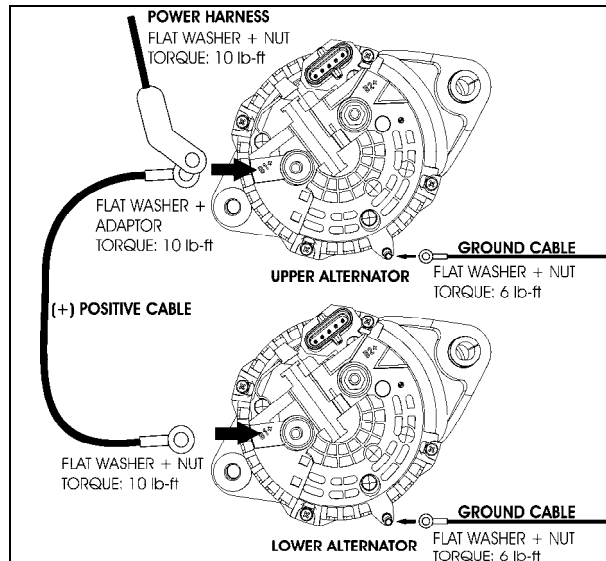


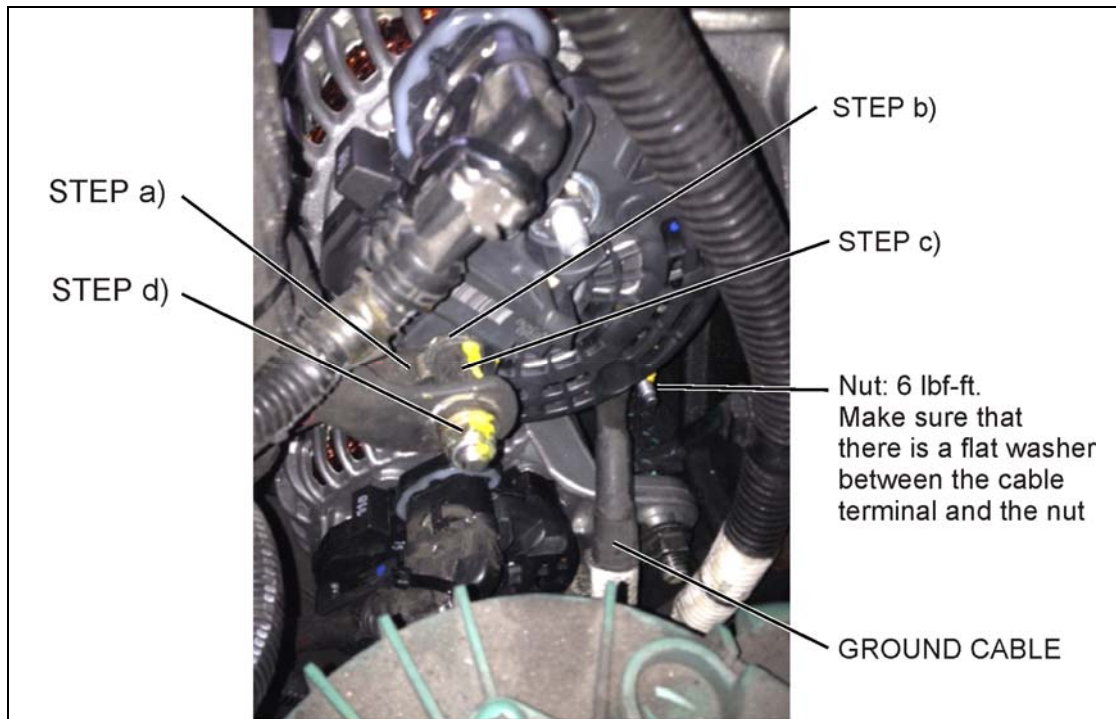
FIGURE 7

## UPPER ALTERNATOR - (use new hardware for cable connection)

### 12. Power harness and jumper cable.

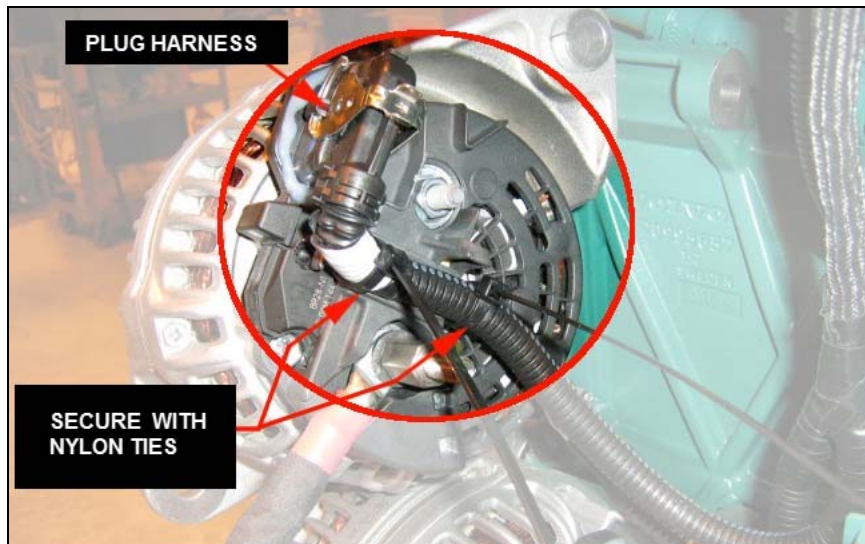
- Install jumper cable (a.k.a. positive cable) onto **B1+** stud terminal on upper alternator (figure 8).
- Place one new flat washer #5001341 against the cable ring terminal (figure 8).
- Screw and tighten the adapter stud #564590 (torque: 10 lbf-ft) (figure 8) prior installing main battery cable (power cable).
- Fit the main battery cable onto adaptor stud, place one new flat washer #5001341 against the battery cable terminal and screw a new nut #5001787 (nut torque: 10 lbf-ft) (figure 8).

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**FIGURE 8**

13. Fit the ground cable onto the alternator ground stud, place one new flat washer #502573 against the ground cable terminal and screw a new nut #5001182 (nut torque: 6 lbf-ft) (figure 8).
14. Plug alternator harness onto alternator connector and secure using nylon cable ties (figure 9).



**FIGURE 9**

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## LOWER ALTERNATOR - (use new hardware for cable connection)

### 15. Jumper cable (positive cable).

- Fit jumper cable (positive cable) onto **B1+** stud terminal on lower alternator (figure 10).
- Place one new flat washer #5001341 against the cable ring terminal and screw new nut #5001787 (nut torque: 10 lbf-ft) (figure 10).
- Fit the ground cable onto the alternator ground stud, place one new flat washer #502573 against the ground cable ring terminal and screw a new nut #5001182 (nut torque: 6 lbf-ft) (figure 10).

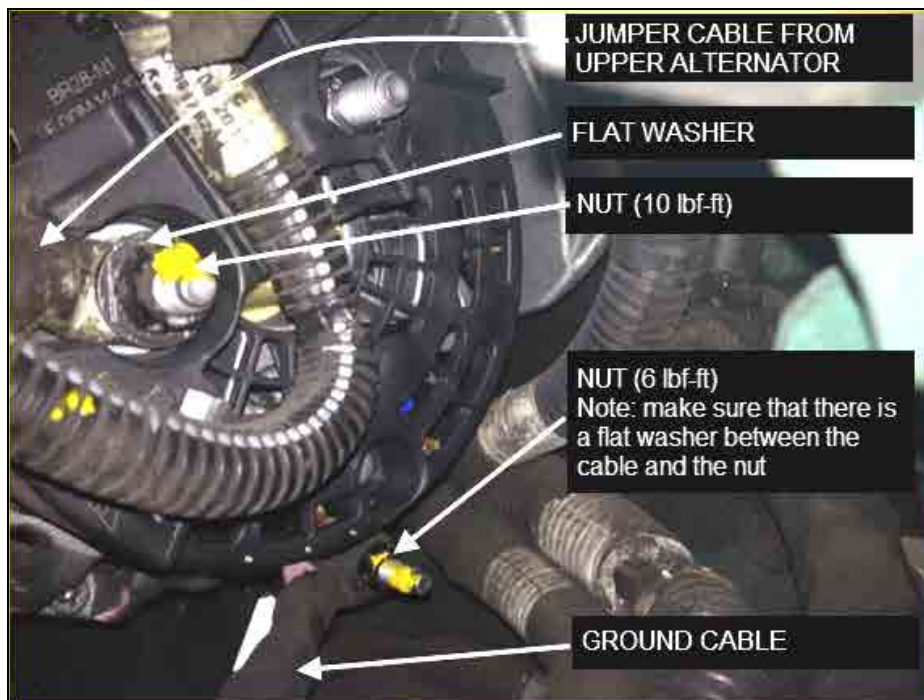


FIGURE 10

- Plug alternator harness onto lower alternator connector and secure using two nylon cable ties #504637 (figure 11).

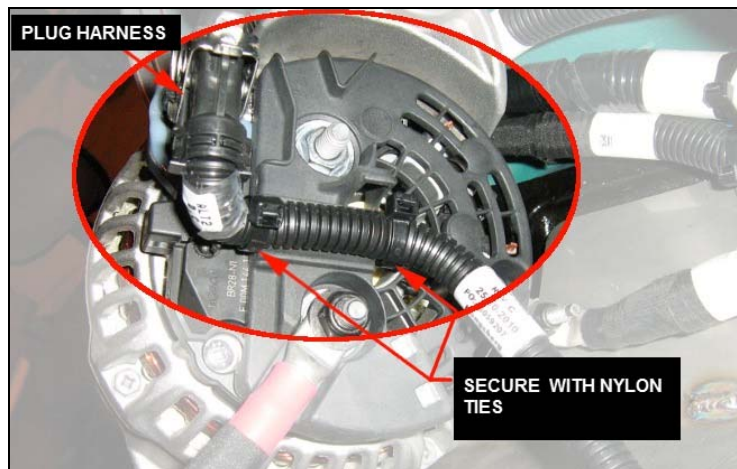


FIGURE 11



17. Apply anti-corrosion compound on alternator terminals and cable ring terminals or use color guard rubber coating #684013 if available.
18. Reinstall the A/C compressor idler pulley bracket assembly (figure 12). Apply Loctite 243 on threads. Reinstall the A/C compressor belts.

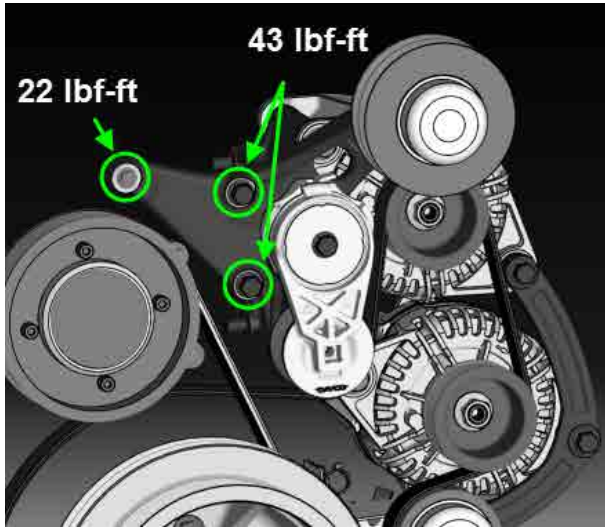


FIGURE 12

19. Finally, check that all cables are properly installed, start engine and check for proper functioning. Check for proper functioning of charging system.

## PARTS / WASTE DISPOSAL

Return replaced parts to Prevest.

## ESTIMATED TIME

The time required to perform this special bulletin is approximately four (4.0) hours.

## OTHER

VBC Bulletin	N/A
Fail Code	06.01
Defect Code	09
System Condition	B
Causal Part	564119

Prevest engages in a continuous program of testing and evaluating to provide the best possible product. Prevest, however, is not committed to, or liable for updating existing products.