




**MAINTENANCE
INFORMATION**

MI14-40B

DATE : JUNE 2014	SECTION : 06 - Electrical
SUBJECT : BOSCH HD10 ALTERNATOR REMOVAL & INSTALLATION	

REVISION B THIS REVISION SUPERSEDES THE PREVIOUS VERSION.
July 2018. Nut #5001787 cancelled and changed. Use nut #5001983 instead.

APPLICATION

Model	VIN
X3-45 Commuter Model Year : From 2012	 <p>APPLICABLE TO: DOB Bus Number Series 2400 - 2489 DOB Bus Number Series 2490 - 2789</p>



MATERIAL

Parts and product that might be required:

Part No.	Description	Qty
502573	WASHER, FLAT M6 STAINLESS STEEL	2
564590	ADAPTER	1
5001182	NUT, M6 STAINLESS STEEL	2
5001341	WASHER, FLAT M8 STAINLESS STEEL	3
5001983	NUT, M8 STAINLESS STEEL NSS	2

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

REQUIRED TOOLS

<p>RATCHET AND SOCKET SET - METRIC</p> 	<p>TORQUE WRENCH</p> 
---	---

SPECIAL TOOLS REQUIRED TO TIGHTEN THE ALTERNATOR PULLEY MOUNTING NUT



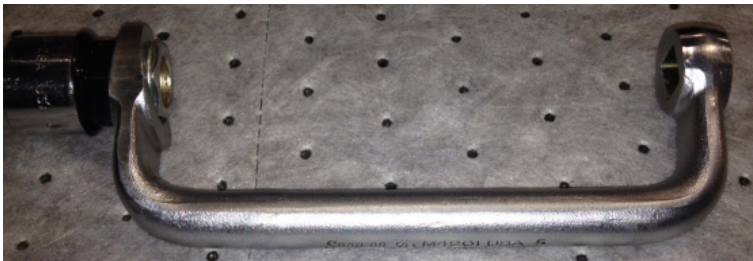
METRIC 10mm 12-POINTS SPLINE DRIVE LONG (CARLYLE SLTS3810M AVAILABLE FROM NAPA)



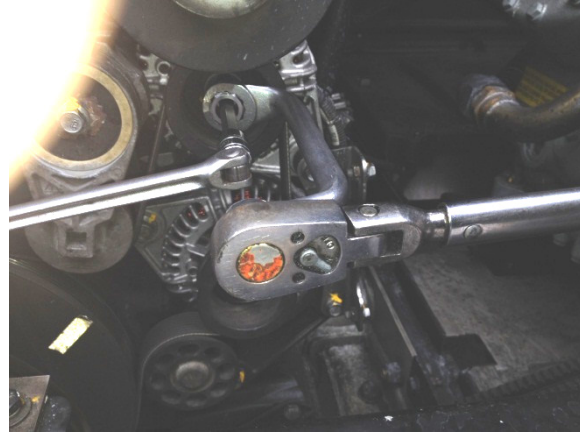
OFFSET 7/8 WRENCH (CYLINDER HEAD WRENCH), SNAP-ON PART NUMBER M4201



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



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



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).

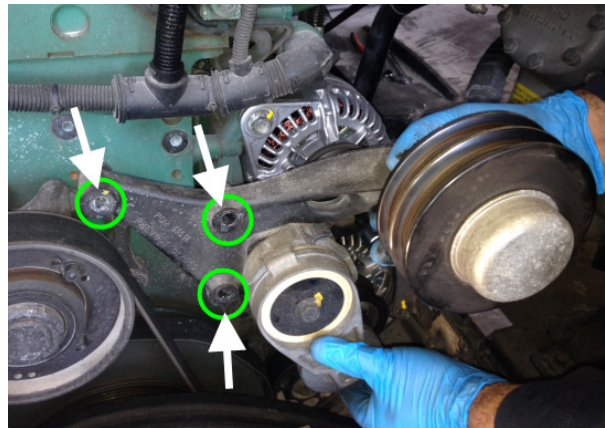


FIGURE 1

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).

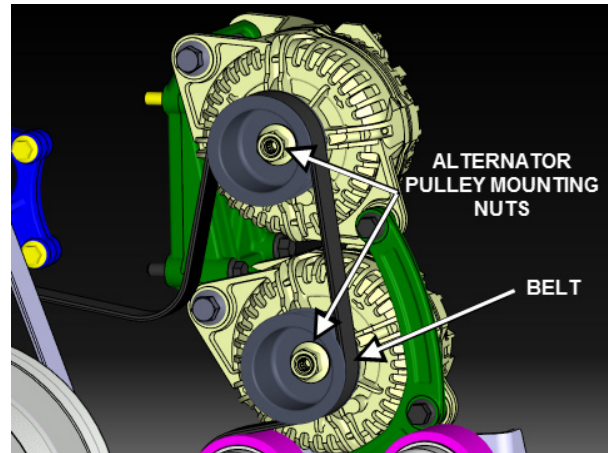


FIGURE 2

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.

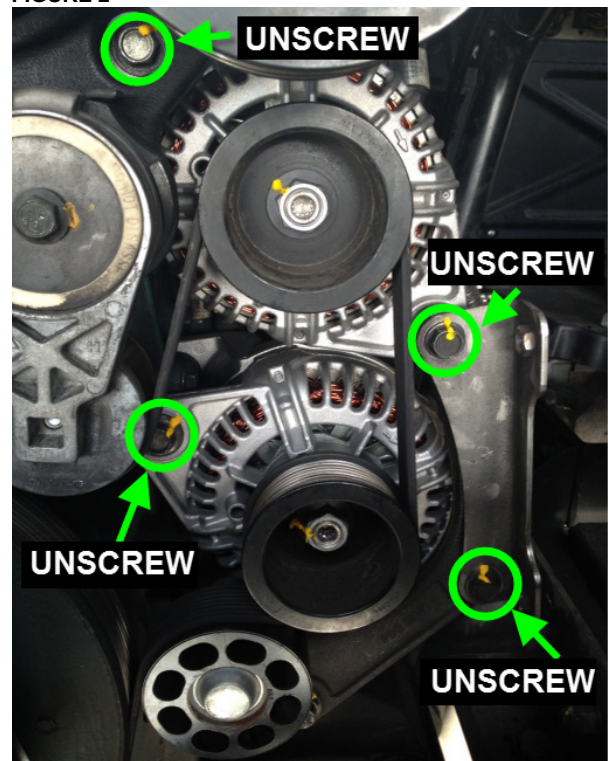


FIGURE 3

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).

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

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

For reference:

C= nut M12 #5001728

B= nut M10 #5001727

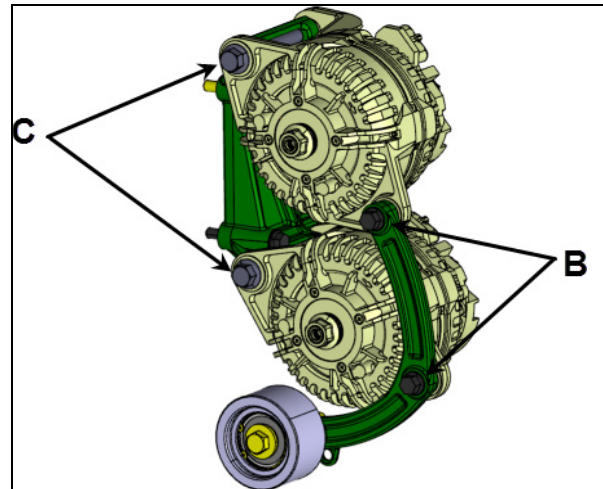


FIGURE 4

9. Mount pulley onto alternators (figure 5). Use Loctite 243 blue on threads. Tighten pulley mounting nut to **75 lbf-ft** using offset 7/8 wrench and a M10 12-points spline drive mounted on a torque wrench (refer to REQUIRED TOOLS for details concerning special tools).

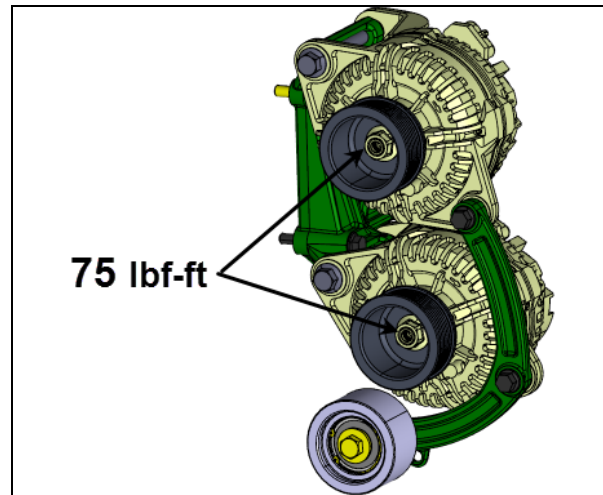


FIGURE 5

10. Install the alternator belt (figure 6)

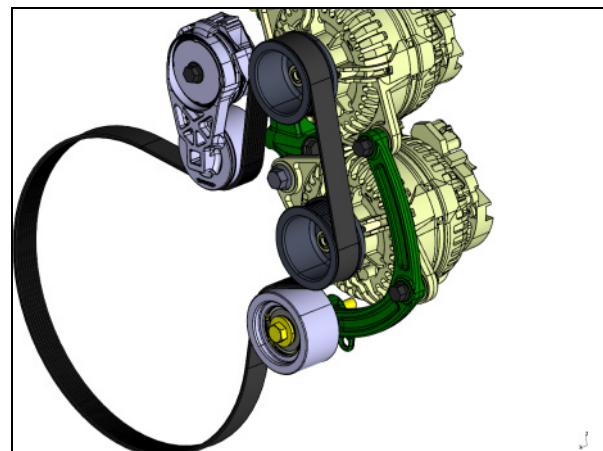


FIGURE 6

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

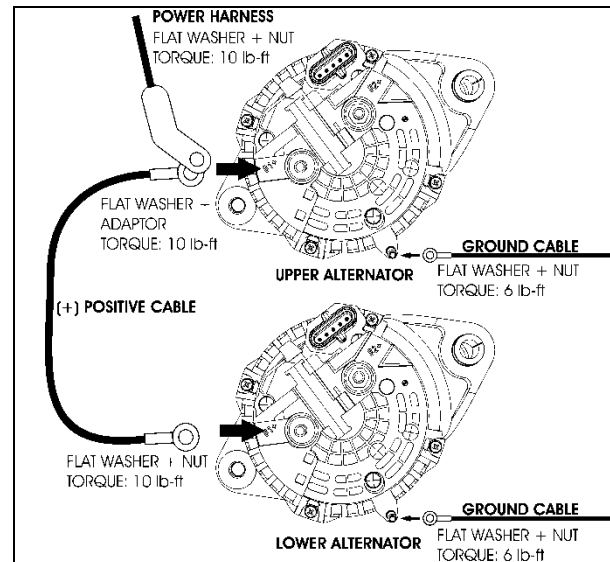


FIGURE 7

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 jumper 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 #5001983 (nut torque: 10 lbf-ft) (figure 8).

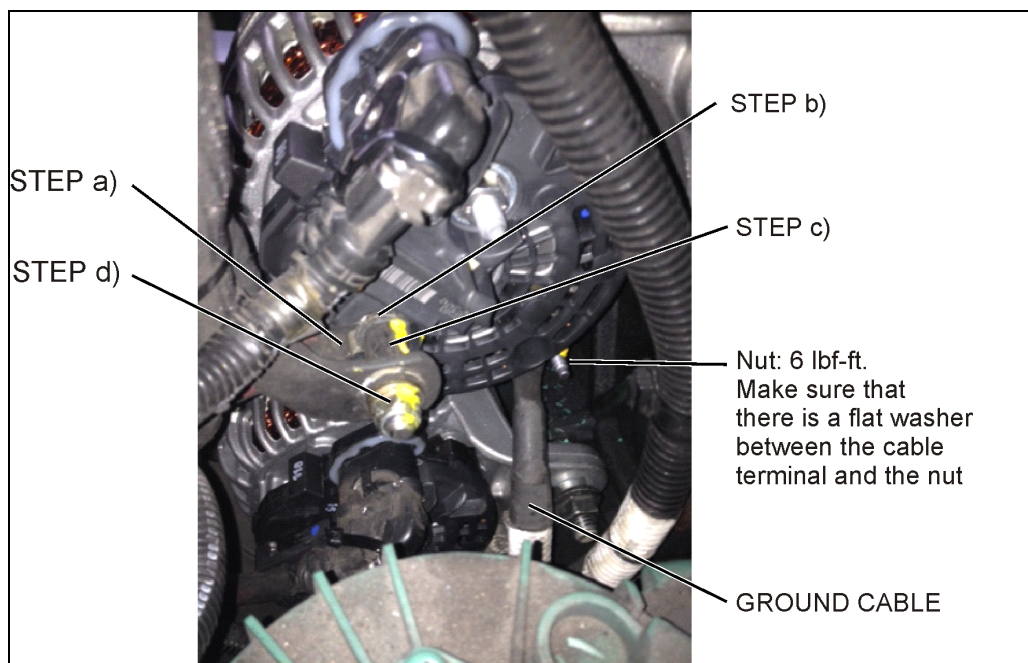


FIGURE 8 : STEP 12 a, b, c, d

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 upper alternator connector and secure using nylon cable ties (figure 9).

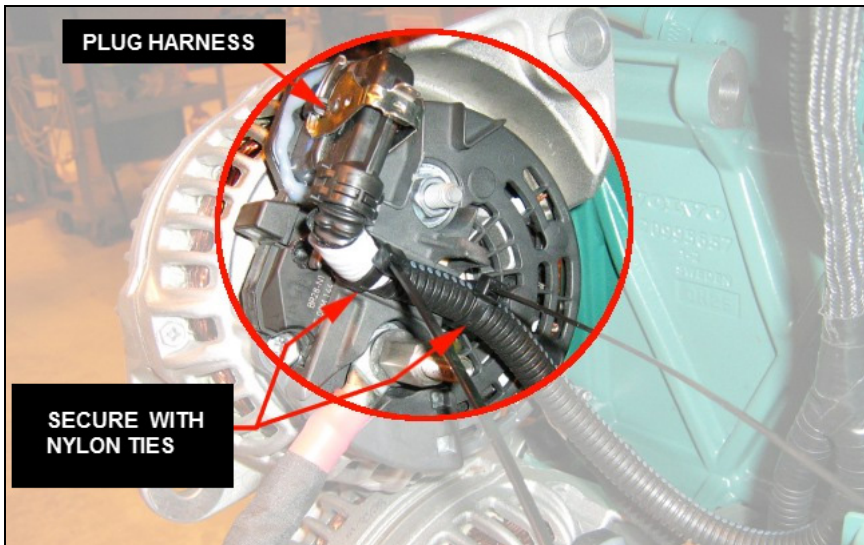


FIGURE 9

LOWER ALTERNATOR - (use new hardware for cable connection)

15. Jumper cable (positive cable) installation.

- a) Fit jumper cable (a.k.a. positive cable) onto **B1+** stud terminal on lower alternator (figures 7 & 10).
- b) Place one new flat washer #5001341 against the jumper cable ring terminal and screw new nut #5001983 (nut torque: 10 lbf-ft) (figure 10).

16. 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).

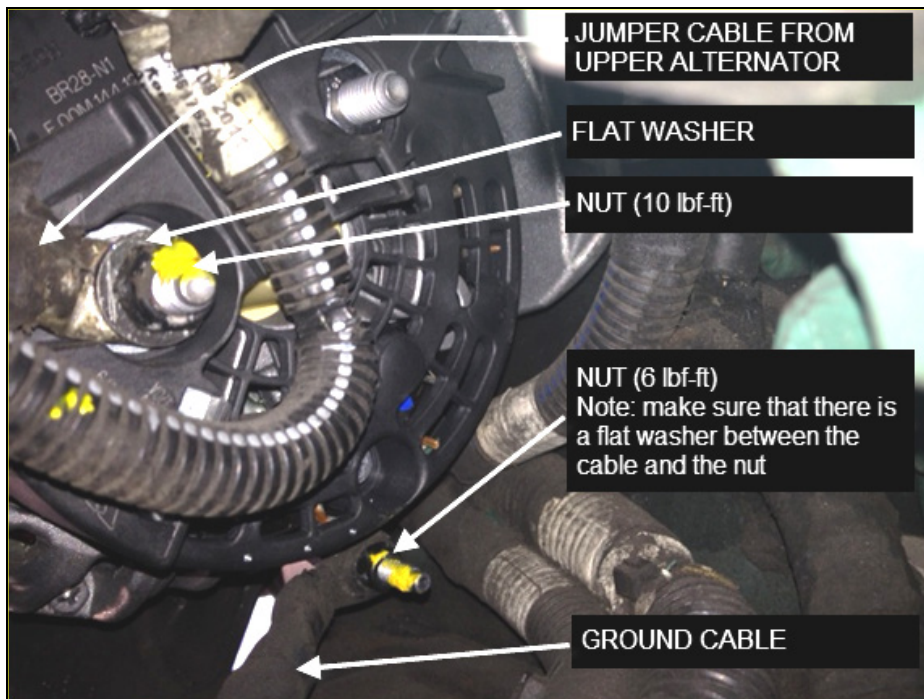


FIGURE 10

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

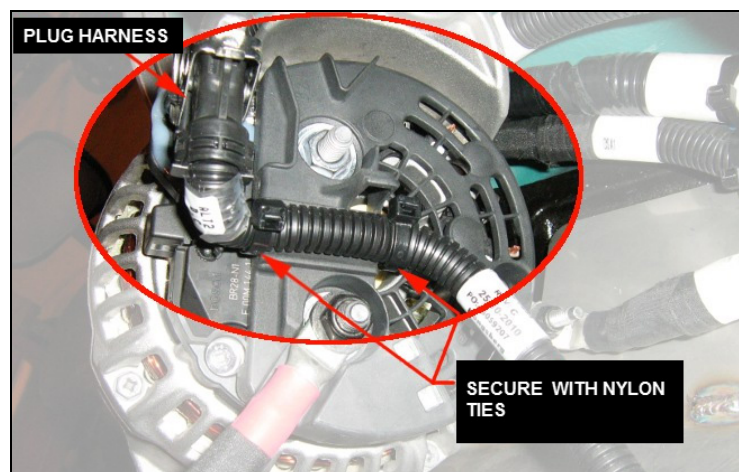


FIGURE 11

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

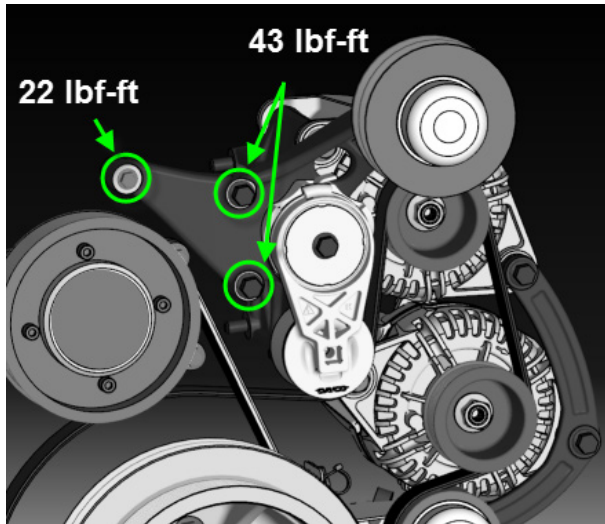


FIGURE 12

20. 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

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

Access all our Service Bulletins on
<http://prevostparts.volvo.com/technicalpublicatios/en/pub.asp>
 Or scan the QR-Code with your smart phone.

E-mail us at technicalpublications_prev@volvo.com and type "ADD" in the subject to receive our warranty bulletins by e-mail.

