SERVICE BULLETIN

SB1210

ADDRESSEES	: Owners and operators of coaches listed under 'Application'
COACH/BUS MODEL	: C2045 with Caterpillar C13 engine
BULLETIN TYPE	: Service Information
SECTION/CHAPTER	: Section 9 – Electrical system Chapter 14.2 Electric power feed
DATE	: October 8, 2007
SUBJECT	**: Alternator B+ cable retention**
TERMS & CONDITIONS	: No claims will be accepted with reference to this Bulletin.

APPLICATION:

The Service Information subject of this Bulletin is applicable to units 47001 → 47447.

DESCRIPTION:

1. To address vibration issues affecting the alternator B+ ring terminal, a P-clamp is now fitted below the black PVC terminal cover in order to improve cable retention and ensure the service life of the terminal (Figure 1).
   This modification has been cut into production on both the upper most and lower most mounted alternators as from Commuter Coach # 47448.

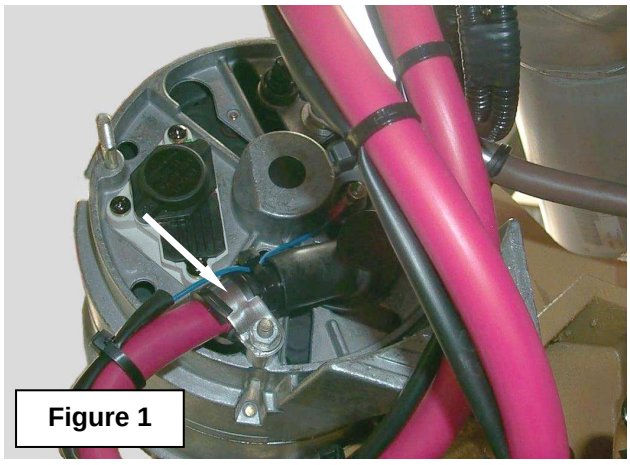


Figure 1

2. The maintenance schedule calls for an electrical cable retention check after the first 1,000 miles from running in, and from then on during every 12,000 miles interval.
   When these checks reveal retention issues at the alternator B+ terminals, Van Hool recommend to change the B+ cable installation as described in this Bulletin.

PARTS AND PRODUCTS:

VH reference	Description	Qty.
VH 637100110	P-clamp, 19/32 inch (15 mm) diameter	2
VH 660203101	Nut, M6 x 1.0 mm, grade .8	2
VH 660636300	Lock washer, M6	2
VH10693808	Bushing, spacer	2
VH 10520290	Terminal, ring, B+ cable, 5/16” (8 mm) diam. eye, 0 AWG	2

- Parts and products disposition: discard according to applicable environmental regulations.

PROCEDURE:

To secure the alternator B+ cable to the alternator housing using a P-clamp

1. General:

- This job should be executed by an experienced automotive electrician
- For more information refer to the Electrical Wiring Diagram Booklet that comes with the coach, the Maintenance Manual, and the Operating Manual.

2. Special tools, equipment or services:

- This job requires the use of: a ¼” drive torque wrench ranging from 15 to 150 in.lbf with 1 in.lbf increments

3. Preparations:

- Park the coach on a level surface with the front wheels straight. Apply the parking brake and shut down the engine. Switch off all systems and turn off the battery master switch.
- When not working in the driver’s area, put a “DO NOT OPERATE” tag on the instrument panel.
- Read the entire procedure before beginning to work.

CAUTION: Before working on the alternator B+ cables turn off the battery disconnect switch in the battery compartment (Figure 2).

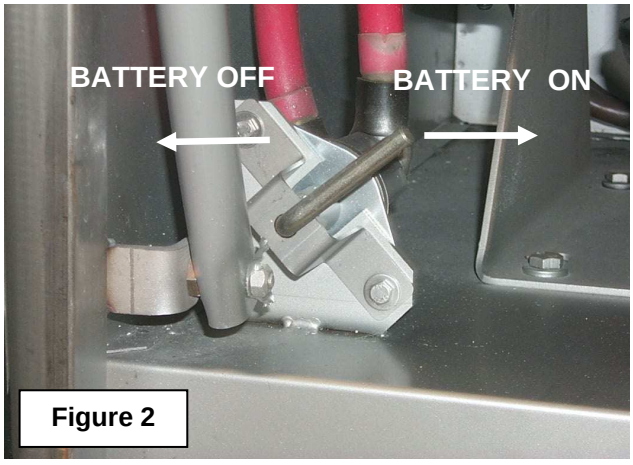


Figure 2

CAUTION: Observe safe shop practices at all times.

4. To install P-clamps VH 637100110:

1) Working inside the engine compartment, at the rear of the upper most alternator:

   Pull back the B+ ring terminal protective cover.
   Check the terminal for possible damage.
   If the terminal shows any signs of cracking, it should be replaced first.

2) To change the B+ cable installation, proceed as follows:

   Undo the nut securing the terminal (1, Figure 3).
   Undo the nut securing the D+ terminal (2, Figure 3).
   Cut cable ties as required to allow re-routing of the B+ and D+ cables.

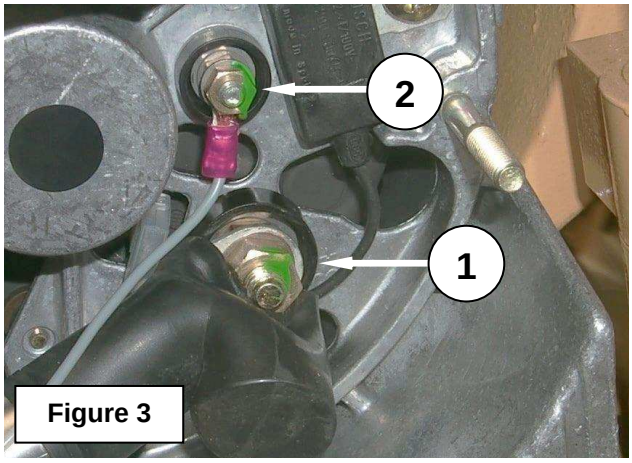


Figure 3

3) Referring to Figure 4, slip a P-clamp over the cable (1).
   Install a spacer bushing over the lower most stud (2).
   Install the P-clamp over the stud.
   Install the lock washer and nut (3).
   Adjust the cable routing for a stress-free installation.
   Tighten the clamp nut to a torque of 80 in.lbf (8.6 Nm).
   Tighten the B+ terminal nut to a torque of 80 to 115 in.lbf (9 to 13 Nm).
   Tighten the D+ terminal nut to a torque of 21 to 28 in.lbf (2.4 to 3.2 Nm).
   SRe-secure the B+ and D+ cables with cable ties.

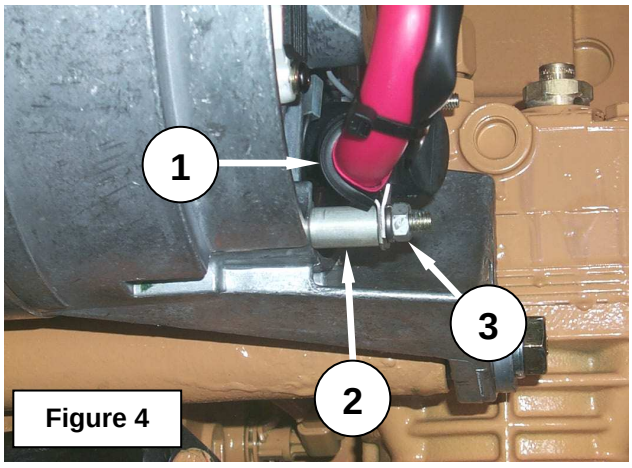


Figure 4

4) Repeat steps 1 and 2 for the lower most alternator.

5) Referring to Figure 5, check the cable routing to be compliant to the one shown. Adjust as necessary.

6) Turn on the battery disconnect switch.

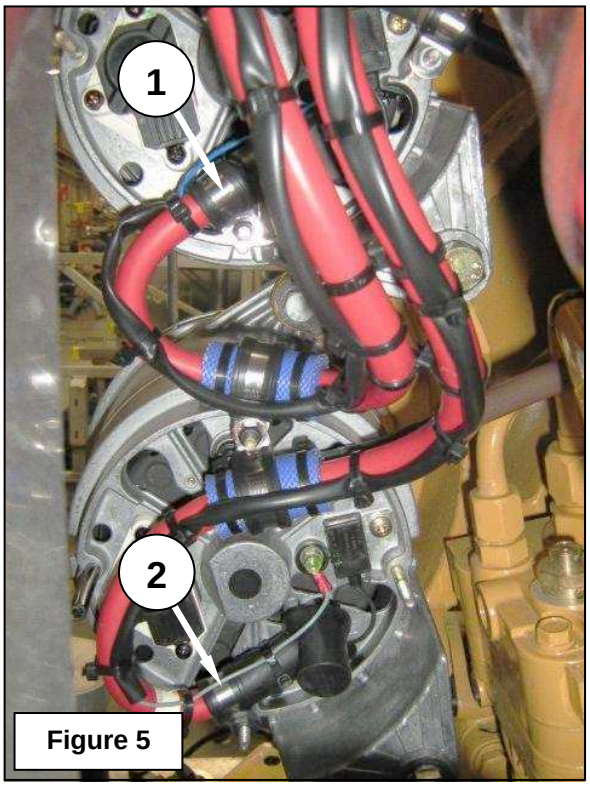


Figure 5

Procedure complete.

DISCLAIMER:

The procedures contained herein are not exclusive. Van Hool cannot possibly know, evaluate, or advise the transportation industry of all conceivable ways in which a procedure may be undertaken or of the possible consequences of each such procedure. Other procedures may be as good, or better, depending upon the particular circumstances involved.
Each carrier who uses the procedures herein must first satisfy itself thoroughly that neither the safety of its employees or agents, nor the safety or usefulness of any products, will be jeopardized by any procedure selected.

SERVICE INFORMATION:

Service Bulletins are issued to supplement or supersede information in the Van Hool manuals. Note Service Bulletin number, date and subject on the register at the end of the relevant chapter(s). File Service Bulletin separately for future reference.