



TECHNICAL SERVICE INFORMATION BULLETIN

TSIB 15-07, rev A		December 18, 2015
TO:	All operators	
TITLE:	Alternator Power Cable Support Inspections	
APPLICABILITY:	All New Flyer Xcelsior and LF Buses	

New Flyer has observed several instances of chafing of the alternator power cable installations in certain of customers' vehicles. New Flyer is issuing this Technical Service Information Bulletin to notify its customers of the potential for this chafing to occur in certain circumstances. In order to prevent chafing, New Flyer reminds customers that the inspection procedures described in the New Flyer Service Manuals relating to its vehicles must be followed before chafing issues manifest themselves and require extensive and/or expensive repairs.

The inspection of alternator power cables is located in the Preventative Maintenance section of the New Flyer Service Manual for the vehicle and is to be conducted during every 6,000 mile (9,600km) inspection. A representative sample of that inspection procedure is provided below:

6,000 Miles (9,600 km) Preventive Maintenance

Inspect all power cables and wiring harnesses. Repair or replace the cable, harness, and/or protective covering if any of the following conditions are evident:

- a. Loose or corroded connections
- b. Damaged or missing protective insulator boots on positive terminals of power cables.
- c. Lack of dielectric grease on exposed power cable terminals. Clean terminals and reapply dielectric grease.
- d. Crushed, cut, or heat-damaged wire covering (corrugated split-loom).
- e. Blistered, soft, or deteriorated wire insulation.
- f. Excessive buildup of oily residue, dirt or road grime. Clean as required.

New Flyer advises that power cable routings in the engine compartment be inspected, and in particular, in the area immediately in front of the connection to the alternator. The alternator power cable mounting hardware is fixed to the ceiling of the engine enclosure and is subjected to the motion of the alternator as it moves with the engine. Excessive motion and/or vibration can lead to chafing and premature wear of the power cable insulation. If not repaired or remediated, chafing of the power cable will result in the cable insulation being compromised, which in turn could result in an electrical short circuit.



There are two general methods recommended by New Flyer to secure the power cables in front of the alternator attachment. The first method is by using a nylon split block clamp (Figure 1). The second method is by using a “Hellerman” saddle clamp that utilizes special wide “Panduit” zip-ties secured around the cable (Figure 2).

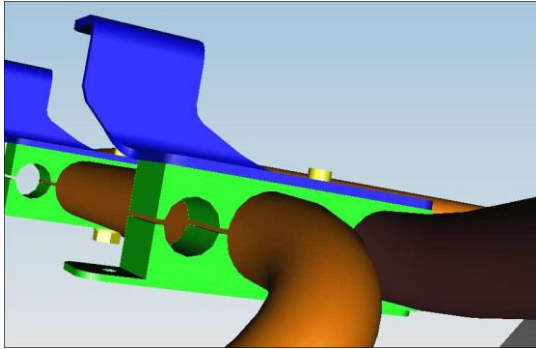


Figure 1. Nylon Split Block Clamp.

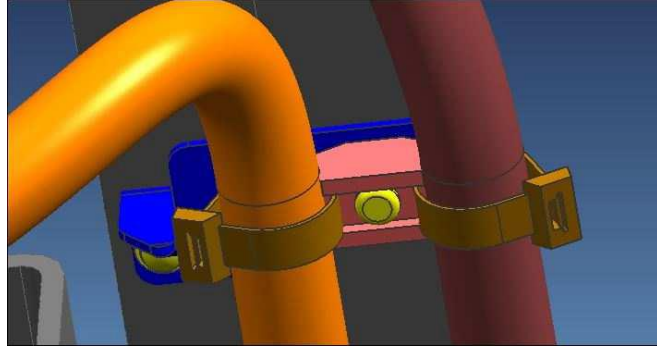


Figure 2. Hellerman saddle clamp with Panduit zip-ties.

Note that the bolt attachment of the nylon split block clamp may become loose as a result of vibration if it is not adequately torqued, or if Loctite thread locker is not used during re-installation after maintenance. Also inspect for chafing of the power cable insulation on the edge of the nylon block.

With respect to the Hellerman saddle clamp installation, New Flyer has observed that maintenance technicians have at times used common narrow zip-ties in place of the wider Panduit style zip-ties (New Flyer PN 351161). New Flyer advises against the use of the narrow zip-ties as they may break or damage the cable insulation because the load being distributed over the narrow zip-tie is too great. The larger width of the specially designed Panduit zip-tie is more appropriate for this application and only the Panduit zip-tie should be used.

New Flyer expects that in conducting inspections of the alternator power cables, customers are:

- Looking for loose, damaged or missing alternator power cable clamps;
- Re-torquing loose alternator power cable clamp assemblies in accordance with the New Flyer Service Manual;
- Verifying that only the proper Panduit zip-ties and power cable support clamps are installed; and
- Looking for any additional damage or wear marks on the insulation of the power cables installed.

Direct all inquiries regarding this bulletin to:

Ted Kosokowsky
Technical Service Manager
New Flyer Service Organization
Phone: (204) 224-6859
Email: Ted_Kosokowsky@newflyer.com