SAFETY RECALL

Mack Trucks Inc.
Greensboro, NC USA

Date	Number	Page
6/17	**SC0407**	1 (19)

High Amperage Alternator Cable, Replacement

SAFETY RECALL INFORMATION:

(June 2017)

On LE, LR and MR trucks with the optional high amperage alternators (greater than 200 amps), the alternator charging cable may be of insufficient size to adequately support the amount of electrical current that is supplied by the alternator. To correct this issue, replace the alternator charging cable with a larger gauge cable as instructed in this document.

MACK Trucks has received no reports of personal injury as a result of this condition. Therefore, MACK Trucks considers this as a proactive measure to protect the public and MACK's customers from the potential risk associated with this defect.

VEHICLES AFFECTED:

2010 - 2016 LE, LR and MR trucks with high amperage alternators (greater than 200 amps).

VEHICLE INDENTIFICATION NUMBERS (VIN):

The number of vehicle affected by this recall is 3345 (3303 USA, 42 Canada, 0 Mexico).

Table of Contents

REQUIRED PARTS:

To schedule parts orders, please call 877-986-5862 and provide the following:

- 17 digit Vehicle Identification Number
- Recall Number SC0407
- Dealer Code
- Purchase Order Information

Engine: MP7
Transmission: Allison™ Medium Duty

PART NUMBER	QTY	DESCRIPTION
21852901	1	Cable
993183	1	Plastic P-Clamp
984725	1	M6 Flange Screw
980464	6	Cable Tie
20885496	3	Helicopter style Cable Tie

Engine: MP7
Transmission: Allison™ Heavy Duty

PART NUMBER	QTY	DESCRIPTION
21852901	1	Cable
965554	2	Bell Housing Bracket
993183	1	Plastic P-Clamp
984725	1	M6 Flange Screw
980464	2	Cable Tie
20885496	2	Helicopter style Cable Tie

Engine: MP7
Transmission: Eaton Fuller™, Mack MaxiTorque

PART NUMBER	QTY	DESCRIPTION
21852901	1	Cable
993183	1	Plastic P-Clamp
984725	1	M6 Flange Screw
980464	5	Cable Tie
20762960	1	Push Pin Cable Tie
20885496	3	Helicopter style Cable Tie

REQUIRED PARTS: (Continued)

Engine: MP7
Required Parts for Exhaust Piping Removal

PART NUMBER	QTY	DESCRIPTION
21021852	1	V-Band Clamp 4 Inch
21060426	1	RG Ray V-Band Clamp 4 Inch
21095721	2	Gasket, V-band Joint 4 Inch

Engine: MP8
Transmission: Allison™ Heavy Duty

PART NUMBER	QTY	DESCRIPTION
21852901	1	High Amperage Power Cable
965534	1	180° Bracket (Short)
965537	1	180° Bracket (Long)
965552	2	90° Bracket
965560	1	Bell Housing Bracket
965554	2	Bell Housing Bracket
993183	4	Plastic P-Clamp
20885496	3	Helicopter style Cable Tie
980464		Cable Tie
984733	7	M8x16 Flange Screw
984738	1	M8x40 Flange Screw
990940	4	Flange Nut

Engine: MP8
Transmission: Eaton Fuller™, Mack MaxiTorque

PART NUMBER	QTY	DESCRIPTION
21852901	1	High Amperage Power Cable
965534	1	180° Bracket (Short)
965537	1	180° Bracket (Long)
965552	2	90° Bracket
993183	4	Plastic P-Clamp
980464	6	Cable Tie
20885496	4	Helicopter style Cable Tie
984733	7	M8x16 Flange Screw
984738	1	M8x40 Flange Screw
990940	4	Flange Nut

DECOMMISSIONING THE TRUCK FOR REPAIR

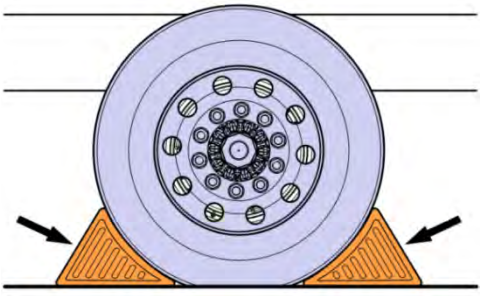
⚠ DANGER

Do not attempt to repair or service this vehicle without having sufficient training, the correct service literature and the proper tools. Failure to follow this could make the vehicle unsafe and lead to serious personal injury or death.

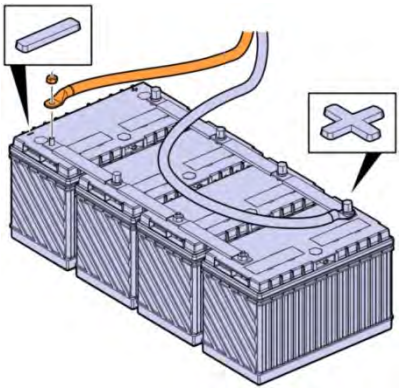
NOTE

The Illustrations shown in this document are used for reference only and may differ slightly from the actual vehicle being serviced. However, the replacement procedure is represented as accurately as possible.

1. Secure the vehicle for service by parking on a flat and level surface, applying the parking brake, chocking the rear wheel, and placing the transmission in neutral.



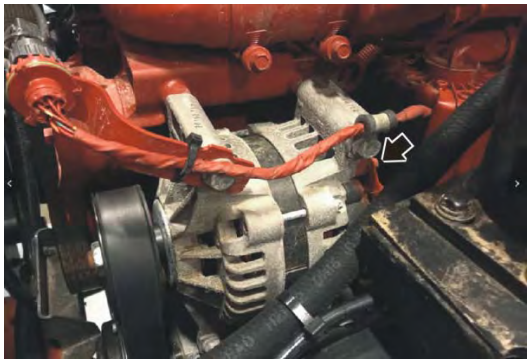
2. Disconnect the cable from the battery's negative (ground) terminal.



REPAIR PROCEDURE:

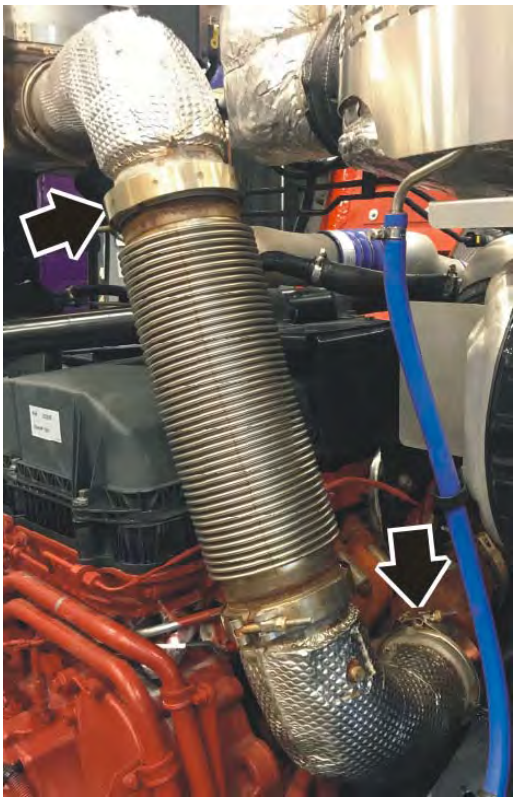
1. Tilt the cab forward.

2. Remove the nuts fastening the cable terminals to the alternator terminal stud and starter terminal stud.



3. Clip all cable ties and remove all fasteners securing the charging cable to the engine and transmission. It may be necessary to cut the cable into pieces for easier removal.

4. It may be necessary to remove a portion of the exhaust piping to allow for easier access to the starter.



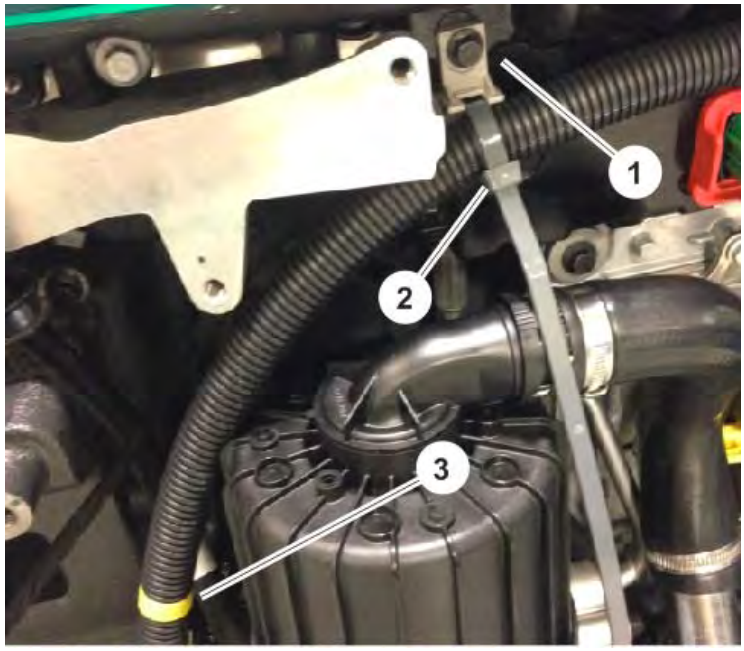
NOTE
The gaskets and v-band clamps are one time use only and should be replaced when reassembling the exhaust piping.

5. The following steps illustrate the proper routing depending on the particular engine and transmission combination. Determine the proper section to use and route the charging cable as necessary.

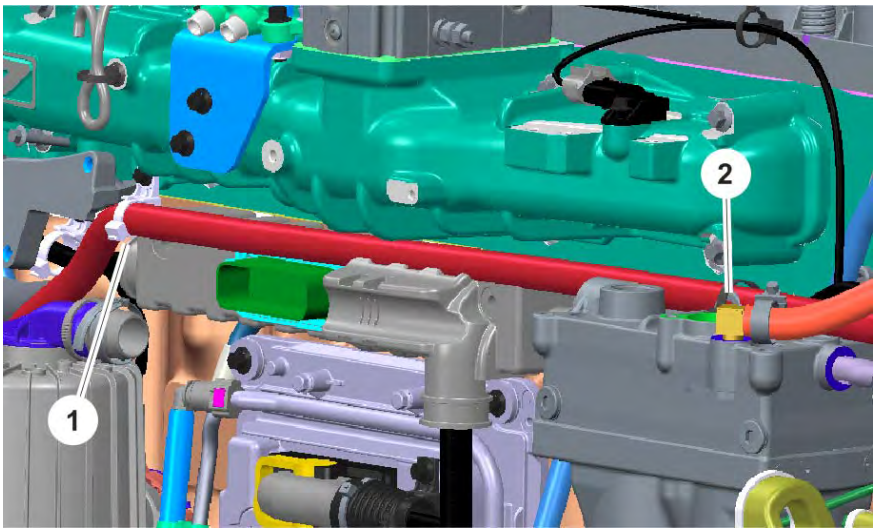
⚠ WARNING
Improper routing and securing can lead to cable rubbing and potential short circuiting.

For All MP7 (11L) Engines

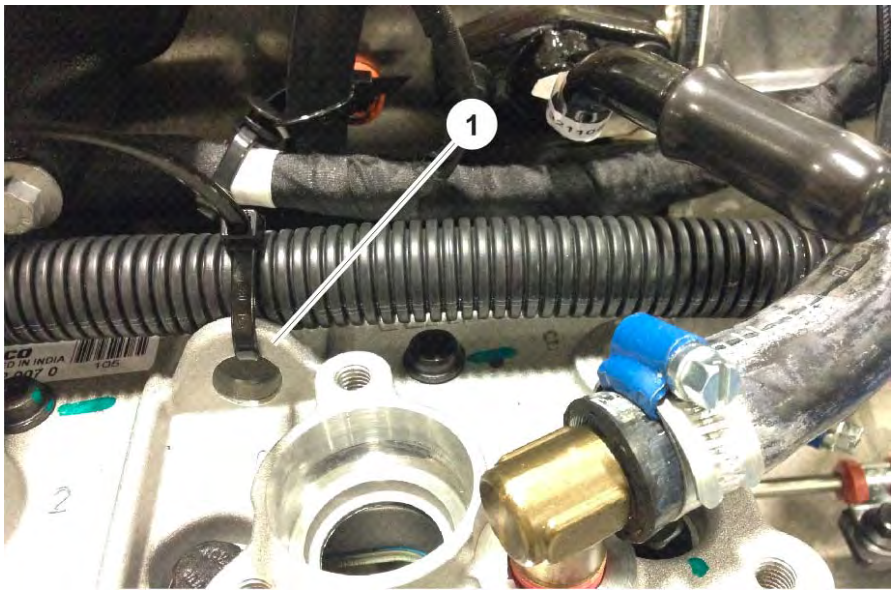
1. Starting near the alternator, install a plastic p-clamp **(1)** as shown in the picture. Then secure the new cable with a cable tie **(2)** approximately 240mm from the yellow tape **(3)**.



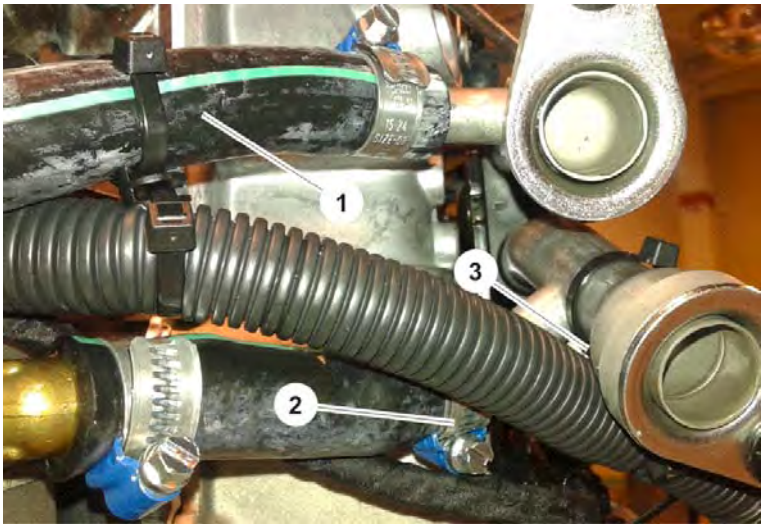
2. Continuing along the engine, route the cable from the previously install p-clamp **(1)** to the top of the air compressor **(2)**.



3. Install a cable tie securing the cable to the air compressor lifting eye **(1).**



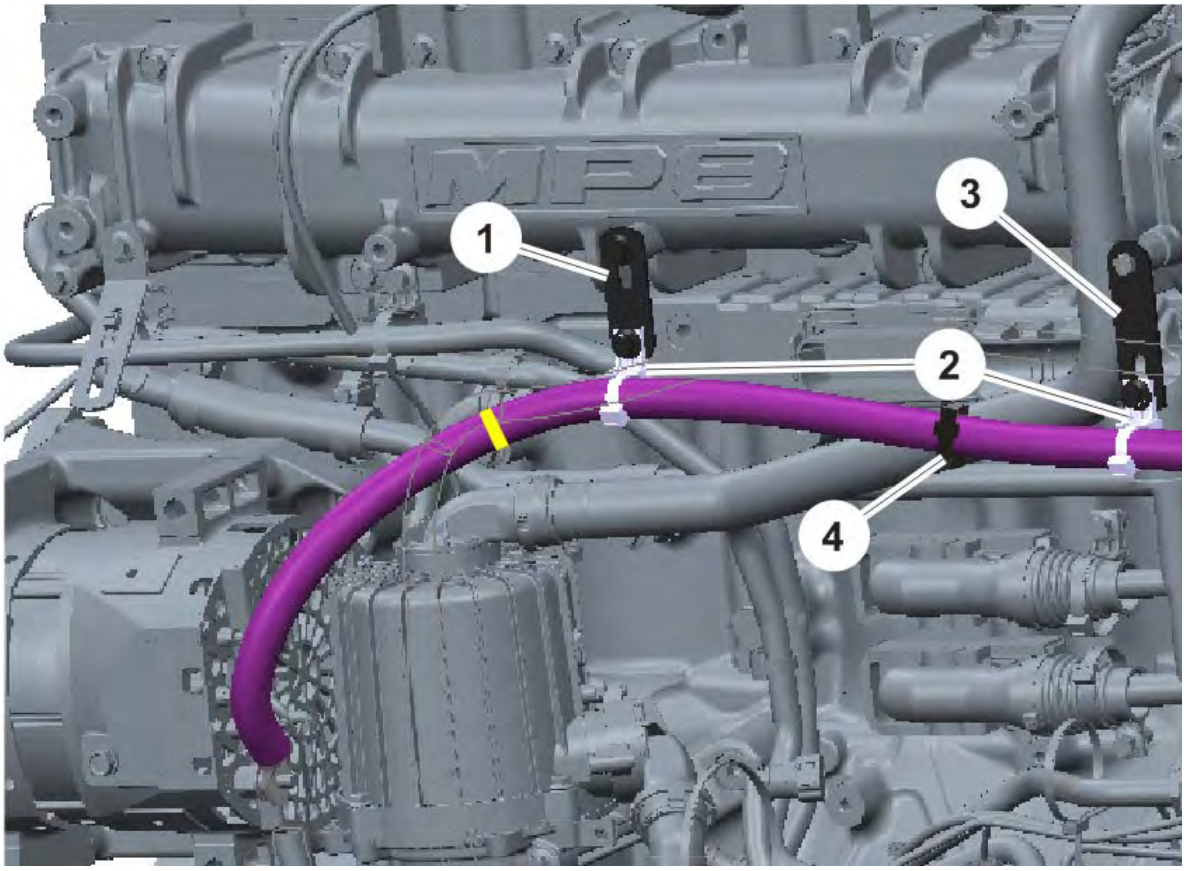
4. Route the power cable under the rubber air conditioning coolant hose **(1)** and secure with a helicopter style cable tie. Loosen a rotate the pipe clamp **(2)** so that the head does not contact the power cable. Retighten the pipe clamp as necessary. Route the cable under the air conditioning pipe and secure with a helicopter style cable tie **(3).**



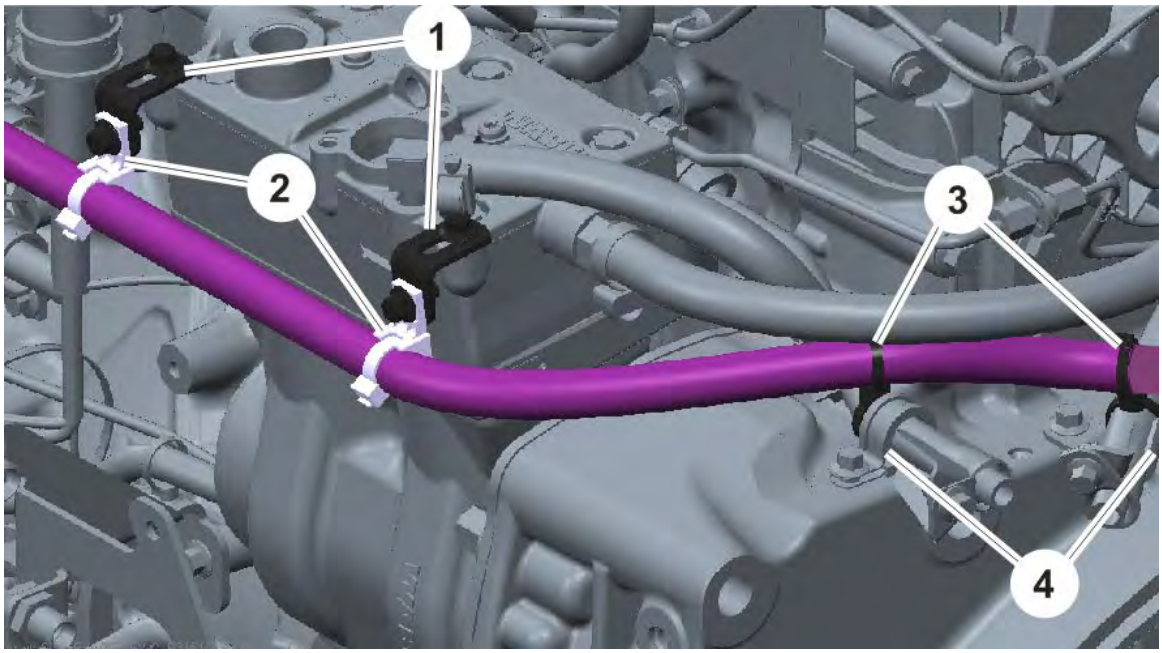
5. After the cable has been routed along the engine, find the section appropriate relevant for the truck's transmission and continue routing the cable.

For All MP8 (13L) Engines

1. Install the short attachment bracket **(1)** and p-clamp **(2)** to the forward attachment point as shown. Install the long attachment bracket **(3)** and p-clamp **(2)** to the rear attachment point as shown. Measure approximately 50mm back from the yellow tape and use a cable tie to secure to the forward attachment point **(1)**. Secure the cable to the adjacent crank case ventilation (CCV) pipe with a helicopter style cable tie **(4).**



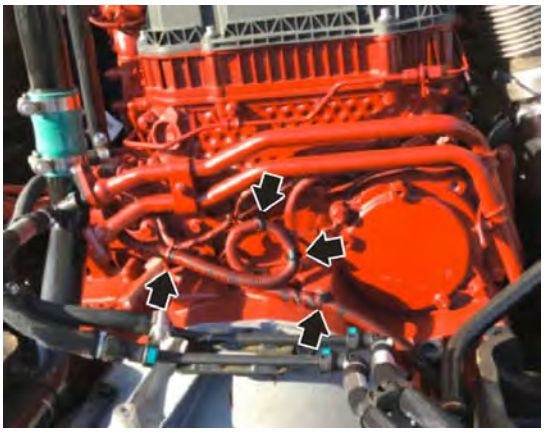
2. Install the 90-degree brackets **(1)** to the air compressor as shown and install the p-clamps **(2)** to the brackets. Fasten the cable with helicopter style cable ties **(3)** behind the coolant pipe p-clamps **(4)** as shown.



3. After the cable has been routed along the engine, find the section appropriate relevant for the truck's transmission and continue routing the cable.

Excess Cable Information for All Transmissions

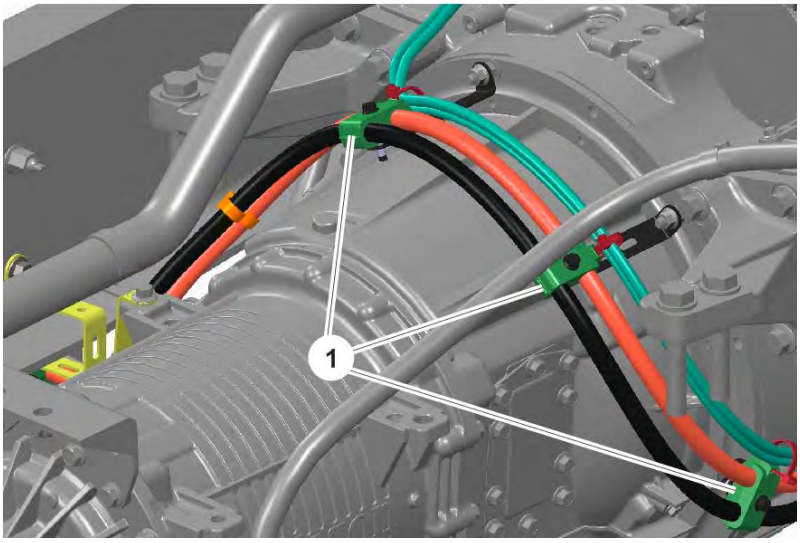
1. If excess cable is left after routing, the remaining cable length can be routed in various ways depending on the amount of excess length and the engine and transmission configuration. Refer to the images below on acceptable ways to secure the excess length.



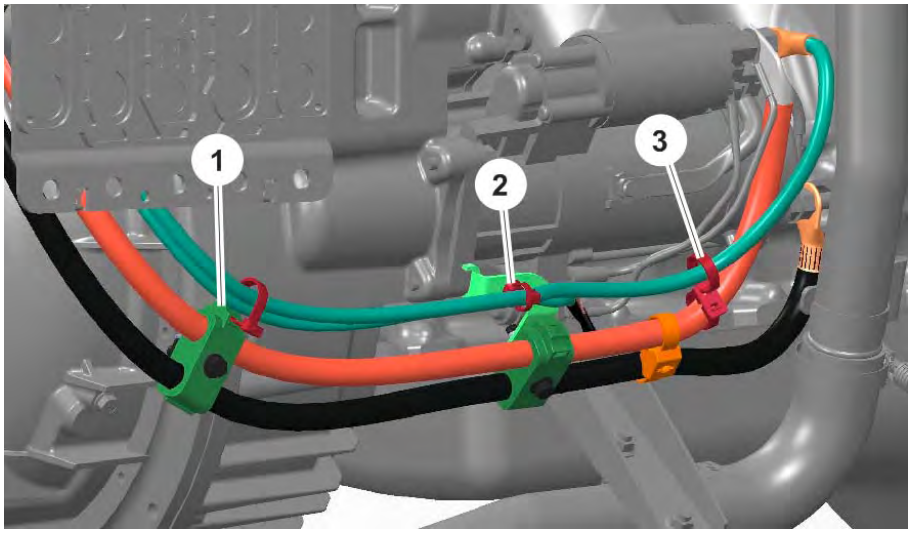
NOTE
Be sure not to route the excess length in front of the rear power take off (PTO) cover.

For All Allison™ Medium Duty (AMD) Transmissions

1. Continuing routing from the cold side of the engine, route the charging cable along the battery cables. Use a cable tie to secure the charging cable to the side of each battery cable clamp **(1)**.

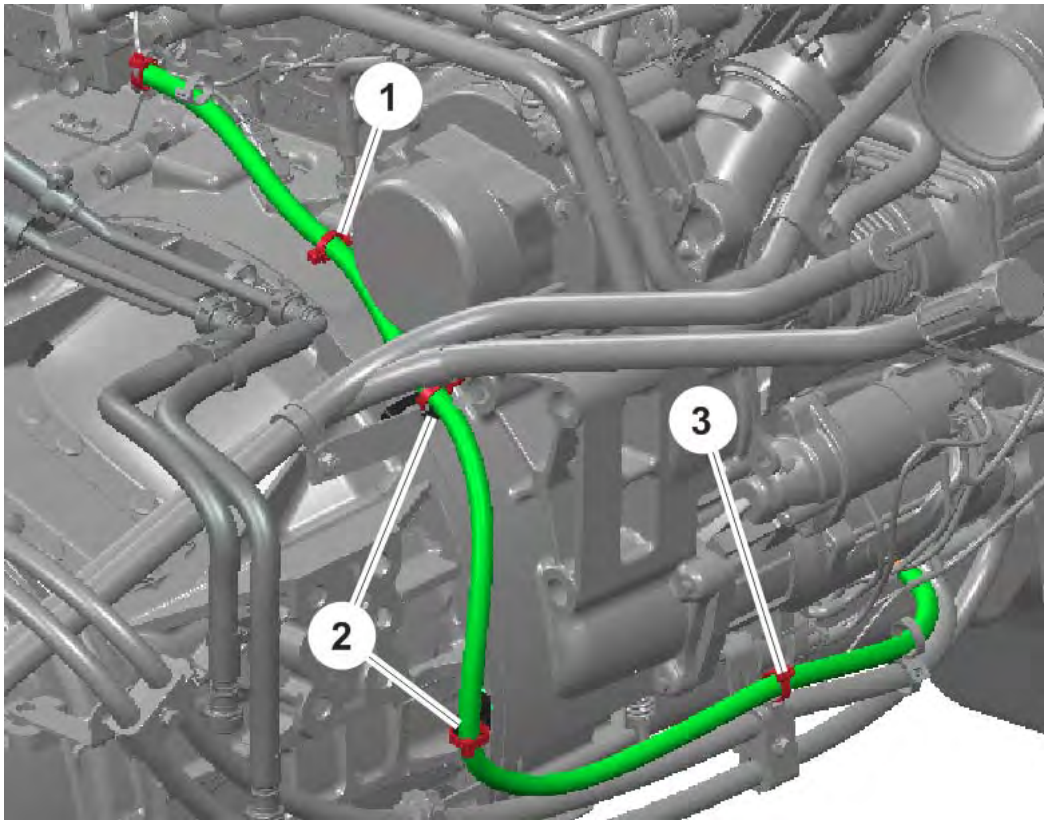


2. Continue routing the charging cable along the battery cable and securing it to the battery cable clamps with cable ties **(1)**. Use a push pin cable tie to secure the charging cable to the bracket **(2)**. Use a helicopter style cable tie to secure the charging cable approximately half way between the last battery cable clamp and the starter **(3)**.



For Allison™ Heavy Duty (AHD) Transmissions with MP7 (11L) Engines

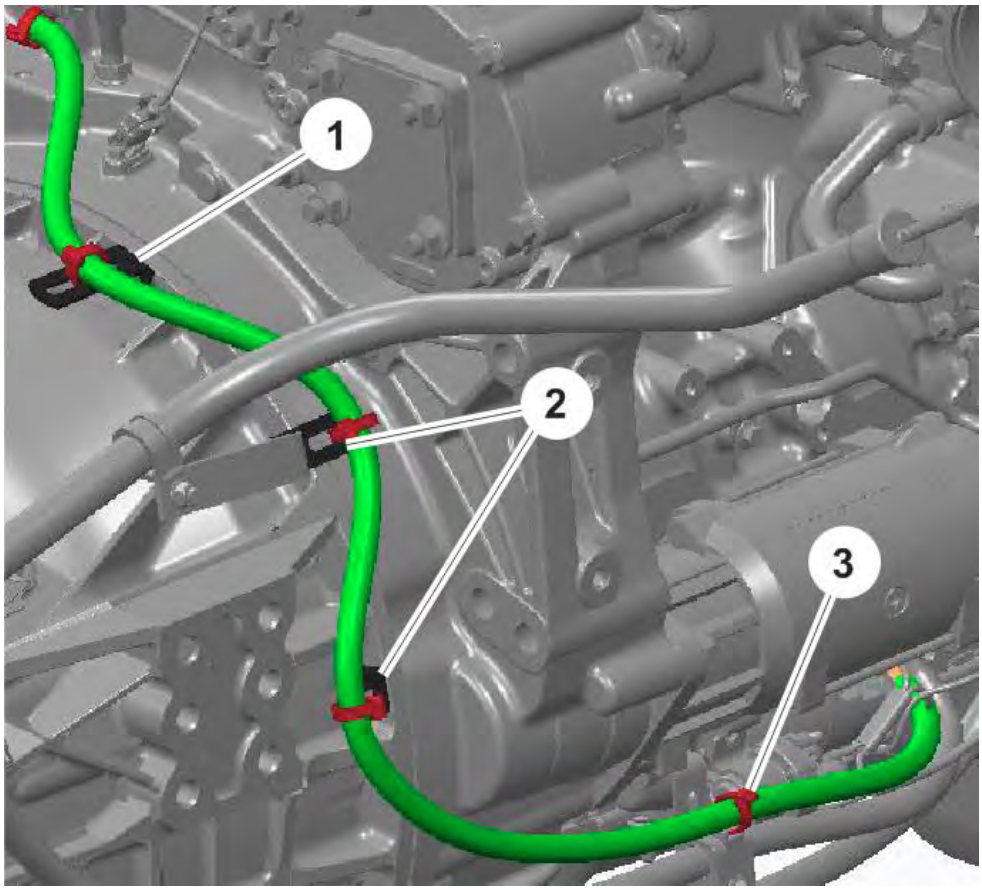
1. Use a push pin cable tie **(1)** to attach the charging cable to the back side of the engine. If the attachment brackets **(2)** are not already present, install the necessary brackets as shown. Route the charging cable to the brackets and fasten the cable to the brackets with cable ties. Use a cable tie to fasten the charging cable to the existing battery cable clamp **(3)**.



NOTE
If it is necessary to remove bell housing bolts to install cable attachment brackets, the bell housing bolts must be torqued to 92 Nm ± 8 Nm (68 ft-lbs ± 6 ft-lbs) when reinstalled.

For Allison™ Heavy Duty (AHD) Transmissions with MP8 (13L) Engines

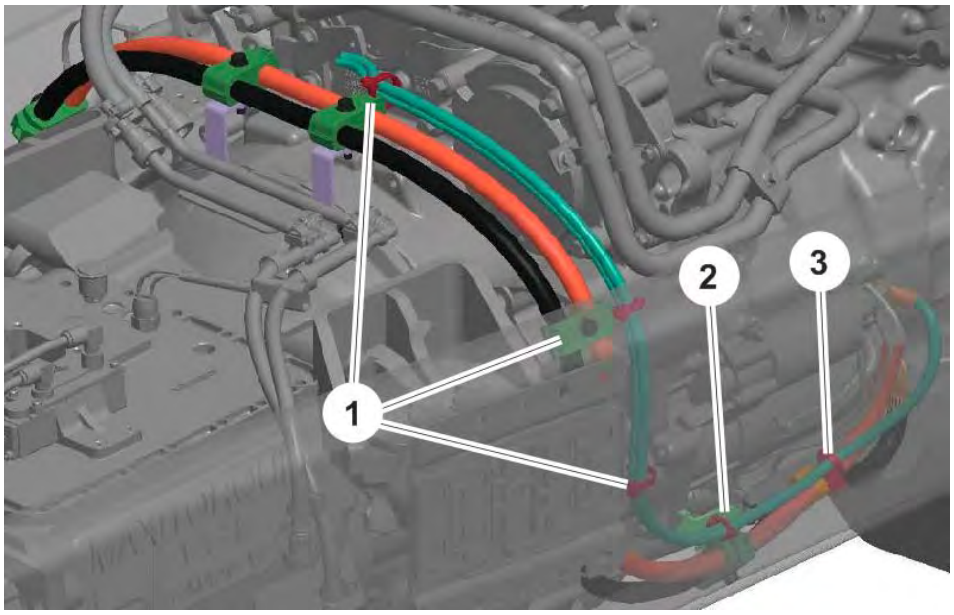
1. If the attachment brackets **(1 & 2)** are not already present, install the necessary brackets as shown. Bracket **(1)** will be part number **965560** and bracket **(2)** will be part number **965554**. Route the charging cable to the brackets and fasten the cable to the brackets with cable ties. Use a cable tie to fasten the charging cable to the existing battery cable clamp **(2)**.

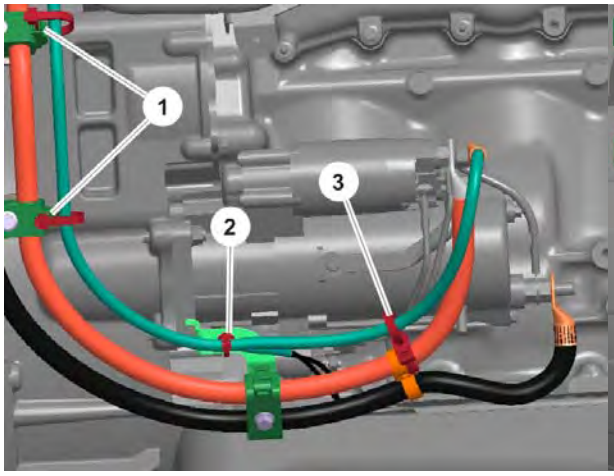


NOTE
If it is necessary to remove bell housing bolts to install cable attachment brackets, the bell housing bolts must be torqued to 92 Nm ± 8 Nm (68 ft-lbs ± 6 ft-lbs) when reinstalled.

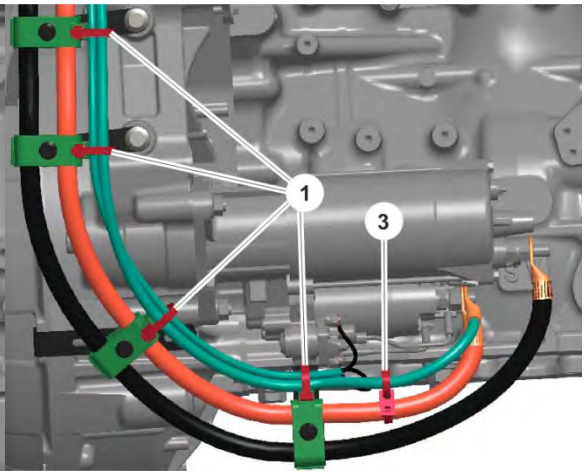
For All Eaton Fuller™ and MaxiTorque Transmissions

1. Route the charging cable along the battery cable. Attach the charging cable to the battery cable clamps using cable ties **(1)**. On MP7 (11L) engines, there may be an additional bracket where a push pin cable tie can be used to attach the cable **(2)**. Use a helicopter style cable tie **(3)** to keep the charging cable and battery cable from rubbing.





MP7 (11L) Engine



MP8 (13L) Engine

Alternator and Starter Terminal Torque Specifications

1. The alternator and starter terminal torque requirements will vary depending on the alternator and starter models. Follow the tables below to find the proper torque requirement.

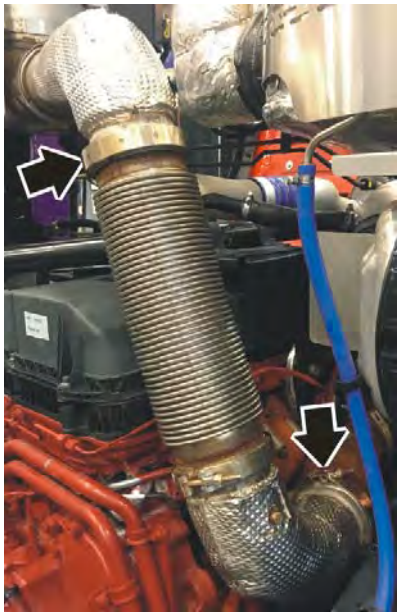
Starter Motor		
Stud Size	**Nut Tightening Torque**	
	Melco™	Delco-Remy™
M10	18 ± 3.6 Nm	-
M12	25 ± 5 Nm	26 ± 1.5 Nm

Alternator	
Alternator	**Torque Specification**
Leece-Neville™ A0014951PGH	80 – 120 lb-in
Leece-Neville™ A0014949PA	
Leece-Neville™ A0014949PGH	
Leece-Neville™ A0014962PGH	

2. Torque the alternator and starter terminal nuts to the proper torque specification.

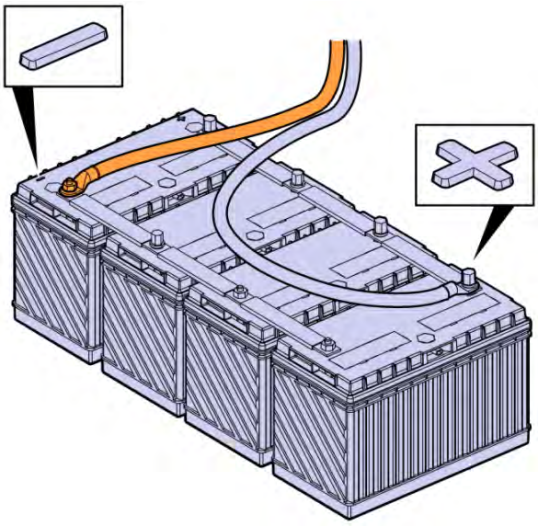
COMMISSIONING THE TRUCK FOR OPERATION:

1. Re-install the exhaust piping using new sealing gaskets and new v-band clamps. Torque the V-band clamps to 7 ± 0.5 Nm.

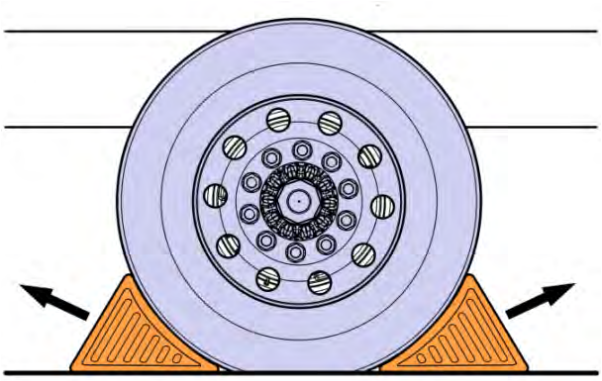


NOTE
The gaskets and v-band clamps are one time use only and should be replaced when reassembling the exhaust piping.

2. Connect the battery cable to the negative (ground) terminal.



3. Remove the wheel chocks.



REIMBURSEMENT:

	UCHP Reimbursement
Claim Type (used only when uploading from the Dealer Business System)	R
Recall Status	
Vehicle repaired per instructions	1-Modified per instructions
Labor Code	
Primary Labor Code (High Amperage Alternator Cable, Replacement)	3715-03-09-01 2.0 hrs
Time to take charge of vehicle and determine campaign status	1700-16-01-01 0.3 hrs
Causal Part	23122970
Authorization Number	C6588

Take-charge time is not included in the labor code for this operation. Take charge may be eligible, but can only be used once per vehicle repair visit. If the vehicle is having other warranty repairs performed, take-charge should be charged to the warranty repair, otherwise take-charge can be charged to this Safety Recall campaign.