Subject: Western Star Ground Circuit Splice Pack

Models Affected: Specific Model Year 2019-2021 Western Star 4700 and 5700 model vehicles manufactured October 24, 2018, through May 6, 2020.

General Information

Daimler Trucks North America LLC (DTNA), on behalf of its wholly owned subsidiary, Western Star Truck Sales, Inc., has decided that a defect that relates to motor vehicle safety exists on the vehicles mentioned above.

On certain vehicles, a particular wire in the ground harness may be undersized, resulting in a melted connector or corrosion in the ground circuit harness. If the connector becomes damaged, under certain circumstances, the engine may stall without the ability to restart, which may increase the risk of a crash.

The ground circuit splice pack, located in the engine compartment near the frame rail on the driver's side, will be replaced.

There are approximately 3,827 vehicles involved in this campaign.

Additional Repairs

Dealers must complete all outstanding Recall and Field Service campaigns prior to the sale or delivery of a vehicle. A Dealer will be liable for any progressive damage that results from its failure to complete campaigns before sale or delivery of a vehicle.

Owners may be liable for any progressive damage that results from failure to complete campaigns within a reasonable time after receiving notification.

Work Instructions

Please refer to the attached work instructions. Prior to performing the campaign, check the vehicle for a completion sticker (Form WAR260).

Replacement Parts

Replacement parts are now available and can be obtained by ordering the part number(s) listed below from your facing Parts Distribution Center.

If our records show your dealership has ordered any vehicle(s) involved in campaign number FL852, a list of the customers and vehicle identification numbers will be available on DTNAConnect. Please refer to this list when ordering parts for this recall.

Table 1 - Replacement Parts for FL852

Campaign Number	Part Description	Part Number	Qty.
FL852A	HARN-GND_PWRTN,ENG,OL,STD	AFL A66 13193 000SO	1 ea
FL852B	HARN-GND_PWRTN,ENG,OL,STD	AFL A66 13193 002SO	1 ea
FL852AB	BLANK COMPLETION STICKER	WAR260	1 ea

Table 1

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Removed Parts

U.S. and Canadian Dealers, please follow Warranty Failed Parts Tracking shipping instructions for the disposition of all removed parts. Export distributors, please destroy removed parts unless otherwise advised.

Labor Allowance

Table 2 - Labor Allowance

Campaign Number	Procedure	Time Allowed (hours)	SRT Code	Corrective Action
FL852A	Install ground circuit splice pack harness	1.4	996-R094A	12-Repair Recall/Campaign
FL852B	Install ground circuit splice pack harness	1.5	996-R094B	12-Repair Recall/Campaign

Table 2

IMPORTANT: When the Recall has been completed, locate the base completion label in the appropriate location on the vehicle, and attach the red completion sticker provided in the recall kit (Form WAR260). If the vehicle does not have a base completion label, clean a spot on the appropriate location of the vehicle and first attach the base completion label (Form WAR259). If a recall kit is not required or there is no completion sticker in the kit, write the recall number on a blank sticker and attach it to the base completion label.

Claims for Credit

You will be reimbursed for your parts, labor, and handling (landed cost for Export Distributors) by submitting your claim through the Warranty system within 30 days of completing this campaign. Please reference the following information in OWL:

- Claim type is Recall Campaign.
- In the Campaign field, enter the campaign number and appropriate condition code (FL852A or FL852B)
- In the Primary Failed Part Number field, enter 25-FL852-000.
- In the Parts field, enter the appropriate part number(s) as shown in the Replacement Parts Table.
- In the Labor field, first enter the appropriate SRT from the Labor Allowance Table. Administrative time will be included automatically as SRT 939-6010A for 0.3 hours.
- The VMRS Component Code is F99-999-005 and the Cause Code is A1 Campaign.
- U.S. and Canada -- Reimbursement for Prior Repairs. When a customer asks about reimbursement, please do the following:
 - · Accept the documentation of the previous repair.
 - Make a brief check of the customer's paperwork to see if the repair may be eligible for reimbursement. (See the "Copy of Owner Letter" section of this bulletin for reimbursement guidelines.)
 - Submit an OWL Recall Pre-Approval Request for a decision.
 - Include the approved amount on your claim in the Other Charges section.
 - Attach the documentation to the pre-approval request.
 - If approved, submit a based on claim for the pre-approval.
 - Reimburse the customer the appropriate amount.

IMPORTANT: OWL must be viewed prior to performing the recall to ensure the vehicle is involved and the campaign has not been previously completed. Also, check for a completion sticker prior to beginning work.

U.S. and Canadian dealers, contact the Warranty Campaigns Department via Web inquiry at DTNAConnect.com / WSC, if you have any questions or need additional information. Export distributors, submit a Web inquiry or contact your International Service Manager.

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U.S. and Canadian Dealers: To return excess kit inventory related to this campaign, U.S. dealers must submit a Parts Authorization Return (PAR) to the Memphis PDC. Canadian dealers must submit a PAR to their facing PDC. All kits must be in resalable condition. PAR requests must include the original purchase invoice number. Export Distributors: Excess inventory is not returnable.

The letter notifying U.S. and Canadian vehicle owners is included for your reference.

Please note that the National Traffic and Motor Vehicle Safety Act, as amended (Title 49, United States Code, Chapter 301), requires the owner's vehicle(s) be corrected within a reasonable time after parts are available to you. The Act states that failure to repair a vehicle within 60 days after tender for repair shall be prima facie evidence of an unreasonable time. However, circumstances of a particular situation may reduce the 60 day period. Failure to repair a vehicle within a reasonable time can result in either the obligation to (a) replace the vehicle with an identical or reasonably equivalent vehicle, without charge, or (b) refund the purchase price in full, less a reasonable allowance for depreciation. The Act further prohibits dealers from selling a vehicle unless all outstanding recalls are performed. Any lessor is required to send a copy of the recall notification to the lessee within 10 days. Any subsequent stage manufacturer is required to forward this notice to its distributors and retail outlets within five working days.

Copy of Notice to Owners

Subject: Western Star Ground Circuit Splice Pack

For the Notice to U.S. Customers: This notice is sent to you in accordance with the National Traffic and Motor Vehicle Safety Act. For the Notice to Canadian Customers: This notice is sent to you in accordance with the requirements of the Motor Vehicle Safety Act. This is to inform you that your vehicle may contain a defect that could affect the safety of a person.

Daimler Trucks North America LLC (DTNA), on behalf of its wholly owned subsidiary, Western Star Truck Sales, Inc., has decided that a defect that relates to motor vehicle safety exists on specific Model Year 2019-2021 Western Star 4700 and 5700 model vehicles manufactured October 24, 2018, through May 6, 2020.

On certain vehicles, a particular wire in the ground harness may be undersized, resulting in a melted connector or corrosion in the ground circuit harness. If the connector becomes damaged, under certain circumstances, the engine may stall without the ability to restart, which may increase the risk of a crash.

The ground circuit splice pack, located in the engine compartment near the frame rail on the driver's side, will be replaced. Repairs will be performed by Daimler Trucks North America authorized service facilities.

Please contact an authorized Daimler Trucks North America dealer to arrange to have the Recall performed and to ensure that parts are available at the dealership. To locate an authorized dealer, search online at www.Daimler-TrucksNorthAmerica.com. On the menu tab, select "Contact," scroll down to "Find a Dealer," and select the appropriate brand. The Recall will take approximately one and one half hours and will be performed at no charge to you. You may also confirm your vehicle's involvement in this recall at this URL: https://dtna-dlrinfo.prd.freightliner.com: 48518/ VinLookup/vin-module/getVinLookupPage

You may be liable for any progressive damage that results from your failure to complete the Recall within a reasonable time after receiving notification.

If you do not own the vehicle that corresponds to the identification number(s) which appears on the Recall Notification, please return the notification to the Warranty Campaigns Department with any information you can furnish that will assist us in locating the present owner. If you have leased this vehicle, Federal law requires that you forward this notice to the lessee within 10 days. If you are a subsequent stage manufacturer, Federal law requires that you forward this notice to your distributors and retail outlets within five working days. If you have paid to have this recall condition corrected prior to this notice, you may be eligible to receive reimbursement. Please see the reverse side of this notice for details.

If you have questions about this Recall, please contact the Warranty Campaigns Department at (800) 547-0712, 7:00 a.m. to 4:00 p.m. Pacific Time, Monday through Friday, e-mail address

DTNA.Warranty.Campaigns@Daimler.com. For the Notice to U.S. Customers: If you are not able to have the defect remedied without charge and within a reasonable time, you may wish to submit a complaint to the Administrator, National Highway Traffic Safety Administration, 1200 New Jersey Avenue, SE., Washington, DC 20590; or call the Vehicle Safety Hotline at (888) 327-4236 (TTY: 800-424-9153); or to http://www.safercar.gov. For the Notice to Canadian Customers: If you wish to submit a complaint about this recall, you can contact Transport Canada road safety, 80 rue Noel, Gatineau, Quebec J8Z 0A1 or call (800) 333-0510.

We regret any inconvenience this action may cause but feel certain you understand our interest in motor vehicle safety.

WARRANTY CAMPAIGNS DEPARTMENT

Enclosure

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Reimbursement to Customers for Repairs Performed Prior to Recall

If you have already paid to have this recall condition corrected you may be eligible to receive reimbursement.

Requests for reimbursement may include parts and labor. Reimbursement may be limited to the amount the repair would have cost if completed by an authorized Daimler Trucks North America LLC dealer. The following documentation must be presented to your dealer for consideration for reimbursement.

Please provide original or clear copies of all receipts, invoices, and repair orders that show:

- The name and address of the person who paid for the repair
- The Vehicle Identification Number (VIN) of the vehicle that was repaired
- What problem occurred, what repair was done, when the repair was done
- Who repaired the vehicle
- The total cost of the repair expense that is being claimed
- Proof of payment for the repair (such as the front and back of a cancelled check or a credit card receipt)

Reimbursement will be made by check from your Daimler Trucks North America LLC dealer.

Please speak with your Daimler Trucks North America LLC authorized dealer concerning this matter.

Work Instructions

Subject: Western Star Ground Circuit Splice Pack

Models Affected: Specific Model Year 2019-2021 Western Star 4700 and 5700 model vehicles manufactured October 24, 2018, through May 6, 2020.

Install Ground Circuit Splice Pack Harness

FL852A and FL852B

- Check the base label (Form WAR259) for a completion sticker for FL852 (Form WAR 260) indicating this
 work has been done. The base label is usually located on the passenger-side door about 12 inches (30cm)
 below the door latch. If a completion sticker is present, no work is needed. If a completion sticker is not
 present, continue with the next step.
- 2. Park the vehicle on a level surface, shut down the engine, and apply the parking brakes. Chock the tires.
- 3. Remove the bulkhead connector ENG_H_DASH_BHA_4A from the frontwall. See Fig. 1.
- 4. Remove the connector back shell cover. Using the tool DKIOCHA17002-12, remove the connector secondary terminal lock. See Fig. 2.

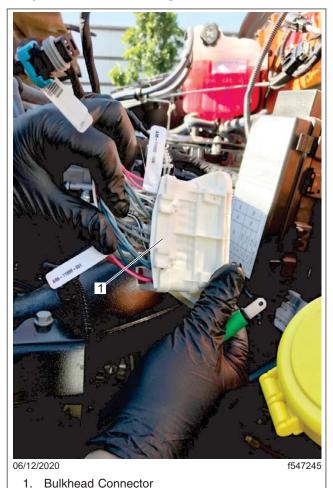




Fig. 2, Connector Removal

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- 5. Using the terminal extraction tool DKIOCHA17002-2, unwrap the harness about six inches in order to locate and extract the wire "GNDE" from pin 16, and leave it loose for now. See **Fig. 3**.
- 6. Disconnect the frontwall ground bullet connector GND_PWRTN_ENG_O_FW_GNDE_1A, which is located on the frontwall near the bulkhead connector.
- 7. Cut the connector wire near the connector, on the side coming from the engine harness A66-13193-000. See **Fig. 4**.

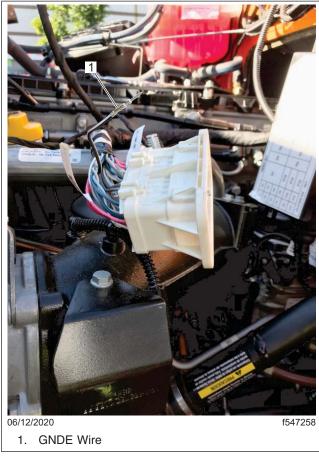


Fig. 3, GNDE Wire



Fig. 4, Frontwall Ground Bullet Connector

NOTE: The connector that is routed to the Mega Ground Junction Block (MGJB) must remain intact.

- 8. Apply shrink tube to the blunt cut wire and secure it into the harness.
- 9. Remove the cab mounted quarter fenders/splash shields as needed to access the harness routing and splice pack. Refer to **Section 88.01**, **Subject 100** of the *Western Star Workshop Manual* for instructions. Locate the GND splice pack GND_PWRTRN_ENG_O_SP_GNDE_1A which will be along the harness (A66-13193-000) and near the L/H frame rail. See **Fig. 5**.

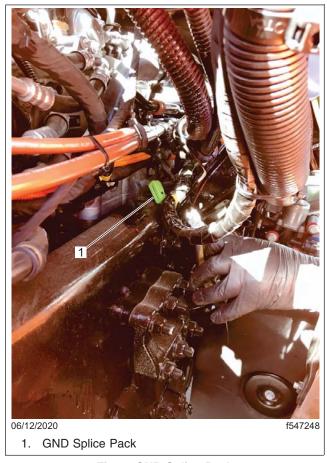


Fig. 5, GND Splice Pack

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NOTE: Some vehicles may have multiple splice packs so the correct splice pack must be verified.

10. To verify the correct splice pack, GND_PWRTRN_ENG_O_SP_GNDE_1A is identified, perform a continuity test using the digital volt ohm meter between the wire ENG_H_DASH_BHA_4A pin 16 (previously extracted from the Bulkhead connector) and the terminal pins within the splice pack.

IMPORTANT: The splice pack cover must be removed for this test and all the terminals must be tested individually. See Fig. 6.

11. Using the tool DKIOCHA17002-1, remove the connector cover (green) from the black termnial plug housing, and then remove the secondary termnial lock. See Fig. 7



Fig. 6, Splice Pack with Cover Removed

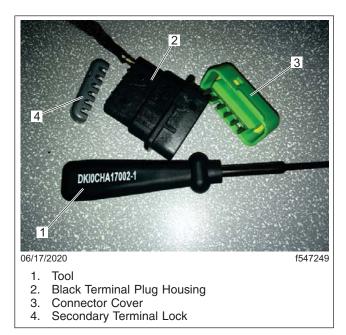


Fig. 7, Splice Pack Removal

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- 12. Locate the wire to cavity A, and the wire found to have the continuity with the wire previously extracted from the bulkhead connector ENG_H_DASH_BHA_4A pin 16.
- 13. Blunt cut both wires near the terminals. Apply shrink tube to the blunt cut wires and secure them into the harness.
- 14. The GNDE wire, which was previously extracted from the bulkhead connector ENG_H_DASH_BHA_4A pin 16, can now be blunt cut near terminal. Apply shrink tube to the blunt cut wire and secure into the harness. See Fig. 8



Fig. 8, GNDE Wire

15. Remove the Motor Control Module (MCM) 21-pin connector ENG_H_ECU_MCM_1A by releasing the lever lock. Pull the 21-pin connector away from the MCM. See Fig. 9, Fig. 10 and Fig. 11.

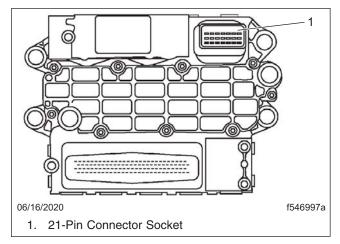


Fig. 9, Motor Control Module (MCM)

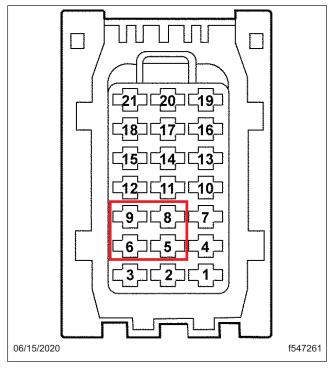


Fig. 10, MCM 21-Pin Connector



Fig. 11, Location of MCM Connector

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- 16. Remove the tie straps and harness wrap to access the terminals wiring, and remove the connector back shell cover.
- 17. Release the secondary terminal lock using the tool DKIOCHA17002-1 by moving the yellow lock away from the terminals until a slight click is heard or felt. See Fig. 12 and Fig. 13



Fig. 12, MCM Connector



Fig. 13, Releasing the MCM Secondary Lock

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18. Using the tool DKOCHA17002-8, extract the four GNDE wires from the connector cavities 5, 6, 8, and 9. See Fig. 10 and Fig. 14.

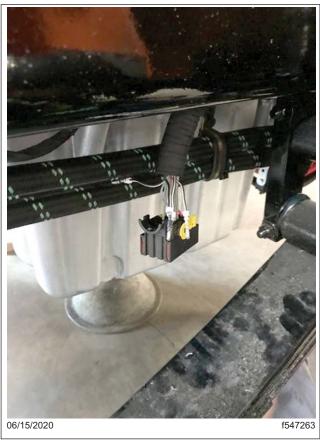


Fig. 14, GNDE Wires Extraction

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19. Blunt cut all the four GNDE wires near the terminals. Apply shrink tube to the blunt cut wires and secure them into the harness. See Fig. 15 and Fig. 16.



06/15/2020 f547264 A. Apply the shrink tube to the blunt cut wire. Fig. 15, Blunt Cut Wire Fig. 16, Shrink Tube Applied

- 20. Install the new overlay harness, part number A66-13193-000SO for FL852A or A66-13193-002SO for FL852B. Route the new overlay harness along the existing front wall and engine harness:
 - 20.1 Install the GNDE wire into the pin 16 of the bulkhead connector and then install the back shell and secondary terminal lock. Route the bulkhead connector to frontwall and connect it to the mating connector. Tighten the fastener 4 to 4.8 N·m. Reconnect any connectors previously removed for harness routing and access.
 - 20.2 Connect the overlay harness ground bullet connector GND_PWRTN_ENG_O_FW_GNDE_1A.
 - 20.3 Extract the two GNDE wires from the splice pack in the new overlay harness and route the harness to the vehicle splice pack GND_PWRTRN_ENG_O_SP_GNDE_1A. Insert the two GNDE wires into splice pack, one in cavity A and the other into any open cavity. Install the splice pack lock and cover. See Fig. 7 and Fig. 17.

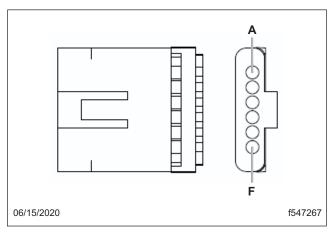


Fig. 17, Splice pack Connector

- 20.4 Route the new overlay harness to MCM 21-pin connector, insert the four GNDE wires into the MCM 21-pin connector cavities 5, 6, 8, and 9. Install MCM 21-pin back shell cover. Move the yellow secondary terminal lock to the lock position by moving it toward the terminals. Secure, wrap, and seal the 21-pin connector to the harness with electrical tape. Install the 21-pin connector into the MCM and secure with the lever-lock. See Fig. 18 and Fig. 19.
- 20.5 Wrap all the exposed wiring with appropriate harness wrap and electrical tape. Route and secure the new overlay harness along the existing harness using tie straps and electrical tape. Check that all connectors and overlay harness connectors are secured.



Fig. 18, MCM 21-Pin with New Terminals



Fig. 19, MCM 21-Pin with New Terminals Installed

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Step 21 and 22 for FL852B only

- 21. For vehicles requiring harness A66-13193-002SO only, locate and remove the ECA 2-pin connector TRANS_CTRL_ENG_O_ECU_ECA_1B on the front wall harness near bulkhead connector ENG_H_DASH_BHA_4A. Remove the terminal lock and extract the GNDE wire from cavity 1 on the front wall side of the connector using the tool DKIOCHA17002-2. Blunt cut the GNDE wire near the terminal. Apply shrink tube to the blunt cut wire and secure into the harness. See Fig. 20.
- 22. For A66-13193-002SO harnesses only, insert the GNDE wire into 2-pin connector TRANS_CTRL_ENG_O_ECU_ECA_1B cavity 1 and plug into original connector.

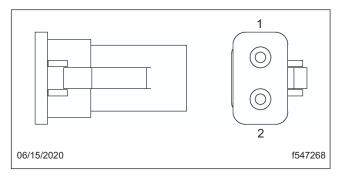


Fig. 20, ECA 2-Pin Connector

FL852A and FL852B

- 23. Connect the battery cable, start and run the vehicle for one minute to verify the repair. Close the hood and remove the chocks.
- 24. Clean a spot on the base label (Form WAR259). Write the recall number, FL852, on a blank red completion sticker (Form WAR260), and attach it to the base label to indicate this recall has been completed.