



U.S. Department
of Transportation
**National Highway
Traffic Safety
Administration**

1200 New Jersey Avenue SE.
Washington, DC 20590

May 5, 2020

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Tim LaFon
Director, Regulatory Affairs
Volvo Trucks North America
P.O. Box 26115
7900 Notional Service Road
Greensboro, NC 27409-6115

NEF-106xt
PE20-005

Dear Mr. LaFon:

This letter is to inform you that the Office of Defects Investigation (ODI) of the National Highway Traffic Safety Administration (NHTSA) has opened a Preliminary Evaluation (PE20-005) to investigate allegations of mDRIVE transmissions failing to disengage causing the truck they are installed on to push through the service brakes when coming to a stop, in certain model year (MY) 2013-2015 CHU and CXU Trucks w/Automated Manual Transmission manufactured by Mack Trucks, Inc. (Mack), and to request certain information.

This office has received one Vehicle Owner's Questionnaire (VOQ) and Early Warning Reporting (EWR) data describing mDRIVE transmission clutches failing to disengage causing the truck to push through the service brakes. This may result in extended stopping distance and/or unintended forward motion when the vehicle is coming to a stop.

Unless otherwise stated in the text, the following definitions apply to these information requests:

- **Subject vehicles:** all 2013-2016 MY CHU and CXU Mack trucks (regardless of transmission type or model) manufactured for sale or lease in the United States.
- **Alleged defect:** Transmission failing to disengage as intended resulting in the truck attempting to push through the service brakes when applied.
- **Mack:** Mack Trucks, Inc., Volvo Trucks North America, The Volvo Group, AB Volvo, all of their past and present officers and employees, whether assigned to their principal offices or any of their field or other locations, including all of their divisions, subsidiaries (whether or not incorporated) and affiliated enterprises and all of their headquarters, regional, zone and other offices and their employees, and all agents, contractors, consultants, attorneys and law firms and other persons engaged directly or indirectly (e.g., employee of a consultant) by or under the control of Mack (including all business

units and persons previously referred to), who are or, in or after January 1, 2010, were involved in any way with any of the following related to the alleged defect in the subject vehicles:

- a. Design, engineering, analysis, modification or production (e.g. quality control);
 - b. Testing, assessment or evaluation;
 - c. Consideration, or recognition of potential or actual defects, reporting, record-keeping and information management, (e.g., complaints, field reports, warranty information, part sales), analysis, claims, or lawsuits; or
 - d. Communication to, from or intended for zone representatives, fleets, dealers, or other field locations, including but not limited to people who have the capacity to obtain information from dealers.
- **Document:** “Document(s)” is used in the broadest sense of the word and shall mean all original written, printed, typed, recorded, or graphic matter whatsoever, however produced or reproduced, of every kind, nature, and description, and all non-identical copies of both sides thereof, including, but not limited to, papers, letters, memoranda, correspondence, communications, electronic mail (e-mail) messages (existing in hard copy and/or in electronic storage), faxes, mailgrams, telegrams, cables, telex messages, notes, annotations, working papers, drafts, minutes, records, audio and video recordings, data, databases, other information bases, summaries, charts, tables, graphics, other visual displays, photographs, statements, interviews, opinions, reports, newspaper articles, studies, analyses, evaluations, interpretations, contracts, agreements, jottings, agendas, bulletins, notices, announcements, instructions, blueprints, drawings, as-builts, changes, manuals, publications, work schedules, journals, statistical data, desk, portable and computer calendars, appointment books, diaries, travel reports, lists, tabulations, computer printouts, data processing program libraries, data processing inputs and outputs, microfilms, microfiches, statements for services, resolutions, financial statements, governmental records, business records, personnel records, work orders, pleadings, discovery in any form, affidavits, motions, responses to discovery, all transcripts, administrative filings and all mechanical, magnetic, photographic and electronic records or recordings of any kind, including any storage media associated with computers, including, but not limited to, information on hard drives, floppy disks, backup tapes, and zip drives, electronic communications, including but not limited to, the Internet and shall include any drafts or revisions pertaining to any of the foregoing, all other things similar to any of the foregoing, however denominated by Mack, any other data compilations from which information can be obtained, translated if necessary, into a usable form and any other documents. For purposes of this request, any document which contains any note, comment, addition, deletion, insertion, annotation, or otherwise comprises a non-identical copy of another document shall be treated as a separate document subject to production. In all cases where original and any non-identical copies are not available, “document(s)” also means any identical copies of the original and all non-identical copies thereof. Any document, record, graph, chart, film or photograph originally produced in color must be provided in color. Furnish all documents whether verified by Mack or not.

If a document is not in the English language, provide both the original document and an English translation of the document.

- **Other Terms:** To the extent that they are used in these information requests, the terms “claim,” “consumer complaint,” “dealer field report,” “field report,” “fire,” “fleet,” “good will,” “make,” “model,” “model year,” “notice,” “property damage,” “property damage claim,” “rollover,” “type,” “warranty,” “warranty adjustment,” and “warranty claim,” whether used in singular or in plural form, have the same meaning as found in 49 CFR 579.4.

In order for my staff to evaluate the alleged defect, certain information is required. Pursuant to 49 U.S.C. § 30166, please provide numbered responses to the following information requests. Insofar as Mack has previously provided a document to ODI, Mack may produce it again or identify the document, the document submission to ODI in which it was included and the precise location in that submission where the document is located. When documents are produced, the documents shall be produced in an identified, organized manner that corresponds with the organization of this information request letter (including all individual requests and subparts). When documents are produced and the documents would not, standing alone, be self-explanatory, the production of documents shall be supplemented and accompanied by explanation.

Please repeat the applicable request verbatim above each response. After Mack’s response to each request, identify the source of the information and indicate the last date the information was gathered.

1. State, by model and model year, the number of subject vehicles Mack has manufactured for sale or lease in the United States. Separately, for each subject vehicle manufactured to date by Mack, state the following:
 - a. Vehicle identification number (VIN);
 - b. Make;
 - c. Model;
 - d. Model Year;
 - e. Transmission model number, design version, electronic control module part number (if so equipped), software version and optional features installed as original equipment;
 - f. Engine model number and power output;
 - g. Date of manufacture;
 - h. Date warranty coverage commenced; and
 - i. The State in the United States where the vehicle was originally sold or leased (or delivered for sale or lease).

Provide the table in Microsoft Access 2010, or a compatible format, entitled “PRODUCTION DATA.” A pre-formatted data collection file, which provides further details regarding this submission, will be provided to you.

2. State the number of each of the following, received by Mack, or of which Mack is otherwise aware, which relate to, or may relate to, the alleged defect in the subject vehicles:
 - a. Consumer complaints, including those from fleet operators;
 - b. Field reports, including dealer field reports;
 - c. Reports involving a crash, injury or fatality;
 - d. Property damage claims;
 - e. Third-party arbitration proceedings where Mack is or was a party to the arbitration; and
 - f. Lawsuits, both pending and closed, in which Mack is or was a defendant or codefendant.

For subparts “a” through “f” state the total number of each item (e.g., consumer complaints, field reports, etc.) separately. Multiple incidents involving the same vehicle are to be counted separately. Multiple reports of the same incident are also to be counted separately (i.e., a consumer complaint and a field report involving the same incident in which a crash occurred are to be counted as a crash report, a field report and a consumer complaint).

In addition, for items “c” through “f,” provide a summary description of the alleged problem and causal and contributing factors and Mack’s assessment of the problem, with a summary of the significant underlying facts and evidence. For items “e” and “f,” identify the parties to the action, as well as the caption, court, docket number, and date on which the complaint or other document initiating the action was filed.

3. Separately, for each item (complaint, report, claim, notice, or matter) within the scope of your response to Request No. 2, state the following information:
 - a. Mack’s file number or other identifier used;
 - b. The category of the item, as identified in Request No. 2 (i.e., consumer complaint, field report, etc.);
 - c. Vehicle owner or fleet name (and fleet contact person), street address, email address and telephone number;
 - d. Vehicle’s VIN;
 - e. Vehicle’s make, model and model year;
 - f. Vehicle’s mileage at time of incident;
 - g. Incident date;
 - h. Report or claim date;
 - i. Whether a crash is alleged;
 - j. Whether property damage is alleged;
 - k. Number of alleged injuries, if any; and
 - l. Number of alleged fatalities, if any;
 - m. The assessment of a Mack dealer of the actual or likely cause or factors contributing to the alleged incident(s) in the subject vehicle (if there was no examination of the vehicle by a dealer, so state; if a dealer examined the vehicle and did not identify the actual or likely cause or factors contributing to the alleged incident(s) in the subject vehicle, so state); and

- n. Mack's assessment of the cause or factors contributing to the alleged incident(s) in the subject vehicle (if Mack has not and has never identified the actual or likely cause or factors contributing to the alleged incident(s) in the subject vehicle, so state).

Provide this information in Microsoft Access 2010, or a compatible format, entitled "REQUEST NUMBER TWO DATA." A pre-formatted data collection file, which provides further details regarding this submission, will be provided to you.

- 4. Produce copies of all documents related to each item within the scope of Request No. 2. Organize the documents separately by category (i.e., consumer complaints, field reports, etc.) and describe the method Mack used for organizing the documents.
- 5. State, by model and model year, a total count for all of the following categories of claims, collectively, that have been paid by Mack to date that relate to, or may relate to, the alleged defect in the subject vehicles: warranty claims; extended warranty claims; claims for good will services that were provided; field, zone, or similar adjustments and reimbursements; and warranty claims or repairs made in accordance with a procedure specified in a technical service bulletin or customer satisfaction campaign.

Separately, for each such claim, state the following information:

- a. Mack's claim number;
- b. Vehicle owner or fleet name (and fleet contact person), street address, email address and telephone number;
- c. VIN;
- d. Repair date;
- e. Vehicle mileage at time of repair;
- f. Repairing dealer's or facility's name, telephone number, city and state or ZIP code;
- g. Labor operation number(s);
- h. Problem code(s);
- i. Replacement part number(s) and description(s);
- j. Concern stated by customer;
- k. Comment, if any, by dealer/technician relating to claim and/or repair;
- l. The assessment of a Mack dealer of the actual or likely cause or factors contributing to the alleged incident(s) in the subject vehicle (if there was no examination of the vehicle by a dealer, so state; if a dealer examined the vehicle and did not identify the actual or likely cause or factors contributing to the alleged incident(s) in the subject vehicle, so state); and
- m. Mack's assessment of the cause or factors contributing to the alleged incident(s) in the subject vehicle (if Mack has not and has never identified the actual or likely cause or factors contributing to the alleged incident(s) in the subject vehicle, so state).

Provide this information in Microsoft Access 2010, or a compatible format, entitled "WARRANTY DATA." A pre-formatted data collection file, which provides further details regarding this submission, will be provided to you.

6. Describe in detail the search methods and search criteria used by Mack to identify the claims in response to Request No. 5, including the labor operations, problem codes, part numbers and any other pertinent parameters used. Provide a list of all labor operations, labor operation descriptions, problem codes, and problem code descriptions applicable to the alleged defect in the subject vehicles. State, by make and model year, the terms of the new vehicle warranty coverage offered by Mack on the subject vehicles (i.e., the number of months and mileage for which coverage is provided and the vehicle systems that are covered). Describe any extended warranty coverage option(s) that Mack offered for the subject vehicles and state by option, model, and model year, the number of vehicles that are covered under each such extended warranty.
7. Produce copies of all service, warranty, and other documents that relate to, or may relate to, the alleged defect in the subject vehicles, that Mack has issued to any dealers, regional or zone offices, field offices, fleet purchasers, or other entities. This includes, but is not limited to, bulletins, advisories, informational documents, training documents, or other documents or communications, with the exception of standard shop manuals. Also, include the latest draft copy of any communication that Mack is planning to issue within the next 120 days.
8. Describe all assessments, analyses, tests, test results, studies, surveys, simulations, investigations, inquiries and/or evaluations (collectively, "actions") that relate to, or may relate to, the alleged defect in the subject vehicles that have been conducted, are being conducted, are planned, or are being planned by, or for, Mack. For each such action, provide the following information:
 - a. Action title or identifier;
 - b. The actual or planned start date;
 - c. The actual or expected end date;
 - d. Brief summary of the subject and objective of the action;
 - e. Engineering group(s)/supplier(s) responsible for designing and for conducting the action; and
 - f. A brief summary of the findings and/or conclusions resulting from the action.

For each action identified, provide copies of all documents related to the action, regardless of whether the documents are in interim, draft, or final form. Organize the documents chronologically by action.

9. Describe all modifications or changes made by, or on behalf of, Mack in the design, material composition, manufacture, quality control, supply, or installation of any mDRIVE transmission components (including associated wiring, sensors, electronic control modules and software), installed on the subject vehicles, which relate to, or may relate to, the alleged defect in the subject vehicles. For each such modification or change, provide the following information:
 - a. The date or approximate date on which the modification or change was incorporated into vehicle production;
 - b. A detailed description of the modification or change;

- c. The reason(s) for the modification or change;
- d. The part number(s) (service and engineering) or software version number(s) of the original component or software, the part description (including acronyms), and supplier;
- e. The part number(s) (service and engineering) or software version number(s) of the modified component, and the supplier;
- f. Whether the original unmodified component or software version was withdrawn from production and/or sale, and if so, when;
- g. When the modified component or software version was made available as a service component or service software reflash/ reprogram; and
- h. Whether the modified component or software version can be interchanged with earlier production components.

Also, provide the above information for any modification or change that Mack is aware of which may be incorporated into vehicle production within the next 120 days.

10. State the number of each of the following that Mack has sold that may be used in the subject vehicles by component name, part number (both service and engineering/production), model and model year of the vehicle in which it is used and month/year of sale (including the cut-off date for sales, if applicable):
 - a. Clutch Valve Unit (CVU);
 - b. Concentric Clutch Actuator (CCA); and
 - c. Brake Pedal Position Signal Switch and
 - d. Any kits that have been released, or developed, by Mack for use in service repairs to the subject component/assemblies described above in “a” through “c.”

For each component part number, provide the supplier’s name, address, and appropriate point of contact (name, title, and telephone number). Also identify by make, model and model year, and other vehicles of which Mack is aware that contain the identical component, whether installed in production or in service, and state the application dates of production or service usage.

11. Provide ODI copies of any mMRIVE transmission diagnostic and service information including information found on the Trucks Dealer Portal (www.trucksdealerportal.com).
12. Describe the manner in which the wiring harness from the mDRIVE transmission gear lever selector to the mDRIVE transmission electronic control module is routed and secured using text and pictorial descriptions. In addition, describe all modifications or changes made by, or on behalf of, Mack in the design, material composition, manufacture, quality control, supply, or installation of the subject wiring harness.
13. Describe the potential and/or actual consequences of the wiring harness from the mDRIVE transmission gear lever selector to mDRIVE transmission electronic control module chaffing and/or short circuiting. Provide Mack’s assessment of the vehicle operator’s ability to

mitigate the alleged defect condition as it is occurring, in the event the subject wiring harness has been compromised.

14. Furnish Mack's assessment of the alleged defect in the subject vehicles, including:

- a. The causal or contributory factor(s);
- b. The failure mechanism(s);
- c. The failure mode(s);
- d. The risk to motor vehicle safety that it poses;
- e. What warnings, if any, the operator and the other persons both inside and outside the vehicle would have that the alleged defect was occurring;
- f. What actions the vehicle operator might take to mitigate the alleged defect condition as it is occurring; and
- g. The reports included with this inquiry.

Legal Authority for This Request

This letter is being sent to Mack pursuant to 49 U.S.C. § 30166, which authorizes NHTSA to conduct any investigation that may be necessary to enforce Chapter 301 of Title 49 and to request reports and the production of things. It constitutes a new request for information.

Civil Penalties

Mack's failure to respond promptly and fully to this letter could subject Mack to civil penalties pursuant to 49 U.S.C. § 30165 or lead to an action for injunctive relief pursuant to 49 U.S.C. § 30163. (Other remedies and sanctions are available as well.) The Vehicle Safety Act, as amended, 49 U.S.C. § 30165(b), provides for civil penalties of up to \$7,000 per day, with a maximum of \$17,350,000 for a related series of violations, for failing or refusing to perform an act required under 49 U.S.C. § 30166. See 49 CFR 578.6 (as amended by 77 Fed. Reg. 70710 (November 27, 2012)). This includes failing to respond completely to ODI information requests.

If Mack cannot respond to any specific request or subpart(s) thereof, please state the reason why it is unable to do so. If on the basis of attorney-client, attorney work product, or other privilege, Mack does not submit one or more requested documents or items of information in response to this information request, Mack must provide a privilege log identifying each document or item withheld, and stating the date, subject or title, the name and position of the person(s) from, and the person(s) to whom it was sent, and the name and position of any other recipient (to include all carbon copies or blind carbon copies), the nature of that information or material, and the basis for the claim of privilege and why that privilege applies.

Confidential Business Information

All business confidential information must be submitted directly to the Office of Chief Counsel as described in the following paragraph and should not be sent to this office. In addition, do not submit any business confidential information in the body of the letter submitted

to this office. Please refer to PE20-005 in Mack's response to this letter and in any confidentiality request submitted to the Office of Chief Counsel.

If Mack claims that any of the information or documents provided in response to this information request constitute confidential commercial material within the meaning of 5 U.S.C. § 552(b)(4), or are protected from disclosure pursuant to 18 U.S.C. § 1905, Mack must submit supporting information together with the materials that are the subject of the confidentiality request, in accordance with 49 CFR Part 512. Additional information can be found here:

<https://www.nhtsa.gov/coronavirus/submission-confidential-business-information>.

If you have any questions regarding submission of a request for confidential treatment, contact Daniel Rabinovitz, Trial Attorney, Office of Chief Counsel at daniel.rabinovitz@dot.gov or (202) 366-8534.

Due Date

Mack's response to this letter, in duplicate, together with a copy of any confidentiality request, must be submitted to this office by Friday, June 5, 2020. Mack's response must include all non-confidential attachments and a redacted version of all documents that contain confidential information. If Mack finds that it is unable to provide all of the information requested within the time allotted, Mack must request an extension from me at (202) 366-6938 no later than five business days before the response due date. If Mack is unable to provide all of the information requested by the original deadline, it must submit a partial response by the original deadline with whatever information Mack then has available, even if an extension has been granted.

Please send email notification to Xiaoming Tan at xiaomng.tan@dot.gov and to ODI_IRresponse@dot.gov when Mack sends its response to this office and indicate whether there is confidential information as part of Mack's response.

If you have any technical questions concerning this matter, please call Mr. Xiaoming Tan of my staff at (202) 366-8575.

Sincerely,



Bruce York, Chief
Medium & Heavy Duty Vehicles Division
Office of Defects Investigation

Enclosure 1, The reference number for the reports cited above, which can be viewed at NHTSA.gov is: 10839430