

**Complete Response to
PE23-020**

INTRODUCTION

In responding to this Information Request ("IR"), information has been obtained from those places within Nissan likely to contain such information in the regular and ordinary course of business. When a particular Request seeks "documents" as defined in the IR, reasonable, good faith searches have also been made of corporate records that are likely to contain responsive information in those places where such records are likely to be found. We have not checked such documents as "calendars", "appointment books", "financial statements" and "personnel records" even though they are included in the definition of "documents" because such documents would not contain owner complaints, field reports, technical analyses or other information sought by Requests 2, 5, 9 and 10-12 pertaining to the Subject Component in the Subject Vehicles. We have also searched for responsive documents and information only with respect to vehicles manufactured for sale in the United States, which we understand to be the scope for which the IR seeks information. Nissan has searched for and produced records that were created through January 26, 2024.

By email dated Friday March 8, 2024, NHTSA granted an extension of time through Monday March 25, 2024 for Nissan to respond to requests 10-13 that require additional time for analysis. On March 11, 2024, Nissan submitted Responses to Requests 1-9.

Responses are provided after each request, and Attachments are utilized as appropriate. The source of information used as a basis for the data in each Attachment, including the date the data were updated and retrieved, is identified at the beginning of each Attachment, as applicable. If a document itself is the source for the requested information and it is provided, we assume no further source identification is called for. If a document, drawing or component is requested, or if no responsive information is available, we assume no further source identification is called for.

With regard to claims of privilege, Nissan understands that it is acceptable to the Agency for Nissan to identify specific categories of privileged documents rather than any specific document. These specific categories are: 1) communications between outside counsel and Nissan Legal Department employees, other Nissan employees, or other Nissan-represented parties in litigation or claims; 2) communications between Nissan Legal Department employees and other Nissan employees or other Nissan-represented parties in litigation or claims; 3) notes and other work product of outside counsel or of Nissan Legal Department employees concerning communications with Nissan employees or consultants, and the work product of those employees or consultants done for or at the request of outside counsel or Legal Department employees; and 4) other categories to be identified later as necessary. For any privileged documents that are not included in these categories, such documents, if any, will be specifically identified on a separate privilege index at a later time. To the extent that a document is furnished, and unless the production of that document is inadvertent, Nissan is not asserting a privilege claim for that document, although the disclosure of such document does not waive the attorney-client privilege or work-product protection with respect to other documents prepared in connection with the specific litigation or claim or other litigation or claims. In addition, in submitting such documents, we reserve our right to claim the attorney-client privilege and/or work-product protection with respect to analyses that may be prepared subsequently in connection with these and other cases. Also, we understand documents specifically related to the preparation of the responses are not sought.

Nissan believes NHTSA's policy is to protect the privacy of individuals under exemption 6 of the Freedom of Information Act, 5 U.S.C. Section 552(b)(6). We understand that name, address, and other personal information of owners or other individuals, including Nissan personnel, contained in any of the attachments in this response will not be made available to

the public. Therefore, Nissan is not requesting confidential treatment for this information pursuant to 49 CFR, Part 512, but we believe any private information concerning individuals should not be made public.

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The National Highway Traffic Safety Administration (NHTSA) in its Preliminary Evaluation PE23-020 investigation of allegations of crank shaft failures in certain model year 2016-2019 Nissan Titan XD vehicles has requested information from Nissan North America, Inc. ("NNA"). In regards to NHTSA's questions and requests PE23-020, NHTSA is seeking information on Subject Vehicles identified as "all 2016 through 2019 Model Year (MY) Nissan Titan XD diesel trucks equipped with 5.0L V8 Cummins diesel engines manufactured for sale or lease in the United States, including, but not limited to, the District of Columbia, and current U.S. territories and possessions." The Subject Component has been identified as "The crankshaft, bearings, and bearing caps equipped in the Cummins 5.0L V8 diesel engine installed in the subject vehicles." NHTSA has specifically requested information related to the Alleged Defect defined as "Any failure or malfunction of the subject component, to include galling and fracture, as evidenced by indicators such as debris in the oil, rough running engine, loud 'knocking' type or similar noise from the engine, certain trouble codes, or engine replacement."

1. State, by model and model year, the number of subject vehicles Nissan has manufactured for sale or lease in the United States. Separately, for each subject vehicle manufactured to date by Nissan, state the following:
 - a. Vehicle identification number (17-character VIN);
 - b. Make;
 - c. Model;
 - d. Model Year;
 - e. Subject component part number and design version installed as original equipment;
 - f. Date of manufacture (MM/DD/YYYY);
 - g. Date warranty coverage commenced (MM/DD/YYYY); and
 - h. The State in the United States where the vehicle was originally sold or leased, or delivered for sale or lease (postal abbreviation).

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.

Table 1. Production Data Summary

MAKE	MODEL	2016	2017	2018	2019
Nissan	Titan XD	14,327	12,823	6,637	4,976

The information requested in 1.a through 1.h, when known, is being uploaded to the NHTSA designated SFTP site as Attachment A in a Microsoft Access database titled "PE23-020 DATA" that contains a table titled "PE23-020_PRODUCTION_DATA."

2. State the number of each of the following, received by Nissan, or of which Nissan is otherwise aware, which relate to, or may relate to, the alleged defect in the subject vehicles:

For subparts "a" through "g," 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 "g," provide a summary description of the alleged problem and causal and contributing factors and Nissan's assessment of the problem, with a summary of the significant underlying facts and evidence. For items "f" and "g," 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.

- a. Consumer complaints, including those from fleet operators;

Table 2. Consumer Complaints Summary

Make	Model	Total Consumer Complaints
Nissan	Titan XD	64

- b. Field reports, including dealer field reports;

Table 3. Field Reports Summary

Make	Model	Total Field Reports
Nissan	Titan XD	209

- c. Reports involving a crash, injury or fatality;

Table 4. Crash, Injury & Fatality Reports

Make	Model	Total Reports of All Crashes	Total Reported Injuries	Total Reported Fatalities
Nissan	Titan XD	0	0	0

Nissan found zero (0) reports of a crash, injury, or fatality.

- d. Reports involving a fire:

Table 5. Reports Involving Fire

Make	Model	Total Reports of Fire
Nissan	Titan XD	5

Nissan found five (5) reports which included a localized thermal incident in the area of the starter. When the operator attempted to start the vehicle with a seized engine, the amperage applied to the starter wiring can result in a smoldering harness that is self-extinguishing. We have found zero (0) reports which included an open flame thermal incident.

A summary description of five (5) reports is being uploaded to the NHTSA designated SFTP site as Attachment A in a Microsoft Access database titled "PE23-020 DATA" which contains a table titled "REQUEST_NUMBER_2D_SUMMARY".

e. Property damage claims; and**Table 6. Reports Involving Property Damage**

Make	Model	Total Reports of Property Damage
Nissan	Titan XD	0

NNA found zero (0) reports of property damage relating to the Alleged Defect in the Subject Vehicles.

f. Third-party arbitration proceedings, both pending and closed, where Nissan is or was a party to the arbitration; and

Nissan found zero (0) third party arbitration proceedings where Nissan is or was a party to the arbitration, which relate to, or may relate to, the Alleged Defect in the Subject Vehicles.

g. Lawsuits, both pending and closed, in which Nissan is or was a defendant or codefendant.**Table 7. Lawsuits**

Make	Model	Total Lawsuits
Nissan	Titan XD	2

Nissan found two (2) breach of warranty lawsuits in which Nissan is or was a defendant or co-defendant, which relate to, or may relate to, the Alleged Defect in the Subject Vehicles. The cause of action in both lawsuits is an alleged breach of warranty.

A summary description of two lawsuits is being uploaded to the NHTSA designated SFTP site as Attachment A in a Microsoft Access database titled "PE23-020 DATA" which contains a table titled "REQUEST_NUMBER_2G_SUMMARY".

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:
- Nissan's file number or other identifier used;
 - The category of the item, as identified in Request No. 2 (i.e., consumer complaint, field report, etc.);
 - Vehicle owner or fleet name (and fleet contact person), email address and telephone number (please use distinct fields for each data type);
 - Vehicle owner or fleet street address, city, state (postal abbreviation), and ZIP code (please use distinct fields for each data type);
 - Vehicle's 17-character VIN;
 - Vehicle's make, model and model year (please use distinct fields for each data type);
 - Vehicle's mileage at time of incident (numeric data type);
 - Incident date (MM/DD/YYYY);
 - Report or claim date (MM/DD/YYYY);
 - Whether a crash is alleged;

- k. Whether a fire is alleged;
- l. Whether property damage is alleged;
- m. Number of alleged injuries, if any; and
- n. Number of alleged fatalities, if any.

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.

The information available to Nissan requested in 3.a through 3.n, when known, is being uploaded to the NHTSA designated SFTP site as Attachment A in a Microsoft Access database titled "PE23-020 DATA" which contains a table titled "REQUEST_NUMBER_TWO_DATA."

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 Nissan used for organizing the documents. Describe in detail the search methods and search criteria used by Nissan to identify the items in response to Request No. 2. For each vehicle identified in the responsive data to Request No. 2, provide a complete dealer service history within 6 months of (before and after) the alleged incident or report date (whichever is the earliest) and report close date.

Documents requested within the scope of "Request No. 2" are being uploaded to the NHTSA designated SFTP site as Attachment A in a folder titled "REQUEST NUMBER 2 DOCUMENTS". The documents are organized by category and stored as Adobe pdf files.

The search criteria used by Nissan to identify the documents in response to "Request No. 2" are set forth below.

Nissan searched for all documents related to Production Codes A61 (Titan) between model years 2016 – 2019 (inclusive) with the Engine Prefix code CD50 (Cummins Diesel engine) that contained the following words (case insensitive). Commas below represent an "OR" statement.

- "Engine"
- Crankshaft, Crank Shaft, Bearing, Bearing Cap
- Quit Running, Stalled, Stopped Running, Died, Shut Off, Turned Off, Seized, Galling, Fracture, Metal, Debris
- Not Including: Wheel, Hub

The documents must also have been opened/created on or before January 26, 2024.

Nissan manually reviewed all of the resulting set of documents and is reporting those which relate to, or may relate to, the Alleged Defect in the Subject Vehicles.

For litigation files, Nissan searched for all matters related to 2016-2019 model year Titan trucks with a VIN indicating a diesel engine, and a TREAD early warning allegation category of "Engine (6)."

The litigation files must also have been opened/created on or before January 26, 2024.

Nissan manually reviewed all of the resulting set of litigation files and is reporting those

which relate to, or may relate to, the Alleged Defect in the Subject Vehicles.

The Dealer Service information available to Nissan requested in question 4, when known, is being uploaded to the NHTSA designated SFTP site as Attachment A in a Microsoft Access database titled "PE23-020 DATA" which contains a table titled "REQUEST_NUMBER_TWO_SERVICE_HISTORY."

5. State, by model and model year, a total count for all of the following categories of claims, collectively, that have been paid by Nissan 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. Nissan's claim number;
- b. Vehicle owner or fleet name (and fleet contact person), email address and telephone number (please use distinct fields for each data type);
- c. Vehicle owner or fleet street address, city, state (postal abbreviation), and ZIP code (please use distinct fields for each data type);
- d. 17-character VIN;
- e. Repair date (MM/DD/YYYY);
- f. Vehicle mileage at time of repair (numeric data type);
- g. Repairing dealer's or facility's name, telephone number, city and state or ZIP code (please use distinct fields for each data type);
- h. Labor operation number(s);
- i. Problem code(s);
- j. Diagnostic trouble code(s);
- k. Replacement part number(s) and description(s);
- l. Concern stated by customer;
- m. Cause as stated on the repair order;
- n. Correction as stated on the repair order; and
- o. Additional comments, if any, by dealer/technician relating to claim and/or repair.

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.

Table 8. Warranty Data Summary

Make	Model	Total Warranty Claims
Nissan	Titan XD	213

The information available to Nissan requested in 5.a through 5.o, when known, is being uploaded to the NHTSA designated SFTP site as a Microsoft Access database titled "PE23-020 DATA" which contains a table titled "WARRANTY_DATA."

6. Describe in detail the search methods and search criteria used by Nissan to identify the claims in response to Request No. 5, including the labor operations, problem codes, diagnostic trouble codes, part numbers and any other pertinent parameters used.

The search criteria used by Nissan to identify the documents in response to "Request No. 5" are set forth below.

Nissan searched for all documents related to Production Codes A61 (Titan) between model years 2016 – 2019 (inclusive) with the Engine Prefix code CD50 (Cummins Diesel engine) that contained the following words (case insensitive). Commas below represent an "OR" statement.

- "Engine"
- Crankshaft, Crank Shaft, Bearing, Bearing Cap
- Quit Running, Stalled, Stopped Running, Died, Shut Off, Turned Off, Seized, Galling, Fracture, Metal, Debris
- Not Including: Wheel, Hub

The documents must also have been opened/created on or before January 26, 2024.

Nissan manually reviewed the resulting set of documents and is reporting those which relate to, or may relate to, the Alleged Defect in the Subject Vehicles.

7. Provide a list of all labor operations, labor operation descriptions, problem codes, and problem code descriptions, diagnostic trouble codes and diagnostic trouble code descriptions applicable to the alleged defect in the subject vehicles. State whether the diagnostic trouble codes are automatically reported to the warranty database electronically or manually entered into the warranty database by a claims administrator.

Descriptions of each labor operation code and problem code are being uploaded to the NHTSA designated SFTP site as Attachment A and are contained within the "WARRANTY_DATA" table included in the Microsoft Access database entitled "PE23-020 DATA." Diagnostic trouble codes were manually entered from the technician comments when available.

8. State, by make and model year, the terms of the new vehicle warranty coverage offered by Nissan 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 Nissan 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.

Table 9. New Vehicle Warranty Coverage

	Nissan Titan XD 2016	Nissan Titan XD 2017-2019
Basic Coverage	36mo/36,000mi	60mo/100,000mi
Corrosion Coverage	60mo/unlimited mileage	
Powertrain Coverage	60mo/60,000mi	
Diesel Powertrain Coverage	60mo/100,000mi	
Federal Emission Performance	24mo/24,000mi	
Federal Emission Defect	36mo/36,000mi	

Federal Emission Long Term Defect	96mo/80,000mi
California Emission Performance	36mo/50,000mi
California Emission Defect	36mo/50,000mi
California Emission Long Term Defect	84mo/70,000mi
Seat Belt	120mo/unlimited mileage

Table 10. Extended Warranty Summary

Make	Model	Model Year	Gold	Gold Preferred	Silver Preferred	Coverage
NISSAN	Titan XD	2016	0	2,878	108	Up to 8 years, 120,000 miles
NISSAN	Titan XD	2017	1	1,340	7	
NISSAN	Titan XD	2018	5	792	3	
NISSAN	Titan XD	2019	2	555	1	

9. Produce copies of all service, warranty, and other documents that relate to, or may relate to, the alleged defect in the subject vehicles, that Nissan 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 Nissan is planning to issue within the next 120 days.

Nissan has not issued any bulletins, advisories, informational documents, training documents, or other communications related to the Alleged Defect in the Subject Vehicles. Warranty information booklets requested within the scope of "Request No. 9" are being uploaded to the NHTSA designated SFTP site as Attachment A in a file folder titled "REQUEST NUMBER 9 DOCUMENTS". The documents are stored as Adobe pdf files.

Nissan does not currently plan to issue any documents to dealers, regional or zone offices, field offices, fleet purchasers or other entities that relate to, or may relate to, the Alleged Defect in the Subject Vehicles within the next 120 days.

10. 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, Nissan. For each such action, provide the following information:
- Action title or identifier;
 - The actual or planned start date;
 - The actual or expected end date;
 - Brief summary of the subject and objective of the action;
 - Engineering group(s)/supplier(s) responsible for designing and for conducting the action; and
 - 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.

The information available to Nissan requested in 10.a through 10.f, when known, is being uploaded to the NHTSA designated SFTP site as CONFIDENTIAL Attachment B in an Adobe PDF file titled "CONFIDENTIAL BUSINESS INFORMATION - REQUEST NUMBER 10 RESPONSE."

Documents requested within the scope of "Request No. 10" are being uploaded to the NHTSA designated SFTP site as CONFIDENTIAL Attachment B in an Adobe PDF file titled "CONFIDENTIAL BUSINESS INFORMATION - REQUEST NUMBER 10 DOCUMENTS". The documents are organized chronologically by action.

11. Describe all modifications or changes made by, or on behalf of, Nissan in the design, material composition, manufacture, quality control, supply, or installation of the subject component, from the start of production to date, 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) of the original component;
 - e. The part number(s) (service and engineering) of the modified component;
 - f. Whether the original unmodified component was withdrawn from production and/or sale, and if so, when;
 - g. If any design version of the subject component was withdrawn from production and/or sale, and remaining supplies of the parts were destroyed or removed from commerce, provide the reason why this occurred.
 - h. When the modified component was made available as a service component; and
 - i. Whether the modified component can be interchanged with earlier production components.

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

The information available to Nissan requested in 11.a through 11.i, when known, is being uploaded to the NHTSA designated SFTP site as CONFIDENTIAL Attachment C in an Adobe PDF file titled "CONFIDENTIAL BUSINESS INFORMATION - REQUEST NUMBER 11 RESPONSE."

12. State the number of each of the following that Nissan 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. Subject component; and
 - b. Complete engines
 - c. Any kits that have been released, or developed, by Nissan for use in service repairs to the subject component/assembly.

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, any other vehicles of which Nissan is aware that contain the identical component, whether installed in production or in service, and state the applicable dates of production or service usage.

The information available to Nissan requested in 12.a through 12.b, when known, as well as the supplier information is being uploaded to the NHTSA designated SFTP site as CONFIDENTIAL Attachment D in a Microsoft Excel file titled "CONFIDENTIAL BUSINESS INFORMATION - REQUEST NUMBER 12 RESPONSE."

13. Furnish Nissan'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; and
- 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, or subject component was malfunctioning; and
- f. The reports included with this inquiry.

Nissan believes this issue does not pose an unreasonable risk to motor vehicle safety for the reasons discussed below.

Presumed Failure Mechanism

The bearing and subsequent crankshaft failure mechanism described in CONFIDENTIAL Attachment C in an Adobe PDF file titled "CONFIDENTIAL BUSINESS INFORMATION - REQUEST NUMBER 13 Figure 1" shows that this issue progresses over time, with a number of detectable symptoms and warnings given to the driver including noise, rough running, malfunction indicator lights, and a potential warning message to stop the vehicle in the instrument cluster prior to any loss of power. Progression of the failure to a loss of motive power, if it occurs, is not expected to be a sudden event; abnormal noise and rough running specifically are expected to be present before the failure progresses significantly. These symptoms and warnings are clear indicators of abnormal conditions requiring vehicle service. This reasoning is reinforced by the fact that the majority of complaints do not display a loss of motive power and instead present with noise, vibration, or MIL illumination, and the vehicles are able to be driven to the dealership for diagnosis. Contributing factors can lead to the initiation of this mechanism, such as inadequate maintenance and vehicle modification, which may have an additive affect over time. The field data does not indicate an early life trend, rather the average occurrence mileage seen for this issue is approximately 60,000 miles. Nissan recognizes that certain complaints have claimed little to no warning; however, these claims are not consistent with Nissan's understanding of the failure mode based on its investigation and analysis with Cummins.

Continued Decrease of Field Incidents

Analysis of field data shows that the incident rate observed after the introduction the countermeasures discussed in response to Request 11 is less than half of what it was prior to implementation. The field data also confirms that Incidents related to the Alleged Defect peaked in 2020 and have declined each year since. In fact, 90% of all incidents occurred before 2022. This trend is expected to continue given the reduction in incident rates seen after the implementation of production countermeasures.

Lack of Observed Severity

With 414 unique complaints, Nissan has not received any reports of accidents, injuries, fatalities, or significant thermal event attributed to the Alleged Defect.

Summary

Nissan believes that the combination of a decreasing incident trend in the field combined with a failure mode that requires a progression of events over time and multiple types of warning to the driver prior to an actual loss of motive power does not pose an unreasonable risk to motor vehicle safety. Nissan will continue to analyze customer claims and monitor the field data and will reevaluate the situation as appropriate.

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