### **NISSAN**

#### **NISSAN NORTH AMERICA, INC.**

Corporate Headquarters One Nissan Way Franklin, TN 37068

Mailing Address: P.O. Box 685001 Franklin, TN 37068-5001

Telephone: 615.725.1000

April 2, 2015

Mr. D. Scott Yon Vehicle Integrity Division Office of Defects Investigation National Highway Traffic Safety Administration 1200 New Jersey Avenue S.E. Washington, D.C. 20590

Re: PE15-001; NVS 212mjl

Dear Mr. Yon,

Enclosed is Nissan's response to the referenced NHTSA Information Request of February 2, 2015 concerning the Agency's investigation of allegations concerning delayed/late/partial/slow inflation or deployment of the driver's frontal air bag in Model Year 2013 Nissan Rogue vehicles. The enclosed complete response replaces the partial response Nissan submitted on March 19, 2015.

The attached reply responds by first stating each question, then the response. Please contact us if you have any questions.

FOR. A NEFF

Sincerely,

Donald Neff Senior Manager

**Technical Compliance** 

**Enclosures** 

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Response to PE15-001

#### 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 in those places likely to maintain them in the regular and ordinary course of business. Nissan has searched for and produced records that were created up to and on the date the IR was released, February 2, 2015. Nissan appreciates the agency's consideration in granting a two week extension for the full response.

The definitions of "documents" and "Nissan", however, are unreasonably broad, vague and ambiguous in the context of the information sought by this IR. For example, "calendars", "appointment books", "financial statements" and "personnel records" would not contain owner complaints, field reports or other information sought by Request 2 pertaining to the alleged defect. Therefore, searches were not made for such "documents", inasmuch as they would not likely contain responsive information. In addition, Nissan has not provided information from persons or entities over which it does not ordinarily exercise control. Nissan understands this IR to seek information on vehicles manufactured for sale in the United States.

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 and 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, 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 workproduct 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.

\* \* \* \* \*

- 1. State, by model and model year, the number of subject vehicles that 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 (VIN);
  - b. Make;
  - c. Model;
  - d. Model Year;
  - e. Subject component part number and design version installed as original equipment;
  - f. Date of manufacture;
  - g. Date warranty coverage commenced; and
  - h. 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."

Table 1. Production Data Summary

MAKE	MODEL	MODEL YEAR	UNITS
NISSAN	ROGUE	2008	80,310
NISSAN	ROGUE	2009	74,071
NISSAN	ROGUE	2010	88,877
NISSAN	ROGUE	2011	138,518
NISSAN	ROGUE	2012	142,026
NISSAN	ROGUE	2013	195,218
NISSAN	ROGUE SELECT	2014	57,544
NISSAN	ROGUE SELECT	2015	20,902

Nissan introduced a fully re-designed Rogue for model year 2014. The redesigned model is not substantially similar to the prior model, which is not included in this response. The previous generation vehicle continued to be sold as the "Rogue Select" for the 2014 and 2015 model years.

The information requested in Request 1, with the exception of 1.e, is provided, when known, in a Microsoft Access table titled "PE15-001 Production Data" on a DVD enclosed as Attachment A.

In response to 1.e, the part number for the inflator assembly is DZD6000100 and remained constant throughout each of the model years listed above.

2. Separately, by model and model year, 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:

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- 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 Nissan is or was a party to the arbitration; and
- f. Lawsuits, both pending and closed, in which Nissan 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 Nissan'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.

#### a. Consumer complaints, including those from fleet operators:

Nissan has identified a total of 5 complaints from Nissan's Consumer Affairs database, representing 5 unique VINs, matching the description of the alleged defect. One of those complaints involved the same incident as one of the VOQ reports. The customer of that vehicle denied Nissan access to additional information.

The remaining four complaints involved allegations of partial or uninflated (although deployed) driver airbags.

- For two of the four complaints, vehicles were inspected, and in both instances it was determined that the airbag system functioned properly.
- For one of the four complaints, photos were reviewed which showed that the airbag had appeared to properly deploy.
- For the remaining complaint, the customer did not allow an inspection to take place.

There were no incidents involving a fatality in the subject vehicles in which the driver airbag had deployed.

#### b. Field reports, including dealer field reports:

Nissan has identified 0 Field Reports, and 3 Incident Investigation Reports. Two of those reports related to complaints identified above. The third report involves a case beyond the normal 5 year record retention period for customer complaints.

#### c. Reports involving a crash, injury, or fatality:

All of the reports involve a crash. There were 4 reports of injuries, all minor in nature. There were no reports of fatality or serious injury.

d. Property damage claims:

Since all of the reported incidents involve vehicle-to-vehicle collisions, each resulted in property damage. There were 8 reports of property damage, representing 6 incidents.

- e. <u>Third-party arbitration proceedings where Nissan is or was a party to the arbitration:</u>

  There are no third party arbitration proceedings.
- f. <u>Lawsuits</u>, both pending and closed, in which Nissan is or was a defendant or codefendant:

There are no lawsuits.

The answers given to Request Number Two above were gathered from Nissan's data and are current as of February 2, 2015.

- 3. <u>Separately, for each item (complaint, report, claim, notice, or matter) within the scope of your response to Request No. 2, state the following information:</u>
  - a. Nissan'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), 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
  - I. Number of alleged fatalities, if any.

<u>Provide this information in Microsoft Access 2010, or a compatible format, entitled "REQUEST NUMBER TWO DATA."</u>

The information requested in 3.a through 3.I is provided, when known, in a Microsoft Access table titled "PE15-001 Request Number Two Data" on a DVD enclosed as Attachment A.

4. <u>Produce copies of all documents related to each item within the scope of Request No.2.</u>

<u>Organize the documents separately by category (i.e., consumer complaints, field reports, etc.)</u>

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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 Reguest No. 2.

The requested documents are on a DVD enclosed as Attachment A. The documents are organized by category.

The search criteria used by Nissan to identify the claims identified in response to Request No. 2 are set forth in Attachment B.

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. <u>Vehicle owner or fleet name (and fleet contact person)</u>, <u>street address, email address and telephone number</u>;
- c. Vehicle's VIN;
- d. Vehicle's make, model and model year;
- e. Repair date;
- f. Vehicle mileage at time of repair;
- q. Repairing dealer's or facility's name, telephone number, city and state or ZIP code;
- h. Labor operation number(s);
- i. Problem code(s);
- j. Diagnostic trouble code(s);
- k. Replacement part number(s) and description(s);
- I. Concern stated by customer;
- m. Cause as stated on the repair order;
- n. Correction as stated on the repair order; and
- o. Comment, if any, by dealer/technician relating to claim and/or repair.

<u>Provide this information in Microsoft Access 2010, or a compatible format, entitled "WARRANTY DATA."</u>

There is no responsive warranty related to the alleged defect. This was determined by using the same search criteria employed in the response to Request No. 2. As mentioned above, this search criteria is put forth in Attachment B.

Warranty can be searched for the mention of an airbag related DTC code. Claims involving a DTC code, however, would not be within the scope of the alleged defect because the airbag would be suppressed if the DTC code is created by virtue of an open or short circuit in the driver air bag system. Accordingly, while Nissan reviewed such claims to confirm that they are not responsive, no such claims have been included in this response.

6. Describe in detail the search criteria used by Nissan to identify the claims identified 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 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. Indicate which extended service plans provide coverage for the subject component.

The requested new vehicle warranty coverage documents are on a DVD enclosed as Attachment B.

The search criteria used by Nissan to identify the claims identified in response to Request No. 5 are set forth in Attachment B.

Table 3. Extended Warranty Summary

		MODEL YEAR							
PLAN	COVERAGE	2008	2009	2010	2011	2012	2013	2014	2015
BRONZE		357	152	255	339	178			
SILVER		340	171	187	162	84	2		
SILVER PREFERRED	Up to 8 years and 120,000 miles	480	454	522	551	777	1,239	218	18
GOLD		4,182	2,531	3,316	4,422	2,024	16	13	
GOLD PREFERRED		19,265	15,595	20,824	32,543	34,553	42,687	9,357	485

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 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 issued no communications relating to the alleged defect.

Nissan does not plan to issue any communication(s) at this time.

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

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conducted, are planned, or are being planned by, or for, Nissan. This includes, but is not limited to, all actions related to the two VOQ reported incidents referenced in the beginning of this letter. Also, this includes, but is not limited to, all actions by the subject component manufacturer relating to the alleged defect in the subject vehicles. 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
- g. 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. If an action is not complete, provide a detailed schedule for the work to be done, tentative findings and/or conclusions, and provide an update within 10 days of completion of the action.

There are no actions related to the alleged defect.

- 9. Describe in detail 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 components and/or the air bag control modules in the subject vehicles, from the start of production to the end of production of 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) (engineering and service) of the original component;
  - e. The part number(s) (engineering and service) of the modified component;
  - f. Whether the original unmodified component was withdrawn from production and/or sale, and if so, when; g. When the modified component was made available as a service component; and
  - h. 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

There have been no modifications related to the alleged defect.

10. Produce an exemplar sample of each design version of the subject components originally installed in the subject vehicles and those supplied to Nissan dealers as replacement components for the subject vehicles.

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Exemplar parts will be shipped under separate cover.

11. State, by model and model year, all part numbers of the subject components that have been installed in the subject vehicles as assembled by Nissan, and the service part numbers of the subject components Nissan designates for installation on the subject vehicles. Provide, by model year, the names of the suppliers of the driver's frontal air bag inflator assembly installed in the subject vehicles, the air bag module assembly (if different than the inflator supplier), and the initiator assembly. State, by sales month, sales year and part number, the total number of subject components sold as service parts by Nissan. Identify any kits that Nissan has released or developed for use in service repairs to the subject components or assembly.

For each subject component part number, including the initiator supplier, provide the supplier's name, address, and point of contact used by Nissan (name, title and telephone number). Also, identify by model and model year, any other vehicles of which Nissan is aware that contain the identical subject component, whether installed in production or in service, and state the applicable dates of production or service usage.

The requested documents are on a DVD enclosed as Attachment C.

12. Provide a detailed description of the design and operation of the driver's frontal air bag inflator assembly, including but not limited to, the entire air bag deployment process for various crash severity levels. Include in your response a cross-sectional drawing of the air bag inflator assembly to explain the sequence of steps/events for deploying the air bags and to show the location of each of the internal components of the inflator assembly, including the nominal timing of each step of the air bag deployment process from the time the deployment decision is determined to the full deployment and inflation of the air bag. Also, state whether the inflator is a single or dual staged design, and if dual staged, state whether the two stages of the inflator are independent or dependent design type.

The requested documents are on a DVD enclosed as Confidential Attachment D.

13. Provide all Failure Modes and Effects Analyses that refer or relate to, or may relate to, the alleged defect in the subject vehicles. Include in your response any and all analyses and testing that studied or evaluated unintended inflator deployment sequences such as a deployment of only one stage of the inflator without subsequent deployment of the other stage (e.g., electrically actuated deployment of the secondary stage without electrically actuated deployment of the primary stage). If no such analysis or testing has been conducted, so state.

The requested Failure Mode and Effects Analyses documents are on a DVD enclosed as Confidential Attachment E.

- 14. 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;
  - 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 VOQ reports referenced in this inquiry.

Based upon the design criteria for the airbag system, and the available information, Nissan does not believe that the type of delayed deployment described in the complaints is technically feasible.

As described in the response to Question 12 above, the system is designed to deploy within specified, and very fast parameters, and to be suppressed should those parameters not be present. Similarly, in the event of a) an open circuit, b) a low firing current to the squib, or c) a shorter duration of the correct current level, the airbags would also be suppressed.

As for the assessment of the two VOQ reports referenced in the inquiry, Nissan could not inspect these vehicles because in both instances the vehicles were unavailable for inspection. However, each of the vehicles that Nissan has been able to inspect has been found to have operated appropriately and within the design specifications.

Nissan has not identified any defect in the systems or verifiable failures in the field, and therefore does not believe that a safety related defect exists.

#### **ATTACHMENT B**

Search Criteria for Request 2 and Request 5
New Vehicle Warranty Coverage Documents

#### **Search Criteria**

Warranty claims data were gathered from Warranty database February 2, 2015.

The search criteria used by Nissan to identify the claims identified in response to Request Nos. 5 is as follows:

Model Codes: S35 (Rogue and Rogue Select)

Model Year: 2008 – 2013 (Rogue)

2014-2015 (Rogue Select)

Customer or Technician Verbatim must contain at least one word from each of the following lists:

List A <b>KeyWord</b>	List B <b>KeyWord</b>	List C <b>KeyWord</b>
AIR%BAG	DEPLOY	DELAY
		PARTIAL
		SLOW
		INFLATE
		OPEN%CIRCUIT
		SHORT
		LATE DEPLOY
		DEPLOY%LATE
		NO AIR
		DEPLOY UNTIL AFTER

Claims matching the keywords as specified above were then reviewed for relevancy to the request. Any documents that were obviously a different issue or otherwise non-responsive were removed. Any documents in which relevancy could not be determined because the verbatim was too vague were included in the submission.

#### **ATTACHMENT C**

DVD with Information Related to Request 11

Part Number and Part Sales Information

#### **ATTACHMENT D**

DVD with Information Related to Request 12

<u>Driver Airbag Design and Operation</u>

#### **ATTACHMENT E**

DVD with Information Related to Request 13

Failure Modes and Effects Analysis

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ATTACHMENT D
ATTACHMENT D
(REDACTED)

## Inflator Design and Operation Information



## Driver Airbag Deployment Test Results

# S35 Driver side airbag module Deployment test results

## S35 ACU Logic

## **ACU Logic Supplemental Information**

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ATTACHMENT E
ATTACHMENT E
(REDACTED)

## FMEA – Airbag Control Unit



