

Toyota's Response to Information Request

EA21-002

July 1, 2022

**Request No. 1:**

State, by model and model year, the number of subject vehicles (excluding vehicles remedied under a subject recall action) Toyota has manufactured for sale or lease in the United States. Separately, for each subject vehicle manufactured to date by Toyota, state the following:

- a. Make;
- b. Model;
- c. Model year;
- d. Module position (Driver or Passenger);
- e. Inflator prefix;
- f. Inflator type;
- g. Main propellant (2004 or 2004L);
- h. Desiccant type;
- i. Booster material; and
- j. Auto-Ignition material;

A pre-formatted data collection file, in which you should submit your response, will be provided to you.

**Response 1:**

The number of subject vehicles (excluding vehicles remedied under a subject recall action) Toyota has manufactured for sale or lease in the United States, including the information requested in subparts a. through j., is provided electronically in Microsoft Excel format entitled "Confidential Attachment-Response 1" stored in the folder "Confidential Attachment-Response 1."

Please note that certain information provided in this response is confidential, and a request for confidential treatment has been submitted to the Office of Chief Counsel. Please see the documents submitted to the Office of Chief Counsel for the confidential versions of these documents.

**Request No. 2:**

For all subject vehicles identified in Request No. 1, provide the following information.

- a. Vehicle identification number (17-character VIN);
- b. Make;
- c. Model;

- d. Model year;
- e. Date of manufacture (MM/DD/YYYY); and
- k. The state (postal abbreviation) in the United States including, but not limited to, the District of Columbia, and current U.S. territories and possessions 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."

**Response 2:**

The information requested in subparts a. through e. and k., where available, is provided electronically in Microsoft Access format entitled "Confidential Attachment-Response 2" stored in the folder "Confidential Attachment-Response 2."

Column K in Confidential Attachment-Response 2 includes the original retail state, if available. If original retail state is not available, the original wholesale state was included, if available. If neither original retail nor original wholesale state information is available, the field is left blank.

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**Request No. 3:**

Provide the following information for each subject recall action conducted by Toyota in the United States, including, but not limited to, the District of Columbia, and current U.S. territories and possessions. Separately, for each subject recall action to date, state the following:

- a. Make;
- b. NHTSA recall ID;
- c. Recall status active (Yes) or closed/superseded (No);
- d. Remedy inflator group ID;
- e. Number of remedy repairs performed using the subject component; and
- f. Subject component currently being used for remedy repairs (Yes or No)

A pre-formatted data collection file, in which you should submit your response, will be provided to you.

**Response 3:**

The information requested for each subject recall action conducted by Toyota in the United States, including, the District of Columbia, and current U.S. territories and possessions, is provided electronically in Microsoft Excel format entitled "Confidential Attachment-Response 3" stored in the folder "Attachment-Response 3."

Please note that certain information provided in this response is confidential, and a request for confidential treatment has been submitted to the Office of Chief Counsel. Please see the documents submitted to the Office of Chief Counsel for the confidential versions of these documents.

**Request No. 4:**

For each remedy inflator group identified in Request No. 3, provide the following information.

- a. Remedy inflator group ID;
- b. Module position (Driver or Passenger);
- c. Inflator prefix;
- d. Inflator type;
- e. Main propellant (2004 or 2004L);
- f. Desiccant type;
- g. Booster material;
- h. Auto-Ignition material; and
- i. Total number of inflators that were purchased.

A pre-formatted data collection file, in which you should submit your response, will be provided to you.

**Response 4:**

The information requested for each remedy inflator group identified in Request No. 3, where available, is provided electronically in Microsoft Excel format entitled "Confidential Attachment-Response 4" stored in the folder "Confidential Attachment-Response 4." For subpart i., Toyota does not have purchase order information with the exact number of inflators purchased for the U.S. market. Toyota is estimating the number of inflators purchased by adding the number of remedy repairs performed using the subject component (request 3e) plus the number of inflators that were still in stock at U.S. Toyota Parts Distribution Centers when the use of those parts ended on March 11, 2022.

Please note that certain information provided in this response is confidential, and a request for confidential treatment has been submitted to the Office of Chief Counsel. Please see the documents submitted to the Office of Chief Counsel for the confidential versions of these documents.

**Request No. 5:**

List all reports and/or allegations of a field rupture of the subject component. For each reported allegation, provide:

- a. Make;
- b. Model;
- c. Model year;
- d. Vehicle identification number (17-character VIN);
- e. State;
- f. Vehicle build date;
- g. Module position (Driver or Passenger);

- h. Inflator serial number;
- i. Inflator build date;
- j. Inflator type;
- k. Incident date;
- l. Description of incident;
- m. Injury (Yes/No);
- n. Fatal (Yes/No); and
- o. Description of injuries.

Provide the table in Microsoft Access 2010, or a compatible format, entitled "REQUEST NUMBER FIVE DATA."

**Response 5:**

Toyota has not identified reports and/or allegations of a field rupture of the subject component.

**Request No. 6:**

List all past, currently active, and/or any planned future field collection activities conducted/being conducted/to be conducted by or on behalf of Toyota of the subject component. Separately, for each field collection activity conducted to date, provide the following information.

- a. Any entities that assisted with the field collection activity;
- b. All make, model, model year vehicles included in the field collection activity;
- c. Inflator type(s);
- d. Inflator prefix(s);
- e. Geographic area of collected parts;
- f. Field age range of collected parts;
- g. Number of parts targeted;
- h. Number of parts collected; and
- i. Rationale for selecting targeted population. (i.e. investigating field incident, abnormal laboratory test result, legal claims, production quality concerns, etc.)

**Response 6:**

The information requested about field collection activities is provided electronically in Microsoft Excel format entitled "Confidential Attachment-Response 6" stored in the folder "Confidential Attachment-Response 6."

In addition, Toyota has been monitoring the activities of Northrop Grumman Innovation Systems (NGIS) and TK Global in their analysis of various Takata inflators, including the subject components identified in response to Requests No. 1 and No. 4. Reports, which include description of collection activities, have been provided by these organizations to NHTSA. The latest reports are: "Northrop Grumman Final Report on Field Monitoring of Takata X-Series Inflators, December 2021," "TK Global Final PSAN Inflator Industry Update, November 2021," and "TK Global Update to the November 2021 Presentation, May 2022." Please refer to those reports for details.

Please note that information provided in this response is confidential, and a request for confidential treatment has been submitted to the Office of Chief Counsel. Please see the documents submitted to the Office of Chief Counsel for the confidential versions of these documents.

**Request No. 7:**

List all past, currently active, and/or any planned testing and analysis activities conducted/being conducted/to be conducted by or on behalf of Toyota of the subject component. Separately, for each testing and analysis activity conducted to date, provide the following information.

- a. All parties, including third parties, involved with the identified testing activity.
  - i. A description of each party's role in the identified testing activity.
- b. All field collection activity(s) associated with each testing activity.
- c. Details on laboratory testing associated with each testing activity, including but not limited to:
  - i. Use of field collected or specifically prepared (not production units) inflators;
  - ii. All dissection and internal inflator component analysis;
  - iii. All ballistic testing including any propellant burn rate analysis;
  - iv. All accelerated exposure testing (e.g., chamber cycling);
  - v. All controlled field exposure testing (e.g., parking lot exposure); and
- d. Any interim or final reports/results generated from the testing activity.

**Response 7:**

The information requested about testing and analysis activities is provided electronically in Microsoft Excel format entitled "Confidential Attachment-Response 7" store in the folder "Confidential Attachment-Response 7."

In addition, Toyota has been monitoring the activities of Northrop Grumman Innovation Systems (NGIS) and TK Global in their analysis of various Takata inflators, including the subject components identified in response to Requests No. 1 and No. 4. Reports, which include testing and analysis activities, have been provided by these organizations to NHTSA. The latest reports are: "Northrop Grumman Final Report on Field Monitoring of Takata X-Series Inflators, December 2021," "TK Global Final PSAN Inflator Industry Update, November 2021," and "TK Global Update to the November 2021 Presentation, May 2022." Please refer to those reports for details.

Please note that information provided in this response is confidential, and a request for confidential treatment has been submitted to the Office of Chief Counsel. Please see the documents submitted to the Office of Chief Counsel for the confidential versions of these documents.

**Request No. 8:**

Provide the current service life estimate for each subject component (listed by inflator prefix) identified in response to Requests No. 1 and No. 4. For each service life estimate provided, include the following.

- a. A detailed description of the data, report, test activity, predictive modeling, or other information and analysis that provides the basis for the service life estimate. Include copies of all documents related to the basis for the estimate.
- b. A detailed description of all current and/or planned testing, analysis, and/or predictive modeling activities being conducted for the purpose of establishing or updating your understanding of the service life of the subject component. Your description should include, but not be limited to:
  - i. All controlled field exposure testing (e.g., parking lot exposure); and
    1. The identification of all parties, including third parties, involved with the identified activity, including a description of each party's role in the identified activity.
    2. The actual or planned start date and end date for each identified activity.
    3. The identification and description of specific activities associated with each service life estimate determination.

**Response 8:**

Toyota has been monitoring the activities of Northrop Grumman Innovation Systems (NGIS) and TK Global in their analysis of various Takata inflators, including the subject components identified in response to Requests No. 1 and No. 4. Reports, which include service life estimates, have been provided by these organizations to NHTSA. The latest reports are: "Northrop Grumman Final Report on Field Monitoring of Takata X-Series Inflators, December 2021," "TK Global Final PSAN Inflator Industry Update, November 2021," and "TK Global Update to the November 2021 Presentation, May 2022." Please refer to those reports for details.

NGIS activities have been on behalf of the Independent Testing Coalition (ITC), whose members include Toyota and nine other vehicle manufacturers. The scope of this independent investigation of Takata Phase-Stabilized Ammonium Nitrate (PSAN)-based inflators was in two phases. Phase I investigated the root cause of inflator ruptures subject to numerous recalls by Takata and vehicle manufacturers.

Phase II investigated three passenger inflators and four driver inflators as shown in Table 1 below from the December 2021 NGIS report. All use either the 2004 or 2004L propellants, which combust PSAN propellant as the gas generant and have primary / secondary chambers, with the exception of the PSDI-X that has a shared chamber. As noted in the report, "this set of inflators was carefully selected to represent the widest range of inflator designs that are in the widest use in the field. This set, at the time selected, included the design of roughly 60% of the inflators in the field directly and designs that are closely related to over 90% of Takata manufactured inflators."

**[CONFIDENTIAL BUSINESS INFORMATION]**

Inflator	Type / Propellant Form	PSAN Formulation	Booster Formulation	Desiccant	Propellant System
PSDI-5 ZA	Driver / Tablet	2004	3110	None	1
PSDI-5D YT	Driver / Tablet	2004	3110	CaSO4	2
PSDI-5D GE	Driver / Tablet	2004	3110	13X	3
PSDI-X SV	Driver / Tablet	2004L	AIB	13X	5
PSPI-L FD	Passenger / Wafer	2004	3110	None	1
PSPI-LD DU	Passenger / Wafer	2004	AIB	13X	4
PSPI-X TX	Passenger / Wafer	2004L	AIB	13X	5

The NGIS service life estimations are presented in years to a 0.01 POF (1% probability of failure) for the inflator in the climate (city), vehicle temperature band (T3 being the hottest vehicles and T1 being the coolest) and in the most severe vehicle usage scenario (first percentile vehicle). Table 2 below from the December 2021 NGIS report contains the service life estimates for the **[CONFIDENTIAL BUSINESS INFORMATION]**:

Inflator Type	Main ID	Booster ID	Desiccant ID	Desiccant as % of Main in Primary	Platform Temp Band	Miami	Atlanta	Phoenix	Detroit	Seattle	Prefix
PSPI-L	2004	3110	NA	NA	T3	9	15	16	21	>30	LT
					T2	12	21	18	30		
					T1	21	>30	23			
PSDI-5	2004	3110	NA	NA	T3	9	17	>30	25	>30	ZA
					T2	14	26				
					T1	22					
PSDI-5D 13X	2004	3110	13X	4.4	T3	24	>30	>30	>30	>30	GE
					T2						
					T1						
PSDI-5D CaSO4	2004	3110	CaSO4	5.1	T3	24	>30	>30	>30	>30	YT
					T2						
					T1						
PSPI-LD	2004	AIB	13X	1.7	T3	23	>30	>30	>30	>30	DU
					T2						
					T1						
PSPI-X	2004L	AIB	13X	0.9	T3	16 to >30	27 to >30	>30	>30	>30	TX
					T2	23 to >30					
					T1						
PSDI-X	2004L	AIB	13X	1.3	T3	17 to >30	30 to >30	>30	>30	>30	SV
					T2	24 to >30					
					T1						

*\*Note that the values in this table are shown as single value integers outside of the last two entries but should be considered to have +/- 5%-15% ranges. The values can be compared with each other directly. The values are for the specific prefixes shown in Table 1 and design differences may result in significantly different predictions. See Table 12 and Appendix D for a description of the cities used in this study.*

Toyota is also closely monitoring TKG's testing and analysis. **[CONFIDENTIAL BUSINESS INFORMATION]**. TKG defines safe service life of the subject inflators as "the absence of age-related propellant degradation exceeding a critical state level where an inflator rupture is plausible." The table below was presented by TKG in its November 2021 report and includes estimates for these inflators:

## TKG Service Life Forecasts for Desiccated Takata PSAN Inflators in the Highest Risk U.S. Environment

Propellant	Inflator Type	November 2021 Forecast T65H Miami
2004 + 13X	SDI-D	12.4
	PSDI-5D	21.4
	PSPI-LD (wafers)	14.4
	PSPI-D (wafers)	13.8*
	SPI-D (wafers)	16.7*
2004L + 13X	PSDI-X 3110	>30
	PSDI-X AIB	28.3
	SDI-X AIB	>30
	SDP	>30
	PDP	>30
	PSPI-X 3110	>30
	PSPI-X AIB	>30

\*New SSL calculations. All others are the same as reported in the April 2021 update.

**[CONFIDENTIAL BUSINESS INFORMATION]**

**Request No. 9:**

For any inflator types identified in response to Requests No. 1 and/or No. 4, state whether you have or are developing a program to replace the inflators in subject vehicles. If yes, identify for which inflator type(s), the status of the program, and projected completion of each program.

**Response 9:**

There is no available information suggesting that the subject components in the subject vehicles contain a defect. Toyota has not developed and is not developing a program to replace the inflators in the subject vehicles.

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In responding to this Information Request ("IR"), unless otherwise noted in individual attachments, the data provided in this response are current as of May 23, 2022.

As discussed with the Agency, an extension has been granted until July 18, 2022 to respond to Request No. 7d.

In responding to Request No. 5, Toyota searched reports previously submitted under the Standing General Order (SGO) 2015-01A to identify allegations of inflator ruptures on the subject vehicles. These reports are based on allegations of field ruptures received in consumer complaints, claims and lawsuits, Toyota field reports and dealer field reports, including technical assistance system (TAS) cases.

In the foregoing responses to this IR, information has been obtained from those departments and employees knowledgeable about the subject matter of this inquiry most likely to have 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 been made of corporate records where such documents would ordinarily be expected to be found and to which Toyota would ordinarily refer when looking for such information.

The definitions of "documents" and "Toyota," however, are unreasonably broad, vague, and ambiguous, and Toyota objects to such definitions, because they exceed a reasonable understanding of such terms. For example, "calendars," "travel reports," "contracts" and "personnel records," to name a few, would not normally contain responsive information pertaining to the "subject system" or "subject crashes". Toyota has also not provided information from electronic files that require extraordinary or expert means to retrieve that are generally unavailable to the computer user.

In addition, Toyota has not, except as otherwise noted, provided information from persons or entities over which it does not ordinarily exercise control, such as independent suppliers and contractors. Toyota also objects to the definition of "Toyota" to the extent it purports to include outside counsel. It would be unduly burdensome to require Toyota to request that outside counsel search files for responsive documents. Moreover, it is highly unlikely that outside counsel would possess any non-privileged documents responsive to this IR that are not already being produced by Toyota. In light of the significant burden and cost associated with canvassing outside counsel for potentially responsive documents and the very low probability of identifying any non-privileged document not already being produced, Toyota has not asked its outside counsel to search for responsive documents.

Toyota understands this IR to seek information on vehicles manufactured for sale in the United States and its territories. Also, we understand documents specifically related to the preparation of the responses are not sought.

Toyota understands that NHTSA will protect any private information about persons that is contained in the Attachments to this response, based on privacy considerations. Such private information includes data such as names, addresses, phone or fax numbers, email addresses, license plate numbers, driver's license numbers and the last 6 digits of a vehicle's VIN.