Manufacturer Name: DENSO International America, Inc.

Submission Date: November 24, 2021

Recall No.: 20E-085

Manufacturer Recall No.: NR

Manufacturer Information:

Manufacturer Name: DENSO International America, Inc.

Address: 24777 Denso Drive, Southfield, Michigan 48086 U.S.A

Company phone: +1 248 350 7500

Population:

Number of potentially involved: 2,483,801 Estimated percentage with defect: NR

Equipment Information:

Brand / Trade : DENSO Model : Fuel Pump

Part No.: Various part numbers

Size: N/A

Function : Fuel supply Descriptive Information :

The low-pressure fuel pump is located in the fuel tank and supplies fuel pressure to the fuel injection system.

Production Dates: JUN 26, 2017 – SEP 24, 2019

Description of Defect:

Description of the Defect:

For Description of Defect, please see DIR filed April 24, 2020 attached to recall 20E-026.

FMVSS 1 : NR FMVSS 2 : NR

Description of the Safety Risk:

For Description of Safety Risk please see DIR filed April 24, 2020 attached to recall 20E-026.

Description of the Cause:

For Description of Cause, please see DIR filed April 24, 2020 attached to recall 20E-026.

Identification of Any Warning that can Occur:

For Identification of Any Warning that can Occur, please see DIR filed April 24, 2020 attached to recall 20E-026.

Supplier Identification:

Component Manufacturer

Name: DENSO International America, Inc.

Address: 24777 Denso Drive, Southfield, Michigan 48086 U.S.A

Country: US

Name: DENSO CORPORATION

Address: 1-1, Showa-cho, Kariya, Aichi 448-8661, Japan

Country: Japan

Chronology:

For earlier events, see Separate DENSO DIR filed April 24, 2020 attached to recall 20E-026.

June 2020 – October 2020

Additional analysis was conducted regarding the density of impellers manufactured during various periods. Because the impeller material contains three elements (resin, glass fiber, and calcium carbonate), but only one element (resin) is susceptible to swelling, only resin density was examined for this analysis. Resin density was found to more closely correlate with the occurrence of field cases than overall impeller density. The resin density findings indicated additional material lots which could contribute to the occurrence of the condition in combination with other factors.

In addition, the surface strength of impellers manufactured during various periods was examined with additional variables considered. This analysis demonstrated that a lower minimum surface strength than previously estimated could be possible.

The new resin density and surface strength information can be correlated by vehicle manufacturers with warranty data, production timing data, vehicle specific variables, and other information to determine which vehicles, if any, may be susceptible to the condition.

November 2020

Toyota filed a safety recall notice (20V-682) to cover additional Toyota vehicles that were not included in its earlier recall notices.

December 2020

Toyota amended safety recall notice (20V-682) to include additional vehicle models.

March 2021

Honda filed a safety recall notice (21V-215) to cover additional Honda vehicles that were not included in its earlier recall notices.

July 2021

Subaru filed a safety recall notice (21V-587) to cover additional Subaru vehicles that were not included in its earlier recall notices.

August 2021

Toyota filed a safety recall notice (21V-617) to cover additional Toyota vehicle model (Yaris) that was not included in its earlier recall notices. DENSO revised the population and production scope within the safety recall notice 20E-085 to account for the Yaris population.

September 2021

Subaru amended safety recall notice (21V-587) to cover additional Subaru vehicles that were not included in its earlier recall notices. DENSO revised the population within the safety recall notice 20E-085 to account for the additional population.

November 2021

Mazda made safety recall notification and implemented a safety recall (21V-875) for certain Mazda vehicles for a particular period. Additionally Chrysler (FCA US LLC) made safety recall notification and implemented a safety recall (21V-879) for certain substantially similar vehicles for a particular period. Chrysler (FCA US LLC) is not a purchaser as such term is used in this document. DENSO revised the population within the safety recall notice 20E-085 to account for the additional population.

DENSO sells low pressure fuel pumps of similar but not identical design and construction to other vehicle manufacturers. The vehicles of the other vehicle manufacturers possess different fuel delivery systems, engine configurations, and other variables to those Toyota, Honda, Subaru, Mazda, and Chrysler (FCA US LLC) included in its recall. DENSO is cooperating with other vehicle manufacturers' analysis.

Description of Remedy:

Description of Remedy Program:

The remedy program, if any, will be determined by vehicle manufacturers.

How Remedy Component Differs from Recalled Component:

The impeller of fuel pumps utilized for a remedy component have higher density.

Identify How/When Recall Condition was Corrected in Production :NR

Recall Schedule:

Description of Recall Schedule: The recall schedule will be decided by vehicle manufacturers.

Planned Dealer Notification Date : NR - NR Planned Owner Notification Date : NR - NR

Purchaser Information:

The following manufacturers purchased this defective/noncompliant equipment for possible use or installation in new motor vehicles or new items of motor vehicle equipment:

Name: American Honda Motor Co., Inc.

Address: 1919 Torrance Blvd. Torrance CA 90501-2746

Country: US

Company Phone: NR

Name: Ford Motor Company Address: 1 American Rd, Dearborn MI 48126

Country: US

Company Phone: 800-392-3673

Name: Mazda North American Operations Address: 1025 Connecticut Avenue, NW

Washington DC 20036

Country: US

Company Phone: NR

Name: Mitsubishi Motors North America, Inc.

Address: 4015 Aspen Grove Dr,

Franklin TN 37067

Country: US

Company Phone: 865-441-4166

Name : Subaru of America, Inc. Address : One Subaru Drive Camden NJ 08103 Country:US

Company Phone: 856-488-8500

Name: Toyota Motor North America, Inc.

Address: 6565 Headquarters Drive, Plano TX 75024

Plano TX 75024 Country: US

Company Phone: 469-292-4000

Name: Magnuson Products, LLC

Address: 1990 Knoll Drive, Building A,

Ventura CA, 93003

Country: US

Company Phone: 805-642-8833

Comment section:

complementary explanation

Number of potentially involved: 2,483,801

This is the sum of the vehicle populations announced when Toyota filed safety recall notice 20V-682 and 21V-617, Honda filed safety recall notice 21V-215, Subaru filed safety recall notice 21V-587, Mazda filed safety recall notice 21V-875, and Chrysler (FCA US LLC) filed safety recall notice 21V-879.

Estimated percentage with defect: NR

DENSO is unable to provide an estimate of the percentage of vehicles to actually contain the defect. Whether the issue will lead to a vehicle stall while driving at higher speeds depends on many variables, such as the vehicle operating conditions.