

# Part 573 Safety Recall Report

# 18E-095

**Manufacturer Name :** Alpha Technology Corp

**Submission Date :** OCT 11, 2018

**NHTSA Recall No. :** 18E-095

**Manufacturer Recall No. :** N/A



## Manufacturer Information :

## Population :

**Manufacturer Name :** Alpha Technology Corp

**Address :** 1450 McPherson Park Dr

Suite 200 Howell MI 48843

**Company phone :** 5175469700

**Number of potentially involved :** 20

**Estimated percentage with defect :** 100 %

**Brand / Trade 1 :** Alpha Ignition Switch

**Model :** Alpha Ignition Switch

**Part No. :** FOJ57 00000

**Size :** N/A

**Function :** Ignition Switch

**Descriptive Information :** Alpha conducted a durability test during investigation of a Steering Lock material supplier change. Alpha detected the loss of Torque Click Feel in the Steering Lock Rotation. A tear down of the ignition switch found a broken spring starting at a pressure mark. It was determined that the material in the spring production process went through a feeding roller that had deteriorated and was worn out. The indentation on the roller was transposed to a pressure mark on the spring that led to the fatigue failure of the spring. This failure discovered during testing caused Alpha Technology to stop manufacturing parts with this spring in June, 2017. The supplier replaced the feeding roller and the new parts were determined not to have the pressure marks. Parts containing the defective spring were manufactured in a number of batches from December 18, 2016 through June 2, 2017.

The defective products include: (1) products incorporated as original equipment in the Nissan vehicles subject to Safety Recall 18V-551; (2) Service parts and vehicles containing the same:

For Nissan: Service parts: Replacement manual steering column locks and ignition switches for Nissan vehicles subject to Safety Recall 18V-551 and certain other vehicles.

Vehicles: Vehicles which had their manual steering column locks or ignition switches after February 24, 2017

For Subaru: Service parts: Replacement manual steering column locks and ignition switches for Subaru Legacy and Outback vehicles manufactured between 2007 and 2012. Vehicles: Subaru Legacy and Outback vehicles manufactured between 2007 and 2012 which had their manual steering column locks or

**Equipment Information :**

ignition switches replaced after April 10, 2017.

Service Parts for SUBARU Vehicles: 20

Service parts for Nissan Vehicles: 395

Production Dates : DEC 18, 2016 - JUN 02, 2017

**Description of Defect :**

Description of the Defect : The mechanical key ignition systems may have been equipped with a ball spring which could be susceptible to long-term excessive wear and possible fatigue breakage after an estimated 6 years of normal use. If the ball spring breaks, the retention force of the ignition switch is reduced. Vibration while driving may pull the ignition switch from the "ON" position to the "ACC" position, especially if there is a heavy key ring

FMVSS 1 : NR

FMVSS 2 : NR

Description of the Safety Risk : On Nissan vehicles subject to its recall there is the risk of the engine stopping while the vehicle is running, which will cause an increased risk of a crash and increased potential for injury, if a crash does occur. Subaru is evaluating whether there is a safety risk on its vehicles.

Description of the Cause : Due to improper maintenance of tooling used in the manufacture of ball springs for ignition switches, some of the springs may have imperfections which may cause the ball spring to eventually break after repeated switching of the ignition switch.

Identification of Any Warning that can Occur : It is possible that the ignition system would lose its "click" when the spring broke, but the driver may not notice this.

**Supplier Identification :****Component Manufacturer**

Name : Calsonic Kansei

Address : 2-1917 Nishin-cho Kita-ku  
Saitama, Saitama Ken FOREIGN STATES 3318501

Country : Japan

**Chronology :**

June 5, 2017—ALPHA conducted a durability test of the manual steering column locks in order to evaluate the

feasibility of changing the frame material of the manual steering column locks for Nissan vehicles. During the course of the test, it was found that a defect in the ball spring could lead to the breakage of the spring.

August, 2017—A tooling maintenance issue at the ball spring supplier was discovered which could have affected the durability of the ball springs used in the ignition switches. It was confirmed that the maintenance issue could cause the affected ball springs to break after approximately six years of use due to metal fatigue. Although ALPHA had not received any reports regarding broken springs, it reported the issue to Nissan.

September 2017—ALPHA and Nissan held a series of meetings to discuss the issue.

October 2017-August 2018—Nissan conducted an investigation of the potential impact of the defect on vehicle performance. ALPHA cooperated with Nissan's investigation by conducting various bench vibration tests. However, Nissan determined that the bench tests were not representative of actual vehicle usage. Nissan decided to conduct vehicle tests and established the test conditions for them. ALPHA provided Nissan with test specimens and test tools for the vehicle tests. Ultimately Nissan concluded from the vehicle tests that if the ball spring is broken, the ignition switch could accidentally turn from the "on" position to the off (ACC) position under rough road conditions when heavier weights are suspended from the ignition key ring.

August 21, 2018—Nissan notified NHTSA of a safety defect in the ALPHA ignition switches

August 23, 2018—ALPHA notified Subaru of the Nissan safety recall. ALPHA had sold some of the defective ignitions switches to Subaru for replacement parts on its vehicles. ALPHA participated in the review at Subaru as to the safety impact of the defect on Subaru vehicles. Present-ALPHA is filing.

## Description of Remedy :

Description of Remedy Program :	The remedy is to repurchase or replace any of the ignitions switches still in the hands of Alpha Technology Corporation's customers and to replace any ignition switches that have been placed into vehicles.
How Remedy Component Differs from Recalled Component :	The ignition switches which may have the defect can be identified by the following lot numbers: 6Z18-6Z23; 6Z26-7212; 7407-7410; 7411-7602. The remedy component is from different lot numbers after a correction in the manufacture of the spring occurred.
Identify How/When Recall Condition was Corrected in Production :	The rollers used for formation of the ball springs were replaced with rollers without imperfections when the defect was discovered.

## Recall Schedule :

Description of Recall Schedule :	Although Alpha Technology Corporation's customers are aware of the defect, Alpha will officially notify its customers sometime in the month of November. Alpha will assist its customer(s) in implementing the recall campaign.
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 : Nissan North America

Address : P. O. BOX 685001

Franklin TN 37068-500

Country : US

Company Phone : 6157253142

Name : Subaru of Indiana Automotive (SIA

Address : NR

Lafayette IN

Country : US

Company Phone : NR

\* NR - Not Reported