



Safety Research & Strategies, Inc.

340 Anawan Street / Suite 200

Rehoboth, MA 02769

Ph. 508-252-2333, Fax 508-252-3137

www.safetyresearch.net

Are Floor Mats the Cause of Sudden Unintended Acceleration in Toyotas?

It appears that Toyota's all-weather floor mats can cause interference with the accelerator pedal resulting in unintended acceleration. While this problem is likely the cause of some SUA events, it doesn't explain many incidents. The following shows how floor mat interference can occur and the design changes to the recalled 2007 Lexus ES350 all-weather floor mat.

Below are photos of the three all-weather floor mats:



Recalled Lexus ES350



Redesigned Lexus ES350

When properly installed using the retaining clips provided, the floor mat **cannot** interfere with the accelerator as show in this 2009 Lexus ES350:



If the floor mat is not retained by the clips and the mat is misplaced closer toward the accelerator, it can interfere with the accelerator. In the photos below, note the lower edge of the accelerator pedal caught in the groove of the all-weather mat.



In order for the accelerator to stick in the floor mat groove, it must be pressed all the way down to the floorboard.

However, in most instances when the accelerator gets caught, the return spring force of the pedal is strong enough to cause it to release, particularly when the mat is jarred and / or the pedal is being manipulated the pedal will return to its nominal position.

The 2007 Lexus ES350 All Weather Floor Mat Recall

In 2007 Toyota recalled Lexus ES350 models for all-weather floor mat interference. The redesigned ES350 floor mat contains significant design changes.

A side by side comparison of the recalled ES350 and redesigned ES350 floor mats shows some of these differences.



The two most obvious changes to the floor mat are that the cut out around the accelerator is larger and the rib that was catching the lower edge of the accelerator pedal has been removed.

Another significant change was made to the underside of the floor mat at the accelerator cut-out (below). There are ridges designed on the underside of the mat to make the area near the bottom of the accelerator pedal more flexible. On the recalled floor mat, this area is very stiff, which can contribute to retention of the accelerator pedal.



Recalled ES350 Mat



Redesigned ES350 Mat

The new floor mat has much larger cut-out area around the floor mat and is unlikely to entrap the accelerator if it is fully depressed.



The redesigned floor mat also includes a caution regarding interference with pedal operation.



Finally, the redesigned floor mat is also noticeably thinner gauge rubber material.