By JOSH MITCHELL

A lengthy investigation by NASA into last year's Toyota Motor Corp. recalls found that engine electronics played no role in incidents of sudden, unintended acceleration of its cars, U.S. officials said Tuesday.

The report, released by the Transportation Department to settle persistent questions over the Toyota recalls, concluded that the auto maker had identified the only two causes of the incidents: defective gas pedals and interfering floor mats. The Japanese auto maker recalled more than 8 million vehicles to correct those problems.

"Toyota's problems were mechanical, not electronic. And that comes after one of the most exhaustive" and thorough investigations ever conducted, Transportation Secretary Ray LaHood said.

"We feel that Toyota vehicles are safe to drive," Mr. LaHood said.

The report also contains a key finding: Most incidents reported to the DOT appeared to be caused by drivers stepping on the gas instead of the brake. The National Aeronautics and Space Administration, which conducted the study with the DOT, "observed that the vast majority of complaints involved incidents" that began when the car was stationary or at a low speed. The most likely cause in such incidents was "pedal misapplication," with the driver stepping on the gas, rather than, or in addition to, the brake, the report said.

DOT said it is looking at the design and placement of the gas pedals to determine if there are problems there.

A Toyota spokesman declined immediate comment.

The DOT added that it "does not have reason to believe that pedal misapplication is a cause of the relatively few, prolonged, high speed UA incidents that present the greatest safety risk." Such incidents were likely...
caused by floormat entrapment.

The conclusions of the 10-month-long inquiry have broader implications for the auto industry, which has sought to put to rest questions over vehicle electronics that auto makers increasingly rely on to govern critical functions in their vehicles from braking to acceleration.

David Strickland, chief of the DOT's National Highway Traffic Safety Administration, said the agency is currently considering whether to require advanced-brake technology, known as brake-override systems, and "black box" event-data recorders in all passenger cars.

The potential for glitches in engine electronics has been debated for years, with no major studies having linked electronics to sudden acceleration. The rash of unintended acceleration reports involving Toyota vehicles stirred up doubts about the safety of electronic systems that were amplified by product liability lawyers, who have advanced theories that automotive electronic systems could be vulnerable to electromagnetic interference.

The industry maintains that electronics makes cars safer, and auto makers have feared that a government report finding fault with electronics could open them up to product-liability lawsuits and more government regulation.

"NASA engineers found no electronic flaws in Toyota vehicles capable of producing the large throttle openings required to create dangerous high-speed unintended acceleration incidents," the DOT said in a statement.

Toyota, which has paid $49 million in U.S. fines related to the recalls to settle claims that it hid deficiencies from regulators, has maintained that no problems with its electronics exist. But the questions from Democratic lawmakers and consumer advocates grew so loud last year that the Transportation Department enlisted space engineers at NASA to look into the matter.

"I think it's a failure of evaluation because there are so many cases where there was no problem with the floormat and it was clear the vehicle had runaway on its own," said Joan Claybrook, president emeritus of Public Citizen and a former National Highway Traffic Safety Administration secretary. "It has to be some vehicle related malfunction. The failure to find that is a failure of analysis."

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