



U.S. Department
of Transportation

Memorandum

**National Highway
Traffic Safety
Administration**

Subject: Vehicle Inspections

Date: 2/26/2008

Vehicle Owner Questionnaires (VOQ) ODI 10192738 and 10214424

From: Scott Yon

Investigator, NHTSA ODI

To: Files ODI 10192738, 10214424, and PE08-006

Present: Rick Lantz, Manager, Product Support, Mitsubishi Motor North America, Inc
Scott Yon; NHTSA, ODI

On 2/13/2008, the Mitsubishi and ODI personnel noted above met at a location near Johnstown, PA to interview the Complainant for ODI 10192738 and inspect their vehicle. The Complainant confirmed that the vehicle experienced a rollaway incident as described in ODI 10192738¹. The vehicle has remained in service since the incident and has not been repaired for the concern the Complainant alleges caused the rollaway. The vehicle was manufactured in May 2006 and is identified by VIN 4A4MN21S96[REDACTED]. The current mileage is 30,724. The shifter bezel, upper and lower steering column shrouds, and RH center console panel were removed for inspection purposes. No other components were removed or altered in any fashion (including adjustment), all removed components were reinstalled after the inspection, and no components were taken away from the inspection site.

The subject vehicle ignition-park interlock and shift lock (brake-shift interlock) systems are mechanically actuated. The systems utilize two cable assemblies, one routed from the brake lever to the shifter, and one routed from the ignition switch to the shifter. Both cables connect to a plastic housing mounted to the RHS of the shift lever mechanism; the plastic housing is a subcomponent of the shift lock cable. Within the housing is a lever (interlock lever) that the ignition-park interlock cable connects to. When the interlock lever is positioned towards the rearward end of its travel range (and the cable is extended) the ignition key is blocked from removal by a cable actuated mechanism located at the ignition switch. When the lever is positioned in its forward travel position, the key can be removed from the ignition switch.

The shift lever cannot be moved from the park position when the ignition key has been removed. When the key is inserted and turned to any position and the brake pedal is depressed (which actuates the shift lock cable) the shifter can be moved from the park position. The action of disengaging the shift lever from the park position moves the interlock lever to its rearward position; this blocks the ignition key from removal. When the shifter is moved back to the park position the interlock lever is moved to the forward position and the key can be removed.

¹ Visit www-odi.nhtsa.dot.gov and use the 'Search our complaint database' option to view the report under this ID.

Continued: Vehicle Inspections, ODI 10192738 and 10214424

During the inspection, Mitsubishi and ODI determined that if the shift lever was moved from the park position (thus positioning the interlock lever rearward) and the brake pedal was subsequently released in a rapid fashion from a depressed position then the interlock lever would (of its own accord) move back to the forward position²; this apparently occurs due to some interaction between the ignition-park and shift lock system. When the interlock lever moved to the forward position then the key could be removed from the ignition in a non-park gear position and a vehicle rollaway could occur. Additionally, once the interlock lever moved to the forward position it remained there (i.e., for the remainder of the drive cycle) until the shift lever engaged and disengaged the park position again. The Complainant was advised of the concern and was instructed to always ensure the shifter was placed in park and the park brake was set before exiting the vehicle.

After this inspection, Mitsubishi and ODI traveled to a location in Weirton, WV to interview the Complainant for ODI 10214424 and inspect their vehicle. The Complainant confirmed that the vehicle experienced a rollaway incident as described in ODI 10214424³. The vehicle has remained in service since the incident and has not been repaired for the concern the Complainant alleges caused the rollaway. The vehicle was manufactured in May 2006 and is identified by VIN 4A4MN21S56 [REDACTED]. The current mileage is 33,113. The inspection procedure described above was performed. No other components were removed or altered in any fashion (including adjustment), all removed components were reinstalled after the inspection, and no components were taken away from the inspection site.

Mitsubishi and ODI observed that the vehicle demonstrated the same ignition-park interlock system behavior as the Johnstown, PA vehicle and that the key could be removed in a non-park position under these conditions; this could lead to a rollaway incident. The Complainant was advised of the concern and was instructed to always ensure the shifter was placed in park and the park brake was set before exiting the vehicle. During that discussion the Complainant also noted difficulty engaging the park position that had been experienced on an occasional basis since the Complainant has owned the vehicle.

Both complaint vehicles were purchased used by the Complainants. Mitsubishi has advised that both vehicles were initially sold for service in a rental fleet. Mitsubishi and ODI agreed that further analysis of the complaint vehicles was required to fully understand the failure mechanism and possible causation. Both Complainants have indicated a willingness to allow ODI to further inspect the vehicle, details to be agreed at a future date. Mitsubishi agreed to do identify a Mitsubishi dealership local to the Washington, DC area for ODI to visit and inspect the ignition-park interlock system on non-complaint subject vehicles. Mitsubishi agreed to inspect non-complaint subject vehicles available at their corporate offices and to advise ODI of their findings.

² The interlock lever would also move to the forward position if the brake pedal was applied and released multiple times in a forceful manner.

³ Visit www-odi.nhtsa.dot.gov and use the 'Search our complaint database' option to view the report under this ID.