



U.S. Department  
of Transportation

# Memorandum

**National Highway  
Traffic Safety  
Administration**

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Subject: Vehicle and Incident Site Inspection  
Vehicle Owner Questionnaire (VOQ) ODI 10182245

Date: 5/2/2007

From: D. Scott Yon  
Investigator, NHTSA ODI

To: Files ODI 10182245 and PE07-016

Present: Complainant [REDACTED] and spouse;  
Scott Yon;

The vehicle inspection was conducted on 4/11/2007 at a used car facility located at 1001 Dolly Parton Parkway, Sevierville, TN and consisted of a physical examination of the vehicle (interior, exterior, engine compartment, and underbody), a physical examination of the LHF and RHR brake components, and a test drive. The Complainant attended the entire process and discussed their experiences with the vehicle and recollections of the incident that occurred on October 12, 2006; they answered questions posed by ODI. No electronic interrogation of any vehicle system was performed. With the exception of the components removed for brake inspection, and the floors mats, no other components were removed and NHTSA did not take possession of any vehicle components or other materials. Copies of pertinent photographs taken during the vehicle inspection are included with this report. Additionally ODI visited the location where the incident reportedly occurred.

The VIN was recorded as JTHBJ46G372[REDACTED] and the initial odometer reading as 2,728 miles. The certification label indicated the date of manufacture was 04/06, and the point of manufacture as Japan (photo 1). According to the Complainant, the vehicle has been located either at a dealership in Kingsport, TN (through late January) or at the current facility since the incident occurred<sup>1</sup>. The Complainant states they have not driven the vehicle since the incident and that to the best of their knowledge the vehicle is currently in the same state as it was at the time of the incident.

The exterior vehicle body is clean and appears to be without damage or abnormality. Tire tread depth and wear appears consistent with the indicated vehicle mileage. Discoloration, rust and surface damage to the brake rotors is visible through all four wheel apertures. The engine compartment appears normal<sup>2</sup> and consistent with indicated vehicle mileage; engine oil, coolant, power steering and brake fluid levels were within expected levels.

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<sup>1</sup> A repair order subsequently provided by the Complainant reflects that the mileage at the start of the inspection process is the same as the outgoing mileage from the Kingsport dealership.

<sup>2</sup> The battery state of charge indicator showed the battery was discharged. The vehicle would not start due to this condition and a boost from a portable battery device was applied.

The vehicle interior is clean and its condition is consistent with the indicated vehicle mileage. Rubberized all weather mats of the type which are the subject of NHTSA Preliminary Evaluation (PE) 07-016 are installed at all four seating positions. The driver side all weather mat (see photos 2 through 5) is installed on top of the original equipment carpet mat and is unsecured by a retention device. The all weather mat was removed for inspection. A retention device is securing the carpet mat and the device is properly engaged to the fixed flooring material (carpet). The Complainant states that the vehicle was delivered (by the dealership, new) with this floor mat configuration<sup>3</sup>.

The engine was started and its speed and operation were normal. The throttle and brake pedals operated normally and the vehicle was driven to a service bay where it was hoisted. The engine was started and the engine speed limiter was tested. The vehicle was placed in drive and a three second delay in the engine stop button was confirmed. The underbody of the vehicle appeared normal and its condition is consistent with the indicated mileage. The right hand rear (RHR) and left hand front (LHF) wheels and brake components were removed for inspection of the friction materials<sup>4</sup>. The brake components exhibit wear and damage inconsistent with normal operation and inconsistent with the indicated vehicle mileage (see photos 6 to 16). The damage indicates excessive brake temperatures and is consistent with the brakes being applied vigorously over an extended period while the vehicle is moving at speed.

The vehicle was removed from the service bay and the engine was turned off. The all weather mat was placed on the carpet mat approximately 2" forward of its intended location. The accelerator was fully depressed at which point it engaged (became trapped in) the forward edge of the all weather mat. This condition was demonstrated to the Complainant.

ODI and the Complainant's spouse conducted a 10 mile test drive of the vehicle. The functionality of the shift interlock, cruise control, and cruise interlock/override systems were tested; no abnormalities were noted. A brake override test was performed; a stopped condition could not be maintained<sup>5</sup> however this result was not unexpected given the state of the brake system. The vehicle was accelerated in drive at wide open throttle and at a speed of approximately 50 MPH the shifter was placed in neutral<sup>6</sup> at which point the transmission disengaged drive, the vehicle lost forward propulsion, and the engine speed increased to the speed (rev) limiter.

ODI used another vehicle to travel north on Tennessee Rt. 66 (along the same route the Complainant followed prior to their October 2006 incident) and exiting onto Interstate 40 West towards Knoxville and continued on I-40 to the approximate location the Complainant states the vehicle stopped (near Thorngrove Pike overpass, about 6 miles on I 40). ODI notes that the roadway on I 40 W has an uphill grade from the Rt. 66 interchange.

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<sup>3</sup> The Complainant recalled previously observing the retention holes in the all weather mat questioning if something should be engaged in them but assumed this was not necessary since the vehicle had been delivered in this condition.

<sup>4</sup> This includes damage to the park brake components also.

<sup>5</sup> The brake override test is conducted from a stopped state with the transmission in drive. The driver then fully applies the throttle with the right foot while using the left foot to operate the brake pedal. Typically a brake pedal force of 40 to 60 lbf is sufficient to prevent vehicle movement. In this case the writer was unable to prevent vehicle movement at the maximum brake force that could be applied with the left foot (well in excess of 100 lbf).

<sup>6</sup> During this maneuver the shifter was accidentally placed in reverse initially however this had the same effect as placing the shifter in neutral, i.e., the vehicle lost forward propulsion and the engine revved to the speed limiter.

Photographic Log:

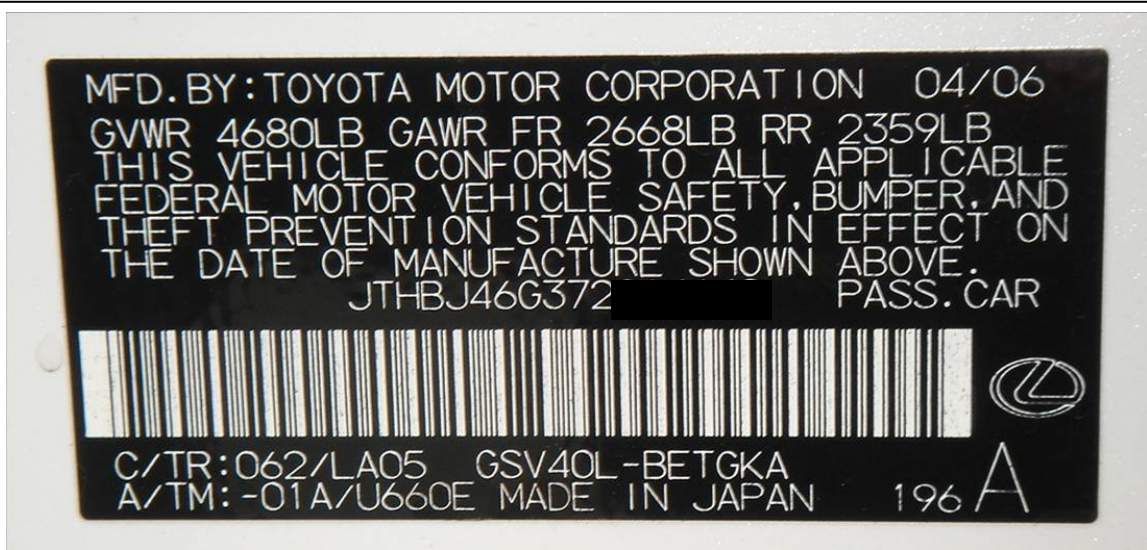
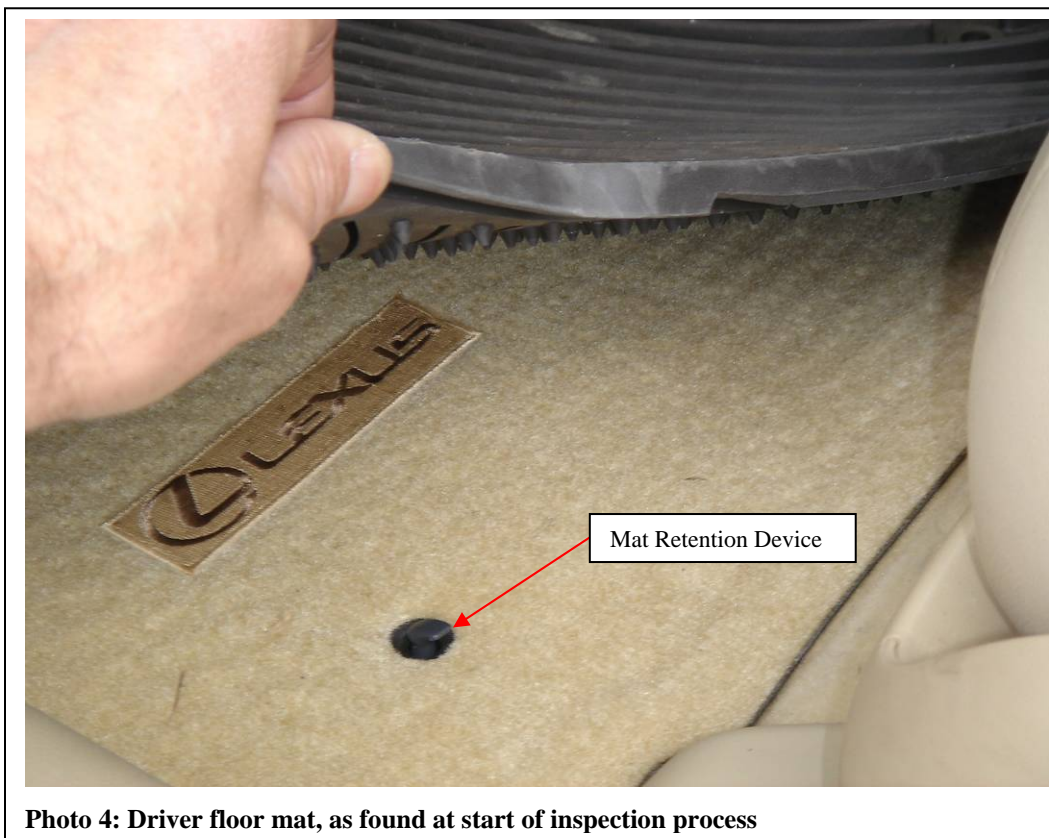


Photo 1: Certification label, driver side door jam



Photo 2: Driver floor mat, as found at start of inspection process







**Photo 5: Driver floor mat, as found at start of inspection process**



**Photo 6: RHR disc brake rotor, before disassembly**



**Photo 7: RHR rotor and pads, caliper removed**



**Photo 8: RHR outboard disc brake pad, friction surface/rotor side**





Photo 9: RHR brake caliper mount and inboard brake pad, non-rotor surface



Photo 10: RHR inboard disc brake pad, friction surface

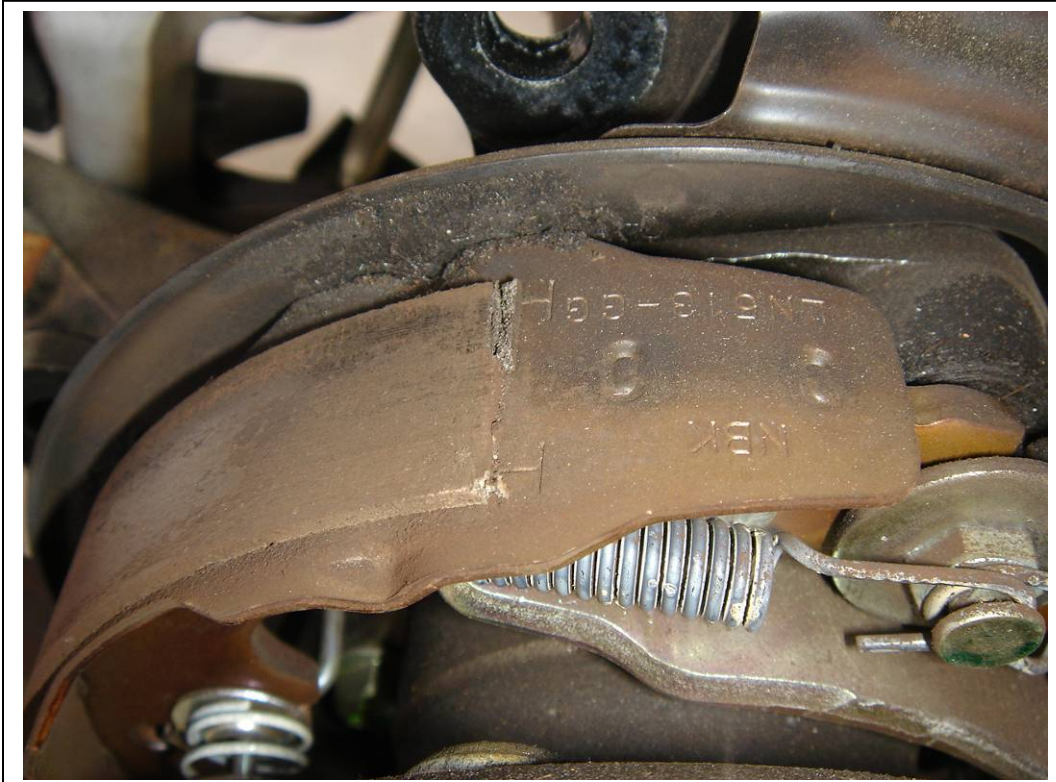


Photo 11: RHR park brake (Drum-In-Hat type) rear shoe and hardware, drum removed



Photo 12: RHR park brake drum and inboard service brake friction surfaces





Photo 13: LHF brake assembly, before disassembly

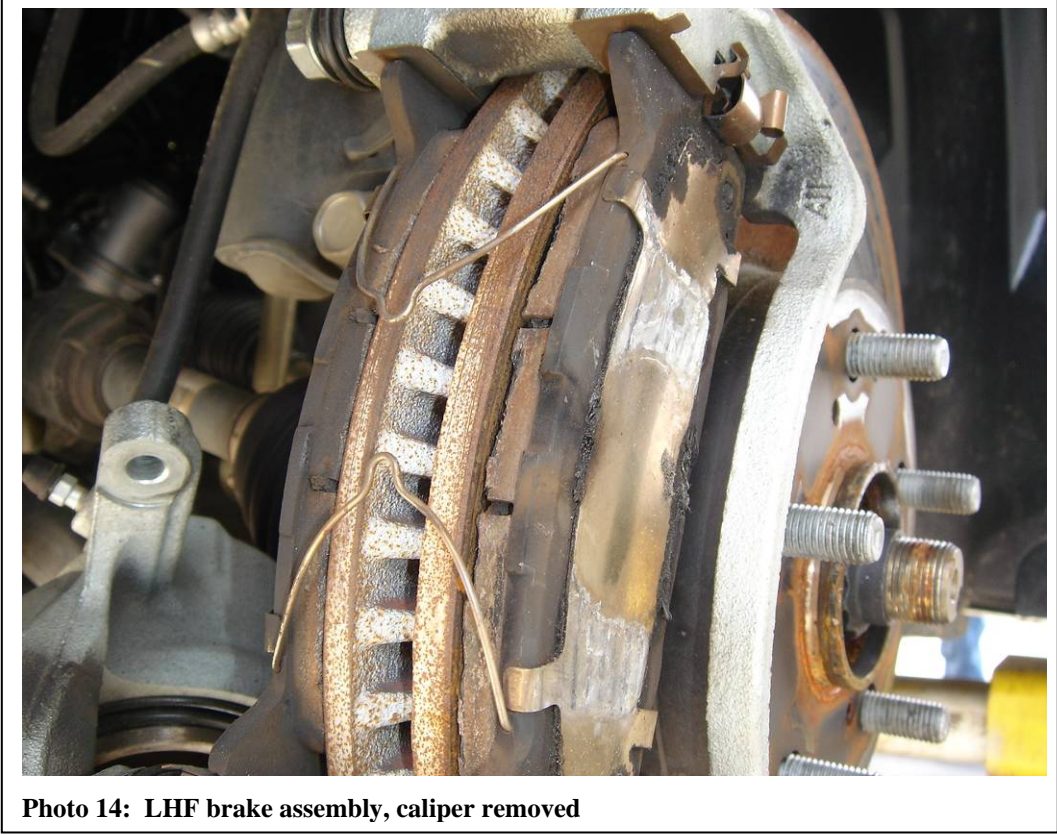


Photo 14: LHF brake assembly, caliper removed



**Photo 15: LHF outboard brake pad, friction surface**



**Photo 16: LHF outboard brake pad, friction surface**





Photo 15: LHF inboard brake pad, friction surface



Photo 16: LHF inboard brake pad, friction surface