



U.S. Department
of Transportation
**National Highway
Traffic Safety
Administration**

1200 New Jersey Avenue SE
Washington, DC 20590

NOV - 6 2008

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. James Vondale, Director
Automotive Safety Office
Environmental and Safety Compliance
Ford Motor Company
330 Town Center Drive, Suite 400
Dearborn, MI 48126-2738

NVS-213
EA07-012

Dear Mr. Vondale:

The Office of Defects Investigation (ODI) of the National Highway Traffic Safety Administration (NHTSA) hereby requests that Ford Motor Company (Ford) /Land Rover North America (Land Rover) conduct a safety recall to correct a defect in the coupling between the front differential and propeller shaft in model year (MY) 2003 through 2005 Land Rover Range Rover vehicles. This letter is being sent to you as agent for Land Rover.

Misalignment of the front differential coupling sleeve and propeller shaft results in spline wear over time, which may result in loss of drive and a failure of the Park lock system. Once immobile the vehicle can become disabled in the roadway or alongside the roadway. A stalled or disabled vehicle creates a safety hazard to its occupants and to trailing traffic, especially if the disablement occurs in a roadway or in a high speed traffic environment. Additionally, unexpected movement of a vehicle with the transmission in Park can create a hazard to other vehicles as well as pedestrians. Defect conditions with these types of safety consequences should be remedied by safety recalls.

Ford is undertaking to address this problem through Service Action Q041 rather than a recall. Service Action Q041 is inadequate. Defect conditions presenting this type of unreasonable risk of accidents and an unreasonable risk to the occupants of vehicles and others must be remedied by a safety recall, not a service action/customer service campaign or other similar measure.

ODI's Investigation

ODI began its investigation of the Range Rovers when a Preliminary Evaluation (PE), PE07-019, was opened on April 4, 2007. The investigation was upgraded to an Engineering Analysis (EA), EA07-012, on August 14, 2007. During EA07-012, ODI collected and analyzed information regarding the failure of the coupling.



The Defect and its Frequency

Ford provided ODI detailed information in response to ODI's information requests during the PE and EA phases of the investigation. During the course of this investigation, the evidence strongly supported the conclusion that the front propeller shaft and front differential coupling failed frequently. ODI determined that the coupling that mates the front propeller shaft and front differential fails, resulting in a loss of motive power.

In the Range Rovers, the front propeller shaft provides power to the front wheels through a spline coupling to the front differential. Misalignment of the front differential coupling sleeve and the front propeller shaft results in wear to the spline teeth. Failure of the spline coupling results in a loss of drive to the front wheels and also the rear wheels due to the design of the center differential.

Analysis of Ford's warranty claim data shows that, on average, approximately 16% of the Range Rover vehicle population had a front differential, front propeller shaft and/or both replaced under new vehicle warranty coverage. Statistical analyses of warranty data by both Ford and ODI estimate that over one-third of the subject vehicles would experience the alleged defect within six years of service. The data demonstrate that the defect has occurred and is likely to occur at a very high frequency. ODI's analysis of failure data for peer sport utility vehicles¹ found significantly lower warranty claims rates of 0.2% or less and no issues with vehicle movement after shifting to Park.

By its actions, Ford has recognized that there are problems in the drivetrain in the Range Rovers. Underlying the failure of the drivetrain is the misalignment and wear of various parts, which leads to the failure of the coupling. In production, Ford introduced a change to the lubricating grease of the coupling in February 2003 and a change to the assembly plant alignment process in July 2003 to address the misalignment and wear issue. Later, during the course of ODI's investigation, Ford provided information to ODI regarding a redesigned front propeller shaft and front differential coupling that Ford is offering to provide customers in its recently released Service Action Q041. Ford states that the new design would address potential misalignment and premature spline wear of the front propeller shaft to front differential coupling that could lead to the inability of the shaft to transfer torque to the front differential. Ford also notes in the Service Action Q041 technical information to service personnel, that it does not consider the condition to be an unreasonable risk to safety. Based on information gathered during the investigation, ODI does not agree with the assessment that the condition is not an unreasonable risk to motor vehicle safety.

Safety Consequences

When assessing the loss of motive power and/or vehicle disablement as a potential safety issue, ODI initially considers the frequency of occurrence and causation. In this investigation, having concluded that the front propeller shaft and front differential coupling was defective and that the frequency of loss of motive power and subsequent vehicle disablement was extraordinarily high,

¹ BMW X5, the Cadillac Escalade, the Toyota Land Cruiser and the Lexus LX470.

ODI continued to look at other factors relevant to the relative severity of loss of motive power and vehicle disablement incidents, such as driving circumstances, speed of occurrence, ability to regain vehicle mobility and vehicle controllability. In this investigation, ODI also assessed allegations of other safety consequences involving movement of the vehicle after the transmission has shifted into the Park position.

To assess and gather additional information on these factors, ODI reviewed Vehicle Owner Questionnaire (VOQ) reports and Ford consumer complaints; conducted telephone interviews of both VOQ and Ford consumer complainants; and conducted a telephone survey of Ford warranty claimants who had recently experienced a loss of motive power due to the defective front propeller shaft and front differential coupling. The primary objective of the survey was to assess the safety consequences of front propeller shaft and front differential coupling failure in the subject vehicles.

ODI's survey analysis found that almost all consumers (~ 97%) who reported a loss of motive power became aware of the condition while the vehicle was in motion. Although Ford noted in its Information Request (IR) letter response to ODI that the warning presented to consumers is typically a loud grinding noise as the splines are shearing, consumers in ODI's survey reported that the loud grinding noise occurs as the joint failure is occurring. A very low percentage (~6%) of consumers surveyed by ODI reported experiencing warning symptoms for any notable period of time prior to the failure. Most consumers reported they did not experience any warning symptoms prior to the failure.

A disabled vehicle that has been rendered immobile poses a risk to its occupants and surrounding traffic, especially in high speed environments. More than half of the consumers surveyed reported the incidents occurred at speeds greater than 40 miles per hour, such as at interstate or highway speeds where a crash between a moving and an immobile vehicle, or crashes caused by other traffic maneuvering to avoid a disabled vehicle, could have severe consequences. None of the consumers was able to regain motive power once the vehicles were rendered immobile; the fact that the vehicle cannot be restarted increases the time occupants are exposed to potential collision and exacerbates the effect on surrounding traffic flow. Approximately one-third of the consumers interviewed by ODI reported that they were unable to maneuver the vehicle completely to the shoulder before the vehicle came to rest. Vehicles immobilized in a lane of traffic are in even greater danger of being struck than vehicles that are stopped on the highway's shoulder. Also, if the occupants exit the immobilized vehicle they are exposed to oncoming traffic.

In addition, owners have reported after the vehicle was immobilized and the transmission was shifted into the Park position, the vehicle continued to move. Information provided to ODI by Ford in the EA IR letter response noted the design of the center differential could allow for the vehicle to move even after the transmission was put in the Park position after a front propeller shaft/front differential coupling failure. Approximately one-quarter of the consumers surveyed noted this condition. Some of these consumers also noted that the vehicle rolled back into the roadway before they became aware of the need to apply the emergency brake.

Owner testimonials provided to ODI support the view that the coupling failures result in an unreasonable safety risk to occupants of the affected vehicle and to the other motorists in surrounding traffic, which must stop suddenly or maneuver around the disabled vehicle. Numerous owners were lucky to avoid a crash when their vehicle lost motive power. Moreover, in some instances the unexpected movement of a vehicle with the transmission in Park creates a hazard to other vehicles as well as pedestrians. The owners related driving experiences that placed them in a precarious and unsafe condition. Summaries of these and other customer testimonials have been included in the Enclosure. The fact that crashes have not yet occurred as a result of this defect does not negate the substantial risk it poses. The relatively small vehicle population (37,000) would not be expected to experience the most catastrophic consequences often, but the frequency of the defect is so high that such an event is entirely likely. As the testimonials make clear, the potential for a serious crash due to this defect is very real.

Conclusion and the Requested Recall

On the basis of the available information, ODI believes that the coupling failure of the front propeller shaft and front differential constitute a defect related to motor vehicle safety and that Ford must conduct a safety recall.

Ford's service action to replace the front propeller shaft and modify the front differential free of charge is inadequate. Among other things, the service action does not address – and in fact, dismisses – the unreasonable risk of accidents, injuries or deaths related to this defect. The coupling failures result in an unreasonable safety risk to occupants of the affected vehicle and to the other motorists in surrounding traffic, which must stop suddenly or maneuver around the disabled vehicle. The owner notification letter does not inform consumers that coupling failure results in vehicle disablement or affects the Park lock function of the vehicle. The unexpected movement of a vehicle with the transmission in Park can create a hazard to pedestrians as well as other vehicles, particularly since the movement typically occurs in close proximity to moving traffic. Because the service action does not properly advise consumers of the safety risk they face, they are less likely to have the service performed prior to the vehicle's being disabled by the defect.

The service action is also not being conducted in accordance with the National Traffic and Motor Vehicle Safety Act, as amended, 49 U.S.C. Chapter 301 (Safety Act) and other applicable laws and regulations, including the requirements for notice to consumers. Ford's approach also would deprive the agency of the ability to assess the adequacy of Ford's remedy.

Therefore, ODI hereby requests that Ford initiate a safety recall pursuant to the Safety Act, 49 U.S.C. § 30118, and in accordance with 49 U.S.C. § 30119 and 30120 notify all owners and dealers of the defect and provide a free remedy for each of the subject vehicles.

If Ford decides not to conduct the requested recall, it must provide ODI, pursuant to 49 U.S.C. § 30166, with a full explanation for this decision, including any additional analysis of the problem beyond its past presentations.

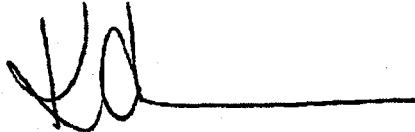
If Ford fails to initiate the requested recall, the agency may proceed to an Initial Decision that these vehicles contain a safety-related defect under 49 U.S.C. § 30118(a). An Initial Decision would be accompanied by a Federal Register notice to the public describing the alleged defect and the ODI investigation, the scheduling of a public meeting, and the issuance of a press release to inform the public regarding this matter.

ODI's request that Ford conduct a safety recall does not constitute a formal conclusion by NHTSA with respect to the evidence in our investigative file. Also, this request does not constitute an initial or final decision that the subject vehicles contain a safety-related defect pursuant to 49 U.S.C. § 30118, or an order to recall those vehicles.

Ford's written response to this letter, in duplicate, referencing the identification codes in the upper right hand corner of page one of this letter, must be submitted to this office **no later than November 21, 2008**. It is important that Ford respond to this letter on time. This letter is being sent pursuant to 49 U.S.C. § 30166, which authorizes this agency to conduct investigations and requires the submission of reports that may be necessary to enforce Chapter 301 of Title 49. Failure to respond promptly and fully to this letter may be construed as a violation of 49 U.S.C. § 30166, which could subject Ford to civil penalties pursuant to 49 U.S.C. § 30165.

If you have any question regarding recall procedures, please contact Mr. George Person of my staff at 202-366-5210. If you have any questions about this letter, please contact Mr. Jeffrey Quandt of my staff at 202-366-5207.

Sincerely,

A handwritten signature in black ink, appearing to read 'KD', followed by a horizontal line extending to the right.

Kathleen C. DeMeter, Director
Office of Defects Investigation
Enforcement

Enclosure

cc: Tim Davis

Enclosure: Summary of a sample of complainant interviews alleging a loss of motive power and/or movement of the vehicle with the transmission in Park.

VOO # 10203675

While traveling 40 - 45 mph in light traffic at night on Interstate 5 near Irvine, CA, the consumer reported that the vehicle made a grinding noise and the throttle did not work. The consumer reported the vehicle operated as if it was in neutral and rolled to a stop in the middle of the road. The assistance of a few people was required to push the vehicle to the side of the roadway. The consumer noted he was on a slight incline when he put the vehicle in Park and noticed the vehicle began to roll. He stated he initially had to hold the brake pedal down to keep the vehicle from moving but the emergency brake was required to keep the car from moving if he removed his foot from the brake pedal. The tow truck took an hour and a half to come.

VOO # 10142458

The consumer reported she has experienced two separate loss of motive power events. The first event was more significant and occurred while going up a hill at 60 mph. The consumer noted she was driving with no prior events or warning when she experienced a loud grinding noise and the vehicle began to immediately lose power. She was able to coast to the off ramp where she noted the transmission would not hold and the vehicle began to roll back towards traffic to a flat part of the road. At this point she applied the emergency brake to hold the vehicle. The consumer reported the second event occurred approximately 35,000 miles after the vehicle was repaired following the first event.

VOO # 10196095

The consumer reported he was traveling at 50 mph in heavy morning traffic when he heard a loud noise under the front of the vehicle and warning lights came up on the dash. He reported there was no engine power but he was able to negotiate across two lanes and into the breakdown lane. He noted it was a very dangerous situation that almost caused an accident as he tried to negotiate to the breakdown lane as he did not want to be stranded in the middle of the highway and rear-ended.

VOO # 10169526

The consumer reported two separate loss of motive power incidents. The second incident occurred after the vehicle was repaired following the first incident. Both incidents resulted in the consumer's vehicle being stranded in a lane of traffic. The consumer noted while traveling in heavy morning rush hour traffic the vehicle began losing power without any previous symptoms. The vehicle came to rest in between the emergency lane and the right lane of the highway.

VOO # 10157960

The consumer experienced a loss of motive power while climbing a mountain grade while traveling approximately 60 mph with no prior warning. The vehicle came to a stop and the consumer put the vehicle in Park. The vehicle began to roll backwards down the hill and ended up sideways in the highway before the consumer became aware of what was occurring and was able to apply the brakes to prevent further movement of the vehicle. In this case approaching traffic had sufficient time to stop before a crash occurred.

VOO # 10219047

The consumer and his wife were returning home on Interstate 29 heading south just 3 miles north of Platte City, Missouri at 11:45 pm. He was traveling about 74 MPH and the vehicle began making a loud grinding sound and the vehicle was losing power. He stated there was an 18-wheel truck to his right and one behind him, but was able to signal and coast almost to the right shoulder of the highway. The back half of the vehicle was partially in the right lane when the vehicle came to rest. He put the car in Park, the grinding stopped but the car rolled backwards so he applied the emergency brake and put on his hazard lights.

VOO - # 10165335

The consumer reported he just exited the freeway and came to a stop at the light at the end of the exit ramp, which also is a busy intersection. He noted as the traffic light changed he applied the accelerator to proceed through the intersection; there was horrible metal on metal grinding noise accompanied by sudden and complete loss of power. He noted he immediately shut the car off and put the vehicle into park. He noticed the vehicle began to roll and he used the emergency brake to keep from rolling backward.

AWS Claim Key 76269431

The consumer reported she was driving on a highway in light to medium traffic. She was approximately 5 miles from home when the vehicle began to lose power with no prior warning. She coasted across two lanes of traffic to the shoulder and put the vehicle in Park. She then noticed the vehicle began to roll even though it was in Park. She then applied the emergency brake to keep the vehicle from moving. She contacted Range Rover and had to wait 3 hours for a tow truck.

AWS Claim Key 76269176

The consumer reported he was traveling approximately 55 mph in the fast lane on Interstate 75N in medium traffic conditions from Cleveland to Detroit when the vehicle began to lose power without warning. He was able to coast across multiple lanes of traffic to the emergency lane. The consumer noted the tow truck took over three hours to arrive due to service being back logged around the Christmas holiday.

AWS Claim Key 76252246

The consumer reported two loss of motive power incidents in two Range Rover vehicles (MY 2004 and MY 2005) he owned. In the MY 2005 vehicle the consumer reported the loss of motive power incident occurred while driving through a one lane work zone with a very small shoulder. He reported just prior to the failure the vehicle appeared to hesitate and then suddenly there was no power while trying to accelerate. He then pushed the vehicle to the shoulder of the roadway. Once the vehicle was on the shoulder he noted "he could not shift the vehicle into Park" and the vehicle continued to roll. He then applied the emergency brake and waited for a tow truck to arrive.