



NHTSA **CLOSES** ITS BMW FINAL DRIVE **FAILURE** INVESTIGATION

After 18 months of analysis, the National Highway Traffic Safety Administration (NHTSA) closed its investigation into the failure of BMW Paralever final drive assemblies, concluding that the agency “finds insufficient evidence that a safety-related trend currently exists resulting from final drive failures in BMW K1200LT motorcycles.” The NHTSA investigation was prompted by a complaint filed in November 2011 after the crown gear bearing in my 2001 LT disintegrated, resulting in final drive oil on

the rear tire and rear brake failure. Annoyed at this second final drive bearing failure in 17,000 miles, I began researching complaints filed with the NHTSA in order to better understand the agency’s standard for when a manufacturer’s recall may be warranted, if at all.

I focused my complaint on the potential safety hazards of the bearing failure, namely oil seepage that could affect braking and rider control. In 2006, the NHTSA ordered the recall of certain BMW R1200S and HP2 motorcycles (#06V399) because the speed sensor O-ring installed in the final drive “could leak final drive oil onto the rear wheel and brake disk, increasing the risk of a crash.” BMW issued

BY CHRIS CIMINO

a Service Bulletin in connection with the recall titled “Final Drive Assembly Leaking.” I concluded the “risk of crash” standard used in the 2006 recall seemed appropriate for final drive bearing failures as well as the result was the same: possible oil on rear wheel and brake.

Upon review of the NHTSA’s website, I identified 145 complaints filed between April 9, 2001 and August 7, 2011 citing failure of the final drive bearing. Of these, 76% involved the K1200LT (with 88% focused on 1999-2002 models, presumably before BMW changed the bearing design and likely focused on more precise assembly controls); 32% cited oil on the rear wheel and brakes; and 3% cited the rear wheel locked. I limited the focus to the K1200LT subgroup rather than all models with the Paralever, assuming that the complaint could be extended to other models once precedent existed with the LT. However, even the LT complaints encompassed over 18 component categories, ranging from Power Train to Brake and even Engine Cooling failures. I compiled the data from the various component complaints into a single spreadsheet, which I included with my complaint, along with photos of my rear wheel covered in oil, and an excellent on-topic article written by Bill Shaw from the September 2008 issue of *Motorcycle Consumer News*. I also included the oil-soaked bearing parts taken from my final drive so the engineer assigned to the matter would have the mechanical connection that only the lingering smell of 90-weight oil could establish.

A few weeks later, the Office of Defects Investigation engineer assigned to the case contacted me. He stated that he was an experienced motorcyclist and a Motorcycle Safety Foundation Rider Coach. He also said that he had been tracking the final drive issue for seven years, but “needed a petition to open an investiga-

tion.” While my complaint wasn’t technically styled as a petition per agency requirements, he stated they were treating it as such. Also, the engineer wanted me to know that he was personally offended by the language in my complaint where I had asked if, despite the number of complaints filed, someone really needed to crash first before the NHTSA would act. Ironically, after reviewing the NHTSA’s justification to deny pursuing the matter further, this seems to be precisely what may have to happen before the issue is more thoroughly investigated by this agency.

Eighteen months later, the NHTSA issued its decision denying my petition, including a 12-page summary of its findings and conclusions. The agency cited as part of its research discussions with various BMW motorcycle owners, including Paul Graves, Bill Shaw and Anton Largiader all authors of final drive failure related technical articles. The agency also claims to have conducted informal interviews at MOA and RA rallies and reviewed various BMW motorcycle-related websites. Finally, the NHTSA said it “participated in discussions with BMW Motorrad dealer service personnel,” although it is not clear if the manufacturer was formally contacted as part of the research or if these discussions happened at the dealer level or through dealer intermediaries.

The NHTSA made no reference to a manufacturer’s response to the complaint or to any data provided by BMW regarding failures, except to state that “a comprehensive search of the Early Warning Reporting (EWR) reports provided by BMW failed to identify any reports involving a K1200LT failure involving death or injury.” However, the NHTSA has required EWR data from all vehicle manufacturers on a quarterly basis since 2003. It appears from the agency’s report that the NHTSA did

not actually contact the manufacturer about the final drive issue.

In its analysis, the NHTSA appears to have sidestepped the “risk of a crash” standard used in the 2006 recall in order to focus on early warning detection. The agency claimed it conducted a “comprehensive internet-based search for information concerning sudden, unforeseen subject final drive bearing failure resulting in loss of motorcycle control.” The agency further stated “bearings give different warnings when they are failing including noise, increased vibration and the visible loss of bearing material,” although the report cites no engineering authority for these statements. Unfortunately, many of the symptoms listed by the agency — such as vibration, noise, or ride quality — can



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also be attributed to (or masked by) tire or road conditions. While the NHTSA claims that it heard from many owners that a pre-ride check would reveal if a bearing failure was imminent, none of the published material I read on the subject cites the lapsed period from initial bearing pitting to catastrophic failure, including seal rupture and oil loss. Thus, a bearing in seemingly good condition upon visual inspection during a pre-ride check (lack of oil seepage or play), or even during regular maintenance (absence of metal in the oil), may deteriorate and fail within just a few hundred miles thereafter, or before the next reasonable inspection.

In its decision to close the investigation, the NHTSA stated that when it first became aware of the alleged defect in 2003, "the initial assessment was that the crash risk was minimal. The subsequent nine years of subject motorcycle exposure without a crash reported appear to validate NHTSA's initial assessment." Further, the NHTSA stated that it informally interviewed BMW motorcycle owners at MOA and RA rallies about the issue, concluding that "while many owners expressed concern about the perceived safety consequence of a final drive failure, those who actually experienced a crown gear bearing failure reported that they retained complete control of the motorcycle when the incident occurred." In my opinion, the NHTSA completely ignored the propensity for a bearing failure that could result in conditions that could increase the risk of a crash. Notwithstanding that the riders the agency (informally) interviewed managed to maintain control, circumstances that could result in oil on the rear wheel and brake clearly establish a risk of crash,

DEPARTMENT OF TRANSPORTATION
National Highway Traffic Safety Administration
Denial of Motor Vehicle Defect Petition, DP12-001

AGENCY: National Highway Traffic Safety Administration (NHTSA)

ACTION: Denial of petition for a defect investigation.

SUMMARY: This notice describes the reasons for denying a petition (DP12-001) submitted to NHTSA under 49 U.S.C. Subtitle B, Chapter V, Part 552, Subpart A, requesting that the agency "open an investigation" into "the repeated final drive bearing failure and possibly flawed assembly controls of the final drive unit on BMW K1200LT [motorcycles]."

FOR FURTHER INFORMATION CONTACT: Bob Young, Office of Defects Investigation (ODI), NHTSA; 1200 New Jersey Ave., SE, Washington, DC 20590. Telephone: 202-366-4806.

SUPPLEMENTARY INFORMATION: My letter dated November 28, 2011.
Mr. Christopher D. Cimino wrote to NHTSA requesting that the agency open an investigation into "the repeated final drive bearing failure and possibly flawed assembly controls of the final drive unit on BMW K1200LT [motorcycles]" and to require BMW to "recall the affected models for inspection of component wear and proper assembly of the [final drive]."

NHTSA reviewed the material provided by the petitioner and other pertinent data that the agency gathered since first learning of this issue in February, 2003. The results of this review and

same as the agency concluded in its 2006 recall. Essentially, the agency's analysis confirmed the very premise its engineer found offensive; indeed, someone may need to crash before the issue is investigated further.

As an aside worth noting, the authors of the NHTSA report felt it was somehow relevant to identify me as a "free-lance journalist" although no reference to such is made in my complaint. The authors also included statements that I rode my LT in multiple Iron Butt Rallies and "on the Barber race track at a Reg Pridmore CLASS event." While I did indeed take a CLASS on the LT, it was more than five years and 35,000 miles before my first final drive bearing failure. Also, none of my three IBRs were ridden on my 2001 LT, facts easily available at the very Iron Butt Rally website the authors included in the report. I am still not certain of the relevance of these statements to the agency's investigation, although I suspect the intent was to somehow discredit my complaint and suggest that my "abuse" of the motorcycle somehow contributed to the bearing failures.

Editor's Note: Chris did not file the complaint seeking government protection or compensation from BMW; he knows his 2001 model was outside the 10-year scope of a recall. Rather, the complaint was an attempt to get the NHTSA to provide information regarding how many other BMW owners had been affected, as well as what the manufacturer knew about the issue, when it knew it and what it recommended. Given the popularity of BMW's for long-distance riding, the failure of older Paralever final drives has been a concern for many Iron Butt riders. A design change of adding a vent to the final drives in 2011 appears to have dramatically improved reliability, although the NHTSA does not appear to have been a factor in facilitating this change.

U.S. Department of Transportation
National Highway Traffic Safety Administration
JUN 17 2012
1200 New Jersey Avenue SE
Washington, DC 20590

Mr. Christopher D. Cimino
2228 S Ogden Place, #7
Evanston, IL 60201

Dear Mr. Cimino:

This correspondence is in response to your petition dated November 28, 2011 requesting that the National Highway Traffic Safety Administration (NHTSA) "open an investigation into the repeated final drive bearing failure and possibly flawed assembly controls of the final drive unit on BMW K1200LT [motorcycles]." In supporting your request, you provided information including a listing of NHTSA consumer complaints, a media article and photographs.
Your letter contends that, if no safety recall is conducted, subject vehicle operators are exposed to "potential loss of control, possible crash, injury and...eventual fatality."

Since receiving your petition, NHTSA's Office of Defects Investigation (ODI) has discussed the issue with you during our February 8, 2012 telephone conversation; reviewed material related to BMW motorcycle recall 06S799; reviewed and monitored NHTSA's consumer complaint database for any reports within the scope of this investigation; reviewed consumer postings on internet forums; and gathered and reviewed new information on an ongoing basis since first becoming aware of the final drive bearing issue in February, 2003. This effort included informal interviews with owners of parallel-equipped BMW motorcycles at BMW Riders Association (RA) and BMW Motorcycle Owners of America (MOA) national rallies, as well as discussions with Anton Langlader, Paul Glaves, Bill Shaw and BMW dealer service personnel. Likewise, NHTSA analyzed various media articles gathered in the past seven years dealing with the final drive bearing issue (including Mr. Shaw's which was included with your petition).

Based on the available information and NHTSA's analysis, the agency finds insufficient evidence that a safety-related defect trend currently exists resulting from final drive bearing failures in BMW K1200LT motorcycles. Thus, it is unlikely that NHTSA would issue an order for the notification and remedy of a safety-related defect in the subject vehicles at the conclusion of the investigation requested in your petition. In view of the need to allocate and prioritize NHTSA's limited resources to best accomplish the agency's safety mission, we are denying your petition.

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