

05-11-2009, 05:46 AM

#226

**Mika S**  
JC & MC: Double Freedom  
Joined: Sep 2006  
Location: southern Finland  
Odometer: 138


Baroness, sorry to hear about your incident. I wish you a full recovery and God bless!

Benesesso, what did u find out by SEM?

REPORT

05-13-2009, 12:40 PM

#227

**Benesesso**  
Neutron Lover  
  
Joined: Jul 2008  
Location: West of Phoenix, Arizona  
Odometer: 4,286

Quote:

Originally Posted by **Mika S**  
*Baroness, sorry to hear about your incident. I wish you a full recovery and God bless!*  
*Benesesso, what did u find out by SEM?*

I have been asked not to make any public statements specifically on her forks.

With that said, I can reveal that I have seen reports/photos of other fractured forks of the same type, and based on those reports/photos at least some of them had clear evidence of outside-initiated fatigue fractures that grew, probably over a relatively long time, until the "critical crack length" was reached which resulted in sudden fracture.

What this means for a rider who still has the "old" design forks is that a good dye-penetrant exam, preferably fluorescent, should reveal any cracks before they grow to the point of failure. Any such test must be performed after steps have been taken to assure that no oil or water is within the cracks, and this is not so easily done. The cost of such tests, properly done, could be a fairly large % of new, later-designed forks.

This is not to say that inside-initiated cracks/defects do not occur during riding or are present as new. Such defects would be much harder to be detected.

The bottom line is that if \*I\* rode one of these bikes, I would replace the forks with the newer design.

US out of the UN; UN out of the US.

REPORT

05-13-2009, 01:08 PM

#228

**dwayne**  
Silly Adventurer  
  
Joined: Feb 2006  
Location: wheelie in purgatory, Calgary  
Odometer: 2,519

Quote:

Originally Posted by **Benesesso**  
*I have been asked not to make any public statements specifically on her forks.*  
*With that said, I can reveal that I have seen reports/photos of other fractured forks of the same type, and based on those reports/photos at least some of them had clear evidence of outside-initiated fatigue fractures that grew, probably over a relatively long time, until the "critical crack length" was reached which resulted in sudden fracture.*  
*What this means for a rider who still has the "old" design forks is that a good dye-penetrant exam, preferably fluorescent, should reveal any cracks before they grow to the point of failure. Any such test must be performed after steps have been taken to assure that no oil or water is within the cracks, and this is not so easily done. The cost of such tests, properly done, could be a fairly large % of new, later-designed forks.*

*This is not to say that inside-initiated cracks/defects do not occur during riding or are present as new. Such defects would be much harder to be detected.*

*The bottom line is that if **I** rode one of these bikes, I would replace the forks with the newer design.*

good info! Hmmm I may just haul my forks into work and do some conductivity testing on them to see if I can find localized hardness. What do you think?

I will add that as an instructor in LPI (dye penetrant) certified by the Canadian government with years in aviation inspection that most people do LPI incorrectly.

If Benesses's data proves out I would be inclined to advise against using LPI, first because of the sensitivity required to detect fatigue cracking. They are very fine cracks requiring more sensitive penetrants (hence his well founded advise to use a Flour. Pen. with extremely good precleaning). Secondly because not many do LPI correctly, while it is a very simple process there are steps that often get shortcutted or missed entirely.

I would have complete confidence in Eddy Current inspection (a reasonably common aviation inspection method) to find ANY cracking open or close to the inspection surface. But finding good experienced Eddy Current inspectors is harder than finding good Dye inspectors. I know because I am also certified the same in Eddy Current inspection.

Non Destructive Testing is expensive, also as noted, you are better off spending the money on a new fork leg. I believe the new ones are direct replacements with no modifications needed. Here's a hint. I can do my own testing with Eddy Current, LPI, Radiography or Ultrasonics. I have the equipment and the expertise to accurately test them. I replaced my fork legs with others (WP 50mm Extreme conventional style).

Why? Because the stock forks suck, and because we don't know how quickly the fatigue cracking will cause catastrophic failure. Even if it is a slower failure, I don't want to be testing my forks every 1000 miles or whatever. It would be no good have to test them on a trip, of shock load them incorrectly once an speed the cracking process. Even more thought provoking is just because we (inspectors) accurately declare a part defect free doesn't mean the cracking won't start on the next ride.

One other note. The number of known failures is quite low compared to the number of forks that are out there. What we don't know is how many unreported failures there are, and if there are service considerations that play into failure. I ride my Dakar pretty hard, DS races and lots of dualsporting so I chose to replace and upgrade. Knowing what we know that may not be the right choice for everyone.

Rum Runners [Yukon, NWT & Alaska](#)

Roads and Ruins [Scotland](#)

Kinbasket Lake [Golden B.C.](#)

A "Day" of Dirt Biking [Rockies East Slopes](#)

High and Dry [Colorado and Utah](#)

["When your only tool is a hammer, every problem looks like a nail"](#)

! REPORT



05-13-2009, 08:24 PM

#229

Meltdown

Abort, Retry, Fail?



Joined: Mar 2006

Location: Viera, Florida

Odometer: 1,662

Quote:

Originally Posted by **Benesesso**

*I have been asked not to make any public statements specifically on her forks.*

*With that said, I can reveal that I have seen reports/photos of other fractured forks of the same type, and based on those reports/photos at least some of them had clear evidence of outside-initiated fatigue fractures that grew, probably over a relatively long time, until the "critical crack length" was reached which resulted in sudden fracture.*

*What this means for a rider who still has the "old" design forks is that a good dye-penetrant exam, preferably fluorescent, should reveal any cracks before they grow to the point of failure. Any such test must be performed after steps have been taken to assure that no oil or water is within the cracks, and this is not so easily done. The cost of such tests, properly done, could be a fairly large % of new, later-designed forks.*

*This is not to say that inside-initiated cracks/defects do not occur during riding or are present as new. Such defects would be much harder to be detected.*

*The bottom line is that if **I** rode one of these bikes, I would replace the forks with the newer design.*

It was good of you to do the testing for her.

I suspect that your statement above means that BMW either settled the incident and told Baroness to keep quiet about it OR that litigation is pending. Of the 2, sadly I find the second option more likely.

In any case, after following this for some time (but never posting about it) I'm glad to hear that that she was not injured any worse that she was and that the ADV community came through for her.

Everything. Everyone. Everywhere. Ends

! REPORT



05-13-2009, 11:03 PM

#230

**Benesesso**  
Neutron Lover



**Joined:** Jul 2008  
**Location:** West of Phoenix, Arizona  
**Odometer:** 4,286

Quote:

Originally Posted by **Meltdown**  
*It was good of you to do the testing for her.  
In any case, after following this for some time (but never posting about it) I'm glad to hear that that she was not injured any worse that she was and that the ADV community came through for her.*

Thanks. Maybe one day we'll all meet somewhere. As luck would have it, I finally retired shortly after I received the broken fork pieces, and lost my free access to the SEM. I did manage to get a fairly quick look at some of the pieces in the SEM, but was unable to perform a really detailed study.

With concurrence, I contacted a very highly regarded engineering forum, and found a metallurgical engineer who specialized in aluminum casting failure analyses (I am much more experienced with steel failures). We got lucky as he was aware of the incident--don't know if he's a member here or not. Fortunately he also agreed to examine the broken parts w/o charge, so off went the pieces again.

He found some things that I had missed, but our conclusions were basically in agreement. We certainly owe him a lot of thanks.

It appears that these forks can possibly fracture from different causes, but our broken fork database is tiny. The causes of many other failures I have been involved with were far easier to determine, as most of them had clear evidence of exactly what the causal factor was.

I have no knowledge of what may be happening on the broken fork legal front, if anything.

US out of the UN; UN out of the US.

*Benesesso screwed with this post 07-25-2009 at 07:03 AM*

! REPORT



07-14-2009, 12:01 AM

#231

**WayneC1**  
Gnarly Adventurer  
**Joined:** Oct 2008  
**Location:** Sydney, Australia  
**Odometer:** 232

### UK Safety Investigation

As of 15/6/09 UK VOSA safety Authority has announced an investigation into the fork issues on the early F650GS

They have promised a full investigation

Will post further information as it becomes available

! REPORT



07-14-2009, 03:08 AM

#232

**mitch**  
Beastly Adventurer







**Joined:** Dec 2002  
**Location:** Townsville, Queensland, Australia  
**Odometer:** 1,203




We await with intrest for the result.

mitch  
02 GSA written off by a DRUNK in pickup.  
04 GSA Written off by a pickup.  
06 GSA . SE. will try to stay away from pickups. 🙄  
Well it was a car this time #L/tib & fib in the same place as the previous F wit crushed it 🙄





Ducati making mechanics out of riders for 50 years   

[! REPORT](#) 

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07-17-2009, 03:25 PM
#233

 **RidingAgin**  
Gnarly Adventurer



Joined: Mar 2006  
Location: Wet side of WA Cascades.  
Odometer: 305

Quote:

Originally Posted by **dwayne**  
good info! Hmmm I may just haul my forks into work and do some conductivity testing on them to see if I can find localized hardness. What do you think?

*I will add that as an instructor in LPI (dye penetrant) certified by the Canadian government with years in aviation inspection that most people do LPI incorrectly.*

*If Benessesso's data proves out I would be inclined to advise against using LPI, first because of the sensitivity required to detect fatigue cracking. They are very fine cracks requiring more sensitive penetrants (hence his well founded advise to use a Flour. Pen. with extremely good precleaning). Secondly because not many do LPI correctly, while it is a very simple process there are steps that often get shortcutted or missed entirely.*

*I would have complete confidence in Eddy Current inspection (a reasonably common aviation inspection method) to find ANY cracking open or close to the inspection surface. But finding good experienced Eddy Current inspectors is harder than finding good Dye inspectors. I know because I am also certified the same in Eddy Current inspection.*

*Non Destructive Testing is expensive, also as noted, you are better off spending the money on a new fork leg. I believe the new ones are direct replacements with no modifications needed. Here's a hint. I can do my own testing with Eddy Current, LPI, Radiography or Ultrasonics. I have the equipment and the expertise to accurately test them. I replaced my fork legs with others (WP 50mm Extreme conventional style).*

*Why? Because the stock forks suck, and because we don't know how quickly the fatigue cracking will cause catastrophic failure. Even if it is a slower failure, I don't want to be testing my forks every 1000 miles or whatever. It would be no good have to test them on a trip, of shock load them incorrectly once an speed the cracking process. Even more thought provoking is just because we (inspectors) accurately declare a part defect free doesn't mean the cracking won't start on the next ride.*

*One other note. The number of known failures is quite low compared to the number of forks that are out there. What we don't know is how many unreported failures there are, and if there are service considerations that play into failure. I ride my Dakar pretty hard, DS races and lots of dualsporting so I chose to replace and upgrade. Knowing what we know that may not be the right choice for everyone.*


Good information here, but would like more details on part number of alternate forks that would work, i.e WP 50mm Extreme conventional style, I agree, that eddy current would be the best bet, but it would require going back and rechecking... at an undetermined interval.. not good.

I had [dumped it a couple of months ago 170K 12 yrs old] a auto, mercury mountaineer that had a slight coolant leak, I pulled off the thermostat housing, ie an aluminum one, that "became" cracked. It was very small leak, but when I had the part in my hands, I gave it a twist and it broke in half. The replacement was a new design...

Well, I just had the F650GS on the highway at 75 today, the bike is parked till new forks are installed or I am convinced the ones I have are the new design. This really sucks..as riding season is in full gear now.


\_\_\_\_\_


08 R1200GS

[! REPORT](#) 

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07-17-2009, 06:47 PM
#234

 **sgk3**  
Adventurer



Joined: Aug 2008  
Odometer: 15

[QUOTE=

Well, I just had the F650GS on the highway at 75 today, the bike is parked till new forks are installed or I am convinced the ones I have are the new design. This really sucks..as riding season is in full gear now.[/QUOTE]

Hey RidingAgin. Its pretty easy to tell the difference once you've seen both. The new design has significantly more metal around the axle. Just take a look at the bottom half the axle mount. The old style is narrow, like a half inch. The newer ones are quite a bit wider. There's a photo back in this thread somewhere that shows both new and old forks side by side. That should help you out. If you're still unsure just post a picture. One of us could tell you.

\_\_\_\_\_

[Go Jonah Go Riff Raff 2011 !](#)

1951 Bianchi 125  
1964 BSA Star 250  
2003 BMW Dakar

! REPORT



07-18-2009, 12:01 AM

#235

**RidingAgin**  
Gnarly Adventurer



Joined: Mar 2006  
Location: Wet side of WA Cascades.  
Odometer: 305

Quote:

Originally Posted by **sgk3**  
*Hey RidingAgin. Its pretty easy to tell the difference once you've seen both. The new design has signifigantly more metal around the axle. Just take a look at the bottom half the axle mount. The old style is narrow, like a half inch. The newer ones are quite a bit wider. There's a photo back in this thread somewhere that shows both new and old forks side by side. That should help you out. If you're still unsure just post a picture. One of us could tell you.*

Thanks sgk3, the photo at #92 has the photo of the two and #126 has another break. My F650GS is the beefed up design.

08 R1200GS

! REPORT



07-18-2009, 01:46 AM

#236

**sgk3**  
Adventurer



Joined: Aug 2008  
Odometer: 15

Quote:

Originally Posted by **RidingAgin**  
*Thanks sgk3, the photo at #92 has the photo of the two and #126 has another break. My F650GS is the beefed up design.*

That's good news! Now you can start RidingAgin

[Go Jonah Go Riff Raff 2011 !](#)

1951 Bianchi 125  
1964 BSA Star 250  
2003 BMW Dakar

! REPORT



07-25-2009, 01:49 AM



#237

**vdv2020**  
Luxembiker



Joined: Jul 2009  
Location: Luxembourg  
Odometer: 145

**Investigation**

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### DEFECT INVESTIGATIONS - SEARCH RESULTS

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Report Date : **May 27, 2009 at 03:03 PM** [New Search](#)

NHTSA Action Number : **PE09026** [Print Version](#)

<b>NHTSA Action Number :</b> PE09026	<b>NHTSA Recall Campaign Number :</b> N/A
<b>Make / Models :</b>	<b>Model/Build Years:</b>
BMW / F650 GS	2003
BMW / F650GS	2001-2002
BMW / F650GS DAKAR	2001-2002
<b>Manufacturer :</b> BMW OF NORTH AMERICA, LLC	
<b>Component :</b> SUSPENSION:FRONT	
<b>Date Investigation Opened :</b> May 18, 2009	
<b>Date Investigation Closed :</b> Open	
<b>Summary:</b>	
BETWEEN AUGUST 15 AND DECEMBER 26, 2008, ODI RECEIVED FIVE VEHICLE OWNER QUESTIONNAIRES ALLEGING PARTIAL OR FULL FRONT WHEEL SEPARATION WHEN THE FORK'S AXLE RETAINING LUG FAILED. TO LEARN MORE ABOUT THIS SUBJECT, AND BMW'S RESPONSE TO IT, WE ARE OPENING THIS PE.	

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Image Source: <http://www.therevcounter.com/staying...-owners-7.html>

It's still open:  
<http://www.odi.nhtsa.dot.gov/defects/results.cfm>  
 search on PE09026

Best regards,  
 VdV

Transalp XL700VA 2009 yello

[! REPORT](#)

09-01-2009, 05:35 AM

#238

 **Mossy\_Crk**  
 Gnarly Adventurer  
**Joined:** Apr 2006  
**Location:** Between stops  
**Odometer:** 414


We don't need to let this issue become forgotten.  
 Seems BMW began answering questions to NHTSA last month.


Here's the list of all documents associated (that's open source without having to pay \$\$ for copies of everything)

[! REPORT](#)

10-14-2009, 07:02 AM

#239

 **Crew Dawg Dave**  
 VSRI 3563

 **Any updates??**

Anyone heard anything yet??



Joined: Jan 2006  
Location: Dave's Not Here  
Odometer: 101

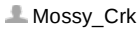
"Many of us are irritable most of the time (unless we're in love or just bought a motorcycle)." - Jack Lynch, The Lexicographer's Dilemma

REPORT



10-15-2009, 05:54 AM

#240



Mossy\_Crk  
Gnarly Adventurer  
Joined: Apr 2006  
Location: Between stops  
Odometer: 414

Yeah, it was closed last month. Summary is list below (formatting adjusted to make it somewhat more readable)

THIS PE WAS OPENED AFTER NHTSA RECEIVED 3 VOQS CONCERNING ALLEGED FRONT AXLE SEPARATIONS ON CERTAIN BMW F650 GS MODEL MOTORCYCLES SOLD FOR USE IN THE UNITED STATES (THE SUBJECT VEHICLES). COMPLAINTS INVOLVING MOTORCYCLES IN NON-US MARKETS ARE NOT COUNTED IN THIS TOTAL.

AFTER GATHERING ADDITIONAL INFORMATION ABOUT THIS SUBJECT, WE ARE NOW AWARE OF FOUR CONFIRMED INCIDENTS INVOLVING MODEL YEAR 2001-2003 SUBJECT VEHICLES. ALL FOUR BIKES WERE BUILT BEFORE SEPTEMBER, 2002. OF THESE, TWO INVOLVE MY 2001 BIKES AND THE OTHER TWO, MY'S 2002 AND 2003, RESPECTIVELY. THE INCIDENTS OCCURRED IN 2002, 2003, AND TWO IN 2008.

IN EACH INSTANCE, THE LUG FRACTURES ARE FORCED FRACTURES RATHER THAN FATIGUE-RELATED.

BETWEEN OCTOBER 1999 AND SEPTEMBER, 2002, BMW BUILT APPROXIMATELY 4,300 SUBJECT VEHICLES. AFTER SEPTEMBER 12, 2002, ALL F650GS'S WERE BUILT WITH REINFORCED LOWER FORK TUBES TO REDUCE, ACCORDING TO BMW, "THE POSSIBILITY OF ANY SIGNIFICANT FRACTURE THAT COULD OCCUR AT THE FORK LEG AXLE LUG AREA" DURING A CRASH.

BMW TOOK THIS ACTION BECAUSE THE SUBJECT VEHICLES ARE DESIGNED FOR OFF-ROAD USE WHERE CRASHES (MANY MINOR) ARE COMMON AND DID NOT WANT RIDERS TO HAVE TO DEAL WITH A BROKEN FORK AS A RESULT.

CURRENTLY, THERE IS NO DATA CONCLUSIVELY ESTABLISHING THAT THE SUBJECT FORK LUGS ARE SEPARATING BEFORE AN ALLEGED CRASH OCCURS. ADDITIONALLY, THE INFREQUENT, SPORADIC, AND RANDOM NATURE OF THE FAILURES FAILS TO ESTABLISH A DEFECT TREND CURRENTLY EXISTS.

THEREFORE THIS INVESTIGATION IS CLOSED. A SAFETY-RELATED DEFECT HAS NOT BEEN IDENTIFIED AT THIS TIME AND FURTHER USE OF AGENCY RESOURCES DOES NOT APPEAR TO BE WARRANTED. ACCORDINGLY, THIS INVESTIGATION IS CLOSED.

THE CLOSING OF THIS INVESTIGATION DOES NOT CONSTITUTE A FINDING BY NHTSA THAT A SAFETY-RELATED DEFECT DOES NOT EXIST. THE AGENCY WILL TAKE FURTHER ACTION IF WARRANTED BY THE CIRCUMSTANCES.

REPORT



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