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NHTSA
201 Mission Street
Suite 1600
San Francisco, CA 94105

August 1, 2014

Dear NHTSA,

I am writing this letter to bring to the NHTSA's attention what I believe is an unsafe and indifferent recreational vehicle industry. This general indifference starts at component manufacturing and perpetuates itself throughout the recreational vehicle manufacturing industry. It doesn't stop there; the RV sales industry is also guilty of indifference to customer satisfaction and safety. In this letter I am going to attempt to present to you what I believe is a clear case of industry recklessness and lack of safety concern. This issue affects many RV brands that use the Lippert Flex Guard rail but I will focus on my specific RV trailer the "Fun Finder 189FD" manufactured by Cruiser RV.

This is my story:

I purchased my brand new 2013 Fun Finder 189FD (VIN last six [REDACTED]) travel trailer from Happy Daze RV in Sacramento, California on July 10, 2013.

In the span of just two weeks (June 24 to July 15, 2014) I experienced two propane leaks! The first leak was a leaky propane bottle hose connector that I discovered while camping at Lake Tahoe CA on June 24, 2014. I replaced both hoses at my own expense. (See photo 1)

On July 15, 2014, just 5 days passed my one year warrantee period, my trailer suffered yet another LP gas leak but this time it was a catastrophic failure that very well could have resulted in the trailer catching fire while in motion! I was towing my Fun Finder north bound on I-5 just north of the California/Oregon border. A man in a pick-up truck pulled alongside and honked his horn while pointing towards my trailer. I looked in my driver's side rearview mirror and saw my LP gas hose and electrical wires all being dragged on the pavement alongside the trailer's tires. I took the first off ramp and found a wide parking lot that was used as a storage area for red lava rock for winter road sanding.

Coming to a complete stop I could smell the LP gas! With high urgency and anxiety I got out of my truck and slipped on the lava rock falling to the ground injuring my left shoulder. I was lying on the pavement in excruciating pain and had totally lost the use of my left arm! I could smell the propane gas and I could hear it hissing from the damaged hose. I knew that there was imminent danger of fire or even an explosion. My shoulder pain was utterly unbearable but I knew that I must pull myself together and make it to the LP gas bottles to turn them off! Screaming in pain, I got myself up using my right arm, made it to the trailer and shut down both LP bottles using my right hand!

Once I had neutralized the threat of fire, I performed a visual assessment and saw that the wires and propane hose were in shreds (see photo 5) after being dragged on the pavement for quite some distance. Note: The live 12 volt wires were in shreds (see photo 2). I later discovered that the 12 volt line fuse had blown cutting off the 12 volts preventing sparks that may have ignited the propane gas! Having only the use of my right arm and no help in sight, I tried but could not tie up the dangling hose and wires so I had to cut them short enough to continue driving the 60 miles to my sister's house in Grants Pass Oregon. The following day, with the aid of some heavy duty Motrin, I drove 350 miles with one hand to return home. A day later, July 17, my family doctor told me that I tore my rotator cuff and will probably require surgery. On July 23, 2014 I saw an orthopedic surgeon and he confirmed my family doctor's diagnosis. He told me, "Without surgery your shoulder will never heal properly".

My Failure Analysis

I am going to preface this by saying that prior to the accident I only knew that there were some wires, a hose, and a plastic looking thingy under my trailers slide-out room. I never really gave it much thought. Post-accident is when I educated myself and realized just how vulnerable the slide-out room really was!

After inspecting the underside of the trailer I observed that the Flex Guard rail was totally gone with only a piece of plastic remaining on the ½' mounting rod. (See photo 3) After doing much research this is what I believed happened; the Flex Guard failed for whatever reason and broke off at the mounting rod and then fell off or abraded off during travel. Without the support of the Flex Guard rail the LP hose and wires (12 volt hot and 110 volt cold) fell down and came in contact with the spinning trailer wheel abrading them in two. The hose and/or wires then got caught between the trailer wheel and pavement and were violently ripped out even further. This theory can be confirmed by examining the damaged LP hose and wires.

Lippert Flex Guard Rail Integrity

I believe the design and/or materials used in the manufacturing of the Lippert Flex Guard rails are less than satisfactory. I have researched multiple internet RV forum websites and discovered that the failure rate for this part is, in my opinion, extra ordinarily high! In my antidotal analysis, I have drawn my own conclusion that a failure rate of only 1-2 years is not uncommon for the Flex Guard rail. What's even more troubling about this is Lippert's lack of concern! The fact that Lippert has been aware of these rail failures for years and has made no attempt to correct the design or improve component materials is unsettling. These forum threads can be viewed by Gogging "Lippert Flex Guard, forum". I copied many of the comments onto a separate sheet of paper labeled, "Flex Guard Forums".

Cruiser RV's Faulty Flex Guard Installation

I am convinced that the Flex Guard is made of inappropriate and/or inexpensive materials and is of poor mechanical design. That said, I also believe that Cruiser RV's installation of my trailer's Flex Guard rail was also flawed. Cruiser RV installed a round head screw into the ½" aluminum rod to keep the Flex Guard in position. The screw that Cruiser used is a round head screw with a head diameter of 0.314". The distance measured from the underside of the screw head to the rod is 0.339" (see drawing 1 and 1A). I believe it is reasonably plausible that the screw head may have impinged the Flex Guard's rotational ability resulting in undue stress on the Flex Guard joint thus exacerbating premature failure of an already flawed component. This impingement risk could have been totally eliminated by inserting a bushing spacer between the screw and the Flex Guard (see drawing 2 and 2-A). With an appropriately sized bushing, the Flex Guard could freely rotate above the screw head without the possibility of impingement. *I have enclosed a photo (see photo 4) of a brand new Flex Guard with the same size screw as the one used on my trailer. Note the impingement probability. Cruiser, I hope you are listening and start installing bushings as I have described.*

Cruiser RV's Slide-Out Room Design is flawed

The Fun Finder 189FD slide-out room design was designed with zero redundancy safeguards should the Flex Guard rail fail. If the rail fails, it does not matter if the rail falls off or just dangles above the rotating tire. It is only a matter of time before the LP gas hose and wires come into contact with the spinning tire creating in a very high probability for a hazardous outcome!

Any reliable engineering design is always designed to a "worst case scenario" that includes redundancy considerations implemented into the design should the part in question fail. This is especially important when human safety, traffic safety, and fire hazards are involved. The manufacturer of the Fun Finder 189FD did not design the slide-out room to even a "modest case scenario" standard! It is truly a "best case scenario" design with

zero redundancy considerations should the Flex Guard rail fail. *In other words, the design of this slide-out room is 100% reliant upon the Flex Guard being of such high quality and dependability that the likelihood of failure is, for all practical purposes, not worthy of concern.*

Happy Daze nor Cruiser Advised Me of Potential Failure

I paid Happy Daze RV a fee of \$500 for a battery (the manufacturer does not supply a battery) and a delivery walk-through instructional tour of my RV at time of delivery. The Interstate group 27 RV/Marine battery retails for \$110. Hence, I paid \$390 for Happy Daze to instruct me on how to use and care for my new trailer. The Happy Daze employee spent 45-60 minutes with my wife and me and showed us things like how to operate the awning, slide out room, refrigerator, radio, TV, shower, toilet etc. During this educational session, the Happy Daze employee did not, at any time, suggested that we routinely inspect the underside of the slide-out room to validate the integrity of the Flex Guard, LP gas hose, and wires. One would think that a safety inspection would be high on the list of things to show a new RV purchaser...especially when the RV purchaser has paid for that instruction! Additionally, the Cruiser RV owner's manual makes no reference to periodic inspection of the Flex Guard rail for integrity issues.

My Conclusion

1. Lippert is producing a cut-rate and unreliable part whose critical mission is to safeguard the slide-out rooms LP gas hose and electrical wires. The Flex Guard rail does indeed fall way short of performing this crucial safety task. Lippert knows of the Flex Guard's unsatisfactory history but chooses to ignore the issue.
2. Cruiser RV uses a single 3 cent screw to hold the Flex Guard rail in place in lieu of adding a 50 cent bushing. This "screw only" method is an impingement liability waiting to happen! A totally unnecessary risk!
3. Happy Daze and Cruiser RV make no attempt to warn their customers to use due diligence and perform periodic under the slide-out room inspections to scrutinize the Flex Guard rail for integrity issues.

Sincerely,

[REDACTED]
[REDACTED]
[REDACTED]
Roseville, CA
[REDACTED]

CC Happy Daze RV
Cruiser RV
Lippert Components
Consumer Safety Commission

Various Internet RV Forum Quotes

All these quotes are in reference to the Lippert "Flex Guard"

08-31-2008, 04:41 PM, "I ditched the flexguard after the tire chewed through it last year. Just using cable ties to hold up the wires now with no problem."

09-02-2008, 08:30 PM, Have had the Flexguard break on our unit only 8 weeks old waiting for an new one currently . Definatly not a well designed system as far as fastening to the inside.

09-02-2008, 09:40 PM, "Was looking under my BH this weekend. All 3 Flex Guard are cracked bad or broken (2 broken, 1 cracked) Guess I will call Lippert to get the parts for this."

05-03-2010, 12:44 AM, "I had the same problem but it cut through my propane hose, put some heavy duty tie wraps and hadn't had a problem with it since, but its one of those things I check before pulling away."

05-02-2010, 08:48 PM, "I have a problem with a tire on the off door side cutting the wires over it. I noticed this problem the first time last October in Oregon. I fixed the wires myself and secured them better to the supporting strap. I monitored it for a while and all seemed to be fine. Last week I noticed wires were cut again."

01-11-2010, 09:36 PM, "I also have had a proplem with the Flex-guard. I picked up my new 2009 Bighorn 3607rl and by the time i had made my 70 mile trip home one had already broke. Called back to the dealer and they replaced it. Stated that was the first time they ever had trouble with them. YA! A poor design.

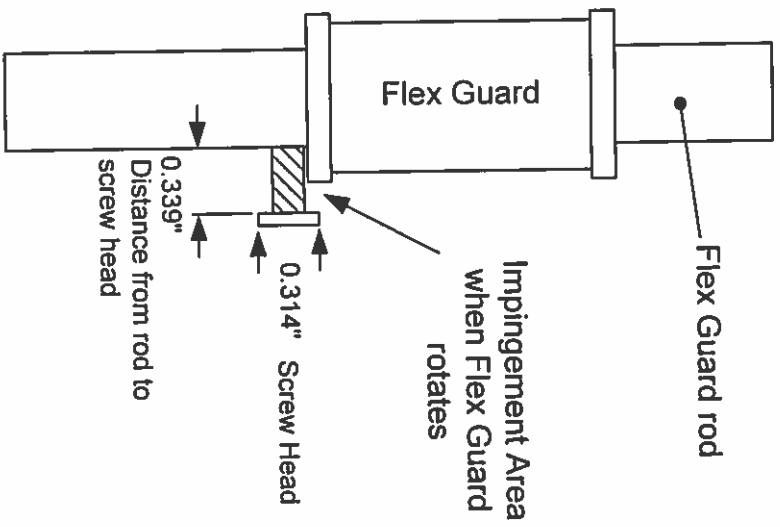
01-12-2010, 05:50 PM, "I have fixed my flex guard a number of times and I have finally gave up. It is a piece of junk in my opnion. Another Lippert product."

08-11-2009, 08:18 AM, "My Flexguard support has broken at both ends and it is too short to fasten at either end. Is there a fix for this? I don't want to buy a new one to have it break also. It is a poor design and will not stand up to any wear and tear. Any help is much appreciated."

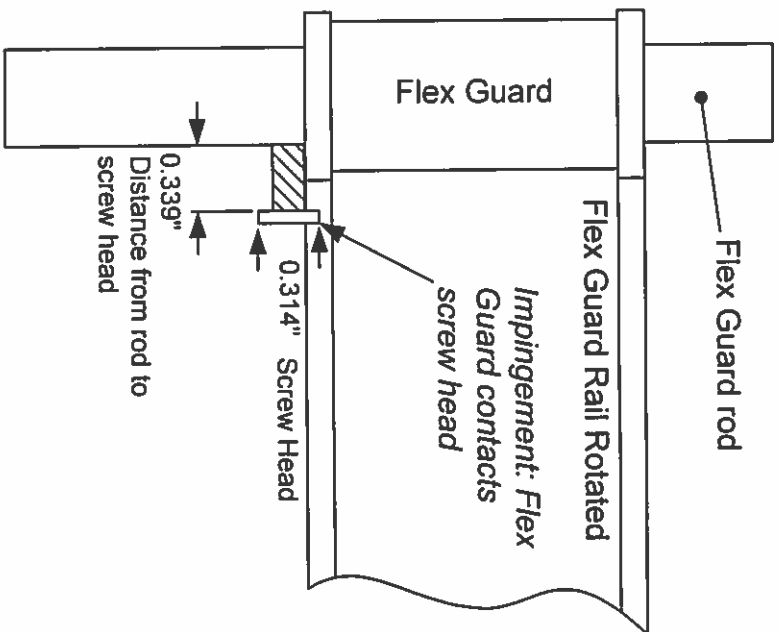
03-20-2006, 07:13 AM, "Lippert is interested in the problem. Jim Belletti e-mailed me and asked me to send pictures of my problem to Lippert. I do not have time at the moment, leaving for the FI Keys in about 1 hour. Hopefully while I am gone they come up with a fix and I will keep trying to monitor this while I am gone if I can find places with WI-FI."

04-07-2006, 09:13 AM, "If Scott (I assume from Heartland) doesn't know, he is probably the only one there that doesn't know there is a problem with the loom supports. I've been in touch with both Heartland and Lippert and they are aware of the problem. They, Lippert, want me to take pictures of my repair and email it to them.:mad:"

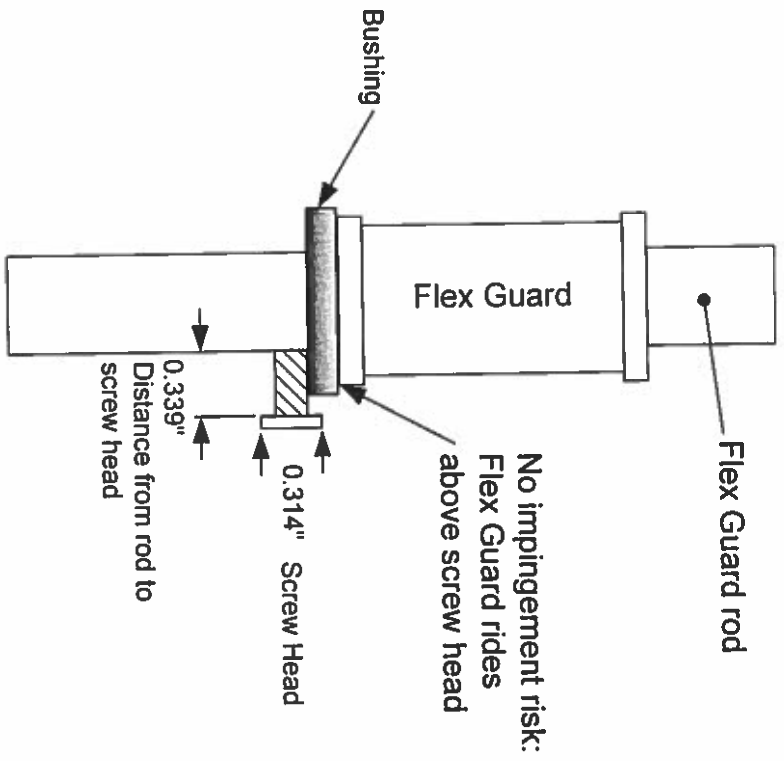
10-15-2005, 08:58 PM, "The plastic wire support strap under the dinette slideout on my Shenandoah broke off at the frame end. The outside end of the belt is looped and is hinged on a pin but the frame end is fastened solid to a metal brace. The frame end flexes at too extreme an angle for the plastic to tolerate a rigid connection. If the strap breaks, the two wires and strap hang under the trailer behind the wheels when the slideout is retracted.



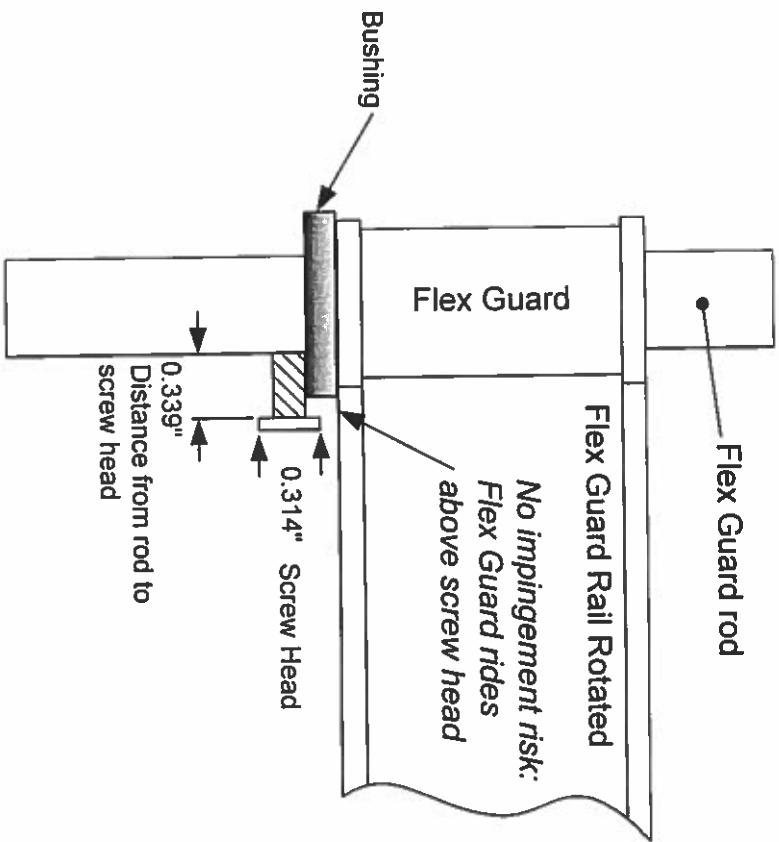
Drawing 1



Drawing 1-A



Drawing 2



Drawing 2-A