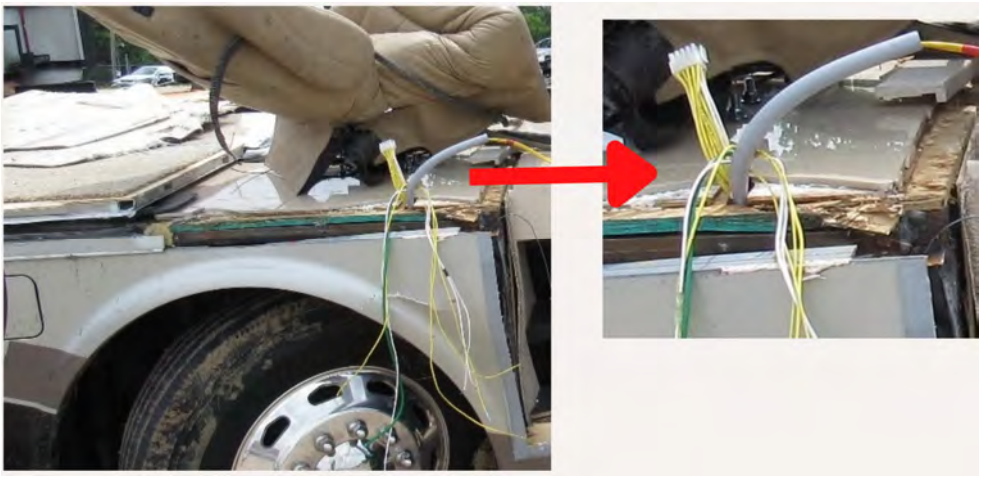
RV Consumer Group

Rating RVs Since 1990

Nonprofit / Independent / Unbiased

About Reliability and Structural Integrity



This motor home flipped and the entire house structure that was supposed to protect its occupants disintegrated because the RV manufacturer used composite board without reinforcement. This photo shows why the sides, front, and back walls left the floor and exposed the man and woman in the vehicle to the natural forces created by speed and weight. They did not survive.

Members Judy and Donald Hall ask . . .

I am not confident that I understand what you mean when you speak of reliability. To me the term is a near equivalent to 'durability,' and it pretty much has that meaning in the Consumer Reports magazine. Looking at the context in which you are using the term 'reliability' seems to refer to your evaluation of the structural integrity of the vehicle and the efficacy of its seat belts upon collision at various speeds and an assessment involving some combination of flammability and escape routes in case of fire. Do I understand you correctly?"

Zero protection for occupants!

To answer part of your questions, Judy and Donald, let's look at reliability first. For 'reliability' we go strictly by the dictionary definition which, according to Webster, means how the RV will operate to take you from point A to point B and how it functions once it arrives at point B (i.e., performance as expected). By using the data from our surveys, which comprise as much as 90% of the reliability rating, our research shows we are right on target when we compare our results with online complaints and our staff's research at shows and dealerships. The second part of the survey scoring has to do with 'service'–which ties in with 'reliability'.

Driver was killed by a detached cabinet!

But your question on ‘durability’ versus ‘structural integrity’ takes me back to the early 1990s when we began building our database and we discussed the subject of durability (i.e., long-lasting) and structural integrity (i.e., ability to hold together in an accident). Our staff had such an interest in durability and structural integrity that we traveled to almost every RV factory in the U.S. and Canada to inspect and photograph the building techniques of the manufacturers.

Not only did we visit RV factories to watch floors, walls, and roofs being installed, but we also traveled extensively to view the results of many accidents that were serious enough to be covered by the media. The results of all this ongoing work is used to produce the ‘**Occupant Safety’** indicator and influences the ‘**Depreciation Schedule’**—along with various sales figures.

This research was, and still is, a major project for our organization; but we wanted desperately to tie design, workmanship, and materials to the many problems that RVers were having with their trailers and motor homes. At first, we published results separately. But because of space, time, and costs, by the turn of the century we had integrated the durability data with an expanded structural integrity research program in our new outreach about occupant safety.

You also ask: “*Can you give me any rules of thumb for assessing structural integrity on the basis of a visual inspection and/or mathematical formulas employing easily discoverable published numeric values*?”

Yes and no, Judy and Donald, I can give you some good “rules of thumb’ on how to do that, but I’m quite sure that ‘mathematical formulas’ for determining RV structural integrity does not yet exist. Through the 40 years of my involvement with RV problems, my staff and I have learned much about the building process at RV factories and RVCG has published much of what we learned. But, as you can see from the photographs I’ve attached to this newsletter, motor homes are still coming apart in accidents where they should not be coming apart. Many are disintegrating in collisions under the barrier test speed of 35 mph set by the **National Highway Traffic Safety Agency (NHTSA)**, and many are coming apart in rollovers.

This ‘sheetmetal” rollbar allowed the driver to be crushed.

Runaway into forest killed driver!

“Over the ditch and into the grass.”
grass.”

A short wheelbase took this motor home into the bushes.

Collapsed on a simple rollover!

Father, son killed in crash of RV

By Aesha Rasheed
Staff writer

Kurt James Seither Sr. left Louisiana Saturday in a motor home with his parents and three sons, destined for a week of relaxation and sightseeing among the mountains and chalets of Gatlinburg, Tenn.

But the family never reached its annual vacation spot. Just a few hours after leaving Folsom, the trip took a tragic turn. The Winnebago, with Seither's father at the wheel, slammed into a tree along the side of Interstate 59 in Tuscaloosa County, Ala., killing Seither, 36, of New Orleans, and his 13-year-old son, Kurt Seither, Jr.

Seither worked in the human resources department of Entergy's New Orleans

See CRASH, B-2

Kurt James Seither Sr. and his wife Mary posed for a family photo with their children, Stephen, 8, left, Mark, 11, and Kurt James Jr., 13. Kurt Seither and his son Kurt were killed Saturday when their Winnebago slammed into a tree along the side of Interstate 59 in Tuscaloosa County, Ala. Mark and Stephen were injured in the accident as were Kurt Seither Sr.'s parents, Bernard and Bert Seither of Folsom. Mary Seither was not in the vehicle.

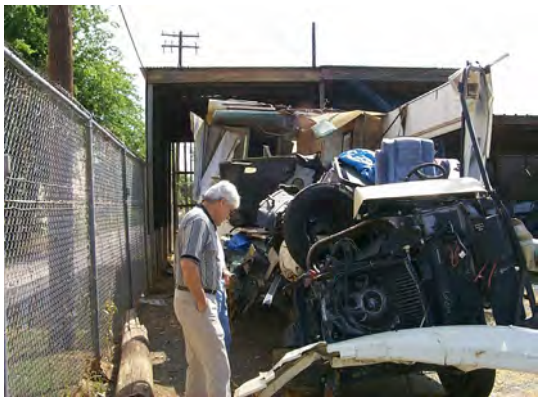
Look at the tree that the motor home struck at 43 mph. The motor home didn't bounce off or break the tree. It disintegrated the right front of the motor home (below) while pulling much of the structure with it.

Yes, Judy and Donald, it is absolutely a fact that using a motor home for outdoor adventures can be a great experience. However, it is also fact that the chances of survivability of an occupant during a collision or rollover in a standard-built class A motor home without injury, is undoubtedly low. The follow two stories should support this premise.

Because the motor home involved in the accident on this page had a wheelbase-to-length ratio of 50%, it was very difficult to control when the side winds hit it and practically pushed it into the ditch where the right front of the motor home hit a tree at 43 mph and the entire front disintegrated. The force of striking the tree ejected the passenger seat with the passenger and the boy in the swivel seat behind it. Both were killed.

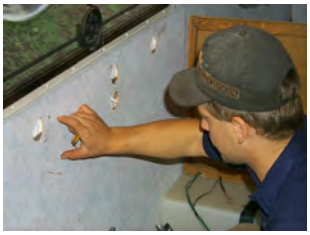
I went to Alabama to inspect and photograph the wreck. (Not me in photo.) where I saw how the builder cut corners to save a few dollars—probably less than a thousand. I saw that it was as "Defective in design and unreasonably unsafe" as the jury called it at the conclusion of the trial.

As a full-time volunteer with RVCG, I have seen too many RV accidents where RVers were killed and injured and, I must admit, I have a problem understanding why so few RVers want to do anything about it. Maybe you can tell me? Send me your thoughts.



Think about it: With these two photos showing the sloppiness of design of this motor home manufacturer and seeing how easily it came apart, don't you think that the manufacturers of motor homes should spend another $!,000 to reinforce around the cockpit?

This seat with its occupant was ejected!



A refrigerator must be fastened securely to wall and floor to help support the roof. This one was not!

When this class C motor home struck the back of a stopped truck trailer at 32 mph, the entire interior flew off the walls and the sink struck and killed the woman on the passenger seat. In these photos, we show how two of our staff members were meticulously measuring fasteners to help determine the causes for the lack of structural integrity of the interior.

"We can and must do better or the Chinese and Germans will soon be building our RVs."

On the personal side, because I am not comfortable riding on a motorcycle, I am not comfortable riding in or driving a **'standard built'** class A motor home (especially with a short wheelbase). Simply, the risk of injury or death is too high for me. However, you can reduce the risk of injury or death to you and your passengers. You just have to choose the type and quality that will fit your personal risk factor. RVCG can help you do that.

Thank you for your questions.

NOTE: Until all RVs are built in a manner that must be approved by the National Highway Traffic Safety Administration (NHTSA), unsafe RVs will dominate the RV arena. Because of the Recreation Vehicle Industry Association's (RVIA) influence through lobbying, NHTSA's influence extends only to some requirements as attached to utility use, autos, and trucks. However, it does not extend to anything having to do with the structural integrity of walls, floors. or roofs of RVs. Your support will help us convince NHTSA to do better.

This motor home was the same brand as the one shown at the top of this page but a 10-year newer model that was involved in a laydown on the highway rather than a collision. This is some of the proof that in America, unlike Europe and Asia, we are not looking to build a stronger and more durable RV. To the contrary, because of adding more entertainment technology, our interiors are more cluttered and more dangerous than ever.

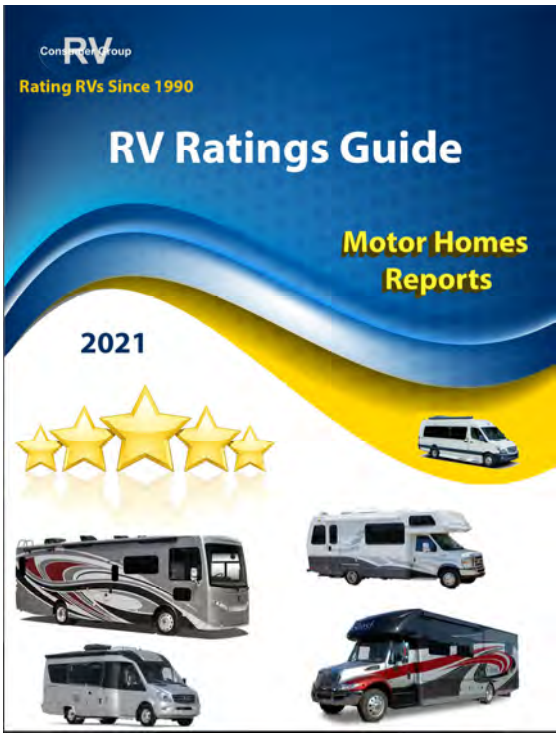
We can be sure that all motor homes and trailers are designed to be controllable in windy conditions, that they won't collapse in a rollover, that the cabinets are securely fastened, and that the occupants will have a reasonable chance of surviving serious injury or death if an accident does occur. If I can get enough of you to agree and tell me what you think, together we might just get our new boss of NHTSA to change the rules for building RVs. Isn't it worth a try?

Also, if you have had your RV for longer than 6 months, please don't forget to send in your **RV OWNER SURVEY** with your comments. We do read them and use them for our ratings.

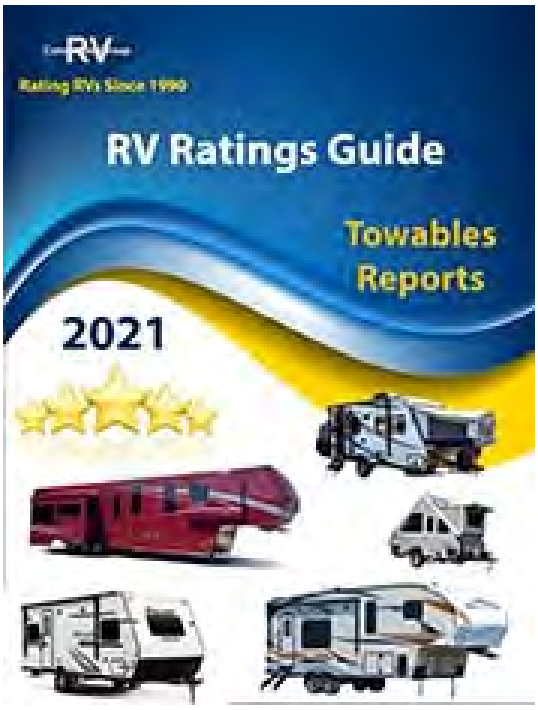
JD Gallant

RVCG staff member checks siding at an RV factory.

We Rate RVs



FOR MEMBERS ONLY



Do your research before you buy—it pays off and avoids much grief later on!

Get your RV Ratings Guide today OR your Membership Package at RV.ORG!