



What's in a Rivet?

The construction of a Road Chief is similar to that of an aircraft. In fact, we use many of the same techniques and materials—down to the panels of 2024 aluminum, which is the optimal alloy for applications requiring high strength to weight ratios. As with aircrafts, rivets are used to hold the aluminum panels together. There are about 5,000 rivets in a single Road Chief. More than just an aesthetic touch, these metal fasteners are responsible for the strength of the entire travel trailer.

We use two different kinds of rivets: Olympic and buck. Olympic rivets secure the “skin,” or shell, to the frame of the Road Chief. They’re simpler and less strong than the buck rivets, which are responsible for the incredible tensile strength of the Road Chief. To install an Olympic rivet, its head is inserted into the panel, above the frame. A hand riveting tool sends a jolt of force through the rivet, and the head of the rivet flares out, securing the panel to the frame. The rounded side that is visible from the outside of the Road Chief is then shaved down and polished to a shine, giving it that iconic, seamless look.

Buck rivets require an even greater level of skill. The buck rivets hold the panels of aluminum together, and all the strength of the Road Chief comes from the joining of the two (the strength does not come from the frame, which is a common misunderstanding). It takes two meticulous craftspeople and a lot of collaboration to buck a rivet. One person stands on the outside of the Road Chief with a rivet gun, while the other stands inside with a hard bar of tungsten. The gun acts like a hammer, setting the rivet to expand on the inside and securing it in place.

Sound simple? It isn't. There's an ideal strength-to-weight ratio with buck rivets. The flattened part of the rivet (on the inside of the Road Chief) needs to be exactly 1.5x larger than the stem of the rivet. The tungsten has to be carefully stabilized because if it slips, it can dent the interior. And the technician on the outside of the travel trailer has to be able to distinguish exactly how many “taps” of the rhythmic, machine-gun-like fire from the rivet gun result in a rivet that is within the proper spec. This is just one of the many complex processes that go into the making of a Road Chief.



Road Chief Vs. Airstream

While the process of bucking rivets is similar across riveted travel trailers, it's the quality of rivet we use that sets the Bowlus Road Chief apart. The rivets in a Road Chief are made from special alloy that is specific to the aircraft industry. These rivets harden in the process of bucking, making them as strong as our aircraft-grade aluminum sheets.

To give you an idea of how the choice in materials affects the strength of the final product, let's compare a Bowlus Road Chief to an Airstream. Recall that a Road Chief uses 2024 alclad aluminum, which is the best alloy for applications requiring a high strength to weight ratio. Airstream uses much softer aluminum sheets and puts a clear coating on the sheets for additional protection. This kind of aluminum poses a few problems: first, moisture can still get under the clearcoat and create filiform between paint and aluminum. Because a Road Chief is made from "true" aluminum, Road Chief owners never have to worry about this kind of corrosion.

Second, Airstream uses soft rivets to match the strength of their low tensile strength aluminum sheet. These are the same kind of rivets you might find in an article of clothing, like a belt. Compare that to the aircraft-grade rivets found in a Bowlus Road Chief, which require the finesse of skilled craftspeople to install. On one hand, the softness of Airstream rivets makes them much easier to buck. On the other hand, Airstream owners often worry about hail because the aluminum is so much softer and can be easily damaged by hard objects. The Road Chief is made from aircraft materials, which can withstand considerable impact (think of a Boeing plane).

Simply put, that's the secret behind the Road Chief's unrivaled strength: aircraft-grade design.

An awe-inspiring level of artistry goes into the construction of a Bowlus Road Chief. These legendary travel trailers are meticulously handcrafted and executed to exacting standards by our experts. That's how we did it starting in 1934. And that's how we do it now. We consider today's editions to be modern heirlooms—each travel trailer takes hundreds of hours to create, because each Road Chief is created with the same care and precise attention to detail as their 1930s ancestors (many of which are still in pristine condition). It's this heritage of uncompromising craftsmanship that makes us The Ultimate Luxury Off



Grid Adventure Vehicle™.

Stay strong,
Geneva Long
Bowlus Road Chief