

Once all welding is complete, our frames are thoroughly heat treated. To be at its maximum strength, an aluminum alloy must have the proper distribution of the alloying elements. Welding disrupts this distribution by heating only one area of the material. We use a three step heat treating process to restore the proper alloy distribution and give the frame its greatest strength. First the frame must be solution heat treated, which means being placed in an oven and raised to a high temperature. This dissolves the alloying elements, forming a uniform supersaturated solid solution of the aluminum and its alloying elements. Next, the frame, in this supersaturated state, is rapidly cooled in a quench bath to "freeze" the solid solution. Finally, the frame is age hardened by being gently heated again. This allows a controlled, evenly dispersed precipitation of the alloying elements. The entire heat treating process creates a unified structure out of our aluminum alloy frame, and brings it up to its maximum strength.



After being fully assembled and heat treated, each frame is thoroughly cleaned and given an iron phosphate coating, which inhibits corrosion and provides excellent paint adhesion. We then electrostatically apply a thick coat of Dupont Imron polyurethane enamel – the finish used by most custom frame builders – and place each frame in an oven for forced drying. The end result is a beautiful, rich, long-lasting finish that we refuse to cover up with a lot of decorations and decals.