

Wooden-Bodied Speedster

By

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As I begin to write this I am delighted that I can do so with all ten fingers! I consider that a miracle as I have just completed my second wooden-bodied Chevrolet. This time it is a 1928 speedster. Earlier I had built a 1927 Chevrolet depot hack¹ (that ended up in a museum in Ankeny, Iowa). That first build involved a pretty vicious kick-back from a dado cut using a radial arm saw. I still keep the piece of wood hanging in my shop to remind me to “slow down”. It was a good reminder for this latest project that involved cutting dozens of cedar strips and routing out dove and cove joints for each one. But, that is getting way ahead of the story, which begins as the depot hack is being hauled away to Iowa on a car carrier. Both my wife and I had tears in our eyes as it left our garage. But, a 1928 rolling chassis was already waiting to fill the empty space thanks to Gary Wallace of St. Louis, MO.

So, the story of this project, to build a 1928 speedster, begins with Gary’s rolling chassis, as well as a spare 1927 engine block from an earlier parts purchase, and various other spare parts including a 1928 head with two exhaust ports instead of the 1927 single port version – and lots of odds and ends found on eBay and other sources. I added to these my wood-working experience acquired from building the depot hack as well as some mechanical know-how from building hot-rods in high school, restoring a 1958 MGA with my wife, and rebuilding a 1965 Mustang notch back for my son. Despite all this background, building an “upside down canoe” as a car body turned out to be a pretty fair challenge.

I started by removing all the chassis parts from the frame and hauling the frame off to be commercially sand blasted. (insert Picture 1). At the same time I replaced all four main spring leaves to correct the worn eye holes – and inserted new bushings as well. I coated each leaf during this rebuild with a special graphite friction reducing paint designed for this application. I have heard opinions on both sides about this practice. Not sure if this is worth it, but we will see. New kingpins were also installed.

The engine (an extra which had come many years ago with another “rolling chassis” that became the depot hack) was in need of a complete rebuild. Fortunately, I live in

¹ Editor’s Note: Details on that car can be found in the cover story of the July 2002 (V. 41, I. 7) Generator and Distributor should you be interested.

Ohio within a few hour's drive of Hart's Machine Shop in Cecil, OH. They provided new poured bearings for the block as well as a sleeve for one badly scored cylinder. Oversize pistons, freshly ground cam and crank, and balancing all component parts was also part of their chore. Perhaps unwisely, I told them I would do the final assembly. This would have been almost impossible without the help of the "flip book" created by Raymond Holland available on the VCCA website². Although his engine rebuild discussion involves a 1928 engine (which has some differences from a 1927), his advice was invaluable.

Now to the body and why I chose to build a wooden-strip boat-tail variety. As I indicated earlier, my experience is with wood, not much about sheet metal bending. Add to that, a friend who had two 8" by 8" by 8 foot cedar posts left over after a deck rebuild. I got them for the cost of gas to haul them away in my pickup. I took them straight to a lumber yard where I had them re-sawn into 1" by 8" by 8 foot planks. I then took them home and, using my newly acquired wood planer, reduced the planks to 7/8" thickness. Then, using my table saw and a jig to guide the wood I cut 1/4 inch thick strips from these planks. Finally, I ran the strips thru a router with a jig that assured accurate dove and cove cuts on the edges of each strip. On the advice of an experienced woodworker, I ran the strips thru the router in the direction of the cutter rotation (usually a big NO-NO). By adjusting the jig to hold the workpiece extra tightly as it moved thru the cutter blade there were no problems encountered and the cuts were extra smooth as a result. If I had used the normal approach and run the strips against the rotation of the blade, there was real danger of gouging the dove and cove cuts.

A final note on these strips – even though the planks came from the same post, there was a variation in colors due to the nature of the wood posts from which they were cut. I sorted the strips by color and tried to use the darker ones for highlights as can be seen in the resulting body.

In order to create the final shape for the speedster body, I first built a scale model of the entire assembly from firewall to the final taper of the boat-tail. (see Picture 2) This helped me to determine the shape of the arches needed to support the cedar strips. I chose not to use fiberglass as it would not be true to the period of this car, so the strength of the body would depend, for the most part, on the arched formers under the strips (much like the wooden model airplanes many of us built as kids). These formers would be mounted on a wooden platform bolted to the frame.

A word about the wooden platform is in order. For the flat part of the frame, I used 3/4-inch plywood fastened snugly with carriage bolts. For the curved part, the kick, I found flexible plywood known as "wacky wood" that can be bent as much as 360 degrees, if

² See VCCA Members Resource Center – Technical Information – 1928 Engine Rebuild

needed. I not only used this for the rear part of the platform, but also to create two bucket seats (thanks to Dave Cufu for that idea).

I used heavy cardboard to cut patterns for each arch and taped them in place on the platform. (see Picture 3) These were trimmed to final shape after laying a few cedar strips against them to assure correct curves for the boat-tail. Then, the cardboard patterns were traced onto $\frac{3}{4}$ inch plywood for final cutting of the arches. As noted earlier, the arches were securely fastened to the platform (and to additional cross-members added under the frame). See Picture 4.

Bracing was added between each arch as shown in Picture 5. The bottom-most cedar strips were then trimmed to fit the curve of the frame and glued/nailed into place. Brass escutcheon pins were used where each strip passed over an arch and counter sunk slightly so they would not interfere with final sanding of the body. The lower strips went very quickly with wood glue bead on each dove and cover and clamps to hold them firmly until the glue set. (See Picture 6) Once the strips began to curve in two directions (compound curves) I soaked them in boiling water (steam cabinet would have worked also) and clamped them in place until they dried. (See Picture 7) Then I removed the clamps, applied the glue and re-clamped them as well as nailing them to each arch. When the curves became too radical, I cut tapered strips to straighten out the curve in one direction (like making gussets) to relieve the strain on the strips. (see darker strips in Picture 8).

The body was sanded with a flexible sanding board using progressively finer sandpaper. I was careful to stay with the grain in this process as the cedar strips were easily scratched when sanded across the grain. Once sanding was complete, I rubbed several coats of marine varnish into the wood using thin protective gloves and the warmth of my hand to apply the finish. I was delighted with the result and had a knowledgeable employee at a nearby Woodcraft Store to thank for advising me on the process. While the finish brought out the highlights of the cedar strips, it also brought out any imperfections in my fitting of those strips. Should I do another cedar strip body (or canoe), I would be far more concerned about any minor gaps in joints, etc. They will show.

The interior of the speedster included the bucket seats (with seatbelts) using the “wacky wood” already mentioned. A mahogany veneer dash and original wooden steering wheel were added to the interior. The windshield(s) were fashioned using wind wing hardware and custom cut safety glass. These can be folded down against the body if desired. (See Picture 9)

The radiator core had to be custom made and attached to top and bottom pans from an original 1920's Chevrolet radiator. This was necessary as I had lowered the body about 6 inches and needed the hood line to match – thus a shorter radiator, but with a modern (and more efficient) core. I also cut down the radiator shell to match. Only the top portion of the hood was used and it is held in place by leather straps fashioned from men's work belts and spring-loaded brackets of my own design (see Pictures 10A and B).

So, that is the story and here is the final product (See Picture 11). Now to convince the DMV in Ohio that the car is worthy of a title and not built from stolen parts. But that is another story ...

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Proof sheet for pictures to accompany article on wood-bodied speedster

Picture 1



Picture 4



Picture 2



Picture 5



Picture 6

Picture 3



Picture 7



Picture 8



Picture 9



Picture 10A



Picture 10B



Picture 11

