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Solid Foundation

Building and Assembling a Walton Fabrication F-100 Chassis

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We are entering a golden age of classic truck building. Never before has there been more choices available to truck owners, especially regarding how to set-up a chassis. As more and more builders realize the market for early trucks, they are moving beyond the '32 Fords and Tri-Five Chevys and producing aftermarket chassis that are far superior to the well-worn rails currently residing under your truck.

One of the chassis builders at the forefront of this is Todd Walton of Walton Fabrication. Walton produces new frames as well as complete chassis setups for '53-56 F-100s. They are unique in that they maintain the profile of the factory framerails, but that is pretty much where the similarities end. Walton knows that a stiff chassis provides a better-performing suspension, so each framerail is built using .125-inch wall and pickled and oiled steel, and each piece is laser-cut before being welded together in a custom jig. The front crossmember is welded into place 1.25 inches farther forward than stock, so the wheel sits centered in the wheelwell.

Walton has also put thought into how to mount the bumpers. The front frame horns have been shortened 1 1/2 inches for a better-fitting bumper, and two sets of mounting holes have been incorporated for the rear bumper using the stock brackets (one in the stock location and one up higher and closer to the body.) Other cool features include an incorporated C-notch, all bed mounts, billet aluminum cab mount bungs that fit to the stock rubber mounting pads, and welded nuts incorporated into the frame for the running boards, brake lines, etc.

The LS Series chassis we're building for an upcoming project came with a Walton IFS with GM calipers and a new Currie 9+ Hot Rod rearend with Explorer rear disc brakes suspended by parallel leaf springs and controlled by Walton's rear anti-rollbar.

We checked out Walton's HQ to get a first-hand look at how one of these frames goes together, and then proceeded to turn the bare frame into a rolling chassis in one fell swoop in our own Primedia Tech Center. We even decked out our new chassis in new billet rollers from Wheel Vintiques wrapped in speed-rated rubber from Yokohama. Stay tuned, you'll be seeing more from this chassis in the coming months as we start on one of our most ambitious projects ever.





Walton Fabrication builds each of their top-notch '53-56 F-100 framersails on this custom-built rotisserie jig.



The inside wall that completes the "box" was put on in a few pieces. The sections with welded nuts for running boards or other accessories were welded in first. Then the open sections were filled in with plate steel.



When each individual framersail was fully welded, all of the welds and seams were carefully ground smooth.



The result was an amazingly smooth appearance from the front of the rail to the rear. Here you can see the mild C-notch incorporated into the rear rails.



The finished framersails were then attached to the frame jig, and the crossmembers were clamped in. The center X-member really ties it all together into one strong piece.



Walton's own front crossmember was then set into place. We went for the simplest approach, opting for coil springs, but airbags or coilovers can be specified. Walton took into account the fact that as these trucks are

lowered, the front wheels move even farther back into the fender opening--giving even more of a nose-heavy appearance. They fixed this problem by moving the front suspension forward an inch and a quarter.



The engine mounts were welded in next. Walton has specifications for most popular and even some exotic engine choices when it comes time to set-up the mounts. If you want something they don't have specs for, they'll work with you to get it right. This setup is for a small-block Ford.



Once we had our new frame and components in hand, we trucked it all back to the Primedia Tech Center and started assembling it. The frames come from Walton crated for shipping with the other chassis parts boxed along with it. If you would like to pick it up yourself, assembly can be arranged. The bare frame was set onto the lift and secured so we could begin assembling it.



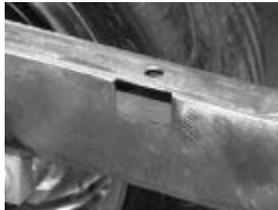
We were extremely impressed with the X-member. It's large and no doubt adds a ton of rigidity to the chassis, but it still provides plenty of clearance for the driveshaft and exhaust.



The front frame horns appear just as the originals, but are 1 1/2 inches shorter. So the bumper will fit tighter next to the valance for a better appearance.



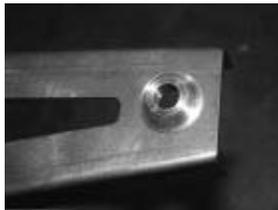
Here you can see the two sets of mounting holes that can be used for the rear bumper. Each set of holes uses the stock brackets, but the upper set mounts the bumper up higher and closer to the body.



In order to help ease the mounting of the bed in its stock location, Walton added these cut-outs in the side of the framerrails.



Spanning the X-member is the bolt-in transmission crossmember, which was ready and waiting in place. Just like the engine mounts, Walton can accommodate most popular transmission choices. Ours is set up for a Ford AOD.



The cab mount is super stout and is the only one that features this billet bung that fits in the mounting hole and has the correct contour to allow the use of the factory rubber biscuit.



Our Tech Center master mechanic, Installation Jason, began the assembly by installing the upper tubular control arms. Once again we opted for the standard pieces, but stainless ones are available if you'd like to step up.



The lowers were then fit to the lower portion of the crossmember.



Trying to install coil springs on an empty chassis without them flying out across the shop can be very difficult, so some dummy struts were cut, drilled, and installed as a temporary solution until we got some weight on the chassis.



The spindle assemblies come pre-assembled with the rotor and caliper in place. The spindles feature a 2-inch drop, but if you so desire, standard ones are available. We disassembled the assemblies so you could better see the components used.



The front brake system we are using features GM '78-up mid-size passenger car calipers with 11-inch rotors. Larger 12- and 13-inch Wilwood brakes are an option. Either system can be matched to the Ford 4.5-inch bolt pattern or the GM 4.75-inch.



The front calipers slid into place and were bolted down. By using the GM calipers, we will be able to get replacement pads at any parts store when needed.



The power rack was installed onto the mounting points on the front of the crossmember, and the tie-rod ends were bolted to the spindles.



Getting a big truck to handle will be a lot easier when using an antisway bar. Walton offers this 15/16-inch one for the front.



Jason installed the master cylinder and 8-inch single booster next (8-inch dual-chamber booster optional).



The brake pedal was bolted up to the pivot point and connected to the pushrod.



The 9+ rearend from Currie was built specifically for this chassis. It is 100-percent brand new and features the upgrade to Explorer disc brakes. Since we will be running an overdrive trans, we equipped the rearend with a 3.70:1 third member with 28-spline axles.



The U-bolts and spring plates were attached to mate the pair together.



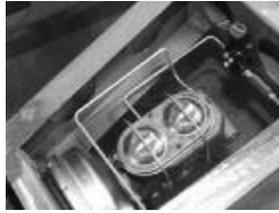
Jason slid the rearend under the chassis, fished the leaves under the housing, and bolted them to the hanger and shackle. Walton offers a variety of rear suspension choices, including a four-link with either coilovers, 'bags, or ShockWaves. If you want to supply a Corvette or Jag IRS, those can be incorporated too.



The shock bolts to the crossmember and has plenty of clearance all around to accommodate a variety of different shocks, such as some of the adjustable ones on the market.



An optional 3/4-inch rear antisway bar can be ordered to go along with the front bar and will do a lot to making the truck more enjoyable to drive through a twisty canyon. The bar attaches to the provided mounting points on both the frame and via heims to the axle housing.



Walton can also custom-bend brake lines, as they did for our Effie foundation. Our lines are the standard ones, but they can also do stainless steel if you prefer. Walton can also supply the chassis with an aluminum 19.5-gallon gas tank with fuel lines ran for either a carbureted or fuel-injected engine.



These are the brand-new Oval Track billet wheels from Wheel Vintiques. We chose a 17- and 18-inch combo and mated them with AVS Sport tires from Yokohama.



Between the streamlined build process to the ease of installation of the components, we're sure that the Walton Fabrication chassis will provide an excellent foundation for our Effie project.