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## **1951 Chevrolet Sport Coupe Project - Project '51 For 15K Part 4: Stop and Go**

*Project '51 gets a crossmember and master cylinder install*

By Todd Ryden



After a slight hiatus, we're happy to show you the progress we're making on our '51 Chevy Sport Coupe. Our wrenching bonanza took a back seat to work commitments, moving homes, holidays, etc. you understand. But we've never stopped thinking about the next updates to our project. In this fourth installment where you'll see how we plan to make the '51 shift and stop.

First, let's take a moment to recap our goal and other modifications we've completed. The end goal is to build a reliable, comfortable cruiser. It might not be pretty at first, but it is something we want to feel confident about while motoring the family around to

cruises. The budget is maxed at \$15,000 total (which we really want to beat by a lot). To date, we're just over \$5,400, including the \$2,750 we paid for the car. So far we've nearly doubled that as we treated the front and rear suspension to complete upgrades from Chassis Engineering to the tune of \$2,604. So far so good.



*The Walton tubular crossmember is designed to bolt in and incorporates a versatile mount that accepts six transmissions, including aluminum Powerglides, TH350 or TH400, the 700-R4, 4L60E, and a T-5 manual trans.*

This month we center on the transmission mount and the master cylinder. Our plans are to run a used small-block Chevy with a TH350 automatic transmission, simply because they were available and cheap. We're going to be mounting the engine with parts from Chassis Engineering so we searched for a new transmission mount. One of the Street Rodder readers following this project suggested that we take a look at Walton Fabrication. After surfing around their site and making a call, we decided to try one of their crossmember kits.

The Walton crossmember is constructed of 1-3/4-inch tubing and is designed as a bolt-in, though they do recommend a couple small welds to the original K-members to add chassis rigidity. We also liked the idea that one crossmember could be used with several transmissions. To fit our budget, we're starting with a simple three-speed automatic, but down the road we may want to upgrade to an overdrive and the Walton mount gives us the opportunity for the swap. Speaking of budget, the Walton kit was a value at \$169.95. This system allows for the swap, plus we can get the trans in and out without pulling the engine.



*The first step was to tackle the 60-year-old rivets. After completing the front and rear suspensions, we thought we were through with grinding and drilling rivets.*

Installation of the crossmember was straightforward as we cut and ground out the rivets of the original unit, and bolted the new one in place. The welding that is recommended is right where the K-member support brackets come down and meet the Walton unit.

They still bolt together, but the finish welding will add to the overall strength of the chassis. We'll wait to weld everything together once the engine and trans is fit in place.

As for braking, we wanted to keep the floor-mounted throttle and brake pedals so we set about looking for a frame-mount master cylinder bracket. We reached out across the country to the Connecticut-based team at Engineered Components and they answered our needs. First, they had the exact bracket for our '51 Chevy. Second, they also recommend the specific dual reservoir master cylinder we needed to work with our Nova drum brakes and the new manual front discs of the CE frontend. It's important to note that there are several different master cylinders to select from depending on the brakes you're using, so be sure to have the answers when you call.



*Once we cut the factory crossmember away from the support brackets, you could see why even southwest cars rust. The frame supports were packed solid with dirt.*

With the master cylinder installed the next big part of the puzzle is running brake lines and hoses. That's proving to take longer than it did installing both the crossmember and the master cylinder. Remember that bending brake lines is like wiring, it takes patience to do the job right. We located brake hoses that fit well from the calipers to the frame, after some trial and trades at the local parts store, and spent about \$100 in hard lines, a proportioning valve, and brake switch. We're taking our time on the plumbing and so far, so good.

With these additions to the '51, we're just under \$6,000 for a full suspension and brake upgrade. Next up we'll be spending some cash on tires and a drivetrain with items such as steering, wiring, glass, and more coming soon.

## Project 51 for 15K

Parts	Cost
'51 Chevy Business Coupe	\$2,750.00
Chassis Engineering	
Front suspension	\$2,052.00
Rear suspension	\$602.00
	Subtotal: \$5,404.00
Brake lines, hoses	\$83.00
Proportioning valve	\$40.00
Brake switch	\$14.00
Walton crossmember	\$169.95

Engineered components	
Bracket	\$130.00
Master cylinder	\$75.00
	Grand Total: \$5,915.95

Running tab: We're skimming just under \$6,000 into our project and we're feeling pretty good. The next big move will be sliding the engine and trans in place followed by figuring out a way to use the stock column with the new rack-and-pinion steering.



*The crossmember bolts in place similar to the original piece. Before our trial fit, we had to drill all of the rivet holes out to 25/64 inch. Walton supplies all new hardware, including locking nuts.*



*The K-member support legs bolt to the brackets of the Walton unit. They also recommend tapping the flat extension tabs of the stock legs up to the new mount and welding the two together. We'll wait for final assembly before the welder is plugged in.*



*With the crossmember in place, you can see that its design and construction will not only make installing our new small-block and trans easier, but it will also add strength to the frame.*



*The mounting plate is the key to accepting a wide range of GM automatic transmissions. The TH350 requires the plate to be installed in the front holes while the overdrive trans uses the rear mounts as shown. (Since we're using a TH350, the mount will be moved forward.)*



*It was time to step away from rivets and get going on the brakes. Since we're retaining the factory floor mount pedals, we chose a master cylinder mounting bracket kit from Engineered Components.*



*Once again, it was out with the old and in with the new. We removed the intermediate pedal bracket from the pedal itself and then removed the original master cylinder assembly.*



*We checked how nicely the Engineered Components bracket and master cylinder assembled before we bolted it out of sight and under the car.*



*The most difficult part of the master cylinder install was drilling and tapping the pivot shaft. This is important as this bolt retains the assembly securely in the new bracket.*



*The bracket simply mounts to the chassis in the same location as the original equipment. Once the bracket was retained, the master cylinder was installed.*



*The master cylinder, pushrod, and intermediate pedal assembly all came together. The pushrod is adjustable and everything aligned with the factory pedal. You can use the factory hole in the floor to fill the master cylinder. Next up on the brakes project list is to start bending hard lines.*



*With the new Engineered Components dual reservoir master cylinder kit installed, it's time to get busy with the brake lines and hoses. We borrowed a friend's bender and a flaring set to get busy.*