

PUT YOUR DIME ON STEROIDS

Pumping a little V-8 muscle into an S-10

>> THE SOURCE

HEDMAN
PERFORMANCE GROUP

(562) 921-0404
www.hedmanperformancegroup.com

MIDWEST IMAGES

(618) 580-0586
www.myspace.com/midwestpaintandmetal

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Stuffing a V-8 into an S-10 isn't something new. Since these trucks were introduced, grease monkeys have been ditching the stock motors for the grunt of a small-block. Back in the day, parts would have to be cobbled together or fabricated from scratch to make it

work. Now things are a little easier. The Hedman Performance Group, which consists of Hedman Heddors, Trans-Dapt, and Hamburger's oil pans, put its collective minds together and built a set of parts which work together to swap a small-block into these little trucks.

>> The motor-mount kit is designed to install a 283-350 or LT1 Chevy engine into any 2WD Chevy Blazer, Sonoma or S-10, GMC Jimmy, or S-15. The mounting brackets are laser-cut using 5/16-inch-thick steel. The bolts are Grade 8 and yellow-zinc-plated for durability. The mounts will raise the motor up one inch if left alone, but you

can trim off the bottom ear and put the motor at stock height. If you run it at stock height, you'll have to use a set of stock exhaust manifolds. Untrimmed, the mounts are specifically designed to be used with Hedman Heddors Engine Swap Heddors.

Hedman offer three tiers of Heddors for this: standard-duty uncoated,

standard-duty HTC-coated, and Elite (ones covered in this story). The Elite line is a heavy-duty set of pipes with 1-1/2-inch mandrel-bent 14-gauge tubes, 3/8-inch flanges, a 2-1/2-inch collector, and a matte-finish ceramic-metallic coating. The big difference between standard-duty and Elite is the wall thickness. Standard-duty headers

typically use 18-gauge, while the Elites are 14-gauge.

Just like the other parts, the high-performance oil pan is designed specifically for this swap and works on both 2WD and 4WD models. The pan has notched side rails to accommodate stroked engines, and it offers a 7-quart capacity (including 1 quart in the filter). The pan comes with the proper oil pick-up and a set of special gaskets that follow the notched side-rail profile.

Since this pan has the notched rails, we grabbed a set of oil-pan spreader bars to provide better load-force distribution along the perimeter of the oil pan.

We flew out to Midwest Images in New Baden, Illinois, and met up with Mike Cotten to perform and document the bare-bones method of getting this motor into a first-generation S-10. If we did it on a California truck, we would have to get it past the smog referee and

that's just a pain. Mike's truck came from the factory with a 2.8L V-6, but the theme of the build was more on target with a retro muscle car. A little V-6 wouldn't be up to par with that theme, so a Mouse motor needed to be stuffed under the hood. We also did a four-link rear setup with some fat tires (also in this issue) so we could hook up with all this new power. Check out how the kit helped us install a semi-mild 355ci engine Mike had at his shop.

WHAT'S IN THE BOX?

Here are all of the parts we needed to transplant a Mouse motor into the S-10. All of the stuff is designed to work together and is of high quality. The headers have thick flanges, the motor mounts are even thicker, and the oil pan has a windage tray and crank scraper built in. Each one of the companies that makes the parts has been around for a while and has plenty of R&D invested into its respective product. Every nut, bolt, and gasket is provided so there's no need for a trip to the hardware store.



WHAT'S IN THE OTHER BOX?

Because the motor would have to look the part, we also ordered some shiny stuff in the way of valve covers and an air cleaner. These retro-inspired, finned aluminum goodies are new parts from Trans-Dapt, and we're glad the company makes them. It's getting really hard to find a good set of finned covers from the swap meet that aren't all busted up.

Everything from T-D is new and fits like a glove thanks to new castings and modern machining processes.

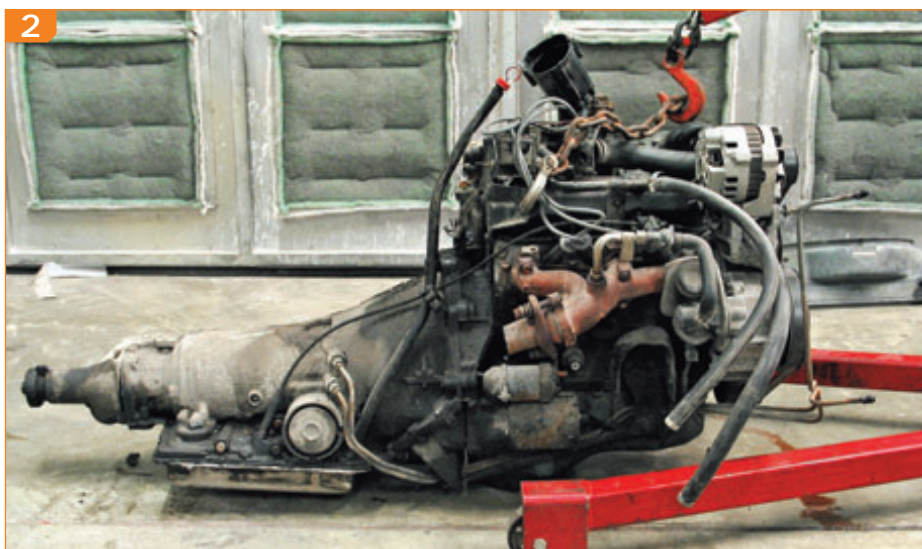


▶▶ PART ONE: THE TEARDOWN

1 Obviously, we can't put in a small-block until the stock 2.8L is out of the way. Mike got started on that while I assembled the new motor. One thing you have to dig about Mike is his willingness to exploit his family. His wife Gina not only does all of the upholstery for the shop, she also stepped up and helped rip out the motor.

2 Here's the 2.8 and transmission out of the truck. Just being curious, I made a quick measurement. From tailshaft to water pump, this setup is approximately 54 inches. Our new 355 with its TH350 measures about 56 1/2 inches with a long water pump. The two units aren't that much different, but that's because we're going from a short V-6 with a long overdrive to a long V-8 with a short, non-overdrive trans. We will need to cut the fire-wall, but the driveshaft won't need to be cut (more on that later).

3 Mike even had his daughter Kyra crawl into the engine compartment to remove stuff. The motor came out pretty easily; the only hassle was the wiring harness. Since the motor is going to be carbureted and devoid of all of the sensors, most of the wiring won't be needed. Therefore, Mike decided to cut the harness and deal with it later. It won't take much for him to build his own engine harness because he'll only need to hook up a few things like the starter, distributor, and alternator. When Mike completes that, we'll give you an update.





1. To get the motor ready, I gave it a fresh coat of black paint and then ripped off the stock oil pan. Once the pan was out of the way, I took off the stock oil-pump pick-up by twisting it back and forth till it came loose.

2. The new pick-up slid into the oil pump and is held on by two of the oil-pump bolts. Because of the extra length, Hamburger's uses the two bolts to make sure it stays in place without the necessity of welding the pick-up to the pump.

3. Even though this pan looks huge, it is made to fit the confines of the S-10 crossmember. After I installed the provided gaskets, the pan dropped on without issue. A note from Hamburger's on the oil-pan gasket reads: "As tempting as it may seem to use a one-piece or thicker oil-pan gasket, they are not designed to be used with a stroked engine pan and will be sucked up, causing oil leakage. Additionally, using thicker gaskets will permanently deform the mounting flange on the pan, rendering it useless." So make sure to use the stuff you got in the box.

4. The pan has some very cool features built in like flapper doors in the sump to prevent the oil from moving forward under hard braking and letting the pump suck air (4a). There is also an integrated windage screen for maximum oil control and more horsepower (4b).

5. Because this pan is designed for stroked motors some of the factory bolts are not used, so this spreader-bar kit will provide better sealing distribution along the perimeter of the oil pan.

6. The new valve covers from T-D come with baffles to prevent oil from getting into the breathers.

>> PART TWO: PRE-ASSEMBLY CONT'D

7 The valve covers fit like a glove, and the strong steel-core, rubber design of the gaskets reinforces the frame to ensure alignment and a long-lasting seal. The valve covers look great with all of the classic styling we needed for this retro build. We also added a set of T-bar fasteners for a more complete retro look, plus we can remove the valve covers without any tools.

8 Next in line were the Elite Hedders. These are no wimpy pipes: You can tell they are stout just by picking them up. The mandrel-bent tubes are 14-gauge, and the flanges are super-thick. All the additional meat of the Elite Hedders means that they can handle the additional muscle that your transplanted V-8 will put out. I used the provided gaskets and hardware to hang them on the motor.

9 The headers use a 2-1/2-inch-diameter, ball-and-socket-type collector hookup. This allows for a little forgiveness on your exhaust system, and since there is no gasket there are no parts to buy later.

10 I had initially installed the motor-mount plates on the block, but then I read the instructions and noticed I was wrong. Because of how tight things get during install, T-D recommends hooking them to the motor mounts. Before that can happen, there are two very small ears that need to be cut off the motor mount.

11 With those cut, the plates slipped right on. We tightened the hardware until the plates would still move a bit but wouldn't flop around.



PART THREE: THE INSTALL

1. Now for the moment of truth. Will it fit? We hooked the TH350 on the motor, and Mike started feeding in the assembly.

2. This is about how far we got until we started hitting stuff—the firewall mainly.

3. First, we tried to just fold the pinch weld flat on the firewall. That wasn't enough—not by a long shot. Before we cut anything, we tried removing the valve covers and headers to see if that would help. Well, those things weren't holding us up so it was time to make some room.

4. Mike grabbed his trusty plasma cutter and went to town on the firewall. He had to cut a sizable portion of the sheetmetal to get the motor to fit. This must be from the new 1-inch-higher motor location the motor mounts provide. We could have trimmed the mounts to lower the engine, but then the headers wouldn't fit and this motor needs the extra flow the headers provide.

5. Once cut, the plates lined up and the provided hardware was installed. Mike crawled under the truck and slid the factory crossmember in place to hold up the transmission. Because the tailshaft falls so close to the original one, there's no need to have a new driveshaft made.



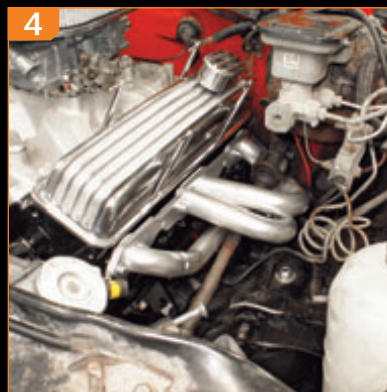
▶▶ PART FOUR: THE CLEARANCES

1 Here is the hole we had to cut to make the setup work. As you can see, it is a sizable hole but it's in an area that will be easy to patch up. If you look at the collector of the header, you can see how close it is in relationship to the framerail. If the motor mounts were cut to run the engine lower, the collector would be very close to the framerail if not hitting it.

2 We slid the stock radiator in to show how close the water pump is. A thicker radiator (Mike says an '89 Corvette radiator works perfectly) is needed to cool the V-8, so this gap will get even tighter. We're going to ditch the long water pump for a short version, which is 1-3/8-inch shorter. That should give us just enough room to install a slim electric fan.

3 Even with the large sump on the Hamburger's pan, it sits well above the crossmember. If the motor-mount plates were cut it would be even with the crossmember, so keep this in mind if you are 'bagged and lay frame.

4 The passenger-side header won't interfere with anything, but you'll need to remove the steering shaft and feed it between the tubes after you install the header.



THE FINAL WORD

With some cutting and some patience, the motor went in the hole. The job would have been a whole different animal if we didn't have the parts from Hedman Performance Group. Even though the motor sits high, the hood still shuts after we installed a Holley carb and the T-D air cleaner. Mike is going to spend some time buttoning up the wiring and exhaust, and we will revisit that once he's done. 🛠

