TECH

METAL MASSAGE

DROPPING A CHEVROLET PERFORMANCE LS7 AND TCI 6X TRANS INTO THE MARCH '57 CONVERTIBLE FOR FINAL METAL FABRICATION.



If you've been following the March Performance '57 convertible build, then you know that virtually no piece of metal will be left unworked. In our last installment the crew at North Port Auto Body shaved the door handles using a kit from AutoLoc to complete the exterior body panels. It took a lot of hard work to get the body straight, but the crew has done an amazing job so far. The ragtop should look every bit as good as it will handle on that slick Art Morrison chassis.

On our last trip down to North Port, Florida, they were at it again, fabricating a new floorpan and firewall. The latter piece was mostly for appearance, the desire for a completely smooth piece of metal that would not divert attention from that gorgeous Chevrolet Performance LS7 that will be fully clad in all of March Performance's products. In addition, they needed to make room for the beefier TCI Auto 6x automatic transmission. In case you missed the build, this six-speed trans is based off the 4L80E and is comparable to a Turbo 400 in size and strength. The custom floorpan was a combination of function and form, accom-

modating the seats of choice and the interior design.

To fabricate a new floorpan, technician Tom Wallace cut out the perfectly good stock metal. New floor braces were picked up from Danchuk and modified to fit the flat 18-gauge steel that would now reside inside the cabin. Lexus seat frames will be used to create the one-of-a-kind interior that Kim March desired, so Tom went through many test-fittings to make sure the seats would accommodate Kim's stature before settling on their final location. Heavy 3/8-inch steel plate was used to secure the seats, while a

set of AutoLoc shoulder belts (PN SB3PRTN) will secure Kim.

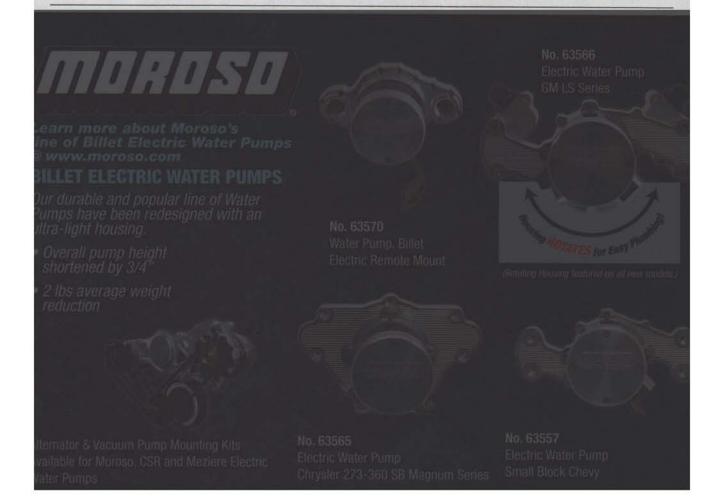
The firewall was another painstaking process that utilized 18-gauge steel and many hours of hammering. "No fancy machines here. Just old-school methods," as Tom put it. He used round objects found around the shop, including mallets, to shape the new firewall. Between the LS7 powerplant, bulky accessories, and large bellhousing on the trans, Tom had his work cut out for him. The key to creating the perfectly smooth firewall, though, is in relocating the brake booster, master cylinder, and windshield wiper motors. Classic Performance Products set us up with a trick remote-mounted brake booster and master cylinder setup. The combination consisted of a 1-inch bore master cylinder with 3/8-inch -24 ports (PN M-C100-S), 7-inch single diaphragm booster (PN 7SRB), adjustable proportioning valve (PN APV), 90-degree 17 1/2-inch brake pedal





After spending so many hours getting the body straight, North Port Auto Body took great care to keep it that way when fabricating a new firewall and floorpan. A support structure was welded to the corners of the cabin prior to removing the factory metal.

Tech, Tom Wallace, started with the floorpan, initially with a cutoff wheel before switching to a reciprocating saw. The floor was cut one side at a time from the firewall all the way back to the crossbrace before the rear seat area. The majority of the trans tunnel was left intact to be reused.



(PN 254), polished aluminum brake pedal pad (PN 90197), and billet pedal shaft (PN 299) along with a vacuum hose kit (PN VHK1-50). The remote-mounted wiper motors came from our friends at Pacific Western. This dual-wiper kit is designed to mount under the dash, next to the CPP brake parts. It uses a two-speed motor with an intermittent switch and enough adjustability to fit any 1957 Chevy.

If the previous installments didn't tip you off, this is no throw-together-in-a-weekend type of build. This is an all-out Pro Touring build that will be the show-piece of March Performance, displayed at events around the country. Clearly, the look of the '57 Chevy is paramount, but that doesn't mean Kim intends to leave anything on the table. As we start adding more go-fast parts this will become even more apparent. Tune in next time!











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The same process was repeated on the firewall, cutting from either side, depending upon the angle.

To keep the engine bay from being cluttered, Pacific Western makes this trick remote-mounted dual wiper kit with a five-piece metal bridge. The two-speed motors are available with or without an intermittent function. Arms, blades, and model-specific knobs are available separately along with washer kits and escutcheons.

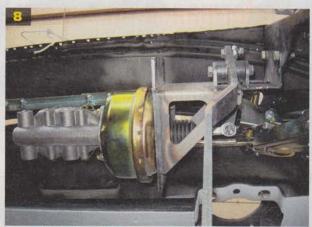
5 The wiper motors will mount under the dash to keep them hidden from sight, with plenty of adjustment to fit any '57 Chevy.

When installed, you can see how the wipers mount behind where the firewall will be, yet still poke through the cowl area.

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The CPP master cylinder and brake booster will mount in the lower portion of the dash (parallel to the firewall). Not only does it stay completely hidden, but should prove a good match to the powerful disc brake setup we'll be installing. The 90-degree brake pedal is key to mounting the booster and master cylinder horizontal.

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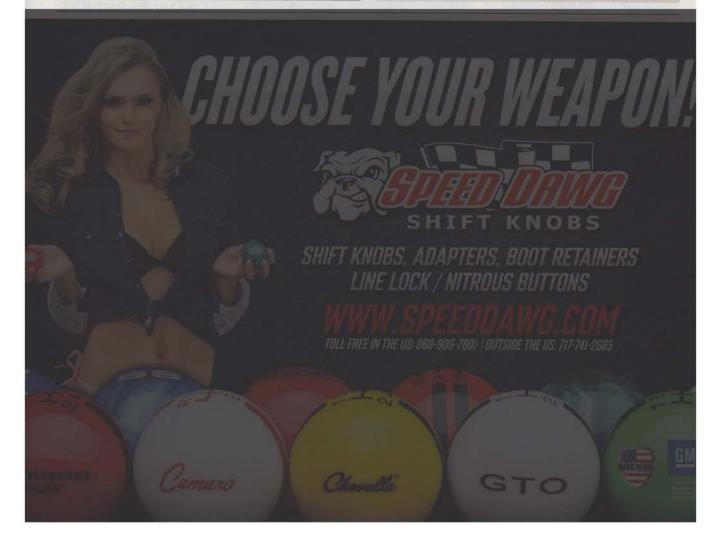




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This was our first experience with this remote-mounted setup, but it came out very clean.

The cabin air will be conditioned by a Vintage Air system, which also mounts under the dash — again, no hole in the firewall. This is a model-specific kit for Tri-Fives that allows for OEM '57 Chevy controls or Vintage Air's control panel.

Tom installed the Vintage Air Gen IV kit in its new home, and all it needs now is some wiring along with the compressor and condenser. That will have to wait for a later date.











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During previous test-fitting, Tom used an LS mill that was lying around the shop. But at last, the Chevrolet Performance LS7 arrived. The 505-horse, 7.0L beast is packed with the exotic materials that give it wow-factor in a Pro Touring build, such as titanium valves and connecting rods. Though it comes with a dry-sump oil pump and pan, those items are easily swapped for a wet-sump if you prefer not to deal with a separate oil tank and plumbing. High-flow 4-into-1 exhaust manifolds and a balancer are also included.

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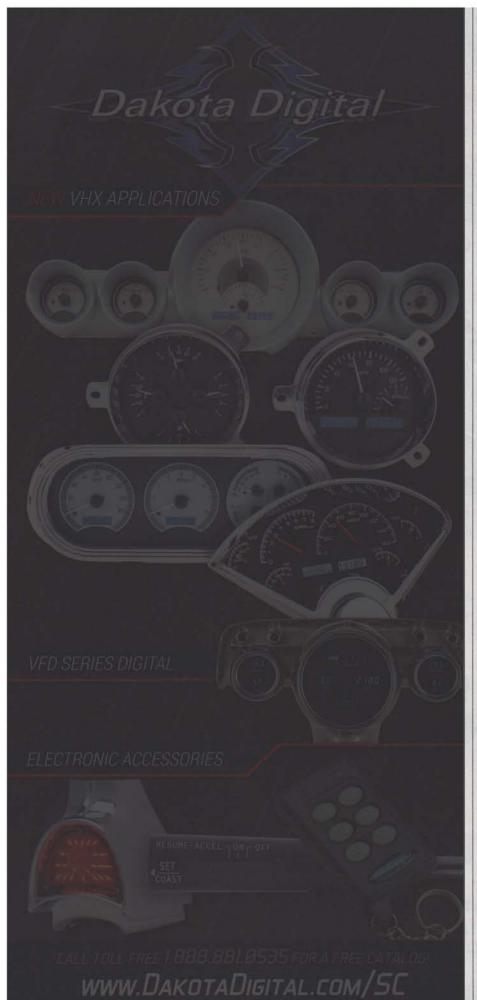
Though he likes the new technology, Kim prefers a more old-school and clean look. So he opted to go with a single-plane Chevrolet Performance LS7 intake manifold (PN 25534394) and MSD Atomic EFI setup. This intake can be purchased with or without injector bosses, and it is basically the only carb-style intake on the market suitable for a stock or mostly stock LS7.

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The Chevrolet Performance intake has a 4150 flange, to which North Port bolted an Atomic TBI throttle body. The standard Atomic LS Wiredless Engine Management system is designed for stock-style intakes, fuel rails, and throttle bodies. In melding the two different systems, the engine will look even more like a carb setup while taking advantage of the Atomic EFI's self-learning tuning feature and hidden wiring. The actual ECU is built right into the side of the four-barrel throttle body (seen here).

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As you saw in the first installment, TCI put together a 6x transmission for this build. The 4L80E-based trans has a total of six forward gears, which will be controlled by the latest generation EZ-TCU. The '57 will be utilizing one of TCI's trans coolers and torque converters as well. Between the engine and transmission controllers, all tuning can be done without a laptop.



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When boited to the LS7 and the Art Morrison chassis, it is apparent that this is a bulky transmission. This Tri-Five had a significantly smaller Powerglide from the factory.

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Tom started fabrication of the firewall with 18-gauge steel. It is a painstaking process of shaping the metal and test-fitting. Eventually it is welded at the seam and then ground smooth.

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The finished product perfectly fit March Performance's air cleaner and coil covers. This smooth finish with a few coats of glossy paint will really make the '57 stand out at SEMA and other events.













SOURCES:

Classic Performance Products 800-522-5004

classicperform.com

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The floorpan is perhaps a bit more involved. Tom started with floor braces from Danchuk, but modified them to fit a completely flat design. It is important to take the height of the driver and the seat into account.

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The seats were test-fit for height and position before fabricating the floorpan itself. The seats and seatbelts need a strong mounting point, so Tom welded 3/8-inch plate to the floor brace and frame. He used the same material to build brackets for the seats.

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AutoLoc provided these three-point retractable shoulder belts for the build (PN SB3PRTN), which is your basic OEM-style fabric that's been CAD engineered to ensure safety. Tan was the color of choice to match the interior. By bolting into the frame, the belts will be even safer than factory.

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Mocked up, you can get a sense of how the belts will look after the final install. Some sort of guide will need to be made for the shoulder, but otherwise it should be very tidy. These used Lexus seats will eventually be completely revamped, recovered, and devoid of the headrests.

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From underneath you can get a sense of how the floor braces, seats, and belts interact to create a sturdy structure.

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Most of the factory tunnel was preserved, and welded to each side of the fabricated floorpan. However, quite a bit more clearance is needed for the bellhousing on the transmission. We expect this to be done by our next trip to North Port as they finish up the final metal and mechanical work before paint.