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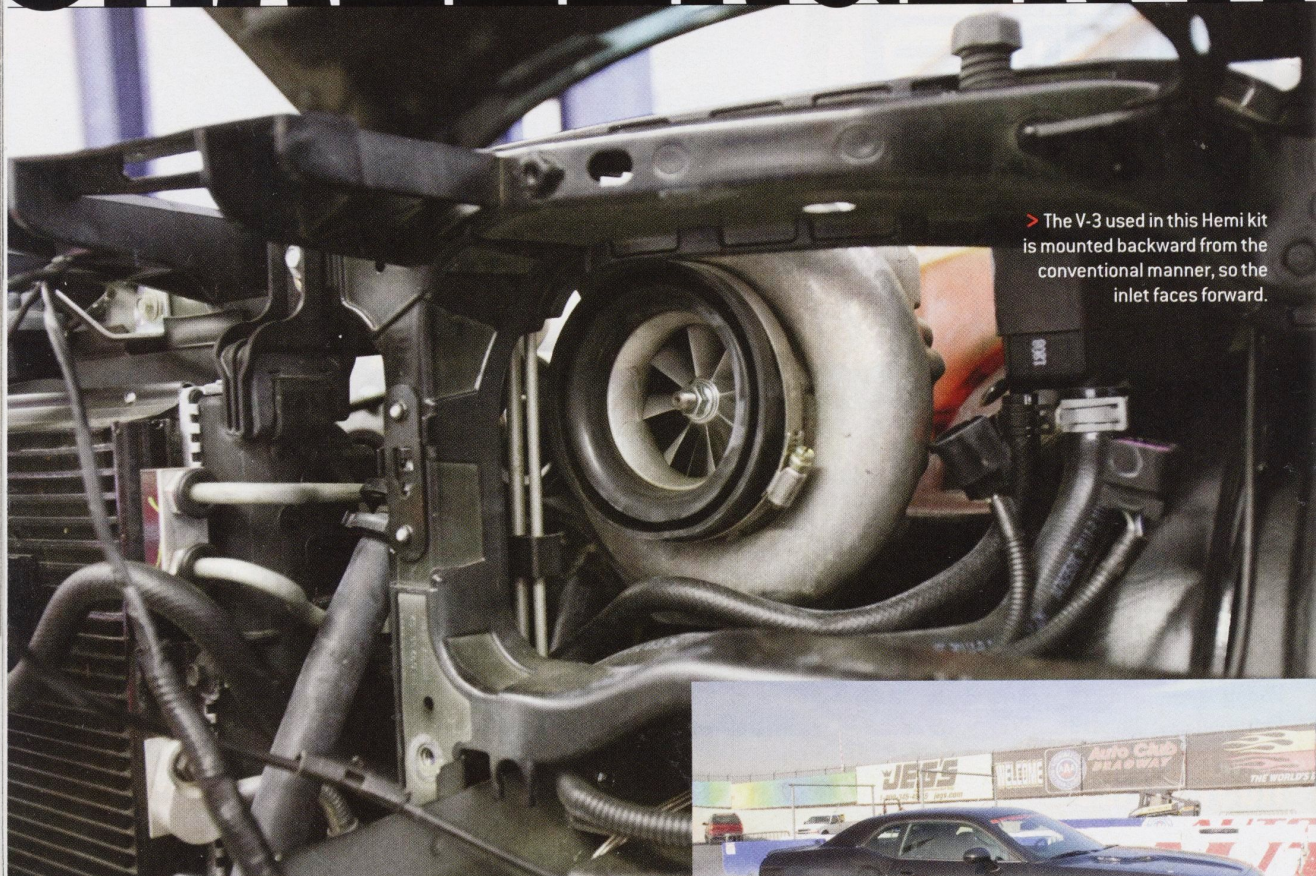
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**HOT ROD** WHERE IT ALL BEGAN

# CHALLENGER 11



> The V-3 used in this Hemi kit is mounted backward from the conventional manner, so the inlet faces forward.

## Vortech's New Self-Contained Supercharger Kit Puts the **SRT8 Challenger** Into the 11s With Ease.

By Rob Kinnan

Photography: Rob Kinnan and David Newhardt

What's the easiest way to make more power with a late-model car? When it comes to bang for the buck and ease of installation, there are two answers: nitrous oxide and supercharging. The merits of one versus the other have been debated forever, and like abortion and evolution, there will never be a consensus. However, the most hassle-free

(though initially more expensive) of the two is a supercharger. When we first drove the new SRT8 Challenger a little less than a year ago, initial impressions were that it is a very nice, damn quick muscle car. It ran 8.30s in the eighth-mile (13 flat) with just a few minor bolt-ons and was a hoot to blast around town in. But no matter how fast a car is, it can



> Speedfactory Cars graciously donated one of its SRT8 Challengers to be the dyno mule. This car came straight off the SEMA show floor with a JBA after-cat exhaust system, KW Automotive Variant 2 coilovers on all four corners, a Richmond Gear 3.55:1 ring-and-pinion on a limited-slip differential, and BMR Fabrications 1,000hp rear halfshafts.

always be faster, and our initial thought was: *This thing needs a blower.*

Well, now it has one. Working with Speedfactory Cars, a division of Landmark Dodge in Georgia, Vortech Superchargers has developed a bolt-on supercharger kit that puts the 6.1L SRT8 Challenger solidly in the 11-second zone at the track and

makes it a complete animal on the street. The supercharger itself is Vortech's new V-3 Si-trim unit that has a self-contained oiling system, meaning you don't have to punch a hole in the oil pan anymore. In this application, the boost is limited to 6.5 psi (5.5 psi for the 5.7L cars), and it blows through Vortech's powercooler air-to-water aftercooler. The kit

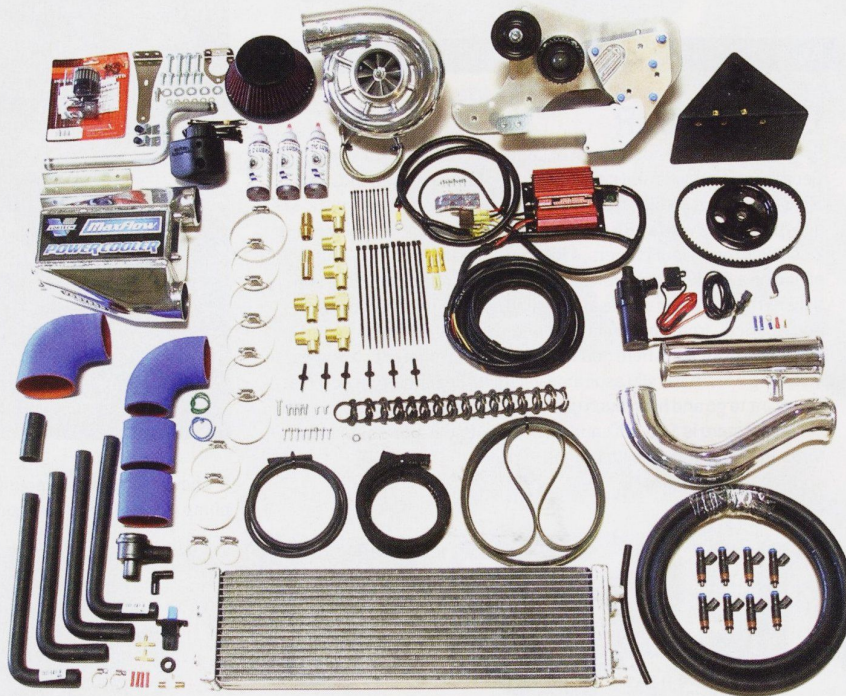
comes with higher-capacity injectors, a two-bar MAP sensor, a DiabloSport Predator handheld tuner (to change the fuel and spark tables to compensate for boost), and a fuel pump voltage booster. Expect about 10 hours to install it yourself—more if you hate wiring.

After we watched Vortech install the supercharger on Speedfactory's Challenger, we strapped it to the dyno, loaded in the DiabloSport tune-up, and turned the rollers to 404 lb-ft and 445 hp. On this dyno, that roughly translates into 560 hp and 510 lb-ft at the crankshaft.

With dyno numbers in hand, we took the car to the quarter-mile dragstrip at California Speedway in Fontana, California, for testing. With no track prep whatsoever, and on 20-inch Nitto NT555 Drag Radials mounted to Boze wheels, the Dodge ran 12.12 at 115.5 mph. With the greasy track and so much bottom-end torque, the tires just wouldn't hook well enough to get the best numbers out of the car, but it pulled very hard on the top end and the mph back up Vortech's claim of 11.90s.

Here's the deal with that. When we ran the car, the track hadn't been used in about three weeks and was unprepped and really dusty. Vortech had rented the track a few weeks prior, right after a Pacific Street Car Association (PSCA) event, and it had lots of rubber down and no dust when they ran on it. Their data showed an 11.91 at 118.8 mph, with a 0-to-60 time of 3.68 seconds, and we believe it.

The big SRT8 rear brakes prevent a real wrinkle-wall slick or tall-sidewall drag radial from fitting, which is too bad, since this Stage 1 Supercharged Speedfactory car is also set up with BMR Fabrication 1,000hp axles and Richmond 3.54:1 gears on a limited-slip differential—if you could throw enough power at it on the launch, it should run quicker than 11.90s.



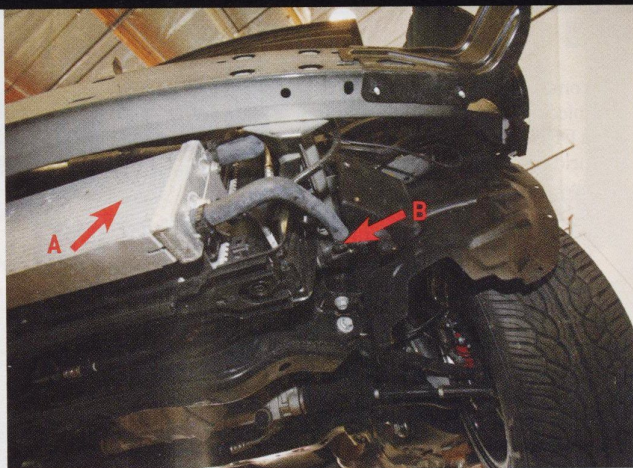
> We installed Vortech's PN 4CL218-030L kit, which has a satin finish on the blower, aftercooler, and tubing and retails for \$6,399.95. Shown is the 4CL218-038L polished version, which is a couple hundred dollars more. Everything is included except the tools and patience to do the installation. The system comes with a three-year/36,000-mile powertrain limited warranty.



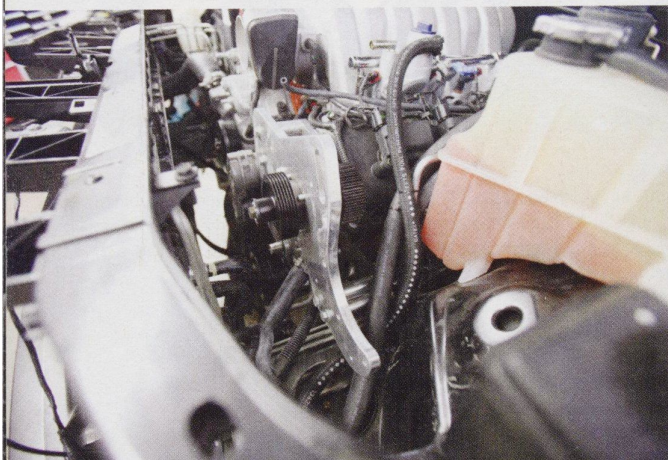
> The front fascia and driver-side headlight have to come off to install the heat exchanger and inlet plumbing. With the Challenger, there are little plastic rivets that attach the inner and outer fenders to each other, so if you want it to go back together completely stock, you'll need to buy a handful from your Dodge dealer.

## BUY THE CAR

Speedfactory is the hot rod arm of Landmark Dodge in Morrow, Georgia, and it builds and sells hot-rodded Chrysler cars. The black SRT8 Challenger in this story has the Stage 1 Supercharged package that comes with a JBA after-cat exhaust, KW Automotive Variant 2 coilovers on all four corners, a Richmond Gear 3.55:1 ring-and-pinion on a limited-slip differential, BMR Fabrications 1,000hp rear halfshafts, and a few subtle interior and exterior badges. You can buy it directly from Speedfactory/Landmark Dodge, and the company will ship it anywhere you want. It also has different packages, including a few naturally aspirated versions, depending on how fast you want to go and how much you want to spend. The sticker on the car in this story is \$65,000, and it comes with the aforementioned three-year/36,000-mile factory warranty.



> Shown here are the mounting for the heat exchanger [A] and the pump [B] that circulates coolant through the aftercooler.



> This beefy aluminum bracket bolts to the driver side of the engine and mounts the supercharger. Note the pulley arrangement—since the blower is mounted backward, the main drive pulley (driven off the engine's six-rib accessory belt) is attached to the bracket and connected to a cog pulley on the back. This cog pulley is what actually drives the supercharger.



> The kit also comes with a new power steering pulley. The stock pulleys have had issues with cracking, and since the supercharger's power draw puts more stress on the accessory drive system, Vortech includes a new, stronger power steering pulley to replace the weak stocker.



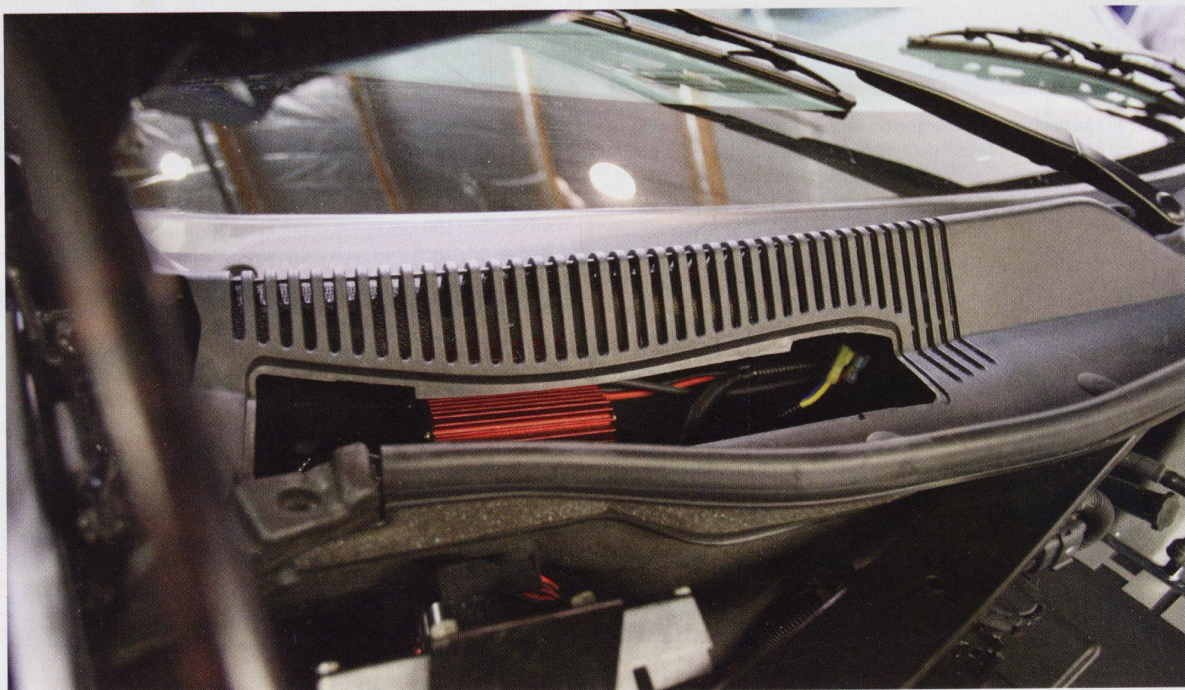
> The V-3 head unit has a fully self-contained oiling system. This is the drain hose that allows you to drain the oil for servicing (rarely needed) without having to remove the blower.



> The aftercooler has two tabs that locate it on the fuel rail but is otherwise held in place with the inlet and outlet tubing.



> The cooler uses a closed-circulation system that's not connected to the engine coolant. It takes a 50/50 mix of water and antifreeze.



> The 6.1L kits come with an MSD fuel pump voltage booster to provide more fuel to the engine under boost. It mounts under the cowl panel on the passenger side.

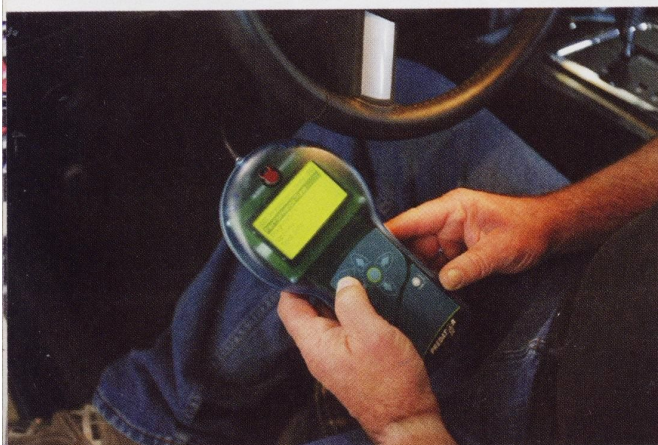
## CHALLENGER 11



> All buttoned up.

### SEE IT ON HOTROD.COM

Go to [HOTROD.COM](http://HOTROD.COM) to see video of us running this Challenger at the track, with technical explanations from Mark Brucks from Speedfactory and Gil Cormaci from Vortech. Also, make sure to check out the video of Speedfactory's Charger—the quickest (at press time anyway) production LX/LC-platform car—run a 10.35 at 137 mph.



> You can't just bolt a supercharger to a new car without changing the spark and fuel maps in the computer to compensate for the boost, so Vortech includes a preprogrammed DiabloSport Predator tuner in the kit. It downloads the new tune-up into the computer and captures the stock tune-up in the handheld.



> The car is a riot to drive, but we knew it was going to have a hard time hooking up on Fontana's unprepped slip 'n' slide. Even with the Nitto Drag Radials, the best 60-foot we could get was a 2.02 and the quickest quarter-mile pass was a 12.12 at 115.6 mph. **HRM**



> On Vortech's dyno, the blown Challenger made peak numbers of 445 hp at 6,100 rpm and 404 lb-ft at 5,300. Blowers continue to make more boost the faster they spin, hence the high torque peak.

## SOURCES

**BMR FABRICATIONS**; Thonotosassa, FL; 813/986-9302; [www.bmrfabrication.com](http://www.bmrfabrication.com)

**BOZE ALLOYS**; 866/634-4626; [www.bozeforged.com](http://www.bozeforged.com)

**JBA EXHAUST**; San Diego, CA; 800/830-3377; [www.jbaheaders.com](http://www.jbaheaders.com)

**KW AUTOMOTIVE**; Sanger, CA; 888/713-5566; [www.kw-suspension.com](http://www.kw-suspension.com)

**LANDMARK DODGE/SPEEDFACTORY**; Morrow, GA; 800/726-4044; [www.speedfactorycars.com](http://www.speedfactorycars.com)

**NITTO TIRE**; Cypress, CA; [www.nittotire.com](http://www.nittotire.com)

**RICHMOND GEAR**; Liberty, SC; 864/843-9231; [www.richmondgear.com](http://www.richmondgear.com)

**VORTECH ENGINEERING**; Oxnard, CA; 805/247-0226; [www.vortechsuperchargers.com](http://www.vortechsuperchargers.com)