



TEXT AND PHOTOS: DAN FOLEY

HAPPENIN' HEMI HEADERS

ADD 26 REAR-WHEEL HORSEPOWER TO ANY 6.4L HEMI WITH A SET OF TTI LONG-TUBE HEADERS!

It's always exciting when a friend or family member gets a new Mopar muscle machine. When my brother Andy told me he was ordering a new 2015 Scat Pack Shaker Challenger with the 485-horse 392 Hemi, I was a bit surprised, yet excited for him. (He always had GM muscle, while I had Mopars.) Whether you're a Chrysler man or otherwise, you have to admit that the Scat Pack 392 Hemi, at \$40,000, is the best performance bargain of all the modern muscle cars.

One cool feature on the Scat Pack (and more expensive Hellcat Challenger) is the

less restrictive, better-sounding dual-mode exhaust. This new high-flow factory X-pipe system sounds awesome and is reminiscent of the tone from a new '60s-'70s Wedge or Hemi from back in the day. But factory exhaust systems can always be improved upon.

Tubular headers have been around for decades adding power to engines. We all know an engine is basically an air pump. When it has to pump air through restrictive exhaust manifolds it's suffering from pumping losses. Headers have individual tubes reducing that restriction, making it easier for the engine to pump out the air to create

more power. Through the years we've seen tubular headers and collectors of different lengths and diameters. The long-tube usually wins in a shootout verses the shorty header. For our application we choose step-type long tubes over the factory shorty headers standard on the 6.4 Gen III Hemi.

We've used Tubular Technologies Inc. (TTI) headers with great success on numerous projects in the past, and Andy wanted to add them to his Challenger. TTI only designs quality headers for Chrysler engines residing in Mopar machines. That's one of the reasons for their success. Also, TTI's founder and owner Sam Davis has been designing/building headers since his teen years. Back in Sam's early days, he bent tubes in 1962 for the brand-new 413 Max Wedge cars. Word spread and many top Mopar racers of the time used his "Davis Headers" throughout the following decades. Sam remained Mopar loyal throughout the years and started TTI in 1988. Ever since, TTI has been designing excellent fitting and performing exhaust products for our classic and late-model Mopar monsters.

We'll be honest, this header installation isn't for the faint at heart. You'll need a lift and all the right tools we outline below. If you're not comfortable doing it yourself, there are competent shops that specialize in the installation and tuning required. The deeper/throatier exhaust note alone made this swap worthwhile, but obviously the 26 rear-wheel horsepower we picked up was the main benefit! My brother loves the tuned tones coming out of his tailpipes. Follow along to see how to install Gen III Hemi headers on a LX-body, then check out our satisfying dyno results. **📺**



These beautiful TTI long tubes will help the 485hp 392 Gen III Hemi to freely exhale and make over 500 hp at the crank. The primary tubes step from 1 7/8 to 2 inches and into a 3 1/2-inch collector with a floating flange. The featured headers are stepped with nearly equal length promoting more power than unequal-length, same-size primary tubes. They're made of 304 stainless tubing with .065 wall thickness (PN TTISRT81782-CO, \$990).

Because it's quite difficult to access the header bolts, you'll need the right tools to get the job done. Be sure to have a selection of swivel and short sockets (metric size 10mm and 3/8 inch), extensions, and a swivel head ratchet, all in 1/4-inch drive. Angle and straight wrenches are also helpful. You'll be working from many positions and angles with different sockets, extensions, and wrenches from both under and above the Hemi.



Dropping out the stock mid pipes is the easiest part of the job using wrench and socket size 15mm. Before disconnecting the four oxygen sensors, be sure to mark their position with masking tape so they don't become mixed-up when switched over to the new mid-pipe.

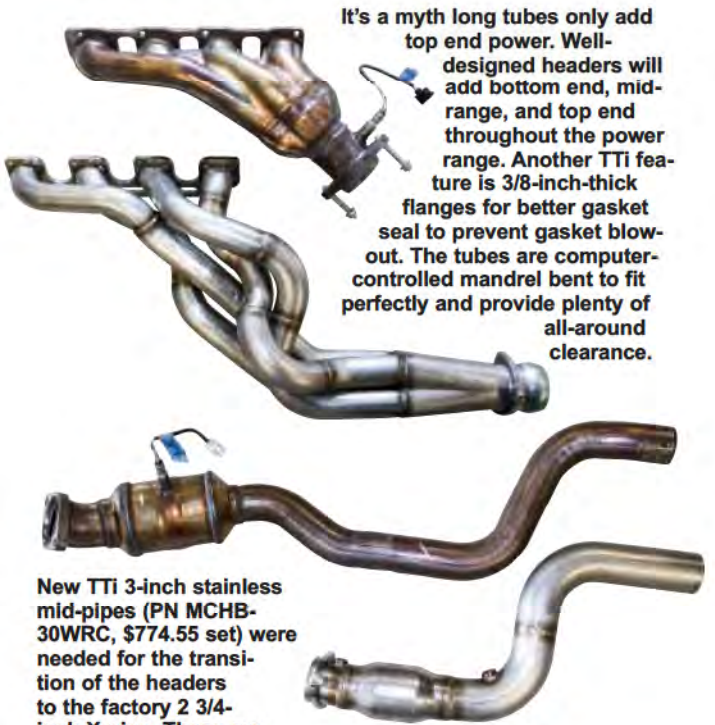
The Scat Pack's Shaker air-intake assembly has to be removed and the coolant tank set aside for access to the header bolts. From above, it's best to reach and loosen the front top three bolts and the bottom front bolt on each side. We used a 1/4-inch drive swivel head ratchet with a stubby extension attached to a metric size 10mm short socket.



On each side, to access the three rear bottom and top rear bolts you'll need the 1/4-inch drive swivel-head ratchet, a size 10mm swivel socket, and a variety of extension lengths. Those factory header fasteners received Loctite and require hard twisting the whole way out. Once all the bolts are removed, the factory headers easily slip out from the bottom.



We coated each header bolt (included) with high-temp antiseize to be sure all would easily screw in by hand. Years down the road, they won't seize in place inside those aluminum Hemi heads. The exhaust port surface area was wiped clean for good header gasket seal. Note: the TTI header bolts have a 3/8-inch hex head.



It's a myth long tubes only add top end power. Well-designed headers will add bottom end, mid-range, and top end throughout the power range. Another TTI feature is 3/8-inch-thick flanges for better gasket seal to prevent gasket blow-out. The tubes are computer-controlled mandrel bent to fit perfectly and provide plenty of all-around clearance.

New TTI 3-inch stainless mid-pipes (PN MCHB-30WRC, \$774.55 set) were needed for the transition of the headers to the factory 2 3/4-inch X-pipe. These are equipped with four O2 sensor bungs and high-flow stainless race cats, including two 12-inch and two 24-inch O2 extension sensor harnesses (not shown). Notice the blue masking tape marking the O2 sensor position.



The steering shaft needs to be removed to make room for installing the left-side headers, and it comes out easily. Be sure to mark the position of the upper and lower section of the shaft. It's easier to access and tighten the header fasteners before reinstalling the steering shaft.

There's plenty of room on both sides to install the headers. Using the previously mentioned assortment of wrenches, 1/4-inch drive swivel-head ratchet, extensions, swivel, 3/8-inch socket, and patience will access the header bolts.



Tighten the fasteners from the inside out. It took roughly 8 to 10 passes from the top and bottom to secure all the bolts.



The factory band clamps are spot-welded to the factory X-pipe. We mangled the band clamps off with a pair of pliers. Left-over welding slag was removed with a die grinder. The TTI mid-pipes slip over the factory X-pipe. The stock mid-pipes slip inside the X-pipe. Once the factory pipes were dressed, the TTI mid-pipes slip over the X-pipe into place.



The 2015 Scat Pack Challenger was brought to expert tuner Matt Hauffe, owner of Tune Time Performance in Lakewood, New Jersey. Our baseline number with a DiabloSport 93-octane tune was 384 rwhp. Bolting on the headers required Matt to install a custom tune into the DiabloSport Trinity tuner. Spinning the rollers after showed the long tubes to be worth an extra 26 hp and 28 lb-ft. Gains like that make bolting on a set of TTI headers a worthy effort.

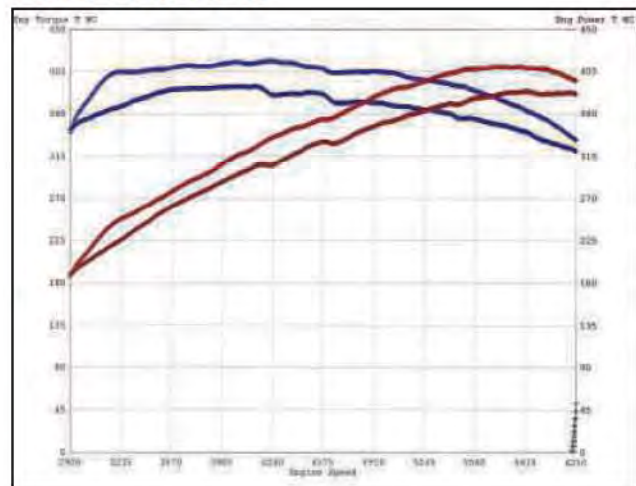


The TTI tubes make for a clean install with a great fit, appearance, and clearance. Be certain to route the O2 sensor harnesses so they will not rub, chaff, or get burned anywhere.



We think the look of new long-tube headers is much cooler than stock. Constructed of U.S.-made 304 stainless, they will be looking good for many years to come.

ON THE DYNO 2015 DODGE SCAT PACK CHALLENGER



SOURCES

DIABLOSPORT
561-908-0040
WWW.DIABLOSPORT.COM

TTI EXHAUST (TUBULAR TECHNOLOGIES INC.)
951-371-4878
WWW.TTIEXHAUST.COM

TUNE TIME PERFORMANCE
732-349-7800
WWW.TUNETIMEPERFORMANCE.COM



Before bolting on a set of headers to your LX platform Hemi, you'll need the appropriate software/tuning equipment. For ours, we contacted DiabloSport for a modified PCM (LX2015) and Trinity tuner (T1000, \$999 pair). Do not attempt to tune a 2015 model without a DiabloSport modified PCM in place. A no-start situation can result.