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FROM STOCK:

WEEKEND BUILDUP

Time, it's the biggest enemy a diesel enthusiast has. Each of us spends at least 40 hours a week at work, 56 hours sleeping (if you're lucky), and what seems like years doing chores around the house. Most of us only get a few hours of the day to even enjoy driving our diesels. So where does that leave time for actually working on them? The answer is—it doesn't.

When we want to modify our diesels, we practically have to schedule it like we would a vacation. We have to set aside some time that we can wrench, wire, and customize our machines to make them our own. Otherwise it seems like our trucks just end up being stock forever.

Here at *Diesel Power* we believe that the best way to tackle a truck project is to set it up ahead of time, get all the parts in one place, and do all of the work at once. To test this theory, we enlisted our friend Mark Lankhorst's new 6.7L '08 Dodge Ram 2500 and gathered enough parts to lift it, add some power, and give it a truly unique look.

Mark Lankhorst and Bryan Kinney, owner of KC Customs in Santa Rosa, California, are good friends, so when it came time for Lankhorst to tear into his '08 Dodge Ram, Kinney offered up his shop for our weekend photo shoot.

TO ROCK: IN 48 HOURS

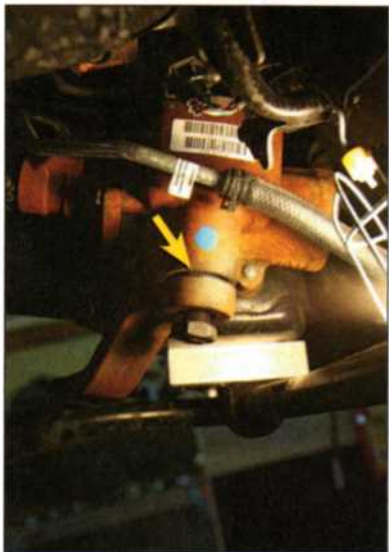




Mark Lankhorst and his friend Keith Spriggs lifted the Dodge on a hoist at KC Customs and tore into the truck Saturday morning. Lankhorst and Spriggs supported the AAM 9 1/4-inch front axle on jack stands and unbolted the factory coils and suspension links.



The new Trailmaster 4-inch lift kit came with longer tubular steel suspension links and urethane bushing that had to be installed. Lankhorst found that the steel sleeves that pressed into the bushings (arrow) were too wide to fit into the brackets on the axle, so Spriggs took them to a local machine shop to have them narrowed.



Trailmaster provided a new pitman arm to compensate for the increased lift height. In order to install it, Lankhorst had to remove the factory pitman arm, which turned out to be the biggest challenge of the whole project. There just wasn't enough room between the stock arm and the steering box to use a conventional pitman arm puller (arrow). Lankhorst considered cutting off the old arm, heating it with a torch, and even flagged down the local Snap-On guy to see if there was a special puller he could buy.



He figured cutting the arm off could damage the steering shaft, heating it might ruin the steering box's seal, and he broke the only puller Snap-On sells that would fit in the small gap. The solution was to use a thin cut-off wheel to grind away the top of the factory arm until there was enough room to fit the pitman arm puller.



Spriggs and Lankhorst then lowered the front axle as far as it would go and removed the original front coil springs and shocks. The new Trailmaster coil springs and front shocks were installed and the Trailmaster suspension links were bolted in one at a time.



The Trailmaster kit used two solid pieces of 6061 aluminum to lower the stock sway bar mounts (A), and the factory brake lines were reused after their attachment points were modified. The only real challenge was the top suspension link bolt (B). When Dodge assembles the suspension at the factory, there's no engine or exhaust in the truck. In order to remove the bolt, you have to cut the head off, and pull it out. Trailmaster provided a new bolt in the kit, but the 6.7L's exhaust was so large that Lankhorst couldn't fit a sawzall blade in there to make the cut. He decided to unbolt the exhaust at the turbo, lowered it out of the way, and reused the factory bolt to attach the Trailmaster suspension link.



Lifting the rear of the Dodge was much easier. The Trailmaster kit came with new, longer rear shocks, cast-iron lift-blocks, and a complete set of U-bolts. The rear leaf springs were left in place, and Spriggs lowered the axle just enough to slide the Trailmaster blocks into place. The blocks were tapered to correct the rear driveshaft angle, so Spriggs installed them with the tall end in the back.



Lankhorst tightened the new Trailmaster U-bolts with a torque wrench in three stages. You might think that's overkill, but it's the right way to do it, and ensures the U-bolts stretch evenly.



Spriggs took the new Type M4 Mamba tires over to McLea's Tire & Automotive in Santa Rosa, California, to have the factory tire pressure monitors (arrow) swapped from the stock wheels into the new Mambas.



Every '08 Dodge Ram has these wheel-mounted sensors that monitor each tire's pressure. Chris Patterson showed us how the factory sensors can be installed in aftermarket wheels.



Then Patterson expertly mounted and balanced each tire and wheel for Spriggs. We suggested that Spriggs use McLea's optional nitrogen-fill, instead of conventional air, for more consistent tire pressure.



The Nitto Dura Grappler's looked tough on the black Type M4 Mamba Wheels. Nitto's 3,750-pound load capacity (load range E) meant that cargo capacity wouldn't be reduced, and the Mamba Wheels' tire pressure sensor compatibility meant there wouldn't be any annoying warning lights popping up on the dash.



Lift kits and bigger tires take more power to move, so to offset the modifications he made under the hood, Lankhorst bolted on Volant's brand-new 6.7L Cummins Ram Scoop air intake.



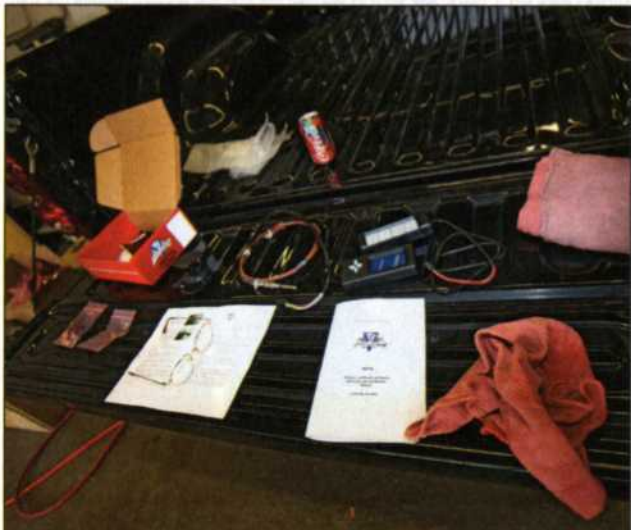
The new Volant Ram Scoop is a conventional high-flow air intake with a reusable Volant Primo filter. Where it differs however, is with this sleek ram air intake tube (arrow) that connected the Volant airbox to a scoop bolted into the front bumper.



The Volant Ram Scoop was installed just above the Dodge's front license plate (arrow) where it will get stuffed with cold air. This is one of the most innovative air intakes we've ever seen.



The bolt-on Volant airbox cover makes it easy to service the Primo filter, and will prevent hot underhood air from mixing with the cool outside air.



Before Lankhorst closed the hood on the 6.7L Cummins he spread the new TS Performance Power Play MP-8 and MPD hardware on the tailgate. He wanted to plan out the wiring for the processor, heads-up display, gauge pod, and control switch.



Lankhorst installed the MP-8 processor under the hood, on the driver side of the firewall. The TS Performance MP-8 is adjustable, and works with the stock manifold absolute pressure (MAP) and rail pressure sensors (RPS). It can add up to 100 hp by massaging the injection strategy of the Bosch common-rail system on the 6.7L Cummins.



Lankhorst mounted the TS Performance MPD gauge pod on the dash, and cut an oval slot in the plastic just big enough to pass the MPD's connector through. The MPD works with the MP-8 and TS Performance heads-up display to monitor EGT, boost, fuel pressure, and engine speed. The system also has the ability to store the peak readings from each sensor.



Lankhorst carved a small groove in the Dodge's dash in order to install the wiring harness for the TS Performance heads-up display.



The digital heads-up display was secured with Velcro, and will broadcast the readings from the MPD onto the windshield.



Truth be told, we ran out of time Sunday night before we got the new Volant DPF-back exhaust installed. It turns out we ordered Volant's new system for a longbed truck, and Lankhorst's Dodge is a shortbed. So, he took the Dodge over to the pros at Johnny Franklin Muffler in Santa Rosa to help us meet our deadline.



Volant's DPF-back exhaust system features polished-stainless steel contraction with mandrel bends, stainless steel band clamps, and replaces the muffler with a 4-inch diameter pipe. Johnny Franklin Muffler modified the Volant pipe so it would fit the shortbed Dodge.



The Volant dual exhaust tips look so much better than the stock steel pipe did, and will for years to come. In a little more than 48 hours, Lankhorst and Spriggs improved the look, ride, power, and performance of this '08 6.7L Dodge Ram. Not bad for a weekend's worth of work.

Sources

Johnny Franklin Muffler

(707) 546-7750

KC Customs

(707) 585-8233 • www.kccustoms.com

Mamba Wheels

(800) 735-2822 • www.mambawheels.com

McLea's Tire & Automotive Service

(707) 542-0363 • www.mcleastire.com

Nitto Tires

www.nittotire.com

TS Performance

(270) 746-9999 • www.tsperformance.com

Trailmaster

(928) 636-7080 • www.trailmastersuspension.com

Volant

(909) 476-7225 • www.volant.com