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HOT ROD WHERE IT ALL BEGAN

THE MUSCLE TRUCK

PART DEUX

In Last Month's Issue We Built and Road-Tripped Our LS6-Powered Stepside. Now the Beatings Begin.

By David Freiburger

Photography: David Freiburger, Rob Kinnan, and Chad Reynolds



There's a feeling of victory after destroying yourself to complete a project vehicle on short notice then jamming it cross-country and back. That was us last issue. Then there's the coming home and finding that same vehicle to be partially completed, road weary, and ignored after life moves on. That was us this month, but we decided to rescue our '74 Chevy C10 Muscle Truck from the doldrums, fix some of the loose ends, and find out what it would really run at the dragstrip.

If you read last month, you know we took a beater, \$1,500 Stepside and tossed in a carbureted GM Performance Parts LS6 crate engine. We've since recalled that we installed a cam in that engine years ago: It's a Crane custom hydraulic roller with 228/232 duration at 0.050, 0.600/0.600-inch lift with Crane

roller rockers, and an LSA of 112 degrees. Other power parts include an Edelbrock RPM dual-plane intake, a Holley 750 double-pumper, and MSD's programmable PN 6010 ignition box driving the stock coils. The exhaust uses Hedman mid-length headers and 3-inch exhaust with DynoMax Bullet muffers.

Our swapped-in drivetrain used a TH400 automatic with a Gear Vendors Under/Overdrive and a 3.00-geared Ford 9-inch from another parts truck. We put Air Ride suspension up front and hung the rear with a flip kit using stock springs that were stripped of all but two leaves, then added CalTracs bars for hook.

All that got us from Los Angeles to Memphis and back on our trip to the '08 LSX Shootout. But it could be better.

PROBLEMS & SOLUTIONS

The single biggest problem the truck had was those 3.00:1 highway gears with 30-inch-tall tires—but it was not the gears themselves that were the problem; it was the torque converter. During our quickie buildup, we had nabbed a converter that was originally custom-ordered for the Crusher Camaro from Art Carr at California Performance Transmissions. We told Carr that the '67 Camaro made 400 hp, had 4.56s and 30-inch tires, weighed 3,400 pounds, and was mostly a bracket car. He built us a high-efficiency 10-incher that was supposed to stall around 4,000 rpm. Then we took his converter and put it in a truck with maybe 450 hp, 3.00:1 gears and 30-inch tires, and 3,860 pounds with our fatness on board.

Torque-converter stall speed varies in proportion to load. The more input power you have, the higher the stall, and the more weight and the less rear gear you have, the higher the stall. With more power and weight and less gear than the converter was designed for, we suffered a physics lesson. The truck was sluggish on the street because the converter was so loose. Climbing highway grades, it was so sloppy that we could use the throttle to vary engine speed by as much as 1,000 rpm and not change our road speed. It was so loose that sometimes switching the Gear Vendors on and off barely showed on the tach. At the dragstrip in Memphis, we blew through the converter to at least half track. The stall speed was like 5,500 rpm. It's a miracle we did not overheat the trans fluid and blow up our TH400.

Our solution was not to change the converter but to swap the rear gears from 3.00s to 5.13s. The impact this had on converter function was enormous. All of a sudden, the driveability off-idle was snappy. It was not at all loose at highway speeds. At the dragstrip, we'd almost call the converter too tight, stalling near 3,000 rpm. It

was a huge learning experience on torque-converter function.

But you think 5.13s are overkill? Remember that we have 30-inch-tall tires and a 0.78:1 overdrive in the Gear Vendors unit. At 70 mph, the engine now spins about 3,200 rpm—buzzy by today's standards, but we can live with it, since we only use the highway to get to the dragstrip.

OTHER STUFF

In addition to the converter, we also had to fabricate a driveshaft safety loop to be dragstrip legal with our new 30x12.50-15 Mickey Thompson ET Street tires on old 15x8 Weld Rod Lites wheels (some tracks don't require loops for street tires like the ET Streets, others rightfully do). Bolting on the wheels was a hassle because the local shop that redrilled our axles to a Ford car bolt pattern (long story there) screwed it up and none of the studs were parallel to each other. They were all splayed out. Sledgehammer time.

We also finished the plumbing job for our NOS Big Shot nitrous system and added an NOS PN 15834 programmable progressive nitrous controller that we used to use on our Bonneville car. We were ready for the track.

DRAG TESTING

As much as we griped about it for years, we now long for Los Angeles County Raceway and its \$200 price for open magazine test days. It's gone now, and all the local tracks want \$2,000 or more to open the gates for testing. We now run during public test and tune events and get far fewer passes as a result. In fact, the only event we could hit before press time was a session at the eighth-mile at Irwindale. The place was packed and we got just three passes, but the weather was good with a density altitude of 1,680 feet.

When we ran with 3.00 gears and street tires in Memphis, the truck's best quarter-mile pass was 13.57 at 102.240 mph. On a different pass, we got the best

eighth-mile time of 8.69 at 82.23 mph. With no changes other than 5.13 gears, ET Street tires, and the venue at Irwindale, the Muscle Truck blasted a best of 8.048 at 86.82 mph. Gains of 0.642 second and 4.59 mph in the eighth are significant. If you believe the NHRA guesstimation on eighth- to quarter-mile conversion, it means the truck should be good for 12.60s.

The 60-foot time improved from 2.097 in Memphis to 1.83 at Irwindale, which is not that impressive in itself. We can't say it will get much better, since the truck dead hooked—that is, until we fired up the 180hp nitrous shot. Even using the NOS controller to ramp from 20 to 100 percent nitrous over 1.5

seconds, we used the entire track from the centerline to the wall on a hairy, sideways run. The nitrous e.t. and mph were 7.78 at 92.79 mph. That speed holds some promise if we can ever stick the thing down and run straight. We were crowd favorites, anyway.

WHAT'S NEXT?

What happens next with the Muscle Truck is entirely up to you. We could easily keep fiddling with it and make it more fun, faster, or easier to look at. Man, that junk is ugly. Do you care? Do you want to see more, or is the pickup just not working for you? Let us know by emailing HOTROD@hotrod.com.



> When we made the trip to Memphis, we had our 5.13 Ford 9-inch centersection with us. It had an open differential in it, but we bought a minispool from Summit Racing and had it FedEx'd to us. At the track, we ran into Corvette racer Steve Hoch, who we knew from Pump Gas Drags™ and Drag Week™, and he used his fully equipped trailer to help us install the minispool.



> During our road trip we suffered the consequences of a blunder in our fuel plumbing thanks to our sleep-deprived state. Aeromotive recommends a 100-micron stainless filter on the inlet side of its A1000 pump and a 10-micron paper filter on the outlet side. We accidentally put the paper element on the inlet side, which caused fuel starvation issues after about 1,800 miles. We solved it somewhere in Oklahoma.



> Our carbureted GMPP LS6 crate engine relies on an MSD PN 6010 box to trigger the stock coils. This box can be tuned with custom timing curves, nitrous timing retard, and two stages of Soft Touch rpm limiting using MSD's ProData software and a laptop computer. We found the best total timing setting on the LS6 to be 28 degrees, and we pulled out 6 degrees when activating the 180hp nitrous shot.



> Our fuel system includes Aeromotive's A1000 pump and regulator (lower right) and PN 14201 Holley fuel inlet log. The return-style regulator has two -6 outlet ports, one feeding the carb and the other feeding the fuel solenoid of our NOS Big Shot plate nitrous system.



> While NOS now has far more advanced nitrous controllers, our old PN 15834 unit allows us to progressively feed the nitrous over time. For our first dragstrip passes, we set it to ramp from 20 to 100 percent over 1.5 seconds, which was clearly too aggressive until we do some traction work.

TOP 10 BEST THINGS ABOUT THE MUSCLE TRUCK

10. **THE GLORY:** We actually built this thing in two weeks and road-tripped it 3,000 miles to the LSX Shootout. No matter what else happens, we'll always share that with this truck.
9. **NO ONE EXPECTS IT:** The Muscle Truck is kind of a sleeper and a total beater, so people ignore it, then ask questions when we fire it up.
8. **THE CUPHOLDERS:** The dual Big Gulp holders on the fabricated shifter stand are pure genius.
7. **THE NOT CARING:** The truck is not rare or anything, so there's a huge burden off our shoulders when building or modding it as compared to if it were a Camaro or something. Drill a hole in pristine sheetmetal? Sure!
6. **THE STANCE:** The best thing about the stance is we got it close to right for now and people dig it, but we know it can go waaay lower.
5. **IT DOESN'T LEAK:** A miracle around here, the Muscle Truck actually holds its fluids.
4. **THE G-TECH TACH:** We got this new Expandable Gauge System tach from G-Tech that has internal data-logging and all sorts of trick features. We have not fully explored it yet, but we love it.
3. **THE GEAR VENDORS:** We used a GV gear splitter behind our TH400, and in addition to being a 0.78:1 overdrive, we found ourselves splitting gears with it all the time. It's great.
2. **THE LS6 CRATE ENGINE:** The GM Performance Parts 5.7L LS6 crate engine is the heart of the truck. It runs hard, doesn't leak, doesn't smoke, and didn't even use a drop of oil during our trip. The all-aluminum construction led to the truck's 3,660-pound weight, which is lower than we'd expected.
1. **RIDE QUALITY:** We're not sure how, but we stumbled into a fantastic ride. The Air Ride CoolRide system up front is no surprise because it's actually been well designed, but it's a miracle that our own concoction of two-leaf springs, CalTracs, a flip kit, and Rancho RS9000 shocks made a well-matched setup in the rear.

DRAG TIMES

60'	330'	660'	MPH	1,320'	MPH	NOTES
2.097	5.79	8.78	81.86	13.578	102.42	Memphis, best quarter time
2.114	5.712	8.692	82.23	13.819	90.92	Memphis, best eighth time, lifted at 1,200 feet
1.868	5.228	8.048	86.82			5.13 gears, Irwindale, best NA pass
1.959	5.143	7.787	92.79			5.13 gears, Irwindale N ₂ O pass



TOP 10 WORST THINGS ABOUT THE MUSCLE TRUCK

10. PAINT IS A HASSLE: See No. 4: It needs paint. But to do that requires taking off the bed to paint the back of the cab. The rollcage we want will extend from the back of the cab into the bed floor and will prevent the bed from coming off. But we want to 'cage it before painting it. It's a conundrum.

9. DRIVESHAFT ANGLE: We're OK now, but the 'shaft angle is almost dead flat. Sometimes the U-joints are not thrilled about the shallow, 2-degree operating angle. It will be a problem when we lower the truck more.

8. JUNK VENT WINDOWS: These trucks are famous for sticky vent windows that whistle badly on the freeway.

7. THE PASSENGER SEAT: Our junkyard bench seat is fantastic on the driver side, but the passenger side slopes to the door and wrecks your back.

6. IN-CAB ROOM: Single-cab trucks suck for road trips. We get sick of having stuff all over the seat and floor.

5. THE BED FLOOR: Because we added a step notch to the rear frame, we totally removed the bed floor and replaced it with a hunk of plywood on the front half. It's ugly and only semiseeful.

4. IT'S NOT THE RIGHT UGLY: The whole truck has a beater vibe, but it's a cheap look and not the correct street race or patina look. It's just junkyard. It forces us to paint it at some point.

3. THE EXHAUST: Our 3-inch pipes with 4-inch glasspacks and turndowns make the thing sound like an 8-second car, which is a pure violation when it can only run in the 12s on motor.

2. IT'S NOT CHEAP: It looks like a beater, but we figure we've got about \$15,000 in the truck as it sits. No surprise, but kind of a bummer.

1. IT'S TOO SLOW: Even with our new gears and rubber, the mid-12s performance is not floating our boat. It's good for a 3,860-pound truck you can drive anywhere but not as brutal as what we crave.

> In the eighth-mile, we found that we were almost at our 6,800-rpm limit just before the finish line. Rather than shift the TH400 to Third gear, we opted for less of an rpm drop by instead activating the Gear Vendors unit. Using Second gear and the GV netted a ratio of 1.154:1 (1.48 Second gear x 0.78 GV ratio) rather than the 1:1 ratio of Third gear. **HRM**

SOURCES

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CALVERT RACING; Lancaster, CA; 661/728-9600; www.calverttracing.com

DYNAMIC RACING TRANSMISSIONS; North Branford, CT; 203/315-0138; www.dynamicracingtrans.com

EARL'S PERFORMANCE PLUMBING (A DIVISION OF HOLLEY); Rancho Dominguez, CA; 310/609-1602 [tech] or 800/465-5391 [nearest dealer]; www.earlspumbing.com

EDEL Brock; Torrance, CA; 800/416-8628; www.edelbrock.com

FLEX-A-LITE; Milton, WA; 800/851-1510; www.flex-a-lite.com

GEAR VENDORS; El Cajon, CA; 800/999-9555; www.gearvendors.com

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MICKEY THOMPSON PERFORMANCE TIRES & WHEELS; Corona, CA; 951/817-0101, ext. 190; www.mickeythompsonstires.com

MILODON; Simi Valley, CA; 805/577-5950; www.milodon.com

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