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AUGUST 2003

America's Fastest!

*Street-Driven Lingenfelter
Twin-Turbo Corvette*



0-60: 1.97 seconds

Top Speed: 230 mph

1/4-Mile: 8.95 sec. @ 153.7 mph

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America's

Lingenfelter's 1,100hp Twin Turbo C5

by Robert Ahl
photography by John Kiewicz

Reputations can be bought. Throw enough bucks into a slick ad campaign, hire top-flight PR flacks, and bribe those journalists who are bribable (not that we know any) and you too can have a worldwide reputation as a genius, raconteur, and lothario. You'll be invited to great parties, date anorexic actresses, and be named one of the "Sexiest People Alive" by a celebrity magazine. But deep down, you'll know that you really suck.

John Lingenfelter didn't buy his reputation. His company, Lingenfelter Performance Engineering (LPE), barely takes out any ads at all. The guy in charge of his PR has been known to sweep the floors and screw together cylinder heads. He's impressed journalists by consistently delivering to road tests vehicles that deliver overwhelming, absolutely verifiable and utterly reliable performance. He earned his reputation with countless hours in the dyno room, a winning record on the dragstrip,

and a forthright, self-deprecating manner that under-promises and over-delivers. But we've never thought of him as a raconteur or a lothario, never seen him at a great party or with an anorexic of any sort, and doubt that celebrity magazines even know who he is. Deep down, we all know he's a genius.

Most of the engines Lingenfelter built his reputation on have been naturally aspirated, small-block Chevy V-8s. Lingenfelter's finely honed, precisely assembled 383 stroker L98 and LT1 crate motors are still among the giddiest upgrades a C4 Corvette owner can make to his car. His 383ci and 427ci reworks of the C5's LS1 are thundering legends too. But now that Lingenfelter has embraced forced induction, the merely ludicrous acceleration of his previous efforts can now be exaggerated into pure science fiction. The C5 seen here, with twin turbos wheezing into a 7.0L (427.6—so you could round up to 428 if

you like—cubic inches in old Corvette-speak) LS1, ripped off a mondo bizarre 8.95-second elapsed time at 154 mph, according to LPE. That's on street tires ... in the rain ... towing a horse trailer ... and fueled by Crisco.

OK, but the "street tires" part is true (Mickey Thompson E.T. Street 26x11.5-16 "cheater" slicks which are—swear to God—DOT approved). And it's the sort of performance that matches up perfectly with the claimed 1,100hp output.

Basically, the engine is an even more intense version of LPE's "regular" 750hp twin-turbo 427. That engine is built around a GM Performance Parts LS1-like aluminum block designed for use in the C5-R Corvette endurance racer. Into that are inserted 4.125-inch-bore sleeves and a custom 4.00-inch-stroke 4340 chromemoly crank. That's an eighth-inch smaller bore diameter than the classic big-block 427 V-8, and almost a quarter-inch-longer stroke. The pistons are forged aluminum and ride on billet-steel connecting rods. LPE shoves a GT2 hydraulic roller camshaft



The look of power. Leaving the line at 1,800 rpm in a futile attempt to tack all 1,100 hp to the ground, the twin-turbocharged Lingenfelter-prepared Corvette logs an 8.94-second, 154-mph quarter-mile time.

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The big street-legal Mickey Thompson tires are no match for the power of this 8-second Corvette. Completely street legal, this Corvette not only smokes the tires but also is completely streetable right up to top speed—of 230 mph.

into the block that then controls the over-size one-piece stainless steel intake and Inconel alloy one-piece exhaust valves in the LPE sweetened and shaped, Z06 Corvette, LS6 heads.

As impressive as the bottom end is, it's the pressurized top end that brings glamour—and several hundred additional horsepower—to the engine. Two Garrett GT28 ball-bearing turbos are the wheezing leads in the turbo system, pressurizing the system with between 14 and 20 pounds of heave, depending on fuel quality. The turbos mount to custom cast exhaust manifolds, breathe in through two K&N conical filters, and exhale through twin air-to-air intercoolers before hitting the port-matched LS6 intake manifold.

To leave the engine's description at that is to seriously understate the content of LPE's work. There are custom silicone air ducts to make sure the engine is swallowing heaping gulps of atmosphere, heat shields to ensure nothing gets cooked, high-performance valvesprings, specific gaskets, matched fuel injectors, and the rotating assembly is computer balanced. This is a thoroughly engineered



For the untrained eye, this may look much like the stock '97-'03 Corvette engine bay. But, in fact, this LS1 engine is outfitted with twin ball-bearing turbochargers netting close to 1,100 hp.

powertrain from intake to the GHL stainless steel exhaust system. It isn't a system you bolt on in your backyard; it's a \$49,995 package (it's another \$2,595 to reinforce the transmission of automatic-equipped C5s) that comes fully installed from LPE's facility in somewhat picturesque Decatur, Indiana. LPE's confidence in its workmanship is reflected in

the two-year, 24,000-mile warranty that comes with the conversion.

Bigger GT30 turbos and a twist of the variable boost controller had the 427 knocking out more than 800 hp when *Motor Trend* took this car and audaciously ran it against one of the U.S. Navy's Boeing F/A-18 fighter bombers. The *MT* test reported back that the blown 427 is

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"remarkably smooth at idle, is quieter than a stock Z06 on the cruise, and passes the sniffer at the local (Texas) smog station. In street trim, generating solid acceleration numbers proved fruitless as the Lingenvette would smoke its 345/30ZR19 rear tires past 100 mph." Yeah, but at least those tires looked good on their HRE wheels.

Despite a wishy-washy 1,800-rpm launch on the Mickey Thompsons, the 427 pounced to a 9.58-second elapsed time in *MT*'s first run, then topped itself with a 9.24 blast at 150.27 mph in the second. That's good enough, if you could find a time machine large enough to contain a Corvette, to completely dominate the first field of NHRA Pro Stockers in 1970. Bill "Grumpy" Jenkins set the elapsed-time record back then, and it was a fairly limp (in comparison to this LPE street Corvette) 9.98 at 139.53 mph. And *MT* measured a 0-60 time of just 1.97 seconds for the Corvette as well. In other words, you couldn't read this sentence in less time than it took for the LPE Corvette to hit 60 mph for *Motor Trend*. In LPE's own testing, the car ran an 8.95 at 153.7 mph.

When the turbos aren't whooshing in torrents of boost, the 427 is as easygoing as the LT1 in a Caprice cab. Hit the boost, though, and you're crushed back into your seat so that every individual vertebra in your neck feels it. It's the sort of acceleration that has you reflexively tightening your abdominal muscles to keep the contents of your stomach from being explosively shot through your lower intestine. Turbo lag? Sure, there's turbo lag. This isn't a low-pressure system intended to add a few ponies to your Volvo sedan's straight five; this is a high-yield tactical weapon. This is a 48-ounce magic wand as swung by Barry Bonds.

Continents have been tamed with fewer horses and the course of rivers changed with less torque.

But if way too much is good, even more has to be better. So this fixed-roof C5 made its way back to Decatur where the heads were swapped for a



Suspension modifications are subtle to be certain, but when you're dealing with this kind of power, things do tend to be overstressed. The same applies for the rest of the drivetrain, and a \$2,995 upgrade is required with this engine upgrade to handle the "new load."



Turning the license plate holder into an air duct is a great idea and helps ram cold, clean air into the turbo system. For high-speed handling reasons, other front fascia openings are blocked off to keep air out from underhood.



The hood bulge serves to vent underhood air to help with aerodynamics.

pair from a C5-R and the boost was tripped up to a vein-popping 20 pounds. That's enough, says LPE, to produce 1,100 hp and 950 lb-ft of peak torque while swilling high-octane racing fuel. Continents have been tamed with fewer horses and the course of rivers changed with less torque.

In that configuration, this Corvette has the '73 Pro Stock field covered. There might be some street car somewhere

that's quicker than this beast, but it probably isn't as civilized or lacking in temperament as this one. And there are definitely much more expensive machines that are much, much less quick.

Go to Google on the Internet and type in "Lingenfelter" alongside the name of any automotive magazine and you'll harvest a crop of accolades unlike any other tuners. LPE didn't pay us to say it, and it didn't pay them to say it.

The Future Of Lingenfelter Performance Engineering

Last October 27, while racing a turbocharged, four-cylinder Cavalier in the NHRA's Summit Sport Compact Drag Racing Series in Pomona, California, John Lingenfelter had a terrifying accident when the car lost traction and hit a retaining wall at about 190 mph. While he had many broken bones and internal damage, his most serious injury was the fracturing of several vertebrae and a skull fracture. An operation to repair the vertebrae was completed in California and John was stabilized before being transported back to Methodist Hospital in Indianapolis nearer John's home in Decatur, Indiana.

In preparation for a second operation on his vertebrae in late November, John was administered a drug to which he had a reaction and went into cardiac arrest. While the heart function was restored, John lapsed into a "semi-comatose" state in which he remains as this is written. While his vertebrae have successfully healed, there's no indication when or if he will emerge from the semi-comatose state. He is currently in an extended-care facility near his home.

Obviously, this calls into question the future of Lingenfelter Performance Engineering, which John founded and behind which he was the animating force. Jason Haines is project director for LPE, and we asked him a few questions about the future of the legendary, even beloved, company and its 35 employees.

CF: Is Lingenfelter Performance Engineering going to stay in business?

JH: Yes.

CF: Who is running the company now?

JH: While John is unable to run the business, Charlie Lingenfelter, John's brother, is president of LPE. Tom Cress, formerly parts manager at LPE, is now general manager of LPE and is responsible for the day-to-day operations of LPE. Tom Cress has been with LPE for more than 20 years. The remainder of LPE's organizational structure remains in place with many employees that have been with LPE for 10 to 20 years.

CF: Will LPE remain active in racing?

JH: LPE is no longer campaigning any vehicles in drag racing. We have sold our Summit-sponsored NHRA Sport Compact Series Ecotec-powered Cavalier team to Matt Hartford. Matt Hartford was the driver of our championship-winning NHRA Sport Compact Series Modified Class Ecotec-powered Cavalier.

CF: Have LPE's racing plans changed otherwise?

JH: LPE will continue to perform research and development on engines and engine components for other racing teams and manufacturers. We will also continue to offer complete engines and engine components to teams and manufacturers involved in drag racing, road racing, and other forms of motorsports competition. LPE also continues to be the exclusive engine upfitter for the GM LS1 V-8 engines for the ASA circle track racing series.

CF: How many people are working at LPE now? Will that number stay about the same?

JH: LPE currently has 35 employees. LPE plans to continue to grow and expand, as we have done for over 25 years. Additional employees are sure to be required as part of that growth.

CF: With John unavailable, will there be any immediate changes to product development at LPE?

JH: No changes to the product development objectives at LPE other than the end to our direct involvement in drag racing. The same group of employees that John selected and trained continue to be involved in our product development process—including such areas as our engineering, fabrication, engine building, cylinder head preparation, calibration, and dynamometer testing staff. LPE will continue to develop high-performance engines and components for the automotive aftermarket and for other aftermarket and OE manufacturers.

GM has exciting rear-drive, V-8-powered products coming in the future. Vehicles like the upcoming Pontiac GTO, LS6-powered Cadillac CTS-V, Corvette-based Cadillac XLR roadster and, of course, the C6 Corvette are all prime candidates for the Lingenfelter treatment. *Corvette Fever* and, we're sure, all of its readers join in prayers for John Lingenfelter and the expansion of LPE's great legacy into what looks like an exciting future. Contact LPE at www.lingenfelter.com or (260) 724-2552.

CF



In testing with Motor Trend magazine, this Lingenfelter Corvette ran in the low 9-second range. But with recent advances the Corvette was able to break into the 8-second category. Does this make it the fastest street-driven Corvette? We think so. Any challengers? We'd love to hear from you.

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Twin Turbo C5 Corvette
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