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# MOTO GUZZI V7

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1967 V7: THE BIKE THAT  
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# GOLDEN ANNIVERSARY

## 1967 Moto Guzzi V7

Story by Greg Williams  
Photos by Ken Richardson

When Paul Harrison first set out to restore his 1967 Moto Guzzi V7, he wasn't in a rush to finish the job. In fact, his young son, Finn, told him he wasn't sure the Italian motorcycle would ever run, and suggested it would take 10 years to complete.

But then Paul realized that 2017 marked a rather significant milestone. With 50 years gone by since the V7 left the Moto Guzzi factory in Mandello del Lario, 2017 is the machine's Golden Anniversary, and Paul didn't want to miss such an important date. "When I figured that out, I thought it would be cool to have the project ready for the date," Paul says.

Paul started the process late in 2015 with a less-than-ideal candidate for restoration. Purchased from an eBay seller in Georgia, the 1967 V7 was really not much more than a frame, engine and gearbox, with other parts in crates. Someone had attempted to fix it before giving up and improperly storing the pieces. Overall, the Guzzi looked as though it had been run into the ground.

Paul collected the Guzzi when he and Keith Fellenstein (author of the *Motorcycle Classics* tech column, *Keith's Garage*) went to the 2015 Barber Vintage Festival in Alabama, detouring to Georgia on their way home to get the bike before returning to Lawrence, Kansas, where Paul was living at the time.

"The bike was not the best one I could find, but it had a low serial number of 1204," Paul says. Frame and engine numbers weren't matched at the factory; Paul's engine is number 1337. As he understands it, Moto Guzzi started V7 serial numbers at 1000. "That puts it early in the production run, and I thought if I planned to take a bike down to the crankshaft for restoration it was a good place to start. In hindsight, I don't know that I'd do it that way again — there were times I wasn't sure I'd ever get there with it."

### **Trials and tribulations**

Paul's trials in the restoration process somewhat mirror the struggles of Moto Guzzi during the 1950s and 1960s. Company namesake Carlo Guzzi established Moto Guzzi in 1921 in a 333-square-foot facility. That first year, 17 employees managed to build 17 motorcycles. The company was not eager at first to enter competitive events and it took pressure from Italian politician and motorcycle enthusiast Aldo Finzi before Moto Guzzi decided to race the single-cylinder 500cc Normale. After early successes,







Guzzi was more than happy to bask in the respect those victories earned the company. Over time, Moto Guzzi's accolades included several Grand Prix world championships and Isle of Man TT wins.

By the mid-1950s, however, domestic motorcycle sales were slipping. Faced by this commercial drought, Moto Guzzi pulled the plug on its racing ventures even though development work on a V8 racer was well underway. Moto Guzzi soldiered on selling its line of single-cylinder machines,

but by the mid-1960s a new product was needed to reinvigorate the brand.

Coming to the rescue was the twin-cylinder V7 designed by Giulio Cesare Carcano. Working with Umberto Todero, Carcano developed a new powerplant,

first as a 500cc and then a 650cc 90-degree V-twin, as something of a design exercise. Moto Guzzi didn't show much interest in the engine, so Carcano installed the V-twin in his personal Fiat Topolino.

According to author Greg Pullen in *Moto Guzzi: The Complete Story*, "almost on a whim [Carcano] decided he would fit his prototype V-twin into the Fiat. Returning to Mandello from Milan one day, flying along at some 90mph (140kmh), he was spotted by a journalist from a car magazine who could



Early V7s used remote float Dell'Orto SS1 carbs (left). Frame and engine numbers weren't factory matched; the engine is number 1337 (top). The valve covers are polished to an other-worldly shine. Motogadget LED bar end signals were added for visibility.



Owner Paul Harrison and his lovingly restored 1967 Moto Guzzi V7.

not believe how quick the Fiat was compared to his own Alfa Romeo. Making a note of the license plate, the journalist tracked the little Fiat down to 'Ing. Carcano of Moto Guzzi fame.' He understandably assumed there was something going on between Fiat and Guzzi, an opinion often repeated since. In fact, there wasn't — Carcano was just having a little fun," Pullen writes.

Nothing further came of Carcano's V-twin design, however, until the Italian police requested a replacement for the Moto Guzzi Falcone. According to motorcycle historian Ian Falloon in *The Complete Book of Moto Guzzi*, the Italian police wanted "a faster and more powerful machine than the Falcone, with a powerful electrical system and a service life of 100,000 kilometers." Certainly, Moto Guzzi's survival depended on the police contract. After taking Carcano's V-twin off the shelf, further development saw the 90-degree all-alloy engine enlarged to 703cc with chrome-plated cylinder bores of 80mm while the stroke measured 70mm. The crank rotated on two plain main bearings, and the connecting rod big end bearings were plain as well. A helical gear at the end of the all-steel, one-piece crankshaft drove a matching gear at the end of the centrally located camshaft that in turn actuated the pushrods to operate the overhead valves.

A battery and coil ignition worked with a camshaft-driven Marelli distributor to

fire the spark plugs while a Marelli 300-watt generator created electrical power. A large-capacity, 32-amp-hour battery stored the current, and it was much needed when the starter button was pushed. The V7 broke with traditional motorcycle practice by offering electric-start only — there was no kickstarter backup. Other companies, notably Honda, had begun offering electric starters on their machines in the early 1960s but there was always a kickstarter included in the design.

At the aft end of the crankshaft the flywheel carried an automotive-type twin-plate dry clutch. Power was transferred through a 4-speed constant mesh transmission to the 18-inch rear wheel via a shaft enclosed in the right side of the swingarm.

The V-twin engine slotted into a double-cradle steel tube loop frame featuring a beefy 48mm backbone and conventional hydraulic forks up front and twin shock absorbers at the back. A fork-top nacelle housed the keyed ignition switch and speedometer, while a rather stretched out headlight shell bolted into steel ears. The front wheel matched the rear at 18 inches in diameter and the brakes were 8.5-inch twin-leading-shoe front and 8.5-inch single-leading-shoe rear. Overall, the machine weighed close to 500 pounds, a heft that author Falloon says "stretched it [the front brake] to the limit."

While developed with military and police use in mind, Moto Guzzi debuted



## 1967 MOTO GUZZI V7

**Engine:** 703.7cc stock (now 757.5cc) air-cooled OHV transverse 90-degree V-twin, 80mm x 70mm bore and stroke stock (now 83mm bore), 9:1 compression ratio, 50 horsepower @ 6,500rpm stock (now 60hp)  
**Top speed:** 106mph @ 6,000rpm stock (now 115mph @ 6,500rpm)  
**Carburetion:** Dell'Orto SS1 DS (right) and D (left) (now with accelerator pumps)  
**Transmission:** 4-speed, shaft final drive  
**Electrics:** 12v, coil and breaker points distributor ignition  
**Frame/wheelbase:** Dual downtube steel cradle/56.9in (1,445mm)  
**Suspension:** Telescopic fork front, twin shock absorbers w/adjustable preload rear  
**Brakes:** 8.66in (220mm) TLS drum front, 8.66in (220mm) SLS drum rear  
**Tires:** 4 x 18in front and rear  
**Weight:** 536lb (243kg)  
**Seat height:** 30in (762mm)  
**Fuel capacity:** 5.28gal (20ltr)  
**Price then/now:** \$1,439/\$6,000-\$9,000

a civilian version of the V7 — so called because of the "V" shape of the cylinder layout and the 700cc capacity — in November 1965 at the Milan Show in Italy. In his book *Moto Guzzi Big Twins*, Greg Field says V7 production began in December 1966, with the first 50 machines delivered early in 1967 to the Italian Corazzieri, an elite military unit. According to Falloon, some 813 examples of the V7 came through importer Premier Motor Corporation in 1967 and were sold in the U.S., of which Paul's is an early model. All of the American machines were finished with a black frame, a red gas tank with chrome panels and silver painted battery cover, toolbox and fenders.

### Back in Kansas

Born and raised in Australia, Paul says he grew up around motorcycles and was on a dirt bike from an early age. His dad always rode BMW street bikes, so when Paul could legally ride on the road he naturally gravitated to the German brand and bought a 1988 R65. He stayed true to BMW while living in Australia, but 10 years ago Paul's wife took a job transfer to the U.S., and that's when he sold off his German bikes and made the switch to



The rear fender, purchased from an eBay seller parting out a V7, had enough original paint to color match the silver hue (right).

Moto Guzzi.

"I wanted to stick with a twin cylinder, but I like the Italian V-twin style. To me, German bikes are a bit clinical, while the Italian bikes have more passion or flair to them," Paul says. "I first bought a 1976 Moto Guzzi 850 T3, and that continues to be a bit of a rolling restoration. I really love that bike, but I wanted to explore Moto Guzzi's V-twin origins and that's why I bought the 1967 project bike.

"The V7 is Moto Guzzi's very first V-twin, and it's where the company's V-twin story really started. They're still making this basic design today," Paul says, adding, "I was interested in sampling an early Moto Guzzi V-twin and I also wanted to see what the Moto Guzzi steel loop frame was like."

With the V7 carcass in his garage, Paul started to strip everything down, taking notes along the way and placing the various sub-assemblies in tubs for later inspection. As he progressed, for example, he'd take apart the distributor, clean and repair what could be serviced and order the parts and pieces he'd need to bring the

unit back to life before putting it away in a tub for reassembly with the rest of the motorcycle.

The loop frame was in good, straight condition and it was sent out for media

blasting before being painted black by Tim Dunham in his Lawrence, Kansas, home workshop. Paul didn't want to powder coat the parts, as he was aiming for a machine as close to factory specification — in appearance — as possible. Paul straightened his bent center stand using some heat and located a used side stand to replace the broken one that came with the bike.

Parts such as the upper fork shrouds and headlight bucket were sourced from Harper's Moto Guzzi ([harpermoto.com](http://harpermoto.com)) in Greenwood, Missouri. Paul also bought a used gas tank with the distinctive Moto Guzzi chrome panels from Harper's, complete with original paint and factory applied decals. "It wears its age with a badge of honor, and there was no way I was going to repaint the tank," he says.

Many other parts, including a rear fender, were purchased from an eBay seller parting out a Moto Guzzi V7. The front fender came from Harper's, and the rear fender had enough original paint to correctly color match the silver hue. Travis Charbonneau from Topeka, Kansas, sprayed all of this paint, and also applied the new-old-stock water slide decals on the fender tips.

The V7 came from the factory with galvanized spokes. The ones in



The original off-center seat lettering (top). The original logo and paint on the tank (middle). New-old-stock water-slide decals were applied to both fenders.



Paul's wheels were a rusted mess, so he bought a later set of Moto Guzzi Ambassador wheels with stainless steel spokes, stripped them out and polished them himself. He had the alloy hubs and Borrani rims professionally polished, then he cleaned, greased and returned the robust tapered roller wheel bearings to service along with the brake shoes, which also had plenty of life left in them.

### Tearing down the engine

When it came time to service the engine, Paul found the pistons were basically welded in the cylinder bores so he took them to "Doc" at Automotive Machine & Performance in Lawrence, Kansas. Doc's hydraulic press wouldn't budge them, so to salvage the connecting rods he cut away the old cylinders.

The crankshaft was in good shape so Doc polished the journals, removing as little material as possible to maintain the shallow nitride heat treatment, a process Moto Guzzi adopted to increase wear resistance. Doc then machined first-undersize big-end shell bearings to fit the crank. Because 700cc replacement cylinder and piston kits weren't available, Paul chose to fit a Nikasil-plated Ambassador 750cc Gilardoni cylinder piston kit from MG Cycle in Albany,

Wisconsin ([mgcycle.com](http://mgcycle.com)). Doc turned down the bottom cylinder spigots a couple of thousandths of an inch so they would fit in the crankcases, and these were topped with later model loop frame cylinder heads with slightly larger valves. "The engine looks stock externally, but we've bumped it up about 10 horsepower," Paul figures.

The bike's transmission is a later model Ambassador 4-speed that has some mechanical improvements over the V7, including helical cut gears and a heavy-duty cush spring on the input shaft. Paul replaced all the bearings, seals and gaskets and updated the shift return spring. Guzzi enthusiast Ian Hays machined the gearbox rear cover for a shift shaft O-ring oil seal.

A reproduction exhaust system, including mufflers, came from MG Cycle. MG had every piece except for one header, which was found at Cycle Garden Moto Guzzi in Huntington Beach, California ([cyclegarden.com](http://cyclegarden.com)). Palo Alto Speedometer in California rebuilt the 120mph Veglia Borletti speedometer and reset the odometer to zero. For safety reasons, Paul chose to fit later model Moto Guzzi handlebar switchgear that includes controls for turn signal lights. The V7 didn't come with indicators in

1967, and wanting to retain the clean lines of the bike Paul adapted a set of Motogadget m.blaze disc turn signal lights to fit in the bar ends. A replacement wiring harness came from enthusiast Gregory Bender ([thisoldtracor.com](http://thisoldtracor.com)). And finally, a solo seat was located on eBay in Germany.

Proving his son Finn wrong, the Moto Guzzi runs — and it didn't take 10 years to finish. Paul met the deadline for the V7's Golden Anniversary, and says Finn will one day ride the V7 himself. "So far I've ridden it about 110 miles," Paul says. "I had some fueling issues to contend with and Keith helped me sort out the Dell'Orto SS1 carburetors with their remote float bowls. They're specific to this model, and we've got them sorted out now."

To start the V7, Paul turns on the fuel and gives very little choke after twisting the throttle once. The ignition operates like a car switch: turn the key fully to the right to engage the starter and once the engine fires let go and the key springs back. "It starts and idles very nicely," Paul says, "and it's a relaxed and solid riding motorcycle because it's so long and low, like Italy's answer to the 1960s Harley-Davidson. It just transports you back in time." **MC**