

1970 Ford Mach I resto mod Mustang with the famous 427 SOHC Cammer engine just completed nut and bolt full rotisserie restoration

Hello everyone I am proud to introduce this beautiful 1970 Mach 1 resto mod Mustang that has been just fully restored and has the extremely rare 427 SOHC Cammer engine between 500 to 700 of these Cammer 427 SOHC engines were ever made by Ford period in 1964. Also this was even a rarer 427 SOHC as it was a true Holman and Moody racing engine as well from Charlotte, NC. If you don't know about them please take the time to research them. There is a full description of the Cammer motor in black in the description below.

The full rotisserie restoration was done on the car a couple of months ago. The car was completed and has been kept in a private collection in a climate controlled garage since. It only has 1 mile since the full restore this was just to test everything on the car. This car is new in every aspect. I want to break down the entire car for everyone I think this would be easiest.

BODY/PAINT

1970 mach 1 Mustang that was pretty much a rust free car from the start this is why it was chosen. Also it was free from any major accidents since 1970. The body is extremely straight and entirely rust free with NO body filler. There are no waves in this car. The body lines line up as they should. There are no gaps on one side more than the other. Both doors close and open with ease and are very tight. No door sag at all. The doors line up when closed very nice and even. The hood opens and closes with ease and also lines up very well with the fenders and cowl. The trunk is the same, opens and closes very nice and lines up as it should. This was a rotisserie restoration done by professionals plain and simple. The original shock towers were taken out during the restore to fit the huge engine in the engine bay as well as to accommodate the custom Martz 4 link suspension. There is nothing to hide on this body. The inner fender wells were all smoothed out as well as the rad support to give it an extremely nice clean look. This was all done to extremely high standards.

As for the paint it is a dark Acapulco blue color with some metallic mixed in. This paint was wet sanded over and over. This car was blocked sanded as well. The cars paint is beautiful and is a 9 out of a 10. 10 being a perfect museum car. This was buffed over and over to get to a mirror shine. The door jams, inside hood, truck jams, etc are all fully detailed and painted also showing a mirror shine. Now the hood has the blacked out paint on it and has a boss 429 hood scoop to direct air right into the air cleaner assembly to help with some horsepower. Also the car still retains it's refurbished front and rear spoilers as well as it's original rear window louvers.

As for all the exterior trim and Stainless steel time pieces. These were carefully inspected for dents. If they were dent free they were reused after being fully polished. All the chrome was fully gone over some being rechromed and some just being replaced. There is nothing on the body that was overlooked.

INTERIOR:

The interior was totally redone down to the smallest item. The car received new headliner, door panels, wiring, carpet and insulation under it, dash pad, seats, etc well you get the idea. It was ALL replaced. Now the interior is pretty much stock in appearance with the exception of the Auto Meter custom gauges and cluster. Also there is a B&M slapshifter installed as well as a chromed tilt steering column and custom steering wheel and finally was the controls for the heater and A/C. Everything in the interior functions as it should all courtesy lights, gauges, radio, controls, horn, etc. Also so you won't be hot or cold during your cruising there is custom A/C-heating units installed.

SUSPENSION/CHASSIS:

The suspension/chassis are all custom. The Chassis is a Martz custom. The suspension is a custom Martz 4 link. These suspensions come with huge front and rear anti sway bars as well. They also come with custom tubular upper and lower A-arm assemblies with special front and rear shocks/springs. I also wanted to mention that the sub frame is also tied together on the car. Martz chassis and suspensions are out of Bedford, Pa. We have a really great relationship with them. These suspensions have been used on several other special Mustangs that we have. They are the best you can get in my opinion. Now the entire Martz Chassis is powder coated gloss black as well as front and rear sway bars, A-arms, and the 9" Detroit Locker rear end.

Now the car is equipped with 4 wheel disk brakes from Wilwood. The rotors are vented and slotted to help in cooling those huge brakes down.

The wheels and tires are 17". The wheels are full polished alloy American Racing wheels and the tires are Fuzion ZR1 tires they are 275/40R17 in the rear and 215/50R17 in the front.

DRIVETRAIN:

The rear end is a 9" Detroit Locker rear with 350 gears.

The transmission is a built C6 with shift kit for better firmer shifts. Also there is a 3500 stall convertor.

Now we get to the best part which is the 427 SOHC Cammer engine. For those that don't know allot about these rare engines here is a brief history.

Ok, if you were to name the top ten engines Ford has built over the last forty years...Ok, ok, let's say the top five engines Ford has built in the last forty years, this one has to be on the list. You've got the Boss 302, Boss 429, the 427 "high riser", the 289/271 hp Windsor, but the real top dog of them all has to be the Single OverHead Cam 427. Usually referred to as the "Cammer", or the "SOHC (pronounced sock) motor", this is the baddest of the bad as far as production/race engines go, from Ford Motor Company, or anybody else for that matter.

Ford's official line on the development of this engine was that they wanted to combine the technology of their proven cylinder heads from the 255cid, dual overhead cam, Windsor-derived "Indy" engine, with the bullet-proof short block and cubic inches of the 7000 rpm 427 "high

riser" FE. An exercise in engineering to show what Ford could do with conventional and future engine technologies. Yeah, right.

The real bottom line: Ford was getting the crap beat out of them at the race track, both drag and NASCAR, by the newly introduced Chrysler 426 "Hemi". The boys over in Highland Park had done their homework developing and building the "Hemi" into a production/race engine, and were decimating the ranks of the Ford powered racers by winning almost everything they set their sights on. And in the age of "Total Performance" declared by Henry the Second in 1963, this had to be stopped. It was proclaimed that we, Ford Motor Company, would build the stoutest of the stout, the baddest of the bad, engine anyone had ever laid eyes on.

Ford wanted to use as much of their current 427 FE engine components as they could to keep development costs down. Yet they wanted to build an engine that had "presence" like no other engine, before or since. And did they ever succeed.

The short block was almost exclusively the realm of the 427 "high riser" with only a few modifications to the reciprocating components and oiling system to increase pressure and flow, while maintaining sufficient drain back to the 7.5-quart oil pan. The forged steel rods came from the "high riser" with the special "Cammer" forged aluminum, hemispherical domed pistons. The crankshaft was the basic 427 forging with the special cross drilling on both the main and rod journal pins for increased high rpm durability. The engineers wanted this engine to live under the harshest of racing environments.

But the commanding focal point of the "Cammers", naturally, was the free-flowing cast iron heads holding a camshaft in each. They had hemispherical, fully machined combustion chambers along with sewer pipe-sized tunnel port-like intake runners and superb flowing D-shaped exhaust ports. The massive, high-flowing yet lightweight intake valves were 2.250" in diameter with hollow stems so as to provide 7200+ rpm capability. The exhaust valves were 1.90" in diameter and had hollow stems filled with sodium as a cooling agent. Both valves had flash chrome plated stems for wear resistance. And sealing the combustion pressure within the confines of the block and heads was a unique for its time, multi-fold, asbestos/steel head gasket.

The rocker arms were manufactured of cast iron with a needle bearing-equipped roller on the camshaft side and they ran on a hardened, hollow steel rocker shaft, which held the rockers in position with specially designed spring steel clips. Valve lash was originally accomplished through the use of select fit lash caps fitting on the stem of the valve. Later versions used adjustable screws in the valve and of the rocker arms. The valve springs were of a dual design with the outer one providing pressure and the inner one being used as a damper, and both being located with machined steel valve spring seats and retainers. And all this superbly constructed valve train was covered by those awesome, yet exquisitely designed and made magnesium valve covers.

To keep the valve train all in sync and running smoothly at 7500 rpm was the job of two timing chains. The small one ran between the crank and the accessory driveshaft, located where the original FE cam ran in the block. Now the second chain was just flat out long at six feet. It runs in a T-shape and is driven at half the crankshaft speed from the accessory driveshaft. It then runs

through a fixed idler and camshaft on the driver's side, across a 20+ inch guide designed to control chain whip, over to the passenger's side camshaft and adjustable idler controlling chain tightness, then back to the accessory driveshaft chain sprocket. This camshaft drive system was deemed by the Ford engineers to be less complicated and easier to field service than any heavy, costly, noisy, and excessively complicated gear driven system. All the chains, guides and idlers are lubricated through splash and oil throw off from the front main, accessory driveshaft, and the outer cam journal supports. Keeping all this rotating mass covered was done using a two-piece cover system with a 0.090 inch thick steel plate gasketed to the block and heads, while a beautifully sand cast cover was attached to the front.

An interesting side note in the development of the "SOHC motor" was the water pump and water jackets. To prevent pump cavitation at high rpm, the cast iron pump impellor had every other vane removed and the diameter decreased. And because over 90 psi of pressure could be developed in water jackets, the water jacket core holes couldn't use ordinary cup, or freeze plugs, but instead used threaded pipe plugs.

A dual-point distributor with a transistorized ignition amplifier system fired the fuel and air mixture from the specially developed and tuned 4V Holley carbs and dual-plane intake manifold. This powerful system fired the 12.0:1 compression without missing a beat, and when setup correctly, would fire with +/- 1/2 degree every time.

Ford accomplished everything it set out to do with the 427 "SOHC" engine and did it in an amazing ninety days. It was years ahead of its time. In Ford dyno testing, the "Cammer" made 616 hp at 7000 rpm and 515 lbs/ft of torque at 3800 rpm, the most power any production/race engine had ever made, then or now. This 765-pound engine was then slapped in a '64 Galaxie NASCAR stocker and ran the fastest laps any stock car had run at Daytona to date. It easily equaled what the vaunted "Hemi" had run and still had more power to unleash. And this really tweaked (read that pissed off), the Highland Park contingent because they couldn't be competitive (read dominate), on the stock car tracks, or drag strips any more. Through temper tantrums and threats of a complete pull out of competition by the Chrysler boys to NASCAR, the 427 "Cammer" was good ol' boy politicked out of the running, never to turn a revolution in competition. But not so with the guys at AHRA and NHRA. They allowed the baddest of the bad to run, and run it did. After some teething problems and some racer development time, the "SOHC motor" was extremely competitive in the A/FX through Pro Stock, even Top Fuel, up through the early '70's. And back in 1965 the Ford Single OverHead Cam 427 is what King Kong brought to the party.

Now there was around 500-700 of these engines ever built by Ford period in 1964. So you really won't find these real often. Also they are not cheap. The last engine alone, that needed to be fully taken apart and painted and polished up and gone over gaskets and such, sold at auction for \$43,450 back in 2008. Also this exact engine was a real Holman and Moody racing engine. Again these engines with the single carb were dynoed at 615 Hp. They have a look when you open up the hood of a Boss 429 sort of. You put these side by side completely stock and the Cammer would run all over the Boss 429 all day. These Cammer engines were the best of the best. Now when this Cammer engine was being rebuilt the intake and some other parts were sent

out and had some powder coating done to have a super clean finish. The engine was totally finished back to mint show condition as well as mechanical.

Now as for the exhaust it is a custom bent jet hot coated exhaust from the custom headers all the way back to the chrome tips out the rear valance. Nothing was overlooked.

As you can see in the video and pictures that the engine compartment is fully detailed along with the engine itself. There are braided lines all over the place and well as custom made tower brace and other custom parts that needed to put made to place some items. This car also comes with power steering, 4 wheel disk brakes and also to keep you comfortable it comes with custom A/C so you won't be hot when you are out cruising.