



BLOWN 406
GARRETT T51R TURBO
SIX-SPEED GETRAG 'BOX
STORY GREG CONWAY
PHOTOS DEAN SUMMERS



40-ODD INCHES OF

◀ It's just 40 inches high but makes 700rwhp. The best things come in small packages

GRUNT



BLONG with the mighty Shelby Cobra and the 427 SOHC Thunderbolt, the Ferrari-killing GT40 is without doubt one of the most desirable Fords imaginable. Plenty of bokes have built tough replicas over the years, but 33-year old electrician Bob Kocoski has created one of the meanest examples we've ever seen. Powered by a quad-cam Mustang V8 with a dirty big turbo slung off the back, the beast makes damn near 700rwhp and looks meaner than Mike Tyson at a Ku Klux Klan meeting.

The car is a carefully thought-out project, bristling with one-off parts and a heap of innovative ideas, which is what often happens when a bloke with a background in fast Jap cars discovers the virtues of V8s!

Bob's previous ride was a Mitsubishi Galant VR4 which ran the quarter in 11.6@121.8mph., the quickest example in the land, if you don't mind.

After selling that car, he went looking for something that looked good standing still, but also offered the best possible power-to-weight ratio. A Roaring Forties GT40 replica was

the solution that led Bob on a car building odyssey and transformed him into a confirmed Ford fan for life.

"I've always wanted a car with one horsepower per kilo," says Bob. "With a dry weight of around 1080kg and 950hp at the crank, that is about what I've got."

His starting point was a fully triangulated space-frame chassis with upper and lower front wishbones and lower reverse A-frames and drag links at the rear. These twin independent trailing links extend from the rear bulkhead, and the rear uprights are made from machined cast aluminium. Pretty much everything else was up to him to choose.

He originally wanted a supercharger and had a blown 2003 Cobra motor ready. The only problem was that the blower would have come into the occupant area — not good for the rego boys and it had to pass because driving it on the street was always one of the main aims: "I never wanted it to be a trailer or dyno queen."

The decision was made to run a single T51R Garrett turbo at the rear of the engine, along with a custom water/air intercooler unit, all of which was knocked up by Bob and Jake

▶ OUT OF SQUIRT

AS we went to print, the GT40 has made a best of 692.7rwhp on 19psi and burning 98RON pump fuel. With more fuel pressure and a tweak to the programming, Bob and JEM proprietor Adam Neish reckon they will crack the 700rwhp mark, but won't push much further. "The 680cc injectors were at 90-93 per cent duty cycle. Going higher would mean you are starting to lose control and you run the risk of overheating the drivers," says Bob. "They're the size they are because we had to pass emissions. We have talked about changing them, but it's a lot of power in a light car and I don't really want to turn it into a dyno-queen, either. Big injectors will kill the idle quality as well,"



▶ THANKS

Wife Davone and son Jett for support; Jake, Bain Racing Engines & Products (02 9671-1121) for fabrication, advice & engine building; Ronnie Tarabay (0415 863 067) for paint; Adam, JEM (02 9600 6567) for tuning; Paul & Pablo; Mick, Chain Towing (02 4648 1214); Roaring Forties for a great chassis (1300 RFGT40 or (03) 9466 4711)



Powered by a quad-cam Mustang V8 with a dirty big turbo, the





beast makes damn near 700rwhp!

ENGINE

1. Bob had to drop \$1200 on this 5in Catco catalytic convertor to enable the car to pass emissions
2. The bellmouth on the T51R turbo is just for show - Bob runs an XR8 airbox for street duties
3. The water in the 1000hp Garret intercooler is pumped through a PWR radiator located in the nose cone, through a a/c-cooled chiller box and back to the intercooler
4. The aftermarket intake pipe has been "chopped up, welded together, finished and polished"





BOB KOCOSKI 1966 FORD GT40 MK.II REPLICA

Colour: PPG Jet Black with silver stripes

GRUNT

Engine: Ford quad-cam 2001 Mustang Cobra V8, 4.6l

Intake: Mustang Cobra, match-ported and ceramic-coated

Turbo: Garrett T51R

Wastegate: Turbosmart 48mm

Blow-off valve: Custom Bain Racing

Intercooler: Custom water/air, Garrett 1000hp core

Throttlebodies: Dual 62mm

Injectors: Eight 660cc

Heads: Mustang Cobra 32-valve

Pistons: Mahle forged, 9.1:1

Crank: Lunati forged 4340

Rods: Scat H-beam forged 4340

ECU: Haltech E11 V2

Ignition: Coil-on-plug, M&W Pro 14 CDI

Exhaust: Racer's Choice extractors, Custom 1¾in system & mufflers

SHIFT

Transmission: Getrag six-speed transaxle

Clutch: Extreme

Type: 10-puck ceramic single-plate

Diff: Quaife torque-biasing

Final drive: 3.83:1

BENEATH

Brakes: DBA 330mm slotted discs, six-spot AP Racing calipers (f), 286mm slotted discs, four-spot calipers, floating handbrake calipers (r)

Shocks: Koni 8200-series, bump & rebound adjustable

Springs: King Springs, progressive (f&r)

Front suspension: Independent unequal length double wishbones

Rear suspension: Lower reverse A-frame, single top-link, double radius-arms, Roaring Forties aluminium uprights

Other: Flat aluminium undercarriage, skid plates

INTERIOR

Wheel: Moto-Lita three-spoke

Seats: Custom fibreglass

Gauges: Smiths/MSD Laser

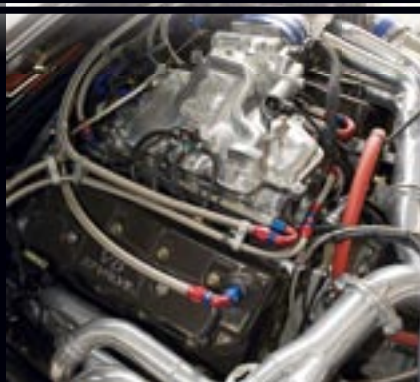
Pedal box: Custom stainless steel, Tilton adjustable master cylinders

ROLLING

Rims: ROH Modular split five-spoke 18x8½ (f), 18x11 (r)

Rubber: Advan A045 235/35 street slicks (f), Bridgestone RE55 295/35 street slicks (r)

750 hours were spent on panel preparation



Bain of Bain Racing.

Starting with a 1000+hp-rated Garrett core, Bob fashioned end tanks — without any proper tooling.

"I copped a lot of flack for pushing ahead with this set-up," he says. "This was the nearest he came to throwing in the towel. 'Everyone said I was out of my mind. Those end tanks took me ages to form up!'"

A 25-litre brass water pump was plumbed in along with a triple-pass PWR front intercooler radiator and a 25-litre chiller-box. Located in the passenger footwell, the chiller has an a/c evaporator core inside.

"The air con chills the intercooler water but when the throttle reaches 90 per cent, the compressor switches off so we don't lose any power. It also cuts off at 5500rpm so we don't over-spin the compressor."

Fuel is drawn from dual 46-litre cells so that each bank of four cylinders has its own source tank, surge tank, lift pump, Bosch Motorsport 044 pump and filters. A Magna Flow rising-rate fuel pressure regulator ensures parity.

The engine itself is a alloy-block, 4.6-litre, 32-valve Mustang Cobra unit, sourced as a crate motor from Eagle Motorsport. These particular blocks were made for Ford by Teksid in Italy and are favoured by the fast Mustang drag racers in the US.

That meant the block was going to be strong enough, but the internals were going to need attention, so Bob and Jake built up their own combination, running a Lunati crank, H-beam Scat rods and Mahle pistons. Perfect Seal gapless rings contain the quad cam's 9.1:1 compression while a 15-litre alloy sump keeps the moving parts fed with oil.

Controlling all of that is a Haltech E11 V2 ECU, tuned by Adam at Just Engine Management.

The car's body is beautifully straight and more than 750 hours were spent on panel prep.

"It was guide-coated five times and the shut-lines are perfect! They were closed up to 2.8mm — originally they were 6–7mm," he says.

Ronnie Tarabay laid down the PPG Jet Black and silver stripes and Bob is over the moon with the result.

The interior features a polished aluminium floor and six-point chrome-moly rollcage, with black Italian leather taking care of the trim. A Sabell six-point racing harness holds Bob in his custom-moulded race seat, the perfect distance from a short-throw six-speed shifter and a trio of Tilton pedals.

"I had the passenger seat made to suit my best mate but he's put on a bit of weight so now we have to change it," he laughs. Why not design it for his wife, Davone?

"She's too scared to go in the car but my son loves it! He's still only little but it's going to be his when he's older. But he'll have to be about 30 before I give him its keys!"

Bob somehow refrains from caning the GT40 on the street but admits he can't wait to get it on the track.

"I don't take it beyond 12psi on the street, so the car responds smoothly when it comes onto boost. There's no lag and it goes like the clappers! First gear's to get off the line. I change between 5500–6000rpm in first and from there at 7200. It comes onto boost at 2600–2700 and by 3500 its making 17–18 psi. The full 19psi is there at 3700.

"I thought I'd get a real kick driving it on the roads but it can get a little scary. I get people who start recording with