

StreeTorquer 550 Long Engines



Ford 4.0L 6 Cylinder SOHC and DOHC Long Engines

Although we have been building high performance engines since 1978, it wasn't until 2004 that we began development work on the Ford 4.0L DOHC 6 cylinder "Barra" turbocharged engine. We witnessed numerous catastrophic engine failures after consumers had undertaken simple modifications such as free flowing exhausts and cold air intake systems, so it became apparent there was a need for us to engineer some solutions to address the inherent factory weaknesses.

The engines possess an abundance of untapped power with their large (factory fitted) Garrett GT35/40 turbocharger, however because the engine internals are almost directly taken from the original inline 6 cylinder NA (normally-aspirated) engine of the 1960's, they were not designed to handle 21st century boost-assisted power levels.

We initially developed a lightweight yet durable billet conrod to work with the 99.31mm (almost 4") stroke crank and before long our customers were making 450+ RWKW (700+ flywheel HP). Following this various other engine weaknesses came to the fore such as oil pump problems, valvespring tension, excessive torsional moments, crankcase flex, inadequate cylinder head retention, airflow distribution problems at high boost etc and engineered a range of solutions to suit.

We have seen power levels in excess of 1350KW (1800+HP) with our engines and components, such is the scope for power from these big cube 6 cylinder power plants.

We have 3 power levels available; new for 2014 is our StreeTorquer 550 engine, designed for hi-performance street cars; the venerable 698GT-A engine has been upgraded for 2014 with a few new tricky bits and finally for the seriously power crazed, our 998 GT-R is just the ticket!

MY2014 Atomic StreeTorquer 550 Long engine specs

- Ultrasonic tested seasoned Ford block – the thickest walls are required (we reject 4 in 10 for being like Cleveland blocks - too thin in spots due to core shift)
- Full crankshaft preparation - magnafluxed, stress relieve/temper, checked for index/stroke, reground and micropolished journals and chamfered oil holes.
- Atomic forged pistons – 8.7:1 comp ratio and include coated skirts, anti detonation bands and H/D pins
- Nitro carburised steel turbo rings
- Atomic billet StreeTorquer conrods #306202 550 Kw – 6.060" C/C, bushed for floating pins, ARP 2000 bolts and cylindrically ground/honed tunnels.
- ACL/King Competition bearings
- Fully machined block inc torque plate honed cylinders, decked to crank centreline, main saddle alignment checked etc
- Bearing clearances set up to suit the intended usage
- Fully prepped (seasoned) Atomic **Stage 3** cylinder head with 7 angle CNC machined valve job and hand porting of inlet and exhaust bowl areas. Fine Ra finish on deck surface, chambers relieved, spring tensions set up and new PC seals fitted.
- Lifter preloads set

- Atomic H/Duty Simplex timing chain **#306620**
- Atomic Induction hardened crank sprocket **#306562**
- Atomic Hi-pressure timing chain tensioner **#306563**
- Precision balanced
- Atomic Hi-Mass Street Performance balancer **#306102**
- Atomic H/D Conical valve springs **#306800**
- Atomic Head stud kit - 12mm **#306651**
- Atomic Billet gear oil pump – complete with EDM cut chrome moly gears **#306750**, Grade 10 fasteners, high flow bypass circuitry and blueprinted clearances.
- Atomic chrome moly timing guide pivot **#306564**
- Atomic gasket set inc SLS Teflon coated head gasket and Viton crank seals
- M14 Hi-Tensile Harmonic balancer retaining bolt and chrome moly washer
- Fit new brass welch plugs
- Spray block grey in hi-temp engine enamel (or any other colour you prefer)
- Powder coated rocker cover – your choice of 6 colours
- Precision blueprinting and assembly of long motor
- Engine is fully test run in our engine test cell - verify all vitals of the engine (oil pressure hot and cold, ring bed-in, cylinder % leak down, lifters bled, etc) and full report supplied.
- Supply torque specs manual, run-in procedure sheet and DVD of engine operation on test bench
- Supply 7 litres of Run-in 15W/50 oil
- Supply genuine Ford oil filter
- 12 months conditional warranty



A long engine is complete from sump to rocker cover and all engines are partially run-in on our engine test cell to ensure everything is 100% spot-on before shipping.

StreeTorquer 550 Series Long engines – Non exchange

- #306390 DOHC Ford 6 cyl - BA Ford
- #306391 DOHC Ford 6 cyl - BF Ford
- #306392 DOHC Ford 6 cyl - FG Ford

StreeTorquer 550 Series Short engines – Exchange

- #306389-RB SOHC Ford 6 cyl - AU Ford
- #306390-RB DOHC Ford 6 cyl - BA Ford
- #306391-RB DOHC Ford 6 cyl - BF Ford
- #306392-RB DOHC Ford 6 cyl - FG Ford