

Putting The BY BOB FEATHER
PART 1: MOTOR WORK

MEAN

In Mean Streak

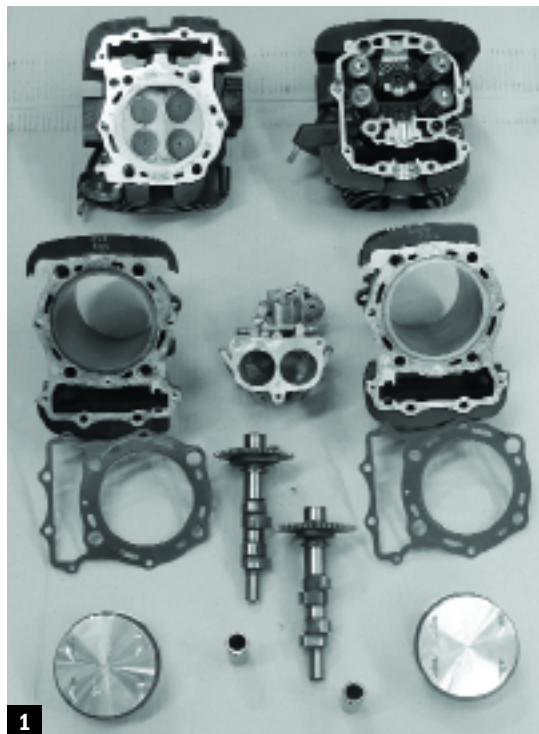
WHEN THE FIRST KAWASAKI MEAN STREAK rolled off the assembly line, it set a new standard for the fledgling power cruiser market with its comfy ergonomics, excellent brakes, and great handling. However, it just isn't that mean in the engine department. So, we *RoadBike* staffers decided to change that — if only to wipe the smirks off the faces of Warrior and VTX riders.

A little homework led us to Thunder Mfg.'s Thunderstorm High Performance Kit, available to fit a number of metric cruisers. You send the necessary motor parts to the factory, and they send back ported heads, bored cylinders (from 1470cc to 1550), 10:1 compression pistons, rings, wrist pins, circlips, and modified gaskets. The kit also comes with precision-ground cams (available through an exchange program) with slotted cam chain sprockets to allow for timing adjustments. The new cams provide greater valve lift with a longer duration to balance the enlarged intake and exhaust ports.

The valves are resealed and lapped at Thunder's facility. We also chose the optional service of having Thunder smooth and reshape the throttle bores for better flow to complement the porting of the heads. This cleaning and matching helps eliminate inefficient turbulence in the intake tract.

According to the company, with the performance kit and a new pipe, you can expect power figures around 100 hp and 100 ft-lbs. of torque, compared with roughly 67 hp and 82 ft-lbs. for the stock motor.

While you can have the techs at Thunder take care of the install, we chose to do it at a local shop. Our project bike came compliments of our friend and fellow horsepower junkie Rich Alexander Jr. at Hudson Valley Motorcycles in Millwood, New York. Rich offered up an '02 Mean Streak 1500 and a skilled pair of hands for the project. Here, we start our build with the engine removed from the bike and ready to receive its new parts.



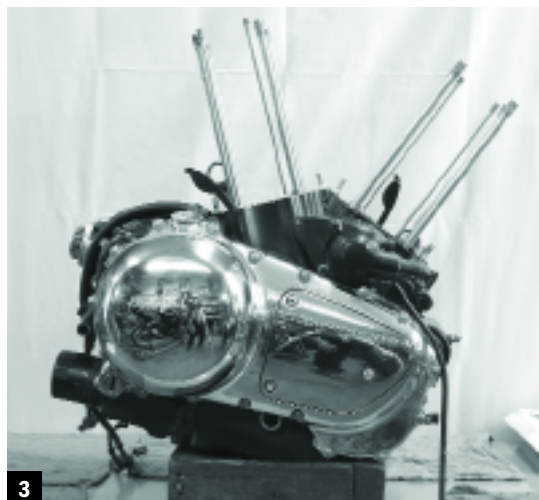
1

The kit includes ported heads, a modified throttle body, bored cylinders, modified gaskets, hotter cams, and new pistons with rings, wrist pins, and circlips.



2

The stock pistons have a concave surface on top (hard to see here because of the carbon buildup). Note that the new pistons have a flat top and pockets machined for valve clearance.



3

Here's the disassembled engine, with all the old gaskets and gasket sealers removed.

SOURCES

HUDSON VALLEY MOTORCYCLES
86 Millwood Rd., Dept. RB
Millwood, NY 10546
914/762-2722

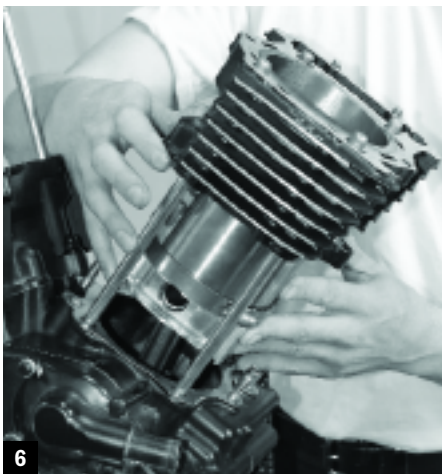
THUNDERSTORM HIGH PERFORMANCE KIT
Part #T410 \$999
Thunder Mfg.
21408 N. 11th Ave., Dept. RB
Phoenix, AZ 85027
623/869-7154
www.thundermfg.com



4 First, Rich checked the ring end gap by putting each ring in a cylinder and measuring the gap with a feeler gauge, going by the specs in the kit instructions. (If the numbers don't match, the rings need to be ground.) Then, before installing the pistons, he put a clean rag inside each cylinder bore, to prevent small parts from falling into the motor.



5 Rich put the rings on each piston, staggering the end gaps according to the instructions. He snapped in a circlip, put assembly lube on the wrist pin and pushed it through the piston and connecting rod, and then snapped the second circlip in place. The pistons are oriented according to the size of the valve pockets — the smaller pockets (for the exhaust valves) face forward in the front cylinder and rearward in the rear one.



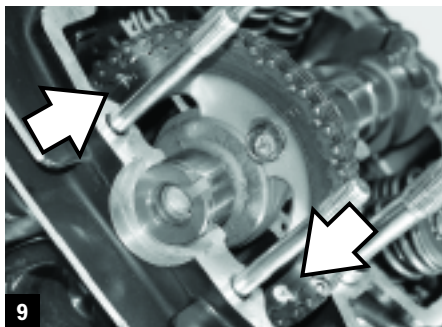
6 Rich installed the new base gaskets and cleaned and lubed the cylinder bore. Next, using a hose clamp, he installed the rings on the piston and slid the cylinder over the piston.



7 Next up were the cam chain guides (marked "front" and "rear"), head gasket, and locating dowels.



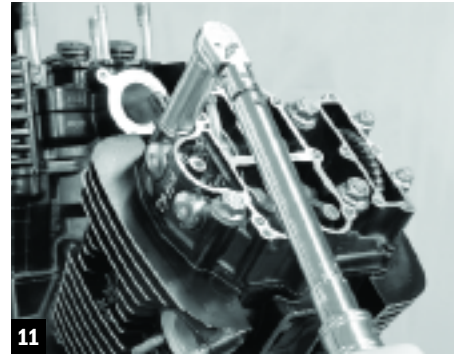
8 Rich then slid the heads onto the motor.



9 Starting with the front cylinder, he slid the compression release mechanism onto the end of the front cam. (You need to install the cam in the front cylinder first, for proper timing.) He then lubed the cam lobes and bearing surfaces and set the cam in place, rotating it until the sprocket alignment marks were level with the valve cover mounting surface (arrows).



10 Next, he preassembled the cam chain tensioner per the Kawasaki Service Manual, and installed it in the front cylinder.



11 Rich then put the front rocker box on top of the head. He lubed all the bearing surfaces and applied Kawasaki Bond Silicone Sealant to the valve cover mating surfaces on the rocker box, then torqued the bolts to OEM spec.



12 He put the brass lifter oil filters back in the rocker box and filled the oil reservoirs. Then he installed a new valve cover gasket and torqued all the bolts to spec. Moving on to the rear cylinder, he repeated steps 9 through 12 to complete the valvetrain assembly.



13 Finally, Rich bolted the throttle body to the intake manifold...



14 ...and called it a day. Next time, we'll add an aftermarket exhaust and a Power Commander, and finish with a trip to the dyno. RB