

K&N AIR CLEANER

We gained 6 ponies with this bolt-on air cleaner!

WHEN IT COMES TO MAKING THE BIGGEST bang for the buck, few performance bolt-ons can match that of a replacement air cleaner. But that's not to say that every design and filter are the same, although just about anything is better than the highly restrictive stock air cleaner on a newer Harley. Every system looks and acts a little differently, leading to varying output numbers and power curves.

However, most of the high-performing air cleaner kits out there do have one thing in common: a K&N filter. K&N's attractive, washable, reusable, and preoiled filters are damn near a guarantee of dyno success, and that's why so many manufacturers choose to run them in their kits. For this project, we decided to go straight to the source and test out a complete kit from K&N's custom Street Metal series (#RK-3935/\$331.99) on a 2007 Twin Cam. This kit is an en-

tire custom assembly that comes with a chrome teardrop-shaped cover that leaves the edges of the filter exposed for maximum air intake. The high-flow breather plate mounts directly to the throttle body via an integrated, aluminum, internal breather system.

What are the two most important parts of any performance bolt-on?

TOOLS NEEDED

- Silicone
- T-27 Torx
- 3/16" Allen
- 7/16" wrench
- 7/16" socket
- Torque wrench (in-lbs.)
- Torque wrench (ft-lbs.) ■

1 Our 2007 Twin Cam bike is on Rob's dyno with the stock air cleaner assembly and breather bolts removed. The baseline dyno runs are done, and we're ready to install the new K&N air cleaner.



2 Rob first wire-ties the stock throttle position sensor wires safely out of the way using a K&N-supplied wire-tie.

drag seats

lehman



3 After putting a little silicone onto the K&N rubber plug, Rob presses it into the 1/2" hole in the K&N base plate with the plug's shoulder on the outside.



4 Rob then installs the four K&N-supplied O-rings into their four grooves, two per side (front and back), in the crankcase breather plate.



5 After slipping the K&N-supplied chrome flat washers onto the K&N-supplied chrome breather bolts, Rob sends the breather bolts through the crankcase breather plate from the front.



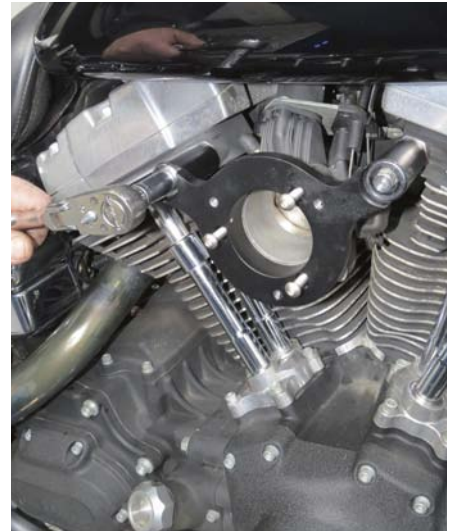
6 Rob then loosely attaches the crankcase breather plate to the engine using the two K&N breather bolts and 7/16" socket.



7 Rob then orientates the K&N-supplied gasket as shown and then slips it between the throttle body and K&N crankcase breather plate.



8 Rob threads in the three K&N-supplied bolts partway into the throttle body to align the gasket and position the throttle body.



9 Rob can now torque the two breather bolts to 22-24 ft-lbs. using a 7/16" socket. He then removes the three bolts that are partway in the throttle body.



10 Rob installs the two K&N-supplied short bolts and their flat washers, with some K&N-supplied blue Loctite, into the base plate from the outside using a T-27 Torx and torques them to 100 in-lbs.



11 Rob slips the three K&N-supplied bolts, with some K&N-supplied blue Loctite, into the K&N base plate from the outer face.

klockwerks

bad dad



12 Rob then slips the K&N-supplied gasket, orientated as shown, over the three bolts.



13 Rob installs the base plate onto the crankcase breather plate using a 3/16" Allen and torques the bolts to 100 in-lbs.



14 Rob then slips the three K&N-supplied lock washers onto the three K&N-supplied standoffs and puts some K&N-supplied blue Loctite on the threads.

Looks and power; the Street Metal air intake kit from K&N kills it on both accounts. You can make up your own mind on looks when you get to the end of this article, but there's no debating the accompanying dyno chart that shows a 6 hp gain and lots of improvement on the power curves. While maximum torque is essentially a goose egg, the K&N kit improves initial bottom end low-range torque and piles on the top end torque from 3700 rpm all the way to redline. Also, max torque now

hits at 2900 rpm instead of 3200.

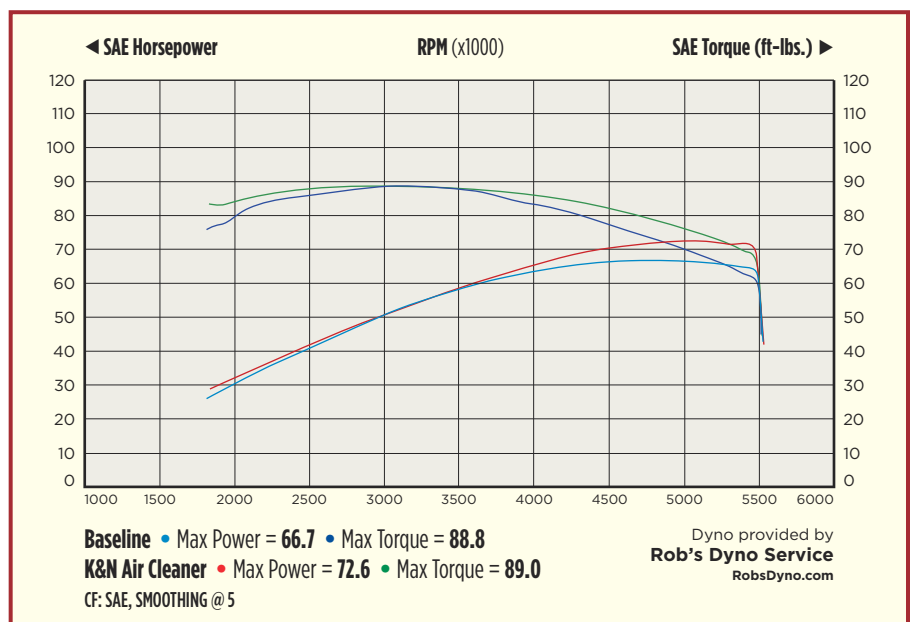
We did this install at Rob's Dyno Service in Gardner, Massachusetts, with proprietor and master tuner Rob himself turning the wrenches for us. He always manages to coax as much power as possible out of a Harley engine. However, we didn't need to install a fuel tuner with this air cleaner setup. For the complete step-by-step install of the K&N Street Metal air intake kit, take a look at the accompanying photos and captions.



15 Rob installs all three standoffs onto the K&N chrome outer cover using a 7/16" wrench. He torques the standoffs to 100 in-lbs.



16 Rob positions the K&N filter element onto the chrome outer cover and around the three standoffs.



custom cycle eng.

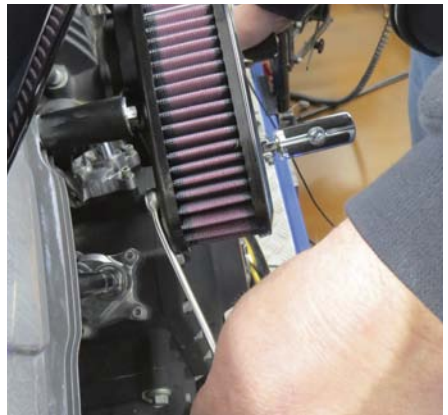
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hil country

iron braid



17 He then positions the cover and filter assembly onto the base plate, with the K&N logo at the bottom right corner.



18 He secures the cover and filter to the base plate using the three K&N-supplied lock washers and nuts, and a 7/16" wrench. Rob torques the nuts to 100 in-lbs.



19 Here's how the finished air cleaner looks! AIM

SOURCES

K&N ENGINEERING
951/826-4000
KNFilters.com

ROB'S DYNO SERVICE
978/895-0441
RobsDyno.com

exotic choppers

mtc

rj star