

S&S AIR CLEANER FOR INDIAN

Easy top-end gains for your Thunder Stroke engine

THE INDIAN THUNDER STROKE 111 IS EVERYTHING that you'd ever want in an American-made V-twin motorcycle engine. It's smooth, powerful, responsive, and that modern take on the original flathead design looks spectacular. We at *American Iron Magazine* love the whole bike, and we've been itching to roll one into the shop and start hopping it up.

Thanks to S&S Cycle of Viola, Wisconsin, that dream finally became reality. S&S was founded by George B. Smith and Stanley Stankos in 1958, just five years after the original Indian Motorcycle company went out of business. Even though it's always been predominately focused on the Harley-Davidson market, S&S recently unveiled a brand-new air cleaner kit for 2014 and 2015 Indian Chieftain, Classic, Roadmaster, and

I Our 2015 Indian Roadmaster is up on Rob's lift with its stock air cleaner cover, filter element, throttle body, throttle body housing, backing plate, backing plate bracket, seat, and both side covers removed. The rear of the gas tank has been raised and the baseline dyno runs have, of course, been done.



Vintage models. In short, we knew we had to test one out — right away.

The S&S air cleaner kit for Indians (#170-0227/\$299.95) provides two times more surface area than the stock air cleaner. The high-performance, washable cotton gauze filter delivers a 37 percent increase in airflow into the engine. And without the added burden of a massive stock cover for the air to move around, the S&S intake allows fresh, cold air to hit the filter directly. Go ahead and flip to the end of this article just so you can see what we're working with. Even with all that additional airflow potential, the filter itself takes up a significantly smaller amount of space on the engine's left side than the stock unit. Don't worry! The kit, with its all-billet aluminum components, doesn't extend any farther into your legroom than the stock cover. What else would you expect from the

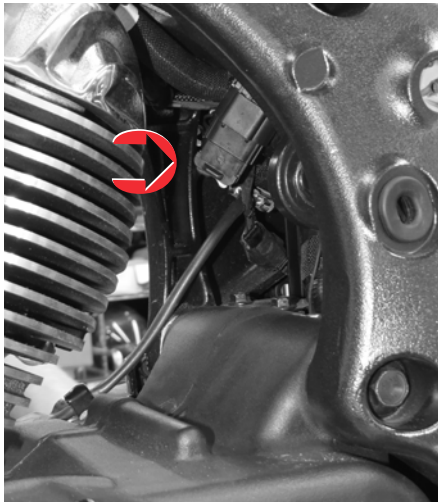
TOOLS NEEDED

- Teflon sealant
- 4mm Allen
- 5mm Allen
- 1/2" open-end wrench
- 5/8" open-end wrench
- Torque wrench (in-lbs.) ■

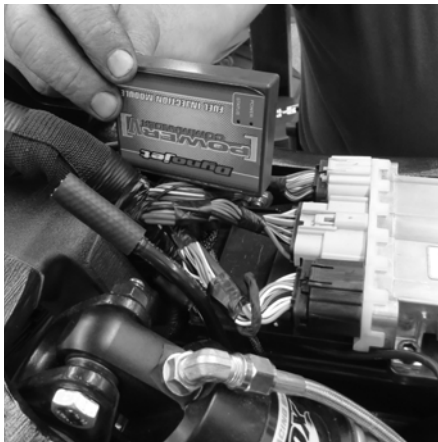


2 We don't normally show this, but here are all the stock parts you have to remove to install this S&S kit. The only stock part that's reused is the throttle body (arrow).

PHOTOS AND CAPTIONS BY CHRIS MAIDA



3 After running the Dynojet Power Commander V (PCV) harnesses (arrow) as per its instructions, Rob connects the PCV's O₂ optimizers to the bike's stock O₂ sensors, which no longer get connected to the stock wiring harness.



4 After hooking up all its connectors, Rob tucks the Dynojet Power Commander V module out of the way under the seat.



5 Rob then inserts the four S&S-supplied rubber grommets into their openings in the kit's back-plate bracket (shown) and throttle body back-plate using just his fingers. Use a little soapy water if the grommets are hard to get in.



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company that brought us the Shorty Super E and G carburetor?

So not only can you show off more of that gorgeous Thunder Stroke motor, but with the available air cleaner covers, you can show off over 55 years worth of performance pedigree. For

our 2015 Roadmaster test bike, we went with the chrome S&S Nostalgic Script cover (#170-0239/\$129.95), which looks perfect with the polished engine and chrome primary cover.

Fortunately for us, and Indian owners everywhere, S&S isn't the only



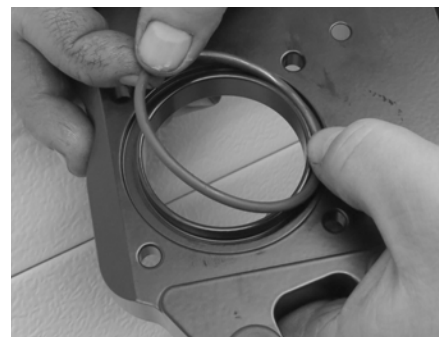
6 Next in are the four S&S-supplied steel spacers, which go into the four rubber grommets he just installed.



7 After putting a little of the S&S-supplied threadlocker onto the threads of the four S&S-supplied bolts, Rob slips one of the four S&S-supplied flat washers onto each bolt.



8 He then uses a 4mm Allen and two of the prepared bolts to secure the S&S-supplied backplate bracket to the engine. He torques both bolts to 88.5 in-lbs.



9 After removing the stock O-ring from the back of the stock Indian backing plate, Rob installs it onto the back of the S&S-supplied throttle body backplate.



10 He then uses a 4mm Allen and the other two prepared bolts to secure the S&S-supplied throttle body backplate to the engine. He torques both bolts to 88.5 in-lbs.



11 Rob uses a 4mm Allen and two of the S&S-supplied countersunk bolts, with S&S-supplied threadlocker on the threads, to secure the other end of the S&S-supplied backplate to the S&S bracket on the engine. He torques both bolts to 88.5 in-lbs.

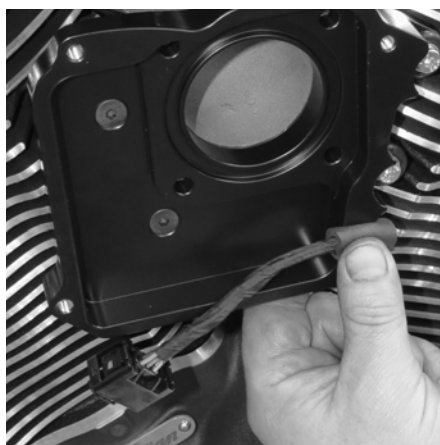
company out there hitting the Indian market. Dynojet Research has developed a Power Commander V (#29-001/\$399.95) for 2014 and '15 Thunder Stroke-powered Indians. With a capable tuner such as the PCV, a whole new realm of possibilities is opened up



12 After putting some Teflon sealant onto the threads of the S&S-supplied 45-degree elbow fitting, Rob uses a 5/8" open-end wrench to install the fitting onto the S&S throttle body backplate. Note how it is orientated on the backplate.



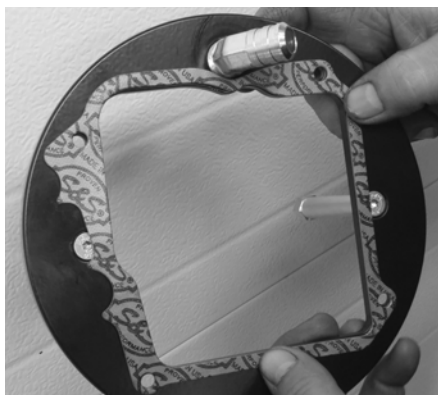
13 With some S&S-supplied threadlocker on the two S&S-supplied countersunk bolts, Rob secures the two S&S standoffs (hex end against the backplate) to the S&S throttle body backplate. He torques the bolts to 88.5 in-lbs. using a 4mm Allen and 1/2" wrench.



14 Rob then positions the stock throttle body harness, with its rubber grommet, into its groove in the S&S throttle body backplate.

for Indian owners. And to make things that much easier for the do-it-yourselfer, S&S has the PCV calibration file available for download right on its web site. Dynojet also has a Dual Auto Tune Accessory (#AT-300/\$399.99) for the PCV, which plugs into the PCV and uses two wideband O₂ sensors to make real-time adjustments to your fuel map while you ride.

Looks are important, but so is performance. It's always great to see when



15 Rob positions the S&S-supplied gasket onto the back of the S&S air filter backplate aligning the contours and holes. He then slips the stock breather hose onto the fitting on the back of the air filter backplate.



16 Rob uses a 4mm Allen and the last four S&S countersunk bolts, with threadlocker on their threads, to secure the S&S air filter backplate to the S&S throttle body backplate. He torques the bolts to 88.5 in-lbs.

SOURCES

DYNOJET RESEARCH
702/399-1423
Dynojet.com

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

S&S CYCLE INC.
866/244-2673
SSCycle.com

samson

haynes



17 After removing the stock throttle body O-ring from the stock Indian backing plate, Rob installs it into its groove in the front of the S&S throttle body backplate.



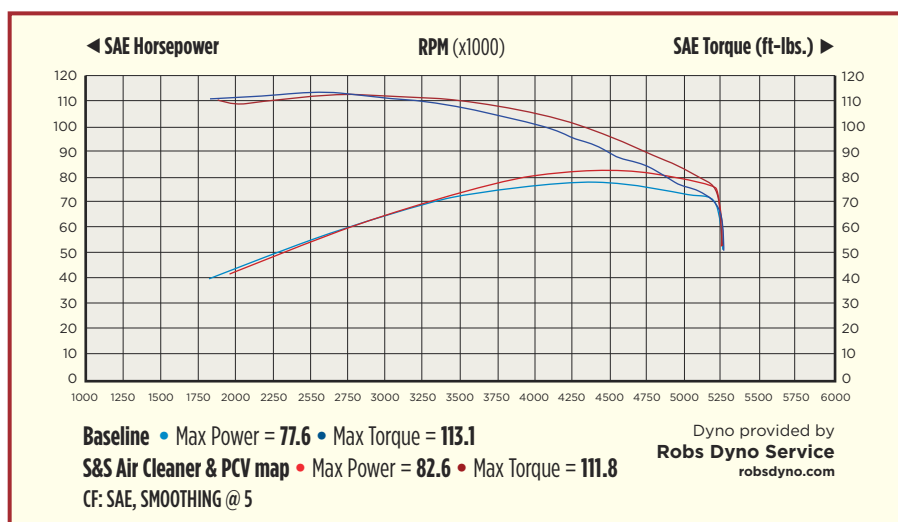
19 After slipping the harness into its stock clip on the throttle body, Rob reconnects it to the throttle body. (Note: to disconnect it, just squeeze the two clips on the top and bottom of the connector.)



18 With some S&S threadlocker on the four stock throttle body bolts, Rob uses them and a 5mm Allen to secure the stock throttle body to the S&S throttle body backplate. He torques the bolts to 88.5 in.-lbs.



20 Rob now positions the S&S-supplied air filter element onto the S&S air filter backplate. He makes sure the element sits in its groove in the backplate.



a manufacturer's advertised power numbers play out for us on the dyno, and that's exactly what occurred with this Roadmaster. The S&S air cleaner with Power Commander V tuner harvested an additional 4.2 hp from the 111" Thunder Stroke engine. Engine torque remains relatively unchanged in terms of max numbers (11.8 ft-lbs. versus the stock 113 ft-lbs.), but the torque curve extends powerfully into the top end. Take a look at the dyno chart on page ?? for the full lowdown.

Installing the S&S air cleaner kit on an Indian is more involved than a Harley-Davidson. You actually have to remove the throttle body from the manifold to mount the backing plate. But this is definitely a project that's doable at home and is only made easier with the Power Commander and S&S download. To show us how it's done, we went to Rob at Rob's Dyno Service in Gardner, Massachusetts. Not only do Rob and crew do installs, but as the shop name suggests, they pull some top of the line dyno numbers from his in-house dyno.



21 With some S&S threadlocker on the two S&S-supplied chrome bolts, Rob uses them and a 4mm Allen to secure the chrome air cleaner cover to the two standoffs. He torques the bolts to 88.5 in-lbs.



22 Here's how the finished air cleaner install looks. AIM

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