

Big Power Down Low



BY BOB FEATHER

When it came time to upgrade the look and performance of his 2004 Vulcan 2000, Fred had a few decisions to make. He wanted a quieter alternative to the straight pipes currently on the market, but also wanted the improved performance associated with a free-breathing, after-market exhaust system. A little research turned up the Vance & Hines Powershots system. With full-length chrome heat shields and welded baffles, the Vance & Hines system looks great, will never blue, and promises a substantial power increase without waking up the neighbors in the process.

Of course, the addition of a Dynojet Power Commander will help squeeze every available pony from that new pipe by fine-tuning the fuel/air mixture. So we gathered up our parts and headed over to Valley Motorsports in Ansonia, Connecticut, where Art Handleman had a lift waiting for us.

The entire installation went smoothly with the exception of a little prying at the “Y” to make the pipe span the distance between exhaust ports on the heads. Some manipulation is often expected with aftermarket pipes and this system was no exception. Also, the hose clamps that hold the heat shields to the exhaust can be a little tricky to get started on the threads, but with judicious use of needlenose pliers, Art finally bent everything into submission.

The Power Commander popped right into place with no surprises. The connectors all fit together easily, and the bike fired up immediately after the install. Dropping the bike off the lift and going for a test ride revealed an instant power increase just from the addition of the new parts.

Next, it was off to see John Tavalacci at Dyno Solutions in Danbury, Connecticut, for some engine mapping and power tweaking. Even though no air intake modifications were made to the big Vulcan, we were all quite impressed with the power gains.

Once John did his magic, the VN2000 made significant gains all the way to redline. At 3200 rpm the numbers jumped up to 73.09 hp from 66.74 hp in stock trim. That’s an increase of 6.35 hp, or 9.5 percent. What really impressed us, though, were the 10.42 ft.-lbs. of torque gained at 3300 rpm.

Then came the biggest test of all. The following morning before heading off to work, Fred was able to start his bike and warm it up for a minute while still remaining on friendly terms with his neighbors. The new Powershots exhaust system emits a nice blub blub sound at idle and doesn’t get much louder than stock as long as you’re careful with the throttle. When you do crack it open, the exhaust has a throaty bark, warning all that the big dog is on the street.

Fred claims that the throttle is much more responsive and that the bike feels smoother and more powerful throughout the rev range. He can’t stop smiling!

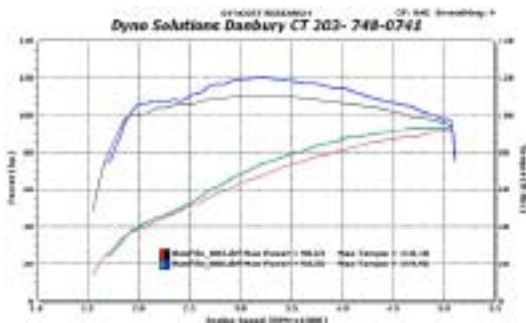
So there you have it: a relatively simple installation that yields substantial power gains without announcing it to the whole world. Oh, Fred’s bike rumbles for sure, he just doesn’t make everyone else around him suffer for it. And don’t bet against him in a race.



1 Vance & Hines’ Powershots exhaust system and the Dynojet Power Commander fuel management system.



2 First, the stock exhaust system, right-side floorboard, and stock muffler support bracket are removed. (Note: the rear brake line should be disconnected first in order to remove the muffler support bracket.)



These mods netted over 6 hp and 10 ft.-lbs of torque.



3
Mount the new muffler bracket and thread the brake line through the retaining loop. Tighten three mounting bolts with a 12mm socket. Bleed the rear caliper.



7
Tighten the acorn nuts with a 12mm socket. (Note: do not overtighten the nuts. Exhaust studs are often brittle and prone to snapping.)



11
Reinstall the right-side floorboard.



4
Slip a piece of packing material into the slots on the muffler to hold the dogbone mounting nuts in place when it's time to mount the exhaust system.



8
Prep the heat shields with mounting hose clamps. Tip: position the heat shields on the pipes and determine the best position placement for the clamps before you tighten them. This will save a lot of aggravation later.



12
Remove the gas tank and disconnect the battery terminal. Slip the Power Commander wiring harness under the front seat mount bracket and follow the factory wiring along the right side of the frame backbone. Set the harness alongside the stock wiring.



5
Position the new exhaust system onto the heads and loosely thread on the acorn mounting nuts to hold the system in place.



9
Put the front heat shield into position and tighten the hose clamp. Install the heat shield for the rear cylinder pipe using the same method.



13
Separate the black, 12-pin wiring connector from the throttle body and connect the Power Commander cable ends to the stock connectors you just separated. They only fit in one direction so you can't get it wrong.



6
Thread the muffler mounting bolts through the mounting bracket and into the dogbone nuts on the mufflers.



10
Slide the rear muffler shield into position from the rear of the bike. Tighten the hose clamps to secure it in place.



14
Connect the Power Commander ground terminal to the negative battery post. Note the orientation of the terminal. It needs to be routed so that it will fit under the battery cover. Replace the battery cover, routing the Power Commander ground wire alongside the bike's stock wiring under the front seat mounting bracket.

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15

Replace the fuel tank. Reconnect the fuel line and OEM electrical connector.



16

Slip the Power Commander module into the protective sleeve and tuck the unit under the forward seat mounting bracket. Position the wiring harness to the side or over the top of the Power Commander module, not underneath it, to prevent the harness from being crushed or damaged by the seat.



17

Here's what the bike looks like with the new exhaust system installed.

hard data

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