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## TOW

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## Stopping Power

**W**e've been toying with this particular Dodge Ram 2500 for about a year, using it as a test mule of sorts for a number of aftermarket products. Overall it has been a good fit as we evaluated the kind of products that specifically benefited truck owners with large, weighty trailers. Interestingly, of all the products that have been installed, the one that impressed us the most was not the most expensive, glamorous, or easiest to install—it just made the most sense. We're referring to the addition of a Banks Brake for the '04-'07 Dodge Ram.

Long before the installation of the Banks Brake, we outfitted the rig with a Banks PowerPack, OttoMind6 Tuner, and cat-back exhaust. As a unit, the parts offered the kind of adjust-on-the-fly power we needed and lowered our exhaust gas temperatures. That particular setup also yielded 100-hp beyond stock.

As our towing loads increased, we decided to rebuild the stock 48RE transmission just in case. That job was left to ATS Diesel in Colorado, and we have never been happier. Power shifts and maximum locking performance from the new torque converter made for even more confident long-distance hauls.

But it was this simple Banks Brake kit that positively changed the way the truck handled with a trailer. Truck owner and *RV Magazine* contributor Tony Becker said that he wished he had done the upgrade sooner. He saw the benefits of the Banks Brake immediately.

The idea that you can cut your downhill speed without using the wheel brakes means that they will be fully functional when you need them most. Less wear and tear means less money spent on buying replacement parts. As you already know, heavy loads and steep descents with a trailer in tow mean that you are tempting fate with just the stock braking system. The last thing you want is to smell your brakes burning up as the rotors or drums turn red-hot. More pedal force just increases the problem.

Don't confuse the Banks Brake we tested with a Jake Brake like those found on commercial tractor trailers though. The Banks Brake is a direct-mount, no-maintenance exhaust brake that saves wheel brakes by utilizing the exhaust exiting the engine. When operating, it was quiet and very effective.

### MOREOVER, WE FOUND IT VERY SIMPLE TO USE.

The installation was do-it-yourself friendly, and there was no need to do any welding or cutting. Common handtools were all that was needed. The kit came complete with detailed instructions, an OEM-like wiring harness, an OBD-II interface cable, interior control switches, and the vacuum solenoid that's mounted under the hood.



The Banks Brake is a practical aftermarket upgrade that can save wear and tear on brakes, transmissions, and engines.

## The Banks Brake with CBC-SmartLock makes the job easy.



If there is one aspect to the install that might be time-consuming, it would be the installation of the new heater core tube from Banks, which replaced the stock tube for better clearance for the brake assembly. We will point out that the instruction manual was much better than most, and obviously Banks took great care in preparing it for the user.

Together with a new serpentine belt and vacuum actuator, and a computerized brake controller called SmartLock, the Banks Brake kit can actually reduce wear on your engine and transmission too, because they don't have to work so hard on steep grades. The brain behind the system is the CBC-SmartLock, which increased line pressure and locked the torque converter—to smoothly reduce vehicle speed.

After speaking the Banks engineers, we learned that the SmartLock senses throttle position and controls braking engagement, improving efficiency. From inside the cab you can remotely cancel overdrive anytime, even in tow/haul mode. What this does is signals the transmission to engage the torque converter lockup clutch and simultaneously increases hydraulic line

pressure, which reduces slippage under extreme braking. When you tap the throttle, the SmartLock disengages.

Unlike gas engines, diesels control speed and power by governing the amount of fuel injected into the combustion chamber. A diesel has no air throttle like a gas engine has, so when you lift off the accelerator of a diesel truck, the engine doesn't brake because there is no pumping loss to retard the engine speed. On steep downhill drives with a large trailer in tow, this can be unnerving to even the most experienced driver, and you leave to chance the possibility that your brakes will overheat and then fade. That's why exhaust brakes, such as the Banks Brake, have become so popular.

Banks also offers an exhaust brake kit for other makes and models of trucks, including its latest product, the SpeedBrake, which is a plug-and-play, all-electronic system that can cut downhill speeds by 78 percent without using your foot brake.

For more details about the Banks Brake, visit us at [RVMagOnline.com](http://RVMagOnline.com). 

**1. The Banks Brake kit comes with everything you'll need for the installation, including a professionally written instruction manual with illustrations, photographs, and troubleshooting info.**

**2. The '06 Dodge Ram 5.9L Cummins did a lot of towing, which made it the perfect candidate for an exhaust brake. The Banks Brake is a direct-mount, no-maintenance exhaust brake that saves your wheel brakes by utilizing the exhaust exiting the engine.**

**3. The Banks Brake kit used a casting that has a 4-inch inside diameter with a butterfly valve located at the end. The larger-than-stock diameter allowed for maximum exhaust flow. Vacuum is supplied to the brake by an engine mounted belt-driven vacuum pump.**

**4. The Banks Brake is controlled electronically with a CBC-SmartLock that increased line pressure. The SmartLock locked the torque converter and**

**simultaneously raised transmission-line pressure to smoothly reduce vehicle speed.**

**5. Looking into the engine bay from above, you'll see that the new Banks Brake housing with the vacuum boost actuator is a direct replacement for the stock cast exhaust elbow that bolts at the turbo.**

**6. Here's the brake enable and overdrive disable cluster mounted inside the cab on the dash to the driver's left.**

