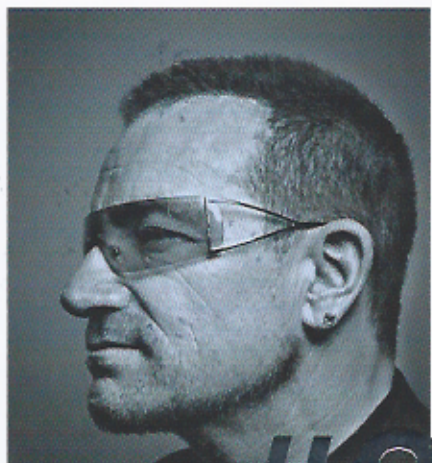


BMW Magazine

Autumn/Winter 2013 — \$ 5.00



DRIVEN #3



Innovation: The BMW i3 turns on electric mobility
Commitment: Bono campaigns for a new Africa
Discovery: The new BMW X5 in Europe's "Surf City"
Dynamics: Clean diesel powers more BMW models



diesel

“d” for diesel. “d” for dynamic.

**BMW's new generation of clean-running
turbo-diesel models
are laying down some big numbers.**

*By
Jim Koscs*

Many car buyers and certainly most car enthusiasts, when asked about BMW performance statistics, might first think of blazing acceleration figures, such as the 4.2-second 0–60 sprint for the mighty 2014 M5.

Exciting performance like that remains a brand core value. But now, BMW also wants current drivers and newcomers to consider another set of performance statistics. These numbers pertain to diesel efficiency, and they start with 45: the highway mpg of the 2014 328d Sedan. The first four-cylinder BMW diesel to appear in the U.S., the 328d also delivers the highest-ever mpg for any non-hybrid luxury vehicle. (Its rating of 32 mpg, city, matches or even beats some economy cars.)

**Today's darling of hyper-milers,
performance drivers and trailer towers.**

Diesel fuel packs more energy per gallon than gasoline, so high fuel efficiency has always been diesel's main benefit versus gasoline engines. Today's diesel fuel also emits up to 20 percent fewer greenhouse gas emissions than before. That makes diesel power an ideal part of the ecologically savvy BMW EfficientDynamics initiative.

While fuel economy and low emissions tell an impressive story, however, the plot goes much deeper when it comes to modern BMW diesel vehicles. That's because they deliver the kinds of numbers that warm the hearts of not just mpg-stretching hyper-milers but driving enthusiasts – for example, 255 horsepower and a massive 413 lb-ft of torque in the 535d.

The greater the torque, the better a vehicle is suited to carrying heavy loads or towing; that's the key reason over-the-road trucks use diesel engines. Diesel has also long been the choice of drivers who tow trailers. Like its gasoline-fueled X5 xDrive35i sibling, the X5 xDrive35d can tow up to 6,000 pounds with a braked trailer. But in addition to increased fuel efficiency, the diesel model's more substantial torque provides an advantage, especially when towing uphill. (And when not towing, all that torque makes the X5 xDrive35d a thrill to drive.)

45: the highway mpg of the 2014 328d Sedan



255 horsepower and a massive 413 lb-ft of torque in the 535d



The ABCs of Torque

You'll be hearing a lot more about diesel torque, courtesy of a bold new marketing campaign BMW has launched to support its six diesel models for 2014 (see sidebar on p.76: "Coming clean: BMW diesels send a powerful message").

Many American drivers may be unfamiliar with torque in the abstract, but they surely know it when they feel it. Torque is the turning or twisting force produced by the engine that turns the gears in the transmission and axle, and ultimately turns the wheels. This force is expressed as "lb-ft." Generally speaking, the greater the torque an engine produces, the stronger that "push you back in your seat" feeling you get when you step on the accelerator. In the U.S., automotive marketing has historically focused on horsepower, with talk of torque more commonly discussed among car enthusiasts. Horsepower, however, is not a force, but rather a measurement of work the force (torque) does over time. Interestingly, this popular benchmark originated as a marketing tool in the 18th century. Scottish inventor James Watt devised it as a way to compare the capability of his new steam engines to turn mill wheels, versus draft horses – hence, "horsepower."

A simplistic, car-centric way to view the relationship between horsepower and torque: an engine with high torque can move a vehicle off the line quickly. But rapidly accelerating that vehicle up to higher speeds requires

high horsepower. In past decades, diesel engines traditionally produced more substantial torque, but significantly less horsepower, than their gasoline cousins. The driver may have felt some initial "oomph" when stepping on the accelerator, but the car would accelerate very slowly. (Some people remember other drawbacks of older diesel cars, including a clattering engine sound and smelly, smoky exhausts.) Only recently were high-horsepower diesel engines developed, with BMW at the forefront of the trend.

The torque difference in BMW diesel engines doesn't make them "better" performers than their gasoline-driven stablemates, just different. It's a matter of personal preference. Today, BMW diesel vehicles meet the same stringent emissions regulations in all 50 states – and run as quietly – as do gasoline models. The 8-speed automatic transmission in all 2014 BMW diesel models also contributes to the phenomenal blend of performance and fuel economy. The result is a new kind of Ultimate Driving Machine® experience that will delight diesel loyalists – and surprise everyone else.

So you may choose a 2014 BMW diesel model for its fuel economy and enjoy the powerful performance as a bonus. Or you may select a BMW diesel vehicle for the performance and be thrilled with the reduced fuel costs. Either way, you, the BMW driver, win.



The greater the torque an engine produces, the stronger that "push you back in your seat" feeling you get when you step on the accelerator.

There's nothing funny about the slow, smoky performance of some older diesel cars. At the same time, the lack of awareness about today's clean-running, powerful clean diesel cars is no joke, either. Humor and irony, though, are the tools BMW is using to tell the story about its six new diesel models for 2014. A comprehensive marketing campaign involving TV, print, digital (YouTube™) and billboards is designed to enlighten, educate, excite and even entertain. The campaign's uniting theme, "It's Time to Come Clean," is a sly reference to diesel's past notoriety. BMW first introduced its clean-running new diesel models to the U.S. market – the 2011 335d and X5xDrive35d – with the TV commercial, "Changes." This played off the classic 1971 David Bowie song of the same name, reflecting BMW's understanding of the need to change peoples' perceptions about diesel engines.

The campaign for the 2014 diesel models builds on that foundation, focusing on the new vehicles' blend of high fuel economy and high performance. According to Michael Jobst, National Marketing Manager, BMW of North America, the new campaign is aimed at enthusiasts who know about the new high-power diesels, as well as younger buyers who have no idea about diesel. Every angle addresses the exciting and practical aspects of the new diesel models. The print ads spotlight big numbers: 45 mpg for the 328d, and 413 lb-ft of torque for the 535d. Billboards placed in major metro areas emphasize the 328d's fuel economy by highlighting its driving range. For example, a billboard in the New York Metro area says the car can be driven from there to Miami on two tankfuls.

Coming clean: BMW diesels send a powerful message

Some of the new TV spots use curious comparisons to showcase fuel economy and torque. One shows the 45-mpg 328d passing a 38-mpg Smart car, touting the BMW as a car "you actually want to drive." Conveying the enormous torque produced by the new diesels was a particular challenge, because the general public doesn't think about torque. The solution: just discuss numbers.

One TV spot shows the 535d paired against a Porsche 911 Carrera. The announcer says, "You may be thinking one of these cars has greater torque." Then, as the 535d pulls away from the sports car, the voiceover adds, "You couldn't be more right" and then cites the BMW's 413 lb-ft of torque. (Though it's not mentioned, the 911's engine has considerably less torque at 287 lb-ft.) A digital spot demonstrates torque by erasing the old diesel reputation for slow performance and smoky exhaust with one clever image that goes right to the car enthusiast's heart: a 535d spins its rear tires, doing a smoky burnout in classic muscle-car fashion. The announcer says, "That old diesel smoke problem? Totally optional."

Torque tales: numbers

280: The 2.0-liter TwinPower Turbo diesel in the 328d delivers the same 180 hp as the gasoline-powered 320i. But the performance number that stands apart is the 328d's peak torque of 280 lb-ft. Driving the 328d, you feel its power and acceleration. That's the torque talking.

38: The EPA fuel economy, highway, estimate for the 535d Sedan exceeds that of most four-cylinder gasoline-engine family sedans, and even encroaches on some hybrids.

413: At 5.8 seconds from 0–60, the 535d is quick – but even more enthralling is its gargantuan 413 lb-ft of peak torque for thrilling off-the-line thrust that starts at just 1500 rpm.

Force: Tale of the torque. BMW 535d peak torque vs. others:

BMW 535d	413 lb-ft
Ferrari 458 Italia	398 lb-ft
Aston Martin Vantage S	361 lb-ft
Porsche 911 Carrera	287 lb-ft
Formula One racecar	about 220 lb-ft