



## MODIFIED HONDA VAN LENDS A HELPING HAND

PHOENIX-BASED VMI 2011 HONDA ODYSSEY WHEELCHAIR CONVERSION VAN

Vantage Mobility International (VMI), of Phoenix, has created a wheelchair accessible conversion of the redesigned 2011 Honda Odyssey, with VMI Northstar and Summit conversions now available through authorized mobility equipment dealers.

"We designed our wheelchair conversion of the 2011 Honda Odyssey minivan based on tools and systems acquired from our Lean Manufacturing and Six Sigma initiatives," said Ted A. Larson, VMI vice president of engineering. "Our engineering team was able to pinpoint potential issues during development and correct them before production began. It's our way of staying true to the same core values that has made Honda one of the leading automotive manufacturers around the world."

The Honda includes an improved FLEX floor that provides an unprecedented 12 3/4" drop from the original floor, affording the conversion two unique distinctions; the most wheelchair maneuvering room and the lowest ramp angle of any VMI conversion. E-coated for corrosion resistance and assembled with lightweight stamped metal components, the FLEX floor is VMI's foremost statement on innovation.

Both the Honda Northstar and Summit conversions feature an improved PowerKneel™ system to reduce noise and increase dependability. The PowerKneel lowers the vehicle to provide the wheelchair user with a lower ramp angle when traveling into and out of the vehicle. The system has an electro-hydraulic actuator that uses less energy and a built-in manual release for safety.

The Northstar conversion has a 55" door opening

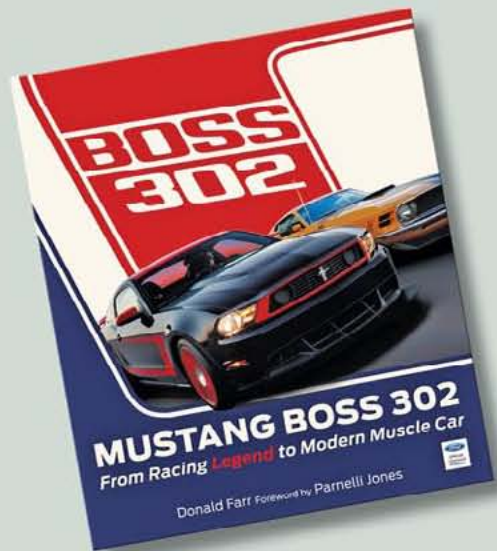
height, 30" usable ramp width, 750-pound load rating and SURE DEPLOY™ Emergency Backup System. It has successfully completed two 10,000-mile validation cycles. The Summit conversion has the same 55" door height, a 28 7/8" usable ramp width and 600-pound load rating.

VMI has passed all required Federal Motor Vehicle Safety Standards (FMVSS), including the rigorous 50 mph rear-impact collision, which tests floor structure and fuel system integrity.

The VMI-converted version of the 2011 Odyssey is available in Honda's four trim levels—EX, EX-L, Touring and Touring Elite—all powered by a 248-hp I-VTEC V6 engine. The Odyssey offers best-in-class fuel economy of 19 MPG city and 28 highway through its six-speed automatic transmission and Variable Cylinder Management. Entertainment options include 650-watt stereo audio with USB interface and 16.2-inch dual DVD screen.

Job number one for a wheelchair conversion van is mobility for the disabled, but VMI reminds us that ramp access can also make it easier to haul furniture, deliver a new washing machine or pick up a big screen TV.

Honda's reputation for quality and value is well established, and VMI takes particular pride in working with their vans, to demonstrate their commitment to the same. VMI also has conversions for 2008 and newer Chrysler Town and Country and Dodge Caravan minivans, Ford E Series full-size vans and others. The full line of VMI products includes domestic and import conversions, platform lifts, scooter and wheelchair lifts and transfer seats. For complete information, visit their website at [www.VantageMobility.com](http://www.VantageMobility.com). ■



## MUSTANG BOSS 302: FROM RACING LEGEND TO MODERN MUSCLE CAR

By Donald Farr (officially licensed by FORD), with foreword by Parnelli Jones.

Of the many high profile names in the history of the Ford Mustang, one stands apart: BOSS. Originally created to homologate the new Boss 302 engine and option package for SCCA Trans-Am racing, the Mustang Boss 302 debuted for the 1969 model year and was built in limited numbers for the street. Designed by the legendary Larry Shinoda, the Boss cars were easily distinguished from their less potent stablemates by their race-bred powerplants, standard spoilers and bold graphics.

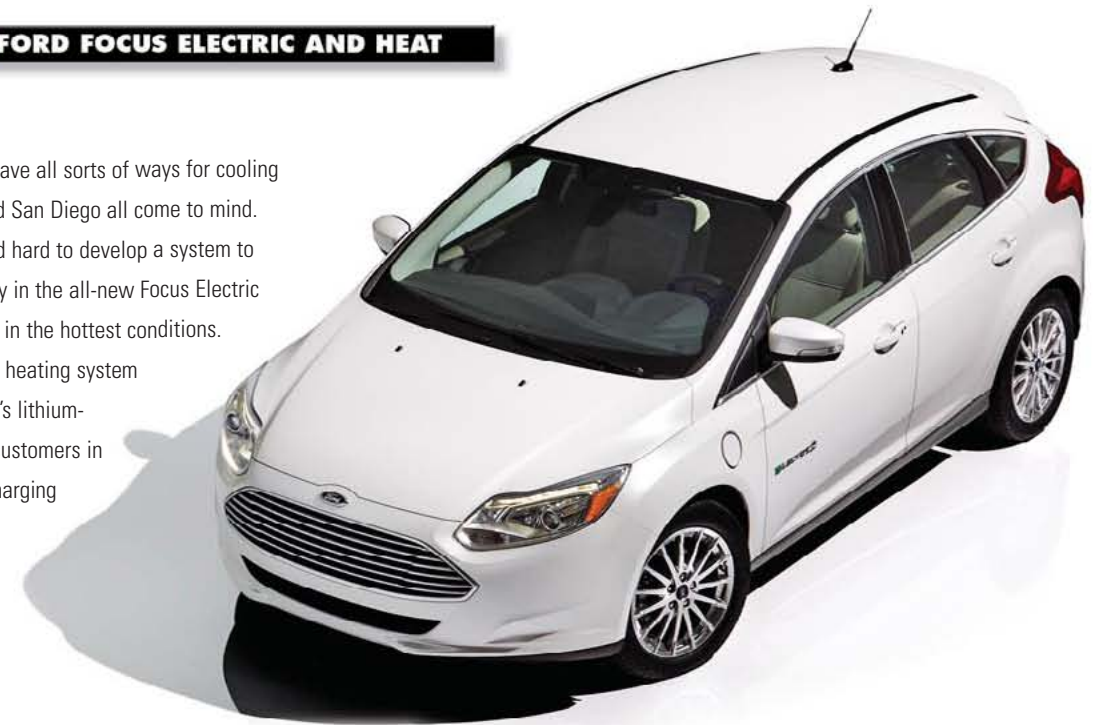
With no small amount of fanfare, Ford is paying homage today to its performance past with the reintroduction of the 5.0-liter (302 cu.in.) V8 in the Mustang GT. Though no longer the iron-block, pushrod Windsor engine of yore, Ford's newest iteration of a DOHC, modular V8 is the most potent base Mustang GT motor yet, topping 400 horsepower. And for the 2012 model year, Ford is at long last reviving the most revered of all Mustang models: BOSS. With a new racing counterpart and a modern street version that makes more than 440 horsepower, the Boss is truly back.

Donald Farr has been on staff at *Mustang Monthly Magazine* for 30 years. In addition to his magazine work, Donald authored *Mustang Boss 302: Ford's Trans-Am Ponycar* and co-wrote *How to Restore Your Mustang* with *Mustang Monthly* founder Larry Dobbs. He currently owns the 1966 Mustang GT that his grandfather purchased new.

The book arrives in stores on August 29, 2011, at a retail price of \$30. ■

When the mercury starts to rise, we have all sorts of ways for cooling ourselves down: pools, cool drinks and San Diego all come to mind. But the engineers at Ford have worked hard to develop a system to specifically cool the lithium-ion battery in the all-new Focus Electric and keep it working at its prime, even in the hottest conditions.

An advanced active liquid-cooling and heating system integrated into the Ford Focus Electric's lithium-ion battery packs is engineered with customers in the hottest climates in mind. While charging or in use, the battery uses a chiller to lower the temperature of the coolant going through the battery as needed.



## How the new Ford Focus Electric will keep its cool in the heat of an Arizona summer

Ford's electrification strategy includes the launch of five electrified vehicles in North America by 2012 and Europe by 2013. The new Focus Electric—the company's first all-electric passenger car—is a zero-emissions, gasoline-free version of Ford's popular global Focus model.

In Arizona, we have obvious specific questions about new technologies: how will they work when the thermometer climbs to 110, 115, 120 degrees? Will they start? Will they keep us cool? Fundamental physics can never be avoided, but clever engineers can mitigate just about anything. We gave an in-depth look at how the Chevrolet Volt deals with these issues (also with a liquid-cooled system) in our March/April issue. Here's the word from Ford.

Extreme temperatures can affect an electric vehicle's battery performance and reduce its range. That's why Ford will use an advanced active liquid-cooling and heating system to regulate the temperature of its lithium-ion battery packs, which are designed to operate under a range of ambient conditions.

"If the battery became too hot, we would have to limit the use of energy, to protect it. The liquid-cooled system allows us to reduce those constraints and get the most out of the battery," says Dave Fabricatore, Thermal Program Management team engineer. "We're helping owners by making sure their battery is always ready to go, regardless of the weather."

The Ford Focus Electric uses an integrated cooling system to keep the different systems in the vehicle at their optimal operating temperatures. The air conditioning system is actually used to refrigerate coolant going to the battery using a "chiller," so as coolant passes through, it's brought down to the temperature the battery requires. Temperature sensors all over the vehicle let the cooling system know when it needs to kick in.

The cooling system can even work when the car is running or when it is charging, which can help reduce charge time in hot climates as the battery is kept at a desirable temperature. As our garages climb to 130° or so in August, this is key.

"Batteries can heat up when they're charging or being used, and it's made worse by ambient temperatures," says Fabricatore. "Controlling the temperature lets us deliver the best range and power for the customer, while improving the longevity of the battery."

The Ford Focus Electric will launch in late 2011 in 19 pilot markets, including Phoenix and Tucson.

The liquid-cooled battery system will give the Focus Electric an advantage over any all-electric vehicles with air-cooled battery systems, especially in Arizona, where of course the air is not particularly cool. In addition to Phoenix and Tucson, these hot-weather pilot markets include Atlanta, Austin, Houston, Los Angeles, Orlando, Raleigh-Durham, Richmond and not-that-hot San Diego.

Ford launched the Transit Connect Electric small commercial van in 2010 and will launch the all-new Focus Electric later this year. In 2012, these models will be joined in North America by the new C-MAX Hybrid, a second next-generation lithium-ion battery hybrid, and the C-MAX Energi plug-in hybrid. ■