VOL. 135 // MOTORAGE.COM ADVERTORIAL SUPPLEMENT

FORD EPAS - MORE THAN YOU MIGHT THINK 15







ADVANCING THE AUTOMOTIVE SERVICE PROFESSIONAL SINCE 1899



A NEW LOCK AT MOTORCRAFT

Coverage expands as product lines consolidate and pricing becomes more competitive



Distributors and installers can save time and increase sales by reducing SKUs and simplifying inventory



Latest editions of the Shelby Mustang and Focus RS hit the streets and track



NEW ATTITUDE. SAME RED BOX.

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Been around a long time? Quality parts for Ford and Lincoln? The guys with the red boxes?

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For Motorcraft, the word is 'accessibility'

Take a look at the new Motorcraft approach to help make your job easier

ou could say parts accessibility was the driving force behind the Motorcraft brand even before there actually was a Motorcraft brand.

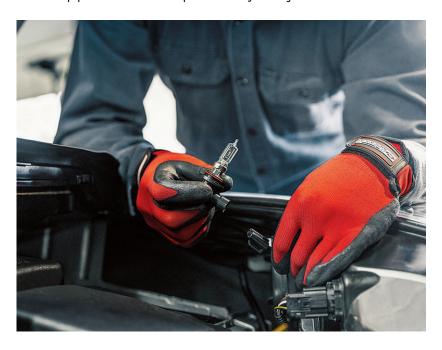
As late as the mid-1900s, auto replacement parts largely were an afterthought for vehicle manufacturers. Owners had to rely on parts – often of potentially dubious quality – from aftermarket companies.

Ford Motor Company set out to change that in 1961, by acquiring the well-known and respected Electric Autolite Company. For the first time, owners would have access to replacement parts approved by Ford. In 1972, Ford dropped the Autolite name and introduced its replacement parts operation under the Motorcraft brand.

Over the years, the Motorcraft line expanded, from motor oil to mass air flow sensors and everything in between. Today, Motorcraft parts offer quality and exceptional fit, helping to maximize the performance of Ford and Lincoln vehicles.

Now Motorcraft is taking even more steps to ensure greater product accessibility. In an ongoing effort, the company is evaluating every single product line, expanding part-line coverage and adjusting its prices.

For example, while the company examines inventory levels and reduces some, there is no reduction to make/model year vehicle applications. This is great news for both distributors and repair shops. It boils down to distributors having the right lines that today's repair shops need in the right amounts. This provides distributors the availability to better serve their shop customers quickly and accurately.



IN AN ONGOING EFFORT, MOTORCRAFT IS EVALUATING EVERY SINGLE PRODUCT LINE, EXPANDING PART-LINE COVERAGE AND ADJUSTING ITS PRICES.

For repair shops, these businesses now have a better ability to stock the most-needed parts that cover the most applications in their small parts areas. Motor-craft understands its end users and the variety of problems they face daily. The Motorcraft approach illustrates just another way that the company stands behind its product and behind those who use the brand.

Beyond that, Motorcraft parts are designed specifically for Ford, Lincoln and Mercury vehicles and have undergone extensive laboratory and on-the-road testing. As part of the company's commitment to all of its customers, Motorcraft parts are held to strict Ford engineering standards that aim to ensure quality and performance.

In the pages ahead, you'll learn how Motorcraft is refining its products, its distribution and its marketing in a quest to become the undeniable choice for technicians and do-it-yourselfers alike. $\overline{\mathbf{Z}}$

OPERATIONS // INVENTORY MANAGEMENT



Distributors and installers can save time and increase sales by reducing SKUs and simplifying inventory

BRIAN ALBRIGHT // Contributing Editor

nventory management continues to be a challenge for warehouse distributors and repair shops. The proliferation of SKUs in the industry has continued at an accelerated pace, which creates both financial and logistical hurdles.

Streamlining inventory can reduce costs and improve sales, but that process requires forging an effective partnership with suppliers. Fortunately, many suppliers have undertaken SKU rationalization efforts to help reduce confusion in the market and improve sales in key categories.

The scope of the SKU count has made it difficult for distributors and repair shops to stock the parts their customers need in the correct quantities and with the right coverage. Repair shops need access to an array of application parts, and they typically need them quickly. This puts more pressure on shops to stock a wider variety of commonly needed parts. The increasing number of choices among parts for similar applications also can create confusion in the installer base when it is time to place an order.

For distributors, SKU expansion means shipping higher volumes of smaller quantities with more complex fulfillment requirements. The wider variety of SKUs complicates the picking process, requires a warehouse to establish more stock locations and drives more frequent handling and storing of lower-volume SKUs.

The supply chain gets clogged with similar parts for the same application, while the preponderance of parts can eat into the movement and positioning of higher quality or more profitable parts. Having more SKUs for similar parts also increases total inventories and complicates forecasting, because all stakeholders (manufacturers, distributors and shops) constantly are adding new items with no ordering histories to draw from.

By streamlining part numbers, distributors can do a better job of stocking higher volumes while turning the inventory more quickly. Having fewer SKUs that fit more models or vehicle lines can reduce inventory carrying levels.

Suppliers tackle SKU counts

Distributors and repair shops can't tackle this problem on their own. Suppliers have a critical role to play – and can benefit from part number consolidation as well.

For Motorcraft, the decision to adjust product lines to optimize SKU count through both consolidation, and in some cases expansion, include fewer SKUs was prompted, in part, by the fact that competitors had fewer part numbers for similar products. The company's decision to consolidate some SKUs and expand others was was targeted at improving sales while also making it easier for distributors to order and stock the parts.

In some cases, it means increasing coverage with new parts (the case with alternators and starters) and in others this means reducing part numbers without affecting covered applications (the case with oxygen sensors). The key is to find a way to reduce the overall SKU count while providing the same coverage level.

"Fewer SKUs reduce inventory carrying levels, but there has been no reduction in make/model year vehicle applications," Jana Shockling Ford North America Air Conditioning Product Manager, says.

No risk to sales

Importantly, reducing SKUs can have a positive effect on sales. While cutting some part numbers from inventory might appear to carry a risk of being out of stock, those risks are mitigated by ensuring coverage from remaining parts.

"It is unlikely there will be a reduction in sales, as there is always an alternative part to one that will be obsoleted," Shockling says. "We anticipate that reducing the number of SKUs will translate into more availability for the end customer. When a customer knows that a quality Motorcraft part is available at a competitive price, he or she is more likely to come to Motorcraft first before the competition. Installers have told us they prefer the quality, fit and performance of Motorcraft parts, but our parts need to be readily available and priced right. We listened, and have taken actions to increase part availability by reducing our complexity."

Fewer SKUs makes it easier to improve availability because there are fewer individual streams of demand to monitor and adjust for. Instead of trying to forecast demand for a wider variety of redundant, competitive parts, distributors can better cover any given application with less guesswork. Across the board, Motorcraft is adjusting its product lineup to best address customers' needs, including offering new alternators in addition to remanufactured ones and a new lineup of coated calipers.

"Long-term, we expect growth due to new product lines where we currently do not have a product, and consolidation (without reducing coverage) to allow for better inventory," says Paul Brearey, Ford North America Electrical Product Manager. In the case of the Motorcraft oxygen sensors, Brearey says Ford is moving from 85 SKUs down to 62 without affecting coverage. For model years 1990 to 2010, 23 part numbers have been cut down to one.

In the case of brake products, Motorcraft is reducing the overall number of SKUs while also introducing new brake products. "We are reducing the complexity of our Motorcraft brake product lines starting with rotors, brake pads, and calipers," says Marcus Liskey, brake product manager at Ford. "We are also launching some exciting new Motorcraft brake products like coated rotors and coated friction ready/semi-loaded calipers."

For Motorcraft A/C compressors, it opted to eliminate certain build levels based on the aftermarket demand. The company is eliminating the loaded remanufactured and new unloaded compressors. "In addition, we verified that any eliminated part (unloaded or reman) had a comparable new loaded part already available for purchase," Shockling says. "There was no impact on coverage."

Which parts to stock?

For distributors that want to try to reduce SKU complexity through their own inventory management processes, doing so requires an investment in time and sales analysis/forecasting capabilities.

In lean environments, this type of

rationalization is conducted by ranking inventory based on sales velocity. Distributors need the ability to understand the impact of brand switching and sales cannibalization to understand the impact of SKU rationalization decisions. You also have to be able to determine, based on part attributes, which SKUs are duplicative and can be consolidated.

The end result of these efforts should be that distributors can stock less inventory with the same level of coverage. This makes it more likely they'll have the parts installers require in stock, but at a lower level of inventory carrying costs and with less complex forecasting requirements.

Easier ordering for installers

For shops, a reduction in SKU count eases inventory management headaches. A more streamlined approach to part numbers can help them focus on the SKUs they need to have on hand.

SKU consolidation makes it easier for installers to find the right part and work efficiently with the distributor because of the streamlined product offerings. This saves time, effort and frustration. There are also fewer part configurations shops need to know how to install. "They are more likely to have the part in stock for the vehicle in their shop," Brearey says. "There is less waiting and down time."

Distributors and installers can improve sales and their ability to have the right part in stock by working with suppliers to consolidate the part numbers they stock. This saves time, eases the inventory management burden and helps ensure customers receive the right part for a quality repair. **ZZ**



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Working to expand the Motorcraft brand

Motorcraft seeks to better serve customers and aftermarket partners

rom the time that Ford Motor
Company launched the Motorcraft parts brand in 1972 until now, customers driving Ford,
Mercury and Lincoln vehicles have been able to buy high-quality, OE replacement parts that were designed, engineered and recommended by Ford Motor Company.
Now, Motorcraft is working to increase its presence in the market to address customers' needs and to build upon Motorcraft's reputation as a provider of quality parts.

In an interview with *Motor Age*, Brett Wheatley, Executive Director – North America for Ford Customer Service Division, details Motorcraft's strategy of continuous improvement with a goal of always being the part of choice for customers and aftermarket partners alike.

Motor Age: What are the strengths that Motorcraft brings to the market historically?

Wheatley: Motorcraft has established a very positive reputation in the industry as a provider of OE quality parts for Ford and Lincoln vehicles that always fit right, are easy to install and are backed by a strong warranty.

Motor Age: What brought about Motorcraft's initiatives to introduce more competitive pricing, increased coverage and improved accessibility?

Wheatley: We listened closely to all of our customers — the end users, dealers, distributors, fleets and independent installers. Their consistent feedback was to build on Motorcraft's advantages of OE fit and quality, but to expand coverage to older models with attractive aftermarket pricing and simplify



WE ALSO WANT TO ENSURE OUR VALUED PARTNERS FULLY UNDERSTAND THE ADVANTAGES OF USING MOTORCRAFT PARTS AND HAVE THE TRAINING TO PRESENT OUR PRODUCTS CONFIDENTLY TO CUSTOMERS

the product lines to make it easier to stock Motorcraft parts. Our customers have helped shape our strategy, and we're very excited to meet their requests and expand our Motorcraft presence in the market.

Motor Age: Given Motorcraft's strengths and these new product initiatives, what is the strategy for Motorcraft going forward?

Wheatley: Motorcraft wants to be the "part of choice" for Ford and Lincoln customers and to always be readily available wherever customers choose to get their vehicles serviced. Our OE quality, more competitive pricing and new product lines will create even more consideration for Motorcraft parts.

We also want to ensure our valued partners — the dealers, distributors, independent installers and fleets — fully understand the advantages of using Motorcraft parts and have the training to present our products confidently to customers. We know Motorcraft provides the OE fit and quality that will result in the best possible repair. Our new brand campaign is just the beginning of a comprehensive strategy to build on Motorcraft's proud heritage and take it to the next level. **Z**

BRETT WHEATLEY, is Executive Director – North America, for Ford Customer Service Division. He oversees Ford and Motorcraft parts and service activities for Ford and Lincoln dealers, Quick Lanes and independent repair facilities. With Ford Motor Company for 27 years, he has served as Vice President of Marketing, Sales and Service for Ford Asia Pacific, Shanghai, China; as Director, Global Market Representation; and as sales zone manager and a regional sales manager. Wheatley has an MBA in international business from Duke University and a bachelor's degree in marketing from Miami University in Oxford, Ohio.



FOR 66 YEARS, IT'S ONLY BEEN FORD FOR THE WOOD BROTHERS

A 1938 FORD UNDER AN OLD BEECH TREE WAS THE FIRST RACECAR THE LOYAL WOOD BROTHERS RACING TEAM TOOK TO THE TRACK

PETE MEIER // Director of Training



here is something to be said of finding a quality product and sticking with it. Whether a technician in a bay turns to a trusted tool or part line or a race team finds success with a vehicle brand and puts all of its efforts into it for decades, that loyalty tends to be rewarded.

That's been the case for the Wood Brothers, who for 66 years have stuck with Ford as it built a successful, respected racing team. NASCAR icon Eddie Wood is president and co-owner of the No. 21 Wood Brothers Motorcraft/ Quick Lane Ford Fusion and is tasked with keeping the team on track in his father's footsteps.

The Wood Brothers racing team has been in existence since 1950, founded by Eddie Wood's father, Glen Wood. The elder Wood received recognition as a top driver in his own right, with 19 wins in the Modified, Sportsman Convertible and Sprint Cup divisions, more than any other driver at the time he retired from driving. In 1998, he was named one of NASCAR's 50 Greatest Drivers, and in 2012, he was inducted into the NASCAR Hall of Fame as a driver and team owner.

Other honors include induction into the International Motorsports Hall of Fame, the Daytona Stock Car Racing Hall of Fame, Motorsports Hall of Fame of America, the NMPA Hall of Fame and the Virginia Motorsports Hall of Fame. He received numerous other awards including the 1968 and 1973 Myers Brothers Memorial Award, the 1993 Buddy Shuman Award, the 1995 Pocono's Bill France Award of Excellence, the 1999 Spirit of Ford Award, the 2005 Smokey Yunick Award and the 2010 Henry Ford Innovation Award.

But while the drivers who have piloted the No. 21 Ford have changed, the car always has remained a Ford. It's that loyalty to a brand that quite possibly



WOOD BROTHERS have raced solely Ford vehicles since the team first took to the racetrack 66 years ago. Pictured are (from left) Eddie Wood, driver Ryan Blaney and Len Wood.

has drawn in the long list of NASCAR notables taking turns filling in Glen Wood's place behind the wheel, among them Cale Yarborough, David Pearson and Michael Waltrip. 2016 marks the return of the Wood Brothers team to a full schedule of racing, with driver Ryan Blaney steering the team into six top 10 finishes and 10 top 15 finishes through 22 races in what else, but a Ford.

So while the technology is more advanced than that found on the old 1938 Ford back in 1950, the dedication to the line, to racing and to the team has remained as strong as the parts on the Fords themselves.

And it all traces back to an old beech tree on a legacy-filled homestead in Buffalo Ridge, Va. Since under the shade of that tree was where the Woods Brothers team started, it's only fitting we start our talk with Eddie Wood at that very point.

MOTOR AGE: Mr. Wood, thanks so much for taking the time to talk with me today. I'd like to start off by talking a little about the history of the Wood Brothers team. I remember reading something about a beech tree on your team's web-

site. Can you tell me more about that?

WOOD: Exactly! The old home place is still there; the beech tree is still there. My father and four or five of his buddies decided one day they were going to buy a racecar and brought home a '38 Ford. Before they could even unload it, his dad comes out says, "Don't unload that thing here!" Of course, they did anyway. (My grandfather), he was a mechanic at the local Ford dealership, and I guess he finally figured out they weren't going to get rid of it, so he started helping with the car. He was a really good mechanic, and he helped them with the engine and things. In fact, the limb is still on that old beech tree and you can still see the marks from the old chain hoist they used to pull that first engine out with. We recently found the original hoist they used, too.

MOTOR AGE: No doubt your family has been involved with stock car racing since the beginning. Which leads to a question I have to ask. I know Virginia is known for good moonshine. Were there any midnight runs made by that first Ford?

NEW ATTITUDE. SAME RED BOX.

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Right part. Priced right.







WOOD: (Chuckles) Yeah, as we've all gotten older they started telling on themselves a bit. They know now they aren't going to influence us anymore, but back then it was always, "Don't drive too fast. Don't do this. Don't do that." But back in those days, they did all of their race testing on the highways near the house. There are not a lot of straightaways in Buffalo Ridge, but they'd get out to make sure the car would at least accelerate and all. I think they had a lot of fun.

MOTOR AGE: I bet they did, too. Is that what attracted you into racing? How did you get involved in the sport?

WOOD: Of course, I was kind of born into it. After school, when I was around 12 or 13 years old, I'd go over to the shop and help out – cleaning up mostly. Cleaning parts, cleaning wheels, cleaning the cars, that kind of thing. It was hard to do the cars right, because there was a certain way you had to wax and polish them, and you had to keep the cleaner off of the plastic and leather. We didn't have all of the cool cleaning stuff we have today back then. And my brother got in the same way a few years later when he got old enough to help.

The way my family always worked

on racecars, you know, they'd work all day on them and then go have dinner. But then they'd go back at night and work another three, four hours more. And that's what we did. We were always around our dad and our uncles in the shop. Then you start picking up on how to do things and it just kind of happens. Tere was never really any doubt we'd end up working on racecars.

MOTOR AGE: And I see that the only brand you're family has ever raced is Ford?

WOOD: It's all we ever raced. That first racecar they ever bought was that '38 Ford, and they gave \$50 for it back in 1950 – and 50 was the first number on the car. It took two or three tries before they finally got to race it the first time, and they crashed and bent the rear axle in the car. Back in those days they had to flat tow the car, you know, with a tow bar and the car riding behind the tow car on all four wheels. Well, the car caught fire on the way home — nearly burned it to the ground — from something dragging in the back. And, of course, they have their gas and stuff in the trunk of the racecar.

They got the car home and then everybody started talking about how that ought to teach 'em, and how racing is

unsafe and all. All it did was make my dad and uncles mad.

They cleaned it up and started all over again, and within a few weeks they went back to the racetrack and actually won their first race.

MOTOR AGE: That's a great story! So you've been in racing for a long time. You must have a favorite track, and I heard somewhere that it was Daytona.

WOOD: Yes, sir. Daytona is probably my favorite track, yes it is! We've had a lot of success there, both in February for Speed Week and again in July for the Firecracker race. And I have memories from Daytona back when I was a kid, around 5 or 6 years old, going with my father. And we'd always bring back trophies! Back then, being so young, I just thought that was really cool. And because it's Daytona, you know, it's just where you had to be, where you have to be. ZZ



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A NEW LOOK AT MOTORCRAFT

COVERAGE EXPANDS AS PRODUCT LINES CONSOLIDATE AND PRICING BECOMES MORE COMPETITIVE

TSCHANEN BRANDYBERRY // Special Projects Editor

pace and time: two commodities of which every distributor and repair shop wishes it had more. Motorcraft is doing its part to meet these demands by adjusting product lines across its offering, making it easier to house inventory, find the right part the first time and complete the sale to the consumer. Motorcraft is streamlining some product lines by adjust-

ing the number of SKUs offered while maintaining coverage

today's automotive aftermarket professionals have come to expect. Additionally, it is adjusting prices on some products to better serve both technicians and consumers.

Across the board, no matter the product, the messages ring similar: less complexity, better coverage for customers, more competitive pricing. Let's look at the individual product areas and the changes professionals will see, along with highlights of each line.

RADIATORS

One way Motorcraft is reaching out to a new segment of customers is through its radiator line. With 159 Motorcraft radiator part numbers, the line is being rebranded from a Ford products with dealer-only distribution to a Motorcraft branded product. Motorcraft experts add that they provide optimal coolant capacity, flow rate and heat dissipation under varying thermal and pressure cycles.

Susan M. Jones, Ford North America Powertrain Components Product Manager, reports that Motorcraft radiators have 97 percent coverage of Ford, Lincoln and Mercury vehicles for model years 1996 to 2017.



SHOCKS AND STRUTS

For Motorcraft, rationalizing the shocks and struts line came down to a simple premise: win the numbers game.

"There were multiple shocks with the identical fit, form and function released on different model years of vehicles. Stocking all of those unique parts was prohibitive," says Jana Czopek, Ford North America Underhood Product Manager. "In order to get greater stocking at our sellers, we needed less complexity and higher volume with less SKUs."

With the line's new approach, there will be 400 fewer SKUs, resulting in a 45 percent reduction in out-of-warranty application. But the advantage is that the higher volume on fewer SKUs enables distributors to stock the parts and turn the inventory faster, Czopek says.

"Motorcraft shocks are the only shocks that meet OE specifications for fit, form, function and durability," she adds, further describing benefits of the rationalized lineup.



A/C COMPRESSORS

Keeping things simple. That's the approach with a new, rationalized line of A/C compressors. Focusing on features that set the Motorcraft compressors apart from the competition, Motorcraft will be able to offer better coverage that works for today's distributors and repair shops.

"Upon reviewing the aftermarket competition, we found Motorcraft was offering three build levels (new



loaded, reman loaded and new unloaded), whereas others were only offering a single type (new loaded)," explains Jana Shockling, Ford North America Air Conditioning Product Manager. "For example, a 2001 F-150 had three compressor options to choose from: YCC214 (new loaded), YC2562 (new unloaded) and YCC121RM (reman loaded). We are eliminating the YC2562 and the YCC121RM to simplify the offerings for the consumer."

One thing that remains unchanged with the revamped lineup is the quality of product. The A/C compressors all feature hardened internal parts; e-coated pulleys for corrosion resistance and long-lasting finish; Teflon® piston rings; tin-plated, forged aluminum washplates; and pre-shimmed, rubber-damped clutch assemblies.

In all, 39 reman compressors and nine unloaded compressors are being eliminated. "Fewer SKUs better enable the WDs to stock a full catalog of compressors," Shockling notes, adding that all Ford vehicle applications from 1991 to current model year are covered. "Instead of carrying two or three types of compressors for higher volume applications, they can carry a single compressor for every line – even those that carry less volume."

OXYGEN SENSORS

Dropping from 23 to one. While that might seem like a large decrease, the positive outcome for distributors and shops is sizeable.

"In the critical 1990-2010 model years, we are consolidating 23 part numbers down to a single one," says Paul Brearey, Ford North America Electrical Product Manager. This means now technicians will have to spend less time working with the counterperson in looking up the right part for the vehicle being repaired. Overall, Motorcraft is moving from 85 SKUs to 62.

"This allows the distributors, stores, installers to stock fewer parts without sacrificing vehicle coverage," Brearey adds.

The rationalization partially is in response to competition, which has significantly fewer part numbers for older model vehicles (1990-2010) that use a Heated Oxygen Sensor (HEGO), he explains. But while the number of SKUs will be fewer, the coverage and features technicians have grown to expect and rely on from Motorcraft remains the same.

"Motorcraft sensors meet OE specifications and are 'plug and play' with no connector modifications required," says Brearey. Most 1990-2010 vehicles will be covered by the new part, which now uses the longest wire length instead of multiple wire lengths on the same sensor.



STARTERS / ALTERNATORS

Motorcraft also took a broader approach to its starter and alternator lines by launching a new line of starters and alternators.

In looking specifically at the new starter and alternator lines, Brearey explains that they are selected by Ford to meet the requirements of Ford, Lincoln and Mercury vehicles and feature no core deposit or core returns. Both are competitively priced across a full line of applications. The new lines significantly expand the Motorcraft coverage, and new parts will be just slightly higher than the quality remanufactured parts.

Additionally, he says the starters are 100 percent precision-balanced to run smoothly and quietly. Solenoid designs are endurance-tested on starters to verify consistent performance in the real-world operating environment.

The new line of alternators feature OE-equivalent brushes and rectifiers for long life and are manufactured utilizing premium brand electronics and premium grade bearings. Most Ford vehicle applications are represented in the alternator line, and the majority of all Ford vehicle applications are found in the starter line.

These lines, too, are getting a new approach to pricing, with the costs being set very competitively. "As a brand, we are driving towards being fully competitive in pricing, especially on new product lines," Brearey says.

BRAKES

With several components comprising the brake product line, overall changes might seem daunting, but they are not. Just as with others, it came down to knowing the numbers and solidifying Motorcraft's place in the market.

"Market research showed that the Motorcraft line of brakes had too many SKUs and was difficult to order and inventory," says Marcus Liskey, Ford North America Brake Product Manager. "We are looking at all of our Motorcraft brake products and are working to simplify all the brake product lines. We started with brake rotors, then brake pads, then calipers and are looking at all the brake parts to see what we can do to make our Motorcraft brake products easier to stock and sell."

In the end, this means fewer SKUs to inventory and manage all while maintaining coverage and service to today's driving public.

In addition, brake pads are being sold in a new pricing structure that will make them more affordable for more consumers, thus bringing in more quality repair options for shops. "We are now offering our premium product at a mid-level price," Liskey says. "We have implemented significant reductions in our pricing to be equal to the competition."

Motorcraft Hub bearings also will have a significant price reduction. "We stand behind the quality of our parts and our ability to help technicians fix it right the first time, but we know we have to be competitively priced to be considered an option in the automotive light repair market," notes Liskey. "Hubs are a late life cycle repair (seven to 10-plus years and 100,000-plus miles), and we are working to ensure we have very competitively priced, high-quality hubs available to meet or exceed the needs of your customers."

Finally, distributors and repair shops will have high-quality options to turn to with a new line of coated rotors and a new lineup of coated calipers. Liskey says the fully coated rotors provide superior corrosion resistance and enhanced appearance. "Coating prevents unsightly corrosion and inhibits the rotor from corroding to the hub, providing easier removal of the rotor for service. The rotors also will provide superior thermal and noise suppression performance."

Additionally, the caliper line addresses the goal of reducing the complexity of the current Motorcraft line while providing a new friction ready-build level.

"The friction-ready calipers will come complete with the bracket, new guide pins and boots and new mounting



hardware. This new build level will make it easier and faster to install," Liskey explains. "We are also launching a new line of coated calipers. The coated calipers will be e-coated in high gloss black and will provide enhanced performance and a long lasting Ford tough appearance."

Overall, Motorcraft expects to launch between 80 and 100 SKUs in fall 2016. It will announce additional product launches later this year as the Ford team aggressively makes product line improvements to meet customers' needs. **ZZ**



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Ford EPAS – More Than You Might Think

The year 2025 is fast approaching, and with it comes the federal mandate of a 54.5 MPG Corporate Average Fuel Economy (CAFE) standard OEMs are required to meet. Many of the system design changes seen over the last several years were born from the need to meet these increasing fuel economy requirements. Electric Power Assist Steering (EPAS) is among these systems.

EPAS systems first were introduced on select Ford production models in 2010. Today, the majority of the Ford line uses EPAS, with hydraulic systems quickly fading away. That's not a bad thing, as EPAS brings several advantages to the table.

First, is its impact on overall vehicle efficiency. EPAS systems weigh considerably less than their hydraulic cousins, and obviously a lighter car uses less fuel. Another immediate advantage is the power required to operate EPAS. Hydraulic systems run constantly whether the driver is turning the wheel or not, but EPAS uses power only when steering wheel movement is detected. Power not being used to drive accessory systems can be used to drive the powertrain, and that provides better fuel economy.

EPAS also can be tailored precisely to a specific vehicle design to provide the driver with the steering responsiveness he or she wants. It also is easily integrated into driver assist systems like Active Park Assist (a system that allows the car to parallel park itself) and Lane Keeping Assist (a system that sends feedback to the driver through the wheel when a lane drift is detected). Additionally, some models offer "Pull-Drift" correction that monitors changing road conditions and limits the vehicle's drift left or right, or "Active Nibble Control," a system that reduces road and tire vibration feedback through the steering system.

Maintenance requirements are reduced as well. There are no fluid leaks to repair, no belts to adjust and no moans or groans to bleed out. If there is a problem, the unit is serviced as an assembly.

Considering there are more than 170 individual electronic and mechanical components that make up an EPAS system, it is vitally important that you choose a replacement assembly wisely. Some offerings might be reverse engineered and will not restore the same steering feel or response as the original OEM unit. Ford offers both new and remanufactured units



under the Ford and Motorcraft brands, both of which meet the original specifications for the models they are designed. They also are backed by Ford engineering teams that are constantly striving to improve the designs and by Ford's twoyear parts warranty.

When replacing an EPAS assembly, be sure to follow all published guidelines including proper torque of all related fasteners and any system re-learns that might be required. Finally, follow up with a test drive to make sure the steering system and related driver assist systems are fully functional before returning the vehicle to your customer. Selecting original Motorcraft will assure the right quality for your customer and the best option for your business.



SOME NEW POWER FOR THE PEOPLE

LATEST EDITIONS OF THE SHELBY MUSTANG AND FOCUS RS HIT THE STREETS AND TRACK

TIM SRAMCIK // Contributing Editor

ost new vehicles receive an official launch.
Some deserve a launching pad as well.
The latter would include the 2016
Shelby GT350 Mustang and Ford Focus
RS, which are celebrating, respectively, a
50th anniversary and a much-anticipated arrival to American
shores. The vehicles are bringing two of the most powerful engines ever built by Ford packaged in designs meant to turn the
track into home and take the yawn out of the daily commute.

The Shelby arrives with an all-new 5.2-liter V8 engine sporting a flat-plane crankshaft, architecture typically found only in racing applications or exotic sports cars. The 180-degree layout reduces the overlap of exhaust pressure pulses. Combined with

additional cylinder-head and valve train advancements, the most powerful naturally aspirated production Ford engine ever punches out 526 hp with a torque peak of 429 ft-lbs.

To harness that power, Ford paired it with the most powerful production brakes ever fitted to a Mustang and MagneRide adaptive suspension. The suspension uses special dampers and wheel position sensors capable of monitoring motion thousands of times per second to adjust every 7 milliseconds.

Handling gets a further boost from special driver control software that monitors wheel position, steering angle, damper temperature, signal quality and vehicle position. All that keeps tires loaded on huge 19-inch aluminum alloy wheels firmly gripping pavement.



Ford says the Shelby is built to inspire confidence at the track. Helping raise that confidence is the addition of a Performance Shift Light Indicator in heads-up display that lets drivers keep their eyes on the road when looking for shift points. Customers can set shift points, light intensity and select from three different modes: Tach, Track and Drag, depending on driving conditions.

The Focus RS, meanwhile, features a tuned-up, turbocharged 2.3-liter EcoBoost I-4delivering 350 hp and 350 ft-lbs. of torque. That's extreme power even for this third generation compact sports hatchback, so Ford made sure to yoke it to its most powerful RS braking system ever, with advanced cooling and Ford Performance All-Wheel Drive.

At play here is Dynamic Torque Vectoring that continuously varies front-to-rear and side-to-side torque distribution to maximize traction and cut understeer in any situation. If the RS already wasn't begging to be taken to the track, it makes its case further with four drive modes to configure the car for optimum performance in road or circuit conditions: normal, sport, track and special drift mode.

"They help ensure that the extreme driving capabilities of the Focus RS are made more accessible and simple to use, enabling the driver to choose from a range of different performance characters for the car," says Focus Brand Manager Jessica Bishop.

Both the RS and Shelby Mustang include a number of styling cues that distinguish them from their model siblings and hone their performance potential. The Shelby suits up with a re-sculpted, more aggressive fascia, wider front fenders, and an aluminum hood that extracts heat while cutting underhood lift. At the rear, a functional diffuser and spoiler increase downforce without creating drag.



AN ADAPTIVE SUSPENSION SYSTEM coupled with special driver control software keep the Shelby's fat 19-inch tires planted firmly on pavement in and out of tight curves.



THE FOCUS RS allows motorists to select among four different drive modes - normal, sport, track and a special drift mode - for an optimized driving experience.

The RS is decked out in a special front grille, rear diffuser and unique spoiler that create zero lift overall for best possible high-speed handling. Both vehicles dress up their interiors with soft, leather covered flat-bottomed steering wheels and RECARO sport seats.

For cars representing two distinct performance venues, classic muscle and tuners, the Shelby GT350 and Focus RS share much of the same

technological and safety innovation and inspiration. Consider it Ford's way of offering extreme levels of fun in two flavors to keep the performance nation happy. Z



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