

## Ford's Visual Performance Evaluation Laboratory Sheds New Light on Glare

DEARBORN – Flip a switch in a Ford lab, and you've just turned on 6,000 watts of electrical energy generated by 270 spotlights and floodlights.

Mahendra Dassanayake, a Ford lighting technical specialist, stands beneath a planetarium-like dome that can replicate sunlight conditions from dawn to dusk. This lab can mimic the fading light of dusk or turn the room black, like a dark backwoods road with no city lights and no moonlight.

The Visual Performance Evaluation Lab (VPEL) is a high-performance lighting lab that simulates the phases of the earth's revolution around the sun.

This gives Ford designers and engineers a controlled environment in which to test how light affects a vehicle's interior from the driver's perspective. How visible are the controls, how much glare and reflection is generated on smooth surfaces, how does the look of textures and materials change with the light? The work in

Ford's VPEL helps answer those questions.

"The VPEL allows us to see how various interior components would work under different sun load conditions, meaning clear sky, overcast sky, dusk or dawn, or artificial light conditions such as how interior components would appear in a dealer showroom," Dassanayake said.

Under different conditions, the way the vehicle interior looks to the customer changes and the level of comfort changes. "We want to create a very user-friendly, pleasant environment inside," Dassanayake said.

Lighting lab engineers focus on instrumentation and interior lighting to make sure interior components are properly lit to be legible inside the vehicle cabin. Various interior components are tested under an array of lighting conditions because different lighting, whether from natural or artificial sources or from the outside or inside, can alter the

way interior surfaces and materials look.

For example, under bright daylight conditions, black leather can appear almost gray, smokier in color than it would under dusk or low light conditions. If that isn't acceptable, then Ford's designers may consider choosing a different shade of black or different texture on the leather to minimize the change in the color's appearance.

The VPEL, in operation since 2006, has been invaluable to the vehicle interior design team

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Ford's Visual Performance Evaluation Lab puts the proverbial spotlight on lighting and glare issues that customers may face, as it mimics sunlight conditions from dawn to dusk.

## Michigan Assembly Plant Is Ford's Versatile Facility

WAYNE, Mich. – Ford Motor Company is celebrating production of its all-new global Ford Focus, built for North American customers in its completely transformed Michigan Assembly Plant (MAP).

Following a \$550 million transformation, the plant features an environmentally friendly workplace with flexible manufacturing capability and a motivated, specially trained workforce ready to deliver a fuel-efficient new car to the marketplace.

"MAP epitomizes the best of what Ford stands for – fuel efficiency, quality, smart technology," said Mark Fields, president of The Americas. "Focus delivers even more of what customers truly want and value – and this new car could not arrive in the market at a better time."

The new Focus sets a new standard in the small car segment in North America, offering

more technology and features than more expensive European cars, such as SYNC with Traffic, Directions and Information, MyFord Touch, active park assist and Wi-Fi access, while delivering up to an unsurpassed 40 mpg with an automatic transmission.

Fuel economy and greener driving will be built into each new vehicle slated for production at MAP. With its flexible manufacturing system, Ford workers can build multiple models on one or more platforms in the same facility. The Focus Electric zero-emissions battery electric vehicle is slated to go into production late this year at the plant, followed by production of the new C-MAX Hybrid and C-MAX Energi plug-in hybrid in 2012.

With this product lineup, Ford's Michigan Assembly Plant will be the first facility in the world capable of building a full array of vehicles – gas-pow-

ered, electric, hybrid and plug-in hybrid – all on the same production line.

The company's investment in Wayne is supported by strong partnerships at the state, county and local level, as well as by Ford's green partnership with the U.S. Department of Energy. Michigan Assembly Plant is one of 11 Ford facilities in the U.S. participating in the Advanced Technology Vehicles Manufacturing Loan Program initiated by Congress and implemented by the Obama administration.

This green loan program is helping to develop advanced technology vehicles and strengthen American manufacturing across the country. Ford, Nissan, Tesla, Fisker and Vehicle Production Group (VPG) are all participants in this initiative.

MAP is Ford's most flexible plant, thanks to reprogrammable tooling in the body shop,

standardized equipment in the paint shop and a common-build sequence in final assembly. This flexibility allows the Ford team to produce multiple models on the same assembly line – and in even more environmentally friendly ways.

In its flexible body shop, at least 80 percent of MAP's robotic equipment can be programmed to weld various-sized vehicles – a Ford first. And, MAP's integrated stamping facility allows the stamping and welding of all large sheet-metal parts on-site, ensuring maximum quality and minimum overhead.

The plant also will employ an efficient, synchronous material flow, where parts and other components will move in kits to each operator, providing employees with the tools they need in the sequence they will need them.

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Ford heiress Josephine Ford is seen driving a "Custer" car used by the children of Edsel and Eleanor Ford back in the 1930s.

## Edsel Ford House Shows Off New Car Exhibition

GROSSE POINTE SHORES – What's the perfect gift to give the children of Automotive pioneers? Miniature cars, of course.

Three special guests are rolling into the Edsel & Eleanor Ford House (Ford House) garage exhibit – two gasoline-engine miniature racer "Custer" cars used by the Ford children and a 1935 Lincoln K Lebaron Coupe. The updated exhibit, which showcases historic Ford family vehicles and highlights Edsel Ford's keen eye for design, opened March 15.

A gift to Eleanor and Edsel's two youngest children, William Clay and Josephine, by their grandparents Henry and Clara Ford for Christmas in 1934, the toy cars were fitting presents for the children of one of America's greatest industrialists.

Made by the Custer Specialty Company of Dayton, Ohio, the racers are powered by one-cylinder Briggs & Strat-

ton engines.

The miniature racer cars demonstrate the Ford family's spirit of adventure and sport as they were used by the children to speed around the grounds of both Ford House and at Fair Lane, their grandparents' home.

"The Custer cars are a fun, new addition to the Ford House garage that reveal a playful side of the Ford family we don't always get a chance to see," said Ford House President Kathleen Mullins.

"With the addition of home movies of William and Josephine zooming around the grounds in the cars, visitors get a real sense that this was a family home, alive with activity."

The home movies, including one of Edsel joining in the fun by squeezing into one of the miniature racers to play with his children can also be viewed on YouTube.

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by Gerald Scott  
Editor  
U.S. Auto Scene

It seems that the Henry Ford Fair Lane estate isn't the only automotive entity in Dearborn poised for major changes these days.

The Automotive Hall of Fame is in for some significant changes of its own, according to President Bill Chapin.

Last week, Chapin spoke at the Hall about what he has in mind for the facility.

"The Hall of Fame, historically has been about – not only the facility, but the (visitor) experience – has been about our inductees," Chapin said.

"While these are very notable people, it's really not the subject that is what we ought to be promoting in the 21st century."

"What we're trying to do here is make the Automotive Hall of Fame (relevant) to the auto industry today – to the Detroit community."

"We're really looking at a new branding exercise that takes the Hall of Fame and rather than talk about our inductees, it's about recognizing outstanding automotive achievement – not only about yester-

day, but today and into the future."

Chapin is wasting no time having an impact on the facility. A familiar name to the Detroit automotive community, he is the grandson of Roy D. Chapin, a founder of the Hudson Motor Car Company, and the son of Roy D. Chapin Jr., former Chairman and CEO of American Motors, Bill Chapin has been involved in the automotive industry his entire life.

Bill Chapin was named president of the Automotive Hall of Fame last July and now he's hitting gear with changes after studying the role and resources that the Hall can bring to the marketing table.

Chapin continues, "The museum here is going to change a great deal, it's not just about the exhibits, but we're going to have a series of special exhibits. We've got about four different areas we can use for special exhibits."

"When we launch our new Web site in April, you start here at the Automotive Hall of Fame as the hub of all the automotive tourism in Southeast Michigan."

"There are probably 3-4 million people who come here to Southeast Michigan to do auto-related things: whether it's to go



PHOTO: GERALD SCOTT

Bill Chapin, president of the Automotive Hall of Fame, said big changes will be coming soon to the Dearborn facility.

to The Henry Ford, Woodward Dream Cruise, MIS, whatever.

"We know there's a ton of them here and what we need to do is help them manage their tourism experience. We're going to tell people you can come here... to plan and learn about all the other auto-tourism things you can do in Southeast Michi-

gan. "So we're really going to become the hub, if you will, for auto tourism in Southeast Michigan. There is a need to market that opportunity better."

He pointed out that up to 30 percent of the visitors to the

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PHOTO: GERALD SCOTT

A visitor checks out the Ford Rouge industrial photo gallery as part of the "Modernism at Risk" art exhibit that opened at the U-M Liberty Annex in Ann Arbor last week.

## Ford Industrial Architecture Gets Its Due in Ann Arbor 'Modernism' Show

by Gerald Scott  
Editor  
U.S. Auto Scene

Noted architectural photographer Balthazar Korab attended the opening of the new "Modernism at Risk" art exhibit in Ann Arbor last week, so that's confirmation how cool the exhibit is.

As it happens, Ford Motor Co. industrial architecture, particularly from the Rouge plant of the 1920s, certainly gets its due in this comprehensive exhibit that is formally entitled, "Modernism at Risk: Modern Solutions for Saving Modern Landmarks."

The traveling exhibit debuted last week at the U-M Liberty Annex, which is a for-

mer railroad warehouse converted into an art space.

The Ford Glass Plant (1922), designed by Albert Kahn, is a major part of the modernism exhibit in that replicas of blueprints and architectural photos are stand-out offerings in the display.

"Completed in 1925, the Glass Plant, which was designed by Albert Kahn and featured butterfly roofs and derestory monitors, was considered a landmark in industrial architecture," the exhibit reads.

"The 240-by-760-foot structure was planned, however, so that it could be easily expanded and altered to meet the demands of constantly changing technology.

"As a result, the present 320-by-2,600-foot edifice bears little resemblance to Kahn's original design. Situated west of the Dearborn Assembly Plant, the Glass Plant is the scene of an almost completely automatic glass-making operation. Using the float process, the plant produces 13.41 miles or 500 tons of glass each working day."

Indeed, the exhibit further notes that the drawing reproductions (blueprints) of the Glass Plant are from primary sources located at the Bentley Historical Library, University of Michigan.

And related photographs are on loan from the Bentley

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