

GM No Featherweight in Manufacturing

It's not exactly for the birds. In fact, it's for the cars – and their quality.

At GM, ostrich feathers are among the “tools” used by some quality operators.

Amid the high-tech robots, miles of conveyers and multiple assembly lines, a number of inconspicuous hand-held “tools” – including one that uses ostrich feathers – are being used in an effort by GM to get top levels of vehicle quality before the vehicles leave the assembly plants across the country.

This attention to detail is important because Chevrolet, Cadillac, GMC and Buick are in the midst of launching 27 new or significantly updated cars, trucks and crossovers this year and in 2014. According to a GM news release, Chevrolet alone will launch 13 “all-new” or significantly revised cars, trucks and crossovers in 2013, including the Chevrolet Silverado, Impala, Corvette Stingray and Cruze diesel.

“Customers probably don't think about what actually goes into putting a high-quality vehicle on the road, although that's exactly what they expect in appearance and functionality when they are shopping for a new vehicle,” said Mike Ptashnik, Quality manager at GM's Detroit-Hamtramck Assembly. “These tools may be small, but they are really

important in helping us build vehicles that deliver on customer expectations.”

Five of these tools, used in most of GM's 12 assembly plants in the United States, are:

- Female ostrich feathers that remove fine exterior dust particles before a vehicle is painted;
- Gap sticks to help ensure uniform body fits;
- Velocity meter gauges that confirm door closing efforts are what customers expect;
- Sniffer gauge that detects refrigerant leaks in the engine compartment;
- A water probe that senses interior moisture.

Jay Baron, president and CEO of the Center for Automotive Research in Ann Arbor, Mich., also sees small tools making big quality contributions.

“With all the technology that goes into designing and making the car, in the end, it's the small things that really matter,” said Baron.

“If the door gaps are not flush and parallel, or the door squeaks when you open it, or there's a small fleck in the paint finish, the overall quality of the vehicle may be tainted in the eyes of the consumer.”

To ensure long-lasting paint quality, GM plants use female ostrich feathers on each vehicle before the top coat of paint is ap-

plied. The paint feathers remove microscopic bits of dust that could affect paint quality.

The pre-paint ostrich feather process resembles a car wash without the water. Ostrich feathers are wrapped around six cylinders, two that roll over each of the vehicle sides and two overhead that clean the fascias, roof, hood, and decklid.

As a vehicle's steel body approaches, the cylinders roll over the body front to back to capture fine dust particles before the final top coat of paint is applied. Female feathers are softer and last longer than their male counterparts.

The feathers are durable, yet delicate enough to prevent scratching. Each feather possesses microscopic fingers, which remove fine dust particles from the body by creating static electricity. As the cylinders of feathers do their job, a high-powered vacuum removes dust residue.

The amount of pressure and feather surface or “crush” applied to each vehicle varies from one to three inches, depending on model and body part being cleaned. Once a vehicle makes its way through the station, a flashlight is used to inspect for any missed particles.

One ostrich feather has no impact on a vehicle's paint quality. But combined with thousands of



A not-yet-assembled Chevrolet Volt makes its way through a bank of female ostrich feathers at Detroit-Hamtramck Assembly.

other feathers, they are a critical tool used at GM plants. No birds are harmed in the feather collection process, as they are collected as a part of the bird's natural shedding process.

Gap stick ensures uniform body fits. Employees at GM

plants receive hours of training on body panel fit and flushness. To ensure vehicles meet extremely tight tolerances, finger-sized measuring tools called gap sticks are used to ensure gaps between body panels are consistent and uniform on the finished vehicle.

EyesOn Design to Honor Ex-GM Design VP Cherry

An EyesOn Design weekend will be held at, among other places, the Eleanor & Edsel Ford Estate on the weekend of June 14-16.

The weekend begins with a special “Vision Honored Awards Dinner” to be held at the GM Heritage Center, 6400 Center Drive in Sterling Heights. Tickets to the event are \$175 per person and the recipient of the 2013 Lifetime Design Achievement Award will be GM designer Wayne Cherry. Bob Lutz will present the trophy to Cherry.

The award, given annually by the Detroit Institute of Ophthalmology (DIO), is unique in that only vehicle designers who have previously won the award are allowed to vote. Previous winners include such designers as Chris Bangle, Walter de'Silva, Tom Gale, Giorgetto Giugiaro, Chuck Jordan, Robert Lutz, Shiro Nakamura, Chuck Pelly, Sergio Pininfarina and Jack Telnack.

Cherry, who was only the fifth vice president of Design in General Motors' history, joined GM in 1962 after graduating from the Art Center College of Design in Los Angeles.

He soon was a member of the teams that developed the landmark 1966 Oldsmobile Toronado and the 1967 Chevrolet Camaro designs.

In 1965, he was transferred to GM's British operations, Vauxhall Motors, where he led the design work on the gull-winged XVR Concept and designed the low-slung, mid-engined SRV, and the 1978 Equus.

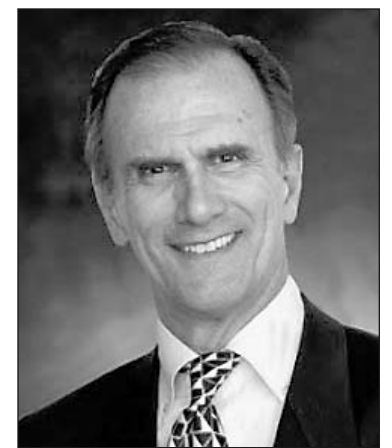
Named director of Design in 1975, Cherry's team was responsible for a number of successful cars, trucks and coaches that significantly improved Vauxhall's market share.

In 1983, he became director of Design at GM's Opel Design Centre in Germany where his team was responsible for the design of all GM vehicles in Europe. There, he oversaw the design of the Opel Junior, which eventually influenced the 1993 Corsa that received 20 international design awards.

In addition, he was responsible for the 1987 Omega, named the European Car of the Year, the 1991 Vectra, the 1995 Astra, the 1996 Omega and two sporty models – the Calibra coupe and the Tigra. During this period, Opel became number one in European sales.

Cherry returned to the U.S. in 1991. Named General Motors' vice president of Design worldwide in 1992, he was responsible for all of GM's North American brands – Buick, Cadillac, Chevrolet, GMC, Pontiac, Oldsmobile, Saturn, and Hummer.

Among the many signature



Wayne Cherry

production cars and trucks produced under his leadership were the Pontiac Solstice, the H2 Hummer and the Chevy SSR, as well as more than 40 concept vehicles, among them the Cadillac Evoq, Cien and the Cadillac Sixteen that was unveiled in 2003.

In addition, he was responsible for Cadillac's “Art and Science” design philosophy of sharp lines and crisp edges as seen in his designs for the Cadillac XLR, CTS, SRX and Escalades.

Since retiring from GM in 2004, he has continued to design cars, including the VSR Concept Sports rod, expressing the Cadillac design genre and powered by a 400-horsepower Cadillac V-series engine.

EyesOn Design will stage a special “garage crawl” Saturday, June 15, where attendees will see the Lingenfelter Collection, at 7819 Lochlin Drive in Brighton.

The cost is \$15 per person, and the collection, considered by many experts to be one of the greatest in the country, contains Corvettes, muscle cars and other exotics.

On Sunday, June 16, the day's festivities begin with a special brunch at the Eleanor & Edsel Ford Estate, 1100 Lake Shore Drive in Grosse Pointe Shores, between the hours of 11 a.m. and 1 p.m. The cost is \$75 per adult, and tickets for children 12 and under are \$25.


The EyesOn Design Car Show – titled, “Revolution Over Evolution” – starts at 10 a.m. and goes until 4:30 p.m. at the Ford Estate. The cost is \$20 a person. Those attending will have the chance to see more than 200 classic vehicles that show off the best of Detroit car designs over the years.

To purchase tickets for the events, visit the EyesOn Design site – eyesondesigncarshow.com.

All proceeds from the weekend go to benefit the Detroit Institute of Ophthalmology. The DIO is the research arm of the Henry Ford Department of Ophthalmology, which is committed to assisting and educating the visually impaired.

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