EDWARD T. WELBURN:
SCULPTING THE WORLD'S WHEELS

By Roger Witherspoon

For a young Ed Welburn, the 1958 Philadelphia International Auto Show was the key to his future.

It wasn't the eight-year-old's first exposure to the intricacies of cars. His father, Edward, owned and operated an auto body and repair shop in nearby Berwyn, Pa., and young Ed spent hours watching his father working on the cars from the skeletons out.

Forty years later, the younger Welburn still spends his days looking at cars from the inside out. But now, it is as Vice President for Design at General Motors, the world's largest auto company. Welburn, the 6th design chief in GM's history, has his stamp on every vehicle conceived by the more than 400 designers at the company's 11 world-wide design studios.

His current stature as one of the highest ranking Blacks in the auto industry is a long way from his '50s childhood, a period in which the development of the interstate highway system was just getting into full swing. Americans in the post-war years were taking to the road in record numbers in cars characterized by shining chrome grills and huge fins.

"The '50s were a very car-oriented period," Welburn said. "And it was a period in which cars had a lot of flair. You could easily identify different brands by their looks. They all have very strong character.

"It was a very exciting auto industry, and I grew up in a family where there were always new cars around."

But the Auto Show was special. Designs were changing as American society shifted into a mobile culture. The automakers were experimenting with new designs, configurations and bold styles.

"I like a design that has flair," said Welburn, "that is very expressive and has character that can mean very different things on different types of vehicles. Some designs need to be expressive, and others need to be quiet.

"But they all have to be contemporary. And that is what the big fins on the cars – especially the Cadillacs – were all about. They were built on the new technology of the time."

The fins, he explained, were derived from the fighters and other aircraft of World War II, and continued evolving into the sleeker shapes of Korean War-era jets. "There was a technical look that was the inspiration for the Cadillacs of that time."

He wanted to know more, and his mother encouraged him to read everything about cars and car designs that he could. By the time he was 11, he knew what he wanted to do with the rest of his life.

"I was very interested in auto design," he said. "It was my dream to be a designer, and I did not think of it as a field in which there were not a lot of African American designers. I just thought of it as a field I was extremely interested in."

He took the unusual step of writing a letter to General Motors "and I just let them know I was an 11-year-old kid in Berwyn, Pa. , who was interested in auto design and

wanted their advice. What courses should I take in high school and what other preparation would I need to go to a university?

"And the GM design team responded, and their advice was thorough. They do a very good job of responding to inquiries from young people."

The information was crucial. Future designers have to take the kinds of art courses in high school which would let them develop portfolios good enough to pass the competitive entrance requirements of top art and design schools.

"Somewhere around 9th grade," Welburn said, "you have to make sure you have the right course load to get into a design school. You can't just get to your senior year and say 'I want to go to a school and major in design because I have a good grade point average.' It takes much more than that."

GM had given the young Welburn a list of colleges with fine arts programs that had a major in product design. From that group, Welburn chose Howard University, specializing in sculpting.

Sculpting? Cars and trucks?

The connection, particularly in this era of computer assisted design, is not far fetched.

"When you think about it," said Davis Smedley, associate professor of art and coordinator of Howard's sculpture program, "the car is the largest form of sculpture that most Americans own.

"We don't buy cars exclusively for their utilitarian value either: our self esteem and identity is invested in them."

And cars, if they are to sell and attract hundreds of thousands of buyers, have to be more than just well-engineered. Cars, no matter how technologically advanced, are not generated by engineers. They are conceived as aesthetic aids to the home, Smedley explained, with the engineering coming second to make the product work.

"GM has always said they are not looking for people who are trained on the computer or trained for commercial applications," the professor continued. "They want people who are creatively trained and know fine arts. They want people who have the skills and creative decision-making that is required to come up with new, aesthetically pleasant, and graceful designs.

"In the process of designing cars, they are actually clay first. They make a full-sized version in clay before they finalize any design. There is nothing like the physical form in front of you, and being in the same space as the vehicle, to get the feel of what these cars are going to be like. It is an emotional attachment, and it therefore makes sense for GM and the other car companies to recruit from fine arts, especially the sculpture programs."

As an incoming Howard freshman, Welburn was allowed to design his own program to prepare him for a career in automotive design. His major was sculpting, with supplemental courses designed to aid him in understanding and leading the manufacturing and marketing processes that are key to moving a successful car design.

"The curriculum here has historically been flexible to that degree," Smedley said. "If you have a specific niche that you are aiming for, we can arrange the curriculum so it can be directed to help you on your way."

In 1972, Welburn graduated from Howard and began an uninterrupted march up the design ranks at GM, beginning in the company's design center in Warren, Mich. A

year later he got his first specific assignment as part of the Buick studio, where he helped design what became the 1977 Buick Park Avenue and the Riviera. In 1975 he moved to Oldsmobile, where he helped design the highly successful Cutlass Supreme and Cutlass Sierra and Calais. The Oldsmobile experience had a side benefit.

In the mid-80s, Oldsmobile had a 1,000 horsepower engine whose capabilities they wanted to test in the extreme. The Indianapolis race car chassis was being developed by an English firm, and the driver was to be none other than the legendary A. J. Foyt.

"I was designing the Cutlass Supreme," Welburn recalled, and off to the side of my desk I had sketches of streamlined and high- speed vehicles. Everyone knew I had a thing for very aerodynamic vehicles that could run at Le Mans."

Still, Welburn was surprised when GM asked him to design Foyt's car.

"The very first sketch I drew was the one they picked," he said. "Its top speed was over 300 miles per hour and the aerodynamics had to be designed very carefully. I'm really proud of the fact that it had no wings, no spoilers, and no external aerodynamic aids to correct the shape of the body. The shape was right on and was, in itself, aerodynamically sound."

Welburn, working on an Oldsmobile Calais, first designed Foyt's 1985 Indianapolis 500 Pace Car. Two years later, his high-performance Oldsmobile Aerotech, with Foyt at the wheel, would set a world land speed record, averaging 257 miles per hour and topping 300 miles per hour. The Aerotech also won the Award for Design Excellence from the Industrial Designers Society of America.
In 1988, Welburn would return to Indianapolis with a Pace Car derived from his newly designed Cutlass Supreme.

Welburn's design philosophy has been a mixture of melding the old with the new. The new generation of Cadillacs, -- notably the sporty CTS and ponderous Escalade SUVs – continue the '50s use of aerodynamic styling. Now, however, it's the harder edge of the stealth jets that provide inspiration for the sharp, angular look of these vehicles.

"When the philosophy was developed for the latest Cadillac," he explained, "a lot of the inspiration came from the fins. It's a very dynamic design, and I trace the lineage back to the fins from the '50s and '60s."

His 2004 Chevy SSR, a car with a pickup body and retractable hardtop that converts it into sporty roadster, resembles the Chevy Camino's of the '50s with its big bold lines, though the art deco, half moon, chrome door handles are strictly a modern touch which, surprisingly, does not seem out of place.

"It's a very expressive design," he said.

GM is still looking to graduates from art programs at Howard and Xavier, he said, and has expanded its collaboration at Howard to include work with engineering students who could be steered towards the automotive industry. There is a need, he believes, for more diversity in the auto design industry.

He points to the Buick Rendezvous, a "crossover" SUV with unique touches such as a split-level center console, which provides a handy shelf for storing a woman's pocketbook, and a holographic display of the dials, so the driver does not have to look down to operate the entertainment center or ascertain speed.

"The Rendezvous was designed by a woman," Welburn said, "and she was on a mission to make it easy to love, easy to operate, and easy to enjoy. And women buy that car. The interior is so convenient that all of it works for the female driver."

Three of GM's 11 design studios are currently headed by women, said Welburn, and the company is looking for more.

"We would like to see more women and people of other affinity groups as part of our design teams," he said. "There are very few blacks in design now and that should change.

"We are looking into what kinds of outreach programs we can develop that go as low as the elementary schools to identify women and minorities who might be interested in auto design."

Looking at Welburn's track record, and his 30 years of success in changing the face of some of the world's best cars, one can expect him to succeed in eventually changing the faces above the drawing boards in the design studios of the auto world.

At that point, the dreams of a young African American boy from Philadelphia, who was in love with beautiful cars, will pass to a new generation of boys and girls who will find the doors too the auto world have been opened for them.

Edward T. Welburn

GM North America Vice President,
Design Center

Edward T. Welburn was appointed vice president of design, North America, on October 1, 2003, becoming the sixth design leader in GM's history.

A native of Philadelphia, Welburn was born on December 14, 1950. He received a bachelor's degree from the **College of Fine Arts at Howard University** in Washington, D.C., in 1972. While at Howard University, he studied both product design and sculpture.

Welburn began his General Motors career in 1972 at the Design Center as an associate designer in the Advanced Design Studios. In 1973, he joined the Buick Exterior Studio. While in this studio, Welburn was part of the team that designed the all-new 1977 Buick Park Avenue and Riviera.

In 1975, Welburn joined the Oldsmobile Exterior Studio where he contributed to every design of the highly successful Cutlass Supreme since the 1978 model year, and later to the Cutlass Ciera and Calais.

In 1985, Welburn was part of the team responsible for the design of the Indianapolis 500 Pace Car, the Oldsmobile Calais. This project and his interest in the design of performance cars led to his design of the Oldsmobile Aerotech. Aerotech, driven by A. J. Foyt, later established two world records of more than 257 miles per hour in 1987.

Welburn was also a key participant in the design of the all-new 1988 Cutlass Supreme, which included a return to Indianapolis with the 1988 Indianapolis 500 Pace Car, based on the new Cutlass Supreme. The car also received the Industrial Designers Society of America (IDSA) Award for Design Excellence.

Welburn was appointed chief designer of the Oldsmobile Exterior II Studio in December 1989. His studio continued the development of Oldsmobile's Cutlass Supreme and Ciera mid-size vehicles. In 1995, Welburn and his design team designed the Oldsmobile Antares Concept Car. This exciting new design was selected by *Autoweek* magazine as –The Best Concept Car" of the 1995 North American International Auto Show. The highly successful Antares Concept Car had a major influence on one of Welburn's favorite projects, the Oldsmobile Intrigue. The Oldsmobile Intrigue was selected by *Autoweek* magazine as –The Most Significant Car" of the 1996 North American International Auto Show.

These awards were an exciting way for Welburn to end his 20-year

association with Oldsmobile and begin his assignment at Saturn. The two-year Saturn assignment led to an international assignment, which had him based at General Motors operations in Russelsheim, Germany, for one year where he represented General Motors North American Operations on a global design project.

On his return to the United States, in November of 1998, Welburn was appointed director of GM's Corporate Brand Center in Warren, Michigan. His team was responsible for the development of new and innovative vehicles for the corporation and the exploration of new vehicle types for all General Motors brands and its global partners. Additionally, Welburn's team had the responsibility for the development of all auto show cars for General Motors. His most recent projects include the 2000 Chevrolet SSR, the 2002 Chevrolet Bel Air, and the 2002 AUTOnomy fuel cell vehicle, which were all revealed to the public at the North American International Auto Show. Another recent fuel cell concept, the GM Hy-Wire, which debuted at the 2002 Paris Motor Show, represented the world's first drivable vehicle that combined a hydrogen fuel cell with by-wire technology. The GM Hy-Wire, appropriately named for its technology, incorporated the features first envisioned in the AUTOnomy.

Welburn was appointed executive director design body-on-frame architectures in January of 2002. In that position, he had responsibility for GM's three body-on-frame design studios at the Design Center in Warren, Michigan. The first project created by his group was the 2003 Chevrolet Cheyenne, which won –The Best Concept Truck" category at the North American International Auto Show.