

Students Build Fuel Cell Vehicles at GM Function

by Gerald Scott
News Dept.

One of the cooler events attached to the SAE Congress these days was the 2nd annual SAE International Fuel Cell Competition, where the GM Foundation is key sponsor.

On the last day of the Congress, some 150 local schoolchildren gathered to build small car models powered by hydrogen fuel cells produced from distilled water.

Cars competed on a series of 30-yard "test tracks" set up in Detroit Hall for the kids to do their heats.

These model cars competed for distance, accuracy, weight-carrying and speed.

We caught up with GM Vice President of Global Engineering John Calabrese, who was overseeing the proceedings.

"It puts relevance to all the equations and all of the stuff that's very mundane," Calabrese said.

"And how the world's changed - when I was their age, I was associated with Cub Scouts and we had pieces of balsa wood and pine wood, we were worried about friction and mass.

"Now all of a sudden, we're looking at distilled water and converting it to electrons and such. It's cool stuff, very cool stuff."

Calabrese was asked how soon would GM have an equivalent "distilled water car," one running on a fuel cell powered by distilled water, much as the smaller ones the kids in the competition used.

"We're working on fuel cell development as we speak. We've already had several vehicles in fleets on both the East Coast and West Coast and we're continuing to look at this as one of the future opportunities - probably in the outgoing years."

Calabrese was further asked whether the Fuel Cell Competition had the further effect on the kids that 15 years from now, if they bought or drove a fuel cell car, it would seem less daunting as a consumer because they already worked with distilled water cars at SAE.

"It'll still be exotic, but it won't be a 'new science' to the consumer in 15 years," Calabrese said.

"This is all about developing these young children around the science and tech-

nology, trying to get them tuned into math. Taking classes when you're in elementary school and even in junior high, you want to have some relevance to what does it really mean?"

"And what's cool about this is between SAE International and the GM Foundation, we've really honed them in to something that's really fun.

"We do this in 300 schools around the country, but 260 of them are here in Michigan, so it's kind of giving back to the community, too.

"We're down in Phoenix, Ariz., and Texas, so a lot of our engineers, I think we have about 1,300 (GM) volunteers that spend a lot of time with these kids in the classroom.

"It brings relevance. I look at this as my future 401 plan, these are the guys that are going to come and run the place.

"It's really around the community, where the United States is at in STEM, is a disadvantage we've got to fix. We're working with SAE to fix that. It's one child at a time kind of thing. I hope we can get 20 percent of these kids that want to do mathematics more."

Meanwhile, gotta like that St. Michael Catholic School in Livonia - their students competed in the 2nd Annual SAE International Fuel Cell Competition and they're divinely inspired, one might say.

That's because the school principal, Sister Carolyn, admits that she prays for victories where her K-8 students compete such as in the SAE Fuel Cell Competition.

Perhaps we'd expect nothing less from a devoted principal overseeing her charges there at Cobo Center's Detroit Hall.

The competitive field there at Detroit Hall was set up with these 30-yard-long test tracks and it was there that the St. Michael students put their best foot forward.

"I'm the principal of the school, I just came to cheer our kids on - they work very hard," said Sister Carolyn.

Asked if they had a big emphasis on science at her school, she said:

"You know what? We do. Some of our kids were already involved yesterday in the Jet Toy competition, they've done the skimmer.

"It's really thanks to our dads, who work so hard. They



PHOTO: GERALD SCOTT

GM Vice President of Global Engineering John Calabrese with the student team from Clippert Academy during the GM-SAE Foundation fuel cell car challenge at Cobo Center.

are engineers for Ford's and they'll come in on their . . . flex time and they come in and help the kids."

Today, St. Michael has 801 students, huge by diminishing Catholic school standards locally and nationally. The Good Shepherdess, Sister Carolyn, has been at the school for 21 years now.

"It's a big school," she said. "I try to make sure it runs. They're very creative kids. They would come in the morning at Zero Hour, 7 a.m., to practice (SAE Fuel Cell car practice, that is).

"Most of our students go on to Catholic Central, U of D, St. Mary's (high schools)," she pointed out.

"Most of the girls will go on to Ladywood, Mercy or Divine Child."

Auto Industry May Have Dodged Bullet on Resin

By TOM KRISHER
AP Auto Writer

DEARBORN, Michigan (AP) - The auto industry may have steered its way around another crisis, avoiding a second major disruption of its supply chain in a year.

Just last week, automakers and parts companies feared that factories could be forced to close due to a shortage of a key plastic resin. Supplies are low because a March explosion and fire knocked out a German factory that makes much of the world's PA-12, a unique resin used to manufacture fuel lines and other parts. The plant could be out until winter.

But last week, Ford gave the strongest indication yet that problems may be avoided. The automaker's chief financial officer said he doesn't expect any Ford factories to be stalled because of the shortage. That is largely because the company has substitutes for PA-12.

"We think we've gotten past that graveyard," CFO Bob Shanks told reporters after Ford's first-quarter earnings announcement. "We think we're going to get through this without any issues."

Ever since the German plant was damaged in the blast, automakers and suppliers have been rushing to find substitutes for PA-12. The plant, owned by Evonik Industries, made at least a quarter of the world's PA-12, and up to 70 percent of CDT, a key ingredient used by other companies to make the resin.

All four of the world's major PA-12 suppliers have told customers they won't be able to keep supplying them with the resin. PA-12 is unique because



PHOTO: GERALD SCOTT

Students from St. Michael Catholic School in Livonia put a little body english on their car as it moves down the track during the GM-SAE International fuel cell car challenge at Cobo Center.



PHOTO: GERALD SCOTT

Sister Carolyn, far left, the principal of St. Michael Catholic School in Livonia, admits that she prays for victory when her charges compete in events like the GM-SAE International fuel cell car challenge, which was part of the SAE Congress in Detroit.

it doesn't absorb much water, so it can carry gasoline and other fuels without deteriorating like other plastics. PA-12 is used in fuel and brake lines as well as pipelines, and household and sporting goods.

Initially, parts-making companies told automakers to expect production stoppages because they couldn't make enough parts that need PA-12. Automakers worried the shortage could cause parts factories to close, cutting off supplies just like in 2011, when an earthquake struck Japan. Companies ran short of paint pigments and electronic parts back then. As a result, Honda and Toyota were forced to cut production and their dealers ran short of cars and trucks.

But Shanks said that Ford has worked with parts suppliers to develop alternative materials that can carry fuel and other liquids without problems. Some of the plastics were in the works before the plant explosion, while others are still being tested.

Parts made with the replacement resins will be checked thoroughly, and car buyers shouldn't notice any differences, Shanks said. "For the consumer, they're not going to have any issue in terms of safety or durability," he said.

Other automakers and large parts companies probably have similar substitutes, so it looks like the industry won't be severely harmed by the shortage, said Steven Wybo, a managing director and automotive expert at Conway MacKenzie, a consulting firm that handles industry restructurings.

If Ford has alternative supplies, other automakers "are either out in front or right be-

hind them," Wybo said.

Other major automakers said last week that they're still evaluating the shortage and have not seen any production cuts yet.

Last week, Chrysler CEO Sergio Marchionne told CNBC in Beijing that there is a better than 50 percent chance the company will find alternatives. General Motors CEO Dan Akerson said the company had enough inventory of PA-12 parts to get through May, and a spokeswoman said last week that GM continues to work with suppliers on substitutes.

Honda, Toyota and Nissan also said they haven't had any factory disruptions. Honda says it also has alternatives and Nissan said it also is working on them. Several parts makers also said last week they were confident there wouldn't be any production problems from the shortage.

Fears of parts shortages and auto assembly plant shutdowns were so high that about 200 industry officials attended a meeting last week to talk about testing alternative plastics.

The industry still has to go all-out to find substitutes and it still must prepare for factory closures, said J. Scot Sharland, executive director of the Automotive Industry Action Group, a trade association that organized the meeting.

By coincidence, a major metals and resins conference is scheduled for May 17 at the Hilton Doubletree in Dearborn, where national experts will gather to discuss the resin issue and related supply chain topics together with Big Three experts.

AP Business Writer Yuri Kageyama in Tokyo contributed to this report.

Your Hot & Healthy Meals prepared automatically while you work!

Hot Meals at Work.com

ASK YOUR SERVER ABOUT THE BEER OF THE MONTH!



Good Food, Good People

DINING • COCKTAILS • 32 TVs

The Best Burger & the Coldest Beer in Town!

PIZZA OR WINGS SPECIAL During Game
Buy 1 Get 2nd One 1/2 Off Dine-in Only

Try Our Every Day Hot Lunch Specials under \$4.95

We've got you covered on all Tiger Games along with Piston Basketball

BUCKET OF BEERS & \$2.50 Boombas
6 FOR \$12.00 till 7pm

10% OFF

to All GM Employees

30200 Van Dyke • Warren

586-751-7883

WARREN URGENT CARE

8am-10pm • 7 Days a week • 365 Days a Year

"Bringing Quality Urgent Care To Your Neighborhood"

"We Care"

URGENT CARE FOR ACCIDENTS AND INJURY

ADULT & PEDIATRIC ILLNESS

Digital X-Rays, EKG and Lab Work, On-Site Lab Service, Strep, Mono, Pregnancy & Urine Testing, Vaccinations, Sports & School Physicals, Occupational Medicine, Work-Related Injuries, Pre-Hire Physicals (BAT & Urine Screening)

SPECIAL ON SPORTS PHYSICAL \$25.00 State-of-the-Art Facility

586-276-8200

31700 Van Dyke • Warren, MI 48093

On Van Dyke Rd., between 13 & 14 Mile in St. John's Windemere Park

OTHER CONVENIENT LOCATIONS:

Woodland Urgent Care N. East Macomb Urgent Care

22341 W. 8 Mile Road 43900 Garfield, Suite 121
Detroit Clinton Township
313-387-8700 586-868-2600

FLU SHOTS

ATTENTION

Chrysler, GM, Ford Employees, we're within 2 miles of your plants

HAP & BCN

NO Referrals Needed!
www.warrenurgentcare.com

The Changing Weather... Means Changing Footwear

- Waterproof & Insulated
- Work & Sport
- Professional Fitting
- Wide Widths In Stock



M-F 10-8; Sat. 10-5; Sun. 12-4

SHELBY TWP.

13989 Hall Rd.
(NE. corner of Schoenherr)
586-566-9600

RED WING SHOE STORE

STERLING HEIGHTS

33289 Mound Rd.
(N. of 14 Mile Rd.)
586-264-4500

INDEPENDENCE AUTO REPAIR

Full Service American Owned & Operated
★ We Have Tires ★ We do all factory scheduled maintenance!

OPEN:
Mon-Fri
7:30 am-6pm
Sat.
8am-3pm

FREE Shuttle Service within a 10 mile radius
FREE Courtesy Check on any vehicle
FREE Coffee to everyone

ASE Certified Technicians

2 Locations:

28775 Van Dyke • Warren
12 & Van Dyke
586-751-4440

15075 32 Mile Rd. • Romeo
Corner of 32 Mile & Powell Rd.
586-336-4440

Trans. Flush w/ cleaner & additive. Includes 17 qts. transmission fluid.

\$99.99 w/ cleaner & additive. Inclu. 3 gal. of Coolant.

In-store offer good through 5-31-12

Full Service Oil, Lube & Filter Change

\$17.99 w/ Tire Rotation

In-store offer good through 5-31-12

Front End Alignment

\$39.99 4-Wheel Alignment

\$79.99 Camber & Caster Adj. Additional

Ceramic Brake Special

\$99.99 Includes pad installation

In-store offer good through 5-31-12

10% OFF Parts

to All GM Employees w/ Badge

In-store offer good through 5-31-12