

# Fitzgerald Students 2nd in Ford/AAA Auto Contest

by Gerald Scott  
News Dept.

Yesterday's auto mechanics have become today's auto techs. Techs as in technologists. After all, as the electrification of the typical automobile continues on its long march forward, the folks who repair the cars have to learn new systems and new methods of diagnosis and repair, too.

This all came to light last week at the longstanding and traditional Student Auto Skills contest, hosted by Ford Motor Co. and AAA Michigan.

Held in the athletic fieldhouse at Macomb College in Warren, the competitive event allows high school teams from across the state to compete for scholarships, attention and more.

Twenty juniors and seniors from 10 high schools and tech centers across Michigan met for the Auto Skills contest on April 25 in Warren.

The winning team, Saline High School, will advance to the nationals, which are held on the giant lawn in front of Ford headquarters in Dearborn in June.

Evan Fischback and Tommy Michaluk won top honors for perfectly diagnosing and repairing electrical and mechanical "bugs" deliberately placed in a 2012 Ford Fusion in just 29 minutes, 14 seconds.

The victory means \$32,000 in scholarship prizes for the two students, who also took home top honors in the written exam portion of the contest. Their instructor, Tim Timoszyk, has led the Saline team to victory for the past three years.

As noted, the winning team will compete for additional scholarship dollars and the chance to kick-start their automotive careers when they represent Michigan in the national Ford/AAA Student Auto Skills Competition at Ford World Headquarters on June 12.

Meanwhile, Devon Krajniak and Thomas Gibson of Fitzgerald High School in Warren placed second in the contest with a perfectly repaired vehicle.

Their instructor is Ralph Romain. He observed that Fitzgerald High is in a blue-collar neighborhood in Warren where not all students seek to go on to a college education.

Romain says he gets good support from his high school management for providing good equipment and tools for students like Krajniak and Gibson to excel in an auto repair contest.

The 10 teams competing last week earned their places in the state contest by outscoring other Michigan high school teams during an Internet-based exam in February.

Note that nearly \$12 million



PHOTO: GERALD SCOTT

The Ford/AAA Auto Skills competition was held at the Macomb College athletic fieldhouse in Warren, where Michigan high school student teams all scrambled to de-bug their identically prepared cars in the least amount of time. The winning Michigan team advances to national finals in June.



PHOTO: GERALD SCOTT

Ralph Romain, auto repair class teacher at Fitzgerald High School in Warren, said he was proud that his student team finished in 2nd place in the statewide Auto Skills competition held at MCC.



PHOTO: GERALD SCOTT

Fitzgerald High School students Thomas Gibson, at computer, and Devon Krajniak, center, scramble to de-bug their car in the Ford/AAA Auto Skills competition at MCC in Warren last week.

in scholarships are available at the state and national level from Ford/AAA Student Auto Skills events.

Both the national and statewide competitions are organized with the support of Ford personnel, local automotive instructors and AAA's Approved Auto Repair program, a public service AAA per-

forms to identify quality repair facilities throughout the country.

Very often, the Ford dealership closest to a competing high school also sponsors

that team as they progress in the competition.

The Crest Ford dealership in Center Line, for example, was the sponsor of the Fitzgerald High School team.

# 700 Robots Come to Aid of Louisville's Ford Escape Assembly Line Processes

DEARBORN - Robots equipped with laser eyes and suction cup hands are helping humans reduce physical strain and save energy, while boosting the quality of the all-new Ford Escape.

Each Escape is in part built by robots first introduced by Ford in Europe, which employ laser-guided and camera-enabled technology to ensure every new vehicle is built to the highest standard of quality.

The machines are programmed to recognize any tiny deviation from specification, such as gaps in between door panels or the windshield and the vehicle body.

"The ability of the machines

to register any difference in each vehicle on the line improves our quality by providing a custom-like build," said Thomas Burns, an engineer who works with the technology for the Escape.

Robotic arms and other automated machines help simultaneously reduce the exertion level required of human laborers and improve accuracy.

"Some of the robots work in concert with our line workers to build the Escape more efficiently," said Marty Smets, an ergonomics engineer.

"We also have a variety of semiautonomous robots, which do tasks that aren't safe

for humans to do repetitively."

For example, robots place the instrument panel, glass, paint and fenders on Escape at Louisville Assembly Plant in Kentucky.

Door panels fit more tightly to reduce wind noise, upping the quality of each Escape that rolls off the line. A robotic arm applies the adhesive for the windshield to provide consistent, repeatable application and the glass is placed mechanically with suction cups for a perfect fit each time.

In the paint shop, 88 new robots reduce energy costs by more efficiently applying paint and sealer inside the body and to the exterior of the vehicle.

# Disasters Forcing OEMs To Rethink 'Just-in-Time'

By DEE-ANN DURBIN  
and TOM KRISHER  
AP Auto Writers

DETROIT (AP) - For the first time in more than 20 years, U.S. automakers are questioning a pillar of manufacturing: The practice of bringing parts to assembly lines right before they're used.

So-called just-in-time deliveries have helped automakers save billions and run their factories more efficiently. But the approach also relies on an almost perfect supply chain. And twice in the last year, weak links have been exposed.

An earthquake in March 2011 knocked out many Japanese parts makers, resulting in factory shutdowns and model shortages around the world. And last month, an explosion at a German chemical plant cut off supplies of a resin essential in car fuel lines. Without those parts, assembly lines could slow or grind to a halt within weeks, causing shortages of cars on dealer lots later this year.

Carmakers are scrambling to find alternatives to the resin. The threat of a new shortage comes as U.S. auto sales are just becoming healthy again.

Supply problems in the auto industry are unavoidable sometimes, but car manufacturers are starting to rethink the just-in-time system, which is more global than ever and relies on increasingly specialized parts from fewer suppliers.

The system, developed by Toyota in the 1970s and brought to the U.S. in the 1980s, discourages big stockpiles of parts in favor of deliveries shortly before they're needed. It saves companies the cost of storing the parts or carrying them on their books. For those reasons, automakers and large suppliers typically store only a few weeks' worth of parts.

"It's pretty fragile," says Steven Wybo, a managing di-

rector and automotive expert at Conway Mackenzie, a consulting firm that handles industry restructurings.

"The only way to protect supply is to build up inventory. Until that happens, we're going to continue to see problems like this."

U.S. automakers say they are studying parts supplies to figure out what they need to stockpile.

Many of a car's 3,000 parts have become so specialized that they're made only by a few factories worldwide. That leaves the industry vulnerable to fires, natural disasters or other problems that may knock out a single parts factory.

The answer may be to stock up on parts that come from one factory, says David Cole, chairman emeritus of the Center for Automotive Research, an industry think tank and research group.

"You can never take away risk completely," he says. "You want to minimize it."

One factory now putting automakers at risk is the German chemical plant damaged by last month's explosion. The plant made at least one-fourth of the world's PA-12, a nylon component in plastic fuel lines. It also supplied 70 percent of the world's CDT, a chemical used by other companies that make PA-12, according to UBS analysts.

PA-12, also known as nylon 12, is crucial because it helps the tubes resist deterioration from carrying fuel. It's also used in seats, and in pipelines and consumer products. No automaker has reported any factories running short of tubes, but industry analysts say that could come within weeks if alternatives aren't found and tested quickly.

The results could be even more serious than last year's Japanese earthquake, which damaged parts factories and cut off everything from electronics to rubber parts.



Auto plant assembly work previously performed by UAW employees including the installation of the instrument panel, windshield, roof and fenders, are now all being performed by robots equipped with cameras and laser eyesights.

Keeping humans out of the zones where the paint is applied reduces airflow and climate control requirements, thereby saving energy and re-

ducing carbon emissions.

More than 700 robots at Louisville Assembly Plant assist in the build of the body and interior of the Ford Escape.

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