

Beyond Grand Rapids

Putting the batteries to the test

At a General Motors research laboratory in Michigan, engineers are simulating real-life wear and tear on a pair of prototype batteries. By repeatedly drawing energy out and pouring it back in every ten minutes, they want to know how much stress the batteries can handle. Dialing up the torture, they'll soon move those tests to a "shaker table," where they will subject the batteries to jarring vibrations, extreme temperatures and corrosive road salt, to name just a few hazards.

GM is working feverishly to prove that one or both of these lithium-ion batteries will be capable of powering a hybrid car for up to 40 miles without burning any gasoline, that they're safe and that they can last ten years and 150,000 miles. Today's hybrids use a wimpy battery by comparison, and they can't be plugged in for recharging. By spring GM aims to road test the batteries in prototype versions of its forthcoming plug-in, the Chevrolet Volt.

GM is sprinting to get the Volt to market by 2010 to claim first bragging rights in what it sees as a critical industry shift: the electrification of the automobile. But the year 2010 is significant for another reason. That's when rival Toyota says it will put its first lithium-ion battery into a plug-in hybrid.

"Somebody lit a fire under [GM's] butt in 2006," says Ric Fulop, founder of A123 Systems, one of two companies whose batteries GM is rushing to validate. "I've never seen a large company move so fast and put so many resources behind something."

Source: Forbes, April 7, 2008

This isn't your father's battery

Did you know that the battery for the Chevy Volt is roughly six feet long and weighs more than 375 pounds? The T-shaped battery will be located down the center tunnel of the vehicle and under the rear seats. This integration requires the battery to be treated as part of the vehicle structure. Simulation data also indicates that the center placement provides greater protection to the battery.

Are cars back?

The shift to cars is "not overnight, but it's noticeable," says Tom Libby, a consultant for J.D. Power and Associates' Power Information Network.

But thanks to the rush of introductions, the diversity of cars is mind-boggling. It shows that automakers are betting

car interest will spread over all sizes and types. The gamble is that the current flirtation with fuel-thrifty small models will blossom into a new love for cars as mainstay vehicles.

But there's not much profit margin in such cars, and if fuel prices fall – or Americans get used to high gas prices – buyers historically gravitate back toward larger, roomier, more powerful vehicles.

"The challenge for the domestic automakers is that even though the small-car market is hot, they don't make nearly as much in profits as they do with traditional SUVs or trucks," says Jesse Toprak, director of industry analysis for Edmunds.com. "They're lucky if they break even."

Source: USA Today, March 20, 2008

Toyota feels pinch on capacity

The auto industry's sales slump deepened sharply in March amid a powerful economic downdraft, and even once-invincible Toyota took a big hit.

The Japanese auto giant is now dealing for the first time with the problem that plagued its U.S. rivals for years: too much North American manufacturing capacity. It was the seventh drop for Toyota in the past nine months — its worst stretch since the early 1980s, according to company officials. "We have almost one assembly plant's worth of idle capacity," said a Toyota executive familiar with manufacturing.

Toyota now has four U.S. plants, two in Canada and one in Mexico, although one plant in Canada isn't due to begin production until later this year. It's building an eighth North American plant in Mississippi and also makes some cars at another company's plant in Indiana.

Now Toyota executives say the sales slump is leaving some of these plants underused, hurting profitability.

Source: The Wall Street Journal, April 2, 2008

Toyota's sales performance

Toyota's current U.S. sales slump is the automaker's lengthiest in 26 years, Ward's data shows.

Not since the December 1981-July 1982 period, when Toyota still was a minor player in the U.S., has the automaker had a streak to match the current 8-month slide. Before Toyota's July 2007 year-on-year decline of 3.5%, it had not experienced a monthly sales drop in the U.S. in three years.

Source: wardsauto.com, March 31, 2008



AutoKnow



General Motors Vision Statement: GM's vision is to be the world leader in transportation products and related services. We will earn our customers' enthusiasm through continuous improvement driven by the integrity, teamwork and innovation of GM people.

Consider Tax-deferred Options for Buyout Cash

Grab the money now? Or do something dull and roll that buyout into the 401(k)? As employees at GM ponder the latest round of buyout offers, there's a new enjoy-the-money-later, save-taxes-now option that's worth considering.

They can pick a tax-deferred option, such as rolling the lump-sum money directly into their 401(k) or choose an annuity. Using buyout money to juice up a 401(k) is a savvy strategy.

"If they don't need the money, it's something they should flat out do," said Jim Badge, president of DFCU Financial Partners, the investment division of DFCU Financial in Dearborn.

There are two big benefits:

- The buyout amount would not be initially taxed if it is rolled directly into a 401(k), Individual Retirement Account or annuity.
- If you roll over more money into a 401(k) or IRA, you could have even more money later.

David Kudla, chief executive officer for Mainstay Capital Management in Grand Blanc, ran some numbers based on the GM offer. Take a skilled trades retiree who takes the current \$62,500 buyout offer at GM. Let's say the retiree, though, got the full \$62,500 by rolling it over and immediately investing it in the 401(k) or an Individual Retirement Account.

By Kudla's calculations, the retiree could have an extra \$162,000 in the 401(k) in 10 years, assuming a 10% rate of return.

"They avoid the immediate tax hit, and they have tax-deferred growth," Kudla said.

Another point to consider: GM will allow retirement-eligible employees to take some of the lump sum money now — and roll over a portion of it into the 401(k) now as well.

—Source: The Detroit Free Press, February 24, 2008

New Chevy Tahoe Hybrid Balances Fuel-Savings with Uncompromised Capability

Chevy takes another leap forward in the full-size SUV segment — and the world — with the introduction of the 2008 Tahoe Hybrid. It features the world's first production 2-mode full hybrid propulsion system and is designed to deliver an approximate 50% improvement in city fuel economy over non-hybrid Tahoe models. Better still, the fuel-saving advantages of the Tahoe Hybrid are balanced with a superior driving experience and uncompromised capability.

"The Chevrolet Tahoe Hybrid combines the functionality and comfort of a full-size SUV with a 2-mode full hybrid system that optimizes fuel efficiency in both city and highway driving, the way most Americans use their vehicles," said Tom Stephens, group vice president, GM Powertrain.

Tahoe Hybrid offers the utility customers seek in a full-size SUV and is capable of towing up to 6,200 pounds with the 2WD and 6,000 pounds with the 4WD.

The 2-mode is patented hybrid technology optimized for city and highway driving. In the first mode, at low speed and light loads, the vehicle can operate in three ways: electric power only, engine power only or in any combination of engine and electric power. When operating with electric power only, it provides all the fuel savings benefits of a full hybrid system. Leaving the engine shut off for extended periods of time and moving under electric power at low speed is key to reducing fuel consumption in heavy stop and go traffic.

The second mode is used primarily at highway

(continued, p. 2)



2008 Chevy Tahoe Hybrid

2nd-Quarter Suggestion Program Focus: Team Quality Suggestions

In the second quarter of 2008, the UAW-GM Quality Network Suggestion Plan focus is on team **quality** suggestions. The entire corporation is placing more emphasis on quality this year, so your suggestions regarding quality are much needed.

At the end of the quarter there will be a drawing. Four team suggestions (three or more people) will each win \$500. The money will be split equally among the team members.

Last Quarter's Winners

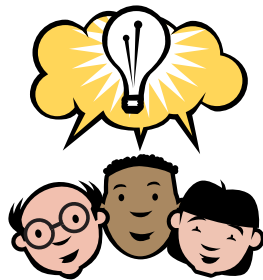
A drawing for \$500 was held last Friday. Every employee who was part of a team safety suggestion during the first quarter of this year was entered into this random drawing. The following employees were on teams that won \$500 in the first-quarter drawing:

Team One: **Brian Young, Larry Tickfer, and Greg Zervoudakis** of Maintenance

Team Two: **Jack Rodarmer and Dan Taylor** of Material Handling and **Danny Price** of the Press Room

Team Three: **Kevin Buitendyk, Glen Wilcox, and Debra Nicholson** of Material Handling

Team Four: **Booker Gray; Guadalupe Aguilar, Jr; Constance Hurst; Barbara Daly; and Star Vredeveld** of the Press Room; and **Juan Wilhelm** of Tech Support



What Will Your Answer Be?

Our external calibration begins on May 12. Here are some frequently asked questions from the GMS calibrators, and how you can answer them:

Question: How do you do problem solving in your teams?

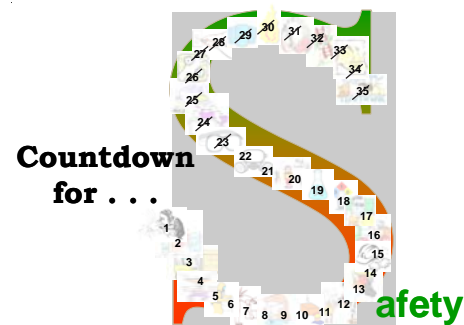
Answer: "We record problems on either the IRAS (Immediate Response Action Sheets) or write countermeasures for simple problem solving. For more complex problems, we use a problem solving worksheet (PSW). The PSW book is on the Level 5 BPD board."

Question: Where is your plant mission statement and what does it mean to you?

Answer: "The plant mission statement is on our Level 5, 3 and 1 BPD boards. If I come to work and make quality products on time, the future for my family and myself will be secure."

Safety Corner

From a strictly measurement perspective, we cannot have more than **22** additional recordable injuries between now and the end of 2008 if we want to meet our Recordable Injury Rate stretch goal of 2.20.



Hierarchy of Health and Safety Controls:

1. Elimination or Substitution (through system design or redesign)
2. Engineering Controls (safety devices)
3. Warnings (flashing lights, placards/sirens)
4. Administrative (training, different work methods)
5. Personal Protective Equipment (gloves, sleeves, safety glasses, hearing protection, bump caps, etc.)

Remember: Control #1 is the most effective because it removes the hazard from the plant.

Know Safety, No Accidents

	2007	Through 4/8/08
First-aid Injuries	454	116
Recordable Injuries	65	13
Lost Work Days	6	0
Near Misses Reported	232	108

Tahoe Hybrid

(continued from page 1)

speeds. In addition to electric assist, the second mode provides full eight-cylinder engine power when conditions demand it, such as when passing, pulling a trailer or climbing a steep grade. The second mode integrates sophisticated electronic controls, such as Active Fuel Management, cam phasing, and late-intake valve closure, allowing even more efficient engine operation.

To learn more about the new Tahoe Hybrid and 2-mode hybrid technology, visit www.chevy.com/tahoe.

Around Grand Rapids

UAW-GM Quality Network Employee Recognition

Karen Tucker

Congratulations to **Karen Tucker**, who was named Employee of the Month for January of 2008. Karen was nominated by fellow team members for going above and beyond to improve scheduling, throughput, and line changeovers. Karen's fast response and individual accomplishments illustrate GM's Core Values of *Teamwork, Customer Enthusiasm, and Individual Respect and Responsibility*. Karen works in Metal Assembly, 2nd shift.



Tip of the Week: Know the Symptoms

By being able to recognize the symptoms of a stroke and understand that they signal an emergency, you are able to seek medical attention quickly. Treatment exists to minimize the effects of stroke. However, it must be given within three hours of the first symptom. It's easy for people to recognize stroke symptoms by learning to **Act F.A.S.T.**

- F = Face** Ask the person to smile. Does one side of the face droop?
- A = Arm** Ask the person to raise both arms. Does one arm drift downward?
- S = Speech** Ask the person to repeat a simple sentence. Are the words slurred?
- T = Time** If you observe any of these signs, then it's time to call 9-1-1.

Happy Convert to GM Vehicle

One of our retirees, **Ken Jeschke**, received an e-mail from a cousin who is quite happy with his recent purchase of a GM vehicle, a GMC Acadia. Ken said that he talked his diehard foreign car owner into considering a GM vehicle because of our new quality. Here's what Ken's cousin had to say in the e-mail to him:

"I received a call from a GM employee who built our Acadia at the plant in Michigan. He thanked us for buying the car. I was blown away by this--what a specialized touch. We were really overwhelmed by the thought. At this point we are very satisfied with the vehicle and we are also glad we could support a guy and his family in Michigan. After over 20 years of owning foreign cars, we are glad to see GM stepping it up and competing. It appears they are on the correct track. I am even considering buying some GM stock."

UAW-GM QN Suggestion Corner

	03/29/08-04/07/08	YTD
*Awards Paid:	89	292
\$ Paid Out:	\$ 13,464.44	\$115,799.94
Savings to GM:	\$ 53,507.52	\$655,988.11

Tangible Awards Paid Last Week:

- An employee suggested a new way of scheduling preventative maintenance on priority mills. The suggestion is estimated to save the plant roughly \$51,705.

*Tangible and intangible awards

Fan washing this month

GRMP is in possession of a Jan fan cleaner for the months of April and May, so please call **Brandon Taylor** (Nextel 65) or any other Maintenance supervisor if you'd like to have your fan washed.

