

SAE MILWAUKEE

An SAE International Section

March 2014

www.milwaukeeesae.com

UPCOMING EVENTS

- Clean Snowmobile Challenge
 - March 3 to 8
- Mercury Marine
 - March 27
- Trek Bicycles
 - April 16
- May TBD
- 2nd Annual SAE Milwaukee Section Golf Outing
 - June 4
- Road America June Sprints
 - June 14
- SAE Milwaukee Section Cruise Night
 - TBD

For more details,
Go to www.facebook.com/MilwaukeeSAE
and Like us!



March 27, 2014



Fond Du Lac, WI

NO WALK INS

REGISTRATION REQUIRED

DEADLINE:

March 20

A little background about Mercury Marine...

Since the company was founded in 1939, Mercury has consistently emphasized quality, performance, innovation and reliability. Today, that pledge remains as strong as ever. Mercury Marine, a division of Brunswick Corporation of Lake Forest, Illinois, began as the Kiekhaefer Corporation of Cedarburg, Wisconsin, when Carl Kiekhaefer and a small but dedicated staff of employees sought to design and produce the best possible boat engine.



For 75 years, Mercury Marine has been the most recognized name in the marine industry, and the memory of its founder lives on in the hearts and minds of engineers and boat enthusiasts alike.

As each goal was accomplished it was replaced by another. That tradition has resulted in a literal embodiment of the Great American Dream. From a modest and inauspicious start, Mercury has grown into an industry leader recognized worldwide for its ability to foresee and fulfill the needs of its consumers.

At Mercury Marine, we understand why our customers love being on the water. And that's why we do what we do: engineer, build, and provide the best marine power in the world. Since 1939, our passion for quality, performance, and value has been matched only by our customers.

Mercury provides engines, boats, services and parts for recreational, commercial and government marine applications. Our industry-leading brand portfolio includes Mercury and Mariner outboard engines; Mercury MerCruiser sterndrive and inboard packages; Mercury propellers; Mercury inflatable boats; Mercury SmartCraft electronics; MotorGuide Trolling Motors; and Mercury and Quicksilver parts and oils.

Here are just a few great moments in our rich history:

1947 – “Full-Jeweled Power”: anti-friction ball, roller and needle bearings in all major bearing locations (connecting rods, crankshaft, driveshaft, and propeller shaft)

1957 – The two-cylinder, 10hp Mercury Mark 10, incorporates outboards firsts such as “Jet Prop Exhaust,” underwater exhaust through the propeller hub.

1961 – MerCruiser is introduced with the first production sterndrive propulsion system over 100hp

1966 – Thunderbolt CD ignition, the industry's first capacitor discharge ignition system, delivers up to 40,000 volts of starting power



A little background about Mercury Marine continued....

1973 – First power ported pistons. An extra fuel charge just before combustion improves performance. Also, first factory-installed power trim system introduced

1987 – Mercury brings electronic fuel injection to the boating industry with the premier of the Mercury Laser XRi and Mariner Magnum EFI

1995 – Mercury and Mariner introduce their first four-stroke outboards, in 9.9 and 50hp configurations. These engines are noted for their smooth, quiet operation, fuel efficiency, low maintenance, and reduced emissions.

1996 – 200 DFI is the world's first direct-injected outboard

1997 – The Mercury OptiMax second generation of low-emissions, direct fuel injected outboard, is unveiled at the 24 Hours of Rouen endurance race. The two OptiMax-powered entries finish ahead of all competitive brands

2002 – Mercury Optimax outboards set new world speed records in all Pro Stock bass boat horsepower categories

2007 – Mercury Racing introduces their most powerful consumer sterndrive engine package, the 1200SCi

2010 – Mercury Racing introduces the QC4V (quad-cam, four valve) turbocharged 1350 sterndrive

2012 – The 150hp FourStroke outboard is introduced. It is the toughest, smallest, and lightest 150hp four-stroke engine in the world.

2013 – The Mercury Diesel TDI lineup is completed. With the 1.9L, 3.0L, and the 4.2L, the TDI engines are lightweight, compact, and lead the industry in horsepower to weight ratio

2014 – Celebrating our 75th anniversary



The evening will begin with a tour of Mercury Marine's impressive Product Development & Engineering department highlighting their various test labs, indoor test facility, dyno cells, and their recent expansion project.

After dinner, David Foulkes, the Vice President of Product Development, Engineering, and Racing, will present to the group. He will cover a company overview, related topics such as new product innovations and successes, and Mercury's rigorous test and development as it relates to the facilities seen in the tour.



EVENT AGENDA

Registration: 4:30 pm to 5:30 pm

Lab Tour: 5:30 pm to 6:30 pm

Dinner and Presentation: 6:30 to 8:00 pm

Meal: Buffet including baked chicken, lasagna, salad, mashed potatoes and dessert

REGISTRATION FEES

SAE Members	\$20.00
Retirees	\$15.00
Guests/Non-members	\$25.00
Students	\$10.00

REGISTRATION

- **Registration Deadline: March 20** **REGISTRATION REQUIRED / NO WALK INS**
- Maximum Attendance for this event is **90**
- Registration can be completed three ways:
 - Online with a charge card via <http://milwaukee.sae.org>
 - By Phone at 262-424-4958(Jim Ryan)
 - By Email ryan_james_w@cat.com (Jim Ryan)

Meeting Location: Mercury Marine, W6250 Pioneer Road, Fond Du Lac, WI

Directions from Milwaukee:

- From Milwaukee: Take 41 North to Fond du Lac, Exit right on South Military Road, Turn right onto West Pioneer Road, Turn right at Plant 10 entrance (first entrance) and stop at guard house.
- From Oshkosh: Take 41 South to Fond du Lac, Exit left on South Military Road, Turn right onto West Pioneer Road, Turn right at Plant 10 entrance (first entrance) and stop at guard house.



Record Snow and Cold? It's All Good at the 2014 SAE Clean Snowmobile Challenge:

It's shaping up to be a perfect year for the 15th annual SAE Clean Snowmobile Challenge, set for March 3-8.

Michigan Technological University, which hosts the event, is experiencing the snowiest winter in years with temperatures solidly sub-freezing, ideal conditions for this Society of Automotive Engineers collegiate design competition. Plus, a new major sponsor has donated an impressive traveling trophy for the winner.

Seven teams are entered in the zero emissions category, for battery-powered sleds, which is sponsored by the National Science Foundation. NSF uses electric snowmobiles while conducting atmospheric research in pristine arctic locations.

A total of 13 teams are registered in the Challenge's internal combustion category. Engineering students from participating schools take a stock snowmobile and reengineer it. Their aim: to reduce emissions and noise and increase fuel efficiency while preserving the riding excitement demanded by snowmobile enthusiasts.

This year, the one that does it the best will be taking home the MacLean-Fogg Cup.

Like hockey's Stanley Cup, the MacLean-Fogg Cup will be engraved with the name of the winning school and displayed there the following year. Sculpted and cast in bronze by renowned Michigan artist Sergio DeGiusti, the cup is funded by the new lead sponsor, MacLean-Fogg Component Solutions, which will also award a prize of \$1,000 to the winning internal-combustion team.

MacLean-Fogg Component Solutions is a leading supplier of fasteners, engineered components, and linkage and suspension products for industry. Through their involvement with the Challenge, the Illinois-based company aims to develop relationships with the engineers of tomorrow.

"MFCS is known to our customers for providing high-value, innovative products," said Dave Lomasney, president of the Fastener Components Division. "But we are not that well known to potential employees. Our involvement with the Clean Snowmobile Challenge allows us to meet top engineering students and introduce them to MacLean-Fogg."

Rob Whitney, president of the company's Engineered Plastics Division, agreed. "We have been fortunate to experience a tremendous growth curve with no signs of slowing down," he said. "We need capable, talented, innovative engineers in all areas of MacLean-Fogg, and the Challenge provides a forum for students preparing careers at companies like ours."



"Michigan Tech is honored to have MacLean-Fogg become the premier sponsor of the SAE Clean Snowmobile Challenge," said Jay Meldrum, the co-organizer of the Challenge and director of the Keweenaw Research Center, the competition's headquarters. "Maclean-Fogg recognizes the value of competition-based engineering and the quality of students that this type of activity creates. Their sponsorship of the MacLean-Fogg Cup exemplifies this support and will provide a lasting impression on the students for years to come."

As in past competitions, the internal combustion sleds must be able to accommodate flex fuel, but this year, there's a twist.

"Isobutanol is our new biofuel," said Meldrum. "It's distilled from corn, like ethanol, but it blends better with gasoline and has more energy."

Pure ethanol contains about 67 percent of the energy of gasoline, so it takes more fuel to travel the same distance. Isobutanol has a higher energy density, 98 percent of gasoline's. Plus, it doesn't absorb water from air, so it doesn't cause corrosion in conventional gasoline engines.

The entries will need to adapt to a "mystery blend," a fuel recipe that contains anything from 16 to 32 percent Isobutanol.



In another first, the Challenge is welcoming competitors from three new schools this year, including Queen's University, of Kingston, Ontario; the Rochester Institute of Technology, of New York; and the University of Alaska Fairbanks at Bristol Bay. They are among the 20 entrants expected to compete.

Teams registered in the internal combustion division are Clarkson University, of Potsdam, N.Y.; École de technologie supérieure, of Montreal; Kettering University, of Flint; Michigan Tech; North Dakota State University, of Fargo; Northern Illinois University, of DeKalb; Rochester Institute of Technology; State University of New York at Buffalo; the University of Idaho, of Moscow; the University of Minnesota-Duluth; the University of Waterloo, of Ontario; the University of Wisconsin-Madison; and the University of Wisconsin-Platteville.

Teams registered in the zero-emissions division are Clarkson University; McGill University, of Montreal; Michigan Tech; Queen's University; the South Dakota School of Mines and Technology, of Rapid City; the University of Alaska Fairbanks; and the University of Alaska Fairbanks at Bristol Bay.

The Clean Snowmobile Challenge is sponsored at Michigan Tech by the Keweenaw Research Center and the Department of Mechanical Engineering-Engineering Mechanics. For more information on the Challenge, see www.mtu.edu/snowmobile.

Credits: www.Newswise.com/MTU

Please consider serving SAE, your Milwaukee Section, and the Challenge by being a **Design Paper Judge** (this does not require you to come to CSC), or judging presentations and/or sleds at the event. If interested, please email Jay Meldrum at jmeldrum@mtu.edu.

If interested in car-pooling to CSC, please contact Dale Wiza, dale@engineeringplacements.com, or call c 414-807-9663. Many attendees come for just part of the event, so we'll attempt to coordinate with your schedule. Dress warm, and consider joining us for a U.P. snowmobile ride, where the current snowfall is 248" with 44" on the ground. This is some of the best snow and scenery around!

We are very proud to be the hosting SAE Section for this great event!



2nd Annual SAE Milwaukee Scholarship Golf Benefit

Wednesday, June 4th 2014

Mee-Kwon Golf Course, Mequon

SAE Milwaukee section will be hosting its 2nd Annual SAE Milwaukee Scholarship Golf Benefit on Wednesday, June 4th 2014. The event will kick off at 11:30 AM with registration followed by a 12 PM lunch. Tee off will be at 1PM via a shotgun start. All holes will be played according to "best ball" rules. The day will wrap up with a 5:30 networking reception. The number of players is limited to 80, with priority being given to sponsors. This is a perfect event for team building. In addition, all proceeds will go to SAE sponsored scholarships.

Mee-Kwon Park is located on one of the highest elevations in Ozaukee County and is a magnificent 18 hole facility that continues to get rave reviews from its customers. Many golfers have said it is better than many private facilities they have belonged to or played at. The course offers a variety of challenges; hills with gentle knolls, level terrain, trees, water, dog legs, and over 40 sand traps, which will keep you thinking about your next shot. The 18-hole course features 6,486 yards of golf from the longest tees for a par of 70. The course rating is 70.6 and it has a slope rating of 122.

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EARLY BIRD DISCOUNT

Register May 9th to receive discount!

- Sponsored Foursome – \$500 (\$600 after May 9th)
- Non-sponsored Foursome – \$300 (\$400 after May 9th)
- Individual Golfer – \$75 (Students \$60)

SPONSORED FOURSOME - \$500 (\$600 after May 9th)

- (1) Golf foursome (\$300 value)
- Hole sponsor lawn sign with company logo
- Company logo on banner and event material

The slots for this event will not last long. Early registration is the only way to guarantee a spot. Teams will be emailed 2 weeks prior to outing with hole assignments and registration details.

Registration includes cart rental, lunch, hors d' oeuvres at reception, award and prizes, and non-alcoholic beverages (cash bar for alcoholic beverages).

For more information contact:

Wayne Richter at (262) 770-0252 / richterway@sbcglobal.net

Tony Grant at (414) 755-2164 / tony.grant@earthlink.net

Additional sponsorship opportunities available on a first come basis:

LUNCH SPONSOR - \$1500

- Exclusive recognition as lunch sponsor
- 1 golf course foursome (\$300 value)
- Full page ad in SAE Milwaukee Section Newsletter for one year. (\$1000 value)
- Reserved table of (5) at any Milwaukee Section event (\$100 value)
- Hole sponsor lawn sign with company logo
- Company logo on banner and event material

DINNER SPONSOR - \$2000

- Exclusive recognition as networking event sponsor
- 2 golf course foursomes (\$600 value)
- Full page ad in SAE Milwaukee Section Newsletter for one year. (\$1000 value)
- Reserved table of (10) at any Milwaukee Section event (\$200 value)
- Hole sponsor lawn sign with company logo
- Company logo on banner and event material



2nd Annual SAE Milwaukee Scholarship Golf Benefit

Wednesday, June 4th 2014 • Mee-Kwon Golf Course, Mequon

Mail to: 1588 Woodland Drive Grafton, WI 53024 • Or register online at <http://www.milwaukeeesae.com/>

No refunds after Wednesday, May 28th 2014

Sponsor Information (The donation receipt will be mailed to this contact.)

Company _____

Contact Name _____

Phone _____

Address _____

City/State/Zip _____

Email _____

Payment Information:

Total Amount _____

Check Enclosed (Make Check Payable to SAE Milwaukee Section)

Check Here If Paid Online via Credit Card

If paid online and require a receipt please mail or email this form to the address above or to richterway@sbcglobal.net.

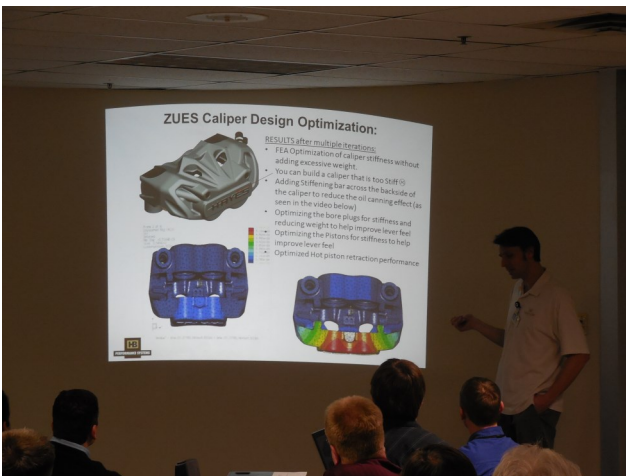
		\$1,500 Lunch Sponsor	\$2,000 Dinner Sponsor	\$520 Sponsored Foursome (After May 9 th)	\$320 Non-sponsored Foursome (After May 9 th)	\$80 Single Golfer (After May 15 th \$100)
1 st Foursome ** Leader's Name						
2 nd Foursome ** Leader's Name						
3 rd Foursome ** Leader's Name						
4 th Foursome ** Leader's Name						
Individual Golfer **	<i>(Individual golfers will be paired to make foursome.)</i>					

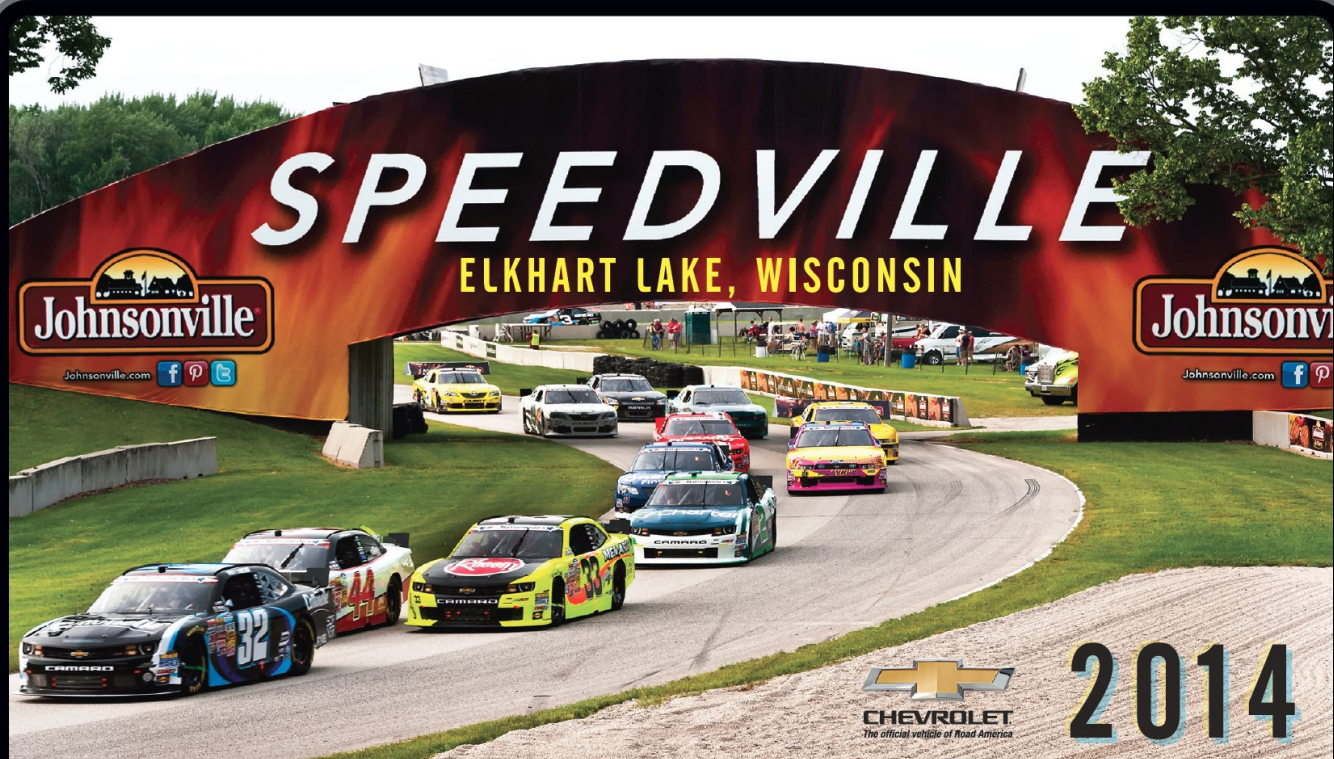
** Will be contacted 2 weeks prior to event with hole assignments and registration details. Need to provide both name and contact information.

Early Bird Registration – Register Before May 9th

A recap of recent section events.....

Our February Section meeting was hosted by HB Performance. Over 75 members and students joined us for a look inside HB and the exciting and innovative products they continue to supply industry with. The factory tour showcased their manufacturing capabilities as well as their impressive test and development cells. The technical presentations gave an in depth look into their motorcycle and snowmobile braking systems, their Trailtrac system and the high tech developments they are pioneering for the bicycle market. There was also plenty of components set up to look at as well as several HB engineers on hand to discuss all of the above. This was a fantastic meeting with four student sections attending. Thank you to HB Performance and their team for an exciting evening!





MAY 16-18

SVRA Spring Vintage Weekend

MAY 30-JUNE 1

**GEICO Motorcycle AMA Pro Racing
SUBWAY SuperBike Doubleheader**

JUNE 6-8

AHRMA Vintage Motorcycle Classic

JUNE 12-15

**WeatherTech® Chicago Region
SCCA June Sprints®**

JUNE 19-21

**Gardner Denver 200 Fired Up by Johnsonville
NASCAR Nationwide Series /
Pirelli World Challenge / SCCA Trans-Am**

JUNE 22

OPTIMA Faceoff at Road America

JULY 17-20

The HAWK with Brian Redman

AUGUST 7-10

**Continental Tire Sports Car Challenge /
TUDOR United SportsCar Championship**

SEPT 12-14

VSCDA Elkhart Lake Vintage Festival®



RoadAmerica.com

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Milwaukee Section 2013-2014 Governing Board

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NMU: John Walsh johwalsh@nmu.edu

Hello SAE Milwaukee Section Members and Friends,

The days have started to get longer and that means that Spring is right around the corner. Before it does, there is one last winter SAE Milwaukee Section event you do not want to miss. Please consider joining us for the annual Clean Snowmobile Challenge on March 3-8th at Michigan Technical University in Calumet Michigan. We are the hosting section for this event and it is a great way to network and see the incredible project vehicles the different school sections have been working hard on over the last year.

After the Clean Snowmobile Challenge we will be thinking spring with a tour and presentation at Mercury Marine. Mercury Marine will graciously be opening their doors to give us a look at their new addition as well as what's new at Mercury Marine.

Lastly registration is open for our 2nd Annual SAE Milwaukee Golf outing On June 4th. Plan for a day of golf and networking, or get a group together and see whose golf skills have improved over the winter! All skill levels are welcome, so consider joining us. Proceeds from this event are used to support the six Student SAE Chapters in our Section.

I hope to see all of you at one of our upcoming meetings.

Garrett Herning
SAE International Milwaukee Section Chair

Section Sponsors



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