



March 2000

Milwaukee Section  
www.milwaukeesae.org

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## MARCH MEETING

### Thursday, March 16, 2000



**TOPIC:** The Chemistry of Today's Motor Oil; Additives and How They Work.

**Speaker:** Tom Ordiway, Technical Advisor Sunoco Inc. Lubricants.

The speaker will discuss the formulation of motor oil starting with base oil selection and progressing through the various additives. The differences, similarities and misconceptions concerning anti-wear additives, extreme pressure additives and friction modifiers will be discussed as related to motor oil design. The specific interests of those in attendance will be addressed as well.

### MEETING AGENDA

**Meeting:** Bluemound Gardens Banquet Center  
(Formerly Christy's Restaurant)  
11703 West Bluemound Road, Wauwatosa  
(Southwest corner of Bluemound Road & Homewood Avenue - 117th Street) Enter from the lower parking lot off of Homewood Avenue.

**Social: 5:00 pm**

**Dinner: 6:00 pm**

**Presentation: 7:00 pm**

**MENU:** Choice of - Stuffed Pork Chop, New York Strip/Boneless Chicken Breast combination or Chicken Breast / Orange Roughy combination plate.

All entrees include tossed salad, vegetable, potato, rolls, beverage, and a brownie dessert. Meal will include bread, coffee, tea or milk.

#### Dinner Costs:

Members & Spouses:	\$17.00
Guests:	\$18.00
Students:	\$ 8.00

#### Registration Info:

Please register for the dinner by contacting Kim Kellen at 414-616-1374 or Email at kim.kellen@harley-davidson.com **no later than 10:00 AM on Tuesday, March 14th.** No shows with reservations will be billed. Attendance during presentation only is welcome at no charge. Fifty year members are entitled to one free meal per year.

## Speaker Biography:

**Tom Ordiway** received his BS from Grove City College in 1960. He graduated on a Saturday and went to work as a research chemist for Kendall Refining Co. in the Automotive Research Group the following Monday.

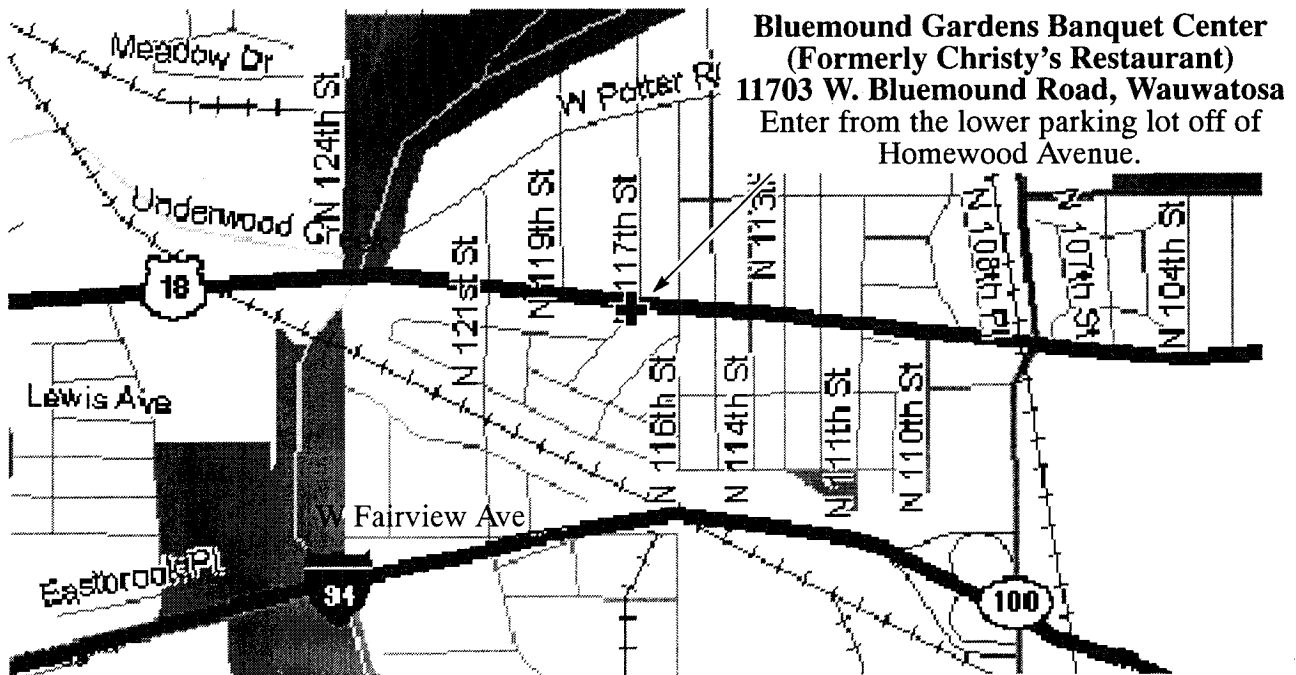
During the past 39 years he has been involved in the

design, formulation and application of mobile equipment lubricants. Tom was the VP of R & D and Quality for the Kendall Motor Oil prior to the Sunoco acquisition. His current title is Technical Advisor Sunoco Inc. Lubricants.

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Sunoco, Inc., headquartered in Philadelphia, is one of the largest independent U.S. petroleum refiner-marketers. Sunoco operates five domestic refineries with 730,000 barrels per day of crude oil processing capacity, and markets gasoline under the Sunoco brand through more than 3,500 outlets in 17 states from Maine to Virginia and west to Indiana. Sunoco sells lubricants and petrochemicals worldwide, operates domestic pipelines and terminals, and manufactures metallurgical-grade coke for use in the steel industry.

Following an extensive decade-long restructuring, a slimmed-down Sunoco is on the rise as the third-largest independent oil refiner and marketer (behind Tosco and Ultramar Diamond Shamrock). The company operates five refineries in the US, which have a combined processing capacity of 730,000 barrels of crude oil a day. It markets its Sunoco gasoline through about 3,700 gas stations (Ultra Service Centers and APlus convenience stores) in 17 US states, primarily in the Northeast. Sunoco has exited its oil exploration and production activities to focus on refining and marketing. The firm also produces lubricants and chemicals and mines coal for coke processing.



## Milwaukee Section 1999-2000 Governing Board

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## From Your Chairman:

Have you ever wondered whether you get what you pay for if you buy expensive motor oil? Have you been skeptical about the claims made in the additive commercials? I certainly have. This month's meeting will give us the technical information to win those debates with coworkers about motor oils and their additives.

Tom Ordiway is Technical Advisor for Sunoco Inc. Lubricants and has the perfect background for helping us sort through the hype. I hope to see you at the dinner meeting.

The Governing Board and student chapters across the world are preparing for the 2000 Midwest Mini-Baja. Volunteers are still needed for judging, timing, scoring and flagging. Please contact Alicia Musczynski via e-mail at alicia\_muszynski@harley-davidson.com or by telephone at 414-616-1348 or E-mail at baja2000@excite.com to volunteer for this exciting event and get the opportunity to interact with some very talented student engineers. Rodica Baranescu, the 2000 SAE National President, is expected to attend the Baja Banquet.

Jerry Fellows  
1999-2000 Chairman  
Milwaukee Section SAE

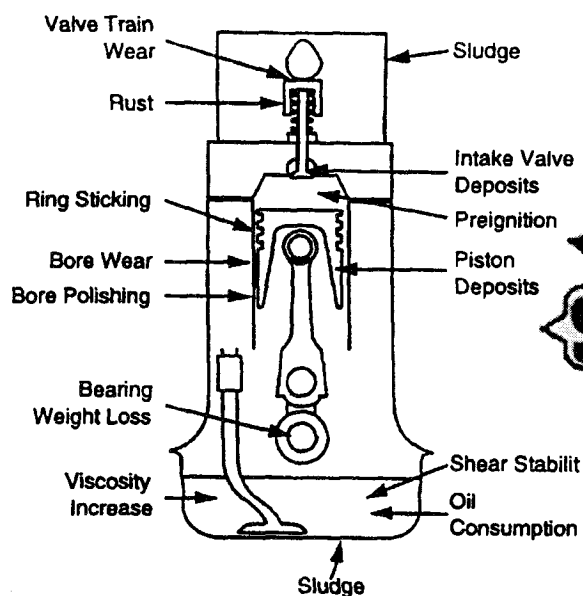




# SAE Milwaukee Section



## ENGINE OIL PERFORMANCE CONSIDERATIONS



## BEARING LUBRICATION

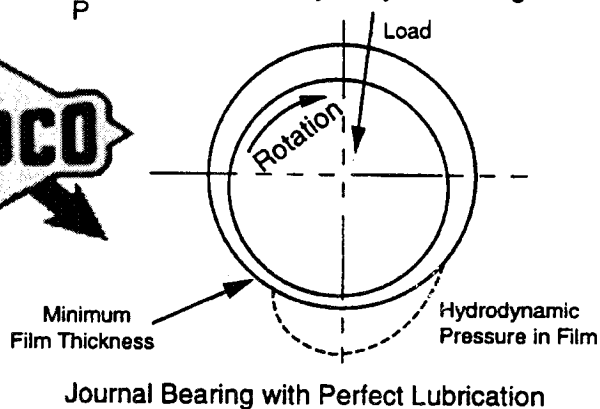
$$\text{Friction} = f \left( \frac{ZN}{P} \right)$$

Z = Absolute Viscosity, cP

N = Speed, RPM

P = Mean Pressure, PSI

$$\frac{ZN}{P} > 30 \text{ Indicates Hydrodynamic Regime}$$



## Meeting Sponsorship

We would like to thank the following organizations for their continued support of the Milwaukee Section:

Waukesha Engine, Harley-Davidson

For more information on becoming a sponsor, please contact: Jerry Fellows 414-225-8265