Olson Marketing
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in partnership with Insane Oil of Omaha
Your AMSOIL Information News Source

Program Highlight:
AMSOIL Severe Gear

SEVERE GEAR is designed for those who demand the best. Engineered with high film strength for high-load demands. Reduces friction and provides the ultimate protection against wear. Excels in extreme temperatures. Helps maintain efficiency and outperforms conventional gear oils. Excellent for all cars and trucks, but especially well-suited for towing, hauling, racing, commercial use or other severe duty.

EXCELS IN TEMPERATURE EXTREMES

- Delivers excellent performance in hot and cold temperature extremes.

- Resists breakdown from high heat, preventing acids and carbon/varnish formation.

- Wax-free construction improves cold-flow properties, improving fuel economy and cold-weather shifting.

MAXIMUM WEAR PROTECTION

- Specifically engineered for maximum performance in severe-duty applications.

- Maintains viscosity for long-lasting protection against metal-to-metal contact.

- Proprietary AMSOIL additives form an iron-sulfide barrier coating on gear surfaces, providing the ultimate line of defense against wear, pitting and scoring.

- Helps prevent "thermal runaway," a phenomenon caused by a lubricant's inability to control friction and increased heat under high-stress conditions.

- Inhibits rapid lubricant degradation and component damage, helping equipment run better and last longer.

AMSOIL
The First in Synthetics®

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RUNS ON FREEDOM™
AMSOIL

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Lubricants Must Be Formulated to Control Foam

Anytime a rotating assembly is submerged in an oil bath, air bubbles, aka foam, can form on the fluid surface. Lubricants must be formulated to control foam to reduce the risk of mechanical damage.

For example, the crankshaft in engines can create foam in motor oil and differentials can create foam in gear oil. In motorcycles, shared-sump transmissions, where the transmission and engine use the same oil, are good at creating foam.

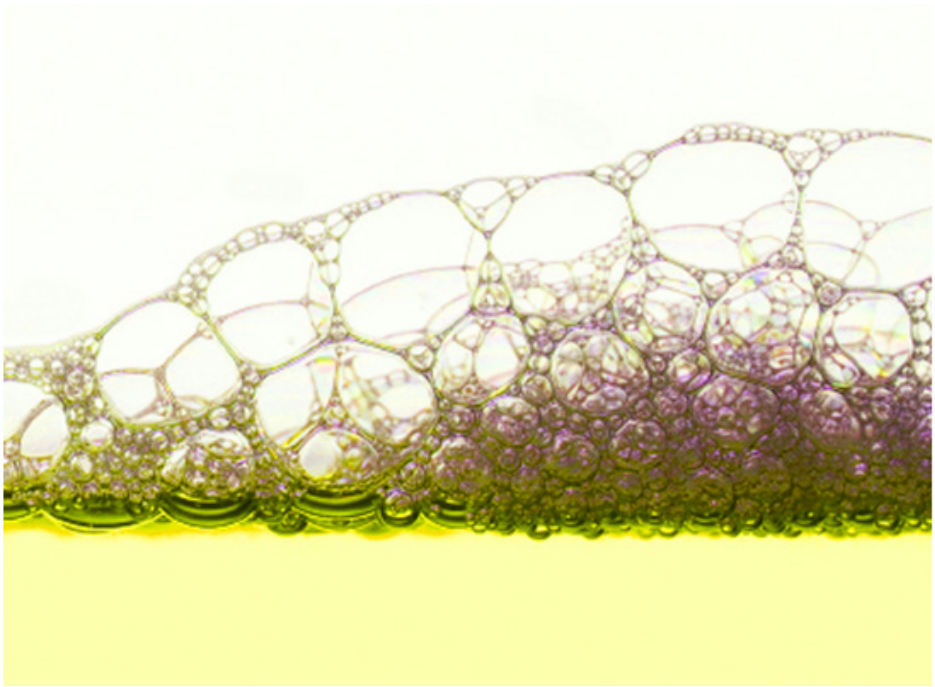
Foam in hydraulic lifters can create valve train noise because the foam is made of air that compresses and creates lash in the valve train.

Foam can lead to poor component protection and ultimately mechanical damage. That's why controlling foam is a critical piece of lubricant formulation.

A Host of Issues

There are several ways that foam causes problems:

1. Heat — Foam heats to extreme temperatures under pressure, generating steam within the fluid. Then, foam compounds the issue by creating an insulating layer that prevents the heat from dissipating. Heat and water contamination limit the lubricant's effectiveness.



2. Wear — Because air is trapped inside the fluid, the fluid barrier is no longer impenetrable and wear-causing metal-to-metal contact can occur.

3. Oxidation — The air trapped in foam promotes oxidation and shortens the service life of the fluid.

Hydraulic and other industrial applications face another issue. When hydraulic fluids foam, they become compressible and can make machinery inoperable or extremely inefficient. These heavy-duty lubricants require special formulations to prevent foaming.

Friend or Foam

Controlling foam is not an easy task. Oil viscosity, contaminants, changes in surface tension and additives can all act as catalysts to the formation of foam.

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Lubricants Must Be Formulated to Control Foam

Detergents and dispersants promote foaming and minimize the effectiveness of anti-foaming additives.

Anti-foam agents can stop foaming but require effective formulation to avoid trapping tiny bubbles within the lubricant.

Silicone additives are an example of how critical it is to get the formulation exactly right. Silicone compounds are widely used for their ability to reduce the surface tension of air bubbles. Reducing the surface tension causes the bubbles to break apart quickly and easily.

Silicone compounds in formulations of only a few parts per million can be extremely effective, however excess amounts can promote foaming.

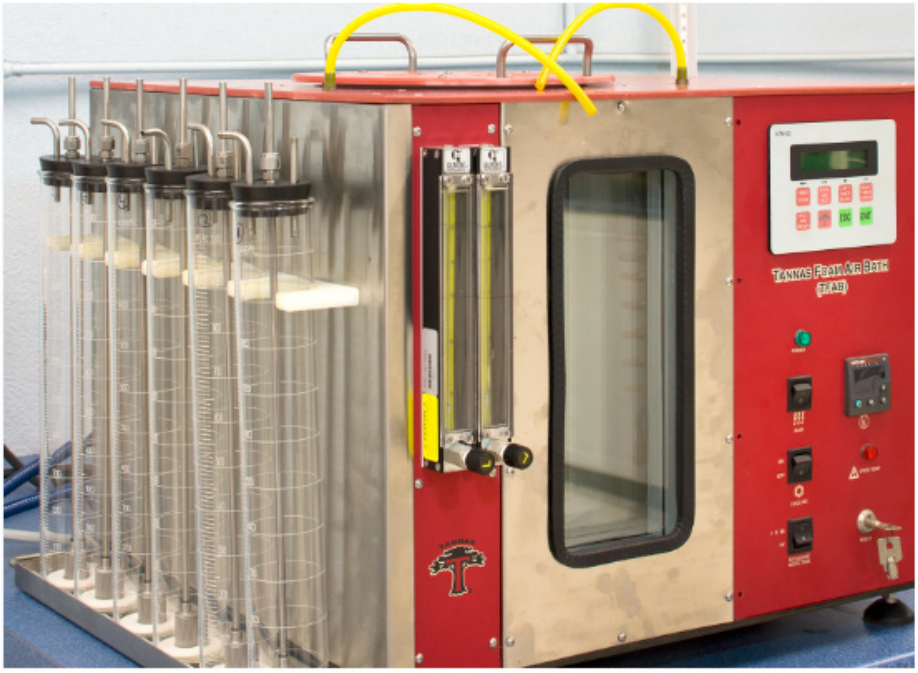
Organic compounds can also decrease the number of small bubbles but require much higher concentrations than silicone.

Foaming Characteristics Test (ASTM D892)

A lubricant's ability to resist foaming is measured with the Foaming Characteristics Test (ASTM D892). It measures the amount of initial foaming (in millimeters) contained within an agitated fluid and compares that value to the amount remaining after 10 minutes of settling time. Generally, the less foam remaining after a short amount of time, the better.

Built-In Resistance

AMSOIL synthetic oils are precisely formulated with anti-foam additives to resist the oxidation and acid formation that contribute to foam development. The suppression of foam improves mechanical performance and provides more reliable protection for your machines.



This chemistry lab foam machine measures the foaming resistance of lubricants.

Shop Talk...

with Dr. Jonathan D. Olson, EdD
(Independent Amsoil Dealer #10458)

In 2011, I purchased my 2001 Ford F150. Much of the research I have conducted over the last 11+ years has involved that vehicle. And, much of that research has ended up in various videos I have uploaded to YouTube on my channel Insane Oil.

In January of 2021, I began to look for a suitable replacement for my truck to both make new content for YouTube as well as conduct more research. It was at that time that the used car market skyrocketed and went crazy. So I have been looking for almost 2 years. This past week I was able to find and purchase a suitable replacement.

Currently, my 2001 F150 is a 5th Generation F150. The replacement that I found is a 2012 F150 with the 3.5 EcoBoost engine. This 'new' truck is classified as a 7th Generation F150. This will help me keep current content on YouTube as well as give me an opportunity to conduct research into the 3.5 EcoBoost engine as it seems to be what is going in a substantial variety of vehicles. And, as much of my research involves the use of Amsoil lubricants, it will help me collect data and provide real world information for the performance of Amsoil within the 3.5 EcoBoost engine.

I will have more information to share in the upcoming months, but I just wanted to provide you with an update for topics to expect in the future.

Congratulations to NEW Amsoil Opportunists and Enthusiasts!

Congratulations:

New Catalog Customers

Sam Shalala
Virginia Beach, VA

Michael Weber
Riverton, CT

Matthew Kane
Omaha, NE

Duane Brazer
Lincoln, NE

Jeremy Lohman
Lincoln, NE

Brad McKinney
North Olmsted, OH

Bashar Alotaibi
Houston, TX

Teague Schierling
Madras, OR

Darin Fehlhafer
Selah, WA

Jerome Roguski
Milford, NE

Congratulations:

New Preferred Customers

Jack Taylor
Meriden, NH

Alexis Lacey
Buchanan, MI

Ethan Dezafra
Omaha, NE

Congratulations:

New Dealer

Kendon Hubbard
Lincoln, NE

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