



AMA Chapter 534,
Medford, Oregon

THE ROGUE Eagle



January 2003

Awards

At the traditional end-of-the-year club dinner and Christmas party, which was held at the Medford JJ North's Grand Buffet, several awards were presented to the most deserving club members. The Broken Prop award was presented to Bill Grove for the spectacular crash of his Avro Arrow ducted fanjet at the 'Media Day' a few days before the annual

Air Show. Danny Stanton and Cliff Sands were also nominated for this award.

Andrew Thompson and Joe Despain were nominated for the Most Improved Pilot award; and those present at the dinner voted Andrew as the most improved flier.

Modeler of the Year nominees were Bob McLane and Joe DeAscentis. Bob is at the airfield three days a week, rain or shine, teaching new fliers and helping others to prepare their planes, test fly-ing new models for members, etc. When other instructors give up on students, Bob will take over

and with his patience will teach the student to fly.

Joe was heavily involved in every field improvement project in the last couple of years, including arranging for and purchasing materials, directing projects on site, running heavy equipment, etc. As the club's Public Relation Officer, Joe worked with the Lions Sight and Hearing Center to publicize the airshow, set up and staff the Wal-Mart day and many other tasks. Joe received the Modeler of the Year award.

Congratulations to all!



FACTS ABOUT FUEL - Which Oil is Better - Synthetic or Castor?

(The following is the second in a series of articles exploring all facets of model engine fuel. The writer is Don Nix, Past owner of Powermaster, Inc. This article is used by permission of POWERMASTER, Inc.)

Before we get started on the subject heading, I'd like to offer a couple more thoughts on last month's subject, "What's the Oil Content?" - thoughts that have been remembered since writing the original column.

Many modelers who have been involved in the hobby for a long time, including those who've been away for years and recently returned, are very stubbornly remembering when model fuel just about had to contain something in the order of 25% oil - usually all-castor. They have a hard time dealing with the idea that virtually no one runs that much in modern engines. The operative word here, of course, is "modern". The metallurgy in today's engines barely resembles that of a generation ago. The end result, as far as model engines are concerned, is that the engines today simply don't require as much lubricant - not nearly as much. I will be quick to add that those running antique engines in Old Timer events should certainly continue to use the old-time formulas - no doubt about it.

In addition to vastly improved metallurgy, we must remember that manufacturing techniques barely resemble those from years ago, in many ways. Modern CNC machinery has made it possible to routinely and cheaply make 1 or 1 million parts all exactly alike. Those of you who have come along in later years may be shocked to know that up until the advent of this new technology, every piston was hand fitted to every liner. There was no such thing as simply machining 1,000 pistons and 1,000 sleeves, picking one from each batch and having them fit. The belief in those days that some engines of the same size and make were markedly hotter than others was no doubt true. We've read that in those days, a .29 for example, might vary from as low as an actual .26 to a .32 - some 23% more displacement! More closely controlled tolerances have resulted in the ability to use much different fuels than a generation ago.

The second thought on the subject of total oil content came from reading the operating instructions included with a new imported 4-stroke engine - the DAMO FS 218 twin. It recommends a fuel containing 94% methanol, 5% nitro and 1% Castor Oil! Clearly, this reinforces my point that "there ain't no such thing as a fixed percentage of oil content."

Now, on to this month's subject: Which kind of oil is better - synthetic or castor? A point vehemently argued all over the land.

Each side has its very strong proponents, and each side is right - to a point. "Old-timers" tend to still favor an all-castor fuel, or at least one containing a liberal amount of castor oil. Modelers who have come to the hobby in the last 15 or 20 years have a strong affection to synthetic oils, or at least want their fuel to have mostly synthetics. Let's take a look at both types:

SYNTHETIC OILS: Strong Points Weak Points

- ? Good Lubricity (it's "slick"). Most tend to cause corrosion if adequate inhibitors aren't added.
- ? Little to no carbon or varnish buildup inside. Burns off surfaces at about 100 degrees lower temperatures than castor oil.
- ? Leaves less oily mess on models. Many types and qualities, making it hard to choose the best one.
- ? Available in a variety of viscosities. Expensive - good ones cost almost twice as much as castor oil, increasing the cost of the fuel.
- ? Totally soluble in nitromethane. When used as the sole lubricant, a greater quantity is required, which increases the cost of the fuel.

CASTOR OIL:

- ? Great Lubricity. Tends to cause carbon and varnish buildup in engine if cheap grade and/or too much is used.
- ? Reduces the amount required, resulting in more power and better idle. Messier on model than synthetics.
- ? Will tolerate internal temperatures about 100 degrees higher than any synthetic. Somewhat sensitive to extremely cold temperatures - mild separation in solution, residue on model becomes almost "buttery" in consistency.
- ? Almost 50% cheaper than good synthetics, reducing cost of fuel. Insoluble in nitromethane. In solutions above 40% - 50% nitro, will separate unless some sort of co-solvent is used.
- ? Great natural rust and corrosion inhibitor. Generally available in only one viscosity.

I'd like to insert here that there is a rumor making the rounds on the Internet these days that the manufacturers of castor oil have recently changed their methods of making the product, and the castor oil we are getting now is either wholly or partially incompatible with methanol.

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I have talked at some length with the "Head Techie" of one of the largest castor oil importers in the U.S., and I want to go on record as saying that, according to the best information I can find, this is total BS The Head Techie actually laughed out loud when I told him what was going around. He said, "You know, there isn't much we do to the stuff. We press the oil out, filter it, grade it and package it. As far as I know, nothing has changed."

The rumor apparently started with one of the fuel manufacturers. For what reason, I have no idea, unless it's to help them promote their proprietary synthetics. (Incidentally, I have read a response on the 'net' from SIG, agreeing with the fact that it's nonsense.)

So...there you have it. "You pays your money and takes your choice." Actually, it's a little better than that, and the obvious answer is - use a combination of the two, in proportions that will come nearest to enjoying the benefits of each, while minimizing the adverse characteristics.

A few years back, the modeling community was in a "synthetic oil frenzy," and the swing was toward all-synthetic fuels. Happily, at least in this writer's opinion, we've seen a very noticeable swing back toward the center, with the majority seeming to prefer a synthetic/castor blend. We think this makes sense, and many years experience proves it.

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And Coordinators**

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Newsletter Editor:

Werner Bruckner 664-2549

wkbruck@charter.net

Webmaster:

Danny Watson 488-2179

webmaster @rogue-eagles.com

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The most frequent comment I hear from lovers of all-synthetic fuels is, "Brand XX leaves a lot less oil on my model." My response to that is, "Doesn't that bother you? If you don't see much oil on your model after flying, that tells you one of two things - or both: Either there wasn't enough oil in there in the first place, or the oil is burning off with the methanol. Neither is good. There's no way oil can burn off and properly lubricate at the same time." This is usually met with a puzzled look, then one of the light dawning, having just realized something they never thought of before. Oil residue in model engines is as natural as barking is to a dog. We have to learn to live with it. As an aside, not long back a friend sent me a copy of an article published in a European model magazine. In one part, the writer stated, "The Americans are the only ones rich enough and dumb enough to use synthetic oils." Perhaps overstated just a bit, but it has some validity.

There are a couple of types of engines that do require an all-castor fuel, or at least one with a considerably higher castor content than most others. One would be the Fox ringed iron piston type, and the other would be the small Cox engines, because of their rather unique ball-and-socket connecting rod-to-piston design.

Pattern flyers traditionally prefer an all-synthetic fuel, for a couple of reasons, I think. One is the fact that pattern flyers practice a lot - hour after hour after hour. That much

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2003 Events Schedule (NOT FINAL)

Puyallup Trade Show February 2nd & 3rd	Ashland EAA Demonstration May 19th	Airshow Interest Day at Wal-Mart, Medford August 31st
Wet and Windy Fly-Fun March 24th	Lee Renaud Memorial Contest, June 1st	Airshow Media Day September 5th
Grants Pass Swap Meet April 20th	Plat-I Float Fly June 15th and 16th	Rogue-Eagles 2002 Airshow September 7th and 8th
Spring Fun-Fly Contest April 27th	Military Fly-In Contest June 22nd	OMPRA North-South Shootout Pylon Race August 24th and 25th
Float Fly at Lake Selmac May 4th and 5th	Bid Bird Fly-In July 6th and 7th	Fall Fun-Fly October 12th
OMPRA Spring Pylon Race May 11th	Selmac Float Fly July 20th and 21st	OMPRA Championship Pylon Race September 21st
Builders Contest May 18th CANCELLED	Kids Day at Hawthorne Park August 3rd	

Rogue Eagles R/C Club,
P.O. Box 8332
Medford, OR 97504

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To:

NEXT MEETING is Tuesday January 14th at the Lions Sight and Hearing Center, 228 N Holly, Medford, OR. Bring your show and tell projects.

Fuel

use, plus the tuned pipe setup that is almost universal with them probably, tends to cause a greater problem with varnish and carbon buildup than in sport types. (At the risk of being bombarded, I also think it's largely a state of mind. "Joe Champion uses all-synthetic, so that's what I'm going to use.")

The other area where we have seen all-synthetic fuels gain in popularity in recent years has been with model helicopters, probably for the same reasons. Also, the trend toward 30% nitro fuel for serious competition has led to using a lower viscosity lubricant, and, as shown in the comparison charts above, this necessarily dictates using synthetics.

Next installment: Nitromethane - the "mystery" ingredient.

Membership Renewal

We ask all Rogue Eagles who wish to renew their membership for 2003 to come to the January 14 meeting. Please bring the Application Form you received in the newsletter several weeks ago, plus your dues of \$25.00. Also, you must be a current member of the AMA, so bring your 2003 AMA card for verification. Make checks out to the Rogue Eagles RC Club.

You may also renew by sending your filled-out form, a copy of your 2003 AMA card and a \$25.00 check to the 2003 treasurer:

Werner Bruckner
925 North 5th St
Central Point, OR 97502

Please renew your membership in January. You will not receive a newsletter in subsequent months, if you don't renew. Furthermore, your flying privileges at the field will stop without an up-to-date membership.

The Board
