EDITOR'S NOTES

Sorry the newsletter is a little late. Say 'hi' sometime to our new member, Joe Gordon.

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PRESIDENTS COLUMN

The 9th Phoenix fun fly has taken place and was again a great event Attendance was a little off at 91 pilots (present pilots, there were 4 pre registered who were unable to attend for a total of 95), but only by a few pilots. We didn't make as much as last year, but still cleared $1500. Everything went fairly smooth with only a few problems. These were the gate, which needed to be locked or manned (I unfortunately got to meet the red neck rancher on this issue), the lack of Night flying pilots, and last, a late night barn fire. The barn or spool fire as it were, was probably the biggest problem. This happened late Saturday night and was still smoldering on Sunday morning. The SVF people were not amused and chose to invoke the contract clause which cost the club $100 extra for the field. I know that several Sun Valley board people, at least initially, were quite upset over the incident. While statements were made that we might not be invited back next year (I heard this second hand), I feel that once they evaluate their revenue from the event (at least $2000) they will calm down and simply add some more clauses to the contract. I can not honestly say that I know who exactly decided to burn the spool, I know that liquid refreshments were involved in glass bottles and I believe that is what really spooled up the SVF people. I know that people were just having fun and the spool was already broken, but we need to watch this in the future. Worst of all, NO ONE TOOK ANY VIDEO OF THE FLAMING FOAMIES!!!
The night flying was disappointing for spectators and pilots alike. I don't know exactly how one year we have the best night flying and the next year I have to hunt down a pilot to just get one in the air. Suggestions for this would be appreciated.
I want to thank everyone who helped out (and you know who you are), without your help we could not pull off this event every year.
That's it for this month, hope to see everyone at the field or meeting.

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TECH TIPS

This article I found is talking about 4 stroke, but it has a nice description of nitro and how it works:

If you want to make a high-power 4-stroke engine, there are a couple of different ways to accomplish your goal. One way is to increase the displacement. Another is to stuff more air into the engine with a turbocharger or a supercharger. If you want to go to extremes, you would replace gasoline altogether and use a more energetic fuel. Top fuel dragsters do all three.

A "nitro-burning" engine and a "top fuel" engine are the same thing -- engines designed to burn **nitromethane** rather than gasoline. Gasoline is a hydrocarbon, and the common chemical formula for gasoline is C_8H_{18}. Nitromethane has the formula CH_3NO_2. Nitromethane is a little like gasoline that has been pre-mixed with nitrous oxide. The fuel comes with its own oxygen atoms to help it burn.

The big advantage of nitromethane is that you can get a lot more power from each explosion inside the engine. Pound for pound, nitromethane is less energetic than gasoline, but you can burn a lot more nitromethane in a cylinder. The net result is more power per stroke. You typically need about 15 pounds of air to burn 1 pound of gasoline, whereas you need only 1.7 pounds of air to burn 1 pound of nitromethane. This means that, compared to gasoline, you can pump about 8 times more nitromethane into a cylinder of a given volume and still get complete combustion.

Since nitromethane is not as dense as gasoline in terms of energy, so you do not get an 8-time improvement in terms of power. It is more like a 2.5-time improvement (see this page for a comparison). Still, you can double or triple your engine's horsepower simply by changing the fuel. That's a huge improvement!

A typical drag-racing engine has a displacement of 8.9 liters, is supercharged and produces about 6,000 horsepower. It can burn close to a gallon (4 liters) of nitromethane per second! To put that in perspective, there is something like 2 teaspoons (10 cc) of nitromethane being poured into each cylinder per intake stroke.

An interesting thing about nitromethane is that it does not burn as quickly as gasoline. In fact, there is not enough time to burn all of the nitromethane between when the spark plug fires and when the exhaust valve opens. So the engine is pumping still-burning nitromethane into the exhaust pipe. That's why you see flames shooting out of the exhaust of a drag-racing car.

JOKES

At a dinner party, several of the guests were arguing whether men or women were more trustworthy. “No women,” said one man, “can keep a secret.”

“I don’t know about that,” answered a blond woman guest. “I have kept my age a secret since I was twenty-one.”

“You’ll let it out someday,” the man insisted.

“I hardly think so!” responded the blond lady. “When a woman has kept a secret for twenty-seven years, she can keep it forever.”