

is removed: if so, the plug is normally too cold. This is also critical to a proper Stunt run.

Most plugs are designed to provide a colder range than we want, and you should try to get the right range for the motor. Many days of testing and much time and expense buying

most every plug on the market has yielded these results: Glo Devil RC #300 long, Rossi RC hot, Rossi #1, 2, 3, Enya 3 & 4, Fireball RC long, the Hobby Shack RC long, SIG RC long, and some of the FOX long plugs, are the best plugs for our use. In almost all instances use a long plug, as they will be substantially hotter than the shorts, plus they are deeper in the combustion chamber and this tends to keep things hotter and cleaner.

A lot of times the plug problems show up as rich inside maneuvers and leaner out-sides; this happens because gravity and centrifugal force forces the oil-fuel charge down on the element on insides, thus cooling the coil, and pulls it away on outside maneuvers, letting it naturally go leaner. I have seen this problem instantly cured by simply changing plugs. All of this assumes you have your tank height perfect, (you did adjust your tank height, didn't you) you're right side up, and inverted lap times are the same. This is important; don't skip this step.

A few tips when flying: if your plane goes lean in maneuvers and comes back to a four-cycle slowly, you most likely need more oil, or less back pressure from the muffler. I have seen a lot of fuel with water in it (methanol attracts water) and this will cause erratic runs and needle settings. Always use fresh fuel, and don't be afraid to try another fuel if you think this is the problem.

Never try to put a brand new engine in a plane, and try to break it in and trim and fly the same time. I have seen this too many times with disastrous results. Keep good care of your equipment, and it will usually take care of you; abuse it and it will most times let you down.

Now, for you guys who absolutely gotta buy the bargain R/C sport fuel, and no amount of persuading will convince you otherwise: you at the very least, need to add a healthy dose of castor oil. You can figure 1.3 ounces will raise the oil content one percent (i.e., 13 ounces of oil to make 15% oil fuel into 25% oil fuel). This is *not* recommended and at the very best will usually be a guess, but I guess it is better than not adding anything at all.

The final thing I would like to say in this session is to make sure you use an after run oil between sessions, and when you store the motors. This is another must do, because of the nature of the fuel we use. When nitromethane or any nitroparaffins burn, they leave behind, in your motor, nitric acid; this, along with the water carried in partly by the alcohol, gets together and eats your bearing and other parts for lunch. Good quality after run oil is easy to get: don't skip this step. If you can't find a good after run at your local hobby shop—there are many available that are made by several companies—then try Prather's. They make a good one, and so does RJL. Do not use motor oil, or Marvel Mystery oil, this is not after run oil.

Marvel makes an excellent oil that can be used as an after run oil, and it is available from most auto parts stores and is called Marvel Air Tool oil. As a matter of fact most air tool oils can be used as a after run oil, they are designed to fight corrosion in metal air tools, and this is exactly what we are looking for. Another good place to get these types of

## Fuel/Additive Suppliers

### Carolina-Taffinders

8345 Delhi Rd.  
Charleston Heights, SC 29418  
803-553-7169

### FHS Supply (Red Max)

PO Box 9  
Clover, SC 29710  
800-742-8484

### Prather Products

1660 Ravenna Ave.  
Wilmington, CA 90744  
213-835-4764

### RJL Industries

PO Box 5  
Sierra Madre, CA 91025  
818-359-0016

### S&W Fuels

PO Box 208  
Tatamy, PA 18085  
215-252-2024

Some of the vendors who supply the magic engine (above). Every type of engine (below) likes to "sip" its own particular fuel blend. Old Time engines may thirst for lots of castor while newer, Schraerle engines imbibe fuels with higher synthetic oil content.

oils are at large home supply stores, Home Depots, or Builders Square type stores. Look in the department where they carry air compressor and paint guns. There are many brands of these oils, so you see you have no excuse not to use them.

As for fuels, there are many good companies out there that will supply you with a good usable Stunt fuel. Red Max is one that comes to mind; they will custom blend almost anything you want, and have been over the years very consistent. Stan Rautkis at S&W will probably do the same if you explain to him what you want, as will Doug Taffinder at Carolina-Taffinder. I am sure some of the west coast fuel companies will also blend fuel for your needs, but I have not had any personal dealing with them, so I'm not absolutely certain of this. If you are using some of these suppliers, call them up, I'm sure most of them will oblige you. The model magazines are full of 800 numbers for fuel suppliers, and the ones that I have mentioned come highly recommended; however, this is by no means all of them.

SIG for example has a very high quality fuel that is stocked by dealers all over the country; their fuel is 20% blended oil, and with extra castor or oil supplements, such as PB-1, makes an excellent Stunt fuel. Keep in mind things will vary slightly, so don't be afraid to try something new, or your buddies fuel if you suspect you have a fuel problem. Thanks for reading, keep em' tight, I'm outta here.

