

THE FLYER

www.VictoryAviation.org

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Current Roster	March 2018
Current Rules	October 2017



All meetings are held at 7:00 pm on the third Tuesday of each month. This month's meeting will be held at Richard's Pizza in Fairfield, located at 495 Nilles Rd., approximately two miles west of Rt. 4.

COME EARLY: SOCIAL HOUR FROM 6:00 to 7:00.

Need a map? <http://goo.gl/maps/FzVPe>

Next Club Mtg. Mar 20, 2018
Next Tour Group/Safety Mtg. April 17, 2018

No meeting in July.

MEETING NOTE: In case of poor driving conditions (heavy snow, ice, rain, etc.), typhoons, locust plagues, floods, famine, or the end of the world, call Brent Clark (Business) or Jan Jansen (Safety) for meeting status. Phone list on page 2.

Upcoming Events

Check this space each month for upcoming Tour Group and other aviation events.

Tour Group

We're looking for someone to take over Tour Group Duties, please contact Brent or Jan if you're interested.

Other Aviation Events

- May 14th Grimes Field Urbana, OH Gathering of B-17's <https://goo.gl/3n6X5X>
- May 17-19 Memphis Belle Exhibit Opening Events at the National Museum of the US Air Force, Dayton Ohio <https://goo.gl/qbx2Lf>

IMPORTANT NOTICE!!

Please send *all* changes to the people listed below, as appropriate. *Everything* except news items or emergency information should be sent to PilotInfo@VictoryAviation.org, as shown below. If you have new or updated information or status changes of any sort, here's where to send it and whom to contact:

News Items for the Newsletter:

News@victoryaviation.org

Information/Photos for the Web Site:

Webmaster@victoryaviation.org

The following information **ALL** goes to:

PilotInfo@VictoryAviation.org

- Roster information changes and updates (address, phone, etc.)
- Email address changes
- Resignations/Requests for Inactive Status
- BFR and/or medical certification date changes (updates to the info on your bill)

ICE (In Case of Emergency) contact info:

Brent Clark, (Primary);

President@VictoryAviation.org

Jan Jansen (Secondary);

CURRENT AIRCRAFT RATES

The rates for each aircraft, as listed below, are current as of the newsletter publication date, based on current fuel prices.

351VA (Dakota)	\$128/hr
352VA (Archer)	\$95/hr
355VA (Skyhawk/Trainer)	\$79/hr
356VA (Saratoga)	\$143/hr
9515Q (Skyhawk)	\$95/hr

FROM THE TOWER

Well it's March and the flying days are getting longer and the VP is reminding me to get something in the newsletter. John's is a difficult and thankless job.

Istly. We need a treasurer. Cory Simms has betrayed us for a Bonanza. The treasurer's job is

one of the most important jobs in the club and needs to be filled shortly. It does take some time but Dave Babcock will thankfully continue to assist with the bills and fetch beer and wings for the new guy. If you have any smidgen of interest or willingness, please call an officer or trustee. Don't bother nagging Dave Gold. "If nominated he will not run. If elected he will not serve"

Cory, thanks for a thoughtful job well done. All the best with your new ride.

2ndly, please welcome three new members this month.

Shaun Brixey is a student with Mark Dame and has a grand total of 1.1 hours. (I believe that is twice as many as your VP). Shaun is a golfer and married although I'm not sure how those two things work together. He also has two teenage boys, one of which is excited about flying and the other, not so much. We'll work on him.

Dan Swarr is a physician with Children's Hospital. He is married and has a 3yr old son. Dan is originally from upstate New York, has lived in Philadelphia and has called Mason home for the last 1 1/2 years. He has logged 9 hours and is also flying with Mark.

Pete Sweemer survived life as a school teacher and now chooses to teach flying. He is a CFII and will be accepting students soon. Very soon.

Lastly. This month is business meeting and we will be voting on dues and flying rates so try to come out Tuesday 3/20/18. Remember, you are less likely to be volunteered if your show up at the meeting.

Cheers,

~ Brent Clark, President

With the warmer weather come the obligatory admonition: **CLEAN THE BUGS OFF THE PLANES!**

WAKE TURBULENCE

From the Treasurer

2018 dues and hourly rates will be voted on at the March meeting. The proposed dues for the next fiscal year are \$60 per month (no change). Hourly rates are the following.

- 5VA - \$81
- 2VA - \$98

- 15Q - \$98
- IVA - \$130
- 6VA - \$145

The increase in the hourly rates are due to the updated engine replacement costs we recently received for all the airplanes effective in 2018.

Also, if you pay your bill by bill pay with your bank, it is highly recommended you move your bill pay date up to earlier in the month. Bill pay checks are the only checks that routinely come in late or never arrive. The best method for ensuring your check is at the airport, and on time, is by dropping it off in the club mailbox.

MEMBER & TRAVEL NEWS

Discount on Pilot Supplies

If you're down at Lunken and need any pilot supplies...headphones, charts, or whatever...stop in at the Flight Depot in the Lunken admin building lobby by Sky Galley. Talk to the owner, Tom Edwards, and tell him you're from Victory Aviation, and he'll give you a 15% discount on any purchase. Their web site is currently down for a facelift and update, but should be back up in the near future.

MAINTENANCE & PLANNING

Hi! I won't be able to attend the March meeting so I want to give you updates on our fleet here. *(and that I'm willing to serve as the Treasurer as well as Planning Officer – but are you really sure you want to put me in charge of the bank account?)*

355VA

It is getting close to engine replacement. The new engine is already at Elite and Amy has the plane scheduled for engine replacement after the Pitot/Static check at the end of March. Temporarily, 9515Q will be used for training. The armrests are looking bad, so during the engine swap, we'll be sending them out to get them looking good again. The leather seats, particularly up front, are looking dirty and worn. During engine replacement, Amy and I will be deep cleaning the leather and other parts of the interior and it should look almost new again.

9515Q

The drama still continues on the intermittent fuel gauge fluctuations. I discovered a service bulletin concerning this on 172's manufactured around 1998 and later. There is a problem with the Molex connector at the wing roots. 9515Q is in Annual now, and Jeff will be applying the fix to address this.

352VA

The plane seems to be working well. Still have a problem with the co-pilot seat adjustments. Bob says it is in line to get fixed.

351VA

At the paint shop. Will be ready for pickup on March 14th. Also, the instrument facia panels have been re-painted and re-placarded, so the inside should look fresh and new as well. I'm imagining most of us will be out of currency when it comes back, so make arrangements soon with our instructors to get current.



356VA

I have been tracking down the source of a vibration for about 2 years and to fix it, had to buy a new prop. The story is long, but the short version is, after the prop strike and engine replacement a couple years ago, there has been a noticeable vibration that did not used to be there when flying at cruise power settings. Dynamic prop balancing, removing wheel pants, checking engine mounts, engine mount shock absorbers, firewall structures... nothing solved the problem. We took the plane to Hartzell and upon investigation, found many issues with the prop, and to buy a new one was cheaper than repairing ours.

There is a very little vibration still remaining, but it's not from the prop. I have been working with Jeff to track down a slight random shudder in the

engine that is likely an ignition issue. The timing was checked, and one mag was out 1 degree (not significant, but now it is set perfectly). The annual is coming up in April, and at that point we are replacing spark plug wiring and spark plugs. I am confident that we will have it nailed down after all that.

The autopilot is at a repair shop getting fixed. It would intermittently fail the test procedure before first flight of the day. For now, you'll have to hand fly it.

General Stuff

Three out of five hangar doors have failed this winter. Our Hangar Captain, Don Geis, has been working with Joe Conrad to get the issues addressed as they happen. The finicky door lock on 352VA's hangar has been fixed. Thanks to Alan Koch for 3D printing our door knob covers to keep off snow and ice. They seemed to have worked well this winter. By the end of March, the heater blocks and extension cords for the Tannis heaters will be stowed until next winter.

One or more pilots have been leaving the tow bar attached to the planes unattended. There are new dents and paint chips off the wheel pants that would result from the tow bar resting against the pants, or dropping it while attached.

Please remember... Never leave a tow bar attached to the front of the plane unless you are holding it in your hand. If you are not holding it, then it needs to be removed and placed on the ground.

Looking Forward

I have now seen several installations in planes of the new Garmin Digital AI's and DG's/HSI's. (G5) They require no vacuum source, are electrically driven and have a backup battery for 4 hours of flight in case of an electrical failure. They integrate seamlessly with our Garmin 430's. I asked all of you last summer your opinion on retrofitting our planes with these devices as our current instruments fail. I got 17 responses and 100% of those were positive. If you have further opinions or concerns, please let me know at

355VA

- No repairs

9515Q

- Replaced oil pressure switch
- Oil change
- Complied with fuel injection line AD

352VA

- No repairs
- Complied with Fuel selector labeling AD

351VA

- In Paint shop
- Complied with Fuel selector labeling AD

356VA

- New prop
- Autopilot being repaired
- Oil Change
- Compliance with all AD's
- Disassembled throttle quadrant and lubed mixture and prop levers
- Fixed broken plastic on throttle quadrant
- Repaired and re-installed pull ring for oil dipstick

~ David Oriskovich, Planning Officer

SAFETY SOAPBOX

This is one that we run every few years for those who haven't seen it and as a refresher for those who have because it contains a lot of wisdom.

Startups & Runups

~by John Deakin|AVweb

John Deakin is a 36,000-hour pilot who worked his way up the aviation food chain via charter, corporate, and cargo flying; spent five years in Southeast Asia with Air America; 33 years with Japan Airlines, mostly as a 747 captain; and is now flying Gulfstream IVs full time as a charter pilot. He also flies his own V35 Bonanza and is very active in the warbird and vintage aircraft scene, flying the C-46, C-131, DC-3, F8F Bearcat, Constellation, B-29, and others.

Even the seemingly simple tasks of starting and running up a piston aircraft engine before takeoff should be done with the same concerns for engine life, reliability and safety as any other part of flight. AVweb's John Deakin steps us through the process, dispelling myths as he goes.

Let's take a few pot shots at some of the more common errors in the seemingly simple procedures of starting an engine and doing the runup, and also cover some new techniques with engine monitors. I've written a little about some

of these procedures elsewhere, but I've never pulled all of them together.

For Starters...

There seem to be very, very few pilots who take any interest in where their prop blast goes or what it does at startup or during the runup. For example, if your airplane is parked in the common, tightly interlocked double line, starting up in that position and taxiing out is going to blow some serious air in the wrong direction at the flight controls of whatever is behind. Many very light aircraft cannot handle this, and many do not have effective control locks. Do your preflight, get all ready to go, pull your flying flivver out into the alley, and point the tail down the alley. Don't do this first, or dilly-dally around—someone else may need the alley.

The absolute worst I've ever seen is at Oshkosh, where airplanes have been sitting in very soft grass for a week or more. It takes a lot of power to break away, and I've seen tents blown down two rows away from this. People compound this error by starting with too much RPM (see below) and then they will sit there and warm up, merrily blasting all behind them, or they'll taxi after a short interval, pulling tons of power—on a still-cold engine!

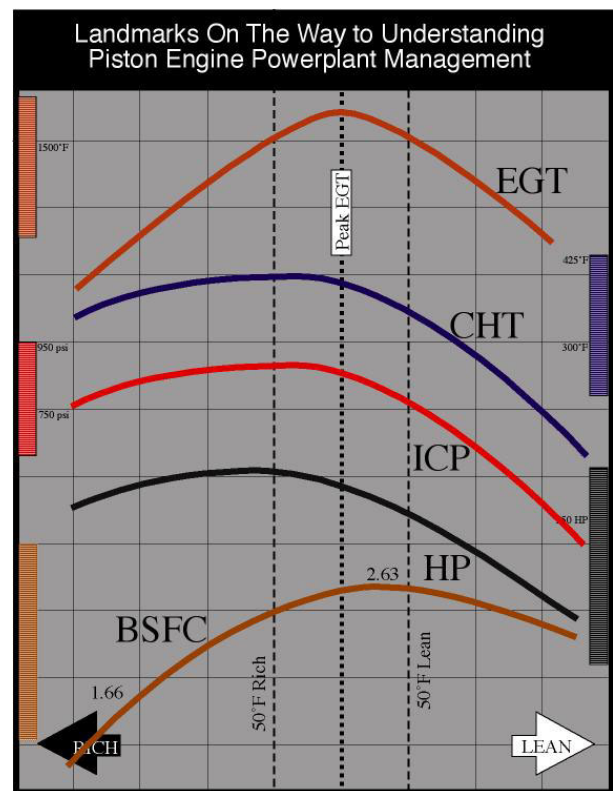
There are always people around, and it's much better to call out, "Hey, can you guys help me pull this airplane out of the ruts?" Starting with the tail pointing "down the alley" makes you look good, and we all like to look good.

On starting, please don't let that engine roar into life, and go straight to some high RPM. This may be the single most damaging thing you can do to an engine, not to mention whatever is behind you. Most of the oil will have oozed out from in between the surfaces inside the engine, and metal-to-metal contact is always bad. Many experts feel that virtually all the wear in an engine comes from starting, and I certainly agree it's likely. One trick I use is to shut down at about 800 to 1,000 RPM, then never change the throttle setting until the next start. The cold engine should start gently and then come up to that same RPM slowly. As the oil pressure builds and starts lubricating the bearing surfaces, and the pistons and cylinders come up to operating temperature the RPM will build up to that same RPM range. That's plenty of RPM for the crankshaft to splash enough oil on all the moving parts inside the engine case.

Ground Leaning

Most general aviation (GA) airplanes are set up to idle much too rich. I can guess at a few reasons, easier starting among them. How can we pilots tell?

It's very simple, if you understand the combustion event, and the effect of mixture on it. I've written extensively about this, and the basic chart is produced here again (below). This is a "mixture sweep," a very rich mixture on the left, leaning to a very lean mixture on the right. This chart is the very heart of our engine seminar and is the key to understanding the combustion event. It comes from the back of many of the older TCM engine manuals; although we're starting to see it dropped in the latest versions. That's a pity, because it's excellent data, fully repeatable on the test stand and in any engine with a good monitor.



"Mixture sweep"—effect of mixture on EGT, CHT, etc.

When these engines are first started, the idle mixture is usually way over on the left side. If this is so, then leaning will produce more and more power, and this will be evident from a slight rise in RPM. Leaning to "peak power" (the black HP curve) on the ground will produce the highest RPM. With further leaning, the RPM will fall again. On some badly-set-up engines, this RPM rise can be several hundred RPM, and this needs to be

fixed by a mechanic. The maintenance manuals usually call for a much more modest rise, perhaps 25 to 50. The old manuals usually say, "a barely perceptible rise."

What they don't mention is that this adjustment should be made at sea level, or at the lowest "usual" airport elevation the airplane will see. Once the idle mixture is set at some elevation, any idle operation at higher airports will cause a richer mixture. This is normal, and should be corrected by the pilot with ground leaning. But setting up the idle mixture at Leadville, Colo., (elev. 10,000 feet) will probably make the engine impossible to start at sea level. It will be too lean.

The idle mixture test (usually done by maintenance) calls for a nice, warm engine, so this is best done after landing. It's a good idea to check it once in a while. When ready to shut down, slowly pull the mixture knob out (starting at full rich), watching the RPM very carefully. The books usually call for idle RPM, but I prefer to set mine at the usual "taxi RPM," about 900 to 1,000, for that's the RPM range the engine will almost always be at on the ground. As the mixture is leaned, the RPM should rise very slightly as the mixture passes "peak power," then it will fall again.

If you see no rise at all during this "sweep," just the fall, you have no way of knowing how the idle mixture is set. It could be anywhere on the lean side of peak power. This is the reason the manuals call for a slight rise, as that demonstrates the mixture is just rich of peak power, and that's a good enough setting for the factory. It's easier to start the engine, and that's good. That's the idle mixture test, and there's no need to get anal about it. Lean, see a little rise before the engine quits, that's it.

Unfortunately, that's not the best mixture for "clean" operation, and you may see some plug fouling from the "dirty mixture." Where is the "clean" mixture? It's where there are enough fuel and oxygen molecules to "mate and burn" (kinda like some marriages), leaving no residue, and that's at or near peak EGT, which is well on the lean side of "peak power," where the power is starting to fall off.

This is the basis for my recommendation to lean to peak RPM, then look for the fall (or roughness), and leave it there for ground operations. A tiny bit of roughness here is not

harmful, unless it causes your significant other to beat on the side of your head. Occasional fouled plugs may be an acceptable alternative in this case.

At the usual power settings on the ground, it is impossible to do any harm to the engine with the mixture control, so don't be nervous about being very aggressive.

Running that lean (lean of peak power) on the ground also absolutely prevents you from taking off with the mixture leaned. This is not true if you take half-measures: Either do it this way, or leave it full rich. I don't care how faithfully you use checklists, you will someday attempt a takeoff with the mixture leaned. If you have properly leaned for taxi, the engine will simply wheeze and lose power, making it very obvious you're not going anywhere. If you take half-measures, the engine will seem perfectly normal, but may well get hot enough to get into detonation, then pre-ignition. With the big, high-performance engines (like the TIO-540 J2DB), this has caused engine failures off the far end of the runway, so it's serious business.

Lean it aggressively on the ground, or not at all!

Moving Out

If significant power (more than 1,000 or 1,200 RPM) is required to start moving (see Oshkosh, above), then sit there patiently and let the engine warm up a bit. If the airplane will move with less than 1,000, then move out when you want. The engine has no way of telling if the airplane is moving, or not. Some of the old manuals on the big radials got this confused, saying, "Do not taxi until the oil temperature is above 40 °C (104 °F)." It wasn't the taxiing they were worried about, it was the possible power required to move out and then maneuver. Many of the old manuals got it right with some variation of "Do not exceed 1,000 RPM until the oil temperature needle is moving, and do not exceed 1,200 RPM until the oil temperature is 40 °C or more." The metallurgy and the bearing clearances have remained much the same. Modern oils are much better at their job, so it's probably not as critical as it used to be with 60-weight, single-viscosity oil. But it's not really bad advice today, if a little conservative. Lycoming has for decades said something like, "OK for runup or takeoff when the engine can be accelerated without faltering." I scratch my head over that—it's not very definitive—and how do you know unless you try

to accelerate it, possibly hurting the engine? On my airplane, the JPI engine monitor has the oil temperature option, and the probe is at the far end of the oil passages, so I have the "low" alarm set at 90 °F, and will do the runup when that minimum is reached. By the time I've done even a short runup that temperature will be up over 100 °F, and that's good enough for me.

If you have the mixture properly ground leaned, and it takes more than 1,200 RPM to start moving, you may be so lean you can't get above 1,200. That's great. Just give the mixture a turn or a tweak, start moving, and reset it. Heck, if you want, you can even modulate the taxi speed with the mixture alone, lean for less power, enrich for more. Try it, for practice, and see how nicely that red knob works. You know, the one your CFI told you, "Don't touch that red knob, you'll burn up the engine!"

Moving Along

Please try to avoid the ham-footed practice of setting too much power during taxi, and controlling the taxi speed with the brakes. I've seen some very high-time pilots do this, and it's very hard on brakes and tires. One even said he was afraid of fouling the plugs with very low power. With aggressive ground leaning, this problem goes away. I have never had a fouled plug in my engines.

Picking A Spot

Where do we do a runup? Well, if there are homes or quiet areas on this end of the airport, and nothing down yonder on the other end, go make your unwanted noise down yonder. Even those aviation nuts who work in the hangar or at the airport office will appreciate you putting some distance between them and your noise-maker, if it's practical to do so. Pay some attention to your runup spot. The "traditional" spot may have changed, there may be an airplane parked behind, or a new building, or perhaps just a dust pile. I've seen big airplanes kick up a dust cloud that slowly drifts downwind for many, many minutes, and many miles. How do you think those folks will vote, next time the airport is under fire?

For the larger airplanes, I prefer to park back in the corner of the runup pad, with my tail swung into the corner where no little airplane can taxi. If someone is dumb enough to taxi behind, you might not feel particularly guilty at blowing him

over, but I'd feel terrible, even if the fault was not mine. We need to look out for the unaware.

Consider the wind direction. Tradition teaches us to run up into the wind, but like so many old wives tales (OWTs), this is not especially helpful. There is probably no more cooling into the wind than downwind, and in fact downwind may provide more cooling. We have the data to prove it. What is harmful is doing a high-power runup in a strong crosswind. This unbalances the forces on the prop, and may cause undesirable stress. The usual 1,700 RPM is not likely to do any damage, anyway.

Set the Brakes?

A very strong "No!" answers this question, for those airplanes with anything but power brakes. For example, my Bonanza has the conventional "master/slave" cylinder type, where the foot pedal squeezes the hydraulic fluid, making pressure in the line down to the brake. There the fluid presses against "something" that creates friction. It may be an expander tube, a set of brake pucks, or disc brakes. The key is that line between the cockpit and the brake. There is no provision for expansion, no hydraulic accumulator in that line, and pulling the parking brake handle simply closes a valve and traps whatever fluid is in there, sealing it off. It takes only a tiny, unnoticeable leak to drop that pressure to nothing, and the parking brake will no longer hold the airplane. At the other extreme, set that parking brake on a cool evening, then have the temperature heat up a lot the next day. If that line is perfect, and holds pressure, you may see enough pressure rise to blow the plumbing.

For runup, hold the brakes, and above all, maintain "outside awareness," both for "creeping," and for whatever else might be taking place. I have seen people set the inadequate parking brake, then do a runup, and creep clear across the runup pad, not recognizing the crisis until the aircraft moves into the rough. They look silly, and wonder how they got there. If at all possible, I'll remain silent and let them do that. It's an excellent lesson, as long as no damage is done.

On the larger airplanes, there are "power brakes." These usually have a simple mechanical latch that holds the brake pedals depressed, just as the pilot would in the absence of a parking brake. The lines will be under system pressure all the time (probably through reducers), and the brake

system will almost always have a hydraulic accumulator that keeps a constant head of pressure on the hydraulic fluid by means of compressed nitrogen on the other side of a bladder. These are very reliable parking brakes, although I have seen airplanes creep with high power, especially right after brake maintenance.

With either system keep a wary eye out for movement.

The Runup

For starters, many overdo this simple procedure. I constantly hear engines being run up at what sounds like full power, sometimes for very long periods. I know of no good reason to ever do this, even after maintenance. It's very hard on the engine because there is almost no cooling airflow at all. The prop may be moving a lot of air, but little or none of it is going into the cowling, because the prop blades are round at the base, and for the first foot or so. They don't have an airfoil section until well outside the cowl inlets, and thus cannot move air. I shudder to think of the hot spots being developed during those high-power runups, and I don't like to run the traditional 1,700 for any longer than necessary.

Props also take a beating on the ground—more beating during runup—and high-power runups are really abusive. Any dirt and grit on the surface will get sucked up, sandblasting the leading edges of the prop, and sometimes worse. Keep high-power operation to an absolute minimum.

Cowl flaps should always be fully open on the ground, even in arctic conditions. Their purpose is to act as an airfoil, and create a low-pressure area outside the engine cowl, helping to suck air out of the engine compartment. Whatever air is sucked out must be replaced, and that will suck in a little bit of cool air from the inlets.

Since you should have the mixture leaned so much that runup RPM is not possible, enrich just enough to get that RPM. Yes, you can go full rich, but the leaner the mixture, the more definitive the mag check.

Basically, all we're checking at the usual 1700 RPM is gross function. Bad timing can be detected here, but the engine monitor is a far better way to show that (by abnormal EGT/CHT).

As you bring the RPM up, this is a good time to check that the generator/ alternator(s) kick in. On most twins, the generator at the higher RPM will

take most or all the load, so you can alter that relationship to make sure both are working.

Does the carb heat work (if installed)? Do this first, in case there is any automatic mixture control, so there's more time before takeoff for this device to stabilize at ambient temperatures again. This is true of most of the big radials. If this device is still warmer than ambient on the takeoff, it will automatically (and abnormally) lean the mixture, which is not good. The usual drop in runup RPM from carb heat is enough to check function. If there is a carburetor air temperature (CAT) gauge, carb heat function can be checked during the taxi to the runup pad, and observing the instrument.

Are the mags working? The leaner the mixture, the more mag drop you'll see on one mag, and that's normal. What you should really be looking at is the engine monitor while you check the mags. Some like to put it in "Normalize" mode, but that's too much fiddling for me; the "Percentage" mode works just fine. What you really want to see is that all EGTs rise during single mag operation. You can even go from BOTH, to LEFT, to RIGHT, and back to both. The EGTs should rise on the first single-mag operation, stay there for the second, then drop again on the return to BOTH. That rise is proof-positive the entire ignition system is working, and working well, and the leaner the mixture, the more diagnostic it is. On my engine, I'll often see a 300-RPM drop on one mag, but if all those EGTs rise, I know it's fine. If any of them fail to rise or even drop during single-mag operation, there is a problem with that plug, the wire, or the mag. On most engines, one or more EGTs may rise off-scale, and others may rise only a couple bars.

If you do this check well-leaned, the engine may even run a bit rough during single-mag operation, but as long as that EGT rises, you're in good shape, and can ignore the roughness. If the roughness really bothers you, enrich a little and repeat.

Prop Cycling

Don't wear the poor thing out, especially on the single-engine aircraft. Many do three or more cycles, often to very low RPM. Not necessary, and probably not desirable, it just prolongs the whole event, making the engine hotter, and going to full low RPM may be hard on the prop and engine

mounts as the blades flail the air. Repeated cycles are probably a carry-over from the old radials.

The big old radials do often need several cycles to flush all the really cold oil out of the prop system. This can be clearly seen on cold starts after the engine has been at rest for a time. During the first cycle, the RPM will drop much more slowly than usual, and it will probably even drop erratically, from "slugs" of oil sludge going through. I've had to exercise them as much as a dozen times to get a nice smooth drop. It's also required to cycle them to the low RPM stop at least once to make sure the system has been adjusted properly; the minimum governor setting is generally 1,200 RPM. These prop systems are somewhat different from those on most GA aircraft.

GA props on single-engine GA aircraft do not keep a lot of oil in the prop hub when at rest: There's a big, strong spring that pushes the blades "flat," and it takes engine and governor oil pressure to get any oil in there at all. A single cycle is sufficient to check function, and frankly, this check is unlikely to find any problems. I frequently skip it entirely. If the RPM comes up to nominal takeoff RPM (on the takeoff run), and stays there, that's function check enough.

(You know, I think there are probably people out there who want to put the airplane up on jacks before every flight so they can roll the wheels to make sure they rotate before they taxi. We tend to do a lot of "checking" in aviation that is really doing nothing more than wearing things out prematurely.)

On the other hand, light twins usually have the spring pushing the prop into feather, and the dome will be full of oil at rest, so they may benefit from a few cycles on a cold day. But modern oils don't sludge up as much as the old straight 60-weight in the radials and the GA props should be well-oiled with one or two short RPM drops on the check. If I owned a twin, I'd probably do a feather check once a month in the air, for real. Certainly before and after the annual, and let it go at that.

Putting It All Together

In summary, start the engine gently when cold. Lean past "peak power" right after the start, enrich only as much as needed for the runup. After the runup, either go full rich or lean back again. Perform a short runup as a function check, and get on with the show. Skip the prop check on

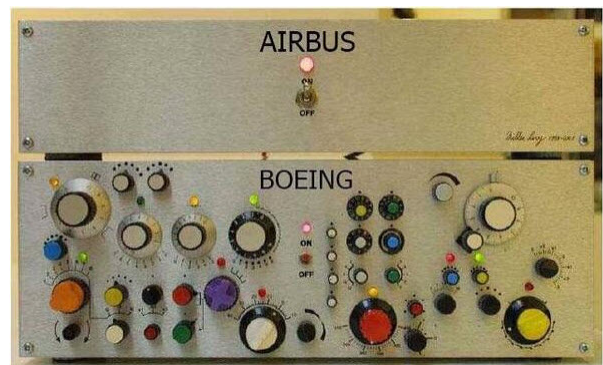
the singles, once or twice on the twins, and as needed on the big radials. Do the mag check leaned out, watching the engine monitor for an EGT rise, ignoring the large RPM drop.

Be careful, up there!

**Plan every flight as if your life depends on it.
It Does!**

~ Jan Jansen, Safety Officer

HANGAR RASH



A young guy in an F-14 fighter was flying escort for a B-52 and generally being a nuisance, acting like a hotdog, flying rolls around the lumbering old bomber. The hotdog said over the air, "Anything you can do, I can do better."

The veteran bomber pilot answered, "Try this hot-shot." The B-52 continued its flight, straight and level.

Perplexed, the hotdog asked, "So? What did you do?"

"I just shut down two engines, kid."

