

How To Fight Back, And WIN!

THIS BOOK CONTAINS SOME 47 OR MORE INCIDENTS WHICH DEAL WITH LEGAL ISSUES, FAA ABUSE OF “POWER”, MISUNDERSTANDING OF FAR’S, POLICE ABUSE, AND LIKE ISSUES WITH WHICH THE AVERAGE MECHANIC AND OR PILOT MAY FIND HIMSELF INVOLVED AS HE GOES ABOUT HIS OWN BUSINESS.

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THE “EXPERT” WITNESS

INTRODUCTION

I have been a very lucky man in my aviation career. I got my Pilots's Certificates and my A&P Mechanics Certificates, along with my 'Chute Rigger and Advanced Ground Instructor Certificates back in the late '40s. The men under whom I trained, both as a mechanic and pilot, were all exceptional men in their respective fields.

My mechanic training began along with my flight training when I went to work at an airport south of San Antonio, Texas for fifty cents an hour, and paid ten dollars per hour for flight training in a J-3 Cub. (Yes, that was "a while back.") I'm not going to say that my flight instructors were "by the book" men. "Capt." Wenyon was a WW- I fighter pilot and the things "Cap" could do with a J-3 or a Taper Wing Waco, no one would believe if I told it here. After I flew a couple of hours with "Cap", he went back up North to fly anti-submarine patrol 90 miles off shore in a Stinson 105. Then I began training with "Bugger Red" Vincel! Bugger Red was a "living legend" in every sense of the word. This is the caliber of men who began my flight training. They wanted the plane flown to it's maximum capability, and they were not averse to covering the gages to make one "fly the plane."

My mechanic training also started under Bugger Red. After a year or so, I went to work with OK

Williams at Mission Airport. Then after another year or so, I went to work for “Pappy” Ragsdale at Stinson Field. It was under Pappy that I got my A&E certificate. Pappy was a Designated Airworthiness Maintenance Inspector (DAMI) and Mechanic Examiner as well as an accomplished pilot, and FBO.

Every one of the men under whom I trained was absolutely tops in his field and stressed doing things correctly. Additionally, not the first one of them understood “you can’t”. Their attitude was “If someone else can do it (or has done it), I can do it too!” That attitude kinda rubbed off on me and I’ve never known how to accept “no” from anyone where flight or maintenance is concerned. With such an attitude, it behooves one to “know the book”. As a result of this attitude, in the early ‘50s I was both Senior Flight Instructor and Squadron Standardization Officer in “Blackjack Flight” at Hondo, Texas even though I was the youngest instructor in the flight, and next to youngest on the whole airbase.

After seven years as a Contract Flight Instr. for the USAF, when Hondo closed, I found myself in Fla., still working for the USAF at Bartow. When that last contract school closed. I went to work for Sam Poole at Bartow, Fl. as both a flight instr. and mechanic. Sam was another ‘by the book’ man. After a couple of years, I took a job as an Executive plot and mechanic for a local electrical contractor. While working for him, I set up Polk County’s aerial Mosquito Control Program as both

Pilot and mechanic on their planes, and opened my own Fixed Base Operation where I operated a Part 141 flight school and major maintenance and ag operation for some 35 years.

My certificates are A&E with IA, CFII Aircraft and Instrument, Commercial SMELS, Sailplane, Helicopter, LOA (for T-28, above 800 hp.), type rated in DC-3 and DC-B-26 (with far beyond 21,000 hours including over 1,000 in jets - have flown close to 200 different planes - from the Aeronca C-3 to Jets with all the old biplanes thrown in for good measure)

In addition, I also carry both Advance Ground Instructor and Senior 'Chute Rigger Certificates. To round out all that "stuff", I served the FAA for ten years as both a DME and DAR (Designated Mechanic Examiner and Designate Airworthiness Representative.) I have rebuilt more wrecked airplanes than most people have ever seen, and have developed many 'one time' and 'multiple' STCs (Supplemental Type Certificates); have built a couple of home-builts and rebuilt several more; received the FAA's Charlie Taylor Master Mechanic Award; and last, but not least, have served as the Sun-N-Fun Air Show Technical Inspector Supervisor since that show started.

Now you can take all of that stuff, and a dollar bill, and buy a cup of coffee almost anywhere! The point of all of this is that I have 'been around' aviation, deeply, for more than 59 years and one cannot be around such a

closely regulated industry that long without running afoul of someone who wants to ‘put it to him’ for some violation of the FARs. To come out clean (remember the Charlie Taylor Award? - “violation free”) after all of that involvement, one has to have known the book - *laws*, if you please. ***That is what this is all about.*** Why I was called upon to act as an Expert Witness, and to show how those cases developed, and the outcome of them, is the purpose of this whole operation - to show you that all is not lost just because the “Friendly Fuzz” says “We’re going to file a violation on you”, or some disgruntled customer yells “I’m going to sue you.”

If you know the book, and do things by the book, you can tell them all to go fly a kite and make it stick! ‘Nuf talkin’, let’s get to the fun part.

We will be discussing the use of the FARs and Advisory Circulars, with related information, from two points of view: First, ***to stay out of trouble***, and secondly, how ***to protect yourself, should trouble arise***.

Let us look at a few instances where a knowledge of the book has kept me, and some others out of trouble with the FF, (Friendly Fuzz) and the court system.

**EACH OF THE FOLLOWING STORIES
RELATES TO SOME POINT OF LAW. KNOW
WHAT YOU ARE TALKING ABOUT!**

1. **DO YOU PERFORM “MAJOR OVERHAULS”- ON SMALL ACFT. ENGINES?**

A number of years ago an FAA Inspector friend of mine (Yeah, some of them are **real nice** - at least, they used to be) walked into my office while I was completing a log book entry (make that read **maintenance record entry** - more of this later), sat there a minute, and then said “Grover, you are making an entry that could get you into **lots of trouble**, if some smart attorney got hold of those logs and wanted to cause you trouble!”

I had just completed a Major Overhaul on a Lycoming 0-540 in a Cherokee Six and I was getting ready to deliver it to a customer who was buying it from me. Russ Turvey said “You have made two ‘false’ entries in that book, if someone is smart enough to know it, and wants to push it.” Russ knew that I kept a manufacturers Overhaul Manual open, and followed it to the letter, every time I did an overhaul. So I questioned what he meant.

Russ said “First, you have said that you **major overhauled** the engine, and **you didn’t major it.**” I said I **had** majored the engine, and he asked where my Form 337 was for the “Major Repair” on the engine. I reminded him that an engine had to (1) be of 450 hp or greater, (2) be supercharged, or (3) be geared, before a Form 337 was required on an engine Major O’haul.. Russ said “Then it is **not a major**, is it?” I answered “If I do rings, valves and jugs (cylinders) it is a Top

Overhaul. If I split the case and get the cam, crankshaft, bearings, rods, gears, seals and gaskets, it's a Major Overhaul." Russ grinned and said "I'm familiar with what you're saying, **but where does that information come from?**"

I answered it's from AC (Advisory Circular) Number so-and-so. Russ said "That is *Advisory* in nature, *not regulatory*. **It is not an FAR! You can't used that as authority for the entry you made.**" "Also, you said you overhauled it *by the Manufacturer's Manual*, and you didn't". I said Russ, you know I always use the book. He grinned again (he loved to catch me with my pants down just because he knew that I was such a stickler for doing things **by the book**) and asked where my test cell was located. Test cell? "The O'haul manual calls for a run in a test cell." But everyone puts the engine in an airframe; runs it to check for oil leaks; then cowl it up and breaks it in, in flight. Russ grinned again and said "You said 'by the book', not 'by accepted industry practices, didn't you?"

So what **should** I put in the book? Russ then answered, "**Put in the book exactly what you did.**" I told Russ that everyone expected to see the words Major Overhauled. Russ said "The name of the game is CYA (Cover Your A--), remember? Always protect yourself." I could not argue with him for ***he was completely right.*** Since then, I have never Major O'hailed a small engine!

Now, as Paul Harvey says, for the rest of the

story. That engine was overhauled by a young mechanic who was working for me. He made the actual log entry. He was also the son of the FBO to whom I was selling the plane.

Shortly after the plane was delivered, the father decided to go Part 135 (Air Taxi) with the Cherokee Six, and shortly thereafter, I got a call from the manager of the FSDO which supervised his operation. He informed me that he was going to “file a violation” on me for **not** making that entry read a MOH. Air Taxi operations **required** the engine to be “Major Over Hauled” at specific intervals. I told him to just **sit tight**, and I’d jump in my plane and be in his office within two hours.

When I walked into his office (with **Two** overhaul manuals under my arm), he jumped up and shook his finger under my nose, and – the conversation went something like this: ***You’re going to sign off a major overhaul on that engine, or I’m going to file against your mechanic’s license! Don’t shake your finger under my nose, and don’t make threats you can’t carry out! In the first place, I did not overhaul that engine, so I don’t have to sign off anything! But it was done in your shop, so you are responsible for it. You have several Inspectors in this office but you do not take the heat for any of them! But that is a young mechanic and you are responsible for him! YOU issued him his certificate and nowhere on it does it say that I have to wipe his nose for “X” number of engine o’hauls!*** By now, things have started to liven up, and get real interesting! He has a rather numb look, for “normal”

people don't talk back to the FAA! **At least, not in that tone of voice!**

I pitched an overhaul manual for the 0-540 across his desk and said "Tell me what **that** says on the cover." ***It says Lycoming Overhaul Manual.*** I pitched another manual onto his desk and said What does **that** one say? It was a manual for a TSIO-540. ***It says Lycoming Major Overhaul Manual.*** I wonder why the **Factory** made a distinction in the two manuals? (I didn't wonder at all, but I wanted **him** to get the point that the **factory** made a distinction!).

I then entered into a discussion in which I pointed out the things Russ Turvey had previously pointed out to me about FARs and ACs, and the difference in Regulations, Advisory Circulars and Accepted Industry Practices! He listened for a short time, stood up and leaned across the desk, **smiled, as he shook my hand,** and said "***You do know the regulations, don't you!***"

One would think that should have ended that episode, but not so! A couple of years later, the plane was sold up near Atlanta, and my next call came from the Engineering Section there which again was refusing to allow this plane to be used on Air Taxi because of the lack of a MOH entry in the log. We went through the same scenario, again, and with the same results - with one exception! Atlanta finally admitted my point, but **asked** if I would send them a statement to the effect that "To my knowledge, that engine was overhauled (by the

mechanic who had performed the work) as specified in the logs, and, ***as per the terminology contained in AC —, this overhaul would be normally be classified as a MOH!*** (The FAA wrote the contradictory FARs and had to find some way to CYA themselves.) I did it for them, since it left me with no more exposure than original - NONE! That got them out of the corner into which they had painted themselves, and got me a few “brownie points” with Engineering!

BE CAREFUL OF WHAT YOU PUT INTO AIRCRAFT RECORDS - DON'T ALLOW ANYONE TO FORCE YOU TO MAKE A QUESTIONABLE MAINTENANCE ENTRY

2. BE ABLE TO READ AND UNDERSTAND THE ENGLISH LANGUAGE

. Let's look at another one that was **fun!** Many years ago, I was told that the "FF" (Friendly? Fuzz) was issuing citations to pilots who performed a pre-flight inspection on their planes and then went ahead and flew, day VFR, with an inoperative navigation, or cockpit light. As I remember now, the FAA cited was 23.1301 (d). FAR 23 has to do with airworthiness requirements for Certification. Again working from memory, that FAR states "When an item of equipment is installed in an aircraft, it must — (a), (b), (c), and (d). As I remember, (a) said "be designed for the intended function (the idea was you could not finagle around and some way or another make an artificial horizon work as a fuel gage!) (b) and (c) covered like requirements. (d) said "**function properly when installed**". According to the "FF", that meant "If it's in there, it's got to work!" (The "FF" personnel changes over the years, and I now seem to lock horns with them just about as often as I agree with them - my old buddies whom I greatly respected have long since retired)

I told every Inspector who would listen that the Reg. *did not say* "if it's in the plane, it must work in order for the plane to remain airworthy". No one listened. About that time, I was sent to the FAA Academy in Ok City to train as a DME (Designated Mechanic Examiner - to give oral and practical exams, and issue FAA A&P licenses to those who passed!) (Me, "dun" joined the "FF"?)

At the FAA Academy I brought this same FAR

up for discussion (some people don't know when to leave well enough alone - no one had filed on me for violating FAR 23). I was told the interpretation of that FAR was from the FAA Legal Staff! So, when I got home from the Academy, I got on the phone to have a discussion with the Atlanta FAA Legal Division.

I got a lady on the phone who very quickly (and very haughtily) informed me that I just did not understand the FARs. I just as quickly (I don't like people talking down to me) informed her that I was a licensed mechanic and pilot before she was born!, and had likely forgotten more FARs than she had ever learned! She then began to inform me about Minimum Equipment Lists. I told her than there was no MEL for many of the older planes, except for FAR 91 which lists minimum equipment for day VFR, night VFR, IFR, etc. She instantly informed me that the list in FAR 91 was **not intended for that purpose**. I then challenged her to give me any other reason for that list. She could not do so. That's **exactly** what that list was, Minimum Equipment for specific flight conditions!

She next brought up the Equipment List in the Aircraft paper work when it left the factory. I promptly informed her that many items in that list were **optional** items of equipment. They did not have to be in the plane for it to be legal to fly, provided it could comply with FAR 91 for the intended flight operation(s). She, again, could not answer, so we moved to another field of combat! I'm now taking the offensive!

I told her that the correct interpretation of that FAR, in accordance with the rules of English Grammar, was that **no piece of equipment could be installed in an aircraft in an inoperable condition. At the time of installation, it had to function properly**, but that did not mean it had to work forever thereafter for the plane to remain airworthy! Then I informed her that the way she was reading the FAR made it become, under the rules of English Grammar, a *redundant statement* - “When an item of equipment *is installed* in an aircraft, it must function properly when *installed*.”

I then told her than any 6th grade English teacher would be happy to verify what I was telling her about the rules of English Grammar and sentence structure. I was promptly informed that the FARs were not written by 6th grade English teachers, but by *Attorneys! Wheee!* I just as promptly informed her that the purpose of both written and spoken English was to convey meaning from one person to another, and that attorneys had no more authority to change the rules (laws) of English Grammar than they did to change the rules of mathematics! Attorneys notwithstanding, $2 + 2$ still = 4, and Attorneys notwithstanding, a redundant statement remains redundant, and as such, by the rules of English Grammar, has no meaning at all!

I further informed her that even though I had not been cited under that fallacious interpretation, if the interpretation was not immediately brought into

compliance with the rules of English Grammar, I would file a class action suit against the FAA on behalf of all those who had been screwed over by this dumb interpretation! I don't like being run over by people that I pay to know the law. *I guess she checked with some 6th grade English teacher because the interpretation was changed shortly thereafter and is currently correct!*

If you do not know the rules of English grammar, sentence structure, etc., many attorneys, and FAA Inspectors, will try to make the law say whatever they wish it to say!

LEARN TO “READ” THE ENGLISH LANGUAGE! THE MEANING OF WORDS, AND SENTENCE STRUCTURE CANNOT BE CHANGED BY SOME LAWYER, OR FAA INSPECTOR.

3. ***IF YOU ARE RIGHT, JUST SAY “NO!”***

Sometimes, you just have to tell them NO! Back in the late '40s, I bought my first Fairchild 24. That one had a Ranger engine. I bought it one morning from OK Williams (a reputable man for whom I had worked) so I

expected to fly it after work that afternoon. I went down to fly it and found some CAA inspector had Red Tagged the plane immediately after I bought it. I read the squawks on the tag and went into orbit! I and this particular Inspector has never seen eye-to-eye on very much. In my opinion, he was a horse behind who just liked to throw his weight (?) around.

The squawks were (1) tires are 6 ply, Acft. Spec Sheet calls for 4 ply (2) upper side of wings has been recovered (over old fabric) with no new rib stitching (3) prop hub has holes overlapping in two places.

I went to see him to see what he wanted done. He first said, replace the tires! I said **NO**, they were 6 ply rather than 4; they constitute no hazard to safe operations (no wheel pants) and they do not come close to touching the gear legs! **I will not change them just to make you happy!**

The Continental W-670 radial engine of 220 hp used the same prop hub as the Ranger L-440 engine of 175 hp, except that the Cont. hub was drilled for 8 bolts while the Ranger hub was drilled for 6 bolts. Due to the scarcity of 6 bolt hubs, someone had redrilled the hub so that it could take a 6 bolt Sensenich prop for the Ranger. As a result, two of the holes overlapped. I asked what he wanted done. He wanted me to fabricate two oblong washers, so as to cover each of the two adjacent holes. Then he wanted a bolt cut to the thickness of the hub, machined to plug the unused portion of the hole, welded

to the back side of the washer, and the whole thing put on the prop hub. I was supposed to then insert the regular bolts in the hub and put that mess back on my engine!

Once again, I said **NO!** And *he* went into orbit! I then told him that I would not do as he wished for two reasons: (1) This “fix”*fixed nothing*, since it added no strength to the hub. It was but a *coverup* for something that he didn’t like; and (2) that mess would throw the hub out of balance. Rangers were critical on prop balance and I wasn’t going to risk my plane and neck just to make him happy!

I had already checked with OK and he verified that the wings had new fabric applied over the old (a not uncommon practice back then). I had already looked and the rib stitching had not been done over when the new fabric was applied. While nothing said it **had** to be done, I knew that if the old fabric allowed the rib stitching to pull through it, the new fabric would then come off of the wings. That could ruin my whole day, and was not conducive to longevity, so I had already made up my mind to re-rib stitch, re-tape and refinish the wings. When I later sold that Fairchild (wish I still had it) it still carried the original prop hub and 6 ply tires. I guess winning two out of three wasn’t too bad.

This same cat and I were to lock horns later over a Great Lakes conversion I made, but that is another story and we’ll get to it in time.

**IF YOU HAVE THE BOOK BEHIND YOU,
STICK TO YOUR GUNS.**

**4. FRIENDSHIP DOES NOT CHANGE THE
LAW**

The first time I was called upon to act as an expert witness was one I'll never forget. I found myself confronting a good friend. The company he owned had repaired the flaps on a Piper PA-28 Cherokee. Since the company was unable to secure the fluted skins for these flaps from the factory, they had installed flat skins. (Definitely not by the book) They had prepared the

Form #337 to show the use of the flat skins, plus some internal reinforcements which they had installed to take the place of the flutes. (The owner of the plane simply told me that flat skins were used to replaced fluted skins and asked if it were legal - he also never told me who had made the repairs.)

When asked by the Judge if those repairs were acceptable, I told him that they did not comply with the regulations since the repairs did not return the plane to it's "Type Certificated, or to a Properly Altered" condition. He asked if the repairs returned the plane to an "as strong as original" condition. I told him that the repairs could still be perfectly legal but, I was not the one authorized to make that decision. He asked who was qualified to make the decision. I told him they must have either a "Field Approval" by the FAA, or be approved by a Designated Engineering Representative.

I could not tell him if either of those conditions had been met as the Form #337 had never been shown to me by either party to the suit. The owner had never shown me the Form; he had simply told me what was done. After testifying, I left the court room. Apparently, my friend was smart enough to have secured an engineering approval for he later thanked me for my testimony and we remain the best of friends to this day. The airplane owner must also have been satisfied as we also remained friends. **One simply cannot compromise his integrity under any circumstances!**

**DO NOT ATTEMPT TO REWRITE THE
LAW, FOR ANY REASON**

**5. TIME SHEETS? – DON'T BE AFRAID TO
CONFRONT THE FAA**

I issued many A&P Mechanic Certificates during the years when I acted as an FAA DME - (Designated Mechanic Examiner) I never had the FAA question any of those certificates when issued, but I received calls later from some of those men when the “FF” got out of line with them.

In the first instance, it was something like 6

month after the certificate had been issued that one of the local FAA Inspectors suddenly issued a Notice of Revocation against that certificate. His **excuse** was that he had received a complaint (from a prior employer of, and now competitor to, this mechanic) in which he alleged that the man had falsified his time requirement (years of work) when he applied for permission to take the written. To get to me, he had to have presented his proof of time, plus a letter of recommendation to the FAA in order to secure permission from then to take the written test. When shown passing grades on that test, I performed both the oral and practical testing, which he satisfactorily completed, and issued the Certificate. Now, months later the “FF” suddenly jerks his ticket! He called me to see if there was **anything** I could do to help him get it back!

I inquired as to how he had documented his time to the FAA. He had presented letters from people for whom he had worked which specified the amount of time he had worked under their supervision. **This inspector was a friend of the complaining party**, so he set out to disprove the time shown on the letters. He went to the smallest of the operations which had issued letters to this mechanic and asked to see their “time sheets” to verify the hours this man had worked for them!

This particular operation was a two-woman glider operation, with one of the women being a CFII, and an A&P, IA. Quite naturally, they had no such “time sheets.” That was all he “needed” to yell “falsified

application.” The lady in question assured me that he had worked more than the hours than she specified in her letter to the “FF”, and she was highly insulted to have been put down in any sch a manner.

I suggested to the man whose certificate had been “revoked” to use the following tactics to straighten up the FAA Inspector. Since the FARs state that a false statement made to the FAA on any form is grounds for revocation of ALL certificates held by the party making the false statement, this Inspector’s action had placed **all** of the certificates held by both himself and this lady in jeopardy! This gave them more than ample grounds to file a Defamation of Character lawsuit against he Inspector. While one cannot file a suit against the Agency (we’ll visit this again), that does not protect an Inspector from a personal law suit when he acts illegally. This would place the burden of **proof on the Inspector**. Needless to say, the certificate action was dropped **immediately!** (This same lady was awarded The Charlie Taylor Master Mechanic Award just a couple of years after I received mine.)

**JUST BECAUSE SOME INSPECTOR SAYS
IT IS LAW, DOES NOT NECESSARILY MAKE IT
LAW!**

6. HOW LONG IS ONE RESPONSIBLE AFTER PERFORMING AN INSPECTION?

The next instance in which I was asked for help was some four or more years after I issued an A&P license. The man had become an IA in the interim. I got a call one day in which he informed me that an Inspector had filed three violations against him. He was going for revocation of the IA, suspension of the A&P for one year and a fine of \$3,000.00! I knew this mechanic fairly well as we had stayed in touch after I issued his certificate. (I **still** get calls from those to whom I have issued certificates asking me how to handle certain situations, or where data relating to some job they might have in progress might be located.).

I asked him what he had done to draw such ire from the “FF”. He told me this story: He had performed an Annual Inspection on a Piper Apache some 6 months earlier - a plane used in a flight school. Now, 100 hours (and 6 months) later someone else had performed a 100 hr. inspection, and this FAA Inspector was after him for the following “violations”: (1) a cut ‘o’ ring had been found in a brake master cylinder, (2) AD notes were not logged on the same page in the Log Book as the Annual Inspection, and (3) I’ve forgotten the third violation, but it was just as ridiculous as the first two.

Never having locked horns with the “FF”, he did not know which way to turn. I told him that his entry said that the plane was airworthy at the time he inspected it - it could be a ball of metal 30 minutes later due to no fault of his. When he signed it off, he assumed no responsibility for any part which might wear out in the future. If such were the case, the plane would never wear out! Tell the Inspector to “go fly a kite” on the cut o’ring complaint!

Then, as to the AD entry location, I told him first of all that the FARs did not specify where those Ads had to be entered except “in the maintenance records.” I told him to inform the Inspector that Log Books were not even mentioned in the FARs, so they could not say “on the same page in the log book.” Now **he** was confused. I told him that the FARs only use the terminology “maintenance records”, not Log Books! If I

wish to maintain my maintenance records on a roll of toilet paper, there is no rule that specifically says I cannot do so. Also, I personally always maintained a separate AD page. **Easier to check without having to research the whole set of “log books”.**

My third answer was of the same tone; the Inspector simply did not know what he was talking about. It turned out that he had recently transferred into the GADO from a position where he had been inspecting airline operations. The mechanic walked off scot-free - **he had broken no rules** and the citation should have never been issued. The Inspector and I became the best of friends. He had respect for someone who knew the rules and operated by them. **His kind, I like!**

DO NOT ALLOW A LOCAL FSDO TO WRITE THEIR OWN “REQUIREMENTS

7. IS THERE ANY AUTHORITY BEHIND LOCAL FSDO “REQUIREMENT”?

That brings up another point. Some time later, on a Saturday, I was some 40-50 miles from home in an experimental biplane. I had parked the bird and gone into town for some reason. When I returned, this same Inspector was on the field “hard-timing” the local IA about ELT batteries. He was arguing that a plane could not pass an Annual with an out-of-date ELT battery, and the IA was arguing that it could. Since both men knew me, I got sucked into the discussion post-haste. I sided with the IA, and that went over with the FF like the well know foreign substance in the punch boll!

My argument was that an ELT is **not even required** in many cases - it could be removed for

maintenance, was not required if on a training flights within 50 miles of the home field, or if the plane were single place, etc, so an operable ELT was not a “Gotta Have” item to pass an Annual Inspection. We went ‘round and ‘round for a couple of hours and no one would budge one inch.

The following Monday I flew about 50-60 miles to the GADO to get the matter settled - I don’t like loose threads hanging out where the FAA is concerned. We stared with myself and him, then added another Inspector, and finally every maintenance Inspector, including the Office Chief was involved in the discussion. I wouldn’t budge and they **could not show me in the FARs** where I was wrong. Finally the Chief said, “Well Grover, that may be true, **but in this District, we want** —“

Right then I grinned and said “My customers have been told what the FARs have to say about operations with an inoperable ELT, so they know better! I cannot force them to do what this District “wants” until you **put it in writing!” It was never put into writing, and never came up again for discussion! The minute you begin to compromise on “we want”, you are in deep do-do! From there on, anything goes - because “we want it.” **“We want it”, “ain’t” law.** The “I Want” of an Inspector, or “We want” of a FSDO, **does not constitute Federal law, and is unenforceable as law!** (If you know the book well enough to back up your stance, and **if** you have the guts to fight back for your legal rights under the law.) If they wish to put such “in writing” and try to**

enforce it, you have grounds to go the FAA in Washington! It has been my experience that **those people** have their heads screwed on straight! They didn't get to headquarters by enforcing "local interpretations as law."

AGAIN, DON'T LET THE LOCAL FSDO WRITE "LAWS" As far as I am concerned, "Go along to get along" does not "cut the mustard". There is a principle of right and wrong involved in such acts.- give in and you lose your rights - give in often enough and you will have no rights left!

*Let's digress momentarily to prove a point.
Integrity is worth it's weight in gold.*

8. ESTABLISH A REPUTATION FOR INTEGRITY, REGARDLESS OF THE COST

Many years ago, while flying mosquito control for the County (as one of three or four jobs I was performing at the same time - exec. pilot/mechanic on a twin for a local contractor, County mosquito control pilot and mechanic, and operating my own maintenance, flight and ag FBO - no rest for the wicked), I took off on my second mosquito run of the day, gross loaded in a Piper Pawnee. As I reached 1,000 ft. I pulled off my crash helmet to wipe the sweat off my face, and **the engine stopped** - with no warning - not even a whimper - just suddenly a **loud silence!** I had several things that I wanted done immediately, like simultaneously (and all at the same time, too), if not sooner!

I wanted that crash helmet back on my head and fastened; I wanted the load dumped; I wanted the mixture and fuel selector checked and I wanted to radio my

ground man that I was going in. I must have gotten it all done in something less than half a second! Dumped the load, slammed the helmet back on my head, checked throttle, mixture and fuel selector, made the radio call, latched the helmet down, and picked myself a set of high lines on the edge of the biggest lake in town.

Now this happened right in the middle of town - houses everywhere. This Texan never was much of a swimmer and I didn't figure a Pawnee tied to my behind was the proper way to start learning to swim! I had only one vacant building lot in sight, in the middle of high trees, with a high line on my side of it. No way could I clear the lines and get into the lot. A crash was inevitable if I chose that route, so look out high lines! I missed the upper lines and took out the middle lines, using them as an arrester gear - to slow me down. I hit them with the brakes locked, and stick back.

I rolled less than 75 feet after touch down and took out a small myrtle tree in the roll out! One prop blade very slightly bent, one shock cord broken and one small dent about mid ways out on the left wing. I climbed out of the plane as a man ran up asking "Are you hurt?" I answered "Nothing but my pride." I walked a couple of blocks to a friends house and called my wife to let her know I wasn't hurt. I knew the forced landing would be on the local news, like instantly.

Next I called the GADO office and told them that the plane was down, no one hurt, damage estimate was

\$250.00 to \$300.00 and I wanted to move the plane out of that area immediately to prevent more damage by the curious. Of course I needed their permission before I touched it. With such a small damage estimate, and no one injured, they gave permission to move it, requesting that I inform them when I found out why the engine stopped running.

The County Director for the Mosquito Control program laughed and said maybe I had run out of fuel. I told him “no way, for I was just taking off on my second flight.” I normally made the same two flights every day and landed with loads of fuel left on board. Piper says the last two or three gallons of fuel are not available, but when I pulled the fuel cap, I couldn't even smell fuel, much less see any! That tank was bone dry! I had no idea as to **why, but it was dry.** I loaded the plane on a truck and took it to my shop for repairs, then called the FAA again. **Now the fun started.**

I could have told them ‘plugged fuel strainer screen’, ‘water in the sediment bowl’, or bunches of things which they could not check up on, and could have gotten away with it, with no questions asked. When they answered the phone, I got an inspector who had somewhat of a reputation of thinking he was just a little hotter than he was. I told him that I had pulled the dumbest trick n the book - I had run out of fuel! He asked me to say it again, and I did. Then things got real quiet on the line for such a long time long that I thought the connection had been broken. I called his name three or four times before he finally said “**Grover, what are**

you trying to cover up?” Pilots don’t call and tell us that they ran out of fuel! What are you trying to cover up”?

To shorten a long story, I returned the plane to duty in a couple of days and got back to work. It was a month or so before I went to the GADO office to fill out a report. I carried in a type written account of the flight and just handed that to him. **He read, tore it in half, and threw it into his trash basket.** That didn’t make me happy so I told him that he could call in a secretary and I’d dictate the report to her, but I would not write it again! He said “I’m not going to take that report.” When I asked why not, he said “If I take that report, I’ll have to file on you.” I asked what charges and he said “improper pre-flight; careless and reckless operations, endangering persons or property on the ground”. I answered “Never the less, that is what happened.” **Then, he floored me!**

That joker had made three long distance calls, and two drives, of about 120-130 miles round trip, over to our county in an attempt to determine what I was covering up! He said “I found out that you’ve flown that flight seven days a week, day in and day out, good or bad weather, for the last seven years. You have standing orders for the plane to gassed after each mornings’ flights. It was not gassed after the previous day’s flight. You had a broken fuel gauge on that flight.” I said he was right on every score.

Then I started with the fuel gauge. It broke sometime during the previous days' flight. (I had flown that flight so often that I could tell anyone where the gauge sat on every lake that I flew. It was located right on top of the cowl and I could not look forward without seeing it. In the work I was doing, I seldom looked anywhere except forward! It went to "full" when it broke and looked good setting there! It had never dawned on me that it was inoperative until I looked at it after finding the tank empty on the ground after the forced landing. It read "full")

When I completed the flights on the previous day, I parked the plane and I went into my hanger and went to work. Some time later, the gas crew drove up, saw the gauge on full, and **assumed** that I had not flown that day! They went over and gassed the twin I was flying. I heard them and **assumed** they were gassing the Pawnee! An older Inspector (fiend of mine) was listening to this whole tale and now interrupted with a question. "Grover, you know what that '**assume**' does, don't you? What's that, "Tink?" (His name was Sherman Tinkham) "That makes an ASS out of U and ME!" (Ass-u-me) Sho' 'nuff did, "Tink".

Then the first Inspector started again. "Aren't you going to blame the gas crew?" I answered "It's not their responsibility to see that the plane is fueled - it's the pilot's responsibility." He next asked "Aren't you going to blame the fuel gauge?" I answered "Roger, you and I have taught students for years 'You don't believe a fuel

gauge, you stick your finger in the tank!” He then said “You’re not going to try to wiggle out of this, are you?” I answered “It’s the dumbest trick in the book but I did it - no, I am not wiggling - I told you from the start that I ran out of fuel. You do what ever you have to do.”

Then he asked if the County Director had sent him a letter by me. He read it and asked if I knew what it said. I told him that I was not in the habit of reading other peoples’ mail. He then told me that the letter said I had been fined \$50.00 by my boss for failure to properly pre-flight the plane. (I never heard a word of this from my boss, nor was my pay check ever short.) I asked what that was supposed to mean. **Roger told me that with my having paid a civil penalty, any further action by the FAA would constitute double jeopardy, and would be illegal! *That joker had found out everything that had happened, and then told my boss to send that letter so that he would not be able to file on me! He turned out not to be the jerk we had all figured him to be!* As often as I locked horns with the FAA, I figured that he would be looking for a way to hang me, but not so. Like I said, maintaining integrity is worth whatever it might costs! They respected me because I respected the book and would not lie, even to protect myself.**

While this wasn’t a court case, it might well have progressed into certificate action by the FAA, and it still is a good example of how knowing, and working within, the regulations works to your advantage. Back to the

court room.

**IF YOU SCREW UP, ADMIT IT. THAT
EARNS YOU A LOT OF RESPECT. JUST
REMEMBER, EVERY FAA INSPECTOR HAS
SCREWS UP TOO, IF HE IS MAN ENOUGH TO
ADMIT IT**

9. **HOW TO HANDLE SOMEONE WHO KNOWS BETTER!**

I received a call one day that seemed simple enough, but turned out to be quite the opposite. A pilot had rented a popular 6-8 place twin engine plane from a FBO some 100 miles north of my FBO. He went to La. with the plane and crashed on takeoff when he started home, killing every body on board. The law in Fla. disallows any and all exclusions in any insurance policy, **unless it can be shown that the exclusion was materially involved in the accident.** I was called in as an Expert Witness (for the insurance company) to testify that faulty flight procedures, not faulty maintenance, caused the accident. The policy specified that it would only cover a multi-engine Commercial rated pilot at the controls. This pilot was rated **Commercial - Single Engine, Private - Multi Engine.** The insurance company had refused to pay for the plane. They, and the facility that performed the last annual, were looking for someone to defend them in a lawsuit.

As the facts were related to me (uncontested during the trial), this man had the plane loaded 450 # over gross weight, was loaded 4.5" forward of the forward CG limit, and attempted to make the takeoff using full flaps! These figures were also verified by the NTSB. To me it was an open and shut case of lack of

training *at the Commercial multi engine level.*

Training for a **commercial** pilot (ME) has stress placed on aircraft loading since there is a good possibility that the pilot will be carrying passengers for hire. Gross Weight operations, plus the necessity for proper balance, are stressed in this training. Also, anyone who knows much about flying recognizes that flaps cause a nose down pitch moment, and prevent a rapid acceleration. **Full flaps, excessively forward CG, plus weight far beyond approved gross weight = sure disaster!**

All briefings with the Insurance Co. Attorney went well - until the night before the trial. I received a call from him - "Do you know -----?" "No, don't think I do, why?" "He is the Expert for the plaintiff - see what you can find out about him and call me right back." OK. What I found out with one phone call was that **he was the Engineering Test Pilot** for the company who built the twin, and he was also the engineering test pilot who flew the test certification flights on the plane! When I advised the atty. of this, he went into orbit and began to ask "How do I discredit his testimony?" I asked what time he would be up the next morning and he said about 4:30AM. I said I'd call him about 4:30 since I had to drive up for the trial.

Let me point out right here that **I am not an atty., but I do know aviation!** I let them handle the legal matters while I handle the technical stuff. That being the case, my approach has always been to brief them well enough that they understood what I was

attempting to prove. That way, we didn't work at cross points, but worked as a team. **Educating them, in aviation matters, was always my big problem in any case.**

When I called at 5 AM the next morning he started out "How do I discredit his testimony?" My answer was "**Don't even try!** He is an Engineering Test Pilot and that you cannot take from him." Again, the atty. was beside himself wanting to know how to "discredit" the other "expert witness". I said again, "Don't try to discredit him." I finally got the atty. to listen to me and here is how "WE" won the case - (how would you have done it?)

I told the atty. how he should approach this witness, and said I'd see him by about 8:30 that morning and we could then again go over the strategy I had developed. When I prepared to give evidence, I said to the Judge - "Your Honor, we all know that no one in the jury box has any aviation knowledge - if they did, one or the other of these Atty's would have disqualified them from serving as a juror. (Judged by your PEERS? **Don't you believe it!** If any juror knows **anything** about what you are to be tried for, **he will be disqualified!**) That being the case, I deem it my job as an expert witness to give them the information they need to be able to make a valid decision, and I can't do that by answering "Yes and No" questions. I am requesting permission to speak to the jury just as I would speak to a student pilot with whom I might discuss this matter." The Judge smiled and

said “Mr. Summers, you say anything you wish to say and if he (pointing to the plaintiff’s atty.) doesn’t like it, he will object!”

I began “Ladies and Gentlemen, I have been driving automobiles and pick-ups for some 45 - 50 years and, as I came up the highway this morning I had no qualms about meeting another vehicle head on at a combined speed of 130 mph with just two or three feet between us! I’m sure you are comfortable in the same conditions or we would stay off the major highways. Our **experience and levels of training** qualify us for such conditions. But consider this: Would **you**, knowing that I am not qualified by either training or experience to handle an 18 wheeler, be comfortable meeting me under those same conditions, if I were driving an 18 wheeler? Or, what would you think the reaction of the other drivers would be if I went to Daytona Beach and insisted upon taking the place of one of the race car drivers in a race? **Do you think they would let you or me on the track with them? Would you get on that track with me under those conditions? We all have drivers’ licenses, don’t we? What makes the difference in these situations?**

We all understand the difference is in training, testing to demonstrate proficiency, and experience! Just so in aviation: the difference in a Private Pilot Certificate and a Commercial Pilot Certificate lies in **training, testing and experience**. The pilot involved in this accident has shown **Commercial Pilot abilities in a**

single engine airplane, but had demonstrated only Private Pilot abilities in a multi-engine airplane. What did this have to do with the accident? Simply this: A Commercial Pilot is qualified to carry paying passengers - people whose lives are dependent upon his judgement and abilities . As a Certified Multi-engine Commercial Pilot, he would have been trained in aircraft loading, the importance of proper distribution of that load, and the effects of improperly deployed flaps on takeoff among many other things. **This training, testing and experience, he did not have!**

Let me demonstrate: An airplane is **Certified** up to carry a certain **weight**. Beyond that load, the pilot has just become a **Test Pilot - in this case, with a load of passengers aboard!** A Certified Airplane has demonstrated it's ability to react properly to control input **only when it is loaded within a certain Center of Gravity range**. Beyond those limits, the pilot is a Test Pilot, again with a load of passengers aboard. He would have known that deployment of full flap would prevent any takeoff attempt. Any properly trained Commercial Multi-engine pilot would have checked the handbook before instigating the takeoff to determine takeoff distance under the existing conditions which involved such things as gross weight, weight and balance, density altitude, runway conditions, flap settings, etc.

Here were the problems: This plane was **450# over Certified gross takeoff weight**; It **balanced"** **4.5 inches forward of the Maximum C.G. Limit**; It

was running with full flap deflection. The first two factors alone would have made it difficult to raise the nose for take off.

Deployment of full flaps created two additional factors which also limited the planes ability to takeoff. Flaps create drag due to wind resistance - **drag which increases with the airspeed.**

. Being located aft of the C. G., the flaps create a force which causes the nose to pitch down. The nose down pitch attitude results in an increase in the **air load** on the **top** side of the wings - a down load which also **increases as the speed increases.**

The forward C. G., multiplied by the 450 pound excess weight, created a very heavy nose down moment. Added to that was the ever increasing flap drag, and ever increasing air load on top of the wings. **This was a load that the elevator was not designed to handle.**

They finally got airborne, (but never got above tree top altitude) **after a roll of some 7,000 feet on a paved runway which was located just barely above sea level!**

There is a compression of air below the wings of an airplane which results in lift, until the airplane reaches an altitude equal to it's wingspan. Then "ground effect" no longer contributes to lift. This plane got off in "ground effect," reached tree top height, lost the lift

created by ground effect and stalled, rolled and crashed.

This is why the insurance company refused to cover the plane without a pilot at the controls who was Certified for Commercial Multi-engine operations! No one could possibly deny the conditions as stated, so the case now depended upon counteracting the testimony of the Engineering Test Pilot.

Here is what I told the atty. to do. I will have testified before he comes to the stand, and he will have given his testimony before you get the opportunity to cross examine him. **Do it this way;** His atty. will have established his credentials **solidly** before you get a shot at him, and to have any case, he is going to have to prove that the lack of a multi-engine Commercial **did not** contribute to the crash. When you get your chance to cross examine, you make him the man who taught the Wright Bros. what they knew about flying! He is **highly qualified** and you **stress that** before the jury! (Now you know why my atty. thought I was “nuts” at this point!)

Then you say to him “Mr. ---, as a highly qualified engineering pilot, I’m sure you consider what you are going to attempt long before you attempt it so that you can take into consideration all the potential consequences of your anticipated actions, and leave yourself a “rabbit hole”, area of safety, before you act, don’t you?” He will answer “Yes, I do.” Then you say “I feel certain also that you perform dangerous or questionable procedures at sufficient altitude so that you

can take care of unexpected reactions by the plane - for example, you do not determine Minimum Single Engine Control Speed at sea level, but you perform this test at altitude and extrapolate back to sea level, do you not?" Again, he will answer "Yes, that is the way I do things".

And you determine absolute **maximum weights** and "draw a line", don't you?" "Yes" And you establish maximum **safe Center of Gravity (CG)** travel, both fore and aft, and draw two more lines, don't you?" Then you establish **acceleration rates** and takeoff, with and without flap settings, as well as **takeoff distances**, and draw more lines, don't you?" And again, he must answer "Yes". After all, **he is an Engineering Test Pilot, isn't he?**

Then you calmly ask him "How is it that with all your many thousands of hours, plus your Engineering Test flying experience, - how is it that you have drawn these "**do not cross**" lines for this very airplane, and yet you tell this jury that this pilot's lack of training and experience, had nothing to do with causing this accident? **An experienced and trained pilot (Commercial Multi Rated) would have recognized these limits you set as "WARNING, GOING BEYOND THESE LINES WILL RESULT IN INJURY OR DEATH", would he not?**

When I reached this point in my early morning briefing of the atty., he yelled "**I'll kill him.**" I said "I don't think that is legal in a trial, but you'll certainly show one of two things to the jury: either **his testimony**

was given without any thought behind it, or he was outright lying to them!

I finished my testimony and sat in the hall outside the court room as he testified. (You can't serve as a witness and then listen to others testify - for some reason?) After some 30 or so minutes, one of the young ladies acting as a paralegal for him walked out of the court room and sat down beside me and said "Grover, that is **absolute slaughter** in there! He is doing what you told him to, and now, every time he asks a question and looks at the jury, **they smile and wink at him!**" I guess it is unnecessary to tell you who won that case!

DON'T ALLOW A TITLE TO INTIMIDATE YOU, IF YOU ARE RIGHT! Some witnesses are influenced by money, some by fear of possible later implication (the company he worked for built that plane), or maybe they just don't think before they open their mouths.

Some of these cases may get long, but they may cover weeks of investigation and days of trial testimony. **Here is another - which proves that the "expert witnesses" are not the only ones who try to pull the wool over the jury's eyes! Attorneys like to get real**

‘cute’ - if they can get away with it!

**10. \$9.5 MILLION AT STAKE!
MAINTENANCE ERROR, OR PILOT ERROR?**

Let me set the scene: A Bellanca crashed on takeoff from a dirt runway. The takeoff was made to the North with a rather stiff breeze from the SW. The tail skid on this tri-gear plane dug in the dirt from the time taxi out from loading was started, until the plane left the ground! The plane turned 90 degrees to the runway heading within 50 feet after liftoff and struck trees along the runway. The fuel tanks ruptured and the plane burned. All four passengers, two men and two women, were burned as they got out of the plane, and one of the women suffered a miscarriage as a result of the crash. The plane had recently been through an Annual Inspection at a large FBO (deep pockets?). The suit alleged that the crash was caused by a flap cable breaking on takeoff, and this was a result of the FBO failing to change the flap cable from “wire cable” to “stainless cable” as required by the Airworthiness Directive, which the FBO allegedly overlooked and did not perform!

In case you have watched “Perry Mason” on TV, that ain’t the way it’s done in the real world. Every trial is preceded by the taking of “depositions” in which the attys. for both sides must divulge to the other side **all evidence and testimony** that they intend to present in the actual trial. At the time of my deposition, I had not

been able to look over the Maintenance Records on this plane, so I stated that I had no conclusions as to the quality of the maintenance which had been performed by the FBO who was being sued. I stated that this was due to not having seen the records before the time for making my deposition! (and not even at that late time was I allowed to view them) But, this is a two edged sword if one stays awake! The testimony of two other “expert witnesses”, one for each side, both experts in metals, **was that the flap cables were Stainless, and were not broken, either before, during, nor even after the accident!** So what we have is a plaintiff’s atty. who is looking for some one with deep pockets to pay for this crash, **guilty or not!** Everyone knows that FBOs are required to be heavily insured - just because of crooked lawyers like this! My ire was now up and I really went to work (for some two months) with the two attys. whom I was assisting. I wanted to be **absolutely certain** that **they** were fully educated as to just what did happen! What I might **know** would be of no help to the defense unless they **fully understood** what my position was.

Comes the time for the trial. The Plaintiff’s atty got

up and presented his case (working mostly on sympathy for the persons burned in the crash, and the abortion). He also made a real show of the AD and built up his case on the dereliction of duty by the FBO resulting in this broken wire, which in turn caused these people to crash

and suffer this misery. I got the idea from his speech that he might know something about flying, but I was then unaware that **he was an ex-Naval Aviator**. He presented his case in some two or three hours - **open and shut, according to him!**

I took the stand and almost got shot out of the saddle when the first question was asked by "my" atty. after we established my qualifications. "Mr. Summers, do you have any conclusions about the quality of the work performed by the FBO?" I Certainly do! Up jumped the Plaintiffs' atty shouting "TRIAL BY AMBUSH, TRIAL BY AMBUSH - Your Honor, in his deposition, he said he had made no such conclusions!" The Judge asked me "Mr. Summers, did you make that statement during your deposition?" Yes I did, your Honor, for at that time I had not had the Maintenance Records to review. I now have studied them and have definite conclusions based upon those records." "Your testimony on this matter will be **disallowed!**"

Now **I'm** the one who is "teed off" since I had been "ambushed" by this smart aleck atty., but my atty. was one sharp cookie! Without hesitation he continued: "Mr.

Summers, do you have any conclusions about the metallic structure of the flap cables, and their condition?" Yes I have! What is your conclusion? **Those flap cables were stainless cables, and they did not break either before, during, or after the crash!** Upon what do you base

those conclusions? [Have you ever heard that “hear-say” evidence is not allowed in court? ‘Taint so! It **is** allowed, if it is based upon other “expert witness” testimony!] I answered “**His** expert witness in metals, and **your** expert witness in metals, both testified in writing that the cable was Stainless, and was unbroken when they investigated it!” [So put **that** in your pipe and smoke it, Mr. Smart Aleck Atty.”] There went his whole case, **by his own expert’s testimony!** (Of course, he had “neglected” to bring this up as part of his evidence.)

You would have thought the case was over then, but far from it. Strangely when an allegation has been made like this, **it now falls our job to show just what did cause the accident!** Otherwise, we might still lose the case. The law is strange! Now that two months I had spent educating “my” attys. was to come into play **with a vengeance!**

The Atty. with whom I am working then asked me “What did cause the crash?” I then turned to the Judge (and this was the first time I had made this statement in court) and said “Your Honor, I am not demeaning the intelligence of any of the jurors, but we all know that not a single one of them knows anything about aviation. If they did, they would not be in that jury box. I am requesting your permission to use a couple of things to assist me in discussing this with them, as I would with students. The judge asked what I needed. I told him that I had constructed a model with moveable control surfaces, and that I would like to use that model, and a

black board, to demonstrate what did cause the accident, **beyond question!** He directed that my model and a blackboard be brought into the court room. [The fact that this case was over a 9.5 Million Dollar claim might have influenced his actions.]

So, armed with my model and a blackboard, I began a course in the effects of a 45 degree crossed tail wind from the left, combined with torque, torque control, (or the lack thereof due to insufficient speed) gyroscopic propeller precession, and how all of these combined had exceeded the ability of the rudder to control direction on this takeoff. Then I got into a downwind takeoff and a takeoff executed below control flying speed, due to ground effect, all of which resulted in the pilot's complete lack of directional control after lift off. (I forgot to mention earlier in this story that the right brake had scuffed the runway from the beginning of taxiing until the plane left the ground.)

While I was teaching flying, the plaintiff's atty kept interrupting me and doing his best to make me look like I was either lying or didn't know what I was talking about! I kept quoting the USAF Primary Flight Training Manual, the FAA Flight Training Manual, and Engineering For Naval Aviators, the Navy's Primary Flight training manual! I was at that time still unaware that he was an ex-naval Aviator, **and I was quoting to him the book by which he learned to fly!**

When court adjourned for the day several things

had happened. I was so angry at this atty. that I told the one with whom I was working that he might have to bail me out of jail the next day! He asked “Why?” I said, If that jerk keeps trying to make me appear to the jury as lying, or not knowing what I’m talking about, I just might punch him in the nose! He laughed and said just keep doing what you’re doing. The jury is getting the message. I said, but when he begins his cross examination, with yes, no, questions, I will not be able to say what I want to say to the jury. He said “Just answer yes, no, or under the circumstances, I cannot answer that question” and **I’ll get what you want on cross-exam for I know what you want to say!** Hello, two months of prior briefing!

Also, I had noticed a man who kept entering and leaving the court room (with one of “my” attys.) during my testimony. He introduced himself as the representative for the Insurance company and told me that on cases of that magnitude, his job was to tell the defense attys. when to either begin a negotiated settlement, throw in the towel, or keep fighting! I’ll never forget his comment: “I wish my flight instructor had known what you know! We will **not** negotiate this case!”

Once, I had turned to the bench during my briefing to say something to the Judge and he wasn’t on the bench! I located him setting in the jury box taking in this whole briefing!

The next day, my antagonist had gone back home, and turned the case over to one of his helpers! I guess **he** knew when to throw in the towel too. Of course, we won. After court adjourned (at the end of the case) the Judge came up to me and said “Mr. Summers, I also am a pilot and I wish my instructor had known what you know!” (No, I didn’t **get** a big head - **us Texans have always worn large hats!**)

But here’s the rest of that story. Many months later this same atty., the one who had bugged me until I wanted to smack him, called and asked me to testify in a case for him! I said “You need to understand that I don’t “testify for” anybody! You tell me the circumstances and I’ll tell you whether you want me or not! He laughed and said “That is just the way you came across in court!” Which brings up another case - one in which I didn’t testify - but got paid for my trouble anyhow.

IF YOU ARE RIGHT, AND HAVE THE BOOK BEHIND YOU, DON’T LET AN ATTORNEY INTIMIDATE YOU.

11. AS I SAID EARLIER, THERE ARE HONEST ATTORNEYS!

I was sitting in my office one day when the phone rang and a lady said “Mr. Summers, my name is ----- and I’m an atty with _____ located in Tampa. We have a client who wishes us to institute suit against a FBO in Tampa. We don’t want to waste

our time, or his money so we'd like to pay you to come pick up the paper work, review it and then advise us whether we should pursue it or not".

I said "**Would you please repeat that?**" She did, and I said "I'm still not sure that I'm speaking to an atty.! They just don't talk like that! **I'd be happy to work with you!**" She got a real big laugh out of that and I went to Tampa and picked up some paper work, and came home to begin researching the case files and the FARs.

The plane, a twin engine jet, had been purchased some months before by a South American. He wanted a pre-purchase inspection by a large maintenance facility and had specified what he wanted done in the inspection - on a signed, written work order. There was an AD on the hot section inspections which specified that if the plane were used in a certain manner, this inspection could be put off for one thousand hours more. Under certain other conditions, including exportation of the plane, it had to be done immediately. The purchaser had specified that he was going to leave the plane in U. S. registry and did not want to pay the many thousands of dollars at the time of the pre-buy inspection to have the hot section inspections performed.

That was pretty specific and was completely in harmony with the AD requirements. It was now months later and he had decided to export the plane to his home country. To do so, he was advised by the same

maintenance facility that he would have to pay for an Annual Inspection (an export requirement) and that would necessitate compliance with the hot section inspection at that time. Since I was functioning as both a DAR and a DME for the FAA, (me, working for the FF?) I was well up on the FARs. He now wanted the firm which had performed the pre-buy inspection to pay for the AD compliance!

After due diligence, I wrote up a report for the legal firm in which I cited the specific FARs involved, as well as the wording of the pre-buy inspection work order. **The man didn't have a leg to stand on to back up his allegation that the maintenance firm had failed to comply with either his directions, or the exact wording of the AD.**

My bill (at \$100.00 / hour, including travel time) was not small! I took the report to the aty. who had first contacted me and went over it with her. Knowing attys. (I thought) I fully expected her to try to find some way to wiggle, and institute the suit anyhow. She studied the report for a time, smiled, and said **“I certainly want to thank you for this report. We will not waste either our time nor our clients money!”** Some attys. are interested in justice, not just money.

BE HONEST AT ALL TIMES, WITH ANY ATTORNEY, BE HE (SHE) FRIEND OR FOE

12. PILOT ERROR, OR MECHANICAL DEFECT - ANOTHER CASE

Another strange(?) case arose from a crash investigation involving a county spray plane which never even got off of the airport.

Mosquito Control has always been a problem near water, and the area of Fla. in which I live is known as “The City Of One Hundred Lakes”. There may not be 100 lakes here but there is a ‘bunch’. Due to my dusting

and spraying background, I was asked by the County Director to set up and fly the spray program for the county. At one time, we had the only “Single Engine, low altitude, congest area” waiver issued. I was able to fly “two rows of houses inland from any lake shore” in any city in the county. In Winter Haven, I could lift off at the airport, drop immediately into an adjacent lake and, by using the canals between the lakes, fly from the NW corner of the city to the SE corner of it - some 13 lakes in all, without ever pulling up. (My first pass was low enough that I had to pull up over the boat **docks** - on the second pass, I pulled p over the boat **houses**. Flew rather low!)

We began the program with an old Callair A-4 and later moved up to a new Piper Pawnee. After some time we added a Beech D-18, and finally added a DC-3 to the fleet. Buzzing along in a DC-3, loaded to military gross weight, just above the telephone poles is a blast! My own business was growing at such a rate that when the director asked me to go full time, I had to refuse and trained a replacement pilot for him. At the time of this incident, he had gone through possibly the third or fourth generation of pilots - all friends of mine, and I still worked for the county when they needed me.

I got a call one day from the director that went something like this: “Grover, our Pawnee Brave was involved in a crash at Bartow Airport yesterday. It had an engine failure on takeoff. We called the FAA and told them that we wanted them involved in the

investigation. (this was a “Public Service” certificated plane) They told us that they didn’t disassemble engines, but would observe the operation by the mechanic that we (the county) chose to do the work. I told the FAA Inspector that you would be doing the disassembly and he said ‘If Grover is doing it, tell him to just call us with his results - we don’t need to be there!’” The county director insisted that the FAA be there as three planes on the ramp had been damaged in the crash. The Inspector assigned was Gene Wellmaker, another good friend of mine in the FAA office in Tampa.

We went through the normal trouble shooting routing and found no reason for the engine to stop. Talking with the pilot disclosed that the engine had not really “stopped”- it had “lost power” just after reaching some 40-50 feet of altitude. I asked for more information from him. He said, “I really don’t know what happened - I must have stalled it as I started my turn right after liftoff“ Now it’s getting more interesting than just a power loss!

The Mosquito Control director liked to have us load up some water and make a spray run over dyed paper cards laid out on the ground - to check droplet size and check for even dispersal of the chemicals. The pilot had lifted off of 27R and started an immediate right hand turn back down the ramp, paralleled to the runway. At about 120 degrees into his 180 degree turn, things got rather sticky! He could not keep the plane in the air and impacted the ground at an angle of about 60 degrees to

the edge of the ramp, in a tail low, almost in a wings level attitude. He immediately stuck the edge of the ramp, lost his landing gear and skidded into some 3 or 4 parked planes!

Having flown more than 2,000 hours from that same field, and being familiar with spray operations, I knew that he had to have been in a fairly steep bank (to complete a 180 turn between the runway and ramp) at the time things got out of hand. I was also **very** convinced that from that altitude, he **could not** have stalled in a steep bank turn and then hit the ground almost immediately in a wings level attitude! Just wont happen! We kept looking, and there was no reason for the engine to have failed.

Gene was ready to write it off as “pilot error”, but I was not satisfied with anything we had found. I walked out of the hanger, talked with a ground crewman who had observed the whole incident, and asked him to describe to me everything he had seen and heard. He said every thing appeared “normal” to him until the plane was in the turn. Then, he said the pilot “feathered” the engine. I said “That engine cannot be feathered - what do you mean, ‘feathered the engine’?” “ He answered, “Well, you know, like before he takes off.”

Now, the wheels start turning! I walked back into the hanger, picked up my tools and climbed on a ladder at the nose of the plane. As I started removing the governor, the county’s mechanic said, “There is no need

to pull that governor - I just had it overhauled about four hours ago.” I said “If it was overhauled just before takeoff, I’m pulling it off.” When I pulled it off, I was unable to rotate the drive gear! I called Gene and said **“I’ve found a snake, I think.”**

A governor is a high pressure oil pump. Inside of it, there is a valve which opens one oil port while closing another, and vice-versa. There is a “speeder” spring attached to the valve shaft which moves the valve shaft one way, and a set of fly weights at the other end of the shaft which moves it the other way. The fly weights are held to the shaft by a “cir-clip”. The spring force is determined by the pilot when he sets the propeller rpm control in the cockpit. The force generated by the fly weight is determined by the engine rpm. When these two forces are in balance, the oil pumped by the governor bypasses the blade angle control. If one or the other causes an imbalance, either the spring force, or the fly weight force moves the valve and causes oil pressure to change the propeller blade angle until the two forces are again balanced. With a locked up governor, the blades went into high pitch (low rpm) setting and the plane could not fly. Gene tried to turn the governor drive shaft and he could not move it either! He said “I’ll take this to a prop shop and have it checked.”

Since this was a “check”, the prop shop just bolted the governor to a test bench where it is driven by an electric motor, and control operations and pressures were checked out - and found to be OK.

A few days later the pilot called and said the governor had checked OK and the FAA had written the incident up as “Pilot Error.” I told him that I didn’t care what the bench check showed, the governor was defective and I wanted it at my shop! The laws of physics simply cannot be violated, and neither Gene nor I could turn the shaft at the hanger - something was wrong!

After removing the bolts which hold the two halves of the governor together, I raised the cover and the fly weights fell out on the floor! The fly weight lock ring also fell out! After scratching my head a while, I theorized that the clip was loose **all the time** and, when in an (im) proper position, was blocking the shaft rotation! I called another prop shop where I knew the operator and presented my theory to him. To my utter amazement, he told me that there had been a service letter calling for rework and replacement of that clip for years, **for just that reason. I could assemble the governor, shake it up, and get it to fail, or work, pretty much as I pleased.**

I asked him what possible reason there could be for not doing it when the governor had just been overhauled. His answer was that it was a “Service Letter”, not an AD, and that many would not spend the money to comply with it! He also said that he had turned out many “unmodified” units for just that reason. I asked him if he got such rejections **“in writing?”** He answered

that he did not.

I then said, “Jeff, let me run a scenario by you. I, or someone else, send(s) you a governor and turn(s) down the modification, for **whatever** reason.(or excuse). Later, this same thing happens and a sharp atty. gets his hands on the case. (I, or the customer, might have been killed in the accident and my wife and family are seeking “restitution.”) This atty. establishes that **you** are beyond all doubt the propeller **expert** in this matter and that I, or the customer, was not. He then says, Mr.-----, how many cases are on record that **you** knew of where this type failure of which the SB warns has occurred? Jeff, even if the one who refused to have this work done survived, do you think he will admit that he told you **not to do** what the SL said to do? Old buddy, did you ever hear of CYA? **Get it in writing and CYA!** Jeff said, “I never thought of that.” Most people are honest and expect others to be so, but ‘tain’t necessarily so, as my court experience has demonstrated many times.

I got a copy of the Service Letter from Jeff, wrote up a report of what I found when I disassemble the governor, and sent it to Gene. **The FAA rescinded it’s “Pilot Error” finding and issued a “mechanical failure” report.** No big deal? Would it have been if it had been **your** pilot’s license!

“THE GAME AIN’T OVER ‘TILL THE FAT LADY SINGS” Babe Ruth

13, **ARE AC's REGULATORY IN NATURE?**
OR WHO MADE THE INSTALLATION:

Roy Dawson is undoubtedly the sharpest radio man I have ever known, and operates his own FAA Approved Radio Shop. (I spend a year in radio / tv school and operated a side line business in that trade for years, while flying too, so I think I know a qualified technician when I see one.) Roy figures in this case only in that he was supervising an uncertified man in a radio installation in a PA-28. He was not filed on, but he pointed the technician to me when trouble arose.

When I was approached, this was the story I was told. The owner of the PA-28 became highly upset with the installer refused his "request" to install a set of 12" speakers behind the rear cabin bulkhead - to serve as

“woofers” for a stereo sound system that the owner intended to install himself!

While the technician was in the installation process, after work one afternoon, the customer went out to the airport, removed the **entire** radio installation, and then **reinstalled it as he wanted it**. He then decided to move the plane (with an uncertified radio installation) to another airport where he thought he could get done what he wanted!

He “reported” the first installer to the FAA who then “filed charges” on him for “failure to complete the necessary forms on the Major Alteration, and numerous wiring and installations errors.” By the time I became involved, this man had spent “bunches” of money on a local atty. who was about as ineffective in getting the FAA to change their mind as it is possible to be. In fact, by the time I became involved in the case, it had already gone beyond local office negotiations and was up for hearing before an NTSB Judge. It should never have come to that, but what civil atty. knows anything about the FARs and how the FAA works? **How many civil attys. wish to end a case quickly, without litigation? Find me one!**

When the two FAA Inspectors had laid their “proof” of violations of the FARs before the Judge: I pointed out to him the following items - which the Inspectors could not successfully refute:

(1) As an uncertificated “repairman”, under FAR 43 this particular man was not allowed to “sign off” repairs or alterations.: (he was charged by those Inspectors of violating FAR 43 by failing to **sign off** the alterations) He could only “make a maintenance record entry which contained a description of the work he actually did, the date work was accomplished, and his signature.” Since the owner had removed the airplane, and all maintenance records, before any work was completed, it was physically impossible for him to make such an entry.

(2) None of the work he had performed was in the plane at the time then FAA looked at it - the owner had pulled it all out and reinstalled the items in the manner he desired. It was a physical impossibility for the FAA to prove (or know) what he had done! Therefore, the charge that he had incorrectly installed the radio gear was again beyond the knowledge of, and could not be substantiated, by the FAA.

(3) Their last charge was that he had violated the FARs by installing “too many ground connections under one grounding point” - as I remember, the allegation was that he had installed 6 ground terminals under a screw where AC 43.13-1 allowed only 5 at each ground point. I could not figure why #2 above did not disqualify this charge also, but the Judge dropped all charges except this one and fined the man some \$300.00. (the FAA had been after thousands so I think the Judge smelled a skunk anyhow). I kept nudging the atty. and telling him that **the FAA Inspectors had perjured themselves** when

they told the Judge that AC 43.13 was **Approved Data**, and **Law just like the FARs**.

After the Judge issued his ruling, I got the atty. aside and chewed him out for not listening to me. AC means “**Advisory** Circular” and plainly states that the information contained in that manual **may not be used as Approved** Data, and that it could be used as **Acceptable Data only under specific conditions!** **It is not regulatory in nature!**

His answer was “Don’t sweat it - we’ll appeal the decision”! If he had **listened**, the ruling would never have been made against his client. (He was stretching it out as long as he could - for the bucks - to heck with his clients rights!’ **I despise an atty. who thinks like that!**)

In response to his initial correspondence relative to an appeal based upon an incorrect interpretation as to the effectiveness of ACs, the FAA offered to “reduce the fine to \$50.00”. (We cannot possibly admit we made an error, and drop the charges.) Then he answered that the Inspectors had **perjured** themselves, and he wanted **no** fine, and would instigate actions against the Inspectors for perjury in a Federal court!

The FAA wrote back that they were “dropping all charges” and therefore he could not file against the Inspectors! **Was he happy? Yes, he was! He charged this client \$9,000.00 for his “services” in the case!** Anyone who knew the first thing about the FARs could

have gotten all charges dropped with just a talk with the Inspectors who filed them! **He was dragging the matter out for the fees he was collecting to “represent “ his client. A man like that should disbarred first, and hung immediately thereafter!**

THE ONLY PROTECTION YOU HAVE, SHOULD SOMEONE “GO AFTER” YOU, IS EITHER YOUR OWN KNOWLEDGE, OR THAT WHICH YOU MAY HIRE. Don’t expect everyone to be honest! Some will knowingly lie, in order to ‘nail’ you.

14. WHO WAS RESPONSIBLE FOR THE CORROSION?

A paint shop bought my hanger lease when I decided to “take it easy” a few years ago. I retained an office and small workshop in the building. After hurricane Donna hit Fla. many FBOs had to replace their planes, particularly along the lower coastal area. One fairly large FBO bought several planes which were in fairly ‘sorry’ condition in so far as paint was concerned.

The planes came to the paint shop at a rate about at least one per month for about a year. The paint shop operator showed me some of the existing corrosion (inside the wings, tail sections and fuselages) as well as corroded areas caused by use of plain screws (rather than stainless) to attach inspection plates. All of this was pointed out to the FBO with the recommendation that the planes be treated internally to stop the corrosion, plus replacement of all the screw hardware. The FBO strenuously objected to spending the money at the time of painting, stating that his own shop men could do this less expensively than the paint shop.

After about 18 months to 24 months, he began to

complain about “poorly painted airplanes” as evidenced by heavy corrosion. He also stated that he began to notice this as shortly as the first month after the first plane was painted! (Can you imagine that when he continued to bring planes up for over a year?)

I flew to the south to check out his fleet of planes and his maintenance records. All evidenced heavy corrosion, and not the first maintenance entry had been made to show any **proper** corrosion prevention measures to have been taken on any of the planes by his shop personnel. He then brought a plane to the paint shop for “investigation” as to the cause of the corrosion. What we found, and photographed, was that **not a single inspection plate screw had been removed in over a year and a half (hundreds of flight hours) on the airplane since the paint was installed!** No screw had broken the original paint job. Also, corrosion was noted on the interior of the skins.

The paint shop owner told the FBO that he would not repaint the first plane free of charge! Of course, this started a big law suit against the paint shop. The atty. for the paint shop reviewed the evidence and told him that he could beat the case, but, it would cost him more in atty. fees than it was worth to fight it! He then told the paint shop to close down his business that very night and open it the next day under a different name! He did - and the FBO instituted suit against his insurance carrier! That is where I came in as an expert witness.

I had already collected the evidence as to what had not been done by the FBOs shop, plus I had copied a maintenance record entry in which his people had used paint stripper on Beech control surfaces where it's use is **strictly forbidden!** Additionally, inspection plate screws had not been removed after hundreds of hour of flight time! The paint was not broken around those screws.

He hired a local "engineer" as his "expert witness". Because of his advise, the suit charged heavy "**intergranular**" corrosion had been caused by the "lack of sufficient paint" having been put on the planes when they were repainted.

It was easy to demonstrate that this "engineer, expert witness" didn't know the difference between intergranular and surface corrosion. When we started investigation what Dupont and NASA considered to be the proper amount of paint on an airplane surfaces, even I was surprised. I've always put on a good single heavy coat of zinc chromate followed by three to five coats of finish paint. Both Dupont and NASA state that the zinc chromate should be a light dust coat (enough to establish a rough surface for the paint to adhere to), and then "quit when you think you need one more coat to finish the job". Both recommended a paint thickness of about 8 mills. Their contention was that excessive paint will not flex with the metal, but will harden and break under flexing, thereby allowing moisture to reach the metal, which defeats the purpose for painting!

In deposition, their expert witness said “the thicker the paint, the better the job!” When it was pointed out that both Dupont and NASA contradicted him, **he answered that was an “engineer” and therefore he was the “expert”**. I guess he thought Dupont and NASA hired dummies to write their Specs! The last I hear of this “suit” was some 5 to 6 years ago! You can bet that the insurance company didn’t throw in the towel on that one. I got paid again without having to go to court.

**WHEN SEEKING KNOWLEDGE, GO TO
THE PROPER SOURCE TO OBTAIN IT.**

15. **WHERE THE REAL TROUBLE EXISTS,
ALL TOO OFTEN!**

When the late Bob White began his business of Waco restorations in Orlando some 25 or so years ago, he contacted the FAA in Tampa seeking assistance in engine changes, as well as many other repairs to airplanes which had been highly altered for dusting/spraying operations some 30 to 50 years earlier. Russ Turvey told him to see me as the FAA just did not have the time to supervise all of this work. Bob and I developed a fine working relationship because I love old biplanes, and because of men like Russ Turvey, I know **how** to get things done! Bob was a “**doer**”!

Now I’m going to reveal some secrets about how to get things done. In that type of work, we needed either “approved” or “acceptable” data to back up what we were doing. I set out to secure data on as many WACOs as I could. To my great surprise and joy, I was able to secure old **factory letters** which said “This is the way to” change to different engine installations in any given model of Waco (which also changed the official Waco Model designation for the plane - for example, changing the engine changed the model from ASO to YSO, etc.) Those letters also told how to go from a Taper Wing to a Straight Wing model by wing change. **This looked like “duck soup”! Looked like, but proved to be far from!**

While none of these restorations would up in court, they **invariably** would up in a long fight to get the

FAA to approve what was done - **and yet they did every time!** This is the time to bring out the point that factory data is classified as “**Approved Data**” under the FARs. **Nobody has the right to argue with Approved Data, (it is Official!) but they will argue with it.** If you don’t know the law, and stick to your guns, you are dead in this type of work! I should point out that many of these engine mounts are welded in as part of the fuselage so you don’t “bolt on” another mount. Knowing what you are doing, and how to do it legally, is maybe 40% of the certification battle. The other 60% is “**I ain’t gonna take NO for an answer**”, while dickering with the FAA!

Bob did the hard (?) work on the airplane rebuild while I did the easy (?) paper work battle with FAA Engineering. I’ve already revealed the source of some of my “Data” and am not going to reveal the “how to” make the conversions. The purpose of these articles is what the “law” says, and how to get what you want with it. Every plane we restored began a paper work battle, first to the local FAA FSDO office, but as only one Inspector up there was familiar with these planes, the rest had their hands tied by the FAA regulations governing what they could “field approve”.

So, the paper work went to Atlanta Engineering for one long fight on **every** plane! It seemed that every time we completed a plane, a new Engineering Inspector got it to approve. I don’t think we ever got the same one twice. So - back to the same arguments every time,

trying to convince some one that this is “Approved Data.” (The FAA has finally settled many of these matters, to my satisfaction, but that is another matter)

After going through this time after time, I finally complied all the Factory Letters, old CAA approved Form 337s, and 337s I had gotten approved the hard slow way, and asked for a Blanket STC to cover all these repairs, alterations and conversions. After Atlanta sat on the data for six months, I raised a racket. Atlanta advised me that they did not have the authority to issue an STC for all that data (**who needed an STC - I just wanted them to recognize Approve Data as such**), so they would have to send it to Regional Office in Kansas City. After two more months, I was on the horn to KC. They told me “Mr. Summers, this is all **approved data!** Submit it to your local office.” I answered, “I tried that and they wont touch it with a 10 foot pole.” KC then said “Send it to your area engineering office.” And I answered “I did, and **they** sent it to you?”

Then the Regional office blew me out of the water. “Mr. Summers, you will have to take each of these changes (with the factory letters) and set down and write a step-by-step procedure to be used to accomplish each and every one of them in order to get the ‘blanket approval’ you wish to cover all of these many models.” I said “Why should I have to write up something like that? Your AC 43.13 covers every procedure that is involved in these conversions, and or restorations.”

Hang on to your chair! **“Mr. Summers, that may be true, but the FAA no longer has men who know how to implement these procedures for converting and restoring these planes! If you don’t set down these changes in a step-by-step procedure and get it approved, when men like you die, these planes also die!”**

What’s the point? “Fellers”, if you are planning a restoration or conversion on one of the older planes, you had better **know** what you are doing, know the FARs (are you aware that the FARs allow you to **build** a part for an old airplane, or engine, if the item is out of production, and **if you own the plane**? You must demonstrate that your part conforms to the original factory part in materials and workmanship, have the proper source of **Approved Data**, and be prepared to flight like the devil for what the law says you can do!) Remember this, it is not the **job** of the FAA to tell you how to do a job, or where to get the necessary data. **Their job is to see that you conform to FAA standards in workmanship and quality of materials used in any repair!**

THE FAA HAS SINCE CHANGED THEIR ATTITUDE. DATA CONTAINED IN OLD CAA FORM 337s IS NOW ‘APPROVE’ DATA! Know how to find what you need! I went to old micro film records in the FAA files!

**16. CAN I MODIFY / CONVERT MY PLANE
TO A LATER MODEL?**

Like most people, I like convenience when I fly, so I highly dislike having to lower the back of the rear seat in my 1960 model 172 in order to store or remove

baggage. A couple of times in the distant past (when the older Inspectors were still with the FAA) I have installed doors from a 1961 model in 1960 models.

To start a program like this, I first checked the parts list on both models of fuselages and found all structure was identical. All skins were identical. The only difference was in the installation of the door frame and door itself. Then I called the Cessna factory engineering department (and those folks are normally very cooperative and helpful) to see if (a) there might be a problem in making such an installation and (b) if the factory had any data available for such a conversion.

The answers came back **“No, there is no problem with making this installation. Both fuselages are identical except for the door frame and door.”** Likewise, the answer to question two was **“No, we do not have a kit to make the change, so we do not supply engineering data to make it. It is a “no-brainer”. Anyone can do it without STC data. Just remove the door frame and door from a ‘61 model and install it in the ‘60 model, using accepted industry practices -install in the same location, use proper rivet spacing and sizes, etc. Of course, you will have to obtain a “Field Approval” for the Major Alteration”**

I had already reached the same conclusions, including the need of a “field Approval” since, after alteration, the plane no longer would conform to it’s

Approved Type Certificate Sheet. With the older Inspectors, I had no problem in securing the Field Approvals after making the conversions. Most of those men were field mechanics in the early days of aviation and were used to patching airplanes up with “chewing gun and bailing wire” No, not really! They were mechanics and **knew from experience** what would work and what would not work!

About two or three years ago, I decided to further modify my 1960 model I had already developed and STCd an Aileron and Flap Gap Seal installation (also PMAd) and had installed a one piece windshield. Now I wanted the outside baggage door. **Step No. 1, always contact the FAA before making any mod that will require a Field Approval!** I called and the conversation went something like this.

This is Grover Summers down in Winter Haven. I have a '60 model 172 and want to install an outside baggage door frame and door. “Mr. Summers, you need to speak to your ‘Supervising Inspector’ before you make such a change.” (I wonder what he thought I was calling for?) Who is my ‘Supervising Inspector’? “Let me look — That is Inspector -----“ Could you put him on the phone, please?

He got on the phone and I told him what I intended to do. He stared in “You need to understand that the plane will not meet it’s TC Data Sheet when you do that. That will necessitate Engineering approval and

you need to contact a DER (Designated Engineering Representative) and have him work up engineering data for such a change to accompany the Form 337 before we can issue a Field Approval.” (I’m smart enough to know that with DER data in hand, I don’t need a Field Approval. That is Approved Data and, with it, as an IA, I can approve my own Form 337.)

I interrupted him with this comment “You don’t know who you’re talking to, do you?” Then I began to advise him of my past history - 55 years in aviation, 21,000 + flight hours, just about every ticked in my pocket that the FAA issues; had developed STCs, and PMAs, Field Approvals, DER approvals, had served as a consultant with the CAA and FAA and Canadian MOT on just about every conversion imaginable, as well as in accident investigations, had been a FBO for some 30 years, specializing in major repairs, (as well as all types of flight training under my own Part 141 school) etc etc etc —.

That ‘Ain’t no way” to start a conversation with the FAA, so he interrupted me with this comment. “Mr. Summers, you obviously know what you are doing. I’m new in this office, so if you will send me your paper work, I will send it to Engineering, or a DER for their approval.” I answered right back. No, I am not going to pay some DER hundreds of dollars to approved what I know I have previously done, and can do legally now. If this is above your area of expertise, just give the paper work to (and I named two Inspectors who know me

well) and let them handle it.”

A couple of days later, I got a call from one of those Inspectors, and he said “Grover, this is -----, put that door in that plane!”

I installed the door frame and door, stripped and painted the plane and installed a new interior, and still no paper work back from the FAA Inspector with whom I had first spoken - my Supervising Inspector. I’m on the phone again - Mr.-----, This is Grover Summers in Winter Haven. I still have not received my Form 337 on the baggage door installation in my 172. “Oh, Are you still planning to make that modification?” No Sir, I’m not **planning** anything - **the door is in and I’m ready to fly!**

“I’ll be down there tomorrow and see what you have done!” Well, that’s one way to get the paper work done, I guess!

He showed up, with a lady Inspector, to check up on my work. After a suitable inspection, and my careful explanation as to the difference in the ‘60 and ‘61 models, he said “Grover, you obviously know what you’re doing!” Then he absolutely floored me with the following statements. “I am relatively new with the FAA and I certainly don’t know it all about maintenance practices, forms, etc. You, on the other hand, have obviously been at this for many years. Would you mind if I called you for assistance and information if I run into

something I don't know?"

After years of fighting a couple of “know-it-all” Inspectors, who really had very little practical maintenance experience, and who interpreted the regulations in light of their limited knowledge, I found such a statement very refreshing! I answered “Frank, I’ll be happy to do anything I can to be of assistance to you, any time you need me. I have learned what little I know because of men in your position, who were both knowledgeable and experience, were willing to take the time to teach me both how to do it, and how to comply with the Regulations.” **An Inspector like that, I can highly respect!** No, I don’t know it all, but what I don’t know, I attempt to find out, and I want an answer “from the book!”

GO TO A RELIABLE SOURCE FOR DATA, IN THIS CASE, THE FACTORY, AND DON'T TAKE 'NO' FOR AN ANSWER.

17. JUST WHAT CAN YOU LEGALLY DO TO AN AIRPLANE?

Back to that first CAA Maintenance Inspector with whom I bumped heads in San Antonio. A friend had an Old Great Lakes Trainer - a relatively small bi-plane with a 90 hp 4 cylinder Cirrus. inline inverted engine in it. The problem was that the case had a rod sticking out through a hole in the crankcase! And that was not too unusual with the Cirrus!

Jack wrote off and bought another engine - trouble was, when it came in, it had a rod sticking through the case on it too. Kind of hard to fly with an engine like that. Since an engine seemed to be unavailable, I asked Jack why he did not install a Warner radial engine in the plane. He said he had tried to obtain data to do so, but was unable to get any answers to his enquiries. I took my trusty little tape measure out one day and measured the distance from the CG of the plane to the C.G. of the Cirrus.. A little simple mathematics told me where I would have to locate the C.G of the Warner in order to retain the original balanced point on the airplane. (The Warner was an approved engine for the Great Lakes)

One day when Jack was gone from home, I took my trusty little hack saw and sawed off the engine mount for the Cirrus, right at the firewall! Both the mount and the Cirrus dropped into the mud! When Jack got home from work, he went into orbit! I had done ruined his Great Lakes!

I took 2x4s and wired them to both sides and the top of the fuselage. That was to establish an alignment for the mount I intended to build. Then I went to the 'bone yard' at the airport and sawed off the engine mount ring for a Warner engine from a crashed Monocoupe. Back to Jacks where, with the help of the 2x4s and bailing wire, I wired this ring into what I had computed to be the proper location for the Warner engine. Then I

got my hack saw, welding torch and some tubing and proceeded to build an engine mount on the front of that Great Lakes for the Warner engine!

We installed a Warner engine with full engine cowling and a ground adjustable prop. It made one real good looking installation. Now comes the paper work. **“When the weight of the paper equals the weight of the plane, the plane is ready to fly!”**

I prepared drawing of every thing I had done, and then had blue prints made of the drawings. I prepared the new Weight. & Balance data and the necessary Form 337s, and made the necessary maintenance record entries and submitted the whole shootin' match to the local CAA. The Inspector who had hard-timed me over the Fairchild 24 said he could not approve it and would submit it to Engineering in Dallas, Tex.

On the appointed day, a new Beech Bonanza arrived from Dallas. The Engineer installed all of his gadgets (flying boom pitot tube for correct airspeed indications and a Cylinder Head Temperature gage with a probe for every cylinder on that Warner). We loaded to gross weight (after he had checked my Wt. & Bal. computations) and he gave me the following instructions for the flight. “Takeoff and climb to 2,000 feet at full throttle. Level off at 2,000 feet and maintain full throttle until all cylinders peak out on temperature. Then begin climbing, still at full throttle, until all cylinders peak out again. Then we will return and land.” I objected that

“No one treats an engine like that!” He said “You will if you want the plane approved with this engine.”

We rolled onto the runway and made like a big bird. To my great pleasure, the plane handled like a dream, hands off! At the conclusion of the test hop, the Engineer told me that we had three or four cylinders which were running some 3 - 4 degrees above the maximum allowable temperature. He left all of his test equipment in the plane and issued me an Experimental Air Worthiness Certificate so that we continue flying the plane until we had the engine cooled off.

When we made the original installation, we had no inter-cylinder baffles and made the test hop without them. Jack and I spent two or three weeks fabricating inter cylinder baffles and test flying the plane. We finally got the engine within limits and called for another check ride. This time, when the Engineer arrived from Dallas, it was a different man, and he was flying a D-18 twin Beech. With him was the local Inspector with whom I had previously ‘had words’.

This new Engineer (who turned out to be the head man in Dallas) looked at the plane and drawings along with the records of our test flights. He seemed happy but the local guy (the one who couldn’t handle the job to start with) said “You haven’t substantiate the strength of your oil tank mount.” My oil tank was supported by two metal straps and bolted to the firewall, with two a 1x2 strip of wood between the tank and the

firewall to prevent metal chafing. I weighed about 155 lbs. so I climbed up the side of the fuselage and stepped out onto the oil tank (with my cowboy boots on) and bounced up and down a few times on the tank. I then said “This tank carries two gallons of oil at about 13 pounds of weight - at 9 G’s, that would be roughly 120 lbs. so I think the mount is sufficiently strong.” He came back with “Put it on paper!”

And the Engineer said “Get off of his back, M-----!” WOW, now I am impressed - driving around in a D-18, and telling the local CAA Inspector to “get off of his back?” Who is this cat? **We made the flight, and he issued us a Standard Airworthiness Certificate for the plane!** I want some answers! Mr. McKissic, just what is your position in Engineering? “I am head of the office in Dallas.” I don’t mind telling you, I was somewhat worried when someone showed up in a D-18. What happened to the first Engineer? “Nothing, I just had to see this plane for myself.” I then asked what brought that on and he said “Grover, we have old mechanics who turn in paper work that is half in ink and half in pencil, dirty and wadded up - we sometimes have to have them do their paper work three or four times to get something we can use - but we have no concern about the quality of their work. Then we have young mechanics who turn in nice clean type written forms, and we like to check on their work - BUT - **I have never gotten a blue print from a mechanic, and I just had to see this one!**” Then he said “**Grover, the next time you want to do something like this, simply put**

“Attention Bob McKissic” on the paper work and I will approve it!”

Wow, I’m only 24 years old, and to hear that from the Chief of the Engineering section, in front of the local Inspector who had been hard-timing me, put me in **“hog heaven.”**

A LITTLE ‘COMMON SENSE’, MIXED WITH A LOT OF DIGGING, CAN GET YOU WHAT YOU WANT, (OCCASIONALLY)

18. TRIVIAL MATTERS? DON’T YOU BELIEVE IT!

The FAA definition of Airworthy is on the face of the Airworthiness Certificate! “This certificate shall remain effect so long as the airplane conforms to it’s Type Certificate Data Sheet, or it’s properly altered Condition, and is in a condition safe for flight.”

If your plane is not “safe to fly”, it is unairworthy and cannot be flown without a Special Flight Certificate. Most mechanics understand that. But consider this.

When you perform an Annual Inspection, do you check to see if the original model engine is in the airplane? Has that Cessna been changed from a pull start to a key start? Where is the Form 337 and the Field Approval for the later model O-300 Continental installation? If there is no such data, the plane (a) does not meet it's TC Data sheet (wrong dash number engine, or wrong equipment on the engine installed) and (b) is not properly altered - no approval for a Major Alteration. Neither is hard to obtain, if you know the paper work routine, and will not take NO for an answer, but without this, your certificate is on the line. You are certifying something that is not true, (the plane is **not** 'airworthy') and **that is grounds for revocation of every FAA certificate you may hold!**

I was called in by another FBO to correct the paper work for a PA-28R. In the Annual Inspection, he had determined that a fuel injected engine (according to the paper work) was not fuel injected! That engine had been installed for three years before it was "caught". We had to write up paper work which showed the injection system had been replaced by a carburetor, fuel injection lines had been removed and injection ports plugged, and reduce the fuel pump pressure output to match the carburetor.

Do the magnetos match those that were on the engine at time of installation? Yes, I am aware of approval for magneto changes - some are in the TC data sheet, and some require a STC.

Let me give you another free bit of advise - Fla. is “broke out” with air boaters - men who know how to remove, install and time magnetos on airplane engines in their air boats. They have no qualms about installing a carburetor, or any other accessory. Peruse this scenario.

You perform a real serious inspection on an airplane to get all the Ads up to date. During the year, unbeknownst to you, a magneto begins to miss, or a carburetor gets partially plugged, so your air boater customer simply jerks one off of his air boat engine, installs it on the airplane, and puts the one with the ADs up to date on his boat engine after he repairs it. He means you no harm, but he has no knowledge of Ads. At some time in the following 12 months, that uncertified part fails and results in a crash. If you think the FAA will not find that part, you are not real smart! And if you cannot **prove** that part was not on the airplane at the time you Annualized the airplane, you are in “deep do-do” **For many years I have made it a standard practice to write down on my Inspection form the make, model and s.n. of every part on that plane that can be identified with such!** And, it has saved my bacon more than once!

A friend of mine in the FAA once noticed that I was doing this and made the following comment. “Many years ago when I was a FBO, I bought a new Cessna 140. Shortly thereafter, an AD came out requiring reinforcement of the vertical fin spar. I complied with the

AD and later that same year sold the 140. It came back for it's next Annual and I started to not check the vertical fin spar - I knew I had modified it. I looked anyhow, and sure enough, **it was not modified!**" What had happened? Without his knowledge, that the plane had been upside down after he sold it and an unmodified fin had been installed! .

It is obvious that you cannot disassemble an engine every 100 Hour / Annual Inspection to check for compliance with an oil pump AD, but you had better be certain that someone signed it off as complied with before you. On things which you can check for compliance, take noone's word. Yours is the last one in the book (for at least a year), and even later, you can be called "on deck" by the FAA if an AD is found to have not been complied with after you signed it off!

CHECK IT ALL - AIRFRAME, ENGINE(S), ALL ACCESSORIES, AND ALL APPLIANCES (heaters, radios, interior and external lights, etc.) WHEN YOU SIGN OFF AN INSPECTION. CYA!

19 **DON'T IGNORE THE FAA - FIGHT BACK!**

I am going to include four separate incidents which show that (a) one **must not** ignore the FAA and (b) the FAA can be fought - **successfully!**

A friend came to me one day many years ago at the shop and told me the following story. He had gone in for a flight physical and passed the physical. In the conversation which followed, as the doctor filled out the forms, a discussion took place in which he was asked by the doctor what his reaction was to a new Class B airspace which was scheduled to go in nearby. He flippantly answered that they could “jam” their Class B, he would fly anyhow! The doctor immediately refused

to issue the certificate and wrote him up as being psychologically unfit to fly! That report was mailed to Ok City.

The very next day, this man went to a different flight surgeon and passed his flight physical with no problems. Shortly thereafter he received a letter from Ok City which he showed to me. It said he had lied on his second application as he did not mention on the application that he had failed a flight physical the day before. Also, since he had been judged psychologically unsound, he was going to have to take a psychological evaluation before he would be granted a flight physical at all. He then said he intended to ignore the FAA and continue flying - he had a physical in his pocket!

I advised him that he could make no bigger mistake! You do not ignore the FAA! He asked how he could fight them and I told him to go back to the first doctor and ask to see his certification as a Psychologist! **If he didn't have such, I'd advise him that I was going to sue him for medial malpractice and own his behind! I'd challenge him to "Put up, or shut up"!**

He chose to ignore the whole thing - and kept getting letters from Ok City telling him to go to Miami and take a psychological evaluation before some board. Then he got legal threats from them. Finally he got a letter from Ok City advising him that he not only did not have a flight physical, he did not have a pilot's license! Further, should he ever wish to fly again, he would take

not only the psychological evaluation, but would go through flight training and recertification also! **To this day, he has no pilot license!**

20 **REVOCATION OF MEDICAL CERTIFICATE? SAYS WHO???**

Some thirty years ago, I crashed an airplane (crop dusting). We will not here get into why I crashed, but it was not pilot error. I got killed - dead - almost. Spent 2 ½ month in the hospital for burns. Three and a half months out of the hospital, I passed a flight physical and, after a flight check, was back doing ag work the next day. Some **six months later**, I got a Special delivery, air mail letter from Ok City which informed me that **my flight physical was revoked and I should send it back!** In less than nothing flat, I was on the phone to Ok City and the conversation went something like this.

This is Grover Summers in Winter Hiner, Fla., holder of Commercial Pilot Certificate no ----- . I want to talk to Dr----- . *He is unavailable at this*

*time. When will he be available? He is not available for phone consultations at all! Will you give him a message for me? Yes, certainly. You tell the doctor that if he is not off of my back **immediately**, I will have his license for medical malpractice, and then I'll sue him for every dime he is worth! What seems to be the problem? I passed a physical here **6 months ago** under someone **you** appointed to see that I met FAA standards. Now that jerk sits out there 1,200 miles away and pretends to know more of my physical condition than the doctor who physically examined me! **I intend to nail his hide to the door! Further, you can advise him that I am making several hundred each day and I am not shutting down my flying for him or anyone else! Mr. Summers, we'll pull your medical records and call you right back! Don't call me back, get off my back!** I hung up the phone, steaming!*

The next morning my office phone rings and, *Mr. Summers, this is the FAA Medical Center in Ok City. We have your records before us and what can we do for you?* I told you yesterday what you can do for me - **get off my back!** *But you don't understand, anyone who is injured as severely as you were – (and she got no further) **Don't tell me how severely I was injured! I'm the one who was burned, and I know just how severely. Despite the doctor's forecast, I did live and I did pass a flight physical 6 months after the accident, and I've been flying again for the last 6 months!** When anyone is injured as severely as you were, we need a copy of the hospital records for our*

files. I have no objection to your obtaining those records. *How soon do you think we may expect to receive them?* It took me about three weeks to get a set and they cost \$900.00 *Oh, you misunderstand, we don't pay for those records.* **No, YOU mis-understand! I have no objection to your having those records, but if you want them, you will pay for them. I will not! The next day I got another Air mail Special deliver letter that said "Keep Flying!"**

21. SUSPENSION OF PILOT'S CERTIFICATE? SAYS WHO???

Lets go back to about three months after the accident. I am just out of the hospital - less than a week - bandaged from head to foot - and the phone rings. *"Mr. Summers, this is -----.* *I am with the FAA in Jacksonville. Have you taken your post accident flight check yet?"* No, I just got out of the hospital a few days ago. *Well, we are going to suspend your license until you take the flight check!*

On what grounds? *Well, incompetency.* You **JERK**, who told you I was an incompetent pilot? I've got over 16,000 hours, all in very dangerous flying, and I **finally** bent an airplane! That makes me incompetent **in your opinion!** Let me tell you what I'm going to do. I still have a valid physical in my pocket and I own an airplane. **I'm going to the airport right now and fly to Jax. I'm going to hand you a hand full of licenses**

and still have more than you have! Then I'm going to stick your behind in my airplane and out fly you even if I am just out of the hospital and can hardly walk! *Oh no, don't you get in an airplane and come up here. We will suspend this whole thing until you get the flight check!* **To date, there is no suspension on my record!** I was so angry that I would have done exactly what I told him, and I think he realized it.

22. **SOME PEOPLE NEVER LEARN!**

And just a few years ago, I suddenly came down with a severe "cold". Could not shake it for a month. I went to bed one night with the "severe cold" and awoke the next morning with no cold symptoms - but - I was suddenly locked up in every joint and every muscle was in spasms! I "toughed it out" for about a month, then began to go every day to a chiropractor (two at the same time, in fact), but - no relief.

At the same time I was rebuilding a home built for a customer and when I told him what was going on. He said he had experienced a similar happening and got full relief with a substance called glucosamine - no prescription required - a natural substance. By then, I'd have tried anything to get relief. I went in for a flight physical and told the doctor exactly what was going on, and what I was taking. He immediately said "You have Rheumatoid Arthritis." I said I didn't think so, for two good reasons. First, Rheumatoid Arthritis doesn't hit one literally "overnight". Secondly, it doesn't hit one all

over his body at the same time with no previous symptoms. He issued my certificate, and I kept on flying.

Six months later again (Ok City must like 6 months for some reason - I guess they think it lull one into complacency) I get another letter from Ok City. *Your medical is revoked! You have rheumatoid arthritis and that disqualifies you from holding any type of medical. However, since this certificate was issued, you may use it as a 3rd class for the remainder of this year. Then you will have to apply for special testing and we may decide to issue a special 3rd class for one year at a time. The devil you say!*

I had already spent some two months in testing in a local clinic, at the local FAA doctor's insistence, and it had been clinically proven that I did not have rheumatoid arthritis! It went totally away, and I heard "we don't really know" , "possible viral infection", etc. but NOT rheumatoid arthritis. So I'm back writing letters, making phone calls, sending e-mail to Ok City - again, and telling them to note the mistle toes attached to my coat tail and take appropriate actions - because I'm going afer someone's bank roll and medical license unless they get with the program!

They later admitted that the attempt to revoke my physical was illegal - they have only 90 days after the local physical is issued to disapprove it - they admitted that rheumatoid arthritis is not a disqualifying disease, so long as once can get into a cockpit an operate the

controls - they were forced to accept the clinic's conclusions, even though I again refused to provide reports at my expense. I told them where to get that information if they really needed it - they slowly backed down on what I **had to do** to get another physical - until the final letter, even though unspoken, boiled down to **"OK hard head, do it your way, but we reserve the right to review your physical for 90 days."** Big deal - they have that **right** with every physical!"

I'm sure that Ok City will hold a celebration the day they get notice of my having moved on to another realm to do my flying! **In spite of what you are reading, I am not by nature a combative person. I just refuse to submit to_bureaucracy! These people forget that we pay their salaries to serve us, not to dictate their every whim and fancy to us! If they do not know how to properly handle their job, they should learn how, or get out!**

There used to be a sign hanging over the door of our flight shack at Hondo, Tex. which read **"The ignorant, educate. The indolent, tolerate. The ignorant and indolent, eliminate!"**

DO NOT IGNORE THE FAA, BUT DO NOT YIELD TO SOME UNJUSTIFIED ACTION BY ANYONE IN THE FAA

23. **TALK BACK - THEY DON'T KNOW IT ALL!**

I will present two more examples of where a lack of knowledge on the part of FAA Inspectors has given me trouble, and how they were handled.

Many years ago, I was asked by a local flying club to perform an Annual Inspection on a J-3 Cub. The plane was not a “cream puff” nor was it a “dog”, just a plain old J-3. (I still think the J-3 is one of the best flying machines ever built, and will teach one more about flying than any of the current trainers. I Love ‘em).

A routine Annual and routing maintenance was performed and the plane was returned to service. Some couple of months later, one of the club members brought me a letter from an FAA Inspector which listed several “discrepancies.” As I got the story, about half of the club wanted to sell the Cub and thought it would be easier to convince the others to sell if the plane were “unairworthy”. The other half wanted to keep it. The “sell group” had called the FAA after the Annual in an attempt to ground the airplane! Since I was the mechanic who had performed th Annual, the “keep group” wanted me to answer the complaints from the FAA. Regardless

of who wanted what, my name was in the records as the one who performed the annual and I had to answer the FAA squawks.

The squawks list ran something like this: (1) screws missing from the wing to fuselage fairing strip (2) there is a hole in the fabric on the left side of the fuselage just ahead of the stabilizer, (3) Unable to read the Airworthiness Certificate (4) numbers on the A/W certificate do not match those on the tail of the plane (5) there is a piece of wire sticking out of the fuselage immediately ahead of the windshield. **I read the list and went into orbit!**

My reply went something like this:

(1) If you will check, Piper originally put something like half a dozen screws in the wing to fuselage fairing strip - there are at least 15 -18 there now - along with holes that have worn over the years so that they will not hold a screw! Get real!

(2) That “hole in the fabric” which so worries you is an access hole to allow adjustment of the tension on the trim tab cables. The Factory designed it that way - and it will stay that way!

(3) If you were “unable to read the A/W Certificate”, how did you determine that the numbers on it did not match the numbers on the tail section? Furthermore, if such was the case, YOU have the authority to field issue a replacement for that certificate.

Why did you not do so instead of making someone drive 80 miles to get it replaced in your office?

(4) The numbers on the A/W Certificate (N-----) were placed there in compliance with standard FAA markings - to comply with International Standards for marking. The numbers on the tail are in full compliance with FAA Regs which allow an antique to be marked NC_____. **Why don't you learn the law?**

(5) That "piece of wire sticking out of the fuselage ahead of the windshield" **is the fuel gage!**

I mailed back his squawk sheet, with the above comments, and informed him that I did not have time to waste on such ignorance!

My response got an almost immediate phone call from the FSDO. I was informed that the Inspector who had made up the squawk sheet was a "new, inexperienced Inspector", and I should take his inexperience in consideration when I answered him! I informed that Inspector that I was busy running a business and it was not my job to teach Inspectors how to do their job.

There were four things that **they** were not taking into consideration! (1) I could not afford to ignore him. (2) He was messing with my License (3) He was using up my productive time in answering his stupid write-ups and (4) after making a very high grade on an Office Managers test, I had been denied employment with the

FAA, and was bluntly told that **I was not hired because I was “the wrong color and wrong sex.”** After that, I was in no mood to cut anyone any slack for ignorance, that is coupled with arrogance! My attitude is know the job, or get out of it!

24. **DID I WIN, OR LOSE? I THINK THAT I WON!**

Another episode ended with my exoneration, even if the Inspector did “get his way.” I mentioned earlier that I did a lot of paper work for Bob White for restoration and conversion of old WACO bi-planes, both straight and taper wing models. I not only got to handle paper work that most mechanics do not know how to handle, but I got a chance to fly those old WACOs.

Bob had completed the restoration of a Straight Wing and the plane was sold to a customer in Chicago. In a couple of months, I got a notice from some ignorant Inspector up there that he was filing charges against me - for allowing a bent pin to be used to attach a lower wing to the fuselage. Those old WACOs used vertical hinge pins at those attach points rather than horizontal bolts as is the case with later designs. (Remember, those birds were designed in the “teens” & ‘20s!)

(The ignorant - educate) I tried to explain that the bent pin was the proper unit to be used to attach the wings on that airplane. He replied some others up in Chicago had told him the same, while others disagreed, so I simply did not know my job (as an IA) and **he was going to make me take the IA examination over!** Again, I was steamed! **I’ve got to take a test over because he is dumb and doesn’t know what he is**

doing! I had a few unkind thoughts about his ancestry!

Off I go to Orlando - an 80 to 100 mile round trip - a day wasted - an unnecessary test to take - I steamed as I walked into the FSDO Office. An older inspector who knew me well listened to my angry oration - placed his arm around my shoulder and said "Grover, you know the FAA can make you take any test over at any time they wish for any license you hold. We know your ability, - so - handing me an IA examination sheet, he said :”Sit down an get through with this thing as rapidly as you can.” I went through it like a house afire, and he graded it the same way - and tossed it in the waste basket with this comment. “Go back to work, and we will handle Chicago.”

I don’t know what he wrote, but a short while later, I got another letter from that same Chicago Inspector in which he informed me that “upon further investigation”, he had determined that the pin was the correct unit!” **No apology though for wasting my time.**

He, in turn, got a last letter from me in which I informed him as to just exactly what I thought of both **his ignorance and his arrogant attitude!** It was a good thing he was in Chicago and I was in Fla., rather than both of us being back in Texas where I would have suggested a “neck tie party” with him as the guest of honor!

**BE CERTAIN OF WHERE YOU STAND,
AND THEN STAND YOUR GROUND**

25. GET IT ON THE RECORDS, AND CYA!

Let's go back to the Inspector who saved my bacon when I ran the Pawnee out of fuel (incident # 8) I did quite a bit of work with law enforcement agencies. One of the things I did was to recover airplanes used in dope operations - either for the insurance companies, or for the Feds.

I was asked to retrieve a 520 Aero Commander from Ft. Lauderdale, Fl. The plane had set for some time after being picked up on a dope flight. During movement by local ramp personnel, the nose gear had been turned too sharply and the forward bulkhead to which the nose gear is attached had been damaged. I checked it and asked for a Ferry Permit. My intent was to "wire it down" and ferry it home with the gear down. The Local FSDO said "No, fix it before you fly it out." That angered me for many reasons: (1) it was an unnecessary decision - I was the man who was going to sign it off, and I was the man who was going to fly it. I well knew what I could do with the 520. (2) That decision necessitated a trip back to central Fla to get all of my tools, an air compressor, electrical extension cords, special sheet metal tools, etc, (3) It forced me to spend three nights in a hotel in FLL. (4) It forced me to work four days on a hot ramp in the sun when the job could have been accomplished much more comfortably and

more quickly in my maintenance hanger.

There were two additional reason which I considered to be much more important. **I hate arbitrary decisions** - “Because I said so” being the only justification for the decision - and I had rebuilt the front end of a couple of other 520s, and knew full well that the maintenance manual said the plane had to be jacked and **the gear re-rigged after any such repairs!**

When I completed the repairs, I sat in the cabin and filled out the Form 337. I signed it off as the mechanic who had done thee work. Then I took the form into the FSDO and told the Office Chief that I wanted his maintenance Inspector to sign off the Return to Service Block. I wanted that job inspected and approved by his office! He objected by pointing out that I had an IA and could do it myself. I told him that the gear would fold, if I were forced to retract it n flight and I wanted that repair **certified buy** His Inspector! I have an Inspection **Authorization, but, I am not required by law to sign off anything as an FAA Representative.** The FAA is required to sign off that block, if I so demand. I waned a “2nd opinion” signed by the FAA! I got it.

When the Inspector inspected and signed off the Return to Service block on the Form 337, I haded him the Log Books and said “The Airworthiness Certificate is missing from this airplane. Here is all the maintenance data, and it is up to date. I want a new A/W Certificate

issued now. He looked and issued a new A/W Certificate. I have what I want.

My wife and I jumped into the bird and fired it up. I told the tower as I requested take-off clearance that I would leave "gear down." Some 3 or 4 minutes after lift off, the right engine "barfed" a couple of times. The wife glanced at it (she has flown "bunches" of hours) and said "Let's go back." I said "Don't sweat it - it has set for a while and likely picked up some moisture - It'll clean up." About two minute later, it acted up again - loudly! I glanced to my right and saw smoke, oil, and flame pouring out of the inboard exhaust augmter tube! Been dare and done dat before! I knew we had swallowed a valve so I immediately rolled into a 180 turn and headed back to FLL.

I called the tower and told them that I had blown the right engine and was inbound. They immediately said they would close the field ----- and I said "**I am in no emergency** - continue normal traffic operations - I will call you downwind." We had reached only 1,200 feet in the climb out, so I was watching the gages on that right engine like a hawk while I continued to run it.

At about half way back to FLL (we were over a highly populated area) the oil pressure began to fluctuate heavily, so I feathered it. We immediately began to loose altitude with the gear down. I told my wife we had no alternative but to haul up the gear. Up it came and I advise FLL that I had now retracted the gear. They

advised me that fire crash equipment was standing by at the runway and again offered to close the field. I said “Negative, but keep the equipment standing by because this nose gear will fold when I touch down.”

I called on the entry leg, downwind, and as I turned final I said “Selsin indicators show three wheels down; gear lights show three green, I can see the mains are down and locked - what do **you** see up front?” The tower came back “Nose gear looks down.” I called back “Roger, keep the fire truck standing by - **it will fold on touchdown.**”

We touched down very smoothly and I held the nose off as long as possible. When I barely had enough speed to control the lowering of the nose, I gently let it down. It touched gently, rolled about 100 feet – and I felt the over center lock give - followed by bunches of noise and smoke pouring up into cabin. My wife yelled “What’s that noise?” And I yelled “The nose gear just folded.”

We screeched to a halt and my wife just sat there. I told her to get out before the plane caught fire. I was busy shutting down the left engine because the firemen were already all over the plane like a bunch of ants. I didn’t want anyone hurt by that propeller. She exited the bird (in no particular rush) and I continued the shut down procedures. As I exited the plane, a fireman spoke to my wife “You’re taking this like its an every day occurrence.” She answered “Well you know how it is

when you fly - never a dull minute.” As they began to try to reach for the tail, to get the nose gear back down, she said “Wait a minute”, climbed into the plane, got her camera and took a picture of the plane on it’s nose. The firemen could not believe what they were seeing! That gal has been around airplanes as long as we have been married. (She claims the fact that I owned an airplane is how I caught her in the beginning)

What I’m thinking about is “What is the FAA going to do about this incident?” It had been some 10-15 minutes since my original call, and there is no FF (Friendly Fizz) in sight. The FAA building was a couple of hundred yards off of the runway - but no FF in sight! Not only was there none in sight, they never exited the office! After we got the plane home and repaired for the insurance company, I prepared a written report as to what I found afer the incident (just what I told them earlier before takeoff, should I be forced to retract the gear) and mailed it to the FLL office. Never heard a word. Playing the CYA game works.

IF THE FAA FORCES YOU TO GO IN SOME DIRECTION WHICH AGAINST YOUR BETTER JUDGEMENT, SPEAK UP AND GET IT IN WRITING, BEFORE PROCEEDING FURTHER.

26. **KEEP RECORDS - COMPLETE RECORDS**

I have flown some rather bent up planes as I retrieved them for rebuilding, or when I retrieved drug running airplanes. I do however have sense enough to draw some lines. I received a call from an insurance company to go out East of Orlando and bring in a 182 that had received some rough handling. I was told that the plane had a bad rear spar in the left fuel tank area, but was flyable. I have flown bent spars before so I went up to get the plane.. I could roll the wheel fully from side to side - and no movement took place at the ailerons! That one I hauled in for rebuild. It would have been just another job, except for a couple of weird things.

First, the owner did not want a full spar splice. The upper flange was bent and he wanted only a small inlay to repair it. The Manual allowed what he wanted, but I wasn't happy with it myself. It was my license involved so I made the inlay, as per the book. I made one change for my own comfort. Instead of putting small reinforcements on the main spar flange as called for in the inlay repair, I put in full reinforcement plates on both sides of the spar. The inlay was legal, and the reinforcement plates were full face reinforcements rather than partial.

The second thing that stuck with me about that plane was the N number. It ended with the letters BS! Don't remember the other numbers, but that stuck - BS?

Time rolled on and jobs went out of the hanger door. **Ten years** after making that repair, I got a letter

from an Alaskan FSDO alleging that I had, within the last 12 months, made an illegal repair to a 182 spar. I had not worked don a 182 major repair in so long that I had almost forgotten what the inside of one looked like - and I called the Alaskan FSDO and told them so! Their answer was that the paper work was enrout to me.

While waiting ro the paper work to arrive, I kept scratching my head - how could they come up with such information when I had not worked on any such airplane? Then it struck me - BS! I headed for my file cabinet and began to dig through old Form 337s. Sure enough I found it,10 years old! I immediately began look up what the book called for on this repair to see where I might have screwed up.

What I found was exactly as described above - the repair was legal - by the book. I did find however that I had made a typo error in writing up the form. I do not now know the figure numbers involved, but for the sake of illustration: Fig. 2.8 was the drawing for the spar flange inlay, with small web reinforcements, and Fig. 2.9 was the drawing for the web reinforcements covering the full web - the method that I used. What I did was reverse the last numbers when I typed up the Form 337.

By the time the paper work came in from Alaska, I had already completed all of my research and had a reply ready to mail. Without those 10 year old records, I would not have known where to start to defend myself. I have advised every mechanic that I certified while a DME

to make out three Form 337s - one for the FF, one for the aircraft records, and one for his own records. I consider the last to be the most important of the three.
CYA

**Review #18 for other important records that I keep, and advise all mechanics to keep
DO NOT EVER DISPOSE OF YOUR MAINTENANCE RECORDS**

27. ANOTHER 182 STORY - DID SOMEONE ELSE SCREW UP? "SHORE NUFF!"

I was authorized by an Insurance company and pick up a 182 for repairs. The airplane was on an extended cross county again, as I remember, from the Chicago area) and was tied down at Tampa Intl. Airport. Another 182 had taxied around a corner and smashed into the left wing of the plane I was to repair. What was weird about the whole incident was that his prop cut up the aileron and entire wing structure of the wing aft of the main spar.

After seeing the condition of the wing, I made no additional examinations of the damaged plane. I removed the wing and took it to my shop where I rebuilt all of the wing aft of the front spar. I went back to Tampa and installed the repaired wing and started to rig the control surface travel. It was then that I noticed that the right flap was down a full 2 - 2 ½ inches when the flap control was “up”. I rigged both flap to neutral in the “up position, and took off from Tampa. As I lifted off, I noticed that I was carrying “bunches” of aileron in order to fly level.

When I got back to my shop, I adjusted the off center rear spar attach fitting for all the travel I could get. The plane flew no better. I checked my jig rigging and it was correct. I then began to play with an aileron trim tab, In the meantime, the customer was yelling for his airplane. I told him the situation and he insisted that I had not properly rigged the wing during the reconstruction. He was an “Engineer” (big deal) and he

was going to measure the angle of twist by taking measurements from the bottom skin on the wing. I tried to explain to him that the measurement was to be made at the chord line, not at the outer surface of the skin - but he “are an Engineer”. I couldn’t tell him anything. I forced him to take measurements of both left and right lower wing skins - don’t know why I did, but I did.

I then went into my office and called the Cessna Engineering Dept. I told the factory engineer what had happened and asked if he could covert the readings we took and determine the angle of twist in both wings. He said that he could and asked me to call him the next morning.

In the meantime, the customer insisted that he was going to test fly the airplane. I advised him that the plane was not “airworthy” until the paper work was done, and that I would not do that until the plane flew to my satisfaction. He insisted - it was his airplane so I could not stop him. I was well aware of that but I was playing CYA, in case of trouble..

There was trouble, but of an unexpected nature! In a couple of hours, I got a phone call from the FAA District Office in St. Pete. Fl. (About 60 - 75 miles away) The man had taken the plane straight to the FAA to complain about my work. The Inspector on the phone was another friend of mine. (I find it strange how well I got on with those older Inspectors when I think of the battles I have had with their replacements over the years)

I told him the whole story and he told me that he had examined the repair and had no problem with it. The owner requested a “Ferry Permit” back to Chicago, and loaded his wife aboard and headed home,

In a couple of weeks, I got a letter from some Inspector in Chicago advising me that he had received a complaint from the owner, and if the information was correct, he would go after my license!

The day after the man flew the plane to St. Pete, I had called the factory engineer and received the following: the wing I had rebuilt and a 2 1/2 degree twist in the outboard section (the book calls for 3 degrees of twist). The right wing had a 5 degree twist in it! I asked if my wing was within factory tolerances, and he said it was. Then he said “the other wing will not fly!” I answered that it was flying and he repeated “It will not fly!” He further stated that the cam in the wing could not take care of that excessive twist. Until he told me that, I really was puzzled as to why the plane would not fly right. Now I knew why! Someone up there had been covering up for both poor maintenance and poor inspections! I now had a “double barreled shotgun” on my side and could **prove** why that flap had been rigged down. I did not know when nor how that right wing got bent, but it was the cause of the problem, not my wing!

So, Grover is back on the phone, again! I told The Chicago FAA man what the factory had told me, about my wing. Then I told him that the owner admitted that he had flown the plane for three years with that flap

down. Then I advised him what the factory had said about the other wing! I then told him that if he was too dense to see where I was headed, if he didn't get off my back **immediately**, I would go after HIS job, and the licenses of every mechanic in Chicago who had signed off any Annual on that plane! The factory said it as unairworthy, according to the figures the owner had taken! **My wing was legal.**

That last comment solicited the following from him: "Well, that may all be true, but that rivet work in the wing is the worst I have ever seen!" I said "Get off of generalities. Tell me **exactly where** that rivet work is unacceptable." He said "The rivets in the spar splice is just not acceptable." I asked "What spar splice?" He came back with "You know what splice - where you spliced on a new outboard spar section - at the jury strut location." I said "Do you have a copy of the Form 337 on my work in front of you"? He said that he did.

I then told him that I had been around long enough to CYA, and if he would shut his mouth long enough and read, he would see that I had listed every part that I had installed by the factory part numbers! I said I'd eat the spar if he could find where I listed it by part no., or where I mentioned having installed it! **"If you don't like the quality of that rivet job, I suggest you contact the factory - they installed it when the plane was built.** Then I told him that I didn't have time for fun-and-games, or time to waste on some jerk who thought that he could bluff me. I told him that if he did

not immediately drop me from his list of people to harass, I would have his job, shortly after I nailed his hide to the wall. I told that my integrity was well know in the FAA (see story 8) and I'd be happy to take him on!

Never heard another word from him! I might not be able to get his job, but I'd do my best to get him transferred to "Podunk, Al." (I've never been there, but it sounded like a place to which he would not like to be sent.

I, at least, had the satisfaction of telling him just how ignorant and arrogant he was!

28 **STOP, LOOK, AND THEN THINK !**

I mentioned earlier that one should keep good records. I also have mentioned that I have flown airplanes that were confiscated for illegal flights - drug flying. One incident stand out real well in my memory.

I received a call one day from the Feds to pick up a Panther Navajo that they had confiscated. It was "hangered" in a well disguised "barn" on a ranch. The "runway" was disguised as a grass overgrown dirt road. A Lakeland FBO (Cypress Aviation) had been called in to partially disassemble the plane to check for any bombs, etc. that might be on board. Bob and I gave it a real good going over. (See incident 4 previously for more on Bob)

That particular engine was reputed to pull 44" MP on takeoff. I figured it should get out ok. I fired it up, taxied to the end of the runway, made my run-up, and poured on the coal. That manifold pressure gage didn't even slow down at 44". The last time I looked, it was going through 56" hg. I got off the gages and began to concentrate on the trees at the end of the field. When I went over them, they might as well have been small bushes - they were real small! That plane climbed like a monkey that had been on steroids! When I leveled off, it laid it's ears back and just screamed!

I got to Lakeland before I hardly got comfortable in the seat. When we uncowed the plane, it had intercoolers, turbo superchargers, Q-tip props, and all that good stuff. Into the impound yard with it and my job is done - I thought!

A couple of months later, Bob called me for a ferry Permit to move the plane to Miami - the Feds wanted to disassemble it, supposedly for parts(?) I

issued the Ferry Permit - I was then a DAR for the FAA, and I once again forgot the bird.

About 6 months after my flight in that plane, I got a call from Bob, requesting an Export Certificate of Airworthiness to the Bahama Islands for a Navajo. I went over to look at the plane and check out the paper work. What a beautiful machine - like better than new! I started the paper work and happened to notice the N number. Small whistles began to blow and small bells began to ring. I did not recognize the plane, but that N number stirred memories. I checked my records and, sure enough, this was the same Panther I had flown in from the dirt patch for the Feds. I told Bob that could not issue an Export C of A for that plane, and he asked what the problem was.

I reminded him that thing had more illegal equipment (no paper work to support) than I could shake a stick at - it would not pass an Annual Inspection. To be eligible for an Export C of A, a plane must have an Annual within the preceding 30 days. Bob then asked "Does it have to **pass** the Inspection?" I scratched my head, put on my thinking cap, and said "NO. The Regs say that "if the Importing country will (in writing) accept the plane with a list of discrepancies, it may be exported in an "unairworthy" condition. Bob pointed at a man sitting at one of his desks in his office and said "Mr. So-and-so is head of the FAA in the Islands, and he is ready to accept the plane, "as is."

I have always tried to do things “by-the-book” so I jumped into my pickup and headed for FSDO in Orlando. Then it got funny! I talked with one Inspector, and he started out “no”, “well, maybe” , “I really can’t see a fault in your reasoning, but let’s call in another Inspector.”. Before that conference ended, we had about four Inspectors in on the argument. Finally one said, “How are you going to issue permission for that plane to fly in the airspace of another country in an unairworthy condition. I answered “When it hits the 12 mile limit, it ceases to exist, so far as I am concerned.” They said ”Get that mother out of Dodge City!” **and off it went!**

What follows are several examples of what **can** happen TO YOU when an “over zealous **law enforcement(?)**” agency gets involved in aviation - something about which they have minimal-to-no knowledge. The fact that they **represent the law (?)** does not make them right.

29 POLICE DEPARTMENT TROUBLES

A friend showed up on day on my ramp with a 310 he had purchased shortly before. He told me some of the things he had done since buying it, one of which was to secure a new N number with his initials in the number. He wanted me to take a flight with him up to

Washington, then to Tennessee, and back home. It was late when we landed, so we parked his plane at my hanger door rather than inside. When I went to work the next morning, a local cop was ‘all over’ the plane. I asked him just what he thought he was doing, and he informed me that he was going to “confiscate” the airplane! (More to follow about other ramp incidents with local law enforcement agencies)

Then the argument started, big time! I told him to get his behind off of my ramp - he was trespassing on property that I had leased from the City, and I had not called for any assistance from the local police department. He said ‘they’ had called some law enforcement agency in Miami and had determined that the plane had an N number on it other than the one assigned by the FAA. I told him that he didn’t know the first thing about “N numbers” and that the plane, to my own knowledge, had the correct number on it! He would not back off. I had reviewed the letter that the FAA had sent to my customer which authorized the number change, and knew it was in the airplane, but I had no keys to the 310.

I went into my office and called the customer. He arrive shortly after, opened the plane and produced the letter to the officer. I then informed the officer that if the local police department had any questions in the future about plans on my ramp, they would be well advised to check with me before pulling any more fool stunts. (I had been involved in a protracted dispute with the City

over their attempt to violate my lease contract.) I then told him that any more such action by the City would result in a suit against the City for harassment of my customers as part of an attempt to force me out of business, or break my lease!

At the time, I was both a DAR (Designated Airworthiness Representative) and a DME (Designated Mechanic Examiner) for the FAA and carried quite a bit more “authority” than the normal Fixed Base Operator. I then informed him that it NORMALLY took months for the FAA to get their records straight after any transaction such as an N number change, and if he doubted my word, I’d be happy to give him the phone number for the FSDO in Orlando!

I might add that the local police department was well aware of my extended cooperation with the Sheriff’s Department, Fla. Department of Law Enforcement (FDLE), Customs, etc. in anti-drug operations. I might add too that this was also with the knowledge, and on advise of the FAA, so I did not in any manner appreciate their harassment of my customers!

HE FIRED UP HIS LITTLE POLICE CAR AND GOT OFF OF MY RAMP

30. MORE POLICE DEPARTMENT TROUBLES

An aerial photography company based some miles south of me came to me to handle the FAA paper work

and inspections necessary to import and certify a Cessna 207 from Canada for use in their business.

The day the plane arrived on my ramp, they told me that they needed the plane ‘like yesterday.’ I told them that it was then taking 3 to 4 months for paper work to be handled by mail from Ok. City. I told them to get on a plane and hand carry the papers through the process at Ok City if they really wanted quick action. They got on a plane for Ok City. I finished the annual and local FAA paper work and tied down the plane on my ramp.

I looked out the door next morning and the local police were swarming all over the airplane! I walked out and asked them just what the devil they thought they were doing! Then answered that the plane had “no markings” (No N numbers) and that made it illegal! They were getting ready to “confiscate it.” **I told them that as a DAR, when that plane was in my hands, it was in the hands of a representative of the FAA, the Federal government, and my best advise to them was to “leave it alone!”** They argued that with no markings, it **violated the law.**

I told them that they didn’t know their behinds from first base about the **Federal law.** By the FARs, (Federal Laws) I was **required to remove** the foreign registration numbers, **and so certify**, in order to get a U S. registration number assigned to an imported airplane.. Removal of the numbers was the first thing I accomplished after it was rolled into my shop! I further

informed them that the plane could remain parked on my ramp, until an awfully hot place froze over, with no numbers on it! The Federal law said it could not be “Operated” in U. S. airspace without proper markings! It was perfectly legal **as was until** we Operated it.’

I again told them that if they doubted my knowledge of the **Federal** law, they should get on the phone to Orlando FSDO and “check it out.”

They were not about to check that out for they had previously determined that I knew what I was talking about, and did not bluff.

In a couple of days, the owner showed up with the paper work for new N numbers for the plane, so I pulled it back in to my hanger and painted the new numbers on.

In the meantime, the police had posted a 24 hour a day guard to watch the airplane!

**IF YOU DON'T KNOW THE LAW,
“YOU'RE IN A HEAP OF TROUBLE, BOY!”**

**31 INNOCENT UNTIL PROVEN GUILTY?
DON'T YOU BELIEVE IT!**

A Seabee for drug running? How dumb can a person get? A Seabee amphibian (you know, that plane that “takes of, climbs, cruises and stalls at 90”) had been purchased out in the NW by a South American buyer

whose plans were to take it south and set up a seaplane training operation. He brought it to Winter Haven so he could learn the proper method of seaplane instructing from John Brown at Brown's Seaplane Base. (I got my single and multi sea ratings with Jack Brown, and assisted him in dual when he needed a second instructor. Before either of us set up our FBOs, we had worked together instructing USAF student pilots in the T-34 and T-37)

When the Seabee owner finished his training, he brought it to me for an Annual and preparation of the necessary Export paper work. The plane had been on the airport some three weeks before being brought to me. I ran into some paper work glitches when about half way through the Annual and tied down the plane out on the ramp while the customer got me what I needed to do my job.

When I arrived at work the next morning, the Seabee had a chain locked around the prop! I wondered why the customer did that for he knew my inspection was incomplete. I needed to move that prop in order to be able to do my job. I figured he would be out later so I made no attempt to bring the plane back into the hanger until he should arrive with keys to remove that chain and lock

About mid morning, I looked out and saw another local cop stretching his yellow "Crime Scene" tape around the plane - and **I blew up! I went out of**

the door steaming!

I walked up and asked him just what the devil he thought he was doing! He said they were confiscating the plane due to an “Illegal” fuel tank installation, and that they had removed the Airworthiness and Registration Certificates from the plane the pervious night. They put the chain on the prop!”. [In Fla., there is a law that states that **any** extra fuel tank in an airplane is ‘prima-fascia’ evidence of “**intent** to commit a crime’! So, they can take your plane because they have decided that your **intent** to break the law!” **BULL! I detest a crooked “law enforcement” agent more than an out and out admitted crook! One admits he is crooked while the other hides behind the law to cover his crookedness. We will return to this fuel tank issue later]**

I informed him that he could be prosecuted for violation of two state laws and for violation of two **Federal** law. He thought I was bluffing until I told him that he was (a) guilty of ‘breaking and entering’ for breaking into the plane and (b) he was guilty of “theft” for taking paper work out of the airplane. Then there is a federal law against breaking into an airplane, and against removal of federal paper work. He said he was a police officer and he could do as he pleased. I told him that I didn’t care who he was, nor what his job was, **I would see to it that he did not do as he pleased in this particular matter. I am slow to anger, but I will not be pushed around by any person, whatever his position might be. I can be lead, but I refuse to be**

pushed by anyone.

The local fuzz made a big show of hauling the plane off my ramp (remember, this isn't the first time they have tried this with me) - and I'm on the phone to the FADO in Orlando. I and the Chief Maintenance Inspector had a large mutual respect for each other for the knowledge and integrity each possessed. He said **“Grover, you inform the local police department that when you are functioning as either a DAR or DME, you are a representative of the FAA. We will back you. In the meantime, see if you can get the paper work on that tank installation cleaned up.”** I told him that I had already taken steps to do that very thing.

I had already made a call to the mechanic who did the installation. He was the prior owner of the bird as well. He said he had not made up a Form 337 for the installation because he did not know if it was legal (under the FARs) to install the ferry tank or not. I told him that legal or not, he had done the work and in failing to make up a Form 337 he had placed himself in serious jeopardy, not only with the FAA, but he had also exposed himself to civil action by the purchaser. He had performed maintenance and failed to log it in the maintenance record of the airplane and had not filled out the required Form 337 for a Major Alteration. Also, his failure to make such entries had left the plane open to confiscation under the laws of the state of Fla. That meant that the purchaser would certainly file suit against him for not only the original purchase price of the plane, but also for the

radios he had installed, plus my fees to date.

I now had his attention but he kept insisting he was afraid to fill out a Form 337 since he had no data by which to approve the tank installation. I told him that I could handle that since I was both an IA and a DAR. All I needed to 'fix' the mess was a 337 signed off by himself as the installing mechanic. I would then determine if the tank installation was according to the FARs., or not. If legal, I would sign off as the Inspector who returned the plane to service. If not, I would remove the tank and trash the Form 337. He mailed me the form and on the back where the work is described, it said "installed ferry tank in rear seat location." No reference was made to any approved data by which the installation was made - nothing! I found that very amusing for I had already made up my mind as to what I was going to do when I got the 337 in my hot little hands.

While waiting for the form to come through the mail, I had done a lot of research to see if I could approve a ferry tank. The installation of ferry tanks is so common I just knew there was an FAR to cover it. I was ready to shove it down the throats of the local police force, but to my amazement, **there was no data of any kind that addressed additional fuel tank installation!** When in doubt, go to someone who is smarter than you - so - I called a friend of mine in the FAA Engineering branch office in Lakeland. He politely listened to my inquiry and then said "**You didn't find such data because it does not exist in the FARs.**"

He went on to educate me. The FAA does not care how many fuel tanks or cans are “in” an airplane! They get bent out of shape if those extra tanks are “connected into the fuel system.” If unconnected, they are just baggage, but if connected, the airplane does not meet it’s original Type Certificate Data sheet, and is unairworthy unless an STC is issued for the installation! Well, it’s rather a dull day when I don’t learn something new. So, I knew before the Form 337 arrived that I was going to trash it - **after it served my purpose!**

I called the local police department and said “I’ve got that Form 337 covering the tank installation - I want the plane back NOW” An hour or so later a police officer arrived, looked at the form and said “Yes, it says Form 337 and it has the number of that plane on it. You can go get the plane.” I said “**Sure I will - you people hauled it off with me telling you to leave it alone - YOU haul it back!**” It was one blistering hot Fla. summer day - and I laughed as three of them pushed that Seabee over a quarter of a mile back down the ramp and tied it out on my ramp. If they wanted to bend the law one way to take a plane from an innocent man, I’d bend it the other way to protect him!

**DON’T GET INTO A CAT FIGHT UNTIL
YOU KNOW WHO HAS THE MOST CATS! ☺**



32. **AND STILL MORE POLICED
DEPARTMENT TROUBLES!**

A similar incident happened to another FBO some few miles south of me. [It is strange (?) how many times you will be harassed by the local police if you are having a contact squabble with a city over an airport lease]

Very late one night, the local fuzz showed up at this FBO - **with automatic weapons, no less - and proceeded to break into the FBO's hanger, and office!** They dragged out a Beech Baron that had been

brought in for an Annual Inspection. They “confiscated” that plane, a D-18 Twin Beech, also in for an Annual, and two Beech Twin Bonanzas, plus breaking into the office and taking airplane papers which were later “lost” and have never yet been recovered!

Of course, with my reputation for fighting back, I got a call from the two men who are friends of mine. I jumped into my 172 and flew down. The planes had been “Impounded” in an area cordoned off with that famous yellow tape, and cops were all over the place - like ants all over chocolate cake. They got themselves four airplanes - **plus trouble they never expected!**

I was informed that the reason the two Twin Bo’s had been confiscated was that they had been on the airport for many months and **were not currently registered** with the FAA. Both planes had major assemblies removed from them, engine accessories removed for overhaul, had no radios of any kind installed - **In short, they could not have been “operated”** by Orville or Wilbur either one. Even Lindbergh would not have been able to “operate” either one of them. **There is no law that says they have to be registered with the FAA until they are ready to be put into operational status.. Both of those planes were obviously in need of Major rebuilding before “flight”.** (They had been ferried in on Ferry Permits and then disassembled for repairs)

The D-18 had a **Data plate** which had obviously

been **altered..** Currently, to do so is against the FARs, **but it was not against the FARs when that data plate was altered, and I could prove when it was altered!** The officer who was in charge informed me that they had removed the data plate from the plane (and they had) and therefore I could prove nothing about the plane. I informed him that I could obtain data from sources about which he had no knowledge! I gave him the plane's serial number, date of manufacture, and then told jim that the Data Plate alteration consisted of having been changed from a D-18G to a D-18 H. I also told him that data plate alteration had been made **by the factory** at the time **they** changed the plane from a tail-dragger to a Dumod Tri-gear.

Then I told him that **anyone** could alter a data plate **at that time**, if certain conditions were met. The plane, in fact was no longer a D-18G, it became a D-19H when the tri-gear conversion was made. (I found the Dumod information on a data plate in the nose gear well, a plate about which he had no knowledge).

I also informed them that they had broken **Federal law** when they removed that Data Plate. **Other than the aircraft owner, No one** but a mechanic can remove a data plate, and he only for the purpose of making repairs in that area. **No one else can do so, not even the FAA! In this cat fight, I've got all of the cats!** (We will run into Data Plate removal again - by the FAA! They too lost)

The Baron seizure was even more stupid, if possible. The tank was not installed, but remember the Fla. law. It's very presence is **proof of intent** to commit a crime. What was even worse, they had called in **an FAA Inspector** for whom I had absolutely no respect. (He really was "Dumber than a bucket of dirt." He once told me that I could not have a magnetic compass installed in an instrument panel [factory job] - it had to be up on the windshield! Needless to say, he lost that argument, as well as this one.) He had looked in the logs and found where a 30 day Experimental Airworthiness Certificate had been issued for the purpose of testing that tank installation. **"Since the 30 day period has long since passed, the installation is obviously illegal."** (We will see.)

Like I said, he was either dumb, or a liar, and either way, I had no use for him At the end of that 30 day period the plane had been returned to Standard Category with an STC for the tank!

You can't argue with a person is both dumb and arrogant, so we went to court. All planes were returned except the D-18. What happened to that plane was that the man who brought it in for an Annual had preciously sold it, and later repossessed it for non-payment. He had neglected to register it in his name, intending to do so after it was returned to service following the Annual. The courts "gotta back" their police some way, so they awarded that plane to them. The police sold the plane back to it's actual owner - the man who had brought it in for the Annual - **and lost their behinds after THEY**

PAID the FBO for the repairs and the Annual!

I love it, love it, love it! As I said, I detest crooked law enforcement personnel. Some of them forget that they are accountable to the public - we pay their salaries - for protection from crooks - all to often it is difficult to tell just who is the crook!

33 AND STILL MORE CONFISCATIONS!

Perhaps, I should point out that at that particular time, drug running was more-or-less open and heavy in Fla. That is still no excuse for picking on law abiding airplane owners, and legitimate FBOs - men who worked with the law enforcement agencies.

Bob (see incidents 4 & 24), a FBO in Lakeland had purchased from an insurance company a Piper PA-31 Navajo which had landed gear up on a beach in England. When the plane was retrieved, they had used a chain saw to remove the wings! Bob bought it in that condition and brought it to Lakeland to rebuild. It was openly in his hanger as the work progressed. No body said "bo" about the plane until he had it almost totally rebuilt. Then the local fuzz showed up and confiscated it - again because it

was not “registered” with the FAA! It is strange that they woke up to that fact just as he was completing a years worth of work, “ain’t” it?

Bob called me (why does everybody pick on me?) and we are in the thick of it again. Without prolonging the narrative, the FARs state that a plane “may not be operated” unless it is registered. Until it is ready to be put into operation, it does not exist so far as the FAA is concerned, but just try flying without a Registration! Bob is another reputable FBO who had worked with both the Feds and local anti-drug people. If you think that “cuts any ice” with them, guess again! They figure you (an honest citizen) are an easier pigeon than the crook is - you’re not supposed to be as smart as the crook.

They again made a big show of hauling Bob’s Navajo down the ramp - “just look what we’re doing to him and form your own conclusions about his honesty!”

It wasn’t long until they hauled that plane back the other way down the ramp, back to Bob’s hanger!

YOU WOULD THINK PEOPLE WOULD LEARN, WOULDN’T YOU

If you think law that all enforcement personnel are honest, “you gotta ‘nuther think coming!” Understand, I am not accusing **all** law enforcement people of being dishonest - nothing is further from the truth - I know too

many good ones. But it only takes one skunk to smell up a large area.

34. **THIS WAS PLAINLY CROOKED, FROM THE START!!!**

More federal law violations by local police agencies. Since I know so much about this one, I'll allow you to guess where it took place - and I had nothing to do with return of the plane to it's owner.

A beautiful Aero Commander was suddenly confiscated - on "suspicion" of drug flights. Now as to how dishonest some law enforcement agencies really are. After 'seizure", (make that read out-and-out theft) a strange thing happened. A numeral "6" on the tail section (part of the N number) mysteriously became a numeral "8", (**A violation of Federal Law!**) and that plane was "leased out" to drug runners for two flights. The only reason that this stopped after two flights is that the owner took the local police to court - and got his

plane back!

Surprise, surprise, there are honest attorneys and honest judges out there.

YOU CAN FIGHT BACK, AND WIN!

We are going now to a couple of real interesting cases, both involving fights with the FAA

35 A \$40,000 CHICKEN COOP?

I received a call from another FBO and rebuilder located about 75 miles away. “Grover, I’ve got a customer who badly needs your help. He owned two 210 Cessnas. Both got wrecked. When the FAA came to investigate each wreck, they told him that they had to have all papers (Airworthiness & Registration Certificates, and log books) **and data plates** in order to perform their investigations.” Right off the bat, I “smelled another rat” because **that simply is not so!**

Al went on with his story. The owner took the wings off of his ‘61 model and put them on his ‘60 model after he rebuilt the fuselage of that plane. It had suffered the least damage. When he went to the FAA to get back his paper work and data plates that they had taken from the planes, their answer was **“You don’t have an airplane. You got a \$40,000.00 chicken coop!”**

Al then asked me if there any way to get the man's airplane licensed. I answered that I knew of at least two ways right off the top of my head! He asked how it could be done and when I told him, he said "I think we better hire you to handle this job."

I went to the FSDO that had refused to return his paper work and data plates and had refused to license his plane. The Inspector who as handling that case was one I had never met before. I talked with him for a few minutes and tried to explain that the actions his office had taken were simply **illegal!** He didn't think that I knew what I was talking about, and refused to consider that they might be wrong. (I'll never understand where some of these inspectors get their "mightier than thou" attitude). They are paid to help us, not hinder us.

I told him that they violated at least two FARs (a) The FAA cannot remove a data plate - only the owner may do so (or a mechanic who has to do so in order to effect repairs); and they had cancelled the registration on both planes and removed them from FAA records. The FARs say that if the owner wished to cancel registration and remove the plane from the records, HE must remove the data plate and send it to Washington. He must also take both the Airworthiness and Registration certificates and sent them to Ok City, with a request to both location to decertify the plane. The owner did none of that! **The FAA illegally did so!**

He insisted that the man had a \$40,000.00 “chicken coop.” I said ”You have two choices. Either license the man’s airplane, or I will go around you and go through Engineering to get it licensed. He said “You can’t do that.” I said “**You hide and watch me do it.**” Very few people know of this route, but it had been shown to me by another Inspector, and we had done it once before.

I returned to my office and began piling up paper work and FAR references. “When the weight of the paper equals the weight of the plane, the plane is ready to license.” I showed up in the Lakeland branch office of Engineering, laid my paper work on the inspector’s desk, and told him that I wanted an Experimental A/W Certificate, “To show compliance”. He told me that the FSDO Inspector had called and told him not to license the plane for me! I replied that he did not work for FSDO, he was in Engineering, and I had paper work to support my request.

He started through 10 pages of paper work. When he finished them, he issued the Experimental Certificate. I had called the Factory and obtained a test flight sheet, over the phone, of course. On the day I called about getting a test flight sheet, the engineer said “sure.” The next morning he called back to explain why he could not send me one. I said that I understood - if he sent me one and I busted my back sides, some shady attorney might sue the factory. He agreed that such was the root of the problem.. Then he asked “Do you have a pencil handy?” I did - he read - and I wrote - a test flight

sheet! Factory people are real helpful, if you are willing to understand their problems and limitations! When I finished my test flights and adjustments, I went back to the Engineering office with another stack of 10 sheets, and requested a Standard Airworthiness Certificate. The Engineer said he had one problem. I asked what it was and he said “Your AD compliance sheet ends two months ago. Why is that?” I answered that was when I had started this mess. He told me to check out his AD listing while he reviewed the papers. While he was reading, I interrupted him with “Your AD list hasn’t been update in over 6 months.” He laughed and continued reading my paper work

When he finished the paper work, he pulled out his pad of Airworthiness Certificates and wrote me A Standard Airworthiness Certificate for the plane. He stood up and grinned and said “Grover, you really do know the FARs.” I told him other inspectors had helped me along the way. I knew what I had been taught by friendly and helpful people, including FAA Inspectors. He and I remained the best of friends until his death a few years ago.

Now as Paul Harvey is noted to say.”Now for the set of the story.” It was a couple of months later that I attended an IA renewal seminar over on the west coast. When I walked into the auditorium, one of the first people I spotted, clear across the auditorium, was the Inspector who told me that I could not get the plane licensed! Here he comes, and I figure I’m for trouble.

Something was wrong for he was **smiling!** He walked up and shook my hand and said, “Man, you really do know the Regulations, don’t you?” He also became a good friend. I wasn’t trying to “show him up”, I was doing what I knew the Regs allowed me to do, no more, and no less.

YOU CAN MAKE A FRIEND OUT OF SOMEONE WHO STARTS OUT AS AN ENEMY, IF YOU WALK SOFTLY, AND CARRY A BIG STICK.

36 HAVE YOU EVER TRIED TO OBTAIN A STC?

I have obtained several STCs, more Field Approvals than I have fingers and toes, and one PMA. FEW came easily. You have to know what you are talking about, know the Regulations, know how to write so you cannot be misunderstood or misinterpreted (see # 2) and you have to be willing to spend some time - the FAA will not “give” you anything, except a hard time.

And that may not be all bad. The lives of people depend upon these STCs, PMAs and Field Approvals. I belly ache about the delays like everyone else, but if I am right and want it, **I will get it!** I’ll relate what should have been a simple one, but turned into **a three year battle!**

I have several thousand hours in the old North American “Texan” T-6, SNJ series of trainers. I love the

old bird, but it is an old bird and old birds wear out. A friend asked me to work up a STC to allow changing the fuel selector valve from the T-6 unit to the one used in the Consolidate C-87, the cargo version of the B-24 Liberator bomber of WW II. **The C-87 was Type Certificated!** Which means that all parts that were used on it were FAA approved parts!

The T-6 fuel valve contains a cone shaped center unit made of cork materials. Cork does wear out, dry out, crack up, and fall into the fuels line causing engine failure due to fuel starvation. The C-87, on the other hand had a fuel selector unit which had cam actuated flapper valves which contained rubber seals which were easily changed.

I secured one of the fuel valves from a B-24/C-87 and began to make my plans and drawing for the installation. That paper work along with an Application for A STC was sent to the Atlanta Engineering office. I sat back and waited - then I got a letter which said "Your Engineer in charge of this project is MIZ-----,(her last name was hyphenated - she would not wear her husband's name alone), and she may be contacted at -----.

"MY aching back - I've got a woman engineer, and I'll bet that she does not know the prop from the rudder on an airplane." I called Atlanta, and a short conversation with my **Supervising Engineer** convinced me that my first impression had been right. She began

with what **she “wanted”** and I replied by stating what the **FARs required. (This was not my first STC.) So we began!**

It drug on, and on, and on, and on and I kept getting angrier. That woman could think up more **useless drivel** than you can imagine. As examples, she said *“You must **verify the fuel flow through these valves.**”* I stopped her and said “The engine(s) in the C-87 were 1200 hp. It was CAA certificated, so the valves met the following criteria - they had to flow twice the fuel required at max power in those 1200 hp engine. **Do you think the 600 hp P&W in the T-6 is going to burn more fuel than a 1200 hp Wright engine? Common sense alone will tell you that valve will flow at least double the Certification requirement of FAR 21.** You can’t reason with a woman - they “run” on emotions. Reason is some foreign country to them. (I’ve been **happily** married for 54 years so I have had a **little** experience in that realm too). I had to waste my time running fuel flow tests in order to satisfy her.

Then she complained that I had no factory drawing for the construction of that valve. I told her that I didn’t **need any construction drawing** of the valve! *“How are you going to maintain it without construction drawing of it?”* I don’t intend to **build** the valves, There are literally thousands of them out there. I will simply replace the rubber seals if they go bad. *“Oh, but you can’t do that.”* What do you mean “I can’t do that”? I am a licensed mechanic and I rebuild fuel valves any

time I want to do so. Never the less, I had to “reverse engineer” the valves - disassemble one and mike and draw every piece of that valve. **Sheer stupidity** just because she stood between me and the STC I wanted, even if she didn’t know up from down. That also went on for months.

Finally, after some two and a half years, she said *“I’m sure that you’ll be glad to know that I’m taking some mechanic courses.”* I said “Don’t get your hands dirty.” ***“Oh no, you don’t under stand. I’m finding out that you can do what you’ve been telling me you could do as a mechanic!”***

That really ripped it! I’ve been held up for two and a half years by someone else’s ignorance (which I already knew) but now they were admitting it! Totally unnecessary paper work went back and forth for close to another six months and **I finally had enough of it.** I got on the phone to the FAA in Washington and had a conversation with the Chief of the Engineering section up there.

The next day I got a call from the Chief of the Engineering division up in Atlanta. We had conversed on other projects so he knew who I was, and I knew who he was. *“Grover, you probably think what goes on up here is a lot of Bureaucratic B ---- S -----.”* I answered “You used the terminology, I didn’t, but YES, **that is exactly what I think!**” He replied *“Well you’re right - it is a bunch of Bureaucratic B----S—, but down where*

you are, the name of the game is CYA, and up here the name of the game is CYA too.” If we don’t know, we don’t sign off on a project.”

I answered “I don’t want to hear that trash. You are an Engineer and **you are paid to know**. If you don’t know, you can find out. I know if communications ceases for over 60 days on a project, you “file 13” it. I have given almost that much time every time I have made an inquiry as to the status of the project. No More! From now on I’m going to become your worst nightmare - I’m going to on this phone ever time you turn around until I get my STC. I’m tired of this crap.”

Two weeks later I had my STC in my hot little hand! I made the first installation and called the Engineering Branch Office in Lakeland for an inspection and permission to test hop the plane. The Inspector looked the installation over and commented on how simple it was. I told him it took me about 4 hours to install the first one, but could probably do the second in about half that time. I then asked him why approval for such a project took so long. He said ”That is the way The FAA gets rig of people they don’t want to fool with - **and then they run into hard heads like you - and you get your STC!**” He then quit joking and said **much of the delay was caused by Engineers just like I got. They simply did not know what they were doing and would stall, and drag out a project until an applicant finally just gave up.**

If I have “dotted all the I’s and cross all the T’s”, I will not give up, I don’t care how high up the ladder I have to go to get what I have a right to have. Many in the CAA, and later the FAA, have gone out of their way to help me learn, and I would be less than a man if I failed to return the favor - but - I was willing to learn. When I am asked for help or information, I gladly provide it, but when I run into a brick wall, I start looking for either a stick of dynamite, or a bull dozer!

37. “LAWYER’ED” OUT OF BUSINESS

I received a call yesterday from a friend who runs an FAA Approved Crankshaft overhaul shop. **He is closing down due to harassment by attorneys! The industry is losing a good man, and a well equipped shop.** He is getting out of aviation! I am aware of two cases in which he has been sued - totally without just cause!.

A few years ago he called me for advise on a suit he was facing. He had overhauled a crankshaft (x-rayed, ground, etc). Part of that process required removal of the races from the counter weight flanges where the pins are located which hold the counter weights to the flanges **The removal of these insert races is required, both by the overhaul manual and the FAA Approved Shop Manual for his shop.**

He did his job correctly - by the book - and, of major importance, his billing showed that the insert races had been removed during his shop procedures.

(Remember - **do your paperwork! And keep records!**)

The crankshaft was returned to a large out-of-state FBO. The flange inserts were placed in a bag which was then tied to the crankshaft when it was returned to the shop which sent it to him. The billing showed that they had been removed, and shipped back **without their being reinstalled** in the crankshaft flanges. They had their mechanic complete the “major” overhaul of the 0-540 engine. The engine was test run and released for service. They returned the plane to it’s owner as “Major Overhauled”.

After a very short local hop, the owner set out on a fairly long cross country business trip. Needless to say, en route the engine began to shell out. The owner landed at the nearest airport and asked that FBO to see what was wrong with the engine. They, of course, found “bunches of metal” in the screen and, with the owner’s permission, began a tear down of the engine. It didn’t take long to determine that the counter weights, without the bearing pin inserts, had torn up all kinds of stuff in the case.

The owner went after the overhaul shop - they went back on the mechanic who assembled the engine and he went after the crankshaft overhaul shop. The owner of the crankshaft shop, after spending a bunch of money with an attorney who knew nothing about engines, finally called me.

First, I looked at his billing and his work sheet. Both clearly indicated that he had removed the flange inserts in order to properly perform his work. Then I checked his FAA Approved Shop manual and found that he was required, by law, to remove those inserts from the crankshaft flanges. Then I checked the Lycoming Overhaul Manual for the 0-540 engine and found that it had the same requirement. To be properly “inspected”, all data **required** the removal of those flange inserts.

He performed his work as required by all Approved Data. He had notified the people who sent him the crankshaft, in writing, that he had removed the flanges. (Billing Form and Work sheet) He returned the flanges, in a small bag which was attached to the crankshaft in such a manner that the bag had to be removed by the mechanic before starting the re-assembly of the engine.

Then I began a study of the overhaul manual itself. If the mechanic had used the manual, he would have found that **he was required, as part of his overhaul duties, to ascertain that those inserts were reinstalled in the flanges!**

I simply sat down and wrote a letter to the Attorney who was threatening suit against the crankshaft shop owner. In it, I pointed out (a) The Lycoming overhaul Manual **required the removal** of those inserts as part of the Crankshaft Shop “Inspection” procedures (b) The FAA Approved Manual for that shop also

required the removal of those inserts to be able to do the “Inspection” correctly (c) **Neither of these books required the Crankshaft Overhaul Shop to reinstall those inserts** as part it’s duties connected with the “Inspection & Certification” it performed.

(d) The “paper work” - Billing Form and Work Sheet - which accompanied this crankshaft on it’s return, **both clearly listed** the removal of those inserts by the shop - but **no where** indicated their reinstallation by that same shop (e) The **removed inserts were sacked and attached to the crankshaft** upon it’s return from the crankshaft shop (f) **The factory overhaul manual clearly indicated that the mechanic who assembled the engine was to, as part of his overhaul duties, ascertain both the installation and condition of those inserts as part of his installation process of the counterweights on the flanges while performing his overhaul of the engine!** (g) Obviously, the mechanic did not perform his work by the overhaul manual, as is required by the FARs (Federal Law)

I then advised the attorney that should he see fit to carry this matter to court, I would make a fool out of him by showing that he obviously did not know what he was talking about to start with, and that once informed as to the Federal Law as pertains to overhaul procedures and duties, he was not willing to abide by law. He was looking for “deep pockets”, the insurance company who insured the crankshaft shop. I would deny him those deep pockets by showing what the law required of my

client, and then would go after his clients's mechanic certificate by filing a complaint with the FAA - a complaint which I could easily **document**.

The charges against the crankshaft shop were dropped immediately! But, he had already spent a ton of money for attorney fees, before he called me.

I should point out, again, that the average mechanic has absolutely no knowledge as to how to go about defending himself **even when he knows he is right!** Most people are "afraid" (cowered) by an FAA Inspector and / or an attorney, (or a police officer) **even if they know they are right.** It is a sad, but incontestable fact that many Inspectors and Attorneys will twist the facts, or "(mis)interpret" the law in an attempt to get what they want. Let me stress again, **not all Inspectors and / or attorneys are either ignorant, or dishonest,** but far too many are for you to expect a "fair shake" if one of them sees fit to go after you!

Also, if you have to defend yourself, either in court or before the FAA, you cannot depend on your attorney to defend you properly. **He does not know the FARs.** Your only defense is either what **you** know of the FARs, or in hiring some "**consultant**" like myself who is experienced in such matters. You have to be able "think like an attorney" to function in the court system. If you are before the FAA, you simply have to **KNOW** the FARs and refuse to let anyone "becloud" the issue. One of the first things I learned in studying debating on college was that a person must stay "focused". That is

certainly true when fighting either an attorney or the FAA.

38. THE STRAW THAT BROKE THE CAMEL'S BACK

Then, the crankshaft shop owner was notified a year or so that he was going to be sued over some internal engine parts he had checked 600 flight hours before - rods, a cam shaft or something. The parts were supposedly shipped by the FAA (for analysis) by a large well known shipping company - and lost! After about a year, no trace of them has been found, yet he is being hounded by an attorney. He is folding because he constantly worries about what "might" happen, and it is effecting his health. It would not take much longer than about 30 seconds to tell that attorney of a hot place that could use his services! Some people had rather change than fight for their rights. I guess I've got too much Texan in me to put up with that kind of stuff. If I'm right, I'll "spit in the devil's eye" before I will fold up for anyone. Time limit has run out on this one, but the attorney continued to harass him..

I'll tell you about two more "cases" and then likely figure that this job is done - I have shown you can fight back and win!

39. **WHAT CAN YOU BE HELD ACCOUNTABLE FOR ON AN ANNUAL??**

This one involves the FAA again. And, it involves the Inspector who told me that the 210 we wanted licensed was a “\$40,000.00 chicken coop.” (#36, above)

I was the FAA District Office one day on some kind of business. This Inspector showed me some pictures of the inside of a Cessna 172 wing. A couple of ribs, forward of the front spar and about half way outboard from the lift strut, were **badly** corroded. In fact, they were so badly corroded that some of the metal was simply eaten away. From the pictures, It was evident that the leading edge had been drilled off for some reason. There was no corroded metal evident on the leading edge skin, but the ribs were definitely unairworthy.

The Inspector said I’m going to file against that man’s mechanic license. I asked what the charge would be. He said the plane had been exported to England and the mechanic signed off an Annual just before it was exported. (At least a year and a half, or two years earlier) Since the plane was unairworthy, he was going after the mechanic’s license.

When I saw the N number of the plane, and the name of the mechanic who signed off the Annual, I was “full speed” on the case because **I was the DAR** who had issued the Export Certificate of Airworthiness “at least” a year earlier! I told the Inspector that he didn’t have a leg to stand on to file on the IA. He said “I’d file on anybody who licensed a plane like that.”

I asked him when did the FAA began to issue “x-ray vision” with a mechanic’s license. *What do you mean?* **I mean that you nor no one else could see that corrosion until after the wing was disassembled.** Nobody can be held responsible for what he cannot see! Might just as well file on him for some internal engine failure which had given no visible evidence of impending failure. What I cannot see, the FAA cannot hold me responsible for! I challenged him to show any means, short of disassembling the wing, by which that corrosion could have ben found! **He could not. He dropped the matter right then.** All he needed to do was just a little “thinking”!

I mentioned earlier that I had testified in at least one case which was tried under English rules. That was the case. It was tried in the U. S., but with the stipulation that the loser would pay all costs. I challenged the other attorney to show **any means** by which the mechanic could have determined the condition of those ribs, short of disassembly of the wing, and **he could not. The jury found for the mechanic. It could not find otherwise.**

It turned out that the wing had been disassembled following some taxi damage in England. Until then, nobody had any reason to suspect corrosion of that magnitude in the wing. Again, had I not challenged both the FAA and the attorney to demonstrate any method by which the mechanic could have found the corrosion, he would have been in trouble. **By the law, (FARs) he is not responsible for what he cannot see!** Something like that should be so obvious that anyone should have thought of it, but until I challenged them, the “machinery” was set to grind up another Mechanic.

Did you ever try to get something out of the FAA, and get nothing but “ignored”? I don’t like being ignored, and I don’t like “No”!

Before we get into battles over ferry permits, let me point out that ferry permits normally are issued when an aircraft is “out” of Annual Inspection dates, is damaged, or does not meet the definition of “Airworthy” - i.e. “Conforms to it’s Type Certificate Data Sheet, or it’s properly altered condition, and is in a condition safe for flight.” If for **any** reason, an airplane does not meet this definition, it’s Standard Airworthiness Certificate is **void** until those conditions are again met. Such being the case, an airplane may not be “operated” in U. S. airspace unless a Special Airworthiness Certificate is issued - A Ferry Permit.

It is normal for several restrictions to be place on

such a permit - such as - Day VFR only, Necessary crew members only, and such other restrictions as the FAA may see fit to impose for safety considerations.

Some FAA Inspectors mistakenly think their job is to say “NO” to what ever you want. That is not the case, as will be shown. Let’s talk a awhile about securing Ferry Permits. There was a time when the FAA Inspector was the one who signed a Ferry Permit - he was the one who took responsibility for the “safe to fly” certification of the airplane for the ferry flight. Such is no longer the case. Any mechanic can certify the plane as “safe for the intended flight, under the specified conditions as may be imposed by the FAA” on the Ferry Permit.

If I see fit to sign my IA to a ferry permit application, you can bet that I am **very** certain the plane can make the intended flight! I make that decision based upon having been an **active** licensed mechanic since 1947. During that time, I have been deeply involved in structural repairs, modifications and such like. I pretty well know airframe structures and engines! I am not happy when someone who was not even born when I received my license questions my decision as to whether or not a plane will fly.

Also, when I sign a ferry permit application, I normally am the cat who is going to be setting behind the controls on that fight. With more than 21,000 hours, (most of it in types which are highly demanding - over

9,000 hours instructing in military planes, including over 1,000 in military jets; plus many more in civilian planes; several thousand crop dusting, banner tow, and similar flying; several hundred on the gages), and having flown close to 200 different types of airplanes, I feel more qualified to determine if a plane can be handled in it's present condition than most FAA Inspectors. **If I do not intend to be the PIC, you can “bet your sox” the plane is “safe to fly.”**

All of which boils down to “I don't like hearing “NO” when I ask for a ferry permit! Le's look at a few examples.

40. JUST CAUSE FOR “NO FERRY PERMIT”?

I received a call from a gentleman on the east coast of Fla. He related the following information. A Cessna 421 had been sold by it's Brazilian owner to a man in the U. S. For some reason, the Brazilian counterpart of our FAA refused to cancel the Brazilian registry. Such being the case, it could not be registered in the U. S. until this was corrected. The purchaser finally got tired of being stonewalled, so he sold it to the man who called me. The plane had been parked for months and was being cannibalized! The present owner had applied for a ferry permit and had been refused. He wanted me to get the permit for him.

I called the FAA office and talked with the Inspector who had refused to issue the Ferry Permit. His "excuse" was that the plane was under foreign registry and he could not therefore issue such a permit. I told him that was baloney! He could issue a Ferry Permit for any plane in this district, regardless of where it was registered! He adamantly refused to discuss the matter.

I immediately got on the phone to the FAA in Washington. A couple of hours later the owner called me and said **he had his ferry permit, and it was signed by the Inspector who had said "NO"!**

For some reason that is unimportant to this story, the next day I made a call to the FAA office and that same Inspector answered the phone. He asked me who that man on the east coast knew in Washington! It told

him that I had no idea who he might know in Washington, but the fact that he was a winner of the Congressional Medal Of Honor and that might have something to do with whom he knew! I never did tell him that I was responsible for the call to Washington. It was none of his business who had made the call. He just needed to be straightened out.

When I explained the situation to the FAA Inspector in Washington, his answer was “Mr. Summers, **those regulations were not written to tell you No! They were written to tell you how to get something done.**” I told him that I was in perfect agreement with him, but he had a local Inspector who needed that explained to him. **I guess he got the explanation!**

41. **MORE FERRY PERMIT PROBLEMS**

A local FBO called me one day and said he was having trouble getting a Ferry Permit to return a 150 Cessna which a student had damaged up in Gainesville, Fl. His mechanic got a cold shoulder - and a list as long as your arm as to what would **have to be** done before the permit would be issued. I looked at the list and blew my stacks. Then I climbed in a plane and flew up to examine the bird. It had minor right wing tip damage and that was about it.

The Inspector was all bent out of shape because the plane had a 500x15x5 tire (as I remember) and wheel on the front where it should have had a 600x6. That smaller donut tire had been installed on earlier 150, so the

plane would fly with it. The FBO had installed it while waiting for a new 600x6 to be delivered. He did not want to lose a flight in the meantime. Whether the tire and wheel was “legal” or not was not at question, in so far as a ferry permit was concerned.

After looking the plane over, I called the FAA Inspector who had refused the ferry permit and requested a permit. He said “NO” and began to harangue me as to what I was **going to do** to get one. I told him “No, if I do what you say, I wont need a ferry permit - the plane will be “Airworthy.” He was adamant so I hung up - **and called Washington!** Two hours later **he** was on the phone wanting to know where I wanted that permit sent! I got my ferry permit and brought the plane home for repairs.

42. AND STILL MORE FERRY PERMIT PROBLEMS

A man called me from the west coast of Fla. and told me that he had just purchased a Bonanza over on the west coast. He wanted it brought to Winter Haven for an Annual, and wanted to know how to go about securing a ferry permit. Here we go again!

It seemed that this plane had been moved up from the lower west coast some 8-10 years previously. It was ferried up - for an Annual, which was not performed. Then about 4 years before this man bought it, it had been moved on another ferry permit to it’s present location -

again for an Annual -which again was not performed! I told him how to apply for the permit.

He called back the next day and said he had been refused the permit on two grounds. (1) He was not the registered owner of the plane in Ok City. (It takes the FAA months to do paper work) and (2) the plane had already had two ferry permits to secure Annuals and had not been through an Annual for the last 10-12 years. I told him to show the FAA his Bill-of-Sale and the pink copy of the Application for Registration. He did, and got a NO again! Could I help him?

So I'm back on the phone again to the FAA. I got a lady Inspector who flatly refused to issue the permit. She said the plane would be Annualized **where it sat**, or it would not move. I informed her that her decision amounted to a restraint of fair trade, which is against federal law. I had been asked to perform the Annual, and I could not work on the field where I was not a FBO!

Then she said it had already had two ferry permits issued to the previous owner and she would not issue another. **I told her that I was faxing her a copy of a letter which appointed me to work as the representative of the present owner, and I as applying for a ferry permit!** She had no reason to reject my request, but her answer remained "NO"!

I immediately wrote and faxed a letter to her

office to the effect that I would have a ferry permit in my hands within the hour, or I would be on the phone to Washington! Within less than 30 minutes, one of the men in that office who knew me (see story 5 previously) was on the phone and the conversation went something like this “Grover, this is -----.” Yes sir, how are you today? “I’m OK. **Stay off that d-----ed phone. You will have your ferry permit faxed over in a few minutes!**” I got the permit!

Incidents much like these could go on for a long time, but I think you get the idea! IF you are right, don’t take no for an answer!

A few years ago I became involved in **Balloon** recertification - Annuals, Major Repairs, Certification after Import of Experimental Balloons, etc. (Man, the things one gets involved in when he gets a “reputation”)

43 WE WONT LICENSE IT? SURE YOU WILL!

I have secured several Field Approvals for Major Repairs on Balloons (use of fabric of specs “Equal to or better than” the original fabric, after the original manufacturer went out of business) and have secured the

Certification of a few Experimental balloons imported from Brazil. This last story will have to do with one such incident.

I received a call from AirSports Intl. Inc. of Orlando, Fl. asking if I might be of assistance to a man who lived in Atlanta, Ga. He had import an Experimental Balloon from Brazil and was unable to get it Certified. He had been trying for more than 90 days, but kept getting shuffled from one part of the agency to another for all that time. He had a \$9,000.00 exhibition contract in Canada and would lose it if he could not get the bird certified within the next week.

I called the owner (even though he is out of our FAA district) and got the following story.

He had the hard copy of the Registration Certificate in his hand - a requirement for Import Certification. He carried that to the FAA Engineering Section in Atl. (Hdqtrs. For the SE Region) and they sent him to the local FSDO. The local FSDO said “We **don’t know “nothing”** about Balloons - go somewhere else!” He had been everywhere anyone would suggest - and still had an unlicensed balloon on his hands - and an expiring \$9,000.00 exhibition contract! He was desperate.

I told him that I would see what I could do. I called the local FSDO and was told that Engineering would have to handle the Original Certification. I called Engineering and was told that (1) the balloon was out of their district and they would have to have specific

authorization from Atlanta (where the balloon owner lived) to do the job, and (2) it would be at least 6 months before they could get to it, even if authorized to do the job! Now I “ain’t” happy? (Did you ever hear “**We’re from the FAA and we’re not happy until you’re not happy!**”? Or is that just a local joke?) Well, I wasn’t happy - it was “no skin off of my nose”, but that is no way to be treated!

I’m sure you now the next sentenced by now - I’m back on the phone again! My first call was to the FSDO Office Manager in Atlanta. I secured from Him permission for our local FSDO to handle the job, if they would. I got him to call and tell the local FSDO Office that. Then I got a call from a local FSDO Inspector (Mike Chicanowski) who agreed to do the job.. Then I called the owner and told him that I could get the job done, if he would get the balloon to Orlando on a certain date and at a certain time! **He got the balloon there on time and we got the job done. Mike reminded me (in a kidding way) that this was a “favor”, and I totally agreed with him - it was not his job to handle work for another district. Some of those FAA Inspectors are OK!**

44. **WHO “OWNS” THIS AIRPLANE???**

How would you handle a fight over who owns an airplane? Do you think your Registration Certificate proves that you legally own the airplane?

An FAA Inspector opened my eyes one day when he pointed to an airplane and said “If I thought the owner of that plane was hauling dope, or engaged in some other illegal activity, so that he would be afraid to take me to court, I could just pick up an FAA Bill of Sale, enter my name as purchaser and forge his signature at the bottom, and the plane would be mine!” I said “Do you mean to tell me that Ok City does not check handwriting?” He said “Read the Registration Certificate!”

It plainly says in heavy print on that certificate “This certificate is issued to the person who provides the FAA with the best proof that he is the owner, or lessee, of this aircraft and **may not be used in any court of law as proof of ownership when the ownership is being contested.**” (I do not have one of the certificates at hand at this moment, but the wording is similar to, if not exactly as given here.)

Many years ago, I saw an advertisement in a local paper “Aero Commander 520 for sale, Price \$9,500.00”, and gave a phone number. At first I started to ignore the ad, thinking it was a misprint. Then I made the call and the price was \$9,500.00! I immediately became most interested! The call disclosed that the right engine had swallowed a valve . That did not worry me since I am a licensed mechanic. I checked the oil screen and found no metal contamination. I found a jug, piston, rings and seals at a good price, and headed to my friendly banker!

I got a **notarized** Bill-of-Sale on an FAA Form,

and a copy of the sales contract where the purchaser had bought the plane down in Miami. The sales contract showed a balance of \$500.00 still due on the purchase, but the bill-of-sale was dated at a later date, indicating that the purchase had been completed. All paper work checked out in Ok City - so I bought the plane. I went to Orlando where the plane was based; paid the storage fees and repaired the plane for flight. When I got ready to move it, the FBO would not let me move it. He claimed that some doctor in Tennessee had notified him that the plane belonged to him!

I had signed the paper work at the bank on Friday and airmailed all paper work to Ok. City. Before our paper work got there, some dealer in Tennessee had flown to Ok City with a bill of sale signed by the man in Miami, and dated the same day mine was signed! I got hold of the dealer and he told me that the plane actually was owned by some doctor up there, but he had handled the paper work for him! I immediately smelled a skunk in the woodpile - and said so!

The doctor told me that he and the man from whom I had purchased the plane were partners in some deal, and the man who sold me the plane owed him money. The sales contract disclosed that the Miami man was holding an auto pilot until he received the last \$500.00. The Tennessee doctor was aware of this and flew to Miami the same day I bought the plane (so he said), paid off the \$500.00 and got the bill-of-sale. He said he intended to use that to get his money from the

man who sold the plane to me. Like I said, this smelled to me so I got on the phone to the man in Miami and he verified what the doctor had told me.

The Tennessee doctor said he did not want “my” airplane, but was going to hold the bill-of-sale until he got “his” money! I told him that was extortion and he just laughed at me. I began to smell another skunk - he was in cahoots with the man who sold me the plane at the cheap price, and now they intended to get more money for the plane after I had repaired it!

I got in touch with the original owner down in Miami and he verified the who story as it had been told to me: Mr “A”, who sold me the plane, had indeed purchased the plane from him at a much higher price than he received from me: Mr “B” (the Tennessee doctor) had flown to Miami the day before I closed my deal with Mr A, and he paid the \$500.00 due on the autopilot. He represented himself to the original owner as Mr A’s partner and got the actual bill-of-sale from the original owner. The Sales contract letter which I had was original and bore th sellers signature. **The notarized bill-of-sale bore a forged signature!**

We communicated back and forth for several months - he did not want to “get involved” in my trouble. I finally told him that I as going to file suit against everyone involved in the case, **including him**. if he did not give me written confirmation of the facts in the matter, as given above. Even if you are innocent, legal

fees are bad news - so he sent me a notarized statement giving full details of his sale to Mr. A, along with details as to how Mr. B got involved with the actual bill-of sale which actually had his signature on it. **That gave me what I wanted.**

I got on the phone to the State Attorney General's officer in Tampa and told him the whole story about the **Notarized forged bill-of-sale.** He listened quietly until I finished my story on the results of my 6 months of investigation. His first words were "You get me that documentation and I'll have the man who sold you the plane, the notary who notarized the forged signature, the doctor in Tennessee, and the Dealer who set this deal up for them, all in Federal custody before sundown tomorrow night!" "Do you mind if I quote you, and give them your phone number?" "Not all - be my guest."

I called the Doctor who had been laughing at me and told him to make a call to the States Attorney representative in Tampa,. **Fl. if he had any doubt as to what I was going to do if I did not have the papers on my desk by noon the following day!** Within an hour, his attorney was on the phone threatening me with a law suit! I said "On what charges?" He answered "You can't make a Federal suit out of a Civil matter."

My answer to that attorney was "Let me tell you something, 'Clarence Darrow'. I am not recording this conversation and you can't without my permission, which

you don't have - so what I'm about to tell you can't be brought up in court. You Kiss My A----. Your client is acting on your advise so **I will have the States Attorney General's office go after you also if I don't have that paper work on my desk by noon tomorrow!**" Fed Ex delivered the paper work by about 11:30 the next day and my troubles were over - **I Thought!**

I went to Orlando to get my 520, and the same FBO who had interfered originally again refused to let me move the plane! I drove back home absolutely livid with anger. By the time I got home, I had devised my next move. I called back to Orlando and his secretary told me he had gone fishing for the weekend and would not be available until Monday morning. I told her that she had better contact him because I was going to enter suit against him personally, and the FBO that he managed, if I did not have a release on that plane by Monday noon!

He called me Monday morning and began to tell me how many people claimed to be the owner of that airplane, and that he was not going to let it move. I told him that he was renting ramp space and **had absolutely no legal right** to become involved in a fight over who owned a plane that happened to be parked on his ramp! I told him "**That plane will be released by noon, or else!**"

In a few minutes I get a call from his attorney, and after a suitable discourse between us, he finally told me that I could pick up my plane - but - his client had a

large storage bill against it and I would have to pay that bill before I could move the plane! I reminded him that I had paid all storage bills due as of the date I completed work on the plane. Any storage bills which had accumulated since that date were the result of his client's illegal interference in a matter which was none of his business, coupled with his illegal seizure of my airplane! I informed him of a dark place where he could deposit that bill! I further told him that I was angry enough to take his clients' whole FBO from him, and I would also report him (the attorney) to the State Bar Assn.!

Even if they are right (and he was not - he was attempting to scare me with the fact that he was an attorney), attorneys do not like to have letters about them going to the State Bar Assn.! When you get into a cat fight, be sure you got the most cats! Within 30 minutes, he called back and told me to pick up my airplane, immediately!

I later sold the Commander for \$25,000.00, but that leads to a few more funny stories that I'll cover in another book that I am writing. **(59, And Counting)**

SOME THINGS NEVER CEASE – HA!

**45. DOES IT MEET IT'S TYPE CERTIFICATE
DATA SHEET?? (TC)**

This one is too funny to leave out. Just yesterday, I got a call from Roy Dawson (# 13). He asked me if I were familiar with a certain prominent Radio (720 Channel nav/com). He was particularly concerned over the slide type switches at the top of the unit. He told me that they were no longer available. I asked him if he meant that the company who built the radio no longer supplied them, or if he really meant they were no longer available - period! He said "No longer available - period. They just can't be gotten anywhere - they are not made any longer, by anyone!" I guess that is positive enough to begin the discussions!

He then told me that he was modifying one of the radios by installing toggle switches in place of the slide switches. That required a slight modification of the face of the radio, but the radio works perfectly normally with the new switches installed. He asked if he would have to fill out any paper work if he made such a change to the radio.

I explained that the radio no longer met it's "certified" (factory made) condition with the new switches, but I could foresee no major problems in securing approval for the change. I suggested at least two routes to follow. Then Roy owned up to the fact that the FAA had just left his facility! The Inspector told him that he would have to secure approval, and began to explain just who all might get involved, how complicated things could get, etc - etc.

Roy interrupted with "Do you know Grover?" He said the Inspector answered with "Do YOU know Grover?" Roy said, Yes, he and I are good fiends." Roy said the Inspector's whole approach changed and he said "Get Grover to do it for you! He knows how to handle this paper work." I told Roy the approach I'd use - and it is not securing an STC! Roy listened and said we'd get together in a week or so to handle the deal.

I told Roy, in the meantime, get me the voltage and current ratings of both the old and new switches. From there on, I'll handle the FAA paper work! A STC

would be involve Engineering, and could get far too difficult - not because the change is more or less complex, but because we'd have to have someone in Engineering who understood electricity and electrical circuitry!

I'm going after a "Field Approval" with multiple use authorization. Roy will not be able to sell the information as he would with a STC, but he can make multiple repairs himself as the mechanic who holds the Multiple Installation Field Approval. Until he gets here, my nose will be in the FARs, AC-43.13-2, and some circuitry study. What I don't know about radios, Roy does! **Does anyone care to place a bet as to whether or not we get the approval for the switch changes?**

46. MORE TC QUESTIONS

I was called in by a FBO for an Annual Inspection on an older 172 Cessna - the type that came out of the factory with a pull starter. He had his own mechanic perform a 100 Hr. Inspection, which I observed, so all I really had to do was check Conformity, ADs, etc in order to sign off the Inspection. The first thing I noted was a key switch starter system. Could I sign the plane off as "Airworthy"? Absolutely not! It did not meet it's TC Data sheet - it did not come out of the factory with that starter system - so I had to fill out a Form 337 for a "Major Alteration." By showing that this was a factory mod, I did not have to secure a "Field Approval" for the Form 337.

Every day, there are many mods and improved parts coming out for the older airplanes. Even though such items may be better than factory original, and though factory new parts may not be available, you must secure FAA approval before you can install such items on your airplane or engine. Otherwise, the plane does not meet its' "TC Data Sheet Specs", or it's "properly altered" condition, and is therefore "unairworthy" (I heard of one man who was 'violated' because his door handle was not 'factory issue'.)

47. **ONE LAST ILLUSTRATION**

I picked up a '60 model 172 some 14 years ago following a minor incident involving a fence - had to re-skin the lower outboard section of the right wing. Some time after picking up the plane, a cam follower failed and I "majored" the engine. We put some 400 hours on it, but it just continually ran too hot to suit me. Of course, the central Fla. weather does not help an engine run cool. After some 400 hours, I topped the engine just to see if ring blow-by were the problem. It continue to run hot and I could find no reason for the problem.

Recently while discussing this with a friend who

also does a lot of rebuilding, he said “Grover, look at the lip on the bottom of your engine cowl. You will probably find a lip of ½ to ¾ of an inch in width. If so, extend that to about 1 ½” and your problem will likely go away.” Well, I have been in aviation for some 60 years and I understood where he was going - if the lip were insufficient in depth, the air coming along the bottom of the cowl will curl back up into the cowling and not let the hot air out! A hot running engine is the natural result. But this was a factory cowl. To the books I go, and found that the cowl lip form ‘56 (when the airplane first came on the market) to ‘60 was a certain part number - and the parts book picture showed a short lip. Beginning in ‘61, the book showed a different part number for this lip, and it was indeed longer! I got out my tools and fabricated and installed an extension on that lip - to a full width of 1 ½" - and took off for a test flight. The temperature, for the first time in the 14 years that I have owned this airplane, was acceptable to me. It dropped not less than 30 degrees!

I asked an FAA Inspector “Where do we go from here?” I know that this mod was first made by the factory (and they do not make mods unless there is a problem to be corrected), and it truly was a **minor mod in every sense of the word**. See FAR 1 for the legal Definition of a Major Mod or Major Alteration. He said “Grover, a few years ago, this was a “do it and forget it” type thing, but with today’s FAA, you will most likely need a Field Approval!” That is just how ridiculous the FAA has become in interpreting the rules. And, he

admitted it is due to a total lack of field experience by the men who now are our “Inspectors”.

By the way, without digging out FAR 1 at this time, as I remember, it basically says that for a mod or alteration to be classified as “Major”, “it must effect either the structural integrity of the airplane, or it’s flight characteristics”. Also, FAR 43, in Appendix A (as I remember) lists certain mods and alterations that are “major”. An extended cowl lip is not on the lip, nor does it meet the legal definition as given in FAR 1. **BY THE BOOK!!!**

Just in case the message has not been received yet, an attorney, or Government “Official” has the idea that you are supposed to be covered by “who they are!” NUTS - they put their pants on just like you do, breathe the same air, eat the same food, and are not the possessors of all knowledge! You Can Fight Back and Win!

Well, I set out to show you that **you can fight back and win** - whether in court, or with the FAA - **if you know what you are doing!** This could go on for many other stories in which I have been personally involved, but these cover some 47 incidents, with a wide enough range of problems, to show what is possible. I hope this has been of benefit to you.

I’m sure that a little thought would bring back several more such cases, but these covert a wide range

and show what can be done.

I ENJOY THIS TYPE OF WORK! Keeps the head-bone flexible!

Would you believe that after all the racket I've raised, the FAA awarded me the Charlie Taylor Master Mechanic Award - the highest award they give to a mechanic? Sho' 'nuff! And, that Inspector I mention for whose abilities I have absolutely no respect made the statement that "Grover knows more about the Regs than any other mechanic I ever met? Sho' nuff! **You can fight back and win - if You know what you're talking about.**

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