EAA OTTAWA 245

NEWSLETTER

Carb Heat

Hot Air and Flying Rumours

Published by EAA Chapter 245 (Ottawa) P.O. Box 8412 Main Terminal, Ottawa, Ontario, Canada, K1G 3H8

FEBRUARY 1989

NEXT MEETING-NRC 100 Sussex Drive.
17 February 7:30 PM

TOPIC Show and Tell; Lars Eif and his Skybolt wing Update;Gord Standing's Flybaby.

Upcoming topics

March- Emanuel Camilleri,AME,Flight Engineer and Instructor at the Ottawa Flying Club will discuss and answer your questions on Aero Engines.

April-Behind the scenes at the National Aviation Museum. See the restoration shop and the storeage area.

MINUTES OF THE MEETING OF JANUARY 20, 1989

First of all, I would like to congratulate Lars Eif on the excellent minutes of our last meeting. My wife got so engrossed in savouring his witty, incisive, and comprehensive coverage that she nearly burned my supper. Worse still, she now expects me to carry on in the same vein. Thanks Lars!

Like Leacock's Mariposa Belle, our 7 for 7:30 meeting got underway at 8:07. After welcoming people to the first meeting of the new year, Doug promptly clarified the confusion over the topic. The "dim-lighting" of the topic in the newsletter was neither a decoding challenge nor an advertising gimmick. It was supposed to indicate that our guest speaker had cancelled--after the newsletter had gone to press. Garry Palmer, however, graciously agreed to pinchhit with an update on his Lancair project and a promo video on the plane. The talk on auto-conversion will be re-scheduled.

On a less pleasant note and to prevent the spread of hearsay, Doug announced the unfortunate crash landing of Alex Fulton's **Starlite.** The plane was destroyed, but luckily the pilot, Wolfgang Weichert, survived with only lower back injuries and minor cuts and bruises. The accident is currently under investigation.

At this point, the president retroactively welcomed our **guests: Robert Patry, Terry Harrison, Brian Berrigan, and Kevin Ford.**

*** MODE C *** MODE C *** MODE C *** MODE C ***

As announced in the Dec. '88 AIP and Jan. '89 COPA publications, plans are afoot to implement **Mode C** (altitude encoding transponders) in certain revised airspaces. In its current form, the proposal **would keep planes without Mode C outside a 10 NM radius of a radar serviced TCA** and **would restrict them to a maximum height of 2,200' AAE** (above airport elevation) **while 10- 20 NM from the centre of a such a TCA.** You will, of course, **still have to maintain 1,000' clearance above the highest obstacle in a "settled" area.** Once you have zig-zagged your way 20 NM from the TCA, you will be permitted (if you have enough gas) to climb to 6,000' AAE. (Obstacle avoidance will take on a whole new meaning for negative Mode C types!) As well as taxing our flying skills (or wallets), the scheme presents a **major problem** for those (like me) who persist in flying pre-historic **machines with no electrics** or those with **critically weight-sensitive homebuilts.** I am not aware of any "grandfather" clauses or exemptions, and perhaps this is one area where we could **request**

modification or further study. Mode C may be inevitable, but let's try to make it as acceptable as possible. Our protests will probably not thwart the government's plans, but **our silence (read apathy) will guarantee the unopposed implementation of Mode C on the scale presently contemplated.** So, drop your ploughshares (the ground's frozen anyway), and pick up your pens to do battle once more! **Massive opposition to similar proposals in the U.S. recently forced the government to reduce greatly the scope of their original plan.** We can be **similarly successful in Canada** but **only if we protest vigorously and quickly.** The **DEADLINE** for responding to these proposals is **March 15, 1989. DO IT NOW!**
ADDRESS: Barry D. Blair, Director General, Air Navigation System, Transport Canada, Tower C, Place de Ville, Room 846, K1A 0N8 (613-990-3896).

Turning to a success story, Doug Richardson bashfully confessed how he let the **hangar project** get completely out of hand. The original intention was merely to plant the uprights and then hibernate for the winter. By some unfathomable process, however, the hangar group members kept turning up and Doug (alias "the whip") kept ordering more supplies so that after only a dozen or so bone-chilling, eye-watering, finger-freezing, wife-wrangling and otherwise fun-packed week ends, Doug suddenly announced that we'd gone too far and accidentally finished building the hangar. (Guess who gets my vote for negotiator in the next Free Trade talks!) After the laughter subsided, Andy Douma showed slides of the early stages of the project and snuck in a few airplane shots, including one of Alex's Starlite on its second flight.

WING WALK (NON-SLIP) MATERIAL: available at Safety Supply (on Belfast) in strips of various colours for $1.17 each.

FEATURE PRESENTATION: Garry Palmer kindly and ably stepped in on short notice and provided an interesting up-date on his Lancair. In addition to showing a promotional video of the plane and ABC's feature presentation of it on "The Wide World of Flight," Garry remarked that he has invested about 1500 hours spread over 3 years, and that the finishing touches will likely take far longer than he cares to contemplate. As more of these slick machines reach completion, the plans' estimates have risen from 800 hours to 1500, but Garry feels 2000 would be more realistic. His plane will sport an O-235 , but a new version with more head and shoulder room is now available for an O-320. Early minor problems with rudder flutter and yaw have been completely eliminated. The plans are the best Garry has ever seen and the quality of the components is likewise consistently high. Given the high performance of this bird, Garry has kept the design clean by mounting and bonding his antennae internally. Although the Lancair utilizes a high-temperature cure in fabricating the components, Garry noted that the

manufacturers only recommend pastel colours. The flashy red Lancair 0-320 seen at Oshkosh is, in fact, highly experimental and extensively monitored for heat build-up in the cores. When will Garry's fly? Sometime in '89 he hopes.

During the break, Garry showed a **video** of Rutan demonstrating how to lay up fiberglass over foam. As the "glass-plane" builders were still glued to the monitor when we returned, no one had the heart just then to reclaim the video to show the 1969 Rockford convention film we recently received from EAA headquarters.

Roger Fowler,
Recording Secretary

SHORTCUTS!

Here is something you might find useful even if your aircraft is flying today. In at Ottawa Safety Supply on Belfast Rd. one day I saw some no-slip strips that would work on the aircraft. They are made by 3M and are 2" x 12" in size. The backing is adhesive but I suspect that it would be better if contact cemented. The strips come in basic colors; white,beige,brown,as well as clear and black. They are the same as the catalogs as far as the material makeup is concerned and best of all they are in stock and you can see them before you own them! The cost is $1.17 + pst each, and the stock number is s12s015.

Here is another cheap and easy way to help keep the snow, birds and summer refuse from entering the engine compartment without at least a fight. And old "Krazy Karpet" (kids plastic slide for winter) cut to suit your own needs will work wonders and cost almost nothing. Being plastic it is almost indestructable, and can go with you on the cross countries due to it's lack of weight and bulkiness. It costs around $3 - $4 .

CABLE INSPECTIONS

Detailed inspections of primary control cables on aproximately 25 airplanes of one make resulted in many cables being replaced due to broken wires previously found by visual inspection. Primary control cables should be inspected at airplane manufacturers specified intervals by glove or rag wiping in usual procedures outlined in FAA Advisory Circular AC 43.13-1A, paragraph 198. Wiping the cables with a rag or glove will result in the rag or glove snagging on any broken surface wires and will clean cables for the visual inspections. If areas on any cables are not accessible for wiping and visual inspection, the cable should be disconnected and pulled out of the airplane, as necessary, to inspect the entire length of cables. Where cables show worn or broken wires, the cables should be slightly untwisted or bent and visually inspected further for broken wires as outlined in AC 43.13-1A, paragraph 198. These inspection techniques may reveal broken wires below the surface that are not detectable by rag wiping or external visual examinations.

MODE C IS NOT ON WITH "ON"

Provided by Earnie Shelton, as printed in the Gremlin Gazette, December 1987.

Transponders must be turned to the ON position while in controlled airspace. Most general aviation transponders display OFF, STANDBY, ON and ALT (altitude) positions. The ON position does not provide Mode C altitude information. The ALT position transmits that information to the air traffic control.

Kanata resident killed in weekend plane crash

BY JEAN CRUICKSHANK

Dunrobin resident John Van Tuyl died Sun. Jan. 23 in an airplane mishap on the Rideau River.

He was 37-years-old.

A 10-year resident of Kanata, Van Tuyl, is described as an adventurer. He had travelled extensively in Canada, the United States and Mexico as well as from England to Australia.

An accomplished sailor, Van Tuyl and his wife Rebecca set out from Canada to the Barbadoes via Europe on a 15-month journey in 1981 in a Contessa 26 sailboat.

Then, in 1986, the Van Tuyls voyaged from Canada to the Barbadoes via Bermuda in a Cabot 36 sailboat with their eldest daughter Ellin.

"He was self-taught," said his wife Rebecca. Although Van Tuyl never had any formal training in sailing -- learning everything from books and magazines -- he seemed to understand the principles of it better than those who had taken courses, she said.

In additon to his passion for sailing, Van Tuyl loved the outdoors, fishing and hunting as well as motorcycling and flying his Cessna.

"He was an extremely mechanical individual and very practical," Rebecca said. Van Tuyl built a log cabin on the shores of his Dunrobin property on the Ottawa River and last year completed a work on an experimental aircraft, a Quickie II, with his father.

John Van Tuyl: dead after tragic airplane mishap Sunday.

Van Tuyl obtained his pilot's license two years ago in Carp. He was a member of the Experimental Aircraft Association, Chapter 245. Although the Ottawa native left school when he was 16-years-old, Van Tuyl was determined to study to get his pilot's license.

"His father is a flyer and John had an interest in airplanes; there was flying in the family," Rebecca said.

Van Tuyl is survived by his parents, Thomas and Joy, sisters Jill of Ottawa and Jackie of Manotick, his wife Rebecca, daughters Ellin and Anna and nieces and nephews Thomas, Penny, James, Scot and Jane.

KANATA KOURIER

Members that did not know John missed knowing a gentle, and quiet human being who listed amongst many interests - flying.

He was most content when he was doing anything mechanical or building, a trait picked up from his father, Tom.

Flying he did, once saying that in the past year he had not been away from the C-170 for more than 10 days at a stretch. His only blemish to aviation was to unintentionally test the resources of Trenton's SAR unit. Questioned the next week, his answer was predictable, his school boy grin and a "welll, I don't know.".

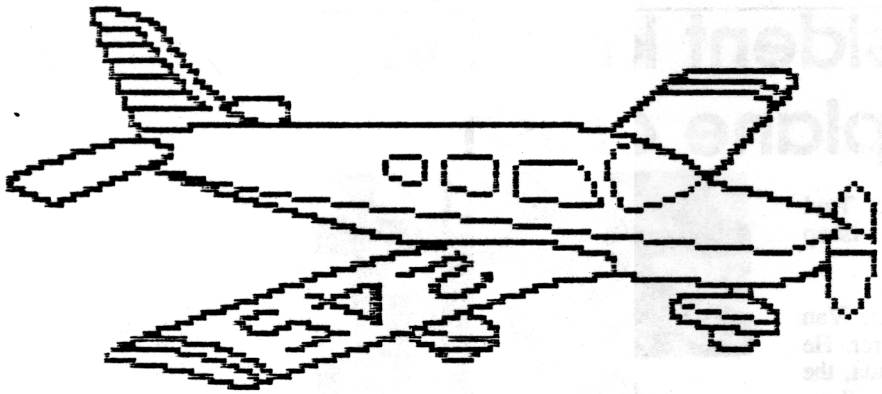
Something went wrong during his last flight.

A part of John will always be around us at the hangar.

It is hard to say good-bye to a admirable friend. This person wishes him many adventures in the new life.

Doug.

Donations in John's name would be gratefully received by the Civic Hospital Foundation(John Van Tuyl Fund) 1053 Carling Ave Ottawa Ont K1Y 4E9.



Classified Section

Aircraft:

Minicoupe, partially completed. Unable to continue due to discontinued kits. All offers considered. Call Richard Taylor 596-6913 after 7:00 pm.

Bowers Flybaby, bargain. Contact Mike Sacoutis 729-3774.

Plans:

Davis D2A. Call Russ Robinson 831-2485

Engines:

Lyc O-320, 800 hrs, half inch valves. Mike Sacoutis 729-3774.

More Parts:

Brakes and wheels, Rosenhan. Suitable for Vari-Eze, Davis, etc. Offers welcome. Eric Taada 749-4264.

Forged VW crank and propeller hub. For details, call Richard Taylor 596-6913 after 7:00 pm.

Kit Shop:

Chapter 245 shirts, with logo. Available in white, light blue, dark blue. Golf shirts $16.00. Tee shirts $7.00. See Andy Douma or call him at 225-1559.

EAA Calendars: Still a few left. Be the last on your block to get one before they're all gone!

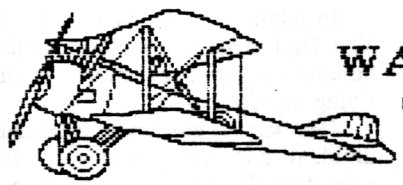
Mike's Parts Bin:

For the following parts, contact Mike Sacoutis at 729-3774.

Propellers - Zero time constant speed.
- 1A170 metal prop, with logbook.
- Wood pusher prop.
- Metal prop for 150 hp
- Zenair wood 68x46"

Hanlon Wilson mufflers
Grumman spinner and backplate
Instruments, NavCom, wheelpants

Mooney Parts: Complete retract gear with 6.00x6 main wheels, 5.00x5 nose wheel. Also seats, fuel tanks, guages gyros and control surface pushrods.



WANTED COLUMN

Wanted: One set of Cleveland wheels and brakes 5.00x5. James Cliff, Work 722-9115, Home 596-1949.

Wanted: Skis for Cessna 172 maingear. Les Kornik 828-8976.

Wanted: Spitfires, several squadrons. H. Goering, Berlin.

Classified Editor: Lars Eif 837-6680.

SAFETY TIPS

If you find yourself upside down on the ground and your bird lights up, you have to fight a fire in position until your rescuers arrive. One pilot bought a small 12 oz. Halon Fire Extinguisher at Oshkosh for $12.00. If you STILL don't trust discharging Halon in a small cockpit, your alternative may be suffocation from the fire while being fried at the same time. You won't like it, even if you do survive. [EDITOR'S NOTE: I have been in a phone booth where a 12 oz. Halon extinguisher was discharged. I found it somewhat uncomfortable, but the demonstration was effective - you could still breathe and think.]

If you land belly up in a remote area, you can't get out unless you cut your way out. A light survival saw of some kind would be just ducky! Something to cut through the side of the fuselage and maybe break the canopy would be in order. I know I have seen such things advertised. Would some of you guys offer some suggestions on this? Maybe you hunters have something of this sort?

Flight Lines

by Olav Peterson. February, 1989.
EAA 33135

Many amphibian designs have been enthusiastically conceived in the past but for some curious reason most have been aborted and only a very small fraction has survived.

Remember Gene Littner's "Kon Tiki" in 1966; Falconair's Teal G121 amphibian; Ken Rand's VW-powered KR-3 in 1976; Larkin Aircraft Skylark KC-3 in 1973; Michael L'Esperance's Esperanza 4 in 1974; Van Dine's Merganser in 1981? They never got past the prototype stage, yet all of them could have enjoyed a bright future if one were able to go by what the designers had to say about their creations.

There is still quite a selection of plans available for amphibians such as George Pereira's Osprey II, Molt Taylor's Coot B, Spencer's AirCar, Garry LeGare's Sea Hawk, Art Lueck's Air Shark, Earl Anderson's Kingfisher, and of course Sportsman, VJ-22, from Volmer Jensen.

Are the simultaneuos design requirements for air, water and ground environments too difficult to fulfill?

Is the pitch change and shift of CG too drastic due to the awkward, pylon-mounted engine placement, making flying characteristics unaccepatable to potential builders? Or are they generally considered to be too clumsy and under- powered?

But don't bemoan the decline of home-built amphibians; water flying should soon be gaining popularity because of the massive restrictions imposed by DOT in Canada and FAA in the States on pleasure flying.

Many airports will be made unwelcome or barred completely for the weekend pilot as commercial operations establish a stronger foothold. Amphibious aircraft, on the other hand, obviate the need for airports and ATC has seldom any interest in traffic over water at 500 feet at downtown waterfronts.

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"Windshear" or microburst is a dreaded word especially for commercial passenger jet airliners.

There have been a number of instances where a "heavy" arriving or departing during significant weather activity, has experienced hair-raising loss of lift and several have even succumbed to these nature's vagaries with loss of life.

Windshear has been blamed for more than 500 deaths in almost 150 crashes in the past 15 years.

One type of windshear detector, radar working at C-band (5.60-5.65GHz), utilizes Doppler shift method to determine changes in wind direction. The data is converted for graphic , visual display for the tower personnel.

The Doppler detector, of course, is based on the same principle as the police radar - the relative motion between the transmitter and target results in the target signal phase change with respect to the transmitted signal which can be related to speed. Or like the moving target indicator radar in the airport tower which utilizes the Doppler phenomenon to enhance the ability to discern moving targets from stationary clutter.

Another gust front detection technique utilizes laser-based light-detection and ranging (lidar) whereas a third method consists of infrared detection.

The first radar type windshear detector will be installed in the latter part of 1991 at the FAA Technical Center in Atlantic City, N.J. (Aviation Trade, Dec.88, p.6; Electronics, Jan '89, pp. 33-35). Wingtip vortices, a similar but a man-made phenomenon, which is a menace to the light-plane, may benefit from these windshear detectors as they surely could be used to pin-point their presence.

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Electronics is making greater inroads into air-traffic control and will expand rapidly to affect our presently serene flying environment.

Unless you intend to stay in the circuit or undertake large detours around control zones on your cross-country flying, start now to gradually becoming familiar with what is ahead and how to cope with it comfortably.

For instance, soon you won't be flying through the control zones at Calgary, Edmonton, Montreal, Toronto, Vancouver and Winnipeg in Canada and many, many more control zones in the States, 254 to be more precise, unless there is an altitude digitizer/transponder on board your aircraft.

You can start by browsing through some of the literature below, all available from COPA:

* "The Air Traffic System" by Milovan S.Brenlove, 1987. (approx $25.)

* "Pilot's Guide to Air Traffic Control" by Frank Bruzzese,1979 (Canadian VFR guide to ATC communication; most basic and most useful for getting started)

* "How to cope with Air Traffic Control in the United States." A reprint of the material from AOPA Air Safety Foundation in Washington appeared in COPA's Canadian Flight, March-April '81, pp.26-29. During the Trenton Airshow, the 1988 version pamphlets were distributed freely and I will attempt to nail up a copy on the clubhouse bulletin board before your first trip south of the border.

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Last year at work, a lad was transferred to Ottawa from our Toronto labs. He had been trained on Pipers, was more at ease with the low-wing design and hence, preferred his rented aircraft to be of similar origin; but he had no luck in locating a mount of his choice in the Ottawa area.

Now there is good news for the Piper-bred pilots! Piper Aircraft Corporation has announced (The Canadian Aircraft Operator, Nov.1988; Flying, Jan.1989) the production of a full line of personal aircraft. After 6 years of dormancy, Piper of Vero Beach, Fla., has received orders amounting to $120 million and 600 a/c ranging from the new, 350hp, Lycoming-powered Malibu Mirage, the 2-seat, 160hp Cadet trainer ($46K US), to the all-time favorite, the Super Cub.

Roughly 20 of the total of 60 Super Cub orders are for the homebuilt kit variety (32K US, less paint).

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Good News:

"Now you can get the best for less!" is the new slogan adopted by Lycoming and to prove it they have lowered the prices of 300 high-usage, piston engine parts. (Lycoming Flyer, July'88)

They have also announced the doubling of its warranty period on engines (new, remanufactured or overhauled) and parts, to ONE YEAR from the time they are placed into service. The cost of labor for repair or replacement, as well as the part, is also covered. (Lycoming Flyer, Dec.'88)

Sad News:

Taylorcraft Aviation Corp., Lock Haven, PA., was liquidated in a bankruptcy sale in Nov'88 - blueprints, dies, machinery - everything to make a Taylorcraft.

It all began in the late 20's in Rochester,NY., when two brothers formed the Taylor Brothers Airplane Company.

89-year old C.G.Taylor died in March of Parkinson's disease.

The company has changed owners many times but the notable one was to Charlie Feris in Alliance, OH.; after his death, wife Dorthy ran the family business.

The last owner was George A. Ruckle of Lock Haven, PA.

Bad News:

Soaring land values and encroaching housing developments have spelled the demise of 7 privatly owned airports in New Jersey in the past 18 months. (Flying, Jan'89)

There were 112 such closures reported last year in U.S.

The U.S. statistics also indicate that in 1974 there were 1376 more airports than there are today!

This trend is not entirely unfamiliar to us, remembering the fate of King City and Maple in the Toronto area.

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Words of advice:

Cross-country controlled VFR is the way we will fly in the very near future.

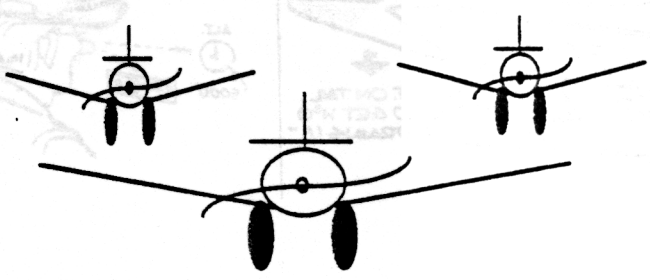
If you fly VOR-to-VOR you cannot avoid entering control zones because this is where they have usually located the thing and even if you do get a Loran-C, you'll probably find your path blocked by class C airspace here at home or TCA's, ARSA's and TRSA's in the States.

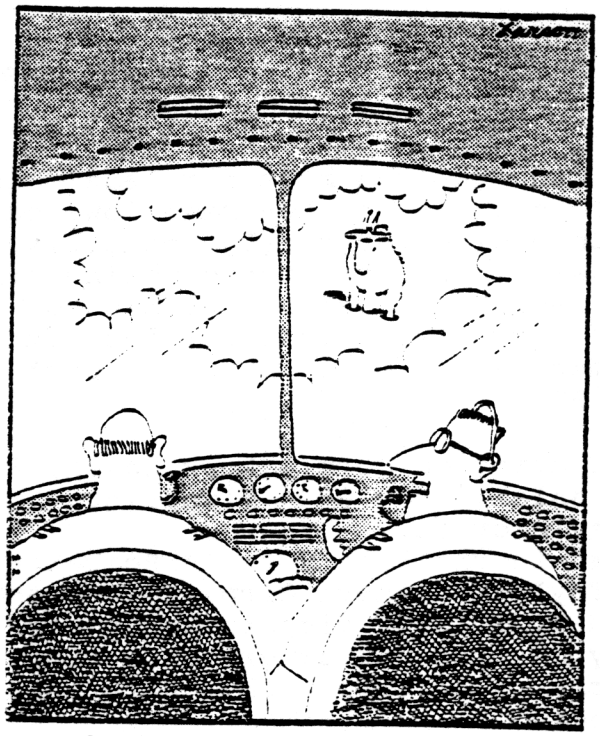
"Big deal", you may say, "I'll install a mode-C transponder and fly through TCAs."

And most likely it won't be a problem if you get into a habit of practicing precision flying whenever you take up your plane.

Once you have been cleared into a controlled airspace, a deviation from your assigned altitude becomes a serious violation - it's sort of pseudo-IFR and the controller expects to see no more than a +/-100 foot deviation from that altitude to assure adequate traffic separation in his sector.

Believe me, on a bumpy day you will have your hands full in your airplane with light wing loading.

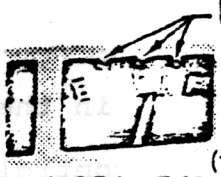




"Say . . . What's a mountain goat doing way up here in a cloud bank?"

QUIT FUELIN' AROUND!

AIRCRAFT FUEL GAUGES ARE CONSISTENT IN THEIR INCONSISTENCY. CALIBRATE YOUR FUEL GAUGES IN FLIGHT THIS WAY:



PLACE SMALL COLORED DOT* FOR EACH HR AT CRUISE (THE 1ST HR. SHOULD INCLUDE T.O. and CLIMB). TWO GAUGES? ALTERNATE COLORED DOTS.

FOR IN-WING GAUGES— (THIS REQUIRES SEVERAL 1 HR HOPS, OF COURSE... IT'S HARD TO DO IN FLT!)

*1 HR GREEN MARKS

YELLOW MARK @ BOTTOM

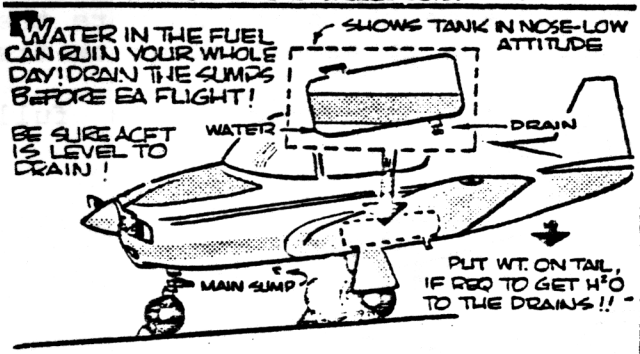
THIS SURE TAKES A LOT OF THE WORRY OUT OF FLT PLANNING and WT. & BALANCE!

IF IN DOUBT AS TO FUEL REM. BEFORE FLIGHT- STICK IT!! (WITH A CLEAN PRE-MARKED STICK)

* PAINT 'EM OR USE ART STORE "STICKEN" DOTS.

WATER IN THE FUEL CAN RUIN YOUR WHOLE DAY! DRAIN THE SUMPS BEFORE EA FLIGHT!

BE SURE ACFT IS LEVEL TO DRAIN!



WHEN TO START DOWN?

YOU DON'T WANT TO THERMAL SHOCK YOUR ENGINE WITH AN 'IDLE' APPROACH, NOR OVERSHOOT and SPIRAL DOWN - THAT WASTES TIME and FUEL, SO...

IF Y = 9000 FT.

X = Y · MULTIPLIER FACTOR

THEN X = ?

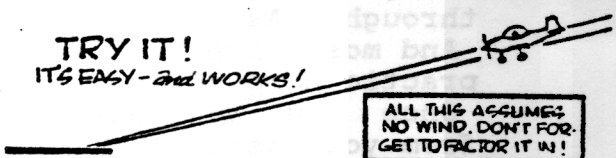
TO FIND THE MULTIPLIER FACTOR

$$\frac{\text{mpm (mi per min)}}{\text{r/d (rate of descent in thousands)}}$$

$\frac{2\ (120)}{.5} = 4$ (500'/min)

Answer: 4 X 9 = 36 START 36 MI. OUT!

TRY IT!
IT'S EASY - and WORKS!



ALL THIS ASSUMES NO WIND. DON'T FORGET TO FACTOR IT IN!

ALSO REMEMBER TO FIGURE ALTITUDE OF AIRPORT IN THIS PROCEDURE (EX: FIELD ELEV. IS 1000 msl, YOU'RE AT 10,000'; 10 M—1M = 9000', AT 90 KTS & 500'/MIN DESCENT, START 27 MI. OUT!

IF YOU HAVE DME, CROSS-CHECK.

NO DME? NOTHIN' BEATS A MAP, WATCH and ALTIMETER