MILE HIGH EXPERIMENTAL AIRCRAFT ASSOCIATION

CHAPTER 43 DENVER

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VOLUME 7, ISSUE NO.7, JULY 1984

LAST MONTH: EAA CHAPTER 43 MINUTES FOR JUNE 9,1984. ALL OFFICERS PRESENT. BILL LANDERS DONATED 95 ISSUES OF AVIATION MAGAZINES. GUESTS WERE BILL MARCY,EDITOR OF CHAPTER #301 AND DICK WEPPNER. LIBRARIAN CATHY IS GOING TO STOP BRINGING THE ENTIRE CHAPTER LIBRARY TO EVERY MEETING, SHE SAID IF ANYONE NEEDS A PARTICULAR BOOK OR MAGAZINE SHE WILL BE GLAD TO BRING IT TO THE NEXT MEETING,JUST GIVE HER A CALL.
THE MEMBERSHIP VOTED TO PURCHASE $69.50 WORTH OF BOOKS. THERE IS A GLASAIR BEING BUILT AT VAN-AIRE BY KENNY WELLES. SECTIONAL AVIATION MAPS ARE GOING UP IN PRICE, COULD BE AS HIGH AS $7.50 IF THE GOVERMENT DROPS THE PROGRAM AND PRIVATE COMPANIES PICKUP THE JOB.
DEAN COCHRAN BROUGHT ANOTHER BOX OF GOODIES, YOU PEOPLE WHO HAVEN'T BEEN COMING TO THE MEETINGS ARE MISSING OUT. PLEASE COME, WE NEED YOU.
RST IS SELLING NAV-COM RADIOES FOR $700.00. SUPERIOR AIR PARTS CAN HELP YOU IF YOU ARE HAVING TROUBLE WITH YOUR VALVES AFTER USING CAR GAS.
COFFEE AT 8:13PM. AFTER THE BREAK, BILL MARCY TALKED ON AERODYNAMICS,WINGS, AND ANSWERED MANY QUESTIONS.

.HIS MONTH: OUR MEETING & BARBECUE WILL BE AT PLATTE VALLEY AIRPORT.
SATURDAY JULY 14,1984 AT 12 NOON, SEE ENCLOSED MAP.
BRING PICNIC LUNCH AND SOMETHING TO DRINK & GRILL.

ADDITIONS: PLEASE WELCOME AND ADD TO YOUR ROSTERS THE FOLLOWING NEW MEMBER.
RICHARD WEPPNER

FOR SALE: 10in SOUTH BEND SHOP LATHE & TOOLING. NEVER USED ON PRODUCTION.
FOR MORE INFORMATION CALL 1-772-7993 TALK TO BILL DAVIS (EVENINGS)

AVIATION HAPPENINGS:
JULY 14,1984 CHAPTER 43 FLY-IN AND PICNIC PLATTE VALLEY
JULY 14,1984 CHAPTER 72 POKER RALLY MEADOW LAKE
JULY 28-29,84 HERITAGE DAYS FLY-IN GREENHORN VALLEY
JULY 28-AUG 4,84 "OSHKOSH 84" WITTMAN AIRFIELD
SEPT 8-9,84 ROCKY MOUNTAIN FLY-IN GREELEY AIRPORT
SEPT 23-24,84 JEFFCO FLY-IN JEFFCO AIRPORT

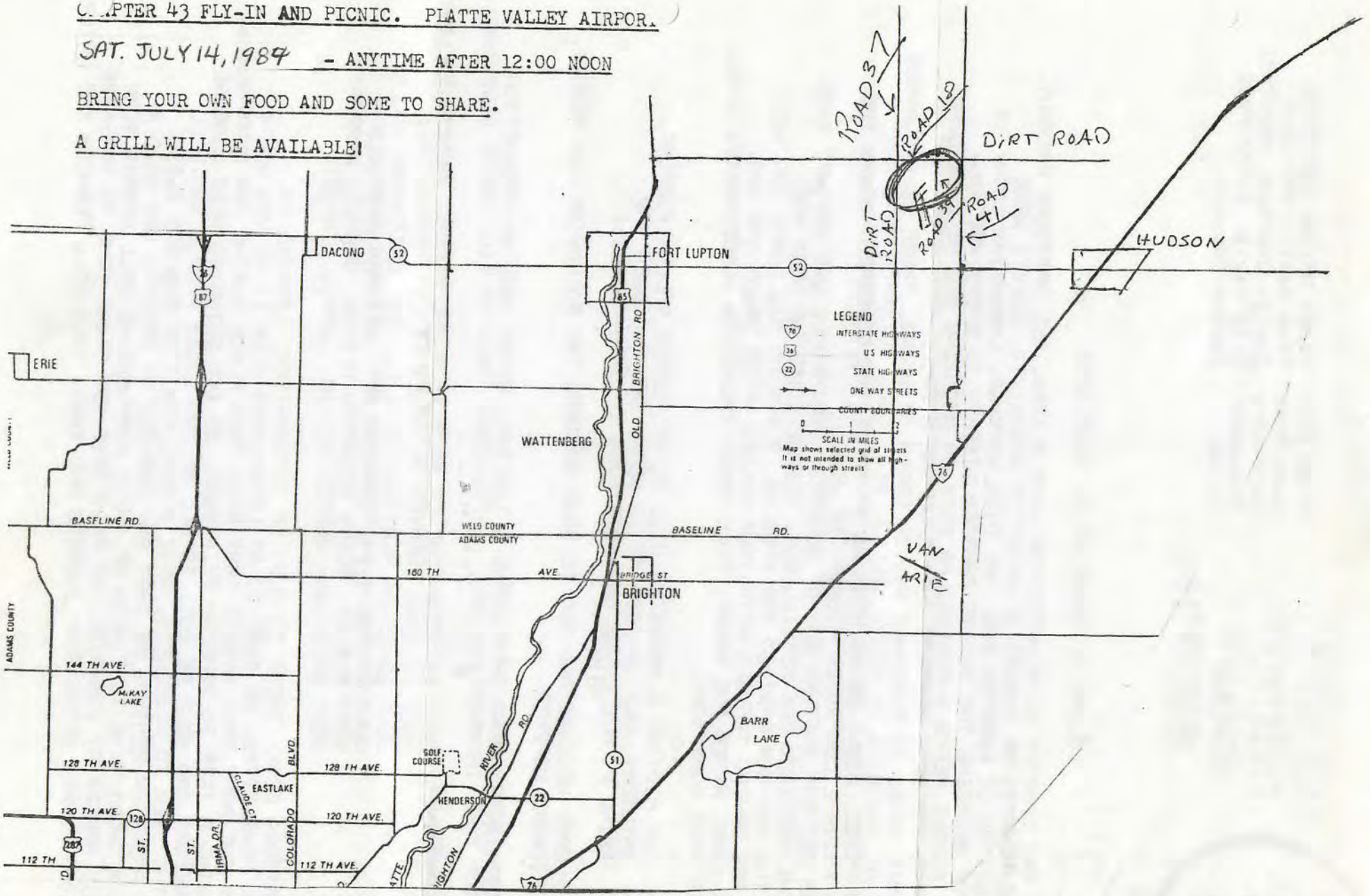
FROM THE EDITORS DESK: THERE IS ALOT OF INFORMATION LOCATED IN THIS MONTHS NEWSLETTER, BE SURE TO AT LEAST SKIM OVER IT SO YOU WON'T MISS OUT ON THE MANY,MANY EVENTS THAT WILL TAKE PLACE DURING THE NEXT MONTHS. I CANN'T SWING A TRIP TO OSHKOSH THIS YEAR, SO I'M GOING TO NEED SOMEONE TO GIVE A REPORT AND HELP ME OUT. TO ALL OF YOU LUCKY PEOPLE WHO WILL BE MAKING THE TREK TO WISCONSIN. HAVE A SAFE,FUN TIME AND GOD BLESS.
ALSO, TROY ANDERSON REMINDS ME THAT ANY CHAPTER 43 MEMBERS WHO NEED A HANGER FOR A SHORT TIME TO FINISH UP THEIR AIRPLANE,HE WILL DONATE SOME PACE IN HIS HANGER AT VAN-AIRE. HE ALSO SAID YOU COULD COME TO VAN-AIRE AND WASH YOUR PLANE. BRING SOAP,BUCKETS AND RAGS. TROY WILL FURNISH THE WATER.

C..PTER 43 FLY-IN AND PICNIC. PLATTE VALLEY AIRPOR.

SAT. JULY 14, 1984 - ANYTIME AFTER 12:00 NOON

BRING YOUR OWN FOOD AND SOME TO SHARE.

A GRILL WILL BE AVAILABLE!



FLY-IN, DRIVE-IN, WALK-IN BUT BE THERE! NO RAIN DATE IF THE ELEMENTS DON"T COOPERATE, SO USE YOUR INFLUENCE!

CHAPTER 43 FLY-IN AND PICNIC. PLATTE VALLEY AIRPORT.

EVERYONE WELCOME

JULY 14 AT NOON

AVEMCO
PILOT BULLETIN

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Aviation safety, insurance, product marketing

FLYING SAFETY UPDATE #73

Winter Preflight

Learning to Outsmart Ol' Man Winter

Learning to handle what Ol' Man Winter can hurl your way requires much more than a frosty prayer as you hit the aircraft starter.

Improper winter operations can cause substantial aircraft damage during start up and taxi, and result in even more serious consequences in flight.

Many pilots prepare for really cold weather by having their aircraft checked out by a qualified mechanic. To avoid engine damage, you'll want to be sure the engine's timing is correct and the spark plugs are cleaned and properly gapped. And make certain oil lines and hoses are properly insulated.

Use winterization kits if they are recommended by your aircraft manufacturer. For example, oil cooler covers and special engine baffling may be recommended. Remember, though, that as you fly from colder to warmer climates, it may become necessary to remove the kits.

Many aircraft are equipped with a heat exchanger that encloses the muffler. As the exhaust system becomes hot, so does the heat exchanger, which, in turn, has its air routed to the cabin.

If the exhaust leaks into the exchanger or its shrouding, deadly carbon monoxide can leak into the cabin. You may wish to purchase an inexpensive paper-type carbon monoxide detector from a pilot supply house and affix it to your aircraft panel.

All hoses, tubing and seals should be checked carefully for condition. Worn hoses may not withstand the strain of cold temperatures. Likewise, clamps and fittings should be checked, along with control cable tension. Defective hoses and loose fittings are among the most common causes of maintenance-related accidents.

It's a good idea, too, to change your oil every 50 hours or so, in summer as well as winter. But in winter, you'll want to use either a thinner oil or one of the multi-viscosity oils, which can adapt their consistency to a wide temperature range.

Be careful, though, not to overfill the engine with oil. If you do, the breather will dump oil overboard as internal pressures rise. In cold temperature, crankcase vapors, as they cool in the breather lines, can condense and form ice. This freezes the breather system shut.

If you run an engine with frozen breather lines, internal pressures rise until you blow your engine's oil seals. The result is not only messy, but dangerous as well. To help prevent costly internal engine damage, both Avco Lycoming and Teledyne Continental engine manufacturers recommend preheating the aircraft whenever the temperature is 10°F or below.

*The pilot of this Cessna 172RG didn't intend to **literally** preheat his airplane for winter start. Improper preheating can cause major engine damage and, as shown here, can result in far more disastrous consequences.*

Whatever preheating system you use (check with your mechanic before you do), just make certain the entire engine is heated and not just the cylinders. Heat directed to the cylinders will help vaporize the fuel and promote combustion, but it will do little for the congealed oil down in the engine sump. This means that during the first crucial seconds the engine is running, critical engine parts will be deprived of oil. Bare metal hammers on bare metal, leaving behind flecks of steel to contaminate the engine.

Check to make sure your battery is tested, cleaned and charged. If the fluid is low, don't permit the battery cells to be topped off with distilled water. Too much water causes the electrolyte to boil over. Remember the electrolyte eats through aluminum very quickly.

Outside the aircraft, take care to remove *all* accumulations of snow, frost or ice from the aircraft surfaces. Don't count on prop blast to carry it away for you. Unless you're blessed with a hangar or can afford a fluid de-icing treatment, you'll have to physically remove the snow and ice. But be gentle; especially, don't bang on the windshield. It can turn brittle in cold temperatures and crack. A suggested method on sunny days is to put dark trash can liners on the flying surfaces and let the sun do the work. *(Don't forget to remove all liners before flight).*

Be extra alert for water in your fuel tanks, owing to snow and ice melting around fuel filler caps that may have worn seals or otherwise permit water to contaminate the fuel. If a drain valve is frozen up, don't ignore it. Ask a mechanic to help you free it. A frozen drain valve is a good sign there could be water where it isn't wanted.

Check to see that all control surfaces are free, especially if you've just de-iced the airplane in a hangar and then moved it back outside. Melted water may run to the hinges or other control fittings and refreeze, blocking movement.

As far as the landing gear goes, carefully examine the speed fairings (if installed) to see if they are obstructed by frozen slush or ice. Many owners remove the speed fairings during winter.

Lastly, make sure you, the pilot, and your passengers are "preflighted" for a winter flight. Dress as though you might be exposed to the harsh winter environment for a long period of time, because, however remote it may be, it could happen.

A thorough winter preflight is a tough job, but certainly time and effort well expended. With alittle extra preflight caution, you *can* beat Ol' Man Winter at his frosty game.

Call Cathy Sheeon at 232-9535 and she will bring your choice to the next meeting.

E.A.A. CHAPTER 43 LIBRARY LIST — LOANED TO — PHONE #

1933 FLYING MANUAL
1932 FLYING MANUAL
1929 FLYING MANUAL
WOOD AIRCRAFT BUILDING TECHNIQUES
BUILDING CUSTOM AIRCRAFT W/SHEET METAL VOL. #1
TIPS ON AIRCRAFT FATIQUE
THE IDENTIFIED SOURCES OF SUPPLY FOR NAT. AEROSPACE STANDARDS
AIRCRAFT MAINTENANCE MANUAL
AIRCRAFT POWERPLANT MANUAL
BASIC HAND TOOLS-VOL. # 1
BASIC HAND TOOLS-VOL. # 2
BUILDING THE CUSTOM AIRCRAFT W/WELDING
CUSTOM AIRCRAFT BUILDING TIPS-VOL.#1
" " " " " 2
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CUSTOM AIRCRAFT ENGINES VOL. #1
" " " " 2
E.A.A. AIRCRAFT PILOT REPORTS & FLIGHT TESTING
AIRCRAFT DESIGN VOL. #3
THEORY OF WING SECTIONS
HANDBOOK OF AIRFOIL SECTIONS FOR LIGHT AIRCRAFT
HELICOPTER DESIGN & DATA MANUAL
SPORT FLYING
THE COMPLETE SOARING PILOTS HANDBOOK
PILOT ERROR
THE NATIONAL AIR AND SPACE MUSEUM
MODERN AIRCRAFT COVERING
AIRCRAFT DETAIL DESIGN MANUAL
TIPS ON ENGINE CARE (CONTINENTAL ENGINES)
U.S. D.O.T. AIRCRAFT INSPECTION FOR THE GENERAL AVIATION AIRCRAFT OWNER
AVIATION BUYER'S DIRECTORY MARCH-78

E.A.A. CHAPTER 43 LIST CON"T. LOANED TO PHONE NO.

25 MOST PRACTICAL AIRPLANES TO BUILD

COMPOSITE CONSTRUCTION SLIDES AND CASSETTE

U.S. D.O.C. NATIONAL TECHNICAL INFORMATION SERVICE REPORT # N-76-26163.
"A DESIGN APPROACH AND SELECTED WIND TUNNEL RESULTS AT HIGH SUBSONIC SPEEDS FOR WING-TIPMOUNTED WINGLETS" BY: RICHARD T. WHITCOMB, LANGLEY RESEARCH CENTER-HAMPTON, VIRGINIA JULY 1976.

NASA CONTRACTOR REPORT- FLIGHT TEST DATA FOR A CESSNA CARDINAL- BY DAVID L. KOHLMAN. PREPARED BY. THE UNIV. OF KANSAS.

U.S. D.O.C. "LOW SPEED AERODYNAMIC CHARACTERISTICS OF A 13.1 PERCENT THICK, HIGH LIFT AIRFOIL

PIPER AIRCRAFT-"WHITE PAPER" - YOUR TURBOCHARGER

U.S. D.O.C.- AERODYNAMIC SHARACTERISTICS OF WING-BODY CONFIGURATION WITH TWO ADVANCED GENERAL AVIATION AIRFOIL SECTIONS AND SIMPLE FLAP SYSTEMS

NASA CONTRACTOR REPORT: "EFFECTIVENESS OF SPOILERS ON THE GA(W)-1 AIRFOIL WITH A HIGh PERFORMANCE FOWLER FLAP"

SOCIETY OF AUTOMOTIVE ENGINEERS: " APPLICATIONS OF ADVANCED AERODYNAMIC TECHNOLOGY TO LIGHT AIRCRAFT"

AIRCRAFT HARDWARE STANDARDS MANUAL & ENGINEERING REFERENCE

E..OUTE WEATHER OVER THE UNITED AIR LINES SYSTEM: (8-15-61)

BUILD YOUR OWN SPORT PLANE

AIRCRAFT WOODWORK

ANYONE CAN FLY

STANDARD OF QUALITY & APPROVED LIST OF HOMEBUILT AIRCRAFT (NASAD)

AIRCRAFT - HOW TO BUILD & FLY YOUR OWN

AS THE PRO FLIES