



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

JANUARY NEWS LETTER

Next Meeting

Thursday January 16th , 1992

7.30 p.m.

At the

**NATIONAL AVIATION MUSEUM
BUSH THEATER**

Featured Topic

The Gander Air Disaster

Guest Speaker

Les Filotas

PRESIDENT: Lars Eif 837-6680

VICE-PRESIDENT: Gary Palmer 596-2172

SECRETARY: Luc Mart'n 744-5347

TREASURER: Deric Dods 692-6121

EDITOR: James Oliff 724-6123

AIRCRAFT OPERATIONS: Dick Moore 836-5554

SPECIAL EVENTS:

PUBLISHING: Dick Moore 836-5554

MEMBERSHIP: Rodney Stead 836-1410

RECORDING SECRETARY: Roger Fowler 225-6070

Aluminum Aircraft Open House

Project: Murphy Rebel

Date & Time: Saturday, January 18, 1992 at 10:00 am until 12:00

Host Builder: Dominique Gravel

Location: 154 Archie Street, Constance Bay, Ontario
(Maps will be available at the January Meeting)

Telephone: (613) 832-4306



RAFT OPERATIONS: Dick Moore 838-8884
SPECIAL EVENTS: ...
PUBLISHING: Dick Moore 838-8884
MEMBERSHIP: Roy Stead 838-1410
RECORDING SECRETARY: Roy Fowler 838-8070
PRESIDENT: ...
VICE-PRESIDENT: ...
SECRETARY: ...
TREASURER: ...
EDITOR: ...



President's Corner

Seasons Greetings

First and foremost, I would like to wish everyone a happy and constructive New Year and I hope that everyone had a pleasant Christmas with family and friends. Maybe Santa was even thoughtful enough to bring you some aviation-related goodies!

Carp Airport Transfer

In December, Andy Douma and I had the pleasure to meet with Bob Borden, the hardworking Airport Manager appointed by the West Carleton Airport Authority. Bob is a mover and a shaker who spent several weeks turning the various consultant studies into a comprehensive proposal which is now in the hands of Transport Canada. In essence, the Airport Authority is asking Transport Canada to fund long-neglected repairs to the airport. If this is agreed to, the Airport Authority will lease the airport from the government and operate it as a growing business. I have a copy of the proposal if anyone would like to have a look at it. Now, if only Transport Canada could reply with the same zeal as Bob Borden, we would have a decision in no time! (Somehow I doubt it!)

A "Riveting" Presentation

I know that I speak for everyone in thanking Jim and Tim Robinson for an extremely informative evening at our November meeting. For most of us, gaining technical knowledge and ability is what we look for most in belonging to EAA. It was obvious that both Jim and Tim put a lot of careful preparation into their presentation and demonstration and, of course, they are both experienced aircraft builders. Thanks, Guys, for a very enjoyable evening!

RV-4 Project Open House

While on the subject of saying "thank you", I would like to express the gratitude of all who attended the excellent project display at Matt Pearson's house. Luc has written up a short account of the event for this newsletter, so I won't go into detail. Suffice to say, that Matt has a beautiful aircraft coming along at a


phenomenally fast rate. How you manage to juggle your time between school, Air Cadets, social events, the rest of your very active family and get so much work done on the RV-4, I'll never know, Matt! (It was obvious from the visit that Matt has very obliging and supportive parents!) Anyway, we are all looking forward to the day in the not-too-distant future when that RV-4 gets trucked out to the airport for final assembly and first flight. Well done, Matt!

It was good to see such a large turnout for Matt Pearson's place. We are fortunate indeed that Dominique Gravel is continuing the open house trend and will be displaying his Murphy Rebel project at his house at Constance Bay on Saturday, January 18, between 10:00 am and 12:00 noon. Maps to this scenic part of the Ottawa Valley will be available at the January meeting. From the good things I've heard about the Murphy kits, this is one open house that you won't want to miss!

Membership Renewal

A number of members noted that the November Carb Heat did not contain a renewal form as has been our practice in the past. No, this doesn't mean that membership in 1992 will be free; you just caught us asleep at the wheel. James Oliff, our hard-working editor will be sure to include a renewal blank in this issue. Also, tiedown fees for the first half of 1992 are due this month as well, so please lighten the load on Dick Moore and George Elliot by submitting your money early. To those considerate members who renewed at the November meeting, a resounding Thank You!

That's it for now; don't miss the February meeting. Les Filotas, a local author will be speaking to us about his experience as a member of the board that investigated the Gander disaster. It promises to be a very interesting meeting. 'See you there!



PLIOBOND

Pliobond is the ultimate adhesive for fastening fabric (Dacron) to tubing, wood or itself. Its shear pull strength far exceeds that of other similar-purpose glues such as Ran-O-Bond or other similar dope-based adhesives. However, Pliobond, which used to be available locally in quart containers, is no longer available in Ontario, it seems, possibly because of health regulations. Pliobond is available in Quebec at the following address: BEMCO, 165 Lesage Avenue, Quebec City, P.Q. Telephone (418) 686-2340.

Pliobond is available in two different grades #20 and #30; these numbers refer to the solids content. For fabric adhesion, #30 is the correct grade. (I forget the price).

ALUMINUM WELDING

Excellent aviation quality welding is available from DAVTAIR Industries, just off the Carp Road at 197 Cardevco Road. Phone (613) 831-1266 and ask for Doug.

LYCOMING O-320 WEIGHTS

I recently disassembled my O-320 Lycoming and weighed the various parts, partly out of curiosity to see where the major weights were concentrated. The following are the results of that weighing using the amateur-builders standard weighing system (bathroom scales):

<u>Item</u>	<u>Weight (lbs)</u>
Crankshaft	32
Each crankcase half	26
Each cykinder (bare)	17
Accessory Case	12
All valves, springs, spring seats, and rockers	10
All pushrods, housings	4
Starter ring gear	6
Carb and intake	5
Sump and intake tubes	10
Starter, geared	18
Generator	16
Two magnetos	13

Other items associated with this engine:

Hartzell c/s propeller	63
Governor for above	4
Sensenich fixed pitch propeller (M-74-DM-0-6-58)	30

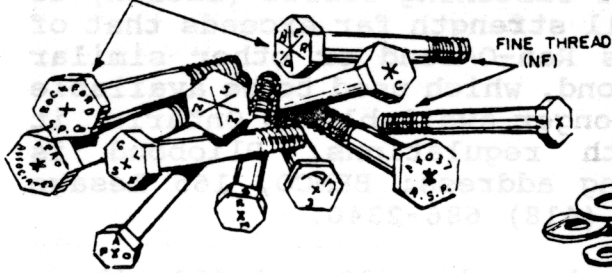
Lycoming gives the weight of this engine (O-320-A1A) as 272 lbs. including magnetos, carburetor or injector, starter, generator with mounting brackets, ignition harness and spark plugs, tach drive and intercylinder baffles. Weights of other O-320 series engines are as follows:

O-320-E2D	268 lbs
IO-320 series	280-294 lbs

Garry Fancy

STANDARD AN AIRFRAME BOLTS

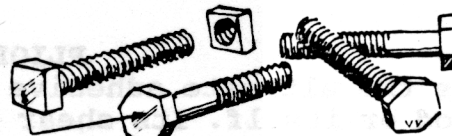
LOOK FOR AN "X" OR A "+" OR AN "A" ON THE HEAD (MANUFACTURER'S NAME NOT ALWAYS SHOWN)



O.K. USE ANY OF THESE BOLTS

FINE THREAD (NF)

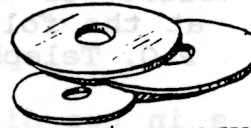
COMMON COMMERCIAL BOLTS



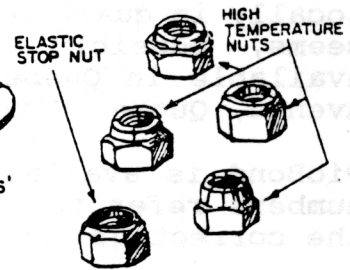
USUALLY NO HEAD MARKINGS DON'T USE THEM!



AN 960 WASHERS (STANDARD USE)



AN 970 'WOOD WASHERS'



ELASTIC STOP NUT

HIGH TEMPERATURE NUTS

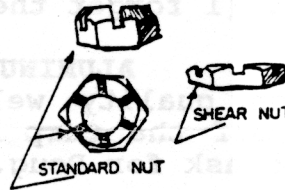
SELF-LOCKING NUTS (MANY VARIETIES)



ALUMINUM ALLOY BOLT (62,000 PSI TENSILE STRENGTH)



CLOSE TOLERANCE BOLT

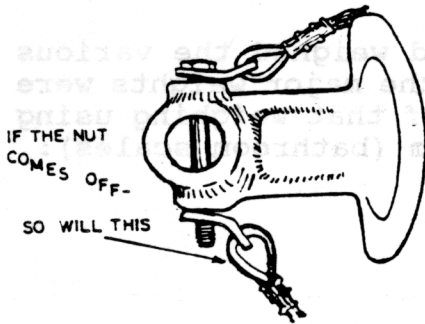


STANDARD NUT

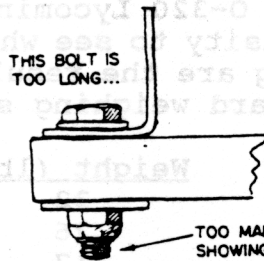
SHEAR NUT

CASTLE NUTS

STANDARDIZED BOLT INSTALLATIONS AS ILLUSTRATED



IF THE NUT COMES OFF - SO WILL THIS



THIS BOLT IS TOO LONG...

TOO MANY THREADS SHOWING

USE A SHORTER BOLT OR ADD WASHER(S)

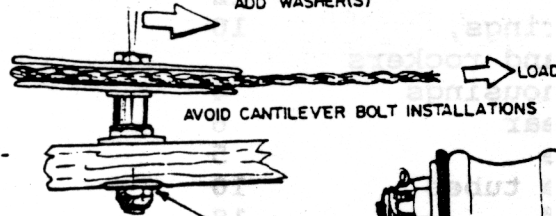


HEAD UP

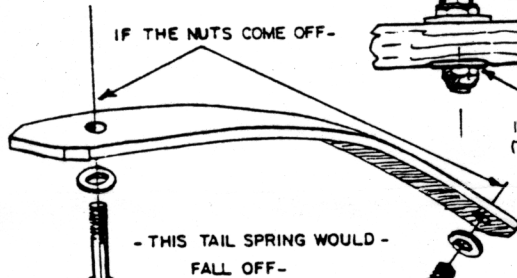
(GRAVITY WORKS FOR YOU)



HEAD FORWARD (SLIPSTREAM WORKS FOR YOU)



AVOID CANTILEVER BOLT INSTALLATIONS

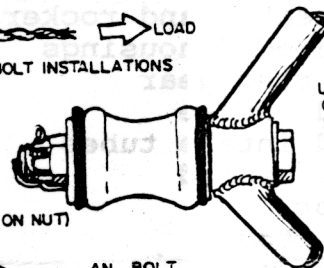


IF THE NUTS COME OFF -

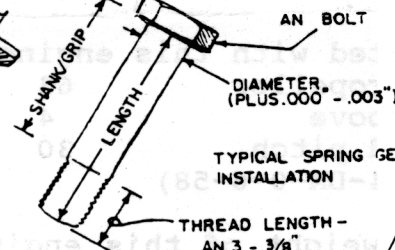
- THIS TAIL SPRING WOULD FALL OFF -

(WHETHER THE BOLTS ARE INSTALLED HEADS-UP OR AS SHOWN)

IMBEDDED WASHER (TOO MUCH TORQUE ON NUT)



USE DRILLED BOLTS AND CASTLE NUTS WITH COTTER PINS IN MOUNTING ENGINE



AN BOLT

DIAMETER (PLUS .000 - .003")

TYPICAL SPRING GEAR INSTALLATION

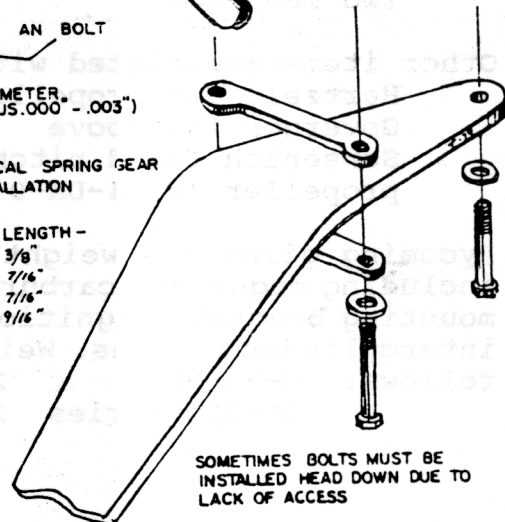
THREAD LENGTH - AN 3 - 3/8" AN 4 - 7/16" AN 5 - 7/16" AN 6 - 9/16"

NUTS & BOLTS

FIGURE 1.



EXHAUST MANIFOLD NUTS (BRASS) (DO NOT SUBSTITUTE STEEL NUTS) (Continental Engines)



SOMETIMES BOLTS MUST BE INSTALLED HEAD DOWN DUE TO LACK OF ACCESS

LYCOMING OIL PUMP IMPELLER REFERENCES

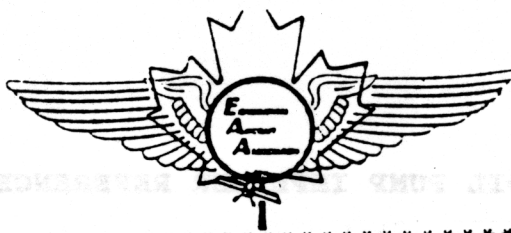
- Service Instruction 1230B:** Oil Pump Impellers 320, 360 series
O-235, O-290 series
- Service Instruction 1432:** Oil Pump Impellers, improved.
- Service Instruction 1164:** Oil Pump w/Integral cover
320, 360 series
O-235, O-290 series
- Service Bulletin 385C:** Oil Pump Impellers and Drive Replacement
(refer to Sup.#1) (AD #75-08-09) O-235, O-320, O-360
- Service Bulletin 423:** Oil Pump Inspection and Impeller Replacement
(AD #78-12-08) O-320
- Service Bulletin 454B:** Replacement of Oil Pump Impellers
HIO-360-D1A, -E1AD, -E1BD
- Service Bulletin 455D:** Replacement of Oil Pump Impellers
360 series
- Service Bulletin 456C:** Replacement of Oil Pump Impellers
O-235, 360 series

Garry Fancy

Matt's open house had good coffee & donuts, plus, a pile of people looking at the RV-4.
About 20 of us were present. I took a few notes so the rest of you can drool at the potential this project has.
Started march 1st, 1991
Approx. 600 hours
Both wings & tail 95% done
Fuselage 40%
Total to date 40% done
Cost 8200 US
It comes in stages (Tail, wings & spar then fuselage
Engine 0320 Lycoming (not included)
Matt say's "The plan's are good and the manual complete"
(DROOLING YET? if not, read on, if so, bet the dishtowel or a bucket.)
Cruise 75 - 180 Mph
Climb 2000 FPM
Stall Full Flap 50 mph
Lands 70 mph
Net weight 950
Gross 1500
T.O. 250
Land 350 (plus an extra chair too)

I'm going to stop writing right here. I have to mop this mess up before my wife notices.
Please excuse my spelling and forgive my bad jokes.

Luc Martin



MEMBERSHIP APPLICATION

NEW: ___ RENEWAL: ___ DATE: _____

EAA NUMBER: _____ EXPIRY DATE: _____

>>See Annual dues note<<

NAME: _____ PHONE: _____ H
ADDRESS: _____ B
_____ ext _____
_____ PC _____

AIRCRAFT & REGISTRATION: _____
(or aircraft of interest) _____

OTHER AVIATION AFFILIATIONS: RAAC: _____
COPA: _____
Other: _____

ANNUAL DUES: January 1st to December 31st. (Prorated after March 31st for new members/subscribers).

>>> **Note:** Associate and Full Chapter members must also be members of the EAA parent body based in Oshkosh, Wisconsin - \$30.00US.<<<

- Associate Member:** \$30.00 Entitles one to the newsletter plus Chapter lounge privileges.
- Full Member:** \$55.00 plus a "one time only" initiation fee of \$200.00. This entitles the member to full hangar, workshop and tie-down privileges. (Tie-downs are billed extra at \$20.00 per month).
- Newsletter subscriber:** \$30.00. No requirement for parent body membership. Entitles the subscriber to the Chapter Newsletter.

Make cheque payable to: EAA Chapter 245 - Ottawa
Mail to : Box 8412 Main Terminal, Ottawa, Ont. K1G 3H8

OFFICE USE:

EAA NUMBER: _____ EXPIRY DATE: _____

MEMSTAT: _____ RECEIPT ISSUED: _____

CARD ISSUED: _____ \$ TRANSFERRED: _____