

International Cessna 120/140 Association

P.O. Box 830092
Richardson, TX 75083-0092

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Tengesdal You just won't believe this one!!! Another UNIQUE way to use your Cessna 120!

Free Screwdriver with Airplane Purchase

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Mort Brown Member **Tom Teegarden** shares a great story with us about Cessna legend Mort Brown.

Q&A Website Forum Questions and Answers

Tech Talk Technical Advisor **Victor Grahn** gives us a lesson on Cowlings



COVER PHOTO:

Bob Boyes 1948 Cessna 140

2005-2006 OFFICERS

Ken & Lorraine Morris, President
815-547-3991
Email: Taildragger7w@aol.com
Reddoch Williams, Vice President
850-863-3330
Email: reddoch@aol.com
Marty & Sharon Lochman, Sec/Treas
405-391-6773
Email: my140@mcloudteleco.com
Mac & Donna Forbes, Past President
336-226-4582
Email: mcforbes55@bellsouth.net

BOARD MEMBERS

Lorraine Morris, Newsletter Editor
815-547-3991
Email: taildragger7w@aol.com
Denise Jackovich, Merchandise Coordinator
319-285-7296
Email: vbjfly@aol.com
Tina Visco, State Rep Coordinator
760-373-4433
tina.visco@earthlink.net
Jack Hooker, Member at Large
815-233-5478
Email: hoohar@mwci.net

STATE REPRESENTATIVES

ALABAMA-

Steve & Edna Earle Simmons
334-898-7376
Email: sesimmons@centurytel.net
Ken Spivey 205-979-5436
Email: kenneth.r.spivey@faa.gov

ALASKA -

Jason Mayrand 907-832-5614
Email: alaska120@yahoo.com

ARIZONA -

Curtis E. Clark 602-953-2571
Email: azskybum@aol.com
Rob Wiener 520-742-5485
Email: rkw55@msn.com

ARKANSAS -

Bill Morgan - 870-239-4017
Email: brmorgan@grnco.net
Donnis Hamilton - 870-236-1500
Email: hamilton@grnco.net

CALIFORNIA -

Tina Visco 760-373-4433
Email: tina.visco@verizon.net

CHILE -

Olegario Reyes - 56-2-2205917
oreyes@mi.cl

COLORADO -

Jack Cronin 303-333-3000
Email: jcronin@ix.netcom.com

CONNECTICUT -

Bob & Sandy Boyer - 203-264-7512
Email: bobandsandy140@charter.net

DELAWARE -

Hugh Horning 302-655-6191 - 410-228-7521
Email: yeepee121@aol.com

EUROPEAN -

FRANCE - Jean Luc Kaiser
(33) 3 87-50 70 57
Email: jlk@leuropevueduciel.com
UK - John Stainer
Email: john@stainair.fsnet.co.uk

NETHERLANDS - Pieter Standaard

Email: piet.standaard@wxs.nl
WEST GERMANY - Wolfgang Schuele
Email: wedees@gmx.net

FLORIDA -

Robert Ray 850-678-3133
Email: betsynbob@peoplepc.com

GEORGIA -

Charlie Wilson 770-927-6179
Email: cwilson193@aol.com
Bob Parks 770-962-6875
rparks@kcc.com

IDAHO -

David Hoffman 208-495-2307
Email: dhpd@iousa.net

ILLINOIS -

Doug Corrigan 815-633-6858
Email: DPCflyer@aol.com
Stacey Greenhill 847-541-7793
Email: sjg140@earthlink.net
Jeff Kohlert 630-513-9275
Email: kohlertjc@comcast.net

INDIANA -

Scott Spencer 317-291-4293
Email: bluecavu@aol.com

IOWA -

Vince & Denise Jackovich
563-285-7296
Email: vbjfly@aol.com

KANSAS -

Don Becker 620-633-1148
ds-becker@sbcglobal.net

KENTUCKY -

David Lowe 270-736-9051
Email: loweaviate@earthlink.net

LOUISIANA -

Paul Crouch 504-892-1979

MARYLAND -

Fred & Sue Lagno 410-827-7896
Email: train@shore.intercom.net

MASSACHUSETTS -

Jack Manchester 508-378-3557
Email: jmanches@hotmail.com

MICHIGAN -

Don Preister 231-839-2191
Email: fun4me2fly@netonecom.net
Richard L. Acker 517-465-6229
Email: ackerd@voyager.net

MINNESOTA -

Tom & Jan Norton 651-459-1423
Email: jannorton@compuserve.com

MISSISSIPPI -

Mitch Hendrix 662-324-3330
Email: tdragger1@yahoo.com

MISSOURI -

Frank Murray 636-227-4111
Email: dee-frank@worldnet.att.net

NEBRASKA -

Ward Combs - 402-895-8601
Email: wacii@prestox.com

NEW HAMPSHIRE & AREA -

Glenn Mori 603-539-8655
Email: GMoriFly5@yahoo.com

NEW JERSEY -

Jim & Diane Morton 609-884-8723
Email: jdmort@bellatlantic.net

NEW MEXICO -

Ed Blevins 505-399-2449
Email: ed_levins@valornet.com

NEW YORK -

Eric Saliba 631-748-0932
Email: esaliba@northeastaviationmarine.com
Martin Green 607-739-1204
Email: n2319n@aol.com
Bob & Anita Campbell 716-358-4210
Email: Cessna @alltel.net

NORTH CAROLINA -

Thomas Reddeck - 704-279-2110
w4vhh@juno.com

OHIO -

Terri Hull 419-375-4704
Email: bthull@bright.net

OKLAHOMA -

Marty & Sharon Lochman 405-734-2118
Email: my140@mcloudteleco.com

OREGON -

Bruce Gustafson 541-461-0574
Email: gustafsonb@lanecc.edu

PENNSYLVANIA -

Mark & Yvonne Macario 610-380-1313
Email: macario@prodigy.net
Michele Vida 724-770-0776

QUEBEC, CANADA -

Michel Charette
Email: m_charette@videotran.ca

RHODE ISLAND -

Erik Thomas 401-635-4381
Email: nc76220@aol.com

SOUTH CAROLINA -

Todd Clamp 803-321-9046
Email: tclamp11v@msn.com
Bo Mabry 843-524-5637
Email: swiftbo@islc.net

TENNESSEE -

Don Mitchell 615-223-1005
E-mail: hawk175@aol.com

TEXAS -

Leonard Richey 940-627-1883
Email: mrichy@ntws.net
Ken Dwight 281-440-7919
Email: kdwright@swbell.net
Billy Shires - West Texas 806-353-1177
Orville Winover - North Texas 903-939-3645
Email: owinover@aol.com

UTAH -

Allen Macbean 801-636-6613
Email: allen@photographicsolutions.com

VIRGINIA -

Lonzo Cornett & Robin Bourne
804-966-2386
E-mail: lonzo140@excite.com

VERMONT -

Bob Desrochers 802-748-8034
Robert@fairbanksmill.com

WASHINGTON -

Dave Sbur360-699-0727
sbur@hei.net

WEST VIRGINIA -

Rod Bush 304-275-3508
Email: funflite@citynet.net
Bill Motsinger 304-757-7706
Email: wmotsinger@tai-cwv.com

WINNIPEG, CANADA -

Jack Foster 204-256-0754

WISCONSIN -

Matt & Carole Rybarczyk 414-767-0920
Email: crybarck@wi.net

Note from the Editor

As this edition of the International Cessna 120/140 Association Newsletter reaches you, the AirVenture Convention in Oshkosh Wisconsin will be over. I hope you made it and I hope you had fun! It is always a sensory overload for me!

Highland Profile - There were many positive comments about last month's Member Profile. I hope you can make the convention, because Jerry and Kelly Highland sent me a tape of their exploits that I will bring to Faribault for viewing. It has also sparked the question, 'What is a J Hook takeoff?'. I must get ahold of Jerry to find that out!

Q&A - Many of our members are not active on the Associations website. They either don't have a computer, don't know how to run the one they have (my husband), don't have time, or don't care. In this issue, I am going to try something different. I went through the Website Forums and picked a few questions that were submitted. Then I took the answers

that were given by other website members and I am reprinting them here. They all have great information in them and may be useful to members that either missed them on the website, or don't go to the website. Please let me know via email feedback if you like this feature. (Or don't like it). And if you are one of the above that doesn't use the computer, my phone still works for feedback!

Mail Bag - And now on a light note... The following is an email I received, and I laughed so HARD, I just had to pass it on! I removed as many of the identifying characteristics as possible. Well... it speaks for itself!

Hello,
Could you please remove my name from your mailing list? *Name removed* (and his mouse infested airplane) left my residence last winter, but I continue to receive a dizzying amount of aviation material for him. If you could also delete my name from the web site also that would be great.
Thank you.

FREE SCREWDRIVER

Member Gene Morris, TX, sends us these pictures of his Cessna 140 rudder pedal. The plane had been sitting un-flown for years when he purchased it. Imagine his surprise when he discovered that he got a free screwdriver with his airplane.



**DIRECTOR OF MAINTENANCE
DAVID LOWE**

Phone: 270-736-9051 - FAX 270-736-9051
Email: loweaviate@earthlink.net

TECHNICAL ADVISOR - VICTOR GRAHN

17465 Woodland Lane, Nunica, MI 49448
Phone: 616-846-9363
Email: zenyamaero@netzero.com

KEN TENGESDAL

Every now and then you meet somebody who uses their Cessna 120/140 in a unique way. Most of the time, your reaction is something like, 'Huh, That's neat!'

And there is the one where you stop, clean out your ears and say, 'You do WHAT with your airplane?' This is one of those stories....

Meet Ken Tengesdal. Ken is one of only four (4) International Cessna 120/140 Association members from North Dakota. When I met Ken at the Omaha Convention is 2005, he told me a bit about his 120 adventures and I had to stop, clean out my ears and say, 'You do WHAT? with your 120? This I just gotta hear!'

Ken learned to fly in 1967 in a 150. He got his Cessna 120 in 1976 and puts about 100 to 150 hours a year on it. In 1979 some local sunflower growers were having trouble with the blackbird population eating all the profits from their sunflowers crops. Ken was asked to go up in his 120 and 'Do Something About it!'

Since then, every fall from August 1st through the end of the harvest, one of Ken's jobs is to get in his 120 and shoot blackbirds out of the window with his shotgun! Yes, you read that right! He shoots birds out of his airplane! Ken says his blackbirds are like the starlings of the Midwest. (If you have ever seen the flocks of starlings in central Illinois, then you can relate! Sometimes the whole sky turns black and it is like a scene out of the movie The Birds.)

Over the last 25 years, Ken now has it down to a science.

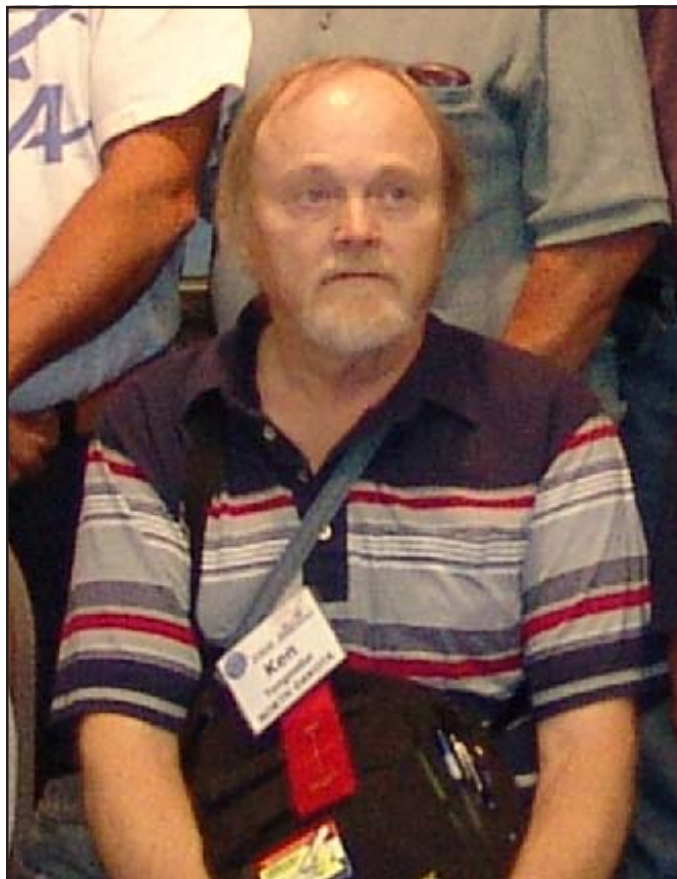
The area around Ken is considered Prairie Pot Hole region. A little info from internet:

The Prairie Pothole Region of North America stretches from Alberta, Saskatchewan, and Manitoba in Canada to Montana, North Dakota, South Dakota, Nebraska, Minnesota, and Iowa. Prairie "potholes" are wetlands that fill with snowmelt and rain in the spring. Some of these wetlands are temporary and others are semi-permanent. They support more than 50% of North American migratory waterfowl, and they mediate flooding by absorbing enormous amounts of water. Because this region is highly productive, more than half of all prairie pothole wetlands have been drained or altered for agricultural use.

As Ken says, 'There is lots of water everywhere'.

Birds are attracted to sunflowers. Many of the farmers that plant sunflowers are planting the kind that are used for cooking oil. The other type of sunflower is a 'confection' sunflower (like what people eat). The birds won't bother that type of sunflower till the end of the season unless it is the only type in the area. The sunflowers are planted in fields on what they call a quarter, or 160 acres, or ½ mile squares and the farmers he takes care of are about 25 miles away from his airfield.

He will be in the plane by 9am, and make his blackbird



rounds till about noon. Then he will help the farmers harvest the crops for the rest of the day. The next morning, he will finish the blackbird rounds. After the crops are all in, he will devote about 6 hours per day to his blackbird elimination rounds till the Sunflowers are all harvested. He will put in about 110 hours from August Through October, and expend about 4000 shells.

He doesn't go up before 9 am, or in the evening. During those times he has the sun in his eyes, and if he is shooting into the sun, he can't see the birds, and ends up flying through them. He says he has had times where he has inadvertently flown through a flock, and after that you have to land and clean off the windshield so you can see before continuing. (Ick!) He has now learned that if you keep everything off to the side, you never fly into the flocks of birds.

Ken uses only 2 – 3 rounds per pass through the field. He will make a pass down the side of the field then come back around down the center to see if there is any birds left in that field. Sometimes he will have to do it twice because he says they get smart occasionally and will not come up on the first pass. After he assesses the field, he may have to unload a few more rounds if they are still around. He never spends more than 10 minutes on a field because after 10 minutes they will get used to you and not come up.

Ken says that at times, the flocks of birds are so large that you can see the dark clouds (birds) from 4 miles away. There is both a local blackbird population as well as a migratory population. Ken has a waiver/license to shoot migratory birds. As far as he knows, he is the only



one doing this kind of thing. On another note, he says that he can't get insurance because of the outrageous commercial operation he does!

A side by side plane is essential for this operation (tandem seating is too narrow). He fires the shotgun out the left window, (which has been disconnected so it opens fully) and keeps a stopwatch and a pad of paper on the right seat. The stop watch is used to keep track of the time spent in each field. This is noted on the pad of paper, along with the number of shells expended on those fields. Billing for the farmers is more accurate this way.

Ken likes the 120 because it has a wide enough cabin to store all his required equipment and the cabin has no exposed cables and holes for shells and casings to fall down or interfere with. Weight is low and there is lots of room and good visibility. Since there is no flap handle, there is less stuff in the cabin to get in the way of his work.

I asked him if it really makes that much difference. He said the farmers keep asking him to come back, so it must be doing something! Ken's 120 wasn't flyable in 2005, (which is why he was at the Convention), and he said the farmers noticed more damage than the previous year, so they have asked him to get the plane fixed and start shooting!

I asked him if he had any pictures of his work, and he said his hands were too busy to take them! He did have a friend rig up a video camera, and the pictures here are taken from the video.



Mort Brown and Coyle Schwab's 195



MORT BROWN FLEW 14,000 CESSNAS

(Excerpts from Dennis Pearce's 3/29/98 Wichita Eagle article, submitted by Tom Teegarden)

The title is not a misprint! Mort Brown did fly that many different Cessna piston engine aircraft between 1938 and his 1972 retirement from the chief production test pilot position at Cessna's Wichita manufacturing facility.

Brown, now an alert 90 year old, has many interesting flying stories to relate. After serving in the Marine Corps, he got his wings at the Santa Clara, CA Eddie Martin Flying School. With his new commercial ticket he got various flying jobs in this home town of Denver. While working at Dave Wilson's Flying School, he met Cessna's C.E.O., Duane Wallace. He and Wallace became fast friends which



resulted in Brown's move to Wichita as the new sales manager. Economical times were still very tight in 1938 and Brown found himself selling the aircraft, doing the production flight testing, delivering the plane and collecting the money! The collection was necessary to place funds in the coffers with which to purchase more component parts to build the next airplane. Brown convinced Wallace to hire a full time sales manager to free him for his first love, that of test flying each airplane as it rolled off the assembly line. With pre-WWII orders and Cessna's general success, Brown became chief of a staff of at least six production flight test pilots. "We'd start with a good 'walk around' look at the plane. We were after all, the first person to take the plane into the air." In less complex airplanes the performance testing, instrument checking, rigging and other checks could be accomplished in as little as an hour. More complex aircraft could take all day.

He tried his best to instill the practice of not allowing customer or sales pressures to rush his test pilots into missing on of the many procedures.

On one occasion, a customer was pressing for a rapid test on his new 310. As he impatiently waited, the test pilot checked fuel flow from only one tank. Unfortunately, flow from the other tank was blocked due to a faulty part and the results were an unscheduled landing with damage.

One of Brown's memorable experiences occurred when the entire yoke came out in his hand on the new 337's climb-out. Continuing to a safe altitude and performing extensive experimentation with the trim and power prepared him for a landing at Wichita's McConnell AFB. "McConnell's 21,000' gave me a little more sidewalk. I got it down OK!" An important bolt had fallen out due to a loose or non-existent nut.

Production flight testing was always done only in VFR conditions. There were times that the pilots flew from dawn to dark seven days a week to fulfill government and other committed orders. Brown estimates that he flew at least 14,000 of the 85,000 Cessnas produced between 1938 and 1972. Did he have favorites? Yes, he admits the 195 was the most comfortable and best cross country airplane he ever flew.

"The 5,000, or so, 120-140 series were the easiest production run. They usually only required no more than an hour of testing.

Mort Brown's 23 log books detailing an excess of 20,000 hours starting with a half hour in Marshall Missouri, it would make for interesting reading.

The 90 year old ex-Marine, ex-test pilot still lives in Wichita and occasionally gets a ride with well known pilots Rod Huckins & Dave Blanton.

(Ed. Note: My friend, Coyle Schwab, C-195 Club President, flew down to see Mort and got the pictures. Mort did the final flight testing on Coyle's 195 almost 60 years before this pictures was taken. Coyle asked him why his test flight was so much longer than other 195's he has looked at and Mort said, 'Oh, those 195's sometimes had trouble with the heaters and those took longer to trouble shoot'.)

Q & A - Tech Questions

Q & A The following are some questions and answers taken from the forums on the International Cessna 120/140 Association's Official Website, www.cessna120-149.org (Some editing may occur for brevity, clarity or spelling).

EMPTY WEIGHT

Q. Does "empty" mean no fuel, no oil and no seats? Why are the seats listed in the certificate for the 140 in the balance calculation if they were in the plane as the weight and balance was calculated?

Just trying to figure out the differences on my plane "empty" now (990lbs) and "empty" 1973 (970 lbs). And I know the wings with the cotton and dope was heavier than the Poly Fiber I used now. Every-thing except paint should be the same as 1973. WP

A. Empty Weight— per the FAA:

The empty weight of an aircraft includes all operating equipment that has a fixed location and is actually installed in the aircraft. It includes the weight of the airframe, powerplant, required equipment, optional and special equipment, fixed ballast, full engine coolant, hydraulic fluid, residual fuel, and oil. Additional information regarding fluids that may be contained in the aircraft systems and must be included in the empty weight will be indicated in the pertinent Aircraft Specifications or Type Certificate.

I've seen or "heard" of several different ways of doing the weight check.

Yes your seats need to stay in the airplane, as do the radios, seat belts, basically anything attached to the airplane.

What is probably most important is to weigh the aircraft the same every time. We always note on the weight and balance sheet if we had full engine oil, removed all pilot equipment (headsets, charts, snacks (food), spare oil containers, cleaning supplies etc as a note stating "all non-essential items removed" or something to that effect.

Mostly it has been full engine oil, and either all fuel removed or "un-usable fuel" still left in. The way to do that is either to drain out every drop of fuel, then you have "residual fuel".

Or to get "un-usable fuel" then you level the aircraft, open the fuel line at the carb and drain all the fuel out that way. You will still be able to drain fuel out of the wing tank drains, but you leave it in.

Then re-fill the tanks after you are done weighing the aircraft you will accurately know how much "usable fuel" you actually have available to you in flight.

I've seen many times where aircraft are weighed

with full fuel and then the "usable fuel" is subtracted out of the equation by math.

It just has happened to me numerous times where a debate will arise as to how much fuel to subtract, weight wise, then that tends to throw your numbers off. I've never been convinced that's the best way to weigh an aircraft, due to the number of times I've weighed them afterwards, either empty of fuel or with actual "un-usable fuel" on board where the numbers would be different. Enough to make me not want to weigh aircraft with "full fuel". Too much tendency for "numbers hanky-panky" for my taste.

Obviously the greater the amount of fuel, the more room there is for error.

You will find that one main wheel will have a little more weight on it than the other. This seems to be more normal than to have both main wheels have the same weight.

Typically some of the Jets I've weighed in the 10,000 to 30,000 empty weight range would be 1,000 to over 2,000 more pounds on one gear than the other.

Little airplanes you probably will see the difference in the 10-50 pound range.

I guess if there is one rule of thumb, check the Type Certificate, then the POH or the flight manual. Those list the empty weight requirements for most airplanes. Unfortunately, our Type Cert is pretty basic and other than the bare essentials doesn't cover very much of this, some required equipment and a few other notes is about all.

Then it all equates to "what needs to be in the airplane to actually make it fly" MINUS the pilots and their items and the fuel. VG

Oil Pump Losing Prime

Q. Problem: My C140 with C85 (1400 SMOH) lost prime on the oil pump and would not show oil pressure on start-up after sitting for a week. My AME pulled the oil PRV to check contamination on seat, and noted the seat seams to have lines/ checks on it. I pumped 15w50 Aeroshell into the oil pressure gauge nipple at the case and hand propped to get oil to the rocker arms, then started and pressure came up to 40 psi on idle at 5 degrees C OAT (Yukon spring!).

It has done this once or twice before (in five years) after sitting for a long time - 2 to 3 weeks in hot weather. Other info: oil pressure is normally good (hot) at idle and cruise - 30 to 45 psi; use 15w50; oil filter installed in last 25 hours; there was no blockage in the oil pressure gauge feeder line.

I note in a previous post on 2005 July 20 that D.O. had this problem but there is no conclusion in the forum. RT's post seems to give the best info 'Air leaks in the pump housing or pick-up tube would promote loss of prime and subsequent ability to self prime'.

Any advice on where to start the search? Is it a big job to replace the pump? FN

A1. We put a honed cyl on and tried to hand prop to get oil pressure, but oil never seemed to pressurize. I read a lot on this page about this and suggested to get some oil in to the oil pump via the oil temp bulb. But my mechanic just filled the oil filler tube to the very top. And after a few revs on the prop, the pressure was there. To get the extra oil out was easy because we put the quick drain on before oil change.

A worn seat on the oil pressure bypass will only drain the oil in the left galley back into the sump. The oil pump will still maintain it's prime. A worn seat could keep you from getting good oil pressure as it would be bypassing at too low a pressure. The bypass is on the end of the oil pressure path and when it opens it puts oil on the accessory gears and then it flows into the sump. WP

A2. In the 29 years I've owned my 120 I never had an oil pump prime problem...until last week. If it were not for this problem being discussed in this forum, I would probably be tearing down my engine right now.

During my annual I decided to remove the oil screen to comply with the oil filter STC. I had the screen off for about an hour while I de-soldered it, perhaps that's how I lost prime.

I tried squirting oil in the temp hole and the oil filter hole, but could only get 2 or 3 squirts in before it started to run out, even with a rubber hose on my oil can to get in deep. I filled the oil filter with oil before installing, and even squirted oil in the pressure regulator housing. Then I started to get worried. I cleaned the regulator seat and plunger, tested the gauge, cleaned out the gauge line and dropped the oil tank to check the suction tube, all to no avail.

Looking at my engine manual I could see that the highest point available to pour oil to prime the pump was through the oil galley that feeds the oil filter. I removed the oil filter bracket assembly and squirted about 3 ounces of oil in the upper hole while turning the prop backwards...Viola, that did the trick! I checked the following day and still had prime.

This was a lot more involved than some of the other experiences I have read about in this forum, although I suspected that prime was the problem, I did start to get nervous when all the fixes I had read about didn't work. As I said before, if it weren't for this forum giving me a heads up, I'd be an unhappy camper right now. KW

Follow up: I thought that since I started this string I should let everybody know what I have done to solve the problem.

First, I removed and cleaned the spring/plunger pressure regulator near the screen housing. I pulled the line to the oil pressure gauge off at the case fitting and pumped about 6 oz of oil into the system with a thumb-pump type oil can with 1/8 inch plastic tube attached, and at the same time swung the prop. With a rocker cover off, oil came out the top.

I started the engine and oil pressure was instant, 35 psi on idle with throttle off (4-500rpm).

I let it sit for a week, and started again - oil pressure normal in 5-10seconds.

I let it sit another week - good pressure on start-up.

Just to be thorough, I pulled the oil tank off and inspected the suction tube etc - all looks good. Changed the oil and filter, re-assembled, refilled the oil, and started up - oil pressure normal in about 10-15 seconds (put some oil in the filter before installing).

So my conclusion? Not sure. I think that the seat for the oil pressure regulator plunger looked eroded/rough and may have had a piece of carbon or something in it.

Does anybody have experience with damage/erosion to the seat, and does it normally need to be ground when an overhaul is done?

Thanks to everybody for your help. We are flying again and keeping an eye on the oil pressure!! FN

Windshield Installation

Q. Can anyone give be an idea what it would cost to have a new windshield installed on '47 140? Is there any possibility of other issues arising from the windshield replacement process? For instance, is there any significant chance of the paint being damaged? Any idea what an A & P is going to hit me for to install a \$375 CeeBailey windshield? Is the installation something that can be performed without complication- i.e. ruining the paint, cracking the dash, etc.? MZ

A1. OK , I'll bite.. If the windshield has been replaced before it more than likely will have screws rather than rivets. If it has rivets, you will be drilling. If you take a razor blade and score the paint along the windshield retaining strip, you may get away without the paint chipping off when the strip is removed. Also there is a tool to score around the rivets for the same reason.

I have never seen any replacement windshield that fit without trimming. Some less than others. I normally go back with 6/32 rivnuts and screws , so count and order enough for the job and have them on hand before you start. Have the rivnut tool also. Make sure you clean out all the old sealants and dirt from the channels.

Depending on how much trimming has to be done, The job can take 6 hours or so to do. I use a belt sander to trim with and an 80 grit sanding disc on my air drill for the final trim, then 220 sandpaper to round the edges smooth. My shop rate is \$60 / hour, so \$360 plus materials. If paint touch up is required the cost goes up. There is a reason A&P's charge for their services. JS

A2. I like the Cee Bailey because of their round shape. It also adds strength to the windscreen. The .125 is the regular size and is fine. The sheets of plexiglass vary in thickness anyway and you usually

end up with one thicker than 1/8 inch. I have never ordered a thick one on purpose but once I got one that was considerably thicker than normal and it was bear to install. Weight is always a consideration so I like the regular thickness. RT

Vortex Generators

Q. Is there an STC'd set of VGs for a C140? I have metal wings and wonder if anyone has any feedback about them. SN

A. I put the generators on my 120 three years ago. STC # SA00123SE, from Aeronautical Testing Services, Inc., 18820 59th Drive NE, Arlington, WA 98223. I believe there are others available now, too.

My wings are fabric, but the STC does not distinguish between metal or fabric. I have not performed any critical measurement performance tests, but I do notice a significant improvement in lower stall speed. Once the stall comes up, however, it goes rapidly.

With these VG's installed, I have been able to "slow fly" to the extent that the airspeed is useless - the needle is down in the blank space. I like to operate out of short fields, and I put them on simply as another safety factor. Believe they would be good safety factor for mountain flying, too, which I hope to get back into if FAA will ever re-certify me.

The VGs just "glue on" on top of wing maybe 5-6" from leading edge. Don't remember exact cost, but believe it was less than \$1000. Since I bought these several years ago, the cost is probably less now. The STC I used does not have anything on the tail, however, I have seen others, for example an Aeronca, that did use them on tail.

Whichever STC is used, I, too, believe it is a good thing to do. HW

Starting a Hot Engine

Q. Its so easy to start the 140A C 90-12F Continental " cold " engine. With few strokes the engine starts up an run easily. I have problems when I cut the engine and I need to start it again and the engine is still hot. As a tropical country the temperature is always between 65 F to 85 F and we have no problems with " cold weather" . What is the better way to start a hot engine? If I know that I will have to start the engine again is better to cut the magnetos or mixture? SAP

A. The most important thing is to not prime on a restart hot. Shutting down with the mixture is best as it does not load the engine with fuel like killing the mags will. If you miss a hot start it is likely flooded. To cure this open the the throttle while you crank and when it starts bring it back to an idle. The open throttle will not pull in more fuel and you will get mostly air so a rich condition will turn in to a lean mixture and it should start. R.T.

Cessna 120/140 Fly In July 8, 2006 Clare, Michigan



Cessna 120/140 Fly In July 8, 2006 Clare, Michigan





CONVENTION UPDATE

This year the Convention starts bright and early on September 27 and everyone will be flying home on October 1. We added an additional day to the normal Convention dates again and will follow the format set by previous conventions. There will be a CONVENTION SCHEDULE placed on the website ([Cessna 120-140.org](http://Cessna120-140.org)) and adjusted as necessary.

CURRENT STATUS:

► **Poker run:** Wednesday, September 27 at 9 am. It makes a good excuse to go flying. The purpose of the run is to fly to a series of different airports. At each airport the pilot is given a card. The person with the best poker hand at the end of the run will win something. Show up and take your chances with the cards.

► **Spam Museum:** Thursday, September 28 at 1 pm. A year or so ago a group of 140 Club members visited the Spam Museum in Austin, MN. Everyone had such a good time it became the first item on the Convention schedule. It's an easy 45 minute flight south of Faribault. Take I-35 south to I-90 and turn left.

► **FREE Weight & Balance Check.** A hangar will

be set up with a set of scales. A sign-up sheet will be available. Sometimes airplanes are like kpeople. As they age the ounces turn into pounds and pretty soon you have a senior citizen airplane that has middle age spread. Has your plane reached a thousand pounds yet?

► **Saturday Flying Events:** How good is your airplane? The pilot? The flying events will consist of a short take-off, followed by nerf ball drop (something that has to be seen! A perfectly sane person running around with a big net trying to catch a foam Halloween head dropped from a 120/140) and ending with a power off spot landing.

► **Aircraft Judging** will also take place on Saturday. Trophies will be handed out during the **Banquet Saturday** night.

► **Forums** are being scheduled. The Minneapolis FAA FSDO has been invited to give a talk. They did it in 1996 and it worked out great. We have to wait 60 days prior to the convention for a confirmation. There is a chance for tours of the Farmington air traffic control center. As that confirmation comes through it will be up on the web. Also, we have members who have volunteered to give forums, *plus a few who just don't know it, yet.*

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www.cessna120-140.org

www.cessna120-140.org, The **official website** of the International Cessna 120/140 Association, www.cessna120-140.org, offers club information, Officer and State Rep contacts, membership information, a guestbook, merchandise and club calendar. The Discussion Forum is a favorite place to communicate with members. The photo album is available to show off your "baby." There are links to member sites, printable membership applications and merchandise order forms, and much more. Stop by and sign in.



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Getting the Right Cowling

Numerous times in the course of a year I get asked questions about cowlings. Many times it's by someone who is looking to rebuild a project aircraft, replace a damaged cowling piece, or, just plain make sure they have what they think they have.

In helping to keep up with the following dissertation it might be helpful to grab your parts book and look at figures 35 and 36.

Right off the bat you'll notice the delineation is marked as 1946 for figure 35 and for years 1947 through 48 see figure 36. You'll also notice many of the part numbers are different. But, a 120 and 140 are really the same airplane you might think? Or, the cowlings look so similar so why can't I just get what ever I can find at the Salvage Yard or in Trade-A-Plane and slap it together?

Well as the old TV commercial went "parts is parts" and part numbers are part numbers. Sometimes they interchange and sometimes they don't.

Quite often I dabble in older motorcycles. Many times you think you ought to have the right part, yet notice the part number is different. Yet it fits? So what gives?

By and large certain manufacturers don't change much when they go from model to model or car year to car year even. Not only Motorcycles and Cars, but Airplanes as well. This past year while at the Omaha Convention there was one Cessna 170 there. After several of us had looked at it, we came to the unmistakable conclusion that the gear legs were identical to the early 1948 gear legs found on 120/140's. So obviously Cessna while they were making C-170's decided that the gear legs on 120/140 would work for the next generation. How great is that, why re-invent the wheel, just take something already available and bolt it up. I will say a great many C-170's that I've seen did not have the C-120/140 gear, but this one did. It was so original, that it still had the rivets in the middle of the gear leg for the gear step!(which a 170 doesn't have, at least not like ours)

Sometimes however the part number does signify an important part change and that's where this article comes in, to help you sort out what year of cowling you have on your airplane.

All the 46's will interchange with any other 46 cowling part. The same goes for 47 and later. A 47 part will fit a 48 and so on right up to the last 140A.

How do you know which is which? Well, it helps to have a 46 aircraft parked next to a 47 and go from each one and look for the following differences.

A 46 cowling will have a shallower nose bowl, it isn't as deep, doesn't extend forward from the rivet line quite as far as the later years.

The two top wings that open so you can access the engine compartment are different in that the piano hinges stop short of the nose bowl by a good four inches. On a

47 and later they will go right up to the front.

On a 46 cowling the air exit hole at the lower firewall location (bottom aft section) is larger, it is a square cut and extends farther towards the ground than the later years. This was designed to allow the "straight exhaust" stacks to exit out the back. It also gives better cooling if you were to install an O-200 (or a Lyc) engine on your airplane.

The 47 and later cowlings have an air exit hole that is more triangular in shape, such as you see in the upper corner of figure 36 where the doubler (item 29) is shown. Also the exit hole for the air isn't as large and doesn't extend into the airflow as much.

So, what's all this mean to you, the reader? If, say you are in the process of replacing your nose bowl, or one of your upper "opening wings" you'll need to know which year you have to properly obtain or order the right part.

"Ah, you say, why would I want to bother with such things, I own a 1948 C-140, obviously I have a 1948 cowling". Well, you probably do, however let me cite two examples. While at Omaha this year there was a 1950 Cessna 140A with a 1946 cowling on it. How did it get there? I don't know, I never could find the owner, but I'm willing to bet the original cowling had some damage and they scrounged what ever they could find and installed it, perhaps years ago.

On my own airplane I have the front cabin section of a 46 riveted to the tailcone section of my original 47 C-120. After the aircraft got destroyed in a wind storm, for some reason I couldn't find good parts for some time, so I ended up buying whatever I could. Thus the two years were joined together. The cowling however is completely made up of 1947 parts.....from three different airplanes by the way.

The long and short of this is, you need to keep your years together, and realize that the front of the fuselage will accept either style (year) cowling.

The only thing that won't work is if you have a 46 aircraft with the old straight exhausts. You'll need the 46 cowling. Your exhaust would rub severely on the bottom of the later year cowlings. There simply isn't enough clearance to allow the straight exhaust on the 47 and later cowlings.

Or, if you want, you could just dispense with your straight exhaust and install the later year mufflers or an O-200 exhaust system and utilize the later year cowlings. This is a possible option.

There's lots of ways to "skin a cat" as we've heard so many times and hopefully, if you find yourself in the "need cowling parts" mode, perhaps this article will help. Or it might make if more interesting the next time you see several Cessna's lined up to spend a little time figuring out which cowling they have and if it matches that particular year aircraft.

2006 Faribault, MN Convention Planner

This is the last Newsletter issue before the Faribault Convention. Do you have your reservations yet? If not, better get them!

Some things to remember for the convention...

1. Do you have any new business to discuss?
2. Review the minutes from the last convention, so Sharon doesn't have to read them out loud to everybody. (The minutes were reprinted in the last issue of the Newsletter, June/July 2006.)
3. There will be great merchandise there, so plan to pick them up and avoid paying the shipping charges.

Be sure to bring the following for the convention:

- ▶ Tie Down Ropes and stakes
- ▶ Cover if needed
- ▶ Check book
- ▶ Room for stuff to take home
- ▶ Camera

SPARE CYLINDER

Currently the Club has a loaner Cylinder. If you are ready to head out to the convention, or are on the way and get stuck somewhere because of a cylinder problem, give us a call. We have a cylinder all set up for a C-85 that we can ship to you to get you on the way. All we ask is that you replace it with another one ready to be loaned out to the next

Member that needs it. The cylinder is currently at our house, so it is best to call us. (Ken & Lorraine Morris)

ASSOCIATION OFFICER NOMINATIONS – Get Involved!

This year's annual membership meeting, as specified by association by-laws and your board of directors, will be held at the convention in Faribault, MN, September 29, 2006. Officer nominations are being solicited and accepted until a meeting motion to "close," with voting to follow. **PLEASE** consider volunteering for one of the three offices to be filled this year (**Vice President, Secretary/Treasurer, and Newsletter Editor**). Contact one of your '06 Nominating Committee members ASAP to submit your name, or the name of another member who has indicated a willingness to serve.

Nominating Committee members are:

Nicki Acker (acker1nr@cmich.edu or 989-465-6229)
Ward Combs (wacii@prestox.com or 402-426-8041)
Bob Parks (rparks@kcc.com or 770-962-6875)

If you have any questions about these offices and/or related responsibilities, please refer to the association by-laws (...in your '06 Membership Directory); ask Nicki, Ward, or Bob; or contact any of the association officers/directors.

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■ **1950 140A**, TTAf 3285, 705SMOH, Cont. O-200, 150 Exhaust, 150 Seats, New interior, Hooker harnesses, Scott 3200 tailwheel, Cleavelands, Fiberglass wheelpants, Strobes, Genave Alpha 600 Nav/Com, Narco A150 transponder, Excellent compression, \$27,500. 724-513-9678 **Michele Vida**

■ **1946 Cessna 120 Project** - \$6,000. Metal Wings, no damage, partly stripped, no engine or propeller. For more information call, **Robert Wheeler** 989-644-8973

■ **1948 Cessna 140**, C-90, 3825TT, 1490SFRM. Extensive restoration completed 2003. New interior. New KY97A, KT76A, and AK350. Dual intercom and head-sets. Cleveland W/B. Original metal pants. Tip strobes. L/E landing light. Cessna harness. Quick drain. All logs from new. Annual to Oct. 06. Award winner Horn Point Antique Fly-in, May 04. Photo cover 120/140 News June 04. \$29,500/offer. **Bob MD**/410/592/8358 email: RJH72V@aol.com

ORIGINAL STYLE DOOR SEAL

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■ COMING EVENTS ■

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31st Annual Convention - International Cessna 120/140 Association

FARIBAULT, MINNESOTA

September 27-October 1, 2006

Plan Ahead!

Come Join Us?

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Breakfast at the Silver Wings Cafe.

TEXAS & SOUTHERN OKLAHOMA BREAKFAST/LUNCH SCHEDULE

Most every Sunday the group from Texas and Southern Oklahoma gets together for breakfast about 8:30 at the scheduled airport. Here is their schedule:

- 1st Sunday - Lake Texoma
- 2nd Sunday - Lake Murray
- 3rd Sunday - Cedar Mills, at Pelican Bay,
Texas side of Lake Texoma
- 4th Sunday - Hicks Field (T67)
- 5th Sunday - Hicks Field again

Call Leonard Richey, 940-627-1883, for more info.

Computer Corner, no batteries allowed!

Here are the questions for this month's issue. Be sure to check out the Oct 2006 newsletter for the answers

Q. You are 120 miles from departure station and 18 miles off course to the right and 170 miles from your destination. What is the drift angle? How many degrees do you have to turn to go to your intended destination and which way do you have to turn?

Q. Altitude - 5000', temp - +15 deg C.; IAS - 125 mph; what is the TAS?

Answers for the questions from the last issue:

Q. Altitude to gain is 9000 feet. Time to gain altitude is 21 minutes. What is the rate of climb?

A. 430 fpm

Q. Degrees of Bearing Change - 5; Time between bearings - 3 min; Aircraft Ground speed is 110 mph. What is the time to station and distance to station?

A. 36 min., 66 miles



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■ Active STC's ■

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Gary Rice - 361-643-4330

Continental O200 - 120/140/140A

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SEPTEMBER 27 - OCTOBER 1, 2006

NOTE: Activities are planned for September 27 - not an arrival date

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Convention Hotels: Credit Card deposit required. All rates plus tax. *Limited number of rooms blocked in the main hotels and will be released by the hotel one month before the convention. Reserve Early!*

International Cessna 120/140 Association

Box 830092, Richardson, TX 75083-0092

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