PUTTING WINGS ON

YOUR DREAMS

VOLUME XV

ISSUE 9

Editor Bert Osborn

CFIT

My Thoughts – I ran across the following article a few weeks ago and thought it would be a great article to publish. There have been several CFIT accidents in the backcountry, some very experienced pilots, and some not so experienced. Within the past few days we lost a very well-known and generous pilot, Tom Boyer. I knew Tom and am very saddened by his loss. He had helped in the ACE program with me and others for the past several years flying kids, and I've run into him many times at Sulphur Cr.

The investigation is just beginning. In the area of his accident in the Owyhee's, its possible it was a CFIT situation.

From the Idaho Aviation Association:
This past Sunday, September 30th, in the early morning a longtime supporter and member of the IAA Tom Boyer flew west. It is with great sadness I bring you this news. Mr. Boyer was an extremely generous man and supported the IAA mission in so many ways. No matter what the occasion he always provided us with coffee from his Treasure Valley business as one small way of many he helped support our mission. Mr. Boyer was a friend and loved pilot all around. Regrettably two others lost their lives as well as Tom's dog Ellie. The IAA and its family are here to support the grieving families in any way we can, and our constant thoughts and prayers are with them.

Fly Safe and Don't do anything Stupid.

Jim

Accident Probe: A Turn Too Late

JOSEPH E. (JEB) BURNSIDE

This article originally appeared in the March 2018 issue of Aviation Safety *magazine*

The club has a subscription to Aviation Safety, copies are in the club meeting room

It's easy to look at controlled flight into terrain (CFIT) accidents as the kind you'll never get into. Sure; you may suffer an engine failure from contaminated fuel or scrape a wingtip while landing in a stiff crosswind or even forget to put down the gear before landing. But flying a perfectly good airplane into the side of a mountain? Never happen. The thing is, I'm relatively certain every pilot who was ever involved in a CFIT accident said the same thing at one point or another, perhaps right up until the moment a tree trunk came through the windshield.

The point is that a CFIT accident can happen to the best of us—and the worst. All it takes is loss of situational awareness, perhaps some bad weather and the misplaced confidence that all is well, that there's nothing to worry about and that the last thing that will happen is flying into terrain.

The NTSB defines controlled flight into terrain, or CFIT, as: "When an airworthy aircraft under the control of the flight crew is flown unintentionally into terrain, obstacles or water, usually with no prior awareness by the crew." A lot of what we know about these accidents comes from the recording devices available aboard larger transports required to have them. Invariably, these were crewed aircraft, those being flown by two or more pilots.

At the same time, those accidents share many common factors when single-pilot general aviation operators are involved in CFIT, with the principal difference being there's no second pilot available to question the airplane's trajectory. The sidebar below lists 12 factors common to CFIT among GA (i.e., single-pilot) operations. This month's accident features some of them and might serve as a poster child for CFIT involving a GA aircraft.

History

On March 26, 2015, at about 1220 Mountain time, a Canadian-registered Piper PA-32R-301 Saratoga collided with mountainous terrain about 16 miles northeast of Townsend, Mon. The private pilot was fatally injured; the passenger was seriously injured. The airplane sustained substantial damage. A mix of visual and instrument conditions was present along the route.

The flight received VFR flight-following services from the non-radar approach control facility at Helena, Mon. At about 1220, the pilot reported reversing his course due to clouds in the area. Shortly thereafter, the controller lost communications with the pilot, a not uncommon occurrence for the location.
The passenger later stated weather closed in and they were soon in the clouds. She recalled the pilot turning the airplane right to try to exit the clouds and heard the pilot tell ATC they were turning around. She heard a computer voice inside the cabin state “terrain,” followed by a partial “terr...,” and then the airplane impacted the wooded, snow-covered terrain. The passenger used her cell phone to contact local authorities and report the crash.

Investigation
The accident site was at an elevation of 8,350 feet MSL. A 300-foot-long debris field was oriented on a heading of about 350 degrees magnetic. Review of radar data revealed a target consistent with the accident airplane traveling on a southbound heading at an altitude of 8,450 feet MSL before climbing over the next 10 minutes to about 9,500 feet.
Two minutes later, the target initiated multiple turns while climbing to 10,125 feet over mountainous terrain with peaks reaching 9,400 feet. The last two minutes of the radar track depicted the target heading southbound and paralleling a ridgeline while descending to an altitude of 9,300 feet before disappearing from radar. After detecting the airplane’s emergency locator transmitter, a search-and-rescue team reached the accident site at 1810. The team reported encountering severe winter weather conditions.
The 632-hour private pilot earned his instrument rating when he had 24 hours of experience in actual IMC. At the time of the accident, he had logged a total of 27 hours of instrument time, none of which were in the last 90 days.
Examination of the airframe and engine revealed no evidence of mechanical malfunctions or failures that would have precluded normal operation. The airplane’s equipment included an iPad with terrain avoidance software. This software likely provided an audible voice alert of “terrain” during the accident sequence.
The pilot received official weather briefings for the flight from Lockheed Martin Flight Service both by phone and electronically. The telephone briefing included the presence of clouds along the route of flight and Airmets for turbulence, icing and mountain obscuration. VFR flight was not recommended in areas of higher terrain with mountain obscuration.
None of the weather information obtained specifically mentioned the possibility of mountain wave activity over the mountainous terrain. A simulation considered weather conditions surrounding the accident site at the accident time. The simulation indicated the flight likely encountered downdrafts with a velocity between 500 and 900 fpm in the accident site area.
At 1153, weather observed 32 miles northwest of the accident site at 3,877 feet MSL included wind from 280 degrees at 18 knots, visibility 10 sm and an overcast at 4,800 feet AGL. At 1129, peak wind was from 280 degrees at 29 knots.

Probable Cause
The NTSB determined the probable cause(s) of this accident to include: “The pilot’s decision to depart on and to continue a visual flight rules flight over mountainous terrain into instrument meteorological conditions, which resulted in controlled flight into terrain. Contributing to the accident was the pilot’s lack of recent instrument flight experience, which exacerbated his difficulty in maintaining control of the airplane while encountering downdrafts and mountain obscuration conditions.”
It should come as no surprise that this accident features some common risk factors associated with CFIT accidents: A VFR-only pilot (who possessed an instrument rating but lacked currency and obviously was trying to maintain VFR), mountainous terrain at least partially obscured by clouds and strong up- and downdrafts associated with relatively stiff winds.

This accident could have been mitigated if the pilot had chosen a different route, one avoiding high terrain, or if he had waited for better weather. Once aloft and over the mountains, windy conditions forced the airplane into rough, disorienting air. The correct decision—to turn around—ultimately was made, but it came too late to do any good.

Preventing CFIT

A February 2000 report from the General Aviation Controlled Flight Into Terrain Joint Safety Implementation Team included a list of 12 risk factors associated with CFIT when VFR pilots operate in areas of reduced visibility. They include:

(1) Loss of aircraft control.
(2) Loss of situational awareness.
(3) Reduced reaction time to see and avoid rising terrain or obstacles.
(4) Inability of the pilot to operate the aircraft at its minimum controllable airspeed.
(5) Getting lost or being off the preplanned flightpath and impacting terrain or obstacle.
(6) Reduced pilot reaction time in the event of an aircraft maintenance problem because of a low or lowering altitude.
(7) Failure to adequately understand the weather conditions that resulted in the reduced conditions.
(8) Breakdown in good aeronautical decision-making.
(9) Failure to comply with appropriate regulations.
(10) Failure to comply with minimum safe altitudes.
(11) Increased risk of hitting one of many new low-altitude towers installed for cellular tele-phones and other types of transmissions. This risk is especially great along major highways if VFR pilots try to follow a highway when lost or trying to stay under a lowering ceiling.
(12) Failure to turn around and avoid deteriorating conditions when first able.

Aircraft Profile: Piper PA-32R-301 Saratoga SP/II HP

Engine: Lycoming IO-540-K1G5
Empty Weight: 1,999 lbs.
Max Gross Takeoff Weight:3,600 lbs.
Typical Cruise Speed: 158 KTAS
Standard Fuel Capacity: 102 gal.
Service Ceiling: 15,588 feet
Range: 784 nm
V_{so}:57 KIAS

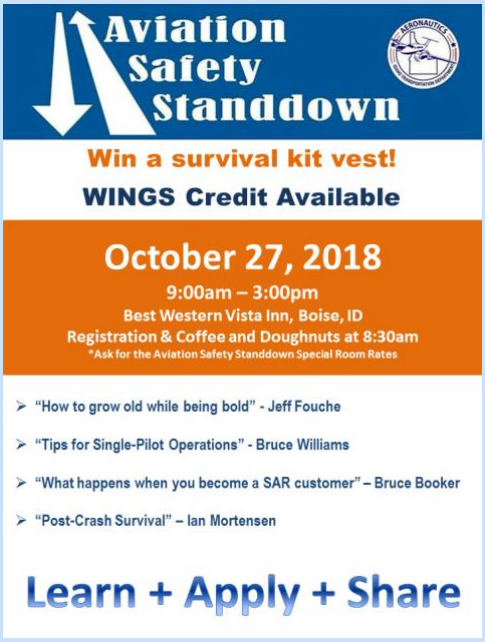
October 2018

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

Calendar of Events:

The next board meeting is October 9.
The next membership meeting will be Tuesday, October 30, 2018.

10/09/2018 - Board Meeting
10/10/2018 – Accounts due
10/16/2018 – Plane Wash
10/20/2018 - Accounts past due
10/27/2018 – Aviation Safety Standdown
10/30/2018 – Membership Meeting



If you have any ideas for safety meeting presentations or would like to arrange a presentation, contact Membership/Safety Director Jim Hudson

Fuel Reimbursement
$4.70 per gallon.

Articles or Pictures
If you have any pictures or articles for the newsletter submit them to Jim Hudson or Bert Osborn.

Member Statistics:
105 Members
24 on wait list.
36 Class I Members (34%)
69 Class II Members (66%)
09 Inactive (voluntary suspension)
15 Suspended (BFR/Med/Attend/Billing, Including 5 Inactive)
6 Social Members (non flying, not included in "Members")

(Please report any BFR's, IPC's, Upgrades, or new ratings to Jim Hudson or Bert Osborn)

Ratings
13 Student Pilots
69 Private Pilots
01 Recreational Pilots
11 Commercial Pilots
11 Air Transport Pilots
32 Instrument Rated Pilots

BFR's
Ben Jantzi
Michael Sage

Back Country
Level III – Charlie Wambolt

T-CRAFT STATS
August Billing Period

Top three flyers:

Bill Howard	13.1 hours
Dale Reese	12.7 hours
Kent Murri	10.5 hours

The top billing aircraft were:

N13686	$2,898
N7593S	$2,838
N1891X	$2,416

The top three aircraft flown were:

13686	39.7 hours
4464R	32.0 hours
67375	30.6 hours

Fuel Reimbursement
$4.70 per gallon

REMINDER-We receive a significant discount from the AV Center published prices. PLEASE REMEMBER TO REMOVE YOUR FUEL RECEIPT from the fuel pumps so others will not see our fuel price. Also, please do not broadcast our price to non-members.

HOURLY RATES (New Rates Effective 8/26/2018)
Due to increased fuel costs our rates have increases as listed. Fuel Reimbursement is $4.70/gal

N64375
$62.00

N4464R
$73.00

N13686
$75.00

N1293F
$86.00

N1891X
$121.00

N9989E
$128.00

N7593S
$128.00

SQUAWKS

- C152 / N67375:
  - Pilot had an emergency landing at KBOI recently (failed magneto). We are working to get it returned to KMAN this week. This particular plane has a split ignition system with the right side being a magneto and the left side being an electric system. The right side / magneto quit working. Pilot / instructor successfully managed the emergency and landed safely. Magneto was inspected and the internals had disintegrated, requiring replacement
- C172 / N13686:
  - In for the 100 hour check and discovered the OEM magneto was near failure, this will be replaced ASAP before it fails in-flight
  - Difficult to remove & replace the engine cowling (historically) which was a real challenge. The fasteners have been replaced making this easier
  - LED beacon was installed
  - Carb heat Cable was replaced
  - The top Garmin G5 avionics instrument has been displaying an error message, so it will be swapped from the upper position to the lower position (swap an identical G5) to see if this clears the error
- C172 / N4464R:
  - Oil change during week of 10/01 and will apply a fix to the brake cables at that time
  - In May 2018, this aircraft had 3,073 hours on the O-320-E2D engine. Currently it has 3,206.5 hours – or 1,206.5 hours past the TBO. Jim Eyre has been looking for options on replacing this engine with both field overhauls and factory replacements being considered. The engine remains operable today with good cylinder pressures and a clean bill of health from the maintenance facility.
  - At the September membership meeting the members passed a motion to have a Factory overhaul on the engine and replaced during the December Annual.
- C182 / N1891X:
  - LED Beacon to be installed during week of 10/01
  - Will have 100 hour inspection during week of 10/01
- C182 / N7593S:
  - Will be in maintenance during week of 10/01 for an oil change
- C182 / N9989E:
  - Will be in maintenance during week of 10/01 for an oil change
  - Altitude squawk on the transponder encoder – about 400 foot error. A replacement encoder has been ordered.

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PROP BLAST from the DOM

It's a CAVU day with a light breeze from nowhere. You decide to take advantage and go for that juicy $100 hamburger at your favorite grease joint. Blissfully en route you happen to glance at the engine instruments. You have normal oil pressure, but high oil temperature. What does this mean? Or perhaps you see indications of low oil pressure with high oil temperature. Would that make any difference? Giving you credit for even noticing these indications means you're already ahead of the game. Hate to say it but the ugly truth is that many pilots do not pay adequate attention to engine instruments. Airplanes and people are not infallible. If they were, airplanes would not come with warranties, and the term *pilot error* wouldn't be in the FAA's lexicon. Even for the seasoned pilot, engine indications can be confusing. Some indications simply mean that everything is OK. Those are the ones with a lot green on both sides of every needle. Other indications are signs of trouble, how much trouble to expect, and how soon to expect it. Key word is *expect*, making the difference between your finding trouble in time to address it, and trouble finding you after it's too late to do anything about it – the difference between a precautionary landing and a forced landing. In addition to the way an airplane sounds and feels to the pilot, the airplane tells you about its health through the engine instruments. Two of the most important engine instruments are the oil temperature and oil pressure gauges. They are the "airplaneese" your airplane uses to describe its health. Here are some quick lessons in "plane" language. High Oil Temp with Normal Oil Pressure: this is a tough one with a mountain of possibilities. No way to tell what is going on w/o further investigation. Best policy is to head for nearest airport – just in case. Err on side of safety always. High oil temperatures in flight may indicate high OAT or poor cooling during a long climb to altitude. Some airplanes just run a little hotter than others (686). May sound strange but something may be wrong with the electrical system. In some older aircraft an electrical short may cause oil temperature gauge to behave like an ammeter – higher the electrical load, the higher the indicated oil temperature. Try turning off unnecessary electrical equipment, one item at a time. Check circuit breakers and recycle the master switch. Ironically, indications of high oil temperature with normal oil pressure are common and commonly the result of *pilot error*. Did you miss something during your preflight inspection or make some sort of in-flight mistake? Was there oil leaking from bottom of cowling? Shouldn't have been. Did you even remember to check the oil? The airplane might be telling you that you have been using too much power with the mixture too lean. Pilot error? Normally you shouldn't lean the mixture when using more than 75% brake horsepower (BHP). This can cause detonation and eventually preignition. That is when parts inside the engine cylinder heat to an incandescent state, causing fuel to ignite prior to normal ignition forcing the cylinders to fire out of sequence. These conditions put a serious strain on the engine, will cause a loss of power, and may cause engine damage or even failure. Check the performance section of POH to find out what constitutes 75% BHP and notice that this figure changes with pressure altitude and OAT. Regardless of the leaning procedure used, if the engine begins to run hot or rough, you've over-leaned the mixture. Here's a way to determine whether you are running too lean: set your power and lean mixture until you believe its set properly. Now activate the carburetor heat and note indication on tachometer. If rpm increased, you've over-leaned. Heated air being less dense resulting in less air for same amount of fuel. Another common cause for high oil temp with normal oil pressure is the use of too high a power setting at too slow an airspeed. This can happen during an extended performance climb at V_X. You are over working the engine, airspeed is too slow to provide adequate airflow through the engine cowling for cooling and the oil is trying to compensate. If an engine runs too hot for too long, the oil pressure will eventually decrease because of thermal breakdown. Oil will lose its lubricating capacity. Now you've really got a problem. High engine temperatures can cause a loss of power and eventually engine damage or failure.

Treat any engine that is overheating, detonating, or preigniting in exactly the same fashion: Smoothly reduce power, gradually enrich the mixture to full rich, lower the nose slightly to increase the airspeed. If there are cowl flaps, open them. Hold level flight – don't descend – you don't want to shock-cool the engine (may cause cylinder heads or engine casing to crack); conserve your altitude just in case you actually do have a problem, because you will come to miss altitude very quickly when you really need it and don't have it. Normal Oil Temperature w/Low Oil Pressure: Bit easier to deal with. Airplane is saying "I'm going to be sick." Low oil pressure is a bad sign, a warning of the onset of a few possible problems, the least of which is a gauge malfunction. There may be an obstruction in the oil line. An oil line, gasket or seal may have blown and the engine may be losing oil which will invariably lead to a high temp/low pressure issue indicating an oil circulation issue and w/o oil engine failure is imminent. Assume gauges are right and head for the nearest airport. If one gauge is wrong the worst that will happen is that you will make a safe precautionary landing. If you see oil temp rising further or if this is accompanied by decreasing oil pressure, don't panic. But do expect a partial or full loss of power as the airplane is saying "I'm dying." Look for a place to land safely and go to it immediately. Normal Oil Temperature w/High Oil Pressure: this is rare. Could be obstruction in oil line, a malfunctioning oil regulator valve, faulty gauge or an electrical problem. Airplane is saying "Something's wrong, Not sure what." Watch the gauges and proceed with caution to nearest airport. Expect oil temp to rise. High Oil Temp w/Low Oil Pressure: Two gauges indicating serious trouble. Airplane is saying "I'm Dying." Don't waste time trying to work this one out because both gauges can't be wrong. Engine is definitely about to give up the ghost. Find a spot to land and treat the engine as though it has already failed. Get the approach right the first time – you may not have an engine for a go-around. Don't bet your life or the lives of others on a gauge malfunction. Any engine indications that are not normal are just that – Not Normal. Listen to your airplane. If something doesn't look right, expect a problem and you won't ever be caught off guard. Don't Panic. You won't just fall out of the sky. If the engine is still running, then you still have an airplane. If not then you at least have a glider. Continue to fly either one for as long as it will fly. Remember to look outside. AVIATE, NAVIGATE, And COMMUNICATE. Your primary responsibility to yourself, passengers, loved ones, and strangers on the ground is to keep it in the air until otherwise necessary. Don't get caught in the same trap as the airliner crew that crashed into the Everglades in 1972 when the pilots were distracted by a panel problem. The gear was down and locked, but 100 people perished because a $10 landing gear position light burned out. A smart pilot on the ground is a safe pilot in the air, and a pilot who listens to his airplane will be a smart pilot on the ground again.

MAINTENANCE TIP

When we are pilots in training our CFI's instill in us good habits on how to care for our birds. As time passes, occasionally we all forget and become rusty pilots in relation to care and maintenance of our aircraft. The Maintenance Tip for today is simply, when cleaning the windscreen, use only vertical strokes. Do not use circular strokes. Over time, circular movement of the cleaning towel will leave a corresponding mark in the screen that will require replacement.

New Hangar News!
9/25/2018

New Hangar Build:

- Approximately $46,000 left to pay for construction with some additional electrical pavement to cover
- Jay Gooden has helped keep costs down and recently ran a 4" pipe under the foundation to push the PEX plumbing / water supply through (ease of future maintenance and protects foundation / ceiling, etc. from original planned overhead PEX routing)
- Steel should begin going up within a couple of weeks (foundation concrete needs time to cure)
- Expect to complete primary construction by November 2018

Foundation Pour

Steal

Tips and Tricks

This is a new area in the newsletter. All members are encouraged to submit items you find helpful to the newsletter editor.

Flight Planning – Jim Hudson

Often, I'm planning BC flights and need to know the fuel/payload trade-off's and/or which plane is best suited for the mission. For the distance, time, and fuel for a specific flight I use ForeFlight. However, Foreflight has a limitation that it only calculates taking off from the departure airport and landing at the destination, even if there are other airports along the route. For a flight with multiple stops, I'll get an estimate for each leg. That's not usually a problem, except for a flight with several stops in which it can be a little tedious. I've found a good rule of thumb that works fairly well. I get the time of the route from ForeFlight, then add 0.2 hr for every take-off and landing. Then I calculate the total time and then use the total time times the cruse fuel burn rate to determine the fuel. That has worked fairly well, even a little conservative. On a recent BC checkout flight, we stopped or made 10 take-off and landings. ForeFlight calculated the route would take 2hr 12 min in 93S and burn 30 gallons of fuel. Adding 10 stops x0.2 = 2 hours to ForeFlight 2.2 hrs resulted in 4 hr, 12 min. Fuel required 4.2 hr x 13.1 gph + 1 hr reserve = 65 gal. The actual flight was 3.7 hr and used 52 gal. I've used this rule of thumb several times over the years and it works well.

Another tool is the one I wrote in the Excel W&B Worksheet available on the club website; the Trip Planner Tab. It's under the Site Index tab, http://www.t-craft.org/siteindex.htm. This planner is a table with all of our aircraft and is part of the W&B spreadsheet on our webpage. You simply enter the distance of your trip, your weight and baggage, and desired fuel reserve. It will calculate the excess payload you can take, fuel required for maximum payload, approximate time and cost of the trip for each plane. The results are for comparison purposes, are reasonable accurate but not to be used for specific W&B and flight planning. For example, the table below is from the Trip Planner for a 340NM trip (round trip to Moose Cr.) Using ForeFlight the fuel and time was projected for the same trip.. As you can see in this case the Trip Planner is very close to the ForeFlight projections. The W&B spreadsheet is on the club webpage in the Site Index Tab. Another observation is 93F has more payload capacity than 91X in this case by 100 pounds.

Estimated Distance of Trip NM	340	C182Q	C182H	C182P	C172N	C172M	C172M	C152
Reserve (Hours)	0.7	N7593S	N1891X	N9989E	N1293F	N13686	N4464R	N67375
Payload-Pax & Bagage Pilot & Bagage-->	225	649	482	686	579	452	451	143
Trip Time - Hrs. (includes 0.3 hrs taxi-run-up)		2.8	3.0	2.8	3.1	3.4	3.4	3.7
Fuel Level Required "Sticked Level"		46	49	47	40	32	32	Need Fuel Stop
Estimated Cost - including tax		$371.31	$ 373.29	$371.31	$278.90	$266.99	$259.87	$ 240.08
Fuel Burned		37.1	40.2	38.2	32.9	26.8	26.8	22.3
Max Fuel Capacity (Useable)		75	75	75	40	38	38	24.5
Fuel Reserve - Gallons		29	26	28	0	6	6	

ForeFlight Projections - 9500'

Trip Time - Hrs.		2.7	2.8	2.7	3.0	3.2	3.2	3.5
Fuel Burned		35.0	39.0	37.0	33.0	27.0	27.0	23

One must have fairly accurate airplane performance data for each of our aircraft in FF. FF has default profiles, but they do not provide climb and decent TAS, fuel, or climb/decent rates, only cruse numbers. I have the following profiles for each of our aircraft which seem to be fairly accurate. Remember that one must lean properly at cruse altitudes to obtain the cruse performance TAS and fuel burn listed in the POH cruse performance tables.

The above projections for FF were based on these aircraft profiles.

	C182Q	C182H	C182P	C172N	C172M	C172M	C152
	N7593S	N1891X	N9989E	N1293F	N13686	N4464R	N67375
Climb							
KTAS	90.0	90.0	90.0	85.0	80.0	80.0	65.0
Fuel Burn	16	16	16	14	10	10	8
Rate of climb	600	600	600	500	450	450	400
Cruse							
KTAS	135	130	135	120	110	110	105
Fuel Burn	12.7	13.1	13.1	10.1	7.6	7.6	6.1
Descent							
KTAS	150	145	150	135	125	125	115
Fuel Burn	8	8	8	7	5	5	4
Rate of descent	750	750	750	600	600	600	500

Let me know if you have any questions or comments.
Have Fun,
Jim

Experience and Impressions of T-Crafts STOL-modified 91X – John Baglien

I recently had opportunity to fly 91X into Lower Loon and Thomas Creek Airstrips, scouting possible hunting camp possibilities for deer. I had weighed my camping gear, calculated weight and balance, and reviewed performance tables prior to flying. For my scouting flight, I went with full tanks and only a portion of my gear, bringing 91X to about 2400 lbs. I wanted to be about 10% below gross in exploring the performance of 91X. As I mentioned to Jim Hudson in verifying that W&B spreadsheet for 91X was updated after mods, with McCall Air we frequently shuttle partial loads from Lower Loon to Mahoney to assure ourselves of safe performance margins on warmer days, or with light tailwind. I also mentioned that, until I gained a great deal more experience in flying 91X, I would be using standard POH performance tables for takeoff; regarding the Sportsman's STOL as only an additional margin for safety.

I offer these impressions of performance (note impressions, not measured performance) in the interest of safety for those who plan on using 91X on any of the shorter (<2000 feet) strips in the back country. I offer these impressions based upon comparison with 27 other landings logged at Lower Loon (3 180hp 172; 4 standard 182; 4 P-Ponk 265hp large tired 182; and 16 206, both turbo and normally aspirated).

1) Short / rough field landings are enhanced by the STOL cuff and larger tires. No doubt.
2) Takeoff performance is no better than book for given weight – the larger tires contribute to a slightly more sluggish initial acceleration. I had about 5-8 knot tailwind and 60 deg temp. Book suggests 930-1000 feet under those conditions – I broke ground at about 800 feet and skipped lightly at 1000 feet.
3) Climb out was marginal – I don't know to what degree it was adversely affected by

down-canyon breezes and downdrafts, or the additional drag of larger tires.

I had hoped to explore a landing at the new Cougar Ranch Airstrip, but given the performance I experienced off Lower Loon, and squirrely winds and downdrafts I was experiencing on my approach for an upstream landing at Cougar Ranch, I elected to do only a low pass (200 feet) and wait for better weather.
Among other things to keep in mind that I found in prepping for my recent trip and planned hunt are:

1) The STOL mods and larger tires have increased the empty weight; reducing the payload of 91X.
2) POH takeoff performance charts for the 182H (91X) and 182Q (93S) models show virtually identical ground roll and distance to clear 50 feet, if same weights, altitude and temperatures are compared. The newer 182Q POH has some important caveats which would be applicable to both:

NOTES:
1. Short field technique as specified in Section 4.
2. Prior to takeoff from fields above 5000 feet elevation, the mixture should be leaned to give maximum power in a full throttle, static runup.
3. Decrease distances 10% for each 9 knots headwind. For operation with tailwinds up to 10 knots, increase distances by 10% for each 2 knots.
4. Where distance value has been deleted, climb performance after lift-off is less than 150 fpm at takeoff speed.
5. For operation on a dry, grass runway, increase distances by 15% of the "ground roll" figure.

3) An interesting table of Takeoff and Landing Distance Factors
https://www.experimentalaircraft.info/flight-planning/aircraft-performance-7.php

REMINDERS

CARE OF YOUR AIRCRAFT
Take Time After You Flight

We are continuing to see many instances of lack of care and taking the time to make sure that you're (and our) planes and hanger are put away properly. Gust locks, pitot tube covers not installed, flaps left down, doors not locked, seat belts not put away, master left on = dead battery, avionics master not turned off, lights not turned off (except its advisable to leave the beacon light on as a warning the master was left on), bugs not cleaned thoroughly from all leading edges, windows streaked, dirt and trash not cleaned out (plane and hanger), fuel card or keys missing from the key bag, key bag not zipped or put away, hanger door pins not fully secured, hanger doors left open, hanger lights left on, the hanger itself not locked, lock code not returned to 0000. There should be no need for any such reminders, as a matter of common courtesy we should leave an aircraft in a clean condition after we have flown it. We learned as early as first grade, if we create a mess, we clean it up. That's the grown-up thing to do. PLEASE take you time when ending your flight and be vigilant on taking care of these items.

Oil Usage

Fellow members/owners - in the big scheme of things OIL is relatively inexpensive. However over time we have established a norm for each aircraft on how much oil a particular engine is comfortable with. Jim Hudson has taken his time to produce a comprehensive check list for each aircraft. Included in the pre-flight section it states minimum/maximum oil to check for. Do not go by what the POH says, i.e. engine has a 12 qt capacity. 93S for example would blow oil out breather tube along belly of aircraft until dip stick reads 8. Please use checklist for amount of oil necessary for all T-Craft aircraft. As I have repletely said, if you are determined

to dump more oil into sump than necessary please present yourself at plane wash to clean the bellies. I keep putting 6-7 Qts oil on back shelf and it disappears quickly. Remember to note oil used on log program. Also putting unnecessary amounts of oil into an engine really screws up any attempt to determine what actual oil usage is. An engine has to work harder if sump is over-filled with oil. Read Aircraft Oil Usage on our web site under Site Index.
DOM – James Eyre

Check Lists

The club has developed check list for each bird which contain key information on the plane from the POH and some club specific items; oil levels, tire pressures, reminders to log in-out, and clean up items. It's not mandatory that you use a club check list, in fact many members develop their own, which is a good way to get intimate with the details. We've had laminated version in each aircraft, but over time, they grow legs and walk off. Members are encouraged to print out a copy of the club check list for yourself or download the pdf version and have it on your iPad/phone/tablet or build one for yourself. There's a word file as well as pdf version of the club website under the Fleet page. I'm in the process of updating the check-list to include some of the newer avionics, and other items that crop up. If you happen to find any discrepancies or have comments, let me know – Jim Hudson

Schedule Master – 90 Day Attendance and Day/Night Currency

Some of you, in fact most by now have probably received email notices from SM that you're 90 day T-Craft attendance will expire on a certain date. A field was set up in the Status tab to show that expiration date in. This is a way to keep track and notify you of your upcoming 90 day attendance expiration date. You'll get a notice 30 day prior to that date from Schedule Master. You will also get a message after that notice when you log on to Schedule Master. As per club policy, your scheduling and flying privileges will be suspended if you exceed this date, and any future schedules will be canceled if you're suspended. You will NOT be automatically suspended by schedule master if this date is exceeded. You will get notification by the membership director when he suspends your privileges, since there are some circumstances for exceptions.

There are also two fields that you can use to keep track of your 90-day, day and night currency for carrying passengers. You can use those two fields if you wish to enter your expiration date and receive a notice 30 days prior to that date. Students can use the 90-day currency field to keep track of your 90 day endorsement to continue to solo.

Billing – Reggie Sellers

There have been a few mistakes made with the Flight Log System logging so I am writing this in hopes of helping with the billing accuracy.

1. The Flight Log System is NOT connected to Schedule Master in that if you Log a plane out in the Flight Log System and then decide not to fly, you need to log the plane back in. Cancelling the flight in the Schedule Master on-line system WILL NOT cancel the flight in the Flight Log System. You have to do BOTH.

2. When you log a plane in PLEASE hit the GREEN FINISH button. If you hit the cancel button, the flight will not be logged back in making it very difficult and confusing for the next member to take that airplane.

3. If the Hobbs meter is inaccurate when you fly PLEASE call the person that flew before you

and work it out. We are all owners of the planes and it is important that the billing is accurate.

Thank you and Happy Flying,
Reggie Sellers

PLEASE REMIT PAYMENT IN FULL BY THE 10TH OF THE MONTH.
Your account will be PAST DUE if not received by the 20th and there will be a $10.00 late fee.
There will be a finance charge if your account is over 30 days past due and flying privileges will be suspended