DFA NEWSLETTER

DUKE FLYERS ASSOCIATION, LLC

Our new Chairman, Ray Assmar with his wife Susan

Welcome to the first newsletter published by the "new" DFA! It's been quite a few months since we sent out a letter so let's get right to the news.

The DFA is undergoing leadership reorganization and the website has been remodeled to include a tool for joining or renewing DFA membership and for paying dues and this year's DFA fly-in will be hosted by Jerry Doyle, General Manager of The New Firewall Forward and is scheduled for September 17-20 in Fort Collins, CO.

LEADERSHIP REORGANIZATION

Captain Bob Hoffman, well known Duke training guru and retired airline captain, is stepping down as the President of DFA. A few long-time members have conducted several, hour-long conference calls to discuss the future of the organization and the plans for going forward. The decision was made to organize a steering committee in order to assign high workload positions to knowledgeable volunteers, refresh the membership list and collect dues, resume quarterly on-line and print versions of this newsletter and to schedule, plan and conduct the annual DFA membership meeting/fly-in.

The steering/organization committee consists of the following volunteers:

Ray Assmar	Ray.Assmar@pilotsteel.com	Chairman	(270) 684-8030	KY
Al Uhalt	cobd@earthlink.net	Vice Chairman	(719) 574-1111	CO
Jeff Gorman	jgorman@gormanrupp.com	Exec. Director	(419) 512-3963	OH
Ab Fuoss	mule@atlanticbb.net	Member/Transport	(410) 294-6922	MD
Gary Bongard	kgbventure1@aol.com	Member/Tech	(612) 281-5158	MN
Kent Rhude	krhude@charter.net	Member/Advisor	(989) 916-5559	MI
Bob Hoffman	BE60pilot@aol.com	Member/Training	(859) 653-1803	KY
Kingsley Hill	Kingsley@siva.com	Member/Website/IT	(908) 234-0972	NJ
Kevin Dingman	Dinger10d@gmail.com	Member/Newsletter	(269) 492-8620	MI

Ray Assmar, the host of our last fly-in will be at the head of the DFA and will coordinate all issues. Ray owns Pilot Steel, a manufacturing company in Kentucky. Al Uhalt is retired USAF and a flight instructor. He will share duties with Ray. Jeff Gorman, son of DFA founder Jim Gorman will perform as the Executive Director of the DFA. Jeff is with The Gorman-Rupp Pump Company in Ohio. Ab Fuoss is retired in Maryland, drives a truck and will coordinate DFA transportation requirements. Gary Bongard operates businesses in South Dakota, Florida and Minnesota including the manufacture of carbide faced lifters for aircraft engines. Gary will advise on Duke technical issues (read his lifter story below). Kent Rhude of Rhude Investments in Michigan will perform as an advisor to the DFA. Bob Hoffman is a retired B-757 captain and long-time Duke Approved School owner and instructor. He resides in Kentucky and will provide operational insight to members (read his Duke flap training below). Kingsley Hill is a Technology Executive in New Jersey and will manage information technologies including the DFA website (read his update below). Kevin Dingman is a B-737 captain, writes for Twin & Turbine magazine and lives in Michigan. Kevin will compile the DFA newsletter (read his "There I was, in my Duke" story below).

DFA WEBSITE

http://www.dukeflyers.org

The DFA website was recently remodeled. It's a great place to exchange information about owning, operating, maintaining, and flying the Beechcraft Duke. The site now includes the following content, news, shopping and action pages:

- Benefits of Membership
- A very active Bulletin Board/ Pilot Forum
- Regular Newsletter with Tips and News
- DFA annual Fly-in information
- Contact with Fellow Duke owners, pilots, and mechanics
- DFA maintains a stock of some hard-to-find parts
- A Commerce page for buying and selling of Duke items

Existing members should click on the "expired" link on the sign-in page to renew your membership. I encourage all members to navigate around the new DFA website in order to become familiar with content, services, information, links and contact information. A forgot-password link, fly-in registration link and a search function are under construction. Several expired and inoperative links are being deleted, but please send an email via the website or directly to Kingsley if you find errors, bad links, inaccurate content or if you have questions.

ANNUAL DFA FLY-IN

SEPTEMBER 17-20, 2020 **FORT COLLINS, CO (KFNL)**

This year's Duke Flyers Association membership fly-in will be held from September 17th through the 20th in Fort Collins, CO (KFNL) which is about 39 nm northwest of Denver. Jerry Doyle of The New Firewall Forward will be hosting the event. Jerry can be reached at: (800) 444-0556 (office), (702) 539-4936 (cell) or jdoyle@thenewfirewallforward.com. All current DFA members and their guest(s) are encouraged to attend. The steering committee concluded that any dues in arrears need not be paid because of the DFA's lack of a timely and accurate collection system. This has been corrected and all dues going forward will be necessary. This means if you haven't paid your dues for a while, please go to the DFA website and submit your membership fee in order to become "current." If you don't see the "expired" link, keep checking over the next few weeks; it will show up at the end of a grace period established by the steering committee. The June newsletter will include a registration form for the September fly-in. There will also soon be an area on the DFA website to register and submit payment for the fly-in.

3:48 PM Fri Mar 27 91%

KFNL

Nearby KFNL +FP

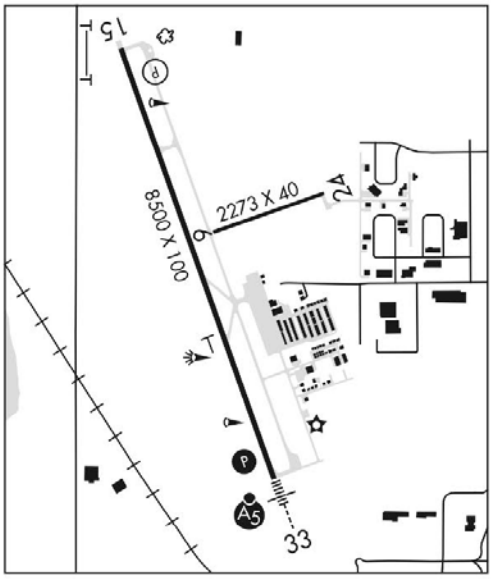
KFNL NORTHERN COLORADO RGNL
Public, Class E, Fort Collins/Loveland CO

General | Weather | Procedures | A/FD | NOTAMs | Services | Nearby

FORT COLLINS/LOVELAND

NORTHERN COLORADO RGNL (FNL)(KFNL) 9 SE UTC–7(–6DT) N40°27.11′ W105°00.68′ **CHEYENNE**
5016 B Class I, ARFF Index B NOTAM FILE FNL **H–3F, 5A, L–10F**
IAP, AD

RWY 15–33: H8500X100 (ASPH–GRVD) S–50, D–65, 2S–82, 2D–130
PCN 49 F/C/W/T HIRL
RWY 15: REIL. PAPI(P4L)—GA 3.0° TCH 54′. 0.5% up.
RWY 33: MALSR. PAPI(P4L)—GA 3.0° TCH 52′. 0.5% down.
RWY 06–24: H2273X40 (ASPH)



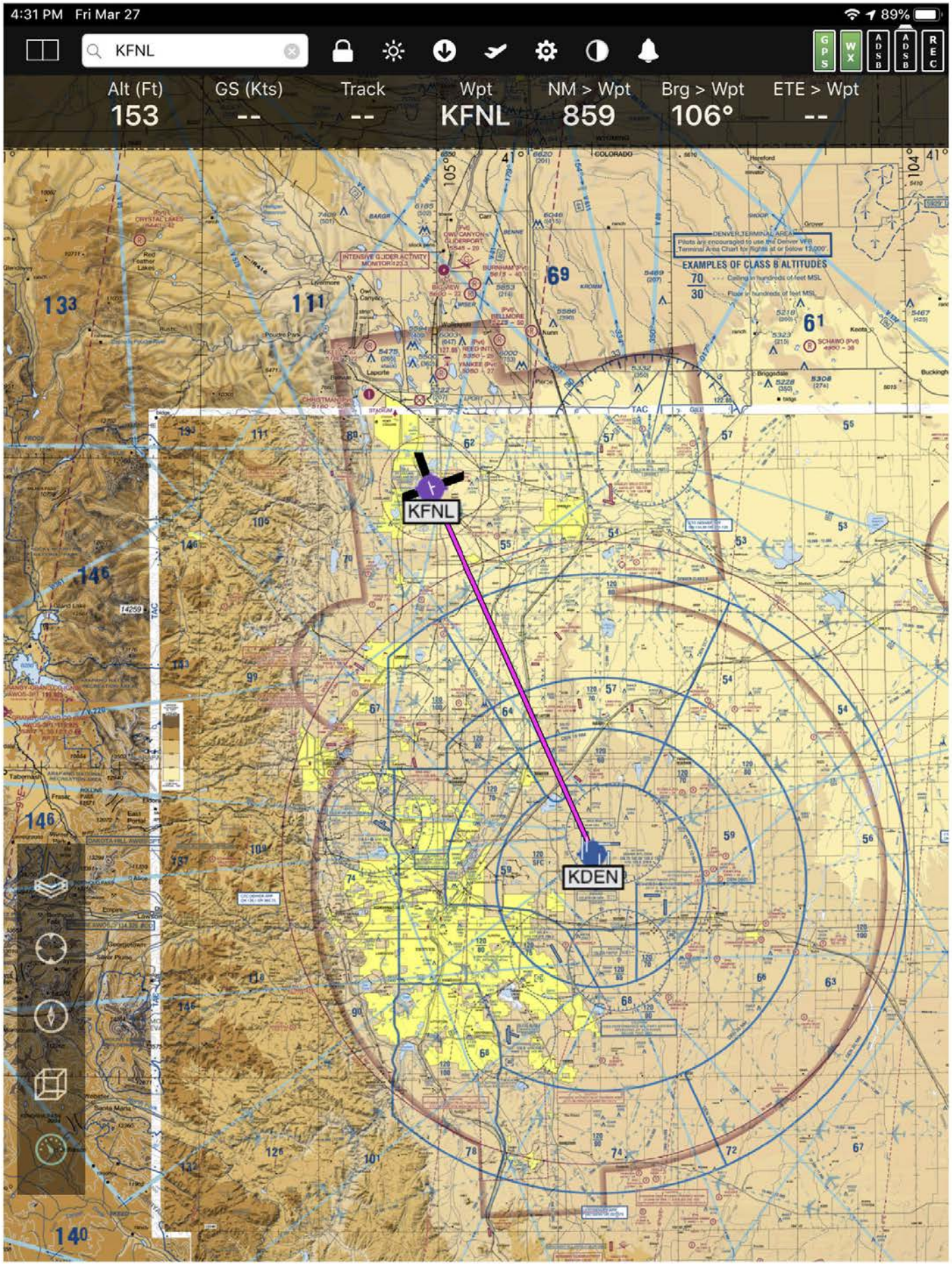
RUNWAY DECLARED DISTANCE INFORMATION
RWY 06: TORA–2273 TODA–2273 ASDA–2273 LDA–2273
RWY 15: TORA–8500 TODA–8500 ASDA–8500 LDA–8500
RWY 24: TORA–2273 TODA–2273 ASDA–2273 LDA–2273
RWY 33: TORA–8500 TODA–8500 ASDA–8500 LDA–8500

SERVICE: S4 **FUEL** 100LL, JET A **OX** 1, 2 **LGT** HIRL Rwy 15–33 preset low ints; to increase ints and ACTIVATE parallel twy lights; REIL Rwy 15; MALSR Rwy 33; and PAPI Rwy 33—CTAF. Rwy 15 PAPI on continuous.

AIRPORT REMARKS: Attended continuously. 24 hr PPR for unscheduled air carrier ops with more than 30 passenger seats call arpt manager 970–962–2852. Rwy 33 preferred tkf and ldg with winds 5 kts or less any direction. Sfc condition unmonitored 0500–1300Z‡. Twy A2 and Twy A3 weight bearing limit 12,500 lbs SWA. Rwy 06–24 rwy edge reflectors full length. NOTE: See Special Notices—USAF 306 FTG Flight Training Areas, Vicinity of Colorado Springs and Pueblo Colorado.

AIRPORT MANAGER: 970-962-2852
WEATHER DATA SOURCES: AWOS–3PT 135.075 (970) 669–9187.
COMMUNICATIONS: CTAF/UNICOM 122.7
FT. COLLINS–LOVELAND RCO 122.4 (DENVER RADIO)
GILL RCO 122.65 (DENVER RADIO)
Ⓡ **DENVER APP/DEP CON** 134.85 **CLNC DEL** 120.25
CLEARANCE DELIVERY PHONE: For CD ctc Denver Apch at 303-342-1916.
AIRSPACE: CLASS E.
RADIO AIDS TO NAVIGATION: NOTAM FILE DEN.
GILL (H) VORW/DME 114.2 GLL Chan 89 N40°30.23′ W104°33.18′ 249° 21.2 NM to fld. 4904/13E.
COLLN NDB (LOMW) 400 FN N40°21.79′ W104°58.28′ 332° 5.6 NM to fld. 4957/9E. NOTAM FILE FNL.
ILS 109.5 I–FNL Rwy 33. Class IE. LOM COLLN NDB. Unmonitored when arpt unattended.

FORT MORGAN MUNI (FMM)(KFMM) 5 N UTC–7(–6DT) N40°20.13′ W103°48.25′ **CHEYENNE**
4595 B TPA 5626(1031) NOTAM FILE DEN **H–5A, L–10F**


4:31 PM Fri Mar 27
89%
KFNL
Alt (Ft)
153
GS (Kts)
--
Track
--
Wpt
KFNL
NM > Wpt
859
Brg > Wpt
106°
ETE > Wpt
--
GPS
WX
ADSB
ADSB
REC
KFNL
KDEN
EXAMPLES OF CLASS B ALTITUDES


3:50 PM Fri Mar 27
91%
Done
KFNL
Winds On
Winds Off
Legal
Satellite
Runway Diagram
FAA Diagram
SA Diagram

TENTATIVE ITINERARY

Thursday, September 17th

9:00 am - 5:00 pm	Member arrivals, distribution of name tag lanyards, welcome packets and the itinerary. Sponsor provided BBQ dinner at the airport around 4-5 ish. Transportation to Embassy Suites provided by DFA. A late-arrival phone number for DFA transportation will be provided in June—probably Ab Fuoss at (410) 294-6922.
5:00 am - 10:00 pm	Hospitality suite at the hotel with gift bags, snacks and drinks provided by FWF/DFA

Friday, September 18th

9:00 am	Breakfast on your own (free continental buffet for guests)
10:00 am	Explore City / 8 Golf courses nearby / social event day
5:00 pm	Dinner on your own (16 restaurants within 0.5 miles of the airport) (Sonny Lubick Steakhouse is 0.5 miles: 4 ½ out of 5 stars)

Saturday, September 19th

7:00 am	Breakfast on your own (free continental buffet for guests)
8:00 am	DFA annual business meeting (itinerary to be provided by Ray and Al)
9:00 am	Spouse's bus to shopping, explore, lunch
9:00 am - 12:00 pm	Technical/vendor presentations (B&B lifters, FWF, and others To Be Determined)
12:00 pm	Lunch provided by FWF and DFA
	Coordinate with Fort Collins Jet Center for fuel and departure times
1:00 pm - 2:00 pm	Training: PowerPoint discussion by Bob Hoffman: *Using the Mayday call*.
5:00 pm - 7:00 pm	Drinks, Social Hour {meet committee members/vendors--- questions & comments}
7:00 pm - 9:00 pm	Evening semi-formal banquet (business casual) Guest speaker TBD
9:00 pm	Hospitality suite as desired (12 hrs. bottle to throttle)

Sunday, September 20th

6:00 am - 10:00 am	Breakfast on your own (free continental buffet in hotel).
7:00 am - 12:00 pm	DFA ride to airport (later departures to be coordinated with Ab Fuoss)
7:00 am - 5:00 pm	Depart at your leisure

PARTS

(2) Generators	(2) Tach Generators	(2) Starters
(2) Magnetos	(2) Flap motors	(2) Landing gear motors
Cowl flap actuators	A/C door actuator	Electric fuel boost pump
Turbocharger	Oil cooler (new)	Nose gear uplock pins
Windshields		

Gary has been working with Bob Hoffman and hopes to provide a more complete list of available spares soon. Gary will ship from his facility at the Sturgis, SD Airport (49B) via UPS. If FedEx is required, he will need to run into Rapid City (KRAP) which is about 30 miles and 45 minutes. Bob Hoffman will ship from Sanders, KY. Some parts are also available from Aircraft Systems in Rockford, IL.

TRAINING & OPERATIONS

Duke specific POH, IFR, and pressurized piston twin procedures and techniques

Bob Hoffman has spent the last couple of years writing a comprehensive operating manual for the Beechcraft Duke. The entire manual should be finished by the 2021 DFA fly-in and available for purchase. { Ed note: Read your POH flap system then read Bob's pdf—the difference is astonishing }. The following is a short excerpt from the manual. The entire chapter is available from the DFA website: http://www.dukeflyers.org

Duke Flaps System

Introduction

Beech Aircraft Corporation marketed the Duke as a short field utility aircraft. Sales brochures and videos depicted the aircraft operating from short unpaved strips using the approach flap take-off technique. The Duke flap system is a semi-fowler design which allows the flap to initially extend aft and down from the wing trailing edge, increasing wing area and lift. As flap travel extends beyond the approach setting, movement is downward, creating more drag than lift. The flaps approach position (APH / 15°) is useful for conducting short or soft / rough field takeoffs. The down position (DN / 30°) allows slow approach speeds and short landing distances.

System Description

The wing flaps consist of one section on each wing driven by a single reversible electric motor and gearbox. Each flap extends from the inboard aileron to the junction of the wing and fuselage. The flaps are attached to the wing structure by flap tracks mounted on the aft spar. Roller bearings, Teflon washers, and standard aviation hardware secure the flaps to the tracks. A flap motor / gear box assembly powers flexible shafts connected to a jackscrew actuators. The flexible shafts are received at the power end of the actuator by a ninety degree adapter. The drive end of the actuator is attached to the inboard flap structure. Rotary motion of the gearbox, flexible drive shaft, ninety-degree adapter, and flap screw is converted to linear motion at the drive end of the actuator to position the flaps. No alternate means of flap actuation is provided. Split flap protection is not provided. The flaps are controlled by a three-position switch located to the right of the control console. Flap position indicators are located near the flap control. Limit switches are installed on the inboard side of the left flap track to stop flap travel at the position selected by the control switch.

Normal Operation

Section II of the POH is a 1940's era training document arranged in a numbered, "how to" format. The section was last revised in 1980, and is rife with obsolete, incorrect, and hazardous practices. Due to the mature nature of the content, operators are advised to exercise a judicious amount of skepticism regarding its technical authority. Please understand that this section represents one technique, rather than the only approved technique for operating the aircraft. Part 91 operators are not bound by regulation to follow this section. An FAA General Council opinion, dated March 2011, regarding Section II checklists explains - "For Part 91 operators that are not operating under Subpart K, there is no FAA requirement for acceptance or approval of modified checklists....The FAA encourages all Part 91 operators to utilize checklists when appropriate and ensure their (aircraft manufacturer or operator modified) checklist is complete and contains no errors."

Flap Operation - Normal Procedures

Before Taxi

The wing flaps are a critical item which, if omitted or incorrectly set, could have a severe adverse impact on the safety of the operation. Flaps should be set and verified after engine start and prior to taxi. This task sequence minimizes the risk of interruptions and distractions.

Before Takeoff

Flaps position is set at the beginning of the Before Takeoff check because the aircraft has no spit flap, or takeoff configuration warning protection. The selection may be delayed until approaching take off if taxiways are contaminated with snow or slush.

Before Landing

The Before Landing checklist is normally initiated by a triggering event that initiates the Before Landing flow and check. The Before Landing checklist should contain no more than four items. Example: Piston powered aircraft – Landing Gear, Flaps, Lights. Turbine powered Dukes – Landing Gear, Flaps, Lights, Ignition.

After Landing

The After Landing flow and checklist is initiated after the aircraft completes a one-hundred eighty turn on the runway (if applicable), or when all of the aircraft clears the runway obstacle free zone. The After Landing checklist begins with the Flaps selected to UP.

Flap System Function Check Procedure

The flap system should be checked periodically for system functionality. Consider completing this check prior to scheduled maintenance. This is a maintenance check procedure, and should not be conducted in concert with the Before Take-off checklist procedure. The procedure confirms the operation and conformity of the following components:

- Motor
- Gearbox
- Flexible Drive Shaft(s)
- Actuators(s)
- Limit Switches
- Control Switch
- Flap Position Transmitter (P-4 to P-247)
- Position Indicator(s)
- Circuit breaker(s)

Flap Functional Check (P-4 to P-247)

1. Visually confirm the area behind and beneath the flaps are clear
2. Confirm the flap motor and indicator circuit breakers are closed
3. Connect a GPU (regulated to 28.25 +/- .25 VDC) to the aircraft, or start an engine(s) and confirm 28.0 VDC power on the electrical bus
4. Confirm the flap control switch is UP, the flap position indicator indicates UP, and both flaps are visually confirmed in the UP position
5. Select flaps APH, verify the flap indicator indicates APH, visually confirm both flaps in the approach position
6. Select the flap control switch to DN, verify the indicator indicates DN, visually confirm both flaps in the down position
7. Select the flap control switch to APH, verify the indicator indicates APH, visually confirm both flaps in the approach position
8. Select the flap control switch to UP, verify the indicator indicates UP, visually confirm both flaps in the UP position
9. Note discrepancies and record for maintenance action

Flap Functional Check (P-247 to P-596)

1. Visually confirm the area behind and beneath the flaps are clear
2. Confirm the flap motor and indicator circuit breakers are closed
3. Connect a GPU (regulated to 28.25 +/- .25 VDC) to the aircraft, or start an engine(s) and confirm 28.0 VDC power on the electrical bus
4. Press the Annunciator Panel Test switch, confirm the red transit, blue approach, amber down flap indicator lights illuminate
5. Confirm the flap control switch is UP, the flap position lights are extinguished, and both flaps are visually confirmed in the UP position
6. Select flaps APH, verify the red transit light illuminates, extinguishes, and the blue approach light illuminates, visually confirm both flaps in the approach position
7. Select the flap control switch to DN, verify the red transit light illuminates, extinguishes, and the amber down light illuminates, visually confirm both flaps in the down position
8. Select the flap control switch to APH, verify the red transit light illuminates, extinguishes, and the blue approach light illuminates, visually confirm both flaps in the approach position
9. Select the flap control switch to UP, verify the red transit light illuminates, extinguishes, visually confirm both flaps in the UP position
10. Note discrepancies and record for maintenance action

Emergencies

The EMERGENCY PROCEDURES Section III of the AFM/POM lists no emergency procedures related to flap operation.

Non-Normal Procedures

The following events may be encountered, requiring **systems knowledge** to address the non-normal occurrence.

- Flaps will not extend from UP to APH
- Flaps will not extend from UP to DN
- Flaps will not retract from DN to APH
- Flaps will not extend from APH to DN
- Flaps will not retract from APH to UP
- Flaps will not retract from DN to UP
- Flap circuit breaker OPENS after flaps are selected, and retract to UP
- Flap circuit breaker OPENS after flaps selected to, and extend to DN
- Electrical smoke / fumes during flap motor operation
- Flaps split during extend or retract sequence
- Flap motor will not operate after opening, closing the flap circuit breaker

{ Ed note: see Bob's entire *Flap System* training pdf on the DFA website to gain systems knowledge http://www.dukeflyers.org }

DUKE MAINTENANCE

News, tips and good practice procedures

Gary Bongard reports:

I hold an ATP and MEI. I'm also an A&P with Inspection Authority (IA). Over the past 45 years I have accumulated over 11,000 hours, most of it in multi-engine aircraft. I owned an FBO with three Dukes along with a couple of Barons and a Bonanza, all on a 135 certificate. And it seems like during the past 27 years of Duke ownership, I've made just about every operational mistake possible. Hopefully I can pass on to DFA members a lot of the things--- not to do. One thing I know for certain is that Lycoming lifters are inferior to carbide lifters. So, after a three-year hiatus, it's time for an update on the carbide lifters: Duke carbide lifters are alive and well!

For those new to the DFA, C&B Aviation had been manufacturing carbide faced hydraulic lifters for more than 20 years and my Duke P-365 was the launch platform for Duke engines. The asset purchase from the Estate of Jerry Burnham and C&B Aviation was completed last August, 2019. During the past six months the manufacturing process was refined resulting in lifters that are held to much closer tolerances than Lycoming factory lifters or lifters previously built by C&B Aviation. The new lifters will be manufactured in our facility at the Sturgis S.D. airport (49B) where we have the ability to replace your lifters on-site with just a two-day turnaround. Our new name is B&B Manufacturing (Gary **B**ongard **&** Roger **B**urnham); Jerry Burnham's son Roger is my partner. We are so confident in our new carbide faced lifters that B&B offers a warranty to TBO (Lycoming offers one year) on both our lifters and any cam when installed where the case is split or during an overhaul. For those with Continental engines, we also provide carbide faced lifters for the 470 and 520 series, and soon for the 550 and GTSIO series. Now, the best part: There will be special pricing on carbide faced lifters for current Duke members if ordered while attending the September fly-in.

Unserviceable cam and lifters due to scaling

{Editor's note: Gary specializes in our TIO-541-E1C4 motors. Gary overhauled my right motor and I now have B&B carbide faced lifters in both of my engines. The overhaul was due to metal in my oil filter from Lycoming lifers and a centi-lube cam—and unrelated to the following event.}

THERE I WAS, IN MY DUKE

Hair-raising, or fun, Duke travel or systems stories

From Kevin Dingman, P-101

There I was, in my 1969 model 60 Duke, climbing through 13k headed to 19k when I noticed the oil pressure needles were not parallel—the right engine was a bit lower than the left. I watched it for about five seconds and it decreased more as I watched. Unstrapping, I moved to the right seat and looked at the cowling for leaks, there were none. By the time I strapped back into the left seat, the right oil pressure was almost to the yellow. I pulled the right throttle to idle but the oil pressure decreased further into the yellow and was still decreasing. I pulled the prop to feather, the mixture to cutoff, closed the fuel valve and switched off the mag. I declared an emergency (we now say Mayday IAW ICAO standards) and the flight ended with a single engine, LPV approach to 400/1 at an uncontrolled field. I extended full flaps and gear only when the runway was assured and came to a stop at the end of a high-speed turn-off, half way down the runway. An oil return line at the top of the case, just aft of the starter, had come loose. It was easy to find, the A&P tightened it, added 5 quarts, which got me back up to 10, cleaned the motor and cowling and I started it—oil PSI in the green. After cleaning out my shorts in a local hotel, I left the next am--- the weather was still 400/1.

Kevin's Duke after oil leak and SE, LPV approach

NEW MEMBERS

(Since Jan., 2019)

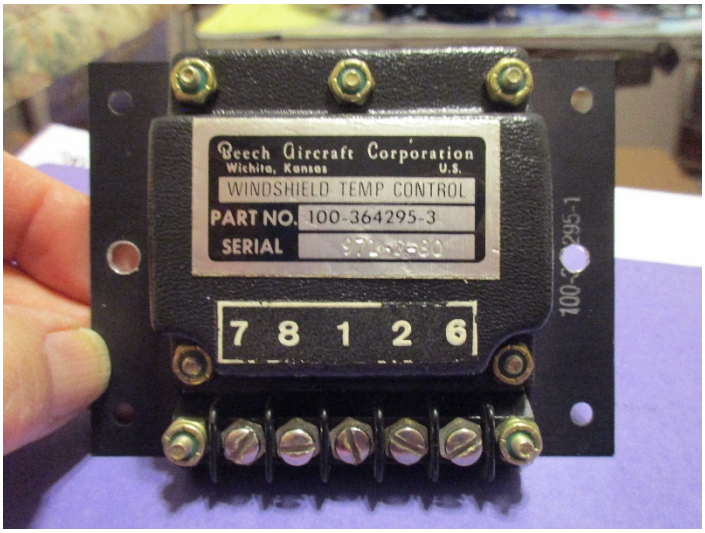
Mike Shepard, TX	Michael Breland, WA	Chris Morton, MT
Robert Brown, AZ	John Lock, FL	Troy Nothrup, NB
Keno Brown, TX	Dan Connell, FL	Timothy Danish, LA
Gary Dyer, NV	Jim VanBuskirk, CO	Chad Johnson, TX
Powel Sanders, AR	Christopher Roan, SD	Thomas Logan, CA
Marshall Egan, ID	Kevin McLaughlin, CA	Samuel Jackson, GA
Clyde Hillier, ON, CA	K. Karim, IL	Tony Desantis, TN
Kirk Chambers, AB, CA	Jay Landwerlen, IN	Tommy Corbin, TX
Jeff Gilmore, TX	Remy Dulay, FL	John Truelson, TX
Eric Choate, CA	Robert Michl, Austria	Edward Westerd, VA
Matthew Modleski, IN	Kent Hoops, IN	Will Yandell III, TN
Isaac Nasar, NJ	Jay Williams, OK	Tommy Stoneman, TX
Lief Anderson, FL	Ben Follas, TN	Guy Cappuccino, MD
Jerry Doyle, CO	Frank Rivas, FL	Dave Schmidtmen, PA

LINKS

Articles from Twin & Turbine magazine:

Jan. T&T:	http://twinandturbine.com/article/statistically-speaking-will-engine-failure-year/
Feb. T&T:	http://twinandturbine.com/article/straight-from-the-heart/
Mar. T&T:	http://twinandturbine.com/article/sick-milestones-kidney-stones-flying-medical-condition/
DFA Website:	http://www.dukeflyers.org/DFA-11/index.php
Parts:	kgbventure1@aol.com and BE60pilot@aol.com

STUMP THE DUMMY / WHAT IS THIS PART?



Where is this part installed in your Duke?

When it fails, you get this!

REQUEST OF DUKE FLYERS

If you have a Duke story, please submit it for the *There I was, in my Duke* section of the newsletter. Or, if you have an interesting system, parts or procedural question or learned something new about your Duke, submit it for the *Stump the Dummy/ What is this part section*. Plus, we are always looking for next year's DFA fly-in venue, guest speaker and a host—be a participant in your DFA and find a location, speaker and/or become a host!

Thank you,

Kevin R. Dingman
Kevin R. Dingman, editor
Dinger10d@gmail.com