Flight Plan Completion

KHYI - KBWD

Some Needed Information

- Use This For Winds Aloft

FT	3000	6000	9000	12000	18000	24000
ABI		3212+12	2317+11	2630+06	2730-09	2734-23

- Standard Temperature @ 6,500’ = ?
  - Standard at Sea Level = 15 deg C
  - Minus 2 deg C / thousand
  - Minus 13 => Standard at 6,500 = 2 deg C

Steps

1. Determine Distance to TOC
2. Determine TAS (KTAS) for 65% Power @ 6,500’ (log)
3. Fuel Burn for Cruise GPH (log)
4. Find CAS (log)
5. Use TAS and Wind Aloft – Compute WCA & GS (log)
6. Compute TH and MH and CH (log)
7. Compute ETE for All Legs (log)
8. Compute Fuel for Startup, Taxi, Takeoff, and Climb – Use for 1st Fuel Entry to TOC (log)
9. Compute Fuel for Cruise Segments
10. Compute Reserve Time

Step 1

- Climb Will be at 75 KIAS
  - Time to Get to Top of Climb (TOC)
- Our Rate of Climb Will Be ~ 700 fpm
  - Therefore ~ 9 minutes to Get to TOC (6,000 / 700)
- What is Distance – Use E6B
  - 11 nm
- So For First Point Will Call This TOC

Step 2 and 3

Table 3 - Cruise Performance Table

Press Alt ft	RPM	20° C Below Standard Temp			Standard Temperature			10° C Above Standard Temp		
		%bhp	KTAS	GPH	%bhp	KTAS	GPH	%bhp	KTAS	GPH
2,000	2800	87	128	8.8	83	129	8.7	80	130	8.6
	2700	78	123	7.7	74	124	6.8	72	125	6.6
	2600	69	118	6.4	66	119	6.2	64	120	6.1
	2500	61	113	5.9	59	113	5.7	57	114	5.6
			107	5.3	52	108	5.2	50	109	5.1
			126	8.6	76	127	8.6	74	129	6.8
			121	6.6	68	122	6.4	66	123	6.2
	2600	63	116	6	61	117	5.9	59	118	5.7
	2500	56	111	5.5	55	112	5.4	53	113	5.3
	2450	53	108	5.3	51	109	5.1	50	110	5.1
6,000	2800	73	125	6.7	70	126	6.5	69	128	6.4
	2700	66	120	6.2	64	121	6	62	123	5.9
	2600	59	115	5.7	57	116	5.6	56	117	5.5

Will Interpolate between the 69% and 62% bhp
KTAS _____
GPH_____

Step 4

- Use KTAS and Temperature at 6,500’ to Determine KIAS (CAS)
- CAS is Airspeed You Will See on Airspeed Indicator
- What is Difference Between KIAS and CAS?

Table 1 - Airspeed System Calibration

Flaps Cruise																	
KIAS	44	50	55	60	65	70	75	80	90	100	110	120	130	140	150	160	164
KCAS	54 V_{S1}	58	62	66	70	75	79	83	92	101	110	120	129	138	147	156	159 V_{NE}
Flaps Take-Off (T/O)																	
KIAS	40	45	50	55	60	65	70	75	80	85	90	95	100	105	---	---	---
KCAS	50 V_{S1}	53	57	61	65	69	73	77	81	85	89	93	96	159 V_{FE}	---	---	---
Flaps Landing (LDG)																	
KIAS	36	40	45	50	55	60	65	70	75	82	---	---	---	---	---	---	---
KCAS	45 V_{S0}	48	52	55	59	64	68	72	76	81 V_{FE}	---	---	---	---	---	---	---

Example: CRUISE Flap KIAS = 90 kts, therefore KCAS = 92 kts from chart

Step 5

- Use Winds Aloft to Compute
  - WCA
  - GS
- Use Vy as GS to TOC
- Unless Strong Wind, Use No Wind for Climb
  - Will Likely Be Maneuvering
  - Will Be Using Ground References to Navigate

Steps 6 and 7

- Compute TH, MH, and TC
  - Unless Compass Deviation Large Use MH as CH
- Compute ETE
  - Use GS and Distance
  - Use E6B
  - Round to Nearest Minute

Step 8

- Fuel to:
  - Start up: 2 Min at 9 GPH
  - Taxi and Runup: 12 Min at 9 GPH
  - Takeoff and Climb: 9 Min at 9 GPH
  - Plus 5 Min for Maneuver at 9 GPH
- Total Time 28 min
  - 4.2 Gallon
  - May be Less Since Using Conservative Fuel Burn Rate

Step 9

- Compute Fuel Burned for Each Segment
- As a Cross Check, Compute Total Time Fuel Burn
  - E.g. Total Time = 1:11
  - Fuel for Start, Taxi, Maneuver, Climb = 4.2 gal
  - Time of Cruise = 1:02
  - Fuel Burn in Cruise at 6.2 GPH is 6.3 gal
  - Total Fuel Est. = 10.5 gal
  - Individual Summation: _____

Step 10

- Compute Reserve Time
  - Use Remaining Fuel
  - Do We Have Sufficient Time to Meet Day or Night VFR Requirements

Flight Plan Form

Form Approved: OMB No. 2120-0026

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION **FLIGHT PLAN**	(FAA USE ONLY) ☐ PILOT BRIEFING ☐ VNR ☐ STOPOVER	TIME STARTED	SPECIALIST INITIALS

1. TYPE	2. AIRCRAFT IDENTIFICATION	3. AIRCRAFT TYPE / SPECIAL EQUIPMENT	4. TRUE AIRSPEED	5. DEPARTURE POINT	6. DEPARTURE TIME		7. CRUISING ALTITUDE
☐ VFR ☐ IFR ☐ DVFR			KTS		PROPOSED (Z)	ACTUAL (Z)	

8. ROUTE OF FLIGHT

9. DESTINATION (Name of airport and city)	10. EST. TIME ENROUTE		11. REMARKS
	HOURS	MINUTES	

12. FUEL ON BOARD		13. ALTERNATE AIRPORT(S)	14. PILOT'S NAME, ADDRESS & TELEPHONE NUMBER & AIRCRAFT HOME BASE	15. NUMBER ABOARD
HOURS	MINUTES			
			17. DESTINATION CONTACT/TELEPHONE (OPTIONAL)	

16. COLOR OF AIRCRAFT	CIVIL AIRCRAFT PILOTS. FAR Part 91 requires you file an IFR flight plan to operate under instrument flight rules in controlled airspace. Failure to file could result in a civil penalty not to exceed $1,000 for each violation (Section 901 of the Federal Aviation Act of 1958, as amended). Filing of a VFR flight plan is recommended as a good operating practice. See also Part 99 for requirements concerning DVFR flight plans.

FAA Form 7233-1 (8-82)
Electronic Version (Adobe)

CLOSE VFR FLIGHT PLAN WITH _____ FSS ON ARRIVAL

Airplane Suffixes

Suffix	Equipment Capability
	NO DME
/X	No transponder
/T	Transponder with no Mode C
/U	Transponder with Mode C
	DME
/D	No transponder
/B	Transponder with no Mode C
/A	Transponder with Mode C
	TACAN ONLY
/M	No transponder
/N	Transponder with no Mode C
/P	Transponder with Mode C
	AREA NAVIGATION (RNAV)
/Y	LORAN, VOR/DME, or INS with no transponder
/C	LORAN, VOR/DME, or INS, transponder with no Mode C
/I	LORAN, VOR/DME, or INS, transponder with Mode C
	ADVANCED RNAV WITH TRANSPONDER AND MODE C (If an aircraft is unable to operate with a transponder and/or Mode C, it will revert to the appropriate code listed above under Area Navigation.)
/E	Flight Management System (FMS) with DME/DME and IRU position updating
/F	`Flight Management System (FMS) with DME/DME position updating`
/G	Global Navigation Satellite System (GNSS), including GPS or WAAS, with enroute and terminal capability.
/R	Required Navigational Performance. The aircraft meets the RNP type prescribed for the route segment(s), route(s) and/or area concerned.
	Reduced Vertical Separation Minimum (RVSM). Prior to conducting RVSM operations within the U.S., the operator must obtain authorization from the FAA or from the responsible authority, as appropriate.
/J	/E with RVSM
/K	/F with RVSM
/L	/G with RVSM
/Q	/R with RVSM
/W	RVSM