RV-8 C-GNHK Flt #: 10 Date: 12 Nov 2005

Weight: 1,740 lb.
CG: 85.81" aft of datum

Pilot: Kevin Horton
FTE:

	Time	Fuel (l)
Start		
Taxi		
Take-off		
Landing		
Stop		
Shut Down		

PURPOSE

1. Stall speed.
2. Cruise perf.
3. Phugoid.
4. CO concentration.
5. CHT spread.
6. Climb perf.
7. SHSS.

WEATHER

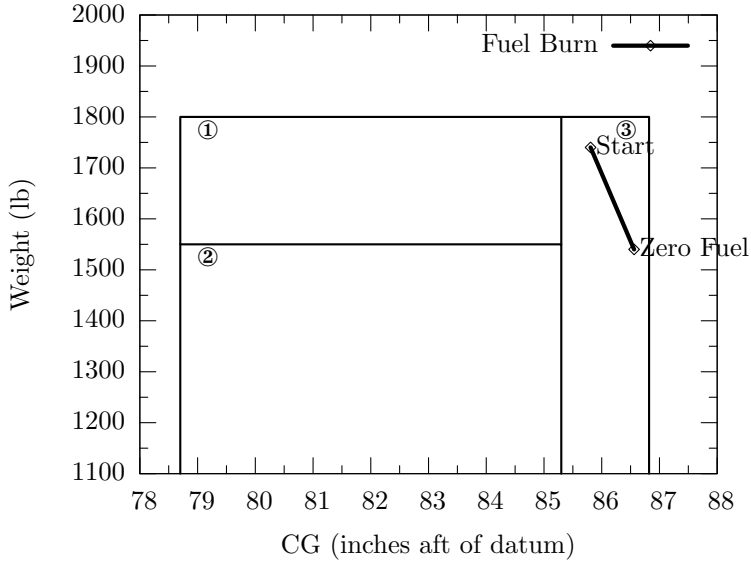
	ATIS	Wind	Vis	Weather	Temp.	Alt.
T/O						
LAND						

LIMITATIONS

1. Remain within gliding distance of airfield.
2. Max speed 220 kt.
3. Min speed 50 kt.
4. Minimize ground running time.
5. Minimize low power flight operations.
6. Maximum flight duration 90 minutes.
7. Day VMC only.
8. Max wind 10 kt, max crosswind 5 kt.
9. Aerobatics Prohibited

WEIGHT AND BALANCE

ITEM	WEIGHT (lb)	ARM (in.)	MOMENT (lb-in.)
Empty Weight	1,160	81.89	95,000.00
Pilot	210	91.78	19,273.80
Rear Seat	150	119.12	17,868.00
Forward Baggage	20	58.51	1,170.20
Rear Baggage	0	138.00	0.00
Rear Baggage Shelf	0	152.91	0.00
Ballast 1	0.0	0.00	0.00
Ballast 2	0.0	0.00	0.00
Zero Fuel Weight	**1,540**	**86.56**	133,312.00
Fuel	200	80.00	16,000.00
Weight at Engine Start	**1,740**	**85.81**	149,312.00



① Restricted Aerobatic Weight/CG Envelope
② Aerobatic Weight/CG Envelope
③ Normal Weight/CG Envelope

1. BEFORE START

**** SET ANALOG ALTIMETER ****
**** SET EFIS ALTIMETER TO 29.92 ****
**** START DATA RECORDING ****

Oil Temp

Check all engine parametres OK.

Complete

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2. ENGINE START

Fuel
EIS OK after start?
Taxi Time
Taxi Fuel

Complete

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3. RUN UP

Complete

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4. STALL SPEED

Conditions

Airspeed:	Trim at $1.3V_S$
Altitude:	5,000 ft
Flaps:	UP
Power:	IDLE

Procedure

1. Establish a heading into the expected wind direction.
2. Trim at $1.3V_S$
3. Conduct a very slow deceleration to the stall, noting the altitude and airspeed indications at the stall.
4. Conduct a stablization at 70 kt at the stall altitude on the same heading.
5. Decelerate at 1 kt/s to the stall.
6. Note the altitude and airspeed indications at the stall.

Results

Time	Fuel (USG)	SLOW DECEL		1 KT/S DECEL		Remarks
		SW (KIAS)	Stall (KIAS)	SW (KIAS)	Stall (KIAS)	

Complete

5. CRUISE PERF

Conditions

Airspeed:	-
Altitude:	7,500 ft
Flaps:	UP
Power:	75%

Procedure

1. Set both altimeters to 29.92.
2. Set rpm and MP as per cruise power charts.
3. Set mixture to obtain max power fuel flow, as per cruise power charts.
4. Allow speed to stabilize, then record data.
5. Repeat with max economy fuel flow.

Results

Alt (ft)	OAT (°C)	RPM	MP	FF	Fuel (USG)	IAS (kt)	Remarks

Complete

6. PHUGOID - CLIMB

Conditions

Airspeed:	V_{CL}
Altitude:	3,000 ft
Flaps:	UP
Power:	MCT

Procedure

1. Trim at the specified condition.
2. Initiate a phugoid oscillation by raising the nose until the speed has decreased by 10 – 15 kt, then releasing the stick.
3. Use small rudder inputs to keep the wings level.
4. Note damping.
5. Record altitude and speed at the phugoid peaks.

Results

Fuel (USG)

Altitude (ft)	Speed (KIAS)

Complete

7. CO VS COCKPIT HEAT - CLIMB

Conditions

Airspeed:	-
Altitude:	3,000 ft
Flaps:	UP
Power:	75%

Procedure

check CO levels in a cruise climb with cockpit heat OFF and ON. Cockpit vent air OFF. Check front and rear seat heat individually.

Complete

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8. CHT SPREAD - CRUISE

Conditions

Airspeed:	-
Altitude:	8,000 ft
Flaps:	UP
Power:	65%

Procedure

Record CHT of each cylinder

Complete

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9. CLIMB PERF

Conditions

Airspeed:	70 kt
Altitude:	8,000 ft
Flaps:	UP
Power:	MAX

Procedure

1. Set both altimeters to 29.92.
2. Select an altitude band that will bracket the target altitude and provide climb durations of at least 90 seconds.
3. Established a stabilized climb at the target speed on a stable heading at 90°to the wind direction.
4. Record data every 500 ft, if possible.
5. Repeat on the reciprocal heading.

Results

Hdg (°)	Fuel (USG)	Alt (ft)	Time (s)	OAT (°C)	Remarks

Complete

10. SHSS - T/O

Conditions

Airspeed:	$1.2V_S$
Altitude:	3,000 ft
Flaps:	UP
Power:	MCT

Procedure

1. Slowly apply full right rudder, while using aileron as required to maintain heading.
2. Note any signs of rudder or aileron force reduction with increasing control input.
3. Note bank angle at full rudder.
4. Release rudder while holding aileron input, and note whether the sideslip decreases.
5. Repeat, and note whether the low wing raises when the aileron control is released first.
6. Repeat, using left rudder.

Complete

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11. END TEST

**** STOP DATA RECORDING ****

Complete
