RV-10

N961M

Pilot's Operating Handbook

Rev B

REVISION HISTORY

Version	Date	Description	Author
-	11Mar2011	Initial draft	M. Andresen
A	26July2011	Added performance charts in section 5. Updated weight and balance charts.	M. Andresen
B	25Nov2011	Added revision history table. Updated pitot static diagram to include alt air valve. Updated equipment list, tire pressure, magneto description and bag door dimensions.	M. Andresen

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1.0 General

1.1 Intro

The performance, handling and cost of the RV-10 make it the obvious choice in the limited field of four-seat kit airplanes, and make it a viable alternative to four-seat production airplanes – singles or twins -- as well.

The RV-10 is a four-person airplane, not just an airplane with four seats. It will carry four FAA standard people, full fuel and sixty pounds of baggage. The cabin accommodates four full-sized adults. Both front and back seats will hold people 6’4" tall and provide them with truly comfortable leg and headroom. Composite gull-wing doors let occupants board from both sides.

The RV-10 is designed to fly well on various versions of the bulletproof six-cylinder Lycoming O-540 engine, developing between 235 and 260 hp.

When many pilots say "performance", they really mean "speed." The RV-10 is quite a fast airplane – it will cruise just under 200 mph -- but speed is only part of the story.

The RV-10 derives its high cruise speed from a clean, light airframe, instead of from a big, consumptive engine. This means that cruise at lower speeds can be very economical. Company pilots often choose to cruise at 50-55% power and take advantage of the economy available there. At 175 mph, the RV-10 is getting more miles per gallon than most of the luxury cars, pickup trucks and SUVs it is flying over.

RVs are known for short-field capability and the RV-10 is no exception. Even at gross weight, the RV-10 can operate out of very short runways and climb well at high density altitudes. At the end of a flight, the generous wing area, big slotted flaps and robust steel rod landing gear allow the RV-10 to land at virtually any small airport -- grass, gravel or pavement. If you can land closer to your destination, you can gain a lot of time over "faster" airplanes that must use big paved airports a long way from town.

Occupant protection is an important design criteria. The composite cabin top provides roll-over protection. The cabin interior is designed around Oregon Aero seats and seat cushions which provide the best available impact mitigation — and comfort. Like all other RVs, the RV-10 has impressively low stall and landing speeds. If necessary, it can be safely landed in very small spaces at speeds that give the occupants the best possible chance of escaping injury.

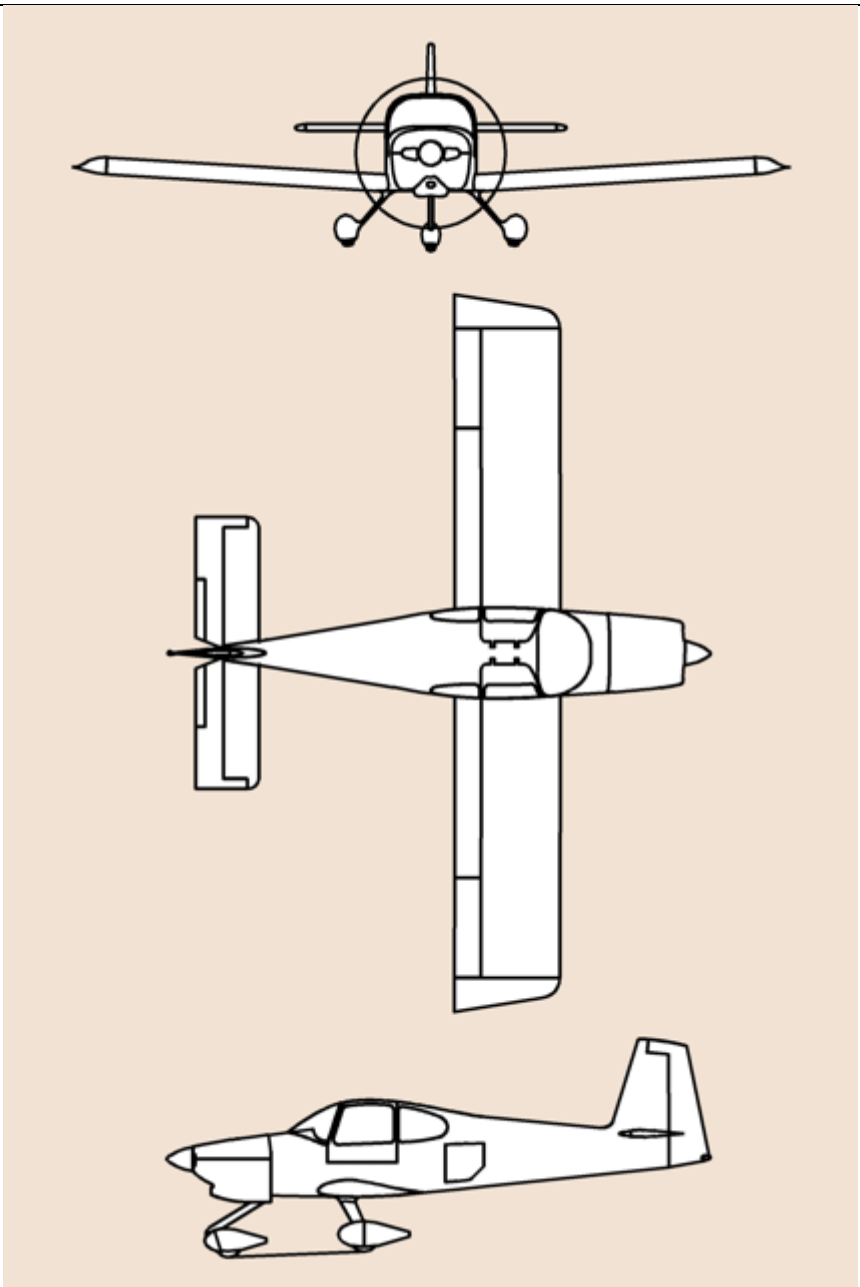
The baggage compartment will accept 100 lbs of "stuff" loaded through the baggage door on the left side. If fewer than four people are traveling, the rear seat backs may be removed in a couple of minutes for extra baggage space.

RVs have always enjoyed a reputation for excellent handling qualities. The RV-10 continues this tradition, in a manner appropriate to a four-place airplane. It is a very responsive airplane, but at the same time stable and easy to fly. It is not an aerobatic airplane, so flick-of-the-wrist sensitivity is not the point. Pilot workload is very low, because the airplane responds quickly and positively to small control inputs from the between-the-knees sticks and rigid pushrods running on ball bearings. It is not the least

bit "twitchy" and does not require constant attention to maintain heading or altitude. A long trip in the RV-10 can be positively relaxing.

If your mission includes more than two people, and you like airplanes that perform and handle well, you really owe yourself a ride in an RV-10.

1.2 Three view figure



Exterior Dimensions

Span 31 ft 9in.

Length 24 ft 5 in.

Height 8 ft 8 in

Wing Area 148 sq ft

1.3 Engine

Manufacturer	Lycoming
Model	YIO-540-D4A5
Rated Horsepower	260 hp
Rated Speed	2700 rpm
Bore	5.125 inches
Stroke	4.375 inches
Displacement	541.5 cu inch
Compression Ratio	8.5:1
Type	Six Cylinder, Direct Drive, Horizontally Opposed, Air Cooled

1.4 Propeller

Manufacturer	Hartzell
Model	HC-C2YR-1BFP/F8068D
Blades	2
Low Pitch	13.5
High Pitch	31.0
Diameter (Max)	
Diameter (Min)	
Type	Constant Speed, Hydraulically Actuated.

1.5 Fuel

Fuel Capacity(total)	60 US gal
Usable Fuel:	
Minimum Grade:	91/96 or 100/100LL Octane, Min

1.6 Oil

Oil Capacity (US qts):	12 qts max, 2.75 qts min
Oil Specification	MIL-L-22851 Ashless Dispersant
Oil Viscosity:	
All temps	SAE 15W-50 or 20W-50
> 80º F	SAE 60
> 60º F	SAE 40 or SAE 50
30 to 90º F	SAE 40
0 to 70º F	SAE 40, 30, 20W-40
< 10º F	SAE 30, 20W-30

1.7 Maximum Weights

Maximum Takeoff Weight:	2700 lbs
Maximum Ramp Weight:	2700 lbs
Maximum Landing Weight:	2700 lbs
Maximum Baggage Compartment Weight:	150 lbs
Empty Weight	1640 lbs
Gross Weight	2700 lbs

1.8 Baggage Space

Entry Width:	20.0” (Lower right corner angled)
Entry height:	18.5” (28” diagonal)
Volume:	13 cuft

1.9 Specific loadings

Wing Loading	18.6 lb/sq ft
Power Loading	10.4 lb/hp

2.0 Limitations

2.1 General

This section provides the operating limitations, instrument markings, color coding and basic placards necessary for the safe operation of the airplane and its systems.

This airplane must be operated as a normal category airplane in compliance with the operating limitations stated in the form of placards and markings and those given in this section and handbook.

2.2 Airspeed Limitations

	Speed	KIAS
V_A	Design Maneuvering Speed	
	@ 2700 lbs	125 kias
	@ 2400 lbs	118 kias
V_{NE}	Never Exceed Speed	200 kias
V_{NO}	Structural Cruising Speed	155 kias
V_{FE}	Flaps Extended Speed	
	Trail (0 deg)	122 kias
	Half (15 deg)	96 kias
	Full (30 deg)	87 kias

2.3 Airspeeds for Safe Operation

Stall – Full Flaps (Vs0) 55 KIAS

Stall – No Flaps (Vs1)	60 KIAS
Best Glide (Vgl)	90 KIAS
Rotation	65 KIAS
Maximum Climb	
Best Angle (Vx)	70 KIAS
Best Rate (Vy)	90 KIAS
Climb	105 KIAS
Cruise Climb	115 KIAS

2.3 Airspeed Indicator Markings

Marking	**KIAS**
Red Line	200 kias
Yellow Arc	155 to 200 kias
Green Arc	61 to 155 kias
White Arc	52 to 87 kias

2.4 Power Plant Limitations

Engine	YIO-540-D4A5
Max Horsepower	260 hp
Max Rotation Speed	2700
Max Manifold Pressure	Full Throttle
Max CHT	500 F
Max Oil Temp	245 F
Oil Pressure	25 psi at idle, 115 psi start up.
Fuel Pressure Inlet to fuel pump Inlet to fuel injector	 -2.0 min to 35 max psi 14 min to 45 max psi, 12 idle min

2.5 Power Plant Instrument Markings

Tachometer Green Arc Red Line (max)	 0 to 2700 rpm 2700 rpm
Oil Temperature Green Arc Red Line (max)	 165 to 200 F 245 F
Oil Pressure Green Arc Yellow Arc	 55 to 95 psi 25 to 55 and 95 to 115 psi

Red Line (min) Red Line (max)	25 psi at idling 115 psi at start and warm up.
Fuel Pressure Green Arc Red Line (min) Red Line (max)	 0 to 35 psi 0 psi 35 psi
Cylinder Head Temp Green Arc Red Line (max)	 0 to 400 F 500 F

2.6 Weight Limits

Maximum Takeoff Weight:	2700 lbs
Maximum Ramp Weight:	2700 lbs
Maximum Landing Weight:	2700 lbs
Maximum Baggage Compartment Weight:	150 lbs
Empty Weight	1570 lbs
Gross Weight	2700 lbs

2.6 Center of Gravity limits

Design C.G. Range. 15%-30% of wing chord

107.84-116.24 inches aft of Datum.

2.8 Maneuver Limits

All intentional aerobatic maneuvers including spins are prohibited.

2.9 Flight Maneuvering Load Factors

Positive Load Limit	3.8 G
Negative Load Limit	-1.9 G

2.10 Types of Operations

The airplane is approved for the following operations when equipped in accordance with FAR 91: Day VFR, Night VFR, Day IFR, Night IFR, Non-Icing.

2.11 Fuel Limitations

Fuel Capacity(total)	60 US gal
Usable Fuel:	
Minimum Grade:	91/96 or 100/100LL Octane, Min

2.12 Placards

On inside of baggage compartment door:

BAGGAGE MAXIMUM 100 LBS

In view from entrance (FAR 45.23(b))

EXPERIMENTAL

In view of front passenger (AC20-27F)

PASSENGER WARNING: THIS AIRCRAFT IS AMATEUR-BUILT AND DOES NOT COMPLY WITH FEDERAL SAFETY REGULATIONS FOR STANDARD AIRCRAFT.

On fuel caps (FAR 23.1557(c))

FUEL 100LL 30 GAL

In view of pilot

V_A 125 KIAS

3.0 Emergency Procedures

See RV-10 check list.

4.0 Normal Procedures

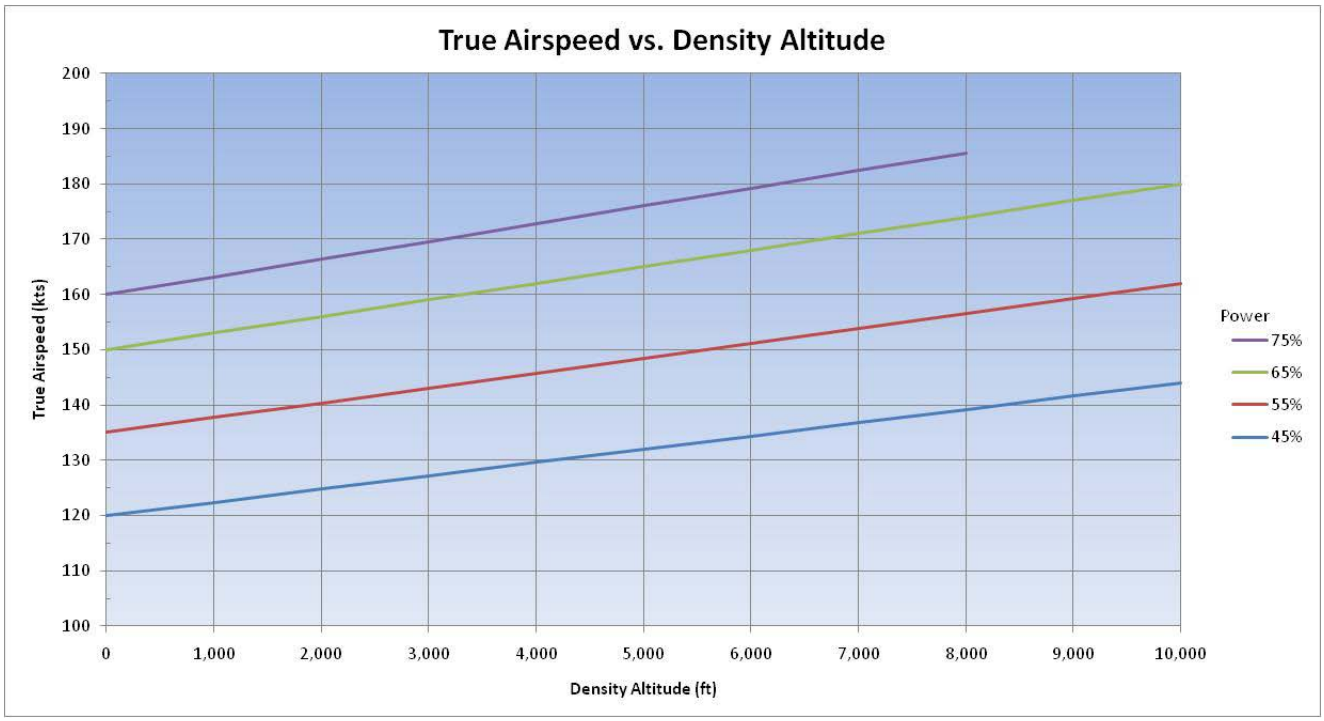
See RV-10 check list.

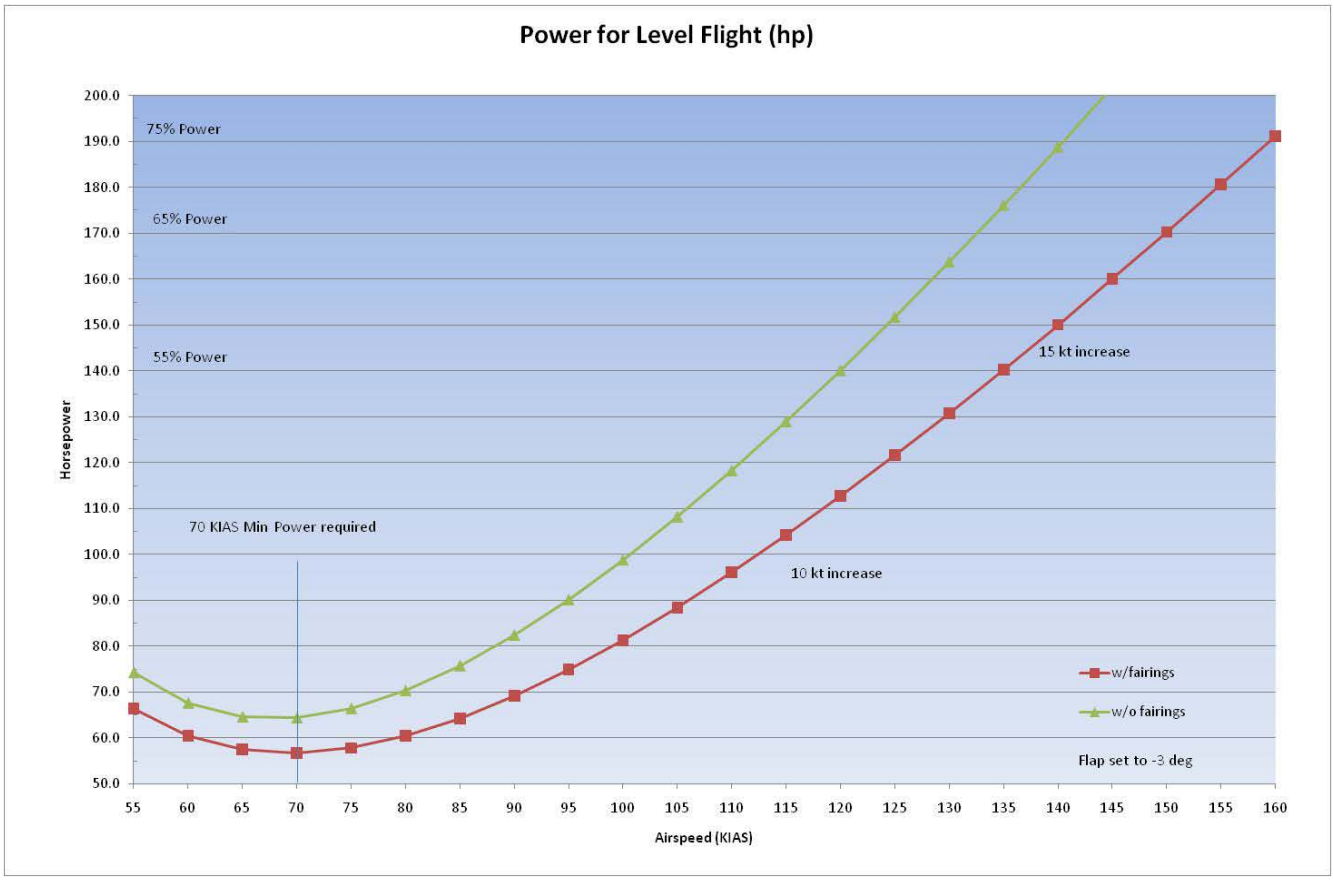
5.0 Performance

5.1 Stall and Approach Speeds

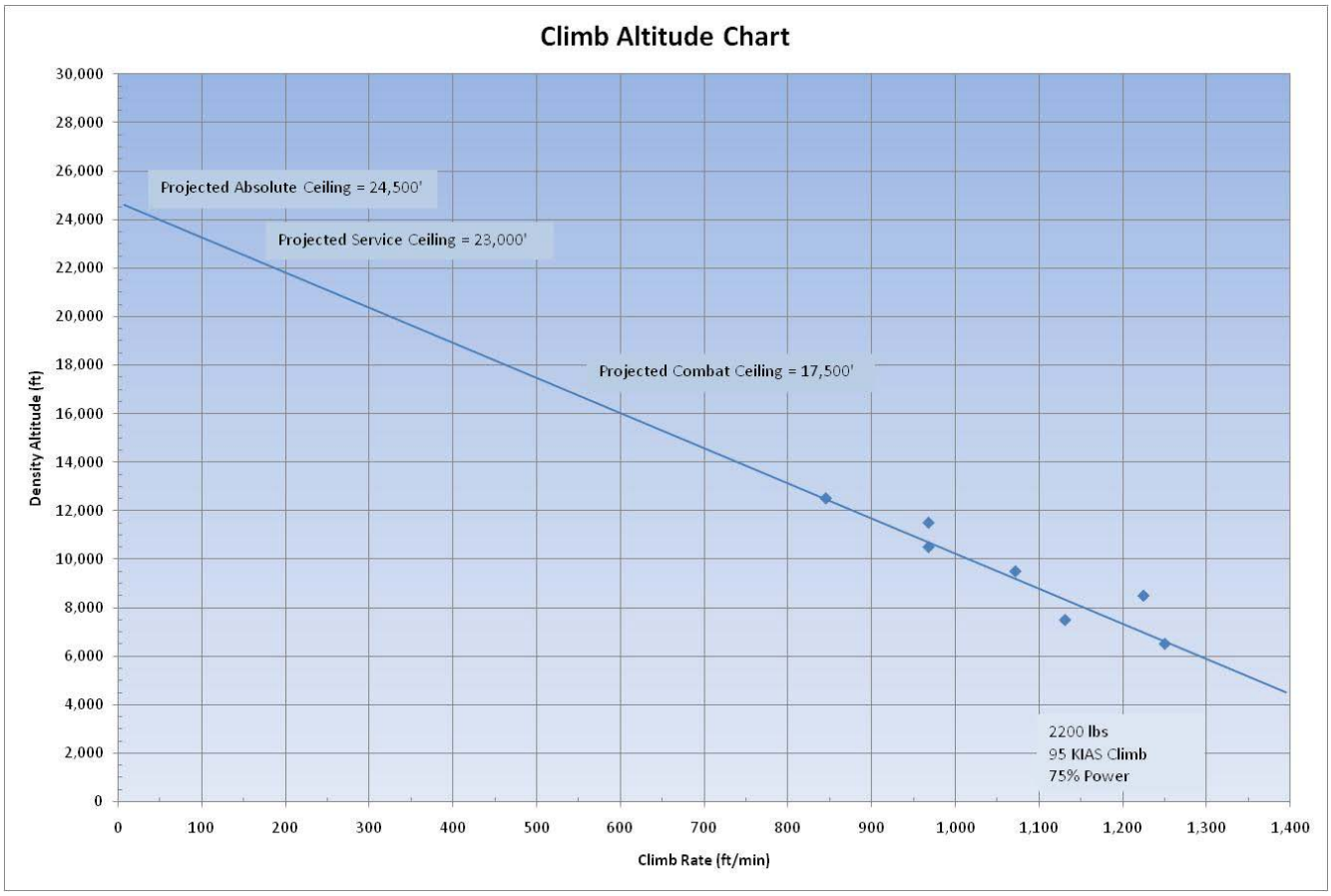
		Flap Position			
Speed	Weight	-3 deg	0 deg	15 deg	30 Deg
Stall	2,200 lbs	64 KIAS	62 KIAS	54 KIAS	52 KIAS
	2,700 lbs	71 KIAS	68 KIAS	60 KIAS	58 KIAS
Approach 1.3 x Vs	2,200 lbs	83 KIAS	80 KIAS	71 KIAS	68 KIAS
	2,700 lbs	92 KIAS	89 KIAS	78 KIAS	75 KIAS

5.2 True and Indicated Airspeeds versus Power and Altitude

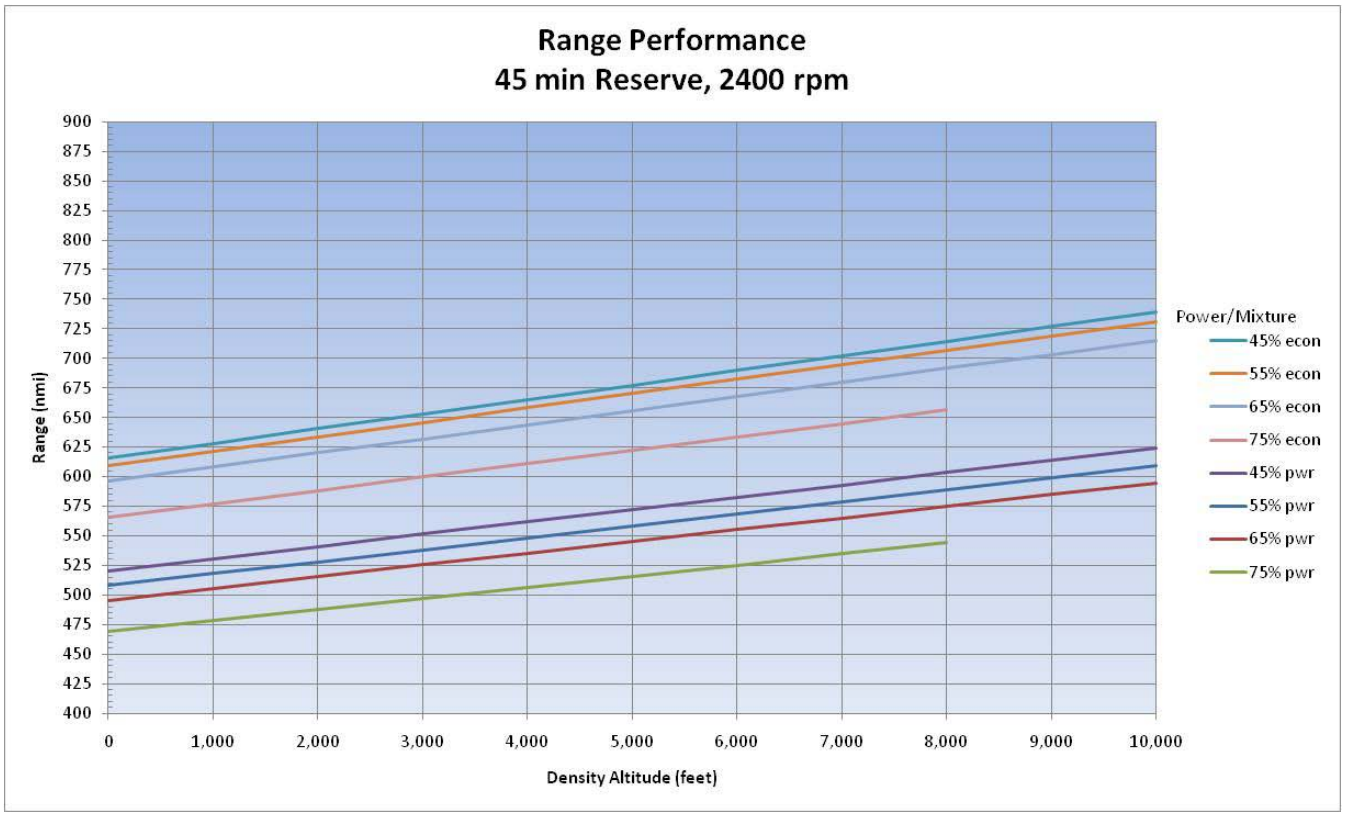


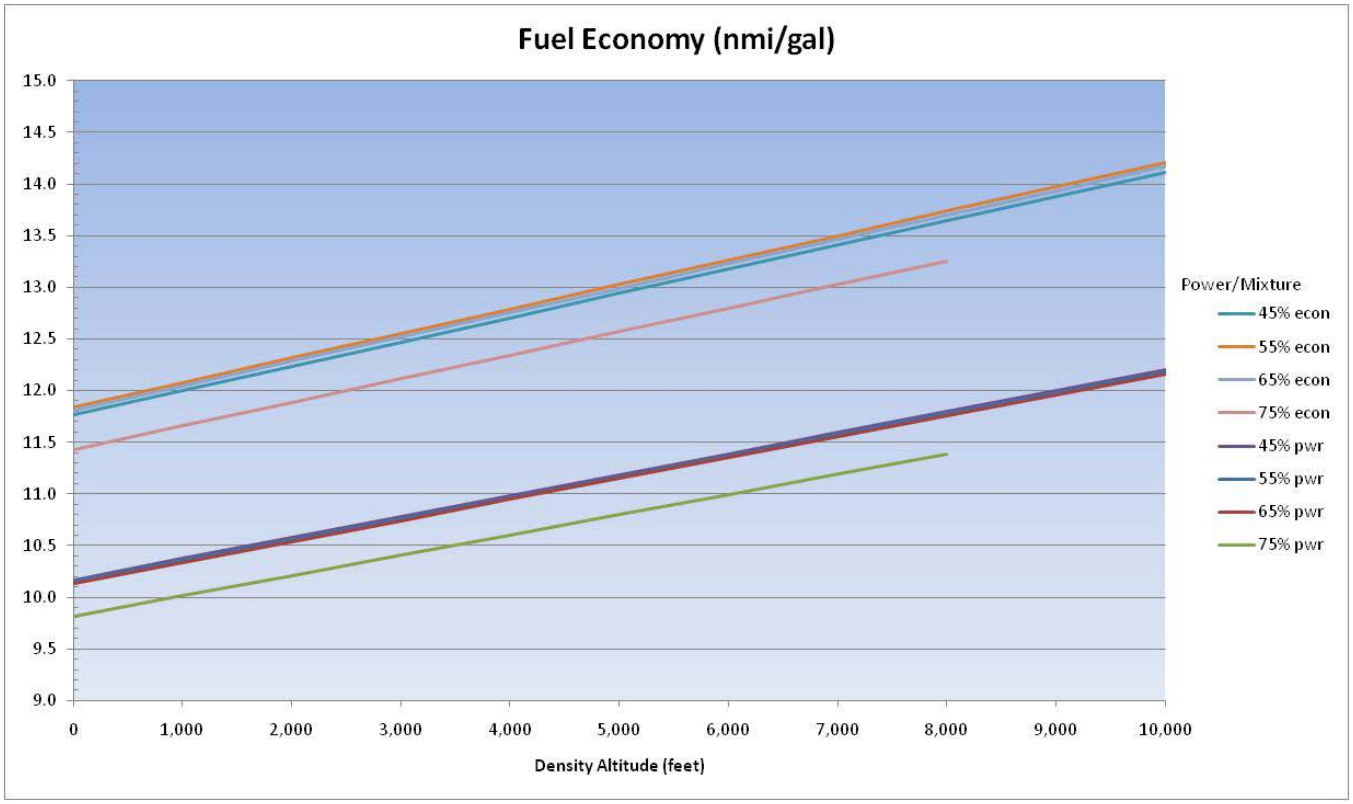


5.3 Climb Performance



5.4 Range and Fuel Economy





6.0 Weight & Balance

6.1 General

This section describes the procedure for establishing the basic empty weight and moment of the aircraft. Sample forms are provided for reference. Procedures for calculating the weight and moment for various operations are also provided.

6.2 Airplane Weighing Procedure

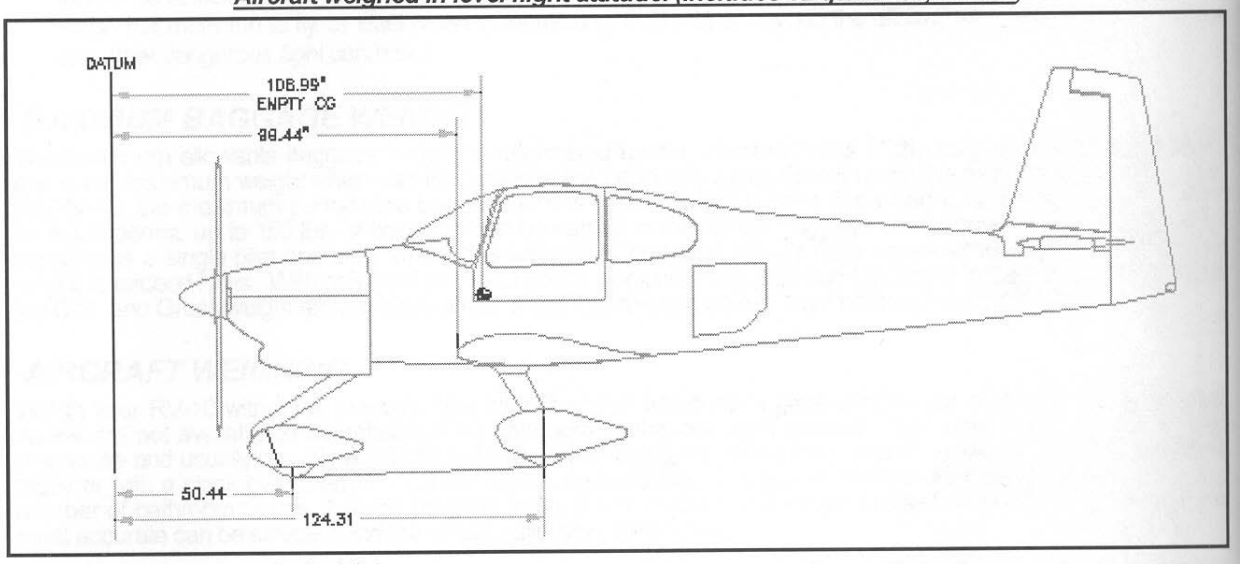
Weigh the RV-10 with three platform type scales which have been certified for accuracy. The airplane should be weighed in the empty condition and in a level attitude. Level attitude is established at the datum line which is the fuselage longeron at the door opening. Scales should be placed simultaneously under both main wheels and the nose wheel. Use plumb lines or vertical levels to measure the locations of the main wheels relative to the wing leading edge, and then convert this to an arm relative to the datum. The same applies to the nose wheel location which can be accurately located by dropping a plumb line to the floor and measuring aft to the wing leading edge.

The forms at the end of this section show a sample calculation of the empty weight Center of Gravity for a RV-10. To keep all moments positive, a datum has been selected at a point forward of the prop spinner. Only three moments must be calculated and combined to determine the CG position. This figure is not in itself too meaningful, but is important for further loaded which CG calculations.

SAMPLE WEIGHT & BALANCE FOR AN RV-10

Datum	99.44 inches forward of wing leading edge. (L.E.)
Design C.G. Range	15%-30% of wing chord, or 8.4-16.8 inches from L.E., or 107.84-116.24 inches aft of Datum.
Wing L.E.	99.44 inches aft of datum.
Pilot & Front Seat Passenger	114.58" aft of datum
Fuel	108.9" aft of datum
Rear Seat Passenger(s)	151.26" aft of datum
Baggage	173.5" aft of datum

Aircraft weighed in level flight attitude. (includes 12 qts. of oil, no fuel)



Main wheel, right 124.44" aft of datum.
Main wheel, left 124.31" aft of datum.
Nose wheel 50.44" aft of datum

DETERMINING EMPTY CG

	Weight	Arm	Moment
Right Wheel -	617	124.44	76778
Left Wheel -	618	124.31	76825
Nose Wheel -	380	50.44	19166
Total:	1615		172769

C.G. = 172769/1615= 106.99" aft of datum for empty weight CG

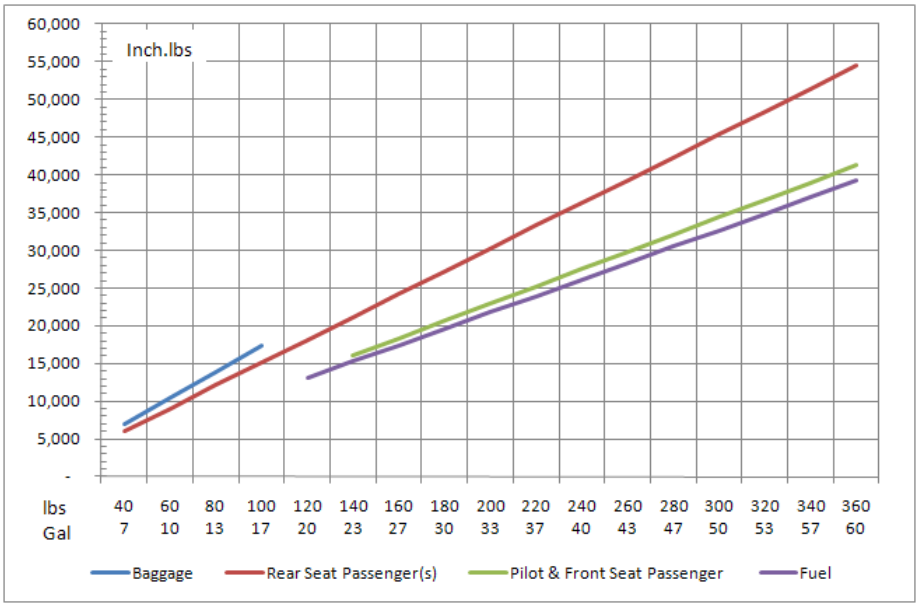
6.3 Weight and Balance Data Record

Date	BEW (lbs)	Moment (in lbs)
28 March 2011	1,632 lbs	174,764.7 in lbs

6.4 Weight and Balance Determination for Flight

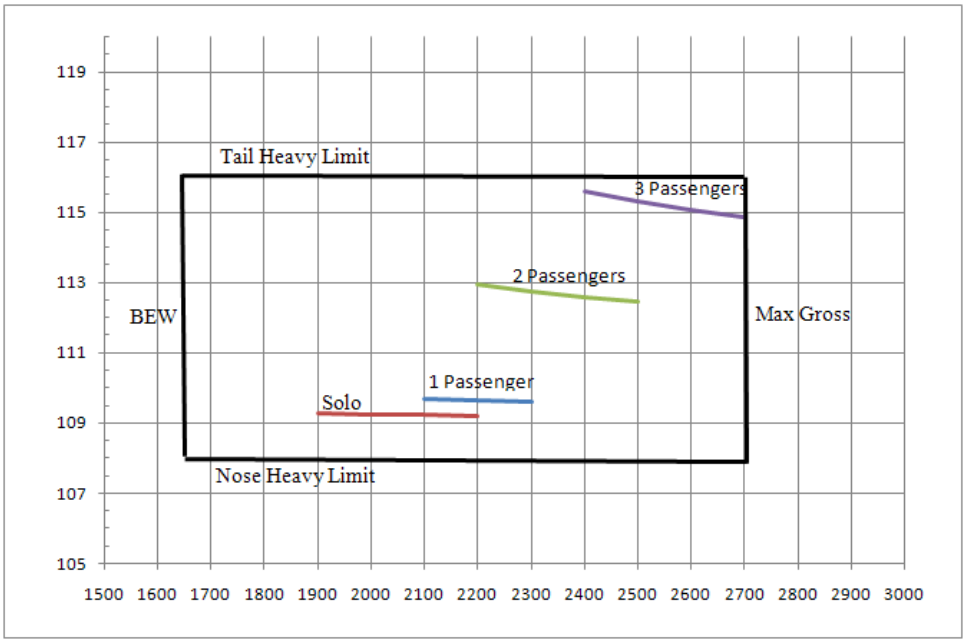
The table below can be used to determine the total weight and moment of a particular manifest. The moment can be found by either multiplying the weight by the station or alternatively using the graph below.

	Weight	Station	Moment
Front Seats		114.6	
Rear Seats		151.3	
Baggage		173.5	
Fuel		108.9	
Total		$\frac{\text{Total Mom}}{\text{Total Wt}}$	



Graph for determining moment given weight.

The total weight and total moment must be within the envelope below. The lines within the envelope show how the weight and moment will vary as a function of fuel burn for various loads.



Weight/Moment Operating Envelope

7.0 Systems Descriptions

7.1 The Airplane

The airplane is a single engine, normally aspirated low wing configuration with tricycle landing gear. The airframe is aluminum alloy construction except for steel components comprising: engine mount, landing gear, landing gear mounts, elevator control horns and other miscellaneous items. The tips of the wings and tail surfaces as well as cowling, landing gear fairings, empennage fairings and cabin top are fabricated from fiberglass.

The constant cord wing planform chosen for the RV-10 offers the ultimate in construction ease, stability and lifting ability. The possible drag and aesthetic penalties for the rectangular wing are negligible in light of its advantages. The airfoil chosen is a SSV-2316; a new airfoil custom designed and optimized around the design parameters of the RV-10.

7.2 Engine

The aircraft is powered by a Lycoming I0-540, direct drive, horizontally opposed engine rated at 260 HP. The engine is fitted with a 60 amp 14 volt main alternator with internal regulator. Ignition is provided by a conventional dual Slick magneto system, model 6350. A SlickSTART Model SS1001 magneto booster system is installed for improved engine start. The engine incorporates a mechanical fuel pump and an alternate air induction system. The starter is a Sky-Tec model 149-12LS.

The exhaust system is all stainless steel with a crossover configuration and no mufflers. One heat muff on the right exhaust provides cabin heat.

Engine controls consist of throttle, propeller, mixture, and alternate air door. The throttle, propeller and mixture controls are of a push-pull type centrally located in between the pilot and copilot positions. The alternate air door push-pull control is mounted above and to the left of the engine controls.

7.3 Propeller

The engine drives two-blade constant speed, non-counterweighted propeller. The propeller is capable of blade angles between a low positive pitch and high positive pitch. This model is not equipped with an air charge and does not feather.

Centrifugal twisting moment acting on the blades moves the blades to a low blade angle to increase RPM. Since the centrifugal twisting moment is only present when the propeller is rotating, a mechanical spring is installed within the propeller to assist moment of the blades to a lower pitch position as RPM decays, and to reduce the propeller pitch to the low pitch stop when the propeller is static. With the blades at low pitch, the load on the starter when starting the engine is reduced significantly.

Oil pressure opposes the spring and centrifugal twisting moment to move the blades to a high blade angle (high pitch), reducing engine RPM.

If oil pressure is lost at any time, the propeller will move to low pitch. This occurs because the spring and blade centrifugal twisting moment are no longer opposed by hydraulic oil pressure. The propeller will then reduce blade pitch to the low pitch stop.

7.4 Landing Gear

The landing gear is a tricycle configuration with steel landing gear legs. The nose wheel is free castering. The nose wheel tire is size 5.00-5 and is 6-ply.

The main gear tires are size 15x6.00 x 6 and are 6-ply. The main gear wheels are fitted with Cleveland wheels and disk brakes.

7.5 Brake System

The braking system consists of toe brakes attached to both the pilot and copilot side rudder pedals operating two Cleveland brake master cylinders. The left and right brake master cylinders share a common fluid reservoir installed on the top right front face of the fire wall.

7.6 Flight Control System

Dual controls are fitted. Elevator and ailerons are operated through a system of adjustable push rods. The rudder is operated through a cable system to the rudder pedals.

Pitch trim is by dual tabs on the elevators actuated by an electric servo. Roll trim is by a spring system actuated by an electric servo located in the left wing at the most inboard access panel. Pitch and roll trim are selected by a set of four switches on the pilot’s stick grip. Trim positions are depicted on LCD indicators located on the lower left portion of the instrument panel.

Flaps are operated electrically and are controlled by a switch mounted on the pilot stick grip. A flap positioning system selects Reflex, 10, 20 and 33 degrees (need to confirm with measurements) of flap

automatically with a temporary press of the flap actuation switch. The up position of the switch is used to select intermediate values of flap or to fully retract the flaps.

7.7 Fuel System

Fuel is stored in two 30 US gallon tanks secured to the leading edge of the left and right main wing spars. Fuel drains are fitted to the lowest point of each tank and should be opened prior to the first flight of the day and after each refueling to check for sediment and water.

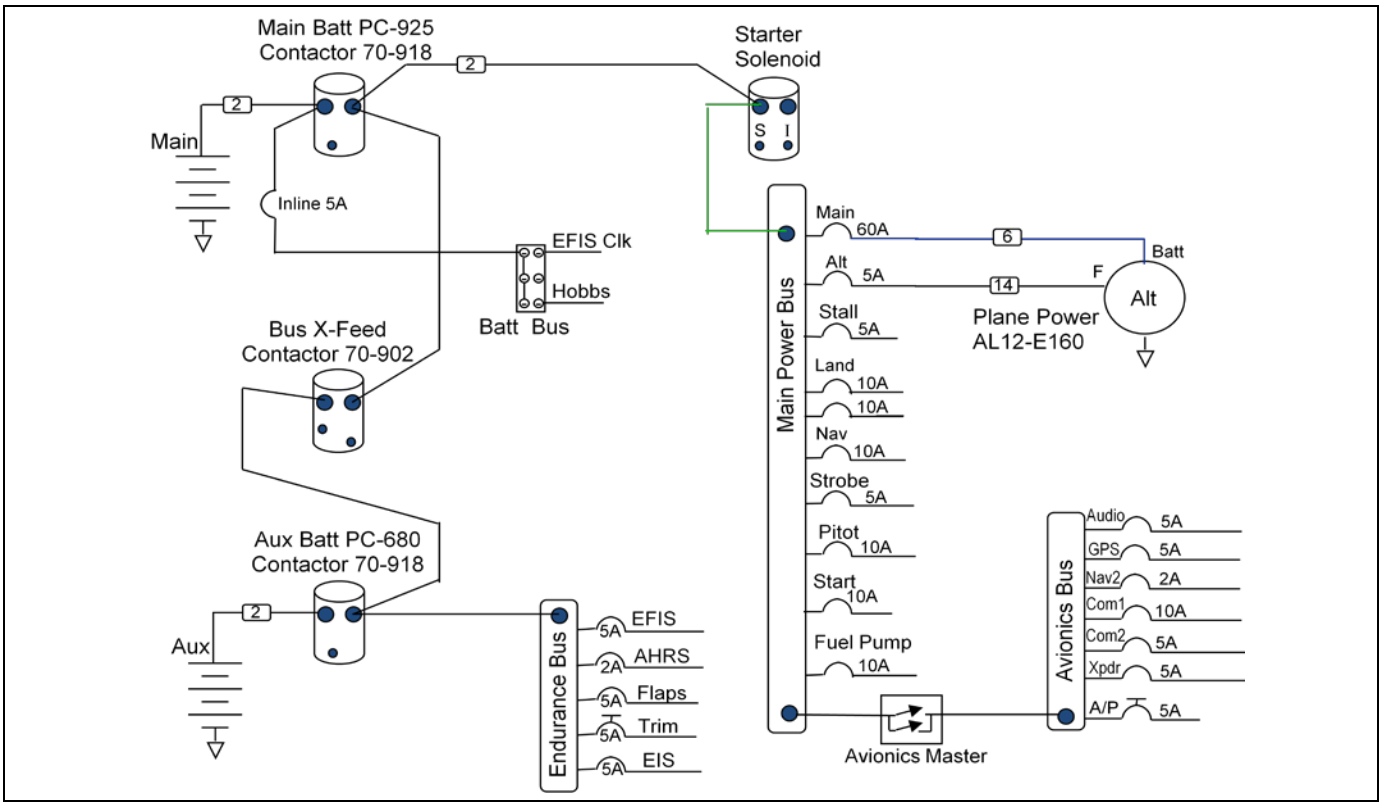
The wing tank fuel is routed to the fuel selector valve which is located on the center tunnel in between the pilot and co-pilot positions. A knob on the valve handle must be lifted to change the selection to or from the OFF position. Left/Right may be selected without lifting the lever.

Fuel that leaves the selector valve is routed to the fuel filter which is located in the center tunnel. Fuel then flows to an electric boost pump which is fitted in case of failure of the engine-driven fuel pump and is also used during takeoff and landing. The boost pump is controlled by a toggle switch on the lower center console.

A fuel flow transducer is fitted at the electric fuel pump output before exiting the fire wall. On the engine side of the firewall, fuel flows to a manifold on the upper left firewall which houses the fuel pressure transducer and also goes to the engine driven fuel pump. The fuel flow and pressure transducers are read by the Grand Rapids EIS 6000 and are displayed on both the EIS and EFIS.

7.8 Electrical System

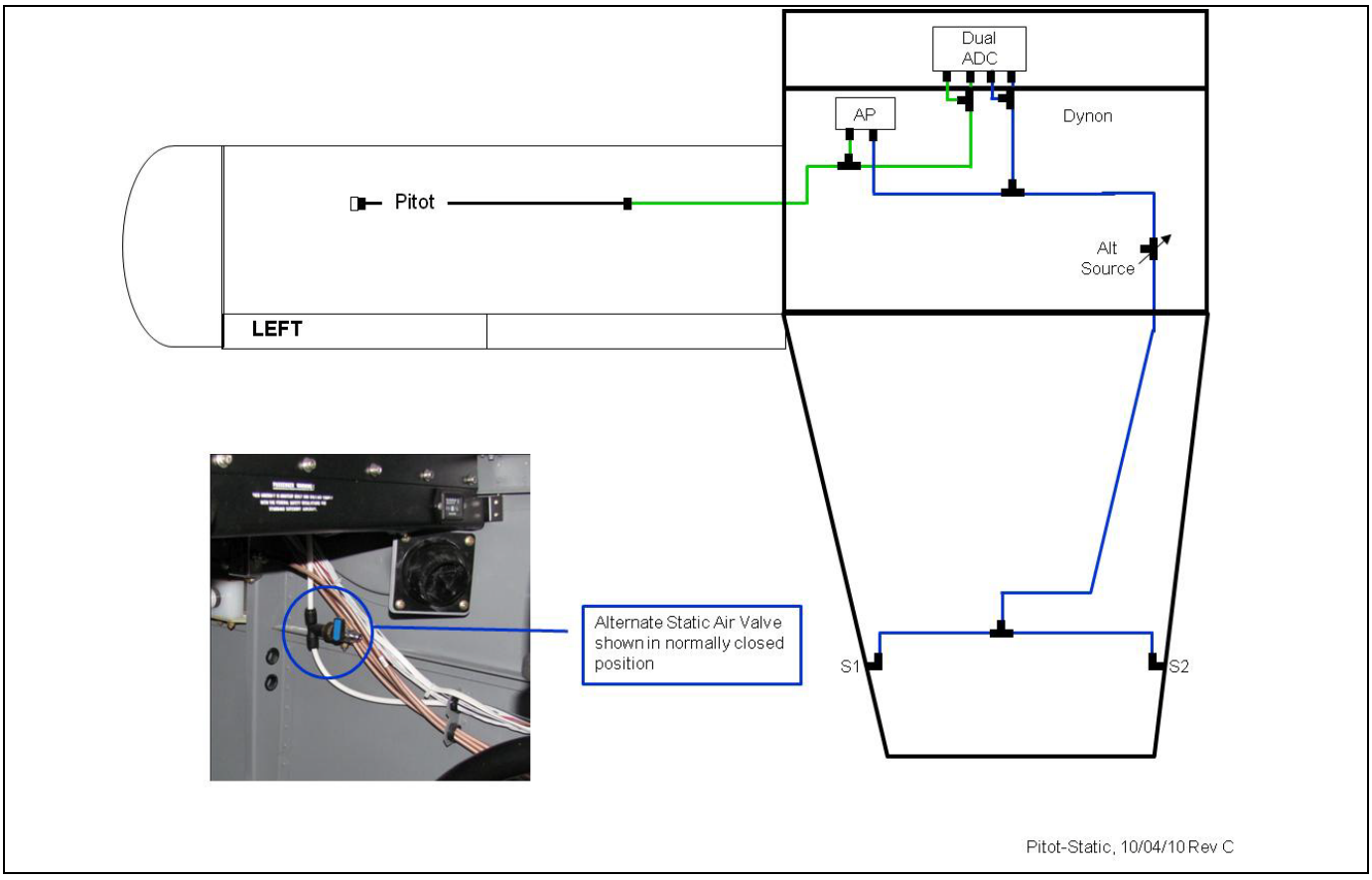
The power distribution system consists of main and auxiliary batteries, a main, endurance, avionics and battery bus, a 60A alternator and battery and cross-bus feed solenoids. The main battery is connected to the main bus via the main battery solenoid. This battery is charged by the alternator. The avionics bus is power from the main bus by a DPDT switch to provide redundancy. The endurance bus powers the essential flight systems and is connected via a solenoid to the auxiliary bus. The auxiliary bus and battery are a completely isolated system unless the bus cross feed solenoid is closed. The bus cross feed solenoid connects the main bus to the auxiliary bus and provides a charging path for the auxiliary battery. The battery bus is always energized via an inline fuse to the main battery.



7.9 Pitot Static System

The pitot system provides pitot pressure to the dual redundant Grand Rapids air data computers and the Trutrak auto pilot. The heated pitot tube is located under the left wing, outboard of the aileron bellcrank. The pitot heat, powered from the Main Bus, is controlled by the PITOT HEAT switch on the lower center console.

The static system supplies static pressure to the dual redundant Grand Rapids air data computers and the Trutrak auto pilot. The static pressure ports are on the rear sides of the fuselage and are positioned to self drain. An alternate static port is located on the co-pilot side in the cockpit, under the panel on the right side wall.



7.10 Instrument Panel

The instrument panels consist of the upper instrument panel, the lower panel support and the lower center switch panel.

The upper instrument panel is divided into three panels: the left pilot panel, the radio panel and the right co-pilot panel. The left pilot panel houses the primary and secondary flight displays, the warning light cluster, the auto pilot, ignition switch and pitch trim indicators. The radio panel houses the audio panel, GPS Nav/Com, Secondary Com and transponder. The right co-pilot panel houses the ELT remote control panel and auxiliary power receptacles.

The lower panel support is 1.5" tall and is a mounting area for the Alternate Air control, Cabin Heat and Air controls, Autopilot select switch and the Hobbs meter.

The lower center switch panel houses the circuit breaker panel on the left side and all electrical switches on the front. Headphone jacks are also located on the front of this panel.

7.11 Heating, Ventilation and Defrosting System

Cabin heat is provided via a single heat muff attached to the right exhaust system and fed with high pressure air taken from the baffling. The heated air is ducted through the firewall and tee'd out of the center tunnel into the foot well of the pilot and copilot stations. Rear cabin heat is not connected. A

second firewall feed through directs ram air into the center tunnel. Control of this ram air is located next to cabin heat on the lower panel support.

Ventilation air is supplied from two NACA inlets located on the sides of the fuselage forward of the pilot and co-pilot stations. The vents are fed to eyeball vents under the left and right sides of the instrument panel.

7.12 Cabin Features

The front seats are equipped with Crow racing style seat belts and harnesses. The rear passenger seats are equipped with seat belts. Front and rear seats have access to overhead red dome and white map lights. The rear seats are removable. The lower portion of the seat is held in place by Velcro. Once the lower seat is removed, the hinge attach pins for the rear seats can be removed and the seat backs are free to be removed.

7.13 Stall Warning

The stall warning is triggered by a vane located on the left wing. The angle of attack which activated this warning is adjustable by changing the switch position and banding of the vane. The buzzer for the stall warning is located on the sub-panel.

7.14 Baggage Area

The rear baggage area is equipped with quick release tie down straps.

8.0 Handling, Servicing and Maintenance

8.1 General

The airplane should be moved using a tow bar which connects to the nose wheel. The airplane may be pushed from the inboard portion of the prop or from a wing if care is taken to push on a rib.

8.2 Ground Handling

The airplane has three tie down rings. One located on each wing near the outboard bellcrank access panel and another on the tail. The tie down rings are removable.

The airplane can be jacked from the tie down rings or alternatively from the main spar just inboard of the main landing gear. The underside of the fuselage should be protected from the jack and the force dispersed over the main spar using padded boards.

8.3 Engine Air Filter

The engine air filter is reusable. It should be cleaned in solvent and blown dry with air. The filter is then coated in oil and reinstalled.

8.4 Brake Service

Brake linings are Cleveland part number 66-11200. Brake hydraulic fluid is MIL-5606 or equivalent.

8.5 Landing Gear Service

Nose wheel tire pressure is 30-35 psi. The nose wheel valve stem can be accessed by a removable insert on the left side of the wheel pant. The valve stem must be positioned in the aft most position for access. The nose wheel break out force should be set to 25 lbs. This is measured using a spring scale and adjusted by setting the torque of the bottom nut on the nose wheel.

The main tire pressure is 35-40 psi. The valve stems for the main tires can be accessed by a small door in the side of the wheel pant. .

8.6 Propeller Service

The propeller must be lubricated at intervals not to exceed 100 hours or at 12 calendar months, whichever occurs first.

1. If annual operation is significantly less than 100 hours, calendar lubrication intervals should be reduced to six months.
2. If the aircraft is operated or stored under adverse atmospheric conditions, e.g., high humidity, salt air, calendar lubrication intervals should be reduced to six months.

Owners of high use aircraft may wish to extend their lubrication interval. Lubrication interval may be gradually extended after evaluation of previous propeller overhauls with regard to bearing wear and internal corrosion.

Hartzell recommends that new or newly overhauled propellers be lubricated after the first one or two hours of operation because centrifugal loads will pack and redistribute grease, which may result in a propeller imbalance. Redistribution of grease may also result in voids in the blade bearing area where moisture can collect.

8.7 Oil System Service

The oil system incorporates a filter model CH48110-1 which should be changed along with the oil every 50 hours. The sump incorporates a pressure screen that should be removed, inspected, cleaned and reinstalled at each oil change.

8.8 Fuel System

Remove the fuel injector screen assembly and check the screen for distortion or openings in the strainer. Replace for either of these conditions. Clean screen assembly in solvent and dry with compressed air. To install the screen assembly, place the gasket on the screen assembly and install the assembly in the throttle body and tighten 60-70 inch pounds torque

The fuel filter can be cleaned by removing the filter from the fuel system, un-screwing the end cap of the filter assembly with a 1.5" wrench while holding the other side of the housing with a 1.375" wrench or vise. The filter should be inspected after 5-10 hours of operation o new installations and then typically every year at the condition inspection after that. Inspect more frequently if know fuel conditions are questionable. The filter element can be removed from the filter cap and cleaned in mineral spirits then blown dry with compressed air. Inspect the seal O-rings. These may be re-used if in satisfactory condition. Re-assemble the filter using some engine oil on the O-rings. Make sure the conical spring is

installed correctly and the filter assemble is installed back in the fuel system in the correct flow direction as designated by the arrows on the filter housing.

8.9 Battery Service

Batteries are located aft of the baggage compartment aft bulkhead. The main battery is an Odyssey PC-925 and the auxiliary battery is an Odyssey PC-680. Both batteries are AGM cell and are not serviceable.

8.10 Lubrication

The landing gear nose wheel and main wheel bearings should be repacked with Aeroshell #5 at the annual condition inspection. The nose wheel castering bearing is fitted with a grease fitting and should be serviced with Aeroshell #5 at the annual condition inspection.
The control system hinges can be serviced with LPS All Purpose Lubricant or equivalent as needed.

9.0 Equipment List

Qty	Item	Manufacturer and Model Number
	Power plant	
1	Engine	Lycoming YIO-540-D4A5
1	Magnetos	Slick model 6350
1	Magneto Booster System	SlickSTART Model SS1001
1	Propeller	Hartzell HC-C2YR-1BFP/F8068D
	Fuel System	
1	Selector Valve	Andair
1	Filter	Airflow Performance P/N 1090079
1	Electric Pump	Airflow Performance P/N 3090050
	Electrical	
1	Starter	Sky-Tec model 149-12LS
1	Alternator	Plane Power 60A
1	Main Battery	Odyssey PC-925
1	Auxiliary Battery	Odyssey PC-680
	Lighting	
3	Navigation/Strobes	Whelan
1	Overhead Lights	Chevy Tahoe red dome/wt map lights
	Avionics	
1	Audio Panel	Garmin GMA-240
1	Nav/Com 1	Garmin GNS-430W
1	Com 2	Garmin SL-40
1	Transponder	Garmin GNX-327
1	ELT	Ameri-King AK-450
1	Engine Monitoring	Grand Rapids Technology EIS-6000
1	Auto Pilot System	TruTrak DigiFlight II VS
	Flight Instruments	Grand Rapids Technology
1	Primary Instrument System(Left)	Horizon HX 6.5", DU1, S/N: 391
1	Multi-Function Display (Right)	Horizon HX 6.5", DU2, S/N: 389
1	Air Data Computer	Dual AHRS.
	Cabin Equipment	
1	Fire Extinguisher	H3R Amerex C352, 2.5 lb Halon 1211
	Landing Gear	
1	Nose Wheel	5.00-5 and is 6-ply
2	Main Wheel	15x6.00 x 6 and are 6-ply
2	Main Brake	Cleveland 66-11200