

# Airplane Operating Manual

## Section 2

### LIMITATIONS

This aircraft must be operated in accordance with the FAA-approved Operating Limitations (Op Limits). The Op Limits are printed on three typed pages. They form a part of the Airworthiness Certificate and as such must remain attached to the certificate.

INDICATED AIRSPEEDS			
CIAS	TERM	MARKING	DESCRIPTION
52	V <sub>SO</sub>	Bottom of White Arc	Stall speed in landing configuration
60	V <sub>S</sub>	Bottom of Green Arc	Stall speed in cruise configuration
87	V <sub>FE</sub>	Top of White Arc	Flap extension speed
125	V <sub>A</sub>	Blue Line and Placard	Maximum speed for full control input at gross weight
156	V <sub>NO</sub>	Top of Green Arc	Normal operations in smooth air
156- 200	V <sub>NO</sub> - V <sub>NE</sub>	Yellow Arc	Operation in smooth air with caution to avoid abrupt control inputs
200	V <sub>NE</sub>	Red Line	Never exceed speed

**NOTE: Because of the high ratio of top speed to stall speed and Maneuvering speed, this aircraft is more susceptible to pilot induced overloads than other similar airplanes. THE PILOT CAN THEREFORE IMPOSE DESTRUCTIVE LOADS ON THE AIRFRAME ABOVE THE RELATIVELY LOW MANEUVERING SPEED. NOTE LIMITATIONS, EXERT CAUTION AND FLY ACCORDINGLY.**

### POWERPLANT LIMITATIONS

Maximum Output 260 Horsepower  
 Maximum Speed 2700 RPM

Maximum Oil Temperature 235°F  
 Normal Oil Temp 140-220°F  
 Minimum Oil Pressure 20 psi  
 Maximum Oil Pressure 95 psi

Maximum Absolute Cylinder Head Temperature (CHT) 500°F  
 Maximum Normal CHT 435°F  
 Normal CHT 350°F -385°F

Maximum Fuel Pressure 45 psi  
 Minimum Fuel Pressure 14 psi

Fuel Grade Leded: 100LL as defined by ASTM D910  
 Unleaded: UL94 as defined by ASTM D7547  
 See Lycoming Service Instruction 1070AB

**ENGINE INSTRUMENT MARKINGS**

Tachometer	Normal Operating Range	0-2700 RPM
	Maximum	2700 RPM
Oil Temperature	Normal Operating Range	140 to 220°F
	Maximum	245°F
Oil Pressure	Normal Operating Range	45 to 95 psi
	Idle Range	25 to 60 psi
	Minimum	20 psi
	Maximum	95 psi
Fuel Pressure	Normal Operating Range	14 to 45 psi
	Minimum	14 psi
	Maximum	45 psi
CHT Normal Maximum		435°F

**WEIGHT LIMITATIONS**

Gross Weight	2700 pounds
Maximum baggage	150 pounds

**CENTER OF GRAVITY LIMITS**

The forward limit is 15% of wing chord or 8.4" aft of the wing leading edge.  
The aft limit is 30% of wing chord or 16.8" aft of the wing leading edge.

**NOTE:** Some RV-10s use an arbitrary datum somewhat forward of the spinner.  
***The datum for this aircraft is the wing leading edge.***

**FLIGHT LOAD FACTORS**

The structure has been designed to withstand aerodynamic loads of 3.8 G positive and 1.9 G negative. This is the maximum load the airframe structure is designed to withstand without sustaining damage. A significant safety factor is engineered into the limits. The calculated breaking strength is 5.7 G (plus safety factor) at which it will withstand the load for 3 seconds (assuming no previous airframe deterioration, fatigue, material flaws, or construction errors). Approaching this 5.7 G load could permanently weaken the structure even if failure does not occur.

**TYPES OF APPROVED OPERATION**

This aircraft is approved for Day and Night VFR and IFR operation in accordance with the aircraft Op Limits.

# Airplane Operating Manual

## Section 2

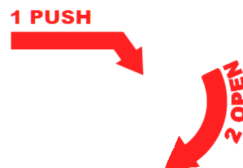
### LIMITATIONS

#### PLACARDS

*Forward left fuselage near the external power port:*



*Outer left and right doors. Mirror and orient as necessary:*



*Left and right fuel cap:*

**AVGAS  
30 GAL**

*Right instrument panel:*

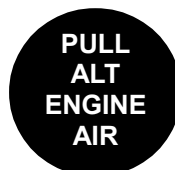
**PASSENGER WARNING  
THIS AIRCRAFT IS AMATEUR BUILT AND DOES NOT  
COMPLY WITH FEDERAL SAFETY REGULATIONS  
FOR STANDARD AIRCRAFT**

*Upper central instrument panel:*

**RV-10/G  
N921AC**

**ALTERNATOR  
FAILED WHEN LIT**

*Knob face on right side of throttle quadrant:*



*Right instrument panel:*

**REDUCE  $V_A$  AT LOWER WEIGHTS:**

2700 LBS	125 KIAS
2500 LBS	120 KIAS
2300 LBS	115 KIAS
2100 LBS	110 KIAS

*Forward center console:*

**FIRE EXTINGUISHER INSIDE**

*Inside baggage door:*

**MAXIMUM BAGGAGE CAPACITY  
150 LBS**

*Right rear window in 2-inch letters:*

**EXPERIMENTAL**

*Left and right flap roots:*

***NO STEP***

END OF SECTION