

**RV-10**

**Check List**

## V - Speeds

		RV-10
$V_{fe}$	Flaps Speeds	
	Trail (0 deg)	122 kias
	Half (15 deg)	96 kias
	Full (30 deg)	87 kias
$V_{s1}$	Stall (Flap Up)	60 kias
$V_{s0}$	Stall (Flap 40 deg)	55 kias
	Best Glide	80 kias
$V_r$	Lift Nose Wheel	65 kias
$V_y$	Best Rate of Climb	95 kias
$V_x$	Best Angle of Climb	80 kias
$V_a$	Maneuvering Speed	
	2700 lbs	125 kias
	2400 lbs	118 kias

# RV-10

  

## Check List & Procedures

### PRE-FLIGHT

#### Cabin

- (1) Hobbs ..... "Record"
- (2) Aircraft Documents....."Check"
- (3) Control lock ..... "Release"
- (4) Main Battery Switch ..... "On"
- (5) Strobe lights ..... "On & Verify"
- (6) Nav lights ..... "On & Verify"
- (7) Landing lights ..... "On & Verify"
- (8) Stall Warning Vane ..... "Activate & Verify"
- (9) All Switches Off ..... "Off"

#### Fuel & Oil

- (1) Fuel Quantity & Filler Caps....."Check & Secure"
- (2) Fuel Tank Left and Right ..... "Drain"
- (3) Engine Oil ..... "8 to 12 qts"

#### Right Wing

- (1) Flap and Aileron attachments ..... "Check"
- (2) Wing tie down..... Disconnect
- (3) Fuel tank vent opening....."Check"
- (4) Tire for inflation & wear....."Check"
- (5) Wheel Fairing....."Check"

#### Nose

- (1) Cowling....."Check"
- (2) Propeller and spinner ..... "Check"
- (3) Air inlet. .... "Check"
- (4) Nose wheel/tire for inflation & wear ..... "Check"

#### Left Wing

- (1) Conduct Right Wing Checks.....Complete
- (2) Pitot openings....."Check"

#### Empennage & Aft Fuselage

- (1) Skins ..... "Check"
- (2) Static openings ..... "Check"
- (3) Tail Tie Down ..... Disconnect
- (4) Rudder & Elevator for freedom of movement "Check"
- (5) Baggage Door & Antennas ..... "Check"

## ENGINE START

### BEFORE STARTING THE ENGINE

- (1) Seats, Seat Belts, Harnesses ..... "SET"
- (2) Passenger Brief ..... "COMPLETE"
- (3) Circuit Breakers ..... "CHECK IN"
- (4) Main Battery Switch ..... "ON"
- (5) Aux Battery Switch ..... "ON"
- (6) Flaps ..... "UP"
- (7) Roll and Pitch Trim ..... "NEUTRAL"
- (8) Fuel Selector ..... "Desired Tank"
- (9) Brakes ..... "SET"

### ENGINE START

- (1) Mixture ..... "RICH"
- (2) Propeller ..... "FWD"
- (3) Throttle ..... Open 1/4 inch.
- (4) Alt Air ..... "OFF"
- (5) Fuel Pump ..... "ON 3sec/OFF."
- (6) Propeller Area ..... Clear.
- (7) Ignition Switch ..... "START."
- (8) Throttle ..... 1000 RPM.
- (9) Oil Pressure ..... "Check"
- (10) Battery X-Feed Switch ..... "ON"
- (11) Ammeter ..... "CHECK"

### HOT/FLOODED ENGINE START

- (1) Throttle ..... Flooded Start: "FULL OPEN"
- (2) Throttle ..... Hot Start: "FULL OPEN"
- (3) Mixture ..... "IDLE CUT-OFF"
- (4) Electric Fuel Pump ..... "ON"
- (5) Propeller Area ..... Clear.
- (6) Ignition Switch ..... "START"
- (7) Mixture ..... "Advance"
- (8) Throttle ..... 1000 RPM.
- (9) Electric Fuel Pump ..... "OFF"
- (10) Oil Pressure ..... "CHECK"
- (11) Battery X-Feed Switch ..... "ON"
- (12) Ammeter ..... "CHECK"

## TAXI – GROUND CHECKS

### AFTER START - PRE-TAXI

- (1) Mixture ..... "LEAN"
- (2) Navigation lights ..... "AS NEEDED"
- (3) Radio Master ..... "ON"
- (4) Radio ..... "ON & SET"
- (5) Transponder ..... "STANDBY," "1200."
- (6) ATIS ..... "COPY"
- (7) Altimeter ..... "SET"
- (8) Taxi Clearance ..... "RECEIVED"
- (9) Stick ..... "POSITION"
- (10) Brakes ..... "TEST"
- (11) Flight Instruments ..... "Check on Turn"

### GROUND CHECKS

- (1) Nose Wheel ..... "STRAIGHT"
- (2) Brakes ..... "HOLD"
- (3) Cabin Doors & Pins ..... "LATCHED"
- (4) Flight Controls ..... "CHECK"
- (5) Flight Instruments ..... "CHECK & SET"
- (6) Fuel Selector valve ..... "MOST FULL"
- (7) Elevator & Aileron Trim ..... "Neutral"
- (8) Engine Run-up
  - A. Mixture ..... "Full Rich"
  - B. Throttle ..... "2000 RPM"
  - C. Oil, Temp, Fuel Pressure ..... "CHECK"
  - D. Magnetos (175 max, 50 max diff) ..... "CHECK"
  - E. Propeller ..... "CYCLE"
  - F. Alt Air ..... "CHECK"
  - G. Ammeter ..... "CHECK"
- (9) Reduce Throttle to ..... "1000 RPM"

## TAKE-OFF

### BEFORE TAKE-OFF

- (1) Lights ..... "ON"
- (2) Transponder ..... "ALT"
- (3) Electric Fuel Pump ..... "ON"
- (4) Radios ..... "SET"
- (5) Wing Flaps ..... "SET"

### NORMAL TAKE-OFF.

- (1) Wing Flaps ..... "0 deg"
- (2) Throttle ..... "FULL"
- (3) Engine Instruments ..... "GREEN"
- (4) Airspeed ..... "ALIVE"
- (5) Rotate ..... "60 to 65 KIAS"
- (6) Best Rate of Climb ..... "95 KIAS"

### SHORT FIELD TAKE-OFF.

- (1) Wing Flaps ..... "15 deg"
- (2) Position and Brakes ..... "HOLD"
- (3) Throttle ..... "FULL"
- (4) Engine Instruments ..... "GREEN"
- (5) Brakes ..... "RELEASE"
- (6) Airspeed ..... "ALIVE"
- (7) Rotate ..... 60 to 65 KIAS
- (8) Obstacle Best Angle of Climb ..... 80 KIAS
- (9) No Obstacle Best Rate of Climb ..... 95 KIAS

### SOFT FIELD TAKE-OFF.

- (1) Wing Flaps ..... "15 deg"
- (2) Stick ..... "FULL AFT"
- (3) Throttle ..... "FULL"
- (4) Engine Instruments ..... "GREEN"
- (5) Airspeed ..... "ALIVE"
- (6) Elevator Control ..... "Nose wheel up"
- (7) Airspeed ..... "95 KIAS"

## FLIGHT

### ENROUTE CLIMB

- (1) Throttle: ..... 25" MP
- (2) Prop: ..... 2400 rpm
- (3) Mixture ..... RICH
- (4) Airspeed ..... 100 kias

### CRUISING

- (1) Throttle: ..... 20 to 24" MP
- (2) Prop: ..... 2100 to 2400 rpm
- (3) Electric Fuel Pump ..... "OFF"
- (4) Fuel Pressure ..... "Check"
- (5) Mixture: ..... "SET"
- (6) Wing Flaps ..... "REFLEX"
- (7) Trim ..... "Adjust"

### DECENT

- (1) Throttle: ..... "SET 1000 fpm"
- (2) Prop: ..... 2400 rpm
- (3) Mixture ..... RICH
- (4) Airspeed (2.3 nmi/min) ..... 137 kias

### BEFORE LANDING

- 1) FEMPS:
  - a) Fuel Selector ..... MOST FULL TANK
  - b) Electric Fuel Pump ..... ON
  - c) Mixture ..... FULL RICH
  - d) Propeller ..... FWD
  - e) Seat Belts ..... SECURE
- 2) Approach Airspeed: ..... **100 kias**
- 3) Wing Flaps 0°/122kts, 15°/96kts, 30°/87kts. .... SET
- 4) Final Approach Airspeed (flaps extended): ..... **72 kts.**

## LANDING

### NORMAL LANDING

- (1) Touchdown -- Main wheels first.
- (2) Landing Roll – Lower nose wheel gently.
- (3) Braking – Minimum required.

### SHORT FIELD LANDING

- (1) Wing Flaps – “FULL” on Base
- (2) Airspeed: **72 kias**
- (6) Touchdown -- Main wheels first.
- (7) Flaps – RETRACT
- (8) Elevator – Increase Back Pressure
- (9) Braking – Even and Firm.

### SOFT FIELD LANDING

- (1) Wing Flaps – “SET”
- (2) Airspeed: **72 kias**
- (6) Touchdown – Use Power to Soften
- (7) Elevator – Increase Back Pressure to keep nose wheel off
- (8) Brakes – Use Springly

### AFTER LANDING

- (1) Throttle ..... “1000 RPM”
- (2) Wing Flaps ..... “UP”
- (3) Electric Fuel Pump ..... “OFF”
- (4) Transponder ..... “STANDBY”
- (5) Lights ..... “AS REQUIRED”

### ENGINE SHUT DOWN

- (1) Throttle ..... 1000 RPM
- (2) 121.5 MHz ..... “CHECK”
- (3) Radio Master Switch ..... "OFF"
- (4) Mixture ..... “Idle Cut-Off”
- (5) Ignition Switch ..... “OFF”
- (6) Aux Battery Switch ..... “OFF”
- (7) Battery X-Feed Switch ..... “OFF”
- (8) Main Battery Switch ..... “OFF”
- (9) Lights ..... “OFF”

## EMERGENCY

### ANY EMERGENCY

- (1) Fly the Airplane
- (2) Delegate to co-pilot
- (3) Notify ATC

### ENGINE ROUGHNESS

- (1) Cyl EGT .....CHECK
- (2) Mixture ..... adj for max smoothness
- (3) Electric Fuel Pump .....ON
- (4) Fuel Selector ..... Switch Tanks
- (5) Magneto Switch .....L then R then Both

If single magneto improves

- (1) Throttle ..... REDUCE
- (2) Mixture .....FULL RICH

### PROPELLER OVERSPEED

- (1) Throttle ..... RETARD
- (2) Oil Pressure .....CHECK
- (3) Prop Control ... full DECREASE then set if any control available.
- (4) Airspeed ..... REDUCE
- (5) Throttle ..... as required to remain below 2400 RPM

### LOW OIL PRESSURE or HIGH OIL TEMPERATURE

1. Land at Nearest Airport
2. Prepare for Power Off Landing

## EMERGENCY

### ELECTRICAL FAILURE (Ammeter shows Zero)

- (1) Alt Switch .....OFF
- (2) Electrical Loads .....REDUCE
- (3) Alt Circuit Breaker ..... CHECK
- (4) Alt Switch ..... ON
- (5) If Ammeter Positive, then OK
- (6) If Ammeter Negative, malfunction confirmed
- (7) Conserve Battery Power and if necessary:
  - a. Cross-Feed OFF to isolate buses
  - b. Aux Batt OFF to hold in reserve.
- (8) Land at nearest airport

### IN FLIGHT ENGINE FIRE

- (1) Mixture .....“Cut-Off”
- (2) Fuel selector..... “OFF”
- (3) Electric fuel pump - ..... "OFF"
- (4) Radio .....Mayday on 121.5, Squawk 7700
- (5) Cross Feed ..... “OFF”
- (6) Main Battery ..... “OFF”
- (7) Emergency Decent ..... “EXECUTE”
- (8) Cabin heat..... “OFF”
- (9) Select a field suitable for a forced landing.
- (10) If a fire not extinguished, increase glide speed.
- (11) Execute forced landing. Do not restart engine.

### IN FLIGHT ELECTRICAL FIRE

- (1) Main Battery ..... “OFF”
- (2) Cross Feed ..... “OFF”
- (3) Cabin heat..... “OFF”
- (4) Cabin vents ..... “OPEN”
- (5) Land..... “As soon as practical”

## EMERGENCY

### ENGINE FAILURE – RESTART PROCEDURE

- (1) Trim for Best Glide .....80 kts
- (2) Alternate Landing Field ..... PICK
- (3) Electric Fuel Pump - .....ON
- (4) Alternate Air ..... OPEN
- (5) Mixture ..... “RICH”
- (6) Magnetos ..... “BOTH”
- (7) Fuel Selector ..... “SWITCH TANKS”

### FORCED WITHOUT ENGINE POWER

- (1) Radio ..... Mayday on 121.5, Squawk 7700
- (2) Electric fuel pump ..... "OFF"
- (3) Mixture..... “Cut-Off”
- (4) Magnetos..... OFF
- (5) Fuel selector ..... “OFF”
- (6) Electrical ..... “OFF”
- (7) Approach speed.....85 kts
- (8) Wing flaps..... “SET”
- (9) Main Battery switch ..... “OFF”
- (10) Aux Battery switch ..... “OFF”

### ICING

- (1) Pitot heat ..... “ON”
- (2) Propeller .....2400 RPM
- (3) Alt Air ..... “AS NEEDED”
- (4) Land ..... as soon as practical.
- (5) Wing Flaps ..... “UP”
- (6) Approach .....80 to 100 kts
- (7) Landing pitch ..... “Level attitude”

## SYSTEMS

### AUTO PILOT

#### Lateral

- 1) Locks to heading and VS when engaged.
- 2) SEL (knob) .....SELECT HDG
- 3) Mode: GPS Waypoint following .....GPS NAV
- 4) Mode: EFIS or GPS Steering ..... GPSS
- 5) Alt: EFIS Vertical Steering .....GPSV

#### Vertical

- 1) SVS: Selected Vertical Speed
- 2) Altitude Hold .....Press ALT 2x
- 3) SVS Select .....Press ALT 1x

## EQUIPMENT REQUIREMENTS

### FAR 91.205 (Edited)

#### VFR - Day

- (1) Airspeed indicator.
- (2) Altimeter.
- (3) Magnetic direction indicator.
- (4) Tachometer.
- (5) Oil pressure & temperature gauges.
- (6) Fuel gauge indicating the quantity of fuel in each tank.
- (7) Anticollision light system if certificated after 3/11/96.
- (8) Flotation gear if the aircraft is operated for hire over water
- (9) Safety belts for each occupant 2 years of age or older.
- (10) Front seat shoulder harnesses if manufactured after 7/18/78.
- (11) Emergency locator transmitter.

#### VFR - Night

- (1) All VFR - Day equipment requirements
- (2) Navigation lights.
- (3) Anticollision light system
- (4) One electric landing light.if the aircraft is operated for hire.

#### IFR

- (1) All VFR Equipment Requirements
- (2) Two-way radio communications system and navigational equipment appropriate to the ground facilities to be used.
- (3) Gyroscopic rate-of-turn indicator
- (4) Slip-skid indicator.
- (5) Altimeter adjustable for barometric pressure.
- (6) A clock displaying hours, minutes, and seconds
- (7) Gyroscopic pitch and bank indicator (artificial horizon).
- (8) Gyroscopic direction indicator (directional gyro or equiv)



### **PASSENGER BRIEF (FAR 91.519)**

- Seat Belts
- Smoking
- Exits
- Survival, Ditching, O2 Systems (if applicable)

### **SQUAWK CODES**

1200 - VFR

7500 - Hijacked Aircraft

7600 - Radio Failure

7700 - All other Emergencies

### **TOWER LIGHT SIGNALS**

	<b>Ground</b>	<b>Airborne</b>
Steady Green	Cleared to take-off	Cleared to land
Flashing Green	Cleared to taxi	Return to land
Steady Red	Stop	Give way and Circle
Flashing Red	Get clear of runway	Unsafe - do not land
Flashing White	Return to start	(no meaning)
Alternating Red/White	Exercise Extreme Caution	Exercise Extreme Caution

### **BEACON LIGHTS**

White-Green: Civilian Land Airport

White-White-Green: Military Airport

White-Yellow: Water Airport

Green-Yellow-White: Heliport