



VANS RV-12 CHECKLIST (SEPT 2021)



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P.A.V.E.

- P**.....PERSONAL / PILOT
Illness/Meds/Stress/Alcohol/Fatigue/Emotion
- A**.....AIRCRAFT
Air Worth / Registration / Ops Limits / W&B
Air Speed / Tach / Oil Press / Manifold Press /
Altimeter / Temp Gauge / Oil Temp / Fuel
Gauge / Land Gear Indicator / Anti-Collision /
Mag Compass / ELT / Safety Belts
- V**.....ENVIRONMENT
NOTAMS / WX / Known ATC / Runway Length
/ Alternates / Fuel Req / TO+Lnd Data / (TFR)
- E**.....EXTERNAL
Invulnerability / Impulse / Macho / Get Home

PREFLIGHT INSPECTION

- WX/NOTAM/TFR.....CHECK
- FRAT.....COMPLETE
- Weight/Balance.....COMPUTE
- Aircraft Binder.....OBTAIN
- Rudder Lock.....REMOVE
- Fuel Quantity.....CHECK

Interior

- Canopy.....OPEN check condition
- Flt Control Locks.....REMOVE
- Spar Pins.....CHECK
- EFIS.....POWER UP (N/A 922CA)
- ELT.....OFF
- Documents (AROW).....PRESENT
- Master + Avionics.....ON
- Stall Vane + Horn.....ACTUATE/ON
- Avionics Switch.....OFF
- Fuel Shut-off.....OPEN
- Gascolator.....DRAIN & CHECK
- Lights / Strobes....CHECK, then OFF
- Trim.....TAKEOFF POSITION
- HOBBS.....RECORD
- Master Switch.....OFF
- Baggage.....RESTRAINED
- FOD.....CHECK
- Fire Extinguisher.....IN GREEN

Left Main Landing Gear

- Tire.....CHK CONDITION (**25 psi**)
- Brake Assembly.....CHECK
- Axle Nut Cotter Pin.....CHECK
- Wheel Bearings.....SHAKE, CHECK
- Chocks/Tie Down.....REMOVE

Left Wing

- Leading Edge.....CHECK CONDITION
- Wing Hand Hold.....CHECK
- Flaperon.....FREE
- Flaperon Hinge Brackets.....SECURE

Empennage

- L Static Port.....CLEAR & OPEN
- Vert Stab.....CHECK
- Stabilator.....CHECK FREE & SECURE
- Anti-Servo Tab.....CHECK
- Rudder.....CHECK FREE
- Tie-Down.....CONFIRM UNTIED
- R Static Port.....CLEAR & OPEN
- Comm. Antenna.....CHECK
- Fuel Vent Lines.....CLEAR
- Fuel Cap.....SECURE & VENT OPEN

Right Wing

- Flaperon.....FREE
- Flaperon Hinge Brackets.....SECURE
- Wing Hand Hold.....CHECK
- Leading Edge.....CHECK CONDITION

Right Main Landing Gear

- Tire.....CHK CONDITION (**25 psi**)
- Brake Assembly.....CHECK

- Axle Nut Cotter Pin.....CHECK
- Wheel Bearings.....SHAKE, CHECK
- Chocks/Tie Down.....REMOVE

Nose Section

- Transponder Antenna.....CHECK
- Muffler.....CHECK
- Coolant.....CHECK LEVEL
- WARN: MASTER & IGNITIONS OFF**
- Oil Level.....CHECK LEVEL
- Nose Landing Gear.....CHECK
- Tire.....CONDITION (**22 psi**)
- Wheel Chocks.....REMOVE
- Cowling.....CHECK
- Air Inlets.....CHECK
- Prop and Spinner.....CHECK
- Pitot.....CLEAN & OPEN

PRE-START

- Passenger Brief.....S.A.F.E.T.Y
- §91.327(e) special airworthiness
- Master.....ON
- Nav / Strobe.....ON
- Canopy.....DOWN
- Safety Belts.....FASTENED/SECURE
- Fuel Valve.....OPEN
- Throttle.....ADJUST FRICTION
- Brakes.....TEST
- Ignition A & B.....ON

ENGINE START

- CAUTION: No Start < -25°C / > 50°C**
- Fuel Press (**2.2 psi min**).....NORMAL
- Cold Start.....THROTTLE CLOSED
-CHOKE PULL & SET

- Warm:THROTTLE 1/8 inch OPEN
-CHOKE IN & LOCKED
- Brakes.....HOLD
- Propeller....."CLEAR PROP"
- Ignition Key.....ENGAGE
- CAUTION: 10 sec max, wait 2 mins**
- Choke.....IN & LOCKED
- Throttle.....2,000 RPM
- Oil Pressure.....Check
-- **12 psi min w/in 10 seconds**
- Ammeter.....CHARGING

AFTER START

- Avionics.....ON
- Autopilot.....ON
- Headset.....ON
- COMMS.....AS REQ'D
- PSM ATIS: 132.05 GRND: 120.95**
- Altimeter.....SET
- XPDR.....CHECK
- Flight Instruments.....CHECK
- Flight Plan.....LOAD

TAXI

- Airport Diagram.....AS REQ'D
- Landing Light.....STEADY
- Taxi Area.....CLEAR
- Brakes.....TEST
- Taxi Clearance.....OBTAIN
- During Taxi.....VERIFY
-- Flt Instruments move in turns
-- **1800-2500 RPM until Oil 120°F**
-- Controls: Climb Into/Dive Away

CROSSWIND ROT'S

30° = 50% / 45° = 75% / 60° = 100%



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ENGINE RUNUP

PSM TWR: 128.4

- Brakes.....HOLD
- Flight Controls.....CHECK
- Flight Instruments.....CHECK & SET
- Fuel Quantity (**4 gal min**).....CHECK
- Canopy.....LATCHED
- Oil Temp.....**120°F min**
- Stick.....BACK
- Run Up Area.....CLEAR BEHIND
- Throttle.....4,000 RPM
 - Ignition.....CYCLE A & B
 - **300 max RPM Drop /115 DIFF**
 - Engine Instrument.....CHECK
 - Ammeter.....CHECK
- Throttle.....IDLE (GENTLY)
- Throttle.....2,000 RPM
- Throttle Friction.....ADJUST
- Fuses.....CHECK
- Fuel Press (**2.2 psi min**)....NORMAL
- Seat Belt.....FASTENED & SNUG

PRE-TAKEOFF BRIEF

Engine Fail/Abnormal on T/O Roll
- Throttle IDLE / Stop St-Ahead

Engine Fail: Liftoff w/ RWY remain
-- Airspeed.....**60 KIAS**
-- Throttle.....IDLE
-- Land.....MAX BRAKING
-- Flaps.....RETRACT

Airborne: Insufficient Runway
-- Airspeed.....**60 KIAS**
-- Landing Area.....SELECT

- Flaps.....FULL DOWN
- Fuel Shutoff Valve.....CLOSED
- Ignition Switches.....OFF
- Master.....OFF
- Land.....MIN AIRSPEED
- 180 Min Alt / Direction of Turn?
- Takeoff ROT...70% Spd NLT 50% Rwy

BEFORE TAKEOFF

BOS DEPT: 125.05

- Pre-Takeoff Brief.....COMPLETE
- Landing Light.....PULSE
- XPDR.....SET
- Fuel QTY.....CHECK
- Fuel Valve.....OPEN
- Trim.....SET
- Flaps.....1ST DETENT
- Engine Instruments.....CHECK
- Canopy.....LATCHED
- Takeoff Procedures.....REVIEW
- Stab.....RAISE NOSE SLIGHTLY
- Rotate.....**50 - 55 KIAS**
- Climb.....**75 KIAS (Vy)**
- Flaps.....UP @ 500' AGL

SHORT FIELD TAKEOFF

- Flaps.....1ST DETENT
- Brakes.....HOLD until FULL Power
- Rotate.....**50-55 KIAS**
- Climb.....**60 KIAS (Vx)** until Clear

SOFT FIELD TAKEOFF

- Flaps.....1ST DETENT
- Stabilator.....RAISE NOSE
- After Lift Off.....LEVEL FLIGHT
- Attain Vx or Vy as Req'd

ENROUTE CLIMB (> 1000' AGL)

- Flaps.....CHECK UP
- Airspeed.....**85 KIAS**
- Throttle (**5,800 max 5 mins**).....FULL
- Oil Temp.....MONITOR

CRUISE

- Level Off.....ACCELERATE
- Flaps.....CHECK UP
- Throttle (**5,500 max CONT**).....SET
- Engine Instruments.....CHECK
- Exterior Lights.....A/R
- Fuel.....MONITOR
- CRUISE ROT (RPM/TAS/GPH/ENDR)**
- 2.5K: 5,000 / 103kts / 4.4gph / 4:25
- 5K: 5,000 / 101 kts / 4.0gph / 4:53

DESCENT (APPROX 15 - 20 NM)

PSM ATIS: 132.05 / TWR 128.4

- ATIS/AWOS.....CHECK
- Altimeter.....SET
- Airport Diagram.....BRIEF
- Runway Review / Field Elevation / Pattern
- Altitude / Winds / Touchdown Point /
- Turnoff Side / Taxi Route / Parking Location
- Flt / Nav Instruments.....SET
- Fuel Quantity.....CHECK
- Landing Light.....PULSE
- Min Altitude.....CONFIRM
- Descent.....500 fpm @ **100 KIAS**
- Engine Instruments.....MONITOR

BEFORE LANDING

- Fuel Shutoff.....OPEN
- Seat Belts.....FASTENED
- Normal.....FLAPS A/R (< 82)
- Speed.....**55 - 60 KIAS**

Short Field.....FLAPS 2ND DETENT

- Speed.....**55 KIAS**
- Touchdown.....FLAPS RETRACT
- Brakes.....MAX
- Soft Field.....FLAPS A/R (< 82)**
- Speed.....**55 - 60 KIAS**
- Touchdown.....POWER ON
- Nose Wheel.....LOWER GENTLY

BALKED LANDING / GO AROUND

- Throttle.....FULL
- Airspeed.....**60 KIAS**
- Flaps.....1ST DETENT
- Airspeed.....**75 KIAS (Vy)**
- Flaps.....UP @ 500' AGL

CROSSWIND ROT'S

30° = 50% / 45° = 75% / 60° = 100%

AFTER LANDING

PSM GRND: 120.95

- Flaps.....UP
- Trim.....SET
- Landing Light.....STEADY
- XPDR.....CHECK
- Flt Controls...Climb Into/Dive Away

SHUTDOWN / SECURE AIRPLANE

- Throttle.....IDLE
- ELT.....LIGHT OFF + **121.5**
- Ignition Switches.....OFF
- When Prop Stops.....KEY REMOVE
- Autopilot.....OFF
- Avionics.....OFF
- Landing and Stobes.....OFF
- HOBBS.....RECORD
- Master.....OFF
- FLT Control Lock.....SECURE
- Chocks.....INSTALL
- Post Flt Walkaround.....COMPLETE
- Rudder Lock.....INSTALL



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FIRES

ENGINE FIRE DURING START

Key.....CONT CRANKING
 Choke.....PUSH OFF
 Throttle.....FULL
 Fuel Shutoff Valve.....PULL UP-OFF
 Fuel Pump Fuse.....PULL-REMOVE
 Ignitions.....BOTH OFF
 Master.....OFF
 Aircraft.....INSPECT

ENGINE FIRE – IN FLIGHT

Fuel Shutoff.....PULL UP/CLOSED
 Ignition Switches.....BOTH OFF
 Air Vents.....CLOSED
 Cabin Heat.....CLOSED
 Airspeed.....INCREASE
 -- Do not exceed **Vne (136 KIAS)**
 Forced Landing.....PERFORM
 Radio.....MAYDAY on **121.5**
 XPDR.....**7700**

WARN: DO NOT RESTART ENGINE BEFORE TOUCHDOWN

Master Switch.....OFF
 Airspeed.....**60 KIAS** (55 Min)
 Flaps.....DOWN (Land assured)

ELECTRICAL FIRE – IN FLIGHT

Electrical Switches.....ALL OFF
 -- **Leave Ignition Switches ON**
 Air Vents.....AS REQ'D
 -- Open if for smoke removal
 Fire Extinguisher.....ACTIVATE
 Land.....AS SOON AS **POSSIBLE**

IF ELEC POWER ESSENTIAL

Master Switch.....ON
 Fuses.....CHECK TO ISOLATE
 Electrics.....1 AT TIME, CHECK FUSE
 Air Vents.....OPEN w/FIRE OUT

WING FIRE

Lights/Strobes.....OFF
 Side Slip.....PERFORM
 Land.....AS SOON AS **POSSIBLE**

ENGINE

ENGINE FAILURE – REJECT

Throttle.....IDLE
 Brakes.....APPLY
 Flaps.....RETRACT
 Ignition Switches.....BOTH OFF
 Master Switch.....OFF
 Takeoff ROT...70% Spd NLT 50% Rwy

ENGINE FAILURE - AFTER TAKEOFF

Airspeed.....**60 KIAS** IMMEDIATELY

Engine Fail: Liftoff w/ RWY remain

Throttle.....IDLE
 Land.....MAX BRAKING
 Flaps.....RETRACT

Airborne: Insufficient Runway

Landing Area.....SELECT
 Flaps.....FULL DOWN
 Fuel Shutoff Valve.....CLOSED
 Ignition Switches.....OFF
 Master Switch.....OFF
 Land.....MIN AIRSPEED
 180 turn MIN ALT/ Direction of Turn



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ENGINE (CONT)

ENGINE RESTART – IN FLIGHT

Airspeed.....**60 KIAS** (55 Min)
 Best Place to Land.....CHOOSE
 Checklist.....PERFORM
 Ignition Switches.....BOTH ON
 Fuel Pump..CHECK FUSE (On=Blown)
 Fuel Shut-off.....OPEN (DOWN)
 Choke.....OPEN (Push)
IF ENGINE DOES NOT START
 Throttle & Choke.....CHANGE
 Forced Landing.....PERFORM

NOTE

Engine starter may be engaged in flight should prop stop windmilling.
 Prop will not windmill < 80 KIAS

PARTIAL POWER / RUN ROUGH

-- Follow Engine Air Restart
 -- Land As Soon as **POSSIBLE** using
 Precautionary Landing Approach

ABNORMAL OIL PRESS / TEMP

RPM.....REDUCE MIN NECESSARY
 Precautionary Landing.....ASAP

POH NOTES

- Check other Engine instruments
 - Hi Temp: Loss of oil or Overheat (Check CHT). Land **PRACTICAL**.
 - Lo Press: loss of oil / defective gauge. Land **PRACTICAL**.
Engine Fail possible at any time
 - Hi Press: Cold? Land **PRACTICAL**

DESCENT / LANDING

EMERGENCY DESCENT

Throttle.....IDLE
 Stick.....Bank 30° - 45°
 Speed.....INCREASE
 -- Do not exceed **Vne (136 KIAS)**
 Throttle.....(every 1,000 ft) CLEAR

FORCED LANDING – NO POWER

Airspeed (Max Glide).....**63 KIAS**
 -- Min rate of descent.....**59 KIAS**
 Fuel Shutoff.....PULL UP/OFF
 Flaps.....UP
 Radio.....MAYDAY on **121.5**
 XPDR.....**7700**
 Ignition Switches.....BOTH OFF

FINAL APPROACH

Airspeed.....**55-60 KIAS**
 Flaps.....DOWN (Land assured)
 Master Switch.....OFF
 Seat/Harness.....CHECK SECURE

PRECAUTION APPROACH / LAND

Airspeed.....**60 KIAS** (55 Min)
 Throttle.....IDLE
 Flaps.....LOWER AS NEEDED

LOSS OF BRAKE

Landing Spot.....LONG RUNWAY
NOTE
 X-Wind from Inop brake side
 Touch Down.....MIN AIRSPEED
 When Stop.....SHUTDOWN ENGINE
NOTE
 Good Brake (Drag) in the middle



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ELECTRICAL

LOW VOLTAGE DISCHARGE (<12V)

Non Essential Elec Equip.....OFF
Avionics Switch.....OFF
Land.....AS SOON AS **POSSIBLE**

HIGH VOLTAGE (> 15V)

Master Switch.....OFF
30A Main Bus Fuse.....REMOVE
Avionics Switch.....OFF
Land.....AS SOON AS **POSSIBLE**

LOSS OF FLIGHT INSTRUMENTS

Throttle.....AS REQ'D
-- Maintain present throttle posit
-- Engine Noise

POH NOTE

Stall Warning aural warn will still
function with Master + Avionics
ON

EFIS REBOOT PROCEDURES

DYNON SKYVIEW
Buttons 1,2,5 Press Simultaneously
GARMIN G3X
Master Switch.....OFF, then ON

FLIGHT CONTROLS

RUNAWAY TRIM

Trim Fuse..REMOVE IMMEDIATELY
Autopilot Switch.....OFF
Stabilator.....HOLD
Airspeed.....REDUCE
Land.....AS SOON AS **PRACTICAL**
Flaps.....UP (For landing)

LOSS OF TRIM TAB

Airspeed.....REDUCE
Stick.....FIRM GRIP
Land.....AS SOON AS **POSSIBLE**

LOSS OF AILERON CONTROL

Rudder....USE FOR LOW RATE TURN
Autopilot.....MAY BE USED
Speed.....**70 KIAS**

LOSS OF RUDDER CONTROL

Runway.....INTO WIND
X-Wind.....OPP WORKING RUDDER
Speed.....**70 KIAS**
After Land.....SHUTDOWN ENGINE

LOSS OF STABILATOR CONTROL

Trim.....AS REQ'D
Flaps.....AS REQ'D
Throttle.....AS REQ'D

WHEN LANDING

Throttle.....REDUCE
Airspeed.....**75 KIAS**
Flaps.....1st POSITION
-- More nose wheel clearance
Airspeed.....TRIM TO **60 KIAS**
Throttle.....USE FOR GLIDEPATH

SHORT FINAL

Airspeed.....**50 KIAS**
Touchdown....USING POWER + TRIM

POH NOTE

-- Go-around: advance throttle
slowly to avoid sudden pitch up

LOSS OF FLAP CONTROL

Speed.....**65 KIAS**

FLIGHT CONTROLS (CONT)

SPINS

Throttle.....IDLE
Rudder.....FULL OPPOSITE
Stabilator.....SLT FWD OF NEUTRAL
Ailerons.....NEUTRAL
Flaps.....UP

WHEN ROTATION STOPS

Rudder.....NEUTRALIZE
Attitude.....RAISE NOSE SMOOTHLY

INFLIGHT OVERSTRESS

Throttle.....REDUCE
Airspeed.....**65 - 75KIAS**
Flaps.....UP
Land.....AS SOON AS **PRACTICAL**

WARNING

DO NOT make large control
movements or subject the aircraft
to additional G loadings.

WEATHER

UNINTENTIONAL FLT INTO ICING

Icing Area.....LEAVE ASAP
Cabin Heat.....ON
AutoPilot.....OFF
RPM.....INCREASE
Flaps.....LEAVE RETRACTED
ATC.....ADVISE

CAUTION

**Ice increases stall speed. Carry
extra speed on final. Stall warning
horn may not function.**

SEVERE TURBULENCE

Airspeed.....< **108 KIAS**
<**90 KIAS** Personal Discomfort
Attitude.....LEVEL FLIGHT
-- Visually. EFIS may be erratic.

SULLY MANEUVER

DITCHING

Approach.....AS REQ'D
-- Hi Wind/Hvy Sea: INTO WIND
-- Lt Wind/Hvy Swell: PARALLEL
Airspeed (Max Glide).....**63 KIAS**
-- Min Rate Descent.....**59 KIAS**
Fuel Shutoff.....PULL UP / OFF
Flaps.....UP
Radio.....MAYDAY on **121.5**
XPDR.....**7700**
Ignition Switches.....BOTH OFF
Canopy.....UNLATCH
Seat/Harness.....CHECK SECURE
Touchdown.....NOSE HIGH

POH NOTE

Aircraft cannot be depended upon
to provide flotation after
contacting the water.