



VANS RV-12 CHECKLIST (MAR 2021)

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

Weather.....CHECK
Fuel.....CHECK
Weight/Balance.....COMPUTE
Aircraft Binder.....OBTAIN

Interior

Canopy.....OPEN check condition
Flt Control Locks.....REMOVE
Spar Pins.....CHECK
EFIS.....POWER UP (A/R)
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

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



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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.....SAFETY
- §91.327(e) special airworthiness
Master.....ON
Strobe Lights.....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
Warm Start.....THROTTLE 1/8th OPEN
.....CHOKE OFF

Cold Start.....THROTTLE CLOSED
.....CHOKE PULL & HOLD
Brakes.....HOLD
Propeller.....CLEAR
Ignition Key.....ENGAGE
CAUTION: 10 sec max, wait 2 mins
Choke.....OFF
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.....ATIS/CLEAR AS REQ'd
PSM ATIS: 132.05 GRND: 120.95
Altimeter.....SET
XPDR.....ALT
Flight Instruments.....CHECK
Clearance.....OBTAIN (A/R)

TAXI

Airport Diagram.....AS REQ'D
Lights.....AS NEEDED
Taxi Area.....CLEAR
Brakes.....TEST
Flight Instruments.....CHECK
-- **1800-2500 RPM until Oil 120°F**
Flt Controls...Climb Into/Dive Away
Taxi Clearance.....OBTAIN/BRIEF

CROSSWIND ROT'S

30° = 50% / 45° = 75% / 60° = 100%



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ENGINE RUNUP

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
 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
 - Close Throttle / Stop St-Ahead

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

Airborne: Insufficient Runway
 -- Landing Area.....SELECT
 -- Flaps.....FULL DOWN
 -- Fuel Shutoff Valve.....CLOSED

-- Ignition Switches.....OFF
 -- Master.....OFF
 -- Land.....MIN AIRSPEED
 -- Technique: 180 turn MIN ALT &
 Direction of Turn?
 Takeoff ROT...70% Spd NLT 50% Rwy

BEFORE TAKEOFF

PSM TWR: 128.4 DEPT: 125.05

Pre-Takeoff Brief.....COMPLETE
 Strobes / Land Light.....ON
 XPDR.....SET
 Fuel QTY.....CHECK
 Fuel Valve.....OPEN
 Trim.....SET
 Flaps.....1ST DETENT
 Engine Instruments.....CHECK
 Canopy.....LATCHED / **GREEN LT**
 Takeoff Procedures.....REVIEW
 -- Rotate.....**50 - 55 KIAS**
 -- Climb.....**75 KIAS (Vy)**
 -- Flaps.....UP @ 500' AGL

MAX (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



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ENROUTE CLIMB (> 1000' AGL)

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

CRUISE

Level Off.....ACCELERATE
 Flaps.....CHECK UP
 Throttle (**5,500 max CONT**).....SET
 Trim.....AS REQ'D
 Engine Instruments.....CHECK
 Lights.....A/R
CRUISE ROT (RPM/TAS/GPH/RNGE)
 2.5K: 5,000 / 103kts / 4.4gph / 456
 5K: 5,000 / 101 kts / 4.0gph / 493

IN RANGE / DESCENT

PSM ATIS: 132.05

ATIS/AWOS.....CHECK
 Altimeter.....SET
 Prelim Approach.....BRIEF
 Flaps / Landing Type / Rwy / Field EI / TPA /
 Winds / Aim-Touchdown Point / Rwy
 Length / Turnoff Side / Taxi Route / Park
 Location

Airport Diagram.....OUT/AVAIL
 Seat Belts.....FASTENED
 Fuel Quantity.....CHECK
 Descent.....PLAN
 Min Altitude.....CONFIRM

APPROACH (APPROX 15 NM)

TWR: 128.4

Approach.....BRIEFED
 Altimeter.....SET

Landing Light.....ON
 Flt / Nav Instruments.....SET
 Engine Instruments.....MONITOR

BEFORE LANDING

Flaps.....UP (> 82 KIAS) / A/R (< 82)
 Fuel Valve.....OPEN

BALKED LANDING / GO AROUND

Throttle.....FULL OPEN
 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.....AS REQ'D
 XPDR.....ALT
 Taxi Clearance.....OBTAIN & BRIEF
 Flt Controls...Climb Into/Dive Away

SHUTDOWN / SECURE AIRPLANE

Throttle.....IDLE
 ELT.....OFF
 Ignition Switches.....OFF
 Autopilot.....OFF
 Avionics.....OFF
 HOBBS.....RECORD
 Master.....OFF
 FLT Control Lock.....SECURE
 Chocks.....SECURE
 Walkaround.....COMPLETE



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FIRES

ENGINE FIRE DURING START

Key.....CONT CRANKING
Choke.....PUSH OFF
Throttle.....FULL OPEN
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.....CLOSED
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.....CLOSED
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.....CLOSED
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**



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FLIGHT CONTROLS (CONT)

SPINS

Throttle.....CLOSED
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.