

Van's RV-12 is

Normal Procedures suggested flow

PREFLIGHT

CABIN	
Canopy	OPEN-CHECK CONDITION
Spar pins	CHECK
Fuel tank	CHECK FUEL LEVEL
Flight Control Lock.	REMOVE
ELT	CHECK ARMED
Documents AROW	ON BOARD
Weight & Balance	PERFORMED
Master Switch	ON
Hobbs	RECORD
Elevator trim	TAKE OFF POSITION
Stall warning vane	ACTUATE
Stall Warning horn	CHECK ON
Strobes/Navigation Lights.	CHECK
Master switch	OFF
LEFT MAIN LANDING GEAR	
Main Tire (25 PSI and tread condition)	CHECK
Brake lines, leakages, pads & rotors.	CHECK
Wheel chocks	REMOVE
LEFT WING	
Leading edge condition	CHECK
AOA port (if installed)	CHECK OPEN
Tie down,	DISCONNECT

WARNING EXCESSIVE FORE & AFT PLAY OF THE WING TIP WILL RENDER THE EFIS AOA INDICATION INACCURATE.

Flaperon freedom of movement, 3 hinge nuts	CHECK
Flaperon actuator	CONNECTED
FUSELAGE LEFT SIDE	
Fuel Sample	DRAIN and CHECK for leaks
Static port	CLEAN & OPEN
Vertical Stabilizer condition	CHECK
Stabilator	CHECK condition and FREE of movement
Antiservo Tab. Condition and attachment	CHECK
Rudder	CHECK condition and FREE of movement
Tail Tie down.	DISCONNECT
FUSELAGE RIGHT SIDE	
Static port	CLEAN & OPEN
Antenna condition	CHECK
Fuel cap	SECURE & VENT OPEN
RIGHT WING	
Flaperon actuator	CONNECTED
Flaperon freedom of movement, 3 hinge bolts	CHECK
Leading edge condition	CHECK
Tie down,	DISCONNECT

RIGHT MAIN LANDING GEAR	
Main Tire (25 PSI and tread condition)	CHECK
Brake lines, leakages, pads & rotors.	CHECK
Wheel chocks	REMOVE
NOSE SECTION	
Coolant level between MAX & MIN	CHECK
Engine Oil level, color and clarity	CHECK

WARNING: MAKE SURE MASTER AND BOTH IGNITION SWITCHES ARE OFF BEFORE TURNING PROPELLER BY HAND

Transponder antenna security	CHECK
Muffler	CHECK
Air Inlets & Oil and Water coolers	CHECK
Nose gear	CHECK
Nose Tire condition and 22 PSI	CHECK
Wheel chocks	REMOVE
Cowling condition and screws	CHECK
Propeller & Spinner condition & security	CHECK
Pitot tube	CHECK CLEAN
Final walk around	

BEFORE STARTING ENGINE

Passenger Briefing	PERFORM
Baggage	RESTRAINED
Seat Belts	FASTENED
Canopy	LATCHED
Throttle Friction and Range	CHECK
Fuel Valve	PUSH ON
MASTER	ON
Strobes Lights	ON

STARTING ENGINE

DO NOT START ENGINE WHEN OIL TEMP IS BELOW -13° F / -20 ° C OR AMBIENT TEMP ABOVE 120 ° F / 50 ° C

Lane A and B	ON
Lane A/B Warning Lamps – Illuminate and extinguish after 3 Seconds.	
Fuel Pump 1	ON
Fuel Pump 2	OFF
Fuel pressure	CHECK above 43.5 psi (3 bar)
Throttle Position	50% +/-5%
Brakes	HOLD
Start Power Switch	PRESS & HOLD

If after 3 seconds a light flashes, illuminates or fails to illuminate when start power is applied abort start and check operation manual. See Abnormal Engine Indications

Propeller	CLEAR
Starter	ENGAGE
(10 sec max activation followed by 2 min cooling period)	
Oil pressure	CHECK above 43.5 psi (3 bar)
(oil pressure may take up to 10 sec to acquire)	
Throttle above 2500 RPM for 5 seconds.	
Engine Gauges	CHECK GEN B SHIFT to GEN A
	(AMMETER SHOWS INCREASE)

NOTES: If after start Lane A/B warning lamp lights or flashes perform a LANE and IGNITION Check. If WARN lights activate, proceed to engine shut down.

Throttle < 2500RPM until oil reaches 120° F (50° C)

TAXI

Avionics	ON
ATIS/ASOS/Altimeter	SET
Lights	AS NEEDED
Brakes.	CHECK
Taxi RPM until Oil Temp above 120F	1400-2500
Flight Instruments.	VERIFY proper indications

RUN UP

Brakes	SET
Flight Controls	FREE and CORRECT
Flight Instruments (PFD)	CHECK & SET
Fuel Valve	CHECK PUSH ON
Fuel Quantity.	CHECK
Canopy	CHECK LATCHED
Elevator	STICK BACK
Oil Temp	>120° F (50° C)

LANE and IGNITION Check

Throttle	4000 RPM
LANE A	OFF (Max drop 180 rpm) ON
Warning Light	Wait to extinguish
LANE B	OFF (Max drop 180 rpm) ON
Throttle	2000 RPM
Each LANE =>12VDC	CHECK
Engine Temps and Pressures	CHECK
Ammeter	CHECK

Fuel pressure	CHECK 40.5 to 46.5 psi
Fuel Pump B – ON	
Fuel Pump A – OFF wait 5"	CHECK 40.5 to 46.5 psi
Fuel Pump A – ON	
Throttle	IDLE 2000RPM
Friction Lock	ADJUST
Fuses	CHECK
Seat belts and harness	CHECK
Take off Briefing	REVIEW
Abort Plan	REVIEW

BEFORE TAKE OFF

Elevator Trim SET for T/O
 Flaps SET
 Canopy LATCHED
 Take Off/Abort Plan BRIEF
 Brakes RELEASE

TAKE OFF with OBSTACLE

Brakes APPLY
 Throttle-Apply smoothly FULL
 Engine Instruments CHECK
 Stabilator NOSE in TAKE OFF attitude
 Flaps 50%

CLIMB

CLIMB Vx 60 KTS
 CLIMB Vy 75 KTS
 Flaps RETRACT
 Landing Light OFF
 Engine Instruments CHECK
 Cruise Climb 85KTS

CRUISE

Flaps Verify UP
 Engine Instruments CHECK

DESCENT

POWER AS REQUIRED
 ATIS/AWOS/Altimeter SET
 Engine Instruments CHECK
 CHT and OIL TEMP. GREEN ARC
 Avoid Propeller wind milling.

LANDING

FUEL CHECK
 BRAKES CHECK
 SAFETY BELTS CHECK
 LANE A & B BOTH ON
 LIGHTS AS REQUIRED
 FLAPS below 82 KIAS

SHORT FIELD / OBSTACLE LANDING

FLAPS FULL
 Airspeed. 55 KIAS until flare

GO AROUND

THROTTLE FULL
 FLAPS 50%
 AIRSPEED Vx 60 KCAS until clear of obstacles
 then Vy 75 KCAS with FLAPS UP

AFTER LANDING

Once clear of the Runway
 Wing Flaps. RETRACT
 Landing Lights AS NEEDED
 TRIM T/O

SHUT DOWN & SECURING

Engine Cool Down* *PERFORMED
 ELT CHECK OFF
 Electrical Equipment OFF
 Avionics Master OFF
 Throttle LOW IDLE
 LANE B OFF
 LANE A OFF
 Fuel Pumps BOTH OFF
 Master OFF
 Control Lock/Chocks INSTALL

* Cool Down Engine for 2 minutes if operated at increased temperatures.

LANE A	LANE B	Action on Ground	Action in Flight
OFF	FLASHING	Flight only for maintenance	Fly to destination at own discretion
FLASHING	OFF	Flight only for maintenance	Fly to destination at own discretion
OFF	ON	Do not fly	Precautionary Landing
FLASHING	FLASHING	Do not fly	Precautionary Landing
FLASHING	ON	Do not fly	Precautionary Landing
ON	OFF	Do not fly	Precautionary Landing
ON	FLASHING	Do not fly	Precautionary Landing
ON	ON	Do not fly	Precautionary Landing

ABNORMAL ENGINE INDICATIONS**POWER LOSS AFTER TAKE OFF**

IMMEDIATELY PITCH FORWARD FOR AIRSPEED!
 AIRSPEED (Max glide) 63 KTS
 THROTTLE CLOSED

BRAKES APPLY**POWER LOSS IN FLIGHT**

AIRSPEED-BEST GLIDE 63 KTS
 FUEL CUT OFF VALVE - CHECK ON
 LANE A & B - CHECK

FORCED LANDING

IF ENGINE RESTART IS NOT POSSIBLE
 AIRSPEED-BEST GLIDE 63 KTS
 FLAPS - UP FOR MAXIMUM RANGE
 RADIO MAYDAY 121.5
 SQUAWK 7700
 FUEL CUT OFF VALVE - OFF
 LANE A & B SWITCHES BOTH OFF
 MASTER SWITCH - OFF

ELECTRICAL FIRE

ELECTRICAL SWITCHES OFF
 AIR VENT OPEN
 FIRE EXTINGUISHER USE IF AVAILABLE
 LAND AS SOON AS PRACTICAL

ENGINE FIRE DURING START

CONTINUE CRANKING WITH STARTER
 THROTTLE FULL OPEN
 IF FIRE IS EXTINGUISHED:
 SHUT DOWN AND INSPECT DAMAGE.
 IF FIRE PERSISTS:
 FUEL SHUT OFF VALVE OFF
 ELECTRICAL AND LANE A & B OFF
 EXIT AIRCRAFT AND USE FIRE EXTINGUISHER
 THROUGH AIR OUTLET IN THE BOTTOM OF COWL.

ENGINE FIRE IN FLIGHT

FUEL SHUT OFF VALVE - PULL OFF
 ELECTRICAL AND LANE A & B - OFF
 PERFORM AN EXPEDITED DESCENT
 INCREASE glide speed to find an airspeed which will provide an incombustible mixture..
 CONSIDER FORWARD SLIP TO DIVERT SMOKE
 RADIO MAYDAY 121.5
 ON FINAL APPROACH MASTER SWITCH OFF
 Airspeed for maximum gliding distance - 63 KIAS
 Minimum rate of descent airspeed- 59 KIAS