

GROUND PROCEDURES

Vans RV-12iS N262BS/N954B

CABIN

1. Canopy.....OPEN check condition
2. Required Documents..... A.R.O.W.
3. Ignition Switch OFF
4. Spar pins.....CHECK
5. EFIS..... Master dependent
6. Flight Control Locks REMOVE
7. Fuel tank..... CHECK (minimum 4 gallons)
8. Fuel Shutoff Valve ON (Push Down)
9. Pitot Cover.....REMOVED
10. Master switch..... ON
11. Hobbs/Engine (TACH in FSP) RECORD
12. Avionics switch..... ON
13. Elevator trim.....Takeoff Position
14. Avionics (headset)..... ON
15. Audio panel aux light..... ON
16. Stall warning vane ACTUATE, check ON
17. Strobes/Nav lights..... CHECK then OFF
18. Avionics OFF
19. Master OFF
20. ELT OFF
21. Baggage RESTRAINED

Left Main Landing Gear

22. Tire CONDITION (25 psi)
23. Brake CHECK condition, no leakage
24. Axle Nut..... CHECK cotter pin installation
25. Wheel BearingsSHAKE WHEEL - CHECK
26. Wheel Chocks..... REMOVE

Left Wing

27. WingCONDITION
28. Wing Hand HoldCHECK no free movement
29. Tie-Down REMOVE
30. AOA and Static Port..... check
31. Flaperoncondition, FOM
32. Flaperon Hinge BracketsBOLTS – CHECK

Fuselage (Left Side)

33. Controls..... CONNECTED
34. Static Port..... CLEAN & OPEN
35. Fuel Sample.....CHECK

Empennage

36. Vertical StabilizerCHECK condition
37. Stab condition, attachment, FOM
38. Anti-Servo Tab.....condition, attachment
39. Rudder.....condition, attachment, FOM
40. Tie-Down DISCONNECT

Fuselage (Right Side)

41. Static Port..... CLEAN & OPEN
42. Comm. Antenna CHECK
43. Fuel and Fuel Air Vent Lines..... CLEAR
44. Fuel Cap..... SECURE & VENT OPEN
45. Controls..... CONNECTED

Right Wing

46. Flaperon.....CHECK condition, FOM
47. Flaperon Hinge Brackets.... BOLTS – CHECK
48. Wing Hand Hold..... CHECK no free movement
49. Wing..... CONDITION
50. Tie-DownREMOVE

Right Main Landing Gear

51. Tire..... CONDITION (25 psi)
52. Brake..... CHECK condition, no leakage
53. Axle NutCHECK cotter pin installation
54. Wheel Bearings..... SHAKE WHEEL - CHECK
55. Wheel ChocksREMOVE

Nose Section

56. Transponder Antenna..... CHECK
57. Muffler.....CHECK condition, attachment
58. Cowl Door OPEN
59. Coolant LEVEL CHECK
60. Engine Oil..... CHECK
 - a. MASTER AND BOTH LANE A/B..... OFF
 - b. Remove cap; place in holder on oil door
 - c. Turn prop by hand in direction of prop rotation several times (could be 10 full rotations) to pump oil from engine into oil tank
 - d. A gurgling sound will be heard
 - e. OilMin: bottom of flat dipstick
.....Max: top of flat dipstick
NOTE: Flat portion is ½ quart of oil
 - f. Replace oil cap
61. Nose Landing Gear..... CHECK
62. Tire..... CONDITION (22 psi)
63. Tow Bar disconnected and stowed
64. Wheel ChocksREMOVE
65. Cowling CHECK condition
66. Right Air Inlet.....CHECK unobstructed
67. Propeller and Spinner..... CHECK
68. Pitot CLEAN & OPEN
69. Oil & Coolant Air Duct.....CHECK clear
70. Left Air InletCHECK clear
71. Cowl Door CLOSED

**GROUND PROCEDURES**

Vans RV-12iS N262BS/N954B

BEFORE STARTING ENGINE

1. Passenger Briefing PERFORM
2. Baggage RESTRAINED
3. Seat Belts FASTENED
4. Canopy..... CLOSED and LATCHED
5. Fuel Shutoff Valve..... ON (push down)
6. Throttle..... CHECK FRICTION
7. Master Switch..... ON
8. Fuses..... CHECK
9. Strobe 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

1. PFD On ELECTRICAL page
2. Brakes TEST and HOLD
3. Fuel Pump 1 ON
4. Fuel Pump 2 OFF
5. LANE A & B..... BOTH ON, warn lamps illuminate & extinguish after 3 secs.
6. Throttle SET

Cold	50% +/- 5%
Warm	35% +/- 5%
7. Brakes HOLD
8. Propeller CLEAR
9. Ignition Key ENGAGE (10 sec max)
10. Throttle..... REDUCE AS REQ'D
11. Oil Pressure.....CHECK 12 psi in 10 sec or immediately shutdown engine
12. Throttle > 2500 RPM until ammeter is active (approx. 5 sec)
13. Ammeter..... CHECK FOR CHARGING
14. Avionics Switch ON
15. Fuel Pump 2 ON
16. Throttle..... < 2500 RPM until Oil > 120°F
17. Engine Gauges CHECK
18. Flight Instruments (PFD/MFD)..... SET
19. Transponder SET
20. GPS..... Runway diagram
21. ATIS / Altimeter SET
22. Lights..... ON as REQ'd

FIRE DURING START

1. Ignition Switch START, continue cranking
2. Throttle..... FULL OPEN
3. Fuel Shutoff Valve.....PULL UP – OFF
4. Fuel Pump Switches..... BOTH OFF
If Fire Extinguished: shutdown & inspect
If Fire Persists:
5. Electrical Switches ALL OFF
6. Lanes A & B..... BOTH OFF
7. Exit Aircraft

RUNUP

1. Brakes..... HOLD
2. Autopilot (AP)..... ENGAGE
3. AP DISC button VERIFY DISC. & AUDIO
4. Flight Director SET or OFF
5. Flight Controls FREE & CORRECT
6. Flight InstrumentsCHECK & SET
7. Fuel Shutoff Valve CHECK DOWN – ON
8. Fuel Quantity..... CHECK (min 4 gal)
9. Pitch Trim SET for takeoff
10. Canopy CHECK Latched
11. Oil Temp > 120°F
12. LANE & IGNITION CHECK
 - a. Control Stick..... FULL BACK
 - b. Throttle 4000 RPM
 - c. Lane A OFF / ON (Max drop 180 RPM)
wait for warn light to extinguish
 - d. Lane B OFF / ON (Max drop 180 RPM)
wait for warn light to extinguish
13. Throttle 2000 RPM
 - a. Engine Instruments.....CHECK
 - b. Volts = / > 13 VDC
 - c. Ammeter.....CHECK + CHARGE
14. Fuel Pressure.....CHECK 40.6 to 50.8
15. Fuel Pump 1 OFF, wait 5 sec
CHECK 40.6 to 50.8 psi
16. Fuel Pump 1 ON
17. Fuel Pump 2 OFF, wait 5 secs
CHECK 40.6 to 50.8 psi
18. Fuel Pump 2 ON
19. Throttle 1800 – 2000 RPM
20. Seat Belts..... FASTENED & SNUG
21. Take Off Briefing REVIEW
22. Brakes..... RELEASE

SHUTDOWN - SECURING AIRPLANE

1. Engine Cool Down ... (If WX hot) 2500 RPM – 2min
2. NAV & Land Light Switches OFF
3. Avionics Switch..... OFF
4. ELT CHECK OFF
5. Throttle IDLE
6. Lane B..... OFF
7. Lane A..... OFF
8. Fuel Pumps..... BOTH OFF
9. HOBBS/ENGINE (TACH in FSP)..... Record
10. Master Switch OFF
11. Aircraft Keys ON KNOB
12. Gust Lock..... INSTALLED
13. Pitot Cover..... INSTALLED
14. Wheel Chocks..... INSTALLED
15. Tie Downs..... INSTALLED
16. Tires and Aircraft..... INSPECTED
17. Shade/Canopy Cover..... INSTALLED

FLIGHT NORMAL PROCEDURES Vans RV-12is N262BS/N954B

NORMAL TAKEOFF

1. CanopyCLOSED/LOCKED
2. Fuel Quantity.....CHECK
3. Elevator Trim.....set for TAKEOFF
4. LightsAs REQ'D
5. Wing flaps..... UP or HALF
6. Control Stick ½ Neutral - Aft
7. ThrottleSmoothly FULL OPEN
8. Nose to take-off attitude.... ASAP and HOLD
9. Take-off Allow plane to fly off runway
10. Climb Speed $V_x = 60$ KIAS; $V_y = 75$ KIAS
11. Wing Flaps UP
12. Engine Gauges..... CHECK

SHORT / SOFT FIELD TAKEOFF

1. Normal take off procedure except
2. Flaps HALF
3. Elevator Control SLIGHTLY TAIL LOW
4. After Liftoff..... Accelerate to safe airspeed
5. Climb Speed V_x 60 KIAS

CRUISE

1. Flaps VERIFY UP
2. ThrottleAS Desired (< 5500 RPM)
3. Engine Gauges..... CHECK

DESCENT

1. Throttle as REQ'd
2. ATIS/Altimeter..... SET
3. Flight Instruments ADJUST
4. Engine Gauges..... CHECK

BEFORE LANDING

1. Seat Belts..... FASTENED
2. Brakes..... CHECK
3. LANE A & B BOTH ON
4. Fuel Pump Switches BOTH ON
5. Lights ON
6. Flaps < 82 KIAS
7. Autopilot DISCONNECT

LANDING

1. Wing flaps..... as DESIRED (< 82 KIAS)
2. Airspeed 65 - 70 KIAS (FLAPS UP)
3. Airspeed 55 - 60 KIAS (FLAPS DOWN)
4. Short Field FLAPS DOWN, 55 KIAS

AFTER LANDING

1. Flaps UP
2. Lights ON as REQ'd
3. Trim Takeoff
4. TransponderALT

BALKED LANDING

1. Throttle FULL
2. Flaps HALF
3. Climb speed V_x 60 KIAS
4. Wing Flaps V_y 75 KIAS, FLAPS UP

V speeds		Info	
V_{SO}	41	Oil range	Flat part
V_{S1}	45	Fuel (usable)	20.2
V_R	55	Weight TO	1320
V_X	60	Weight LND	1320
V_Y	75	Max Xwind	11
V_G	63		
V_{FE}	82	App FL DN	55-60
V_A	72 / 90	App FL UP	65-70
V_{NO}	108		
V_{NE}	136		

ENGINE FAILURE DURING FLIGHT

1. Airspeed..... 63 KIAS
2. Fuel Shutoff Valve..... CHECK ON
3. LANE A&B CHECK

ENGINE FAILURE ON TAKE-OFF (airborne)

1. Airspeed.....60 KIAS (55 min)
2. Suitable Landing Area Select
3. Flaps FULL DOWN
4. Fuel Shutoff Valve..... OFF
5. Lanes A & B BOTH OFF
6. Fuel Pump Switches BOTH OFF
7. Master Switch OFF

ENGINE FIRE IN FLIGHT

1. Fuel Shutoff Valve..... PULL UP - OFF
2. Fuel Pump Switches..... BOTH OFF
3. Lane A & B BOTH OFF
4. Air Vents and Cabin Heat..... CLOSED
5. Airspeed Increase
6. Consider side slip to divert smoke
7. Radio MAYDAY..... 121.5
8. Follow Forced Landing Procedure

ENGINE AIR RESTART

1. Maintain Airspeed 60 KIAS min
 2. Smart Glide... Hold Direct-To Button on G3X
 3. Lane A & B switches..... BOTH ON
 4. EMS Backup Battery Switch ON
 5. Fuel Pump Switches BOTH ON
 6. Fuel Shutoff Valve..... CHECK ON – DOWN
 7. Throttle SET to 55%-65%
 8. Spar Pin Override Switch HOLD DOWN
 9. Ignition Key ENGAGE
- If restart not possible, change throttle settings

FLIGHT EMERGENCY PROCEDURES Vans RV-12is N262BS/N954B

EMERGENCY LANDING NO POWER

- If engine restart is not possible
1. Airspeed-best glide 63 kts
 2. Smart Glide Hold Direct-To Button on G3X
 3. Fuel Shutoff Valve.....PULL UP – OFF
 4. Fuel Pump Switches BOTH OFF
 5. Flaps..... UP for max range
 6. Squawk 7700
 7. ELTACTIVATE for off airport landing
 8. Radio MAYDAY 121.5
 9. Lane A & B switches..... BOTH OFF
 10. Final Approach 55-60 KIAS
 11. Flaps DOWN when landing assured
 12. Master Switch..... OFF
 13. 30A “Gen Main Bus” Fuse....PULL-REMOVE

ELECTRICAL FIRE IN FLIGHT

1. Electrical Switches ALL OFF
2. 30A “Gen Main Bus” Fuse....PULL - REMOVE
3. Air Vent..... OPEN if necessary
4. Fire Extinguisher ACTIVATE

DITCHING

1. Smart Glide ... Hold Direct-To Button on G3X
2. ELT ACTIVATE
3. Transponder SQUAWK 7700
4. Radio..... MAYDAY 121.5
5. Seats and Seat Belts.....SECURE
6. Fuel Pump Switches BOTH OFF
7. Lane A & B BOTH OFF
8. Flaps..... DOWN
9. Master Switch..... OFF
10. 30A “Gen Main Bus” Fuse....PULL-REMOVE
11. Approach:
High winds, heavy seas INTO WIND
Light winds, heavy swells... PARALLEL SWELLS
12. Canopy UNLATCH
13. Touchdown LEVEL ATTITUDE
14. Face.....CUSHION at touchdown
15. Life Vests/Raft..... CLEAR of A/C INFLATE

PARTIAL POWER LOSS

1. Follow the “Engine Air Restart” procedure
2. Land ASAP using “Precautionary Landing Approach” procedure

RUNAWAY PITCH TRIM

1. Verify pax is not pressing a trim button
2. Activate trim in the opposite direction
3. Remove “Trim / Start” fuse
4. Remove “Autopilot” fuse
5. Reduce airspeed to decrease stick force
6. Land as soon as possible

HIGH COOLANT TEMPERATURE

Caution: Coolant temp > 220°F and rising rapidly may indicate loss of coolant and imminent engine damage

On Ground:

- If due to high OAT or excessive idling
 1. Throttle 2500 – 3000 RPM
 2. Turn aircraft into the wind

In Flight:

- If due to low IAS or extreme climb angle
 1. Reduce pitch angle
 2. Increase airspeed

LANE A AND B INDICATOR LIGHTS

LANE A	LANE B	Ground	Flight
OFF	FLASHING	1	2
FLASHING	OFF	1,5	2,5
OFF	ON	3	4
FLASHING	FLASHING	3,5	4,5
FLASHING	ON	3,5	4,5
ON	OFF	3	4
ON	FLASHING	3	4
ON	ON	3	4

1. Flight only to maintenance facility
2. Fly to destination at own discretion
3. Do not fly aircraft
4. Precautionary landing
5. If coolant temp inop, may indicate loss of coolant and imminent engine damage

LOSS OF FLIGHT INSTRUMENTS

1. Fly to nearest suitable airport using present power settings and normal maneuvers
2. Set power based on throttle position and engine noise
3. Pitch nose slightly below horizon

AUTOPILOT MALFUNCTION

1. Firmly grasp the stick
2. Press and hold AP DISC button
3. Retrim the aircraft as needed
4. Remove “Trim/Start” and “Autopilot” fuses
5. Release the AP DISC button

SEE POH FOR ADDITIONAL EMERGENCY PROCEDURES

Phone Numbers

Paine (KPAE) Tower 425-923-1400
 Renton (KRNT) Tower 206-764-6632
 BEFA 425-271-2332