**“ Virus SW-80 Microlite Aircraft” NCC Air Wing**

Multiple Choice Questions.

Chapter 1 - Airplane System Description

Video : [1 - Introduction](https://youtu.be/DbHWXPG4y5Q?si=w0gubtp4DPxdafFF)

1. What is the power plant used in the Virus SW 80 microlite aircraft?

a) ROTAX 912 A

b) ROTAX 914 F

c) ROTAX iS

d) ROT2 ULS

2. What is the undercarriage type of the Virus SW-80 aircraft?

a) Tailwheel type with a single main wheel

b) Tricycle type with two main, brake-equipped wheels mounted on a U-piece composite strut

c) Skid type with no wheel

d) Floats for water landings

3. What is the primary material used in the construction of the Virus SW 80 microlite aircraft?

a) Aluminum

b) Steel

c) Composite

d) Wood

4. Which company manufactures the Virus SW 80 microlite aircraft?

a) Cessna

b) Pipistrel

c) Boeing

d) Airbus

5. What unique feature does the Virus SW 80 aircraft have on its wings?

a) Spoilers

b) Flaperons

c) Winglets

d) Slats

6. What is the position of the wing in the Virus SW 80 microlite aircraft?

a) Low wing

b) Mid wing

c) High wing

d) Variable wing

7. What type of safety belts are equipped in the Virus SW 80 aircraft?

a) V-type

b) X-type

c) H-type

d) Y-type

8. What is the seating capacity of the Virus SW 80 microlite aircraft?

a) One

b) Two

c) Three

d) Four

9. What type of engine configuration does the Virus SW 80 microlite aircraft have?

a) Inline

b) Radial

c) Horizontally opposed

d) V-type

10. What type of control levers does the Virus SW 80 aircraft have?

a) Single main flight control lever

b) Full dual main flight control levers

c) Triple main flight control levers

d) No flight control levers

11. What is the purpose of the removable seat cushion in the Virus SW 80 aircraft?

a) For additional comfort

b) To elevate the seat position for better visibility

c) For weight reduction

d) To provide extra storage space

12. What type of navigational aids and avionics equipment is the Virus SW 80 aircraft equipped with?

a) Basic

b) Standard

c) Advanced

d) Minimal

13. What is the primary use of the Virus SW 80 microlite aircraft?

a) Commercial passenger transport

b) Cargo transport

c) Initial and advanced flight training

d) Agricultural spraying

14. What type of tail configuration does the Virus SW 80 microlite aircraft have?

a) Conventional tail

b) T-tail

c) V-tail

d) H-tail

15. Which country is the manufacturer of the Virus SW 80 microlite aircraft located in?

a) Germany

b) France

c) Slovenia

d) India

16. What is the primary function of the flaperons on the Virus SW 80 aircraft?

a) To act as both flaps and ailerons

b) To provide additional lift during takeoff

c) To reduce drag during flight

d) To stabilize the aircraft during turbulence

17. Which component of the Virus SW 80's undercarriage is responsible for steering the aircraft on the ground?

a) Main wheels

b) Nose wheel

c) Tail wheel

d) Wing struts

18. What is the significance of the H-type safety belts in the Virus SW 80 aircraft?

a) They provide additional comfort for the pilot and passenger

b) They are attached to the fuselage at three mounting points for enhanced safety

c) They are designed to be easily removable for maintenance

d) They are equipped with automatic tensioning systems

19. How does the Virus SW 80 aircraft achieve better visibility for the pilot?

a) By using a high wing design

b) By incorporating transparent surfaces made of anti-UV GE tinted Lexan

c) By providing removable seat cushions that elevate the seat position

d) By equipping the aircraft with advanced avionics

20. What is the role of the ROTAX 912 A engine in the Virus SW 80 aircraft?

a) It provides electrical power to the avionics

b) It powers the aircraft with a 4-cylinder horizontally opposed 4-stroke engine

c) It controls the flight control surfaces

d) It manages the aircraft's fuel system

21. What is the role of the ROTAX 912 A engine in the Virus SW 80 aircraft?

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c) It controls the flight control surfaces

d) It manages the aircraft's fuel system

22. How is the Virus SW 80 aircraft's undercarriage designed to handle rough terrain?

a) By using a tailwheel configuration

b) By incorporating a spring-type shock absorber in the nose wheel

c) By equipping the main wheels with hydraulic brakes

d) By using a skid-type undercarriage

23. What is the function of the dual main flight control levers in the Virus SW 80 aircraft?

a) To provide redundancy in case of a control failure

b) To allow both the instructor and student to have full control during flight training

c) To enhance the aircraft's maneuverability

d) To reduce the pilot's workload during long flights

24. What is the Indian name of the Virus SW-80 aircraft?

a) Garud

b) Tejas

c) Chetak

d) Dhruv

25. When did India receive its first Virus SW-80 aircraft?

a) August 2015

b) August 2016

c) August 2017

d) August 2018

Video : [2 – Airframe Systems](https://youtu.be/W-0O5FytlY8?si=CtxiOxA-ATVjANz3)

1. What is the primary material used in the construction of the Virus SW-80 aircraft?

a) Aluminum

b) Steel

c) Composite materials

d) Wood

2. What is the purpose of the firewall reinforcement in the Virus SW-80 aircraft?

a) To provide additional structural strength

b) To reduce heat and noise

c) To imprve aerodynamics

d) To enhance visibility

3. Which of the following materials is NOT used in the composite parts of the Virus SW-80 aircraft?

a) Glass

b) Carbon foam

c) Kevlar

d) Titanium

4. Which of the following materials is NOT used in the composite parts of the Virus SW-80 aircraft?

a) Glass

b) Carbon foam

c) Kevlar

d) Titanium

5. How are the composite parts of the Virus SW-80 aircraft made?

a) By welding

b) By riveting

c) In moulds

d) By casting

6. Which metal parts are used in the Virus SW-80 aircraft?

a) Tubes, sheet metal, rods, cable bolts, and nuts

b) Only aluminum sheets

c) Only steel rods

d) Only titanium bolts

Video : [3 - Cockpit](https://youtu.be/WW9hYjhwEaw?si=mJDIfg4yM71NhIpp)

1. What material are the cockpit windshields, doors, and overhead windows of the Virus SW-80 aircraft made of?

a) Polycarbonate

b) 2mm anti-UV GE tinted Lexan

c) Acrylic

d) Tempered glass

2.How is cabin ventilation achieved in the Virus SW-80 aircraft?

a) Through air conditioning vents

b) Through special vents provided on doors

c) Through open windows

d) Through ceiling vents

3. What is the source of cabin heating and windshield defrost/demist in the Virus SW-80 aircraft?

a) Electric heaters

b) Hot air from the engine

c) Solar panels

d) Battery-powered heaters

4. How many fixed seats does the cabin of the Virus SW-80 aircraft accommodate?

a) One

b) Two

c) Three

d) Four

5. What type of safety harness is used in the Virus SW-80 aircraft?

a) V-type

b) X-type

c) H-type

d) Y-type

6. How are the seat cushions in the Virus SW-80 aircraft designed to enhance comfort?

a) They are made of memory foam

b) They are removable to elevate seating height

c) They are heated

d) They are adjustable for lumbar support

7. What feature is provided for leg length adjustment in the Virus SW-80 aircraft?

a) Adjustable seat position

b) Adjustable rudder pedals

c) Adjustable footrests

d) Adjustable armrests

Video : [4 - Cockpit (contd.)](https://youtu.be/CaSKWZjPmTM?si=i9vF0WoNOZ-DdCJ7)

Question no 1. Where are all engine and flight control operating levers located in the Virus SW-80 aircraft?

a) In the cockpit.

b) In the tail section.

c) On the wings.

d) In the undercarriage.

Question no 2. How are the main undercarriage brakes controlled in the Virus SW-80 aircraft?

a) Mechanically.

b) Hydraulically.

c) Electrically.

d) Pneumatically.

Question no 3. What type of mechanism is used for the elevator trim in the Virus SW-80 aircraft?

a) Hydraulic mechanism.

b) Electrical mechanism driving a spring mechanism.

c) Mechanical lever.

d) Pneumatic system.

Question no 4. Where is the parachute and rocket system installed in the Virus SW-80 aircraft?

a) In the nose section.

b) Behind the right seat.

c) Under the wings.

d) In the tail section.

Question no 5. Where is the activation handle for the emergency parachute and rocket system located in the Virus SW-80 aircraft?

a) On the instrument panel.

b) Overhead between both pilots.

c) On the left side of the cockpit.

d) Under the pilot's seat.

Question no 6. What is the purpose of the elevator trim in the Virus SW-80 aircraft?

a) To increase stick loads.

b) To reduce stick loads.

c) To adjust the rudder position.

d) To control the ailerons.

Question no 7. How is the elevator trim controlled in the Virus SW-80 aircraft?

a) Through a hydraulic system.

b) Through a common switch.

c) Through a mechanical lever.

d) Through a pneumatic system.

Video : [5 - Undercarriage](https://youtu.be/swQoDNtWvEI?si=tnN_sxUV3rr1EmK9)

Question no 1. What type of undercarriage does the Virus SW-80 aircraft have?

a) robust Tailwheel type.

b) robust Tricycle type.

c) Skid type.

d) Floats for water landings.

Question no 2. What material is the main undercarriage strut made of in the Virus SW-80 aircraft?

a) Aluminum

b) Steel

c) Composite

d) Titanium

Question no 3. How are the main undercarriage brakes operated in the Virus SW-80 aircraft?

a) Mechanically

b) Hydraulically

c) Electrically

d) Pneumatically

Question no 4. What type of shock absorber is used in the nose undercarriage of the Virus SW-80 aircraft?

a) Hydraulic shock absorber

b) Pneumatic shock absorber

c) Spring type shock absorber

d) Rubber shock absorber

Question no 5. How is the nose wheel steered in the Virus SW-80 aircraft?

a) Through a joystick

b) Through rudder pedals

c) Through a steering wheel

d) Through a control stick

Question no 6. What type of tyres are used on all wheels of the Virus SW-80 aircraft?

a) Tubeless tyres

b) Tube type tyres

c) Solid rubber tyres

d) Pneumatic tyres

Question no 7. How are the wheel brakes actuated in the Virus SW-80 aircraft?

a) By pressing a foot pedal

b) By pulling on the common handbrake lever

c) By turning a knob

d) By pushing a button

Question no 8. Where is the handbrake lever located in the Virus SW-80 aircraft?

a) On the instrument panel

b) On the left side of the cockpit

c) On the central column in the cockpit

d) Under the pilot's seat

Question no 9. How is the parking brake function achieved in the Virus SW-80 aircraft?

a) By using a lock latch on the handbrake lever

b) By pressing a foot pedal

c) By turning a knob

d) By pushing a button

Question no 10. Which wheel does not have a braking function in the Virus SW-80 aircraft?

a) Left main wheel.

b) Right main wheel.

c) Nose wheel.

d) All wheels have braking functions.

Question no 11. What type of brakes are used in the Virus SW-80 aircraft?

a) Drum brakes.

b) Disc brakes.

c) Mechanical brakes.

d) Pneumatic brakes.

Question no 12. How is the nose wheel of the Virus SW-80 aircraft connected and steered?

a) Connected by rods and steered through a joystick.

b) Connected by cables and steered through rudder pedals.

c) Connected by hydraulic lines and steered through a steering wheel.

d) Connected by mechanical linkages and steered through a control stick.

Question no 13. What grade of hydraulic oil is used in the brake system of the Virus SW-80 aircraft?

a) MIL-H-5606.

b) MIL-H-83282.

c) MIL-H-87257.

d) MIL-H-46170.

Video : [6 - Flight Control System](6%20-%20Flight%20Control%20System)

Question no 1. What type of control surfaces are featured in the Virus SW 80 aircraft?

a) Ailerons, elevators, and rudder.

b) Flaperons, elevators, and rudder.

c) Spoilers, elevators, and rudder.

d) Flaps, elevators, and rudder.

Question no 2. What makes the Virus SW 80 aircraft ideal for basic and advanced flight training?

a) Single main flight control lever.

b) Full dual main flight control levers.

c) Automated flight control system.

d) Advanced autopilot system.

Question no 3. How are the flight controls (flaps, ailerons, and elevators) connected to the cabin controls in the Virus SW 80 aircraft?

a) Using hydraulic lines.

b) Using self-fitting push-pull tubes.

c) Using electrical wires.

d) Using mechanical linkages.

Question no 4. How is the rudder controlled in the Virus SW 80 aircraft?

a) Via hydraulic lines connected to pedals.

b) Via cables connected to pedals.

c) Via electrical wires connected to pedals.

d) Via mechanical linkages connected to pedals.

Question no 5. What type of mechanism is used for the elevator trim in the Virus SW 80 aircraft?

a) Hydraulic mechanism.

b) Electro-mechanical mechanism driving a spring mechanism.

c) Mechanical lever.

d) Pneumatic system.

Question no 6. Where are the flaperons installed in the Virus SW 80 aircraft?

a) At the leading edge of each wing.

b) At the trailing edge of each wing.

c) On the fuselage.

d) On the tail section.

Question no 7. How is the aileron movement of the flaperon controlled in the Virus SW 80 aircraft?

a) By a flap lever located between both seats.

b) By lateral movement of the dual flight control stick.

c) By a joystick.

d) By a control wheel.

Question no 8. What are the three position settings for the flaps in the Virus SW 80 aircraft?

a) Position 0 (fully retracted), Position 1 (10 degrees extended), Position 2 (20 degrees extended).

b) Position 0 (fully retracted), Position 1 (15 degrees extended), Position 2 (25 degrees extended).

c) Position 0 (fully retracted), Position 1 (20 degrees extended), Position 2 (30 degrees extended).

d) Position 0 (fully retracted), Position 1 (5 degrees extended), Position 2 (15 degrees extended).

Question no 9. What is the purpose of the flap lever located between both seats in the Virus SW 80 aircraft?

a) To control the elevator trim.

b) To facilitate the movement of flaps.

c) To control the rudder.

d) To adjust the ailerons.

Question number 10. What is the function of the dual flight control stick in the Virus SW 80 aircraft?

a) To control the rudder.

b) To control the elevator trim.

c) To control the aileron movement of the flaperon.

d) To control the flap settings.

Question number 11. How is the elevator trim controlled in the Virus SW 80 aircraft?

a) Through individual switches for each pilot.

b) Through a common cockpit switch available to both pilots.

c) Through a joystick.

d) Through a control wheel.

Question no 12. How many different control levels are used for flaps and ailerons in the Virus SW 80 aircraft?

a) One.

b) Two.

c) Three.

d) Four.

Question no 13. What is the purpose of having two different control levels for flaps and ailerons in the Virus SW 80 aircraft?

a) To simplify the control system.

b) To provide independent control for flaps and ailerons.

c) To reduce the weight of the aircraft.

d) To enhance the aerodynamic performance.

Video : [7 - Parachute Rescue System](Parachute%20Rescue%20System)

Question number 1. What is the purpose of the rocket engine in the PRS?

A) To increase the aircraft's speed.

B) To deploy the parachute quickly.

C) To provide additional lift.

D) To stabilize the aircraft.

Question number 2. Where is the parachute placed within the PRS?

A) Inside the cockpit.

B) Inside a deployment bag within the cylinder.

C) Under the pilot's seat.

D) In the left wing.

Question number 3. What secures the activation handle to prevent accidental deployment?

A) A lock.

B) A safety pin.

C) A password.

D) A biometric scanner.

Question number 4. How long does it take for the main canopy to open after pulling the activation handle?

A) 1.5 seconds.

B) 2.0 seconds.

C) 3.2 seconds.

D) 4.5 seconds.

Question number 5. What is the location of the PRS cylinder in the Pipistrel Virus SW 80?

A) Under the pilot's seat.

B) On the left wing.

C) On the right-hand side of the baggage compartment.

D) In the engine compartment.

Question number 6. How often should the parachute in the Pipistrel Virus SW 80's Parachute Rescue System be repacked?

A) Every 2 years.

B) Every 4 years.

C) Every 6 years.

D) Every 8 years.

Question number 7. What is the minimum height required for the activation of the Parachute Rescue System (PRS) in the Pipistrel Virus SW 80?

A) 100 feet.

B) 200 feet.

C) 300 feet.

D) 400 feet.

Question number 8. What is the minimum force required for the activation of the Parachute Rescue System (PRS) handle in the Pipistrel Virus SW 80?

A) 10 pounds.

B) 20 pounds.

C) 30 pounds.

D) 40 pounds.

Question number 9. What happens immediately after the activation handle is pulled in the PRS?

A) The aircraft's speed increases.

B) The main canopy opens.

C) The engine shuts down.

D) The landing gear deploys.

Question number 10. Where is the rocket engine located in the PRS?

A) Above the parachute.

B) Underneath the parachute.

C) Inside the cockpit.

D) In the left wing.

Question number 11. What is the function of the safety pin in the PRS?

A) To secure the parachute.

B) To prevent accidental activation.

C) To lock the baggage compartment.

D) To stabilize the aircraft.

Video : [8 - Fire Extinguisher](8%20-%20Fire%20Extinguisher)

Question number 1. What type of fires is the AFFF fire extinguisher designed to extinguish?

A) Electrical fires.

B) Hydrocarbon and polar solvent fires.

C) Metal fires.

D) Wood and paper fires.

Question number 2. What is the primary function of the fluorinated and hydrocarbon surfactants in the AFFF fire extinguisher?

A) To increase the viscosity of the foam.

B) To form an aqueous film on the surface of hydrocarbon fuels.

C) To enhance the color of the foam.

D) To reduce the weight of the extinguisher.

Question number 3. What does the aqueous film formed by the AFFF fire extinguisher do?

A) Increases the temperature of the fuel.

B) Reduces vapor leaks and prevents contact with oxygen.

C) Enhances the flammability of the fuel.

D) Increases the spread of the fire.

Question number 4. What is a notable characteristic of AFFF as a synthetic foam?

A) High viscosity.

B) Low viscosity and rapid spreading across hydrocarbon fuels.

C) High density.

D) Slow spreading across hydrocarbon fuels.

Question number 5. What forms beneath the foam when AFFF is used on a fire?

A) An oil layer.

B) A water film.

C) A gas layer.

D) A solid barrier.

Question number 6. What is the name of the compound used in the fire extinguisher?

A) Aqueous Film Forming Foam (AFFF).

B) Dry Chemical Powder (DCP).

C) Carbon Dioxide (CO2).

D) Halon.

Question number 7. What cools the liquid fuel and stops the formation of flammable vapors when using AFFF?

A) Oil film.

B) Gas layer.

C) Water film.

D) Solid barrier.

Video : [9 - Propeller](propperl)

Question number 1. What is the design of the propeller described?

A) Three blade variable pitch.

B) Two blade fixed pitch.

C) Four blade adjustable pitch.

D) Single blade fixed pitch.

Question number 2. What is the diameter of the propeller?

A) 1200mm.

B) 1450mm.

C) 1650mm.

D) 1800mm.

Question number 3. How is the propeller drive achieved?

A) Through the engine directly.

B) From the central cam shaft through an integrated reduction gear box.

C) Via a belt drive system.

D) Using a hydraulic system.

Question number 4. What additional components are integrated into the reduction gear box?

A) Hydraulic pump and cooling system.

B) Mechanical shock absorber and overload clutch.

C) Electrical generator and battery.

D) Fuel pump and filter.

Question number 5. What is the reduction ratio provided by the gear box?

A) 1 : 1.5

B) 1 : 2.27

C) 1 : 3.0

D) 1 : 4.5

Video : [10 - Power Plant](power)

Question number 1. What are the cooling features of the Virus SW-80 AC's power plant?

A) Ram Air Cooled Cylinders, Liquid (Water) Cooled Cylinder Heads, and Oil Cooled moving parts.

B) Air Cooled Cylinders, Liquid (Water) Cooled Cylinder Heads, and Oil Cooled moving parts.

C) Ram Air Cooled Cylinders, Air Cooled Cylinder Heads, and Oil Cooled moving parts.

D) Air Cooled Cylinders, Air Cooled Cylinder Heads, and Oil Cooled moving parts.

Question number 2. Which of the following is NOT a feature of the Rotax 912 A engine?

A) Dual Breakerless Capacitor Discharge Ignition (CDI).

B) Single carburetor.

C) Mechanical Fuel Pump.

D) Integrated AC Generator with External Rectifier Regulator.

Question number 3. What is the maximum RPM for the Rotax 912 A engine?

A) 5000 RPM.

B) 5500 RPM.

C) 5800 RPM.

D) 6000 RPM.

Question number 4. What type of propeller drive does the Virus SW 80 aircraft use?

A) Direct drive.

B) Belt drive.

C) Gearbox with Integrated Mechanical Shock Absorber and Overload Clutch.

D) Chain drive.

Question number 5. Which component is responsible for cooling the engine oil in the Rotax 912 A engine?

A) Cooling fan.

B) Radiator.

C) Air intake.

D) Water pump.

Question number 6. What type of ignition system is used in the Rotax 912 A engine?

A) Single spark ignition.

B) Dual electronic spark ignition.

C) Magneto ignition.

D) Distributor ignition.

Question number 7. Where are the cooling air intakes located on the Virus SW 80 aircraft?

A) On the top part of the engine cover.

B) On the sides of the fuselage.

C) On the bottom part of the engine cover.

D) On the wings.

Question number 8. What is the function of the Integrated Mechanical Shock Absorber in the propeller drive system?

A) To reduce engine noise.

B) To absorb vibrations and shocks.

C) To increase propeller speed.

D) To cool the propeller.

Question number 9. What type of lubrication system does the Rotax 912 A engine use?

A) Wet sump lubrication.

B) Dry sump forced lubrication.

C) Splash lubrication.

D) Pressure lubrication.

Question number 10. The Virus SW-80 AC is powered by which engine?

A) Rotax 912 A (80 HP) four-stroke, four-cylinder, horizontally opposed, twin carbureted, spark ignition (dual electronic), single central camshaft engine.

B) Rotax 914 F (115 HP) four-stroke, four-cylinder, horizontally opposed, twin carbureted, spark ignition (dual electronic), single central camshaft engine.

C) Rotax 912 ULS (100 HP) four-stroke, four-cylinder, horizontally opposed, twin carbureted, spark ignition (dual electronic), single central camshaft engine.

D) Rotax 915 iS (141 HP) four-stroke, four-cylinder, horizontally opposed, twin carbureted, spark ignition (dual electronic), single central camshaft engine.

Question number 11. What is the Virus SW-80 AC's engine dependent on for cooling?

A) A cooling fan.

B) Moving air or airspeed.

C) Water pump.

D) Radiator.

Question number 12. How is the engine oil cooled while the Virus SW-80 AC's engine is running?

A) By a cooling fan.

B) By a water pump.

C) By being passed through a radiator.

D) By air intake.

Question number 13. What type of starter is used in the Virus SW-80 AC's engine?

A) Manual Starter.

B) Electric Starter.

C) Hydraulic Starter.

D) Pneumatic Starter.

Question number 14. What type of generator is integrated into the Virus SW-80 AC's engine?

A) DC Generator with Internal Rectifier Regulator.

B) AC Generator with External Rectifier Regulator.

C) AC Generator with Internal Rectifier Regulator.

D) DC Generator with External Rectifier Regulator.

Question number 15. What type of fuel pump is used in the Virus SW-80 AC's engine?

A) Electric Fuel Pump.

B) Mechanical Fuel Pump.

C) Manual Fuel Pump.

D) Hydraulic Fuel Pump.

Question number 16. How many carburetors does the Virus SW-80 AC's engine have?

A) One.

B) Two.

C) Three.

D) Four.

Question number 17. What kind of carburetor is used in the Virus SW-80 AC's engine?

A) Constant Velocity Carburetors.

B) Constant Depression Carburetors.

C) Fixed Jet Carburetors.

D) Variable Jet Carburetors.

Question number 18. How is the Virus SW-80 AC's engine lubricated?

A) With an external oil pump.

B) With a central oil pump.

C) With a manual oil pump.

D) With a hydraulic oil pump.

Video : [11 - Fuel System](asd)

Question number 1. Where is the refueling aperture located on the aircraft?

A) Top right side of the fuselage.

B) Top left side of the fuselage.

C) Bottom left side of the fuselage.

D) Bottom right side of the fuselage.

Question number 2. What material is used to protect the fuel hoses?

A) Glass and silicon rubber.

B) Plastic and rubber.

C) Metal and plastic.

D) Kevlar and carbon fiber.

Question number 3. How is the rate of fuel flow calculated?

A) From RPM and MAP (Manifold Pressure) measurements.

B) From fuel tank pressure.

C) From fuel temperature.

D) From fuel quantity.

Question number 4. What is the purpose of the gascolator in the fuel system?

A) To filter fuel.

B) To drain water and particles.

C) To measure fuel flow.

D) To regulate fuel pressure.

Question number 5. Where is the optional electric fuel pump usually fitted?

A) Between the fuel tank and coarse filter.

B) Between the safety cock and water drain cock.

C) Between the fine filter and mechanical fuel pump.

D) Between the carburetors and fuel tank.

Question number 6. What type of fuel quantity indication system is used?

A) Mechanical gauge.

B) Electric gauge style.

C) Digital display.

D) Analog meter.

Question number 7. What is the principle of fuel quantity indication?

A) Pressure sensor.

B) Float with position detection.

C) Ultrasonic sensor.

D) Optical sensor.

Question number 8. What is the function of the fuel shutoff valve?

A) To regulate fuel pressure.

B) To stop fuel flow in emergencies.

C) To measure fuel quantity.

D) To filter fuel.

Question number 9. Where is the gascolator located?

A) Inside the fuel tank.

B) Below the bottom engine cowling.

C) Next to the fuel pump.

D) Near the carburetors.

Question number 10. What is the function of the coarse filter in the fuel system?

A) To measure fuel flow.

B) To filter large particles from the fuel.

C) To regulate fuel pressure.

D) To control fuel quantity.

Question number 11. What is the fuel tank capacity in the VIRUS SW-80 AC?

A) 40 liters.

B) 45 liters.

C) 50 liters.

D) 55 liters.

Question number 12. What is the usable fuel capacity in the VIRUS SW-80 AC?

A) 45 liters.

B) 46 liters.

C) 47 liters.

D) 48 liters.

Question number 13. Where is the fuel tank located in the VIRUS SW-80 AC?

A) Inside the wing.

B) Inside the fuselage.

C) Under the cockpit.

D) In the tail section.

Question number 14. Where is the fuel shutoff valve located in the VIRUS SW-80 AC?

A) Inside the wing.

B) Inside the fuselage.

C) Inside the cockpit.

D) In the tail section.

Question number 15. How is the draining of water/particles achieved in the VIRUS SW-80 AC fuel system?

A) Through a coarse filter.

B) Through a fine filter.

C) Through the gascolator.

D) Through the fuel pump.

Question number 16. The fuel tank is located outside the fuselage.

A) True.

B) False.

Question number 17. The fuel system features an electric gauge style fuel quantity indication.

A) True.

B) False.

Question number 18. The fuel shutoff valve is located outside the cockpit.

A) True.

B) False.

Question number 19. The fuel system does not have a fuel return circuit.

A) True.

B) False.

Question number 20. The mechanical fuel pump is located after the fine filter in the fuel flow sequence.

A) True.

B) False.

Video : [12 - Cooling System](ds)

Question number 1. How is the cooling system designed in the VIRUS SW-80 AC?

A) Liquid cooling of cylinder heads and ram air cooling of cylinders.

B) Air cooling of cylinder heads and liquid cooling of cylinders.

C) Only liquid cooling of the entire engine.

D) Only air cooling of the entire engine.

Question number 2. What forces the coolant flow for cooling cylinder heads?

A) Electric water pump.

B) Engine/cam shaft driven water pump.

C) Manual pump.

D) Gravity.

Question number 3. What is the engine's cooling system dependent on, given it does not have a cooling fan?

A) Electric fans.

B) Ram/moving air and air speed.

C) Water cooling.

D) Oil cooling.

Question number 4. What is the significance of ram air cooling in the VIRUS SW-80 AC?

A) It provides additional cooling for the cylinders.

B) It reduces the need for a cooling fan.

C) It enhances the efficiency of the cooling system.

D) All of the above.

Question number 5. What happens if the air speed is insufficient for cooling the engine?

A) The engine may overheat.

B) The engine will shut down automatically.

C) The cooling system will switch to electric fans.

D) The coolant will evaporate.

Question number 6. What is the role of the water pump in the cooling system?

A) To circulate coolant from the radiator to the cylinder heads.

B) To pump fuel to the engine.

C) To circulate oil for lubrication.

D) To provide air for combustion.

Question number 7. Why does the engine not comprise a cooling fan?

A) It relies entirely on ram/moving air and air speed.

B) It uses an electric cooling system.

C) It has an advanced liquid cooling system.

D) It does not require cooling.

Question number 8. What is the primary method of cooling for the engine in the VIRUS SW-80 AC?

A) Liquid cooling.

B) Air cooling.

C) Oil cooling.

D) Hybrid cooling.

Question number 9. Where does the coolant flow from and to for cooling the cylinder heads?

A) From the radiator to the cylinder heads.

B) From the fuel tank to the cylinder heads.

C) From the oil tank to the cylinder heads.

D) From the air intake to the cylinder heads.

Question number 10. What drives the water pump for cooling the cylinder heads?

A) Electric motor.

B) Engine/cam shaft.

C) Manual pump.

D) Gravity.

Question number 11. What drives the engine oil pump in the VIRUS SW-80 AC?

A) Electric motor.

B) Engine/cam shaft.

C) Manual pump.

D) Gravity.

Question number 12. How is hot oil after lubricating the engine cooled in the VIRUS SW-80 AC?

A) Air cooling.

B) Water cooling.

C) Oil cooler.

D) Radiator.

Video : [13 - Lubrication System](13%20-%20%20Lubrication%20System)

Question number 1. What type of lubrication system is used in the Virus SW 80 engine?

a) Wet sump lubrication.

b) Dry sump forced lubrication.

c) Splash lubrication.

d) Mist lubrication.

Question number 2. What drives the oil pump in the Virus SW 80 engine?

a) Crankshaft.

b) Camshaft.

c) Timing belt.

d) Flywheel.

Question number 3. Where does the oil go after being forced through the oil filter?

a) Back to the oil tank.

b) To the oil cooler.

c) To individual lubrication points.

d) To the crankcase.

Question number 4. How is surplus oil returned to the oil tank?

a) By a secondary pump.

b) By gravity.

c) By blow-by gases.

d) By a siphon system.

Question number 5. What happens to the oil after it lubricates the engine?

a) It is discarded.

b) It is cooled by passing through a radiator.

c) It is mixed with fuel.

d) It evaporates.

Video : [14,15,16 - Electrical System](14,15,16%20-%20Electrical%20System)

Question number 1. What type of switches are used for the magnetos in the Virus SW 80 aircraft?

a) Rocker switches.

b) Toggle switches.

c) Push-button switches.

d) Slide switches.

Question number 2. What is the function of the Master switch in the Virus SW 80 aircraft?

a) To control the avionics system.

b) To control individual electric loads.

c) To provide overall power control.

d) To control the lighting system.

Question number 3. How are individual electric loads controlled in the Virus SW 80 aircraft?

a) By a single master switch.

b) By individual fused rocker switches.

c) By a central control panel.

d) By the avionics switch.

Question number 4. What type of lighting is provided for the cockpit in the Virus SW 80 aircraft?

a) Overhead fluorescent lights.

b) Internal gooseneck cockpit lighting.

c) LED strip lights.

d) Halogen spotlights.

Question number 5. What additional feature do the instruments in the Virus SW 80 aircraft have?

a) Touchscreen displays.

b) Backlit instruments with day/night visible displays.

c) Voice-activated controls.

d) Digital readouts only.

Question number 6. What is the weight of the battery in the Virus SW 80 aircraft?

a) 1.2 Kg.

b) 1.62 Kg.

c) 2.0 Kg.

d) 2.5 Kg.

Question number 7. What principle is the battery in the Virus SW 80 aircraft based on?

a) Lithium-ion.

b) Nickel-cadmium.

c) Lithium Phosphate.

d) Lead-acid.

Question number 8. What type of housing is used for the battery in the Virus SW 80 aircraft?

a) Metal.

b) Glass.

c) ABS (Acrylonitrile Butadiene Styrene) plastic.

d) Ceramic.

Question number 9. What is the operating temperature range of the battery in the Virus SW 80 aircraft?

a) -20°C to +50°C.

b) -30°C to +60°C.

c) -10°C to +40°C.

d) -40°C to +70°C.

Question number 10. What is the maximum operating altitude of the battery in the Virus SW 80 aircraft?

a) 3000 metres.

b) 4000 metres.

c) 5000 metres.

d) 6000 metres.

Question number 11. What type of compatibility does the battery in the Virus SW 80 aircraft have?

a) Thermal compatibility.

b) Electromagnetic compatibility.

c) Chemical compatibility.

d) Mechanical compatibility.

Question number 12. What type of control does the battery in the Virus SW 80 aircraft have?

a) Manual overload control.

b) Integrated electronic overload control.

c) Mechanical overload control.

d) Hydraulic overload control.

Question number 13. What system is integrated into the battery for balance in the Virus SW 80 aircraft?

a) Power Management System (PMS).

b) Battery Management System (BMS).

c) Thermal Management System (TMS).

d) Voltage Management System (VMS).

Question number 14. What type of battery is used in the Virus SW 80 aircraft?

a) Wet battery.

b) Dry battery.

c) Gel battery.

d) Lead-acid battery.

Question number 15. What is the voltage of the circuit provided by the engine-driven electric alternator in the Virus SW 80 aircraft?

a) 6 Volt.

b) 12 Volt.

c) 24 Volt.

d) 48 Volt.

Question number 16. What is the capacity of the battery in the Virus SW 80 aircraft?

a) 5 AH.

b) 10 AH.

c) 15 AH.

d) 20 AH.

Question number 17. What is the power output of the alternator at maximum engine RPM in the Virus SW 80 aircraft?

a) 100 Watt.

b) 150 Watt.

c) 200 Watt.

d) 250 Watt.

Question number 18. How is the AC from the alternator provided to the 12 Volt Busbar in the Virus SW 80 aircraft?

a) Through a Transformer.

b) Through a Regulator Rectifier.

c) Through a Converter.

d) Through a Battery Charger.

Question number 19. What does the Regulator Rectifier cater for in the Virus SW 80 aircraft?

a) Only electric loads.

b) Only charging the battery.

c) Both electric loads and charging the battery.

d) Neither electric loads nor charging the battery.

Question number 20. Which component is supplied through the Master switch and Fuel CB in the Virus SW 80 aircraft?

a) Electric starter.

b) Electric Fuel Boost pump.

c) External lighting.

d) Navigation GPS.

Question number 21. What type of lighting is included in the electrical system of the Virus SW 80 aircraft?

a) Only external lighting.

b) Only internal lighting.

c) Both external and internal lighting.

d) No lighting.

Question number 22. Which system is used for navigation in the Virus SW 80 aircraft?

a) Garmin Aero 500.

b) TomTom Navigator.

c) Magellan GPS.

d) Google Maps.

Question number 23. What display is part of the Engine Management Systems in the Virus SW 80 aircraft?

a) Digital Display.

b) Quadrant Display.

c) Analog Display.

d) Touchscreen Display.

Question number 24. Which of the following is NOT a load supplied by the electrical system in the Virus SW 80 aircraft?

a) Electric Fuel Boost pump.

b) Electric starter.

c) External & internal lighting.

d) Hydraulic pump.

Video : [17 - Instrument Panel](17%20-%20Instrument%20Panel)

Question number 1. Which of the following is NOT an analogue indicator on the Virus SW 80 instrument panel?

A) Altitude.

B) Slip & Trim.

C) GPS.

D) Airspeed.

Question number 2. What type of gauge is the tachometer on the Virus SW 80?

A) Analogue.

B) Digital.

C) Hybrid (Analogue & Digital).

D) None of the above.

Question number 3. Which component on the Virus SW 80 electrical panel mechanically disables the complete electrical system?

A) Starter Button.

B) Fuel Pump Circuit Breaker (CB).

C) Battery Disconnect Ring.

D) Cabin Light Lever.

Question number 4. Which of the following is a digital indicator on the Virus SW 80 instrument panel?

A) Altitude.

B) Slip & Trim.

C) Engine Instrument Cluster.

D) Airspeed.

Question number 5. What is the function of the Fail Light Rocker Switches on the Virus SW 80 electrical panel?

A) To start the engine.

B) To control the fuel pump.

C) To manage the master, avionics, and magnetos.

D) To disconnect the battery.

Question number 6. Which of the following is a hybrid gauge on the Virus SW 80 instrument panel?

A) Altitude.

B) Slip & Trim.

C) Airspeed.

D) GPS.

Question number 7. What type of indicator is the engine instrument cluster on the Virus SW 80?

A) Analogue.

B) Digital.

C) Hybrid (Analogue & Digital).

D) None of the above.

Question number 8. Which component on the Virus SW 80 electrical panel is used to start the engine?

A) Fuel Pump Circuit Breaker (CB).

B) Starter Button.

C) Battery Disconnect Ring.

D) Cabin Light Lever.

Question number 9. Which of the following is NOT a function of the Fail Light Rocker Switches on the Virus SW 80 electrical panel?

A) Master.

B) Avionics.

C) Magnetos.

D) Fuel Pump.

Question number 10. What does the cabin light lever control on the Virus SW 80 electrical panel?

A) The engine start process.

B) The fuel pump.

C) The cabin lighting.

D) The battery disconnect.

Question number 11. Which of the following is a digital indicator on the Virus SW 80 instrument panel?

A) Altitude.

B) Slip & Trim.

C) Radio.

D) Airspeed.

Question number 12. What is the purpose of the 12 Volt socket on the Virus SW 80 electrical panel?

A) To start the engine.

B) To power external devices.

C) To control the fuel pump.

D) To disconnect the battery.

Video : [18 - Instrument/Communication/Navigation Systems](18%20%20-%20Instrument/Communication/Navigation%20Systems)

Questions number 1. Which of the following is NOT a gauge type used for airspeed indication on the Virus SW 80?

A) Digital.

B) Analogue.

C) Hybrid.

D) None of the above.

Questions number 2. Which parameter is NOT displayed on the Right Hand Quadrant Display (Engine Cluster) system of the Virus SW 80?

A) Manifold Pressure.

B) Altitude.

C) Exhaust Gas Temperature (EGT).

D) Coolant Temperature.

Questions number 3. Which parameter is NOT displayed on the Right Hand Quadrant Display (Engine Cluster) system of the Virus SW 80?

A) Manifold Pressure.

B) Altitude.

C) Exhaust Gas Temperature (EGT).

D) Coolant Temperature.

Questions number 4. Which of the following engine parameters is displayed on the Right Hand Quadrant Display (Engine Cluster) system?

A) Airspeed.

B) Oil Temperature.

C) Slip & Trim.

D) Altitude.

Questions number 5. Which of the following engine parameters is displayed on the Right Hand Quadrant Display (Engine Cluster) system?

A) Airspeed.

B) Oil Temperature.

C) Slip & Trim.

D) Altitude.

Questions number 6. Which parameter is monitored by the Right Hand Quadrant Display (Engine Cluster) system on the Virus SW 80?

A) Fuel Quantity.

B) Slip & Trim.

C) Airspeed.

D) Altitude.

Questions number 7. What type of gauges are used for vertical speed indication on the Virus SW 80?

A) Digital.

B) Analogue.

C) Hybrid.

D) None of the above.

Questions number 8. Which of the following is NOT an engine parameter displayed on the Right Hand Quadrant Display (Engine Cluster) system?

A) Oil Pressure.

B) Busbar & Battery Voltage.

C) Fuel Flow.

D) Vertical Speed.

Question number 9. Which of the following is NOT a gauge type used for altitude indication on the Virus SW 80?

A) Digital.

B) Analogue.

C) Hybrid.

D) None of the above.

Question number 10. What type of gauges are used for RPM indication on the Virus SW 80?

A) Digital.

B) Analogue.

C) Hybrid.

D) None of the above.

Question number 11. What type of gauges are used for RPM indication on the Virus SW 80?

A) Digital.

B) Analogue.

C) Hybrid.

D) None of the above.

Video : [19 - Instrument/Communication/Navigation Systems](19%20-%20Instrument/Communication/Navigation%20Systems)

Question number 1. Which radio unit is included in the Virus SW 80 Communication System?

A) Garmin Aera 500.

B) X COM VHF 760 Trans-receiver.

C) Garmin G1000.

D) Bendix/King KX 155.

Question number 2. What type of navigation system is used in the Virus SW 80?

A) Analog Compass.

B) Garmin Aera 500 GPS touch screen.

C) VOR Navigation.

D) LORAN-C.

Question number 3. What type of trans-receiver is used in the Virus SW 80 Communication System?

A) UHF.

B) VHF.

C) HF.

D) MF.

Question number 4. What unit is used to indicate altitude on the Virus SW 80 altimeter?

A) Meters.

B) Feet.

C) Kilometers.

D) Miles.

Question number 5. How many indicators does the altimeter have on its LCD display?

A) One.

B) Two.

C) Three.

D) Four.

Question number 6. Which of the following is NOT an indication on the Virus SW 80 altimeter?

A) Flight Level.

B) Altitude referenced, 1013.25 hPa.

C) QNH in hPa.

D) Airspeed in knots.

Question number 7. What is the reference pressure for altitude indication on the Virus SW 80 altimeter?

A) 1013.25 hPa.

B) 1000 hPa.

C) 1020 hPa.

D) 990 hPa.

Question number 8. What does QNH represent on the Virus SW 80 altimeter?

A) Altitude in feet.

B) Flight Level.

C) Altitude referenced, 1013.25 hPa.

D) Atmospheric pressure at sea level in hPa.

Question number 9. Which of the following is an indication on the Virus SW 80 altimeter?

A) Airspeed in knots.

B) Vertical Speed.

C) Altitude in feet.

D) Engine RPM.

Question number 10. What unit is used to indicate speed on the Virus SW 80 Air Speed Indicator (ASI)?

A) Miles per hour.

B) Kilometers per hour.

C) Knots.

D) Meters per second.

Question number 11. How is speed displayed on the Virus SW 80 ASI?

A) Digital only.

B) Analogue only.

C) Both digital and analogue.

D) Neither digital nor analogue.

Question number 12. What happens to the speed indication on the Virus SW 80 ASI when speed exceeds 135 Kts?

A) It turns green.

B) It turns red.

C) It starts to pulse/blink.

D) It turns blue.

Question number 13. At what speed does the Virus SW 80 ASI start to pulse/blink?

A) Below 50 Kts.

B) Below 45 Kts.

C) Below 40 Kts.

D) Below 35 Kts.

Question number 14. Which of the following is a feature of the Virus SW 80 ASI?

A) Speed indication turns red when speed exceeds 135 Kts.

B) Speed indication turns blue when speed exceeds 135 Kts.

C) Speed indication turns green when speed exceeds 135 Kts.

D) Speed indication turns yellow when speed exceeds 135 Kts.

Question number 15. What happens to the speed indication on the Virus SW 80 ASI when speed drops below 40 Kts?

A) It turns red.

B) It turns green.

C) It starts to pulse/blink.

D) It turns blue.

Question number 16. What is the range of the tachometer in the Virus SW 80?

A) 0 – 5000 RPM.

B) 0 – 6000 RPM.

C) 0 – 7000 RPM.

D) 0 – 8000 RPM

Question number 17. How is the RPM displayed on the Virus SW 80 tachometer?

A) Digital only.

B) Analogue only.

C) Both analogue and digital.

D) Neither analogue nor digital.

Question number 18. What happens to the RPM display on the Virus SW 80 tachometer when engine RPM exceeds 5800?

A) It turns green.

B) It turns blue.

C) It turns red.

D) It starts to pulse/blink.

Question number 19. At what RPM does the totaliser start counting engine hours on the Virus SW 80 tachometer?

A) 500.

B) 600.

C) 700.

D) 800.

Question number 20. Which of the following is displayed on the Virus SW 80 tachometer?

A) Airspeed.

B) Altitude.

C) Engine RPM and Engine Hour Totaliser.

D) Fuel Quantity.

Question number 21. What is the function of the Engine Hour Totaliser on the Virus SW 80 tachometer?

A) To display airspeed.

B) To display altitude.

C) To count engine hours when RPM exceeds 700.

D) To display fuel quantity.

Question number 22. What units are used to indicate vertical speed on the analogue display of the Virus SW 80 variometer?

A) Meters per second and feet per minute.

B) Meters per second and kilometers per hour.

C) Feet per minute and miles per hour.

D) Meters per second and miles per hour.

Question number 23. What unit is used to indicate vertical speed on the digital LCD of the Virus SW 80 variometer?

A) Meters per second.

B) Kilometers per hour.

C) Feet per minute.

D) Miles per hour.

Question number 24. When does the additional LCD on the Virus SW 80 variometer start registering flight time?

A) When speed exceeds 30 Kts for more than 05 seconds.

B) When speed exceeds 35 Kts for more than 05 seconds.

C) When speed exceeds 36 Kts for more than 05 seconds.

D) When speed exceeds 40 Kts for more than 05 seconds.

Question number 25. Which of the following is NOT a feature of the Virus SW 80 variometer?

A) Indication of vertical speed in meters per second on analogue display.

B) Indication of vertical speed in feet per minute on digital LCD.

C) Additional LCD for flight time registration.

D) Indication of airspeed in knots.

Question number 26. What happens when the speed exceeds 36 Kts for more than 05 seconds on the Virus SW 80 variometer?

A) The vertical speed indication turns red.

B) The additional LCD starts registering flight time.

C) The vertical speed indication starts to pulse/blink.

D) The vertical speed indication turns green.

Question number 27. Which of the following units is NOT used on the Virus SW 80 variometer?

A) Meters per second.

B) Feet per minute.

C) Kilometers per hour.

D) Knots.

Video : [20 - Engine Cluster Display](20%20%20%20-%20Engine%20Cluster%20Display)

Question number 1. In what unit is oil pressure displayed on the Virus SW 80 Engine Cluster?

A) Bar.

B) PSI.

C) Pascal.

D) ATM.

Question number 2. What happens to the displayed oil pressure value if it drops below 14.5 PSI on the Virus SW 80 Engine Cluster?

A) It turns green with a ‘LOW’ warning.

B) It turns blue with a ‘LOW’ warning.

C) It turns red with a ‘LOW’ warning.

D) It starts to pulse/blink with a ‘LOW’ warning.

Question number 3. At what oil pressure value does the display show a ‘HIGH’ warning on the Virus SW 80 Engine Cluster?

A) Above 80.0 PSI.

B) Above 85.5 PSI.

C) Above 90.0 PSI.

D) Above 94.3 PSI.

Question number 4. What color does the oil pressure value turn if it rises above 94.3 PSI on the Virus SW 80 Engine Cluster?

A) Green.

B) Blue.

C) Red.

D) Yellow.

Question number 5. Which of the following is a feature of the oil pressure display on the Virus SW 80 Engine Cluster?

A) Displays oil pressure in Bar.

B) Displays oil pressure in PSI.

C) Displays oil pressure in Pascal.

D) Displays oil pressure in ATM.

Question number 6. In what unit is oil temperature displayed on the Virus SW 80 Engine Cluster?

A) Fahrenheit.

B) Kelvin.

C) Celsius.

D) Rankine.

Question number 7. What happens to the displayed oil temperature value if it rises above 125 degrees Celsius on the Virus SW 80 Engine Cluster?

A) It turns green with a ‘HIGH’ warning.

B) It turns blue with a ‘HIGH’ warning.

C) It turns red with a ‘HIGH’ warning.

D) It starts to pulse/blink with a ‘HIGH’ warning.

Question number 8. Is there an alarm or warning for low oil temperature on the Virus SW 80 Engine Cluster?

A) Yes, it turns red with a ‘LOW’ warning.

B) Yes, it turns blue with a ‘LOW’ warning.

C) No, there is no alarm or warning for low oil temperature.

D) Yes, it starts to pulse/blink with a ‘LOW’ warning.

Question number 9. When is the oil temperature warning message displayed on the Virus SW 80 Engine Cluster?

A) Only when the engine is running.

B) Only when the engine is turned off.

C) When the engine is turned off.

D) When the engine is running and turned off.

Question number 10. Which of the following is a feature of the oil temperature display on the Virus SW 80 Engine Cluster?

A) Displays oil temperature in Fahrenheit.

B) Displays oil temperature in Celsius.

C) Displays oil temperature in Kelvin.

D) Displays oil temperature in Rankine.

Question number 11. In what unit is coolant temperature displayed on the Virus SW 80 Engine Cluster?

A) Fahrenheit.

B) Kelvin.

C) Celsius.

D) Rankine.

Question number 12. What happens to the displayed coolant temperature value if it rises above 120 degrees Celsius on the Virus SW 80 Engine Cluster?

A) It turns green with a ‘HIGH’ warning.

B) It turns blue with a ‘HIGH’ warning.

C) It turns red with a ‘HIGH’ warning.

D) It starts to pulse/blink with a ‘HIGH’ warning.

Question number 13. Which of the following is a feature of the coolant temperature display on the Virus SW 80 Engine Cluster?

A) Displays coolant temperature in Fahrenheit.

B) Displays coolant temperature in Celsius.

C) Displays coolant temperature in Kelvin.

D) Displays coolant temperature in Rankine.

Question number 14. What is the threshold for the coolant temperature to trigger a ‘HIGH’ warning on the Virus SW 80 Engine Cluster?

A) 100 degrees Celsius.

B) 110 degrees Celsius.

C) 120 degrees Celsius.

D) 130 degrees Celsius.

Question number 15. Which of the following is NOT a feature of the coolant temperature display on the Virus SW 80 Engine Cluster?

A) Displays coolant temperature in Celsius.

B) Turns red with a ‘HIGH’ warning above 120 degrees Celsius.

C) Displays coolant temperature in Fahrenheit.

D) Monitors CT1 & CT2.

Question number 16. In what unit is manifold pressure (MAP) displayed on the Virus SW 80 Engine Cluster?

A) PSI.

B) Bar.

C) Millimeter of Hg.

D) Pascal.

Question number 17. What happens to the displayed manifold pressure value if it rises above a certain threshold on the Virus SW 80 Engine Cluster?

A) It turns red with a ‘HIGH’ warning.

B) It turns blue with a ‘HIGH’ warning.

C) It starts to pulse/blink with a ‘HIGH’ warning.

D) There is no warning.

Question number 18. Which of the following is a feature of the manifold pressure (MAP) display on the Virus SW 80 Engine Cluster?

A) Displays manifold pressure in PSI.

B) Displays manifold pressure in Bar.

C) Displays manifold pressure in millimeter of Hg.

D) Displays manifold pressure in Pascal.

Question number 19. Is there any warning for high manifold pressure on the Virus SW 80 Engine Cluster?

A) Yes, it turns red with a ‘HIGH’ warning.

B) Yes, it turns blue with a ‘HIGH’ warning.

C) No, there is no warning.

D) Yes, it starts to pulse/blink with a ‘HIGH’ warning.

Question number 20. In what unit is voltage displayed on the Virus SW 80 Engine Cluster?

A) Amperes.

B) Volts.

C) Watts.

D) Ohms.

Question number 21. What happens to the displayed Busbar voltage value if it drops below 11.4 volts on the Virus SW 80 Engine Cluster?

A) It turns green with a ‘LOW’ warning.

B) It turns blue with a ‘LOW’ warning.

C) It turns red with a ‘LOW’ warning.

D) It starts to pulse/blink with a ‘LOW’ warning.

Question number 22. At what voltage value does the displayed Busbar voltage become red with a ‘HIGH’ warning on the Virus SW 80 Engine Cluster?

A) Above 12.4 volts.

B) Above 13.4 volts.

C) Above 14.4 volts.

D) Above 15.4 volts.

Question number 23. When is the voltage warning message displayed on the Virus SW 80 Engine Cluster?

A) Only when the engine is running.

B) Only when the engine is turned off.

C) When the engine is turned off.

D) When the engine is running and turned off.

Question number 24. Which of the following is a feature of the voltage display on the Virus SW 80 Engine Cluster?

A) Displays voltage in Amperes.

B) Displays voltage in Volts.

C) Displays voltage in Watts.

D) Displays voltage in Ohms.

Question number 25. In what unit is fuel pressure displayed on the Virus SW 80 Engine Cluster?

A) Bar.

B) PSI.

C) Pascal.

D) ATM.

Question number 26. What happens to the displayed fuel pressure value if it drops below 2.2 PSI on the Virus SW 80 Engine Cluster?

A) It turns green with a ‘LOW’ warning.

B) It turns blue with a ‘LOW’ warning.

C) It turns red with a ‘LOW’ warning.

D) It starts to pulse/blink with a ‘LOW’ warning.

Question number 27. At what fuel pressure value does the display show a ‘HIGH’ warning on the Virus SW 80 Engine Cluster?

A) Above 4.8 PSI.

B) Above 5.3 PSI.

C) Above 5.8 PSI.

D) Above 6.3 PSI.

Question number 28. What color does the fuel pressure value turn if it rises above 5.8 PSI on the Virus SW 80 Engine Cluster?

A) Green.

B) Blue.

C) Red.

D) Yellow.

Question number 29. Which of the following is a feature of the fuel pressure display on the Virus SW 80 Engine Cluster?

A) Displays fuel pressure in Bar.

B) Displays fuel pressure in PSI.

C) Displays fuel pressure in Pascal.

D) Displays fuel pressure in ATM.

Question number 30. In what unit is Exhaust Gas Temperature (EGT) displayed on the Virus SW 80 Engine Cluster?

A) Fahrenheit.

B) Kelvin.

C) Celsius.

D) Rankine.

Question number 31. What happens to the displayed EGT value if it rises above 925 degrees Celsius on the Virus SW 80 Engine Cluster?

A) It turns green with a ‘HIGH’ warning.

B) It turns blue with a ‘HIGH’ warning.

C) It turns red with a ‘HIGH’ warning.

D) It starts to pulse/blink with a ‘HIGH’ warning.

Question number 32. Is there an alarm provided for low EGT on the Virus SW 80 Engine Cluster?

A) Yes, it turns red with a ‘LOW’ warning.

B) Yes, it turns blue with a ‘LOW’ warning.

C) No, there is no alarm for low EGT.

D) Yes, it starts to pulse/blink with a ‘LOW’ warning.

Question number 33. When is the EGT warning message displayed on the Virus SW 80 Engine Cluster?

A) Only when the engine is running.

B) Only when the engine is turned off.

C) When the engine is turned off.

D) When the engine is running and turned off.

Question number 34. Which of the following is a feature of the EGT display on the Virus SW 80 Engine Cluster?

A) Displays EGT in Fahrenheit.

B) Displays EGT in Celsius.

C) Displays EGT in Kelvin.

D) Displays EGT in Rankine.

Question number 35. In what unit is fuel quantity displayed on the Virus SW 80 Engine Cluster?

A) Liters.

B) Gallons.

C) Percentage.

D) Cubic meters.

Question number 36. What happens to the displayed fuel quantity value if it drops below 10 liters on the Virus SW 80 Engine Cluster?

A) It turns green with a ‘LOW’ warning.

B) It turns blue with a ‘LOW’ warning.

C) It turns red with a ‘LOW’ warning.

D) It starts to pulse/blink with a ‘LOW’ warning.

Question number 37. At what fuel quantity does the display show a ‘LOW’ warning on the Virus SW 80 Engine Cluster?

A) Below 5 liters.

B) Below 7 liters.

C) Below 10 liters.

D) Below 12 liters.

Question number 38. Which of the following is a feature of the fuel quantity display on the Virus SW 80 Engine Cluster?

A) Displays fuel quantity in liters.

B) Displays fuel quantity in gallons.

C) Displays fuel quantity in percentage.

D) Displays fuel quantity in cubic meters.

Question number 39. What color does the fuel quantity value turn if it drops below 10 liters on the Virus SW 80 Engine Cluster?

A) Green.

B) Blue.

C) Red.

D) Yellow.

Question number 40. In what unit is fuel flow displayed on the Virus SW 80 Engine Cluster?

A) Gallons per hour.

B) Liters per hour.

C) Cubic meters per hour.

D) Milliliters per hour.

Question number 41. What factors influence the fuel flow value displayed on the Virus SW 80 Engine Cluster?

A) Engine RPM and airspeed.

B) Manifold pressure and altitude.

C) Engine RPM, manifold pressure, and engine fuel consumption data.

D) Airspeed and altitude.

Question number 42. When is the fuel flow display available on the Virus SW 80 Engine Cluster?

A) When more than 5 liters of fuel is available in the tank.

B) When more than 7 liters of fuel is available in the tank.

C) When more than 10 liters of fuel is available in the tank.

D) When more than 12 liters of fuel is available in the tank.

Question number 43. Which of the following is a feature of the fuel flow display on the Virus SW 80 Engine Cluster?

A) Displays fuel flow in gallons per hour.

B) Displays fuel flow in liters per hour.

C) Displays fuel flow in cubic meters per hour.

D) Displays fuel flow in milliliters per hour.

Question number 44. What is the minimum fuel quantity required for the fuel flow display to be available on the Virus SW 80 Engine Cluster?

A) 5 liters.

B) 7 liters.

C) 10 liters.

D) 12 liters.

Video : [21 - Communication System](21%20%20-%20%20%20Communication%20System)

Question number 1. What type of controls are available on the front panel of the X COM VHF 760 Transreceiver in the Virus SW 80?

A) Digital volume control.

B) Squelch control.

C) VOX intercom control.

D) All of the above.

Question number 2. How many memory channels does the X COM VHF 760 Transreceiver have?

A) 88.

B) 99.

C) 100.

D) 121.

Question number 3. What is the primary channel frequency for the VHF Guard Frequency on the X COM VHF 760 Transreceiver?

A) 118.5 MHz.

B) 119.5 MHz.

C) 120.5 MHz.

D) 121.5 MHz.

Question number 4. How many user-defined channels are available on the X COM VHF 760 Transreceiver?

A) 88.

B) 99.

C) 100.

D) 121.

Question number 5. What voltage levels trigger a low battery alert on the X COM VHF 760 Transreceiver?

A) Below 9.5 Volts DC.

B) Below 10.5 Volts DC.

C) Below 11.5 Volts DC.

D) Below 12.5 Volts DC.

Question number 6. What voltage levels trigger an over voltage alert on the X COM VHF 760 Transreceiver?

A) Above 13.5 Volts DC.

B) Above 14.5 Volts DC.

C) Above 15.5 Volts DC.

D) Above 16.5 Volts DC.

Video : [22 - Navigation System](22%20-%20%20Navigation%20System)

Question number 1. What is the screen size of the Garmin AERA 500 GPS?

A) 3.5 inches.

B) 4.3 inches.

C) 5.0 inches.

D) 6.0 inches.

Question number 2. What type of display does the Garmin AERA 500 GPS have?

A) Monochrome LCD.

B) Colour TFT with white backlight.

C) OLED.

D) E Ink.

Question number 3. How long does the lithium-ion battery of the Garmin AERA 500 GPS last?

A) Up to 3 hours.

B) Up to 4 hours.

C) Up to 5 hours.

D) Up to 6 hours.

Question number 4. What is the GPS refresh rate of the Garmin AERA 500 GPS?

A) 1 Hz.

B) 2 Hz.

C) 5 Hz.

D) 10 Hz.

Question number 5. What type of warnings are included in the Garmin AERA 500 GPS map display?

A) Speed limit warnings.

B) Terrain and obstacle warnings.

C) Fuel level warnings.

D) Altitude warnings.

Question number 6. How many waypoints can the flight plan mode of the Garmin AERA 500 GPS comprise?

A) 10 – 100 waypoints.

B) 20 – 200 waypoints.

C) 50 – 300 waypoints.

D) 100 – 400 waypoints.

Question number 7. What type of unit is the Garmin AERA 500 GPS described as?

A) Fragile and delicate.

B) Rugged and waterproof.

C) Lightweight and portable.

D) Heavy and bulky.

Question number 8. What feature does the Garmin AERA 500 GPS automatically adjust while navigating?

A) Altitude.

B) Speed.

C) Time zones.

D) Fuel consumption.

Video : [23 - Pitot Static System](23%20-%20Pitot%20Static%20System)

Question number 1. Where is the Pitot tube attached on the Virus SW 80?

A) Top side of the left-hand wing.

B) Bottom side of the right-hand wing.

C) Top side of the right-hand wing.

D) Bottom side of the left-hand wing.

Question number 2. Where do the Pitot lines lead in the Virus SW 80?

A) Through the fuselage to the tail.

B) Through the inside of the wing to the instrument panel.

C) Through the landing gear to the cockpit.

D) Through the engine compartment to the instrument panel.

Question number 3. What is the primary function of the Pitot tube in the Virus SW 80?

A) Measure fuel flow.

B) Measure airspeed.

C) Measure altitude.

D) Measure engine temperature.

Question number 4. Which wing is the Pitot tube attached to in the Virus SW 80?

A) Left-hand wing.

B) Right-hand wing.

C) Both wings.

D) Neither wing.

Question number 5. What does the Pitot Static System in the Virus SW 80 primarily measure?

A) Airspeed and altitude.

B) Fuel pressure and temperature.

C) Oil pressure and temperature.

D) Manifold pressure and voltage.

Chapter 2 - LIMITATIONS / PROHIBITIONS / RESTRICTIONS

Video : [24 - Manuever Limitations](24%20-%20Manuever%20Limitations)

Question number 1. At what altitude should power on/off stalls not be carried out in the Virus SW 80?

A) Below 1000 ft AGL.

B) Below 1500 ft AGL.

C) Below 2000 ft AGL.

D) Below 2500 ft AGL.

Question number 2. What is the entry speed for power on/off lazy eights in the Virus SW 80?

A) 90 Kts.

B) 100 Kts.

C) 110 Kts.

D) 120 Kts.

Question number 3. At what altitude should power on/off lazy eights not be carried out in the Virus SW 80?

A) Below 1000 ft AGL.

B) Below 1500 ft AGL.

C) Below 2000 ft AGL.

D) Below 2500 ft AGL.

Question number 4. What is the initial speed for steep turns in the Virus SW 80?

A) 90 Kts.

B) 100 Kts.

C) 110 Kts.

D) 120 Kts.

Question number 5. At what altitude should Chandelle maneuvers not be carried out in the Virus SW 80?

A) Below 300 ft AGL.

B) Below 400 ft AGL.

C) Below 500 ft AGL.

D) Below 600 ft AGL.

Question number 6. What is the entry speed for Chandelle maneuvers in the Virus SW 80?

A) 100 Kts.

B) 110 Kts.

C) 120 Kts.

D) 130 Kts.

Question number 7. At what altitude should spin initiation not be carried out in the Virus SW 80?

A) Below 1500 ft AGL.

B) Below 2000 ft AGL.

C) Below 2500 ft AGL.

D) Below 3000 ft AGL.

Question number 8. At what degree should recovery be initiated in an actual spinning maneuver in the Virus SW 80?

A) Maximum 90 degrees.

B) Maximum 180 degrees.

C) Maximum 270 degrees.

D) Maximum 360 degrees.

Question number 9. For what type of operations is the Virus SW 80 approved?

A) Night VFR operations.

B) Day VFR operations.

C) IFR operations.

D) All-weather operations.

Video : [25 - Prohibitions](25%20-%20Prohibitions)

Question number 1. Which of the following is prohibited for the Virus SW 80?

A) Flying with one door open.

B) Flying with both doors open.

C) Flying with windows open.

D) Flying with the canopy open.

Question number 2. In which weather condition is flying the Virus SW 80 prohibited?

A) Light rain.

B) Heavy rainfall.

C) Clear skies.

D) Overcast skies.

Question number 3. Which of the following conditions is prohibited for the Virus SW 80?

A) Flying in light turbulence.

B) Flying in thunderstorm activity.

C) Flying in mild winds.

D) Flying in clear weather.

Question number 4. What is the maximum outside air temperature (OAT) at which the Virus SW 80 can be flown?

A) 45 degrees Celsius.

B) 50 degrees Celsius.

C) 55 degrees Celsius.

D) 60 degrees Celsius.

Question number 5. What is the maximum alcohol content allowed in the fuel used for the Virus SW 80?

A) 5%

B) 10%

C) 15%

D) 20%

Question number 6. Which of the following maneuvers is prohibited for the Virus SW 80?

A) Steep turns.

B) Lazy eights.

C) Aerobatic maneuvers including full developed spin.

D) Chandelle maneuvers.

Question number 7. What is prohibited during takeoff and landing for the Virus SW 80?

A) Takeoff with flaps partially extended.

B) Takeoff with flaps fully retracted.

C) Landing with flaps partially extended.

D) Landing with flaps fully extended.

Question number 8. Which weather condition is prohibited for flying the Virus SW 80?

A) Light rain.

B) Blizzards.

C) Overcast skies.

D) Clear skies.

Question number 9. What type of flight conditions are prohibited for the Virus SW 80?

A) VFR (Visual Flight Rules) conditions.

B) IMC (Instrument Meteorological Conditions) / IFR (Instrument Flight Rules) conditions.

C) Daylight conditions.

D) Calm wind conditions.

Video : [26- Limitations / Restrictions / Warnings](https://youtu.be/0yrp3Joc-as)

Question number 1. What is the maximum wind speed for parking the Pipistrel Virus SW 80 outdoors without tie-down?

A) 10 Kts.

B) 15 Kts.

C) 20 Kts.

D) 25 Kts.

Question number 2. What is the maximum wind speed for parking the Pipistrel Virus SW 80 outdoors with tie-down?

A) 30 Kts.

B) 35 Kts.

C) 40 Kts.

D) 45 Kts.

Question number 3. Flying in side slip turbulence may result in:

A) Increased fuel consumption.

B) Non-precise fuel quantity indication.

C) Engine failure.

D) Improved fuel efficiency.

Question number 4. Soft grass runways tend to increase take-off performance data by:

A) 10%

B) 15%

C) 20%

D) 25%

Question number 5. Headwinds shorten take-off and landing length required by how many meters for every 3 Kts / 5 Kmph of increase in wind speed?

A) 6 meters.

B) 8 meters.

C) 10 meters.

D) 12 meters.

Question number 6. Tailwinds extend take-off and landing length required by how many meters for every 3 Kts / 5 Kmph of increase in wind speed?

A) 10-20 meters.

B) 15-25 meters.

C) 18-28 meters.

D) 20-30 meters.

Question number 7. Tailwinds affect take-off and landing performance by:

A) Less than headwinds.

B) The same as headwinds.

C) More than twice as much as headwinds.

D) Not at all.

Chapter 3 – Technical Specifications

Video : [27- Airframe](https://youtu.be/8LjQisZCaNw)

Question no 1. What is the wing span of the Pipistrel Virus SW 80?

A) 9.5 metres

B) 10.5 metres

C) 11.5 metres

D) 12.5 metres

Question no 2. What is the length of the Pipistrel Virus SW 80?

A) 5.5 metres

B) 6.5 metres

C) 7.5 metres

D) 8.5 metres

Question no 3. What is the height of the Pipistrel Virus SW 80?

A) 1.95 metres

B) 2.05 metres

C) 2.15 metres

D) 2.25 metres

Question no 4. What is the height of the Pipistrel Virus SW 80?

A) 1.95 metres

B) 2.05 metres

C) 2.15 metres

D) 2.25 metres

Question no 5. What is the vertical fin area of the Pipistrel Virus SW 80?

A) 0.90 Sq metres

B) 1.00 Sq metres

C) 1.10 Sq metres

D) 1.20 Sq metres

Question no 6. What is the aspect ratio of the Pipistrel Virus SW 80?

A) 10.8

B) 11.8

C) 12.8

D) 13.8

Question no 7. What is the angle of the positive flaps down in Position 1 for the Pipistrel Virus SW 80?

A) 10 degrees

B) 15 degrees

C) 20 degrees

D) 25 degrees

Question no 8. What is the angle of the positive flaps down in Position 2 for the Pipistrel Virus SW 80?

A) 15 degrees

B) 20 degrees

C) 25 degrees

D) 30 degrees

Question no 9. What are the center of gravity limits for the Pipistrel Virus SW 80 in terms of MAC?

A) 10% - 28%

B) 20% - 38%

C) 30% - 48%

D) 40% - 58%

Question no 10. What is the range of the center of gravity limits for the Pipistrel Virus SW 80 in millimeters backwards of datum?

A) 120mm – 268mm

B) 170mm – 318mm

C) 220mm – 368mm

D) 270mm – 418mm

Question no 11. What is the maximum take-off weight (MTOW) of the Pipistrel Virus SW 80?

A) 452.5 Kgs

B) 462.5 Kgs

C) 472.5 Kgs

D) 482.5 Kgs

Question no 12. What is the standard empty weight of the Pipistrel Virus SW 80?

A) 255 Kgs

B) 265 Kgs

C) 275 Kgs

D) 285 Kgs

Question no 13. What is the maximum useful load of the Pipistrel Virus SW 80?

A) 177.5 Kgs

B) 187.5 Kgs

C) 197.5 Kgs

D) 207.5 Kgs

Question no 14. What is the maximum baggage weight of the Pipistrel Virus SW 80?

A) 10 Kgs

B) 15 Kgs

C) 20 Kgs

D) 25 Kgs

Question no 15. What is the maximum load per seat for the Pipistrel Virus SW 80?

A) 100 Kgs

B) 110 Kgs

C) 120 Kgs

D) 130 Kgs

Question no 16. What is the minimum combined crew weight for the Pipistrel Virus SW 80?

A) 45 Kgs

B) 50 Kgs

C) 55 Kgs

D) 60 Kgs

Question no 17. What is the total fuel capacity of the Pipistrel Virus SW 80?

A) 45 Ltrs

B) 48 Ltrs

C) 50 Ltrs

D) 52 Ltrs

Question no 18. What is the usable fuel capacity of the Pipistrel Virus SW 80?

A) 45 Ltrs

B) 46 Ltrs

C) 47 Ltrs

D) 48 Ltrs

Question no 19. What is the oil capacity of the Pipistrel Virus SW 80?

A) 2 Ltrs

B) 3 Ltrs

C) 4 Ltrs

D) 5 Ltrs

Question no 20. What is the maximum positive 'G' load factor for the Pipistrel Virus SW 80?

A) +3 G

B) +4 G

C) +5 G

D) +6 G

Question no 21. What is the maximum negative 'G' load factor for the Pipistrel Virus SW 80?

A) -1 G

B) -2 G

C) -3 G

D) -4 G

Question no 22. What is the tested minimum safety factor for the Pipistrel Virus SW 80?

A) 1.675

B) 1.775

C) 1.875

D) 1.975

Video : [28 - Engine/Powerplant](https://youtu.be/AjVRFu8jzt8)

1. What type of engine does the Pipistrel Virus SW 80 use?

A) Rotax 912 A (80 HP)

B) Rotax 914 F (100 HP)

C) Lycoming O-235 (115 HP)

D) Continental O-200 (100 HP)

2. How many cylinders does the Rotax 912 A engine have?

A) 2

B) 3

C) 4

D) 6

3. What is the propeller type used in the Pipistrel Virus SW 80?

A) Variable Pitch

B) Fixed Pitch

C) Constant Speed

D) Feathering

4. What is the propeller type used in the Pipistrel Virus SW 80?

A) Variable Pitch

B) Fixed Pitch

C) Constant Speed

D) Feathering

5. What is the absolute ceiling at MTOW for the Pipistrel Virus SW 80?

A) 5000 metres / 16,400 feet

B) 5500 metres / 18,000 feet

C) 6000 metres / 19,700 feet

D) 6200 metres / 20,300 feet

6. What is the engine performance of the Pipistrel Virus SW 80 at 5500 RPM?

A) 50.0 KW (67 HP)

B) 55.0 KW (74 HP)

C) 58.0 KW (79 HP)

D) 60.0 KW (82 HP)

7. What is the engine performance of the Pipistrel Virus SW 80 at 5800 RPM?

A) 57.6 KW (77 HP)

B) 58.6 KW (78 HP)

C) 59.6 KW (81 HP)

D) 60.6 KW (83 HP)

8. For how long can the Pipistrel Virus SW 80 engine operate at 59.6 KW (81 HP) at 5800 RPM?

A) 3 minutes

B) 4 minutes

C) 5 minutes

D) 6 minutes

9. What is the torque of the Pipistrel Virus SW 80 engine at 4800 RPM?

A) 93 Nm (68.6 foot pounds)

B) 103 Nm (75.9 foot pounds)

C) 113 Nm (83.3 foot pounds)

D) 123 Nm (90.7 foot pounds)

Question no 10. What is the compression ratio of the Pipistrel Virus SW 80 engine?

A) 8:1

B) 9:1

C) 10:1

D) 11:1

11. What type of cooling system does the Pipistrel Virus SW 80 use?

A) Air cooled Cylinder Heads, Ram Air cooled Cylinders

B) Water cooled Cylinder Heads, Ram Air cooled Cylinders

C) Oil cooled Cylinder Heads, Ram Air cooled Cylinders

D) Water cooled Cylinder Heads, Oil cooled Cylinders

12. What type of lubrication system does the Pipistrel Virus SW 80 use?

A) Wet Sump Forced Lubrication

B) Dry Sump Forced Lubrication

C) Splash Lubrication

D) Pressure Lubrication

13. What type of ignition system does the Pipistrel Virus SW 80 use?

A) Single Breakerless Capacitor Discharge

B) Dual Breakerless Capacitor Discharge

C) Magneto Ignition

D) Distributor Ignition

14. What is the maximum coolant temperature for the Pipistrel Virus SW 80 engine?

A) 100 deg C

B) 110 deg C

C) 120 deg C

D) 130 deg C

15. What is the normal range for Exhaust Gas Temperature (EGT) in the Pipistrel Virus SW 80?

A) 600 deg C – 850 deg C

B) 650 deg C – 885 deg C

C) 700 deg C – 900 deg C

D) 750 deg C – 950 deg C

16. What is the maximum Exhaust Gas Temperature (EGT) for the Pipistrel Virus SW 80?

A) 850 deg C

B) 875 deg C

C) 900 deg C

D) 925 deg C

17. What is the maximum EGT difference allowed for the Pipistrel Virus SW 80?

A) 20 deg C

B) 25 deg C

C) 30 deg C

D) 35 deg C

18. What is the normal range for oil temperature in the Pipistrel Virus SW 80?

A) 70 deg C – 90 deg C

B) 80 deg C – 100 deg C

C) 90 deg C – 110 deg C

D) 100 deg C – 120 deg C

19. What is the maximum oil temperature for the Pipistrel Virus SW 80 engine?

A) 120 deg C

B) 130 deg C

C) 140 deg C

D) 150 deg C

20. What is the minimum oil temperature for the Pipistrel Virus SW 80 engine?

A) 40 deg C

B) 45 deg C

C) 50 deg C

D) 55 deg C

21. What is the minimum oil pressure for the Pipistrel Virus SW 80 engine?

A) 0.5 Bar (7.25 PSI)

B) 1.0 Bar (14.5 PSI)

C) 1.5 Bar (21.75 PSI)

D) 2.0 Bar (29.0 PSI)

22. What is the maximum oil pressure for the Pipistrel Virus SW 80 engine?

A) 5.0 Bar (72.5 PSI)

B) 5.5 Bar (79.75 PSI)

C) 6.0 Bar (87.0 PSI)

D) 6.5 Bar (94.25 PSI)

23. What is the maximum engine RPM on the ground for the Pipistrel Virus SW 80?

A) 5000 RPM

B) 5200 RPM

C) 5400 RPM

D) 5500 RPM

24. What is the maximum permitted RPM for the Pipistrel Virus SW 80 engine?

A) 5600 RPM

B) 5700 RPM

C) 5800 RPM

D) 5900 RPM

25. At what RPM is the magneto drop check performed for the Pipistrel Virus SW 80?

A) 3500 RPM

B) 4000 RPM

C) 4500 RPM

D) 5000 RPM

26. What is the maximum single magneto drop allowed for the Pipistrel Virus SW 80?

A) 200

B) 250

C) 300

D) 350

27. What is the maximum difference in magneto drop allowed for the Pipistrel Virus SW 80?

A) 100

B) 115

C) 130

D) 145

28. What is the recommended fuel for the Pipistrel Virus SW 80?

A) Unleaded Regular Grade 87

B) Unleaded Super Grade 93 or above Max 10% alcohol

C) Leaded Aviation Fuel 100LL

D) Diesel Fuel

Video : [29 - Performance](https://youtu.be/nhOyWgXGza0)

1. What is the take-off ground roll at MTOW for the Pipistrel Virus SW 80?

A) 120 metres

B) 130 metres

C) 140 metres

D) 150 metres

2. What is the take-off ground roll over a 50 ft obstacle for the Pipistrel Virus SW 80?

A) 200 metres

B) 215 metres

C) 225 metres

D) 235 metres

3. What is the best climb speed for the Pipistrel Virus SW 80?

A) 66 Knots

B) 76 Knots

C) 86 Knots

D) 96 Knots

4. What is the best climb rate at MTOW for the Pipistrel Virus SW 80 at sea level?

A) 1020 feet per minute

B) 1120 feet per minute

C) 1220 feet per minute

D) 1320 feet per minute

5. What is the best climb rate at 100 Kts for the Pipistrel Virus SW 80?

A) 600 feet per minute

B) 700 feet per minute

C) 800 feet per minute

D) 900 feet per minute

6. What is the cruise air speed for the Pipistrel Virus SW 80?

A) 102 Kts

B) 112 Kts

C) 122 Kts

D) 132 Kts

7. What is the sink rate at 50 Kts for the Pipistrel Virus SW 80 with full flaps and power idle?

A) 340 feet per minute

B) 390 feet per minute

C) 440 feet per minute

D) 490 feet per minute

8. What is the minimum sink rate speed for the Pipistrel Virus SW 80?

A) 48 Knots

B) 58 Knots

C) 68 Knots

D) 78 Knots

9. What is the minimum sink rate with flaps at 15° for the Pipistrel Virus SW 80?

A) 360 feet per minute

B) 410 feet per minute

C) 460 feet per minute

D) 510 feet per minute

10. What is the best L/D ratio speed for the Pipistrel Virus SW 80?

A) 54 Knots

B) 64 Knots

C) 74 Knots

D) 84 Knots

11. What is the best L/D ratio with flaps at 15° for the Pipistrel Virus SW 80?

A) 15:1

B) 16:1

C) 17:1

D) 18:1

12. What is the final approach speed with flaps at 25° for the Pipistrel Virus SW 80?

A) 40 Knots

B) 45 Knots

C) 50 Knots

D) 55 Knots

13. What is the landing roll at MTOW (SL) for the Pipistrel Virus SW 80?

A) 310 feet

B) 360 feet

C) 410 feet

D) 460 feet

Video : [30 - Airspeeds](https://youtu.be/sLnVXqbMC8k)

1. What is the stall speed with clean configuration (flaps up) for the Pipistrel Virus SW 80?

A) 40 Knots

B) 43 Knots

C) 46 Knots

D) 49 Knots

2. What is the stall speed with flaps at 25° for the Pipistrel Virus SW 80?

A) 30 Knots

B) 35 Knots

C) 40 Knots

D) 45 Knots

3. What is the maximum speed with flaps at 15° for the Pipistrel Virus SW 80?

A) 60 Knots

B) 65 Knots

C) 70 Knots

D) 75 Knots

4. What is the maximum speed with flaps at 25° for the Pipistrel Virus SW 80?

A) 50 Knots

B) 55 Knots

C) 60 Knots

D) 65 Knots

5. What is the maximum design maneuvering speed (VA) for the Pipistrel Virus SW 80?

A) 76 Knots

B) 81 Knots

C) 86 Knots

D) 91 Knots

6. What is the maximum speed (VNE) for the Pipistrel Virus SW 80?

A) 125 Knots

B) 130 Knots

C) 135 Knots

D) 140 Knots

7. What is the normal operating speed (VNO) for the Pipistrel Virus SW 80?

A) 98 Knots

B) 103 Knots

C) 108 Knots

D) 113 Knots

Video :[31 - ASI Markings](https://youtu.be/hdlBbJeVUZo)

1. What is the range of the white band on the ASI for the Pipistrel Virus SW 80?

A) 30 – 65 Knots

B) 35 – 70 Knots

C) 40 – 75 Knots

D) 45 – 80 Knots

2. What is the range of the white band on the ASI in Kmph for the Pipistrel Virus SW 80?

A) 55 – 120 Kmph

B) 60 – 125 Kmph

C) 65 – 130 Kmph

D) 70 – 135 Kmph

3. What does the white band on the ASI represent for the Pipistrel Virus SW 80?

A) Normal Operating Range

B) Full Flap Operating Range

C) Maneuvering Speed Range

D) Maximum Speed Range

4. What is the lower limit of the white band on the ASI for the Pipistrel Virus SW 80?

A) Maximum weight Vs1

B) Maximum weight Vso

C) Maximum weight Vfe

D) Maximum weight Vne

5.What is the upper limit of the white band on the ASI for the Pipistrel Virus SW 80?

A) Maximum speed with Flaps 1 (10°) Position

B) Maximum speed with Flaps 1 (15°) Position

C) Maximum speed with Flaps 1 (20°) Position

D) Maximum speed with Flaps 1 (25°) Position

6. What is the range of the green band on the ASI for the Pipistrel Virus SW 80?

A) 38 – 103 Knots

B) 40 – 105 Knots

C) 43 – 108 Knots

D) 45 – 110 Knots

7. What is the range of the green band on the ASI in Kmph for the Pipistrel Virus SW 80?

A) 73 – 191 Kmph

B) 78 – 196 Kmph

C) 83 – 201 Kmph

D) 88 – 206 Kmph

8. What does the green band on the ASI represent for the Pipistrel Virus SW 80?

A) Full Flap Operating Range

B) Normal Operating Range

C) Maneuvering Speed Range

D) Maximum Speed Range

9. What is the lower limit of the green band on the ASI for the Pipistrel Virus SW 80?

A) Maximum weight Vs1 at C of G max forward & flaps fully retracted

B) Maximum weight Vso at C of G max forward & flaps fully retracted

C) Maximum weight Vfe at C of G max forward & flaps fully retracted

D) Maximum weight Vne at C of G max forward & flaps fully retracted

10. What is the upper limit of the green band on the ASI for the Pipistrel Virus SW 80?

A) Maximum structural cruising speed (in calm air)

B) Maximum structural cruising speed (in turbulent air)

C) Maximum speed with Flaps 1 (15°) Position

D) Maximum speed with Flaps 2 (25°) Position

11. What is the range of the yellow band on the ASI for the Pipistrel Virus SW 80?

A) 98 – 125 Knots

B) 103 – 130 Knots

C) 108 – 135 Knots

D) 113 – 140 Knots

12. What does the yellow band on the ASI represent for the Pipistrel Virus SW 80?

A) Normal Operating Range

B) Full Flap Operating Range

C) Maneuvering Speed Range (with caution) in calm air only

D) Maximum Speed Range

13. What is the red band on the ASI for the Pipistrel Virus SW 80?

A) 125 Knots

B) 130 Knots

C) 135 Knots

D) 140 Knots

14. What does the red band on the ASI represent for the Pipistrel Virus SW 80?

A) Normal Operating Range

B) Full Flap Operating Range

C) Maneuvering Speed Range

D) Maximum Speed for all operations (VNE)

Video : [32 - Engine Instrument Markings](https://youtu.be/V_hSRfRSZ3I)

1. What is the minimum RPM (Red Line) for the Pipistrel Virus SW 80 tachometer?

A) 1400

B) 1500

C) 1600

D) 1700

2. What is the normal operating RPM range (Green) for the Pipistrel Virus SW 80 tachometer?

A) 1500 – 5400

B) 1600 – 5500

C) 1700 – 5600

D) 1800 – 5700

3. What is the caution range (Yellow) for the Pipistrel Virus SW 80 tachometer?

A) 5400 – 5700

B) 5500 – 5800

C) 5600 – 5900

D) 5700 – 6000

4. What is the maximum RPM (Red Line) for the Pipistrel Virus SW 80 tachometer?

A) 5600

B) 5700

C) 5800

D) 5900

5. What is the minimum oil temperature (Red) for the Pipistrel Virus SW 80?

A) 40° C

B) 45° C

C) 50° C

D) 55° C

6. What is the normal oil temperature range (Green) for the Pipistrel Virus SW 80?

A) 80° C – 100° C

B) 85° C – 105° C

C) 90° C – 110° C

D) 95° C – 115° C

7. What is the caution range (Yellow) for the oil temperature in the Pipistrel Virus SW 80?

A) 100° C – 130° C

B) 105° C – 135° C

C) 110° C – 140° C

D) 115° C – 145° C

8. What is the maximum oil temperature (Red) for the Pipistrel Virus SW 80?

A) 130° C

B) 135° C

C) 140° C

D) 145° C

9. What is the caution range (Yellow) for the coolant temperature in the Pipistrel Virus SW 80?

A) 100° C – 110° C

B) 105° C – 115° C

C) 110° C – 120° C

D) 115° C – 125° C

10. What is the maximum coolant temperature (Red) for the Pipistrel Virus SW 80?

A) 110° C

B) 115° C

C) 120° C

D) 125° C

11. What is the minimum oil pressure (Red) for the Pipistrel Virus SW 80?

A) 0.5 Bar (7.25 PSI)

B) 1.0 Bar (14.5 PSI)

C) 1.5 Bar (21.75 PSI)

D) 2.0 Bar (29.0 PSI)

12. What is the maximum oil pressure for the Pipistrel Virus SW 80?

A) 5.0 Bar (72.5 PSI)

B) 5.5 Bar (79.75 PSI)

C) 6.0 Bar (87.0 PSI)

D) 6.5 Bar (94.25 PSI)

13. What type of battery does the Pipistrel Virus SW 80 use?

A) Lead-Acid

B) Nickel-Cadmium

C) Lithium-Ion

D) Lithium Phosphate

14. What is the nominal voltage and amp-hour rating of the alternator in the Pipistrel Virus SW 80?

A) 12 Volts, 6.5 Amp Hour

B) 12 Volts, 7.0 Amp Hour

C) 12 Volts, 7.5 Amp Hour

D) 12 Volts, 8.0 Amp Hour

15. What is the power output of the alternator at 5500 RPM in the Pipistrel Virus SW 80?

A) 200 W

B) 225 W

C) 250 W

D) 275 W

16. Which of the following is NOT a function of the electrical system in the Pipistrel Virus SW 80?

A) Charges battery

B) Provides power to all appliances/instruments

C) Provides supply to Nav/Strobe Lights, Cockpit Lights, Radio, GPS, Instruments

D) Provides hydraulic power

Video : [33 - Checks & Procedures / Cockpit Preflight Inspection](https://youtu.be/xo_1-d5b4Xo)

1. What should be carried out before proceeding to the aircraft?

A) Pre-flight briefing covering the complete sortie profile

B) Post-flight briefing covering the complete sortie profile

C) Pre-flight briefing covering only the take-off

D) Post-flight briefing covering only the landing

2. What must be completed to ensure all participants are fully fit to fly?

A) Pre-flight meals only

B) Medical check only

C) Pre-flight meals and medical check

D) Post-flight meals and medical check

3. What document must be filled in and signed before proceeding to the aircraft?

A) Flight Log Book

B) Authorisation Book

C) Maintenance Log Book

D) Navigation Log Book

4. What form must be completed, closed, and signed before proceeding to the aircraft?

A) Form – 600

B) Form – 700

C) Form – 800

D) Form – 900

5. What should be checked inside the cockpit during the preflight inspection?

A) Instruments and instrument panel for condition

B) Fuel quantity only

C) Safety belts only

D) Radio wiring only

6. What should be checked regarding the fuses during the cockpit preflight inspection?

A) Fuses should be removed

B) Fuses should be checked

C) Fuses should be replaced

D) Fuses should be ignored

7. What should be checked regarding the battery disconnection ring during the cockpit preflight inspection?

A) The battery disconnection ring should be removed.

B) The battery disconnection ring should be in its slot.

C) The battery disconnection ring should be replaced.

D) The battery disconnection ring should be ignored.

8.After checking the battery disconnection ring in its slot, what should be verified next during the cockpit preflight inspection?

A) Ensure all switches are turned on.

B) Ensure all switches are turned off.

C) Ensure some switches are turned on.

D) Ensure some switches are turned off.

9. What position should the Master Switch be in to check the Generator Fail light?

A) Key in full left position

B) Key in full right position

C) Key in middle position

D) Key in off position

10. After turning the Master Switch on, what should be checked next during the cockpit preflight inspection?

A) Check the fuel quantity.

B) Check the Gene Fail light is ON.

C) Check all instruments set to initial setting.

D) Check the flaps for full deflection.

11. What should be checked regarding the Pitot static lines and cables during the cockpit preflight inspection?

A) They should be disconnected

B) They should be correctly connected and in position

C) They should be replaced

D) They should be ignored

12. What should be checked regarding the main wing spar during the cockpit preflight inspection?

A) Connection, bolts, and nuts in position

B) Only the bolts

C) Only the nuts

D) Only the connection

13. What should be checked regarding the safety belts during the cockpit preflight inspection?

A) Safety belts should be removed

B) Safety belts should be undamaged

C) Safety belts should be replaced

D) Safety belts should be ignored

14. What should be checked regarding the fuel quantity during the cockpit preflight inspection?

A) Fuel quantity should be ignored

B) Fuel quantity should be checked and sufficient for sortie

C) Fuel quantity should be checked and insufficient for sortie

D) Fuel quantity should be replaced

15. What should be done after pressing the Fuel CB during the cockpit preflight inspection?

A) Check the fuel quantity.

B) Check the fuel not leaking from the gascolator.

C) Check the safety belts.

D) Check the flaps for full deflection.

16. What should be checked regarding the elevator trim during the cockpit preflight inspection?

A) Elevator trim should be set to maximum

B) Elevator trim should be set to minimum

C) Elevator trim should be set to neutral

D) Elevator trim should be ignored

17. What should be checked regarding the flaps during the cockpit preflight inspection?

A) Flaps should be set to full deflection and back to ‘0’ position

B) Flaps should be set to full deflection only

C) Flaps should be set to ‘0’ position only

D) Flaps should be ignored

18. What should be checked regarding the radio during the cockpit preflight inspection?

A) Ensure the radio is turned off.

B) Ensure the radio is disconnected.

C) Ensure the radio wiring is intact.

D) Ensure the radio is replaced.

19. What should be checked regarding the emergency parachute release handle during the cockpit preflight inspection?

A) Safety pin should be removed

B) Safety pin should be ‘IN’

C) Safety pin should be replaced

D) Safety pin should be ignored

Video : [34 - Preflight External Checks](https://youtu.be/QeVFZMkcK7Q)

No Questions (Must Learn All these Checkups)

Video :[35 - Engine Cowling](df)

1. What should be checked for the engine cowling?

A) Fasteners and screws in place, cowling undamaged

B) Only fasteners in place

C) Only screws in place

D) None of the above

2. What should be ensured for the spinner dome?

A) No mechanical damage, bolts & nuts in place

B) Only bolts in place

C) Only nuts in place

D) No mechanical damage, bolts & nuts missing

3. What should be checked for the propeller?

A) Any damage/cracks, clean, bolts & nuts secure

B) Only damage

C) Only cracks

D) Only cleanliness

4. What should be checked for the nose undercarriage?

A) Any mechanical damage, hydraulic line secure, no leaks

B) Only mechanical damage

C) Only hydraulic line secure

D) Only leaks

5. What should be checked for the nose tyre?

A) Cuts, cracks, and creep

B) Only cuts

C) Only cracks

D) Only creep

6. What should be checked on the RH side of the engine cowling?

A) Coolant level minimum halfway to top through panel, exhaust pipes free of cracks

B) Only coolant level

C) Only exhaust pipes

D) None of the above

7. What should be checked for the wing leading edge?

A) Surface condition for dents, cracks or separation, cleanliness, pitot tube firmly attached, no damage, no block

B) Only dents

C) Only cracks

D) Only cleanliness

8. What should be checked for the wing tip?

A) Surface condition of tip, Nav/strobe lights for condition, wings for play

B) Only surface condition

C) Only Nav/strobe lights

D) Only wings for play

9. What should be checked for the wing trailing edge?

A) Any damage, Flaperon movement, vertical or horizontal play

B) Only damage

C) Only Flaperon movement

D) Only vertical play

10. What should be checked for the undercarriage (starboard)?

A) Any mechanical damage, hydraulic pipes for condition/leaks, tyre for cuts, pressure, and creep

B) Only mechanical damage

C) Only hydraulic pipes

D) Only tyre

11. What should be checked for the parachute self-adhesive tape?

A) Position and separation

B) Position and damage

C) Separation and damage

D) Position, separation, and damage

12. What should be checked for the tail boom?

A) Free of damage

B) Free of cracks

C) Free of damage and cracks

D) Free of separation

13. What should be checked for the horizontal tail surface?

A) Cracks, hinges for play, central securing screw fastened and secure

B) Only cracks

C) Only hinges for play

D) Only central securing screw

14. What should be ensured for the elevator surface?

A) Smoothness, free movement up & down, no sideward play

B) Only smoothness

C) Only free movement up & down

D) Only no sideward play

15. What should be checked for the vertical tail surface?

A) Cracks, hinges for play, rudder cable ends intact & in position

B) Only cracks

C) Only hinges for play

D) Only rudder cable ends

16. What should be ensured for the fuel tank cap?

A) Secure

B) Clean

C) Fastened

D) Intact

17. What should be ensured for the antenna?

A) Firmly attached

B) Clean

C) Secure

D) Intact

18. What should be checked for the undercarriage (port)?

A) Mechanical damage, hydraulic pipes for condition/leaks, tyre for cuts, pressure, and creep

B) Only mechanical damage

C) Only hydraulic pipes

D) Only tyre