

2024 A109S Trekker



Note: Leonardo list the specification in both VFR and IFR configurations, this aircraft is confirmed as Single Pilot IFR with 4 axis auto pilot

1. AW109 TREKKER SINGLE PILOT VFR STANDARD AIRCRAFT

1.1. Airframe

- Aluminium alloy and bonded panel fuselage
- Semi-monocoque aluminium alloy tail boom
- New reinforced skid type landing gear
- Two (2) hinged jettisonable crew doors (LH and RH)
- Two (2) sliding passenger doors (LH and RH), 1.40 m opening, with jettisonable windows
- Acrylic transparent windshield and side windows
- Acrylic transparent overhead windows
- Quick removable tail rotor drive shaft cover
- Separate baggage compartment with hinged door
- Removable fairing and cowlings, for complete accessibility to the controls and drive components
- Quick opening hinged inspection doors, to allow visual check of engine oil levels and maintenance inspection points
- Grounding points
- Jacking and hoisting points



1.2. Rotors and Controls

- Titanium main rotor hub, corrosion protected, fully articulated with four (4) composite grips, four (4) elastomeric bearings, four (4) individually interchangeable composite material blades, swept tips, and dampers
- Steel tail rotor hub, corrosion protected, semi-rigid delta hinged type, with two composite material blades, individually interchangeable
- Cyclic and collective controls powered by two (2) hydraulic systems
- Hydraulically powered anti-torque system
- Adjustable friction devices on cyclic and collective system
- Force trim and artificial feel system
- Adjustable directional control pedals
- Flapping and droop restraint mechanism

1.3. Power Plant and Fuel System

- Two (2) Pratt & Whitney Canada PW207C turbo-shaft engines
- Two (2) independent electronic control systems (FADEC) with normal emergency and training operation modes and auto-start
- Two (2) engine mounted fuel pump and filter assembly
- Two (2) engine mounted oil pump and filter assembly
- Two (2) engine mounted fuel control and governor
- Lubrication and cooling system
- Two (2) engine oil chip detectors
- Engine control panel
- Two (2) independent fuel systems with cross-feeding valve and control panel
- 3-cell crash-resistant fuel system (575 I 152 USgal)
- Two (2) submerged fuel boost pumps
- Airframe mounted easy access fuel filter
- RH refuelling point
- Ground fuel drains



1.4. Transmission / Drive System and Hydraulic System

- 960 shp for take-off and 900 shp continuous operation main transmission
- 3-stage transmission
- Two (2) free wheeling units
- Dual independent, redundant hydraulic systems
- Two (2) transmission mounted hydraulic pumps with separate reservoir
- Internal dry sump transmission lubrication with pressure and scavenge pump and oil filter
- Two (2) transmission oil chip detectors
- Single stage, bevel gear T/R 90° gear box including oil level sight glass and chip detector
- Transmission cooling and lubrication system
- Transmission shafts

1.5. Electrical System

- 24 V DC 33 Ah nickel-cadmium battery with temperature probe
- Two (2) 200 A self-cooled starter generators
- Two (2) voltage regulators
- Battery relay
- Two (2) interconnecting bus relays
- External power relay
- Distribution buses (one [1] battery, two [2] essential, two [2] emergency, two [2] main, two [2] auxiliary)
- External power receptacle
- Position lights (NVG friendly green, red, white)
- Taxing light (one [1] RH) and landing light (one [1] LH)
- Two (2) anti-collision lights (NVG friendly)
- Two (2) cockpit utility lights
- Instrument lights with dimming switch
- Radio master switch with ground function



1.6. Single Pilot VFR Avionic Package

- Two 6" x 8" display units providing a Primary Flight Display (PFD) and a Multifunction Display (MFD) and integrating:
 - Synthetic Vision System (SVS)
 - Highway In The Sky (HITS)
 - Helicopter Terrain Awareness and Warning System (HTAWS)
 - Flight Management System (FMS)
 - Radio tuning controls
- Dual Data Acquisition Unit (DAU)
- Dual Air Data Computer and Attitude Heading Reference System (ADAHRS)
- VHF/AM
- VOR/ILS
- GPS
- Mode-S & ADS-B Out Transponder
- Pilot Intercommunication System (ICS)
- Magnetic Direction indicator

1.7. Systems Data (on displays)

- Dual Inter turbine gas temperature indicator (ITT°C)
- Dual Engine torque indicator (TQ%)
- Dual Compressor speed indicator (N1%)
- Dual Turbine speed indicator (N2%)
- Rotor speed indicator (NR%)
- Dual Transmission oil pressure (PSI) and temperature (°C) indicator
- Dual Engine oil pressure (PSI) and temperature (°C) indicator
- Dual Fuel pressure (PSI) and fuel quantity (kg) indicator
- Dual hydraulic pressure system indicators (PSI)
- Outside air temperature indicator (°C)
- Dual DC voltmeter (VDC)
- Dual DC ammeter (Amp)



1.8. Warning/Caution Advisory and Maintenance System

- Master warning lights
- Master caution lights
- Warning, caution and advisory messages
- Aural alerts
- Engines fire detection system

1.9. Interior Arrangement

- H10-13H David Clark headsets (pilot and co-pilot)
- Crash-resistant pilot seat, fore and aft adjustable, with lap belts and headrest
- Shoulder harness with inertial reels (pilot)
- Aluminium alloy honeycomb reinforced floor with anti-skid finishing
- Ventilation ram air inlets
- Anti-reflection instrument panel
- Primer finished cabin walls
- Portable fire extinguisher

1.10. Exterior finishing

- Finishing in accordance with manufacturer specification
- Primer exterior painting

1.11. Painting

- Standard painting and finishing
 - Up to 4 colours from LHD selection
 - painting scheme and finishing from LHD selection
 - Registration marks and logos



1.12. Premium Equipment

- Crash-resistant co-pilot seat, fore and aft adjustable, with lap belts and headrest
- Shoulder harness with inertial reels (co-pilot)
- AC power supply system (two [2] inverters)
- AFCS 3-axis duplex SP-711 Honeywell
- Radar altimeter
- Doors key lock
- Airframe hourmeter
- Baggage compartment lights
- Crew open door actuators
- Two (2) engine compartment fire extinguishers
- Fuel cap with key-lock
- Pulsed chip detector In lieu of quick disconnecting chip detectors.
- 450 W Retractable/rotating landing light Nose mounted.
- Reinforced windshield
- Baggage compartment extension (1.9 m)
- Bleed air heater
- Passenger foot step (RH)

1.13. Miscellaneous / Ground Equipment

- Air intake/exhaust covers
- Ground tools kit (including tow bar, ground wheels, lifting tool)
- Pitot tubes covers
- Rotorcraft Flight Manual (RFM) (hard copy) and technical publications (soft copy)
- Tie-down fittings (main rotor retention straps)



2. PROPOSED CONFIGURATION

2.1. Interior Equipment - Cabin

Executive interior - 6 places

- VIP Passenger Cabin, including:
 - Soundproofing
 - Liners leather or leatherette covered
 - Cabin loudspeakers (Qty. 2)
 - Reading lights, advisory lights, floor courtesy lights
 - Upper and lower air vents
 - VIP Cabin finishing
- VIP Cockpit package, including:
 - Interseat console tray with 12 V power supply
 - Multipurpose holder (with space provision for fire extinguisher)
 - Door pockets (RH and LH)
 - Headset hooks (Qty 2)
 - Cyclic and collective leather gators
 - Curtains in cockpit on upper windows
 - VIP Cockpit finishing
- Three (3) crashworthy fwd facing seats (aft bench) covered with leather, with foldable armrest
- Three (3) crashworthy aft facing seats (central bench) covered with leather, with see-through modification and with foldable armrest
- 4-point shoulder harness with inertial reels and safety belts for all passenger seats
- Cabin double layer acrylic windows (azure coloured)
- Headset Bose ANR type (Qty 6)
- Floor carpeting
- Coat hooks in passengers cabin (Qty. 4)
- Single central drawer Under central bench
- USB charger at central bench (LH)



2.2. Avionics Equipment

Dual Pilot IFR package (in addition to Single Pilot VFR STD configuration)

- Dual controls
- Co-Pilot large colour Primary Flight Display (PFD) embedding:
 - Synthetic Vision System (SVS)
 - Highway In The Sky (HITS)
 - Helicopter Terrain Awareness and Warning System (HTAWS)
 - Flight Management System (FMS)
 - Radio tuning controls
- 2nd VHF/AM
- 2nd VOR/ILS
- 2nd GPS
- DME
- Marker beacon
- Electronic Standby Indicator
- Co-Pilot Intercommunication System (ICS)
- Dual Master warning lights
- Dual Master caution lights
- 2nd Magnetic Compass indicator
- Digital clock
- Flight Director
- 4-axis AFCS in lieu of 3-axis duplex SP-711 Honeywell
- Emergency Locator Transmitter
- Traffic Advisory System TAS-620 Avydine Or equivalent model



2.3. Utility Equipment

- Air conditioning ECU
- First aid kit
- Baggage compartment extension (2.3 m)
- Rotor brake
- Windshield wipers (pilot and co-pilot) with wiper switch on cyclic grips
- 213 USgal crash-resistant fuel system In lieu of 152 USgal.
- Strobe lights on horizontal stabilizer
- Long Step Bar (LH)
- Long Step Bar (RH) in lieu of standard passenger foot step (RH)

2.4. Finishing - Painting

- Customized painting and finishing
 - Customized colours
 - Customized painting scheme and finishing
 - Registration marks and logo

