



AIRCRAFT SPECIFICATION

2018 Leonardo AW109 Trekker Helicopter Specifications



General Information

The 2018 Leonardo AW109 Trekker Helicopter, is a state-of-the-art, twin-engine light utility helicopter. It is currently registered as TBD and has accrued a total flight time of 170 hours since new (SNEW). The helicopter is powered by PW207C engines, with serial numbers PCE-BH0903 and PCE-BH0889.

California Aviation Services, Inc
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General Characteristics

- Type: Twin-engine light utility helicopter
- Crew: 1–2 (single-pilot VFR standard; dual-pilot IFR optional)
- Passenger Capacity: Up to 6 passengers
- Airframe: Constructed with an aluminum alloy fuselage featuring bonded panels, a semi-monocoque aluminum alloy tail boom, and reinforced skid-type landing gear. The aircraft is equipped with hinged crew doors on both left and right sides, sliding passenger doors with jettisonable windows, and a separate baggage compartment with a hinged door.

Rotor System

The AW109 Trekker's main rotor system features a titanium, fully articulated hub with four composite blades that have swept tips. The blades are fitted with elastomeric bearings and dampers, and each grip can be replaced individually. The tail rotor has a steel, semi-rigid delta-hinged hub with two composite blades, which are also individually interchangeable.

Controls

- Dual independent hydraulic systems
- Force trim and artificial feel for enhanced flying comfort
- Adjustable friction devices on cyclic and collective controls
- Adjustable directional pedals
- Flapping and droop restraint mechanism

Powerplant and Fuel System

- Engines: Two Pratt & Whitney Canada PW207C turboshaft engines
- Engine Control: Dual FADEC with auto-start, supporting normal, emergency, and training modes
- Integrated Assemblies: Engine-mounted fuel pump/filter and oil pump/filter for each engine
- Lubrication: Engine lubrication and cooling, equipped with two oil chip detectors
- Fuel Architecture: Dual independent systems with cross-feed capability, submerged boost pumps, airframe-mounted fuel filter, right-hand refueling point, and ground fuel drains
- Fuel Capacity: 177 US gallons, crash-resistant three-cell fuel system (upgraded from 152 US gallons)

Transmission, Drive, and Hydraulics

- Main Transmission: Rated at 960 shp for takeoff and 900 shp continuous
- Design: Three-stage transmission with dual freewheeling units



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- Hydraulic Systems: Dual independent, redundant systems with transmission-mounted pumps and separate reservoir
- Cooling and Lubrication: Internal dry sump with pressure/scavenge pumps and oil filter, transmission oil chip detectors (two units)
- Tail Rotor Gearbox: Single-stage 90° bevel gearbox with sight glass and chip detector
- Transmission Shafts: Included in the configuration

Electrical System

- Battery: 24 V DC, 33 Ah Ni-Cd battery with temperature probe
- Generators: Two 200 A self-cooled starter-generators
- Power Control: Two voltage regulators, battery and interconnecting bus relays, external power relay and receptacle
- Buses: One battery, two essential, two emergency, two main, and two auxiliary buses
- Exterior Lighting: NVG-friendly position lights (green/red/white), two anti-collision lights, right-hand taxi and left-hand landing lights
- Cockpit Lighting: Two utility lights and instrument lights with dimming capability
- Radio Master: Equipped with ground function



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Avionics

- AFCS 3-axis duplex SP-711 Honeywell
- Radar altimeter

Single Pilot VFR Standard Package

- Two 6" x 8" displays for Primary Flight Display (PFD) and Multi-Function Display (MFD) with Synthetic Vision System (SVS), Highway in the Sky (HITS), Helicopter Terrain Awareness and Warning System (HTAWS), Flight Management System (FMS), and radio tuning
- Dual Data Acquisition Units (DAU) and dual Air Data Attitude Heading Reference Systems (ADAHRS)
- Navigation and Communication: VHF/AM, VOR/ILS, GPS, Mode-S transponder
- Pilot Intercom System (ICS) and magnetic direction indicator

Upgraded – Dual Pilot IFR Avionic Package

- Dual controls for both pilot and co-pilot
- Co-pilot PFD with SVS, HITS, HTAWS, FMS, and radio tuning
- Additional radios: Second VHF/AM, second VOR/ILS, and second GPS
- Navigation Aids: Automatic Direction Finder (ADF), Distance Measuring Equipment (DME), Marker Beacon
- Flight Instrumentation: Flight Director, Electronic Standby Indicator, second magnetic compass, and digital clock
- Co-pilot Intercom System (ICS)





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Systems Data Display

- Engine parameters: Dual Inter-Turbine Temperature (ITT in °C), torque (TQ%), N1 (compressor %), N2 (turbine %)
- Rotor speed (NR %)
- Transmission: Oil pressure (PSI) and temperature (°C)
- Engine oil: Pressure (PSI) and temperature (°C)
- Fuel: Pressure (PSI) and quantity (kg)
- Hydraulic: Dual system pressure (PSI)
- Electrical: Dual DC voltmeter (VDC) and ammeter (Amp)
- Environmental: Outside air temperature (°C)

Safety and Warning Systems

- Master warning and master caution lights
- Aural alerts and warning/caution/advisory messages
- Engine fire detection and two engine compartment extinguishers
- Pulsed chip detectors for monitoring
- Emergency Locator Transmitter (ELT) installed

Interior and Cabin

Cockpit

- Crash-resistant pilot and co-pilot seats, adjustable fore/aft, equipped with lap belts and headrests
- Shoulder harnesses with inertial reels for both pilot and co-pilot
- Standard cockpit interior with anti-reflection instrument panel
- Portable Fire Extinguisher



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(Customize Corporate Seating Available)



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Passenger Cabin

- Passenger intercommunication system and two cabin loudspeakers
- Reading and emergency lights
- Upper and lower air vents, along with ventilation ram air inlets
- Acrylic windshield and side/overhead windows

Environmental and Utility Equipment

- Air conditioning ECU
- Installed windshield wiper and rotor brake
- Provision for external hoist with a capacity of 272 kg (600 lb)

