



**2013 Leonardo AW109 GrandNew | #22297 | N520SM**



## TOTAL HOURS

720 Hours Since New

## ENGINES

Pratt & Whitney PW 207C

#	TSN
ENG ①	720
ENG ②	720

## HIGHLIGHTS

Aerolite EMS interior

Hoist

Aux Fuel

Cockpit Central Display, Weather Radar

Multi-band Airborne FM transceiver

Fixed parts CV-FDR, SX16 searchlight, loudspeaker, EVS

## STANDARD EQUIPMENT

Airframe hourmeter

Baggage compartment extension (1.9 m)

Baggage compartment lights

Crash-resistant co-pilot seat, fore and aft adjustable, with lap belts and headrest

Crew open door actuators

First aid kit

Fuel drain electrical valves

Internal structural provisions for utility equipment

Portable fire extinguisher

Shoulder harness with inertial reels (pilot and co-pilot)

Tail boom strake

## ADDITIONAL EQUIPMENT

Active Noise Reduction (ANR) headsets (pilot and co-pilot)

Engine compartment fire extinguishers (Qty 2)

Fuel cap with key-lock

Pulsed chip detectors (in lieu of quick disconnecting chip detectors)

Reinforced windshields

Retractable/rotating landing light (nose mounted)

Rotor brake

Windshield wipers (pilot and co-pilot) with wiper switch on cyclic grips

## MISC./GROUND EQUIPMENT

Air intake/exhaust covers

Ground tools kit (including tow bar, lifting tool, wheel chocks)

Pitot tubes covers

Rotorcraft Flight Manual (RFM) and technical publications

Tie-down fittings (main rotor and tail rotor retention straps)

## INTERIOR

Air conditioning ECS (Environment Control System)

Primer finished cabin walls



## SINGLE PILOT DUAL CONTROLS IFR AVIONIC PACKAGE

Pilot flight/navigation EFIS (2 displays) with embedded FMS, Synthetic Vision (SVS), HTAWS (Helicopter Terrain Awareness and Warning System), slip indicator and Remote Bug Panel (RBP) (\*) in lieu of basic Pilot flight/navigation EFIS (1 display) with slip indicator and Remote Bug Panel (RBP)

Co-pilot flight/navigation EFIS (2 displays) with embedded FMS, Synthetic Vision (SVS), HTAWS (Helicopter Terrain Awareness and Warning System), slip indicator and Remote Bug Panel (RBP)

Reversionary Control Panel (RCP)

EFIS pilot/co-pilot navigation synchronization switch (FMS data)

Electronic Standby Instrument System (ESIS)

Second Radio Management System (RMS) RTU-4210 Collins

Second VHF/AM VHF-4000E Collins

VORILS/ADF NAV-4000 Collins

DME DME-4000 Collins

Radio altimeter ALT-4000 Collins

Second Attitude Heading Reference System (AHRS)

Second Air Data Unit (ADU)

Pilot GPS/SBAS Chelton interfaced to EFIS/FMS

Co-pilot GPS/SBAS Chelton interfaced to EFIS/FMS

Digital Audio Control System (DACS) NAT additional cockpit panel

4-axis dual duplex digital AFCS with integrated Flight Director

Second electronic clock

Second magnetic compass indicator

ELT C406-N HM Artex (with Navigation Interface Module embedded)

Dual controls

## PAINTING

Standard colour scheme from Company paint selection, solid colour

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## CUSTOMER EQUIPMENT

### ADDITIONAL EQUIPMENT

External rescue hoist (272 kg/600 lb90 m) (Goodrich) provision including step bar

External rescue hoist (272 kg/600 lb90 m) (Goodrich) removable with single control pendant

177 us gallon crash-resistant fuel system (in lieu of 152 us gallon) (\*) Not compatible with dual stretcher installation

8.4" cockpit central display

Digital map Euronav V Euroavionics interfaced to FMS (presented on 8.4" display)

Weather radar RDR 2000 Bendix/King

TDFM 7000 Radio

### INTERIOR

#### EMS Interior Single/Dual Stretcher Fixed Parts

o EMS multi configuration cabin floor with rails and drains

o Roof liners with soundproofing and EMS provisions and rails

o Aft bench panel (including inertial reels and safety belts)

o EMS electrical system with cabin lights

o Medical DC-power system (24/28 VDC)

o 3rd ICS station in passenger cabin

o Stretchers support provision

o Cargo retainer provision

o Medical oxygen distribution system (on LH and RH side liners)

o Sliding windows on cockpit and cabin doors windows

o Cabin loudspeakers

#### EMS Interior Single Stretcher Installation Removable Parts

o Aft facing sliding and rotating seat (crash-resistant type)

o Forward facing crash-resistant seats with foldable backrest and removable headrest (Qty 2)

o 4-point shoulder harness with inertial reels and safety belts for all seats

o Primary stretcher support platform quick release retaining system

o Primary stretcher support platform LH side with aft and fwd locking mechanism

o Primary foldable stretcher 1.85 m (Qty 1)

o Medical/oxygen cabinet with space provisions for up to 4 oxygen bottles (600 l each, excluded)

#### PAINTING

Customized painting schema 2-3 metallic colors from painting Company selection

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## AW109SP HELICOPTER BASELINE CONFIGURATION DESCRIPTION (1/2)

### a. Airframe

Aluminium alloy/composite material and bonded panel fuselage

Semi-monocoque aluminium alloy tail boom

Three-wheeled retractable landing gear

Two hinged jettisonable crew doors (LH and RH)

Two sliding passenger doors (LH and RH), 1.40 m opening, with jettisonable windows

Acrylic windshield and side windows

Acrylic 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

Swivelling front wheel with tow bar attachment

Quick opening hinged inspection doors, to allow visual check of engine oil levels and maintenance inspection points

Grounding points

Jacking and hoisting points

### b. Rotors and controls

Titanium main rotor hub, corrosion protected, fully articulated with four composite grips, four elastomeric bearings, four individually interchangeable composite material blades, swept tips, and dampers

Steel tail rotor hub, corrosion protected, semi-rigid delta hinged type, with two composite blades, individually interchangeable

Cyclic and collective controls powered by two 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

Co-Pilot brake controls (in addition to the Pilot standard ones)



### c. Power plant and fuel system

Two Pratt & Whitney Canada PW207C turbo-shaft engines

Two independent electronic control systems (FADEC) with normal emergency and training operation modes and auto-start

Engine mounted fuel pump and filter assembly

Engine mounted oil pump and filter assembly

Engine mounted fuel control and governor

Lubrication and cooling system

Engine oil chip detectors (2)

Engine control panel

Two independent fuel systems with cross-feeding valve and control panel

3-cell crash-resistant fuel system (575 l 152 US gal)

Submerged fuel boost pump (2)

Airframe mounted easy access fuel filter

RH refueling point

Ground fuel drains

### d. Transmission drive system and hydraulic system

960 SHP for takeoff and 900 SHP continuous operation main transmission

Three-stage transmission

Free-wheeling units (2)

Dual independent, redundant hydraulic systems

Transmission mounted hydraulic pumps (2) with separate reservoir

Ripple dampers (2)

Internal dry sump transmission lubrication with pressure and scavenge pump and oil filter

Transmission oil chip detectors (2)

Single stage, bevel gear T/R 90° gear box including oil level sight glass and chip detector

Transmission cooling and lubrication system

Transmission shafts

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### e. Electrical system

24 V DC 33 Ah nickel-cadmium battery with temperature probe

200 A self-cooled starter generators (2)

Voltage regulators (2)

Battery relay

Interconnecting bus relays (2)

External power relay

Distribution buses (1 battery, 2 essential, 2 emergency, 2 main, 2 auxiliary)

External power receptacle

Position lights

Taxing lights (2) and landing lights (2) on landing gear sponsons

Anti collision lights (2)

Cockpit utility lights (2)

Instrument lights with dimming switch

Radio master switch with ground function

### f. Flight/navigation instruments

Pilot flight/navigation EFIS (1 display) with slip indicator and Remote Bug Panel (RBP)

Radio Management System (RMS) RTU-4210 Collins (1)

VHF/AM VHF-4000E

VOR/ILS NAV-4500 Collins

Transponder (Mode S) TDR-94 Collins

Attitude Heading Reference System (AHRS) (1) with one dual AHRS control panel

Air Data Unit (ADU) (1)

Digital Audio Control System (DACS) NAT with one cockpit panel

Electronic clock (1)

Magnetic compass indicator (1)

## AW109SP HELICOPTER BASELINE CONFIGURATION DESCRIPTION (2/2)

### g. Instrumentation (on IDS display)

LCD Integrated Display System (IDS)

Dual gas generator speed indicator (N1%)

Dual turbine outlet temperature indicator (TOT°C)

Dual torque meter indicator (TQ%)

Dual power turbine speed indicator (N2%)

Rotor speed indicator (NR %)

Transmission oil pressure (PSI) and temperature (°C) indicator

Two engine oil pressure (PSI) and temperature (°C) indicators

Two fuel pressure indicators (PSI)

Two fuel quantity indicators (kg)

Two fuel flow indicators (kg/hr)

Two flight controls hydraulic system pressure indicators (PSI)

Two utility hydraulic system pressure indicators (PSI)

Outside air temperature indicator (°C)

Two AC voltmeters (VAG)

Two DC voltmeters (VDC)

Two DC ammeters (Amp)

### h. Warning/Caution Advisory and Maintenance System

Master warning lights

Master caution lights

Warning, caution and advisory messages (on IDS display)

Aural warning generator system

Engine fire detection system

Exceedance recorder system (on IDS display)

### i. Interior arrangement

Crash-resistant pilot seat, fore and aft adjustable, with lap belts and headrest

Aluminium alloy honeycomb reinforced floor with anti-skid finishing

Ventilation ram air inlets

Anti reflection instrument panel

### j. Exterior finishing

Finishing in accordance with manufacturer specification (NTA 893 A)

Primer exterior painting

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