

| Title | Issue | Date |
|--|-------|----------------|
| Type Certificate Data Sheet № ФАВТ-AW189 | 02 | April, 13 2017 |

This Data Sheet is the integral part of Type Certificate № CT354 - AW189 dated August 04 2015 as well as major changes approvals to Type Certificate. It prescribes conditions and limitations under which the product, for which Type Certificate was issued, meets the requirements of Certification Basis.

Model AW189

| | |
|-----------------------------------|---|
| Type Certificate Holder | Leonardo S.p.a. – Helicopters Via Giovanni Agusta 520, 21017 Cascina Costa (VA) Italy |
| Manufacturer | AgustaWestland S.p.A. - Italy Plant – Vergiate (VA) - UK Plant – Yeovil (Somerset) AgustaWestland Ltd Lysander Road, Yeovil, Somerset BA20 2YB, UK |
| Aircraft Description | Single-rotor helicopter with twin turbo-shaft engines and a retractable wheel landing gear |
| Category | Transport, A and B |
| Applicability | AW189 helicopter is approved for VFR and IFR flights during day and night, for over land and over water flights, for people transportation. |
| Initial Certification Data | Type Certificate No CT354-AW189 Issued by IAC-AR dated August 04, 2015 |
| Type Design | Defined in the document «№ 189G0000P012 AW189 – FATA TYPE DESIGN DEFINITION », Issue B. |
| Certification Basis | <p>Certification Basis CБ 189.29 approved by IAC-AR on 28.07.2015</p> <p>Certification Basis CБ 189.29 includes:</p> <ul style="list-style-type: none"> – Aviation Regulation, Part 29, Issue 2 dated 2003; – Aviation Regulation, Part 36, Issue 2; – Aviation Regulation, Part 34 dated 2003; – Special Technical Conditions: <p>The list of certification basis requirements for which equivalent compliance is established: 29.67(a)(2); 29.87(a); 29.807(c)(d)(2)(3); 29.811(d); 29.812; 29.813(c); 29.815; 29.1305; 29.1309(c); 29.1517; 29.1521; 29.1541(a)(1); 29.1545(b)(4); 29.1549; 29.1587(b)(6).</p> |
| Noise | <p>Helicopter is compliant with:</p> <ul style="list-style-type: none"> – Requirements of Sections A, O, H of Aviation Regulation, Part 36 Issue 2, «Aircraft Noise Certification» – Requirements of Annex 16 ICAO, Volume 1, Chapter 8 «Environment protection» |

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| Measurement points | Achieved Noise Levels (EPNdB) | Required Noise Levels Due to AP-36 (EPNdB) | Required Noise Levels Due to Annex 16 ICAO, Volume 1, Chapter 8 (EPNdB) |
|--------------------|-------------------------------|--|---|
| Take-off | 91,3 | 99,2 | 96,2 |
| Flyover | 95,2 | 98,2 | 94,2 |
| Approach | 99,1 | 100,2 | 99,2 |

Engines

Two engines General Electric CT7-2E1,
Type Certificate №73-Д dated 25.07.1995
Major changes approval №73-Д/ОГИ-01 dated 14.10.2014

Fuel

PT, TC-1 GOCT 10227-86.
Refer to flight manual for the foreign fuel grades.

Oil

| | |
|--------------------------|---|
| For engine | D50TF1 (GE Spec) - MIL-PRF-7808 D50TF1 (GE Spec) - MIL-PRF-23699 |
| For transmission gearbox | DOD-L-85734 |

Maximum power transmitted by the main gearbox

2907 h.p. / 2168 kW

Engines limits

| Rating | | Max ITT (°C) | MAX NG (%- RPM) | MAX NF (% - RPM) |
|--------|----------------|--------------|-----------------|------------------|
| AEO | Continuous | 942 | 102,7 – 42843 | 104 - 20192 |
| | Take-off 5 min | 968 | 102,7 – 42843 | |
| OEI | Continuous | 968 | 102,7 - 42843 | 104 - 20192 |
| | 2,5 min | 1078 | 105 - 41905 | |

Transmission Torque Limits

| Rating | | MAX TORQUE (%) | INPUT SPEED (RPM) |
|--------|----------------------------|----------------|-------------------|
| AEO | Maximum Continuous 30 min | 2 x 100 | 21420 |
| | | 2 x 116(*) | 21420 |
| OEI | Maximum Continuous 2,5 min | 1 x 135 | 21420 |
| | | 1 x 164 (**) | 21420 |

(*) For airspeeds less than 90 KIAS (166,7 km/h). For airspeeds greater than 90 KIAS (166,7 km/h) refer to flight manual.

(**) Interval between 155% and 164% is allowed for 30 sec and one time per 2.5 min mode.

The other engines limits - in accordance with TCDS No 73-Д and reference documentation mentioned in it, which define the approved Type design.

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Rotor Speed Limits

| Power On AEO: | RPM | % |
|----------------------|------------|----------|
| - Maximum continuous | 296.14 | 104.0 |
| - Minimum continuous | 284.75 | 100.0 |
| Power On OEI: | | |
| - Maximum continuous | 296.14 | 104.0 |
| - Minimum continuous | 284.75 | 100.0 |
| Power off: | | |
| - Maximum continuous | 313.23 | 110.0 |
| - Minimum continuous | 256.28 | 95.0 |

Maximum Take-off weight 8600 kg

Air speeds limits

| | |
|--|-------------------------------------|
| VNEPower On AEO | 169 kts (312.9 km/h) |
| VNEPower On OEI | 139 kts (257.4 km/h) |
| VNEPower Off | 120 kts (222.24 km/h) |
| VNE(VFR Night / IFR Single Pilot) Power On AEO) | VNEPower On AEO - 20 kts (-37 km/h) |

C.G. See the approved flight manual and the approved flight manual supplements

Maximum Baggage Loads 300 kg

Maximum Load on cargo compartment floor 550 kg/m²

Minimum flight crew 1 pilot (on right seat) during VFR flights daytime.
2 pilots during VFR flights nighttime and IFR flights during over water flights.

Maximum number of passengers seats in passenger cabin 19

Fuel quantity Basic configuration maximum capacity: 1303 liters;
Unusable quantity: 24 liters.

Maximum Operating Altitude **For Take-Off and Landing:**
8000 ft./2438,4 m barometrical altitude / density altitude, depending on whichever comes first.

For Flight:
10000 ft./3048 m barometrical altitude / density altitude, depending on whichever comes first.

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The maximum operating altitude limitations related with the necessity to supply flight crew and passengers with oxygen are contained in Aviation regulations of state of helicopter operator.

Outside Ambient Temperature Limitations - 40 °C...+ 55 °C (ISA + 40 °C)

Fuel temperature limits Minimum fuel temperature for starting engines – not below –18°C

Approval major changes

| Approval of Major change | Major change name | Applicability | NDC |
|--------------------------|---|---------------|-------------------|
| № СТ354-AW189/ОГИ-01 | New Aluminium Stationary Swashplate | AW189 | NDC-189G6230-002 |
| № СТ354-AW189/ОГИ-02 | New Main Case & Mast | AW189 | NDC-189G6320-002 |
| № СТ354-AW189/ОГИ-03 | New REPU ASSY and ECDU APSW EXE Rel.3.2 | AW189 | NDC-189G2460-001 |
| № СТ354-AW189/ОГИ-04 | TRGB Configuration change | AW189 | NDC-189G6522-002 |
| № ФАВТ-AW189-ОГИ-05 | MTOW 8600KG | AW189 | NDC-189G0000-001 |
| № ФАВТ- AW189-ОГИ-06 | OEI Training Mode | AW189 | NDC-189G0000-005 |
| № ФАВТ- AW189-ОГИ-07 | CATEGORY A Envelope Extension to Low Temperature | AW189 | NDC-189G0000-006 |
| № ФАВТ- AW189-ОГИ-08 | AW189 BASIC, Emergency and Category A Procedure and Performance Improvements | AW189 | NDC-189G0000-011 |
| № ФАВТ- AW189-ОГИ-09 | Airspeed Limitation Removal for Cabin Door Open | AW189 | NDC-189G0000-012 |
| № ФАВТ- AW189-ОГИ-10 | RFM Change Limitations | AW189 | NDC-189G0000-013 |
| № ФАВТ- AW189-ОГИ-11 | Blowing and Falling Snow | AW189 | NDC-189G0257-002 |
| № ФАВТ- AW189-ОГИ-12 | Removal of Limitation for Over Water Operations with Open Doors | AW189 | NDC-189G0257-003 |
| № ФАВТ- AW189-ОГИ-13 | RFM Limitations Modifications (Baggage in Cabin, Ditching, Occupants in Hoist Operations) | AW189 | NDC-189G0257-004 |
| № ФАВТ- AW189-ОГИ-14 | KIT Vertical Cargo Net | AW189 | NDC-189G2550-001 |
| № ФАВТ- AW189-ОГИ-15 | ADELTA SIU Improvement | AW189 | NDC-189G2560-001 |
| № ФАВТ- AW189-ОГИ-16 | Double Rescue Hoist | AW189 | NDC-189G2591-001 |
| № ФАВТ- AW189-ОГИ-17 | Hoist Cable Inspection | AW189 | NDC-189G2591-004 |
| № ФАВТ- AW189-ОГИ-18 | Revised Clutch of Rescue Hoist System | AW189 | NDC-189G2591-005 |
| № ФАВТ- AW189-ОГИ-19 | KIT Cargo Hook | AW189 | NDC-189G2592-001 |
| № ФАВТ- AW189-ОГИ-20 | KIT Pressure Refuel Defuel | AW189 | NDC-189G2810-001 |
| № ФАВТ- AW189-ОГИ-21 | KIT Full Ice Protection System | AW189 | NDC-189G3000-002 |
| № ФАВТ- AW189-ОГИ-22 | KIT TRAKKA A800 Searchlight Underbelly | AW189 | NDC-189G3440-003 |
| № ФАВТ- AW189-ОГИ-23 | Core Avionics PHASE 3.0 and KIT ASM Enhanced | AW189 | NDC-189G4600-004 |
| № ФАВТ- AW189-ОГИ-24 | Replacement OF Standard Bolts in Hoists Installation | AW189 | NDC-189G5300-002 |
| № ФАВТ- AW189-ОГИ-25 | KIT Heated Windshield | AW189 | NDC-189G53610-001 |
| № ФАВТ- AW189-ОГИ-26 | MGB Upper Fitting | AW189 | NDC-189G6330-001 |
| № ФАВТ- AW189-ОГИ-27 | KIT Obstacle Proximity LIDAR System | AW189 | NDC-189G9360-001 |
| № ФАВТ- AW189-ОГИ-28 | Enhanced Vision System | AW189 | NDC-189G9750-001 |
| № FATA-02061R-MC-029 | Underbelly Tanks KIT | AW189 | NDC-189G0000-002 |
| № FATA-02061R-MC-030 | Fatigue Life Extension for Main and Tail Rotor Spherical Bearings | AW189 | NDC-189G0255-001 |
| № FATA-02061R-MC-031 | Fatigue Life Extension for the Rotating Swashplate Assy | AW189 | NDC-189G0255-005 |

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| № FATA-02061R-MC-032 | Mast & Main Case Fatigue Life Extension | AW189 | NDC-189G0255-006 |
| № FATA-02061R-MC-033 | Upper Case Fatigue Life Extension | AW189 | NDC-189G0255-007 |
| № FATA-02061R-MC-034 | Fatigue Life Extension for the Tail Rotor Damper | AW189 | NDC-189G0255-010 |
| № FATA-02061R-MC-035 | Tail Assembly Life Extension & Lower Tailplane Attach on Fin Life Extension | AW189 | NDC-189G0255-014 |
| № FATA-02061R-MC-036 | Forward and Aftward Rod Assemblies Life Extension | AW189 | NDC-189G0255-015 |
| № FATA-02061R-MC-037 | Main Cabin Assy Life Extension | AW189 | NDC-189G0255-016 |
| № FATA-02061R-MC-038 | Tailplane Assembly Life Extension | AW189 | NDC-189G0255-017 |
| № FATA-02061R-MC-039 | Main Gearbox Upper Fitting Life Extension | AW189 | NDC-189G0255-019 |
| № FATA-02061R-MC-040 | Main Cabin Life Extension | AW189 | NDC-189G0255-036 |
| № FATA-02061R-MC-041 | Removal of EMC limitation on SATCOM DZMX, Flexcomm II and HF Radio for Extended Range Configuration | AW189 | NDC-189G0257-001 |
| № FATA-02061R-MC-042 | Active Vibration Control System (AVCS) | AW189 | NDC-189G1830-001 |
| № FATA-02061R-MC-043 | KIT HF Radio Underbelly | AW189 | NDC-189G2310-002 |
| № FATA-02061R-MC-044 | KIT External Loudspeakers | AW189 | NDC-189G2350-001 |
| № FATA-02061R-MC-045 | KIT Passengers Cabin Extension | AW189 | NDC-189G2520-002 |
| № FATA-02061R-MC-046 | KIT 4th Row Foldable Seat | AW189 | NDC-189G2520-008 |
| № FATA-02061R-MC-047 | Tunnel Stowing Zone | AW189 | NDC-189G2550-002 |
| № FATA-02061R-MC-048 | KIT External Hoist (Goodrich) | AW189 | NDC-189G2591-002 |
| № FATA-02061R-MC-049 | KIT Lower High TNT Strobe Anticollision Light | AW189 | NDC-189G3340-007 |
| № FATA-02061R-MC-050 | Swivelling/Sliding Seats and Mission Console | AW189 | NDC-189G4620-003 |
| № FATA-02061R-MC-051 | KIT Hinged Passenger Door | AW189 | NDC-189G5212-001 |
| № FATA-02061R-MC-052 | KIT Bubble Windows | AW189 | NDC-189G5620-001 |
| № FATA-02061R-MC-053 | FLIR Star Safire 380 HD | AW189 | NDC-189G9350-001 |
| № FATA-02061R-MC-054 | Floatation Clearance for Underbelly Tanks Configuration | AW189 | NDC-189G9560-001 |
| № FATA-02061R-MC-055 | Main Rotor Mast and Main Case Life Extension (New) | AW189 | NDC-189G0255-004 |
| № FATA-02061R-MC-056 | Fatigue Life Extension for the Tail Rotor Slider Assy | AW189 | NDC-189G0255-011 |
| № FATA-02061R-MC-057 | TGB Mast and Casings Life Extension | AW189 | NDC-189G0255-012 |
| № FATA-02061R-MC-058 | Rear Fuselage and Tail Assy Life Extension | AW189 | NDC-189G0255-032 |
| № FATA-02061R-MC-059 | Tail Rotor Gearbox Fatigue Life Extension | AW189 | NDC-189G0255-013 |
| № FATA-02061R-MC-060 | TR Servoactuator Life Extension | AW189 | NDC-189G0255-023 |
| № FATA-02061R-MC-061 | Revised Power Supply for the Double Rescue Hoist System | AW189 | NDC-189G2591-006 |
| № FATA-02061R-MC-062 | Altitude Extension of Hoist Operations | AW189 | NDC-189G2591-007 |
| № FATA-02061R-MC-063 | Approved Envelope for Nine or Less Passengers | AW189 | NDC-189G0000-003 |
| № FATA-02061R-MC-064 | KIT External Hoist (Goodrich) 8600kg MTOW Extension | AW189 | NDC-189G2591-003 |
| № FATA-02061R-MC-065 | RFM Limitation Modification | AW189 | NDC-189G0257-010 |

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Additional Conditions, Limitations and Information

1. Regular commercial transportations without FDR installed are prohibited.
2. Cargo, baggage and hand-luggage transportation inside of a passenger cabin is prohibited.
3. Other operational limitations are listed in the operational documentation.
4. Flights during real and forecasted icing conditions are prohibited without full ice protection system installed P/N 8G3000F00111.

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*Original in Russian is signed by
Mikhail Bulanov
Deputy Director General*