

AS332 Capabilities

L/L1/L2



Excellence in Helicopter Maintenance Services

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Heli-One.com



Heli-One performs the full range of AS332 maintenance services and is an Airbus Authorized Service Center. Heli-One is dedicated to providing the best maintenance, repair and overhaul on your AS332 and goes the extra mile to find solutions to keep your fleet mission ready.

Our services include:

- Airframe
- Components
- PBH
- Engines

AS332 Services available at 3 facilities:



Stavanger, Norway



Avionics Modifications

Richmond, Canada



Rzeszow, Poland

Approvals for Norway, Canada and Poland include: TCCA, FAA, EASA, ANAC (Brazil), Mexico, Cayman Island, Indonesia, JCAB (Japan), CAAC (China), and Angola

For our complete list of Approvals & Certificates: http://www.heli-one.com/about-us/approvals-certificates

Airframe



Our team of technicians are fully licensed and receive additional training for specialized structures work. All our facilities have in-house supporting workshops to facilitate faster turnaround times and to maintain quality standards. Our state-of-the-art dedicated repair stations for AS332 ensure that your aircraft receives the highest quality service. Heli-One offers the full range of base maintenance services including:

- All levels of inspections/checks up to and including 12 Year/G-Check Inspection
- Full structural support
- Corrosion removal and repair
- Mobile Repair Team services
- Minor/major structural repairs and modifications
- Avionics maintenance and minor/major modifications
- Inspection, test, and re-certification
- Investigation/fault diagnosis
- Vibration evaluation and diagnosis

Our base maintenance services are offered at three locations: Stavanger, Norway; Richmond, Canada; and Rzeszow, Poland.

100+G-CHECKS

COMPLETED

- Large parts inventory for 12 Year/G-checks: including mandatory and typical stock lists
- Complete full overhaul repair, and test capability for all major and minor components
- ✓ Hydraulics MRO capability and test cell
- ✓ Safety equipment MRO capability
- ✓ Full Makila engine services
- Full Avionics support (generators, fire detectors, batteries, communication systems)
- Dynamics inspections and overhaul done in-house
- Extensive modifications and repairs catalogue
- Strong certifying team

G-Checks

Components

Heli-One's extensive AS332 component repair and overhaul capabilities are supported with different departments that collaborate to find solutions. In addition, Heli-One has inventory of serviceable components for quick exchange. Our depth of component service offerings give customers the flexibility of choice depending on operational and budget needs.

Highlights of our components capabilities - please contact us for a full list:

- Gearboxes (Main-Intermediate-Tail)
- Main rotorhead
- Blades
- Electric accessories
- Instruments
- Hydraulic components
- Landing gear
- Servos
- Engine accessories
- Fuel control units
- Life rafts
- Float gear
- Fire extinguisher cylinders
- Fuel tanks

DEDICATED BLADE SHOP AS332 L/L1/L2 Blade Repair:

Their state-of-the-art workshop has specialized tooling and resources that facilitate quick repair work. The shop is qualified to for COV (Level I+) and BOV (Level D) work and has been trained by the OEM to perform repairs.

AS332 L/L1 only: modification from 332A11-0024 to 322A11-0025





Heli-One repairs and overhauls AS332 gearboxes (Main-Intermediate-Tail) and the main rotorhead in short turnaround times. This high-quality overhaul is completed by a highly-experienced team with over 40 years of shop experience in repairing and overhauling helicopter gearboxes.

- On-site repair capabilities and large part inventory
- Exchanges, leasing/rental units, & Mobile Repair available
- Dynamics test cell on premise





Dynamics

Engines



Heli-One Norway's Engine shop services Makila engines. They began maintenance and repair work on Makila engines in 1985 and full overhaul capability was achieved in 1990. Since then over 2000 engines have passed through the shop with over 500 overhauls and 1600 repairs being completed.

The shop has an overhaul turnaround time of 45 days.

Heli-One provides full maintenance, repair, and overhaul services on:

Makila 1A - PN: 0298005040 Makila 1A1 - PN: 0298005060 Makila 1A2 - PN: 0298005110

Heli-One also offers:

- Engine exchanges, leasing and rentals
- Module maintenance, repair, and overhaul
- Mobile Repair
- Maintenance troubleshooting and testing



Heli-One's Avionics capabilities are among the most comprehensive in the industry. Heli-One Norway's shop has **Level 3 component repair capability**, which gives customers further cost-saving options for overhaul work. The shop also has an average 10 day turnaround time and have an exchange pool for high demand items. The Avionics shop has extensive testing capabilities for: generators, radars, batteries, communications/ navigation systems, air conditioning units, DC master boxes and search lights.

Some of the OEMs we have capability for include:

- Rockwell Collins
- Cobham
- L3
- Thales
- Universal Avionics
- Zodiac
- Penny & Giles
- Ducane
- Mahle
- Honeywell
- Luminator
- SNEF

FEATURED CAPABILITY:

Spectrolab Searchlight Repair Capability

- Over 200 searchlight repairs completed
- Authorized Spectrolab Service Center
- Experienced technicians
- EASA, TCCA, ANAC Approvals
- Authorized Honeywell Service Center
 Authorized dealer for Rockwell Collins, NAT and AEM



Modifications

Heli-One's two Design teams design, certify, and install innovative and practical solutions in nearly **any airworthiness jurisdiction in the world**. We have over 100 Major/Minor modifications and repair solutions for the AS332 and have worked with military and civil operators representing every mission type in the industry.



MISSION-BASED MODS DEVELOPED FOR:

FLIGHT TEST ORGANISATION

Heli-One Norway established a Flight Test Organisation to complement their Engineering and Design capabilities. This EASAapproved Category 1 organisation is the first of its kind in Norway and one of the first non-OEM flight test organisations in Europe.

ABOUT THE ORGANISATION:

- EASA-Approved Category 1 Organisation
- Dedicated staff: Category 1-Licensed Flight Test Pilot, Flight Test Engineers
- Can perform testing for operators & design organisations



NAVIGATION & COMMUNICATION:

- AS332 Electronic Flight Information System Upgrade (EFI-890H)
- AS332 Electronic Flight Information System Upgrade (EFI-520)
- AS332 UNS-1Fw Flight Management System (dual FMS option)
- AS332 Barco MDU-268 Multi Function Display
- AS332 Euronav 7 Mission System
- AS332 Skywatch 497 and Avidyne TAS-620 TAS Systems
- Mode S Transponder, ADS-B
- AIS System
- In Flight Entertainment (IFE), Wireless Passenger Headset (for AS332, H225, AW139, S-92, etc)

AIRCRAFT MODERNIZATION

Electronic Flight Information System Upgrade

This flight deck modernisation upgrade replaces analogue displays to digital 'smart' screens. Enhanced visuals and consolidated functions decrease pilot workload, enhance safety, and expand operational capability as well as adding lifespan and value to the aircraft.

OTHER AVIONICS:

- AS332 Cockpit Voice & Flight Data Recorder (CVFDR)
- AS332 Honeywell VXP HUMS
- AS332 Vision-1000 Flight Data Monitoring
- Flight Data Monitoring (FDM) for AS332, H225, AS365, H155, S-92, AW139, etc
- Crash Position Indicators (CPI) for AS332, AS365, H155, etc

MISSION-SPECIFIC:

- AS332 Dual Hoist
- AS332 Bubble Doors (Cockpit)
- AS332 SAR Cabin
- AS332 Stretcher Installation
- IR (FLIR) Camera Installations

HF-Installations

Example Modifications



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AS332 L/L1 HEATED MOTORIZED MIRRORS

Heli-One has developed heated and motorized mirrors for the Airbus AS332 L/L1. These mirrors are installed just below the cockpit chin windows - LH, RH, or dual installation options. The mirrors assist the pilot and/ or co-pilot primarily during sling operations to monitor the cargo hook loads and also during load pick-up for visibility of ground staff.

HEATED AND MOTORIZED MIRROR - DUAL INSTALLATION

BENEFITS:

- Heated mirrors prevent fogging and ice build up while operating in cold conditions
- Motorized mirrors tilt 4-ways and is controlled from a console in the cockpit, allowing for adjustment mid-operations
- · Mirrors can tilt 9 degrees in each direction
- Mirror position can be adjusted manually prior to flight to meet
 mission requirements
- Improved situational awareness in cargo and slinging operations including firefighting
- · Mirrors have minimal vibration during operations
- Quick installation time



MODIFICATION SPECIFICATIONS

- Fixed mirror dimensions: 214mm by 164mm
- Heated & motorized mirror dimensions: 314mm by 228mm
- Single installation weight: 8.95kg including components and provisions
- Dual installation weight: 17.9kg including components and provisions
- Mirror controls are installed in the center cockpit console, for individual pilot/co-pilot or dual

TO ALWAYS KEEP YOU SAFE AND MISSION-READY WHILE REDUCING COST OF OWNERSHIP



AS332 Electronic Flight Information System Upgrade (EFI-890H)

Heli-One installs the Electronic Flight Information System (EFIS) upgrade for the Super Puma (AS332L/L1) based on Universal Avionics EFI-890H - a well proven system with wide interface capabilities. This upgrade modernizes the cockpit display by increasing operational capability as well as enhancing crew safety & awareness.

BENEFITS:

- Reduces direct maintenance cost: eliminates repair of existing analogue systems
- Provides pilot-friendly, intuitive interface which enhances safety, improves situational awareness, and reduces workload
- Extends operational capability and avoids obsolescence
- Dual screen allows for special mission equipment integration (eg. synthetic vision, terrain awareness)
- Proven in many different aircraft types and well supported with spares & repairs
- Full autopilot integration

DISPLAY CAPABILITIES:

- Attitude (ADI)
- DME/FMS Distance
- Heading (Compass)
- Doppler (optional)
- Altitude
- Autopilot and Modes Annunciators
- Airspeed
- TAS/TCAS
- Vertical Speed
- ADF
- WX Radar
- Synthetic Vision
- VOR/ILSRad.Alt. FMS Data
- Coupler Command Bars

COMPONENTS:

- Twin EFI-890H Displays (Universal Avionics)
- Data Concentrator Unit
- L3 Standby Attitude Indicator
- Dual Digital Air Data Computers

To always keep you safe and mission-ready while reducing cost of ownership



