

Business Division

Aircraft Engines



Business Division

Aircrafts



Business Division

Engineering Center

► OUR COMPANY



JSC "Ural Works of Civil Aviation" is one of the largest aviation companies in Russia, which in 2019 will celebrate the 80th anniversary of its founding. Established in 1939 as an aircraft maintenance and repair facility it is acquiring progressively the complete cycle enterprise status.

JSC "Ural Works of Civil Aviation" comprises three successfully operating independent business divisions: "**Aircraft Engines**", "**Aircrafts**" and "**Engineering Center**".



HISTORICAL OVERVIEW

On March 16th, 1939 Sverdlovsk aircraft maintenance and repair facility engaged in technical maintenance of the aircrafts that carried out flights from Moscow to Irkutsk, from Sverdlovsk to Moscow and from Moscow to Magnitogorsk was granted the status of an independent enterprise of the USSR Civil Air Fleet. This date is considered the birth of JSC "Ural Works of Civil Aviation".

Repair and Overhaul

- ◆ **1939**
Repair of U-2 aircrafts, aircraft engines: M-11, M-17, MG-319
- ◆ **1956**
Repair of ASh82-T engine (IL-14 aircraft)
- ◆ **1973**
Repair of TV2-117A (AG) engine (Mi-8T aircrafts)
- ◆ **1975**
Repair of VR-8A gearbox (Mi-8 aircrafts)
- ◆ **1983**
Repair of NK-8-2U engine (aircrafts: TU-154B, B-1, B-2)
- ◆ **1995**
Repair of TV3-117 engine, all modifications (aircrafts: Mi-8MTV, Mi-14, Mi-17, Mi-24, Mi-28, Ka-27, Ka-28, Ka-32)
- ◆ **1999**
Repair of VR-14 gearbox (aircrafts: Mi-14 and Mi-8MT/Mi-17)
- ◆ **1999**
Repair of NK-16ST engine (for gas transport plants)
- ◆ **2003**
Repair of GTD-350 engine (Mi-2 aircrafts)
- ◆ **2005**
Repair of VR -24 gearbox (aircrafts: Mi -24, Mi-25, Mi-35)
- ◆ **2008**
Repair of NK-12ST engine (for gas transport plants)
- ◆ **2015**
Repair of NK-16-18ST engine
- ◆ **2017**
Repair of PS-90GP-2 engine



Aircraft Manufacture

- ◆ **1941**
Assembly of high-speed bombers SB and I-15, I-16 military aircrafts
- ◆ **1993**
Assembly of a two-seater airplane "Aviatika" 890U
- ◆ **2004**
Assembly of MAI-223 aircrafts
- ◆ **2012**
Production of unmanned aircraft systems with unmanned aerial vehicles "Forpost" and "Zastava"
- ◆ **2013**
Manufacture of DA-40NG light aircrafts
- ◆ **2014**
Manufacture of DA-42NG aircrafts
- ◆ **2015**
Manufacture of Bell-407 aircrafts
- ◆ **2016**
Manufacture of aircrafts L- 410 UVP E-20
- ◆ **2017**
Manufacture of DA-42T aircrafts equipped with domestic avionics
- ◆ **2018**
Development of L-410 aircraft modifications with ski and float-type landing gear



QUALITY MANAGEMENT SYSTEM

The company has developed, implemented and maintains a certified quality management system in compliance with GOST ISO 9001-2011, GOST RV 0015-002-2012, GOST R EN 9100-2011, GOST R ISO 14001-2007, Aviation Rules AP-145, AP-21, FAP-285 and other standards regulating the activities of JSC "UWCA".

Quality management system represents organizational and production process structure with a proper distribution of powers and responsibilities, which focuses on performance quality at all production stages and controls procedures and resources required for implementation of the quality policy of JSC "UWCA" and achievement of its objectives.

The quality management system is functioning effectively and is improved continuously to ensure a higher level of customer satisfaction.

LICENSES



License of the Ministry of Industry and Trade of the Russian Federation for development, manufacture, testing and repair of aviation equipment No. 14208-AT dated 4/10/2017.



License of the Ministry of Industry and Trade of the Russian Federation for development, manufacture, testing, installation, mounting, maintenance, repair, disposal and sale of armament and military equipment No. M 003524 BBT-ОПРУ dated 13/5/2015.

CERTIFICATES



Certificate of Compliance of QMS related to development, manufacture, testing, repair and maintenance of aviation equipment with the requirements of GOST R ISO 9001-2015 and additional requirements of GOST RV 0015-002-2012, GOST R EN 9100-2011, issued by the Agency for Quality Management Systems Certification JSC "Gosviasertifica Certification Center" (Voluntary Certification System "Military Register") dated 6/9/2018 No. BP 27.1.12697-2018.



Certificate of Compliance of Quality Management System, Environment Management System, Information Security Management System related to development, manufacture, testing, repair and maintenance of aviation equipment with requirements of GOST R ISO 9001-2015, GOST R ISO 14001-2016, GOST R ISO/IEC 27001-2006, issued by the Agency for Integrated Management Systems Certification JSC "Gosviasertifica Certification Center" dated 6/9/2018 No. POCC RU.ФK05.K00109.



Maintenance Organization Certificate No. 285-16-138 dated 4/10/2016.



Certificate of Production Organization Approval No. ОП 134-ПВС dated 28/02/2019, certifying that its holder meets the requirements of the Aviation Rules, Part 21, Section G, and is authorized as a production organization for the works specified in the list of permitted works. Issued by the Interstate Aviation Committee, the Aviation Register, expiry date: 28/02/2021.



Repair Organization Certificate No. СРП-20 dated 5/9/2018, certifying that its holder meets the requirements of the Aviation Rules, Part 145, and is authorized as a repair organization for the aviation equipment and the works specified in the list of permitted works. Issued by the Interstate Aviation Committee, the Aviation Register.



Certificate of Production Organization Approval No. ФАБТ-И-15 dated 22/8/2018, certifying that its holder meets the requirements of the Aviation Rules, Part 21, section G, and is authorized as a production organization for the works specified in the list of permitted works. Issued by the Ministry of Transport of the Russian Federation, the Federal Air Transport Agency.

► Business Division "Aircraft Engines"



Business Division "Aircraft Engines" offers factory repair of power units of helicopter equipment: TV2-117A/AG engine and VR-8A main gearbox (for Mi-8T, Mi-8PS), TV3-117 engine (all modifications) and main gearboxes: VR-14 (for Mi-8MTV, Mi-8AMT, Mi-17, Mi-171) and VR-24 (Mi-24, Mi-25, Mi-35) and GTD-350 engine (for Mi-2). Together with this the company performs factory repair of gas transmission engines: NK-12ST (blower drive of gas-pumping unit GPA-Ts-6.3), NK-16ST, NK16-18 (blower drive of GPA-Ts-16), PS-90 (blower drive of GPA-16 "Ural").

The array of services provided by JSC "UWCA" also includes manufacture of aircraft engine components, customized equipment and tooling.





Overhaul of TV2-117A (AG) Engines

Under the designer's supervision of the manufacturer JSC "UEC – Perm Engines" JSC "UWCA" overhauls TV2-117 aircraft engines and their units.

The enterprise developed and implemented the automated measuring system (AMS) to test TV2-117A (AG) engines and their units.

The overhaul procedures are gradually improved and extended.

Repair of aviation equipment involves the proprietary processes protected by copyrights:

- ♦ flame spraying (recovery of internal diameter of rings of TV2-117A (AG), internal diameter of the casing of I mount of TV2-117A (AG) engine);
- ♦ honeycomb seal fabrication;
- ♦ electrospark spraying for reconstruction of the parts geometry;
- ♦ fabrication of carbon rings for sealing of II mount of TV2-117 (AG) engine;
- ♦ induction soldering in protective atmosphere (repair of guide vanes through 100% replacement);

- ♦ vacuum-plasma high energy technology for protection of turbocharger compressor blades and nozzle blades from thermal erosion (SDP-2 diffusion coating);
- ♦ specified time in service of GS-18MO unit can be extended from 40 to 50 years.

JSC "UWCA" successfully implements unique techniques for recovery of geometry of impeller components of TV2-117A (AG) engine and methods for application of corrosion protection coatings:

- ♦ laser cladding;
- ♦ arc cladding with further machining;
- ♦ protection of compressor strength part components against air-sand mixture erosion by ion-plasma sputtering of ER-7 coating based on titanium zirconium nitride (TiZr) N.

Overhaul of TV2-117A engine and its parts was started in 1973. In May of the same year JSC "UWCA" completed overhaul of five TV2-117A engines.

In 1986 the enterprise started overhauling of TV2-117AG engines with carbon sealing of II mount and completed upgrading of modification "A" into modification "AG" based on the effective Service Bulletins.

TBO of the engine is 1500 hours with potential extension up to 2000 hours.

Assigned life is 12 000 hours.



TV2-117A (AG)

Overhaul of TV3-117 Engines (all modifications)

Under the designer's supervision of the manufacturer JSC "UEC – Klimov" JSC "UWCA" carries out overhaul of TV3-117 engines of all modifications and their units.

The enterprise developed and introduced automated measuring system (AMS) to test aircraft engine units.

The overhaul procedures are gradually improved and extended.

JSC "UWCA" successfully implements proprietary techniques for restoration of geometry of impeller components of TV3-117 engine by arc cladding and methods of corrosion protection coating application to compressor structural components to protect against erosive wear using ion-plasma sputtering.

Repair of aviation equipment involves the proprietary processes protected by copyrights:

- ♦ application of ER-7 erosion protection coating onto compressor blades by ion-plasma sputtering to avoid erosive wear of the flow passage;
- ♦ vacuum-plasma high energy technology for protection of turbocharger compressor blades and nozzle blades from thermal erosion (VSDP-11 diffusion coating);



TV3-117

- ♦ plasma spraying (sealing and run in coatings of type KNA and 20B);
- ♦ flame and plasma spraying (recovery of internal diameter of rings of TV3-117 engine, outer surface of oil pump block of TV3-117 engine, compressor rotor pin restoration);
- ♦ honeycomb seal fabrication;
- ♦ electrospark spraying for part geometry recovery;
- ♦ fabrication of carbon rings for mount sealing;
- ♦ furnace brazing in protective atmosphere (repair of guide vanes through 100% replacement);
- ♦ electrospark alloying;
- ♦ strain hardening with micro-balls and balls of 1 stage compressor rotor blades (TV3-117 engine);
- ♦ induction soldering (fuel manifold repair);
- ♦ restoration of geometry of rotor blades of a turbocharger compressor by laser and arc cladding;
- ♦ cold gas dynamic spraying for recovery of damper ring platforms.

The enterprise is engaged in upgrading of NR-3VM, VMA into NR-3VM-T, VMA-T extending the assigned life up to 6000 hours.

Extensive work has been done to increase service life of the outsourced items mounted on the repaired aviation equipment. In November 1995 local repair of TV3-117 engine was started, and in October 1996 – overhaul of TV3-117 engine (all modifications) and its assemblies.

JSC "UWCA" performs upgrading of TV3-117V, VK engines into TV3-117 engines of the VM modification according to special requirements.

TBO of the engine is 1500 hours. Assigned life is 4500 hours with potential extension up to 7500 hours.



Overhaul of GTD-350 Engines

While in service the engine has been continuously upgraded to develop a GTD-350 modification of IV series with enhanced design.

GTD-350 gas turbine engine is used in a power unit of Mi-2 helicopter, comprising two GTD-350 engines and VR-2 gearbox.

JSC "UWCA" is engaged in overhaul of the engine since 2003.

The enterprise employs innovative methods for restoration of detail parts.



Mi-2

The enterprise uses advanced methods for restoration of detail parts.

During repair the following actions are made to improve the design:

- ♦ installation of an additional strengthening plate in a plenum chamber;
- ♦ upgrade of the second mount seat to enhance the bearing performance.

TBO of the engine is 1000 Hours.

Assigned life is 4000 hours.

Guaranteed life is 500 hours for Military Aviation and 350 hours for Civil Aviation.



GTD-350

Overhaul of VR-8A, VR-14, BR-24 Main Gearboxes

Main gearboxes of VR family demonstrate high reliability and operational durability.

JSC "UWCA" performs repair of main gearboxes VR-8A, VR-14, VR-24, which are part of power units of helicopter Mi-8MT, Mi-14, Mi-17, Mi-8, Mi-8T, Mi-24, Mi-25, Mi-35.



VR-24

The enterprise applies special manufacturing processes in repair of main gearboxes:

- ◆ electrospark alloying;
- ◆ hardening;
- ◆ spraying (freewheel clutch shaft of BP-8A gearbox);
- ◆ strain hardening of parts of gearboxes: VR-8A, VR-14 and engines NK;
- ◆ restoration of shaft necks and other heavy loaded parts by laser cladding;
- ◆ flame spraying of wear resistant coating to shaft neck of BR-8A gearbox.

JSC "UWCA" performs works on extension of TBO of VR-8A gearbox



VR-8A



VR-14



Fabrication of Engine Components

JSC "UWCA" has its own certified small-batch production facilities making it possible to quickly organize fabrication of new components.

The enterprise currently manufactures 3400 types of components for aircraft and gas engines for its internal needs.

JSC "UWCA" cooperates with more than thirty specialized and licensed manufacturers including JSC "United Engine Corporation".

JSC "UWCA" utilizes cutting-edge turning and milling equipment, grinding and thermal treatment equipment: vacuum shaft furnaces, equipment for chemical-thermal processing (nitrogen hardening, cementation). Almost all types of non-destructive testing are available.

High culture of producing and qualified staff enable prompt and quality manufacturing of aircraft parts.



CNC Special Pipe Bending Machine



General Purpose Cylindrical Grinding Machine

Manufacture of Non-standard Equipment and Tooling

In 2009 "Ural Works of Civil Aviation" began to produce customized non-standard equipment and tooling for conducting overhaul of TV3-117 engine as part of organization of TV3-117 overhauling on the customer production site.

Today JSC "UWCA" offers the complete range of non-standard equipment and tooling starting from the design phase and finishing with commissioning works that help to perform efficiently an independent on-site overhaul of TV3-117.

Integrated solutions for development of the required package of non-standard equipment include

- ◆ design;
- ◆ fabrication;
- ◆ start-up and commissioning;
- ◆ customer personnel training;
- ◆ after sale support and maintenance of the equipment

Large-scale test facilities developed by JSC "UWCA" represent module constructions, making it possible to transform the test stand basing on the site parameters and to organize arrangement at one's sole option.



Test Stand for Tuning-up Electronic Engine controller ERD-3VM



Test Stand for Oil Block and Exhaust Pump



Overhaul of NK-12ST Engines

In 2008 to meet the needs of PAO "Gazprom" JSC the enterprise started factory repair of NK-12ST engines intended for operation as drive of the blower which is part of gas pumping unit GPA-Ts-6.3.

One of the most important aspects ensuring the required level of reliability and durability is regular designer's supervision by OEM PAO "Kuznetsov" of the quality of repair works by JSC "UWCA".

In this any failure of the equipment during operation is quickly eliminated. JSC "UWCA" offers all types of overhaul and repair of NK-12ST engine.

TBO of the engine NK-12ST is 25 000 hours.

Assigned life is 75 000 hours with potential extension up to 100 000 hours.

Guaranteed life is 5000 hours.



Gas Pumping Unit GPA-Ts-6,3



NK-12ST

Overhaul of NK-16ST, NK-16STD Engines



NK-16ST

Since 1999 to meet the needs of PAO «Gazprom» JSC the enterprise started factory repair of NK-16ST engines intended for operation as drive of the blower which is part of gas pumping unit GPA-Ts-16.

JSC "UWCA" carries out overhaul and renewal of gas generator since 1999.

The enterprise started repair of free power turbine module in 2013.

JSC "UWCA" developed and implemented solutions to improve performance of NK-16ST, NK-16STD engines:

- ♦ upgrading of engine lubrication system through installation of a quick-replaceable oil filter module with low flow resistance (better serviceability, extended maintenance interval);
- ♦ installation at the junction of gas turbine and free power turbine of a three-wave sealed thermal expansion compensator instead of floating ring type joint or flexible seal placed in compliance with

MT-0680-09440.16.0700TU (elimination of hot gases (air) "bleeding" to GPA chamber);

- ♦ replacement of floating ring type joint with a multilayer composite expansion compensator at the junction between the free power turbine and "scroll" of gas pumping unit (elimination of hot gases (air) "bleeding" to GPA chamber);
- ♦ implementation of contact free measurement of revolutions directly from low pressure rotor shaft and free power turbine rotor shaft by means of DChV-2500A sensor, by elimination of drive assembly RO-16 and drive assembly of free power turbine (enhanced reliability, elimination of kinematic loops with a low-pressure rotor and a free power turbine rotor, reduced mechanical losses);
- ♦ accomplishing mechanization of the compressor variable guide vanes and air bleed valve with MP-750TV electrical devices (elimination of hydraulic system of ACS);
- ♦ introduction of cabling with new thermal resistant sheath (increased reliability and service life of cabling);
- ♦ fabrication of combustion chamber units from blanks ensuring enhanced dimension accuracy for replacement of units rejected during repair. Assembly of combustion chamber block with the combustion chamber made from the blanks ensuring enhanced dimensions accuracy and the plate being exposed to less deformation during operation (increased reliability and service life of combustion chamber due to reduced number of welding seams).

TBO of the engine is 20 000 hours with potential extension up to 25 000 hours.

Assigned life is 100 000 hours.

If quality improvement measures are implemented- extension up to 125 000 hours.

Guaranteed life after overhaul is 8000 hours.



Overhaul of NK-16-18ST Engines



NK16-18ST

In 2015 JSC "UWCA" started rendering of services on all types of repair and overhaul of NK-16-18ST, NK-16-18STD engines.

While providing repair of NK-16-18ST, STD customers are offered all actions aimed at improvement of performance and application properties, which are developed and implemented for NK-16ST, and those enhancing reliability, namely:

- ♦ independent shock-absorbing front and rear mount of the combustion chamber assembly (increased reliability and service life of a combustion chamber due to elimination of loads by the set of nozzles of high pressure turbine);
- ♦ manufacture of combustion chamber units from blanks ensuring high shape accuracy;
- ♦ recovery of shaft necks and other heavy loaded parts by laser cladding.

TBO of the engine is 20 000 hours with potential extension up to 25 000 hours.

Assigned life is 100 000 hours.

Guaranteed life after overhaul is 8000 hours.



NK-16-18ST

Overhaul of PS-90GP-2 Engines

In 2017 JSC "UWCA" included in its service portfolio the works on overhauling PS-90GP-2 engine, which is installed in GPA GTU-16P.

At present companies incorporated in PAO "Gazprom" run about 285 engines of such type.

GTU-16P gas turbine with the PS-90GP-2 engine has demonstrated excellent performance at gas pumping stations of Russia and surpasses its competitors in the following:

- ◆ high efficiency rate;
- ◆ low fuel consumption;
- ◆ long service life;
- ◆ reliable startup system;
- ◆ low maintenance and repair costs during service life;
- ◆ completely automated control;
- ◆ ease of control and maintenance;
- ◆ environmentally friendly.



Gas Pumping Unit
GPA-16 "Ural"



PS-90GP-2

Overhaul of PS-90GP-2 engine is provided in close technical cooperation with the designer JSC "UEC-Aviadvigatel" and manufactures JSC "UEC-PM", JSC "UEC-STAR", JSC "REDUCTOR-PM", Perm.

JSC "UWCA" has implemented new unparalleled technologies for PS-90GP-2 engines to better their performance characteristics:

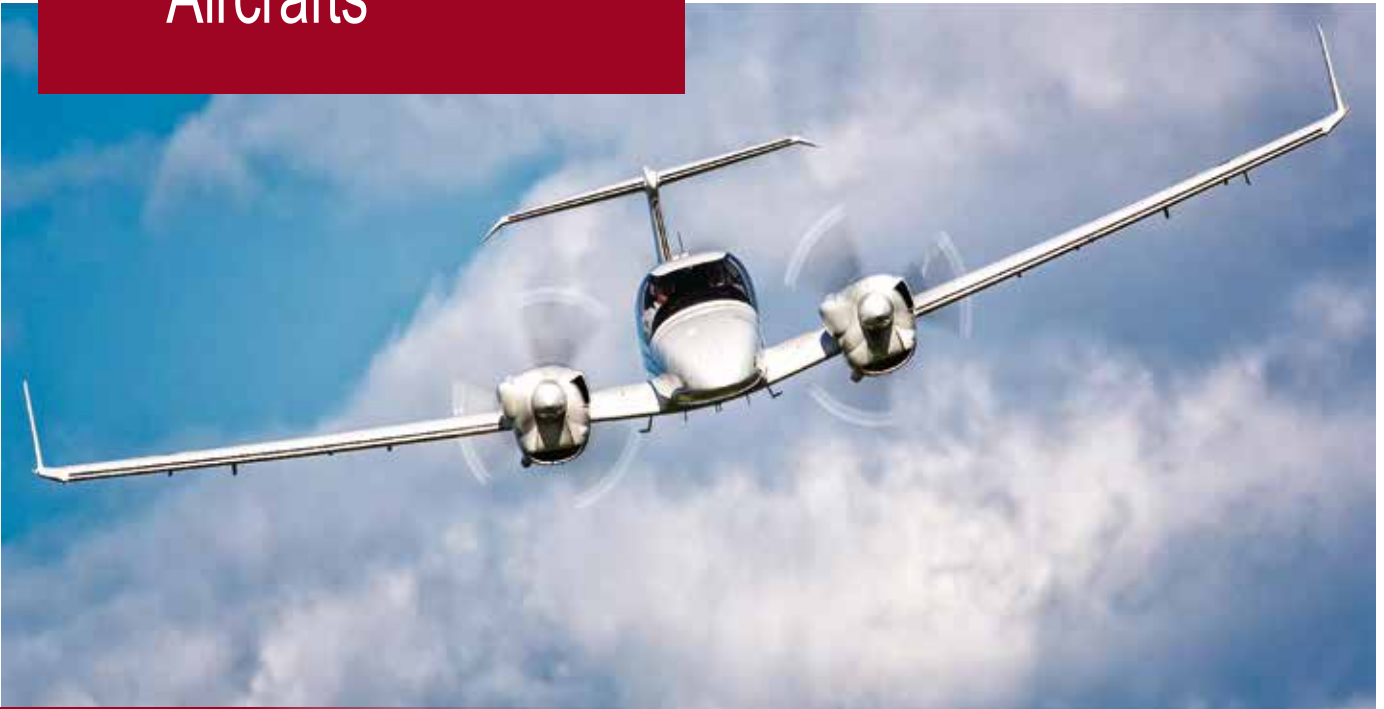
- ◆ detonation spraying of various coats to repair and to enhance wear resistance of components (detonation system of new generation CCDS2000 designed by Institute of Hydrodynamics n.a. M. A. Lavrentieva Siberian Branch of RAS, Novosibirsk);
- ◆ gas alitizing + SDP-1 material + TPC (thermal protection coating);
- ◆ application of EKG-1;
- ◆ polymer material EKG-1 – four-substance polymer compound based on epoxy resin, modified by organo-silicon admixtures with carbon filling material.

TBO of the engine is 25 000 hours.

Assigned life is 100 000 hours.

Guaranteed life after overhaul is 8000 hours (24 months).

▶ Business Division “Aircrafts”



Aircraft manufacture was started in 1993. It provides licensed serial production of such aviation vehicles as light airplanes and helicopters for civil aviation and unmanned aerial vehicles. The business division has departments delivering warranty and after-sales maintenance and repair services for the aircrafts. The company established direct communication with the customers to assist them in quick and efficient maintenance and operation of the aviation equipment.

Manufacture of UAV

In 2012 JSC "Ural Works of Civil Aviation" launched serial production of unmanned aerial reconnaissance complexes with unmanned aerial vehicles (UAV)

"Forpost" and "Zastava".

For assembly of the UAV components supplied by IAI, Israel are used.



UAV "Forpost"



UAV "Forpost"

Unmanned aircraft systems with UAV are employed as independent system for the following applications:

- ◆ air reconnaissance, on-line surveillance;
- ◆ finding and identification of targets during daytime or round-the-clock;
- ◆ determination of target location, directing to the target;
- ◆ video transfer of the ground surface or a certain target.

At present JSC "UWCA" provides after-sales maintenance of the produced unmanned aerial vehicles.



UAV "Zastava"



Manufacture of DA-40NG, DA-42NG and DA-42T aircrafts

In August 2013 JSC “Ural Works of Civil Aviation” launched serial production of light aircrafts DA-40NG Tundra under the license by a leading international aircraft producer «Diamond Aircraft Industries” GmbH (Austria).

DA-40NG is a four-seat piston- powered aircraft.

The airframe if made of composite materials.

The aircraft perfectly suits the needs of corporate flight operators, private owners, for various commercial applications and training both civil and military pilots.

In 2014 JSC “Ural Works of Civil Aviation” started production of twin-engine multiuse DA-42NG.



DA-42NG

It is a light aircraft made of durable composite materials based on glass- carbon. It is powered by two 168hp Jet fuel Austro Engines.

Certified ice protection system (TKS) enables it to resist icing conditions and Garmin G1000 avionics system with autopilot ensures safety and easy flight control.

Combination of advanced technical solutions makes DA-42NG the best choice for environmental services, mineral prospecting, for civil defense and emergencies management.

On November 8th, 2017 aircraft DA-42T, Russian version of Austrian aircraft Diamond, carried out its first flight. On 16th of December, air trials of the first serial batch were completed. Twin-engine training aircraft DA-42T is produced in accordance with the Russian standards, in particular, its avionics is supplied by local producers.



DA-40NG

Manufacture of BELL-407 helicopter

In 2015 JSC "Ural Works of Civil Aviation" obtained permission for manufacture of American helicopters Bell-407.

It is a light multiuse helicopter with one 643 kW (862 hp) single shaft gas-turbine engine Allison (Rolls-Royce) controlled by FADEC with main and tail rotors.

The fuselage is mainly made of aluminum with some skin elements from composite materials.



BELL-407



BELL-407

It is a seven-seat (including the crew) helicopter equipped with Garmin G1000H avionics. The payload is up to 1137 kg, cruise speed is 259 km/h.

Bell-407 is famous for being one of the most comfortable and reliable helicopters and its maneuverability allows to use it for people evacuation, construction purposes, policing, etc.



Aircraft Manufacture L-410 UVP E-20

In 2016 JSC “UWCA” obtained permission for production of Czech aircrafts L-410 UVP E-20.

L-410 UVP E-20 is an all-metal high-wing commuter aircraft with two GE H80-200 turboprop engines and AV-725 propellers. It is a passenger aircraft for regional flights. L-410 moves 19 passengers. The aircraft is also used as freighter and for other specific purposes.



L-410 UVP E-20



L-410 UVP E-20

Aircrafts of L-410 family are used in over 50 countries of the five continents.

L-410 is in high demand in Russia, Africa, South-East Asia, South America and Europe. Its main advantage is landing under bad conditions.

L 410 UVPE20 is in compliance with type certificate No. CT302-L-410 UVP E-20, approved by Interstate Aviation Committee and is permitted for production and operation in the Russian Federation.

In 2017 based on JSC “UWCA” facilities, an authorized service center for technical maintenance of L-410 UVP E-20 was established in Ekaterinburg.

UWCA – service center

JSC "Ural Works of Civil Aviation" is an exclusive distributor of spare parts, units and components and technical maintenance for Diamond aircrafts of type DA-40NG and DA-42NG with AE-300 engines in the Russian Federation.



DA-42NG



DA-40NG



DA-42NG

► Business Division “Engineering Center”



The Center was established in 2016, it is engaged in engine design and development and provides solutions for upgrading of aircrafts manufactured by JSC “UWCA” including their avionics, conducts testing and implements upgrades in serial production. The operating units of the Engineering Center are located in three Russian cities: Ekaterinburg, Moscow and Saint Petersburg.

ENGINEERING CENTER

Engineering center based on JSC "UWCA" facilities was established in 2016. Its purpose was to provide modification services for serial aviation equipment (Diamond DA-42, AI L-410 UVP E-20).

The Engineering Center manages the following activities:

- ♦ design and upgrading of aircrafts, aircraft engines and avionics systems;
- ♦ coordination of trials and implementation of innovations in the serial production.

Among the main projects of the Engineering Center one can name creation of training complex for DA-42 with Russian avionics and modernization of L-410 for operation with Russian avionics, ski and float-type landing gear and cross-country landing gear.

The Center comprises four design offices and a number of operational units located in three Russian cities: Ekaterinburg, Moscow and Saint Petersburg with over 170 employees in total.

In 2017 the Engineering Center became an independent business division.



L-410 UVP E-20



DA-42T flight deck



Aircraft upgrading in the Engineering Center,
L-410



Developments by the Engineering Center,
DA-42

Our Customers



- ◆ Azerbaijan
- ◆ Algeria
- ◆ Armenia
- ◆ Afghanistan
- ◆ Bangladesh
- ◆ Belarus
- ◆ Bulgaria
- ◆ Bosnia-Herzegovina
- ◆ Hungary
- ◆ Venezuela
- ◆ Vietnam
- ◆ Georgia
- ◆ Egypt
- ◆ India
- ◆ Indonesia
- ◆ Iran
- ◆ Canada
- ◆ Kazakhstan
- ◆ Kirghizia
- ◆ China
- ◆ Congo
- ◆ Cuba
- ◆ Laos
- ◆ Latvia
- ◆ Lithuania
- ◆ Malaysia
- ◆ Mexico
- ◆ Myanmar
- ◆ Nepal
- ◆ Pakistan
- ◆ Peru
- ◆ Russia
- ◆ Syria
- ◆ Slovakia
- ◆ Sudan
- ◆ Tajikistan
- ◆ Turkmenistan
- ◆ Turkey
- ◆ Uzbekistan
- ◆ Croatia
- ◆ Czech Republic
- ◆ Sri Lanka
- ◆ Ecuador
- ◆ Ethiopia
- ◆ South Korea