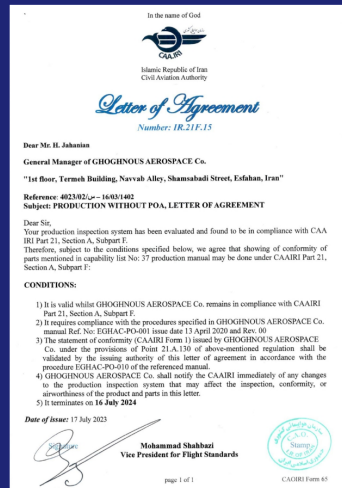




# Esfahan Ghoghnous Aerospace Company

Ghoghnous Aerospace Industry Company officially began its operations in 2014 with the goal of establishing a specialized organization in the design, analysis and manufacturing of aerospace components and systems. By successfully completing notable projects across various sectors of the aviation industry and manufacturing fields, the company has demonstrated its expertise and capabilities. Currently, Ghoghnous Aerospace Industry holds the following certifications, issued by the Civil Aviation Authority: Design Organization Approval (DOA), Production Organization Approval (POA), Maintenance Organization Approval (MOA) and Cabin Crew Training Organization (CCTO).



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## Introduction of Esfahan Ghoghnoos Aerospace Company

Esfahan Ghoghnoos Aerospace Company has officially started its activities in 2014 with the aim of design, analysis and production of aerospace parts and systems, and has provided its capabilities by carrying out brilliant industries. At present, Esfahan Ghoghnoos Aerospace Company is a holder of the certificate of Design Organization Approval (DOA), Production Organization Approval (POA) and Maintenance Organization Approval (MOA) of the National Aviation Organization. At present, performing aviation parts repair, changes in design and repair are among the goals of the company, and it has a unique team in this field.



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## Single motor actuator for Anti-ice system overhaul

Esfahan Ghoghnoos Aerospace Company specializes in the maintenance and repair of Single motor actuators used in aircraft Anti-ice system. This actuator is designed to automate the control of valves or mechanism that regulate the flow of heated air or electrical power to critical areas such as wings, engines and windshields. By preventing ice buildup, they play a vital role in ensuring safe flight operations, especially in cold or icing conditions.

Single motor actuators are favored for their simplicity, reliability, and compact design. Their single motor configuration makes them cost-effective and easy to maintain while still meeting the high reliability standards essential for aviation. The compact and lightweight design also helps in optimizing aircraft efficiency.

With expertise in handling these critical components, Ghoghnoos Aerospace ensures that your Anti-ice system function effectively, contributing to the safety and reliability of flight operations in challenging weather conditions.



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## Manufacture Passenger and pilot seat foam

Esfahan Ghoghnoos Aerospace Company is manufacturer of aircraft seat foams. These foams are in accordance with the standard of the CAA. IRI and CS 25.853 and appendix F. The produced foams have all the necessary standards which have been tested according to the ASTM D3574 standard and also are supplied with Form 1. Esfahan Ghoghnoos Aerospace Company manufacture these seat foam for all types of aircraft.

## Manufacture Aircraft seat belt

These belts are manufactured of the best materials. These products have the necessary standards of civil aviation and have passed the necessary tests. These are made for all types of airplane seats.



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## Hydraulic Line Restrictor Check Valves

This project has been started at the request of airlines and due to service bulletin SBF100-32-162 and AD No 2019-2019-0104. Fokker is requesting replacement of the hydraulic tube assy of the MLG retraction actuator in the Fokker 100 Aircraft landing gear.



## Reducer of Main Landing Gear Hydraulic Hose Assemblies

This project has been started at the request of airlines and due to service bulletin SBF100-32-163 and AD No 2019-0104 . Fokker is requesting the replacement of a restricted check valve with screen restricted check valve in the Fokker 100 aircraft landing gear.



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## Igenition system overhual

Esfahan Ghoghnoos Aerospace Company currently has the certificate to repair & overhual the engine ignition system.

The Ghoghnoos Company overhuals the engine exciter. It also overhuals the ignition Lead.

Some sparkplug are also overhualled by Ghoghnoos Company.

All parts are with CAA.IRI Form 1. This company manufacture the final prototype of the engine spark plug.



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## Design & Manufacture Fast Fin technology

Challenge of helicopter with standard fin is to achieve precision hover holds, crosswinds, or operations at altitudes with max gross weight.

Reducing the excess of vertical fin by changing the size and replacing a simple and light weight nonmetallic end cap structure.



## Strake technology

Main rotor downwash air flow affects undesired lift on tail boom. The Strake is the most cost effective performance enhancing modification particularly in the low speed/hover flight regime for single rotor helicopter on the market today.



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## Design & Manufacture Locking gas spring for seat aircraft

Locking gas spring is adjustable hydropneumatic elements consisting of a pressure cylinder, rods, pistons and a special valve. The different parts of the spring are shown in the figure below. The inner chamber is filled with pressurized gas that supplies the spring force, and the packings and o-rings used ensure the aeration of the various sections. The result of the forces resulting from the application of pressure on different sections of the piston provides the spring force, which depends on the diameter of the piston rod and the internal gas pressure. A small amount of lubricating fluid also facilitates the movement of the piston and the life of the seals. The speed of the piston can be controlled by adjusting the diameter of the hole in the spring valve part, which also determines the damping coefficient of the spring.



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## Specification

- ✓ Position adjustment with elastic or rigid lock.
- ✓ Optimal weight compensation when raising, lowering, opening and closing Position lock in compressed or open spring modes.
- ✓ Installation in specific direction or in all directions depending on the type of spring.
- ✓ Linear spring profile curves even at high forces and ranges of motion.
- ✓ Small size and low weight.
- ✓ Long-term operation without maintenance.



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## Design & Manufacture types of Hydraulic cylinder barrel & shaft

Hydraulic Variable Delivery Pump Cylinder Barrel Model AP1V-059 Supplied for application of Fokker 100 aircraft.



### Manufacture Brake system anti-skid filter

This project was carried out at the request of Airline to repair the anti-skid filter of Fokker 100 aircraft with part number 6004154 and the new filter will be replaced with the old filter. The dual skid control valve assembly is used in the aircraft braking system to electro-mechanically control hydraulic brake pressure during skid conditions. The dual skid control valve assembly receives pilot metered pressure through two external pressure ports. Internally, the flow is filtered and directed to each of the servo valves.



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## Cabin interior design & manufacture

Ghoghnoos Company design and manufacture non-metallic parts for airplane cabins.

This company has the ability to manufacture the required parts of the cabin interior (class divider, side wall,...) according to the necessary standards and by issuing Form 1 of the CAA.IRI.



## Design & Manufacture Scavenge & charge pumpe

Design and manufacture of hydraulic pump related to the CSD generator system of the aircraft by submitting Form 1 of the Civil Aviation Organization in Ghoghnoos Aerospace Company.

The RPM of these pumps is very high and it has a complex design and manufacture. Also, the type of material is very important in the life of the pump.



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## Overhaul types of Servo valve

This company repairs various types of Servovalves found in the hydraulic system of aircraft, particularly in brake components. Pressure operation: 3000 psi



## Rotax engine overhaul

Esfahan Ghoghnoos Aerospace company specializes in comprehensive overhaul services for rotax engines. with years of experience and a team of skilled technicians, we ensure that the engine is restored to peak performance. Our overhaul process includes meticulous inspection, cleaning and replacement of worn-out parts.



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## Single motor actuator Overhaul

Esfahan Ghoghnoos Aerospace Company offers comprehensive overhaul and repair services for Single motor actuator. These actuator feature a motor and a gearbox housing that contains essential components such as the worm and spur gear clutch assembly, gear assemblies, output shaft, and limit switches.

Our team is skilled in restoring each component to ensure reliable operation and precision alignment, utilizing advanced methods to safeguard against overloads and ensure accurate limit detection. With our specialized expertise, we enhance the actuator's performance and longevity, making it fit for critical aerospace applications.



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## Engine driven pump Overhaul

Esfahan Ghoghnoos Aerospace Company specializes in the comprehensive overhaul and repair of Engine Driven Pumps (EDPs). EDPs are essential component of an aircraft's hydraulic system, directly driven by the aircraft's engine to convert mechanical power into hydraulic pressure. These pumps maintain the necessary hydraulic pressure for critical systems, including landing gear, flight controls, and braking systems.

Our team has expertise in restoring pressure-compensated, variable displacement axial piston pumps, ensuring reliable operation and optimal fluid delivery. With advanced capabilities, Ghoghnoos Aerospace guarantees high-quality maintenance and repair for EDPs, supporting safe and efficient aircraft performance.



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## Boeing 737 Door Mechanism Design & Manufacture

Esfahan Ghoghnoos Aerospace Company provides comprehensive overhaul and repair services for Boeing 737 door jacks, crucial for safe and efficient door operations during boarding, disembarking, and emergencies.

### Hydraulic System

**Purpose:** Supplies the force to smoothly open and close heavy cabin doors.

**Operation:** Uses pressurized hydraulic fluid to operate the door jacks.

### Key Components

**Hydraulic Pump:** Generates hydraulic pressure.

**Hydraulic Lines:** Transport fluid to and from door jacks.

**Actuators:** Convert hydraulic pressure into mechanical force.

**Door Jacks:** Mechanisms that apply force to open or close the door.

### Door Mechanisms

**Hinges:** Allow the door to pivot.

**Locking Mechanism:** Secures the door during flight with an electronic system for redundancy.

**Handles:** Exterior and interior handles for ground and crew operation.

With our expertise, Ghoghnoos Aerospace ensures reliable maintenance and repair of Boeing 737 door jacks, enhancing aircraft safety and performance.



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## Dual Adaptive Anti-Skid Valve Overhaul

Esfahan Ghoghnoos Company offers expert overhaul and repair services for Dual Adaptive Anti-Skid Valves (DAAVs), essential for aircraft braking systems. Each DAAV contains two independent valve assemblies that control adjacent wheels.

### Features:

**Configuration:** Eight valve assemblies in four bodies for Green and Yellow brake supplies.

**Connections:** Six-way electrical receptacle and four hydraulic connections (Inlet, Return, Brake 1, Brake 2) to prevent cross-coupling.

### Functionality:

These assemblies adjust hydraulic pressure based on signals from the anti-skid control box, using durable stainless steel and lightweight alloy components.

With our expertise, Ghoghnoos Aerospace ensures reliable DAAV maintenance and repair, enhancing aircraft braking safety and efficiency.



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