TurbineAero was created to become the most comprehensive, flexible, and customer focused APU MRO Services company in the world. As the largest independent APU MRO globally, TurbineAero repairs, sells, leases, tests, and certifies APU and related parts accessories. TurbineAero currently has four locations, three are located near Phoenix, AZ and the fourth is just outside of Bangkok, Thailand.

**Additional Processes include:**

**Machining Core**
- CNC Lathe (up to 31” Swing)
- CNC Mill (3, 4 and 5-Axis Milling)
- CNC EDM (Sinker and Wire)
- ID/OD Grinding
- Curvic Grinding
- Conventional Machining

**Airflow Measurement**
- Mass Airflow Measurement
- Area Airflow Measurement

**Shot Peen – AMS2430 Certified**

**High Speed Spin Testing**

**Inspection/Non-Destructive Testing**

**Pack Aluminide Coating**

**Vapor Aluminide Coating**

**Platinum-Aluminide Coating**

**Platinum Plating Coating**

**Chemical coating removal**
- Internal Stripping
- External Stripping

**Bench Grinding/Hand Finishing**

**Thermal Spray**
- Fully Automated
- Controlled thickness to customer Specifications
- No Dimensional Limitations
- LPPS – Low pressure plasma spray, thermal plasma, HVOF, & dual arc

**Vacuum Furnace**
- 1 Heat Treat Machine
- 1 Brazing Machine
- Used for Age, Stress, Solutions, Aneal, Precipitation hardness
- Working zone = 2’ x 4’

**Brazing**
- Brazing creates an extremely strong joint, usually stronger than the base metal pieces themselves, without melting or deforming the components
- No limitation on size of part, only on the airflow

**Welding**
- ARGON Chamber Welding

**Floride Ion Cleaning (FIC)**
- Employs a chemical vapor process
- Hydrogen fluoride gas penetrates and reduces oxides on all surfaces
- Minute cracks will be cleaned
- An “alloy depleted surface” is created (not detrimental to part)
- Primarily used prior to brazing and welding repairs

**Electron Beam (EB) Welding**
- Single pass welding of thick joints
- Hermetic seals of components retaining a vacuum
- Low distortion
- Low contamination in vacuum
- Weld zone is narrow
History
TurbineAero was originally founded in 1977 then known as Tiernay Manufacturing. Tiernay added repair and overhaul capabilities in 1978, which began the R&O service life of today’s organization.

The first service work came from overhauling environmental control units for Cobra Helicopters for the US Army. The first APU was a Solar Titan Model T62-T39. Subsequently, the GTCP85 model as added which propelled the Company’s growth in both the commercial and military market segments. In the early 1980’s the name was changed to Tiernay Turbines with the development of Tiernay’s TT10 APU which also sold to the US military. In 1988, Alco Standard purchased the overhaul portion of the business and re-named it Triumph Air Repair. Then in 1993, Alco sold the R&O division to Triumph Group.

In 1996, Triumph Engines – Tempe joined the Triumph Group and began a campaign of major capabilities expansion including highly engineered component repairs, advanced thermal coatings, and low pressure plasma spray technologies.

About
TurbineAero is the world’s leading independent aerospace component maintenance, repair, and overhaul service providers focused on APU’s and related products. The businesses provide military, commercial, and regional airline customers with a comprehensive maintenance solution for their legacy and new APU engine models. The combined entity provides global coverage from two modern facilities located in Chandler, Arizona, and Chonburi, Thailand. In addition, it is a provider of hot-section component manufacturing and repair services for original equipment manufacturers, aircraft operators, and repair and overhaul providers, offering extensive and unique capabilities, including complex machining, engineering, inspection, non-destructive testing, and thermal coatings in its Tempe, Arizona facility.

Services
TurbineAero’s world class engineering and services capabilities are designed to provide customers with customized solutions, tailored to each customer’s unique needs. TurbineAero’s operations, engineering and customer services teams strive to provide unique and agile custom solutions for operators of any size, regardless of their needs, with the most flexible pricing and packaging services options in the world.

Certifications:
Regulatory Approvals
Held: FAA, EASA, & CAAC Part 145

Certifications offered:
FAA Form 8130-3 with / EASA Dual Release, CAAC Form AAC-038, &/OR Certificate of Conformance

Quality System
Certifications: ISO9001 & AS9110

In house calibration services, compliant to MIL-STD-45662

On-Site NDT Level III
Staff certified under NAS 410

Industry leading FOD prevention and clean as you go practices

Why choose TurbineAero?
2015, 2016, 2017 The145.com APU MRO Top Shop
Serviced more than 10,000 APU
Serviced more than 200,000 APU Accessories
Over 35 Years of Global APU MRO Services
TurbineAero has DERs on staff
TurbineAero’s mean time between shop visit is greater than the original equipment manufacturers reported fleet times
Development of customized APU maintenance programs designed to lower operating costs and maximize on-wing reliability
APU line maintenance training at the TurbineAero facility
98% Customer Retention