



MANUFACTURING & SPECIALIST SERVICES

SAFE Air's Team offers a wide variety of capabilities for the fabrication and repair of aircraft components for military and civil aviation requirements.

These processes include welding, grinding, heat treatment, machining, shot peening, electroplating, non-destructive inspection and testing and painting.

SAFE Air's specialist services team are highly experienced and provide the flexibility to complete one-off solutions in a short time frame and to a superior standard. We are also an integral link as part of SAFE Air's wider aviation component repair, engineering design, fabrication and manufacturing services.

Our skilled, highly experienced engineers are trained and qualified to meet all current standards for military and civil certification and authorisation.

SAFE Air can release to service for regulatory bodies including CAANZ Pt 145 and pt 148.

ELECTROPLATING

SAFE Air's modern electroplating plant near Blenheim, New Zealand, is a leading centre for all inorganic surface finishes required by the aircraft industry.

Our large electroplating bay is fully self-sufficient and equipped to provide a superior quality product. Importantly, it is built to completely meet demanding environmental standards.

The facility at SAFE Air contains the full spectrum of electroplated and associated coatings and processes.

SAFE Air's technicians deal with small fasteners and fittings to propellers, undercarriage and structural components.

These highly specialised technicians have many years of experience in both the civilian and military aeronautical environment.

PAINTING

Aviation paint requirements is a highly specialised field, and one that SAFE Air has years of experience in providing to our customers. In our purpose-built paint booth, SAFE Air can cater for all types of aircraft paint requirements for both civil and military customers, in a closely controlled environment.

LASER TRACKING

SAFE Air's advanced laser technology offers the highest precision alignment and measurement for improved manufacturing techniques.

Using this tracking equipment, SAFE Air's highly skilled engineers are able to refit and replace critical components to exacting standards.

It is also able to capture and display 3D coordinates for aircraft symmetry and alignment checks, jig alignment checks, positional and planarity checks and mapping data including damage plots on aircraft surfaces, modelling aircraft interior and exterior surfaces.

MACHINING

SAFE Air's extensive machining facilities offer the repair of existing, or manufacture of new, aircraft components. This includes engines, propellers and other aviation components for military and civil aviation. SAFE Air's engineers can also design and manufacture custom tooling and jigs to facilitate repairs or specialist work.

Our capabilities include machining engine cases using our vertical lathe and machining large propellers on our 3m bed lathe. We also have highly accurate tool-making milling machines for producing high quality aircraft components.

SAFE Air's machine shop is integrated with all other on-site SAFE Air services including engineering design, propeller and engine shops, shot peening, non-destructive testing, shot peening, electroplating, heat treatment, painting and logistics and supply.



SHOT PEENING

SAFE Air offers both automated shot peening and rotor peening for military and civil aircraft applications.

Shot peening is a highly specialised, cold working method of imparting a layer of compressive stress onto the surface of a structure, in order to counter the effects of residual fatigue stress. This prevents stress corrosion cracking and fatigue stress cracking, as cracks will not propagate in an area subjected to compressive stress.

The process uses tiny spherical balls as peening hammers, which are propelled in a tightly controlled process to impact on a surface, each creating a small dent.

SAFE Air's engineers have the capability to shot peen propeller blades, wheels, skin structures and third party work for both military and civil applications.

Shot peening is design critical and as such, is offered by SAFE Air as a closely integrated part of the range of other services performed on-site.

WELDING

SAFE Air can manufacture and refurbish aluminium, steel and stainless steel parts.

Our services include MIG welding, TIG welding and spot welding as well as foil repairs on heat shield blankets.

SAFE Air's unique heavy fabrication area features specialised guillotines, plasma cutters and heavy tube bending equipment with which to create or repair engine test stands, jigs and support structure work.

SAFE Air can repair and manufacture rigid pipelines of up to 1 inch in diameter, which can subsequently be hydraulic pressure tested on our hydraulic rig and crack-tested by our on-site NDT facility to meet required certification.

Our welding operations combine services with all other SAFE air operations for smoothly managed, on-time delivery.



HEAT TREATMENT

SAFE Air has a comprehensive heat treatment facility, located on-site in Blenheim, New Zealand.

We can carry out heat treatment of aluminium alloy, stainless steels and alloy steels. Our ovens are controlled to the latest specifications and calibrated regularly to ensure the process meets our required quality standard. Our larger oven facilities include a crane, to safely lift larger parts. we also carry out all post heat treatment testing to ensure conformity to specification.

SAFE Air is fully certified to provide heat treatment services and supports a wide range of domestic and international aviation clients.

Aluminium: All aluminium heat treat processes, from annealing to hardening, on all aircraft grade aluminium are able to be carried out on-site at SAFE Air's heat treatment plant. We can heat treat parts of up to 3m x 1m in our custom-built, high specification aluminium treatment oven.

Stainless steel: SAFE Air can provide heat treatment of stainless steel and alloy steels sized up to 1x1m.

The above is just a sample of our capabilities, see our website or contact us for further information.

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