

Industrial Avon – Advanced Component Repair and Upgrade

Major Oil & Gas Fleet Operators select

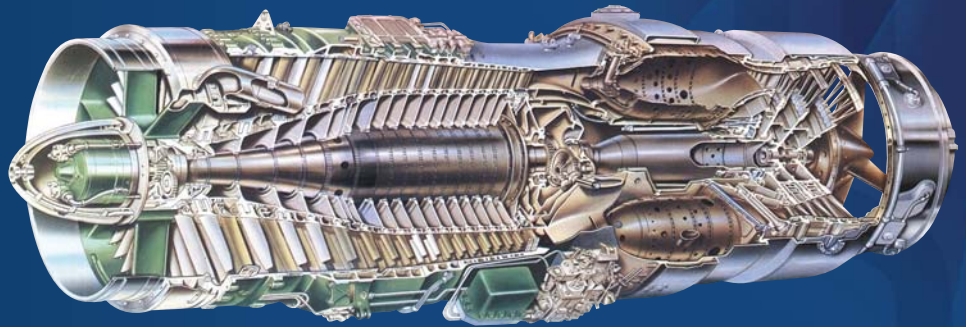
Liburdi Turbine Services for their AeroDerivative Component Repairs

The Liburdi Advanced Repair Program offers:

- Extended Service Life – with demonstrated service 3 times conventional limits
- Reduced Maintenance Expenses through avoided new parts expense
- All Models supported – Industrial Avon 200, 1535, 1534, 1533
- 26 unique Advanced Repairs for GG components – all Authorised by OEM, but only available from Liburdi.

Liburdi Turbine Services have been providing Advanced Repairs for Industrial Avon fleet owners since 1993. In addition to standard repairs offered by others, Liburdi has developed a series of unique proprietary repairs to benefit operators.

The Advanced Repairs enable components to be returned to service at a fraction of the cost of new replacement parts; maintaining or improving component integrity while creating significant savings for the operator.



Advanced Repairs – Proven Reliability

- More than 26 unique repairs – authorized by OEM, but available only from Liburdi
- HPT, IPT, LPT Blades, Nozzle Guide Vanes (NGV's)
- Advanced technologies to restore and re-construct components for extended service
- Multiple service intervals – parts are achieving 130,000+ hours reliable service
- Avoid high expense of new replacement parts – main savings at time of overhaul
- Applied on over 700 engines sets for some 20 customers worldwide including the major international oil companies.

Liburdi Advanced Industrial Avon Repairs

HPT, IPT, LPT Blade Repairs and Life Restoration

- FSR® Full Solution Rejuvenation® heat treatments restore alloy microstructure and creep life to as-new properties, enabling sets to reliably achieve extended service
- FSR® processed blades meet or exceed OEM new-part specs
- Shroud abutments upgraded to Mod 4541, 4542, 4543
- Demonstrated life extension of 130,000+ hours.



HPT, IPT, LPT Nozzle Guide Vanes – Dimensional Reconstruction and FSR® Rejuvenation

- LPM® Liburdi Powder Metallurgy process is used to reconstruct thin airfoils and metal loss due to oxidation burning – parts previously declared not repairable
- NGVs with “bowed” airfoil are able to be straightened and the alloy restored to as-new strength by FSR® Rejuvenation heat treatments to avoid future bowing
- Patented LPM® process used extensively on aeroderivative, industrial frame, and aircraft components over past 20 years – outperforms conventional weld repairs and fully authorised by OEM.



HPT Nozzle Guide Vanes – Throat Area Restoration for full Power/Efficiency

- LPM® Liburdi Powder Metallurgy process is used to reconstruct thin airfoils, bowing, and metal loss to restore the original as-new throat openings
- Restoration of the HPT throat area is critical to achieve full engine power and efficiency – older engines can now recover original performance.

Comprehensive Support for Industrial Avon Fleet Operators

- Our list of Advanced Repairs is always growing, as we continue to invest in new repairs and repair processes, aimed at the extended service for critical components
- Contact us for a catalogue of the latest Advanced Repairs for Industrial Avon, or for more information on the past 15 years of Industrial Avon operator experience and references for these services.

Liburdi Advanced Repairs utilize proven methods such as FSR® Full Solution Rejuvenation, special oxidation resistant weld alloys, high strength LPM® powder metallurgy, and high performance coatings that extend service life after repairs. These processes also achieve extremely high yield rates. The often considered “non-repairable” becomes fully restored using Liburdi’s Advanced Repairs.

Liburdi Advance Repairs typically average \$300,000 to \$600,000 in net savings per major overhaul event.

Liburdi Turbine Services

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