

Industrial SGT-A20/Avon – Advanced Component Repair and Upgrade

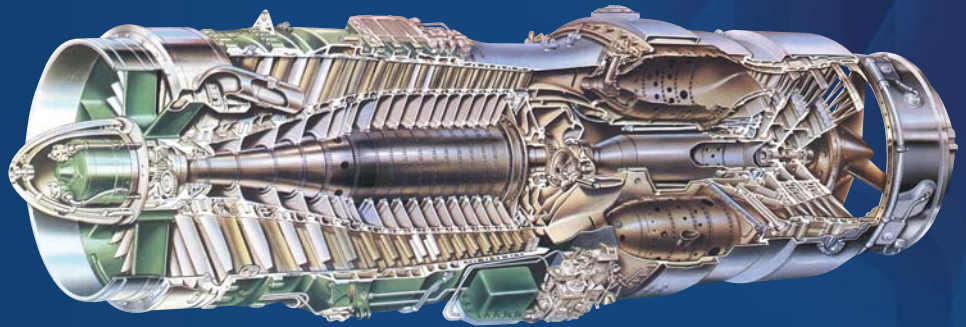
Major Oil & Gas Fleet Operators select
Liburdi Turbine Services for their AeroDerivative Component Repairs

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 SGT-A20/Avon 200, 1535, 1534, 1533
- 26 unique Advanced Repairs for GG components – all Authorised by Siemens and only available at Liburdi.

Liburdi Turbine Services have been providing Advanced Repairs for Industrial SGT-A20/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 SGT-A20/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 SGT-A20/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 SGT-A20/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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