

GAS TURBINE INSPECTION AND REPAIR

Inspection and repair of gas turbine plant
on-site, reducing costs and outage time

Detailed inspections, testing of components, repair and overhaul,
all carried out at the owner's facility



Turbine Controls Limited

Gas turbine inspection and repair

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Engine inspection and repair

TCL are now able to offer an inspection and repair service for a wide range of industrial and aero-derivative gas turbines. This complements the inspection services that TCL have provided for some years.

Engine inspection

An external inspection and internal boroscope inspection is carried out to identify the current condition, this will enable the owner to:

- Identify parts that may fail in the future
- Plan future scheduled and non-scheduled maintenance activities
- Pre-order parts for future replacement
- Reduce the spare parts holding

The engine boroscope service includes:

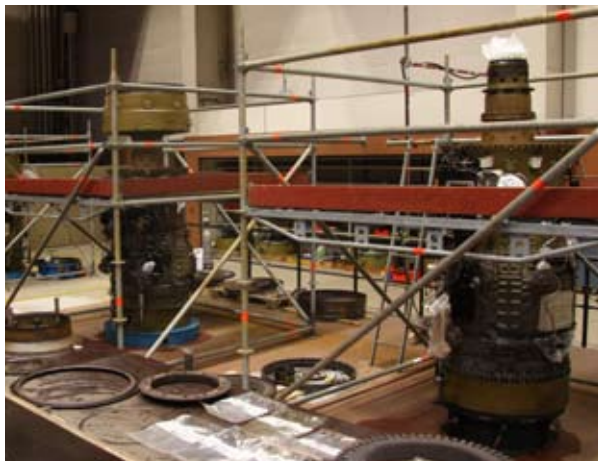
- Attendance on site by TCL engineers, with the latest boroscoping equipment
- Detailed report highlighting all areas of concern
- Video of the engine internals
- Recommendations for future maintenance

On-site repair

Traditionally repairs to many of the aero-derivative engines have been carried out off-site at the overhaul company's workshop. This has resulted in costly repair bills and extended machine outages. The reality is that many repairs can be carried out on site without the need for transporting the engine to a remote facility. Typical examples include:

- Combustor can change out
- Hot end section repair, including turbine replacement
- Nozzle guide vane (NGV) overhaul
- Rotor blade overhaul
- On-site balancing services
- Rear bearing/front bearing changes

An on-site engine repair offers the advantages of reduced repair costs and a much reduced outage time.



RR Avon turbine replacement



Nozzle box with NGV's removed

Parts are assessed for further operation by carrying out comprehensive NDT inspection on site. Depending upon operational requirements faulty parts are replaced or sent for overhaul.

Following repair the rotor is re-balanced if required and the engine is tested up to full load to confirm performance figures.

The repairs are carried out using strictly controlled conditions in line with pre-developed procedures. These involve:

- Setting up a clean conditions area on site
- Full risk assessment survey
- Ensuring all parts are on site before the repair commences
- Working to agreed procedures and method statements

Workshop repair

TCL now have the facilities to repair, overhaul and calibrate the following engine components:

- Turbine blade overhaul
- Bleed valve actuators
- Inlet guide vane (IGV) actuators
- Exhaust thermocouple assemblies
- Gas, liquid and dual fuel burners
- Ant-icing valves
- HP fuel pumps

Repairs are carried out to pre-defined procedures and come complete with a 12 month factory guarantee.

Quality Control

TCL have the following quality control accreditations:

- ISO 9001:2008
- TickIT Guide Issue 5 software production
- CSA Z299.2-85 Quality control developed for CANDU plant

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52, Kenilworth Drive T +44 (0)116 271 7248
Oadby, Leicester F +44 (0)116 271 7250
LE2 5LG UK sales@tcluk.net
Or visit us at www.tcluk.net