



CASE STUDY
Turbine rub damage



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CONDITION MONITORING EXCELLENCE

Early detection of ITT and N2 trend changes lead to prompt and cost efficient repair with minimum operation disruption.

INTRODUCTION

Following a routine DEEC download, Jet-care issued a warning to an operator.

GAS PATH ANALYSIS

We observed a rapid increase in ITT of almost 60°C and a decrease in N2 of around 3.5% on the #1 Engine over the last four flights of the download data. We strongly recommended that the customer investigate this change as a matter of urgency as this type of trend could indicate genuine engine hot end deterioration.

ACTION/FOLLOW UP

The aircraft was ferried to a maintenance shop for investigation. Turbine entry found High Pressure shroud failure with heavy secondary damage caused by debris.

CONCLUSION

The operator was provided with the information to enable it to schedule the repair. Without this information the aircraft may have become grounded due to performance issues during a scheduled flight, ending in passenger disruption, high costs of shipping and staff movements to replace the engine.

