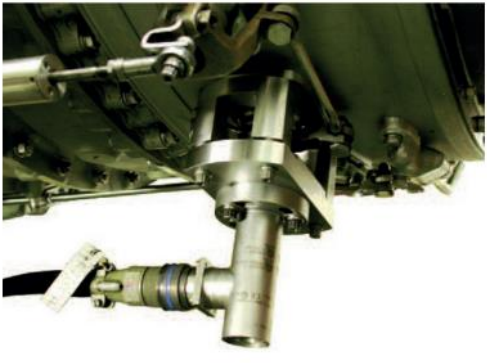
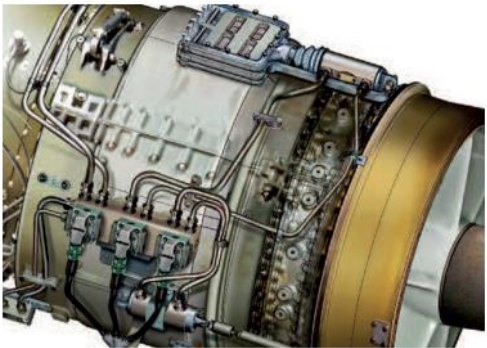


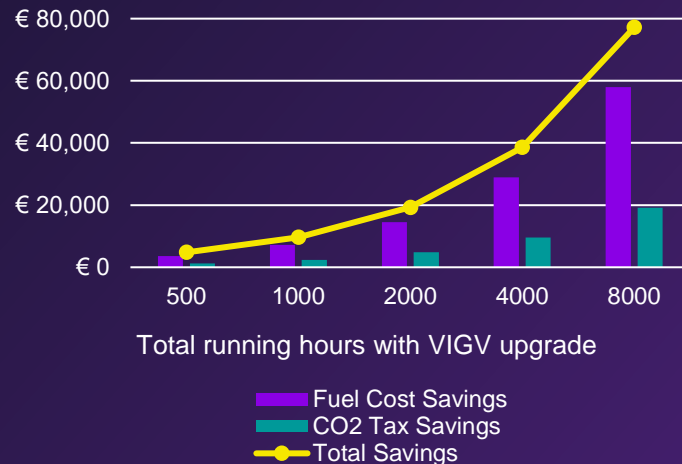
# Closed Loop VIGV Upgrade

Applicable fleet: SGT-A20

*\*can be bundled with BOV Optimisation*



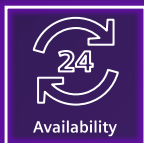
## A20 Estimated Average Fuel and CO2 Tax Cost Savings



Note: Estimated Fuel Cost / CO2 tax Savings above are provided for indicative purposes only and are based on a fuel gas price of €7/MMBtu and CO2 tax of €50/ton.



Reliability



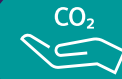
Availability



Efficiency



Equivalent  
to ~3%  
H2 blend



Up to 1% CO<sub>2</sub>  
reduction

## Product Overview

This engineered solution achieves improved control of the VIGV and bleed valves by providing closed loop control and electronic switching.

- State of the art controls technology will replace the current systems.



## Improved Features

- Electronically schedules VIGVs and bleed valves against a nondimensional speed.
- VIGV drift, and the possibility of compressor surge are eliminated.
- Elimination of time-consuming regular maintenance.
- No operator required to check VIGV position and BOV settings prior to startup.



## Benefits

- Improvement in reliability.
- Improvement in availability.
- Gas turbine efficiency is maintained.
- Up to 1% reduction in fuel consumption and CO<sub>2</sub> emissions.
- Improved safety.



## Scope of work & Implementation

- **At overhaul:**
  - Replace VIGV ram and BOV hydraulic actuators / install RVDT Mod, solenoid valves, electrical harness and hydraulic pipe work.
- **On site:**
  - On-site scope inspection / controls modification / wiring installation.

