



7F Advanced Compressor

In 2010, GE introduced the 7F.05 gas turbine with a new compressor platform. With broad market acceptance and a rapidly growing fleet of operational units, GE is pleased to make this technology available as a field retrofit, bringing all the advances of 25 years of compressor development to the 7F installed base. The compressor was validated in the off-grid, full speed, full load test facility in Greenville, SC where it was taken far beyond its normal operating regime and pushed harder than grid-connected operation allows. This testing and the resulting hardware improvements give a high level of confidence in the performance, durability and reliability of the new compressor platform.

Customer Benefits

The 7F Advanced Compressor provides increased airflow and pressure ratio capability at higher efficiency, with fewer stages and more flexibility resulting from the addition of variable stator vanes (VSVs). The VSVs are ganged, reducing the number of actuators required and increasing reliability. The compressor features 3D aero and an advanced multi-passage diffuser for increased efficiency, along with field-replaceable blades for on-site maintenance.

Installation scope varies based on unit configuration, however the gas turbine compressor rotor, and all compressor casings and airfoils are replaced as part of this upgrade. Increased performance is possible with turbine rotor modification and addition of the DLN2.6+ combustion system. Performance benefits can be magnified even further when the additional flow capacity is used to displace duct firing capacity, or with the addition of inlet conditioning.

Benefits:

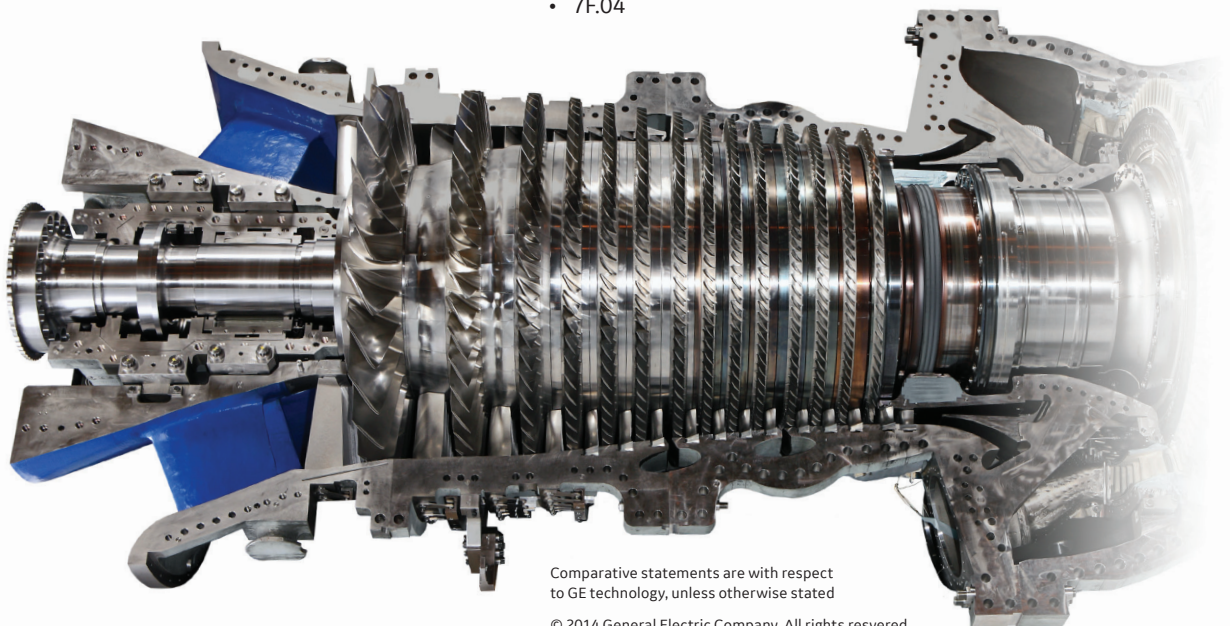
- Up to 12% gas turbine output at 80°F
- Up to 2% gas turbine heat rate reduction at 80°F
- Reduced maintenance cycles field-replaceable blades
- Reduced stage count for fewer parts
- Fleet lessons learned incorporated for increased reliability
- Multiple power augmentation solutions available

A key component of long term planning, including:

- Rotor life extension, replacement, or upgrade
- Plant modernization & upgrade
- Power purchase agreements
- CSA contract extensions
- Capacity auctions/additions

This upgrade can be applied to the following unit configurations:

- 7F.01/2/3 with Advanced Gas Path
- 7F.04



Comparative statements are with respect to GE technology, unless otherwise stated

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