FACTSHEET

IGV RACK & CONTROL RINGS

Applicability:
9E / 7E / 9F / 7F
(except 7F.05)

IGV gear and rack actuation systems are equipped on GE's E-Class and F-Class (except 7F.05) heavy duty gas turbines. Maintaining IGV's and the actuation system in good order is essential to support safe and reliable compressor operation. As 50 and 60Hz E and F-Class gas turbine fleets age, increased wear of IGV and Control Ring gears can be observed.

Considerations for wear may include:

- Gas turbine operation > 20 years
- Changes in plant mission from base load to more cyclic operation
- Use of grease can increase dust accumulation which in turn increases the wear mechanism (grease is not a recommended GE solution)
- Refer to TIL 2363 for Rack and Control Ring Maintenance guideline

Component Impact:

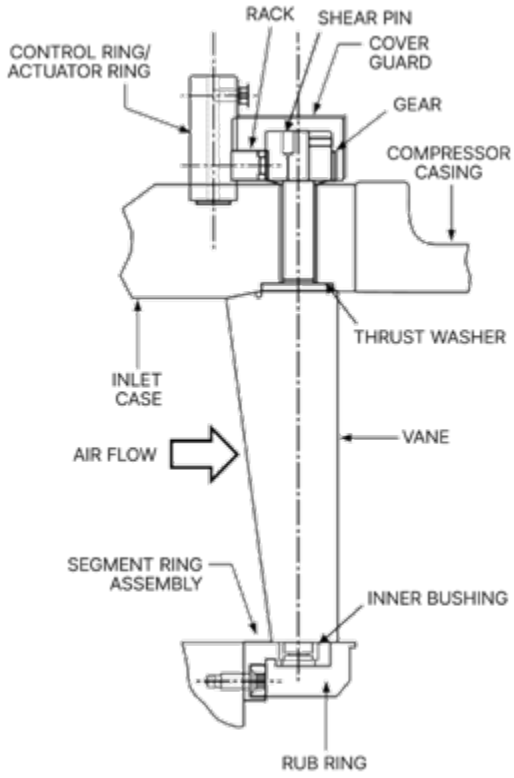
- Excessive wear on IGV Rack and Control Ring can create negative consequences to the IGV gears backlash. If left uncorrected, out-of-tolerance backlash can increase vibratory motion of the IGV which may lead to cracking of IGVs and gears

Recommended Solution:

- Inspect the IGV gears and rack for wear or corrosion and replace the Rack and Control Ring when necessary
- Safety stock for IGV Rack and control rings at site avoids waiting time and helps ensure quick replacements when an issue is identified

Expected Benefits:

- Replacement of control rings maintains the expected lifetime of the IGVs and gears to specifications
- Identifying minor damages and replacing parts helps eliminate the need to re-calibrate backlash at each inspection, reducing outage cost and time by up to one shift of 12 hours for three mechanics during the outage.



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