

CASE STORY

General Electric 1.5 MW Wind Turbine (10007)

Background

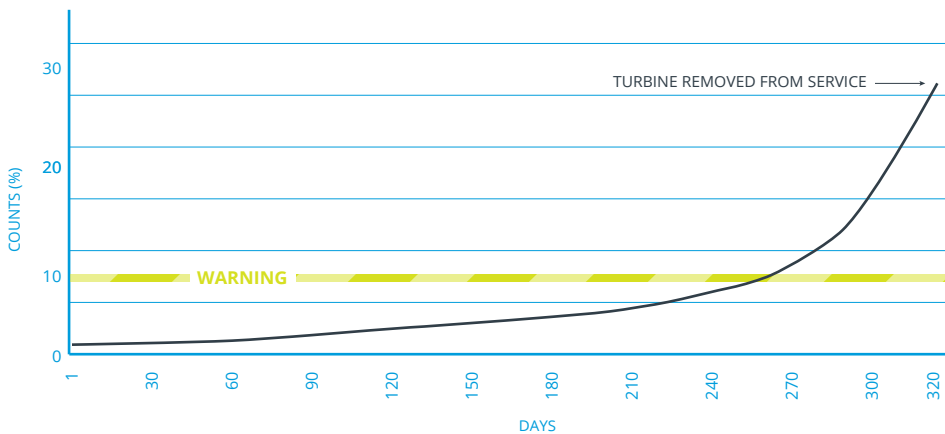
Wind turbine was operating for seven years without incident. MetalSCAN was installed as a diagnostic tool to measure degree of damage as a result of damage observed on a planetary stage gear teeth through videoscope inspection.

Event Description

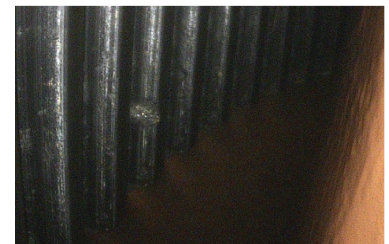
Debris was detected at a moderate rate after installation of MetalSCAN, surpassing the warning limit (10% of the alarm limit) after 266 days. The rate of debris accumulation increased significantly after day 287, indicating more rapid progression of damage, triggering, and being confirmed by, a videoscope inspection. The wind turbine was shut down to prevent secondary damage, and the gearbox was subsequently removed for repair and replaced with a healthy unit.

Time History of Events

TURBINE WAS RUNNING CONTINUOUSLY THROUGHOUT THIS PERIOD



ONLY LAST 320 DAYS SHOWN



Damaged Ring Gear

BENEFITS

- ✓ Turbine ran for ~ seven years with virtually no damage detected
- ✓ MetalSCAN trend enabled operator to minimize repair costs and maximize power production revenue
- ✓ Secondary damage avoided

LONG LIVE EQUIPMENT



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