

# Importing downtime into your plant

Everybody does it

‘Live’ a Proactive & Precision Maintenance  
Philosophy

Circumvent failure modes

# Vibration Analysis

Why wait to test until the equipment is installed and production calls for output/quality?

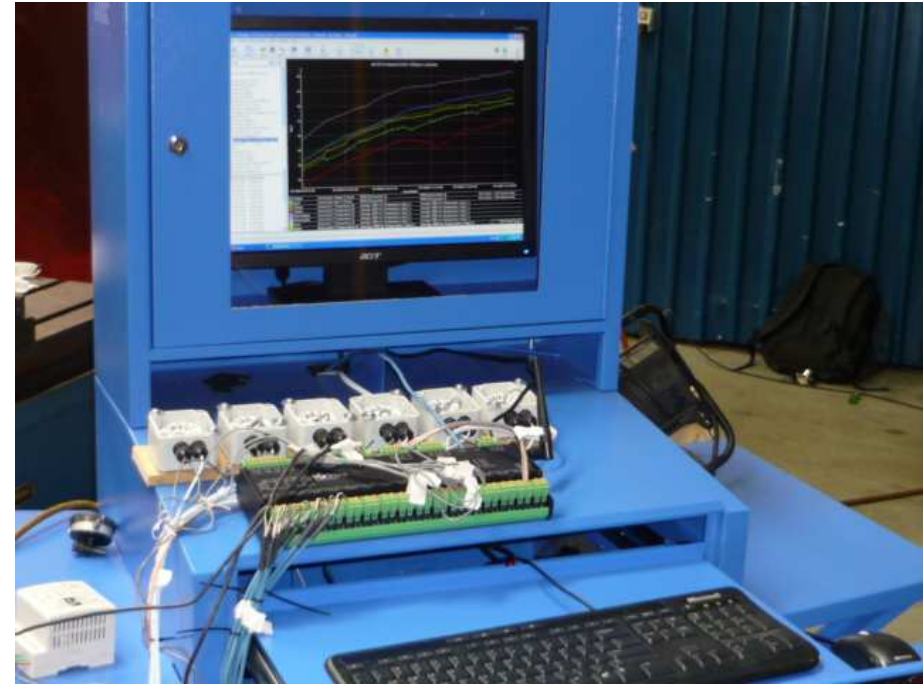
# Test equipment prior to site delivery



# 32 channel vbOnline



# Hardware



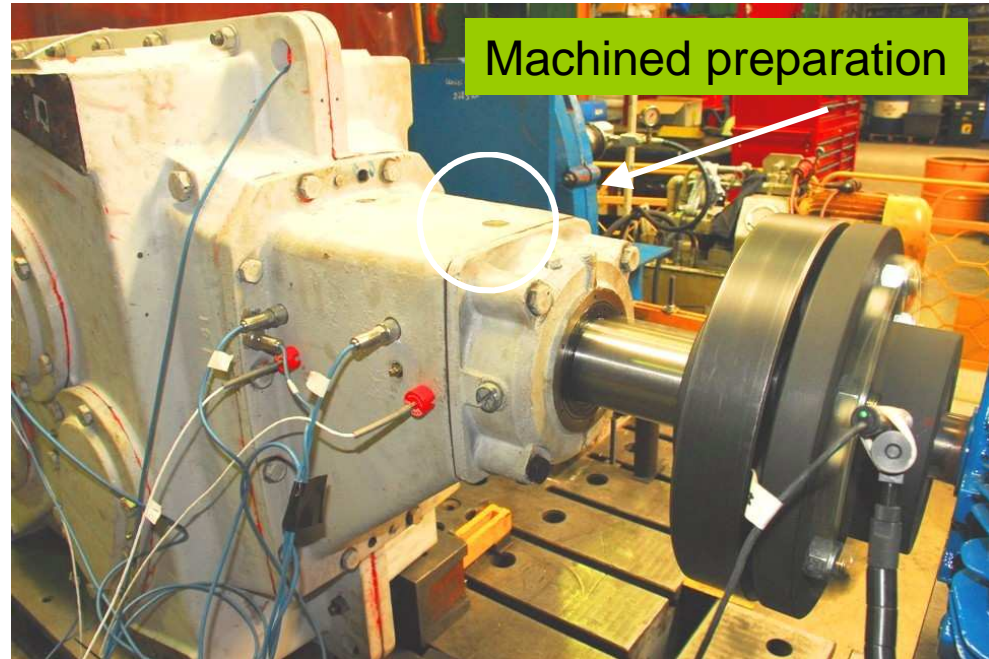
# Installed into Pelican case for wireless portability and 'site work'



# Machine set-up - Consistency



Alignment standard

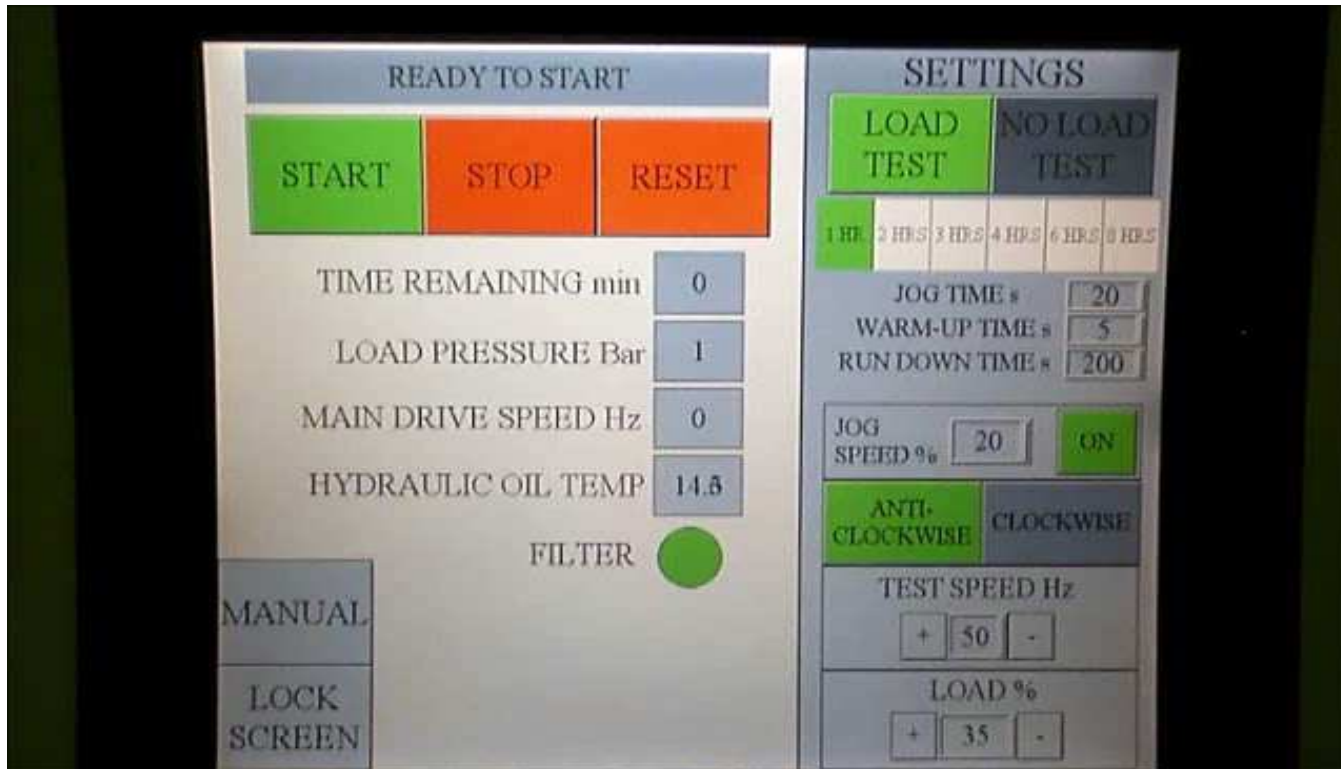


Accelerometer mounting methods





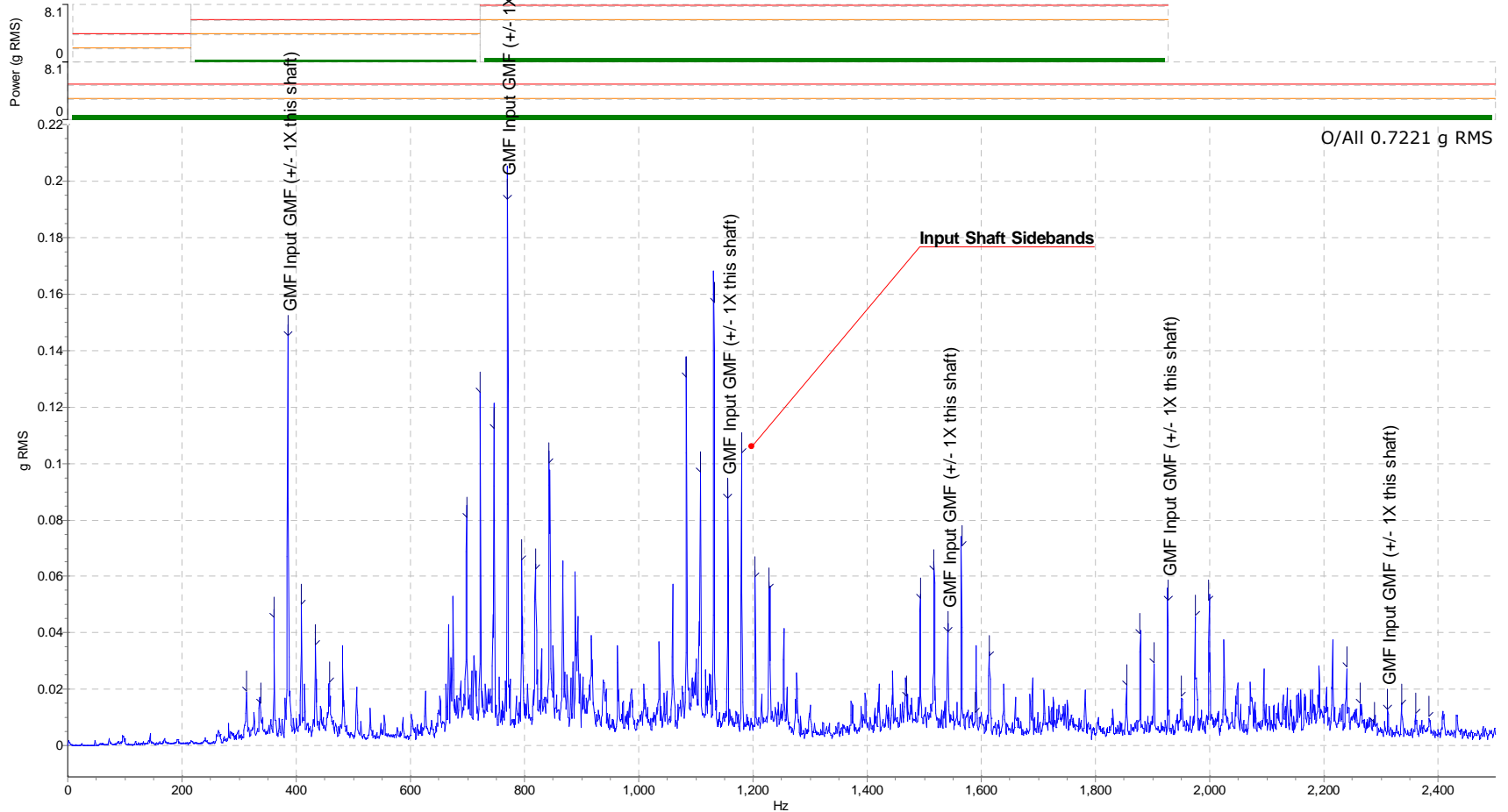
# Dynometer Test and Load Management



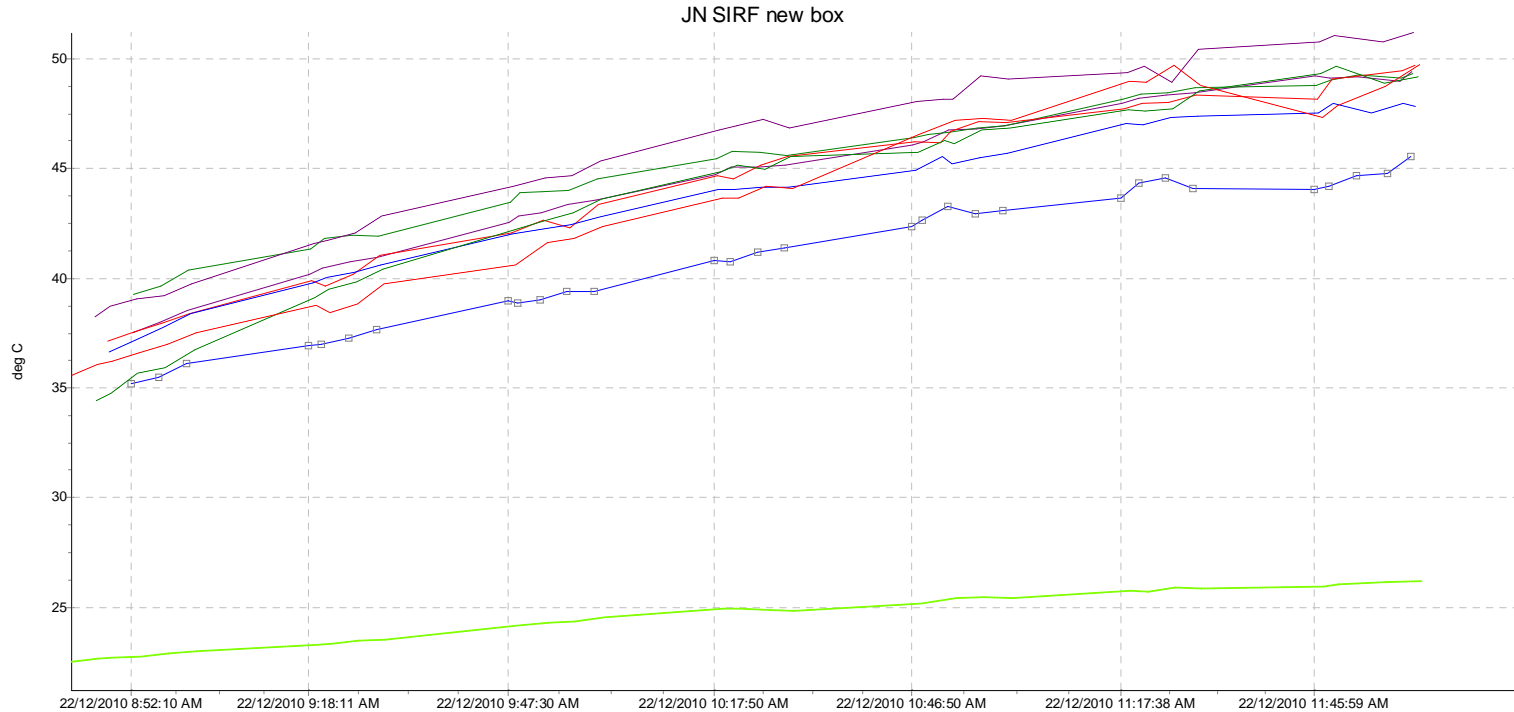
# Brand new gear box tested prior to customer delivery

## Analysis indicated "Inspection Required"

JNSIRF new box - Input - Axial 3 [Tach] - Acc Spec 2500 Hz  
 22/12/2010 12:08:20 PM

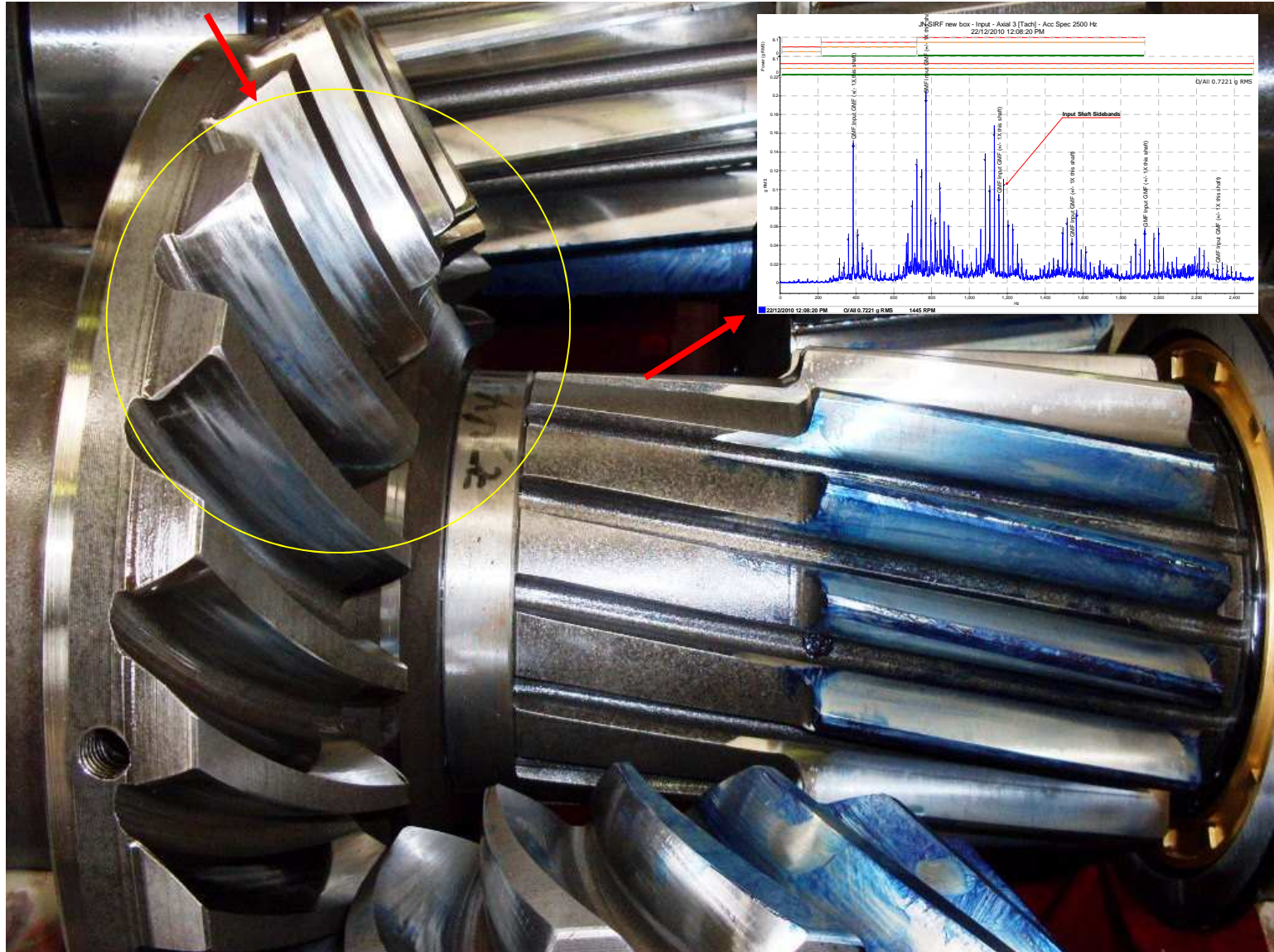


# Temperature Data – 4 hour test

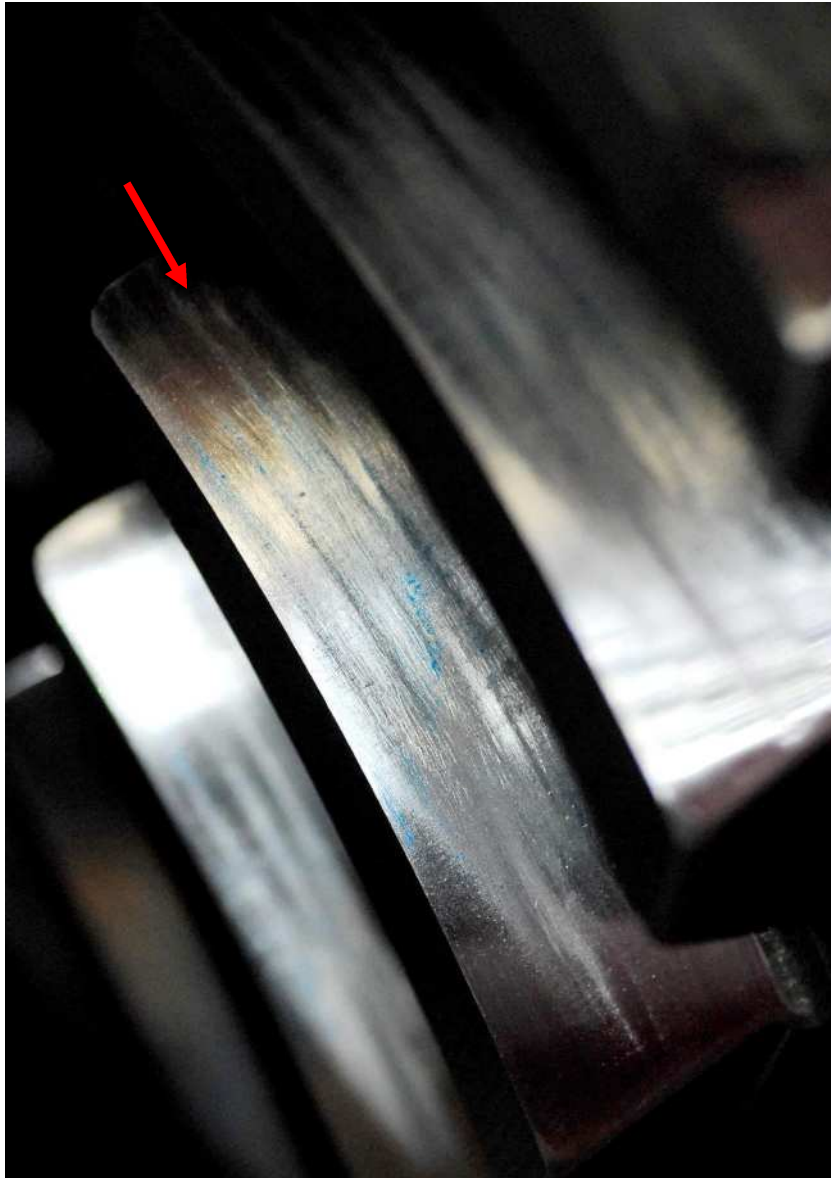


Light Green	Ambient Temp 29	Ambient	Average 1000 ms Temperature ( deg C )
Red	Output	Horizontal 11 Temperature 27	Average 1000 ms Temperature ( deg C )
Green	Output	Horizontal 10 Temperature 26	Average 1000 ms Temperature ( deg C )
Purple	2nd Intermediate	Horizontal 8 Temperature 25	Average 1000 ms Temperature ( deg C )
Blue	2nd Intermediate	Horizontal 7 Temperature 24 [Tach]	Average 1000 ms Temperature ( deg C )
Red	1st Intermediate	Horizontal 5 Temperature 23	Average 1000 ms Temperature ( deg C )
Green	1st Intermediate	Horizontal 4 Temperature 22	Average 1000 ms Temperature ( deg C )
Purple	Input	Horizontal 2 Temperature 21	Average 1000 ms Temperature ( deg C )
Blue	Input	Horizontal 1 Temperature 20	Average 1000 ms Temperature ( deg C )

# Input gear mesh blueing



# Gear machining/finishing errors



## Importing Downtime – everybody does it!

A philosophical change required

QA “hold points” for suppliers – you may need to supervise or witness

Demand or supply Overhaul Specifications & Precision Maintenance Practices

Demand or supply Inspection and Test Plans (ITP)

## Importing Downtime – don't do it