



ACQUIP
ROTATING EQUIPMENT SOLUTIONS

Laser Alignment **Cost-Benefits**

ROTATING EQUIPMENT SOLUTIONS

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ROTATING EQUIPMENT SOLUTIONS



Laser Alignment saves Money!

- Every dollar invested should pay at least two dollars back
- Measurable cost savings will occur



Our Services:

- Shaft Alignment
- Internal Alignment
- Dynamic Movement
- Vibration Analysis
- Laser Tracker Services
- 3D Laser Scanning



LASER ALIGNMENT SERVICES



Misalignment Causes Vibration:

- Increases Maintenance Costs
- Decreases Uptime



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PRESENTATION

How you will Save Time and Money...

- Increase Mean Time Between Failure
- Improve Machine Efficiency
- Increase Operating Life of Parts
- Saves Lost Production
- Decreases Machine Damage
- Reduces Labor Time needed for Alignment

Benefits of ACQUIP Laser Alignment

- Rapid Deployment to jobsite
- Ease and speed of setup
- Highly accurate readings
- Simple repeatable checks
- Logical workflow
- Non-User Dependent Results
- Best practices





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ROTATING EQUIPMENT SOLUTIONS

Laser Alignment Reduces time needed for alignment

- Time to perform alignment will decrease
- Less rework in the alignment process
- Alignments will be performed less often
- Increased efficiency and customer satisfaction



Laser Alignment will increase UPTIME

- Less support personnel needed to complete alignments
- Production will be down less often
- Duration of outage will decrease.



Time is Money, parts
are money...

- Increased UPTIME
- Decreased TIME to perform alignment
- Savings in Bearings, Seals and Couplings
- Increased Equipment life-time
- Power Savings due to less energy loss from useless heat



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PRESENTATION



How much can you save?

- Power loss due to misalignment equals 1% decrease in efficiency
- Machine Damage due to excessive vibration will equal \$4.50/HP
- Production loss due to unplanned failure will equal 5% decrease in uptime \$1.00 per HP-Day





Estimated Cost-Benefit

Number of Machines	300
Average HP	200
Days of Operation	360
Average cost of power (KW-hr)	\$0.25
Average cost of labor/hr	\$75.00

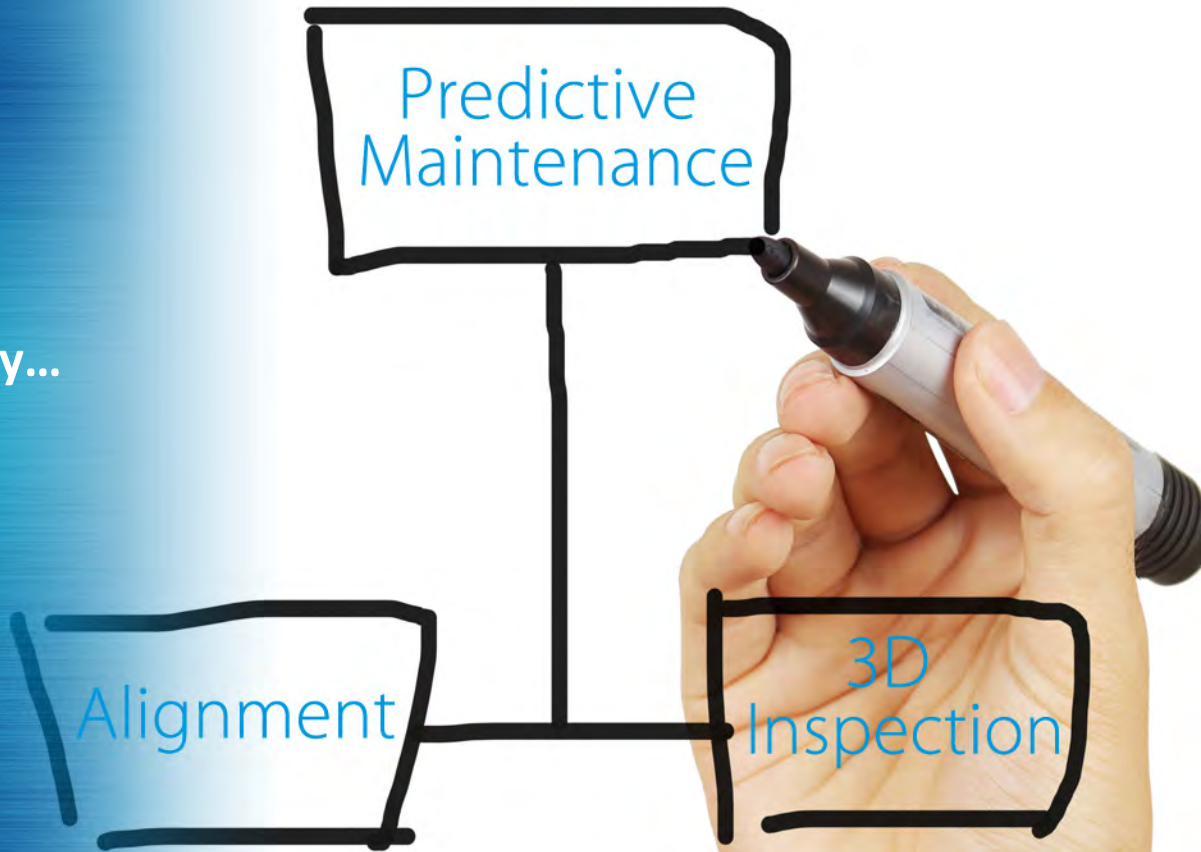
Estimated Annual Savings

Power Loss Due to misalignment (1% Efficiency improvement)	\$193,363.00
Machine damage due to excessive vibration (\$4.50/hp)	\$270,000.00
Production loss due to unplanned failure (5% increase in uptime x \$1.00/hp-day)	\$1,080,000.00
Labor Savings due to unplanned repairs	\$540,000.00

Total: \$2,083,363.00

You can achieve this results by...

- Having an Alignment Program.
- Performing a Comprehensive Alignment.
- Aligning to Running Alignment Tolerances.
- Documenting the Alignment



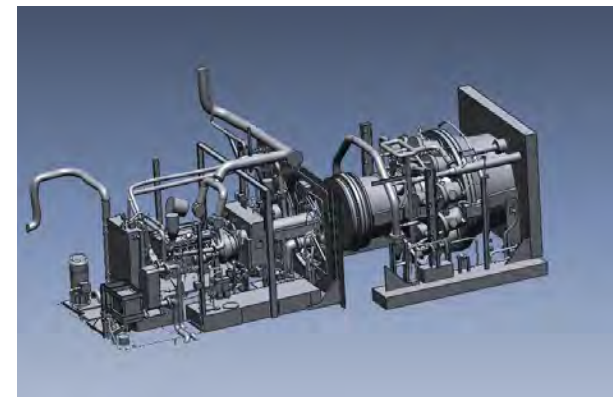
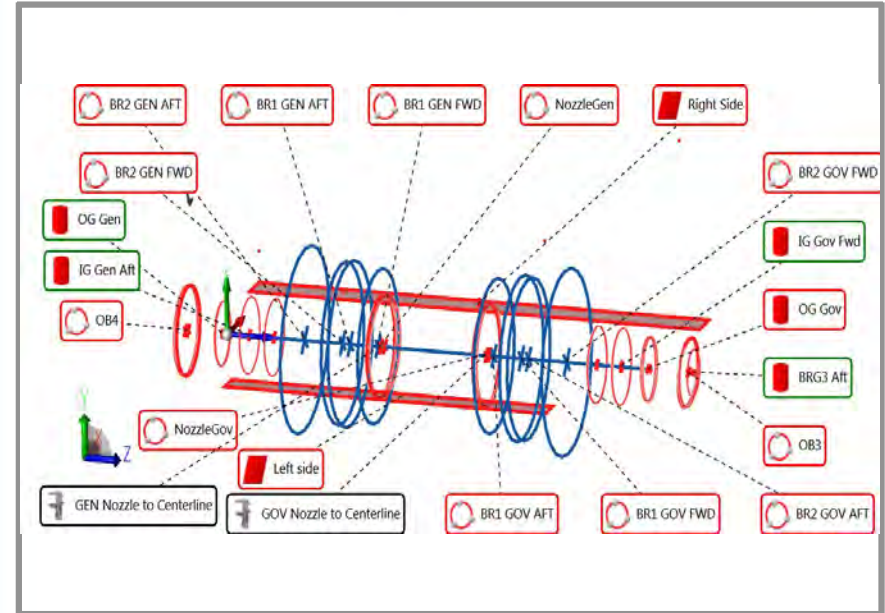
Align to Running Alignment Tolerance

Alignment Target:

- Hot Alignment Check
- Theoretical Calculation
- Manufacturer
- Measuring

Documentation

- A report should be generated for any alignment.
- Report should at least include:
 - As found alignment
 - As left alignment





*ACQUIP FARO ION Laser Tracker
FARO FOCUS 3D Scanner
Effective Solutions*

Benefits of ACQUIP Technology

- State-of-the-Art Equipment
- High Resolution
- Versatile Bracketing
- Powerful software
- 3D Imaging

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ACQUIP SERVICES: YOUR BEST CHOICE

- All we do is alignment; we are experts in the field.
- We take current technology and apply it to new complex problems.
- We continually think outside of the box to solve problems that are out of the ordinary.
- We have experienced alignment engineers who are dedicated to your specific alignment needs.
- We will go almost anywhere at any time without almost no notice.
- We guarantee your alignment will be done correctly the first time.



THANKS!

When do we start?



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