



The Leaders in Turbine Component Repair!

Company Presentation

2024 Version 1

About Us

- TWIN MRO is one of the leading independent turbine component repair stations servicing OEMs, Engine Shops and Parts Brokers world wide.
- Established in 1986, now 100% Employee-Owned (ESOP).
- Steady and experienced leadership team has led us to consistent, organic growth for over 35 years.
- What makes us different?
 - Reliable Communication & Support:
Always available with honest answers - before, during & after the order
 - Consistent Delivery:
Based on customer scheduling needs - not our sales targets
 - Market Leading Quality:
Consistently setting the benchmark through Lean MRO



Personnel

- Currently 118 Employee-Owners. (2024 Goal: 125+)
- Exceeded hiring goal for 2019, 2020 (no layoffs), 2021, 2022 & 2023.
- Two 10.5 hour shifts; 21 hours a day, 6-7 days weekly.
- Average Employee-Owner: 8+ years tenure.
- Employee-Owners regularly cross-trained within their areas of expertise.
- Work Force Breakdown:
 - QA & Engineering = 25%
 - Direct Labor = 50%



Operating System

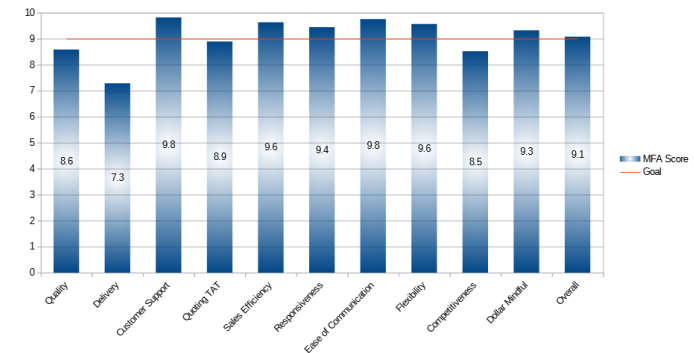
- Lean MRO / Continuous Improvement
- Consistent P&W “Supplier Gold” Rating
- “Gold” means;
 - 95% On Time,
 - Excellent Market Feedback,
 - Zero Major Defects/Turnbacks



- Customer Satisfaction Rating:
 - 91% (9.1 out of a possible 10)

- Customer Feedback Quotes:

TWIN MRO has always been a pleasure to work with from timely replies to helpful assistance. TWIN is setting the standard when comparing to other vendor(s). We are currently happy with the services being provided and want to thank TWIN MRO for all they do. Keep up the excellent work!
-OEM Engine Center



Quality

- AS9110 & ISO9000 C0601998-AS2
- Nadcap NDT 3403210688
- FAA Repair Station VP5R283N
- EASA M.O. EASA.145.4962
- CAAC M.O.C. F00100393
- Current Warranty Rate: <.5%
- Regularly audited and approved by the FAA, EASA, CAAC, Nadcap, GE, CFMI, P&W, most Major Air Carriers and more.
- 2024: United Kingdom CAA is in process



NSF-ISR

Registered to AS9110



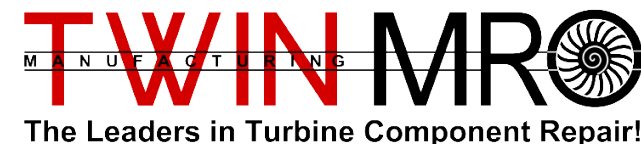
EASA
European Aviation Safety Agency



TWIN MRO
MANUFACTURING
The Leaders in Turbine Component Repair!

Customer Support

- 2 dedicated Customer Support personnel.
- 9 Sales Executives cover 130+ active customers across all markets.
- Customer Feedback: Year after year customers tell us they most appreciate our honest and reliable communication at all points of the sale.
- Our capabilities are listed on our website as well as ILS, The 145 and OneAero-MRO (b2b-aero).
- Automated customer order status and quote information, through “Live” TWIN ERP Integration with OneAero-MRO (b2b-aero).



News

- Overall: We continue to aggressively invest in capital equipment and hiring to increase our capacity and reduce turn-times.

Present State

- In production now: New CNC VTL, CNC Grinders (2), ProtoTrak, Benches, Inspection Plates and more.
- Results: The increased capacity and improved efficiencies significantly reduced in-house delays and decreased turn-times. Unfortunately, our vendors have not responded the same way and our efforts to add qualified sources produced mixed results.

Future State

- Expanding Facility for two furnaces (Q1 qty 1, Q3 qty 1), Adding 5th CNC VTL (Q2), Multiple major Information Technology Upgrades in process.
- Aggressively exploring adding qualified sources and/or in-sourcing more; Also under review: CNC Mill, NDT, Clean Line, etc.

Major Turbine Components Serviced

Repair & Overhaul Of Thousands of Part Numbers

- Housings
- Gearboxes
- Gears
- Shafts
- Seals & Spacers
- Supports
- Ducts
- Sync Rings
- Brackets
- Nuts
- and more!



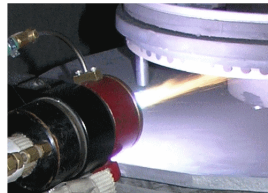
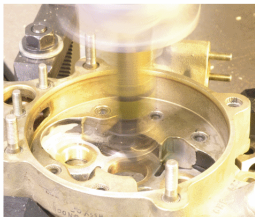
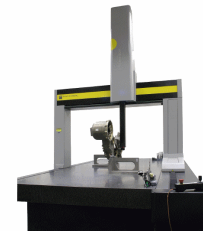
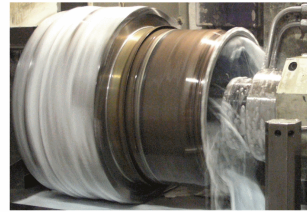
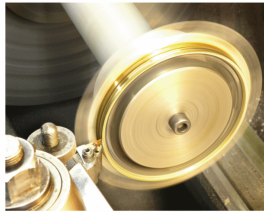
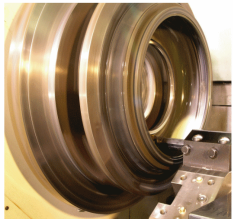
Facility

- 47,500 Sq. Feet (4413 Sq. meters) Climate Controlled Facility.
- 2022 Expansion (+25%): New Inspection & Machining areas and parking lot completes. 2024 Plan: +1,615 Sq. ft (150 Sq. m) for Furnaces.
- Most Processes have a work area up to 60" x 60" x 60" (1524mm x 1524mm x 1524mm).



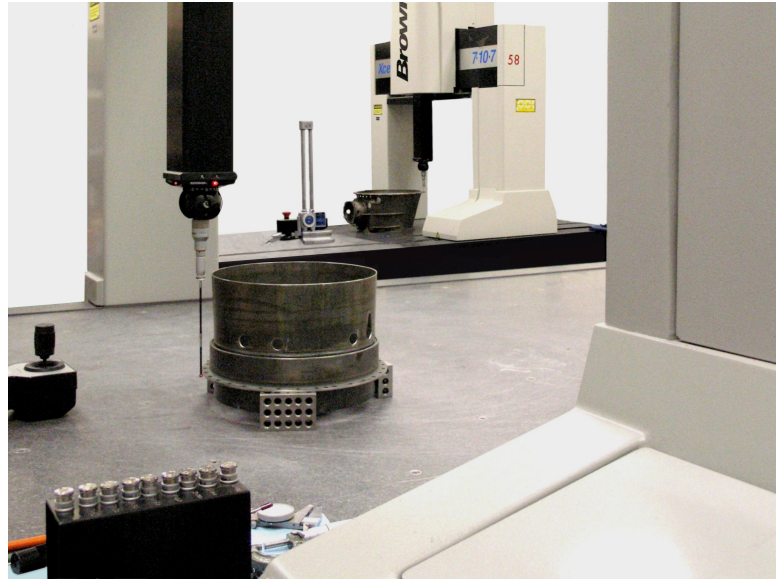
Processes

- Most processes are under our quality system. We outsource less than 3%.
- Our major processes include;
 - Machining
 - Grinding
 - HVOF & Thermal Spray
 - Plating
 - Welding
 - Surface Finishing
 - Heat Treat
 - Shotpeen
 - Adhesive Bonding
 - Painting
 - Balancing
 - Disassembly & Assembly
 - Full Cleaning & Inspection (Including Non Destructive Testing)



Complete Inspection & NDT

- Complete NDT Line (Clean Line, FPI & MPI)
CMMs – Qty 4 & Bench Inspection – Qty 6
- CMM max work area: 60" x 118" x 39" (1524mm x 2997mm x 990mm)



CNC Machining Centers

- CNC Mills – Qty 4 & CNC Mill/Turn – 1
CNC TRAK – Qty 5 & Bridgeports – 5
- CNC Mill max work area: 5 axis, 60" x 48" (1524mm x 1219mm)
CNC Mill/Turn max work area: 5 axis, 30" x 22" (764mm x 558mm)



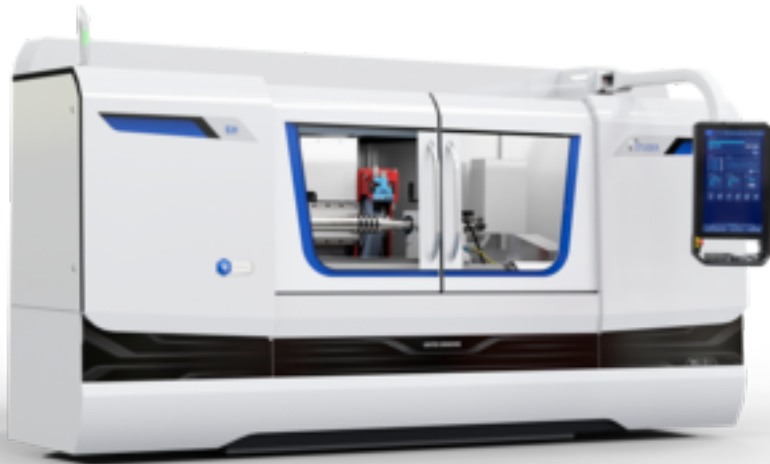
CNC Lathes & Engine Lathes

- CNC Lathes – Qty 3 & Engine Lathes – 3
CNC VTL – Qty 4 (2024: 5) & VTL – 1
- CNC Lathe Max: 4 Axis, 29" Dia swing (737mm)
CNC VTL Max: 78" Dia swing (1981mm)



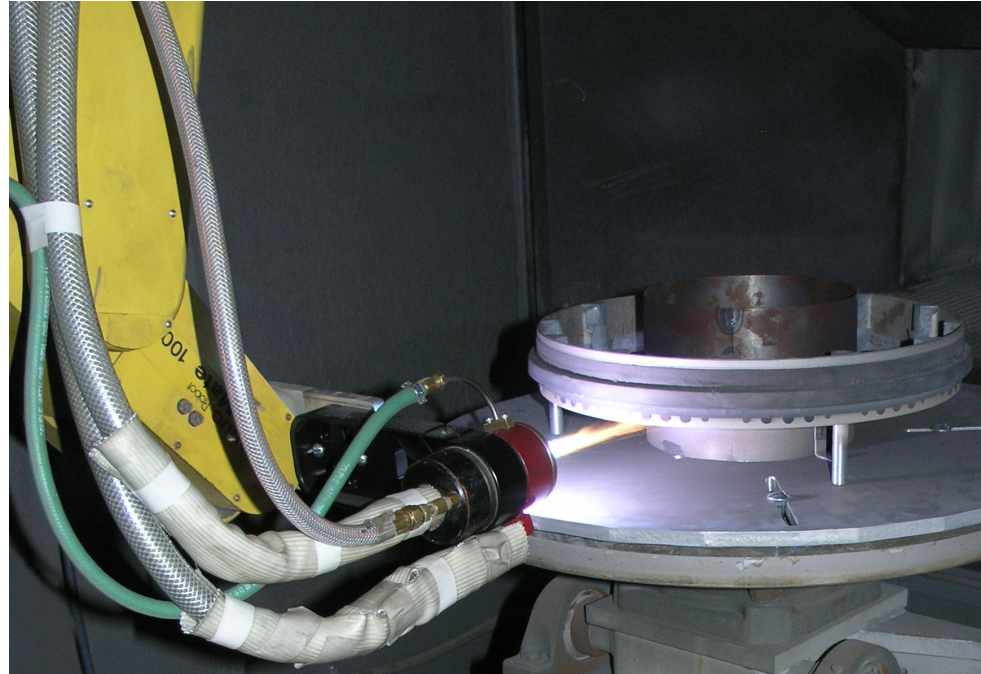
CNC ID/OD Grinding

- CNC ID/OD Vertical – Qty 3 & CNC ID/OD Horizontal – Qty 1 (2024: 2)
Surface Grinding – 1 & OD Grinder – Qty 1
- CNC ID/OD Vertical max work area: 36" Dia (914mm) x 45" (1143mm)
CNC ID/OD Horizontal max work area: 40" Dia (1016mm) x 16" (406mm)
Surface Grinding max: 42" Dia (1066mm)



Thermal Spray Booths & HVOF

- 7 Booths: 8'x10'x10' (2.4m x 3.1m x 3.1m), 72" Dia (1828mm) Capacity
HVOF, Plasma, Thermal Spray, and Dual Wire Capability
All Robot Controlled with Complete, Fully Equipped Lab



Award Winning MRO Services



- P&W Supplier Gold Lean Rating (Multiple Years)
- Pratt & Whitney Supplier of the Year (Multiple Years)
- MTU Aero Engines Global Supplier of the Year
- OneAero MRO Top Shop



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Thank you

www.twinmro.com

Main Office: +1 860 289 6041 - Fax: +1 860 289 0561

273 Chapel Road, South Windsor, Connecticut USA 06074

Corporation Type: S Corporation, ESOP | Cage Code: 64564 | Duns: 004531935