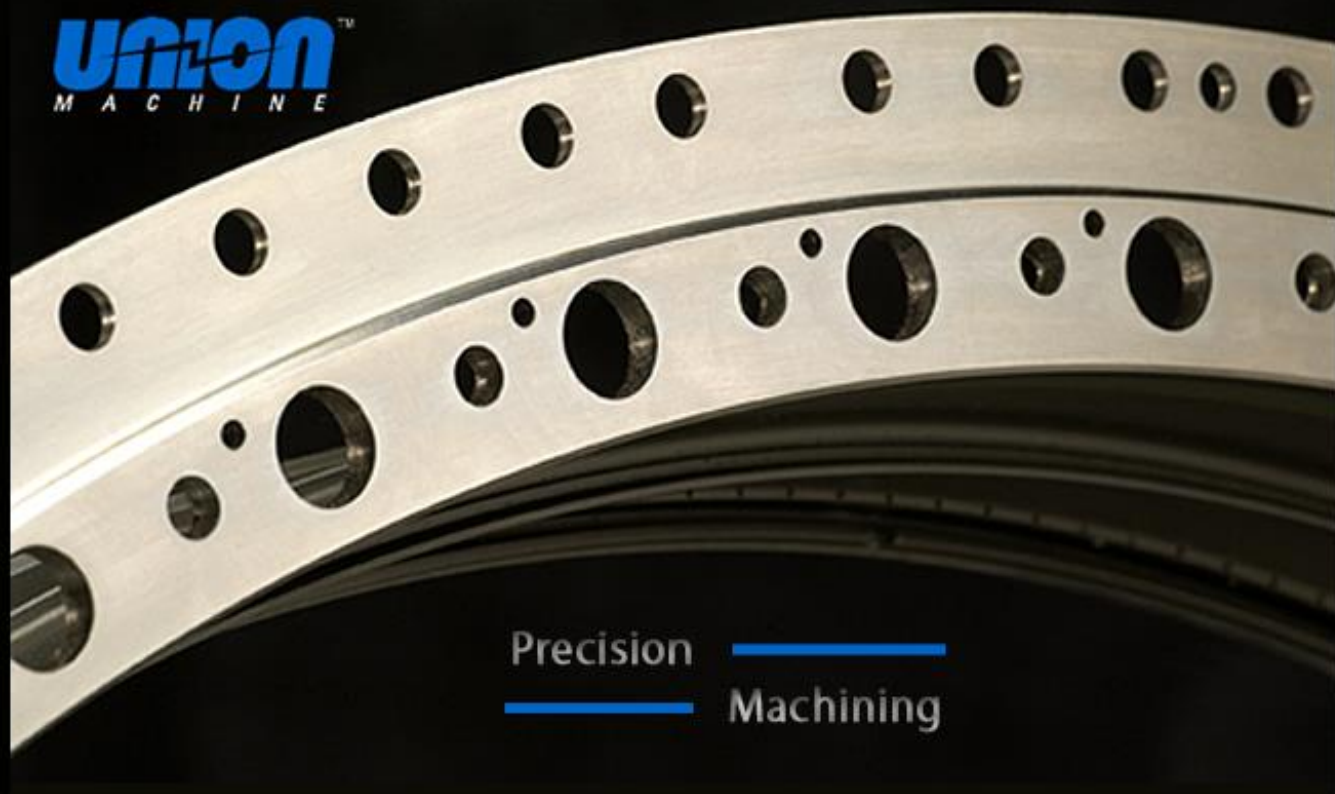


Prime Contractor for Military and Commercial Jet Engine Parts / Veteran Owned SD-VOSB

ISO 9001:2000/AS9100:2004B

**Union**<sup>™</sup>  
M A C H I N E



Precision ———  
————— Machining



# 50 Years of Aerospace Excellence

---

## UNION MACHINE

- ⊕ A **Service-Disabled Veteran-Owned** small business
- ⊕ A full service manufacturer of turbine engine components and complex assemblies for major military and commercial markets





# AWARD-WINNING BUSINESS

2004 recipient of  
US Small Business Administration  
**“Family Owned Business of the Year Award”**



# Unique Capabilities

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- ⊕ Machining up to 40 inches in diameter
- ⊕ 4 & 5-axis milling
- ⊕ Contract Manufacturer of complex assemblies
- ⊕ Special Process Approvals –
  - ⊕ NADCAP (Laser Drilling and Milling)
  - ⊕ Flow Testing
- ⊕ Extensive experience with exotic alloys
- ⊕ 2-D Matrix Marking
- ⊕ Programmable CMM Inspection
- ⊕ AS 9100 REV C



# Typical Engine Products

- ⊕ Rings
- ⊕ Seals
- ⊕ Segments
- ⊕ Shrouds
- ⊕ Retainers
- ⊕ Covers
- ⊕ Cases
- ⊕ Spacers

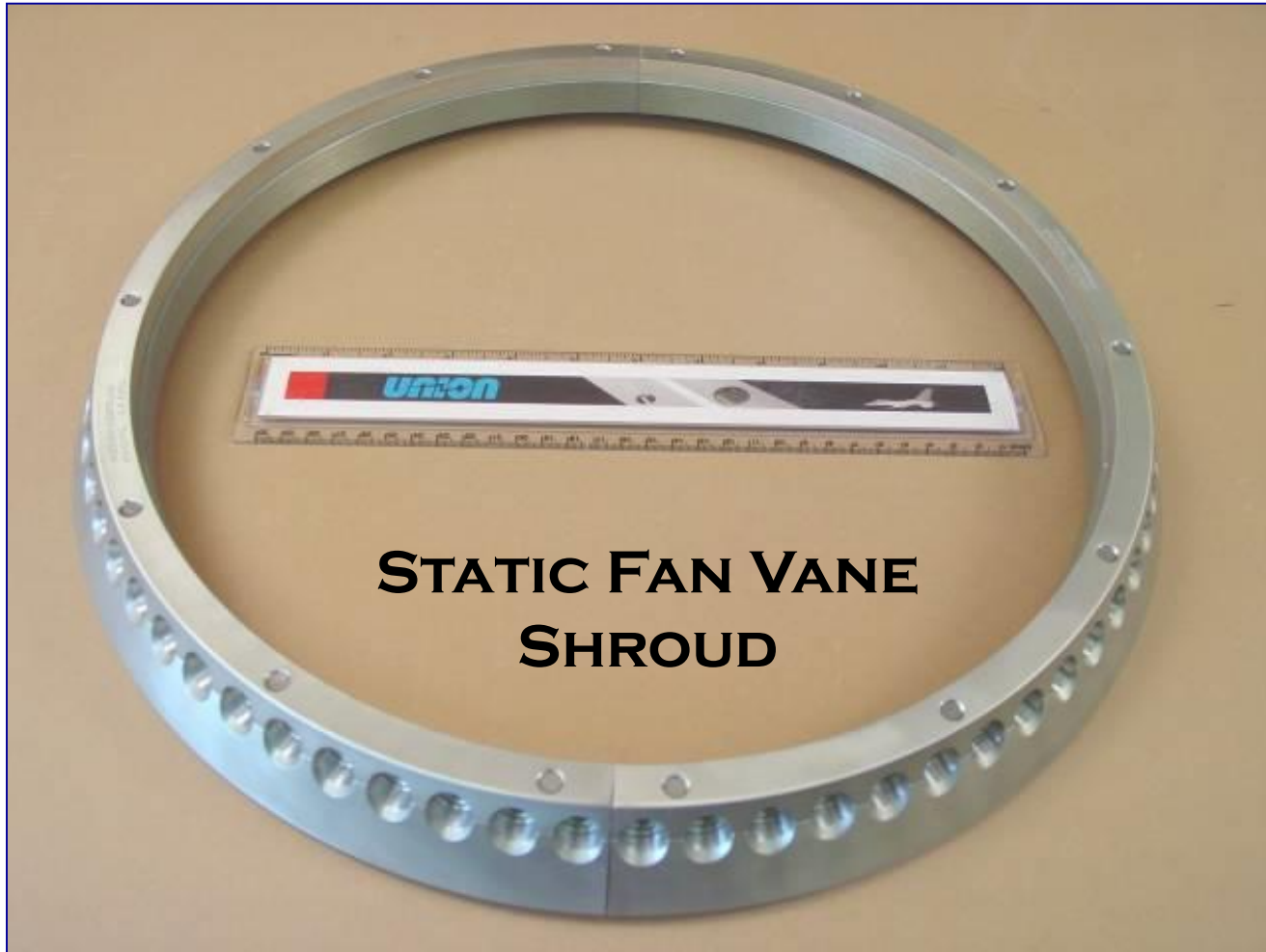




# Flight Critical Safety Items



# Flight Critical Safety Items



**STATIC FAN VANE  
SHROUD**

# Other Aerospace - Landing Gear

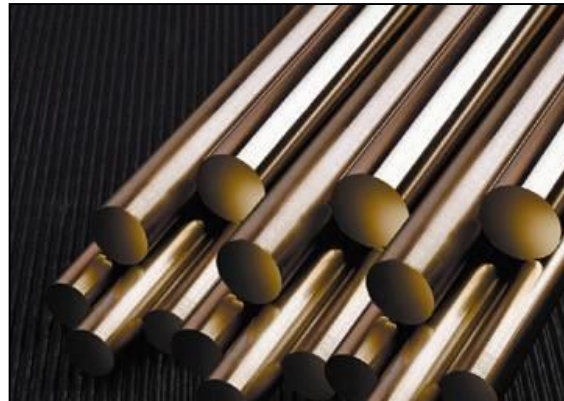
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# Materials



- ⊕ Titanium
- ⊕ Inconel
- ⊕ Hastelloy
- ⊕ Aircraft grade Aluminum
- ⊕ Rene'
- ⊕ Stainless Steel
- ⊕ Carbon Steel
- ⊕ Beryllium Copper
- ⊕ Magnesium
- ⊕ Engineered Plastics

# Engines:

## Fighters, Helicopters, Large Planes, Jetliners

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# Production Equipment List

- ⊕ **CNC Lathes**
  - 6 - Mori Seiki SL6A Modified 35"
  - 2 - Mori Seiki SL6C 30"
  - 2 - Mori Seiki SL3B 20"
  - 2 - Mitsubishi NLX 20"
  - 2 - Mori Seiki SL603 35"
  - 2 - Youji VTL's 40"
- ⊕ **Contour Machining (4/5 AXIS)**
  - 1 - Mori Seiki MV 65/60 48X24X32
  - 1 - Mori Seiki MV 45/40 30X17X20
  - 3 - Matsuura MC-780-VDC 29x16x19  
(Fanuc 11 MB Control)
  - 1 - Matsuura MC-800-VDC 48x16x20  
(Fanuc 11 MB Control)
  - 3 - Matsuura MC-600H 23x18x19  
(Fanuc 11 MB Control)
  - 1 - HMC 410 12X18X18
  - 1 - Excel 810 28X15X18
  - 1 - Mori NH5000 - 40X20X27
- ⊕ **Conventional Turning**
  - 1 - Sigma Tos 37"
  - 1 - Wasino 21"
  - 1 - Hardinge Precision Lathe 13"
  - 1 - Hardinge Hand Screw 8"
- ⊕ **Conventional Milling - Vertical**
  - 2 - Alliant Millers 30x15x20
  - 6 - Bridgeports 30x15x20
  - 3 - Prototraks 48x18x12
- ⊕ **Laser (Drilling, Milling & Welding)**
  - 2 - YAG Lasers (Custom Built)
  - 4 - Fiber Lasers (Custom Built)
- ⊕ **Cylindrical Grinding**
  - 1 - Shigiya GuU20 Universal 12"
  - 1 - Grenby I.D. 7"
  - 1 - Heartland CNC Grinder ID/OD 24"
  - 2 - Spark Erosion Grinders 26"
- ⊕ **Surface Grinding - Auto feed**
  - 1 - K.O. Lee 8x13
  - 1 - Covell 8x13
- ⊕ **Blanchard Grinding - Manual**
  - 1 - Blanchard NC 30"
- ⊕ **Honing**
  - 1 - Sunnen Automatic Stroke 5.6x14
- ⊕ **Finishing**
  - 1 - Trincon 36BP Glass Bead Peen
  - 1 - Sweko Cu. Ft Vibrator
  - 1 - Ultra Sonic Cleaner
  - 1 - Hot Dip Oscillating Degreaser
- ⊕ **Welding**
  - 1 - Ferranti Sciaky Resistance Spot Welder
  - 1 - Synchrowave 300P 200/230/460W/005-544Meter and 03-265 Pulser T.I.G.
  - 1 - Arc Welder
  - 1 - Oxy/Acetylene Torch
  - 1 - Inert Gas Atmosphere Chamber 44"x44" with 21"x44" Entry
- ⊕ **Lapping**
  - 1 - Spitfire SPGYR24PN 24"EDM
- ⊕ **Airflow Testing**
  - 1 - Habco AF1000 Test Stand



# State of the Art Measuring Equipment



⊕ Brown & Sharpe Global Image 9128 CMM

⊕ Brown & Sharpe One Shop Floor CMM





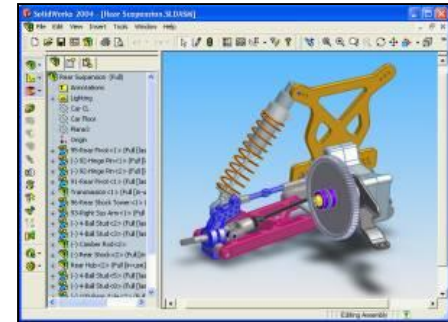
# Full Service SCM

## ⊕ NEW PRODUCT MANAGEMENT

### INTEGRATING CUSTOMER MODELS IN PROCESS DESIGN AND PLANNING

State of the art in solid modeling & programming software

- ⊕ *Unigraphics & Master Cam* - CNC programming
- ⊕ *Solidworks* - Modeling
- ⊕ *PC-DMIS* - Inspection Software
- ⊕ *Datapage* – SPC Analysis



## ⊕ SECONDARY SERVICES

NADCAP Certified Suppliers

- Plating
- Welding
- Heat Treat
- Non-Conventional Machining
- Non-Destructive Testing

## ⊕ ENTERPRISE RESOURCE PLANNING

### EXACT JOBBOSS – 2018

The latest in production and supplier management portals

- ⊕ Single Interface quoting, purchasing, production, accounting
- ⊕ Global Rescheduling Capabilities
- ⊕ Custom Reporting per Customer Reqs.
- ⊕ Supplier Mgt. Integration



# Commitment To Quality

## ISO 9001:2015 and AS9100 Rev. D

 **CERTIFICATE OF REGISTRATION**

This is to certify that  
**Union Machine Co. of Lynn, Inc.**  
6 Federal Way, Groveland, Massachusetts 01834 USA

The above organization has been audited in accordance with the requirements of AS9104/1:2012. QMI-SAI Canada Limited (SAI Global) located in Toronto, Ontario, Canada is accredited under the Industry Controlled Other Party (ICOP) scheme. The certificate is issued at the accreditation location in Toronto, Canada.

operates a  
**Quality Management System**  
which complies with the requirements of  
**ISO 9001:2015 + AS9100D**  
for the following scope of certification

**Manufacture of Machined Parts for Aircraft Engine Components and Assemblies. Offering conventional machining, non-conventional laser cutting/drilling and flow test capabilities for both Military and Commercial Applications. Serving OEM and Government Accounts.**

Certificate No.: CERT-0129867  
File No.: 1068777  
Issue Date: May 13, 2019

Original Certification Date: May 24, 2007  
Certification Effective Date: May 22, 2019  
Certification Expiry Date: May 21, 2022

  
Kevin Goodwin  
General Manager Technical Services  
SAI Global Assurance

  
ANAB  
AS9100D

Registered by:  
QMI-SAI Canada Limited (SAI Global), 20 Carlton Court, Suite 200, Toronto, Ontario M8N 7H8 Canada. This registration is subject to the SAI Global Terms and Conditions for Certification. While all fees are paid, any non-compliance with the requirements of the SAI Global standards may result in suspension or withdrawal of the registration. This certificate remains the property of SAI Global and must be returned to them upon request.  
To verify that the certificate is current, please refer to the SAI Global Certificate Register: [www.sai-global.com/certificate-register](http://www.sai-global.com/certificate-register)

 **SAI GLOBAL**  
CERTAIN. MEASURE. IMPROVE.

**OEM QUALITY RATING**

View Rating Help?

Search Profile Detail Yellow Page Detail View Ratings Special Agreements

Source Code: 89782 Find Source Name: UNION MACHINE COMP Find View Ratings

Supplier Quality Rating  
UNION MACHINE COMPANY(89782)  
Primary PQE: TOPMILLER, JEFF

Rating Score : 100  
Effective As Of : 06/01/2013

**Rating Comments**

**Section I**

Systems Compliance (Max. 35)	Rating
Current Systems Audit Closed	35

**Section II**

Delivered Quality (Max. 65)	Rating
Number of Nonconformance : 0	65
Number of Parts Received : 1740	
DPMO (NC Qty/ Parts Received) * 1,000,000 : 0	
0 points deducted because no nonconforming escaped pieces found during the last 6 months.	

**Sum of Section I & II scores**

Sum	100
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**Section III**

Quality Engineering Adjustment (Max. 41)	Rating
Deducted Points	0

**Deduction Rationale:**

**Final Rating**

Final Rating	100
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**Last Updated By** SYSTEM  
**Last Updated Date** 06/01/2013

**Rating Trends**

**Report Category** Total

# Risk Management

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- ⊕ **Data** – Daily Backup of Operating data kept off-site
- ⊕ **Strong supply chain depth** – Average 3 qualified suppliers per special process.
- ⊕ **Disaster recovery** – Working relationships with local machine shops allowing for continuity of operations should the unthinkable occur.
- ⊕ **Financially Robust** – Union Machine is debt free. Operations and growth are funded organically

# Facility



- ⊕ Location:  
Groveland,  
Massachusetts
- ⊕ Our modern, 3 building  
campus—situated on  
nearly 5 acres—covers  
appr. 26,000 sq ft of  
first level floor space

# Facility





# Strategic Capital Investment

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- ⊕ Union Machine invests in a broad range of the finest engineering, manufacturing, inspection equipment on an ongoing basis.
- ⊕ As such we are positioned to accommodate most any precision machining production requirement.





# Management Team

## ⊕ President

⊕ Eric Harper, President

⊕ Eric.Harper@unionmachine.com; 978-521-5100 ext. 241

## ⊕ Sales

⊕ Adam Timothy, General Manager

⊕ Adam.Timothy@unionmachine.com; 978-521-5100 x240

⊕ John Castino, Quoting

⊕ John.Castino@unionmachine.com; 978-521-5100 ext. 223

## ⊕ Quality

⊕ Wes Frazer, Quality Manager

⊕ 978-521-5100 ext. 221

## ⊕ Accounting

⊕ Robin Trickett, Controller, A/P

⊕ robin.trickett@unionmachine.com; 978-521-5100 ext. 226



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