AIRCORPS AVIATION

LEGACY AIRCRAFT REPLACEMENT PART FABRICATION

Find more information at aircorpsaviation.com/legacy-aircraft-fabrication
SHOP HIGHLIGHTS

- Specialization in formed aluminum structural components
- FAA PMA Quality System
- Full repertoire of CNC equipment
- 3D Scanning to CAD model creation
- Full service engineering to fabrication part delivery
- 10,000 sq. ft. machine shop
- Specialize in low volume orders

The AirCorps fabrication team specializes in the use of traditional and state-of-the-art methods to manufacture and produce aircraft parts. Our adherence to the FAA-PMA Quality System, range of capabilities, and exacting detail are evident in the award-winning work for which AirCorps is known.
CAPABILITIES

REVERSE ENGINEERING
- Portable handheld 3D laser scanning
- Highly accurate part measurement
- 3D scan to 3D CAD model creation

CAD/CAM PART DESIGN
- Conversion of 2D drawings to 3D models
- Expertise in complex aircraft drawings & assemblies
- Design & engineering of tooling for fabrication

METAL FORMING
- Specialize in fabrication of forming aluminum structural components
- Equipment includes hydro-press, drop-hammer & stretch form table
- In-house tooling design & fabrication

CNC MACHINING
- 3, 4 & 5 axis CNC machining
- 4 axis CNC lathe
- CNC router

ASSEMBLY & INSPECTION
- Fully capable of manufacturing simple or complex assemblies
- Utilize custom developed software to manage large Bill of Materials & assemblies
- PMA quality control & inspection system

FIXTURES & JIGS
- Fixed CAD model design & engineering
- Fabrication & assembly of fixtures
- Full-scope services from small part to entire aircraft

VALUE ADDED SERVICES
- In-house aluminum heat treating
  - AMS 2770 Standard
- Managed processes for anodizing, coating, polishings & platings
- In-house painting to spec
- In-house welding including TIG & aluminum spot-welding
BENEFITS OF AIRCORPS

EXPERTISE
Experienced team producing parts under an approved FAA-PMA quality control system. Our diversity of clients and world-class restorations have guided our comprehensive understanding of parts.

QUOTING
Our team can quickly provide a quote and timeline for production of parts drawing based on our years of experience at no cost. Please contact Stefan Hokuf at 218-444-4478 Ex:121 or email stefanh@aircorpsaviation.com for additional information.

PRODUCTION
By internally managing the processing of manufactured parts everyday we can deliver customers precise, high-quality parts quickly and efficiently.
## SHOP EQUIPMENT DETAILS

### METAL FORMING EQUIPMENT

<table>
<thead>
<tr>
<th>Description</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHEET METAL STRETCHER TABLE</td>
<td>300 Ton - 102” x 70”</td>
</tr>
<tr>
<td>1500 TON PRESS</td>
<td>30” x 72” x 6” Rubber Box</td>
</tr>
<tr>
<td>460 TON PRESS</td>
<td>24” x 34” x 4” Rubber Box</td>
</tr>
<tr>
<td>80 TON PRESS</td>
<td>60” x 12” Table - 48” Slide</td>
</tr>
<tr>
<td>55 TON PRESS</td>
<td>36” x 9” Table - 24” Slide</td>
</tr>
<tr>
<td>DROP HAMMER</td>
<td>32” x 32” Table</td>
</tr>
<tr>
<td>CNC PRESS BRAKE</td>
<td>35 Ton - 6ft</td>
</tr>
<tr>
<td>SHEET METAL SHEARS</td>
<td>48” x 12 Gauge</td>
</tr>
<tr>
<td>BOX AND PAN BRAKES</td>
<td></td>
</tr>
<tr>
<td>FARNHAM ROLLER</td>
<td>12ft Capacity</td>
</tr>
<tr>
<td>DIGITAL CONTROL HEAT TREAT OVEN</td>
<td>60” x 60” x 60”</td>
</tr>
<tr>
<td></td>
<td>Certified per AMS 2770 Standard</td>
</tr>
<tr>
<td>DIGITAL CONTROL HEAT TREAT OVEN</td>
<td>42” x 24” x 18”</td>
</tr>
<tr>
<td></td>
<td>Certified per AMS 2770 Standard</td>
</tr>
</tbody>
</table>

### WELDING

- **ALUMINUM SPOT WELDING**: 3/16” 2024-T3 Capacity
- **TIG WELDING**: Ferrous & Non-Ferrous AWS D17.1

### INSPECTIONS

- **COORDINATE MEASURING MACHINE**: XYZ: 20” x 23” x 20”
  Hexagon PC-DMIS 2017 software
- **HAND-HELD 3D SCANNER**:
  - Portable 3D laser scanning
  - (Mesh surface output)
  - Creaf orm VXModel software
- **OPTICAL COMPARATOR**: 14” Horizontal
- **PROFILOMETER**: Surface finish check tool

### MACHINE SHOP EQUIPMENT

<table>
<thead>
<tr>
<th>Description</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 AXIS CNC VERTICAL MILL</td>
<td>XYZ: 30” x 20” x 20”</td>
</tr>
<tr>
<td>3 AXIS CNC VERTICAL MILL</td>
<td>XYZ: 30” x 16” x 20”</td>
</tr>
<tr>
<td>3 AXIS CNC VERTICAL MILL</td>
<td>XYZ: 30” x 20” x 20”</td>
</tr>
<tr>
<td>3 AXIS CNC VERTICAL MILL</td>
<td>XYZ: 40” x 20” x 25”</td>
</tr>
<tr>
<td>3 AXIS CNC VERTICAL MILL</td>
<td>XYZ: 40” x 26” x 25”</td>
</tr>
<tr>
<td>3 AXIS CNC LATHE</td>
<td>10” Diameter x 20” Length</td>
</tr>
<tr>
<td>3 AXIS CNC ROUTER</td>
<td>XYZ: 120” x 48” x 10”</td>
</tr>
<tr>
<td>3 AXIS CNC ROUTER</td>
<td>XYZ: 96” x 48” x 7”</td>
</tr>
<tr>
<td>3 AXIS CNC ROUTER</td>
<td>XYZ: 120” x 60” x 15”</td>
</tr>
<tr>
<td>VERTICAL MILL</td>
<td>XYZ: 36” x 13” x 20”</td>
</tr>
<tr>
<td>CNC CHUCKER LATHE</td>
<td>6” Diameter x 6” Length</td>
</tr>
<tr>
<td>ENGINE LATHE</td>
<td>15” Diameter x 48” Length</td>
</tr>
</tbody>
</table>

### CAD / CAM

- **CAD SOFTWARE**: Solidworks 2019-2020 (editable model)
- **CAM SOFTWARE**: CAMWorks 2019-2020 (Machine programming)

### UNIQUE EQUIPMENT/SERVICES

- **IN-HOUSE PAINT BOOTH**
- **FAA REPAIR STATION**
- **ART SERVICES**: Custom made placards, decals and name plates
For more information please contact:

STEFAN HOKUF
FABRICATION SALES SPECIALIST
stefanh@aircorpsaviation.com
218.444.4478 Ex:121

AIRCORPS AVIATION
1259 Exchange Ave SE
Bemidji, MN 56601
aircorpsaviation.com