

JOB SHOP EQUIPMENT LIST

GRINDING AND MICROFINISHING

Outside Diameter (OD) Grinding

- Okamoto Grind-X NC (15" OD X 60" LG), FANUC oi Model B Control
- Okamoto Grind-X NC (15" OD X 36" LG), FANUC oi Model B Control
- Landis Roll "LFR" (24" OD X 192" LG)
- Landis Universal "1R" (10" OD X 20" LG)
- Landis Universal "2R" (14" OD X 20" LG) with I.D. Attachment
- Cincinnati Plain (10" OD X 72" LG)

Centerless Grinding

- Cincinnati #2 (Thru Feed – 5.250" OD Maximum)
- Unison Omnigrind Precision (Thru Feed – 4" OD Maximum)

Inside Diameter (ID) Grinding

- Heald Plain #171 (8" DIA Swing X 12" LG)
- (2) Heald Universal #273A (24" DIA Swing X 20" LG)
- Heald Plain #74 (21" DIA Swing X 60" LG)
- (2) Heald Universal #273A (18" DIA Swing X 20" LG)

Surface Grinding

- Blanchard #11 (16" DIA Chuck)
- Blanchard #18 (36" DIA Chuck)
- Brown & Sharpe Micromaster (10" X 30" Chuck)
- Okamoto 16" X 32" DX
- Acer Surface Grinder (12" x 24" Chuck)

Tool and Cutter (Profile) Grinding

- 4 – Assorted Universal and Special Purpose Machines, Grand Rapids and Cincinnati

Micro-Finishing and Honing Equipment

- Sunnen Manual Honing Machine "MBB"
- Sunnen Power-Stroker Honing Machine
- Shaft Honer (4" DIA X 54" LG)
- Superior Vertical Honing Machine "VB" (36" Stroke)
- American Universal Lapping Machine
- Taft-Pierce Rod Superfinisher #81 (24" OD X 144" LG)
- Assorted Flat Lapping Tables (Thru 24" DIA) (1-48" Table)

METAL CUTTING

Note: Utilizing computer-assist programming & direct communications between computer and machine controls. All CNC's on main computer network with disc storage.

CNC Lathes

- Virtual Gibbs Programming System
- Daewoo 450, FANUC 18T Control, 24" Swing, 60" Z Axis – 12 Tool
- (2) Doosan 400LC, FANUC 21i-TB Control, 22.4" Swing, 82.4" Z Axis – 12 Tool
- Daewoo 350L, Meldas-500 Mitsubishi Control, 24" Swing, 74" Z Axis – 10 Tool
- Daewoo 230, FANUC 21i-T Control, 10" Swing, 20" Z Axis – 10 Tool
- John Ford SL650, FANUC 0I-TB Control, 20" Swing, 50" Z Axis – 12 Tool
- Daewoo 700L, FANUC 21i-TB Control, 27" Swing, 120" Z Axis – 12 Tool

CNC Vertical Machining Center

- John Ford VMC-1600, FANUC 18I-MB Control, (X-Axis 60", Y – Axis 40", Z – Axis 35" and 4th & 5th Axis) – 22 Tool
- John Ford SV-40, FANUC 0I-MC Control (X – Axis 40", Y- Axis 20" & Z –Axis 30") – 22 Tool
- Doosan MV-8035, FANUC 18I-MB Control, (X-Axis 78.7", Y – Axis 36.4", Z – Axis 33.5" and 4th & 5th Axis) – 40 Tool
- Doosan MYNX 6500/50, Doosan-FANUC I Series Control, (X-Axis 50", Y – Axis 25", Z – Axis 30" and 4th & 5th Axis) – 30 Tool

Engine Lathes

- Monarch #612 (20" Swing X 102")
- Monarch #613 (25" Swing X 192")
- 2 – Standard-Modern (20" X 60")

Engine Lathes

- 1 – LeBlond (15" X 54"), with digital readouts
- Logan with Turret Attachment (14" X 40")

METAL CUTTING (Continued)

Milling

- 2 – Bridgeport II with Digital Read Out

Saw

- Cosen AH-320H, 16” Double Column

METAL JOINING

- TOCCO 50Kw Inductron II, Induction Brazing Heater
- Heat Treating Furnace (13” X 30”)
- 3 – Acetylene Rigs
- Hypertherm Powermax 1250, Plasma Metal Cutter
- ESAB DIP Pak 250, Mig Wire Welder
- Lincoln Electric, Precision Tig 275

QUALITY ASSURANCE AND INSPECTION

- Faro Gage Plus; 24” Coordinate Measuring Machine
- Brown & Sharpe Micro-Hite 900 – 48” with printer
- Brown & Sharpe Micro-Hite – 24” with printer
- Clark Micro-Hardness Tester MHT-1
- Wilson Rockwell/Brinell Hardness Tester – 3 JR & 5M
- 1 each Mitutoyo Profilometer SurfTest 401, Mitutoyo Profilometer SurfTest 201
- S-T Industries, Optical Comparator Quadra-Chek 200, 30” DIA
- Nikon Optical Comparator 10 X 16” DIA
- Nippon Binocular Microscope
- Blanchette #541 Height Gage
- 0 – 4” OD Electronic Digital Micrometer
- Mikrotest #3 Thickness Gage
- 0 – 62” OD Micrometer
- Wet Fluorescent Magnetic Partical Tester
- Surface Crack Inspection (Zygo-Dye Check)
- DoAll Monolight Optical Flatness Comparator
- Leco PR-22 Hot Mounting Press
- Nikon Binocular Microscope-Camera
- Dino-Lite Camera Microscope
- Precision Granite Surface Plates, (48” x 72”, 36” x 54” and 24” x 48”)

HVOF “RAM” SPRAY COATINGS

- High-Energy Linear Flow Rocket Guns – 7
- Grit Blasting Cabinet (40” X 120”)
- Grit Blasting Cabinet (120” W x 120” D x 96” H)
- Multiple Lathe Style Beds for Workpiece Positioning & Rotation:
 - 12” Swing x 204” Bed
 - Two 12” Swing x 48” Bed
 - 10” Swing x 24” Bed
 - 12” Swing x 60” Bed
 - 36” Swing x 36” Bed
 - 64” Swing x 62” Bed)
- On Site Capabilities – Portable Unit
- 48” Welding Positioner

PRESSURE TESTING

- Pressure Test Stand
- Maxpro – Maximator L-500, up to 75,000 psi

FORKLIFT

- 2009 Toyota, 3,000 lb Capacity
- 2009 Yale, 5,000 lb Capacity
- 2009 Hyster, 15,500 lb Capacity