



TOOL & MANUFACTURING

5005 County Rd. 29 ♦ Auburn, IN 46706  
o: 260.925.2128 w: www.rathburntool.com

## CUSTOMER SOLUTIONS: #9

# BEARING HOUSING REDESIGNED.



For a number of years we produced a bearing housing for heavy trucks. After our customer redesigned the part to combine two components into one, it ultimately saved the customer money but became more complicated to produce. The new design called for a completely different process flow that included machining using complex datums, followed by induction heat treatment.



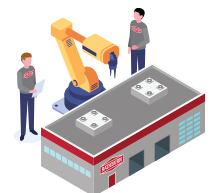
## WE THOUGHT HARD ABOUT PROCESS AND SEQUENCE.

We worked closely with a number of heat treating suppliers to identify an alternative heat treat process, and found ways to resolve issues with tolerances that allowed us to consistently and accurately run production parts. It took some time and collaboration with our suppliers and customer but we improved the machining process and the overall manufacturability of the part.

## PARTNERS IN BETTER PARTS.

A unique machining and heat treating process, along with implementation of robotics and custom automation, allowed us to make quality parts that would meet our customer's specification. In the end, our customer got a better part and we got a better process. That's what it's like to partner with Rathburn.

*Visit our plant in Auburn, Indiana and see for yourself how for 35+ years, we've used the latest technology while applying ingenuity and consistent quality standards to produce an experience our customers call "hard to believe".*





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## EQUIPMENT & FACILITIES

### CNC TURNING CENTERS:

#### (1) Hyundai 2 Axis L280

- Maximum Turning Diameter: 16.14"
- Maximum Thru Spindle: 3"

#### (1) Takisawa TCN-2100G L3

- Diameter Thru Spindle: 2"
- Maximum Turning Diameter: 11.81"
- Box Slide Way X Z

#### (2) Takisawa TCN-2600L6

- Diameter Thru Spindle: 2.9"
- Maximum Turning Diameter: 16"
- Box Slide Way X Z

### CNC MILLING CENTERS:

#### (4) Mazak 410A Nexus

- 4th Axis Head Index
- Axis Travel: x = 30" Y = 16" Z = 20"
- SMW 175 4th Axis Rotary Head

#### (3) Brother TC-S2D

- 4th Axis Head Index
- Axis Travel:  
x = 19.7" Y = 15.7" Z = 11.8"
- Independent Full 4th Axis Rotary Head

#### (1) Brother TC-S2D

- Axis Travel:  
x = 19.7" Y = 15.7" Z = 11.8"

### OTHER TECHNOLOGY

#### ROBOTICS:

#### (4) Motoman NX100 Robots

### CUSTOMIZED AUTOMATION:

#### (2) Multispindle Torque Machine

#### (2) Multispindle Drill & Tap with autoload

#### (1) Takisawa TM-4000Y2

- Diameter thru Spindle: 3.7" (3.23" Max. Bar Capacity)
- Maximum Turning Diameter: 10"
- 12-Station Milling Turret, upper & lower
- High Rigid Box Type Slide Way
- LNS Sprint S3 Barfeeder

#### (1) Citizen Swiss Cincom L32 VIII

- 3 Station Modular Tooling Unit
- Live Face 3-front / 3-back
- Low Frequency Vibration
- CAV32-CAV32LE Cincom Magazine Barloader

#### (2) Amera Seiki TC-2L

- Diameter Thru Spindle: 2"
- Maximum Turning Diameter: 13"
- Programmable Tail Stock

#### (1) Brother S700X1

- Axis Travel:  
X=27.5" Y=15.75" Z=11.8"

#### (1) Brother S500X1

- 4th Axis Head Index
- Axis Travel:  
X=19.68" Y=15.75" Z=11.8"

#### (1) Mazak 640M VTC160B

- Axis Travel: X=44" Y=16" Z=22"

#### (1) Hyundai-Kia VX500 Vertical

- 4th Axis Head Index
- Axis Travel: x = 40" Y = 20" Z = 20"

#### (1) Autoload sorting/ Weighting Machine with Auto Paint Marker

#### (1) Autoload Laser Checker For Lathes

### SAWING EQUIPMENT:

#### (2) Hy-Mech H12 Band Saw

- Capacity: 12" x 12" / 12" round

#### (1) Mazak Quick Turn 250 HP

- Diameter Thru Spindle: 3.15"
- Maximum Turning Diameter: 10"
- Maximum Swing: 17.3"
- Maximum Bar Diameter: 2-3/4" (3" w/ bore chuck)

#### (2) Takisawa TC-203J &

#### (2) Takisawa TC-203JG

- Diameter Thru Spindle: 2"
- Maximum Turning Diameter: 11.81"
- Box Slide Way X Z

#### (1) Citizen Swiss A32 VIII PL

- Maximum Turning Diameter: 1-1/4"
- C332 barloader

#### (1) Fadal VMC 2216FX

- 4th Axis Head Index
- Axis Travel: X=30" Y=16" Z=20"
- 8,000 RPM 22 HP

#### (1) Kent KVR-2418

- Axis Travel:  
X=24.01" Y=18.11" Z=18.89"
- Spindle Taper

#### (4) Kitamura 3XD

- 12000 RPM Spindle Speed
- Axis Travel: X=30" Y=30" Z=20"

### METROLOGY:

#### (1) Mitutoyo B-231 Manual CMM

#### (1) Hexagon Global S Green 710.7 DCC CMM