AJ-03: Repair Machine / Miscellaneous Parts

SAFETY FIRST

- ☐ Follow all Caterpillar facility safety standards when performing this task.
- ☐ Observe machine safety when operating machines.

EQUIPMENT

- ☐ saw
- ☐ TR System
- ☐ Rastar printer
- ☐ Rockwell Hardness Tester
- ☐ basic Toolmaker measuring devices

RESOURCES

- ☐ machine manufacturer's manual
- ☐ print
- ☐ sketch
- ☐ repair ticket
- ☐ written request information

Repair Machine and Miscellaneous Parts

1. Determine work requirements.

- ☐ Read the repair ticket to determine the number of tools required, due date, and the type of repair.

2. Order Rastar prints as shown in the Toolmaker procedures.

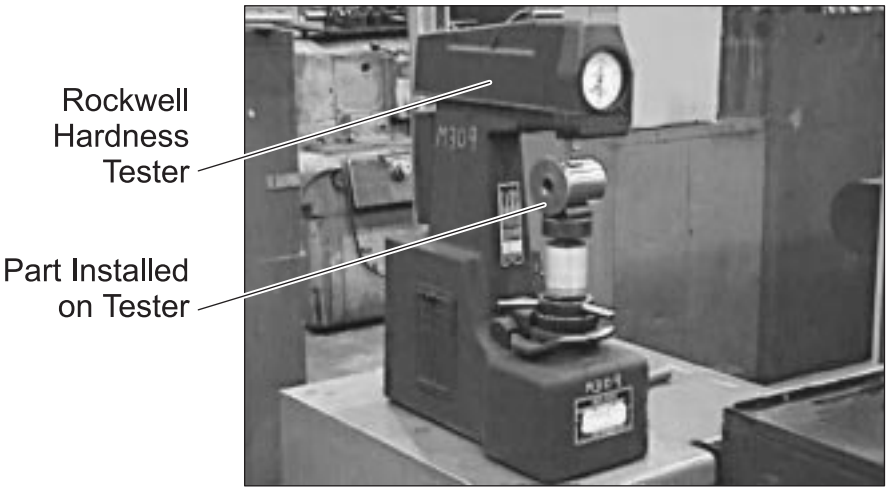
- ☐ Draw a sketch of the sample if no print is available.

3. Determine the best method of repair.

- ☐ Methods may include making a new part or reworking the old part.

4. Determine the required material.

- ☐ Perform hardness or magnetism tests to determine the type and hardness of the material.



- ☐ Consult with a journeyman Toolmaker for material selection and hardness testing.

5. Create a stock list from the drawing.

- ☐ Check to see if the material is in the rack.
- ☐ Order any materials not available.

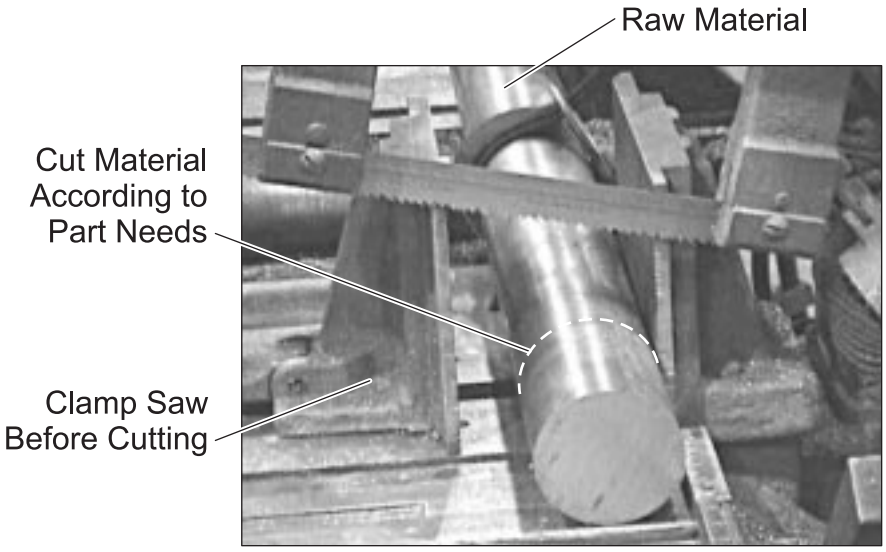
6. Estimate the time and routing for each operation on the "BEN" screen of the TR System.

- ☐ Follow the Toolmaker procedures for entering process data.

7. Print and attach the routing to the repair ticket.

8. Prepare the rough stock.

☐ Cut the new material, if required.



☐ Weld or machine the existing material, as needed.

9. Route the part to the required machine with the write-up.

☐ Perform the machining if a Machine Operator is not available.

10. Stamp the stock and route it to heat treat, as required.

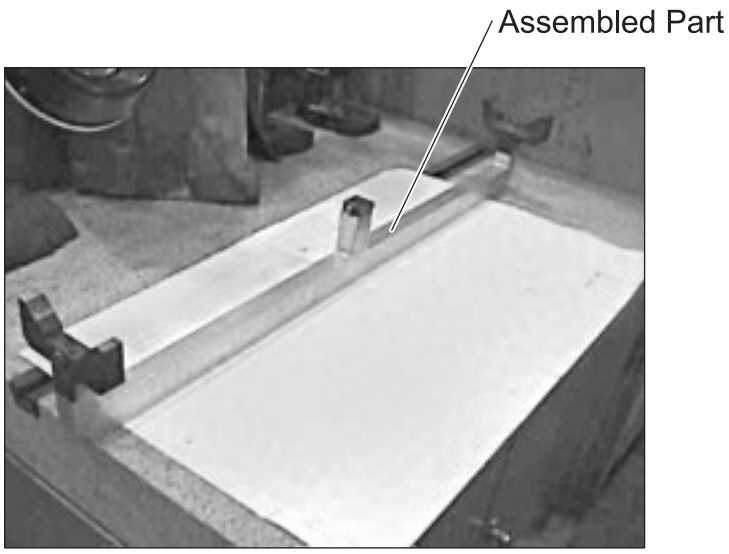
11. Inspect the heat treat.

- ☐ Perform a Rockwell hardness test.
- ☐ Visually inspect for cracks, replacing the stock if necessary.
- ☐ Straighten the stock or grind centers if visual inspection shows signs of warping.

12. Inspect the part.

- ☐ Measure the part to verify print or sample requirements.

13. Assemble the parts according to the print or sketch dimensions.



Assemble According to Specifications

14. Inspect the assembly.

- ☐ Micrometer or indicate the assembly to verify the print requirements.

Part Assembly Verification

15. Create a quality audit sheet according to the Toolmaker procedures.

- ☐ Document all key dimensions.
- ☐ Print and send the audit sheet with the job.
- ☐ Verify that the audit is stored in the TR System.

16. Complete the shipping tags and send the job to the area specified on the repair ticket.