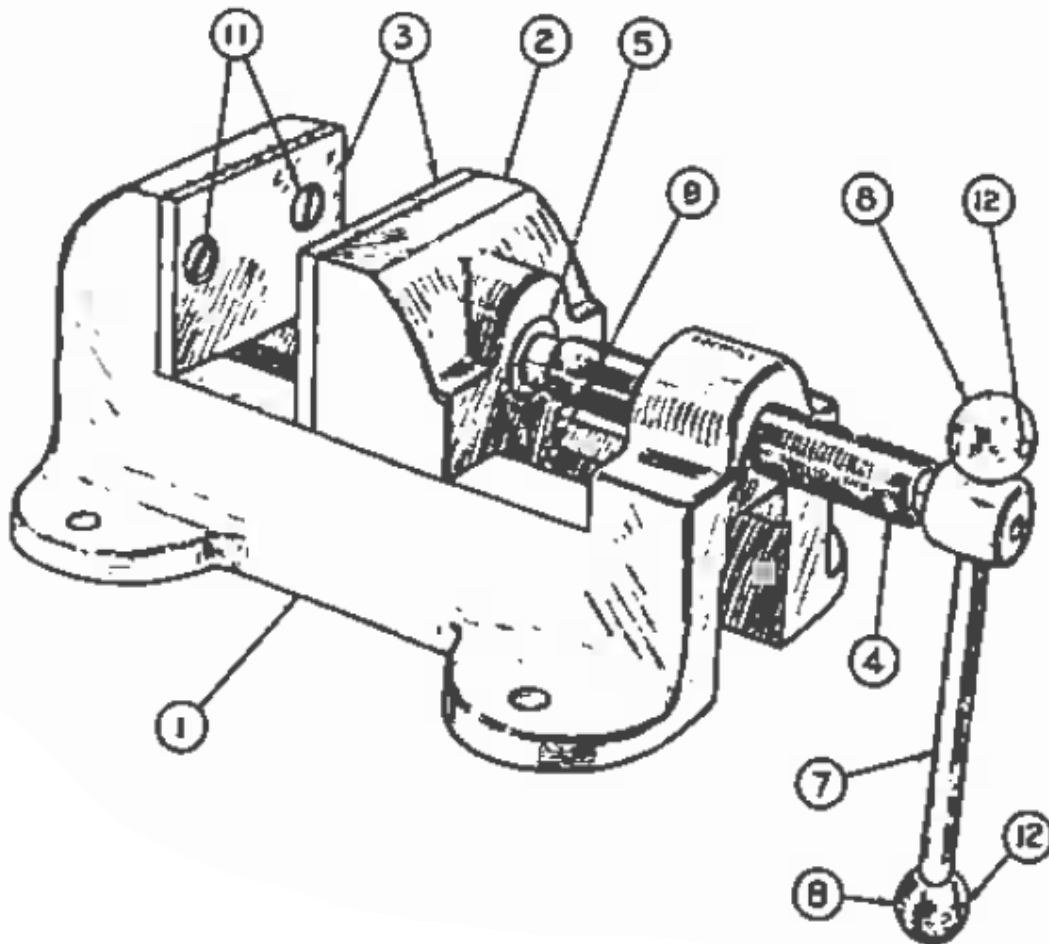
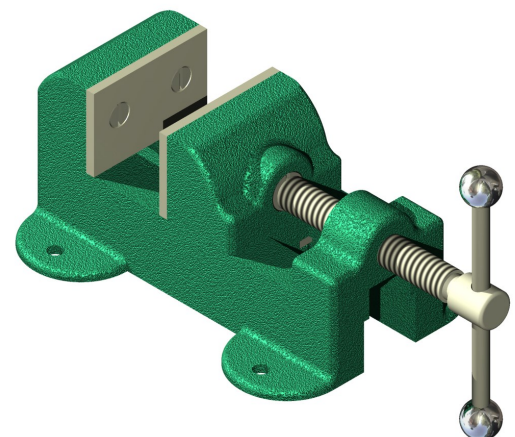


ENGINEERING PRINCIPLES

CAT-1043



THE VISE FINAL PROJECT



The final project for this course will be a VISE. There is a simplified version of a vise at the end of chapter 14 in your textbook, but who wants simple. This is an older drawing dimensioned in fractions and tolerances.

Read all the instructions before starting the project.

Project Requirements:

Inventor Project

- Create a project folder on your flash drive and create an inventor project named “FINAL PROJECT – VISE”.

Create a part file for each part

- All sketches must be fully defined and grounded to the origin.
- Add cosmetic threads where applicable.
- The file name will be VS-001, VS-002, VS-003, etc...

Create a drawing file for each part

- Use a B size sheet with an ANSI-A title block.
- Create as many views and sheets as necessary to fully describe and dimension the part.
- Dimension the views as necessary.

- Use iProperties to fill in the title block.

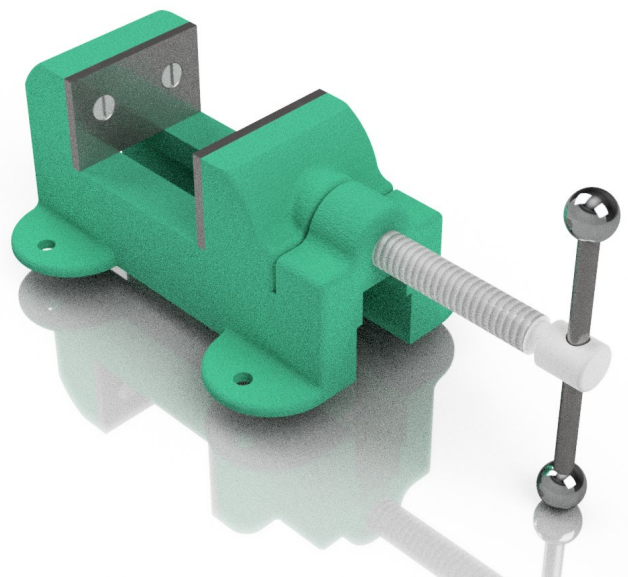
- Author: Your Name
- Company: OKLAHOMA CITY COMMUNITY COLLEGE - CAT DEPT.
- Part Name: Name of Part
- Part Number: Filename (i.e. VS-001, etc.)

Create an assembly of all the parts.

- All parts must be fully mated.

Render the assembly.

- White background
- 1920x 1080 resolution
- Save as Vise.png



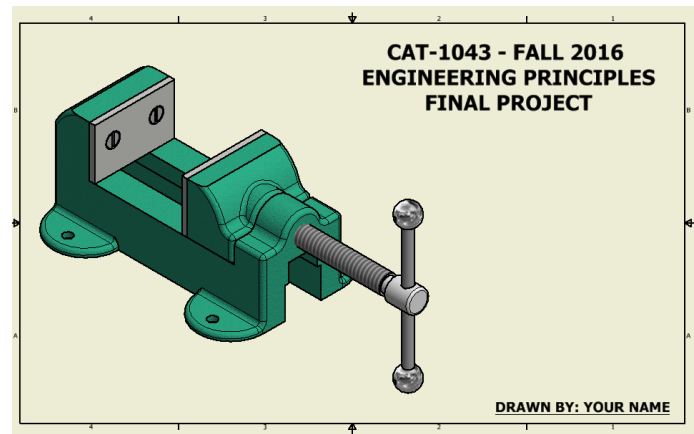
Cover Page Drawing

- Use a B size Sheet with no title block.
- Add an isometric view of the shaded assembly on the left side.
- Add the text below at an height of 0.375 to the upper right side of the sheet.

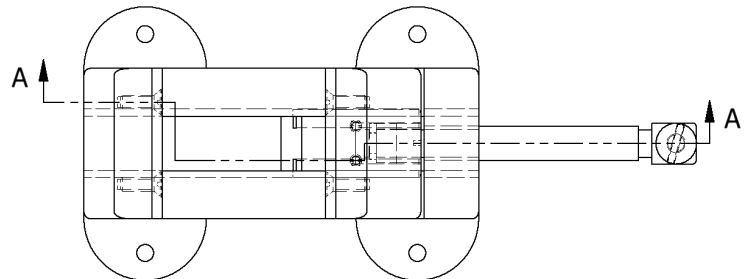
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FINAL PROJECT

- Add the text below at an height of 0.25 to the lower right side of the sheet.

DRAWN BY: YOUR NAME

**Create an assembly section drawing.**

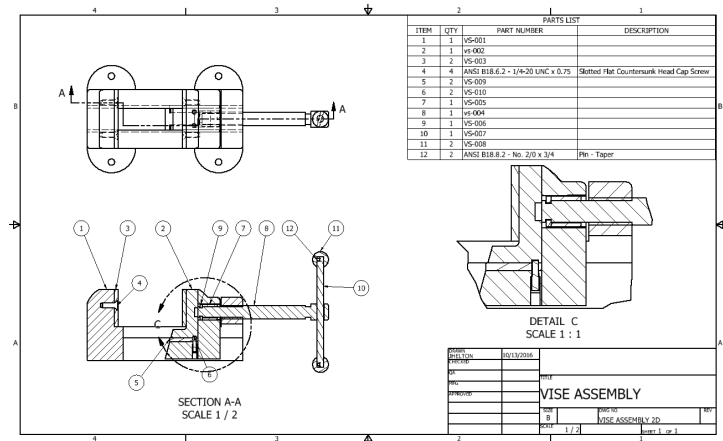
- Use a B size sheet and ANSI-A title block
- Create an offset section that goes through the vise screw, set screw and the back cap screw. Create an enlarged detail view as shown.
- Add a detail drawing as shown.
- Add a Parts list to the drawing.
- Add balloons to the assembly drawing.
- Part 11 and 12 are from design center.

**Vise Screw/Handle Rod Drawings**

- Use the Break tool to reduce the length of the long rods on paper.

Dimensions and Notes

- Use the notes and tolerances as shown in the handout.

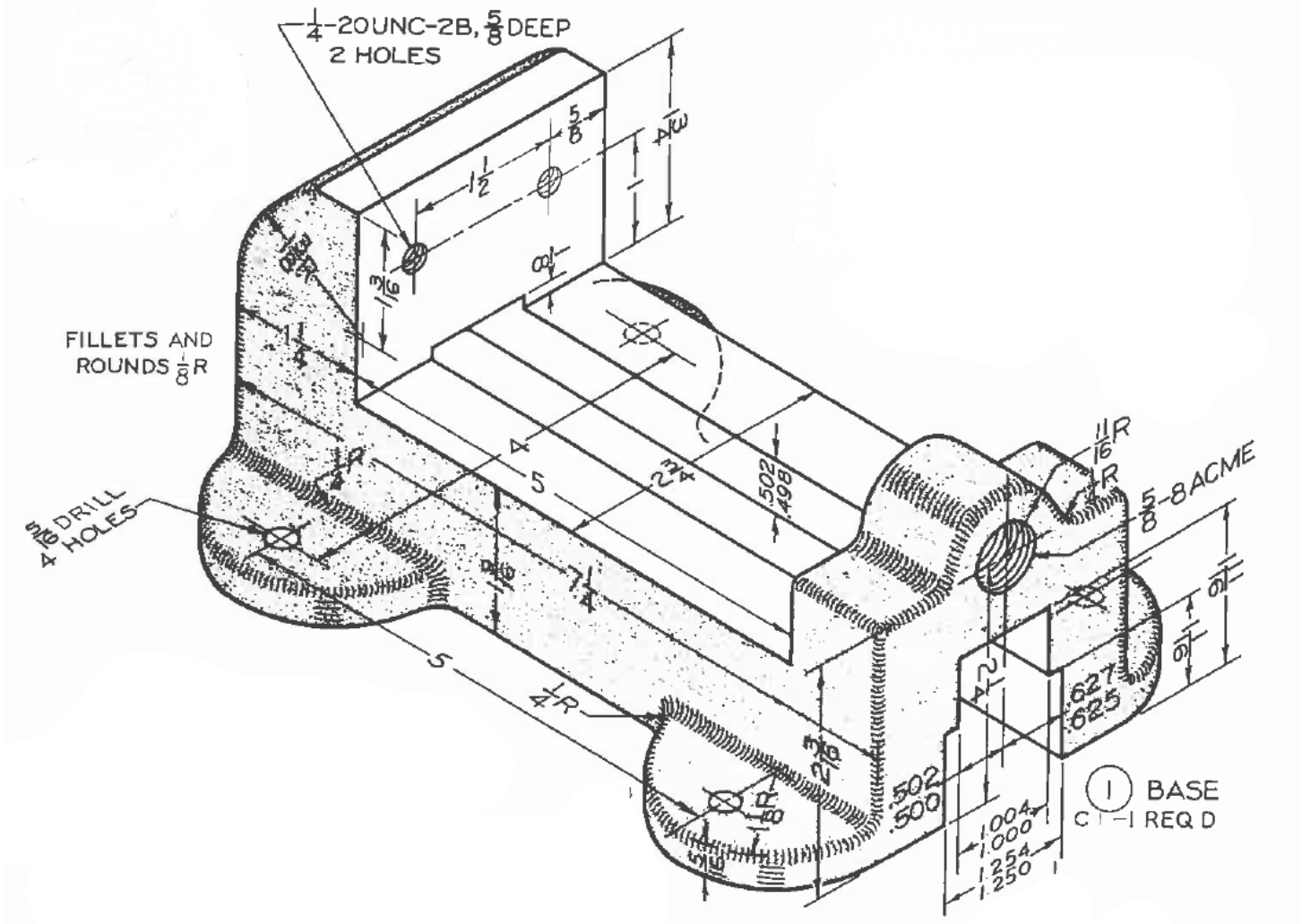
**Submittal Instruction**

- Create a compress folder of all files in the project folder and name it YOUR NAME—FINAL PROJECT. Upload the zip file to Moodle.
- Print each drawing sheet to a PDF file and combine to a single PDF file. Upload the PDF file to the Moodle Dropbox.
- Print each drawing to the 5200 laser printer and bind using the binding provided by your instructor.
 - ◆ Place the files in the following order (Cover Page, 2D Assembly, VS-001, 002, 003, ETC...)

PART # VS-001 (BASE)

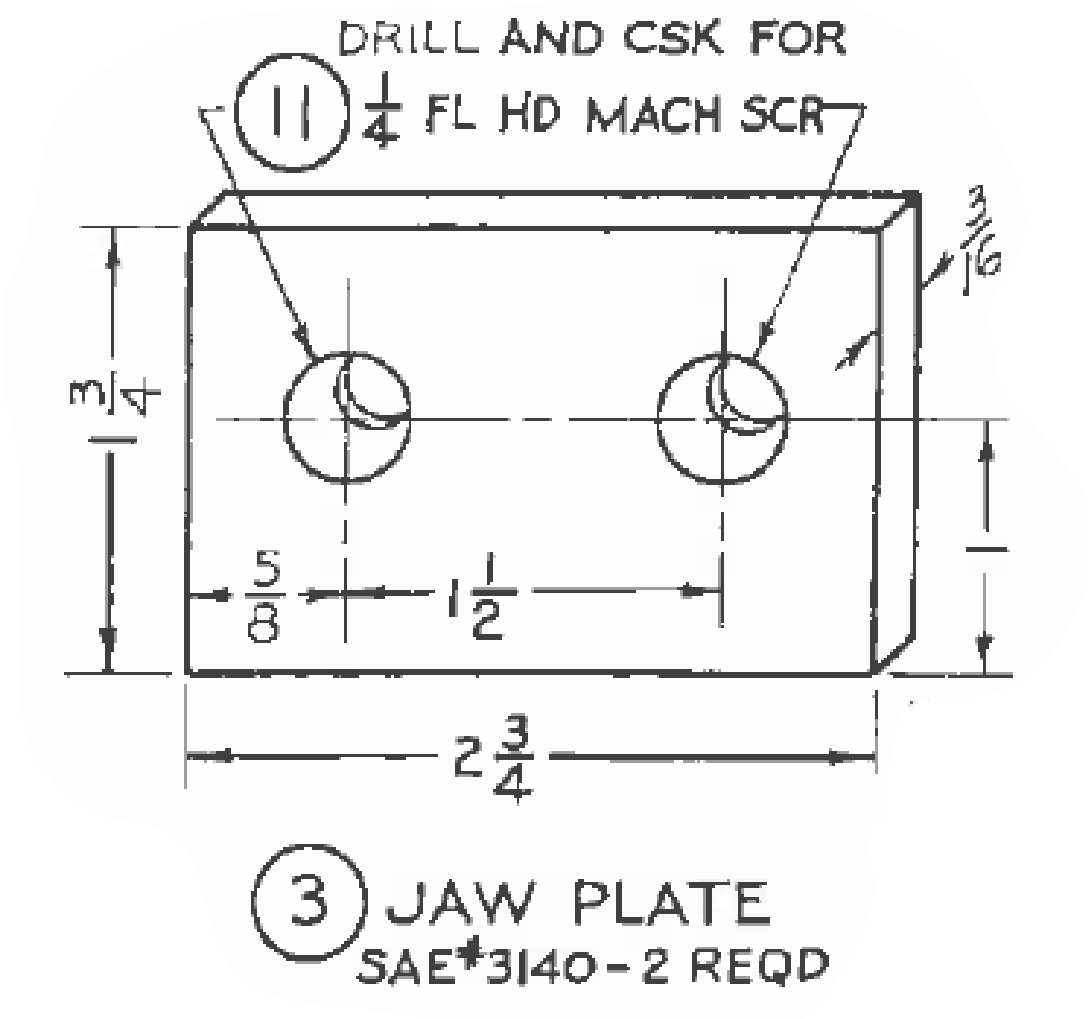
Material: Cast Iron, Machined2

Color: 32,190, 149



PART # VS-003 (JAW PLATE)

Material: Steel Alloy

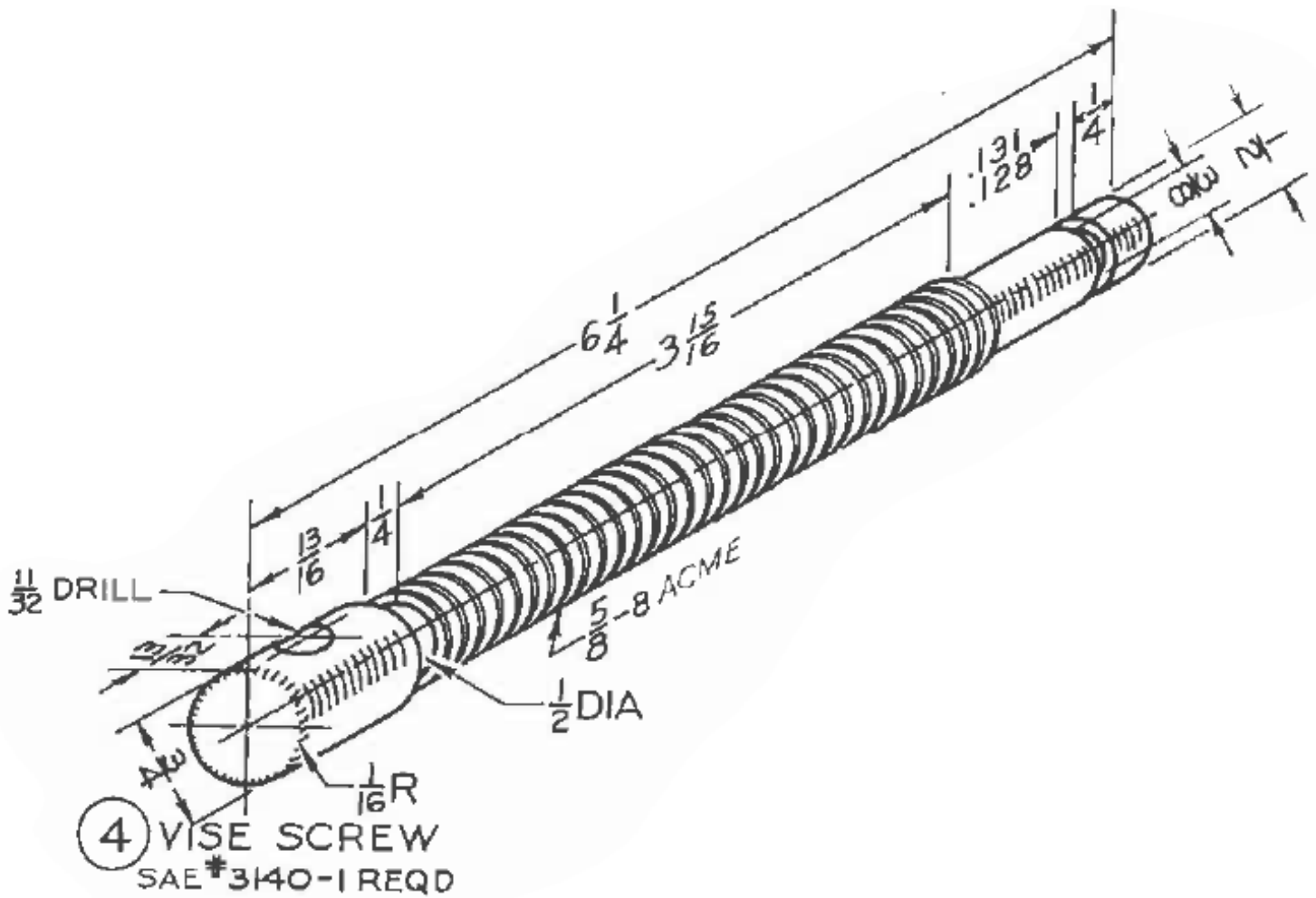


NOTES: Part 11 is listed above. (Obtain from Content Center)

Make the countersunk hole diameter 0.250

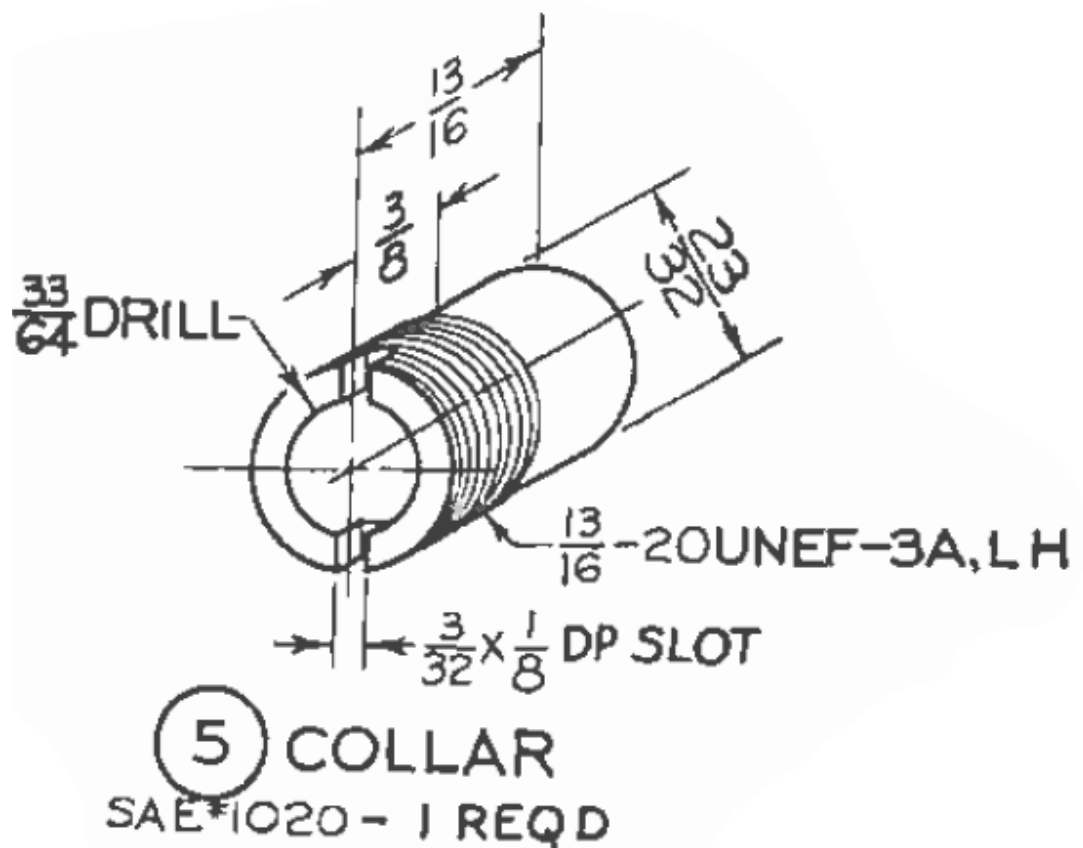
PART # VS-004 (VISE SCREW)

Material: Steel Alloy



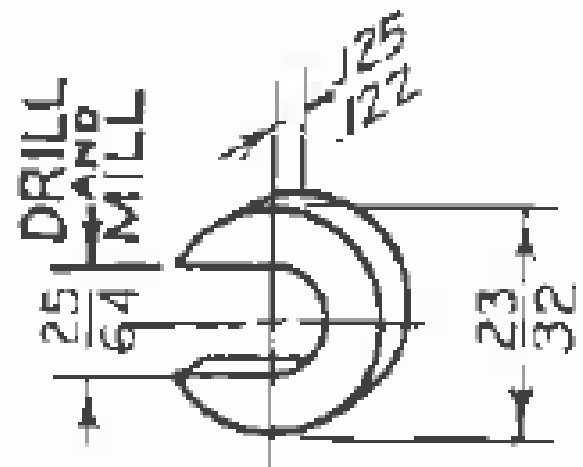
PART # VS-005 (COLLAR)

Material: Carbon Steel



PART # VS-006 (SPECIAL KEY)

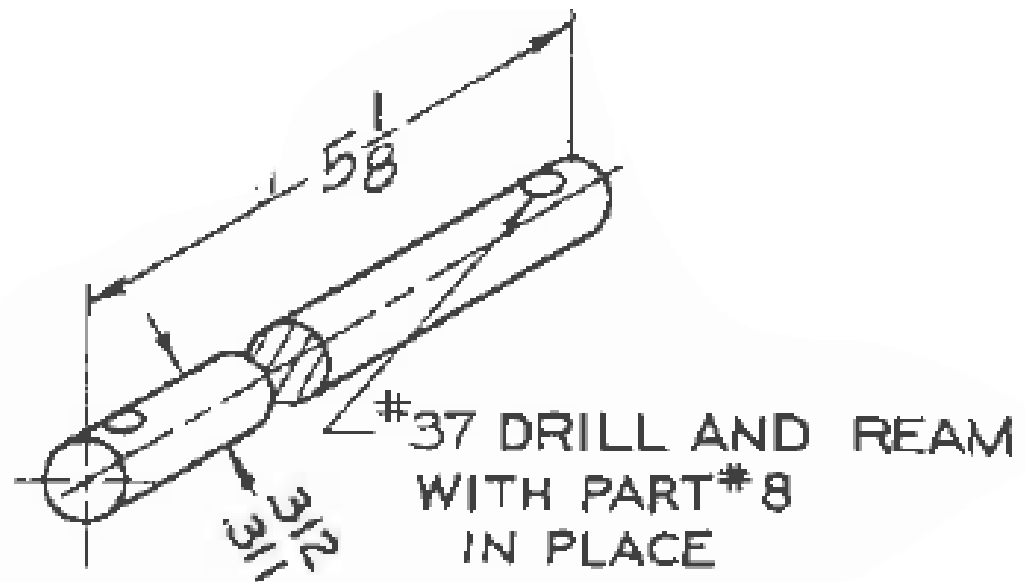
Material: Carbon Steel



(6) SPECIAL KEY
SAE#1020-1 REQD

PART # VS-007 (HANDLE ROD)

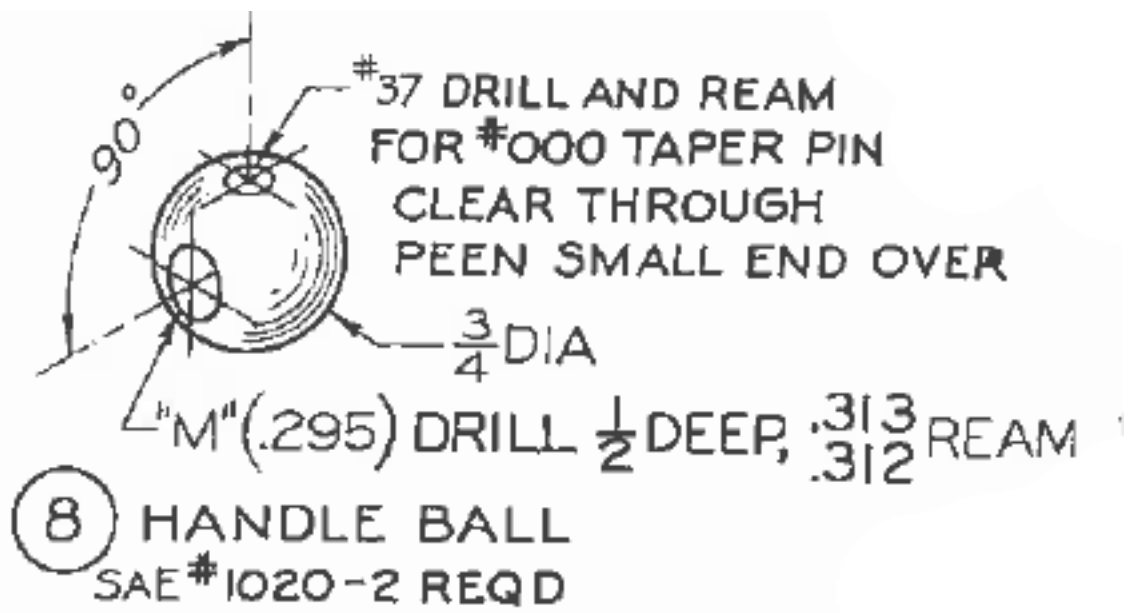
Material: Steel Alloy



⑦ HANDLE ROD

PART # VS-008 (HANDLE BALL)

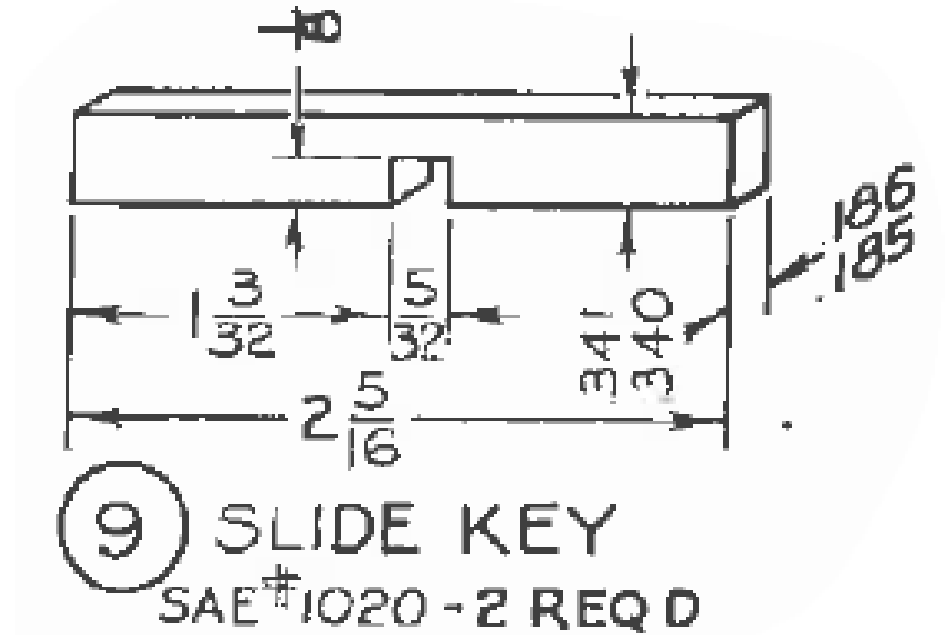
Material: Carbon Steel



NOTE: Part 12 is the taper pin. (Obtain from Content Center)

PART # VS-009 (SLIDE KEY)

Material: Carbon Steel



PART # VS-010 (SET SCREW)

Material: Carbon Steel

