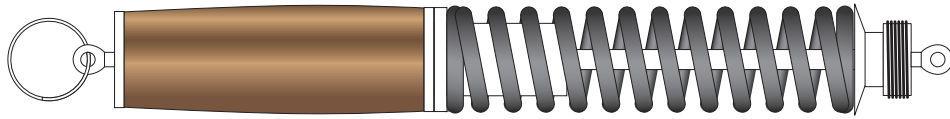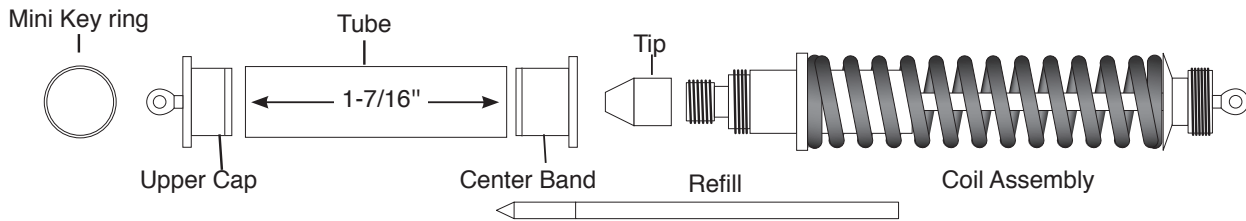# Shock Absorber Pen Kit

Kit Features:
- Unique Automotive theme
- Functional coil action
- Includes split-ring for keys
- Easy to make with a single tube
- Few parts, very easy assembly
- Overall length: 4-1/2"

Required Accessories:
- 7mm, Pen Mandrel
- Drill bit 27/64
- 2 pc Bushing Set 6584
- Barrel Trimmer Sleeve 27/64" (Use w/ 7mm and trimmer)
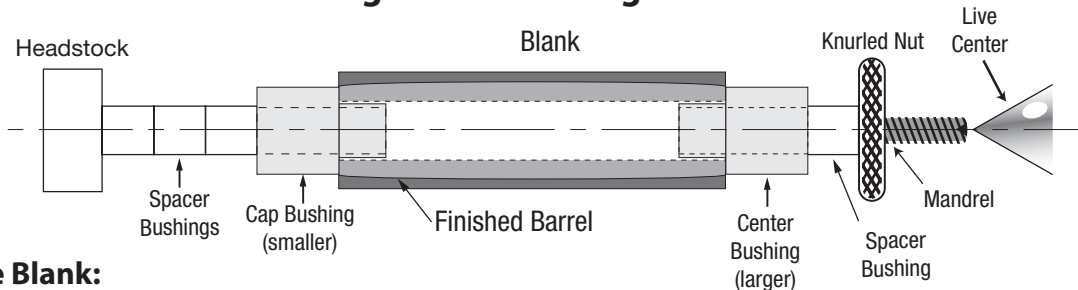- 2 Parts Epoxy Glue or Insta Cure (Cyanoacrylate) Glue

Diagram A - Parts Layout

Mini Key ring — Tube — 1-7/16" — Tip — Upper Cap — Center Band — Refill — Coil Assembly

Preparing the Blank:
- Cut 3/4" or larger square blank to the length of the brass tube (add 1/16" for trimming off)
- Drill a 27/64" hole through the blank
- Spread the glue over the tube. Insert the tube into the blank with a twisting motion to spread the glue evenly inside. Center the tube lengthwise in the blank
- When the glue dries, square off the blanks.
- You can use a 7mm barrel trimmer with the proper sleeve or a universal pen blank squaring jig with a power disc sander. Take the wood down flush with the ends of the brass tube.

Diagram B - Turning the Blank

Headstock — Blank — Knurled Nut — Live Center — Spacer Bushings — Cap Bushing (smaller) — Finished Barrel — Center Bushing (larger) — Spacer Bushing — Mandrel

Turning the Blank:
- Mount the blank and bushings on a pen mandrel according to dia. B.
- Thread on the knurled nut and hand tighten to hold all items in place.
- Slide the tailstock snug to the mandrel shaft. (do not over tighten, it could damage the mandrel). Lock in place.
- Turn down the wood, flush with the bushings using lathe tools and gradual higher grits of sand paper.
- Finish the barrel with your choice of polish

Assembly:
- Layout parts according to diagram A.
- Press the center band into the larger dia. of the barrel.
- Press the upper cap into the opposite side of the barrel.
- Slide the mini key ring through the hole in the upper cap.
- Unscrew the tip and insert the refill into the opening of the coil assembly. Push in until refill is seated tight. Replace the tip.
- The pen is ready to use. Post the top end of the pen when in use.

Diagram C - Bushings

ø.500" ø.389"   ø.389' ø.564"

Cap   Center