

# Materials, Tools and Techniques for Curating Museum Items

**Industrial Control Consultants**





We are all familiar with the standard tools and materials.

- Screw Drivers, Hammers, Clamps, Drills
- Glues, Paints, Solvents
- Styrene, wood, cardboard, brass, resin
- Alcohol, Acetone, MEK



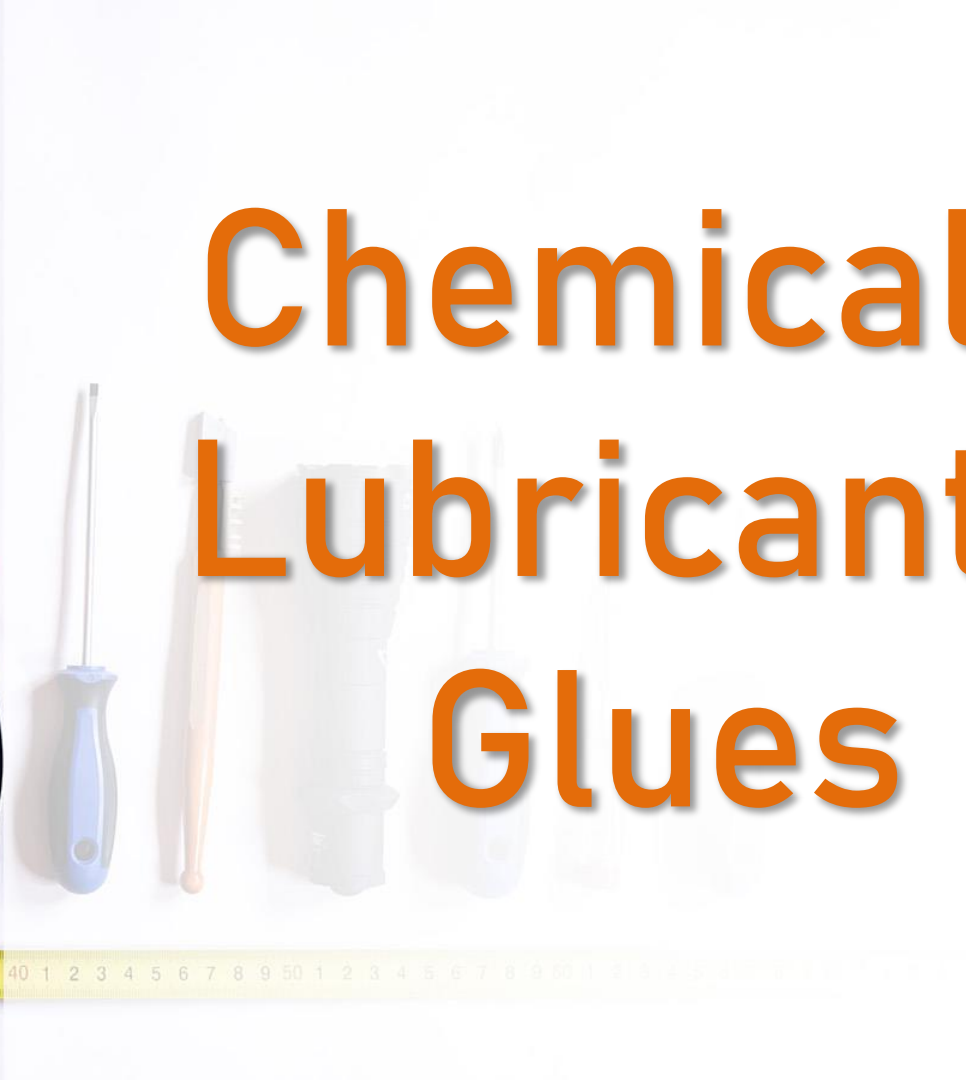
But, . . . The questions, sometimes,

- How did you do that
- What did you use
- What is the name of that



I will show you some stuff of which you may not be aware . . .

# Chemicals, Lubricants, Glues





# BESTINE

- Replaced carbon tetrachloride – no liver damage
- Dissolves carbon crud on wheels, armatures, motor brushes, wheels, pickups
- Thins rubbery compounds. Makes rubber-based dried gunk into gooey gunk. Then rub off.



# Extreme Power Cyanoacrylate De-Bonder

- Does what its name says
- Great for CA bonded shaft-in-hole type connection
- Works on fingers too
- Even opens 5 year joints
- **Careful around armatures and magnet wire. This stuff will strip the varnish and short everything**



# OOPS EXTREME REMOVER

- Paints – acrylics, enamels, lacquers, Tamya
- Markers, inks, track stains, color pens
- Gooney tars, rubbery residue
- Careful use on wheels, drivers – will take off paint.

• Only sold to adults in Alabama – huffers beware – very toxic



# LIQUID TAPE

- Just like Scotch 33+ Black Electrical Tape except IT IS A LIQUID
- Vulcanizes in air at room temperature – don't leave uncapped
- Thin out with MEK – ventilate
- Use small amount, then spread
- Don't touch for 1 hour





# BARE CONDUCTOR Electric Paint



- Carbon-filled latex, water soluble, remains flexible
- Can be used to assure electrical conductivity between dissimilar metals that cannot be soldered, i.e., stainless steel and copper/brass
- Great for rejuvenating press buttons on remote controls

# CRAFTER'S PICK

- Pretty good Super Glue but not CA
  - Water soluble – thinning or removing
  - Goes on white – dries clear
  - Works very well as a Contact Cement
- Thin-coat each surface – wait till just dry, layer together
- Stays flexible
  - Great choice for dissimilar materials



# ALEENE'S TACKY GLUE

- You know that sticky glue on flyers you get in the mail? You can roll it up into a stretchy blob?

This is it.

- Useful when you have to place structures or plant trees.
- Sticks very well – but you *can* pull it apart – just like your mail.
- Only use as much as you need. Thins with small amounts of water



# CANOPY GLUE

- Goes on White dries Clear
- Used to attach Acrylic (hard) airplane model canopies to Polystyrene (flexible medium)
- Will not fog acetate or vinyl
- Use for dissimilar plastics. Not so much for same plastics





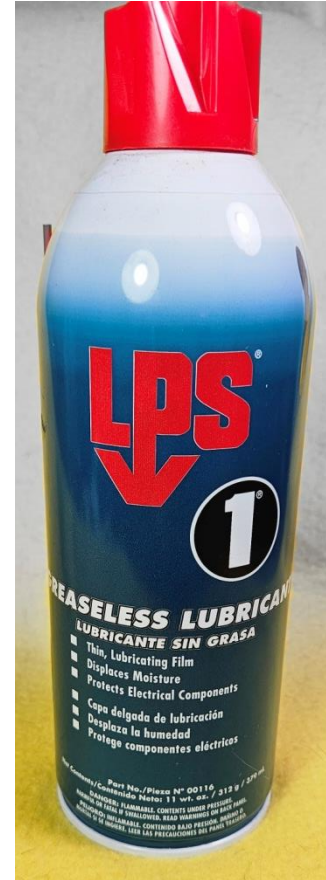
# BULLFROG SNOT

- Answer to traction problems
- Apply to driven wheels
- NON-CONDUCTIVE
- You must choose which wheels carefully – depends on where power pickup takes place.
- Replaces “traction tires”



# LPS-1

- Greaseless Lubricant
- Insulator under no pressure
- Conductor under normal pressure
- Good for (clean) track
- Non-arcng so no carbon gunk
- Only conducts directly under wheel
  - not as it pulls away
- Excellent for dressing commutators
- Excellent for power pickups
- Let dry (15-20 min)



# LABELLE 106 GREASE



- Not migratory – stays in place
- Wheel hubs, axles
- Bearings, bushings
- Sliding surfaces – mechanical
- Coupler boxes – VERY LITTLE
- Universal joints

# LABELLE 102 HEAVY OIL

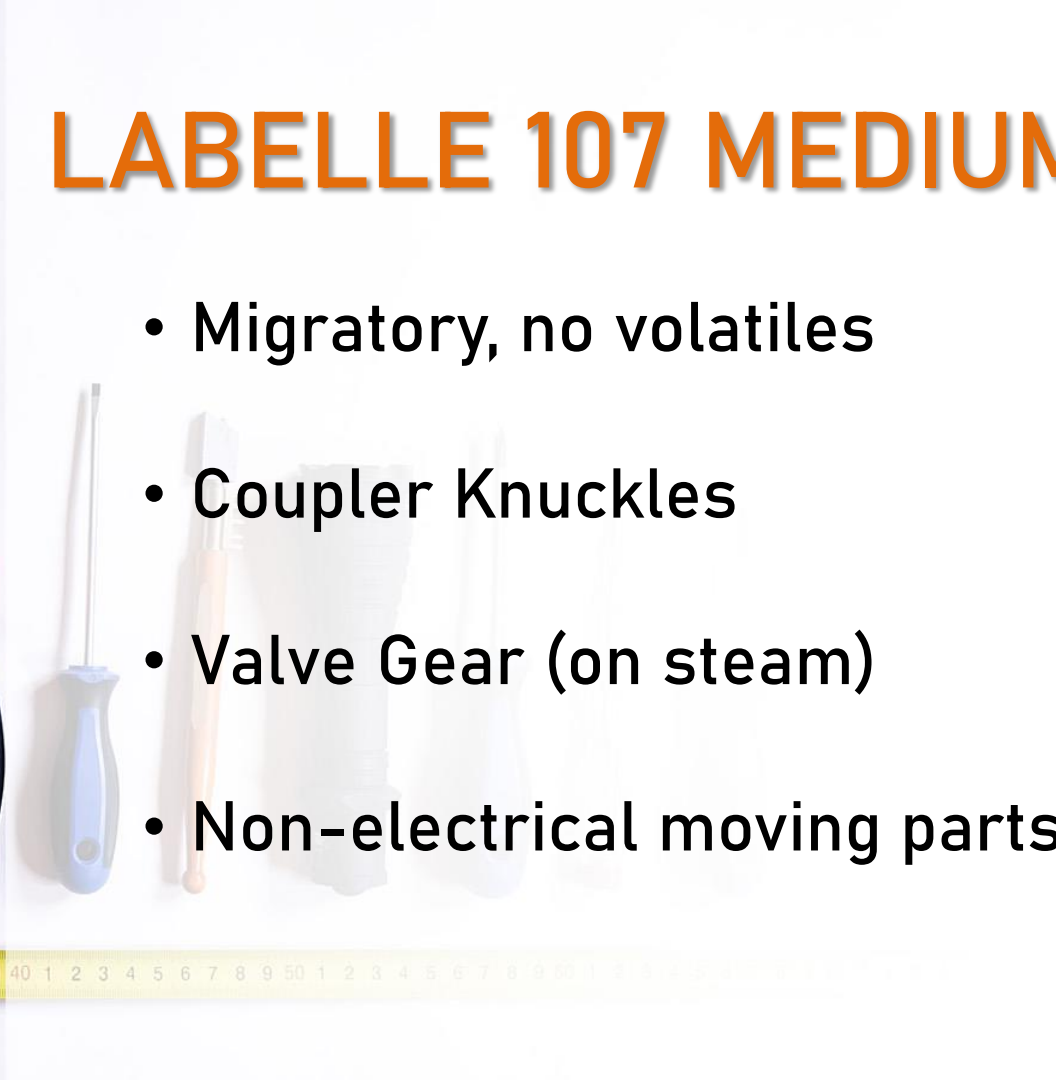
- Slow migratory, no volatiles
- Gears, gear cases
- Pinions, spurs, worms
- Drive towers
- O-rings, gasket rings





# LABELLE 107 MEDIUM OIL

- Migratory, no volatiles
- Coupler Knuckles
- Valve Gear (on steam)
- Non-electrical moving parts





# EQUIPMENT

# DUPONT Connector Set

- Male and female pin sets
- You can mix and match male/female pins in the same connector pair (for proper order)
- Singles and multiples up to 6-gang
- OR, make your own by ganging shells on a flat piece of float glass with styrene cement



# Parallel Jaw Pliers

- Great for flattening wavy stuff
- Heat jaws in (boiling?) hot water for shaping plastics
- Press-lock connectors
- Various jaw covers for embossing and texturing
- It's the parallel movement that's important – acting like a press





# Reduced Thickness Slip Joint Pliers

- You know those connectors and things you just can't get a grip on because the pliers are too thick??
- Get these



# Parallel Jaw Clamps (Starrett Clamps)



- Most clamps have a pivot – not really parallel. Clothes pins, spring clamps, Irvin clamps
- These will assure keeping pieces parallel and normal. Arms are machined square.



# Long Nose End Nipping Cutters

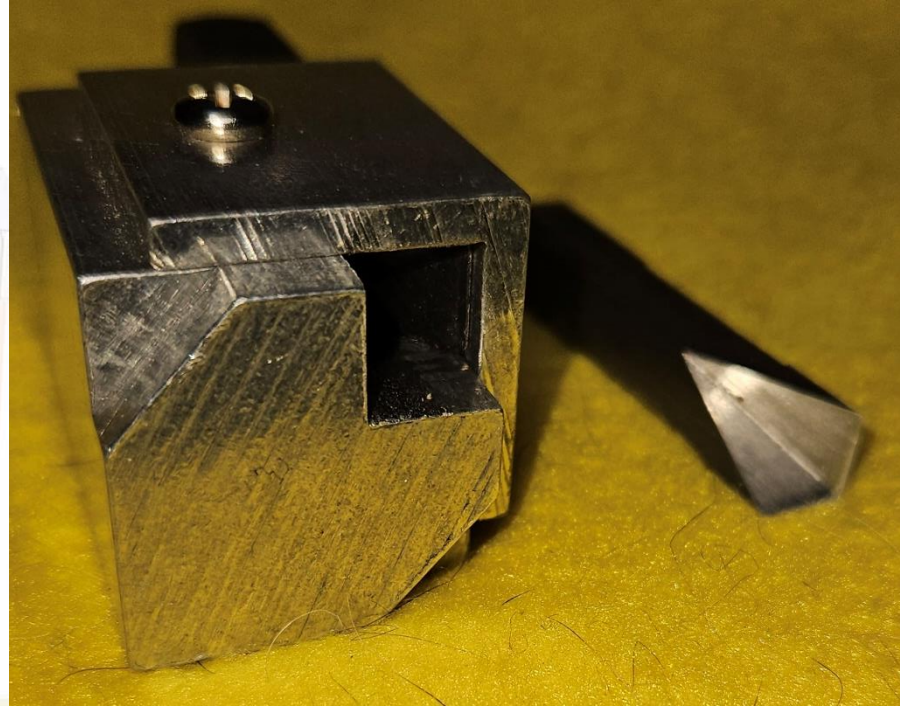


- We all know end nippers.
- These have a long nose to get into those hard to reach places.
- Works well as sprue cutter





# CORNER CHISELS





# PLIERS



Mini Channel Locks



Mini Vise Grips



Chaining Pliers



Hard Wire Cutters



Trip Pin Pliers

# Special Forceps and Tweezers



Decal Forceps



Pearl Forceps



Heat Sink Soldering Forceps



Needle Tweezers



Suture Tweezers

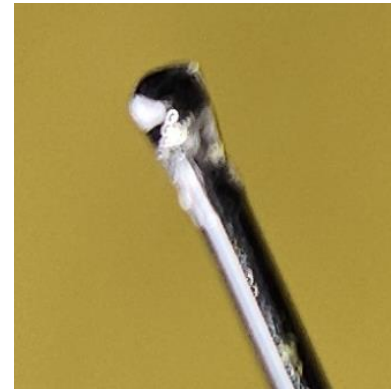
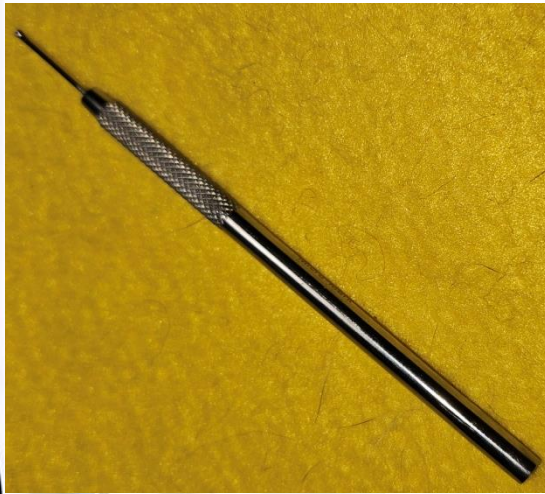
# BALL TIP EMBOSSERS



- Nail holes
- Grooves, corrugated siding, texturing
- Carving stone work, brick work



# KAYDEE SPRING TOOL





# MINI GEAR PULLER



# SPRING CENTER PRICK PUNCH



# CENTER BUBBLE LEVEL & INCLINOMETER





# REFILLABLE AIR BOTTLE



Schrader Valve  
like your vehicle  
tires.

Fill to 100-120 psi





# MATERIALS

# KAPTON TAPE



- Electrically insulating tape
- This particular one is 7.7Kv/mill dielectric strength
- Alternate name Polyamide tape

# WIRING

- Super flexible silicone insulated
- 20 AWG = 32 strands each tinned
- 600V Dielectric Strength
- Insulation 500°F will not shrink back while soldering
- 20, 22, 24, 30 AWG available



# HEAT SHRINK TUBING

- 3:1 Shrink Ratio
- Dual Wall
- Adhesive Lined
- Flame Retardant
- Chemical Resistant
- Waterproof





# TEENY "BOTTLE" BRUSHES

