Present an overview of airgun power plants (spring piston, CO2 and single stroke pneumatic) used in the various classic match type airguns. The classic match airguns are defined as the original guns designed for 10 meter competitions but have been eclipsed by more state-of-the-art systems. Their original use dictated close tolerances in their manufacture and thus the repair procedures are more detailed. These guns are now enjoyed primarily by the casual shooter although they are still used by some schools and youth organizations for competition. The repair process begins with covering the initial inspection, then special tools, disassembly, preparation for installation of new parts, preparation of the parts, then the installation of the parts with tuning in mind and testing. Proper lubrication will also be covered.

Randy Bimrose whose gun repair experience dates back 48 years, puts the same dedication, determination, exactness and consistency into every repair. It does not matter if it is a shooter setting a world record, a national champion or the casual plinker wanting to hit that spinner as he relaxes in the backyard. The desire of each shooter is to have an airgun that works properly and hits where it is aimed. His experience and background include: A retired U.S. Marine Corps Match Armorer, Former Senior Gunsmith for Beeman Precision Airguns for over 10 years, former gunsmith for C&J Enterprises, Repair Consultant for Beeman Precision Airguns, Member of Marine Corps Distinguished Shooter Assoc., Life member of NRA & CRPA (CA Rifle & Pistol Assoc), also on the CRPA Board of Directors and member of NSSF.

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Recommended Textbook: Exploded Airgun Drawings now a PDF download--

Students should bring a minimum of five and a maximum of eight different match airguns from the list below. It will most beneficial to bring at least one each of the three power plant types if at all possible.
Rifles:
Anschutz – LG250, 380
Beeman – M400
FWB – 150, 300, 300S, C60, C62, 600, 601, 602, 603
Diana – 60, 65, 66, 75, 100
Gamo – 126, 128, MC
HW – 55
HyScore – 810M, 810SM, 811SM, 820SM
Steyr – Match 88, Match 91
Walther – LG55, LGR, LGV, CG 90, CGM, LG 90, LG 200, LG 210, LGM-1, LGM-2
Winchester -- 333

In the rifle selections above some models have Junior, Running Target and Universal models. These were not listed separately for space considerations but could be used for that model since the power plant portion is the same as the regular model.

On the Junior models the barrel length and stock pull length is generally all that is different.
The Universal models will have different sight mounting methods and the stock will allow for some adjustments.

The Running Target versions will have better provisions for scope mounting, a different style stock and in some cases a different trigger than the regular model.

The student should bring a new mainspring or mainspring set as appropriate, piston seal and breech seal for each spring piston gun and a set of seals for the other power plants, i.e. Single Stroke Pneumatic and/or CO2. If you have any questions or doubts contact Randy. If anyone has a problem getting any parts please contact me at least 3-4 weeks ahead of the class meeting time.

CLASSIC MATCH GUN -- Rifle

TOOL LIST

Mainspring compressor—Home made or commercial (Commercial available from JG Airguns)

5.5mm or 7/32 open or closed end wrench – Diana 75

10 mm Open end wrench – Gamo 126

1/8 inch Cape chisel – FWB 65 / 80 / 90 / 150 / 300

Devcon Weldit All Purpose Adhesive and Vinyl Mender S-182/18245 (for use in Anschutz 250 hydraulic cylinder to glue in the end seals)
AIRGUNSMITHING COURSE – GENERAL TOOL LIST

Safety glasses
Bench pad – rubber or similar to protect the gun
Soft jaws for the vise (felt, leather or molded plastic)
Assorted screwdrivers
Ball peen hammer (4 oz. Best)
Rawhide or non-marring hammer
Pin punch set
Roll pin punch set
Allen wrenches – SAE .050-¼; Metric 1.5 – 6 mm
Assorted pliers – needle nose, slip joint, parallel action
Adjustable wrench – 8” best, 6” OK
Pin vises for holding small screws and pins
Files – 6” Swiss pattern pillar #2, #0
Needle file set #2
Dental picks – assorted
Deburring tool
Lathe tool bit – 3/8 or 1/2
12 gauge shotgun cleaning rod with slotted tip
3/8” variable speed drill (reversible is nice sometimes but not necessary)
Small flashlight – recommend Mag light with 2 AA batteries, it is bright and focuses to a spot for looking down inside the tubes/compression cylinders or one with LED with several bulbs for a bright beam
Paper towels – 1 roll
M-Pro 7 Gun Cleaner or Mil-Comm MC25 Gun Cleaner/Degreaser
M-Pro 7 Gun Oil LPX or Mil-Comm TW-25 Oil
Mil-Comm TW-25B Lubricating Light Grease
AlmagardVari Purpose Lubricant #3752 or Moly based grease
Rubbing alcohol – 91% is best, 70% OK
Plastic food storage tray (like Rubbermaid or similar), size 5-7” wide by 10-12” long and about 3” deep max. A small inner tray to keep the screw and pins helps to keep things organized.

AIRGUNSMITHING COURSE – SPRING PISTON GUNS TOOL LIST

All Manufacturers -- Mainspring compressor—Home made or commercial (Commercial available from JG Airguns)
FWB 124 -- 11 mm Open end wrench or adjustable wrench
Marksman International Series -- 9 mm socket (1/4 or 3/8 drive)
Marksman International Series -- Circlip pliers