AMERICAN PISTOLSMITHS GUILD

DOUBLE ACTION REVOLVER

CHECK SHEETS

This check list consists of five major sections:

1.) Cylinder fitting.

2.) Action tuning and fitting.

3.) Barrel fabrication and fitting.

4.) Miscellaneous modifications and accessories.

5.) Finishing.

Each check sheet item or modification cited is required unless otherwise noted. Although optional modifications are not required, they will add to the quality and appearance of the revolver and will, consequently, make a favorable impression on the examiners. In a formal inspection, field representatives will apply the following notations to the blank provided in the left margin:

S: Satisfactory

U: Unsatisfactory

NA: Not Applicable

This check list is primarily keyed to Smith and Wesson revolvers, but will, in most particulars, apply to other makes and models. Also attached are other sets of armorer's checks and tests that will also be used to review the general fit and function of guns submitted, although, this series of check items may not be applied completely or specifically. Feel free to contact Guild officers with any questions.

I. CYLINDER FITTING AND FUNCTION:

1.) Yoke and crane:

a.) Yoke/crane must aline with the center pin, rear bolt hole. May be out slightly

at three o'clock to hold the yoke close to the frame, but not to the extent the cylinder binds.

b.) Yoke/crane endfloat should not exceed .001".

c.) Ball detente lock must function properly. Do not drill into the barrel threads.

d.) Front of the cylinder must not hit the barrel extension upon closing or upon rotation.

2.) Extractor/Ejector:

a.) Should operate smoothly with all guide pins in place.

b.) Ratchet teeth should be free of burrs and must not be "staked" to achieve timing.

c.) Ratchet teeth should be .003" to .007" below the center of the extractor and should not rub frame.

d.) Ejector rod runout should not exceed .006".

3.) Cylinder assembly:

a.) Opening and closing should be smooth with a proper bolt fit in the front and back.

b.) Cylinder stop must be properly fitted where utilized (as a cylinder lug). Ratchet must enter recoil shield ramp smoothly when cylinder is closed. Excess rearward float will require stop/lug replacement.

c.) Cylinder should turn smoothly and freely in the receiver.

d.) Headspace must be correct for the cartridge. Standard cartridges would be .060" to .064".

e.) Cylinder endfloat not to exceed .001".

f.) Front bolt, if utilized, should fit and function properly.

g.) Face of cylinder should be square. Gap should not vary over .006" with barrel.

h.) Recoil shield ramp should be smooth, free of burrs and tool marks.

II. ACTION TUNING AND FITTING

1.) General function:

a.) Cycle should be smooth, free of galloping, stacking, hitching, binding, knuckling, sear clicking, etc.

b.) Cylinder must time and carryup correctly and evenly on all chambers. Bolting (cylinder stop drop) must occur before the hammer falls in DA and SA modes.

c.) Both DA and SA cycles should exhibit sufficient mainspring tension for reliable ignition.

d.) All safety devices, hammer block, rear bolt plungers, and springs must be in place for functioning.

e.) Cylinder stop/bolt must be fitted properly, holding the cylinder and preventing throwhby.

2. Trigger:

a.) Pull weight in single action mode should be, 2.5 pounds minimum for match

guns and 3.5 to 4 pounds in service guns.

b.) SA pull should be clean and crisp with a minimum of .004" overtravel.

c.) Hammer should not "push off" under thumb pressure.

d.) DA pull must be heavy enough for reliable ignition and positive trigger return.

3.) Hammers:

a.) Should not rub side of frame.

b.) Smith and Wesson hammer nose/firing pins should protrude a minimum of .045" to .060".

c.) If the hammer spur is removed, the single action notch should be removed. Rear of the hammer bolt contact point must not be removed (on S&W only).

d.) Hammer must not push off under thumb pressure in single action mode.

***NOTE: Please review the attached armorer sheets which will be employed in an examination, particularly with respect to duty weapons.

III. BARREL FABRICATION AND FITTING

1.) Custom barrel required and for standard barrels where applicable.

a.) Should exhibit an attractive contour.

b.) Crown should be even, true, and free of burrs.

c.) Barrel should be free of sharp edges.

d.) Barrel should not be screwed into the frame with excessive torque causing

bore disfigurement.

e.) Forcing cone should be smooth, concentric, and of proper depth, measured with a plug gauge.

f.) Face of the barrel extension should be square with the cylinder face.

g.) Barrel to cylinder gap should be .004" to .006" maximum (.009" on service guns).

IV. ASSESSORIES AND MISCELLANEOUS MODIFICATIONS

1.) Sights:

a.) Sights and ribs (required on custom barrels) must be installed neatly, square, and level.

b.) Front sights must be square and parallel to the centerline of the gun.

2.) Chamfered chamber mouths: Must not be excessively deep when cut in a pistol that chambers a cartridge of high pressure.

3.) Scope mounts:

a.) Must be drilled neatly, straight, and level.

b.) Drilled and tapped holes must be properly executed.

V. FINISHING

1.) Metal preparation:

a.) Surfaces, ripple free; corners, sharp; screw holes crisp.

b.) Screw heads free of damage.

c.) Welding should not show hardness which effects bluing or plating. Should be free of pits and inclusions and be properly finished.

d.) Solder joints should be free of gaps; no excess solder.

2.) Finish proper:

a.) Bluing and plating should be evenly applied, free of clouds, spots, and discoloration.

b.) Matte finishes should be even; no over-spray.

3.) Serration’s and checkering (optional):

a.) Should be even, with parallel lines.

b.) Diamonds should be sharp and free of runovers.

4.) Stippling:

e.) Should be uniform in texture and coverage.

f.) Stippling should not overrun and remove sharp corners.

FIELD INSPECTORS GENERAL OBSERVATIONS AND REMARKS:

AMERICAN PISTOLSMITHS GUILD

SMITH AND WESSON REVOLVER ARMORER CHECKS

INSPECTION GUIDELINES AND PROCEDURES

Unload revolver and remove all ammunition from the inspection area.

I. EXTERNAL CHECKS:

A. All screws tight.

B. Open and close cylinder six times and check for:

1. Hard opening and closing.

2. Cylinder stop engages cylinder slots.

3. Thumb piece hard to move or sticks.

4. Yoke loose or to tight on the yoke screw.

C. Check thumb piece for wink.

D. Check hammer "knuckling" on mainspring.

E. Open cylinder:

1. Check ratchets for burrs.

2. Push up on ejector roe and check for extractor pins.

3. Inspect charge holes for bulging, scoring, etc.

4. Check bolt slots for peening.

5. Check for loose extractor rod and runout.

6. Check firing pin protrusion.

F. Close cylinder:

1. Check double action timing.

a. With and without dummies.

b. Multiple orientation.

c. Pull through rapidly to check for "throw by".

d. Right and left Double Action Carryup

2. Check single action timing.

3. Check for hand "sings" on ratchet.

4. Cylinder must not open when hammer is cocked.

G. Check for endshake.

1. Cylinder

2. Yoke

H. Check headspace and barrel to cylinder gap (to factory specs). Rear of barrel face must be square with cylinder.

I. Check forcing cone with plug gauge for proper depth. Forcing cone must not be eroded or cracked.

J. Check barrel alignment and ranging with gauges (all six charge holes).

K. Check barrel crown for burrs and square.

L. Open cylinder and check cylinder for proper function (all six charge holes).

M. Check for "three winks".

1. Cock hammer (overall).

2. Hammer down and trigger to rear (wink in trigger).

3. Hammer at rest (hammer pretravel).

N. Static weight test (to factory specs).

O. Check locking bolt for proper engagement with extractor rod.

P. Check trigger pull:

1. Double action should be smooth with a clean break. Also check for hammer shift on stud.

2. Single action (no creep).

Q. Check for clearance between trigger and trigger stop (to factory specs).

R. Check ejection of empty shells (grips should not interfere).

S. Check for hammer hitting trigger.

T. Check hammer for pushoff.

U. Trigger guard must not be thinned or altered.

II. INTERNAL CHECKS:

A. Remove grips.

B. Loosen yoke screw and remove cylinder. Tighten yoke screw. Check yoke alignment with gauge. Remove yoke screw and yoke.

1. Check yoke for over peening of yoke button:

2. Over peening and stretching of yoke barrel.

C. Place cylinder on yoke and check for freedom of rotation.

D. Remove side plate and check for presence of hammer block (safety). It must be in place and functional!

E. Remove strain screw and mainspring to check for:

1. Factory springs (no spring kits).

2. Overbowing.

3. Broken stirrup finger or fractures.

4. Metal shaving conditions.

F. Remove hammer assembly and check for:

1. Single action cocking notch, foot and rebound seat damage or improper alteration.

2. Check sear:

a. Proper angle.

b. Free movement and recovery.

c. High pin.

3. Check stirrup for:

a. Damage.

b. Free movement.

c. High pin.

4. Check hammer nose for:

a. Damage.

b. Properly staked.

c. Free movement and recovery.

G. Remove rebound slide assembly to check for:

1. Factory spring (17 coils).

2. Burrs on nose.

3. Hammer seat (proper angle).

4. No excessive stoning or polishing

H. With trigger and hand assembly in the revolver, check hand for:

1. Alignment in window.

2. Free movement and recovery.

I. Remove trigger and hand assembly and check trigger for:

1. Hook, bevel, and cam damage or alteration.

2. High pins.

3. Burrs on lever.

K. Remove cylinder stop:

1. Check bevel for proper angle.

2. Recovery surface for burrs.

3. Ball of stop should not be altered.

4. Spring (all coils present).

L. Check hammer trigger studs for:

1. Alignment.

2. Looseness.

M. Check frame lug for:

1. Looseness.

2. Proper orientation and secure staking.

N. Check locking bolt for:

1. Free movement.

2. Remove and check for proper bevel.

Reassemble revolver in reverse order and check function in both single and double action. Revolver should be test fired with factory ammunition to ensure proper function. WHEN TEST FIRING, ALWAYS WEAR EYE AND EAR PROTECTION.

III. APPEARANCE

A. Bluing:

1. Polishing

a. No washed out holes or lettering.

b. No edge or corner distortions.

c. No wheel burns.

d. No scratches.

e. No screw slot damage.

2. Masking of matted areas should be clean and sharp.

3. Bead blasting should be even. Check for evidence of "overblasting" in barrel.

B. Sights, ribs, and scope bases:

1. Firmly attached.

2. Square to frame.

IV. PPC BARREL INSTALLATION

A. Underlug tight and square to the frame. Underlug radius should match the O.D. of the barrel.

B. Diameter of barrel should be consistent (entire length).

C. Flats should be consistent in width (entire length, both sides).

D. Finish comparable to frame.

E. Length of six inches overall.

F. Crown should be clean and true (machined).

G. Ball détente bolt lock:

1. Must secure yoke without movement.

2. Be positive.

3. Détente must not be drilled into barrel threads.

H. Check overtravel stop in trigger:

1. Drilled and tapped on center.

2. Location above center of trigger bow.

FIELD INSPECTORS COMMENTS AND OBSERVATIONS: