



Silver Streak and Blue Streak Repair Manual

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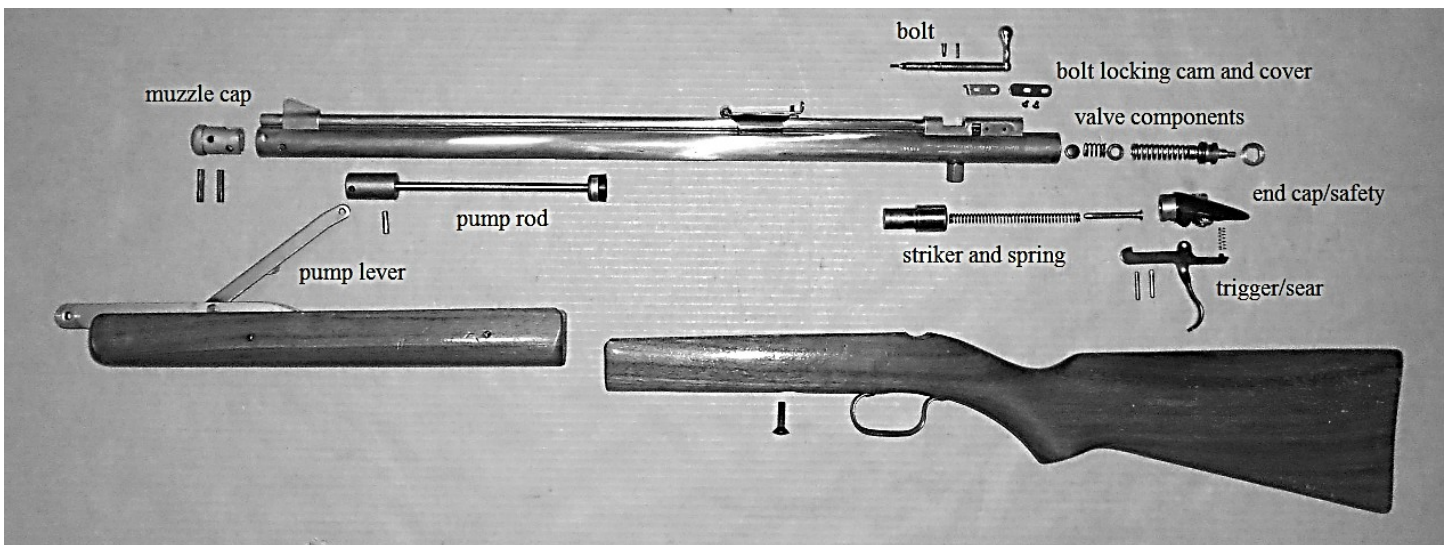
Preface

An understanding of the mechanics of air guns is necessary in order to perform repairs properly and safely. Sheridan air guns are of the pneumatic type and the CO2 gas type. Care must be taken during disassembly and all parts cleaned with a proper solvent. Alcohol is adequate for most parts. Lacquer thinner and #0000 steel wool can be used to remove heavier grunge and stains. For re-assembly, light grease and non-detergent oil should be used sparingly in the proper places. A 50/50 mix of 30wt non-detergent motor oil and Marvel Mystery oil works well. Keep in mind that the barrel and air tube are made of brass compounds that have self-lubricating properties. The bore need only be cleaned with alcohol and a soft cloth patch. Wood should be carefully cleaned and preserved with light oil. Several products are available that can restore the wood to a presentable condition without destroying its originality. Formby's Lemon Oil Treatment and Birchwood Casey Tru-Oil give good results. To preserve collector value, re-finishing should be avoided unless it is deemed necessary due to excessive wear and/or damage.

The text and photos in this manual will guide the individual in the repair of Sheridan air rifles. It is not instructional material and is intended for those who have proper skills, such as the use of tools. Replacement parts, as well as the special tools needed, are available through several sources which can be searched out on the Internet. When in doubt, it is best to consult with an airgun smith or individual with experience.

When properly repaired a Sheridan air rifle will last for many years. The owner's Hand Book for the particular model is a valuable source of information on operating, care, and maintenance. Originals and copies are occasionally listed on the various auction sites found on the Internet.

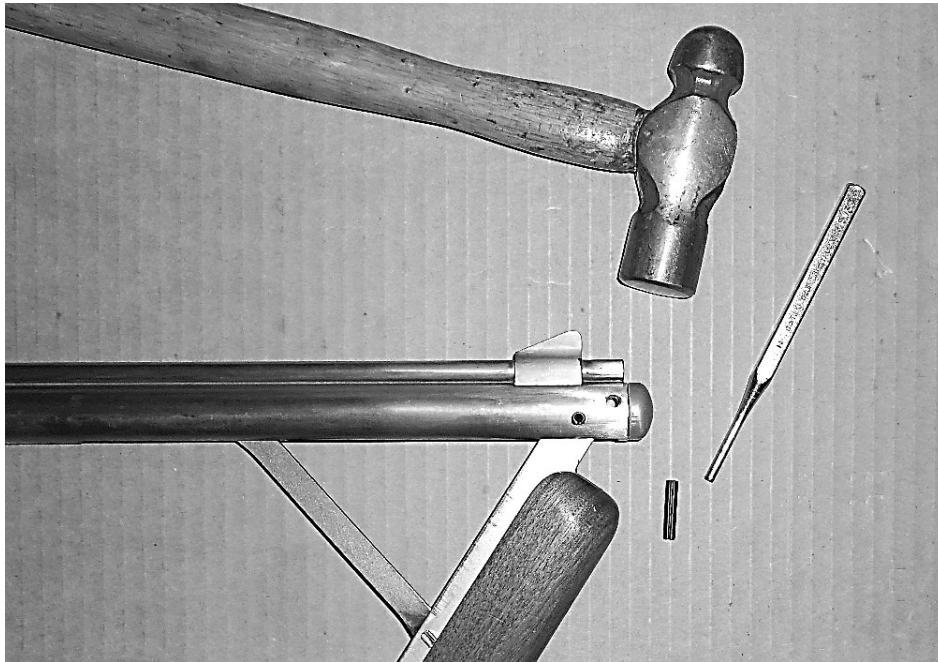
Silver Streak and Blue Streak pneumatic rifle



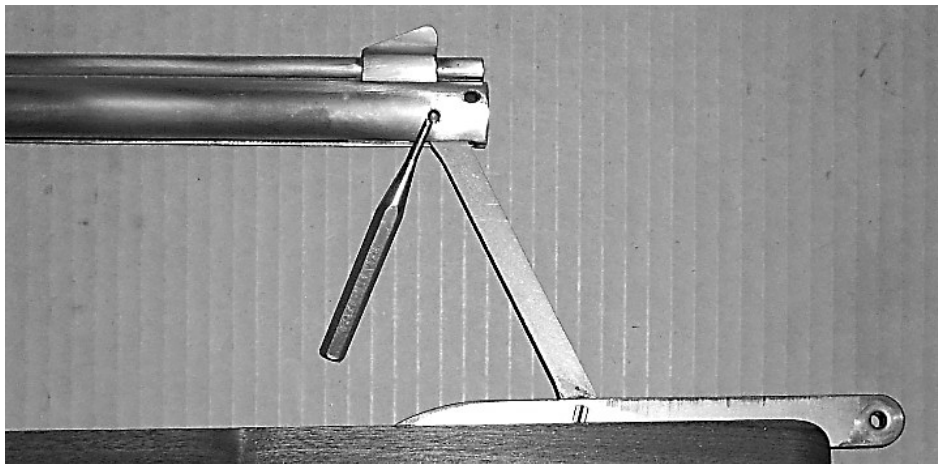
Model C and C-SERIES pneumatic rifle

These models were manufactured from 1949 to 1990

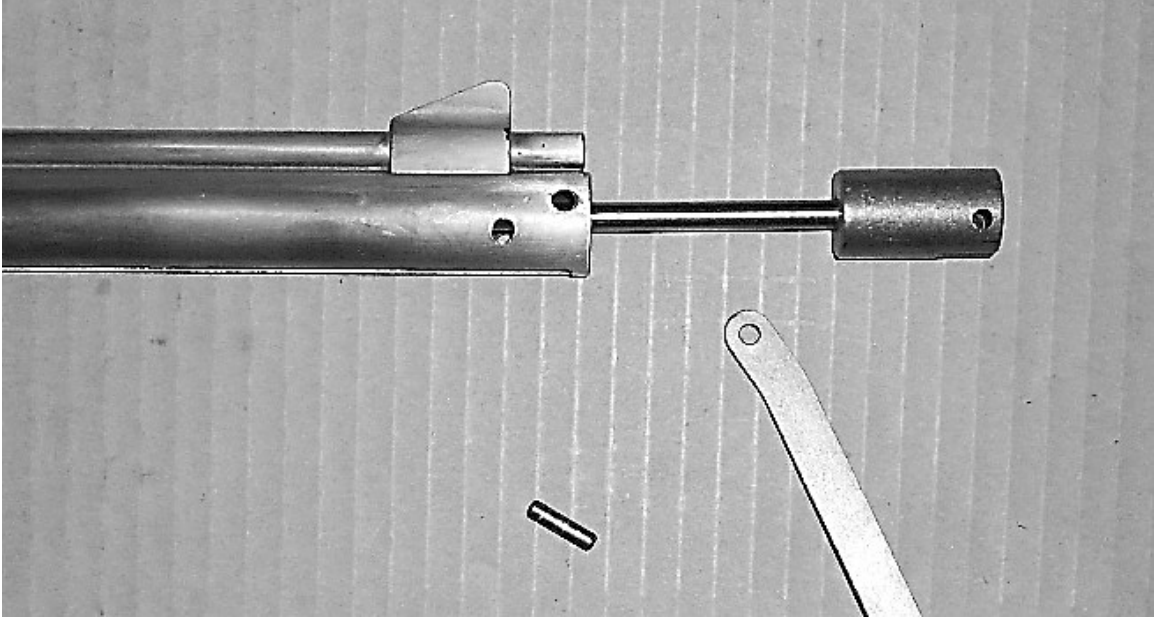
pneumatic rifle pump cup replacement



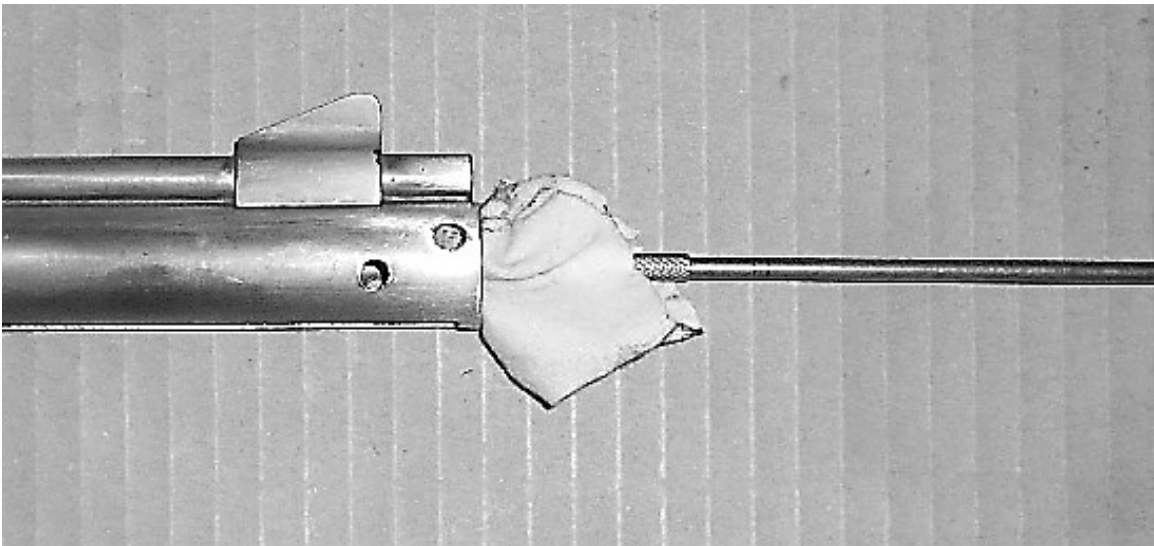
drive out the two roll pins from front of air tube and remove muzzle cap



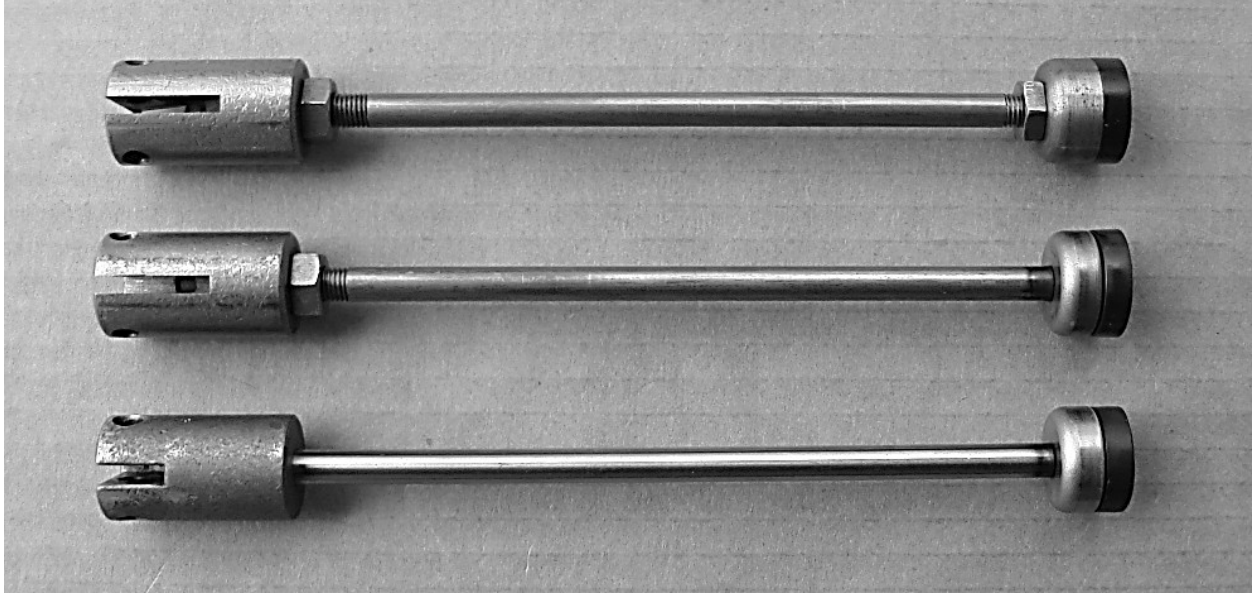
cross head pin pushes out through roll pin hole
this pin secures the pump arm linkage to the pump rod cross head



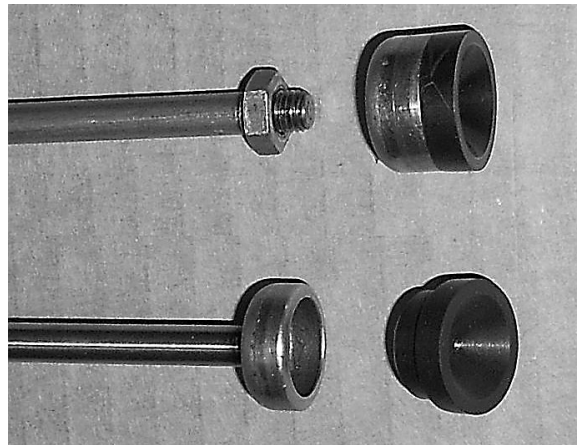
withdraw pump rod from air tube



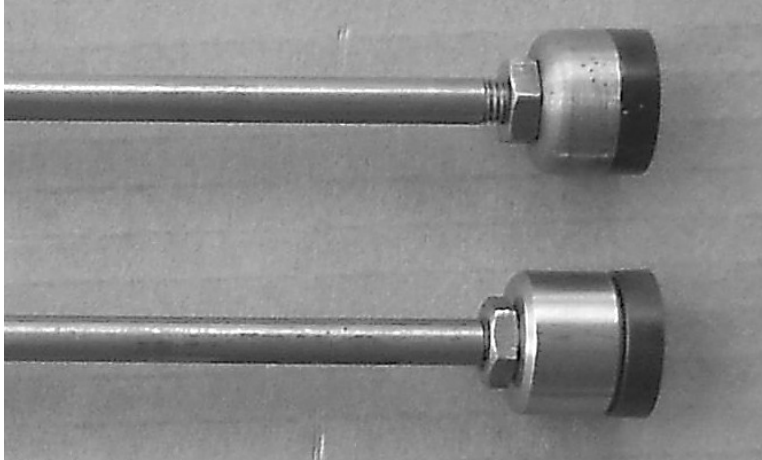
clean all parts including inside of air tube



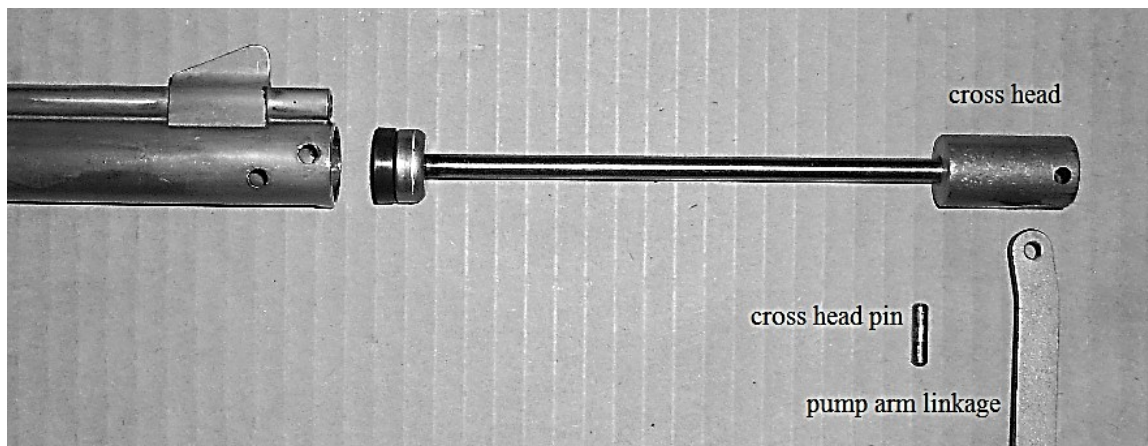
there are three styles of pump rods
top is adjustable with pump cup molded into piston head used to about 1961
middle is adjustable with pump cup press fitted in piston head used to 1964
bottom is non-adjustable with press fitted pump cup used to end of production



remove old pump cup
molded in style unscrews and is replaced with custom piston head
Helpful hint: press fitted type are often brittle and can be burned out with propane torch



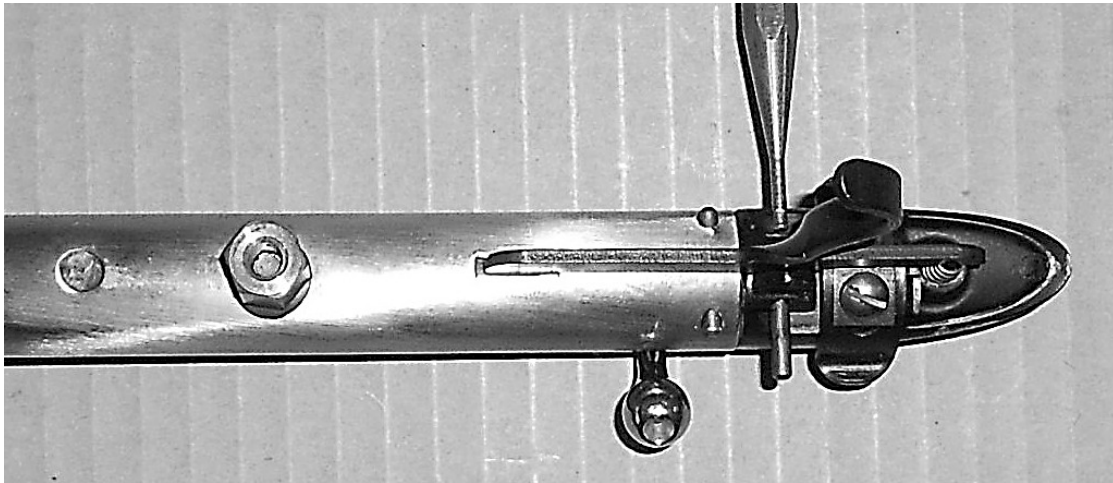
new pump cups are of the press fitted type
top shows pre 1962 original piston head with molded in pump cup
bottom is custom piston head for pre 1962 which accepts press fitted pump cup
oil perimeter of new pump cup to aid in pressing it into the piston head recess



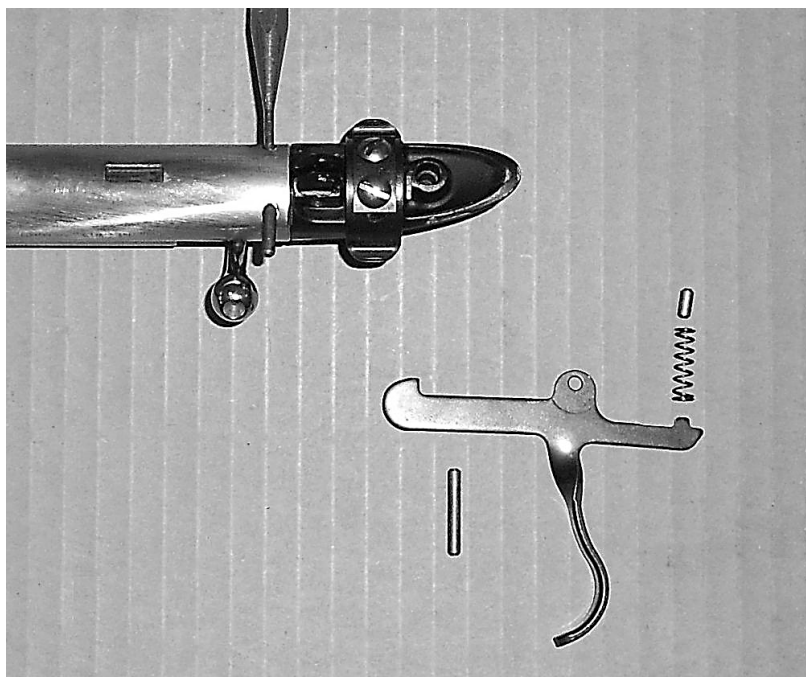
with new pump cup installed and lightly oiled, insert pump rod into air tube
adjustable rods can be set to length for slight over travel*, which requires trial and error fitting
this reduces space between pump cup and inlet valve which will result in maximum power
re-install pump arm linkage and cross head pin
re-install muzzle cap and press the roll pins in with a vise
apply light oil at cross head, pump lever pivot, and pump lever arm at muzzle cap

*Definition: slight over travel is achieved when pump cup is felt to bottom out during pump arm closure and the pump arm is about 1/2" from being fully closed. Increasing the length of the rod will increase the pump arm closure distance and vise-versa. Too much over travel will put strain on the pump arm linkage and cause premature wear.

pneumatic rifle valve seals replacement

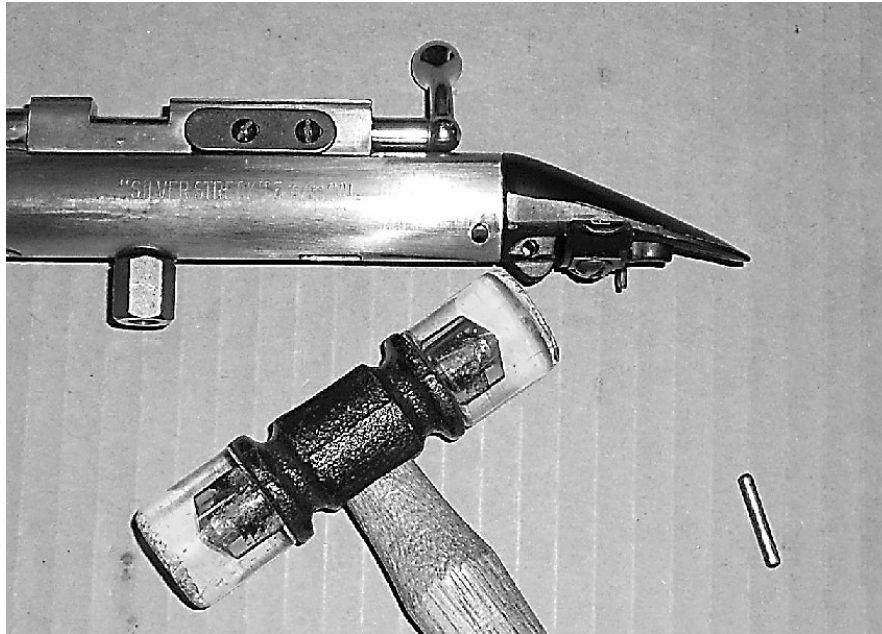


remove trigger/sear and spring by driving out retention pin
some have a small spring guide pin as shown below



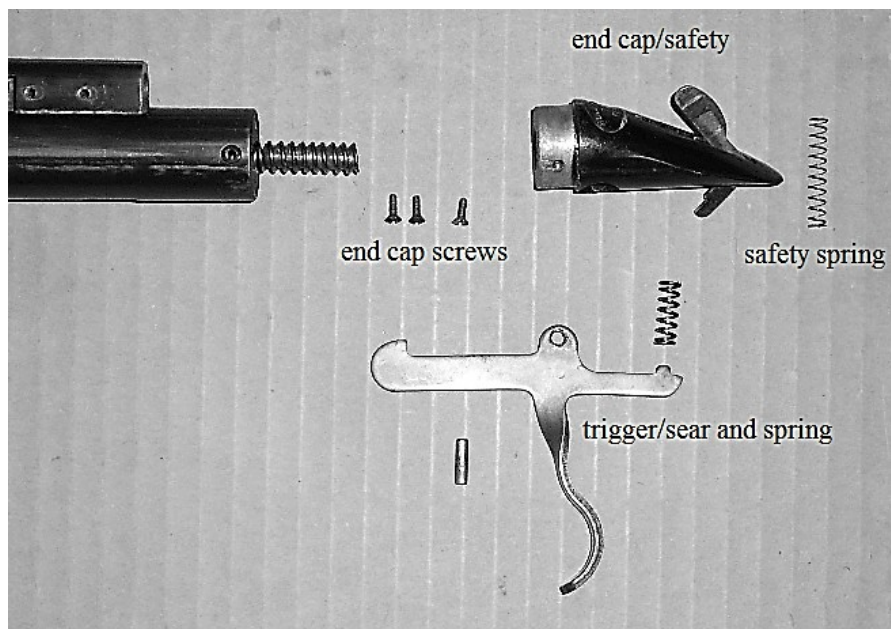
drive out end cap retention pin

CAUTION: end cap is under pressure from striker spring

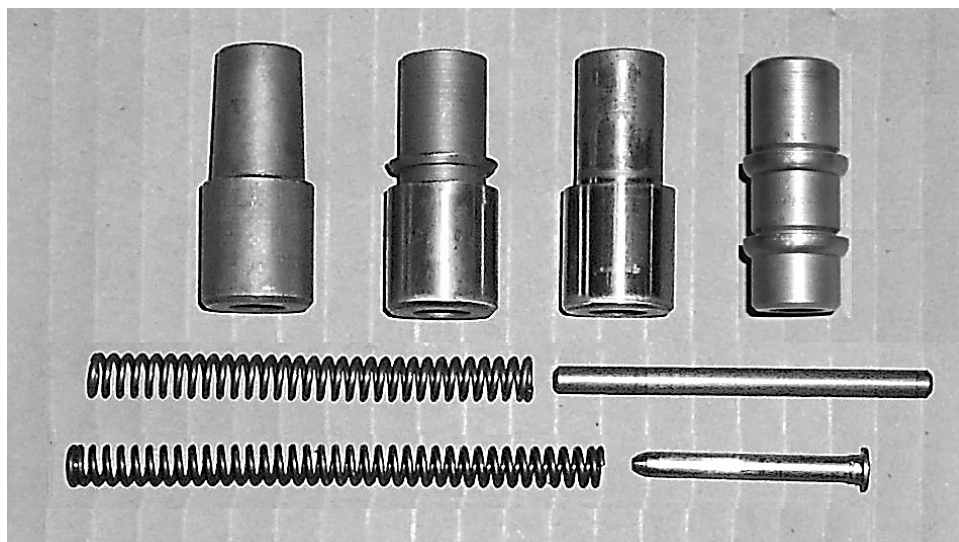


some persuasion may be necessary to remove end cap

CAUTION: end cap is under pressure from striker spring

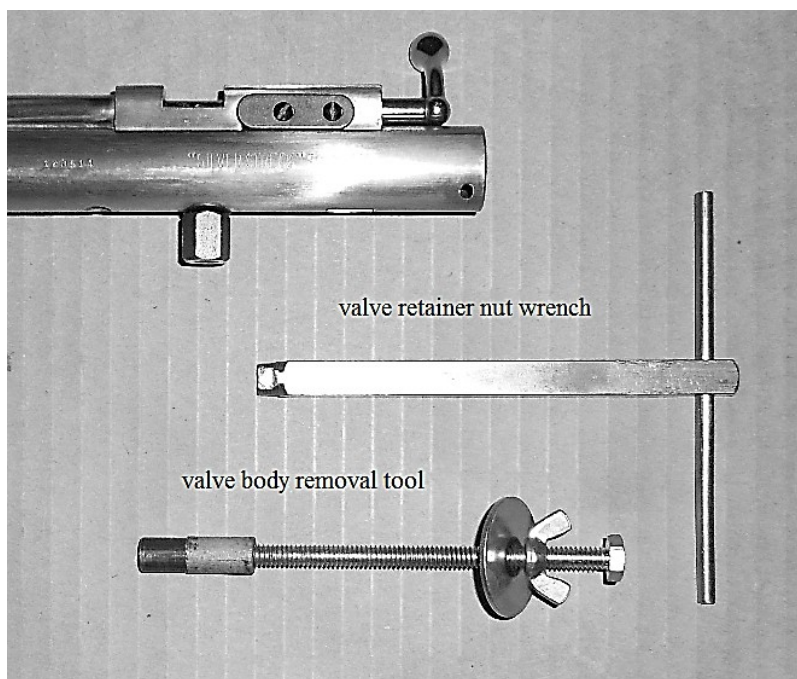


earlier models use three screws to retain end cap

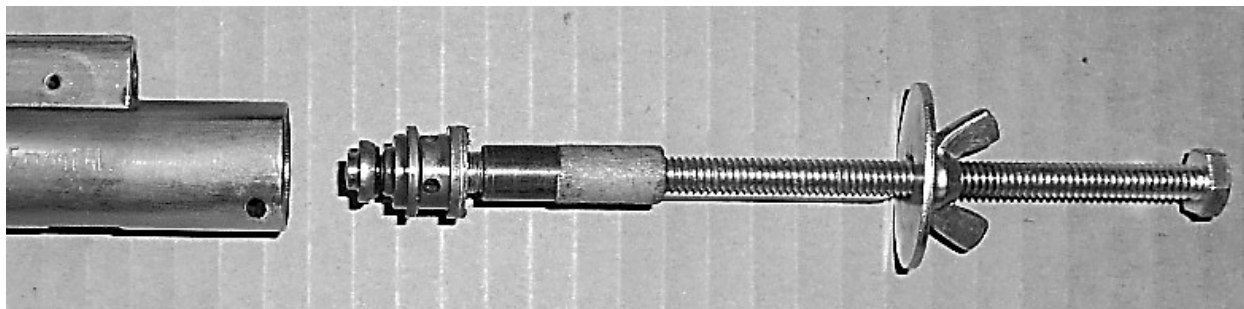


remove striker, spring, and guide / earliest style striker is shown on left
note ring on second striker from left; many have just half a ring which faces down when installed

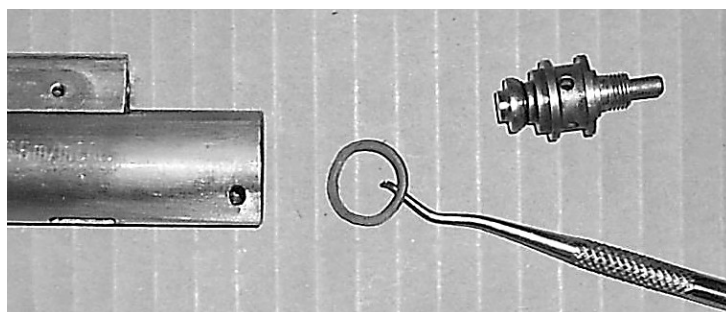
1979 – 1990 C-Series rifles with double sear trigger have strikers with two rings as shown on right. Very late strikers may have a slot which mates to a guide pin pressed into the end cap. Also, the rocker safety on very late end caps may incorporate a detent ball and spring.



typical tools needed to remove valve components
tool at bottom screws onto threads at end of valve body, which are 9/32-32



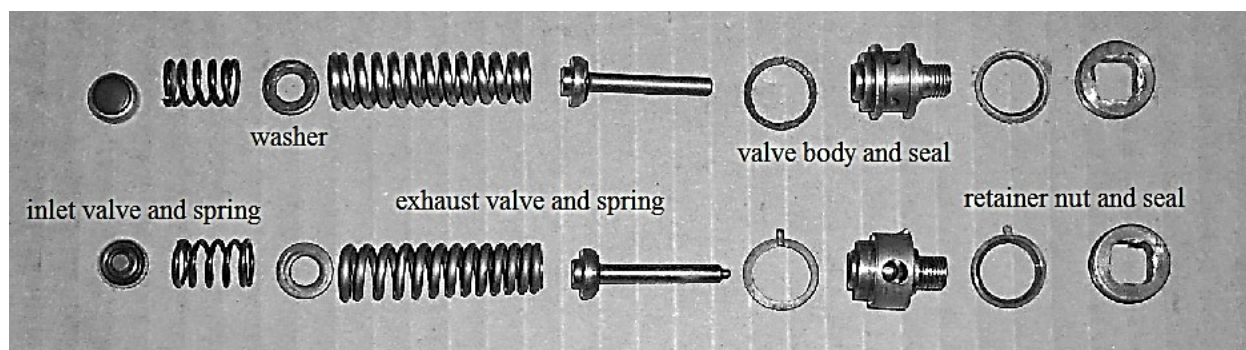
remove the valve retainer nut and valve body / the remainder of the valve parts should fall out
sometimes it is necessary to push the parts out with a stiff wire inserted from the inlet side



be sure to remove the valve body seal, which is usually stuck inside the chamber, and clean the seating area

the surface in the bottom of chamber where the inlet valve seats should also be carefully cleaned

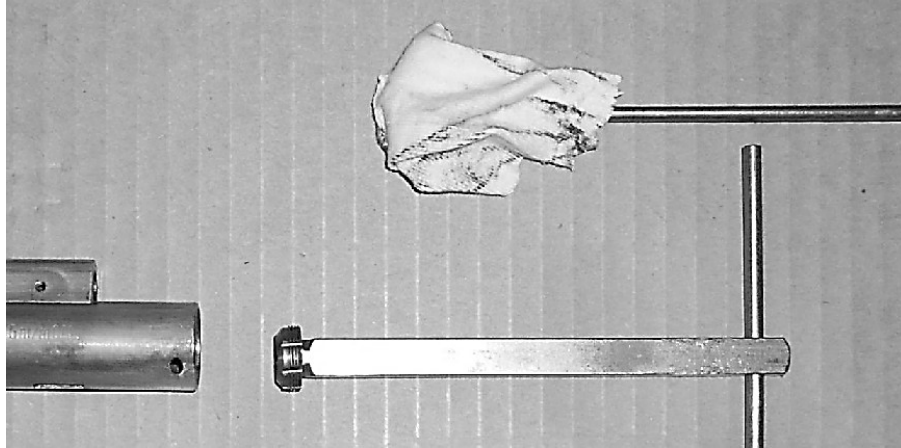
Helpful hint: fine sandpaper glued to end of 3/8" X 10" wooden dowel can be used to polish inlet valve seat



assembly order of valve components

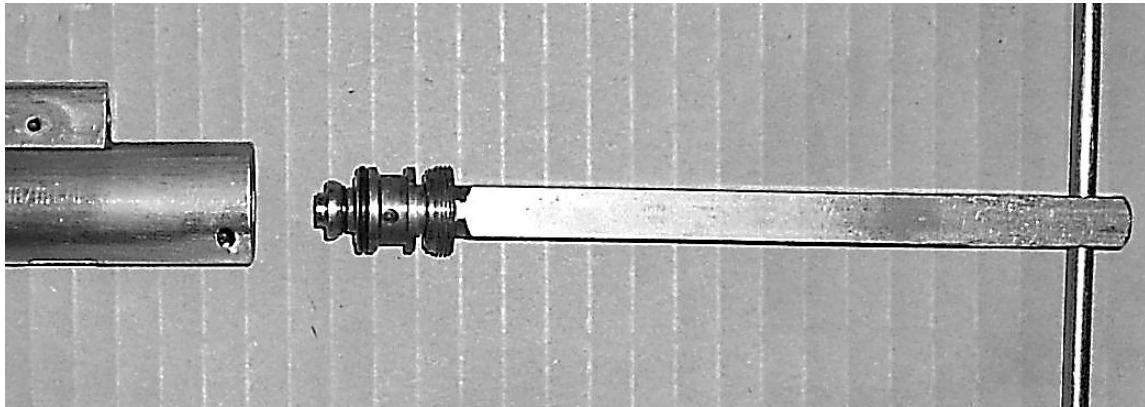
new inlet valve, exhaust valve, and valve body seal shown at top
early valve components with original valves and seals shown at bottom

some rifles use two washers / valve body seal can be either lead or rubber
clean and inspect all parts / exhaust valve seat can be polished with #0000 steel wool



clean inside of tube, air chamber, and chamber threads
make sure retainer nut screws easily into chamber

Helpful hint: tap for chamber threads can be made by cutting slots in a spare steel retainer nut as shown



apply a light coat of oil to surface of seals

drop inlet valve, inlet valve spring, washer(s), and exhaust valve spring into chamber

small end of exhaust valve spring faces base of exhaust valve / refer to photo on previous page

early valve bodies have a single exhaust port; later valve bodies have two or four exhaust ports

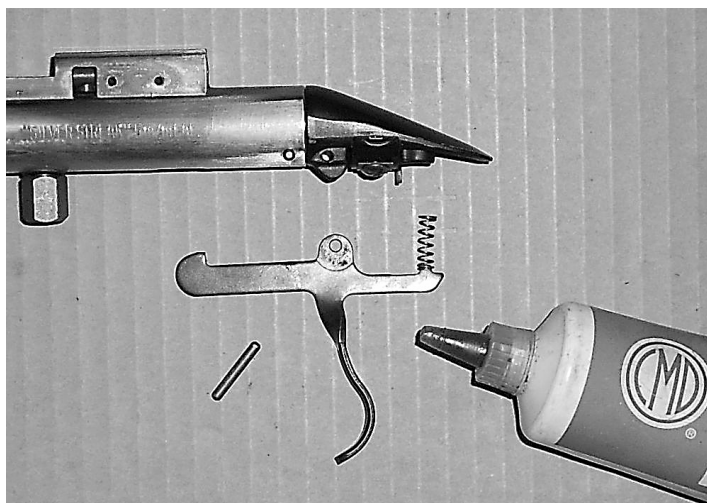
be sure to properly align the early single port valve bodies / they have a tab that fits a slot in the chamber

install valve body with seal and exhaust valve as shown / take care to not cross-thread retainer nut

Helpful hint: 1) With exhaust valve components stacked on the tool as pictured, insert into tube and push down to engage threads.

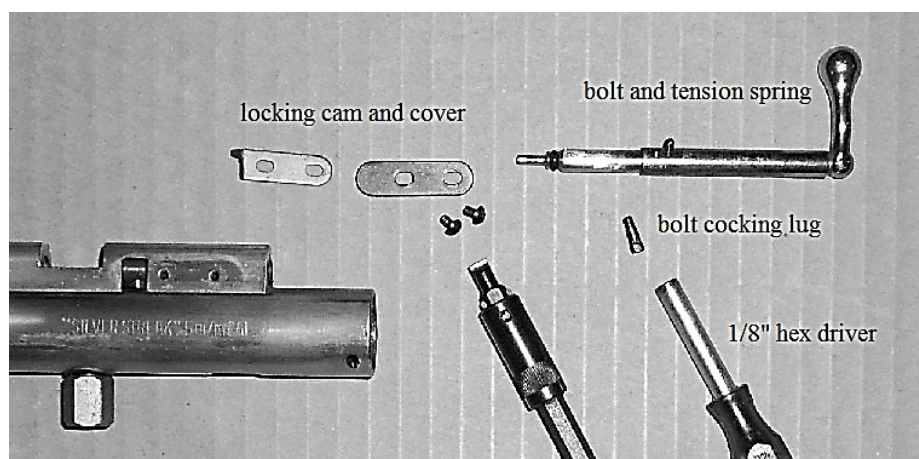
2) Raise air tube to vertical position on work bench and rotate tube while holding pressure on tool to start retainer nut.

Note: Retainer nut lead seal is omitted in photo. If blow back is evident when firing rifle and bolt-to-breech seal is properly adjusted (see bottom of next page), then retainer nut lead seal should be installed.



install striker (half ring down if applicable), striker spring, spring guide, end cap and trigger/sear

Note: some rifles have an apparent coat of grease on the striker applied by the factory. This should be thoroughly cleaned and, if anything, a drop of light oil distributed on the surface. Apply a light coat of grease or drop of oil on the area where the trigger/sear attaches to the end cap.



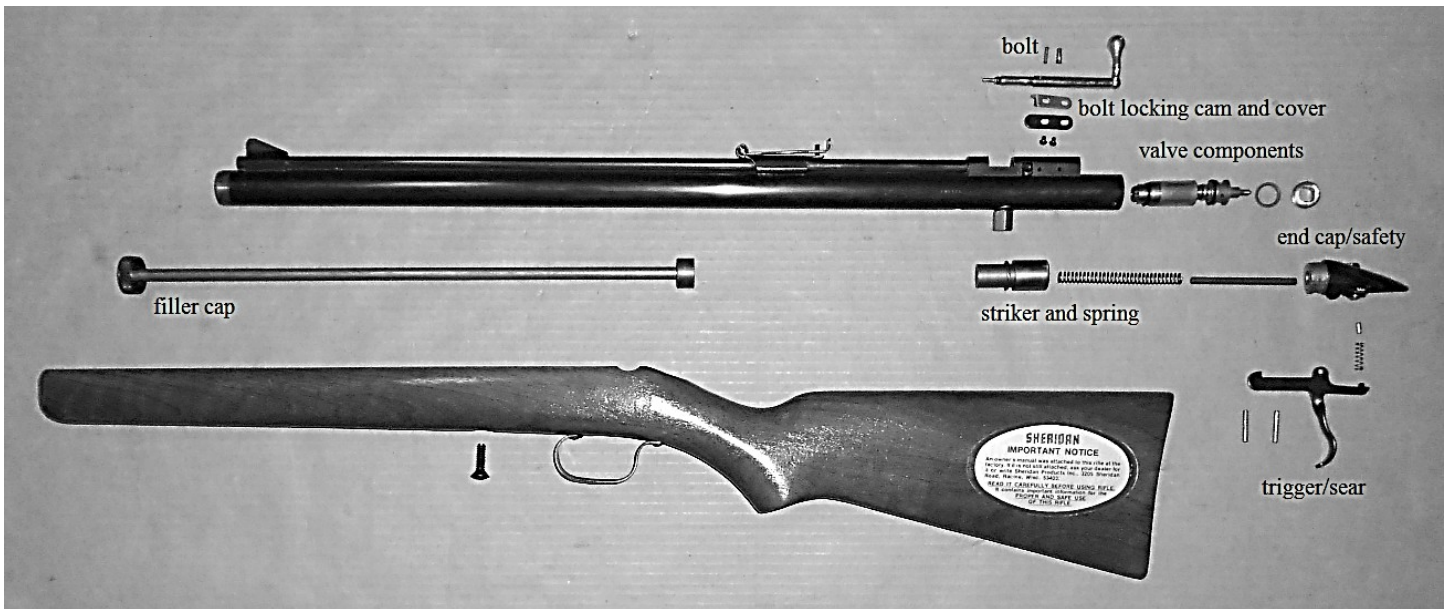
tools needed to remove bolt if required

take care to not lose bolt tension spring when withdrawing bolt from receiver

1951 to 1955 bolts also have a small pin that must be driven out before removing cocking lug
the receiver on these rifles will have a small hole on right side that aligns with pin
drive pin out from left side of receiver after removing locking cam and cover

Note: Bolt should seal breech when closed. Adjustment is made by moving locking cam forward or to the rear as necessary. Bolt handle should not contact stock in closed position when properly adjusted. If applicable, replace damaged or worn o-ring on bolt loading probe with size AS568-004.

CO2 Silver Streak and CO2 Blue Streak

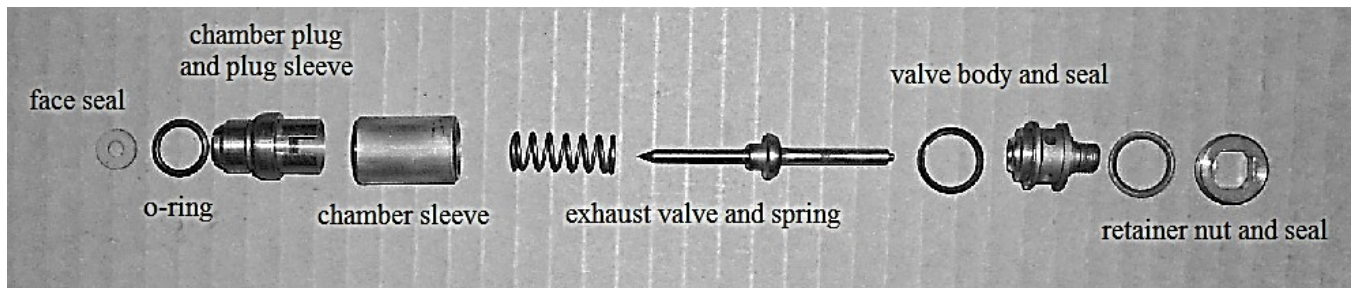


Model F and F-SERIES CO2 rifle

These models were manufactured from 1975 to 1990

CO2 rifle valve seals replacement

remove trigger/sear, end cap, striker and spring, retainer nut and valve body as outlined for pneumatic rifles

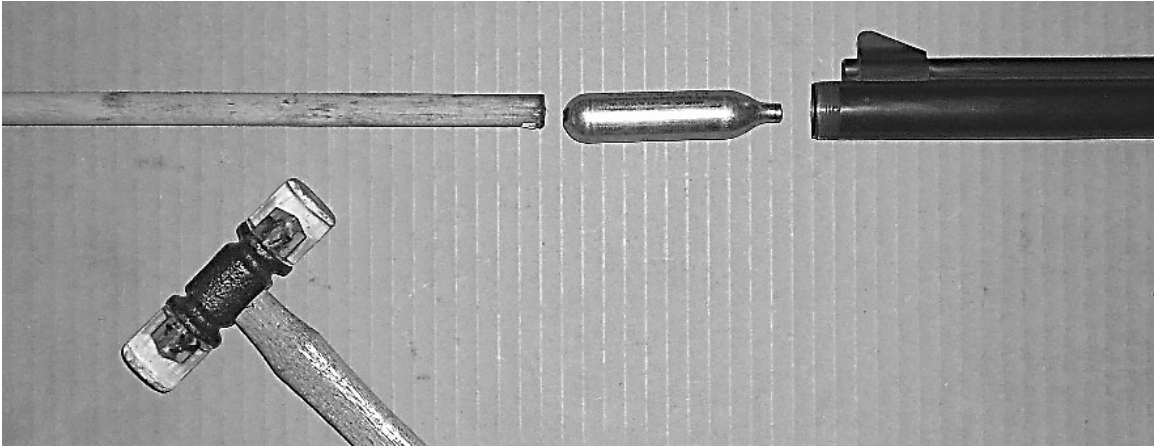


valve components

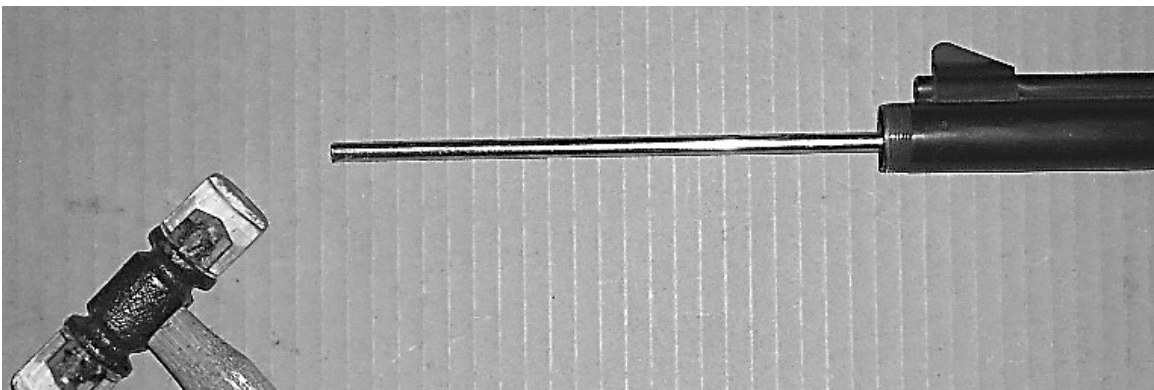
chamber plug has a slotted sleeve attached

larger chamber sleeve is made of brass / valve body seal is rubber

retainer nut seal is lead and can be omitted if no blow back is noted as outlined for pneumatic rifles

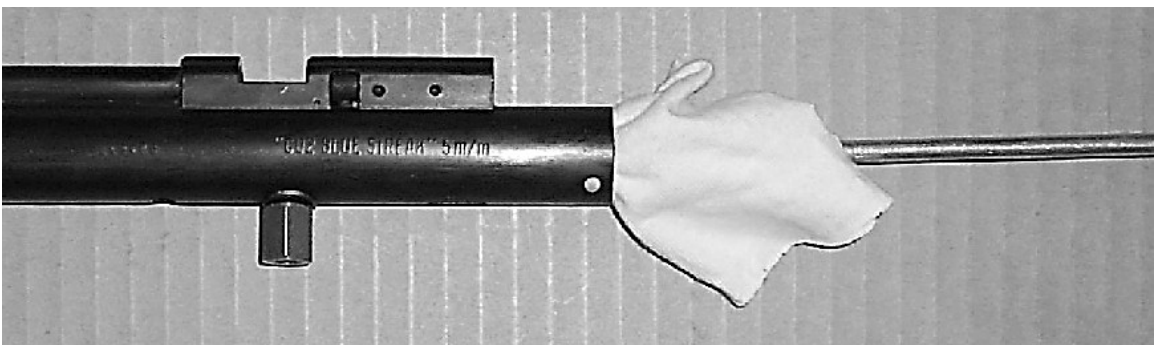


insert spent CO2 cartridge and tap with wooden dowel to work chamber plug loose from tube
 spraying penetrating oil down the tube may help loosen the chamber plug if stuck
 a slight movement of the dowel will be noted when the chamber plug breaks loose



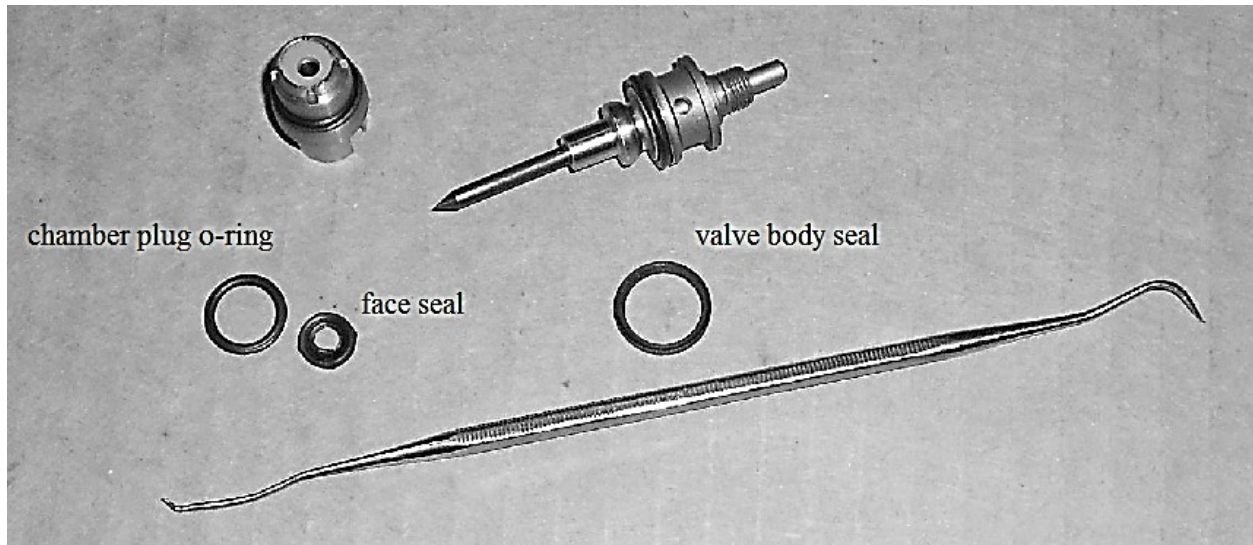
CAUTION: see note at top of next page before proceeding with this step

remove spent cartridge and use a 1/4" rod to drive chamber plug and sleeve out rear of tube

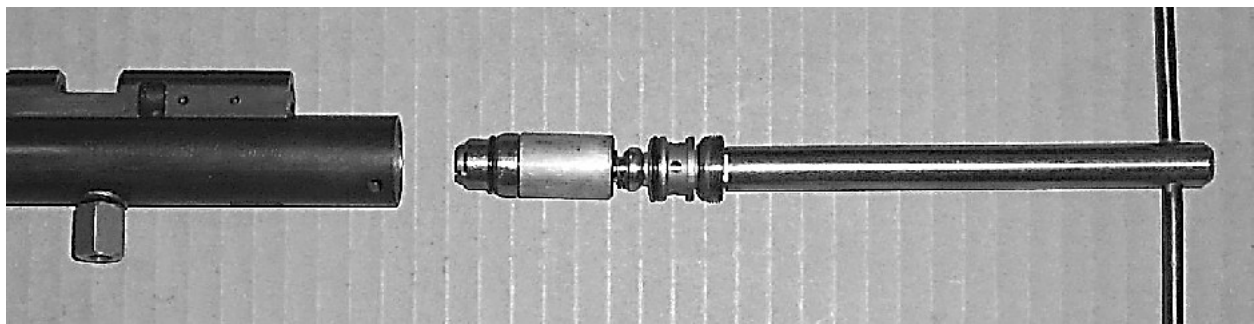


clean all parts, inside of tube, and chamber threads as outlined for pneumatic rifles

Note: the 1/4" rod used to drive out the chamber plug fits into the face seal cavity in the end of the plug. Take care to not damage the cavity sides while driving out the plug.



this shows the old seals, and the chamber plug and valve body with new seals installed



apply a light coat of oil on chamber plug o-ring and valve body seal

re-install valve components in tube as shown

complete re-assembly with installation of striker, striker spring and guide, end cap, and trigger/sear

refer to pneumatic rifle section for helpful notes on re-assembly and bolt removal/adjustment

C9-SERIES and F9-SERIES

These models were manufactured from 1991 to end of production

Pump cup replacement for the C9-SERIES is the same as described previously for pneumatic rifles. Valve seals replacement for the C9-SERIES and F9-SERIES rifles made before 1995 is also the same as described previously, except for the trigger/safety assembly which is shown in the following F9A procedures.

The following procedures also show the removable cartridge valve found in 1995 and newer models.



Model F9A-SERIES CO2 rifle

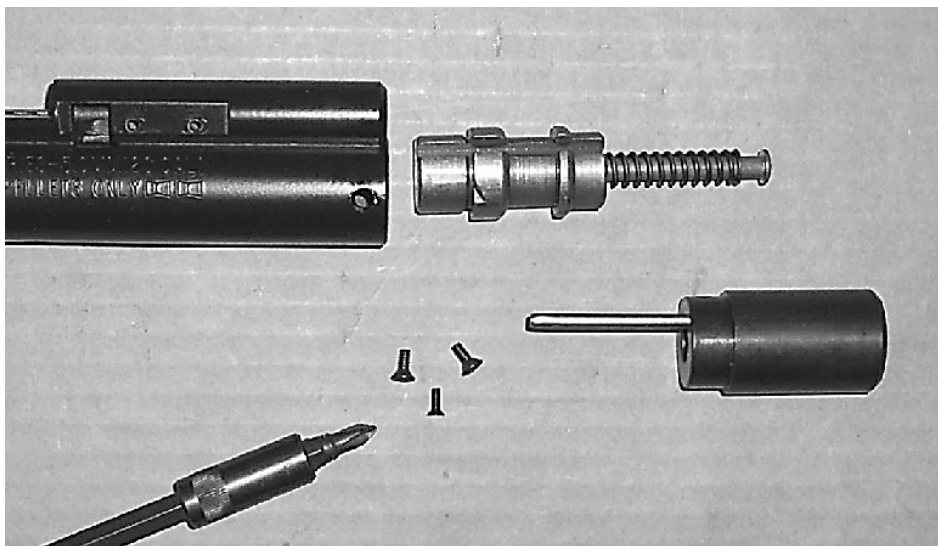


remove trigger spring components



drive out trigger/sear retention pin and remove safety components

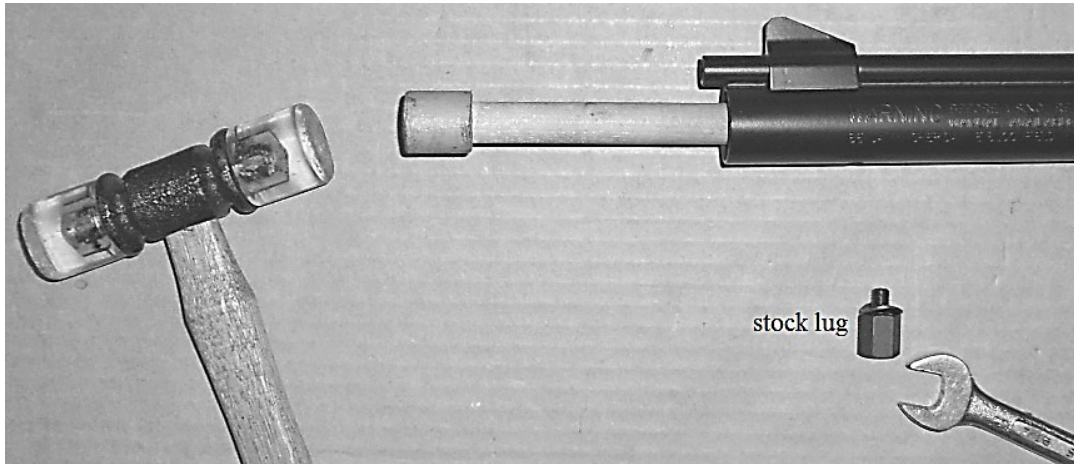
Note: retention pin has knurled end and must be driven out from proper direction
take care to not lose safety detent ball and safety spring located in end cap



remove three screws securing end cap and withdraw cap, striker and spring from tube

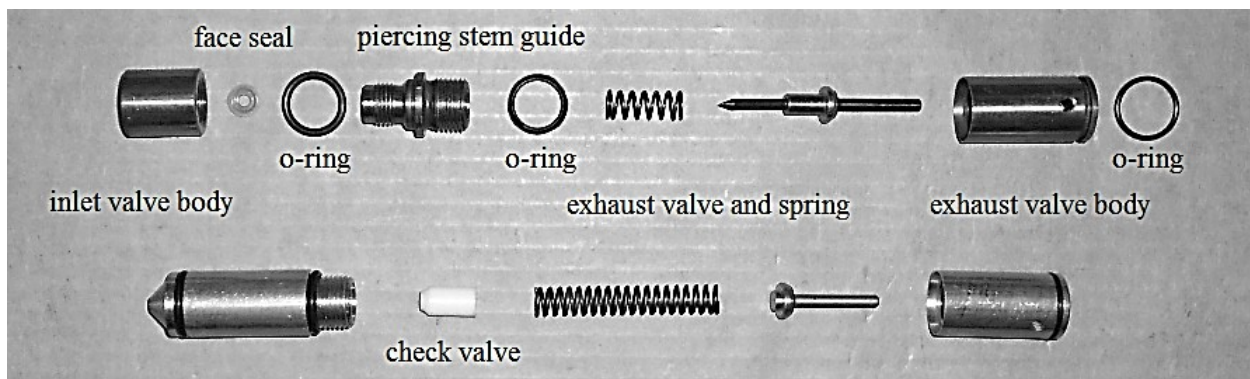
Note: bolt removal/adjustment is the same as previous series except that a 7/64" allen wrench is needed to remove cocking lug and there is no tension spring in the bolt.

cartridge valve seals replacement



remove stock lug, which also serves to secure cartridge valve in tube
drive out cartridge valve assembly with wooden dowel

Note: in pneumatic rifles the cartridge can sometimes be blown out by activating the pump



CO2 cartridge valve components shown at top

pneumatic cartridge valve components with o-rings installed shown at bottom

unscrew valve body and clean parts; re-assemble cartridge with new seals and o-rings

apply a light coat of oil on the o-rings

install cartridge in air tube and re-assemble rifle in reverse order

Part Numbers

pre 1995 pneumatic rifle part numbers:

pump cup	397-025
inlet valve	10010
exhaust valve	397-038
valve body seal	68AT-035
valve body	68AT-033
lead seal	68AT-032
valve retainer nut	68AT-034

pre 1995 CO2 rifle part numbers:

chamber plug	F500
chamber plug o-ring	F500-0
chamber plug sleeve	F500-1
chamber sleeve	F500-2
face seal	G397-012
valve spring	G397-011
exhaust valve	FX505-3
valve body seal	same as pneumatic rifle
valve body	same as pneumatic rifle
lead seal	same as pneumatic rifle
valve retainer nut	same as pneumatic rifle

pneumatic cartridge valve part numbers:

complete valve assy	397-032
exhaust valve body	397-033
exhaust valve body o-ring	397-036
exhaust valve	397-038
valve spring	397-035
inlet valve body	397-034
inlet valve body inner o-ring	397-037
inlet valve body outer o-ring	JTX-080
check valve	1322-056

CO2 cartridge valve part numbers:

complete valve assy	G397-008
exhaust valve body	397-033
exhaust valve body o-ring	397-036
exhaust valve	2250-016
valve spring	788-061
inlet valve body	G397-009
inlet valve body inner o-ring	397-037
inlet valve body outer o-ring	397-040
face seal	G397-012
piercing stem guide	G397-010

A note on barrel separation

A common issue with Sheridan Silver Streak and Blue Streak pellet rifles is barrel separation. The solder joint along the barrel and air tube can break due to stress or age. It is well known that the clip-on rear sight used on 1971 and later pellet rifles can cause stress on the solder joint. An improperly attached scope mount can also cause stress on the joint.

To check for barrel separation shine a bright light along the barrel/air tube seam and note if any light passes through the solder joint. Also, pinch between the muzzle and air tube to check for separation at the front sight. In some cases the receiver can become separated so check that it cannot be lifted from the air tube.

Barrel separation can be repaired by anyone who has good soldering skills. In most cases the heat applied will not damage the nickel finish on a Silver Streak. However, the repair area on a Blue Streak may need to be re-finished.

In the case of minor separation in the area of the clip-on rear sight, it is advised to remove the sight to prevent the separation from worsening. There are different methods to remove the sight. One way is to tap it from front to rear while holding the wedges stationary so that the sight can slide off of them. If it is desired to retain the open rear sight installed with the metal wedges, the solder joint will need to be repaired. The clip-on sight can also be installed using a pair of wedges fabricated from soft plastic. An advantage to using plastic wedges is that the solder joint may not have to be repaired. Another option is to install a Williams 5D-SH receiver sight. The bolt will have to be removed to drill and tap the holes for the two 6-48 screws which secure the Williams sight to the receiver.

To learn more about Sheridan air guns refer to the following books:

“SHERIDAN / Classic American Air Rifles” by UJ Backus

“Know Your Sheridan Rifles & Pistols” by Ronald E. Elbe