GENERAL RIMFIRE QUESTIONS
(new section)

Given the description of basic rimfire actions, including the functions of hammer, sear, trigger, bolt, and safeties, diagnose causes of common malfunctions.

1. When working on .22LR Rimfire semi-auto actions, the MOST probable causes of a FAILURE TO EJECT are _____ or _____.
    a. excessive headspace; missing ejector
    b. Missing, broken, or worn left extractor; missing, worn, or broken ejector
    c. weak or worn ejector spring; missing or worn left extractor
    d. shooting .22 shorts in a rifle balanced for .22 LR; missing ejector
    e. shooting .22 shorts in a rifle balanced for .22 LR; missing or worn left extractor

2. What is the primary thing that delays the opening of the bolt when a .22 rimfire semiauto is fired?
    a. The firing pin spring.
    b. The locking lugs.
    c. The hammer.
    d. The mass of the bolt.
    e. The energy of the cartridge.

3. What will happen to the cyclic rate of a .22 rimfire semi-auto if you DECREASE the weight of the bolt and INCREASE the recoil spring tension?
    a. It will decrease.
    b. It will increase.
    c. It will stay the same.
    d. It will become erratic.
    e. It will refuse to cycle.

4. What DIRECTLY opens the bolt when a .22 rimfire straight blowback semi-auto is fired?
    a. Pressure on the cartridge case.
    b. Hot flaming gases.
    c. The bolt spring.
    d. The gas piston.
    e. The extractor.

5. What is the **MINIMUM** headspace for a .22LR rimfire rifle?
    a. .025"
    b. .035"
    c. .044"
    d. .050"
    e. .054"

6. To avoid damage to the chamber, what is the **MAXIMUM POSITIVE** firing pin protrusion on a .22LR rifle
    a. .025"
    b. .034"
    c. .040"
    d. .055"
    e. .060"

7. What will happen if you fire a .22 rimfire semi-auto that has had .020" filed off the breech end of the barrel?
    a. It will function normally because it does not change the headspace.
    b. It will fire full auto.
    c. It will fire when the bolt closes.
    d. The case will blow out because of excessive headspace.
    e. The cartridge will bind while transitioning from magazine to chamber.

8. In general, the extractor hook should be _____.
    a. neutral
    b. positive
    c. negative
    d. set according to the strength of the extractor spring
    e. set according to the chamber headspacing

REMINGTON NYLON 66

Given a basic understanding of rimfire actions and their characteristics, and a detailed disassembly of a Nylon 66, identify the basic functions of critical parts.

9. Which of the following INDIRECTLY holds the hammer in the cocked position in a Remington Nylon 66?
    a. The sear
    b. The disconnector
    c. The trigger
    d. The bolt
    e. The trigger spring

10. How does the safety function in a Remington Nylon 66? It:
    a. lifts the disconnector from the trigger.
    b. blocks the trigger.
    c. blocks the sear.
    d. blocks the disconnector from the hammer.
    e. lifts the trigger from the sear.

11. What happens when the opening bolt moves rearward and hits the end of the disconnector, forcing it down in a Remington Nylon 66?
    a. It releases the sear and allows it to catch the hammer.
    b. The disconnector unhooks from the trigger and slips under the sear.
    c. It pushes the trigger away from the sear.
    d. It pushes the sear under the hammer.
    e. It pushes the sear bar away from the sear.

12. With the bolt in the CLOSED position on a Remington Nylon 66, the _____ acts as a cartridge stop.
    a. cartridge stop pin
    b. magazine tube
    c. cartridge feed guide
    d. bottom of the bolt
    e. cartridge guide insert

13. What extracts the fired case in a Remington Nylon 66?
    a. Gas pressure moves the case rearward and then momentum extracts it.
    b. The left extractor.
    c. The right extractor.
    d. Both the right and left extractors.
    e. The ejector.

14. What are the functions of the extractor of a Nylon 66? The EXTRACTER _____ and _____.
    a. extracts the live round; extracts the fired case
    b. extracts the fired case; ejects the fired case
    c. helps to hold bolt closed; ejects fired cases
    d. extracts the live round; holds the fired case up in the bolt face
    e. holds the fired case up in the bolt; ejects the fired case

15. The two things that hold the Nylon 66 cartridge feed guide in place are the _____ and _____.
    a. the cartridge feed guide spring; outside magazine tube
    b. the cartridge feed guide spring; firing pin stop pin
    c. disconnector spring; cartridge stop spring
    d. cartridge feed guide spring; outside magazine tube
    e. outside magazine tube; firing pin stop pin

Given a basic understanding of rimfire actions and their characteristics, and a detailed disassembly of a Nylon 66, deduce causes of common malfunctions.

16. What would happen if a Nylon 66 was fired with a broken or missing cartridge feed guide or spring?
    a. The gun would eject erratically.
    b. The cartridge would stub against the cartridge feed insert.
    c. It would fail to eject.
    d. It would double feed.
    e. The cartridge could stub against the top of the barrel.

17. You have just replaced a weak cartridge stop spring in a Nylon 66. It is still double feeding. The next most PROBABLE causes are _____ or _____. Choose the BEST answer.
    a. the magazine spring is too strong; the action (recoil) spring is too weak
    b. the action (recoil) spring is too week; there is excessive drag of the bolt on the sides of the receiver
    c. the working part of the cartridge stop is rounded or broken off; the cartridge stop is bent, sticking in the downward position
    d. the working part of the cartridge stop is rounded or broken off; there is excessive drag of the bolt on the sides of the receiver
    e. the cartridge stop is bent, sticking in the downward position; the magazine spring is 50% too strong

18. _____ and ____ could cause SLUGGISH or ERRATIC ejection on a Nylon 66.
    a. Right extractor is missing or worn; Ejector spring is weak or missing
    b. Ejector is missing; chamber is rough, ringed, or bulged
    c. Left extractor is missing or worn; Ejector is missing
    d. Ejector spring is weak or missing; chamber is rough, ringed, or bulged
    e. Right extractor is missing or worn; chamber is rough, ringed, or bulged

19. Assuming a functional magazine spring, there are two other reasons that can prevent a Nylon 66 from feeding cartridges from the magazine. They are _____ or _____.
    a. the cartridge stop spring is broken or missing; the magazine spring is 50% stronger than normal
    b. a dent in the inside of the magazine tube; the magazine spring is 50% stronger than normal
    c. a dent in the inside of the magazine tube; the rear end of the cartridge stop is broken off
    d. the rear end of the cartridge stop is too long; the cartridge stop spring is broken or missing
    e. a dent in the inside of the magazine tube; bent or worn left extractor occluding boltface

20. What would happen if the STEEL INSERT trigger of a Nylon 66 broke off?
    a. The sear would refuse to reset.
    b. The hammer would not stay cocked.
    c. The gun would fire full auto.
    d. The disconnector would not go under the sear.
    e. The trigger is pulled but the hammer would not fall.

21. A customer brings in a Nylon 66 with SLUGGISH and ERRATIC ejection. Occasionally, the rifle fails to eject the empty at all. What would you suspect as the MOST likely cause of this problem?
    a. Headspace .005" excessive.
    b. Ejector too long causing early ejection.
    c. Headspace too tight.
    d. Extractor not holding case to boltface.
    e. Short cycling causing double feeding.

22. To correct excessive headspace on a Nylon 66, you would _____ or _____.
    a. file some off the breech end of the barrel, if the chamber chamfer was too deep; file some off the bolt face if the rimcut is too deep
    b. file some off the breech end of the barrel, if the chamfer was too deep; increase firing pin protrusion to .050
    c. install a stronger action spring; file some off the bolt face if the rimcut is too deep
    d. file some off the bolt face if the rimcut is too deep; lengthen the extractor .020
    e. lenthen the extractor .020; increase firing pin protrusion to .050.

23. What will happen if a Nylon 66 is fired with a missing LEFT extractor?
    a. It will extract because it has both right and left hand extractors.
    b. It will not extract.
    c. It will not feed.
    d. The spent casing will remain trapped against the bolt face.
    e. It does not have a left-hand extractor

24. What will happen if you fire a Nylon 66 with a missing RIGHT extractor?
    a. Won't extract a fired casing.
    b. Won't eject a fired casing.
    c. Ejection would be unreliable.
    d. Won't close completely.
    e. The fired casing will remain trapped against the bolt face.

25. If the Nylon 66 was cocked and held with the muzzle pointing upward, with the safety on, what is holding the bolt closed?
    a. The drag of the cartridge case against the chamber
    b. The locking block
    c. The sear
    d. The action/recoil spring
    e. The drag of the bolt against the sides of the receiver

26. What forces the bolt open when a Nylon 66 is fired?
    a. Recoil.
    b. Powder gas escaping past the cartridge case.
    c. The cartridge case under pressure.
    d. The slide that has been pushed by the trapped gas.
    e. Release of the locking lugs.

27. The rearward travel of the Nylon 66 bolt is stopped by the _____ and the _____.
    a. action spring; magazine bolt stop
    b. action spring; back of the receiver
    c. bolt buffer; back of receiver
    d. bolt buffer; receiver cover
    e. bolt buffer; magazine bolt stop

Crickett

Given a basic understanding of rimfire actions and their characteristics, and a detailed disassembly of a Crickett, identify the basic functions of critical parts.

28. What special tool is needed to disassemble the Crickett rifle?
    a. A custom made spanner screwdriver.
    b. A pair of parallel flat nose smooth jaw pliers.
    c. a T25 Torx driver with a recess bored into the center.
    d. A 3/16ths hex head wrench with a .25" offset.
    e. No special tools are needed to disassemble or reassemble the rifle.

29. What safety feature is unique on the Crickett rifle? The
a. automatic trigger safety
b. plunger type bolt safety lock.
c. turn key trigger lock safety.
d. rotating striker stop.
e. There are no safety features on this rifle, as it is a single shot bolt action rifle.

SAVAGE 87

Given a basic understanding of rimfire actions and their characteristics, and a detailed disassembly of a Savage 87, identify the basic functions of critical parts.

30. The Savage Model 87 has two long coil springs behind the bolt, one inside the other. What does the INSIDE one do?
    a. Sets the extractor.
    b. Spring loads the firing pin.
    c. It is the hammer spring .
    d. Insures proper headspace.
    e. Closes the bolt.

31. The Savage Model 87 has two long coil springs behind the bolt, one inside the other. What does the OUTSIDE coil spring do on a Savage 87?
    a. It is the hammer spring.
    b. Reduces sear surge.
    c. Reduces bolt rebound.
    d. Returns the bolt.
    e. Spring loads the firing pin.

32. How far must the carrier of a Savage Model 87 A, B, or C be mechanically cammed upward when shooting the gun in order for it to feed? Until the:
    a. carrier pushes the shell into the feed lips.
    b. carrier hits its stop.
    c. carrier gets in front of the bolt face.
    d. cartridge goes through the cartridge guide spring.
    e. cartridge rim engages the extractor.

33. The _____ elevates the Savage Model 87 carrier to its uppermost position.
    a. carrier spring
    b. hump on the belly of the bolt
    c. cam on the side of the bolt
    d. rear carrier ear
    e. downward tension on lifter spring

34. The _____ serves as the secondary cartridge stop of an Savage Model 87.
    a. rear of the carrier
    b. left cartridge stop
    c. front of the carrier
    d. carrier spring

e. carrier pin

35. With no cartridge in the magazine guide, the _____ stops the upward motion of the carrier.
    a. carrier stop pin
    b. front ear striking the bolt
    c. magazine guide
    d. tab on the front of the trigger plate
    e. recoil bumper

36. What stops the forward movement of the firing pin? The _____
    a. barrel.
    b. bolt.
    c. firing pin retaining pin.
    d. hammer.
    e. edge of the breech face.

Given a basic understanding of rimfire actions and their characteristics, and a detailed disassembly of a Savage 87, deduce causes of common malfunctions.

37. When fired, sometimes the Savage 87 bolt won't go completely closed, sometimes the bolt does close, but the gun isn't cocked. Other times the gun goes full auto. Two possible causes of this are the _____ and the _____.
    a. hammer plunger isn't holding the hammer; hammer plunger is letting go of the hammer too late.
    b. bolt plunger isn't holding the bolt; hammer plunger is letting go of the hammer too late
    c. bolt plunger isn't holding the bolt; bolt plunger is letting go of the bolt too late
    d. bolt plunger isn't holding the bolt long enough; hammer plunger isn't holding the hammer
    e. hammer plunger isn't holding the hammer; bolt plunger is letting go of the bolt too late

38. What would you do if a customer brought you a Savage Model 87F with a broken firing pin?
    a. Install a series "C" firing pin.
    b. Install a series "F" firing pin.
    c. Install a series "J" firing pin.
    d. Install a series "N" firing pin.
    e. Machine a new firing pin from 4140 alloy bar stock and temper.

39. What two things could you do to retain the magazine guide and the trigger plate screws when reassembling a Savage Model 87? You could _____ or _____.
    a. stake them in place; install jam nuts
    b. install lock washers; stake them in place
    c. screw them in real tight; torque them to ten inch-ounces
    d. torque them to ten inch-ounces; LOCTITE them in place
    e. stake them in place; LOCTITE them in place

40. The gun doesn't cock all the time. If the trigger is released quickly it usually cocks, but if the trigger is released slowly it won't be cocked. In fact, sometimes it goes full auto and sometimes the bolt won't go completely closed. This is caused when the bolt plunger releases the bolt before the _____.
    a. sear is disengaged.
    b. safety is released.
    c. hammer plunger can catch the hammer.
    d. bent firing pin can retract.
    e. carrier stop can keep another cartridge from feeding.

CHARTER AR-7

Given a basic understanding of rimfire actions and their characteristics, and a detailed disassembly of a Charter AR-7, identify the basic functions of critical parts.

41. The AR-7 safety blocks the _____.
    a. firing pin
    b. bolt
    c. hammer
    d. trigger
    e. sear

Given a basic understanding of rimfire actions and their characteristics, and a detailed disassembly of a Charter AR-7, deduce causes of common malfunctions.

42. The design of the AR-7 is such that with some shooters the gun tends to full auto. What can be done to reduce this tendency?
    a. Make the primary sear system longer.
    b. Make the secondary sear system more neutral.
    c. Time the sear system so the secondary lets go sooner.
    d. Make the secondary sear system more positive.
    e. Time the sear system so the secondary hangs on longer.

43. A customer brings in his AR-7 complaining of failure to feed, misfires and occasionally going "full auto". This gun is not high or low feeding, and the sear system is functioning correctly. What is probably the cause of this?
    a. Firing pin is too long.
    b. Firing pin is sticking or stuck in the forward position.
    c. The gun has excess headspace.
    d. The barrel is too far back in the receiver.
    e. Burr on bolt face impacts cartridge rim ahead of firing pin.

44. How do we correct the excessive headspace caused by too deep of a chamber chamfer on an AR-7?
    a. Face off the chamber end of the barrel.
    b. Set the barrel back.
    c. Remove metal from the face of the bolt.
    d. Install stiffer action springs.
    e. lengthen the firing pin.

45. The Charter AR-7 frequently misfires, You find that the bolt closes and then usually backs away from the barrel about .050". The two best ways to correct this are _____ and _____.
    a. increase headspace; fit extractor and/or extractor cut in barrel
    b. install stronger action springs; install a weaker extractor spring
    c. install a weaker extractor spring; fit extractor and/or extractor cut in barrel
    d. install a stronger extractor spring; fit extractor and/or extractor cut in barrel
    e. install stronger action springs; install a stronger extractor spring

46. A Charter AR-7 short cycles using the correct .22 LR high velocity cartridges. The chamber is **NOT** rough. What is the BEST way to correct this short cycling problem?
    a. Polish the inside of the receiver and outside of the bolt.
    b. Weaken the action springs.
    c. Lighten the bolt.
    d. Replace the recoil spring guide.
    e. polish the feed ramp.

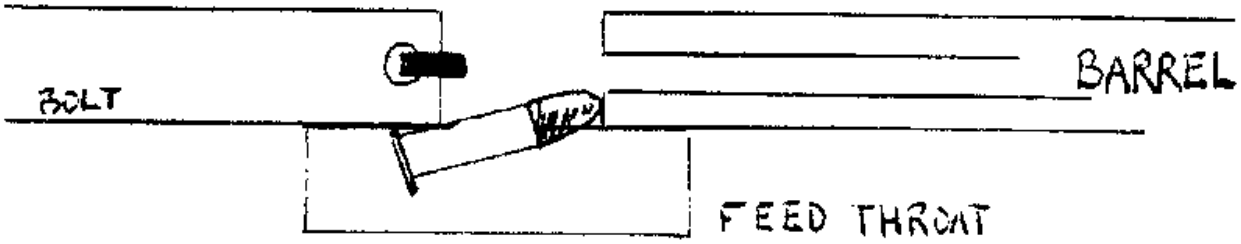
MARLIN 99

Given a basic understanding of rimfire actions and their characteristics, and a detailed disassembly of a Marlin 99, identify the basic functions of critical parts.

47. Why should you always replace the buffer on a Marlin 99 if it's broken? It:
    a. makes the rifle work quieter.
    b. increases the cyclic rate of the rifle.
    c. prevents the bolt from breaking the back of the receiver.
    d. holds the assembly plates the correct distance apart.
    e. reduces the recoil transmitted through the stock.

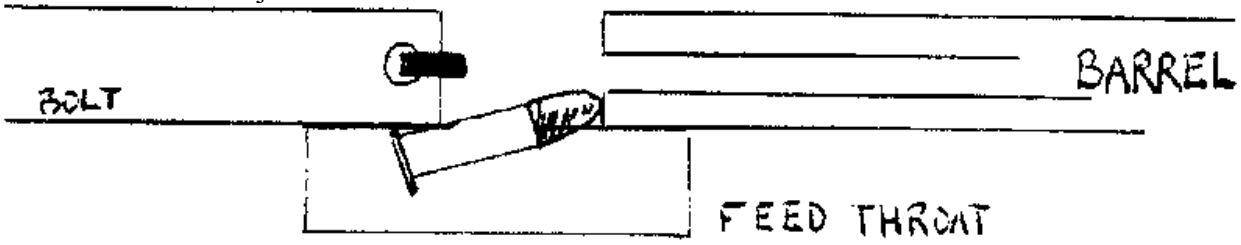
Given a basic understanding of rimfire actions and their characteristics, and a detailed disassembly of a Marlin 99, deduce causes of common malfunctions.

48. A man brings in his Marlin 99 because it is jamming. It ejects ok but won't feed. The jam looks like this:



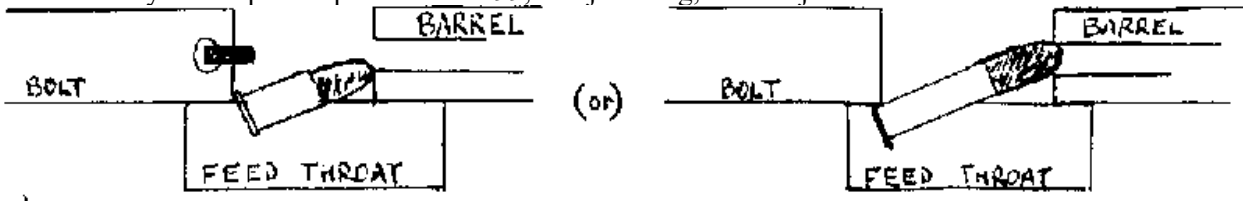
The cause of this is:
    a. extractor spring is too strong.
    b. barrel needs chamfering.
    c. agazine feed tube has shifted too far forward.
    d. bolt is overriding the cartridge rim.
    e. the barrel is set too far back in the receiver.

49. Which of these four possible cures for the problem illustrated here **would NOT** work assuming the Marlin 99 would eject but not feed?



    a. Strengthen the carrier spring.
    b. Install a feed throat kit.
    c. Re-cut the angles on the extractor and case harden.
    d. shorten the back of the bolt 1/16".
    e. "a" and "d".

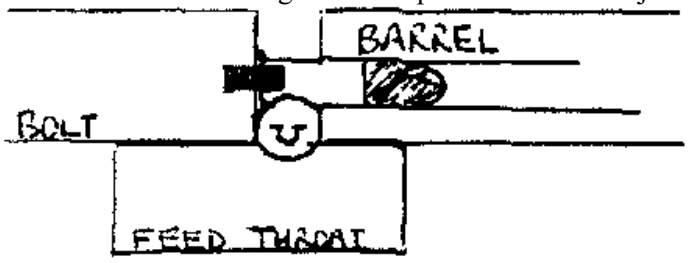
50. You have in your shop for repair a Marlin 99, it is jamming, and the jam looks like this:

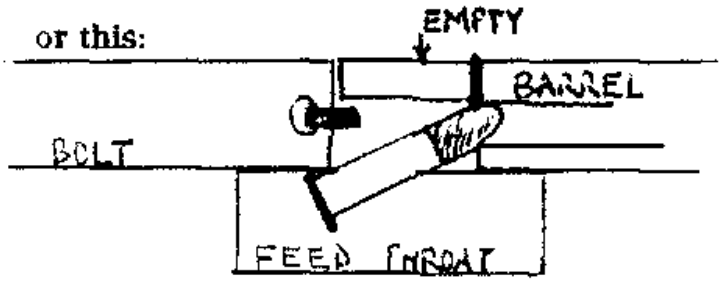


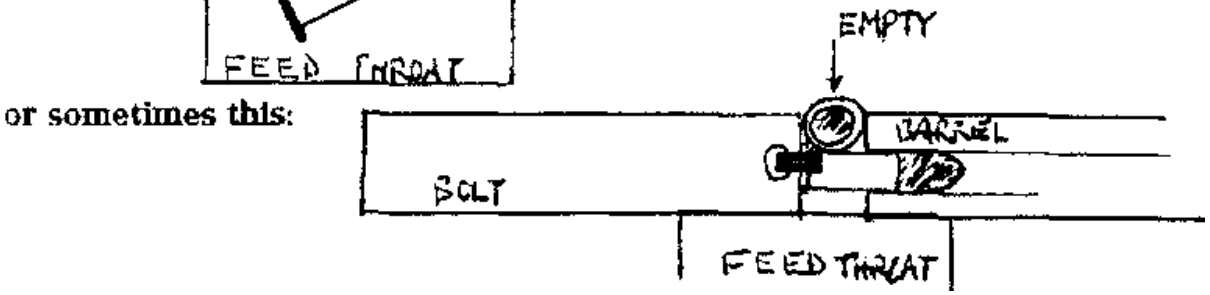
The two MOST likely causes of this are _____ and _____.
    a. improperly fitted extractor; worn out feed throat
    b. improperly fitted extractor; too sharp of a bolt face
    c. too sharp of a bolt face; the feed throat is too wide
    d. worn out feed throat; too sharp of a bolt face

e. worn out feed throat; the feed throat is too wide

51. Another Marlin 99 is brought in for repair. This time the jam looks like this:



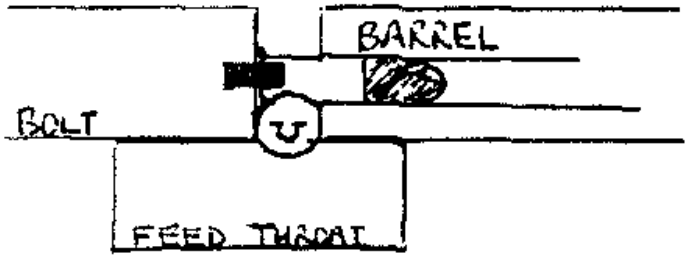


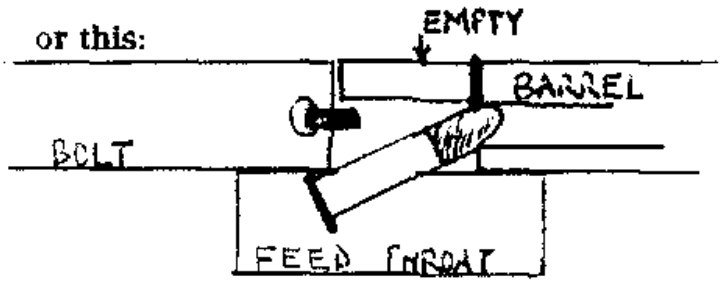


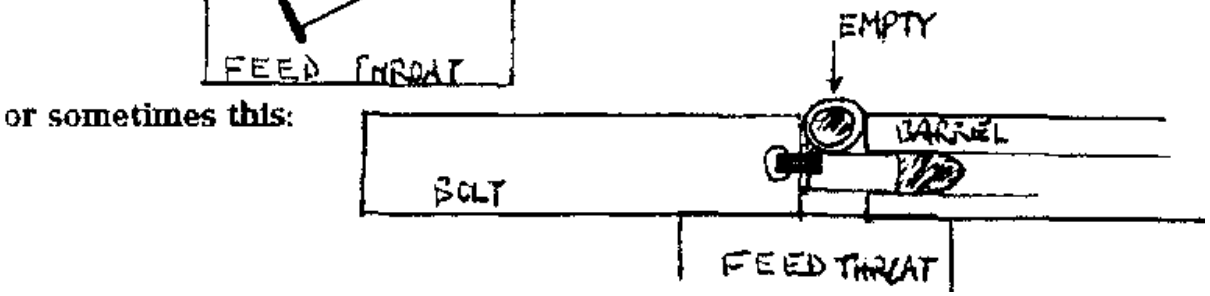
This is caused by:

a. the empty striking the bolt handle and being knocked back into the ejection port.
b. an improperly fitted extractor.
c. excessively loose breech
d. an ejector that is too long.
e. a worn out feed throat.

52. A Marlin 99 consistently jams as shown -







The BEST solutions would be _____ or _____

a. tighten the spring on the extractor; tighten the bolt spring and chamfer the chamber
b. tighten the bolt spring and chamfer the chamber; remove 1/8" off the back of the bolt
c. remove 1/8" off the back of the bolt; extend the ejector forward by 1/16"
d. tighten the bolt spring and chamfer the chamber; extend the ejector forward by 1/16"
e. tighten the spring on the extractor; extend the ejector forward by 1/16"

53. We now have a new cure that will fix almost all feeding problems on most Marlin model 99's made prior to 1985. This is accomplished by _____.
    a. re-cutting the bolt face
    b. cutting the extractor to a more positive angle
    c. installing a universal cartridge guide
    d. setting the barrel back
    e. installing a feed throat kit

RUGER 10/22

Given a basic understanding of rimfire actions and their characteristics, and a detailed disassembly of a Ruger 10/22, identify the basic functions of critical parts.

54. There is a large pin found in rear of the receiver of a 10/22. What does this pin do?
    a. It acts as a stop to protect the back of the receiver.
    b. It prevents the trigger assembly from falling out of the receiver.
    c. It keeps the rear end of the stock from moving around, which increases accuracy, similar to glass bedding the rifle.
    d. Through inertia and the fast rearward movement of the bolt, it is what cocks the hammer.
    e. It serves as receiver reinforcing pin.

55. The barrel on a 10/22 is removed from the receiver by:
    a. unscrewing the threaded portion of the barrel itself from the receiver.
    b. slowly heating the barrel seal with a heat gun and using a 10/22 barrel wrench to unscrew the barrel from the barrel extension located in the rear of the receiver.
    c. driving out the barrel retaining pins from the receiver shell.
    d. removing two Allen screws and barrel retainer.
    e. unscrewing the barrel nut, removing the barrel washer, rotating the barrel one half turn counterclockwise and then pulling the barrel straight out.

56. Which one of the operations or movements BEST describe how the disconnector is reconnected with the sear after the 10/22 has been fired?
    a. The hammer pushing the disconnector downward reconnects the disconnector with the sear.
    b. The forward movement of the trigger caused by the stored energy in the trigger spring reconnects the disconnector to the sear.
    c. The trigger spring pushing on the sear reconnects the disconnector to the sear.
    d. The rearward movement of the trigger pushes on the trigger plunger which reconnects the disconnector to the sear.
    e. The rearward movement of the hammer releases pressure on the sear spring reconnecting the sear.

57. The safety on a 10/22 blocks the…
    a. Sear
    b. Disconnector
    c. Trigger
    d. Hammer
    e. Firing pin

Given a basic understanding of rimfire actions and their characteristics, and a detailed disassembly of a Ruger 10/22, deduce causes of common malfunctions.

58. Where should you set the safety when removing the barrelled action from the stock?
    a. On
    b. Off
    c. depends on whether it is original or aftermarket stock
    d. it is not critical
    e. halfway between the two settings

59. When replacing a 10/22 trigger, disconnector, sear and sear spring sub-assembly and inserting back into the trigger guard, what tool makes this job easier?
    a. Rubber band
    b. Pliers
    c. Slave pin
    d. Dental pick
    e. Forcepts

60. What other Ruger firearms have an extractor which will interchange with that of the 10/22?
    a. Mini-14
    b. Ruger LCP II
    c. Ruger P-9
    d. Ruger P-85
    e. Ruger Standard Auto, all Marks

61. What gun part from a 10/22 breaks the connection between the sear and the disconnector after the gun has been fired? The:
    a. trigger
    b. sear itself
    c. hammer
    d. empty cartridge case
    e. disconnector spade

62. Why should you exercise extreme caution when reassembling the safety back into the trigger guard of a 10/22? Because, if you:
    a. assembe the safety so that the red paint on the safety is on the right side of the rifle, the trigger will be blocked by the solid part of the safety and will not allow the rifle to be fired.
    b. put the safety back into the trigger guard in the wrong position, the safety detent plunger could move into the flat cut into the safety and bind the safety so that it cannot easily be taken back out of the trigger guard.
    c. assemble the safety on the wrong side, clearances will allow the rifle to fire regardless of safety position.
    d. assembly of the safety on the wrong position, the first time the rifle is fired, the trigger will jam to the rear and full auto.
    e. None of the above, it doesn't matter which direction the safety goes back into the trigger guard, other than making sure that you put the safety detent plunger and spring in first.

63. Why must you have to have a good chamfer on the bottom of the extractor of a 10/22?
    a. To avoid feeding problems, due to the angle of the extractor's position in the bolt and the rim cut in the bolt face.
    b. Because the firing pin would not be able to hit the rim of the cartridge when the cartridge is in the chamber and the action is in battery.
    c. Because gravity tends to want to pull the empty case away from the ejector when the gun is fired.
    d. Because the extractor recess cut into the breech face is angled to ensure a positive mating of case and extractor.
    e. Actually, you must make sure that there is no chamfering at all on the bottom of the extractor because it will cause the cartridge rim to miss the rim cut that is milled into the bolt face.

64. You have a Ruger 10/22 ejector that is too low to hit the cartridge rim. The two BEST solutions are to _____ or _____.
    a. bend the ejector up; lower the bolt in the receiver
    b. spring load it upward; lower the bolt in the receiver
    c. lower the bolt in the receiver; deepen the ejector slot in the bolt
    d. bend the ejector down; deepen the ejector slot in the bolt
    e. bend the ejector up; spring load it upward

GSG-522

Given a basic understanding of rimfire actions and their characteristics, and a detailed disassembly of a GSG-522, identify the basic functions of critical parts.

65. With the simple design of the GSG-522, after verifying it is unloaded and uncocked, initial disassembly is accomplished using:
    a. two T-25 torx wrenches.
    b. two 3/16" allen wrenches.
    c. two flat-blade screwdrivers.
    d. two phillips screw drivers.
    e. a single 3/16" punch.

66. To remove the _____ from the GSG-522 requires you to separate the two receiver halves.
    a. barrel and block
    b. bolt
    c. stock
    d. trigger group
    e. rear sight group

Steven's Favorite

Given a basic understanding of rimfire actions and their characteristics, and a detailed disassembly of a Stevens Favorite rimfire, identify the basic functions of critical parts.

67. How do you remove the barrel of a Stevens Favorite rimfire rifle? By:
    a. unscrewing the threaded portion of the barrel from the receiver.
    b. driving out the barrel retaining pins from the receiver shell..
    c. removing two recessed flat-head straight screws on each side of the receiver.
    d. loosing the take-down locking screw by turning the D-ring on underside of receiver front.
    e. unscrewing the barrel nut, removing the barrel washer, rotating the barrel one half turn counterclockwise to free the interrupted threads and pulling the barrel straight out.

68. In a Stevens Favorite rimfire .22 the extractor is:
    a. moved out from the chamber by a spring as the block is lowered.
    b. actuated by a link attached to the block as it is lowered.
    c. linked to the lever and extracts as it is lowered.
    d. cut into the receiver block 90 degress to the firing pin.
    e. moved by a frame-mounted rod that pivots as the block moves down past it.

MARLIN 39A

Given a basic understanding of rimfire actions and their characteristics, and a detailed disassembly of a Marlin 39A Lever-action rifle, identify the basic functions of critical parts.

69. There is a screw in the Marlin 39A ejector assembly that doesn't seem to do anything. What is the purpose of the screw?
    a. Holds the ejector to the frame
    b. Holds the ejector to the housing
    c. Locks the ejector in the inactive position
    d. Prevents cartridge override
    e. Adusts ejector spacing relative to the bolt face.

70. What is the carrier rocker? The:
    a. screw that the carrier rocks on.
    b. finger lever.
    c. button that lowers the carrier.
    d. hook or plunger that makes the carrier rise.
    e. extrusion on the bolt that shifts the carrier.

Given a basic understanding of rimfire actions and their characteristics, and a detailed disassembly of a Marlin 39A Lever-action rifle, deduce causes of common malfunctions.

71. The carrier of a Marlin 39A does **NOT** go LOW enough to allow a cartridge to come out of the magazine onto the carrier. How can this be corrected?
    a. Bend the carrier down no more than 1/16th inch.
    b. Widen the finger lever.
    c. Increase the carrier spring tension.
    d. Increase the diameter of the button that the lever pushes on.
    e. File metal from the bottom inside of the frame.

72. The Marlin 39A carrier does **NOT** go HIGH enough to get the nose of the bullet into the chamber. How can this be corrected?
    a. Increase the carrier spring tension.
    b. Increase the engagement depth (deeper) of the carrier rocker on the lever.
    c. Increase carrier rocker spring tension.
    d. Weld up the front of the finger lever.
    e. Bend the rear of the carrier down.

73. The nose of the bullet jams between the top of the Marlin 39A receiver and the end of the barrel. What is the probable cause of this?
    a. Finger lever bump is too tall.
    b. Defective or missing cartridge guide spring.
    c. An un-chamfered chamber.
    d. The carrier spring is too strong.
    e. The carrier is going too high.

74. The cartridges are NOT coming out of the Marlin 39A magazine onto the carrier. The two MOST probable causes are the _____ and _____.
    Note: the long, skinny cartridge guide (stop?) was removed in the 1950s.
    a. cartridge interrupter (stop); nose on the front of the bolt
    b. cartridge interrupter (stop); cartridge guide
    c. cartridge guide; receiver
    d. nose on the front of the bolt; receiver
    e. cartridge interrupter (stop); receiver

75. A Marlin 39A rifle tries to double feed. What is at fault?
    Note: the long, skinny cartridge guide (stop?) was removed in the 1950s.
    a. The magazine
    b. The magazine feed spring
    c. The cartridge guide spring
    d. The carrier
    e. The cartridge interrupter (stop)

76. The Marlin 39A secondary cartridge interrupter (stop) is **NOT** letting cartridges out of the magazine. How can this be corrected without altering anything except the cartridge interrupter (stop)?
    a. Slightly thin the cartridge interrupter (stop) to reduce engagement.
    b. Only by replacing the cartridge interrupter (stop).
    c. File down the tab on the interrupter (stop) to reduce engagement.
    d. Bump up the tab on the interrupter (stop) so the bolt will push farther.
    e. Move the cartridge interrupter (stop) back to initially allow the cartridge onto the carrier earlier.

77. After setting the barrel back one thread on a Marlin 39A, you will also have to shorten the _____.
    a. outer magazine tube
    b. forearm
    c. inner magazine tube
    d. bolt
    e. magazine tube spring

Henry Lever Action

Given a basic understanding of rimfire actions and their characteristics, and a detailed disassembly of a Henry Lever-action rifle, identify the basic functions of critical parts.

78. What holds the stock onto the receiver on the .22 Henry Lever action rifle?
    a. One long stock bolt screw and locking washer
    b. One upper tang screw and one lower tang screw
    c. One top receiver screw and one rear trigger guard screw
    d. One top tang screw
    e. One lower tang screw

79. What holds the barrel onto the receiver of a Henry .22 lever action rifle?
    a. Barrel and receiver are threaded with interrupted threads. Barrel is inserted, rotated quarter turn and locked with small set screw.
    b. 2 taper pins
    c. One long screw and one short screw
    d. 3 taper pins
    e. The barrel is not meant to come out of the receiver, it is staked into place at the factory.

Given a basic understanding of rimfire actions and their characteristics, and a detailed disassembly of a Henry Lever-action rifle, deduce causes of common malfunctions.

80. How can you insure that the knurled magazine follower tube cap on a Henry lever-action will be reassembled back into its previous correct position onto the inner magazine tube without damaging the outer surface of the cap?
    a. Scratch marks on the inner portion of the magazine tube cap so that it will match up with the top of the inner magazine tube.
    b. Drill a 3/64th inch through cap for an alignment registration pin before disassembly.
    c. The cap only goes in one way so it is not an issue.
    d. Make aligning scratch marks on the outer surface of the inner magazine tube and outer portion of the knurled cap so that you can visually align the parts upon reassembly, the customer won't mind.
    e. The magazine tube cap is a permanent factory installation and should not be removed.

81. How do you remove the bolt from a Henry lever action .22 rifle?
    a. With the hammer at full-cock position, remove lever screw from receiver, slide lever and bolt pivot arm from receiver, slide bolt out rear.
    b. With the hammer at full-cock position, remove trigger pivot screw, hammer pivot screw, drop trigger assembly down through bottom of receiver, slide bolt out rear.
    c. With hammer at half-cock position, remove lever pivot pin and trigger pivot screw from receiver, lower lever and trigger assemblies, slide bolt out rear of reciever.
    d. Remove stock, four receiver screws and washers, remove action from shell and slide bolt from shell.
    e. Remove stock, relax hammer spring to take tension off hammer, remove lever screw, drop lever from receiver, slide bolt out rear over hammer.

REMINGTON 552 AND 572

Given a basic understanding of rimfire actions and their characteristics, and a detailed disassembly of Remington 552 and 572 rifles, identify the basic functions of critical parts.

82. What holds a Remington **572** locking bar in place?
    a. A cam
    b. A small clip
    c. The action bar
    d. A spring
    e. Gravity

83. What screw is a fitted screw in a Remington 552 or 572?
    a. Locking bar screw
    b. Take down screw
    c. Barrel retaining screw
    d. Magazine tube screw
    e. Action rod locking screw

84. What holds the Remington **552** locking bar in place?
    a. The bolt assembly
    b. The trigger housing group
    c. A cross pin and extractor
    d. A Cam
    e. It doesn't have a locking bar

85. What is the composition of the Remington 552 receiver?
    a. Titanium
    b. Aluminum
    c. Glass-filled plastic
    d. Zinc casting alloy
    e. Steel

Given a basic understanding of rimfire actions and their characteristics, and a detailed disassembly of Remington 552 and 572 rifles, deduce causes of common malfunctions and procedures to repair.

86. To tighten the headspace in a Remington 572 you would:
    a. set the barrel back.
    b. shorten the slide arm while retaining same forward movement.
    c. build up the locking block.
    d. adjust the eccentric bushing.
    e. move the bolt forward.

87. To loosen headspace in a Remington 552 you would:
    a. make the locking system more positive.
    b. install a stronger spring on the locking bar.
    c. replace the action spring.
    d. make the locking system less negative and readjust headspace.
    e. deepen the chamber.

88. When replacing a broken forearm on a Remington 572, you should also check the:
    a. action unlocking under pressure.
    b. forearm bushing.
    c. action control lever.
    d. forearm supports and magazine tube.
    e. forearm screw.

89. What will happen if the Remington 552 locking bar screw is **NOT** screwed in far enough? The:
    a. locking bar may come loose when pumped.
    b. locking bar won't unlock when pumped.
    c. bolt will jam before engaging.
    d. action will open too easily.
    e. action will exhibit loose breech.

90. What is the minimum positive protrusion that a Remington 552 firing pin should have?
    a. .010"
    b. .015"
    c. .025"
    d. .035"
    e. .045"

WINCHESTER 200 SERIES

Given a basic understanding of rimfire actions and their characteristics, and a detailed disassembly of a Winchester 200 series rimfire, identify the basic functions of critical parts.

91. On a Winchester 200 series rifle, what serves as the left extractor?
    a. Receiver-mounted tab that slides through slot in bolt.
    b. Spring loaded ball in the left side of the bolt.
    c. Left side of the bolt face.
    d. A ridge in the left side of the receiver.
    e. Firing pin/ejector

92. What does the right extractor plunger look like in a Winchester 200 series rifle?
    a. 1/8" diameter, .200" long with a small tail.
    b. 1/8" diameter, .250" long with a spherical end.
    c. 1/8" square pin, .15" long with a 1/16" small hook.
    d. 3/16" diameter, .300" long with a spherical end.
    e. Ball bearing.

93. The _____ lowers the Winchester 200 Series rifle's cartridge carrier.
    a. bolt
    b. carrier spring
    c. bolt carrier
    d. falling hammer
    e. hump on bottom of bolt action bar

94. The Winchester 200 series rifles use the _____ and _____ to eject cartridges.
    a. firing pin/ejector; left side of the bolt face
    b. left side of the bolt face; a ridge in the left side of the receiver
    c. left side of the bolt face; left extractor
    d. firing pin/ejector; left extractor
    e. left extractor; a ridge in the left side of the receiver

95. What holds any Winchester 200 series rifle barrel in place?
    a. A collar that screws into the receiver
    b. Two pins
    c. matching interrupted threads on the barrel and receiver
    d. A wedge in the receiver
    e. It is threaded directly into the receiver

Given a basic understanding of rimfire actions and their characteristics, and a detailed disassembly of a Winchester 200 series rimfire, deduce causes of common malfunctions and procedures to repair.

96. Occasionally, the cartridges do **NOT** come out of the magazine of a Winchester 200 series rifle onto the carrier, and the carrier is low enough. What is the MOST probable cause.
    a. A misaligned magazine tube and feed guide assembly.
    b. Too strong an extractor spring keeps cartridge from engaging bolt face.
    c. Cartridge stop is bent too far inward.
    d. Barrel set too far back in receiver.
    e. Weak magazine tube spring.

Ruger American .22

Given a basic understanding of rimfire actions and their characteristics, and a detailed disassembly of a Ruger American rimfire, identify the basic functions of critical parts.

97. What holds the butt pad/back portion of the stock onto the stock of a Ruger American .22 rimfire rifle?
    a. Two wood screws through the butt pad.
    b. Two allen screws.
    c. A long u shaped C-clip.
    d. The rear sling swivel screw.
    e. A rubberized button on the underside of the stock.

98. The Ruger American .22 rimfire rifle has a recoil lug that:
    a. is a molded part of the stock and does NOT come out.
    b. projects downward from the barrel into a fitted stock recess ahead of the forward action screw.
    c. serves as the rear action screw threaded insert.
    d. extends downward into the stock behind the fire control group.
    e. drops into the stock forearm as a separate part and engages barrel notches ahead of the magazine well.

99. What prevents the spring-loaded sear from popping up too far in the trigger assembly in a Ruger American .22?
    a. Nothing, as the sear is not spring-loaded.
    b. A small roll pin.
    c. The trigger guide.
    d. The guide block
    e. The trigger overtravel screw.

100. In a Ruger American .22, the sear pivot pin and the trigger pivot pin:
    a. do not come out of the trigger housing.
    b. drive out from left to right.
    c. are retained by small "c" clips.
    d. are actually screws not pins.
    e. drive out from right to left.