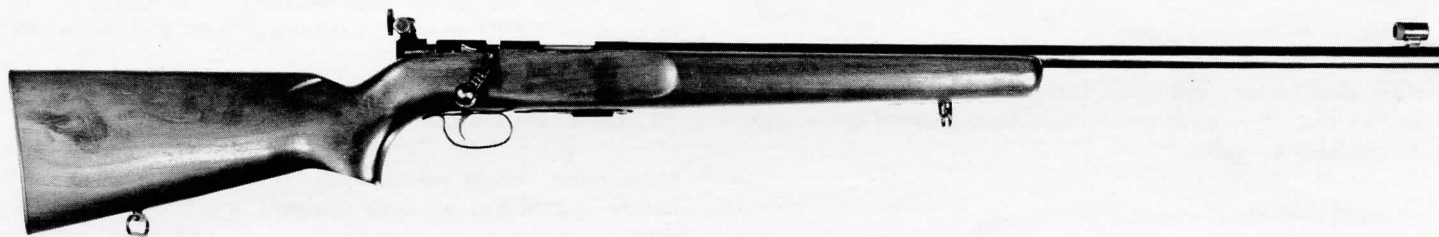


REMINGTON FIELD SERVICE MANUAL

This rifle is shipped from the factory with bolt and micrometer sight removed from the rifle and packed in a separate partition to insure against damage.



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Send all guns for factory service and inquiries on service and parts to
REMINGTON ARMS COMPANY, INC.
 Arms Service Division
 Ilion, New York 13357

MODEL 513

To Put Bolt In Receiver:

With safety switch in forward of "OFF" position and bolt cocked, insert bolt in receiver, hold trigger fully rearward and push bolt forward as far as possible, then rotate bolt handle downward to lock.

To Cock Bolt:

The bolt is cocked when red tip of safety switch indicator shows at rear of bolt. Should bolt become uncocked while removed from receiver, it will be necessary to cock it before putting it back in receiver. To do so, push bolt into receiver as far as possible, with bolt handle on right side of receiver, rotate bolt handle upward, cocking bolt, then put bolt in receiver.

To Mount Micrometer Sight:

Place micrometer sight upon two-position extension located on left side of receiver and tighten down knurled screw into desired hole in block.

To Open Action:

Rotate bolt handle upward (this motion cocks firing pin and shows red tip of safety switch indicator at rear of bolt) then pull bolt handle fully rearward.

To Close Action:

Push bolt handle fully forward and rotate bolt handle downward to lock.

To Make Safe:

Grasp safety switch, located on right side of receiver rearward of bolt handle, pull back, covering red dot on side of receiver. This movement locks trigger and gun cannot be fired.

To Remove Bolt:

Open action, push safety switch forward to "OFF" position. Hold trigger fully rearward, and pull bolt entirely from receiver.

To Remove Box Magazine:

Grasp magazine lock and pull rearward, thus disengaging magazine. Hold back on lock and pull box downward and out.

To Load Box Magazine:

Remove magazine, hold firmly in one hand, place cartridge upon top just forward of notch and press head end downward and under ears at rear of magazine. Repeat until six cartridges are loaded.

To Put Magazine in Rifle:

Place magazine in opening forward of trigger guard with open end of magazine up and the two ears on magazine rearward. Push magazine upward until it engages the magazine lock and is locked in place.

To Load Barrel As Single Shot:

A Cartridge may be inserted directly into barrel when empty box is in place.

To Fire:

BE SURE GUN IS POINTED WHERE YOU WANT TO SHOOT With action closed, push safety switch forward to "OFF" position. Pull trigger to fire. Open action to eject shell.

To Unlock Firing Pin:

Open bolt by rotating bolt handle upward. **BE SURE THERE IS NO CARTRIDGE IN THE BARREL.** Push safety switch forward to "OFF" position, hold trigger back and rotate bolt handle downward.

To Remove Loaded Cartridge From Barrel:

Move safety switch rearward to "ON" position, rotate bolt handle upward and pull fully rearward to extract loaded cartridge.

Caution:

Always rotate bolt handle fully downward for proper locking of breech to prevent misfires which may otherwise occur.

TO COMPLETELY DISMOUNT

Stock:

Remove box magazine. Unscrew takedown screw located in bottom stock forward of magazine opening and lift out action.

Butt Plate:

Unscrew butt plate screws and remove butt plate.

Front Swivel Base:

Unscrew front swivel base screws and remove front swivel base.

Trigger Guard:

Unscrew trigger guard screws and remove trigger guard.

Rear Swivel Assembly:

Unscrew from stock.

Micrometer Sight:

Unscrew rear sight base mounting screw and remove block.

Bolt:

Uncock bolt to remove tension on main spring. Drive out bolt sleeve pin, being careful to hold bolt sleeve against tension of main spring to prevent loss of parts. Remove bolt sleeve, safety switch indicator, main spring and main spring plunger, drive out firing pin cam pin and remove bolt handle assembly, remove firing pin through rear of bolt. Drive out extractor pins from bottom to top and remove extractors, then remove extractor spring from cross hole in bolt between the two extractors.

Trigger Cushion Spring: (Part 491)

Unscrew trigger cushion spring screw and remove trigger cushion spring assembly.

Trigger Cushion Spring Housing: (Part 124)

Loosen trigger cushion spring housing lock nut and unscrew trigger cushion spring assembly from receiver. Unscrew trigger cushion spring retaining screw and remove trigger cushion spring and trigger cushion spring plunger from trigger cushion spring housing.

Safety Switch:

Unscrew safety switch screw located in right side of receiver and lift-off safety switch lever. Push safety switch into receiver from hole in right side of receiver and remove through rear of receiver.

Ejector:

Remove ejector screw from left side of receiver. Remove sear pivot screw from left side of receiver, directly back of ejector screw, Slide receiver insert, rear forward in receiver and remove ejector.

Trigger Assembly:

Drive out trigger pin. Push trigger assembly upward in receiver, feeding sear downward from receiver into magazine opening directly forward of trigger opening. Grasp sear and pull trigger assembly from magazine opening.

Trigger Spg. Plunger:

Remove trigger spring plunger and trigger spring from hole in top of trigger.

Magazine Lock:

Unscrew magazine lock screws from bottom of receiver insert, rear, and remove magazine lock.

Receiver Insert, rear:

Slide insert from receiver through rear end.

Barrel From Receiver:

Drive out barrel lock pins. Drive receiver and receiver insert, front, from barrel.

Front Sight Ramp:

Unscrew front sight ramp screws and remove ramp.

TO COMPLETELY ASSEMBLE**Safety Switch:**

Place safety switch into receiver through rear. Insert stem of safety switch into hole in right side wall with locking lug down. Hold safety switch in place and assemble safety switch lever over stem protruding through right side of receiver with thumb piece of lever up. Insert safety switch lever screw through hole in safety switch lever and safety switch. Screw tightly into place.

Trigger Spg. and Plunger:

Close in end coil of trigger spring so that it fits snugly over small end of trigger spg. plunger. Holding plunger into spring, assemble spring and plunger into hole in rear of trigger top.

Trigger:

Insert finger piece of trigger into magazine opening in bottom of receiver. Push trigger toward rear of receiver and feed finger piece down out of receiver through trigger opening in receiver. Line up pin holes and drive in trigger pin.

Ejector:

Place ejector upon left side of receiver insert, rear. Place insert and ejector into front end of receiver with flat side of insert toward the right and curved side forward. Slide back into receiver, align front hole in insert and ejector with hole in left side of receiver and screw in ejector screw. With detents in safety straddling trigger spring plunger in trigger, hold back on trigger. Line up front end of sear between insert, rear, and ejector. Align hole in sear with hole in insert, ejector and receiver. Screw in sear pivot screw from left side. (Sear pivot screw must be assembled to full depth, backed off one half turn and staked in place). Try trigger for freeness.

Bolt:

Place right extractor (having straight edge hook) into slot in right side of bolt. Drive in extractor pin from top. Place extractor spring in cross hole in bolt between extractors. Place left extractor (having angle edge hook) into slot in left side of bolt, compress spring, align holes and drive in extractor pin from top. Place firing pin into bolt from rear, entering firing pin point into firing pin hole in front of bolt and slide into bolt. Place bolt handle over bolt with lug on cam forward and handle on right side. Assemble cam pin through cocking cam of bolt handle and firing pin. Place main spring follower into bolt sleeve and small end of safety switch indicator into main spring. With bolt handle in downward position - so that cam pin is forward, place large end of safety switch indicator into bolt against slotted end of main spring follower. Align slot in main spring follower with small hole in end of bolt. Compress main spring by pushing bolt sleeve on rear end of bolt. Align holes and drive in bolt sleeve pin.

MODEL 513

Barrel To Receiver:

Place receiver insert, front, on rear end of barrel. With slot in insert straddle tongue on bottom of barrel. Place barrel and insert into front end of receiver and push into receiver. Place assembly plug into chamber of barrel. Insert assembled bolt into receiver and close bolt. Force barrel and receiver back tightly against heading, keeping front end of insert, front, flush with front end of receiver. Drill cross holes in receiver for barrel lock pins, and drive in pins.

Trigger Cushion Spring: (Part 491)

Assemble to bottom of receiver in hole just forward of trigger with narrow end of spring forward.

Trigger Cushion Spring Housing: (Part 124).

Screw trigger spring housing assembly in bottom of receiver just forward of trigger and tighten lock nut.

Magazine Lock:

Place magazine lock on bottom of insert, rear, with spring extending downward and forward. Screw in magazine lock screws.

Rear Sight Base Mounting Block:

Place on left rear side of receiver with countersunk screw hole forward. Screw in rear sight base mounting block screws.

Front Sight Ramp:

Place ramp on top of barrel at front end with level of ramp toward rear. Screw in front sight ramp screws.

Barrel and Receiver:

Place action into stock with trigger projecting through stock into guard and magazine lock projecting through magazine opening. Push receiver back against recoil shoulder in stock and tighten take-down screw.

Micrometer Sight:

Entire sight quick-detachable, positive quarter-minute click adjustment, one side of elevating staff scaled in minutes, the opposite side blank for the shooters own range markings.

Elevation is provided by use of a vertical micrometer screw and the zero graduation set by loosening two screws on left side, moving slide and tightening screws. Lateral or windage adjustment may be made by horizontal micrometer screws and the zero graduation set by loosening screw in front of slide, moving vernier slide and tightening screw. Elevation and windage screws are both provided with micrometer graduated dial heads having clicks at each line of dial. Each click equals 1/16 inch at 25 yards. 1/8 inch at 50 yards, 1/2 inch at 100 yards. Elevating staff is graduated in minutes of angle.

Front Swivel:

Position of swivel can be changed to any one of seven holes in base by screw in swivel. This adjustment is provided for shooters who desire an exact location of hand holding fore-end.

CLEANING

Clean bore immediately after shooting to prevent powder residue from causing rusting and pitting. Cleaning can be done by scrubbing bore with cloth, brass wire or bristle brush, saturated with powder solvent. If this is not available, pour one pint of boiling water through barrel to dissolve residue. Use small funnel to prevent spilling. Wipe clean and dry until no stain is removed by clean cloth, then lubricate with oil to prevent rusting. Repeat wiping and oiling again in a day or two. When storing gun, lubricate inside and out with heavy grease. Interior of barrel should be cleaned free of grease before firing to ease the passage of bullets and prevent a swelled bore or injury to barrel. It is very important to remove bolt from rifle and wipe barrel from rear to front. This will wipe all residue through muzzle and prevent it falling into the mechanism. Rubbing of metal wiping rod, if started from muzzle, causes considerable wearing away of rifling at muzzle and will eventually decrease accuracy of shootings. Lubricant should always be maintained on cocking cam in bolt.

