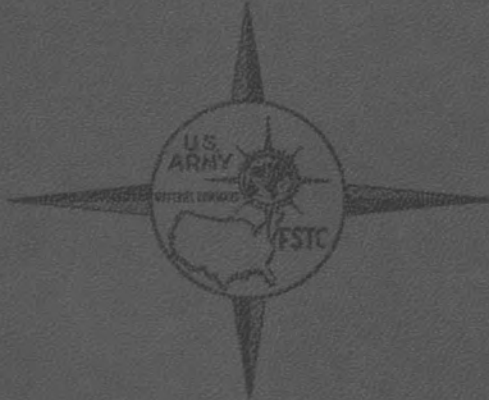


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SMALL ARMS IDENTIFICATION AND OPERATION GUIDE
--EURASIAN COMMUNIST COUNTRIES

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SMALL ARMS IDENTIFICATION AND OPERATION GUIDE
-- EURASIAN COMMUNIST COUNTRIES

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PREFACE

This guide is intended to provide information on the identification, physical characteristics, operation and functioning, user maintenance, accessories, and ammunition of current Eurasian Communist small arms. No attempt has been made to provide instructions for complete maintenance and repair.

Disassembly and assembly procedures are limited to those operations required by the user to maintain the weapon properly. Detailed or complete disassembly should not be undertaken, because of the danger of lost or broken parts, which would render the weapon unusable. Major parts (i. e., bolts, trigger mechanism, and the like) should not be interchanged between weapons; these parts are numbered to specific weapons, and their use in other weapons could cause malfunctions.

Unless otherwise specified, the weapons covered herein should be cleaned and lubricated with the same materials and techniques used for standard U.S. small arms. Special care should be taken to remove the firing residue from the components of the gas mechanism of gas-operated arms.

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SMALL ARMS IDENTIFICATION AND OPERATION GUIDE
-- EURASIAN COMMUNIST COUNTRIES

Section I. PISTOLS

A. THE 9-MM MAKAROV PISTOL (PM)

1. GENERAL

The Makarov pistol (fig. 1) is the standard sidearm of the Soviet Army and is also used by several other Warsaw Pact Armies. It is an 8-shot, semiautomatic, blowback-operated, magazine-fed pistol, fitted with an unusual double-action trigger mechanism. In addition to conventional functioning, this mechanism also allows the hammer--if uncocked--to be cocked and released by a single long pull on the trigger. The Makarov fires the Soviet 9 x 18-mm pistol cartridge (sec. VI).



Figure 1. 9-mm Makarov pistol (PM), right and left side.

2. TECHNICAL DATA

Technical data concerning the Makarov pistol will be found in table I.

3. OPERATION

The Makarov is similar in operation to most conventional pistols.

a. Load the magazine by placing a cartridge on the magazine follower just forward of the feed lips; press the cartridge down and slide it to the rear, under the feed lips, until it seats against the rear wall of the magazine. Repeat until the magazine is full.

b. Insert the magazine into the pistol so that the magazine catch (fig. 1) retains the magazine.

c. Rotate the safety (fig. 1) downward; grasp the slide by its milled grooves and pull it fully rearward against spring tension. Release the slide; it will return forward, loading the pistol. Caution: The pistol is now ready to fire!

d. If desired, set the pistol on safe by rotating the safety upward until the red dot (fig. 1) on the slide is covered. The hammer will fall; but, because the safety blocks the firing pin, the pistol will not fire.

e. To fire, set the safety to the fire position by rotating it fully downward. The hammer can be manually cocked by pressing it rearward by thumb pressure or, when aiming, by pressing the trigger through its full arc. (The first method is preferred.) Use a conventional sight picture for aiming, and press and release the trigger for each shot. The slide will remain open when the last round is fired.

f. Remove the magazine by pressing the magazine catch away from the magazine and withdrawing the magazine. To close the slide, if open, press down on the slide stop (fig. 1); or remove the magazine and pull the slide slightly rearward, then release it.

g. To clear the pistol, set it on safe, remove the magazine, reset the safety to the fire position, and retract the slide. Inspect the chamber through the ejection port in the slide to insure that no cartridges are present. Release the slide, reset the safety on safe, and insert the magazine.

4. DISASSEMBLY AND ASSEMBLY

To disassemble the Makarov pistol for cleaning:

a. Clear the weapon (par. 3g), but do not insert the magazine.

b. Pull the front of the trigger guard down and, when it is clear of the receiver, press it to one side; then rest it against the receiver (fig. 2).

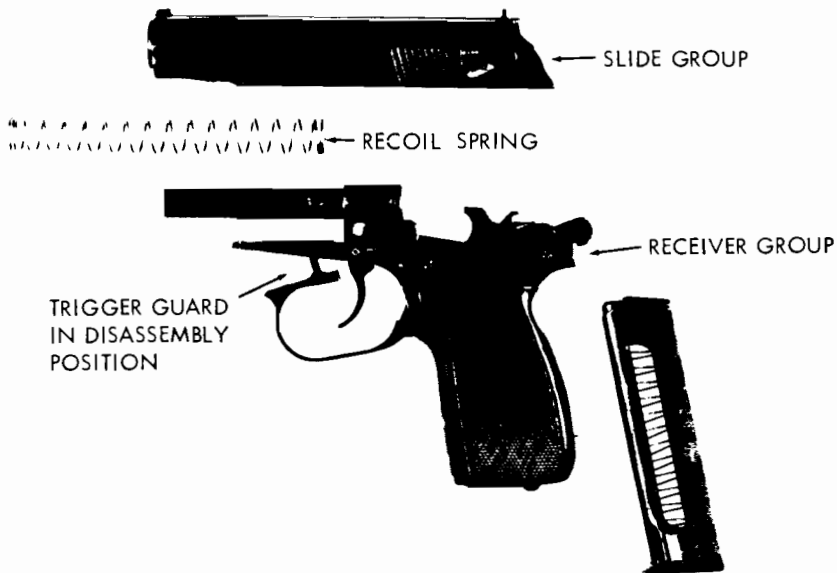


Figure 2. Makarov pistol, field-stripped.

c. Grasp the slide by its milled grooves, pull it fully rearward, and lift its rear end up, out of engagement with the receiver. Ease the slide forward over the barrel until it is free. Pull the recoil spring off the barrel.

d. No further disassembly is necessary or desirable.

e. To reassemble, insure that the hammer is cocked, the safety is in the fire position, and the trigger guard is in the disassembly position ("b" above). Slide the recoil spring over the barrel, small end first.

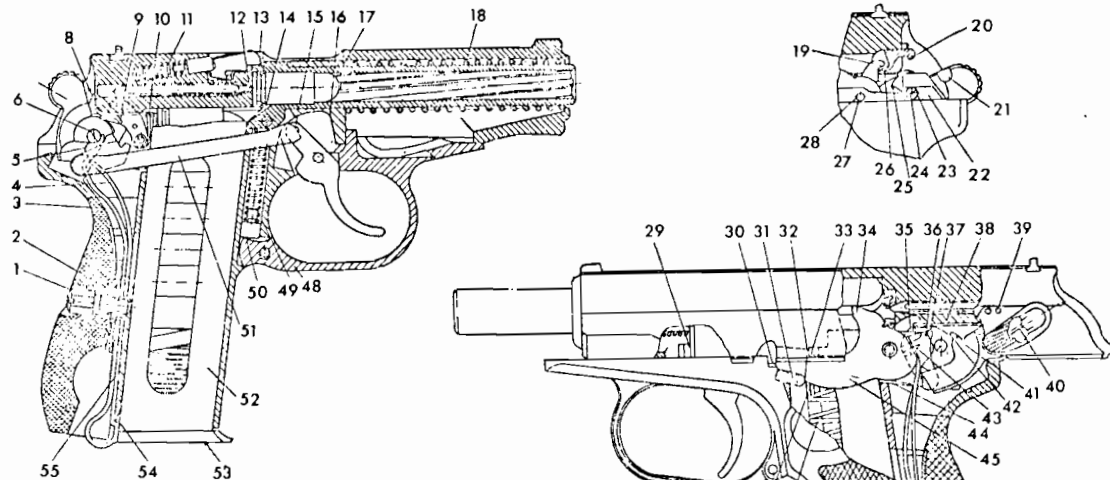
f. Insert the end of the recoil spring into the circular front section of the slide, and slip the barrel through the hole in the slide. Pull the slide fully rearward, press it down into position on the receiver, and allow the recoil spring to drive the slide forward.

g. Disengage the trigger guard from the receiver and let it return to its normal position. Insert the magazine.

5. FUNCTIONING

a. The Makarov pistol is blowback operated; i. e., the gas pressure that drives the bullet down the barrel also, by driving the cartridge case against the slide, provides the power to impel the slide rearward. A strong recoil spring is compressed during the rearward movement, and this spring provides the thrust to drive the slide forward. The pressure of the recoil spring and the great weight and inertia of the slide, as contrasted to the bullet, causes the slide to remain closed until the bullet has left the barrel and the gas pressure has dropped to safe limits.

b. If the hammer is in its forward position, finger pressure on the trigger moves the trigger bar forward; this causes the pivoting cocking lever (fig. 3) to engage a notch in the hammer. As the forward motion of the trigger bar continues, the cocking lever makes the hammer rotate rearward on its pin against the hammer spring (fig. 3) until the angle between the hammer and the cocking lever changes enough to cam the cocking lever out of engagement. As this happens, the cocking lever



1. screw (18); 2. hole for screw; 3. mainspring wide leaf; 4. mainspring narrow leaf; 5. recess for sear lug; 6. curved end of mainspring wide leaf; 7. hammer (13); 8. safety lug; 9. sear lug; 10. sear spring (11); 11. extractor spring (26); 12. firing pin striker; 13. extractor hook; 14. bullet guide of barrel; 15. trigger upper end; 16. receiver curved slot; 17. recoil spring turn (of less diameter); 18. recoil spring (12); 19. sear tooth; 20. nook for locking hammer; 21. recess on hammer head; 22. slide guiding slot; 23. trunnion seat for hammer trunnion; 24. hammer trunnion; 25. hammer rebound tooth; 26. shoulder of safety recess; 27. sear trunnion; 28. trunnion seat for sear trunnion; 29. recess on trigger guard lug; 30. slide stop recess; 31. slide stop catch knob; 32. slide stop lug; 33. slide tooth; 34. slide stop ejector; 35. disconnecting lug of cocking lever; 36. sear (15); 37. hammer cocking notch; 38. slide rib; 39. recess for safety thumb catch; 40. safety thumb catch (27); 41. lug for locking hammer; 42. hammer safety notch; 43. rebound lug of cocking lever; 44. shoulder for trigger bar; 45. slide stop (14); 46. follower spring (29); 47. follower claw; 48. trigger guard (3); 49. trigger guard spring (6); 50. trigger guard lug; 51. trigger bar (10); 52. magazine body (30); 53. follower spring bent end; 54. lug for magazine catch; 55. mainspring lower end.

Figure 3. Makarov pistol, section.

lifts the sear (fig. 3) out of engagement with the hammer. The hammer, powered by the hammer spring, swings forward and strikes the firing pin, which fires the cartridge.

c. The gas pressure generated upon firing thrusts the cartridge case and slide rearward. The extractor holds the fired cartridge case against the slide until the case strikes the ejector; the case then pivots around the extractor and is expelled. Finally, the lower rear section of the cylindrical front portion of the slide strikes the projection of the trigger guard extending into the receiver, and all rearward motion stops. The recoil spring now expands and drives the slide forward. The feed rib of the slide drives the top cartridge from the magazine into the chamber; the extractor, under pressure of its spring, snaps into position over the cartridge rim.

d. As the slide starts to recoil after firing, a cam surface on the rear of the feed rib forces the cocking lever sideward, out of engagement with the sear. The sear spring then snaps the sear against the hammer. When the recoiling slide forces the hammer rearward, the sear drops into the sear notch of the hammer. When the slide counterrecoils, the sear holds the hammer cocked. By releasing the trigger, the cocking lever rotates forward and down until it can move in, under the sear. If the trigger is again pressed, the cocking lever will again engage the sear and force it out of engagement with the hammer to fire another round.

e. When the safety is rotated up to the safe position, it interposes a block between the hammer and the firing pin, and as its rotation continues, a projection on the safety mates with a lug on the sear and lifts the sear from the hammer, allowing the hammer to fall. The safety also locks the hammer in its forward position; this prevents the slide from being retracted.

f. When the last round is fed from the magazine, the magazine follower moves to its highest position. The magazine spring, working through a lug on the lower left side of the follower, then presses the slide stop (fig. 1) up against the slide. When the slide recoils, the slide stop enters a notch in the slide and holds it open.

6. ACCESSORIES

A leather holster, an extra magazine, and a cleaning rod are the only accessories issued with the Makarov pistol.

B. THE 7.62-MM VZOR 52 PISTOL (Vz 52)

7. GENERAL

The Vz 52 pistol (fig. 4) is the standard sidearm of the Czechoslovak Army. It may also be found in use by other armies. It is an 8-shot, semiautomatic, short-recoil-operated, magazine-fed pistol, the design of which was greatly influenced by World War II German weapons. An automatic safety mechanism on the firing pin prevents the pin from firing a cartridge unless the trigger is first pulled. The weapon fires the Type "P" 7.62 x 25-mm pistol cartridge (sec. VI).

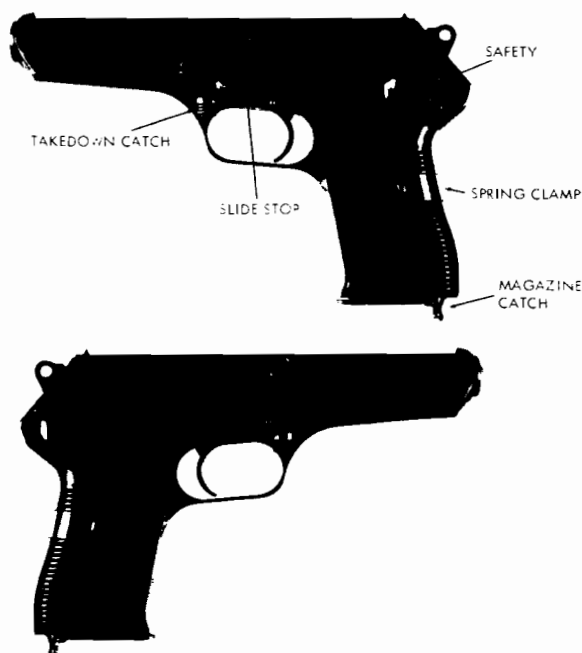


Figure 4. Czechoslovak 7.62-mm Vzor 52 pistol (Vz 52).

8. TECHNICAL DATA

Technical data concerning the Vz 52 pistol will be found in table I.

9. OPERATION

To operate the Vz 52 pistol:

a. Load the magazine in the same way as for the Soviet Makarov pistol (par. 3a), and insert the loaded magazine into the butt until the magazine catch snaps over the magazine floor-plate.

b. Firmly grasp the slide by the milled grooves at its rear end; pull it fully rearward against the force of the recoil spring and release it. The spring will then drive the slide forward, loading the pistol. The front end of the extractor will protrude from the slide, indicating that the pistol has a cartridge in its chamber.

c. If desired, set the pistol to safe by rotating the safety (fig. 4) fully upward to drop the hammer (the weapon will not fire); then release the safety, which will move to the normal safe position.

d. To fire, rotate the safety downward and cock the hammer, if necessary; aim--using a normal sight picture--and squeeze the trigger. The pistol will fire one shot each time the trigger is pressed. When the last round is fired, the slide will remain in the open position.

e. Remove the magazine by pressing the magazine catch rearward with the left thumb, away from the magazine, and at the same time withdrawing the magazine with the left index finger. After removing the magazine, the slide can be closed by pulling it slightly to the rear and releasing it.

f. To clear the pistol, set the safety on safe, remove the magazine, and retract the slide. The slide can be locked open by pressing upward on the slide stop (fig. 4) and then easing the slide forward until it is caught. Visually inspect the pistol

to insure that no cartridges are present. Pull the slide slightly rearward to release the slide stop, and then allow the slide to run forward. Reinsert the magazine. Press the safety fully upward to drop the hammer.

10. DISASSEMBLY AND ASSEMBLY

To disassemble the Vz 52 for cleaning:

a. Clear the weapon (par. 9f), but do not insert the magazine.

b. Pull the takedown catch, located on the front of the trigger guard (fig. 4), down until the slide moves slightly forward. Press the slide forward, about one-fourth of an inch, until it disengages from the receiver; then completely separate the slide and receiver groups.

c. Turn the slide so that the sights are down, and insert the lip of the magazine base into the notch in the locking wedge. Press the wedge about three-fourths of an inch forward, against the pressure of the recoil spring, until the rear of the square shoulder of the barrel lines up with the dismounting cuts in the slide. Ease the rear of the barrel up through these cuts and carefully allow it to move to the rear. (Note: This is a difficult operation. All parts should be firmly held so that the recoil spring does not throw the components apart). Separate the barrel from the slide and pull the recoil spring from around the barrel.

d. No further disassembly is necessary or desirable.

e. To reassemble, install the recoil spring around the barrel, and position the spring against its seat in the front of the slide. Press the barrel forward and down, against the pressure of the spring, until it partially enters the slide. Push the locking wedge forward with the magazine until the barrel fully enters the slide; then ease it back.

f. Place the assembled slide group on the receiver with the rear end of the slide about one-fourth of an inch forward of the rear end of the receiver. Press the slide onto the receiver

as far as possible; then draw the slide toward the rear until the dismounting catch snaps into position. Insert the magazine and press the safety up. to drop the hammer.

11. FUNCTIONING

a. The Vz 52 pistol is recoil operated; i. e. , the recoil of the fired cartridge. transmitted through the barrel and slide, provides the power to expel the fired cartridge case, to compress the recoil spring for reloading, and to cock the hammer.

b. When the pistol is loaded. the hammer is cocked, and the safety is in the fire position, finger pressure on the trigger moves the trigger bar (the connection between the trigger and the sear) forward. A hook on the trigger bar engages a projection on the sear and. with continued finger pressure, pulls the sear out of engagement with the hammer. Simultaneously, a projection on the top of the sear lifts the firing pin lock and releases the firing pin. The hammer, under pressure from the hammer spring. swings forward and strikes the firing pin. firing the cartridge.

c. The slide and the barrel are locked together by two opposed vertical rollers held in position by the locking wedge. This wedge. through which the recoiling barrel slides. is stationary in relation to the receiver. Upon firing, the slide and the barrel--locked together as one unit--recoil about five-sixteenths of an inch; the locking wedge then allows the locking rollers to move inward. and the barrel stops moving. The slide. due to its inertia. continues to move to the rear against the force of the recoil spring.

d. The extractor withdraws the fired cartridge case from the chamber and holds it in position against the slide face until the case strikes the fixed ejector, pivots around the extractor, and is expelled. The rearward travel of the slide stops when the inner lower front of the slide strikes the receiver.

e. The compressed recoil spring expands and drives the slide forward; the feed rib of the slide strikes the top cartridge in the magazine and drives it into the barrel. The extractor snaps into the groove in the cartridge case.

f. Just before the completion of the forward movement of the slide, the slide locking recesses line up with the locking rollers, and the rollers are cammed into the recesses by the tapered portion of the locking wedge, locking the barrel and the slide together.

g. Prior to the slide's recoiling, a projection on the trigger bar fits into a semicircular notch cut in the slide. As the slide recoils, the trigger bar is forced down, out of the notch. This action disconnects the trigger bar from the sear. The sear spring forces the sear against the hammer, and as the recoiling slide rocks the hammer rearward, the sear snaps into the sear notch. When the slide counterrecoils, the sear holds the hammer at full cock. When the trigger is released, the trigger bar moves to the rear until its hook is free of the projection on the sear. The trigger bar then moves up to re-engage the sear, preparatory to firing another shot.

h. When the safety is turned to the safe position, a small lug on the right side of the shaft of the safety rotates down into a cutout in the trigger bar and prevents any movement of the trigger bar. If the safety is forced up past the normal safe position, a projection on the safety shaft presses the lower edge of the sear forward and disengages the sear from the hammer; the hammer falls, but is stopped by a lug on the safety shaft just before striking the firing pin.

i. When the last round is fired, the magazine follower contacts an inner projection on the slide stop and forces the stop against the slide. When the slide recoils, the slide stop raises, and engages a notch in the slide, holding it open.

12. ACCESSORIES

A leather holster and a cleaning rod are the only accessories issued with the Vssr 52 pistol.

C. THE 7.62-MM TOKAREV PISTOL MODEL 1933 (TT-33)

13. GENERAL

The Tokarev TT-33 pistol (fig. 5), obsolete in the Soviet Army, is still used by many of the Eurasian Communist Armies. The ChiCom versions, the Type 51 and Type 54 pistols (fig. 6), differ from the TT-33 only in the shape of the grasping grooves in the slide, while the Hungarian Tokagypst 58 (fig. 7) differs in that it fires the 9 x 19-mm Parabellum cartridge, has a differently shaped grip, and incorporates a manual safety. All of these pistols are 8-shot, semiautomatic, recoil-operated, magazine-fed weapons, and--with the exception of the 9-mm Tokagypst version--all fire the 7.62 x 25-mm Type "P" pistol cartridge (sec. VI). TT-33 pistols have been manufactured in Russia (TT-33); Communist China (Types 51 and 54); Hungary (48M Pisztoly); and Poland (Pistolet TT).

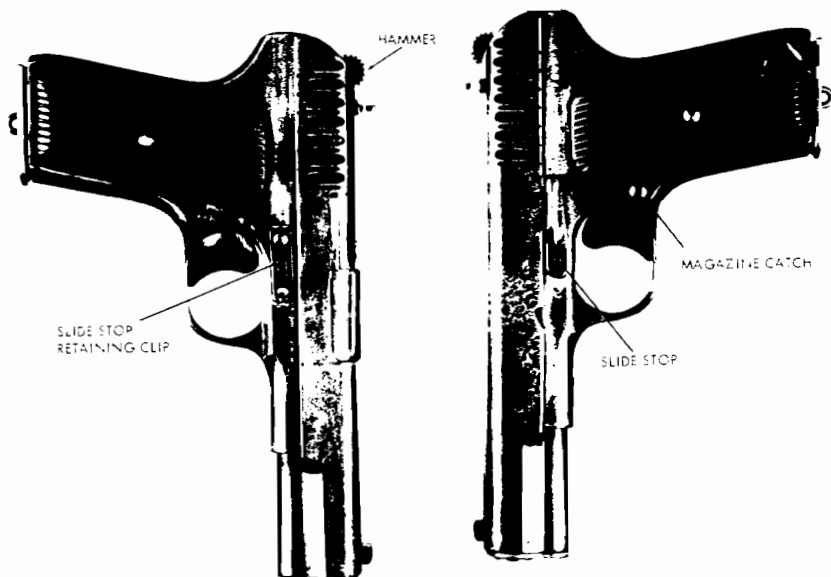


Figure 5. 7.62-mm Tokarev pistol Model 1933 (TT-33).



Figure 6. ChiCom 7.62-mm Type 51 or Type 54 pistol.



Figure 7. Hungarian 9-mm Tokagyp 58 pistol.

14. TECHNICAL DATA

Technical data concerning the Tokarev pistol will be found in table I.

15. OPERATION

a. Load the magazine as for the Makarov pistol (par. 3a), and insert the loaded magazine into the pistol until it is caught by the magazine catch.

b. Grasp the slide by the grooves and pull it fully to the rear against the pressure of the recoil spring. Release the slide; the recoil spring will force it forward, loading the pistol. (Note: If the hammer is at half cock, the slide cannot be retracted; the hammer must be fully cocked). Caution: The pistol is now ready to fire!

c. The Tokarev-type pistols have no safety as such; however, the hammer can be carefully lowered to the half-cock position (part way between fully forward and cocked). Hold the hammer back with the left thumb and press the trigger; after easing the hammer slightly forward, release the trigger and continue easing the hammer forward until it stops in the half-cock position. This also locks the slide in its forward position. The Tokagvpt 58 is made safe by rotating the safety lever fully rearward to the "S" position (fig. 7).

d. To fire, bring the hammer back to full cock (if at half cock), aim--using a conventional sight picture--and squeeze the trigger. The pistol will fire one shot each time the trigger is pressed. When the last round is fired, the slide will remain open.

e. Remove the magazine by pressing the magazine catch inward (fig. 5). Close the slide by pressing down on the slide stop (fig. 5) or, after removing the magazine, pull the slide slightly to the rear and release it.

f. To clear the pistol, remove the magazine, retract the slide and, after pressing the slide stop up, ease the slide forward until the slide is caught by the slide stop. Inspect the

chamber through the ejection port to insure that no cartridges are present. Release the slide, pull the trigger, and insert the magazine.

16. DISASSEMBLY AND ASSEMBLY

a. Clear the pistol (par. 15f), but do not insert the magazine.

b. Use the point of a bullet or similar item to press in the recoil spring plunger (located directly under the muzzle) to unlock the barrel bushing. Rotate the barrel bushing one-half of a turn until it, the recoil spring, and its plunger can be removed from the slide. Caution: Control the recoil spring so that it does not fly out of the slide and become lost.

c. Use the base of the magazine to press the slide stop retainer (fig. 5) to the rear and free the slide stop. Pull the slide stop to the left, out of the receiver.

d. Invert the pistol and draw the slide forward off the receiver. Caution: Hold the hand under the rear of the receiver to catch the hammer mechanism if it falls free of the receiver. The recoil spring guide will be found lying loose on the barrel.

e. Hold the slide inverted and swing the barrel link forward; lift up slightly on the rear end of the barrel to disengage it from the slide, and slide the barrel forward out of the slide.

f. If the hammer mechanism did not fall free of the receiver (par. 14d), pull it out of the receiver.

g. No further disassembly is necessary or desirable.

h. To reassemble, place the hammer mechanism into the receiver.

i. Slide the barrel, chamber end first, into the inverted slide until it drops into the locked position. Lay the recoil spring guide (rounded side up and shaft toward the muzzle) on the barrel, just forward of the turned-down link.

j. While holding the hammer mechanism in place, slide the receiver onto the slide as far as it will go. Turn the pistol upright and look through the small hole above the trigger to insure that the holes in the link and the receiver are lined up. If not, jiggle the barrel until they are, then insert the slide stop and press the retainer forward to hold the slide stop in place.

k. Insert the recoil spring into the slide by sliding it over the recoil spring guide. Move the hammer to the half-cock position to lock the slide in place, and carefully force the recoil spring and plunger into the slide.

l. With the smaller hole of the barrel bushing alined with the front sight, insert the bushing into the slide, and rotate it one-half of a turn. The recoil spring plunger will lock it in place. Insert the magazine, cock the hammer, and press the trigger.

17. FUNCTIONING

a. The Tokarev-type pistols are recoil operated; i. e., the recoil of the cartridge--when fired--transmitted through the barrel and slide, provides the power to expel the fired cartridge case, compress the recoil spring for reloading, and cock the hammer mechanism.

b. When the pistol is loaded and cocked, finger pressure on the trigger causes it and its bar to move rearward, against the pressure of the trigger spring, until the trigger bar contracts the bottom of the sear. Continued pressure on the trigger causes the sear to release the hammer which, under the force of its spring, swings forward and strikes the firing pin, firing the cartridge.

c. The barrel is locked to the slide by ribs (machined into the outer surface of the barrel) that mesh with grooves in the slide. A link connects the movable barrel to the receiver by means of the slide stop pin; as the barrel moves to the rear in recoil, the link pivots and pulls the rear end of the barrel down to unlock it from the slide. Because of its momentum, the slide continues to the rear.

d. As the slide recoils, the recoil spring is compressed and the extractor withdraws the fired cartridge case from the chamber and holds it against the slide face until the case strikes the ejector on the left extension of the hammer housing. The fired cartridge case pivots around the extractor and is expelled. The rearward movement of the slide terminates when the recoil-spring housing at the bottom front of the slide strikes the recoil-spring guide.

e. The compressed recoil spring expands and drives the slide forward; the feed rib of the slide strikes the top cartridge in the magazine and drives the cartridge into the chamber. The extractor snaps into the groove of the cartridge case. The slide strikes the barrel and drives it forward and the link forces the rear end of the barrel up into the locked position. All forward motion stops when the lug on the bottom rear of the barrel contacts the slide stop pin.

f. Before the slide recoils, the disconnecter projects upward from the hammer mechanism into a cut in the slide. When the slide recoils, the disconnecter is forced down, pushing the trigger extension down and releasing the sear. The sear spring then presses the sear against the hammer. As the slide continues to recoil, it rocks the hammer back so that the sear engages the sear notch on the hammer. When the slide counterrecoils, the sear holds the hammer cocked; when the slide is fully forward, the disconnecter is free to raise into the cut in the slide. This action allows the trigger bar, under the pressure of the trigger spring, to rise against the bottom of the sear. When the trigger is released, it moves forward, and as soon as the trigger bar clears the sear, the trigger spring again forces the trigger bar up into position in front of the sear. Pressure on the trigger will now fire another shot.

g. When the hammer is drawn to the half-cock (safe) position, the bottom of the sear is forced to its foremost position, and a lug on the side of the sear moves into position below the disconnecter to prevent it from being depressed. Because the disconnecter protrudes into a cut in the slide and now cannot be depressed, the slide is locked in position. The sear nose engages the undercut half-cock notch on the hammer, and, because of the undercut, the sear cannot be disengaged from the hammer by trigger pressure; the pistol is now safe.

h. The Hungarian version of the Tokarev, the Tokagyp 58, has an additional manual rotary safety. The shaft of this safety passes through the receiver behind the sear and has a cutaway section through which the sear can move when the safety is in the fire position. When the safety is rotated to "S," the shaft also rotates; its solid section moves behind the sear and blocks any movement. This prevents the sear from releasing the hammer; the pistol is safe.

i. When the last round is fired, the magazine spring, working through the magazine follower, forces the slide stop against the slide. The slide stop engages the notch on the side of the recoiling slide and holds it open.

18. ACCESSORIES

A leather holster, an extra magazine, and a cleaning rod are the only accessories issued with the TT-33 pistol.

D. THE 9-MM STECHKIN MACHINE PISTOL (APS)

19. GENERAL

Machine pistols resemble conventional pistols, but have one major distinguishing characteristic--a selective-fire option: i. e., they can be fired either fully or semiautomatically. In addition, the pistols usually have large-capacity magazines and some type of a shoulder brace or stock to aid in accurate long-range firing. The Soviet Stechkin machine pistol (fig. 8) was issued in limited numbers and, while it is now obsolete, it might be in use by special units such as border guards and security police.

The Stechkin is similar in appearance and in basic operation to the Makarov pistol (par. 3), but it is larger, has a safety-selector on the slide, a 4-position adjustable rear sight, a full-automatic-fire rate-reducing device, and a 20-round magazine. The pistol is equipped with a wooden holster that can be attached to its handle for use as a shoulder stock (fig. 9). The Stechkin fires the Soviet 9 x 18-mm pistol cartridge (sec. VI).

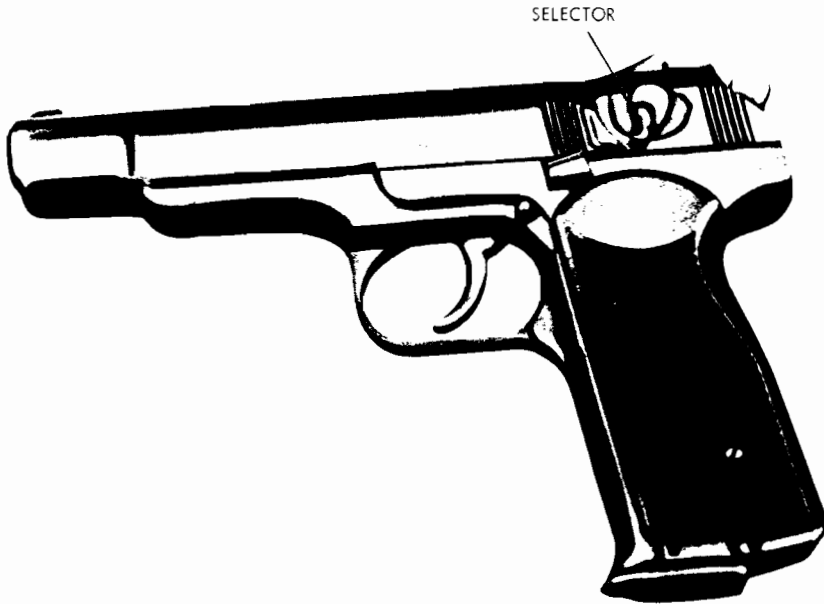


Figure 8. 9-mm Stechkin machine pistol (APS).

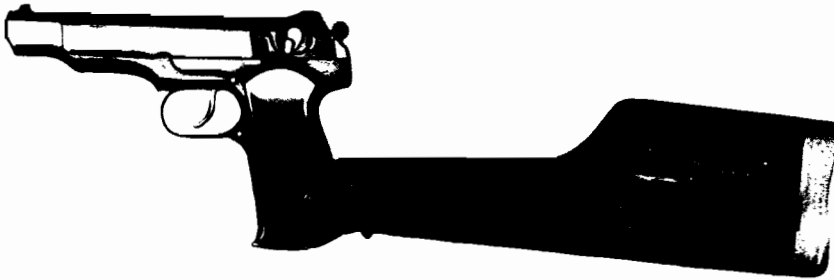


Figure 9. Stechkin machine pistol with
holster-stock attached.

20. TECHNICAL DATA

Technical data concerning the Stechkin pistol will be found in table I.

21. OPERATION

The Stechkin is operated in the same manner as for the Makarov pistol (par. 3), except for the following:

a. The selector (fig. 8) must be positioned for the type of fire desired; at "0 I" for semiautomatic fire, at "ABT" for full-automatic fire, or at "III" for safe.

b. Rotate the rear sight by thumb pressure on the knurled rings to the appropriate range--25, 50, 100, or 150 meters.

c. The holster-stock is attached by sliding its male lug into the recess in the handle of the Stechkin pistol until the latch on the stock snaps into place. Remove by pressing the thumb-piece of the catch away from the pistol and then sliding the stock off the pistol.

22. DISASSEMBLY AND ASSEMBLY

Disassembly and assembly of the Stechkin machine pistol is accomplished in exactly the same way as for the Makarov pistol (par. 4).

23. FUNCTIONING

The Stechkin is blowback operated. Detailed information on the mechanism of the APS is not available.

24. ACCESSORIES

A sling to carry the holster or the holster-pistol combination, and a T-handled cleaning rod are the only accessories issued with the Stechkin machine pistol.

E. THE 7.65-MM VZSOR 61 MACHINE PISTOL (Vz 61) (SKORPION)

25. GENERAL

The Czechoslovak 7.65-mm Vz 61 machine pistol (fig. 10), nicknamed "Skorpion," is used by the Czechoslovak Army and security forces; it has also been offered for sale to other countries. It is a blowback-operated, selective-fire weapon using 10- or 20-round box magazines and is equipped with a sturdy wire shoulder brace. The mild recoil of its relatively weak 7.65-mm cartridge (sec. VI), coupled with its cyclic-rate reducer, makes the Skorpion a very comfortable weapon to fire.

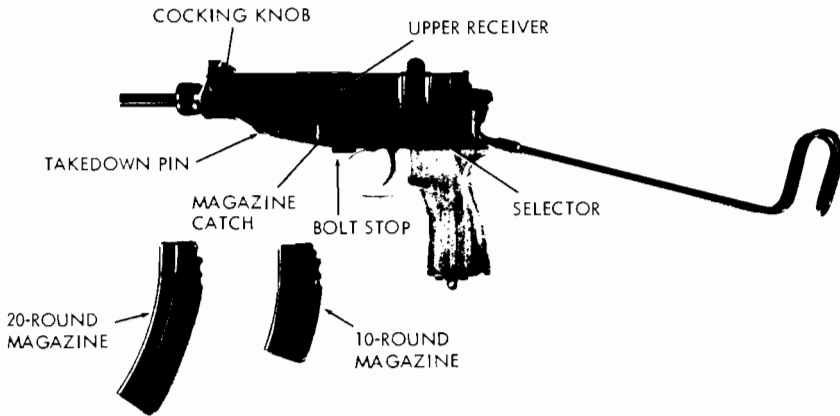


Figure 10. 7.65-mm Vz 61 (Vz 61) Skorpion machine pistol with 10- and 20-round-capacity magazines.

26. TECHNICAL DATA

Technical data concerning the Vz 61 "Skorpion" machine pistol will be found in table I.

27. OPERATION

To operate the "Skorpion":

a. Load the magazine by placing a cartridge on top of the magazine and pressing the cartridge down until it rolls sideways under the magazine lips. Repeat until the magazine is full.

b. Swing the selector (fig. 10) to its mid or "O" position (to make the pistol safe) and insert a loaded magazine into the recess ahead of the trigger guard until the magazine catch (fig. 10) engages the magazine. Grasp the cocking knobs (fig. 10) between the thumb and forefinger; pull them fully to the rear and release them. The bolt will return forward.

Caution: The pistol is now ready to fire!

c. Set the rear sight to the appropriate range--75 or 150 meters--by flipping the leaf forward or rearward. When firing automatically, or semiautomatically at longer ranges, best results are obtained by unfolding and using the shoulder brace.

d. Rotate the selector forward to "20" for automatic fire, or rearward to "1" for semiautomatic fire. Aim--using a normal sight picture--and press the trigger to fire. When the last round in the magazine is fired, the bolt will remain at the rear.

e. Remove the magazine by pressing in the magazine catch. The magazine will be expelled. If the bolt is held rearward after loading a fresh magazine, grasp the cocking knobs, pull them slightly rearward, and release to close the bolt.

f. To clear the pistol, remove the magazine as in "e" above, press up on the bolt stop (fig. 10), and retract the bolt fully; it will be caught by the bolt stop. Set the safety on "O" and examine the pistol to insure that no cartridges are present. Move the safety off "O," pull back on the cocking knobs slightly, and release them. Reset safety to "O" and reinsert magazine.

28. DISASSEMBLY AND ASSEMBLY

Extend the shoulder brace.

a. Clear the pistol (par. 27f), but do not insert the magazine.

b. Pull the takedown pin (fig. 10) out to the left as far as possible; pull the upper receiver unit forward about three-sixteenths of an inch and then swing down the barrel (fig. 11).

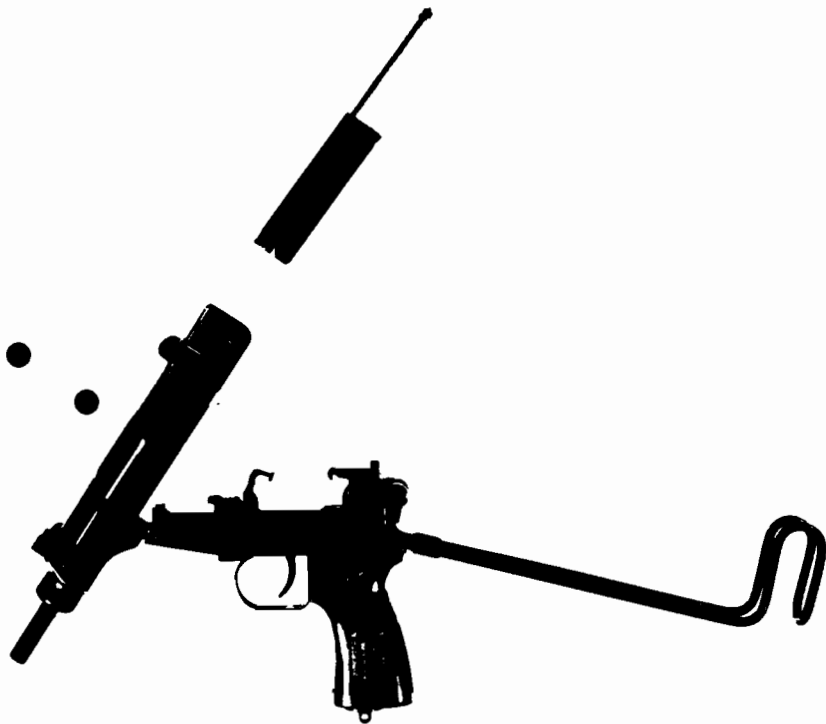


Figure 11. Vzor 61 Skorpion machine pistol, field stripped.

c. Retract the bolt fully to the rear and pull the cocking knobs out to the sides. Pull the bolt and the driving springs out of the receiver.

d. No further disassembly is necessary or desirable.

e. To reassemble, insert the bolt and the driving springs into the upper receiver. Aline the elongated holes in the bolt with the enlarged portion of the slot in the upper receiver and insert the cocking knobs. Slide the bolt fully forward.

f. Swing the upper receiver into position on the lower receiver and slide it to the rear until the dismounting pin can be pressed back into position. Insert the magazine and fold the shoulder brace forward.

29. FUNCTIONING

a. The Vz 61 pistol is blowback operated.

b. The trigger mechanism is similar in function to that of the AK-47 assault rifle (par. 56e to 56h).

c. This weapon has a cyclic-rate reducer incorporated in it. The bolt is caught at the rear of its stroke by a spring-operated catch; the bolt also forces an inertia block (inside the grip) down against a light spring. When the spring drives the block up, the block causes the catch to release the bolt. The time lapse between the catching and releasing of the bolt causes a distinct reduction in the cyclic rate of fire.

30. ACCESSORIES

The following accessories are available for use with the Vzor 61 machine pistol:

- (1) Ten- and twenty-round magazines.
- (2) Night-sighting device.
- (3) Silencer
- (4) Bayonet
- (5) Hip holster
- (6) Shoulder holster

- (7) Cleaning rod
- (8) Oil container
- (9) Front-sight adjustment tool

F. MAINTENANCE OF PISTOLS

The procedures and materials prescribed for cleaning standard U. S. Army pistols also apply to Eurasian Communist pistols. These weapons should be disassembled only to the extent necessary for adequate cleaning, in order to prevent breakage and subsequent loss of use. No repairs should be attempted on foreign pistols other than replacement of parts, and this should be done only by a competent armorer.

G. MALFUNCTIONS AND STOPPAGES

Most malfunctions and stoppages are caused by defective magazines or ammunition. Table II lists common problems and their remedies.

Table I. Pistol Technical Data

Weapon	Makarov	Vzr 52	Tokarev Model 1933	Stechkin	Vzor 61
Short name	PM	Vz 52	TT-33	APS	Vz 61 Skorpion
Caliber (mm)	7.62	7.62	7.62	9	7.65
Length (in)	6.3	8.25	7.7	8.4	10.6 ²
Weight, empty (lb)	1.46	2.12	1.88	2.25 ³	3.42 ³
Barrel length (in)	3.63	4.3	4.57	5	4.4
Magazine capacity (rd)	8	8	8	20	10 or 20
Operation	Blowback	Recoil	Recoil	Blowback	Blowback
Fire-type	Semi- auto- matic	Semi- auto- matic	Semi- auto- matic	Selective	Selective
Muzzle velocity (m sec)	315	400	420	340	305
Practical range (m)	50	50	50	50 ⁴	50 ⁴
Rate of fire, semi- automatic (rpm)	35	35	35	40	35
Rate of fire, cyclic (rpm)	DNA	DNA	DNA	750	835

¹ Pistol only; add 1.23 lb for holster-stock.² 20.2 in, with stock extended.³ With empty 20-round magazine.⁴ With stock in use, 200 meters.

Table II. Pistol Malfunctions

Condition	Cause	Remedy
Fails to fire (cartridge in chamber)	Defective cartridge	Reload
Fails to fire (no car- tridge in chamber)	Defective magazine	Replace magazine
Fails to extract or eject	Fouled weapon	Clean and lubricate

Malfunctions caused by broken or worn parts can be corrected by replacing the defective part with a serviceable one. This should be done only by a competent armorer, and the repaired weapon must then be function test fired.

Section II. SUBMACHINES

A. THE 7.62-MM MODEL 1941 SUBMACHINEGUN (PPSh-41)

31. GENERAL.

a. The Model 1941 submachinegun (fig. 12) was produced in enormous numbers by the Soviet Union during World War II and, after the war, was distributed to many nations in the form of Soviet military assistance. Although obsolete in the Soviet Army, the PPSh-41 is still used by many of the other Eurasian Communist countries and has been manufactured in Hungary, Iran, North Korea, and Communist China. These weapons are: Hungarian, the 48M submachinegun; North Korean, the Type 49 submachinegun; ChiCom, the Type 50 submachinegun. The national origin of these weapons can usually be determined by the receiver markings. If these markings are obscured, the rear sight offers a major clue. Soviet and Iranian PPSh-41's and Hungarian 48M's have V-notched rear sights; the North Korean Type 49 and the ChiCom Type 50 have aperture rear sights. Minor changes can be found in the design of various components, depending on the time and place of manufacture. Because these changes do not affect the handling or operation of the weapon, they will not be covered in detail. One extensively altered gun, the North Vietnamese K-50 submachinegun, is covered in section II C. Some PPSh-41's were converted to use the 9 x 19-mm Parabellum cartridge by the Germans during World War II and by Iran after the war; these versions are now rarely found.

b. The PPSh-41 submachinegun is a blowback-operated (par. 5a), selective-fire, drum- or box-magazine-fed weapon with a fixed wooden buttstock. The magazines can be either the 35-round box-type or the 71-round drum-type; the box magazine is preferred. These are simple, rugged, reliable

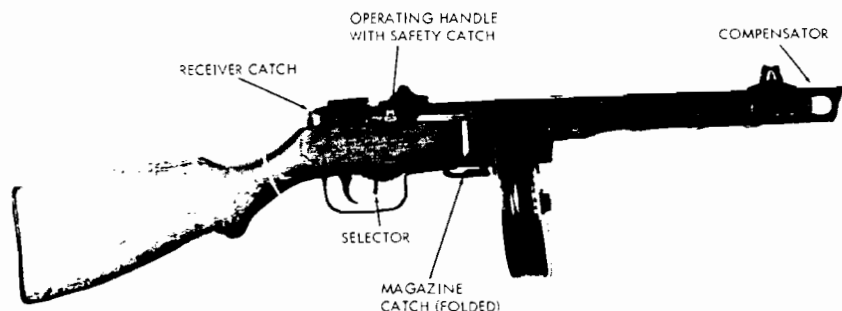


Figure 12. 7.62-mm submachinegun Model 1941 (PPSh-41).

weapons, manufactured from heavy-gauge steel stampings with a minimum number of machined parts. The barrel jacket protrudes beyond the muzzle; it has an inclined face and is vented at its top and sides to serve as a combined muzzle brake and compensator. The front sight is screw adjustable for elevation zero and can be moved from side to side for windage zero. The PPSH-41, 48M, Type 49, and Type 50 submachineguns all fire the 7.62 x 25-mm pistol cartridge.

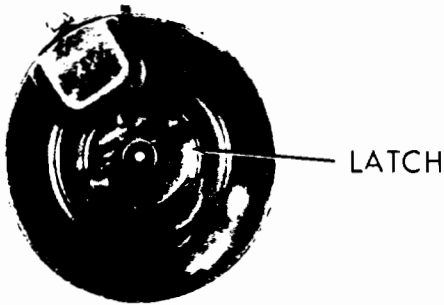
32. TECHNICAL DATA

Technical data concerning the PPSH-41 submachinegun will be found in table III.

33. OPERATION

To operate the PPSH-41, 48M, Type 49, or Type 50 weapons:

- a. Load a box magazine with 35 cartridges in the same manner as in paragraph 3a. Load a drum magazine by pressing in the button in the center rear of the drum and swinging down the latch on the front cover of the drum (fig. 13). Lift off the cover and latch. Grasp the cruciform rotor in the center of the drum and wind it counterclockwise as far as possible; turn the spiral-track insert counterclockwise as far as possible. Place 71 cartridges, bullet end up, into the spiral tracks. When all of the cartridges are in place, grasp the rotor again and turn it slightly counterclockwise against



71-ROUND DRUM MAGAZINE

Figure 13. 71-round
drum magazine.

its spring; at the same time, press in on the button and then ease the rotor clockwise until it stops. Replace the cover on the magazine, again press the button, and swing the latch up to its locked position.

b. Load the submachinegun by inserting a loaded magazine into the magazine opening and slide it up into place until the magazine catch engages. (Note: If a drum magazine is

used, and the serial numbers on the drum and on the gun do not coincide, the drum/gun combination should be test fired prior to use. Slide the safety catch (fig. 12) on the operating handle outward, if necessary, and draw the handle fully to the rear. Caution: The submachinegun is now ready to fire! Position the selector (fig. 12) according to the type of fire desired; forward for automatic, rearward for semiautomatic. If immediate firing is not anticipated, place the weapon on safe by pressing the safety catch inward into the slot in the receiver. Slide the safety catch out to the ready position when ready to fire.

c. Set the sight for the desired range by flipping the leaf to "10" or "20" (100 or 200 meters); aim--using a normal sight picture--and press the trigger to fire. The bolt will remain forward after firing the last round.

d. Remove the magazine by unfolding the magazine catch (fig. 14) and pressing it forward, toward the magazine; simultaneously pull the magazine straight down, out of the magazine opening.

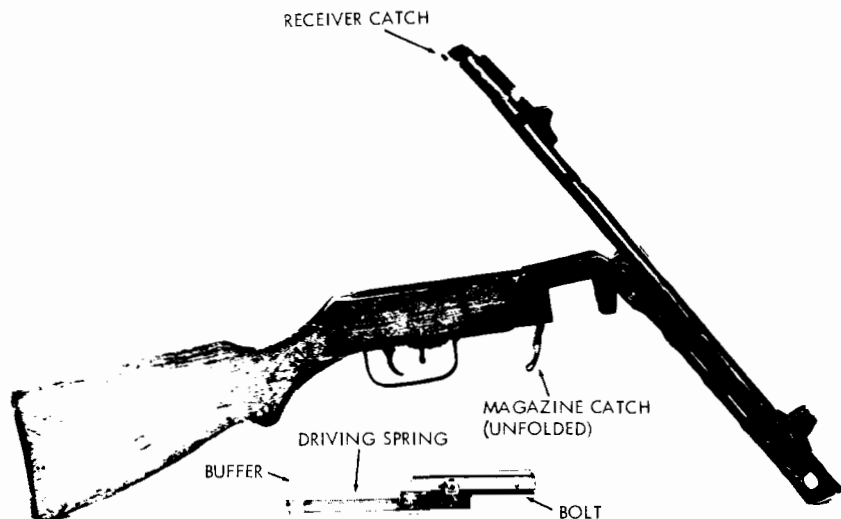


Figure 14. PPSH-41, field stripped.

e. Clear the weapon by removing the magazine and retracting the bolt. Insure that no cartridges are present; then, while holding the operating handle, press the trigger. Ease the bolt forward and slide the safety catch inward to lock the bolt. Insert the magazine.

34. DISASSEMBLY AND ASSEMBLY

To disassemble the PPSH-41, 48M, Type 49, and Type 50 submachineguns for routine care and cleaning:

- a. Clear the gun (par. 33e), but do not insert the magazine.
- b. Press in on the receiver catch at the rear of the receiver, and swing the barrel down (fig. 14).
- c. Grasp the operating handle, pull it rearward and upward, and rotate the bolt, the driving-spring assembly, and the buffer up and out of the receiver. The bolt must be pulled back, against the driving spring, while this is done.

d. The driving-spring assembly can now be pulled from the bolt, and the buffer can be removed from the driving-spring assembly.

e. If necessary, the trigger mechanism can be removed for cleaning by unscrewing the large screw behind the receiver catch and pulling the trigger mechanism down, out of engagement with the receiver.

f. No further disassembly is necessary or desirable.

g. To reassemble the submachinegun, first engage the lugs on the front of the trigger mechanism with the receiver, then swing the mechanism up into place. Retighten the screw.

h. Insert the driving-spring assembly into the bolt, and place the buffer, flat side toward the bolt, over the spring. Place the tapered end of the driving-spring assembly into the hole in the rear wall of the receiver and pull the bolt back, against the force of the driving spring, until it can be swung into position in the receiver.

i. Swing the receiver shut and insure that the receiver catch is engaged.

35. FUNCTIONING

a. The PPSH-41, 48M, Type 49, and Type 50 submachine-guns are blowback operated.

b. The firing cycle starts with the bolt caught to the rear by the sear (fig. 15). Pressure on the trigger causes the sear (21) to disengage from the bolt. The force of the driving spring drives the bolt forward. The feed rib on the bolt strikes the top cartridge in the magazine and drives the cartridge out of the magazine and into the barrel. The extractor snaps into the rim of the cartridge, and the fixed firing pin ignites the primer.

c. The recoil of the fired cartridge forces the bolt to the rear. This, in turn, compresses the driving spring. The fired cartridge case is held to the bolt by the extractor until the case strikes the fixed ejector (15); the case then pivots

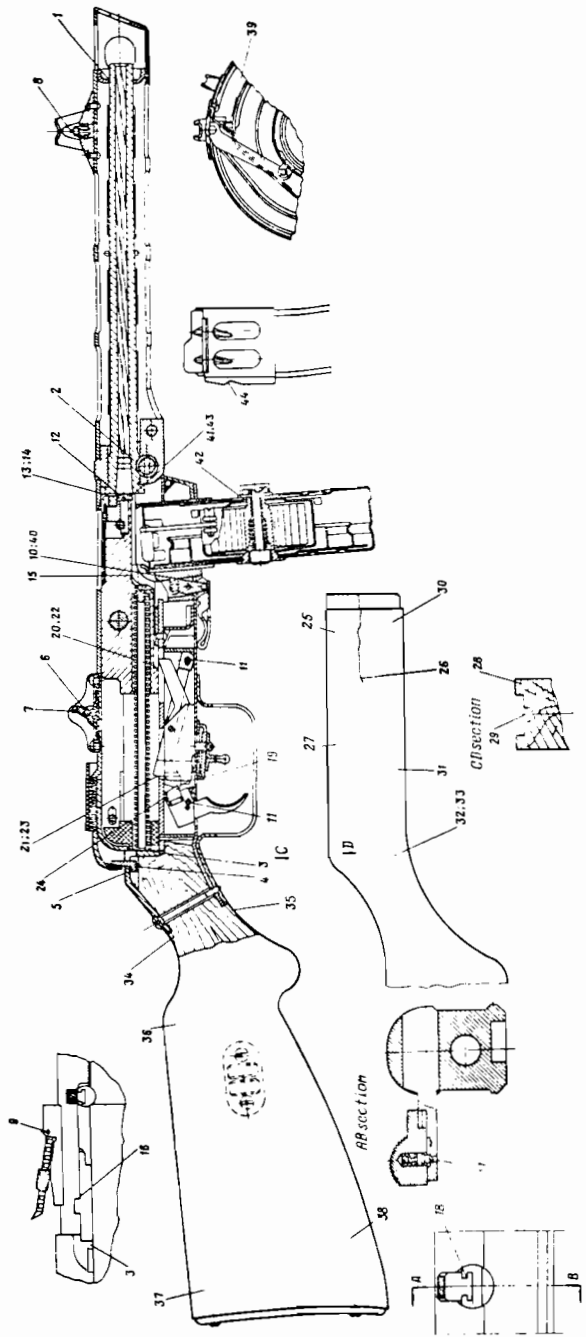


Figure 15. PPSH-41, section.

around the extractor and is expelled. The bolt continues to the rear until it is stopped by the buffer; the driving spring then drives the bolt forward again.

d. The sear, which holds the bolt cocked, is a pivoted, spring-loaded bar with a step (19) in its rear surface. The trigger has a forward-projecting, spring-loaded trigger pawl (24) mounted in its top side. This pawl mates with the step on the sear and serves to depress the sear when the trigger is pressed (fig. 15). A pivoting disconnecter (20) is mounted on the selector and moves back and forth with the selector. When the selector is forward, the disconnecter has no function; when rearward, the disconnecter projects into the bolt path, and the rear of the disconnecter just touches the trigger pawl.

e. When the bolt is retracted, the spring-loaded sear snaps into the bolt's sear notch and holds it to the rear. Pressure on the trigger causes it and the trigger pawl to rotate, and the pawl contacts the step on the sear. Continued movement of the trigger depresses the sear to release the bolt. If the selector is forward (in the automatic position), the sear will remain depressed and the gun will continue to fire until the trigger is released and the sear reengages the bolt. When the selector is rearward (in the semiautomatic position), the initial action of the trigger is the same, the pawl depresses the sear, and this releases the bolt. As the bolt goes forward, it contacts the now-protruding disconnecter, forcing it down and rotating it about its pivot. The rear end of the disconnecter is cut at a cam angle. This cam forces the trigger pawl back into the trigger and out of engagement with the sear. The sear is freed and snaps up where it can engage the bolt after each shot. To fire a second shot, the trigger must be released in order to allow the trigger pawl to rise high enough to reengage the sear.

f. The safety catch, when on safe, in either the rearward or forward position of the bolt, mates with a notch in the operating handle slot and thus prevents movement of the bolt.

36. ACCESSORIES

The following accessories are available for use with the PPSH-41, 48M, Type 49, and Type 50 submachineguns:

- (1) Sling.
- (2) Two-section T-handled cleaning rod carried in the butt.
- (3) T-shaped folding screwdriver, also carried in the butt.
- (4) T-shaped wrench for adjusting the front sight.
- (5) Magazine filler for 35-round magazines (fig. 16).
- (6) Standard Soviet-pattern 2-compartment oil-and-cleaning-solvent container.
- (7) Magazine carriers, appropriate to the type of magazine used.

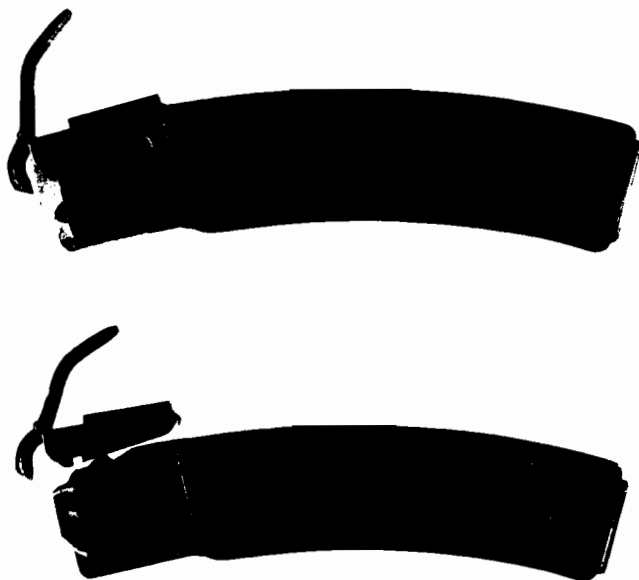


Figure 16. Magazine loader for PPSH-41 submachinegun.

B. THE 7.62-MM MODEL 1943 SUBMACHINEGUN (PPS-43)

37. GENERAL

a. The Model 1943 submachinegun (fig. 17) was produced during World War II by the Soviet Union, primarily for paratroopers who found the fixed-stock PPSH-41 too unwieldy for airborne operations. The PPS-43, now obsolete in the Soviet Army, is still used by many Eurasian Communist countries and has been manufactured in Poland as the Model 43/52 submachinegun and in Communist China as the Type 43 Copy submachinegun; this latter weapon has often been erroneously referred to as the Type 54 submachinegun. Except for markings, the Soviet and the ChiCom guns are identical; the Polish Model 43/52 is readily recognizable by its lengthened receiver and its fixed wooden butt (fig. 18).

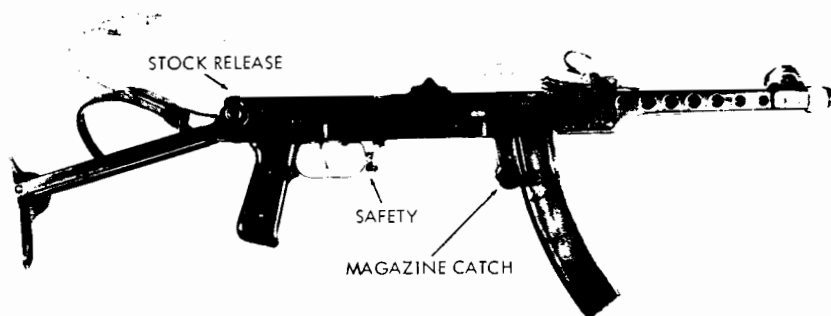


Figure 17. 7.62-mm submachinegun Model 1943 (PPS-43).

b. All versions of the PPS-43 submachineguns are blow-back-operated, automatic, box-magazine-fed weapons and, except for the Polish Model 43/52, have folding metal buttstocks. These weapons have a low cyclic rate of fire. Although they are fully automatic, single shots can be fired by skillful trigger manipulation. The weapons are constructed almost entirely from steel stampings and have very few machined parts. A sheet metal muzzle brake-compensator is attached to the front of the barrel jacket to stabilize the gun during bursts of fire. The 35-round box magazines are

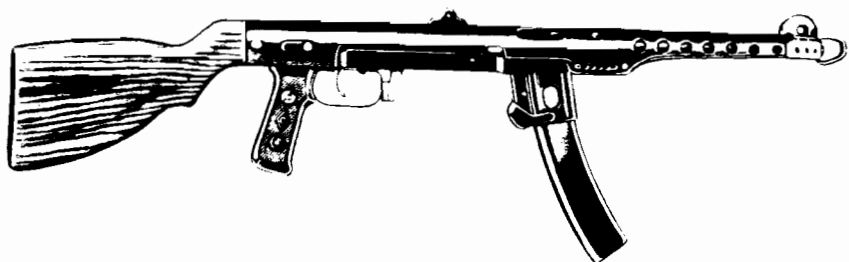


Figure 18. Polish 7.62-mm submachinegun Model 43/52.

peculiar to the PPS-43 and cannot be interchanged with the box magazines for the PPSH-41. The PPS-43, Model 43/52, and Type 43 Copy submachineguns all fire the 7.62 x 25-mm pistol cartridge (sec. VI).

38. TECHNICAL DATA

Technical data concerning the PPS-43 submachinegun will be found in table III.

39. OPERATION

To operate the PPS-43, Model 43/52, or Type 43 Copy weapons:

- a. Load a magazine with 35 cartridges in the same manner as in paragraph 3a.
- b. While the gun can be fired with the stock folded, best results are obtained by using the stock to brace the weapon. Depress the button (fig. 17) at the top rear of the receiver; grasp the buttplate and pull the stock assembly up and back until it locks in position. Then rotate the buttplate into position.
- c. Insert a loaded magazine into the magazine well until it is caught by the magazine catch. Pull the operating handle fully rearward and ease it forward until it is caught by the sear.
Caution: The gun is now ready to fire!

- d. The safety (fig. 17) can be applied by pressing its finger-piece (alongside the trigger guard) rearward and upward. A reversal of this motion takes off the safety.
- e. Set the sight for the desired range (10 = 100 meters, 20 = 200 meters); aim--using a normal sight picture--and press the trigger to fire. The gun will continue to fire as long as the trigger is depressed; single shots can be fired by pressing and rapidly releasing the trigger. The bolt will close on an empty chamber when the last round is fired.
- f. Remove the magazine by pressing the magazine catch (fig. 17) forward and withdrawing the magazine.
- g. The stock can be folded by rotating the buttplate three-fourths of a turn into its closed position; then, after depressing the button on the top rear of the receiver, swing the entire metal buttstock up and forward.
- h. Clear the weapon by removing the magazine and retracting the bolt. After insuring that no cartridges are present in the receiver, hold the operating handle, press the trigger, and ease the bolt forward. Apply the safety and insert the magazine.

40. DISASSEMBLY AND ASSEMBLY

To disassemble the PPS-43, Model 43/52, and Type 43 Copy submachineguns for routine care and cleaning:

- a. Clear the gun (par. 39h), but do not apply the safety or insert the magazine.
- b. Press in on the receiver catch at the lower rear end of the receiver, then swing the lower receiver down (fig. 19). Pull the operating handle slightly rearward and then swing the bolt downward, out of the receiver. Pull the driving-spring assembly out of the bolt.
- c. No further disassembly is necessary or desirable.

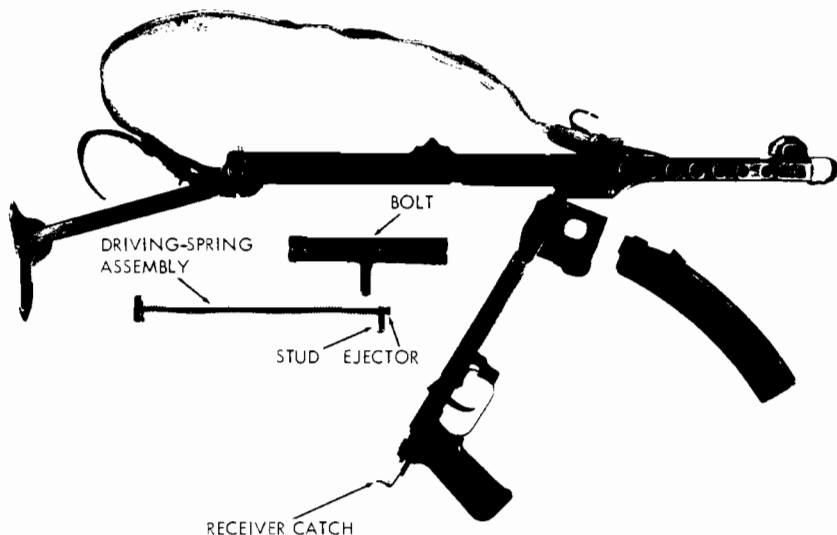


Figure 19. PPS-43, field-stripped.

d. To reassemble the submachinegun, first insert the stud of the driving-spring assembly into the bolt, with the spring in the groove in the side of the bolt.

e. Hold the bolt and the driving-spring assembly at about a 90° angle to the receiver and, with the flat edge of the metal-and-fiber buffer pad to the rear of the gun, place the buffer over the foremost crosspiece at the rear of the receiver. Retract the bolt slightly and swing it into the receiver.

f. Swing the lower receiver up, press on the receiver catch, and completely close the lower receiver.

41. FUNCTIONING

a. The PPS-43, Model 43/52, and Type 43 Copy submachineguns are blowback operated.

b. The firing cycle starts with the bolt caught to the rear by the sear (fig. 20). Pressure on the trigger causes the sear to disengage from the bolt. The force of the driving spring

drives the bolt forward. The feed rib on the bolt strikes the top cartridge in the magazine and drives the cartridge out of the magazine and into the barrel. The extractor snaps into the groove of the cartridge as the fixed firing pin strikes and ignites the primer, firing the cartridge.

c. The recoil of the fired cartridge drives the bolt to the rear and compresses the driving spring. The fired cartridge case is held to the bolt by the extractor until it strikes the ejector on the end of the driving-spring guide. The cartridge then pivots around the extractor and is expelled. The bolt continues to the rear until it is stopped by the buffer; the driving spring then drives the bolt forward.

d. The sear, which holds the bolt cocked, is a stamping whose front edge seats against a shoulder in the lower receiver; the trigger is pivoted to the rear end of the sear. The front of the receiver catch-pin passes through a hole in the trigger, and the spring-loaded trigger-return collar, mounted on the pin, bears against the rear of the trigger. See figure 20 for a sectional view of the trigger mechanism.

e. When the trigger is pressed, the receiver catch-pin, where it passes through the trigger, serves as a point about which the trigger pivots. As the trigger pivots, its upper end rotates forward and downward and because it is pinned to the sear, the sear is depressed and releases the bolt. As the trigger is pressed, the trigger-return collar is forced to the rear, compressing its spring. When the trigger is released, the collar and its spring force the trigger forward; this moves the sear up so that it can reengage the bolt.

f. The safety is a flat steel strip with a fingerpiece and two slots (one angular slot at its front end, and a wedge-shaped slot at its rear end). The pin that connects the trigger to the sear protrudes from the right side of the sear into the wedge-shaped slot. When the safety is forward, the pin is in the larger end of the cut and can move freely; however, when the safety is moved to the rear, the pin is prevented from moving by the smaller end of the slot, and thus the trigger cannot be pulled. The angular slot at the front of the safety rides on a fixed crosspin in the receiver and causes the safety

to rise and lower as it moves. When the safety is moved rearward to the safe position, the safety rises, engages the operating handle, and prevents any movement of the bolt, whether the bolt is forward or rearward.

42. ACCESSORIES

The only accessories issued for use with the PPS-43 are:

- (1) Sling.
- (2) Two-section T-handled cleaning rod.
- (3) Standard Soviet-pattern 2-compartment oil-and-cleaning-solvent container.
- (4) Fabric, 3-pocket magazine carrier, with additional compartments for the cleaning rod and the oil container.

C. THE 7.62-MM K-50 MODIFIED SUBMACHINEGUN (K-50M)

43. GENERAL

a. The K-50 Modified submachinegun (fig. 21) is an extensively altered ChiCom Type 50 submachinegun, used by the Viet Cong in Vietnam. The most obvious changes are the sliding metal buttstock, the short barrel jacket which eliminates the original muzzle brake-compensator, and the wooden pistol grip. The lower receiver also has been reshaped.

b. The K-50 Modified submachinegun is a blowback-operated, selective-fire, box-magazine-fed weapon equipped with a telescoping metal buttstock. This gun fires ChiCom 7.62 x 25-mm Type 50 pistol cartridges or Soviet 7.62 x 25-mm Type P pistol cartridges (sec. VI).



Figure 21. North Vietnamese 7.62-mm K-50 Modified submachinegun.

44. TECHNICAL DATA

Technical data concerning the K-50 Modified submachinegun will be found in table III.

45. OPERATION AND FUNCTIONING

The K-50 Modified submachinegun is operated and functions exactly like its parent weapon, the ChiCom Type 50 submachinegun. See paragraphs 33, 34, and 35 for information. An additional feature, the telescoping stock, is operated by pressing in the stock catch (fig. 21) and sliding the stock to the desired position.

D. THE 9-MM VZOR 23 AND VZOR 25 SUBMACHINEGUNS AND THE 7.62-MM VZOR 24 AND VZOR 26 SUBMACHINEGUNS (Vz 23, Vz 25, Vz 24, and Vz 26)

46. GENERAL

a. The 9-mm Vz 23 and 25 submachineguns (fig. 22) and the 7.62-mm Vz 24 (fig. 23) and 26 submachineguns are all mechanically similar variations of the same weapon. The Vz 23 and 24 both have fixed buttstocks, but differ in the cartridges they fire; the Vz 25 and 26 have folding metal butts, and also differ in the cartridges they fire. The main design

change, other than those occasioned by the different cartridges, is at the rear of the receiver. Early Vz 23/25 weapons have a machined band, for mounting the rear sight and stock, encircling the receiver; late production Vz 23/25's and all Vz 24/26's have a bracket welded to the receiver for mounting the sight and stock. The magazines of the Vz 24/26 submachineguns, when inserted, have a pronounced forward slant.

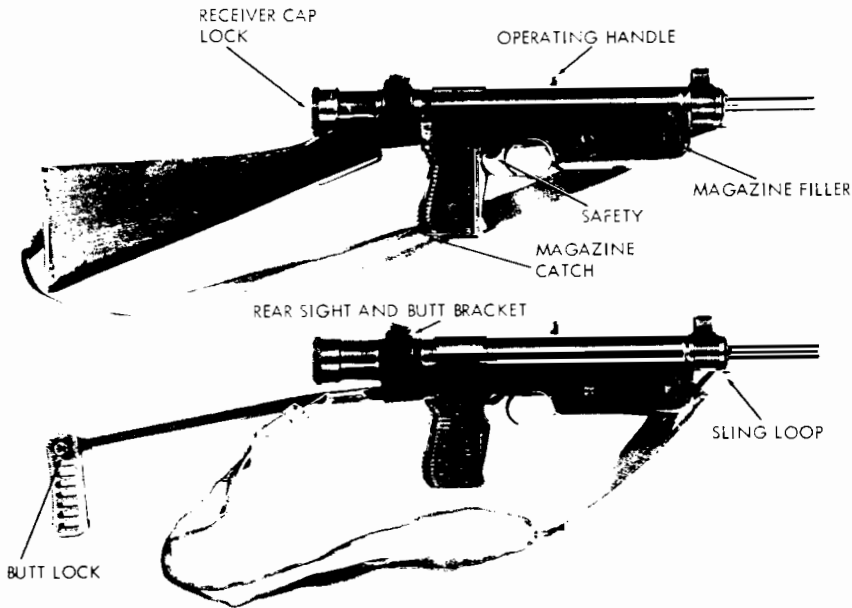


Figure 22. Czechoslovak 9-mm submachineguns Vz 23 (top) and Vz 25.

b. These guns are all blowback-operated (par. 5a), selective-fire, box-magazine-fed weapons. The 9-mm magazines are made in 24- and 40-round versions; the 7.62-mm magazine holds 32 rounds (fig. 24). The type of fire, full automatic or semiautomatic, is governed by the trigger pull--a light pull fires one shot; a heavy pull fires continuously. The unusual bolt is very long and heavy; but, because it telescopes over the barrel, the overall length of the gun is quite short. An automatic safety lock (the operating handle) locks the bolt forward to prevent the gun from accidentally firing if it is dropped. An integral magazine filler is mounted on the

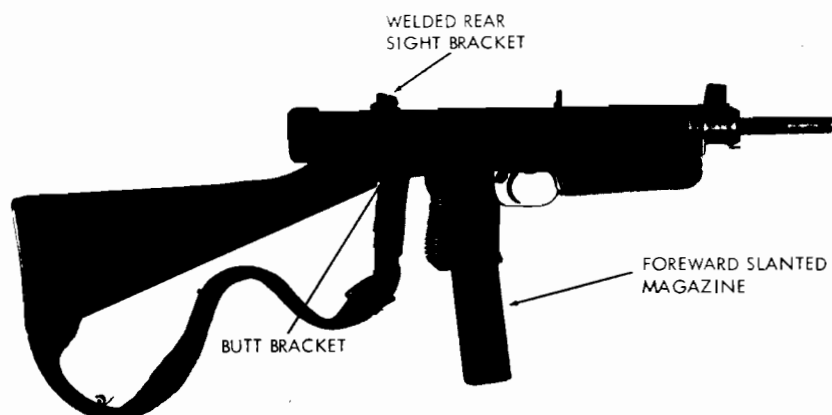


Figure 23. Czechoslovak 7.62-mm submachinegun Vz 24.

right side of the forestock (fig. 22). The Vz 23 and 25 submachineguns fire 9 x 19-mm Parabellum-type cartridges; the Vz 24 and 26 fire 7.62 x 25-mm pistol cartridges (sec. VI).

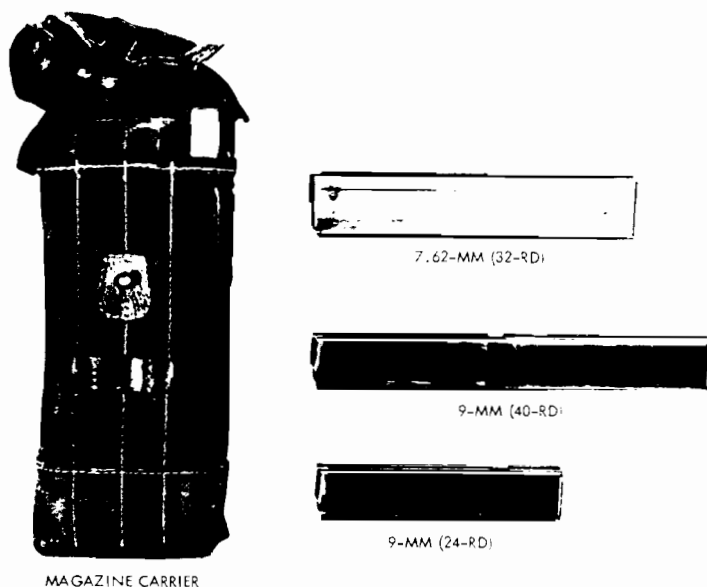


Figure 24. Czechoslovak submachinegun magazines.

47. TECHNICAL DATA

Technical data concerning the Vz 23, 24, 25, and 26 submachineguns will be found in table III.

48. OPERATION

To operate the Vz 23, 24, 25, and 26 submachineguns:

a. Load a magazine by using the technique described in paragraph 27a, or, if clipped ammunition is available, place a clip, bullets up, on the magazine filler. Place the magazine on the filler, with the rib on the rear wall of the magazine in the slot in the filler. Press the magazine forward (fig. 25). This will strip the cartridges off the clip and into the magazine; at the same time, the clip will be driven out of the clip exit. Repeat until the magazine is full.

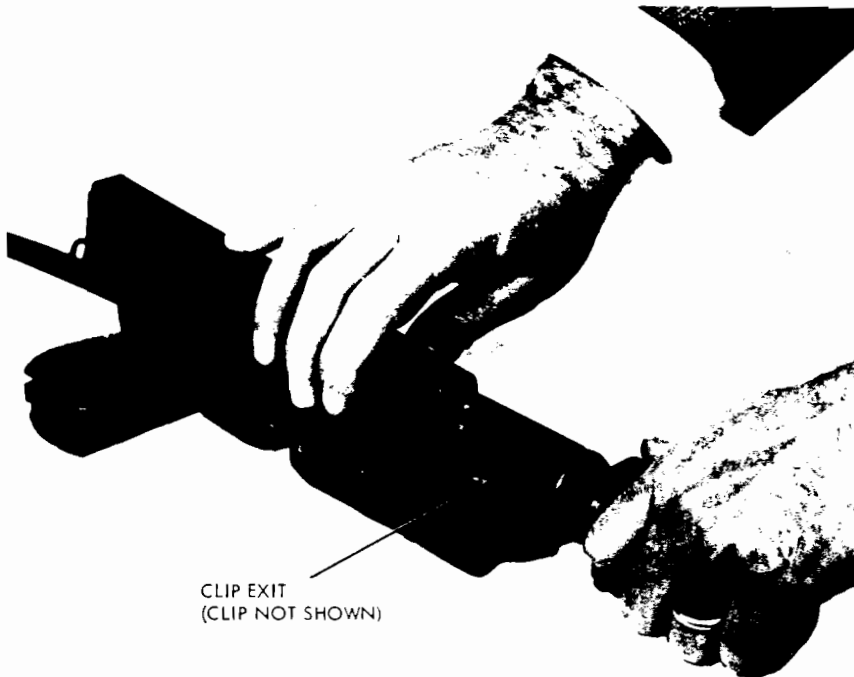


Figure 25. Using magazine filler to load magazine.

b. Insert a loaded magazine into the magazine well in the pistol grip until the magazine catch engages.

c. With an initial slight upward motion, pull the operating handle (fig. 22) fully to the rear. Caution: The submachine-gun is now ready to fire! If desired, place the gun on safe by sliding the safety latch, located behind the trigger, to the right.

d. For accuracy, the folding stocks of the Vz 25 and 26 should be used to steady the guns when firing. Press in on the butt lock (fig. 22) and turn the butt to disengage it from the sling loop (fig. 22); then swing the stock toward the rear until it locks into position.

e. Set the rear sight for range (1. 2. 3. or 400 meters): push the safety latch to the left; aim--using a normal sight picture--and press the trigger. Pressing the trigger lightly will cause the weapon to fire once, pressing it over its full travel cause the gun to continue to fire. The bolt will remain forward after the last round is fired.

f. Remove the magazine by pressing on the magazine catch, located at the bottom rear of the pistol grip, and pull the magazine out of the gun.

g. Fold the stock by pulling the entire stock slightly to the rear against its locking spring, then swing it to the left. Press the butt lock and turn the butt until it slips over the sling eye. Rotate the butt down for use as a handgrip, or swing it up to allow the gun to be fired through a small aperture.

h. Clear the submachinegun by removing the magazine (par. 48f) and then retracting the bolt. Insure that no cartridges are present. Then, while holding the operating handle, press the trigger. Ease the bolt forward, set the safety to safe, and insert the magazine.

49. DISASSEMBLY AND ASSEMBLY

To disassemble the Vz 23, 24, 25, or 26 submachineguns for routine care and cleaning:

- a. Clear the gun (par. 48h), but do not insert the magazine or apply the safety latch.
- b. Use a cartridge, punch, or similar item and press in the receiver cap lock in the middle of the receiver cap (fig. 26). Rotate the receiver cap to disengage it from the receiver and remove it.

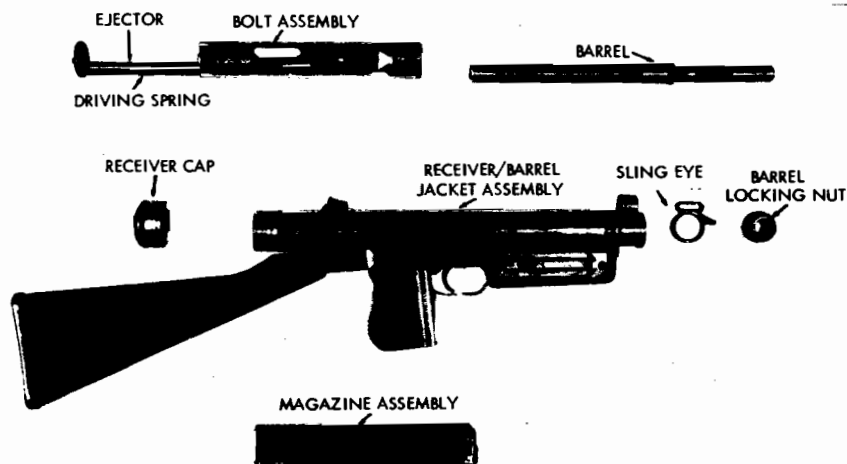


Figure 26. Vz 24 submachinegun, disassembled.

- c. Pull the operating handle to the rear to start the driving springs out of the back of the receiver. Grasp the round plate and pull the bolt assembly out of the receiver.
- d. Unfold the stock, if a Vz 25 or 26 submachinegun. Unscrew the barrel locking nut (fig. 26) (using the front of the bolt as a wrench, if necessary) and pull the barrel out of the receiver.
- e. No further disassembly is necessary or desirable.

f. To reassemble the submachinegun, place the sling eye into the front of the receiver, with the tab pointing forward. Slide the barrel into the receiver, and rotate the barrel until it mates with its key. Screw the barrel nut tight, using the bolt as a wrench.

g. Start the bolt assembly into the receiver, pull the trigger and slide the bolt fully forward.

h. Place the receiver cap on the end of the receiver, force it forward against the driving spring, and rotate it until it locks.

50. FUNCTIONING

a. The Vz 23, 24, 25, and 26 submachineguns are blow-back operated. The firing cycle starts with the bolt caught to the rear by the sear. Pressure on the trigger causes the sear to disengage from the bolt. The force of the driving spring drives the bolt forward. The feed rib on the bolt strikes the top cartridge in the magazine and forces the top cartridge out of the magazine and into the barrel. The extractor snaps into the groove of the cartridge as the fixed firing pin strikes and ignites the primer to fire the cartridge.

b. The recoil of the fired cartridge forces the bolt to the rear, compressing the driving spring. The fired cartridge case is held to the bolt by the extractor until the case strikes the ejector (fig. 26). At this instant, the ejection ports in the bolt and receiver are alined with each other, and the cartridge case pivots about the extractor and is thrown out the ejection ports. The bolt continues to the rear until it strikes the plate on the driving-spring assembly; the driving spring then drives the bolt forward again.

c. On the left side of the sear a small projection extends into the receiver, while a short, spring-loaded sear plunger extends from its rear. Just below this plunger, a small ledge also projects rearward. The trigger is one piece, with a lug protruding from its upper front side. When the trigger is pressed, it rotates, and the lug contacts the sear plunger. As pressure continues, the sear is depressed, releasing the bolt. The sear plunger, because of the rotary motion of the sear and trigger, slips out from under the trigger lug, and the sear

spring returns the sear to a position where it can catch the bolt. To fire another shot, the trigger must be released; as the trigger spring rotates the trigger back, the lug forces the sear plunger into the sear. When the lug passes the plunger, its spring forces the plunger out, under the lug. Pressure on the trigger will now fire another shot.

d. To fire automatically, the trigger must be pressed to the limit of its travel. The action in "c" above takes place, then the ledge on the sear contacts the lug of the trigger; as the trigger continues to rotate, the sear is again depressed and remains so until the trigger is released. As the sear does not rise between shots, the weapon will continue to fire.

e. When the safety is on safe, a shoulder on the safety fits behind the trigger, preventing any trigger movement. On the bottom rear edge of the sear is a projection that rests on the trigger. When the trigger is blocked by the safety, the trigger prevents any movement of the sear. The part of the sear that extends into the receiver projects into one of two semicircular cuts in the bolt, depending on whether the bolt is forward or rearward. Because the sear is blocked when the weapon is on safe, this projection locks the bolt in position.

51. ACCESSORIES

The only accessories issued with the Vz 23, 24, 25 and 26 submachineguns are a fabric sling, a 1-piece cleaning rod, and a 4-pocket magazine carrier.

E. MAINTENANCE OF SUBMACHINEGUNS

The procedure and materials prescribed for cleaning standard U.S. Army submachineguns also apply to Eurasian Communist submachineguns. These weapons should be disassembled only to the extent necessary for adequate cleaning, in order to prevent breakage and subsequent loss of use. No repairs should be attempted on foreign submachineguns other than replacement of parts, and this should be done only by a competent armorer.

F. MALFUNCTIONS AND STOPPAGES

Most malfunctions and stoppages are caused by defective magazines. Table IV lists common problems and their remedies.

Table III. Submachinegun Technical Data

Weapon	Model 1941	Model 1943	K-50 Mod	Vzor 23 Vzor 25	Vzor 24 Vzor 26
Short name	PPSh-41	PPS-43	K-50M	Vz 23, Vz 25	Vz 24, Vz 26
Caliber (mm)	7.62	7.62	7.62	9	7.62
Length (in)	33.2	24.2 ¹	22.56 ⁵	27 ²	27
Weight, empty (lb)	7.7	6.6	7.5 approx	7.2 ³	7.5
Barrel length (in)	10.6	9.5	10.6	11.2	11.2
Magazine-type	Box or drum	Box	Box	Box	Box
Magazine capacity (rd)	Box-35 drum-71	35	35	24 or 40	32
Operation	Blowback	Blowback	Blowback	Blowback	Blowback
Fire-type	Selective	Automatic	Selective	Selective	Selective
Muzzle velocity (m/sec)	500	500	500	450	550 ⁴
Practical range, semi-automatic (m)	200	DNA	200	150	200
Practical range, full (m)	100	200	100	100	300
Rate of fire, semiautomatic (rpm)	40 to 50	DNA	40 to 50	70	70
Rate of fire, full automatic (rpm)	100	100	100	100	100
Rate of fire, cyclic (rpm)	900	650	900	650	700

¹ 32.7 in, with stock extended.² 17.5 in, with stock folded.³ Vz 25: 7.7 lb.⁴ With Czechoslovak M48 cartridge.⁵ 29.75 in, with stock extended.

Table IV. Submachinegun Malfunctions

Condition	Cause	Remedy
Fails to fire (cartridge in chamber)	Defective cartridge	Retract bolt and fire
	Weak driving spring	Replace spring
Fails to fire (no cartridge in chamber)	Defective magazine	Replace magazine
	Short recoil	Clean and lubricate
	Fouled weapon	Clean and lubricate
Fails to eject	Fouled weapon	Clean and lubricate

Malfunctions caused by broken or worn parts can be corrected by replacing the defective part with a serviceable one. This should be done only by a competent armorer, and the repaired weapon must then be function test fired.

Section III. ASSAULT RIFLES

A. THE 7.62-MM KALASHNIKOV ASSAULT RIFLE (AK-47)

52. GENERAL

a. Assault rifles are short, compact, selective-fire weapons that fire a cartridge intermediate in power between submachinegun and rifle cartridges. Assault rifles have very mild recoil characteristics and, because of this, are capable of effective full-automatic fire at ranges up to 300 meters.

b. The Soviet-designed Kalashnikov AK-47 assault rifle, a gas-operated, selective-fire, box-magazine-fed weapon, is the major infantry arm for most Eurasian Communist countries. Large numbers of these weapons have also been passed to other nations as military aid, and some have been supplied to insurgent groups. AK-47's have been manufactured by Communist China (Type 56 assault rifle), East Germany (MPiK), Poland (PMK), Bulgaria (?), and North Korea (Type 58 assault rifle). The selector markings make a convenient method of determining the origin of a given weapon. The Soviet AK's are marked "AB" and "0.1"; the East German, "D" and "E"; the Polish, "C" and "P"; the Bulgarian, "O" and "1"; the Chinese Communist, "连" and "单"; and the North Korean, "24" and "HL."

c. The AK-47 is produced in two different models; one with a conventional, fixed, wooden buttstock (fig. 27), the other with a folding, metal shoulder stock (fig. 28). In addition, there are early and late production variations. The early model has a built-up receiver and is identified by the angular shape of the rear of the receiver (fig. 29), whereas the late model has a straight rear end to its receiver (fig. 29). There are various other minor changes between models, none of which affects operation. There are also a number of changes which reflect the traits of the producing nation; i. e., the East German AK-47's have no provision for a cleaning rod; all other AK's do. All AK-47 assault rifles fire the 7.62 x 39-mm M1943 cartridge; however, if at all possible, cartridges produced by the same country that produced the rifle should be used. Refer to section VI for information concerning 7.62-mm M1943 ammunition.

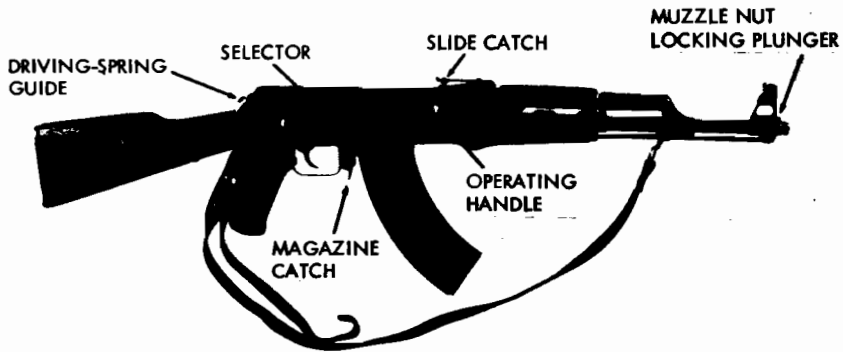


Figure 27. 7.62-mm Kalashnikov assault rifle (AK-47), late production version.



Figure 28. 7.62-mm Kalashnikov assault rifle with folding stock, East German.



Figure 29. Differences between AK-47 assault rifles, early version (bottom) and late version.

53. TECHNICAL DATA

Technical data concerning the AK-47 assault rifle will be found in table V.

54. OPERATION

a. Load the AK-47 magazine by placing a cartridge on the magazine between the feed lips (fig. 30) and pressing the cartridge down into the magazine. Repeat until the magazine is full (30 rounds).

b. Insert the magazine into the receiver, canting it forward (fig. 31) so that the lug on the top front of the magazine engages with its recess in the magazine well. Swing the magazine rearward until the magazine catch snaps into place.



Figure 30. Loading the AK-47 or AKM magazine.



Figure 31. Loading the magazine into the AK-47.

c. If necessary, press the selector (fig. 27) down from the safe position; pull the operating handle (fig. 27) fully to the rear and release it. Caution: The rifle is now ready to fire!

d. Unless the rifle is to be fired immediately, put it on safe by moving the selector fully upwards. This action locks the trigger and bolt; however the bolt can still be opened sufficiently to ascertain whether or not a round is in the chamber.

e. If the AK-47 is equipped with a folding stock, the best firing results will be obtained by using the stock to brace the rifle during firing. Press in the knurled stock latch (fig. 28) and swing the stock rearward into position; then turn the butt-plate into position. The stock can be folded forward by reversing this action, but the stock latch has to be depressed before the stock can be moved.

f. Set the rear sight for the desired range by depressing the slide catch (fig. 27) and moving the sight bar along the leaf until the front edge of the bar is aligned with the line below the number that corresponds with the range in hundreds of meters. The first character on the sight leaf is a battle-sight setting used in combat for shooting at ranges up to 300 meters.

g. The front sight is adjustable for zero. The front-sight post can be screwed in or out of its base to adjust for elevation zero. The wrench in the combination tool kit is used for this purpose (par. 57b(2)). Lateral zero is accomplished by moving the cylindrical front-sight post mount from side to side. Once a good zero is established, do not disturb the front sight.

h. To fire, move the selector to its middle position for full-automatic fire or to its bottom position for semiautomatic fire; then aim--using a normal sight picture--and press the trigger. The bolt will remain closed after the last round has been fired.

i. Remove the magazine by pressing the magazine catch (fig. 27) toward the magazine, then swinging the magazine forward and out of the receiver.

j. To clear the AK-47, remove the magazine and pull the operating handle fully to the rear. Inspect the receiver and the chamber to insure that no cartridges are present, then release the operating handle. Press the trigger, press the selector up to the safe position, and insert the magazine.

55. DISASSEMBLY AND ASSEMBLY

To disassemble the AK-47 for cleaning:

a. Clear the weapon (par. 54j), but do not insert the magazine or set the selector on safe.

b. Press the serrated end of the driving-spring guide (fig. 27) into the bolt cover and, while holding the guide in, lift off the bolt cover, rear end first.

c. Press the driving-spring guide forward and disengage it from its seat, then pull the complete driving-spring assembly out of the piston.

d. Pull the operating handle fully to the rear, lift the bolt carrier slightly upwards, then remove the bolt and carrier to the rear.

e. Press the bolt into the carrier until the bolt operating lug can be turned free of its cam path in the carrier. Pull the bolt straight forward and remove it from the carrier.

f. Rotate the gas-cylinder tube lock (fig. 32) upward to free the gas-cylinder tube. Remove the tube by pulling up on the rear of the hand guard.

g. No further disassembly is necessary or desirable.

h. To reassemble, first engage the front opening of the gas-cylinder tube with the gas cylinder (fig. 32), and then seat the rear of the tube into the rear-sight base. Rotate the gas-cylinder tube lock down to its locked position.

i. Slide the spindle of the bolt into its hole in the carrier and rotate the bolt to mate the operating lug with its cam path. Pull the bolt as far forward as possible in the carrier.

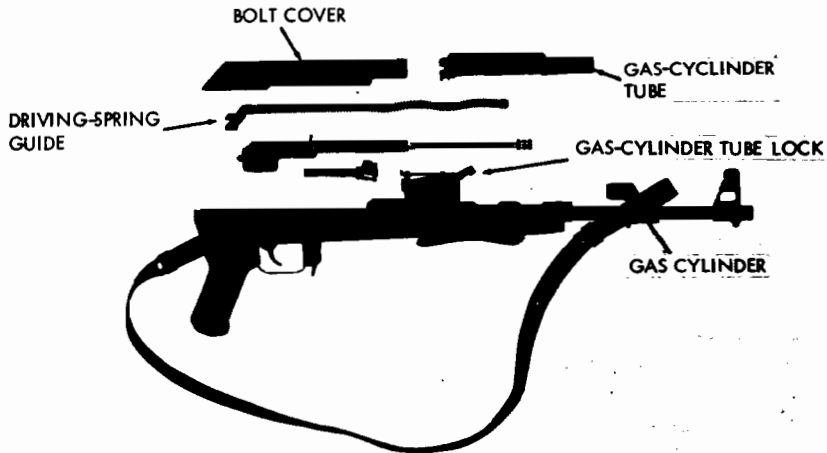


Figure 32. AK-47 assault rifle, field-stripped.

j. Slide the piston into the hole under the rear sight until the carrier fits into its cuts at the rear of the receiver. Press the carrier down (bolthead must be fully forward), and then slide the carrier fully forward.

k. Insert the driving spring into its hole in the piston and reseal the guide into the receiver.

l. Place the front end of the bolt cover into the circular groove in the rear-sight base. Some covers have antirattle dimples pressed into their front ends. This sometimes requires force to fit a cover into its groove. Apply thumb pressure over the square opening in the rear of the cover; press forward and down until the end of the driving-spring guide snaps through the opening.

m. Press the trigger to release the hammer, set the selector to safe, and insert the magazine. See paragraph 57 for information concerning the operation of the accessories for the AK-47.

56. FUNCTIONING

a. The AK-47 is gas operated; i. e. , a portion of the gas that propels the bullet through the barrel is tapped off through a port in the barrel and is used to drive the bolt mechanism to the rear during firing. A strong driving spring returns the bolt forward.

b. When the AK-47 is loaded and cocked, finger pressure on the trigger causes the twin lugs on the top of the trigger (fig. 33) to disengage from the hammer; the hammer, under pressure of the hammer spring, swings forward and fires the weapon. The bullet is driven through the barrel by the propellant gases. After the bullet passes the gas port, some of the gases are tapped off and directed against the piston extending from the bolt carrier.

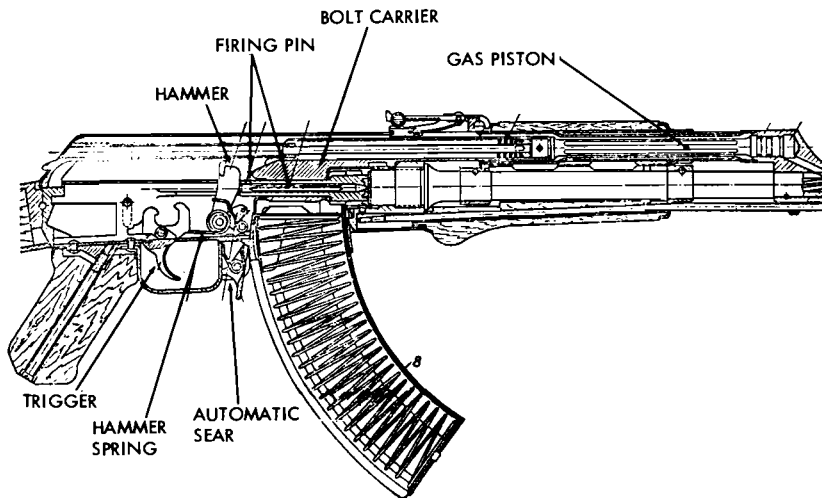


Figure 33. AK-47 assault rifle, section.

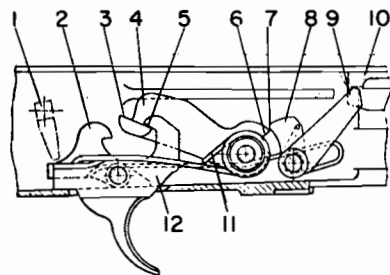
c. The propellant gases drive the piston and the bolt carrier (fig. 33) rearward, compressing the driving spring. After one-third of an inch of free travel, a cam in the bolt carrier contacts the cam stud on the bolt; further travel rotates the bolt 35° and unlocks it from the receiver. The

piston, carrier, and bolt all move rearward together, rocking the hammer back. The extractor withdraws the empty cartridge case from the chamber and holds it against the bolt until the case strikes the fixed ejector; the case then pivots around the extractor and is expelled. The bolt carrier hits the inner rear wall of the receiver and stops.

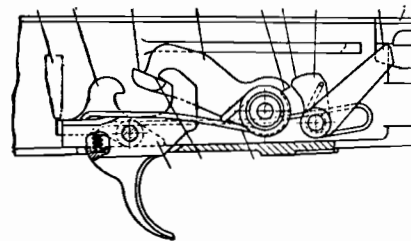
d. The driving spring drives the recoiling parts forward, and, as the bolt moves, its feed rib drives the top cartridge out of the magazine and into the barrel. The extractor snaps into the groove of the cartridge case, and, as the bolt carrier continues forward, its cam rotates the bolt to its locked position. During the final one-third of an inch of travel, the carrier depresses the automatic sear. The forward movement terminates when the front of the bolt carrier strikes the receiver.

e. The selector controls the functioning of the trigger mechanism by causing its arm inside the receiver to change positions, in relation to the trigger, as the selector is moved. The automatic sear (fig. 34) which also holds the hammer cocked is not affected by the selector in any way, but is operated solely by the bolt carrier. A projection on the rear of the bolt carrier above the bolt spindle prevents the hammer from striking the firing pin unless the bolt carrier has moved sufficiently forward to lock the bolt to the receiver.

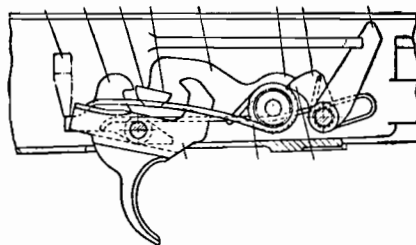
f. When the selector is in its lowest (semiautomatic) position, the arm of the selector moves to its rearmost position (fig. 34) and has no effect on the trigger mechanism. As the trigger is pressed, the twin lugs on the trigger disengage from the hammer, which swings forward. The recoiling bolt carrier rocks the hammer to the rear, and the hammer forces the semiautomatic sear (fig. 34) (which, due to the movement of the trigger, has moved forward) to the rear against its spring. As the hammer passes the semiautomatic sear, the sear snaps forward, where it can catch the hammer (fig. 34). Therefore, when the counterrecoiling bolt carrier trips the automatic sear, only the semiautomatic sear holds the hammer. When the trigger is released, the semiautomatic sear moves rearward and releases the hammer, which is then



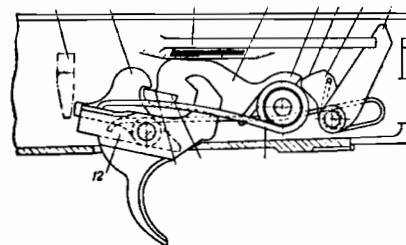
SAFE



FULL AUTOMATIC



FULL AUTOMATIC



SEMI-AUTOMATIC

- 1 Selector Arm
- 2 Semiautomatic Sear
- 3 Hammer Lug

- 4 Hammer
- 5 Twin Trigger Lugs
- 6 Sear Notch

- 7 Automatic Sear
- 8 - do -
- 9 - do -

- 10 Bolt Carrier
- 11 Hammer Spring
- 12 Trigger

Figure 34. AK-47 trigger mechanism.

caught by the twin lugs of the trigger. The trigger must be pressed again to fire another round.

g. By moving the selector to its middle (automatic fire) position, the arm inside the receiver is positioned over the tail of the semiautomatic sear (fig. 34). As the trigger is pressed, the semiautomatic sear contacts the arm and is rocked rearward. It then cannot catch the hammer. Only the automatic sear holds the hammer cocked and, as the carrier in its final travel depresses the automatic sear and releases the hammer, the weapon fires. This action continues as long as the trigger is held depressed and ammunition is present. To stop firing, the trigger is released and its twin lugs intercept the hammer and hold it cocked.

h. As the selector is moved into its upper (safe) position (fig. 34), the arm moves over the rear of the trigger, blocking any trigger movement. If the hammer is uncocked, the interference between the hammer and the twin lugs of the unmovable trigger prevents full retraction of the bolt.

57. ACCESSORIES

a. The following accessories are available for use with the AK-47 rifle:

- (1) Combination tool kit.
- (2) Bayonet.
- (3) Sling.
- (4) Blank-firing device.
- (5) Night-sighting device.
- (6) Magazine carrier.

(7) Standard Soviet-pattern 2-compartment oil-and cleaning solvent container.

b. The combination tool kit can be ejected by pressing in the circular cover in the buttplate. The design of the combination tool kit might vary slightly, but generally it is used as follows:

(1) The case serves as a container for the components and as a handle for the cleaning rod. Remove the cleaning rod by disengaging its head from the front-sight base and pulling it out of the weapon. Insert the threaded end through the empty case--into the largest hole first and out through the hole diagonally opposite--and straighten the rod so that its head rests against the inner wall of the case. Slip the case cap over the rod, and screw either the brush or the patch holder onto the rod. Slip the cap onto the muzzle nut and turn it slightly to lock it in place. Depress the muzzle-nut lock plunger to unlock the case cap to remove it.

(2) The combined drift, screwdriver, and wrench has several uses: To adjust the front sight, mate the screwdriver blade to the slot near the end of the case, slip the wrench over the front-sight post, and turn as necessary. Unscrew the post in order to move the strike of the bullet downwards. To use the screwdriver, reverse the combination tool, but place it in the center oval holes, with the wrench end engaged in the smaller hole.

c. The bayonet (fig. 35) is affixed by positioning its loops in front of the muzzle nut and the gas cylinder body and sliding the bayonet to the rear until the bayonet catch engages with the muzzle nut. The bayonet is removed by pulling the catch--located behind the hilt--away from the handle and sliding the bayonet forward and off. (Note: The AK-47 bayonet, the AKM bayonet, and the Czechoslovak M58 bayonet are not interchangeable).

d. The sling (either of fabric or of leather) is attached by looping it through the lower sling swivel and hooking the snap onto the upper swivel.

e. The blank-firing device is installed by pressing in the muzzle-nut locking plunger (fig. 27), unscrewing the muzzle nut, and replacing it with the device. It is removed in the

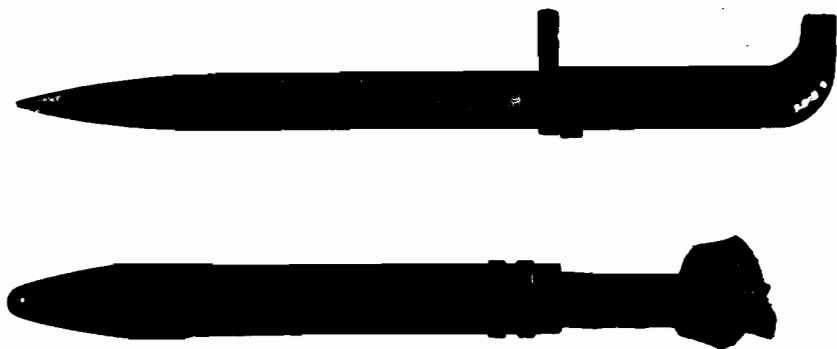


Figure 35. AK-47 bayonet and scabbard.

same way as is the muzzle nut. (Caution: Do not fire any bulleted ammunition when the blank-firing device is in place, and do not use the cap of the combination tool kit as a blank-firing device.)

f. The night-sighting device is attached by snapping it on over the sights (fig. 36). It can be swung out of the way in order to use conventional sights in the daytime. To use, superimpose the luminous dots on each other and on the target, aim, and fire.

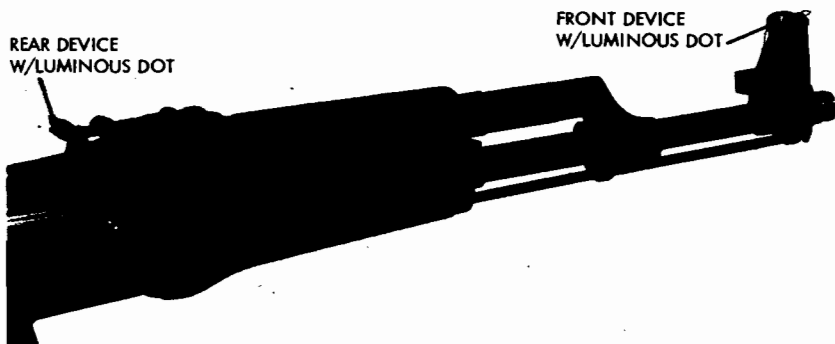


Figure 36. AK-47 assault rifle with night-sighting device.

g. There are a variety of magazine carriers; figure 37 illustrates a typical one. It holds three magazines and a combination tool kit.

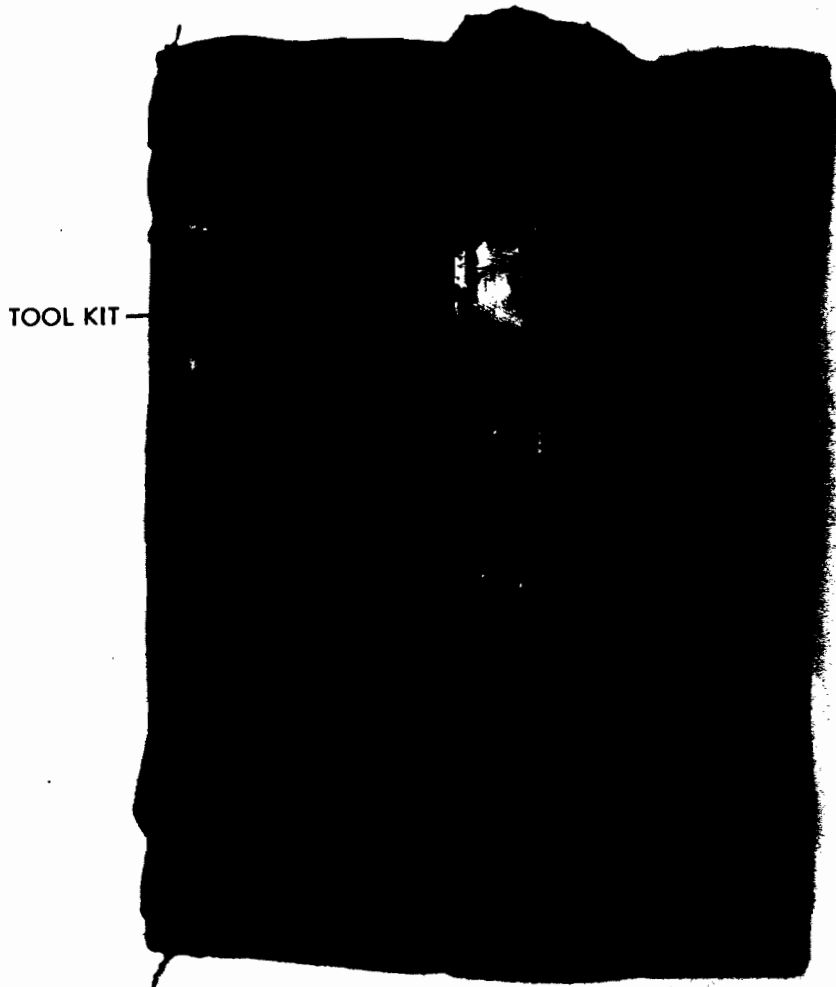


Figure 37. AK-47 magazine carrier.

h. A standard Soviet-pattern 2-compartment oil-and-cleaning-solvent container is used to carry a supply of lubricating oil and bore-cleaning solvent. This container is placed in a small pouch carried separately from the weapon.

B. THE 7.62-MM MODERNIZED KALASHNIKOV ASSAULT RIFLE (AKM)

58. GENERAL

a. The modernized Kalashnikov assault rifle (fig. 38), while basically similar to the AK-47, has a number of features which differ from the earlier weapon. The major change is in the receiver, a stamped component in the AKM, but a forged-and-machined component in the AK-47. The two weapons are mechanically identical except that the AKM has a cyclic rate reducer in its trigger mechanism. The AKM can be recognized by its sheet metal receiver with a small magazine guide dimple pressed into each side, by the grasping rails on the forestock, by the ribbed receiver cover, by the presence of a bayonet lug, and by the absence of vent holes in the gas tube.

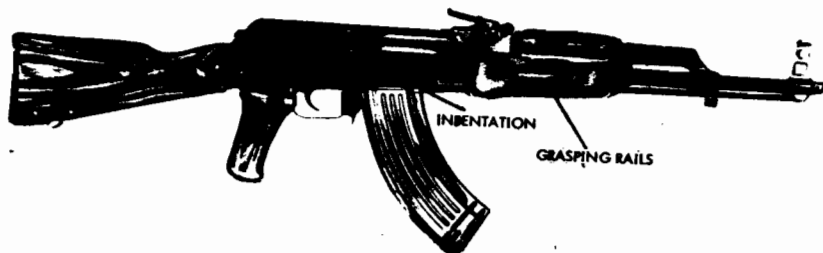


Figure 38. 7.62-mm modernized Kalashnikov assault rifle (AKM).

b. The AKM is produced in two versions, one with a conventional fixed wooden butt and one with an AK-47 folding metal stock. The AKM is used by the Soviet, East German, Cuban, and Hungarian Armies. The East Germans refer to their

weapon as the MPiKM; the Hungarian nomenclature is not known. All AKM's fire the 7.62 x 39-mm M1943 cartridge (sec. VI).

59. TECHNICAL DATA

Technical data concerning the modernized Kalashnikov assault rifle will be found in table V.

60. OPERATION

The AKM is operated in the same manner as for the AK-47 assault rifle (par. 54).

61. DISASSEMBLY AND ASSEMBLY

Disassembly and assembly of the AKM is accomplished in exactly the same way as for the AK-47 assault rifle (par. 55).

62. FUNCTIONING

The AKM's functioning is identical to that of the AK-47 (par. 56) except that the AKM has a cyclic rate reducer. This unit lies alongside the trigger and the semiautomatic sear and replaces one of the twin lugs on the trigger. The cyclic rate reducer functions by momentarily holding the hammer in the cocked position after the automatic sear has disengaged. The hammer has to overcome the inertia of the heavy rate reducer before it is released; this causes a slight delay, with a resultant decrease in the automatic rate of fire.

63. ACCESSORIES

The AKM has the same accessories as does the AK-47 (par. 57), except that the bayonet differs. The AKM bayonet is affixed by sliding its loop over the muzzle nut and, at the same time, its groove over the bayonet lug. It is removed by depressing the catch and sliding it forward, off the rifle. The AKM bayonet can be used as a wire cutter by mating the slot in its blade with the lug on the scabbard.

C. THE 7.62-MM VZOR 58 ASSAULT RIFLE
(Vz 58P or Vz 58V)

64. GENERAL

a. The Czechoslovak-designed-and-produced Vz 58 assault rifle, a gas-operated, selective-fire, box-magazine-fed weapon, is the standard shoulder arm of the Czechoslovak Army. Two versions of this rifle exist, the Vz 58P (fig. 39), with a conventional fixed buttstock, and the Vz 58V (fig. 40), with a folding metal buttstock. Early production weapons had wooden forearms, pistol grips, and, in the case of the Vz 58P, buttstocks; however, current production weapons have these components fabricated from a wood-fiber-filled plastic material.



Figure 39. 7.62-mm Vzor 58P (Vz 58P) assault rifle.

b. The Vzor 58 rifles superficially resemble the Soviet AK-47; however, the two weapons are mechanically different. The Vz 58 has a swinging-wedge breechlock and a plunger-type hammer; the AK-47 has a rotary bolt and a swinging hammer. All 7.62 x 39-mm cartridges manufactured in Eurasian Communist countries can be fired in the Vz 58, but, if possible, Czechoslovak-manufactured cartridges should be used. See section VI for information concerning ammunition used with this rifle.

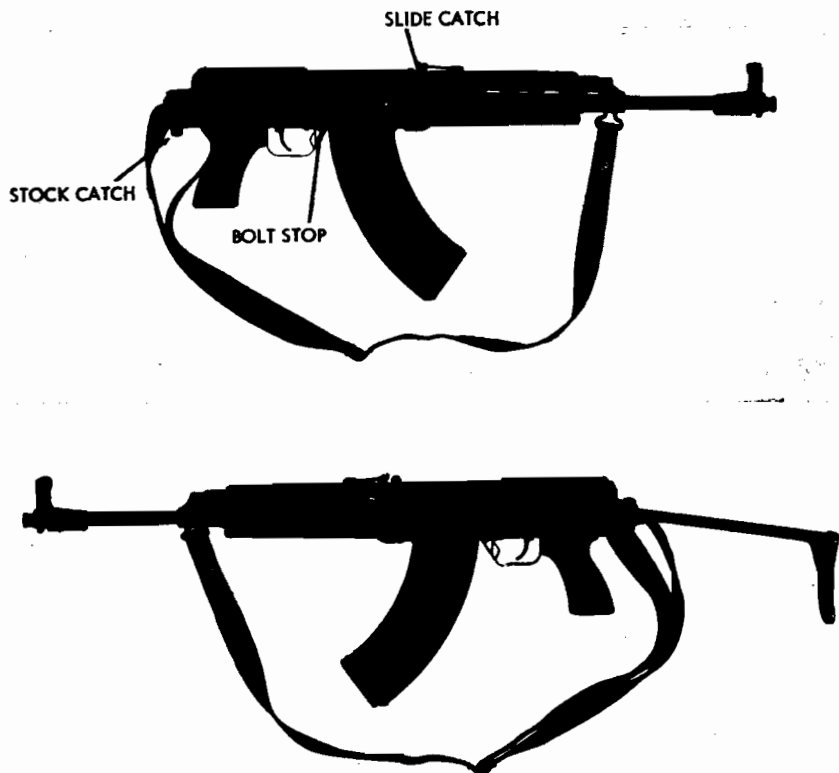


Figure 40. 7.62-mm Vz 58V (Vz 58V) assault rifle.

65. TECHNICAL DATA

Technical data concerning the Vz 58 assault rifle will be found in table V.

66. OPERATION

To operate the Vz 58 assault rifle:

- a. Load the magazine, using 10-round SKS stripper clips (par. 72a). With an empty magazine in the weapon, fully retract the operating handle (fig. 39) and release it. The bolt mechanism will be held open. Place a stripper clip into the

clip guides formed at the top front of the bolt carrier and, with the thumb as close as possible to the base of the top cartridge, press the cartridges off the clip and into the magazine. Remove the empty stripper clip and repeat until 30 rounds have been loaded. If SKS stripper clips are not available, load the magazine as for the AK-47 (par. 54a) and, after loading, engage the T-lug on the front of the magazine with its recess in the magazine opening of the receiver. Then swing the magazine rearward until the magazine catch snaps into place. Furthermore, individual cartridges can be pressed into the magazine one at a time with the magazine in place in the receiver.

b. Pull the operating handle fully to the rear and release it. Caution: The rifle is now ready to fire!

c. Unless the rifle is to be fired immediately, put it on safe by rotating the selector (fig. 39) to the vertical position. This locks only the trigger; the bolt can be opened if necessary.

d. If the rifle is a Vz 58V, the best firing results are obtained by using the stock to brace the rifle. Press up the stock latch (fig. 40) at the rear of the receiver and swing the stock sideways until it locks in its extended position. The stock is folded by pressing in the stock latch and swinging the stock forward.

e. Set the rear sight for the desired range by depressing the slide catch (fig. 40) and moving the sight bar along the leaf until the front edge of the bar is aligned with the line below the number that corresponds with the range in hundreds of meters. The "U" symbol on the sight leaf is a battle-sight setting used in combat for shooting at ranges up to 300 meters.

f. The front sight is adjustable for zero. Refer to paragraph 57b(2) for the procedure to be followed.

g. To fire, rotate the selector forward to "30" for full-automatic fire or rearward to "1" for semiautomatic fire; then aim--using a normal sight picture--and press the trigger. The bolt will remain open after the last round has been fired.

h. Remove the magazine by pressing the magazine catch (fig. 39) toward the magazine; then swing the magazine forward and out of the receiver.

i. To clear the Vz 58, set the safety to its vertical (safe) position, remove the magazine, and pull the operating handle fully to the rear. Press up on the bolt stop (fig. 40) located at the right front of the trigger guard and release the operating handle. The bolt will remain open. Inspect the receiver and chamber to insure that no cartridges are present, then pull the operating handle to the rear and release it. Rotate the selector to "30" or "1," press the trigger, and then rotate the safety to its vertical (safe) position. Insert the magazine.

67. DISASSEMBLY AND ASSEMBLY

a. Clear the weapon (par. 66i), but do not insert the magazine or put the weapon on safe. If the weapon is a Vz 58V, extend the stock.

b. Pull the receiver cover pin, located at the top rear of the receiver (fig. 41), to the right as far as possible. Press the receiver cover slightly forward and lift up its rear end. Ease the receiver cover rearward and remove it along with the hammer and the driving springs.

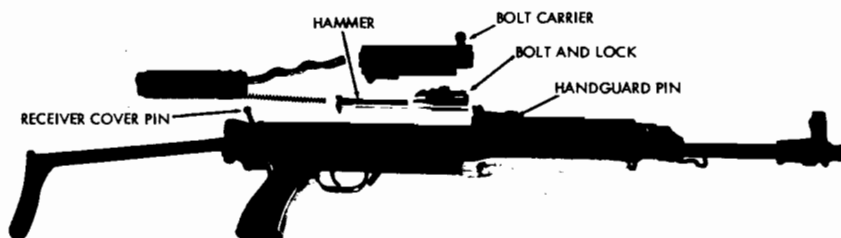


Figure 41. Vz 58V assault rifle, field-stripped.

c. Pull the operating handle fully rearward. Then, with an upward motion, rotate the bolt carrier and the bolt from the receiver. Caution: The bolt and lock (fig. 41) might fall free from the carrier. If the bolt and lock do not fall free, pull the hammer (fig. 41) to the rear and lift off the bolt and

lock. The hammer can be removed by moving it forward about one-fourth of an inch from its rearmost position; then rotate it counterclockwise and withdraw it from the bolt carrier.

d. Pull the handguard pin (fig. 41) (located at the front of the rear-sight base) to the right as far as possible and lift off the handguard. Grasp the shaft of the gas piston and force it rearward against its spring; when the piston head is clear of the gas cylinder, tilt the piston up and remove it. Pull the piston return spring from the rear-sight base.

e. No further disassembly is necessary or desirable.

f. To reassemble, place the piston return spring into the rear-sight base, and insert the small end of the piston into the spring. Force the piston to the rear until its head can be inserted into the gas cylinder. Slip the claws at the front of the handguard under the lugs on the gas cylinder, drop the rear of the handguard into place, and insert the handguard pin.

g. Insert the hammer into the bolt carrier while applying a clockwise twist to the hammer. After it enters the carrier, it will rotate to its engaged position; when this happens, pull the hammer out as far as possible.

h. Attach the lock to the bolt and place the bolt and lock into the bolt carrier, extractor up and forward. Slide the bolt forward in the carrier by pushing the hammer in as far as possible.

i. Place the bolt carrier into the receiver by alining the rails on the lower sides of the carrier with the cutout portions at the rear of the receiver; then press the carrier down into place. (Note: The bolt must be fully forward in the carrier before this can be done.) Slide the bolt carrier forward in the receiver.

j. Apply finger pressure on the hammer, pull the trigger, and press the hammer forward.

k. Attach the receiver cover by inserting the driving spring into the large hole in the bolt carrier and inserting the smaller diameter hammer spring into the hammer; then slide the cover forward. Apply a forward and downward pressure on the triangular plate on the rear of the cover until the cover snaps into the receiver. (Note: Be sure that the inward curved lower edge of the cover is mated with the undercuts at the lower sides of the bolt carrier.) Reseat the receiver cover pin, place the weapon on safe, and insert the magazine.

68. FUNCTIONING

a. The Vz 58 assault rifle is gas operated. When the Vz 58 is loaded and cocked, pressure on the trigger releases the hammer, which impacts against the firing pin, firing the rifle. The propellant gases drive the bullet through the barrel, and, after the bullet passes the gas port, some of the gases are tapped off and directed against the piston.

b. The propellant gases drive the piston rearward against the bolt carrier, forcing the carrier to the rear and compressing the driving and hammer springs. The hammer, because its head rests against the rear of the bolt carrier, moves to the rear away from the firing pin. The piston is returned forward by its return spring. The bolt carrier continues rearward and, after five-eighths of an inch of free travel, a cam on the inside top of the carrier contacts the bolt lock and lifts it up, out of engagement with the locking recesses in the receiver. After the lock is fully disengaged, the bolt moves rearward with the bolt carrier, and the extractor withdraws the empty cartridge case from the chamber. The case is held to the bolt until the case strikes the fixed ejector in the receiver, at which time the case pivots around the extractor and is expelled. The rear end of the bolt carrier strikes the inner rear wall of the receiver and terminates the rearward movement.

c. The driving and hammer springs expand and force the bolt carrier forward; the bolt, moving with the bolt carrier, drives the top cartridge out of the magazine and into the chamber. The hammer is caught by the automatic sear. When the cartridge is fully seated in the chamber, the extractor snaps

into the groove in the cartridge case and bolt's forward motion ceases. The bolt carrier continues forward, and a transverse rib in the inner top of the carrier forces the bolt lock down into its locked position. The bolt carrier trips the automatic sear and releases the hammer just before the carrier is stopped by the front of the receiver.

d. The Vz 58 has an extremely simple trigger mechanism consisting of a right-hand automatic sear with a sear trip, a trigger, and trigger bar, a left-hand semiautomatic sear, and a disconnector. A rotary selector controls the engagement of either the disconnector or the trigger bar with the semiautomatic sear.

e. When the selector is placed at its full-automatic position, the shaft of the selector depresses the disconnector out of engagement with the semiautomatic sear and allows the trigger bar to rise to engage the semiautomatic sear. The bolt carrier has tripped the automatic sear, and the hammer is held by the semiautomatic sear. As the trigger is pressed, the trigger bar moves forward and rotates the semiautomatic sear, which releases the hammer to fire the weapon. As the bolt carrier recoils, it releases the sear trip; this allows the automatic sear to rise. During the counterrecoil stroke of the bolt carrier, the hammer is caught by the raised automatic sear and is held until the bolt carrier completes its stroke and depresses the sear trip and automatic sear. This releases the hammer to fire another shot. This action continues until the trigger is released and allows the semiautomatic sear to rise and intercept the hammer.

f. When the selector is rotated to the semiautomatic position, the trigger bar is depressed and cannot engage the semiautomatic sear, but the disconnector rises so that it can engage. The firing cycle commences, but as the bolt carrier recoils, it depresses the disconnector to release the semiautomatic sear, which rises to catch the hammer. As the bolt carrier counterrecoils and trips the automatic sear, the hammer moves only a short distance and then is caught by the raised semiautomatic sear. To fire another round, the trigger is released and the disconnector moves rearward and upward into engagement with the semiautomatic sear. Pressing the

trigger will now depress the semiautomatic sear and fire one more shot.

g. When the selector is rotated to the safe position, both the disconnecter and the trigger bar are depressed so that they cannot engage the semiautomatic sear. Thus the hammer cannot be released to fire.

h. When the magazine is empty, a projection on the right rear of the magazine platform contacts the bolt catch and forces it up to intercept the bolt carrier when it countercoils. The bolt catch can also be actuated by finger pressure on its head. A weak spring holds the bolt catch depressed.

69. ACCESSORIES

a. The Vz 58 assault rifles do not have a combination tool kit; however, the following accessories are available:

- (1) Sling.
- (2) Bayonet and scabbard.
- (3) Flash hider.
- (4) Bipod.
- (5) Sectional cleaning rod w/brush and patch holder.
- (6) Oil bottle.
- (7) Magazine carrier.
- (8) Front-sight wrench.

b. The fabric sling is attached by looping it through the lower sling swivel and passing the leather end through the upper swivel loop and securing it with its button.

c. The bayonet is attached by sliding it onto the dovetail under the front-sight base until the bayonet catch locks into place. The bayonet is removed by pressing its catch and sliding it rearward off the rifle.

d. The flash hider (fig. 42) is installed by removing the muzzle nut (press in on its locking plunger and unscrew) and then screwing the flash hider on in its place. The locking plunger has to be depressed to allow the flash hider to be fully seated. Remove the flash hider by unscrewing it after depressing the locking plunger. The muzzle nut should then be replaced.



Figure 42. Vzor 58P assault rifle with flash hider and bipod.

e. The bipod (fig. 42) is installed on the front-sight base. Fold the legs forward on their base until the locking plunger retracts into the base; then slide the base onto the bayonet mount. Rotate the legs downward for use, or rearward, beneath the forearm, for carrying. Remove the bipod by folding the legs forward and sliding the bipod off the front-sight base. The bayonet cannot be attached when the bipod is installed.

f. The sectional cleaning rod is screwed together for use with either the brush or the cleaning patch holder. The grooved end of the rod is inserted into the cap of the oil bottle and is held in place with the handle of the front-sight wrench.

g. The heavy steel oil bottle has a screw cap with an oiling brush attached. This bottle also serves as the cleaning rod handle.

h. The front-sight wrench is used to adjust the front sight for elevation zero. Refer to paragraph 57b(2) for the procedure to be followed. The handle of the wrench is used as a punch when disassembling the rifle, and also for locking the cleaning rod to the oil bottle.

i. A fabric, 3-pocket magazine carrier is used. Cleaning material can also be carried in the carrier.

D. MAINTENANCE OF ASSAULT RIFLES

The procedures and materials prescribed for cleaning standard U.S. Army rifles also apply to Eurasian Communist assault rifles. These weapons should be disassembled only to the extent necessary for adequate cleaning, in order to prevent breakage and subsequent loss of use. No repairs should be attempted on foreign assault rifles other than replacement of parts, and this should be done only by a competent armorer.

E. MALFUNCTIONS AND STOPPAGES

Eurasian Communist assault rifles are extremely rugged weapons. Table VI lists the most common malfunctions and their remedies.

Table V. Assault Rifle Technical Data¹

Weapon	Kalashnikov	Modernized Kalashnikov	Vzor 58
Short name	AK-47	AKM	Vz 58P ²
Caliber (mm)	7.62	7.62	7.62
Length (in)	34.2	34.5	33.2
Weight, empty (lb)	9.48	6.93	6.9
Barrel length (in)	16.3	16.3	15.8
Magazine capacity (rd)	30	30	30
Operation	Gas	Gas	Gas
Locking feature	Rotating bolt		Swinging wedge
Fire-type	Selective	Selective	Selective
Muzzle velocity (m/sec)	710	715	700
Practical range, semiauto-matic (m)	400	400	400
Practical range, full-automatic (m)	300	300	300
Rate of fire, semiautomatic (rpm)	40	40	40
Rate of fire, full-automatic (rpm)	100	100	80 to 100
Rate of fire, cyclic (rpm)	600	600	820

¹ Data, unless otherwise stated, apply to both wooden- and folding-stock versions.

² Folding-stock version is M58V; all other data are identical

Table VI. Assault Rifle Malfunctions

Condition	Cause	Remedy
Fails to fire (cartridge in chamber)	Defective cartridge	Reload
	Bolt not fully locked	Clean and lubricate
Fails to fire (no cartridge in chamber)	Defective magazine	Replace magazine
Fails to extract or eject	Fouled weapon	Clean and lubricate

Malfunctions caused by broken or worn parts can be corrected by replacing the defective part with a serviceable one. This should be done only by a competent armorer, and the repaired weapon must then be function test fired.

Section IV. RIFLES

A. THE 7.62-MM SIMONOV SEMIAUTOMATIC CARBINE (SKS)

70. GENERAL

a. The Soviet-designed Simonov semiautomatic carbine (fig. 43), a gas-operated, integral box-magazine-fed weapon, now obsolete in the Soviet Army, is used by most of the other Eurasian Communist countries. This weapon has been manufactured in East Germany as the Karabiner-S (fig. 44), in Communist China as the Type 56 semiautomatic carbine, and in North Korea as the Type 63 carbine. The country of origin can be determined by the markings. The Soviet and East German weapons usually carry the year of manufacture and

the serial number on the front left of the receiver; the ChiCom weapons have the symbol 五六式 (Type 56) located there, while the North Korean weapons have a "63" symbol stamped into the receiver cover. The East German version has a hole through the stock for attaching the lower end of the sling; the others all have swivels.

b. All SKS-type rifles fire the 7.62 x 39-mm M1943 cartridge; however, if at all possible, cartridges produced by the same country that produced the rifle should be used. Refer to section VI for information concerning 7.62-mm M1943 ammunition.

71. TECHNICAL DATA

Technical data concerning the SKS carbine will be found in table VII.

72. OPERATION

a. Grasp the operating handle (fig. 43) and pull it fully to the rear and release. If the magazine is empty, the bolt will remain open. Insert a stripper clip into the clip guides at the top front of the bolt carrier and, with the thumb as close as possible to the base of the top cartridge, press the cartridges off the clip and into the magazine (fig. 45). Remove the empty clip. If clipped ammunition is not available, individual cartridges can be placed on top of the magazine and pressed down into the magazine until it is full. Pull the operating handle rearward and release; the bolt will run forward and chamber a cartridge. Caution: The rifle is now ready to fire!

b. If the rifle is not to be fired immediately, apply the safety (fig. 43) by rotating it forward and upward.

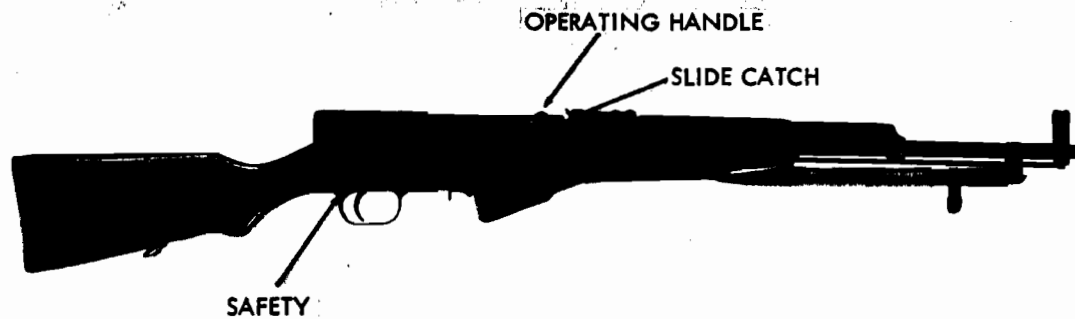


Figure 43. 7.62-mm Simonov semiautomatic carbine (SKS).

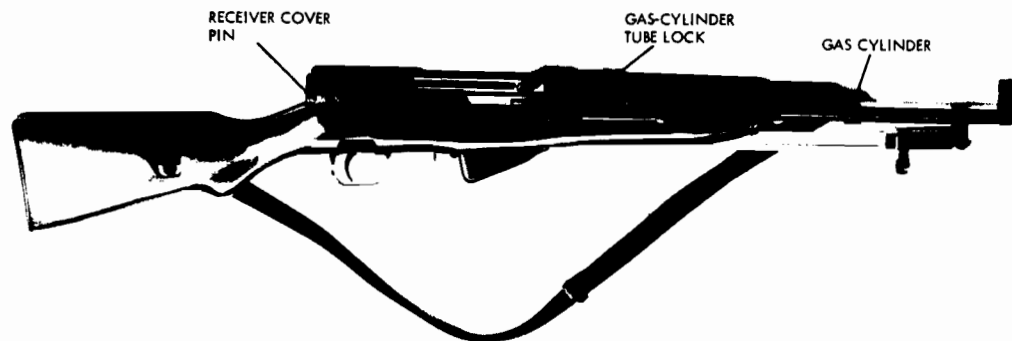


Figure 44. East German Karabiner-S.



Figure 45. Loading the SKS.

c. Set the rear sight for the desired range by depressing the slide catch (fig. 43) and moving the sight bar along the leaf until the front edge of the bar is alined with the line below the number that corresponds with the range in hundreds of meters. The first character on the sight leaf is a battle-sight setting used in combat for shooting at ranges up to 300 meters.

d. The front sight is adjustable for zero. Refer to paragraph 57b(2) for the procedure to be followed.

e. To fire, rotate the safety rearward until it is parallel to the trigger; then aim--using a normal sight picture--and press the trigger. The SKS will fire one shot and reload itself; when the last round has been fired, the bolt will remain open.

f. To unload or clear the SKS, apply the safety, then pull back the magazine catch and allow the magazine to swing open. Remove all cartridges and close the magazine. Grasp the operating handle, pull it fully rearward to eject any cartridge that might have been in the chamber, and release the handle; the bolt will remain open. Inspect to insure that no cartridges remain in the magazine, barrel, or receiver. Close the bolt either by opening the magazine again and pulling rearward on the operating handle and releasing it, or by pressing the magazine platform down slightly and pulling the operating handle rearward and releasing it. Move the safety to the ready position, press the trigger, and apply the safety.

g. The SKS bayonet is affixed by forcing the hilt to the rear (against spring pressure) and swinging the bayonet forward until it locks to the muzzle. This action is reversed to fold the bayonet in its stowed position.

73. DISASSEMBLY AND ASSEMBLY

a. Clear the weapon (par. 72f).

b. Press in on the cover in the buttplate until the combination tool case is ejected. Unlock the bayonet, let it hang vertically, and, after disengaging the head of the cleaning rod from the front-sight base, pull the cleaning rod out of the

rifle. (Note: The East German Karabiner-S does not have a combination tool case in the butt, nor does it have a cleaning rod; these are carried separately.)

c. Rotate the receiver cover pin (fig. 44) to a vertical position and pull it out as far as possible. (Note: It might be necessary to pry the receiver cover pin handle away from the receiver before it can be rotated.) Remove the receiver cover to the rear and pull the driving-spring assembly out of the bolt carrier.

d. Open the magazine by pulling the magazine catch to the rear, then pull the operating handle fully rearward, and lift the bolt carrier and bolt out of the receiver. Separate the bolt from the bolt carrier.

e. Rotate the gas cylinder tube lock (fig. 44) to its uppermost position and lift the rear of the handguard to remove the gas cylinder tube and the gas piston. The tube can be inverted, and the piston will slide out.

f. If necessary, the trigger group can be removed by depressing the catch located at the outer top rear of the trigger guard and by pulling the trigger group down and out of the rifle. The safety must be in the safe position before the catch can be depressed.

g. No further disassembly is necessary or desirable.

h. To reassemble, invert the rifle and engage the pins at the front of the trigger group with the notches behind the magazine box. Swing the trigger group into position in the stock and seat it by a blow of the hand on the loop of the trigger guard. Move the safety to the fire position to insure that the catch is fully engaged.

i. Slide the gas piston, small end first, into the gas cylinder tube; fit the large end of the tube over the gas cylinder (fig. 44). Swing the rear end of the gas cylinder tube into the rear-sight base and turn the gas cylinder lock downward.

j. Place the bolt into the receiver, with the extractor to the right front, and position the bolt about three-eighths of an inch from the inner rear wall of the receiver. Lay the bolt carrier on the bolt and, while pressing down on the carrier, move it slightly back and forth until it mates with the bolt. Slide the bolt and bolt carrier fully forward in the receiver. Insert the driving-spring assembly, stepped end first, into the bolt carrier.

k. Insure that the receiver cover pin is pulled fully out to the right, then slide the receiver cover into place from the rear. Secure it with the receiver cover pin and rotate the pin down to the locked position. Close the magazine, and replace the cleaning rod and the combination tool case.

74. FUNCTIONING

a. The SKS semiautomatic carbine is gas operated. After the SKS has been loaded, pressure on the trigger releases the hammer, which impacts against the firing pin, firing the rifle. The propellant gases drive the bullet through the barrel and, after the bullet passes the gas port, some of the gases are tapped off and directed against the piston head.

b. The propellant gases drive the piston rearward against the bolt carrier, forcing the carrier and the hammer rearward and compressing the driving and hammer springs. After the bolt carrier moves rearward about one-fourth of an inch, a cam on the inner top of the bolt carrier contacts a projection on the top rear of the bolt and lifts the rear of the bolt up and out of its seat in the receiver. The automatic safety, which has been held down by the bolt, now rises. The bolt and bolt carrier now travel rearward as a unit, while the piston is returned forward by its spring. The extractor withdraws the fired cartridge case from the chamber and holds it to the bolt until the case strikes the fixed ejector and is expelled. The rear end of the bolt carrier strikes the inner wall of the receiver, and all rearward movement then terminates.

c. The driving spring expands and forces the bolt and bolt carrier forward; the bolt drives the top round out of the magazine and into the chamber. When the cartridge is fully seated

in the chamber, the extractor snaps into the groove of the cartridge, and forward movement of the bolt ceases. The bolt carrier still has a short distance to travel and, as it does, it cams the rear of the bolt down into its seat in the receiver; the bolt, as it seats, forces the automatic safety down. All forward movement terminates when the bolt carrier strikes the receiver.

d. The SKS has a complicated trigger mechanism. The hammer is cocked by the recoiling bolt and is held cocked by a sliding sear. The sear is disengaged from the hammer by a spring-loaded trigger bar pivoted to the top of the trigger. The vertical alignment of the trigger bar is controlled by the automatic sear; the automatic sear, when depressed by the locking of the bolt, presses down on the trigger bar and thus aligns the trigger bar and sear. Pressure on the trigger will force the trigger bar to move forward and disengage the sear from the hammer. The hammer swings forward to fire the rifle, and, as it does, a cam on the bottom of the hammer depresses the automatic sear, which in turn depresses the trigger bar below the sear. The sear spring forces the sear back against the hammer.

e. When the hammer is rocked back by the bolt, it strikes the disconnector and depresses it. The disconnector insures that the contact between the trigger bar and the sear is broken by depressing the trigger bar. When the bolt counterrecoils, the hammer moves forward slightly, off the disconnector, which rises and allows the trigger bar to rise against the bottom of the sear (the automatic sear having risen to its highest point). When the trigger is released, the trigger bar moves rearward until it is clear of the sear, then it springs up (if the bolt is locked) against the automatic sear, and the rifle is ready for another shot.

f. The automatic sear prevents the rifle from firing if the bolt is not fully locked. It does this in two ways; first, by its control of the position of the trigger bar, and second, by a notch in the automatic sear, which intercepts the sear notch of the hammer if the automatic sear is not fully depressed, as the case would be if the bolt were not fully locked.

g. The safety, when rotated up to the safe position, places a block behind the trigger, preventing the trigger from being pressed.

h. The bolt catch is normally held depressed by a light spring. When the last round is fed from the magazine, a nib on the magazine platform contacts the catch and forces it upward. As the recoiling bolt passes the catch, the catch protrudes into the bolt path, holding the bolt open.

75. ACCESSORIES

a. The following accessories are available for use with the SKS semiautomatic carbine:

(1) Combination tool kit.

(2) Sling.

(3) Charger clips.

(4) Standard Soviet-pattern 2-compartment oil-and-cleaning-solvent container.

b. The combination tool kit, except for its cap, is similar in appearance and use to the kit for the AK-47 assault rifle. When used as a cleaning-rod guide, the cap is twisted into engagement with the front-sight base. See paragraph 57b(1) for instructions on the use of this kit.

c. The SKS uses the same sling as does the AK-47.

d. The stripper clips are used to charge the rifle's magazine. Each holds 10 cartridges.

e. The SKS uses the same oil-and-cleaning-solvent container as does the AK-47.

B. THE 7.62-MM VZOR 52 (Vz 52) AND VZOR 52/57 (Vz 52/57) SEMIAUTOMATIC RIFLES

76. GENERAL

a. The Czechoslovak-designed-and-produced Vzor 52 and Vzor 52/57 semiautomatic rifles (fig. 46) are gas-operated, box-magazine-fed shoulder weapons and are equipped with permanently attached folding bayonets. The Vz 52 and Vz 52/57 rifles are obsolete in the Czechoslovak Army; however, large quantities of both weapons have been supplied to several Communist-aligned nations.

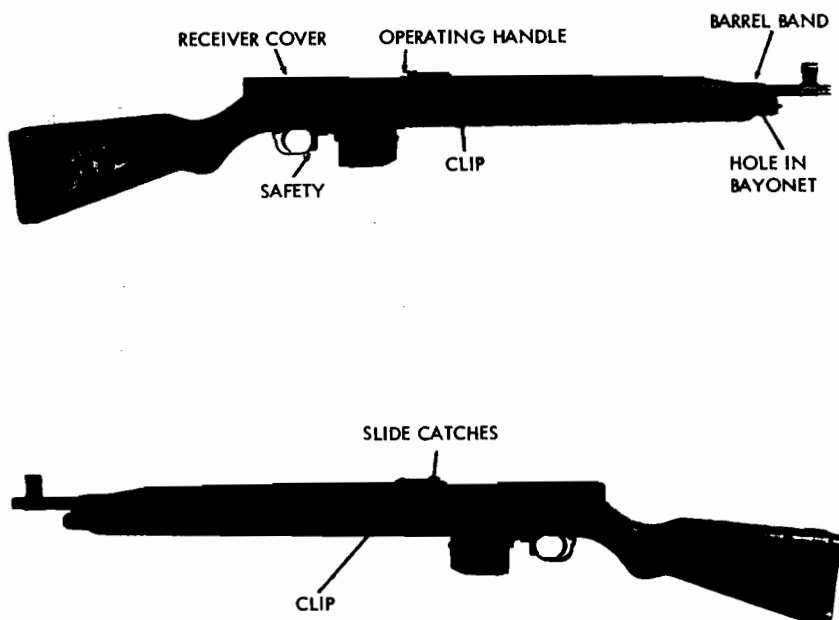


Figure 46. 7.62-mm Vzor 52 or Vzor 52/57 semiautomatic rifle.

b. The two rifles are almost identical in outward appearance; the Vz 52 is unmarked, while the Vz 52/57 bears the imprint "Vz 52/57" on the right front of the receiver. The main differences between the two rifles are those required by the different cartridges used; the Vz 52 fires the Czechoslovak

7.62 x 45-mm M1952 cartridge, the Vz 52/57 fires the 7.62 x 39-mm M1943 cartridge. If possible, Czechoslovak-manufactured ammunition should be used; however, any Communist-produced cartridges will suffice. Refer to section VI for information on the ammunition used with these rifles.

77. TECHNICAL DATA

Technical data concerning the Vz 52 and Vz 52/57 semiautomatic rifles will be found in table VII.

78. OPERATION

a. The Vz 52 and Vz 52/57 are identical in operation. These rifles can be loaded by any one of three different methods. In any case, the bolt must be drawn fully rearward by the operating handle (fig. 46) until the bolt is caught to the rear by the bolt catch; an empty magazine must be in place in the rifle to actuate the bolt catch. The three methods of loading are:

(1) Insert a 5-round stripper clip into the clip guides machined into the front of the bolt carrier; then, using thumb pressure, press the cartridges from the clip into the magazine.

(2) If clipped ammunition is not available, place individual cartridges in the magazine opening and press them into the magazine.

(3) If spare loaded magazines are available, press the magazine catch toward the magazine and, with a forward rotary motion, swing the empty magazine out of the rifle. Hold the loaded magazine slightly canted forward and mate the groove across its top front edge with the lip in the magazine well. Swing the magazine rearward until the magazine catch snaps into place.

b. Pull the operating handle rearward and release it; the bolt will go forward and load the first cartridge. Caution: The rifle is now ready to fire!

c. If the Vz 52 is not to be fired immediately, apply the safety (fig. 46) by moving it rearward.

d. Set the rear sight for the desired range by pressing the slide catches (fig. 46) and moving the sight bar along the leaf until the front edge of the bar is alined with the line below the number that corresponds with the range in hundreds of meters. The Vz 52 and Vz 52/57 rifles have no battle-sight setting.

e. The front sight is adjustable for windage zero only; it can be tapped from side to side.

f. To fire, press the safety forward; then aim--using normal sight picture--and press the trigger. The Vz 52 will fire one shot and reload itself; when the last round has been fired, the bolt will remain open.

g. To unload or clear the Vz 52, first remove the magazine, then draw the operating handle fully rearward. While holding the bolt open with the operating handle, inspect to insure that no cartridges remain in the receiver or chamber. Release the operating handle, press the trigger, and insert the magazine.

h. The Vz 52 bayonet is affixed by pressing on the bayonet catch (located at the left front end of the stock), and swinging the bayonet forward until it locks into place. The bayonet is folded back by again pressing on the bayonet catch and swinging the bayonet rearward until it locks into place.

79. DISASSEMBLY AND ASSEMBLY

a. Clear the weapon (par. 78g), but do not replace the magazine. Set the safety on safe by pressing it to the rear.

b. Force the receiver cover (fig. 47) forward as far as possible; press in on the plunger protruding from the rear of the cover and lift the cover straight up and off the receiver. Ease the plunger and the driving spring to the rear and upward, and remove them. Caution: Keep the strong driving spring under control.

c. Use the operating handle to pull the bolt carrier to the rear; at the same time firmly pull the handle to the right. This will cause the bolt carrier to slip into the disassembly notch as it moves rearward; when this happens, press down on the operating handle, and the bolt carrier will disengage from the receiver. Lift the bolt carrier away from the receiver. Lift the bolt carrier away from the receiver.

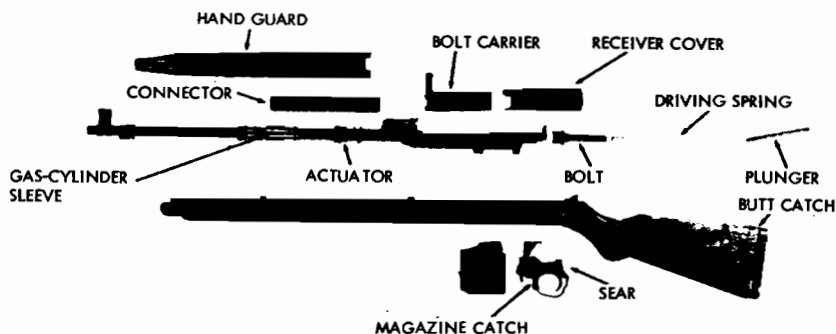


Figure 47. Vzr 52 semiautomatic rifle, field-stripped.

d. Push the bolt rearward in the carrier; pull down on the front end of the bolt and, when the bolt has disengaged, pull it forward out of the carrier.

e. Press in on the clips (fig. 46) in front of the rear sight and lift the handguard off the rifle.

f. Pull the rear end of the trigger guard to the rear to unlock it, then swing it forward. Slide the trigger group forward into the magazine opening and remove it.

g. Use a punch or the point of a bullet to press in on the plunger underneath the hole in the bayonet (fig. 46) then slide the barrel band (fig. 46) forward. Lift the muzzle end of the barrel away from the stock and separate the stock from the rifle.

h. Hold the gas-cylinder sleeve (fig. 47) in place and force the connector (fig. 47) as far to the rear as possible until it can be lifted away from the gas-cylinder sleeve.

Pull the connector forward out of the actuator (fig. 47). The gas-cylinder sleeve can be moved to the rear for cleaning.

i. No further disassembly is necessary or desirable.

j. To reassemble, first insure that the actuator is in place with its semicircular cut facing upward. It should be possible to push the actuator in, flush with the front of the receiver. Slide the gas-cylinder sleeve forward. Insert one end of the connector into the actuator and force both parts rearward until the connector can be placed onto the gas-cylinder sleeve. If necessary, rotate the connector slightly to insure that it is mated into the two slots in the bottom of the actuator.

k. Aline the recess at the lower rear end of the receiver with the recoil lug on the stock, then lower the barrel into the stock. Start the barrel band into its seat in the stock tip, press in on the plunger, and fully seat the barrel band. Insert the lip at the front of the handguard into the barrel band and press the rear of the handguard down until it snaps into place.

l. Place the trigger group into the magazine opening and, with a rearward twisting motion, aline the trigger housing lugs with their slots in the receiver. Slide the trigger housing to the rear and close the trigger guard.

m. Insert the round end of the bolt into the loop in the bolt carrier and push the bolt as far as possible to the rear. Press the front end of the bolt into the carrier; at the same time, push the bolt forward until it snaps into the bolt carrier, and the extractor is flush with the front of the bolt carrier.

n. Tilt the bolt carrier so that the operating handle tilts downward and insert the bottom right rail of the bolt carrier into its groove in the receiver. Press down on the carrier and move it forward or rearward until its left side seats into the receiver, then slide the carrier fully forward.

o. Insert the driving spring into the bolt carrier and then insert the plunger into the spring. Force the plunger forward

until it can be inserted into the upper hole in the rear wall of the receiver.

p. Place the receiver cover on the receiver, with the rear of the cover resting on the plunger. Press the plunger forward until the cover drops over it; then force the cover forward until it seats into its tracks in the receiver. Ease the cover to the rear. Insert the magazine.

80. FUNCTIONING

a. The Vzor 52 and Vzor 52/57 rifles are identical in their functioning. The rifles are gas operated; however, they employ an unusual concentric gas cylinder which surrounds the barrel. The gas mechanism is composed of a bearing mounted on the barrel, with a gas port drilled through it into the barrel. A sliding gas-cylinder sleeve is positioned over the bearing and is connected to the actuator by means of a sheet-steel connector (fig. 47).

b. When the rifle is loaded and cocked, pressure on the trigger releases the hammer, which impacts against the firing pin, firing the rifle. The propellant gases drive the bullet through the barrel, and, after the bullet passes the gas port, some of the gases are tapped off and expand between the rear of the barrel bearing and the gas-cylinder sleeve. The sleeve is forced to the rear, and this motion is transmitted through the connector to the actuator. The actuator, by means of projections that pass through the sides of the receiver, forces the bolt carrier rearward. This movement of the carrier compresses the driving spring and rocks the hammer to the rear. As the carrier continues rearward, cams on the inner sides of the carrier, mating with lugs on the bolt, lift the front end of the bolt out of its locking recess in the receiver. When the bolt is completely unlocked, it and the carrier travel to the rear as one unit. The actuator, connector, and gas-cylinder sleeve are returned forward by a spring pressing against the actuator (fig. 47).

c. The stirrup-type extractor withdraws the cartridge case from the chamber and holds it to the bolt. The plunger-type ejector contacts a lug in the rear floor of the receiver

and stops. The bolt continues to the rear, and the now stationary ejector protrudes through the bolt face and strikes the cartridge case, which pivots around the extractor and is expelled. The bolt carrier strikes the rear wall of the receiver and stops.

d. The driving spring forces the bolt and bolt carrier forward. The bolt drives the top cartridge out of the magazine and into the chamber. When the cartridge is fully seated in the chamber, the extractor snaps into the groove in the cartridge case. The forward movement of the bolt now ceases. The bolt carrier continues to move forward, and, as it does, the cams in its inner sides force the bolt down into its locking recess. The bolt carrier finally strikes the receiver and stops.

e. If the bolt does not lock fully, the firing pin will not align with the cartridge primer, and the bolt carrier will not go fully forward. If this happens, the loop on the bolt carrier prevents the hammer from striking the firing pin.

f. The trigger mechanism of the Vz 52 and Vz 52/57 rifles is similar to that of the U.S. M14 rifle. When the hammer is cocked, pressure on the trigger causes it to pivot about its pin; the front hooks of the trigger disengage from the front lugs of the hammer, and the hammer, under pressure of its spring, swings forward to fire the rifle.

g. The recoiling bolt carrier forces the hammer back to its cocked position. The sear (fig. 47) which, because of the trigger rotation, has moved forward, is pushed back against its spring as the rear hammer hooks pass. When the rear hooks completely pass the sear, it snaps back into position, and, as the bolt counterrecoils, the sear engages the hammer and holds it to the rear. When the trigger is released, the sear moves to the rear and releases the hammer; however, as the front trigger hooks have now moved to the rear, they intercept the hammer and hold it cocked. The trigger must be pressed again to fire another shot.

h. When the safety is applied a hook on the front of the safety locks the hammer, and also blocks the trigger so that it cannot be pressed.

i. When the magazine is empty, a projection on the rear of the magazine platform contacts the bolt catch and forces it up to intercept the bolt when it counterrecoils. A weak spring normally holds the bolt catch in its retracted position.

81. ACCESSORIES

a. The accessories used with the Vzor 52 and Vzor 52/57 rifles are carried in recesses in the butt and are removed by depressing the butt catch (fig. 47) and removing the buttplate. The accessories are:

- (1) 3-piece sectional cleaning rod.
- (2) Bore brush.
- (3) Oil bottle.
- (4) Breech shield.

In addition, a fabric sling is used with the rifle.

b. The sections of the cleaning rod are screwed together for use; the assembled rod can be screwed into the lid of the oil bottle, which then serves as a handle. The bore brush can also be screwed onto the rod.

c. The breech shield keeps dirt out of the breech during cleaning and prevents damage to the bolt. To use, open the bolt and engage the hooks of the shield in the cuts next to the actuator projections; then swing the shield down until its wings rest on the receiver; ease the bolt onto the shield.

C. THE 7.62-MM CARBINE MODEL 1944

82. GENERAL

a. The Soviet-designed Model 1944 carbine (fig. 48)--a rifle by U.S. standards--is the final version of a rifle originally adopted by the Russian Army in 1891. There have been many variations on the original weapon: Rifles, short rifles, carbines, and sniper's rifles. Only the Model 1944 carbine is still in extensive use. Earlier versions, such as the Model 1891/30 rifle (fig. 48) and the Model 1938 carbine (fig. 48), will occasionally be encountered. Instructions for the Model 1944 carbine also apply to these earlier weapons. These old Russian weapons are simple, rugged, and reliable.

b. The Model 1944 carbine is a short, 5-round-capacity, magazine-fed, manually operated, bolt-action weapon equipped with a permanently attached, folding spike bayonet. This weapon can easily be recognized by its protruding, stream-lined magazine, its short, straight bolt handle, and its large, flanged cocking piece. The Chinese Communists have also produced this rifle (Type 53 carbine). It can be distinguished from the Soviet Model 1944 by the Chinese characters stamped into its receiver. All versions of this weapon fire the 7.62 x 54R long-rimmed cartridge. See section VI for additional information on the ammunition used with these rifles.

83. TECHNICAL DATA

Technical data concerning the Model 1944 carbine will be found in table VII.

84. OPERATION

a. Open the bolt by turning the bolt handle (fig. 49) to the vertical position; then pull the bolt fully to the rear. Load the magazine by:

(1) Inserting a 5-round stripper clip into the clip guides in the receiver (fig. 49) and pressing the cartridges from the clip into the magazine; or

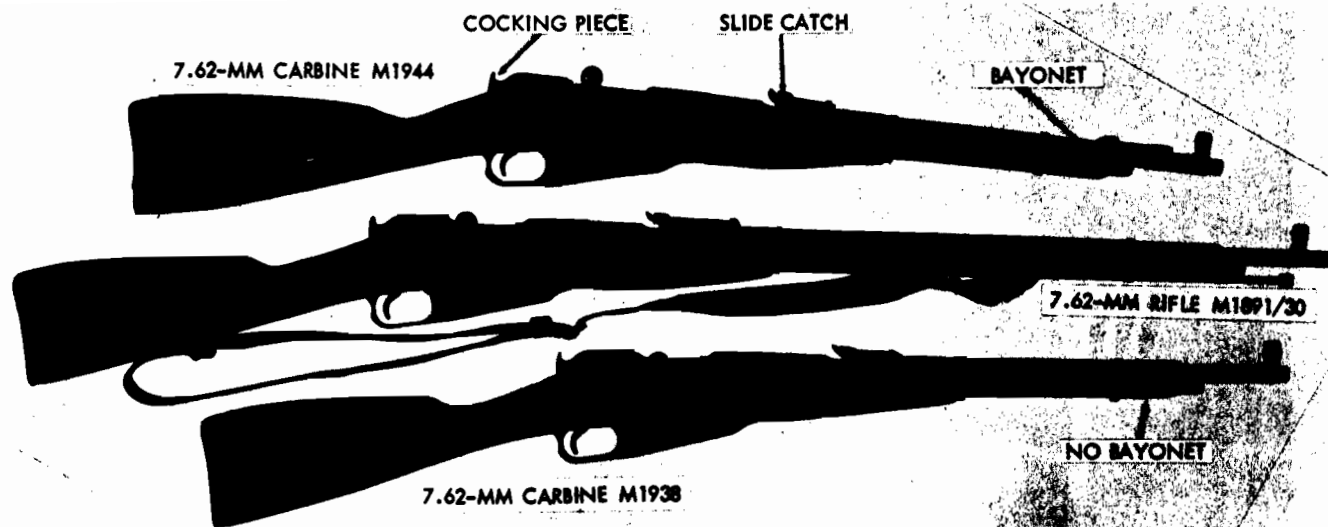


Figure 48. Bolt action rifles.

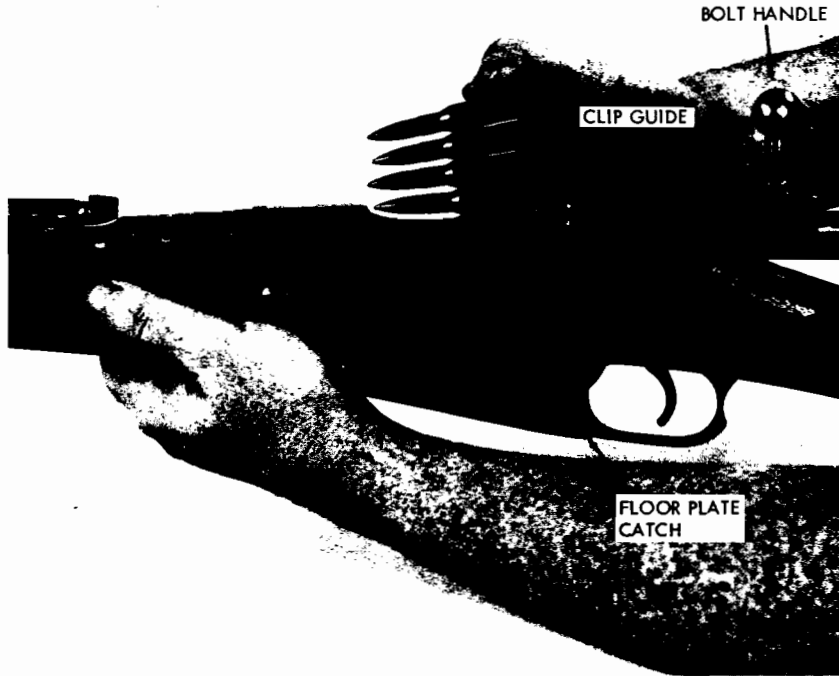


Figure 49. Loading the Model 1944 carbine.

(2) Placing individual cartridges in the receiver and pressing them down into the magazine until they are caught by the interrupter. Be sure that the rim of each cartridge, as it is loaded, is ahead of the rim of the preceding cartridge.

b. Individual cartridges can also be inserted directly into the chamber.

c. Slide the bolt forward and rotate the handle to its horizontal position. Caution: The rifle is now ready to fire! If the weapon is not to be fired immediately, make it safe by grasping the cocking piece and drawing it back against the force of the firing pin spring, then rotating it to the left and engaging it with the receiver wall. Reverse this action to prepare the rifle for use.

d. Set the rear sight for the desired range by pressing the slide catch and moving the sight bar along the leaf until the front edge of the bar is alined with the line below the number that corresponds with the range in hundreds of meters. There is no battle-sight setting.

e. The front-sight post is adjustable for zero; it can be screwed in or out for elevation adjustment, and tapped from side to side for windage adjustment (M1891/30, M1938, and M1944 only).

f. To fire, if the rifle is on safe, pull the cocking piece to the rear and rotate it to the fire position; aim--using a normal sight picture--and press the trigger. Rotate the bolt handle up and pull it vigorously to the rear. Then push it forward and rotate it down. The weapon can again be fired. These rifles have no device to hold the bolt open when the last round is fired.

g. To unload or clear these weapons, open the bolt (par. 84a) and release the floorplate catch (fig. 49) by pressing it to the rear. The floorplate and the magazine platform will swing out of the magazine, along with any cartridges. Inspect to insure that no cartridges remain in the barrel or magazine, then swing the floorplate back into position, close the bolt, and press the trigger.

85. DISASSEMBLY AND ASSEMBLY

a. Clear the weapon (par. 84g).

b. Open the bolt, press the trigger, and, while holding the trigger, pull the bolt out of the rifle.

c. Open the magazine by pressing the floorplate catch (fig. 49) to the rear and swinging the floorplate down. Squeeze the magazine platform against the floorplate and pull the floorplate away from the magazine.

d. No further disassembly is necessary or desirable.

e. To reassemble the rifle, squeeze the magazine platform against the floorplate and engage this unit with the large crosspin at the front of the magazine. Release the platform and swing the floorplate up into its latched position.

f. Insert the bolt into the receiver and push it forward over the trigger and sear.

86. FUNCTIONING

a. The Model 1944 carbine is manually operated; all power to operate its mechanism comes from the shooter. When the bolt handle is raised, a cam on the cocking piece is forced back by a cam cut in the bolt to retract and cock the firing pin. As the bolt is drawn back, the extractor removes the cartridge case from the chamber and holds it to the bolt until it strikes the ejector-interrupter, at which time it is expelled. The guide rail on the bottom of the bolt contacts the top of the trigger and stops the rearward travel of the bolt.

b. When the bolt is pushed forward, it drives the top cartridge out of the magazine and into the barrel. As the bolt is rotated shut, the extractor snaps over the rim of the cartridge, and a cam on the bolt pushes the interrupter in and releases another cartridge into the feedway. Finally, the cam on the cocking piece aligns with the cam cut in the bolt.

c. When the trigger is pressed, it bends the flexible sear down and out of engagement with the cocking piece. The firing pin spring drives the firing pin forward to fire the weapon.

87. ACCESSORIES

a. The following accessories are issued with the Model 1944 carbine, but are carried separately from the weapon:

- (1) Cleaning rod patch holder.
- (2) Bore brush.
- (3) Screwdriver.
- (4) Oil can.

b. The patch holder is attached to the cleaning rod and used to hold patches when cleaning the barrel. The screw-driver is used for tightening the trigger guard/magazine screw.

D. THE 7.62-MM SNIPER'S RIFLE MODEL 1891/30

88. GENERAL

a. The Model 1891/30 sniper's rifle (fig. 50) is a Model 1891/30 rifle that is specially selected for accuracy and fitted with a telescopic sight. In addition, the bolt handle has been lengthened and turned down alongside the stock.

b. These rifles can be fitted with the 3.5-power PU telescope (fig. 50) or the 4-power PE telescope (fig. 52). The PU is the more common telescope. These telescopes have large pointed post reticles and rather coarse adjustments.

89. TECHNICAL DATA

Technical data concerning the Model 1891/30 sniper's rifle will be found in table VII.

90. OPERATION

Refer to paragraph 84.

91. DISASSEMBLY AND ASSEMBLY

Refer to paragraph 85.

92. FUNCTIONING

Refer to paragraph 86.

93. ACCESSORIES

a. The PU and PE telescopes are removed by loosening the lock screw (fig. 50) and removing the telescope and its upper mount.

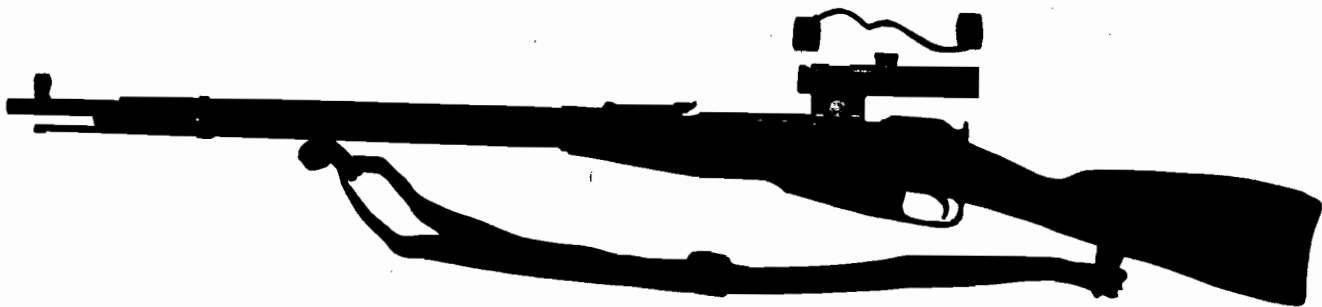


Figure 50. Model 1891/30 sniper's rifle with PU telescope.

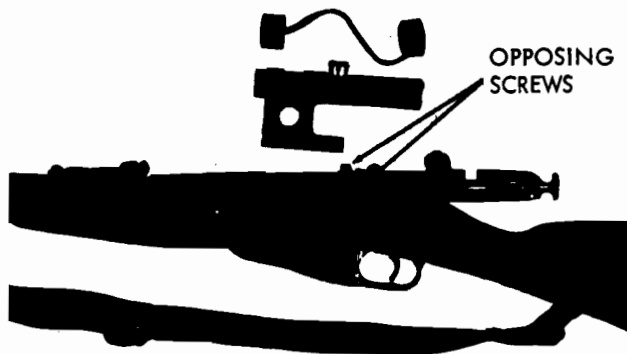


Figure 51. Zero adjustments for PU telescope.

b. The PU telescope can be zeroed to the rifle by means of adjustment screws in the mount. Elevation zero is accomplished by alternately loosening and tightening the vertical opposing screws (fig. 51) near the lock screw. Windage zero is accomplished by adjusting the screw in the upper mount that bears against the lower mount; this determines how close to the receiver the rear mount can move.

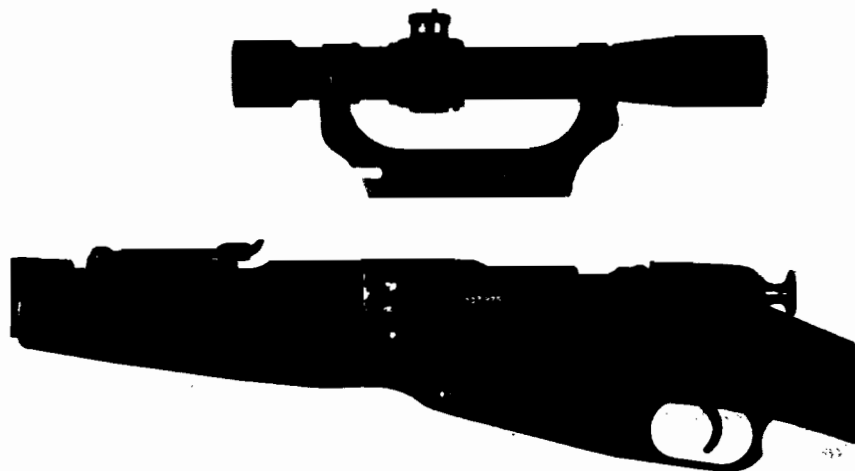


Figure 52. Model 1891/30 sniper's rifle with PE telescope.

c. The PE telescope can be adjusted for windage zero by means of the screw in the rear mount (fig. 52).

d. Handle these telescopes with care. Avoid scratching the lenses, and clean them only with a soft, grit-free cloth.

e. Use the tip of the pointed post for aiming.

E. MAINTENANCE OF RIFLES

The procedures and materials prescribed for cleaning standard U.S. Army rifles also apply to Eurasian Communist rifles. These weapons should be disassembled only to the extent necessary for adequate cleaning, in order to prevent breakage

and subsequent loss of use. No repairs should be attempted on foreign rifles other than replacement of parts, and this should be done only by a competent armorer.

F. MALFUNCTIONS AND STOPPAGES

See table VIII for common malfunctions and their remedies.

Table VII. Rifle Technical Data

Weapon	Simonov carbine	Vzor 52 ¹	M1944	M1891/30
Short name	SKS	Vz 52	M44	M91/30
Caliber (mm)	7.62	7.62	7.62	7.62
Length (in)	40.2	39.5	40	48
Weight, empty (lb)	8.49	9.4	8.6	9.9 ²
Barrel length (in)	20.5	20.6	20.47	28.6
Magazine capacity (rd)	10	10	5	5
Operation	Gas	Gas	Manual	Manual
Locking feature	Tilting bolt	Tilting bolt	Turn bolt	Turn bolt
Muzzle velocity (m/sec)	735	745	810	865
Practical range (m)	400	400	400	500 (800 w/scope)
Rate of fire (rpm)	35 to 40	35 to 40	10	10
Method of loading	10-rd charger	5-rd charger	5-rd charger	5-rd charger

¹ Includes Vz 52/57.

² Without telescopic sight.

Table VIII. Rifle Malfunctions

Condition	Cause	Remedy
Fails to fire (cartridge in chamber)	Defective cartridge	Reload
	Bolt not fully locked	Clean and lubricate
Fails to fire (no cartridge in chamber)	Short recoil	Clean and lubricate
Fails to extract or eject	Fouled weapon	Clean and lubricate

Malfunctions caused by broken or worn parts can be corrected by replacing the defective part with a serviceable one. This should be done only by a competent armorer, and the repaired weapon must then be function test fired.

Section V. MACHINEGUNS

A. THE 7.62-MM KALASHNIKOV SQUAD LIGHT MACHINEGUN (RPK)

94. GENERAL

a. The Soviet Kalashnikov squad light machinegun Model RPK (fig. 53) is a gas-operated, selective-fire, box- or drum-magazine-fed, bipod-mounted weapon developed from the AKM assault rifle (par. 58). The RPK is used by the Soviet and East German Armies and is replacing the older RPD squad light machinegun (par. 112) in other Warsaw Pact Armies. The East Germans refer to the RPK as the LMG-K.



Figure 53. Soviet 7.62-mm Kalashnikov squad light machinegun (RPK).

b. The RPK differs from the AKM in several ways; the RPK has a longer, heavier barrel, a folding bipod, a modified receiver, and a different rear sight, forearm, and buttstock. Except for these, all other parts of the weapons appear to be interchangeable (refer to the warning in the Preface concerning parts interchange). Some RPK's are equipped with a bracket for mounting an infrared night sight, and a folding-stock version is issued to airborne units.

c. The RPK can be fed from any one of three different magazines: The 30-round-capacity AK-47/AKM box magazine, the 40-round-capacity RPK box magazine, or the 75-round-capacity RPK drum magazine. Any of these magazines can be used with any Kalashnikov weapon. The RPK fires the 7.62 x 39-mm M1943 cartridge; refer to section VI for information concerning this ammunition.

95. TECHNICAL DATA

Technical data concerning the RPK light machinegun will be found in table IX.

96. OPERATION

a. The RPK is operated in the same manner as for the AK-47 rifle; refer to paragraph 54.

b. To load the 75-round drum magazine, press down the lever on the front of the drum to compress the magazine spring before each round is inserted into the feed lips of the magazine. The loaded drum is then inserted into the rifle in the same manner as is a box magazine.

c. The bipod can be unfolded for use by unsnapping the bipod clip (fig. 53) from the right leg and then swinging the bipod legs forward. The legs spring apart and lock into place. The bipod is folded by pressing its legs together, swinging them rearward, and securing them with the bipod clip.

97. DISASSEMBLY AND ASSEMBLY

Disassembly and assembly of the RPK is accomplished exactly the same way as for the AK-47 assault rifle (par. 55).

98. FUNCTIONING

The RPK's functioning is identical to that of the AKM assault rifle (par. 62).

99. ACCESSORIES

The RPK has the same accessories as does the AK-47 (par. 57), except for the bayonet, which is not used with the RPK. Some RPK's can mount an infrared night-sighting device.

B. THE 7.62-MM VZOR 52 (Vz 52) AND VZOR 52/57 (Vz 52/57) LIGHT MACHINEGUNS

100. GENERAL

a. The Czechoslovak-designed-produced Vzor 52 and Vzor 52/57 light machineguns (figs. 54 and 55) are identical except for minor alterations required by the different cartridges they use; the Vz 52 fires the Czechoslovak 7.62 x 45-mm M1952 cartridge, the Vz 52/57 fires the 7.62 x 39-mm M1943 cartridge. Refer to section VI for information concerning ammunition. The two guns can be distinguished from each other by their markings; they will have either "Vz 52" or

"Vz 52/57" stamped into the receiver. These guns are gas-operated, selective-fire, belt- or box-magazine-fed, bipod- or tripod-mounted weapons equipped with quick-change barrels. While the Vz 52 is obsolete in the Czechoslovak Army, the Vz 52/57 is still used, and both weapons have been distributed to other countries.

b. The Vz 52 and Vz 52/57 machineguns have many unique features, such as their use of either box magazine or feed belts without adding extra components, an extremely fast and simple method of changing barrels, cocking and jam clearing by sliding the trigger group back and forth, and having the type of fire determined by the location of the gunner's finger on the trigger.

101. TECHNICAL DATA

Technical data concerning the Vz 52 and Vz 52/57 light machineguns will be found in table IX.

102. OPERATION

a. These guns can be fed from box magazines or metallic-link feed belts. If box magazines are used, close the dust cover (fig. 54), force the side feed cover lever fully down, and press the magazine catch forward until the feed cover springs open. The box magazines are loaded by placing a cartridge between the feed lips and pressing the cartridge down until it rolls under one of the lips. Repeat until 25 cartridges have been loaded. Engage the lip at the front of the magazine, with its recess in the magazine opening of the receiver, and rock the magazine back until the magazine catch snaps into place.

b. If the metallic-link belt is to be used for feeding, load it by sliding cartridges into its loops until the tail of each link snaps into the groove in the cartridge case. Close the feed cover (fig. 54), open the small left-side dust cover, and raise the knurled end of the side feed cover lever to open the feed-way entrance. The top of the lever should be aligned with the top of the feed cover. The belt must be loaded with the open side of the links facing down. Press the lead tab into the

feedway and out the small opening on the left side. Vigorously pull the lead tab to the left as far as possible to seat the first round in the holding pawls.

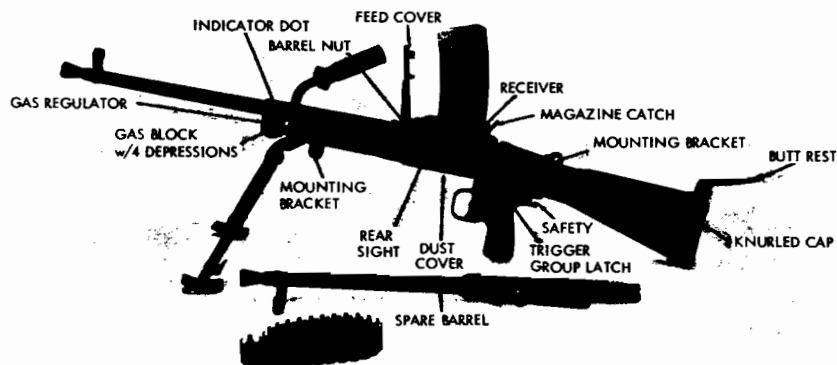


Figure 54. 7.62-mm Vzor 52 light machinegun, box magazine in place.

c. Prior to cocking the machinegun, the trigger group can be either forward or rearward, and it may be locked in place by the safety (fig. 54). Unlock the safety by pressing it down. If the trigger group is in its forward position, draw it rearward (without touching the trigger) until it catches. If it is rearward, depress the conical trigger group latch (fig. 54), slide the trigger group forward as far as possible, release the latch, and, without touching the trigger, draw the trigger group to the rear until it latches in place. Caution: The machinegun is now ready to fire!

d. If the weapon is not to be fired immediately, press the safety up until the letter "Z" appears; the weapon is now safe.

e. The bipod is unfolded by disengaging its feet from the ridges formed in the sides of the receiver housing and swinging them forward; they will lock into place. The legs can be lengthened by pulling the bottom legs out of the top legs, or shortened by pressing the catch on the top leg and telescoping the bottom leg into the top one. The bipod is folded by squeezing the legs together and swinging them rearward, where they can lock onto the receiver housing. The butt rest can be

unfolded to support the stock on the gunner's shoulder during firing.

f. Adjust the rear sight for the desired range by rotating the serrated nut under the rear sight until the figure that corresponds with the range in hundreds of meters is alined between the pointers above the serrated nut. Windage adjustments can be made by turning the windage knob at the left of the rear sight.

g. To fire, press the safety (fig. 54) down; then aim--using a normal sight picture--and press the trigger. If the top of the trigger (marked "I") is pressed, only one shot will be fired; if the bottom of the trigger (marked "D") is pressed, the gun will fire automatically.

h. To unload or clear the gun when a box magazine has been used, press the magazine catch toward the magazine; then tip the magazine forward and remove it.

i. If belts have been used, press the magazine catch and allow the feed cover to swing open; then rotate the side feed cover lever (fig. 55) up and forward until the side feed cover swings open. Lift the belt up and out of the gun.

j. Inspect to insure that no cartridges remain in the gun; then close all covers. Press the trigger group latch and ease the recoiling parts and trigger group forward; then press the safety upward to lock the gun.

k. If it is necessary to change barrels, press the magazine catch forward and remove the magazine or allow the feed cover to swing open. Rotate the open feed cover to the right as far as possible; then pull the barrel forward, out of the gun. Insert a new barrel by sliding it into place, insuring that the gas block enters the gas cylinder at the front of the receiver housing. Turn the feed cover back to a vertical position to lock the barrel in place.

l. Adjust the gas regulator to give positive functioning at its lowest setting. The gas regulator has four different-sized dots drilled into its left side, and the gas block has a

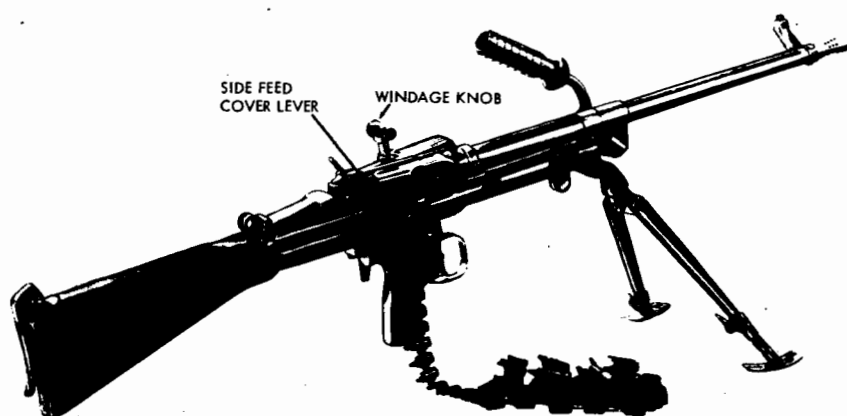


Figure 55. Vzor 52 light machinegun, belt-fed.

single dot drilled into it. One of the dots on the regulator must be aligned with the dot on the gas block. The size of the particular dot indicates the size of the gas port in use. Normally, the smallest port is used with box magazines and the second smallest port is used with belts. If there is a loss of operating power, adjust the gas regulator to its next larger port. Remove the barrel and rotate the regulator in the gas block until the next larger dot aligns with the dot on the gas block. Replace the barrel.

103. DISASSEMBLY AND ASSEMBLY

a. Clear the weapon (par. 102h, i, and j), but do not close the feed cover or set the safety on safe. Pull the trigger and draw the trigger group to the rear; then remove the barrel.

b. Lift the butt rest (fig. 54) and press in and rotate counterclockwise the knurled cap under the butt rest until the cap disengages and can be eased out to the rear. Pull the driving spring and rod out of the buttstock.

c. Reach into the channel in the front of the receiver housing and move the piston to the rear until it is just clear of the gas cylinder. Grasp the receiver (fig. 56) at its front

end and pull it up out of the receiver housing. Make certain that the piston and bolt do not accidentally slide out.

d. Slide the piston and bolt rearward, out of the receiver. Lift the rear end of the bolt up and pull it toward the rear; then lift it off the slide.

e. Rotate the gas regulator until the bar on its right side lines up with the notches in the gas block; then press the regulator out of the block.

f. No further disassembly is necessary or desirable.

g. To reassemble, insert the gas regulator into the gas block so that the bar passes through the notches in the block; then turn the regulator to its proper setting (par. 102l).

h. Hold the bolt at an angle to the slide; then fit the rails at the lower front end of the bolt into the cuts in the slide just in front of the hammer, and drop the bolt over the hammer onto the slide. Push the bolt forward on the slide; then aline the grooves in the slide with the lowest set of rails in the receiver, and push the slide forward until its rear end is flush with the rear of the receiver.

i. Insert the receiver into the receiver housing, tilting the receiver enough to insert its rear end under the top cover of the receiver housing; then press the front end of the receiver down into place.

j. Insert the driving spring (push rod first) into the butt and press it forward until the piston moves forward. Place the knurled cap over the spring, press it home, and rotate it clockwise to lock.

k. Insert the barrel (par. 102k) and then clear the weapon.

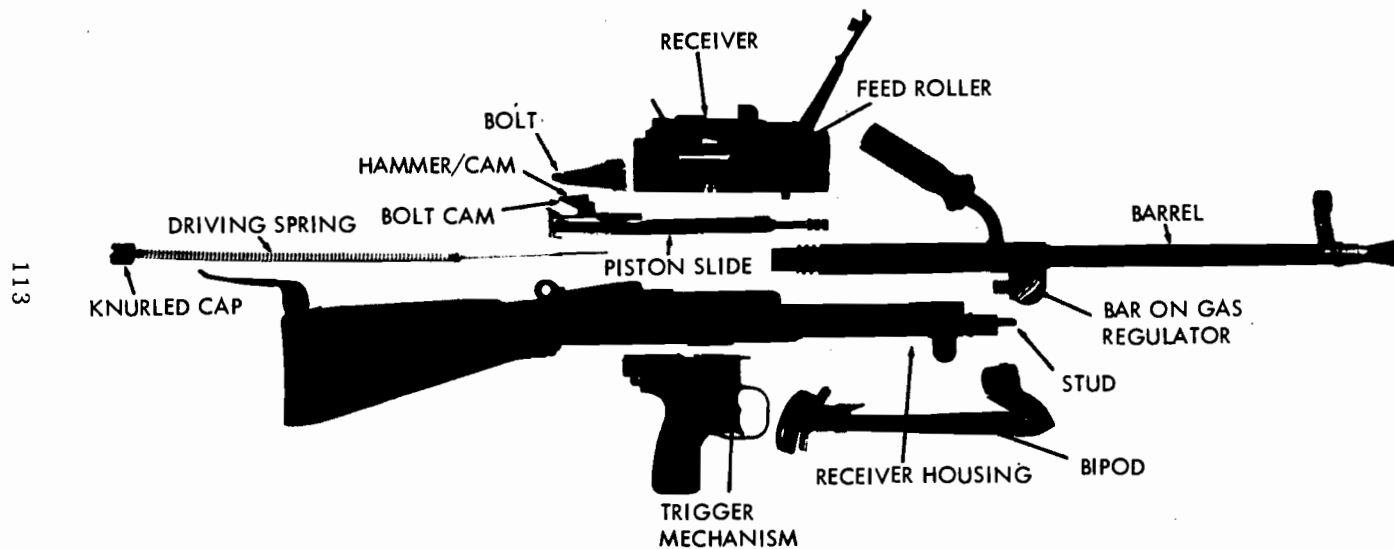


Figure 56. Vzor 52 light machinegun, field-stripped.

104. FUNCTIONING

a. The Vz 52 and Vz 52/57 machineguns fire from the open bolt position. When the trigger is pressed, the gas piston, slide, and bolt are released, and the driving spring impels them forward to load and fire a cartridge. Some of the propellant gases are tapped off and drive the piston, slide, and bolt to the rear, compressing the driving spring in preparation for another shot.

b. When the upper or semiautomatic portion of the trigger cover is pressed, the trigger pivots on its pin, and its upper end moves forward. The disconnecter, pinned to the upper end of the trigger, moves forward, as does the sear hook (with its downward extending shaft) pinned to the bottom of the disconnecter. The sear hook is engaged with a downward extending arm of the L-shaped sear, and as the sear hook moves, it makes the sear rotate about its pin and release the slide. Under the force of the driving spring, the slide starts to drive forward, striking the disconnecter and forcing it to pivot down on its pin. As the disconnecter goes down, the sear hook also goes down and releases the sear. The sear spring forces the sear up where it can engage the recoiling slide and hold it to the rear. When the trigger is released, the disconnecter and the sear hook move rearward, and the sear hook snaps up to reengage the sear. Pressure on the upper trigger will again fire one shot.

c. When the lower or automatic portion of the trigger is pressed, the trigger cover pivots on its pin and blocks the sear hook extension from swinging forward as the disconnecter pivots on its pin. This action causes the disconnecter to move down and forward as the trigger is pressed; however, a lug on the trigger cover also forces the sear hook to pivot on the disconnecter and stay in engagement with the sear. The sear is depressed and stays depressed until the trigger is released; the sear spring then forces the sear up where it can catch the slide.

d. When the safety is applied, it pivots and positions a small pin under the sear, which prevents the sear from depressing to release the slide. The pin also moves into a slot

in the trigger housing to prevent the trigger group catch from being depressed. The top of the safety also fits into a cut in the receiver housing and locks the trigger group in place.

e. When the sear releases the slide, the compressed driving spring forces the slide, piston, and bolt forward. The feed rib on the bolt strips a cartridge from the magazine or belt and drives it into the chamber. The cartridge rim seats in the fixed extractor at the bottom of the bolt face; the movable extractor then keeps the round in position. When the cartridge is fully seated in the chamber, the bolt stops its forward motion. The slide continues to move forward, and the combined hammer and cam (fig. 56) forces the rear of the bolt up into its locked position. In the last forward travel of the slide, the hammer strikes the firing pin to fire the cartridge.

f. Some of the propellant gases that drive the bullet through the barrel are tapped off at the gas block and led through the gas regulator into the gas cylinder to drive the piston and slide to the rear. As soon as the piston and slide start rearward, the hammer moves away from the firing pin, and the cam on the back of the hammer pulls the bolt out of its locked position. The bolt and slide now travel as one; the extractors pull the fired cartridge case from the chamber and hold the case to the bolt until the fixed ejector expels the case out the bottom of the gun. The slide continues rearward until it strikes the buffer at the rear end of the receiver housing; the driving spring then drives the slide forward, either to fire another shot or to be caught by the sear.

g. The belt is fed into the gun by a laterally reciprocating belt-feed lever. This lever is mounted vertically on the receiver, with a pivot halfway along its length. A roller on the bottom of the lever rides along a cam on the piston slide, and, as the slide moves rearward, this cam forces the upper end of the lever inward. This movement feeds the belted cartridge into the gun against a pair of positioning stops on the feed cover. As the slide moves forward, a second cam forces the feed lever out, and, as the slide moves, a spring-loaded pawl on its upper end is depressed by, and slides under the next round in the belt. The belt is prevented from moving

outward by a pair of stationary spring-loaded holding pawls that engage the second round in the belt. The round positioned against the stops is driven out of the link and into the barrel by the feed rib on the bolt.

105. ACCESSORIES

A fabric sling, magazine carriers, belt boxes, and a cleaning rod are issued as accessories.

C. THE 7.62-MM DEGTYAREV LIGHT MACHINEGUNS (DP, DPM, DTM, and RP-46)

106. GENERAL

a. The Soviet Degtyarev light machinegun Model DP was the forerunner of a number of basically similar weapons:

- (1) The DP infantry light machinegun (fig. 57).
- (2) The DPM modernized infantry light machinegun.
- (3) The DTM modernized tank machinegun (fig. 58).
- (4) The RP-46 company machinegun (fig. 59).

Because these guns are similar in appearance, operation, and functioning, they are all grouped under one heading. Differences will be pointed out as necessary.

b. Although these Degtyarev machineguns are obsolete in the Soviet Army, they are used by most of the other Eurasian Communist countries. In addition, large quantities have been given or sold to other nations. Communist China produced the DPM as their Type 53 light machinegun, and the RP-46 as their Type 58 company machinegun. Except for the Chinese markings, these weapons are identical to the Soviet-produced arms.

c. The Degtyarev machineguns are automatic, gas-operated, bipod-mounted, open-bolt-firing weapons, and, except for the RP-46, are fed from horizontal, pan-type

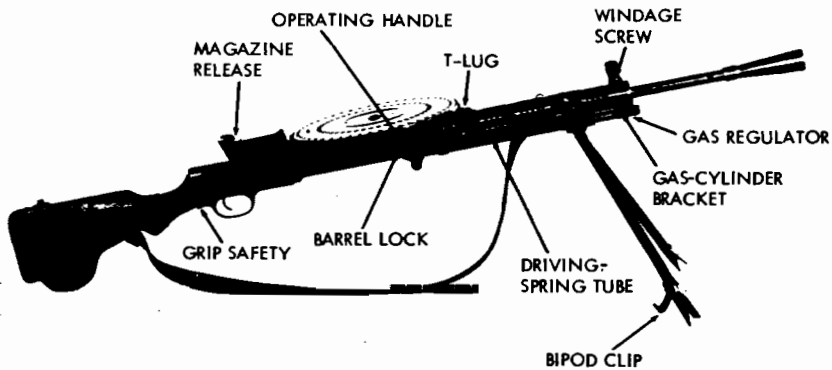


Figure 57. 7.62-mm Degtyarev light machinegun (DP).

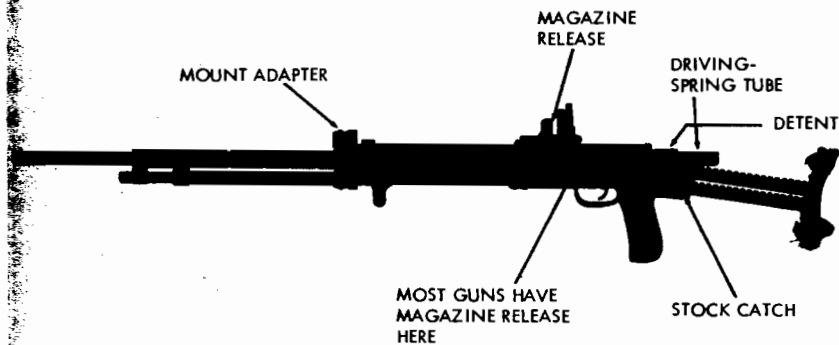


Figure 58. 7.62-mm Degtyarev tank machinegun (DTM).

magazines. The RP-46 is normally fed by a metallic-link belt; however, the DP or DPM pan magazines can be used after the belt-feed device is removed.

d. The DP and DPM are fed from 47-round-capacity, pan-type magazines; the DTM is fed from 60-round, 2-layer pan magazines. The RP-46 normally is fed from a 250-round, nondisintegrating, metallic-link belt; however, it can also be readily converted to use 47-round pan magazines (fig. 60). All of these Degtyarev machineguns fire the 7.62 x 54R long rimmed cartridge (sec. VI).

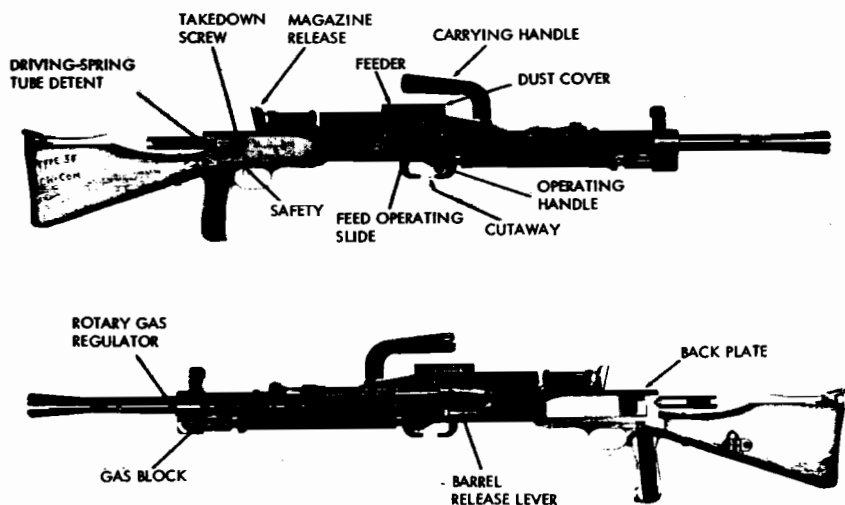


Figure 59. 7.62-mm Degtyarev company machinegun (RP-46).

107 TECHNICAL DATA

Technical data concerning the DP, DPM, DTM, and RP-46 machineguns will be found in table IX.

108. OPERATION

a. Load the 47- or 60-round-capacity pan magazines by holding them with the feed mouthpiece up and away from the loader. Press down on the empty cartridge case that serves as a stop in the mouthpiece, and rotate the perforated cover in a clockwise direction. A small stud will protrude from the cover; use this to help turn the cover. As the cover turns, individual compartments for cartridges will be seen to pass by the mouthpiece. Slip a cartridge into the mouthpiece, rim first, bullet pointing to the center of the pan, so that each compartment will be filled. Do not insert over 47 rounds into the DP/DPM magazine.

b. Load the metallic-link belts by shoving a cartridge as far as possible into each link of the belt. The belt holds 250 rounds. Insert the loaded belt into the carrying container so that the open side of the top layer is down.

c. The DP, DPM, and DTM machineguns all have a sliding dust cover over the feed opening on top of their receivers; if this is closed, slide it forward to open. Engage the fork (fig. 60) at the front of the magazine with the "T" lug (fig. 57) on top of the barrel jacket; then seat the rear of the magazine into place in front of the rear sight. Strike the top rear of the magazine with the side of a closed fist to insure that the magazine is fully seated. Pull the operating handle (fig. 57) fully to the rear. Caution: The gun is now cocked and ready to fire!

d. The RP-46 has a dust cover closing the entrance to the feedway. If this cover is closed, swing it open. Insert the feed tab (fig. 60) of the ammunition belt into the feedway (from right to left) and pull the tab sharply to seat the first cartridge in position. If the operating handle is forward, pull it to the rear to position the first cartridge in the feeder. Pull the trigger and allow the recoiling parts to move forward again; then pull the operating handle rearward again. Caution: The gun is now cocked and ready to fire! The DP has an automatic grip safety (fig. 57) behind the trigger guard; the DPM, DTM, and RP-46 have a rotary safety lever (fig. 59) above the right side of the trigger. Rotate the safety forward to render these weapons safe.

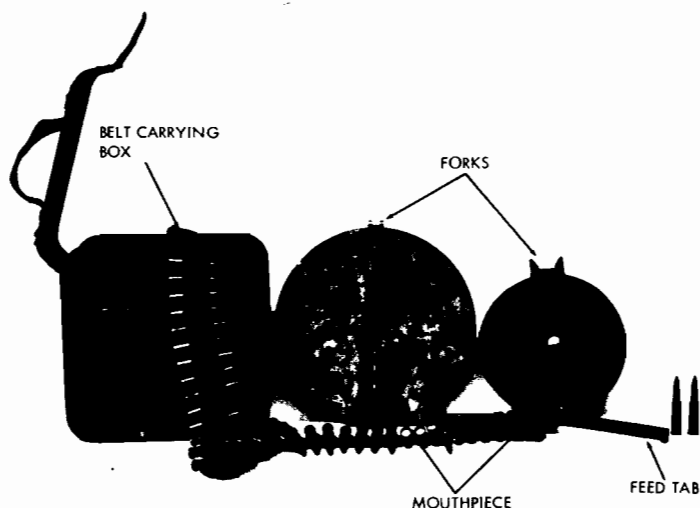


Figure 60. Degtyarev machinegun belt and drums.

e. Unfold the bipod by unsnapping the bipod clip from the right leg and swinging the bipod down into position. The bipod is folded by reversing this action. The DTM stock is shortened or lengthened by pressing the stock catch (fig. 58) and moving the stock to the desired position.

f. Adjust the rear sight of the DP, DPM, and RP-46 machineguns for the desired range by pressing the slide locks and moving the bar along the sight until the top of the bar is alined with the line below the number that corresponds to the range in hundreds of meters. The DTM rear sight is adjusted by pressing in its slide locks and vertically moving the sight to aline the range number with its index. The front sights of all guns are adjustable for windage by means of a large screw on the right side of the base, and for elevation zero by screwing the front-sight post in or out. The DTM has an accessory front sight that must be inserted into the mount adaptor (fig. 58) before firing.

g. To fire, rotate the safety rearward on the DPM, DTM, and RP-46, or press the grip safety on the DP; turn down the carrying handle of the RP-46; then aim--using a normal sight picture--and press the trigger. The bolt will remain open between bursts, but will remain closed on an empty chamber or when the last round of a belt or magazine has been fired.

h. To unload or clear, pull the rear-sight guard (fig. 57) of the DP and DPM rearward and lift the pan magazine off the receiver; or press the magazine release (fig. 58) of the DTM to the side or rear (depending on the particular model) and lift its magazine off. Pull the rear-sight guard of the RP-46 to the rear and, when the cover opens, pull the belt to the right, out of the gun. Pull the operating handle to the rear; insure that no cartridges are present in the barrel, receiver, or feedway; then press the trigger and ease the operating handle forward. Apply the safety and close all covers.

i. The DP, DPM, and RP-46 have quick-change barrels; the DTM does not. To change the barrel, cock the gun and press in on the barrel lock (fig. 57) of the DP and DPM, or turn the barrel-release lever of the RP-46 fully forward to depress its barrel lock. Place a wrench on the barrel notches

near the muzzle and rotate the barrel clockwise one-sixth of a turn; then pull the barrel forward and out of the barrel jacket. Insert a fresh barrel, depress the barrel lock, seat the barrel fully and counterrotate it one-sixth of a turn to lock it in place. Use caution when changing barrels; they get very hot!

j. The DP, DPM, DTM, and RP-46 might require adjustment of their gas regulators when they become fouled. To adjust the DP, DPM, and DTM, remove the cotter pin that passes through the gas regulator and unscrew the nut. The regulator has three settings, stamped "2.5", "3", and "4." The normal setting is 2.5, established when this number lines up with the index line stamped into the right side of the gas-cylinder bracket. Gently tap the regulator to the rear, out of engagement with its location pin, and turn it until the next larger number lines up with the index. Pull the regulator forward into position, tighten the nut, and replace the cotter pin.

k. The RP-46 will have either one of two different systems for adjusting the amount of gas used to operate its mechanism. One type uses a rotary gas regulator that is adjusted like the regulator of the RPD light machinegun (par. 114g); the other, more common type, uses a sliding regulator. The latter type has a catch that engages with one of three grooves in the bottom of the gas block. The center groove, marked "1," is normally used, while "2" on the right and "3" on the left admit increasing amounts of gas into the mechanism. To adjust this regulator, pry the catch out of engagement with the groove and move the regulator catch to the next higher numbered groove.

109. DISASSEMBLY AND ASSEMBLY

a. Clear the gun (par. 108h), but do not put it on safe.

b. The driving spring of the DPM, DTM, and RP-46 is mounted at the rear of the receiver. Pry back the detent on the driving-spring tube and rotate the tube until it can be removed. Pull out the driving spring.

c. For the RP-46, pull back the magazine catch (fig. 59) to open the feeder, and turn the carrying handle to the left.

Pull the operating handle to the rear until it alines with the cutaway in the feed operating slide, and lift the feeder off the receiver; then push the operating handle fully forward.

d. Unscrew and remove the takedown screw (fig. 59) at the right rear of the receiver just behind the operating handle; then, with the other hand, strike down on the heel of the butt. The butt and the trigger guard will swing apart and can be separated from the receiver.

e. On the DP only, unlock the driving spring by pressing the handle of the lock forward against the force of the driving spring; then rotate it downward. This handle is located at the left front end of the receiver, about 2 inches ahead of the barrel lock.

f. Pull the operating handle rearward; the operating slide, bolt, locking flaps, and firing pin will come out as a unit. Lift the bolt straight up, off the slide, and pull the firing pin rearward, out of the bolt. The twin locking flaps can now be removed.

g. No further disassembly is necessary or desirable.

h. To commence reassembly, place the locking flaps (fig. 61) onto the bolt and insert the firing pin into the bolt. The lug on the firing pin should contact the rear of the bolt, and the rear of the locking flaps will project below the bottom of the bolt. Place the bolt onto the slide, mating the firing pin with the fork at the rear of the slide. Push the bolt forward on the slide so that the locking flaps are flush with the sides of the bolt.

i. Insert the bolt and slide into the receiver by starting the piston into the gas-cylinder tube; then aline the rails on the slide, below the bolt, with their grooves in the receiver, and slide the entire unit forward into the receiver.

j. Fit the round lugs at the front of the trigger guard into their seats in the receiver, swing the trigger guard up into place on the receiver, and screw the takedown screw back into place.

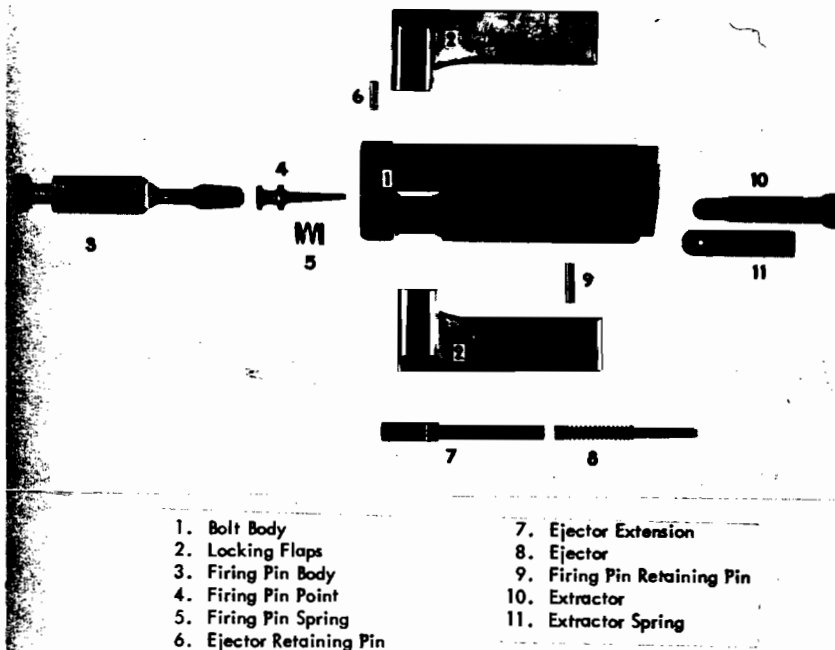


Figure 61. Degtyarev bolt, typical.

k. Place the feeder back on the RP-46 by engaging the forks at its front end with the "T" lug on the barrel jacket. Lift up the rear of the feeder and move the operating handle to the rear until it can enter the cutaway section of the feed operating slide. Drop the feeder into position and close its cover. Push the operating handle fully forward. Note: If the feeder is not replaced, DP or DPM pan magazines can be used to feed the RP-46.

l. Insert the driving spring of the DPM, DTM, or RP-46 into the hole in the rear of the backplate (fig. 59), fitting it over the firing pin extension. Place the driving-spring tube over the spring (detent up), and press the tube forward until it can be rotated to a locked position.

m. Lock the driving spring of the DP machinegun into place by pressing the lock forward against the driving spring until it can be turned to its locked position.

110. FUNCTIONING

a. All Degtyarev machineguns fire from the open-bolt position. When the trigger is pressed, the slide and bolt are released, and the driving spring drives them forward to load and fire a cartridge. After firing, some of the propellant gases are tapped off to drive the slide and bolt to the rear, compressing the driving spring in preparation for another shot.

b. When the trigger (fig. 62-27) is pressed, its upper end, which hooks over the sear (fig. 62-25), revolves forward and downward to depress the sear. The sear releases the slide (fig. 62-9), which, under the force of the driving spring (fig. 62-12), goes forward. The bolt (fig. 62-16), which travels with the slide, drives a cartridge out of the mouthpiece of the magazine or the RP-46 feeder and into the barrel until the rim of the cartridge seats on the end of the barrel. The extractor (fig. 62-19) snaps over the rim of the cartridge, and forward motion of the bolt then ceases. The slide continues forward, carrying the firing pin (fig. 62-17) with it. The firing pin moves forward in the bolt and forces the locking flaps outward into the locking recesses in the receiver. The firing pin and slide continue to move forward until the firing pin ignites the cartridge. The stud on the firing pin strikes the end of the bolt and stops all forward motion.

c. The propellant gases drive the bullet through the barrel, and, when the bullet passes the gas port (fig. 62-6), some of the gases are tapped off and directed against the piston (fig. 62-14), driving it to the rear. The slide is connected to the piston and also moves rearward. During the travel of the slide the firing pin is retracted, and the driving spring is compressed. As the slide continues to move, cams cut into its top surface contact the locking flaps and cam them inward, out of the receiver recesses. The bolt and slide now move rearward as one unit. The extractor removes the fired

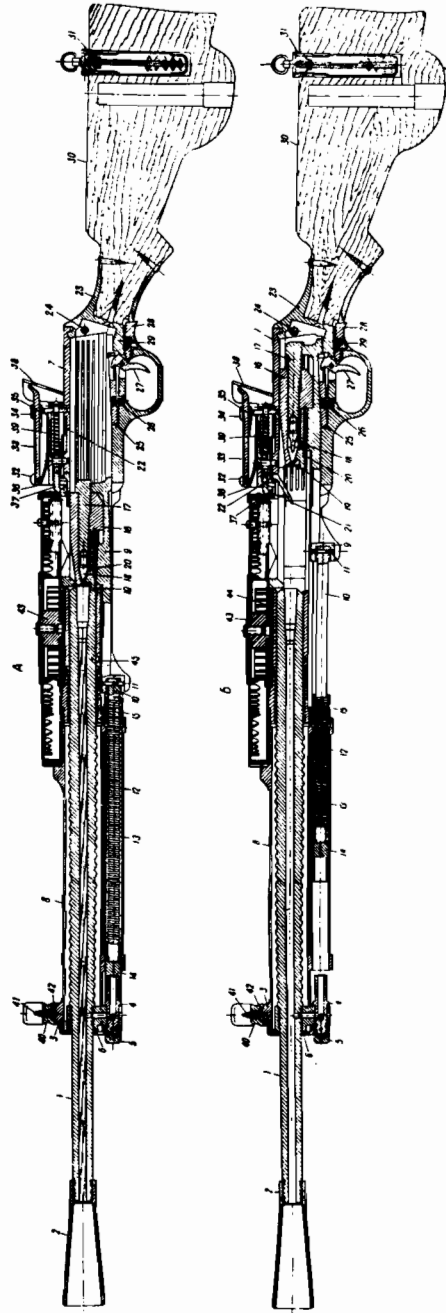


Figure 62. Degtyarev light machinegun, section.

cartridge case from the chamber and holds it to the bolt until the ejector, at the rear of the feed opening, expels the empty case. The slide strikes the rear wall of the trigger housing and stops. The driving spring now drives the slide and bolt forward.

d. The cartridges in the pan magazine are moved into the mouthpiece of the magazine by spring pressure. As each cartridge is driven out by the bolt, another cartridge immediately replaces it in the mouthpiece.

e. The belt feeder of the RP-46 is powered by the recoiling operating handle. The handle fits inside the feed operating slide (fig. 59), and, as the handle reciprocates, the feed operating slide also moves back and forth. The handle has some free travel in the operating slide so that full operating power is available to unlock the gun. As the feed slide moves rearward, a cam track (fig. 59) on its horizontal top side moves a belt feed slide inward. The feed slide moves the first cartridge in the belt against positioning stops (fig. 62), and the round is held there by a stationary holding pawl (fig. 63) in the top feed cover. As the feed slide goes forward, the feed pawl moves outward and engages the next round to be fed.

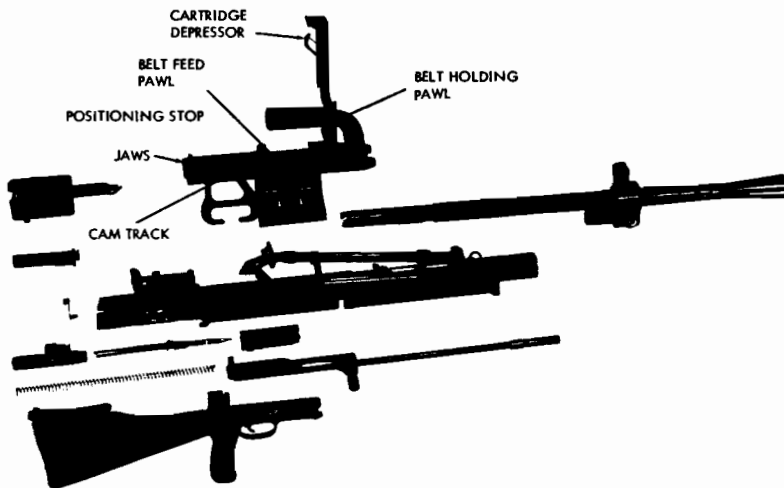


Figure 63. Degtyarev machinegun, field-stripped.

f. The feed slide has a pair of jaws (fig. 63) on its upper left side that grasp the rim of the cartridge positioned against the stops in the cover, and, as the feed slide moves rearward, the cartridge is extracted from the belt by these jaws and is moved rearward over the mouthpiece. A spring-loaded cartridge depressor (in the top cover) forces the cartridge down into position in the mouthpiece so that the bolt feed ribs can pick up the cartridge.

111. ACCESSORIES

a. The following accessories (fig. 64) are issued for use with the Degtyarev machinegun:

- (1) Fabric sling.
- (2) Belt or drum carrying case.
- (3) Combination tool and sectional cleaning rod.
- (4) Protective covers for the gun and the spare barrel.

b. The combination tool is used to tighten screws and bolts, to rotate the gas regulator and its nut, to turn the barrel for removal, and for similar tasks. It is carried separate from the DP, DPM, and DTM, and in the butt of the RP-46. To remove the tool kit from the latter weapon, press in on the oiler catch through the hole near the top of the buttplate and lift the oiler up, out of the gun. The trapdoor in the butt can now be opened and the tool kit removed. Lubricating oil is carried in the oilers of all guns.

c. The RP-46 carries its sectional cleaning rod on the bipod. Press in on the small crosspin at the top of the bipod leg and slide the sleeve up. The rod sections can now be removed.

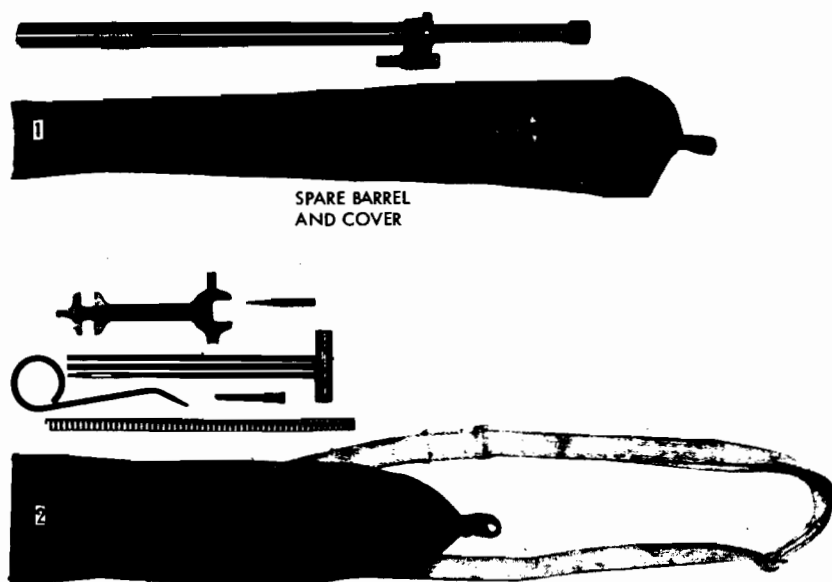


Figure 64. Typical accessory kit for Degtyarev machineguns.

D. THE 7.62-MM DEGTYAREV SQUAD LIGHT MACHINEGUN (RPD)

112. GENERAL

a. The Soviet-designed Degtyarev squad light machinegun Model RPD, obsolescent in the Soviet Army, is used by many of the other Eurasian Communist countries, and has been distributed to many other Communist-aligned nations. A number of modifications have been made to increase the operational reliability of the RPD, resulting in the following distinct versions:

First version:	Cup-type gas piston, no dust covers; straight, reciprocating handle; right-hand windage knob (fig. 65).
----------------	---

- Second version: Plunger-type gas piston; no dust covers; straight, reciprocating operating handle; left-hand windage knob (fig. 65 and 66).
- Third version: As for second version, but has dust covers on feed mechanism and has folding, nonreciprocating operating handle (fig. 66).
(also ChiCom Type 56)
- Fourth version: As for third version, but with longer gas cylinder, additional roller on piston slide, and buffer in butt.
(RPDM)
- Fifth version: As for fourth version, but with folding magazine bracket/dust cover and cleaning rod (sectional) carried in butt.
(ChiCom Type 56-1)

These changes have no effect on the gun's operation and little effect upon its functioning. The RPD has also been manufactured in Communist China as the Type 56 and Type 56-1 light machineguns, and in North Korea as the Type 62 light machinegun. These latter types can be identified by the presence of Chinese or Korean markings upon their feed covers.

b. The RPD is an automatic, gas-operated, bipod-mounted weapon firing from the open-bolt position. It is fed from metallic-link belts (fig. 67); two coupled 50-round sections are carried in a drum-type belt container under the gun. The RPD fires the 7.62 x 39-mm M1943 cartridge (sec. VI).

113. TECHNICAL DATA

Technical data concerning the RPD machinegun will be found in table IX.

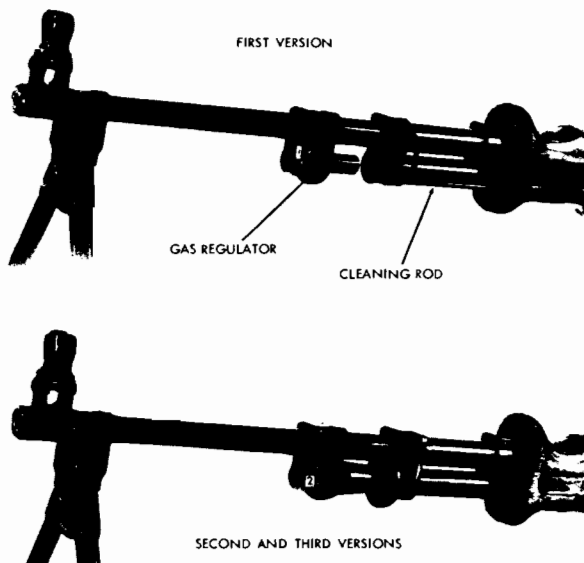


Figure 65. 7.62-mm Degtyarev squad light machinegun (RPD).

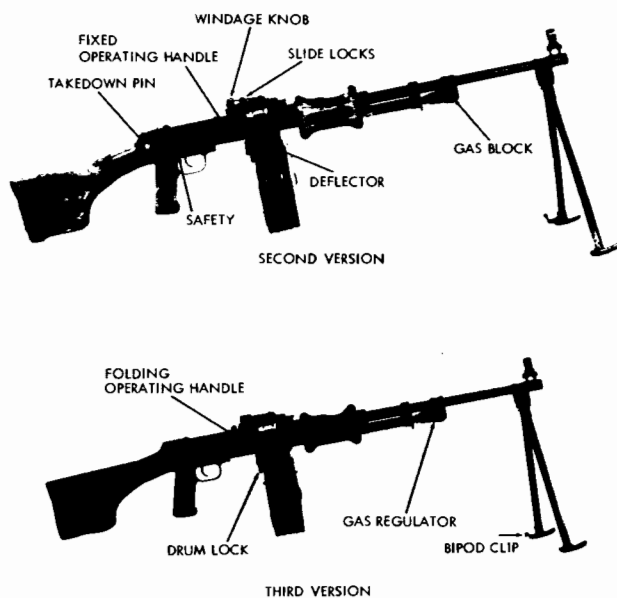


Figure 66. 7.62-mm Degtyarev squad light machinegun (RPD).

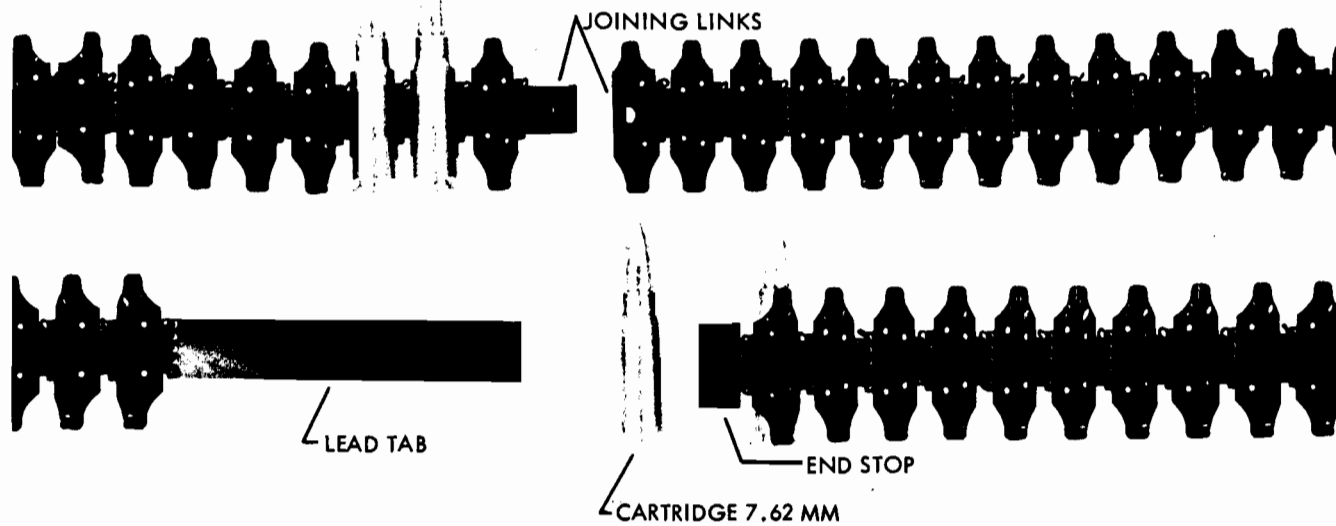


Figure 67. Metallic belt for Degtyarev squad light machinegun.

114. OPERATION

a. Load the metallic-link belt by inserting a cartridge into each link and press it into the link until the positioning tab snaps onto the rim of the cartridge (fig. 67). Belt sections can be joined together to make the 100-round-capacity belts by coupling the end link on one belt with the joining link on the other belt; once connected, the links are held together by inserting a cartridge. Turn the lock on the drum and open its cover; coil the belt so that the lead tab (fig. 68) is on the outside and insert the belt into the drum. Only the lead tab should protrude from the drum.

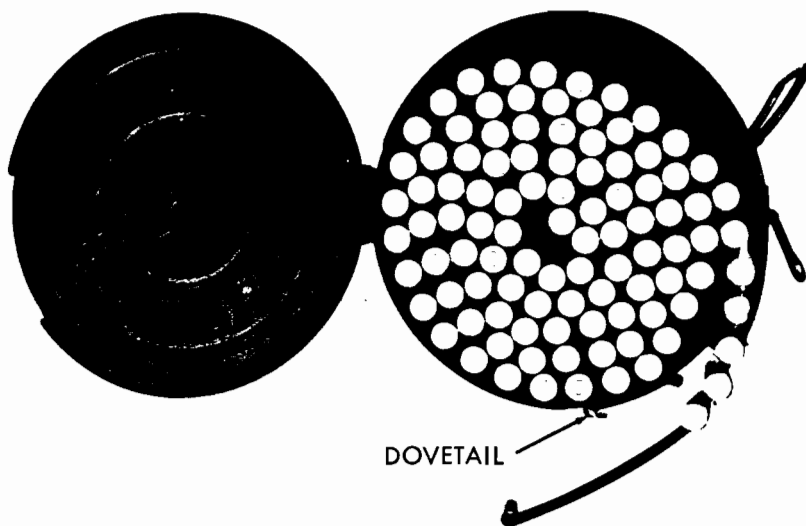


Figure 68. Drum magazine for Degtyarev squad light machinegun.

b. If the gun is a ChiCom Type 56-1, press the catch on the dust cover and swing the cover down until it locks into place to serve as a magazine bracket. Once this is done, and in all other cases, slide the drum onto the bracket, from the rear, and rotate the drum lock (fig. 66) down to secure the drum in position. If necessary, open the dust covers by opening and closing the feed cover. Then insert the lead tab of the

belt into the feedway, from left to right, and give it a vigorous pull to the right to seat the first cartridge in the holding pawl. Pull the operating handle to the rear (unfolding first, if a third or later version RPD) until the slide is caught by the sear.

Caution: The machinegun is now ready to fire! If the gun is not to be fired immediately, apply the safety (fig. 66) by rotating it forward.

c. Open the bipod by unsnapping the bipod clip (fig. 66) and swing the bipod legs forward until they spring open and lock in place. Fold the bipod by squeezing the legs together; swing them rearward and secure them with the bipod clip. (Note: Some RPD's do not have a bipod clip.)

d. Adjust the rear sight for the desired range by pressing the slide locks and moving the bar along the sight until the top of the bar is aligned with the line below the number that corresponds to the range in hundreds of meters. The rear sight can be adjusted for windage by turning the windage knob. The front sight is adjusted for elevation zero by screwing the front-sight post in or out, and for windage zero by loosening the lock nut and sliding the entire front sight from side to side, as necessary.

e. To fire, rotate the safety to the rear; then aim--using a normal sight picture--and press the trigger. The gun will fire until the trigger is released, and the bolt will remain open between bursts or closed after the firing of the last cartridge.

f. To unload or clear, pull the operating handle rearward, apply the safety by rotating it forward, push the cover catch forward, and open the feed cover. Draw the belt to the left and feed it back into the drum so that only the feed tab protrudes. Inspect to be sure that no cartridges remain in the receiver, chamber, or feedway, and then close the cover. Turn the drum lock (fig. 66) and slide the drum off to the rear. Rotate the safety rearward, hold the operating handle to ease the bolt and the slide forward, and press the trigger. Close all covers; if a Type 56-1, press the latch to release the drum bracket and swing it up to cover the entrance to the feedway.

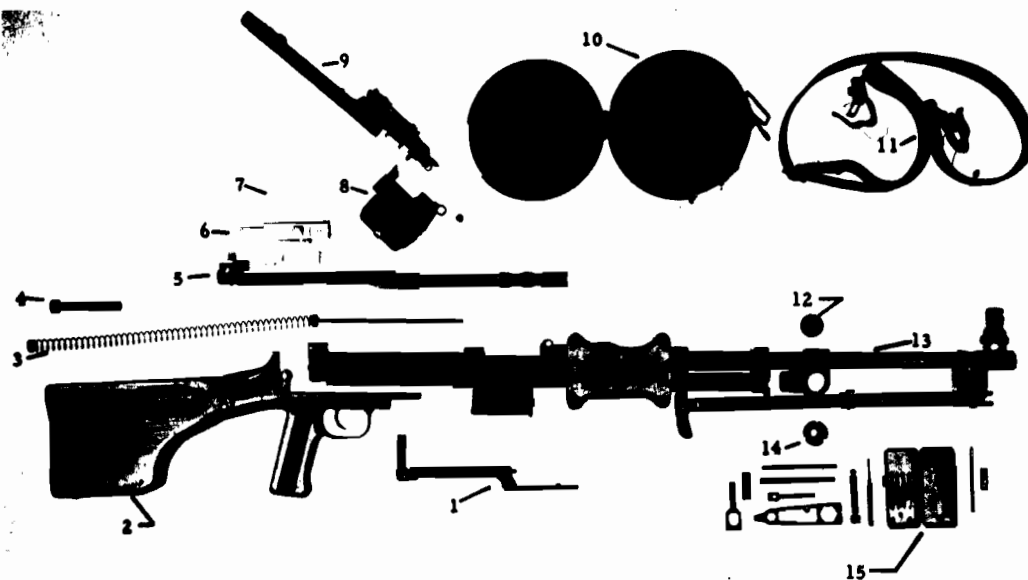
g. The RPD might require adjustment of its gas mechanism when it becomes fouled. Loosen the nut on the left side of the regulator and press the regulator to the right to disengage it from the index pin. The regulator has three settings, stamped "1", "2", and "3." The first is for normal use. Turn the regulator until the next higher number lines up with the index pin; then press the regulator back into place and tighten the nut.

115. DISASSEMBLY AND ASSEMBLY

- a. Clear the gun (par. 114f), but do not close the covers.
- b. Press out the takedown pin at the rear of the receiver (fig. 66) and slide the butt and trigger group off to the rear.
- c. Pull the operating slide and bolt (fig. 69) out of the receiver, and separate the bolt from the operating slide by lifting the bolt straight up. The locking flaps will fall free.
- d. No further disassembly is necessary or desirable.
- e. To reassemble, first assemble the locking flaps to the bolt; then place the bolt onto the slide so that the flaps fit into the cam cuts in the slide.
- f. Push the bolt and locking flaps as far forward as possible on the slide and insert the slide into the receiver, matching the rails on the slide with their grooves in the receiver.
- g. Slide the butt and trigger group onto the receiver, being sure that the driving-spring rod seats into its recess in the end of the slide. Press the takedown pin back into place.

116. FUNCTIONING

a. The RPD is a Degtyarev-designed weapon, and its functions, with the exception of its belt-feed device, almost exactly like the Degtyarev DP light machinegun (par. 110). The sole exception to the basic functioning lies in the locking action; the DP uses a cam on its firing pin to force the locking flaps into the locked position, whereas the RPD uses a



- | | |
|------------------------------|-------------------------|
| 1 OPERATING HANDLE | 9 FEED COVER |
| 2 BUTT STOCK | 10 DRUM (OPEN) |
| 3 DRIVING SPRING AND ROD | 11 SLING |
| 4 DRIVING SPRING GUIDE | 12 GAS REGULATOR SCREW |
| 5 OPERATING SLIDE AND PISTON | 13 BARREL |
| 6 BOLT | 14 GAS REGULATOR |
| 7 BOLT LOCKING FLAP | 15 COMBINATION TOOL KIT |
| 8 FEED TRAY | |

Figure 69. Degtyarev squad light machinegun, field-stripped.

cam machined out of the slide. This cam also acts as a hammer to strike the firing pin; however, for all practical purposes, the hammer cam can be considered to function the same as the cam on the firing pin of the DP.

b. The belt-feed device of the RPD is operated by the recoiling slide; a roller on the top of the slide fits into a belt-feed lever in the cover. As the slide recoils, it first forces the lever to the right; this moves the belt-feed slide out to the left, where it can engage a round to be fed. As the slide roller continues rearward, it passes the feed lever pivot point and reverses the direction of motion of the lever. This, in turn, moves the slide in to the right and feeds the round into position, where it can be picked up by the bolt. The belt-feed slide thus makes two strokes (in and out) for each cycle of the slide. Each stroke feeds the round halfway into position to where it can be picked up by the feed ribs on the bolt. A stationary spring-loaded belt-holding pawl retains the belt in the gun as the belt-feed slide moves in and out.

117. ACCESSORIES

a. The following accessories are issued for the RPD light machinegun:

- (1) Combination tool kit.
- (2) Belt drums.
- (3) Fabric sling.
- (4) Night-sighting device.
- (5) Blank-firing device.

b. The combination tool kit (fig. 69) contains a combination wrench and screwdriver (for use in turning the gas regulator and bipod screws), a gas-cylinder cleaner, a reamer for the gas port, a front-sight wrench, a ruptured-cartridge extractor, a pin punch, a cleaning rod tip, and a handle bar. The handle bar is inserted into the front-sight wrench or the gas-cylinder cleaning tool in order to rotate them. The

ruptured-cartridge extractor is inserted into the chamber, the bolt is allowed to slam shut on it, and, when the bolt is retracted, the extractor will remove any ruptured cartridge that might be present. All accessories are contained in a case stored in the butt under a rotary trapdoor.

c. The night-sighting device is similar to that used with the AK-47 assault rifle (par. 57f).

d. The blank-firing device is also similar to that used with the AK-47 assault rifle (par. 57e).

E. THE 7.62-MM GORYUNOV HEAVY MACHINEGUNS (SG-43, SGM, SGMT, SGMB, and SG-43M)

118. GENERAL

a. The Soviet-designed Goryunov heavy machinegun in one form or another is used by almost all of the Eurasian Communist countries and has been widely distributed to many Communist-aligned nations. There are five versions of this gun:

- SG-43: Smooth barrel, sear attached to driving-spring guide, plain barrel lock, no dust covers, operating handle between spade grips (fig. 70).
- SGM: Splined barrel, separate sear housing, micrometer barrel lock, no dust covers, operating handle on right side (fig. 71).
- SGMT: Tank version of SGM, differs in that it has a solenoid mounted on the backplate.
- SGMB: Similar to SGM, but has dust covers over feedway ports, feed slide, and ejection port. The SGMB also has semicircular flanges on the lower front of its receiver for mounting on the cradle.

SG-43M: The SG-43 with SGMB barrel lock and dust covers.

These guns have been produced in Communist China, where the SG-43 is known as the Type 53 heavy machinegun and the SGMB is known as the Type 57 heavy machinegun. These guns can be distinguished from the Soviet weapons by the Chinese markings on their feed covers. The SG-43 has also been manufactured in Czechoslovakia; this version is stamped "Vz 43."

b. All of the Goryunov heavy machineguns are automatic, gas-operated, belt-fed, tripod- or vehicle-mounted weapons firing from the open-bolt position. They have quick-change barrels and are extremely simple weapons. Feeding is accomplished by 250-round-capacity metallic-link belts, the same one as used with the RP-46 company machinegun (fig. 60). The Goryunov machineguns all fire the 7.62 x 54R long rimmed cartridge (sec. VI).

119. TECHNICAL DATA

Technical data concerning the Goryunov machineguns will be found in table IX.

120. OPERATION

a. Mount the Goryunov machinegun on its mount as explained in paragraph 123.

b. Load the metallic-link ammunition belt (par. 108b).

c. Open the feed cover by pressing the cover catch (fig. 72) forward and swing up the cover. Place the belt in the feedway with the rim of the first cartridge between the cartridge feed slide grippers (fig. 72); then close the cover. Pull the operating handle fully to the rear and push it fully forward. Caution: The machinegun is now ready to fire!

d. Lift the rear sight leaf to a vertical position and adjust it for the desired range by pressing the slide catch (fig. 72) and moving the slide along the leaf until the upper edge of the

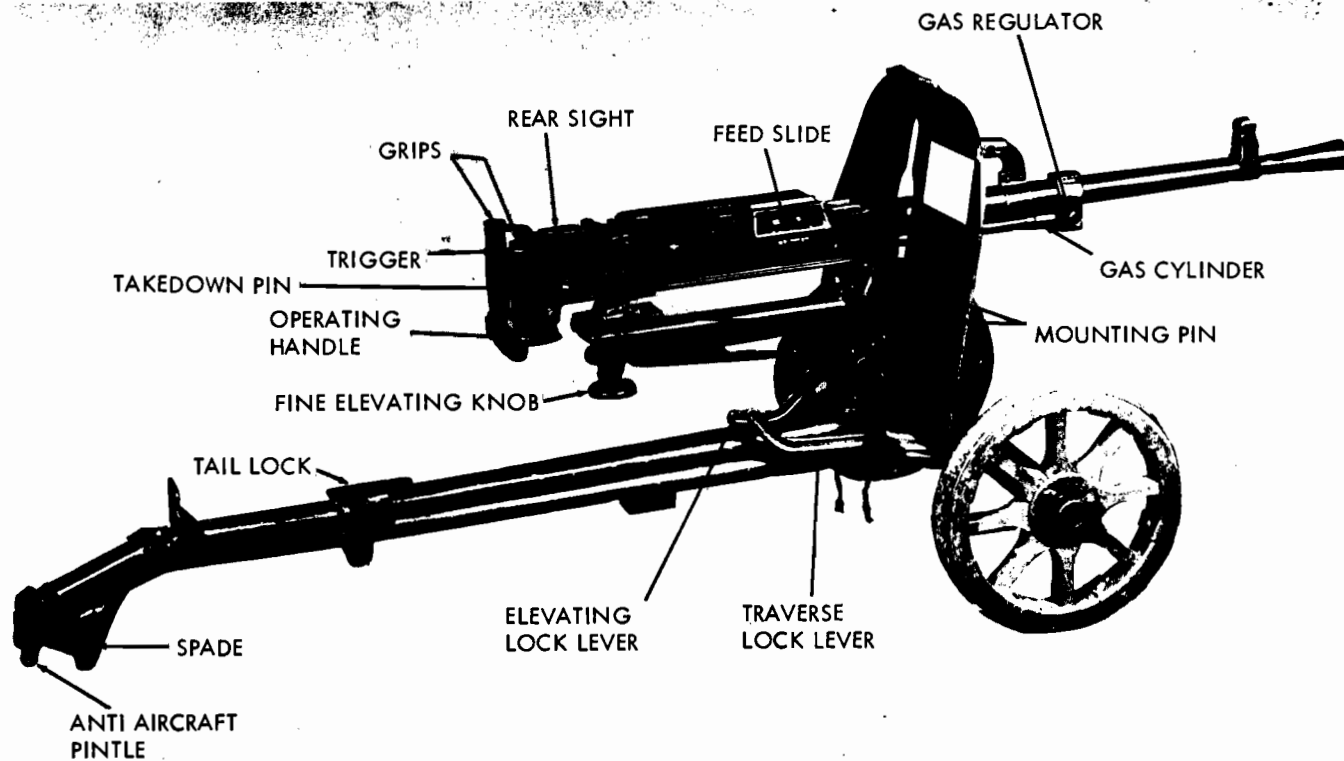


Figure 70. 7.62-mm Goryunov heavy machinegun (SG-43).

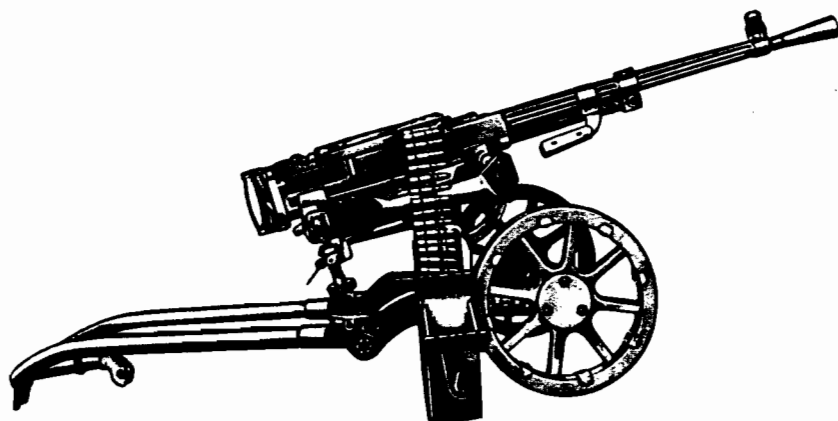


Figure 71. 7.62-mm Goryunov heavy machinegun (SGM).

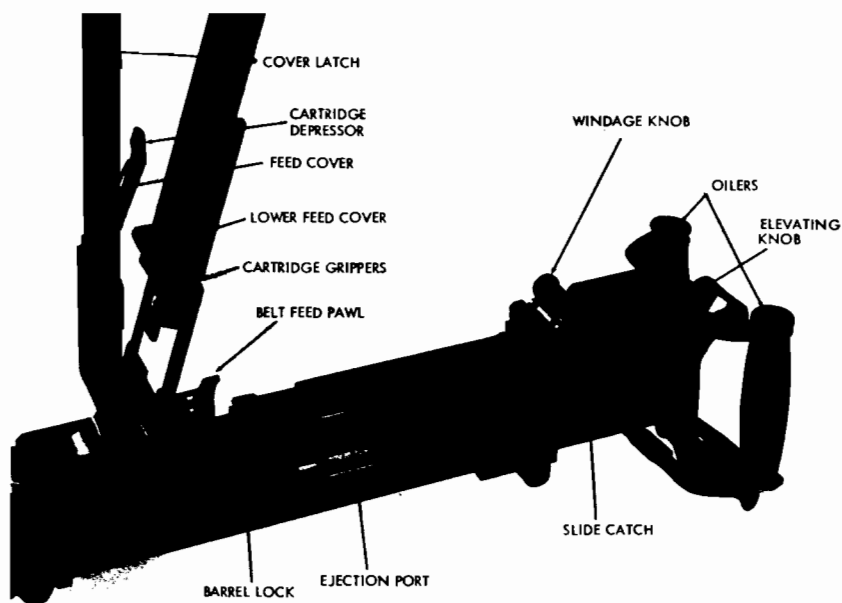


Figure 72. Goryunov machinegun, receiver details.

slide is alined with the line below the number that corresponds with the range in hundreds of meters. Final fine adjustment is made by the elevating knob (fig. 72), and lateral adjustment can be made by the windage knob (fig. 72). Use the range figures on the right side of the leaf when firing light bullets (Type L or LPS) and the left side of the leaf when firing yellow-tipped heavy bullets. The front sight is adjustable for windage and elevation zero; loosen the nut on the front-sight base and move the sight from side to side as necessary to zero, and screw the post in or out as necessary for elevation zero.

e. To fire, aim--using a normal sight picture--lift up the safety (fig. 73) with the thumb of one hand and press forward on the trigger (fig. 73) with the other thumb. The bolt will remain open between bursts, but will remain closed on an empty chamber when the last round has been fired.

f. To unload or clear, open the cover by pressing the cover catch forward. Lift the belt from the feed slide pawls (fig. 72) and remove it. Lift the lower feed cover and remove the cartridge from the cartridge grippers. Inspect to insure that no cartridges remain in the gun. Pull the operating handle to the rear, and, while holding it, raise the safety, press the trigger, and ease the operating handle forward. Close the covers and lower the rear sight.

g. To change the barrel of the Goryunov machinegun, unload the weapon, retract the bolt until it is caught by the sear, and raise the feed covers. Pull the barrel lock to the left (if an SGM, SGMT, SGMB, or SG-43M, first depress the knurled catch on the barrel lock) and pull the barrel forward out of the receiver. Insert a fresh barrel into the receiver, guiding the gas cylinder into the gas-cylinder tube if necessary, and push the barrel lock fully to the right. Close the lower feed cover and reload.

h. It might be necessary to adjust the gas regulator to compensate for a loss in operating power. The figure "1" on the regulator is normally alined with the index pin. Use a wooden mallet and drive the regulator to the right to disengage it from the index pin; then rotate the regulator until

the next higher number on it lines up with the index. Drive the regulator to the left, back into position.

121. DISASSEMBLY AND ASSEMBLY

a. Clear the gun (par. 120f), but do not close the feed covers.

b. If an SG-43 or SG-43M, pull the takedown pin (fig. 70) to the right and remove the backplate. If the gun is an SGM, SGMT, or SGMB, depress the round detent in the latch on the top center of the backplate and slide the latch to the rear. Rotate the backplate to the right until it can be removed. Pull out the driving spring.

c. Slide the sear housing out of the lower rear of the SGM, SGMB, and SGMT receiver.

d. Pull the operating handle rearward; this moves the bolt and slide to the rear of the receiver, where they can then be pulled out of the receiver. Lift the bolt off the slide. Pull the belt feed slide to the right, out of the receiver.

e. The cartridge gripper can be removed by sliding it to the rear until it aligns with the dismounting cuts in the lower feed cover.

f. No further disassembly is necessary or desirable.

g. Replace the cartridge gripper in the lower feed cover with the lug of the gripper down and to the rear.

h. Place the belt feed slide into the receiver and push it as far to the left as possible.

i. Lay the bolt over the hammer-cam on the slide, and move the bolt as far forward as possible. Shove the operating handle forward and insert the piston and slide into the receiver.

j. Slide the sear housing of the SGM, SGMB, and SGMT (sear to the front) into the receiver.

k. Insert the driving spring into the slide, and then insert the driving-spring guide into the spring. If the gun is an SGM, SGMB, or SGMT, turn the backplate at a right angle to the receiver, insert the backplate lugs into the receiver, and rotate the backplate counterclockwise until it stops. Slide the lock on the top center of the backplate forward. If the gun is an SG-43 or SG-43M, push the backplate straight in and insert the take-down pin. Close all covers.

122. FUNCTIONING

a. The Goryunov machineguns fire from the open-bolt position. When the trigger is pressed, it releases the slide, which is propelled forward, carrying the bolt with it. The bolt loads a cartridge, which is then fired. The propellant gases drive the slide to the rear and compress the driving spring in preparation for the next shot.

b. When the trigger (fig. 73-46) is pressed on the SG-43 or SG-43M, it lifts the rear of the sear (fig. 73-50), and the sear releases the slide. The trigger of the SGM, SGMB, and SGMT bears against a sear release and moves it forward. This movement removes a block from under the sear, and, because the rear of the sear and its mating notch in the slide are at an angle, the slide kicks the sear out of engagement. On all guns, when the trigger is released, the sear catches the slide to the rear.

c. As the slide travels forward, cams cut in its top move the belt feed slide outward so the belt feed slide pawl can engage the next cartridge.

d. The bolt drives a cartridge from the feed cover into the barrel, and, when the bolt seats the cartridge fully into the chamber, the extractor snaps over the cartridge rim. The cam (fig. 73-23) forces the rear of the bolt to the right, into a locking recess in the right wall of the receiver. The bolt ceases moving. The slide continues forward, and the hammer (fig. 73-23) strikes the firing pin, firing the cartridge.

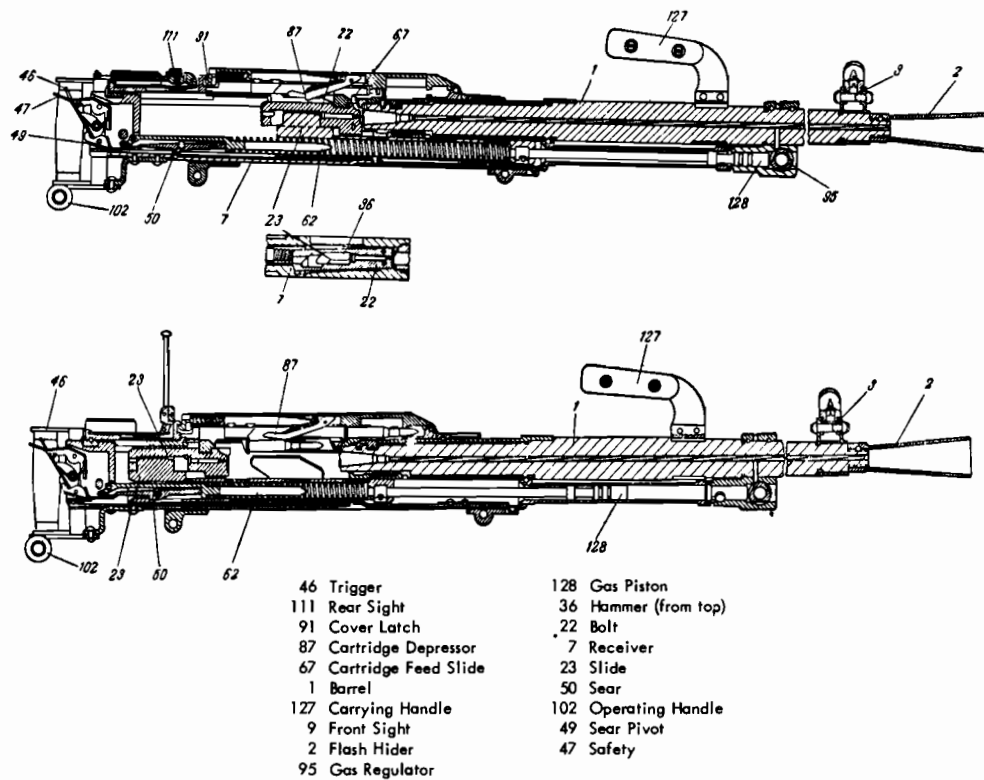


Figure 73. Goryunov machinegun (SG-43), section.

e. The propellant gases drive the bullet through the barrel, and, when the bullet passes the gas port, some of the propellant gases are tapped off and drive the piston and slide to the rear. The hammer moves away from the firing pin, and compression of the driving spring starts. As the slide continues rearward, its cam draws the rear of the bolt to the left, out of the locking recess. When the bolt is fully unlocked, it moves to the rear with the slide. The extractor pulls the fired cartridge from the chamber and holds it to the bolt face until the ejector strikes a shoulder in the receiver and moves against the case to expel it.

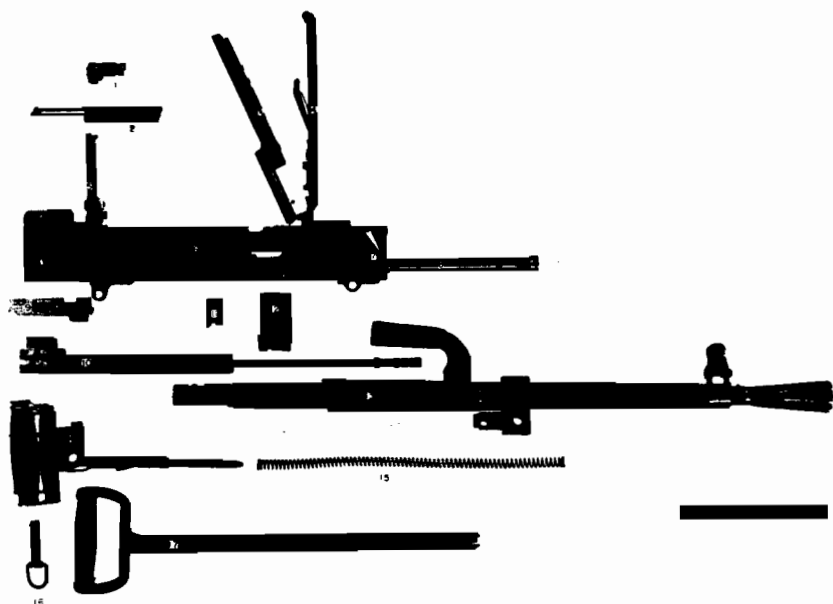
f. Cams on the top of the slide force the belt feed slide inward, feeding the next cartridge into position, where it can be seized by the cartridge grippers. A stationary spring-loaded belt-holding pawl in the feed cover prevents withdrawal of the belt. The cartridge feed slide, which holds the gripper (fig. 73-67), is mated to the bolt and moves back and forth with it. The grippers draw the round out of the belt and move it to the rear, where the depressor (fig. 73-87) forces the round down into the lower feed cover, where it can be fed by the bolt.

g. The rearward movement of the bolt and slide ends when they strike the backplate. The driving spring then forces the bolt and slide forward.

123. MOUNTS

a. There are a number of mounts available for the Goryunov machineguns. These include the wheeled Model 1943 and Degtyarev mounts, the Sidorenko-Malinovski tripod mount, and various vehicular mounts. There are two methods of joining the guns to the mounts. The SG-43, SG-43M, early SGM, and SGMT guns use traverse pins; late SGM and the GMB use spring-loaded clamps to hold the gun to the mount.

b. The guns with pin-type mount adapters are installed by positioning them on their mounts and inserting the two mounting pins (fig. 70). The guns with clamp-type mount adapters are installed by placing the curved flanges on the front mount adapter into their seats on the mount; then press the rear of



- | | |
|------------------------------|-----------------------|
| 1 CARTRIDGE FEED SLIDE | 10 SLIDE AND PISTON |
| 2 CARTRIDGE FEED SLIDE GUIDE | 11 BARREL LOCK |
| 3 LOWER FEED COVER | 12 BELT FEED SLIDE |
| 4 FEED COVER | 13 BARREL |
| 5 REAR SIGHT | 14 BACK PLATE w/GUIDE |
| 6 RECEIVER | 15 DRIVING SPRING |
| 7 RIVETS | 16 TAKEDOWN PIN |
| 8 GAS CYLINDER TUBE | 17 OPERATING HANDLE |
| 9 BOLT | |

Figure 74. Goryunov machinegun, field-stripped.

the gun down into its bracket and insure that the locking handle is as far rearward as possible.

c. These mounts have coarse elevating and traversing movements with lock levers to hold the gun in position (fig. 70). Fine elevation is obtained by means of the fine elevating knob (fig. 70). The gun should never be fired unless the elevating lock lever (fig. 70) is tightened. Normally the traverse lock lever should also be tightened when firing; however, the gun can be fired in free traverse.

d. The ground mounts are readily converted to anti-aircraft use by dismounting the gun, upending the mount (fig. 75), and installing the gun (by its front mount only) on the anti-aircraft pintle.



Figure 75. Goryunov heavy machinegun, AA position.

e. The spades (fig. 70) should be imbedded into the ground or braced, in order to obtain the best accuracy.

f. The mounts should be kept clean, and all movements should be lightly oiled.

124. ACCESSORIES

a. The following accessories are issued with the Goryunov machineguns:

(1) Cleaning rod.

(2) Combination wrench.

(3) Standard Soviet pattern 2-compartment oil-and-cleaning-solvent container.

(4) Punches.

(5) Ruptured-cartridge extractor.

(6) Chamber cleaning brush.

(7) Barrel lock tool.

(8) Wooden mallet.

(9) Covers.

(10) Antiaircraft sight.

b. The combination wrench is used for tightening or loosening various nuts, bolts, and other parts which are threaded, and for removing a hot barrel.

c. Refer to paragraph 117h for instructions on using the ruptured-cartridge extractor.

d. The barrel lock tool is used to turn the square socket screw on the micrometer headspace adjustment. This tool is to be used by ordnance personnel only to adjust the seating of the bolt into its locking recess. This adjustment must be made so as to just allow the rear of the bolt to enter its locking

ecess. This is governed by the distance the butt end of the barrel enters into the receiver.

e. The antiaircraft sight clamps onto the feed cover. It is a speed-ring-type sight and is used to determine lead angles when firing at aircraft. Its use is not recommended.

F. THE 12.7-MM DEGTYAREV HEAVY MACHINEGUNS (DShK-38 and the Model 38/46)

25. GENERAL

a. The Soviet-designed Degtyarev 12.7-mm heavy machineguns are used by the Eurasian Communist countries as an antiaircraft/antivehicular weapon. The Warsaw Pact countries use this weapon almost exclusively on vehicular mounts, whereas the Asian Communist countries appear to use it mostly on its ground mount. The original DShK (fig. 76) machinegun had a complicated rotary feeder that was superseded by a conventional shuttle-type feeder in the Model 38/46 (fig. 77). A number of other changes in the Model 38/46 made most of the parts noninterchangeable between the two guns. The Chinese Communists have produced the Model 38/46 as their Type 54 heavy machinegun. These guns can be identified by the Chinese characters stamped into the receiver behind the feeder.

b. The 12.7-mm Degtyarev heavy machinegun is an automatic, gas-operated, belt-fed, tripod- or vehicle-mounted weapon firing from the open-bolt position. The Model 38/46 can be adapted to right- or left-hand feed, and it has a changeable barrel. Feeding is accomplished by 50-round-capacity metallic-link belts. The Degtyarev 12.7-mm machineguns use the 12.7 x 108-mm cartridge (sec. VI).

c. The mount can be used for ground fire and is easily converted to antiaircraft use (fig. 78).

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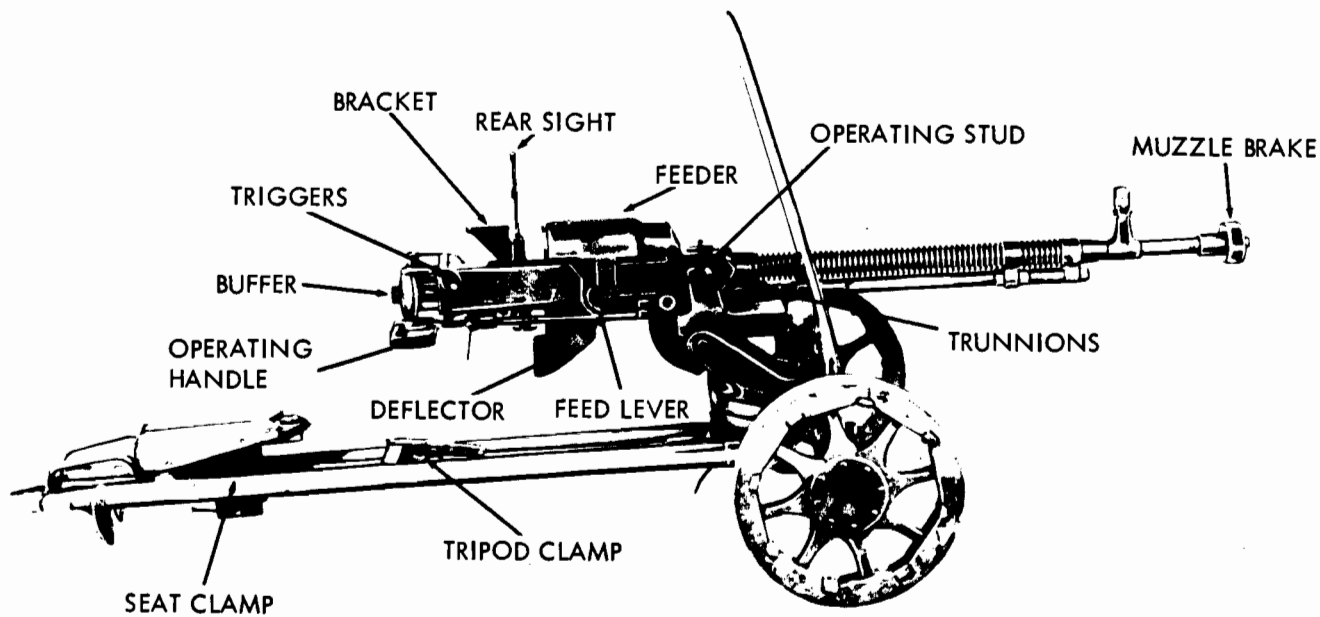


Figure 76. 12.7-mm Degtyarev heavy machinegun DShK-38.

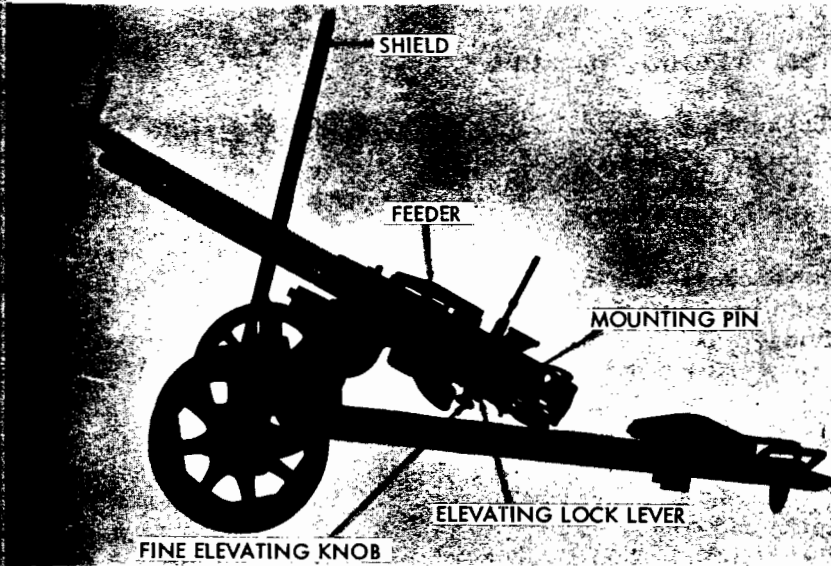


Figure 77. 12.7-mm Degtyarev heavy machinegun Model 38/46.



Figure 78. Degtyarev heavy machinegun, AA position.

126. TECHNICAL DATA

Technical data concerning the 12.7-mm Degtyarev heavy machineguns will be found in table IX.

127. OPERATION

a. Load the metallic-link belt by pressing a cartridge into each link until the tab on the link snaps into the rim of the cartridge. Place the loaded belt into an ammunition box so that the open side of the top layer faces down.

b. Mount the gun on the tripod (par. 130).

c. To load the DShK-38 rotary feeder, press the cover latch and open the cover (fig. 79). Slip the link stripper into the first link, and place the first cartridge in the belt into the topmost compartment of the drum (fig. 79). Grasp the end of the belt with the right hand; with the left hand, press the belt against the drum; then sharply jerk the belt to the right and down so that the drum and cartridges will rotate as far as possible. Close the cover.

d. To load the Model 38/46 feeder, insert the belt into the feeder and, with a vigorous jerk on the lead tab, seat the first cartridge into position.

e. Pull the operating handle fully rearward; then thrust it forward. Caution: The gun is now ready to fire! If the gun is not to be fired immediately, rotate the safety (fig. 79) forward.

f. The sights are similar to those of the Goryunov machinegun. Refer to figure 72 and paragraph 120d for the method of operating the sight. The 12.7-mm sight has only one scale on it.

g. To fire, rotate the safety rearward; then aim--using a normal sight picture--and squeeze the trigger (fig. 76). The bolt will remain closed on an empty chamber when the last round has been fired.

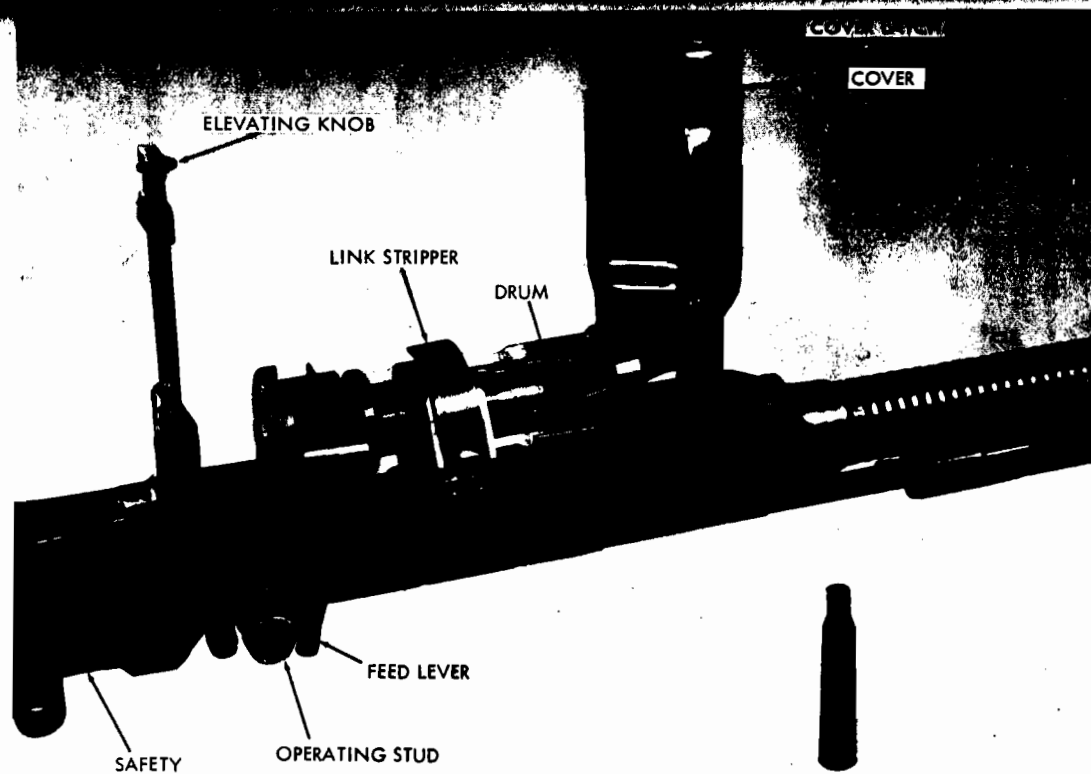


Figure 79. Degtyarev heavy machinegun, receiver and feeder, DShK-38.

h. To unload or clear, set the safety to the safe position (forward), open the cover, and remove the belt. On the DShK-38, also lift the drum and remove all cartridges from the drum by rotating it until it is empty. Inspect to insure that no cartridges are present in the feeder, chamber, or receiver. Close all covers, rotate the safety to the rear, pull the operating handle to the rear, and, while holding the handle, press the trigger and ease the bolt forward. Lower the rear sight.

i. If necessary, adjust the gas regulator in the same manner as for the Degtyarev light machinegun (par. 108j). The 12.7-mm regulator is marked "3", "4", and "5."

128. DISASSEMBLY AND ASSEMBLY

a. Clear the gun, but leave the feed cover and drum open.

b. Press out the cross pin at the rear of the receiver, and drive the backplate upward until it separates from the receiver.

c. Drive the sear mechanism to the rear and remove it.

d. Grasp the knurled gas-piston tube under the barrel and pull it as far forward as possible; then turn it clockwise to disengage it from the barrel.

e. Pull the operating stud (fig. 79) to the rear, and remove the gas piston, bolt, slide, gas-piston tube, etc. Lift the bolt off the slide, and remove the firing pin and the locking flaps.

f. No further disassembly is necessary or desirable.

g. To reassemble, place the firing pin into the bolt, and the locking flaps onto the bolt. Place the assembled bolt on the slide, shove it as far forward as possible, and, when the flaps lie flush against the bolt, insert the entire unit into the receiver.

h. Pull the gas-piston tube forward and insert it with the barrel.

i. Slide the sear mechanism back into the receiver. Then slide the backplate down on the back of the receiver. Insert the takedown pin, close all covers, and lower the rear sight. Be sure that the feed operating lever is pushed forward before closing the feeder.

129. FUNCTIONING

a. The basic operation of the breech mechanism is identical to that of the DP machinegun (par. 110a, b, and c).

b. The trigger mechanism, however, differs from that of the DP. When the trigger is pressed, it pivots and raises the trigger-release lever (fig. 80-56). This lever pivots and depresses the sear (fig. 80-58) to release the slide.

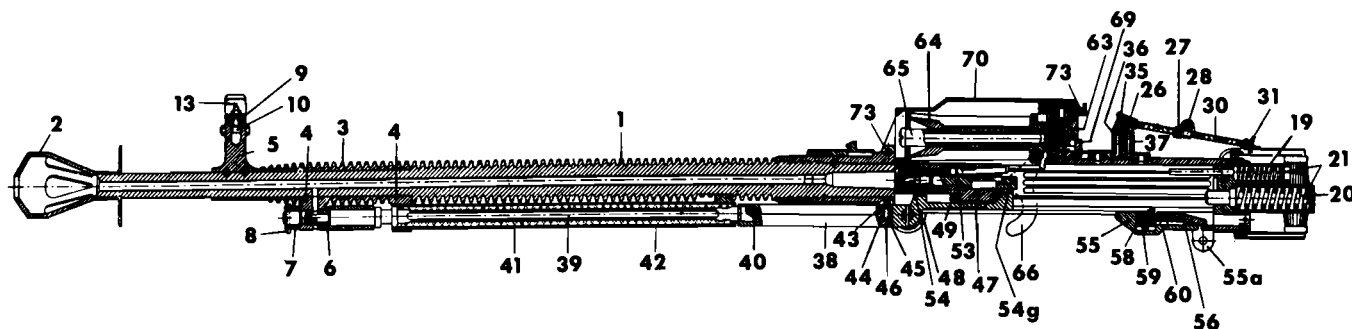
c. The safety (fig. 80-60), when rotated to the safe position, blocks the trigger-release lever.

d. The recoiling slide actuates a belt feed lever (fig. 80-66). This lever, depending on the gun, causes the DShK-38 drum to rotate or the 38/46 feed slide to move back and forth. This action is brought about by suitable levers and linkages.

130. MOUNTS

a. The DShK-38 and the Model 38/46 heavy machineguns are mounted on the Model 1938 mount (fig. 76). This wheeled mount is used for ground fire and can be readily converted for antiaircraft fire (fig. 78). A large flat armored shield is used to protect the crew when the gun is used in its ground role. Like all Soviet heavy machinegun mounts, it has a coarse free traverse and elevation movement with a fine adjustment on the elevation movement only.

b. To mount the gun, open the trunnion caps by loosening the cap wing-nuts and swing the caps open. Place the gun trunnions (fig. 76) into their seats, close the trunnion caps, and



CROSS SECTION OF DShK MACHINE GUN. MOVING PARTS IN FORWARD POSITION

1. barrel; 2. muzzle brake; 3. cooling flange; 4. retaining pins; 5. front sight base; 6. gas regulator; 7. gas regulator nut; 8. cotter pin; 9. front sight guard; 10. front sight guard base bolt; 13. front sight; 19. bolt buffer spring; 20. barrel extension/locking frame buffer spring?; 21. spring housings; 26. rear sight housing; 27. rear sight slide; 28. rear sight; 30. rear sight leaf; 31. rear sight elevation knob; 35. rear sight leaf retaining pin; 36. rear sight spring; 37. rear sight spring cap; 38. slide; 39. gas piston rod; 40. dowel pin; 41. gas piston rod spring; 42. gas cylinder tube; 43. roller?; 44. roller press?; 45. roller press spring?; 46. container base?; 47. sear notch?; 48. operating handle?; 49. bolt; 53. ejector; 54. firing pin; 54g. firing pin housing; 55. trigger housing; 55a. ear; 56. trigger release lever; 58. sear; 59. sear spring; 60. safety; 63. receiver base; 64. knob?; 65. knob shaft?; 66. feed lever; 69. feed base catch; 70. feed cover; 71. feed cover catch; 73. feed cover bolt.

Figure 80. Degtyarev heavy machinegun, section.

tighten the wingnuts. Place the rear end of the receiver into the mount and secure it with the mounting pin (fig. 77).

c. The elevating lock lever (fig. 77) clamps the gun at any desired elevation, and fine adjustments are made with the fine elevating knob. Except for antiaircraft use, never fire the 12.7-mm guns unless the elevating lock lever is tightened down.

d. The traversing lock lever is located at the junction of the upper and lower mounts. Normally it should be tightened when firing ground fire.

e. To convert the mount for antiaircraft fire, dismount the gun (reverse instructions in "b", above), loosen the shield clamps, and remove the shield. Loosen the axle bracket clamp and remove the wheels and axle. Loosen the clamp halfway along the legs, and lift the mount so that the legs are perpendicular to the ground. Swing the middle leg to the rear and open the outer legs. Lock the middle leg so that the upper mount will rotate on a horizontal plane, and reinstall the gun. A shoulder brace can be installed on the dovetail above the fine elevating knob, and the antiaircraft sight (fig. 78) can be slid into the dovetail cut in the receiver. Caution: The use of this weapon for antiaircraft defense is not recommended because of the training required to develop a competent gun crew for this type of firing.

f. The ammunition box fits into a holder on the left side of the gun.

131. ACCESSORIES

The same general type of accessories used with the Goryunov heavy machinegun are used with the 12.7-mm Degtyarev heavy machinegun (par. 124).

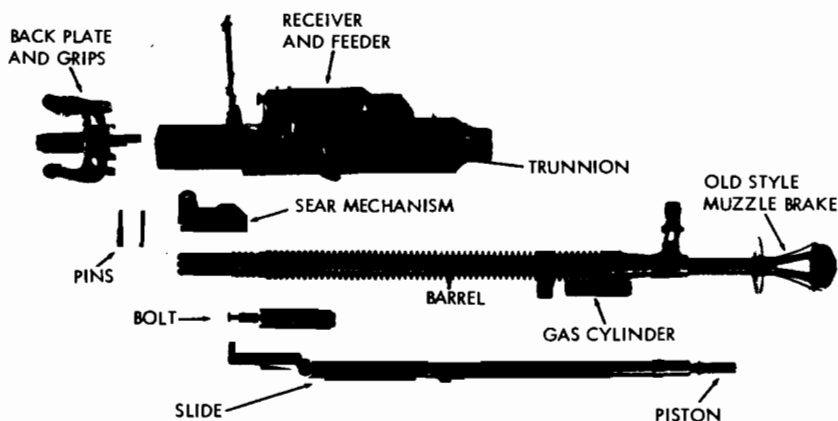


Figure 81. Degtyarev heavy machinegun, field-stripped.

G. MAINTENANCE OF MACHINEGUNS

The procedures and materials prescribed for cleaning standard U.S. Army gas-operated machineguns also apply to Eurasian Communist machineguns. These weapons should be disassembled only to the extent necessary for adequate cleaning, in order to prevent breakage and subsequent loss of use. No repairs should be attempted on foreign machineguns other than replacement of parts, and this should be done only by a competent armorer.

H. MALFUNCTIONS AND STOPPAGES

See table X for common malfunctions and their remedies.

Table IX. Machinegun Technical Data

Weapon	Kalashnikov squad LMG	Vzor 52 and 52/57 LMG	Degtyarev LMG	Degtyarev company MG	Degtyarev squad LMG	Goryunov heavy MG	Degtyarev heavy MG
Short name	RPK	Vz 52 and Vz 52/57	DP and DPM	RP-46	RPD	SG-43, SG-43M, SGM, and SGMB	DShK-38 and Model 38/46
Caliber (mm)	7.62	7.62	7.62	7.62	7.62	7.62	12.7
Length (in)	40.75	41.1	50	50.5	40.8	44.1 ²	62.5 ³
Weight, empty (lb)	11.1	18.2	20	28.7	15.6	29.8 ²	78.5 ³
Barrel length (in)	24	21.5	23.8	23.9	20.5	28.3	42.1
Barrel change	No	Yes	Yes	Yes	No	Yes	Yes (38/46 only)
Feed device	Box or drum	Box or belt	Pan	Belt ¹	Belt	Belt	Belt
Capacity (rd)	Box, 40; drum, 75	Box 25; belt, 100	47	250	100	250	50
Operation	Gas	Gas	Gas	Gas	Gas	Gas	Gas
Locking feature	Rotary bolt	Tilting bolt	Pivoting flaps	Pivoting flaps	Pivoting flaps	Pivoting bolt	Pivoting flaps
Fire-type	Selective	Selective	Automatic	Automatic	Automatic	Automatic	Automatic
Muzzle velocity (m/sec)	735	745 (M52)	640	840	735	800	860
Practical range (m)	800	800	800	800	800	1000	2000
Rate of fire, practical (rpm)	50, semiautomatic; 150, full- automatic	300, belt; 125, box	80	250	150	250	80
Rate of fire, cyclic (rpm)	600	900 to 1100	600	600	650 to 750	600 to 700	540 to 600
Mount-type	Bipod	Bipod or tripod	Bipod	Bipod	Bipod	Tripod	Tripod

¹ 47-rd DP drums can be used if feeder is removed.² Gun only, SGM.³ Gun only.

Table X. Machinegun Malfunctions

Condition	Cause	Remedy
Fails to fire (cartridge in chamber)	Defective cartridge	Retract bolt and fire
	Weak driving spring	Replace spring
	Fouled weapon	Clean and lubricate
Fails to fire (no cartridge in chamber)	Defective magazine	Replace magazine
	Short recoil	Adjust gas regulator to next largest setting
	Short recoil	Clean and lubricate
Ruptured cartridge (repeatedly)	Excessive head-space Goryunov weapons	Adjust
Fails to extract	Dirty chamber	Clean
	Broken extractor	Replace extractor
Fails to eject	Fouled weapon	Clean and lubricate
	Short recoil	Adjust gas regulator
Runaway gun	Short recoil	Adjust gas regulator

Malfunctions caused by broken or worn parts can be corrected by replacing the defective part with a serviceable one. This should be done only by a competent armorer, and the repaired weapon must then be function test fired.

Section VI. AMMUNITION

132. GENERAL

a. Communist ammunition is generally comparable to U.S. Army ammunition in quality and reliability. Cartridge cases are fabricated from brass, copper-clad steel, and a green-lacquered steel; none of these production variants affects the use or interchangeability of specific types of ammunition.

b. Ammunition with rust, dents, or corrosion should not be used. Dirty or greasy ammunition should be wiped clean prior to loading. U.S. and Communist 7.62-mm ammunition is not interchangeable; do not attempt to fire U.S. ammunition in a Communist weapon.

c. Communist ammunition is produced in a variety of types, and a standard color code is used throughout the Communist world to identify ammunition as to its function. This code is based upon the bullet tip color (table XI). Cartridges with the symbol "III" on their base should not be used except in Goryunov heavy machineguns.

d. There are four different 7.62-mm cartridges currently used by the Eurasian Communists. They are:

(1) A pistol cartridge, the 7.62 x 25-mm round; the overall length is 1.36 inches.

(2) An intermediate cartridge, the 7.62 x 39-mm M1943 round; the overall length is 2.19 inches.

(3) A full-powered rimmed cartridge, the 7.62 x 54R-mm round; the overall length is 3.02 inches.

(4) A special Czechoslovak intermediate cartridge, the 7.62 x 45-mm M1952 round; the overall length is 2.36 inches. The 9 x 18-mm Makarov cartridge is 0.97 inches overall. The 9 x 19-mm Parabellum cartridge is 1.15 inches overall. The 12.7 x 108-mm DShK-38 cartridge is 5.78 inches overall.

Table XI. Cartridge Data and Color Codes

Cartridge	Bullet tip color	See note
7.62 x 25-mm Pistol Ball Type P	None None	4
7.62 x 25-mm Pistol Tracer Type PT	Green	
7.65 x 17SR Pistol Ball	None	5
9 x 18-mm Makarov Pistol Ball	None	
9 x 19-mm Parabellum Pistol Ball	None	6
7.62 x 39-mm M43 Ball Type PS	None	2
7.62 x 39-mm M43 Tracer Type T-45	Green	2
7.62 x 39-mm M43 API Type BZ	Black and red	2
7.62 x 39-mm M43 Incendiary-T Type Z	Red	2
7.62 x 45-mm M52 Ball	None	3
7.62 x 45-mm M52 Tracer	Green	3
7.62 x 54R Ball Type L	None	

Table XI. Cartridge Data and Color Code (Continued)

Cartridge	Bullet tip color	See note
7.62 x 54R Ball Type D	Yellow	1
7.62 x 54R Ball Type LPS	Silver or white	
7.62 x 54R Tracer Type T	Green	
7.62 x 54R Tracer Type T-46	Green	
7.62 x 54R AP Type B-30	Black	
7.62 x 54R API Type B-32	Black and red	
7.62 x 54R Incendiary- ranging Type ZP	Red	
12.7 x 108-mm API-T Type BZT	Purple and red	
12.7 x 108-mm API Type B-32	Black and red	
12.7 x 108-mm AP Type B-30	Black	

¹ Use in emergency only.² Used in assault rifles; SKS and Vz 52/57 rifles; and RPD, RPK, and Vz 52/57 light machineguns.³ Vz 52 rifles and machineguns only.⁴ Do not use Czechoslovak-made ammunition in TT-33 pistols.⁵ Vz 61 "Skorpion" pistol ammunition.⁶ Tokagyt pistol and Czechoslovak Vz 23 and Vz 25 submachineguns.

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