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Nastavleniye Po Strelkovomu delu - 9-mm Avtomaticheskiy Pistolet Stechkina (APS)

Small Arms Manual - 9-mm Stechkin Automatic Pistol

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Ministry of Defence, USSR.

Small Arms Manual - 9-mm Stechkin Automatic Pistol

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Foreword: This handbook is a new edition of the handbook published in 1955.

In this edition the following paras have been corrected: 7,20,27, 28,34,42,44,82,89,92,96,98,100,&119.

Part I.

Construction of the pistol, its use, treatment and care

Chapter I.

General Characteristics.

Name and Combat Characteristics of the Pistol.

1. The 9-mm automatic pistol designed by Stechkin is a powerful personal weapon, in which the combat characteristics of a pistol and a sub-machine gun have been combined. It is designed for a personal weapon for officers, who participate directly in combat activities, as well as for sergeants and soldiers of certain special small units.

Figure I: The general view of the 9-mm automatic pistol Stechkin.

Fire from the pistol is conducted with the 9-mm pistol ammunition, either automatically (short bursts of two to three rounds) and by single rounds.

With automatic fire and the use of the attached holster butt (Figure 2) it is possible to fire aimed fire against group and single targets for a distance of up to 200 metres.

Figure 2: General view of the pistol with attached holster butt.

More or less accurate fire can be conducted with the pistol on the following distances:

-With holster butt attachment in bursts up to 100m, single rounds up to 150 m;

-Without the holster butt, in single rounds up to 50 m.

2. Rates of fire - 700-750 rounds per minute.

Combat rates of fire -

-With automatic fire, up to 90 rounds per minute.

-Firing single rounds, up to 40 rounds per minute.

Maximum aimed fire 200 m.

The killing power of the bullet is retained up to 350 m.

Distance of direct fire on a chest target - 150 m.

Initial velocity of the bullet - 340 m/sec.

3. The pistol is worn in its holster butt (Figure 3).

Figure 3: The pistol in its holster butt.

The pistol is simple in construction and use and with proper care it works without failures.

The Principles of Construction and the Working of the Parts of the Pistol

4. The pistol is an automatic weapon. The action of the automatic pistol is based on the principle of the recoil of the free bolt. The pistol has a self-cocking striker release mechanism of the cock principle, which makes it possible to open fire by exerting direct pressure on the trigger without previously cocking the gun. The safety catch is of a flange type, also serving at the same time as a transferrer from automatic to single round firing and return. Besides that, the cock automatically positions itself in a safety position by virtue of the arming spring after it has been released from its firing. (Rest of the cock.) The pistol also has mechanism to slow down the fire. The feeding of bullets is achieved through an exchangeable two-row magazine of twenty bullets.

5. The pistol consists of the following main parts and mechanisms: (Figure 4) Frame with the barrel and basic handle, trigger guard,

bolt and striker, ejector and transfer safety catch, the striker-trigger mechanism, the mechanism to slow down the speed of fire, the return spring, the bolt locker, stock with screw and magazine.

Figure 4 - The Main Parts and Mechanism of the Pistol:
1. Frame with barrel and basic handle; 2. Trigger guard; 3. Bolt with striker, ejector, and transfer safety catch; 4. Parts of the striking mechanism; 5. Parts of the mechanism retarding speed of fire; 6. Return spring; 7. Bolt locker; 8. Stock with screw; and 9. Magazine.

6. The 9-mm pistol round (Figure 5) consists of the casing, percussion cap, powder charge and bullet.

Figure 5: 9-mm pistol round: 1. Casing; 2. Bullet.

7. When firing the automatic pistol works as follows.

Powder gases are formed in firing as the result of the combustion of the powder charge, which exert heavy pressure in all directions. Under the pressure of the powder gases, the bullet moves into the channel of the barrel, but the bolt begins to move away backwards, compressing the return spring. During the return motion the bolt engages the ejector of the shell which with meeting the ejector is thrown out backwards. While moving back, the bolt engages the cock. Under the pressure of the return spring, the bolt returns to its forward position, moves up, the next bullet from the magazine into the chamber and closes thereby the channel of the barrel.

When the change lever safety catch is set to automatic firing, then automatic fire will continue during such time as the release catch stays in that position and as long as there are shells in the magazine. When the change lever safety catch is set to single rounds, then pressure of the trigger will result in the firing of a single round; to continue fire one has to release the trigger and pull it again.

Chapter II

Stripping, Assembly, Cleaning and Oiling of the Pistol.

Stripping and Assembly of the Pistol.

8. The stripping of the pistol is conducted for cleaning, oiling and inspection, as well as for exchange or repair of damaged parts. Excessive stripping is harmful because it increases the wear on the parts and mechanism of the pistol.

Stripping and assembling of the pistol should be carried out on a table, or , in the field, - on a clean surface.

The parts and the mechanism are to be laid down in the order of their removal, and they have to be treated with care, excessive force and hitting of parts is to be avoided.

9.The stripping of the pistol may be partial or complete. Partial stripping is conducted for cleaning, oiling, and inspection of the pistol. Complete stripping is conducted for the exchange of damaged parts and in the event that the pistol has fallen into water, is wet by rain, has fallen into mud or snow, when completenew greasing is required, and after extended firing.

10. Partial stripping of the pistol is conducted in the following manner:

1.Remove the magazine from the handle of the pistol. Holding the pistol in the right hand by the grip, one presses with the thumb of the left hand on the magazine release catch and removes it from the handle. (Figure 6.)

Figure 6: Removal of magazine.

After that it is absolutely necessary to check whether or not a round is still in the chamber. To do this one holds the pistol in the right hand.Without touching the trigger with the left hand one changes the change lever to single round.(One turns the lever and puts it in the proper position pointing to "OD"(Single) on the bolt).

Cocking the piece, one pulls the bolt back, inspects the chamber, and releases the bolt.

2. To separate the bolt from the frame of the pistol: Holding the pistol with the striker cocked in the right hand, with the left hand one pulls away the forward part of the trigger guard by a downward motion. (Figure 7.) Then pulling the bolt back till it stops, and lifting it up, one lets it slide forward and then removes it from the barrel. (Figure 8.)

Figure 7: Removal of the trigger guard.

Figure 8: Removal of bolt.

3. To remove the return spring from the barrel: Holding the pistol by the grip in the right hand, with the left hand one removesthe return spring from the barrel.

11. The assembly of the pistol after partial stripping is conducted in the following order:

1. Replace return spring on the barrel.

Holding the pistol in the right hand, the return spring is slipped on to the barrel with the left hand.

2. Join the bolt to the frame of the pistol.

Holding the pistol in the right hand, by the handle, with the left hand grasp the rear end of the bolt with the sight upwards. Feed the forward end of the return spring into the channel of the bolt and place the bolt over the barrel. After this, lightly pushing the bolt to the frame of the pistol, pulling it back until it catches, push down towards the frame of the pistol, and then slide forward. With the index finger of the left hand pushing up on the trigger guard, so it remains in its proper position. Smoothly release the cock, holding it back with the thumb of the right hand.

Note: While replacing the bolt the forward end of the trigger guard does not always have to be pulled down. In this event the trigger guard will be pushed down by the flange of the bolt when

its rear end fits on to the frame.

3.Replace magazine.Holding the pistol with the right hand by the handle, with the left hand move the retarder safety catch by its flange to the position "PR" (safety), on the bolt. Then grasp the magazine and push it into the handle with an upward motion until it catches, so that the cover of the magazine is locked on the rear end of the frame of the handle.

12.Complete stripping of the magazine is conducted in the following order:

1. Conduct partial stripping as outlined in paragraph 10.
2. Push the trigger guard back into position.
3. Release the cock from the cock position. Holding the pistol with the right hand, with the thumb of the left hand push down until the transfer lever releases, but with the index finger of the right hand on the tail of the trigger and release the cock from the cock position, holding it with the thumb of the right hand. (Figure 9).

Figure 9: Release of the cock from the cock position.

Note: With the pistols of the first issue, it is necessary in order to release the cock from the cock position to press down the disconnector besides releasing the transfer lever. In this event, the order of releasing the cock from the cock position is as follows: Holding the pistol with the right hand, by the handle, with the middle finger of the left hand push down until release on the transfer lever and, at the same time, with the index finger ofthe same hand, push down the disconnector and, holding it in this position, with the index finger of the right hand press down on the tail of the trigger and release the cock from the cock position holding it back while doing this with the thumb of the right hand.

4. Remove the grips from the frame of the handle. Lay the pistol with the barrel pointing to the left in the palm of the left hand.

With the right hand, with the aid of a screw driver, remove the holding screw and lift off the grips.

5. Remove the transfer lever. With the thumb of the right hand move the ejector slightly to the side; then turning the transfer lever with the thumb and forefinger of the same hand upwards, give it a vertical position and remove it from the frame. (Figure 10).

Note:In several copies of the pistols of the first issue, in order to remove the transfer lever, it is necessary to lower the retarder before it is possible to push the ejector to the side.

Figure 10: Removal of transfer lever.

6. Remove the disconnector, sear and with bolt stop from the frame. With the forefinger of the right hand push down the retarder and holding it with the fingers of the left hand in the lowered position, grasp the cleaning rod with the right hand and with the screw driver remove the end of the sear spring and bolt stop, (Figure 11), pushing the sear forward and remove the disconnector. After this, with the thumb and index finger of the right hand, holding the sear and bolt stop, pull out first the right and then the left pin of the sear from the pin recess on the frame and separate the bolt stop from the sear.

7. Extract retarder. With the right hand extract the retarder together with its spring and guide rod from the slots of the crosspiece of the handle, and separate the spring with the guide rod from the retarder.

8. Separate the cocking spring and operating rod and the magazine retainer from the frame. Holding the pistol in the left hand, with the thumb of the right hand push the magazine catch forward and then back and release it from its catch on the frame; after that, pull down, separate the cocking spring together with the operating rod and magazine catch from the frame. (Figure 12).

Figure 12: Separation (Re-assembly) of the cocking spring and operating rod as well as magazine catch.

9. Separate hammer from frame. Holding the pistol in the left hand, with the thumb push down on the trigger guard, with the forefinger of the right hand move the hammer forward and pushing it back with the thumb of the same hand, remove the cock from the frame. (Figure 13.)

Figure 13: Separation of the cock of the hammer from the frame.

10. Separate trigger guard from frame. Holding the pistol in the left hand, with the right hand pull the trigger guard forward and with a downward motion seppnrte the trigger guard from the frame. (Figure 14.)

Figure 14: Separation (Re*assembly) of trigger guard.

11. Separate trigger and spring and trigger bar from frame. With the thumb and forefinger of the right hand, push the trigger towards yourself and downwards. Following this, with the forefinger of the left hand move the trigger pin from its slot in the frame downwards, with the right hand twist the trigger and extract it together with the trigger bar from the frame with an upward motion. (Figure 15.)

Figure 15: Separation (Re-assembly) of trigger with spring and trigger bar.

12. Take apart the bolt. To begin with, remove striker and separate

the change lever-safety catch. For that, grasp the bolt in the left hand at its for ward end and holding it with the flange of the change lever-safety catch towards oneself. With the thumb of the right hand turn the flange upwards until it comes into a vertical position. Then lightly tapping the rear part of the bolt with the palm of the right hand, separate the striker from the channel of the bolt; with the thumb and forefinger of the right hand grasp the flange and with

a to-and-fwo motion separate from the bolt the change lever-safety catch. After that, remove the extractor. (Figure 16.)

Figure 16: Separation of extractor from bolt.

In order to do that, place the bolt on a table with the sight upwards; holding the bolt with the left hand, with the right hand press down the stopper of the extractor and lifting its rear end upwards push it forward and separate the extractor from the frame. After this, remove the stopper, the extractor spring, and the change lever-safety catch retaining pin from the channel of the bolt.

13. Disassemble the magazine. Grasping the magazine in the left hand, with the thumb and forefinger push the spring to the feeder. With the right hand slide the magazine cover out of its slot, grasping it by its protusion, (Figure 17.) and slowly releasing the spring and feeder plate, remove it from the body of the magazine.

Figure 17: Disassembly of magazine.

With this the complete disassembly is finished. The remaining parts and mechanisms of the pistol will only be separated in an armourer's workshop.

13. The assembly of the pistol after complete disassembly will be carried out in the following order:

1. Replace trigger with spring and trigger pin in the frame. Grasping the pistol with the left hand, (See Figure 15), with the thumb and forefinger of the right hand grasp the trigger and place the trigger pin in the slot in the frame. After this, turning the trigger to the left, with the forefinger of the left hand guide the trigger pin into the slot of the frame, moving the trigger towards oneself and then

pushing it back to the holding bar of the trigger on the frame.

2. Replace the trigger guard on the frame. Holding the pistol with the left hand, grasp the trigger guard with the right hand, with the strut downwards, feed the trigger guard into the opening and the stopper into the hollow located inside the frame. (See Figure 14.)

After that, lift the trigger guard slightly towards yourself, and with the thumb of the right hand push down until it catches in the slot.

3. Replace hammer on the frame. Holding the pistol with the left hand, with the thumb and forefinger ofthe right hand grasp the hammer and guide its pin into the pin recess on the frame; (Figure 18.) turn the hammer back and at the same time push down the trigger bar.

Figure 18: Replacing the hammer.

4. Reattach the firing spring with the operating rod and magazine catch to the frame. Holding the pistol in the palm of the left hand, with the right hand grasp the magazine catch and guide the operating rod into the handle, (See Figure 12.) with the half round facing to the back of the handle. After this, place the upper part of the operating rod in the hammer recess and pushing with the thumb of the right hand on the magazine catch, slightly move it to the right and slide into its place.

5. Replace the retarder. Place the spring and guide rod in the channel of the retarder. Holding the pistol with the left hand, place the retarder in the slot on the crosspiece which runs sideways through the handle frame and lower the retarder into it. At the same time, the cam on the guide rod which is designed to catch in the frame has to enter into the proper cut-out on the crosspiece of the frame of the handle. After this, with the fingers of the right hand, the retarder has to be pushed down, compressing the spring. With the fingers of the left hand, hold it in the lower position during this operation. Holding the retarder in this lowered position, with the right hand take the screw which is to hold the grips and place it in the opening

on the right crosspiece of the handle bar in such a way that the end of the screw crosses the way of the retarder and holds it in this lowered position.

Note: In earlier models of the pistol there is no opening on the right crosspiece. In these pistols the retarder has a special lug and the guiderod has a tooth which is designed for this purpose in the assembling of the pistol.

In this event, the assembly is carried out as follows: Placing the spring with the guiderod in the channel of the retarder grasp the assembled retarder with the left hand in such a way that the guiderod is pointing down. And pushing the giderod against the table compress the spring to the lower recess on the retarder. After this, guide towards the recess and engage the tooth of the guiderod with the catch on the cam of the retarder. The engagement of the rod with the retarder can also be achieved by turning the upper end of the rod (which protrudes from the channel of the retarder) with the fingers of the right hand. Grasping the pistol with the left hand, with the right hand insert the retarder engaged with the rod into the proper passages on the base of the handle. (Figure 19.)

Figure 19: Replacing retarder.

6. Replace the sear, bolt, catch and disconnector on the frame. Grasping the sear by its upper wing with the left hand, with the wing pointing to oneself, with the right hand feed on to the left pin of the sear the locking device with the ejector pointing upwards; Lightly pressing together the bolt catch with the forefinger of the left hand towards the spring of the sear in such a way that the left pin protrudes through the opening of the catch. With the thumb of the right hand on the upper wing of the sear and with the forefinger of the same hand slightly push the bolt catch to the spring of the sear (Figure 20) in such a way that the catch enters on the seat of the sear.

Figure 20: Method of holding sear with the bolt stop during assembly.

After this, grasping the pistol by the handle with the left hand,

with the right hand guide the left pin of the sear into the pin recess on the crosspiece of the frame, (Figure 21.) then guide the right pin of the sear into the pin recess on the right side of the frame; place the pin off the disconnector into the pin recess on the right side of the frame in order that the tail of the disconnector is caught on the trigger bar and that its cam with its lower end lies on the lower wing of the sear. After this, turn the sear in such a way that the cam of the disconnector enters the slot of the lower wing of the sear, (the middle wing should be in a horizontal position). With the right hand, using the cleaning rod, feed the end of the sear spring on to the bolt catch.

Figure 21: Replacing the sear with the bolt stop on the frame.

With the fingers of the left hand push the retarder into a lower position, with the right hand unscrew the grip screw and holding the retarder let it rise slowly into the upper position.

In pistols of earlier vintage the teeth of the guiderod engage with the lip of the retarder. With this, the retarder will assume its proper position.

7. Replace the transfer lever. Holding the pistol in the left hand, with the thumb and forefinger of the right hand grasp the transfer lever with the long pin pointing towards oneself and in a vertical position, (Figure 22.) place the pin in the pin recess. Turn around the transfer lever and pushing on its upper tooth downwards until it engages in the slit. With this the lower pin should engage with the retarder and the ejector should rest on it.

8. Replace grips on the frame of the handle. Holding the pistol in the left hand, with the right hand place the grips on the frame, insert screw and with the aid of a screw driver screw tight.

9. Assemble magazine. Holding the body of the magazine in the left hand with the opening upwards, with the right hand grasp the screw with

the feeder in such a position that the protrusion of the feeder points upwards. After this, insert the spring with the feeder into the body of the magazine. With the thumb and forefinger of the left hand

suppress the feeder spring and with the right hand insert the magazine cover; fitting the end of the feeder spring into the opening provided in the magazine cover should be accompanied by a click.

10. Assemble the bolt. Holding the bolt in the left hand with the thumb and forefinger of the right hand grasp the transfer lever safety catch with the flange pointing upward and place it in the large opening of the bolt in such a manner that the pin enters the small opening which is located on the right side of the bolt. Holding the flange in a vertical position with the right hand slide in the extractor spring into the channel of the bolt with the retaining pin of the transfer lever safety catch pointing downwards (Figure 23). (The retaining pin of the transfer lever safety catch is sharp.) Place the bolt on a table with the opening for the ejection of the casings towards oneself. Holding the bolt with the left hand with the right hand using a screw driver push down the stopper of the ejector as deep as possible. Holding the stopper with the forefinger of the left hand, with the right hand push the extractor into the passage. After this push the extractor to the left until it slides into the slot. Holding the bolt with the left hand with the sight upwards, with the right hand insert the striking pin into the canal with the recess downward, pushing it to the left as far as possible. Change the lever to single round position.

Figure 23: Insertion of the extractor spring with pin and transfer lever safety catch.

11. Further assembly will be carried out as shown in paragraph 11. On conclusion of partial or complete stripping the correctness of the

assembly and the proper working of the parts and mechanism of the pistol is checked as outlined in paragraph 51.

CLEANING AND OILING OF THE PISTOL

14. The pistol is always to be maintained clean and in proper working order. This can be achieved by timely and correct cleaning and oiling, careful handling and proper care of the pistol.

15. The pistol will be cleaned as follows:
-Under combat conditions, during manoeuvres and during long field

training - daily in periods between combat or in intermissions of the training exercises;

- After lessons, details and exercises in the field without firing - soon after the completion of the lesson detail or exercise;

- After firing - soon after the completion of the firing (on the range, in the field,) clean the barrel with an alkaline compound after which wipe it dry and oil it; when returning from the firing carry out complete cleaning of the pistol; during the next three to four days repeat cleaning;

- When the pistol is not used - not less than once every seven days.

16. Oiling should only be carried out on a clean and dry surface and when the metal is also dry and soon after cleaning so that ~~rust~~ moisture cannot assemble on the metal.

17. The cleaning and oiling of the pistols by officers is carried out independently, by enlisted men under the supervision of the commander who should:

- supervise the steps of the necessary stripping and cleaning and oiling;

- ascertain the proper quality of the cleaning and oiling materials;

- check the quality of the cleaning and give permission to oil the pistol;

- inspect the quality of the oiling.

18. In barracks or in camps the cleaning of the pistols will be carried

out in especially designated areas on improvised or specially designated tables for the purpose. Under combat conditions and on the move - on the ground sheet, bahrds, plywood covers, etc. free from dirt and dust.

19. For washing, cleaning and oiling of the pistol, there will be used:

- alkaline compound - to neutralize the action of the powder gases and to remove this from the wall of the barrel and other parts of the pistol which are affected by the powder gases;
- gun grease - for greasing all metal parts of the pistol; This oil

safeguards the proper workings of the parts and the mechanism of the pistol at a temperature not below plus 5° C;

- winter lubricant No. 21 - for oiling the parts of the pistol in winter; this oil insures the proper working of the parts and the mechanism of the pistol down to a temperature of minus 40°C;
- cannon grease - for oiling pistols which have been handed into a storage depot for extended storage;
- clean cotton rags - for washing, cleaning and oiling the parts of the pistol as well as waste impregnated with linseed oil, free of fuzz, for cleaning the barrel.

20. The cleaning of the pistol is carried out in the following manner:

1. Prepare the washing and oiling materials.
2. Look over the cleaning rod, as shown in paragraph 59.
3. Strip the pistol.
4. Clean the barrel. Feed into slot of the cleaning rod oakum or cotton. The amount should be such that the cleaning rod with the cotton will pass through the barrel without too much pressure. Soak the cotton with the alkaline solution. Insert the cleaning rod into the barrel from the muzzle. Place the frame of the pistol on a table

and holding it with the left hand with the right hand push cleaning rod up and down the whole length of the barrel several times. Change the cotton and soaking it again with the alkaline solution repeat the cleaning another time. Then carefully clean the cleaning rod. Then clean the barrel dry, first with cotton waste, and then with clean dry rags. Inspect the rags, and if there are any signs of dirt on the rags then again clean the barrel with cotton soaked with alkaline solution and then with dry cotton and rags. The cleaning of the barrel is repeated as long as the rags drawn out of the barrel are not clean. In the same manner the breech is cleaned. Carefully inspect the barrel and breech in the light. Special attention at the inspection is to be directed at the breech and the corners of the slots in which no dirt or residue should remain.

Note:When during cleaning the cleaning rod jams in the barrel, pour

into the barrel dissolving oil, and, after a few minutes pull the cleaning rod out. If the cleaning rod does not move, send the pistol to the armourer's workshop.

5. Clean the frame of the pistol and barrel from the outside. With a rag which is dry wipe off all the dirt and moisture. Attack rust either with rags or hemp fibre soaked in an alkaline solution. Then dry the area to which the alkaline solution has been applied. When cleaning passages, openings and recesses make use of a wooden stick.

6. Clean the bolt, return spring, parts of the striker release mechanism, as well as the mechanisms of the retarder, trigger guard, and pistol grips. When the cleaning of the pistol is carried out after firing, clean the bolt recess either with a rag or hemp fibre, soaked in alkaline solution until all the fouling is removed. After cleaning, wipe it dry. If firing has not taken place, and there is no fouling of the bolt recess, then wipe it dry with a dry rag. When cleaning the channels, recesses and openings, make use of a wooden stick.

The remaining metal parts and mechanisms are to be wiped off with a dry rag until all the moisture and dirt is removed using a wooden stick for that purpose. The pistol grips are to be cleaned with dry rags or hemp fibre.

The bolt, the parts of the striker-release mechanism and the retarder mechanism will be cleaned assembleed after details or exercises in which no firing took place; after firing or after the pistol has been in heavy rain or otherwise got dirty the parts will be disassembled.

7. Clean the magazine. After exercises and details without firing the magazine will be cleaned assembled. After firing, or after the pistol has been in heavy rainfall or has otherwise become dirty, it will be dismantled for cleaning. After details and exercises the magazine will be wiped off with a rag until it is completely dry and clean. After firing the fouling is removed with rags or hemp fibre soaked with alkaline solution. After cleaning wipe the feeder dry.

8. Clean the screw driver cleaning rod dry.

9. Soldiers after completing the cleaning will present the pistol to their commander for inspection. Having checked the quality of the cleaning, the proper working of the parts and mechanism of the pistol, the commander will give permission to oil it.

21. The oiling of the pistol is carried out in the following order:

1. Oil the channel of the bolt. Pull a rag through the slot of the cleaning rod. Soak the rag in oil. Introduce the cleaning rod into the channel of the bolt from the muzzle end and push through quickly two or three times until the whole length of the barrel is oiled with a thin even film the whole length and in the grooves. The breech is oiled from the rear end.

2.Oil the remaining metal parts and mechanism ofthe pistol. The outer surfaces are oiled using oiled rags. For oiling the channels and op-

enings pull through a rag; recesses, passages and holes are oiled by the use of oily rags or hemp fibre wound around the end of a stick. Oiling should be carried out in light long strokes. Excessive use of oil encourages collection of dirt and may result in failure of the pistol.

The holster butt and pistol grips will not be oiled but only wiped dry.

3. Oil the cleaning rod screw driver.

4. After completion of the oiling assemble the pistol, inspect it, ascertain its proper working and assembly. Present the pistol to the commander for inspection.

22. The parts and mechanism of the pistol will have to be oiled in the winter (when temperatures are below +5°C) only with winter oil No. 21. When the use of winter oil becomes necessary carefully remove all gun grease. If all the gun grease is not removed the pistol will not work in frosty conditions. The winter oil is to be applied to the parts and mechanisms of the pistol in an even film with an oily rag.

23. A pistol brought from a frosty outside into warm surroundings is not to be oiled until it has "sweated";as long as little beads of

moisture appear they have to be wiped off immediately. Do not wait until the moisture dries off. Wipe dry the parts and mechanism of the pistol and oil it.

24. A pistol which is to be handed in for extended storage has to be carefully cleaned and liberally oiled with gun oil or a mixture consisting of 50% gun oil and 50% rifle oil.

Chapter III

NOMENCLATURE AND CONSTRUCTION OF THE PARTS AND MECHANISM OF THE PISTOL, CARTRIDGES AND ACCESSORIES

Nomenclature and Construction of the parts and mechanism of the pistol.

25. The frame with barrel and basic handle. (Figure 24.)

Figure 24: Frame with barrel and basic handle. 1. barrel; 2.frame; 3.stand; 4. lug with pin recesses; 5. swivel; 6. recess for bolt stopp 7. side opening; 8.crosspiece;9. opening recoil spring guide;10. cutout for magazine catch; 11. opening for grip retaining screw; 12. barrel lug;13.pin; 14. projection for attaching holster butt.

The barrel serves to guide the flight of the bullet. In the inside the barrel has four slots (grooves) turning from left to right upwards. The grooves serve to impart a spinning motion to the bullet. The spaces between the grooves are called the fields. The distance between the two opposite fields (Diameter) is the calibre of the barrel; it is 9 mm. The rear part of the barrel serves to hold the cartridge and is called the breech. The breech has a flange. The outer surface of the barrel is smooth. The return spring is fed on the outside of the barrel. At the rear end of the barrel there is a slot to direct the cartridge from the magazine into the breech snd a cutout for the extractor. The barrel is connected with the frame with a pressed seat.

The frame serves to join all the parts of the pistol. It is a single unit together with the basic handle. In the upper part of the frame there is : a stand in which the barrel is fastened; an opening to hold the upper part of the trigger guard and trigger; cams (right and

left) with the pin recesses for the hammer pins, disconnector (only on the right cam), transfer lever and sear; passages for the guide lugs of the bolt.

On the left wall of the frame a swivel is attached for attaching a belt for wear with the pistol with its holster butt and the recess for the bolt stop.

Inside the frame there are two symetrically located cams which together with the slots on the trigger guard form the recesses for the pins of the trigger.

The basic handle has two side windows (the right and the left) in order to reduce the weight of the pistol. The internal field of the handle is divided into two parts by a crosspiece. In the forward part the magazine is held, but in the rear part the cocking spring with the operating rod and magazine catch.

In the crosspiece there are passages to direct the movement of the retarder, for the cams, of the operating rod, a slot for catching the magazine lid, and an opening for the handle bar retaining pin. On the right side of the crosspiece there are recesses which are designed to accept the grip springs for the purpose of holding the retarder in the lower position while the pistol is being assembled.

Note: In pistols of earlier manufacture there are no such openings on the right side of the crosspiece.

In the forward wall of the handle frame there is a slot to take the rear end of the trigger guard and an opening in which the pin is fastened, insuring the firm joining of the trigger guard to the frame; on the rear wall there is a cam and slot to fit and fasten the magazine butt.

26. The trigger guard, (Figure 25.) serves as a safety device to prevent accidental catching of the trigger. It is made separate and can be removed from the frame of the pistol. On the trigger guard there are: a strut which limits the rearward motion of the bolt; slots for the pins of the trigger; an opening for the passage of the trigger and the catch
-~~pins~~ to attach the trigger to the frame of the pistol. Attached to

the strut is a stopper over which a spring has been fed. The stopper is designed to hold the trigger guard in the frame of the pistol in the assembled position and to hold the trigger guard in the lowered position while the bolt is being separated from the frame of the pistol.

Figure 25: The trigger guard: 1. The strut; 2. recesses; 3.catch;

4. stopper; 5. stopper spring.

27. The bolt (Figure 26) serves to cock the hammer, to send the cartridge from the magazine into the breech, to close the barrel, to hold the cartridge (expulsion of the shells), and to activate the mechanism for reducing the rate of fire.

Figure 26: The bolt:1. The sight; 2. the front sight;3. the window; 4. passage; 5. recess; 6. lug for safety catch; 7. passage for the cock; 8. channel; 9. the guide lugs; 10. cam;11. cam; 12. Side opening.

On the outside the bolt has: on the upper surface an aiming device consisting of a fore and rear sight; between the fore and rear sight there is a saddle to exclude glare while aiming; on the right side there is an opening for the extraction of the fired shells and a passage for the extractor and spring; on the left side there is an opening for the locking device, a holding lug for the flange of the transfer lever safety catch; a half-round seat for the flange of the transfer lever safety catch indicating the two positions of the transfer lever safety catch: "PR" - position of safety; "OD" - single round; "AVT" - automatic fire.

On both sides the bolt has ridges to allow a firm grip for manual handling and openings(on the left - large, on the right - small) for the pin of the transfer lever safety catch. On the rear end of the bolt there is a passage way for the cock.

On the inside the bolt has:

- a channel to accommodate the barrel and return spring;
- extended lugs to guide the movement of the bolt along the frame.
- on the left side of the bolt there is a lug which when the bolt is moving will strike the transfer lever to move the retarder down;

- on the right side there is an extended passage to hold the fold of the body of the magazine and a slot for the disconnector;
- the cup in which the shell of the round finds its place;
- an extended slot for the ejector;

- a feeder to feed the rounds from the magazine into the breech block;
- an extended passage for the striker.

Striker (Figure 27.) serves to explode the cap. It is located in the channel of the bolt and is held in place by the transfer lever safety catch. The striking pin has in the forward end a striker and in the rear a recess to permit the passage of the pin of the transfer lever safety catch and a bulge to cover the striker when the pistol is placed at safety.

Figure 27: Striker. 1. -pin; 2.- recess.

The extractor with a spring, retaining pin, stopper, and locator pin, (Figure 28.) serves to hold the shells in the cup of the bolt until it's engagement with the ejector. The extractor has a catch to grasp the shell and to hold it in the cup of the bolt; It has a heel and a lug to connect it with the bolt. The spring of the extractor serves to hold the ejector with its stopper in a working position and to hold the transfer lever safety catch in its various positions with the aid of the locator pin.

Figure 28: The extractor with spring, stopper and locator pin.
1. extractor; 2. catch; 3. heel; 4. lug; 5. extractor spring; 6. locator of transfer lever safety catch; 7. extractor stop.

Transfer lever safety catch (Figure 28.) serves to insure the safe handling of the pistol and the transfer of the striker release mechanism of the pistol, from single to automatic fire and reverse. It has a flange to change the position of the transfer lever safety catch to the required position(PA, OD, AT.); a recess to hold the upper end of the transfer lever; a flat surface to limit the lift of the transfer lever; cams to move the striker backwards and to lock it with the bolt; a fin to lock the bolt to the frame; a collar to hold the striker in the bolt; a recess to hold the locator pin of

the transfer lever safety catch; teeth to turn the sear; pins for joining with the bolt. A part of the collar is cut off. When the flange of the transfer lever safety catch is placed in a vertical position the cutoff part of the collar turns to the striker and insures the free removal of the striker from the bolt.

Aiming Devices consist of the forward and rear sights and serve to guide the pistol on to its target during firing and are graduated on the rear side for various distances.

The rear sight (Figure 30.) consists of a drum, baffle plate, and its spring. On the drum the figures 25,50, 100, 200 designate the distance in meters. To assist in placing the drum in the proper distance it has notches. The rear sight baffle holds the drum in its various positions. In the rear part of the baffle plate there is a crest with cutouts.

Figure 29: Transfer lever safety catch: 1. flange;2. recess to receive the upper end of the transfer lever; 3. cams; 4.collar; 5. recess for locator; 6. pins for joining with bolt.

Figure 30: Rear sight: 1.drum; 2. baffle plate; 3. crest with cutouts.

The forward sight consists of the sight and its strip which serves to change the position of the forward sight in a sideways direction when sighting the pistol. The strip can be moved sideways with the aid of a knockout rod and hammer.

28. Striker release mechanism serves to detonate the cap in order to bring forth firing. It makes firing possible in single rounds or automatically.

Figure 31: The hammer: 1. head; 2. safety catch notch; 3. cocking notch; 4. notch for self-firing; 5. recess to lock the hammer before the transfer lever safety catch is placed; 6. passage to hold the upper end of the striker; 7. pin to attach the hammer to the striker; 8.pins; 9. semi-circular cutout to reduce weight.

The striker release mechanism consists of the hammer, the cocking spring with the operating rod and the magazine retainer, sear with spring, disconnector, trigger with spring and trigger bar.

The hammer (Figure 31.) serves to deliver a blow on the striker. It consists of : at the top a head with a recess to pull the hammer with the hand; in the base two recesses; the upper - the safety catch recess, the lower - cocking recess; lug for self cocking; recess to insure cushioning of hammer; recess to lock the hammer with the lower wing of the sear while placing the transfer lever safety catch; passage to hold the upper end of the operating rod; on the side - pins on which the hammer turns in the pin recesses of the frame, and semi-circular cutout to reduce weight.

Cocking spring with operating rod and magazine catch (Figure 32.) serves to put the hammer into motion.

The cocking spring is fed over the lower end of the operating rod, which is connected to the magazine catch. It simultaneously fulfills the role of the magazine catch spring.

The operating rod is a single assembly with the cocking spring and the magazine catch. It has a recess for joining with the pin of the hammer, a lug to insure the safety of the hammer, catches for the supports of the upper part of the cocking spring and the directing rod of the cocking spring.

Figure 32: Cocking spring with operating rod and magazine catch: 1. cocking spring; 2. operating rod; 3. recess for joining with hammer pin; 4. recess to insure hammer safety; 5. shoulders to hold the upper part of cocking spring; 6. directing rod of cocking spring; 7. magazine catch; 8. magazine hook; 9. shoulders; 10. magazine retaining platform; 11. platform with notch to release the catch from holding magazine.

The magazine catch serves to hold the magazine in the handle of the

pistol. It has a catch by which the operating rod with the cocking spring and the magazine catch is joined to the frame of the pistol; a nest for the lower end of the cocking spring; shoulders joining the cocking spring with the operating rod and magazine catch and serving to separate these from the frame of the pistol; when the pistol grips are fitted to the handle; platforms to hold the magazine in the handle;

projection with a notch to release the catch from magazine when it is to be removed from the handle.

Sear with spring (Figure 33.) serves to hold the hammer in a cocked position. It has pins by which the sear is joined to the frame of the pistol; on the left pin there is a catch to hold the sear spring; on the right side a pin to hold the spring of the disconnector. One end of the sear spring is fastened on the lower wing of the sear; the other end when assembled joins with the bolt catch.

Figure 33: Sear with spring: 1. pins; 2. sear spring; 3. disconnector spring; 4. lower wing; 5. middle wing; 6. upper wing; 7. cutout.

The disconnector spring is , by one end fastened to the upper wing of the sear, but on assembly, it joins the forward end of the disconnector holding it in its rear position. On the middle wing of the sear there is a recess for the lug of the disconnector. When the pistol is put on safety the upper wing turns the sear, and the lower locks the hammer.

The disconnector (Figure 34.) serves to disconnect the trigger bar from the hammer when firing independently, to disconnect the sear from the cocking position of the hammer, to disconnect the ~~operating~~ trigger bar from the sear after firing (the trigger bar interacts with the sear via the disconnector,) as well as a safeguard from firing a round before the bolt is properly closed. It has pins by which it is joined to the frame of the pistol, a lug which interacts with the sear while the pistol is working, and a tail which interacts with

the trigger bar during operation.

Figure 34: Disconnector: 1. pin; 2. lug;3. tail.

Trigger with spring and trigger bar (Figure 35.) serve to release the hammer from the cocked position and to move the hammer when pressure is exerted upon it with the finger.

The trigger has : pins by which it is connected to the frame of the pistol; a pin on which the trigger spring is located (one end of the spring is connected to the trigger, the other with the lug on the trigger bar,) and a tail.

The trigger guard is joined by a hinged join to the pin of the trigger. It has: a lug to join with the end of the trigger spring; a slanting plate which interacts on firing with the disconnector and retarder; a bent end to interact with the tail of the disconnector and the lug on the hammer for self-cocking fire.

Figure 35: Trigger with spring and trigger bar. 1. pin; 2. trigger pin; 3. trigger spring; 4. tail of the trigger; 5. trigger bar;6. lug of the trigger guard; 7. slanting plate; 8. bent over end.

29. Retarder Mechanism serves to reduce the rate of fire by acting as a brake on the movement of the bolt and extending the cycle of the work of the automatic. It consists of a transfer lever, retarder and retarder spring, and guide rod.

Transfer lever (Figure 36.) serves to receive the strike of the bolt and the transfer of the energy of the strike to the retarder. It has: pins for joining it to the frame of the pistol; an upper lug which receives the strike from the bolt; lower lug which passes on the energy of the strike to the retarder, and a ~~cocking~~ side lug which limits the movement of the transfer lever.

Figure 36: Transfer lever: 1. pins; 2. upper lug; 3. lower lug; 4. side lug.

The retarder (Figure 37.) has : guiding lugs on the side to direct

the movement in the frame of the pistol; in the middle part a lug which operates with the trigger bar during automatic fire; at the bottom a lug to limit the movement of the retarder in the lower position which has a slot to hold the base of the guide rod of the spring. Inside the retarder has a channel of two diameters to hold the retarder spring with the guide rod.

Note: In pistols of earlier design the retarder has a special lug to engage the retarder with a tooth of the guide rod during assembly of the pistol.

Figure 37: Retarder with spring with guide rod: 1. side guide lugs; 2. lug; 3. lug; 4. slot; 5. retarder spring with guide rod; 6. lug for joining with frame.

The retarder spring and the guide rod serve to return the retarder to its upper position. The spring is fed over the guide rod and is held in place by a washer which is clamped to the end of the rod. The base of the guide rod has a lug by which it is joined to the frame of the pistol.

Note: In pistols of earlier issue the lug on the guide rod has a tooth to catch it with the retarder while assembling the pistol.

30. The return spring (Figure 38.) serves to return the bolt to the forward position after a round is fired. It is slid over the barrel and is housed together with the barrel in the bolt channel.

Figure 38: Return spring;

31. The bolt stop (Figure 39.) serves to hold the bolt in the rear position when all the shells from the magazine have been spent. In the forward part it has a lug to hold the bolt in the rear position when all the shells from the magazine have been spent, and a button with ridges to facilitate the release of the bolt by hand from the locked position; in the rear part it has an opening to join it with the left pin of the sear and an ejector to eject the casings.

Figure 39: Bolt stop; 1. lug to hold the bolt in the rear position;

2. button with ridges to release the bolt from the locked position; 3. ejector; 4. opening for joining with the left pin of the sear.

32. Grips (Figure 40.) the left and the right, close the side openings of the base of the handle and serve to make the holding of the pistol comfortable. The grips are made of plastic. They have an opening for a screw by which the grips are fastened to the basic handle.

33. The magazine (Figure 41.) serves to hold and feed the bullets. It consists of a body, feeder, feeder spring and cover.

The body of the magazine joins all parts of the magazine. The upper parts of the side walls of the body are bent over inwards to hold the bullets and the feeder, as well as guide to the bullets when they are being fed into the bolt chamber.

Figure 41: The magazine: 1. The body of the magazine; 2. the cover;

3. feeder spring; 4. feeder; 5. lug.

On the side walls of the body there are cutouts to reduce the weight of the magazine and to make it possible to count the number of rounds, at the end there are bent ridges for the cover. On the back wall of the body there is a cam for the magazine catch and an opening to show the full loading of the twenty rounds; on the left wall at the bottom there is a recess for the passage of the feeder lug.

The feeder and feeder spring serve to feed the bullets. The feeder has two bent over ends which direct its movement within the body of the magazine. At one of these bent over ends on the left side there is a catch to engage the bolt stop when all the bullets have left the magazine. The feeder spring is attached to the feeder, one end of which is bent over and has a cutout which serves as a lock for the magazine cover.

The magazine cover is slid into the bent over slots of the body of the magazine. It has an opening to receive the bent over end of the spring.

34. The holster butt (Figure 42) serves as a holder for the pistol and is used as an attachable butt during firing of the pistol. The holster butt in pistols of earlier issue was made of wood, in pistols of later issues it is pressed plastic. It has : on the left side, a metal loop with an extended form to attach the pistol to the carrying belt (On the loop there are two attachments for the belt;) on the outside a cutout for the handle of the pistol; on the right side an opening for the catch of the lid of the holster butt and an opening for the grip screw; below, an opening for the screw for the head. The lower of the holster butt is encircled by the head with a catch. The head has guide slots to join the holster butt to the pistol handle. The upper part is a cover joined to the elongated ring with two wood screws and having a spiral spring. Inside the cover there is a soft spring which presses on the pistol. Inside the holster butt there is a catch, a spring to hold the cleaning rod and a recess to hold it.

Figure 42: Holster butt: 1. iron loop; 2. swivel; 3. button; 4. head; 5. catch; 6. belt.

35. The cartridge pouch serves for the carrying of four reserve magazines. It has two sections which are closed by flaps. In each section there are two places for magazines. To the back wall there are attached two loops for the carrying of the pouch on the belt.

NOMENCLATURE AND CONSTRUCTION OF THE ATTACHMENTS

(Cleaning rod - screw driver)

36. The attachment (Figure 43.) serves for cleaning and oiling of the barrel and for the assembly and dismantling of the pistol. It consists of a cleaning rod and a screw driver. The cleaning rod has a slot at one end, a slot to hold the cloth or hemp fibre, and at the other end a handle for holding it during cleaning. At one end of the handle there is a screw driver for the removal and replacing

of the grip screws during assembly or dismantling of the pistol.

Figure 43: Attachment :1. cleaning rod; 2. screw driver.

THE CONSTRUCTION OF THE BULLET

37. The 9-mm pistol round (Figure 44.) consists of a casing, cap, powder charge and bullet.

The casing serves to hold the powder charge and to combine all parts of the round. It contains the powder charge and the cap and protects it from outside influences and during firing prevents the escape of the gases from the barrel through the breech block. In the bottom of the casing there is a recess for the cap, an anvil on which the capsule is exploded by the striker; two internal openings through which the flame of the exploding capsule passes to the powder. On the outside at the bottom of the casing there is a recess in which the extractor can engage.

The cap serves to ignite the powder charge. The cap consists of brass casing in which the explosive is pressed and a tin covering holding the explosive material. When it is hit by the striker pin the explosive explodes and gives a strong flash.

Figure 44: 9-mm pistol round: 1. casing; 2. cap; 3. powder charge; 4. bullet.

38. The bullet consists of a lead core surrounded by a steel casing. The bullet is fastened to the casing by crimping.

38. The rounds for the pistol are loaded into a magazine in two rows. The magazine is designed to hold twenty rounds. The loading of the magazine is accomplished manually by inserting and sliding in the bullets by hand.

39. The rounds are packed in the standard ammunition boxes of 2,560 pieces in each. IN each box there are two soldered galvanized iron boxes in which the rounds are placed in cardboard boxes of sixteen rounds each. In each of these galvanized iron boxes eighty cardboard containers are packed. On the side walls of the wooden boxes there

are inscriptions describing the nomenclature of the bullets contained in the box. The weight of one of these boxes with the rounds is about 33 kgs.

Chapter IV

THE OPERATION OF THE PARTS AND MECHANISM OF THE PISTOL

The position of the parts and mechanisms prior to loading.

40. The parts and mechanisms of the pistol prior to loading are in the following position:

The bolt is in a forward position; the return spring is under least stress.

The hammer is released, the operating rod under the influence of the cocking spring is in the upper position, the cocking spring - under least pressure.

The flange of the transfer lever safety catch is in a forward position and covers the inscription "PR" (Safety). The cams of the transfer lever safety catch push the striker back and hold it locked. The tooth of the transfer lever safety catch has pushed the sear forward so that the lower wing of the sear has locked the hammer.

The retarder is in the upper position, its spring under least pressure.

The transfer lever under the influence of the retarder is in the upper position.

The disconnector, under the influence of its spring, is pushing upward.

The tail of the trigger is in its most forward position; the trigger bar is in the rear position and under the influence of the trigger spring is pushing upward so that its slanting end is connected with the lug on the hammer for self firing.

The magazine having been placed in the pistol grip, the feeder is in the upper position; the lug on the feeder presses against the bolt lock.

Operation of the parts and mechanism of the pistol during loading

41. In order to load the pistol it is necessary :

- to charge the magazine with rounds;
- to insert the loaded magazine;into the handle of the pistol;
- to release the safety catch;
- to pull the bolt all the way back and release it.

During loading the rounds lying on top of each other compress the feeder spring; when the magazine is fully loaded with rounds, the feeder is pressed down and the upper round is held in position by the bent flange on the upper part of the magazine body.

Note:In some magazines twenty-one rounds can be placed; but no more than twenty rounds should ever be loaded because magazines loaded with twenty-one rounds will not fit into the handle of the pistol allowing a backward movement of the bolt.

When the loaded magazine is inserted into the handle the magazine catch will engage on the rear wall of the body of the magazine and will prevent the magazine from falling out. The top round will press against the lower part of the bolt.

In order to release the safety catch it is necessary to move the flange of the transfer lever safety catch to the position "Single rounds" (OD). With this the cams of the transfer lever safety catch turn and release the striker, the tooth of the transfer lever safety catch releases the sear, the lower wing of the sear releases the hammer; the bolt is freed.

When the bolt is pulled backwards, gliding along the frame of the pistol, it turns the hammer and cocks it. The return spring is compressed

The backward movement of the bolt is limited by the prop of the trigger guard The hammer while turning pushes on the trigger which then assumes an intermediate position which limits partially its free movement. The feeder under the influence of its spring pushes the rounds upwards so

that the first round is placed in front of the feeder in the bolt. When the bolt is released the return spring sends the bolt forward. The bolt pushing forward moves the upper round from the magazine into the breech block. The next round raises itself against the base of the bolt. When the bolt reaches its forward position and leads the round into the breech the catch of the extractor engages with the rim of the casing.

The round with its forward part is imbedded in the breech. The pistol is loaded and ready for firing (Figure 45.)

Figure 45: Location of parts and mechanism of the pistol prior to firing: 1.barrel; 2. return spring; 3. bolt; 4. extractor; 5. extractor spring; 6. striker; 7. transfer lever safety catch; 8. rear sight; 9. sighting drum; 10. forward sight; 11. frame; 12. stopper; 13. stopper spring; 14. trigger; 15. trigger spring; 16. trigger guard; 17. hammer; 18. sear; 19; sear spring; 20. disconnector; 21. bolt stopper; 22. operating rod; 23. cocking spring; 24. retarder; 25. retarder spring; 26. body of magazine; 27. feeder; 28. feeder spring; 29. magazine lid; 30. magazine catch.

The operation of the parts and mechanism of the pistol during firing:

42. In order to fire it is absolutely necessary to pull on the trigger with the forefinger of the right hand. The trigger moving on its pins displaces the trigger bar forward. The trigger bar with its slanting bar presses on the end of the disconnector which with its lug moves the sear and releases it from engagement with the cock hammer. The hammer under the action of the cocking spring mates on its pins and energetically strikes the striker, which with a pin explodes the cap. A shot occurs. Under the influence of the powder gases the bolt is moved backwards holding the shell with the extractor. The return spring

is compressed.

If the transfer lever safety catch is positioned for single round firing, then:

- under the influence of the bolt the disconnector displaces downwards, releasing the rear end of the trigger bar; the lug of the disconnector moves from engagement with the sear;
- the sear under the influence of its spring turns down; the hammer is pushed back by the bolt and is cocked;
- the transfer lever safety catch moves away from the transfer lever; the transfer lever together with the retarder under the pressure of the retarder spring is lifted upwards to the opening on its side and level with the longitudinal passage of the bolt;
- the shell encountering the ejector is thrown out; the next round in the magazine is fed upwards by the feeder spring to the opening at the top of the magazine frame and locates itself in the way of the movement of the bolt;
- the bolt moves forward from its rear position under the influence of the return spring; with this the feed rib of the bolt guides the next round into the breech;
- the lug on the bolt strikes the transfer lever, which turns the retarder downwards compressing the retarder spring. With the forward movement of the bolt the extractor engages on the rim of the shell. The retarder and the transfer lever under the influence of the retarder spring moves upwards until the transfer lever and the change lever safety catch engage. With the forward position of the bolt, the disconnector presses against the cut on the bolt.

In order to fire the next round it is necessary to pull the trigger again. With this the trigger under the influence of its spring turns on its pins and assumes a middle position while the trigger bar moves

back and lifts upwards. The disconnector under the influence of its spring and the trigger bar moves up, its lug enters the recess of the sear.

If the next pressure is exerted on the spring, the cycle is repeated

(Figure 46.)

Figure 46: Diagram of the automatic operation of a pistol: 1. Trigger; 2. trigger bar; 3. hammer; 4. sear; 5. disconnector; 6. retarder; 7. retarder spring; 8. Bolt.

If the transfer lever safety catch is set for automatic firing then:

- the flange of the transfer lever safety catch covers the inscription "AVT", and the recess for the upper end of the transfer lever turns towards the transfer lever which gives the retarder the opportunity to move up;
- the bolt moving to the furthest rear position, with its lug, hits the transfer lever and by this movement slowing down the movement of the bolt occurs; the parts and mechanism of the pistol work in such a way as for single round firing;
- the bolt moving to its forward position strikes the transfer lever and offers the transfer lever the opportunity to lift up to its upper position, as the recess which is located on the transfer lever safety catch permits;
- the transfer lever and retarder under the influence of the retarder spring move upward; the retarder with its lug hits the trigger bar; the trigger bar turns upwards and lifts the disconnector, which with its lug, turns the sear and moves it away from the cocked position of the hammer; the released hammer strikes the strikingpin. The next round is fired without pulling thetrigger.

When the trigger is released it turns under the pressure of its spring, the trigger bar moves back and the retarder when lifted does not engage with the trigger bar. The lug on the disconnector enters the recess on the sear. The hammer is moved back and remains cocked. Firing is ended

Firing with an open bolt is not possible, when the disconnector engages the bolt and its lug does not engage the sear.
When all the shells from the magazine have been spent the lug on the feeder presses on the bolt stop and turns it. The bolt stop enters the recess on the bolt and holds it in a rear position.

The operation of the retarder mechanism.

43. The bolt on its backward movement pushes the transfer lever down with its lug, thereby losing the spped of its movement. With the forward movement the lug on the bolt strikes the transfer lever and pushes the retarder down. Speed of movement is lost in this manner.
The bolt returns to its forward position, but the retarder having been pushed down raises itself, moving the transfer lever and tirgger bar upwards and carries by means of the disconnector the sear away from the cocked position of the hammer. This adds up to the extension of the working cycle of the automatic. On account of the increased cycle of the work of the automatic from the moment of striking the transfer lever to the moment of release of the hammer from the sear (The time of movement of the retarder down and up,) the tempo of firing is reduced.

Operation of the parts when the pistol is set to Safety.

44. In order to set the pistol on Safety it is necessary to move the flange of the transfer lever safety catch forward to the inscription "PR". With this the lugs of the safety catch push the striker back and lock it. The tooth on the transfer lever safety catch moves the upper wing of the sear and moves it from the cocking position of the hammer; the hammer with this delivers a strike on the locked striking pin, but the tooth of the transfer lever safety catch holds the sear in its forward position. The lower wing of the sear engages in the lower recess of the hammer and does not give it the opportunity to move. The horizontal passage of the transfer lever safety catch enters on the right recess of the frame and locks the bolt with the frame of the pistol.

The operation of the parts of the pistol when firing by self-cocking.

45. When pressure is exerted on the trigger, the trigger bar moves forward and with its bent end exerts pressure on the lug of the hammer, (Figure 47.). The hammer, turning on its pins, as far as the disconnector, will not permit the trigger guard to move further and will not disconnect it from the hammer. After this, the hammer, under the action of the cocking spring, strikes the striking pin.

Figure 47. Position of Parts and Mechanism of the Pistol under self-cocking firing: 1. barrel; 2. return spring; 3. bolt; 4. extractor; 5. extractor spring; 6. striker; 7. transfer lever safety catch; 8. rear sight; 9. sighting drum; 10. foresight; 11. flame; 12. stopper; 13. stopper spring; 14. trigger; 15. trigger spring; 16. trigger bar; 17.hammer; 18. sear; 19. sear spring; 20. disconnector; 21. bolt stop; 22.operating rod; 23.cocking spring; 24. retarder; 25. retarder spring; 26. magazine body; 27. feeder; 28. feeder spring; 29. magazine cover; 30. magazine catch.

Chapter V

Stoppages when firing with the pistol and their correction.

46. The pistol with proper care and handling is a reliable weapon which will not fail.

However under extended use, as a result of wear of the parts and mechanism, and more often with careless handling, and use, the normal working of the pistol can be damaged which will lead to stoppages during fire.

47. In order to avoid stoppages during firing and to insure uninterrupted working of the pistol, it is absolutely necessary:

- to prepare the pistol for firing correctly;
- in the proper time and following all instructions, to inspect, clean and oil the pistol; particularly carefully to look after cleaning and

oiling of the moving parts of the pistol;

- to carry out timely repair of the pistol;

- prior to firing to inspect the rounds; faulty damaged or dirty rounds are not to be used for firing;

- during firing and while moving, to guard the pistol and the holster butt from getting dirty and receiving blows;

- during intensive firing, to let the barrel cool after 100 rounds have been fired; after extended fire, at the first opportunity, clean and oil the moving parts; when the pistol is fouled (by sand, dirt, snow, etc.) the pistol is to be stripped and cleaned;

- if the pistol prior to firing has been in heavy frost for an extended

period, then it is necessary manually to move the moving parts back and forth several times before loading.

48. If during firing a stoppage occurs it is necessary to clear the pistol. If the clearing does not eliminate the stoppage then it is necessary to ascertain the cause of the stoppage as detailed in the following table:

Stoppage 1

1. Sticking of the bullet in the breech block. Jumping out of the shell from the magazine.

1. Reasons for Stoppage: 1. Bent magazine ends. 2. Settling of feeder spring. 3. Excessive rolling or pitching of the magazine in the pistol handle.

Corrections of Stoppage 1: Holding the bolt, remove the sticking or jumped-out round and continue firing. If the stoppage is repeated, exchange magazine.

Stoppage 2.

Faulty ejection of the shells. The shells are not extracted properly and are squeezed between the bolt and the breech or else are sent back into the breech block; the shell remains in the breech block;

the next round sticks.

Reasons for stoppage 2.

1. Dirty bolt frame and breech. 2. Faulty engagement of the extractor or else damaged extractor spring. 3. Dirty rounds.

Corrections of Stoppage 2.

Pull the bolt back and throw out the stuck or jammed round and continue firing. At the first opportunity clean and oil. Empty the pistol and remove the casing from the breech. Clean the rounds and the breech and inspect the extractor. In the event of some parts of the pistol being damaged dispatch the pistol to the armourer's workshop.

Stoppage 3.

Misfire: The bolt in its forward position, the cock has struck, but no

Misfire:

If there is a deep indentation in the cap - a faulty cap. If there is a slight indentation in the cap - faulty striker or striker release mechanism.

Corrections of Stoppage 3

Reload and continue firing. If the stoppage is repeated frequently, inspect the striker and the striker release mechanism and clean it. If the parts are damaged, send the pistol to the armourer's workshop.

Chapter VI

INSPECTION, PREPARATION FOR FIRING THE PISTOL AND ROUNDS, HANDLING AND CARE OF THESE.

General Instructions.

49. In order to ascertain the condition of the weapon, its proper state of repair and battle readiness, periodic inspections of the pistol are carried out in the intervals laid down in the Internal Service Regulations. Inspection may be carried out in the assembled or stripped condition. The level of stripping is determined prior to each inspection.

Simultaneous to the inspection of the pistol, inspection of the holster

butt, spare magazines, and accessories (cleaning rod -screw driver) is carried out.

Every serviceman armed with a pistol should inspect his pistol daily prior to proceeding to an exercise, prior to firing, and while cleaning.

Prior to proceeding to an exercise and immediately prior to firing, the pistol is inspected while assembled, during cleaning it is inspected in a stripped or assembled state.

50. During the daily inspection of the pistol it is necessary to check:

- Are there any indications of rust on metal parts? Is there any dirt? Or scratches? Dents? Or abrasions? What is the state of oiling?
- Are there any indentations, scratches, abrasions, on the holster butt or pistol grips?
- Are the sighting devices (Rear and front) properly mounted on the

bolt?

- Does the magazine catch work properly?
- Does the striking release mechanism work properly?
- Does the transfer lever safety catch work properly?

Of any faults or damages discovered during inspection of the pistol or its accessories and ammunition report to your superiors. Faults in the pistol should be removed immediately; if they cannot be corrected within the subunit the pistol has to be sent to the workshops without fail.

Inspection of the pistol while assembled.

51. While inspecting the assembled pistol ascertain:

1. Is the bolt, are the sighting devices, frame, magazine rusted, dirty, scratched or bent, or are the pistol grips or the holster butt damaged; is the foresight not bent, do the gradation marks on the foresight coincide with the gradation marks on the bolt and are the fore and rear sights not bent or damaged? Does the aiming drum move freely?

2. Do the parts and mechanisms of the pistol work properly? In order to check this the following has to be done:

Turn the transfer lever safety catch to single round firing, pull the bolt back as far as possible and release it; the bolt should return and under the action of the bolt lock remain in a rear position. Push the bolt lock down; the bolt under the influence of the return spring should return quickly to its forward position, and the hammer should remain cocked. Pull on the trigger and the hammer should be released from the cocked position and should strike the striking pin.

Remove the magazine from the handle and change the position of the flange of the transfer lever safety catch to automatic firing; pull the bolt back by hand, pull on the trigger and release the bolt. The bolt should return quickly to its forward position but the hammer should be released and strike the striker. Pull the trigger, then the hammer should be raised and strike the striker.

Holding the pistol pointing downwards raise the cock and turn the flange of the transfer lever safety catch to Safety ("PR"); the striker should come out of the bolt channel, and the hammer released from the cocked position, should strike the striker. After this, the bolt should be locked with the frame, the hammer should not be moveable either by manual means or by pulling the trigger. The flange of the transfer lever safety catch should move freely under the pressure of a finger and be fixed in the predetermined position.

Load the magazine with training rounds and insert it in the handle of the pistol. The magazine should enter freely into the opening of the handle (the snap of the magazine lock should be heard). Try manually to pull the magazine out; ythe magazine should remain in its position. Reload the pistol with training rounds several times by means of pulling the bolt back manually, with this the rounds should be removed easily from the magazine into the breech, and extracted from the breech and be ejected quickly.

3.Serviceability of the holster butt: on the metal parts there should be no indentations, rust or abrasions. The cover and the catch of the holster butt should work freely. Under pressure on the button the lid of the holster butt should open quickly under the pressure of its spiral spring. The laminated spring should not be split.

Inspection of the dismantled pistol.

52.In the dismantled pistol carefully inspect every part and mechanism separately in order to ascertain whether there is any crumbling of the metal, cut threads, scratches, dents, twists, erosion, rust and dirt as well as whether all the details have the same number.

53. While inspecting the dismantled pistol the barrel has to be inspected as well as the striking release mechanism, the retarder mechanism, the bolt and return spring, the magazine and the accessories.

54. The barrel has to be inspected from both ends. Ascertain the cleanliness of the barrel, the breech, and the proper condition of the grooves.

The barrels may be chrome-plated or plain.

While inspecting barrels which are not chrome-plated look for the following faults:

Corrosion -The initial impression of the metal is that it is rusted. Corrosion looks like spots or cracks in isolated spots or covering the whole inner surface of the barrel.

Rust - Appears as a dark film. Rust which cannot be seen with the eye can be detected by pulling a clean rag through the barrel on which yellowish marks remain.

Result of rust - are dark shallow indentations which remain after the removal of the rust.

Pitting - is deep indentations in the metal which are caused by extended presence of rust. The removal of these in the subunit is prohibited.

Copper fouling - appears while firing bullets which have been dipped

in red brass. Copper fouling appears in the form of a light copper film on the inner wall of the barrel. This is to be removed only in a workshop.

Scratches - have the appearance of lines, occasionally with visible indentations on the edges of the metal.

Dents - more or less deep indentations, occasionally with a lifting of metal.

Rounding of the edges of the rifling - which is particularly noticed on theleft edge of the rifle.

To establish the condition of a chrome-plated barrel consult your responsible instructor.

The removal of scratches in the barrel is not permitted.

55. While inspecting the striker mechanism ascertain the proper condition of the separate parts. On the parts of the striker release mechanism there should be no spalling of the metal, scratches, indentations or dirt. The springs of the disconnector, the sear, and trigger should not be bent. The striking pin of the striker should not be spalled.

56. While inspecting the retarding mechanism ascertain the proper con-

dition of all its parts. On the parts of the retarder mechanism there should be no crumbling of metal, scratches, indentations or twists or dirt. The retarder spring should not be bent.

57. While inspecting the bolt and the return spring ascertain the proper condition of the parts of the bolt. On the parts of the bolt and on the return spring there should be no spalling of metal, scratches, twists, or slivers, rust or dirt. Pay special attention to the internal passages and recesses, the aiming devices, the extractor, stopper and extractor spring.

58. While inspecting the magazine ascertain the proper condition of all its parts. On the parts of the magazine there should not be any twists

scratches or dirt. The lug on the feeder should not be spalled, nor the feeder spring be bbnt. The bent end of the feeder spring should be imbedded in the proper opening of the magazine lid.

59. While inspecting the accessories ascertain the condition of the cleaning rod - screw driver. The cleaning rod should not be bent, nor should it be scratched nor indented. The edges of the screw driver should show no sign of crumbling.

Inspection of live rounds.

60. The inspection of live rounds is carried out for the purpose of discovering faults which could lead to a stoppage while firing the pistol.

The rounds are inspected prior to firing, when proceeding on a detail and when secially ordered.

61. While inspecting the rounds it is necessary to ascertain:

- are the casings rusted or covered with verdigris, particularly on the cap? Are there any indents or scratches the presence of which would hinder entry of the round into the breech?
- can the bullet be pulled out of the casing by hand? And does the cap stick out of the bottom of the casing?
- are there any training rounds among the live ones?

All forty rounds are to be removed and handed in.

If the rounds are dusty or dirty, it is necessary to wipe them off

with a dry rag.

62. The rounds should be stored in a dry place and if possible protected from direct sunlight; when handling them do not allow any damage, protect them from being hit, dampness, dirt and so on.

Preparation of the pistol for firing.

63. Preparing the pistol for firing is carried out with the aim of insuring uninterrupted working of the pistol during fire and insuring its capacity in normal combat. For this it is necessary:

- to inspect the pistol in the dismantled state as laid down in para.

52-58;

- to inspect the assembled pistol as laid down in para. 51;
- to inspect the rounds as laid down in para. 60-61;
- to load the magazine as shown in para. 95;
- to pull a dry rag through the barrel immediately before firing.

Care of the pistol and its storage.

64. The pistol should always be in proper working order. The care of the pistol and holster butt and the accessories is the responsibility of the service man (armed with a pistol) who is duty bound to handle the pistol carefully and inspect it daily.

65. While in barracks or camps the pistol is kept in its holster butt in the cupboard or a pyramid. The flange of the transfer lever safety catch should be on Safety (covering the inscription "PR"), the accessories should be in the slot of the holster butt. In the same pyramid the case with the remaining magazines is also stored.

66. While temporarily located in a settled locality, the pistol is kept in a dry place, but not near an oven or heating device.

67. During field exercises and while moving the pistol is carried in the holster butt on the belt; the magazines should be in the carrying case on the waist belt.

68. During extended voyages on the railway or across the sea the pistol in its holster butt is placed in a special pyramid or is placed on a shelf in such a way that it cannot fall down or be damaged. While moving by any other means of transport the pistol is carried on ones-

self in the holster butt.

69. In order to prevent explosions and bulging of the barrel it is absolutely forbidden to cover or close ~~with~~ the barrel by any means.

70. In hot climates where dust is present in the air and in humid coastal areas with high moisture the pistol is cared for according to special instructions.

71. In all events not connected with the firing the flange of the transfer lever asafety catch should be turned forward, that is, the pistol is on safety.

72. Decontamination of the pistol when it has come into contact with harmful substances will be carried out in accordance with special instructions issued by the chemical warfare section of the unit.

Chapter VII

TESTING THE WEAPON AND ZEROING.

General Instructions.

73. All pistols should be zeroed.

74. Zeroing of a pistol is carried out:

- when the pistol is issued to the unit;
- after repair or exchange of parts of the pistol which may have an effect on its operation;
- when during firing abnormal deviation of the course of the bullet occurs.

Under combat conditions the commander is duty bound to use all opportunities to zero pistols periodically.

Testing a pistol and zeroing it.

75. Testing of a pistol is carried out by officers or excellent shots in the presence of the service man to whom the pistol is assigned. The senior commander up to and including the unit commander is responsible for insuring the proper order of zeroing the pistol and bringing it to normal working order.

76. Prior to testings the pistol should be inspected carefully and any faults which are discovered should be removed. During the inspection an armourer with the necessary instruments should be present.

77. Testing will be carried out under favorable conditions: in clear windless weather or in a covered range or in a section of the firing range whihh is protceted from wind.

78. The testing of a pistol is carried out at the range of fifty metre

and on the issue of a hundred rounds per party. The firing is conducted against a black circle with a diameter of 25 cm., which is fastened to a shield one metre high and 0.5 m. wide.

79. ~~As the aiming point serves the middle of the lowere edge of the~~ The middle of the lower edge or the centre of the black circle serve as the aiming points. The aiming point should be approximately at the same height as the eyes of the marksman. With chalk or a coloured pencil a vertical line is drawn on the aiming point which indicates the normal central point of impact which should be 13 cm. higher than the aiming point. The marked point is the control point.

80. The zeroing of a pistol is carried out in a lying position with the butt attached by firing four separate rounds, carefully and uniformly aimed at the centre of the black circle. After the firing the target has to be inspected and the grouping of the rounds has to be ascertained as well as the middle point of impact.

81. The grouping of a pistol is considered normal if all four bullets are located in a circle with a 20 cm. diameter (In certain instances, 3 rounds will suffice if one bullet is separated widely from the others.

82. When a satisfactory grouping has been established the commander establishes the central point of impact and measures the size of its diversion from the control point with the aid of a centimetre rule. In order to make the testing more convenient two lines are drawn (with chalk or coloured pencil) across the control point, one vertical, and the other horizontal.

In order to establish the central point of impact of four rounds it is necessary to connect two of the holes and to divide the distance between them equally; having found the division point connect it with the third hole, divide the distance between them into three

parts; the division point closest to the first two holes is connected with the fourth and the distance between them is divided into four equal parts. The point which is located three parts along this line is the central point of impact. (Figure 48.)

Figure 48: Determination of the central point of impact with four tests

With a symmetrical location of the holes the central point of impact can be determined in the following manner: connect the holes which lie closest together in pairs, connect the middle of both straight lines again and divide the resulting line in half, the dividing point will be the central point of impact (Figure 49.).

Figure 49: Determination of the central point of impact of four symmetrically located holes.

In order to determine the central point of impact with three holes it is necessary to connect two holes with a straight line; the middle of this line is to be connected with the third hole; the new line is to be divided into three equal parts; the point closest to the first line will be the central point of impact (Figure 50.).

Figure 50: Determination of the central point of impact with three holes.

83. Having established the central point of impact the commander will measure the size of the divergence from the vertical and horizontal lines.

The central point of impact should not be farther than 7 cm. from the control point in any direction. If the central point of impact is away from the control point by more than 7 cm. then the armourer on the instructions of the commander will make the necessary adjustments, repair, or replace the foresight. The foresight is ~~too low~~ lowered if the central point of impact is below the control point , or it is filed down, or exchanged for a higher one if the central point of impact is above the control point. The foresight is moved to the left or right

if the central point of impact is to the left or right of the control point.

By the exchange or adjustment of the foresight a condition should be

achieved in which the central point of impact should not be farther then 7 cm. away in any direction from the control point.

84. The testing of a pistol may be considered completed when the pistol in regard to accuracy as well as in regard to the location of the central point of impact satisfies the requirements of zeroing.

85. When testing is completed the old scale on the sight may be damaged and in its place a new scale may have to be placed.

86. The results and time of the zeroing of the pistol is entered on the record card. The holes are marked with dots but the central point of impact by a cross.

Note: Bringing the pistol to the required state of zeroing for all distances and the corresponding setting of the sights can be assured by firing with the holster butt and comparing the central point of impact with the aiming point.

While firing standing up from the hand (without the use of the butt) for a distance of twenty-five metres, the central point of impact will be 10 cm. above the aiming point.

Faults preventing accurate firing of the pistol.

87. The characteristic faults preventing accurate fire of the pistol are :

- the sight is damaged, displaced or bent. The bullets will hit in the opposite direction to the displacement of the apex of the sight;
- wear on the barrel (particularly at the muzzle), wearing of the rifling, rusting, scratches and bends in the barrel (particularly in the area of the muzzle), looseness of the rear sight, vibration of the foresight. All these lead to dispersal of the bullets.

Part II

Methods and regulations for firing the pistol

Chapter VIII

Methods for firing the pistol.

General instructions.

88. Firing a pistol may be conducted by repeat or single rounds from a lying position, from a kneeling position, standing up, and from a

horse, with the use of the holster butt and by hand. In order to make firing more convenient, as well as to hide it, use is to be made of cover and local objects. During an attack, you may fire while walking, or with short stops. All methods of firing should be carried out quickly, without ceasing to observe the target.

89. Firing from the pistol can be divided into the following procedures:

- Preparation for firing (assuming a firing position and loading);
- Firing (setting the sight, attaching the butt, aiming, and pulling the trigger);
- Discontinuation of firing (release the pressure on the trigger, set the pistol to Safety, Umload the pistol).

90. Each serviceman while carrying out the firing procedures, will select the most convenient positions for firing, assume the most comfortable of the body, and the hands and legs, in order to insure the greatest comfort of the serviceman firing.

Preparation for firing.

91. While preparing for firing the pistol may be in any of the following positions: "in marching order on shoulder strap", "in marching order on the waist belt", and "at the ready on the shoulder belt".

92. Preparing for firing from the position "marching order on the shoulder strap" (Figure 51.).

Figure 51: Location of the pistol in marching order on shoulder strap.

1.To fire from the standing position it is necessary :

a. if the fire is to be carried out with the use of the holster butt, you make a half right turn in relationship to the target without moving the left leg, and leave it pointing to the left in the direction of the shoulder, at a comfortable distance so that the weight of the body is evenly divided on both legs. At the same time with three fingers of the right hand reach for the handle of the pistol with the thumb on the cover button and move the pistol and the holster butt forward with the muzzle pointing forward. With the left hand push the strap back over the left shoulder and grasp the holster butt. With the

thumb of the right hand press down the button of the lid of the holster butt and extract the pistol. With the left hand turn the holster butt slightly upwards with the slots pointing up. With the thumb of the right hand close the lid of the holster butt; attach the pistol to the holster butt (guide the slide on the pistol in the direction of the slots on the butt until a loud click is heard) and holding the handle of the pistol with the left hand load the pistol.(Figure 52.)

Figure 52: Preparation for firing using the holster butt.

b. If firing is done from the hand (without the use of the holster butt) - make a half-turn to the left without moving the right leg, then move it forward in the direction of the target about the distance of the shoulders, as is most comfortable to your height, and evenly dividing the weight of the body on both legs. With three fingers of the right hand reach for the handle of the pistol and with the thumb press down the button of the lid and remove the pistol from the holster butt. Cover the butt, hold the pistol with the muzzle up towards your right eye, holding your hand at the level of your chin. Freely let your left hand hang on your left side or place it behind your back. Load the pistol. (Figure 53.)

Figure 53: Preparation for firing by hand standing up.

Note: If firing with the left hand the opposite position of the body is to be assumed; pull out the pistol with the right hand and then place it in the left.

2. In order to fire lying down it is necessary to make a half-turn right and at the same time move the right foot half a step forward, to place three fingers of the right hand on the pistol grip and the thumb on the button of the holster butt.

With that:

a. if you are going to fire with the holster butt, quickly lower yourself on to your right knee while moving the pistol with the muzzle pointing forward up. With the left hand free and moved back the strap over the left shoulder, supporting yourself with the left hand on the

ground, lie down facing in the direction of the target, slightly spread out your legs with the toes pointing outwards. Grasp the holster butt with your left hand while pressing with the thumb of the right hand on the button of the cover of the holster butt, and extract the pistol. With the thumb, close the lide of the butt, with the left hand turn the holster butt so that the slots are pointing upwards and pull it towards yourself. After this join the pistol to the butt with the right hand. Load the pistol. Lay the hands with the pistol on the ground. (Figure 54.)

Figure 54: Preparation for firing from a lying position using the holster butt.

b. If firing is conducted by hand (without the use of the holster butt) quickly lower yourself on to your left knee. After this, supporting yourself with your left hand on the ground, lie down, facing in the direction of the target, slightly spread your legs with the toes pointing outwards. With the thumb of the right hand press the button of the lid of the holster butt and extract the pistol, pointing it in the direction of the target. Load the pistol. (Figure 55.)

Figure 55: Preparation for firing by hand in a lying position.

3. Firing from the kneeling position: Step back with the right foot so that the toe touches the heel of the left foot. Quickly lower yourself on to your right knee, sitting down on your heel. The left leg from the knee down should be straight and pointing in the direction of the target. Place three fingers of the right hand on the pistol grip and the thumb on the button of the lid of the holster butt.

At the same time:

a. If firing is to be conducted using the holster butt bring forward the pistol with the holster butt with the right hand with the muzzle pointing forward and in the direction of the target. With the left hand grasp the holster butt, with the thumb of the right hand press the button of the lid of the holster butt, extract the pistol, and close the lid with a thump. With the left hand turn the holster butt with the slots pointing upwards lifting it towards oneself. Then with

the right hand join the pistol to the holster butt, directing it towards the target. Load the pistol.(Figure 56.)

Figure 56: Preparation for firing in a kneeling position using the holster butt.

b. If firing is by hand (without the use of a holster butt) press on the button of the lid of the holster butt and extract the pistol, holding it with the muzzle pointing upwards, opposite your right eye, hold the hand at chin height and load the pistol (Figure 57.).

Figure 57: Preparation for firing in a kneeling position by hand.

93. Preparation for firing when the pistol is carried in marching order on the waist belt. (Figure 58.)

Figure 58: Position of the pistol in marching order on the waist belt.

1. If firing is to be conducted with the use of the holster butt release the holster butt from the waist belt, that is, transfer it to the position for "marching order on the shoulder strap" and prepare it for firing from that position.

2. If firing is to be conducted by hand (without the use of the holster butt) push on the button holding the lid of the holster butt without taking it from the waist belt, extract the pistol and prepare for firing as from the position "marching order from shoulder strap".

94. Preparation for fire from the position "in combat order on the shoulder strap" (Figure 59).

Figure 59: Position of the pistol in "combat order from the shoulder strap".

In order to place the pistol in the position "combat order from the shoulder strap" it is necessary to take the pistol out of the holster butt, attach it to the holster butt, release one end of the strap from the swivel of the holster butt, attach it to the swivel on the pistol, and hang the pistol by its strap over the left shoulder.

In preparing for firing hold the pistol by the grip with the right hand and proceed as from the position "marching order on shoulder belt" with the holster butt attached.

95. To load the pistol, the command "Load" is given. If necessary,,

prior to the command "Load", the firing position is ordered.

Loading the pistol is carried out in the following sequence.

1. If the pistol is attached to the holster butt, hold the pistol in the right hand at the end of the holster butt, with the left hand open the magazine holder, extract a loaded magazine, holding it with the rounds upwards and the bullets facing away from oneself. With the forefinger of the right hand move the magazine catch back, with the fingers of the left hand grasp and extract the magazine out of the handle of the pistol and with the same hand slide a loaded magazine back into the pistol grip, (Figure 60.) placing the empty magazine in the holder. Release the safety catch (turning the flange of the transfer lever safety catch to the required firing position). In order to achieve this, move the flange of the transfer lever safety catch to the required position ("OD", or "AVT") with the left hand. With the

left hand pull the bolt back until it stops and release it. If the command "Fire" is not given place the bolt on Safety (directing the pistol towards the target, with the left hand move the transfer lever safety catch to its forward position, with this the striker moves back and the hammer is released).

Figure 60: Loading (re-loading) a pistol.

2. If the pistol is in the right hand, not attached to the holster butt, holding the pistol by the right hand by the handle, with the left hand unbutton the holder and extract a magazine, holding it with the rounds up and the bullets pointing away from yourself. Holding the loaded magazine in the left hand, with the thumb of the same hand, push the magazine catch, grasp the magazine and remove it from the handle, placing the loaded magazine in the handle and the empty magazine in the holder. Take the bolt off the safety catch, with the left hand pull the bolt back and release it. If the command "Fire" is not given put the pistol on Safety.

If the magazine is not loaded then prior to loading the ~~magazine~~ pistol, it is absolutely necessary to load the magazine. In order to do that, grasp the magazine in your left hand with the feeder pointing upwards, and the cam pointing away from yourself, and with the right hand, the

rounds. Insert the roundsbetween the upper bent flanges of the magazine and pressing with the thumb of the right hand, push it to the left. In the same manner insert the remaining rounds. Place the magazine in the handle of the pistol.

Note: In combat conditions the pistol should always be loaded in advance.

Conduct of fire.

96. In order to fire, it is necessary:

1. To set the sight and to release the safety catch (if it was set on) for which it is necessary to turn the flange of the transfer lever safety catch to the required position and PULL THE TRIGGER.

a. If firing takes place with the holster butt attached grasp the pistol grip with the right hand placing the forefinger on the trigger. Pull the holster butt against your right cheek and without losing sight of the target,with the left hand grasp the back of the right hand below the trigger guard, pressing the holster butt tightly against your shoulder, so that the marksman feels the butt tightly against his shoulder.

The position of the elbow should be the following: while pressing back the elbow of the right arm should be raised approximately to the height of the shoulder (Figure 61.); when aiming lying down, the elbow should be on the ground (Figure 62); when firing from the kneeling position the elbow of the left arm rests on the foreleg or a little bit in front of the knee, the elbow of the right hand is raised approximately to the height of the shoulder (Figure 63.).

Figure 61:Position when firing standing up with the holster butt.

Figure 62: Position when firing lying down with the holster butt.

Figure 63: Position when firing kneeling with the holster butt.

b.If firing is done by hand (without the use of the holster butt) pull the pistol out with the right hand holding the pistol by the grip in the palm of the right hand; place the forefinger of this hand immediately on the trigger, extend the thumb of the right hand along the left side of the handle parallel to the direction of the barrel;

the stretched out right hand is to be held freely, relaxed, the wrist of this hand is to be held in a line which passes through and is parallel to the barrel and the elbow. (Figure 64.)

Figure 64: Position while firing standing up.

While firing from the knee (Figure 65) and lying down (Figure 66) the pistol will be held in the same way as when lying down.

Figure 65: Position while kneeling.

Figure 66: Position while firing lying down.

2.Aiming - Hold your breath after exhaling, close your left eye, and

with the right eye look through the slit on the sight so that the apex of the foresight is in the middle of the slot on the rear, and its height is level with the sides of the rear sight. In this manner bring the pistol on to the target at the same time pressing with the forefinger on the trigger until the hammer almost is released.

While releasing the cock, one should not disturb by slight movement the level of the sight in relationship to the target. Overanxiety to fire at the moment when the sight is dead on will bring about quivering and will result in an inaccurate shot.

If the marksman, while he is pressing down the trigger, feels that he cannot hold his breath any longer, it is not necessary to either increase or decrease the pressure on the trigger, but to take a breath and continue the pressure on the trigger.

While firing, it is necessary to press the holster butt uniformly and firmly against the shoulder, maintaining the line of aim. During the firing, and after every series of rounds, check the sighting.

Note: If the marksman finds it difficult to close the left eye only, it is permitted to fire with both eyes open.

97. In order to set the sight it is necessary to raise the pistol with the muzzle pointing upwards and to turn the sighting drum with the thumb of the left hand to the desired distance.

Ceasing fire.

98. Cease fire may be temporary or complete.

For a temporary cease fire the command "Suspend firing"(STOY) is given;

while moving the command is "Cease firing" (PREKRATIT' OGON'). Upon this command, the marksman stops pulling on the trigger, puts the pistol on Safety and if necessary, reloads.

To reload a pistol it is necessary:

- to remove the magazine from the handle of the pistol;
- to place the loaded magazine in the handle;
- if further firing is expected, to take the pistol off safety and

cock it. (In the event that prior to reloading all the bullets have been spent, the bolt will have to be pulled back and released.)

To cease fire (after the command "Cease fire") the command "Unload" is given, upon which command the marksman is to :

- discontinue pressing the trigger;
- place the pistol on Safety;
- take the pistol in the same manner as for preparing for firing;
- unload the pistol.

In order to unload the pistol it is necessary :

- extract the magazine from the handle;
- take the pistol off Safety;
- eject the round from the breech by grasping the bolt with the left hand and pulling it backwards and releasing it;
- place the pistol on Safety;if further firing is not expected, remove the rounds from the magazine ;
- place the magazine in the handle of the pistol;
- separate the pistol from the holster butt (if it was attached);
- place the pistol in the holster butt.

Firing from a rest and from cover.

99.

A rest is used in order to increase the accuracy of firing. Depending on the height of the rest the marksman will have to assume the appropriate position for firing.

While firing from a rest, the wrist of the left hand is to be placed on the support, and the pistol is to be held as shown in Figures 67-71.

Figure 67: Position while firing with a rest, lying down, using the holster butt.

Figure 68: Position while firing kneeling down from a rest, using the

holster butt.

Figure 69: Position while firing lying down from cover using the holster butt.

Figure 70: Position while firing from the kneeling position from

cover, using the holster butt.

Figure 71: Position while firing standing up from cover using the holster butt.

While firing from a rest without using a holster butt, place the right hand with the pistol on the support in such a way that the wrist carries the weight and that the handle of the pistol does not touch the rest. (Figure 72).

Figure 72: Position of the wrist while firing with a support.

When firing by hand from cover it is necessary to assume the appropriate position (standing, kneeling, or lying down,) and to lay the right hand against the rest in such a way that the wrist with the pistol is free to move. (Figures 73 and 74.)

Figure 73: Position of firing by hand from behind cover.

Figure 74: Position while firing standing up by hand from cover.

Translator's note: The Russian expression "S RUKI" has been translated as "by hand", meaning that the pistol is gripped by by the hand, not held in the holster butt.

Firing on the move.

100.Firing on the move takes place while moving to an attack. The pistol should be attached to the holster butt. Firing may be from the shoulder (Figure 75) and with the holster butt pressed against one's side (Figure 76.).

Figure 75: Firing on the move from the shoulder.

Figure 76: Firing on the move with the holster butt pressed against the side.

Firing from the shoulder on the move may be carried out with or without stopping.

Firing from the shoulder with short stops is accomplished by stopping the movement on the left foot and simultaneously raising of the pistol

with the holster butt to the shoulder, to aim, to fire, and to continue movement.

In order to fire without stopping it is necessary to pull the pistol with the holster butt attached to the shoulder and continuing movement with short steps, ~~to~~ direct the pistol towards the target and to continue firing.

To fire with the holster butt pushed against your side, it is necessary to hold the pistol by its grip with the right hand and squeezing the holster butt to ~~one's~~ side with the same ~~hand~~ arm, to direct the pistol towards the target, (repeat), without stopping movement.

Loading and reloading of the pistol is carried out on the move.

Firing while mounted.

101. Firing from a horse is carried out with the use of the holster butt and from the hand. In order to fire while mounted with the use of the ~~holster~~ reins butt, it is necessary, without releasing the ~~halter~~ with the left hand, to remove the holster butt ~~from~~ and the pistol from the waist belt, extract the pistol and join it to the holster butt.

If firing is to be conducted from a halt, place the horse in a half right direction in relationship to the target so that the direction of the fire would be carried out over the left shoulder of the horse; Raise your body somewhat to the front, squeeze your knees tightly to the saddle, slightly turning the toes outwards, and holding the holster butt tightly against your shoulder, carry out the firing.

If firing is carried out while moving forward lift yourself slightly on the stirrups, move the body forwards, and press down with the knees; the pistol is held above the head of the horse, so that the firing will not be dangerous to the horse.

In order to fire sideways, away from the direction of movement, raise yourself slightly in the stirrups, turn your body towards the target, and move it forward, resting it on the right or left stirrup.

For firing downwards, raise yourself and bend your body forward and slightly down, resting it on the right (left) stirrup.

Chapter IX

Principles of firing from a pistol.

General instructions.

102. Servicemen equipped with pistols will fire in combat according to the situation.

103. In order to achieve more or less acurate fire, it is necessary:

- to know the rates of dispersion and average quantity of rounds which is necessary to destroy various targets;
- to know the principles of selecting the place of firing;
- to know how to select a target to be fired at;
- to know how to select the proper aim and aiming point, taking into consideration firing conditions;
- to know how to fire at static, single and group targets;
- to know how to fire at vague and moving targets;
- to know how to fire against parachutists.

Characteristics of pistol firing.

104. Fire from the pistol by single rounds utilizing the holster butt is characterized by the following details.

1. The magnitude of dispersal of the bullets in relation to height and sideways is:

Distance m.	Height of trajectory above aiming line cm.	Dispersal zone cm. Height	Width
25	1	9	6
50	3	15	12
100	13	27	27
200	67	66	63

2. The average number of ~~words~~ bullets necessary to destroy single open targets:

Distance m.	Head	Chest	Running
25	1	1	1
50	1	1	1
100	2	2	2
200	8	5	3.

Selection of firing sight.

105. A pistol may be fired from any location from which the target can be observed or an area where a possible target may appear.

106. The marksman will select independently the place as well as the most suitable position, having assessed the circumstances and the character of the locality. The selected location should more or less allow freedom of movement and a good field of fire and be able to provide cover from observation by the enemy and protection from his fire.

107. Having selected the firing position it is necessary to assess which of the various positions standing or kneeling are most suitable to conduct fire from the trenches, shell-holes, ditches, from vegetation (rye, grass, shrubs), from behind fences, from wreckage, as well as upon a sudden meeting with the enemy. In open localities the lying position provides the greatest assurance of accurate fire, cover, and camouflage of the marksman.

Selection of Targets.

108. Pistol fire is conducted against live open targets, camouflage, suddenly appearing and running targets, also on attacking or counter-attacking enemy groups.

While selecting the target its combat significance has to be assessed, as well as its vulnerability: in the first instance, the more important and dangerous targets have to be destroyed, and of these, the closest

and most vulnerable.

Selection of aiming point and setting sights.

109. The following instructions apply to the selection of the aiming point and sight setting: automatic fire against a running upright target at a distance up to 200 m. is carried on with the sight set at 200, automatic or single round firing against small targets at a distance of 100 m. or closer is conducted with the sight set at 100, but with distances of over 100 m. with the sight set at 200.

110. The proper aiming point is the middle of the lower edge of the target. When firing at high targets, (waist-high, running, etc.), the aiming point is to be selected on the wide part of the target. While firing watch out for richchet and if necessary change the aiming point. When firing at distances exceeding 200 m. aim at the head of the target.

111. Side winds have considerable influence on the flight of the bullet and divert it. Therefore, it is absolutely necessary to carry the aiming point over into the direction of the wind according to the following table :

Distance m.	Transfer of aiming point with moderate wind (5m/sec) at 90° angle	
	in cm.	in human figures.
25	2	-
50	5	-
100	20	1/2
200	70	1 1/2.

Note: 1. Divergence with a strong wind (10 m/sec) is twice the distance, with a lighter wind (2 to 3 m/sec), one half.

2. If the wind lies in a sharp angle to the direction of firing the aiming point has to be moved only half the distance.

3. Measuring the transfer of the aiming point is begun from the middle of the target.

Firing on stationary single and group targets.

112. Single and group targets at a distance of 200 m. are destroyed by single or repeat fire depending on the situation, having selected the aiming point in relationship to distance and height of target and the external firing conditions.

113. The proper manner to fire on group targets is with automatic fire and transferring the aiming point successively from one figure to another.

114. While repulsing an attacking enemy as well as the unexpected encounter of group targets at a distance of 100 m. or less, firing is conducted in long bursts dispersing the fire across the whole front of

the target.

115. When fighting in the woods you fire from behind trees, using them as cover and support. In battle from trenches, crawling trenches, and other cover, fire is conducted in short bursts from supports by hand, but when the holster butt is attached you fire without raising it to the shoulder.

Firing at quickly appearing and moving targets.

116. Most of the targets in combat will appear for a short time only. Therefore it is necessary to observe carefully the battle field at all times, and to quickly detect, assess and destroy such targets. Speed in firing on fleeing targets is achieved by quick preparation, (assuming the required position, loading, re-loading etc.).

117. Firing on targets moving across the field of fire (towards a marksman or away from him), is carried out with the sights set at 200, changing the aiming point in relationship to the greater or receding proximity of the target.

118. Firing at a target which passes through the field of fire at a 90° angle, is conducted with the sight set at 200. The aiming point is to be brought forward in the direction of the movement of the target according to the following table:

Distance in m.	Distance of lead to be given to the aiming point for a running target at 90° and speed of 3m/sec	
	in cm.	in human figures
25	24	1/2
50	48	1
100	99	2
200	216	4 1/2

Note:1. The lead given to the aiming point on a target moving at walking speed is half of the above.

2.The lead given to the aiming point for a target which is moving at a sharp angle through the field of fire is one half of the above.

3. While giving a lead to the aiming point count from the centre of the target.

Firing at parachutists.

119. Firing against parachutists is conducted with the sight set at 200; giving a lead to the aiming point in the direction of the fall. The lead to be taken is in the visible outline of the figure of the parachutist as laid down in the following table:

Distance of slope m.	25	50	100	200
The lead to be given the aiming point in the figure of a parachutist, dropping at the rate of 6 m/ sec	1/2	1/2	1 1/2	3

Note:Counting is to be done from a central point on the figure of the parachutist.

120. The firing position while firing at parachutists is the one most favourable to the locality and circumstances - kneeling, lying down, or standing whichever is most comfortable for the conduct of fire. As supports may serve local objects, which are not too high - fences, limbs of trees, etc.

Firing under conditions of limited visibility.

121. Firing at night with artificial illumination of the target is carried out according to the same rules which apply in daytime.

When a locality is lit up, the marksman should search out his target quickly, take aim, and fire (bursts, or a sequence of bursts, depending on the duration of the light).

Prior to the moment of illuminating an area it is necessary to turn in the direction in which a target might appear. During lighting, do not look at the artificial lights, because these may temporarily blind the marksman.

122. At night, when it is not possible to light up the target, and not possible to take aim, fire at silhouettes, or in the direction of previous shots, and in the direction of various noises which can be heard from the direction of the enemy.

Firing in twilight and in light (moonlight) nights is conducted according to the same rules which apply in daytime.

Firing under conditions of use of toxic substances.

123. The characteristics of firing with a gas mask are:

- the clouding over of the eyepieces of the mask from your breath; ~~whic~~ this results in poor vision of the target;
- difficulties in breathing.

Getting used to the difficulties of firing with a gas mask can be achieved as the result of realistic and regular training.

For firing with the gas mask the marksman must put on the mask properly, and in such a way that the lenses of the gas mask are directly in front of the aiming eye and perpendicular to the direction of sight.

Supply of rounds and expenditure of same in battle.

124. A reserve of ammunition for the pistol is carried in the magazine holder. Each serviceman armed with a pistol is duty bound to take care to replenish his supply and to expend it economically in battle.

Appendix

Appendix 1.

Table

of elements of the trajectory of the bullat firing single rounds from the pistol with the holster butt attached.

Angle of flight at muzzle minus 3 minutes. Weight of bullet 6.1gr.

Initial velocity - 340 m/sec

Distance	Aiming angle	Falling Angle	Height of trajectory above sight	Horizontal distance to highest point of trajectory	Full time of flight	Speed of bullet at target	Energy of bullet at target	Average divergence (with uniform firing)	
								Vertical Direction prob. error	prob. error
m	min	min	thous	m	m	sec	m/sec	kg	m	m
25	9	4	1.2	0.0	0.01	13	0,076	318	21	0,03	0,02
50	12	9	2,6	0,03	26	0,156	300	28	0,05	0,04
100	21	20	5.8	0,13	52	0,33	273	23	0,09	0,09
200	43	51	14.8	0,67	107	0,730	230	17	0,22	0,21

9-mm Stechkin Automatic Pistol H7455 61.

Table

of vertical interval between trajectory and aiming line.

Sight	Distance m	25	50	100	200
		cm.			
25	25	0	-4	-34	-199
50	50	2	0	-25	-180
100	100	9	13	0	-129
200	200	25	45	65	0

Note:The figures preceded by a minus sign indicate a lowering of the trajectory below the aiming line.

Appendix 2.

Weights and linear measures of the 9-mm Automatic Pistol, Stechkin (APS)

Weight of pistol with unloaded magazine	1.02 kg
Weight of pistol with magazine loaded with 20 rounds without holster butt	1.22 kg
Weight of holster butt with strap	0.56 kg
Length of pistol without holster butt	225 mm
Length of pistol with holster butt attached	540 mm
Height of pistol without holster butt	150 mm
Calibre	9 mm
Number of grooves for	4
Length of aiming line	185 mm
Aiming distance	200 m
Capacity of magazine	20 rounds
Weight of round	10 gr
Weight of bullet	6.1 gr
Length of round	25 mm
Rate of fire	700-750 rounds per minute
Combat rate of fire (bursts)	up to 90 rounds per minute
single rounds	up to 40 per minute.
Initial velocity	340 m/sec

Index

Part I