



**Zastava**  
a r m s

# M93 - Black Arrow

**.50 BROWNING / 12.7 DSHK**



**IMPORTANT!  
READ THIS  
MANUAL  
BEFORE USING  
THE FIREARM!**

**OWNER'S MANUAL AND SAFETY INFORMATION**



**IMPORTANT! READ THIS MANUAL BEFORE USING FIREARM!**



**PLEASE READ CAREFULLY FOLLOWING PRECAUTIONS BEFORE TAKING YOUR FIREARM OUT OF ITS PACKAGE!**

**SAFE FIREARM HANDLING OF IS YOUR SOLE RESPONSIBILITY AT ALL TIMES!**

**WARNING: ALWAYS KEEP AND CARRY YOUR FIREARM EMPTY  
TO AVOID ACCIDENTAL DISCHARGE!**

**WARNING : USE OF IMPROPER AMMUNITION CAN DESTROY YOUR FIREARMS**

**FOLLOW THE LAW! OBEY ALL LOCAL STATE AND FEDERAL LAWS  
REGARDING TRANSPORTING, STORAGE AND OPERATING YOUR FIREARM!**

**DO NOT USE YOUR FIREARM BEFORE YOU GET FAMILIAR WITH  
USING THIS FIREARM, SEEK PROPER TRAINING BEFORE USING IT FIRST!**

**WARNING: IF CARELESSLY OR IMPROPERLY HANDLED,  
UNINTENTIONAL FIREARM DISCHARGE COULD POTENTIALLY CAUSE INJURY, DEATH,  
OR DAMAGE TO PROPERTY.**

**WARNING: CLEANING AND DISCHARGING FIREARMS IN POORLY VENTILATED AREAS  
MAY RESULT IN EXPOSURE TO LEAD!**

**DO NOT ALTER YOUR FIREARM!**

**This firearm was assembled and tested to function properly in its original condition.  
Altering internal parts of your pistol's firing mechanism voids the manufacturer's warranty.**

**THIS MANUAL SHOULD ALWAYS ACCOMPANY THIS FIREARM, AND BE TRANSFERRED WITH IT UPON CHANGE  
OF OWNERSHIP!**



**ZASTAVA ARMS** name on the weapon that you now own represents quality, reliability and gunsmith tradition since 1853. Your weapon was made in accordance with strict requirements and standards. Only materials of the highest quality have been used for this type of products and tested by our quality control. This owner's manual is designed to assist you in learning how to use and care for your Zastava Arms® firearm properly. We want you to enjoy and practice safe shooting with your ZASTAVA weapon. You may be an experienced shooter, already familiar with the procedures in this Instruction manual, but we urge you to read this entire Instruction manual carefully. You must follow the safety instructions for your safety and the safety of others. Digital copy of this manual can be obtained from Zastava Arms USA website.

***Thank you for choosing our product!***

## STATE-BY-STATE WARNINGS

Certain US states require by law their own specified warning notices, in larger than normal type be conspicuously included by the manufacturer, distributor, or retail dealer with firearms sold in that state. Zastava Arms sells its products in compliance with applicable laws and regulations. Because our products may be sold in these states, we include the following:

### **CALIFORNIA:**

“Children are attracted to and can operate firearms that can cause severe injuries or death. Prevent child access by always keeping guns locked away and unloaded when not in use. If you keep a loaded firearm where a child obtains and improperly uses it, you may be fined or sent to prison.”

### **ADVERTENCIA:**

““A los niños atraen las armas de fuego y las pueden hacer funcionar. Ellos pueden causarse lesiones graves y la muerte. Evite que los niños tengan acceso a las armas de fuego guardándolas siempre con llave y descargadas cuando no las esté utilizando. Si usted tiene una arma de fuego cargada en un lugar en que un niño tiene acceso a ella y la usa indebidamente, le pueden dar una multa o enviarlo a la cárcel.”

### **CONNECTICUT:**

“UNLAWFUL STORAGE OF A LOADED FIREARM MAY RESULT IN IMPRISONMENT OR FINE!”

### **FLORIDA:**

*“IT IS UNLAWFUL, AND PUNISHABLE BY IMPRISONMENT AND FINE, FOR ANY ADULT TO STORE OR LEAVE A FIREARM IN ANY PLACE WITHIN THE REACH OR EASY ACCESS OF A MINOR UNDER 18 YEARS OF AGE OR TO KNOWINGLY SELL OR OTHERWISE TRANSFER OWNERSHIP OR POSSESSION OF A FIREARM TO A MINOR OR A PERSON OF UNSOUND MIND.”*

### **MAINE:**

*“ENDANGERING THE WELFARE OF A CHILD IS A CRIME. IF YOU LEAVE A FIREARM AND AMMUNITION WITHIN EASY ACCESS OF A CHILD, YOU MAY BE SUBJECT TO FINE, IMPRISONMENT OR BOTH. KEEP FIREARMS AND AMMUNITION SEPARATE. KEEP FIREARMS AND AMMUNITION LOCKED UP. USE TRIGGER LOCKS.”*

### **MARYLAND:**

“**WARNING:** Children can operate firearms which may cause death or serious injury. It is a crime to store or leave a loaded firearm in any location where an individual knew or should have known that an unsupervised minor would gain access to the firearm. Store your firearm responsibly!”

### **MASSACHUSETTS:**

This firearm is not equipped with a device that fully blocks use by unauthorized users. More than 200,000 firearms like this one are stolen from their owners every year in the United States. In addition, there are more than a thousand suicides each year by younger children and teenagers who get access to firearms. Hundreds more die from accidental discharge. It is likely that many more children sustain serious wounds, or inflict such wounds accidentally on others.

In order to limit the chance of such misuse, it is imperative that you keep this weapon locked in a secure place and take other steps necessary to limit the possibility of theft or accident. Failure to take reasonable preventative steps may result in innocent lives being lost, and in some circumstances may result in your liability for these deaths."

"IT IS UNLAWFUL TO STORE OR KEEP A FIREARM, RIFLE, SHOTGUN OR MACHINE GUN IN ANY PLACE UNLESS THAT WEAPON IS EQUIPPED WITH A TAMPER RESISTANT SAFETY DEVICE OR IS STORED OR KEPT IN A SECURELY LOCKED CONTAINER. " - *FROM THE MASSACHUSETTS ATTORNEY GENERAL* "

#### **NEW JERSEY:**

"IT IS A CRIMINAL OFFENSE TO LEAVE A LOADED FIREARM WITHIN EASY ACCESS OF A MINOR."

#### **NEW YORK CITY, NY:**

"THE USE OF A LOCKING DEVICE OR SAFETY LOCK IS ONLY ONE ASPECT OF RESPONSIBLE FIREARMS STORAGE. FOR INCREASED SAFETY, FIREARMS SHOULD BE STORED UNLOADED AND LOCKED IN A LOCATION THAT IS BOTH SEPARATE FROM THEIR AMMUNITION AND INACCESSIBLE TO CHILDREN AND OTHER UNAUTHORIZED PERSONS."

#### **NORTH CAROLINA:**

"Any person who resides in the same premises as a minor, owns or possesses a firearm, and stores or leaves the firearm (i) in a condition that the firearm can be discharged and (ii) in a manner that the person knew or should have known that an unsupervised minor would be able to gain access

to the firearm, is guilty of a Class 1 misdemeanor if a minor gains access to the firearm without the lawful permission of the minor's parents or a person having charge of the minor and the minor:

- (1) Possesses it in violation of G.S. 14-269.2(b)
- (2) Exhibits it in a public place in a careless, angry, or threatening manner; (
- 3) Causes personal injury or death with it not in self defense; or
- (4) Uses it in the commission of a crime.!"

#### **TEXAS:**

"IT IS UNLAWFUL TO STORE, TRANSPORT, OR ABANDON AN UNSECURED FIREARM IN A PLACE WHERE CHILDREN ARE LIKELY TO BE AND CAN OBTAIN ACCESS TO THE FIREARM."

#### **WISCONSIN:**

"IF YOU LEAVE A LOADED FIREARM WITHIN THE REACH OR EASY ACCESS OF A CHILD YOU MAY BE FINED OR IMPRISONED OR BOTH IF THE CHILD IMPROPERLY DISCHARGES, POSSESSES, OR EXHIBITS THE FIREARM."

Please check with your licensed retailer, state police, or local police for additional warnings, which may be required by local law or regulation. Such regulations change constantly, and local authorities are in the best position to advise you on such legal matters.

## SAFETY GUIDES & PRECAUTIONS

1. **ALWAYS HANDLE YOUR FIREARM AS IF IT WERE LOADED** so that you never accidentally discharge it when you think it is unloaded.

2. **NEVER POINT YOUR FIREARM AT ANY UNDESIRE TARGET**, loaded or unloaded, as accidental discharge causing injury, death or damage to property might occur.

3. **NEVER SQUEEZE THE TRIGGER OR PUT YOUR FINGER IN THE TRIGGER GUARD UNTIL YOU ARE AIMING AT A TARGET AND READY TO SHOOT.** This will prevent you from firing the firearm when it is pointing in an unsafe direction.

4. **ALWAYS KEEP AND CARRY YOUR WEAPON EMPTY AND BLOCKED**, EXCEPT WHEN YOU INTEND TO SHOOT, SO THAT IT CANNOT BE FIRED WHEN YOU DO NOT MEAN IT.

5. **NEVER DRINK ALCOHOLIC BEVERAGES OR TAKE DRUGS BEFORE OR DURING SHOOTING**, as your vision and judgment could be seriously impaired making your weapon handling unsafe.

6. **NEVER INDULGE IN HORSEPLAY WHILE HOLDING YOUR WEAPON** AS IT MAY BE ACCIDENTALLY DISCHARGED.

7. **NEVER LEAVE YOUR WEAPON READY TO FIRE**, SINCE THIS POSITION IS EXTREMELY DANGEROUS BECAUSE OF RISK OF ACCIDENTAL DISCHARGE CAUSING SERIOUS INJURY, DEATH OR DAMAGE TO PROPERTY.

8. **NEVER LEAVE A LOADED WEAPON UNATTENDED.** There is always a chance that someone might use it, and causing injury, death or damage to property.

9. **ALWAYS KEEP YOUR HANDS AWAY FROM THE BARREL AND EXTERNAL MOVING PARTS** OF THE WEAPON WHILE OPERATING, AS YOU CAN GET HURT.

10. **ALWAYS BE SURE THAT BARREL INTERIOR IS CLEAN AND THAT THE BORE AND THE MUZZLE ARE CLEAR OF OBSTRUCTIONS.** Clean a fouled weapon immediately, so that it will function correctly and safely.

11. **ALWAYS WEAR AND ENCOURAGE OTHERS TO WEAR EAR PROTECTION WHEN SHOOTING**, especially on a range. Without ear protection the noise from your weapon and other weapon close to you, could leave ringing in the ears for some time after firing, while the cumulative long term effect could be permanent hearing loss.

12. **ALWAYS WEAR PROTECTIVE-SHOOTING GLASSES.** There's always a chance that gun powder, gas, carbon residue, lubricant, metallic particles, or other debris that may blow back and injure eyes of the shooter. Injury in such circumstances can be severe, including the possible loss of vision. ENCOURAGE OTHERS TO WEAR SAFETY GLASSES TOO!

13. **ALWAYS USE ONLY COMMERCIALY MANUFACTURED AMMUNITION** IN GOOD CONDITION (CLEAN, DRY, ORIGINAL, HIGH GRADE) , WHICH IS APPROPRIATE TO THE CALIBER OF YOUR WEAPON.

14. **NEVER USE AMMUNITION NOT SPECIFICALLY DESIGNATED FOR USE IN YOUR FIREARM.** FAILURE TO USE THE CORRECT TYPE OR CALIBER OF AMMUNITION MAY CAUSE THE FIREARM TO JAM, OR FAIL TO FIRE, OR MAY GENERATE EXCESSIVE PRESSURE WHICH CAN DAMAGE OR EVEN RUPTURE YOUR FIREARM, CAUSING PERSONAL INJURY OR DEATH TO YOU OR BYSTANDERS.



15. **NEVER SHOOT AT A HARD SURFACE OR AT WATER.** A bullet may ricochet and travel in any direction to strike you, or an object you cannot see, causing injury, death or damage to property.

16. **NEVER TAKE ANYONE'S WORD THAT A WEAPON IS UNLOADED!** Check it for yourself first, pointed in a safe direction.

17. **NEVER FIRE YOUR WEAPON NEAR AN ANIMAL UNLESS IT IS TRAINED TO ACCEPT THE NOISE;** an animal's startled reaction could injure it or cause an accident.

18. **ALWAYS BE SURE YOUR BACKSTOP IS ADEQUATE TO STOP AND CONTAIN BULLETS BEFORE BEGINNING TARGET PRACTICE, SO THAT YOU DO NOT HIT ANYTHING OUTSIDE THE RANGE SHOOTING AREA.**

19. **ALWAYS BE ABSOLUTELY SURE OF YOUR TARGET AND THE AREA BEHIND IT BEFORE YOU SQUEEZE THE TRIGGER.** A bullet could travel through or past our target.

20. **NEVER USE YOUR WEAPON IF IT FAILS TO FUNCTION PROPERLY, AND NEVER FORCE A JAMMED ACTION, AS A ROUND MAY EXPLODE CAUSING SEVERE DAMAGE TO YOUR WEAPON, SERIOUS INJURY OR POSSIBLE DEATH.**

21. **KEEP THE WEAPON POINTING TOWARDS THE BACKSTOP WHEN LOADING, FIRING AND UNLOADING, TO ELIMINATE THE RISK OF INJURY, DEATH OR DAMAGE TO PROPERTY.**

22. **ALWAYS INSTRUCT CHILDREN TO RESPECT FIREARMS.** Keep your weapon out of reach of children. The training of all, including children (age determined by law), should be performed by authorized people in institutions equipped and authorized for that kind of activity.

23. **ALWAYS MAKE SURE YOUR WEAPON IS NOT LOADED BEFORE CLEANING, STORING OR TRAVELING, MAGAZINE REMOVED FROM IT, BEFORE YOU STORE IT OR TRANSFER IT TO SOMEBODY ELSE, SO THAT IT CANNOT FIRE ACCIDENTALLY.**

24. **ALWAYS KEEP AND STORE YOUR WEAPON AND AMMUNITION IN SEPARATE LOCKED RECEPTACLES, OUT OF REACH AND SIGHT OF CHILDREN AND UNTRAINED PEOPLE.**

25. **THE SHOOTER (AND ALL BYSTANDERS) MUST BE OUT OF THE LINE OF FIRE** at all times and safe distance away from other shooters, since they may be struck by a ricochet, or by ejected cases from firearms.

**IN CASE OF MISFIRE:** When the weapon fails to fire, keep holding it pointed toward the target or a safe open area and wait at least 60 seconds. If a hang fire (slow ignition) has occurred, round will fire within 60 seconds. If round does not fire, remove magazine eject round, and examine primer. If firing pin indent on primer is light, off center, or non-existent, have the firearm examined by a competent gunsmith. If firing pin indent on primer appears normal (in comparison with similar previously fired rounds) assume faulty ammunition. Segregate mis-fired round from other live ammunition and empty cases, reload and carry on firing.

**LEAD WARNING:** CLEANING AND DISCHARGING FIREARMS in poorly ventilated areas may result in exposure to lead and other substances known to cause birth defects, reproductive harm and other serious injuries. Have adequate ventilation at all times when shooting. Wash hands thoroughly after exposure.

# Chapter I

## TECHNICAL DATA

### 1. GENERAL PURPOSE AND CHARACTERISTICS

1. The Black Arrow is intended for fight against live targets at open space, against non-combat vehicles at distances up to 1800 m and against light armored combat vehicles at distances up to 800 m as well as for firing at vulnerable targets: grounded aircrafts and helicopters, means of communication, equipment for electronic observation and tracking, etc. The weapon is suitable for use in mountainous regions and for protection of border line as well as for destruction of floating mines at rivers and sea.

### 2. TECHNICAL DATA

Caliber	12,7 DSHK	.50 Browning
Muzzle velocity	2625 ft/s	2756 ft/s
Combat rate of fire with aiming	8-10 rds/min	8-10 rds/min
Sighting range of fire from the rifle	5905 ft (1.12mi)	5905 ft (1.12 mi)
Principle of operation of .50 Browning	bolt action	bolt action
Mass of the rifle with optical sight and empty magazine	36.37 lbs	33 lbs
Length of rifle	65.75 in	59 in
Length of barrel	39.37 in	33 in
barrel bore	8 grooves	8 grooves
twist pitch	t=15 inches	t=15 inches
twist direction	right-hand	right-hand
Magazine capacity	5rds	5 rds
Optical sight (magnification 8x)	ON 8 x 56	ON 8 x 56



## Chapter II

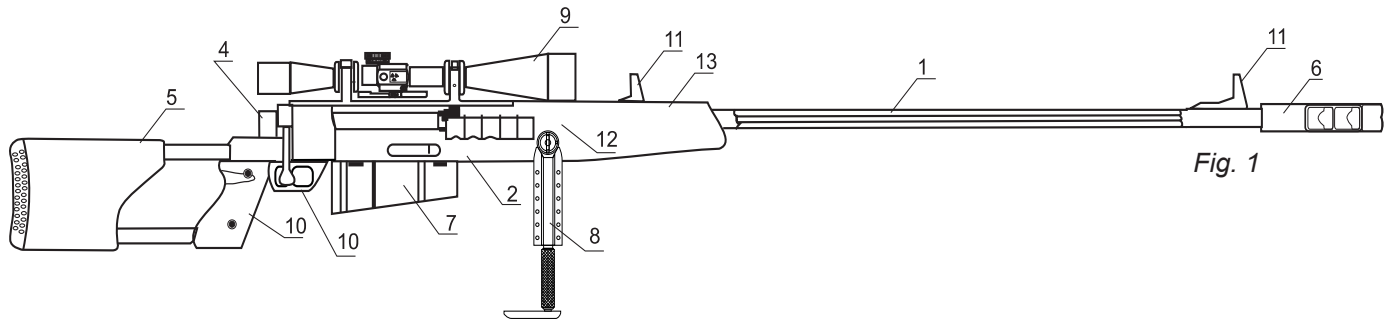


Fig. 1

### DESCRIPTION, OPERATION OF PARTS, STRIPPING AND ASSEMBLING OF THE RIFLE

#### 1. DESCRIPTION OF THE RIFLE

2. The rifle (Fig. 1) consists of the following parts and assemblies: barrel (1), receiver (2), triggering mechanism (3), bolt (4), stock (5), muzzle brake (6), magazine (7), bipod (8), optical sight (9), handgrip (10), mechanical sight (11), carrying handle (12), wooden cover (13), accessories (14).

#### 1) BARREL

3. Function of the barrel (1, Fig. 1) is to give bullet the direction of flight. Cartridge chamber and bullet lead section of the barrel are protected from corrosion by chrome coating. There are two threads on the barrel exterior; the one on the front part connects it with the muzzle brake while that on the rear part joins it with the receiver.

4. The sights (front and rear) (11, Fig. 1) are folding type, non-adjustable, allowing for firing at distances up to 400 m. The sight bases are provided with dovetail guides which fit onto corresponding dovetail lugs located on the barrel.

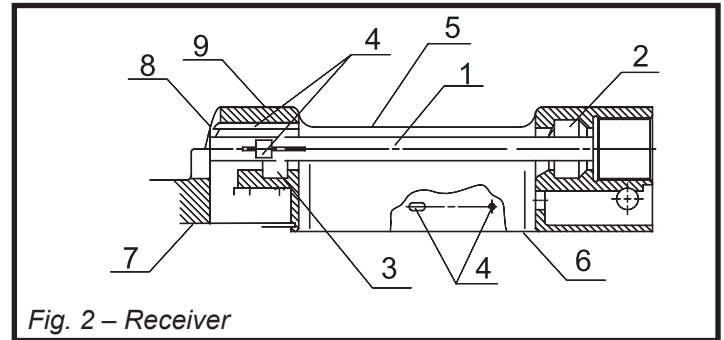
## 2) RECEIVER

5. Function of the receiver (2, Fig. 1) is to join together all parts of the rifle into a functional whole. The interior of the receiver serves to accommodate and guide the bolt. Inside the receiver (Fig. 2) there are:

- Two longitudinal grooves (1) along which bolt nipples slide in forward-backward movement,
  - Two lugs (2) upon which the bolt nipples rest when closing the barrel bore with a part of spiral surface along which the bolt nipples slide in locking and unlocking
  - Achieving the ultimate pushing of the round and extraction of the case out of the cartridge chamber respectively,
  - Lug in the rear part (3) as a support for the bolt rear nipple with a corresponding part of spiral surface,
  - Rectangular opening (4) above the lug supporting the rear nipple to guide the body in its movement forward backward.
- Inside the receiver on the left side there are fixed the bolt stop and case ejector, on the right side is fixed the magazine catch, while the triggering mechanism is fixed from the underside.

On the receiver, there are the following:

- Top opening (5) for inserting the round when loading the rifle and for ejecting the case or round,
- Bottom rectangular opening (6) to accommodate the magazine,
- Lug (7) for connection with the handgrip and upper shaft for



connection with the stock,

- On the rear side there is a spiral surface (8) for unlocking the bolt while pulling the bolt into its rearmost position,
- Lug (9) in dovetail shape for connection with the optical sight mount. The front end of the receiver is provided with a thread for joining it with the barrel.

## 3) TRIGGERING MECHANISM

6. Function of the triggering mechanism (Fig. 3) is to retain the striker in cocked position when the bolt is locked and to release it at pulling the trigger.

The parts of the mechanism are:

- trigger (1) serves to act upon the sear. When the trigger is pulled the trigger first rests upon a circular-segmented lug (the first knee), and then the trigger rest moves from the lug to a rounded part on the other end of the trigger (the second knee),

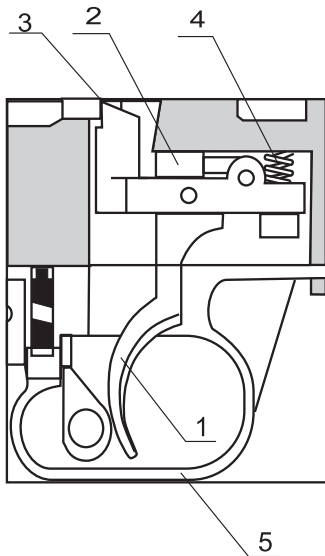


Fig. 3 – Triggering mechanism

ing are made impossible, and horizontal position to the left (unlocked). The trigger safety ensures reliability of operation of the mechanism.

- trigger rest (2)
- sear (3) serves to retain the striker in cocked position by means of the spring. The sear front end is pressed by the spiral spring holding its rear end in upper position. The sear turns around its pin in the receiver,
- spring (4),
- trigger guard (5) with trigger safety; the trigger safety is situated behind the trigger, in the guard. The safety has two positions: vertical position (locked) whereat pulling the trigger backward and firing

#### 4) BOLT

7. Functions of the bolt (Fig. 4) are as follows: pushing the round into the cartridge chamber, closing the barrel bore, firing the round, extracting the case.

The basic parts of the bolt are: bolt body and firing mechanism.

8. The parts of the bolt body are:

- bolt handle (1),
- bolt nest with the rim (2) which accommodates the cartridge case bottom
- groove (3) through which the firing pin bracket passes,
- slot for ejector (4),
- shaped groove (5) which accommodates the extractor fixing ring,
- spiral surface (6) for cocking the striker,
- two front nipples (7) with corresponding spiral surfaces on their edges which push the round into the cartridge chamber while the bolt moves forward that is, in locking,
- rear nipple (8) – takes up and transmits load upon the receiver in extreme cases of pressure upon the bolt face,
- bolt body guide (9) prevents radial movement of the bolt until the moment of locking when pushing the bolt forward and backward,
- extractor (10) is located in the front part of the bolt.

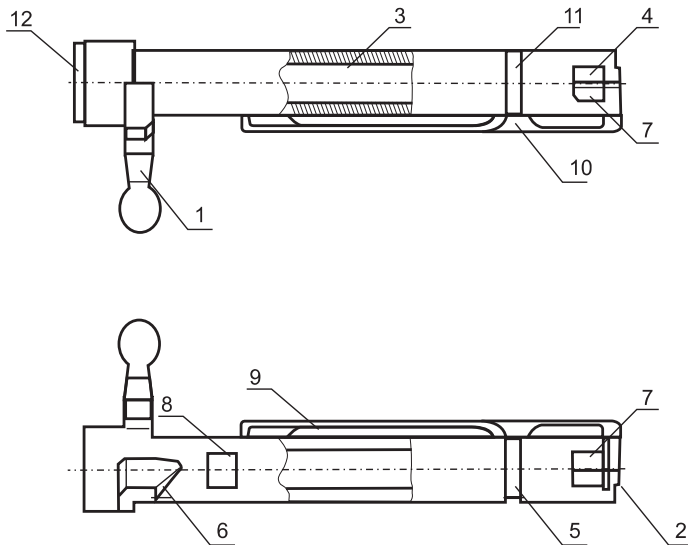


Fig. 4 – Bolt

To engage the cartridge case there is a lug which can move in relation to the bolt so that the extractor lug can grip the cartridge case rim while the bolt is reaching the front position having chambered the round,

- ring (1),
- coupling (12) with firing spring guide.

9. Firing mechanism (Fig. 5) serves to fire the round which is in the chamber.

The parts of the firing mechanism are:

- striker (1) is equipped with a projection with a catch which by its front end engages the sear of the triggering mechanism when the bolt is being pushed; in unlocking the striker compresses the firing spring through the spiral surface on the bolt body;
- firing spring guide (2);
- firing pin (3) serves to fire the primer: it is of cylindrical shape with coned and rounded top;
- firing spring (4) pushes the striker into front position so that the firing pin fires the primer of the round;
- coupling (5).

### 5) STOCK

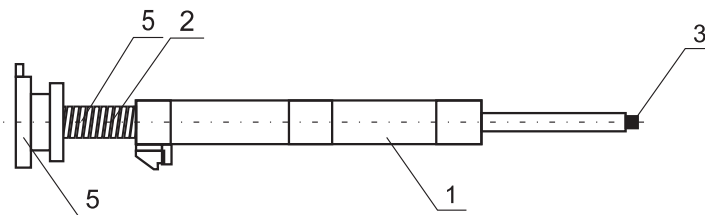


Fig. 5 – Firing mechanism

10. The stock (8) serves for resting the rifle upon the shoulder in firing. It is connected to the receiver and handgrip with guides and fixed to them by means of screws.

The parts of the stock are:

- pad (1) serves as the rifle rest against the shooter's shoulder during aiming and firing,
- Wooden rest (2) contains holes for accommodation of the springs which absorb the recoil force in firing,
- Guide (3) connects the stock with the receiver and handgrip. The lower guide is held by hand during firing,
- spring (4) serves to absorb the recoil force in firing and returns the barrel with the receiver and handgrip into the foremost position after firing,

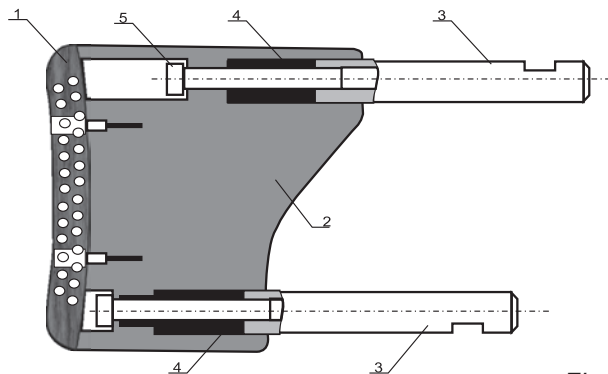


Fig.6 – Stock

- screw (5) is used to adjust the spring and to connect the stock to the guides.

## 6) MUZZLE BRAKE

11. The muzzle brake (Fig. 7) is used to reduce the recoil energy of the weapon. It is located at the barrel muzzle attached to it by its threaded part and secured in horizontal position in relation to the rifle by means of its securing pin.

The force of the muzzle brake acts in the direction opposite to the weapon recoil and occurs due to change of direction of flow of a certain quantity of powder gases which flow out of the barrel. The gases formed by powder combustion flow out through lateral openings on the muzzle brake.

## 7) MAGAZINE

12. The magazine (Fig. 8) serves to hold the specified quantity of ammunition and to move it to the lips in firing. The magazine is loaded with five rounds in two rows alternatively.

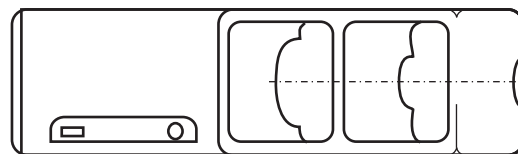


Fig. 7 – Muzzle brake

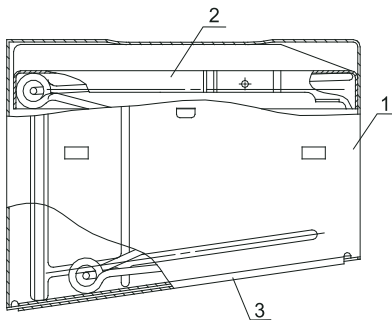


Fig. 8 – Magazine

The magazine consists of the following parts:

- Magazine body, inseparable assembly, (1) includes two sides, left and right, and two abutments (bigger and smaller). In

magazine design special attention is devoted to shape and dimensions of the magazine lips which serve for holding the round within the magazine and ensuring its direction while it is being pushed into the cartridge chamber. The shape of the lips allows for only one round at a time to be gripped by the bolt and chambered;

- Cartridge follower (2) – its role is to ensure that the round reaches the lips in due time - before the bolt reaches the position for gripping the round. For proper functioning of the follower it is necessary that the force of the spring of the cartridge follower mechanism is sufficient to move the round with acceleration which ensures that all the rounds travel the necessary path so that the next round reaches the magazine lips and can be pushed into the cartridge chamber;
- Magazine bottom plate (3).

## 8) BIPOD

13. The bipod (Fig. 9) is used as a rest in firing. The bipod height can be adjusted if necessary by means of a clamping guide which fixes the bipod at the height required. The bipod has two positions: folded and extended.

The main parts are:

- Bipod body with swivel joint (1),
- Telescopic leg with shoe (2),
- Bipod sleeve (3) serves to connect the bipod to the rifle,
- Handle (4) serves for changing the position of the bipod.

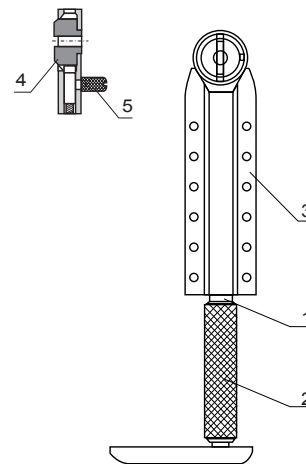


Fig. 9 – Bipod

## 9) OPTICAL SIGHT

14. The optical sight (Fig. 11) serves for firing at various distances.

The basic parts are:

- Mount (1) with dovetailed guides which fit onto corresponding lugs in the shape of dovetail provided on the receiver.



Along the whole length of the guide there is an opening bridged in the middle with a screw and a wing which, in proper position, tightens the mount to the receiver thus fixing the optical sight to the rifle;

- on the right side of the mount at two places on the guide there are clips into whose openings the scope is inserted through two rings (plastic) and two movable semi-clips;

- The scope (2) has fixed magnification of 8x. Up to the distance of 1400 meters (1531 yards) the reticle is adjusted by means of the corresponding knob marked from 4 to 14 on the top side of the scope. Over 1400 meters aiming is done by means of respective divisions at the reticle (Fig. 10).

- Screw with fixing pin (3).
- Firing range adjusting screw (4).
- Traverse adjusting screw (5).

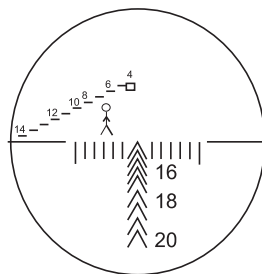


Fig. 10 – Reticle

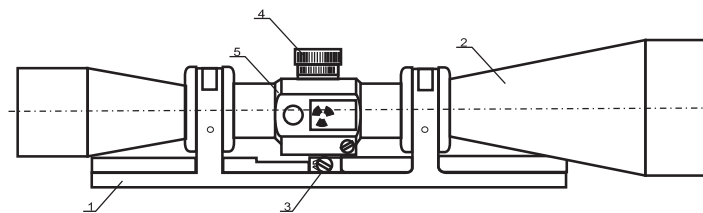


Fig.11 – Optical sight

## 10) MECHANICAL SIGHT

13. Sights (front and rear), (fig. 12 and 12A) are folding, enabling firing at distances up to 400 meters (1/4 mile). Sight bases have dove tail shaped guides, which are connected with the appropriate dove tail shaped lugs on the barrel and they are secured from moving with a screw (item 5).

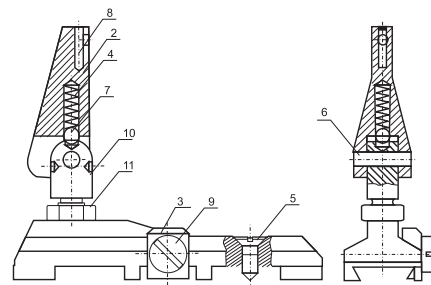


Fig. 12 - Mechanical sights - front

Rear sight is adjustable by direction and front sight is adjustable by height. Adjusting of rear sight is done by screwing, i.e. unscrewing the screw (item 6), by which the rear sight (item 2) is moved to one or the other side (turning of

screw by 360° gives movement of 270mm at 400m). Securing of wanted position is enabled by a safety lock (item 10) and a screw (item 11). Adjustment of the front sight (by height) is done by its turning (item 10) (screw-

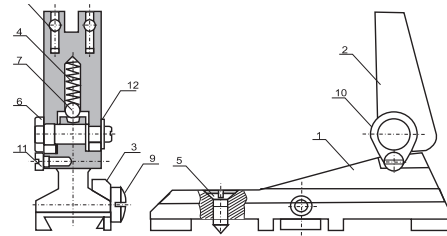


Fig. 12A - Mechanical sights - rear

ing, or unscrewing) and the rotation of 360° gives vertical movement of 270mm at 400m.

### 11) HANDGRIP

15. The handgrip (Fig. 13) serves as a hand rest in firing and it joins the stock to the receiver.

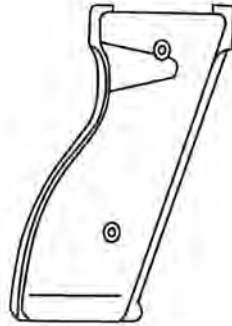


Fig. 13 – Handgrip

### 12) CARRYING HANDLE

16. The carrying handle (Fig. 14) serves for carrying and taking the rifle from one combat position to another.

It consists of the handle which is connected to the slide through a hinged lever; through the slide and by means of two screws the handle is connected to the same securing sleeve as the

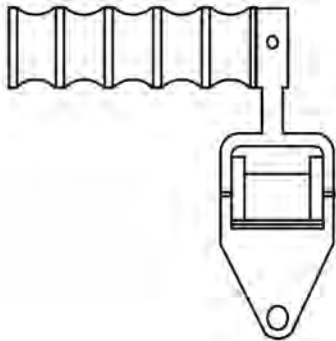


Fig. 14 – Carrying handle

bipod of the rifle. The handle has two positions: extended and folded position for packing into the rifle packing case.

### 13) ACCESSORIES

17. The accessories are intended for cleaning, lubrication and assembling of the rifle.

The accessories include the following items:

- barrel bore cleaning rod (1),
- optical sight adjusting tool (2),
- screwdriver for tightening the optical sight mount (3),
- gun lubricant can (4),
- barrel bore cleaning and lubrication brush (5).

## 2. OPERATION OF PARTS OF THE RIFLE

### 1) POSITION OF PARTS AND MECHANISMS BEFORE LOADING

18. The barrel is in the foremost position, shock absorbing springs located in the stock body are extended.

The bolt closes the cartridge chamber, its nipples rest upon the lugs in the receiver, and the striker is released.

The firing spring leans by its front end against the striker and by its rear end against the firing spring guide, and it is in extended condition.

The lug of striker is in the receiver groove, and its catch is in front of and above the sear of the triggering mechanism.

## 2) POSITION OF PARTS AND MECHANISMS IN LOADING

19. Turn the bolt handle to the left; in doing so, the bolt nipples go out of the receiver lugs and face the longitudinal grooves of the receiver.

Pull the bolt backward to the bolt stop catch, whereat the bolt stop leans upon the rear surface of the bolt left nipple thus retaining it in the receiver.

Insert the loaded magazine into rifle from the underside whereat the magazine retaining catch must slip into the corresponding opening provided on the magazine.

Push the bolt forward whereby it feeds the round from the magazine into the cartridge chamber of the barrel.

While the bolt is being pushed forward, the catch of the striker reaching the sear stops the striker holding it in cocked position.

Turn the bolt handle fully to the right causing the following to happen:

- the bolt nipples come in front of the lugs in the receiver and rest against them thus closing firmly the barrel bore;
- the firing spring leaning upon the guide and the striker is being compressed to the maximum;
- the extractor lug grips the cartridge case bottom rim.

## 3) POSITION OF PARTS AND MECHANISMS IN FIRING

The trigger is to be pulled for firing and this initiates the following:

20. The trigger turning around its axle rests upon the surface on the receiver forcing the sear to go down and out under the striker.

The firing spring extending presses upon the striker and forcefully pushes it with the firing pin forward; the firing pin top strikes the primer and fires the round.

The powder gases developing at firing expand at all sides at the same intensity and push the bullet forward and the rifle backward.

Since the powder gases act upon the cartridge case bottom, the barrel with the receiver, handgrip and triggering mechanism goes backward whereat the shock absorbing springs located in the stock body are getting compressed.

When the bullet has left the barrel, the powder gases going out of the barrel bore through the openings of the muzzle brake create the braking force which is opposite to the recoil force and that action together with the action of the shock absorbing springs stops the rifle from moving backward. Having taken up a part of the recoil force the shock absorbing spring extends and returns the barrel and the receiver into the foremost position.

### 3. STRIPPING AND ASSEMBLING OF THE RIFLE

21. In stripping and assembling rifles should be handled carefully, not allowing the parts to strike one another, and always observing the rule that stripping and assembling should be done on a table or bench, and when in the field on a clean rug.

The rifle is stripped for the purpose of inspection, cleaning, lubrication, replacement and repair of parts. Before stripping the rifle must be emptied and checked for that. Frequent stripping is harmful because it leads to sooner wear of parts.

22. Incomplete stripping of the rifle includes the following:

- place the rifle on the table (ground) resting on its bipod;
- take the bolt out by pressing upon the bolt stop with the left hand thumb and opening and taking the bolt out with the right hand. Further stripping includes stripping of the bolt by the following sequence: Separate the firing spring coupling while resting the bolt nest upon a wooden object. Take the bolt body in the left hand and, retaining the handle with the thumb, press the firing pin guide with the right hand and turn it right by 90° whereby it gets disengaged from the bolt body; releasing gradually the pressure of the firing spring, take the firing spring and the striker out of the bolt body.

23. Assembling of the bolt is performed by the following procedure:

- put the striker into bolt body so that its lug enters the groove on the bolt body,



Fig. 15 – Taking the bolt out

on the guide slips into its place within the bolt body. Then turn the guide to the left by 90° so that it is engaged to the bolt body.

Incomplete stripping of the rifle is shown in the following figures.



Fig. 16 – Stripping of the bolt

- put the firing spring into the striker bringing the bolt into vertical position and resting its nest upon a wooden object; by pressing from above upon the firing spring guide put it into such a position that the corresponding part

Further stripping and assembling may be carried out only by expert personnel.

## Chapter III

### HANDLING

#### 1. PREPARING THE RIFLE FOR USE

24. The rifle is to be prepared for firing in order to avoid stoppages and undesired consequences during firing. The preparation is to be supervised by the commander of the section in accordance with the Army service regulations. As a rule, the rifle is to be prepared for firing during the procedure of cleaning and lubrication.

In order to prepare the rifle for firing it is necessary to do the following:

- inspect the rifle in stripped condition;
  - assemble the rifle;
  - inspect the rifle in assembled condition;
  - dry rub the barrel bore;
  - inspect the ammunition and put away the defective rounds; put the correct rounds into the bag.
- Within the inspection it is necessary to do the following:

- check metal parts for rust, dirt, deep scratches and



Fig. 17 – Bag with ammunition

dents, and check wooden parts for cracks.

- check the bolt for proper functioning. When pulling the bolt with the hand backward it must move freely along the grooves of the receiver. The bolt stop must retain the bolt in the rearmost position.
- check the triggering mechanism for proper functioning.
- the striker must be cocked when the bolt goes backward while when the trigger is pulled the striker under the action of the firing spring must move forward forcefully and strike abruptly against the bolt body. With the trigger pulled back when the bolt is being pulled backward the striker remains in cocked condition. The striker can be “fired” only when the released trigger is pulled back again.
- check the optical sight for correctness. The optical sight mount must not be damaged or loose in its position on the rifle.
- check condition of the barrel bore (in case of any doubt about its cleanliness).

#### 2. FIRING POSITIONS

25. The basic position for firing from the rifle is lying position. Kneeling and standing position can be used for firing from a trench or other shelters.

## 1) FIRING FROM LYING POSITION

26. The basic position for firing from the rifle is lying position. The shooter places the rifle in the firing direction as follows: without hitting the ground too hard he puts the bipod down so that the shoes go into soil whereat they must be in the same line, not slanted; the shooter lies in a position suitable for firing, with his left hand he grips the lower guide of the rifle stock while his right hand embraces the handgrips. The shooter's body with the rifle must be positioned at a small angle in regards to firing direction, his legs slightly spread in a position as desired. The shooter's assistant takes his position on his right so that it is convenient for him to place and accept the magazine in the receiver slot.

## 2) FIRING POSITION FROM THE REST AND BEHIND THE SHELTER

27. Using a rest makes firing easier to a large extent while providing a shelter for the soldier from enemy's observation and action. As a rest can be used any materials on hand at the site (parapet, embankment, turf and the like). The rest should provide a suitable firing position for the soldier. When firing from the rest the rifle must lie in such a way that its center of gravity is on the rest. The bipod must be folded. If the rest is hard, a pad should be placed under the rifle (folded uniform, tent canvas, etc.).



*Fig. 18 – Firing from the rest*



*Fig. 19 – Firing from behind the shelter*

28. When firing from behind a shelter, a position which suits the height of the shelter is used. In firing from behind a shelter which protects only from enemy's observation, generally is used the lowest position which allows for good action as well.

If the shelter is somewhere slightly lower for standing position, the soldier should not adapt to such a shelter by bending his body; instead he should stand astride which gives him better stability in firing and does not make him feel tired soon.



### **3. SURVEILLANCE OF THE GROUND AND CHOOSING FIRE POSITIONS**

29. Before choosing fire positions it is necessary to survey the ground, to study directions for firing and suitable places for approaching of movable targets.

In doing this special care should be taken of the following:

1) While observing every direction it is indispensable to estimate unevenness of the ground where movable targets have to reduce their speed or to go around.

2) Importance of each local object in the direction of probable movement of vehicles which can be either an obstacle in movement or a mask during temporary staying or disposition at the site.

3) In addition to the main position it is necessary to choose and prepare back-up positions bearing in mind circular action.

4) It is necessary to make a sketch of fire plan with reference points given and the distance from them. As reference points are used clearly distinct and well visible individual local objects (a house, mill, tree, bushes, etc.).

5) In attack the ground should be studied in the direction of attack to find the most suitable line for firing, hidden accesses and masks.

6) Fire position must allow for good visibility and action, shelter from enemy's observation and fire, as well as fast changes of firing direction.

7) When choosing and taking positions it is important to

consider possibility of targets appearing laterally and from behind and solve the problem of fast and for enemy unnoticeable change of fire position and firing direction.

8) Special attention should be paid to making trenches and shelters against enemy's fire and observation from the ground and air.

9) Good masking allows for sudden opening of fire and its successful action.

10) For concealed coming to fire position it is necessary to use hidden accesses and masks.

### **4. OBSERVING THE FIELD AND CHOOSING THE TARGET**

30. In order to discover a target in due time it is necessary to observe the field incessantly and carefully, paying special attention to accesses from target's direction and a suitable place for hostile's vehicle approaching in the most probable direction of movement according to tactical situation. Nothing should be considered unimportant in observing the battlefield since some trivial events (bending branches, swinging grass, appearance of new small objects, reflection of metal parts and glass, flash from firearms, smoke, dust, etc.) can make detection of enemy easier. Observation is carried out by the shooter and his assistant whereby the assistant observes the flanks and behind.

When the shooter fires individually, he fires primarily at

important and dangerous targets (enemy's firearms, commanders, observers, messengers, ammunition carriers, the most prominent soldiers and the like). When targets are of the same importance, he chooses the nearest target or the one that can be hit most easily.

If a new important or dangerous target appears during firing, the shooter is obliged to transfer the fire to it.

## 5. DETERMINATION OF TARGET DISTANCE

31. The exact target distance must be known for successful firing. The basic way of determining the target distance is rough estimate and it can be determined in two ways:

- by appearance (visibility) of objects or targets;
- by using known distances at the site; any known distance may be used as a basis for calculation.

## 6. CHOSING THE SIGHT AND SIGHTING POINT

32. The sight and sighting point are to be chosen and determined by the commander of the section on the basis of the specified target distance. When firing individually, the sight and sighting point are determined by the shooter.

33. Due to its high muzzle velocity, the BLACK ARROW in firing is not significantly affected by temperature and longitudinal wind (in firing direction or opposite to it) as far as the bullet range is concerned, and therefore they needn't be tak-

en into account. Cross wind, especially if strong, has a significant influence, starting from the distance of 400 meters (1/4 mile). Therefore, in aiming it must be taken into account and calculated and sighting point shifted accordingly to the side from which the wind is blowing. For this Table 1 should be used. Correction due to wind should be reduced by a half when firing at a small angle.

When firing at moderate wind (4 m/sec | 13 ft/sec), the lead should be reduced by a half, and at weak wind 2 m/sec (6.5 ft/sec) it needn't be taken into account at all. When firing at approaching targets in the firing direction, if it is a fast moving target, the sighting point should be lowered and if it is a departing target, the sighting point should be raised.

The sight should be reset for new elements in case of a significant change of the distance of moving targets.

Distance in meters	Summit of mean trajectory above aiming line in m	Area including 50% of hits	
		per elevation H(m)	per traverse L(m)
100	0.03	0.21	0.11
200	0.09	0.40	0.25
300	0.19	0.60	0.41
400	0.34	0.82	0.59
500	0.55	1.05	0.78
600	0.90	1.29	0.97

Distance in meters	Summit of mean trajectory above aiming line in m	Area including 50% of hits	
		per elevation H(m)	per traverse L(m)
700	1.30	1.54	1.17
800	1.80	1.80	1.37
900	2.40	2.06	1.58
1000	3.10	2.34	1.79
1100	3.50	2.64	2.01
1200	4.90	2.94	2.23
1300	6.10	3.26	2.45
1400	7.60	3.60	2.68
1500	9.40	3.96	2.91
1600	11.5	4.34	3.14
1700	13.9	4.74	3.37
1800	16.7	5.14	3.61
1900	19.9	5.56	3.86
2000	23.5	5.98	4.11

Table 1 – Correction per traverse due to cross wind blowing at 10 m/s and at the angle of 90°

34. When firing at the targets moving at an angle in relation to the firing direction the distance mark should be positioned according to the distance and the sighting point shifted in the direction of the target movement using the Table 2 (Lead for the targets moving at the angle of 90°).

If the target is moving at a small angle, a half of the above given lead should be used.

When firing at ground targets the shooter and his assistant are obliged to observe the fall of the bullet and to enter necessary correction of the sight and sighting point.

Distance in meters	Strong wind 10 m/s at the angle of 90°
Shifting of sighting point in mils	
100	0
200	1
300	1
400	1
500	2
600	2
700	3
800	3
900	3
1000	4
1100	4
1200	5
1300	6
1400	6
1500	7

Table 2 – Lead of the targets moving at the angle of 90°

## **7. HANDLING WITH THE RIFLE DURING FIRING**

35. All the actions during firing should be carried out rapidly, automatically, while constantly observing the battlefield.

### **1) LOADING THE RIFLE**

36. The command to load rifle is “LOAD”. At this command the shooter and his assistant place the rifle, take position with it and load it.

### **2) OPENING FIRE**

37. In order to open fire the commander of the section commands direction, place and executive firing command “START”.

The command to open fire contains the target, sight, sighting point, type of round and type of fire.

If the command does not specify the number of rounds, firing proceeds until the target is destroyed (or disappeared) or until the command “STOP” is given.

### **3) STOPPING FIRE**

38. Fire is stopped at the command “STOP” or upon an agreed sign, while to cease fire there is the command “STOP - EMPTY”

## **8. POSSIBLE DEFECTS AND HOW TO ELIMINATE STOPPAGES**

39. The defects in mechanisms which disturb normal operation or cause stoppages in firing can occur after longer usage of the rifle, in combat due to inevitable wear.

In order to avoid stoppages it is necessary to observe the following instructions:

- obey the rules concerning keeping, stripping, cleaning, assembling and inspection of the rifle;
- prior to firing always strip the rifle and clean it from lubricant, inspect its parts, lubricate with a thin layer of gun lubricant the parts which are exposed to wear;
- inspect ammunition before firing;
- when changing fire positions keep the rifle from dirt and blows; pay special attention to muzzle brake so that no soil, sand, snow and the like comes into it;
- every stoppage in firing should be eliminated by repeated loading, not applying force.

If the stoppage cannot be eliminated by repeated loading or if it recurs, the cause of the stoppage must be found and eliminated.

Stoppage	Cause of stoppage	Elimination of stoppage
1. Misfired round	Defective primer on the round, thickened lubricant on the parts of firing mechanism. Insufficient protrusion of the firing pin. Broken or loosened firing spring..	Pull the bolt again to cock the striker, fire the round. If it misfires again, replace the round, clean the parts of firing mechanism or replace its defective parts and inspect the bolt.
2. Barrel closes with difficulty	Deformed round. Dirty cartridge chamber as well as the bolt nest. The primer of the previous round remained in the bolt nest. Dirt within the receiver front part.	Take the bolt out, clean the cartridge chamber and bolt and lubricate them lightly. If a round remained in the cartridge chamber, take it out through the barrel muzzle using the cleaning rod.
3. Cartridge case is not extracted after firing	Chipped off extractor lug, or the extractor does not stick to the bolt; dirt or rust in the cartridge chamber. Dirt under the extractor lug. Dirty ammunition used.	Replace the extractor, push the case out with the cleaning rod; clean the cartridge chamber and lightly lubricate it and ammunition as well.

4. Case is not ejected	Broken ejector spring and cartridge case ejector.	Replace the ejector spring and ejector.
5. Bolt stop fails to retain the bolt	The bolt stop catch broken.	Take the rifle to the technical repair shop to be repaired.

### 9. CHECK OF RIFLE FIRING ACCURACY AND ITS ADJUSTMENT FOR ACCURATE FIRING

40. All the rifles within the unit must be capable of accurate firing. The firing accuracy is tested when the unit receives the weapon without any records on its firing accuracy.

Accuracy is checked in following situations:

- after replacement of some parts or repairs which could impair the firing accuracy;
- if abnormal dispersion of bullets is observed during firing.

As a rule the check of rifle firing accuracy is made by the commander of the company or platoon, or some of the marksmen. Firing is made from the bipod and in lying position like in a combat situation.

Rifle accuracy is checked with standard machine gun ammunition at the distance of 400 m whereat the knob on the optical sight is set at 4. The practice target with dimensions 1 x 1 m and marked sighting point is used for this check.

41. The rifle firing accuracy is satisfying if 4 or 3 shots out of 4 are grouped in a circle of 100 mm, and if the mean hit does

not deviate from the sighting point by more than 70 mm vertically and 50 mm laterally.

If distribution of shots does not satisfy the above requirements, the firing accuracy of the rifle is considered unsatisfactory and the cause of it must be found. If the mean hit deviates horizontally and/or vertically more than it is specified, a gunsmith may change position of the reticle by a special tool contained in the accessories according to the instruction for adjusting accuracy of the optical sight.

Each shift (click) changes position of the hit by 10 mm when firing at 100 m.

After finding and eliminating the cause of inaccuracy of the rifle it is indispensable to repeat the accuracy check.

## **Chapter IV**

### **KEEPING AND MAINTENANCE OF THE RIFLE**

#### **1. KEEPING THE BLACK ARROW RIFLE**

42. In any circumstances the operators of the rifle are obliged to keep the rifle clean, to handle with it carefully and to inspect it every day in order to make sure that it is completely correct and ready for combat.

In barracks and in camps rifles should be kept in racks without protective covers and with bolts open.

When temporarily kept in any building (if there are no racks), rifles are kept on a dry place far from fire, furnace or other heating appliances.

In combat the rifle must be loaded and "at safe".

During marching when there is no danger from enemy's air attack, the rifle should be carried in its protective cover.

In transport by boat, car or any vehicle the rifle in its protective cover should be held as it is convenient keeping it from blows.

Accessories and spare parts for the rifle should be kept in clean and correct condition in a special pocket of the protective cover.

When keeping the rifle under special conditions (keeping in the open, at low and high temperatures, in humid and sandy regions), it is necessary to pay special attention to its cleaning and lubrication in due time, to condition of the color, cleanliness and correctness of the protective cover. When keeping the rifle under special conditions, the inspection, cleaning and lubrication should be carried out more often.

#### **2. CLEANING AND LUBRICATION**

43. The rifle which is in use should be cleaned:

- After firing - immediately at the shooting range it is necessary to clean and lubricate only the barrel bore and the front part of the bolt, while the detailed cleaning of all parts is to be done upon return;
- After training at the shooting range (without firing);
- In combat, at manoeuvres and longer exercise in the field - every day using the periods of fire cease or rests;
- if the rifle is not used at least once in ten days.

44. Rifles are cleaned by the operators controlled by the commander of the section who has the following duty:



- to determine necessary extent of stripping, cleaning and lubrication;
- to check correctness of the accessories and quality of the cleaning material;
- to check whether cleaning is well done before assembling and lubrication;
- to check whether lubrication is well done and allow putting the rifles into the racks.

45. The following materials are used for cleaning and lubrication:

- DRNĀ (or any equivalent detergent solvent) for cleaning powder soot;
- ZUON-SNO 2139 (or any equivalent standard military lubricant) for lubrication of parts after cleaning;
- clean, soft rages or cotton-paper fiber-specially packed for protection from dirt and dust;
- Lubrication brush for barrel bore and cartridge chamber.

### 3. MAINTENANCE

46. Basic maintenance is completely carried out by the users of the rifles controlled by the commander of the section. For the basic maintenance are used the spare parts, tools and accessories specified and contained in the set belonging to each rifle.

The basic maintenance includes the following:

- Daily inspections (before use, during use, and after use);
- Periodical (weekly) inspections which are included in the plan and program of training for the direct users. They comprise the rifles and accompanying sets in constant use. The inspection is intended to check technical condition and completeness of the rifle and its set of spares, tools and accessories.

47. Daily inspections as well as temporary ones are made by the operators; the defects found at the inspection which are within the competence of the basic maintenance are to be eliminated immediately by the users with the application of the means specified and the accompanying set of spare, tools and accessories. All the defects found at the inspection which are within the competence of the technical maintenance department must be immediately reported to the commander in charge.

48. Inspection before use includes:

- Completeness of the rifle and accessories;
- General condition of the rifle, whether all the parts are cleaned and lubricated, whether the barrel is clean and empty.
- Check of the bolt for functioning (feeding the round, locking, cocking of the triggering mechanism, unlocking and extracting the round).
- Condition of sights.
- Condition of ammunition.

49. Inspection during use:

- heating of the barrel;
- completeness of the rifle and accessories.

50. Inspection after use is to be made by direct users supervised by the commander of the unit and it includes:

- condition of the barrel - whether it is well cleaned and lubricated and whether there are changes occurred during firing;
- completeness of the rifle and accessories.
- correctness of operation of parts and mechanisms of the rifle.

- check of parts – if they got damaged during firing.
- check of parts for proper cleaning and lubrication.

Daily inspection of the rifle which is in the storage includes visual inspection made by competent chiefs whereat it is necessary to check condition of the packing case and condition of anti-corrosion protection; to eliminate moisture and dirt from parts; if necessary to renew the protection and to check the completeness.

51. Periodical inspection includes:

- completeness of the rifle and accessories;
- general condition of the rifle, whether the parts are clean and lubricated;
- check of movable parts of the rifle for correct operation.

## Chapter V

### DESCRIPTION AND MAINTENANCE OF AMMUNITION

#### 1. DESCRIPTION OF AMMUNITION

52. Live round (Fig. 20) consists of: cartridge case, primer, powder charge and bullet. The cartridge case consists of the body, neck and cartridge case bottom. The bottom of the case has a seat for the primer, anvil and two holes through which the flame from the primer passes toward the powder charge. The primer consists of a brass cup with impressed incendiary mixture. Powder charge is made of smokeless powder. The bullet is armour-piercing-incendiary and it con-

sists of the jacket, core and incendiary charge.

53. The rifle uses two types of ammunition as follows:

- BLACK ARROW round;
- BLACK ARROW blank round for practice firing. This round contains the same elements as the live round except that the front end of the bullet is thin. The powder charge is smaller than in case of the live round;
  - the practice round is intended for training in loading and emptying. The cartridge case of this round is perforated and contains neither powder charge nor primer.

#### 2. MAINTENANCE OF AMMUNITION

54. Ammunition is kept in dry premises protected from moisture. Magazines and rounds should be kept in closed cases. Defective magazines and rounds should be separated and replaced by correct ones. Keeping different types of ammunition in the same case is strictly forbidden.

Before using live ammunition the commander check the rounds for correctness and cleanliness.

When a soldier gets live rounds he must make sure that they are not dirty, deformed, corroded, with cracked cartridge case or loose bullets. Magazines must also be checked for cleanliness and correctness. After he has checked correctness of the rounds and magazines the soldier is obliged to clean them with a dry rag, put them in carrying bags (rounds are carried in bags containing 20 rounds each) and keep them carefully.

## TRANSPORTATION AND STORAGE

**WARNING: ALWAYS CHECK TO ENSURE THAT YOUR FIREARM IS NOT LOADED BEFORE TRANSPORTING, OR PUTTING IT AWAY FOR STORAGE.**

**PREVENT UNAUTHORIZED ACCESS:** *For increased safety, firearms should be stored unloaded and locked in a SECURE, hidden location, separate from the ammunition for the same rifle. Out of reach of children and unauthorized persons!*

**WHEN STORED IN AN IRRESPONSIBLE AND UNSAFE MANNER, FIREARMS CAN BE DANGEROUS, POSING A HUGE RISK OF POTENTIAL SERIOUS OR FATAL INJURIES TO CHILDREN AND OTHER UNQUALIFIED PERSONS.**

*NEVER ASSUME THAT STORING A FIREARM AT A “SECRET HIDING” PLACE IS A SECURE STORAGE METHOD. Others may get sooner or later get aware of your storage location by chance.*

The most suitable place for keeping firearms is a safely locked cabinet. *Use the locking device with this firearm for storage.* The use of a locking device or safety lock is only one aspect of responsible firearms storage.

**WARNING: NEVER LOAD A LOCKED FIREARM!  
NEVER LOCK A LOADED FIREARM!**

When transporting your rifle, **ALWAYS** keep it unloaded for your own, and safety of others.

By purchasing this firearm, you have accepted the responsibility of safely securing the firearm at all times and preventing its unauthorized use.

**GET FAMILIAR WITH YOUR STATE’S “SAFE AND SECURE STORAGE OF FIREARMS AND AMMUNITION” GUN LAWS AND REGULATIONS, THE MOST IMPORTANT LAW!**

**DRUGS & ALCOHOL WARNING: DO NOT TRANSPORT OR HANDLE FIREARM WHILE UNDER THE INFLUENCE!**

*Alcohol, certain drugs and illegal substances can impair your judgement, physical coordination, and your actions.*

## LIMITED PARTS REPLACEMENT WARRANTY

The enclosed firearm is warranted to be free of manufacturing defects for a period of one year from the original date of purchase from a federally licensed firearms retailer. The warranty only applies to the first retail purchaser and is not transferable or assignable. Proof of purchase must be presented at the time any warranty claim is made. This is a one year warranty limited to replacement of improperly manufactured parts.

Any alternations, modifications, abuse, misuse or discharge of poor quality, corrosive or defective ammunition voids the warranty. If your weapon needs servicing, apply to one of the service shops authorized by your dealer. Do not send your weapon directly to the manufacturer!

### REGISTER ONLINE TODAY!

To activate your warranty, please register your firearm online at [www.zastavaarmsusa.com](http://www.zastavaarmsusa.com) after purchase.

#### **DO NOT ALTER YOUR FIREARM!**

*This firearm was assembled and tested to function properly in its original condition. Altering your firearm voids the manufacturer's warranty!*

## DISCLAIMER OF LIABILITY

The manufacturer shall not be responsible for injury, death, or damage to property resulting from either intentional or accidental discharge of this firearm, or from its function when used for purposes or subjected to treatment for which it was not designed. The manufacturer also will not honor claims involving this firearm which result from careless or improper handling, unauthorized adjustment or parts replacement, corrosion, neglect, or the use of wrong caliber ammunition, or the use of ammunition other than original high quality commercially manufactured ammunition in good condition, or any combination thereof.

### RETURN AUTHORIZATION

To obtain warranty service, please contact us at [warranty@zastavaarmsusa.com](mailto:warranty@zastavaarmsusa.com). Please note that a return authorization must be obtained prior to returning the firearm.

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