

Zastava arms

Sporting Rifles

LK M70(Z98), LK M70PS, LK M70PSS, LKM85, LK M98

HANDLING AND MAINTENANCE INSTRUCTION MANUAL

WARNING:
PLEASE READ BEFORE USE

Dear Customer,

The name ZASTAVA ORUŽJE represents quality, reliability and gunsmith tradition since 1853. Your weapon was made in accordance with very strict requirements, of the highest quality materials used for this type of products and tested by our quality control.
To be able to handle this gun safely, you are obliged to read carefully and completely the Instruction manual. In case of any misunderstanding, please apply to your dealer or manufacturer for detailed explanations within shortest time.
If your gun needs servicing, apply to one of the service shops authorized by your dealer.
Thank you for purchasing our sporting rifle, we hope that you will be satisfied with it.



Fig. 1> Sporting Rifle M70 (Z98)



Fig. 2> Sporting Rifle M70PS (polymer stock)



Fig. 3> Sporting Rifle M70PSS (polymer stock; all metal parts-stainless steel)



Sl. 4> Sporting Rifle M85



Sl. 5> Sporting Rifle M98

SAFETY MEASURES

We want you to enjoy safe shooting with the rifle you purchased. 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.

WARNING: ALWAYS CARRY YOUR RIFLE EMPTY IN ORDER TO AVOID RISK OF ACCIDENTAL DISCHARGE.

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

2. NEVER POINT YOUR RIFLE AT ANYTHING YOU DO NOT INTEND TO SHOOT so that if it fires accidentally, injury, death or damage to property will be prevented.

3. NEVER TAKE ANYONE'S WORD THAT A RIFLE IS UNLOADED, check it for yourself with fingers off the trigger and gun pointed in a safe direction.

4. ALWAYS KEEP AND CARRY YOUR RIFLE EMPTY, WITH THE FIRING PIN UNTENSIONED EXCEPT WHEN YOU INTEND TO SHOOT, SO THAT THE GUN 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 gun handling unsafe.

6. ALWAYS SEEK DOCTOR'S ADVICE IF YOU ARE TAKING ANY MEDICATION, to be sure you are fit to shoot and handle your gun safely.

7. ALWAYS USE ONLY CLEAN, DRY, ORIGINAL HIGH QUALITY COMMERCIALLY MANUFACTURED AMMUNITION IN GOOD CONDITION, WHICH IS APPROPRIATE TO THE CALIBER OF YOUR RIFLE.

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

9. ALWAYS WEAR AND ENCOURAGE OTHERS TO WEAR EAR PROTECTION WHEN SHOOTING, especially on a range. Without ear protection the noise from your rifle and other guns 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.

10. ALWAYS WEAR AND ENCOURAGE OTHERS TO WEAR PROTECTIVE-SHOOTING GLASSES, especially on a shooting range.

11. OBEY THE COMMANDS OF THE PERSON IN CHARGE OF THE RANGE, SO THAT DISCIPLINE IS MAINTAINED TO REDUCE THE LIKELIHOOD OF ACCIDENTS.

12. 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.

13. ALWAYS BE ABSOLUTELY SURE OF YOUR TARGET AND THE AREA BEHIND IT BEFORE YOU SQUEEZE THE TRIGGER. A bullet could travel through or past your target. It has enough energy to cause unwanted consequences at large distances. If in doubt, do not shoot.

14. 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.

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

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

17. ALWAYS HOLD THE RIFLE BY THE STOCK, IN DEFINED (CARVED) ZONES, SINCE YOU COULD BE HURT BY HOT METAL OR MOVING PARTS.

18. NEVER SQUEEZE THE TRIGGER OR PUT YOUR FINGER IN THE TRIGGER GUARD UNTIL YOU ARE AIMING AT A TARGET AND READY TO SHOOT.

19. IN CASE OF MISFIRE:
Holding the rifle pointed toward the target. Wait 30 seconds. If a hang fire (slow ignition) has occurred, round will fire within 30 seconds. If round does not fire, eject round, and examine primer. If firing pin indent on primer is light, off centre, or non-existent, have the rifle examined by a competent gunsmith. If firing pin indent on primer appears normal (in comparison with similar previously fired rounds) assume faulty ammunition. Segregate misfired round from other live ammunition and empty cases, reload and carry on firing.

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

21. KEEP THE RIFLE POINTING TOWARDS THE BACKSTOP WHEN LOADING, FIRING AND UNLOAD-

ING, TO ELIMINATE THE RISK OF INJURY, DEATH OR DAMAGE TO PROPERTY.

22. NEVER LEAVE A LOADED RIFLE UNATTENDED. There is always a chance that someone will use it and cause injury, death or damage to property.

23. NEVER INDULGE IN "HORSEPLAY" WHILE HOLDING YOUR RIFLE AS IT MAY BE ACCIDENTALLY DISCHARGED.

24. ALWAYS INSTRUCT CHILDREN TO RESPECT FIREARMS. Keep your rifle 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.

25. WHEN YOUR RIFLE IS READY TO FIRE, OTHER PEOPLE MUST NOT BE IN FRONT OR NEAR YOU. Always hold your rifle so that you can control the direction of the muzzle.

26. ALWAYS MAKE SURE YOUR RIFLE IS NOT LOADED BEFORE CLEANING, STORING OR TRAVELLING, MAGAZINE REMOVED FROM THE PISTOL, BEFORE YOU STORE IT OR TRANSFER IT TO SOMEBODY ELSE, SO THAT IT CANNOT FIRE ACCIDENTALLY.

27. ALWAYS KEEP AND STORE YOUR RIFLE AND AMMUNITION IN SEPARATE LOCKED RECEPTACLES, OUT OF REACH AND SIGHT OF CHILDREN AND UNTRAINED PEOPLE.

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 honour claims involving this firearm which result from careless or improper handling, unauthorized adjustment or parts replacement, corrosion, neglect, or the use of wrong calibre ammunition, or the use of ammunition other than original high quality commercially manufactured ammunition in good condition, or any combination thereof.

IMPORTANT

Before it left the factory, this firearm was tested, carefully inspected and packaged. The manufacturer cannot control product handling after it leaves the factory, therefore, please examine this firearm carefully at the time of purchase to insure that it is unloaded and undamaged.

This Instruction manual should always accompany this firearm and be transferred with it upon change of ownership.

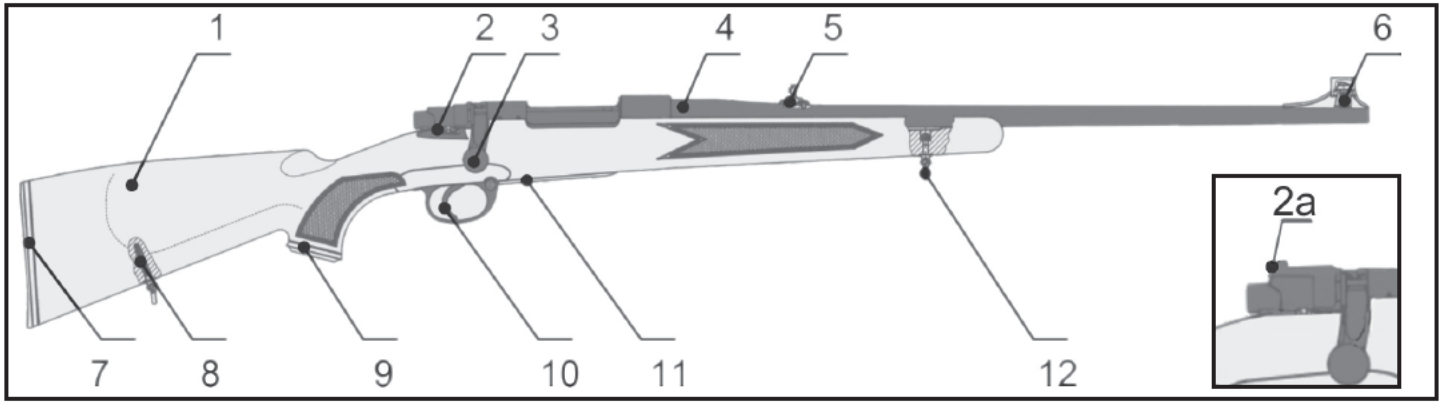


Fig. 6 > 1. Stock, 2. Safety (2a – in M98), 3. Bolt with bolt handle, 4. Barrel, 5. Rear sight, 6. Front sight, 7. Recoil pad, 8. Rear swivel, 9. Grip cap, 10. Trigger mechanism, 11. Magazine, 12. Front swivel

1 TECHNICAL CHARACTERISTICS

This Handling and maintenance instruction manual is valid for models: LK M70 (Z98); LK M70PS /polymer stock/; LK M70PSS /polymer stock, stainless steel/; LK M85 and M98 (hereinafter sporting rifle).
The design of sporting rifles Zastava is based on safe and well-known Mauser system (rotating bolt, with three locking points).
Reliability, accuracy and precision of these sporting rifles are confirmed in exploiting and they guarantee that these sporting rifles will be popular in future. The rifles are made of high quality steel alloys, while M70PSS is made of high quality stainless steel. Their important characteristics are quality surface treatment and protection of metal and wooden parts.
Standard finish is blue (except for stainless steel model).

Barrels of the sporting rifles are made of high quality steel by cold forging.
Interior dimensions of the barrel are in accordance with International standards.
Resistance of the barrel and of complete sporting rifle is also checked according to the International standards, which is proven by the stamps on rifles.
Warranty period for these sporting rifles is 36 months.
Sporting rifle is created by a combination of various subassemblies (A–G) (Fig. 7), that make numerous versions of Zastava's sporting rifles.

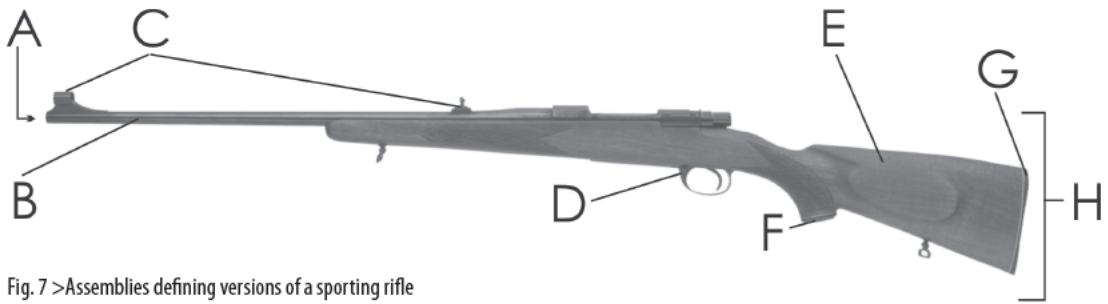


Fig. 7 >Assemblies defining versions of a sporting rifle

A	**Barrel calibre:** 18 different calibres for M70 (Z98), 6 different calibres for M85 16 calibres for M98	**E**	**Stock((wooden or polymer)** Pig back, Monte Carlo, Mannlicher
B	**Various lengths and external shapes of barrel:** round, "heavy"	**F**	**Grip cap:** plastic, wooden
C	**Sights:** iron, express (battue), without any	**G**	**Recoil pad:** rubber, rubber buffer
D	**Trigger mechanism:** with single trigger – adjustable, with single trigger Rückstecher, with double trigger	**H**	**Optional characteristics:** Optical sight For right-handed and left-handed shooters Finish and structure of wooden parts (oiling, lacquering / trunk, root...) Finish of metal parts (fine, polished) Surface protection of metal parts (bluing, chrome plating) Carving of wooden and engraving of metal parts

Sporting Rifle M70 (Z98)

Calibre			Stock model	Barrel length	Overall length	Weight
Capacity 5 rounds	Capacity 4 rounds	Capacity 3 rounds				
.22-250 Rem., 6 mm Rem. 6.5x57, 6.5x55SE, 7x57, 7x64, 8x57JS, 9.3x62, .25-06 Rem., .30-06 Spring, .270 Win.	.308 Win. .243 Win.	.300 Win. Mag., .264 Win. Mag. 7 mm Rem. Mag., .458 Win. Mag. .375 H&H Mag.	Pig back	600 mm	1130 mm	3600 g
			Monte Carlo			
			Mannlicher	510 mm	1040 mm	3500 g

Trigger mechanism
Single trigger mechanism - adjustable
Double trigger mechanism (except .375 H&H Mag)
Mechanism „Rückstecher"

Sporting rifle M70PS (polymer stock), M70PSS (polymer stock, stainless steel)

Calibre			Stock model	Barrel length	Overall length	Weight
Capacity 5 rounds	Capacity 4 rounds	Capacity 3 rounds				
.22-250 Rem., 6 mm Rem. 6.5x57, 6.5x55SE, 7x57, 7x64, 8x57JS, 9.3x62, .25-06 Rem., .30-06 Spring, .270 Win.	.308 Win. .243 Win.	.300 Win. Mag., .264 Win. Mag. 7 mm Rem. Mag.	POLYMER-Pig back	600 mm	1130 mm	3150 g
				560 mm	1090 mm	2940 g

Trigger mechanism
Single trigger mechanism - adjustable
Double trigger mechanism
Mechanism „Rückstecher"

Sporting Rifle M85

Calibre Capacity 5 rounds	Stock model	Barrel length	Overall length	Weight
.22 Hornet, ..222 Rem. .222 Rem. Mag. .223 Rem. 7.62x39 .22-250 Rem.	Pig back	510 mm (560 mm for .22 Hornet)	1010mm	2800 g (2900 g for .22 Hornet)
	Monte Carlo			
	Mannlicher	460mm	960mm	2700 g

Trigger mechanism
Single trigger mechanism
Mechanism „Rückstecher"

Sporting rifle M98

Calibre			Stock model	Barrel length	Overall length	Weight
Capacity 5 rounds	Capacity 4 rounds	Capacity 3 rounds				
.22-250 Rem., 6 mm Rem. 6.5x57, 6.5x55SE, 7x57, 7x64, 8x57JS, 9.3x62, .25-06 Rem., .30-06 Spring, .270 Win.	.308 Win. .243 Win.	.300 Win. Mag., .264 Win. Mag. 7 mm Rem. Mag.	Pig back	600 mm	1130 mm	3600 g
			Monte Carlo			
			Mannli-cher	510 mm	1040 mm	3500 g

Trigger mechanism
Single trigger mechanism - adjustable
Double trigger mechanism
Mechanism „Rückstecher"

2 HANDLING THE SPORTING RIFLE

Before using the sporting rifle for the first time

Before using a new rifle, it is necessary to remove preserving material. Procedure: clean the oil from the bolt and cartridge chamber; remove oil from the barrel grooves with the cleaner and a cloth (in direction from cartridge chamber towards the muzzle); check and clean the sights; set the bolt to the rifle; push the bolt forward and lock (to check whether it functions properly). After this check, the rifle is ready to use.
Before each following use, wipe the rifle, especially the barrel, which must be dry, otherwise increased quantity of soot may create on the walls of the barrel and the barrel can be damaged.
Check whether the ammunition is clean and undamaged.

Loading

Pull the handle upwards and rotate the bolt. Pull the handle (bolt) fully rearwards (Fig. 8).

Ammunition should be put into the magazine from the top side of the rifle (Fig. 9).

In models that have a detachable box magazine, to lock the magazine, push it into the bearing, from the bottom side of the rifle. Magazine box is loaded by pushing the cartridges from the top side of the magazine.

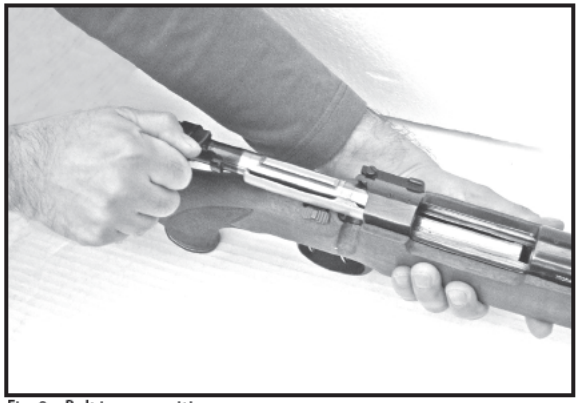


Fig. 8> Bolt in rear position

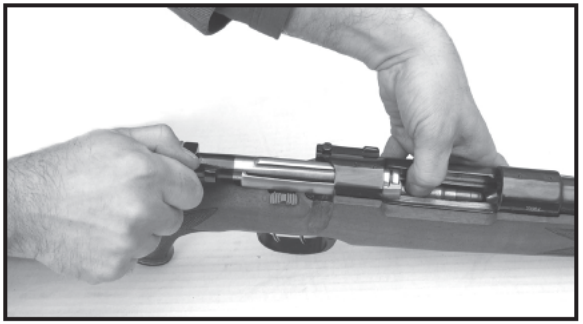


Fig. 9> Loading of the magazine



Fig. 10> Bolt in locked position

Push the bolt into front position to bring a cartridge into the barrel. (Fig. 10).

If you wish to have your magazine full and not to bring a cartridge into the barrel, when pushing the bolt, push the ammunition downwards into the magazine (magazine box), until the bolt comes over it. To bring a cartridge into the barrel, pull the bolt rearwards and then push it forward. Rotate the bolt handle downwards to lock the bolt.

After a cartridge is brought into the barrel, the safety should be put in position „ON". The safety is "ON" when:
in M70 (Z98), M70PS, M70PSS and M85 – on the stock, next to the safety, the red dot is not visible (Fig. 11a).
in M98 – on the bolt, safety thumb-lock is in vertical position (Fig. 12a).

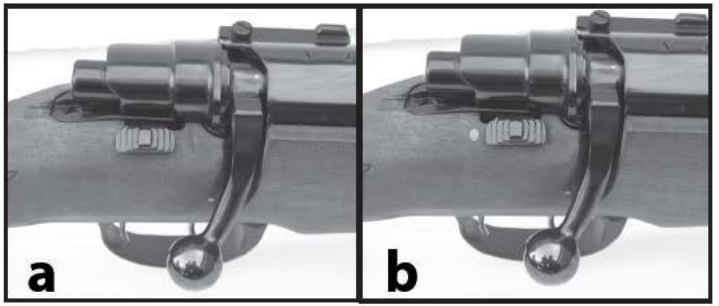


Fig.11> Safety in M70 (Z98), M70PS, M70PSS and M85
safety "ON", b) safety "OFF"

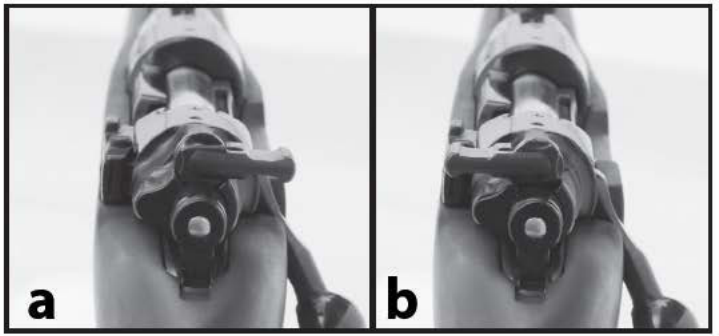


Fig.12> Safety in M98
safety "ON", b) safety "OFF"

When the safety is “ON”, bolt handle is blocked in all models of sporting rifles.
When the safety is “ON”, in models M70 (Z98), M70PS, M70PSS and M85 triggers are blocked, and in model M98 it is possible to pull the trigger, but it is not possible to fire.
In model M98, it is possible to put the safety thumb-lock into vertical position, and then the safety is “ON”, but it is possible to rotate the handle and unlock the bolt. This function is used during the stripping of the sporting rifle.

A cartridge is brought into the barrel immediately before shooting.
Triggering

Immediately before triggering, the safety should be put in position „OFF“ to unblock the mechanism.
Safety is in position “OFF” when:
- in M70 (Z98), M70PS, M70PSS and M85 – on the stock, next to the safety, a red dot is visible (Fig. 11b).
- in M98 – on the bolt, thumb-lock safety is in horizontal position, rotated to the right (Fig. 12b).

Depending on model, sporting rifles can have one of four types of trigger mechanism. Manner of triggering directly depends on the type of the mechanism.
Single trigger mechanism – trigger pull and length of pull cannot be adjusted. Triggering is done by pulling the trigger.

Single trigger mechanism — adjustable - there is a possibility of adjusting the engagement between the sear and trigger, which directly affects length of pull and trigger pull. Triggering is done by pulling the trigger.

Double trigger mechanism – enables triggering in two ways: with large trigger pull with small trigger pull.

a) with large trigger pull – triggering is done solely by pulling the front trigger with large trigger pull with long length of pull
b) small trigger pull – triggering is done in two stages: by pulling the rear trigger (preparation stage) and by pulling the front trigger with small trigger pull and with very small length of pull (triggering stage)

Single trigger mechanism, «Rückstecher» or DAT mechanism, enables triggering in two ways: with large trigger pull and with small trigger pull.

a) with large trigger pull – triggering is done solely by pulling the trigger with larger pull, with long length of pull (force of 2.2 to 2.8 daN)
b) with small trigger pull – triggering is done in two stages: by pushing the trigger forward (preparation stage) and by pulling the trigger with small trigger pull and with very small length of pull (triggering stage) (force of 0.5 daN)

WARNINGS:
1. Put the trigger into position with small trigger pull only immediately before firing. When handling the rifle or during carrying, the trigger must be in position with large pull.
2. If the trigger is in position with small trigger pull, and you do not wish to shoot, you should put the safety on, by pulling it rearwards. The trigger will then automatically return to the position with large pull.
WARNING: On all sporting rifles, trigger pulls, engagements and lengths of pull are set at the factory. Further adjustments should be done only in authorized service shops. Incompetent adjustment is extremely dangerous!

Unloading

After a cartridge is fired, rotate the bolt handle upwards, pull it backwards and eject the case.

If you need to empty the rifle when a cartridge is in the barrel, pull the bolt rearwards and eject the cartridge from the barrel. Then, while the bolt is in rear position, manually empty the magazine.

WARNING: It is not recommended to empty the rifle by first bringing a cartridge into the barrel and then by pulling the bolt to eject it.

3 STRIPPING AND ASSEMBLY

The owner strips the rifle for cleaning, inspection and lubrication.

WARNING: Before you start stripping the rifle, make sure it is empty.

During the disassembly, models M70 (Z98), M70PS, M70PSS and M85 must have the safety in position "OFF", and in model M98 thumb-lock safety must be in vertical position (Fig.13).

To separate the bolt assembly, rotate the bolt handle upwards, pull the bolt rearwards. In that, pull the ejector box to the side, to enable free extraction of the bolt from the receiver. (Fig. 14).



Fig. 13> Position of thumb-lock safety in stripping of model M98



Fig. 14> Separation of bolt assembly from the sporting rifle

Stripping of the bolt: Lean the hammer lug onto a wooden surface, pull the bolt to compress the hammer spring. A hole will appear on the hammer. Put a piece of a wire or a rod with diameter lesser than 2,5 mm into the hole (Fig. 15).
In model M98 this step is not performed (thumb-lock safety in vertical position enables necessary position of parts)
Separation of hammer mechanism: push the bolt sleeve lug and separate the bolt sleeve turning it anticlockwise (Fig. 16).

Stripping of the hammer mechanism: lean the tip of the firing pin onto soft wood, push the bolt sleeve forward, hammer spring will compress. The hammer should have enough space to turn anticlockwise, so that the lugs on the rear part of the firing pin come out of the grooves on the hammer. Then the hammer and firing pin with hammer spring are separated from the bolt sleeve and finally, firing pin is separated from the hammer spring (Fig. 17).

Separation of thumb-lock safety: in model M98, thumb-lock safety is turned to the right and extracted to separate it from the bolt sleeve.



Fig. 15> Compression of hammer spring

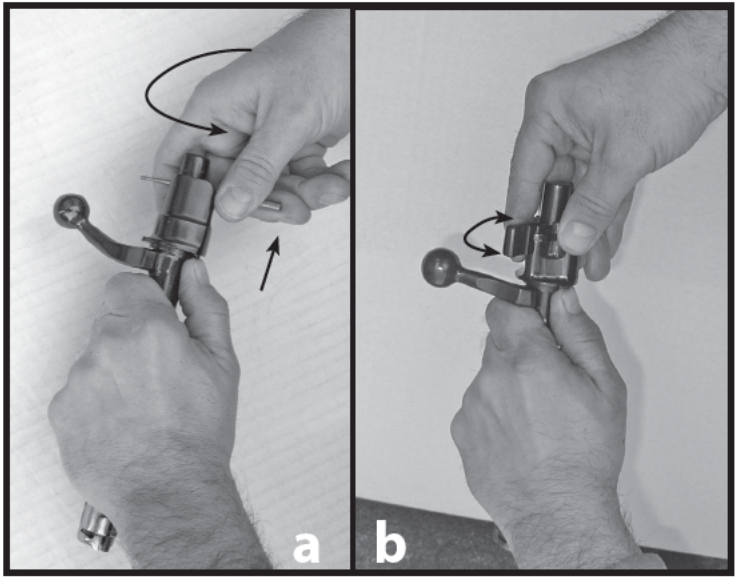


Fig. 16> Separation of hammer mechanism a) models M70 (Z98), M70PS, M70PSS and M85; b) model M98

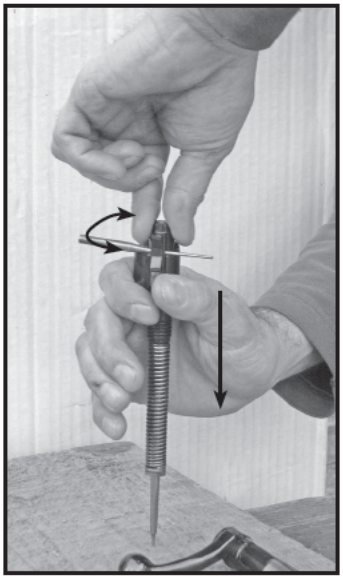


Fig. 17> Stripping of hammer mechanism

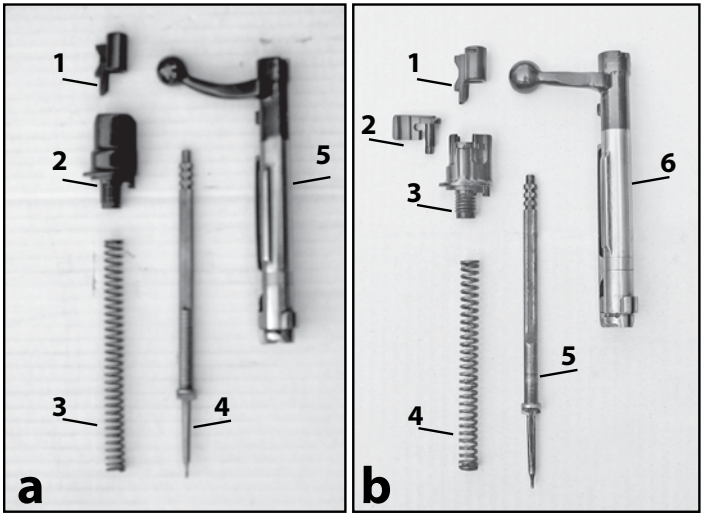


Fig. 18> Parts of hammer mechanism:
a) models M70 (Z98), M70PS, M70PSS and M85,1. hammer, 2. bolt sleeve, 3.hammer spring, 4. firing pin, 5. bolt body
b) model M98, 1. hammer, 2. thumb-lock safety, 3. bolt sleeve, 4. hammer spring, 5. firing pin, 6. bolt body

WARNING: Further stripping should not be done by the owner.
Assembly is done by the opposite sequence of actions.
After the rifle is assembled, hammer spring and trigger mechanism spring remain compressed. Fire the rifle without cartridges to decompress the springs, so they do not remain compressed for a longer period.
In models M70 (Z98), M70PS, M70PSS and M85 switch the safety to position „ON".

Note: common error in stripping is to press the bolt sleeve catch and start the separation of the bolt sleeve before insertion of wire (rod) into the hole on the hammer. After the rotation for a small angle further unscrewing is not possible and the bolt cannot be returned into the rifle. If you made this mistake: lean the hammer lug onto wooden surface, push the bolt downwards and rotate it to return the bolt sleeve to the starting position.
In model M98, a mistake is made if you rotate the thumb-lock safety when you press bolt sleeve catch and when you separate the bolt sleeve. If you made this mistake: lean the hammer lug onto wooden surface, push the bolt downwards and rotate it to return thumb-lock safety to the starting position.

4 ZEROING AND AMMUNITION

Aiming: point the gun to the target. Set the front sight post visually to the slot in the rear sight, align the height with the upper edge of the rear sight and match with the target (Fig. 18)

When choosing calibres, the manufacturer wanted to include all types of ammunition mostly used in the world. Differences in the characteristics of ammunition of certain manufacturers affect the trajectory of a bullet and create deviation of the shot from the aiming point.
To solve this problem, the height of the rear sight of the rifle is adjustable, by moving the sight plate. In that way, you can eliminate differences in ammunition and differences in aiming in relation to factory rectification of the sight, which is done at 100 m (Fig. 18).

By using the same ammunition, you avoid constant correction of the sights.

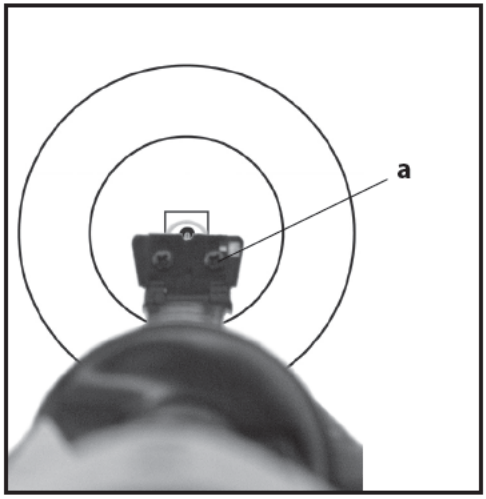


Fig. 19> Aiming
a) rear sight adjustment screw

Note: It is recommended to do all the adjustments of the sights in authorized service shops.

5 MAINTENANCE

A rifle should be maintained and cleaned so that it would last long and function well. Foul and corroded barrel, barrel with soot from powder gas on it, oxidized and damaged parts of rifle mechanisms, apart from creating improper function and shortening the service life of a gun, can cause consequences that are dangerous to the life of a shooter and the environment.

After each hunt, no matter if fired or not, a gun should be dried and wiped. Clean soot in barrel with cleaner and a cloth, changing the cloth several times. Clean cloth is a sign that the barrel is cleaned well. Bring the cleaner with cloth into the barrel through the cartridge chamber. Using the cleaner and a cloth, lubricate the barrel with special oils for this purpose.

Brushes with spiral wire should not be used for cleaning of the barrel, because they could damage smooth surfaces of the barrel.

Other parts can be cleaned with a clean cloth or a brush, with preservation oil or paraffin oil. Never use materials used for cleaning of the barrel, because they can cause corrosion on other metal parts of the rifle.

Flax oil is recommended for cleaning and lubrication of the stock.

Cleaned and lubricated weapon should be kept in a dry room, away from heat sources. It is recommended to keep it in specialized gun closets, which have safety key.

WARNING: For all repairs and replacement of parts, you should turn to authorized service shops.

Zastava
arms

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