

SAR 109

SUBMACHINE GUN

SAR★**USA**
by **SARSILMAZ**



THIS MANUAL COVERS FOLLOWING MODELS

- SAR 109 T (Fully Automatic)
- SAR 109 C (Semiautomatic)

Caliber : 9 x 19 mm | **USER and MAINTENANCE MANUAL**
/ 8,6" | **& SPARE PARTS LIST**

SAR 109

Submachine Gun



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& SPARE PARTS LIST**

SAR 109

Submachine Gun

Caliber 9 mm x 19
8.6"

ATTENTION

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- > Reproduction of this document and its use by and disclosure to any unauthorized persons, in whole or in part, are prohibited.

DANGER

Life hazard caused by gunshot wound !
There is risk of unintentional discharge when holding a loaded firearm !

- > Do not use the firearm before you thoroughly read and fully understand this manual !
- > Observe safety warnings when using the firearm !
- > Perform a safety check before handling the firearm !

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GENERAL REMINDERS

Please read these instructions thoroughly before beginning to use SARSILMAZ products.

As a precondition for avoidance of any mistakes during commissioning of SARSILMAZ products, and ensuring required safety during use, cleaning, and maintenance, you are required to duly familiarize yourself with and strictly adhere to any information provided in these instructions. Never use the product before thoroughly reading and completely understanding all safety instructions and instructions for use. Should you need further information, please contact the seller or manufacturer of your firearm, respectively.

Please duly observe applicable regulations on purchasing, carrying, and using firearms in force in your region or country.

All firearms are dangerous. Therefore your product is sold to you on condition that you will duly observe all safety instructions and instructions for use; and SARSILMAZ hereby expressly disclaims any liability for any product damages and other consequences which may arise as a result of and / or in connection with any misuse. This disclaimer includes in particular any wounding, injuries, and property damages which may arise as a result of and / or in connection with:

- Careless shooting, or shooting with intent to kill,
- Careless use, and use against general safety rules,
- Use of unsound, foreign, hand-loaded, or reloaded cartridges,
- Negligence in maintenance of product (e.g. rust, malfunctioning, etc.)
- Ignoring any functioning failures,
- Shooting against local laws and regulations,
- Any other factors which are beyond our direct or indirect control.

USE OF THIS MANUAL

Purpose of this manual :

This user manual describes design and functions of the gun in the first part “ **Description** ” , and how to use the gun in the second part “ **Operation** ”.

Target group of this manual :

This user manual is intended for soldiers , police officers , security teams, and other persons authorized to use this gun. This user manual does not require having comprehensive technical knowledge or gun - specific technical knowledge.

Warnings , notes , and notices :

Important information and technical notes are specifically emphasized to ensure maximum safety level possible during use.

Warning notice and warning levels :

Warning notices are shown below (example) :

DANGER

Life hazard caused by gunshot wound !

There is risk of unintentional discharge when holding a loaded firearm !

- > Do not use the firearm before you thoroughly read and fully understand this manual !
- > Observe safety warnings when using the firearm !
- > Perform a safety check before handling the firearm !

Following colors and signal phrases show different hazard levels of warning notices :

Symbol

Meaning

 **DANGER**

Imminent hazard !

It will result in death and severe injury if not observed !

 **ATTENTION**

Probable imminent hazard !

May cause injuries if not observed !

CAUTION

May cause material damages if not observed !

Symbols Used :

Symbol	Meaning
--------	---------

- | | |
|-------------|---|
| i | Supplementary information concerning the gun , practical use of gun , or use of this user manual. |
| 1. | Specific action required : You have to take action here ! |
| > | Individual action step or action requirement for a warning notice : You have take action here ! |
| > | Sequence of actions not completed yet , and continues on next page : Turn the page ! |
| • | Bullet point. |

Image rules :

-
- | | |
|----------|--|
| i | Depending on the version, image and drawing details may differ from the actual gun you own !
" Right ", " left ", " front ", and " back " refer to position of gun in firing direction. |
|----------|--|
-

Images and parts therein are intended to supplement the information provided in this user manual , and are marked as follows :

- Description of an image consists of current page number and continuous lowercase letters. **Exemplary Figure (11a:)**
- Actions required are marked with circled capital letters.
- Structural parts relating to an action are emphasized in light blue color. Where needed, parts are defined by marking with numbers and circular balloons.
- Directions of movement are marked with red arrows.

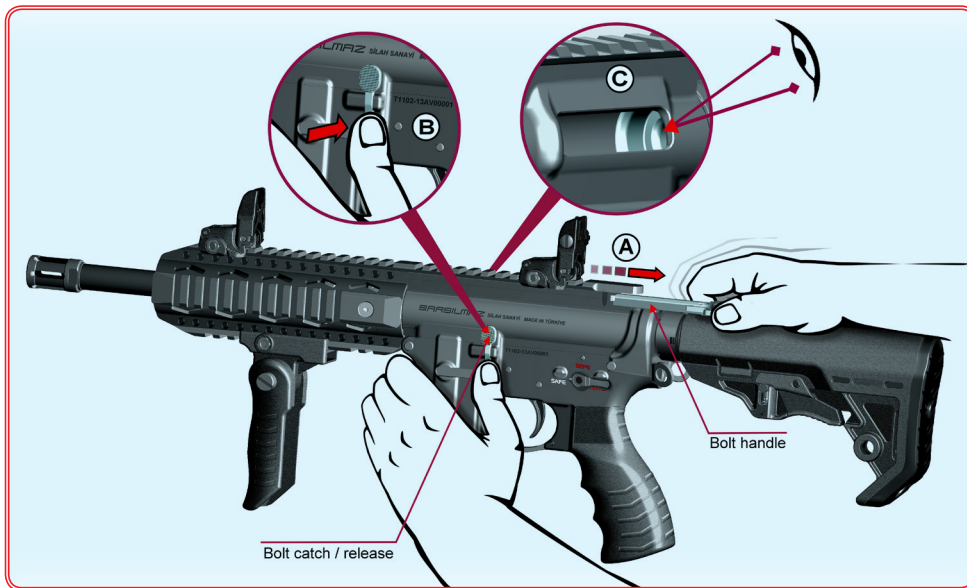


Figure 11a: Exemplary image

BASIC SAFETY INFORMATION



This gun is designed and manufactured in accordance with the most recent technical information and safety technical rules. Nevertheless , use of gun may cause risks of injury and death for the user , the third persons , or material damage to the gun and properties nearby.

- > Make sure that you observe all the information and notices contained in this user manual ! **Otherwise , it may cause risks of injury and death !**
- > Never use the gun when you are tired , have any bodily discomfort , or have taken alcohol , drugs , or medication !
- > Always observe applicable regulations on use of firearms !

User manual as a part of safety concept :



User manual is a part of the gun.

- > Never use the gun before reading and fully understanding the user manual !
- > Keep the user manual for future reference throughout the life of gun !
- > If necessary , add to the user manual any attachments you receive !
- > Hand the user manual to each subsequent user or owner !
- > Never hand the gun to persons who have not read and fully understood the user manual !

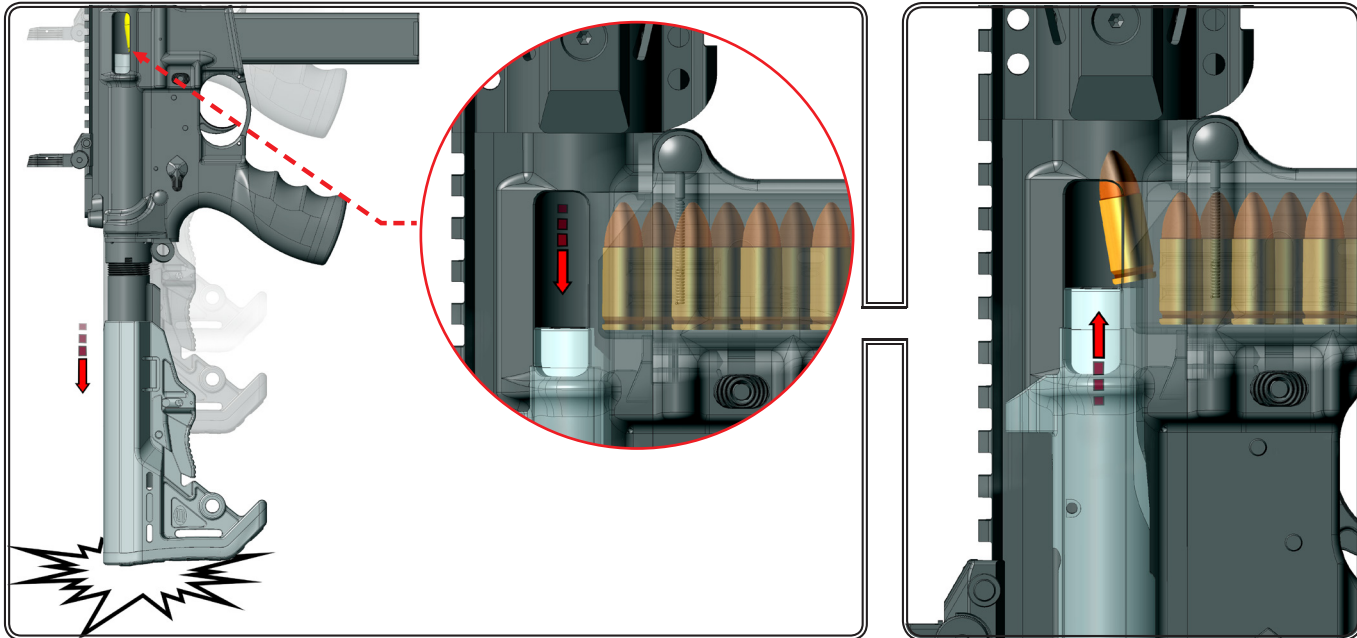
Safety information for the use of gun :

- > Special attention required when using small arms as the position and direction of the firearm can very easily change !
- > Use the gun only when it is technically perfect !
- > Always treat your gun as fully loaded and safety disengaged (off) until you perform a complete safety check on your gun !
- > Make sure that the gun is always unloaded when the gun is not intended to be used for loading and shooting !
- > Always use the gun according to its intended use ! Do not use the gun as a tool for striking, hitting, crushing , etc. ! Unintended uses may lead to an unintentional discharge, or heavy damage to the gun!
- > Never use the gun as a play tool !
- > Never point the gun at someone when handling or practicing with the gun !
- > Never touch the trigger of gun during loading , unloading , aiming , and other operations ! Always place your trigger outside the trigger guard !
- > Do not use brute force when disassembling, cleaning , and assembling the gun !
- > Avoid dry firing ! Dry firing may cause early wear !
- > Store the gun and ammunition in separate places ! Keep the gun and ammunition out of reach of unauthorized persons and , in particular , children !
- > During gun handover and takeover , make sure that the gun is unloaded and the barrel is in open position !
- > Leave this gun only to persons that are authorized to carry this gun ! Always observe the applicable regulations !
- > Make sure that any failures with adverse effects on safety are immediately eliminated !
- > Extraordinary exposures such as harsh impacts and drop of gun may have adverse effects on safety ! In case of any extraordinary exposures , make sure you have your gun checked by the manufacturer or an authorized personnel having technical knowledge on firearms !
- > Do not rely on safety mechanisms ! Safety mechanisms are not a substitute for careful and correct use of a firearm !
- > For use of accessories and ammunition , please observe instructions of the relevant manufacturer !

⚠ ATTENTION

In falls , physical interventions with stocks , pedestrians and vehicles ;

- > When the stock is hit hard , the mechanism moves backward with the effect of the shock , can fire bullets from the magazine to barrel !
- > In such a case , the trigger should never be pressed. Otherwise , it may cause accidents !



Safety information for shooting :

- > Wear hearing protections when shooting !
- > Wear protective glasses when shooting !
- > Keep your hands off the travel range of bolt carrier when shooting !
- > Keep (**muzzle area**) clear and empty when shooting !
- > Do not shoot at doors , glass sections , walls , concrete , stones , or flat surfaces (**including water**) ! Shots may destruct such objects or ricochet off and fly towards an unsafe place !
- > Pull the trigger only when the gun is pointed at the target , and when it poses no danger to what is beyond the target !
- > Use only correctly loaded , damage - free , and correct caliber cartridges !
- > Wear protective gloves before touching the barrel , flash suppressor , or silencer after shooting ! Barrel , flash suppressor , and silencer become hot during firing !

Disclaimer of liability and warranty :

SARSILMAZ Silah Sanayi A.Ş. assumes no liability in case of :

- Failure to observe this user manual ,
- Misuse of gun ,
- Negligence ,
- Unintended use ,
- Any gun modifications , addition , and alterations without concrete express and written consent of Sarsılmaz Silah Sanayi A.Ş.
- Use of accessories and spare parts of other manufacturers without concrete express and written consent of Sarsılmaz Silah Sanayi A.Ş.

GUN DESCRIPTION

SAR 109T (9mm x 19) is a gas-operated firearm featuring the immediate recoil concept. Sheet metal - frame magazine is available in following capacities: 10, 20, or 30 rounds.

Definition :

SAR 109T Submachine Gun. Figure (16a):

Intended use :

SAR 109T Submachine Gun is a small arm that can be used for targets at following distances :

- 25 m Point - blank range
- 100 m Effective range
- 400 m Maximum range



Figure 16a: SAR 109T Submachine Gun



**Tactical , Fully Automatic
Plastik Sight Model**

Figure 17a: **SAR 109T** Submachine Gun



Semiautomatic Model with Carry Handle

Figure 17b: **SAR 109C** Submachine Gun



Model with Folding Metal Sight
Figure 18a: SAR 109T Submachine Gun



Model with Plastic Front Sight and Carry Handle
Figure 18b: SAR 109T Submachine Gun

Technical features

SUBMACHINE GUN	SAR 109T	SAR 109C
FUNCTIONING PRINCIPLE	Recoil System	
CALIBER	9 mm x 19	
CARTRIDGE FEEDING	Magazine , 10 / 20 / 30 Rounds	
CASING EJECTION	Right	
FIRING MODES	Semi / Auto	Semi
SIZES		
MAXIMUM LENGTH	705 mm (± 5 mm)	
MINIMUM LENGTH	625 mm (± 5 mm)	
WIDTH	56 mm (± 5 mm)	
HEIGHT	280 mm (± 5 mm)	
BARREL LENGTH	275 mm 8.6" (± 3 mm)	
WEIGHTS (Excluding accessories)		(Including sights)
GUN WITHOUT MAGAZINE	2500 g (± 300 g)	2550 g (± 300 g)
30 - ROUND MAGAZINE (fully loaded)	584 g (± 70 g)	
30 - ROUND MAGAZINE (unloaded)	230 g (± 70 g)	
OTHER INFORMATION		
STANDARD TRIGGER PULL	25 / Newton	
RATE OF FIRE	Approximately 1000 rounds per minute (± 100 rounds per minute)	
MUZZLE VELOCITY	400 meters per second (± 50 meters per second)	
BARREL PROFILE / LAND - GROOVE	Right twist 6 lands - grooves	

ASSEMBLY GROUPS (Main Complete Assemblies and Accessories)

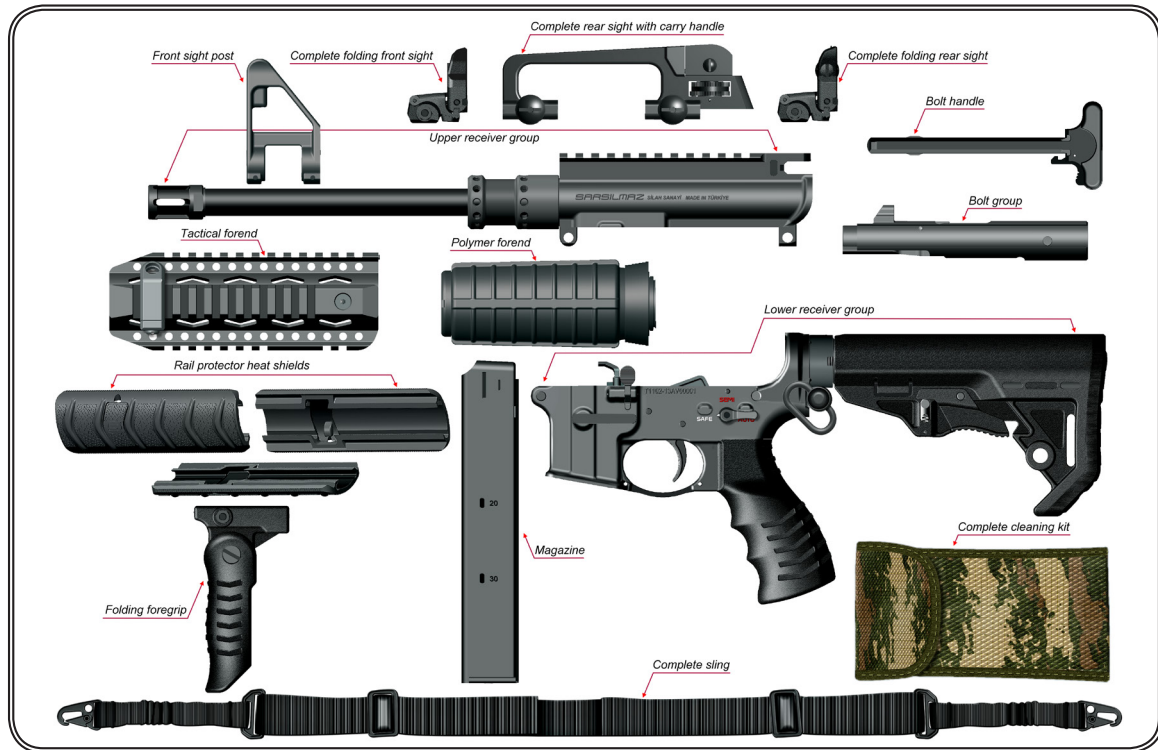


Figure 20a: Assembly groups

TECHNICAL DESCRIPTION

Cross - section view :



Figure 21a: Cross - section view

SAFETY MECHANISMS

Safety catch :

CAUTION

- The safety catch can switch to the " Safety " position only if the gun is installed.

Safety catch prevents unintentional pull of trigger. When the safety catch lever is placed to " Safe " position , it will block the trigger. When the safety catch lever is placed to " Semi " (single) shot position or " Auto " (burst) position , the safety catch will release the trigger.



Figure 22a: " SAFE " position

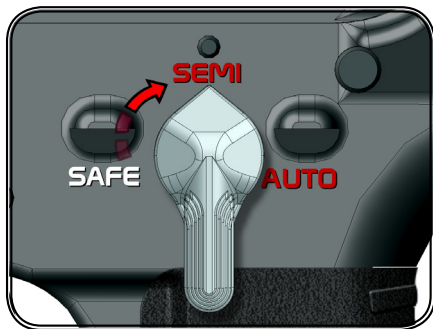


Figure 22b: " SEMI " position

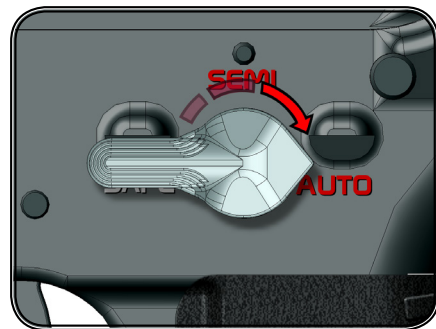


Figure 22c: " AUTO " position

Functional Parts :

Safety catch is used to engage the safety , and select the firing mode. Magazine latch enables fast replacement of magazine.

Bolt catch locks the bolt in open position after the magazine is expended. When a new magazine containing cartridges is inserted , it releases the bolt to chamber a round.

Forend is fixed to the barrel nut with three fastening screws.The forend is not directly fixed to the barrel , which enhances precision of the gun. Forend is equipped with Picatinny rails at 3, 6, 9, and 12 o'clock positions.

Various mechanical and optical rear sights , laser / light modules , and other accessories can be mounted on the Picatinny rail. Adjustable stock can be locked in 5 positions within 80mm adjustment distance.

Bolt handle can be used to load and unload the chamber using the bolt group.

Folding rear sight and front sight are as follows :

- Rear sight consisting of two different parts with two holes with different diameters to aim at far and near targets
- Height - adjustable front sight

Functional Parts - View from Right

i Images on the front and back of pages show functional parts on the right and left of the gun. There are frequent references to those images throughout the document.



Figure 24a: View from right

Functional Parts - View from Left

i Images on the front and back of pages show functional parts on the right and left of the gun. There are frequent references to those images throughout the document.

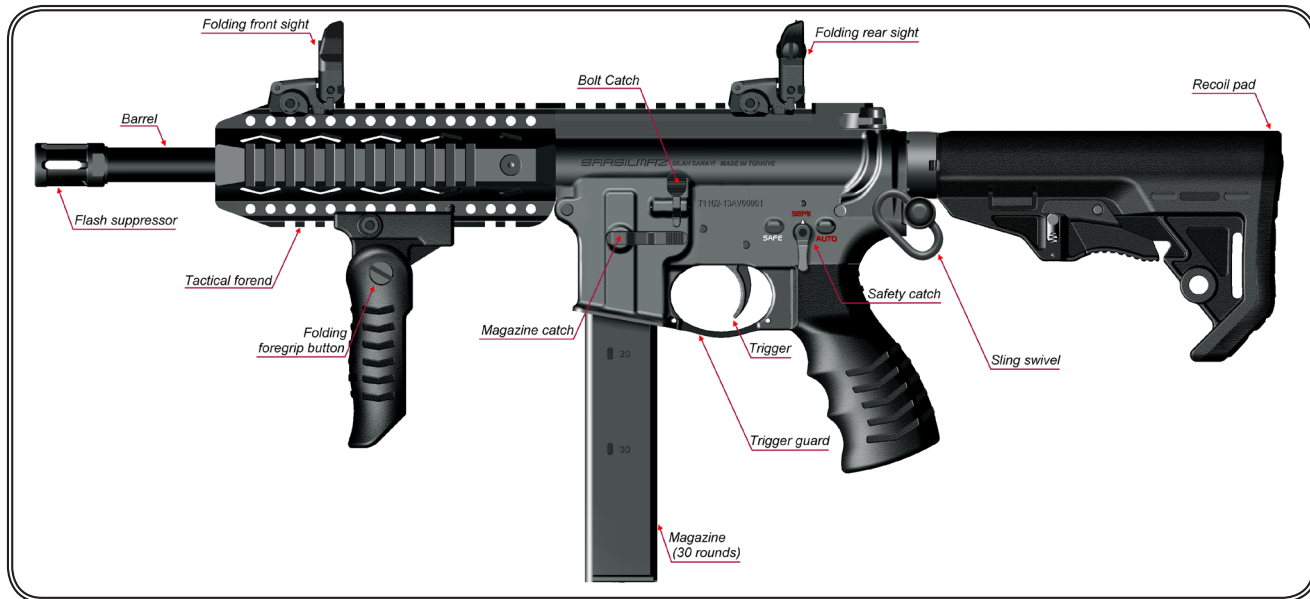


Figure 25a: View from left

Cycle of functioning for firing :

Starting status : **Gun partly loaded**

Manually pull the bolt group completely to the rear using the bolt handle. In the meantime , the bolt group cocks the hammer. Trigger hook holds the hammer cocked. When the bolt handle is released , the bolt carrier group travels forward as a result of the force applied by the sear spring. Bolt pushes a cartridge from magazine into the chamber. The extractor grasps the rim of the casing. Bolt carrier group travels forward and is seated in the barrel. Now , there is a round in the chamber.

Cycle of functioning for “ Semi ” (single) shot mode :

Starting status : **There is a round in the chamber of gun**

The cocked hammer is released when the trigger is pulled. With the impact of the hammer spring, the hammer turning around the axis of pin , unlocks the pin safety on the bolt group upward , allowing the pin to travel forward. The pin strikes the primer of cartridge. The cartridge is fired. Bullet travels through the barrel. The gas pressure generated by the firing pushes the bullet forward through the barrel while pushing the bolt backward. As the bolt travels backward , the extractor extracts the casing from the chamber. When the casing reaches the ejection port , the fixed ejector hits the casing from the rear right side. Casing hits the casing deflector , and is ejected towards right from the ejection port. Bolt group travels forward again as a result of the force applied by the sear spring. Bolt slides a round from the magazine into the chamber. Now , there is a round in the chamber.

Cycle of functioning for “ Auto ” (burst) mode :

Starting status : **There is a round in the chamber of gun**

The cocked hammer is released when the trigger is pulled. Pin safety disengages , hammer strikes the pin, and then the pin strikes the primer , as a result of which the cartridge is fired. Bullet travels through the barrel. The gas pressure generated by the firing pushes the bullet forward through the barrel while pushing the bolt backward. As the bolt travels backward , the extractor extracts the casing from the chamber. When the casing reaches the ejection port , the fixed ejector hits the casing from the rear right side. Casing hits the casing deflector, and is ejected towards right from the ejection port. Bolt group travels forward again as a result of the force applied by the sear spring. Bolt groups travel backward to the buffer support. In the meantime , the bolt group cocks the hammer. The disconnecter and sear hold the hammer in cocked position. Bolt group travels forward again as a result of the force applied by the sear spring. Bolt slides a round from the magazine into the chamber. Simultaneously , the bolt carrier traveling forward rotates the sear which releases the hammer. As the trigger is pulled , hammer strikes the firing pin again , starting next firing cycle. This cycle is repeated until the trigger is released. When the trigger is released , the trigger hook keeps the hammer in cocked position , and interrupts the firing cycle. Now , there is a round in the chamber.

Cycle of functioning for unloaded magazine :

Firing cycle continues until the bolt chambers the last cartridge in the magazine. Then the magazine follower presses the bolt catch handle upwards. After the last shot , the bolt catch holds the bolt that travels forward in open position. As the bolt catch is pressed , the bolt group travels forward as a result of the force applied by the bolt spring. If a loaded magazine has been inserted previously , then the gun is fully loaded.

CHECKS

How to perform a safety check :

i Performing a successful safety check will ensure that there is no ammunition left in the gun. Safety check is particularly important when the gun is taken over and in case of doubt as to whether the gun is loaded.

1. Remove the magazine. **Figure (28a:)**
2. Pull the bolt handle completely to the rear , and hold it. **Figure (29a: - A)**
3. Press and hold the bolt catch handle. **Figure (29a: - B)**
4. Slide the bolt handle completely to the front , and lock it.
5. Look at the chamber. There should be no cartridge in the chamber. If there is any cartridge in the chamber , that means there is a failure. **Figure (29a: - C)**
6. Press the bolt catch handle. The bolt group will travel forward.
7. Place the safety catch to the " **Semi** " (single) shot position. **Figure (22b:)**
8. Pull the trigger. Now , the hammer is released.
9. Place back to " **Safe** " position. **Figure (22a:)**

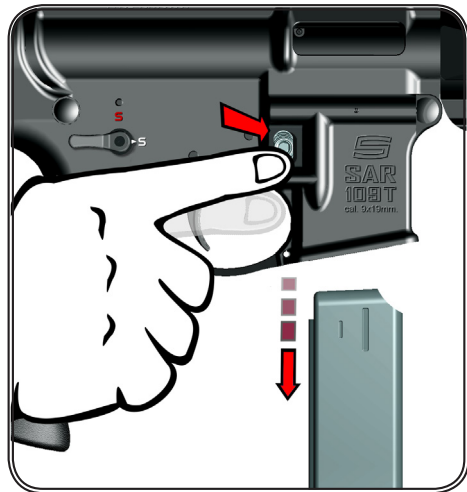


Figure 28a: Removal of magazine

⚠ ATTENTION

Risk of injury due to bolt travelling forward fast !

Once the bolt catch handle is pressed , the bolt carrier group travels forward.

- > Do not place your hand within the travel range and direction of the bolt group !

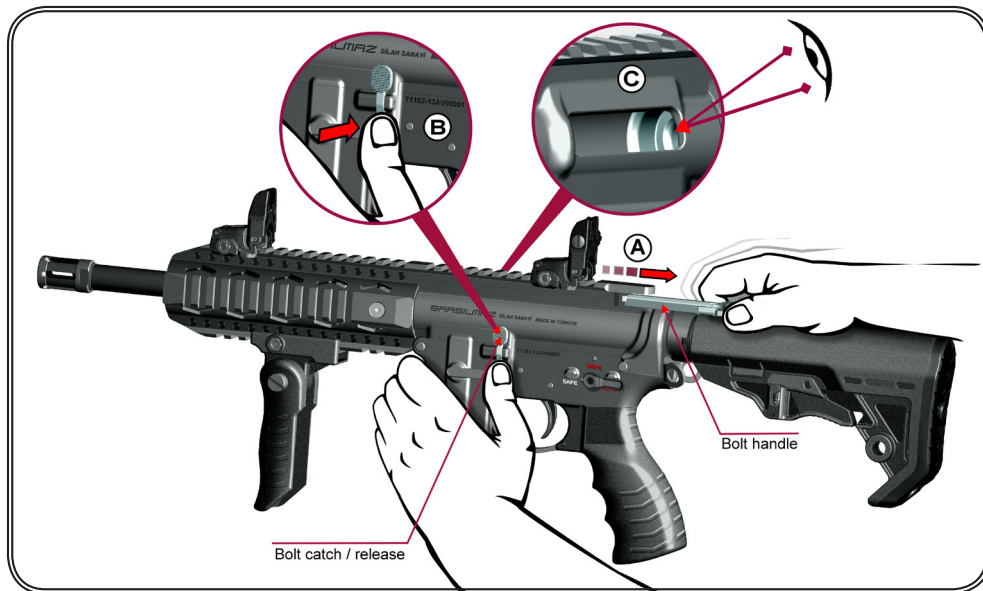


Figure 29a: How to perform a safety check

How to perform a function check :

i Performing a successful function check will ensure maintaining functionality of the gun. A function check is particularly required after assembly of gun , and elimination of any failures.

1. Perform the safety check. **Figure (29a:)**
2. Pull the bolt handle completely to the rear many times.
3. Release the bolt handle forward.
4. Place the safety latch to " Safe " position. **Figure (22a:)**
5. Pull the trigger. Hammer will not strike.
6. Place the safety latch to " Semi " (single) shot position. **Figure (22b:)**
7. Press the trigger. Hammer will strike.
8. Pull the bolt handle completely to the rear many times.
9. Release the trigger. Disconnecter will release the hammer.
10. Pull the trigger. Hammer will strike.
11. Insert the empty magazine , by pushing it into the gun until the magazine latch snaps into position.
12. Make sure that the magazine is in good order.
13. Pull the bolt handle completely to the rear. Bolt catch will hold the bolt carrier in open position.
14. Slide the bolt handle completely to the front , and lock it.
15. Press the bolt catch. The bolt group will travel forward.
16. Remove the magazine. **Figure (28a:)**
17. Place the safety latch to " Auto " (burst) position. **Figure (22c:)**
18. Pull and hold the trigger. Hammer will strike.
19. Pull the bolt handle completely to the rear and release it many times.
20. As the trigger is kept pulled , the hammer will strike each time with the travel of bolt group.
21. Place the safety latch to " Safe " position. **Figure (22a:)**

⚠ ATTENTION

Risk of injury due to bolt travelling forward fast !
Once the bolt catch handle is pressed , the bolt carrier group travels forward.

- > Do not place your hand within the travel range and direction of the bolt group !

PREPARATIONS

Stock adjustment :

i Stock can be locked in 5 positions.

1. Press and hold the stock adjustment latch. Figure (31a: -1)
2. Slide the stock to desired position. Figure (31a: - 2)
3. Release the stock adjustment latch once the stock is slid into desired position.

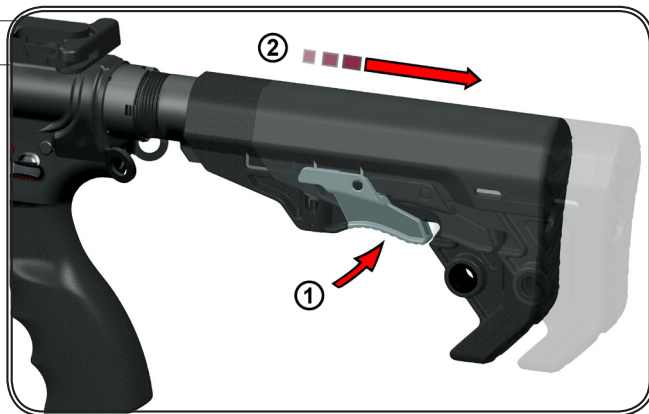


Figure 31a: Stock adjustment

How to load the magazine :

CAUTION

Risk of material damage due to damaged or contaminated cartridges !
Damaged or contaminated cartridges may cause gun damages and functioning failures !

> Do not use damaged or contaminated cartridges !

1. Grasp the magazine.
2. Press the cartridge down the magazine lip.
3. Slide the cartridge backwards.
4. Repeat Steps 2 and 3 until the magazine is fully loaded. Figure (32a:)

Preparing the gun for firing :

Auxiliary materials needed :

- Cleaning cords
- Cleaning kit

1. Disassemble the gun.
2. Screw the rod handle, extension rods, and cord holder to each other.
3. Insert clean cords into the cord holder.
4. Push clean cleaning cords through the barrel couple of times until the barrel is cleared of oil and foreign objects.
5. Perform a visual check on the gun.
6. Assemble the gun.
7. Perform functions check.

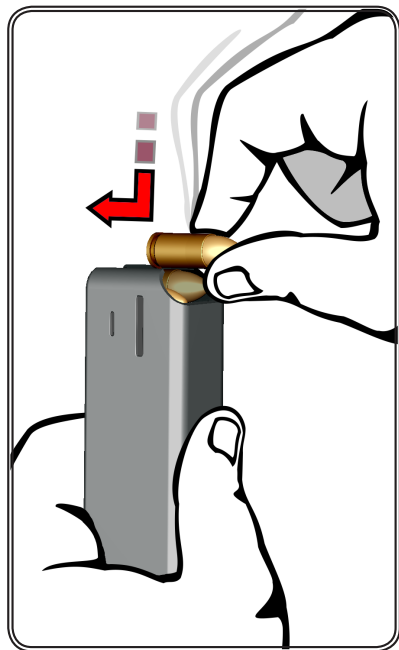
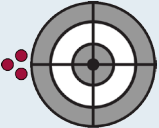
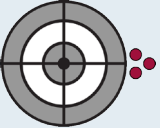






Figure 32a: Magazine loading

FOLDING PLASTIC Rear Sight and Front Sight Adjustment :

i Position of point of aim also depends on the ammunition. Use of different types of ammunition may change horizontal and vertical position of the point of aim. Rear sight adjustment will ensure correction of the changed point of aim position.

POSITION OF POINT OF AIM	CORRECTION STEPS	REMARKS
	To draw the point of impact to the (Right), turn the side adjustment wheel "clockwise" as shown in the figure. Figure (34a:)	REAR SIGHT (Horizontal adjustment) : To adjust the point of impact to right - left , use the horizontal adjustment wheel on the right side of the rear sight. Turning the wheel "one notch" will lead to nearly 1,9 cm change in the point of impact within a target distance of 100 m. Figure (34a:)
	To draw the point of impact to the (Left), turn the side adjustment wheel "counterclockwise" as shown in the figure. Figure (34a:)	
	To draw the point of impact to (Downwards), turn the front post sight "clockwise" as shown in the figure. Figure (34b:)	FRONT SIGHT (Vertical adjustment) : To adjust the point of impact downwards - upwards , use the A2 front sight wrench. Each quarter (1/4") turn of wrench will lead to nearly 4,7 cm change in the point of impact within a target distance of 100 m. Figure (34b:)
	To draw the point of impact to the (Upwards), turn the front post sight "counterclockwise" as shown in the figure. Figure (34b:)	

Folding Plastic Rear Sight "Right & Left" Adjustment

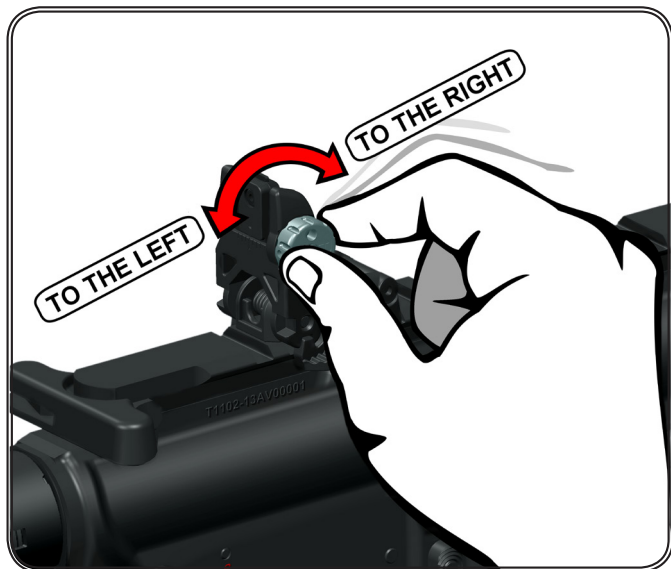


Figure 34a: Folding Plastic Rear Sight Left & Right Adjustment

Folding Plastic Rear Sight "Upward & Downward" Adjustment

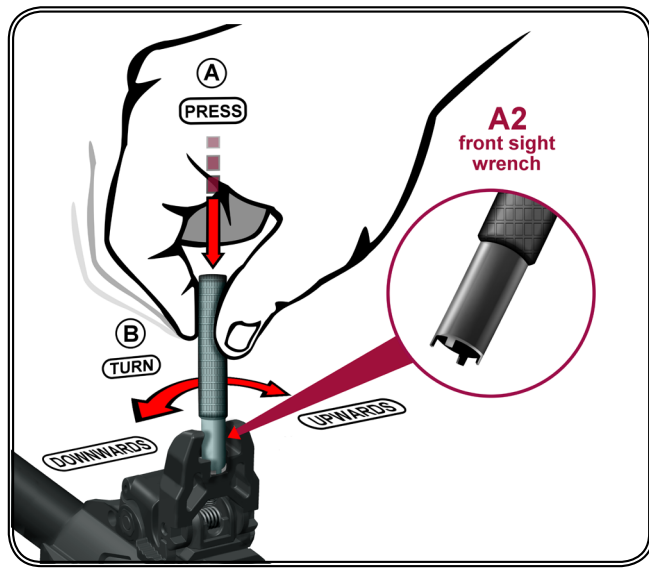


Figure 34b: Folding Plastic Front Sight Upward & Downward Adjustment

Folding Plastic Rear Sight "Far / 100 m" Adjustment

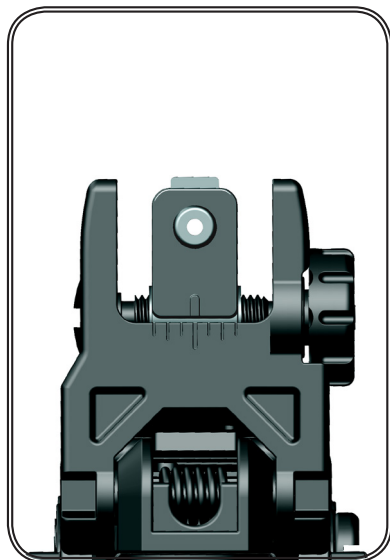


Figure 35a: Folding Plastic Rear Sight **Far / 100 m** Adjustment

Folding Plastic Rear Sight "Near / 25 - 50 m" Adjustment

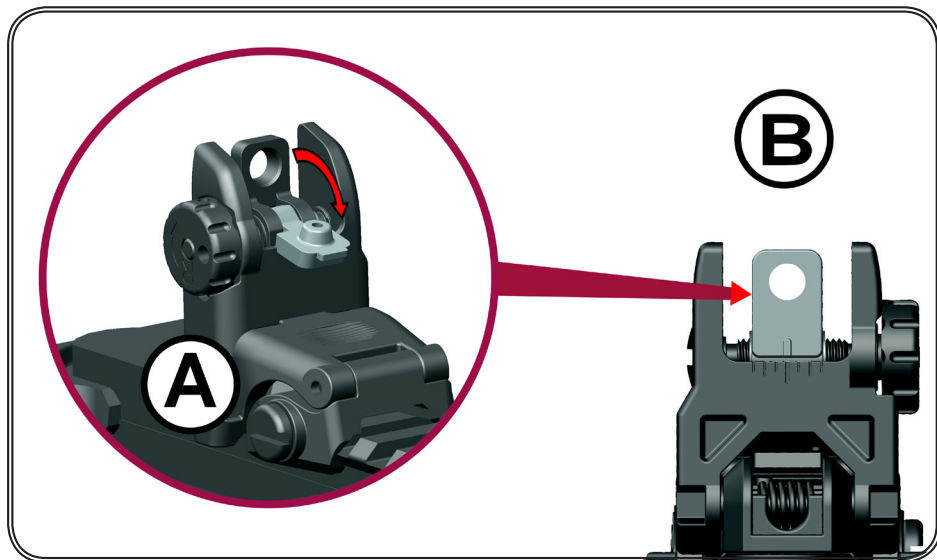
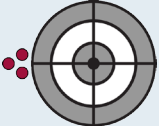
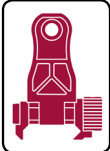
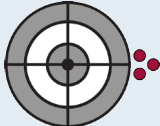
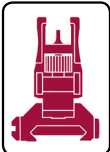
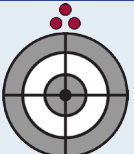



Figure 35b: Folding Plastic Rear Sight **Near / 25 - 50 m** Adjustment

FOLDING METAL Rear Sight and Front Sight Adjustment :

i Position of point of aim also depends on the ammunition. Use of different types of ammunition may change horizontal and vertical position of the point of aim. Rear sight adjustment will ensure correction of the changed point of aim position.

POSITION OF POINT OF AIM	CORRECTION STEPS	REMARKS
	<p>To draw the point of impact to the (Right), turn the side adjustment wheel " clockwise " as shown in the figure. Figure (37a):</p>	<p>REAR SIGHT (Horizontal adjustment = 1.00 MOA) : Each click at 25 meters = 0.75 cm Each click at 50 meters = 1.50 cm</p>  <p>To center the rear sight , turn 50 CLICKS in average from the rightmost in counterclockwise direction.</p>
	<p>To draw the point of impact to the (Left), turn the side adjustment wheel " counterclockwise " as shown in the figure. Figure (37a):</p>	<p>REAR SIGHT (Vertical adjustment = 1.00 MOA) : Each click at 25 meters = 0.75 cm Each click at 50 meters = 1.50 cm</p>  <p>To center the front sight , turn 30 CLICKS in average from the bottommost in clockwise direction.</p>
	<p>To draw the point of impact to (Downwards), turn the front post sight " clockwise " as shown in the figure. Figure (37b):</p>	<p>To center the front sight , turn 30 CLICKS in average from the bottommost in clockwise direction.</p>
	<p>To draw the point of impact to the (Upwards), turn the front post sight " counterclockwise " as shown in the figure. Figure (37b):</p>	

Folding Metal Rear Sight
"Right & Left" Adjustment

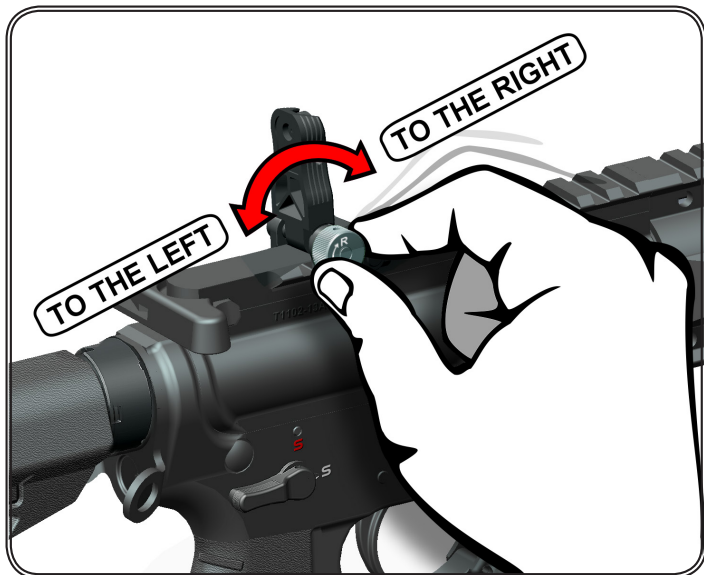


Figure 37a: Folding Metal Rear Sight's Left & Right Adjustment

Folding Metal Rear Sight
"Upward & Downward" Adjustment

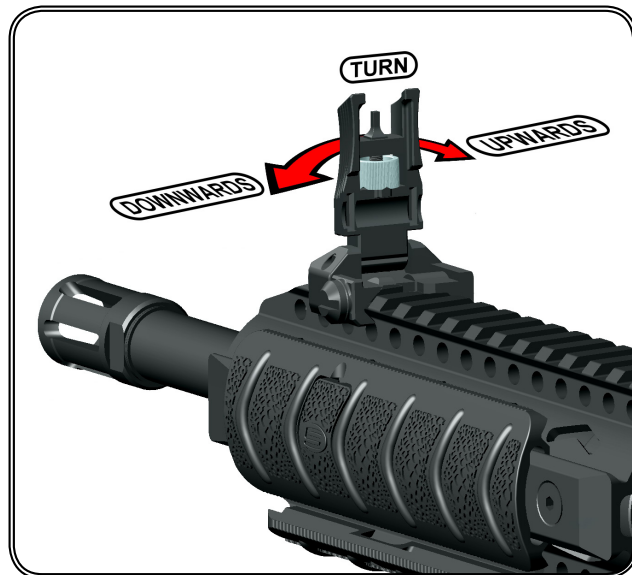


Figure 37b: Folding Metal Front Sight Upwards & Downwards Adjustment

Folding Metal Rear Sight "Far / 100 m" Adjustment



Figure 38a: Folding Metal Rear Sight **Far / 100 m** Adjustment

Folding Metal Rear Sight "Near / 25 - 50 m" Adjustment

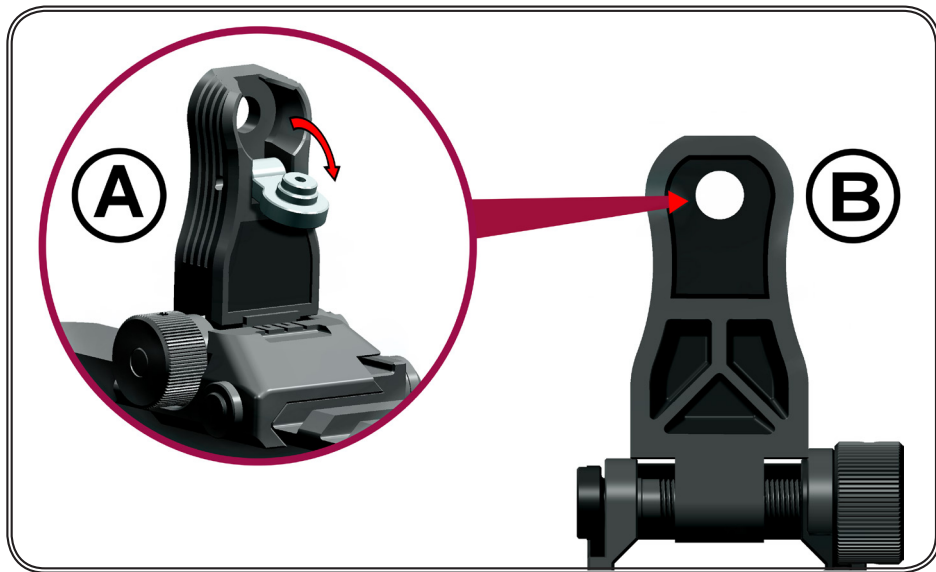


Figure 38b: Folding Metal Rear Sight **Near / 25 - 50 m** Adjustment

“ Right & Left ” and “ Upward & Downward ” (Distance) Adjustment of Rear Sight with Carry Handle

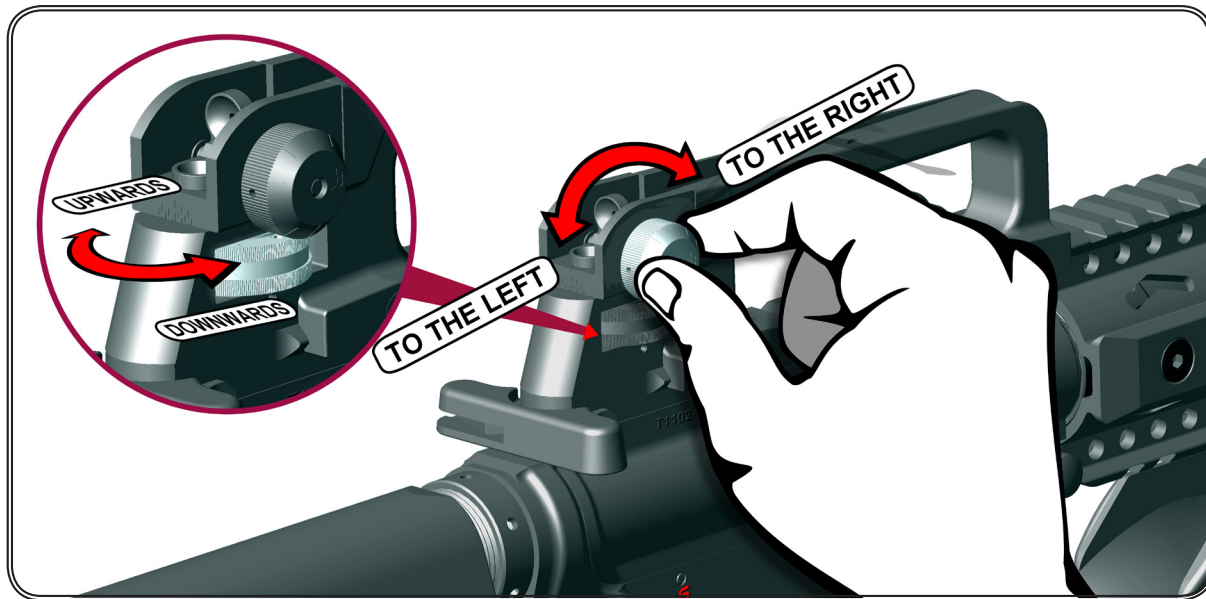


Figure 39a: Right / Left and Downwards / Upwards (Distance) Adjustment of Rear Sight with Carry Handle.

"Far / 100 m" Adjustment of Rear Sight with Carry Handle

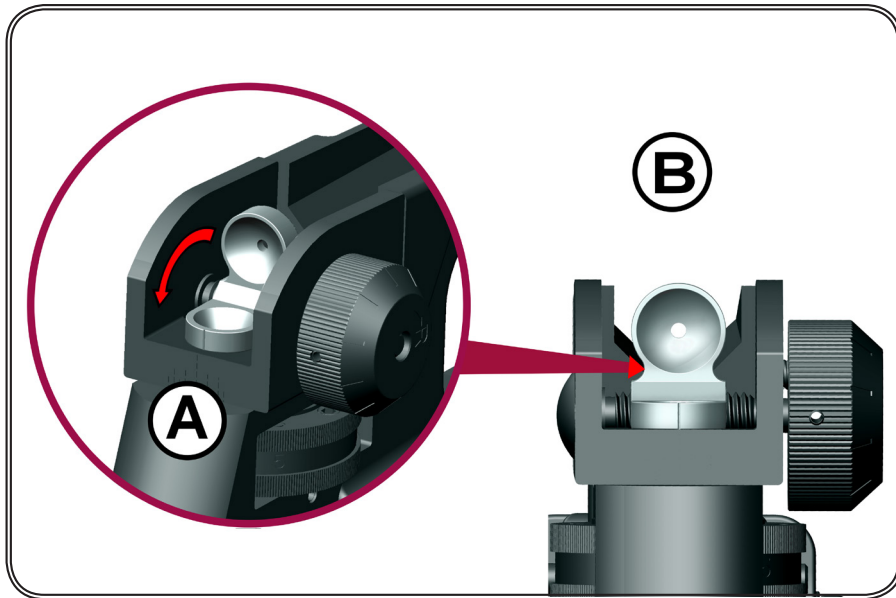


Figure 40a: **Far / 100 m** adjustment of rear sight with carry handle

"Near / 25 - 50 m" Adjustment of Rear Sight with Carry Handle

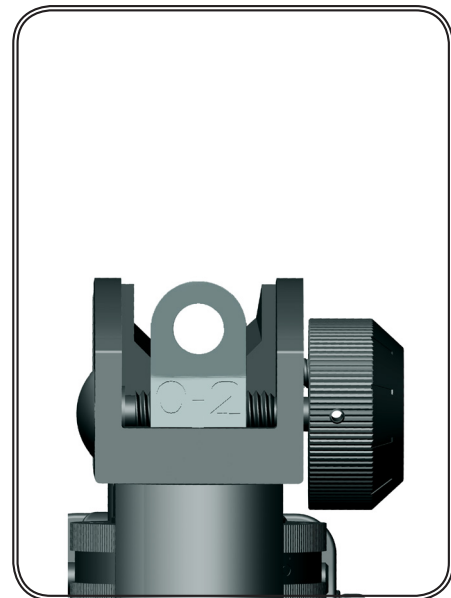


Figure 40b: **Near / 25 - 50 m** adjustment of rear sight with carry handle

OPERATION

How to insert the magazine :

1. Load the magazine. **Figure (32a:)**
2. Place the safety latch to " Safe " position. **Figure (22a:)**
3. Insert the loaded magazine into the gun and push it until the magazine latch snaps into position.

How to chamber a round :

1. Insert a loaded magazine into the gun.
2. Pull the bolt handle completely to the rear. **Figure (29a: - A)**
3. Release the bolt handle forward. Now the gun is fully loaded. Place it into safe position.



ATTENTION

Risk of injury due to unintentional discharge !

A firearm loaded with ammunition is always a potential source of danger !

- > Load ammunition to your gun only immediately before shooting !
- > Unload the gun immediately after shooting !

Shooting Positions :



Shoulder - backed shooting is the securest shooting position , and it provides best target view. **Figure (42a:) - (42b:)**



ATTENTION

A recoiling gun may sometimes cause injuries !

- > When shooting , put the gun firmly against your shoulder !
- > When shooting , keep your eye at least **6 cm** off the rear sight !
- > When shooting , keep your hands off the travel range of the bolt !

- > When shooting , keep your hands off the travel range of the bolt !
- > Put the gun on the forend or bipod !
- > Do not put the gun on the barrel or magazine !

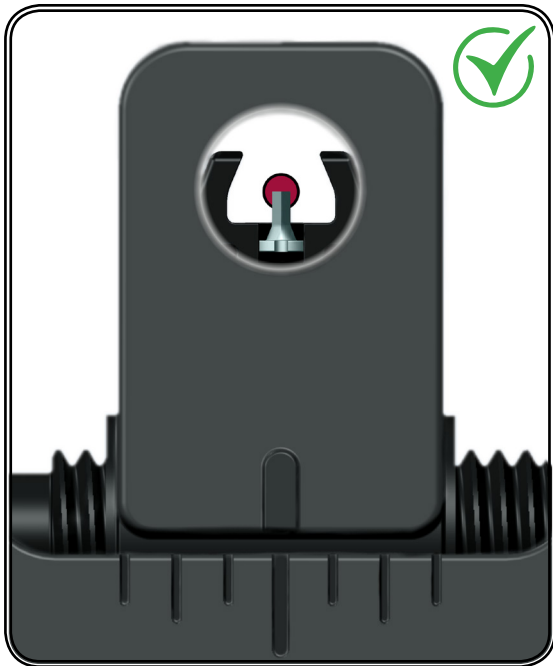
Figure 42b: **Supported Prone** shooting positionFigure 42a: **Unsupported standing** shooting position

Aiming (PLASTIC SIGHT)

Central point of aim



CORRECT AIMING

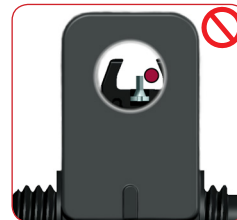


• Aiming Errors

Left shot



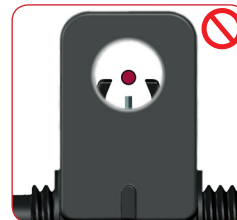
Right shot



High shot



Low shot



Left low shot

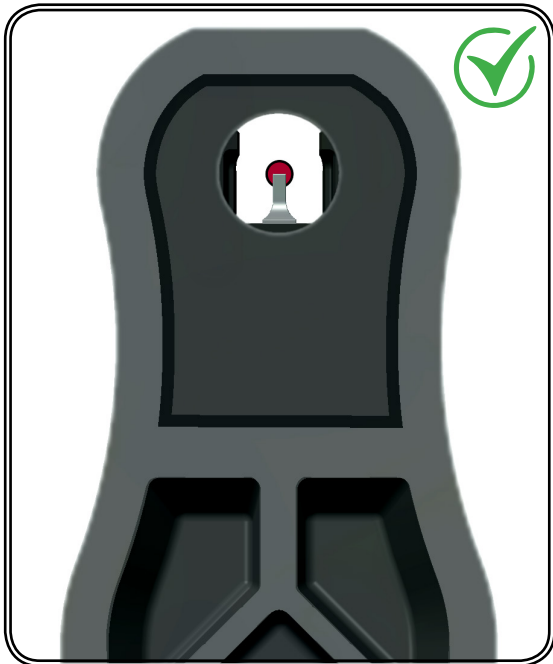


Right low shot



Aiming (METAL SIGHT)

Central point of aim



• Aiming Errors

Left shot



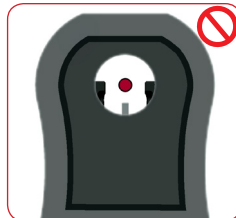
Right shot



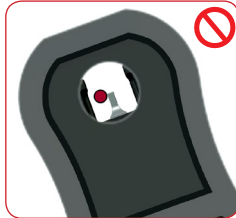
High shot



Low shot



Left low shot



Right low shot

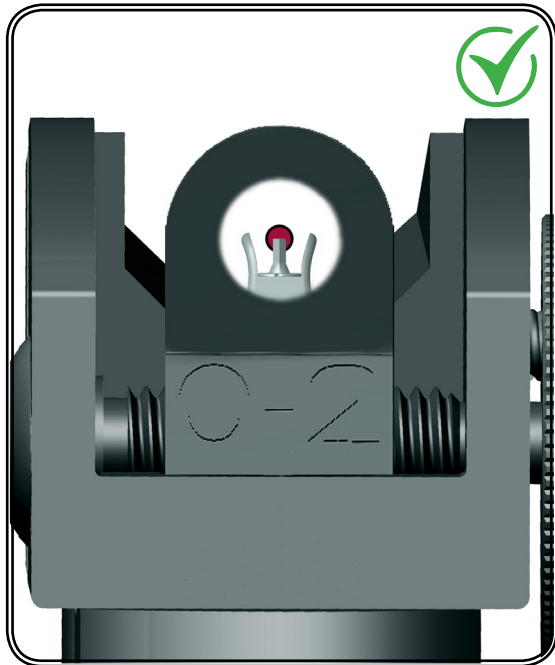


CORRECT AIMING

Aiming (SIGHT WITH CARRY HANDLE)

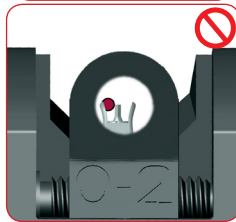
Central point of aim

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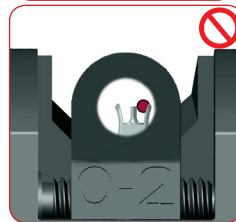


• Aiming Errors

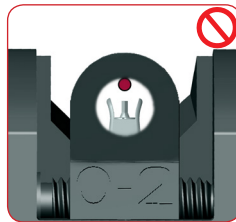
Left shot



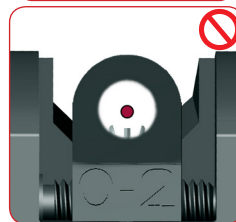
Right shot



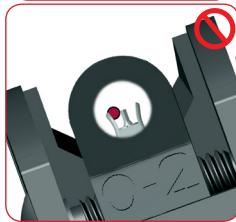
High shot



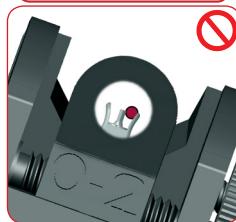
Low shot



Left low shot



Right low shot



SHOOTING

i Observe safety information for shooting.

Shooting in " Semi " (single) shot mode :

1. Prepare the gun for firing.
2. Fully load the gun.
3. Aim.
4. Place the safety latch to " Semi " (single) shot position. **Figure (22b):**
5. Pull the trigger. Cartridge will be fired.
6. After firing or in order to reload , place the safety latch to " Safe " position. **Figure (22a):**

ATTENTION

A recoiling gun may sometimes cause injuries !

- > When shooting , put the gun firmly against your shoulder !
- > When shooting , keep your eye at least **6 cm** off the rear sight !
- > When shooting , keep your hands off the travel range of the bolt !

Shooting in " Auto " (burst) mode :

ATTENTION

Shooting in " Auto " (burst) mode will make it hard to control the gun so the shots may be out of the target ! This may result in a risk of accident!

- > Fire after ensuring that the surrounding environment is safe !
 - > Pull the trigger intermittently (3 to 5 shots in a single pull of trigger) !
1. Prepare the gun for firing.
 2. Fully load the gun.
 3. Aim.
 4. Place the safety latch to " Auto " (burst) position. **Figure (22c):**
 5. Pull the trigger. Gun will fire until the trigger is released , or until no cartridge is left in the magazine.
 6. After firing or in order to reload , place the safety latch to " Safe " position. **Figure (22a):**

ATTENTION

A recoiling gun may sometimes cause injuries !

- > When shooting , put the gun firmly against your shoulder !
- > When shooting , keep your eye at least **6 cm** off the rear sight !
- > When shooting , keep your hands off the travel range of the bolt !

How to remove the magazine:

1. Grip the magazine.
2. Press the magazine catch button. **Figure (28a:)**
3. Remove the magazine. **Figure (28a:)**

How to reload the gun :

i After the last cartridge in the magazine is fired , the bolt catch holds the bolt carrier group in open position.

1. Remove the magazine. **Figure (28a:)**
2. Insert the loaded magazine into the gun.
3. Press the bolt catch handle. The bolt catch will travel forward. Now the gun is fully loaded. **Figure (29a: - B)**
4. Check whether the safety latch is placed to " Safe " position. **Figure (22a:)**

ATTENTION

Risk of injury due to unintentional discharge !

A firearm loaded with ammunition is always a potential source of danger !

- > Load ammunition to your gun only immediately before shooting !
- > Unload the gun immediately after shooting !

How to unload the gun :

1. Remove the magazine. **Figure (28a:)**
2. Pull the bolt handle completely to the rear , and hold it. The cartridge will be ejected. **Figure (29a: - A)**
3. Press the bolt catch handle , and hold it until the bolt handle it pulled. **Figure (29a: - B)**
4. Slide the bolt handle completely to the front , and lock it.
5. Look at the chamber. There should be no cartridge in the chamber. If there is any cartridge in the chamber , that means there is a failure. **Figure (29a: - C)**
6. Press the bolt catch handle. The bolt carrier will travel forward. **Figure (29a:-B)**
7. Place the safety catch to the " **Semi** " (single) shot position. **Figure (22b:)**
8. Pull the trigger. Hammer strikes.
9. Place back to " **Safe** " position. **Figure (22a:)**

ATTENTION

Risk of injury due to bolt travelling forward fast !

Once the bolt catch handle is pressed , the bolt carrier group travels forward.

- > Do not place your hand within the travel range and direction of the bolt group !

How to unload the magazine :

ATTENTION

Risk of injury in case of firing of cartridges !

Cartridge may be fired in case of impact to the cartridge primer !

- > When unloading the magazine , slide the cartridges with your hand !
- > Prevent any impacts to the cartridge primer !
- > Avoid fall of cartridges to the ground !
- > Slide the cartridges outward toward the front side of magazine !

CAUTION

Use of brute force during disassembling , assembling , and cleaning may cause gun damage !

- > Do not use brute force when disassembling, cleaning, and assembling the gun !

USER - LEVEL DISASSEMBLING OF GUN

ATTENTION

Risk of injury in case of firing of cartridges !

Cartridge may be fired in case of impact to the cartridge primer !

- > Disassemble the gun only as directed in this user manual !

How to disassemble the gun to subassembly groups :

Auxiliary materials needed :

- A 3mm Allen Key

1. Remove the magazine. **Figure (28a:)**
2. Perform safety check. **Figure (29a:)**
3. Press the front and rear retaining pins rightwards and inward. **Figure (52a: - A)**
4. Pull the front and rear retaining pins outward till the support. Remove the upper receiver. **Figure (52a: - B)**
5. Fold the sights , and pull the bolt handle to the rear together with the bolt. **Figure (53a:)**
6. Remove the bolt group from the upper receiver. **Figure (53b: - A)**
7. Remove the bolt handle from the upper receiver. **Figure (53b: - B)**
8. Loosen the forend mounting bolts by turning them counterclockwise using an Allen key. **Figure (54a:)**
9. Pull the forend from the barrel to the front. **Figure (54b:)**

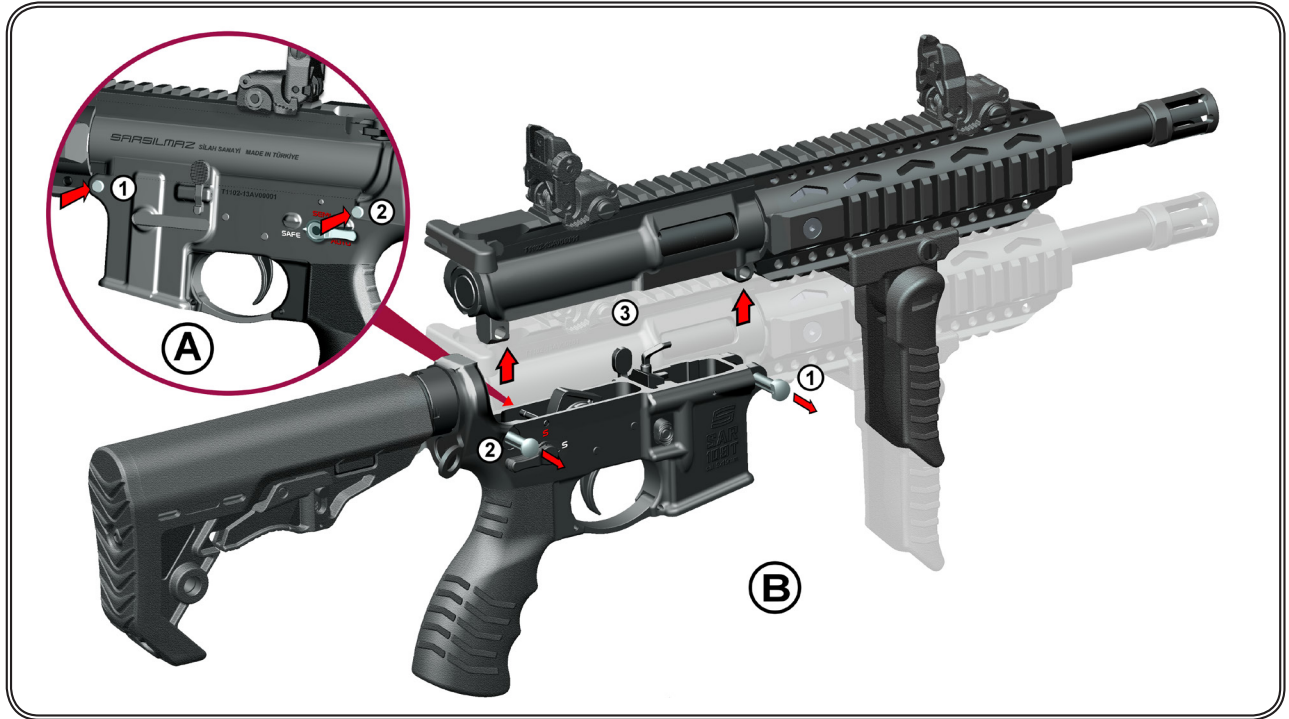


Figure 52a: Disassembling the lower and upper receiver

Figure 53a: Folding the sights, and pulling the bolt handle together with the bolt.

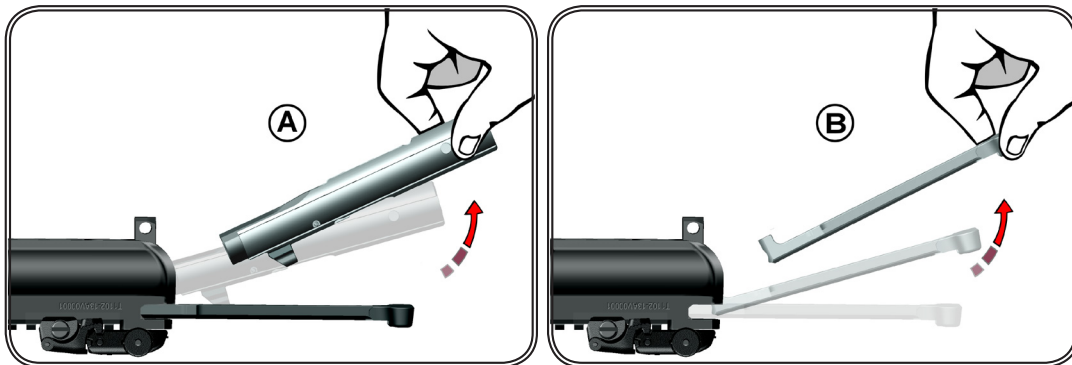
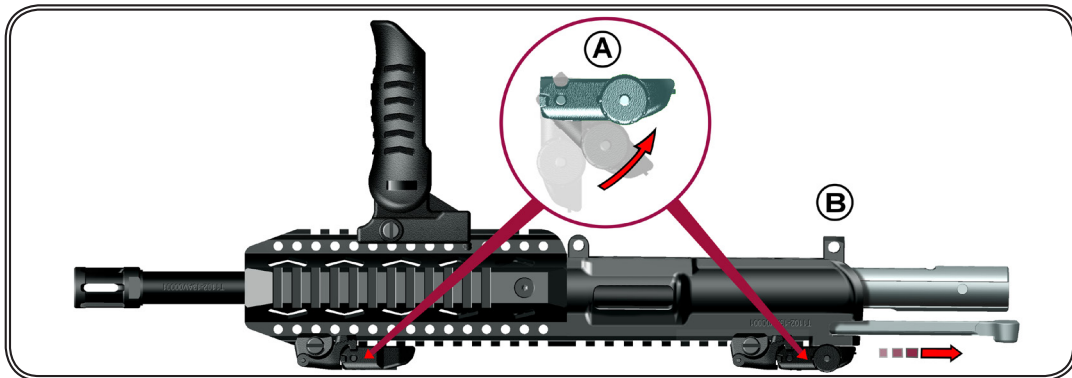


Figure 53b: Removing the bolt group and bolt handle from the upper receiver

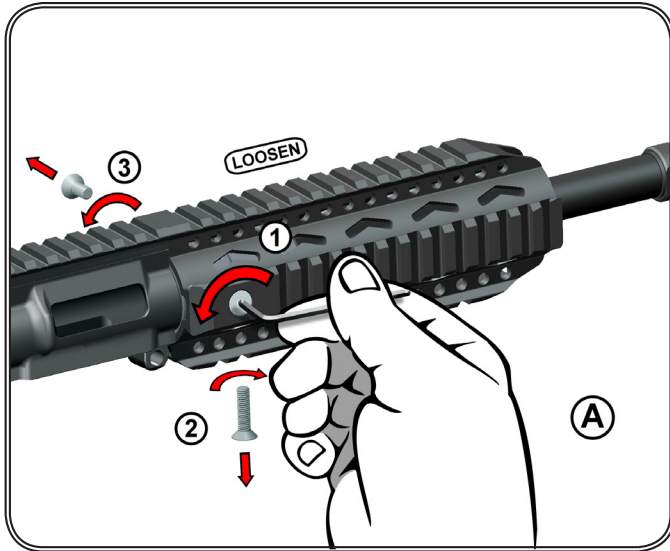


Figure 54a: Loosening mounting bolts of forend

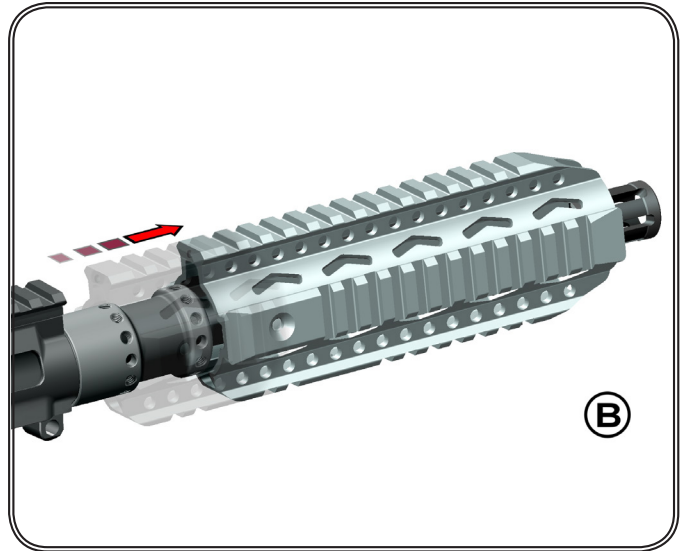


Figure 54b: Removing the forend

Removing The Firing Pin :

1. With the help of a punch and hammer , lightly tap the needle pin so that it does not come out of its socket , so that it goes inside a little. **Figure (55a:)**
2. Remove the firing pin safety under spring pressure. **Figure (55b:)**
3. Pull the firing pin spring and the firing pin back out of the mechanism. **Figure (55c:)**

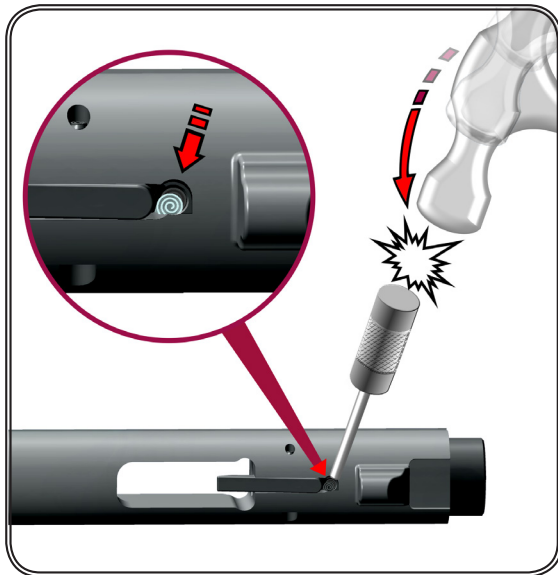


Figure 55a: Removing the firing pin

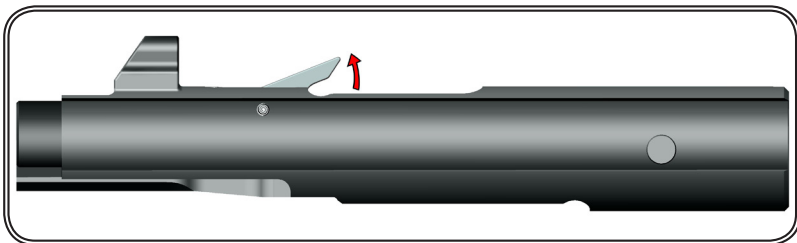


Figure 55b: Releasing the firing pin safety

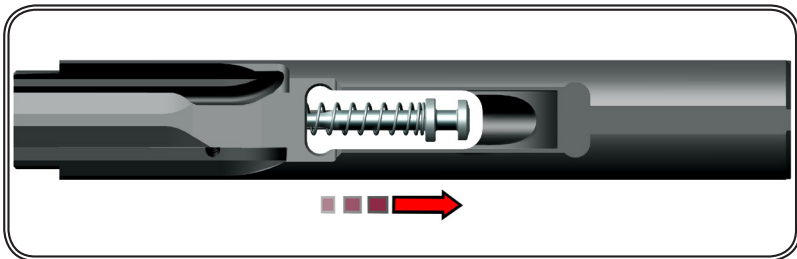


Figure 55c: Firing pin and spring removal

How to disassemble the accessories :

1. Remove the folding " Metal and Plastic " rear sight - front sight by turning them counterclockwise using a screwdriver. **Figure (56a:) - (56b:) - Figure (57b:) - (57c):**
2. Remove the folding foregrip by turning its screw counterclockwise using a screwdriver. After removing the screw and nut, remove it by pulling through the Picatinny Rail channels. **Figure (57a:)**
3. You can remove the Picatinny Rail protective covers by placing a screwdriver or end of a cartridge bullet to the stretching slot , and sliding through the channels of rails by. **Figure (58a:)**

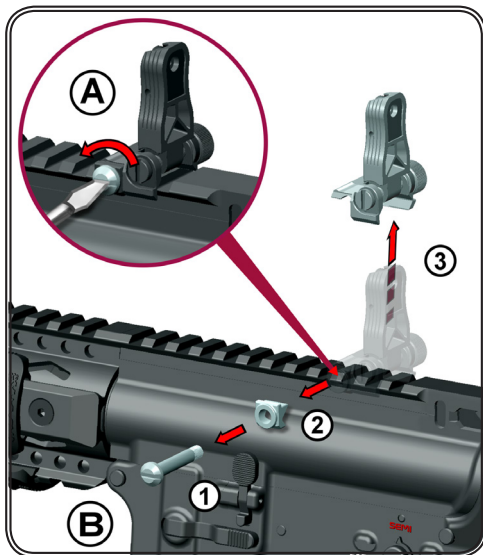


Figure 56a: Removal of Folding Metal Rear Sight

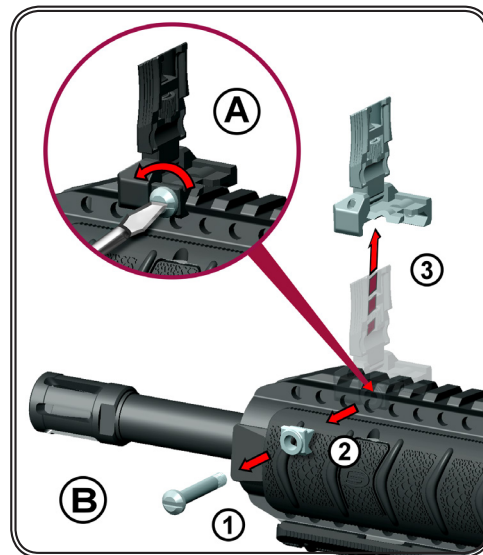


Figure 56b: Removal of Folding Metal Front Sight

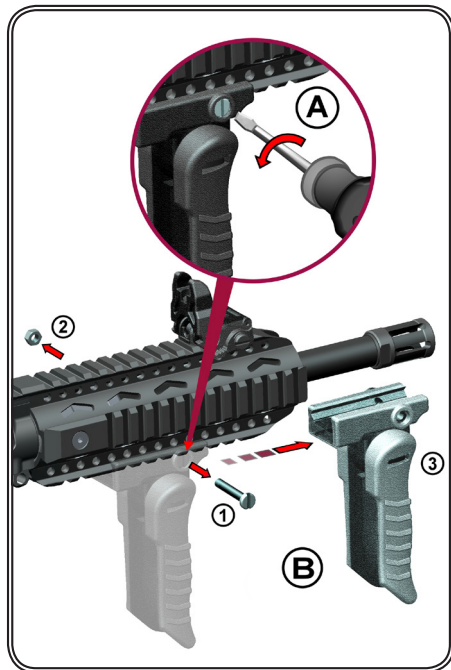


Figure 57a: Removal of folding foregrip

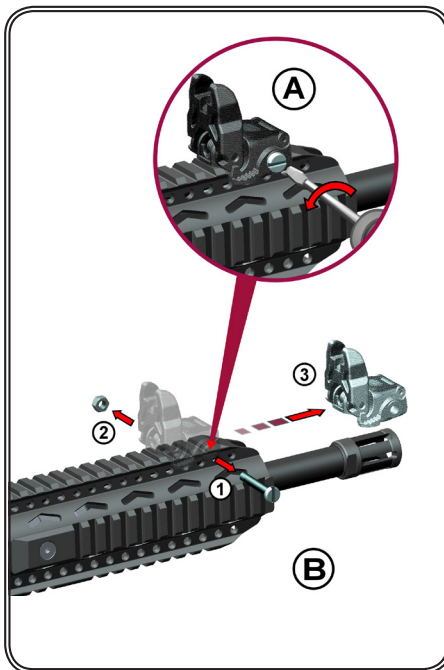


Figure 57b: Removal of folding plastic front sight

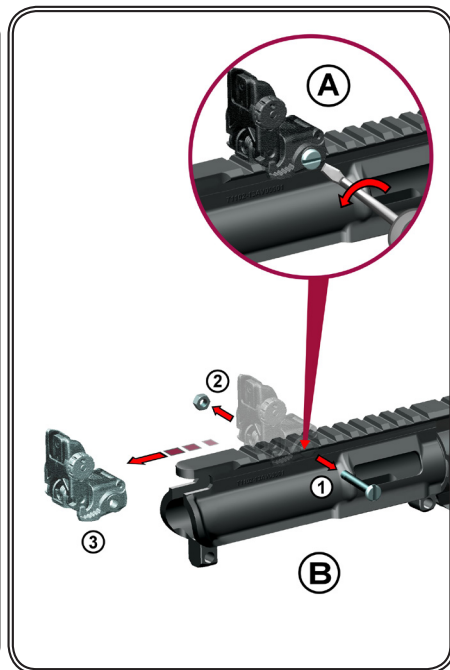


Figure 57c: Removal of folding plastic rear sight

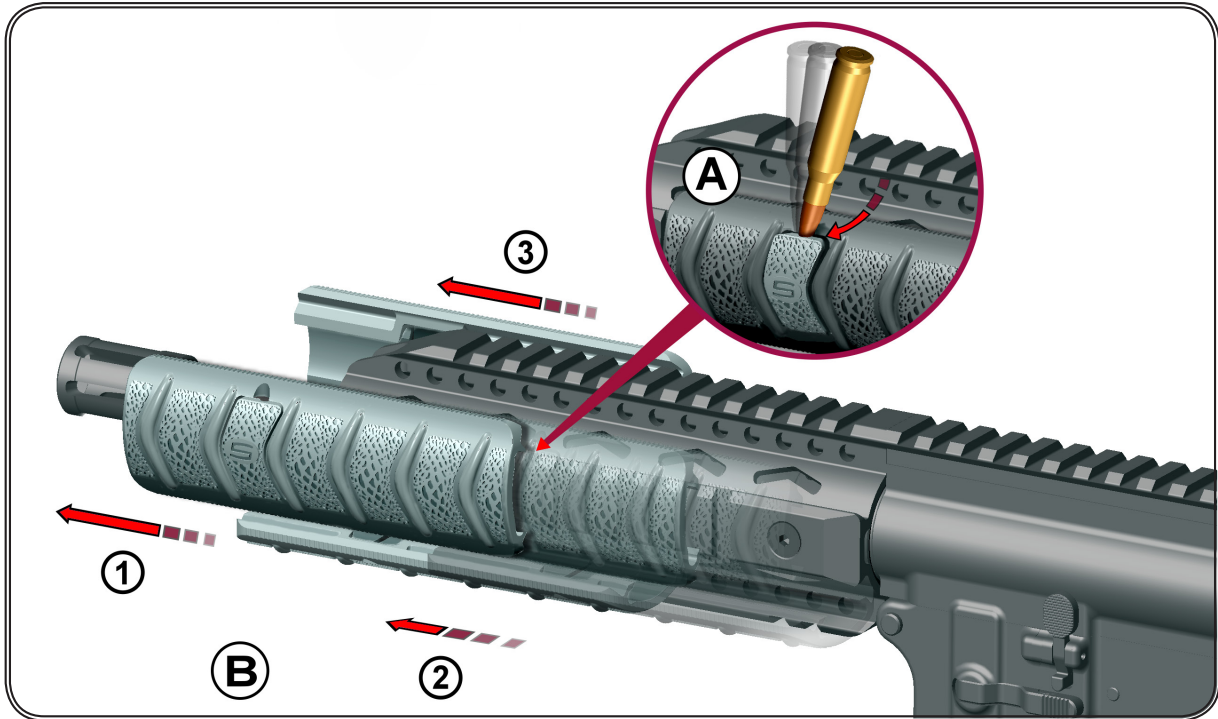


Figure 58a: Removal of Picatinny Rail protective covers

USER - LEVEL ASSEMBLING OF GUN

Assembly Of The Firing Pin :

1. Remove the firing pin safety under spring pressure.
2. Insert the firing pin spring and the firing pin into its slot in the mechanism and press it firmly. Then release the safety firing pin so that it catches the firing pin. **Figure (59a: - 59b:)**
3. By turning the mechanism so that the bottom surface is facing up, with the help of a punch and hammer, hit the lower part of the needle pin and seat it in its slot. **Figure (59c:)**

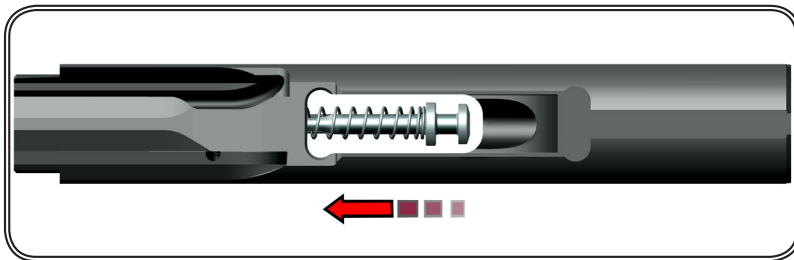


Figure 59a: Attaching the firing pin and spring

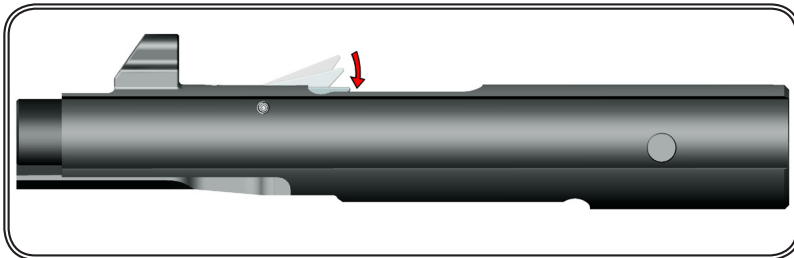


Figure 59b: Releasing the firing pin safety

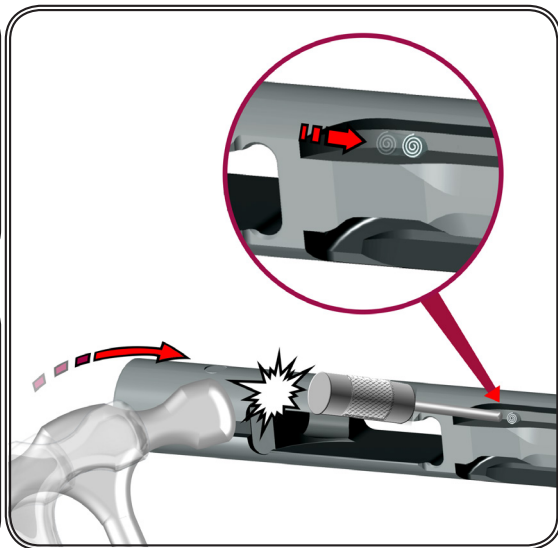


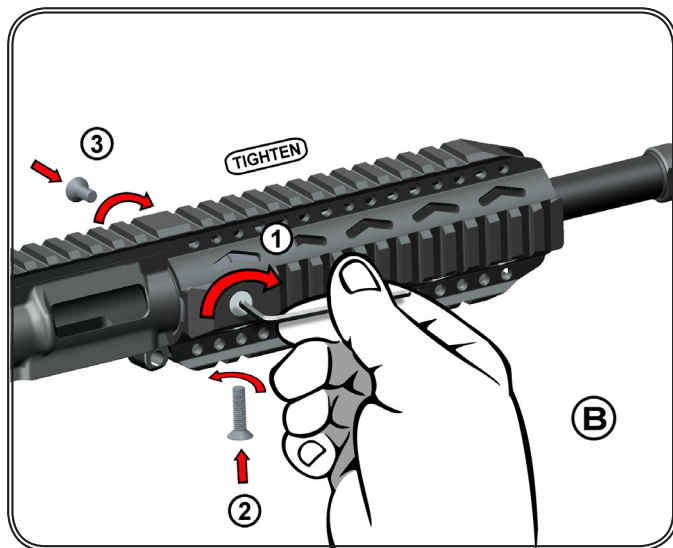
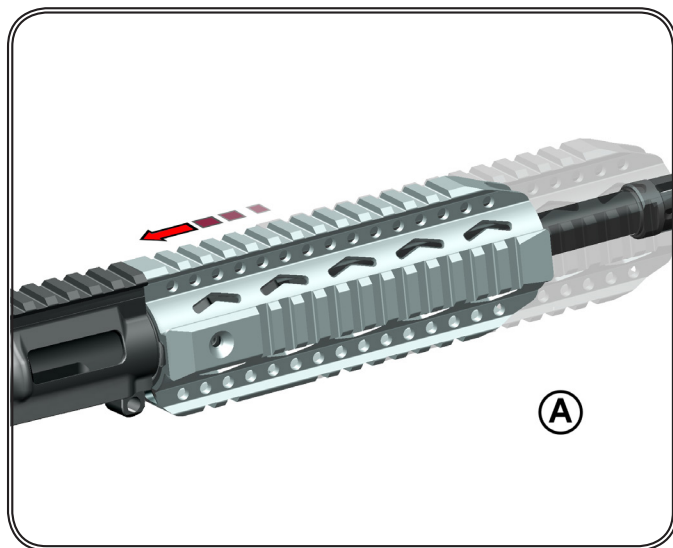
Figure 59c: Driving the needle pin

How to assemble the subgroups :

Auxiliary materials needed :

- A 3mm Allen Key

1. Assemble the bolt carrier. **Figure (59a:) - (59b:)**
2. Push the forend from front side till the upper receiver. **Figure (61a:)**
3. Tighten the forend mounting screws clockwise using an Allen key. **Figure (61b:)**
4. Assemble the folding foregrip and front sight - rear sight accessories by pushing through the Picatinny Rail channels. Tighten the screws clockwise , using a screwdriver.
5. Fold the rear sight - front sight. **Figure (62a: - A)**
6. Place the bolt handle into the indent in the upper receiver , and push forward nearly 5cm. **Figure (62a: - B)**
7. The bolt group can only be assembled by inserting the bolt guide cam into the guide channel under the lower part of the bolt handle. Otherwise , the bolt pulling protrusion will prevent insertion of the bolt carrier into the upper receiver.
Figure (62a: - C)
8. Push the bolt group completely to the front until the bolt handle is locked. **Figure (62a: - D)**
9. Place the upper receiver with a **90°** angle in such a way that its holes are aligned with the channel in the lower receiver.
Figure (63a: - A1)
10. Press the front and rear retaining pins completely to the left. **Figure (63a:-A2 - A3)**
11. Open up the rear sight - front sight , and perform a function check. **Figure (63a: - B)**



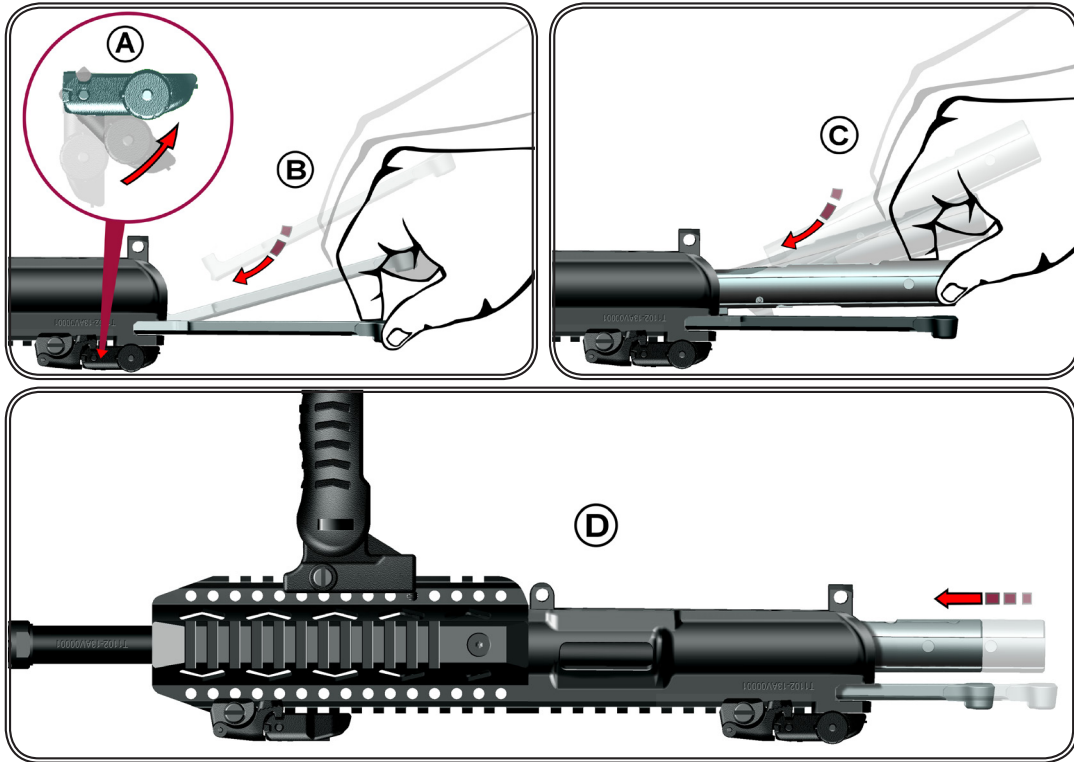


Figure 62a: Mounting the Bolt Handle and Bolt Group to the upper receiver

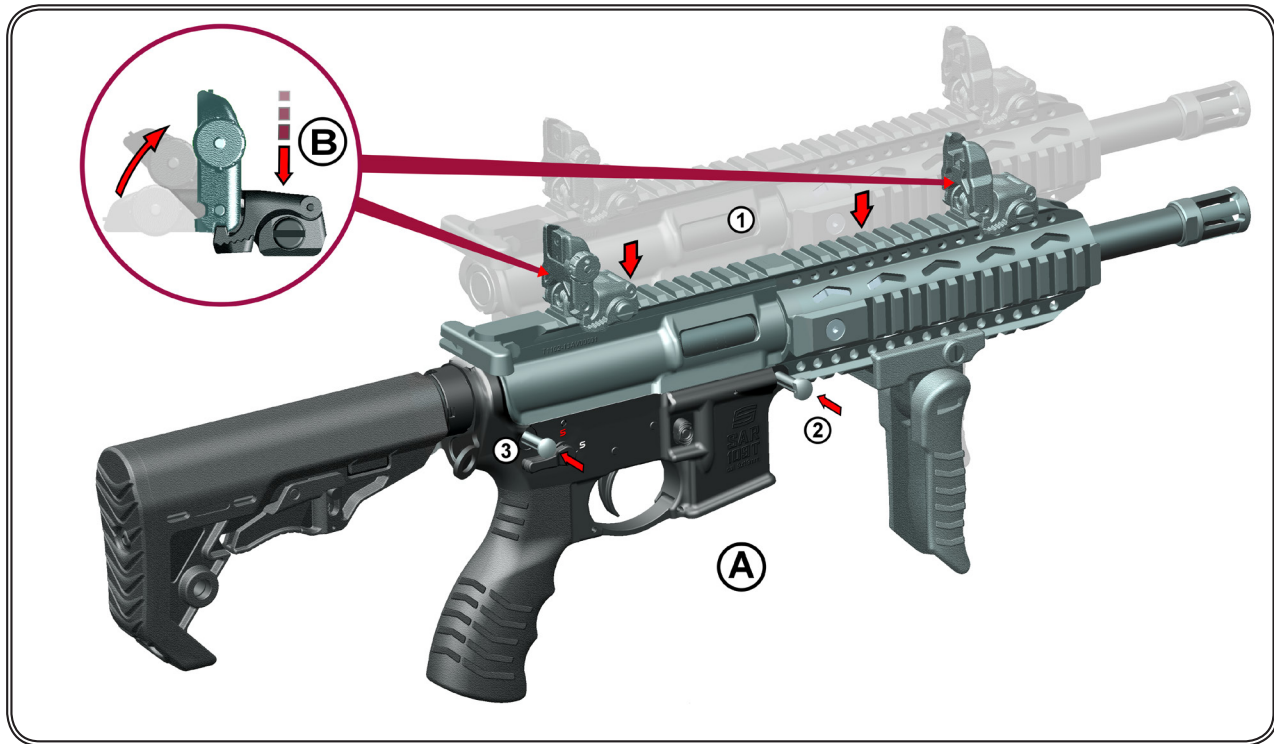


Figure 63a: Mounting the upper and lower receiver

GUN MAINTENANCE

Gun maintenance is performed to keep the gun in good operating order. It includes maintenance , inspection , repair , cleaning , and lubrication.

General information about cleaning :

Regular cleaning of gun and its accessories will :

- maintain the functioning safety
 - improve the life
 - protect against accidents
 - save repair costs and time
-

i Clean the barrel from chamber towards muzzle !

CAUTION

Wrong cleaning and maintenance products may cause material damage to the gun !

- > Use designated cleaning agents to clean the gun !
- > Do not use any metal objects , plastics (Nylon , Perlon , etc.) , chemical cleaning agents (Benzene , Tetrachloroethylene , Trichlor , etc.) o clean your gun !
- > Do not clean your gun in ultrasonic bath !

Cleaning kit

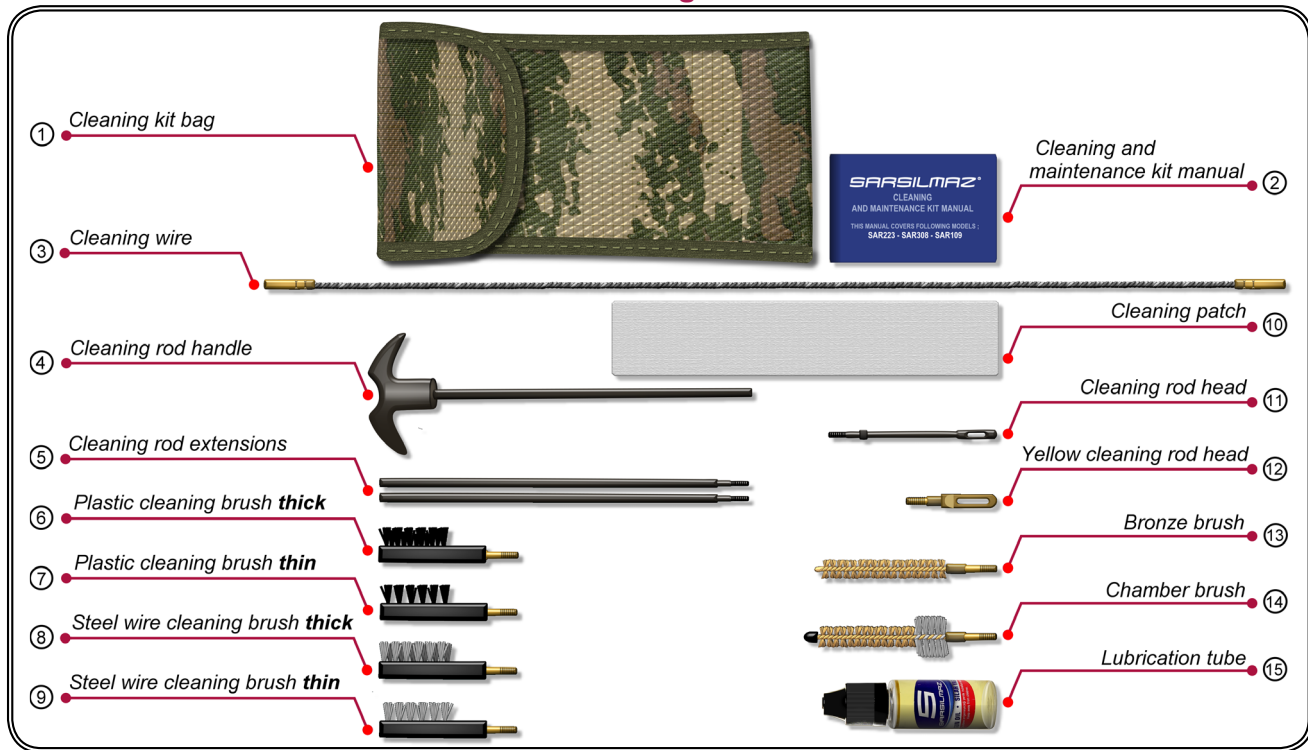


Figure 65a: Cleaning kit

1. Cleaning Kit Bag :

All following materials required for gun cleaning are placed into the Cleaning Kit Bag.

2. Cleaning and Maintenance Kit Manual :

A pocket manual ,intended in particular for use in the field , containing information about use and intended use of materials available in the cleaning kit bag.

3. Cleaning Wire :

Bronze brushes , cotton brushes , and plastic brushes are screwed to both ends of the cleaning wire to clean inside of the barrel. Inside of the barrel can also be cleaned by screwing yellow cleaning rod head to ends of cleaning wire , and attaching a cleaning patch.

4. Cleaning Rod Handle :

Cleaning rod handle is the main holder of the cleaning rod extensions. Besides cleaning of barrel , cleaning rod handle can , if desired, also be used to clean narrow and small areas , in particular , by attaching relevant ends.

5. Cleaning Rod Extensions :

Length of cleaning rod can be arranged as necessary by screwing the cleaning rod handle and 2 cleaning rod extensions to each other. This combination constitutes the **Cleaning Rod**. Cleaning rod head is screwed to the end of cleaning rod , and cleaning swap is attached to the cleaning rod head , and then inside of the barrel is cleaned. The gun can also be cleaned by screwing bronze brush, soft brush , and chamber brush to the cleaning rod.

6. Plastic Cleaning Brush (Thick) :

It is used after being screwed to the end of cleaning rod handle. It is used to clean powder residues, powder ashes, carbon and metal dirt generated after firing.

7. Plastic Cleaning Brush (Thin) :

It is used after being screwed to the end of cleaning rod handle. It is used to clean powder residues , powder ashes , carbon and metal dirt generated after firing.

8. Steel Wire Cleaning Brush (Thick) :

It is used after being screwed to the end of cleaning rod handle. It is used to clean powder residues , powder ashes , carbon and metal dirt generated after firing.

9. Steel Wire Cleaning Brush (Thin) :

It is used after being screwed to the end of cleaning rod handle. It is used to clean powder residues , powder ashes , carbon and metal dirt generated after firing.

10. Cleaning Patch :

It used to clean inside of the barrel. It is attached after the cleaning rod head is screwed to the end of cleaning rod and cleaning wire. Then inside of the barrel is cleaned.

11. Cleaning Rod Head :

It is used after being screwed to the end of cleaning wire and cleaning rod. Cleaning patch is attached to the cleaning rod head, and then inside of the barrel is cleaned.

12. Yellow Cleaning Rod Head :

It is used after being screwed to the end parts of the cleaning wire. Inside of the barrel is cleaned with cleaning patch attached to the yellow cleaning rod head.

13. Bronze Brush :

It is used after being screwed to the fragmental cleaning rod or cleaning wire. It is used to clean powder residues , powder ashes, carbon and metal dirt generated after firing.

14. Chamber Brush:

It is used after being screwed to the fragmental cleaning rod. It is used to clean powder residues , powder ashes , carbon and metal dirt generated in the chamber after firing.

15. Lubrication Tube :

The lubrication tube contains lube for gun maintenance. It is used for lubricating the gun after cleaning.

 **ATTENTION**

Do not force the gun when disassembling , cleaning , and assembling it !
When cleaning inside of the barrel with a cleaning patch , never clean from muzzle to chamber !

Daily maintenance :

A function check of gun's stock , grip , bolt handle , bolt , and magazine is performed during this maintenance. Check whether the gun functions normally , whether there is any abnormality with the parts , and whether the parts are clean. In case of any abnormality , try to identify and eliminate the cause. If there are any foreign matters such as dust , dirt , moisture , rust , etc. , clean them , and if necessary slightly lubricate the gun.

Weekly maintenance :

For weekly maintenance , perform user - level disassembling of gun , and follow the following steps ;

- Screw the **Bronze Brush** to the end of fragmental cleaning rod , and moisten it with maintenance lubricant. Cleaning operation should be performed in the chamber - to - muzzle direction. Then screw the cleaning rod head to the cleaning wire. Attach the cleaning patch to the cleaning rod head , and clean in the chamber - to - muzzle direction. Repeat those steps until the bore (inside of the barrel) is clean.
- Screw the **Cleaning Brush** (steel or plastic) to the end of fragmental cleaning rod , and brush any dust , dirt , moisture , rust , etc. on the bolt , lower receiver , upper receiver , and bolt handle , and then clean them using a piece of cloth. Slightly lubricate the surfaces you cleaned.
- Upon completion of weekly maintenance procedures , assemble the gun following disassembling steps in reverse order , and then subject the gun to **Function Test**.

Pre - shooting maintenance :

In this maintenance cycle , check whether the gun functions normally. Check whether there is any dust , dirt , and foreign matters inside the barrel that may prevent functioning of the gun.

Post - shooting maintenance :

As firing will produce powder residues , powder ashes , carbon and metal dirt , the gun should be cleaned after shooting. Though modern ammunition contains easy - to - clean and anti - corrosive powder , failure to remove such dirt will lead to corrosion of gun. The gun should be cleaned within couple of hours after completion of shooting. Scopes used with the gun should not be disassembled for daily maintenance but rather as and when deemed as necessary.

CAUTION

For post - shooting maintenance , perform user - level disassembling of gun (including Release Spring , Stock Tube's Interior Surface , and Buffer) , and follow the steps as defined in **Page 70 - c**.

a. Barrel cleaning :

- Place the gun on the cleaning table or another flat surface in such a way that the muzzle is **not pointed at any live target**. Make sure that you do not hit the muzzle and scope against the table !
- **Always perform barrel cleaning from chamber to muzzle !** When doing this , keep the muzzle at a lower level to prevent that the maintenance lubricant flows into loading and firing mechanisms.
- Fix the gun on a flat surface.
- Remove the bolt.
- Clean the cleaning rod thoroughly before starting to clean the barrel.
- Once the cleaning rod comes out of the muzzle , remove the patch and the cleaning rod head. Then pull the cleaning rod backward, and repeat the procedure.
- Attach a clean and dry patch to the cleaning rod , and perform rough dry cleaning of barrel couple of times.
- Attach a patch moistened with maintenance lubricant to the cleaning rod head , and lubricate inside of the barrel.
- Wait for **15 to 20 minutes** to allow the maintenance lubricant to remove the residues.
- Attach the bronze brush to the cleaning rod head , and moisten it with maintenance lubricant.
- Number of cleaning cycles with a cleaning rod is calculated as follows : **1 bronze brush cleaning cycle for 3 firings**.
- Attach a dry and clean patch to the cleaning rod , and continue cleaning until the patch comes out clean.
- To clean the chamber , attach the chamber brush to the cleaning rod , and brush the chamber.

b. Bolt , Bolt Handle , Magazine , Lower Receiver , and Upper Receiver cleaning :

- There will be powder residues , powder ashes , carbon and metal dirt on the surfaces of bolt , bolt handle , magazine , lower receiver , and upper receiver after firing so they should be brushed with cleaning brushes (steel or plastic) , and cleaned with a patch.

c. Release Spring , Stock Tube , and Buffer cleaning :

- There will be powder residues , powder ashes , carbon and metal dirt on the surfaces of **Release Spring , Stock Tube , and Buffer** so they should be brushed with cleaning brushes (steel or plastic) , and cleaned with a patch.

CAUTION

Upon completion of post - shooting maintenance procedures , assemble the gun following disassembling steps in reverse order , and then subject the gun to **Function Test**.

MAINTENANCE OF GUN IN DIFFERENT CLIMATE CONDITIONS

Preparations :

i Humidity and environmental temperatures between **-25°C** and **+63°C** do not require any special measures.

i Water condensed in cold weather may have adverse effects on gun's functioning reliability.To prevent occurrence of condensed water , do not move from a cold environment to hot environment and then again to a cold environment.

Auxiliary materials needed :

- Lubricant
- Low - temperature lubricant
- At high dust concentrations or at temperatures above **+63°C** , lubrication points of the barrel and lubrication points of functional parts should be lubricated more. **Figure (76a):**
- At temperatures below **- 25°C** , lubricate all moving parts of the gun with low - temperature lubricant.

1. Maintenance in Hot and Humid Climate Conditions :

- Perform regular gun maintenance.
- Perform more frequent maintenance and lubrication.
- Continuously check interior surfaces of the gun against rusting and corrosion.
- **Pay special attention to lands and grooves !** If possible , lubricate inside of barrel (bore) continuously.
- Use maintenance lubricant more often.
- Unload your magazine frequently. Check interior of the magazine and the magazine spring.
- Store your gun enclosed as much as practically possible.
- **Avoid contact with sea water and saltwater !** If the gun is exposed to saltwater , quickly proceed with complete disassembly. Wash each part with potable water ! Dry all parts , and perform the regular maintenance procedure.

2. Maintenance in Hot and Dry Climate Conditions :

Lands featuring hot and dry desert climate conditions produce airborne sand particles carried by the wind. Dust and sand penetrate into the gun parts and the magazine , and cause misfires.

- Perform frequent gun maintenance.
- Excessive lubrication of gun will produce sludge on surfaces so pay specific attention to lubrication.
- Lubricate interior surfaces of the gun , bolt , and functioning parts but keep exterior surfaces dry.
- In such lands , rust and corrosion are rare. However , you should still check the gun.
- Store your gun enclosed as much as practically possible.
- Against any dust and sand particles , continuously clean inside of the barrel (bore) with a cleaning rod to keep it dry.
- To protect the gun against sand , store it in its carry bag or case.

- Clean the barrel and chamber on a daily basis.
- Prevent penetration of sand into barrel and the spare magazine.
- Drying the gun thoroughly and lubricating it slightly will prevent rusting caused by sweating hands and cheek.

3. Maintenance in Extremely Cold Climate Conditions :

- As much as practically possible , perform gun maintenance indoors , at a warm ambient and at room temperature.
- Lubricate gun's interior surfaces , functioning parts like bolt , and the trigger group. However , make sure that the exterior surface is kept dry as much as practically possible.
- When you move the gun from room temperature to cold weather outside , the gun must be wrapped and covered. Otherwise , sudden change of temperature may lead to a layer of moisture on the surfaces , which may result in rust.
- When moving from a cold environment to a warm environment (tent , etc.) , disassemble and dry the gun.
- Try to preserve your gun dry as much as practically possible.
- Keep the magazines dry. Moisture will cause freezing and misfire.
- **Do not attempt sudden Auto (Burst Fire) in extremely cold weathers !** First start with semi (single) - shots , and then proceed with auto (burst) fires.
- Against parts freezing in cold weather , perform **Function Test** in every **30 minutes**.
- Never not put a hot , fired gun on snow and ice.
- When storing the gun at a room , keeping a room temperature equal to the outdoor temperature may protect the gun against sudden temperature changes.
- If you move the gun to a warm environment , dehumidify it before moving it back to a cold environment. Clean and dry the gun. Otherwise , icing may occur on the metal surfaces due to condensation.

4. Maintenance in Wet Weather and River Crossings :

- In rainy weathers , carry the gun with the muzzle facing downward.
- During river crossings , absolutely keep the gun above the body level as you fight the current.
- Try to keep the gun conserved and dry.
- Make sure that no water penetrates into the barrel. If water penetrates into the barrel , immediately discharge the water, and if possible , clean with a cleaning rod and a dry patch. If the barrel is filled with water , hold the gun with the muzzle facing downward and pull the bolt handle to discharge the water.
- Maintain the gun as soon as practically possible after exposure to adverse climate conditions.

EXAMINATION

Always examine the gun visually every time you clean or disassemble the gun , or in case there is any problem with the gun. Perform a detailed inspection to see whether there are any cracks , bends , or breaks on the barrel , bolt handle , bolt frame , and bolt head. Inspect spring pressure of the empty casing ejector , and the pressure of extractor spring. Check whether there are any cracks , bends , or breaks.

LUBRICATION OF GUN

Before lubrication , clean the gun. Lubricate the gun using a clean cloth.
(Parts and areas that should not be lubricated). **Figure (76a:)**



ATTENTION

Parts and areas that should not be lubricated :
Plastic or Rubber components , Sling , Optics !

CAUTION

Lubricated cartridges will cause overloading of parts , and may damage the gun !

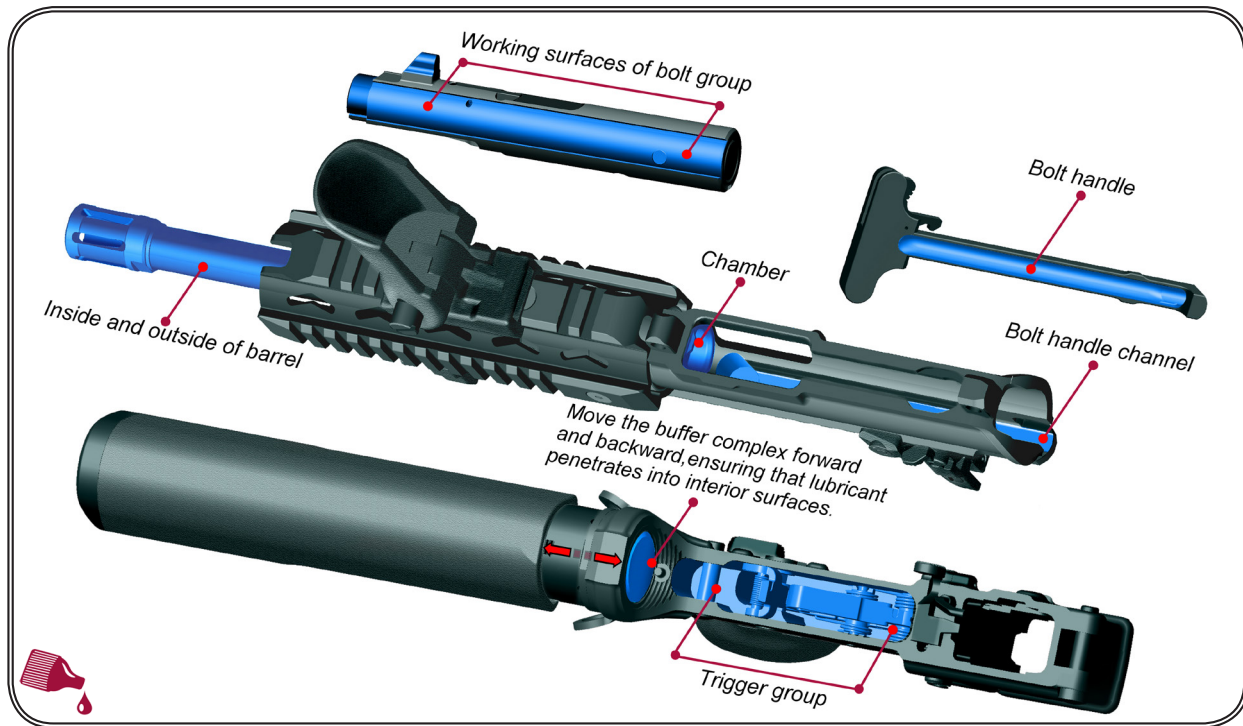
a. Parts and Areas to be Lubricated during Pre - shooting Weekly Maintenance :

Figure 76a: Parts and areas to be lubricated during pre - shooting , post - shooting and weekly maintenances.

b. Parts and Areas to be Lubricated during Post - Shooting Weekly Maintenance :

In addition to parts and areas to be lubricated during the pre - shooting , post - shooting , and weekly maintenances, the buffer spring and buffer should also be lubricated after shooting. **Figure (77a):**

ATTENTION

Buffer and buffer spring should be lubricated only after shooting !

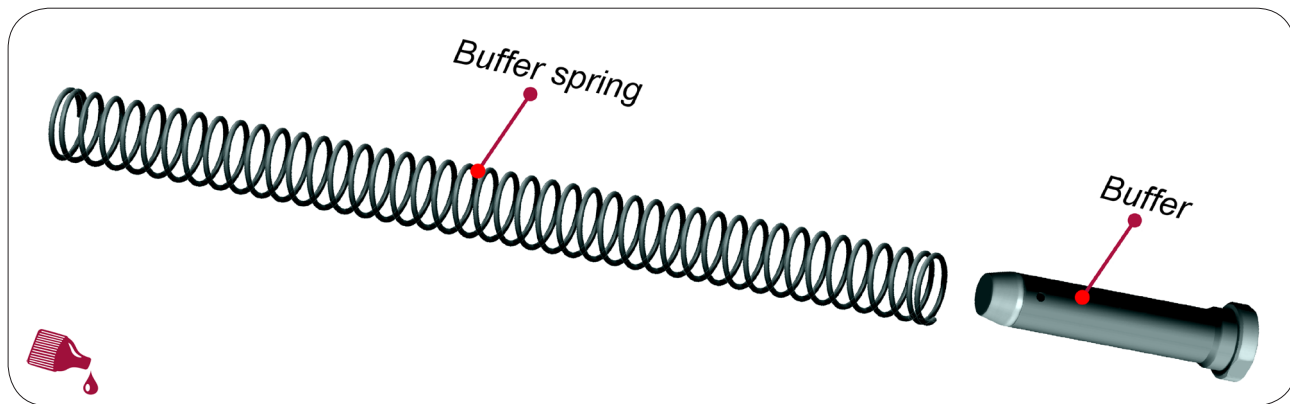


Figure 77a: Parts and areas to be lubricated after shooting

CAUSES OF FAILURES AND SOLUTIONS



Users are definitely prohibited to take any failure elimination action except as defined in this user manual ! Such failures can only be eliminated by authorized specialists.



ATTENTION

Safety risk due to lack of knowledge as to whether the gun is loaded or not !

In case of any failure , please note that the gun might be loaded even when you think the gun is unloaded !

- > In case of any failure , treat the gun as if there is a cartridge in the chamber !
- > In case of any failure , check whether the gun is loaded or not !
- > Observe basic safety information when eliminating a failure !

The list does not theoretically contain all possible failures! There might be other causes not listed here!

FAILURE	REASON	ELIMINATION
BULLET REMAINED IN THE BARREL !	AMMUNITION FAILURE.	RETURN THE GUN FOR REPAIR.
BULLET CANNOT BE FIRED !	AMMUNITION FAILURE.	WAIT AT LEAST ONE MINUTE. UNLOAD THE GUN. DO NOT USE THE MISFIRING CARTRIDGE AGAIN.
	PIN MOVES HARDLY , DAMAGED , OR BROKEN.	RETURN THE GUN FOR REPAIR.
	HAMMER FAILURE.	RETURN THE GUN FOR REPAIR.
BOLT CARRIER DOES NOT RETURN TO OPEN POSITION AFTER FIRING !	AMMUNITION FAILURE.	UNLOAD THE GUN. CLEAN THE GUN. IF NECESSARY, RETURN THE GUN FOR REPAIR.
CARTRIDGE OR CASING NOT EJECTED !	BROKEN CASING RIM.	UNLOAD THE GUN. IF NECESSARY, RETURN THE GUN FOR REPAIR.
	DIRT IN CHAMBER.	CLEAN THE CHAMBER.
	BOLT CARRIER GROUP DOES NOT RETURN TO THE REAR ADEQUATELY.	UNLOAD THE GUN. PERFORM FUNCTION CHECK. IF NECESSARY , CLEAN THE GUN. IF NECESSARY , RETURN THE GUN FOR REPAIR.
	AMMUNITION FAILURE.	USE OTHER AMMUNITION.
FAILURE TO FEED CARTRIDGE INTO THE CHAMBER !	DIRT IN CHAMBER.	UNLOAD AND CLEAN THE GUN.
	DEFORMED CARTRIDGE.	USE OTHER AMMUNITION.
	BOLT HANDLE MALFUNCTION.	RETURN THE GUN FOR REPAIR.

The list does not theoretically contain all possible failures! There might be other causes not listed here!

FAILURE	REASON	ELIMINATION
<p>FAILURE TO FEED CARTRIDGE !</p>	MAGAZINE NOT INSERTED CORRECTLY.	INSERT THE MAGAZINE CORRECTLY.
	MAGAZINE SPRING FAILURE.	RETURN THE MAGAZINE FOR REPAIR.
	DAMAGED MAGAZINE OR MAGAZINE LIP.	USE OTHER MAGAZINE.
	BOLT CARRIER GROUP DOES NOT RETURN TO THE REAR ADEQUATELY.	UNLOAD THE GUN. PERFORM FUNCTION CHECK. IF NECESSARY , CLEAN THE GUN. IF NECESSARY , RETURN THE GUN FOR REPAIR.
<p>AFTER LAST FIRING , THE BOLT DOES NOT STAY IN OPEN POSITION !</p>	MAGAZINE SPRING FAILURE.	RETURN THE MAGAZINE FOR REPAIR.
	BOLT CARRIER GROUP DOES NOT RETURN TO THE REAR ADEQUATELY.	UNLOAD THE GUN. PERFORM FUNCTION CHECK. IF NECESSARY , CLEAN THE GUN. IF NECESSARY , RETURN THE GUN FOR REPAIR.
	DAMAGED BOLT CATCH HANDLE.	RETURN THE GUN FOR REPAIR.
	AMMUNITION FAILURE.	USE OTHER AMMUNITION.
<p>MAGAZINE IS STUCK IN MAGAZINE HOUSING !</p>	DAMAGED MAGAZINE.	REPLACE THE MAGAZINE. RETURN THE DAMAGED MAGAZINE FOR REPAIR.
	DAMAGED MAGAZINE CATCH.	RETURN THE GUN FOR REPAIR.
<p>POSITION OF THE POINT OF AIM CHANGED UPWARD OR LATERALLY !</p>	REAR SIGHT ADJUSTMENT CHANGED.	ADJUST THE REAR SIGHT.
	USE OF DIFFERENT AMMUNITION.	USE DIFFERENT AMMUNITION OR ADJUST THE REAR SIGHT.
	DAMAGED REAR SIGHT.	RETURN THE GUN FOR REPAIR.

CONSERVATION , PACKAGING , AND STORAGE

- If the gun is to remain unused for an extended period of time , the gun should be duly maintained , and then stored in its packaging (gun bag or gun case).

i Conservation will protect the gun from external factors , and maintain functional safety when the gun remains unused for an extended period of time. If the estimated storage period of the gun is more than 6 months , subject the gun to conservation procedure. If the estimated storage period of the gun is not more than 6 months , cleaning will suffice.

Conservation of gun :

Auxiliary materials needed :

- Grease
- Oil paper

i Clean the barrel completely from chamber till muzzle.

CAUTION

Wrong cleaning and maintenance products may cause material damage to the gun !

- > Use designated cleaning agents to clean the gun !
- > Do not use any metallic objects , plastics (Nylon, Perlon, etc.) , chemical cleaning agents (Benzene , Tetrachloroethylene, Trichlor , etc.) to clean your gun !
- > Do not clean your gun in ultrasonic bath !

Gun packaging :

1. Unload the gun.
2. Unload the magazine.
3. Put the gun in its original carry box.

CAUTION

Lubricated cartridges will cause overloading of parts , and may damage the gun !

- > Do not lubricate inside of the magazine !

Storage of gun :

i Store the gun and ammunition in different places !

1. Observe applicable regulations concerning storage of firearms and ammunition.
2. If the estimated storage period of the gun is more than 6 months , subject the gun to conservation procedure.
3. If the estimated storage period of the gun is not more than 6 months , clean the gun.
4. Pack the gun.
5. Store the gun indoors , providing protection against weather conditions.
6. Ensure safety of the storage place of gun against theft and fire. If the gun's storage period exceeds 1 year: Check grease cover of the barrel and grease layer of the metal parts once a year.

! ATTENTION

**Risk of accident to unauthorized persons !
Persons not experienced in use of gun may cause accidents !**

- > Prevent access to gun and ammunition by unauthorized persons !

TRANSPORTATION AND DELIVERY

Preparation of gun for transportation :

1. Pack the gun.
2. Secure the gun in the transport vehicle.

CAUTION

Lurches during transportation may damage the gun !

- > Avoid impacts and lurching during transportation !

Transportation of gun :

i Transport the gun and ammunition separately !

- > Observe applicable regulations concerning transportation of the gun and ammunition !

Delivery of gun :

i Deliver the gun and ammunition separately !

- > Observe applicable regulations concerning transportation of the gun and ammunition !

DESTRUCTION AND DISPOSAL

Destruction of gun :

- > Observe applicable regulations concerning destruction of gun and ammunition !

Disposal of gun :

- > Observe applicable regulations concerning disposal of gun and ammunition !

SAR 109T

Exploded views
(With plastic sight)

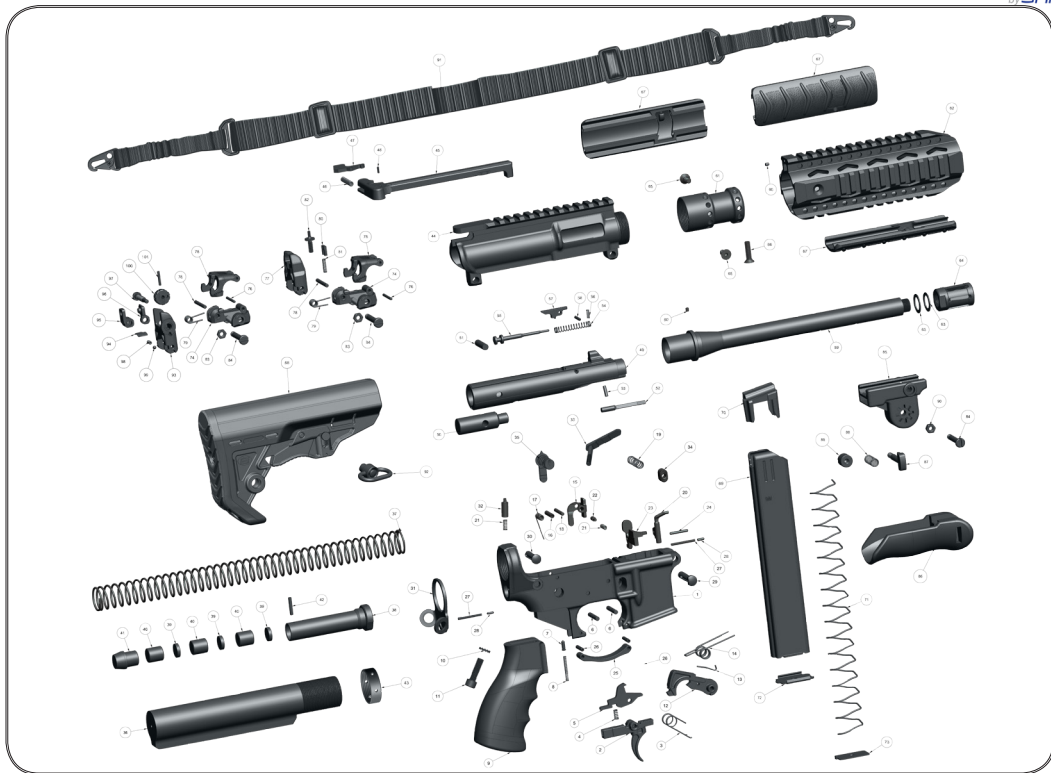


Figure 86a: SAR 109T exploded views (with plastic sight)

PARTS LIST SAR 109T (With plastic sight)
NO PART DESCRIPTION

1	LOWER RECEIVER
2	TRIGGER
3	TRIGGER SPRING
4	DISCONNECTOR SPRING
5	DISCONNECTOR
6	TRIGGER AND HAMMER PIN
7	SAFETY PLUNGER
8	SAFETY PLUNGER SPRING
9	GRIP
10	GRIP NUT WASHER
11	GRIP BOLT
12	HAMMER
13	HAMMER (J) SPRING
14	HAMMER SPRING
15	SEAR
16	SEAR PIN
17	SEAR SPRING
18	SEAR ASSEMBLY PIN
19	MAGAZINE CATCH SPRING
20	FIXED EJECTOR
21	BOLT CATCH SPRING
22	BOLT CATCH PLUNGER
23	BOLT CATCH
24	BOLT CATCH PIN
25	TRIGGER GUARD
26	TRIGGER GUARD PIN
27	DISASSEMBLY PIN SPRING
28	DISASSEMBLY PIN PLUNGER
29	PIVOT PIN
30	DISASSEMBLY PIN
31	STOCK GUIDE CATCH
32	BUFFER FIXER
33	MAGAZINE CATCH

NO PART DESCRIPTION

34	MAGAZINE CATCH BUTTON
35	SAFETY CATCH
36	GUIDE
37	BUFFER SPRING
38	BUFFER HOUSING
39	BUFFER DAMPER
40	BUFFER WEIGHT
41	BUFFER HOUSING PLUG
42	BUFFER HOUSING PIN
43	STOCK FIXING NUT
44	UPPER RECEIVER
45	BOLT HANDLE
46	BOLT HANDLE LATCH SPRING
47	BOLT HANDLE LATCH
48	BOLT HANDLE LATCH PIN
49	BOLT CARRIER
50	BOLT REAR WEIGHT
51	BOLT REAR WEIGHT PIN
52	EXTRACTOR
53	EXTRACTOR HELICAL PIN
54	PIN SPRING
55	PIN
56	PIN SAFETY SPRING
57	PIN SAFETY
58	PIN SAFETY ASSEMBLY PIN
59	BARREL
60	BARREL POSITIONING PIN
61	TACTICAL BARREL NUT
62	TACTICAL FOREND
63	FLASH SUPPRESSOR WASHER
64	FLASH SUPPRESSOR
65	TACTICAL FOREND SHORT ASSEMBLY BOLT
66	TACTICAL FOREND LONG ASSEMBLY BOLT

NO PART DESCRIPTION

67	RAIL PROTECTOR
68	STOCK
69	MAGAZINE FRAME
70	MAGAZINE FOLLOWER
71	MAGAZINE SPRING
72	MAGAZINE LOWER COVER
73	MAGAZINE SPRING BOTTOM TABLE
74	FOLDING SIGHT LOWER FRAME
75	FOLDING SIGHT LOCK
76	FOLDING SIGHT LOCK PIN
77	FOLDING SIGHT FRONT SIGHT UPPER FRAME
78	FOLDING SIGHT ASSEMBLY PIN
79	FOLDING SIGHT SPRING
80	FOLDING SIGHT FRONT SIGHT PLUNGER
81	FOLDING SIGHT FRONT SIGHT PLUNGER SPRING
82	FRONT SIGHT
83	FOLDING SIGHT TIGHTENING NUT
84	FOLDING SIGHT TIGHTENING BOLT
85	FOLDING FOREGRIP BEARING
86	FOLDING FOREGRIP
87	FOLDING FOREGRIP LOCK
88	FOLDING FOREGRIP LOCK SPRING
89	FOLDING FOREGRIP LOCK NUT
90	FOLDING FOREGRIP TIGHTENING NUT
91	TWO - SIDED SLING COMPLETE
92	SLING SWIVEL COMPLETE
93	FOLDING SIGHT REAR SIGHT UPPER FRAME
94	FOLDING SIGHT REAR SIGHT LEAF SPRING
95	FOLDING SIGHT REAR SIGHT NEAR
96	FOLDING SIGHT REAR SIGHT FAR
97	FOLDING SIGHT REAR SIGHT SIDE ADJUSTMENT BOLT
98	FOLDING SIGHT REAR SIGHT SIDE ADJUSTMENT SPRING
99	FOLDING SIGHT REAR SIGHT SIDE ADJUSTMENT BALL
100	FOLDING SIGHT REAR SIGHT SIDE ADJUSTMENT DRUM
101	FOLDING SIGHT REAR SIGHT SIDE ADJUSTMENT DRUM PIN

SAR 109T

Exploded views
(With metal sight)

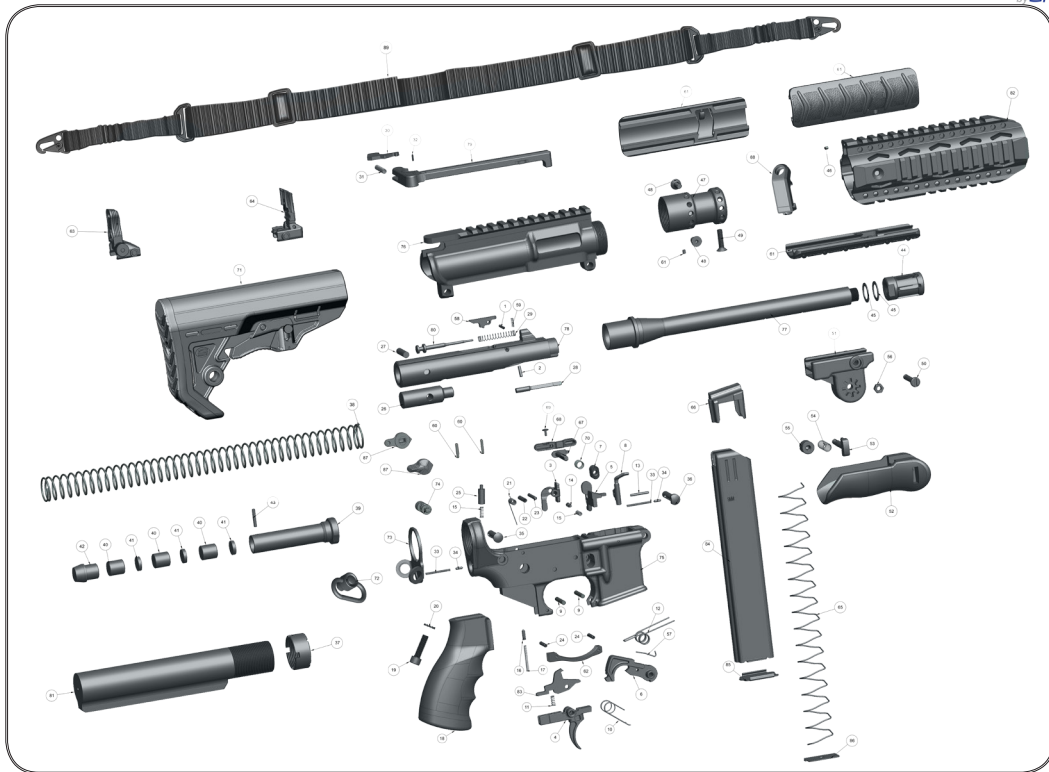


Figure 88a: SAR 109T exploded views (with metal sight)

PARTS LIST SAR 109T (With metal sight)

NO	PART DESCRIPTION	NO	PART DESCRIPTION	NO	PART DESCRIPTION
1	PIN SAFETY ASSEMBLY PIN	31	BOLT HANDLE LATCH SPRING	61	RAIL PROTECTOR
2	EXTRACTOR HELICAL PIN	32	BOLT HANDLE LATCH PIN	62	TRIGGER GUARD
3	SEAR	33	DISASSEMBLY PIN SPRING	63	METAL REAR SIGHT COMPLETE
4	TRIGGER	34	DISASSEMBLY PIN PLUNGER	64	METAL FRONT SIGHT COMPLETE
5	BOLT CATCH	35	DISASSEMBLY PIN	65	MAGAZINE SPRING
6	HAMMER	36	PIVOT PIN	66	MAGAZINE FOLLOWER
7	MAGAZINE CATCH BUTTON	37	STOCK FIXING NUT	67	TWO-SIDED MAGAZINE LATCH
8	FIXED EJECTOR	38	BUFFER SPRING	68	TWO-SIDED MAGAZINE LATCH LEVER
9	TRIGGER AND HAMMER PIN	39	BUFFER HOUSING	69	MAGAZINE LATCH PLUG
10	TRIGGER SPRING	40	BUFFER WEIGHT	70	TWO-SIDED MAGAZINE LATCH SPRING
11	DISCONNECTOR SPRING	41	BUFFER DAMPER	71	STOCK COMPLETE
12	HAMMER SPRING	42	BUFFER HOUSING PLUG	72	SLING SWIVEL COMPLETE
13	BOLT CATCH PIN	43	BUFFER HOUSING PIN	73	STOCK GUIDE LOCK
14	BOLT CATCH PLUNGER	44	FLASH SUPPRESSOR	74	SAFETY SHAFT
15	BOLT CATCH AND BUFFER FIXER SPRING	45	FLASH SUPPRESSOR WASHER	75	UPPER RECEIVER
16	SAFETY PLUNGER	46	BARREL POSITIONING PIN	76	LOWER RECEIVER
17	SAFETY PLUNGER SPRING	47	TACTICAL BARREL NUT	77	BARREL
18	GRIP	48	FOLDING SIGHT REAR SIGHT SIDE ADJUSTMENT DRUM	78	BOLT CARRIER
19	GRIP BOLT	49	FOLDING SIGHT REAR SIGHT SIDE ADJUSTMENT DRUM PIN	79	BOLT HANDLE
20	GRIP BOLT WASHER	50	FOLDING SIGHT TIGHTENING NUT	80	PIN
21	SEAR SPRING	51	FOLDING FOREGRIP BEARING	81	GUIDE
22	SEAR SPRING PIN	52	FOLDING FOREGRIP	82	TACTICAL FOREND
23	SEAR ASSEMBLY PIN	53	FOLDING FOREGRIP LOCK	83	DISCONNECTOR
24	TRIGGER GUARD PIN	54	FOLDING FOREGRIP LOCK SPRING	84	MAGAZINE FRAME
25	BUFFER FIXER	55	FOLDING FOREGRIP LOCK NUT	85	MAGAZINE LOWER COVER
26	BOLT REAR WEIGHT	56	FOLDING FOREGRIP TIGHTENING NUT	86	MAGAZINE SPRING BOTTOM TABLE
27	BOLT REAR WEIGHT PIN	57	HAMMER (J) SPRING	87	SAFETY COVER COVER SHORT
28	EXTRACTOR	58	PIN SAFETY	88	RAIL CONNECTOR COMPLETE
29	PIN SPRING	59	PIN SAFETY SPRING	89	TWO - SIDED SLING COMPLETE
30	BOLT HANDLE LATCH	60	SAFETY CATCH PIN		

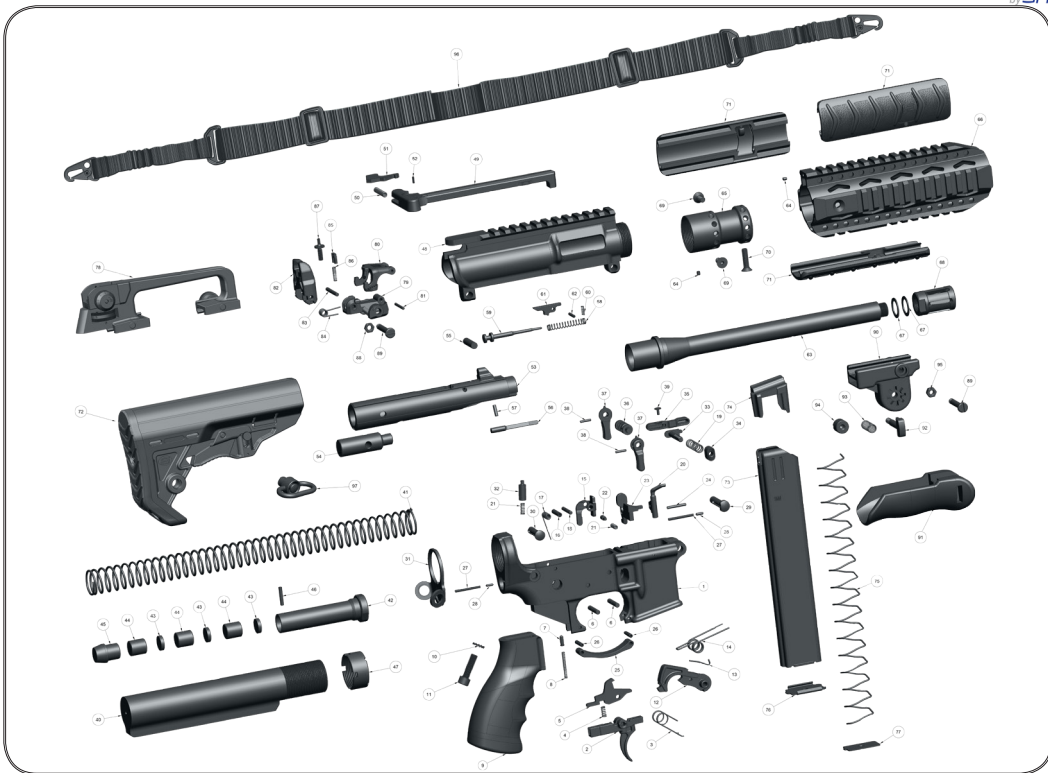
SAR 109T
Exploded views
(With carry handle)

Figure 90a: SAR 109T exploded views (with carry handle)

PARTS LIST SAR 109T (With carry handle)

NO	PART DESCRIPTION	NO	PART DESCRIPTION	NO	PART DESCRIPTION
1	LOWER RECEIVER	33	MAGAZINE CATCH	65	TACTICAL BARREL NUT
2	TRIGGER	34	MAGAZINE CATCH BUTTON	66	TACTICAL FOREND
3	TRIGGER SPRING	35	MAGAZINE LATCH	67	FLASH SUPPRESSOR WASHER
4	DISCONNECTOR SPRING	36	SAFETY	68	FLASH SUPPRESSOR
5	DISCONNECTOR	37	SAFETY CATCH	69	TACTICAL FOREND SHORT ASSEMBLY BOLT
6	TRIGGER AND HAMMER PIN	38	SAFETY CATCH HELICAL PIN	70	TACTICAL FOREND LONG ASSEMBLY BOLT
7	SAFETY PLUNGER	39	MAGAZINE LATCH PLUG	71	RAIL PROTECTOR
8	SAFETY PLUNGER SPRING	40	GUIDE	72	STOCK COMPLETE
9	GRIP	41	BUFFER SPRING	73	MAGAZINE FRAME
10	GRIP NUT WASHER	42	BUFFER HOUSING	74	MAGAZINE FOLLOWER
11	GRIP BOLT	43	BUFFER DAMPER	75	MAGAZINE SPRING
12	HAMMER	44	BUFFER WEIGHT	76	MAGAZINE LOWER COVER
13	HAMMER (J) SPRING	45	BUFFER HOUSING PLUG	77	MAGAZINE SPRING BOTTOM TABLE
14	HAMMER SPRING	46	BUFFER HOUSING PIN	78	CARRY HANDLE COMPLETE
15	SEAR	47	STOCK FIXING NUT	79	FOLDING SIGHT LOWER FRAME
16	SEAR PIN	48	UPPER RECEIVER	80	FOLDING SIGHT LOCK
17	SEAR SPRING	49	BOLT HANDLE	81	FOLDING SIGHT LOCK PIN
18	SEAR ASSEMBLY PIN	50	BOLT HANDLE LATCH SPRING	82	FOLDING SIGHT FRONT SIGHT UPPER FRAME
19	MAGAZINE CATCH SPRING	51	BOLT HANDLE LATCH	83	FOLDING SIGHT ASSEMBLY PIN
20	FIXED EJECTOR	52	BOLT HANDLE LATCH PIN	84	FOLDING SIGHT SPRING
21	BOLT CATCH SPRING	53	BOLT CARRIER	85	FOLDING SIGHT FRONT SIGHT PLUNGER
22	BOLT CATCH PLUNGER	54	BOLT REAR WEIGHT	86	FOLDING SIGHT FRONT SIGHT PLUNGER SPRING
23	BOLT CATCH	55	BOLT REAR WEIGHT PIN	87	FRONT SIGHT
24	BOLT CATCH PIN	56	EXTRACTOR	88	FOLDING SIGHT TIGHTENING NUT
25	TRIGGER GUARD	57	EXTRACTOR HELICAL PIN	89	FOLDING SIGHT TIGHTENING NUT
26	TRIGGER GUARD PIN	58	PIN SPRING	90	FOLDING FOREGRIP BEARING
27	DISASSEMBLY PIN SPRING	59	PIN	91	FOLDING FOREGRIP
28	DISASSEMBLY PIN PLUNGER	60	PIN SAFETY SPRING	92	FOLDING FOREGRIP LOCK
29	PIVOT PIN 61 PIN SAFETY	61	PIN SAFETY	93	FOLDING FOREGRIP LOCK SPRING
30	DISASSEMBLY PIN	62	PIN SAFETY ASSEMBLY PIN	94	FOLDING FOREGRIP LOCK NUT
31	STOCK GUIDE CATCH	63	BARREL	95	FOLDING FOREGRIP TIGHTENING NUT
32	BUFFER FIXER	64	BARREL POSITIONING PIN	96	TWO - SIDED SLING COMPLETE
				97	SLING SWIVEL COMPLETE

The logo features a large, stylized letter 'S' composed of red and grey geometric shapes. The left side of the 'S' is formed by two parallel grey lines that taper towards the top. The right side is a solid red shape with a grey section at the bottom right. The text is positioned within the red area of the 'S'.

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1- 833 - SAR - GUNS

1- 833 - 727 - 4867

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