SG 751 SAPR

Manual

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1 Safety warnings Assault Rifle SG 751

1.1 Handling

The safety warnings in this booklet are important. By understanding the dangers inherent in the use of any firearm, and by taking the precautions described herein, you can enjoy complete safety in the use of your Rifle. Failure to heed any of these warnings may result in serious injury to you or others, as well as severe damage to the firearm or other property.

1.1.1 Dangerous Weapons

PISTOLS, REVOLVERS, SHOTGUNS and RIFLES are classified as FIREARMS or DANGEROUS WEAPONS and are sold by us with the specific understanding that we are not responsible in any manner whatsoever for their safe handling or resale under local laws and regulations. SAN Swiss Arms AG shall not be responsible in any manner whatsoever for malfunctioning of the firearm, for physical injury or for property damage resulting in whole or in part from (1) criminal or negligent discharge, (2) improper or careless handling, (3) unauthorized modifications, (4) defective, improper, hand-loaded, or reloaded ammunition, (5) corrosion, (6) neglect, or (7) other influences beyond our direct and immediate control.

This limitation applies regardless of whether liability is asserted on the basis of contract, negligence or strict liability (including any failure to warn). Under no circumstance shall SAN Swiss Arms AG be liable for incidental or consequential damages, such as loss of use of property, commercial loss and loss of earnings or profits.

1.1.2 15 commandments of firearms safety

1. ALWAYS carry the rifle loaded with the safety lever in the “S” (SAFE) position.
2. Keep the safety lever on “S” (SAFE) unless actually firing.
3. ALWAYS treat every gun as if it were loaded.
4. ALWAYS be sure the barrel is clear of any obstruction.
5. ALWAYS be sure of your backstop, what lies beyond and the safety of bystanders before you shoot.
6. ALWAYS use clean, dry, original factory- made ammunition of the proper type and caliber for your gun.
7. ALWAYS wear ear protection and safety glasses when shooting.
8. ALWAYS carry your gun so that you can control the direction of the muzzle if you fall or stumble.
9. NEVER shoot at a flat surface or water.
10. DO NOT leave an unattended gun loaded. Guns and ammunition should be stored separately, locked if possible, beyond the reach of children and careless adults.
11. NEVER allow your firearm to be used by anyone who has not read and understood this instruction and safety manual.
12. DO NOT point any gun, loaded or unloaded, at any undesired target.
13. 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.
14. NEVER drink alcoholic beverages or take drugs before or during shooting, as your vision and judgement could be seriously impaired making your gun handling unsafe.
15. ALWAYS seek a doctor’s advice if you are taking medication, to be sure you are fit to shoot and handle your rifle safely.

1.1.3 Protect your eyes and ears

Always wear adequate safety glasses and ear plugs or «earmuff» type protectors whenever you are hooting. Always make certain that persons close to you are similarly protected. Unprotected eyes may be injured by powder gas, carbon residue, lubricant, metallic particles or similar debris which may emanate occasionally from any firearm in normal use. Without ear protection, repeated exposure to shooting noise may lead to cumulative, permanent hearing loss.

1.1.4 Ammunition

1. Use only high quality, original factory- manufactured ammunition. Do not use cartridges that are dirty, wet, corroded, bent, or damaged. Do not oil cartridges. Do not spray aerosol-type lubricants, preservatives, or cleaners directly onto cartridges or where excess spray may flow into contact with cartridges Lubricant or other foreign matter on cartridges can cause potentially dangerous ammunition malfunctions. Use only ammunition of the caliber for which your firearm is chambered. The proper caliber is permanently engraved on your firearm; never attempt to use ammunition of any other caliber.

2. The use of reloaded, «remanufactured», hand-loaded, or other non-standard ammunition voids all warranties. Reloading is a science and improperly loaded ammunition can be extremely dangerous. Severe damage to the firearm and serious injury to the shooter or to others may result. Always use ammunition that complies with the industry performance standards established by the Sporting Arms and Ammunition Manufacturers' Institute, Inc. of the United States (SAAMI).

3. Firearms may be severely damaged and serious injury to the shooter or to others may result from any condition causing excessive pressure inside the chamber or barrel during firing. Excessive pressure can be caused by obstructions in the barrel, propellant powder overloads, or by the use of incorrect cartridges

or defectively assembled cartridges. In addition, the use of a dirty, corroded, or damaged cartridge can lead to a burst cartridge case and consequent damage to the firearm and personal injury from the sudden escape of high-pressure propellant gas within the firearm's mechanism.

4. **Immediately stop shooting and check the barrel for a possible obstruction whenever:**

   - You have difficulty in, or feel unusual resistance in, chambering a cartridge, or
   - A cartridge misfires (does not go off), or
   - The mechanism fails to extract a fired cartridge case, or
   - Unburned grains of propellant powder are discovered spilled in the mechanism, or
   - A shot sounds weak or abnormal. In such cases it is possible that a bullet is lodged part way down the barrel. Firing a subsequent bullet into the obstructed barrel can wreck the firearm and cause serious injury to the shooter or to bystanders.

5. Bullets can become lodged in the barrel:

   - If the cartridge has been improperly loaded without propellant powder, or if the powder fails to ignite, (ignition of the cartridge primer alone will push the bullet out of the cartridge case, but usually does not generate sufficient energy to expel the bullet completely from the barrel), or
   - If the bullet is not properly seated tightly in the cartridge case. When such a cartridge is extracted from the chamber without being fired, the bullet may be left behind in the bore at the point where the rifling begins. Subsequent chambering

of another cartridge may push the first bullet further into the bore.

6. If there is any reason to suspect that a bullet is obstructing the barrel, immediately unload the firearm and look through the bore. It is not sufficient to merely look in the chamber. A bullet may be lodged some distance down the barrel where it cannot easily be seen.

   IF A BULLET IS IN THE BORE, DO NOT ATTEMPT TO SHOOT IT OUT BY USING ANOTHER CARTRIDGE, OR BY BLOWING IT OUT WITH A BLANK OR ONE FROM WHICH THE BULLET HAS BEEN REMOVED: SUCH TECHNIQUES CAN GENERATE EXCESSIVE PRESSURE, WRECK THE FIREARM AND CAUSE SERIOUS PERSONAL INJURY.

   If the bullet can be removed with a cleaning rod, clean any unburned powder grains from the bore, chamber, and mechanism before resuming shooting. If the bullet cannot be dislodged by tapping it with a cleaning rod, take the firearm to a gunsmith.

7. Dirt, corrosion, or other foreign matter on a cartridge can impede complete chambering and may cause the cartridge case to burst upon firing. The same is true of cartridges which are damaged or deformed.

8. Do not oil cartridges, and be sure to wipe the chamber clean of any oil or preservative before commencing to shoot. Oil interferes with the friction between cartridge case and chamberwall that is necessary for safe functioning, and subjects the firearm to stress similar to that imposed by excessive pressure.

9. Use lubricants sparingly on the moving parts of your firearm. Avoid excessive spraying of any aerosol gun care product, especially where it may get on ammunition. All lubricants and aerosol spray lubricants in particular can penetrate cartridge primers and cause misfires. Some highly penetrative lubricants

can also migrate inside cartridge cases and cause deterioration of the propellant powder; on firing, the powder may not ignite. If only the primer ignites, there is danger that the bullet may become lodged in the barrel.

1.1.5 NEVER completely trust any safety

1. Your firearm comes equipped with an effective, well-designed safety device. HOWEVER, NEVER RELY COMPLETELY ON ANY SAFETY MECHANISM. It is NOT a substitute for cautious gun handling. NO safety, however positive or well-designed, should be totally trusted. Like all mechanical devices, the safety is subject to breakage or malfunction and can be adversely affected by wear, abuse, dirt, corrosion, incorrect assembly, improper adjustment or repair, or lack of maintenance. Moreover, there is no such thing as a safety which is «child-proof» or which can completely prevent accidental discharge from improper usage, carelessness, or «horseplay». The best safety mechanism is your own good sense; USE IT! Always handle your firearm as though you expect the safety NOT to work!

2. While handling any firearm, do not allow it to point at any part of your body or at another person. No harm will result if you obey this rule, even if an accidental discharge occurs.

3. Never carry this rifle with a cartridge in the chamber and the trigger cocked.

4. Always keep your finger off the trigger and point the muzzle in a safe direction when operating the gun release.

1.1.6 Loading

1. Always make sure the muzzle is pointed in a safe direction!

2. Never attempt to load or unload any firearm inside a vehicle, building or other confined space (except a properly constructed shooting range). Enclosed areas frequently offer no completely safe direction to point the firearm; if an accidental discharge occurs, there is great risk of injury or property damage.

3. Before loading, always clean all grease and oil from the bore and chamber, and check to be certain that no obstruction is in the barrel. Any foreign matter in the barrel could result in a bulged or burst barrel or other damage to the firearm, and could cause serious injury to the shooter or to others.

1.1.7 Firing

1. Keep the muzzle pointed in a safe direction and your finger away from the trigger when cocking any firearm.

2. Never carry about or leave unattended any firearm which is cocked and ready to fire! When cocked, it will fire from slight pressure on the trigger. An accidental discharge could easily result if you fall or drop the firearm, or if the firearm is struck or disturbed by someone or something.

3. Never fire any firearm with your finger, hand, face, or other part of your body over or adjacent to the ejection port, or in any position where you may be struck by reciprocating movement of the breech. Both the ejection of empty cartridge cases and the movement of the breech are part of the normal operating cycle of firearms, and pose no safety hazard to the shooter if the firearm is held in a normal grip and fired at arm's length.

4. Never allow other persons to stand beside you where they might be struck by an ejected cartridge case. The case is hot, and may be ejected with sufficient force to cause a burn or cut or injure an unprotected eye. Make certain there is a clear, unobstructed path for safe ejection of the fired case. Remember, the case may bounce off a hard object nearby and strike you or someone else.

5. If, while shooting, your firearm develops a mechanical malfunction or binding, or «spits» powder gas, or if a cartridge primer is punctured or a cartridge case is bulged or ruptured, or if the report on firing does not sound quite right, STOP SHOOTING IMMEDIATELY! It may be dangerous to continue. UNLOAD THE FIREARM – do NOT try «one more shot». Take the firearm and the ammunition to a gunsmith for examination.

6. While shooting any firearm, an unfired cartridge or fired cartridge case may occasionally become jammed between the slide and the barrel. Clear the jam as follows, WHILE KEEPING THE MUZZLE

POINTED IN A SAFE DIRECTION: Remove the magazine, then pull back the slide and lock it to the rear by pushing up the slide release. The jammed cartridge or case now can be removed by shaking it out or by picking it out with the fingers.

1.1.8 Unloading

1. Always make sure the muzzle is pointed in a safe direction!

2. Remember to clear the chamber after the magazine has been removed.

3. Never assume that any gun is unloaded until you have personally checked it!

4. After every shooting practice, make a final check to be certain the firearm is unloaded before leaving the range.

1.2 Transport and storage

When transporting your firearm to and from shooting activities, keep it unloaded for your safety and for the safety of others. When storing your firearm, keep it separated from ammunition, under lock and key if possible, and out of the reach of children and other inexperienced or unauthorized persons.

1.3 Maintenance

All firearms require periodic maintenance and inspection which may reveal a need for adjustment or repair. Have your firearm checked by a competent gunsmith annually even if it seems to be working well, since breakage, improper functioning or corrosion of some components may not be apparent from external examination. If you notice any mechanical malfunction, do NOT continue to use the firearm. UNLOAD the firearm and take it to a competent gunsmith immediately for a thorough examination. Similarly, if water, sand, or other foreign matter enters the internal mechanism, immediately dismantle the firearm for a complete and thorough cleaning. Failure to keep your firearm clean and in proper working order can lead to a potentially dangerous condition and an accident causing serious bodily injury or property damage may result.

1.4 Care and cleaning

1. Your firearm is delivered factory packaged and preserved with a light coating of protective grease and oils. Before loading make certain that all packing grease and oil has been cleaned from the bore and exposed mechanism.

2. Before you begin to disassemble your firearm for cleaning, always double-check to make sure it is unloaded!

3. After cleaning always check to be sure that no cleaning patch or other obstruction remains in the bore or chamber!

1.5 Parts

Our Service Department maintains a full complement of replacement parts. Even though most gunsmiths have the knowledge, training and ability to make the necessary repairs to your firearm, the skill and workmanship of any particular gunsmith is totally beyond our control. Should your firearm ever require service, we strongly recommend that you return it to SAN Swiss Arms AG. Follow the instructions outlined below. Remember, unauthorized adjustments of parts replacement can void your warranty.

A firearm is a precision instrument and some replacement parts will require individual fitting to insure correct operation.

A wrong part, improper fitting or incorrect mechanical adjustment may result in an unsafe condition or dangerous malfunction, damage to the firearm, or possible serious injury to the shooter or to others. IF ANY PART IS ORDERED WITHOUT RETURNING THE FIREARM TO SAN SWISS ARMS AG, the customer bears full responsibility for ensuring that the part supplied is correct for his particular firearm and is properly installed and fitted by a qualified gunsmith. SAN SWISS ARMS AG CANNOT BE RESPONSIBLE FOR THE FUNCTIONING OF ANY FIREARM IN WHICH REPLACEMENT PARTS ARE INSTALLED BY OTHERS.

1.6 SAN SWISS ARMS AG service policy

Before shipment your firearm was carefully inspected and test fired in order to ensure that it conformed to our specifications and standards. Should your firearm require adjustment, repair or refinishing, we strongly recommend that you return it to SAN Swiss Arms AG for factory service.

If there is any question regarding the performance of your firearm, please write to SAN Swiss Arms AG. Service Department fully describing all circumstances and conditions involved. If our Service Department makes the determination that your firearm requires factory service, you will be so advised and will be given instructions for the most expeditious handling of your shipment.

Our Service Department will give your firearm a complete inspection, and evaluate the problem(s) specified in your letter. If the work required is not covered under the terms of our «Limited Warranty» (a copy is enclosed with your firearm), you will receive an actual cost quotation, not an estimate. Any repair work must be authorized by you, and no work will be done without your express approval.

To return any firearm to us for adjustment, repair or refinishing, please follow these suggestions to expedite service:

1. Only Federally licensed dealers may ship handguns via mail. Handguns mailed by individuals are confiscated by the Post Office.

2. Federal law permits you to return your firearm to the manufacturer for service via common carriers or, if your firearm is a rifle or shotgun, by mail. However, state and local firearms laws vary greatly; you should consult your local prosecuting attorney regarding any restrictive laws in your jurisdiction regarding your shipment or receipt of firearms. With the above in mind, it is strongly recommended that any firearm sent to us for repair be sent through a Federally licensed dealer.

3. All firearms must be shipped to us prepaid.
   WE WILL NOT ACCEPT COLLECT SHIPMENTS.

4. Firearms returned for repair should be addressed to:

   SAN Swiss Arms AG
   Industrieplatz
   8212 Neuhausen am Rheinfall
   Switzerland

5. Be sure to enclose a letter stating serial number, caliber and barrel length of your firearm. Also state nature of trouble experienced or work required. Merely stating «defective» or «repair as necessary» is inadequate information. Be specific and enclose copies of any previous correspondence.

6. FIREARMS MUST BE SHIPPED UNLOADED. Double-check the chamber of your firearm before shipping. If firearms are sent to SAN Swiss Arms AG in a loaded condition, we are required by law to notify the Federal authorities.

7. DO NOT include telescopic sights, custom stocks, slings, or other accessories with any firearm shipped to us.

2 Weapon theory

2.1 Weapon description

2.1.1 General

The SG751 is a gas operated weapon with rotary bolt mechanism.

Figure 1: SG 751 LB Long barrel version with flip up front and rear sight, Picatinny rail, foldable butt stock and plastic handguard

Figure 2: SG 751 SB Short barrel version with flip up front and rear sight, Picatinny rail, foldable butt stock and plastic handguard

2.2 Field of application

SG 751 LB
SG 751 SB

- at distances of up to 500 m / 546 yds.
  - in semi automatic fire
  - in rapid semi automatic fire
  - in three-round bursts (optional*)
  - in full auto operation (optional*)
- at distances of up to 600 m / 656 yds. when fitted with telescopic sights

*Optional also implies subject to the legal situation in different countries.

2.2.1 Barrel LB / SB with receiver, Picatinny rail and gas system

The barrel is screwed into the receiver. The muzzle is fitted with screwed on or integrated flash suppressor. The front sight mount, which is fixed to the barrel, contains the gas port, accepts the front sight and gas system and also serves as a support for the handguard.

The receiver guides the bolt and houses the locking system. The rear sight mount with diopter drum or integrated Picatinny-rail with flip up rear sight are also mounted on top of the receiver.

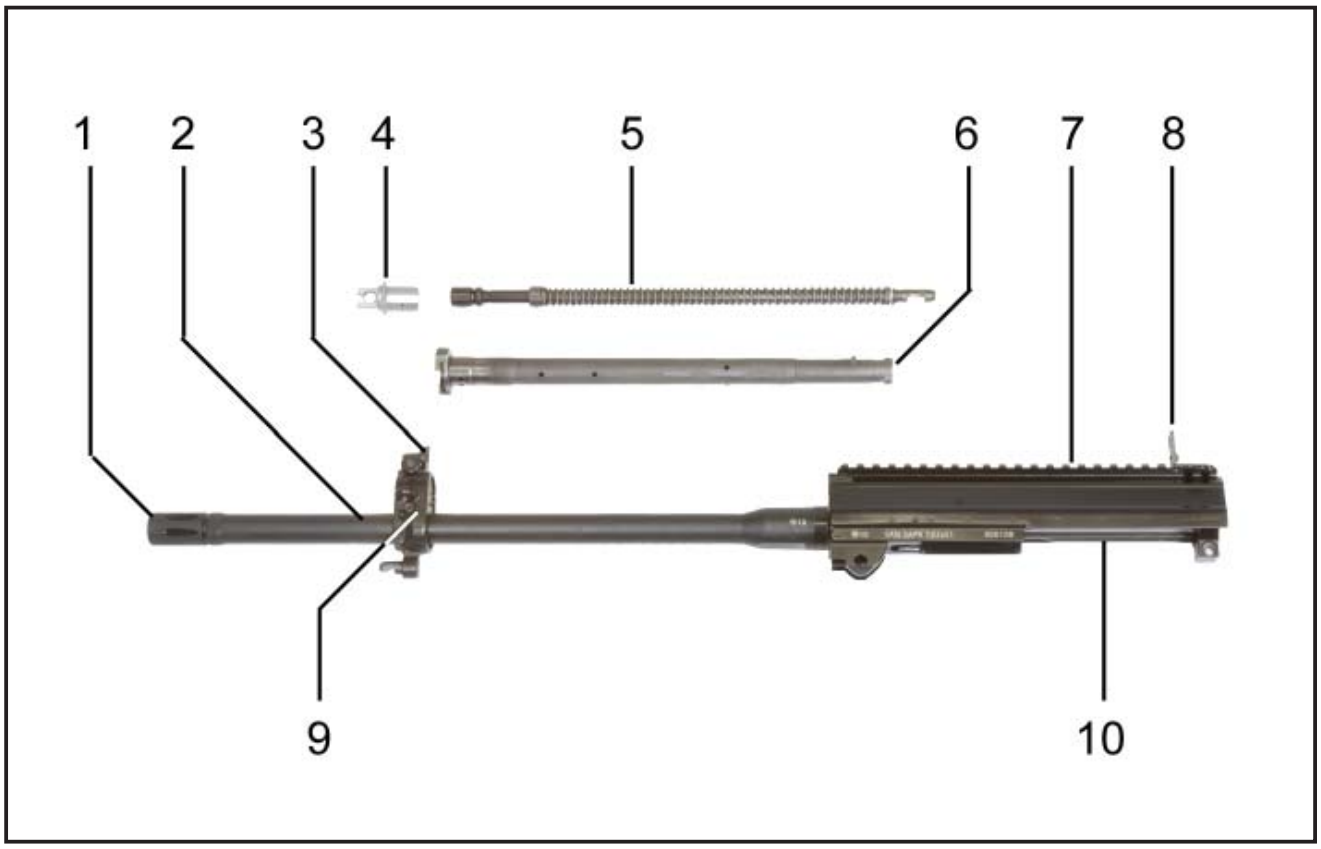


Figure 3: Barrel LB with receiver casing, Picatinny rail und gas system

(1) Flash suppressor
(2) Barrel LB
(3) Front sight
(4) Gas valve
(5) Gas piston with recoil spring
(6) Gas tube
(7) Picatinny rail
(8) Rear sight
(9) Front sight mount
(10) Receiver casing

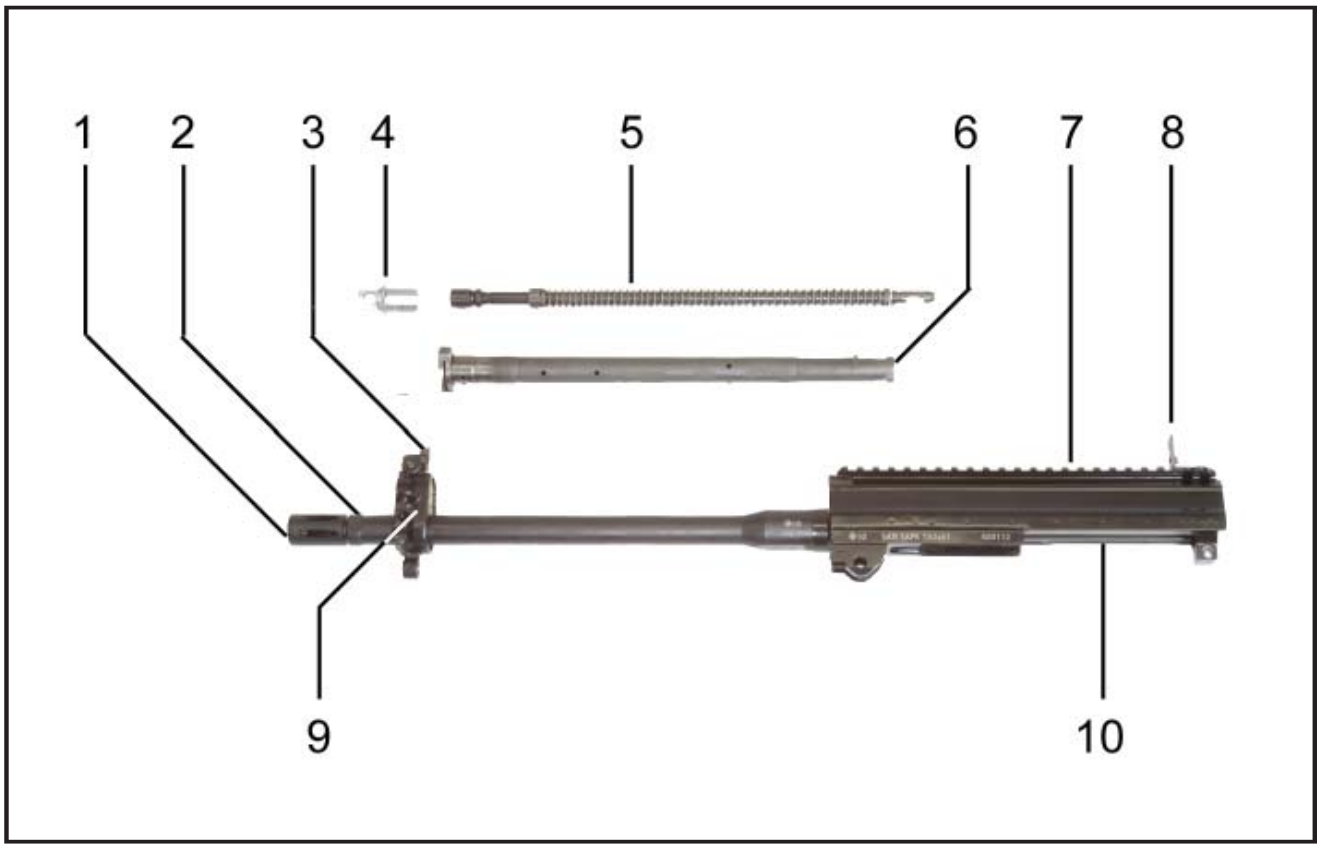


Figure 4: Barrel SB with receiver casing, Picatinny rail und gas system

(1) Flash suppressor
(2) Barrel SB
(3) Front sight
(4) Gas valve
(5) Gas piston with recoil spring
(6) Gas tube
(7) Picatinny rail
(8) Rear sight
(9) Front sight mount
(10) Receiver casing

2.2.2 Bolt

The bolt consists of two main parts:

- Bolt head
- Bolt carrier

Bolt head

The bolt head locks the bolt assembly, houses the firing pin and the extractor and feeds the cartridges to the chamber.

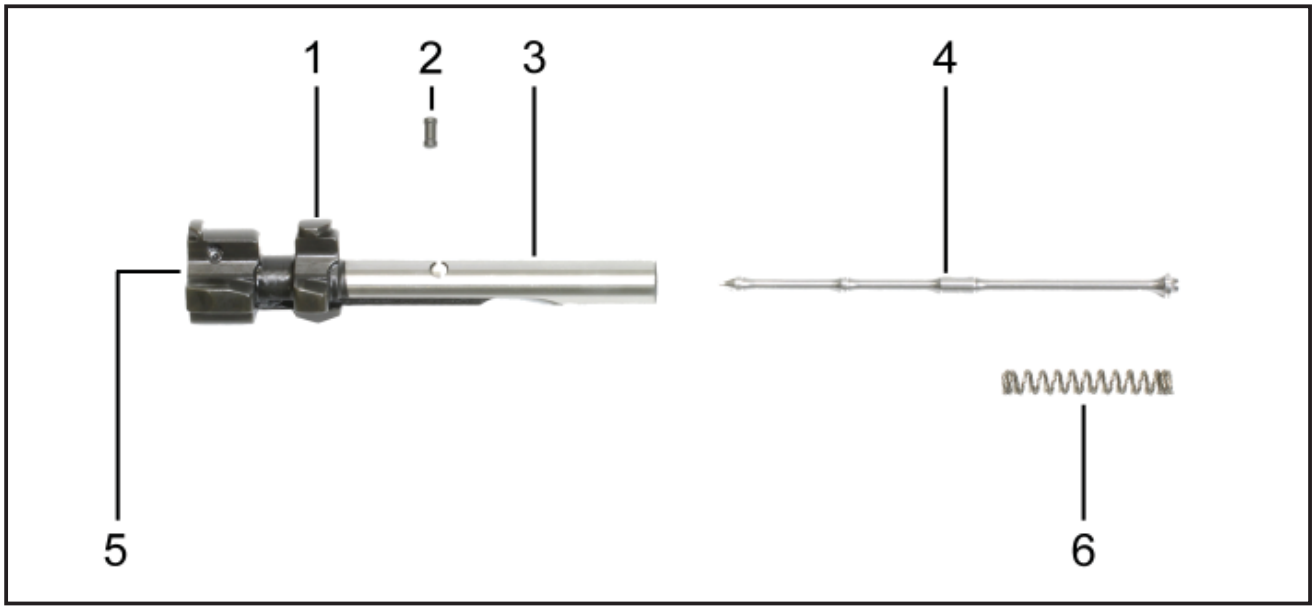


Figure 5: Bolt head

(1) Control cam
(2) Firing pin stud
(3) Bolt head
(4) Firing pin
(5) Extractor
(6) Firing pin spring

Bolt carrier

The bolt carrier guides the bolt head, controls the locking and unlocking by means of the cam, holds the gas piston and cocks the hammer.

(1) Bolt carrier

(2) Cam

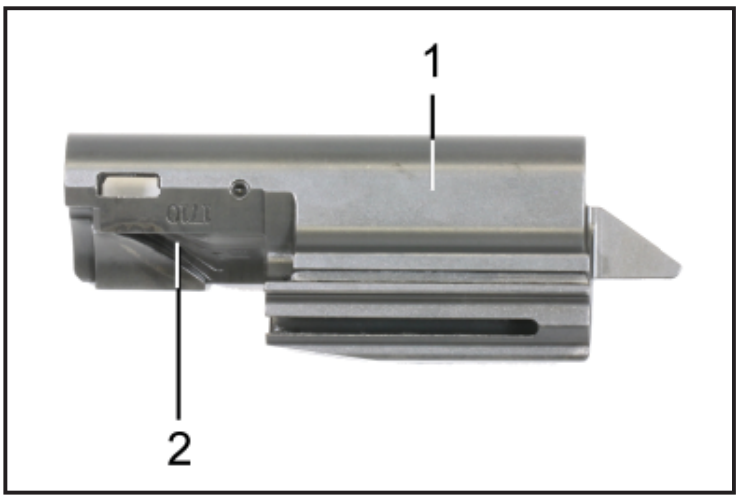


Figure 6: Bolt carrier from left

(1) Cocking lug

(2) Bolt carrier

(3) Charging handle catch

(4) Charging handle

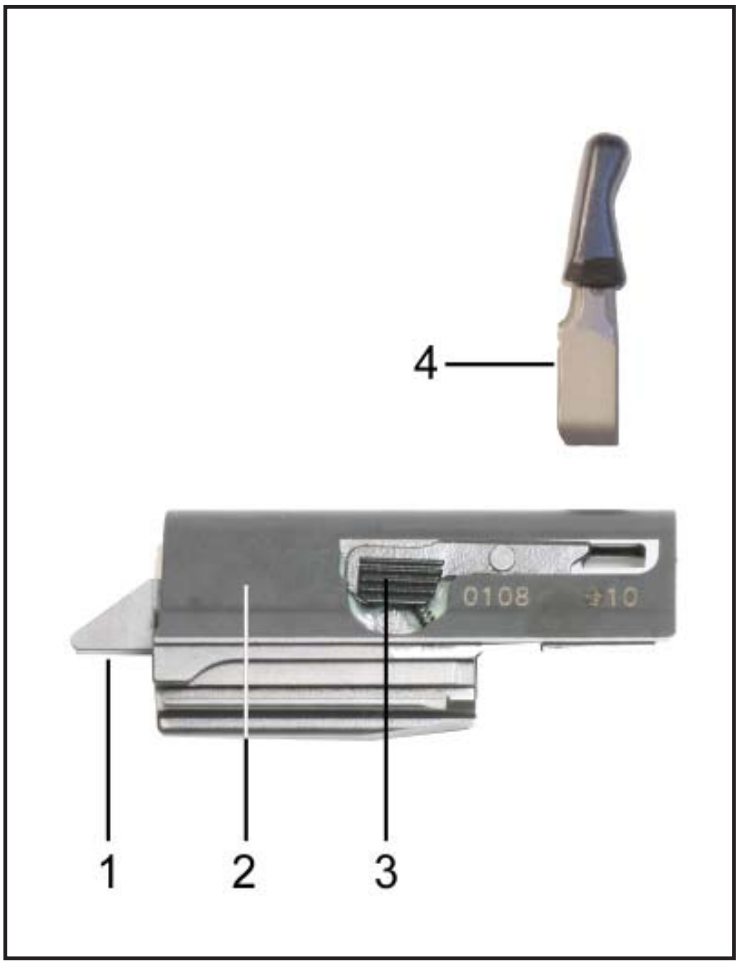


Figure 7: Bolt carrier from right with charging handle

2.2.3 Handguard

The handguard protects the barrel and the gas system from damage and provides protection from burning.

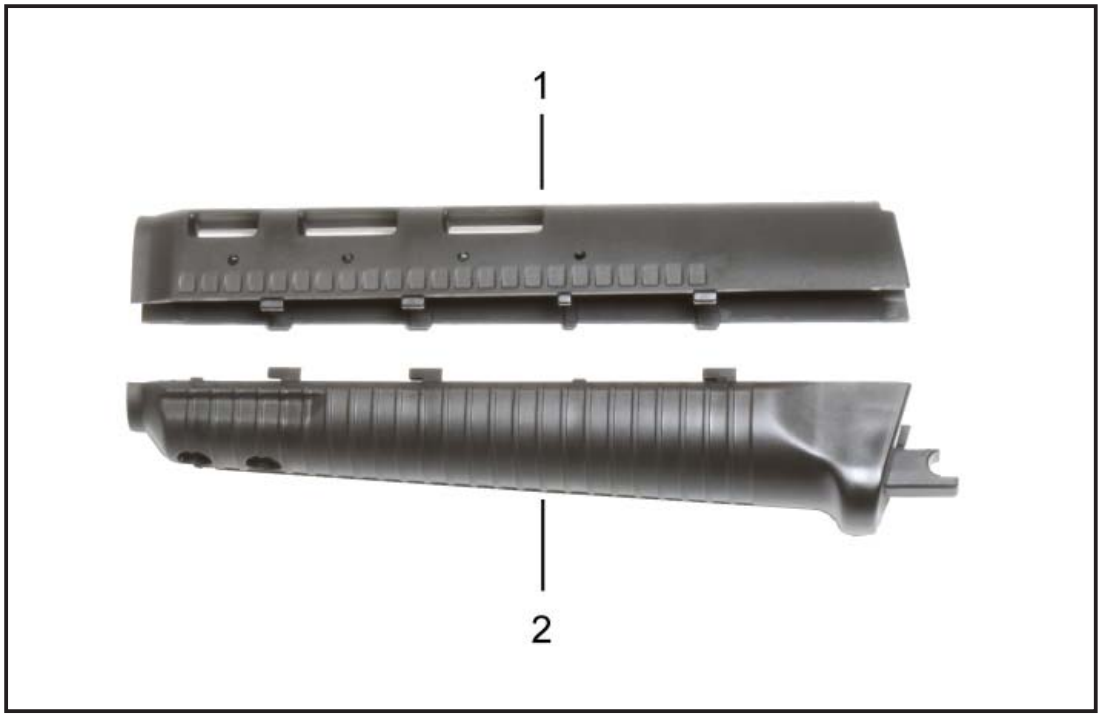


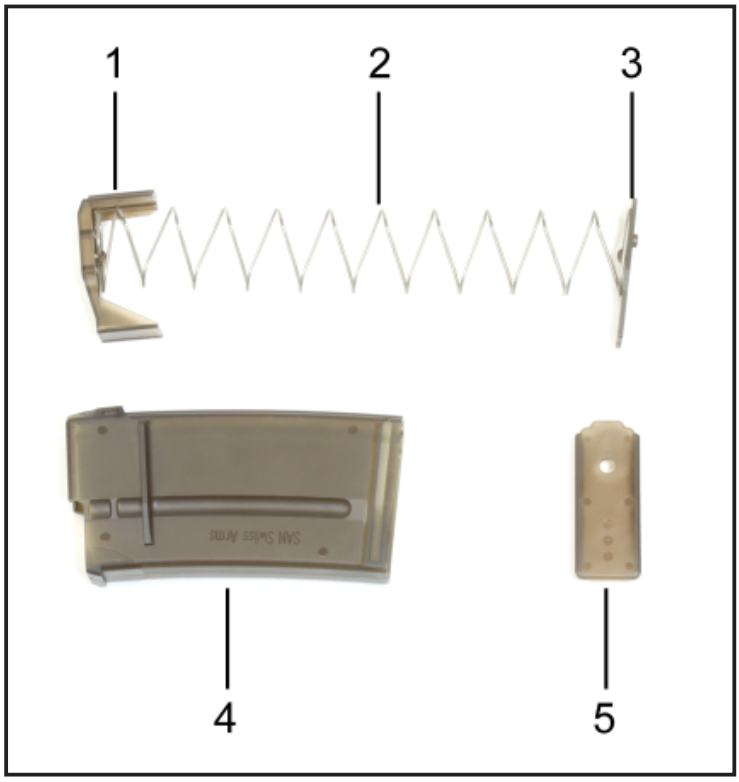
Figure 8: Plastic Handguard

(1) Handguard, upper part

(2) Handguard, lower part

2.2.4 Magazine

The magazine is transparent and has a capacity of 20 rounds.
It can be charged without any auxiliary tools.



(1) Feeder

(2) Magazine spring

(3) Magazine floorplate catch

(4) Magazine casing

(5) Magazine floorplate

Figure 9: Magazine 20 rounds, not connectable

2.2.5 Trigger assembly and butt stock

The trigger assembly comprises all the parts required for firing a shot. The safety lever on both sides can be set to four* positions:

Position «S»	=	The weapon is locked in the safe position
Position «1»	=	The weapon will fire semi auto
Position «3»	=	The weapon fires 3-round burst*
Position «20»	=	The weapon fires in the full auto mode*

*Optional also implies subject to the legal situation in different countries.

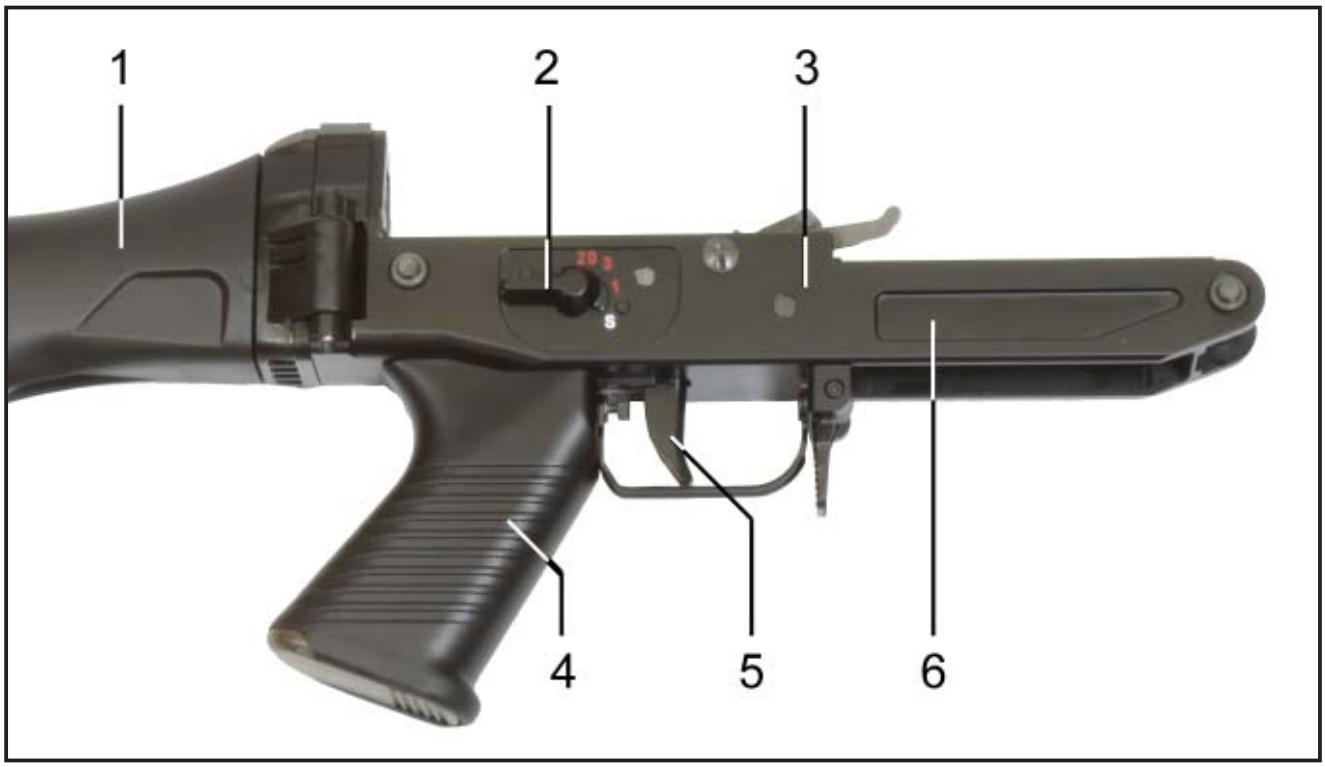


Figure 10: Trigger assembly and butt stock from right

(1) Butt stock

(2) Safety lever

(3) Trigger casing

(4) Pistol grip

(5) Trigger

(6) Magazine catch

By pivoting the trigger guard to the right or left side the trigger becomes accessible for shooting with mittens.

For safety reasons the trigger guard must not be shifted until just before firing the weapon, and after firing it should be immediately replaced in the normal position.

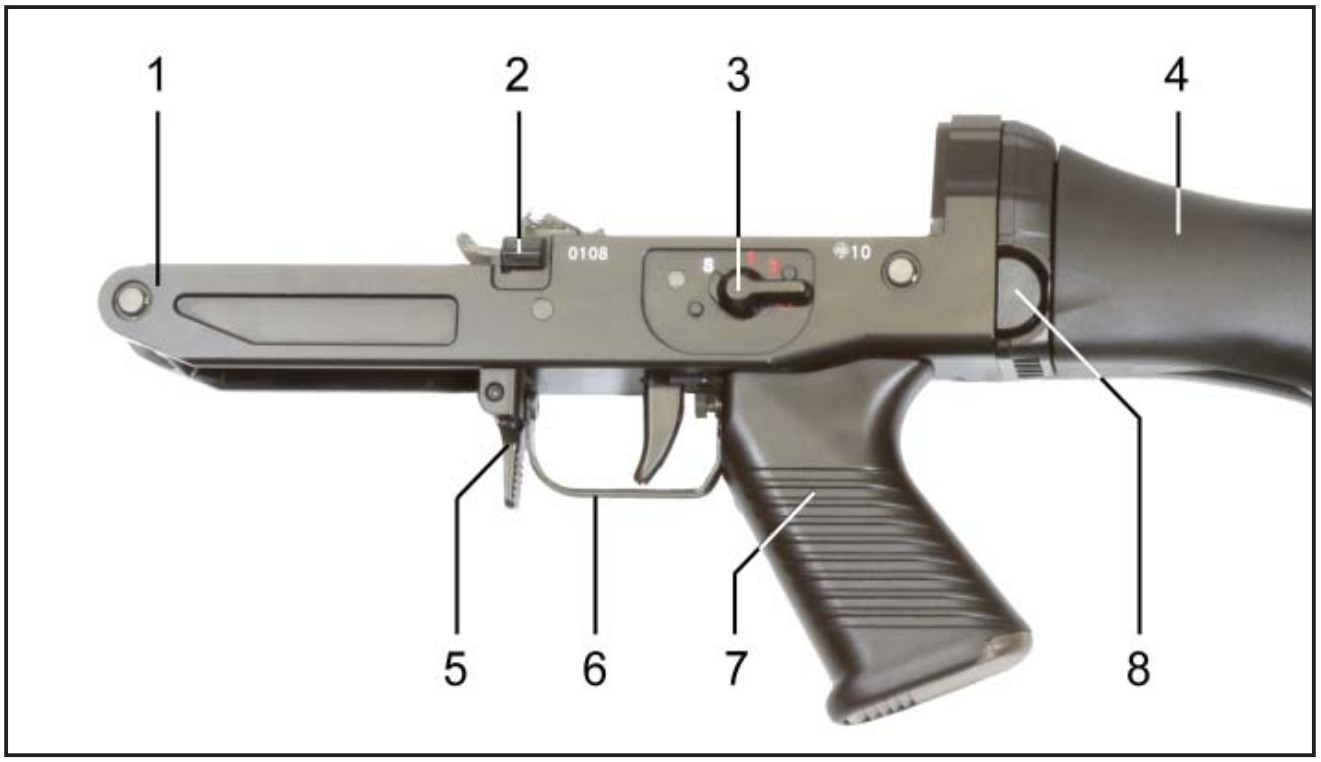


Figure 11: Trigger assembly and butt stock from left

(1) Trigger casing

(2) Bolt catch

(3) Safety lever

(4) Butt stock

(5) Magazine catch

(6) Trigger guard

(7) Pistol grip

(8) Butt stock catch

2.3 Sights mechanism

The sights mechanism consists of the flip up and diopter sights.

2.3.1 Flip up sight mechanism

The rear sight is marked with «100», corresponding to firing range 100 m / 109 yds.

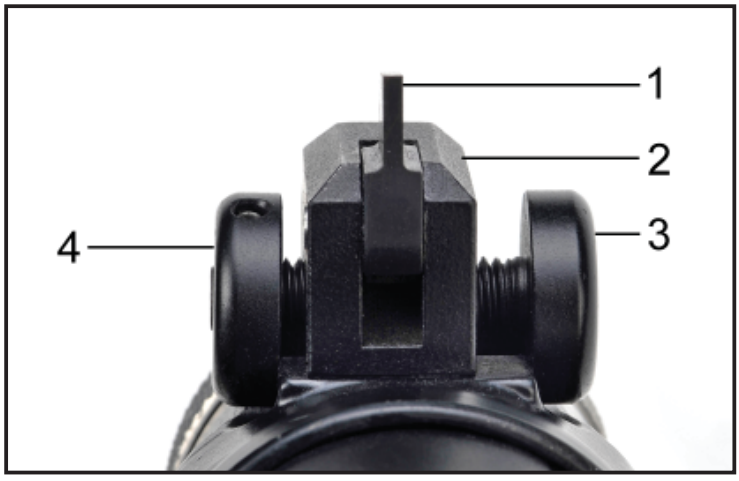
The front sight is fixed to its mount with the front sight screw. The folding front sights are mounted on the lower part of the front sight.

(1) Rear sight holder

(2) Rear sight plate

(3) Flat head screw

Figure 12: Flip up rear sight



(1) Front sight

(2) Front sight holder

(3) Front sight screw

(4) Front sight disc

Figure 13: Flip up front sight

2.4 Technical specifications

2.4.1 SG 751 LB

Caliber ..... 7.62 x 51 mm

Total length ..... 960 mm

Length with butt stock folded ..... 733 mm

Barrel

Barrel length ..... 455 mm

Number of grooves 6

Rifling

SG 751 SAPR ..... right 11 inches

Sights

Type ..... Flip up sights

Sight base ..... 500 mm

Range adjustment ..... 100 m

Trigger pull weight ..... 35 N

Weight

Weapon incl. empty magazine ..... 3820 g

Empty twenty-round magazine ..... 150 g

Loaded twenty-round magazine ..... 630 g

Subject to change without notice.

2.4.2 SG 751 SB

Caliber ..... 7.62 x 51 mm

Total length ..... 870 mm

Length with butt stock folded ..... 643 mm

Barrel

Barrel length ..... 365 mm

Number of grooves 6

Rifling

SG 751 SAPR ..... right 11 inches

Sights

Type ..... Flip up sights

Sight base ..... 500 mm

Range adjustment ..... 100 m

Trigger pull weight ..... 35 N

Weight

Weapon incl. empty magazine ..... 3630 g

Empty twenty-round magazine ..... 150 g

Loaded twenty-round magazine ..... 630 g

Subject to change without notice.

2.5 Accessories

Every SG 751 has the following accessories:

- carrying sling
- cleaning kit

Figure 14: Carrying sling

Carrying sling in woven nylon with two hooks, an adjustment clip and a buckle

Figure 15: Cleaning kit NATO

(1) Weapon oil

(2) Weapon grease

(3) Case

(4) Cleaning brush with gas valve cleaning tool

(5) Cleaning rod sections (3 pcs.)

(6) Cleaning rod handle

(7) Cleaning cord for barrel cleaning

(8) Cleaning jag

(9) Barrel brush

(10) Grease brush

(11) Chamber cleaning tool

(12) Gas tube brush

3 Handling

3.1 Safety instructions

1. The assault rifle is to be considered as loaded until the user is convinced of the contrary on the basis of his personal safety check.

2. If the rifleman is holding the assault rifle in his hand the barrel must never be aimed at anything that he does not want to hit.

3. The trigger finger is to rest outstretched against the trigger casing while the sights mechanism is not aiming at a target.

4. Every rifleman is responsible for the use of his assault rifle. He also immediately discontinues firing against a command to the contrary if he is convinced that he discerns a danger to humans and animals or damage to material.

5. A barrel check must be performed prior to firing practice. Each shooter is responsible for the barrel check himself.

6. An unloading check is to be performed at the end of every firing practice. Each shooter performs the unloading check himself.

7. The barrel must point in a safe direction while handling.

8. Only Manip Pat may be used for training in weapons handling.

9. Before entering the firing range:

   a. The weapon is unloaded and the magazine kept separate from it;
   b. The automatic firing lock is activated (white point visible);
   c. The barrel check is performed;
   d. The bolt is opened and locked in place with the bolt catch.

10. At the firing range:

    a. The assault rifle is to be left alone with bolt open, without magazine and secured in the gun rack;
    b. The assault rifle may only be loaded in the shooting position; the assault rifle must be unloaded before leaving the shooting position; the bolt remains open;
    c. All handling in the shooting position is to be carried out with the weapon in the firing position;
    d. The unloading check is to be performed after shooting at the range.

11. Upon leaving the firing range the automatic firing lock has to be set relative to use (OPTIONAL).

12. Resting the assault rifle on a human body while firing is prohibited.

13. Hearing is to be protected with a hearing protector when shooting.

14. The assault rifle may be loaded under cover, but the safety catch may only be released in the shooting position. It can be reset upon leaving the shooting position.

15. When firing while in motion the various firing positions are considered to be the shooting position.

16. The contact position parallels the shooting position.

17. When repositioning the safety lever the trigger must not be squeezed at the same time.

18. Single, semi-auto burst or full-auto fire while in motion may only be shot when walking..

19. Single, semi-auto burst or full-auto fire may be shot while in motion as long as the assault rifle is rested against the shoulder and is not overshot or shot wide.

20. Shooting off more than six magazines in succession is prohibited, no matter which type of fire and ammunition is selected. The assault rifle may only be reloaded when it has cooled off sufficiently so that the barrel can be gripped with bare hands. Whenever possible submerge the weapon in water for cooling. In cold weather or snow, however, it must not be dipped in the snow or submerged in water.

21. If this instruction is not followed, autoignition or serious damage due to the assault rifle overheating can occur.

22. The weapon - bullet trap distance must be at least 50 m, provided that the bullet trap is available in soft material visibly free of stones (in permanent firing ranges particular rules apply with respect to the composition of the bullet trap).

23. If these conditions are met, there is no limit to the weapon - troop distance when shooting at wood, cardboard, plastic and roller discs, as well as discs with sackcloth covering.

3.2 Loading the weapon

1. Put the safety lever to position «S».

2. Swing the trigger guard into the vertical position.

3. Insert the magazine and check that it is properly seated by pressing forward.

4. Carry out loading movement (pull the charging handle fully back and let it fly forward).

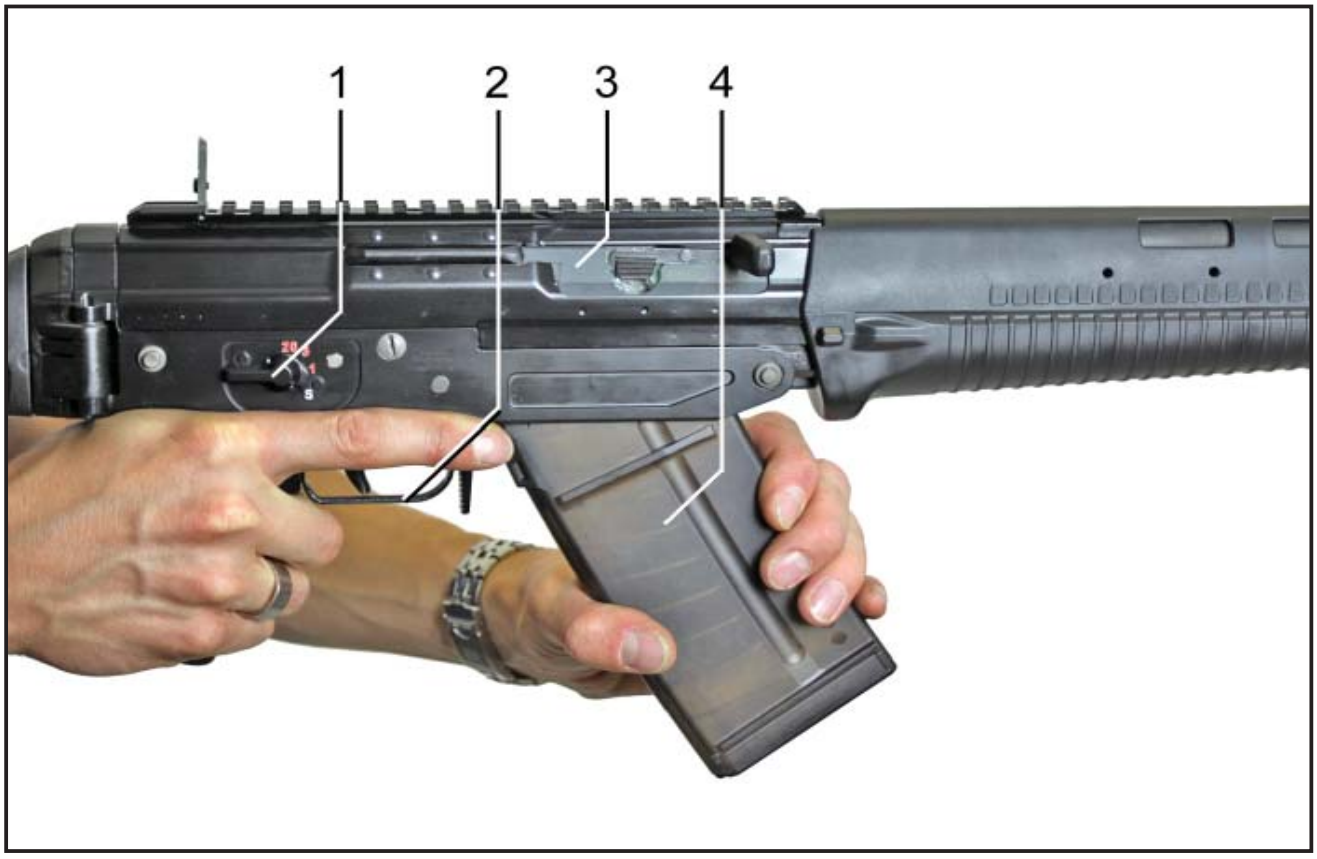


Figure 16: Inserting the magazine

(1) Safety lever

(2) Trigger guard

(3) Bolt

(4) Magazine

3.3 Unloading

1. Put safety lever to position «S».
2. Swing trigger guard into vertical position.
3. Remove magazine by pressing magazine catch.
4. Carry out loading movement, with bolt retracted, check for empty chamber.
5. Switch safety lever to «1», pull trigger (with weapon pointing at target), switch safety lever to «S».

Figure 17: Check the chamber

(1) Chamber

3.4 Changing the magazine

1. Put the safety lever to position «S».
2. Swing trigger guard into vertical position.
3. Remove magazine by pressing magazine catch.
4. Insert loaded magazine and check that it is properly seated by pushing forward.

3.5 Reloading

1. Put the safety lever to position «S».
2. Swing trigger guard into vertical position.
3. Remove empty magazine by pressing magazine catch.
4. Insert loaded magazine and check that it is properly seated by pushing forward.
5. Push the bolt catch up or pull back the charging handle slightly and allow the bolt to fly forward.

Figure 18: Push the bolt catch up

4 Aiming, firing, adjusting

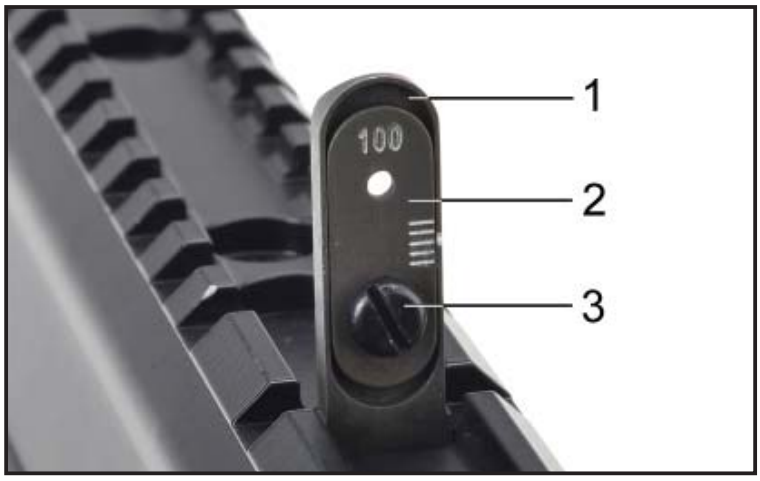
4.0.1 Aiming, firing with flip up sight

To aim, align the eye, flip up rear sight, front sight and target.
At all ranges, the front sight should be aimed at the center of the target.
Firing is herefore to point of aim.

4.0.2 Adjusting

To correct the elevation, release the flat head screw of the flip up sight and shift the sight plate up- or downwards respectively, then lock the flat head screw.

Elevation:
High shots are corrected to shift the sight plate down.
Low shots are corrected to shift the sight plate up.



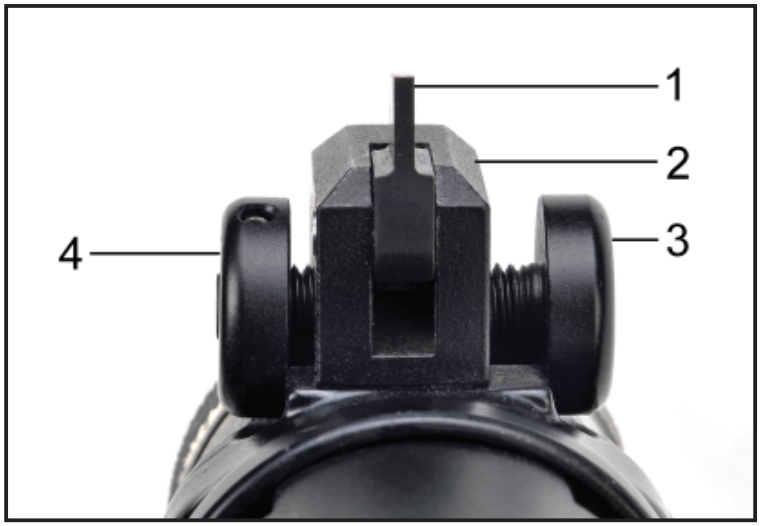
(1) Rear sight holder

(2) Rear sight plate

(3) Flat head screw

Figure 19: Flip up rear sight

Windage:
Shots to the right are corrected by turning the front sight screw to the right.
Shots to the left are corrected by turning the front sight screw to the left.



(1) Front sight
(2) Front sight holder
(3) Front sight screw
(4) Front sight disc

Figure 20: Front sight

SG 751 with flip up sight
(average point of impact correction per one mark in the height and per one turn in the front sight screw)

Firing range	**Average point of impact correction per mark (flip up sight)**	
SG 751	Windage	Elevation
100 m / 109 yds.	2.2 cm / 0.9 inch	2.4 cm / 0.9 inches
200 m / 218 yds.	4.4 cm / 1.7 inches	4.8 cm / 1.9 inches
300 m / 328 yds.	6.6 cm / 2.6 inches	7.2 cm / 2.8 inches

4.1 Gas valve position

With the SG 751, the gas volume required for the function of the weapon can be controlled by the gas valve..

4.1.1 Position I

Rib of gas valve in position 1.4 (LB) or 1.7 (SB)

Under normal conditions, firing is effected in this position.

Figure 21: Gas valve position I

4.1.2 Position II

Rib of gas valve in position 1.6 (LB) or 1.9 (SB)

When cycling or ejection problems occur due to heavy fouling or icing-up, the gas valve is to be turned clockwise as far as the stop. In this position, a larger gas volume acts on the gas piston.

The adjustment of the gas valve is effected manually, and, in case of a hot or heavily fouled weapon, by means of a cartridge or auxiliary aid.

Firing with gas valve in position II is an exception. As soon as the weapon works, the gas valve must be turned back to position I, otherwise the recoil is intensified and the weapon is unnecessarily stressed.

Figure 22: Gas valve position II

4.1.3 Position III

Rib of gas valve in position 1.0 (LB) or 1.2 (SB)

For shooting with suppressor.

Figure 23: Gas valve position III

4.1.4 Position IV

Rib of gas valve in position X

For shooting with suppressor without self-loading function.

Figure 24: Gas valve position IV

4.2 Foldable butt stock

Thumb in the butt stock catch and fold the butt stock.

Figure 25: Butt stock folded

(1) Butt stock catch

(2) Butt stock

4.3 Firing with mittens

For firing with mittens the trigger guard can be pivoted to the left or right.

For safety reasons the trigger guard must be placed in the vertical position before carrying out any manipulations.

Figure 26: Trigger guard folded

(1) Trigger casing

(2) Trigger guard

4.4 Use of accessories

4.4.1 Carrying sling

One end of the sling hooks into the lug on the front sight mount; the other end is attached to the butt stock or the rear sight mount.

Its length can be adjusted with the adjustable buckle.

To maintain a taut sling, slip the clip over the sling strap.

Figure 27: Sling hooked to front sight mount

Figure 29: Fix the taut sling

Figure 28: Sling hooked to rear sight mount

Figure 30: Sling attachment to the butt stock

4.5 Field stripping

1. Unload weapon in accordance with point «3.3 Unloading» on page 40

2. Unlock carrying sling.

3. Press the rear trigger casing stud from both sides and withdraw it from the stud head side as far as the stop.

4. Put the weapon on its left side and swing out the trigger assembly.

Figure 31: Remove trigger assembly

5. Pull out the front trigger casing stud according to point. 3 and remove the trigger casing.

6. Press down the charging handle catch and remove the charging handle .

Figure 32: Remove charging handle

8. Use the charging handle to pull the bolt to the rear, remove the bolt from the receiver.

Figure 33: Pull bolt to the rear using charging handle

7. Twist the bolt head to remove it from the bolt carrier.

Figure 34: Remove bolt head (rotate)

Figure 35: Remove bolt head (pull)

8. Pull lower handguard to rear and lift it off.

9. Lift rear of upper handguard and extract it from the front sight mount.

Figure 36: Lift off lower handguard

10. Press down the gas valve catch and rotate the gas tube through 90° so that the notch on the headpiece lies on the barrel.

Figure 37: Remove gas valve

11. Pull the gas piston out from the front end..

Figure 38: Remove gas piston

12. Remove firing pin:

    - Hold the bolt against a firm surface so that the firing pin is completely pressed into the bolt head.

    - Use the cleaning rod handle to remove the retention stud. Extract the firing pin complete with spring.

Figure 39: Remove firing pin

13. Stripping the magazine:

    - Use the cleaning rod handle to press in the retention lug of the floorplate. Slide out magazine floorplate to the rear.

    - Pull out floorplate catch together with magazine spring and follower.

Figure 40: Stripping the magazine

14. If required, remove butt catch:

    - Turn the butt stock down
    - Press the butt catch in with charging handle, turn 90° counter clockwise and remove together with spring

Figure 41: SG 751 SB stripped

Additional dismantling may only be performed by a weapons and equipment mechanic.

Figure 42: SG 751 LB stripped

Additional dismantling may only be performed by a weapons and equipment mechanic.

4.6 Assembly

The weapon must always be assembled in the reverse order of stripping.

1. Insert the butt catch and the spring into the butt stock press it down with the charging handle and turn it 90° clockwise.

2. Assemble the magazine

3. Install firing pin:

   - Insert firing pin and spring into the bolt head. Ensure that the notch is correctly located to accept retention stud.
   - Press firing pin into the bolt head.
   - When the notch aligns with the stud hole, insert the stud.

Figure 43: Install firing pin

4. Install gas tube:

   - Slip the gas tube (flange notch pointing downwards) through the bore of the front sight mount and insert the end into the corresponding opening in the receiver.

   - Press the gas tube against the front sight mount and turn it through 90° to the right so that the retention stud of the gas valve registers in the flange.

5. Install gas rod with recoil spring

   - Slide the gas piston into the gas tube with locking notch pointed toward the barrel.

   - With your index finger check whether the gas tube springs freely (figure)

Figure 44: Install gas tube

6. Install gas valve:

   - Install the gas valve in the head end of the gas tube with the wider wings pointed toward the barrel.

   - Press locking bolt in and turn gas valve counter clockwise to the «I» position (vertical)

   - Check that gas valve catch has registered.

Figure 45: Install gas valve

7. Install the upper handguard

8. Install the lower handguard

9. Assemble the bolt head and carrier

10. Insert the bolt assembly

    - Slide bolt the head completely to the front by pressing the firing pin
    - Slide the bolt into receiver casing .

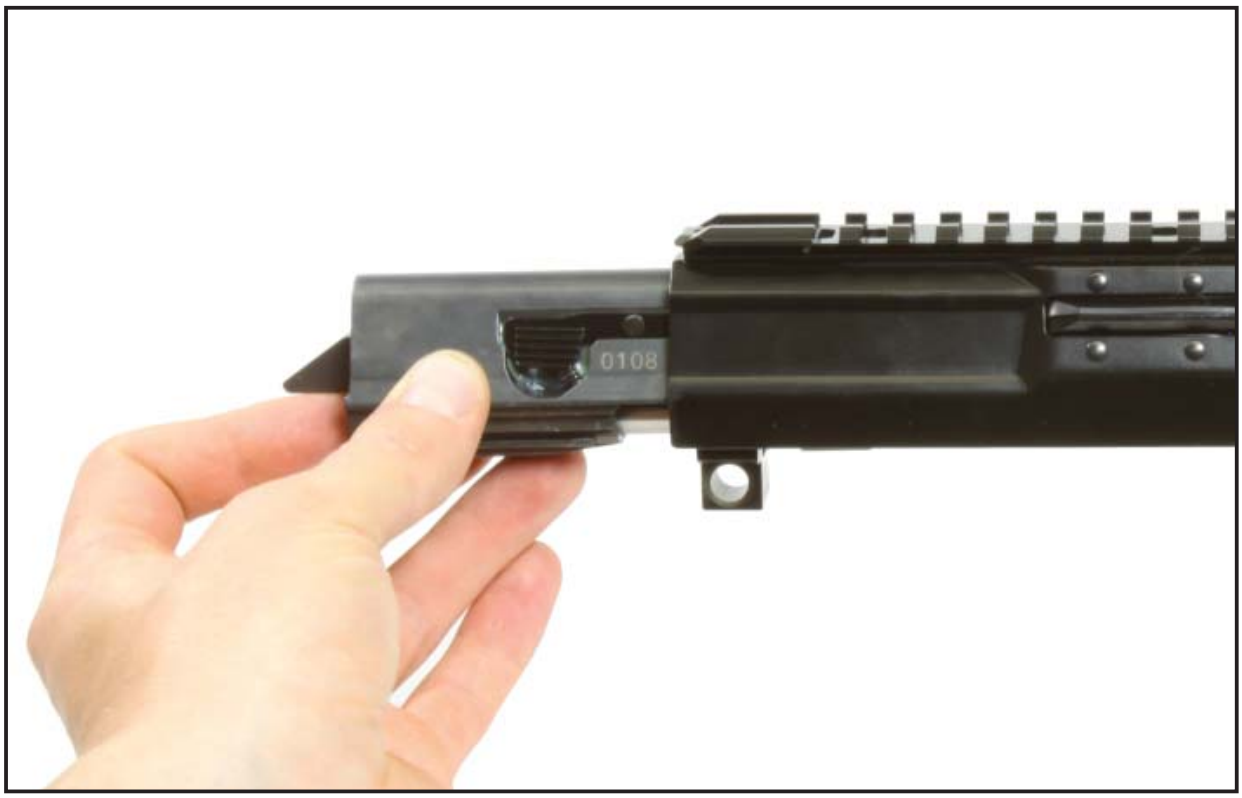


Figure 46: Insert bolt assembly

11. Insert the charging handle into its slot in the bolt carrier and check that it has registered with the catch.

12. Install trigger casing

    - Ensure that the holes in the front trigger casing stud overlap
    - Press the trigger casing stud through as far as the stop

13. Tilt up the trigger casing and fix with rear trigger casing stud.

14. The function check sould be carried out in accordance with Section „4.7 Verification of Functions“ on page 64

4.7 Verification of Functions

Each time the weapon is stripped, verify its functions as follows:

1. **Unload in accordance with „3.3 Unloading“**
2. **Remove magazine**
3. **Inspect serial numbers**
4. **Ensure that cocking handle has registered in correct position**
5. **Functions (a to f):**

   a.) With safety lever on «S» execute a loading cycle, pull the trigger
   - *Hammer must not drop, the trigger must be blocked*

   b.) With safety lever on «1», pull the trigger and hold it back

   - *Hammer must drop*

   With the trigger held down, cycle the weapon once

   - *Hammer must not drop*

   Release the trigger and pull it again

   - *Hammer must drop*

   c.) Execute loading cycle

   d.) Safety lever on «3», pull the trigger and hold it back

   - *Hammer must drop*

   With trigger held back, cycle the action
   (allow bolt to slide forward slowly)

   - *Hammer must drop immediately as the bolt locks up*

Repeat the loading cycle

- *On the third loading cycle, the hammer must not drop*

Release the trigger

e.) With safety lever on «20», repeat procedure as under with safety lever on «3» (see point d)

- *Hammer must drop each time*

f.) Pressure point

Cycle the weapon:

- *Safety lever on «1», verify several time that pressure point is discernible*

6. Insert empty magazine, check that it is located firmly

7. Bolt catch

a.) Execute loading cycle

- *Bolt must be caught in its rear position*

b.) Thumb up bolt catch

- *Bolt must immediately run forward*

c.) Pull the trigger, apply the safety lever

8. Check that the stowed butt is secured

4.8 Procedure in case of malfunction

Whenever a Weapon no longer works due to a malfunction, proceed as follows:

- Carry out loading movement
- Continue firing

If the weapon does not fire:

- Insert a fresh magazine
- Loading action
- Continue firing

If the weapon still does not fire:

- Put weapon on safe
- Remove magazine
- Loading action, hold bolt in rearmost position, check ejection of cases and, if necessary, remove any jammed cases or cartridges.
- Turn gas valve on position II when weapon is heavily fouled or iced up
- Insert fresh magazine and load
- Set safety lever to desired firing mode, continue firing

If the weapon still will not fire:

- Put weapon on safe
- Unload according to Section »3.3 Unloading» on page 40
- Clean weapon in accordance with «5.1.3 Cleaning after malfunctioning» on page 70
- Take up firing position
- Load
- Set safety lever to desired firing mode, continue firing

If the weapon cannot be unloaded or the fault rectified by the rifleman in accordance with the operating instructions, a trained expert must be consulted:

- If the weapon cannot be unloaded immediately and there is any danger of self-ignition due to a hot barrel (140° C / 284° F), wait at least 15 minutes.
- The weapon must remain in position as long as it is loaded.
- Spectators and other unnecessary persons must be sent away so that the problem can be tackled carefully without disturbance.
- As long as the weapon is loaded, only trained experts should be allowed to manipulate the weapon.

Malfunctions can largely be avoided by:

- Cleaning the weapon according to item «5.1.2 Cleaning after firing» on page 69 after each period of firing, at the latest just after setting the gas valve to position II.
- Carrying out cleaning in accordance with the regulations.
- Loading the magazine correctly.

5 Maintenance

5.1 Types of maintenance

There are the following types of maintenance:

- daily cleaning
- cleaning after firing
- cleaning after malfunctioning

5.1.1 Daily cleaning

Daily cleaning should be carried out if the weapon is dry and has not been fired

Sequence of operations:

1. Unload weapon
2. Clean the weapon externally
3. Lightly oil steel parts (to prevent rusting)
4. Carry out function check in accordance with section «4.7 Verification of Functions» on page 64

5.1.2 Cleaning after firing

Sequence of operations:

1. Unload weapon
2. Field strip the weapon according to «4.5 Field stripping» on page 49
3. Clean the weapon:
   a. Gas valve, gas tube and gas piston (with cleaning brush, cloth, gas valve cleaning tool and cleaning rod with gas tube brush)
   b. Receiver casing, chamber and barrel from the rear (with cleaning brush, cloth and cleaning rod)
   c. Trigger assembly and all remaining parts of the weapon (with cleaning brush and cloth).
4. Clean accessories
5. Zustandskontrolle der Einzelteile
6. Inspect serial numbers (Receiver casing, trigger casing, receiver and bolt head)
7. Clean and lubricate the weapon as described in the cleaning an lubrication procedures in „5.2.3 Post-shoot lubrication instructions“ on page 72
8. Assemble weapon
9. Carry out function check in accordance with section «4.7 Verification of Functions» on page 64

5.1.3 Cleaning after malfunctioning

The SG 751 must be cleaned whenever the gas valve is switched to position II. After cleaning, all moving parts should be lubricated and a light coat of oil applied to all steel parts to prevent rusting.

Sequence of operations:

1. Set the safety lever to «S»
2. Unload the weapon
3. Withdraw the rear trigger casing stud to the stop
4. Fold down the trigger casing, clean and check
5. Remove the bolt assembly, clean and check
6. Remove the gas valve, clean and check
7. Remove the gas piston, clean and check for correct operation
8. Clean the receiver
9. Oil all parts in accordance with section „„Greasing and degreasing“Assemble weapon in reverse sequence
10. Carry out function check
11. Load and continue with assignment

5.1.4 Actions to be taken in cold weather and snow

The weapon and ammunition are to be protected whenever possible from ice build-up and snowfall. They are not to be stored in warm spaces when outside temperatures are low because condensate could most often build, which in the open air would lead to ice build-up.

- Hot shot weapons must not be dipped in the snow or submerged in water because they can ice up once cooled down.

- At low temperatures the primed assault rifle is carried with the butt stock swung out.

- In case of iced-up diopter holes firing is carried out with the sight open (100 m) and the corresponding hold point modified

- To prevent ejection failures at low temperatures (from approx. 10° C) firing should be carried out right from the outset with the gas valve position II.

5.2 Cleaning and greasing

5.2.1 Before shooting

(Bolt with bolt catch open) the barrel is to be sleeked off from the muzzle up (cleaning rod handle with cleaning rod extensions).

5.2.2 After shooting

(Bolt with bolt catch open) the barrel is, if possible in a warm condition, are to be penetrated with oiled barrel cleaner at least ten times so that powder residues are softened and rust formation does not occur (cleaning rod handle with cleaning rod extensions).

5.2.3 Post-shoot lubrication instructions

Lubricate with weapon grease:

- Oil barrel, chamber and bolt (barrel from the chamber up, cleaning rod complete with grease brush)
- Oil bolt casing inside, especially the guide tracks
- Oil gas valve, gas tube and gas rod inside and outside
- Oil trigger casing; if required oil butt catch and spring for the butt catch
- Wipe remaining metal parts with oily cloth

6 Appendix

6.1 List of figures

6.2 List of parts

6.2.1 List of parts SG 751 LB

No.	Part-No.	Description
10	34564020	Barrel HA LB Assem.-E.
20	34562024	Bolt carrier HA Assem.-E.
30	34562040	Bolt head Assem.-E.
40	34562661	Charging handle; straight
50	34553012	Butt stock Mont.-E.
60	34554654	Flip up front sight Assem.-E.
70	34554581	Front sight screw*
80	34554591	Front sight disc*
90	34554481	Springpin 2 x 12 DIN 7346/BN
100	34564035	Gas tube
110	34564085	Gas piston short Assem.-E.
120	34564045	Gas valve LB drills X, 1.0, 1.4, 1.6
130	34565027	Trigger casing HA Assem.-E.
140	34566060	Magazine 20-rounds not connectable
150	34557219	Upper handguard OT 551 drilled
160	34557257	Lower handguard

6.2.2 List of parts SG 751 SB

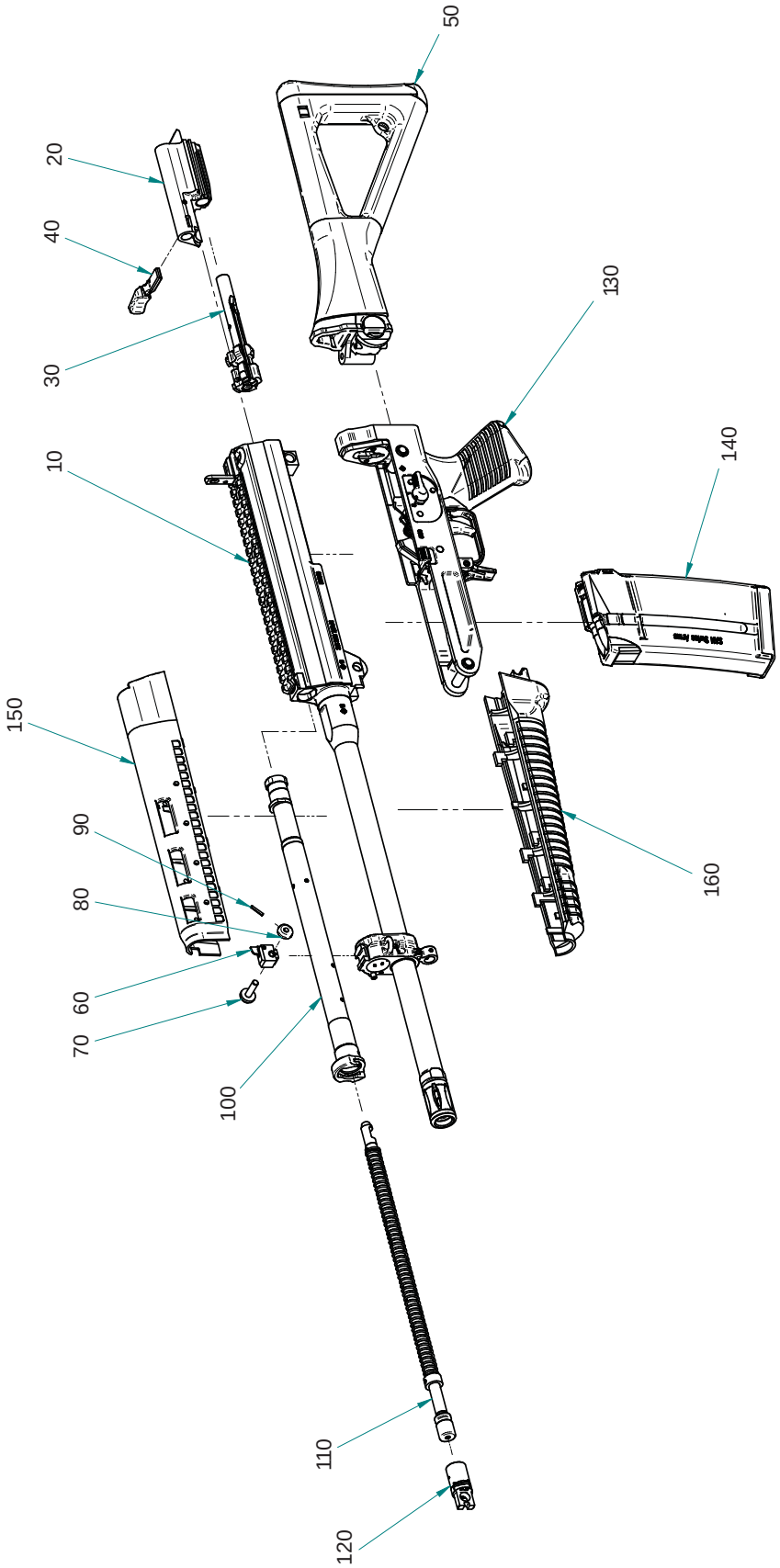
No.	Part-No.	Description
10	34564021	Barrel HA SB Assem.-E.
20	34562024	Bolt carrier HA Assem.-E.
30	34562040	Bolt head Assem.-E.
40	34562661	Charging handle; straight
50	34553012	Butt stock Mont.-E.
60	34554654	Flip up front sight Assem.-E.
70	34554581	Front sight screw*
80	34554591	Front sight disc*
90	34554481	Springpin 2 x 12 DIN 7346/BN
100	34564035	Gas tube
110	34564085	Gas piston short Assem.-E.
120	34564046	Gas valve SB drills X, 1.2, 1.7, 1.9
130	34565027	Trigger casing HA Assem.-E.
140	34566060	Magazine 20-rounds not connectable
150	34557219	Upper handguard OT 551 drilled
160	34557257	Lower handguard

6.3 Exploded drawings

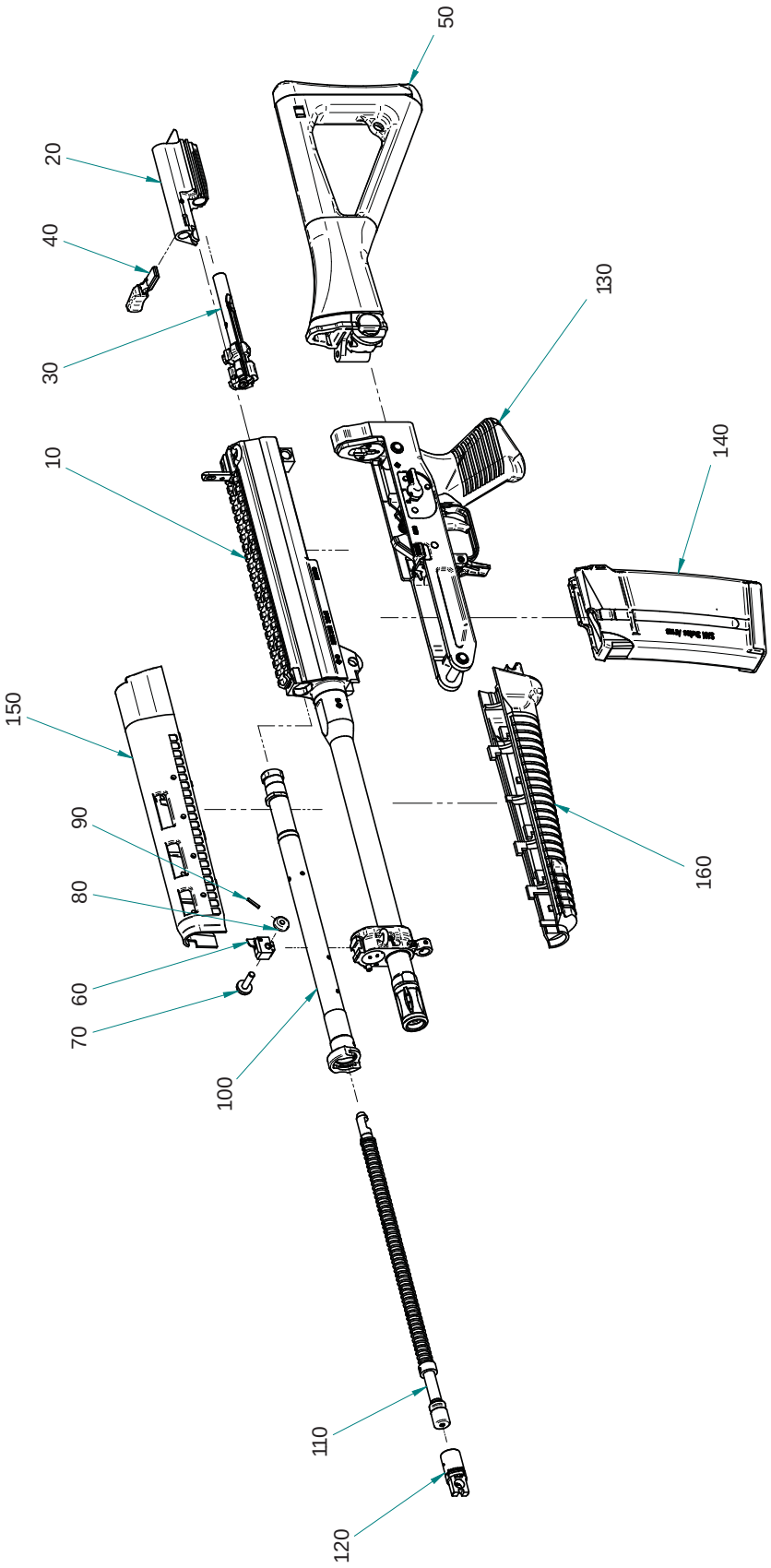
Information to be supplied when ordering spare parts:

- Type of weapon
- Serial number
- Caliber
- Part number according to list of parts
- Part designation according to list of parts

6.3.1 Exploded drawing SG 751 LB



6.3.2 Exploded drawing SG 751 SB



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