SIG Assault Rifles
SG 550 and SG 551
Caliber 5.56 mm (.223)

Armourer's Instructions

SIG Assault Rifle SG 550 and SG 551

Armourer's Instructions

Contents

1. Safety rules

- The shooter should always consider the weapon as loaded and ready to fire until he has personally convinced himself of the contrary by unloading it.
- Use only commercial grade ammunition.
- Use only ammunition that corresponds to the caliber of the weapon.
- During all manipulations point the weapon in a safe direction.
- Never aim the weapon at any object you do not intend to shoot at.
- Do not load the weapon until immediately before use.
- Do not place your finger on the trigger until the target has been sighted.
- Unload weapon immediately after shooting is finished.
- Detach bolt and magazine from the weapon prior to transportation.
- Keep weapon and ammunition separately and under lock and key.
- Never leave the weapon unattended and keep it out of the reach of children.

2. Weapon theory

2.1. Weapon description

2.1.1. General

The SIG assault rifle SG 550 or 551 is a gas operated weapon with rotary bolt mechanism. The operation and maintenance of the assault rifle SIG SG 550 and the short version SIG SG 551 are identical.

Figure 1

SIG assault rifle SG 550

Standard version with folding butt, bipod and carrying sling

Figure 2

SIG assault rifle SG 551

Short version with folding butt

The SIG assault rifle SG 550/551 can be used:

- at distances of up to 400 m,
  in semi automatic fire
  in rapid semi automatic fire
  in three-round bursts
  in full auto operation
- at distances of up to 600 m, when fitted with telescopic sights
- with the bayonet attached, as a club and as a blank weapon (on SG 550 only)
- as a grenade launcher (on SG 550 only).

The SG 550 / 551 can be fired with the butt in the normal position or folded back.

2.1.2. Barrel with receiver and gas system

The barrel is screwed into the receiver. The muzzle is fitted with a 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 are also mounted on top of the receiver.

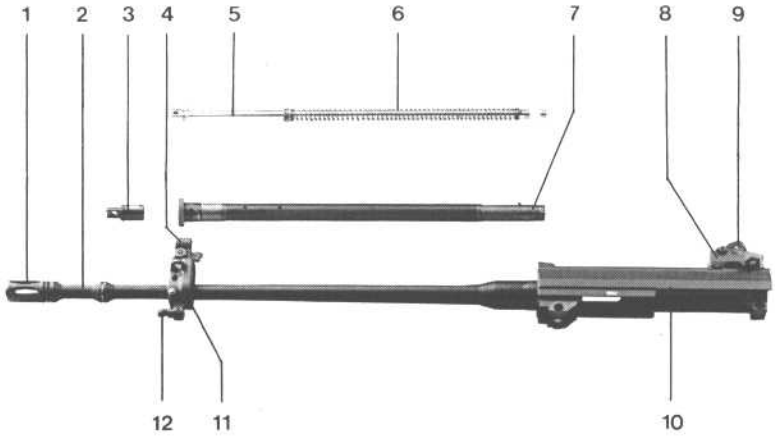

Figure 3

Barrel with receiver and gas system

1	Flash suppressor	7	Gas tube
2	Barrel	8	Rear sight mount
3	Gas valve	9	Diopter drum
4	Front sight	10	Receiver casing
5	Gas piston	11	Front sight mount
6	Recoil spring	12	Bayonet lug (on SG 550 only)

2.1.3. Bolt

The bolt consists of two main parts:

- bolt head
- bolt carrier

a. Bolt head

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

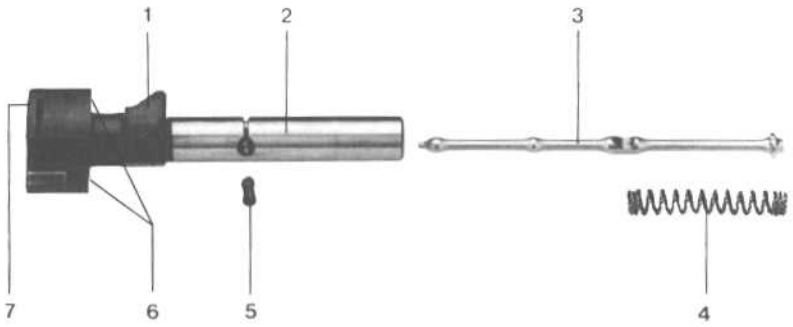

Figure 4

Bolt head

1 Control cam
2 Bolt head
3 Firing pin
4 Firing pin spring
5 Firing pin retaining stud
6 Locking lug
7 Extractor

b. Bolt carrier

The bolt carrier guides the bolt head, controls the locking and unlocking by means of the cam, connects the bolt to the gas system and cocks the hammer.

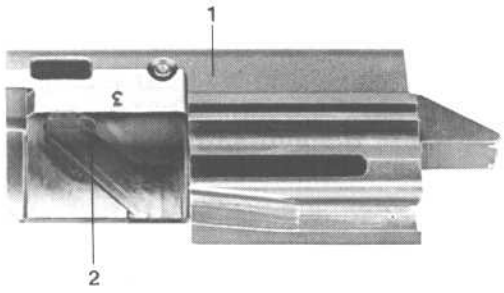

Figure 5

Bolt carrier from left

1 Bolt carrier
2 Cam

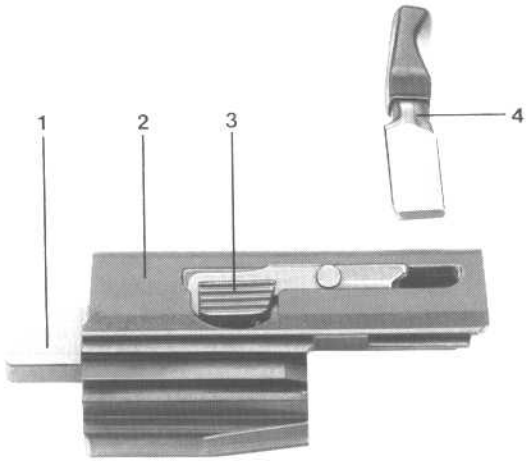

Figure 6

Bolt carrier from right

1 Cocking lug
2 Bolt carrier
3 Bolt handle catch
4 Bolt handle

2.1.4. Handguard and bipod

The handguard protects the barrel and the gas system from damage and provides heat protection. The bipod on the SIG SG 550 can be used to support the rifle when firing.

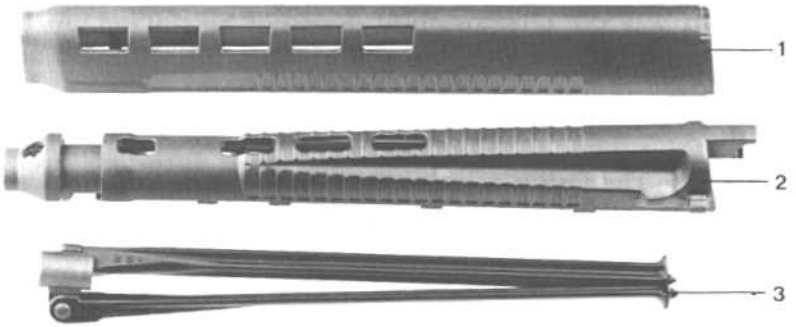

Figure 7

Handguard with bipod

1 Handguard, upper part
2 Handguard, lower part
3 Bipod

2.1.5. Trigger assembly and butt

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. After each burst, the trigger must be released and then pulled again.
Position "20"	=	the weapon fires in the full auto mode.

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.

The folding butt is made of high strength synthetic material. In the firing position it is held by the butt locking mechanism, and when folded it is held by spring pressure on the handguard.

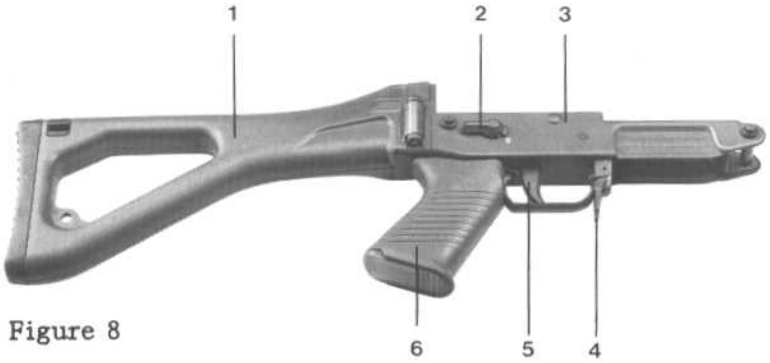

Figure 8

Trigger assembly and butt from right

1 Butt
2 Safety lever
3 Trigger casing
4 Magazine catch
5 Trigger
6 Pistol grip

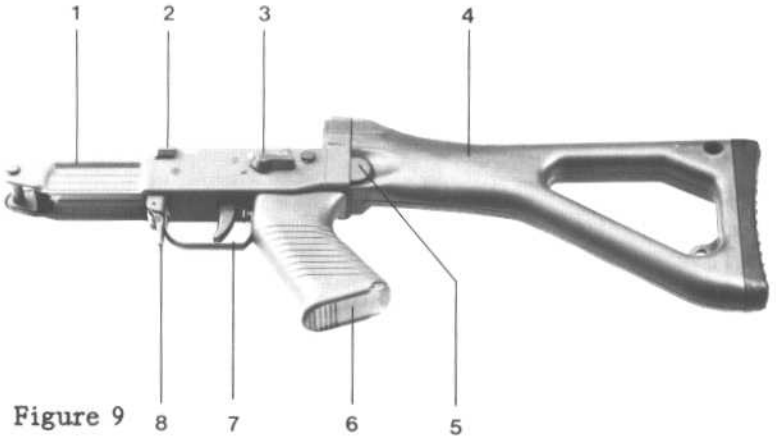

Figure 9

Trigger assembly and butt from left

1 Trigger casing
2 Bolt catch
3 Safety lever
4 Butt
5 Butt catch
6 Pistol-grip
7 Trigger guard
8 Magazine catch

2.1.6. Sights mechanism

The sights mechanism comprise the rear sight and foresight.

The rear sight is made up of the:

- Rear sight mount
- Diopter drum
- Windage correction screw
- Elevation correction screw

The diopter drum can be set to positions "1","2","3" and "4", corresponding to firing ranges 100m, 200m, 300m and 400m. The positions marked in white correspond to aiming point = point of impact. The red "3" position corresponds to aiming point "black 6" at 300m.

Sighting position "1" is designed for immediate firing, and two luminous dots are fitted laterally for aiming at night.

The foresight with tunnel is fixed to its mount with the foresight screw. A folding foresight is provided for use at night with the night sights on the diopter drum.

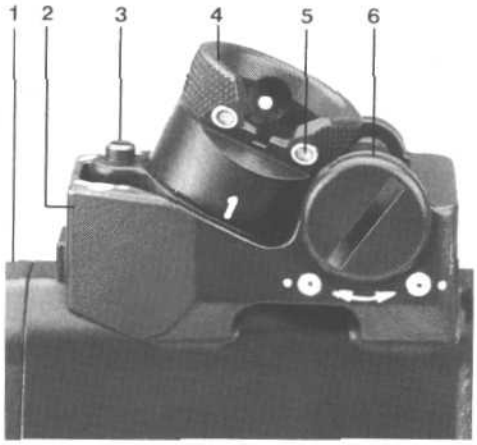

Figure 10

Rearsight assembly

1 Receiver casing
2 Rear sight mount
3 Elevation correction screw
4 Rear sight drum
5 Night sight
6 Windage correction screw

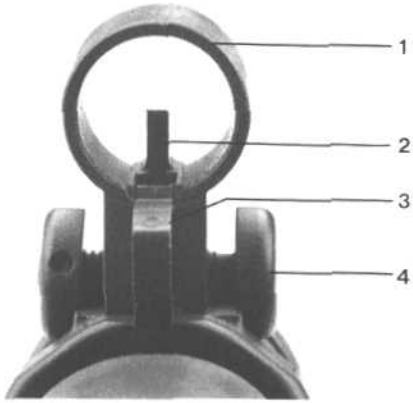

Figure 11

Front sight

1 Front sight tunnel
2 Front sight
3 Night front sight
4 Front sight screw

2.1.7. Magazine

The magazine is transparent and has a capacity of twenty or thirty rounds. On either side of the casing there is a mechanism which allows several magazines to be connected if required.

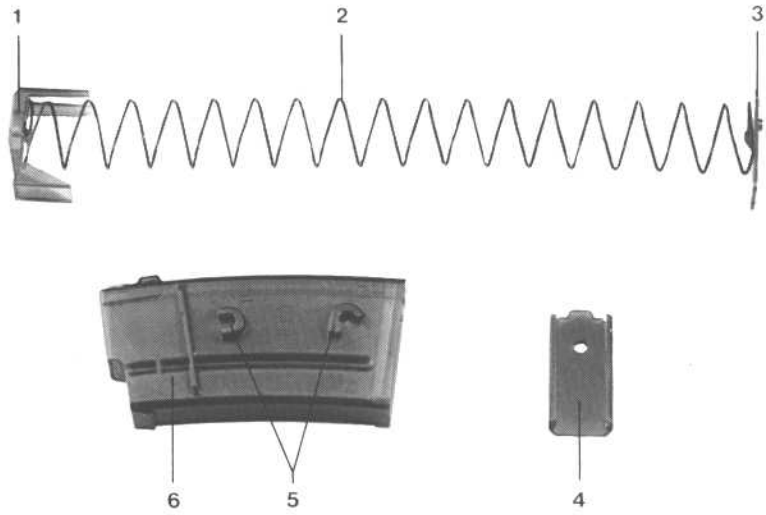

Figure 12

Magazine, dismantled

1 Feeder
2 Magazine spring
3 Magazine floorplate catch
4 Magazine floorplate
5 Magazine coupling lugs
6 Magazine casing

2.2. Technical specifications

			SG 550	SG 551
Dimensions				
Caliber		mm	5.56	5.56
Total length		mm	998	833
Length with butt folded		mm	772	607
Barrel				
Barrel length		mm	528	363
Number of grooves			6	6
Rifling:				
SG 550-1/SG 551-1	right	inches	10	10
SG 550-2/SG 551-2	right	inches	7	7
Sights				
Type			diopter sights	
Sight base		mm	540	466
Range adjustment		m	100 to 400	
Weight				
Weapon incl. empty magazine		g	4100	3400
Empty twenty-round magazine		g	95	95
Empty thirty-round magazine		g	110	110
Loaded twenty-round magazine		g	340	340
Loaded thirty-round magazine		g	475	475

Subject to change without notice

2.3. Accessories

Every SIG assault rifle SG 550/551 has the following accessories:

- carrying sling
- loading aid
- cleaning kit

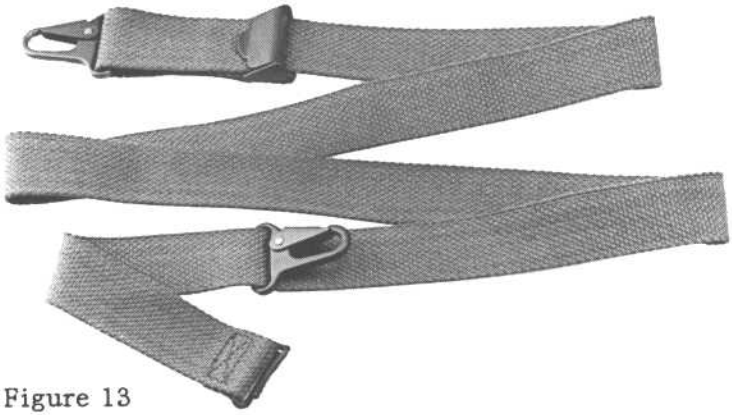

Figure 13

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

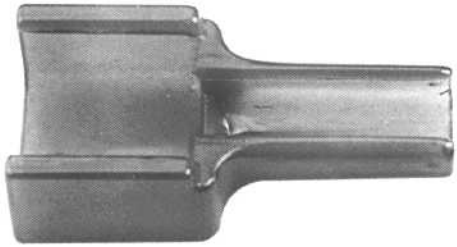

Figure 14

Loading tool

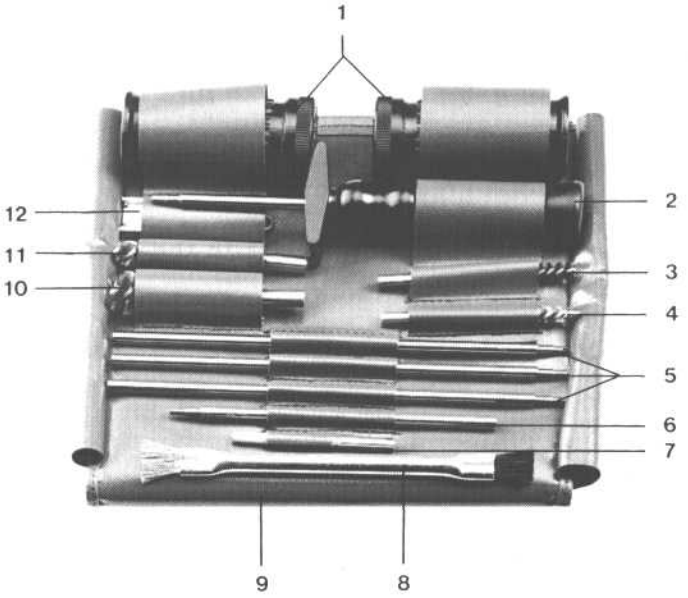

Figure 15

Cleaning kit

1 Weapon grease tube
2 Cleaning rod handle
3 Grease brush
4 Barrel brush
5 Cleaning rod sections
6 Extension rod with ferrule
7 Cleaning jag
8 Cleaning brush
9 Simileather case
10 Gas tube brush
11 Chamber cleaning tool
12 Barrel inspection mirror

3. Handling

3.1. Important instructions

- Before manipulating the weapon, make sure it is safe and that the trigger guard is put in vertical position.
- Use only commercial grade ammunition.
- Use only ammunition that corresponds to the caliber of the weapon.
- During all manipulations point the weapon in a safe direction.
- Do not place your finger on the trigger until the target has been sighted.
- Do not load the weapon until immediately before use.
- Unload weapon immediately after shooting is finished.
- Detach bolt and magazine from the weapon prior to transportation.

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 bolt handle fully back and let it fly forward)

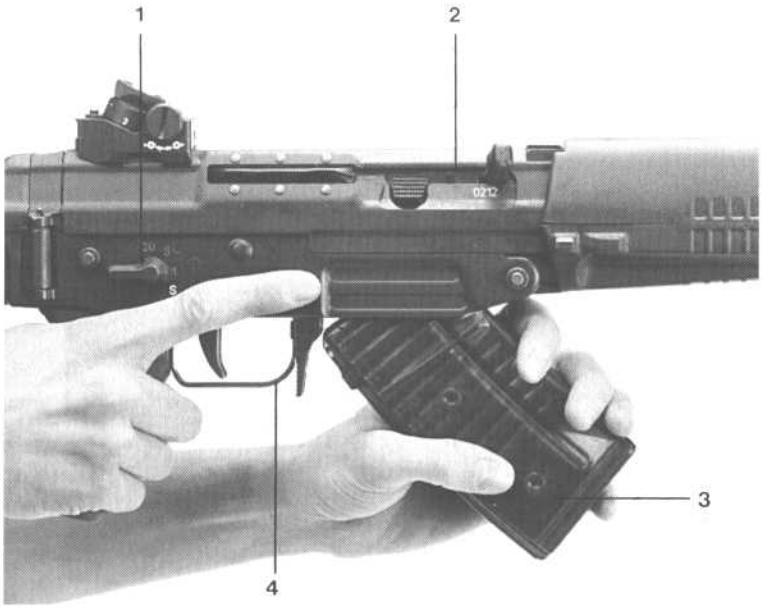

Figure 16

Inserting the magazine

1 Safety lever
2 Bolt
3 Magazine
4 Trigger guard

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 down range), switch safety lever to "S".

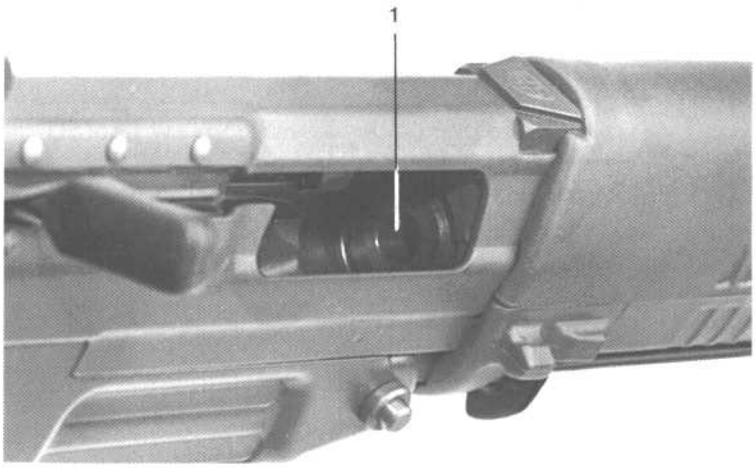

Figure 17

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;
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;
4. Insert loaded magazine and check that it is properly seated by pushing forward;
5. Push the bolt catch up or pull back the bolt handle slightly and allow the bolt to fly forward.

Figure 18

Push the bolt catch up

3.6. Filling and coupling of magazines

3.6.1. Filling the magazine

1. Place loading tool on magazine;
2. Insert the ammunition clip and press cartridges into magazine;
3. Remove loading tool.

3.6.2. Coupling of magazines

1. Hold magazine vertically;
2. With the floorplate of the second or third magazine pointing to the rear, firstly connect the upper lugs, then rotate forward and connect lower lugs.

Coupling more than three magazines in sequence is not recommended.

Figure 19

Loading the cartridges into the magazine by means of the loading tool

Figure 20

Coupling of magazines

3.7. Aiming, firing

To aim, align the eye, diopter or battle sight, foresight and target. When using the diopter, ensure that the periphery of the foresight tunnel and the diopter aperture are concentric.

At all ranges, the foresight should be aimed at the center of the target. Firing is therefore to point of aim.

Figure 21

Sight picture point of aim

Figure 22

Bull's eye 6 o'clock with sight setting "red 3" at 300m.

Figure 23

Sight picture night sight

3.8. Adjusting

To correct for elevation and windage, the corresponding correction screw is turned with a screwdriver.

By rotating the elevation correction screw and the windage correction screw by one click, the average point of impact in the vertical respectively the horizontal axis is displaced by approximately 0.15 °/oo.

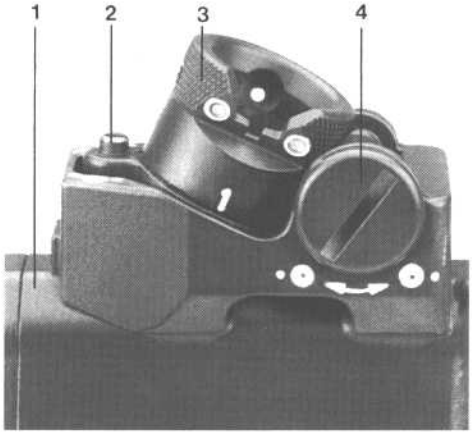

Figure 24

Rear sight

1 Receiver casing
2 Elevation correction screw
3 Rear sight drum
4 Windage correction screw

Elevation: High shots are corrected by turning the elevation correction screw to the left.

Low shots are corrected by turning the screw to the right.

Figure 25

Correction symbol on rear sight (correction of elevation)

Windage: Shots to the right are corrected by turning the windage correction screw to the left.

Shots to the left are corrected by turning the screw to the right.

Figure 26

Correction symbol on rear sight (correction of windage)

Firing range	average point of impact correction per notch	
	SG 550	SG 551
100 m	1.5 cm	1.8 cm
200 m	3.0 cm	3.6 cm
300 m	4.5 cm	5.4 cm
400 m	6.0 cm	7.2 cm

To adjust for elevation or windage the corresponding correction screw is turned with a screwdriver.

3.9. Gas valve position

With the SIG SG 550/551, the gas volume required for the function of the weapon can be controlled by adjusting the gas valve.

a. Position I (Rib of gas valve in vertical position)

Under normal conditions, firing is effected in this position.

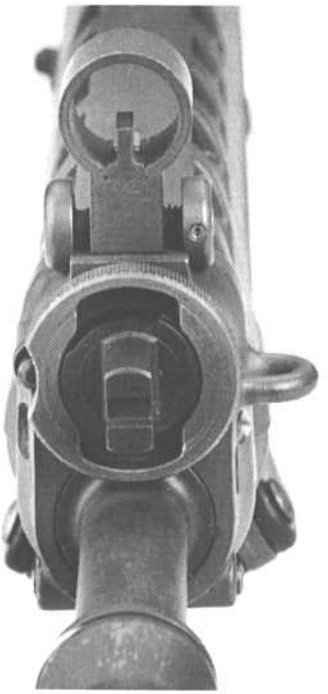

Figure 27

Gas valve in position I

b. Position II (Rib of gas valve in slanting position)

When cycling or ejection problems are encountered 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 quantity 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 28

Gas valve in position II

3.10. Folding the butt

Thumb in the butt catch and fold the butt so that it registers with the handguard under spring pressure.

Figure 29

Butt folded

1 Butt catch
2 Butt

3.11. 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 30

Trigger guard folded

1 Trigger casing
2 Trigger guard

3.12. Rifle Grenades (Bullet trap type)

3.12.1. General

The rifle grenades are intended to be launched in flat trajectory. Standard, live ammunition is used for launching, whereby the weapon cycles automatically.
(The bullet is caught in the bullet trap integrated in the grenade)

3.12.2. Handling

Acting on orders, or his own initiative in situations of danger, the trooper prepares his weapon for grenade launching.

Loading procedure:

- Load model SG 550 assault rifle with standard, hardball ammunition
- Place safety lever of model SG 550 on "S"
- Mount rifle grenade: it must be possible to twist on the grenade up to the stop without encountering significant resistance.

3.12.3. Aiming

At a range of 75 m, aim over the upper edge of the rifle grenade and the upper rim of the foresight tunnel. At longer ranges, cover the target with the body of the grenade. Consequently, first obtain the height of the target by approaching it from the side. Then move the rifle sideways, without changing the inclination of the barrel, until the target is covered.

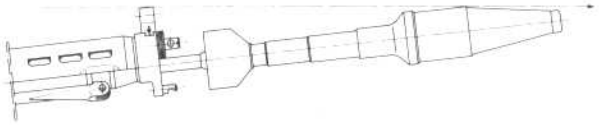

Figure 31

Aiming the rifle grenade

Range 75 m: Point of aim = average point of impact

Launching positions: The grenade launching can be done from the standing, kneeling and prone positions.
The rifle butt should be held as tightly as possible under the armpit of the firing arm; the other hand grasps the handguard firmly. The safety lever is on positon "1". Firing from the shoulder is also possible. However, the trooper must take cover before the grenade detonates upon impact.

3.13. Use of accessories

3.13.1. Carrying sling

One end of the sling hooks into the lug on the foresight mount; the other end is attached to the butt.

To fix the taut sling, use the clip.

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

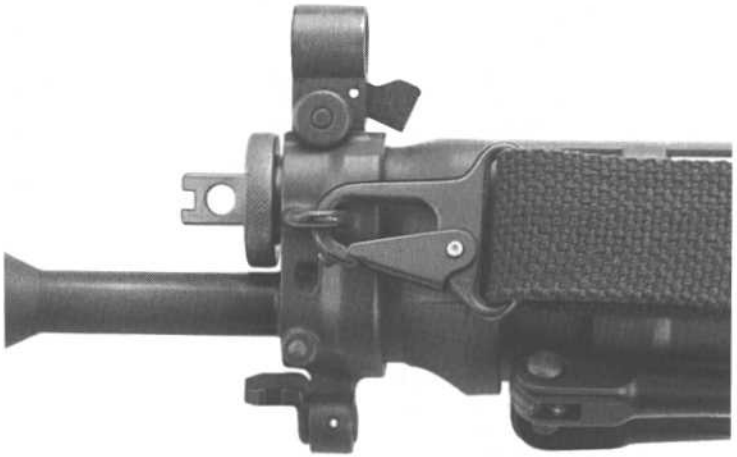

Figure 32

Sling hooked to foresight mount

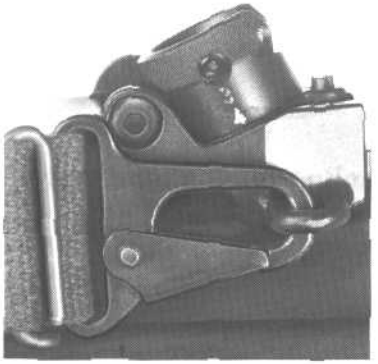

Figure 33

Sling hooked to rearsight mount

Figure 34

Sling attachment to the butt

Figure 35

Fix the taut sling

3.14. Field stripping

1. Unload weapon;
2. Remove 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. Lay the weapon on its left side and swing out the trigger assembly;
5. Withdraw the front trigger casing stud as described in point 3 and remove the trigger assembly;

Figure 36

Remove the trigger housing stud

6. Press down the bolt handle catch and remove the bolt handle;
7. Use the bolt handle to push the bolt to the rear, remove the bolt from the receiver;

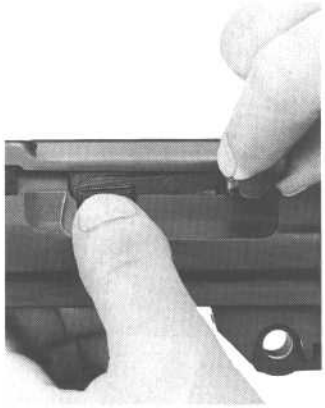

Figure 37

Remove bolt handle

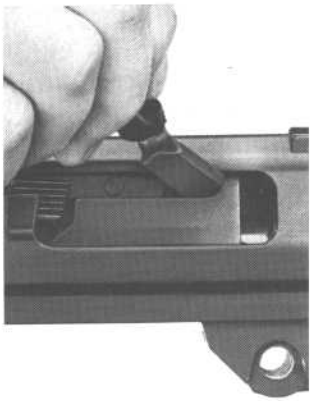

Figure 38

Push bolt to the rear, using bolt handle

8. Twist the bolt head to remove it from the bolt carrier;

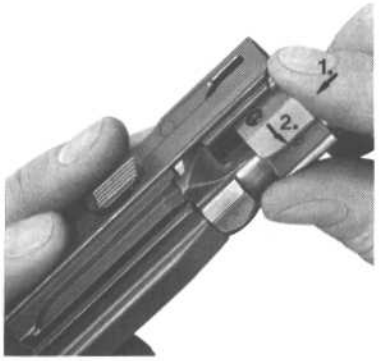

Figure 39

Remove bolt head

1. Push in
2. Rotate

Figure 40

Remove bolt head

9. Pull lower handguard to the rear and remove; swing out the bipod legs and remove laterally

10. Lift upper handguard at the rear and remove at the front sight mount;

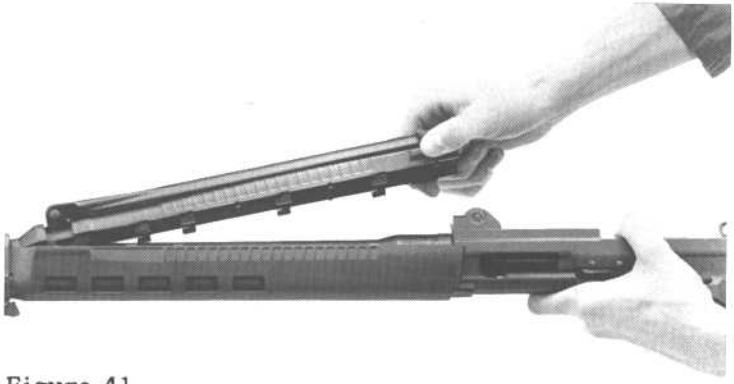

Figure 41

Lift off lower handguard

Figure 42

Remove bipod carrier from the handguard

11. Press in the gas-valve catch, remove the valve by simultaneously rotating it and pulling it forward;

12. Push the gas piston and recoil spring forward, reaching through the ejection port, and extract them from the front;

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

14. Pull the gas tube out from the front end;

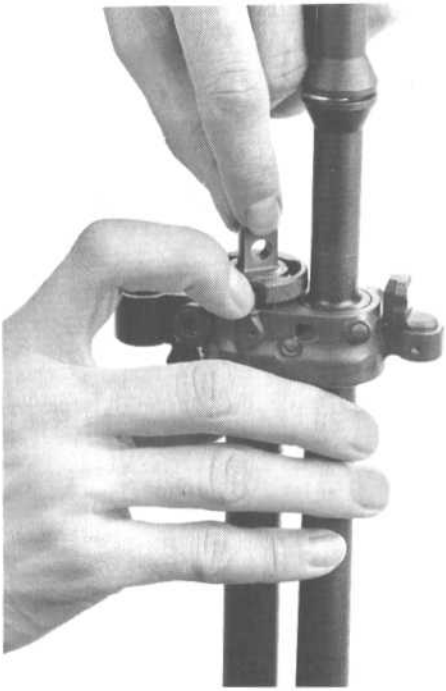

Figure 43

Remove gas valve

Figure 44

Push in gas piston

15. Remove the firing pin:

- Hold the bolt head against a firm surface in such a way that the firing pin is completely pressed into the bolt head;
- Remove the retention stud using a knife-edge and extract the firing pin and spring;

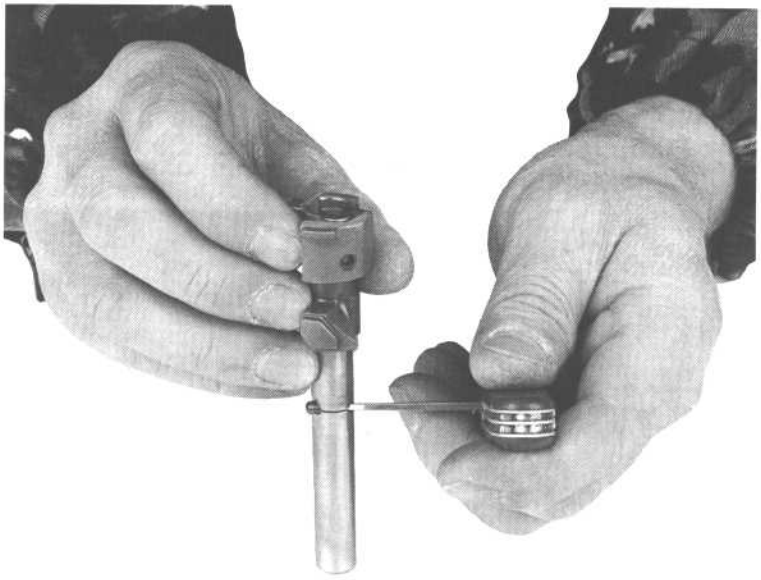

Figure 45

Remove firing pin

16. Dismantle the magazine:

- Press in the retention lug of the magazine floorplate with the thick end of the firing pin. Pull the magazine floorplate out from the rear;
- Pull out the floorplate catch along with the spring and the follower.

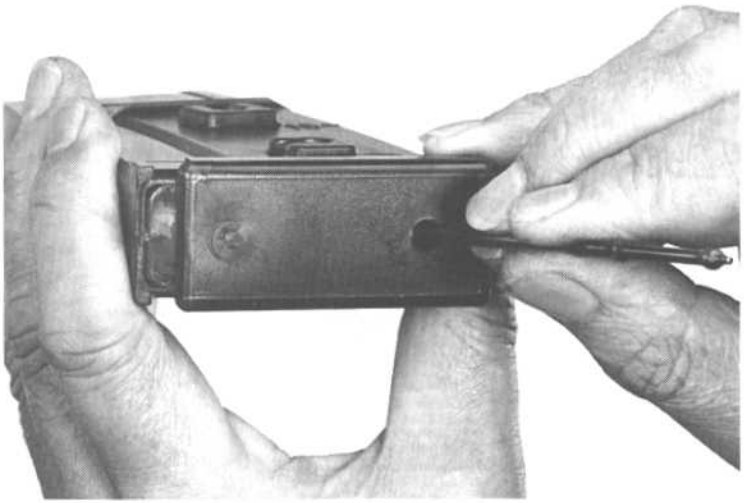

Figure 46

Dismantle magazine

Figure 47

SIG SG 550 dismantled

3.15. Assembly

The weapon should always be reassembled in the reverse order of stripping:

1. Assemble magazine;
2. Insert firing pin:
   - Slip the firing pin and spring into the bolt head. Ensure that the notch is correctly placed to accept the retention stud;
   - Push the firing pin into the bolt head and secure it with the retention stud as soon as the notch is flush with the bore;

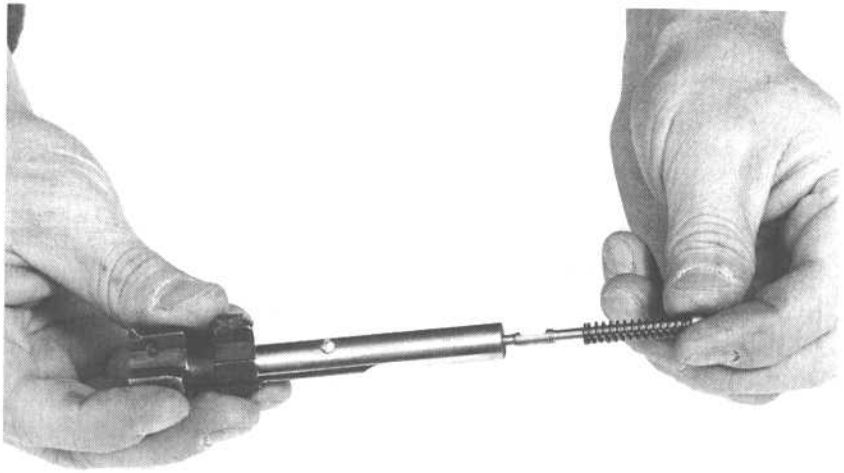

Figure 48

Insert firing pin

Correct position of the notch

3. Install the gas tube:

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

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

4. Insert the piston with recoil spring
   - Insert the piston, with its retention notch slide facing against the barrel, into the gas tube;

   - Check with the forefinger that the gas piston moves freely in the tube;

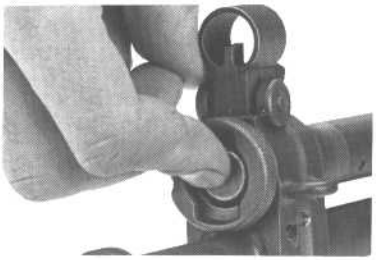

Figure 49

Check correct position with index finger

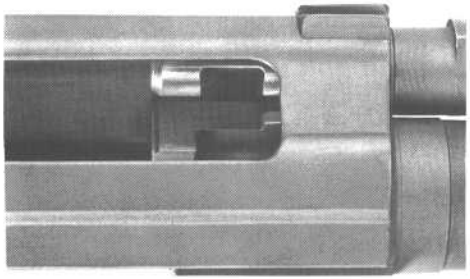

Figure 50

Correct position of retention notch

5. Install the gas valve:
   - With the notch for the retention stud facing downwards in the flange of the gas tube;
   - Press in the catch and turn the gas valve to the right up to positon I;
   - Check that the gas valve catch has registered;

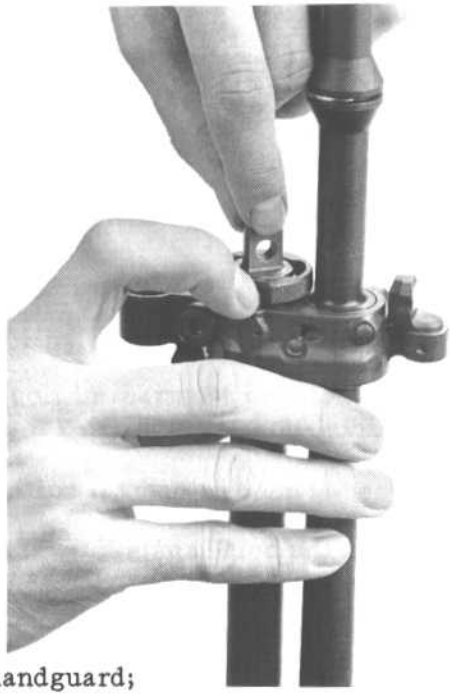

Figure 51

Install gas valve

6. Install the upper handguard;
7. Attach the bipod;
8. Install lower handguard;
9. Assemble bolt head and carrier;
10. Insert bolt assembly:
    - Slide bolt head completely to the front by pressing firing pin;
    - Slide bolt into receiver casing.

Figure 52

Inserting the bolt assembly

11. Insert the bolt 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;
    - Tilt up the trigger casing and fix with rear trigger casing stud.
13. The function check should be carried out in accordance with Section 6.2;

3.16. Procedure in case of malfunction

In the event of 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 the desired firing mode;

If the weapon still will not fire:

- Put weapon on safe;
- Unload per section 3.3.;
- Clean weapon in accordance with 4.1.;
- Take up firing position;
- Load;
- Set safety lever to the desired firing mode;

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. The following points must be borne in mind:

- If the weapon cannot be unloaded immediately and there is any danger of self-ignition due to a hot barrel (140°C), 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 4.1. 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.

4. Maintenance

4.1. Types of maintenance

There are the following types of maintenance:
- daily cleaning
- cleaning after firing
- cleaning after malfunctioning

4.1.1. 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 6.2.

4.1.2. Cleaning after firing

SEQUENCE OF OPERATIONS:

1) Unload weapon;

2) Field strip the weapon (see Section 3.14.);

3) Clean and lubricate the weapon as described in the cleaning and lubrication procedures in Section 4.2.;

4) Assemble weapon;

5) Carry out function check in accordance with Section 6.2.

4.1.3. Cleaning after malfunctioning

The SG 550 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, 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 4.2.6.;
10) Assemble weapon in reverse sequence;
11) Carry out function check;
12) Load and continue with assignment.

4.2. Cleaning and lubrication procedures

4.2.1. Prior to firing

The barrel should be checked and cleaned prior to firing.

4.2.2. After firing

After firing the barrel should be cleaned with at least ten strokes of the greased dry barrel brush. This should be carried out from the chamber down and whenever possible while the barrel is still warm. In this way, residual powder can be softened, thus preventing rusting.

4.2.3. Greasing and degreasing

SEQUENCE OF OPERATIONS:

1) Unload the weapon;
2) Remove the bolt;
3) Clean from the chamber down.

4.2.4. Daily cleaning

During daily cleaning the weapon should be wiped with a dry cloth and the metal parts should be lightly lubricated with weapon oil.

4.2.5. Cleaning procedure

- Carry out stripping procedure
- Remove residual powder from the gas valve, gas tube and gas piston with weapon-cleaning oil
- Clean the receiver and barrel from the rear
- Clean the trigger assembly and all remaining parts of the weapon
- Clean accessories.

4.2.6. Lubrication procedure

- Lubricate the barrel from the chamber down and the bolt using oil
- Lightly oil the valve and gas tube internally and externally
- Lightly oil the gas piston and recoil spring
- Lightly oil the trigger casing
- Wipe all remaining metal parts with an oil cloth.

5. Function

5.1. Weapon function

5.1.1. Readiness to fire

At the moment of readiness to fire the bolt is closed and locked.

- the recoil spring (2) holds the bolt carrier (4) in the front final position, via the gas piston (1);

- the bolt head (5) is rotated by the control cam (3) of the bolt carrier (4) in such a way that its locking lugs (8) engage in the corresponding recesses of the locking piece (9);

- in this position the hammer (7) is cocked and the release bar (6) is depressed.

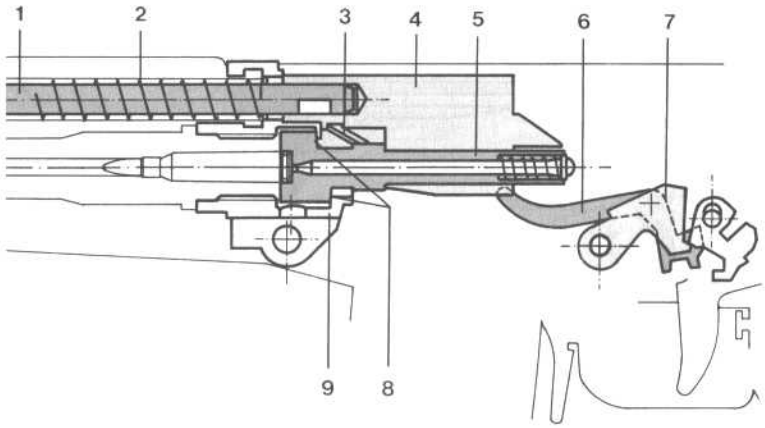

Figure 53

Weapon loaded

5.1.2. Discharging the shot

By pressing the trigger (11) the hammer (7) is released. The hammer is under pressure of the main spring (12) and strikes the firing pin (10) which, in turn, impacts against the cartridge primer of the cartridge (P) thus discharging the shot.

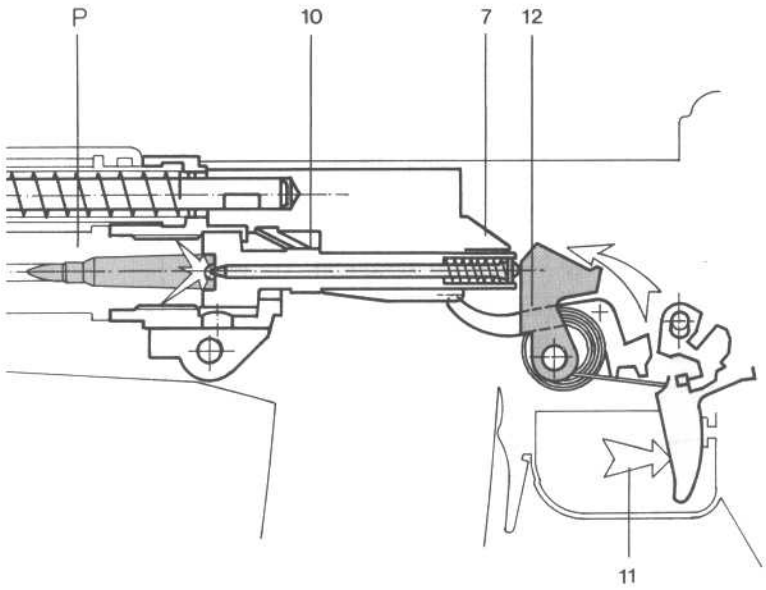

Figure 54

Discharging the shot

5.1.3. Unlocking and recoil of bolt

The gas pressure, generated by the burning powder, drives the bullet up the barrel (13). As soon as the projectile passes the gas port (15), propellant gas flows through the adjustable gas valve (14). The gas pressure acts on the gas piston (1) which pushes the bolt carrier (4) to the rear.

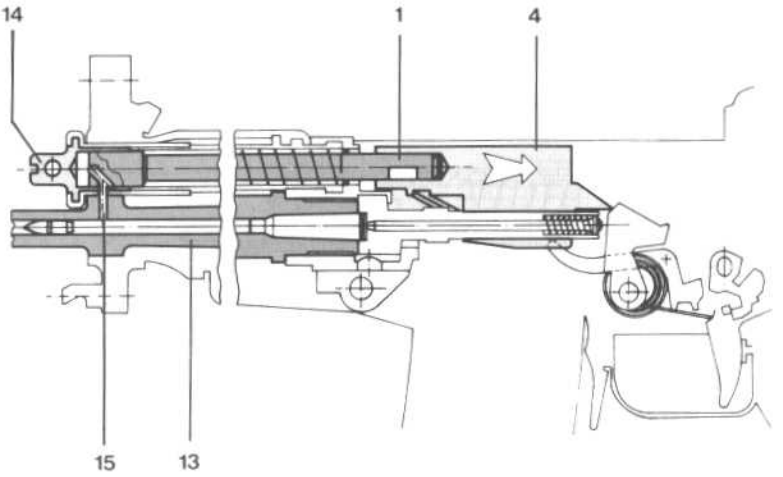

Figure 55

Bolt carrier recoil begins

During the rearward motion of the bolt carrier (4) the bolt head (5) is rotated by the control cam (3) so that the locking lugs (8) are disengaged. The bolt is now unlocked.

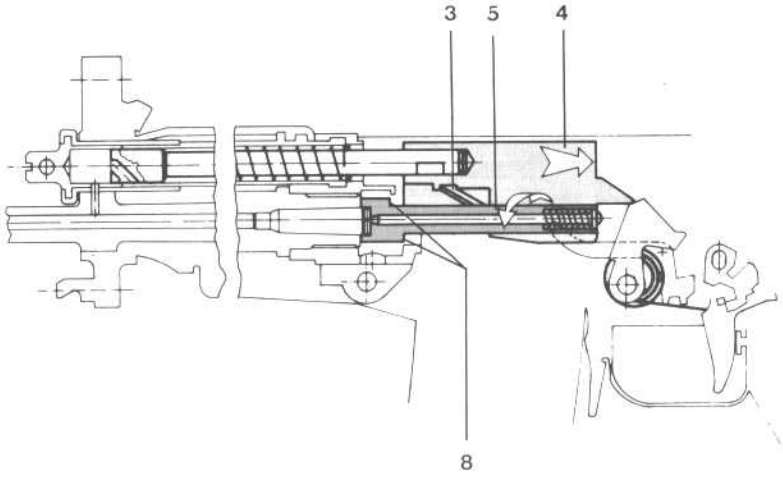

Figure 56

Unlocking begins

The bolt assembly moves back along the rails in the receiver (16) as far as the stop (17) whereby:

- the recoil spring (2) is compressed;
- the hammer (7) is cocked;
- the extractor (18) extracts the case from the chamber;
- the ejector (19) ejects the case through the port in the receiver (16).

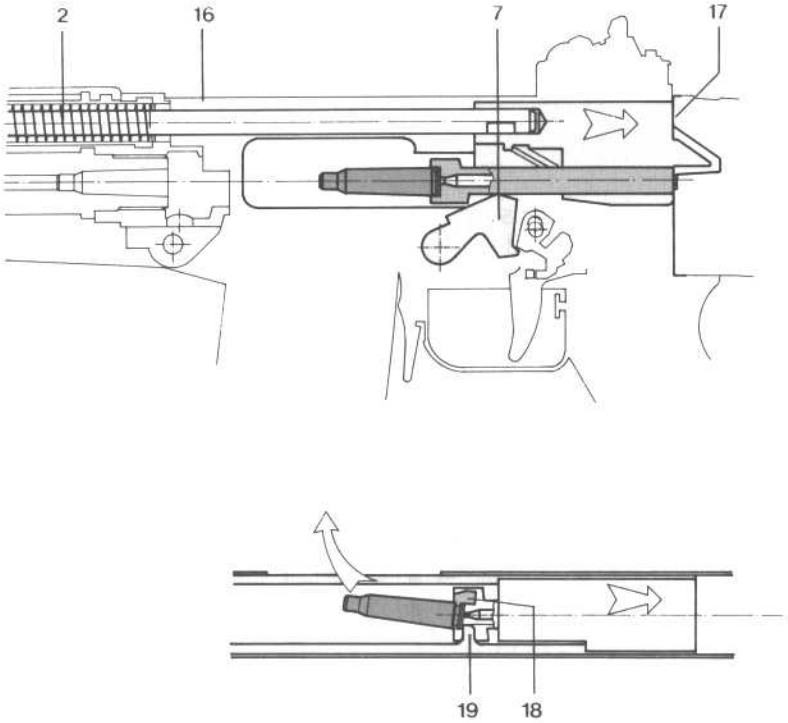

Figure 57

Case ejection

5.1.4. Bolt advance

The force of the compressed recoil spring (2) thrusts the bolt forward. The bolt head (5) feeds the next round from the magazine (20) into the chamber.

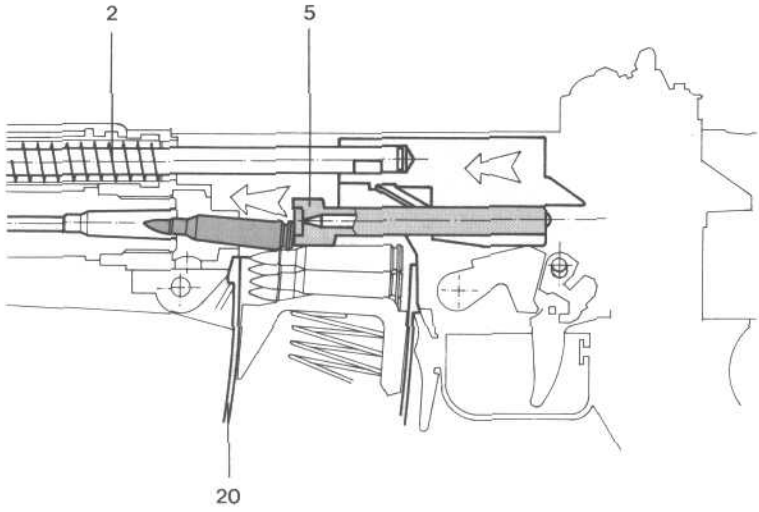

Figure 58

Bolt advance

In the final stage of the advance, the bolt head (5) locks up and the release bar (6) is depressed. The weapon is ready to be fired.

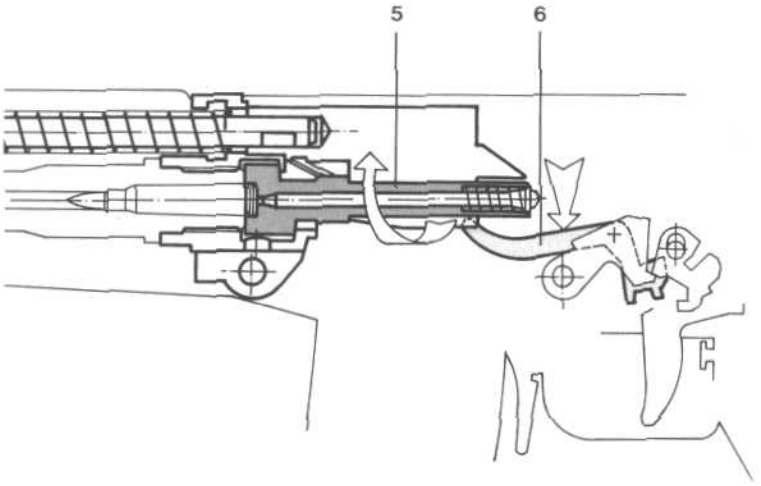

Figure 59

Locking

5.2. Trigger functions

5.2.1. General

Home position for describing the trigger functions:

- the hammer (3) is held by the trigger rod (4)
- the release bar (2) is depressed by the bolt carrier (1)
- the sear (5) is not engaged.

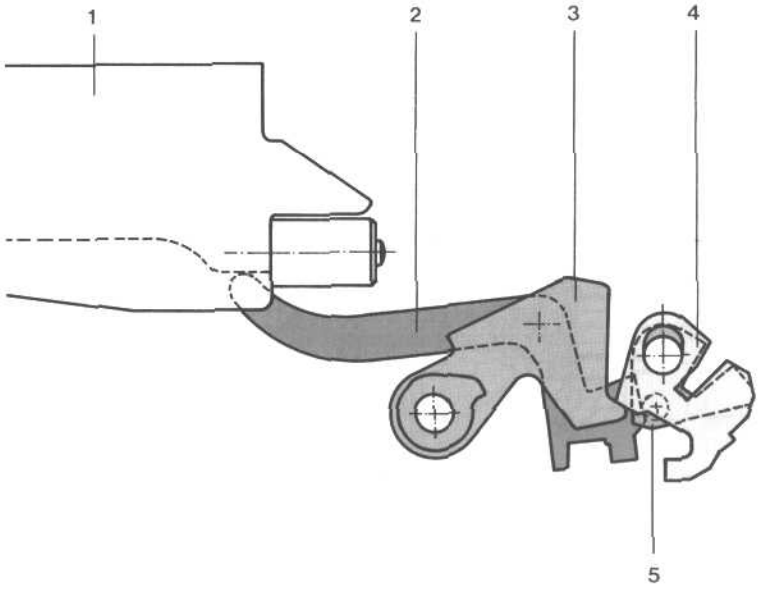

Figure 60

Trigger mechanism in cocked position

5.2.2. Trigger in safe position "S"

The safety lever (6) is set to "S". The safety shaft (7) locks the trigger (8).

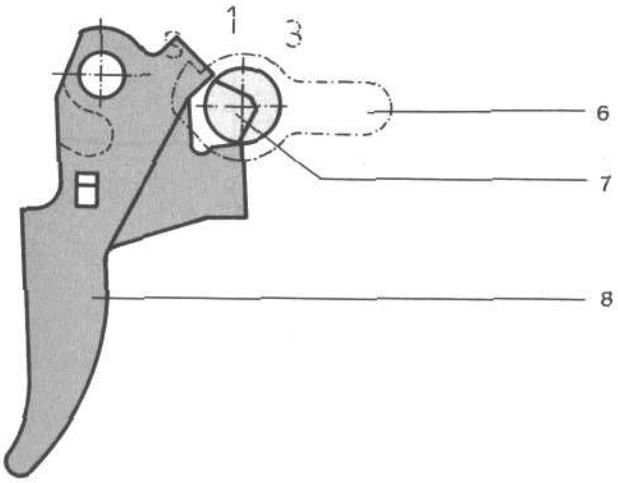

Figure 61

Trigger in safe position "S"

5.2.3. Semiautomatic fire

The safety lever (6) is set to "1" and the hammer (3) is held by the trigger rod (4).

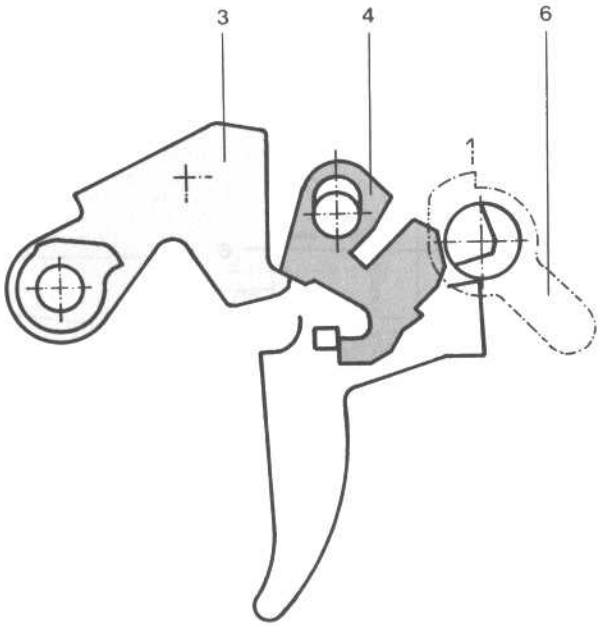

Figure 62

Trigger mechanism before firing

By pulling the trigger (8) and after having overcome the pressure point, the trigger rod (4) releases the hammer (3) which strikes the firing pin (9). The trigger rod (4) falls downwards.

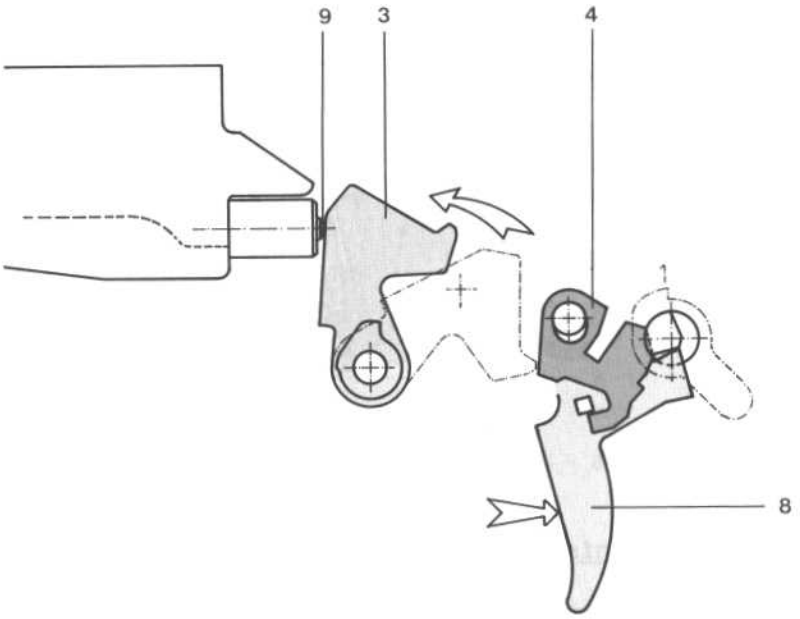

Figure 63

Striking the firing pin

The recoiling bolt presses the hammer (3) down and releases the sear (5) via the release bar (2). The sear (5) catches the hammer (3).

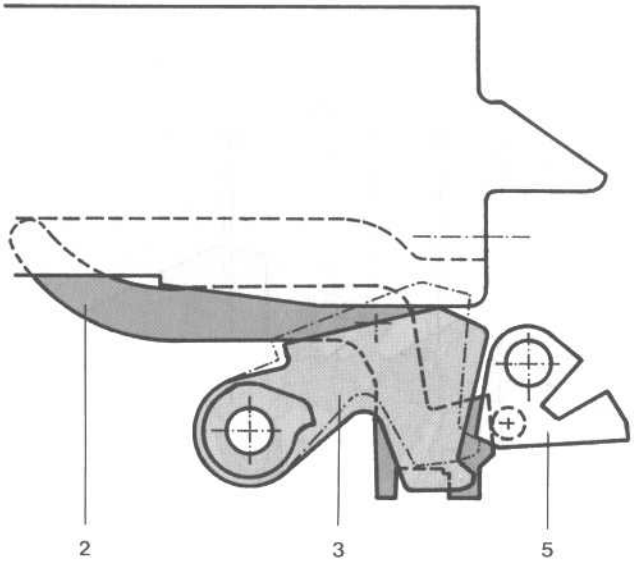

Figure 64

Trigger mechanism during bolt recoil

During the bolt advance, the bolt presses down the release bar (2). The sear (5) is thereby moved to the rear and releases the hammer (3) to the trigger rod (4). When the trigger is released, the trigger rod (4) moves to its upper end position (refer to figure 60).

5.2.4. 3-round burst control system

The safety lever (6) is set to "3". The automatic fire pawl (11) lies in the groove of the safety shaft (7). The segment (10) is controlled by the safety shaft (7) and moved upward.

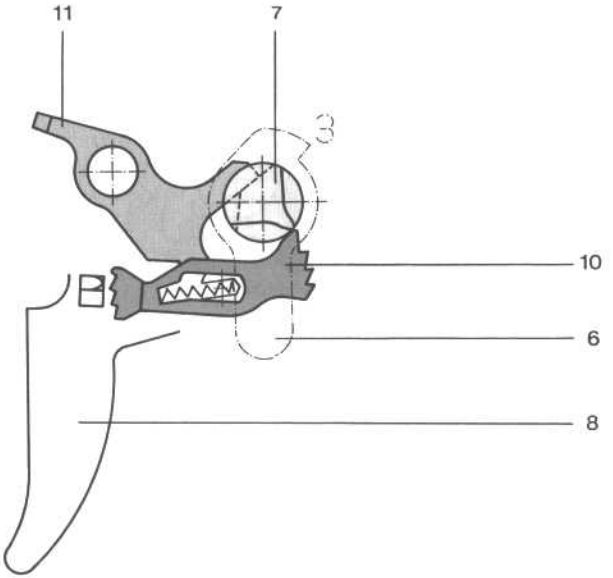

Figure 65

Home position, 3-round burst control system

By pulling the trigger (8), the trigger rod (4) is withdrawn and simultaneously retained by the automatic fire pawl (11). The segment (10) is pressed to the rear by the driving cam (12) in the trigger (8) so that the pawl (13) is allowed to register.

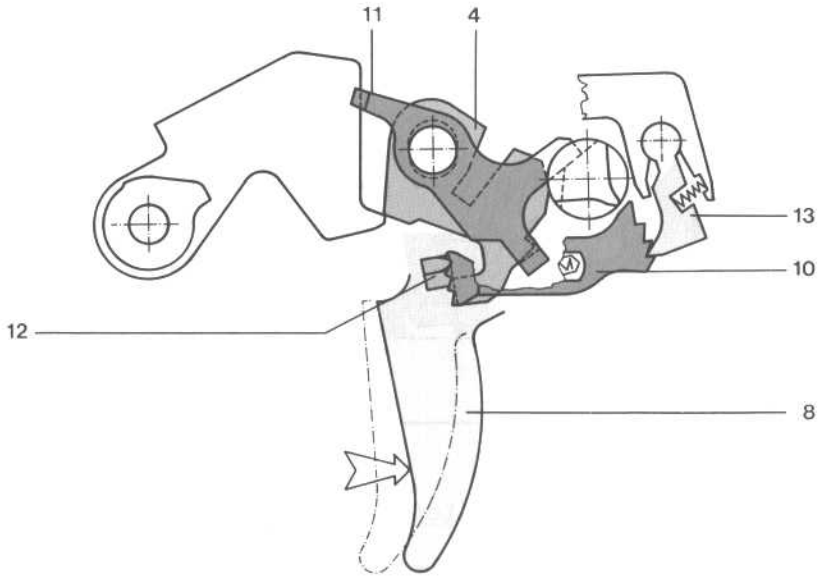

Figure 66

Trigger mechanism, immediately prior to firing

When the hammer (3) is thrust forward, the chargeover (14) presses the pawl (13) via its eccentric (15) on the segment (10). The segment (10) jumps up by one notch.

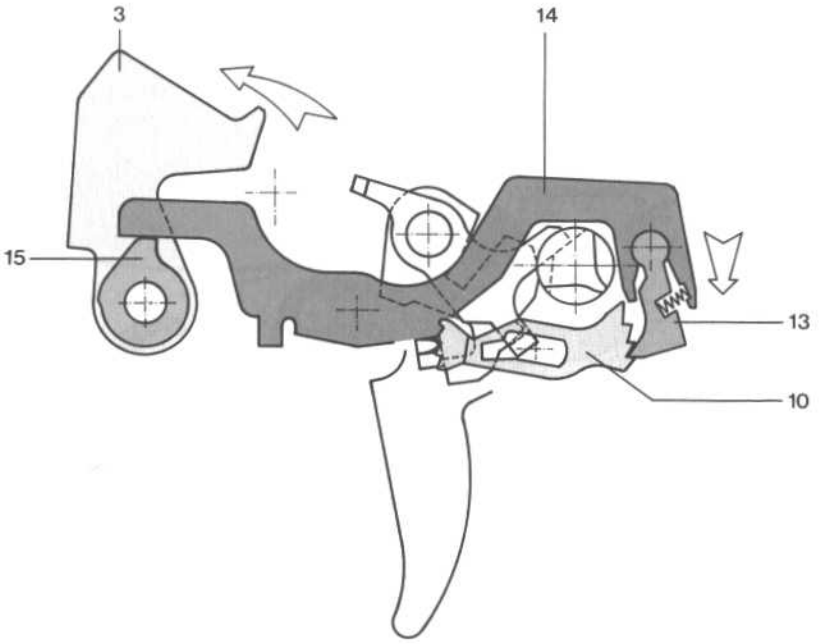

Figure 67

Trigger mechanism after firing
(first round)

The recoiling bolt cocks the hammer (3) which is retained by the sear (5) (refer to figure 64).

The advancing bolt presses the sear (5) via the release bar (2) to the rear thus releasing the hammer (3). The segment (10) moves up another notch.

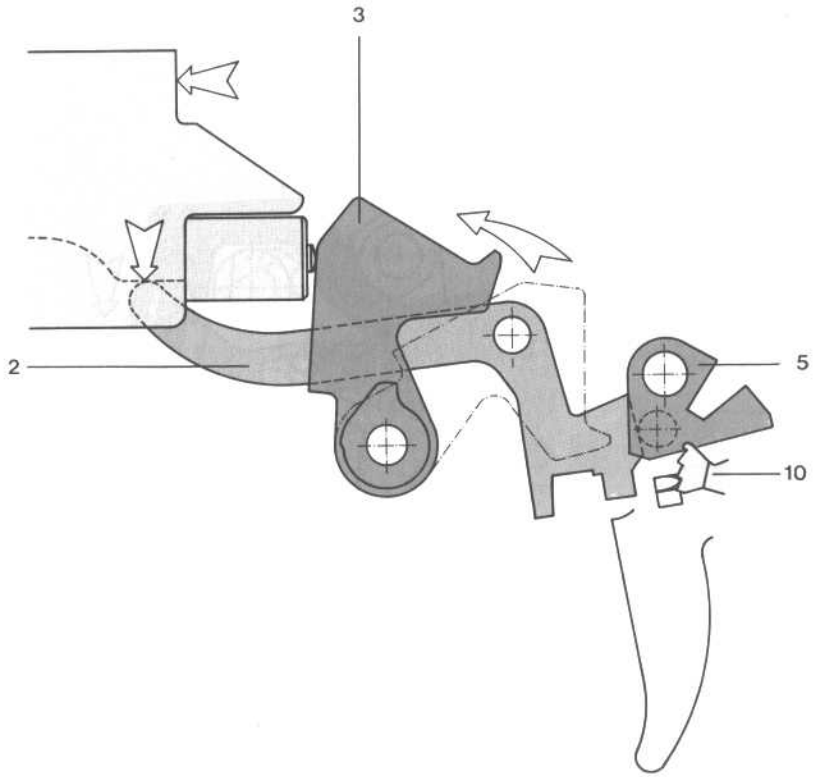

Figure 68

Trigger system during firing
(second round)

When the third round is fired - just like the second round - via the release bar, the segment (10), pressed by the chargeover (14) jumps on the driving cam (12) of the trigger (8) and interrupts the support of the trigger rod (4) by the automatic fire pawl (11).

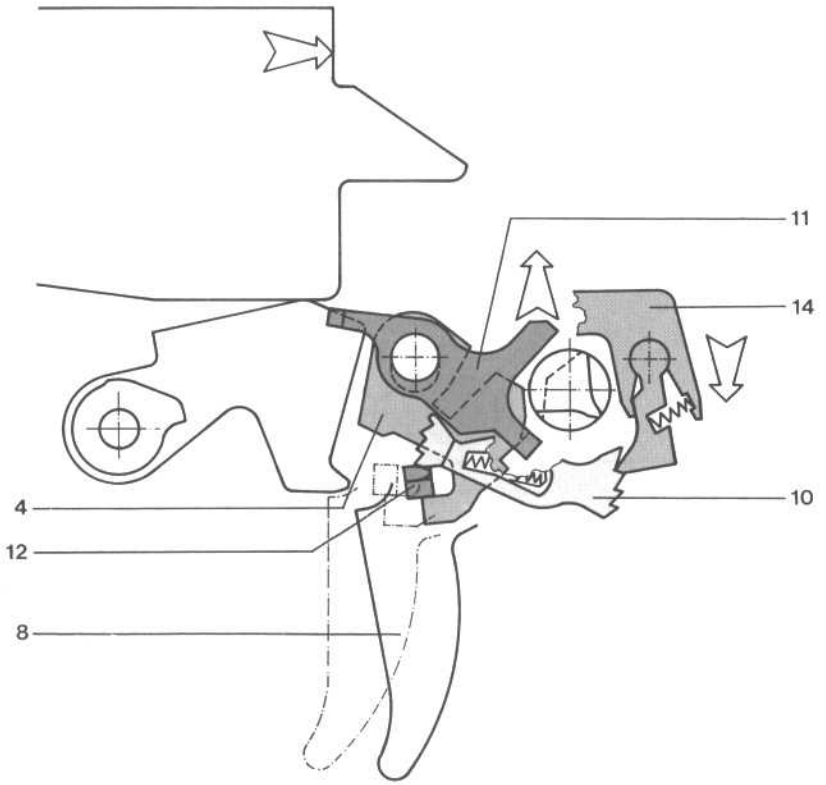

Figure 69

Trigger mechanism after the third round

The sear (5) catches the hammer (3) (refer to figure 64).

The advancing bolt drives the release bar (2) downward. The release bar (2) presses the sear (5) to the rear and releases the hammer (3) (refer to figure 68).

The hammer is retained by the trigger rod. When the trigger (8) is released the segment (10) moves back to its home position (refer to figure 65).

5.2.5. Full auto fire

The safety lever (6) is set on "20". The automatic fire pawl (11) which supports the trigger rod (4) lies in the groove of the safety shaft (7). By pulling the trigger (8) the trigger rod (4) is drawn to the rear and supported by the automatic fire pawl (11).

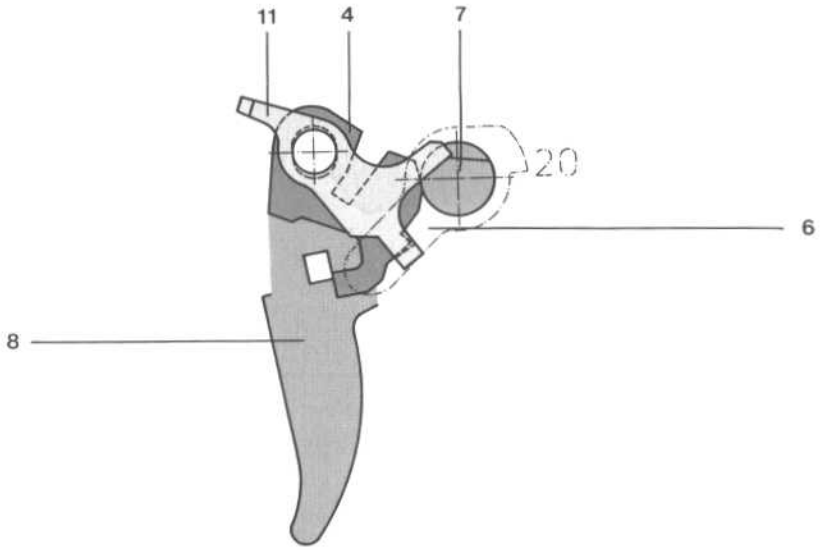

Figure 70

Trigger mechanism during full auto fire

The hammer (3) is released and strikes forward (refer to figure 63).

The recoiling bolt cocks the hammer (3) which is retained by the sear (5) (refer to figure 64).

The advancing bolt presses on the release bar (2) which pushes the sear (5) to the rear thus releasing the hammer (3) (refer to figure 68).

This trigger function is only interrupted when the trigger (8) is released. In doing so the link between the automatic fire pawl (11) and the trigger rod (4) is disconnected. The trigger rod (4) moves downward and catches the hammer (3).

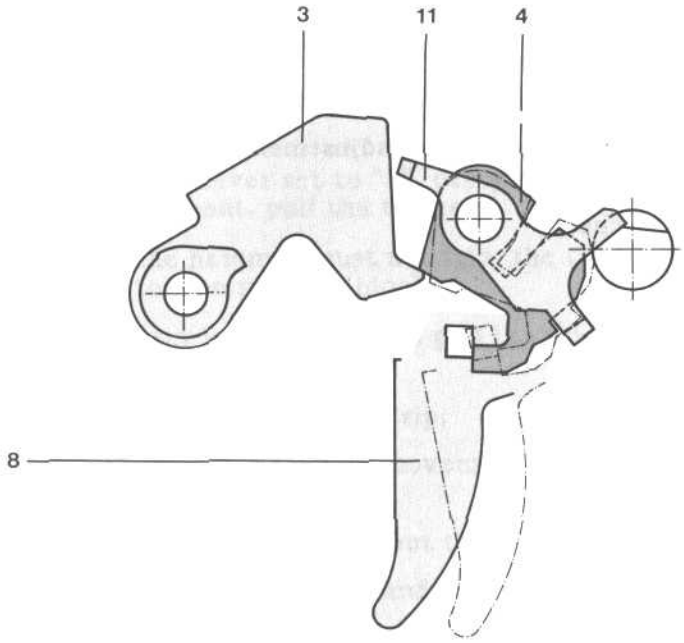

Figure 71

Interruption of fully automatic fire

6. Repairs

6.1. Sequence of repair operations

1) Unloading;
2) General estimation;
3) Carry out stripping, additional stripping depending on diagnosis;
4) Cleaning of components inclusive barrel;
5) Perform extended inspection;
6) Replace defective and missing components;
7) Grease in accordance with lubrication procedure;
8) Assembly of weapon, intermediate check;
9) Check adjustments, make adjustments, if necessary;
10) Function check.

6.2. Function check

The function check described below is to be made after every stripping as well as before and after repairs:

6.2.1. Function check of weapon

SEQUENCE OF OPERATIONS:

1) Unloading per Section 3.3.;
2) Remove magazine;
3) Check number;
4) Check firm seating of bayonet;
5) Make sure that bolt catch is engaged in correct position;
6) Functions:
   a) Safety lever set to "S", carry out loading movement, pull the trigger:
      - the hammer must not trip, the trigger tongue must be blocked;
   b) Safety lever set to "1", pull the trigger and hold it back:
      - the hammer must trip;

      Carry out a loading movement with trigger still held back:
      - the hammer must not trip;

      Release the trigger and pull it again:
      - the hammer must trip;
   c) Carry out loading movement;

d) Set safety lever to "3", pull the trigger and hold it:

- the hammer must trip;

Carry out loading movement with trigger pulled through (ease bolt forward slowly):

- the hammer must trip immediately the bolt reaches the forward position;

Repeat the loading action:

- on the 3rd loading cycle, the hammer must not trip;

Release the trigger:

e) Set safety lever on "20", perform check as under position "3":

- the hammer must trip each time;

f) Pressure point;

Loading movement:

- Set safety lever on "1": verify serveral times that there is a discernible pressure point;

7) Insert empty magazine and check firm seat;

8) Bolt catch;

a) Carry out loading movement:

- the bolt must be retained in the rear position;

b) Push-up the bolt catch:

- the bolt must run forward;
- check engagement of folded butt, pull the trigger and put the weapon on safe.

6.3. Detailed check

6.3.1. General

The purpose of the detailed check is to ensure the weapon's readiness to fire and the functional reliability of its important components. The detailed check is carried out:

- in order to determine the cause of malfunctions
- when performing maintenance and repair work

In order to carry through the detailed check the weapon is to be stripped, cleaned and degreased.

The detailed check serves also as a partial check of the corresponding main assemblies.

Prior to the assembly the weapon is to be lubricated in accordance with the lubrication procedure, Section 4.2.

6.3.2. Carrying out the detailed check

The components have to be checked for:

- surface condition, wear
- distortion, damage
- formation of cracks, breakages, condition of joints (soldered connections, rivet joints)
- conformity of numbers

1) Barrel with receiver and gas system

a) Barrel

- bore of barrel and chamber:	check from both ends with magnifier and judge (condition of barrel, barrel damage)
- caliber of barrel:	measure caliber from the muzzle, using a maxi ring gauge
- flash suppressor:	deformations, damages
- circlip:	condition and spring action
- front sight mount with bayonet lug:	deformations, damages, spring action of stop pin for gas tube catch
- front sight:	condition, matching of marks, perfect function of night front sight, light source

b) Receiver

- casing:	cracks, deformations, joints
- bolt cover:	cracks, joints
- rear sight:	catch of rear sight drum, engagement of correction screws, damages, light sources when rear sight is grossly misadjusted, check position of front sight, possibly sighting-in of weapon

c) Gas system:

- gas tube:	deformations, joints, condition
- gas valve:	deformations, condition, function, residual powder
- gas piston with recoil spring:	joints, condition, damages

2) Bolt

- bolt head:	condition, cracks, formation of rust
- extractor:	condition, cracks, spring action
- firing pin:	condition of firing pin tip, deformations
- firing pin spring:	condition
- bolt carrier:	joint of bolt handle catch

3) Handguard with bipod

a) Handguard:	cracks, burnt spots, condition
b) Bipod:	engagement, condition

4) Trigger assembly with butt

a) Trigger assembly

- trigger casing:	condition, cracks, joints, soldered connections
- trigger components:	cracks, deformations, condition
- axles:	secured by safety spring

- safety lever:	distinct engagement in all 3 positions
- trigger guard:	function, engagement, condition
- bolt catch:	spring action
- magazine catch:	spring action
- pistol grip and floorplate:	condition, cracks
- trigger casing stud:	check firm seating of spring by pressure with trigger casing stud being inserted, condition, spring action

b) Butt

- butt catch:	condition, engagement
- butt:	condition, cracks, correct mounting of clip

5) Magazine

- magazine casing:	condition, deformations, cracks
- magazine claws:	check along the entire length (wear)
- magazine catch and coupling lugs:	condition, wear
- magazine floorplate:	condition, cracks
- magazine floorplate catch:	condition
- magazine spring:	condition
- feeder:	condition, function in magazine casing

6) Accessories

- carrying sling:	condition, function of hooks
- loading aid:	condition

6.4. Special repair work

Extended stripping for exchange of components.

6.4.1. Spring ring

a. Removal

SEQUENCE OF OPERATIONS:

Apply two suitable screwdrivers at both ends of spring ring and push it off.

b. Detailed inspection

- Good condition and spring action of circlip
- Flash suppressor and barrel do not show any deformations and damages

c. Mounting

SEQUENCE OF OPERATIONS:

Apply spring ring in the groove and push it in manually.

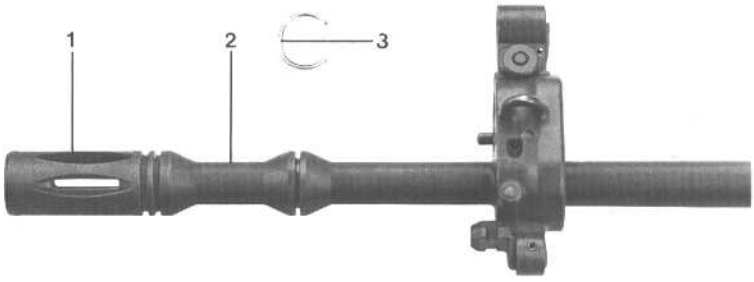

Figure 72

Barrel with spring ring

1 Flash suppressor
2 Barrel
3 Spring ring

6.4.2. Bayonet lug

a. Stripping

SEQUENCE OF OPERATIONS:

1) Knock out spring pin by means of a punch;
2) Pull out bayonet lug.

b. Detailed inspection

- Condition of bayonet lug and spring pin

c. Assembly

SEQUENCE OF OPERATIONS:

1) Push bayonet lug into the bore with milled portion pointing downward;
2) Center bore by means of punch;
3) Drive in spring pin.

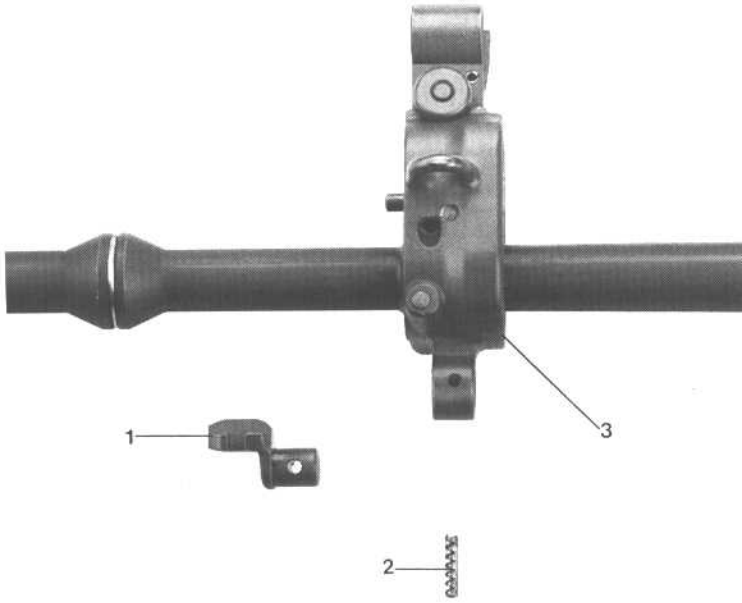

Figure 73

Front sight mount with bayonet lug

1 Bayonet lug
2 Spring pin
3 Front sight mount

6.4.3 Front sight

a. Remove and dismantle

SEQUENCE OF OPERATIONS:

1) Turn front sight screw with Allen key until the bore for the spring pin stands horizontally;
2) Remove spring pin using a punch;
3) Unscrew front sight disc;
4) Unscrew front sight screw;
5) Remove front sight from front sight mount with a brass punch;
6) Clamp front sight in vice and remove spring pin for night front sight with a punch;
7) Hold fast night front sight and withdraw punch slowly from the bore;
8) Remove night front sight, positioning pin and night front sight spring.

b. Detailed inspection

- Condition of front sight with protective tunnel and dovetail guide
- Condition of night front sight with light source
- Condition of spring pins
- Condition of dovetail guide on front sight mount

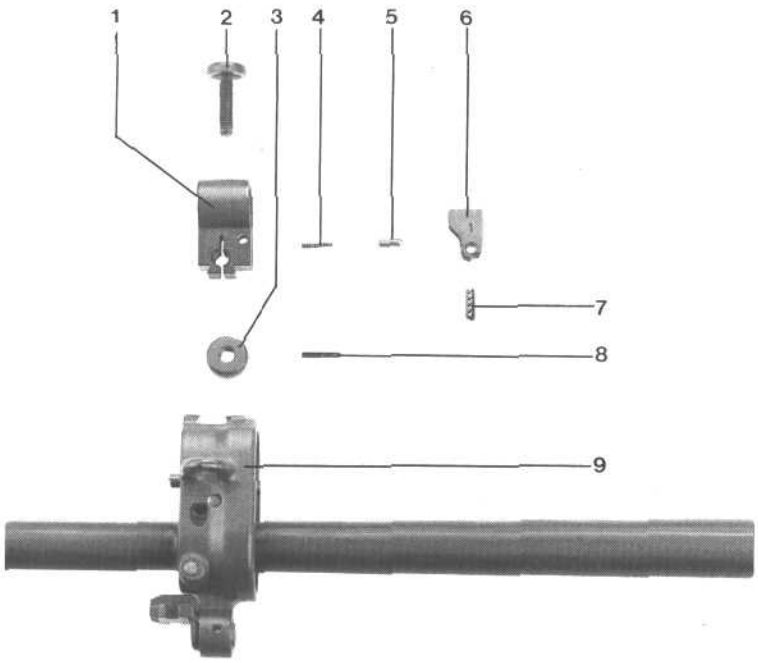

Figure 74

Front sight, dismantled

1 Front sight
2 Front sight screw
3 Front sight disc
4 Night front sight spring
5 Positioning pin
6 Night front sight
7 Spring pin
8 Spring pin
9 Front sight mount

c. Assembly

SEQUENCE OF OPERATIONS:

1) Put positioning pin and night front sight spring into the hole;

2) Push night front sight with its light source to the rear against the positioning pin. Center hole with punch;

3) Insert spring pin;

4) Check function of night front sight;

5) Put front sight mount to the right side;

6) Gently insert front sight mount in dovetail guide;

7) Drive front sight on front sight mount using a brass punch and make sure that it stands somewhat to the right;

8) Screw front sight screw into the front sight from the right;

9) Screw front sight disc on the front sight screw and center bore with a suitable punch;

10) Insert spring pin;

11) Adjust front sight with front sight screw to the mark.

6.4.4. Gas tube catch

a. Dismantling

SEQUENCE OF OPERATIONS:

1) Knock out spring pin against the hole for the gas tube;

2) Remove stop pin and compression spring.

b. Detailed inspection

- Good condition of stop pin, compression spring and spring pin

c. Assembly

SEQUENCE OF OPERATIONS:

1) Push compression spring into the hole;

2) Push stop pin into the hole, making sure that the milled notch points downward, and check centering with a punch;

3) Insert spring pin with the groove pointing downward and check function of stop pin.

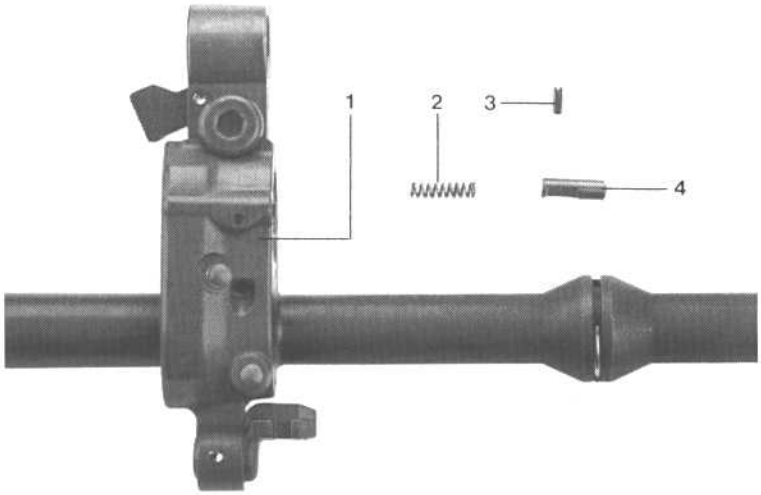

Figure 75

Gas tube catch, dismantled

1 Front sight mount
2 Compression spring for stop pin
3 Spring pin
4 Stop pin

6.4.5. Rear sight

a. Dismantling

SEQUENCE OF OPERATIONS:

1) Remove spring pin;
2) Remove limiting ring;
3) Unscrew elevation correction screw as far as the stop;
4) Unscrew windage correction screw;
5) Push in click stud for windage correction screw using a punch and push rear sight drum forward;
6) Slip out rear sight drum upward and simultaneously hold fast click stud for windage correction screw by hand;
7) Remove click stud and compression spring;
8) Unscrew insert;
9) Remove safety washer for rear sight drum using a screwdriver;
10) Remove leaf spring;
11) Separate rear sight drum from pivot;
12) Remove drum stud and drum spring;
13) Unscrew elevation correction screw;
14) Push drum axle, spring washer and rubber disc out of rear sight drum.

Key to figure 76

1 Insert
2 Rear sight drum
3 Spring washer
4 Drum axle
5 Rubber disc
6 Drum spring
7) Drum stud
8) Pivot
9) Click stud
10) Rear sight spring
11) Elevation correction screw
12) Leaf spring
13) Safety washer
14) Rear sight mount
15) Spring pin
16) Limiting ring
17) Windage correction screw

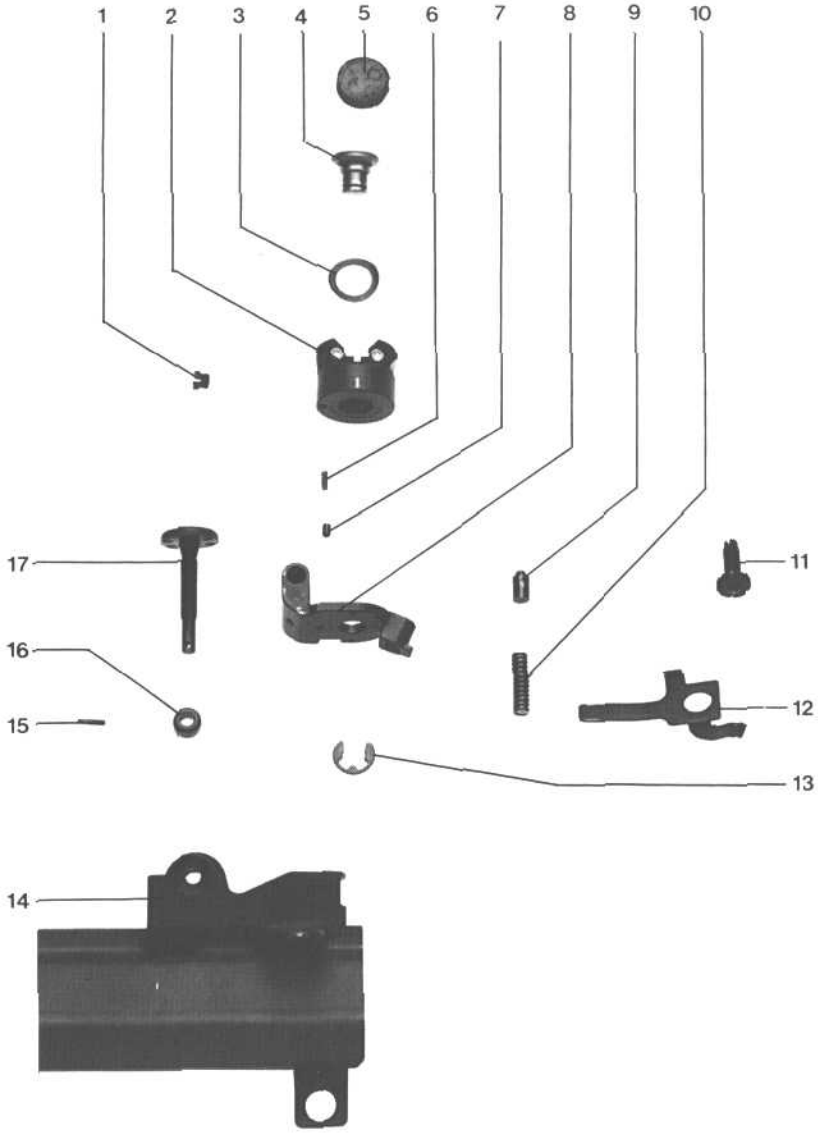

Figure 76

Rear sight dismantled

b. Detailed inspection

- Condition of rear sight drum and light sources
- Condition of windage and elevation correction screws
- Condition of click stud and drum stud

c) Assembly

SEQUENCE OF OPERATIONS:

1) Put spring washer into the rear sight drum, the curvature pointing downward;
2) Put drum axle on the spring washer;
3) Squeeze rubber disc into the rear sight drum;
4) Screw insert into the rear sight drum;
5) Insert drum spring and drum stud into the bore;
6) Screw elevation correction screw entirely into the pivot;
7) Put together pivot and rear sight drum;
8) Put leaf spring on the drum axle;
9) Mount safety washer;
10) Put rear sight spring into the bore;
11) Put pivot from above into the rear sight mount the click stud's bore being visible in the hole of the windage correction screw;

12) Put click stud on the compression spring, through the bore of the windage correction screw;

13) Push click stud inside, using a punch and simultaneously push pivot with rear sight drum downward;

14) Screw in windage correction screw;

15) Mount limiting ring;

16) Insert spring pin;

17) Turn elevation and windage correction screw until the rear sight stands in the center.

6.4.6. Gas piston

a. Dismantling

SEQUENCE OF OPERATIONS:

1) Remove spiral spring pin with a punch;
2) Pull back recoil spring at the support washer and hold it;
3) Remove punch and take out slowly support washer and recoil spring;
4) Remove recoil spring from the gas piston by turning;
5) Remove spring pin and ring.

b. Detailed inspection

- Condition of components;
- Check recoil spring for wear.

c. Assembly

SEQUENCE OF OPERATIONS:

1) Push ring on the gas piston and center bores with a punch;
2) Insert spring pin making sure that it does not protrude;
3) Push recoil spring on the gas piston and tighten as much as possible;

4) Put support washer on the recoil spring;

5) Insert spring pin making sure that it protrudes equally on both sides;

6) Release recoil spring.

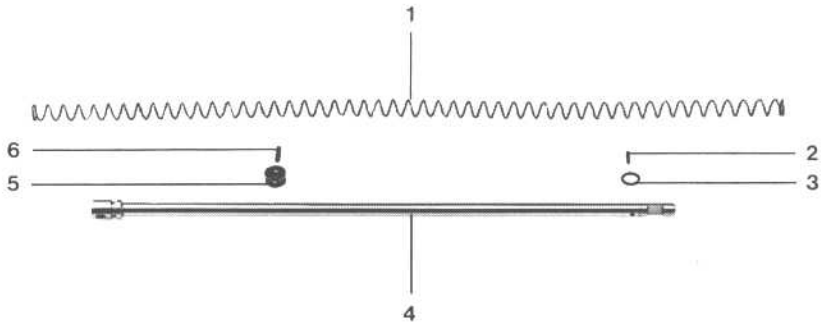

Figure 77

Gas piston, dismantled

1 Recoil spring
2 Spring pin
3 Support washer
4 Gas piston
5 Ring
6 Spring pin

6.4.7. Extractor

a. Removal

SEQUENCE OF OPERATIONS:

1) Knock out cylinder pin with a punch;
2) Pull out extractor from the bolt head to the front;
3) Remove extractor spring.

b. Detailed inspection

- Condition of extractor spring
- Condition of extractor claw

c. Mounting

SEQUENCE OF OPERATIONS:

1) Insert extractor spring into the hole;
2) Push extractor from the front into the bolt head;
3) Push extractor spring downward, using a special punch with its ground surface pointing forward and push simultaneously extractor to the rear and hold fast;
4) Center hole of extractor with a punch;
5) Insert cylindrical pin until it is flush on either side.

d. Remarks

The function of the extractor is to be checked after its assembly.

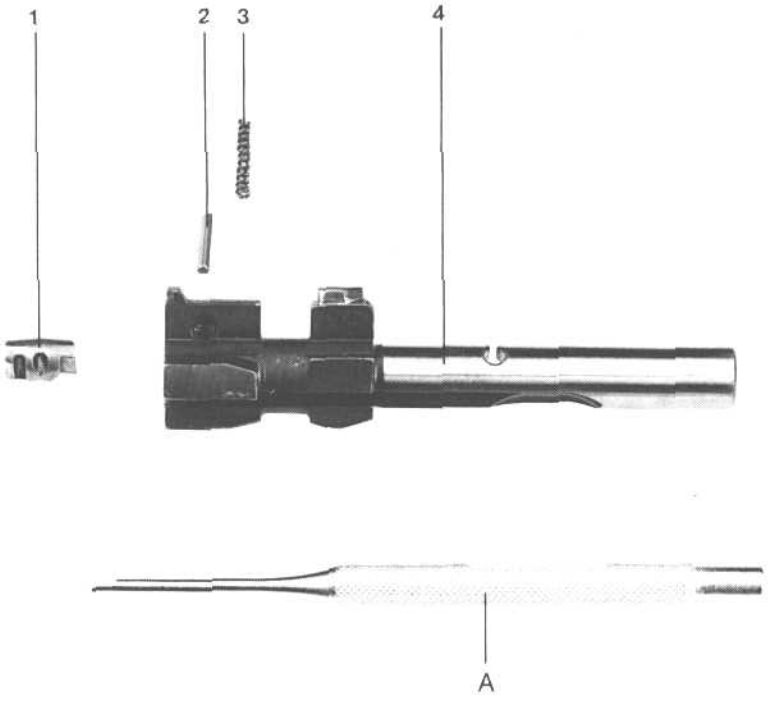

Figure 78

Extractor dismantled

1 Extractor
2 Cylindrical pin
3 Extractor spring
4 Bolt head
A Special punch

6.4.8. Bolt handle catch

a. Dismantling

SEQUENCE OF OPERATIONS:

1) Unlock axle for bolt handle catch and remove with punch;
2) Remove bolt handle catch.

b. Detailed inspection

- Condition of components

c. Assembly

SEQUENCE OF OPERATIONS

1) Insert spring for bolt handle catch in bore;
2) Position bolt handle catch;
3) Install axle of bolt handle catch;
4) Secure axle of bolt handle catch on firm support;

d. Note

When installing axle of bolt handle catch, use a brand-new one.

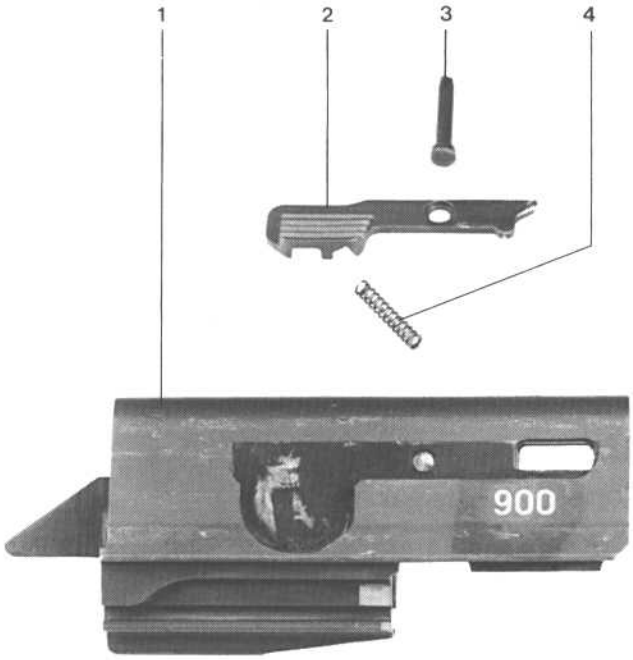

Figure 79

Bolt handle catch, dismantled

1 Bolt carrier
2 Bolt handle catch
3 Axle of bolt handle catch
4 Spring of bolt handle catch

6.4.9. Bipod

a. Dismantling

SEQUENCE OF OPERATIONS:

1) Remove circlip;
2) Knock out stud from bore with a punch;
3) Remove bipod from bipod carrier;
4) Remove click stud and spring.

b. Detailed inspection

- Condition of click stud and spring
- Bipod not distorted or deformed

c. Assembly

SEQUENCE OF OPERATIONS:

1) Insert spring and click stud;
2) Press bipod on bipod carrier in correct position;
3) Push stud into hole;
4) Mount circlip;
5) Check function and engagement of bipod.

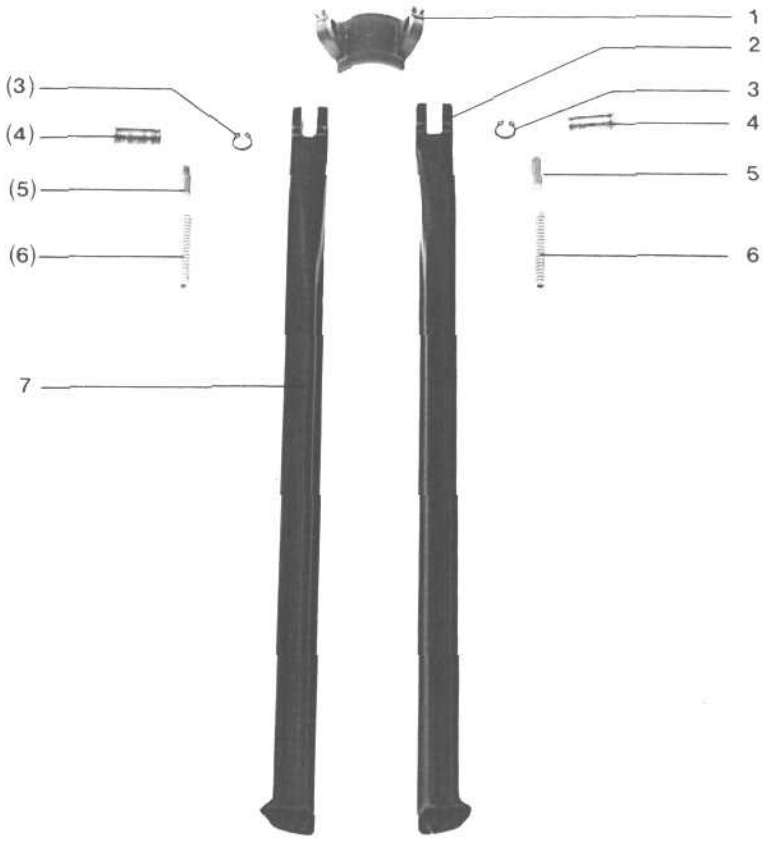

Figure 80

Bipod dismantled

1 Bipod carrier
2 Bipod leg, right
3 Circlip
4 Stud
5 Click stud
6 Bipod spring
7 Bipod leg, left

6.4.10. Trigger assembly

a. Dismantling

SEQUENCE OF OPERATIONS:

1) Decock hammer, remove trigger casing bolt;

2) Remove lever on right side by taking away the spring pin;

3) Put assembly bolt for safety shaft on safety shaft;

4) By rotating and pushing, remove safety shaft to the left, take out assembly bolt;

5) Knock out pivot trigger to the left, using a punch;

6) Pull trigger with 3-round burst facility out of trigger casing;

7) Take 3-round burst control system, automatic fire pawl spring and trigger spring off the trigger bush;

8) Put hand around trigger and pull out trigger bush;

9) Remove automatic fire pawl;

10) Pull trigger rod, sear, baffle plate, springs for trigger rod and sear out of the trigger;

11) Lift front end of locking spring with a screwdriver and remove it from the trigger casing;

12) Hold hammer and knock hammer axle from the left out of the trigger casing, using a punch;

13) Remove hammer and main spring from the trigger casing;

14) Spread main spring and slip it over the cams on the hammer and remove it;

15) Remove circlip for release bar;

16) Remove release bar.

b. Detailed inspection

- Condition of trigger casing
- Condition of components
- Condition of springs
- Check sear of hammer, trigger rod and sear for wear
- Good condition of pistol grip and floorplate

Key to figure 81

1 Trigger rod
2 Baffle plate
3 Springs for trigger rod and sear
4 Sear
5 Trigger
6 Automatic fire pawl
7 Lever
8 Spring pin
9 Safety shaft
10 Trigger spring
11 Rear trigger casing bolt
12 Pivot trigger
13 3-round burst control system
14 Trigger casing
15 Automatic fire pawl spring
16 Release bar
17 Circlip
18 Trigger bush
19 Main spring
20 Hammer
21 Hammer axle
22 Locking spring

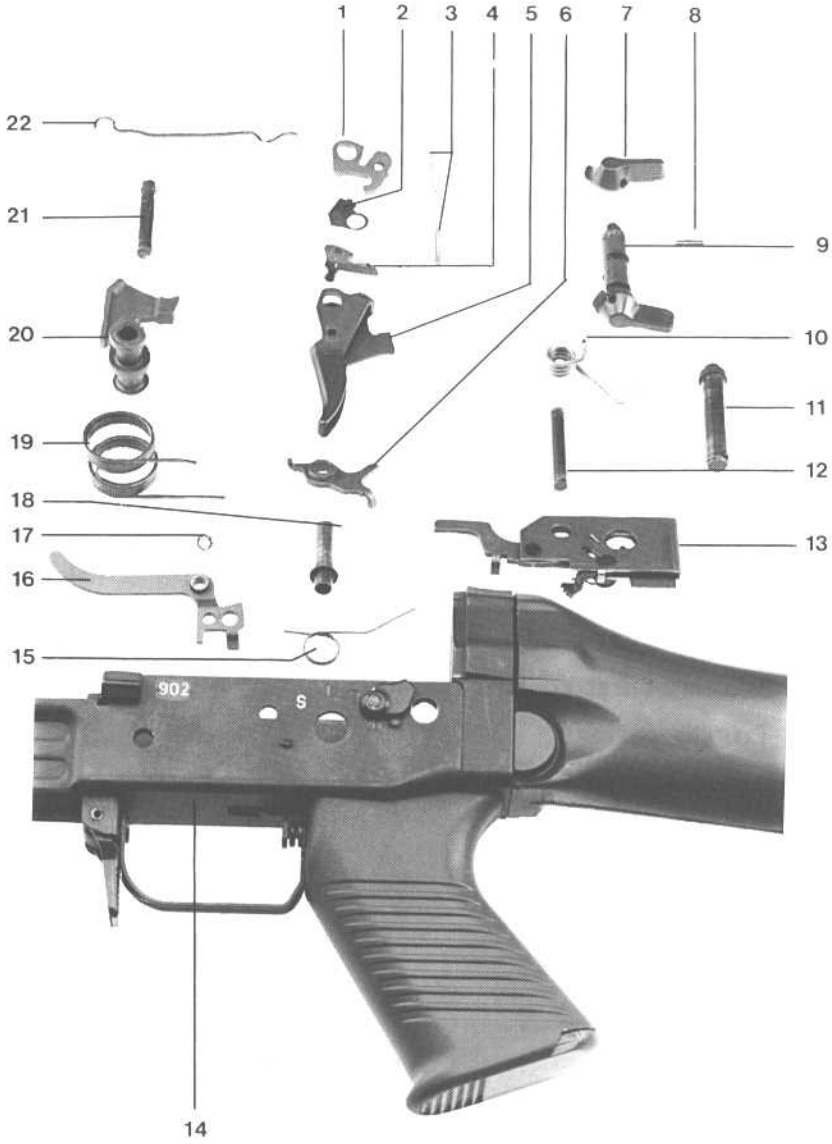

Figure 81

Trigger assembly, dismantled

c. Assembly

SEQUENCE OF OPERATIONS:

1) Install release bar and secure with circlip;

2) Mount main spring on the hammer;

3) Put the longer spring end of the main spring on the recess of the release bar and the shorter end on the bridge in the trigger casing;

4) Push the hammer down in vertical position, until the bore for the hammer axle matches;

5) Push the hammer axle from the left into the trigger casing, making sure that the groove for the locking spring precedes and push it through the hammer until it flushes on both sides;

6) Hold fast hammer axle on either side of the trigger casing and push the hammer to the left;

7) Mount locking spring;

8) Push automatic fire pawl on the trigger bush;

9) Push trigger bush through the first bore on the trigger and hold it;

10) Put trigger rod into the trigger and center with trigger bush;

11) Mount baffle plate. The plate's cam is to be positioned above in the recess of the trigger;

12) Mount sear and push trigger bush entirely in;

13) Push sear and trigger rod entirely forward and put the springs into the slots;

14) Push down springs for sear and trigger rod by means of pointed portion of mounting hook and position them in the trigger assembly;

15) Put spring for automatic fire pawl on the trigger bush making sure that the short end lies under the cam of the automatic fire pawl;

16) Mount trigger spring;

17) Put automatic fire facility on the trigger bush;

18) Push the assembled trigger from above into the trigger casing;

19) Press sear and trigger rod inside and push trigger downward simultaneously until the bore for the pivot trigger matches;

20) Mount the pivot trigger from the left making sure that the groove for the locking spring precedes;

21) Put the short end of the main spring on the 3-round burst control system;

22) Mount safety shaft from the left by turning and pushing, making use of the assembly aid. In doing so, make sure that:

- the spring for the automatic fire pawl lies below the safety shaft and the locking spring lies in the holes above the safety shaft;

23) Mount right lever and see to it that the spring pin does not protrude;

24) Mount both trigger casing studs;

25) Check the trigger functions.

Make sure that:

- the spring for the automatic fire pawl and the trigger spring lie under the safety shaft
- the locking spring lies in the holes above the safety shaft.

6.4.11. Bolt catch

a. Dismantling

SEQUENCE OF OPERATIONS:

1) Dismantle trigger assembly per Section 6.4.10. The assembly unit of the trigger is not to be dismantled;
2) Squeeze slotted end of spring bolt of bolt catch with flat pliers and push simultaneously to the inside;
3) Knock out the loosened spring bolt with a punch;
4) Remove bolt catch and bolt catch spring.

b. Detailed check

- Condition of components

c. Assembly

SEQUENCE OF OPERATIONS:

1) Insert bolt catch spring in the trigger casing;

2) Place bolt catch in the guide;

3) Squeeze front end of spring bolt with the assembly hook and mount;

4) Assemble trigger assembly per Section 6.4.10.

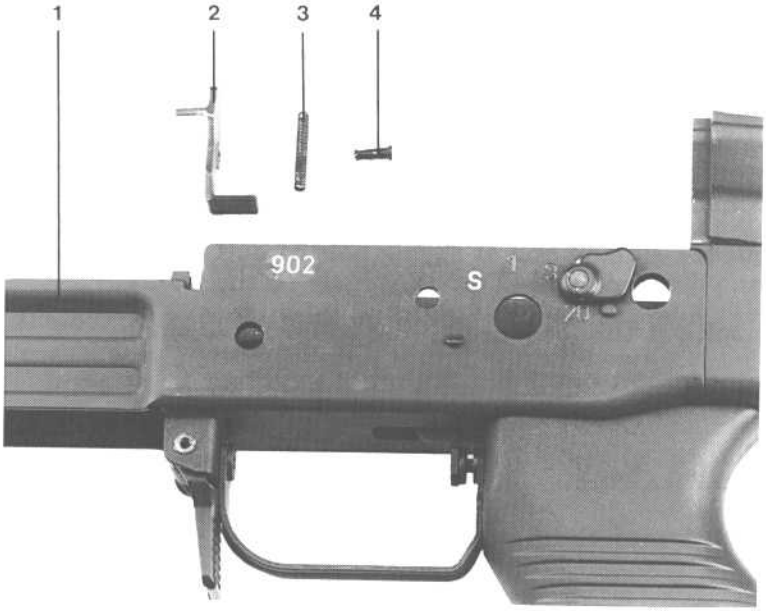

Figure 82

Bolt catch, dismantled

1 Trigger casing
2 Bolt catch
3 Bolt catch spring
4 Spring bolt

6.4.12. Magazine catch

a) Dismantling

SEQUENCE OF OPERATIONS:

1) Unlock magazine catch pin and remove with punch;
2) Remove magazine catch;
3) Knock out bush, remove magazine catch spring.

b) Detailed check

- Condition of components
- Rivets of trigger guard

c) Assembly

SEQUENCE OF OPERATIONS:

1) Install magazine catch spring in magazine catch, the long leg pointing downward;
2) Press down magazine catch from above. The short end of the spring must lie in the hole of the trigger casing;
3) Position magazine catch with punch;
4) Insert magazine catch pin and lock. Check function of magazine catch and engagement of trigger guard.

d) Note

For the assembly of the magazine catch, a new magazine catch pin is to be used.

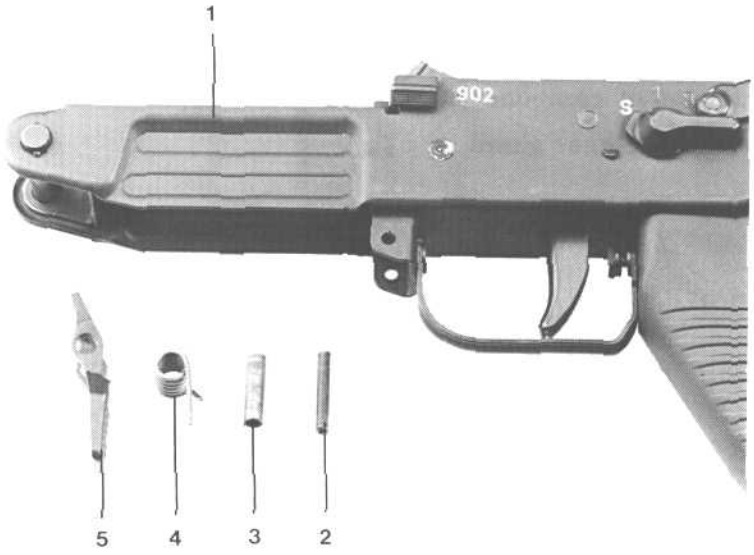

Figure 83

Magazine catch, dismantled

1 Trigger casing
2 Magazine catch pin
3 Bush
4 Magazine catch spring
5 Magazine catch

6.4.13. Butt

a. Dismantling

SEQUENCE OF OPERATIONS:

1) Knock out the butt axle from below with a punch dia. 4.8 mm;
2) Remove butt and cup spring;
3) Remove spring pin of butt catch;
4) Remove butt catch and butt catch spring;
5) Turn clip by 90° so that the rectangular opening is in vertical position;
6) Squeeze clip simultaneously with 2 screwdrivers and pull out;
7) Put screwdriver between butt and butt plate and remove butt plate.

b. Detailed check

- Condition of butt and butt axle
- Condition of components of butt catch
- Condition of click surfaces on butt catch
- Condition of clip

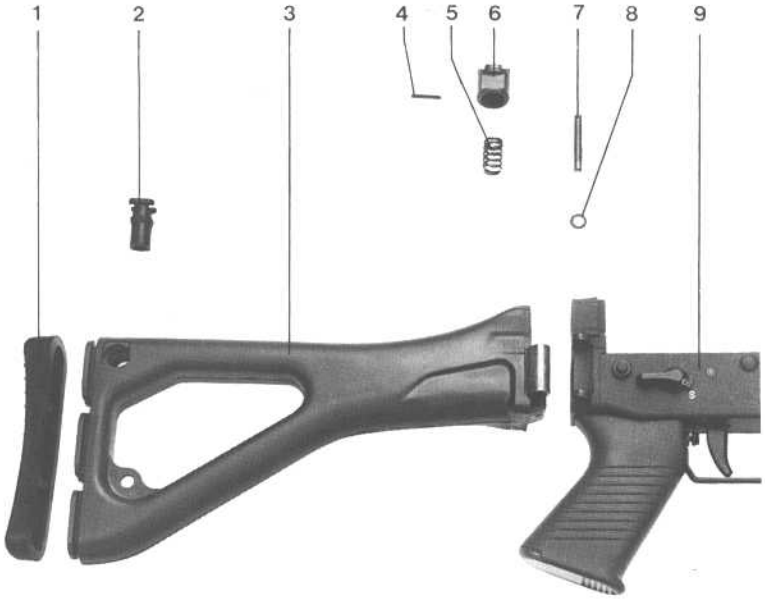

Figure 84

Butt dismantled

1 Butt plate
2 Clip
3 Butt
4 Spring pin
5 Butt catch spring
6 Butt catch
7 Butt axle
8 Disc washer
9 Trigger casing

c. Assembly

SEQUENCE OF OPERATIONS:

1) Mount butt plate
2) Push clip in vertical position into butt and turn by 90° making sure that the flap rounded off, lies on top;
3) Insert butt catch and spring into the butt;
4) Push in butt catch until the hole for the spring pin matches;
5) Insert spring pin;
6) Apply butt axle from above;
7) Push cup disc on butt axle making sure that its curvature is pointing against the upper flap on the trigger casing;
8) Position butt, insert axle as far as the notching;
9) Engage butt;
10) Drive in butt axle until it protrudes equally on both sides;
11) Check function and engagement of butt catch.

6.4.14. Pistol grip

a. Removal

SEQUENCE OF OPERATIONS:

1) Remove screw with hexagonal socket screw wrench 5 mm (extend legs with assembly bolts);

2) Take off pistol grip.

b. Detailed check

- Condition of pistol grip
- Condition of screw
- Rivets of trigger guard

c. Assembly

1) Screw down pistol grip with hexagonal socket screw wrench 5 mm (extend legs with assembly bolts).

d. Note

The stop nut of the pistol grip is forced into the plastic material. It shall be removed solely when replacing the pistol grip.

6.4.15. Pressure point mechanism

a. Removal

SEQUENCE OF OPERATIONS:

1) Dismantle trigger assembly per Section 6.4.10. up to and including operation 6);
2) Remove pistol grip per Section 6.4.14.;
3) Hold fast locking nut with special wrench 5.5 mm and unscrew pressure point screw until the end of the thread;
4) Hold fast pressure point spring and remove pressure point screw;
5) Remove stop nut and pressure point spring.

b. Detailed check

- Condition of components

c. Assembly

1) Position stop nut and pressure point spring;
2) Screw in pressure point screw;
3) Adjust pressure point per Section 6.5.;
4) Assemble pistol grip per Section 6.4.14.;
5) Assemble trigger assembly per Section 6.4.10.;

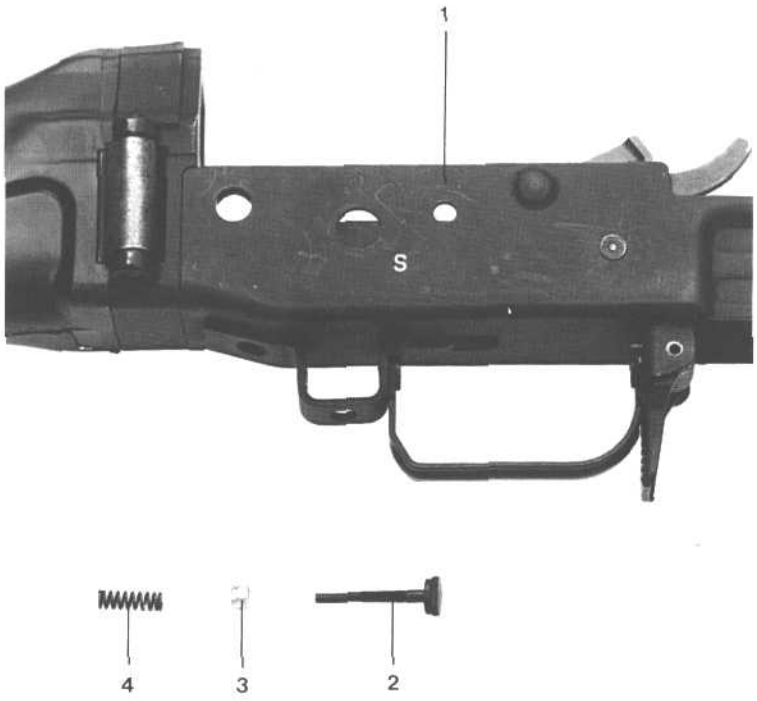

Figure 85

Pressure point mechanism, dismantled

1 Trigger casing
2 Pressure point screw
3 Stop nut
4 Pressure point spring

6.4.16. Targeting of weapon

Should the windage or elevation range on the rear sight be insufficient for the correction, the weapon should be retargeted.

During targeting, corrections are basically effected on the rear sight.

Large corrections of elevation or windage are made by replacing or drifting the front sight.

a. Procedure

SEQUENCE OF OPERATIONS:

1) Estimation of condition of barrel;
2) Check of barrel caliber;
3) Perform function check per Section 6.2.;
4) Turn elevation and windage correction screws as far as the stop;
5) Turn the elevation and windage correction screws the other way round as far as the stop and count the number of notches;
6) Turn back half the number of notches for both elevation and windage;
7) Push the front sight with the front sight screw until the marks match;

8) Fire 3 shots having the same aiming point;

9) Unload weapon;

10) Find out average point of impact;

11) Make the necessary corrections

Install a non-marked front sight if:

- the deviation of elevation for a firing range of 300 m exceeds 45 cm
- the front sight must be drifted sideways

12) Fire 3 shots having the same aiming point and unload weapon;

13) Find out average point of impact;

14) Make the necessary corrections.

b. Note

Proceed in this sequence of operations until the rear sight position and the point of impact correspond.

If there is a substantial dispersion during the targeting, the respective assault rifle is to be returned to the arsenal.

After the targeting the range of adjustment of both elevation and windage shall comprise at least 8 clicks.

After having replaced a front sight, the front sight is to be marked.

c. Change of front sight

To change the front sight, proceed as described under Section 6.4.3.

- If the point of impact shall be higher, install a smaller front sight.

- If the point of impact shall be lower, install a larger front sight.

The following front sight sizes are available:

Symbol	
	-.
	-
	N-
Normal front sight	not labelled
	N+
	+
	+.

When the front sight is changed by one size, the average point of impact is displaced as follows:

Firing range	Point of impact correction
100 m	10.5 cm
200 m	21.0 cm
300 m	31.5 cm
400 m	42.0 cm

When the front sight is drifted laterally by 1 mm, the average point of impact is displaced as follows:

Firing range	Point of impact correction
100 m	18.0 cm
200 m	36.0 cm
300 m	54.0 cm
400 m	72.0 cm

6.5. Setting the pressure point

6.5.1. General

Adjustments shall be made exclusively by armourers specially trained on the SIG SG 550/551 assault rifle.

6.5.2. Pressure point

The trigger pull weight is preset by the trigger spring. The pull weight can be increased by means of the pressure point screw. By adjusting the pressure point screw, the position of the pressure point can be changed. Do not adjust the pull weight of the trigger by manipulating the trigger and pressure point springs.

SEQUENCE OF OPERATIONS:

1) Remove pistol grip per Section 6.4.14.
2) Hold fast stop nut with special wrench 5.5 mm
3) Adjust pressure point screw with special wrench 7.0 mm
   - Set position of pressure point to the back = screw in pressure point screw
   - Set position of pressure point to the front = screw out pressure point screw.

IMPORTANT

Measured from the pressure point to the point of discharging the shot, the trigger travel must be at least 0.5 to 1 mm.

4) Assemble pistol grip per Section 6.4.14.

Figure 86

Pressure point mechanism

1 Pressure point screw
2 Stop nut
3 Pressure point spring
A Special wrench 5.5 mm
B Special wrench 7 mm

7. Appendix

7.1. List of parts

100 Receiver

111 Receiver casing
141 Bolt cover
142 Rivet
151 Rear sight drum
152 Drum spring
153 Drum stud
154 Luminous ampule*
155 Insert
156 Rubber disc
161 Pivot
162 Drum axle
163 Spring washer
164 Safety washer
165 Leaf spring
171 Windage correction screw
172 Click stud
173 Rear sight spring
174 Limitation ring
175 Spring pin
181 Elevation correction screw

200 Barrel / gas system

211 Barrel*
212 Front sight mount*
213 Roll pin
214 Spring ring**
221 Bayonet lug**
222 Spring pin**
223 Stop pin
224 Compression spring
225 Spring pin
231 Front sight
232 Night front sight
233 Positioning bolt
234 Night front sight spring
235 Spring pin
236 Front sight screw*
237 Front sight disc*
238 Spring pin
241 Gas valve
251 Gas tube
261 Gas piston
262 Recoil spring
263 Spring pin
264 Spring pin
265 Spacer
268 Support washer

* Cannot be ordered as individual parts
** Not on SG 551

300 Handguard

311 Upper handguard
321 Lower handguard
330 Bipod complete**
331 Leg, left**
332 Leg, right**
333 Bipod carrier**
334 Stud**
335 Circlip**
336 Click stud**
337 Bipod spring**

400 Bolt

411 Bolt head
412 Firing pin
413 Firing pin stud
414 Firing pin spring
415 Extractor
416 Extractor spring
417 Pin
421 Bolt carrier
422 Bolt handle catch
423 Axle of bolt handle catch
424 Spring of bolt handle catch
425 Bolt handle

** Not on SG 551

500 Trigger assembly

501 Trigger casing
510 3-round burst facility
511 Template
512 Chargeover
513 Pawl
514 Pawl spring
515 Bush
516 Segment
517 Segment axle
518 Segment spring
519 Locking washer
520 Compression spring
521 Magazine catch
522 Magazine catch spring
523 Magazine catch pin
524 Bush
531 Release bar
532 Circlip
541 Pistol grip
542 Floorplate
543 Allen screw
544 Stop nut
545 Nameplate
551 Pressure point screw
552 Stop nut
553 Pressure point spring
554 Trigger guard
555 Trigger guard bearing
561 Hammer
562 Hammer axle
563 Main spring
564 Bolt catch
565 Bolt catch spring
566 Spring bolt
571 Safety lever
572 Safety shaft
573 Locking spring
575 Autom. firing lock axle
576 Spring pin
578 Stop ring
581 Trigger
582 Trigger spring
583 Trigger rod
584 Pivot trigger
585 Trigger bush
586 Trigger rod spring
587 Sear*
588 Automatic fire pawl
589 Automatic fire pawl spring
591 Trigger casing stud
592 Spring-pressure pin
593 Spring for trigger casing stud
594 Spring pin
595 Pin
596 Cup spring
597 Baffle plate
598 Sear bolt*
599 Sear roller*

* Cannot be ordered as individual parts

600 Butt

611 Buttstock
612 Butt catch
613 Butt catch spring
614 Clip
615 Spring pin
616 Butt plate

700 Magazine

711 Magazine casing
712 Magazine floorplate
713 Floorplate catch
714 Feeder
715 Magazine spring

7.2. Exploded drawing

Information to be supplied
when ordering spare parts:

- Type of weapon
- Serial number
- Caliber
- Item number
- Parts designation

Subject to change without notice
W-7.603/8.87/10.12
Printed in Switzerland

Assault Rifle SG 550