OPERATOR'S MANUAL

MR223 SEMI-AUTOMATIC RIFLE

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Heckler & Koch is a leading firearms manufacturer of global proportions, yet remains firmly rooted in Germany. The company has been a dependable partner to security forces, police and special forces of NATO and its associated states for over 70 years.

Heckler & Koch stands for superlative quality and innovative products. Heckler & Koch is also the only small arm supplier with a comprehensive product portfolio. Its range includes pistols, submachine guns, assault rifles, designated marksman rifles, training systems and 40 mm systems.

QUALITY.
INNOVATION.
SERVICE.
SAFETY.

Thank you very much for deciding to purchase a product from Heckler & Koch.

The more familiar you are with the weapon, the safer you will be with it. Hence our request:

Read these operating instructions as well as the safety instructions they contain before operating the weapon. Keep the instruction manual for the life of the weapon and pass it on to any subsequent operator or owner, along with any supplements attached.

The weapon has been designed, manufactured and inspected according to the latest technical knowledge and the recognised safety-related technical rules and regulations. Nevertheless, use of the weapon may result in injury or death of the user and third parties, or damage to the weapon and other material property.

Please inform yourself with regard to the current edition of the safety instructions via www.heckler-koch.com.

⚠ DANGER

Risk of death from gunshot wounds!

Accidental discharge of weapon may occur due to external influences when loaded weapon is handled.

- Do not use the weapon until you have read and understood this manual completely.
- Follow the safety instructions when handling the weapon.
- Carry out a safety check before working on the weapon.

Table of contents

PART I
DESCRIPTION

1 Using this manual

This operator's manual describes all product variants and serial or special furnishings which are offered in the product family. For that reason, this operator's manual also describes and depicts equipment and functions which are not present on your weapon, e.g. due to the special furnishings selected.

Specific subjects can be found most quickly with the table of contents or index of keywords at the end of this operator's manual. For an overview of the weapon, it is recommended to see the first part ("Description") of this operator's manual.

1.1 Purpose of this manual

The first part of this manual ("Description") describes the design and function of the weapon, and the second part ("Handling") describes the handling of the weapon.

1.2 Target audience for this manual

This manual is intended for persons who are authorised to use this weapon. This manual does not assume extensive technical or weapons-specific knowledge.

1.3 Safety instructions, notes and information

To ensure the greatest possible safety during handling, important information and technical notes are specially highlighted.

1.3.1 Safety instructions and danger levels

Safety instructions are depicted as follows (example):

⚠ DANGER

Risk of death from gunshot wounds!

Accidental discharge of weapon may occur due to external influences when loaded weapon is handled.

› Do not use the weapon until you have read and understood this manual completely.
› Follow the safety instructions when handling the weapon.
› Carry out a safety check before working on the weapon.

The following colours and signal words are used in the safety instructions to indicate various danger levels:

Colour / signal word	Meaning
⚠ DANGER	Direct, imminent danger! Non-compliance will lead to death or extremely serious injury.
⚠ WARNING	Possible imminent danger! Non-compliance could lead to death or serious injury.
⚠ CAUTION	Dangerous situation! Non-compliance could lead to minor injuries.
NOTICE	Non-compliance could lead to material damage.

1.3.2 Symbols used

Symbol	Meaning
	Here you have to observe something.
	Supplementary information regarding weapon and accessories.
	Tip / useful hint
1. / 1.	Call to perform an action in a sequence of actions: Here you have to do something!
›	Stand-alone call to perform an action or call to perform an action in a safety instructions: Here you have to do something!
▶	Cross reference between individual sections: Open to the relevant page and follow the section described there! The sections can be found most quickly with the index of keywords at the end of this manual.
•	Bullet point
	Call to perform an action properly implemented. The check was successful.
	Call to perform an action improperly implemented. The check was not successful: Follow the specified call to perform an action!
	Here something engages.

1.3.3 Symbols for auxiliary materials

The following table explains symbols for auxiliary materials which may appear in operation and maintenance manuals from Heckler & Koch. The symbols are shown in the illustrations and indicate which auxiliary materials are needed for which actions.

Symbols for auxiliary materials					
	Hammer		Pliers such as assembly pliers		Screwdriver
	Torque, e.g. 30 Nm		Pointed object, such as a pin punch		Vice
	Pin punch, e.g. size 1.8 mm		Open jawed spanner, e.g. size 17 mm		Screwdriver, e.g. 3.5 x 100 mm screwdriver
	Screwdriver, e.g. size PH2		Allen key, e.g. size 6 mm		Torx key, e.g. size TX15
	Oil		Adhesive		Grease

1.3.4 Conventions for illustrations

Details in illustrations can - depending on the variant - deviate from your current weapon and/or the accessories.

The information “right,” “left,” “front” and “rear” refers to the position of the weapon and/or accessories as viewed from the direction of fire.

Illustrations and their constituent elements are identified as follows:

- Components relevant to the action are highlighted in blue. Where necessary the components are marked with numbers and identified in a legend.
- Motions are indicated by orange-coloured arrows.
- Calls to perform an action are indicated by upper-case letters enclosed in circles.

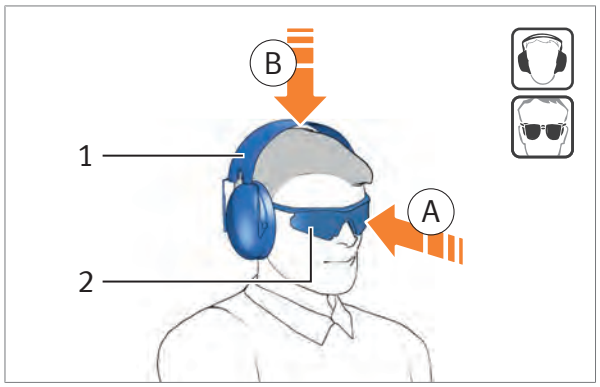


Fig. 1: Example of an illustration

1 Hearing protection
2 Safety goggles

1.3.5 Conventions for cross references

Cross references represent relationships between the text and an illustration or an individual section.

- Cross references between text and illustrations are in *italics* and enclosed in (brackets), e.g. (*Fig. 1*).
- Cross reference between individual sections are marked with the symbol ▶ (*Fig. 2*).

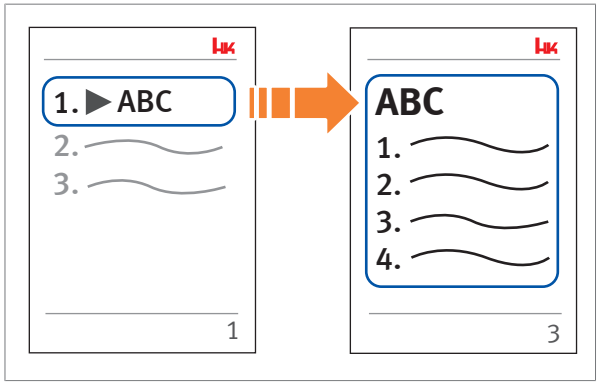


Fig. 2: Example of a cross reference between sections

2 Safety instructions

2.1 Fundamental safety instructions

The weapon has been designed, manufactured and proofed according to the latest technical knowledge and the recognised safety rules. Nevertheless, use of the weapon may result in injury or death of the user and third parties, or damage to the weapon and other material property.

Please inform yourself with regard to the current edition of the safety instructions via www.heckler-koch.com.

- Follow all of the instructions in this operator's manual. Non-compliance may result in injury or death.
- Never handle the weapon if you are tired, feeling unwell, or when you have previously consumed alcohol, drugs or any types of medicines.
- Always follow the instructions provided by their respective manufacturers when using accessories and ammunition.
- Always follow the safety data sheets and details or instructions from the respective manufacturers when using hazardous materials, such as e.g. oils, lubricants and cleaning agents.
- Always follow all valid provisions for handling weapons, accessories and ammunition.
- Always follow all valid provisions for handling hazardous materials, such as e.g. oils, lubricants and cleaning agents.

2.2 The operator's manual as an integral component of the safety concept

The operator's manual is an integral component of the weapon.

- Do not use the weapon until you have read and understood this operator's manual completely.
- Always adhere to the stated sequence for handling stages in the operator's manual.
- Keep the operator's manual for the entire service life of the weapon.
- Please inform yourself with regard to the current edition of the operator's manual, safety instructions and any relevant supplements via www.heckler-koch.com.
- If you receive any supplements or amendments, be sure to add them to the operator's manual.
- Always pass the operator's manual and the enclosed supplements on to any subsequent operator or owner.

2.3 Safety instructions for handling the weapon

- Special care must be taken when handling firearms, because the position and direction of the weapon can be changed very easily.
- Use the weapon only for its intended purpose. Do not use the weapon as a club, hammer, pry bar, etc. Using the weapon for other than its intended purpose may result in accidental discharge of weapon or damage to the weapon.
- Until you have performed a safety check, treat the weapon as if it was loaded and the safety released.
- Use the weapon only if it is in perfect technical condition.
- Do not play with the weapon.

2.3.1 Handling

- Never point the weapon at people when handling or practising with it.
- Make sure that the weapon is always unloaded when it is handled for purposes other than loading or firing.
- Do not touch the trigger when loading, unloading, aiming, disengaging the safety or handling the weapon in any other way.
- Always place your trigger finger on the outside of the trigger guard.
- Do not use excessive force when handling, disassembling, cleaning and assembling the weapon.

2.3.2 Safety features

› Do not rely on safety features. Safety features are no substitute for careful, correct handling of the weapon.

› For weapons with safety lever, make sure that the safety lever is always clicked to the "Safe" position.

2.3.3 Malfunctions and unusual encumbrances

Users are strictly prohibited from troubleshooting faults that go beyond the scope of this manual! Only authorised specialists may rectify faults in the weapon.

› Always treat the weapon as if it were loaded in the event of a malfunction.

› Immediately rectify any faults that compromise safety.

› Exposure to exceptional stresses such as when the weapon is banged or dropped can have a negative effect on safety. After exceptional stresses, have the weapon inspected by the manufacturer or trained firearms personnel.

2.3.4 Handing over the weapon

› Do not entrust the weapon to anyone who has not comprehensively read and completely understood this operator's manual.

› Do not entrust the weapon to anyone who is not entitled to possess the weapon. Observe applicable regulations.

› Never handover or receive the weapon unless it is unloaded and the bolt group is in the open position.

2.3.5 Storage, transport and disposal

› Store weapon and ammunition separately. Be sure to prevent access to the weapon and ammunition by unauthorised persons, especially children.

› Always follow the applicable provisions for the transport and shipping of weapons and ammunition.

› Always follow the applicable provisions for destroying and disposal of weapons and ammunition.

2.3.6 Additional information

› Always prevent dry firing of the hammer with weapons with a hammer sidelock. Dry firing of the hammer can lead to premature wear.

› Always prevent dry firing of the firing pin with weapons with a firing pin lock. Dry firing of the firing pin can lead to premature wear.

› Always prevent snapping forward of the bolt group with rapid firing weapons such as e.g. machine guns. Snapping forwards of the bolt group can lead to premature wear.

2.4 Safety instructions for firing

- Wear hearing protection when firing.
- Wear safety goggles when firing.
- Keep the muzzle area clear when firing.
- Wear protective gloves when touching the barrel or parts which heat up during firing after firing.
- Use only properly loaded, undamaged cartridges of the correct calibre.
- Do not shoot at doors, panes of glass, walls, concrete, stone, or smooth surfaces (including water). A bullet can penetrate these objects or be deflected in an unsafe direction.
- Pull the trigger only if the weapon is pointing at the target and the area behind the target is not endangered.
- The trigger must be pulled back completely when firing. The trigger must be released completely and return to the forward position after every shot when firing in rapid succession.
- Only actuate the trigger after you have snapped the safety lever into the desired firing selection position.
- Keep your hands out of the path of the bolt group when firing.

2.5 Safety instructions for utilising accessories and ammunition

- Inspect the attachments mounted on the weapon for secure seating before firing and at regular intervals.
- Use only properly loaded, undamaged cartridges of the correct calibre.
- The use of muzzle attachments such as silencers or blank firing attachments places greater stress on the weapon and gets it dirty faster. Clean the weapon at shorter intervals.

2.6 Safety instructions for drop safety

Drop safety is affected by many factors, such as: fall height, fall angle, ground, type and frequency of impact, handling and treatment of the weapon, loading and safety status of the weapon, accessories and equipment configuration of the weapon and the ammunition used. Regardless of the weapon's manufacturer or model, absolute drop safety is not possible and can only be checked based on defined test parameters.

Use of weapons with match/sporting trigger: For physical reasons, match/sporting triggers have reduced drop and impact safety due to the refined trigger characteristics. Extraordinary stresses, such as if the weapon falls and hits the floor, can cause an accidental discharge.

- Make sure that the weapon is always unloaded when it is handled for purposes other than loading or firing.
- Always ensure, with weapons with a safety lever, that the safety lever is in the desired firing selection position immediately before firing.
- Set the safety lever to the "Safe" position during every pause in firing.
- Use a carrying sling / securing belt in order to prevent the weapon from falling and striking the ground.
- After exceptional stresses, such as falling and hitting the ground, have the weapon inspected by trained firearms personnel.

2.7 Exclusion of liability and warranty

Heckler & Koch GmbH accepts no liability and provides no warranty for incidents arising from:

- non-compliance with this manual,
- incorrect handling of the weapon,
- negligence,
- improper use,
- modifications, attachments to or conversion of the weapon without the express written consent of Heckler & Koch GmbH, or
- use of accessories or spare parts from other manufacturers without the express written consent of Heckler & Koch GmbH (except for accessories from other manufacturers mentioned in this manual).

3 Description of the weapon

The MR223 in calibre .223 Rem. features outstanding functional reliability - its gas system was developed for military purposes and has proven itself in military technology over many years. The drive system reduces the usual dirt deposits to a minimum. Starting with Version A3, the MR223 can be operated completely as ambidextrous and has a reworked magazine well according to NATO-STANAG-4179 (DRAFT). The MR223 is a versatile semi-automatic rifle for several long-range weapon disciplines.

Fig. 3: Scope of supply

1 Weapon
2 Magazine
3 Operator's Manual

3.1 Intended use

The semi-automatic rifle MR223 is a small arm for sport shooting at a range of up to:

Mechanical rear sight	Optical sight
approx. 200 m	approx. 500 m

3.2 Functional elements

Fig. 4: Left side view

1 *Flash hider*
2 *Barrel*
3 *Front sight*
4 *Handguard*
5 *Bolt catch/release, both sides*
6 *Rear sight, foldable*
7 *Charging handle*
8 *Buttstock cap*
9 *Safety lever, ambidextrous*
10 *Trigger*
11 *Magazine*
12 *Follower*
13 *Magazine lips*

Fig. 5: Right side view

1	*Buttstock*	*7*	*Magazine well*
2	*Forward assist*	*8*	*Magazine catch, both sides*
3	*Cartridge case deflector*	*9*	*Trigger guard*
4	*Ejection port cover*	*10*	*Locking pin, rear*
5	*Locking screw for handguard*	*11*	*Pistol grip*
6	*Locking pin, front*	*12*	*Release lever for buttstock*

3.3 Assembly groups

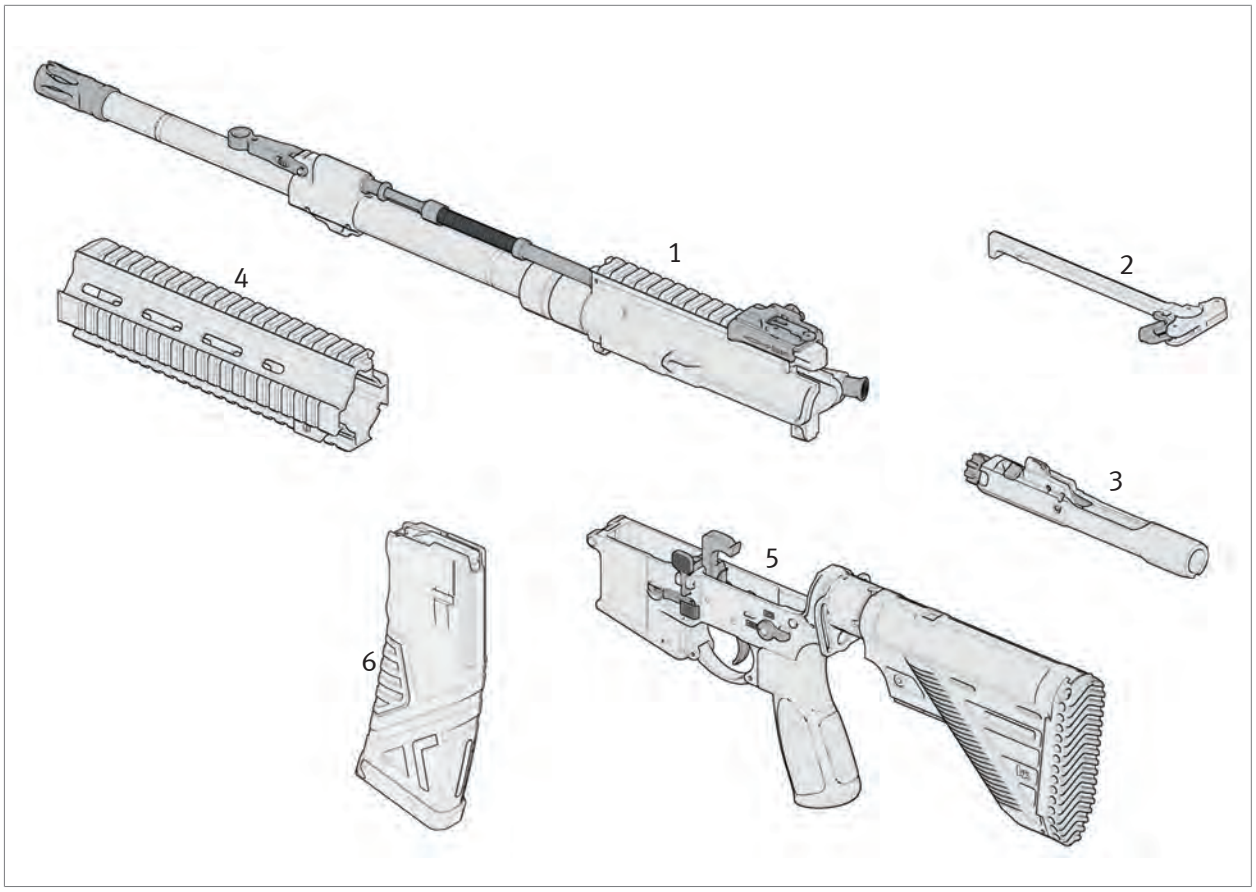


Fig. 6: Assembly groups

1 *Upper receiver*
2 *Charging handle*
3 *Bolt group*
4 *Handguard*
5 *Lower receiver*
6 *Magazine*

3.4 Safety features

3.4.1 Safety lever

The safety lever prevents accidental actuation of the trigger. In the “Safe” position (*Fig. 7*) the safety roller blocks the trigger. Only when the safety lever is clicked to the “Single fire” position (*Fig. 8*) will the safety roller release the trigger.

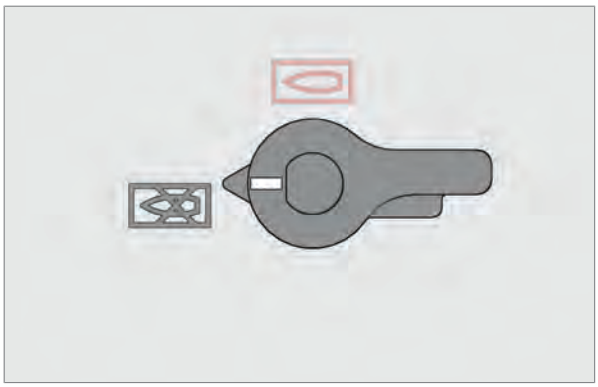


Fig. 7: “Safe” position

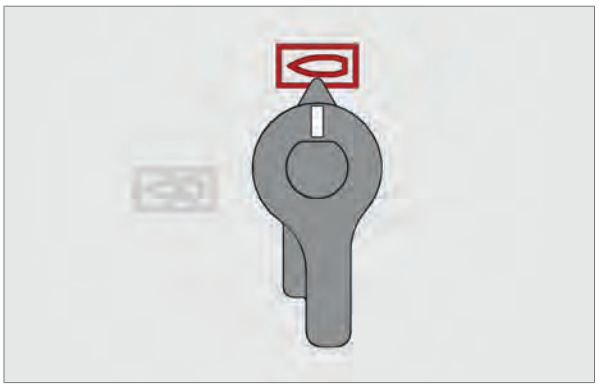


Fig. 8: “Single fire” position

3.4.2 Firing pin safety

The firing pin safety prevents the firing pin from being able to strike the cartridge primer in the event of an accidental discharge, for instance if the weapon is dropped. The firing pin remains blocked until the trigger is pulled.

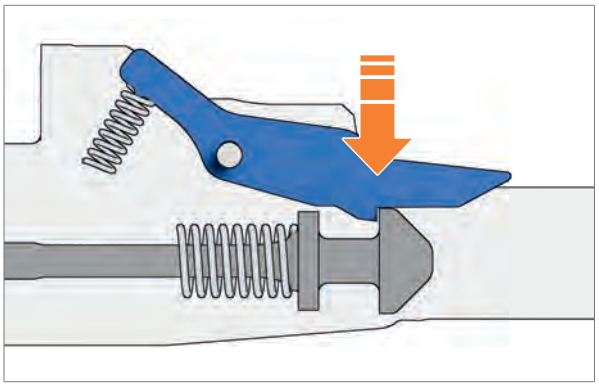


Fig. 9: Firing pin safety

4 Variants

The weapon features a modular structure and can be configured individually for the specific purpose of use depending on the customer's requirements.

The following chapters show the weapon's possible furnishings and functions.

4.1 Barrel length

Illustration	Feature	Information
	Barrel length 11"	The weapon has a barrel length of 11" (approx. 279 mm).
	Barrel length 14.5"	The weapon has a barrel length of 14.5" (approx. 368 mm).
	Barrel length 16.5"	The weapon has a barrel length of 16.5" (approx. 420 mm).

4.2 Colour

Illustration	Feature	Information
	Colour 	Available in various colour concepts, such as e.g.: "SW", black (standard colour)
		"GB", green brown (similar to RAL8000)

4.3 Handguard

Various types of handguard variants are available. Depending on your requirements, you can select between a handguard with Picatinny rails or a Slim Line handguard with HKey interfaces. Different lengths are also available. Additional equipment features such as e.g. an integrated folding sight are possible.

Handguard with Picatinny profile

The aluminium handguard has a Picatinny profile at 3, 6 and 9 o'clock, as well as a STANAG 4694 profile at 12 o'clock position.

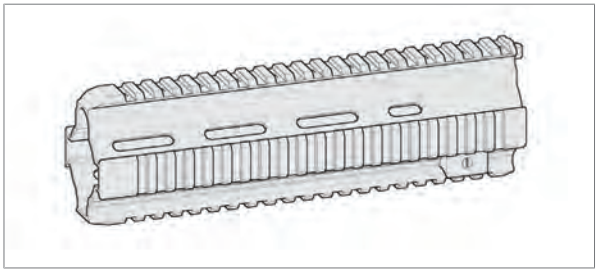


Fig. 10: Handguard with Picatinny profile

Slim Line handguard with HKey interfaces

The Slim Line handguard is equipped with HKey interfaces at 3 and 9 o'clock, a Picatinny profile at 6 o'clock and a STANAG 4694 profile at 12 o'clock position.

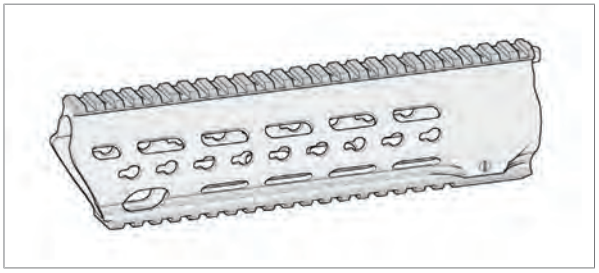


Fig. 11: Handguard with HKey interfaces

4.4 Additional equipment features

Carrying sling

There are various carrying slings in different types, modes of functioning or fastening. The carrying sling enables various methods of carry. The carrying sling is attached to the handguard and to the eyelet on the receiver or on the buttstock.

Sights

Various mechanical rear sights are available such as e.g. a drum sight or a quick-change sight.

Buttstock

Various buttstocks are available. Depending on the requirement. A selection can be made between standard buttstock or buttstocks with cheek cap / buttstock cap. There is also a choice of different versions for the buttstock caps (convex / concave). Additional equipment features such as e.g. Picatinny rails for a carrying sling are also possible.

4.5 Examples of configurations

4.5.1 MR223 / MR223 A1

with one-sided operation (through loading, magazine and bolt catch/release lever).

4.5.2 MR223 A3

with ambidextrous operation (through loading, magazine and bolt catch/release lever). Available with barrel lengths 11" / 14.5" / 16.5".

4.5.3 MR223F-C / MR223F-S

MR223 configuration which corresponds to the new HK416F assault rifle of the French Army. With barrel length 11" (MR223F-C) and 14.5" (MR223F-S).

4.6 Technical data

4.6.1 General data

Weapon	MR223
Calibre	.223 Rem.
Operating principle	Semi-automatic, gas-operated
Locking system	Locked rotating bolt head
Cartridge feed	Magazine, 2 / 5 / 10 / 20 / 30 cartridges
Cartridge case ejection	Right
Mode of fire	Single fire
Barrel profile	6 fold groove / land profile
Twist	Right-hand twist
Trigger pull	Approx. 25 N

4.6.2 Dimensions

Weapon		MR223 A3 11”	MR223 A3 14.5”	MR223 A3 16.5”
A	Length, maximum	807 mm	896 mm	948 mm
B	Length, minimal	711 mm	800 mm	852 mm
C	Buttstock adjustment travel	96 mm		
D	Width	74 mm		
E	Height	191 mm		
F	Barrel length[1]	279 mm (11”)	368 mm (14.5”)	420 mm (16.5”)
G	Sight radius	371 mm		

[1] Without flash hider

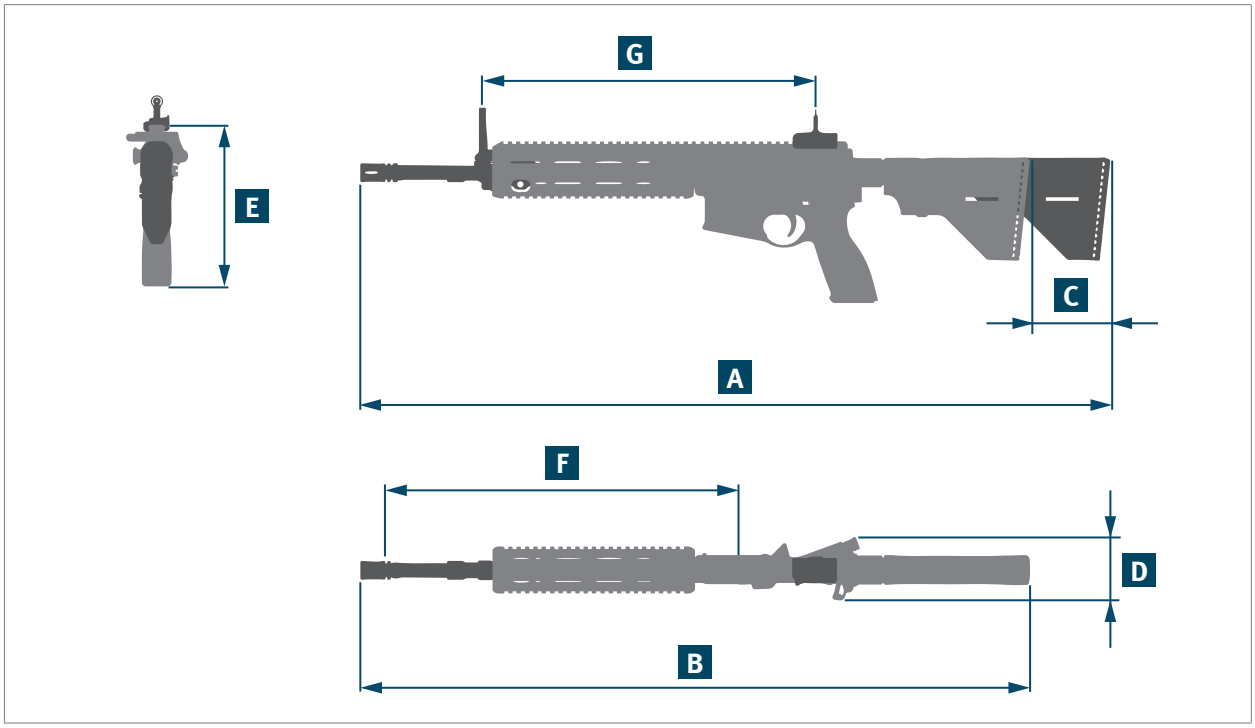


Fig. 12: Dimensions

5 Cleaning kit and auxiliary materials

The cleaning kit is not included in the standard scope of supply for the weapon. The cleaning kit can be ordered from Heckler & Koch using the Ident.-No. shown.

5.1 Cleaning kit (Ident. No. 236990)

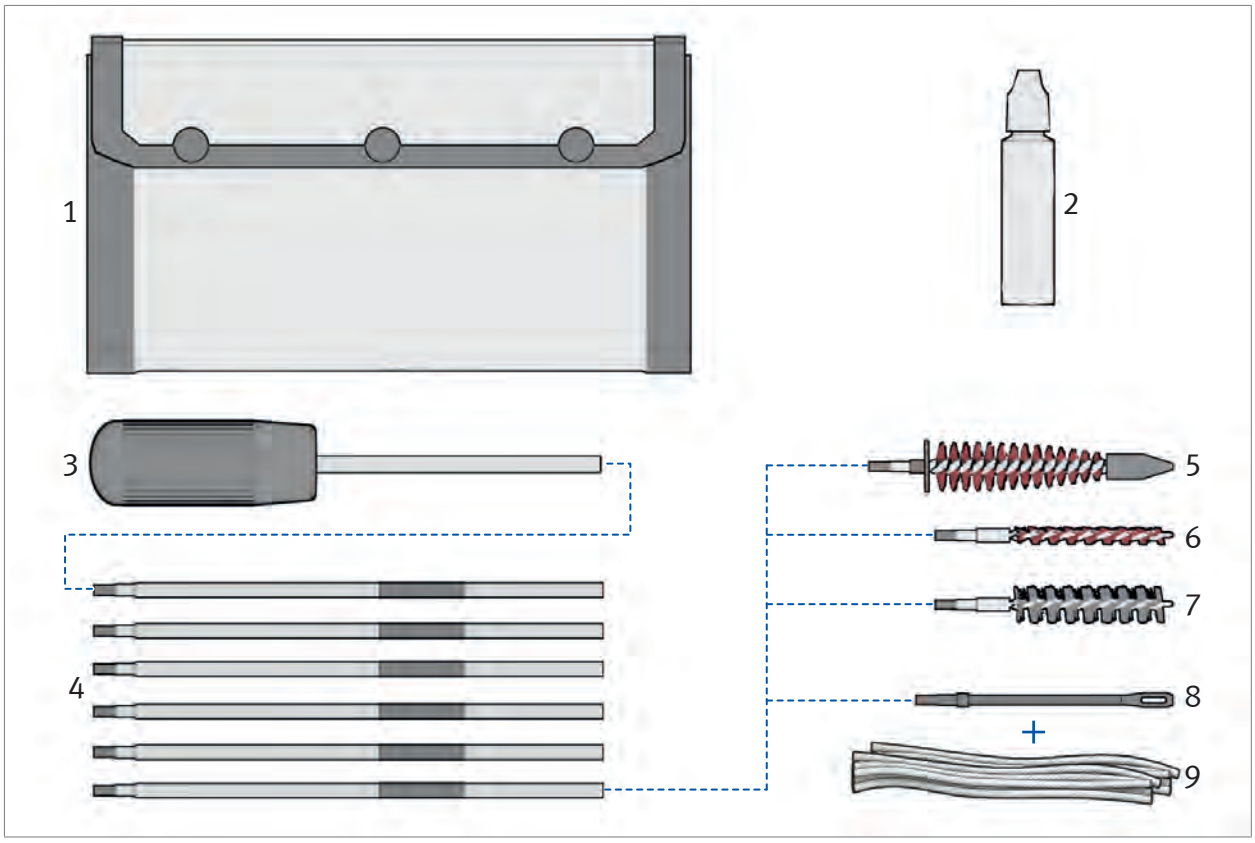


Fig. 13: Cleaning kit

Item	Designation	Ident.-No.
--	Cleaning kit (Positions 1 - 9)	236990
1	Bag for cleaning kit	975256
2	Oil bottle, filled	260399
3	Handle rod	975263
4	Extension rod (6x)	975262
5	Chamber cleaning brush	975375
6	Barrel cleaning brush	985523
7	Oil brush	985525

Item	Designation	Ident.-No.
8	Pull-through holder	975261
9	Pull-throughs (10x)	962017

5.2 Extended cleaning kit (Ident. No. 237448)

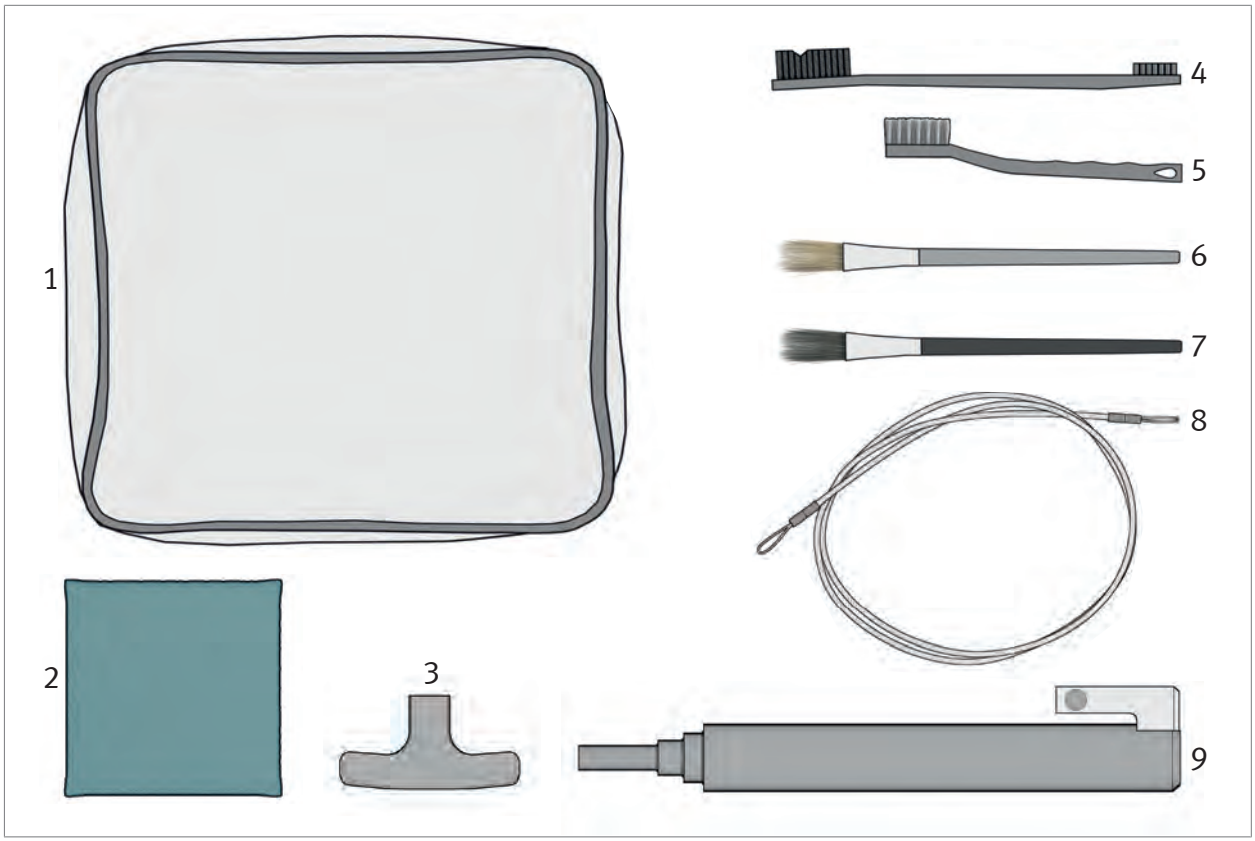


Fig. 14: Cleaning kit (Positions 1 - 9)

Position	Designation	Ident.-No.
--	Extended cleaning kit (Positions 1 - 20)	237448
1	Bag for cleaning kit	975518
2	Cleaning cloth	974113
3	T-handle	975264
4	Cleaning brush, polymer	974187
5	Cleaning brush, brass	979769
6	Cleaning brush, natural hair	979766
7	Cleaning brush, polymer	975243
8	Cleaning hose	979926
9	Cleaning rod guide	237022

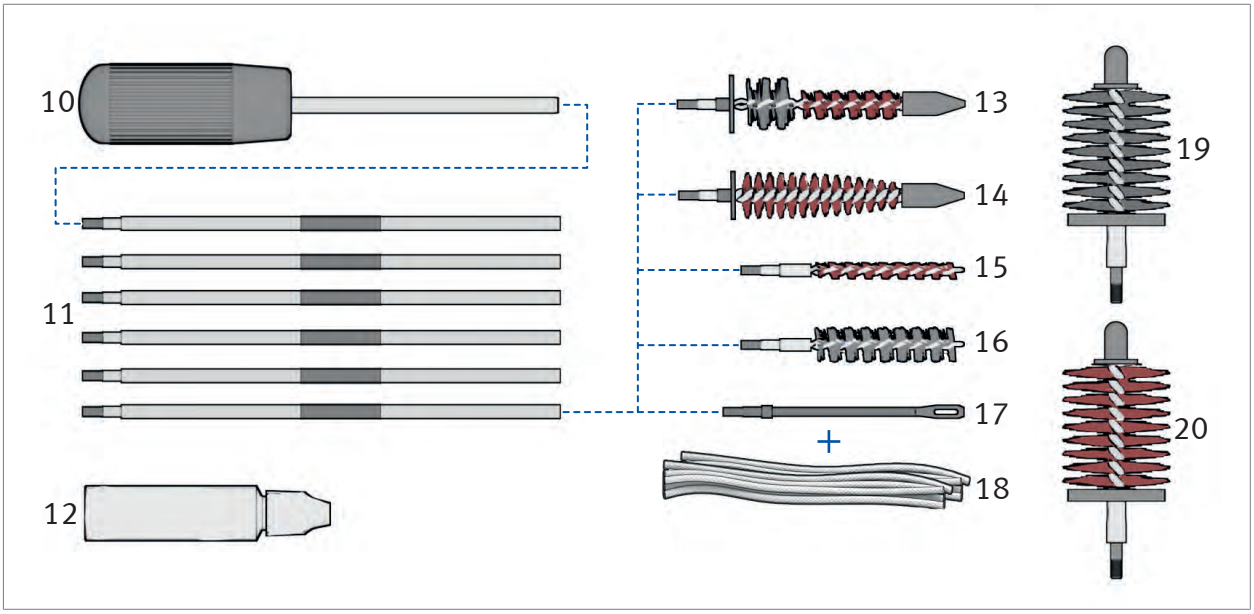


Fig. 15: Cleaning kit (Positions 10 - 20)

Position	Designation	Ident.-No.
10	Handle rod	975263
11	Extension rod (6x)	975262
12	Oil bottle, filled	260399
13	Cleaning brush for locking piece / Chamber cleaning brush	975260
14	Chamber cleaning brush	975375
15	Barrel cleaning brush	985523
16	Oil brush	985525
17	Pull-through holder	975261
18	Pull-throughs (10x)	962017
19	Oil brush for extension	974456
20	Cleaning brush for extension	974457

5.3 Auxiliary materials

Auxiliary materials are available from specialist dealers.

Required auxiliary materials are listed at the beginning of each section.

5.3.1 Tools

- Allen key 2 mm / 3 mm / 4 mm
- 3.5 x 100 mm screwdriver
- PH2 screwdriver
- Screwdriver and elevation adjustment tool (Ident.-No. 300009)

5.3.2 Torque wrench and socket set

A suitable torque wrench and socket set are available in specialist shops.

Activity	Torque	Assignment
Attach Picatinny rail to HKey interface	5 Nm	Torx insert TX15
Insert adapter for carrying sling on HKey interface	5 Nm	Torx insert TX15
Insert handguard	8 Nm	11 mm open jaw spanner insert
Insert flash hider	45 Nm	17 mm open jaw spanner insert

5.3.3 Lubricants / Other auxiliary materials

- Low-temperature oil (MIL-L-14107), e.g. O-157
- Oil (MIL-L-63460), e.g. S-761
- Grease
- Oil paper
- Cleaning rag
- Cleaning pull-throughs

PART II
HANDLING

6 Checks

6.1 Carry out a safety check

Successful completion of a safety check verifies that there is no ammunition in the weapon. The safety check is especially important when accepting a weapon and when you are unsure whether or not a weapon is loaded.

1. Click safety lever to the “Safe” position.
2. ▶ Remove magazine.
3. ▶ Lock bolt group into place.
4. Look into the chamber (*Fig. 16*). There must not be a cartridge in the chamber. If there is a cartridge in the chamber, then a fault is present. ▶ Faults: Causes and remedies.
5. ▶ Guide bolt group forwards.

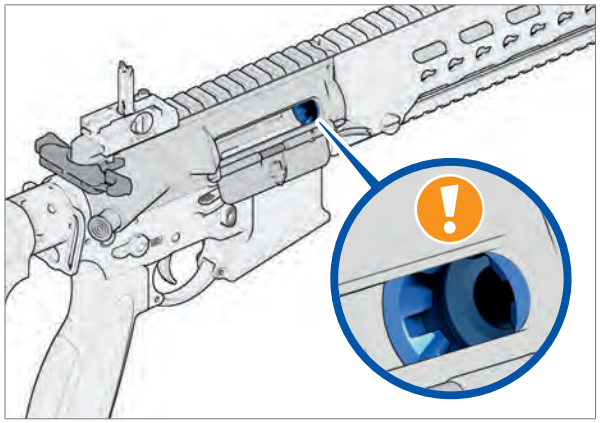


Fig. 16: Look into the chamber

6.2 Carry out function check

Successful completion of a function check verifies that the weapon is functional. The function check is especially important after assembly of the weapon and after rectification of faults.

1. ▶ Carry out a safety check.
2. ▶ Remove lower receiver.
3. ▶ Check functioning of lower receiver in “Safe” position.
4. ▶ Check functioning of lower receiver in “Single fire” position.
5. ▶ Insert lower receiver.
6. ▶ Check free movement of bolt group and function of recoil spring.
7. If the function check is not successful, then a fault is present. ▶ Faults: Causes and remedies.

6.2.1 Check functioning of lower receiver in “Safe” position

1. Click safety lever to the “Safe” position.
2. Push the hammer completely to the rear.
3. Pull trigger. The hammer is not released.

6.2.2 Check functioning of lower receiver in “Single fire” position

1. Click safety lever to the “Single fire” position.
2. Push the hammer completely to the rear.

⚠ CAUTION

Risk of injury when the hammer snaps forwards!

The hammer snaps forwards when the trigger is pulled.

› Secure the hammer with your hand.

› Slowly guide hammer forwards.

3. Hold hammer.
4. Pull trigger and guide hammer forwards slowly (*Fig. 17*).
5. Push the hammer completely to the rear The hammer will be held.
6. Click safety lever to the “Safe” position.

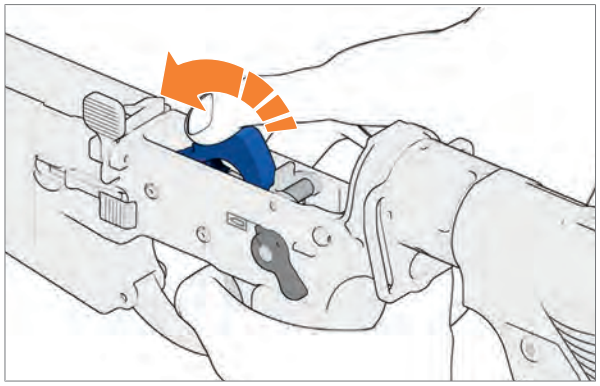


Fig. 17: Slowly guide hammer forwards

6.2.3 Check free movement of bolt group and function of recoil spring

1. Move charging handle all the way back and then forwards several times.
2. Pull charging handle all the way back and hold it.

⚠ CAUTION

Risk of injury when the bolt group snaps forwards!

The bolt group snaps forwards when the charging handle is released.

› Do not reach into the path of the bolt group.

3. Release charging handle. The bolt group snaps forwards.
4. Click safety lever to the “Single fire” position.
5. Pull trigger. The hammer is released.
6. Click safety lever to the “Safe” position.

7 Preparations

7.1 Lock bolt group into place and guide forwards

7.1.1 Locking bolt group into place

1. Pull charging handle all the way back and hold it (*Fig. 18*) .
2. Press bolt catch/release and hold it (*Fig. 18*) .
3. Push charging handle all the way forwards and lock it.

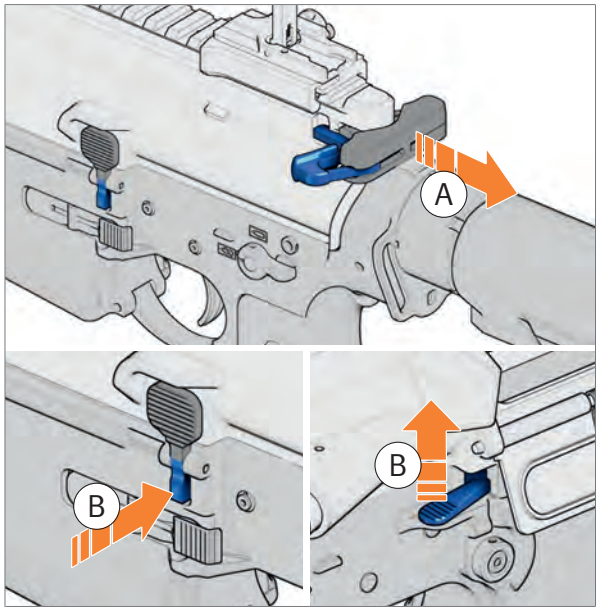


Fig. 18: Locking bolt group into place

7.1.2 Guide bolt group forwards

Initial state: Bolt group is locked in place.

⚠ CAUTION

Risk of injury when the bolt group snaps forwards!

The bolt group snaps forwards when bolt catch/release is pushed.

› Do not reach into the path of the bolt group.

1. Pull charging handle all the way back and hold it (*Fig. 19*).

The bolt catch/release must be pressed if there is a magazine in the magazine well.

2. Move charging handle slowly forwards and lock it in place (*Fig. 19*).

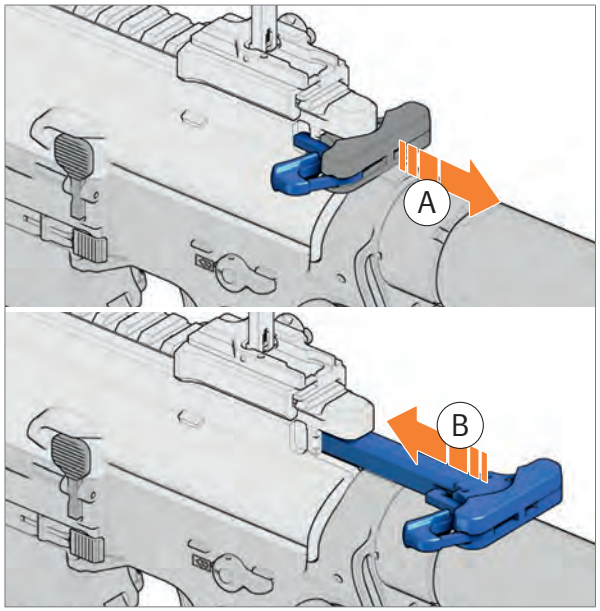


Fig. 19: Move charging handle slowly forwards

7.1.3 Let bolt group snap forwards

Initial state: Bolt group is locked in place.

⚠ CAUTION

Risk of injury when the bolt snaps forwards!

The bolt group snaps forwards when bolt catch/release is pushed. If the charging handle is not locked into place in the forward position, the charging handle will snap forwards with the bolt group when the bolt catch/release is pressed.

› Do not reach into the path of the bolt group.

› Lock the charging handle in the forward position.

1. Push charging handle all the way forwards and lock it.
2. Push bolt catch lever (*Fig. 20*) , (*Fig. 21*) . The bolt group snaps forwards.

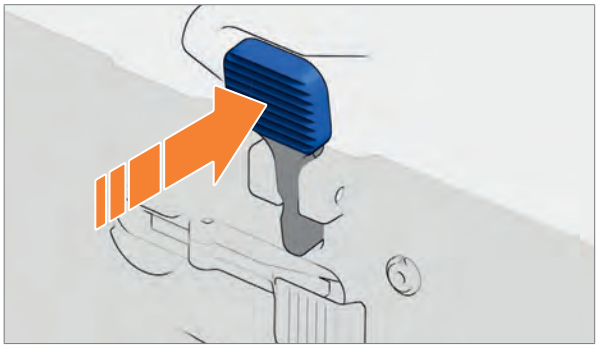


Fig. 20: Pressing left bolt catch/release

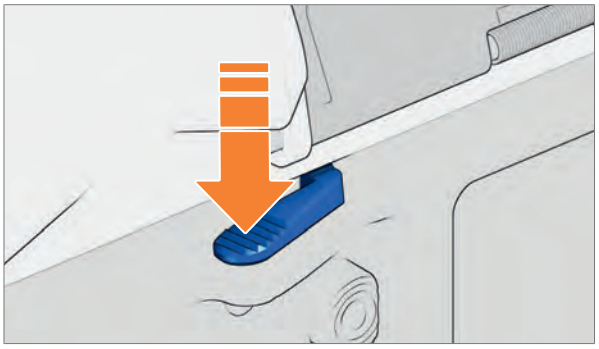


Fig. 21: Pressing right bolt catch/release

7.2 Lock charging handle

If the bolt group is locked and the charging handle is in the forward position, the charging handle will snap forwards with the bolt group when the bolt catch/release is pressed.

› Push charging handle all the way forwards and lock it (*Fig. 22*).

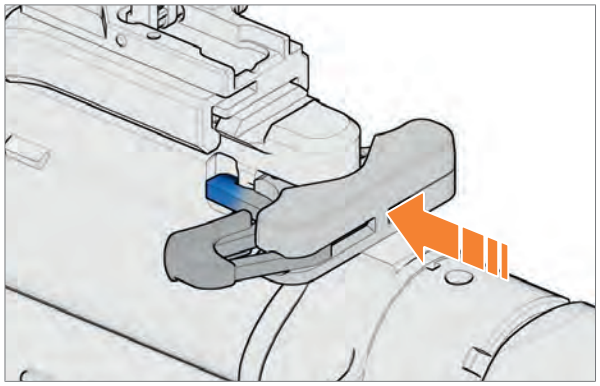


Fig. 22: Lock charging handle

7.3 Use forward assist

The forward assist can be used to lock the bolt group manually in case of fouling.

Initial state: Bolt group is not locked in place.

› Press forward assist until the bolt group is locked (*Fig. 23*).

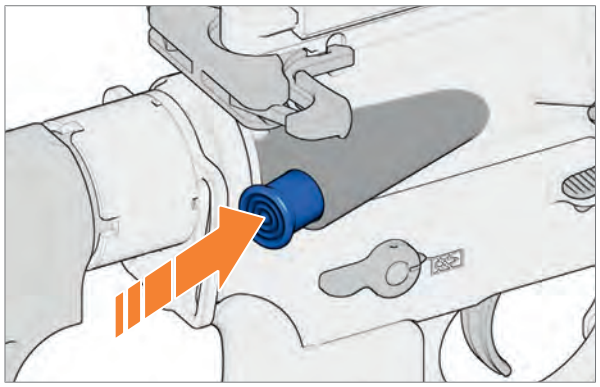


Fig. 23: Use forward assist

7.4 Use storage space in grip

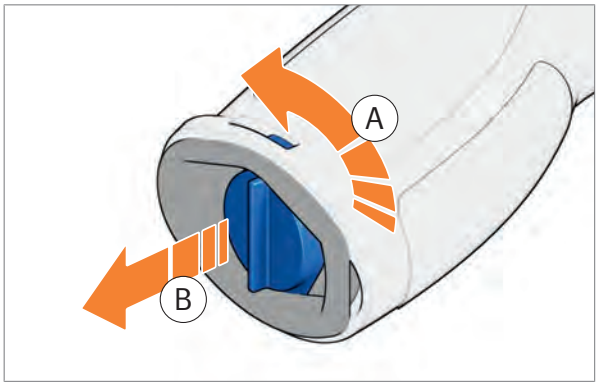


Fig. 24: Open cover

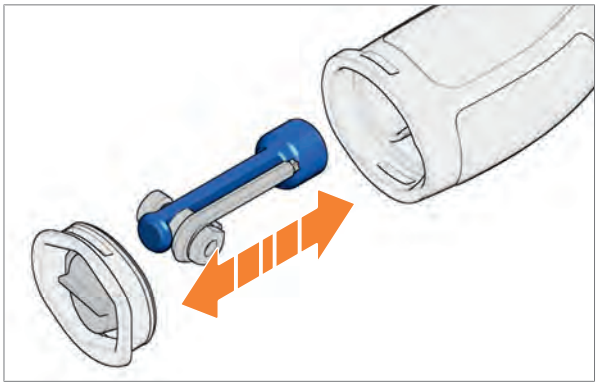


Fig. 25: Insert / remove multi-purpose tool

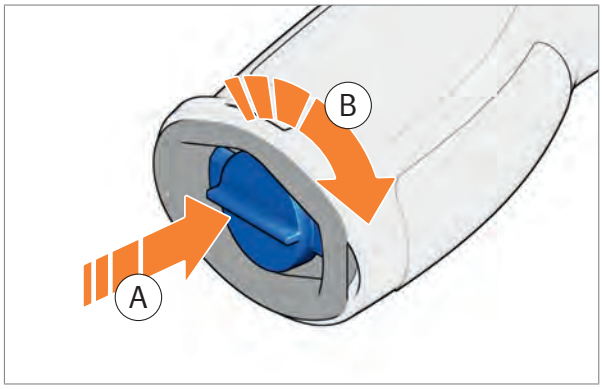


Fig. 26: Close cover

7.5 Use forward grip

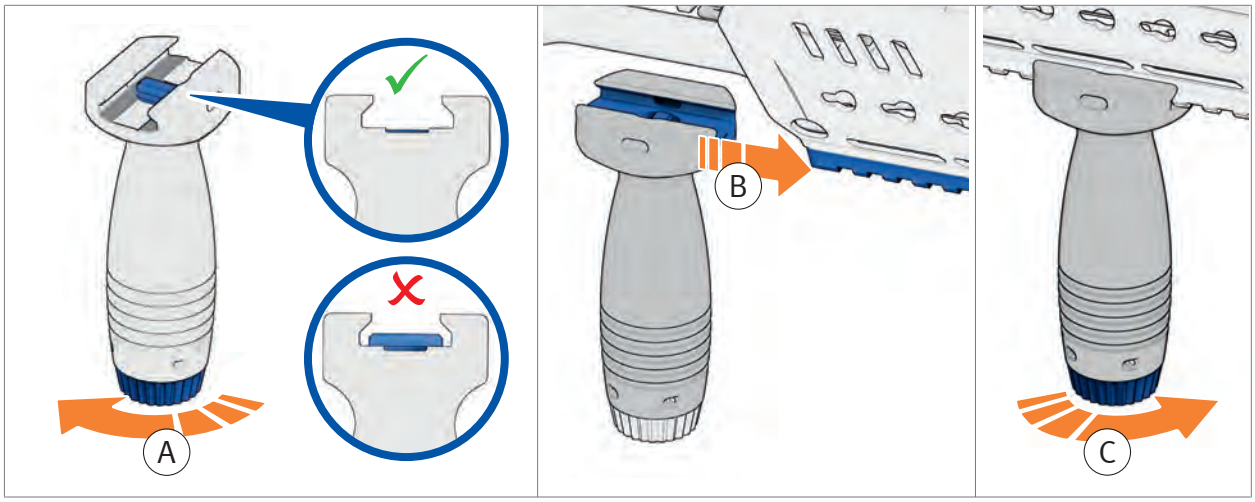


Fig. 27: Use forward grip

7.6 Use 45° forward grip

Required auxiliary materials:

- *4 mm Allen key*

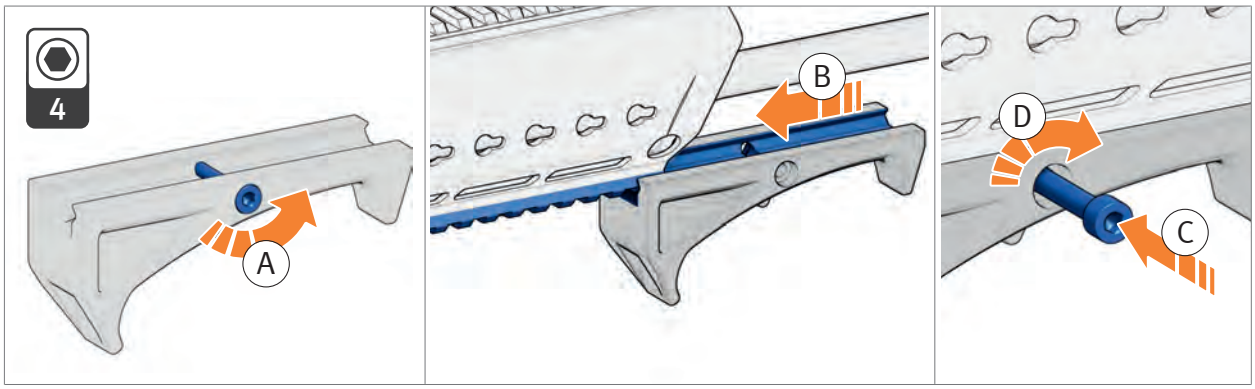


Fig. 28: Use 45° forward grip

7.7 Use bipod

7.7.1 Bipod versions

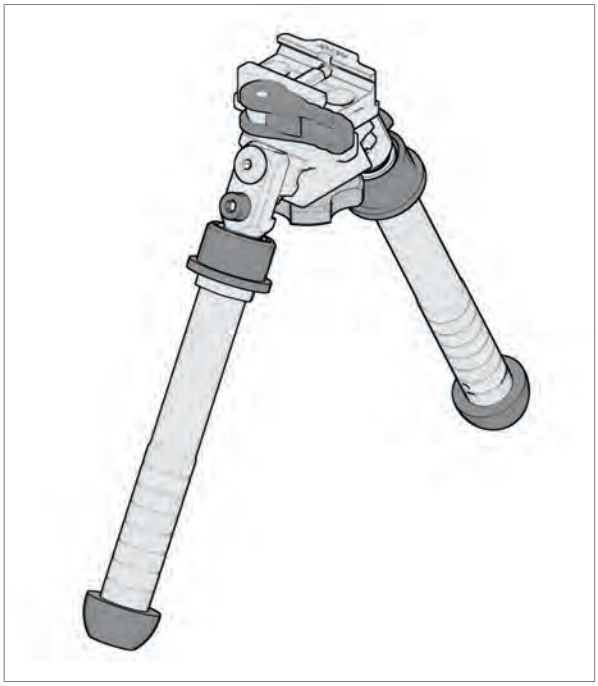


Fig. 29: Bipod "Variant A"

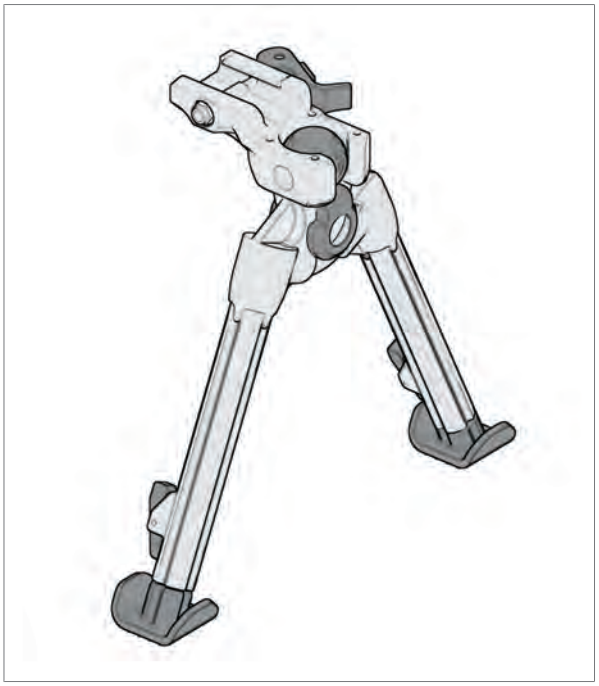


Fig. 30: Bipod "Variant B"

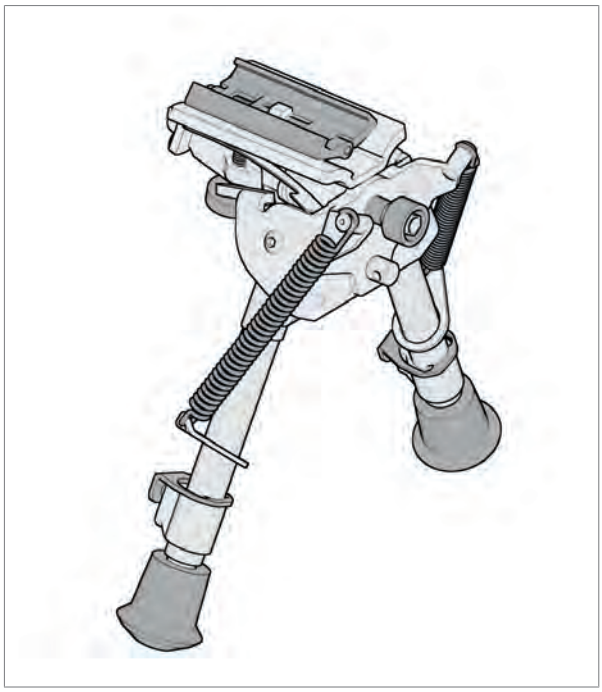


Fig. 31: Bipod "Variant C"

7.7.2 Bipod "Version A"

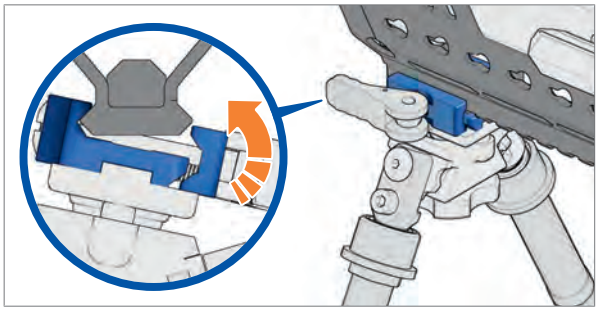


Fig. 32: Insert bipod

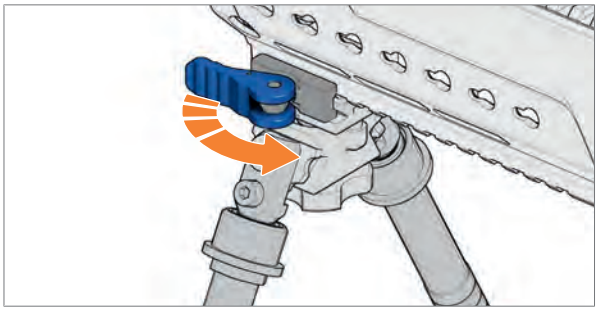


Fig. 33: Close quick-release lock

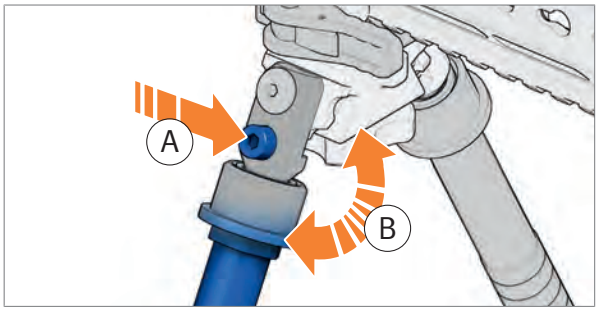


Fig. 34: Fold / unfold bipod

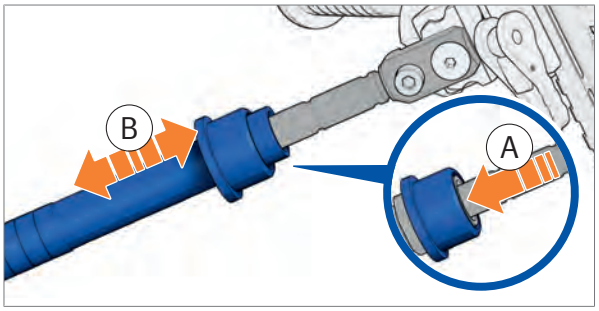


Fig. 35: Adjust bipod

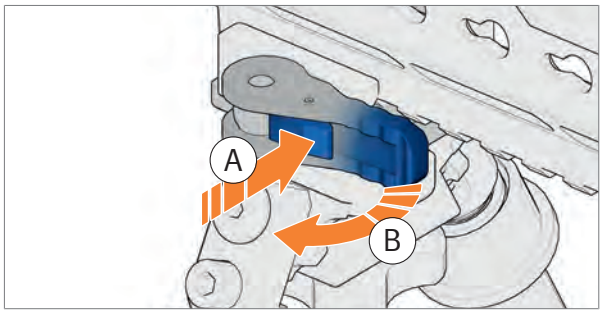


Fig. 36: Remove bipod

7.7.3 Bipod "Version B"

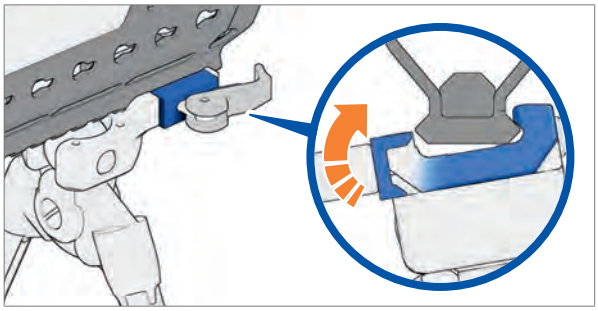


Fig. 37: Insert bipod

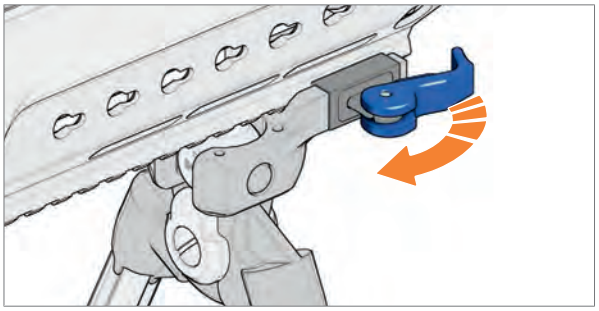


Fig. 38: Close quick-release lock

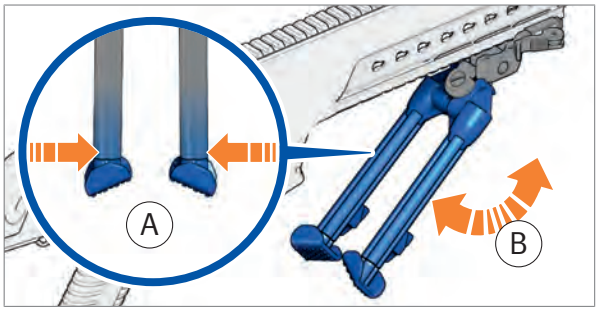


Fig. 39: Fold / unfold bipod

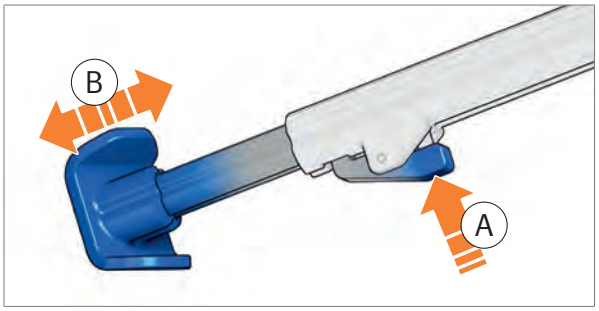


Fig. 40: Adjust bipod

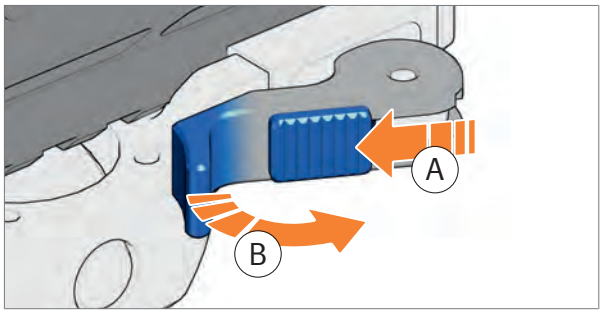


Fig. 41: Remove bipod

7.7.4 Bipod "Variant C"

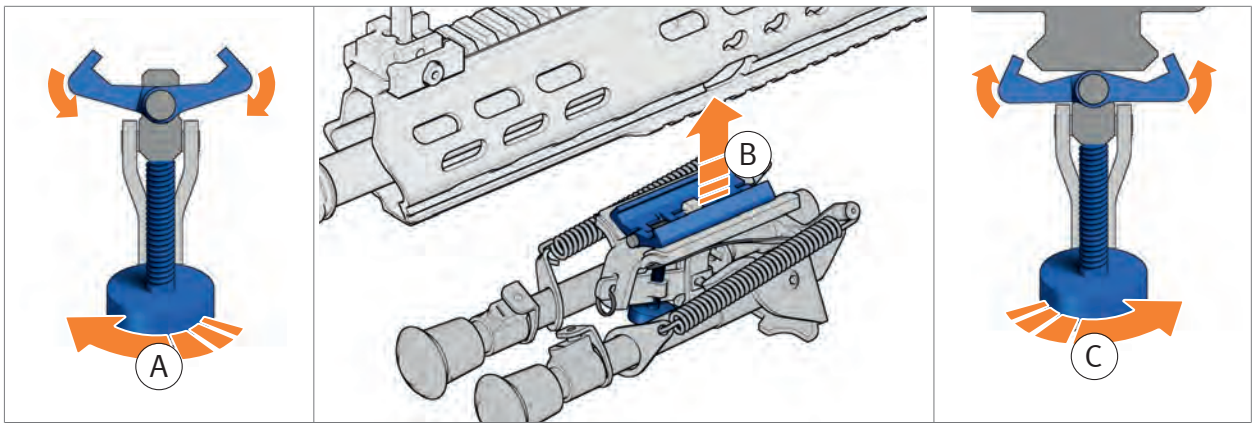


Fig. 42: Insert bipod

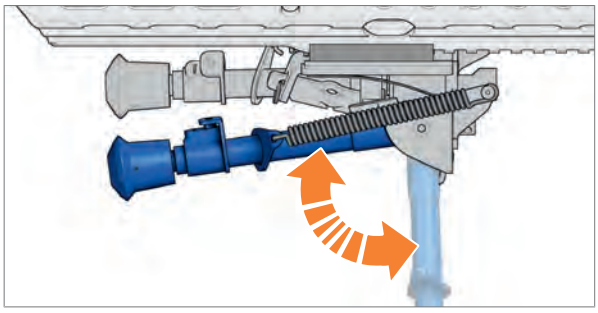


Fig. 43: Fold out bipod / fold in bipod

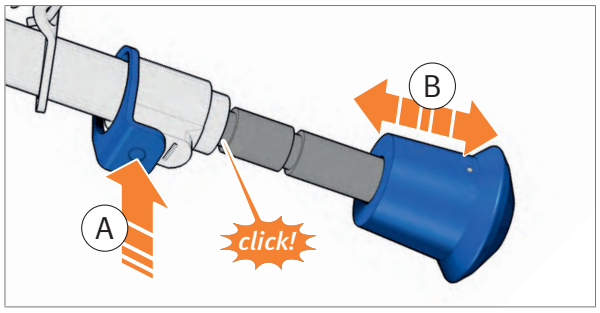


Fig. 44: Adjust bipod

7.8 Using the Picatinny rail

7.8.1 Insert Picatinny-rail, HKey-interface

Required auxiliary materials:

- *Torx insert TX15*
- *Torque wrench*

1. Insert Picatinny rail into mounting points and push forwards.

Observe the torque when tightening the screws.

2. Set torque wrench to 5 Nm.
3. Place Torx insert in torque wrench.
4. Tighten locking screws for Picatinny rail clockwise with torque wrench until the torque is reached (*Fig. 45*).

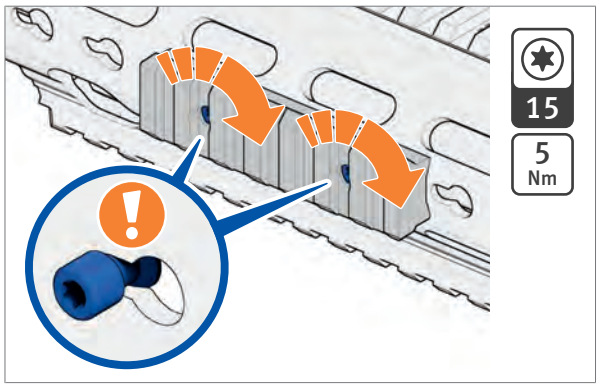


Fig. 45: Tighten screws for Picatinny rail

7.8.2 Remove Picatinny-rail, HKey-interface

Required auxiliary materials:

- *Torx insert TX15*
- *Torque wrench*

1. Place Torx insert in torque wrench.
2. Adjust torque wrench.
3. Loosen screws for Picatinny rail by turning anti-clockwise with torque wrench (*Fig. 46*).
4. Push Picatinny rail to the rear and remove.

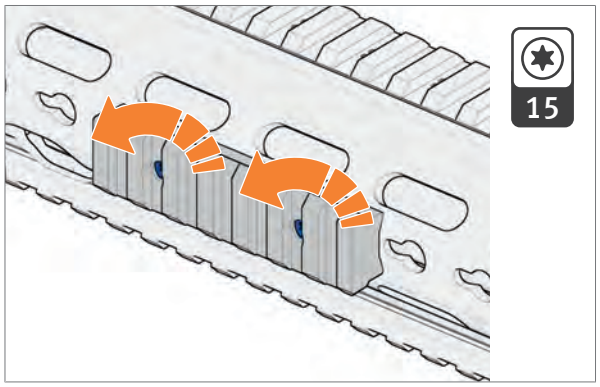


Fig. 46: Loosen screws for Picatinny rail

7.9 Adjust buttstock

1. Press buttstock release lever and hold it (*Fig. 47*).
2. Slide buttstock to the desired position (*Fig. 47*).
3. Release the release lever for buttstock.
4. Slide buttstock until it locks in desired position.

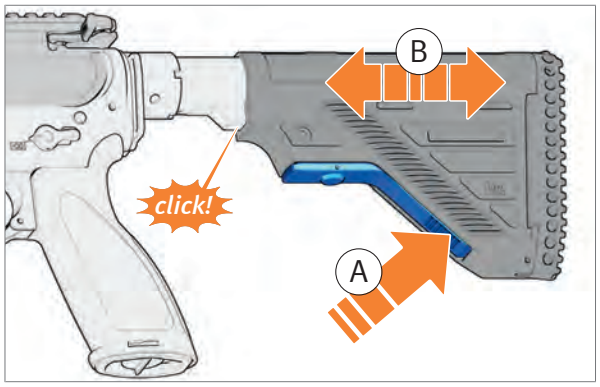


Fig. 47: Adjust buttstock

7.10 Using adapter for carrying sling

Various adapters for carrying slings available. The illustration may differ.

7.10.1 Fastening to HKey interface

Required auxiliary materials:

- *Torx insert TX15*
- *Torque wrench*

Observe the torque when tightening the screws.

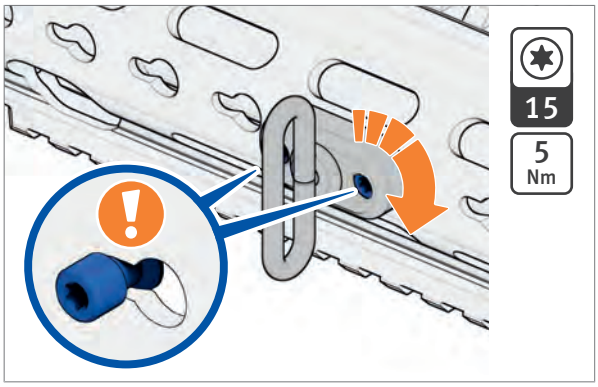


Fig. 48: Insert adapter for carrying sling into HKey interface

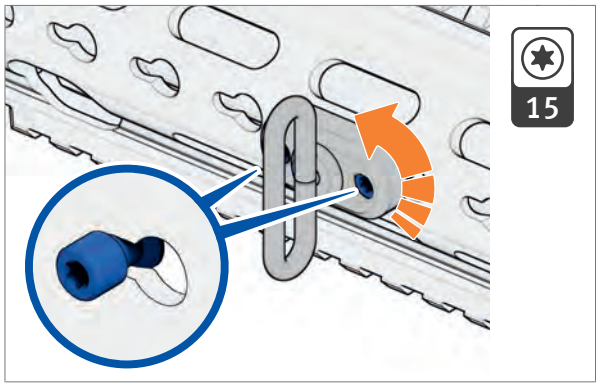


Fig. 49: Remove adapter for carrying sling

7.10.2 Fastening to Picatinny rail

Required auxiliary materials:

- *Allen key*
- *Screwdriver*

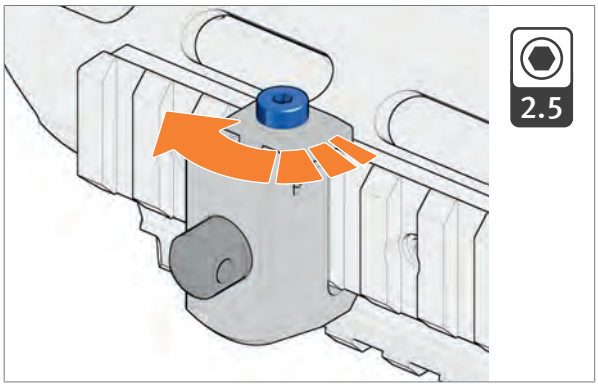


Fig. 50: Insert adapter for carrying sling on Picatinny rail

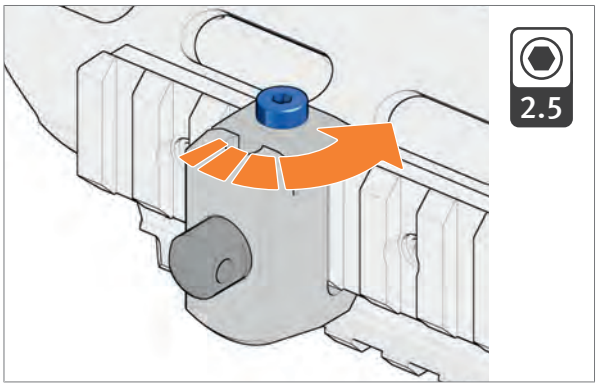


Fig. 51: Remove adapter for carrying sling

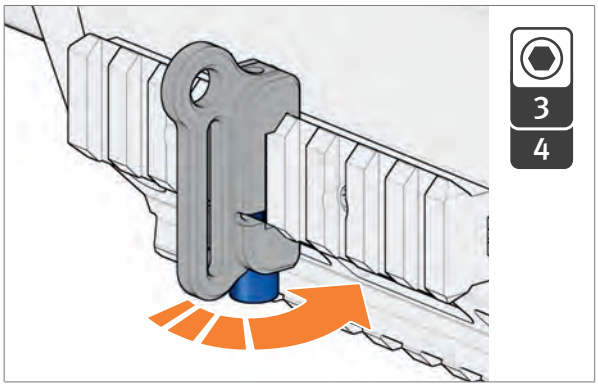


Fig. 52: Insert adapter for carrying sling on Picatinny rail

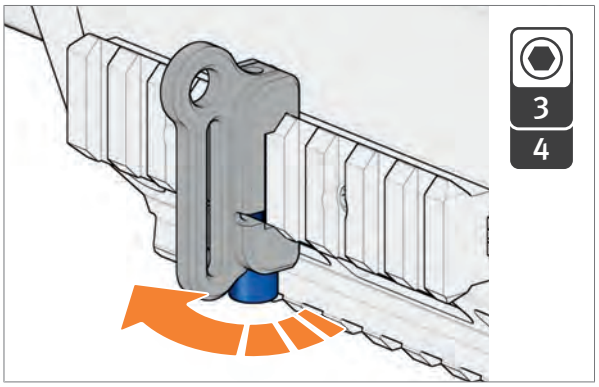


Fig. 53: Remove adapter for carrying sling

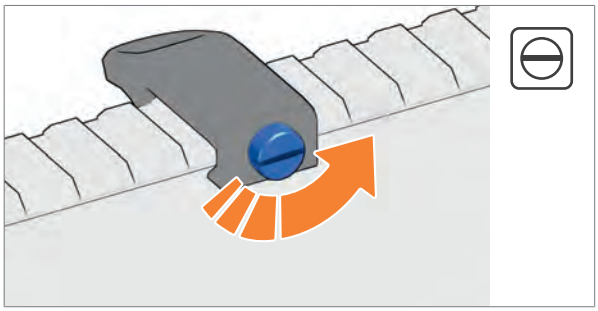


Fig. 54: Loosen screw

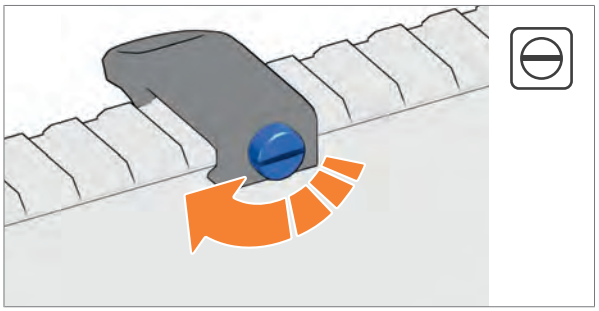


Fig. 55: Tighten screw

7.11 Use the carrying sling

The carrying sling connects the weapon to the shooter and secures the weapon to prevent it from being lost, falling and striking the ground.

Various adapters for carrying slings available. The illustrations may differ

7.11.1 Fasten carrying sling to handguard

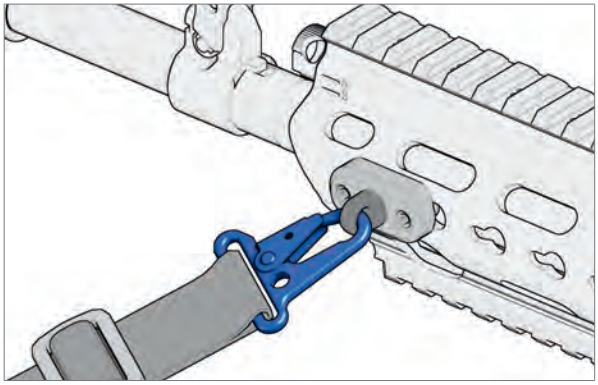


Fig. 56: Attach carrying sling with snap-hook

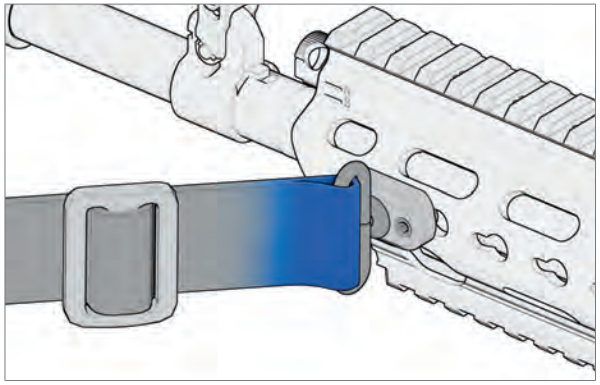


Fig. 57: Thread carrying sling directly

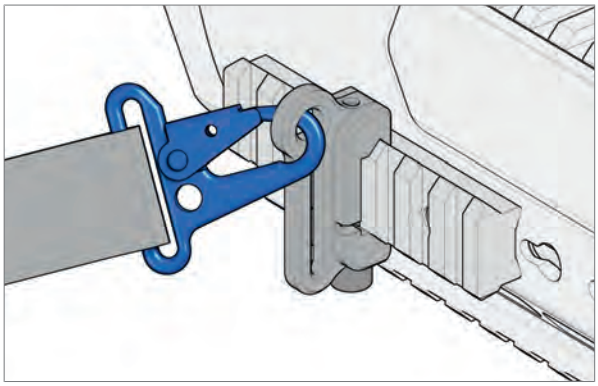


Fig. 58: Attach carrying sling with snap-hook

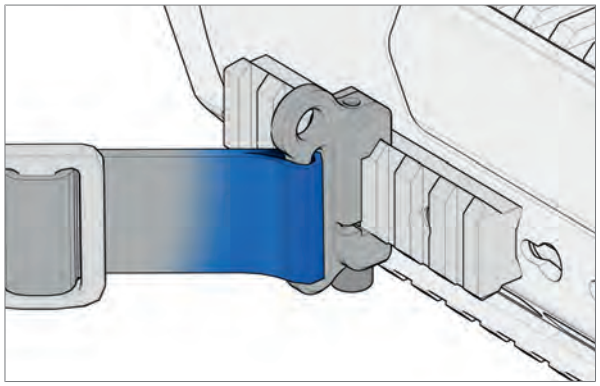


Fig. 59: Thread carrying sling directly

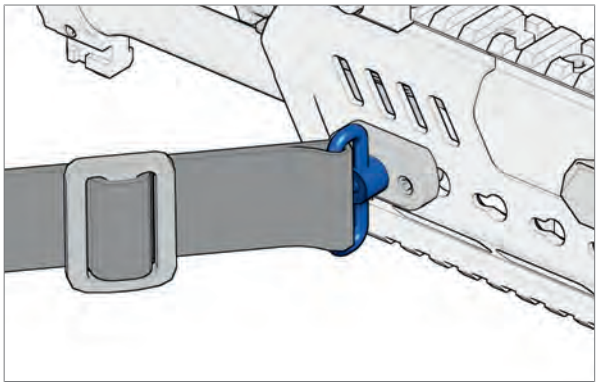


Fig. 60: Attach carrying sling with flush cap

7.11.2 Attach carrying sling to plate

Various plates are available. The illustration may differ.

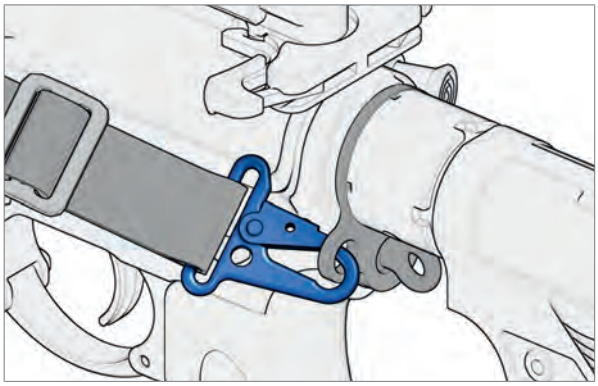


Fig. 61: Attach carrying sling with snap-hook

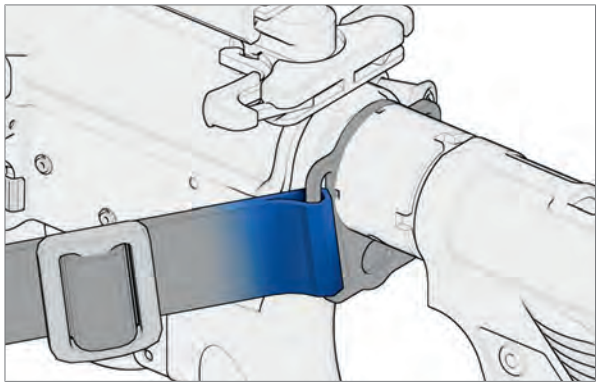


Fig. 62: Thread carrying sling directly

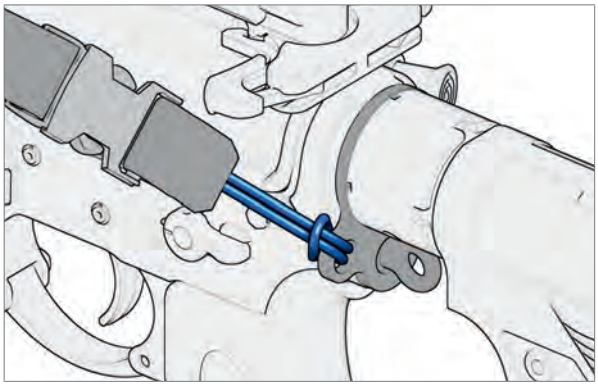


Fig. 63: Thread in carrying sling with quick-release

7.11.3 Attach carrying sling to buttstock

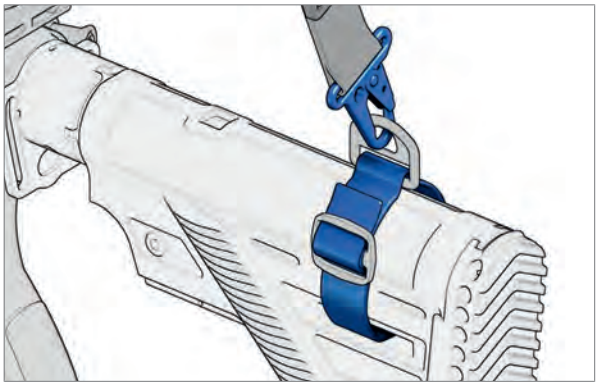


Fig. 64: Attach carrying sling to buttstock collar

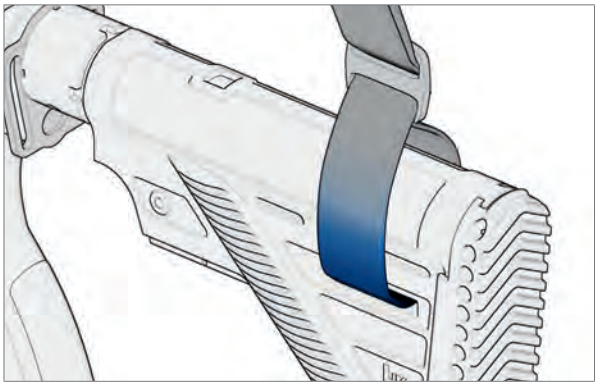


Fig. 65: Thread carrying sling directly

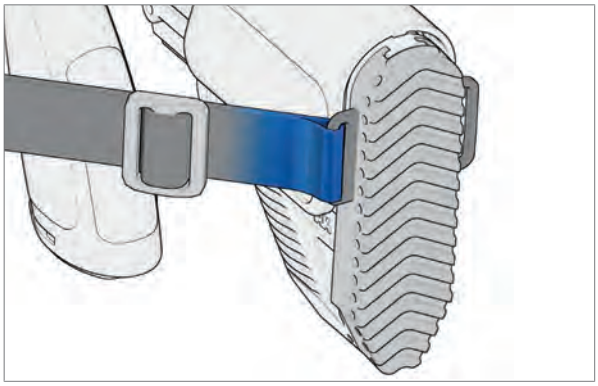


Fig. 66: Thread carrying sling directly

7.12 Use sights

7.12.1 Fold / unfold rear sight

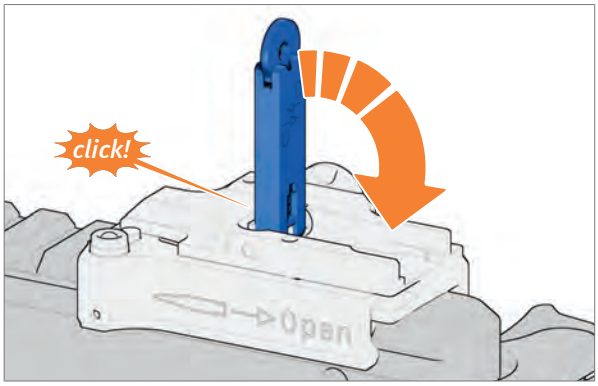


Fig. 67: Fold rear sight

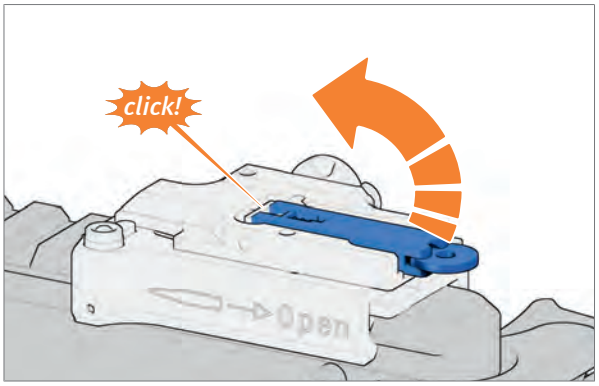


Fig. 68: Fold out rear sight

7.12.2 Fold / unfold front sight

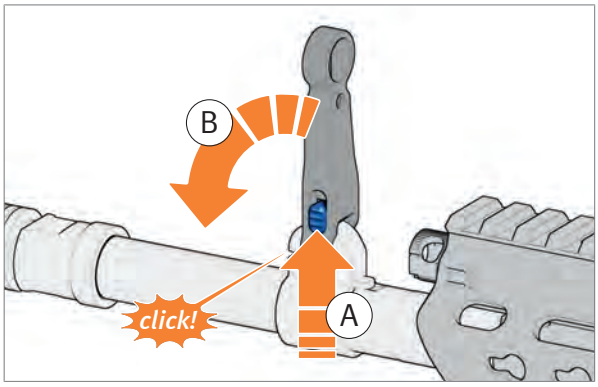


Fig. 69: Fold front sight

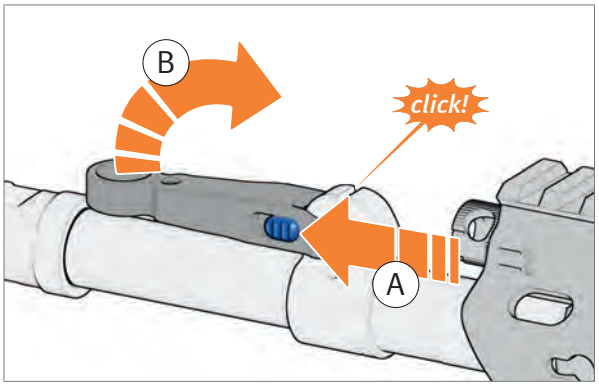


Fig. 70: Unfold front sight

7.12.3 Insert / remove quick-release sight

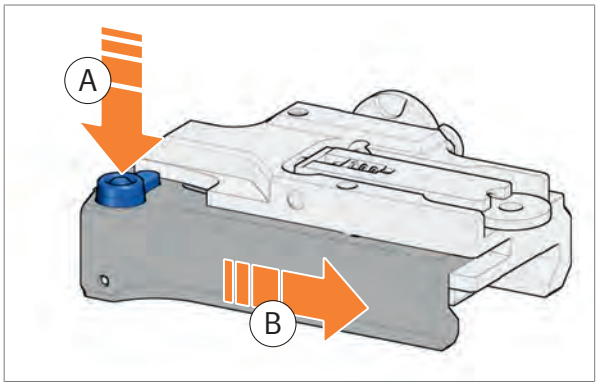


Fig. 71: Push locking device to the rear and hold

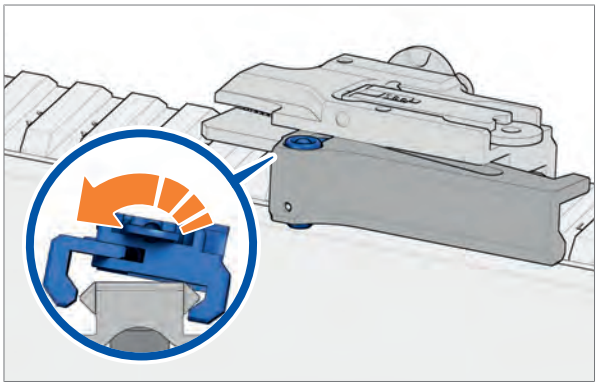


Fig. 72: Insert quick-release sight

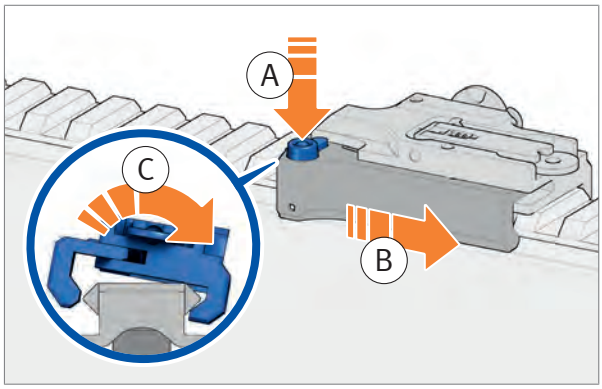


Fig. 73: Remove quick-release sight

7.12.4 Insert / remove drum sight

Required auxiliary materials:

- *Screwdriver*

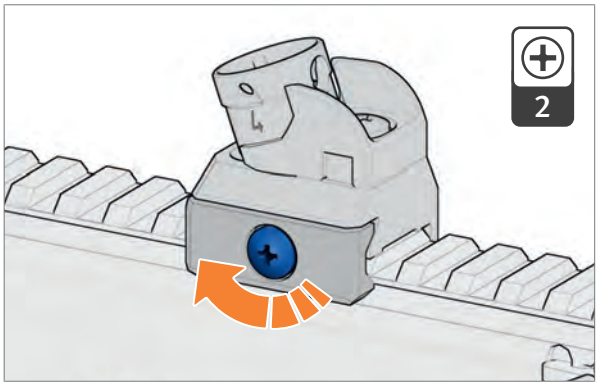


Fig. 74: Insert drum sight

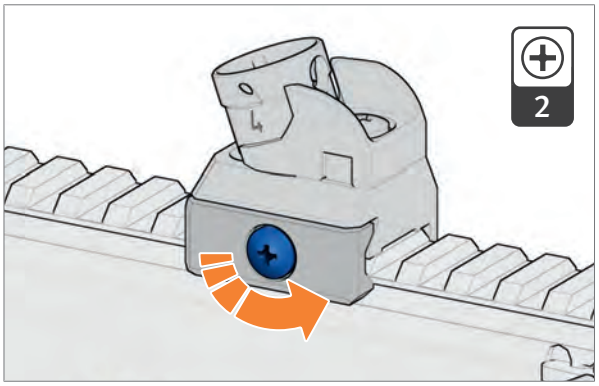


Fig. 75: Remove drum sight

7.12.5 Insert / remove front sight

Required auxiliary materials:

- *Allen key*

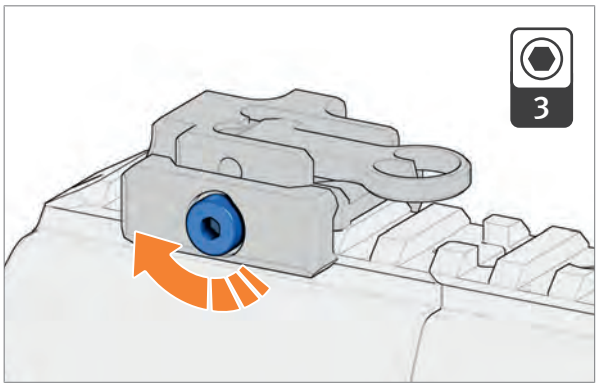


Fig. 76: Inserting the front sight

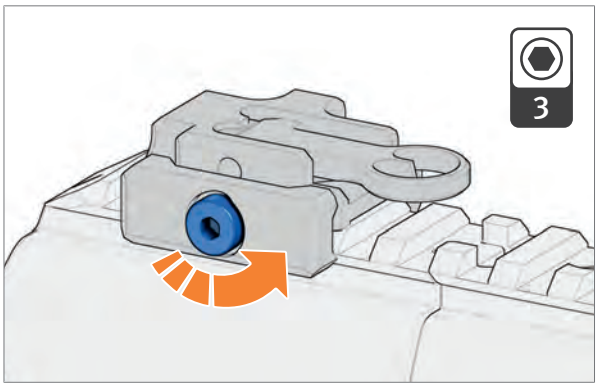


Fig. 77: Remove front sight

7.13 Adjust sights

The position of point of impact also depends on the ammunition. Use of different types of ammunition can change the elevation and windage of the position of point of impact. The sights can be adjusted to correct the changed position of point of impact.

7.13.1 Adjust mechanical rear sight

Position of point of impact	Corrective measures	Information
	1. Raise dioptre (*Fig. 78*). 2. Turn dioptre in direction "D" (Down) (*Fig. 78*).	Half a turn changes the point of impact by approx. 4 cm at a range of 100 m.
	1. Raise dioptre (*Fig. 78*). 2. Turn diopter in direction “U” (Up) (*Fig. 78*).	
	1. Press safety button for windage adjustment screw (*Fig. 79*). 2. Turn windage adjustment screw in direction “L” (left) (*Fig. 79*).	A quarter-turn changes the point of impact by approx. 3 at a range of 100 m.
	1. Press safety button for windage adjustment screw (*Fig. 79*). 2. Turn windage adjustment screw in direction “R” (right) (*Fig. 79*).	

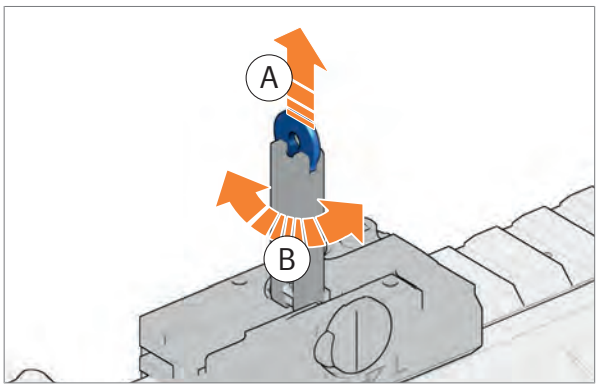


Fig. 78: Turning the dioptre

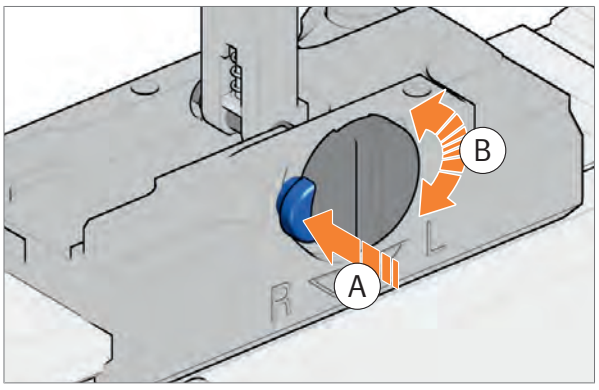


Fig. 79: Turn the windage adjustment screw

7.13.2 Elevation adjustment screw of drum sight

Required auxiliary materials:

- *Screwdriver and elevation adjustment tool (Ident.-No. 300009)*

1. Insert elevation adjustment tool into drum sight while inserting the wedges of the tool into the grooves of the drum sight (*Fig. 80*).
2. Insert screwdriver in tool for elevation adjustment (*Fig. 80*).
3. Press screwdriver downwards and hold it (*Fig. 80*).
4. Turn the drum sight in the desired direction (*Fig. 80*).
5. Remove screwdriver and elevation adjusting tool from rear sight cylinder.

Position of the impact point	Corrective measures	Information
	› Turn drum sight clockwise (*Fig. 80*).	Turning by one lug mark alters the point of impact by approx. 1.4 cm at a range of 100 m.
	› Turn drum sight anti-clockwise (*Fig. 80*).	

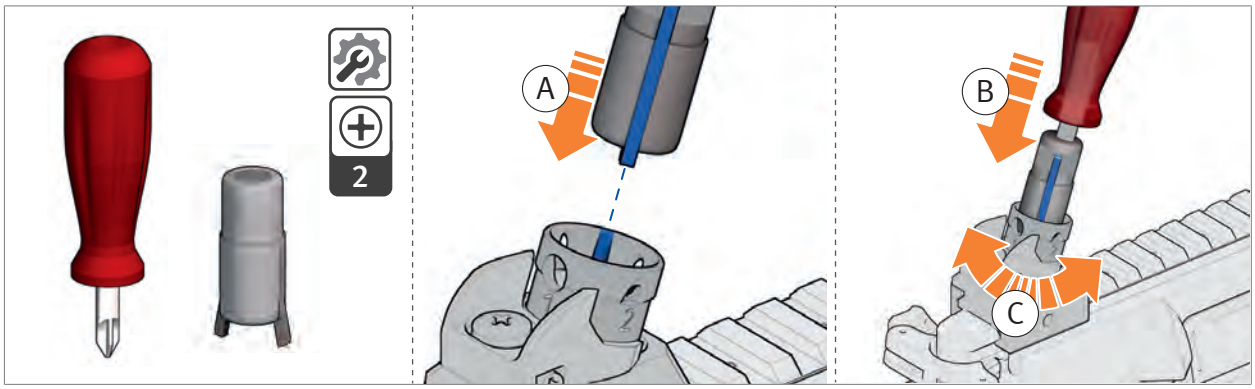


Fig. 80: Turn drum sight

7.13.3 Windage adjustment screw of drum sight

Required auxiliary materials:

- *Screwdriver*

1. Loosen the locking screw with a screwdriver anti-clockwise (*Fig. 81*).
2. Turn the windage adjustment screw in the desired direction with a screwdriver (*Fig. 82*).
3. Tighten the locking screw clockwise with a screwdriver. (*Fig. 83*).

Position of the impact point	Corrective measures	Information
	› Turn windage adjustment screw anti-clockwise (*Fig. 82*).	One turn alters the position of the impact point by approx. 5.5 cm at a range of 100 m.
	› Turn windage adjustment screw clockwise (*Fig. 82*).	

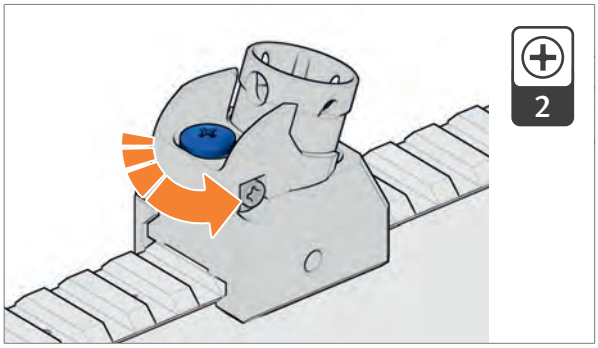


Fig. 81: Loosen the locking screw

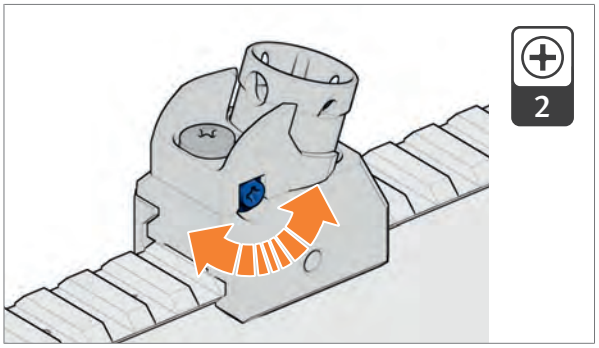


Fig. 82: Turn the windage adjustment screw

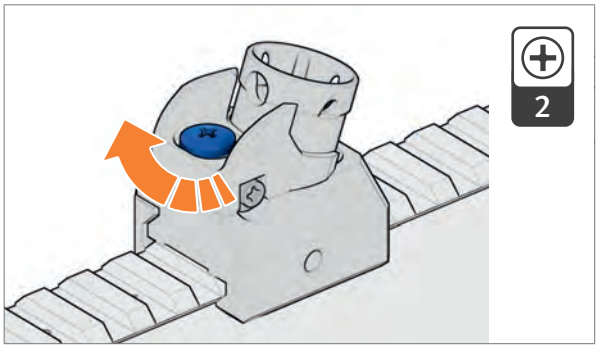


Fig. 83: Tighten the locking screw

7.14 Remove / insert flash hider

The flash hider can be removed and inserted by hand.

For ideal precision results, Heckler & Koch recommends tightening the flash hider with the specified torque when attaching it.

Required auxiliary materials:

- *17 mm open jaw spanner insert*
- *Torque wrench*

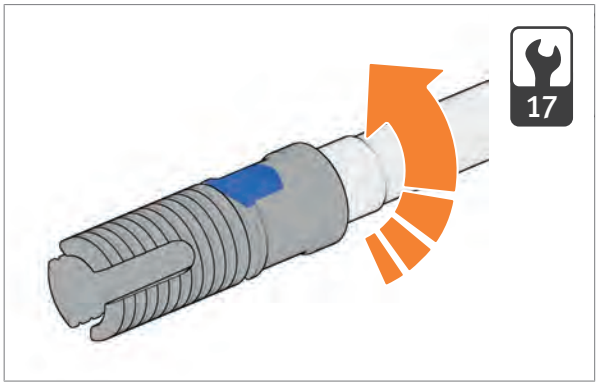


Fig. 84: Remove flash hider

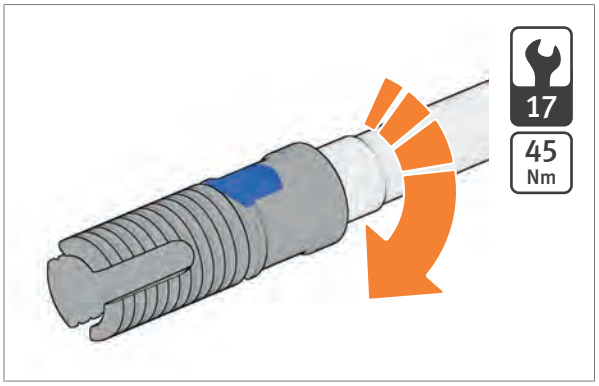


Fig. 85: Insert flash hider

7.15 Fill magazine

Overloading a magazine or keeping it fully charged for long periods of time can lead to malfunctions. Do not fill the magazine with more than the number of cartridges indicated on the magazine. Check to make sure that the final cartridge is resting against the right magazine lip. Empty the magazine before placing the weapon and magazine in storage.

NOTICE

Risk of material damage due to damaged or fouled cartridges!

Damaged or fouled cartridges can damage the weapon and cause malfunctions.

› Do not use damaged or fouled cartridges.

1. Grasp the magazine.
2. Push cartridge under the magazine lips (*Fig. 86*).
3. Push cartridge to the rear as far as it will go (*Fig. 86*).
4. Repeat steps 2. - 3. until the magazine is full (*Fig. 87*).

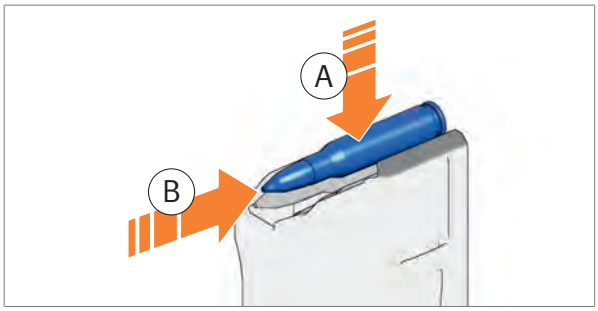


Fig. 86: Fill the magazine

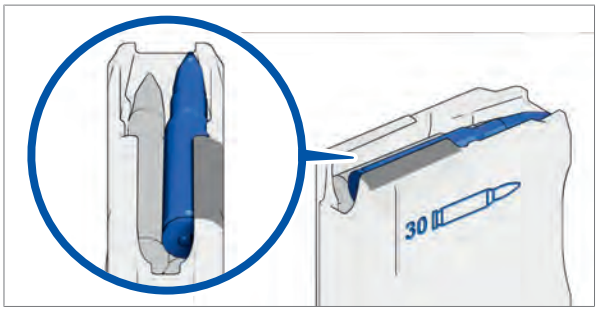


Fig. 87: Position of the last cartridge

7.16 Prepare weapon for firing

Required auxiliary materials:

- *Cleaning kit*
- *Cleaning pull-throughs*

1. ▶ Disassemble weapon.
2. Screw handle rod, extension rod(s) and pull-through holder together.
3. Insert clean cleaning pull-throughs in pull-through holder.

NOTICE

Risk of material damage from incorrect cleaning direction!

Cleaning the barrel from the muzzle end may damage the muzzle. A damaged muzzle will decrease the weapon's accuracy.

› Always clean the barrel starting from the chamber end.

4. Pull clean cleaning pull-throughs through barrel several times until barrel is free of oil and foreign bodies.
5. Visually check weapon for damage.
6. ▶ Assemble the weapon.
7. ▶ Carry out a function check.

7.17 Additional preparations in unusual climatic conditions

The following environmental effects require additional measures to maintain operability:

- Extreme dryness and heavy dust formation
- Extreme heat
- Moisture and mud
- Saltwater and salty air
- Extreme cold (under -25°C) and snow

7.17.1 Extreme dryness and heavy dust formation

› Test the free movement of all moving parts of the weapon. Clean and oil if stiff.

› Lubricate the weapon more heavily in case of extreme dryness or heavy dust concentration.

› Protect magazine from dust (sealable magazine pouch).

› Store ammunition in dust-tight containers.

› Do not oil ammunition. Remove dirt and dust particles before use.

7.17.2 Extreme heat

› Lubricate the weapon more heavily at temperatures over +63°C.

› Only touch metal parts with gloves (danger of burns).

› Protect ammunition from direct sunlight and heat.

7.17.3 Moisture and mud

› Lubricate weapon more heavily.

› Protect weapon from moisture and mud.

› After contact with mud, wash the weapon off with fresh water, dry it and lubricate it.

7.17.4 Saltwater and salty air

Make sure that steel parts without protective coating are lubricated.

- In case of salty air and saltwater, lubricate all moving parts of the weapon with low-temperature oil.
- After contact with saltwater or salt spray, wash the weapon off with fresh water, dry it and lubricate it.
- Store the weapon in a dry container so that it is protected from saltwater and salty air.

7.17.5 Extreme cold (under -25°C) and snow

In cold conditions, freezing condensation can compromise the functional reliability of the weapon. To prevent the formation of condensation, do not bring the weapon from cold conditions into warm conditions and shortly thereafter again into cold conditions.

- At temperatures below -25°C, lubricate all moving parts with low-temperature oil.
- Clean and dry weapon thoroughly before lubricating it with low-temperature oil.
- Only touch metal parts with gloves (danger of frostbite).
- Before loading, carry out a function check and ensure that the moving parts move freely.
- Thaw frozen parts of the weapon and ice in the barrel with heated low-temperature oil.
- To store the weapon, lubricate all moving, friction and sliding surfaces more heavily.
- Store the weapon in dry, unheated rooms.

8 Operation

8.1 Insert magazine

1. ▶ Fill magazine.
2. Click safety lever to the “Safe” position.
3. Insert filled magazine into the weapon until the magazine catch engages.

Check whether the magazine catch is engaged in the magazine. It must not be possible to remove the magazine downwards from the weapon.

8.2 Load the weapon

⚠ WARNING

Risk of injury from accidental discharge of weapon!

A loaded weapon is always a potential source of danger.

› Load the weapon only immediately before firing.

› Unload the weapon immediately after firing.

1. ▶ Insert magazine.
2. Pull charging handle all the way back.
3. Let charging handle snap forwards. The weapon now has a round in the chamber and is set to “Safe”.

8.3 Firing position and aiming

8.3.1 Firing position

The supported shoulder firing position is the most stable and provides the best probability of hitting.

⚠ WARNING

Risk of injury from recoil!

The weapon's recoil can cause serious injury.

- When firing, pull the weapon firmly into your shoulder.
- Keep your eye at least 6 cm away from the rear sight when firing.
- Keep your hands out of the path of the bolt group when firing.

1. Rest weapon on the handguard or bipod.
2. Do not rest weapon on the barrel or magazine.

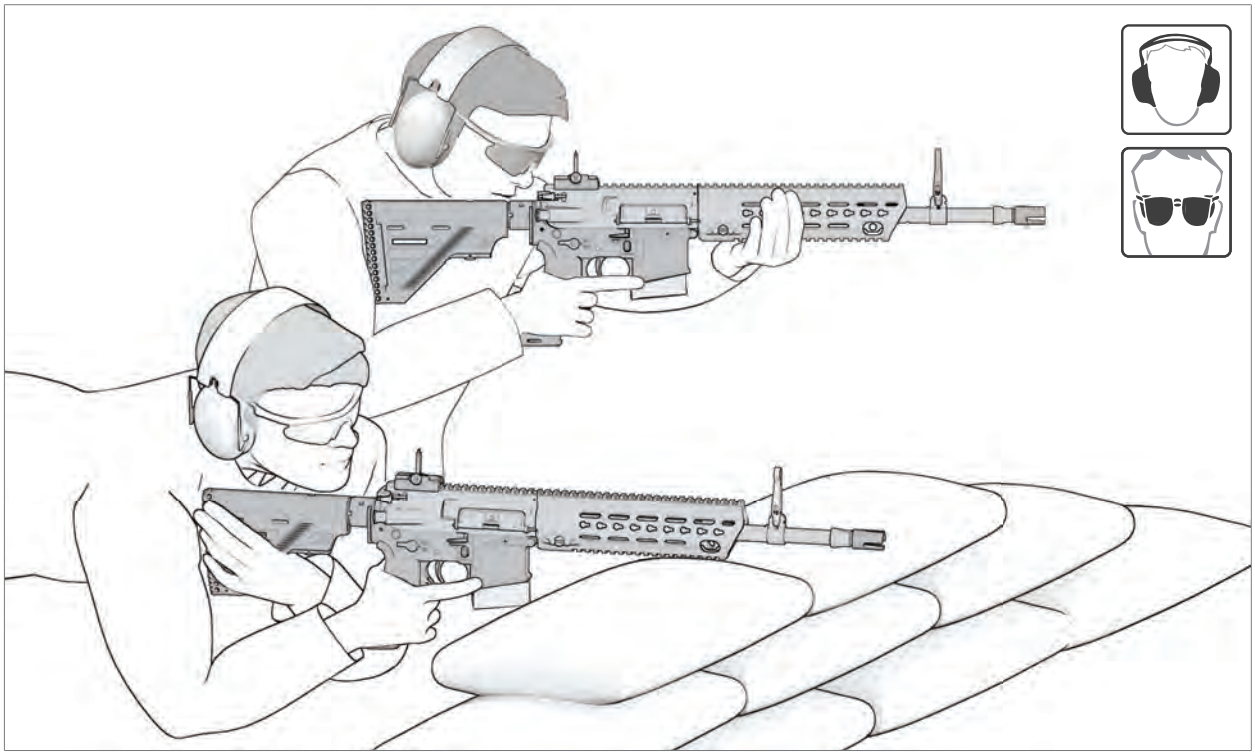
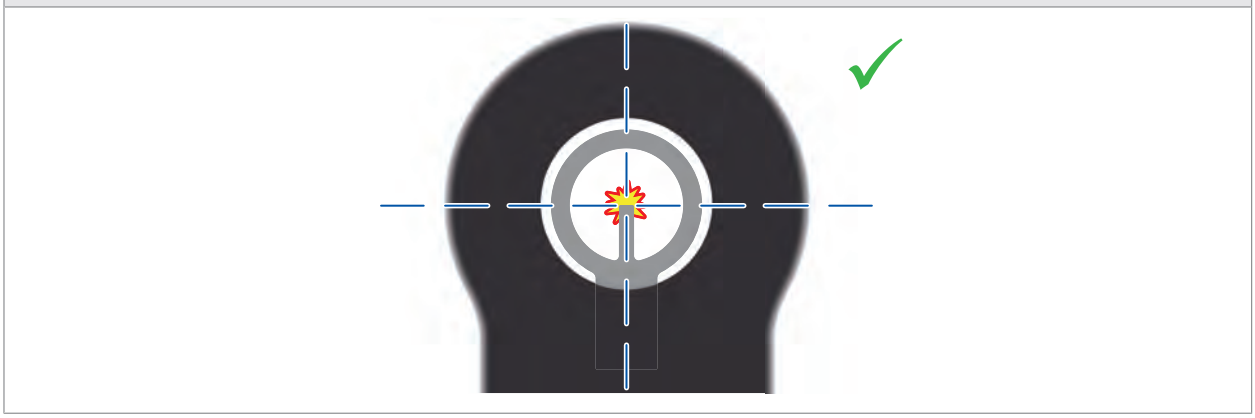


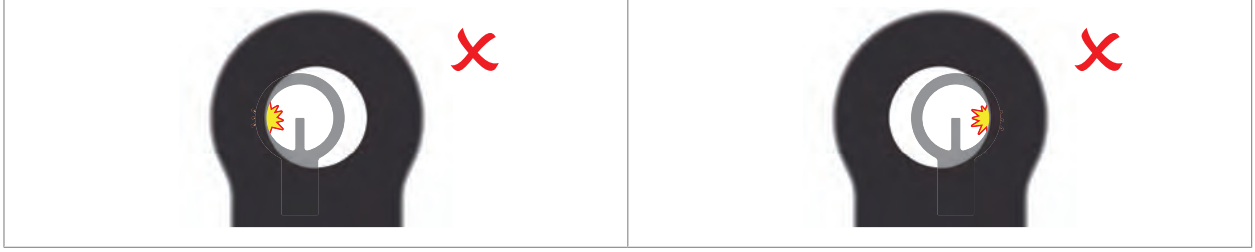
Fig. 88: Firing position

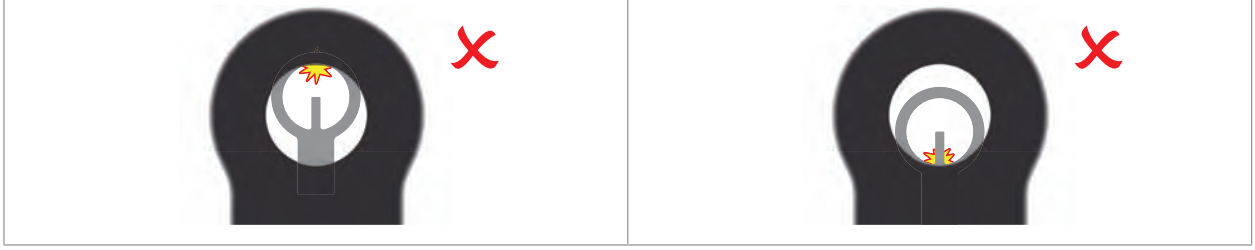
8.3.2 Aiming with mechanical rear sight

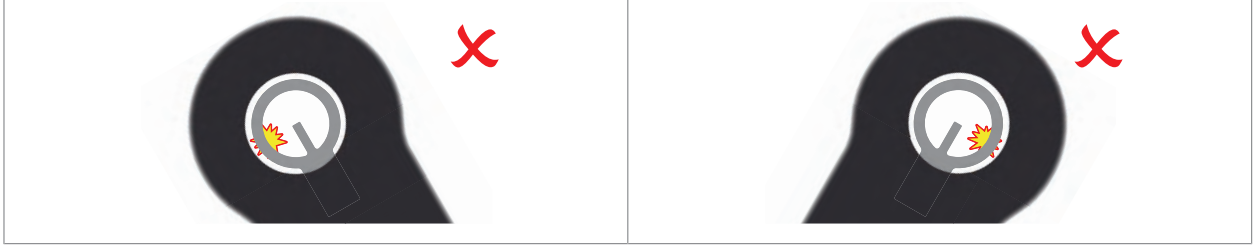
- Correct aiming

Point of impact centred


- Aiming errors

Shooting left	Shooting right
	

Shooting high	Shooting low
	

Shooting low and left	Shooting low and right
	

8.4 Firing

Follow ▶ Safety instructions for firing.

8.4.1 Firing in the “Single fire” position

1. ▶ Prepare weapon for firing.
2. ▶ Load the weapon.
3. ▶ Aim.
4. Click safety lever to the “Single fire” position.

⚠ WARNING

Risk of injury from recoil!

The weapon’s recoil can cause serious injury.

› When firing, pull the weapon firmly into your shoulder.
› Keep your eye at least 6 cm away from the rear sight when firing.
› Keep your hands out of the path of the bolt group when firing.

5. Pull trigger. A cartridge is fired.
6. After firing, or to reload, click safety lever to the “Safe” position.

8.5 Remove magazine

1. Grasp magazine.

NOTICE

Risk of material damage from dropping the magazine!

Dropping a magazine can damage the magazine lips and cause malfunctions.

› Remove the magazine by hand.
› Avoid impacts on the magazine lips.

2. Press magazine catch.
3. Remove magazine.

8.6 Reload weapon

⚠ WARNING

Risk of injury from accidental discharge of weapon!

A loaded weapon is always a potential source of danger.

› Load the weapon only immediately before firing.

› Unload the weapon immediately after firing.

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

1. ▶ Remove the magazine.
2. ▶ Load the weapon.

8.7 Unload weapon

1. ▶ Remove magazine.
2. ▶ Lock bolt group into place. A cartridge is ejected. If no cartridge is ejected, then a fault is present. ▶ Faults: Causes and remedies.
3. Look into the chamber. There must not be a cartridge in the chamber.
4. ▶ Let bolt group snap forwards.
5. Click safety lever to the “Single fire” position.
6. Pull trigger. The hammer is released.
7. Click safety lever to the “Safe” position.

8.8 Empty magazine

⚠ WARNING

Risk of injury from igniting the cartridges!

Impacts to the primer can ignite the cartridge.

› Push the cartridges into your hand when you empty the magazine.

› Prevent any impacts to the primer.

› Prevent cartridges from falling.

› Push cartridges forwards out of magazine.

9 Disassembly

9.1 Disassemble weapon

⚠ WARNING

Risk of injury from improperly assembled weapon!

Improper assembly can compromise the safety and functioning of the weapon.

› Only disassemble the weapon to the extent described in this manual.

1. ▶ Remove handguard.
2. ▶ Remove lower receiver.
3. ▶ Remove buffer and recoil spring.
4. ▶ Remove charging handle and bolt group.
5. ▶ Remove parts of gas operation.
6. ▶ Disassemble bolt group.

9.2 Remove handguard

Required auxiliary materials:

- *11 mm open jaw spanner insert*
- *Torque wrench*

If a front sight is mounted to the barrel, the front sight will have to be folded down before the handguard is removed.

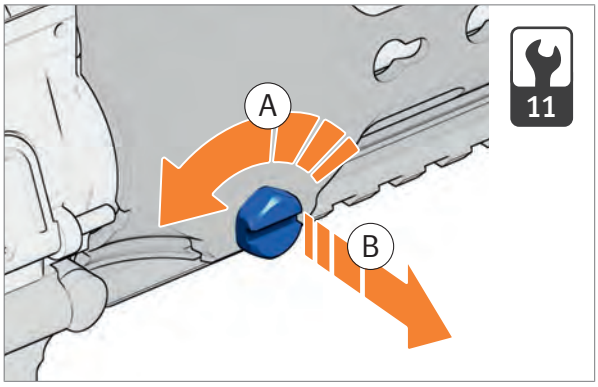


Fig. 89: Unscrew locking screw for handguard

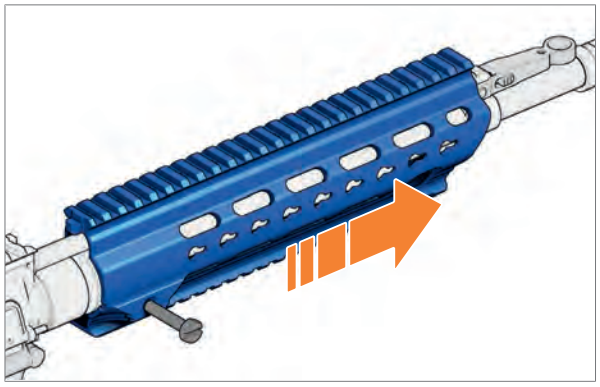


Fig. 90: Remove handguard

9.3 Remove lower receiver

1. ▶ Carry out a safety check.
2. Push rear locking pin in to the right and pull out as far as disassembly position (*Fig. 91*).
3. Fold upper receiver upwards (*Fig. 91*).
4. Push front locking pin in to the right and pull out as far as disassembly position (*Fig. 92*).
5. Remove lower receiver.

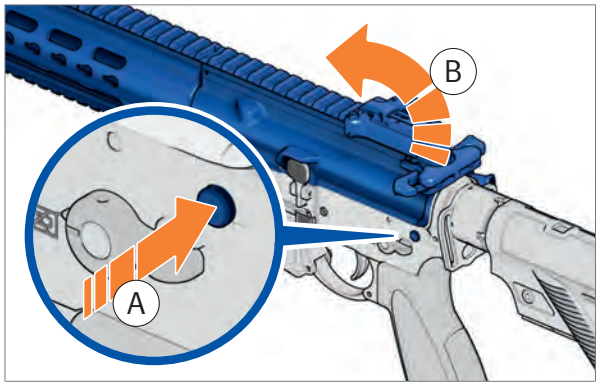


Fig. 91: Push in rear locking pin

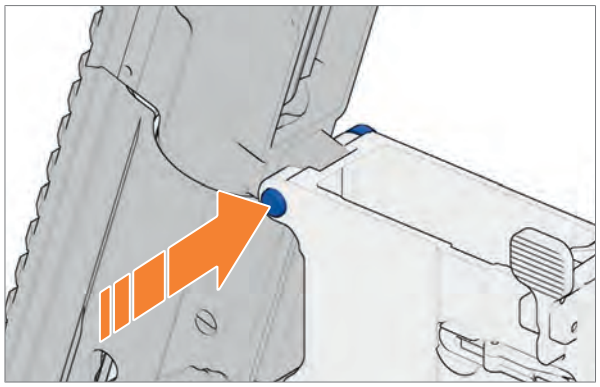


Fig. 92: Push in front locking pin

9.4 Remove buffer and recoil spring

1. ▶ Remove lower receiver.
2. Push buffer into the buttstock and hold it (*Fig. 93*).
3. Press locking pin for buffer in and hold it (*Fig. 93*).
4. Pull buffer and recoil spring forwards out of the buttstock (*Fig. 94*).

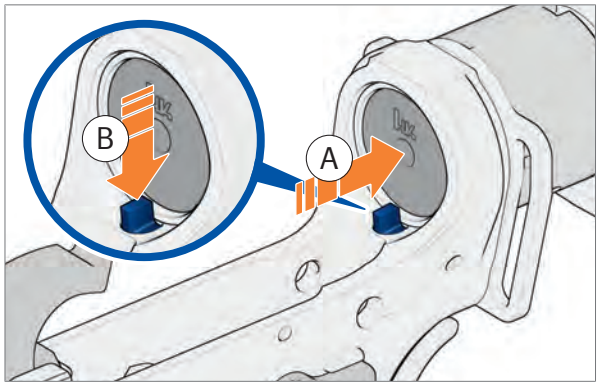


Fig. 93: Push in locking pin for buffer

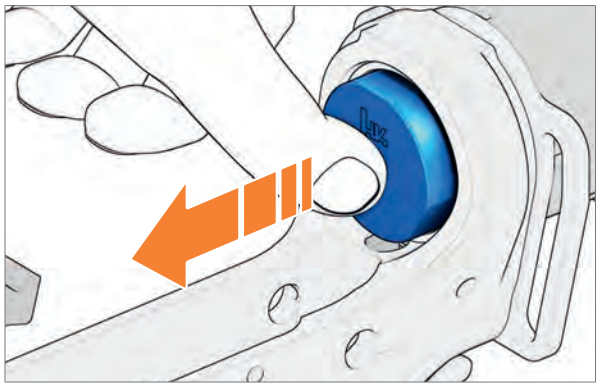


Fig. 94: Pull out buffer and recoil spring

9.5 Remove charging handle and bolt group

1. ▶ Remove lower receiver.
2. Pull charging handle back.
3. Remove bolt group from upper receiver (*Fig. 95*).
4. Remove charging handle from upper receiver.

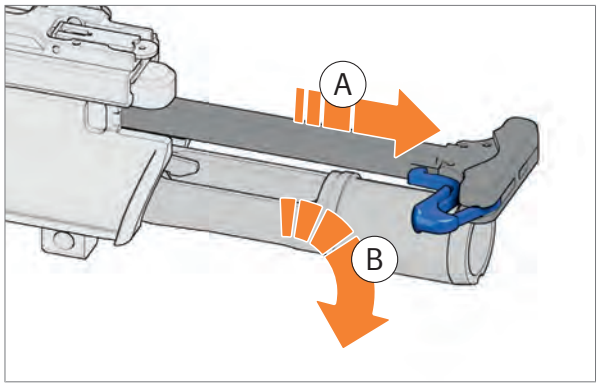


Fig. 95: Remove bolt group

9.6 Remove parts of gas operation

1. ▶ Remove handguard.
2. Pull rod back and hold it (*Fig. 96*).
3. Pull rod upwards and forwards out of upper receiver (*Fig. 96*).
4. Remove gas piston from gas block.

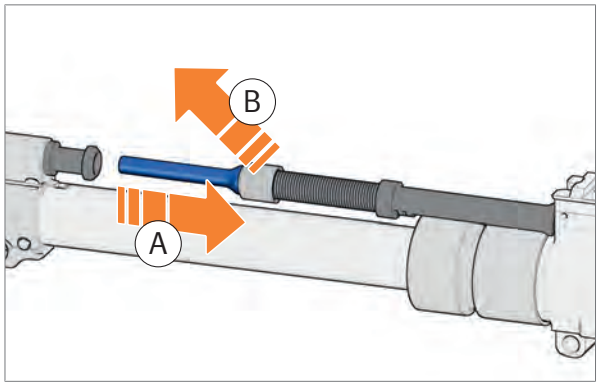


Fig. 96: Remove rod

9.7 Disassemble bolt group

1. ▶ Remove lower receiver.
2. ▶ Remove charging handle and bolt group.
3. Push locking pin from the right completely into the bolt head carrier (*Fig. 97*).
4. Pull locking pin out of the bolt head carrier to the left as far as it will go (*Fig. 97*).
5. Lift firing pin safety (*Fig. 98*).
6. Remove firing pin and pressure spring for firing pin to the rear from bolt head carrier (*Fig. 98*).
7. Remove control bolt from bolt head (*Fig. 99*).
8. Pull bolt head out of bolt head carrier (*Fig. 99*).

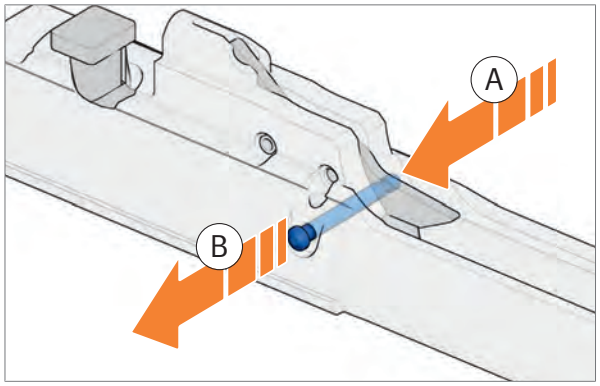


Fig. 97: Pull locking pin out of bolt head carrier

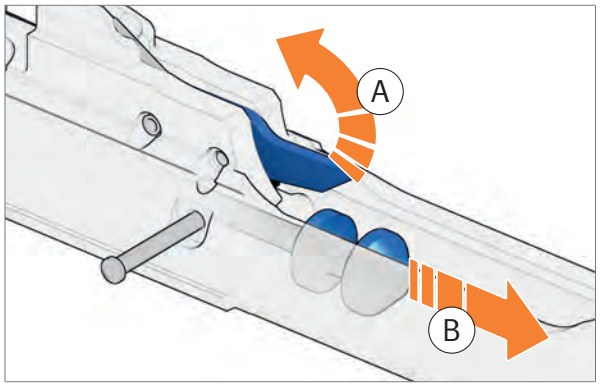


Fig. 98: Remove firing pin and pressure spring for firing pin

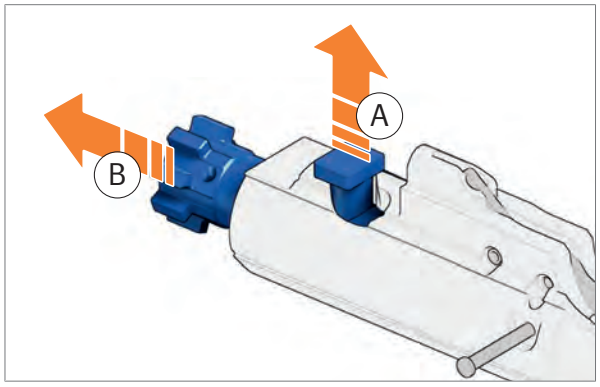


Fig. 99: Remove bolt head

10 Cleaning

10.1 General instructions for cleaning

Regular cleaning and care of the weapon and accessories

- maintain functional reliability,
- increase service life,
- prevent accidents, and
- save repair costs and time.

1. Clean weapon each time it is fired and at intervals of 1.200 rounds.
2. If heavily fouling ammunition is used: Clean and lubricate weapon at shorter intervals.

NOTICE

Risk of material damage from the use of excessive force!

The use of excessive force during cleaning can damage the weapon.

› Do not use excessive force when cleaning the weapon.

10.2 Maintenance plan

The maintenance plan depicts routine tasks which must be conducted before or after firing, as well as after a certain number of rounds fired.

The following maintenance tasks are to be conducted according to the following table.

Symbols	Intervals
▲ = function check	V = before firing / use of the weapon
■ = cleaning / service point	N = after firing / use of the weapon
● = oil / lubrication point	S (100) = according to total of rounds fired (number of rounds)

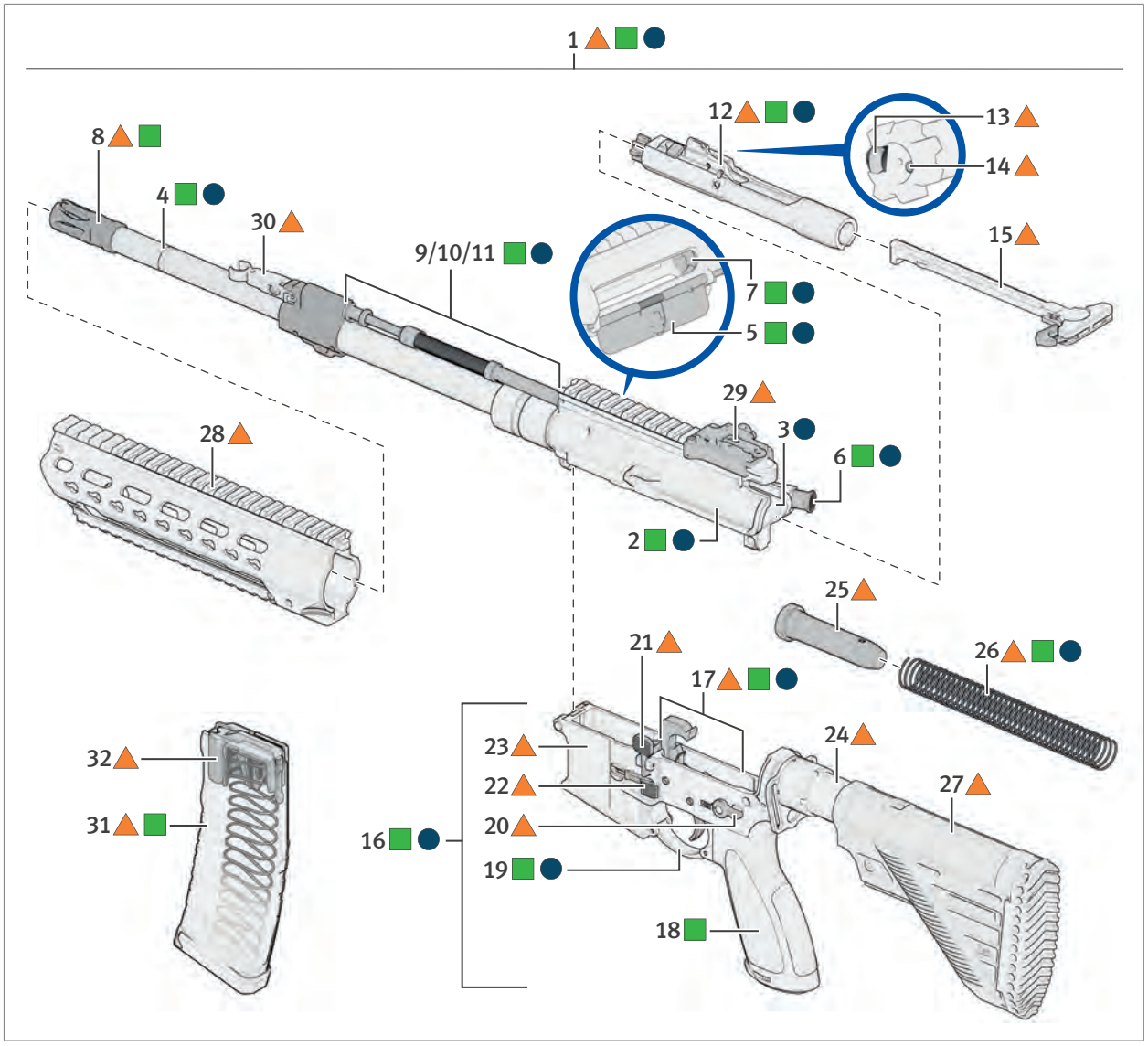


Fig. 100: Overview of maintenance points

Item (*Fig. 100*)	Designation	Check / activity	Auxiliary materials	Time of task
1	Rifle with accessories	▲ function	—	V, N
		■ clean	Cleaning kit	N
		● oil	Oil, e.g. S-761	N
2	Upper receiver	■ clean	Cleaning rag	N
		● oil	Oil, e.g. S-761	N
3	Bolt channel guides	● oil	Oil, e.g. S-761	V
4	Barrel	■ de-oil	Cleaning kit	V
		■ clean	Cleaning kit	N
		● oil	Oil, e.g. S-761	N
5	Ejection port cover	■ clean	Cleaning rag	N
		● oil	Oil, e.g. S-761	N
6	Forward assist	■ clean	Cleaning rag	N
		● oil	Oil, e.g. S-761	N
7	Chamber	■ clean	Cleaning kit	N
		● oil	Oil, e.g. S-761	N
8	Flash hider	▲ firm seating	—	V, S (500)
		■ clean	Cleaning rag	N
9	Gas port	■ clean	Cleaning kit	N
		● oil	Oil, e.g. S-761	N
10	Gas piston	■ clean	Cleaning rag	N
		● oil	Oil, e.g. S-761	N
11	Rod	■ clean	Cleaning rag	N
		● oil	Oil, e.g. S-761	N
12	Bolt group	▲ function	—	V
		■ clean	Cleaning rag	N
		● oil	Oil, e.g. S-761	N
13	Extractor	▲ function	—	V
14	Ejector	▲ function	—	V

Item (*Fig. 100*)	Designation	Check / activity	Auxiliary materials	Time of task
15	Charging handle	▲ condition, locking into place	—	V
16	Lower receiver	■ clean	Cleaning rag	N
		● oil	Oil, e.g. S-761	N
17	Trigger / Trigger mechanism	▲ function	—	V
		■ clean	Cleaning rag	N
		● oil	Oil, e.g. S-761	N
18	Pistol grip	■ clean	Cleaning rag	N
19	Trigger guard	■ clean	Cleaning rag	N
		● oil	Oil, e.g. S-761	N
20	Safety lever	▲ function, locking into place	—	V
21	Bolt catch/release	▲ function	—	V
22	Magazine catch	▲ function	—	V
23	Magazine well	▲ condition	—	V, N
24	Extension	▲ condition	—	V
25	Buffer	▲ condition	—	N
26	Recoil spring	▲ function	—	V
		■ clean	Cleaning rag	N
		● oil	Oil, e.g. S-761	N
27	Buttstock	▲ condition, locking into place	—	V, N
28	Handguard	▲ condition, Firm seating	—	V, N
29	Rear sight	▲ condition, Function	—	V, N
30	Front sight	▲ condition, Function	—	V, N
31	Magazine	▲ condition	—	V, N
		■ clean	Cleaning rag	N

Item (*Fig. 100*)	Designation	Check / activity	Auxiliary materials	Time of task
32	Follower, magazine spring	▲ free movement	—	V
—	Accessories	▲ condition	—	V
		■ clean	Cleaning rag, brush, oil, e.g. S-761	N
—	Front grip	■ clean	Cleaning rag	N
—	Bipod	▲ condition, adjustability, locking into place	—	V
		■ clean	Cleaning rag	N
		● oil	Oil, e.g. S-761	N
—	Carrying sling	▲ condition	—	V
		■ clean	Cleaning rag, brush	N
—	Transport bag	▲ condition	—	V
		■ clean	Cleaning rag, brush	N

10.3 Clean weapon

NOTICE

Risk of material damage from incorrect cleaning agents and care products!

Incorrect cleaning agents and care products can damage the weapon.

› When cleaning the weapon, use the specified cleaning agents.

› Do not use any metallic objects, plastics (nylon, etc.) or chemical cleaning agents (benzine, tetrachloroethylene, trichlor, etc.) to clean the weapon.

› Do not clean the weapon in an ultrasonic bath.

1. ▶ Disassemble weapon.
2. ▶ Clean assembly groups.
3. ▶ Clean barrel.
4. ▶ Clean parts of gas operation.
5. ▶ Lubricate weapon.
6. ▶ Assemble the weapon.

10.4 Clean assembly groups

Required auxiliary materials:

- *Cleaning rag*

1. Clean fouled parts and surfaces using cleaning rag.
2. Clean inside of receiver using cleaning rag.
3. Clean upper receiver, lower receiver, charging handle, bolt group, recoil spring and firing pin with cleaning rag.
4. Clean firing pin bore in bolt head using cleaning rag.
5. Clean magazine well, magazine and follower using cleaning rag.
6. Visually check weapon for damage.

10.5 Cleaning the lower receiver extension

Required auxiliary materials:

- *Cleaning kit*

1. Screw together handle rod, 2 extension rods and cleaning brush for extension (*Fig. 101*).
2. Clean extension inside with a lubricated cleaning brush (*Fig. 101*).
3. Replace cleaning brush with oil brush for extension (*Fig. 102*).
4. Lubricate extension inside with oil brush (*Fig. 102*).

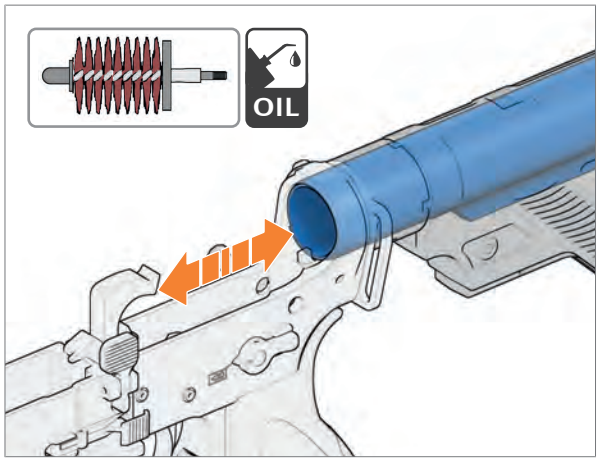


Fig. 101: Cleaning inside extension

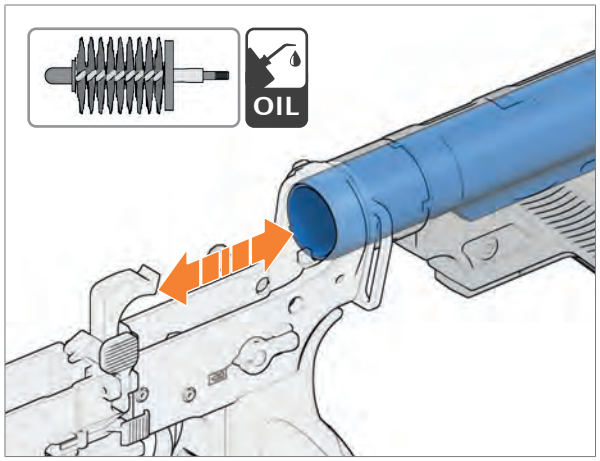


Fig. 102: Lubricate inside extension

10.6 Using the T-pistol grip

Required auxiliary materials:

- *Cleaning kit*

The T-pistol grip is firmly connected to the extension rods via a thread / cleaning brushes associated. The T-pistol grip allows the cleaning of the chamber and the locking piece by turning it.

1. Screw the T-pistol grip, 2 extension rods and cleaning brush for chamber and locking together (*Fig. 103*).
2. Clean chamber and locking piece with cleaning brush (*Fig. 103*).

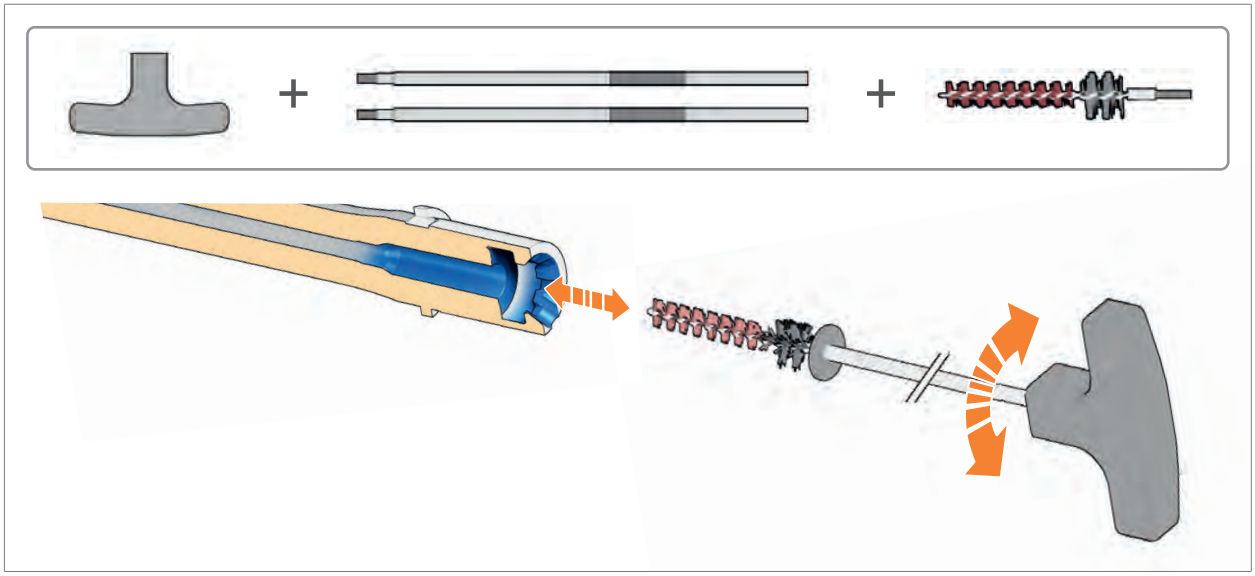


Fig. 103: Using the T-pistol grip

10.7 Using the cleaning rod guide

Required auxiliary materials:

- *Cleaning kit*

The cleaning rod guide serves as a guide for the cleaning rod and facilitates cleaning of the barrel. Use the cleaning rod guide when cleaning the barrel with the barrel cleaning brush or oil brush.

1. Push locking pin of cleaning rod guide in all the way.
2. Insert the cleaning rod guide into the upper receiver (*Fig. 104*).
3. Push the locking pin of the cleaning rod guide completely into the upper part of the receiver (*Fig. 104*).
4. Screw together handle rod, extension rods and oil brush / barrel cleaning brush (*Fig. 105*).
5. Insert the handle rod into the cleaning rod guide from the rear (*Fig. 105*).
6. ▶ Clean barrel.

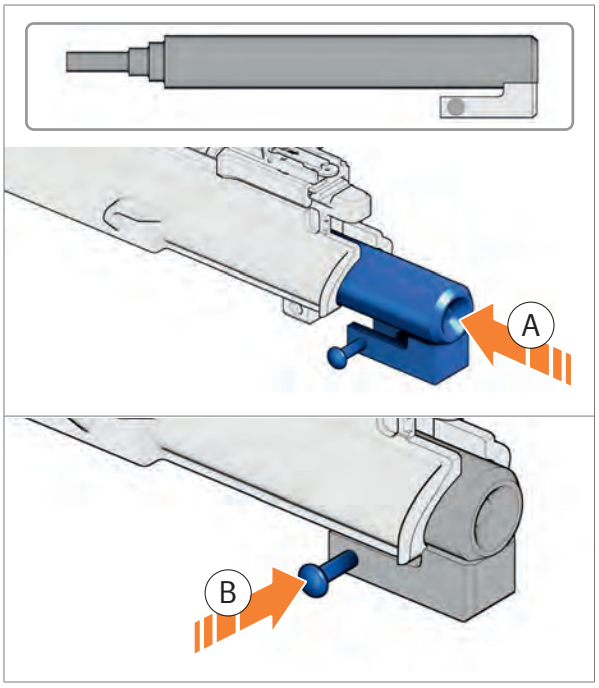


Fig. 104: Insert cleaning rod guide

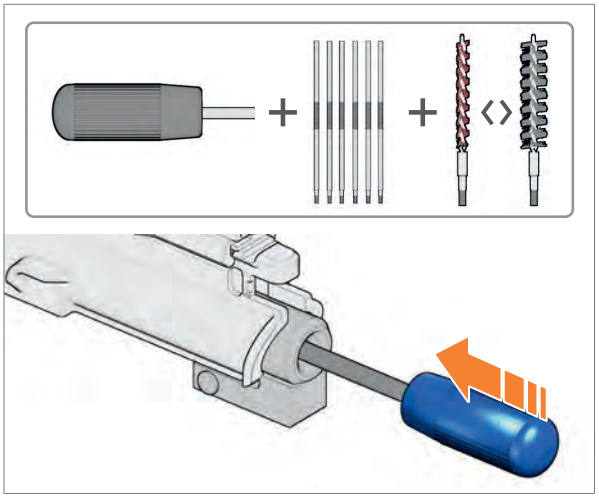


Fig. 105: Insert handle rod

10.8 Clean barrel

Required auxiliary materials:

- *Oil*
- *Cleaning pull-throughs*
- *Cleaning kit*

NOTICE

Risk of material damage from incorrect cleaning direction!

Cleaning the barrel from the muzzle end may damage the muzzle. A damaged muzzle will decrease the weapon's accuracy.

› Always clean the barrel starting from the chamber end.

NOTICE

Danger of material damage if the barrel cleaning brush is not pulled completely through the barrel!

Not pulling the barrel cleaning brush completely through the barrel can damage the inside of the barrel and decrease accuracy.

› Pull the barrel cleaning brush completely through the barrel starting from the chamber end. This allows the bristles of the barrel cleaning brush to straighten out again.

› Pull the barrel cleaning brush out of the chamber to the rear in line with the barrel bore axis.

If possible, lubricate the inside of the barrel immediately after firing while the barrel is still warm to the touch.

1. Oil outside of barrel.
2. Let the oil sink in.
3. Clean and dry barrel using cleaning rag.
4. Screw handle rod, extension rods and oil brush together.
5. Lubricate oil brush.
6. Pull oil-lubricated oil brush through barrel (*Fig. 106*).
7. Let the oil sink in.

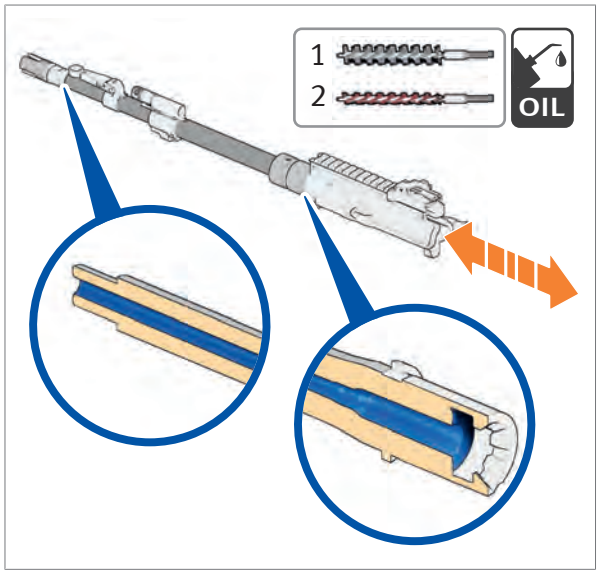


Fig. 106: Clean barrel

1 Oil brush
2 Barrel cleaning brush

8. Replace oil brush with pull-through holder.
9. Insert clean cleaning pull-throughs / insert cleaning cloths into pull-through holder.
10. Pull clean cleaning pull-throughs / cleaning cloths through the barrel to remove heavy soiling (*Fig. 107*).
11. Replace pull-through holder with barrel cleaning brush.
12. Oil barrel cleaning brush.
13. Pull oiled barrel cleaning brush through the barrel several times (*Fig. 106*).
14. Replace barrel cleaning brush with chamber cleaning brush.
15. Oil chamber cleaning brush.
16. Pull oiled chamber cleaning brush through the chamber and locking piece several times (*Fig. 108*).
17. Replace chamber cleaning brush with pull-through holder.
18. Insert clean cleaning pull-throughs / insert cleaning cloths into pull-through holder.
19. Pull clean cleaning pull-throughs / cleaning cloths through the barrel several times until the barrel is free of oil and foreign bodies.
20. Replace cleaning pull-through with oil brush.
21. Lubricate oil brush.
22. Pull lubricated oil brush through barrel to preserve the barrel (*Fig. 109*).

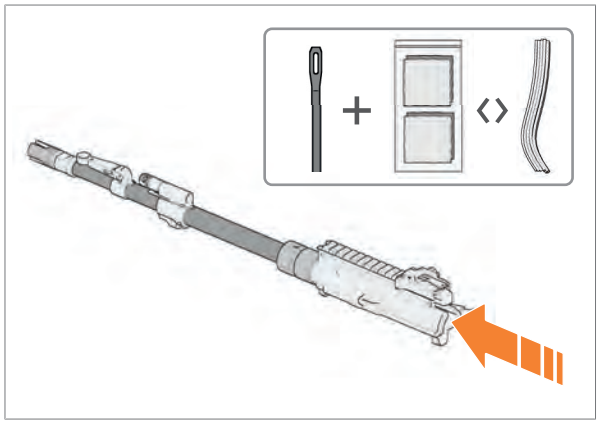


Fig. 107: Clean barrel

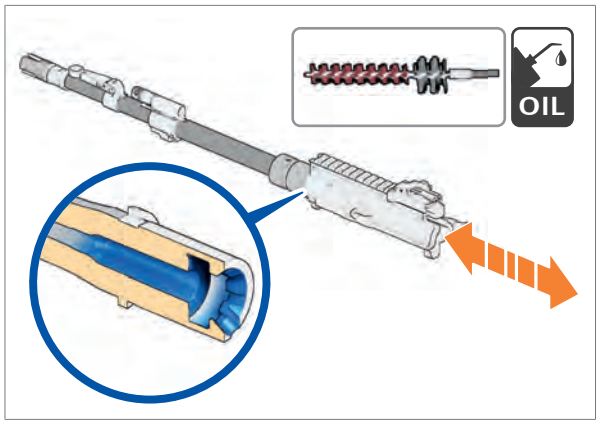


Fig. 108: Clean chamber and locking piece

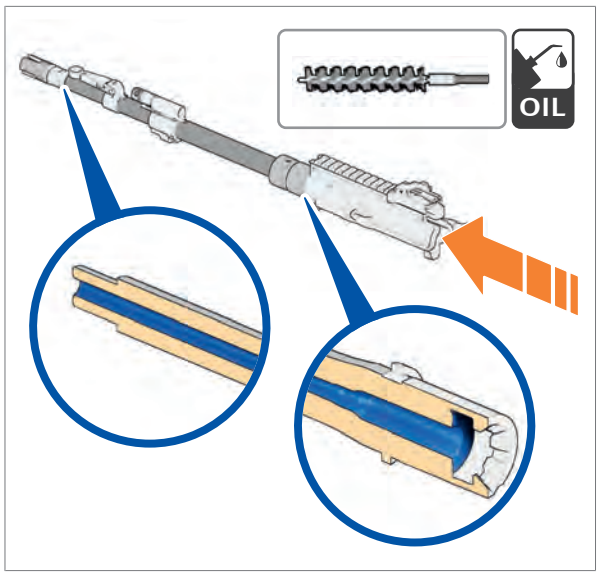


Fig. 109: Lubricate the inside of the barrel

The cleaning string serves for quick and rough cleaning of the barrel.

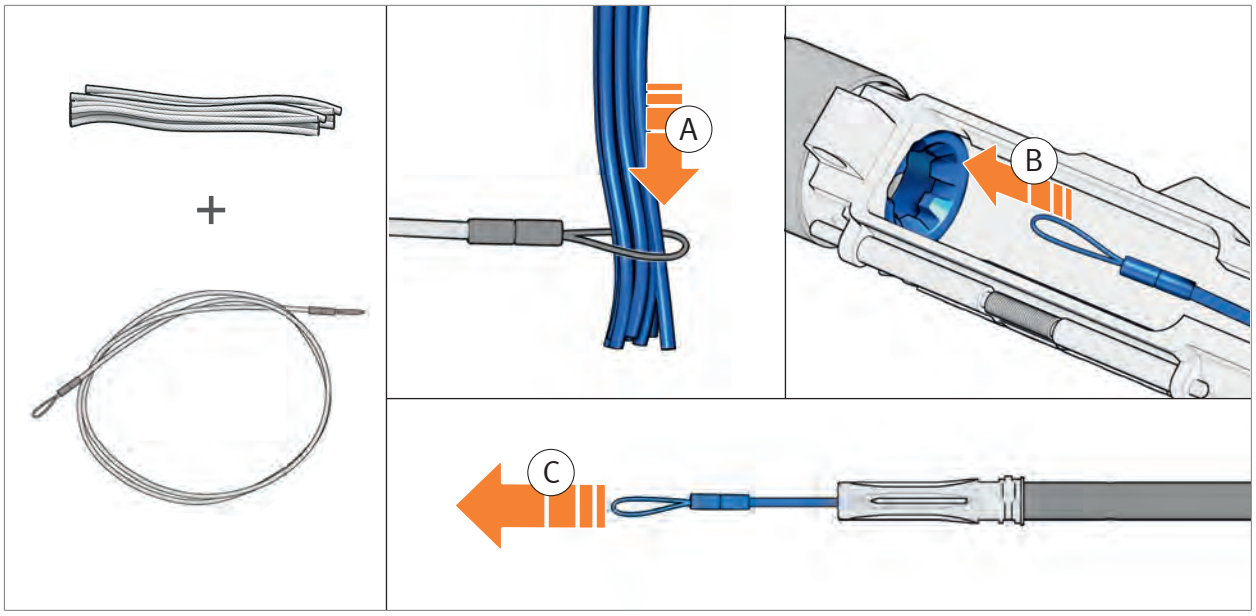


Fig. 110: Clean barrel with cleaning string

10.9 Clean parts of gas operation

Required auxiliary materials:

- *Oil*
- *Cleaning kit*
- *Cleaning rag*

1. Lubricate parts of gas operation (*Fig. 111*).
2. Let the oil sink in.
3. Clean and dry parts of gas operation using cleaning rag (*Fig. 111*).
4. Lubricate the inside of the gas port.
5. Let the oil sink in.
6. Screw handle rod and barrel cleaning brush together. Use different extension rods if necessary.
7. Oil barrel cleaning brush.
8. Clean inside of gas port with barrel cleaning brush (*Fig. 112*).
9. Lubricate the inside of the gas port.

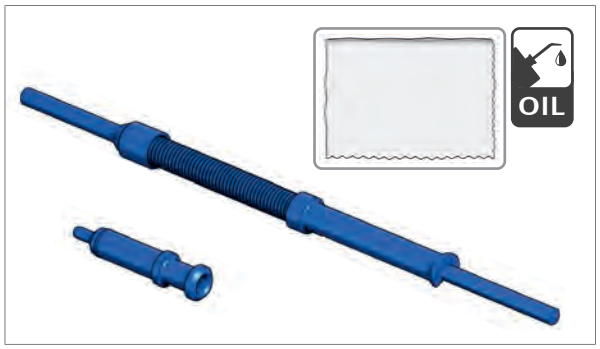


Fig. 111: Clean parts of gas operation

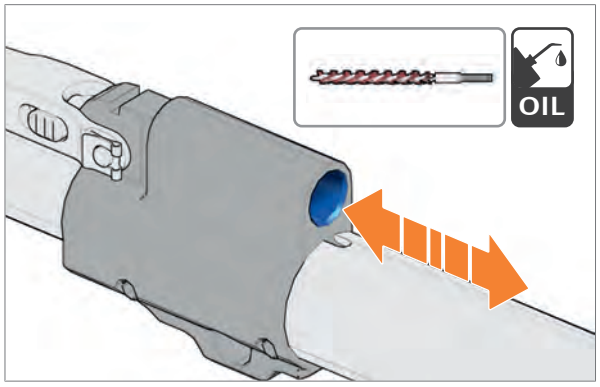


Fig. 112: Clean gas port

10.10 Lubricate weapon

Required auxiliary materials:

- *Oil*

1. Lubricate cleaned metal parts thinly.
2. Lubricate lubrication points of bolt group (*Fig. 113*).
3. Lubricate lubrication points of lower receiver (*Fig. 114*).
4. Lubricate lubrication points of functional elements (*Fig. 115*).

NOTICE

Risk of material damage from lubricated cartridges!

Lubricated cartridges result in increased loads on components and can damage the weapon.

› Do not lubricate the inside of the magazine.

5. Lubricate outside of steel magazine thinly.

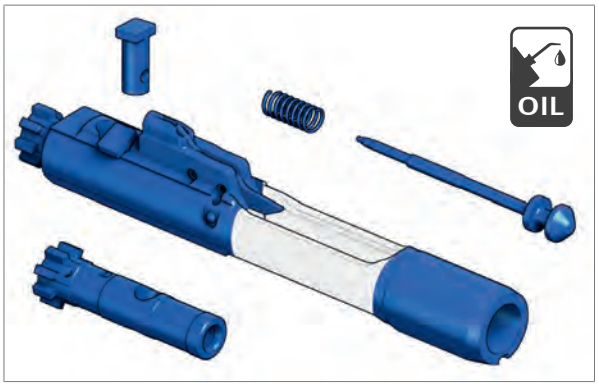


Fig. 113: Lubrication points of bolt group

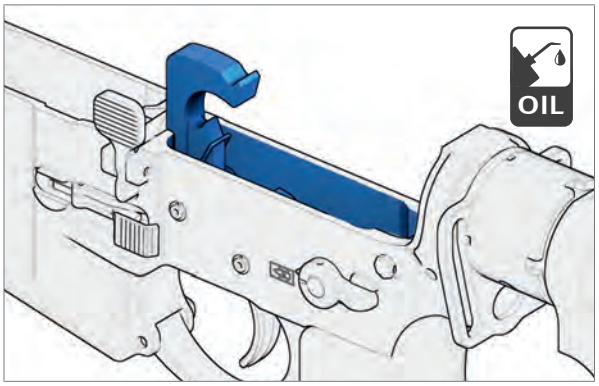


Fig. 114: Lubrication points on lower receiver

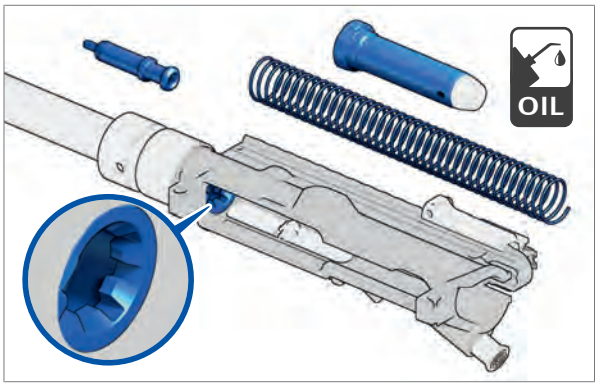


Fig. 115: Lubrication points of functional elements

11 Assembly

11.1 Assemble weapon

1. ▶ Assemble bolt group.
2. ▶ Assemble parts of gas operation.
3. ▶ Insert charging handle and bolt group.
4. ▶ Insert buffer and recoil spring.
5. ▶ Insert lower receiver.
6. ▶ Insert handguard.
7. ▶ Check free movement of bolt group and function of recoil spring.

11.2 Assemble bolt group

1. Insert bolt head into the bolt head carrier with the extractor to the right (*Fig. 116*).
2. Insert control bolt into bolt head carrier with the bore in the longitudinal direction (*Fig. 117*).
3. Push pressure spring for firing pin onto firing pin.
4. Pull locking pin out of bolt head carrier to the left as far as it will go.
5. Raise firing pin safety and hold it (*Fig. 118*).
6. Press firing pin and pressure spring for firing pin from the rear into the bolt head carrier as far as they will go and hold them (*Fig. 118*).
7. Insert locking pin from the left completely into the bolt head carrier (*Fig. 118*).

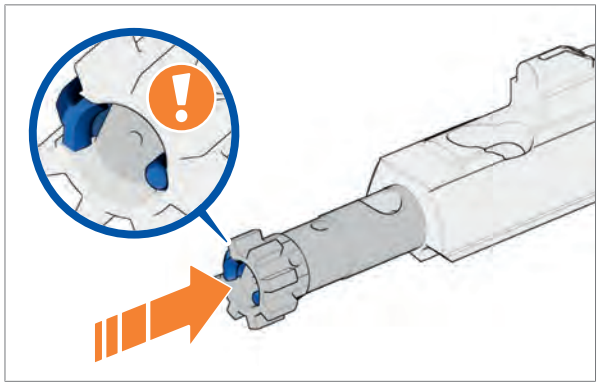


Fig. 116: Insert bolt head into bolt head carrier

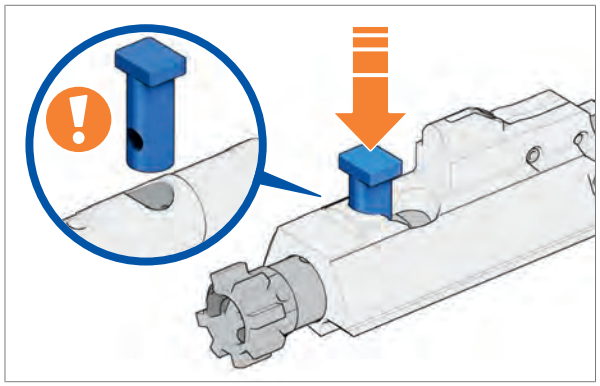


Fig. 117: Insert control bolt

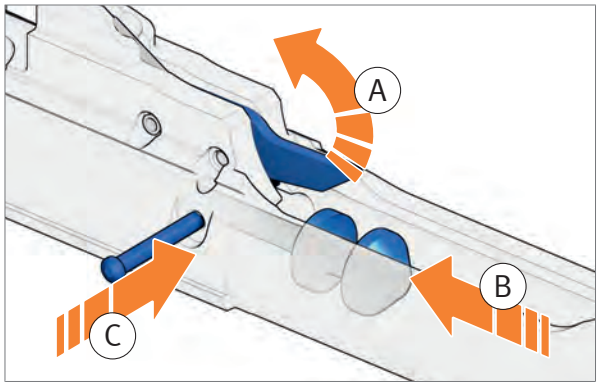


Fig. 118: Press in locking pin

11.3 Assemble parts of gas operation

1. Insert gas piston into the gas block (*Fig. 119*).
2. Insert rod into receiver in assembly position (*Fig. 120*).
3. Press rod to the rear against spring force and insert into gas piston (*Fig. 120*).

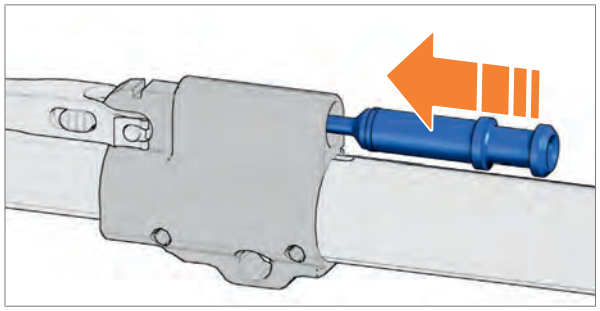


Fig. 119: Insert gas piston

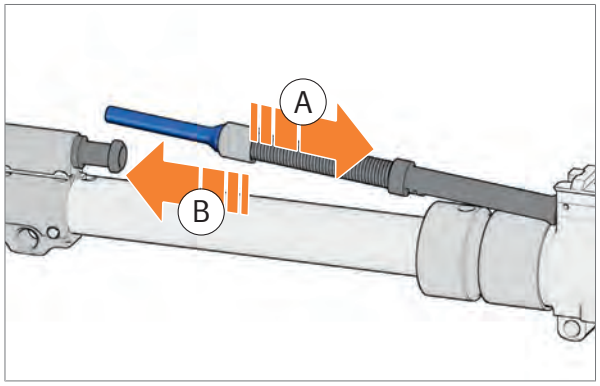


Fig. 120: Insert rod

11.4 Insert charging handle and bolt group

1. ▶ Assemble bolt group.
2. Insert charging handle into recess in upper receiver and push it forwards about 5 cm.

The bolt group can only be inserted into the weapon if the bolt head is in the forward position.

3. Insert guide cam of bolt group into guide groove of charging handle (*Fig. 121*).
4. Push bolt group all the way forwards until the charging handle locks.

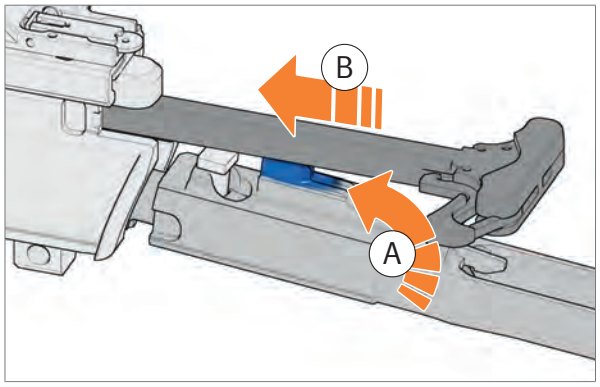


Fig. 121: Inserting bolt group into charging handle

11.5 Insert buffer and recoil spring

1. Insert buffer into recoil spring.
2. Insert buffer with recoil spring into buttstock (*Fig. 122*).
3. Push buffer behind locking pin for buffer.

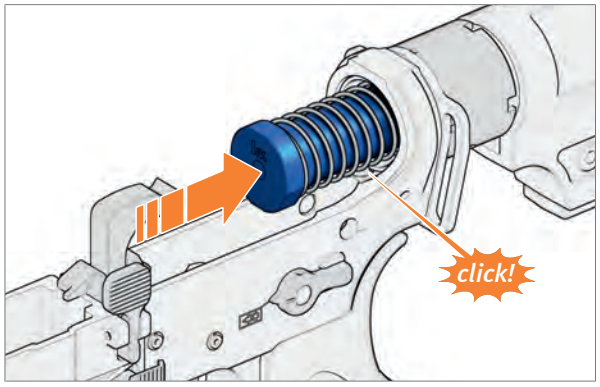


Fig. 122: Insert buffer with recoil spring into buttstock

11.6 Insert lower receiver

1. ▶ Check functioning of lower receiver in “Safe” and “Single fire” positions.
2. Insert lower receiver into front bore for locking pin with the front locking pin in upper receiver at an angle of about 45° (*Fig. 123*).
3. Press front locking pin in all the way to the left (*Fig. 123*).
4. Fold upper receiver downwards onto lower receiver up to the end stop (*Fig. 123*).
5. Push rear locking pin in all the way to the left.

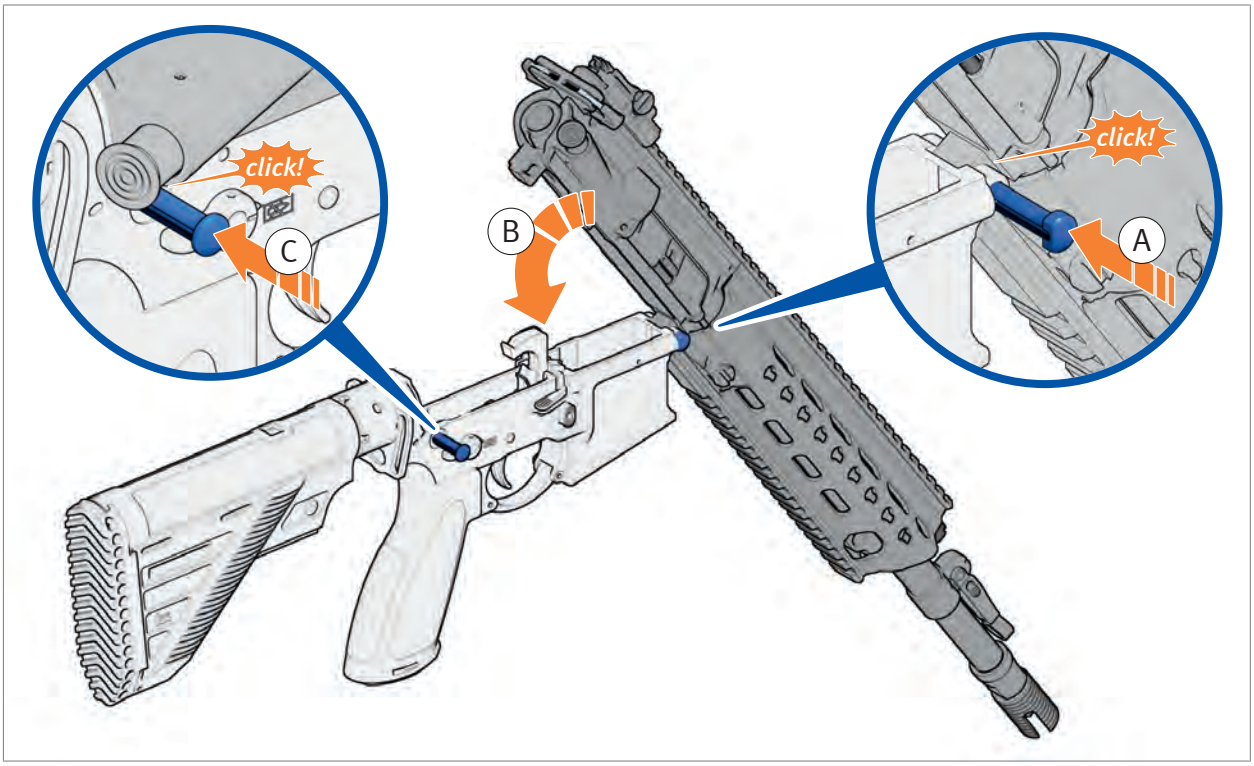


Fig. 123: Insert lower receiver

11.7 Insert handguard

Required auxiliary materials:

- *11 mm open jaw spanner insert*
- *Torque wrench*

If a front sight is mounted to the barrel, the front sight will have to be folded down before the handguard is mounted.

NOTICE

Risk of material damage through use of excessive torque!

The locking screw for handguard has a defined breaking point to prevent damage to the handguard. The locking screw for the handguard breaks off at a torque of 14 Nm.

› When tightening the locking screw for handguard, keep within the torque.

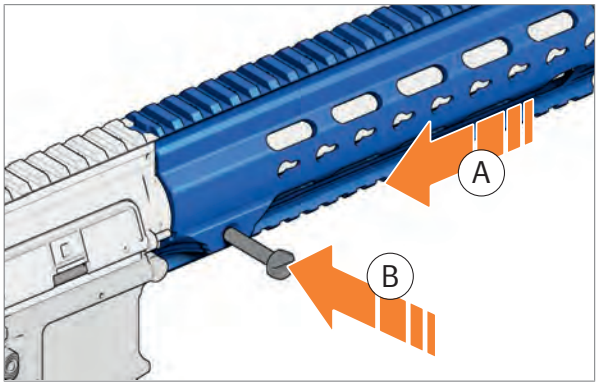


Fig. 124: Push handguard onto barrel

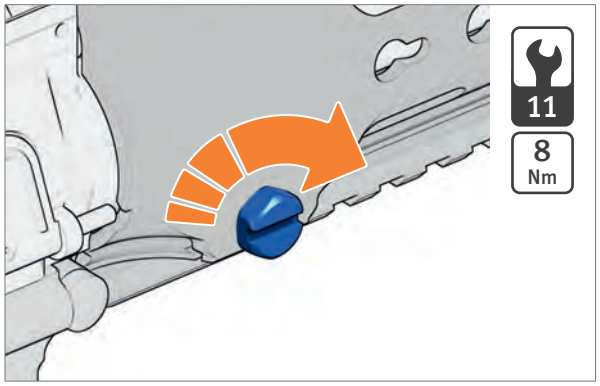


Fig. 125: Tightening locking screw for handguard

12 Faults: Causes and remedies

Users are strictly prohibited from troubleshooting faults that go beyond the scope of this manual! Only authorised specialists may rectify faults in the weapon.

⚠ WARNING

Safety risk from not knowing whether or not the weapon is loaded!

In the event of a fault, the weapon may be loaded even if you expect it to be unloaded.

› In the event of a fault, treat the weapon as if it were loaded.

› In the event of a fault, verify whether the weapon is actually loaded.

› Follow the fundamental safety instructions for troubleshooting.

The following points do not constitute a complete list of all the possible faults. Faults/causes other than those named here are also possible.

Fault	Cause	Remedy
Bullet is stuck in the barrel.	Defective ammunition.	Send weapon in for repair.
Cartridge has not ignited.	Defective ammunition.	Wait at least one minute. ▶ Unload weapon. Do not re-use cartridges that have failed to fire.
	Firing pin sluggish, damaged or broken.	Send weapon in for repair.
	Hammer defective.	
Bolt group does not open after firing.	Defective ammunition.	▶ Unload weapon. ▶ Clean parts of the gas drive. ▶ Clean weapon if necessary. Send weapon in for repair if necessary.
	Gas operation fouled or defective.	

Fault	Cause	Remedy
Cartridge or cartridge case is not ejected.	Cartridge rim ripped off.	▶ Unloading the weapon. Send weapon in for repair if necessary.
	Chamber fouled.	Clean chamber.
	Rearward movement of bolt group too short.	▶ Unloading the weapon. ▶ Carry out function check. ▶ Clean weapon if necessary. Send weapon in for repair if necessary.
	Defective ammunition	Use different ammunition.
	Extractor, pressure spring for extractor, ejector or pressure spring for ejector damaged.	Send weapon in for repair.
Bolt group does not lock.	Cartridge case jams in ejection port (failure to eject).	▶ Carrying out a safety check. Remove cartridge, cartridge case or foreign body. Send weapon in for repair if necessary.
Cartridge is not loaded into the chamber.	Chamber fouled.	▶ Unloading the weapon. ▶ Clean weapon.
	Cartridge deformed.	Use different cartridge.
	Recoil spring defective.	Clean recoil spring. Check recoil spring for damage. Replace recoil spring if necessary.

Fault	Cause	Remedy
Cartridge does not feed.	Magazine not correctly inserted.	Insert magazine correctly.
	Magazine spring defective.	Send magazine in for repair.
	Magazine or magazine lips damaged.	Use different magazine.
	Rearward movement of bolt group too short.	▶ Unloading the weapon. ▶ Carry out function check. Replace barrel if necessary. ▶ Cleaning the weapon. Send weapon in for repair if necessary.
Bolt does not stay in open position after last round.	Magazine spring defective.	Send magazine in for repair.
	Rearward movement of bolt group too short.	▶ Unload weapon. ▶ Carry out function check. ▶ Clean weapon. Send weapon in for repair if necessary.
	Slide release damaged.	Send weapon in for repair.
	Defective ammunition.	Use different ammunition.
Magazine sticks in magazine well.	Magazine damaged.	Exchange magazine. Send damaged magazine in for repair.
	Magazine catch defective.	Send weapon in for repair.
Windage or elevation of point of impact changed.	Rear sight misaligned.	▶ Adjust sights.
	Other type of ammunition.	Use different type of ammunition. ▶ Adjust sights.
	Sights damaged.	Send weapon in for repair.

13 Protection, packaging and storage

Protection guards the weapon against external influences and maintains its functional reliability even if it is not used for long periods. Whenever the weapon is expected to be stored for more than 6 months, the weapon must be protected.

If the weapon is not expected to be stored for more than 6 months, it is sufficient to clean the weapon.

13.1 Protect the weapon

Required auxiliary materials:

- *Grease*
- *Oil paper*

1. ▶ Clean the weapon.
2. Seal both ends of the barrel with grease.
3. Wrap weapon in oil paper.

13.2 Package the weapon

1. ▶ Unload weapon.
2. ▶ Empty the magazine.
3. Package the weapon in appropriate transport container.

13.3 Store the weapon

Store the weapon and ammunition separately.

1. Follow applicable regulations for the storage of weapons and ammunition.
2. If the weapon is not expected to be stored for more than 6 months, it will suffice to clean the weapon. ▶ Clean weapon.
3. If the weapon is expected to be stored for more than 6 months, the weapon must be protected. ▶ Protect weapon.
4. ▶ Package weapon.
5. Store the weapon in an enclosed, weather resistant room.

⚠ WARNING

Risk of accidents caused by unauthorised persons!

Unauthorised persons who have no experience with weapons can cause accidents.

› Be sure to prevent access to the weapon and ammunition by unauthorised persons, especially children.

6. Protect rooms where weapons are stored against break-in and fire.
7. If the weapon is to be stored for longer than 1 year, check the grease seal on the barrel and the oil film on the metal parts on an annual basis.

14 Transport and shipping

14.1 Prepare the weapon for transport

1. ▶ Package the weapon.
2. Secure weapon in vehicle.

NOTICE

Risk of material damage from vibrations!

Vibrations during transport can damage the weapon.

› During transport, secure the transport container against slipping and damage from outside influences.

› Avoid impacts and vibration of the weapon.

14.2 Transport and ship the weapon

Transport and ship weapon and ammunition separately.

› Follow the applicable regulations on the transport and shipping of weapons and ammunition.

15 Destruction and disposal

15.1 Destroy the weapon

› Follow the applicable regulations on the destruction of weapons and ammunition.

15.2 Dispose of the weapon

› Follow the applicable regulations on the disposal of weapons and ammunition.

Index of keywords

P

R

S

T

U

V

W

SEMI-AUTOMATIC RIFLE	MR223
Calibre	.223 Rem.
Operating principle	Semi-automatic, gas-operated
Locking system	Locked rotating bolt head
Cartridge feed	Magazine, 2 / 5 / 10 / 20 / 30 cartridges
Cartridge case ejection	Right
Mode of fire	Single fire
Barrel profile / twist	Groove/land profile, 6 grooves / right-hand twist
Trigger pull	25 - 32 N

TECHNICAL DATA

TECHNISCHE DOKUMENTATION

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