

OWNER'S MANUAL

OWNER'S AND MAINTENANCE MANUAL FOR SAKO TRG-22/42 PRECISION RIFLE

WARNING

Before operating the firearm, read and understand the safety instructions! Please follow the safety procedures detailed in this manual at all times!

- · Always check first that the chamber is empty. Always handle the firearm as if it was loaded.
- Keep the safety engaged until just before firing.
- Always check the barrel before firing to make sure it is free from obstruction. Even the slightest obstruction may damage the barrel and cause a serious accident.
- The firing mechanism is coated with protective oil, please remove this before firing in order to prevent an accident which could cause an injury.
- Always clean and lubricate the rifle after use according to the instructions. Clean excess oil from the cartridge chamber and bore before using the rifle.



11101 Riihimäki FINLAND Tel. +358 108305200 Fax. +358 108305381 www.sako.fi

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INTRODUCTION

Thank you for choosing 'the' highperformance Sako TRG precision rifle! The Sako TRG is an accuracy concept designed to accomplish a single-minded mission: to hit the target, whatever it takes. It is the result of Sako innovation, giving you performance that surpasses the highest demands for accuracy, reliability and versatility.

This manual provides general instructions for use and maintenance of all the different versions of Sako TRG-22/42 rifle including optionals. As a result, you may encounter material that is not applicable to your specific model version.

For higher level maintenance operations, refer to the authorized SAKO dealer.

All the information included in this manual is accurate at the time of publication. However, Sako reserves the right to make changes at any time without prior announcement. This enables continuous product development and product improvements.

HOW TO USE THIS MANUAL

Instructions in this manual are structured in various instruction types to make it easier to read the manual and to improve personal safety. Manual has following sections:

- 1. Introduction
- 2. Overview of the system
- 3. Safety instructions
- 4. Instructions for use
- 5. Maintenance
- 6. Technical specifications

CONVENTIONS FOR DEFINING ORIENTATION

To help you understand this manual, figure 1 provides conventions for defining orientation used in this manual.



INSTRUCTION TYPES

Instructions in this manual are structured in various instruction types to make it easier to read the manual and to improve personal safety. Pay attention and read carefully ALL highlighted WARNING and CAUTION text boxes in this manual.

(i) NOTICE

A NOTICE sign indicates a condition that can be interesting or helpful in the corresponding subject.

WARNING

A WARNING sign indicates a condition in which accident, serious injury or even death could result if the WARNING is negleted.

▲ CAUTION

A CAUTION sign indicates a condition that can cause damage to your firearm if the CAUTION is negleted.

LIST OF ABBREVIATIONS AND UNITS

The table below gives the meaning of abbreviations and units used in this manual.

Table 1. Used abbreviations and their meanings

ABBREVIATION	MEANING	
cal.	Caliber	
C.I.P.	Commission internationale permanente pour l'épreuve des armes à feu portatives	
CLP	CLP Regulation ("Classification, Labelling and Packaging")	
Fig.	Figure	
g	gram	
in.	inch	
kg	kilogram	
lb	pound (mass)	
MIL-STD	US Army Military Standard	
mm	millimetre	
MOA	Minute of Angle	
Nm	Newton metre	
QD	Quick Detachable	
SAAMI	Sporting Arms and Ammunition Manufacturers' Institute	

RIFLE IDENTIFICATION DATA

 Manufacturer: SAKO Ltd. Riihimäki, Finland
Model: TRG-22

TRG-42

wodel.

You will find the model and serial number of the rifle stamped on the side of the receiver, while the caliber is shown on the side of the barrel. The bolt of your rifle is packed separately in the package. The three last digits of the rifle's serial number have been marked on the bolt.

RIFLE'S OPERATING CONTROLS

The SAKO TRG-22/42 rifle is equipped with the following controls (Fig. 2):

- 1. Bolt handle
- 2. Bolt release
- 3. Trigger
- 4. Safety
- 5. Magazine catch



OVERVIEW OF THE RIFLE COMPONENTS

The SAKO TRG-22/42 comprises of the following main components (Fig. 3):

- 1. Bolt
- 2. Barreled receiver
- 3. Magazine
- 4. Trigger unit
- 5. Fore-end
- 6. Rear stock
- 7. Base rail





BOLT

- 1. Bolt body
- 2. Firing pin
- 3. Firing pin spring guide
- 4. Firing pin spring
- 5. Bolt shroud



BARRELED RECEIVER

The TRG-22/42 features a free-floating, cold-hammer forged heavy barrel for extreme accuracy. In the muzzle of the barrel there is an M18 x1 thread for fastening a muzzle brake or suppressor. The muzzle thread is protected by muzzle thread cover.

Top surface of the receiver can be equipped with a MIL-STD-1913 rail that enables quick and robust mounting of a scope or other optics. The bolt release is located on the rear-right side of the receiver.



TRIGGER UNIT

- Two-stage trigger.
- Pull-weight adjustable approx. at 1,3 2,3 kg or 2.9 to 5.1 lbs.
- Individually removable from the rifle.
- Trigger adjustable in three directions: length, horizontal and vertical pitch.
- Safety notch prevents accidental discharge by influence of strong impact.



MAGAZINE

- Detachable staggered row magazine
- Center feeding
- Capacity: TRG-22: 10 rounds TRG-42, .300 WM: 7 rounds
 - TRG-42. 338 LM: 5 rounds



FORE-END

- Removable from base rail.
- Mounting for optional equipment (e.g. sling, bipod, etc.).



FIXED REAR STOCK

- Molded of polyurethane.
- Extruded aluminium frame fastens the rear stock to the base rail.
- Symmetrical for left- and right-handed shooters.
- Bottom surface has shoulder for the supporting hand.
- Upper surface has an adjustable cheek piece.
- Adjustable (vertical, length of pull and cant) recoil pad.
- Ambidextrous sling swivel attachment point on the rear part.



Fig. 10 - TRG-22/42 Folding stock

FOLDING REAR STOCK (if equipped)

- Rear stock folds for better maneuverablity.
- Made of steel, aluminum and polyurethane.
- Pistol grip with aluminum frame and polyurethane grip
- Fits for right- or left-handed user.
- Monopod to stabilize rifle for better target acquisition and long term surveillance.
- Vertically quick adjustable cheek rest.
- Vertically and longitudinally adjustable recoil pad assembly.
- ambidextrous sling swivel attachment point.



BASE RAIL

- Acts as a rifle's framework to which barreled receiver, fore-end, rear stock and other components are attached.
- Manufactured from extruded aluminum.
- Top front half of the base rail has an interface for optional accessory rail attachment

AMMUNITION

AMMUNITION

The SAKO TRG-22/42 is designed to use cartridges manufactured according to CIP specifications. Make sure that you use only high quality, factory manufactured ammunition that match your rifle caliber and specifications. Do not use cartridges that are dirty, wet, corroded, dented or damaged. Do not oil cartridges. Any of these things can make ammunition dangerous, and can cause damage to the firearm or injury to the shooter.

We recommend that you use *Sako Cartridges* with Sako rifles. This way you can ensure reliable, safe and accurate operation of the rifle. Consult your local Sako dealer to get more information about Sako Cartridges suitable for your caliber and use.



WARNING

The use of reloaded, handloaded. remanufactured or other non-standard ammunition voids all warranties, and may cause severe damage to the firearm and serious injury to the shooter or others. Improperly loaded ammunition can be extremely dangerous. Always use ammunition that complies industry performance with standards established by the **Sporting Arms and Ammunition** Manufacturers Institute, Inc. (SAAMI) or Commission Internationale Permanente pour l'Epreuve des Armes à Feu portatives (C.I.P.). SAKO Ltd. does not accept any liability for any damage or injuries by reloaded/handcaused loaded or otherwise improper ammunition.

SAFETY INSTRUCTIONS

Always maintain firearm safety by following the safety instructions below. As a firearm owner, YOU have a set of responsibilities for the safe use of the rifle. Neglecting these responsibilities could result in serious injuries or even death.

WARNING

Failure to observe any of the safety instructions and warnings could result in serious injury or death.

IMPORTANT SAFETY INSTRUCTIONS

- Ensure that the chamber is empty and point the muzzle in a safe direction.
- Always handle the rifle as if it was loaded, cocked and ready to fire.
- Keep the safety ON until you are ready to fire.
- Never rely totally on a rifle's safety device.
- Before handling the rifle or handling it to someone, always open the bolt immediately and check that the rifle's chamber is empty.
- Always wear ear and eye protection when shooting. Make sure that people around you are protected as well.
- Before firing, ensure that the barrel is free from obstructions. When the rifle is fired even a small obstruction may cause permanent damage in the barrel.
- Any preventive oil or storage grease on the rifle, especially in the barrel or in the trigger mechanism, must be removed before firing.

- Cleanandlubricatetherifleafterfiring.Ensurethat the barrel and the chamber are left clean and properly lubricated when the rifle is stored.
- The rifle must be unloaded during transportation.
- In case of malfunctioning or any unusual functioning in the operation of the rifle, firing must be ceased immediately. The cause of the malfunction must be determined and corrected.
- In the event that correcting the malfunction is beyond the user's capabilities, the rifle and a fault description must be delivered to qualified maintenance for inspection and corrective procedures.

Before the first shot:

- Read and understand the contents of this Instruction Manual.
- Remove the preventive lubrication or storage grease from the rifle.
- Perform necessary preparations ("Before starting to use the rifle" on page 15).

In case of a misfire:

• Point the muzzle in a safe direction and wait 30 seconds before opening the bolt. Then, open the bolt with extreme care and remove the faulty cartridge. Take the rifle to an authorized gunsmith to locate the cause of the problem.



OPERATION OF THE SAFETY

"The safety" is a rifle's mechanism that blocks the trigger, sear, hammer or firing pin. The safety lever is located inside the trigger guard extending to the sides, where it can be reached by the index finger. The safety is engaged ON when the safety lever has been pulled backwards to its rearmost position.(Fig. 13)

When the safety is engaged ON it locks:

- the bolt in the closed position
- the firing pin to the cocked position
- the trigger lever.

The safety is engaged OFF, i.e. the rifle is ready to fire, when the safety lever has been pushed forward to its foremost position. (Fig. 12)

When silent use of the safety is required, the user can use the thumb and index finger together when moving the safety lever.

(i) NOTICE

The safety can only be engaged when the rifle is cocked. In case the rifle is not cocked the safety bounces back to its forward position.

WARNING

Don't shoot unless you are absolutely sure of your target and what is beyond it. Remember that a bullet from the rifle can cause serious injury or damage even at a distance of 8 kilometers (5 miles).

<mark>▲ WARNING</mark>

The manual safety is to minimize the potential for firing in the event of an unintentional pulling of the trigger. The manual safety and the rifle's other safety features provide only partial protection against firing from other causes. The safety is only a mechanical device. It is not a substitute for safe firearm handling.

GENERAL INSTRUCTIONS FOR USE

It is important to follow the instructions of the SAKO TRG-22/42 in order to keep it in proper operating condition and also to protect the user from unnecessary injuries. The rifle and its components must be properly lubricated after use with the lubricants provided, multi-purpose Break-Free CLP lubricant or another approved product to avoid corrosion or other degradation of the proper functioning.

The rifle can only be fired with the bolt in the "bolt-closed" position. The cartridge is chambered from a loaded magazine by moving the bolt to its rearmost position and then to its closed-position, after which the rifle is cocked and ready to fire. Safety is engaged "ON" by pulling the safety lever to its rearmost position. When set "ON" the safety prevents the opening of the bolt. Safety can only be placed "ON" when the rifle is cocked or when the bolt has been opened. An empty case or live round is removed from the rifle by opening the bolt and pulling it backwards to its rearmost position.

BEFORE STARTING TO USE THE RIFLE

Before starting to use the rifle, follow the instructions below to ensure safety usage:

- Remove the bolt and visually inspect the barrel to ensure that the barrel and chamber are clean and obstruction-free.
- Remove excess oil from the bolt and breech area in the action.
- Clean the excess oil from the chamber. Then remove the oil from the bore by pushing a dry cleaning patch or felt pellet (commercially available) through the barrel, from breech end to the muzzle.
- Make sure that areas A-C (Fig. 14) are all lightly greased.
- Check the proper functioning of ejectors and extractor. If necessary, test the functioning of the ejectors and the extractor with dummy cartridges or empty cases.



- Insert magazine and verify the locking and functioning.
- Insert bolt and check proper functioning of the action WITHOUT CHAMBERING LIVE CARTRIDGES. The bolt must open and close smoothly.
- Test functioning of the trigger unit. The first stage pull must be clearly recognizable and the trigger break point must be exact. Trigger movement must be smooth and the trigger must return to the forward position by its own spring tension.
- Test that the functioning of the safety is precise. With the safety ON, the rifle must not discharge when normal force is applied to the trigger.

- Check the fastening and condition of the fore-end, rear stock, cheek piece and recoil pad and verify the functioning of the adjustments.
- Check that the aiming device is attached in a proper way and that the fastening screws are tightened properly. If any of the fastening screws cannot be fastened properly, the screw must be replaced with a new one.
- Check the proper attachment of muzzle brake or suppressor (if equipped). If loose, it must be retightened by the user or depending type of attachment the rifle must be turned into qualified maintenance personnel for proper reattachment.
- Check the attachment of the bipod as well as the functioning and adjustments.

WARNING

In case the operation of the items above differ from the description, follow the procedures described in the 'Maintenance' chapter or turn to qualified maintenance personnel.

USE IN LOW TEMPERATURES

In addition to the previous paragraph, some precautions must be taken when the rifle is being used in low temperatures. Before and during use in low temperature conditions the bolt must be disassembled and all oil or grease must be removed from the bolt components. However, the cocking surface and locking surfaces of the locking lugs must always be thinly greased. This will ensure reliable functioning of the rifle in sub-zero conditions.

USING THE RIFLE

Various metal parts of the rifle have been coated with rust preventive storage oil at the factory. This oil needs to be removed before starting to shoot with the rifle. Clean the storage oil from inside the barrel, receiver, action and chamber areas with a cleaning rod and cleaning patch/felt pellet moistened with high-quality gun oil. If your intention is to store the firearm, it is advisable to leave the storage oil on the metal surfaces.

(i) NOTICE – CLEANING PARTS WITH SPECIAL FINISHES

Be careful when cleaning camouflage or other special finishes. Too powerful rubbing and improper cleaning agents may damage these finishes.



OPERATING THE BOLT

OPENING

To open the bolt, do the following (Fig. 15):

- 1. When the safety is OFF, open the bolt by lifting the bolt handle upwards.
- 2. Pull the bolt backwards, until its movement is stopped by the bolt stop.

CLOSING

To close the bolt, do the following (Fig. 15):

- 1. Push the bolt forward and when it reaches its forward position, turn down the bolt handle completely.
- 2. THE RIFLE IS NOW COCKED AND READY TO FIRE, if the safety is OFF.
- 3. Safety can now be engaged ON.

▲ CAUTION

When operating the bolt exact and complete movements ensure smooth and reliable operation of the action. Incomplete movement of the bolt, i.e. "short stroke", may cause misfeeding or failure in ejection.



REMOVAL OF THE BOLT

To remove the bolt, proceed as follows (Fig. 16):

- 1. Make sure that the cheek piece is adjusted to its lowest position.
- 2. Press and hold the bolt release (1).
- 3. Simultaneously pull the bolt backwards out of the receiver.



REMOVING AND INSERTING THE MAGAZINE

REMOVAL OF THE MAGAZINE

- 1. Push the magazine catch (1, Fig. 17), located in front of the trigger guard, forward.
- 2. The magazine (2) falls freely out of the rifle.

INSERTING THE MAGAZINE

- 1. Push the magazine upwards into the magazine well and press it until the catch (1) locks the magazine.
- 2. When inserting a fully loaded magazine while the bolt is closed push the magazine firmly to ensure it locks properly.



LOADING THE MAGAZINE

- 1. Press the cartridge against front part of the magazine so that the case head seats under the retaining lips of the magazine. (Fig. 18)
- 2. While pressing downwards, push the cartridge all the way to its rearmost position.
- 3. Ensure that the cartridges stagger properly to maintain the full magazine capacity.

(i) NOTICE

Loading the magazine may be assisted by pushing the trailing cartridge or the magazine follower down with the thumb of the supporting hand.

FIRING

When you have carried out all of the procedures described in the previous paragraphs, your rifle is ready for firing. Wear adequate eye and ear protection whenever you shoot, and make sure that people around you are similarly protected. The rifle is fired as follows:

- 1. Close the bolt and make sure that the safety is ON.
- 2. When you have decided to shoot and it is safety to do so, move the safety to OFF position.
- 3. Take final aim and squeeze the trigger.
- 4. Open the bolt with a firm and clean action to eject the fired cartridge from the chamber.
- 5. Repeat the previous sequence to continue shooting.
- 6. When you are done with shooting, remove the magazine and make sure that there are no cartridges left in the chamber. Leave the bolt in the rearmost position.
- 7. Perform routine cleaning and maintenance according to the paragraph 'Routine cleaning and lubrication' in the 'Maintenance' chapter.

WARNING

Stop shooting immediately, and take the rifle to an authorized gunsmith or ship to the manufacturer/importer, if any changes in the functioning of your firearm are noticed. For example:

- the functioning of the trigger mechanism has changed
- the rifle does not fire the cartridge (misfires)
- the safety lever does not operate
- there is any cartridge malfunction, such as escaping gas, a punctured primer, a bulged or ruptured case or a different sound when firing.

▲ CAUTION

Excessive trigger pressure must be avoided because it may lead to the damage of the trigger unit. In case of abnormal function of the trigger, contact the authorized repair service for system inspection.



IRON SIGHTS (IF EQUIPPED)

Sako back-up/iron sights can be attached only if the barrel has specific aligning groove.

FRONT SIGHT ATTACHMENT

- 1. Remove the muzzle thread protector or muzzle brake.
- 2. Attach the front sight by sliding it over the muzzle so that the guiding pin fits on the groove on the barrel. (Fig. 19)
- 3. Re-attach the muzzle thread protector or muzzle brake.
- 4. Tighten the fastening screws when the mount is in its foremost position with 4mm allen wrench.





REAR SIGHT ATTACHMENT

There are two different rear iron sight options available (Type A/B). Both are attached as follows:

- 1. Loosen the fastening screw until mounting on to the rail possible.
- 2. Align the recoil shoulder with the rear groove on the rail. (Fig. 20)
- 3. When the rear sight is properly in position, tighten the fastening screw.



STORAGE (Type A)

Rear sight can be stored inside the cheek piece of the fixed stock as follows (Fig. 21):

- 1. Remove the cheek piece from the rifle by unscrewing the cheek piece fastening screw.
- 2. Insert the rear sight to the rear compartment of the cheek piece.
- 3. Place the cheek piece back to the rifle, adjust desired position and tighten the fastening screw (see paragraph "Cheek piece height adjustment").



ADJUSTING THE IRON SIGHTS

Windage

- Loosen the adjusting screw on the side where the bead is desired to move (Fig. 22).
- 2. When desired position is obtained, tighten the screw on the opposite side.

The point of impact moves to the opposite direction of bead movement.



Elevation

- 1. Turn the bead with special tool provided with sights (Fig. 23).
- 2. When turning clockwise, the bead moves downwards and the point of impact moves upwards.



Rear sight (Type A)

The rear sight aperture is flippable for quick bullet drop compensation for following distances:

Position (fig.), used sight type	Distance compensation
1. Flipped forward, diopter	300m
2. Flipped backward, diopter	600 m
3. Flipped backwards, slot	1000 m



REAR SIGHT (Type B)

The use the rear sight, lift up the diopter wheel (1, (Fig. 25). Diopter wheel is returned down by pushing button (2). Windage adjustment is done by rotating adjustment screw (3) by hand. Turning the screw clockwise moves the diopter wheel to the right, and vice versa.

Diopter wheel can be adjusted in four different distances. Position sign is marked on the wheel.

Position	Distance compensation
-	200 m (low light)
2	200 m
4	400 m
6	600 m

RIFLE SCOPE MOUNTING

In order to attach a scope to the rifle, you need appropriate scope mounts. The rifle may be equipped with following top mounting rail options:

- 17 mm rail (standard)
- MIL-STD-1913 Picatinny.

Before obtaining scope-mounts, check their compatibility with the rifle (mounting rail type, etc.). Please refer to the instructions of the scope mounts for mounting and use. The following instructions are only generic guidelines to sight in the scope of the rifle. Specific procedures may vary depending on the scope make and model.

BORE-SIGHTING

The scope or sights need to be pre-aligned so that actual sighting-in procedure is easier. Bore-sighting can be done with a specific bore-sighter OR following the procedure below:

- 1. Place the rifle solidly on benchrest or other steady support (sandbag, etc.) and remove the bolt.
- 2. Place a target (e.g. paper sheet) at about 25-30 m distance.
- 3. If equipped with the fixed stock, remove additional spacers under the cheek piece so that you can look at the target through the bore. In case of folding stock, turn the stock to the side.

Make sure that the rifle is stationary.

4. Look through the scope or sights and adjust windage and elevation so that the reticle centers on the same target you see through the bore.



SIGHTING-IN

After bore-sighting, final sighting-in is done at a target set at 100-150 m distance. Again, it is best to do this from a solid benchrest or other steady support.

Please follow the adjustment directions and other instructions given by the manufacturer of the sight you will be using.



When you have prepared properly and are ready to start sighting-in, take the following steps:

- 1. Aim at the bullseye and fire 3 shots.
- 2. Unload the rifle and check the shot grouping with binoculars or a spotting scope.
- 3. Adjust the sight (elevation and windage) so that reticle moves to the center of the shot grouping (Fig. 26).

Repeat the procedure until shot grouping is hitting in the proximity of the bullseye.

(i) NOTICE

Never shoot with rifle resting on the support from the barrel, and never use a hard shooting support (such as bare wood). Doing so can dramatically affect your groups.



Fig. 28 - Cheek piece height adjustment

ADJUSTING THE FIXED STOCK (if equipped)

CHEEK PIECE HEIGHT ADJUSTMENT (OPTIONAL)

The cheek piece is adjustable in height through the use of straight spacers (available as option). To adjust cheek piece height, do the following (Fig. 28):

- 1. Remove the cheek piece fastening screw with a 5 mm hex driver and replace it with a longer one.
- 2. Add desired number of spacers.
- 3. Tighten the fastening screw.

If you remove the spacers, remember to use the short screw. Notice that the spacers must be removed to remove the bolt.



Fig. 29 - Cheek piece horizontal adjustment

CHEEK PIECE HORIZONTAL ADJUSTMENT

The cheek piece can be adjusted horizontally as follows (Fig. 29):

- 1. Loosen the cheek piece fastening screw with a 5 mm hex driver.
- 2. Move the cheek piece to the desired position.
- 3. Tigten the fastening screw.



RECOIL PAD HEIGHT AND PITCH ADJUSTMENT

The recoil pad is adjustable in height and pitch as follows (Fig. 30):

- 1. Loosen the center fastening screw of the recoil pad with a 5 mm hex driver.
- 2. Adjust the recoil pad to the desired height and pitch.
- 3. Tigthen the fastening screw.



LENGTH OF PULL AND ANGLE ADJUSTMENT

Recoil pad length adjustment is done by adding or removing spacers between stock and recoil pad, as follows (Fig. 31):

- 1. Remove the upper and lower recoil pad fastening screw with a 4 mm hex driver.
- Add desired number of spacers (straight or diagonal) between stock and recoil pad.
- 3. Make sure to use fastening screws of appropriate length (next paragraph),
- 4. Tighten the fastening screws.

Fastening screws must be replaced with a screw of suitable length as indicated in the following table:

Number of spacers	Length of screws
3-4	30 mm
5-6	40 mm
7-8	50 mm
9-10	60 mm



RECOIL PAD HORIZONTAL AND ANGULAR ADJUSTMENT

Recoil pad horizontal and angular adjustment is done as follows (Fig. 32):

- 1. Slacken the upper and lower recoil pad fastening screws with a 4 mm hex driver.
- 2. Adjust desired horizontal position and angle of the recoil pad.
- 3. Tighten the fastening screws.



ADJUSTING THE FOLDING STOCK (if equipped)

FOLDING AND UNFOLDING THE STOCK

The rear stock can be folded as follows (Fig. 33):

- 1. Press button (1) on the top of the pistol grip and simultaneously fold the rear stock to the left.
- 2. The stock locks securely to the folded position.

The folding stock is opened by pushing the corresponding button and folding the stock parallel to the rifle until it locks securely to the open position.



CHEEK PIECE HEIGHT ADJUSTMENT

The cheek piece height is adjusted as follows (Fig. 34):

- 1. Press and hold Catch (1) on the side of the rear stock below the cheek piece.
- 2. The cheek piece (2) can be lowered or raised to the desired position in 3 mm increments.



RECOIL PAD HEIGHT ADJUSTMENT

The recoil pad height is adjusted as follows (Fig. 35):

- Press and hold Button (1) located on the left side of the rifle in front of Recoil pad (2).
- 2. Slide recoil pad assembly up or down to the desired position at 7.2mm increments.
- 3. Releasing the push button locks the recoil pad assembly to the locked position.



RECOIL PAD ADJUSTMENT RANGE AND BUTTON HANDEDNESS

The recoil pad adjustment button can be positioned to three different vertical positions and either on the left or right side. Proceed as follows (Fig. 36):

- 1. Detach the rubber recoil pad by removing upper and lower screw with a 4 mm Allen driver.
- 2. Then, remove screw holding the push button assembly on the middle of the aluminium plate with a 3 mm Allen key.
- 3. Now, attach the button assembly to one of three different vertical positions either positioning the button on the left or the right side of the stock. Assemble the recoil pad in reverse order.



ADJUSTING THE LENGTH OF PULL

The length of the pull can be adjusted as follows (Fig. 37):

- 1. Press and hold Catch (1) in the rear of the stock from the left side of the rifle.
- 2. The recoil pad (2) can be adjusted forward or rearward at 6 mm increments.
- 3. Release the catch and the recoil pad assembly locks into position.



MONOPOD ADJUSTMENT

Monopod has two separate adjustment means (Fig. 38): coarse adjustment by using buttons (1) on both sides of the stock and fine-tuning by using rotating wheel (2). Adjustment is done as follows:

- 1. Press buttons (1) on both sides of the stock.
- 2. Adjust the rear support (3) to the desired position.
- 3. Rotate the adjustment wheel (2) to finetune the adjustment.



MUZZLE BRAKE (if equipped)

The Muzzle brake (Fig. 39) is correctly positioned when the gas ports (1) are positioned to the sides and the mirage strap fitting screw (2) is pointing upwards. SAKO TRG muzzle brake attachment:

- 1. Remove the muzzle thread protector by turning it counter-clockwise, if fitted.
- 2. Attach the muzzle brake to the barrel and rotate it clockwise until it reaches the end of the thread.
- 3. Turn the muzzle brake slightly counterclockwise until it is positioned correctly.
- 4. Tighten the fastening screw (3) to 10 Nm torque.

Reverse the procedure to remove the muzzle brake.



BIPOD (if equipped)

The rifle can be equipped with an adjustable quick detachable bipod (Fig. 40).

Attachment

- 1. Slide the bipod attachment tab (1) into the slot (2) in the fore-end.
- 2. Bipod locks into position.

Removal

- 1. Press down the release lever (3).
- 2. Simultaneosly pull the bipod out of the fore-end.



Adjustment

- 1. Press and hold Catch (1, (Fig. 41).
- 2. Move lower leg (2) to the desired position.
- 3. Release the catch.
- 4. Repeat the procedure to the other leg.

Folding the legs

- 1. Pull the complete leg downwards.
- 2. Fold the leg either forward or backward.
- 3. Repeat the procedure to the other leg.

(i) NOTICE

It is advisable to keep the sliding surfaces of the bipod link oiled with viscous oil or vaseline.

SLING (if equipped)

The sling fastening mount positions are illustrated in figures 42 (fixed stock) and 43 (folding stock).

There are following types of sling fasteners: Type A - Sling hook

Type B - Quick Detachable swivel





Utilizing the sling

The sling is multipurpose, and has several functions (Fig. 46):

- Regular carrying on shoulder or behind neck.
- Can be configured to be used as a biathlon sling / shoulder harness.
- Regular shooting sling around supporting arm of the shooter.

Different functions are configured by relocating buckles on the sling.



The rifle may be equipped with a sling together with hook swivels. The hook swivel is attached by pressing the latch against mounting hook (Fig. 45). To remove the sling, open the latch by hand.



Optional quick detachable (QD) sling is attached by pushing the button in the center of the QD sling swivel and by pulling the swivel out of its attachment point (Fig. 46).

QD swivel attachment to the fore-end requires adapter that is available separately.

SUPPRESSOR (if equipped)

SAKO TRG-22/42 can be equipped with a suppressor that can be fitted to 18x1 muzzle thread.

▲ CAUTION

Follow the instructions supplied with the suppressor when attaching the suppressor to the rifle. Never store the rifle with the suppressor on.

▲ CAUTION

Attachment of the suppressor may become loose during firing due to heat expansion. Verify proper tightness of the suppressor periodically during firing.

WARNING

Even with a small number of rounds, the suppressor becomes extremely hot during firing. Use protective gloves or cloth when inspecting tightness or when removing the suppressor in order to avoid burn injuries. Do not shoot with a loose or misaligned suppressor.

WARNING

Unstable or projectiles that disintegrate after the muzzle (frangible, sabot etc.) are not to be shot through the suppressor. If in doubt, further information can be received from the manufacturer.

STORAGE OF THE RIFLE

Always store your firearm absolutely unloaded in a secure, dry place, where it will not be damaged and where children and unauthorized persons cannot gain access to it. Also, keep cartridges stored separately in a secure place.

(i) NOTICE

Always follow the national legislation and regulations concerning the storage of the rifle. Rules depend on the country.

The SAKO TRG-22/42 should always be handled with extreme care to prevent unintentional discharge and operational malfunctions, which are usually due to negligence or insufficient knowledge on the use on the rifle. Like all rifles, the SAKO TRG-22/42 must be cleaned and lubricated after use.

This section gives instructions to be followed to prevent malfunction due to normal wear and tear caused by regular use of the rifle. If the malfunction is identified promptly and immediate action is taken to eliminate the cause, it is possible to avoid more serious damage and maintain good working condition of the equipment.

REQUIRED TOOLS

Tools needed for the comprehensive maintenance of the rifle are listed below:

- 1. Cleaning kit (cleaning rod, bore brushes, cloth patch tip, cleaning patches).
- 2. Screwdriver type hex key 1,5 mm
- 3. Screwdriver type hex key 4 mm
- 4. Screwdriver type hex key 5 mm

For continuous and routine maintenance, we recommend to use full-sized highquality tools.

WARNING

Make sure the rifle is not loaded with ammunition and that the magazine is out of the rifle before any kind of cleaning or maintenance procedures.

WARNING

Always read instructions and precautions of all chemical products. Make sure that the chemical is suitable for corresponding use.

<u> WARNING</u>

When fired even a minor obstacle in the barrel may lead to a permanent damage to the rifle and cause a severe injury to the shooter or bystanders.

▲ CAUTION

Use only lubricants and chemicals provided with the rifle or the ones that have been previously approved for maintenance of small arms.

Excessive amount of oil gathers dirt particles which can interfere with reliable fuctionality of the rifle. Moreover, the dirt in the barrel may, when fired, cause deformation in the barrel and render the barrel unserviceable. Never use emery paper, sand paper or other abrasive products to clean the rifle, especially the bore.

▲ CAUTION

Be careful when cleaning "soft touch", camouflage or other special finishes. Too powerful rubbing and improper cleaning agents may damage these finishes.

ROUTINE CLEANING AND LUBRICATION

Routine cleaning should always take place right after the use of the rifle. Maintenance should not be neglected even in case of the "All-weather" or "Stainless" models, as the steel may still corrode. It is recommended to support the rifle with the bipod during cleaning. Use only the best quality SAKO gun oil (or equivalent), which cleans, protect and lubricates. Routine cleaning procedure is done as follows:

- 1. Ensure that the rifle is unloaded and remove the bolt and magazine
- 2. In case the rifle has been used in wet conditions dry it using compressed air or let it dry in a warm / dry place without any protective cover i.e. drag bag.
- 3. Use an absolutely straight, sturdy and smooth cleaning rod equipped with a cleaning patch or nylon brush moistened with gun oil and push it through the bore.
- 4. Replace cleaning tip with a bronze bore brush soaked in bore solvent and push-pull it through the bore until major residues are removed (approx. 10-15 times). It is recommended to use cleaning rod guide to prevent the rod from dragging on the inner surfaces of the bore and receiver.

- Push a clean, solvent-wetted patch or felt pellet through the bore one after another until pellets come out clean (approx. 5-10 times). Clean only in the direction of bullet movement and replace dirty pellet with new before every cleaning sequence. Guide the cleaning rod with fingers or special bore guide.
- 6. Clean the inner surfaces of the receiver from all the firing residues with solvent-wetted patch or brush.
- 7. Use a small solvent-wetted brush to clean the bolt from firing residues.
- 8. Use larger diameter nylon brush or particular chamber cleaning brush moistened with bore solvent to clean the cartridge chamber.
- 9. Pass a patch or bore pellet moistened with rust preventive oil through the bore.
- 10. Wipe all contact surfaces of the receiver and bolt with a very light coat of rust preventive oil.

PERIODIC MAINTENANCE

Periodic maintenance should be carried out at least once a year or more frequently under heavy use or in severe conditions. Moreover, periodic maintenance is recommended if the rifle is to be stored for prolonged period. If it is necessary to change any parts, use only original factory spare parts. When loosening or tightening screws, ensure that the screwdriver is of appropriate size and shape. Poor tools will damage the screw heads and general appearance of the rifle.

Periodic maintenance is carried out as follows:

- 1. Carry out the routine cleaning.
- 2. It is advisable to remove copper fouling from the bore. When examining the front part of the bore, slight residue from the bullet copper jacket might be seen. There are various solvents and mechanical cleaners for this purpose, and we recommend that the instructions given by their manufacturers are followed. Badly fouled barrels can shoot inaccurately and will corrode much easier than carefully cleaned ones.

- 3. Wipe the rifle clean from dust, dirt etc. and lubricate all metal surfaces with a lubricated piece of cloth so that a light film of lubricant remains on the rifle.
- 4. Lubricate the sling swivel studs and inspect their attachment to the rifle.
- 5. Disassemble the bolt as instructed in the manual, clean the dirt with solvent-wet-ted brush and lightly lubricate surfaces with protective oil.
- 6. Assemble the bolt and check the function of different parts (incl. extractors and ejectors).
- 7. Check the attachment of the sights and scope.
- 8. Clean muzzle brake and other accessories and lubricate them if needed.
- 9. Check tightness of all screws including stock and trigger unit screws.
- 10. Assemble the rifle and check the functionality of components.

MAINTENANCE ITEMS AND ADJUSTMENTS

Before carrying out any maintenance or service routine on the rifle proceed as follows:

- Make sure the rifle is not loaded with ammunition.
- Push the magazine catch to remove the magazine.
- Remove the bolt.
- Remove sling or any other accessories.



DISASSEMBLING AND ASSEMBLING THE BOLT

DISASSEMBLING THE BOLT

The bolt can be disassembled as follows:

- Hold the bolt body firmly and then carefully turn the bolt shroud clockwise approximately ¹/₄ turn (Fig. 47).
- 2. When the bolt shroud disengages, the firing pin assembly can be pulled out of the bolt body.

▲ WARNING

When disassembling the bolt pay special attention when releasing the firing pin spring tension in order not to cause any injury to the user or loss of components.



ASSEMBLING THE BOLT

The bolt, including the firing pin components, are assembled in reverse order to the disassembly, as follows (Fig. 48):

- 1. Insert the firing pin assembly, with the spring and spring guide, into the bolt.
- 2. Place the bolt shroud to the firing pin spring / spring guide so that the opening in the bottom of the bolt shroud aligns with the rear part of the firing pin cocking piece.



- 3. When the cocking piece points opposite to the bolt handle (Fig. 49), push the bolt shroud hard towards the bolt body so that the bolt shroud meets the rear part of the bolt body.
- 4. While keeping the bolt shroud pushed against the bolt body, turn the bolt shroud counter-clockwise until the rounded front surface of the cocking piece clicks in to the resting groove on the rear of the bolt body (Fig. 50). The bolt is now cocked and can be slid back into the receiver.



(i) NOTICE

When assembling the bolt be sure not to overturn the bolt shroud so that the cocking piece falls to the forward (uncocked) position. In case this happens, turn the bolt shroud clockwise to align the cocking piece and resting groove.

▲ CAUTION

Do not alter or make any modifications to the ejectors or extractors as the functioning of the bolt may be compromised. Turn to qualified gunsmith.

MAGAZINE

▲ CAUTION

No alterations should be made to magazine feeding lips or to the magazine box in order to correct improper feeding or other malfunction. In case of improper feeding or other malfunction occurs replace the magazine with a complete spare part magazine.



ADJUSTMENTS OF THE TRIGGER MECHANISM

REMOVING/INSTALLING THE TRIGGER MECHANISM

- 1. Make sure that the rifle is not loaded with ammunition.
- 2. Remove the bolt and the magazine.
- 3. Turn the safety OFF by pushing the safety to its forward position.
- 4. Pull the trigger to allow the 5 mm allen wrench to be inserted through the opening in the bottom of the trigger guard.
- 5. Open the trigger fastening screw.
- 6. Pull the trigger unit downwards out of the rifle (Fig. 51).

Installation is carried out in reverse order. Remember to tighten the trigger mechanism fastening screw carefully.

(i) NOTICE

Before the final tightening of the fastening screw, ensure by moving the trigger mechanism that it fits evenly in its slot in the receiver.



ADJUSTING TRIGGER PULL WEIGHT

Adjusting the trigger pull weight adjusts both the first stage and second stage pull weights equally (adjustment range: approx. 1,3 - 2,3 kg or 2.9 to 5.1 lbs). The trigger pull weight adjustment is carried out as follows (Fig. 52):

- 1. Introduce a 2,5 mm allen wrench to the screw through the opening in the trigger guard.
- 2. The trigger pull weight will increase when the adjustment screw is turned clockwise. Locking of the adjustment screw with locking agent is not required. Travel of the adjustment screw is limited by an Allen screw.

WARNING

For safety reasons, do not attempt to reduce trigger pressure below 1,3 kg (2.9 lbs).

WARNING

The inner components of trigger the are precision mechanisms, which were adjusted properly at the factory. They should not be altered, modified or changed. Modifications to the firearm may decrease its safety and increase the risk of serious injury.

If you notice any kind of change in operation of the trigger, take the rifle to an authorized Sako service for inspection.



ADJUSTING THE TRIGGER BLADE

The trigger blade can be adjusted horizontally as well as rotated both vertically and horizontally. The trigger blade is adjusted as follows (Fig. 53):

- 1. Before adjusting the trigger position, loosen the fastening screw using a 2,5 mm allen wrench.
- 2. Set the trigger to the desired position.
- 3. Re-tighten the screw after adjustment and verify the functioning of the trigger.



Fig. 54 Removal of the rear stock

REMOVING AND RE-ATTACHING THE REAR STOCK

The rear stock (fixed or folding) can be removed as follows (Fig. 54):

- 1. Loosen the top fastening screw approx. 4 turns with a 5 mm allen wrench.
- 2. Loosen the bottom fastening screw about one turn.
- 3. Remove the rear stock by pulling it backwards.
- The rear stock is re-attached in reverse order. Mating the attachment pieces with the base rail T-profile may be assisted by adjusting the top fastening screw. Securely tighten the fastening screws.



REMOVING AND RE-ATTACHING THE FORE-END

To remove the fore-end, do the following (Fig. 55):

- 1. Loosen the fore-end fastening screws with a 4 mm allen wrench approx. 6 to 7 turns.
- 2. Remove the fore-end by it sliding towards the muzzle.

The fore-end is re-attached in reverse order. Mating the attachment pieces with the base rail T-profile may be assisted by raising the head of fastening screws. Securely tighten the fastening screws.



REMOVING THE BARRELED RECEIVER FROM THE BASE RAIL

Remove the barreled receiver from the base rail as follows (Fig. 56):

- 1. Remove the bolt, magazine, trigger machanism, fore-end and rear stock.
- 2. Remove all three receiver fastening screws with a 5 mm allen wrench.
- 3. Detach the barreled receiver from the base rail.

RE-ATTACHING BARRELED RECEIVER TO THE BASE RAIL

- 1. Make sure that the bedding surface are clean, the underside of the receiver may be lightly oiled.
- 2. Tighten the receiver fastening screw loosely allowing the barreled receiver still move.
- 3. Assemble the trigger mechanism.
- 4. Tighten the front action fastening screw and simultaneously push the receiver backwards so that the surface of the recoil lug mate with each other.
- 5. Remove the trigger mechanism.
- 6. Tighten the other action fastening screws.

TROUBLESHOOTING

Troubleshooting consists of identifying any faulty components through a systematic analysis of causes, which led to the detection of the malfunction, by means of tests carried out to determine the faulty part and remedies required to eliminate the problem.

In most cases, the rifle user can identify the problem and carry out the corrective action. The attached chart lists most common problems, possible causes and steps to be taken to keep the firearm and its components and accessories in operational condition.

TROUBLESHOOTING CHART

Table below contains a list of functional faults, possible causes and corrective actions required to rectify the problem.

MALFUNCTION	POSSIBLE CAUSE	SOLUTION
Bolt will not close.	Bolt is not cocked.	Cock the bolt.
	A faulty, deformed cartridge.	Replace the cartridge with a new one.
	Foreign objects in the chamber.	Clean the chamber.
	Action is damaged.	Repair beyond user's capabilities. Turn to qualified maintenance for correc- tive action.
Closing or open- ing bolt is dif- ficult.	Cocking surface is damaged.	Repair beyond user's capabilities. Turn to qualified maintenance for correc- tive action.
	Faulty cartridge.	Replace the cartridge with a new one.
Rifle cannot be cocked.	Trigger mechanism is not placed properly.	Check the attachment of the trigger mechanism.
	Cocking piece and / or sear rounded or cracked due to excessive wear or damage.	Repair beyond user's capabilities. Turn to qualified maintenance for correc- tive action.
	Dirt or foreign particles in the trig- ger mechanism.	Try removing dirt from the trigger unit with a suitable cleaning kit. In case fault is not corrected, repair is beyond user's capabilities. Turn to qualified maintenance for corrective action.

MALFUNCTION	POSSIBLE CAUSE	SOLUTION
Misfires.	Faulty cartridge.	Make sure you use approved and good quality cartridges (C.I.P).
	Old tarred lubricant and/or dirt inside the bolt.	Perform periodic maintenance described in the 'Maintenance' chapter
	Damaged firing pin spring.	Repair beyond user's capabilities. Turn to qualified maintenance for correc- tive action.
	Damaged firing pin.	Repair beyond user's capabilities. Turn to qualified maintenance for correc- tive action.
Misfeeding of cartridge into the chamber.	Insufficient bolt movement.	Use precise and exact movements while operating the bolt.
	Damaged magazine.	Repair is beyond user's capabilities. Replace the magazine with a new one.
	Dirt in the magazine.	Disassemble and clean the magazine
	Improper loading of the magazine.	Empty and reload the magazine.
Improper extraction.	Dirty or damaged extractor.	Clean the extractor with a suitable cleaning kit. In case fault is not corrected, repair is beyond user's capabilities. Turn to qualified maintenance for corrective action.
	Dirty or corroded chamber.	Perform routine cleaning procedure described in the 'Maintenance' chapter. In case fault is not corrected, repair is beyond user's capabilities. Turn to qualified maintenance for corrective action.
Improper ejection.	Dirty or damaged / stuck ejector/ ejectors.	Clean the ejectors with a suitable cleaning kit. In case fault is not corrected, repair is beyond user's capabilities. Turn to qualified maintenance for corrective action.
	Fatigued ejector spring/springs.	Repair beyond user's capabilities. Turn to qualified maintenance for correc- tive action.

MALFUNCTION	POSSIBLE CAUSE	SOLUTION
Imprecise or inconstant trigger pull.	Misaligned or loose trigger mecha- nism.	Check attachment of the trigger mechanism.
	Dirt or tarred lubricant in the trig- ger mechanism.	Clean the trigger mechanism.
	Improperly adjusted trigger mecha- nism.	Adjust the trigger pull weight according to the instructions.
	Faulty trigger mechanism.	Repair beyond user's capabilities. Turn to qualified maintenance for correc- tive action.
Insufficient accuracy.	Scope mounting has become loose.	(Double) check the mounting of the scope.
	Base rail attachment to the action has become loose.	Check the tightness of receiver mounting screws.
	Fouling in the barrel.	Clean the bore thoroughly. If necessary, remove the copper from the bore with a special bore decoppering solvent.
	Flashes on the flanges of the muzzle brake.	Repair beyond user's capabilities. Turn to qualified maintenance for correc- tive action.
	Damaged optical sight.	Verify using another sight. Repair beyond user's capabilities. Turn to qualified maintenance for corrective action.
	Barrel fastening has become loose.	Check the mounting of the barrel.
	Faulty catridge	Replace the cartridge with a new one.

TECHNICAL DATA

TECHNICAL SPECIFICATIONS

Below is a list of technical data for the main components of the SAKO TRG-22/42 rifles (dimensions and weight may vary due to different rifle configurations).

Model	TRG-22		TRG-42	
	.260 Rem	.308 Win	.300 Win Mag	.338 Lapua Mag
Weight*	4,7 kg (10 3/8 lbs)	4,7 kg (10 3/8 lbs)	5,1 kg (11 1/4 lbs)	5,1 kg (11 1/4 lbs)
Length w/ muzzle brake and recoil pad spacers	1150 mm (45 1/4")	1150 mm (45 1/4")	1200 mm (47 1/4")	1200 mm (47 1/4")
Barrel length	660 mm (26")	660 mm (26")	690 mm (27 1/8")	690 mm (27 1/8")
Rate of twist and direction of rotation	204 mm (8"), RH	280 mm (11"), RH	280 mm (11"), RH	305 mm (12"), RH
Number of grooves	4	4	4	4
Bolt lift angle	60°	60°	60°	60°
Bolt throw	98 mm (3 7/8")	98 mm (3 7/8")	118 mm (4 5/8")	118 mm (4 5/8")
Firing pin travel	6,5 mm (1/4")	6,5 mm (1/4")	6,5 mm (1/4")	6,5 mm (1/4")
Firing pin protrusion (nominal)	1,65 mm (0.065")	1,65 mm (0.065")	1,65 mm (0.065")	1,65 mm (0.065")
Trigger pull weight	1,3 - 2,3 kg (2.9 to 5.1 lbs)			
Magazine capacity	10 rounds	10 rounds	7 rounds	5 rounds

* Without muzzle brake

CARTRIDGES





For optimum accuracy on your rifle, demand Sako Cartridges from your local gunshop.