Original T97NSR Manual

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Manufacturer of the T97.ca FTU™ (Flat Top Upper)

Operation & Maintenance Instructions

5.56 × 45mm Sporting Rifle Model T97NSR



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Operation & Maintenance Instructions 5.56×45mm Sporting Rifle Model T97NSR

1 Fundamental rules of safe operation

Please carefully read the following fundamental rules of safe operation before using the rifle, and again read, review and memorize these rules when you're going to use or to take the rifle out from the packing box. Remember: the safety with the rifle depends on you! Keep in mind that the fundamental rules of safe operation will prevent accidents happening to it. Everyone having the rifle has to observe the following fundamental rules of safe operation in all circumstances, in the open field, training ground or residential areas.

Article 1 Make sure that the rifle is always pointed to a safe direction

This is the most fundamental and most important safety rule. Adequate attention must be paid to this rule on disassembling and reassembling the rifle. The safe direction refers to the one where misfire, if any, will not cause injury to the operator or other people, or material damage. It should always be assumed that the rifle is already loaded with cartridge.

Warning! In any case it is strictly prohibited to point the rifle at any non-target objects.

Article 2 The magazine should be removed when the rifle is not in use

When the rifle is not in use, remove the magazine and cartridge to ensure against any cartridge in the magazine and the rifle, keep the hammer in the fired state and store the rifle and cartridges separately in a safe place away from other materials. Before operating the rifle or handing it to others, check to make sure that there is no cartridge in the magazine and chamber. The rifle can be loaded with cartridges only in the open field, training ground or shooting area.

Warning! It is strictly prohibited to go over fences, climb trees, wade across streams

or make any violent movements by carrying the rifle with cartridge in its chamber. When you are not sure about the state of the rifle, remove the magazine and disassemble the rifle for inspection!

Warning! It is strictly prohibited to push cartridge to or pull it from the chamber with the rifle toward yourself or others.

Warning! It is strictly prohibited to put the rifle charged with ammo in its case or packing box.

Article 3 Do not rest assured solely on the rifle safety device

Like any other devices, the rifle safety device may malfunction or fail in some of the worst cases. Do not assume that the rifle will not misfire, and never rashly operate it or touch the trigger when the "Safety" is set in the "Safe" position. It is strictly forbidden to pull the trigger when the "Safety" is in between the "Safe" and "Fire". The "Safety" is a supplementary device for proper operation rather than an alternative device. It is strictly forbidden to put any finger on the trigger when mounting or removing the magazine or loading cartridges. After removing the magazine, check must be made to make sure that there is no cartridge in the chamber, keeping all fingers clear of the trigger.

Warning! It is forbidden to touch the trigger before shooting.

Article 4 Verification of the target and objects behind it

Shots cannot be retrieved. Therefore, prior to shooting, you have to get to know where shots are going and what they will hit to ensure that the shooting will not hurt people or damage anything behind the target. It is strictly prohibited to shoot to riproarious areas or at moving objects or unidentified objects. Make sure that shots are safely intercepted behind the target. Bear the shooting range in mind and that you are responsible for your behavior and judgment if you miss the expected target.

Article 5 Using cartridges of right specifications

Cartridges of an applicable caliber or standard are to be used for each rifle. It is very important to use cartridges of right specifications. Both the rifle operation manual and the trademark contain the information of proper use of the right animo. Using cartridges of wrong specifications or corroded cartridges or incorrect cartridge loading is likely to cause damage to the rifle and even serious human casualties. Make efforts to develop a good habit of checking the specifications and status of cartridges before loading.

Article 6 Be cautious in case of no shooting when the trigger is pulled

In case of no shooting when the trigger is pulled, follow the rule in Article 1 by keeping the rifle muzzle towards a safe direction, eg downward for 30 sec at least to sec to it that no hang fire of cartridge happens, before unloading the cartridge and handling safely.

Article 7 Wear eye and ear protective devices during shooting

Shooting noise may cause permanent damage to hearing and fragments of cartridge (for example, debris and cartridge cases) may hurt the eye Therefore, safety glasses (like shooting glasses) and protective headset (like noise-proof headset) should be worn during shooting, which is of the basic common knowledge. On cleaning and disassembling the rifle, wearing the eye protector can prevent detergents and springing parts (such as spring) from hurting the eye.

Article 8 Make sure before firing that no foreign object is in the barrel

If there is any foreign object inside the rifle barrel on firing, it may cause damage to the rifle or properties or even casualties. Prior to charging the chamber with a cartridge, check to make sure that there is no cartridge therein, that the magazine is loaded with cartridges of the right specifications and that there is no foreign object in the barrel. Even a little bit of mud, snow or superfluous lube oil inside the barrel is likely to cause the barrel bulging or bursting, causing casualties to the shooter and bystanders. Make efforts to develop the good habit of clearing the chamber and removing all foreign objects from the barrel before each shooting operation. In case of any phenomenon found with the shooting noise or the recoil, stop fire immediately and check to make sure that there is no foreign object in the barrel. A cartridge or case of a smaller size loaded may remain in the barrel, resulting in obstruction, which may cause bursting of the firing rifle and casualties to the shooter and bystanders. Please see and review Article 5.

Article 9 Carry out periodic maintenance but do not modify or retrofit the rifle

The rifle is a complex mechanical device and can function normally only in its original state. Any changes or modification of the rifle as delivered from its manufacturer may result in potential danger and jeopardize the warranty. Do not try to modify the trigger, the safety device or other components of the rifle to avoid causing harm to yourself and others. Regular overhaul and maintenance should be carried out by an authorized factory or agency to ensure the normal function of the rifle.

Article 10 Get familiar with the mechanical and operating features of the rifle

All rifles are not of the same operation. Each rifle is different in terms of characteristics related to carrying, cartridge loading and unloading and operation. Therefore, do not try to hold any rifle if you are not quite clear about it in terms of safe operation, cartridge loading and unloading and protection requirements. It is the same as the rule for safely holding a gun in a general sense.

To fire or clean the rifle or handle cartridges in places with poor ventilation may expose the operator to lead or other known substances, potentially causing birth defects and reproductive damage and other serious damage. Keep good ventilation during fire and wash your hands thoroughly after getting contact with those substances.

Article 11 Away from alcoholic drinks and medicines when using the rifle

The shooter has to keep a clear head during shooting! Do not operate the rifle after drinking alcoholic drinks or taking medicines. Alcoholic drinks, certain medicines and rifles should not go together simultaneously, as your judgment could be impaired. You cannot operate the rifle safely after drinking alcoholic drinks. Stay away from anything that may impair your judgment and physical coordination.

2 Introduction to the rifle

2.1 Use of the rifle

5.56×45mm Model T97NSR sporting rifle is a best tool for shooting and hunting en-

thusiasts and also a best collectable for collection lovers.

2.2 Structure and operation characteristics

This rifle employs the automatic principle of gas operation and the bolt rotation for locking and unlocking. On firing, the powder gas from the gas port impacts on the piston, pushing the bolt backward, and then the bolt goes forward under the action of the return spring, completing the automatic cycle.

This rifle is the same as other sporting rifles, where one cartridge is fed and then fired by pulling the trigger, the case extraction and ejection are completed by the bolt and the next cartridge is automatically loaded into the chamber under the action of the powder gas.

2.3 Structure

2.3.1 The rifle profile(see Fig.1)

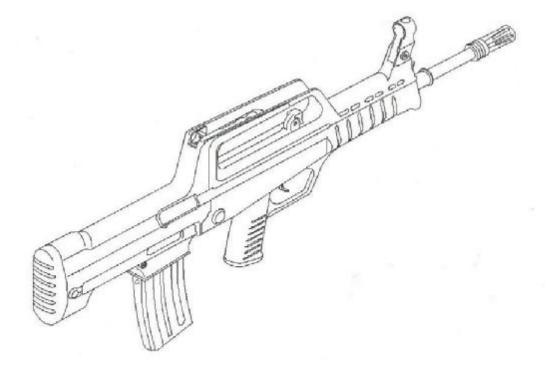


Fig.1 The rifle profile

2.3.2 Major components of the rifle(see Fig.2)

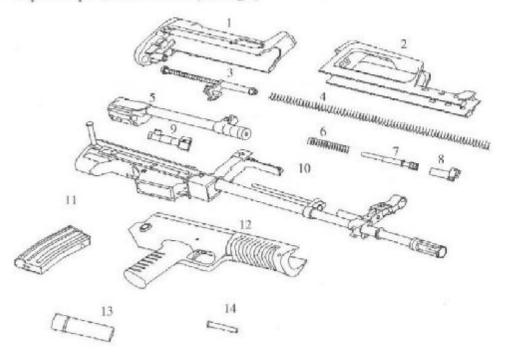


Fig.2 The exploded view of the rifle

Stock 2. Upper handguard 3 Firing mechanism 4. Return spring 5. Bolt body
 Piston spring 7. Piston 8.Gas regulator 9. Bolt head 10. Gun body 11. Magazine
 Lower handguard 13. Accessory tube 14. Lower handguard pin

2.4 Main data

Caliber: 5.56mm

Barrel length:≥470mm

Cartridges used: 5.56×45mm cartridges Type SS109; Type M193 may be used when necessary

Length of whole gun: ≤760mm

Firing mode: Single shots

Weight of whole gun (with one empty magazine but without accessories):≤3.9kg

Aiming means: mechanical sight (with optical sight connector)

Feeding device: Magazine of 5 rounds

3 Operating procedures

3.1 Check on safety before use

Remove the magazine, pull the bolt backward and check if there is any cartridge inside the chamber. Hold the stock firmly with the left hand and the magazine with the right hand, press hard the magazine holder with the right thumb as shown below, and pull the magazine downward to get it off (see Fig.3).

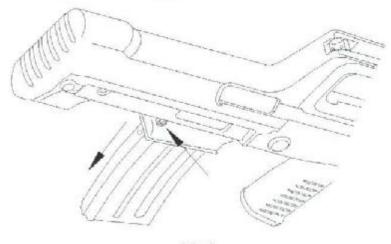


Fig.3

Note: At the end of shooting, first remove the magazine and then pull the bolt backward to take out the cartridge.

Warning! It is forbidden to touch the trigger before shooting.

Warning! In any case it is strictly prohibited to point the rifle at any non-target objects.

- 3.2 Load cartridges
- 3.2.1 Rotate the safety knob to the safe position "S".
- 3.2.2 Remove the magazine as shown in Fig. 3 if it is on the rifle.
- 3.2.3 Load one cartridge of the right specifications (5.56×45mm) into the magazine.
- 3.2.4 Press the cartridge downward till it is held reliably by the holding piece.
- 3.2.5 Load next cartridge in the same way until the magazine is full.

Warning! Prior to loading make sure that the cartridge is of the right specifications,

clean and free of damage. The rifle manufacturer and dealer are not responsible for use of any reproduced, retrofitted or self-made cartridges. Using the latest up-to-standard cartridges is beneficial to the rifle. Use of nonstandard or low quality cartridges may cause property damage or casualty during fire. Bear in mind that the rifle safety is up to you.

Warning! In order to minimize the risk of causing property damage and casualties, load cartridges when everything else is ready for shooting.

3.3 Aiming

The mechanical sight consists of the aperture type rear sight, adjustable on both sides, and the front sight that can be adjusted up and down. The rear sight is marked with "1", "3" and "5", representing the range of 100m, 300m and 500m respectively. To conduct aiming, aline the three points, ie the aperture center and the tip of front sight with the target for firing.

3.4 Firing

3.4.1. Preparation before firing

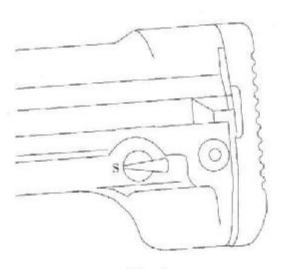
Warning! Before shooting, make sure that there is no dirt or other obstacles in the barrel.

Warning! Keep fingers away from the trigger when loading the magazine.

Warning! Point the muzzle to a safe direction.

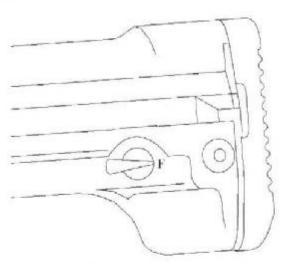
Warning! There are two positions, ie the fire position and the safe position of the safety knob. When the safety knob points to "S", the rifle is in the "safe" state (see Fig. 4). The rifle is in the firing state when the safety knob points to "F" (see Fig. 5). If the safety knob is not pointing to the "safe" position, pulling the trigger will fire the cartridge. Keep aware of the "Safe" and "Fire" positions of the safety knob to avoid serious casual-ties or property losses.

The safety knob in the safe position: The safety knob points to "S" shown on the receiver.





The safety knob in the firing position: The safety knob points to "F" shown on the receiver.





3.4.1.1 Set the safety knob in the "S" position;

3.4.1.2 Load cartridges as stated herein;

3.4.1.3 Insert the loaded magazine into the magazine slot on the receiver and hook up the magazine hitch with the magazine holder on the receiver till the noise of "click", indicating the magazine is fitted to position. In the process of mounting the magazine, keep

the muzzle towards the safe direction and fingers off the trigger. After mounting, gently swing the magazine to make sure that it is firmly locked (see Fig. 6 and Fig. 7).

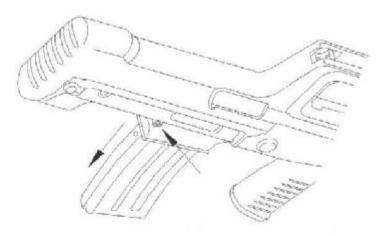


Fig.6 Press the magazine holder and remove the magazine.

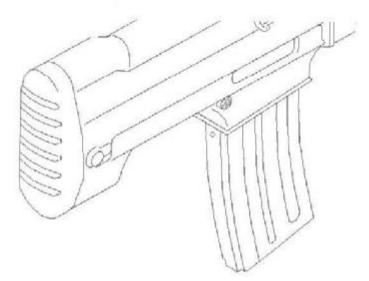


Fig.7 The Magazine is fitted to position

3.4.1.4 Keep the muzzle towards the safe direction and fingers off the trigger, and set the safety knob to "F" (fire) position (see Fig. 5).

3.4.1.5 Pull the bolt to the rearmost position and then release it (see Fig 8). The bolt moves fast forward under the action of the return spring and push a cartridge into the chamber at the same time, getting the rifle ready for firing.



Fig. 8 Pull the bolt backward to feed a cartridge into the chamber

3.4.1.6 Set the safety knob to the "S" (safe) position.

Warning! Now the rifle chamber is loaded with a cartridge and the hammer is in the cocked position. Be careful with operation.

Warning! Now the rifle chamber is loaded with a cartridge and fire will be made if the safety knob is set to the "F" (fire) position and the trigger is pulled. Please be extremely careful and point the muzzle towards the safe position.

3.4.2 Shooting

3.4.2.1 Bear in mind the fundamental rules of safely operating the rifle and conduct aiming within the shooting range.

3.4.2.2 Set the safety knob to the "F" position.

3.4.2.3 Adjust the sights and aim at the target.

3.4.2.4 Put the index finger on the trigger inside the trigger guard.

3.4.2.5 Pull the trigger to fire the first cartridge.

3.4.2.6 Under the action of the powder gas after firing the first round, unlocking and case extraction and ejection will all be completed. At that moment, it should be made sure that

there is nobody in the case ejecting direction to avoid injury caused by the ejected case.

Warning! If the trigger is pulled again, the rifle will fire again! Keep the muzzle toward the safe direction.

3.4.2.7 Carry on firing in the same way until all the rounds in the magazine are finished.
3.4.2.8 At the end of firing, set the safety knob to the "S" (safe) position (see Fig. 4)
3.4.2.9 Remove the magazine and check if there is any cartridge left inside. Pull the bolt a few times and visually check to make sure if there is any cartridge in the chamber. Remove the cartridge, if any, and store the rifle and ammo separately in a place inaccessible to other people.

Warning! After use and before cleaning and storing, remove the cartridge from the chamber to minimize the risk of misfire.

Warning! If there is a cartridge in the chamber, the rifle will still fire when the trigger is pulled even the magazine has been removed.

Warning! Once dropped on to the ground, any rifle with a cartridge in its chamber and with the safety knob set to the "F" position may probably fire.

Warning! If the rifle fails to fire, it should be kept toward the target for at least 30 seconds to wait for hang fire. If the cartridge is not fired yet, remove the magazine and take out the failed round, which shall be properly kept or handled by a qualified agency or personnel.

3.5 Check for cartridge left

Warning! Keep the muzzle toward the safe direction

3.5.1 Set the safety knob to the "S" position (see Fig. 4).

3.5.2 Press the magazine holder to remove the magazine (see Fig. 6).

3.5.3 Set the safety knob to the "F" position. Pull the bolt to the rearmost position (see Fig. 8), check to make sure that there is no cartridge inside the chamber. Prompt: If there is a cartridge therein, that action will drag it out.

3.5.4 Unload the left cartridges from the magazine.

3.5.5 Set the safety knob to the "S".

Note: When storing the rifle, set the safety knob to the "S" position and the hammer in the fired position. Place the magazine, cartridges and the rifle separately.

4 Disassembling and reassembling

Points for attention

A. Before disassembling, check on safety must be carried out to ensure against any cartridge inside the chamber.

B. Operation should be performed as specified, without hard knocking or violent stripping.

C. Disassembled parts should be placed on a clean surface in sequence.

D. No parts other than those specified shall be disassembled.

E. Parts should be cleaned and oiled before reassembling.

F. After reassembly, all the mechanisms of the rifle should function flexibly and reliably.

G. The reassembled rifle should be set to the safe position after check.

4.1 Disassembling procedures

Warning! Disassembling the rifle against the rules may cause damage to the rifle.

Warning! Wear eye protector, such as shooting glasses or goggles, to prevent eye being injured by springing components, such as springs during disassembly.

Warning! Prior to breaking down the rifle, follow the steps described above and check to make sure that there is no cartridge in the chamber.

4.1.1 Check on safety

Remove the magazine, pull the bolt backward and check if there is any cartridge inside the chamber. Hold the stock firmly with the left hand and the magazine with the right hand, press hard the magazine holder with the right thumb as shown below, and pull the magazine downward to get it off (see Fig. 3).

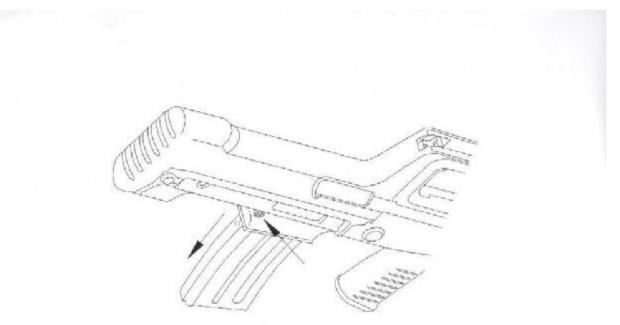


Fig.9 Remove the magazine

4.1.2 Disassemble the rifle

A. Remove the stock

Press the stock butt hard by the right thumb, push out the stock pin from left to right by the left thumb (see Fig. 10), then press the stock butt with the left hand and pull the stock pin out from the right side with the right hand (see Fig. 11). To follow, hold the receiver with the left hand, pull the stock backward with the right hand to remove the stock (see Fig. 12).

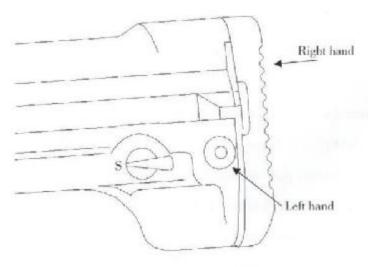


Fig.10

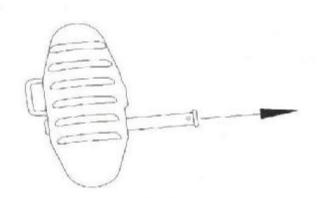
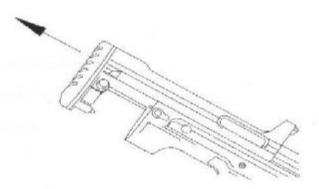


Fig.11





B. Remove the firing mechanism and the return spring

After the stock removal, hold the rear end of the receiver with the left hand and pull the firing mechanism backward with the right hand to remove it (see Fig. 13). Then take out the return spring from its tube at the end of the bolt.

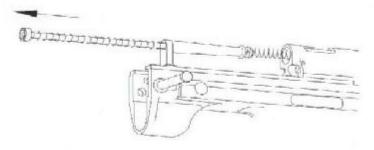


Fig. 13

C. Remove the bolt

Hold the rear end of the receiver with the left hand and pull the bolt backward with

the right hand to remove the bolt (see Fig. 14).

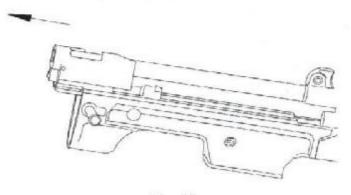


Fig. 14

D. Remove the bolt head

Pull the bolt head forward to aline the locking-unlocking protrusion with the slot on the bolt body, then rotate it to the left and pull further forward to take it out (see Fig. 15).

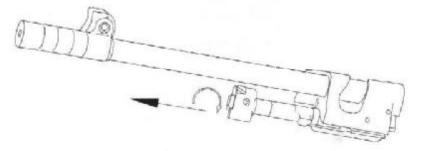


Fig. 15

E. Remove the upper handguard

Push the upper handguard backward for $5 \sim 8$ mm first, then lift its rear part upward, let the telescope seat pass by, and continue to lift the handguard backward up to remove it (see Fig. 16).

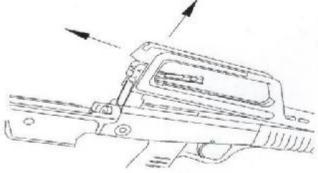


Fig. 16

F. Remove the gas regulator

Press the regulator cog to force it out of the locating slot, turn the gas regulator till its two sides are in a horizontal position, and then pull the regulator forward to remove it (see Fig. 17).

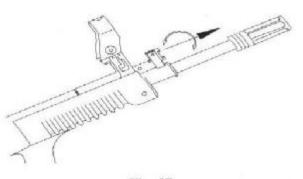


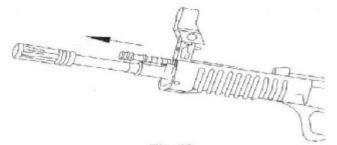
Fig. 17

C. Remove the piston and the piston spring

Pull the piston spring backward and compress it. Then release the spring and the piston head is sprung out of the gas block under the action of the spring, where the piston head and piston spring can be taken out (see Fig. 18 and Fig. 19).



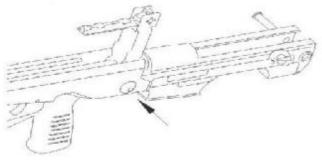






H. Remove the lower handguard

Press the lower handguard pin to make it stick out form the guard and pull it out (see Fig. 20). Pull the handguard downward to disengage the trigger from the tie rod, and then push the handguard forward to disengage it from the hook of the gas block to remove it (see Fig. 21).





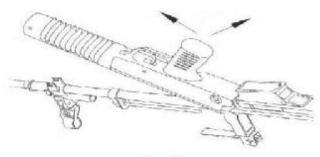


Fig. 21

I. Remove the safety knob

Turn the rear end of the safety knob to the lower position, press downward the retainer in the firing mechanism housing with the right hand to drive it out of its slot in the safety knob and pull the knob out with the left hand (see Fig. 22).

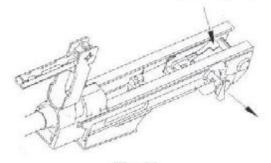
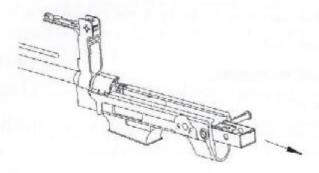


Fig. 22

J. Remove the firing mechanism

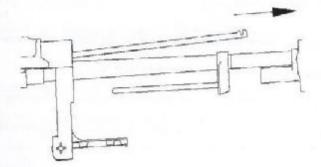
Pull the firing mechanism backward along the inner groove of the receiver with one hand and disengage it from the trigger tie rod to take out the firing mechanism (see Fig. 23).





K. Pull out the trigger tie rod

Hold the trigger tie rod with one hand and pull it forward to take it out (see Fig. 24).





L. Take out the accessory tube

Press the grip cover pin downward with a pen point, bullet, nail or other pin, push the grip cover over its pin by hand and then forcefully draw the grip cover outward to open it, followed by dropping out the accessory tube.

4.2 Reassembling procedures

Reassembly should be carried out in the reverse order of disassembly. After reassembly, pull the trigger to set the hammer in the fired position with its spring free of tension.

Note: The firing mechanism should be only fitted in along the receiver groove after

the trigger tie rod engages with the trigger body.

Note: To fit on the lower handguard, first insert its rear part into the corresponding location, push the handguard forward and then pull it backward to engage its front hitch pin with the corresponding slot in the gas block and to ensure that the trigger firmly engages with the trigger tie rod.

5 Rifle cleaning and maintenance

5.1 Cleaning of the rifle

5.1.1 Read through the cleaning instructions and use high-quality cleaning kit to clean the rifle.

5.1.2 Disassemble the rifle according to the procedures prescribed herein.

Warning! Handling ammunition and cleaning the rifle may cause spread of lead or other substances, presenting threat to health. Wash hands and face after shooting and cleaning.

Warning! Regularly have the rifle checked by an authorized manufacturer or agency for worn out or damaged parts to ensure its safety and service life.

Warning! In cleaning the rifle, eye protector, such as shooting glasses or goggles should be worn to avoid potential injuries caused by detergent, lubricants and elastic components like springs.

Warning! Excessive use of detergent or lube oil will be counterproductive. Prior to shooting, wipe the barrel bore with dry cloth to ensure that there is no foreign object therein.

Warning! Some detergents may produce harmful gases. Read and follow the warning instructions on the package by the detergent manufacturer.

Warning! Some parts may be with sharp edges. It is recommended to wear gloves to protect hands during cleaning.

5.2 Frequency of cleaning

Timely cleaning should be conducted after firing to prevent powder residue accumu-

lation and barrel corrosion. When the rifle is not used, it should be thoroughly cleaned once or twice a year under dry condition and once a week under humid condition, to ensure the normal function of all the mechanisms.

Note: In extreme circumstances (with a temperature below zero Celsius or below 36 degree Fahrenheit), using a dry lubricant (instead of lube oil) can better protect the rifle.

6 Storage requirements

The rifle should be thoroughly cleaned and mildly lubricated for storage, by wiping with soft cloth coated with quality antirust oil. Before storage, check to make sure that there is no cartridge in both the barrel and the magazine. The action should be in the forefront position, the rear sight at mark "3", the hammer in the fired position and the safety knob in the "S" (safe) position. The rifle and ammo should be stored apart in a place inaccessible to children and people unauthorised. To put the rifle back into use, superfluous lubricant and antirust oil should be removed and check made before shooting to ensure against any contaminant and foreign objects in the bore so as to avoid the bore bursting accident.

Warning! Using retrofitted, modified or other nonstandard cartridges may cause damage to the rifle and even casualties to the shooter and surrounding people. The rifle manufacturer and dealer are not responsible for any accidents resulting from using any nonstandard or defective cartridges.

Warning! Any changes or modification of the rifle as delivered from its manufacturer may cause potential danger and jeopardize the warranty. The rifle manufacturer and dealer are not responsible for any accidents happening to the shooter or other people due to any modification of the trigger, safety device or other parts of the rifle.

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or make any violent movements by carrying the rifle with cartridge in its chamber. When you are not sure about the state of the rifle, remove the magazine and disassemble the rifle for inspection!

Warning! It is strictly prohibited to push cartridge to or pull it from the chamber with the rifle toward yourself or others.

Warning! It is strictly prohibited to put the rifle charged with ammo in its case or packing box.

Article 3 Do not rest assured solely on the rifle safety device

Like any other devices, the rifle safety device may malfunction or fail in some of the worst cases. Do not assume that the rifle will not misfire, and never rashly operate it or touch the trigger when the "Safety" is set in the "Safe" position. It is strictly forbidden to pull the trigger when the "Safety" is in between the "Safe" and "Fire". The "Safety" is a supplementary device for proper operation rather than an alternative device. It is strictly forbidden to put any finger on the trigger when mounting or removing the magazine or loading cartridges. After removing the magazine, check must be made to make sure that there is no cartridge in the chamber, keeping all fingers clear of the trigger.

Warning! It is forbidden to touch the trigger before shooting.

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Shots cannot be retrieved. Therefore, prior to shooting, you have to get to know where shots are going and what they will hit to ensure that the shooting will not hurt people or damage anything behind the target. It is strictly prohibited to shoot to riproarious areas or at moving objects or unidentified objects. Make sure that shots are safely intercepted behind the target. Bear the shooting range in mind and that you are responsible for your behavior and judgment if you miss the expected target.

Article 5 Using cartridges of right specifications

Cartridges of an applicable caliber or standard are to be used for each rifle. It is very important to use cartridges of right specifications. Both the rifle operation manual and the