

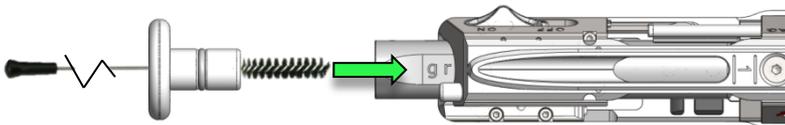
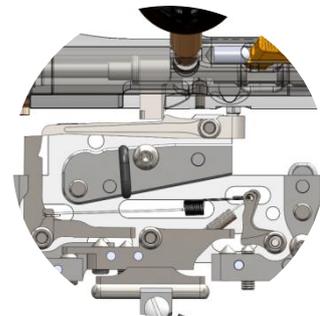
**R3** *acer*

SMALL BORE RIFLE .22 l.r.



## MANUAL

### Maintenance and Cleaning



## **Maintenance and Cleaning**

-General information	Page 2
-Trigger	Page 3
-Action	Page 4
-Nylon safety of screws	Page 4
-Cleaning the barrel	Page 5
-Cleaning rod guide	Page 5+6
-Dirt groove on the bolt face	Page 7
-Maintenance checkup	Page 7

## **Dear Target Shooter**

Congratulations on the acquisition of your new target rifle. Our rifles are used worldwide with great success. We are convinced that your decision was easy. Our products fulfill the highest engineering standards and are manufactured with the latest product technology.

### **Please carefully read the following before using your new rifle:**

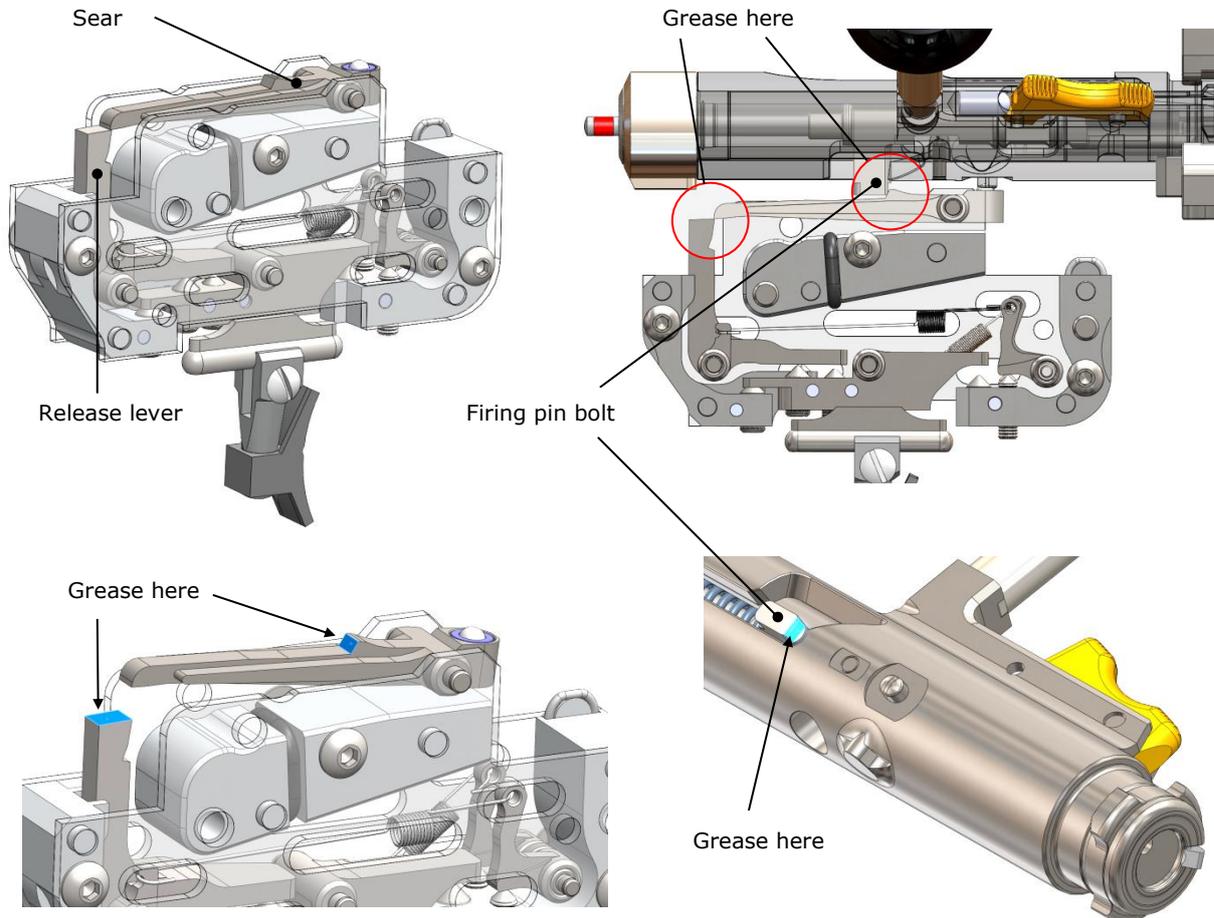
1. Always consider a rifle loaded until you personally checked that it is not. Make sure the action is open when you carry the rifle around so everybody can see that your rifle is unloaded.
2. Make sure the muzzle is always pointed downrange or in a safe direction!
3. Always make sure that you are using the correct ammunition for your rifle.
4. Before shooting always check to see that your barrel is not obstructed.
5. The safety lever must always be pushed all the way in either "safe" or "ready to fire" position (F)! Always keep your rifle on "safe" until you are ready to fire. Make sure there is nothing between the muzzle and the target before you release the safety lever. Always keep the finger off the trigger until you are ready to shoot.
6. Except for cleaning, your rifle should only be disassembled by an authorized gunsmith.
7. The life of your rifle and your barrel depends on proper care. Please carefully follow the instructions in your rifle's manual.
8. Target rifles should only be used by an experienced shooter or under the supervision of such an individual.

(190511/1757)

### Maintaining your rifle

The Racer WORLD CHAMPION is easy to maintain and clean. We use corrosion resistant materials and coatings to provide extra protection for your rifle!

Once a year you should grease the contact areas of the firing pin bolt, sear and release lever. We included in your shipment a bag labeled "trigger grease." Remove the trigger from the system as described in the **Extended Manual Trigger Adjustments** (pages 10+11).

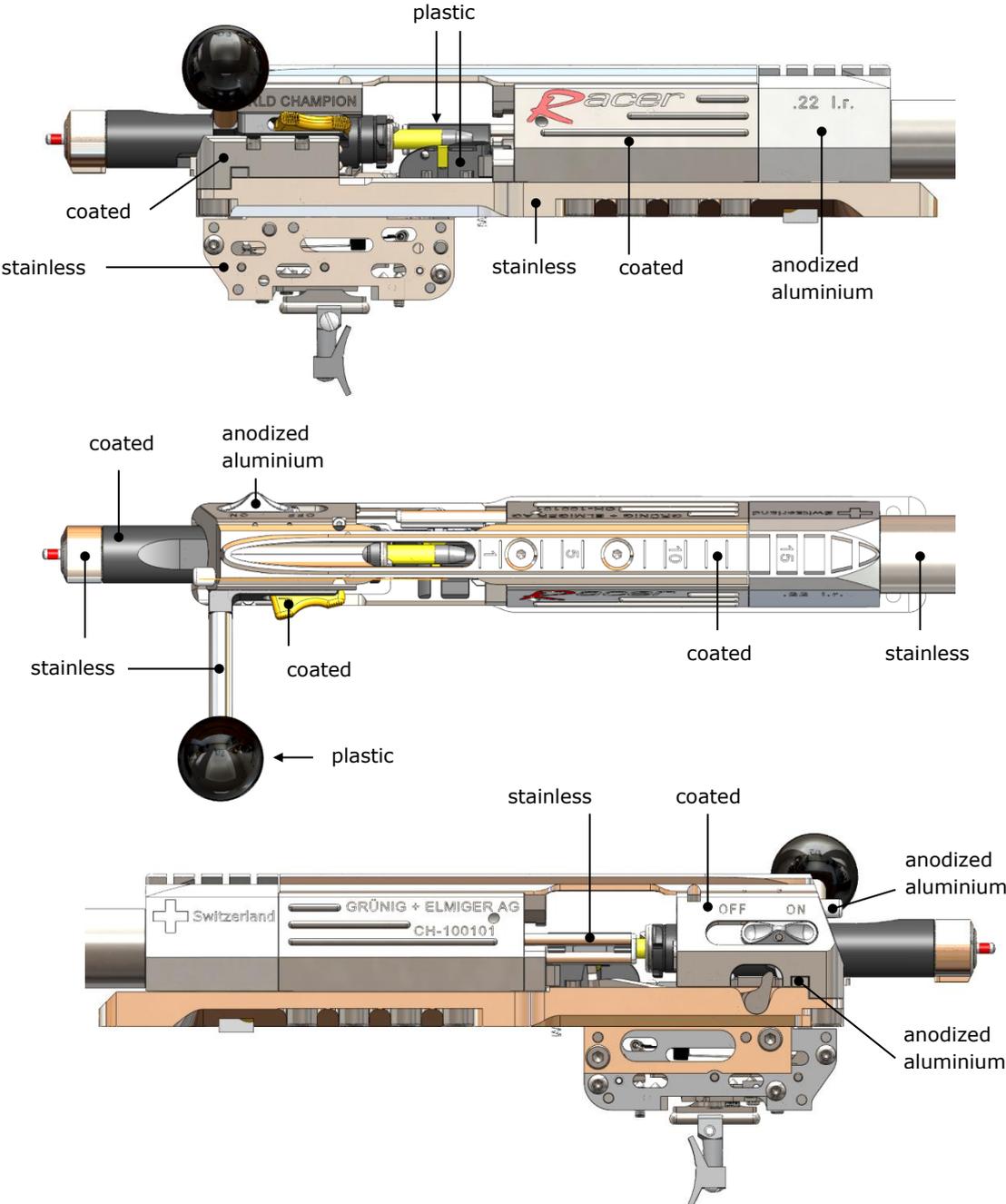


### Bolt

We recommend to completely disassemble the bolt every 1000 rounds as described in the manual **Bolt Assembly** (pages 6+7). Wipe all parts with a patch using a small amount of solvent. After cleaning, lightly oil all parts with gun-oil (Gunex 2000).



Wipe off any dirt with a clean cotton patch. The Racer WORLD CHAMPION is designed with corrosion resistant materials and coatings to make it as maintenance free as possible. In the following illustrations we indicate why your new Racer is easy to maintain.



**Watch out!**

Most screws on the Racer WORLD CHAMPION use a Nylon safety. We recommend that you check all screws annually for tightness.

## Barrel cleaning

To maintain precision, the bore must be cleaned after every shooting. It is best to make it a routine to clean your rifle right after shooting. There are as many opinions on cleaning a .22lr barrel as there are shooters so we recommend asking an experienced small-bore shooter at your local gun range and he will gladly tell you all the tricks of the barrel-cleaning trade!

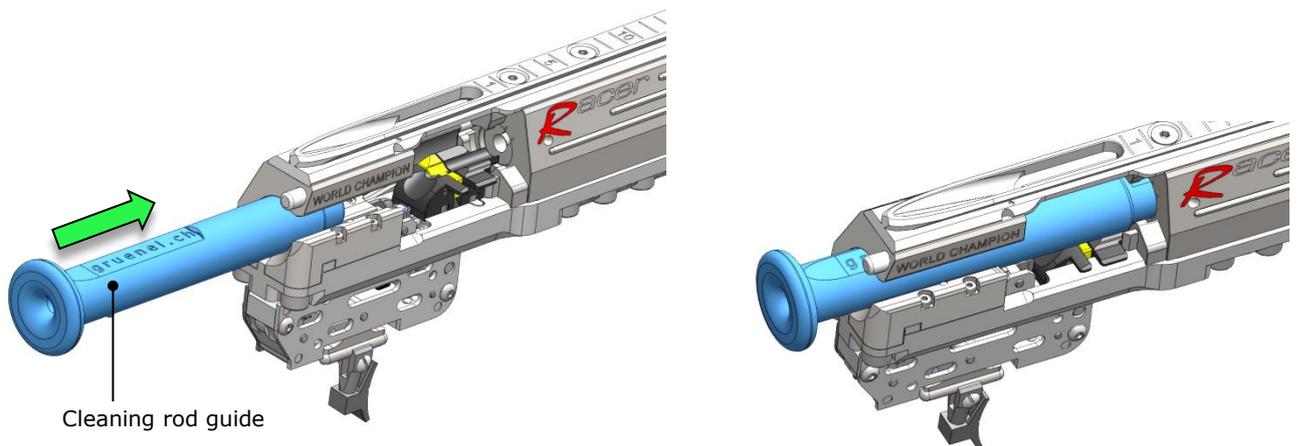
Experienced shooters take enough time to carefully clean the barrel. Most use some solvent on a cotton patch or use a specially designed felt plug. Some use a copper-brush to clean the barrel. Make sure that you are always cleaning from the breach else you may damage the muzzle.

After cleaning the barrel use a couple of dry cotton patches to polish the barrel mirror like. Then apply a small amount of gun oil on a cotton patch and run it through the bore to apply a thin oil film. This will protect the barrel from moisture condensation.

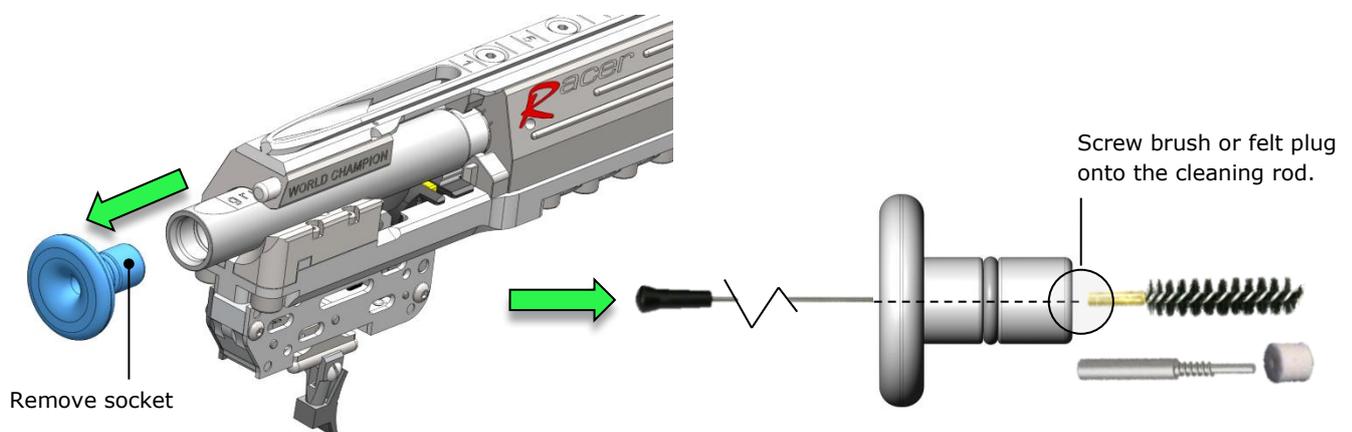
To maximize your barrel life we recommend that you always use a **cleaning rod guide!**

### Cleaning rod guide (included with the accessories delivered)

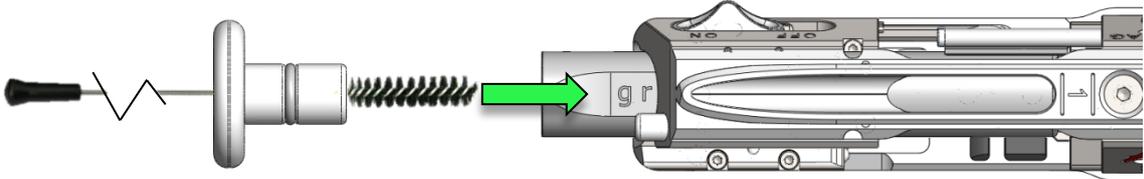
Remove the bolt. Insert cleaning rod guide until the bolt release locks in.



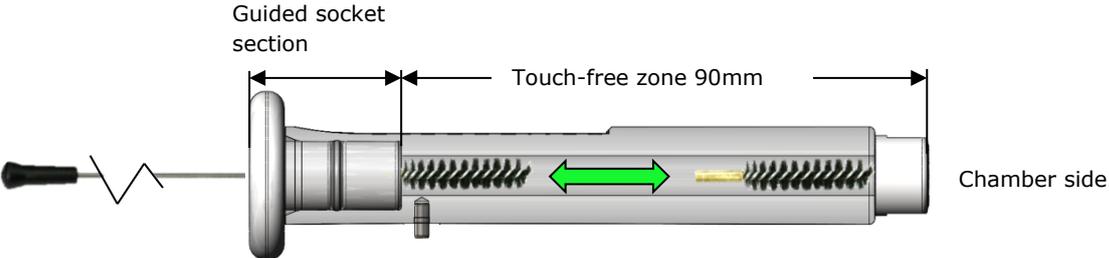
To use a brush, you will have to remove the cleaning rod guide socket. Insert the cleaning rod (without brush) in the socket and then screw the brush onto the cleaning rod.



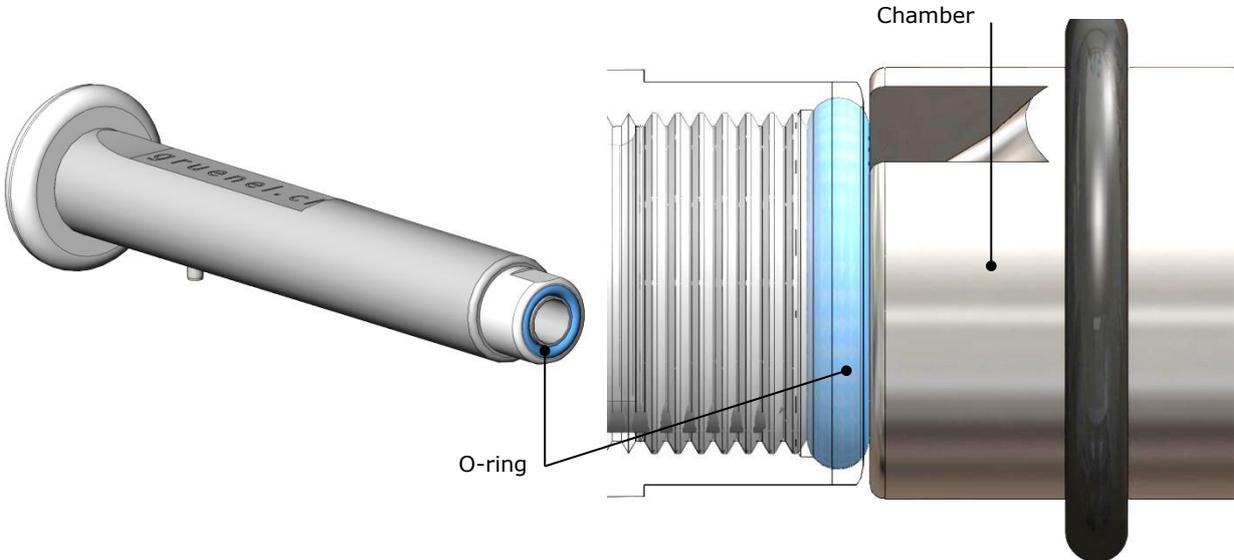
Push the socket with the brush attached, into the cleaning rod guide.



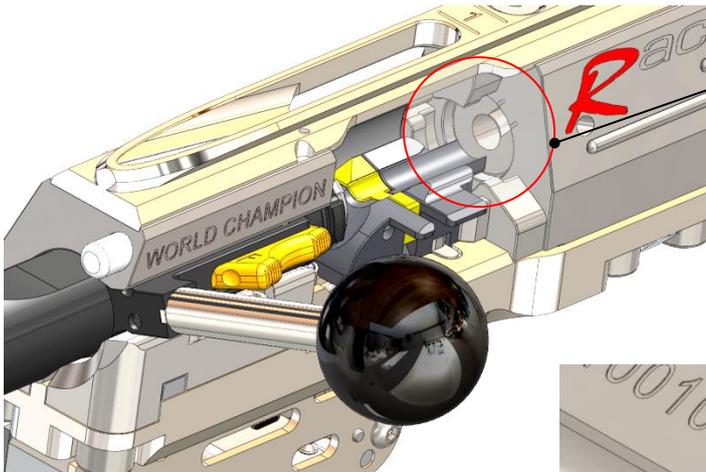
Our cleaning rod guide has a 90mm (ca. 3.5 inches) touch-free zone.



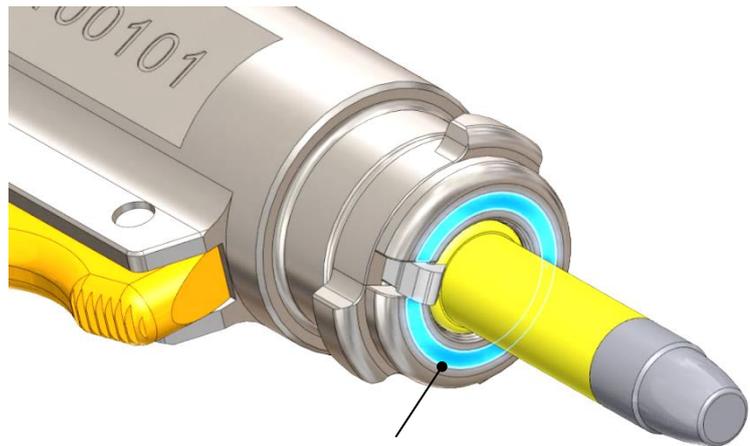
The cleaning rod guide is equipped with an O-ring. The O-Ring seals the space between the clearing rod guide and the chamber face during cleaning. The O-ring is important to prevent dirt from entering the action.



### Dirt groove on the bolt face



Most of the dirt from shooting small-bore is settling on the face of the chamber. Therefore we added a dirt groove to the bolt face. We recommend that you clean this dirt groove after every shooting with a clean cotton patch.



Dirt groove on the bolt face.

### Maintenance and Checkup

The Racer WORLD Champion was developed using the most advanced materials and technologies. However, there are still parts that are subject to wear. The greatest wear occurs in the bore. We recommend that you have your gun serviced at least once a year at an authorized Grünig service facility.

At this service we will check the following:

- Barrel caliber
- Muzzle and crown
- Chamber
- Lands and grooves
- Trigger
- Firing pin
- Bedding
- Testfire

In addition, we review all other parts using visual inspection.

Please call us to make a reservation for your gun's check-up. This way we can insure that your gun will be returned to you quickly.

We recommend to record the total amount of shots you fired. This will help us judge your barrel correctly.