

# RSEnterprises

*Performance Airguns*

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## **Tuning Guide**

### **Beeman RS2 trigger (Chinese)**

Also applies to: Hammerli Titan, Techforce TF89, and AR1000 model air rifles.

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## **Copywrite and contact**

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Beeman RS2 tuning information is available at



<http://webpages.charter.net/guru1>

## Introduction

### Warning:

The following procedures pose a serious health risk and may cause damage to your airgun if not performed properly. Any modification of the trigger group may cause accidental discharge or a bear trap situation. Always pay attention and observe safe gun handling.

**TRIGGER PARTS ARE NOT AVAILABLE FROM THE MANUFACTURER, PROCEED AT YOUR OWN RISK!**

### Objective:

Provide a detailed guide on how to improve the feel and function of the trigger group found on the Chinese made Beeman RS2, Tech Force TF89, Hammerli Titan, and AR1000 model air rifles.

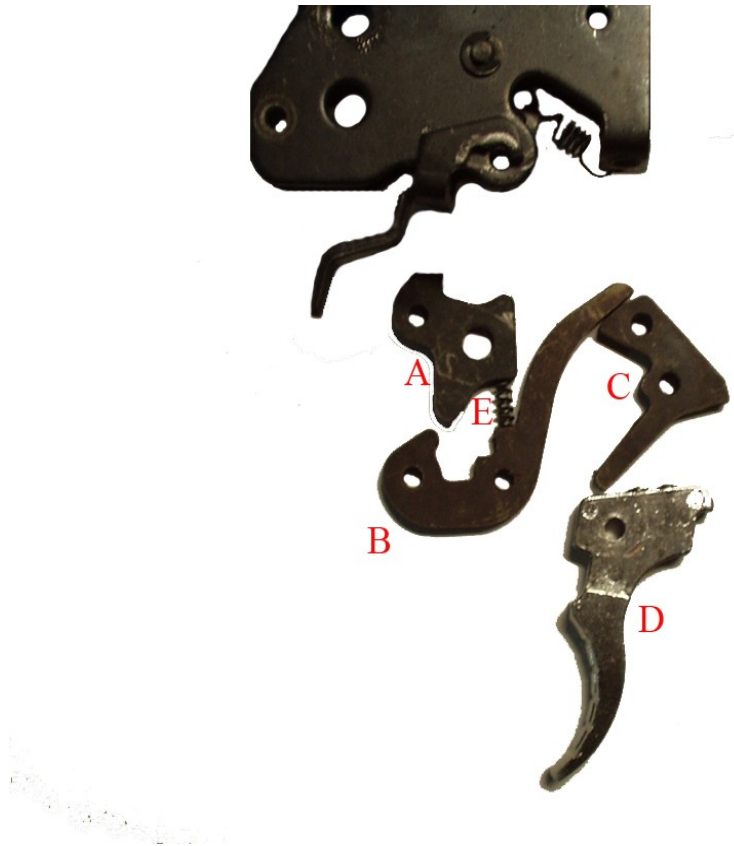
### Legend:

Red areas indicate an area that is important.

### Tools and required parts:

Phillips (cross head) screwdriver  
Small flat blade screwdriver  
Small punch  
Assorted drill bits  
Moly paste lube  
Assorted sand paper and polishing stones

## Trigger group function



### **Legend:**

- A - Sear
- B - Sear catch
- C - Trigger lever
- D - Trigger blade
- E - Sear spring

## **Cocking:**

1. The piston is forced rearward by the cocking link.
2. The piston contacts the rear face of the sear and pushes it rearward against the force of the sear spring.
3. The sear has rotated fully clockwise and now contacts the sear catch which locks the group in the "cocked" position.
4. The rotation of the sear and sear lever applies pressure against the trigger blade.
5. The front face of the sear catches on the piston body as the barrel and cocking link are returned to the stored position.

## **Firing:**

1. The trigger blade is pulled rearward which applies pressure against the trigger spring and lever.
2. The trigger lever then applies pressure against the sear catch which rotates away from the sear.
3. With nothing preventing it from rotating, the sear pivots forward allowing the piston to travel.

## Trigger group modification

### **Disassembly and reassembly:**

Removal of the trigger housing and/or safety lever is not required when servicing the trigger group. Begin disassembly by removing the “C” clips from all pins on one side of the housing. The first component removed should be the trigger blade, followed by the trigger spring before proceeding to the trigger lever, sear catch, and sear. The sear spring should be removed with either the sear or sear catch since it is held in place by holes in both components. Assembly should be performed in reverse order.



## Polishing:

Whenever polishing any of the surfaces in the following steps it is important to polish in the direction of the part's movement during operation. With the parts oriented as shown below, polishing would be left to right. It is also important to achieve as smooth a surface as possible without removing any edges unless noted otherwise.



**A - Sear** The areas highlighted in red contact the lower sear and piston. Polishing these areas will reduce the latching effort of the trigger group and reduce trigger pull. Do not change any of the angles found here.

**B - Sear catch** The areas highlighted in red contact the sear and trigger lever. This area is responsible for most of the friction found within the trigger group. Do not change any of the angles found here.

**C - Trigger lever** The areas highlighted in red contact the sear catch and trigger blade. The surface between the trigger lever and sear catch is responsible for most of the friction found within the trigger group. Do not change any of the angles found here.

**D - Trigger blade** The two adjustment screws are highlighted in red. These screws should be smoothed and rounded where they contact the trigger lever. This will help smooth the trigger pull.

**A thin layer of moly paste should be applied to all polished surfaces prior to assembly.**

## Trigger group adjustment



Out of the box, the trigger is typically adjusted for a long first stage followed by a rather long second stage. I will outline my preferred method for adjustment and provide a description of each adjustment so you can adjust for your own preference.

### **My preference:**

1. Start by turning the first stage screw in  $\frac{1}{2}$  turn from the factory setting to shorten it a bit.
2. Back out the second stage screw in  $\frac{1}{8}$  turn increments until there is a clean break in the second stage when test fired.

This results in a medium length first stage for safety in the field with a short and crisp second stage for target. The further you back out the second stage screw, the lighter and shorter this stage will become.

### **Description of adjustments:**

- **First stage** - clockwise = shorter stage, counter clockwise = longer stage
- **Second stage** - clockwise = longer stage, counter clockwise = shorter or no stage
- **Pull weight** - clockwise = heavier pull, counter clockwise = lighter pull