

HUMA-AIR.COM

Market Leader In Accuracy

Welcome to Huma-Air. We design and manufacture brand- and model specific precision regulators for PCP air rifles.

By using only the highest quality materials such as aircraft grade aluminum, aluminum-bronze, chrome-moly steel and precision belleville springs, our ultra-compact regulators are high performing with less than 1% fluctuation.

Regulator installation guide Spa P12



For adjustment tips, frequently asked questions and a complete list of installation manuals and instructions on how to adjust your Huma-Air regulator

<https://www.huma-air.com/Fitting-instructions>



Or go there directly by scanning the QR code



Before you you start, realize this;

- Working on a high pressure rifle could potentially be harmful or lethal to you or bystanders if you do not know what you are doing.
- The pictures of the rifleparts in this manual are universal and mend as an example to explain the working principle. They might not be equal to the parts in your rifle.
- Do not attempt to install this regulator yourself if you do not have a clear understanding of how these pcp rifles and regulators work.
- Do not attempt to install this regulator if you are not skilled to work on an airrifle; contact your local gunsmith to do the fitting.
- Installation and operation is done completely at your own risk.
- Installing this regulator might void your rifle's factory warranty.
- Your rifle may never be filled higher in pressure as stated in your rifle's manual.
- Do not attempt to fit this regulator in another rifle as mentioned in our order conformation.
- These regulators are not suitable to use as a CO2 to HPA conversion, this could potentially be harmful or lethal to you or bystanders.
- We cannot be held liable for any accidents in relation to this regulator and its installation.

Before you start, make sure that the rifle is unloaded, remove the magazine and make absolutely sure ALL the air is drained from the pressure tube. If there is a pressure gauge, it will give you just an indication. Dry fire the rifle or follow the manufactures instructions and double check to make sure all the air is out of the rifle



If the regulator is fitted and there is no output pressure after filling the pressure tube, something might be wrong causing the airflow to block totally.

Please beware even though there is no output pressure, the pressure tube is fully charged with high pressure air!!

If you are not able to relieve the pressure of the pressure tube according to the manufacture instructions or by dry firing the rifle then:

Contact a professional gunsmith to retrieve a solution!

- **DO NOT try to unscrew or to open the pressure tube in any way.**
- **DO NOT try to pierce/drill or to use force to open the pressure tube or unscrew parts in an attempt to relieve the blocked pressure.**
- **These actions can cause serious injury or death to you or bystanders**

Method 1:

1. Drain the pressure tube/air cylinder completely by dry firing or opening the valve,
2. Unscrew the both barrel band screws and pull the barrel a bit out of the breech



3. Unscrew the trigger assembly rod so it is loose on one side
4. Now you can unscrew the full back end of the action from the air cylinder.
5. Remove the large O ring from the valve body.
6. Make sure the valve body and threads are clean and free of grease and oil,



7. Make sure the inside of the pressure tube has no scratches or dirt inside it,
8. Lightly grease the first 7 cm of the pressure tube with silicone grease,
9. Carefully push the regulator into the pressure tube as shown in the picture below, Make sure the breath hole of the regulator body is facing upwards to the breech when the tube is screwed on.



10. Make sure the O-rings are properly seated in the grooves of the regulator
11. Grease the end face of the valve body with some silicone grease so that the O ring can't be twisted out of the chamber.
12. Screw the valve body into the pressure tube, then back it off a tiny bit (the thickness of a piece of paper). This allows the regulator to vent, which allows it to operate normally.

Slowly fill the pressure tube and check for leaks, Once you are sure it is not leaking, then you can re-assemble the rifle again.

If you notice the power spikes every few shots it means that the regulator is not venting/breathing enough/properly. Check that the threads of the pressure tube and valve body are clean and free of grease, also make sure the valve body is not screwed too tightly into the air cylinder.

If this does not cure the problem then proceed to method 2 below, this is a bit more work but absolutely the most reliable method.

Method 2

This method is more reliable than method 1 because it allows the regulator to vent/breath freely

There are no adverse structural changes made to the air cylinder and the rifle can be put back to standard after this modification.

Mark the bottom side of the pressure tube and valvehouse as in the picture below



Follow step 1 till 5 of method 1

Following your mark on the valve body, file a small groove in the longitudinal direction of the screw-thread of the valve body. Use the corner of the file to cut a 45 degree/triangular groove in the threads, as shown below,

Note that the O ring groove does not get damaged by doing this modification.

The groove should be cut so that no threads are visible in the groove, this cut will be used as an "air-channel" for the regulator to breath/vent freely.



Use the same small metal file to make a tiny notch in the end/edge of the pressure tube. This does not have to be very big/deep, see pictures below. Just a very tiny notch just enough so you can feel it with your fingernail.



After you have done this screw the valve body into the pressure tube/air cylinder.

Additional testing procedure:

Remove the fill valve from the other end of the cylinder,

Put some soapy water on the edge of the valve body/pressure tube and blow (with your mouth) into the fill port end of the cylinder,

If the air duct just created is functioning properly, there will be air bubbles visible when you blow.



If you are happy that the cylinder is venting as it should then remove the valve body again, and then fit the regulator as described in Method 1,

The only difference now is the valve body can be tightened up to the pressure tube completely.