Home
Spyder
Bushmaster
Tippmann

Setup Guides

Autococker Rocket Valve setup guide

Welcome to valve adjustment 101 ! To prepare for today's class, we will need a few things: an autococker marker, a Maddman products spring kit for autococker's, and a Rocket valve (of course). Also, you'll need a set of tools to disassemble the paintball marker. To begin, remove the hammer assembly and jam nut and set the marker aside. Now take the jam nut and hammer and stack them (16) for a gauge when filing the stem to fit your hammer. Make sure there is no gaps between the valve body, locking lug and hammer and the stem doesn't bind. (17)

IMPORTANT, ONE FULL TURN ON THE SRP IS A GAP CHANGE OF .025".

The rocket valve has Dwell that can be adjusted to control the opening of the valve port, at the S pring R etainer P late (SRP) to valve body where the spring sits. This setting is adjusted to get a constant opening at all pressures ! This means of controlling the valve port opening was written into the patent to insure consistency with the valve.

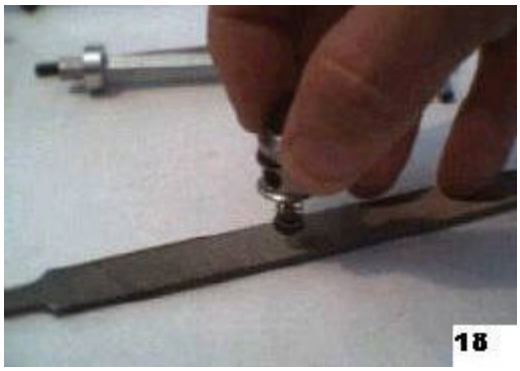
Use lock tight!! On the SRP , Any Color

You can use a (11/32) gap for an optimum setting on the .187" exhaust ported valves. (11) . This is adjusted by turning the Spring Retainer Plate (SRP) in or out to the preferred gap opening about .025" per full turn. The measurement is taken at the point where the spring sits on the valve body and the SRP. Important note

here, The newer valves have exhaust port openings of .230" while the older valves pictured here have exhaust port openings of .187" so you will need to turn in the SRP in a turn or two or three to save a bit of gas, On a few Cockers I've set up I turned in the SRP almost all the way down so the valve could only open 1/8 inch. these few markers were set up for max flow and worked very well.

Use lock tight!! On the SRP , Any Color
The jam nut should have no gaps on either side of it when the hammer holds the valve open. (16) You can adjust this by grinding or filing the end of the valve stem off a small amount at a time. (18) the stem will stick out about .080" (20) on a setup with a dimpled hammer, and will be flush with the SRP on a flat faced hammer setup.

Use Lock tight!! On the SRP , Any Color



Use lock tight!! On the SRP , Any Color

If you grind it Don't get the stem hot! Keep it wet. This should help keep it cool. - We don't want to melt the retainer plate!

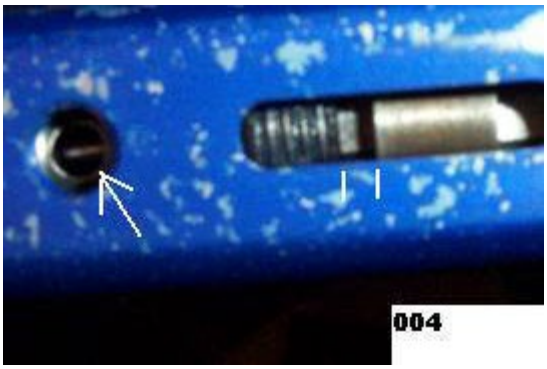
Use lock tight!! On the SRP , Any Color

Hand files are slow about 3 minutes but they work just as well for adjusting the stem length for your markers.

Use Lock tight!! On the SRP , Any Color

The Install

Well it's time to drop the valve down into the valve body and get it centered.



Welcome Next is to drop the locking Lug down on the valve and use the tool to tighten it in Place (004) . When using the tool for the locking lug it will only fit half way into the lug Because the (SRP) takes up half the space of the locking lug, This is normal. (004) Before you install the locking lug, if you Clean it with a wire brush and coat it lightly with Blue RTV it won't leak or Back out, But can be easily removed (003) . Hold the Valve In Position with the smooth side of a .187" or a .230" drill bit when you tighten the locking lug to keep it centered. (001-002-004) .Last is a mod for the Bottom set screw, Grind the dimple off the end (12) so when it is installed flush with the outside of the frame it doesn't touch the Valve Body (005) . this allows more air to flow around the valve body. Use Blue RTV to hold it and seal it in place.

Next is the spring assembly.

(DON'T PUT A STOCK SPRING IN THE VALVE CHAMBER!!;) It's not needed for the rocket valve. the only spring it needs to close the valve is on the valve already. The Rocket valve is the only valve on the market that will allow you to bore over the valve chamber as deep as is possible. Because there is no need for a spring

seat in the valve chamber.

The valve is not closed by air pressure in the valve chamber as much as the other valves ,So the hammer spring should not be so heavy that it holds the valve open when the marker is empty. If the spring is adjusted to apply too much pressure to the valve it may cause the marker to dump all of its pressure, leaving it unable to recock automatically and would have to be done manually. The guys that are using the valve now are mostly using the green hammer springs.

I believe the valve should be opened completely every time when fired and the regulator should be used to control velocity. setting the spring tension on the valve, so that it achieves max Velocity without creating too much flow varies from Marker to marker. I've put together a new LP spring kit for the Autococker 4/1/02 These Hammer springs work better for the rocket valve, and we are no longer shipping the lighter cocker rocket valve return spring with the rocket.

A note on the Ram and Bolt and Air Pressure

I'm noting a problem on setting your pressure to low on your front ram, especially with electronic/Eblade cockers. if your velocity seems like it is low and your volume too high your front reg may need to be turned up. 85- 90 PSI

If Your Front Reg pressure is set to low the air pressure pushing the paint ball forward out your barrel is also pushing your bolt back. If you pull your threeway rod out of your trigger on a stock or push the sear solenoid on the Eblade and test fire the marker without triggering the three way and cock it by hand you can check and see if your bolt is getting pushed back when you shoot paint. Turn the pressure up on your ram until its keeps the bolt closed.

Next is the timing make sure you have it setup so the hammer can get the valve completely open before the back block starts to pull it back, if it pulls the hammer back to soon , the faster you shoot the more your velocity will fluctuate. Set the length of the cocking as long as possible to get max hammer forward time and still recock consistently.