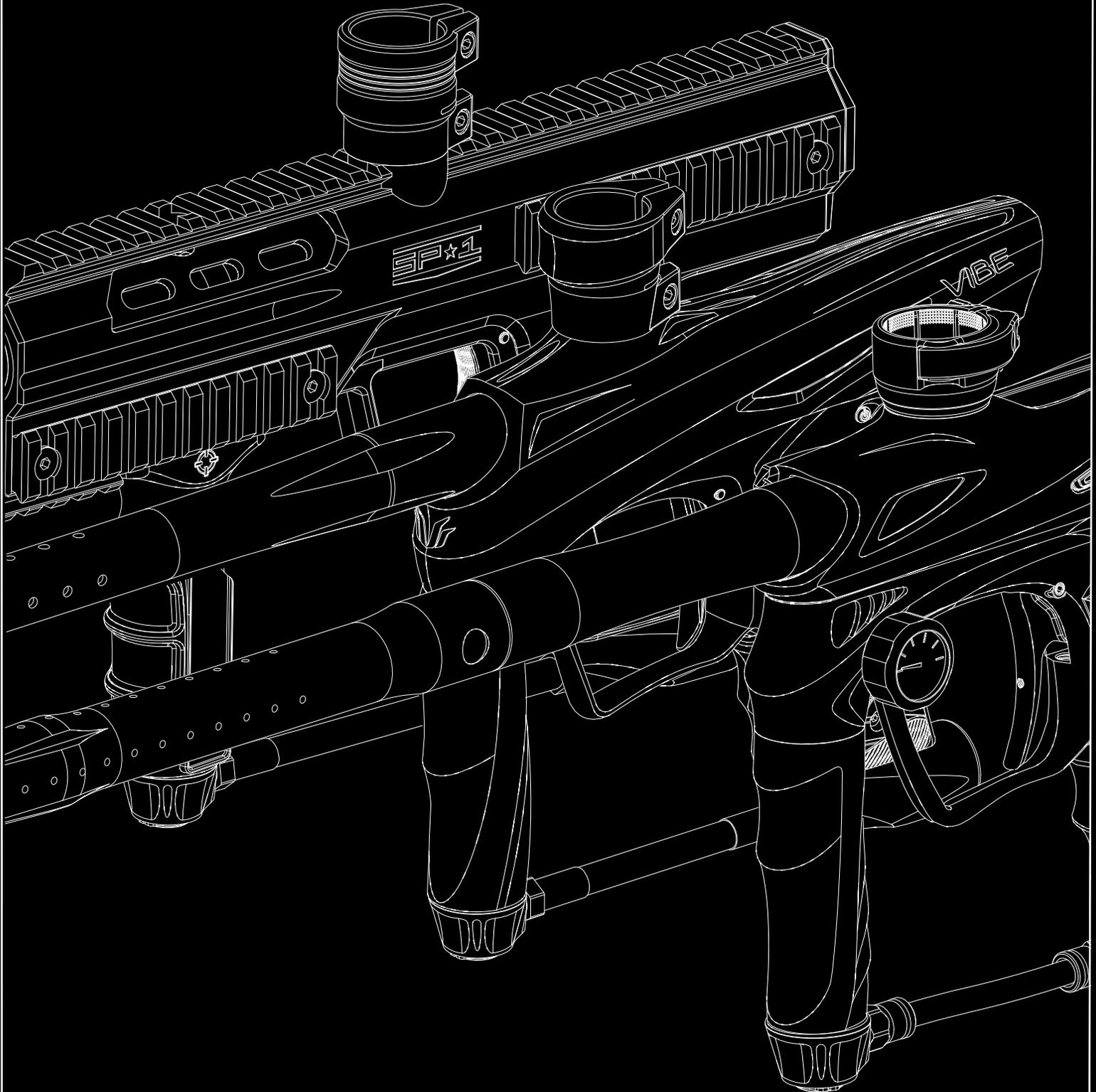


MAX-FLO R VERTICAL REGULATOR

SMART PARTS



Maintenance Manual



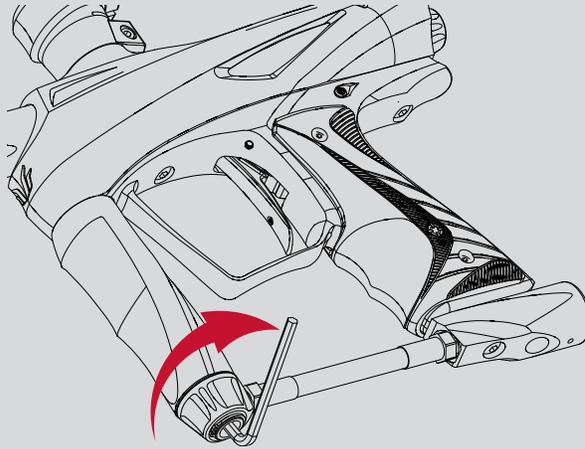
ADJUSTING VELOCITY

FIG. 1 → INCREASING VELOCITY

You must use the velocity adjustment procedure described in the manual for your marker. The adjustment will be made with a 5/32-inch allen wrench inserted into the hole in the center of the regulator's bottom end. Clockwise increases velocity, counter-clockwise decreases.

WARNING

Never adjust your marker to fire at greater than 300 feet per second.



IMPORTANT

The relief valve integrated into the Max-Flo R makes it an ideal regulator for those players who choose to use CO₂ as their propellant gas. If liquid CO₂ gets past the regulator, and expands, the relief valve will prevent excess gas pressure from damaging solenoid valves or other sensitive components. This will be evidenced by occasional explosions of gas at the bottom of the regulator, which are normal, and not a sign of a problem. Even with this tolerance, the best CO₂ powered performance will be obtained with an anti-siphon tank, or a tank carried vertically and fed to the marker with a remote hose.

REGULATOR

01

WARNING

Parts of the Max-Flo R vertical regulator use left-handed threads. These parts must be turned counter-clockwise to screw them in and clockwise to unscrew them – the opposite direction of normal screws.

02

Completely degas the marker following the instructions in its manual. Unscrew the Max-Flo R from the marker's vertical ASA, taking care not to lose the filter screen if one is used. Remove the regulator cover from the regulator. Using a pair of snap-ring pliers, remove the snap-ring from the bottom of the regulator and slide off the regulator swivel.

03

Using 7/16-inch or adjustable wrench, engage the wrench flats in the sides of the spring platform and remove it from the bottom of the regulator body. The regulator spring will now be free to fall out into your hand.

04

The regulator piston may be removed from the regulator body by grasping its sides with a soft or padded tipped pair of needle-nosed pliers. Standard hardened steel pliers should be avoided as they may scratch the sides of the piston. The tips of standard needle-nosed pliers may be wrapped in a layer or two of cloth tape to provide protection.

05

At this level of disassembly, the piston seal and regulator body may be inspected, replaced if necessary and cleaned with a soft cloth or cotton swab. If the reg seal at the end of the piston is damaged (MFV103) it may be flipped over or replaced. Lightly lubricate all o-rings with SL33K for reassembly. Do not lubricate the reg seal at the end of the piston. For normal maintenance this is all that must be done.

06

The relief valve assembly should only be removed if leaking, and this may be done with a 9/64-inch allen wrench. The velocity adjuster similarly should only be removed if shown to be the source of a leak, and this must be done with a pair of compact snap-ring pliers. The adjuster is equipped with left-hand threads.

07

The Max-Flo R is reassembled in the reverse order of disassembly. The piston slides into the regulator body wide end first, followed by the regulator spring. The spring platform should be tightened for a snug fit. Do not over-tighten. Re-attach the regulator swivel to the bottom end of the regulator and secure it in place with its snap-ring. Reinstall the regulator body into its sleeve, and the assembled regulator into the marker – being sure the filter screen is seated properly.

WARNING

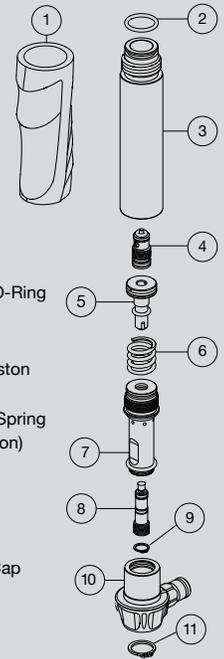
Service and adjustments to the regulator will cause changes in its output pressure. Re-adjust the regulator for the correct velocity using a chronograph as described in the Marker's manual.

WARNING

The relief valve in the Max-Flo R provides protection against pressure spikes caused by liquid CO₂. Replacing the Max-Flo R on any Smart Parts marker with another brand will invalidate the marker's warranty. Use of CO₂ with a regulator that is not equipped with a relief valve may cause severe internal damage to the Vibe, SP-1 and similar markers.

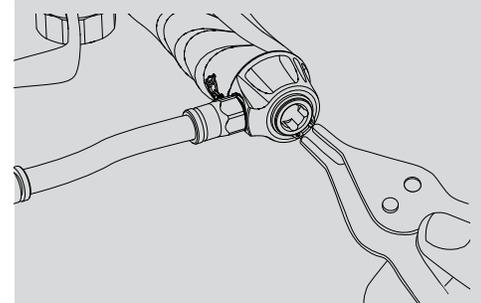
PLEASE READ CAREFULLY

FIG. 2 → REGULATOR



- 1 (Varies With Marker) Reg Cover
- 2 ORN01590UR - ASA O-Ring
- 3 MFV101 - Reg Body
- 4 Relief Valve Assembly
- 5 MFP105ASM - Reg Piston (with seals)
- 6 SPR035 - (EOS) Reg Spring SPR032 - (Vibe/SP-1/Ion)
- 7 MFV102ASM - Spring Platform (with o-ring)
- 8 MFV104 - Adjuster
- 9 CLP005 - Stop Ring
- 10 MFV108 - Swivel Cap
- 11 CLP006 - Snap Ring

FIG. 3 → REMOVING SNAP RING





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