

TECH TIP: Ruger Double-Action Cylinder Shims Mounted External to the Cylinder

Tech Tip from TriggerShims: Proper Cylinder Shim Placement for Ruger Double-Action Revolvers

Since the introduction of Bill Ruger's iconic double-action revolvers, such as the Security-Six and Service-Six, cylinder shims have been installed inside the cylinder at the base, where the yoke interfaces with the cylinder. This method, also standard in Smith & Wesson double-action revolvers, positions the shim to extend the effective length of the cylinder shaft, ensuring minimal end shake (typically 0.002–0.004 inches) while protecting the shim from wear, debris, and potential dislodgment. This was Bill Ruger's original design intent—precision engineering for durability and reliability.

However, following Bill Ruger's passing and the sale of the company, and likely during or post-COVID, Ruger altered its manufacturing process. They began placing shims on the front of the cylinder, between the cylinder face and the yoke shoulder—a method more typical of single-action revolvers. This change enables less-skilled labor to quickly install shims during assembly, as external placement requires minimal training to adjust end shake. Unfortunately, this leaves the shim exposed to environmental factors like dirt and recoil stress, which can accelerate wear, cause shifting, or result in loss of the shim over time, especially with very thin 0.0015" and 0.002" shims, compromising the revolver's performance.

At TriggerShims, we strongly recommend returning to Bill Ruger's original design by installing shims inside the cylinder base. This method shields the shim, maintains tighter tolerances, and honors the engineering that made Ruger's double-action revolvers legendary. While we can supply shims for either placement, we advise our customers to install them internally for maximum longevity and reliability. Keep your revolver running as Bill intended—precise, protected, and ready for action.

Have questions about shim installation or need the right size for your Ruger? Contact Lance at TriggerShims.com!

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****Tech Tip from TriggerShims: End Shake Adjustment Guide Steps for Ruger Double-Action Revolvers****

Understanding End Shake and Proper Shim Placement

End shake refers to the fore-and-aft movement of a revolver's cylinder, which should be minimized for reliable function. In Bill Ruger's original design for double-action revolvers like the Security-Six and Service-Six, cylinder shims were placed inside the cylinder at the base, where the yoke (or crane) interfaces with the cylinder. This internal placement, also used in Smith & Wesson double-action revolvers, extends the effective length of the cylinder shaft, keeping end shake between 0.002 and 0.004 inches while protecting the shim from wear, debris, and recoil stress. This method reflects Bill Ruger's engineering for durability and precision.

Ruger's Recent Change

Since around the COVID period, Ruger altered their manufacturing process, likely to streamline production.

They began placing shims externally, between the front of the cylinder and the yoke shoulder, a method typical of single-action revolvers. This allows less-skilled workers to quickly adjust end shake without precise fitting. However, external shims are exposed to dirt, recoil, and wear, risking shifting or damage over time, which can compromise the revolver's reliability and precision.

Why Internal Placement is Superior

At TriggerShims, we advocate returning to Bill Ruger's original design by installing shims inside the cylinder base. This placement shields the shim, ensures tighter tolerances, and maintains the robust engineering of Ruger's double-action revolvers. External shims, while easier to install, deviate from Ruger's vision and are less durable long-term.

Safety First

- Ensure the firearm is unloaded. Remove all ammunition from the area.

Measure End Shake

- Close the cylinder and use a feeler gauge to measure the gap between the cylinder face and barrel (barrel-cylinder gap) or between the cylinder and yoke. Aim for 0.002–0.004 inches.

Disassemble the Cylinder

- Follow your Ruger's manual to remove the cylinder assembly. Typically, this involves removing the grip, opening the cylinder, and unscrewing the yoke screw to slide out the cylinder and yoke.

**** Detailed Cylinder Disassembly Instructions can be found on [TriggerShims.com](https://www.triggershims.com)***

Inspect Current Shim Placement

- Check for an existing shim. In newer Rugers, it may be a thin washer-like shim sitting externally between the cylinder's front face and the yoke shoulder. In older models or properly shimmed revolvers, it's inside the cylinder's rear recess.

Select and Install Internal Shim

- Choose a precision shim from TriggerShims, sized for your Ruger model (common thicknesses range from 0.002 to 0.005 inches).
- Remove any external shim if present. Place the new shim inside the cylinder's rear recess, where the yoke shaft inserts, ensuring it sits flat and even. This effectively lengthens the shaft to reduce end shake.

Reassemble and Test

- Reassemble the cylinder and yoke per the manual. Close the cylinder and recheck end shake with a feeler

gauge. Verify smooth rotation and proper timing (no binding). Adjust with a different shim thickness if needed.

Seek Professional Help if Needed

- If you're unsure about disassembly or shim fitting, consult a qualified gunsmith to ensure precise installation without risking damage.

****TriggerShims Recommendation****

We strongly recommend installing cylinder shims internally, as Bill Ruger designed for his double-action revolvers. This placement protects the shim, upholds Ruger's engineering for optimal performance, and ensures long-term reliability. While we can supply shims for external placement upon request, internal installation is the best way to keep your Ruger true to its heritage—tight, durable, and ready for action. Honor Bill Ruger's vision and keep your revolver running like it was meant to.

Need help selecting the right shim or have questions about end shake adjustment? Visit TriggerShims.com or contact us for expert support!