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## *How to rebarrel an Enfield No. 4 Rifle*

Article Submitted by: Billy Smith

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### Note

If you are planning on rebarreling a single Enfield No. 4 rifle then it is probably not cost effective for you to acquire the required tools and perform the process yourself. The required tools can cost upwards of \$300.

How to rebarrel an Enfield No. 4 Rifle. Or should I say, CAN you rebarrel an Enfield at home? Well, you CAN do it! You need a few tools (listed below) and some time.

- (1) Barrel Vise & Barrel Vise Bushing Shims
- (2) Action Wrench
- (3) Large Heavy Bench or Table
- (4) Headspace Gauges

Item	Supplier
Barrel Vise	<a href="http://secure.armorholdings.com/b-square/tools_gunsmith.html">http://secure.armorholdings.com/b-square/tools_gunsmith.html</a>
Barrel Vise	<a href="http://www.kenfarrell.com/BBL-V-1.5.html">http://www.kenfarrell.com/BBL-V-1.5.html</a>
Barrel Vise	<a href="http://www.brownells.com/asp/NS/store/ProductDetail.aspx?p=1754">http://www.brownells.com/asp/NS/store/ProductDetail.aspx?p=1754</a>
Action Wrench	<a href="http://www.brownells.com/asp/NS/store/ProductDetail.aspx?p=881">http://www.brownells.com/asp/NS/store/ProductDetail.aspx?p=881</a>
Headspace Gauges	<a href="http://www.pacifictoolandgauge.com/gauges.asp">http://www.pacifictoolandgauge.com/gauges.asp</a>
	<a href="http://www.midwayusa.com/ebrowse.exe/browse?">http://www.midwayusa.com/ebrowse.exe/browse?</a>

Headspace Gauges	<a href="#">TabID=8&amp;Categoryid=9455&amp;categorystring=649***10398***10334***9161***</a>
Headspace Gauges	<a href="http://www.brownells.com/asp/NS/store/ProductDetail.aspx?p=19385&amp;title=.30+CALIBER+RIFLE+HEADSPACE+GAUGES">http://www.brownells.com/asp/NS/store/ProductDetail.aspx?p=19385&amp;title=.30+CALIBER+RIFLE+HEADSPACE+GAUGES</a>

First, strip the rifle and clean everything so that there is no grease on any part, as it will cause the barrel vise to slip. Mount the barrel vise to a heavy bench like the one in **figure 1**. Select one of the correct barrel bushing shims as seen in **figure 2**. Selecting the proper shim is a try & fit process. The shim that fits best around the barrel, without turning, is the correct shim. The shims provide the barrel vise with more surface area to grip the barrel, basically so that you don't squash the barrel out of shape. **Note:** I have seen gunsmiths over the years using duct tape in varying layers as a shim for both the barrel as well as the action wrench.



**Barrel Vise Clamped Down on an Enfield No. 4 Barrel**



**Assorted Barrel Bushing Shims**

The next thing you must do is place the shims around the barrel at the knox form (the milled flat spot on top of the barrel at the breach) and insert the barreled action into the vise like you see in **figure 1**, then using a large spanner, about 2 ft long, tighten the nuts on the vise (and I mean tight) or the barrel will spin in the vise.

The action wrench comes in two halves. Separate them from each other then clamp them around the action, and tighten (but don't squash the action) as you can see in **figure 3**. I have clamped the barrel in the vise, and the action wrench is tightened and the barrel is ready to be removed.



#### **Barrel and Action with Barrel Vise and Action Wrench Set-up and Ready**

This is the part that is very important! You must hit the handle of the action wrench hard and sharp with a large hammer. If you do not then you will bend or twist your action or possibly create marks on your action. If you hit the action wrench handle with a sharp hit it works like an impact hammer. Also you may have to hit the action wrench handle 4 or 5 times before the action comes loose.



#### **Action Still in Action Wrench After Barrel Has Been Removed**

Once the barrel is out of the action (**figure 4**), you can then clamp your new barrel into the barrel vise and screw it onto your action. As you are installing the new barrel you may

have to remove the barreled action from the barrel vise a few times to check on your sight alignment. Basically you align the front sight block so it is vertical and in line with the rear sight. Also make certain the extractor slot in the breach end of the barrel align with the extractor claws themselves on the bolt.

One important thing to remember during this process is that the bolt should always be removed from the action, except when checking to see if the extractor claw aligns with the slots in the barrel.

Lastly use headspace gauges to check [headspace](#). If the headspace is off, you have the option with the Enfield No. 4 of changing the bolt head till correct headspace is achieved.

There are four bolt heads for the No. 4 rifle (#0, #1, #2, and #3). The #2 and #3 are the more difficult to locate of the four.

Part	Source
<b>Bolt Head #0</b>	<a href="http://www.e-gunparts.com/product.asp?chrProductSKU=486770-01">http://www.e-gunparts.com/product.asp?chrProductSKU=486770-01</a>
	<a href="http://www.sarcoinc.com/le4.html">http://www.sarcoinc.com/le4.html</a>
	<a href="http://www.ssporters.com/parts/enfield4.htm">http://www.ssporters.com/parts/enfield4.htm</a>
	<a href="http://www.hoosiergunworks.com/catalog/enfield.html">http://www.hoosiergunworks.com/catalog/enfield.html</a>
	<a href="http://www.poppertsgunparts.com/webdata2/search.html">http://www.poppertsgunparts.com/webdata2/search.html</a>
<b>Bolt Head #1</b>	<a href="http://www.e-gunparts.com/product.asp?chrProductSKU=486770-02">http://www.e-gunparts.com/product.asp?chrProductSKU=486770-02</a>
	<a href="http://www.sarcoinc.com/le4.html">http://www.sarcoinc.com/le4.html</a>
	<a href="http://www.ssporters.com/parts/enfield4.htm">http://www.ssporters.com/parts/enfield4.htm</a>
	<a href="http://www.hoosiergunworks.com/catalog/enfield.html">http://www.hoosiergunworks.com/catalog/enfield.html</a>
	<a href="http://www.northridgeinc.com/enfield_sml.html">http://www.northridgeinc.com/enfield_sml.html</a>
<b>Bolt Head #2</b>	<a href="http://www.e-gunparts.com/product.asp?chrProductSKU=486770-03">http://www.e-gunparts.com/product.asp?chrProductSKU=486770-03</a>
	<a href="http://www.poppertsgunparts.com/webdata2/search.html">http://www.poppertsgunparts.com/webdata2/search.html</a>
<b>Bolt Head #3</b>	<a href="http://www.e-gunparts.com/product.asp?chrProductSKU=254230A">http://www.e-gunparts.com/product.asp?chrProductSKU=254230A</a>
	<a href="http://www.poppertsgunparts.com/webdata2/search.html">http://www.poppertsgunparts.com/webdata2/search.html</a>

I hope this short article provides some basic information to all those who love Enfields as I do.

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