

Blown Out Spring Repair

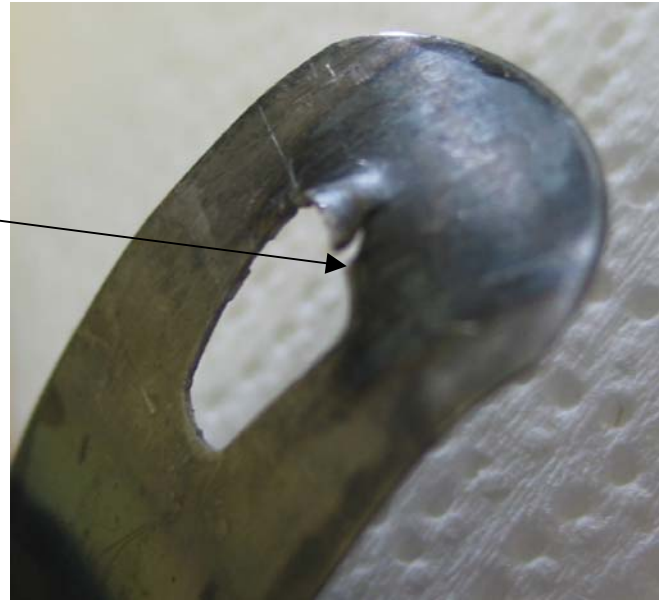
by, Terry White

When overhauling a spring driven clock works, inspection of the springs is important. If there is any tear-out or ripping of the spring material, it needs to be repaired or the spring replaced.

Note Tear-Out

The following illustration is for a clock, which the springs are held within a barrel. Once the springs are out of the barrel and cleaned, they need to be inspected. If the spring is otherwise in good condition, and only torn-out, the repair is simple.

Like any repairs, having the correct tools help and with this job, you will need a torch, metal hole punch, handheld metal shears, and a round file.



Torch

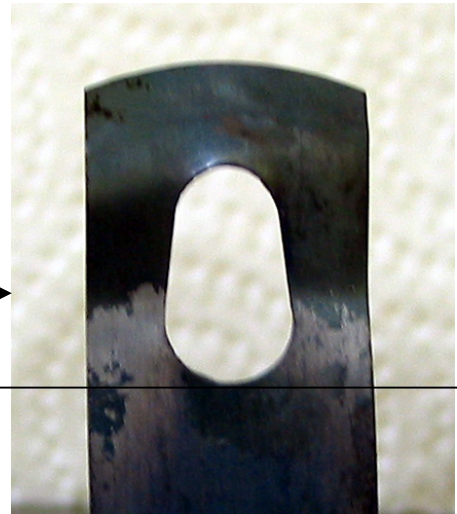
Metal Shear

Hole Punch

The hole punch is a Number 5 Jr. and manufactured by Roper Whitney and comes with a set of seven interchangeable punch and dies. <http://roperwhitney.com/>

Spring material is extremely hard and needs to be softened before any work can be done. The torch is used to heat the spring to red-hot, back from the existing hole about 1-½ inches. Once the spring cools, the end needs to be trimmed off with the metal shears. Removing such a small amount of spring material from its overall length will not affect the operation of the clock.

Remove material above line →



Shape the End With Metal Shears

Once the spring has been cut, it needs to be rounded or shaped to remove the sharp edges and to ease in inserting it into the spring barrel. Next you select a punch-die set that is approximately the same diameter as the original hole, punching the metal spring, making sure the hole is midway between the spring edges.



Punch the Hole

With a round metal file, shape or elongate the hole allowing the spring to catch the barrel hook when reinstalling the spring back into the barrel. Smooth off the rounded end of the spring, removing any sharp edges.

With the spring end punched, shaped, and sharp edges filed smooth, it now can be placed in the spring winder, wound and inserted into its barrel, good as new.

