

# Repairing the Tank Cap of Honda CX Turbo models

By Joe Hovel © 2014

The keyhole swing covers on many Honda models are now 30 years old and metal fatigue and corrosion of the zinc diecast is taking its toll. Sadly, some of these rare swing caps are lost in the process.

However, if the cap can be found, the tank cap can be repaired – with the right equipment.

To be able to disassemble the chrome cover from the body of the tank cap with its locking mechanism, I built a special 'de-rolling' device. I've tried several times to do this manually using screwdrivers and pliers, but each time the outer edge of the chrome cover was damaged or deformed to some extent. I strongly recommend against trying this.



The rolled edge of the tank cap is gently and slowly 'un-rolled' outwards by the angled needle roller bearing (an industrial cam follower), progressively pulling the bearing further outwards the the bolt on the very right.

The cap is rotated on a felt ring in a specifically machined recess in the base plate. The large washer on the left prevents the tank cap tipping up and hides a third ball bearing to hold it in place without marring the outer edge.





Tank cap slipped under the washer on the left and dropped against the guide rollers at the right



Here the 'un-rolling' bearing and arm are fitted in place. The white PVC tube as the handle for turning the tank cap



Here the rolled edge and the action of the angled bearing is clearly visible.



This is the typical damage sustained by the lock swing cover: the little die-cast peg which holds everything together breaks off. Fortunately, the little spring, collar and screw remain inside the diecast body. See next page.

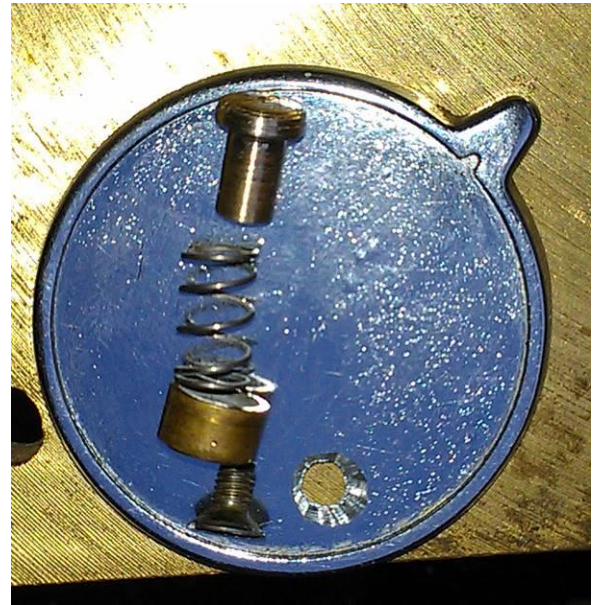


The coloured badge in the turbo models is actually a separate thin brass stamping, stock to the lock swing cover with double sided tape – presumably fuel proof. It can be separated using a razorblade inserted gently into the gap between the outer lip and the edge of the badge. Caution, it is very easily deformed! Progressively sliding the razor blade around and under the badge will eventually slice through the tape pad and separates the badge. The sticky residue is then removed with acetone and small probes.





The left picture shows the original broken swing and spring mechanism and the right photo shows the replacements.



The remaining dimple of the original spring post can be used to drill through the diecast swing lid in exactly the right spot. Any remaining protrusion is then filed or scraped off and the hole countersunk to match the head of a new M3 screw.

The other new part required is female panhead screw, internally tapped M3. These are not generally available but can be made using a suitably shaped M5 brass screw or bolt in a small lathe.



Diameter: 6.4mm  
Height: 1.5mm

Diameter: 4.6mm  
Height: 7.0mm

Assembled it looks like this. A drop of Loktite is used to ensure the new little countersink screw won't loosen.



Once the chrome cover is refitted to the tank cap body, the edge can be re-rolled carefully (even with a soft face small hammer by hand) until tight

The badge can then be refitted into the cap with a little 2-part epoxy glue after cleaning with acetone to ensure no dirt or oil from fingerprints will compromise adhesion.



All done!

The same procedure can be used to repair other CX model tank caps without the badge, but the new countersink screw will be visible of course.. That doesn't look bad if a chromed M3 screw can be found.