

The ALC Galaxy Lock: An in-depth look

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DISCLAIMER

Everything expressed in this talk is my own opinion.

Whoami

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Cyber Security (Undergrad)

Enjoys security in general
Usually breaks everything



Before I start

Yes – It can be attacked

Yes – You could pick this Lock

Where it all began



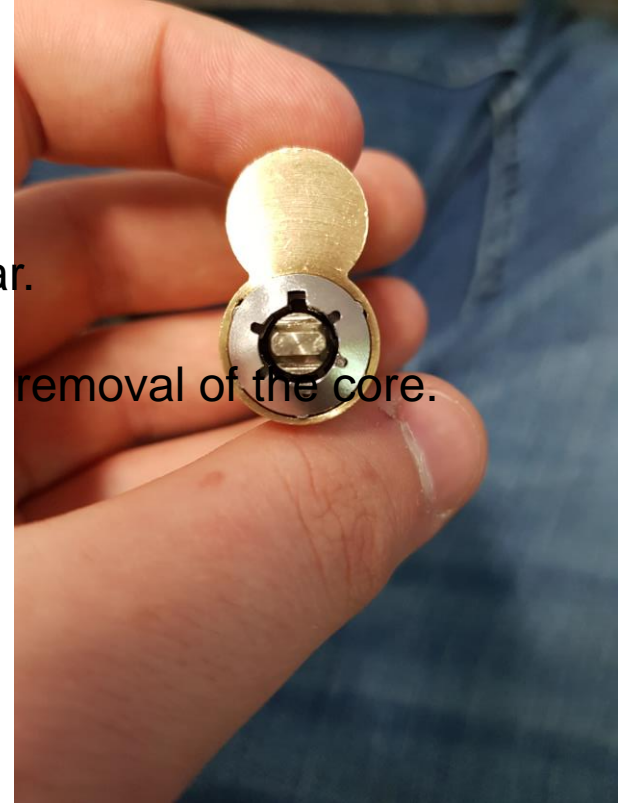
The ALG Galaxy Lock

Released 201X by the Australian Lock Company.

Sold as a “High Security Master Key System”.

Contains 5 Individual Sidebars to interact with the Codebar.

The Codebar can be changed easily and does not require removal of the core.



Sidebar



Sidebar (Carrage Bar)





Codebar



Core





Overall

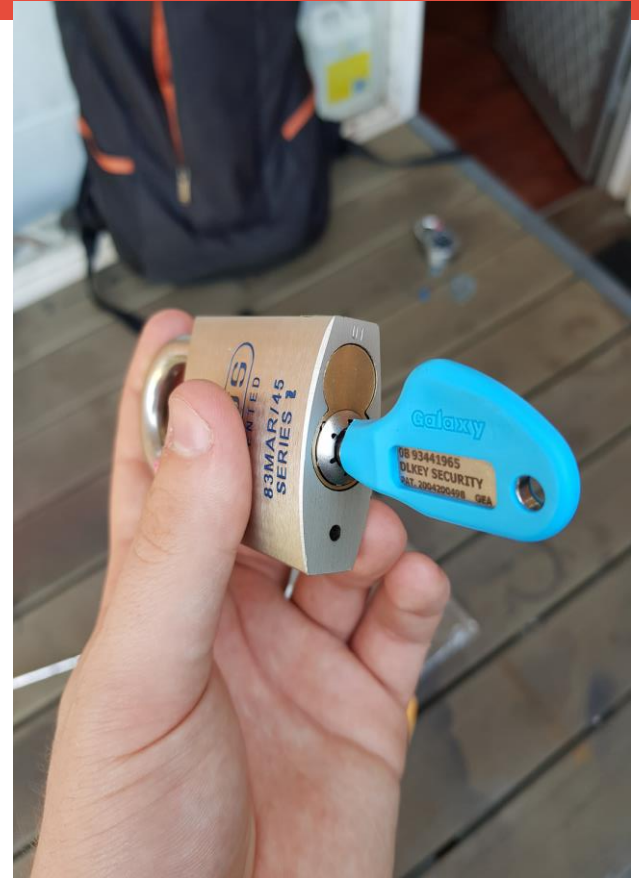
Keys – Cast Steel with CNC Milling – 5 Pin

Sidebar - Steel pins with Interaction on the core

Codebar – Multiple Pin Heights and Spring Loaded

Lets attack it

The First Failure



Step 1: Tension

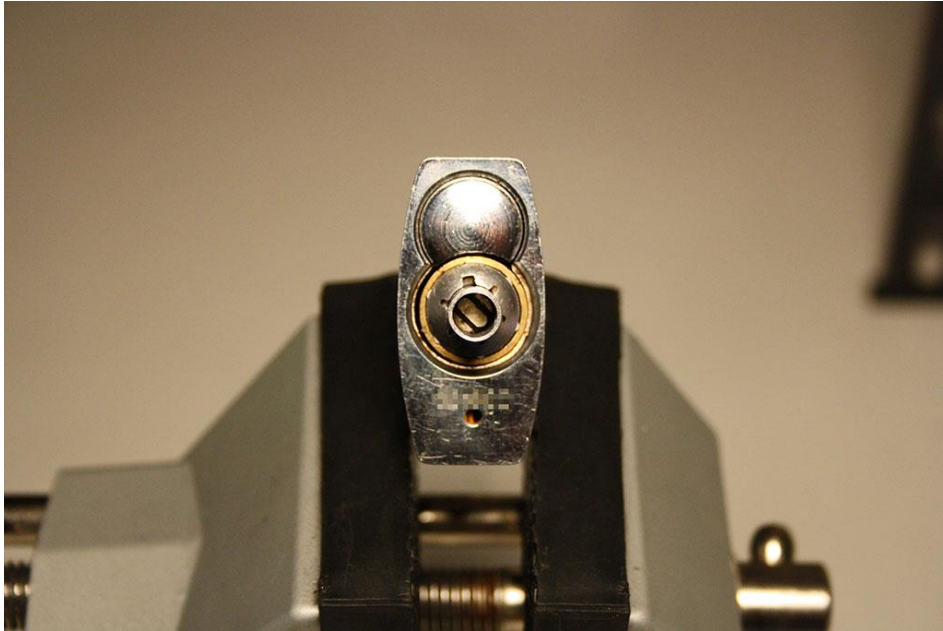
Apply tension through the codebar

Requires a tool of some sort

Lets base it off the Key

Others Tension Tool

Ali_picker of Keypicking



Our Tension Tool

Similar Design

More Streamlined for us

Slipped more often than not



Setting the pins

Use any flat metal pick which can fit into the space.

Did we Pick it?

Yes – but...

I messed up and forgot to record the attempt, was unable to replicate.

Waitaminuite

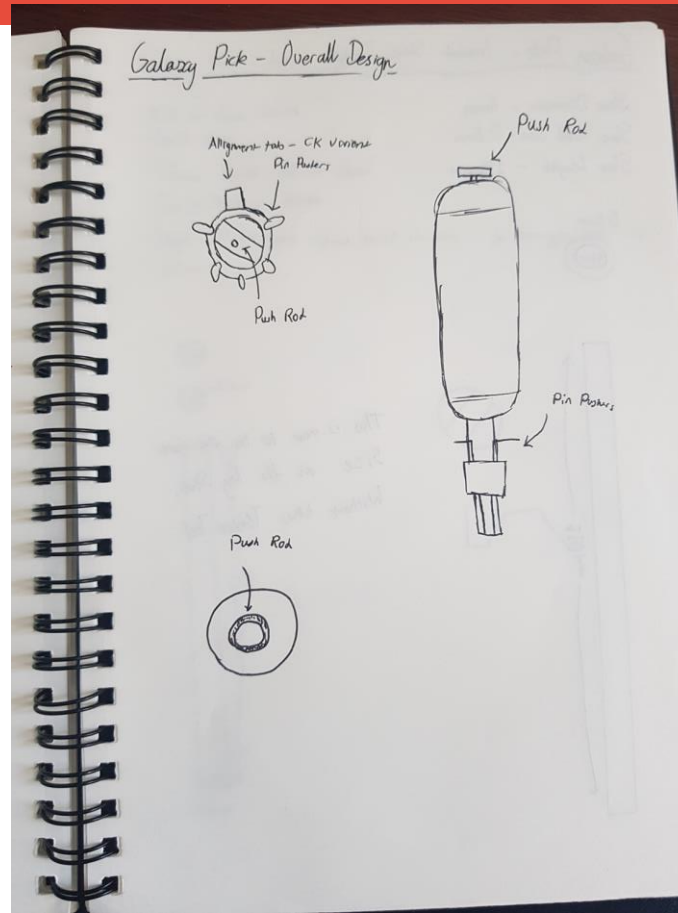
We have another contender



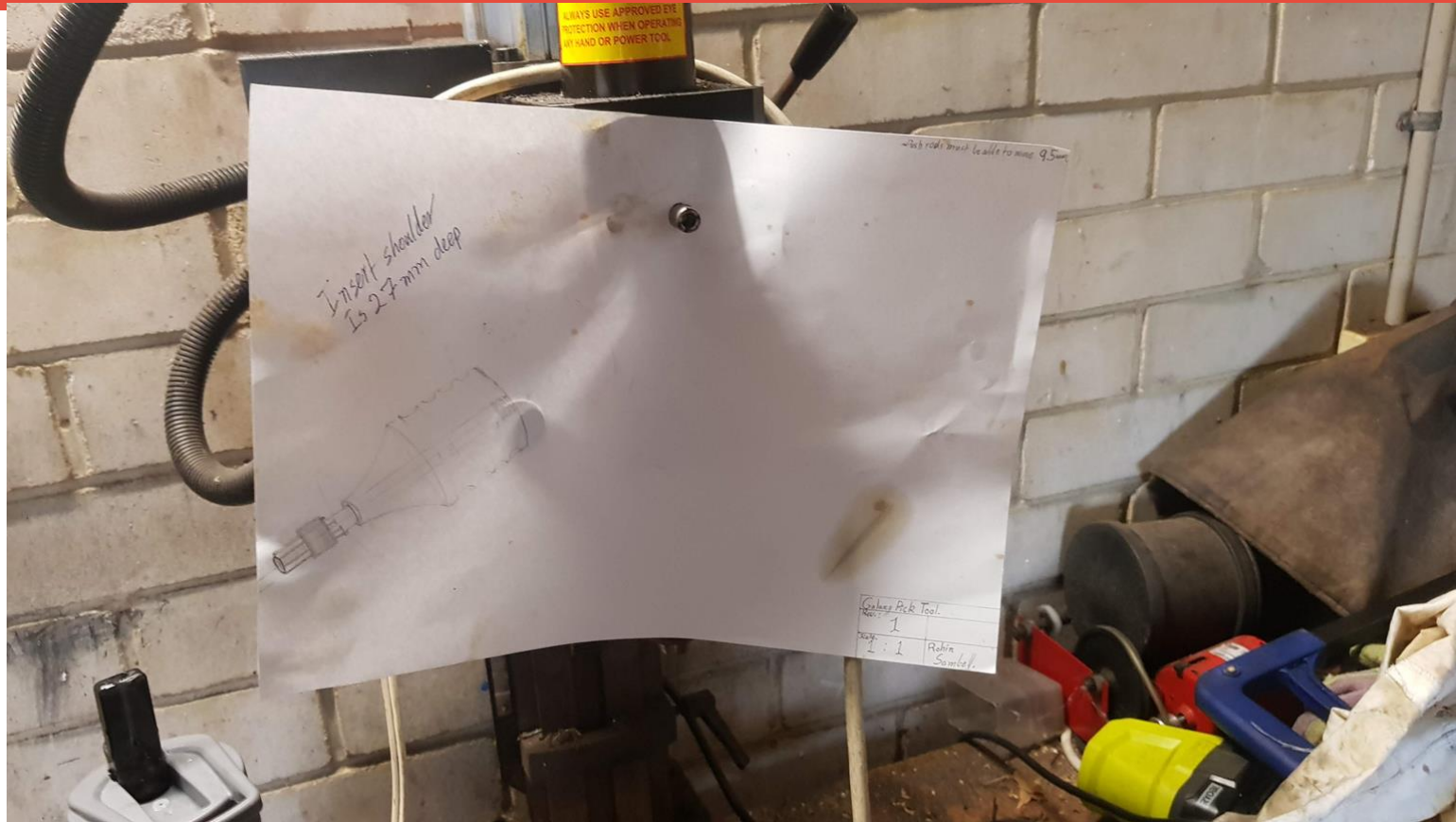
Ex-Roomate BeardySloth

Can we make it into a AIO Tool

Lets Try



His Design



Tool Design

Tension the Codebar and alignment Notch.

Pick each pin and keep them for the next rotation.

Real edition

WIP

Still needs a lot of work



Conclusion

Its an awesome lock

It can keep its “High Security” title for now

Keep searching for vulns