

The Law Lock Tools Ltd L4V dimple impressing system

Instruction set V4.0

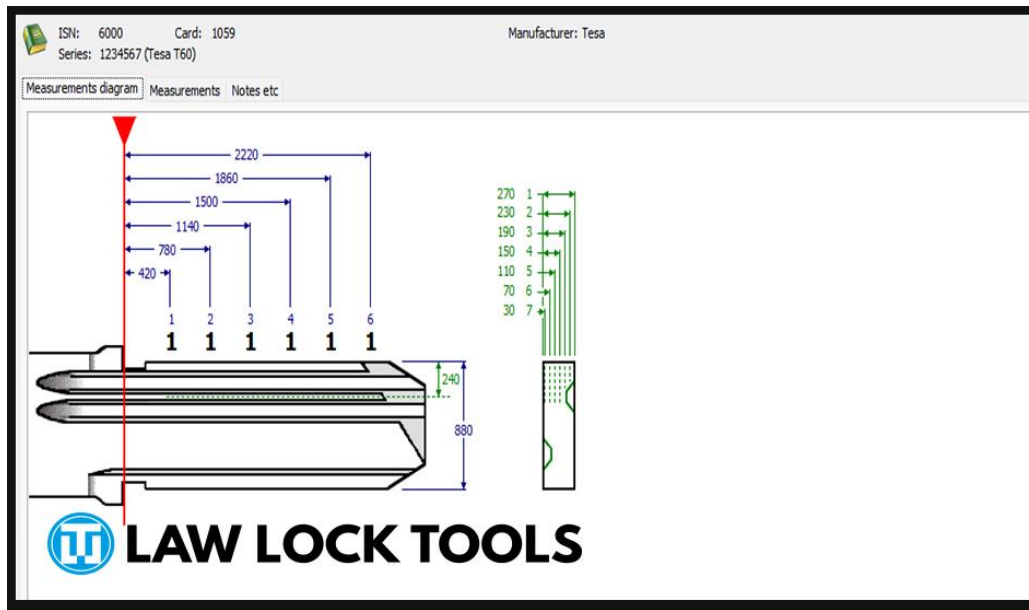


A brief overview of the L4V (Locks for Vans) locks

The L4V cylinders are a dimple lock available in a number of security platforms including half euro profile deadlocks and rim cylinders type Slam Locks. The locks are usually found on commercial vehicles alongside the vehicles existing locks. They have been retrofitted with additional L4V locking systems to increase overall vehicle security.





The L4V locks share the same depth and space as the TESA T60 and the same pins.



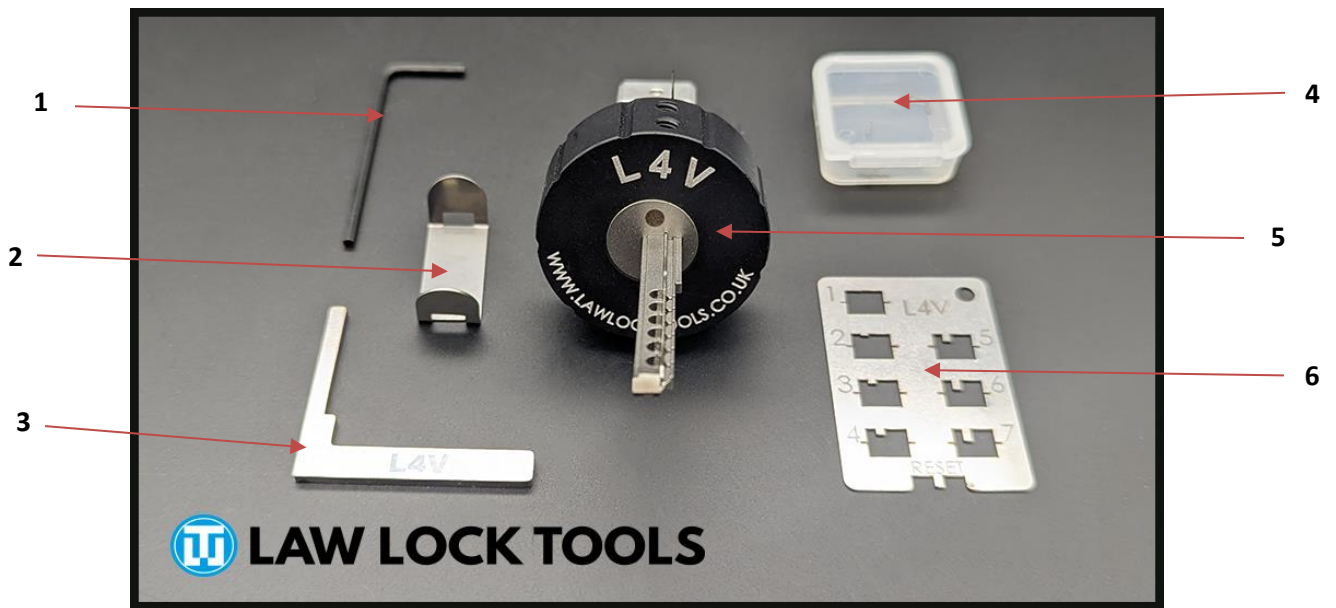
The L4V locks are currently available with 3 different profiles. The V series LV dimple top and the S series pin tumbler middle and the T series LD dimple profiles. The tool only works on the T series LD locks.

See Below image showing the various of L4V locks.

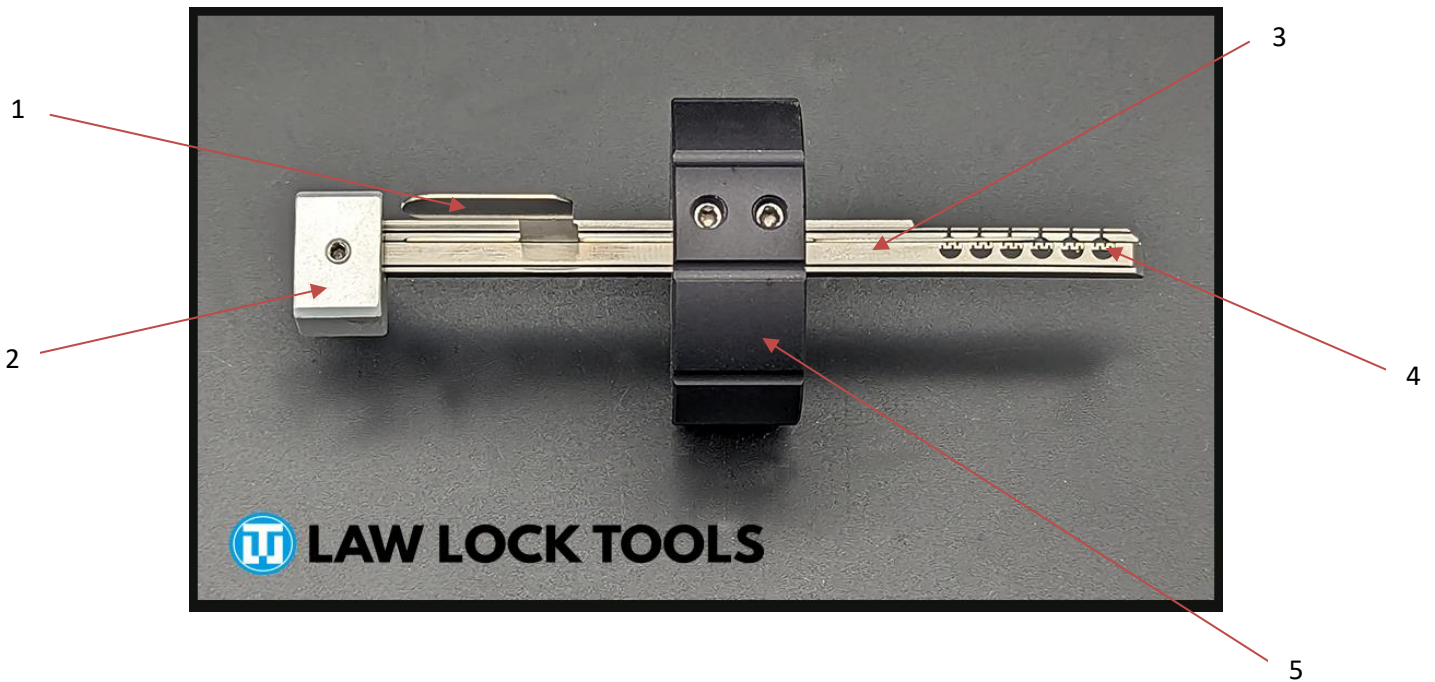
	<p>V SERIES KEY 7 DIGITS LONG STARTING WITH THE LETTER K LV STAMPED UNERNEATH</p>
	<p>S SERIES KEY 7 DIGITS LONG STARTING WITH THE NUMBER 5 E03 STAMPED UNERNEATH</p>
	<p>T SERIES KEY 7 DIGITS LONG STARTING WITH THE NUMBER 6 LD STAMPED UNDERNEATH (Don't confuse this with the L Series key)</p>

L4V dimple impressing system

The L4V system is supplied with the following.



- 1- Allen key 2.5mm
- 2- Reset cap
- 3- Tension Tool
- 4- Spare impressing pins x 6
- 5- Main L4V impressing system
- 6- Decoder and reset card



The main L4V dimple impressing tool consists of the following parts-

- 1- Lift Strip
- 2- Rear Collar
- 3- L4V dimple decoder key blade
- 4- Impressing pins
- 5- Main Handle

Before using the tool ensure the impressing pins are all in place and level with the top side of the decoder key blade.

Once you have identified the target lock to determine if it's a deadlock (Half Euro Type) pins down. Or if it's a Slam lock Cylinder pins up version. This will indicate what way around the tension tool and Main L4V dimple tool need to be inserted. Also the Dead Locks can be tensioned in both clockwise or anti-clockwise directions. Whereas the Slam Locks are often fitted to a right-hand or left-hand door and can only be tensioned in one direction. This does not matter in our case they can all be defeated non-destructively using this tool.

Opening Procedure

Insert the tension tool first and then the main L4V tool and slide the slider fully to the rear of the tool and use the following method-

- 1 Apply medium to heavy tension to the tension tool in any direction the lock allows.
- 2 While the tension is applied turn the main L4V tool clockwise until it stops then release the main tool and back off the tension tool. **(DO NOT apply heavy torque on the main L4V tool)**
- 3 Now repeat the above but apply tension in the opposite direction.
- 4 Continue the above steps until the lock opens.

To extract the tool you must slide the slider fully forward to lift all of the key pins out of the holes in the key blade tip. You can now remove the tool and it will retain the key code until its reset. You can also re insert the tool to operate the lock again if required. Just be sure to slide the slider forwards again to insert and back it off again to open the lock.

Decoding Procedure

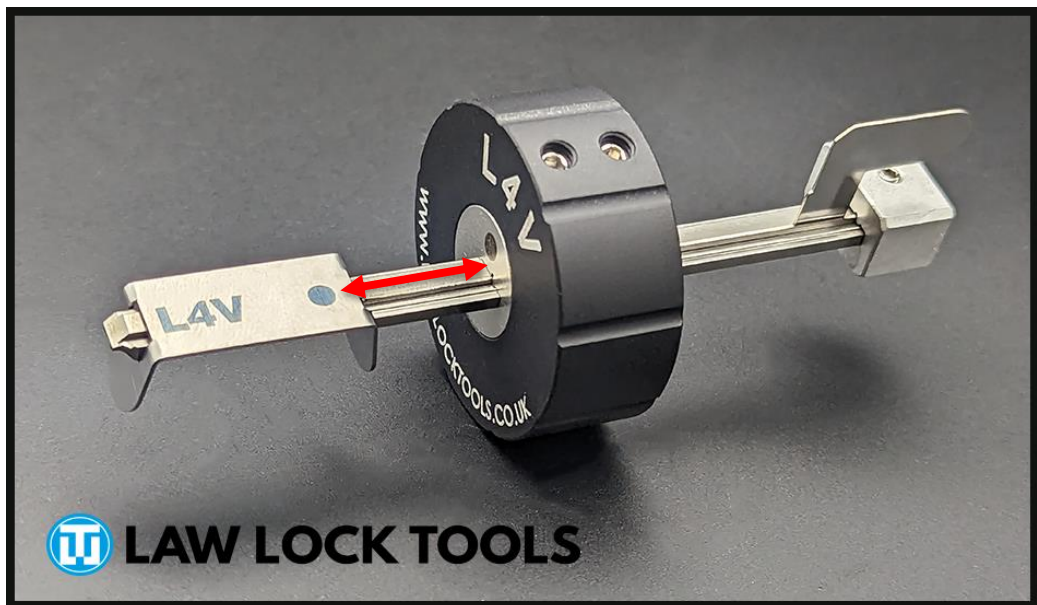
Once open you can read the bitting on the L4V tool using the decoder card supplied. To decode all 6 positions start with the deepest number 7 code on the card and work your way down from 7-1 and check if the key blade sits level with the top of the decoder card cut-out. Take a note of the correct code for each position to assist with cutting a new key to code later if required.



It is also possible to use the key decoder card to set the impressing pins to a known code and use the tool as a MUK (Make Up Key) Just be sure to keep the card centred and at a level 90 degree to the impressing pins so as not to dislodge them if you pushed from one side etc.

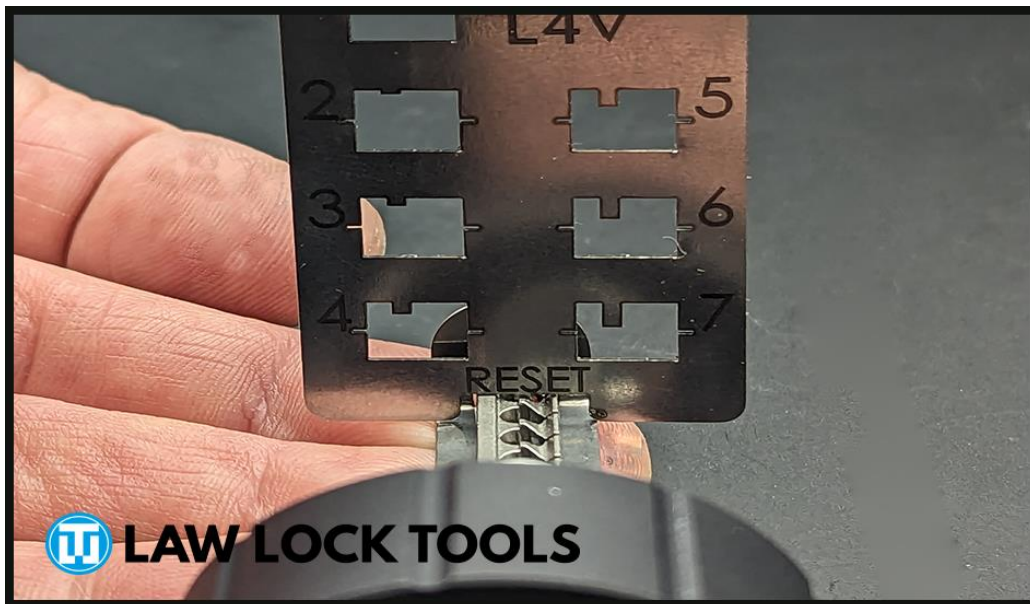
Reset Procedure

To reset the impressing pins first pull the slider to the rear then using the reset cap slide it over the key blade. I find it easier to do this if you hold it by the ends between your thumb and index finger and squeeze it slightly. Align the dot on the reset cap with the dot on the L4V main tool see below-





Now using either the end of the decoder card marked reset or the Allen key provided gently push the impressing pins back into the start position. It doesn't matter what tool you use its just down to preference. Take care not to overset the pins and to push into the middle of the pin and keep everything nice and square in relation to each other. If you push them at an angle, you risk dislodging them.

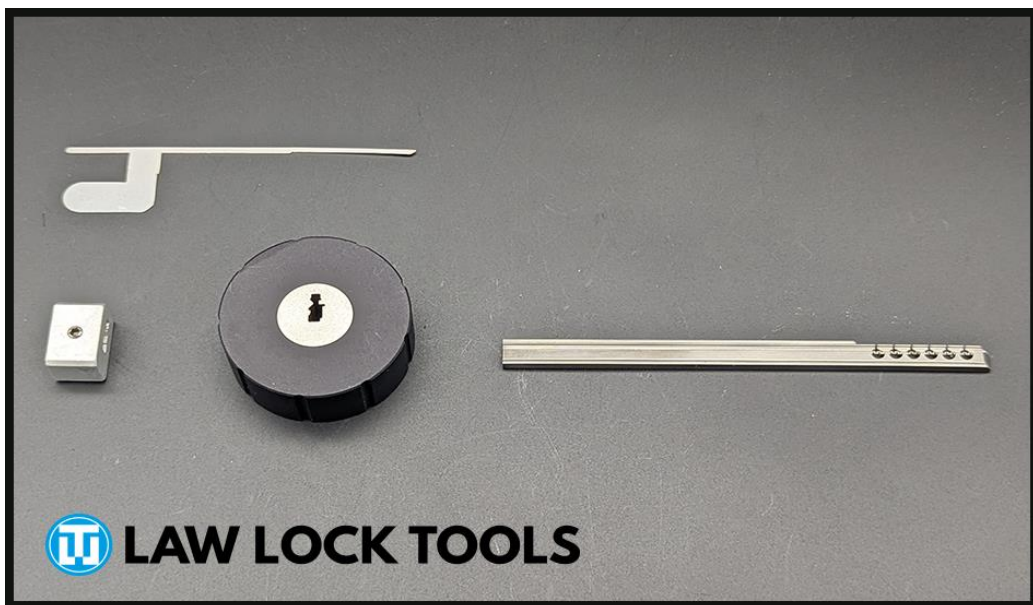




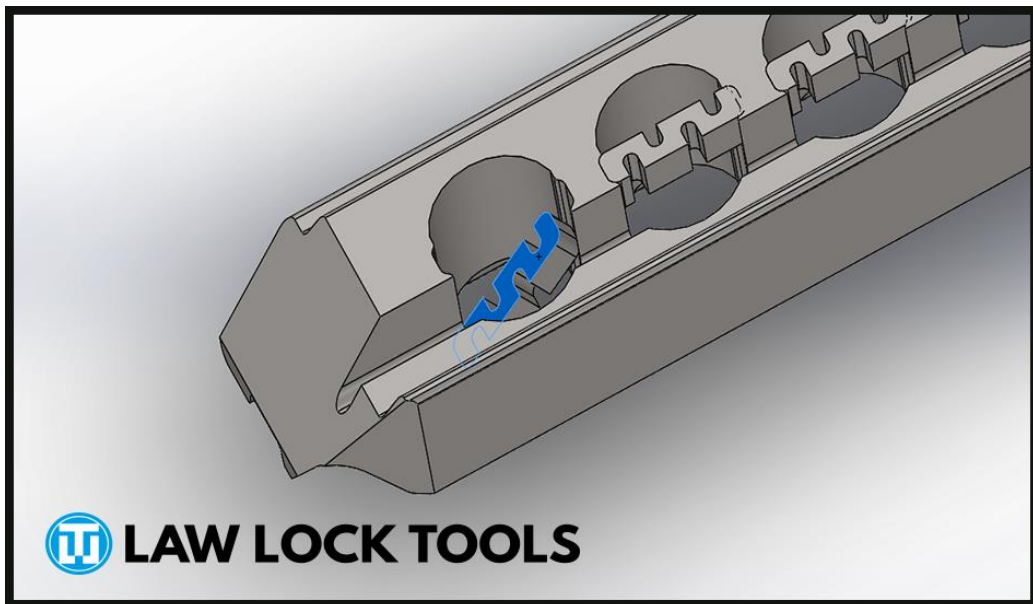
Replacing the impressioning pins

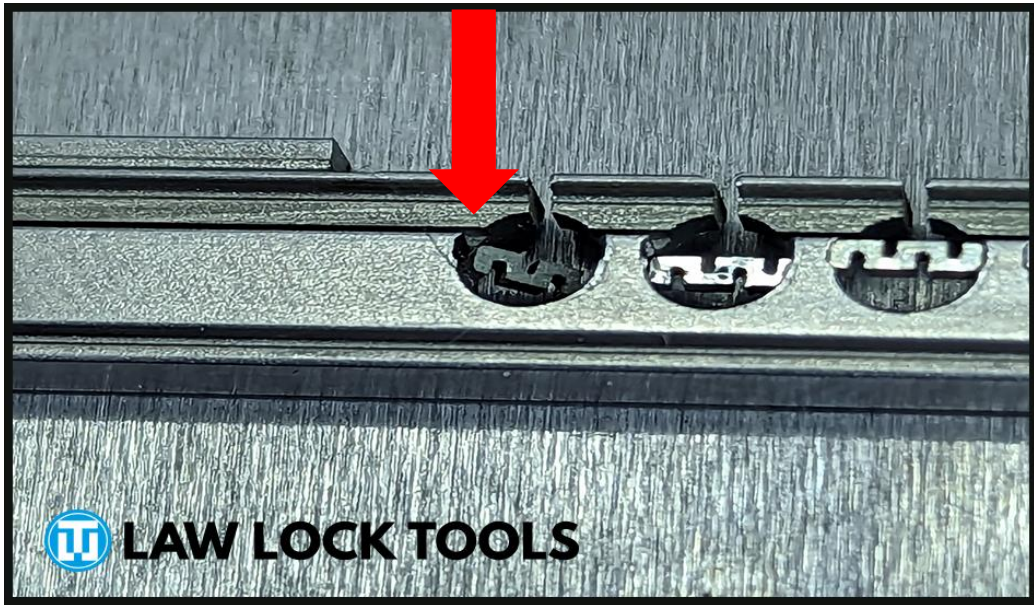
The tool is supplied with a full set of spare impressioning pins. They can become worn over time and are classed as a wear part that will need to be replaced occasionally. That said during testing I've opened 20+ locks without losing a single pin so they will last a while.

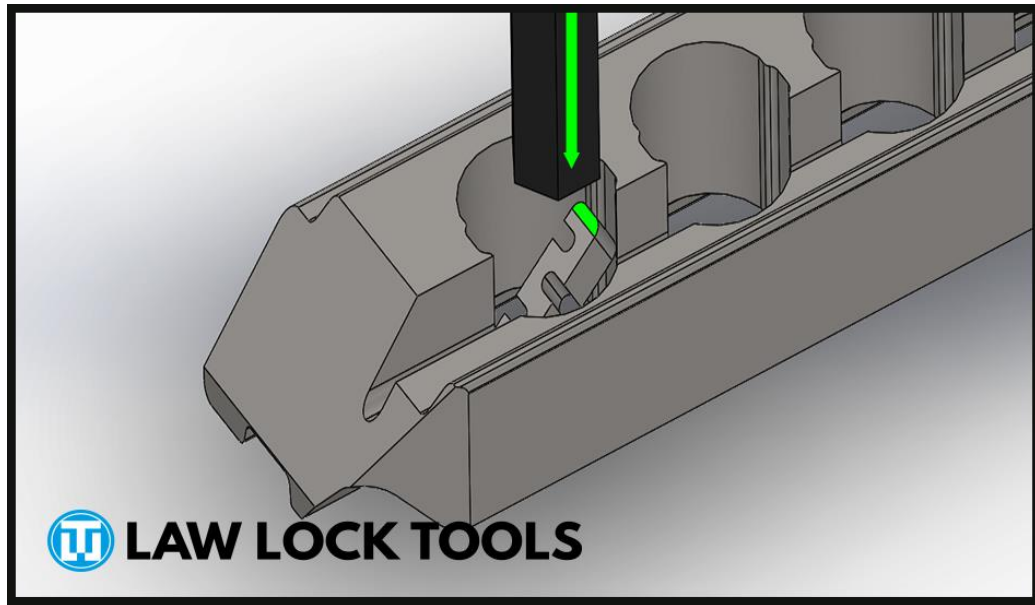
To replace the pins you will need a clean flat work surface with good lighting a pair of needle nose tweezers (not supplied) the Allen key supplied and your spare pins. I have also found using a bench top magnifier helps a lot here. I find it easier to just back off the 3 grub screws and disassemble the whole tool. That way you can lay the key blade flat on a hard surface.



Place the new impressing pin into the hole on a slight angle of about 45 degrees. (See image with pin highlighted blue) You will notice that the holes have a groove either side to locate the pins into. Once you are sure they are in the groove using the tip of the closed tweezers push the upper end down slightly to hold it steady. Now using the Allen key continue to push the pin from the upper edge of the pin straight down into the final position in the hole.







Now using the Allen key continue to push the pin from the upper edge (highlighted green above) of the pin straight down into the final position in the hole.

Once in place check the pin is not damaged and is sitting nice and level. If it has been damaged replace it with another one. Now flip the key blade over and carefully push the pin back in the opposite direction. Repeat this 4-5 times to bed the new pins in place until they feel smooth.

Now re assemble the tool taking care not to over tighten the grub screws and be sure the slider travels back far enough to expose all the pins and not to far forward that it extends beyond the key blade.

Check out the video link <https://youtu.be/sGY8QrHtzQk> demonstrating how to reset the pins-

Hints & Tips

DO NOT apply heavy torque on the main tool. This may be tempting but you are risking damaging the tool and voiding any warranty.

All you need to do is apply medium to heavy tension with the tension tool to bind any pins not yet set and turn the tool clockwise once. Turning the tool anti clockwise or away from the pins will not achieve the desired results.

These systems work by exploiting tolerances between the bound pins and the movement of the key tip while forcing the impressing pins against bound key pins to set them a little closer to the correct depth.

Do not apply any oil or grease to the tool it's not required. Keep the tool clean and dry and it should last a long time.

When inserting the tool place your finger on the key tip to be sure the strip is flush with the key blade.

When sliding the slider forwards again wiggle the black handle left and right slightly. This helps the process and prevents damaging the strip.

It's a good idea while learning the proper method to extract the tool after say 5 -10 turns and check if the pins are moving. If they don't seem to be moving apply heavier tension with the tension tool and a little more torque on the main tool. Continue and check again until you see some movement so you can dial in the correct amount of force required.

Always cycle new pins up and down 4-5 times to bed them in so they move smoothly.

DO NOT set the impressing pins the wrong way around! If you reset them with the reset cap on the wrong side of the key blade they will be at their deepest. They will not move up into a bound key pin only down. Remember dot to dot on the reset cap.