

A LOCKSPORT PRIMER

LOCKSPORT INTERNATIONAL BRINGS YOU A BRIEF INTRODUCTION TO LOCK PICKING

LEARN TO PICK LOCKS WITH A VISUAL STEP-BY-STEP GUIDE

LEARN HOW TO RE-PIN A LOCK, MAKE TOOLS, AND MORE! TO LEARN MORE VISIT WWW.LOCKSPORT.COM

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WRITTEN AND COMPILED BY PAUL WRAGG AND JOSH NEKREP FOR LOCKSPORT INTERNATIONAL













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INTRODUCING LOCKSPORT INTERNATIONAL

From all of us at Locksport International, I'd like to thank you for picking up this guide. We hope you will find it helpful as you take on the new challenge of learning to pick locks. But first, allow me to tell you a little about LSI.

In early spring of 2005 Josh Nekrep (digital_blue on lockpicking101.com) approached Kim Bohnet (Varjeal, site administrator on lockpicking101.com) with the idea of starting a club with the purpose of bringing lockpicking enthusiasts together and promoting the sport/hobby with face-to-face interaction. At the time there were a couple large regional clubs (SSDeV in Germany and TOOOL in The Netherlands) but there was no broad-based club. Kim and Josh saw a need for an organization that would be open to members all over the world and set about making it happen. It was felt that it would

be easier and more effective for individuals to start a local lockpicking club if much of the groundwork were already laid for them, and if they had the opportunity to share resources with other associated clubs. Kim and Josh quickly recruited Devon McDormand (frostbyte on lockpicking101.com) to sit as Treasurer. After much discussion (5 minute conversation on MSN) it was decided that Kim would act as President of the association and Josh would take the role of Administrative Director. The term "Locksports" was adopted as a means of distinguishing what hobby/sport lockpicking enthusiasts do from what locksmiths do. The three founding members set about laying the foundation for what they hoped would someday be a large organization. A short time later, Matt Fiddler and Doug Farre were brought on to sit on the board of directors. Since then, LSI has worked to bring locksport enthusiasts together. As individuals come forward to pioneer locksport groups in their area, LSI continues to grow and organize.

Locksport is a fun, challenging hobby, and one that is gaining ground around the world. Members gather together to learn from each other, share tools and locks, research security vulnerabilities, and most of all, have fun!

If you are interested in starting an LSI chapter in your area, see the "How To Get involved With LSI" section at the back of this guide.



YOU MAY ONLY PICK LOCKS THAT YOU OWN, OR THOSE TO WHICH YOU'VE BEEN GIVEN EXPLICIT PERMISSION TO PICK BY THE RIGHTFUL OWNER

LOCKSPORT IS AN HONEST, ETHICAL, AND LEGITIMATE HOBBY. UNFORTUNATELY, THE WHOLE WORLD HASN'T FIGURED THAT OUT YET (THOUGH WE'RE WORKING ON IT!). BECAUSE THE LAY PERSON HAS A TENDENCY TO PERCEIVE WHAT WE DO AS SOMEHOW NEFARIOUS, IT IS EXTRA IMPORTANT THAT WE COMMIT TO FOLLOWING A STRICT CODE OF ETHICS. FOR THIS REASON, THE ABOVE CREDO IS NON-NEGOTIABLE IN THE LOCKSPORT COMMUNITY. LOCK PICKING SHOULD NEVER, EVER BE USED TO ILLEGAL OR EVEN QUESTIONABLE PURPOSES.

PLEASE DO NOT MISUSE THIS INFORMATION. WE ASSUME NO RESPONSIBILITY FOR YOUR ACTIONS, AND IN NO WAY CONDONE IMMORAL ACTIVITY.HELP KEEP LOCKSPORT FUN FOR ALL BY FOLLOWING STRICTLY THE ONE RULE.



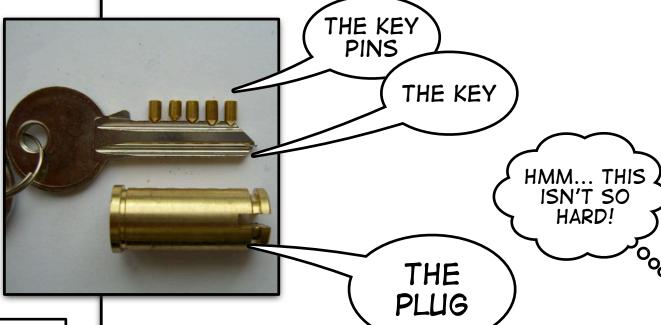
AN UNMOUNTED (UNINSTALLED) LOCK

THE SHELL (UPSIDE DOWN)

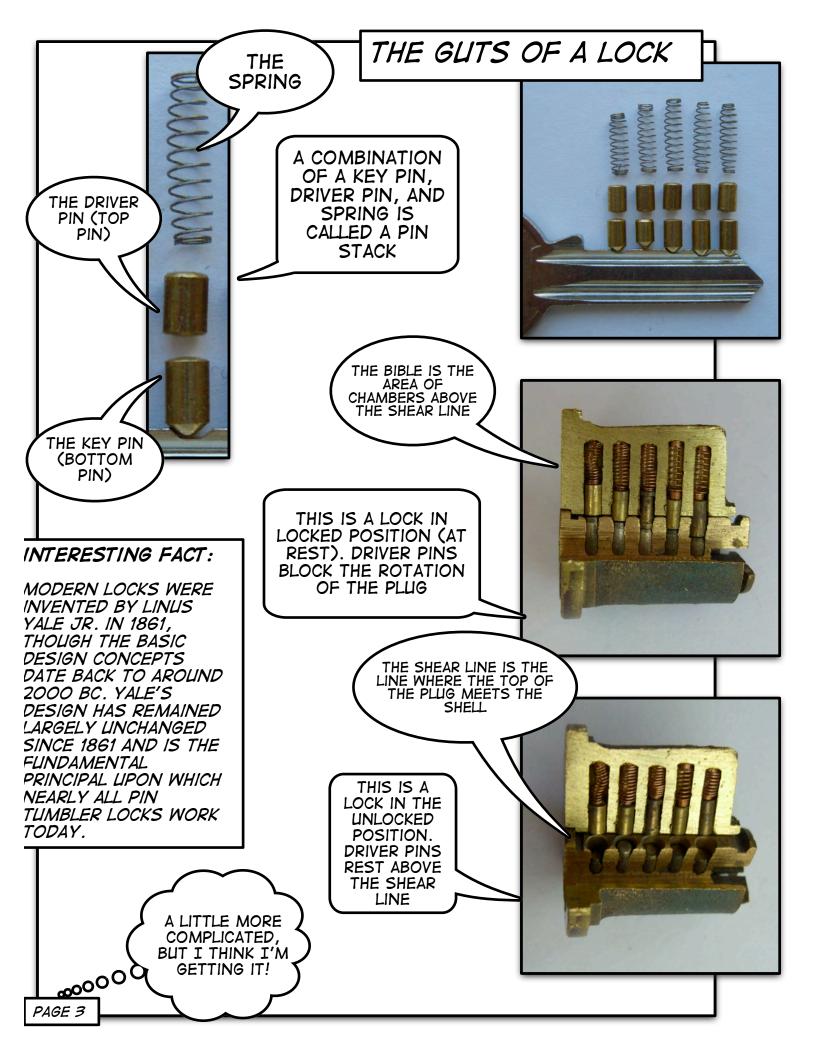


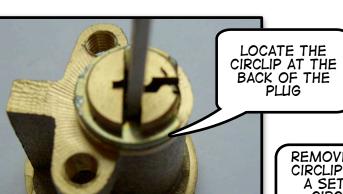
HOW A LOCK WORKS

A PIN TUMBLER LOCK IS COMPOSED OF SEVERAL BASIC COMPONENTS. THE OUTER CASING IS CALLED THE SHELL. INSIDE A SHELL IS A PLUG. THE PLUG HAS A KEYWAY - THE SLOT WHERE THE KEY GOES IN - AND THE WHOLE THING HAS A SERIES OF PIN CHAMBERS.



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RE-PINNING A LOCK

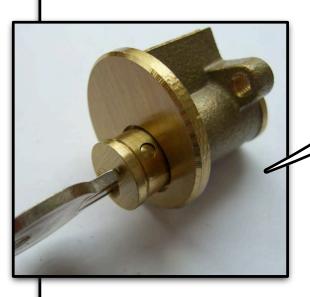
REMOVE THE CIRCLIP WITH A SET OF CIRCLIP PLIERS, OR A SMALL FLAT SCREW DRIVER



THE CIRCLIP HOLDS THE PLUG IN PLACE. HOWEVER EVEN WITH THE CIRCLIP REMOVED THE PLUG WILL NOT COME OUT **BECAUSE** THE PINS ARE STILL BLOCKING THE **REMOVAL** OF THE PLUG



IN ORDER TO
REMOVE THE PLUG,
THE PIN STACKS
MUST ALL BE LIFTED
TO THE SHEAR LINE.
THIS CAN BE DONE
WITH THE CORRECT
KEY, BY PICKING THE
LOCK, OR WITH A
THIN METAL SHIM



WITH THE KEY INSTALLED, AND THE CIRCLIP REMOVED, THE PLUG IS FREE TO BE REMOVED FROM THE SHELL

SPROING!

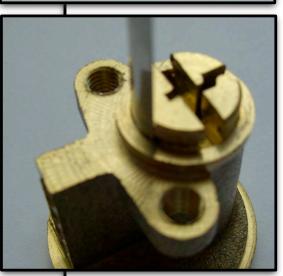
CAUTION!

REMOVAL OF THE PLUG
WILL CAUSE PINS AND
SPRINGS TO COME OUT
RATHER VIOLENTLY.
DON'T GET AHEAD!

THEY THE LOCK

THESE ARE SHIMS.
THEY ARE AVAILABLE
THROUGH MANY
LOCKSMITH SUPPLY
STORES

USING A SHIM TO REMOVE THE PLUG



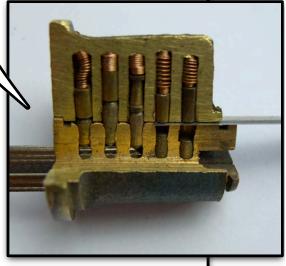
INSERT A BLANK KEY INTO THE LOCK, THEN BEGIN TO SLIDE THE SHIM IN FROM THE BACK AS THE SHIM CONTACTS THE FIRST KEY PIN, SLOWLY REMOVE THE KEY BLANK ONE PIN POSITION ALLOWING THE KEY PIN TO SLIDE DOWN AND THE SHIM TO ENTER THE SPACE BETWEEN THE KEY AND DRIVER PIN. REPEAT THE PROCESS FOR EACH PIN POSITION MOVING THE SHIM FARTHER INTO THE LOCK EACH TIME

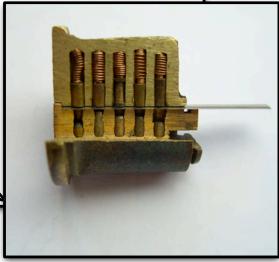
INTERESTING FACT:

SHIMS CAN BE MADE
USING AUTOMOTIVE
FEELER GAUGES. JUST
FIND THE THICKNESS
THAT FITS AND CUT
DOWN TO SIZE.
BEFORE CUTTING, YOU
MAY WISH TO PUT THE
CURL IN THE SHIM BY
WRAPPING IT TIGHTLY
AROUND A PEN.



ONCE COMPLETED, YOUR SHIM WILL BE FULLY INSERTED INTO THE LOCK AND ALL THE DRIVER PINS WILL BE STUCK ABOVE THE SHEAR LINE. YOU ARE NOW ABLE TO REMOVE THE PLUG, BUT DON'T DO THAT YET! SEE THE NEXT PAGE FIRST!





REMOVING THE PLUG

CHANGING THE KEY PINS

CLINK!

WHEN REMOVING THE PLUG, BE SURE THAT YOU TURN THE PLUG 45 DEGREES BEFORE SLIDING IT OUT, AND MAKE SURE THE PLUG IS UPRIGHT OR ELSE YOU WILL DROP KEY PINS!



IN ORDER TO REMOVE THE PLUG, YOU WILL NEED A PLUG FOLLOWER. THESE CAN BE PURCHASED, OR MADE FROM WOODEN DOWEL. THERE ARE A VARIETY OF PLUG DIAMETERS, SO YOU WILL NEED A VARIETY OF PLUG FOLLOWERS. HOWEVER, THE MOST COMMON SIZE FOR LOCKS IN NORTH AMERICA IS 1/2 INCH.

THE PURPOSE OF THE PLUG FOLLOWER IS TO REPLACE THE PLUG, TRAPPING THE DRIVER PINS IN THE BIBLE OF THE LOCK.

THE PLUG FOLLOWER MUST BE INSERTED FROM THE BACK OF THE LOCK, AND PUSHED FORWARD TO PUSH THE PLUG OUT THE FRONT OF THE LOCK.

YOU'RE NOW FREE TO CHANGE THE KEY PINS IN THE PLUG!









CHANGING THE DRIVER PINS

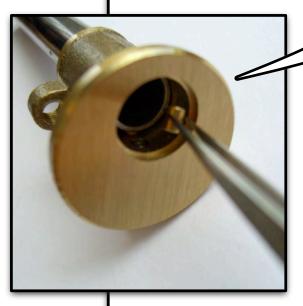


TIP: USE A PLASTIC BAG WHEN REMOVING THE PLUG FOLLOWER. THIS WILL CONTAIN THE SPRINGS AND PINS WHEN THEY GO SPROING! (AND THEY WILL!)

ONCE THE FOLLOWER IS REMOVED, COLLECT ALL THE SPRINGS AND PINS AND KEEP THEM SAFE FOR REINSTALLATION

USING TWEEZERS, CAREFULLY LOAD THE REARMOST CHAMBER WITH ONE SPRING AND ONE DRIVER PIN. YOU WILL NEED TO PRESS THE PIN AND SPRING DOWN INTO THE CHAMBER, THEN SLIDE THE FOLLOWER IN ONE PIN POSITION TO HOLD IT IN PLACE.

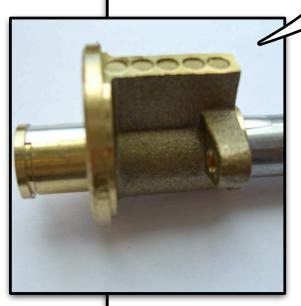
REPEAT THIS PROCESS FOR EACH PIN POSITION



ONCE ALL PIN STACKS ARE INSTALLED, YOU CAN USE THE PLUG TO REPLACE THE PLUG FOLLOWER. IT IS JUST LIKE REMOVING THE PLUG, BUT IN REVERSE!

ZOINK!

YOU MUST REMEMBER TO KEEP THE PLUG ROTATED SLIGHTLY OR THE DRIVER PINS WILL DROP INTO THE WRONG PLUG CHAMBERS. IT GETS BAD AT THAT POINT.





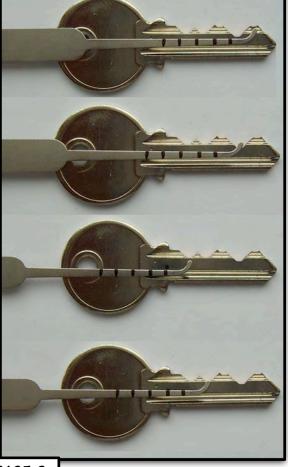
REINSTALL THE CIRCLIP AND YOU ARE COMPLETE!

THE PENCIL TRICK

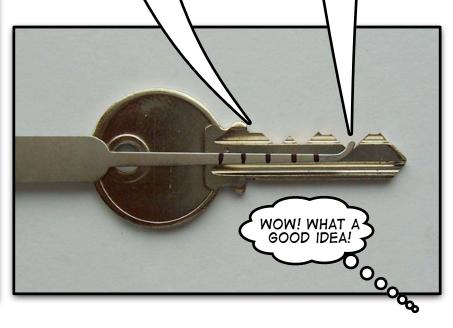
THE PENCIL TRICK IS GREAT FOR THE BEGINNER. BY MARKING OUT THE POSITIONS OF EACH PIN, YOU WILL HAVE A VISUAL GUIDE TO HELP YOU KNOW WHEN YOU ARE DIRECTLY UNDER EACH PIN. WHEN THE PICK IS IN THE LOCK, LINE EACH MARKING UP WITH THE FACE OF THE LOCK AND YOU WILL KNOW YOU'RE LINED UP. BY KNOWING JUST WHEN YOU'RE UNDER EACH PIN, YOU WILL BE ABLE TO BETTER UNDERSTAND THE FEEL OF LINING UP WITH A PIN.



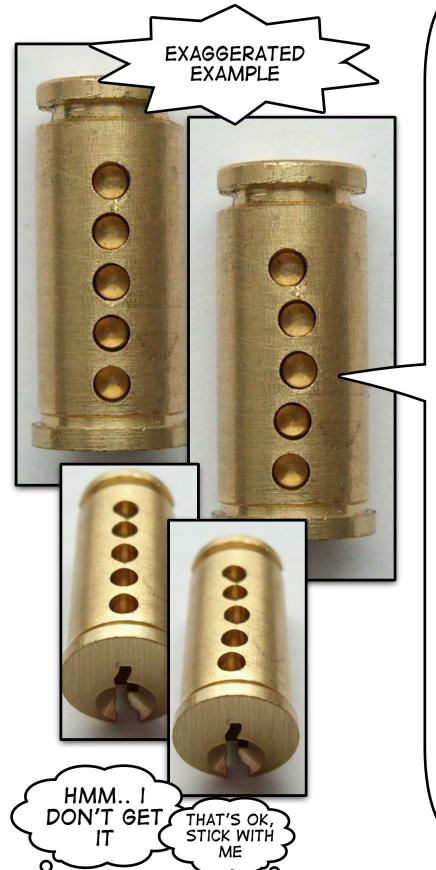




MARK IN LINE WITH SHOULDER OF KEY LINE UP TIP OF HOOK WITH PIN POSITION ON KEY



MECHANICAL DEFECTS AND TOLERANCES

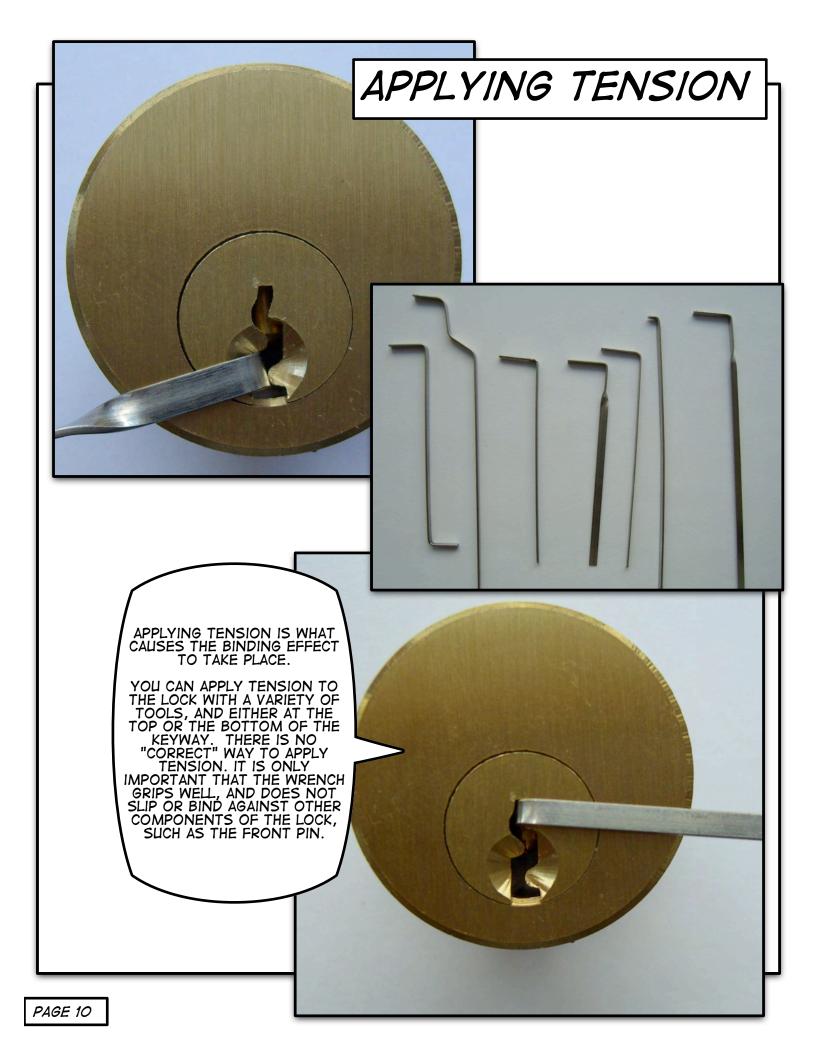


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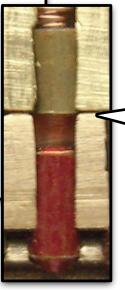
LOCK PICKING WORKS
BECAUSE OF A
VULNERABILITY CREATED
BY MECHANICAL
TOLERANCES IN THE
MANUFACTURE OF LOCKS.
SMALL MISALIGNMENTS IN
THE PIN CHAMBERS,
CHAMBERS THAT ARE
MISSHAPEN (OVAL), AS
WELL AS MISSHAPEN PINS
WILL CREATE WHAT IS
CALLED THE BINDING
EFFECT (EXPLAINED
NEXT).

IT'S IMPORTANT TO UNDERSTAND THAT NO LOCK CAN BE MADE "PERFECT". EVEN IN A **VERY WELL-**MANUFACTURED LOCK. THERE WILL ALWAYS BE **MECHANICAL** TOLERANCES. IN ORDER FOR THE PINS TO MOVE FREELY IN THE CHAMBERS, THE OUTSIDE DIAMETER OF THE PINS MUST BE SLIGHTLY SMALLER THAN THE INSIDE DIAMETER OF THE CHAMBER. THESE TOLERANCES WILL ALWAYS BE IMPERFECT.

IN THE NEXT SECTION, WE WILL LOOK AT HOW TO EXPLOIT THESE TOLERANCES TO PICK THE LOCK







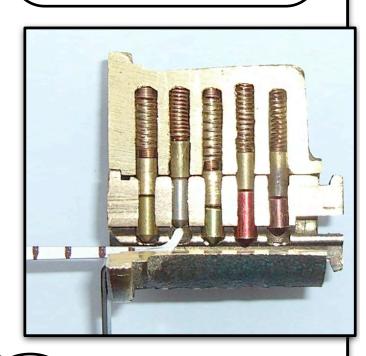
THE BINDING EFFECT

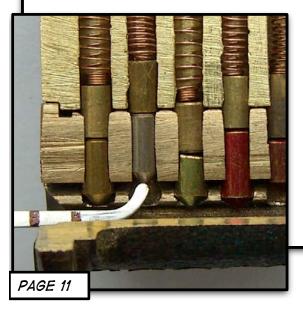
WHEN ROTATIONAL TENSION IS APPLIED TO THE PLUG, ONLY ONE PIN WILL PREVENT THE ROTATION OF THE PLUG. THIS IS DUE TO THE MECHANICAL TOLERANCES MENTIONED PREVIOUSLY. THIS ONE PIN IS CALLED THE "BINDING PIN", BECAUSE IT WILL GET "STUCK" AT THE SHEAR LINE. THIS BINDING PIN CAN NOW BE LIFTED, USING YOUR PICK TOOL, UNTIL IT CROSSES THE SHEAR LINE AND GETS STUCK ABOVE. WHEN THIS HAPPENS, THE BINDING EFFECT WILL BE TRANSFERED TO ANOTHER PIN IN THE LOCK. IF TENSION IS MAINTAINED, THE SET PIN WILL REMAIN ABOVE THE SHEAR LINE AS YOU CONTINUE TO SET THE NEXT PIN. THIS IS THE PRINCIPLE UPON WHICH LOCK PICKING RELIES.

DING DING!

STEPS TO LOCK PICKING

1. APPLY TENSION
2. FIND THE BINDING PIN
3. LIFT IT TO THE SHEAR LINE
4. REPEAT STEPS 2 AND 3 UNTIL THE
LOCK IS OPEN





SOUNDS EASY ENOUGH..

WELL, JUST HANG TIGHT KILLER, IT'S HARDER THAN IT LOOKS

POSSIBLE PIN STATES



AT REST
PIN STACK IS SITTING
AT ITS LOWEST POINT.
PICKER WILL NOTICE
SPRING TENSION ON
STACK

FALSE SETS

OVERSET
THE KEY PIN HAS BEEN
PUSHED PAST THE SHEAR
LINE AND IS NOW
BINDING. KEY PIN WILL
NOT FALL BACK DOWN.
NO SPRING TENSION WILL
BE DETECTED



IT'S IMPORTANT TO UNDERSTAND
THAT AT ANY TIME, EACH PIN
STACK WILL BE IN ONE OF THE
ABOVE PIN STATES. TO
SUCCESSFULLY OPEN THE LOCK,
YOU MUST GET ALL PIN STACKS
INTO THE "SET" STATE. THEY
START OFF IN THE "AT REST"
STATE. ALONG THE WAY, YOU
WILL BE CHALLENGED BY FALSE
SETS, AND RECOGNIZING AND
OVERCOMING THESE FALSE SETS
WILL DETERMINE YOUR SUCCESS.



COOL. THIS IS MAKING SENSE NOW!



A BRIEF INTRO TO TOOL MAKING

MAKING A PICK FROM A HACKSAW BLADE



FOR THIS
EXERCISE, YOU'LL
NEED A BENCH
GRINDER, SAFETY
GLASSES, A GLASS
OF WATER, AND A
HACKSAW BLADE.
YOU'LL ALSO
WANT SAND PAPER
(EMERY PAPER) IN
A VARIETY OF
GRITS, AND SOME
PATIENCE.



ALWAYS WEAR EYE
PROTECTION AND WORK IN
A WELL VENTILATED AREA
WHEN SANDING OR
GRINDING

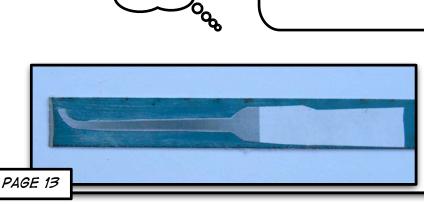
USING YOUR BENCH GRINDER, REMOVE THE TEETH FROM THE HACKSAW BLADE.

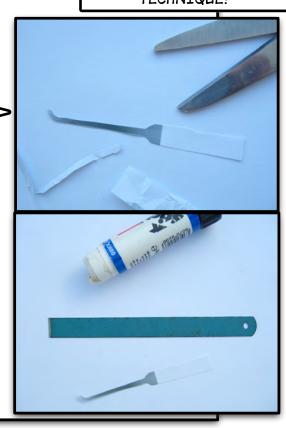
IMPORTANT NOTES

THERE ARE A LOT OF MATERIALS THAT ARE GREAT FOR MAKING PICKS, AND A VARIETY OF TOOLS THAT CAN BE USED. WE HAVE DECIDED TO USE A HACKSAW BLADE AND A BENCH GRINDER FOR THIS EXERCISE BECAUSE BOTH ARE WIDELY AVAILABLE AND PRODUCE GOOD RESULTS. SEE THE NEXT PAGE FOR IMPORTANT TIPS ON BENCH GRINDER SAFETY AND TECHNIQUE!

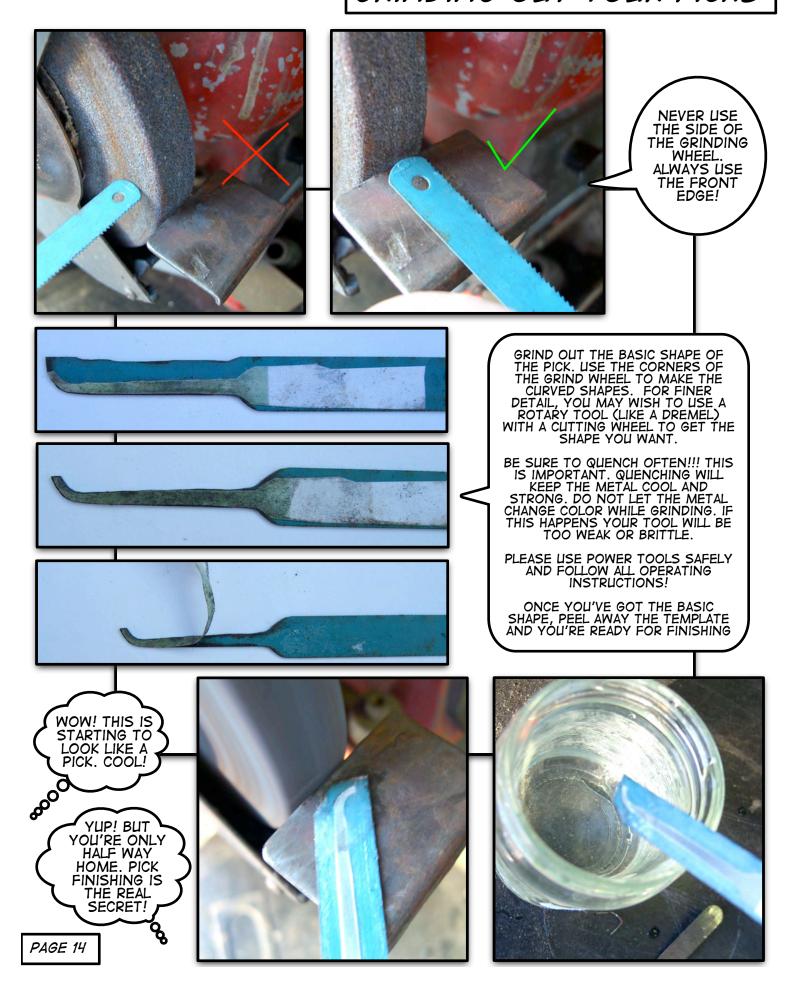


GET YOURSELF A PICK TEMPLATE. THESE CAN BE FOUND ONLINE. CHECK AT LOCKPICKING101.COM FOR PICK TEMPLATES. PRINT THE TEMPLATE TO SCALE AND CUT OUT THE SHAPE OF THE PICK, GLUING IT TO THE HACKSAW BLADE WITH A CONVENTIONAL GLUE STICK





GRINDING OUT YOUR PICKS



PICK FINISHING



TO START, LAY THE PICK FLAT ON A SURFACE AND SAND. PICK FINISHING IS WHERE IT'S AT. GET GOOD AT THIS! THE SMOOTHER YOUR PICKS, THE EASIER THEY WILL MOVE THROUGH THE LOCK, THE BETTER FEEDBACK YOU'LL GET FROM THE PINS, AND THE BETTER YOU'LL BE AT PICKING LOCKS!

START WITH A HEAVIER GRIT OF SAND PAPER (EMERY PAPER), PERHAPS BETWEEN 150 AND 200 GRIT, AND THEN WORK YOUR WAY TO PROGRESSIVELY FINER AND FINER GRITS, FINISHING WITH SOMEWHERE BETWEEN 1100 AND 2000 GRIT.

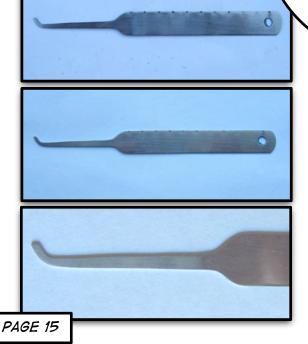
FOR THE ROUGH FINISHING, WRAP THE PAPER AROUND A BLOCK OF WOOD AND SAND ALL SURFACES, PAYING SPECIAL ATTENTION TO THE EDGES OF THE NECK AND TIP OF THE PICK.

FOR THE TIGHT CORNERS, TRY WRAPPING THE PAPER AROUND A CHOP STICK.

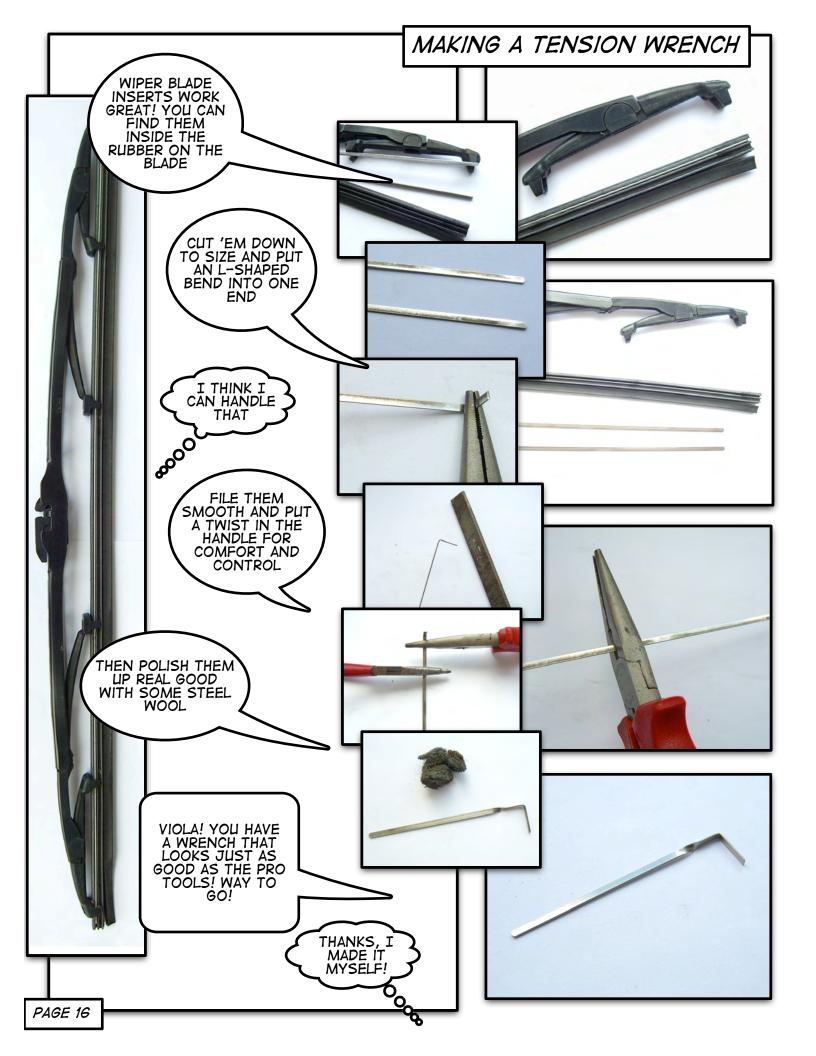
SAND THE PICKS UNTIL YOU GET A VERY SHINY, VERY SMOOTH FINISH.

BEGINNER'S TIP!

WHEN YOU THINK YOU'VE SANDED ENOUGH, YOU'RE PROBABLY ONLY HALF FINISHED! YOU WANT THESE BABIES TO LOOK LIKE LITTLE MIRRORS! IT'S A LOT OF WORK, BUT WORTH IT IN THE END! ONCE YOU'RE HAPPY
WITH THE LEVEL OF
SANDING, YOU MAY
WISH TO REALLY
SHINE THEM UP! TRY
TAKING A ROTARY
TOOL (DREMEL)
WITH A HARD FELT
POLISHING WHEEL
AND SOME
POLISHING
COMPOUND. YOU'LL
BE AMAZED AT THE
DIFFERENCE!





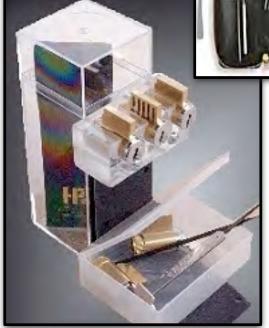


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USE THE COUPON CODE "LSI" WHEN CHECKING OUT

WWW.LOCKPICKSHOP.COM



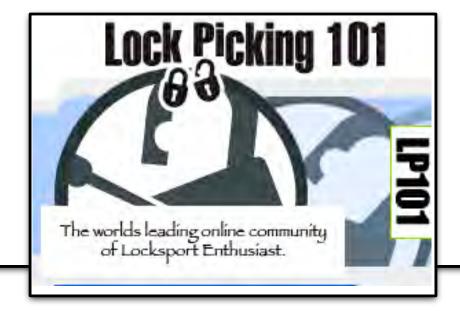
WHERE TO GET MORE INFO

WWW.LOCKSPORT.COM

LOCKSPORT INTERNATIONAL IS LOOKING FOR PIONEERS TO FORM LOCKSPORT GROUPS IN YOUR AREA!

WWW.LOCKPICKING101.COM

EVERY DAY, HUNDREDS (POSSIBLY THOUSANDS) OF ENTHUSIASTS GATHER TOGETHER IN THE WORLDS LEADING ONLINE LOCKSPORT COMMUNITY. LOCKPICKING101 SERVES AS A HUGE RESOURCE OF INFORMATION ON EVERY LOCKSPORT TOPIC IMAGINABLE. MEMBERS REGULARLY ANSWER QUESTIONS AND DISCUSS TOPICS OF TECHNIQUE, TOOLS, LOCKS, AND MORE! THERE IS NO BETTER PLACE ONLINE FOR THE LOCKSPORT HOBBYIST TO HANG OUT AND LEARN!











WHY GET INVOLVED IN LSI?

BECAUSE IT'S FUN! PICKING LOCKS
IS COOL. BUT MANY HAVE
DISCOVERED THAT GETTING
INVOLVED IN A LOCKSPORT GROUP
IS EVEN COOLER. MEMBERS
PARTICIPATE IN CONTESTS AND A
RANKING SYSTEM. THEY LEARN
TOGETHER, CHALLENGE EACH
OTHER, AND MOST IMPORTANT,
THEY HAVE FUN TOGETHER!









Locksport International

MEMBER APPLICATION

Applicant Info:	First Name		Middle Initia	al	Last Name		
PLEASE PRINT CLEARLY	Date of Birth (dd/mm/yyyy):			//			
Address:	Street Add	ress:					
	City/Town	:					
	State/Prov	ince/Territory:					
	Zip/Postal	Code:					
	Phone Nu	mber:					
PLEASE PRINT CLEARLY	Email Add	lress:					
Sponsorship:	Applicant must be sponsored by two members of Locksport International in good standing. One of these sponsoring members may be the president of the applicants attending Chapter.						
Sponsoring Member:		PRINT NAME	SIGN			MEMBER NUMBER	
Sponsoring Member:		PRINT NAME	SIGN			MEMBER NUMBER	
Sponsoring Chapter:	CHAPTER NAME / LOCATION				CHAPTER ABBREVIATION		
Chapter President		PRINT NAME	SIGN			MEMBER NUMBER	
APPLICANTS UNDER THE AGE OF 18 AT THE TIME OF APPLICATION MUST ACCOMPANY THIS APPLICATION WITH A SIGNED LETTER OF CONSENT FROM A PARENT OR LEGAL GUARDIAN. I agree that the above information is true and accurate. I understand that membership is granted by the Board of Directors of Locksport International and may be refused or terminated at any time. I understand that upon acceptance, I will be issued a Member ID Card which will remain property of Locksport International and its Board of Directors. I agree to return this Member ID Card upon termination of membership in Locksport International. I agree to abide by the Member Rules of Conduct and conduct myself in a manner consistent with the spirit of the Locksport International Charter. I also understand that this information is being collected for the internal use of Locksport International and will not be distributed without consent. This information will, however be used to send me information relating to the organization.							
APPLICANT NAME		APPLICANT SIGNATURE		DATE			
OFFICE USE ONLY							
Member Number:							
Date Approved / Denied							
CODE:							