

Introduction to a Collection of Information on the All American Tool & Mfg. Co. Die Filer

Collected by Bob Nawa

I have consolidated all the information I have acquired over the last years on the All American Die Filer in this document. Sources were mainly from the internet so you may have some or all of it. I have not put the manual in this document as it is readily available on line and on the <http://www.vintagemachinery.org/home.aspx> site.

I have, over the last 12 years, purchased three of these machines. The first one, that I am still using, was incomplete and in real bad shape. I had no idea of its shortcomings as I had never seen one before and it was running when I picked it up. It seemed to beat the no name one I had which needed the table held on with a C-clamp.

When I got it home I quickly discovered that the file would move all over the place ie I could grab the end of it and move it in all directions. The further out the more it moved. Upon investigation I discovered the two knobs on the front of the drive case for adjusting vertical movement - no luck. I took the case cover off and discovered that the brass bearings for the vertical shaft were worn through and the vertical shaft itself was worn as much as .030 to .050 with two areas "bellied out" so to speak. This caused the vertical shaft to move all over the place. The bellows was also shot. It had none of the above the table equipment, not even the post to connect the over arms too. I did not know they even existed. Motor worked good, and drive system was just fine just needed cleaning up. Long story short, I made a new vertical shaft, new bearings, new bellows system, overarm with adjustable file backer, rod to mount overarm on, and cleaned it all up. It has served me well since 2009.

This year (2015) I decided I wanted to get a "new" one with more of the equipment. I found one that was close to what I wanted but needed a lot of cleanup. I purchased it. A month or so later another one came up for sale that was really nice looking, had everything I wanted except the Magnifier Light. So I purchased that one. I sold the other "new" one about two months later for what I had in it.

Potential buyers need to learn what these machines had as to equipment, what were the options, and to check out the mechanics carefully before buying so you can decide if the work it needs is worth your time.

Here is what follows in the rest of the document:

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- 4. Hone Attachment Information**
- 5. Replacement Bellows Options**
- 6. Bellows Repair - Parts**
- 7. Bellows Repair - Verifying Fit**
- 8. Bellows Repair - Final Installation**
- 9. Lubrication Improvement**
- 10. My Current Machine and “New” Machine**
- 11. Small File Adaptor Attachment**
- 12. Small File Attachment Detail Drawing for Reproduction**
- 13. File Setting Square and File Clamp Wrench Attachments**
- 14. File Setting Square Attachment Detail Drawing for Reproduction**
- 15. File Clamp Wrench Attachment Detail Drawing for Reproduction**
- 16. Wear in the Vertical Shaft**
- 17. Testing for Wear in the Vertical Shaft**
- 18. Detailed Drawings showing how to test for wear in the Vertical Shaft**
- 19. Page 8 of the All American Die Filer Manual showing Operating and Adjusting procedures for reference**

As I find more information it will be added to this document.

Saw Attachment Information

SAW ATTACHMENT
FOR ALL AMERICAN PRECISION FILING MACHINES

SAW ATTACHMENT
COMPLETE WITH TWO SAWS

Price \$6.00
F.O.B. SKOKIE, ILL.

Extra Saws \$0.20 each
Assorted Saws 2.25 per doz.
Extra Saw Guides 1.10 each
Prices Subject To Change Without Notice

Saw is clamped with teeth to the right when operator is facing end of machine.
Teeth must point downward.
Remove U-shaped hold down finger from Auxiliary Overarm and use finger of large Overarm to hold down the work.

ALL AMERICAN TOOL & MFG. CO.
8027 LAWNDALE AVENUE SKOKIE, ILL.

4-135 4-8-19-58 764



TO SAVE TIME WHEN SETTING UP MACHINE FOR SAWING

1. Set lower file clamp square with table top by clamping a round file or rod about 3/8" diameter into the V slot of the lower file clamp and setting it square with the table by means of the setting square.
2. Clamp ball joint assembly tight with hex wrench.
3. Remove round file or rod and replace with saw chuck as shown.
4. Square up back edge of saw blade with setting square, then clamp saw chuck tightly.
5. Clamp upper saw chuck in overarm file clamp. Overarm file clamp can be adjusted by swiveling so as to cause saw blade to run true. Tighten knurled thumb screw.
6. Adjust bronze saw guide to back up rear edge of saw blade.



Hone Attachment Information

TO USE HONE ATTACHMENT

In ALL AMERICAN Precision Bench Filing Machine:-



1. Clamp hone into hone holder while assembly is laying sideways on a flat surface. Clamp lightly to avoid breaking hone.
2. Clamp shank of hone holder into Universal Joint File Clamp, same as clamping a file.
3. Square up hone with Setting Square, same as file.
4. Top end of hone holder may be supported in the file clamp of the regular overarm, same as a file, or may be backed up by the roller of the Auxiliary Overarm.

Total length of hone holder - 5-9/16".

Size of Hone - 3/16" X 1/4" X 2-1/2",

PRICE — complete with 1 reversible hone
(#120 grit).....\$5.00

REVERSIBLE HONES as shown are available in the following grits:

#80 Coarse	#150 Medium Fine	
#100 Medium Coarse	#180 Fine	
#120 Medium		each \$0.90

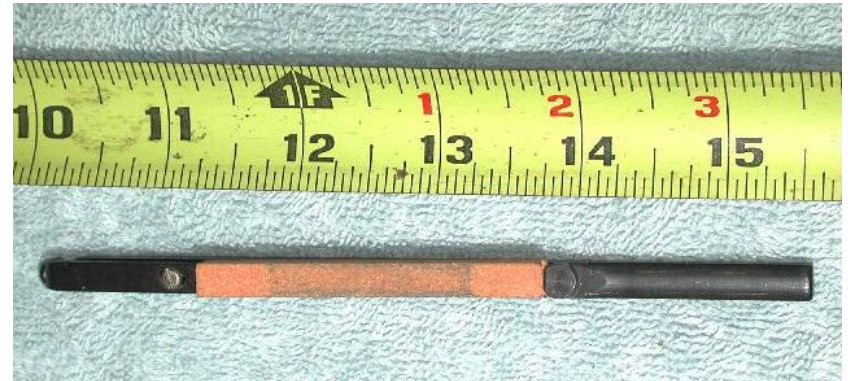
RADIUS HONE to fit holder (#120 grit only) each \$0.90

Prices F.O.B. our Skokie, Illinois plant.

ALL AMERICAN TOOL & MFG. CO.

8027 LAWDALE AVENUE

SKOKIE, ILL.



Replacement Bellows Options

I redid my torn bellows with a 38 Chevy Starter Bellows, see next pages. They are available on ebay for about \$10, just do a search for a starter boot. Earlier in the year I came across a company, Dynatect, that had a bellows that was a very close match but expensive. It is also a bit thinner. I purchased that one and will use it to fix up my "new filer". I purchased a 47 Chevy Truck bellows and it was not very good. When compressed it did not collapse evenly, just sort of squished. I do not think it would have worked well.

DYNATECT™
DYNAMIC EQUIPMENT PROTECTION

Dynatect Manufacturing, Inc.

2300 S. Calhoun Rd.
P.O. Box 510847
New Berlin, WI 53151-0847

Ph: 262-786-1500 Fax: 262-786-3280
Fed. ID No. 20-8635723 Duns No. 00-609-0583
www.dynatect.com sales@dynatect.com

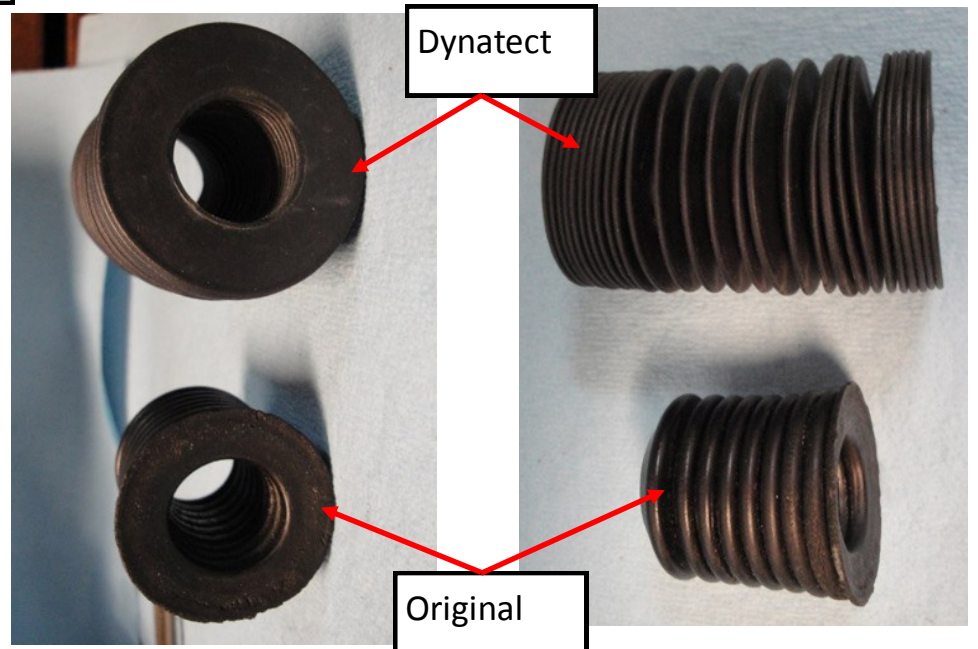


ACKNOWLEDGEMENT

DATE: _____ Page: 1
PO NUMBER: _____
REPRESENTATIVE: RESOURCE INDUSTRIAL

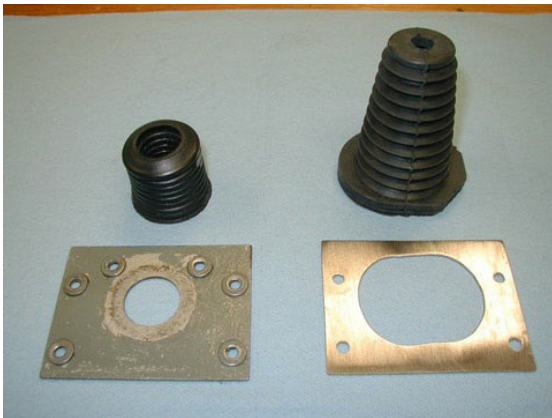
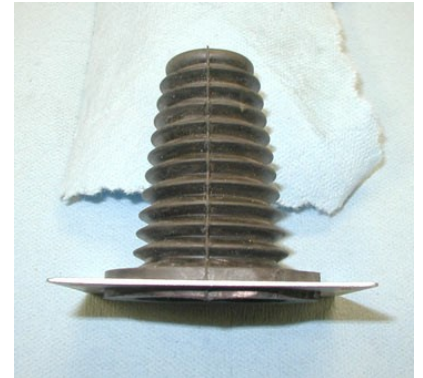
BILL TO: _____ SHIP TO: _____

PAYMENT TERMS		TERMS OF SALE IF INTL. PER INCOTERMS 2010		SHIP VIA	ORDER	CUSTOMER NO.	ORDER DATE
		FOB Origin, Freight Prepay & Add		BEST WAY			
ITEM	QTY	SHIP DATE	DESCRIPTION	UNIT PRICE	EXT. PRICE		
We collect sales/use tax on shipments into CA, CT, IN, MN, TX, WA, and WI. Tax will be calculated based on the final shipping address at the time of invoicing, unless an exemption certificate has been submitted through our online system.							
1	1 EA	06/11/15	CT GORTIFLEX CT COVER CTH-.75-12 CT-STK25783	36.00	36.00		



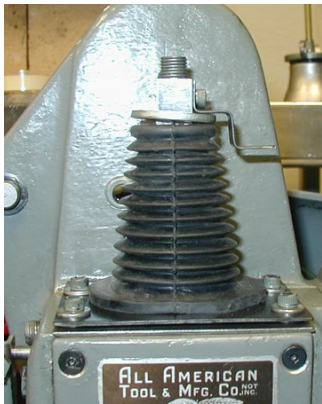
Bellows Repair - Parts

The pictures should give you the idea of how to do a repair using a starter boot. You will need to make a new Plate to match the boot. I cut a good amount of the bottom of the boot off so it would fit nicely. You will still use the original plate. The new one goes on top. The small bent part is the file holder stop, mine was missing, part not needed for bellows only repair. The felt was a lubricating improvement see later pages.



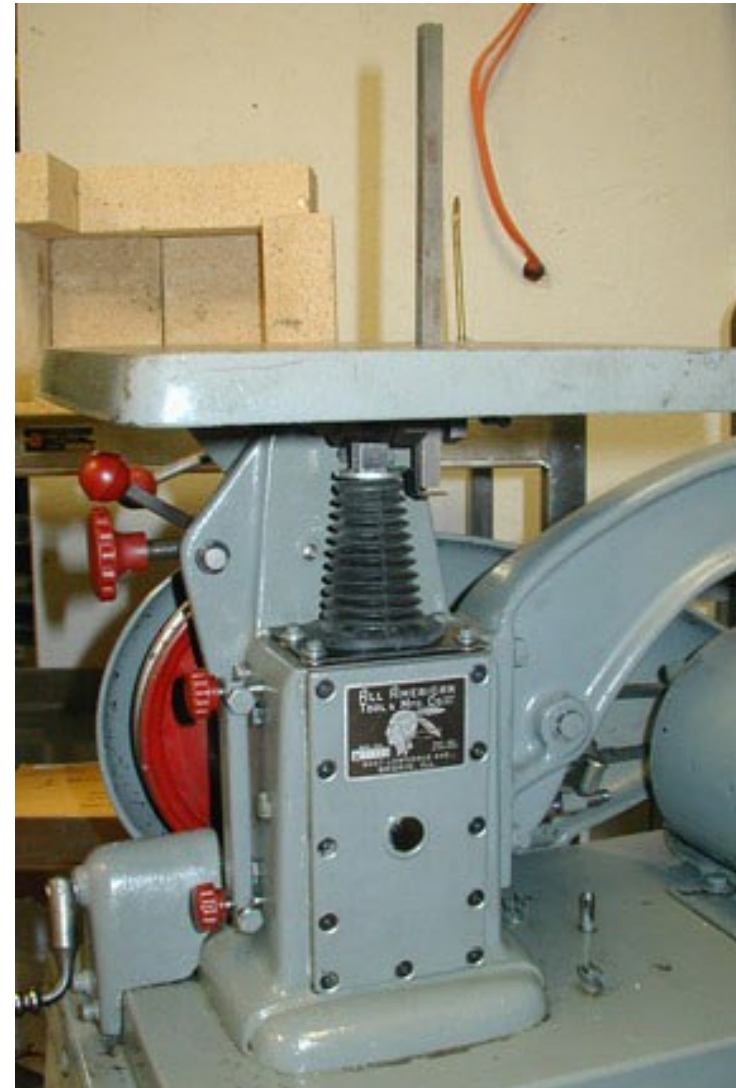
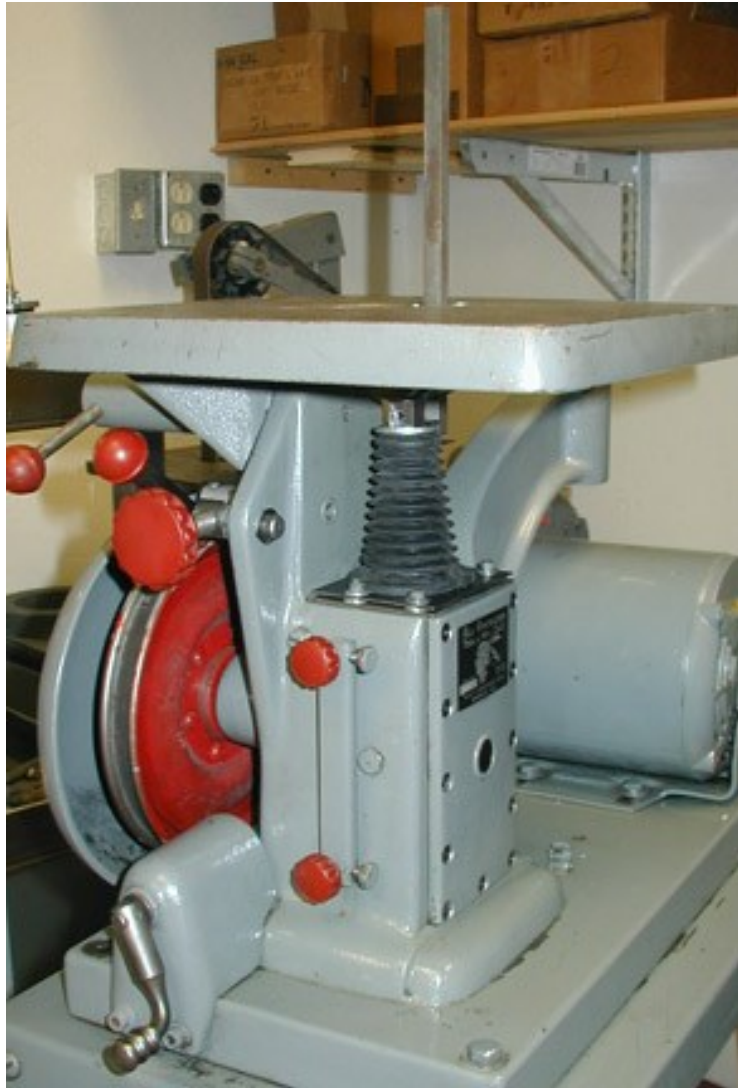
Bellows Repair - Verifying Fit

New Bellows installed and you can see the deflection with both up and down positions. The file holder is mounted and a file is shown in place.



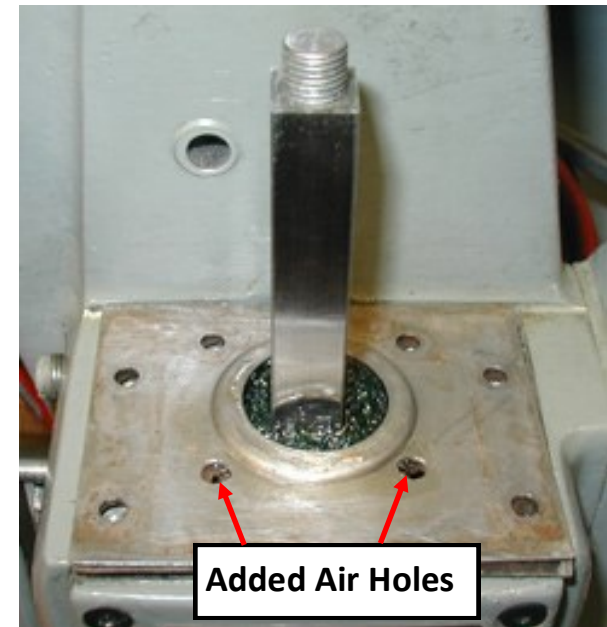
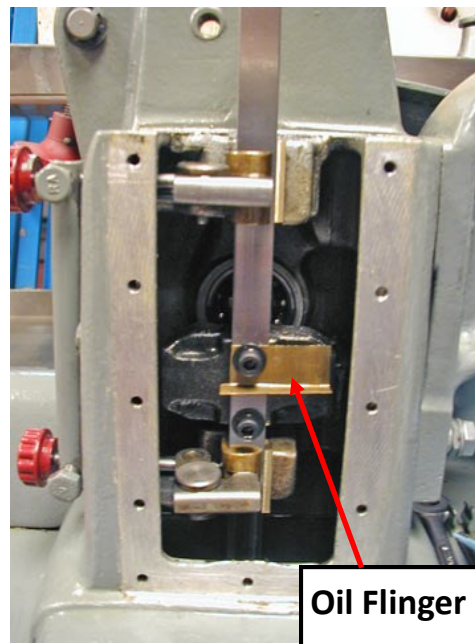
Bellows Repair - Final Installation

Everything installed on the machine.



Lubrication Improvement

My original machine had a totally destroyed Vertical Shaft as well as worn out adjustment bearings. I made all new parts. One of the reasons for failure, in my opinion, was lack of lubrication of top bearing. I also added a "oil flinger" that would fling oil up from the sump. I opened it up to look last year and the felt was still wet so the "oil flinger" seems to work. As you can see I added a felt that could keep the bar lubricated. When I did that it blocked off the port for the air so I added two holes, they probably should have been bigger but it seems to give enough air flow to clear fillings.





My Current Machine

It has been in use since February of 2009. I had to make an overarm and the bar to support it. It has seen lots of use.



My "New" Machine

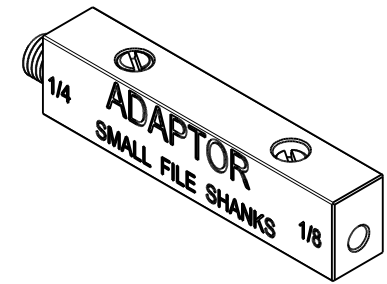
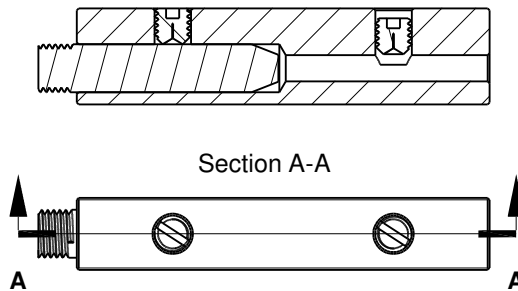
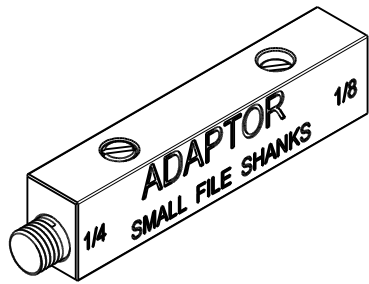
It has all the original parts, including wrench, small file adaptor, and the angle setting block. That is a factory light, I wish I had the Magnifier Light instead.



Small File Adaptor Attachment

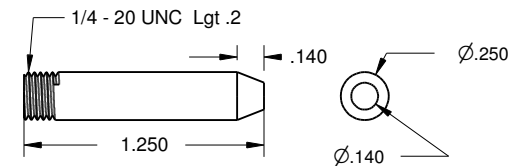
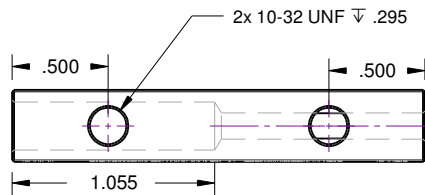
This adaptor lets you use 1/4" and 1/8" files. You can see a set of 1/4" as compared to the large 8" file on the right in the first picture. I did not know the adaptor existed and you can see the one I "invented". In the second picture you see a close up of the original. The small rod at the top is the storage stud, It screws into the base just behind the angel setting block. You slip the adaptor over it and tighten the set screw to keep it in place. I can see where these would disappear. I included a set of drawings if you want to make one.



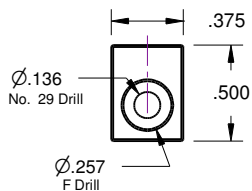


Slotted or Hex Set Screw

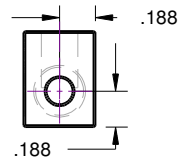
Length: .1875



Adaptor Stud
Material: Mild Steel



Adaptor Body
Material: Mild Steel



Slotted or Hex Set Screw
Length: .1875

Notes:

1. Chamfer's edges .010, Counter sink holes .010
2. The adaptor stud is screwed into a tapped hole behind the angle block. You slide the Adaptor over it and lightly tighten the screw.
3. The adaptor is used for small 1/4 inch and 1/8 inch files, and is mounted in the main file holder.
4. Lettering Stamped with metal stamping sets for different sizes

Information & Modifications		SUBASSEMBLY	
		All American Die Filer	
PART	DWG NO.	REV	
Small File Adaptor	1		
SCALE	DATE	DRAWN BY: Bob Nawa	
None	11 / 28 / 2015	© 2015 All Rights Reserved	

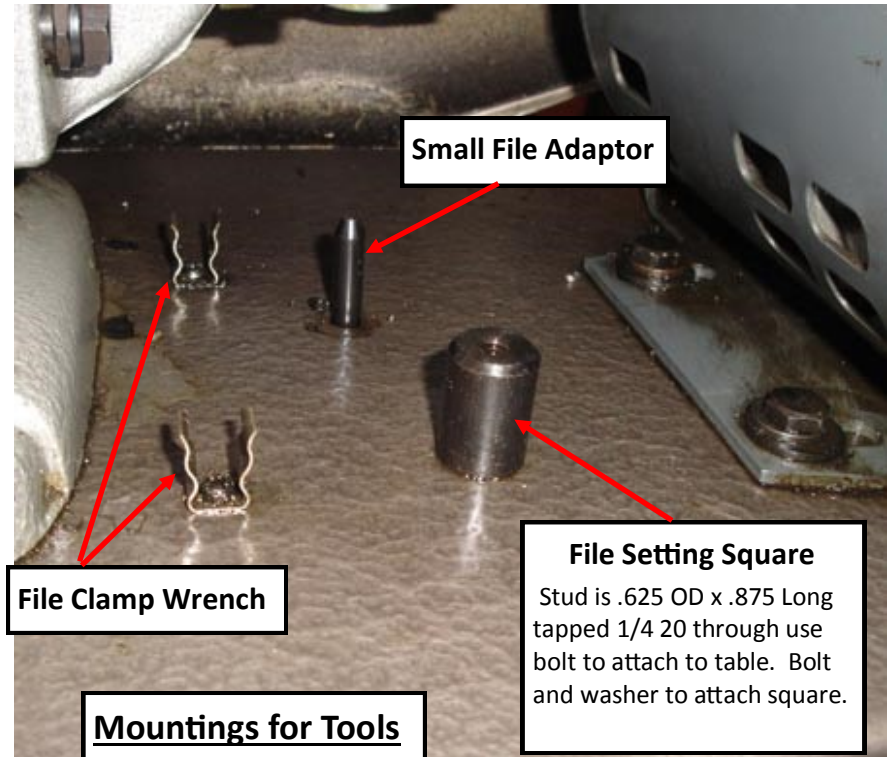
File Setting Square and File Clamp Wrench Attachments



File Setting Square

Angles were 0, 1/2, 1 and a V at 0 degrees for round files

The two additional attachments for setting the file in place are shown. I have included drawings for both the square and the wrench for those who want to make them.

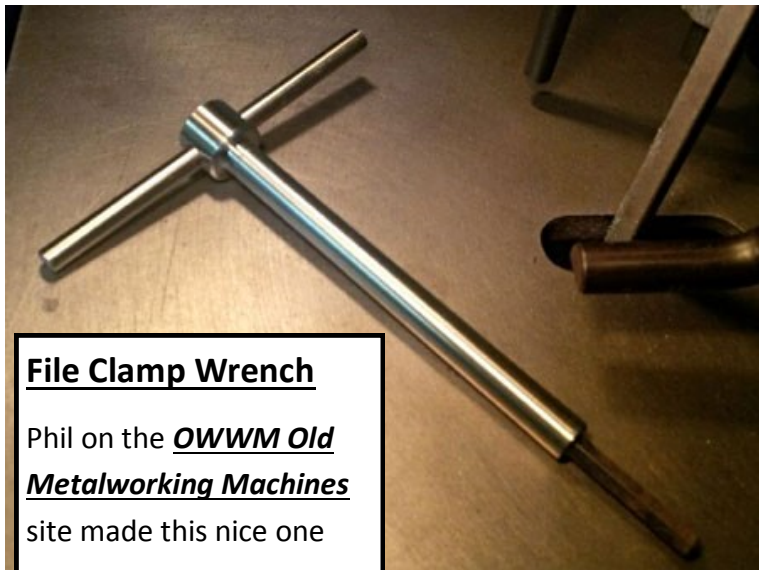


Small File Adaptor

File Clamp Wrench

File Setting Square
Stud is .625 OD x .875 Long
tapped 1/4 20 through use
bolt to attach to table. Bolt
and washer to attach square.

Mountings for Tools

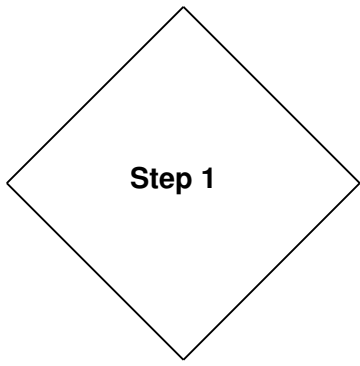


File Clamp Wrench

Phil on the [OWWM Old Metalworking Machines](http://www.owwm.com) site made this nice one



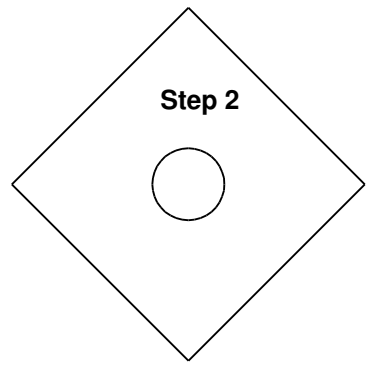
Original File Clamp Wrench



Step 1

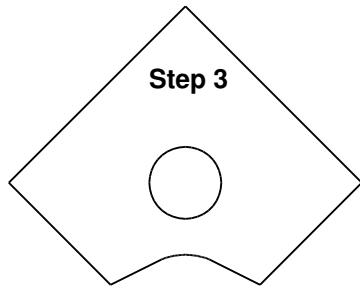
Start with block
2.6L x 2.6W x 1.6H

Make sure sides are
perpendicular to base
as they are used to set
the files.



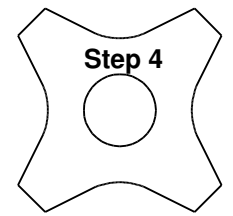
Step 2

Drill .75 Hole



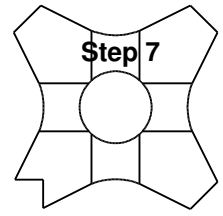
Step 3

This contour just needs
to be approximate. Use
a .625 round mill for bottom
and just blend angle cuts.



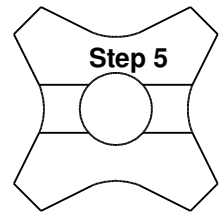
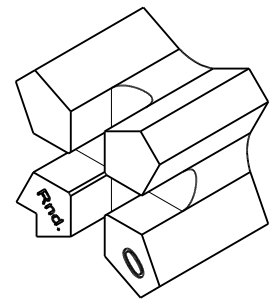
Step 4

Finish all four sides or
all four at same time



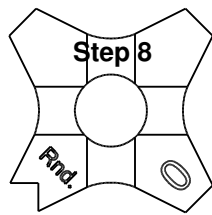
Step 7

V cut with mill, this needs
to be done perpendicular
to base as it is setting
round files.



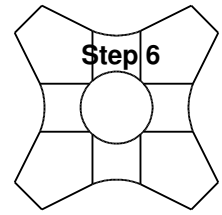
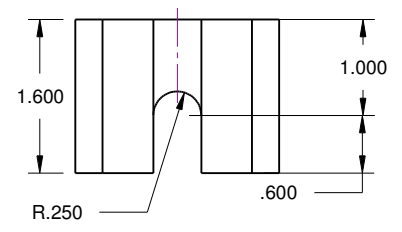
Step 5

First slice cut with
.5 round (could
be flat) your choice



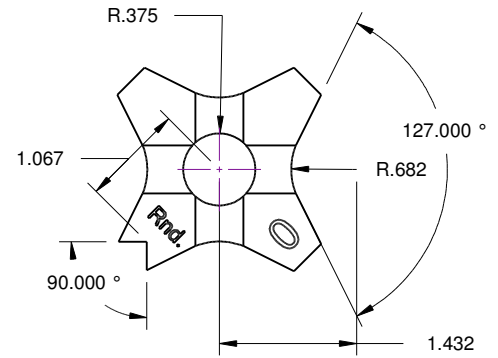
Step 8

Stamp sides that
are ready for use



Step 6

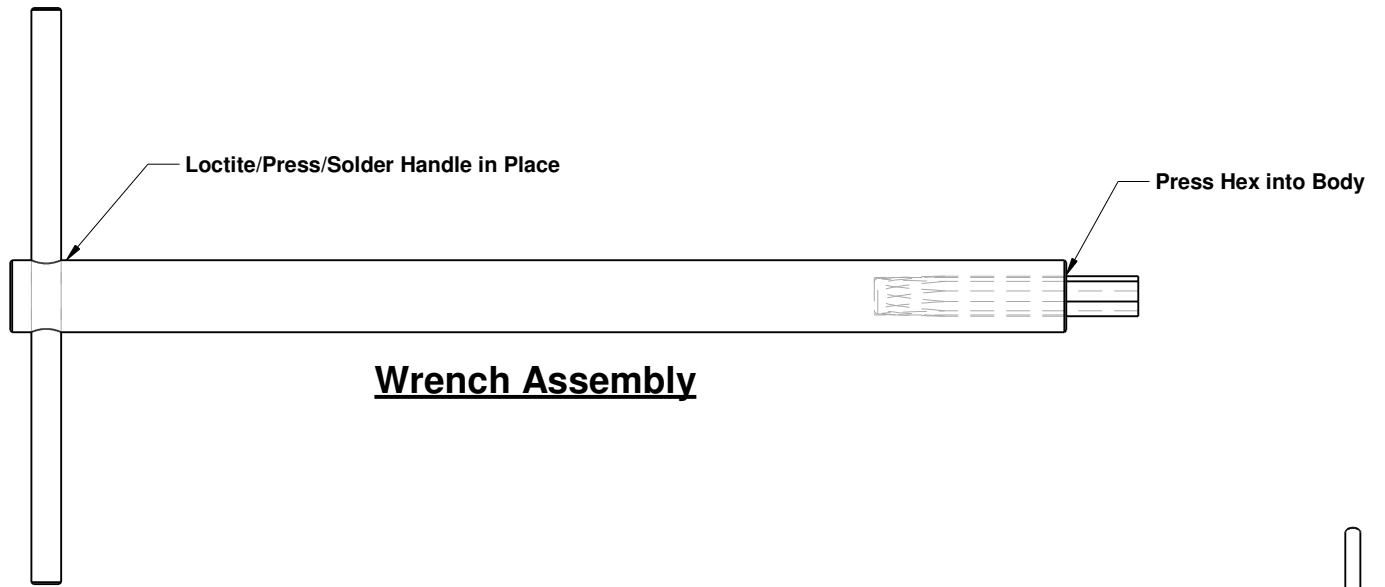
Second Slice Cut



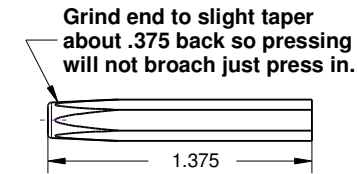
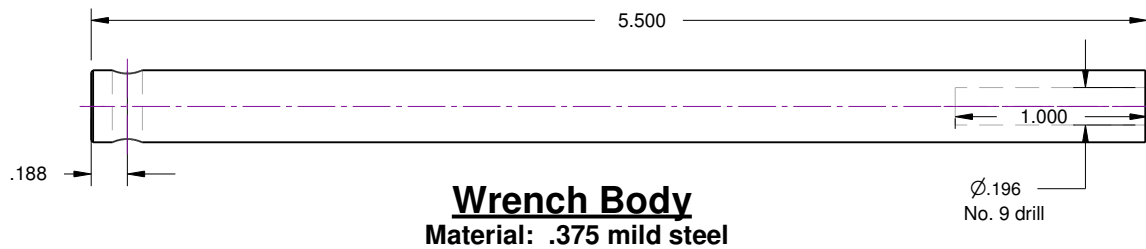
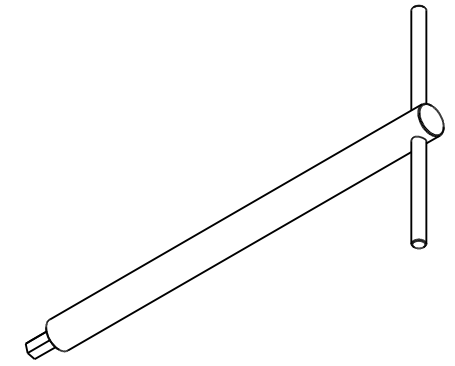
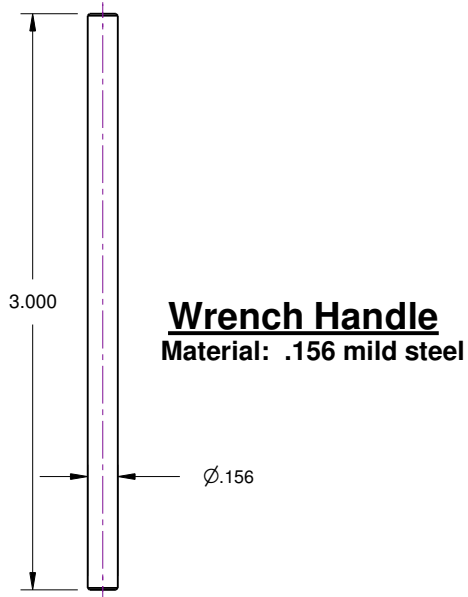
Notes:

1. This block is physically the same size as the original. Trying to put all the draft angles and rounding in is a waste of time. You can blend and trim edges as desired.
2. It is important that the base and the finished file setting surfaces be set accurately relative to the base. The two I show for the standard flat file and round files (the V) are perpendicular to the base. The original had 1/2 and 1 degree settings. You can make the other two to any angle you want.
3. This is just one way to make a block.
A regular V block would work just fine as long as all you need are perpendicular settings.

Information & Modifications		SUBASSEMBLY	
File Setting Block		All American Die Filer	
PART	DWG NO.	REV	
File Setting Block	1		
SCALE	DATE	DRAWN BY: Bob Nawa	
None	12 / 04 / 2015	© 2015 All Rights Reserved	



Wrench Assembly



Wrench Hex
Material: Length of 3/16 Allen Wrench

Note:

1. I have not made one of these as I have an original. A No. 8 or 10 might provide for a better press fit. Phil (see picture of his several pages back) suggested packing the hole with J-B Weld in addition to pressing.
2. Another suggestion was to just make hole a slip fit and use set screw to hold in place. When hex is damaged easy replacement.

Information & Modifications		SUBASSEMBLY	
		All American Die Filer	
PART	DWG NO.	REV	
Wrench	1		
SCALE	DATE	DRAWN BY: Bob Nawa	
None	12 / 04 / 2015	© 2015 All Rights Reserved	

Wear in the Vertical Shaft

The reason I am writing this section is that there is a design flaw (in my opinion) in the All American Die Filer, the top bearing for the Vertical Shaft. The flaw is that the top bearing does not get as well lubricated as the bottom bearing as the oil level is at the middle of the case. The top bearing relied on splashing. The Vertical Shaft moves up and down driving the file through the Ball Joint File Clamp Assembly. The Vertical Shaft must move along a 90 degree vertical axis all the time. The vertical axis is perpendicular to the table top. The Vertical Shaft moving along the vertical axis allows the Ball Joint File Clamp Assembly to lock a file at a precise angle relative to the table, eg 90 degrees. As long as the Vertical Shaft is moving with no motion of its own other than vertical there is proper movement of the file relative to its setting to the table. The proper movement is demonstrated by taking a test block and setting it next to a pseudo file say .005 away, the vertical movement of the pseudo file will remain exactly that distance away from the test block no matter what vertical position of the Vertical Shaft. If you were actually filling a part the part would not be moving around following a moving file in and out or sideways.

My first All American Die Filer had a badly damaged Vertical Shaft. The bearings at the top support were worn through and to compound that the obvious lack of lubrication had caused the Vertical Shaft to wear in a taper about .020-.030, see the photos.



Even though the bearings could be adjusted a bit, two issues occurred as the Vertical Shaft moved vertically. As it moved top to bottom the Vertical Shaft shifted axis angle in two planes as you can see the taper was on two sides and it was different on each side. In addition, the bearing adjustment really could not hold the shaft tight as the top worn deeper than the bottom so the whole shaft could be moved around if grabbed by hand, ie it was loose. Therefore, no matter how you set the file it just moved every which a direction in and out as well as changing its angle relative to the table as it moved up and down. This worn condition made it impossible to file a part with a specified angle to the table.

The next pages show you how to determine your machines current state and how to fix most of the problems.

Testing for Wear in the Vertical Shaft

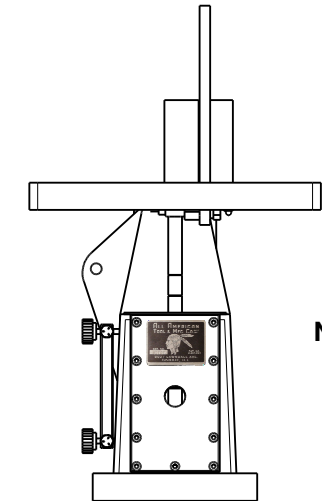
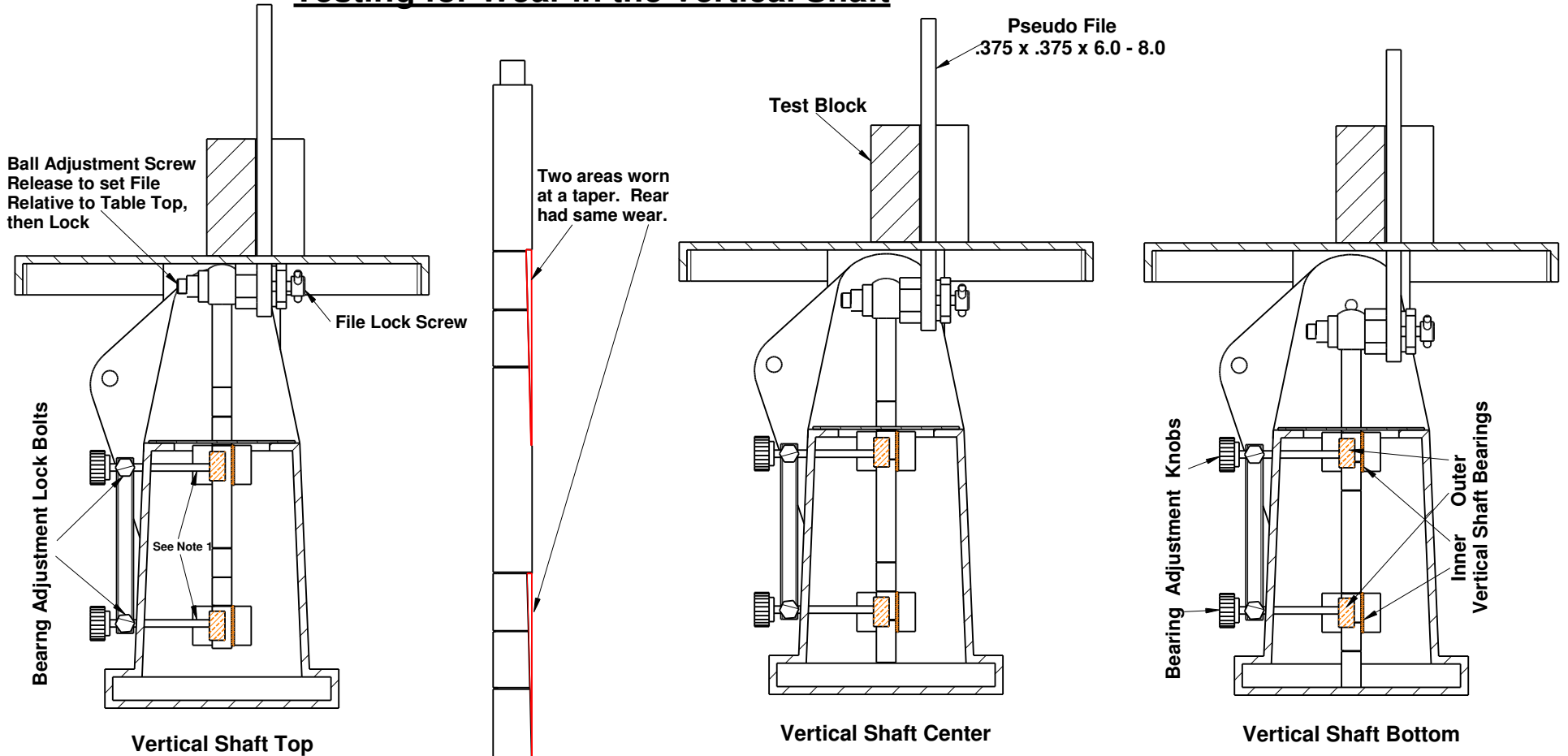
Even if your machine passes the test I am going to describe, afterwards I would strongly recommend draining the oil, taking the cover off the machine and examining the four bearings as well as the Vertical Shaft for signs of wear. You might want to make some new bearings. Unfortunately, at this time I could not find my hand drawings of the bearings or the Vertical Shaft. I will update this document with that information when I take my “new machine” apart for a good cleaning and new bellows installation.

For the test procedure you can refer to the next page that has a set of drawings to assist in visualizing the test.

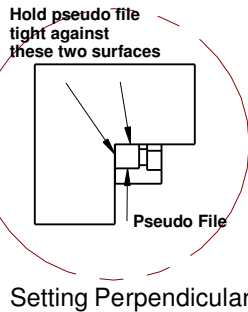
1. Make sure the oil level is OK, none of the upper arms are used so move them out of the way, place the pseudo file (see dwg.) in the Ball Joint File Clamp Assembly and roughly set it up as there are several steps that need to be done before setting it accurately .
2. Follow the take up bearing adjustment procedure as shown on page 8 of the downloaded Manual available on the site you downloaded this document. As a convenience I included that page as the last page of this document.
3. Turn machine off and pull plug, all the rest of the movement will be done by manually turning the large pulley.
4. Set the Ball Joint File Clamp Assembly / Vertical Shaft at about the center of the vertical movement, see “Vertical Shaft Center” on dwg.
5. Using a test block as described on the dwg. or a “V” block on end (assuming it is actually ground perpendicular to the slot), lock the pseudo file in both planes of the “V” as shown “Setting Perpendicular” on the dwg.
6. The pseudo file is now set accurately relative to the table at this particular point in the vertical movement of the Vertical Shaft.
7. Next take some feeler gage (any size between .005 ->.010) and in one of the planes set the test block against the pseudo file with that space see “Setting Test Distance” on dwg.
8. Remove the feeler gage while holding the test block so the test block will not move. If at this point you can move pseudo file around ie the Vertical Shaft is loose, you know you already have an issue, the rest of the test is not going to give you any further information.
9. Rotate the pulley so the Vertical Shaft is at the bottom. Using feeler gage determine the distance from the pseudo file to the test block. Record the measurement. If the Vertical Shaft is in perfect alignment the distance will be the one you started with on the initial setup in step 7.
10. Repeat step 9 for the top, center, bottom positions in the first plane. Then repeat for the adjoining 90 degree plane.
11. Look at all the recordings of the different positions and planes. You now have a good idea of how well your machine is performing.

At this point you know the state of the machine. You can decide how you wish to proceed - new Vertical Shaft, new bearings, etc. Again I recommend you take it apart and examine the bearings and Vertical Shaft, if for no other reason than to clean it out and put in new oil.

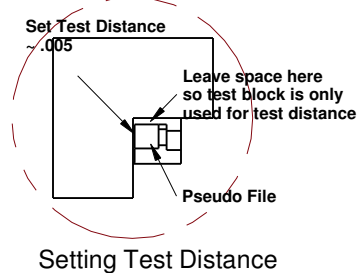
Testing for Wear in the Vertical Shaft



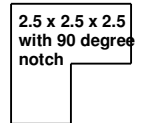
Damaged Vertical Shaft



Setting Perpendicular



Setting Test Distance



Test Block
The notch must be perpendicular to the bottom. A "V" block that is perpendicular to the slot would work also.

Note

1. For clarity I did not show the actual adjusting mechanism for the bearings. It pushes on the two surfaces of the outside bearings forcing the Vertical Shaft into the inner bearings and therefore into the casting notch.

Information & Modifications		SUBASSEMBLY	
		All American Die Filer	
PART	DWG NO.	REV	
Wear Testing	1		
SCALE	DATE	DRAWN BY: Bob Nawa	
None	12 / 13 / 2015	© 2015 All Rights Reserved	

OPERATING INSTRUCTIONS

ALL AMERICAN MODEL 1500-S PRECISION BENCH FILING MACHINE

Before starting machine remove $\frac{1}{8}$ " pipe plug from housing and fill mechanism with #20 or #30 machine oil. When oil level shows half way up the plastic oil window, replace plug.

TO SET FILE:

- A. Clamp file into file holder using file clamp screw.
- B. Loosen Ball Joint Assembly slightly with hex wrench furnished.
- C. Square up file with Setting Square, using V groove face. Tighten ball and socket joint.

TO ADJUST OVERARM:

- A. Move file into highest position of stroke by turning large pulley by hand.
- B. Adjust height of Overarm so that it will clamp file in the desired position.
- C. Open overarm file clamp, sufficiently to accommodate file.
- D. Bring overarm clamp into position by operating Swivel adjustment on side of overarm, so that it touches file. Clamp may be swiveled by operating knurled screw.
- E. Lift cam lever (to left of Overarm) in order to permit file being clamped with jaws $\frac{1}{16}$ " below overarm housing.
- F. Clamp Overarm to post.
- G. Clamp file in file clamp.

Machine is now ready for filing. Any front to back inaccuracy in alignment of file can be adjusted

by operating swivel adjustment. Tighten swivel adjustment before starting to file. AUXILIARY OVERARM may be used in place of standard overarm. This overarm carries an adjustable soft steel roller for backing up file or other tool. Both overarms are standard equipment and may be used interchangeably.

TO FILE TABLE:

- A. Pull register pin out of register by operating register lever 1500-25.
- B. Loosen table clamp knob.
- C. Set table to the desired angle by turning table adjustment knob.
- D. Tighten table clamp knob.

TO ADJUST BEARINGS OF VERTICAL SHAFT:

- A. While machine is running, loosen two hex head screws on locking bar.
- B. Adjust bearings to suit by turning bearing adjustment screws (plastic heads).
- C. Tighten hex head screws.

SPEED OF MACHINE is adjusted by turning speed control crank 1500-39. Speed can be changed only while machine is running. Infinite changes within the range of 210 to 470 strokes per minute may be obtained. Oil all moving parts daily.