

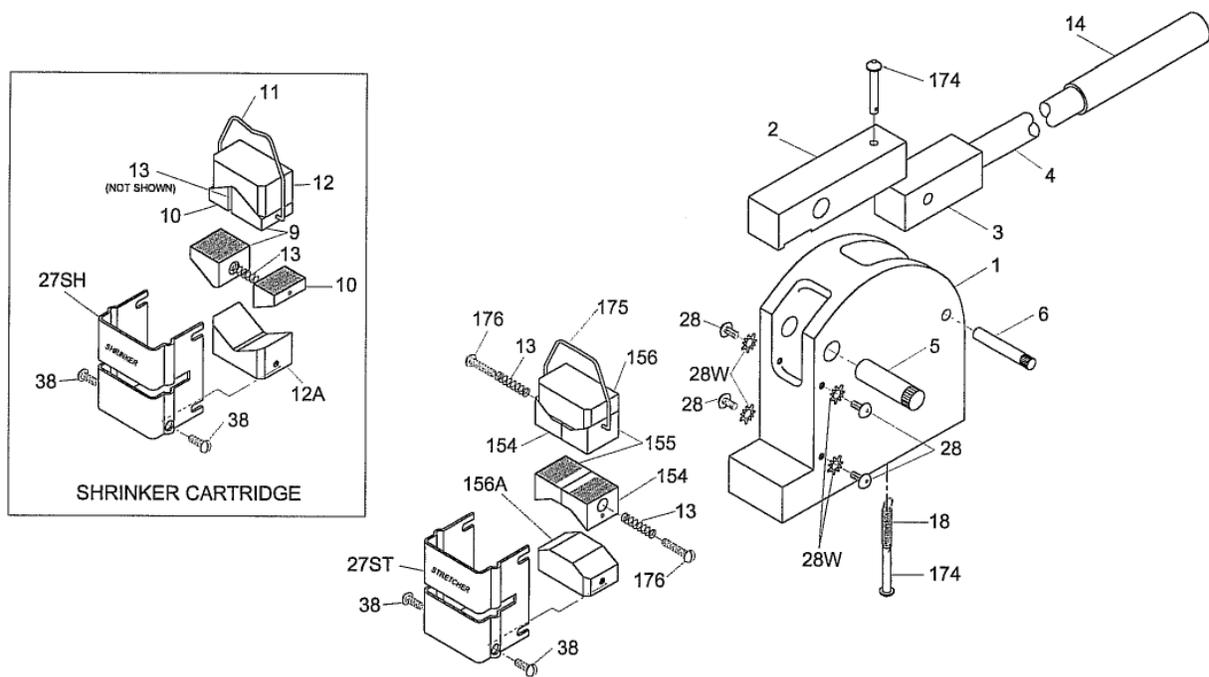
# INSTALLATION AND OPERATING INSTRUCTIONS FOR METAL SHRINKERS AND STRETCHERS

(SHRINKS METAL FOR INSIDE ANGLES, STRETCHES METAL FOR OUTSIDE ANGLES)

1. Secure the tool to the work bench. Two holes are drilled and tapped into the body of the tool to accept two 3/8 - 16 bolts. It can also be mounted on a vise if portable on-the-job field use is desired. The more rigid you secure it, the easier it is to use.
2. Try the tool using a sample piece of metal first to get the "feel" of it.
3. When forming any metal, work the leading edge first. This "breaks down" the maximum resistance and permits easy and accurate working thereafter.
4. Move the metal back and forth as you apply pressure to the handle until the desired radius is obtained. The control of these tools lies in the pressure exerted in the handle as the metal is moved back and forth between the jaws.
5. The jaws of both tools are "toothed" so as to exert a better grip on the metal. These teeth leave slight markings depending on the hardness of the metal and can quickly be removed with either abrasive cloth or wheel.

## CAUTION TIPS

1. Notice when you receive your tool that an insert is between the teeth. **NEVER** press without a separator between jaws: **ALWAYS** insert metal pieces or other material divider between jaws when not in use.
2. Take handle out of fulcrum slot when not in use to avoid accidental press.



PART#	QTY.	PART DESCRIPTION
9-1	1	BODY
9-2	1	PRESSURE ARM
9-3	1	FULCRUM ARM
9-4	1	HANDLE WITH VINYL GRIP
9-5	1	PRESSURE ARM PIN
9-6	1	FULCRUM ARM PIN
9-9	2	LARGE JAW (SHRINKER)
9-10	2	SMALL JAW (SHRINKER)
9-11	1	SUSPENSION WIRE (SHRINKER)
9-12	1	UPPER PRESSURE V BLOCK (SHRINKER)
9-12A	1	LOWER PRESSURE V BLOCK (SHRINKER)
9-13	2	PRESSURE SPRING
9-14	1	VINYL GRIP FOR HANDLE
9-18	1	PRESSURE ARM RELEASE SPRING
9-27SH	1	COVER FOR SHRINKER
9-27ST	1	COVER FOR STRETCHER
9-28	4	SOCKET HEAD SCREW (8-32 x 3/8)
9-28W	4	EXT. TOOTH LOCK WASHER

PART#	QTY.	PART DESCRIPTION
9-38	2	MACHINE SCREW (8-32 X 3/8 )
9-154	2	STRETCHER JAW (SPRING SLIDE)
9-155	2	STRETCHER JAW
9-156	1	UPPER PRESSURE BLOCK (STRETCHER)
9-156A	1	LOWER PRESSURE BLOCK (STRETCHER)
9-174	2	RIVET
9-175	1	SUSPENSION WIRE (STRETCHER)
9-176	2	MACHINE SCREW (8-32 x 1)
REPLACEMENT ASSEMBLIES		
PART#	QTY.	ASSEMBLY DESCRIPTION
9-9	2	REPLACEMENT JAWS FOR SHRINKER ASSEMBLY# 9-RJ-71
9-10	2	
9-13	2	
9-154	2	REPLACEMENT JAWS FOR STRETCHER ASSEMBLY # 9-RJ-82
9-155	2	
9-176	2	
9-13	2	

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## GENERAL MAINTENANCE

Clean the jaws occasionally. Blowing them out with an air hose helps but it doesn't do the job thoroughly. Vacuuming helps to get filings out. The best way to maintain the jaws is to periodically disassemble them and clean as follows:

1. Remove Shrinker or Stretcher cartridge (cover/jaw assembly) by loosening four socket head screws.
2. Take out upper jaws and V block (Shrinker) or upper jaws and pressure block (Stretcher) as a single assembly. Be careful! DO NOT lose the spring between the jaws!
3. Remove suspension wire.
4. Take notice as to how the Shrinker jaws are inserted. A small jaw is opposite a larger jaw, top to bottom.
5. Clean the two upper jaws with a non-hazardous metal cleaner and a file card (brush). DO NOT use a wire brush or a wire wheel.
6. Always brush in the direction of the Teeth (with the grooves).
7. Clean the V block (Shrinker) or pressure block (Stretcher).
8. Re-assemble the upper jaws and set aside.
9. After removing the two machine screws at the lower end of the cover, remove the bottom jaws by lifting and taking out as a single unit with the V block (Shrinker) or pressure block (Stretcher). Clean all as described previously.
10. Replace jaws. Be careful to locate larger Shrinker jaw opposite small Shrinker jaw. When replacing the V blocks (Shrinker) or pressure blocks (Stretcher), chamfered corners face front.
11. Oil jaws **lightly** when **not** in use for extended periods.
12. For best operating results, clean the jaws after every job.

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