



Mastercool[®] Inc.
"World Class Quality"

OPERATING INSTRUCTIONS

HYDRAULIC FLARING AND SWAGING

MODEL#-71700



HYDRAULIC FLARING AND SWAGING INSTRUCTIONS



Warning!
Wear Safety Glasses

Note: Copper tube to be flared or swaged should be cut clean and square. Use a tool made to cut copper tubing such as a commercial grade tube cutter. ***The end must be deburred on the inside and outside of the tube.**

1. Open the relief valve by turning counterclockwise. Hold the yoke and rotate the hydraulic cylinder until last thread on cylinder is even with yoke base. (Ref. Fig. 1)
2. Position the correct size die set and tube in the yoke assembly. Tube end should be even with face of die blocks for swage and even with mark on die blocks for flare. (Ref. Fig. 2)
3. Tighten "T" Handle (rotate clockwise) to lock die blocks and tube in yoke. When swaging, insert correct size swage adapter into adapter seat on end of piston (slotted end of adapter fits into grooved end of piston). When flaring, insert cone shaped adapter. (Ref. Fig. 3)
4. Close relief valve by rotating clockwise. When swaging, hold yoke and rotate hydraulic cylinder clockwise advancing adapter as close to die blocks as possible, without inserting into tube. When flaring, rotate the hydraulic cylinder clockwise advancing the adapter to engage the tube. (Ref. Fig. 4)
5. Slowly pump handle. As piston advances, make sure adapter enters tube smoothly. Continue pumping until resistance from pump handle is felt and large flange on swage adapter reaches face of die blocks or cone adapter has engaged die blocks. Stop pumping, swage or flare is complete. (Ref. Fig. 5)
6. Open relief valve, DO NOT loosen "T" Handle. Hold the yoke and rotate hydraulic cylinder counterclockwise until adapter is fully disengaged from die blocks. Loosen "T" Handle (rotate counter clockwise) and remove die block and tube from yoke. (Ref. Fig. 6)

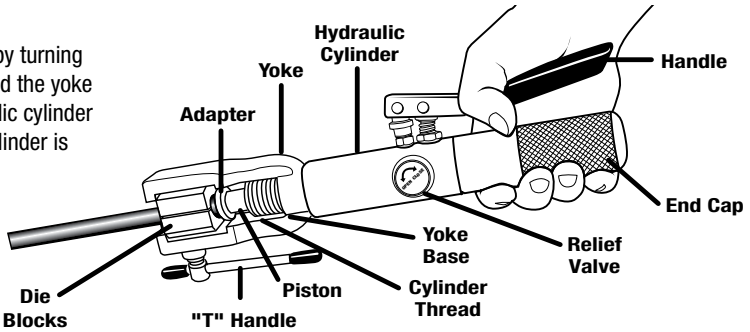
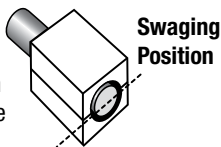


FIGURE 2

Insert the tube between the die blocks as shown.

When swaging,
position tube even with the end of the die blocks.



When flaring,
position tube even with line "guide" on die block bore.

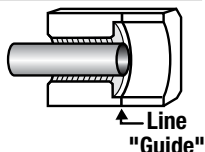
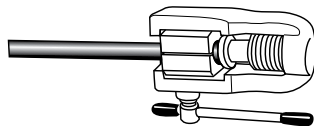


FIGURE 3

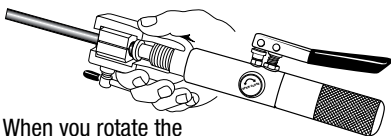
Insert and tighten the dies and tubing into the yoke. *It is important to securely fasten the die blocks.*



Securely fasten die blocks by turning the "T" handle clockwise.

FIGURE 4

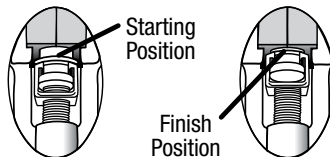
Hold the yoke and rotate the hydraulic cylinder clockwise to advance swage adapter until front of adapter is even with die blocks. Flare adapter should be engaged in tube.



When you rotate the cylinder, the adapter will travel towards the die.

FIGURE 5

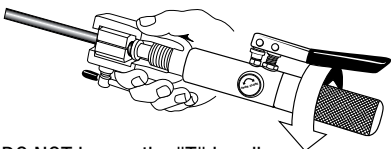
With relief valve closed securely, begin pumping the handle. Continue pumping until the edge of the adapter meets the die.



Securely fasten die blocks by turning the "T" handle clockwise.

FIGURE 6

Hold the yoke and rotate the hydraulic cylinder counterclockwise to remove the adapter from the die blocks.

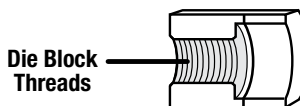


DO NOT loosen the "T" handle until adapter is outside of the die blocks. Some resistance while turning is normal.

— Maintenance Instructions —

Lubricate "T" handle threads and yoke/hydraulic cylinder threads with EP grease as needed.

Clean internal die block threads with brush periodically to remove any debris ensuring a tight grip on tubing when flaring or swaging.



OIL CHECK

Please note that oil check should only be done if there are traces of oil found suggesting some type of leak.

Check hydraulic oil level. Hydraulic oil can be checked by unscrewing back part of hydraulic cylinder. Rotate endcap (round textured section under pump handle) counterclockwise until separated from main body. Hold tool vertical with rubber reservoir at top. Remove small plug from end of reservoir. With piston in full retract position, hydraulic oil should fill reservoir. Add hydraulic oil as needed. Use hydraulic oil with a viscosity of about 46. Replace plug and endcap.

Part#	Description	SWAGING ADAPTERS		SWAGING DIE SETS	
		Part#	Description		
71700-A	Flaring & Swaging Pump	71700-04	1/4" Swaging Adapter	71700-104	1/4" Die Set
71700-B	Yoke Assembly	71700-05	5/16" Swaging Adapter	71700-105	5/16" Die Set
71700-01	45° Flaring Cone	71700-06	3/8" Swaging Adapter	71700-106	3/8" Die Set
71700-PB	Plastic Molded Box	71700-08	1/2" Swaging Adapter	71700-108	1/2" Die Set
		71700-10	5/8" Swaging Adapter	71700-110	5/8" Die Set
		71700-12	3/4" Swaging Adapter	71700-112	3/4" Die Set
		71700-14	7/8" Swaging Adapter	71700-114	7/8" Die Set