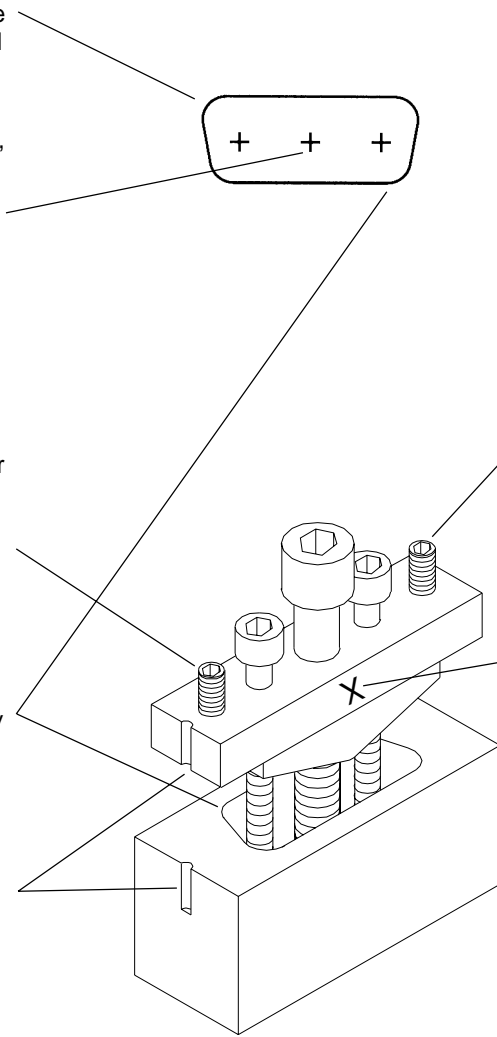


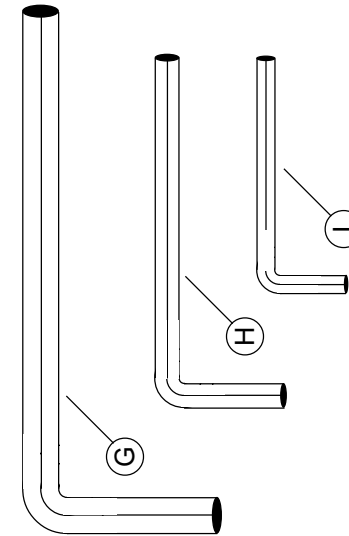
I N S T R U C T I O N S

PLEASE NOTE STEPS (5) & (6). IF THESE INSTRUCTIONS ARE NOT FOLLOWED THE DIE WILL BREAK. THERE IS NO WARRANTY PROVIDED FOR THIS MISUSE.

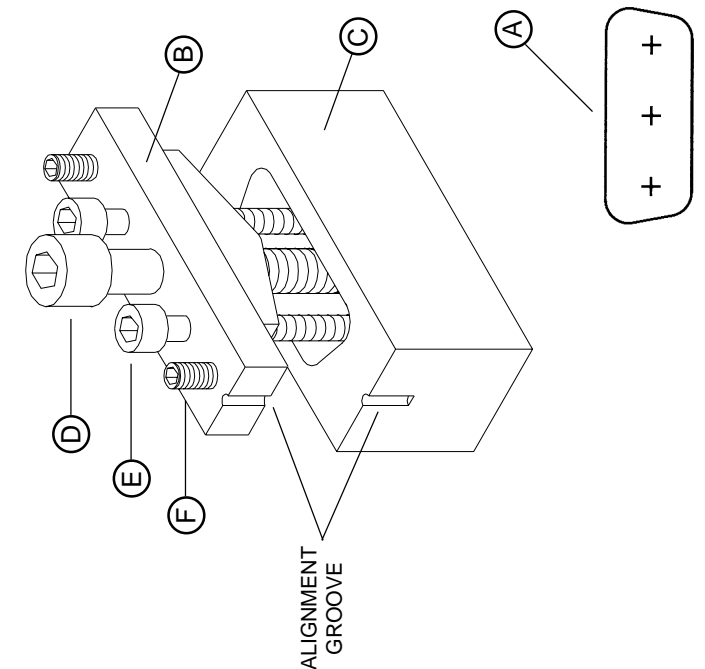
- (1) MOUNT the adhesive backed template at the location you wish to make a connector installation. (Caution: be sure there will be sufficient clearance to use both punch and die at this spot.) Surface must be clean and dry so the template will adhere.
- (2) CENTER PUNCH at the points marked "+" on the template. Drill the two outer holes with a 3/16 inch drill; drill the center hole with a 1/4 inch drill. It is wise to remove the template before the actual drilling.
- (3) CLEAN and LUBRICATE the area to be punched. Any oil (or even vegetable shortening) will allow the punch to work easier.
- (4) THREAD the 2 hard point screws into their holes so the points do not project beyond the face of the punch flange. IF THEY PROJECT BEYOND THE FLANGE FACE EXCESSIVE LOAD WILL CAUSE THE PUNCH TO BREAK.
- (5) NOTE the template has tapered ends; so do the punch and die. When the punch and die are installed to make the hole they must be aligned properly with each other.
- (6) INSERT the three draw screws into their holes on the punch, through the 3 holes you drilled in the panel and thread them into their tapped holes in the die. You will note there is a groove on the end of the punch; there is a corresponding mark on the end of the die. These marks must BOTH be on the same end, as shown in the sketch. If you install the Punch/Die incorrectly, the die will break and the punch will be distorted. THERE IS NO WARRANTY AGAINST BREAKAGE OR DISTORTION DUE TO SUCH MISUSE.



- (7) AFTER properly aligning punch to die and snugging the 3 draw screws hand tight, use the large hex key to tighten the draw screws, alternately if necessary, and thus cut the hole. Most times the entire hole can be made by use of the center draw screw only and the screws on either side are used to correct any tilting of the punch as related to the die.
- (8) AFTER the hole is punched and before the 3 draw screws are loosened the two hard point set screws are tightened sufficiently to mark the locations of the mounting holes for the connector. (After removal of the punch unit you can then center punch and drill the holes at these locations.) Then, BACK THESE 2 SCREWS CLEAR (as per step 4).
- (9) REMOVE the 3 draw screws and die.
- (10) REMOVE the punch from the panel. By gripping the punch with vise grip pliers in the center of the flange and applying slight up-and-down motion the punch should release. Do NOT pry the punch out with a screwdriver.
- (11) REMOVE the slug. The slug is readily removed by threading the 2 ejector screws into the die.
- (12) STORE the tool after applying a light oil coating.



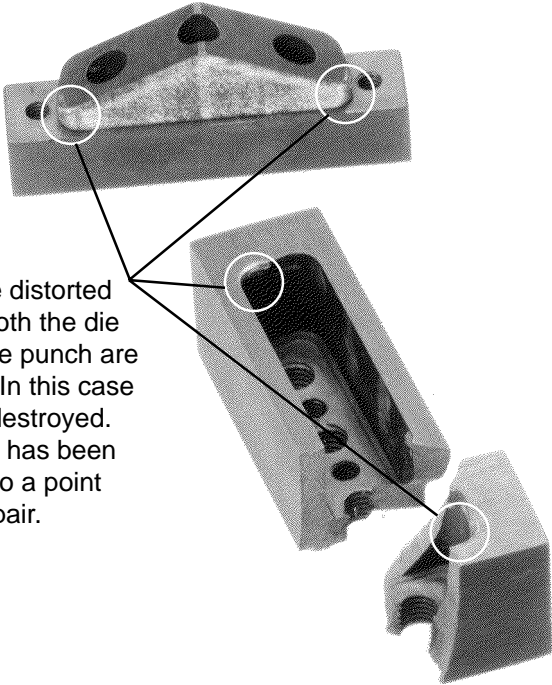
ITEM	QUANTITY	PART NO.	DESCRIPTION
A	25	AT-15	Template
B	1	HP-15P	Punch
C	1	D-15P	Die
D	1	CS-2	Draw Screw
E	2	D/E-15	Draw/Eject Screw
F	2	PP-15	Set Screw
G	1	AW-D	Hex Key
H	1	AW-E	Hex Key
I	1	AW-PP	Hex Key



RECOGNIZING THE CAUSES OF PANEL PUNCH DAMAGE

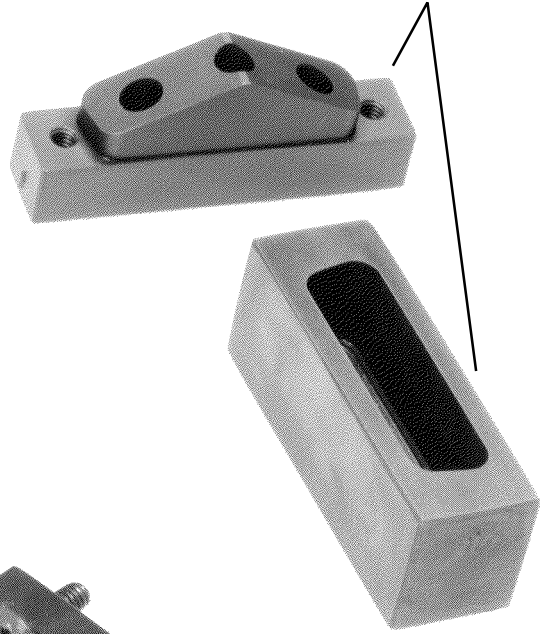
DO NOT RETURN YOUR UNIT TO THE SELLER FOR A "DEFECT IN MANUFACTURE" IF THE DAMAGE APPEARS AS FOLLOWS:

The Panel Punch Instructions outline the proper procedure for assembly of the Punch/Die unit in order to punch a hole. If the instructions are not followed and the Punch is inserted into the Die incorrectly, 180 degrees from its proper placement, an end load will be applied to the die section which exceeds design load and the die will break. See the example below, left. The actual load that caused this damage was not measurably higher than the force that would be required to punch 16 gauge mild steel if the punch and die were not lubricated.

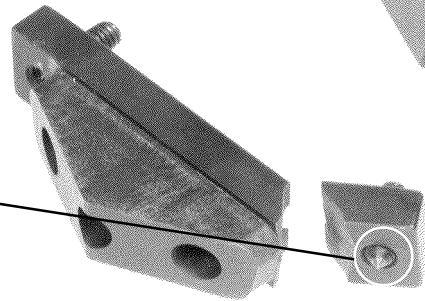


Note these distorted corners. Both the die unit and the punch are damaged. In this case the die is destroyed. The punch has been damaged to a point beyond repair.

This Punch and Die are new and undamaged. Properly used, this unit could last indefinitely.



Because the Hard Point Set Screw was not retracted (backed-off; unscrewed) before the punching of subsequent holes, unequal loading of the flange occurred, resulting in breakage of the flange.



READ THE DIRECTIONS. THE ABOVE TYPES OF BREAKAGES ARE NOT COVERED BY WARRANTY.

WARRANTY AND DISCLAIMER: There are no express warranties which extend beyond the description and face hereof. SELLER DISCLAIMS ANY IMPLIED WARRANTIES AS TO MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. Since seller can not control the manner of use of its products after the sale, Seller will not be responsible for any consequential or indirect damages. Rather, Seller will, at it option, either replace the products sold or refund the purchase price. No warranty will apply if product is in any way altered or modified after delivery by Seller.

(INSTRUCTIONS ON REVERSE SIDE)

www.ctm-inc.com

**RE-USE THIS BAG.
WRENCHES AND SCREWS
ARE NOT STANDARD. KEEP
ALL COMPONENTS TOGETHER.**

MODEL MK-15P PANEL PUNCH

(for use with 15 pin D-Subminiature connectors, metal or plastic, for rear of panel mounting only.)

PATENTED



Challenge Tool & Manufacturing

P.O. BOX 306 • 11725 LINCOLN HIGHWAY EAST • NEW HAVEN, INDIANA 46774
TELEPHONE: (260) 749-9558 • FAX: (260) 749-6724