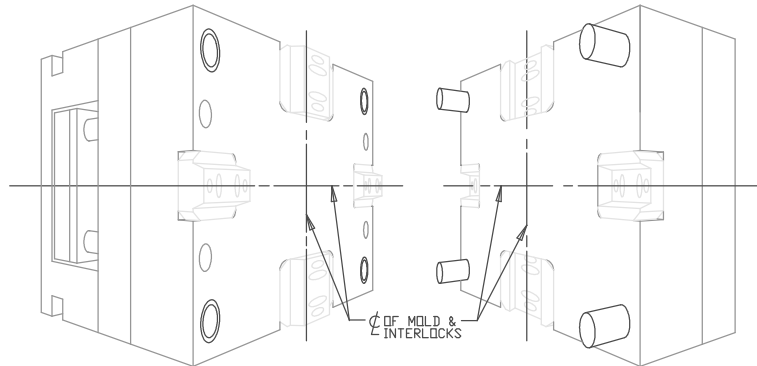


**D-M-E**

# RECTANGULAR TAPERED INTERLOCKS (MACHINED FROM THE MOLD PARTING LINE) MACHINING AND INSTALLATION INSTRUCTIONS

Please carefully read instructions on both sides before installing Rectangular Tapered Interlocks.

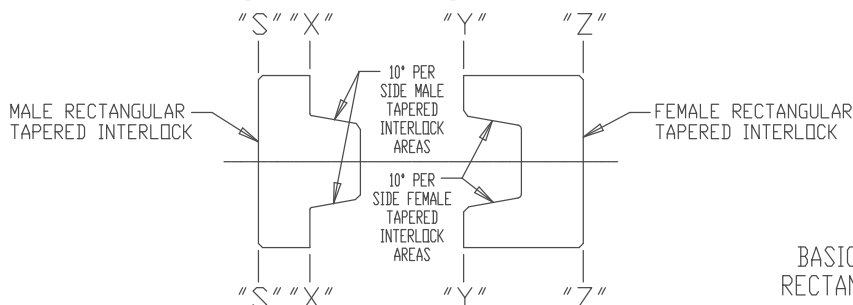
D-M-E RECTANGULAR TAPERED INTERLOCKS ARE DESIGNED FOR USE WHERE THE TWO HALVES OF THE MOLD MUST BE CLOSELY ALIGNED WITH EACH OTHER. THEY ARE DESIGNED TO BE INSTALLED WITH ALL MACHINING DONE FROM THE PARTING LINE OF THE MOLD. THE MACHINING OF THE POCKETS FOR THE RECTANGULAR TAPERED INTERLOCKS IS EXTREMELY IMPORTANT SINCE IT ESTABLISHES THE ACCURACY OF THE ALIGNMENT, AS WELL AS THE FITS OF THE INTERLOCKS IN THE POCKETS. REFER TO THE NOTES BELOW, AS WELL AS THE INFORMATION ON OTHER SIDE OF THIS SHEET FOR ADDITIONAL INSTALLATION INSTRUCTIONS.



## MACHINING AND INSTALLATION INSTRUCTIONS:

- Four sets of D-M-E Rectangular Tapered Interlocks must be used in each mold application. When in operation, the engaged interlocks contact the edges of the machined pockets to maintain the parting line alignment. The socket head cap screws are only used to retain the interlocks to the mold base. It is extremely important that the pockets be very closely machined and very accurately aligned.
- The center of each pocket for the Rectangular Tapered Interlocks must be located on the centerline of the mold base on each side and each end of the mold. This centerline location is critical to avoid misalignment problems which could result from uneven thermal expansion of the individual mold plates. Again, it is very important to machine the pockets for each set of interlocks with extreme accuracy in both alignment and fit.
- The Female Rectangular Tapered Interlocks must be mounted to the plate which is exposed to the highest operating temperature. Normally, this will be on the stationary or "A" half of the mold. This procedure is critical to insure that each Male Rectangular Tapered Interlock does not grow larger in width than each engaging Female Rectangular Tapered Interlock if uneven mold temperatures are present.
- Individually and uniquely mark each of the components of the mating Rectangular Tapered Interlocks, as well as their positions in the mold. This will insure that the interlocks will remain as sets once they have been fitted and installed.
- To maintain accurate alignment between the parting lines, each set of Male and Female Rectangular Tapered Interlocks must be properly fitted to have simultaneous contact on the 10° interlock angles, as well as on the flat surfaces as indicated on the other side of this sheet called "Basic Information for Fitting Rectangular Tapered Interlocks".
- Then the pockets must be machined for the four sets of Rectangular Tapered Interlocks. It is extremely important that the pockets be very closely machined and very accurately aligned. The pocket depth must also be closely held. Only if all of this is done can the interlocks accomplish their purpose.
- After the pockets for the Rectangular Tapered Interlocks have been accurately aligned and machined to establish the proper fit, the locations of the taps for the socket head cap screws can now be transferred from the components or dimensionally located in the pocket areas on the mold. These mounting holes for retaining the Interlocks should then be drilled and tapped, as required. Then install the Male and Female Rectangular Tapered Interlocks with the appropriate socket head cap screws. Each set of interlocks should be checked to assure that the required fit and alignment have been accurately achieved.
- Suggested Torque on the Socket Head Cap Screws is:
 

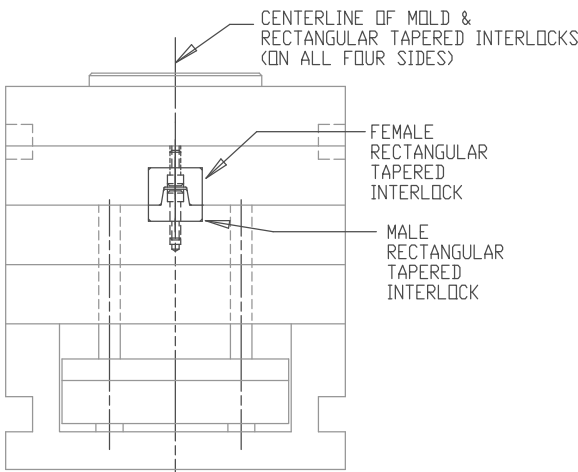
79 in-lbs for #10-24	Socket Head Cap Screws (or 6.4-ftlbs.)
200 in-lbs for 1/4-20	Socket Head Cap Screws (or 16.7-ftlbs.)
415 in-lbs for 5/16-18	Socket Head Cap Screws (or 34.6-ftlbs.)
- After installation of all four sets of interlocks, open and close the mold while the mold is on the bench and check to insure that proper alignment has been achieved.
- Always maintain lubrication on the interlocks to extend the life of each component. Lubrication will reduce any wear, as well as minimize any possibility of galling.
- Refer to the other side of this sheet for basic information to use in fitting and mounting the Rectangular Tapered Interlocks in a mold. Installation of other mold components, waterlines, taps for eyebolts, etc. must not interfere with the machined pockets or drilled and tapped holes for mounting of the Rectangular Tapered Interlocks.



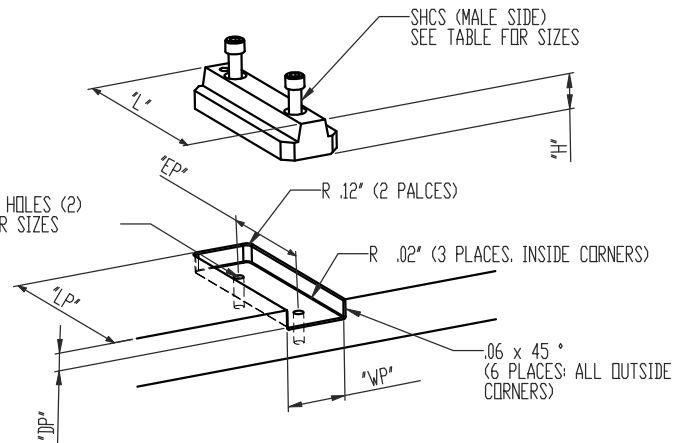
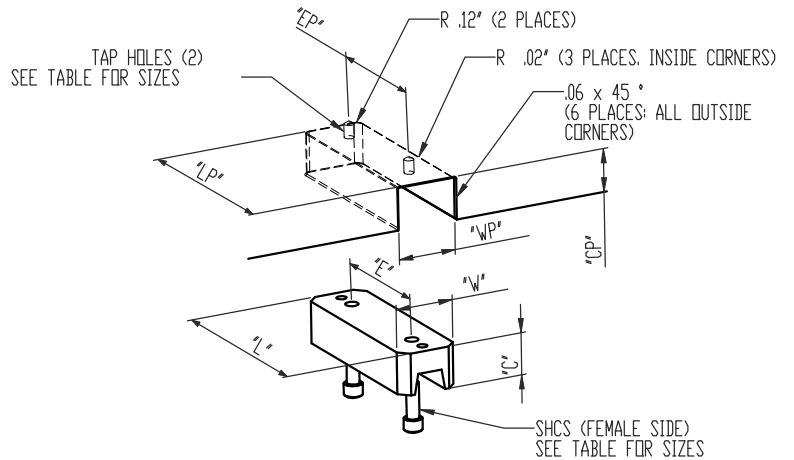
BASIC INFORMATION FOR FITTING  
RECTANGULAR TAPERED INTERLOCKS

**NOTES:**

- FIRST, MARK EACH MALE AND FEMALE INTERLOCK UNIQUELY AS SETS, SUCH AS 1M & 1F, 2M & 2F, ETC. BY INDIVIDUALLY AND UNIQUELY MARKING EACH OF THE COMPONENTS OF THE MATING RECTANGULAR TAPERED INTERLOCKS, AS WELL AS THEIR POSITIONS IN THE MOLD, THIS WILL INSURE THAT THE INTERLOCKS WILL REMAIN AS SETS ONCE THEY HAVE BEEN FITTED AND INSTALLED IN THE MOLD.
- SECOND, TAKE EACH INTERLOCK SET AND DETERMINE IF THE 10° TAPERED INTERLOCK AREAS AND THE FLAT SURFACES, "X" ON THE MALE INTERLOCK AND "Y" ON THE FEMALE INTERLOCK, MAKE CONTACT SIMULTANEOUSLY. IF THEY DO NOT, THEN A SMALL AMOUNT OF STEEL MUST BE GROUND FROM SURFACE "Y" ON EACH FEMALE RECTANGULAR TAPERED INTERLOCK UNTIL THIS SIMULTANEOUS CONTACT HAS BEEN ACHIEVED ON EACH SET OF INTERLOCKS. BLUING OF ALL OF THESE CONTACT AREAS CAN BE USED TO DETERMINE IF THE SIMULTANEOUS CONTACT IS OCCURRING IN EACH SET OF INTERLOCKS.
- THIRD, AFTER COMPLETING STEP TWO ABOVE FOR ALL FOUR SETS OF THE RECTANGULAR TAPERED INTERLOCKS IN THE MOLD, THEN A SMALL AMOUNT OF STEEL CAN BE GROUND FROM THE OTHER SIDE OF EACH OF THE MALE (SIDE "S") INTERLOCKS AND FEMALE (SIDE "Z") INTERLOCKS TO ESTABLISH A UNIFORM POCKET DEPTH IN EACH HALF OF THE MOLD.
- THEN, THE INTERLOCKS MUST BE INSTALLED IN THE MOLD TO MAINTAIN THIS SIMULTANEOUS CONTACT BETWEEN THE MALE AND FEMALE RECTANGULAR TAPERED INTERLOCKS. HOWEVER, THIS CONTACT MUST NOT PREVENT PROPER CONTACT AND SHUT OFF AT THE MAIN PARTING LINE OF THE MOLD FOR FORMING THE MOLDED PART.
- ADDITIONALLY, IT IS EXTREMELY IMPORTANT THAT THE POCKETS FOR THE INTERLOCKS BE VERY CLOSELY MACHINED AND VERY ACCURATELY ALIGNED FOR THE INTERLOCKS TO ACHIEVE THEIR PURPOSE. CHECK THE WIDTH OF EACH INTERLOCK AND MACHINE THE POCKET WIDTH TO HOLD EACH INTERLOCK VERY CLOSELY, AS WELL AS TO ESTABLISH VERY CLOSE ALIGNMENT. THE DEPTH OF EACH POCKET MUST ALSO BE CLOSELY HELD.



TYPICAL MOLD APPLICATION FOR RECTANGULAR TAPERED INTERLOCKS



**ADDITIONAL NOTES:**

- THE MACHINING OF THE POCKETS FOR THE RECTANGULAR TAPERED INTERLOCKS IS EXTREMELY IMPORTANT SINCE IT ESTABLISHES THE ACCURACY OF THE ALIGNMENT, AS WELL AS THE FIT OF THE INTERLOCKS IN EACH POCKET.
- THIS DRAWING SHOWS A TYPICAL APPLICATION FOR THE RECTANGULAR TAPERED INTERLOCKS, HOWEVER, REFER TO NOTE #3 ON THE OTHER SIDE OF THIS SHEET WHICH EXPLAINS THAT THE FEMALE INTERLOCK SHOULD ALWAYS BE MOUNTED IN THE PLATE THAT IS EXPOSED TO THE HIGHEST OPERATING TEMPERATURE.
- ALSO, PLEASE REFER TO THE MACHINING AND INSTALLATION INSTRUCTIONS AS INDICATED ON THE OTHER SIDE OF THIS SHEET.

\*) FOR MTR-08-2 & FTR-08-2 TAP HOLE IN THE MIDDLE OF THE POCKET

	CATALOG NUMBER	COMPONENT NAME	"E" INTERLOCK	"L" INTERLOCK	"W" INTERLOCK	"C" INTERLOCK	"H" INTERLOCK	"EP" +0.005 -0.005	"LP" +0.015 +0.010	"WP" +0.000 +0.0005	"CP" +0.005 +0.001	"DP" +0.005 +0.001	"TH'D"	TAP DEPTH	S.H.C.S. LENGTH	
ONE SET (FOUR SETS REQUIRED PER MOLD)	MTR-08-2	MALE INTERLOCK	-	1.980	.999	-	.600	*)	1.980	.999	-	.312	#10-24	.62	1.00	
	FTR-08-2	FEMALE INTERLOCK	-	1.980	.999	.69	-	*)	1.980	.999	.690	-	#10-24	.62	0.75	
ONE SET (FOUR SETS REQUIRED PER MOLD)	MTR-10-4	MALE INTERLOCK	2.500	3.980	1.249	-	.740		2.500	3.980	1.249	-	.375	#1/4-20	.62	1.00
	FTR-10-4	FEMALE INTERLOCK	2.500	3.980	1.249	.87	-		2.500	3.980	1.249	.870	-	#1/4-20	.62	0.75
ONE SET (FOUR SETS REQUIRED PER MOLD)	MTR-12-6	MALE INTERLOCK	4.000	5.980	1.499	-	.880		4.000	5.980	1.499	-	.500	#5/16-18	.75	1.250
	FTR-12-6	FEMALE INTERLOCK	4.000	5.980	1.499	1.00	-		4.000	5.980	1.499	1.000	-	#5/16-18	.75	0.75