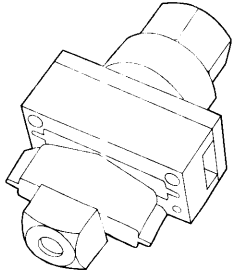


# Safety Instructions and Parts List



## 229, 231, RS232, 234 and 238 Connector Punches

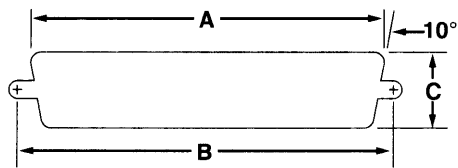


Read and understand this material before operating. Failure to understand how to safely operate the tool could result in an accident causing serious injury or death. This tool should only be operated by qualified personnel.

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IM 1069 REV 1 12/94

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Cat. No.	229	231	RS232	234	238
NAED/DCI No.78-3310-	34436	34437	34420	34429	34444
No. of Pins	9	15	25	37	50
Wt./Lbs. (Kg)	1.4 (0.635)	1.5 (0.680)	2.0 (0.907)	2.0 (0.907)	2.0 (0.907)
"A"	.787 (20.0 mm)	1.127 (28.6 mm)	1.655 (42.0 mm)	2.296 (58.3 mm)	2.201 (55.9 mm)
"B"	.982 (24.9 mm)	1.309 (33.3 mm)	1.853 (47.1 mm)	2.497 (63.4 mm)	2.402 (61.0 mm)
"C"	.469 (11.9 mm)	.469 (11.9 mm)	.469 (11.9 mm)	.469 (11.9 mm)	.579 (14.7 mm)
Punch	34441	34442	344189	34427	34443
Die Unit	35196	35197	35198	35199	35200
Draw Stud	34421	34421	34421	34421	34421
Square Retaining Nut	04638	04638	04638	04638	04638
Drive Nut	34733	34733	34733	34733	34733

# GREENLEE D'SUBMINIATURE PANEL PUNCHES

CAPACITY: 22 THROUGH 16 GAUGE MILD STEEL (0.8 mm - 1.5 mm) & 1/8" (3.2 mm) ALUMINUM

## WARNING

Do not punch enclosures containing or close to live circuits. Electrical shock could result causing severe injury or death.

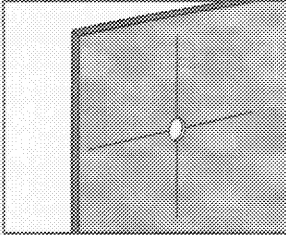
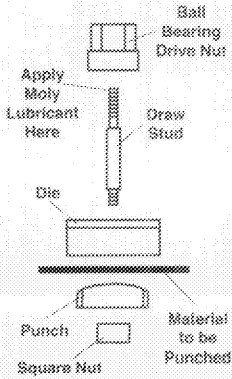
## CAUTION

Make sure you have firm footing and balance when operating.  
Position yourself to avoid any injuries in case of slippage, breakage or any other loss of control while punching.

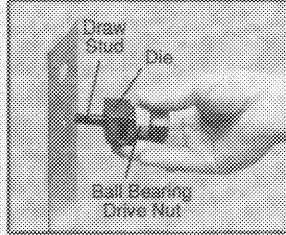
## INFORMATION

Lubricate threads and cutting edges before use.

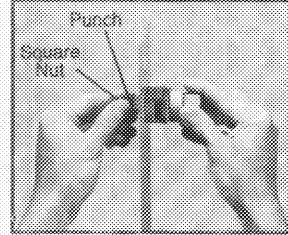
### OPERATING WITH WRENCH



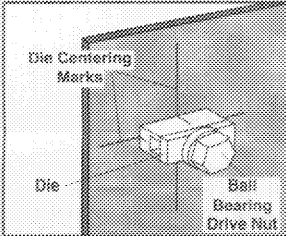
Layout hole location and drill 7/16" (11.1 mm) pilot hole.



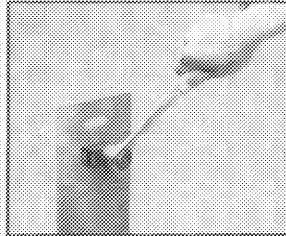
Insert through 7/16" (11.1 mm) pilot hole.



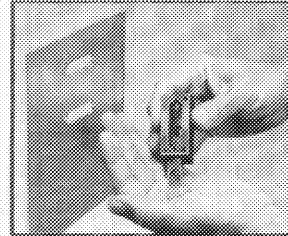
Tighten square nut against draw stud.



Align the centering marks on the outside of the die with the center lines of the hole. Tighten the ball bearing drive nut.

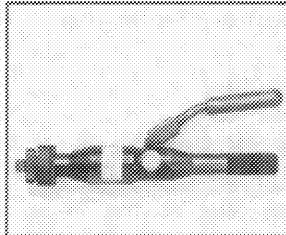
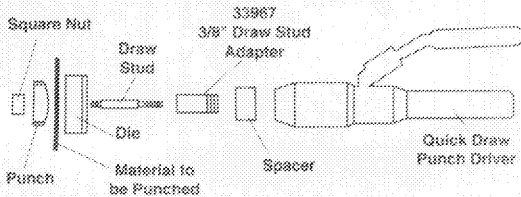


Turn drive nut with 1" wrench until punch is through material completely.

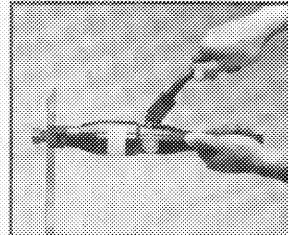


Disassemble, shake slug out of opening at side of die.

### OPERATING WITH QUICK DRAW PUNCH DRIVER

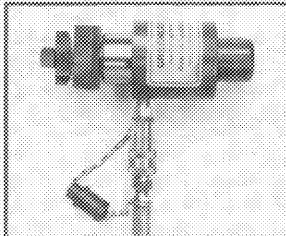
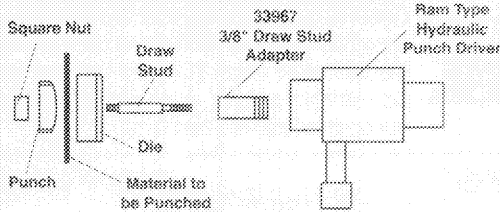


Assemble

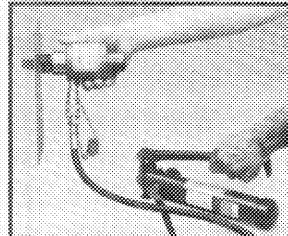


Punch

### OPERATING WITH RAM-TYPE HYDRAULIC PUNCH DRIVER











Assemble



Punch

**Other GREENLEE  
Punching Products . . .**

-  53 Sizes of Round Punches
-  12 Sizes of Square Punches
-  17 Sizes of Rectangular Punches
-  3 Sizes of "D" Punches
-  5 Sizes of Double "D" Punches
-  4 Sizes of Key Punches
-  2 Sizes of Keyway Punches
-  2 Sizes Of Round Punches with 4 Notches

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