



# SURFACE VEHICLE STANDARD

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## Countersunk Square Holes for Cutting Edges and End Bits

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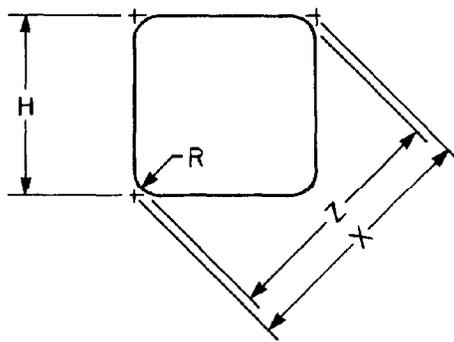
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1. **Scope**—To be used on cutting edges and end bits in conjunction with No. 3 head plow bolts (Ref. ANSI B18.9) typically used on off-road self-propelled work machines as described in SAE J1116.

Cutting edges are further defined in SAE J737, J739 and J1304.

End bits are further defined in SAE J63.



- A = Minimum material thickness for bolt retention - countersunk one side  
 B = Minimum material thickness for bolt retention - countersunk both sides  
 C = Diameter of extended countersink  
 D = Diameter of  $81 \pm 2$  deg countersink and counterbore  
 E = Angle of countersink =  $81 \pm 2$  deg  
 H = Square hole size  
 X = Theoretical diagonal dimension of square hole  
 Z = Minimum diagonal dimension of square holes with corner radii  $R = .12$  in (3.0 mm) maximum.

FIGURE 1—SQUARE HOLE DIMENSIONS

1. When section thickness exceeds A in drawing 1 (Figure 2) (countersunk one side) or B in drawing 4 (countersunk both sides), use counterbore with diameter D, as shown in cross section drawings 2, 5 and 6, or extended countersink C, as shown in cross section drawings 3 and 7.
2. The inscribed circle of the square holes shall be concentric with countersink or counterbore within 0.03 in (0.8 mm).

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