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# Datum Feature Identification[1]

All datum features must be identified with datum feature symbols and specified in feature control frames. That is, if a feature is oriented or located relative to one or more surfaces, each surface must be identified with a datum feature symbol and the letter or letters in the datum feature symbol or symbols must appear in a feature control frame in their proper order of precedence. Datum features may be designated with any letter of the alphabet except I, O, and Q. The datum feature symbol is used to identify physical features of a part as datum features. **Datum feature symbols must not be applied to centerlines, center planes, or axes.**

The datum feature symbols attached to the center planes in Fig. 4-5 are ambiguous. It is not clear whether the outside edges, a hole pattern, or the slots determine these center planes. The other datum feature symbols in Fig. 4-5 are attached to actual features and are acceptable as datum features. The center planes can then be determined from actual features on the part.

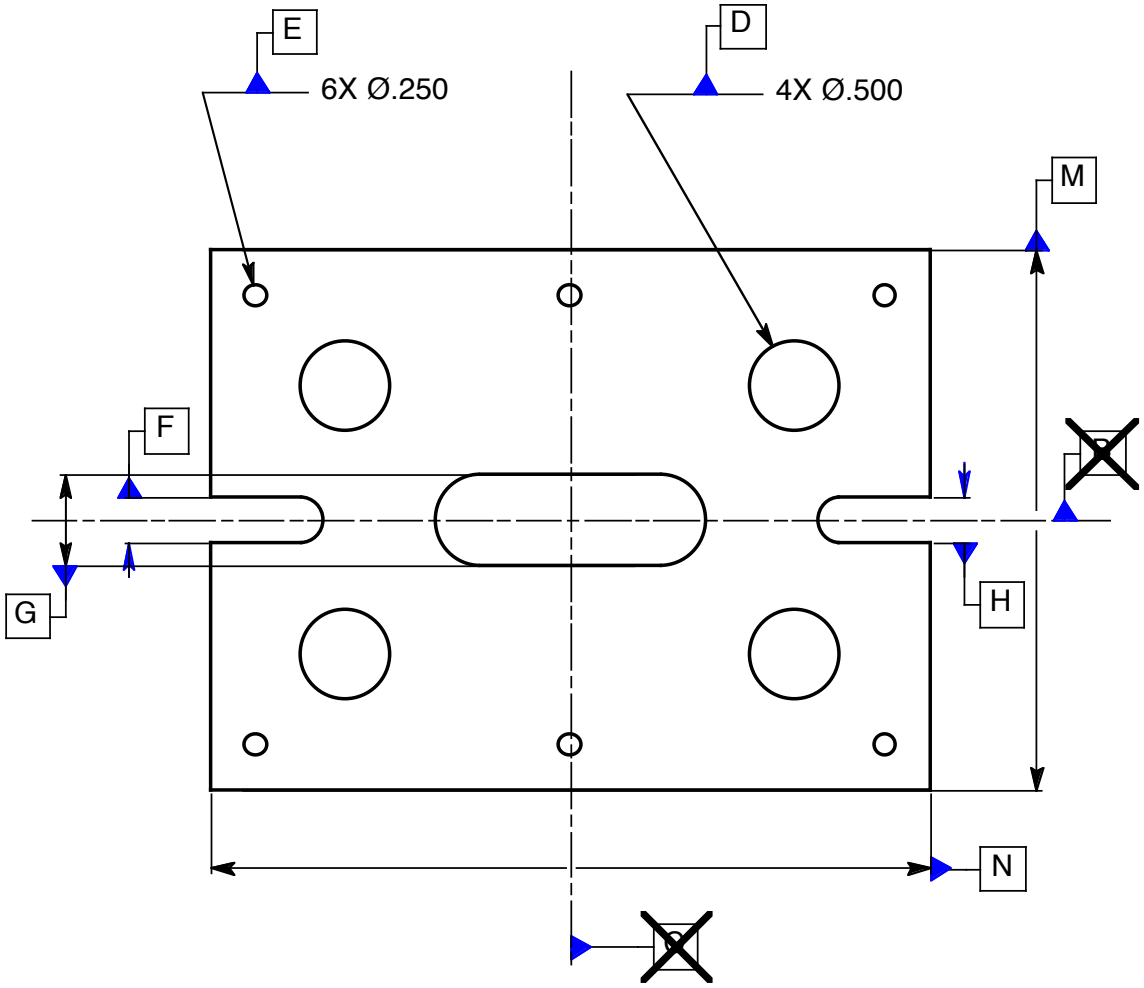


**Figure 4-5 Datum feature symbols must not be applied to imaginary planes or lines.**

# Cylindrical Datum Features[1]

Cylindrical parts might have an inside or outside diameter specified as a datum feature. A cylindrical datum feature is always associated with two theoretical planes meeting at right angles at its datum axis. The part in Fig. 4-7 may be mounted in a centering device such as a chuck or V-block so that the center planes intersecting the datum axis can be determined. Another datum feature, datum feature C in this drawing, may be established to control rotational orientation or clocking of the hole pattern about the datum axis.

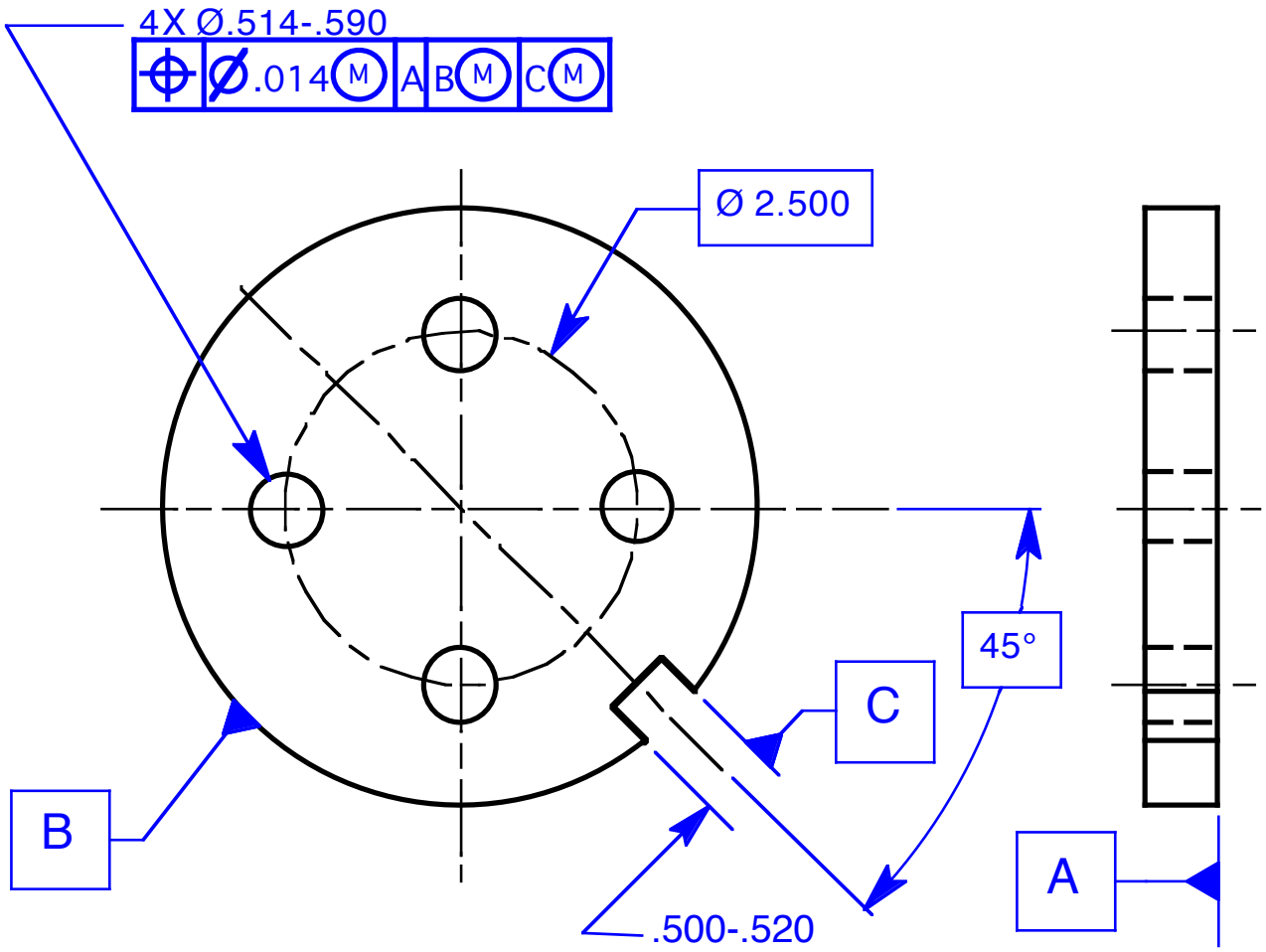


**Figure 4-7 A pattern of features is located to a cylindrical datum feature and clocked to a third datum feature.**

[1]Cogorno, Gene R., ***Geometric Dimensioning and Tolerancing for Mechanical Design, Second Edition***, McGraw-Hill, New York, 2011, pp. 53 and 54.