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Superseding J609a

(R) Mounting Flanges and Power Take-Off Shafts for Small Engines

1. **Scope**—This SAE Recommended Practice was developed to provide a method of recommending the availability of various dimensional output shaft and crankcase flange combinations.
- 1.1 **Purpose**—The purpose of this document is to provide a recommended practice for mounting flanges and power take-off shafts used in small engine powered applications. Small engines addressed herewith are the reciprocating piston type of 14.9 kW (20 hp) or less, of both 4-cycle and 2-cycle designs.
2. **References**—There are no referenced publications specified herein.
3. **Mounting Flanges for Horizontal Crankshaft Engines**
 - 3.1 Illustrations of mounting flanges for horizontal crankshaft engines are shown in Figure 1. Three flange types A,B, and C are described and their corresponding specific use with take-off shaft extensions can be identified in Figure 2.
 - 3.2 Recommended dimensional tolerances for concentricity, squareness of crankcase pilot flanges for pump and generator crankshaft mountings are specified in Figure 1.
4. **Power Take-Off Shaft Extensions for Horizontal Crankshaft Engines**
 - 4.1 Crankshaft design examples for keyway, pump, and generator shafts are illustrated in Figure 2. Illustration describes mounting dimensions tolerances of power take-off shaft extensions for horizontal engines. Tables 1a and 1b provide additional descriptive dimensions for shaft extensions 1, 2, 3, 4, 4a, 4b, 6, 6a, 6b, and 8.
 - 4.2 Recommended concentricity and squareness dimensional tolerances of threaded crankshaft to their corresponding face measurement are provided in Figure 2.
5. **Shafts and Flanges for Vertical Crankshaft Engines**
 - 5.1 Three recommended flanges D, E, and F; suitable for vertical crankshaft engines power take-off extensions are shown in Figure 3.

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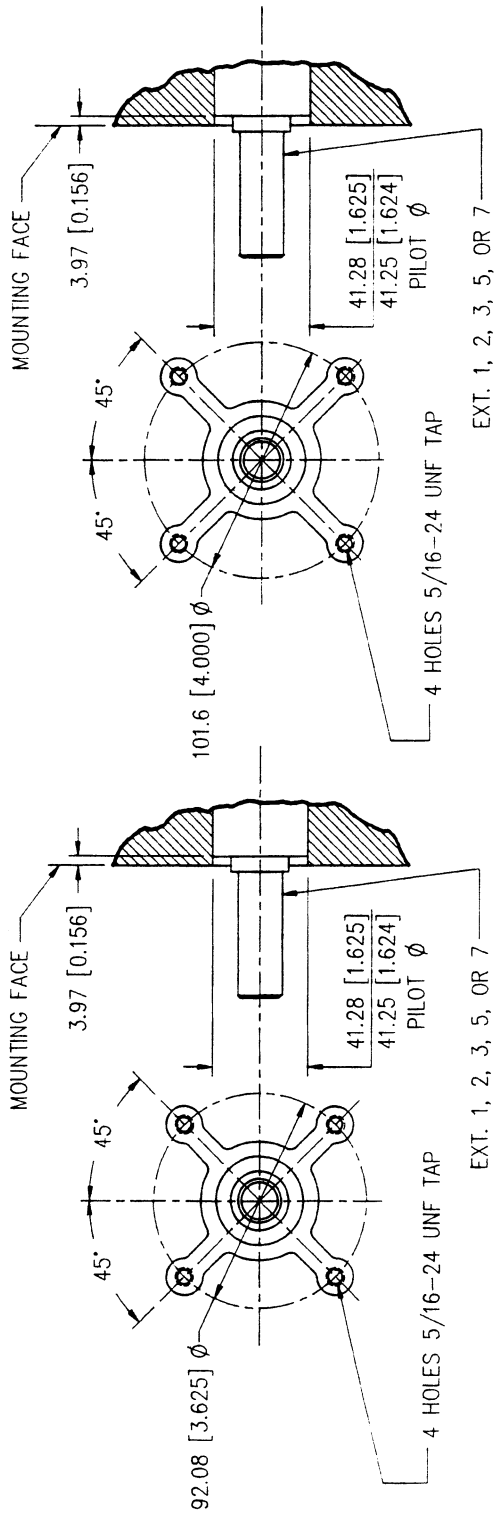
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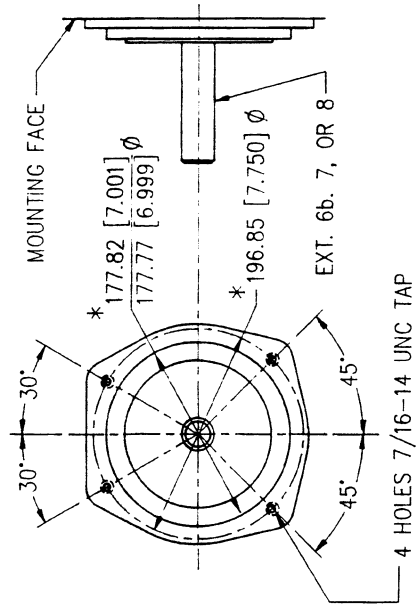
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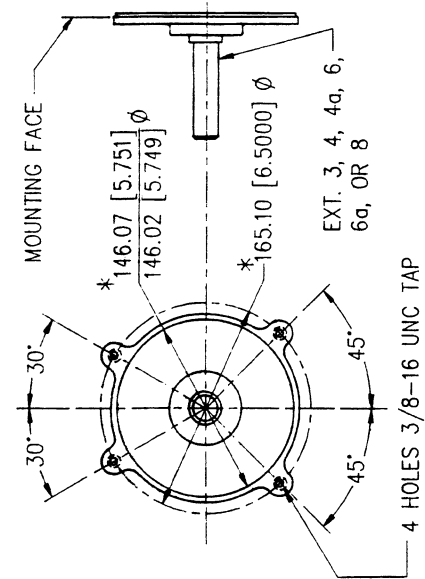
SAE WEB ADDRESS:



FLANGE A-1



FLANGE A



FLANGE C

FLANGE B

All dimensions shown are in mm [inches].

FIGURE 1—MOUNTING FLANGE FOR HORIZONTAL CRANKSHAFT ENGINES