



SURFACE VEHICLE STANDARD

J1946™

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Superseding J1946 APR2007

Companion Flanges, Type A (External Pilot) and Type S (Internal Pilot)

RATIONALE

This document has been determined to contain basic and stable technology which is not dynamic in nature.

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Documents

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This document is equivalent to ISO 7646 and ISO 7647.

1. **Scope**—This SAE Standard specifies the nominal dimensions and tolerances which affect the interchangeability between companion flanges and mating parts. The flanges covered by this document are designated type A and type S.

The type A flanges are equivalent to type A ISO 7646. The type S flanges are equivalent to the type S ISO 7647. Type A is an external (male) pilot construction and type S is an internal (female) pilot construction. These flanges are not interchangeable. Dimensions not specified are left to the discretion of the component manufacturer.

2. References

- 2.1 **Applicable Publications**—The following publications form a part of this specification to the extent specified herein.

- 2.1.1 ISO PUBLICATIONS—Available from ANSI, 25 West 43rd Street, New York, NY 10036-8002, Tel: 212-642-4900, www.ansi.org.

ISO 286—ISO system of limits and fits

ISO 1101—Technical drawings—Geometrical tolerancing—Tolerancing of form, orientation, location and run-out—Generalities, definitions, symbols, indications on drawings

ISO 7646—Road vehicles—Gearbox flanges for commercial vehicles and buses—Type A

ISO 7647—Road vehicles—Gearbox flanges for commercial vehicles and buses—Type S

3. **Dimensions and Tolerances**—Nominal dimensions, tolerances, and bolt hole locations of type A companion flanges are shown in Figures 1 to 5, and given in Table 1. Nominal dimensions, tolerances, and bolt hole locations of type S companion flanges are shown in Figures 6 to 9, and given in Tables 2A and 2B.

“Tolerances of position apply at maximum material condition (MMC).”

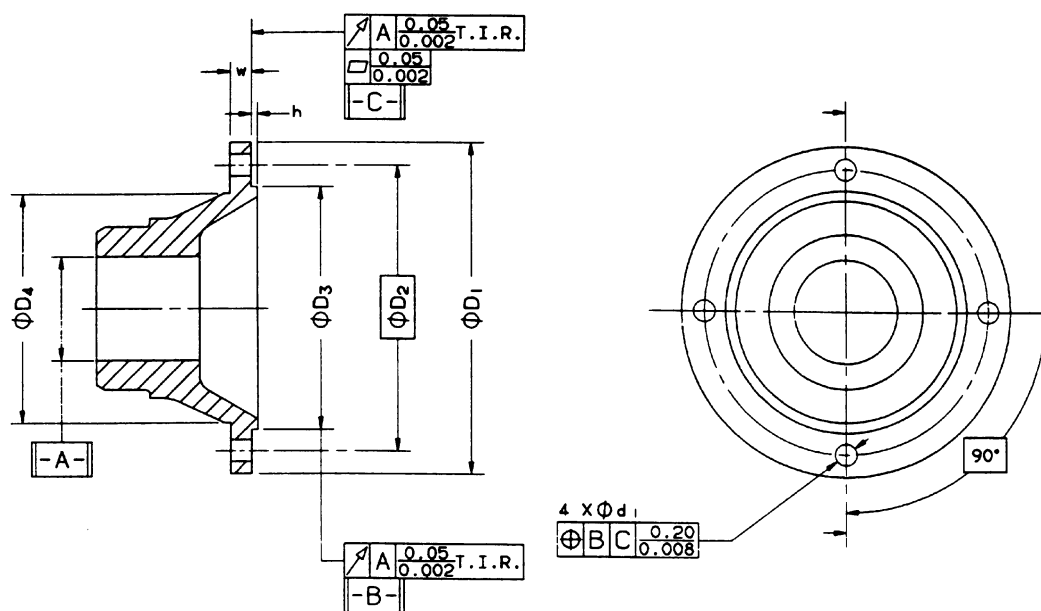


FIGURE 1—TYPE A COMPANION FLANGES—TRUE POSITION, FLATNESS AND RUNOUT TOLERANCES—mm/in

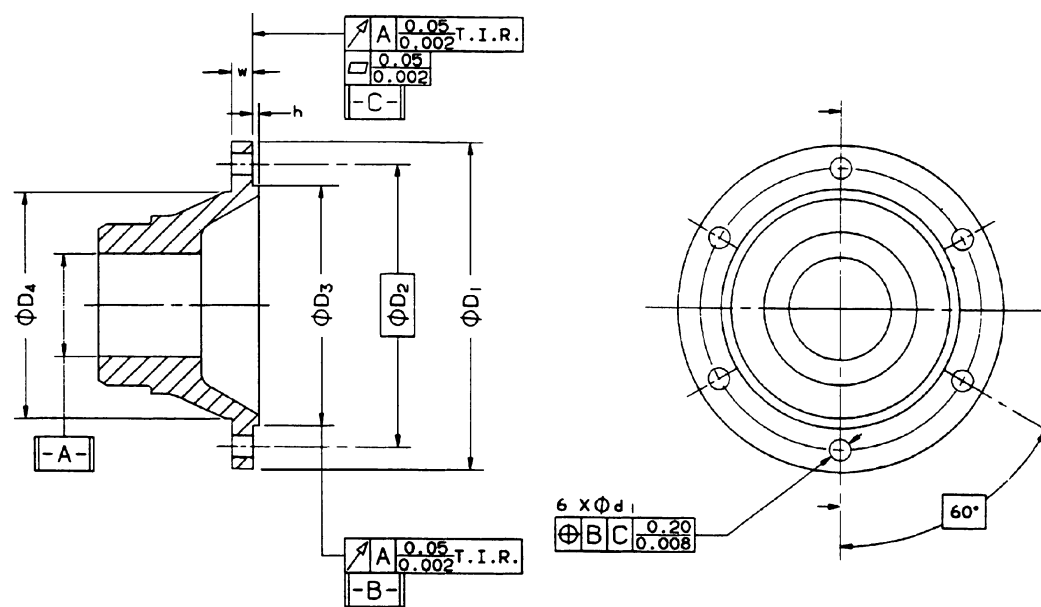


FIGURE 2—TYPE A COMPANION FLANGES—TRUE POSITION, FLATNESS AND RUNOUT TOLERANCES—mm/in