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ABS Excitor Ring Location Standardization**1. Scope**

This SAE Recommended Practice establishes the Antilock Brake System [ABS] sensor interface and envelope dimensions for standardizing the location of the ABS rings mounted on the inner end of the hub on the following axle designations.

- a. FF
- b. FL
- c. L
- d. R
- e. U
- f. W
- g. N
- h. P

1.1 Purpose

This document provides standardized wheel end ABS sensor interface dimensions for spoke wheels and hubs intended for normal highway use on trucks, buses, truck trailers and multi-purpose vehicles.

2. References**2.1 Related Publications**

The following publications are provided for information purposes only and are not a required part of this document.

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2.1.1 SAE PUBLICATIONS

Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

SAE J393—Nomenclature--Wheels, Hubs, and Rims for Commercial Vehicles

SAE J1842—Axle End Standardization

SAE J2246—Antilock Brake System Review

SAE J2475—Wheel End Assembly and Axle Spindle Interface Dimensions- Commercial Vehicles

SAE J2535—Setting Preload in Heavy-Duty Wheel Bearings

3. Definitions

A listing of the basic nomenclature and definitions is shown as follows. A hub shall be defined as a disc wheel hub or the hub area of a spoke wheel.

3.1 Definition

See Figures 1 to 4.

- a. A = Outer Bearing Cup [per American Bearing Manufacturers Association]
- b. B = Inner Bearing Cup [per American Bearing Manufacturers Association]
- c. C = Wheel Speed Sensor
- d. D = 7mm diameter sensor target zone
- e. E = Dimension from inner bearing cup seat to the face of the ABS excitor ring teeth
- f. F = Minimum inside diameter of the ABS excitor ring to allow for seal clearance
- g. G = Sensor pitch diameter
- h. H = Maximum outside diameter of the ABS tone ring

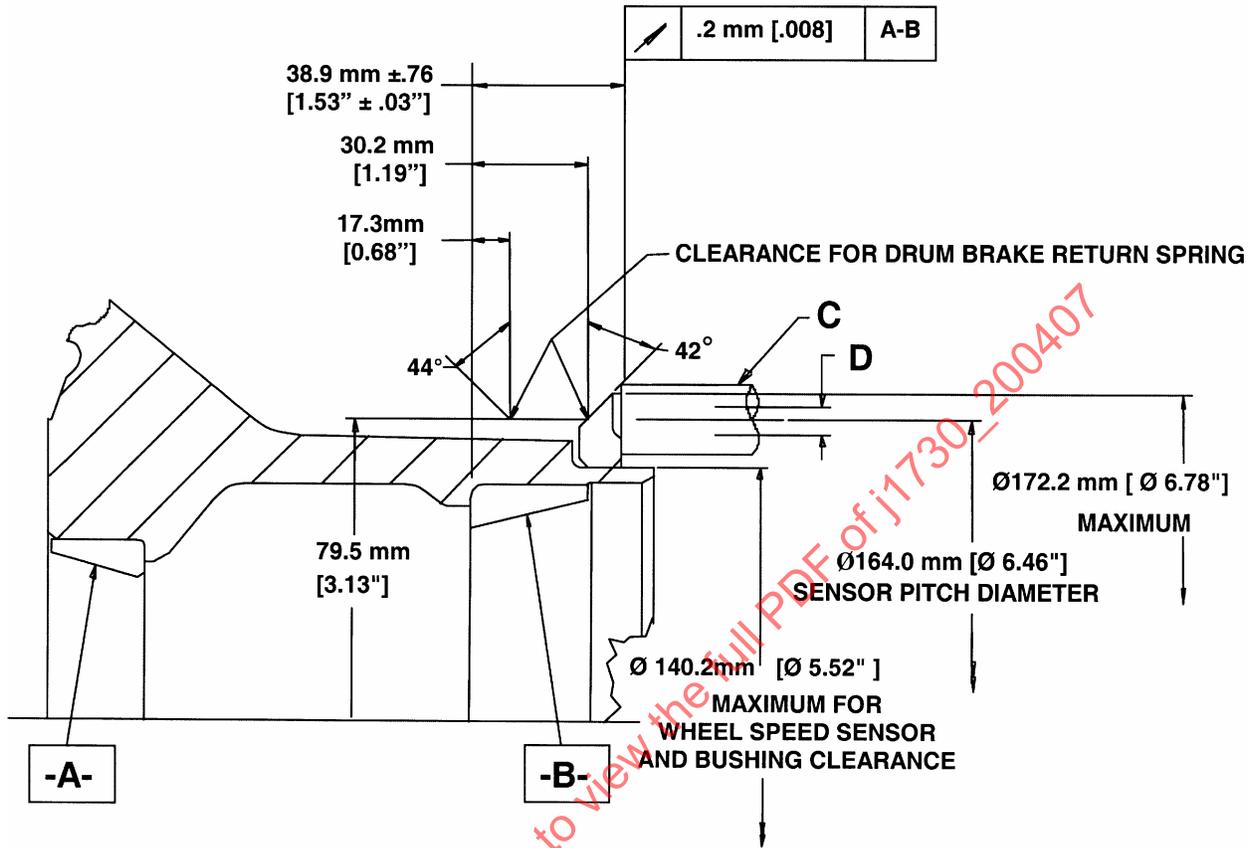
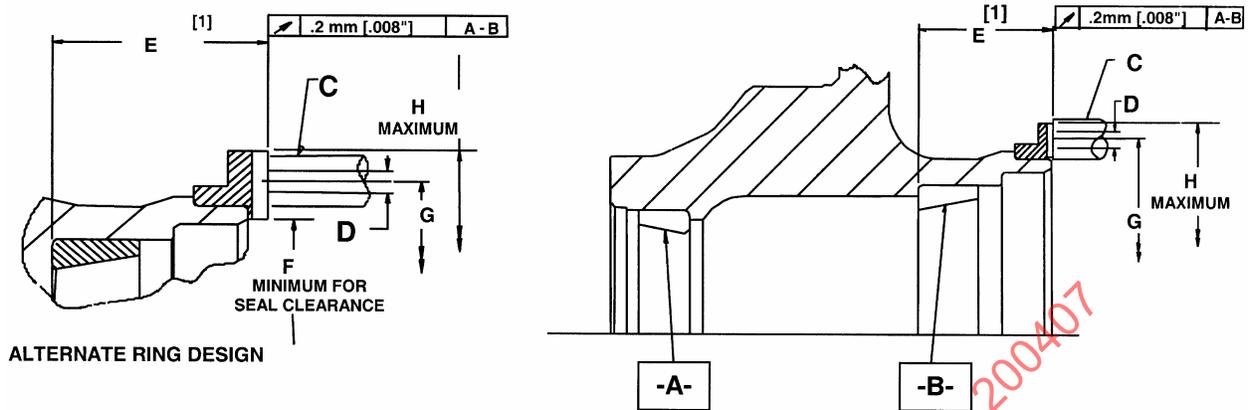


FIGURE 1—FRONT “FF” APPLICATION

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SAE CONFIGURATION	E [1]	F	G	H
L	59.2mm +/- .76mm [2.33" +/- .03"]	∅ 147.6mm [∅ 5.81"]	∅ 177.8mm [∅ 7.00"]	∅ 192.0mm [∅ 7.56"]
U	64.5mm +/- .76mm [2.54" +/- .03"]	∅ 190.5mm [∅ 7.50"]	∅ 208.5mm [∅ 8.21"]	∅ 218.9mm [∅ 8.62"]
W	73.7mm +/- .76mm [2.90" +/- .03"]	∅ 197.1mm [∅ 7.76"]	∅ 209.6mm [∅ 8.25"]	∅ 218.6mm [∅ 8.60"]
N	59.4mm +/- .76mm [2.34" +/- .03"]	∅ 159.0mm [∅ 6.26"]	∅ 172.0mm [∅ 6.77"]	∅ 192.0mm [∅ 7.56"]
P	55.9mm +/- .76mm [2.20" +/- .03"]	∅ 159.0mm [∅ 6.26"]	∅ 172.0mm [∅ 6.77"]	∅ 192.0mm [∅ 7.56"]

NOTE: [1] THE FACE OF THE TEETH MUST BE FLUSH OR PROTRUDE BEYOND THE END OF THE HUB.

FIGURE 3—POWERED REAR “L, U & W” / TRAILER “N & P” APPLICATIONS

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