SAE International

SURFACE VEHICLE RECOMMENDED PRACTICE

SAE J1730

REV. JUL2004

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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.

TO PLACE A DOCUMENT ORDER: **Tel: 877-606-7323 (inside USA and Canada)**
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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

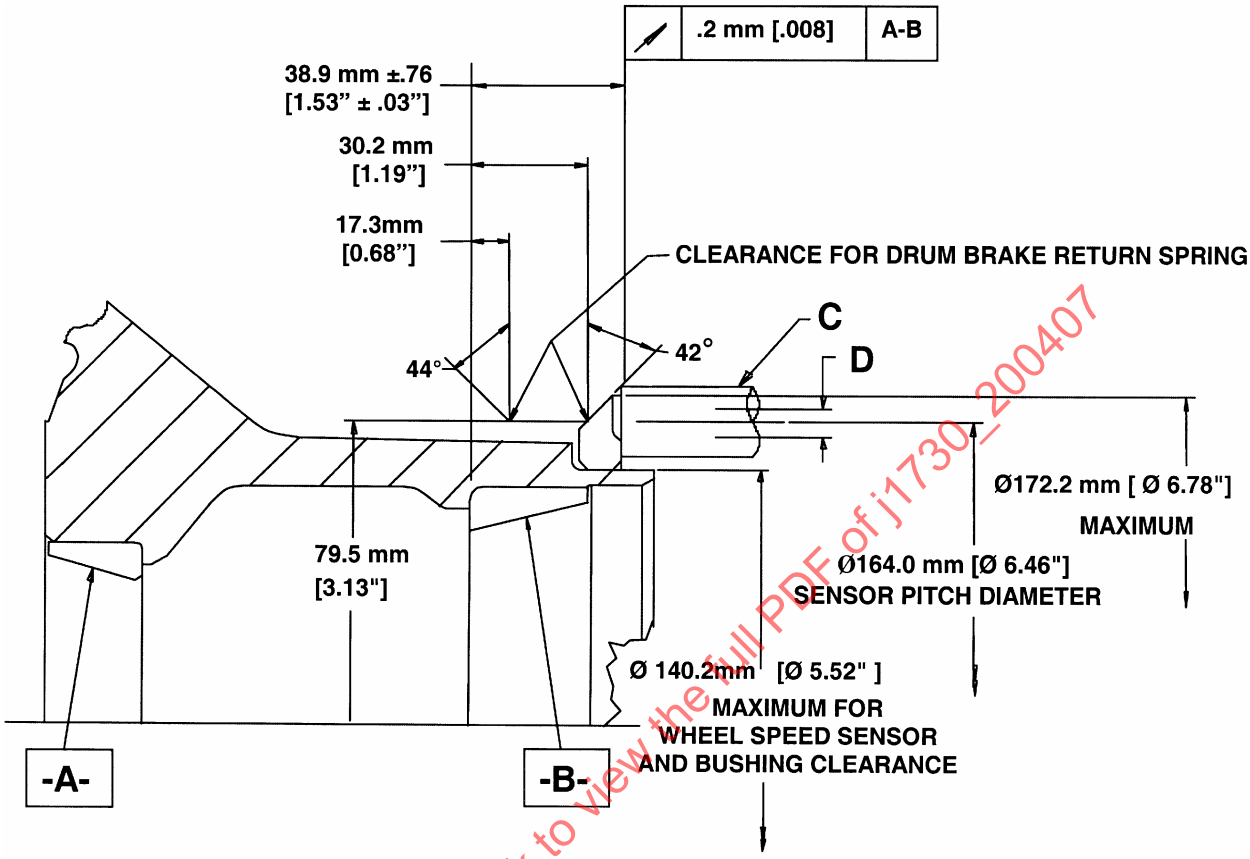
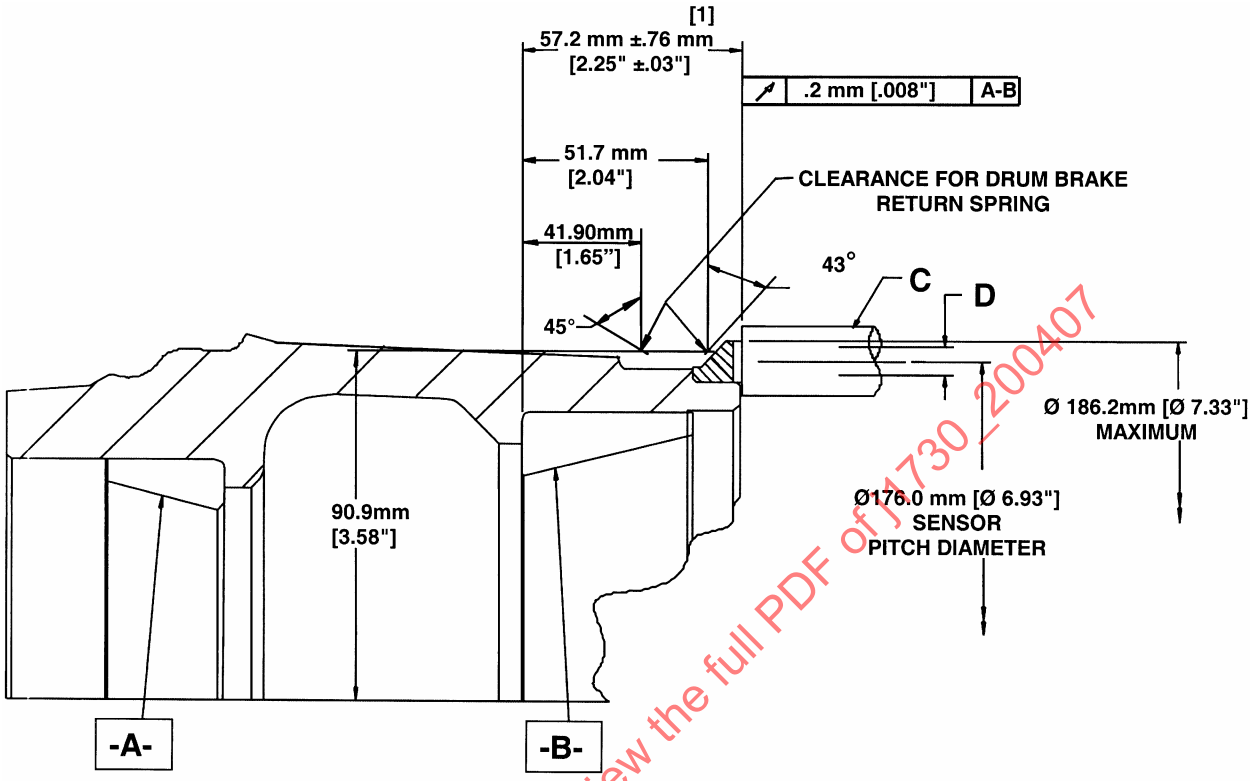
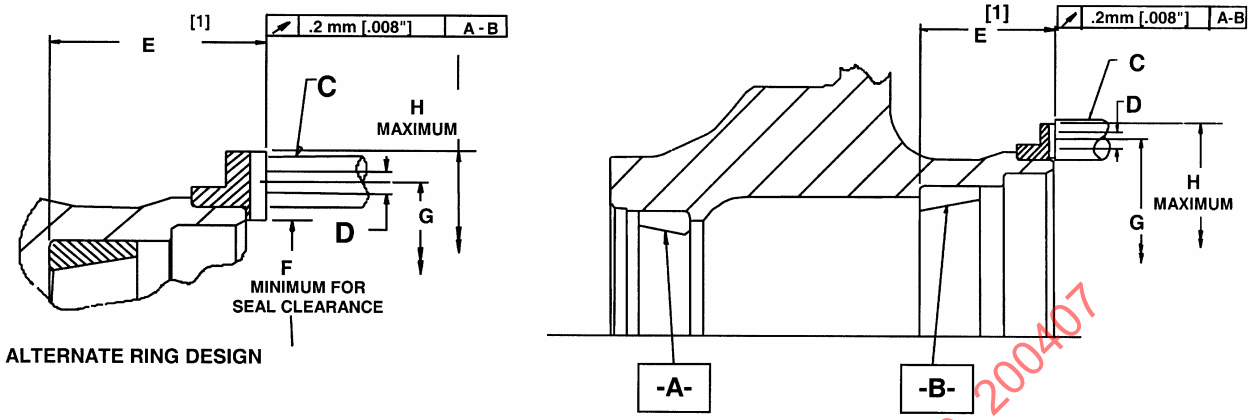


FIGURE 1—FRONT "FF" APPLICATION



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

FIGURE 2—FRONT "FL" APPLICATION



SAE CONFIGURATION	E [1]	F	G	H
L	59.2mm +/-.76mm [2.33" +/- .03"]	∅ 147.6mm [Ø 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