The Engineering Society For Advancing Mobility Land Sea Air and Space®
INTERNATIONAL
400 Commonwealth Drive, Warrendale, PA 15096-0001

SURFACE VEHICLE RECOMMENDED PRACTICE

SAE J1730

REV. OCT1999

Issued 1996-10
Revised 1999-10

Superseding J1730 OCT96

Submitted for recognition as an American National Standard

ABS Excitor Ring Location Standardization

1. ***Scope—***This SAE Recommended Practice is to establish the Antilock Brake System (ABS) sensor interface and envelope dimensions for standardizing the location of the Antilock Brake System (ABS) rings mounted on the inner end of the hub on the following axle designations.

a. FF front
b. FL front
c. L powered rear
d. R powered rear
e. U powered rear
f. W powered rear
g. N trailer
h. P trailer

1.1 **Purpose—**This document provides standardized wheel end Antilock Brake System (ABS) sensor interface dimensions for spoke wheels and hubs intended for normal highway use on trucks, buses, truck trailers, and multipurpose passenger 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.

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

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 (American Bearing Manufacturers Association)
c. C = Wheel Speed Sensor
d. D = 7 mm diameter sensor target zone
e. E = Dimension from inner bearing cup seat to the face of the ABS excitor ring teeth
f. F = The minimum inside diameter of the ABS excitor ring to allow for seal clearance
g. G = The sensor pitch diameter
h. H = The maximum outside diameter of the ABS tone ring

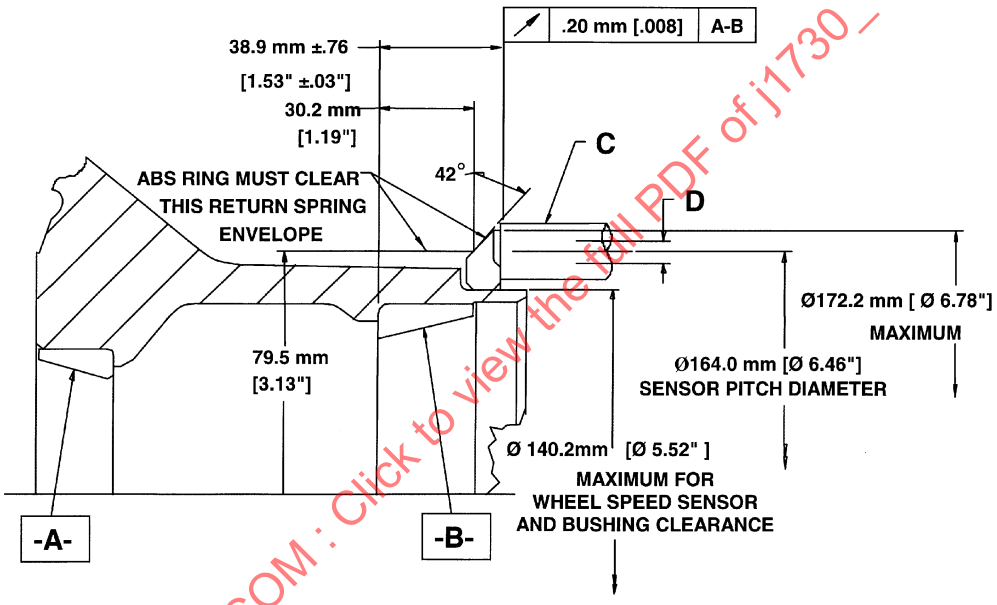
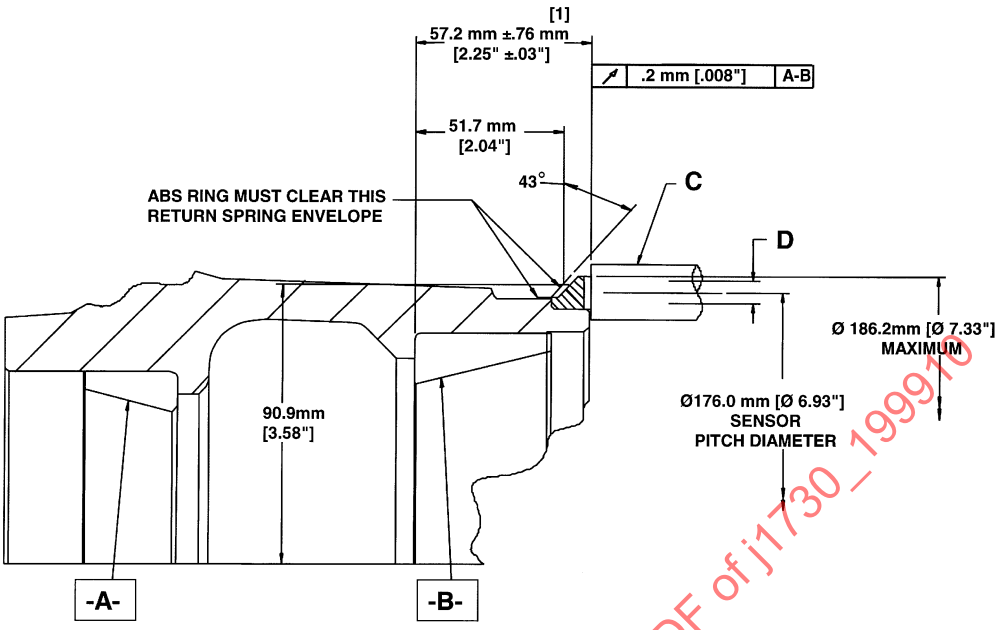
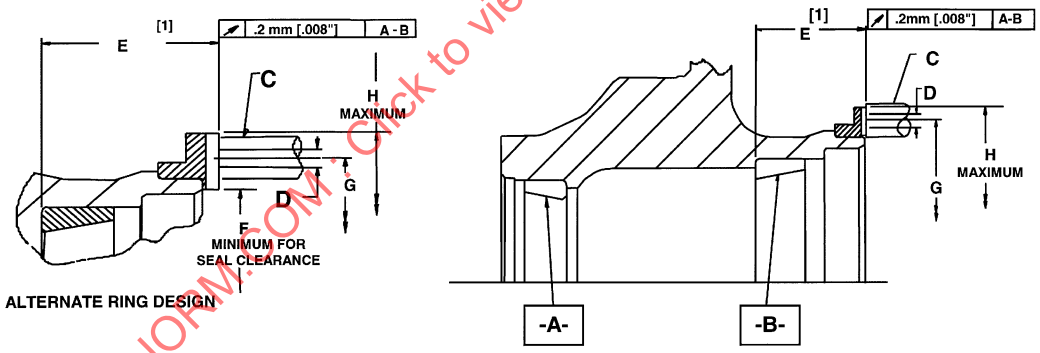


FIGURE 1—FRONT “FF” APPLICATION



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"]	Ø 147.6mm [Ø 5.81"]	Ø 177.8mm [Ø 7.00"]	Ø 192.0mm [Ø 7.56"]
U	64.5mm +/- .76mm [2.54" +/- .03"]	Ø 184.2mm [Ø 7.25"]	Ø 208.5mm [Ø 8.21"]	Ø 218.9mm [Ø 8.62"]
W	73.7mm +/-.76mm [2.90" +/- .03"]	Ø 197.1mm [Ø 7.76"]	Ø 209.6mm [Ø 8.25"]	Ø 218.6mm [Ø 8.60"]
N	59.4mm +/-.76mm [2.34" +/- .03"]	Ø 155.4mm [Ø 6.12"]	Ø 172.0mm [Ø 6.77"]	Ø 192.0mm [Ø 7.56"]
P	55.9mm +/-.76mm [2.20" +/- .03"]	Ø 155.4mm [Ø 6.12"]	Ø 172.0mm [Ø 6.77"]	Ø 192.0mm [Ø 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," AND "W"/TRAILER "N" AND "P" APPLICATIONS

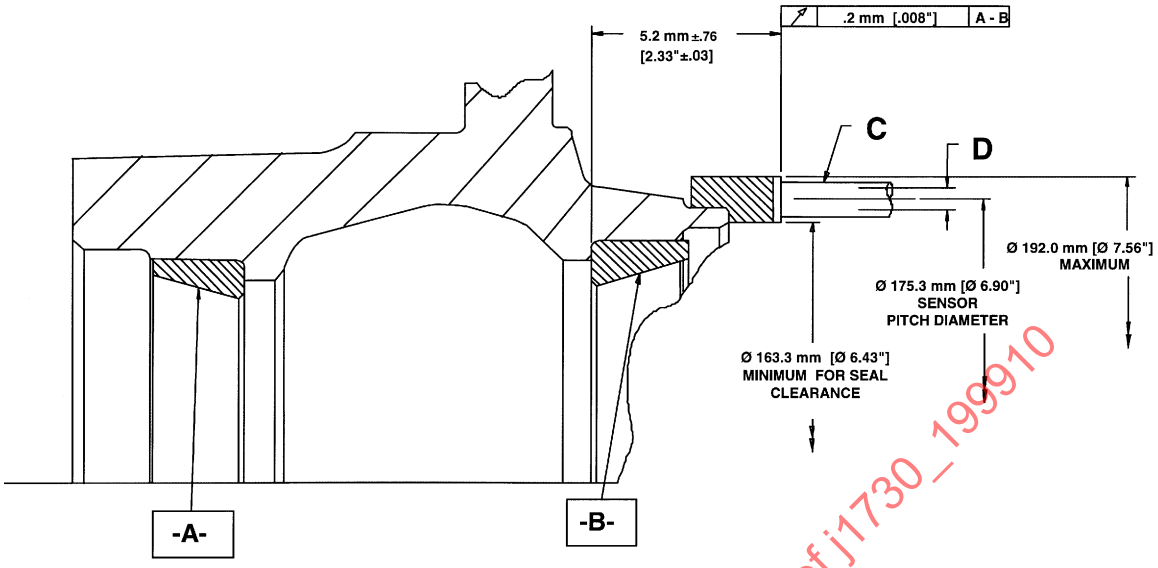


FIGURE 4—POWERED REAR "R" APPLICATION

PREPARED BY THE SAE TRUCK AND BUS WHEEL SUBCOMMITTEE OF THE
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