

Revisions to this document are noted by a stripe in the left-hand margin

SIL 10-WT-00, Rev. A
June, 2018
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SUBJECT: Redesigned Planetary Spindles and Spindle Retaining Ring

VOCATIONS AFFECTED: HD 4000(P)(R) / B 500(P)(R)

Introduction:

Beginning January 1, 2000, the planetary spindles for P1, P2, and P3 planetary gear sets have been redesigned to decrease the clearance between the spindle and the spindle-retaining ring. Refer to [Figure 1](#) for location of physical change on planetary spindle. Also, P1, P2, and P3 planetary spindle retainer hardness has been increased. Spindle design improvements decrease spindle rotation. A reduction in spindle rotation/increase in retainer hardness minimizes spindle to carrier bore wear and spindle to retainer wear.

Identification:

Prior to July 2018, redesigned planetary spindles were identified by a number "2" stamped on the rear face of the spindle. Refer to [Figure 1](#). Redesigned P1, P2, and P3 planetary spindle retainer can be identified by a "HD5" stamped on the face of the retainer. Refer to [Figure 2](#).

In July 2018, the identification mark on the end of five spindle part numbers will change. Each spindle will then have the stamped number "2" replaced with one 2.50 – 3.00 mm dia x 90 degree countersink, approximately 7.5 mm from the part centerline, on the same end. Refer to [Figure 1](#). Because there is no functional change to these parts, part numbers will not change. There will be no change to the P1/P2/P3 Retainer.

Interchangeability:

Previous design P1, P2, and P3 planetary spindles have been completely canceled. Redesigned planetary spindles are interchangeable backwards.

Part	Current P/N	Dimension A Current	Prior P/N	Dimension A Prior
P1 Spindle	29535987	10.63 mm (0.419 in.) 10.93 mm (0.430 in.)	29501586	10.75 mm (0.423 in.) 11.35 mm (0.447 in.)
P2 Spindle (CR)	29535991	10.50 mm (0.413 in.) 10.80 mm (0.425 in.)	29501587	10.62 mm (0.418 in.) 11.22 mm (0.442 in.)
P2 Spindle (WR)	29535994	10.08 mm (0.397 in.) 10.38 mm (0.409 in.)	29501588	10.20 mm (0.402 in.) 10.80 mm (0.425 in.)

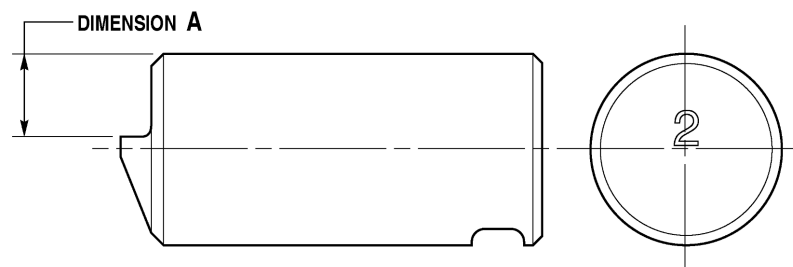
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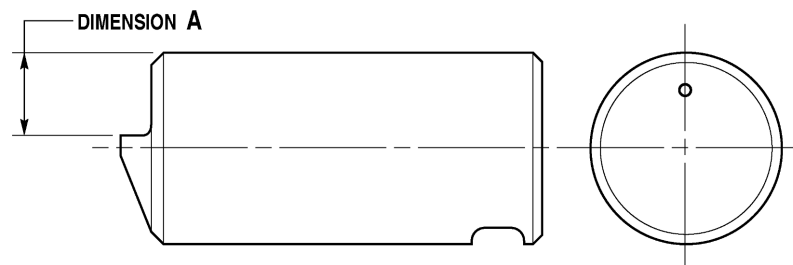
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Part	Current P/N	Dimension A Current	Prior P/N	Dimension A Prior
P3 Spindle (CR)	29535996	11.84 mm (0.466 in.) 12.14 mm (0.478 in.)	29501589	11.94 mm (0.470 in.) 12.54 mm (0.494 in.)
P3 Spindle (WR)	29535998	6.17 mm (0.243 in.) 6.47 mm (0.255 in.)	29501590	6.30 mm (0.248 in.) 6.90 mm (0.272 in.)
P1/P2/P3 Retainer	29535988	N/A	29501593	N/A



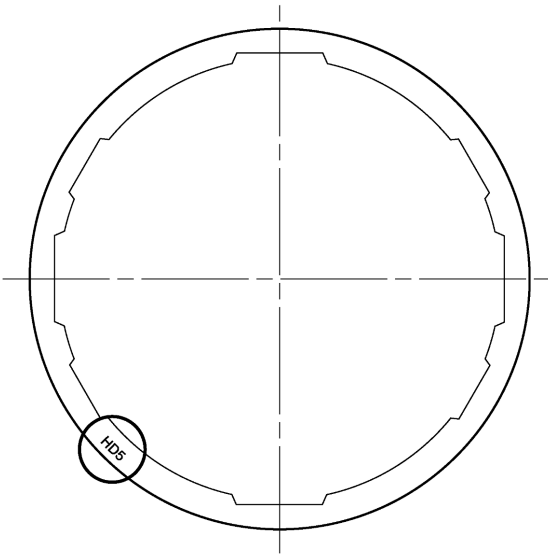
FORMER
(Jan. 2000 - June 2018)



CURRENT
(July 2018 Onward)

Figure 1. Planetary Spindle

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Figure 2. Planetary Spindle Retainer