

Retaining Ring, Internal Ph O/B Finish

1. SCOPE

1.1 The fasteners defined by this specification are Phosphate and Film coated Retaining Rings.

1.2 The preferred Phosphate and Film coated Retaining Ring secures parts axially when assembled into pre-cut grooves in mating bores.

2. DESIGNATION

2.1 Typical call-out on a drawing shall be:

Dutch	301646	BV	INW	32x1.2	86505671
English	301646	RRG	INID	32x1.2	86505671
Part Number					
Retaining Ring					
Internal					
Bore I.D.					
Thickness					
Standard Part Number					

NOTE: The above typical description is required for use in all company-wide computer generated documents. The description on hand-drawn assembly drawings should follow the same practice.

2.2 Table 2 contains the preferred part numbers to be used in future designs. Table 3 lists the Non-preferred part numbers which should not be used in future designs.

2.3 When requesting a new part number, refer to the instructions in standard 86505922 (FNHA-3-A-005.00).

3. RELATED SPECIFICATIONS

3.1 REFERENCE STANDARDS

86505922 (FNHA-3-A-005.00)—Assignment of Standard Part Numbers
 86508306 (FNHA-2-H-501.00)—Zinc Phosphate Conversion Coating on Ferrous Surfaces
 DIN 472—Circlips
 MIL-P-16232—Phosphate Coatings, Heavy, Manganese or Zinc Base

3.2 This standard replaces the following company standard:

New Holland	ES37.02
Versatile (Partial)	1-M-080

4. REQUIREMENTS

4.1 MATERIAL AND HARDNESS

4.1.1 Material

Spring Steel

4.1.2 Hardness

Austempered to the following:

$d_3 \leq 48$: 47/54 Rockwell C
 $48 < d_3 \leq 200$: 44/51 Rockwell C
 $200 < d_3 \leq 300$: 40/47 Rockwell C

Twisting a sample Retaining Ring 180° quickly evidences austempering (preferred) as opposed to any other method of hardening.

					NAME	STD RRG INTERNAL		
ALL	M	BJF	120449	30JAN03	 NEW HOLLAND	ENGINEERING SPECIFICATION		
ALL	L	BJF	117333	22JAN02				
ALL	K	BJF	116564	17SEP01				
ALL	J	BJF	116097	30MAY01				
ALL	H	RE	115468	18JAN01				
FRAME NO.	REV	BY	ECN NO.	DATE	THE INFORMATION HEREON IS THE CONFIDENTIAL AND PROPRIETARY PROPERTY OF NEW HOLLAND N. V. AND/OR ITS SUBSIDIARIES. ANY USE, EXCEPT THAT FOR WHICH IT MAY BE LOANED, IS PROHIBITED.	FRAME 1	OF 6	PART NUMBER
APP.	DRAWN		WLS	5/21/96				
KHH 7/96	CHECKED							

4.2 COATING

The coating shall be a black, non-reflective, corrosion-retardant phosphate and oil 86508340 (FNHA-2-H-501.02) per standard 86508306 (FNHA-2-H0501.00). All parts with this coating will have a rust - preventive finish of either of the following:

- 1) a non-tacky dry, clear film.
- 2) a drying-type oil-base film.

4.3 INSPECTION AND ASSEMBLY

Total Indicator Reading (T.I.R.) is the maximum allowable deviation of concentricity between groove and shaft. Rings should not be over-compressed during installation. If the groove has been machined to the recommended diameter, play between the ring and groove after installation indicates the ring has been compressed excessively which may lead to application failure.

4.4 SHEAR STRENGTH

Standard Basic austempered phosphate coated spring steel Retaining Rings yielding 310.5 N/mm^2 tensile and realizing 8900 N of acting thrust load shall have an ultimate shear strength of 830 N/mm^2 when .90 mm thick and thinner. Rings 1.07 mm thick and thicker shall have an ultimate shear strength of 1000 N/mm^2 .

4.5 DISH

Dish is considered any height difference occurring between the inner and outer peripheries of the Retaining Ring (Fig. A). For specific limits, see Table A.

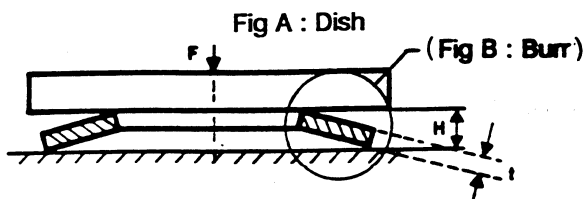


Table A: Limitations of Dish

Ring Thk. (t)	Max. Dish (H-t)	Thrust Load (F)
mm	mm	kg
.25/.40	.05	.9
.60/.90	.08	2.3
1.10/2.40	.13	4.5
2.80/3.20	.25	6.8
4.00/4.80	.50	9.1

4.6 BURR

Burr is a raised solid protrusion caused by the metal shearing process (Fig. B). For specific limits, see Table B.

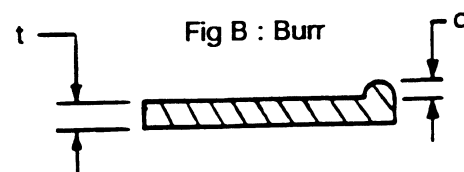


Table B: Limitation of Burr

Material Thk. (t)	Max. Allowed Burr (d)
mm	mm
.25	.03
.60	.04
.90	.05
3 and Thicker	.08

4.7 OVERALL HEIGHT

Overall height shall not exceed $3 \times t$ as illustrated in Fig. C below.

Fig C: Overall Height

