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- O-Ring Splice Kits – 3 Inch and Metric size options
- 7 Back-up and Retainer Ring Kits
- 4 Caterpillar® Assortment Kits
- 20 Bulldog® Assortment Kits
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SPRING/SUMMER 2016

in the NEWS

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The best tools to make your repair job easier!

Most jobs are easier if you have the proper tools with which to perform the activities needed to complete the job. Whether it is changing the oil in your car, replacing parts in a "drippy" faucet or repairing a hydraulic cylinder, the correct tools make the job easier, faster and enable a person to do a better job.

A number of years ago, Hercules began adding tools to the Seal Catalog to make the job of repairing cylinders easier for mechanics doing the work. Since that date, a large number of tools have been added.

The various tools include installation tools, splicing tools, cutting and chopping tools, removal tools, dismantling tools and remanufacturing tools. This article will highlight only a few tools which will simplify the job of repairing cylinders

The Rod U-seal Installation Tool, illustrated on page 787 of the 2016 Seal Catalog, makes the installation of rod u-seals easier than just using fingers, thumbs and maybe a "pusher" tool. Usually heavier cross section, smaller diameter rod seals can be difficult to install. The u-seal installation tool makes that chore easier and faster.

Another very helpful tool is the Piston Seal Stretcher Tool. Shown below, this tool makes the "stretching" of the PTFE piston seals effortless and more consistent. After heating the PTFE portion of the piston seal, the sealing element is then placed over the cone shaped portion of the tool to the appropriate size and then the plunger is pushed down. The sealing element is stretched to an appropriate amount, which provides a consistent radial wall cross section; eliminating the mistake of stretching the seal element more in one area of the circumference than another area.

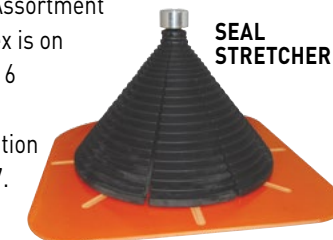
After using the stretcher and installing the piston seal, the next chore is to compress the PTFE seal back to a smaller size to allow for installation. Generally mechanics will use nylon wear rings and hose clamps to compress the seal to the OD of the piston. However, it can sometimes be difficult and time consuming to find the proper sized wear ring and clamp.

The Seal Clasper on page 788 and the Piston Seal Reforming Tool on page 802 both make it a quick and easy task to compress the PTFE seal to the required diameter for ease of installation.

In addition to the many other tools listed, Hercules also carries an extensive selection of Sunnen brand honing stones and other honing accessories. So, when you are ordering the seals needed for a repair, you can also order the honing stones you need and have them sent in the same shipment, saving on freight, paperwork and the time needed to pay for separate invoices.

Hercules is continually trying to offer the various products you need for success in your business such as the hoist slings recently added (see newsletter page 3). If you have suggestions for other products you'd like Hercules to offer please let us know at rpetrie@HerculesCa.ca.

If you are not familiar with the many tools offered to simplify your jobs, please take a few minutes to review them. The Assortment Kits and Tools index is on page 755 of the 2016 Seal Catalog. The actual tool information begins on page 787.



Hercules – your partner for success!



JUST ARRIVED! NEW TAKEUCHI COMPACT EXCAVATOR REPAIR KITS

By popular demand, the Hercules Takeuchi Kits have been expanded to cover the following models –

- TB014
- TB016
- TB108
- TB125
- TB145
- TB175



To place your order:

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ONLINE www.HerculesCa.ca

SPRING / SUMMER WEB SPECIAL

Seal Stretcher (shown left) \$58.00 Net

The Seal Stretcher includes:

- 8 stepped segments
- 1 top nut/handle
- 1 O-Ring
- 1 flat base
- 4 screws
- 1 threaded rod with a piston pre-installed
- 1 stop nut
- 1 aluminum support base
- 1 spring

To obtain usage instructions or place your order go to www.HerculesCA.ca

New Product



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Style PS3300 nylon step cut piston seals

This two piece piston seal design comes made with a new high grade fiberglass filled polyamide step-cut ring along with a rectangular shore A 70 NBR energizer. This product offers extreme strength and resistance to extrusion, a very high resistance to abrasion, ease of installation thanks to the step cut design and the chamfered edges, greater resistance to surface roughness in comparison to any elastomer seals, rectangular shaped contact pressure points

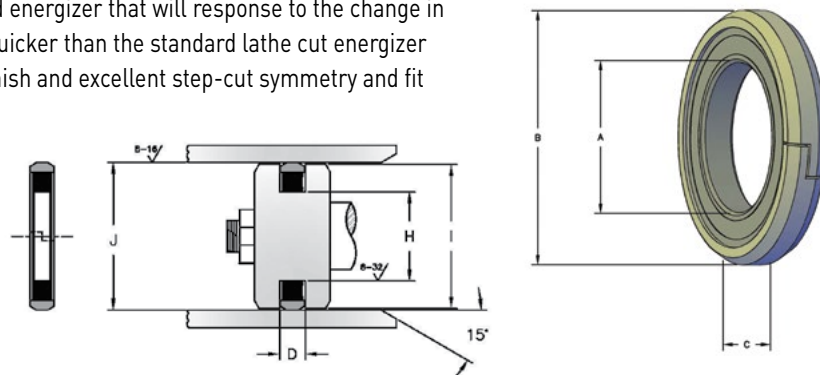
which produces consistent high pre-loading forces and high protection from twisting within the housing. ISO 7425-1 compliant.

SEAL INFORMATION	
Material	Glass Filled Nylon w/Rubber Energizer
Temperature Range	-22° F to 212° F
Pressure Range	0 to 8700 PSI
Speed 3 ft/sec	3 ft/sec

Part Number	A Nom. ID	B Nom. OD	C Nom. Ht	D Groove Width	H Groove Diameter	I Piston Diameter	J Bore Diameter	List Price
PS3327-32	1.462	2.000	0.274	0.282 +0.005 -0.000	1.462 +0.000 -0.005	1.999 +0.000 -0.065	2.000 +0.005 -0.000	\$36.13
PS3327-40	1.962	2.500	0.274	0.282 +0.005 -0.000	1.962 +0.000 -0.005	2.499 +0.000 -0.065	2.500 +0.005 -0.000	37.82
PS3331-48	2.408	3.000	0.305	0.312 +0.005 -0.000	2.408 +0.000 -0.005	2.999 +0.000 -0.080	3.000 +0.005 -0.000	44.38
PS3327-48	2.442	3.000	0.274	0.282 +0.005 -0.000	2.442 +0.000 -0.005	2.999 +0.000 -0.080	3.000 +0.005 -0.000	46.45
PS3331-56	2.908	3.500	0.305	0.312 +0.005 -0.000	2.908 +0.000 -0.005	3.499 +0.000 -0.080	3.500 +0.005 -0.000	53.95
PS3327-56	2.942	3.500	0.274	0.282 +0.005 -0.000	2.942 +0.000 -0.005	3.499 +0.000 -0.080	3.500 +0.005 -0.000	50.75
PS3331-64	3.408	4.000	0.305	0.312 +0.005 -0.000	3.408 +0.000 -0.005	3.999 +0.000 -0.080	4.000 +0.005 -0.000	56.44
PS3327-64	3.442	4.000	0.274	0.282 +0.005 -0.000	3.442 +0.000 -0.005	3.999 +0.000 -0.080	4.000 +0.005 -0.000	54.82
PS3331-72	3.908	4.500	0.305	0.312 +0.005 -0.000	3.908 +0.000 -0.005	4.499 +0.000 -0.080	4.500 +0.005 -0.000	60.88
PS3327-72	3.942	4.500	0.274	0.282 +0.005 -0.000	3.942 +0.000 -0.005	4.499 +0.000 -0.080	4.500 +0.005 -0.000	60.26
PS3337-80	4.226	5.000	0.368	0.375 +0.005 -0.000	4.226 +0.000 -0.005	4.999 +0.000 -0.080	5.000 +0.005 -0.000	70.89
PS3327-80	4.442	5.000	0.274	0.282 +0.005 -0.000	4.442 +0.000 -0.005	4.999 +0.000 -0.080	5.000 +0.005 -0.000	64.08
PS3337-88	4.740	5.500	0.368	0.375 +0.005 -0.000	4.740 +0.000 -0.005	5.499 +0.000 -0.100	5.500 +0.005 -0.000	68.59
PS3337-96	5.240	6.000	0.368	0.375 +0.005 -0.000	5.240 +0.000 -0.005	5.999 +0.000 -0.100	6.000 +0.005 -0.000	74.82
PS3337-104	5.740	6.500	0.368	0.375 +0.005 -0.000	5.740 +0.000 -0.005	6.499 +0.000 -0.100	6.500 +0.005 -0.000	87.29
PS3337-112	6.240	7.000	0.368	0.375 +0.005 -0.000	6.240 +0.000 -0.005	6.999 +0.000 -0.100	7.000 +0.005 -0.000	99.59
PS3337-120	6.740	7.500	0.368	0.375 +0.005 -0.000	6.740 +0.000 -0.005	7.499 +0.000 -0.100	7.500 +0.005 -0.000	100.72
PS3337-128	7.240	8.000	0.368	0.375 +0.005 -0.000	7.240 +0.000 -0.005	7.999 +0.000 -0.100	8.000 +0.005 -0.000	103.96

- Fits in the same groove as the PS2000 and the PS914 series
- Has chamfered edges that make the installation process easier
- A better designed energizer that will respond to the change in pressure much quicker than the standard lathe cut energizer
- Better surface finish and excellent step-cut symmetry and fit

Order yours today!



shop talk

Why and when to use nylon

With the introduction of the PS3300 style step-cut nylon piston seal to the extensive seal selection already offered, there are now 3 styles of nylon step-cut piston seals from which to choose.

The PS3300 is interchangeable with both the PS2000 and the PS914 style step-cut nylon piston seals. There are differences in each style which may lead to the mechanic preferring one design over another depending on the application, but all three are high quality products.

There are several reasons for using nylon step-cut piston seals. The primary reason for selecting a nylon step-cut seal is the anti-extrusion characteristics of the hard nylon sealing element. Due to the extreme hardness of the element, it must be "step-cut" to allow for installation. The "step" is then sealed by the very high radial forces created by the seal being larger than the bore into which it is installed.

Another application in which the nylon step-cut seal can be used is where it must cross an internal port, as in a DA telescopic cylinder or some designs of cylinder cushions. The nylon sealing ring is hard enough that it can cross a port without being damaged as is the case with an elastomeric or PTFE seal. Care must be taken to be sure that the port being crossed is no more than 1/2 the width of the nylon seal ring (so the nylon tip does not get "clipped off" in the port).

Another advantage to the nylon step-cut piston ring is that it is hard enough to prevent extrusion (in most all applications) but soft enough to allow metal or other hard contaminants to be imbedded in the nylon, thus minimizing damage and scoring to the tube, unlike cast iron rings.

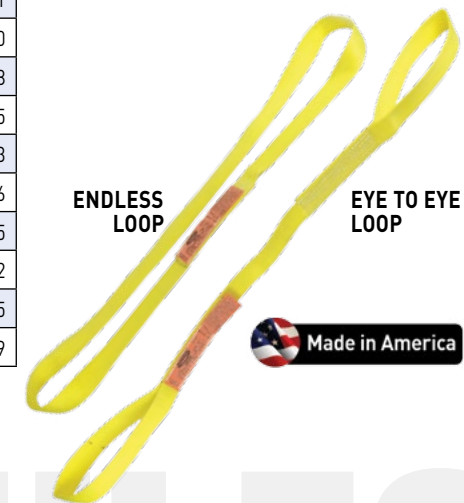
Lifting slings

Hercules now carries new synthetic web lifting slings which are primarily composed of nylon. Our lifting slings are a soft and flexible solution to rigging and are offered in endless and eye to eye styles. All of the synthetic web slings are constructed with 9800 lbs. heavy duty webbing, and are in full compliance with current ASME B30.9 standards, with a 5:1 design factor.

Nylon web slings with flat eye to eye loops are one of the most popular straps for lifting because of their versatility: they can be used in a choker, basket or vertical hitch. The design also makes it easy to remove from underneath a load.

Hercules Part #	Width (in)	Length (ft)	Product	Vertical Load Limit (lbs.)	Choker Load Limit (lbs.)	Basket Load Limit (lbs.)	Net Price (CDN)
SLEN1-4	1"	4'	Endless Loop	3200	2500	6400	\$ 11.01
SLEN1-6	1"	6'	Endless Loop	3200	2500	6400	14.00
SLEN2-4	2"	4'	Endless Loop	6400	5000	12800	16.58
SLEN2-6	2"	6'	Endless Loop	6400	5000	12800	22.05
SLEN2-8	2"	8'	Endless Loop	6400	5000	12800	27.53
SLEE1-4	1"	4'	Eye to Eye	1600	1200	3200	10.26
SLEE1-6	1"	6'	Eye to Eye	1600	1200	3200	11.75
SLEE2-4	2"	4'	Eye to Eye	3200	2400	6400	15.22
SLEE2-6	2"	6'	Eye to Eye	3200	2400	6400	17.95
SLEE2-8	2"	8'	Eye to Eye	3200	2400	6400	20.69

MATERIAL	NYLON
Max Temperature	180°F
UV Degradation	High



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