



# USG PRODUCTS (F.E.) PTE. LTD. TECHNICAL NOTES



## D8 Class BERCO BPR & BPR2

Updated on 21<sup>st</sup> February 2017

- BPR – BERCO Pin Retention
- BPR2 – **BERCO Pin Retention 2** which is equivalent to Caterpillar **Positive Pin Retention** (PPR)

The latest production from BERCO for D8R machine class

- **CR4525C** – BPR (external snap ring) in master link only + Old Design Seal Group + Different Oil vs D version  
**Caterpillar Part No: 8E-4518**
- **CR4525D** – BPR (external snap ring) in master link only + NEW SEAL GROUP (improvement) + NEW OIL (improvement). For not High Impact application – GOOD chain  
**IMPROVED VERSION OF CR4525 – !! LATEST NON BPR2 (CAT PPR) DESIGN !!**
- **CR7603** – **BPR2 (metal ring squeezed between pin and link= CAT PPR) - improvement**+ NEW SEAL GROUP (improvement) + NEW OIL (improvement).. For all application (especially for High Impact Application) – GOOD chain  
**Caterpillar Part No: 8E-4517**

## Reference Material

### BERCO BPR2 Video Link

<https://www.youtube.com/watch?v=bFre3C9zR74>

### Caterpillar Public Documents

CAT Positive Pin Retention Track - *Available on Internet*



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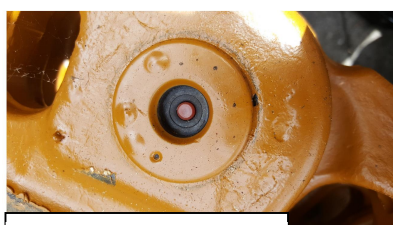
## D8R – Original Standard Design – BERCO Part No: CR4525 with BPR Design

BERCO offers BPR at **Master Link ONLY** for vs original CAT design. The old version C production is being replaced by new version D.

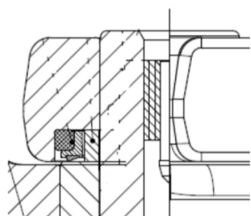
### In version D,

- Overall design remain the same except the improved sealing components of longer joint life and better wear behavior of the seal (*same as BPR2 = CAT PPR*)
- Lubrication improvement – (*same as BPR2 = CAT PPR*)
- BPR design at **Master Link ONLY**

Following are the outlook of version C and D.

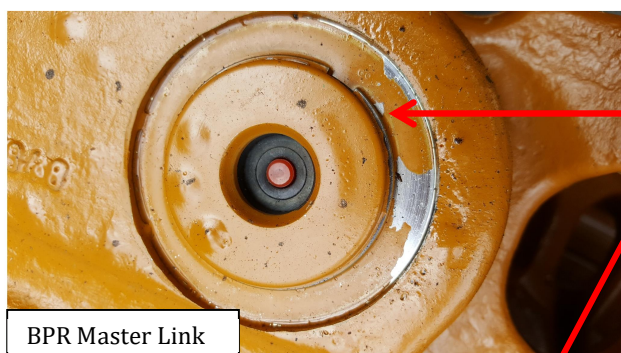


Standard Link Design



#### Notes:

This means the BPR Snap Ring only installed at **Master Link ONLY** and the rest of the link are standard type.

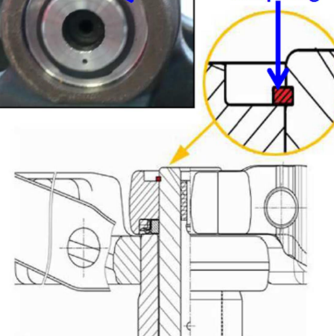


BPR Master Link

BPR Snap Rings



Snap ring



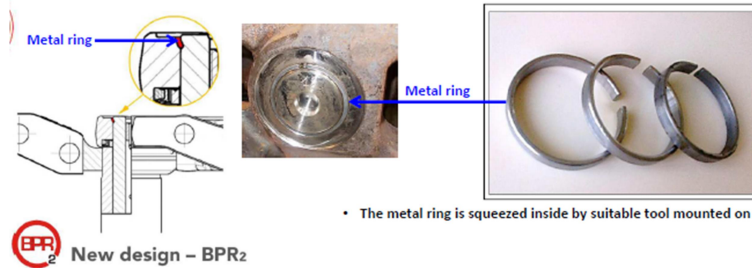
Version C	Version D
Master Link – BPR	Master Link BPR
Seal – Standard Design (Old Design like many of the lubricated chain)	Seal – Using BPR2 (equivalent to CAT PPR) design. Better wear behaviour
Oil – Standard Oil	Oil – Using BPR2 Oil – improved formula for artic use as well.



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## D8R – PPR Design – BERCO Part No: CR7603 with BPR2 Design



- The metal ring is squeezed inside by suitable tool mounted on the press



New design – BPR<sub>2</sub>



New seal design has been developed to improve SALT chain joint life

New seals



New design

- Improved synthetic rubber ring suitable from -45°C to +70°C
- Main ring made by two plastic materials with improved wear behavior

### New Design

- Improved synthetic rubber suitable from -45°C to 70°C
- Main ring made by two plastic materials with improved wear behaviour

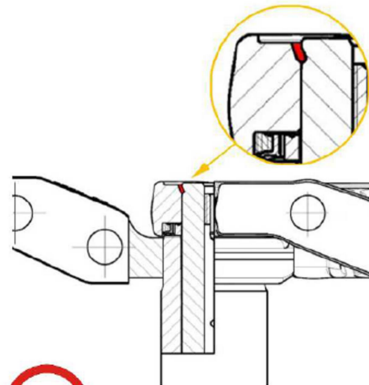


NEW OIL : suitable for Standard and Artic use



Notes:

This means **all links** all design and equipped with BPR2 design.



New design – BPR<sub>2</sub>

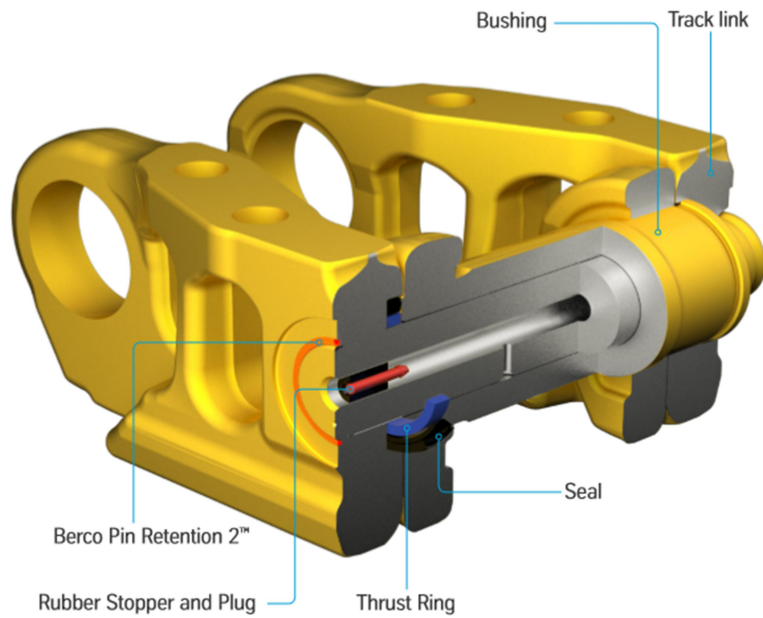




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### BERCO BPR2 Positive Pin Retention 2



### Caterpillar PPR Positive Pin Retention

