

SafeR Bearing Assemblies

For improved reliability & extended wear life

SafeR-Bearing Assemblies

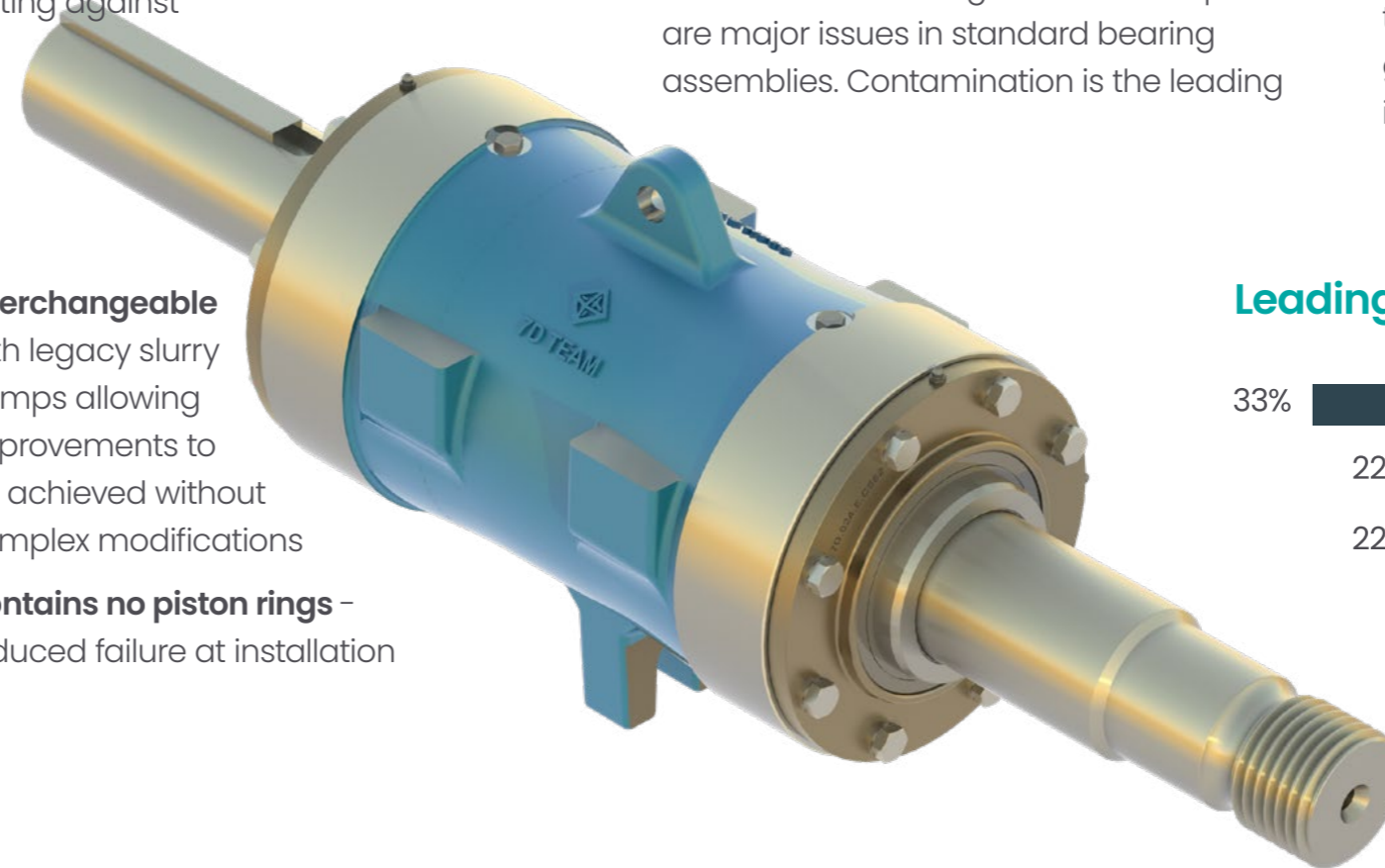
Standard in SafeR-Series. Designs also available to for upgrading Metso®, Goulds®, Flowserve® and the brand we cannot mention.

7D have developed a range of slurry pump products which feature patented innovative designs that can significantly reduce the operational costs of slurry pumping. By addressing key performance areas, 7D provide reliability, longer service life and greater efficiency.

7D advanced pump upgrades include the SafeR™ bearing assembly, an innovative design protecting against contaminants, reducing grease consumption and improving overall plant reliability.

Advantages

- ✓ **Less maintenance** - only requires greasing every few months. Directional grease port prevents over consumption of grease.
- ✓ **Advanced stainless steel non-contacting bearing isolators** provide a unique barrier to prevent ingress of contaminant
- ✓ Choice of **oil or grease lubrication**
- ✓ **Interchangeable** with legacy slurry pumps allowing improvements to be achieved without complex modifications
- ✓ **Contains no piston rings** - reduced failure at installation



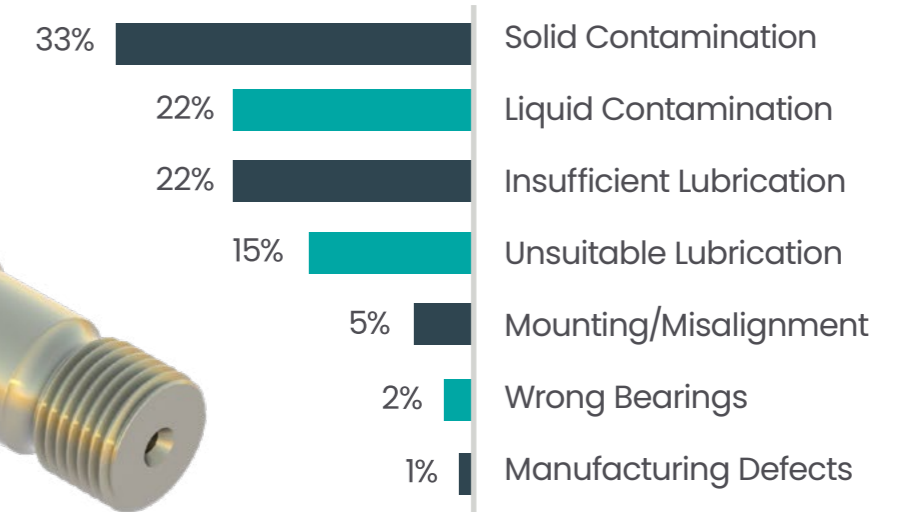
Improved bearing reliability and extended wear life

It is crucial for bearing assemblies to be reliable, to prevent expensive and unexpected downtime. The 7D SafeR bearing assembly offers many updated parts to improve on typical legacy failure points.

Contamination and grease consumption are major issues in standard bearing assemblies. Contamination is the leading

cause of bearing failure, with approximately 55% of bearing failures due to contamination leading to unscheduled downtime and lost production. Up to 95% of grease is wasted in conventional bearing assemblies. The SafeR bearing assembly was specifically designed to prevent against contamination, reduce grease consumption, improve maintenance intervals and reduce inventory costs.

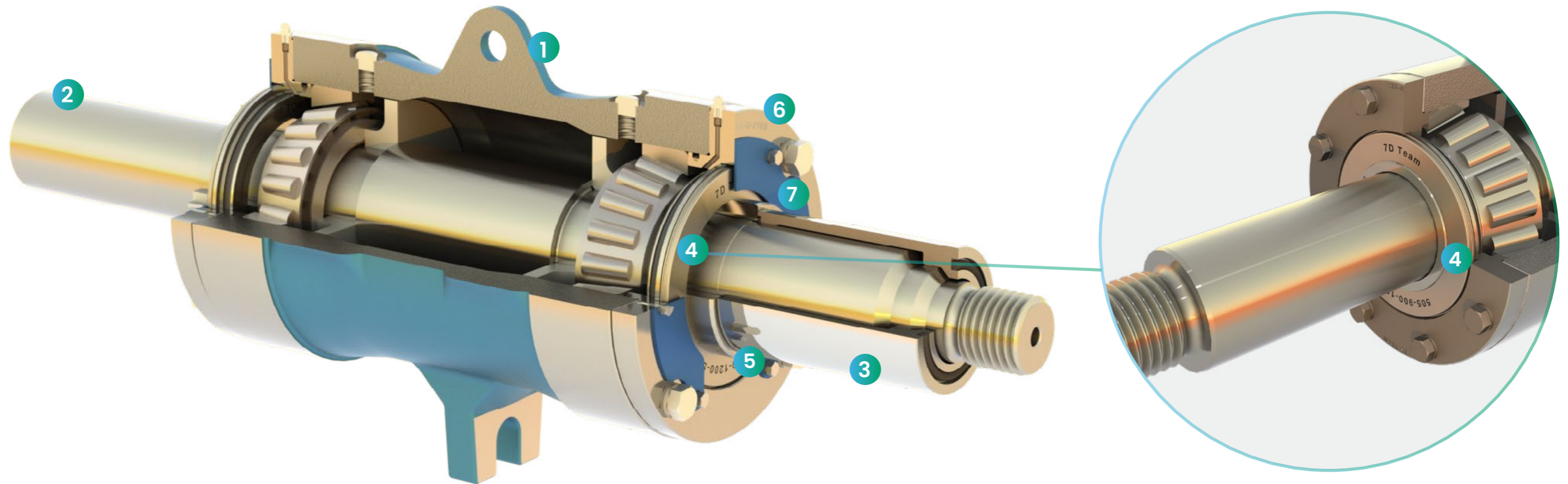
Leading causes of bearing failure



SafeR-Series Bearing Assembly vs. Standard

	ISOLATOR MODERN DESIGN	STAINLESS STEEL AS STANDARD	COMBINED STATOR & ROTOR	DIRECTIONAL GREASE PORT	GREASE PURGE REQUIRED	SPLASH GUARD STANDARD	ISOLATORS FIELD REPAIRABLE	SEVERE DUTY END COVER	LEGACY SLEEVES
SAFER-SERIES BEARING ASSEMBLY	✓	✓	✓	✓	✗	✓	✓	✓	✓
LEGACY BEARING ASSEMBLY	✗	✗	✗	✗	✓	✗	✗	✗	✓
GENERIC ISOLATOR UPGRADES	✓	✗	✓	✗	✗	✗	✗	✓	✓

Features and Benefits



1 Bearing Housing

- ✓ Old bearing assemblies can be upgraded in-situ
- ✓ Rated lifting lugs for safe lifting (no threaded holes)
- ✓ Ductile Iron Standard. 316SS, CD4MCu optional extra

2 Shaft

- ✓ 1040 standard
- ✓ 4140, 316SS, 2205, 431T, 17-4PH available as optional extra

3 Sleeve

- ✓ For optimum frame life, Wolfram long sleeves can be supplied as an optional extra on most frames
- ✓ Wide range of materials available to suit the most demanding services

4 Bulwark Bearing Guard

- ✓ Non-contact metals so isolator does not wear
- ✓ Permanent bearing protection
- ✓ Can be installed by 7D or retrofitted on site
- ✓ Maintenance free
- ✓ Ultra-low energy consumption
- ✓ Shaft sizes of 1.59cm (0.6") to 11.1cm (4.3"). Other sizes available on request.
- ✓ Temperature tolerances from -40°C (-40°F) to 110°C (424°F)
- ✓ Manufactured in Stainless Steel for extreme conditions

5 Spacer

- ✓ Spacer easily retrofitted to suit 'XL' shafts. Simple maximised interchangeability

6 Severe Duty End Cover

- ✓ Shims and o-ring provide double protection against possible contaminant entry
- ✓ Added o-ring for superior gland spray protection
- ✓ Wide material range, stainless steel as standard

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Splash Guard

- ✓ Protects against high pressure

Bearing Service Exchange

Reduce your stock holding, and minimise downtime with our bearing service exchange program.

Exchange an old bearing assembly for a new or refurbished one at just 60% of the price of buying new.

Even before that hot, noisy, or high vibration bearing assembly fails, you can have a service exchange unit shipped to site, ready to install, minimizing downtime without increasing your stock holding.

We can provide you with a new or remanufactured unit in a short period of time, typically dispatched the same day.

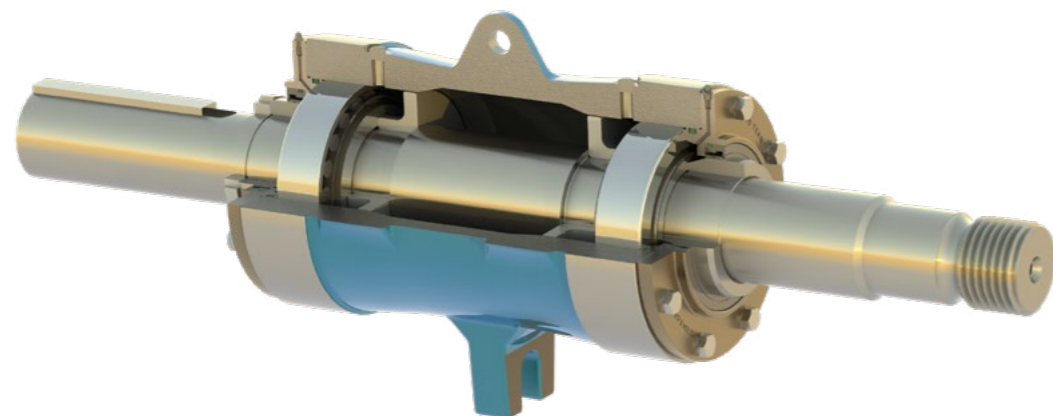
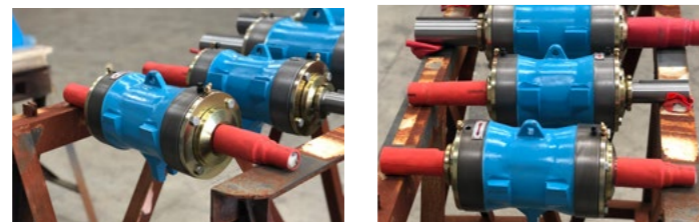
Benefits include:

- ✓ Less risk in critical rotating component of pump due to optimal assembly under ideal workshop conditions
- ✓ Less waste and environmental damage as parts are used where they still comply with as new tolerances
- ✓ Less components to stock in store inventory

From this:



To this:



Core Exchange Process

- 1** Contact us and have the bearing assembly size ready to tell us.
- 2** We'll check our inventory and provide you an estimated arrival date of a new/remanufactured unit with detailed pricing.
- 3** Place an order to hire a service exchange bearing assembly on a per day basis.
- 4** We'll provide freight instructions so you can ship the damaged unit back to our workshop.
- 5** When we receive your damaged assembly, place an order for the service exchange unit (60% of the 'new' bearing assembly price). The service exchange hire unit is then yours.
- 6** Depending on the condition of the returned housing, it will either be scrapped or be overhauled, going into our pool of remanufactured units, awaiting the next emergency call.
- 7** Every bearing assembly is meticulously checked, to ensure compliance with acceptable tolerances, is run tested, with reports, and provided with the same warranty as a new bearing assembly. You can rest assured each overhauled assembly will perform as new.



Typical service exchange includes:

- ✓ Complete Strip Down
- ✓ Reassemble
- ✓ Electronic (PDF) IOM Manuals
- ✓ Bead Blast/Clean
- ✓ Run Test
- ✓ Freight to and from site is by others
- ✓ New Bearings
- ✓ Two Pack Epoxy Coating
- ✓ Service Tag ID
- ✓ New O Rings
- ✓ Test Certificate
- ✓ New Shims
- ✓ Laminated BOM sheets and SA Drawings
- ✓ New Fasteners

How to Upgrade

7D's Bulwark Bearing Guard bearing isolator kits (standard in new 7D pumps) are available to upgrade existing legacy equipment without the need for complex modifications, to deliver similar advantages of the complete SafeR bearing assembly.

The Bulwark Bearing Guard is a non-contacting, permanent bearing protection device.

Features and benefits

- ✓ **The recessed design** ensures dust, grime and mud do not sit on the top of the seal, damaging it over time.
- ✓ **A protective bearing isolator** improves maintenance intervals and reduces your inventory needs. The improved design catches lubricant in the inner section of the labyrinth and flows back to the bearing housing. External contamination is prevented from entering the bearing housing, caught in the outer labyrinth parts and released through a port in the stator by centrifugal force and gravity.
- ✓ **The splash guard** ensures even sustained high pressure gland leakage does not enter the bearing assembly.

Contact our technical team for videos and reports of the extensive test work conducted, providing confidence to claim superiority over competitor designs.



Bulwark Bearing Guard on a 7D Team bearing assembly



Bulwark Bearing Guard