



SKF CASSETTE SEAL



SEAL SOLUTIONS
AUSTRALIA



New generation of SKF cassette seal- MUD11

SKF Mudblock- MUD11 : Product Information Overview



SKF MUDBLOCK- MUD11 : Product Overview

Offer description:

- Standard range of SKF Mudblock seals for Oil applications with superior performance covering the range of 25mm to 250mm shaft size

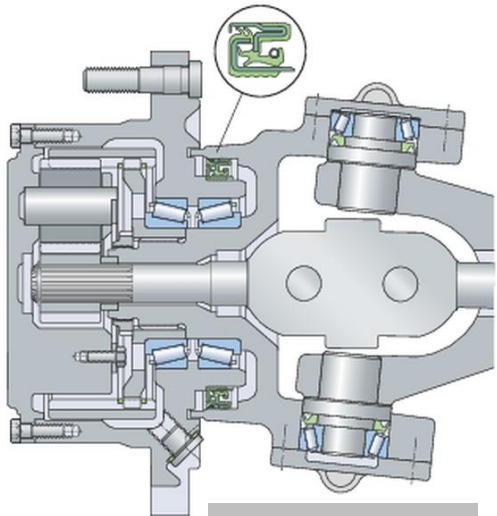
Applications

Front and rear WHEEL-End of

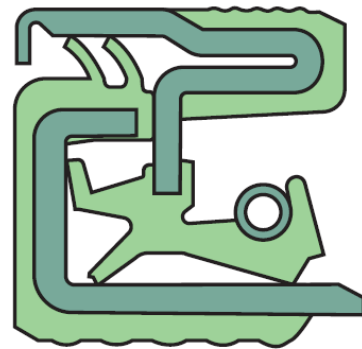
- Tractors
- Agricultural machines
- Construction vehicles
- Forklifts
- Forestry vehicles
- Planetary gearbox

Selection criteria:

- Heavy contamination exclusion ✓
- Oil Seal ✓
- Grease sealing ✓
- Speed (up to 200 rpm) ✓



Wheel end layout



MUD11

Wheel End bearing for Off-Highway applications



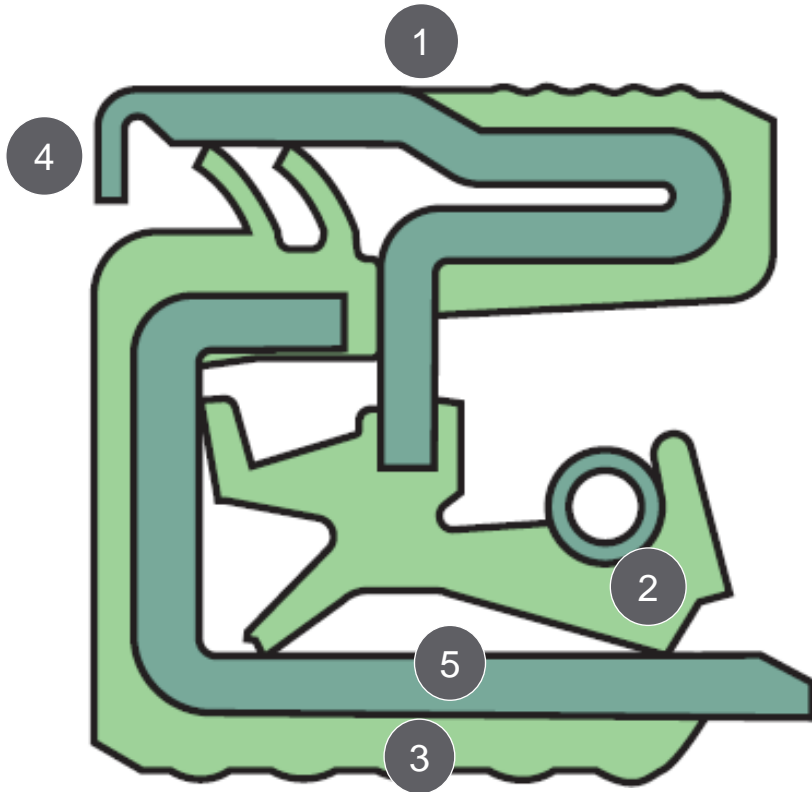
Application challenges

- Long, intensive work periods
- Exposure to elements and harsh conditions
- Failed seals allow contaminant ingress, lubricant loss and bearing failures

Wheel-end bearing failures

- Lower productivity and higher maintenance costs for end-users
- More warranty claims and damaged reputations for OEMs

The Solution : SKF Mud11 designed for high Performance



1

Half-metal/half-rubber outside diameter

Improves static sealing, heat dissipation and retention in housing.

2

Main lip

The spring-loaded main sealing lip keep the lips lubricated and promote sealing ability regardless of rotation direction. The result: less friction and wear for extended service life.

3

Full rubber inside diameter

Contributes to effective static sealing and helps reduce assembly force required for installation.

4

Curl

Closes the unitized design, promotes easier installs and dismounts, and prevents seal disassembly during transport/handling.

5

Integrated counterface

Wear sleeve and seal form a single, unitized seal unit that eliminates shaft machining requirements. Sleeve running surface is machined to obtain required finish

6

Multiple sealing lips

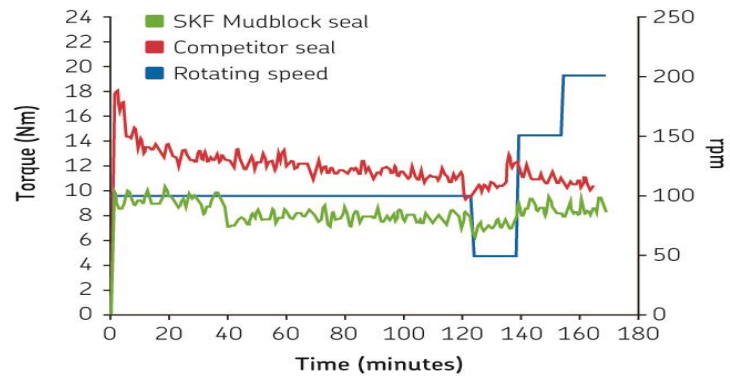
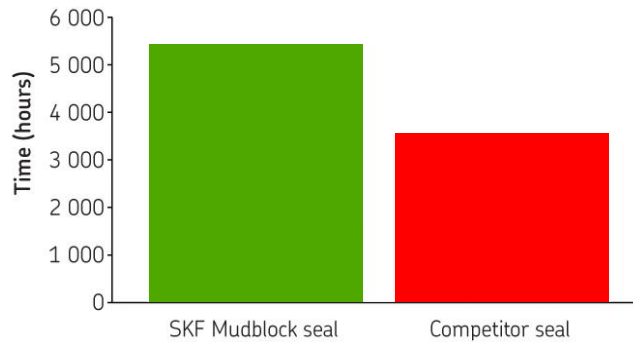
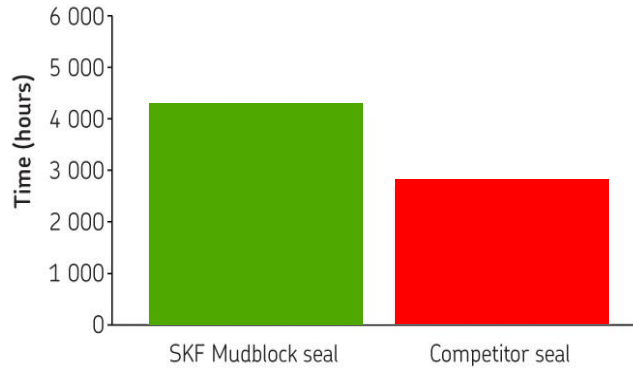
Pre-greased auxiliary radial and axial lips support SKF Wave main lip for maximum protection against liquid or solid contaminants.

7

SKF developed compound

An SKF-formulated compound that helps reduce wear and ageing; compatible with most synthetic oils.

SKF Mud11 : Validation Rig Tests



Mud slurry test results to seal failure

- Tests simulating real field conditions with oil inside and mud slurry contamination outside
- SKF Mudblock seals out-performed competitor seals
- Results based on multiple number of tests

Hot oil durability tests to seal failure

- Validated main lip oil retention by hot oil durability test
- SKF Mudblock seals outlast competition
- Results based on multiple number of tests

Friction torque test results

- Measured friction from start-up through first few hours of operation
- SKF Mudblock seals operated with up to 20% less friction than competitor's seals

SKF Mudblock- MUD11 - Benefits

For end-users

- Increased productivity
- Reduced maintenance
- Lower operating costs

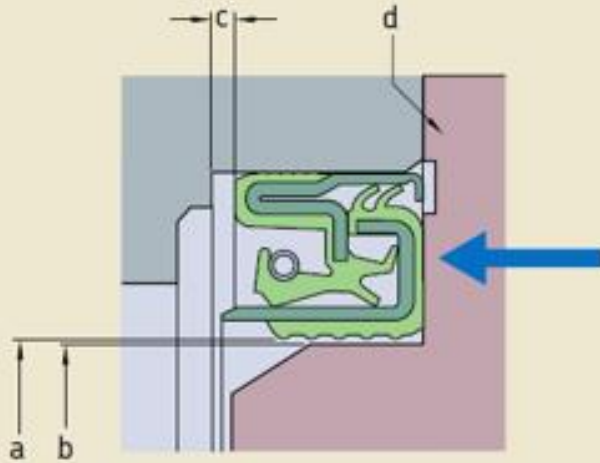
For OEMs

- Increased seal service life
- Reduced warranty claims and costs
- Reliable seals partner



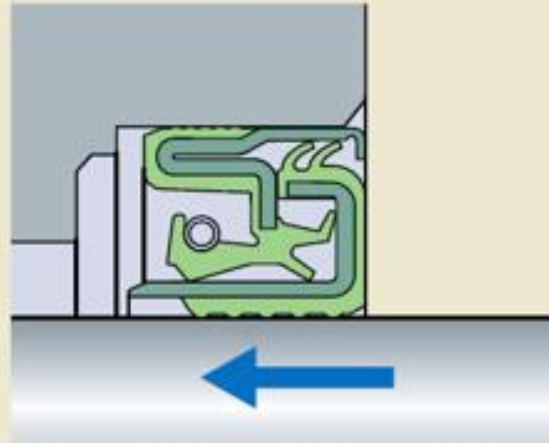
MUD 11 Assembly Procedure

Seal is installed in the housing bore



- a) Seal inside diameter
- b) Installation tool inside diameter
- c) Bore depth clearance
- d) Installation tool arrest

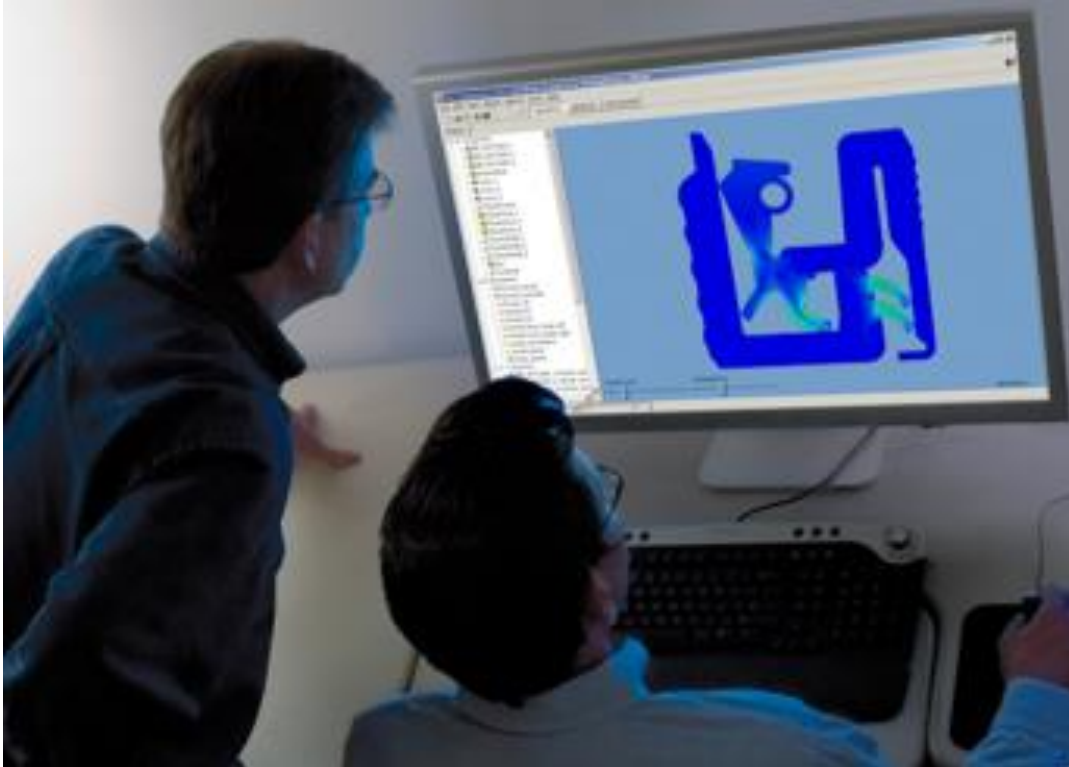
Shaft is introduced



Recommended surface roughness values:
Shaft: h8; Ra = 1,6 to 3,2 μm
Housing bore: H8; Ra = 1,6 to 3,2 μm

- Install seal in the housing bore with proper installation tool
- Installation tool should prevent seal contact w/housing bottom and leave small clearance against seal inside diameter
- Introduce the shaft

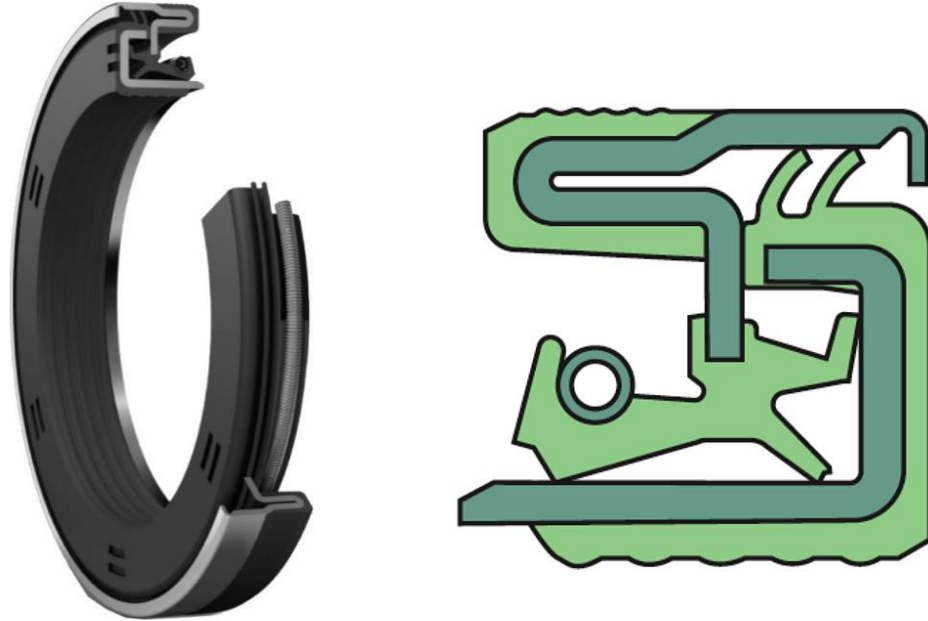
Global Support



Application Engineers located locally can support the customers in

- Seal selection
- Seal assembly – Tool design and Installation
- Post-test analysis

Target Range for Feb 2021



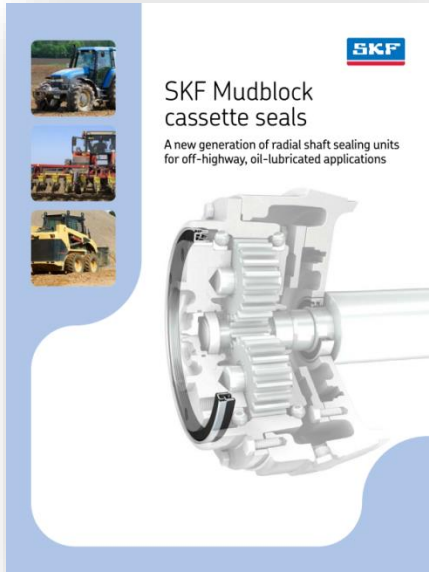
MUD11 Design - Interchangeable with Competitor seals

Please contact your local SKF representative for sizes not in the list . We will keep adding new sizes every month

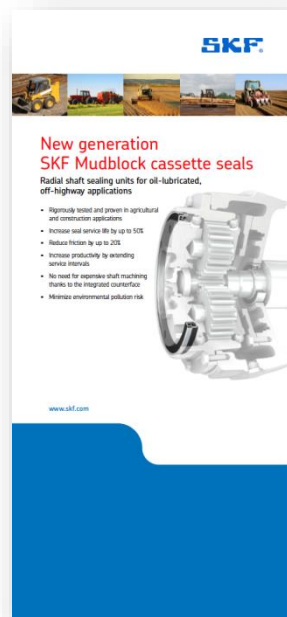
Range Target

Prodmast Designation	Dimensions	Materials
56x80 MUD11 R	56x80x13,5x14,5	NBR
55x80 MUD11 R	55x85x13,5x14,5	NBR
60x90 MUD11 R	60x90x14,5x15,5	NBR
65x95 MUD11 R	65x95x14,5x15,5	NBR
65x90 MUD11 R	65x90x14,5x15,5	NBR
70x95 MUD11 R	70x95x14,5x15,5	NBR
70x100 MUD11 R	70x100x14,5x15,5	NBR
75x105 MUD11 R	75x105x14,5x15,5	NBR
80x110 MUD11 R	80x110x14,5x15,5	NBR
85x115 MUD11 R	85x115x14,5x15,5	NBR
90x120 MUD11 R	90x120x14,5x15,5	NBR
100x130 MUD11 R	100x130x14,5x15,5	NBR
110x140 MUD11 R	110x140x14,5x15,5	NBR
130x160 MUD11 R	130x160x15x16	NBR
140x170 MUD11 R	140x170x15x16	NBR
145x175 MUD11 R	145x175x15x16	NBR
150x180 MUD11 R	150x180x15x16	NBR
165x190 MUD11 R	165x190x15x16	NBR
170x200 MUD11 R	170x200x15/16	NBR

Market Commmunications material



- Brochure PUB 45/P2 14184
- Agri Catalogue
- Back-drop
- Exhibit
- Presentation external
- Product data Package
- Product tables and info on skf.com



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