

# RAVENOL®

OIL ANALYSIS PDK FLUID



# RESULTS OF THE OIL ANALYSIS

<b>Parameters</b> Measurement methods	<b>Unit</b>	<b>Fuchs</b> <b>Titan FFL-3</b>	<b>RAVENOL</b> <b>PDK Fluid</b>
Appearance/colour	-	yellow	yellow
Colour code DIN ISO 2049:2001-06"	-	2,5	2,0
Density 15°C DIN EN ISO 12185:1997-1	kg/m <sup>3</sup>	842,6	847,5
Viscosity 40°C E-DIN 51659-2:2014-08	mm <sup>2</sup> /s	34,5	33,68
Viscosity 100°C E-DIN 51659-2:2014-08	mm <sup>2</sup> /s	6,903	6,951
Viscosity index DIN ISO 2909:2004-08	-	165	173
Brookfield -40°C ASTM D 2983:2009	mPa·s	6900	6700
Pour Point DIN ISO 3016:1982-10	°C	-60	-66
VKA AW 40kg 1hr DIN EN ISO 20623:2018-04	mm	0,47	0,40
VKA EP Weld-Load DIN EN ISO 20623:2018-04	kg	2200/2400	2200/2400
KRL 20hr KV100°C DIN 51350-6:1996-08	mm <sup>2</sup> /s	6,683	6,732
Shear stability, KRL, loss of viscosity	%	3,19	3,15
Copper Corrosion ASTM D130: 2012	-	1b	1a

# BROOKFIELD -40°C

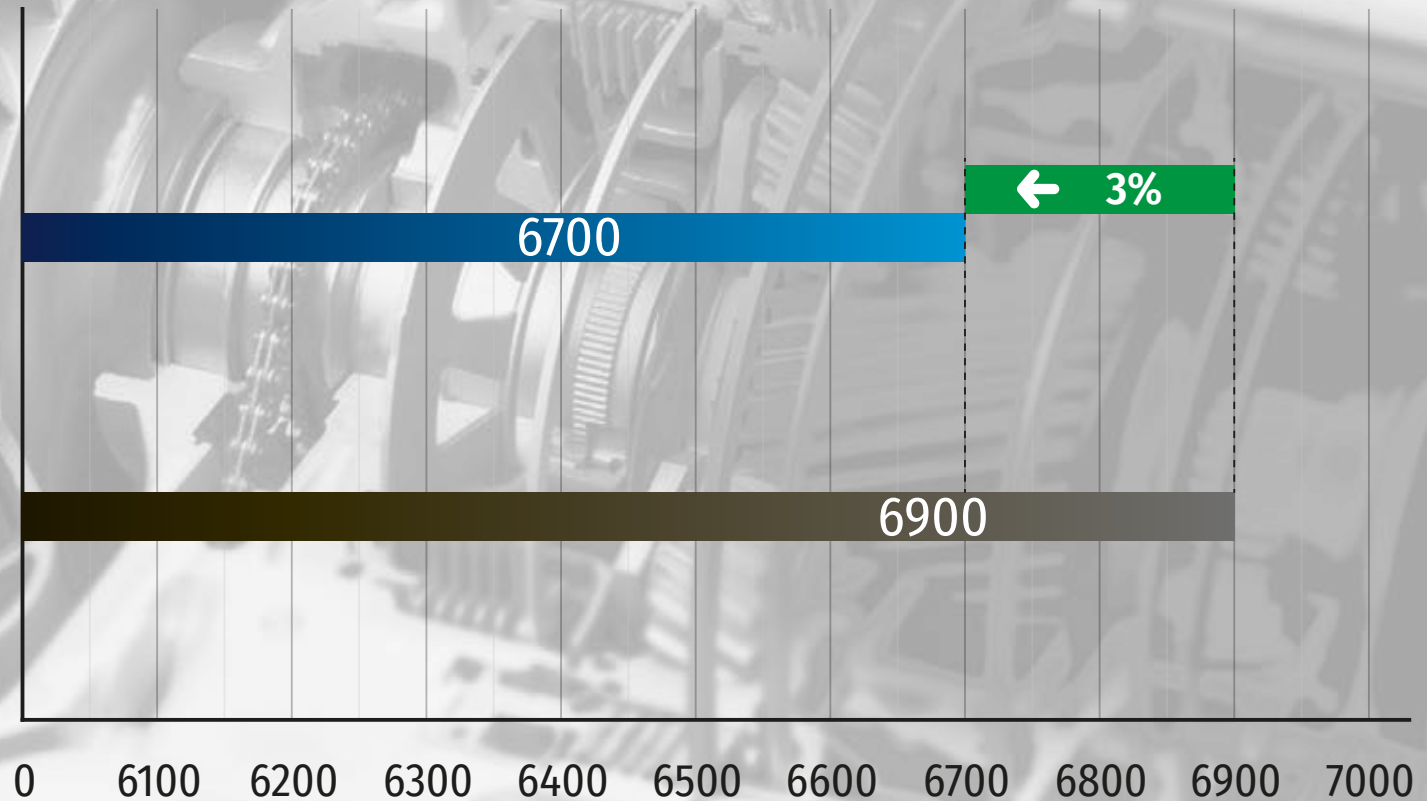
ASTM D 2983

The lower the dynamic viscosity, the better. With regard to the parameters for dynamic viscosity at minus 40 °C, RAVENOL PDK Fluid delivers 3% higher performance than the Fuchs Titan FFL-3.



**RAVENOL**  
PDK FLUID

**FUCHS**  
TITAN FFL-3



**MPA·S**

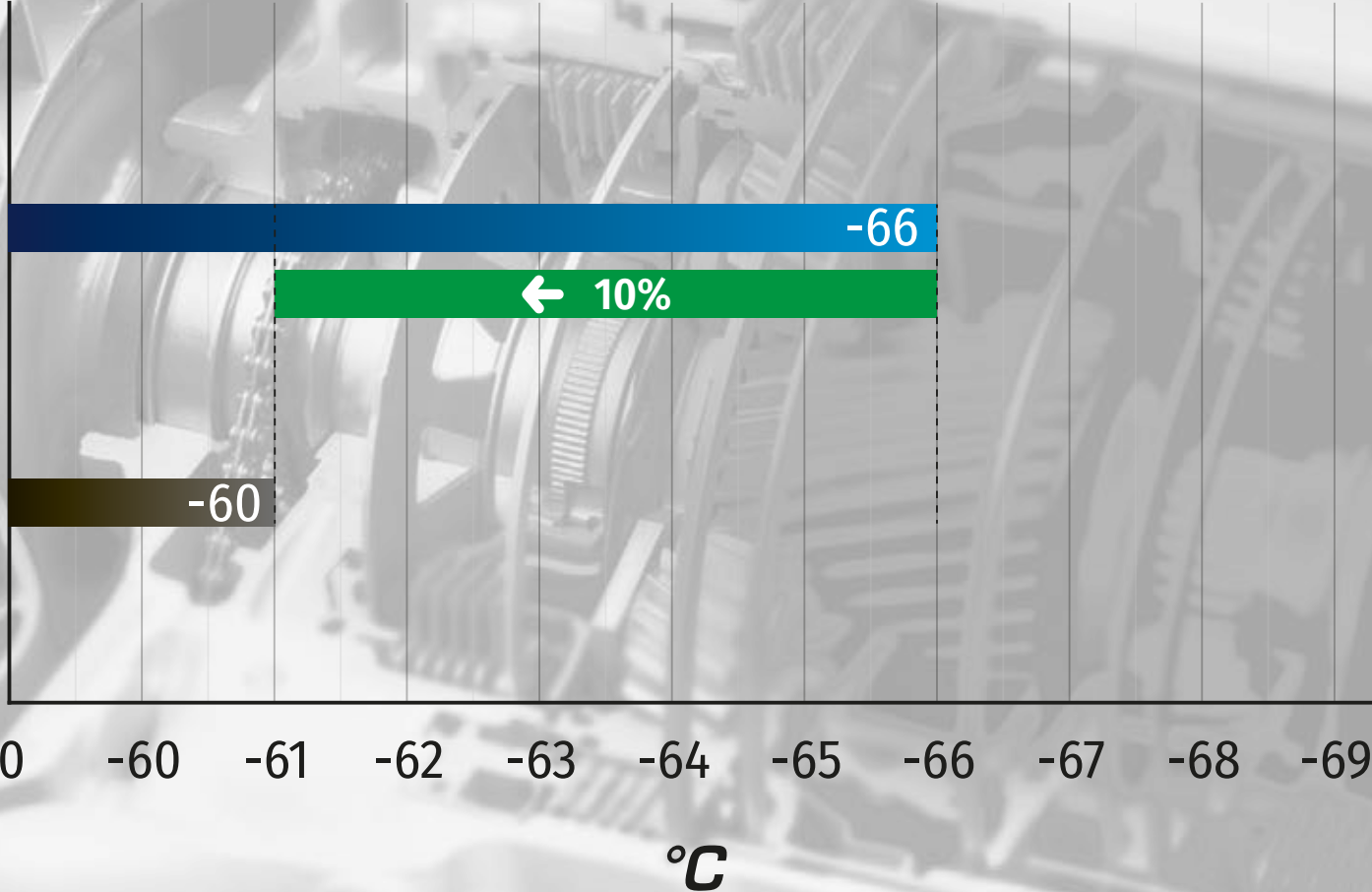
# POUR POINT

DIN ISO 3016

At its pour point, RAVENOL PDK Fluid delivers 10% higher performance than the Fuchs Titan FFL-3.

**RAVENOL**  
PDK FLUID

**FUCHS**  
TITAN FFL-3



# VKA AW 40KG 1H

FBT = FOUR BALL TESTER  
WEIGHT 40 KG CYCLE TIME 1 HOUR

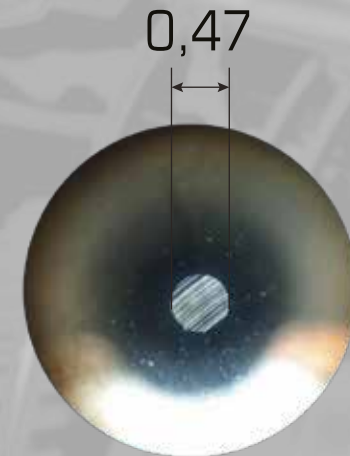
Wear mark, the smaller the better. With regard to its anti-wear characteristics, RAVENOL PDK Fluid delivers 17,5% higher performance than the Fuchs Titan FFL-3.



**RAVENOL**  
PDK FLUID



**FUCHS**  
TITAN FFL-3



**MM**



# VKA EP WELD-LOAD

DIN EN ISO 20623:2018-04



**RAVENOL**

PDK FLUID

2200

**FUCHS**

TITAN FFL-3

2200

0 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400

**KG**

# ***SHEAR STABILITY, KRL, LOSS OF VISCOSITY***

DIN 51350-6

TAPERED ROLLER BEARING TEST 20-HOUR



**RAVENOL**

PDK FLUID

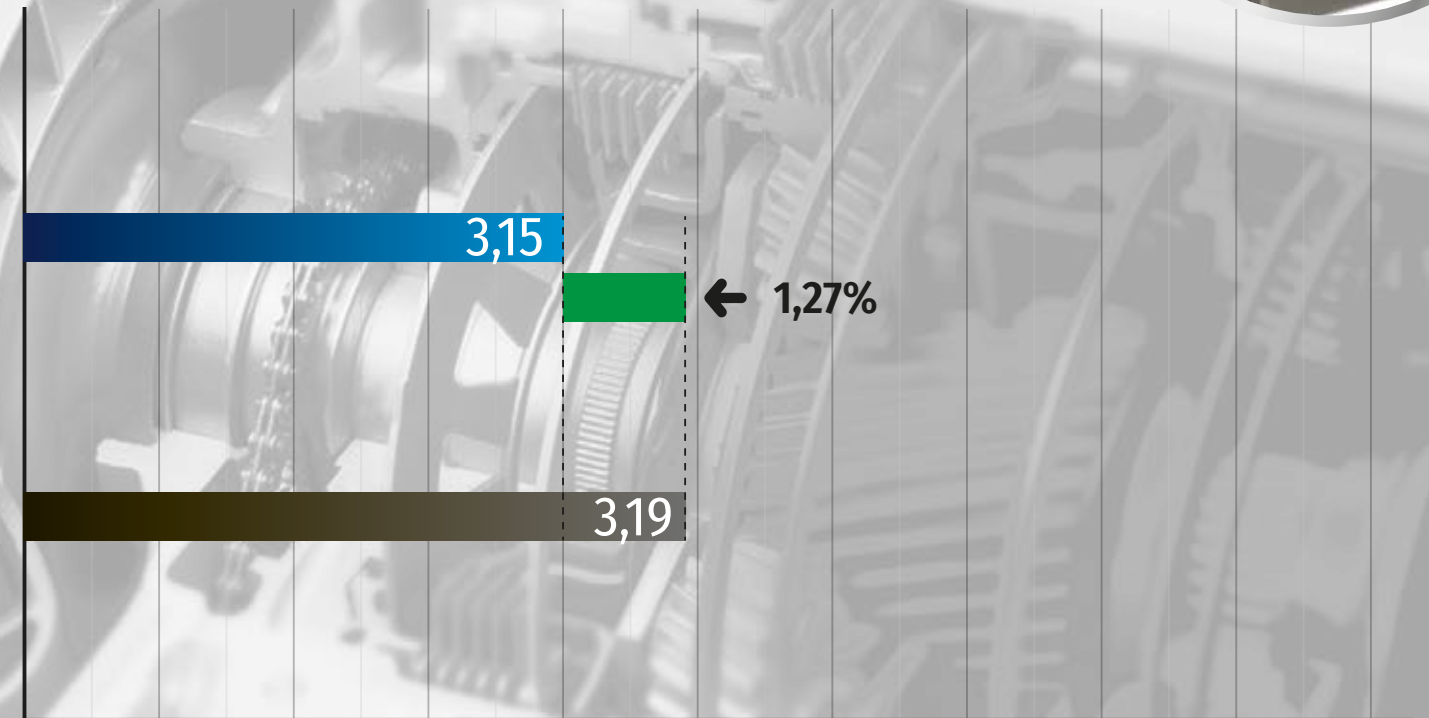
3,15

← 1,27%

**FUCHS**

TITAN FFL-3

3,19



0 3 3,05 3,1 3,15 3,2 3,25 3,3 3,35 3,4 3,45

%

# COPPER STRIP TEST: EFFECT OF CORROSION ON COPPER

ASTM D130: 2012

Test duration 3 hr  
 Temperature: 150 °C



**FRESHLY POLISHED**

**RAVENOL** PDK FLUID

**FUCHS** TITAN FFL-3

<b>FRESHLY POLISHED</b>	<b>1A</b>	<b>1B</b>	<b>2A</b>	<b>2B</b>	<b>2C</b>	<b>2D</b>	<b>2E</b>	<b>3A</b>	<b>3B</b>	<b>4A</b>	<b>4B</b>	<b>4C</b>
	SLIGHT TARNISH		MODERATE TARNISH					DARK TARNISH		CORROSION		



# TEST RESULTS

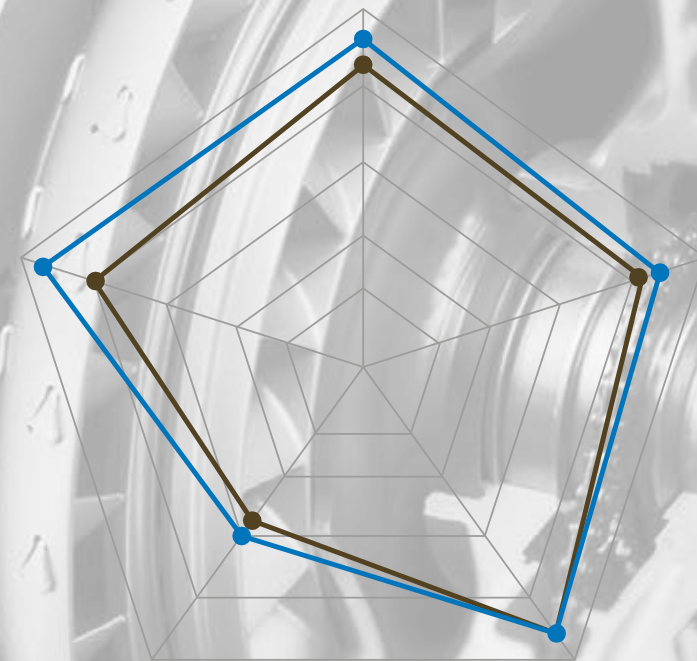
Brookfield -40°C

VKA AW  
40KG 1H

Pour  
Point

Shear stability, KRL

VKA EP WELD-LOAD



—●— RAVENOL  
PDK Fluid

—●— Fuchs  
Titan FFL-3

Parameters Measurement methods	Unit	Fuchs Titan FFL-3	RAVENOL PDK Fluid
Brookfield -40°C ASTM D 2983:2009	mPa·s	6900	6700
Pour Point DIN ISO 3016:1982-10	°C	-60	-66
VKA AW 40KG 1H		0,47	0,40
VKA EP WELD-LOAD	N	2200	2200
Shear stability, KRL, loss of viscosity	%	3,19	3,15