

RAVENOL®

OIL ANALYSIS
RAVENOL UFE SAE 0W-8



RESULTS OF THE OIL ANALYSIS

Parameters Measurement methods	Unit	Limits	RAVENOL UFE SAE OW-8	Toyota Advanced Fuel Economy
Appearance/colour	-		yellow-brown	yellow-brown
Colour code <small>DIN ISO 2049</small>	-		L2,5	L4,5
IR-Spectrum <small>DIN 51451</small>	-		ok	ok
Density 15°C <small>DIN EN ISO 12185</small>	kg/m ³		842,5	841,7
Viscosity 40°C <small>DIN 51659-2</small>	mm ² /s		26,63	24,92
Viscosity 100°C <small>DIN 51659-2</small>	mm ² /s	4,0-6,1	5,457	5,219
Viscosity index <small>DIN ISO 2909</small>	-		143	146
CCS-35°C <small>ASTM D 5293</small>	mPa·s	max 6200	2740	3640
MRV -40°C <small>ASTM D 4684</small>	mPa·s	max 60 000	5300	19700
Yield Stress <small>ASTM D 4684</small>	Pa		<35	<35
HTHS 150°C <small>ASTM D 5481</small>	mPa·s	min 1,7	1,89	1,86
Noack <small>ASTM D 5900a</small>	%	max 15	10,8	13,7
Flash point <small>DIN EN ISO 2592</small>	°C		226	226
Pour Point <small>DIN ISO 3016</small>	°C		-72	-39
TBN <small>ASTM D 2896</small>	mgKOH/g		9,5	7,0
CoCo (150°C/3h) <small>ASTM D130</small>	-		1b	1b
VKA AW 40kg/1h <small>DIN EN ISO 20623</small>	mm		0,38	0,44

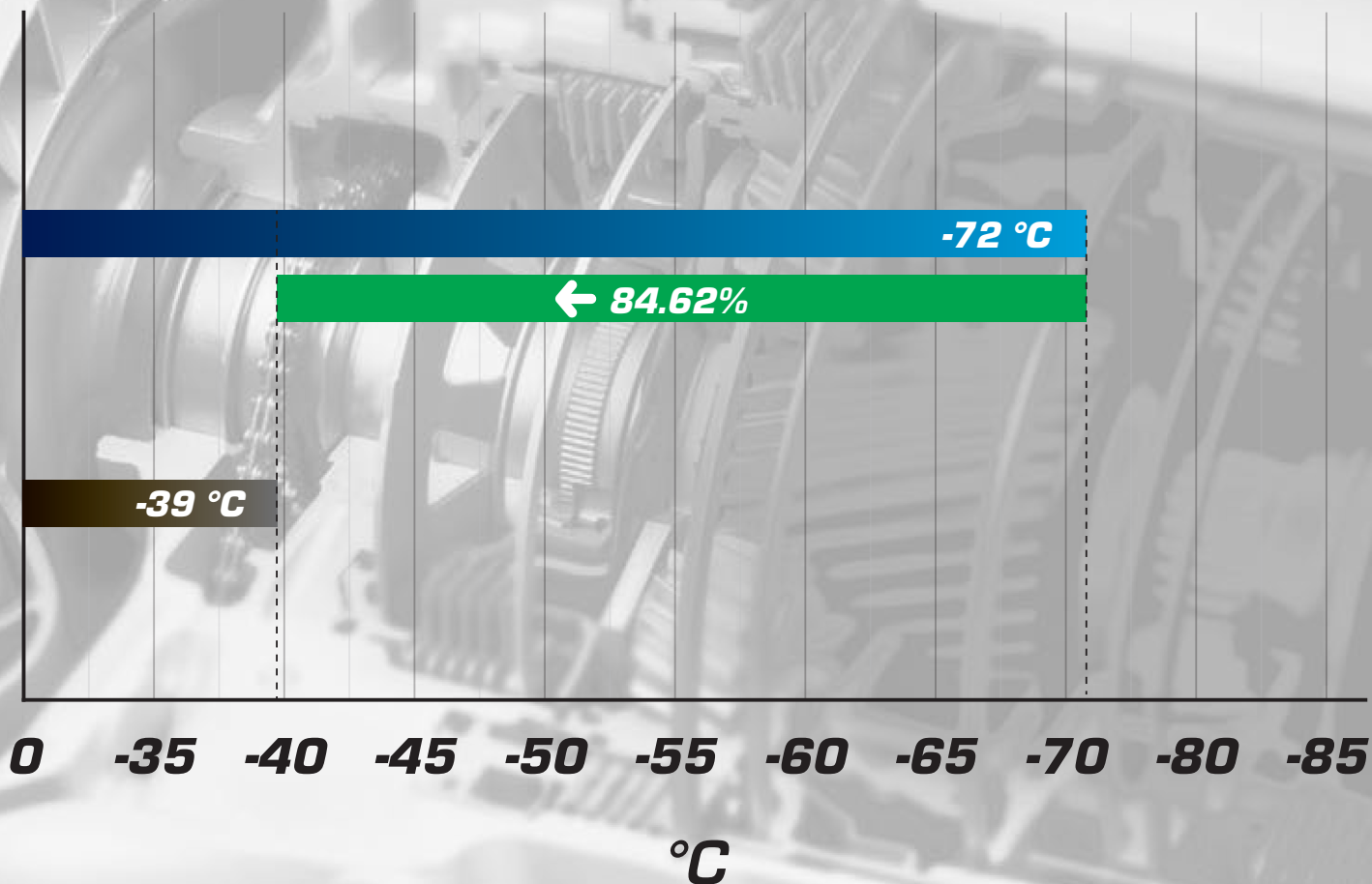
POUR POINT

DIN ISO 3016

At its pour point, **RAVENOL UFE SAE OW-8 Fluid** delivers 84.62% higher performance than the **Toyota Advanced Fuel Economy**.

RAVENOL
UFE SAE OW-8

TOYOTA
ADVANCED
FUEL ECONOMY



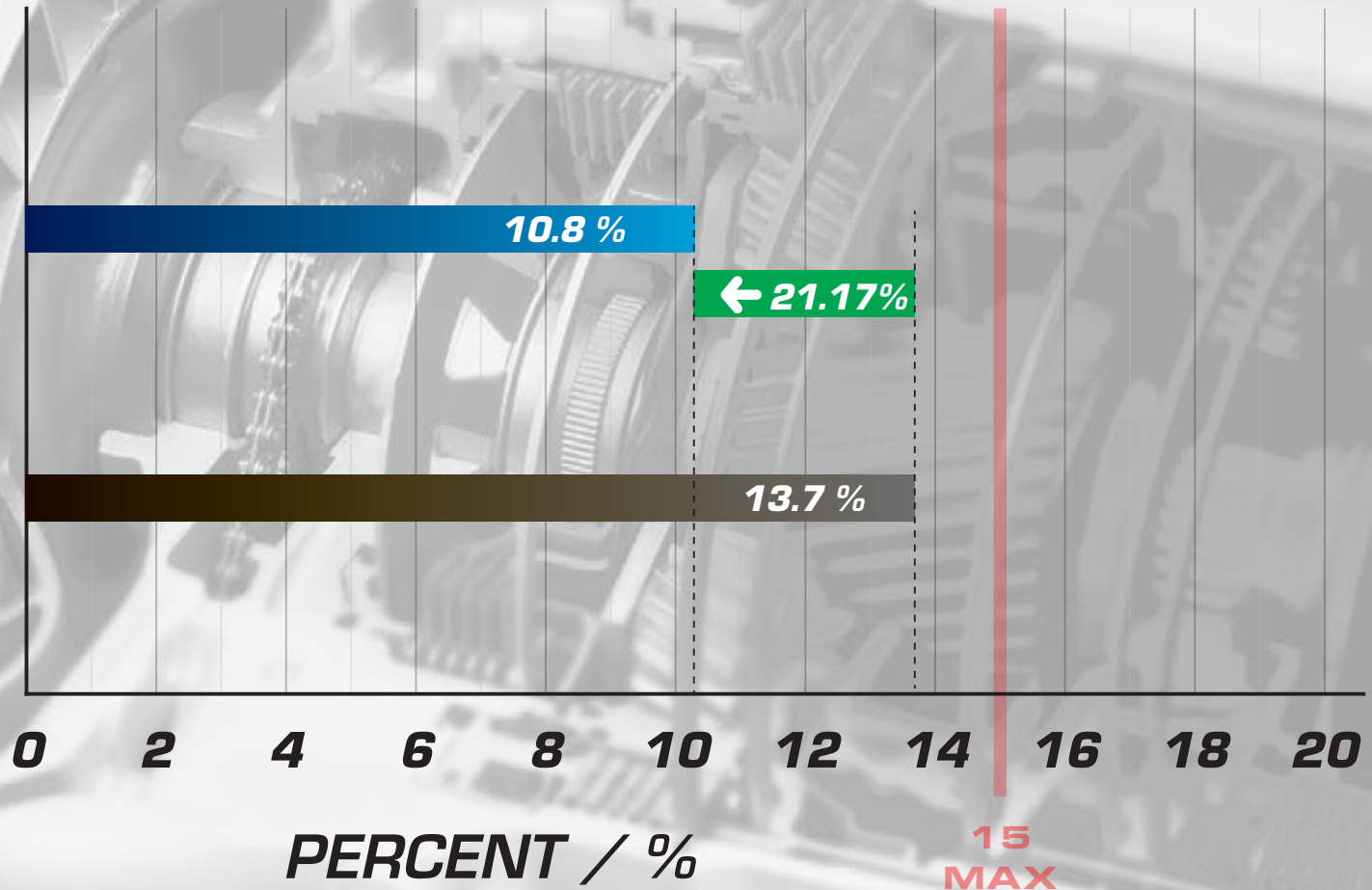
VOLATILITY OF AN OIL (NOACK)

ASTM D 5800A

At its NOACK , **RAVENOL UFE SAE OW-8 Fluid** delivers 21.17% higher performance than the **Toyota Advanced Fuel Economy**.

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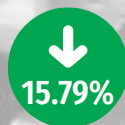
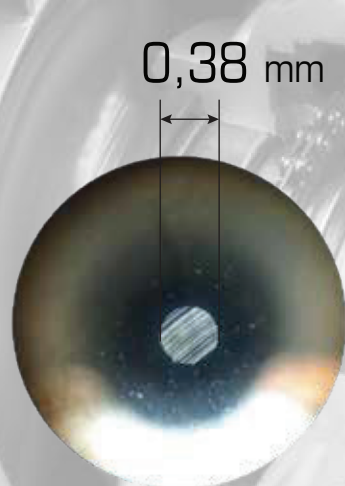
VKA AW 40KG 1H

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

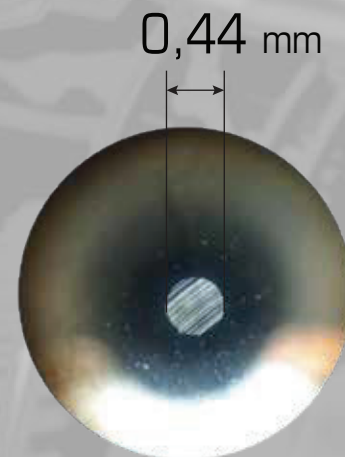
Wear mark, the smaller the better. With regard to its anti-wear characteristics, **RAVENOL UFE SAE OW-8** delivers **15.79%** higher performance than the **Toyota Advanced Fuel Economy**.



RAVENOL
UFE OW-8



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MM



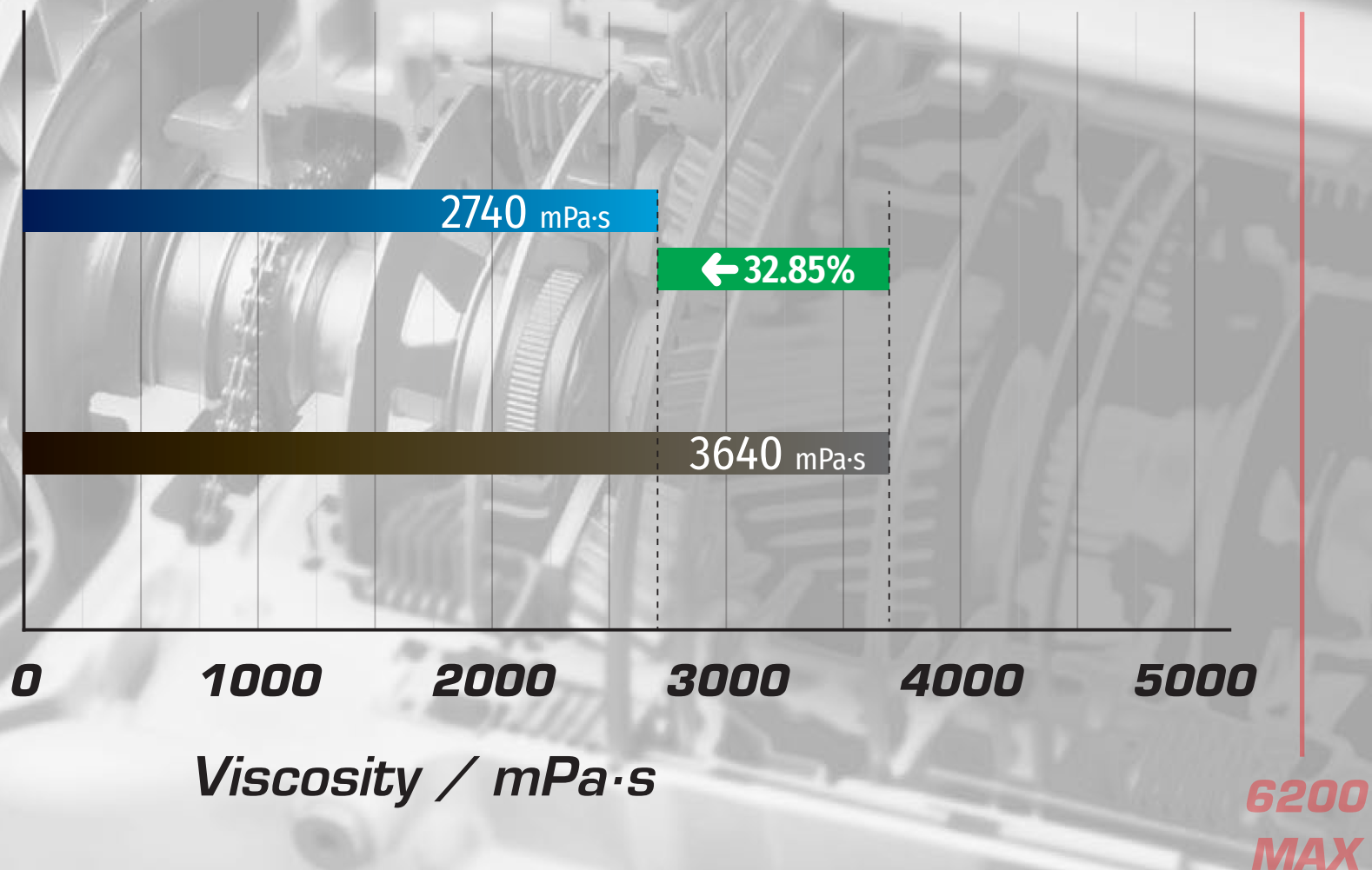
COLD-CRANKING SIMULATOR (CCS) AT -35°C

ASTM D 5293

At -35°C, the CCS -35 test (ASTM D 5293) showed that **RAVENOL UFE SAE OW-8** with a result of 2740 outperformed **Toyota Advanced Fuel Economy**, which scored 3640, by approximately **32.85%**.

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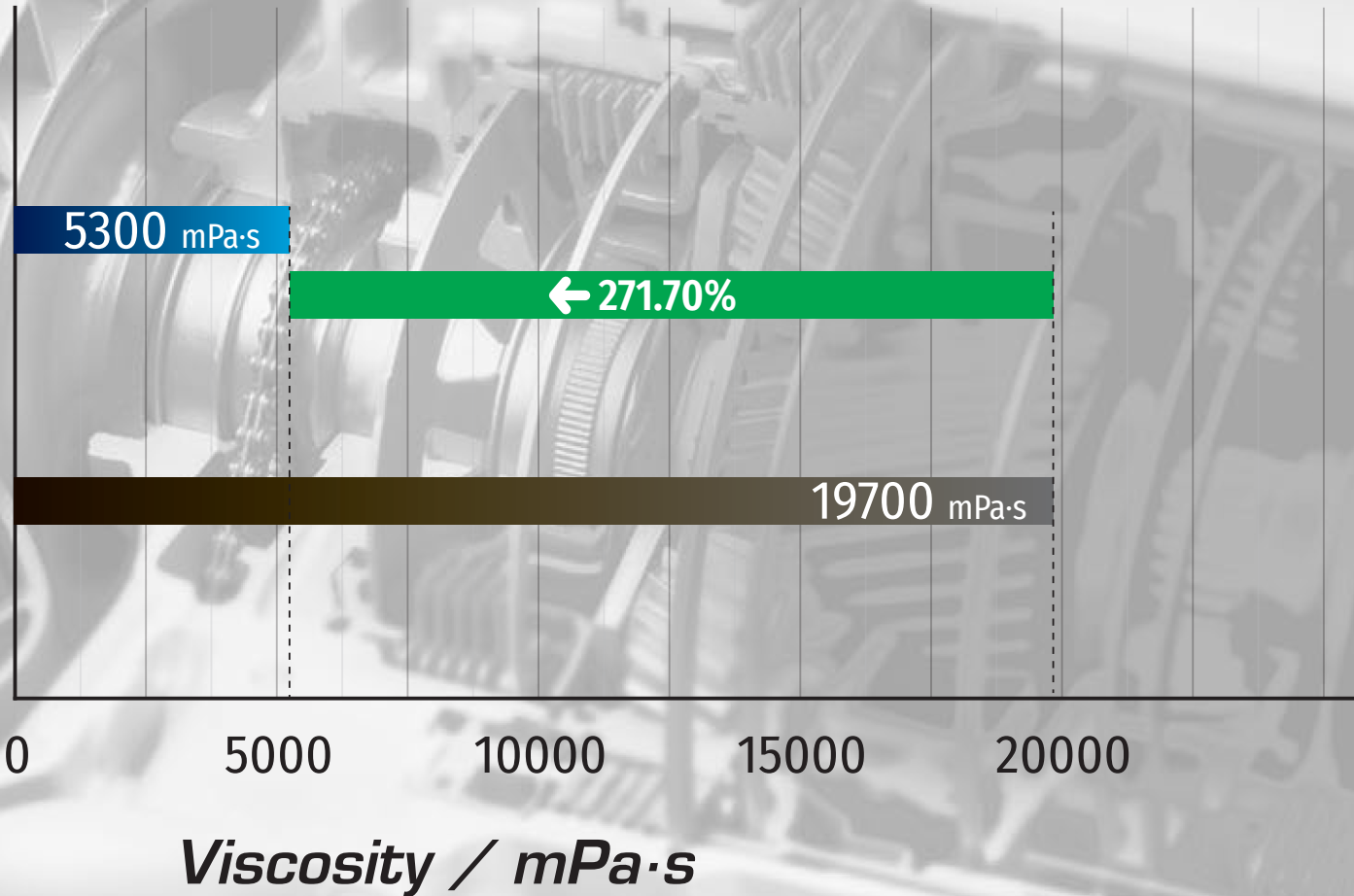
MINI-ROTARY VISCOMETER (MRV) AT -40°C

ASTM D 4684

At -40°C, the MRV -40°C test (ASTM D 4684) revealed that **RAVENOL UFE SAE OW-8**, with a result of 5300, outperformed **Toyota Advanced Fuel Economy**, which scored 19700, by approximately **271.70%**.

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COPPER STRIP TEST: EFFECT OF CORROSION ON COPPER

ASTM D130: 2012

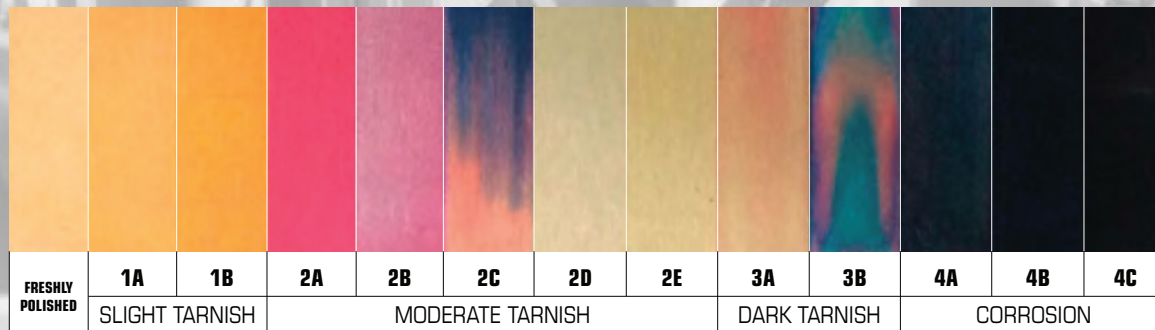
Test duration 3 hr
Temperature: 150 °C



FRESHLY POLISHED

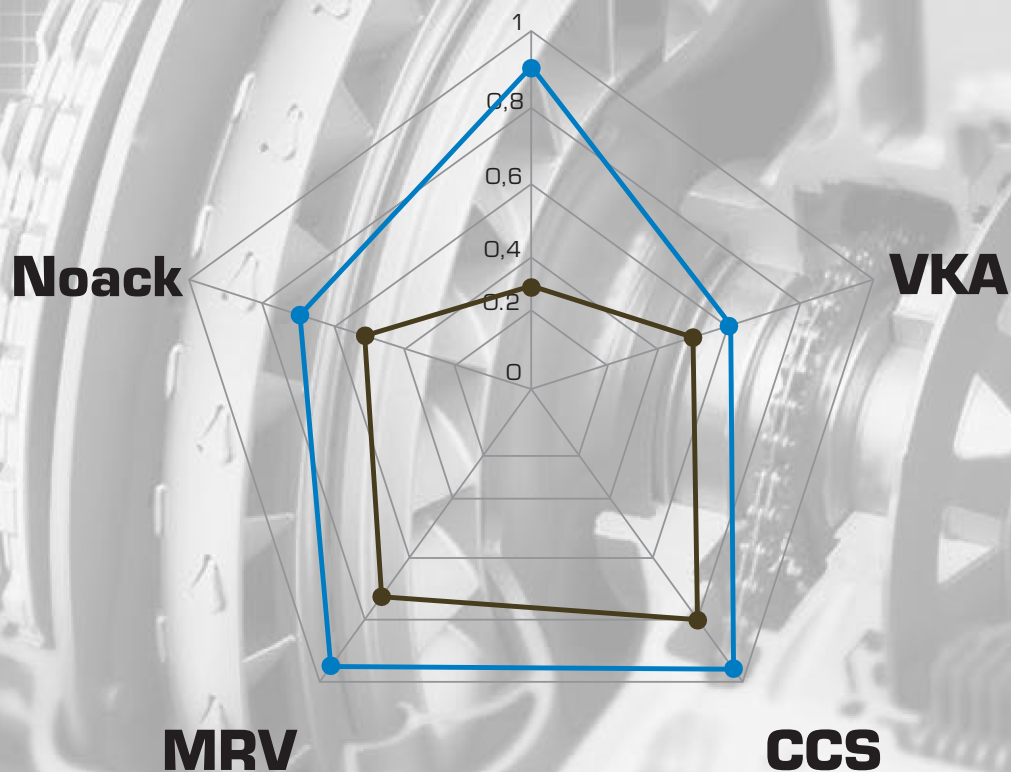
RAVENOL UFE SAE 0W-8

TOYOTA ADVANCED FUEL ECONOMY



TEST RESULTS

Pour Point



Parameters Measurement methods	Unit	RAVENOL UFE SAE 0W-8	Toyota Advanced Fuel Economy
MRV -40°C ASTM D 4684	mPa·s	5300	19700
Pour Point DIN ISO 3016:1982-10	°C	-72	-39
VKA AW 40KG 1H	mm	0,38	0,44
CCS-35°C ASTM D 5293	mPa·s	2740	3640
Noack ASTM D 5800a	%	10,8	13,7

—●— RAVENOL
UFE SAE 0W-8

—●— Toyota Advanced
Fuel Economy