**WEAR CONTAMINATION FLUID CONDITION** 

**NORMAL NORMAL** NORMAL

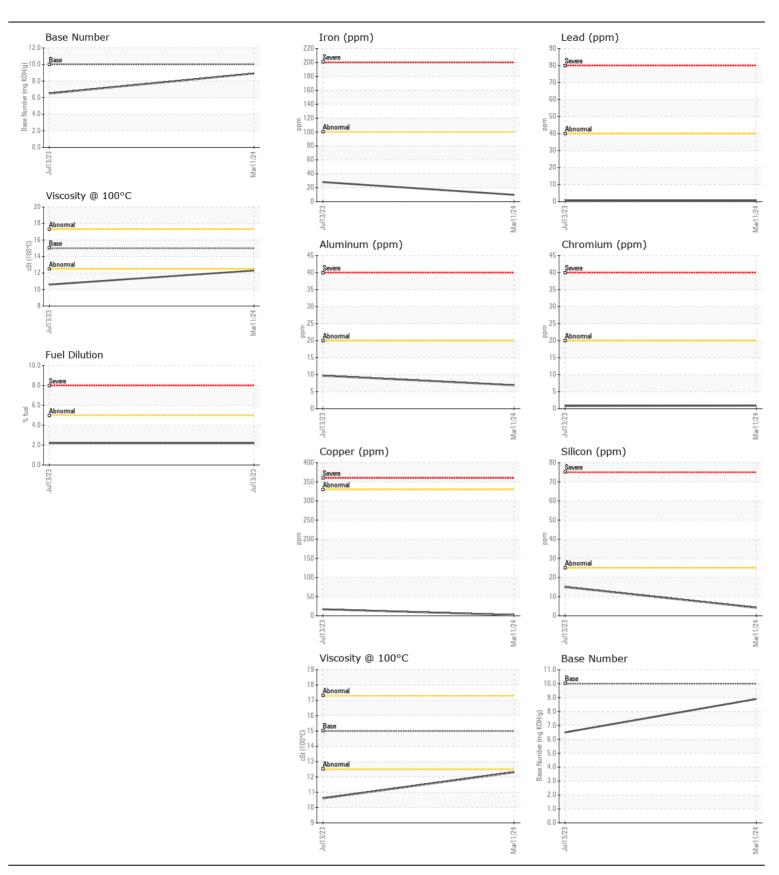
[686812]

## **SENNEBOGEN 840 2371**

Component Diesel Engine

**VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (--- GAL)** 

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Resample at the next service interval to monitor.	Sample Number		Client Info		VCP445319	VCP416337	
	Sample Date		Client Info		11 Mar 2024	13 Jul 2023	
	Machine Age	hrs	Client Info		1773	603	
	Oil Age	hrs	Client Info		500	603	
	Filter Age	hrs	Client Info		0	0	
	Oil Changed		Client Info		Changed	Changed	
	Filter Changed		Client Info		Changed	Changed	
	Sample Status				NORMAL	ABNORMAL	
WEAR	Iron	ppm	ASTM D5185m	>100	10	28	
All component wear rates are normal.	Chromium	ppm	ASTM D5185m	>20	<1	<1	
	Nickel	ppm	ASTM D5185m	>4	<1	0	
	Titanium	ppm	ASTM D5185m		<1	<1	
	Silver	ppm	ASTM D5185m	>3	0	0	
	Aluminum	ppm	ASTM D5185m	>20	7	10	
	Lead	ppm	ASTM D5185m	>40	<1	<1	
	Copper	ppm	ASTM D5185m	>330	2	17	
	Tin	ppm	ASTM D5185m	>15	<1	<1	
	Vanadium	ppm	ASTM D5185m		<1	<1	
	White Metal	scalar	*Visual	NONE	NONE	NONE	
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
CONTAMINATION	Silicon	ppm	ASTM D5185m	>25	4	15	
	Potassium	ppm	ASTM D5185m	>20	17	40	
There is no indication of any contamination in the oil.	Fuel	%	ASTM D3524	>5	<1.0	<u>^</u> 2.2	
	Water		WC Method	>0.2	NEG	NEG	
	Glycol		WC Method		NEG	0.0	
	Soot %	%	*ASTM D7844	>3	0.1	0.2	
	Nitration	Abs/cm	*ASTM D7624	>20	8.6	11.0	
	Sulfation	Abs/.1mm	*ASTM D7415	>30	19.7	19.9	
	Silt	scalar	*Visual	NONE	NONE	NONE	
	Debris	scalar	*Visual	NONE	NONE	NONE	
	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
	Appearance	scalar	*Visual	NORML	NORML	NORML	
	Odor	scalar	*Visual	NORML	NORML	NORML	
	Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	
FLUID CONDITION	Sodium	ppm	ASTM D5185m		6	6	
The DN words in disease sheet the up in gratical to all all the second of the second o	Boron	ppm	ASTM D5185m	2.5	3	47	
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.	Barium	ppm	ASTM D5185m	0.0	0	4	
	Molybdenum	ppm	ASTM D5185m	0.7	57	85	
	Manganese	ppm	ASTM D5185m	0.0	<1	8	
	Magnesium	ppm	ASTM D5185m	256	895	141	
	Calcium	ppm	ASTM D5185m		1173	2233	
	Phosphorus	ppm	ASTM D5185m	935	1039	978	
	Zinc	ppm	ASTM D5185m		1234	1187	
	Sulfur	ppm	ASTM D5185m		3411	4273	
	Oxidation	Abs/.1mm	*ASTM D7414	>25	16.9	17.5	
	Base Number (BN)	mg KOH/g	ASTM D2896	10	8.9	6.5	
	Visc @ 100°C	cSt	ASTM D445	150	12.3	<b>1</b> 0.6	





Laboratory Sample No.

: VCP445319 Lab Number : 06123413 Unique Number: 10937564

: WearCheck USA - 501 Madison Ave., Cary, NC 27513

Received **Tested** Diagnosed

: 20 Mar 2024 : 22 Mar 2024 : 22 Mar 2024 - Jonathan Hester Test Package: MOB 1 (Additional Tests: FuelDilution, PercentFuel, TBN)

3400 E LAFAYETTE DETROIT, MI US 48207 Contact: KEITH HALL

FERROUS PROCESSING AND TRADING

keith.hall@fpt1.com T:

To discuss this sample report, contact Customer Service at 1-800-237-1369. \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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