



VOLVO

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Area

[703489]

Machine Id

SENNEBOGEN 830R 2296

Component

Diesel Engine

Fluid

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

RECOMMENDATION

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VCP454546	VCP431175	VCP399391
Sample Date		Client Info		24 May 2024	05 Dec 2023	09 Feb 2023
Machine Age	hrs	Client Info		3753	2444	619
Oil Age	hrs	Client Info		500	500	500
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	SEVERE	NORMAL

WEAR

Cylinder, crank, or cam shaft wear is indicated.

Iron	ppm	ASTM D5185m	>100	▲ 111	72	23
Chromium	ppm	ASTM D5185m	>20	5	2	<1
Nickel	ppm	ASTM D5185m	>4	1	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	1	0	0
Aluminum	ppm	ASTM D5185m	>20	9	6	4
Lead	ppm	ASTM D5185m	>40	<1	0	<1
Copper	ppm	ASTM D5185m	>330	17	3	1
Tin	ppm	ASTM D5185m	>15	1	0	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

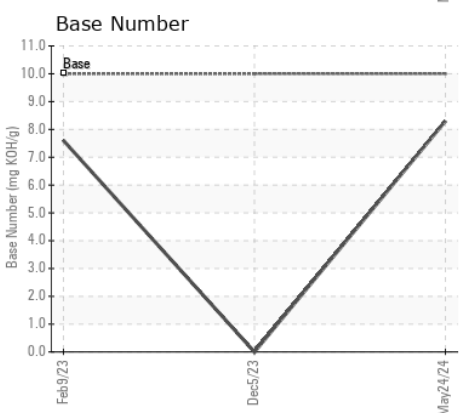
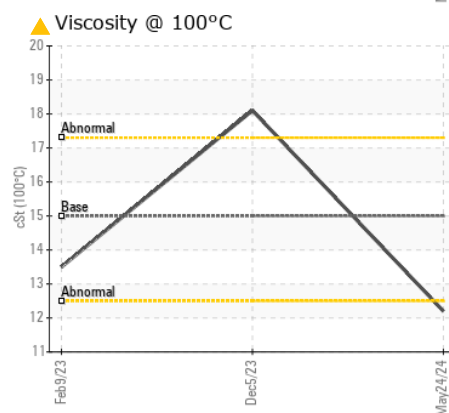
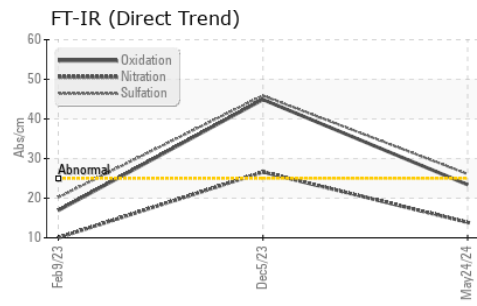
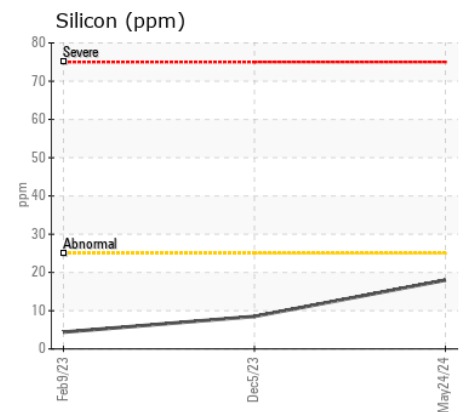
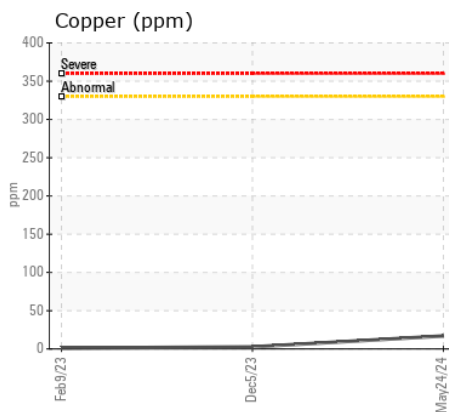
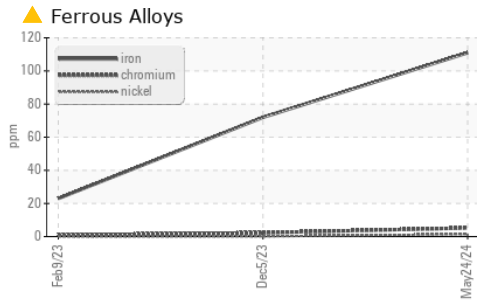
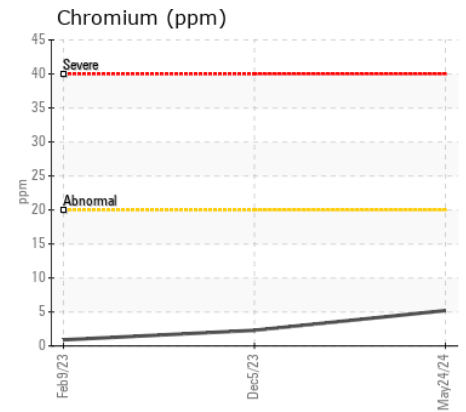
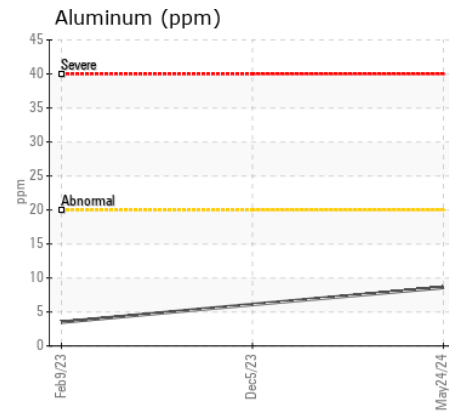
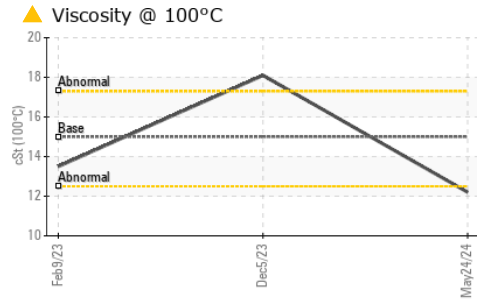
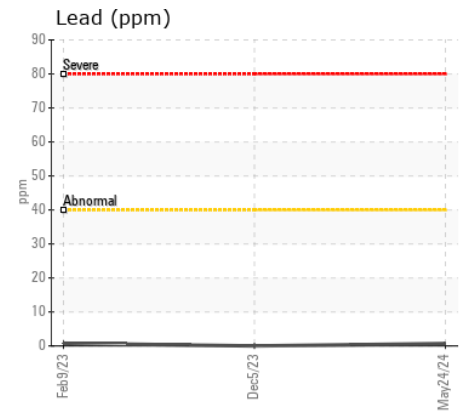
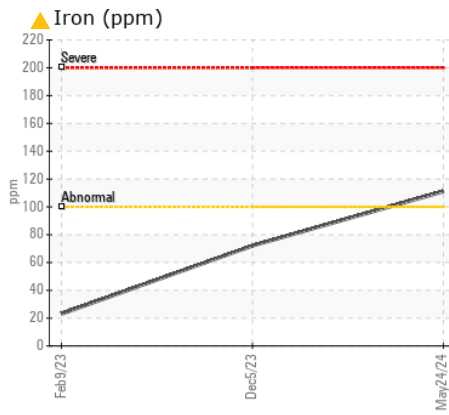
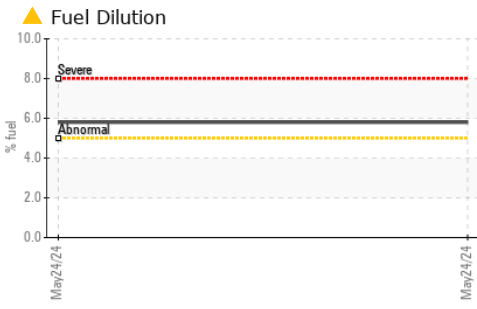
There is a moderate amount of fuel present in the oil.

Silicon	ppm	ASTM D5185m	>25	18	8	4
Potassium	ppm	ASTM D5185m	>20	5	5	2
Fuel	%	ASTM D3524	>5	▲ 5.8	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	1.9	▲ 7.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	13.9	26.6	10.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	26.1	45.9	20.2
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG

FLUID CONDITION

Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

Sodium	ppm	ASTM D5185m		3	1	2
Boron	ppm	ASTM D5185m	2.5	9	21	21
Barium	ppm	ASTM D5185m	0.0	2	3	0
Molybdenum	ppm	ASTM D5185m	0.7	83	89	70
Manganese	ppm	ASTM D5185m	0.0	3	0	<1
Magnesium	ppm	ASTM D5185m	256	1247	752	743
Calcium	ppm	ASTM D5185m	2057	1662	1724	1491
Phosphorus	ppm	ASTM D5185m	935	1305	1193	1067
Zinc	ppm	ASTM D5185m	1223	1682	1446	1361
Sulfur	ppm	ASTM D5185m	4079	3923	4072	3951
Oxidation	Abs/.1mm	*ASTM D7414	>25	23.4	44.9	16.9
Base Number (BN)	mg KOH/g	ASTM D2896	10	8.3	▲ 0.0	7.6
Visc @ 100°C	cSt	ASTM D445	15.0	▲ 12.2	▲ 18.1	13.5



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VCP454546 **Received** : 28 May 2024
Lab Number : 06191817 **Tested** : 30 May 2024
Unique Number : 11048569 **Diagnosed** : 30 May 2024 - Sean Felton
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel, TBN)

ALTA EQUIPMENT COMPANY - METRO WEST
 56195 PONTIAC TRAIL
 NEW HUDSON, MI
 US 48165
 Contact: PAUL ELZERMAN
 paul.elzerman@altaequipment.com
 T: (248)356-5200
 F: (248)356-2029

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)