



ASCENDUM

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Area
Ascendum Machinery
 Machine Id
VOLVO EC220E 310380
 Component
Hydraulic System
 Fluid
VOLVO SUPER HYDRAULIC OIL 46 (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		ASC0009954	ASC0000177	VCP220640
Sample Date		Client Info		07 May 2024	14 Jun 2023	31 Aug 2018
Machine Age	hrs	Client Info		4432	4052	1018
Oil Age	hrs	Client Info		380	4052	0
Filter Age	hrs	Client Info		0	4052	0
Oil Changed		Client Info		Not Changed	Changed	Not Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>25	7	10	2
Chromium	ppm	ASTM D5185m	>10	<1	<1	<1
Nickel	ppm	ASTM D5185m	>10	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>20	1	<1	<1
Lead	ppm	ASTM D5185m	>20	0	0	0
Copper	ppm	ASTM D5185m	>150	21	32	27
Tin	ppm	ASTM D5185m	>10	<1	0	0
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	VLITE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

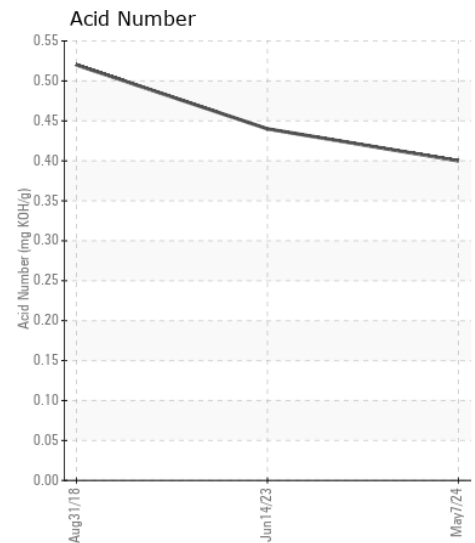
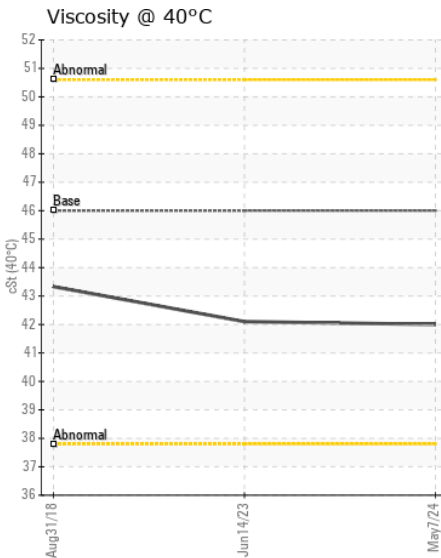
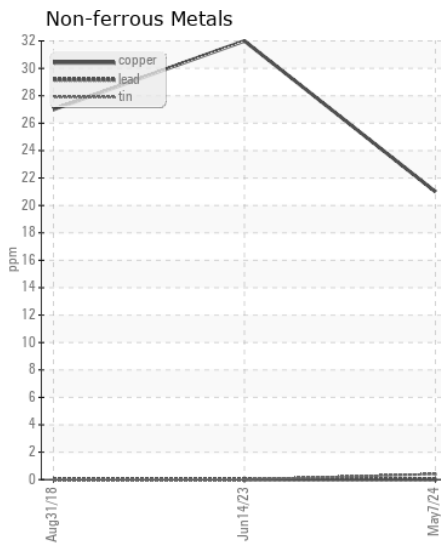
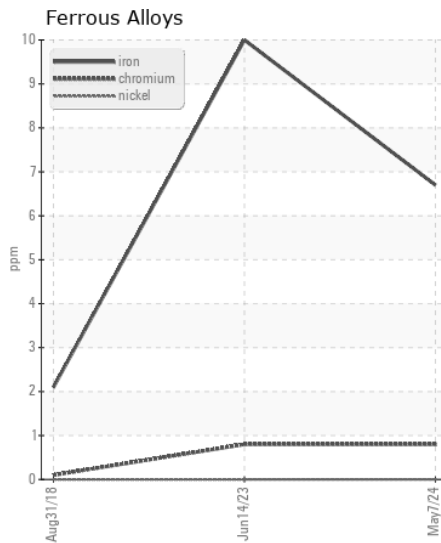
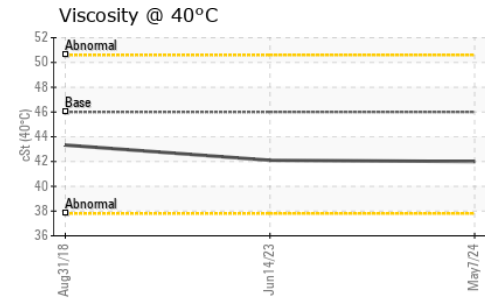
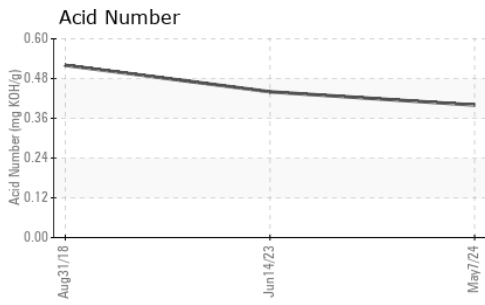
Moderate concentration of visible dirt/debris present in the oil.

Silicon	ppm	ASTM D5185m	>50	4	4	3
Potassium	ppm	ASTM D5185m	>20	0	0	12
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>40000	---	3553	293
Particles >6µm		ASTM D7647	>10000	---	222	72
Particles >14µm		ASTM D7647	>2500	---	21	7
Particles >21µm		ASTM D7647	>640	---	6	1
Particles >38µm		ASTM D7647	>160	---	0	0
Particles >71µm		ASTM D7647	>40	---	0	0
Oil Cleanliness		ISO 4406 (c)	>22/20/18	---	19/15/12	15/13/10
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	MODER	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	>0.1	NEG	NEG	NEG

FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		2	1	1
Boron	ppm	ASTM D5185m	14	0	0	0
Barium	ppm	ASTM D5185m	0.0	0	0	0
Molybdenum	ppm	ASTM D5185m	0.0	0	<1	<1
Manganese	ppm	ASTM D5185m	0.0	2	<1	0
Magnesium	ppm	ASTM D5185m	2.6	3	2	<1
Calcium	ppm	ASTM D5185m	49	78	110	87
Phosphorus	ppm	ASTM D5185m	354	328	377	405
Zinc	ppm	ASTM D5185m	419	391	452	514
Sulfur	ppm	ASTM D5185m	3719	1511	1298	990
Acid Number (AN)	mg KOH/g	ASTM D8045		0.40	0.44	0.520
Visc @ 40°C	cSt	ASTM D445	46	42.0	42.1	43.33



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ASC0009954
Lab Number : 06177056
Unique Number : 11023109
Test Package : CONST
Received : 13 May 2024
Tested : 14 May 2024
Diagnosed : 14 May 2024 - Don Baldrige

BRS INC
 208 STATE HWY 49
 RICHFIELD, NC
 US 28137
 Contact: Service Manager

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)

T: (704)463-1700
F: (704)463-1700