CONST

ASCENDUM

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ATTENTION

Area
Ascendum Machinery/Greensboro, NC
Machine Id
VOLVO L90C L90CV63157
Component
Hydraulic System
Fluid
VOLVO SUPER HYDRAULIC OIL 46 (--- GAL)

RECOMMENDATION

We advise that you check all areas where dirt can enter the system. We recommend you service the filters on this component. We recommend an early resample to monitor this condition. We were unable to perform a particle count due to a high concentration of particles present in this sample.

WEAR

The lead level is abnormal. The iron level is marginal.

CONTAMINATION

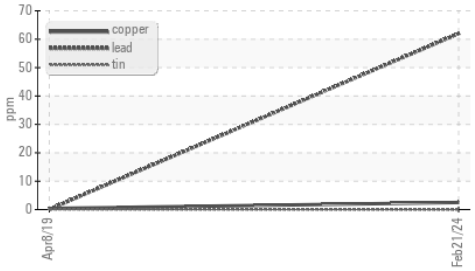
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. High concentration of visible dirt/debris present in the oil.

FLUID CONDITION

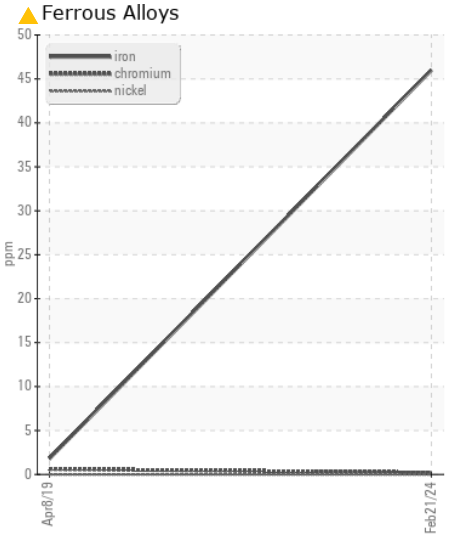
The oil viscosity is higher than normal. Additive levels indicate the addition of a different brand, or type of oil. Confirm oil type.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		ASC0007358	VCP148117	---
Sample Date		Client Info		21 Feb 2024	08 Apr 2019	---
Machine Age	hrs	Client Info		31348	30389	---
Oil Age	hrs	Client Info		959	0	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		Not Changd	Changed	---
Filter Changed		Client Info		Not Changd	Changed	---
Sample Status				ABNORMAL	NORMAL	---
Iron	ppm	ASTM D5185m	>50	▲ 46	2	---
Chromium	ppm	ASTM D5185m	>20	<1	<1	---
Nickel	ppm	ASTM D5185m	>10	0	0	---
Titanium	ppm	ASTM D5185m		<1	0	---
Silver	ppm	ASTM D5185m		0	0	---
Aluminum	ppm	ASTM D5185m	>20	● 8	<1	---
Lead	ppm	ASTM D5185m	>20	▲ 62	<1	---
Copper	ppm	ASTM D5185m	>20	2	<1	---
Tin	ppm	ASTM D5185m	>20	0	<1	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---
Silicon	ppm	ASTM D5185m	>20	▲ 32	3	---
Potassium	ppm	ASTM D5185m	>20	0	<1	---
Water		WC Method	>0.2	NEG	NEG	---
Particles >4µm		ASTM D7647	>5000	---	4304	---
Particles >6µm		ASTM D7647	>1300	---	572	---
Particles >14µm		ASTM D7647	>160	---	20	---
Particles >21µm		ASTM D7647	>40	---	6	---
Particles >38µm		ASTM D7647	>10	---	0	---
Particles >71µm		ASTM D7647	>3	---	0	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	---	19/16/11	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	▲ HEAVY	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	---
Sodium	ppm	ASTM D5185m		0	<1	---
Boron	ppm	ASTM D5185m	14	● 62	1	---
Barium	ppm	ASTM D5185m	0.0	0	0	---
Molybdenum	ppm	ASTM D5185m	0.0	● 39	0	---
Manganese	ppm	ASTM D5185m	0.0	<1	0	---
Magnesium	ppm	ASTM D5185m	2.6	● 481	2	---
Calcium	ppm	ASTM D5185m	49	● 1470	166	---
Phosphorus	ppm	ASTM D5185m	354	711	457	---
Zinc	ppm	ASTM D5185m	419	842	644	---
Sulfur	ppm	ASTM D5185m	3719	● 2486	7787	---
Acid Number (AN)	mg KOH/g	ASTM D8045		0.47	0.550	---
Visc @ 40°C	cSt	ASTM D445	46	● 70.4	39.00	---

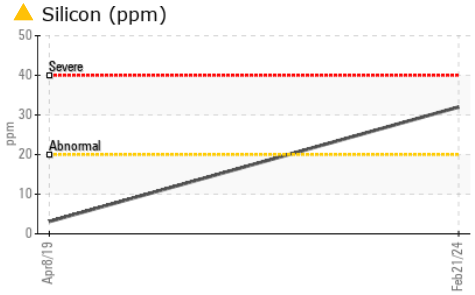
Non-ferrous Metals



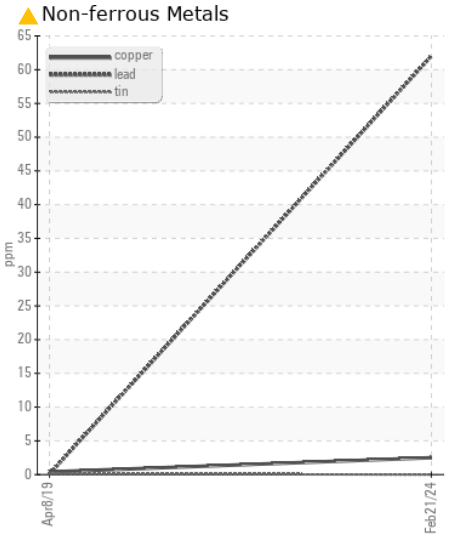
Ferrous Alloys



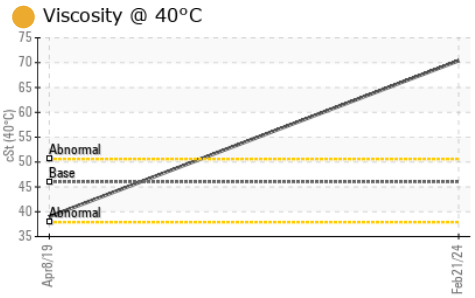
Silicon (ppm)



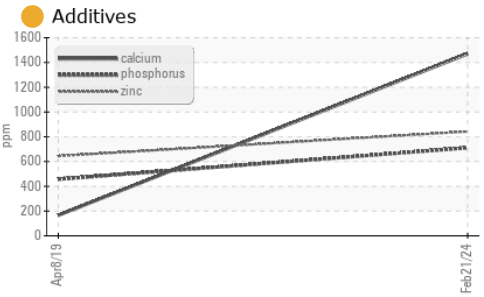
Non-ferrous Metals



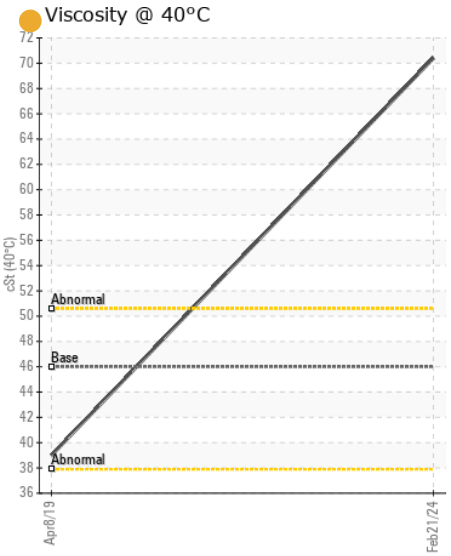
Viscosity @ 40°C



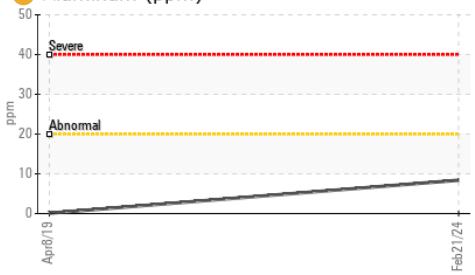
Additives



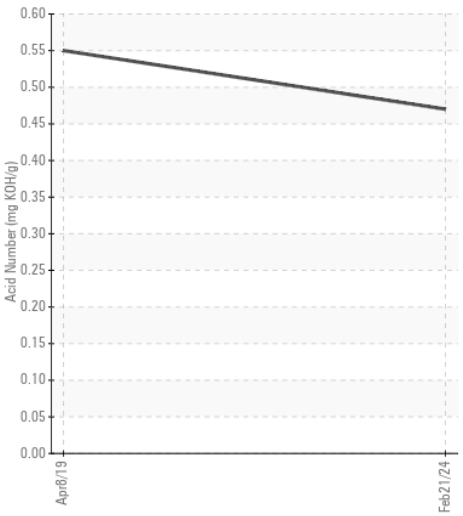
Viscosity @ 40°C



Aluminum (ppm)



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ASC0007358
Lab Number : 06101535
Unique Number : 10899765
Test Package : CONST

Received : 27 Feb 2024
Tested : 29 Feb 2024
Diagnosed : 29 Feb 2024 - Jonathan Hester

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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