



VOLVO

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Area
[SWO-070506]
 Machine Id
EPIROC TMG21SED0165
 Component
Hydraulic System
 Fluid
VOLVO SUPER HYDRAULIC OIL 46 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VCP455403	VCP444237	VCP442502
Sample Date		Client Info		17 Mar 2024	13 Feb 2024	04 Jan 2024
Machine Age	hrs	Client Info		5181	4946	4682
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Not Changd	Changed
Filter Changed		Client Info		Changed	Not Changd	Changed
Sample Status				ABNORMAL	ATTENTION	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>20	4	2	6
Chromium	ppm	ASTM D5185m	>10	<1	0	0
Nickel	ppm	ASTM D5185m	>10	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>10	0	<1	0
Lead	ppm	ASTM D5185m	>10	0	<1	0
Copper	ppm	ASTM D5185m	>75	3	2	3
Tin	ppm	ASTM D5185m	>10	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

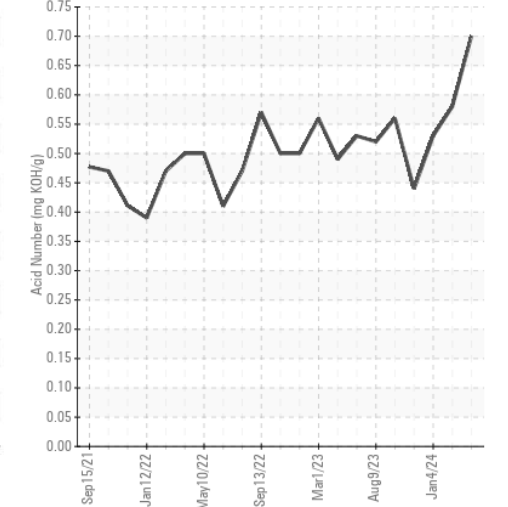
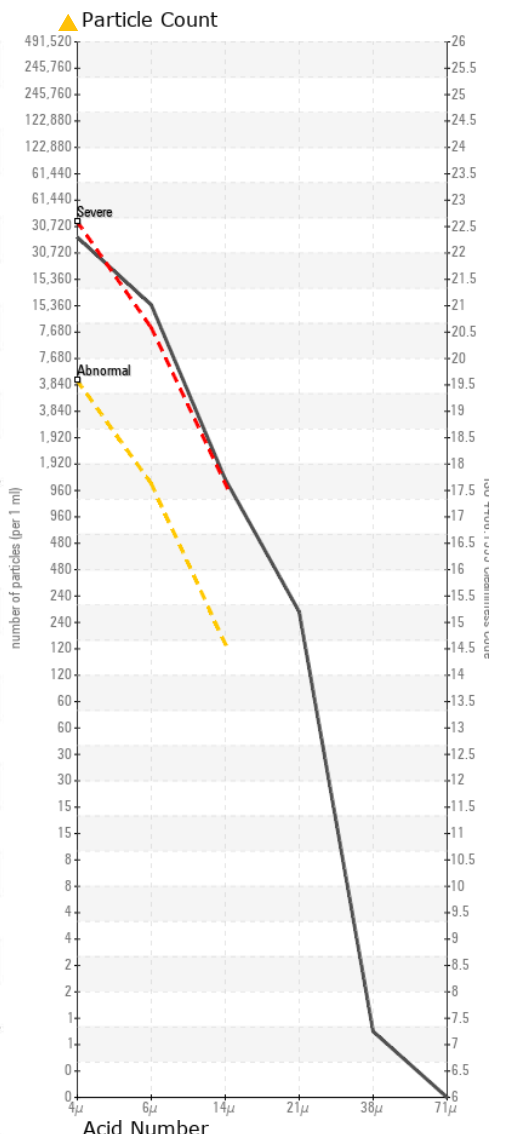
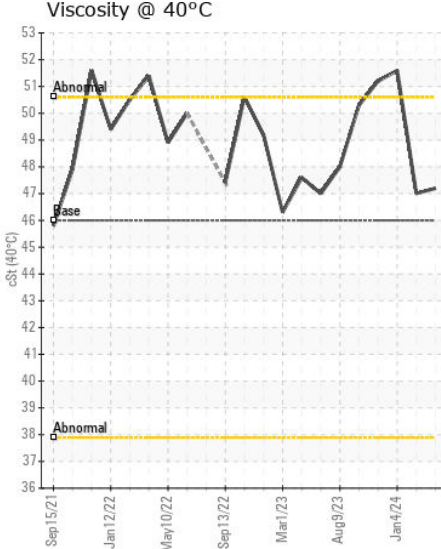
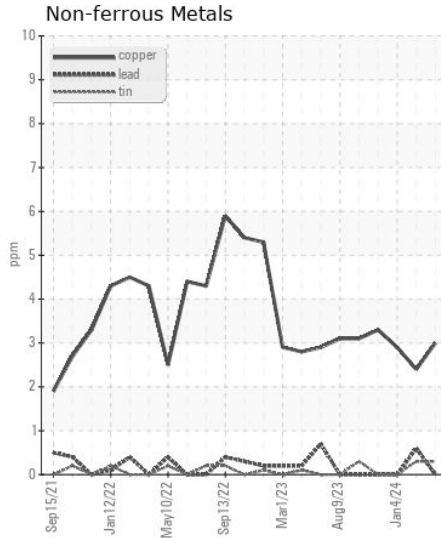
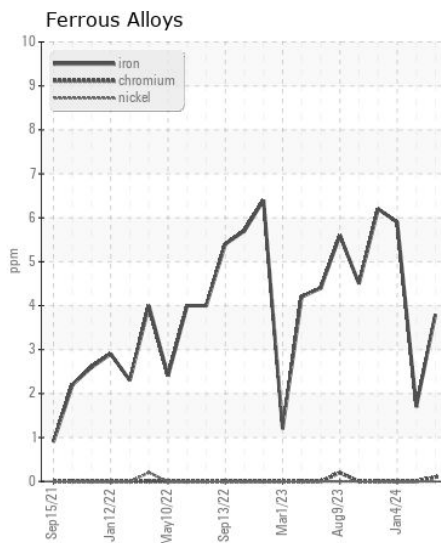
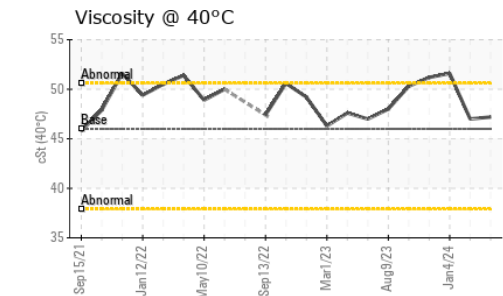
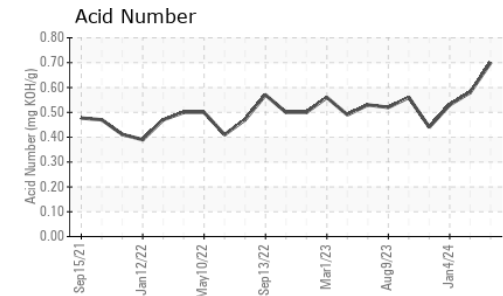
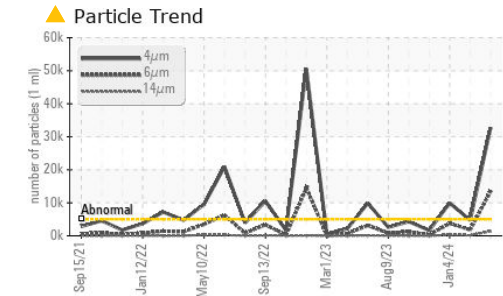
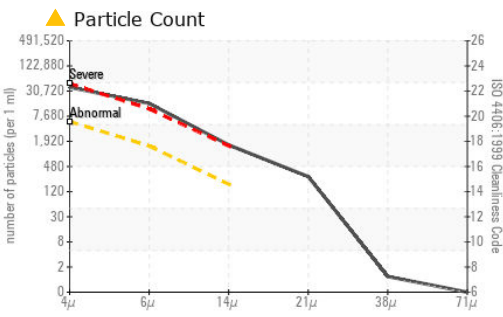
There is a high amount of particulates present in the oil.

Silicon	ppm	ASTM D5185m	>20	3	3	3
Potassium	ppm	ASTM D5185m	>20	0	<1	0
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	▲ 32675	4737	▲ 9948
Particles >6µm		ASTM D7647	>1300	▲ 13483	● 1790	▲ 3786
Particles >14µm		ASTM D7647	>160	▲ 1377	160	▲ 278
Particles >21µm		ASTM D7647	>40	▲ 243	31	▲ 49
Particles >38µm		ASTM D7647	>10	1	1	1
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 22/21/18	● 19/18/14	▲ 20/19/15
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	>0.1	NEG	NEG	NEG

FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<1	1	0
Boron	ppm	ASTM D5185m	14	0	2	0
Barium	ppm	ASTM D5185m	0.0	0	0	0
Molybdenum	ppm	ASTM D5185m	0.0	2	2	0
Manganese	ppm	ASTM D5185m	0.0	<1	<1	0
Magnesium	ppm	ASTM D5185m	2.6	22	32	35
Calcium	ppm	ASTM D5185m	49	118	110	83
Phosphorus	ppm	ASTM D5185m	354	546	429	440
Zinc	ppm	ASTM D5185m	419	711	598	599
Sulfur	ppm	ASTM D5185m	3719	1920	1737	1628
Acid Number (AN)	mg KOH/g	ASTM D8045		0.70	0.58	0.53
Visc @ 40°C	cSt	ASTM D445	46	47.2	47.0	51.6



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VCP455403
Lab Number : 06124824
Unique Number : 10938975
Test Package : MOB 2
Received : 21 Mar 2024
Tested : 22 Mar 2024
Diagnosed : 24 Mar 2024 - Don Baldrige

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Certificate L2367
 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)