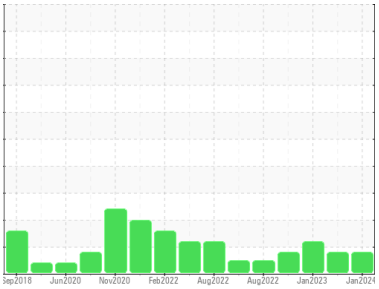
OIL ANALYSIS REPORT

Area
AMR-12th Street
Machine Id
438153 VOLVO L180H 4787
Component
Hydraulic System
Fluid
VOLVO SUPER HYDRAULIC OIL 46 (39 GAL)

Sample Rating Trend



ISO

DIAGNOSIS

Recommendation
The filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear
All component wear rates are normal.

Contamination
There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

Fluid Condition
The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**DJJ0016937**	DJJ0016948	DJJ0012281
Sample Date		Client Info		**02 Jan 2024**	05 Jul 2023	13 Jan 2023
Machine Age	hrs	Client Info		**11028**	10517	9993
Oil Age	hrs	Client Info		**0**	0	2000
Oil Changed		Client Info		**Not Changd**	Not Changd	Changed
Sample Status				**ABNORMAL**	ATTENTION	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	**5**	3	3
Chromium	ppm	ASTM D5185m	>20	**1**	<1	<1
Nickel	ppm	ASTM D5185m	>10	**0**	0	0
Titanium	ppm	ASTM D5185m		**<1**	0	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**2**	<1	<1
Lead	ppm	ASTM D5185m	>20	**<1**	<1	<1
Copper	ppm	ASTM D5185m	>20	**1**	<1	<1
Tin	ppm	ASTM D5185m	>20	**0**	<1	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	14	**0**	0	0
Barium	ppm	ASTM D5185m	0.0	**0**	0	1
Molybdenum	ppm	ASTM D5185m	0.0	**<1**	<1	<1
Manganese	ppm	ASTM D5185m	0.0	**0**	<1	0
Magnesium	ppm	ASTM D5185m	2.6	**2**	0	2
Calcium	ppm	ASTM D5185m	49	**80**	82	141
Phosphorus	ppm	ASTM D5185m	354	**365**	356	357
Zinc	ppm	ASTM D5185m	419	**429**	442	448
Sulfur	ppm	ASTM D5185m	3719	**882**	1058	1057

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	**2**	1	2
Sodium	ppm	ASTM D5185m		**0**	2	0
Potassium	ppm	ASTM D5185m	>20	**1**	1	1

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	▲ **19710**	▲ 7198	▲ 24290
Particles >6µm		ASTM D7647	>1300	**374**	1289	▲ 4621
Particles >14µm		ASTM D7647	>160	**7**	77	153
Particles >21µm		ASTM D7647	>40	**2**	23	33
Particles >38µm		ASTM D7647	>10	**0**	0	2
Particles >71µm		ASTM D7647	>3	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **21/16/10**	▲ 20/17/13	▲ 22/19/14

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.38**	0.45	0.45

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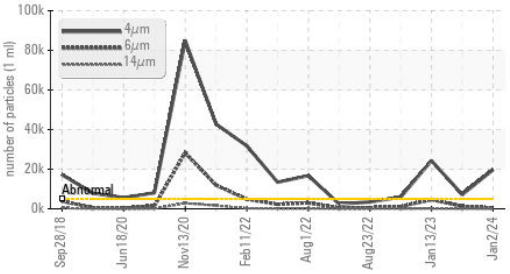
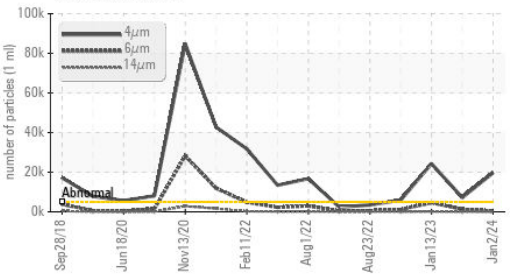
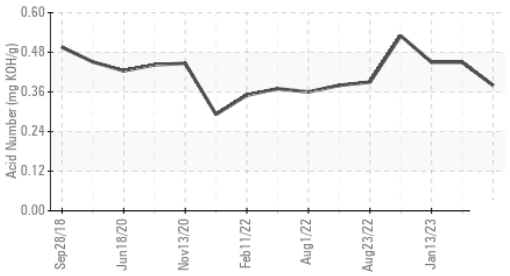
Particle Trend



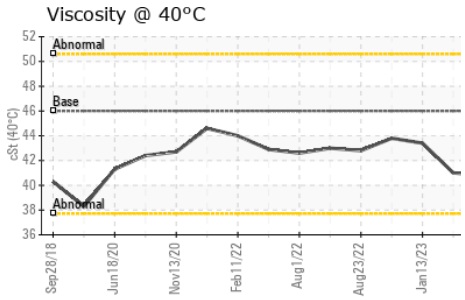
Particle Trend



Acid Number

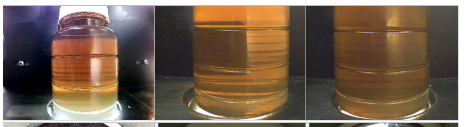
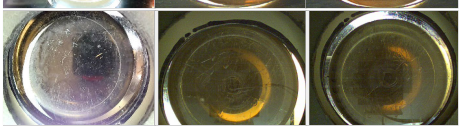


Viscosity @ 40°C



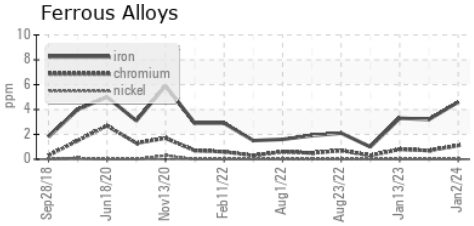
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	LIGHT
Sand/Dirt	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
Free Water	scalar	*Visual		**NEG**	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	46	**40.8**	41.0	43.4

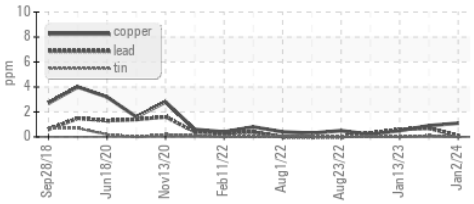
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

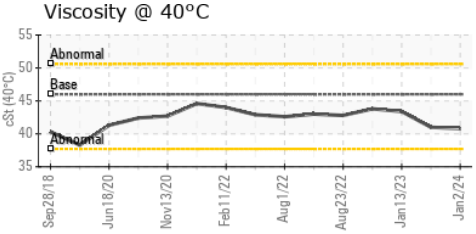
Ferrous Alloys



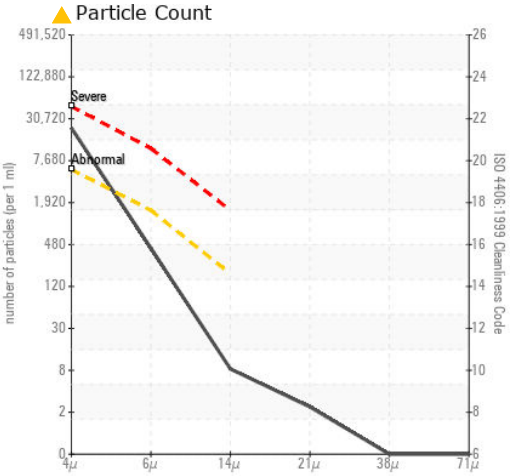
Non-ferrous Metals



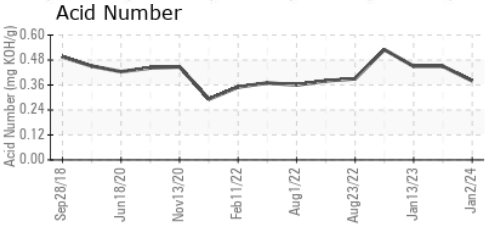
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : DJJ0016937
Lab Number : 06058715
Unique Number : 10830097
Test Package : CONST

Recieved : 11 Jan 2024
Diagnosed : 12 Jan 2024
Diagnostician : Wes Davis

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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