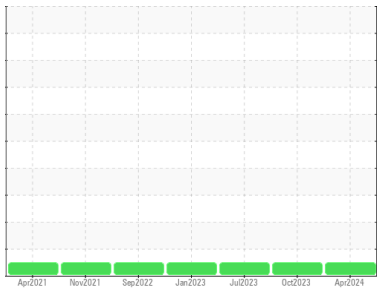
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
VOLVO 480445
Component
Front Diesel Engine
Fluid
AMSOIL (ATM) SYN MOTOR OIL10W30 (34 LTR)

DIAGNOSIS

Recommendation
Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Fluid Condition
Additive levels indicate the addition of a different brand, or type of oil. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0931969**	WC0874492	WC0836891
Sample Date		Client Info		**12 Apr 2024**	29 Oct 2023	08 Jul 2023
Machine Age	kms	Client Info		**1958899**	1905976	1858528
Oil Age	kms	Client Info		**53000**	47447	52134
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**NORMAL**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>6.0	**<1.0**	<1.0	<1.0
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	**23**	26	24
Chromium	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185(m)	>2	**<1**	<1	<1
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)	>2	**0**	<1	0
Aluminum	ppm	ASTM D5185(m)	>25	**7**	9	17
Lead	ppm	ASTM D5185(m)	>40	**0**	1	1
Copper	ppm	ASTM D5185(m)	>330	**1**	2	2
Tin	ppm	ASTM D5185(m)	>15	**0**	<1	<1
Antimony	ppm	ASTM D5185(m)		**<1**	0	0
Vanadium	ppm	ASTM D5185(m)		**0**	0	0
Beryllium	ppm	ASTM D5185(m)		**0**	0	0
Cadmium	ppm	ASTM D5185(m)		**0**	0	0

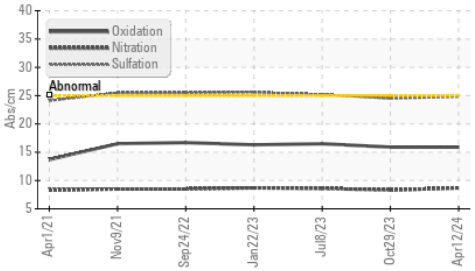
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		**<1**	1	1
Barium	ppm	ASTM D5185(m)		**0**	<1	0
Molybdenum	ppm	ASTM D5185(m)		**0**	<1	<1
Manganese	ppm	ASTM D5185(m)		**<1**	0	<1
Magnesium	ppm	ASTM D5185(m)		**14**	12	13
Calcium	ppm	ASTM D5185(m)		**2308**	2266	2265
Phosphorus	ppm	ASTM D5185(m)		**837**	819	884
Zinc	ppm	ASTM D5185(m)		**1014**	990	1008
Sulfur	ppm	ASTM D5185(m)		**2708**	2648	2763
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**6**	12	5
Sodium	ppm	ASTM D5185(m)		**7**	8	8
Potassium	ppm	ASTM D5185(m)	>20	**13**	17	39

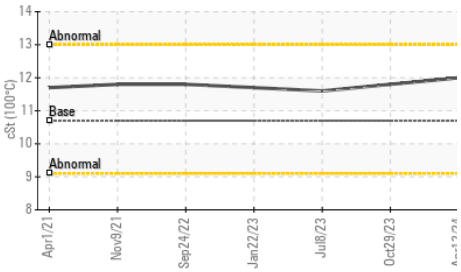
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	**0.3**	0.3	0.3
Nitration	Abs/cm	ASTM D7624*	>20	**8.7**	8.3	8.6
Sulfation	Abs/.1mm	ASTM D7415*	>30	**24.8**	24.5	25.2

OIL ANALYSIS REPORT

FT-IR (Direct Trend)



Viscosity @ 100°C



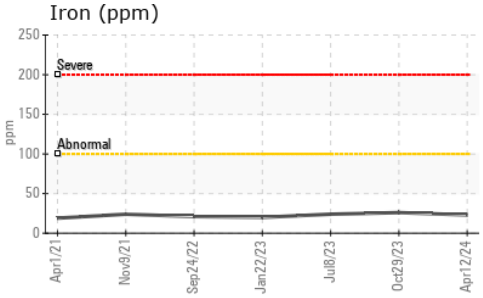
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**15.9**	15.9	16.5

VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

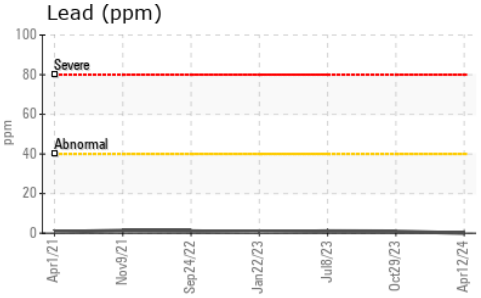
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	10.7	**12.0**	11.8	11.6

GRAPHS

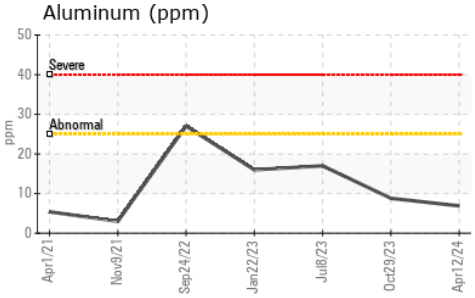
Iron (ppm)



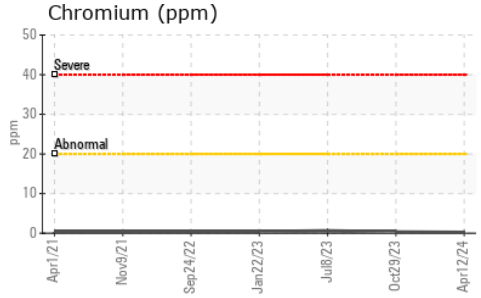
Lead (ppm)



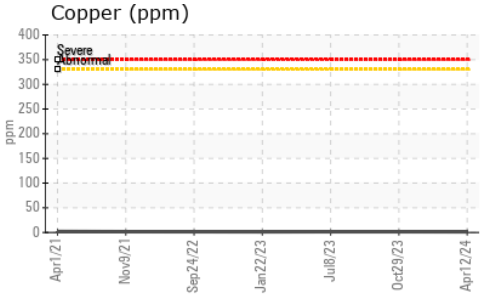
Aluminum (ppm)



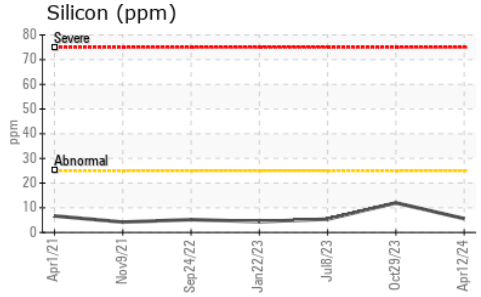
Chromium (ppm)



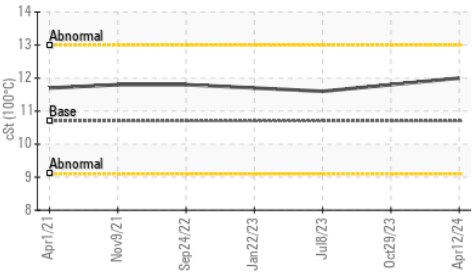
Copper (ppm)



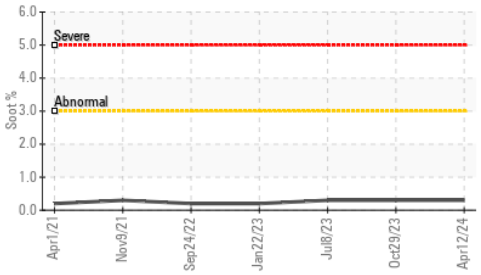
Silicon (ppm)



Viscosity @ 100°C



Soot %



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0931969
Lab Number : 02628711
Unique Number : 5761843
Test Package : MOB 1

Received : 15 Apr 2024
Tested : 15 Apr 2024
Diagnosed : 15 Apr 2024 - Kevin Marson

To discuss this sample report, contact Customer Service at 1-800-268-2131.
Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
Validity of results and interpretation are based on the sample and information as supplied.

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Report Id: ARMHAM [WCAMIS] 02628711 (Generated: 04/15/2024 16:00:02) Rev: 1

Submitted By: ?