



McCLUNG-LOGAN
EQUIPMENT COMPANY, INC.

OIL ANALYSIS REPORT

WEAR
CONTAMINATION
FLUID CONDITION

ATTENTION
ABNORMAL
NORMAL



Machine Id
VOLVO L180G 19399
Component
Diesel Engine
Fluid
CHEVRON 15W40 (13 GAL)

RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		ML0001154	ML0000126	VCP318150
Sample Date		Client Info		09 Apr 2024	22 Jan 2024	20 Aug 2021
Machine Age	hrs	Client Info		15712	15712	13690
Oil Age	hrs	Client Info		500	500	0
Filter Age	hrs	Client Info		500	500	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	SEVERE	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	56	80	22
Chromium	ppm	ASTM D5185m	>10	2	2	<1
Nickel	ppm	ASTM D5185m	>10	4	4	1
Titanium	ppm	ASTM D5185m		1	<1	1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>10	7	7	6
Lead	ppm	ASTM D5185m	>20	2	3	9
Copper	ppm	ASTM D5185m	>15	3	4	2
Tin	ppm	ASTM D5185m	>10	2	2	0
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

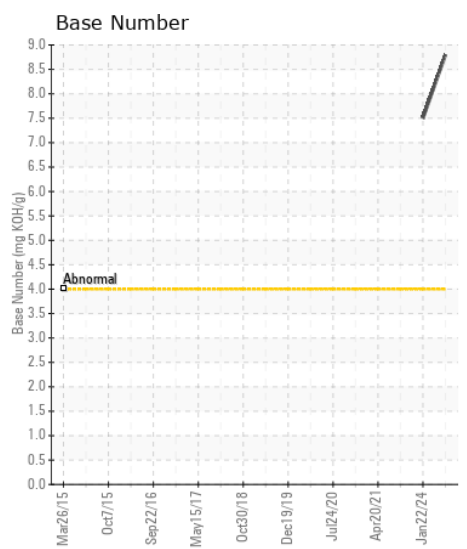
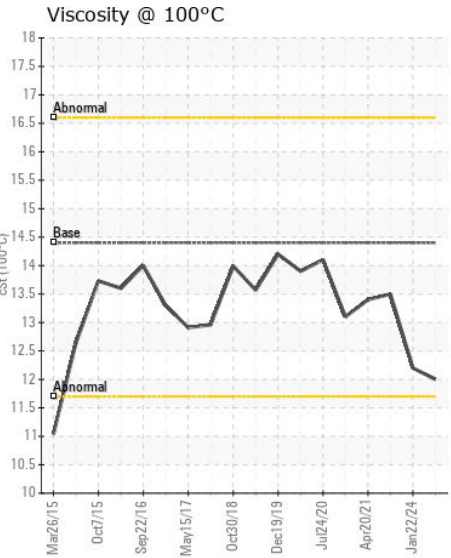
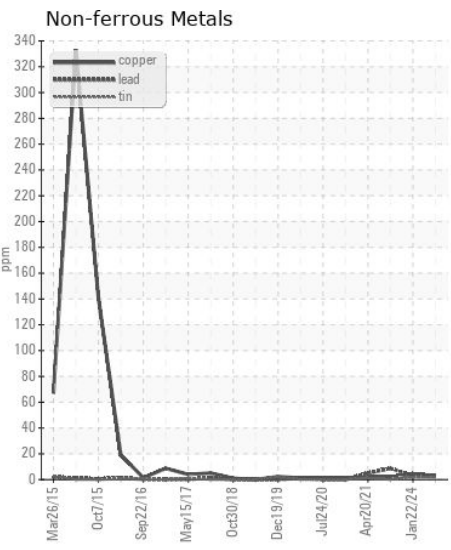
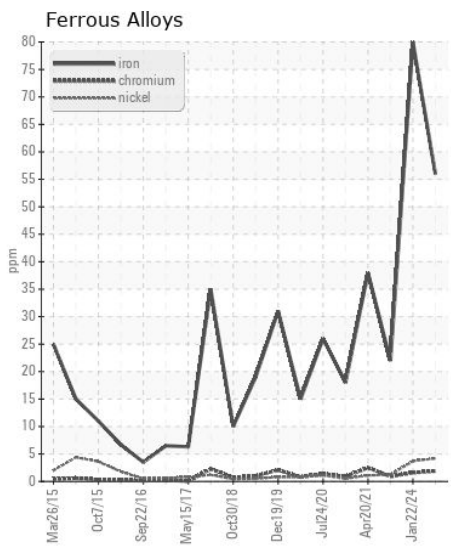
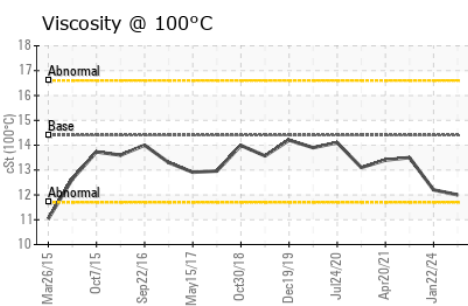
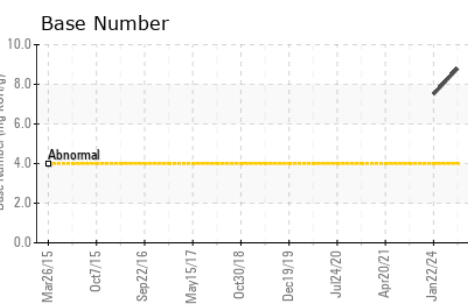
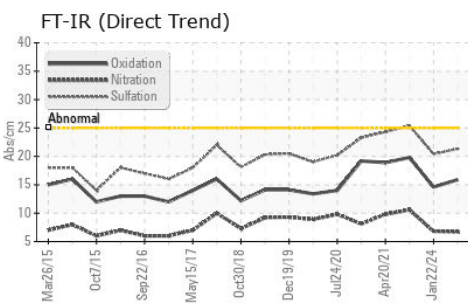
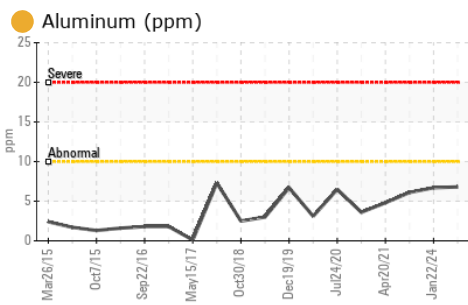
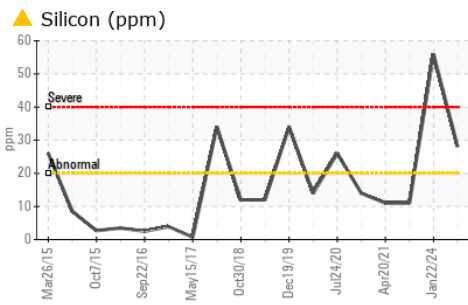
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

Silicon	ppm	ASTM D5185m	>20	28	56	11
Potassium	ppm	ASTM D5185m	>20	3	5	10
Fuel		WC Method	>6.0	<1.0	2.2	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.2	0.6
Nitration	Abs/cm	*ASTM D7624	>20	6.7	6.8	10.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.3	20.4	25.4
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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m	>50	3	6	2
Boron	ppm	ASTM D5185m		396	251	163
Barium	ppm	ASTM D5185m		<1	0	0
Molybdenum	ppm	ASTM D5185m		127	66	88
Manganese	ppm	ASTM D5185m		2	2	<1
Magnesium	ppm	ASTM D5185m		682	378	579
Calcium	ppm	ASTM D5185m		1980	1620	1791
Phosphorus	ppm	ASTM D5185m		1174	938	726
Zinc	ppm	ASTM D5185m		1239	1194	853
Sulfur	ppm	ASTM D5185m		3916	3204	2561
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.9	14.6	19.8
Base Number (BN)	mg KOH/g	ASTM D2896		8.8	7.5	---
Visc @ 100°C	cSt	ASTM D445	14.4	12.0	12.2	13.5



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ML0001154 **Received** : 12 Apr 2024
Lab Number : 06146896 **Tested** : 15 Apr 2024
Unique Number : 10976974 **Diagnosed** : 15 Apr 2024 - Sean Felton
Test Package : CONST (Additional Tests: TBN)

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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)