



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
VOLVO L90G L90G-2 (S/N 617650)
Component
Diesel Engine
Fluid
MOBIL DELVAC SUPER 1400 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TLY0002494	TLY0001394	TLY0001107
Sample Date		Client Info		18 Jun 2024	09 May 2023	20 May 2022
Machine Age	hrs	Client Info		9295	8754	8311
Oil Age	hrs	Client Info		8754	443	518
Filter Age	hrs	Client Info		8754	443	518
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	19	21	17
Chromium	ppm	ASTM D5185m	>10	1	1	<1
Nickel	ppm	ASTM D5185m	>10	0	<1	<1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>10	15	17	11
Lead	ppm	ASTM D5185m	>20	<1	<1	<1
Copper	ppm	ASTM D5185m	>15	2	1	<1
Tin	ppm	ASTM D5185m	>10	<1	<1	1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

There is no indication of any contamination in the oil.

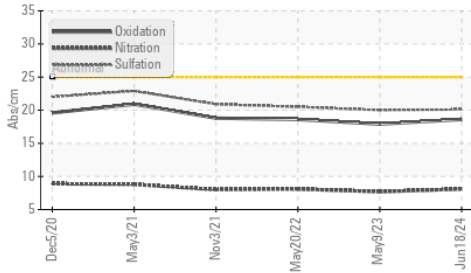
Silicon	ppm	ASTM D5185m	>20	6	8	7
Potassium	ppm	ASTM D5185m	>20	1	1	0
Fuel		WC Method	>6.0	<1.0	0.7	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.4	0.4	0.5
Nitration	Abs/cm	*ASTM D7624	>20	8.1	7.7	8.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.1	20.0	20.5
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

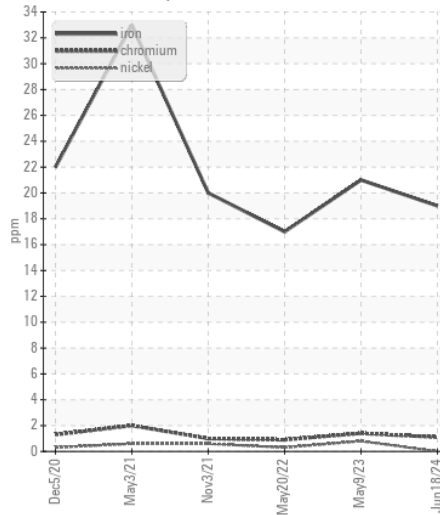
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		3	3	2
Boron	ppm	ASTM D5185m		34	36	37
Barium	ppm	ASTM D5185m		0	2	0
Molybdenum	ppm	ASTM D5185m		56	52	44
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		585	653	533
Calcium	ppm	ASTM D5185m		1753	1643	1627
Phosphorus	ppm	ASTM D5185m		881	892	776
Zinc	ppm	ASTM D5185m		977	1083	937
Sulfur	ppm	ASTM D5185m		3111	3055	2628
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.6	17.9	18.6
Base Number (BN)	mg KOH/g	ASTM D2896	11.5	9.5	9.7	9.5
Visc @ 100°C	cSt	ASTM D445	15.0	12.6	12.4	12.7

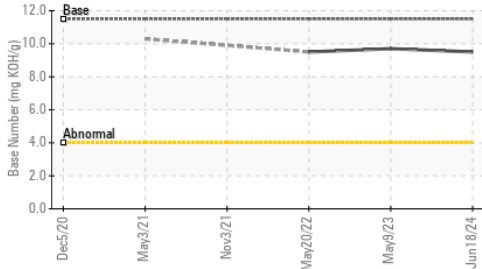
FT-IR (Direct Trend)



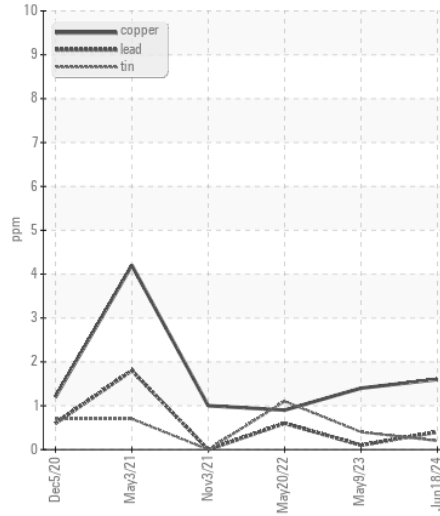
Ferrous Alloys



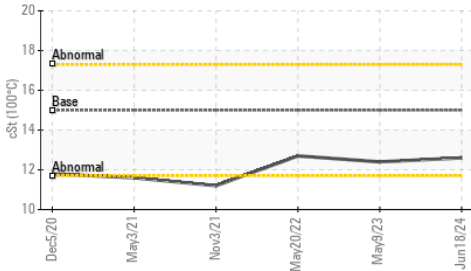
Base Number



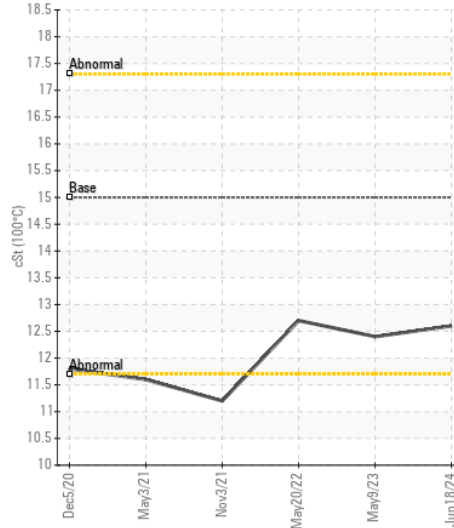
Non-ferrous Metals



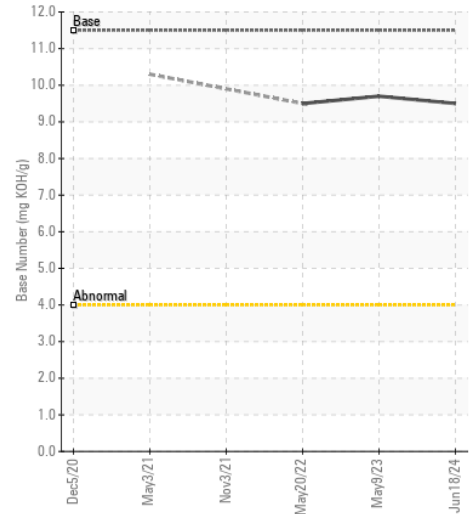
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TLY0002494 **Received** : 26 Jun 2024
Lab Number : 06221946 **Tested** : 28 Jun 2024
Unique Number : 11100143 **Diagnosed** : 28 Jun 2024 - Don Baldrige
Test Package : CONST (Additional Tests: TBN)

GAINES & COMPANY
 112 WESTMINSTER RD
 REISTERSTOWN, MD
 US 21136

Contact: LANCE TANCRAITOR
 ltanckraitor@gainesandco.com

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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F: