McCLUNG-LOGAN EQUIPMENT COMPANY, INC.

OIL ANALYSIS REPORT

WEAR	MARGINAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
[W02008461]
Machine Id
VOLVO EC350E 314605
Component
Diesel Engine
Fluid
{not provided} (14 GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample. (Customer Sample Comment: W02008461)

WEAR

The copper level has decreased, but is still abnormal.

CONTAMINATION

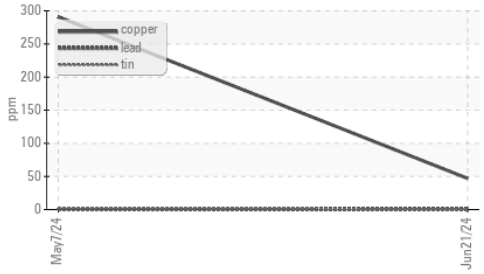
There is no indication of any contamination in the oil.

FLUID CONDITION

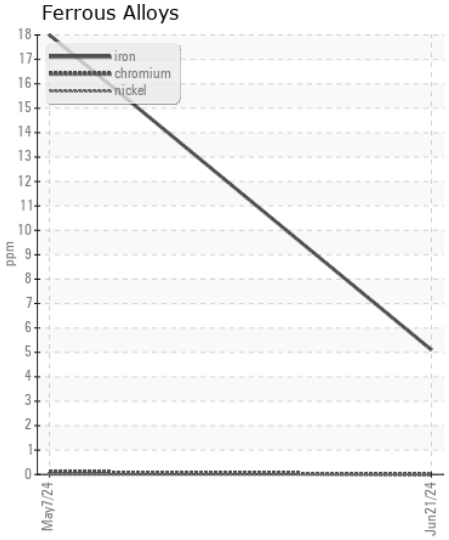
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**ML0001145**	ML0001065	---
Sample Date		Client Info		**21 Jun 2024**	07 May 2024	---
Machine Age	hrs	Client Info		**1052**	500	---
Oil Age	hrs	Client Info		**552**	500	---
Filter Age	hrs	Client Info		**0**	500	---
Oil Changed		Client Info		**Changed**	Changed	---
Filter Changed		Client Info		**Changed**	Changed	---
Sample Status				**MARGINAL**	ABNORMAL	---
Iron	ppm	ASTM D5185m	>100	**5**	18	---
Chromium	ppm	ASTM D5185m	>10	**0**	<1	---
Nickel	ppm	ASTM D5185m	>10	**0**	0	---
Titanium	ppm	ASTM D5185m		**<1**	0	---
Silver	ppm	ASTM D5185m	>2	**0**	0	---
Aluminum	ppm	ASTM D5185m	>10	**<1**	2	---
Lead	ppm	ASTM D5185m	>20	**0**	<1	---
Copper	ppm	ASTM D5185m	>15	▲ **47**	▲ 291	---
Tin	ppm	ASTM D5185m	>10	**0**	2	---
Vanadium	ppm	ASTM D5185m		**<1**	0	---
White Metal	scalar	*Visual	NONE	**NONE**	NONE	---
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	---
Silicon	ppm	ASTM D5185m	>20	**7**	27	---
Potassium	ppm	ASTM D5185m	>20	**0**	2	---
Fuel	%	ASTM D3524	>6.0	**<1.0**	0.6	---
Water		WC Method	>0.1	**NEG**	NEG	---
Glycol	%	*ASTM D2982		**NEG**	NEG	---
Soot %	%	*ASTM D7844	>3	**0.1**	0.1	---
Nitration	Abs/cm	*ASTM D7624	>20	**7.4**	9.9	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	**21.4**	22.8	---
Silt	scalar	*Visual	NONE	**NONE**	NONE	---
Debris	scalar	*Visual	NONE	**NONE**	NONE	---
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	---
Appearance	scalar	*Visual	NORML	**NORML**	NORML	---
Odor	scalar	*Visual	NORML	**NORML**	NORML	---
Emulsified Water	scalar	*Visual	>0.1	**NEG**	NEG	---
Sodium	ppm	ASTM D5185m		**2**	3	---
Boron	ppm	ASTM D5185m		**37**	26	---
Barium	ppm	ASTM D5185m		**0**	<1	---
Molybdenum	ppm	ASTM D5185m		**55**	91	---
Manganese	ppm	ASTM D5185m		**<1**	3	---
Magnesium	ppm	ASTM D5185m		**559**	23	---
Calcium	ppm	ASTM D5185m		**1648**	2289	---
Phosphorus	ppm	ASTM D5185m		**971**	1014	---
Zinc	ppm	ASTM D5185m		**1171**	1180	---
Sulfur	ppm	ASTM D5185m		**3452**	3824	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	**18.0**	18.3	---
Base Number (BN)	mg KOH/g	ASTM D2896		**8.6**	4.0	---
Visc @ 100°C	cSt	ASTM D445		**11.8**	10.5	---

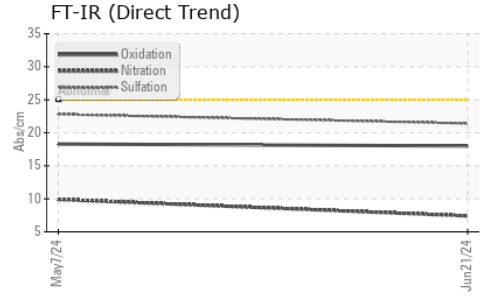
Non-ferrous Metals



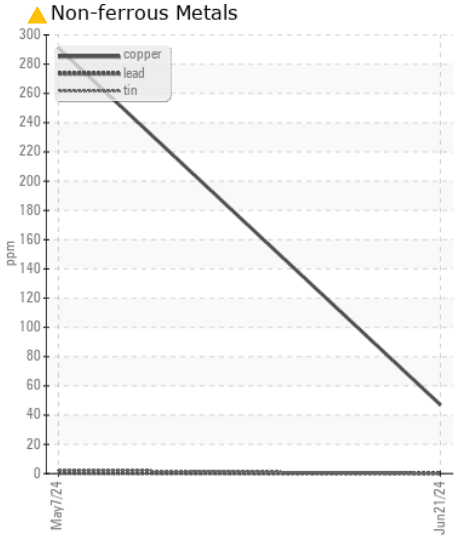
Ferrous Alloys



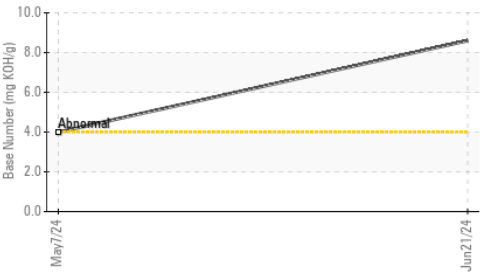
FT-IR (Direct Trend)



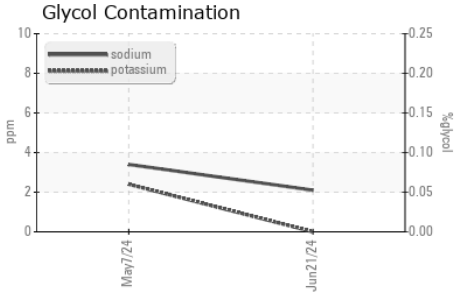
Non-ferrous Metals



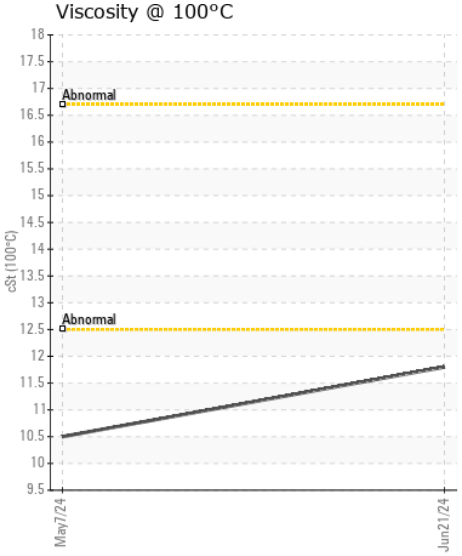
Base Number



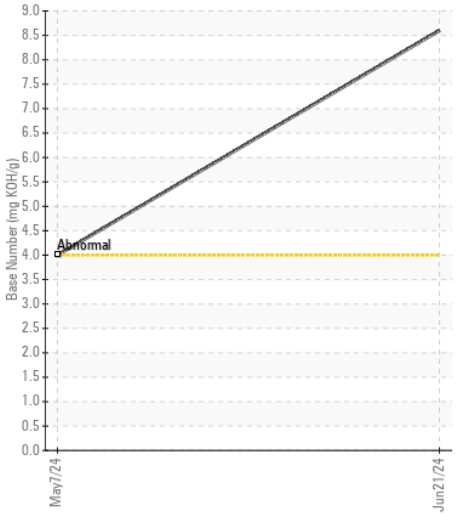
Glycol Contamination



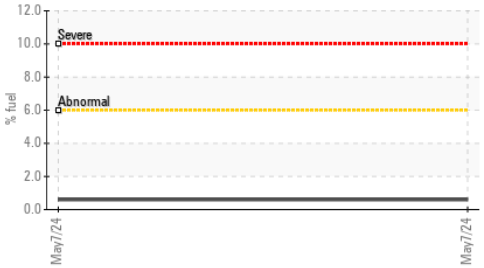
Viscosity @ 100°C



Base Number



Fuel Dilution



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ML0001145
Lab Number : 06219113
Unique Number : 11097310
Test Package : CONST (Additional Tests: FuelDilution, Glycol, PercentFuel, TBN)

Received : 24 Jun 2024
Tested : 26 Jun 2024
Diagnosed : 26 Jun 2024 - Jonathan Hester

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)

MCCLUNG-LOGAN EQUIPMENT CO - MANASSAS
8450 QUARRY ROAD
MANASSAS, VA
US 20110
Contact: MIKE MAYHUGH
MMAYHUGH@MCCLUNG-LOGAN.COM
T: (703)393-7344
F: (703)393-7844