CONSTRUCTION EQUIPMENT

REGION OF PEEL 8-395949 VOLVO L60H 622787 - DIESEL ENGINE

Sample No: VCP394108
Oil Type: DIESEL ENGINE OIL SAE 40
Job No: 8-395949

STRONGCO EQUIPMENT INC.
1640 ENTERPRISE ROAD
MISSISSAUGA, ON
CA L4W 4L4
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SAMPLE INFORMATION

Sample Number		**VCP394108**	VCP380461	VCP353328	---
Sample Date		**22 Feb 2024**	20 Jul 2023	06 Dec 2022	---
Machine Hours		**2999**	2028	1024	---
Oil Hours		**0**	0	0	---
Oil Changed		**Changed**	Changed	Changed	---
Sample Status		**ABNORMAL**	ABNORMAL	ABNORMAL	---

OIL CONDITION

Visc @ 100°C	cSt	**13.1**	13.3	12.8	---
Oxidation (PA)	%	**95**	90	90	---

CONTAMINATION

Water	%	**NEG**	NEG	NEG	---
Soot %	%	**0.7**	0.5	0.6	---
Nitration (PA)	%	**80**	77	86	---
Sulfation (PA)	%	**66**	66	68	---
Glycol	%	**NEG**	NEG	NEG	---
Fuel	%	**<1.0**	<1.0	<1.0	---
Silicon	ppm	**9**	9	18	---
Sodium	ppm	**2**	3	4	---
Potassium	ppm	**17**	0	2	---

WEAR METALS

Iron	ppm	▲ **104**	▲ 121	▲ 282	---
Copper	ppm	**2**	3	11	---
Lead	ppm	**<1**	<1	2	---
Tin	ppm	**1**	1	3	---
Aluminum	ppm	**7**	4	8	---
Chromium	ppm	**2**	3	9	---
Molybdenum	ppm	**40**	41	38	---
Nickel	ppm	**<1**	<1	<1	---
Titanium	ppm	**0**	0	<1	---
Silver	ppm	**0**	0	0	---
Manganese	ppm	**1**	2	8	---
Vanadium	ppm	**0**	0	0	---

ADDITIVES

Calcium	ppm	**1761**	1717	1658	---
Magnesium	ppm	**509**	535	606	---
Zinc	ppm	**1100**	1103	1100	---
Phosphorus	ppm	**949**	984	992	---
Barium	ppm	**<1**	<1	4	---
Boron	ppm	**23**	27	27	---

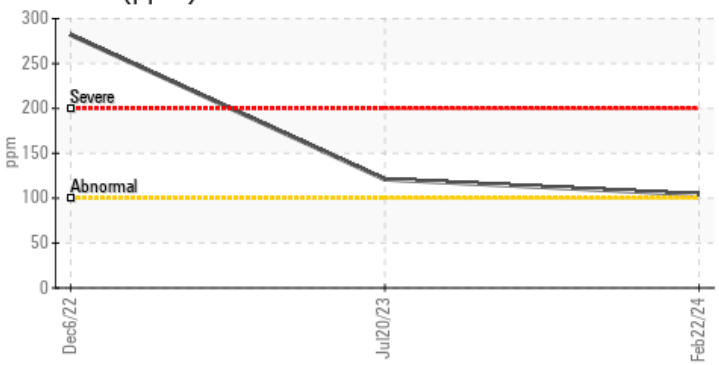
Diagnosis

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.Iron ppm levels are abnormal. Cylinder, crank, or cam shaft wear is indicated. 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. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

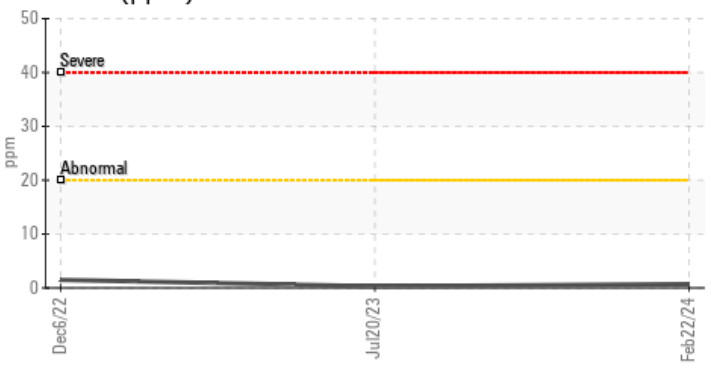
Depot: SHEMIS
Unique No: 5746513
Signed: Kevin Marson
Report Date: 13 Mar 2024

GRAPHS

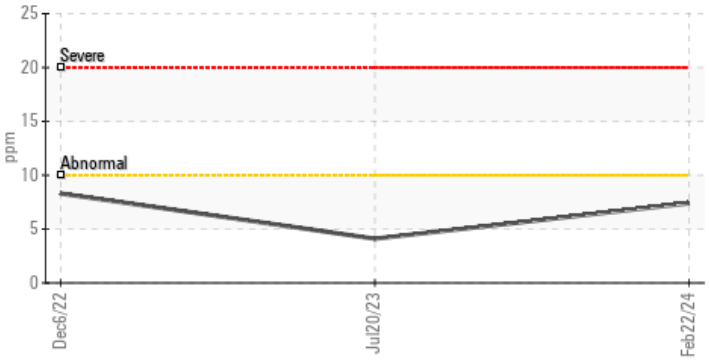
Iron (ppm)



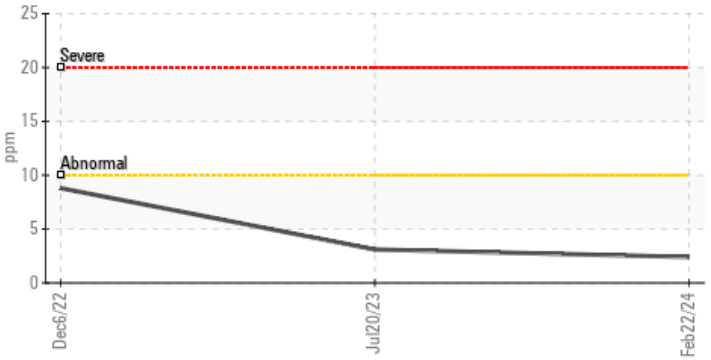
Lead (ppm)



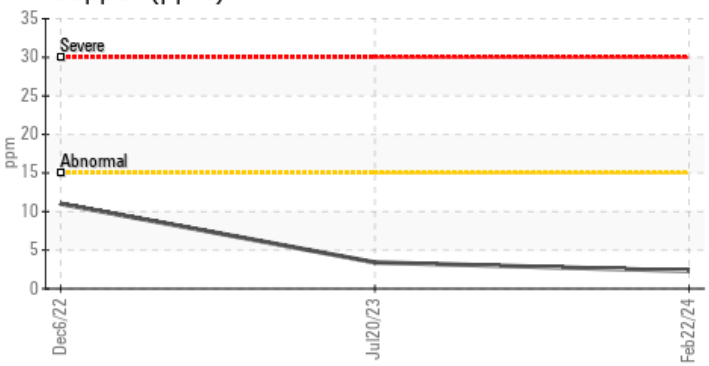
Aluminum (ppm)



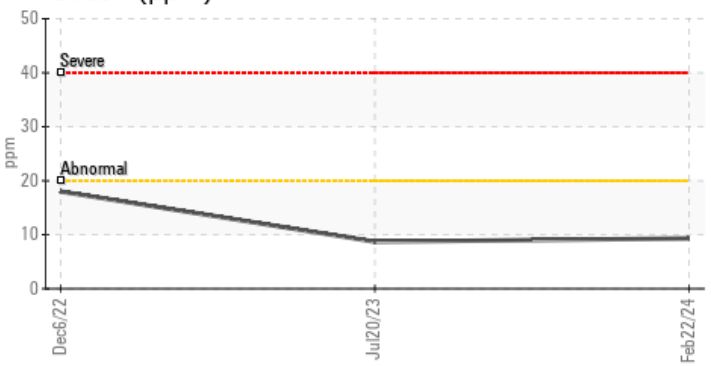
Chromium (ppm)



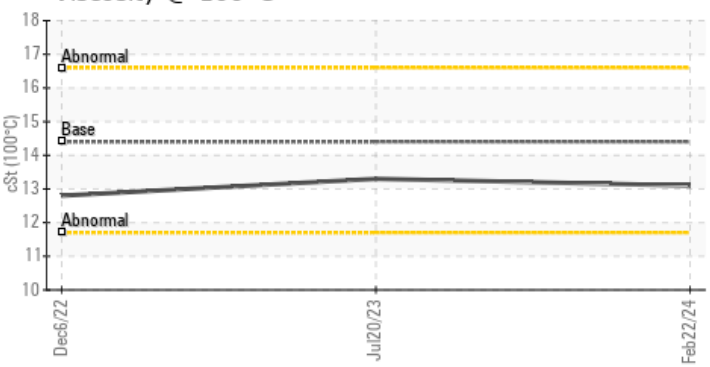
Copper (ppm)



Silicon (ppm)



Viscosity @ 100°C



Soot %