CONSTRUCTION EQUIPMENT

HALDIMAND COUNTY 362323 VOLVO G940B 575336 - DIESEL ENGINE

Sample No: VCP394691
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: 362323

STRONGCO EQUIPMENT (CE)
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SAMPLE INFORMATION

Sample Number		**VCP394691**	VCP352524	VCP381755	---
Sample Date		**27 Jun 2023**	01 May 2023	19 Apr 2023	---
Machine Hours		**6301**	0	6163	---
Oil Hours		**0**	0	5	---
Oil Changed		**Not Changd**	Changed	Changed	---
Sample Status		**SEVERE**	NORMAL	NORMAL	---

OIL CONDITION

Visc @ 100°C	cSt	**13.4**	13.6	14.4	---
Oxidation (PA)	%	**76**	74	53	---

CONTAMINATION

Soot %	%	**0**	0	0	---
Nitration (PA)	%	**38**	38	33	---
Sulfation (PA)	%	**60**	60	51	---
Glycol	%	**0.0**	NEG	NEG	---
Fuel	%	**0.9**	<1.0	<1.0	---
Silicon	ppm	**10**	8	6	---
Sodium	ppm	**2**	2	1	---
Potassium	ppm	**0**	0	<1	---

WEAR METALS

Iron	ppm	**14**	3	3	---
Copper	ppm	**2**	<1	<1	---
Lead	ppm	**<1**	0	<1	---
Tin	ppm	**0**	0	0	---
Aluminum	ppm	**2**	<1	1	---
Chromium	ppm	**<1**	0	0	---
Molybdenum	ppm	**39**	39	52	---
Nickel	ppm	**0**	0	<1	---
Titanium	ppm	**1**	1	10	---
Silver	ppm	**0**	0	0	---
Manganese	ppm	**<1**	<1	<1	---
Vanadium	ppm	**0**	0	<1	---

ADDITIVES

Calcium	ppm	**1620**	1690	1806	---
Magnesium	ppm	**475**	470	383	---
Zinc	ppm	**1047**	1033	1151	---
Phosphorus	ppm	**945**	980	1064	---
Barium	ppm	**0**	0	0	---
Boron	ppm	**70**	69	123	---

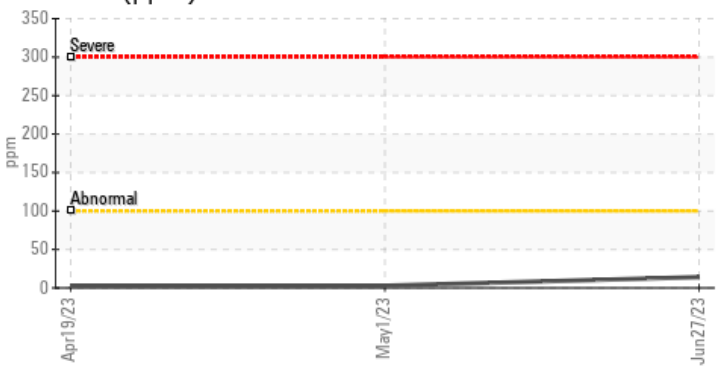
Diagnosis

We advise that you check for visible metal particles in the oil. We recommend that you drain the oil from the component if this has not already been done. An inspection for the source(s) of wear may be warranted at this time. We recommend an early resample to monitor this condition. Re-sampling is suggested to confirm test results prior to significant maintenance activities being performed. Please indicate that this is a resample on your Sample Information Form (SIF).Wear particle analysis indicates that the ferrous cutting and nonferrous other particles are severe. High concentration of visible metal present. Piston, ring and cylinder wear is indicated. Cutting wear particles are caused by either hard protuberances (mis-aligned components, etc.), or abrasives entering the system and embeding themselves in softer materials (sand, etc.), and gouging out mating surfaces. Fuel content negligible. 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.

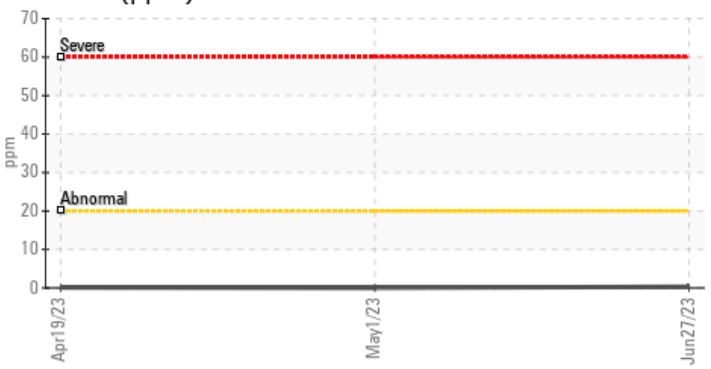
Depot: VOLVO0252
Unique No: 5603829
Signed: Kevin Marson
Report Date: 05 Jul 2023

GRAPHS

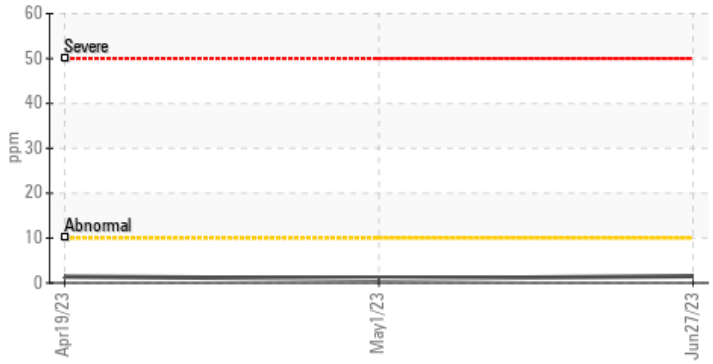
Iron (ppm)



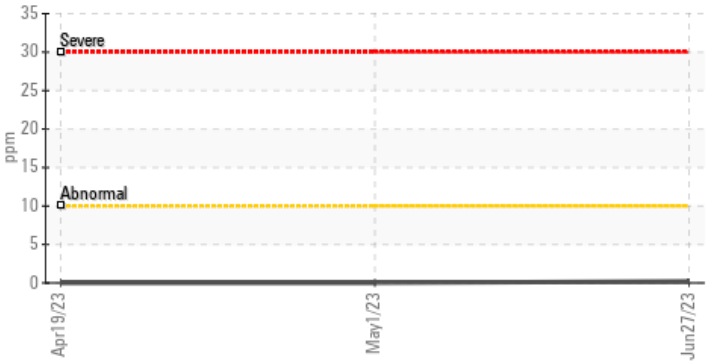
Lead (ppm)



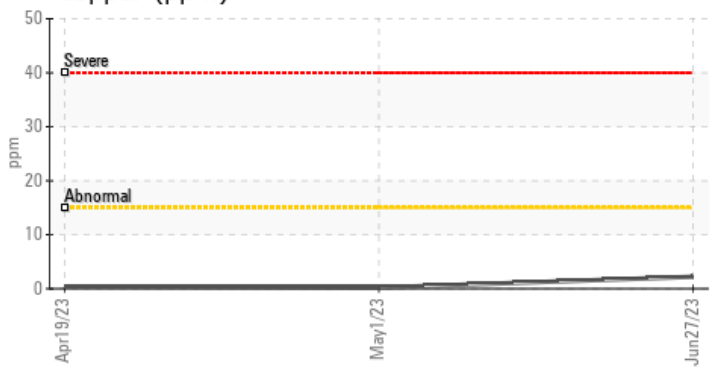
Aluminum (ppm)



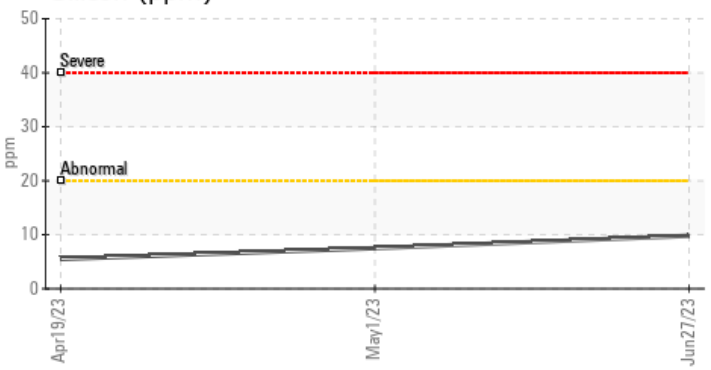
Chromium (ppm)



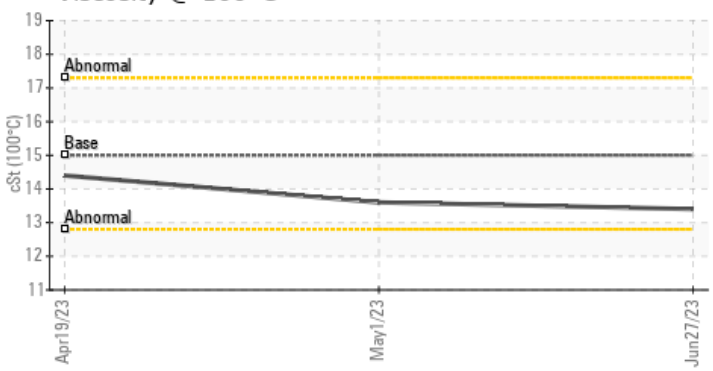
Copper (ppm)



Silicon (ppm)



Viscosity @ 100°C



Soot %