CONSTRUCTION EQUIPMENT

HORST VOLVO EC460CL 110503 - HYDRAULIC SYSTEM

Sample No: VCP348816
Oil Type: VOLVO SUPER HYDRAULIC OIL 46
Job No: HORST

HIGHWAY EQUIPMENT AND SUPPLY CO
200 BURKHOLDER DR.
EPHRATA, PA
US 17522
Contact: CHAD HERRON
chad@hwyequip.com
T: (717)859-3132
F: (717)859-2698

SAMPLE INFORMATION

Sample Number		**VCP348816**	VCP304545	VCP148650	---
Sample Date		**26 Jan 2023**	25 May 2021	18 Dec 2015	---
Machine Hours		**9014**	7721	3899	---
Oil Hours		**0**	0	0	---
Oil Changed		**Not Changd**	Not Changd	Not Changd	---
Sample Status		**ABNORMAL**	NORMAL	NORMAL	---

OIL CONDITION

Visc @ 40°C	cSt	**40.9**	41.0	43.59	---
Acid Number (AN)	mg KOH/g	**0.60**	0.559	0.472	---

CONTAMINATION

Particles >4µm		**116090**	24710	15239	---
Particles >6µm		**11865**	2042	455	---
Particles >14µm		**810**	85	44	---
ISO 4406:1999 (c)		**24/21/17**	22/18/14	21/16/13	---
Silicon	ppm	**7**	6	5	---
Sodium	ppm	**2**	5	1	---
Potassium	ppm	**1**	<1	2	---

WEAR METALS

Iron	ppm	**22**	15	8	---
Copper	ppm	**16**	16	11	---
Lead	ppm	**1**	<1	1	---
Tin	ppm	**<1**	<1	<1	---
Aluminum	ppm	**3**	3	1	---
Chromium	ppm	**17**	2	<1	---
Molybdenum	ppm	**4**	2	0	---
Nickel	ppm	**<1**	0	<1	---
Titanium	ppm	**<1**	<1	<1	---
Silver	ppm	**0**	<1	0	---
Manganese	ppm	**<1**	<1	<1	---
Vanadium	ppm	**0**	0	0	---

ADDITIVES

Calcium	ppm	**1650**	914	89	---
Magnesium	ppm	**48**	26	3	---
Zinc	ppm	**731**	664	447	---
Phosphorus	ppm	**599**	527	367	---
Barium	ppm	**0**	0	0	---
Boron	ppm	**8**	7	<1	---

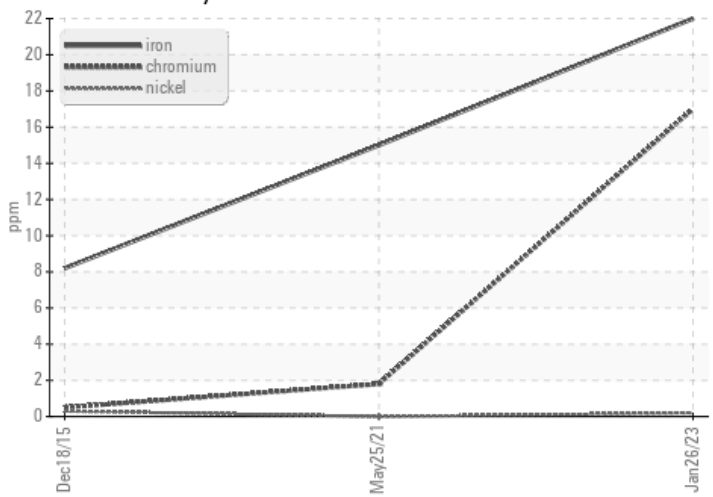
Diagnosis

No corrective action is recommended at this time. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.The chromium level is abnormal. All other component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

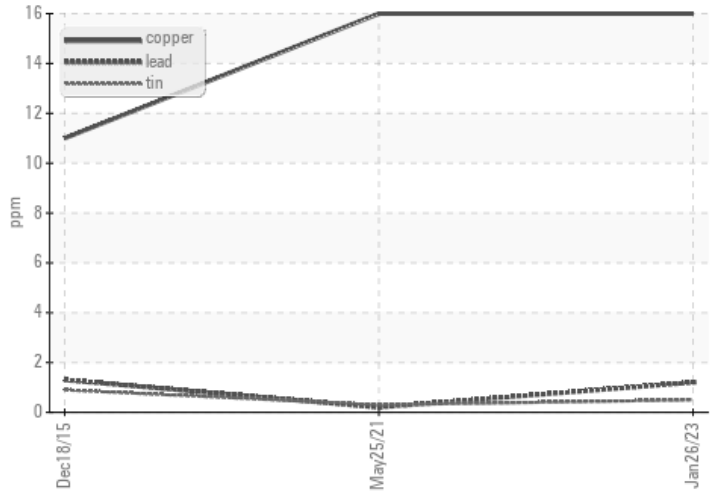
Depot: INSEPH
Unique No: 10320686
Signed: Jonathan Hester
Report Date: 06 Feb 2023

GRAPHS

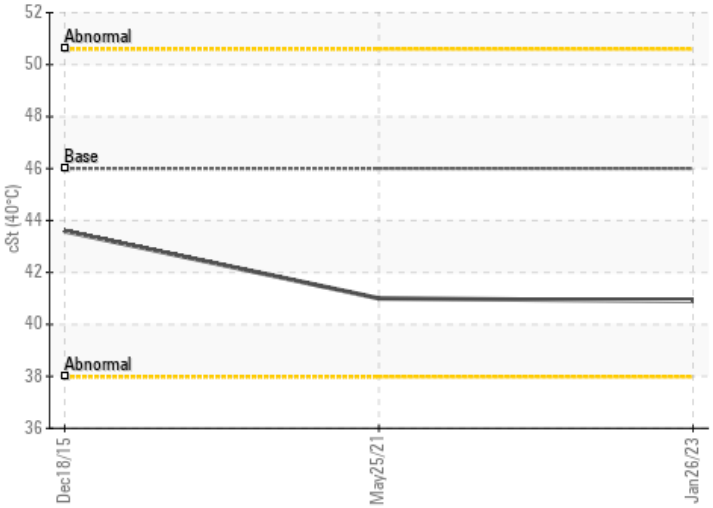
Ferrous Alloys



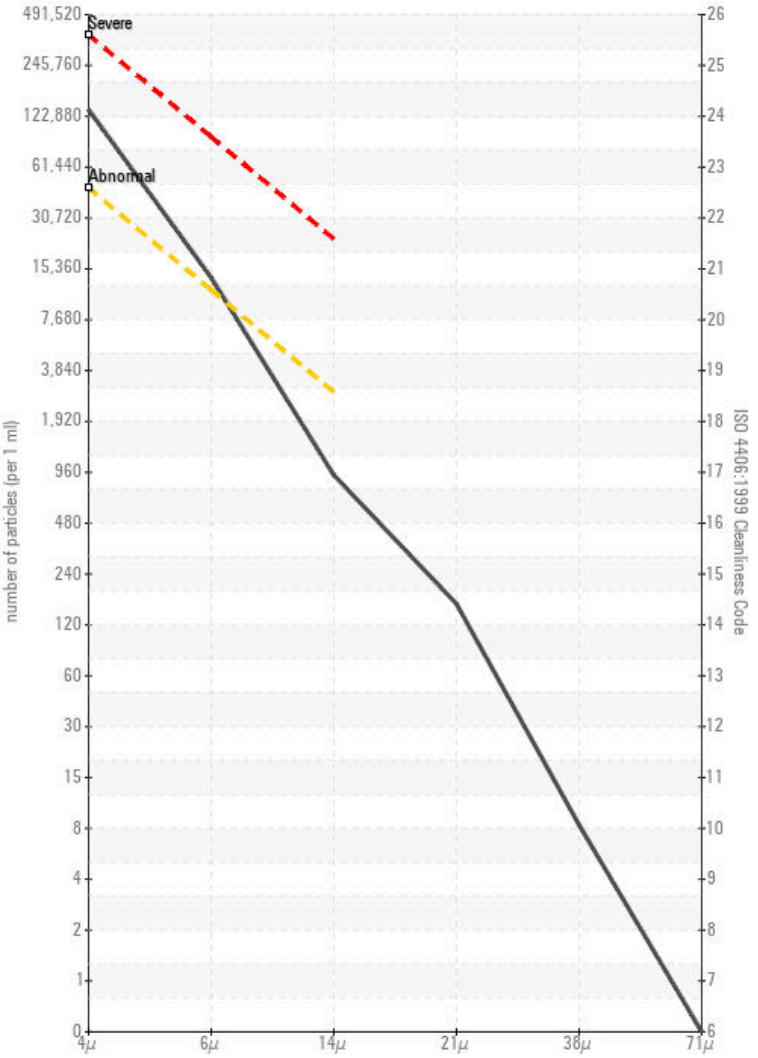
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number