



CONSTRUCTION EQUIPMENT

660738 DIPRO VOLVO L220 3352 - HYDRAULIC SYSTEM



Sample No: VCP452287
Oil Type: VOLVO SUPER HYDRAULIC OIL 46
Job No: 660738 DIPRO



SAMPLE INFORMATION

Sample Number	VCP452287	VCP411897	VCP421773	VCP380942
Sample Date	24 Jan 2024	14 Aug 2023	22 Mar 2023	13 Dec 2022
Machine Hours	8210	6368	4140	2544
Oil Hours	4210	2000	4140	2544
Oil Changed	Changed	Not Changd	Changed	Not Changd
Sample Status	SEVERE	ABNORMAL	ABNORMAL	ABNORMAL

ALTA EQUIPMENT COMPANY - METRO WEST
 56195 PONTIAC TRAIL
 NEW HUDSON, MI
 US 48165
 Contact: PAUL CONZ
 paul.conz@altg.com
 T: (313)348-8861
 F: (248)356-2029



OIL CONDITION

Visc @ 40°C	cSt	43.1	43.0	41.5	42.1
Acid Number (AN)	mg KOH/g	0.33	0.42	0.38	0.33



CONTAMINATION

Water	%	NEG	0.115	NEG	NEG
Particles >4µm		56562	---	---	38592
Particles >6µm		16688	---	---	11075
Particles >14µm		1148	---	---	1017
ISO 4406:1999 (c)		23/21/17	---	---	22/21/17
Silicon	ppm	<1	<1	1	<1
Sodium	ppm	2	2	1	<1
Potassium	ppm	3	0	<1	0



WEAR METALS

Iron	ppm	5	4	4	3
Copper	ppm	2	1	2	2
Lead	ppm	1	0	0	1
Tin	ppm	<1	0	0	0
Aluminum	ppm	<1	<1	0	0
Chromium	ppm	2	1	2	<1
Molybdenum	ppm	0	0	0	0
Nickel	ppm	<1	0	0	0
Titanium	ppm	0	0	0	0
Silver	ppm	0	0	0	0
Manganese	ppm	<1	<1	0	0
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	28	29	58	60
Magnesium	ppm	1	0	2	0
Zinc	ppm	463	480	424	441
Phosphorus	ppm	376	384	322	354
Barium	ppm	0	0	0	0
Boron	ppm	0	0	0	0

Diagnosis

We advise that you check all areas where contaminants can enter the system. The oil change at the time of sampling has been noted. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation. All component wear rates are normal. There is a high amount of particulates (2 to 100 microns in size) present in the oil. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Depot: VOLVO2990
Unique No: 10863385
Signed: Wes Davis
Report Date: 07 Feb 2024

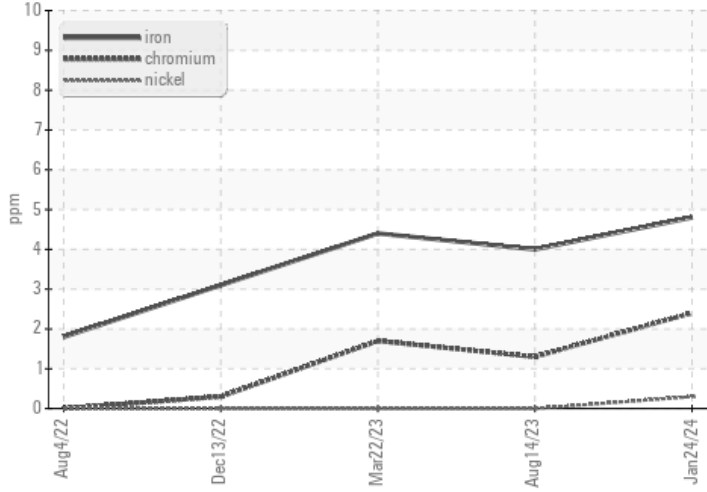


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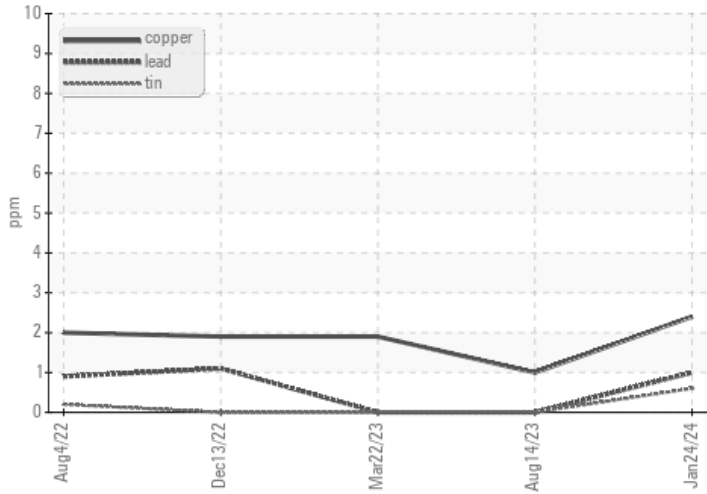


GRAPHS

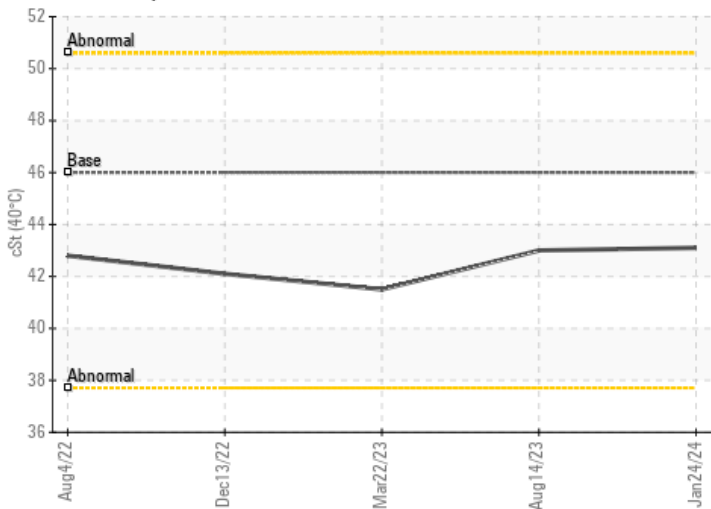
Ferrous Alloys



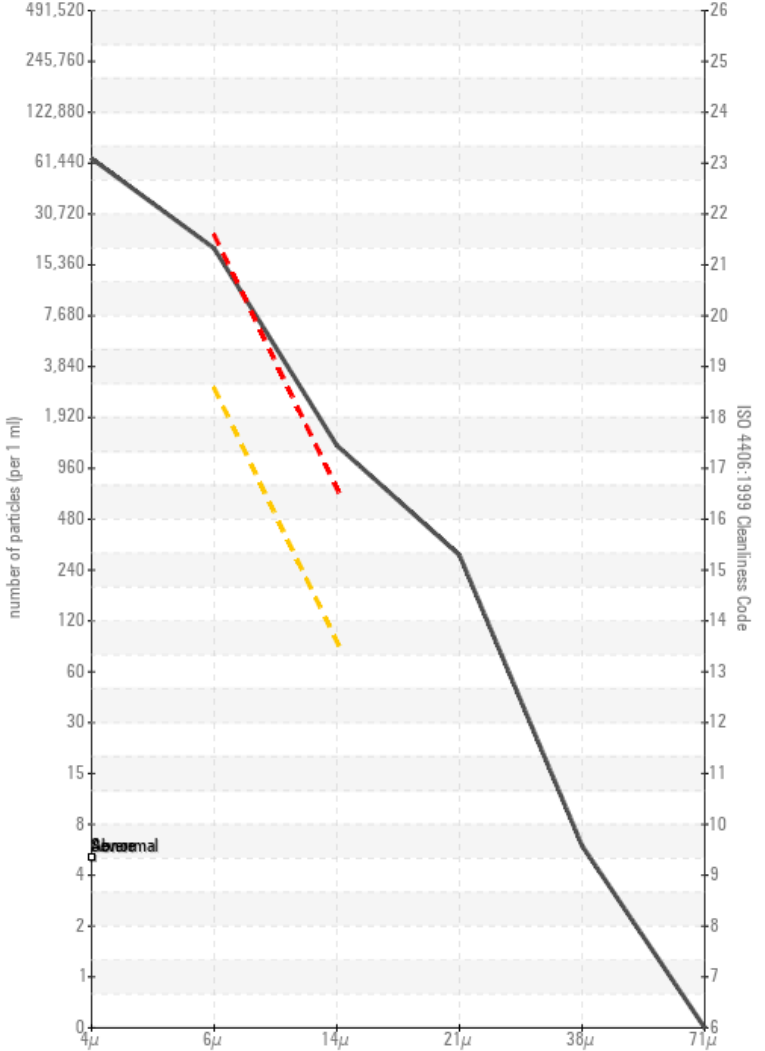
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number

