



CONSTRUCTION EQUIPMENT

2176BO VOLVO EC220EL 314082 - HYDRAULIC SYSTEM



Sample No: VCP400588
Oil Type: VOLVO SUPER HYDRAULIC OIL 46
Job No: 2176BO



SAMPLE INFORMATION

Sample Number	VCP400588	VCP335956	VCP305102	VCP290178
Sample Date	12 Jan 2023	04 Nov 2021	23 Mar 2021	30 Dec 2020
Machine Hours	6283	4319	3056	2582
Oil Hours	0	2000	0	0
Oil Changed	Changed	Changed	Not Changd	Not Changd
Sample Status	NORMAL	ABNORMAL	NORMAL	NORMAL

LCSWMA - LANCASTER COUNTY SOLID WASTE
 1299 HARRISBURG PIKE
 LANCASTER, PA
 US 17604
 Contact: ROGER RUSSIN
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 T: (717)735-0166
 F: (717)735-0197

OIL CONDITION

Visc @ 40°C	cSt	36.9	38.8	39.2	39.5
Acid Number (AN)	mg KOH/g	0.42	0.483	0.423	0.368

CONTAMINATION

Particles >4µm		2455	---	10161	7450
Particles >6µm		1086	---	1578	715
Particles >14µm		306	---	120	64
ISO 4406:1999 (c)		18/17/15	---	21/18/14	20/17/13
Silicon	ppm	3	2	10	4
Sodium	ppm	<1	13	2	1
Potassium	ppm	<1	4	1	0

Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

WEAR METALS

Iron	ppm	8	2	7	6
Copper	ppm	8	2	14	14
Lead	ppm	0	<1	<1	<1
Tin	ppm	0	0	<1	<1
Aluminum	ppm	0	0	<1	0
Chromium	ppm	8	<1	5	4
Molybdenum	ppm	4	3	<1	<1
Nickel	ppm	0	<1	<1	<1
Titanium	ppm	<1	0	<1	<1
Silver	ppm	0	0	<1	0
Manganese	ppm	0	0	<1	<1
Vanadium	ppm	0	0	0	0

ADDITIVES

Calcium	ppm	189	439	154	149
Magnesium	ppm	18	35	8	6
Zinc	ppm	455	496	498	491
Phosphorus	ppm	353	361	379	378
Barium	ppm	0	0	0	0
Boron	ppm	4	8	4	3

Depot: LANLANPA
Unique No: 10298661
Signed: Don Baldrige
Report Date: 22 Jan 2023

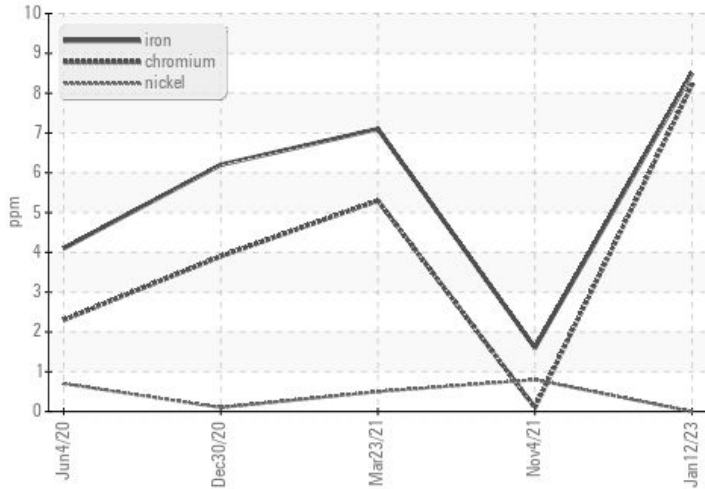


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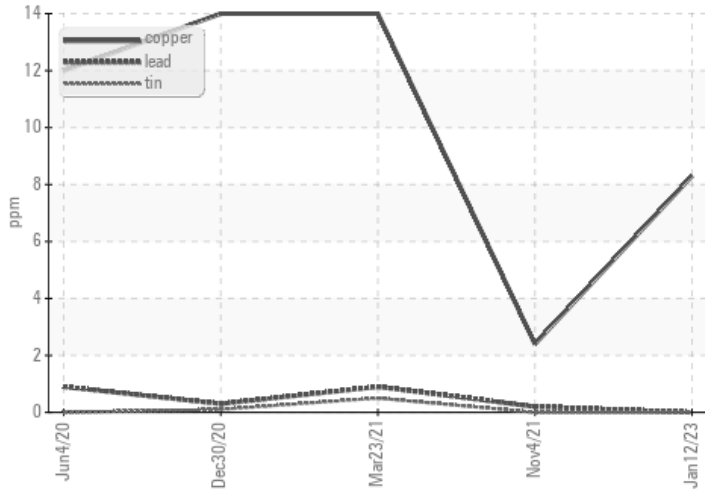


GRAPHS

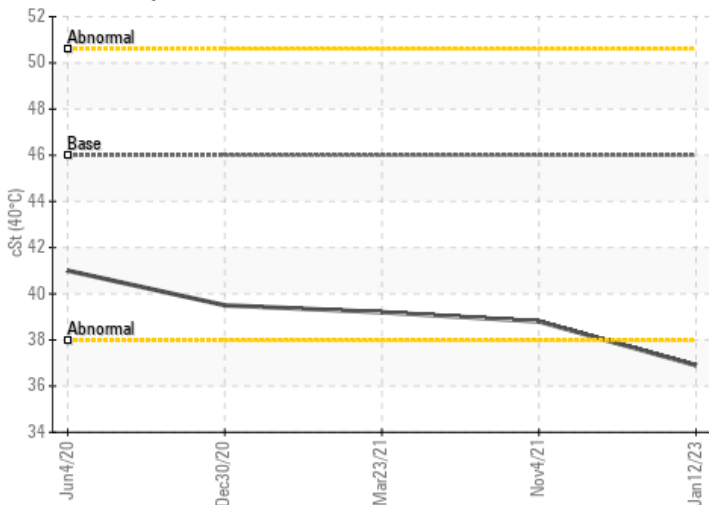
Ferrous Alloys



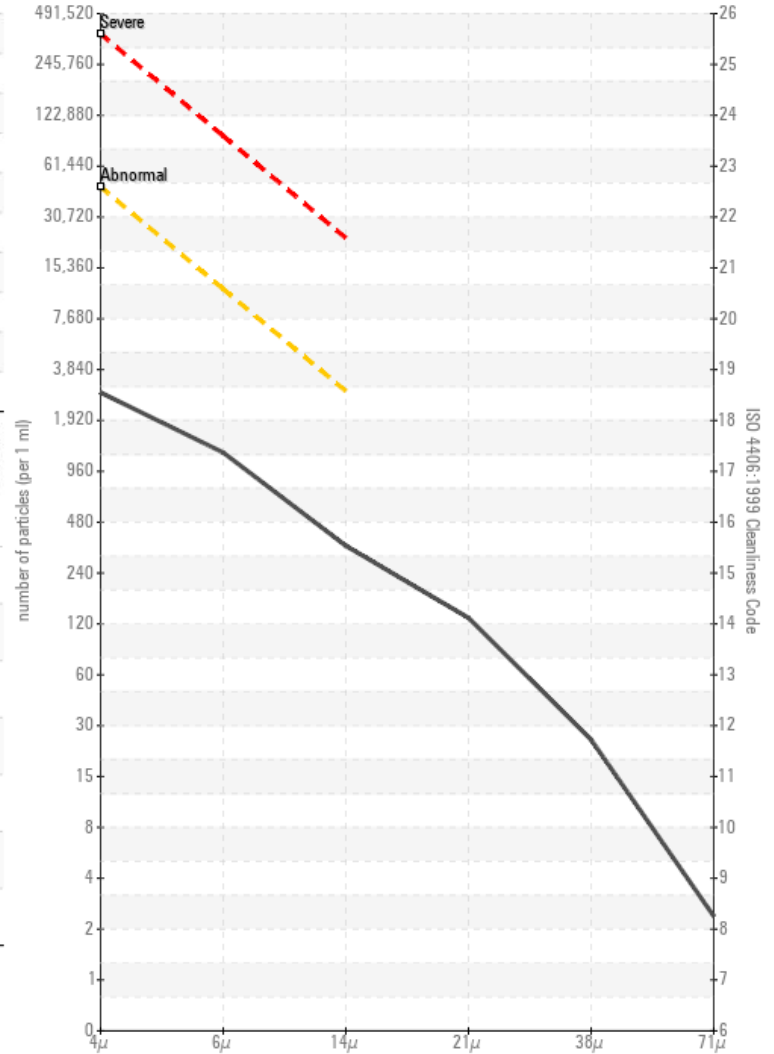
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number

