



CONSTRUCTION EQUIPMENT

688511 VOLVO ECR145 3 10112 - HYDRAULIC SYSTEM



Sample No: VCP455382
Oil Type: VOLVO SUPER HYDRAULIC OIL 46
Job No: 688511



SAMPLE INFORMATION

Sample Number	VCP455382	VCP396675	VCP320429	VCP291168
Sample Date	19 Mar 2024	14 Mar 2023	25 Aug 2021	14 Oct 2020
Machine Hours	6977	6267	5286	4776
Oil Hours	0	0	0	0
Oil Changed	Not Chngd	Not Chngd	Not Chngd	Not Chngd
Sample Status	NORMAL	ATTENTION	NORMAL	ABNORMAL

HUBBARD CONSTRUCTION
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OIL CONDITION

Visc @ 40°C	cSt	45.0	44.8	44.9	44.5
Acid Number (AN)	mg KOH/g	0.408	0.49	0.639	0.602



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Particles >4µm		1944	40577	2431	---
Particles >6µm		515	9448	178	---
Particles >14µm		47	436	15	---
ISO 4406:1999 (c)		18/16/13	23/20/16	18/15/11	---
Silicon	ppm	3	4	<1	3
Sodium	ppm	1	2	1	0
Potassium	ppm	0	0	0	<1

Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



WEAR METALS

Iron	ppm	5	4	4	4
Copper	ppm	25	27	40	39
Lead	ppm	0	0	<1	1
Tin	ppm	0	0	0	<1
Aluminum	ppm	0	<1	<1	0
Chromium	ppm	7	4	5	5
Molybdenum	ppm	1	3	<1	<1
Nickel	ppm	0	0	0	0
Titanium	ppm	0	0	0	0
Silver	ppm	0	0	<1	<1
Manganese	ppm	0	<1	0	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	108	76	73	79
Magnesium	ppm	<1	9	0	2
Zinc	ppm	406	459	498	531
Phosphorus	ppm	425	443	483	459
Barium	ppm	0	0	0	0
Boron	ppm	0	0	1	<1

Depot: HUBORL
Unique No: 10941859
Signed: Wes Davis
Report Date: 26 Mar 2024

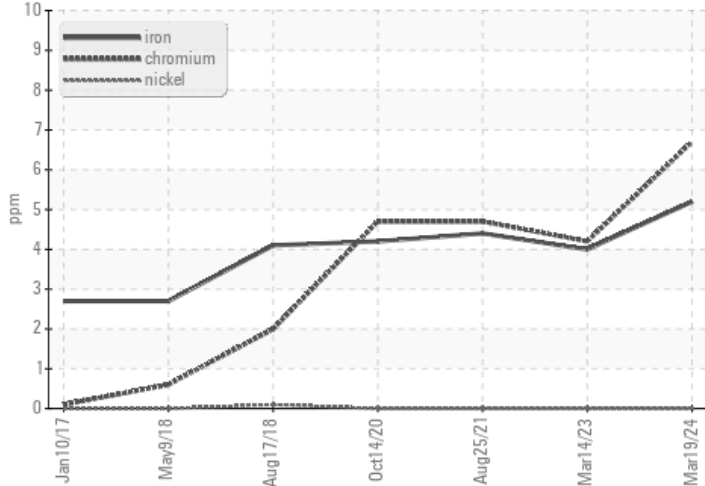


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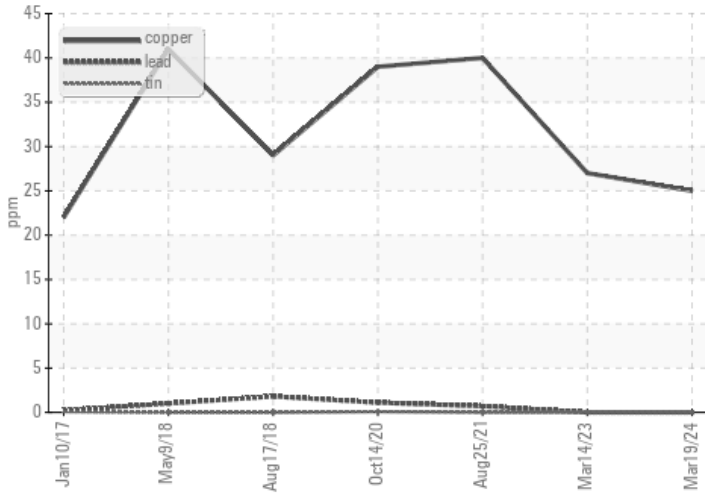


GRAPHS

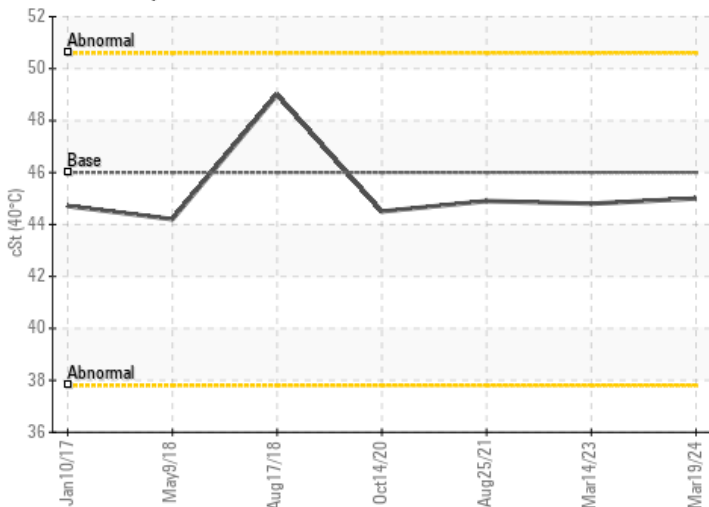
Ferrous Alloys



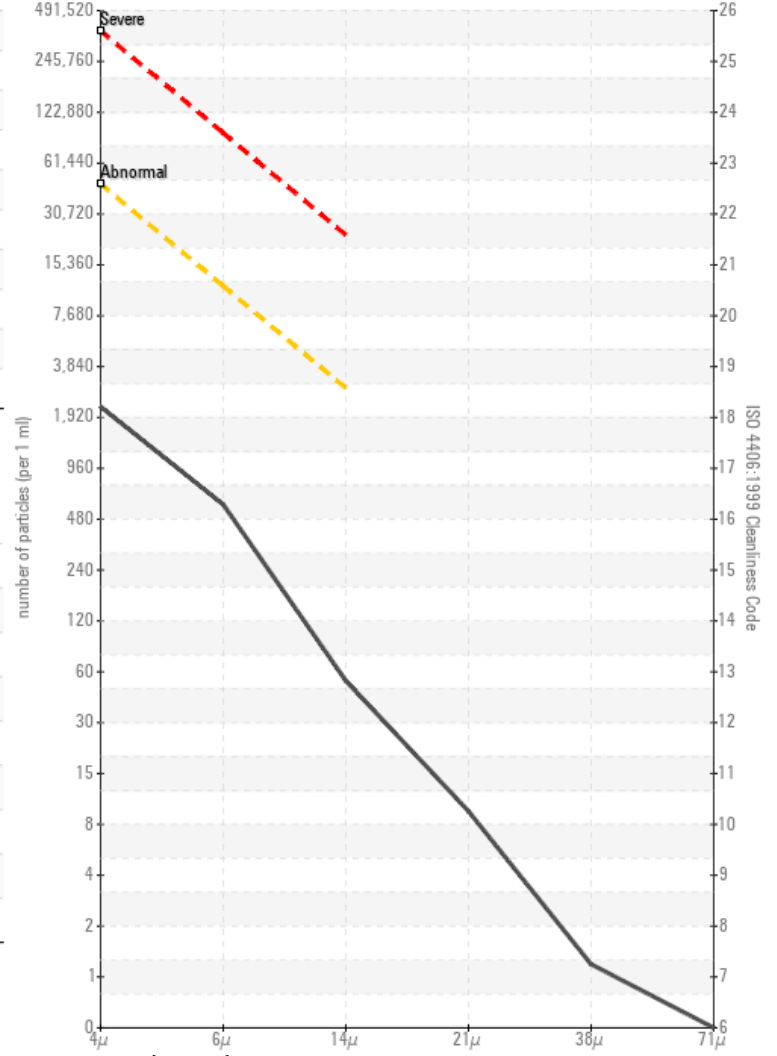
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number

