



CONSTRUCTION EQUIPMENT

SW1027987 DIAMOND VOLVO A40D 60013 - HYDRAULIC SYSTEM



Sample No: VCP441200
Oil Type: AW HYDRAULIC OIL ISO 46
Job No: SW1027987 DIAMOND



SAMPLE INFORMATION

Sample Number	VCP441200	VC027466	VC043194	---
Sample Date	20 Dec 2023	29 Dec 2003	14 Mar 2003	---
Machine Hours	4671	3263	2053	---
Oil Hours	0	1263	674	---
Oil Changed	Not Changd	N/A	Not Changd	---
Sample Status	ATTENTION	ABNORMAL	ABNORMAL	---

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OIL CONDITION

Visc @ 40°C	cSt	▲ 62.6	▲ 49.5	▲ 50.81	---
Acid Number (AN)	mg KOH/g	■ 1.08	■ 1.33	■ 1.65	---



CONTAMINATION

Water	%	NEG	NEG	NEG	---
Particles >4µm		■ 51166	■ 12726	■ 18041	---
Particles >6µm		▲ 5648	■ 6258	▲ 8097	---
Particles >14µm		■ 152	▲ 170	■ 37	---
ISO 4406:1999 (c)		23/20/14	21/20/15	21/20/12	---
Silicon	ppm	■ 4	■ 6	■ 10	---
Sodium	ppm	■ 4	■ 3	■ 3	---
Potassium	ppm	■ 2	■ <1	■ 0	---

Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The oil viscosity is higher than normal. This plus the additive levels indicates the addition of a different brand, or type of oil. Confirm oil type. The AN level is acceptable for this fluid.



WEAR METALS

Iron	ppm	■ 2	■ 6	■ 5	---
Copper	ppm	■ 3	■ 20	■ 17	---
Lead	ppm	■ 0	■ 2	■ <1	---
Tin	ppm	■ 0	■ <1	■ 0	---
Aluminum	ppm	■ 0	■ 1	■ 2	---
Chromium	ppm	■ 0	■ <1	■ <1	---
Molybdenum	ppm	■ 4	<1	<1	---
Nickel	ppm	■ 0	<1	<1	---
Titanium	ppm	0	0	<1	---
Silver	ppm	0	0	0	---
Manganese	ppm	■ <1	1	<1	---
Vanadium	ppm	0	0	0	---



ADDITIVES

Calcium	ppm	▲ 899	2717	2353	---
Magnesium	ppm	■ 12	9	10	---
Zinc	ppm	▲ 666	1149	1049	---
Phosphorus	ppm	▲ 535	1026	938	---
Barium	ppm	■ 0	0	0	---
Boron	ppm	▲ 15	<1	1	---

Depot: VOLVO6174
Unique No: 10808336
Signed: Don Baldrige
Report Date: 02 Jan 2024

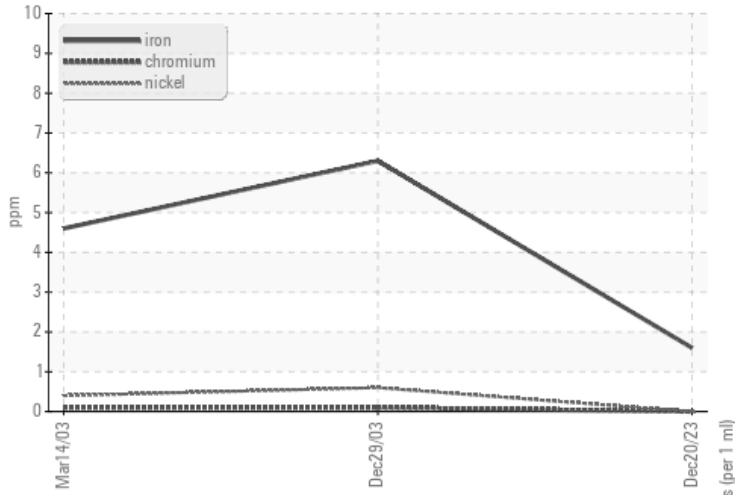


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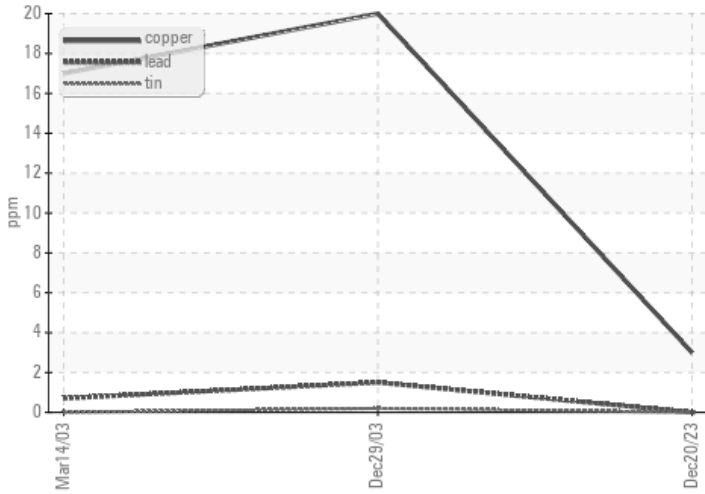


GRAPHS

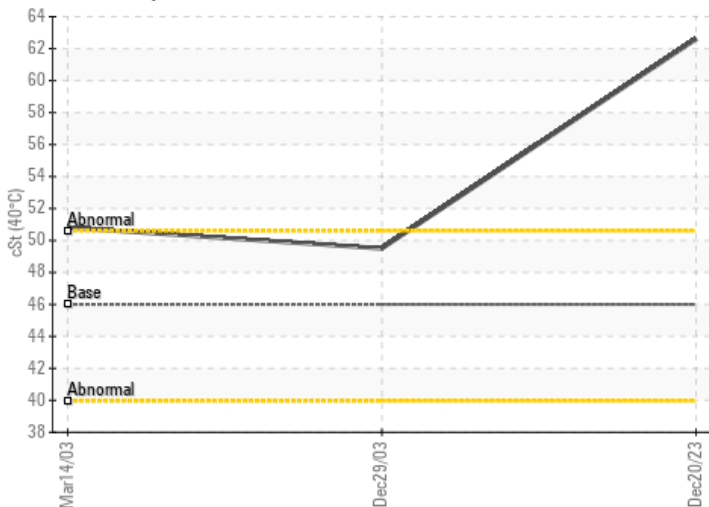
Ferrous Alloys



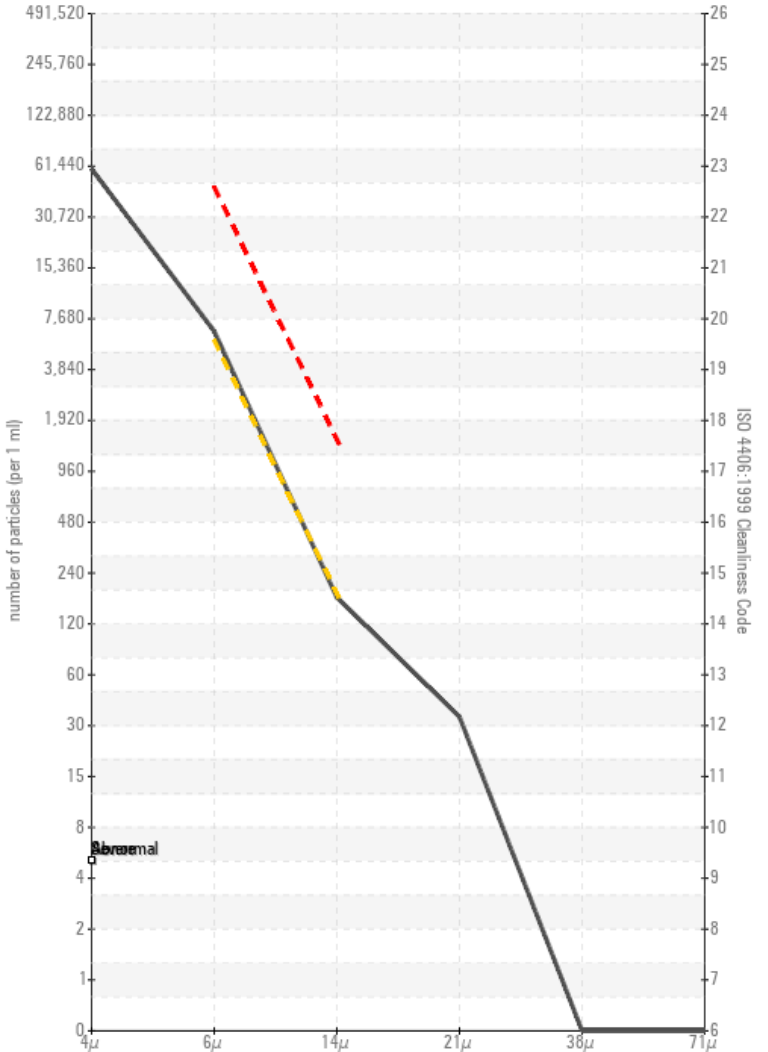
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number

