



CONSTRUCTION EQUIPMENT

NORTH STAR SENNEBOGEN 850 3139 - HYDRAULIC SYSTEM



Sample No: VCP454896
Oil Type: VOLVO SUPER HYDRAULIC OIL 46
Job No: NORTH STAR



SAMPLE INFORMATION

Sample Number	VCP454896	VCP416281	VCP396140	---
Sample Date	19 Jun 2024	26 Jul 2023	15 Nov 2022	---
Machine Hours	4105	1921	509	---
Oil Hours	0	1921	509	---
Oil Changed	Changed	Not Changd	Not Changd	---
Sample Status	ABNORMAL	ABNORMAL	ATTENTION	---

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OIL CONDITION

Visc @ 40°C	cSt	39.8	38.5	36.48	---
Acid Number (AN)	mg KOH/g	0.67	0.91	1.02	---

CONTAMINATION

Water	%	NEG	NEG	NEG	---
Particles >4µm		▲ 11511	▲ 28632	● 8344	---
Particles >6µm		▲ 3976	▲ 5407	■ 1111	---
Particles >14µm		▲ 229	■ 132	■ 49	---
ISO 4406:1999 (c)		21/19/15	22/20/14	20/17/13	---
Silicon	ppm	1	2	2	---
Sodium	ppm	5	4	0	---
Potassium	ppm	4	0	0	---

Diagnosis

No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

WEAR METALS

Iron	ppm	7	8	5	---
Copper	ppm	2	3	3	---
Lead	ppm	<1	<1	<1	---
Tin	ppm	0	0	0	---
Aluminum	ppm	<1	1	<1	---
Chromium	ppm	2	<1	<1	---
Molybdenum	ppm	4	9	0	---
Nickel	ppm	<1	0	0	---
Titanium	ppm	0	0	0	---
Silver	ppm	0	0	0	---
Manganese	ppm	<1	0	<1	---
Vanadium	ppm	0	<1	0	---

ADDITIVES

Calcium	ppm	671	1179	1384	---
Magnesium	ppm	49	81	4	---
Zinc	ppm	563	686	710	---
Phosphorus	ppm	487	612	666	---
Barium	ppm	0	0	0	---
Boron	ppm	5	10	0	---

Depot: VOLVO2990
Unique No: 11088604
Signed: Don Baldrige
Report Date: 22 Jun 2024

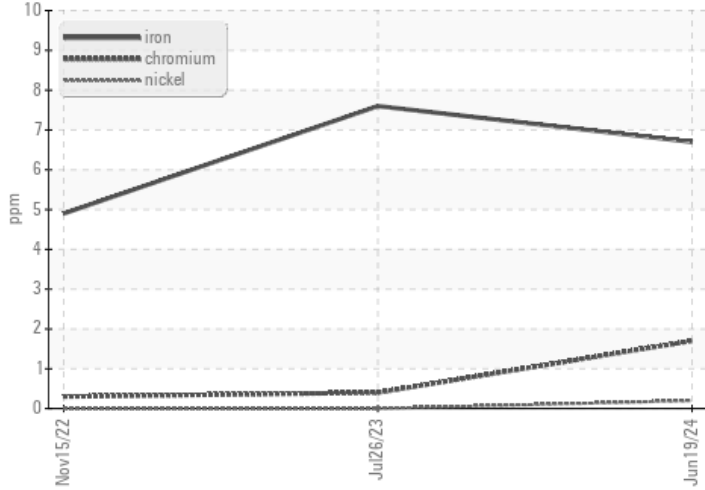


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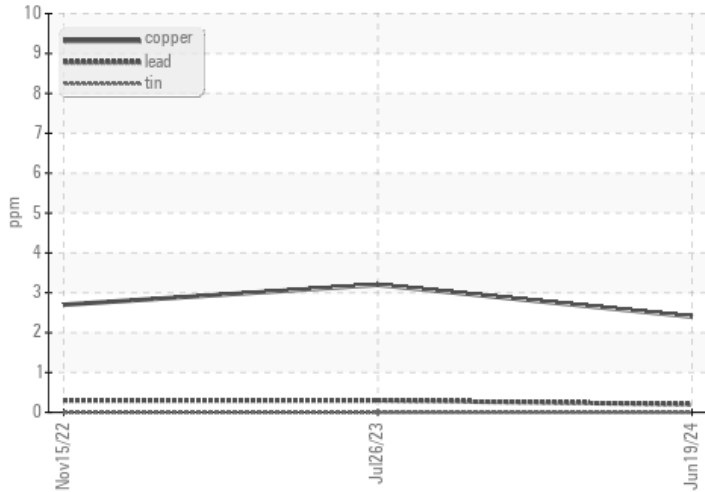


GRAPHS

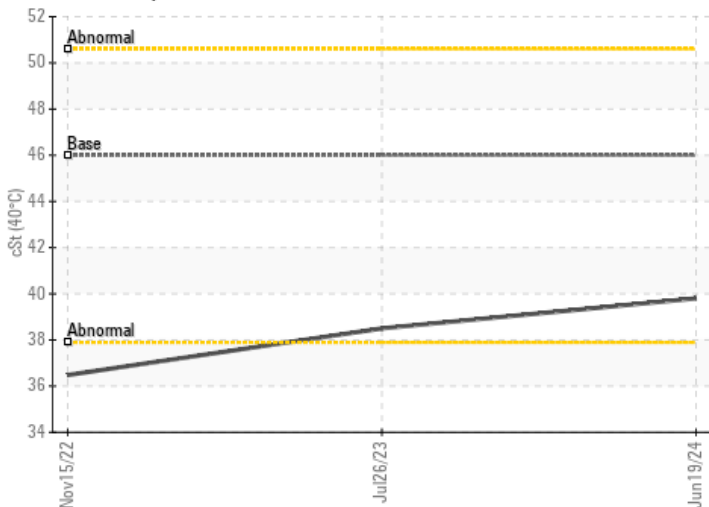
Ferrous Alloys



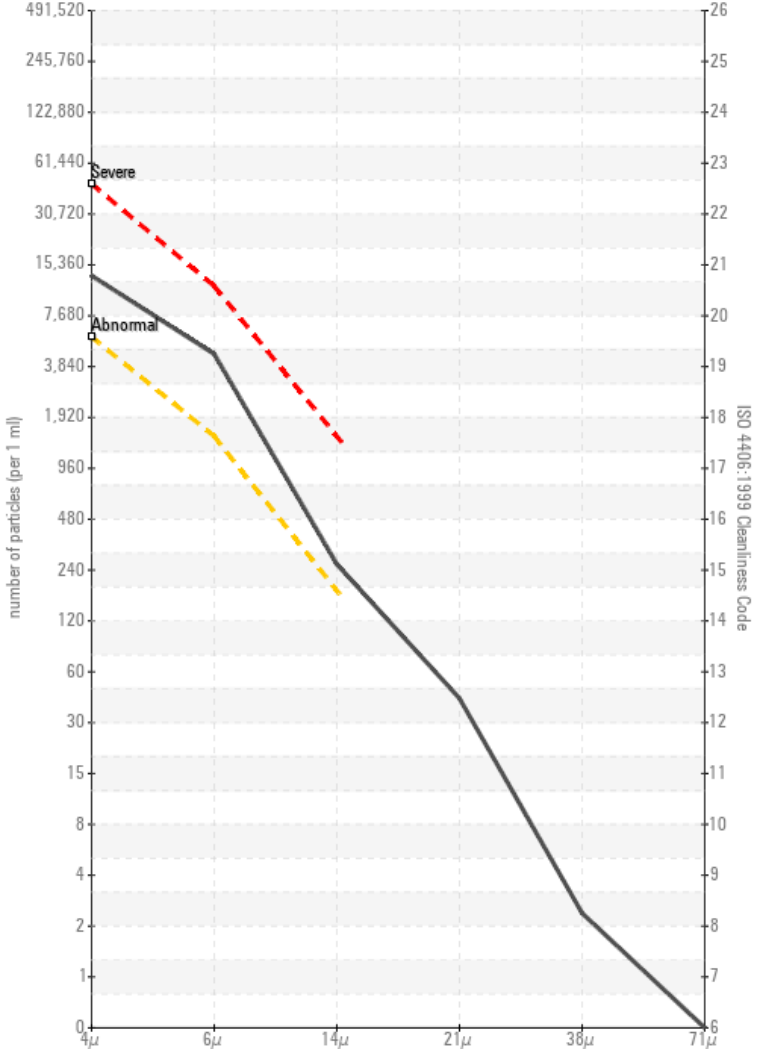
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number

