



CONSTRUCTION EQUIPMENT

SWA305088-10 VOLVO L220H 3195 - HYDRAULIC SYSTEM



Sample No: VCP418710
Oil Type: VOLVO SUPER HYDRAULIC OIL 46
Job No: SWA305088-10



SAMPLE INFORMATION

Sample Number	VCP418710	VCP390233	VCP373355	VCP332101
Sample Date	21 Aug 2023	01 Nov 2022	20 Jun 2022	04 Jan 2022
Machine Hours	10636	8642	7036	6553
Oil Hours	0	0	0	2000
Oil Changed	Not Chngd	Not Chngd	Not Chngd	Not Chngd
Sample Status	ABNORMAL	ATTENTION	ABNORMAL	ATTENTION

CALLANAN INDUSTRIES
 93 SULLIVAN RD
 MONTICELLO, NY
 US 12701
 Contact: Service Manager

OIL CONDITION

Visc @ 40°C	cSt	▲ 37.1	▲ 36.6	▲ 37.03	▲ 36.5
Acid Number (AN)	mg KOH/g	■ 0.67	■ 0.53	■ 0.41	■ 0.44

T:
F:

CONTAMINATION

Particles >4µm		■ 4451	■ 3584	▲ 11437	■ 1627
Particles >6µm		■ 703	■ 181	▲ 2351	■ 434
Particles >14µm		■ 65	■ 16	■ 134	■ 109
ISO 4406:1999 (c)		19/17/13	19/15/11	21/18/14	18/16/14
Silicon	ppm	▲ 26	■ 20	■ 17	■ 16
Sodium	ppm	■ 4	■ 4	■ 4	■ <1
Potassium	ppm	■ 6	■ 3	■ 4	■ 5

Diagnosis

We advise that you check all areas where dirt can enter the system. Resample at the next service interval to monitor. All component wear rates are normal. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The amount and size of particulates present in the system are acceptable. The oil viscosity is lower than normal. Confirm oil type. The AN level is acceptable for this fluid.

WEAR METALS

Iron	ppm	■ 29	■ 27	■ 24	■ 21
Copper	ppm	■ 3	■ 3	■ 4	■ 4
Lead	ppm	■ <1	■ 2	■ 1	■ 2
Tin	ppm	■ 0	■ <1	■ <1	■ <1
Aluminum	ppm	▲ 15	■ 13	■ 12	■ 10
Chromium	ppm	■ 1	■ 1	■ 1	■ 1
Molybdenum	ppm	■ 2	■ 1	■ <1	■ <1
Nickel	ppm	■ 0	■ 0	■ 0	■ 0
Titanium	ppm	2	1	<1	<1
Silver	ppm	0	0	0	0
Manganese	ppm	■ <1	■ <1	■ <1	■ <1
Vanadium	ppm	<1	0	0	0

ADDITIVES

Calcium	ppm	■ 791	■ 347	■ 217	■ 232
Magnesium	ppm	■ 31	■ 15	■ 9	■ 10
Zinc	ppm	■ 611	■ 487	■ 468	■ 470
Phosphorus	ppm	■ 497	■ 401	■ 372	■ 362
Barium	ppm	■ 0	■ 0	■ 0	■ 0
Boron	ppm	■ 23	■ 10	■ 10	■ 7

Depot: CALMONNY
Unique No: 10617345
Signed: Don Baldrige
Report Date: 24 Aug 2023

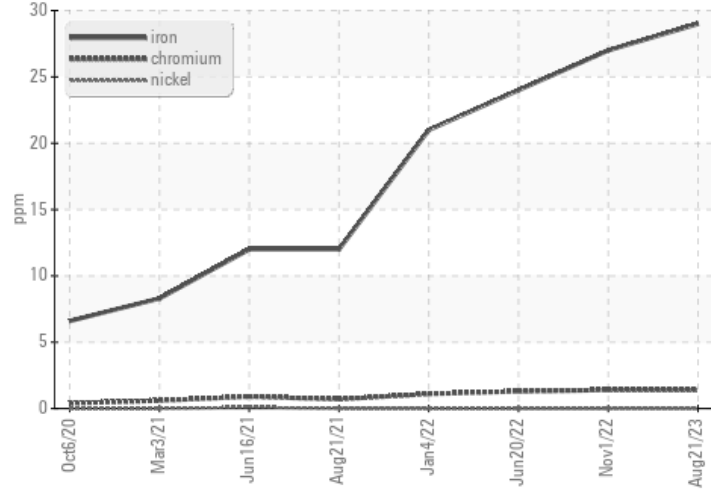


CONSTRUCTION EQUIPMENT

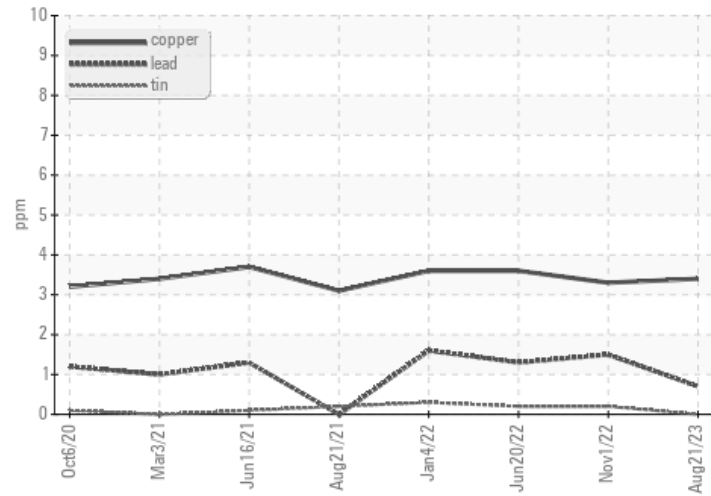


GRAPHS

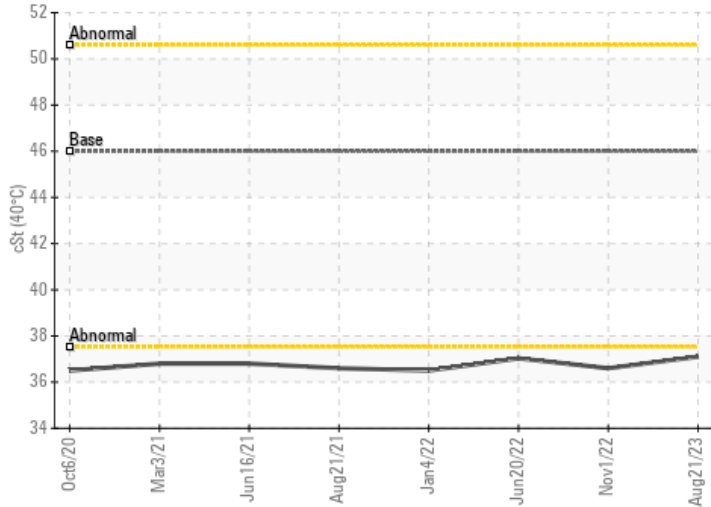
Ferrous Alloys



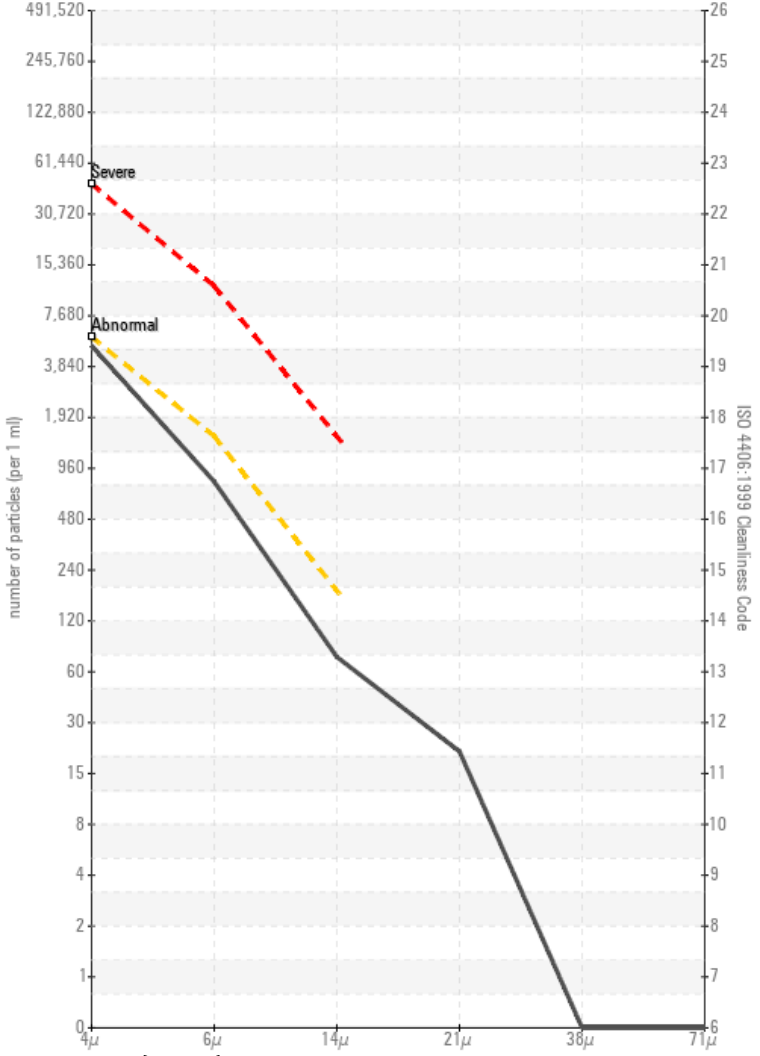
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number

