



CONSTRUCTION EQUIPMENT

332194 VOLVO SD115B 236555 - HYDRAULIC SYSTEM



Sample No: VCP343524
Oil Type: VOLVO SUPER HYDRAULIC OIL 46
Job No: 332194



SAMPLE INFORMATION

Sample Number	VCP343524	VCP311959	VCP305550	VCP284933
Sample Date	30 Nov 2021	12 Jun 2021	18 Jan 2021	06 Aug 2020
Machine Hours	4650	3986	3328	3841
Oil Hours	2000	3986	3328	1600
Oil Changed	Changed	Not Changd	Not Changd	Not Changd
Sample Status	ABNORMAL	ATTENTION	NORMAL	NORMAL

RIPA AND ASSOCIATES

10149 FISHER AVENUE
TAMPA, FL
US 33619
Contact: ROBERT TURNER
rturner@ripatampa.com
T:
F:



OIL CONDITION

Visc @ 40°C	cSt	▲ 29.6	▲ 30.49	■ 42.8	■ 43.4
Acid Number (AN)	mg KOH/g	■ 0.471	■ 0.431	■ 0.302	■ 0.414



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Particles >4µm		■ 965	■ 2865	■ 3062	■ 2149
Particles >6µm		■ 99	■ 318	■ 170	■ 621
Particles >14µm		■ 14	■ 33	■ 29	■ 25
ISO 4406:1999 (c)		17/14/11	19/15/12	19/15/12	18/16/12
Silicon	ppm	■ 13	■ 14	■ 2	■ 3
Sodium	ppm	■ 3	■ 3	■ <1	■ <1
Potassium	ppm	■ <1	■ <1	■ <1	■ <1

Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil. Viscosity of sample indicates oil is within ISO 32 range, advise investigate. Confirm oil type. The AN level is acceptable for this fluid.



WEAR METALS

Iron	ppm	▲ 25	■ 16	■ 38	■ 30
Copper	ppm	■ 10	■ 6	■ 7	■ 5
Lead	ppm	■ 2	■ 2	■ 4	■ 4
Tin	ppm	<1	0	0	0
Aluminum	ppm	■ 2	■ <1	■ 0	■ 7
Chromium	ppm	■ <1	■ <1	■ <1	■ <1
Molybdenum	ppm	■ 7	■ 7	■ 1	■ 1
Nickel	ppm	■ 0	■ 0	■ <1	■ <1
Titanium	ppm	<1	<1	0	0
Silver	ppm	<1	0	0	0
Manganese	ppm	■ <1	■ <1	■ <1	■ <1
Vanadium	ppm	<1	0	0	0



ADDITIVES

Calcium	ppm	■ 264	■ 266	■ 112	■ 106
Magnesium	ppm	43	■ 43	■ 14	■ 14
Zinc	ppm	■ 340	■ 323	■ 342	■ 349
Phosphorus	ppm	■ 310	■ 312	■ 380	■ 368
Barium	ppm	■ 0	■ 0	■ 0	■ 0
Boron	ppm	■ 4	■ 24	■ 2	■ 5

Depot: RIPTAM
Unique No: 9802106
Signed: Doug Bogart
Report Date: 07 Jan 2022

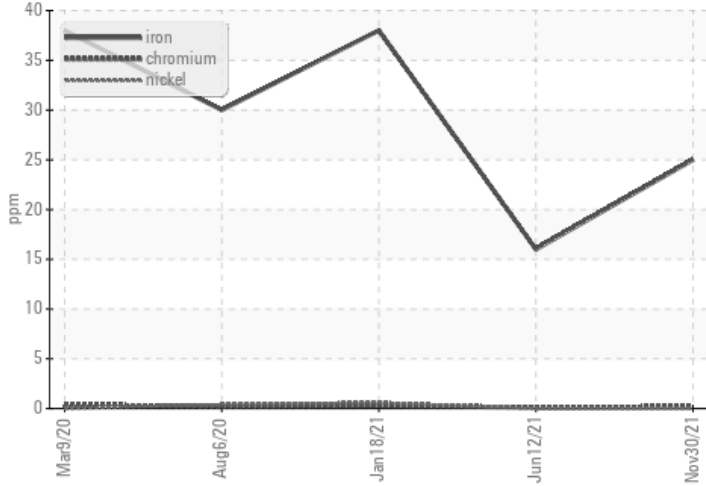


CONSTRUCTION EQUIPMENT

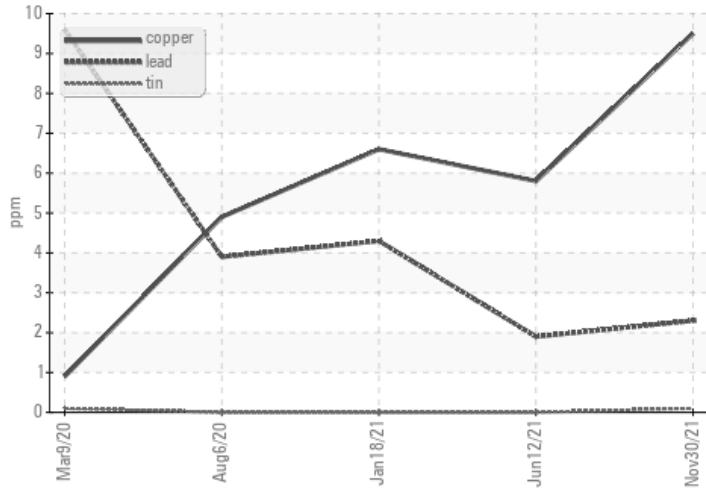


GRAPHS

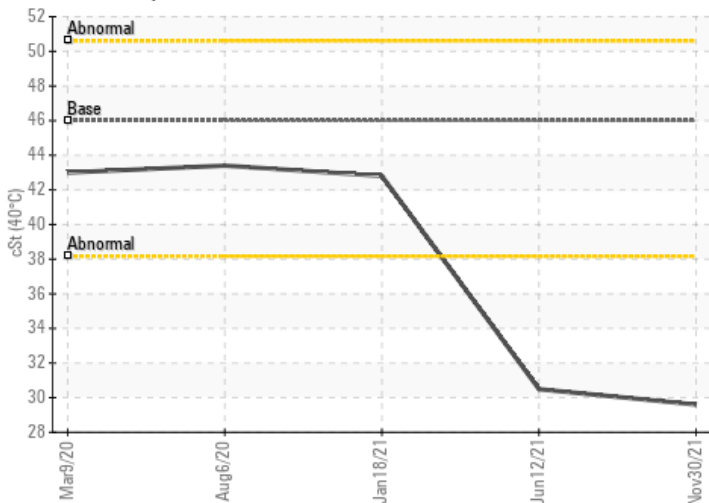
▲ Ferrous Alloys



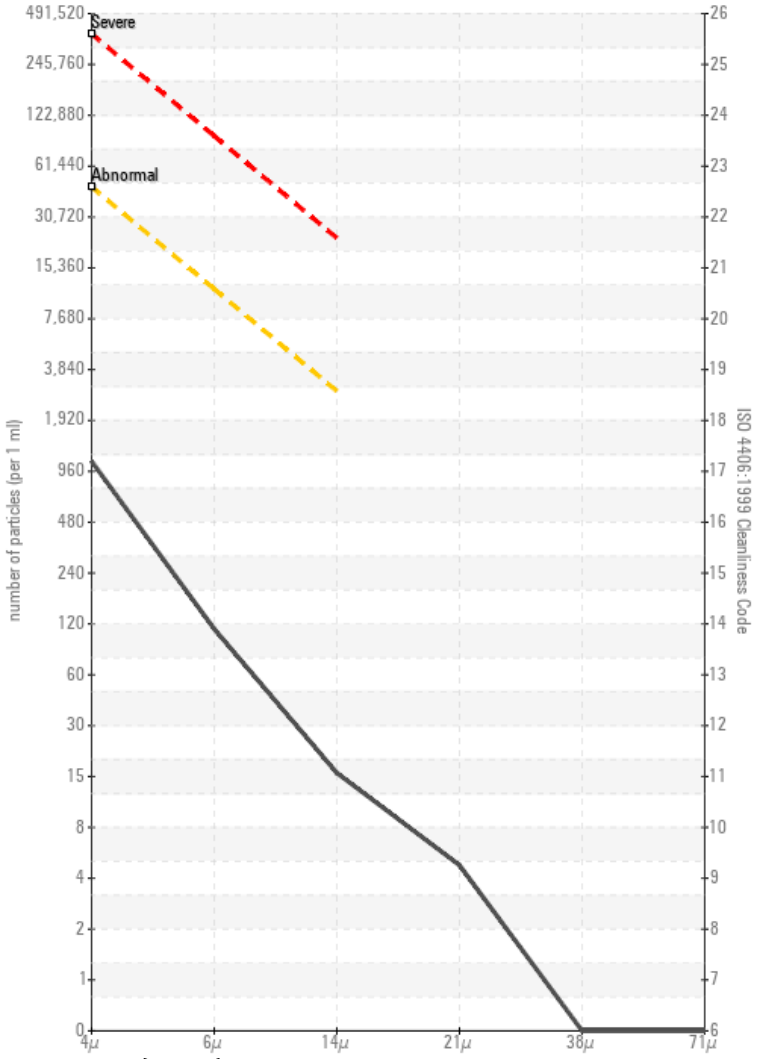
Non-ferrous Metals



▲ Viscosity @ 40°C



Particle Count



Acid Number

