



CONSTRUCTION EQUIPMENT

VOLVO L90G 3117 - HYDRAULIC SYSTEM



Sample No: VCP434846
Oil Type: CASTROL HD AW ISO 46
Job No:



SAMPLE INFORMATION

Sample Number	VCP434846	VCP398128	VCP393316	VCP373552
Sample Date	18 Jun 2024	17 Oct 2023	09 Jun 2023	06 Dec 2022
Machine Hours	13585	13160	12700	12245
Oil Hours	500	0	0	0
Oil Changed	Changed	Not Changd	Not Changd	Not Changd
Sample Status	NORMAL	ABNORMAL	ABNORMAL	NORMAL

LEONARDS CONTRACTING
 30850 STEPHENSON HWY
 MADISON HEIGHTS, MI
 US 48071
 Contact: LARRY SCHRADER
 larry.schrade@sdevelop.com
 T: (810)499-1953
 F: x:

OIL CONDITION

Visc @ 40°C	cSt	43.2	41.5	41.9	41.8
Acid Number (AN)	mg KOH/g	0.29	0.33	0.28	0.34

CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Particles >4µm		4830	13371	19792	8742
Particles >6µm		1165	4224	4964	1174
Particles >14µm		60	200	274	27
ISO 4406:1999 (c)		19/17/13	21/19/15	21/19/15	20/17/12
Silicon	ppm	8	12	12	10
Sodium	ppm	4	5	<1	4
Potassium	ppm	2	2	2	0

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	4	6	8	7
Copper	ppm	2	2	4	3
Lead	ppm	0	1	<1	<1
Tin	ppm	0	<1	<1	0
Aluminum	ppm	1	3	2	2
Chromium	ppm	0	<1	<1	<1
Molybdenum	ppm	0	0	0	<1
Nickel	ppm	0	<1	0	0
Titanium	ppm	0	<1	<1	<1
Silver	ppm	0	0	0	0
Manganese	ppm	<1	<1	0	<1
Vanadium	ppm	0	0	0	0

ADDITIVES

Calcium	ppm	95	130	131	122
Magnesium	ppm	6	13	10	8
Zinc	ppm	383	461	441	411
Phosphorus	ppm	313	352	341	336
Barium	ppm	0	0	0	0
Boron	ppm	<1	<1	0	0

Depot: LEOMAD
Unique No: 11099344
Signed: Wes Davis
Report Date: 27 Jun 2024

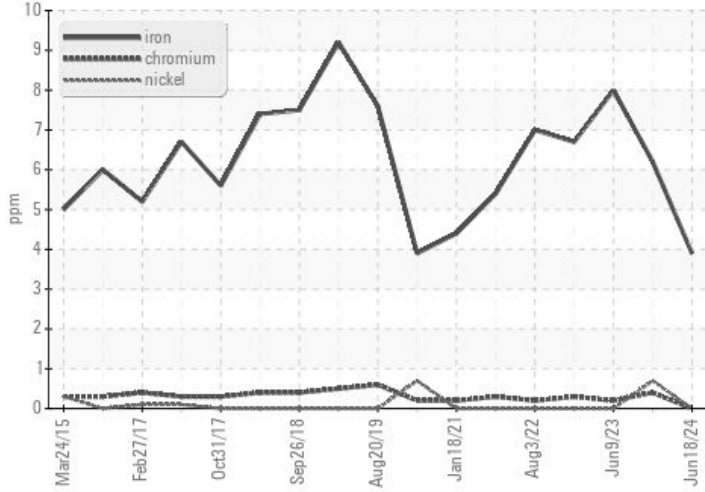


CONSTRUCTION EQUIPMENT

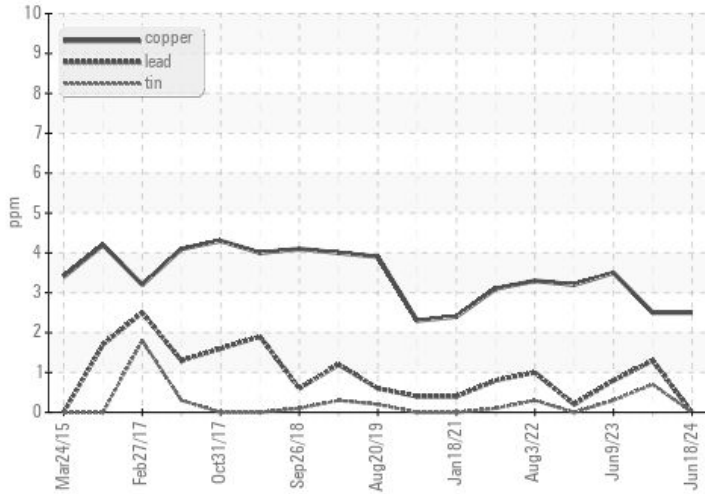


GRAPHS

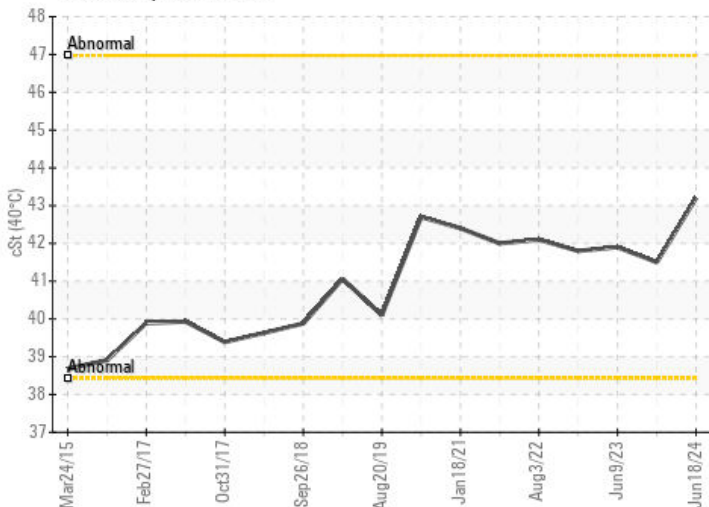
Ferrous Alloys



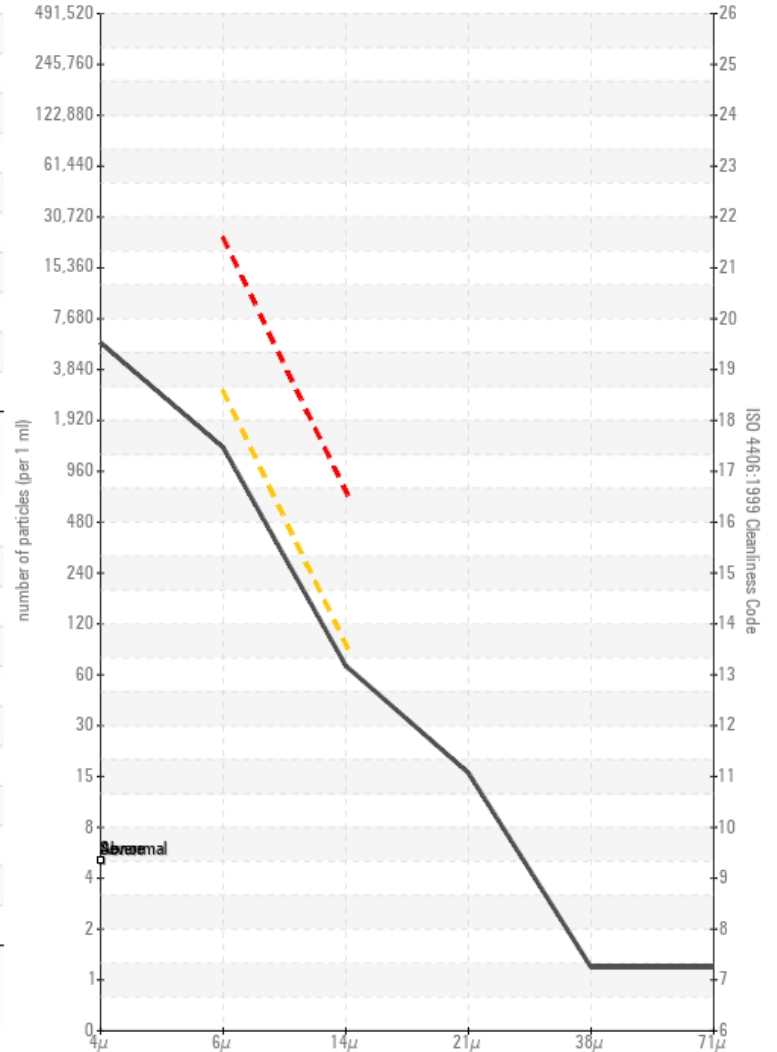
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number

