CONSTRUCTION EQUIPMENT

MARTIN MARIETTA VOLVO A60H 340053 - HYDRAULIC SYSTEM

Sample No: VCP423980
Oil Type: CHEVRON HYDRAULIC OIL AW ISO 46
Job No: MARTIN MARIETTA

SAMPLE INFORMATION

Sample Number		**VCP423980**	VCP309348	VCP297173	VCP271847
Sample Date		**28 Aug 2023**	17 May 2021	06 Mar 2021	05 Aug 2020
Machine Hours		**7391**	4220	3845	3000
Oil Hours		**0**	0	0	0
Oil Changed		**Changed**	Not Changd	Changed	Not Changd
Sample Status		**ABNORMAL**	NORMAL	ABNORMAL	ATTENTION

OIL CONDITION

Visc @ 40°C	cSt	**45.1**	39.4	36.9	39.2
Acid Number (AN)	mg KOH/g	**0.28**	0.495	0.359	0.482

CONTAMINATION

Particles >4µm		**55391**	3519	2730	5239
Particles >6µm		**14894**	608	222	616
Particles >14µm		**613**	22	11	20
ISO 4406:1999 (c)		**23/21/16**	19/16/12	19/15/11	20/16/11
Silicon	ppm	**7**	11	24	8
Sodium	ppm	**2**	2	3	3
Potassium	ppm	**2**	<1	0	2

WEAR METALS

Iron	ppm	**5**	4	7	6
Copper	ppm	**2**	2	6	5
Lead	ppm	**<1**	1	2	3
Tin	ppm	**0**	<1	<1	<1
Aluminum	ppm	**1**	1	1	<1
Chromium	ppm	**0**	<1	2	1
Molybdenum	ppm	**2**	5	5	5
Nickel	ppm	**0**	0	0	<1
Titanium	ppm	**0**	<1	<1	0
Silver	ppm	**0**	0	0	0
Manganese	ppm	**0**	0	<1	<1
Vanadium	ppm	**0**	0	0	0

ADDITIVES

Calcium	ppm	**389**	176	232	226
Magnesium	ppm	**14**	32	30	22
Zinc	ppm	**471**	361	383	471
Phosphorus	ppm	**386**	308	326	339
Barium	ppm	**0**	0	0	0
Boron	ppm	**1**	14	12	10

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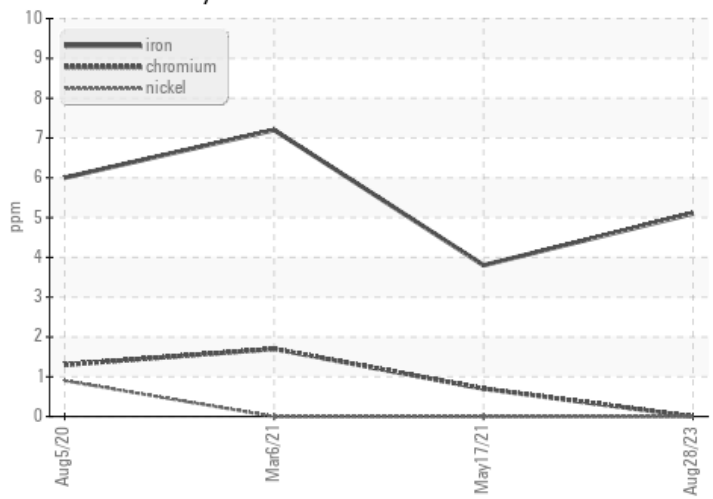
Diagnosis

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 suitable for further service.

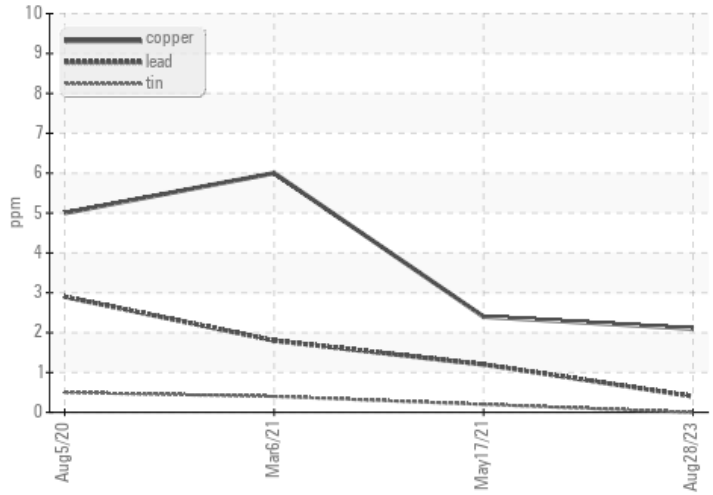
Depot: VOLVO0088
Unique No: 10659803
Signed: Doug Bogart
Report Date: 24 Sep 2023

GRAPHS

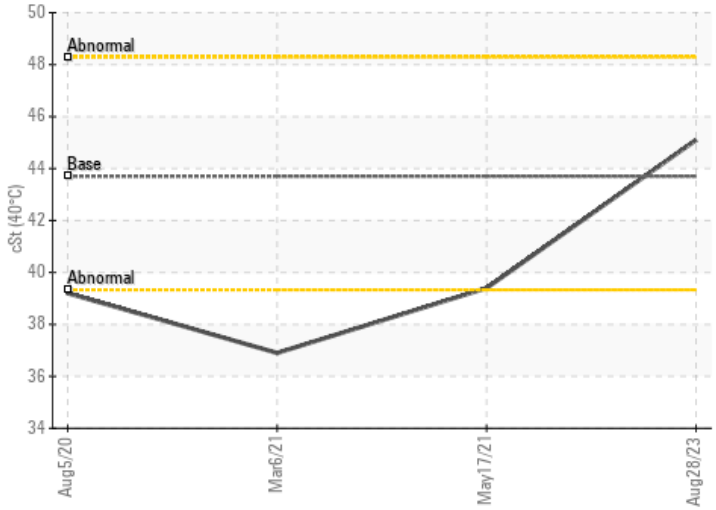
Ferrous Alloys



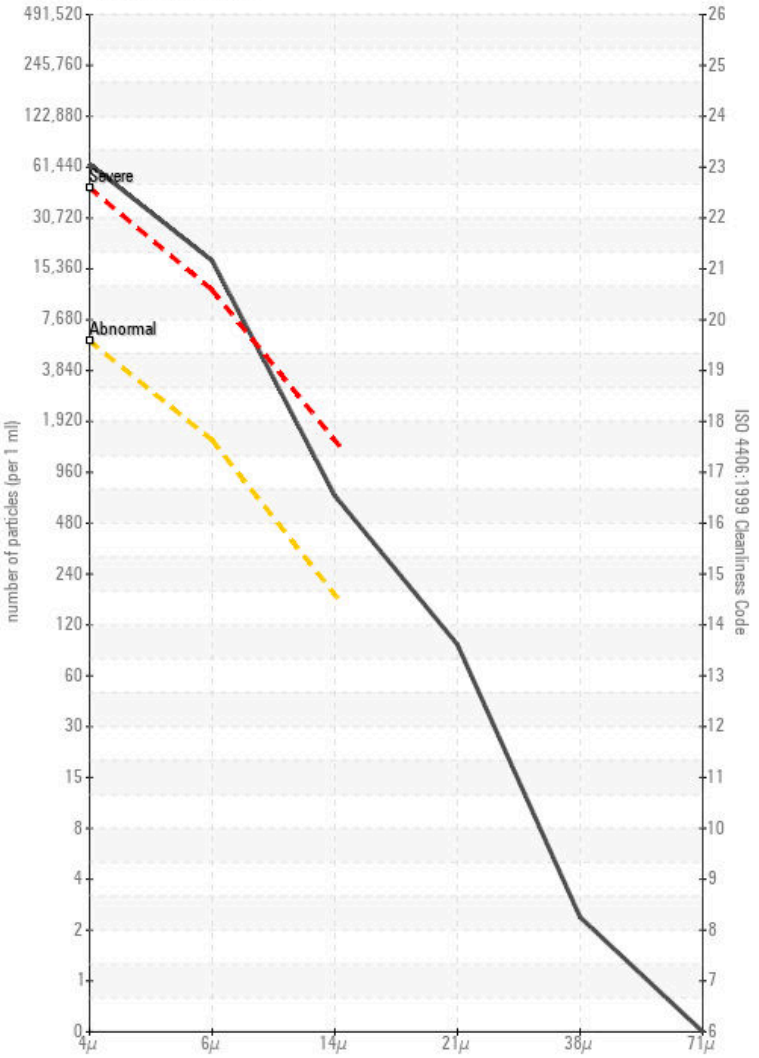
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number