

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR R944C 025842-791 - Diesel Engine

Sample No: LH0258212

Oil Type: LIEBHERR MOTOROIL 10W-40 LOW ASH



SAMPLE INFORMATION

Sample Number	LH0258212	LH0243947	LH0229856	LHMC166198
Sample Date	20 Jul 2023	14 Mar 2023	28 Oct 2022	29 Apr 2022
Machine Hours	10120	9586	9162	8570
Oil Hours	552	406	592	539
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	ABNORMAL	NORMAL

ACECO

10119 RESIDENCY ROAD
MANASSAS, VA
US 20110
Contact: RON BROCK



OIL CONDITION

Visc @ 100°C	cSt	16.5	14.4	18.8	15.3
Base Number (BN)	mg KOH/g	13.9	15.5	16.1	8.8
Oxidation (PA)	%	43	41	49	82

T: (703)392-0111
F: (703)331-5604



CONTAMINATION

Soot %	%	2.8	2.2	3.6	0.3
Nitration (PA)	%	117	109	138	85
Sulfation (PA)	%	53	50	62	71
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	8	8	8	21
Sodium	ppm	2	3	5	2
Potassium	ppm	<1	2	<1	0

Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.



WEAR METALS

Iron	ppm	24	25	33	4
Copper	ppm	2	2	2	<1
Lead	ppm	0	<1	2	<1
Tin	ppm	<1	<1	<1	<1
Aluminum	ppm	4	3	4	4
Chromium	ppm	1	<1	1	<1
Molybdenum	ppm	0	<1	<1	20
Nickel	ppm	0	<1	0	0
Titanium	ppm	<1	<1	<1	0
Silver	ppm	0	0	0	<1
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	0	0	<1	0



ADDITIVES

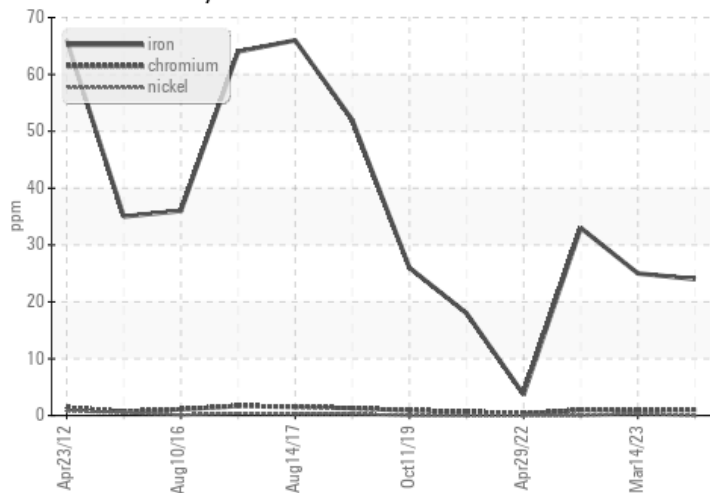
Calcium	ppm	4836	4638	4779	1412
Magnesium	ppm	31	21	29	692
Zinc	ppm	1289	1231	1209	859
Phosphorus	ppm	1077	1052	1024	751
Barium	ppm	0	0	0	0
Boron	ppm	223	243	200	85

Depot: ACEMAN
Unique No: 10635626
Signed: Don Baldrige
Report Date: 10 Sep 2023

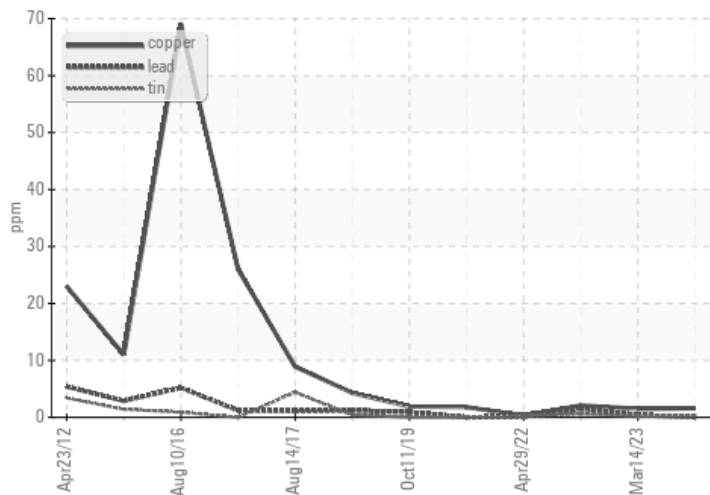


GRAPHS

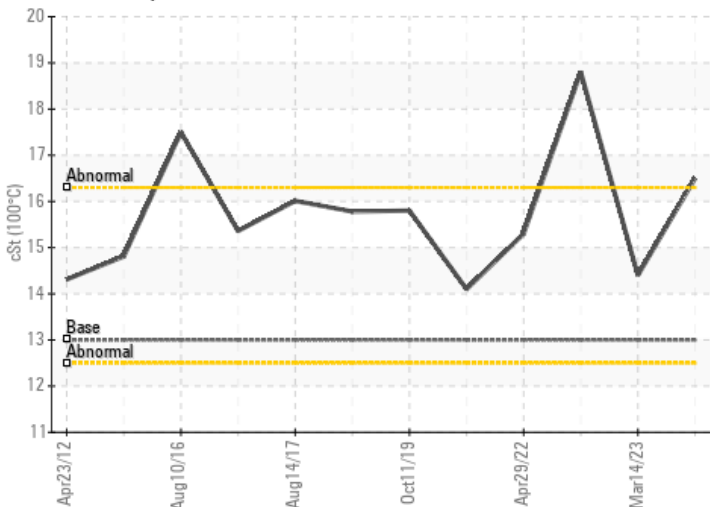
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



Base Number

