CONSTRUCTION EQUIPMENT

[AMR-Cheyenne [GABY IRON]] LIEBHERR LH60M 1204-69983 - Dies

Sample No: LH0254403

Oil Type: DIESEL ENGINE OIL SAE 5W40

SAMPLE INFORMATION LH0254403 LH0220088 DJJ0002892 DJJ0001315 Sample Number Sample Date 20 Apr 2023 04 Jan 2023 26 Jun 2020 02 Jan 2020 Machine Hours 17642 17121 15094 14722 **Oil Hours** 500 500 250 250 Oil Changed Changed Changed Changed Changed Sample Status SEVERE ABNORMAL NORMAL NORMAL **OIL CONDITION** Visc @ 100°C cSt 0 12.3 0 13.7 0 12.7 0 13.7 Base Number (BN) mg KOH/g 06.4 7.0 Oxidation (PA) % 69 73 67 CONTAMINATION Soot % % 0 1.2 0 1.2 0.7 1 % 95 Nitration (PA) 97 68 68 Sulfation (PA) % 65 65 60 60 Glycol % NEG NEG NEG NEG Fuel % <1.0 <1.0 <1.0 9.1 Silicon 6 8 08 maa 08 Sodium 02 02 02 ppm 3 Potassium 02 $\bigcirc 0$ ppm \bigcirc $\bigcirc 7$ $(\bullet$ WEAR METALS ppm 0 18 0 19 0 10 Iron 09

lion	PPIII				\bigcirc \bigcirc
Copper	ppm	28	0 112	0 1	○ <1
Lead	ppm	02	2	0	0
Tin	ppm	○ <1	○ <1	0	0
Aluminum	ppm	3	0 4	04	O 5
Chromium	ppm	○ <1	○ <1	○ <1	○ <1
Molybdenum	ppm	0 19	35	98	0 109
Nickel	ppm	<mark></mark> <1	0	0	○ <1
Titanium	ppm	○ <1	◯ <1	<1	<1
Silver	ppm	0	0	0	0
Manganese	ppm	○ <1	◯ <1	○ <1	○ <1
Vanadium	ppm	<1	0	0	0

Calcium	ppm	0 1251	0 1503	0 1210	1425			
Magnesium	ppm	0 551	○ 536	0 468	565			
Zinc	ppm	0 793	926	○ 710	788			
Phosphorus	ppm	667	○ 722	618	692			
Barium	ppm	0	0	◯ <1	0			
Boron	ppm	31	0 42	218	232			



FINKBINER EQUIPMENT CO.

15 W 400 N FRONTAGE RD BURR RIDGE, IL US 60527 Contact: DON FITZGERALD dfitzgerald@finkbiner.com T: (815)546-8991 F: (630)654-3792

Diagnosis

We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample.All component wear rates are normal. There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Depot:LEC0033Unique No:10548602Signed:Wes DavisReport Date:11 Jul 2023

Report Id: LEC0033 [WUSCAR] 05892792 (Generated: 07/11/2023 15:29:49) Rev: 1

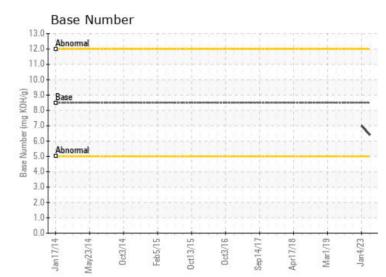
Contact/Location: DON FITZGERALD - LEC0033





GRAPHS

Ferrous Alloys 30iron chromium 25 nickel 20 ud 15 10 5 0-0ct3/14 Feb5/15 Oct13/15 0ct3/16 Apr17/18 Mar1/19 lan4/23 Jan 17/14 May23/14 Sep 14/17 Non-ferrous Metals 180 copper 160 nn lead tin 140 120 100 udd 60 40 20 0-Apr17/18 Mar1/19 Jan4/23 Feb5/15 0ct3/16 Jan 17/14 Mav23/14 0ct3/14 Oct13/15 Sep14/17 Viscosity @ 100°C 18 17 Abnormal 16 () 2.001) 15 14 13 Abno 12 11-Jan 17/14. Feb5/15 Oct3/16 -Apr17/18 Mar1/19. Jan4/23. Sep14/17 May23/14 0ct3/14 Oct13/15



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Contact/Location: DON FITZGERALD - LEC0033