

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH50M 1203-80864 - Coolant

Sample No: LH0130029

Oil Type: EXTENDED LIFE COOLANT



Sample Information

Sample Number	LH0130029	---	---	---
Sample Date	20 Sep 2018	---	---	---
Machine Hours	14360	---	---	---
Sample Status	NORMAL	---	---	---



Coolant Condition

Boron	ppm	14	---	---	---
Phosphorus	ppm	2	---	---	---
Sodium	ppm	2341	---	---	---
Potassium	ppm	3556	---	---	---
Silicon	ppm	3	---	---	---
pH	Scale 0-14	7.65	---	---	---
Reserve Alkalinity	Scale 0-20	2.0	---	---	---
Molybdenum	ppm	216	---	---	---
Nitrites	ppm	440	---	---	---
Percentage Glycol	%	53.0	---	---	---
Freezing Point	°C	-42	---	---	---



Contamination

Magnesium	ppm	4	---	---	---
Calcium	ppm	8	---	---	---
Coolant Appearance		Clear	---	---	---
Coolant Color		Red	---	---	---
Sand/Dirt	scalar	NONE	---	---	---
Debris	scalar	NONE	---	---	---
Precipitate	scalar	NONE	---	---	---
Silt	scalar	NONE	---	---	---



Corrosion

Iron	ppm	<1	---	---	---
Aluminum	ppm	2	---	---	---
Copper	ppm	0	---	---	---
Lead	ppm	<1	---	---	---
Tin	ppm	<1	---	---	---

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Diagnosis

Le fluide peut encore servir. Échantillonner de nouveau l'équipement au prochain intervalle de vidange afin d'en surveiller la condition. Les concentrations de tous les métaux sont normales indiquant qu'il n'y a pas de corrosion dans le système de refroidissement. Il n'y a aucun indice de contamination dans le l'agent de refroidissement. Le niveau de pH de ce fluide est dans les limites acceptables. La réserve d'alcalinité de ce fluide est acceptable.

Depot: SC1149STE
Unique No: 4756354
Signed: Kevin Marson
Report Date: 25 Sep 2018

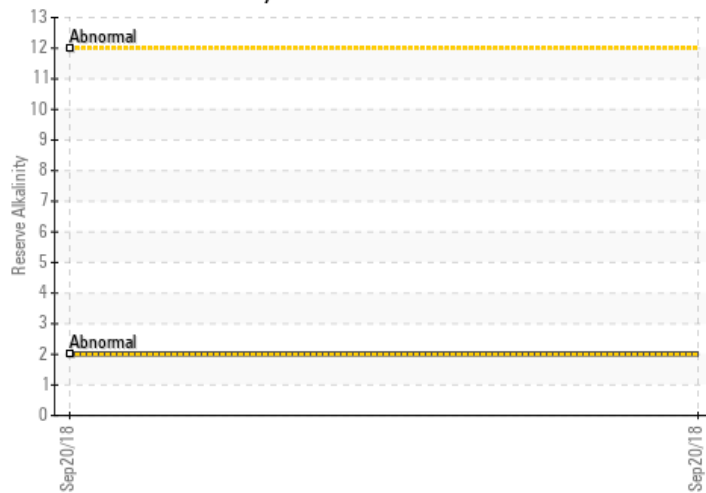


Graphs

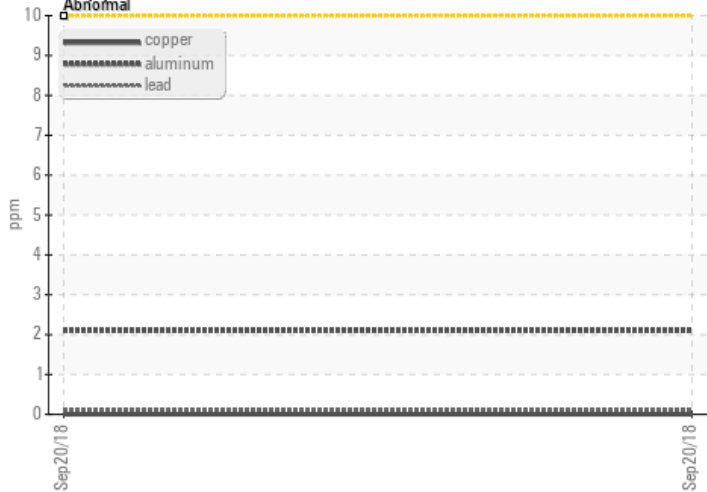
Iron/Tin/Silver



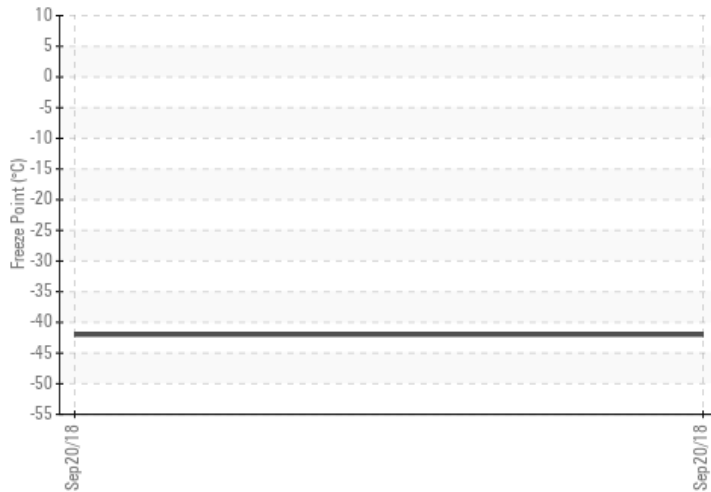
Reserve Alkalinity



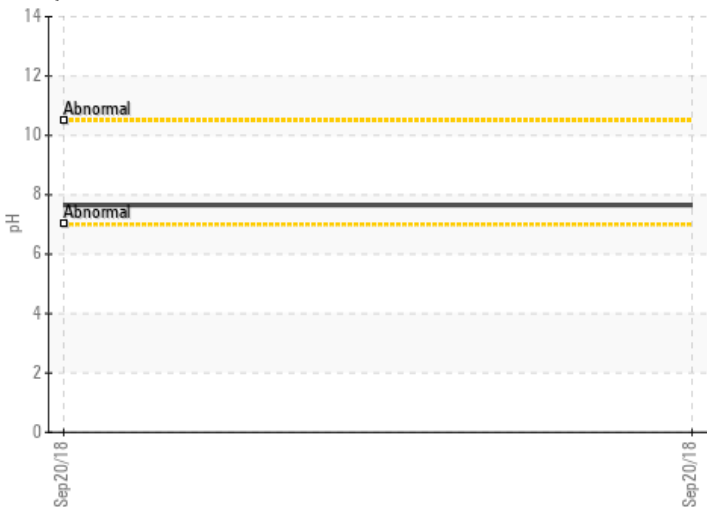
Copper/Aluminum/Lead



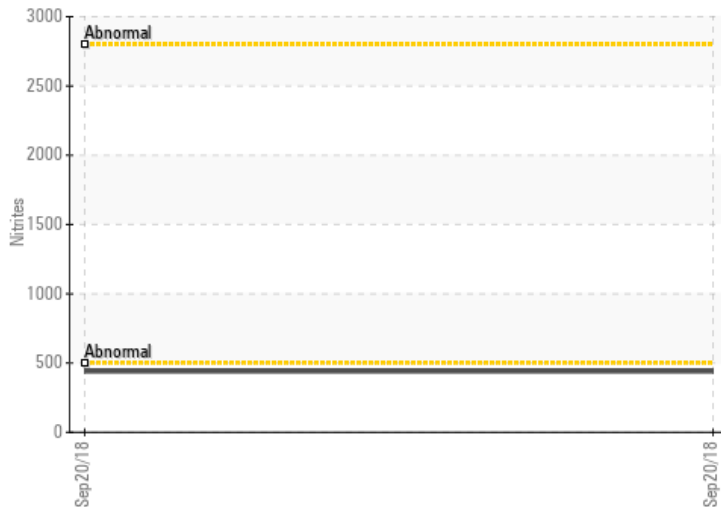
Freeze Point



pH



Nitrites



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LIEBHERR LH50M 1203-80864 - Diesel Engine

Sample No: LH0230674

Oil Type: PETRO CANADA SUPREME 5W30



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Sample Information

Sample Number	LH0230674	LH0177829	LH0130176	LH0112447
Sample Date	09 Jun 2022	02 Aug 2021	20 Sep 2018	23 Mar 2017
Machine Hours	23538	21583	14360	9010
Oil Hours	0	0	0	0
Oil Changed	Not Changd	Changed	N/A	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL



Oil Condition

Visc @ 100°C	cSt	14.1	13.2	16.1	15.5
Oxidation (PA)	%	67	49	96	86



Contamination

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0	0	0.3	0.5
Nitration (PA)	%	51	58	103	95
Sulfation (PA)	%	61	47	78	77
Glycol	%	NEG	NEG	0.0	0.0
Fuel	%	<1.0	0.1	<1.0	<1.0
Silicon	ppm	7	5	8	10
Sodium	ppm	3	<1	3	3
Potassium	ppm	<1	0	8	9



Wear Metals

Iron	ppm	4	1	22	11
Copper	ppm	<1	<1	4	2
Lead	ppm	0	0	<1	1
Tin	ppm	<1	0	0	<1
Aluminum	ppm	2	2	4	2
Chromium	ppm	<1	0	1	<1
Molybdenum	ppm	52	7	7	5
Nickel	ppm	0	<1	2	<1
Titanium	ppm	0	0	<1	0
Silver	ppm	0	<1	0	0
Manganese	ppm	0	0	<1	<1
Vanadium	ppm	0	<1	0	0



Additives

Calcium	ppm	819	1932	2248	2483
Magnesium	ppm	983	65	100	24
Zinc	ppm	1128	1122	1227	1304
Phosphorus	ppm	1023	1015	1019	1057
Barium	ppm	0	0	0	<1
Boron	ppm	48	68	70	48

Diagnosis

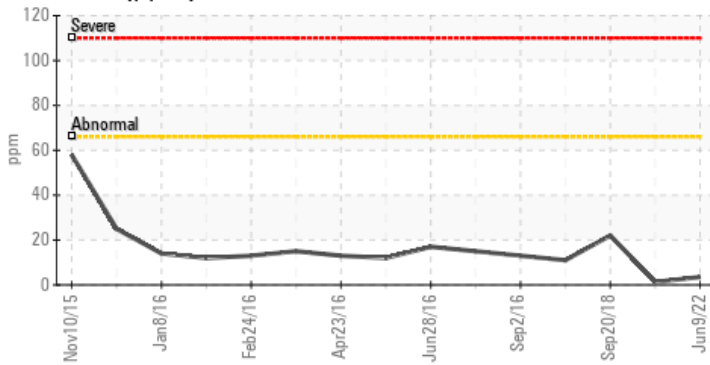
Échantillonner de nouveau l'équipement au prochain intervalle de vidange afin d'en surveiller la condition. Les taux d'usure de tous les composants sont normaux. Il n'y a aucun indice de contamination dans l'huile. La viscosité de l'échantillon se situe dans la portée de l'SAE 40; nous vous conseillons de vérifier. L'état de l'huile est acceptable pour la durée de service.

Depot: SC1149STE
Unique No: 5410981
Signed: Kevin Marson
Report Date: 10 Jun 2022

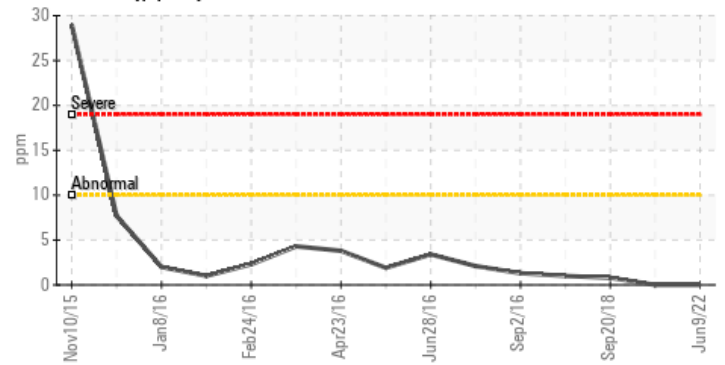


Graphs

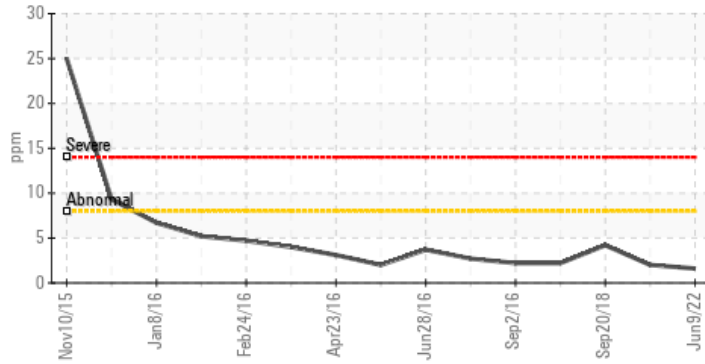
Iron (ppm)



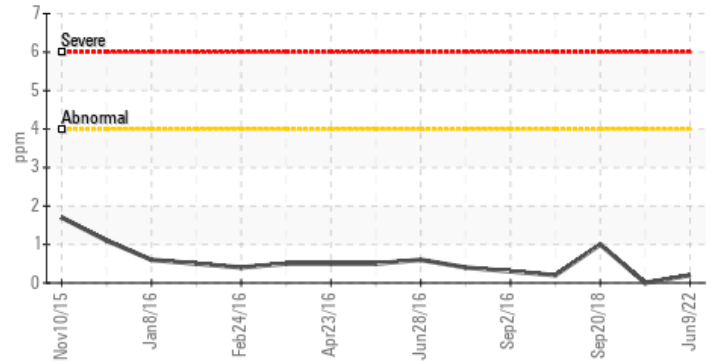
Lead (ppm)



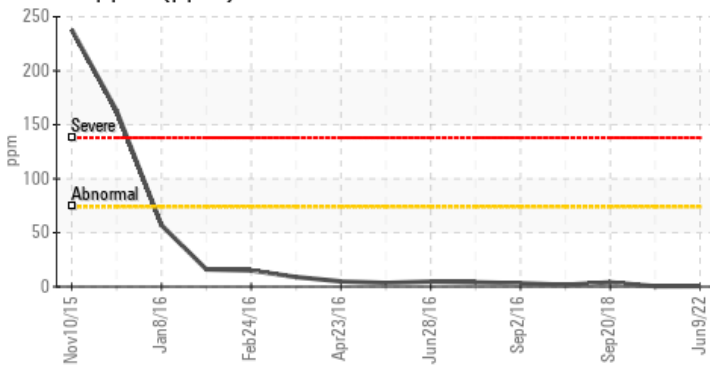
Aluminum (ppm)



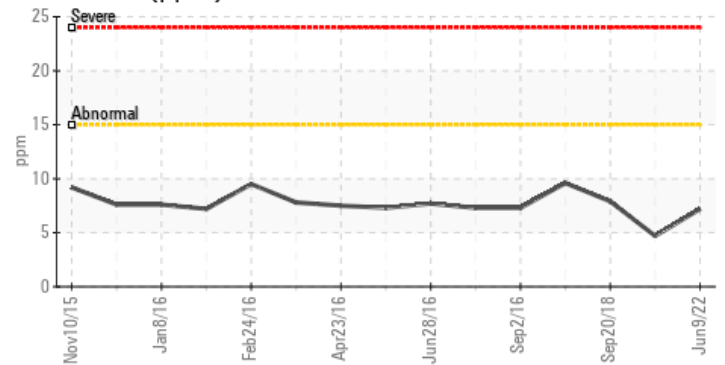
Chromium (ppm)



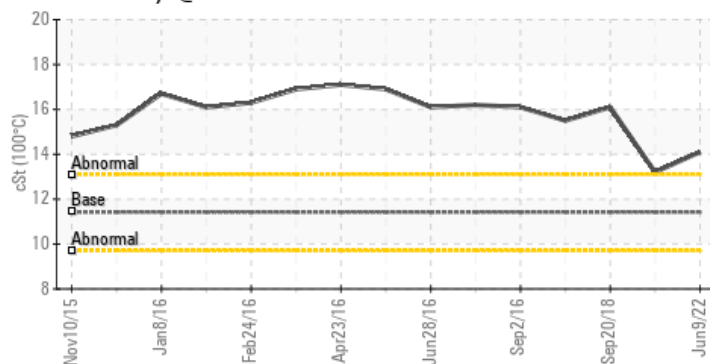
Copper (ppm)



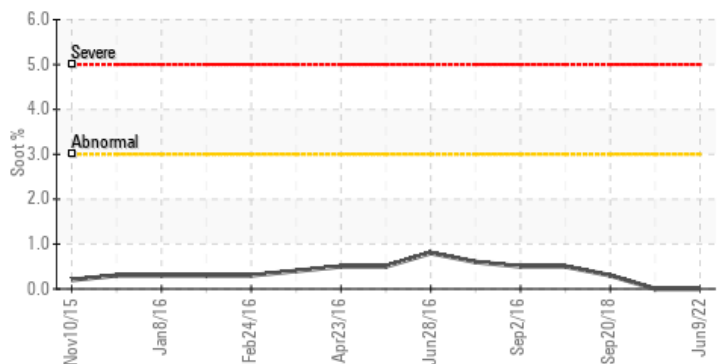
Silicon (ppm)



Viscosity @ 100°C



Soot %



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LIEBHERR LH50M 1203-80864 - Transmission (Manual)

Sample No: LH0130086

Oil Type: MOBIL 1 SAE 10W30



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Sample Information

Sample Number	LH0130086	LH0130032	LH0112438	LH0099154
Sample Date	14 Jul 2021	20 Sep 2018	23 Mar 2017	05 Aug 2016
Machine Hours	21583	14360	9010	5010
Oil Hours	0	0	0	0
Oil Changed	Not Changd	Not Changd	Changed	Changed
Sample Status	ABNORMAL	NORMAL	ABNORMAL	ABNORMAL



Oil Condition

Visc @ 40°C	cSt	53.5	60.7	53.9	53.8
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Contamination

Water	%	NEG	NEG	NEG	NEG
Silicon	ppm	7	8	3	4
Sodium	ppm	2	4	4	7
Potassium	ppm	1	<1	4	5



Wear Metals

Iron	ppm	37	11	25	48
Copper	ppm	22	4	33	37
Lead	ppm	<1	<1	1	1
Tin	ppm	<1	0	<1	1
Aluminum	ppm	2	3	5	4
Chromium	ppm	<1	0	<1	<1
Molybdenum	ppm	8	46	<1	<1
Nickel	ppm	0	0	<1	<1
Titanium	ppm	0	<1	0	0
Silver	ppm	<1	0	0	0
Manganese	ppm	<1	<1	1	6
Vanadium	ppm	<1	0	0	0



Additives

Calcium	ppm	2003	1722	2405	2395
Magnesium	ppm	61	470	8	9
Zinc	ppm	1130	1260	1208	1184
Phosphorus	ppm	1055	1141	1093	1082
Barium	ppm	0	0	<1	<1
Boron	ppm	71	66	26	38

Diagnosis

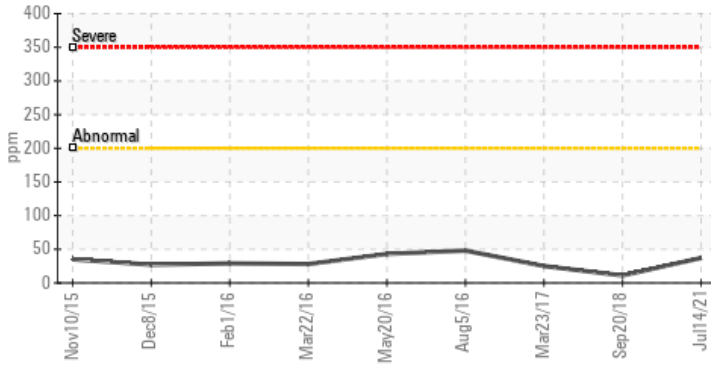
Confirm the source of the lubricant being utilized for top-up/fill. Échantillonner de nouveau l'équipement au prochain intervalle de vidange afin d'en surveiller la condition. Le fluide était spécifié comme MOBIL 1 SAE 10W30, toutefois, une comparaison avec d'autres fluides indiqua que ce fluide est du SAE 20 Transmission/Drive Train Oil. Veuillez confirmer la viscosité de l'huile et veuillez préciser la marque de votre prochain échantillon. Les taux d'usure de tous les composants sont normaux. Il n'y a aucun indice de contamination dans le le fluide. La viscosité de l'échantillon se situe dans la portée de l'SAE 20; nous vous conseillons de vérifier. Ceci, en plus des niveaux d'additifs, indique que la marque ou le type d'huile ne correspond pas à ce qui a été signalé. L'état de le fluide est acceptable pour la durée de service.

Depot: SC1149STE
Unique No: 5264058
Signed: Kevin Marson
Report Date: 04 Aug 2021

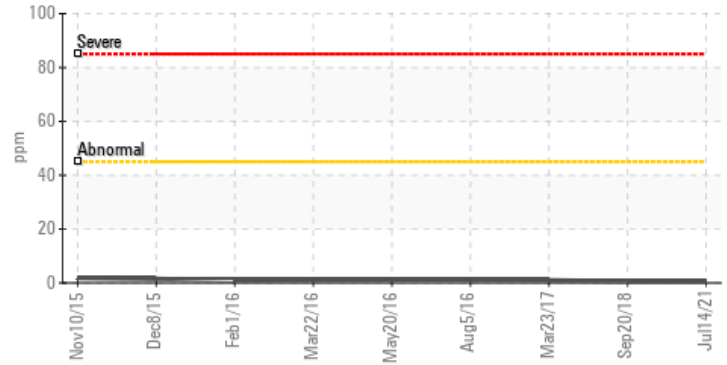


Graphs

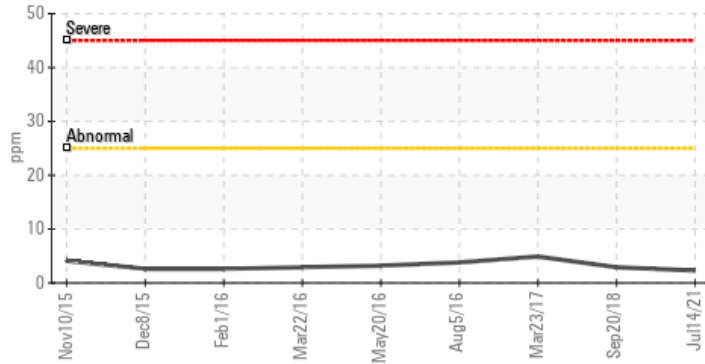
Iron (ppm)



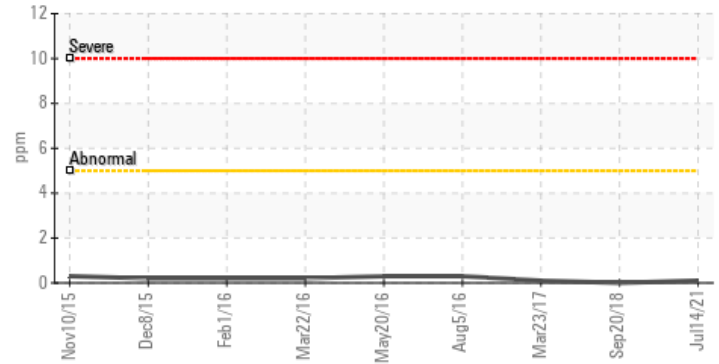
Lead (ppm)



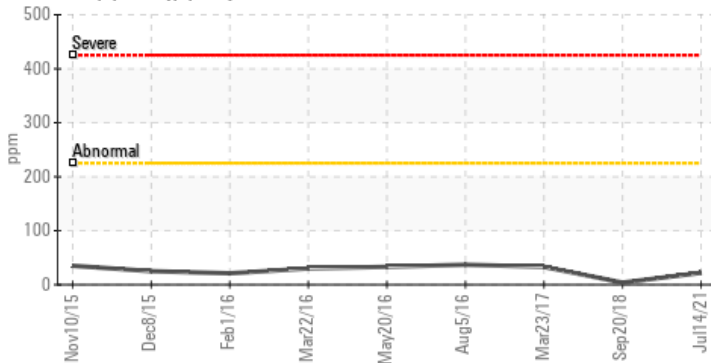
Aluminum (ppm)



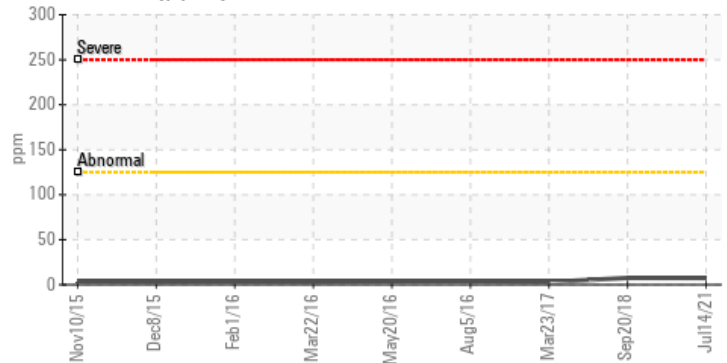
Chromium (ppm)



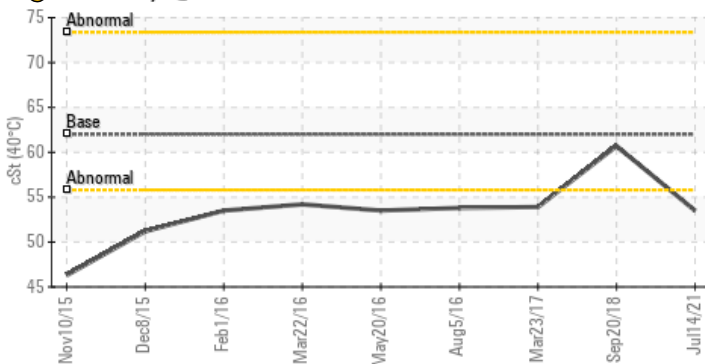
Copper (ppm)



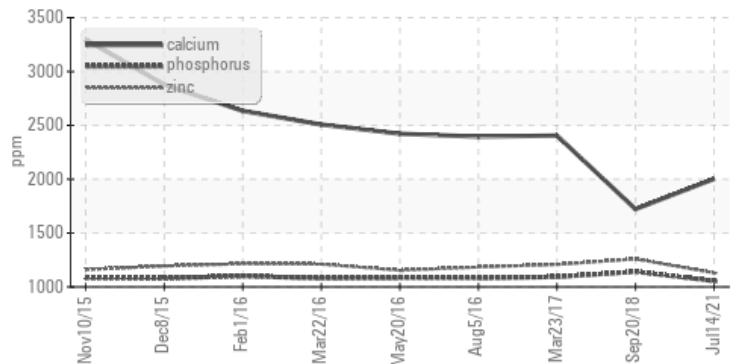
Silicon (ppm)



● Viscosity @ 40°C



Additives



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LIEBHERR LH50M 1203-80864 - Hydraulic System

Sample No: LH0285970

Oil Type: AW HYDRAULIC OIL ISO 32



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Sample Information

Sample Number	LH0285970	LH0130089	LH0130030	LH0099157
Sample Date	06 May 2024	14 Jul 2021	20 Sep 2018	06 Aug 2016
Machine Hours	27021	21583	14360	5010
Oil Hours	0	0	0	0
Oil Changed	Not Changd	Changed	Not Changd	Changed
Sample Status	ABNORMAL	NORMAL	ABNORMAL	ABNORMAL



Oil Condition

Visc @ 40°C	cSt	41.8	32.9	28.7	34.0
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Contamination

Water	%	NEG	NEG	NEG	NEG
Particles >4µm		3351	2676	93039	2388
Particles >6µm		1317	152	720	929
Particles >14µm		58	8	4	124
ISO 4406:1999 (c)		19/18/13	19/14/10	24/17/9	18/17/14
Silicon	ppm	<1	2	2	<1
Sodium	ppm	<1	2	3	2
Potassium	ppm	<1	<1	<1	0



Wear Metals

PQ		---	---	14	---
Iron	ppm	5	11	73	19
Copper	ppm	1	2	6	3
Lead	ppm	0	0	<1	<1
Tin	ppm	0	<1	0	0
Aluminum	ppm	<1	<1	<1	<1
Chromium	ppm	0	1	1	<1
Molybdenum	ppm	2	14	2	0
Nickel	ppm	0	0	<1	0
Titanium	ppm	0	0	0	0
Silver	ppm	0	<1	0	0
Manganese	ppm	0	<1	2	<1
Vanadium	ppm	0	0	0	0



Additives

Calcium	ppm	178	474	175	346
Magnesium	ppm	43	214	1	1
Zinc	ppm	873	631	382	526
Phosphorus	ppm	684	581	370	402
Barium	ppm	0	0	0	<1
Boron	ppm	6	20	4	<1

Diagnosis

Échantillonner de nouveau l'équipement au prochain intervalle de vidange afin d'en surveiller la condition. Les taux d'usure de tous les composants sont normaux. La propreté du système est acceptable pour votre objectif de propreté ISO 4406. La propreté du système et du fluide est acceptable. La viscosité de l'échantillon se situe dans la portée de l'ISO 46; nous vous conseillons de vérifier. L'état de l'huile est acceptable pour la durée de service.

Depot: SC1149STE
Unique No: 5775288
Signed: Kevin Marson
Report Date: 09 May 2024

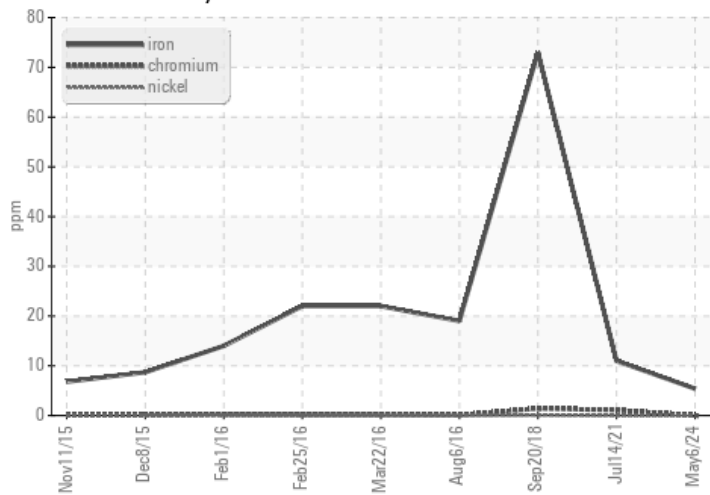
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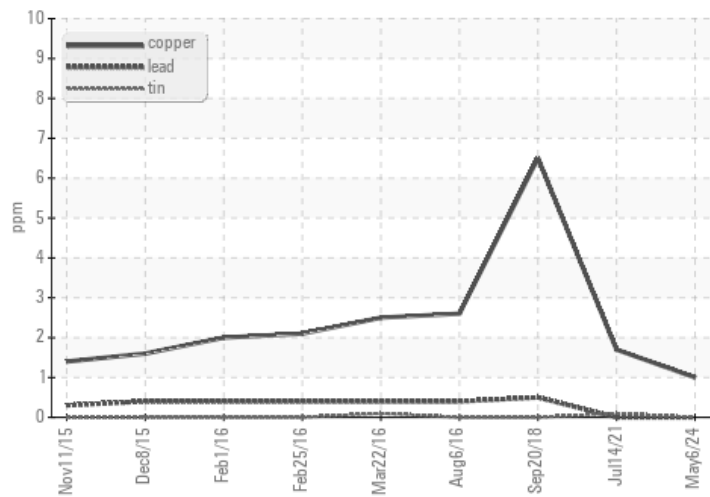


Graphs

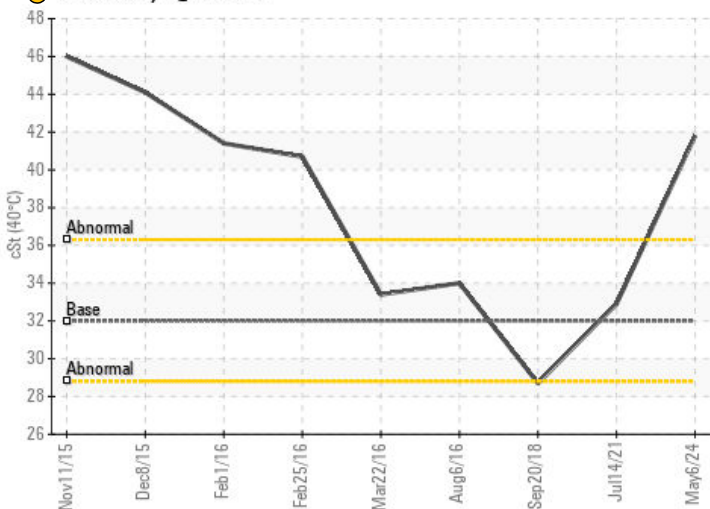
Ferrous Alloys



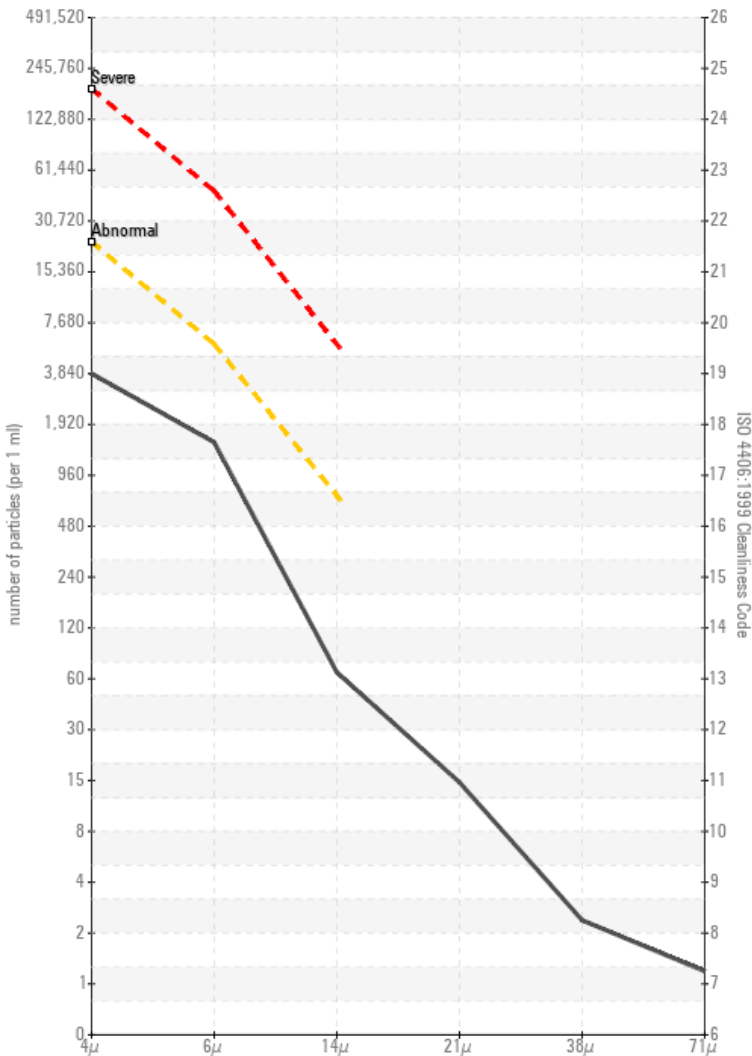
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



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LIEBHERR LH50M 1203-80864 - Swing Drive

Sample No: LH0130085

Oil Type: TRC 890 VARI-PURPOSE SAE80W90



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Sample Information

Sample Number	LH0130085	LH0130031	LH0112444	LH0099158
Sample Date	14 Jul 2021	20 Sep 2018	23 Mar 2017	05 Aug 2016
Machine Hours	21583	14360	9010	5010
Oil Hours	0	0	0	0
Oil Changed	Changed	Not Changd	Changed	Changed
Sample Status	NORMAL	MARGINAL	NORMAL	ABNORMAL



Oil Condition

Visc @ 40°C	cSt	95.5	150	147	153
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Contamination

Water	%	NEG	0.181	NEG	NEG
Silicon	ppm	2	9	16	10
Sodium	ppm	<1	0	2	1
Potassium	ppm	<1	0	<1	1



Wear Metals

PQ		---	---	---	31
Iron	ppm	88	129	273	526
Copper	ppm	38	23	48	218
Lead	ppm	<1	<1	2	6
Tin	ppm	<1	<1	1	2
Aluminum	ppm	0	<1	<1	<1
Chromium	ppm	<1	<1	3	4
Molybdenum	ppm	0	<1	<1	<1
Nickel	ppm	<1	<1	<1	<1
Titanium	ppm	0	0	0	0
Silver	ppm	<1	0	0	0
Manganese	ppm	<1	1	2	7
Vanadium	ppm	0	0	<1	0



Additives

Calcium	ppm	6	6	5	17
Magnesium	ppm	1	<1	0	<1
Zinc	ppm	6	6	5	22
Phosphorus	ppm	1297	733	670	650
Barium	ppm	0	0	0	<1
Boron	ppm	299	<1	2	2

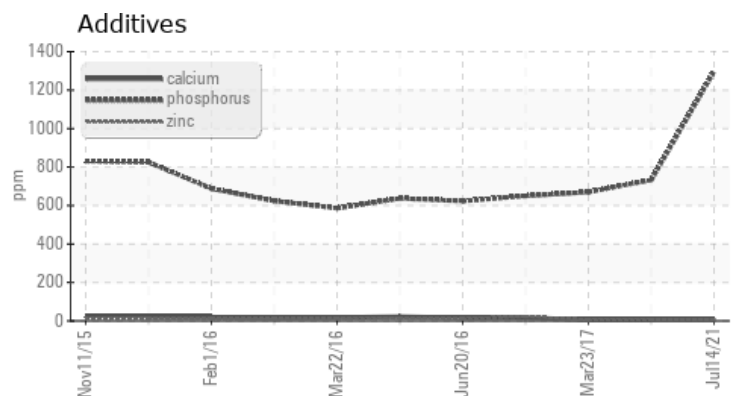
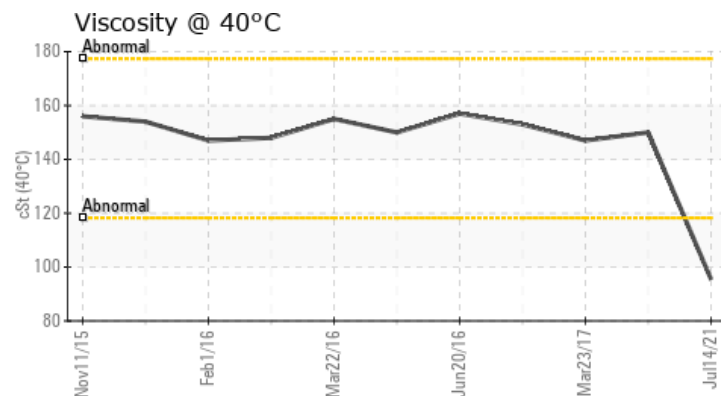
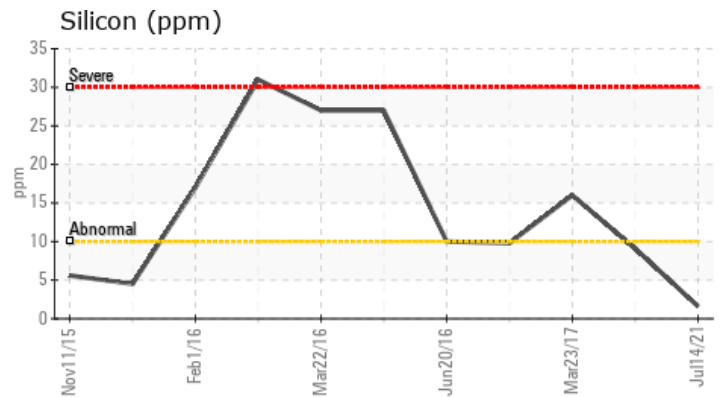
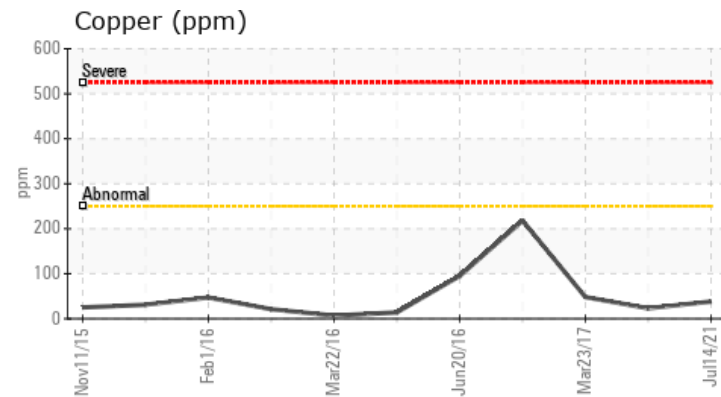
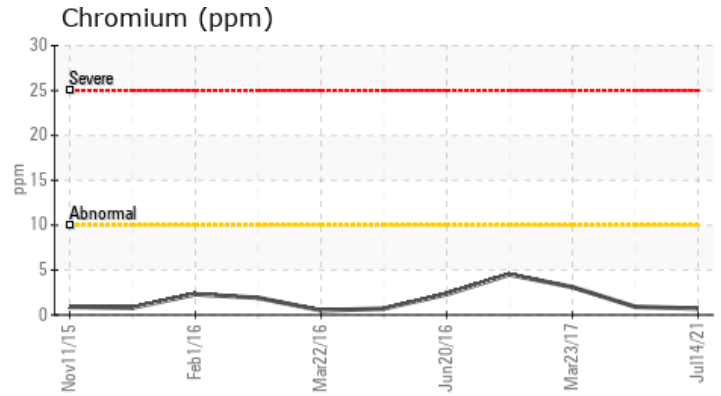
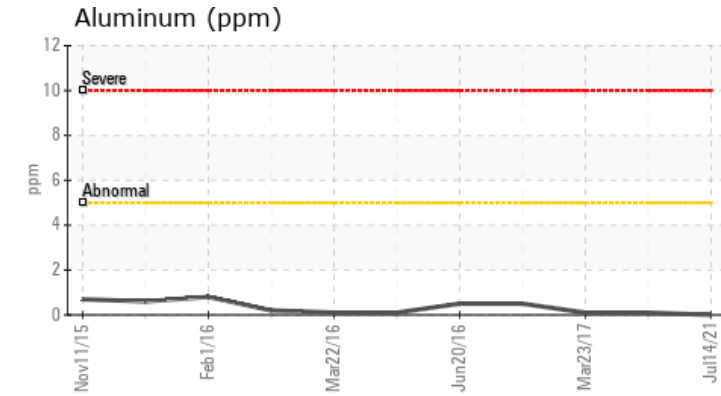
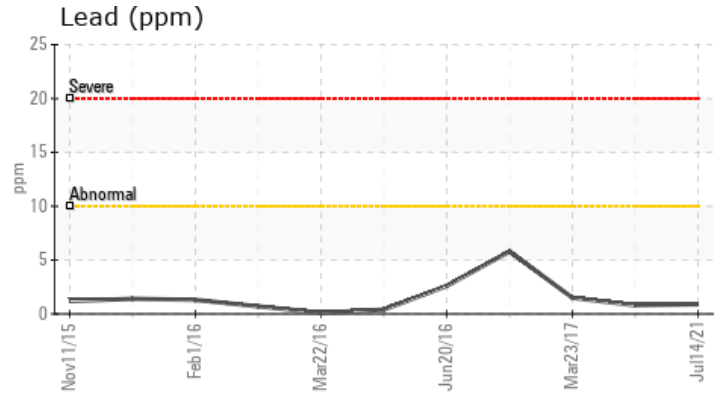
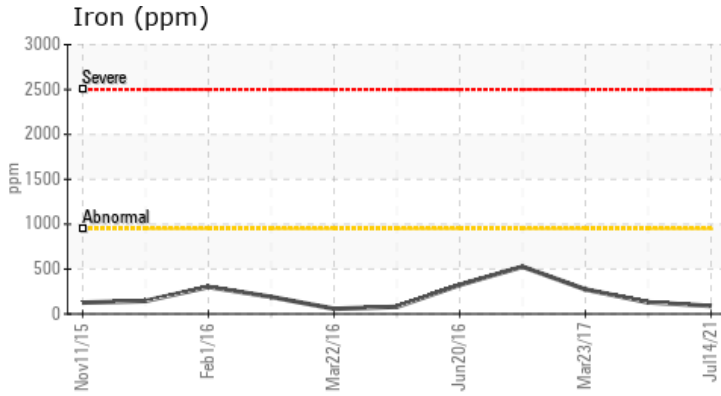
Diagnosis

Confirm the source of the lubricant being utilized for top-up/fill. Échantillonner de nouveau l'équipement au prochain intervalle de vidange afin d'en surveiller la condition. Les taux d'usure de tous les composants sont normaux. Il n'y a aucun indice de contamination dans le l'huile. Les niveaux d'additifs indiquent l'ajout d'une autre marque ou d'un autre type d'huile. La viscosité de l'échantillon se situe dans la portée de l'SAE 75W90; nous vous conseillons de vérifier. L'état de l'huile est acceptable pour la durée de service.

Depot: SC1149STE
Unique No: 5264080
Signed: Wes Davis
Report Date: 03 Aug 2021



Graphs



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CONSTRUCTION EQUIPMENT



LIEBHERR LH50M 1203-80864 - Front Left Wheel Hub

Sample No: LH0130084

Oil Type: TRC 890 VARI-PURPOSE SAE80W90



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Sample Information

Sample Number	LH0130084	LH0133536	LH0112441	LH0099156
Sample Date	14 Jul 2021	20 Sep 2018	23 Mar 2017	06 Aug 2016
Machine Hours	21583	14360	9010	5010
Oil Hours	0	0	0	0
Oil Changed	Changed	N/A	Changed	Changed
Sample Status	NORMAL	ABNORMAL	NORMAL	NORMAL



Oil Condition

Visc @ 40°C	cSt	82.9	144	140	147
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Contamination

Water	%	NEG	NEG	NEG	NEG
Silicon	ppm	8	9	7	5
Sodium	ppm	4	2	4	8
Potassium	ppm	1	<1	<1	<1



Wear Metals

Iron	ppm	175	93	195	162
Copper	ppm	16	4	6	20
Lead	ppm	<1	<1	<1	<1
Tin	ppm	<1	0	0	0
Aluminum	ppm	1	<1	<1	2
Chromium	ppm	<1	<1	1	<1
Molybdenum	ppm	1	<1	<1	<1
Nickel	ppm	<1	<1	<1	<1
Titanium	ppm	0	0	0	0
Silver	ppm	<1	3	0	0
Manganese	ppm	2	1	3	3
Vanadium	ppm	0	0	0	0



Additives

Calcium	ppm	25	4	5	14
Magnesium	ppm	14	<1	0	0
Zinc	ppm	43	5	10	20
Phosphorus	ppm	1156	748	644	691
Barium	ppm	0	0	0	0
Boron	ppm	167	<1	<1	<1

Diagnosis

Confirm the source of the lubricant being utilized for top-up/fill. Échantillonner de nouveau l'équipement au prochain intervalle de vidange afin d'en surveiller la condition. Les taux d'usure de tous les composants sont normaux. Il n'y a aucun indice de contamination dans le l'huile. Les niveaux d'additifs indiquent l'ajout d'une autre marque ou d'un autre type d'huile. La viscosité de l'échantillon se situe dans la portée de l'SAE 80; nous vous conseillons de vérifier. L'état de l'huile est acceptable pour la durée de service.

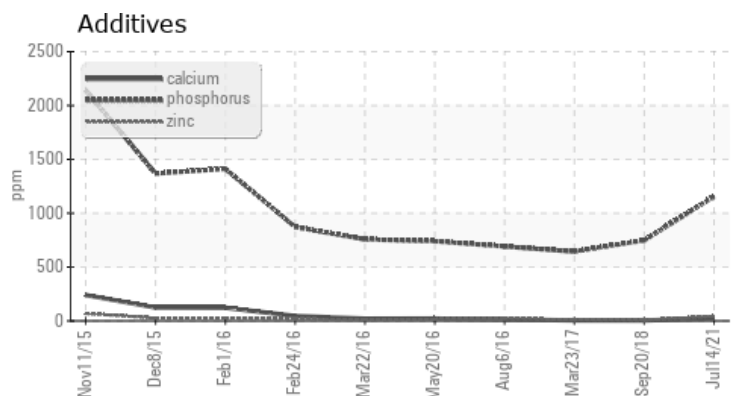
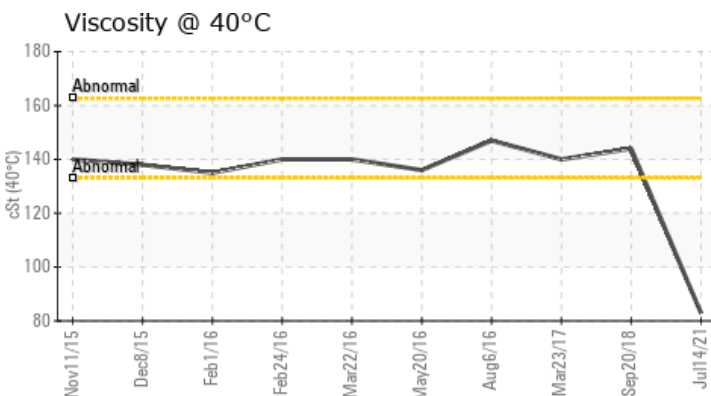
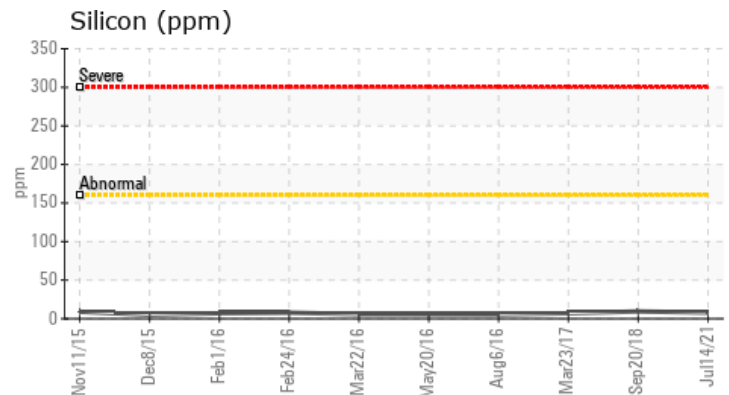
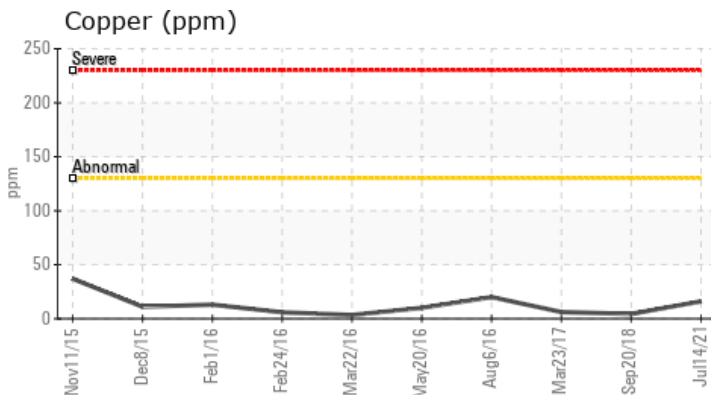
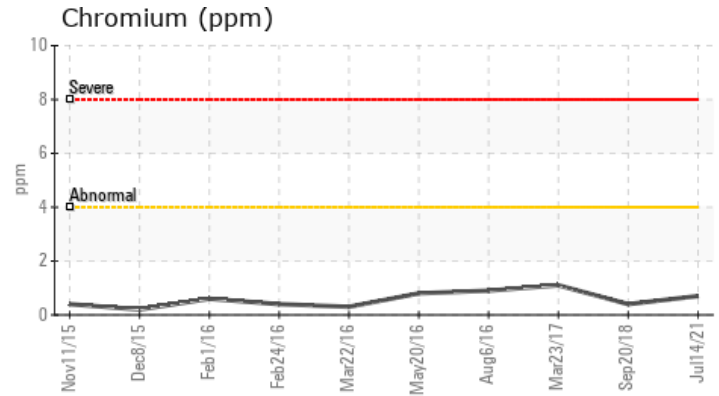
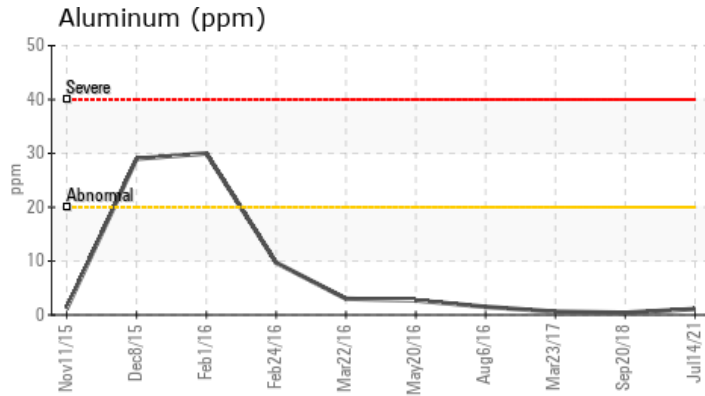
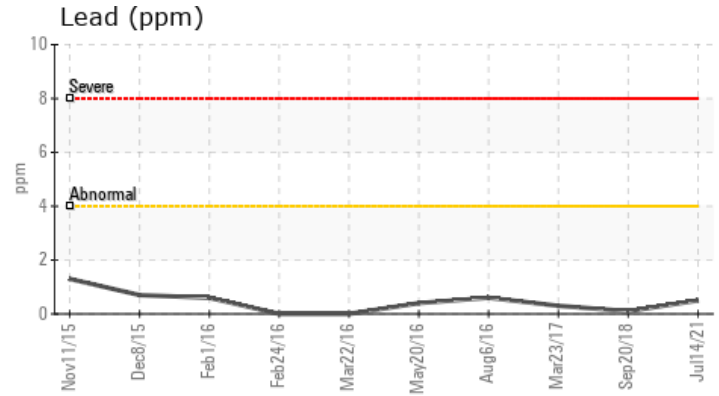
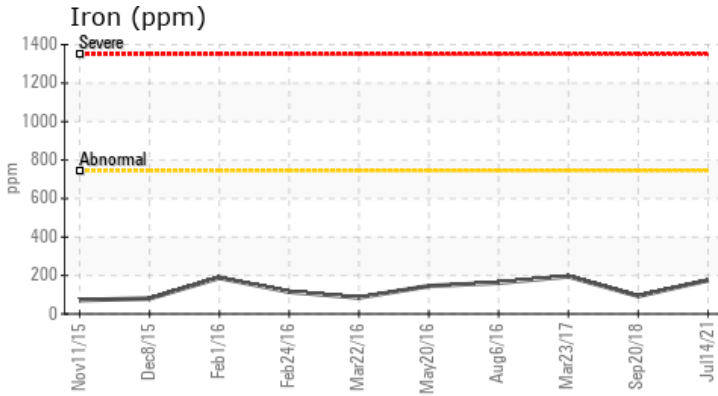
Depot: SC1149STE
Unique No: 5264067
Signed: Wes Davis
Report Date: 03 Aug 2021

LIEBHERR

CONSTRUCTION EQUIPMENT



Graphs



LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH50M 1203-80864 - Front Differential

Sample No: LH0130088

Oil Type: GEAR OIL SAE 75W90



Scierie Alexandre Lemay et Fils Inc.
 1492, Boul. Vachon S.
 Ste-Marie, QC
 CA G6E 2S5
 Contact: Service Manager
 info@scierielemay.com
 T: (418)209-4081
 F:



Sample Information

Sample Number	LH0130088	LH0130011	LH0133533	LH0112443
Sample Date	14 Jul 2021	19 Jun 2019	20 Sep 2018	23 Mar 2017
Machine Hours	21583	16081	14360	9010
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Not Changd	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL



Oil Condition

Visc @ 40°C	cSt	84.2	101	150	148



Contamination

Water	%	NEG	NEG	NEG	NEG
Silicon	ppm	4	5	8	24
Sodium	ppm	5	<1	0	<1
Potassium	ppm	<1	<1	0	0



Wear Metals

Iron	ppm	13	24	66	106
Copper	ppm	3	2	8	8
Lead	ppm	0	<1	<1	<1
Tin	ppm	<1	0	0	0
Aluminum	ppm	<1	<1	<1	<1
Chromium	ppm	0	0	<1	<1
Molybdenum	ppm	<1	2	<1	<1
Nickel	ppm	<1	<1	<1	1
Titanium	ppm	0	0	0	0
Silver	ppm	<1	0	0	0
Manganese	ppm	<1	<1	<1	1
Vanadium	ppm	0	0	0	0



Additives

Calcium	ppm	11	33	15	1
Magnesium	ppm	9	21	<1	0
Zinc	ppm	13	43	12	6
Phosphorus	ppm	1191	1225	660	691
Barium	ppm	0	0	0	0
Boron	ppm	280	310	<1	<1

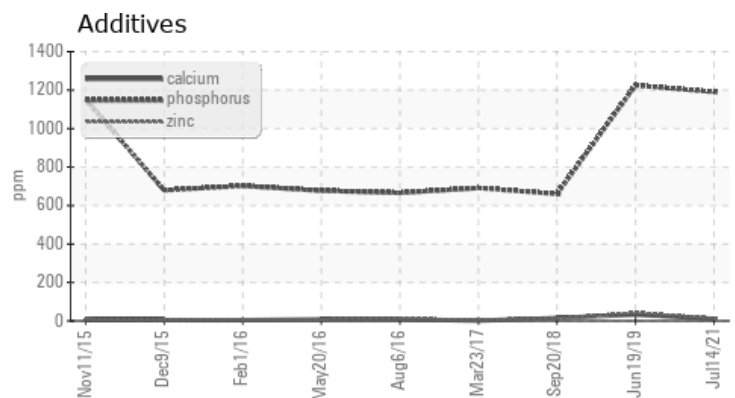
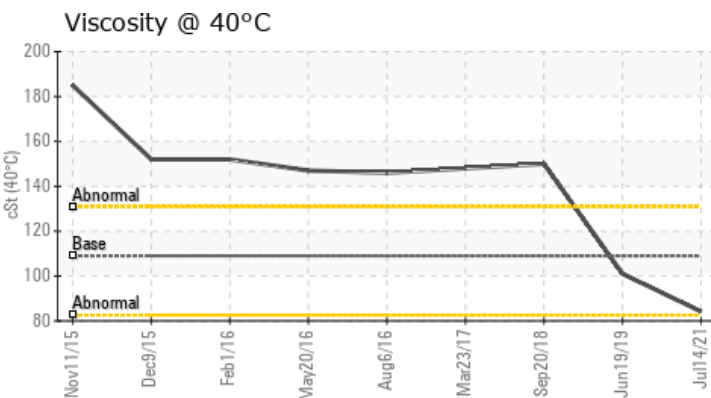
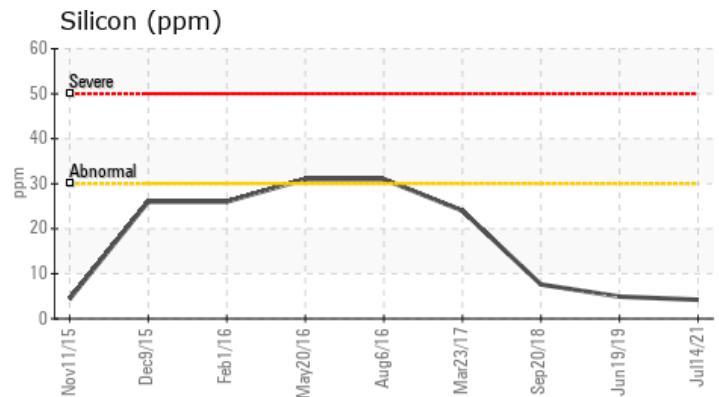
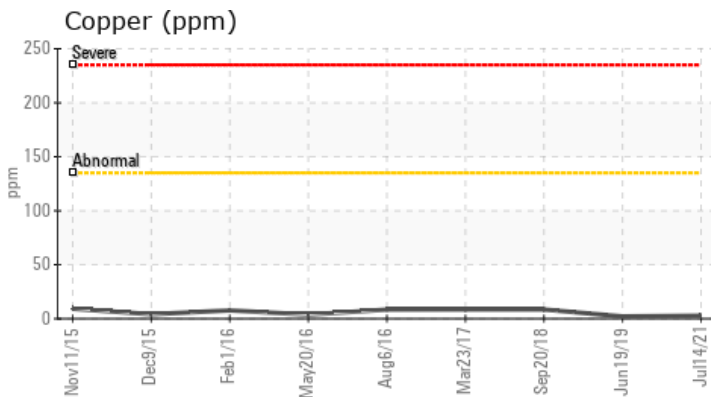
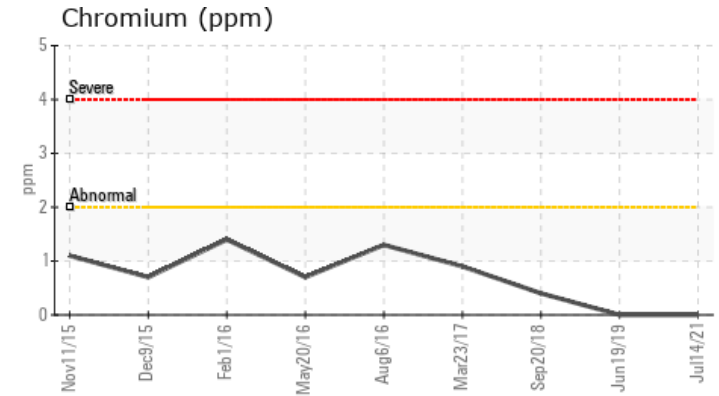
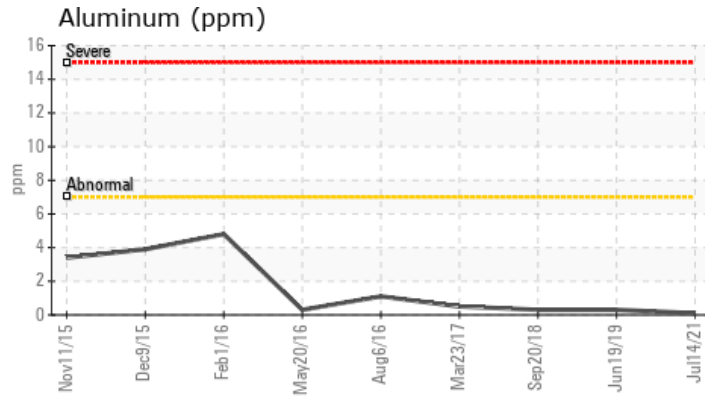
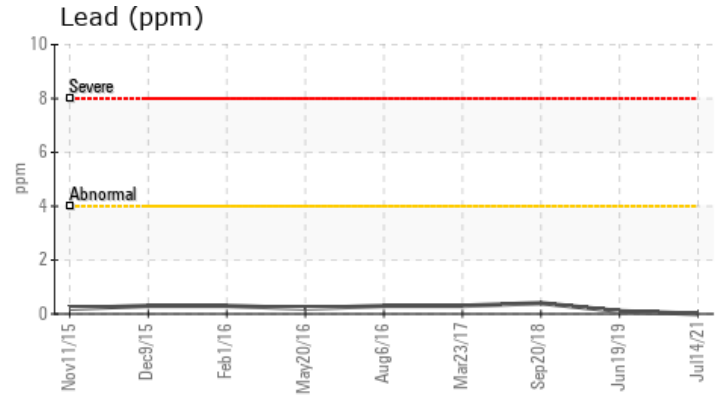
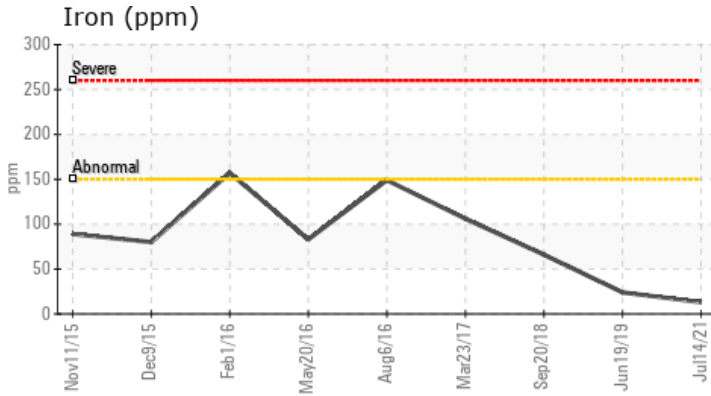
Diagnosis

Échantillonner de nouveau l'équipement au prochain intervalle de vidange afin d'en surveiller la condition. Les taux d'usure de tous les composants sont normaux. Il n'y a aucun indice de contamination dans le l'huile. L'état de l'huile est acceptable pour la durée de service.

Depot: SC1149STE
 Unique No: 5264068
 Signed: Wes Davis
 Report Date: 03 Aug 2021



Graphs



LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH50M 1203-80864 - Front Right Wheel Hub

Sample No: LH0177825

Oil Type: GEAR OIL SAE 75W90



Scierie Alexandre Lemay et Fils Inc.
 1492, Boul. Vachon S.
 Ste-Marie, QC
 CA G6E 2S5
 Contact: Service Manager
 info@scierielemay.com
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 F:



Sample Information

Sample Number	LH0177825	LH0130008	LH0133535	LH0112446
Sample Date	14 Jul 2021	19 Jun 2019	20 Sep 2018	23 Mar 2017
Machine Hours	21583	16081	14360	9010
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Not Changd	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL



Oil Condition

Visc @ 40°C	cSt	78.1	87.9	145	142
		●	●	●	●



Contamination

Water	%	NEG	NEG	NEG	NEG
Silicon	ppm	● 5	● 7	● 8	● 7
Sodium	ppm	● 4	● 4	● 2	● 5
Potassium	ppm	● 1	● <1	● <1	● <1



Wear Metals

Iron	ppm	● 122	● 83	● 88	● 182
Copper	ppm	● 17	● 9	● 2	● 3
Lead	ppm	● <1	● <1	● <1	● <1
Tin	ppm	● <1	● 0	● 0	● 0
Aluminum	ppm	● <1	● <1	● <1	● <1
Chromium	ppm	● <1	● <1	● <1	● 1
Molybdenum	ppm	● 1	● 1	● <1	● <1
Nickel	ppm	● <1	● <1	● <1	● <1
Titanium	ppm	● 0	● 0	● 0	● 0
Silver	ppm	● <1	● 0	● 0	● 0
Manganese	ppm	● 2	● 1	● 1	● 2
Vanadium	ppm	● 0	● 0	● 0	● 0



Additives

Calcium	ppm	● 39	● 40	● 4	● 6
Magnesium	ppm	● 17	● 14	● <1	● 0
Zinc	ppm	● 80	● 103	● 4	● 8
Phosphorus	ppm	● 1115	● 996	● 747	● 661
Barium	ppm	● 0	● 0	● 0	● 0
Boron	ppm	● 148	● 145	● <1	● <1

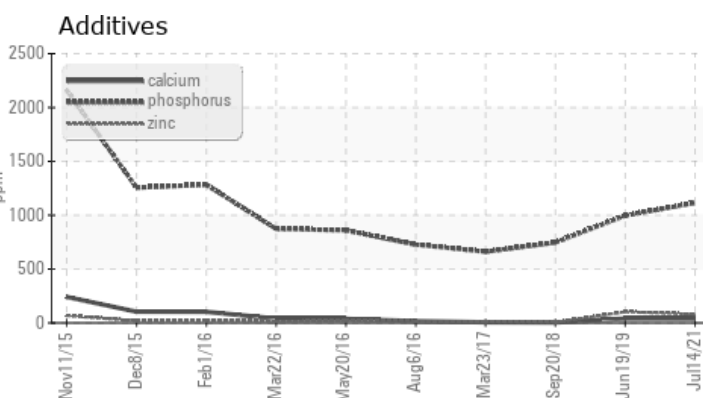
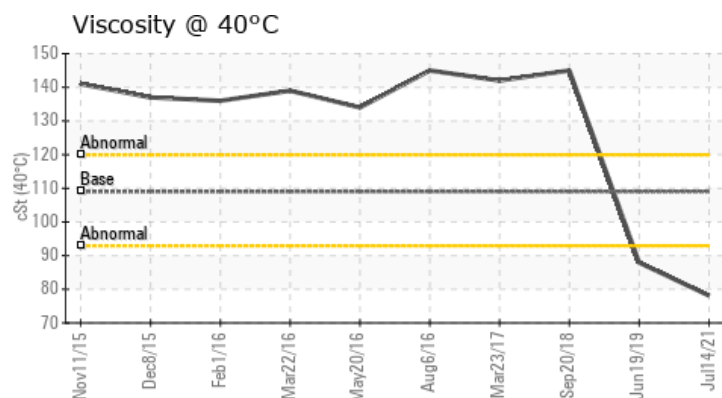
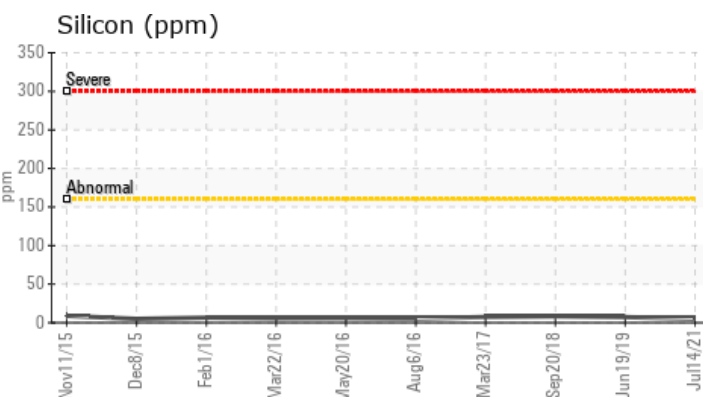
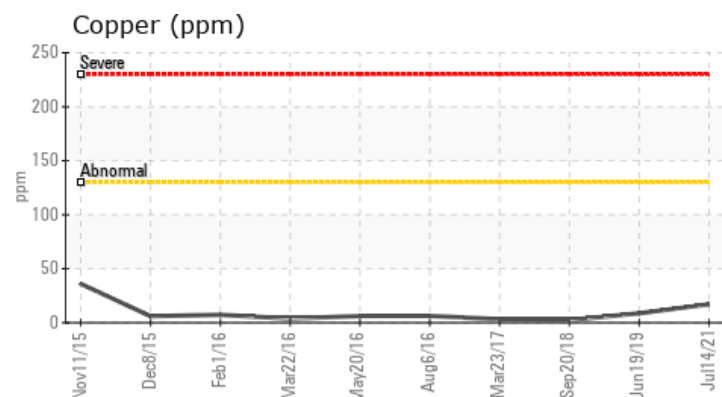
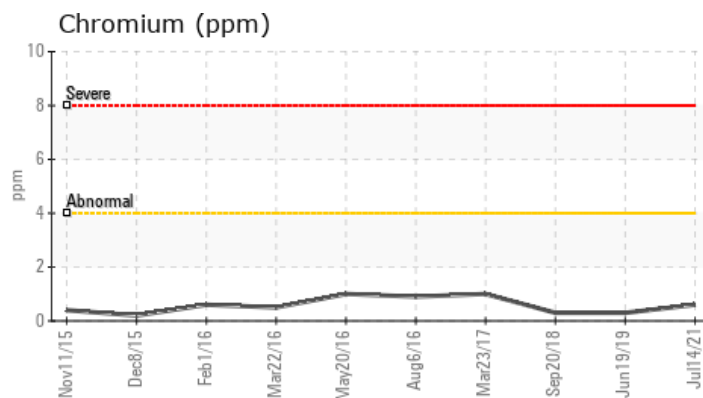
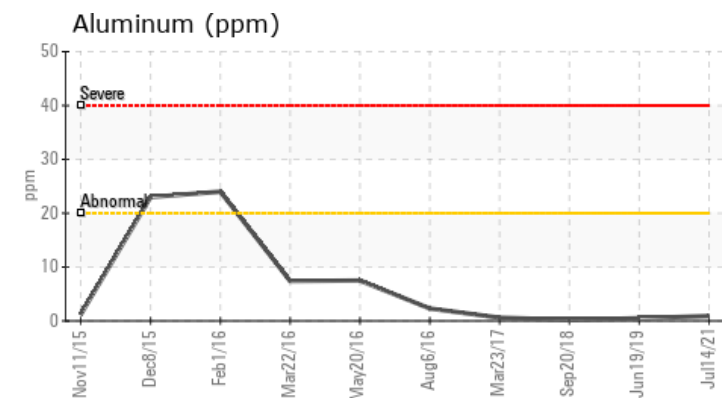
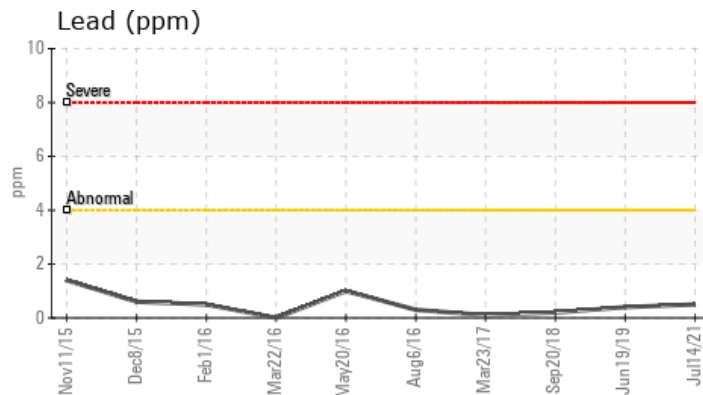
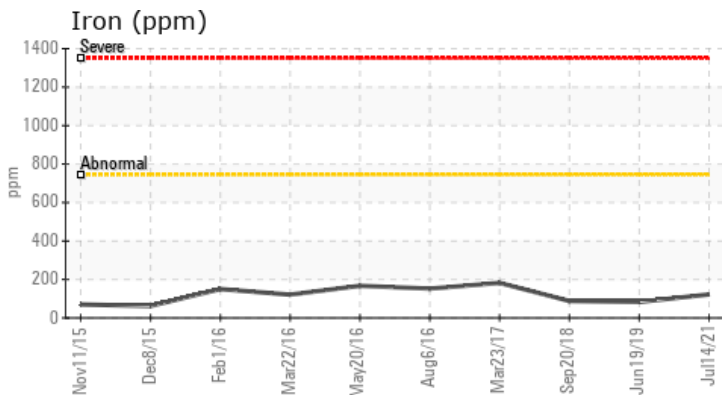
Diagnosis

Échantillonner de nouveau l'équipement au prochain intervalle de vidange afin d'en surveiller la condition. Les taux d'usure de tous les composants sont normaux. Il n'y a aucun indice de contamination dans le l'huile. L'état de l'huile est acceptable pour la durée de service.

Depot: SC1149STE
 Unique No: 5264079
 Signed: Wes Davis
 Report Date: 03 Aug 2021



Graphs



LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH50M 1203-80864 - Splitter Box

Sample No: LH0130090

Oil Type: TRC 890 VARI-PURPOSE SAE80W90



Sample Information

Sample Number	LH0130090	LH0130175	LH0112439	LH0099184
Sample Date	14 Jul 2021	20 Sep 2018	23 Mar 2017	02 Sep 2016
Machine Hours	21583	14360	9010	5500
Oil Hours	0	0	0	0
Oil Changed	Not Changd	Not Changd	Changed	Not Changd
Sample Status	ABNORMAL	NORMAL	NORMAL	NORMAL

Scierie Alexandre Lemay et Fils Inc.
 1492, Boul. Vachon S.
 Ste-Marie, QC
 CA G6E 2S5
 Contact: Service Manager
 info@scierielemay.com
 T: (418)209-4081
 F:



Oil Condition

Visc @ 40°C	cSt	64.5	116	108	149
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Contamination

Water	%	NEG	NEG	NEG	NEG
Silicon	ppm	6	14	12	20
Sodium	ppm	<1	<1	1	3
Potassium	ppm	4	2	<1	1



Wear Metals

Iron	ppm	37	28	25	46
Copper	ppm	2	<1	<1	<1
Lead	ppm	0	<1	<1	0
Tin	ppm	<1	0	<1	0
Aluminum	ppm	2	<1	<1	2
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	6	<1	0	0
Nickel	ppm	0	0	0	0
Titanium	ppm	0	0	0	0
Silver	ppm	<1	0	0	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	0	0	0	0



Additives

Calcium	ppm	201	24	30	9
Magnesium	ppm	84	<1	0	0
Zinc	ppm	291	65	94	25
Phosphorus	ppm	1075	702	629	789
Barium	ppm	0	0	<1	<1
Boron	ppm	193	<1	<1	1

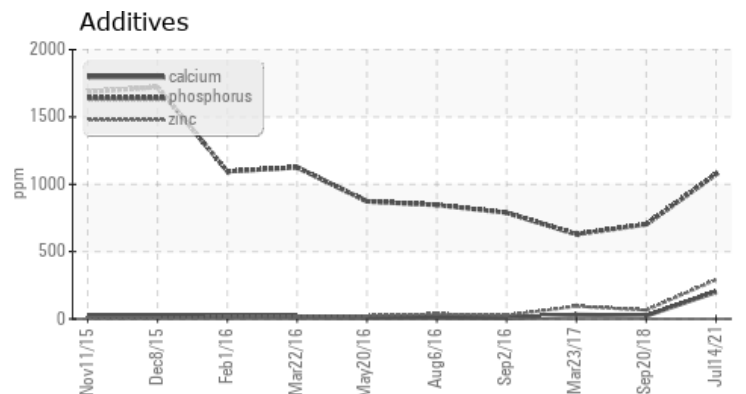
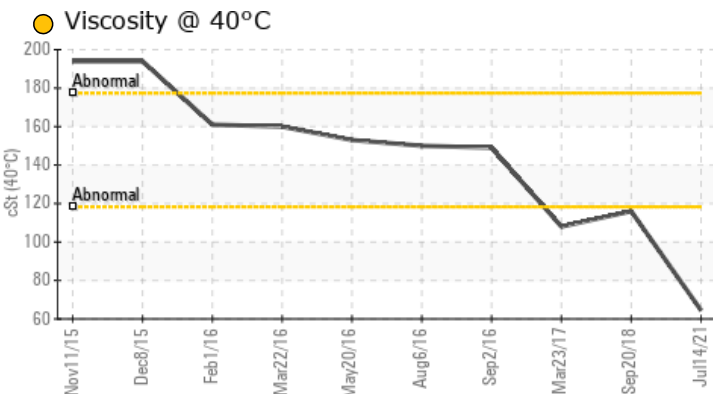
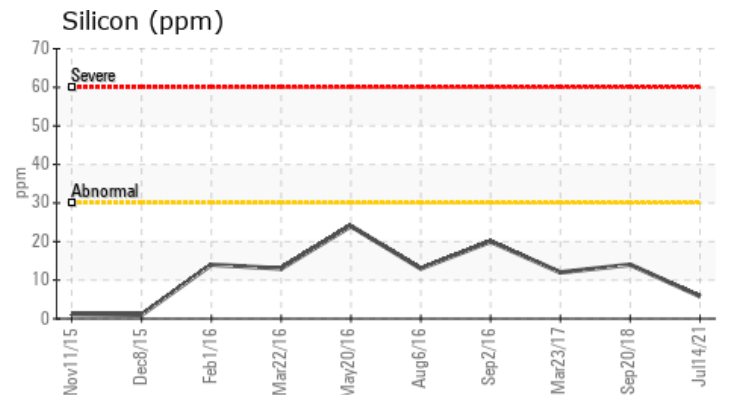
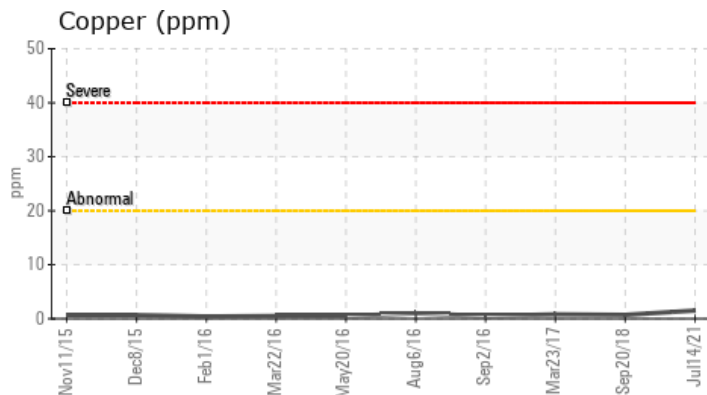
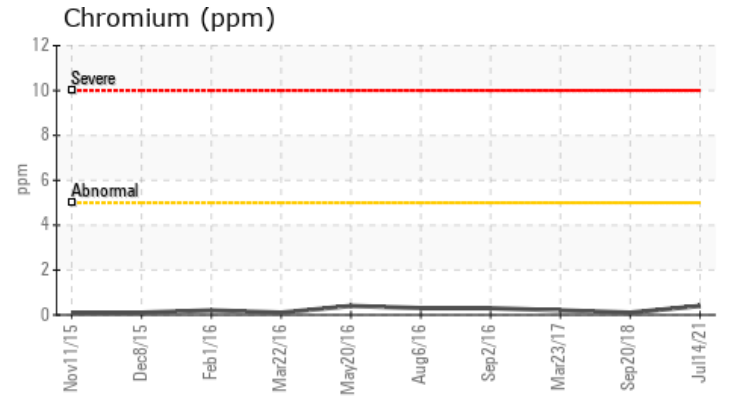
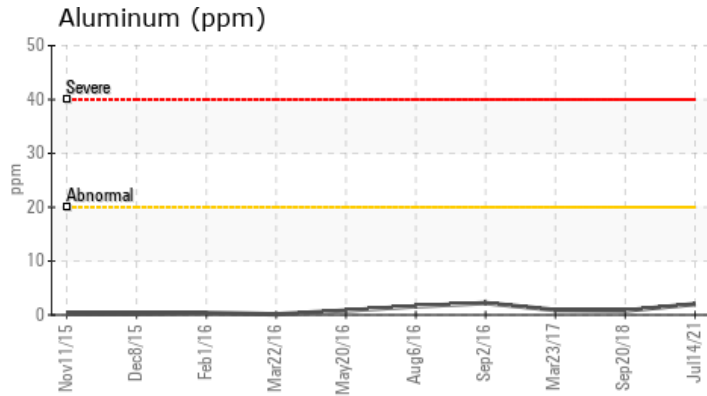
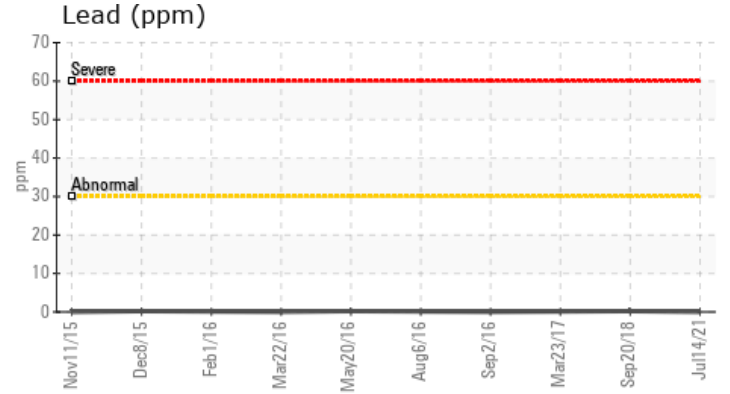
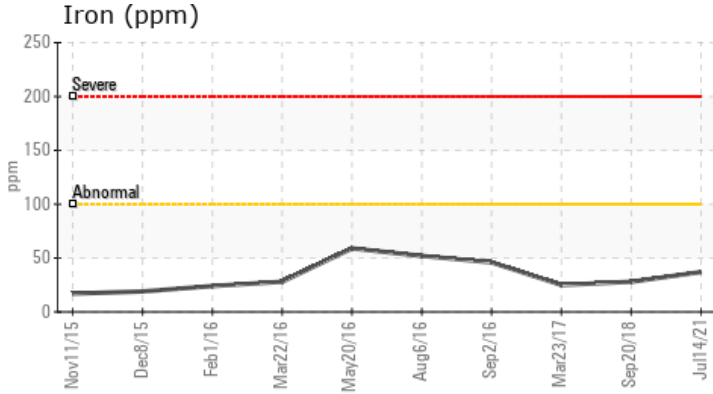
Diagnosis

Confirm the source of the lubricant being utilized for top-up/fill. Échantillonner de nouveau l'équipement au prochain intervalle de vidange afin d'en surveiller la condition. Les taux d'usure de tous les composants sont normaux. Il n'y a aucun indice de contamination dans le l'huile. La viscosité de l'échantillon se situe dans la portée de l'SAE 80; nous vous conseillons de vérifier. Ceci, en plus des niveaux d'additifs, indique que la marque ou le type d'huile ne correspond pas à ce qui a été signalé. L'état de l'huile est acceptable pour la durée de service.

Depot: SC1149STE
Unique No: 5264078
Signed: Kevin Marson
Report Date: 04 Aug 2021



Graphs



LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH50M 1203-80864 - Rear Left Wheel Hub

Sample No: LH0177827

Oil Type: GEAR OIL SAE 75W90



Sample Information

Sample Number	LH0177827	LH0130013	LH0133077	LH0112440
Sample Date	14 Jul 2021	19 Jun 2019	20 Sep 2018	23 Mar 2017
Machine Hours	21583	16081	14360	9010
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Not Changd	Changed
Sample Status	ABNORMAL	NORMAL	NORMAL	NORMAL

Scierie Alexandre Lemay et Fils Inc.

1492, Boul. Vachon S.

Ste-Marie, QC

CA G6E 2S5

Contact: Service Manager

info@scierielemay.com

T: (418)209-4081

F:



Oil Condition

Visc @ 40°C	cSt	60.9	101	145	136



Contamination

Water	%	NEG	NEG	NEG	NEG
Silicon	ppm	4	11	13	11
Sodium	ppm	2	4	2	3
Potassium	ppm	<1	<1	0	<1



Wear Metals

Iron	ppm	80	128	129	203
Copper	ppm	16	16	16	14
Lead	ppm	<1	<1	<1	<1
Tin	ppm	<1	0	0	0
Aluminum	ppm	<1	1	1	<1
Chromium	ppm	<1	<1	<1	1
Molybdenum	ppm	9	1	<1	<1
Nickel	ppm	<1	<1	<1	1
Titanium	ppm	0	0	<1	0
Silver	ppm	<1	0	0	0
Manganese	ppm	<1	2	2	3
Vanadium	ppm	0	0	0	0



Additives

Calcium	ppm	294	27	4	6
Magnesium	ppm	124	15	<1	0
Zinc	ppm	341	46	14	12
Phosphorus	ppm	1058	1086	707	684
Barium	ppm	0	0	0	0
Boron	ppm	180	167	<1	<1

Diagnosis

Confirm the source of the lubricant being utilized for top-up/fill. Échantillonner de nouveau l'équipement au prochain intervalle de vidange afin d'en surveiller la condition. Le fluide était spécifié comme (GENERIC) GEAR OIL SAE 75W90, toutefois, une comparaison avec d'autres fluides indiqua que ce fluide est du SAE 80 Gear Oil. Veuillez confirmer la viscosité de l'huile et veuillez préciser la marque de votre prochain échantillon. Les taux d'usure de tous les composants sont normaux. Il n'y a aucun indice de contamination dans l'huile. La viscosité de l'échantillon se situe dans la portée de l'SAE 80; nous vous conseillons de vérifier. Ceci, en plus des niveaux d'additifs, indique que la marque ou le type d'huile ne correspond pas à ce qui a été signalé. L'état de l'huile est acceptable pour la durée de service.

Depot: SC1149STE

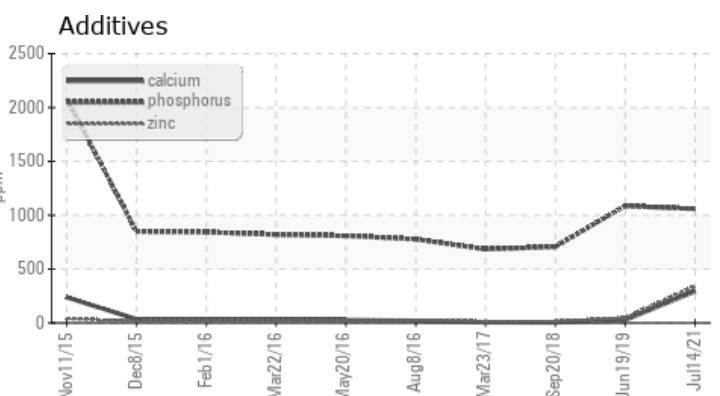
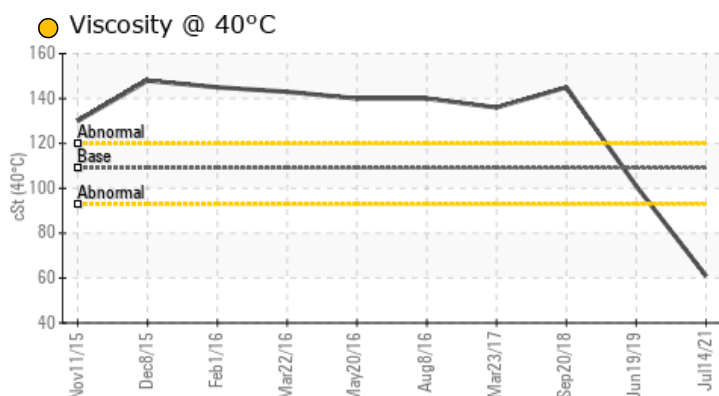
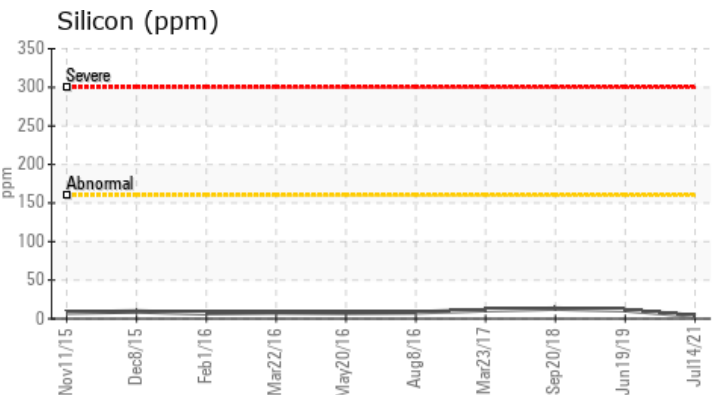
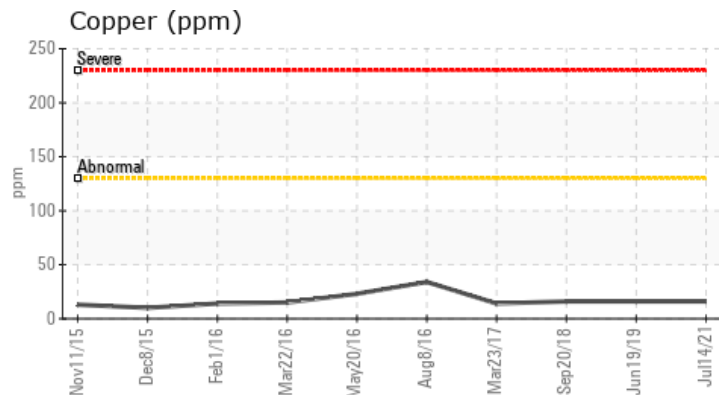
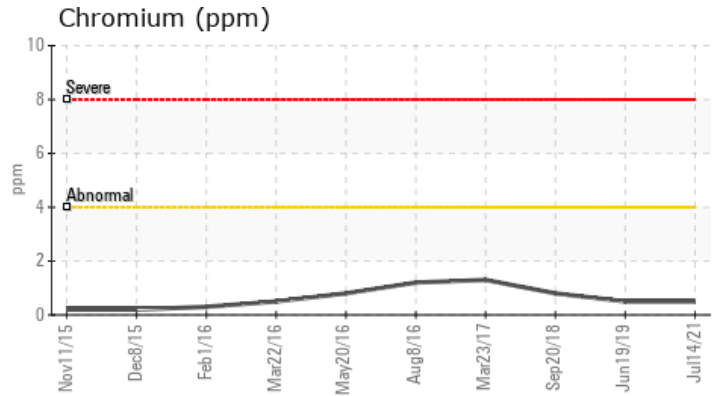
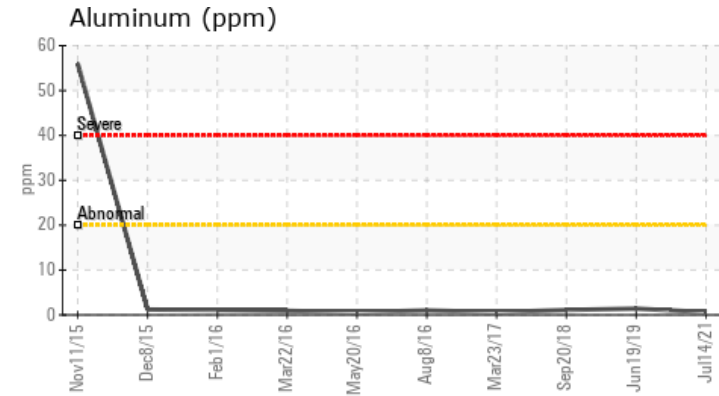
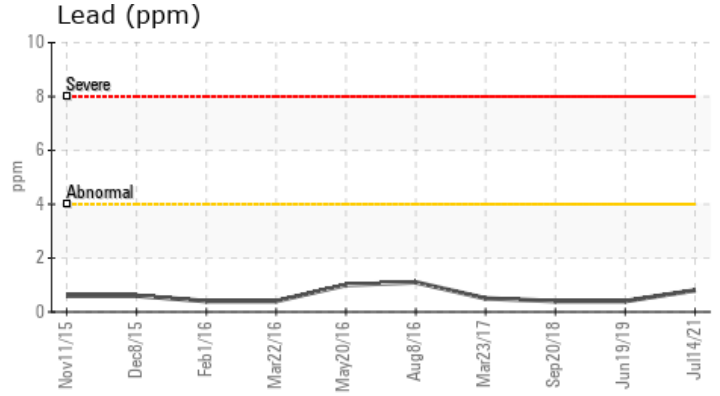
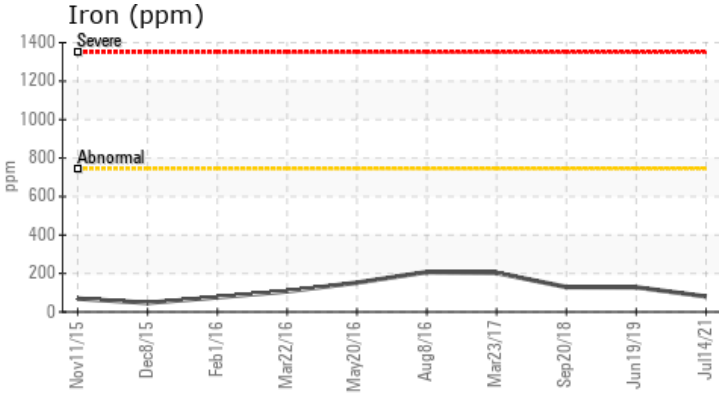
Unique No: 5264077

Signed: Kevin Marson

Report Date: 04 Aug 2021



Graphs



LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH50M 1203-80864 - Rear Differential

Sample No: LH0130087

Oil Type: GEAR OIL SAE 75W90



Scierie Alexandre Lemay et Fils Inc.
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 F:



Sample Information

Sample Number	LH0130087	LH0130012	LH0133534	LH0112448
Sample Date	14 Jul 2021	19 Jun 2019	20 Sep 2018	23 Mar 2017
Machine Hours	21583	16081	14360	9010
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Not Changd	Changed
Sample Status	SEVERE	NORMAL	NORMAL	NORMAL



Oil Condition

Visc @ 40°C	cSt	60.5	96.4	145	136



Contamination

Water	%	NEG	NEG	NEG	NEG
Silicon	ppm	3	8	15	13
Sodium	ppm	2	2	2	4
Potassium	ppm	<1	<1	<1	0



Wear Metals

PQ		---	57	---	62
Iron	ppm	77	112	145	216
Copper	ppm	16	16	17	15
Lead	ppm	<1	<1	<1	<1
Tin	ppm	<1	0	0	0
Aluminum	ppm	<1	<1	2	<1
Chromium	ppm	<1	<1	<1	1
Molybdenum	ppm	9	1	<1	<1
Nickel	ppm	<1	<1	<1	1
Titanium	ppm	0	0	<1	0
Silver	ppm	20	0	0	0
Manganese	ppm	<1	1	2	3
Vanadium	ppm	0	0	0	0



Additives

Calcium	ppm	286	33	4	6
Magnesium	ppm	124	19	<1	0
Zinc	ppm	337	61	15	12
Phosphorus	ppm	1048	1171	704	681
Barium	ppm	<1	0	0	0
Boron	ppm	180	255	<1	<1

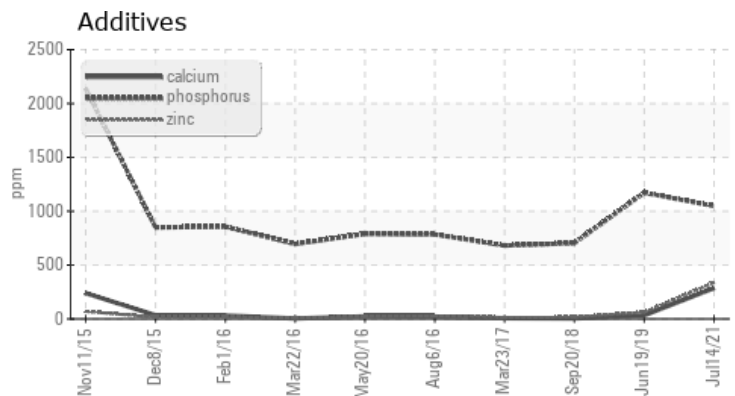
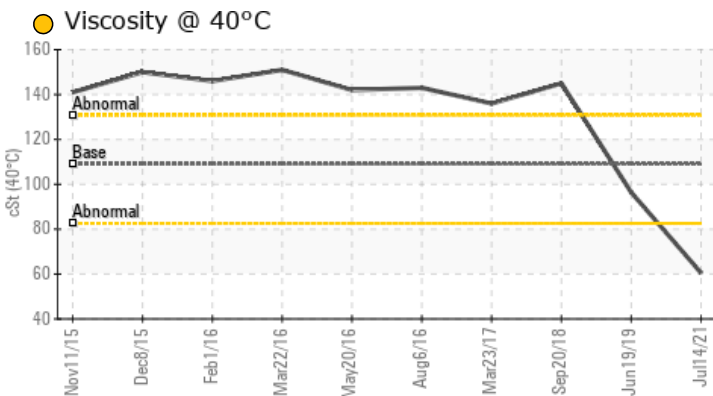
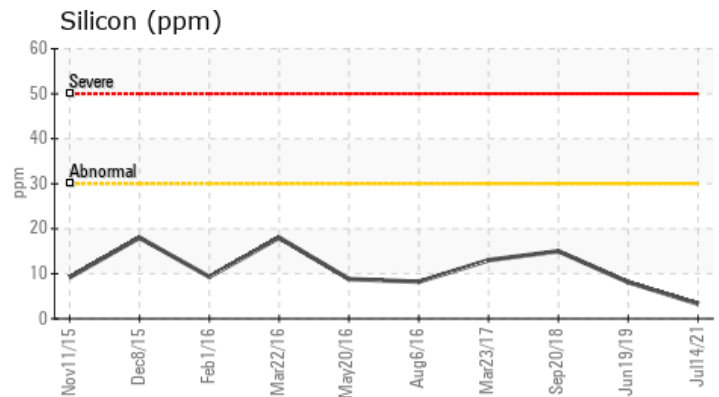
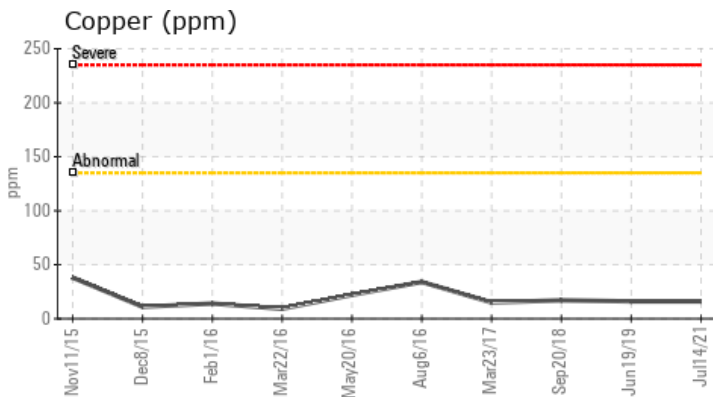
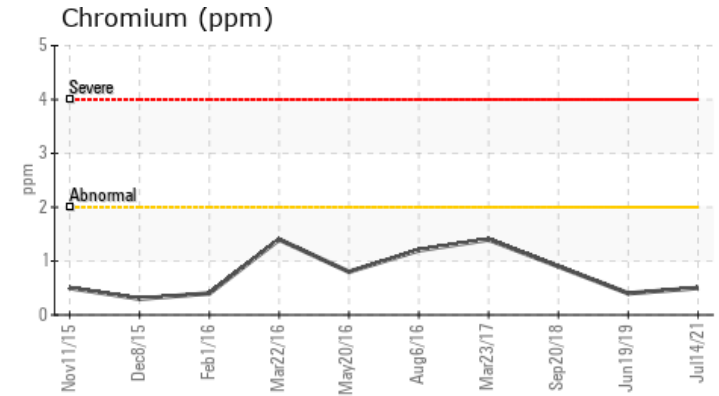
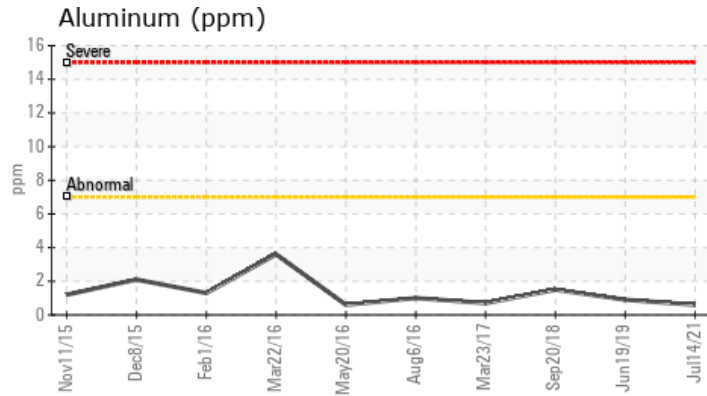
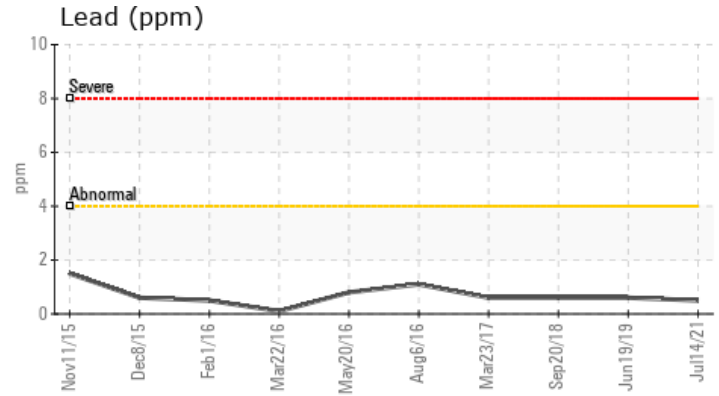
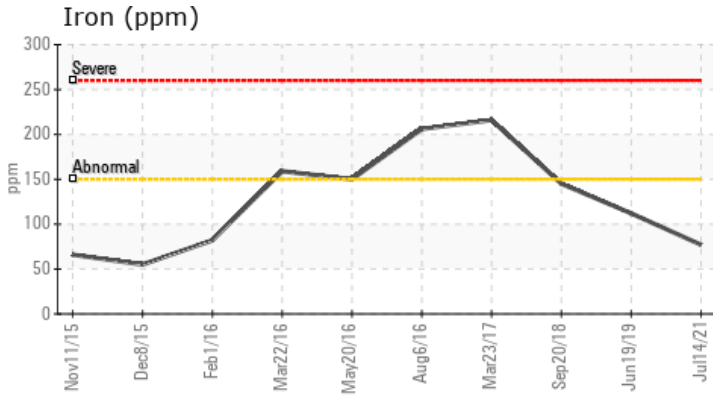
Diagnosis

Nous avons pris note que la vidange d'huile a été effectuée au moment de l'échantillonnage. Nous vous recommandons d'échantillonner de nouveau dès que possible afin de contrôler la situation. La présence d'argent est sévère. Il n'y a aucun indice de contamination dans le l'huile. Les niveaux d'additifs indiquent l'ajout d'une autre marque ou d'un autre type d'huile. La viscosité de l'échantillon se situe dans la portée de l'SAE 80; nous vous conseillons de vérifier. l'huile n'est plus en état de service en raison d'une usure anormale et/ou sévère.

Depot: SC1149STE
 Unique No: 5264076
 Signed: Kevin Marson
 Report Date: 04 Aug 2021



Graphs



LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH50M 1203-80864 - Rear Right Wheel Hub

Sample No: LH0177826

Oil Type: GEAR OIL SAE 75W90



Scierie Alexandre Lemay et Fils Inc.
 1492, Boul. Vachon S.
 Ste-Marie, QC
 CA G6E 2S5
 Contact: Service Manager
 info@scierielemay.com
 T: (418)209-4081
 F:



Sample Information

Sample Number	LH0177826	LH0130010	LH0130009	LH0129993
Sample Date	14 Jul 2021	19 Jun 2019	19 Jun 2019	20 Sep 2018
Machine Hours	21583	16081	16081	14360
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Not Changd
Sample Status	ABNORMAL	NORMAL	NORMAL	NORMAL



Oil Condition

Visc @ 40°C	cSt	60.4	96.4	96.8	145
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Contamination

Water	%	NEG	NEG	NEG	NEG
Silicon	ppm	3	8	8	14
Sodium	ppm	2	2	2	2
Potassium	ppm	<1	<1	<1	<1



Wear Metals

Iron	ppm	77	111	108	135
Copper	ppm	16	16	16	17
Lead	ppm	<1	<1	<1	<1
Tin	ppm	<1	0	0	0
Aluminum	ppm	<1	1	<1	1
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	9	2	2	<1
Nickel	ppm	<1	<1	<1	<1
Titanium	ppm	0	0	0	<1
Silver	ppm	<1	0	0	0
Manganese	ppm	<1	1	1	2
Vanadium	ppm	0	0	0	0



Additives

Calcium	ppm	282	33	33	6
Magnesium	ppm	119	19	20	<1
Zinc	ppm	331	61	61	15
Phosphorus	ppm	1045	1174	1173	707
Barium	ppm	0	0	0	0
Boron	ppm	180	256	257	<1

Diagnosis

Échantillonner de nouveau l'équipement au prochain intervalle de vidange afin d'en surveiller la condition. Les taux d'usure de tous les composants sont normaux. Il n'y a aucun indice de contamination dans le l'huile. La viscosité de l'échantillon se situe dans la portée de l'SAE 80; nous vous conseillons de vérifier. L'état de l'huile est acceptable pour la durée de service.

Depot: SC1149STE
Unique No: 5264075
Signed: Kevin Marson
Report Date: 04 Aug 2021



Graphs

