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LIEBHERR

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
LIEBHERR R936 050669-1828
Component
Right Final Drive
Fluid
LIEBHERR GEAR BASIC 90 LS (--- GAL)

RECOMMENDATION

Nous avons pris note que la vidange d`huile a été effectuée au moment de l`échantillonnage. Confirm the source of the lubricant being utilized for top-up/fill. Nous vous recommandons d`échantillonner de nouveau dès que possible afin de contrôler la situation.

WEAR

Usure des engrenages. Le bas indice ferreux (PQ) indique que l'usure ferreuse est due à de la corrosion.

CONTAMINATION

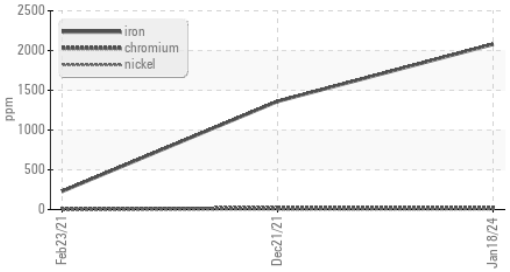
Il n`y a aucun indice de contamination dans l`huile.

FLUID CONDITION

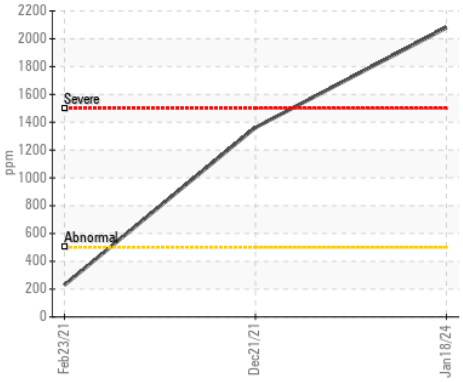
Les niveaux d`additifs indiquent l`ajout d`une autre marque ou d`un autre type d`huile. La viscosité de l'échantillon se situe dans la portée de l'SAE 75W90; nous vous conseillons de vérifier. l`huile n'est plus en état de service en raison d'une usure anomale et/ou sévère.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH	LH0192334	LH
Sample Date		Client Info		18 Jan 2024	21 Dec 2021	23 Feb 2021
Machine Age	hrs	Client Info		4293	1949	0
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	NORMAL
PQ		ASTM D8184*		6	▲ 863	---
Iron	ppm	ASTM D5185(m)	>500	▲ 2079	▲ 1361	229
Chromium	ppm	ASTM D5185(m)	>10	15	▲ 19	4
Nickel	ppm	ASTM D5185(m)	>10	5	3	1
Titanium	ppm	ASTM D5185(m)		1	10	2
Silver	ppm	ASTM D5185(m)		0	<1	<1
Aluminum	ppm	ASTM D5185(m)	>25	65	▲ 196	31
Lead	ppm	ASTM D5185(m)	>25	<1	<1	<1
Copper	ppm	ASTM D5185(m)	>50	4	1	<1
Tin	ppm	ASTM D5185(m)	>10	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	<1	<1
White Metal	scalar	Visual*	NONE	NONE	VLITE	LIGHT
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185(m)	>75	335	▲ 733	105
Potassium	ppm	ASTM D5185(m)	>20	21	70	13
Water		WC Method	>0.2	NEG	NEG	NEG
Silt	scalar	Visual*	NONE	NONE	NONE	LIGHT
Debris	scalar	Visual*	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG
Sodium	ppm	ASTM D5185(m)		18	54	12
Boron	ppm	ASTM D5185(m)	0	21	8	6
Barium	ppm	ASTM D5185(m)	0	0	12	15
Molybdenum	ppm	ASTM D5185(m)	0	<1	<1	<1
Manganese	ppm	ASTM D5185(m)	0	10	14	3
Magnesium	ppm	ASTM D5185(m)	<1	10	46	13
Calcium	ppm	ASTM D5185(m)	<1	49	92	48
Phosphorus	ppm	ASTM D5185(m)	2143	1054	2251	1330
Zinc	ppm	ASTM D5185(m)	<1	9	28	24
Sulfur	ppm	ASTM D5185(m)	23468	24541	27555	26068
Visc @ 40°C	cSt	ASTM D7279(m)	170	103	202	198

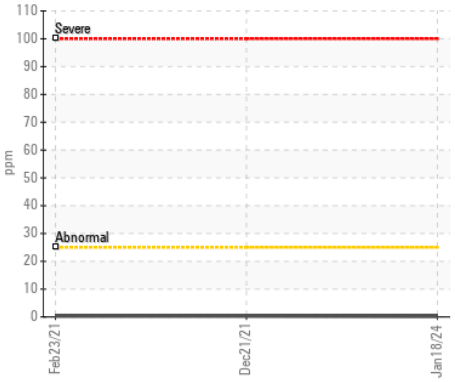
Ferrous Alloys



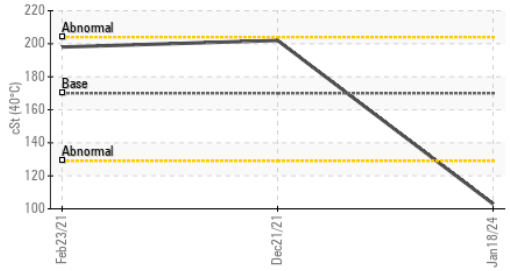
Iron (ppm)



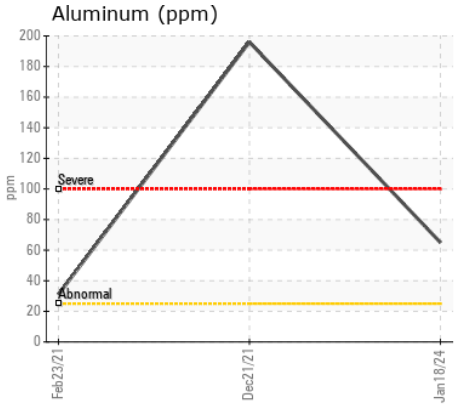
Lead (ppm)



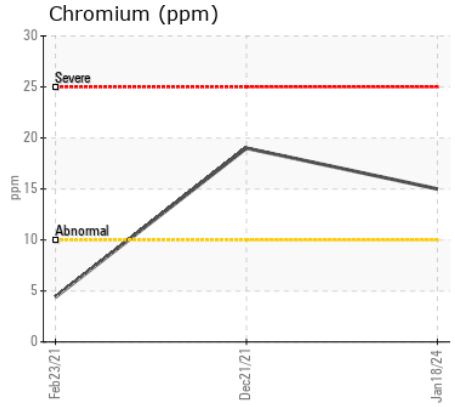
Viscosity @ 40°C



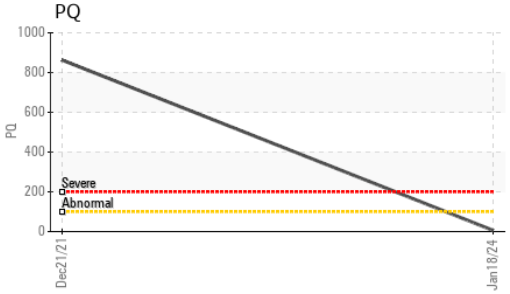
Aluminum (ppm)



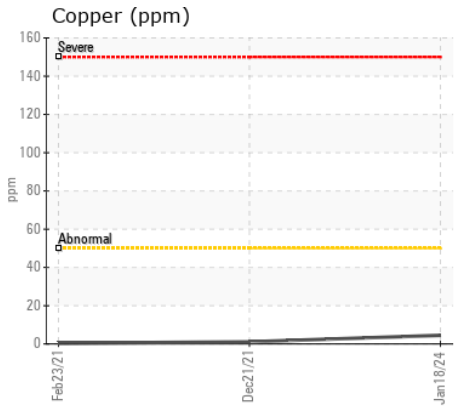
Chromium (ppm)



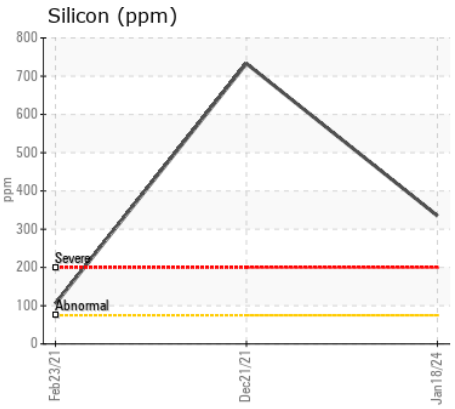
PQ



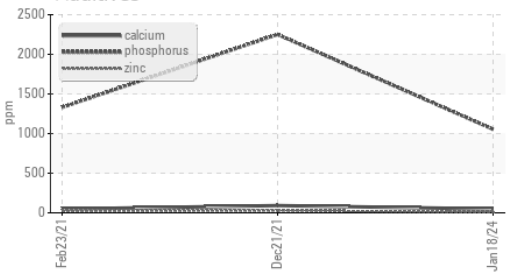
Copper (ppm)



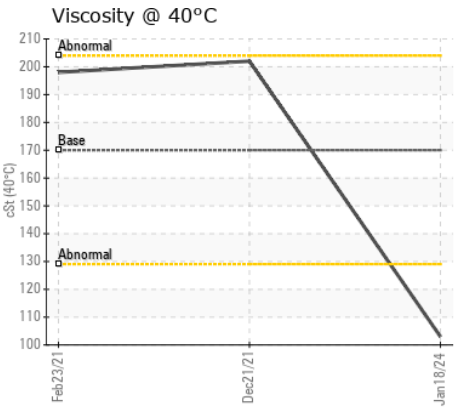
Silicon (ppm)



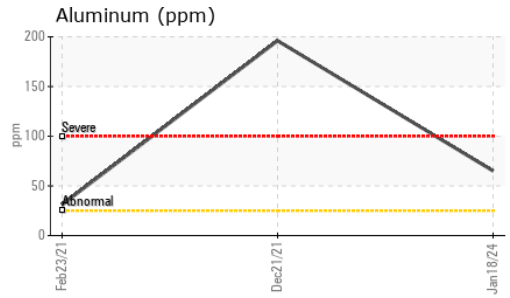
Additives



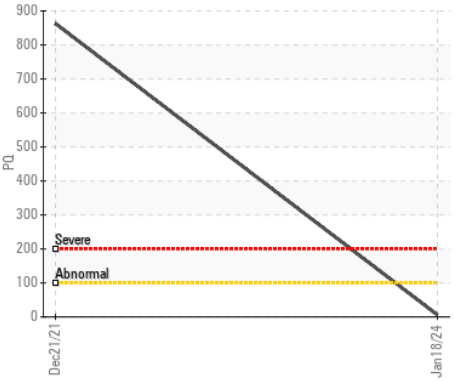
Viscosity @ 40°C



Aluminum (ppm)



PQ



ISO 17025:2017 Accredited Laboratory

Laboratory	: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9		
Sample No.	: LH	**Recieved**	: 19 Jan 2024
Lab Number	: 02610013	**Diagnosed**	: 19 Jan 2024
Unique Number	: 5711099	**Diagnostician**	: Kevin Marson
Test Package	: MOB 1 (Additional Tests: PQ)		

To discuss this sample report, contact Customer Service at 1-800-268-2131.
Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
Validity of results and interpretation are based on the sample and information as supplied.

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