



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR L586 057998-1334
Component
Hydraulic System
Fluid
PETRO CANADA 10W30 (--- GAL)

RECOMMENDATION

We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0290969	LH0281535	LH0123063
Sample Date		Client Info		17 Jun 2024	06 Dec 2023	19 Sep 2023
Machine Age	hrs	Client Info		8509	7545	7088
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	ATTENTION	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>50	14	16	16
Chromium	ppm	ASTM D5185(m)	>5	2	2	2
Nickel	ppm	ASTM D5185(m)	>2	<1	<1	0
Titanium	ppm	ASTM D5185(m)		12	16	18
Silver	ppm	ASTM D5185(m)		0	<1	0
Aluminum	ppm	ASTM D5185(m)	>5	4	4	4
Lead	ppm	ASTM D5185(m)	>15	7	7	7
Copper	ppm	ASTM D5185(m)	>10	3	3	3
Tin	ppm	ASTM D5185(m)	>2	0	<1	<1
Vanadium	ppm	ASTM D5185(m)		0	0	<1
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE

CONTAMINATION

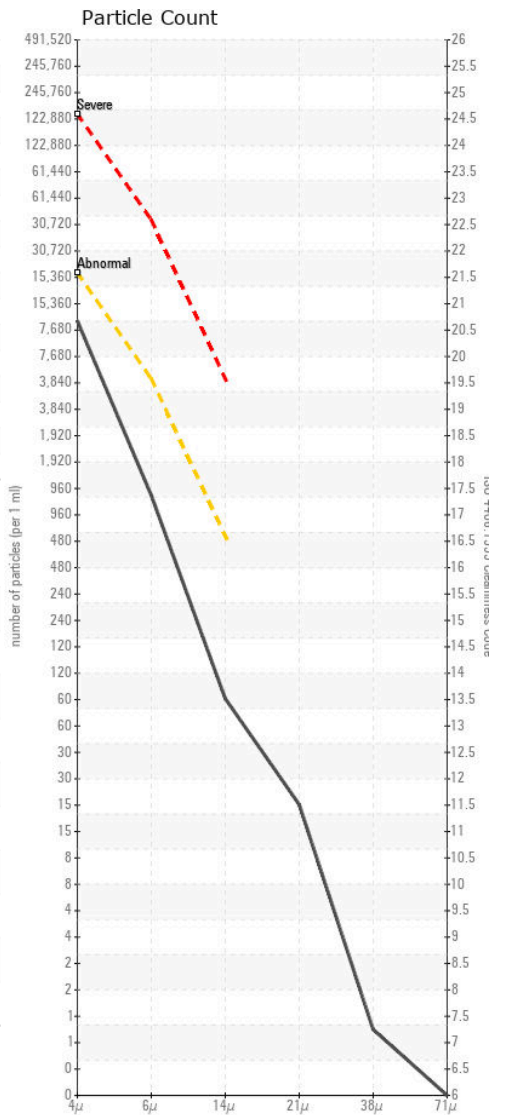
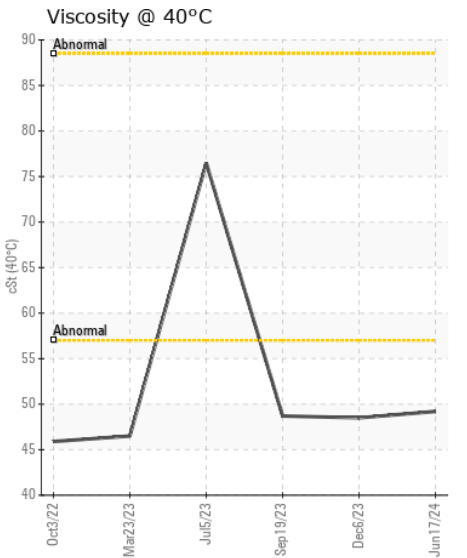
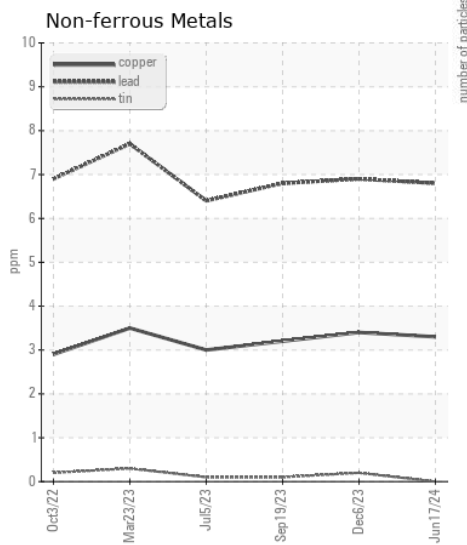
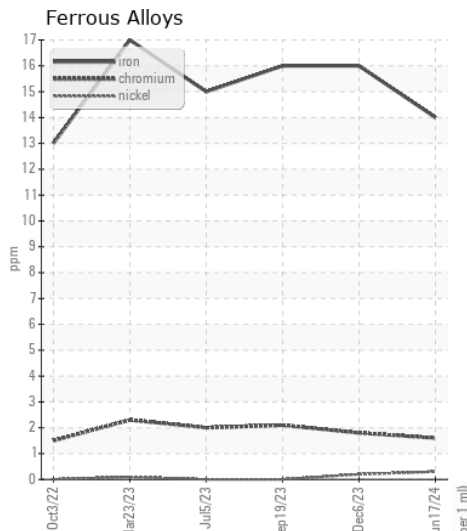
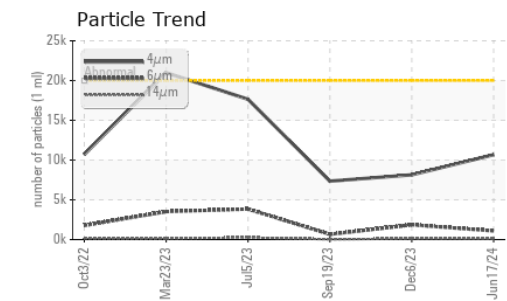
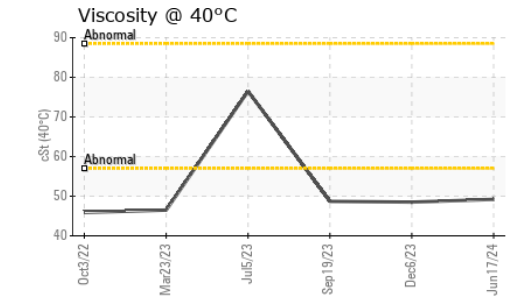
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185(m)	>15	10	11	11
Potassium	ppm	ASTM D5185(m)	>20	15	2	2
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>20000	10673	8142	7348
Particles >6µm		ASTM D7647	>5000	1087	1858	664
Particles >14µm		ASTM D7647	>640	76	112	30
Particles >21µm		ASTM D7647	>160	19	24	9
Particles >38µm		ASTM D7647	>40	1	3	1
Particles >71µm		ASTM D7647	>10	0	1	1
Oil Cleanliness		ISO 4406 (c)	>21/19/16	21/17/13	20/18/14	20/17/12
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
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*	>0.1	NEG	NEG	NEG

FLUID CONDITION

Viscosity of sample indicates oil is within SAE 10W range, advise investigate. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		7	3	3
Boron	ppm	ASTM D5185(m)		21	28	30
Barium	ppm	ASTM D5185(m)		<1	<1	0
Molybdenum	ppm	ASTM D5185(m)		19	14	15
Manganese	ppm	ASTM D5185(m)		<1	0	<1
Magnesium	ppm	ASTM D5185(m)		340	276	303
Calcium	ppm	ASTM D5185(m)		1040	1060	1041
Phosphorus	ppm	ASTM D5185(m)		788	760	870
Zinc	ppm	ASTM D5185(m)		915	944	965
Sulfur	ppm	ASTM D5185(m)		2999	3059	3126
Visc @ 40°C	cSt	ASTM D7279(m)		49.2	48.5	▲ 48.7



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0290969 **Received** : 24 Jun 2024
Lab Number : 02643763 **Tested** : 25 Jun 2024
Unique Number : 5801302 **Diagnosed** : 25 Jun 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: PrtCount)

THOMAS CAVANAGH CONSTRUCTION LTD
 RR # 2, 9094 CAVANAGH ROAD
 ASHTON, ON
 CA K0A 1B0
 Contact: Keith

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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