



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR T282C L2-6514 (S/N 532-4317)

Component
Hoist

Fluid
PETRO CANADA PRODURO TO-4 SYNTHETIC ALL SEASON (1510 LTR)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

WEAR

All component wear rates are normal.

CONTAMINATION

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

FLUID CONDITION

The condition of the oil is acceptable for the time in service.

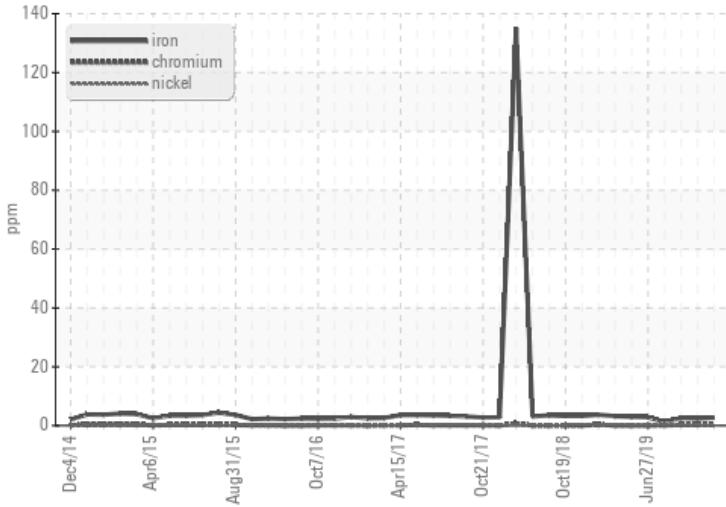
Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number				LH	LH0146308	LH0146335
Sample Date				12 Jan 2020	08 Dec 2019	23 Sep 2019
Machine Age	hrs			0	41553	40936
Oil Age	hrs			0	0	0
Filter Age	hrs			0	0	0
Oil Changed				N/A	Not Changd	Not Changd
Filter Changed				N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

Iron	ppm	ASTM D5185(m)	>750	3	2	3
Chromium	ppm	ASTM D5185(m)	>10	<1	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	0	<1	<1
Titanium	ppm	ASTM D5185(m)		<1	<1	<1
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>5	1	1	1
Lead	ppm	ASTM D5185(m)	>5	0	<1	<1
Copper	ppm	ASTM D5185(m)	>25	2	2	3
Tin	ppm	ASTM D5185(m)	>5	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual	NONE	NONE	NONE	NONE

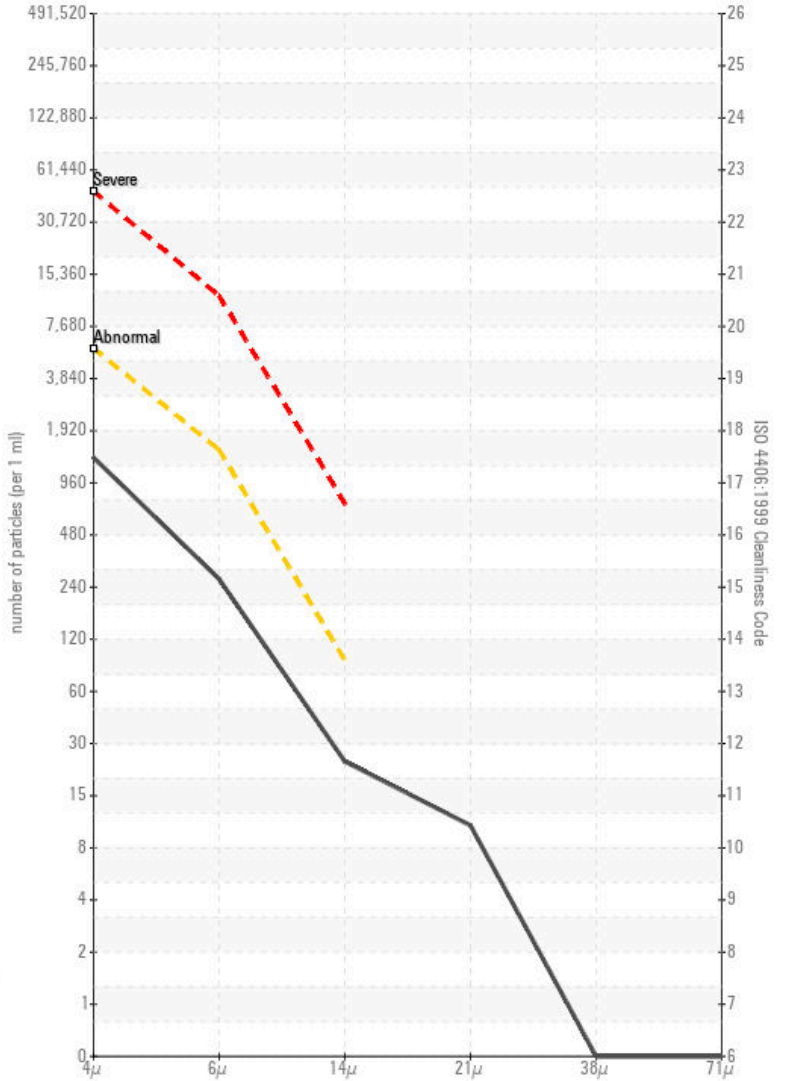
Silicon	ppm	ASTM D5185(m)	>25	8	8	8
Potassium	ppm	ASTM D5185(m)	>20	1	1	1
Particles >4µm		ASTM D7647	>5000	1176	1054	2886
Particles >6µm		ASTM D7647	>1300	235	163	569
Particles >14µm		ASTM D7647	>80	21	6	45
Particles >21µm		ASTM D7647	>20	9	3	13
Particles >38µm		ASTM D7647	>4	0	0	0
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/13	17/15/12	17/15/10	19/16/13
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	>0.02	NEG	NEG	NEG

Sodium	ppm	ASTM D5185(m)		<1	<1	<1
Boron	ppm	ASTM D5185(m)	5	<1	1	1
Barium	ppm	ASTM D5185(m)	0	<1	<1	<1
Molybdenum	ppm	ASTM D5185(m)	0	<1	<1	<1
Manganese	ppm	ASTM D5185(m)	1	<1	<1	<1
Magnesium	ppm	ASTM D5185(m)	10	16	16	14
Calcium	ppm	ASTM D5185(m)	3068	3024	3067	3113
Phosphorus	ppm	ASTM D5185(m)	1081	1042	1058	1034
Zinc	ppm	ASTM D5185(m)	1199	1210	1240	1249
Sulfur	ppm	ASTM D5185(m)	4636	4274	4402	4361
Visc @ 40°C	cSt	ASTM D7279(m)	55.79	56.5	56.3	56.0

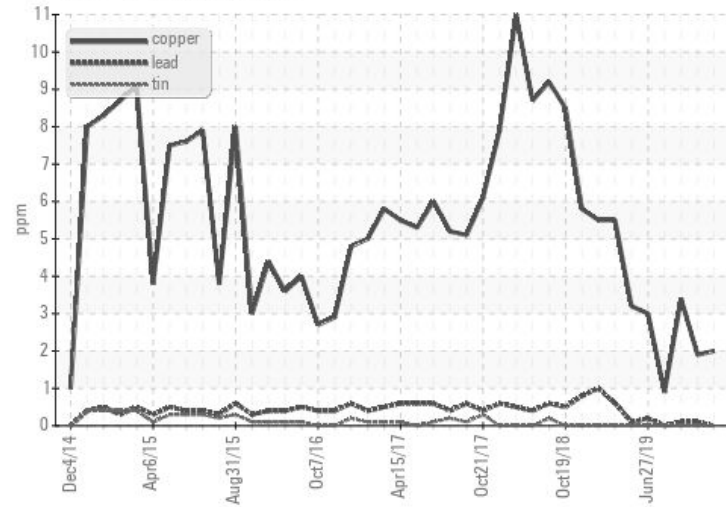
Ferrous Alloys



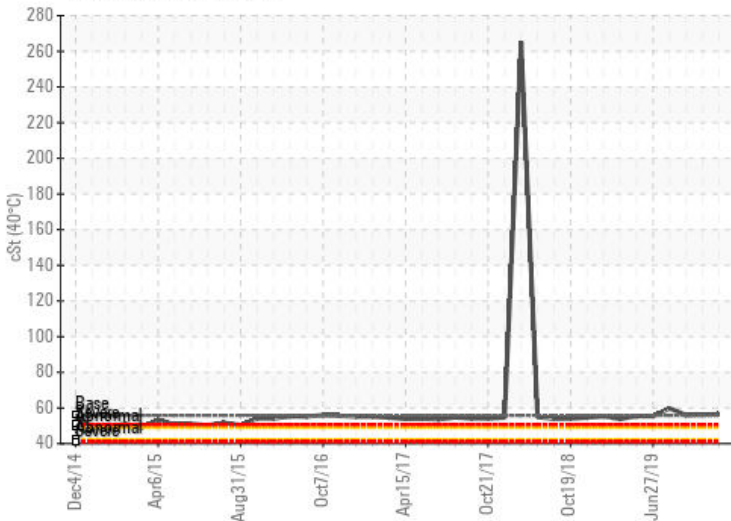
Particle Count



Non-ferrous Metals



Viscosity @ 40°C



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC1234567 **Received** : 13 Jan 2020
Lab Number : 01234567 **Diagnosed** : 03 Nov 2021
Unique Number : 12345678 **Diagnostician** : Bill Quesnel
Test Package : MOB 1 (Additional Tests: PrtCount)

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 (m) Denotes a modified test method, (e) Denotes a test conducted using an external laboratory.

Cusany Logistics Inc.
 1212 Industrial Place
 Centerville, OH
 USA 75900
 Contact: Jim Leduc
 jim.leduc@cusanylogisticsinc.com
 T: (305)555-1212
 F: (305)555-1222