



LIEBHERR

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL



Machine Id
054897-1650

Component
Swing Drive

Fluid
PETRO CANADA TRAXON 75W90 SYNTHETIC (--- GAL)

RECOMMENDATION

We advise that you check for the source of water entry. The oil change at the time of sampling has been noted. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition.

WEAR

Chromium and iron ppm levels are abnormal. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion.

CONTAMINATION

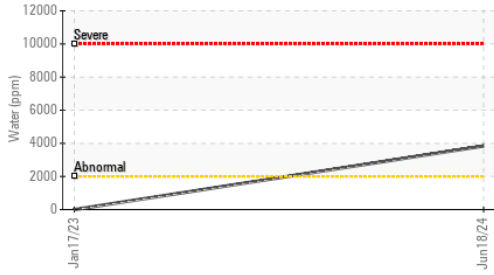
There is a moderate concentration of water present in the oil.

FLUID CONDITION

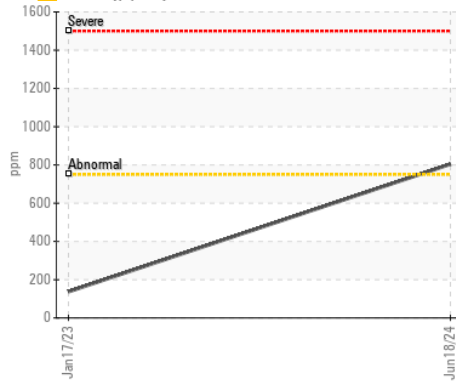
Additive levels indicate the addition of a different brand, or type of oil. Viscosity of sample indicates oil is within SAE 80W140 range, advise investigate. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0292448	LH0243058	---
Sample Date		Client Info		18 Jun 2024	17 Jan 2023	---
Machine Age	hrs	Client Info		1937	641	---
Oil Age	hrs	Client Info		0	0	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		N/A	N/A	---
Sample Status				ABNORMAL	NORMAL	---
PQ		ASTM D8184*		0	---	---
Iron	ppm	ASTM D5185(m)	>750	▲ 804	137	---
Chromium	ppm	ASTM D5185(m)	>10	▲ 12	3	---
Nickel	ppm	ASTM D5185(m)	>5	<1	<1	---
Titanium	ppm	ASTM D5185(m)		<1	<1	---
Silver	ppm	ASTM D5185(m)		0	0	---
Aluminum	ppm	ASTM D5185(m)	>20	<1	<1	---
Lead	ppm	ASTM D5185(m)	>5	0	0	---
Copper	ppm	ASTM D5185(m)	>250	<1	0	---
Tin	ppm	ASTM D5185(m)	>10	0	0	---
Vanadium	ppm	ASTM D5185(m)		0	0	---
White Metal	scalar	Visual*	NONE	NONE	NONE	---
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	---
Silicon	ppm	ASTM D5185(m)	>15	2	4	---
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	---
Water	%	ASTM D6304*	>0.2	▲ 0.384	---	---
ppm Water	ppm	ASTM D6304*	>2000	▲ 3842	---	---
Silt	scalar	Visual*	NONE	NONE	NONE	---
Debris	scalar	Visual*	NONE	NONE	NONE	---
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	---
Appearance	scalar	Visual*	NORML	NORML	NORML	---
Odor	scalar	Visual*	NORML	NORML	NORML	---
Emulsified Water	scalar	Visual*	>0.2	▲ 1%	NEG	---
Sodium	ppm	ASTM D5185(m)		1	4	---
Boron	ppm	ASTM D5185(m)	328	6	2	---
Barium	ppm	ASTM D5185(m)	1	<1	5	---
Molybdenum	ppm	ASTM D5185(m)		0	<1	---
Manganese	ppm	ASTM D5185(m)		9	2	---
Magnesium	ppm	ASTM D5185(m)	1	<1	3	---
Calcium	ppm	ASTM D5185(m)	7	7	18	---
Phosphorus	ppm	ASTM D5185(m)	1145	2103	2492	---
Zinc	ppm	ASTM D5185(m)	3	11	14	---
Sulfur	ppm	ASTM D5185(m)	17909	24567	29910	---
Visc @ 40°C	cSt	ASTM D7279(m)	99.6	243	176	---

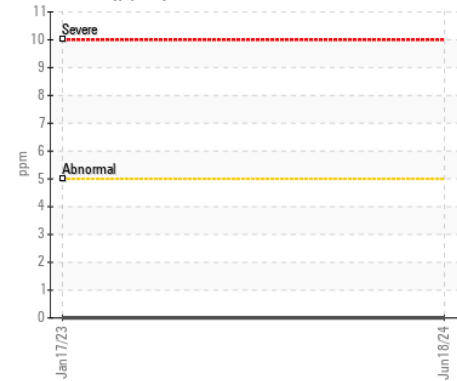
▲ Water (KF)



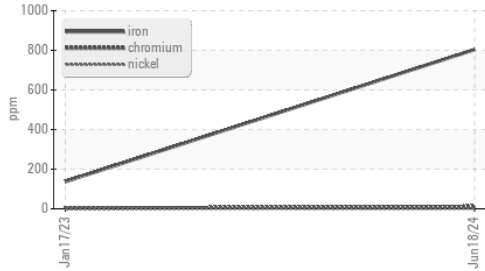
▲ Iron (ppm)



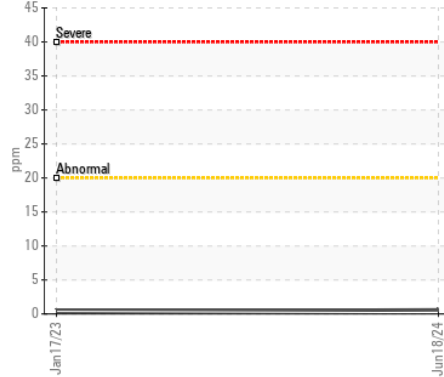
Lead (ppm)



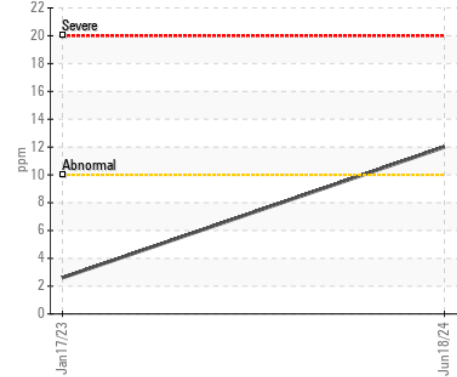
▲ Ferrous Alloys



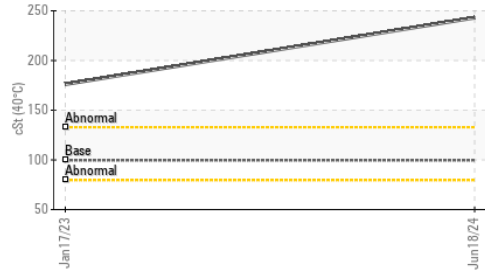
Aluminum (ppm)



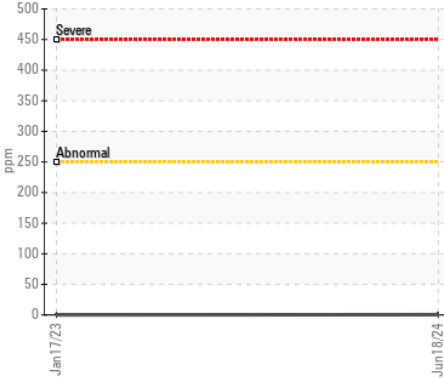
▲ Chromium (ppm)



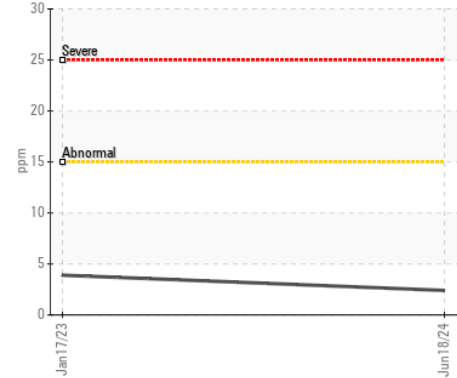
Viscosity @ 40°C



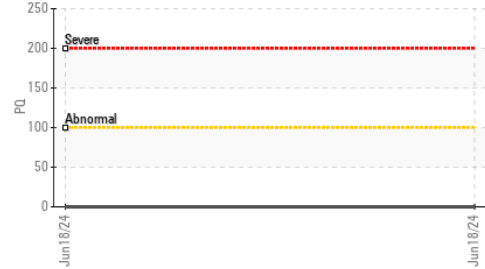
Copper (ppm)



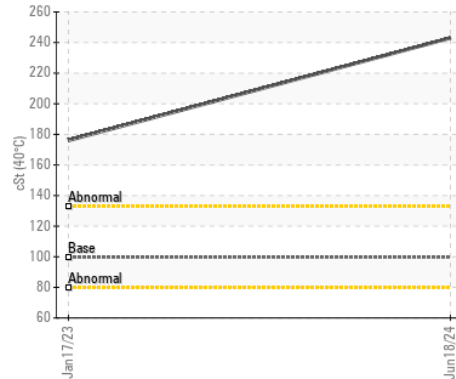
Silicon (ppm)



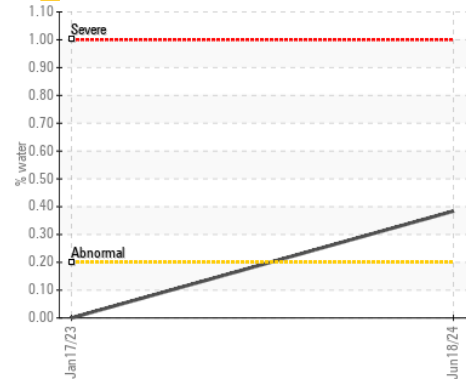
PQ



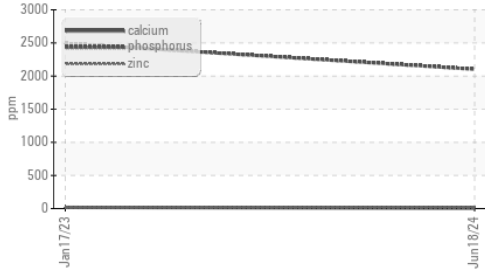
Viscosity @ 40°C



▲ Water



Additives



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0292448 **Received** : 26 Jun 2024
Lab Number : 02644214 **Tested** : 27 Jun 2024
Unique Number : 5801753 **Diagnosed** : 28 Jun 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: KF, PQ)

Delsan - American Iron and Metal
 2187 Montee Masson
 Laval, QC
 CA H7B 0A6
 Contact: MANNY MARQUES
 mmarques@delsan-aim.com

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.

T:
F: