TRAAP
Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
KOMATSU E-4
Component
Diesel Engine
Fluid
TRC MOLY XL PROSPEC III 15W40 (--- GAL)

RECOMMENDATION

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

WEAR

Iron ppm levels are abnormal. Cylinder, crank, or cam shaft wear is indicated.

CONTAMINATION

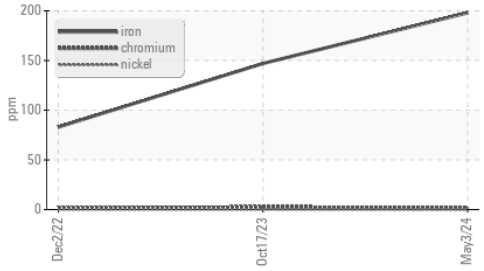
There is no indication of any contamination in the oil.

FLUID CONDITION

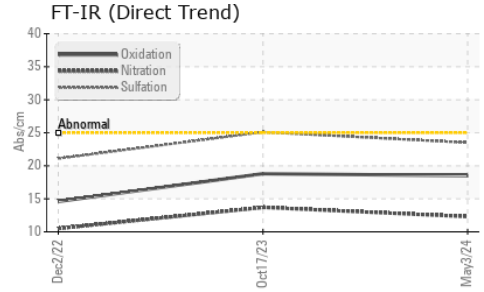
The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR02634518	TR02591336	TR02537533
Sample Date		Client Info		03 May 2024	17 Oct 2023	02 Dec 2022
Machine Age	hrs	Client Info		5923	5348	4834
Oil Age	hrs	Client Info		575	1000	553
Filter Age	hrs	Client Info		575	500	553
Oil Changed		Client Info		Changed	Changed	Not Changd
Filter Changed		Client Info		Changed	Not Changd	Changed
Sample Status				ABNORMAL	ABNORMAL	NORMAL
PQ		ASTM D8184*		22	0	---
Iron	ppm	ASTM D5185(m)	>100	▲ 198	▲ 147	83
Chromium	ppm	ASTM D5185(m)	>20	2	2	2
Nickel	ppm	ASTM D5185(m)	>4	0	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	<1
Silver	ppm	ASTM D5185(m)	>3	0	<1	0
Aluminum	ppm	ASTM D5185(m)	>20	6	6	6
Lead	ppm	ASTM D5185(m)	>40	0	<1	<1
Copper	ppm	ASTM D5185(m)	>330	9	11	9
Tin	ppm	ASTM D5185(m)	>15	0	<1	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
Silicon	ppm	ASTM D5185(m)	>25	9	8	7
Potassium	ppm	ASTM D5185(m)	>20	<1	1	<1
Fuel		WC Method	>5	<1.0	▲ 2.2	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>3	0.5	0.7	0
Nitration	Abs/cm	ASTM D7624*	>20	12.3	13.7	10.5
Sulfation	Abs/.1mm	ASTM D7415*	>30	23.5	25.1	21.1
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG
Sodium	ppm	ASTM D5185(m)		3	5	4
Boron	ppm	ASTM D5185(m)		26	29	32
Barium	ppm	ASTM D5185(m)		<1	0	0
Molybdenum	ppm	ASTM D5185(m)		221	116	92
Manganese	ppm	ASTM D5185(m)		1	<1	<1
Magnesium	ppm	ASTM D5185(m)		23	32	31
Calcium	ppm	ASTM D5185(m)	4500	3374	4673	4583
Phosphorus	ppm	ASTM D5185(m)		1020	1114	1173
Zinc	ppm	ASTM D5185(m)	1400	1242	1290	1301
Sulfur	ppm	ASTM D5185(m)		3303	3582	3692
Oxidation	Abs/.1mm	ASTM D7414*	>25	18.5	18.8	14.6
Base Number (BN)	mg KOH/g	ASTM D2896*	15	10.57	11.74	10.89
Visc @ 100°C	cSt	ASTM D7279(m)	15.5	14.2	▲ 7.3	14.0

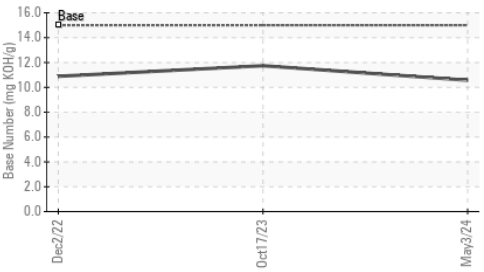
Ferrous Alloys



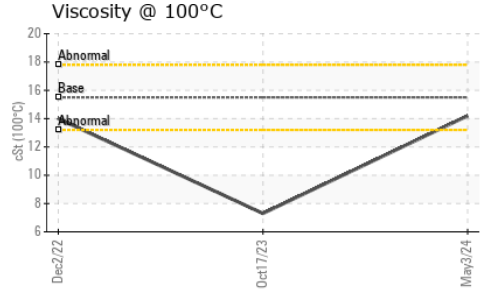
FT-IR (Direct Trend)



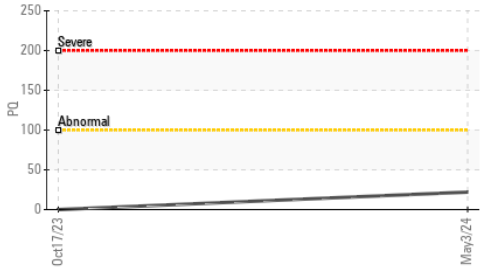
Base Number



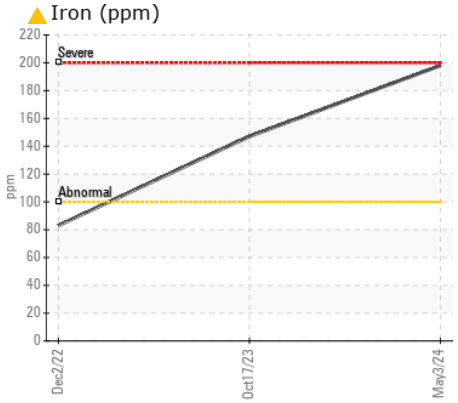
Viscosity @ 100°C



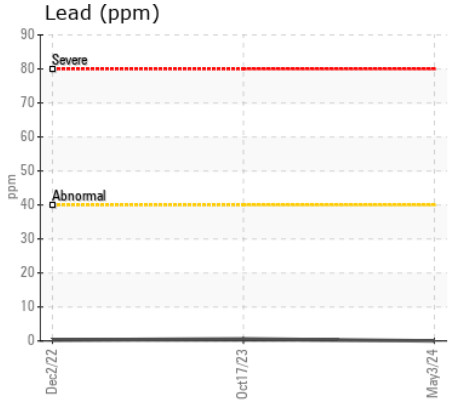
PQ



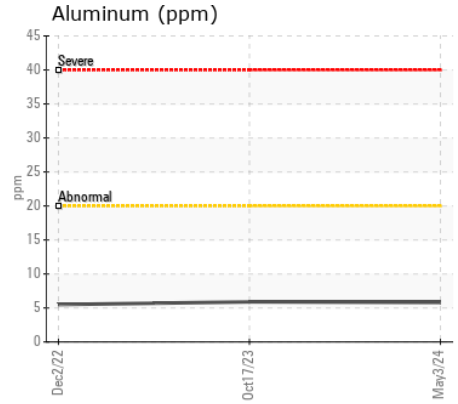
Iron (ppm)



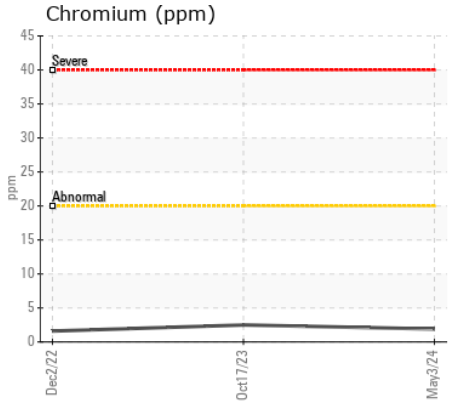
Lead (ppm)



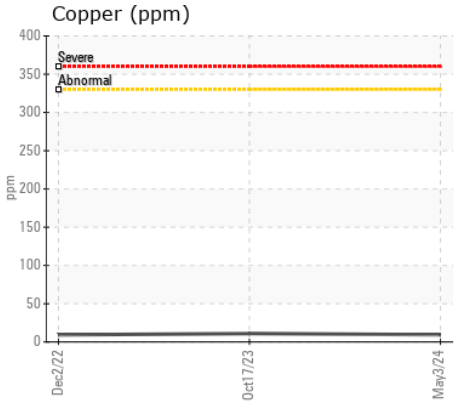
Aluminum (ppm)



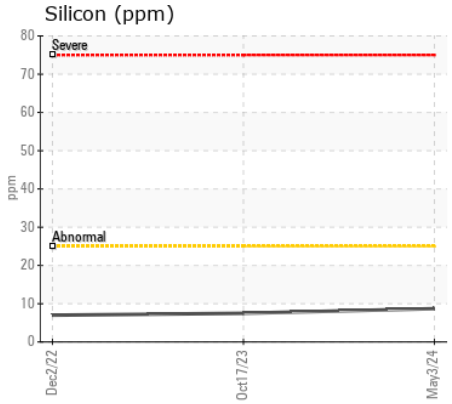
Chromium (ppm)



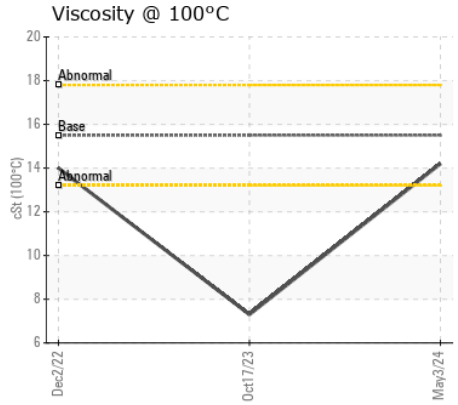
Copper (ppm)



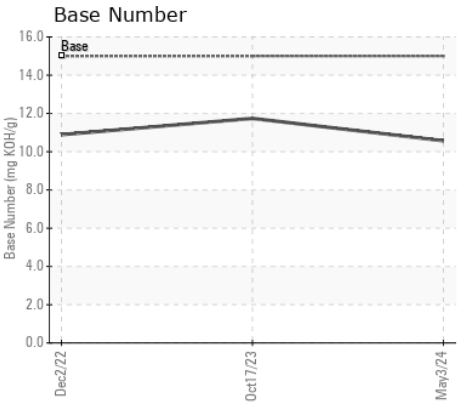
Silicon (ppm)



Viscosity @ 100°C



Base Number



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : TR02634518 **Received** : 10 May 2024
Lab Number : 02634518 **Tested** : 10 May 2024
Unique Number : 5775671 **Diagnosed** : 13 May 2024 - Kevin Marson
Test Package : MOB 2 (Additional Tests: PQ)

To discuss this sample report, contact Customer Service at 1-800-827-0711.
** - Denotes test methods that are outside of the ISO 17025 scope of accreditation.*
Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

POLAR ENTERPRISE
BOX 36, GRP 8
HADASHVILLE, MB
CA R0E 0X0
Contact: Trevor Panych

T: (204)326-8683
F: