MOB II KIMBRO FLUID SOLUTIONS

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Machine Id
PU-3
Component
Diesel Engine
Fluid
PETRO CANADA DURON HP 15W40 (--- GAL)

RECOMMENDATION

We advise that you check the fuel injection system. We advise that you check for the source of water entry. We recommend an early resample to monitor this condition.

WEAR

All component wear rates are normal.

CONTAMINATION

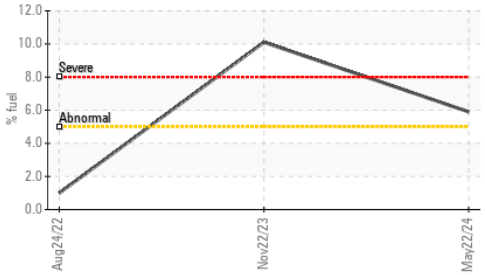
There is a moderate amount of fuel present in the oil. There is a moderate concentration of water present in the oil. Moderate concentration of visible dirt/debris present in the oil.

FLUID CONDITION

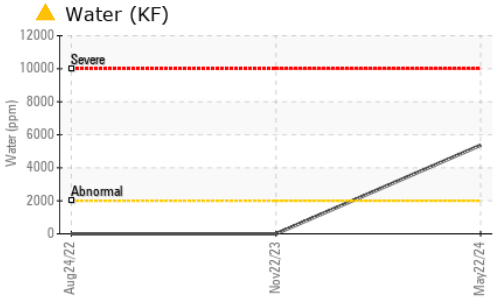
Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		KFS0006080	KFS0004087	KFS0002860
Sample Date		Client Info		22 May 2024	22 Nov 2023	16 Nov 2022
Machine Age	mls	Client Info		261478	229243	224386
Oil Age	mls	Client Info		32235	229243	0
Filter Age	mls	Client Info		32235	0	0
Oil Changed		Client Info		N/A	Changed	Changed
Filter Changed		Client Info		N/A	Changed	Changed
Sample Status				ABNORMAL	SEVERE	NORMAL
Iron	ppm	ASTM D5185m	>100	13	24	12
Chromium	ppm	ASTM D5185m	>20	2	2	1
Nickel	ppm	ASTM D5185m	>2	<1	<1	0
Titanium	ppm	ASTM D5185m	>2	<1	<1	0
Silver	ppm	ASTM D5185m	>2	1	0	0
Aluminum	ppm	ASTM D5185m	>25	14	17	4
Lead	ppm	ASTM D5185m	>40	<1	0	<1
Copper	ppm	ASTM D5185m	>330	2	2	1
Tin	ppm	ASTM D5185m	>15	<1	0	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	LIGHT	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	9	12	4
Potassium	ppm	ASTM D5185m	>20	1	2	<1
Fuel	%	ASTM D3524	>5	▲ 5.9	▲ 10.1	<1.0
Water	%	ASTM D6304	>0.2	▲ 0.537	---	---
ppm Water	ppm	ASTM D6304	>2000	▲ 5370	---	---
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0.8	0.2
Nitration	Abs/cm	*ASTM D7624	>20	10.1	12.0	8.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	16.9	20.3	19.7
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	▲ MODER	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	▲ 0.2%	NEG	NEG
Sodium	ppm	ASTM D5185m		2	3	1
Boron	ppm	ASTM D5185m		<1	1	7
Barium	ppm	ASTM D5185m		<1	0	0
Molybdenum	ppm	ASTM D5185m		49	52	56
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		754	780	871
Calcium	ppm	ASTM D5185m		954	912	1114
Phosphorus	ppm	ASTM D5185m		864	861	973
Zinc	ppm	ASTM D5185m		1038	1044	1211
Sulfur	ppm	ASTM D5185m		2876	2830	3682
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.2	19.2	16.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	9.92	8.52	9.35
Visc @ 100°C	cSt	ASTM D445	15.6	▲ 11.5	▲ 11.8	13.0

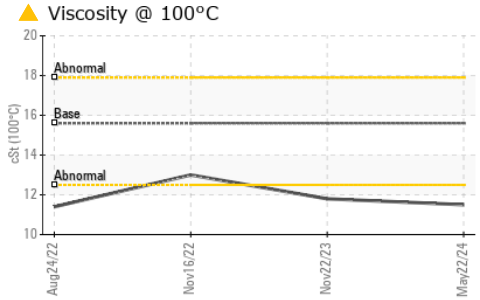
Fuel Dilution



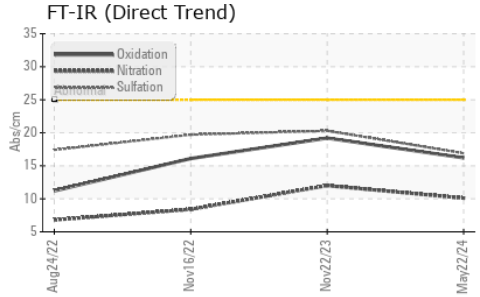
Water (KF)



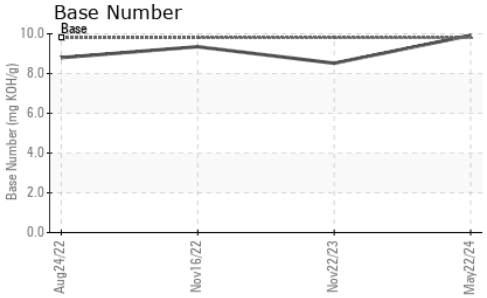
Viscosity @ 100°C



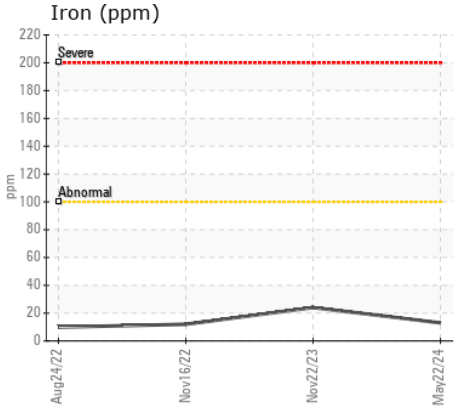
FT-IR (Direct Trend)



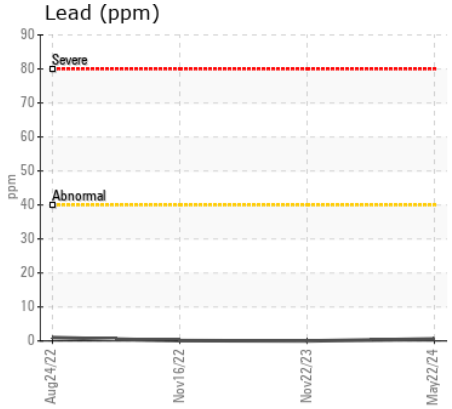
Base Number



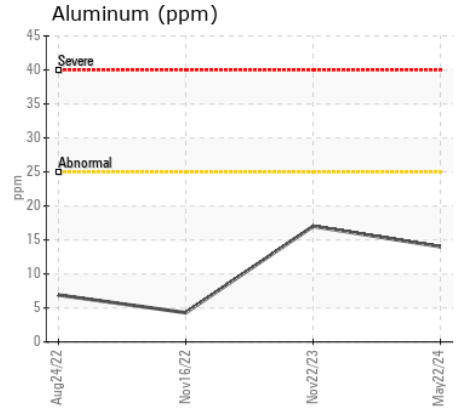
Iron (ppm)



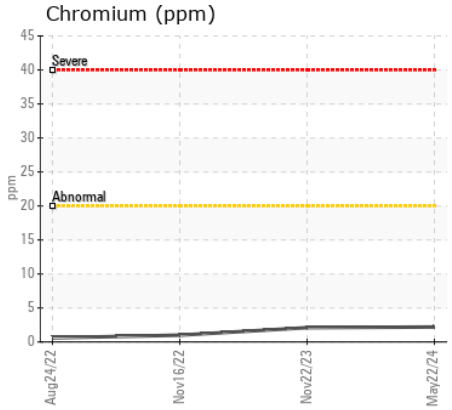
Lead (ppm)



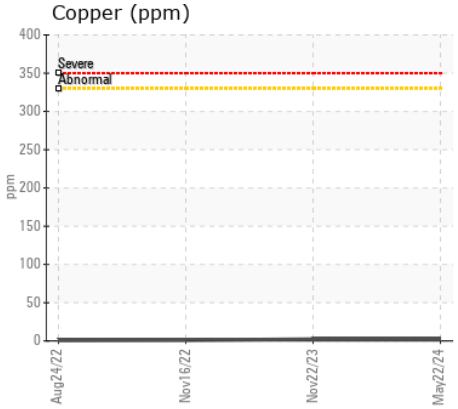
Aluminum (ppm)



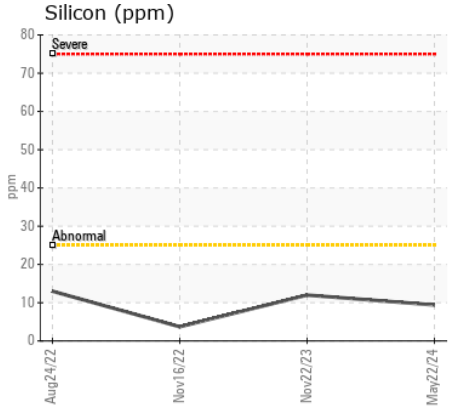
Chromium (ppm)



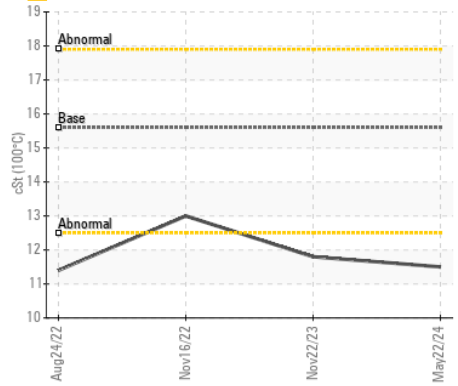
Copper (ppm)



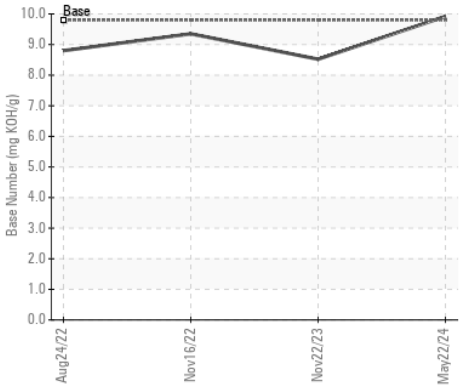
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KFS0006080 **Received** : 28 May 2024
Lab Number : 06193020 **Tested** : 30 May 2024
Unique Number : 11049772 **Diagnosed** : 30 May 2024 - Sean Felton
Test Package : MOB 2 (Additional Tests: Glycol, KF, PercentFuel)

To discuss this sample report, contact Customer Service at 1-800-237-1369.
** - 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)

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