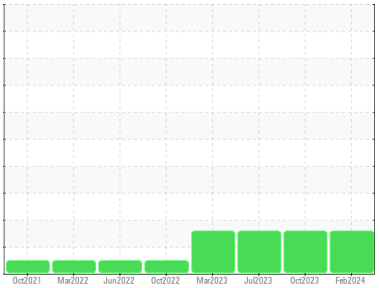
OIL DIAGNOSTICS

OIL ANALYSIS REPORT

Sample Rating Trend



DIRT

Area
MIXERS
Machine Id
[MIXERS] M208
Component
Diesel Engine
Fluid
KENDALL 15W40 (--- GAL)

DIAGNOSIS

Recommendation
Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
Elemental level of silicon (Si) above normal indicating ingress of seal material.

Fluid Condition
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PCA0109788**	LP0000662	LP0000189
Sample Date		Client Info		**19 Feb 2024**	13 Oct 2023	20 Jul 2023
Machine Age	hrs	Client Info		**14701**	14347	13747
Oil Age	hrs	Client Info		**600**	600	600
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>5	**<1.0**	<1.0	<1.0
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	**6**	4	10
Chromium	ppm	ASTM D5185m	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>4	**0**	0	<1
Titanium	ppm	ASTM D5185m		**<1**	1	1
Silver	ppm	ASTM D5185m	>3	**0**	0	<1
Aluminum	ppm	ASTM D5185m	>20	**3**	3	3
Lead	ppm	ASTM D5185m	>40	**1**	<1	2
Copper	ppm	ASTM D5185m	>330	**2**	<1	2
Tin	ppm	ASTM D5185m	>15	**<1**	0	<1
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	6.3	**58**	62	42
Barium	ppm	ASTM D5185m	0.6	**0**	0	0
Molybdenum	ppm	ASTM D5185m	0.4	**86**	87	83
Manganese	ppm	ASTM D5185m		**<1**	0	<1
Magnesium	ppm	ASTM D5185m	277	**122**	141	332
Calcium	ppm	ASTM D5185m	1514	**2093**	2074	2079
Phosphorus	ppm	ASTM D5185m	634	**1078**	973	1082
Zinc	ppm	ASTM D5185m	743	**1300**	1211	1347
Sulfur	ppm	ASTM D5185m	2592	**3721**	3938	4360

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	▲ **34**	▲ 48	▲ 37
Sodium	ppm	ASTM D5185m		**5**	4	13
Potassium	ppm	ASTM D5185m	>20	**1**	2	1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.3**	0.2	0.4
Nitration	Abs/cm	*ASTM D7624	>20	**9.8**	8.0	10.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	**19.3**	17.3	20.6

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**15.1**	13.0	16.2
Base Number (BN)	mg KOH/g	ASTM D2896		**6.5**	6.9	8.43

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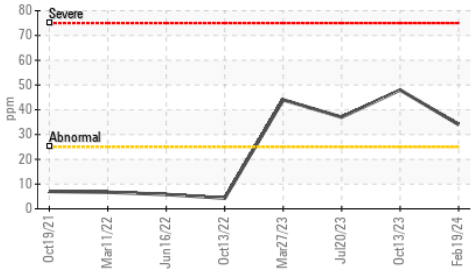
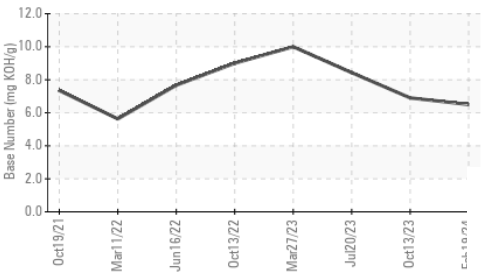
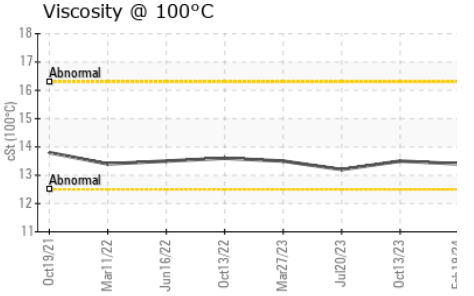
Silicon (ppm)



Base Number



Viscosity @ 100°C

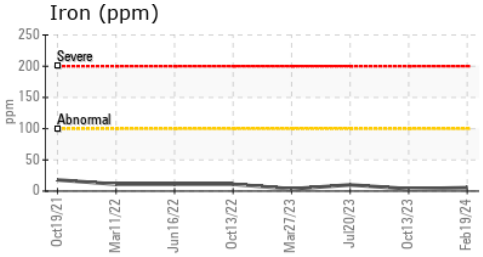


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

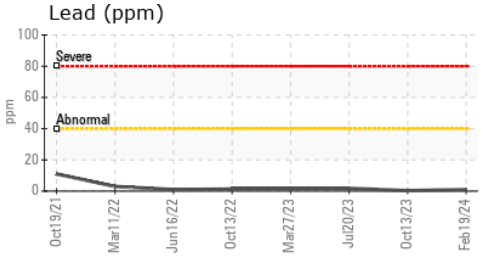
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445		**13.4**	13.5	13.2

GRAPHS

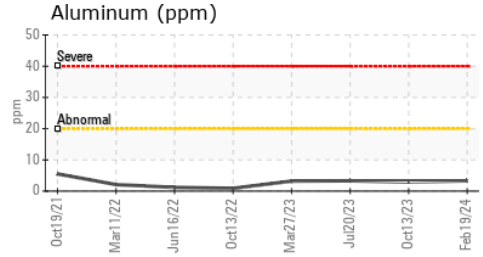
Iron (ppm)



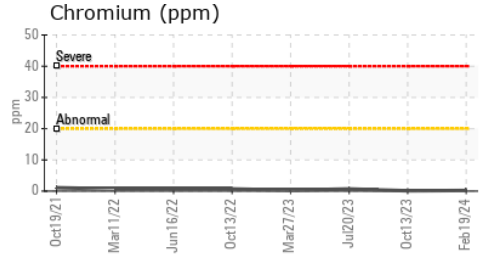
Lead (ppm)



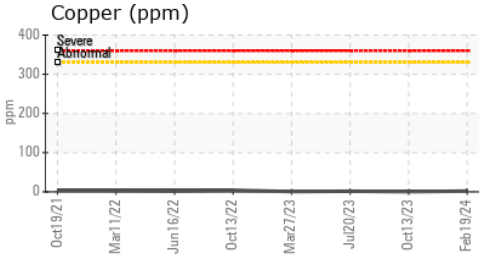
Aluminum (ppm)



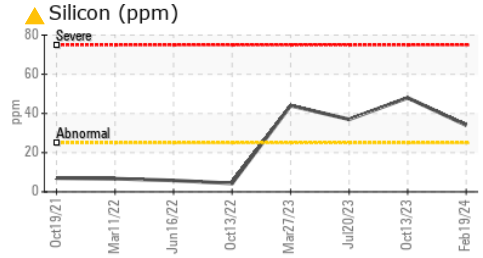
Chromium (ppm)



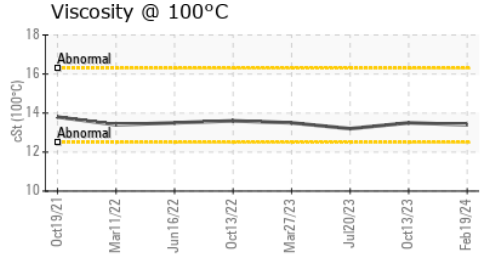
Copper (ppm)



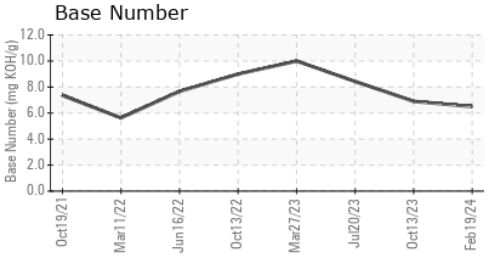
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0109788
Lab Number : 06105101
Unique Number : 10903331
Test Package : MOB 2

Received : 29 Feb 2024
Tested : 06 Mar 2024
Diagnosed : 06 Mar 2024 - Jonathan Hester

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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