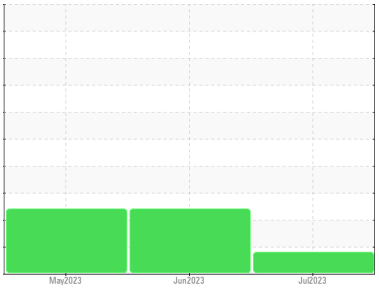
OIL ANALYSIS REPORT

OIL DIAGNOSTICS

Sample Rating Trend



WEAR

Machine Id
ASL237799
Component
Diesel Engine
Fluid
NOT GIVEN (--- GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other component wear rates are normal.

Contamination

Tests indicate that there is no fuel present in the oil. 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 condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PCA0090758**	PCA0090697	PCA0090445
Sample Date		Client Info		**10 Jul 2023**	06 Jun 2023	05 May 2023
Machine Age	hrs	Client Info		**1065**	566	566
Oil Age	hrs	Client Info		**566**	566	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ABNORMAL**	SEVERE	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>120	**21**	14	43
Chromium	ppm	ASTM D5185m	>20	**1**	<1	2
Nickel	ppm	ASTM D5185m	>5	**5**	10	▲ 15
Titanium	ppm	ASTM D5185m	>2	**1**	2	<1
Silver	ppm	ASTM D5185m	>2	**1**	0	<1
Aluminum	ppm	ASTM D5185m	>20	**2**	2	5
Lead	ppm	ASTM D5185m	>40	**0**	0	2
Copper	ppm	ASTM D5185m	>330	▲ **332**	2	146
Tin	ppm	ASTM D5185m	>15	**1**	<1	4
Vanadium	ppm	ASTM D5185m		**<1**	<1	<1
Cadmium	ppm	ASTM D5185m		**0**	<1	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**15**	8	259
Barium	ppm	ASTM D5185m		**2**	0	0
Molybdenum	ppm	ASTM D5185m		**86**	56	129
Manganese	ppm	ASTM D5185m		**1**	<1	6
Magnesium	ppm	ASTM D5185m		**1168**	835	692
Calcium	ppm	ASTM D5185m		**1385**	1213	1589
Phosphorus	ppm	ASTM D5185m		**1235**	959	691
Zinc	ppm	ASTM D5185m		**1559**	1239	891
Sulfur	ppm	ASTM D5185m		**3742**	3723	2766

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**13**	3	▲ 94
Sodium	ppm	ASTM D5185m		**3**	2	3
Potassium	ppm	ASTM D5185m	>20	**2**	4	8
Fuel	%	ASTM D3524	>3.0	**0.3**	⬢ 6.0	<1.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>4	**0.4**	0.3	0.4
Nitration	Abs/cm	*ASTM D7624	>20	**8.6**	9.4	10.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	**20.6**	20.3	25.2

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**16.2**	17.0	23.8
Base Number (BN)	mg KOH/g	ASTM D2896		**8.85**	3.18	8.63

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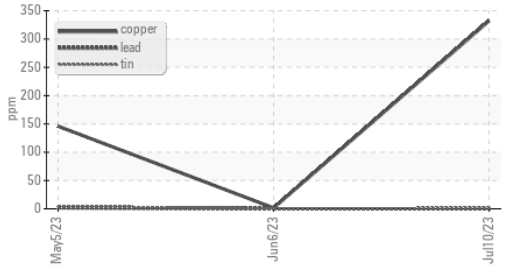
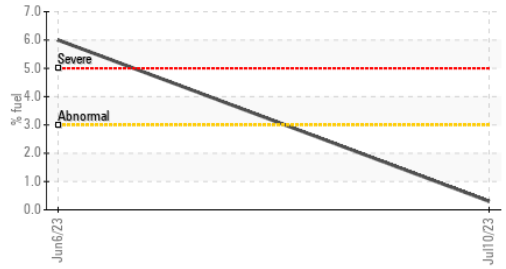
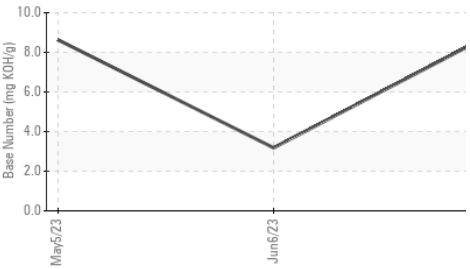
▲ Non-ferrous Metals



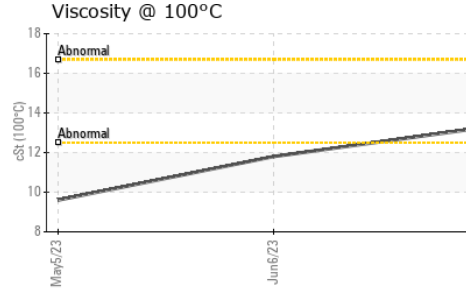
Fuel Dilution



Base Number



Viscosity @ 100°C

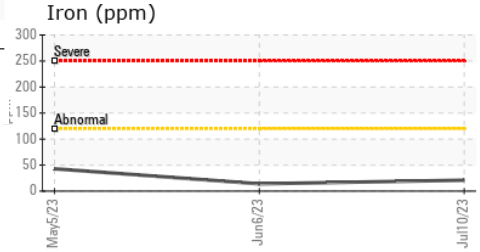


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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

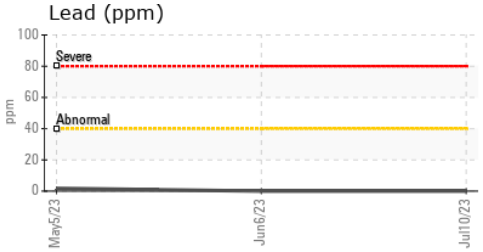
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445		**13.3**	▲ 11.8	9.6

GRAPHS

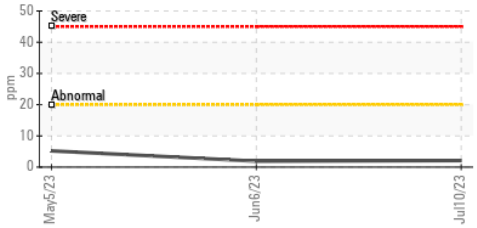
Iron (ppm)



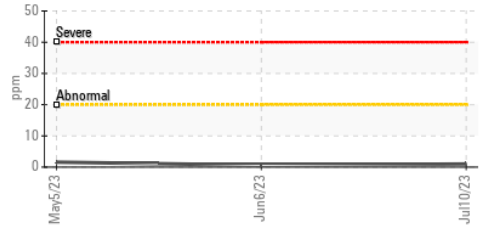
Lead (ppm)



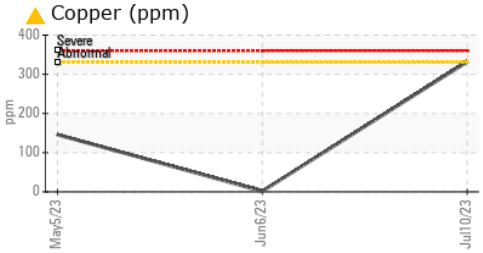
Aluminum (ppm)



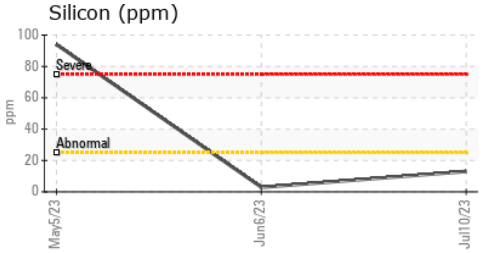
Chromium (ppm)



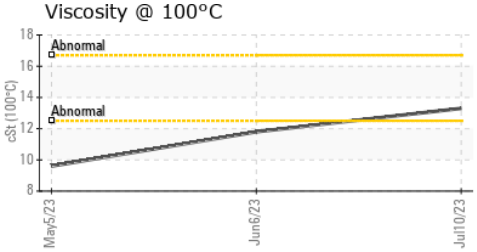
▲ Copper (ppm)



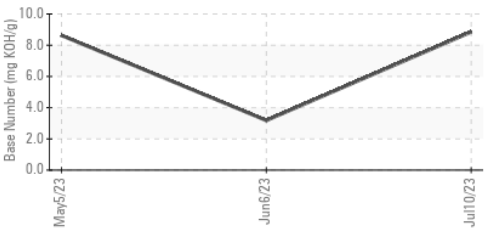
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0090758 **Received** : 14 Jul 2023
Lab Number : 05898772 **Diagnosed** : 17 Jul 2023
Unique Number : 10560128 **Diagnostician** : Don Baldridge
Test Package : MOB 2 (Additional Tests: 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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