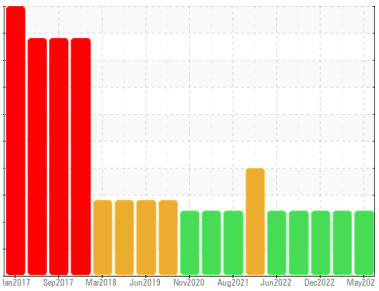
OIL DIAGNOSTICS

OIL ANALYSIS REPORT

Sample Rating Trend



FUEL

Area
KEMP QUARRIES / RIVER VALLEY BACKBONE
Machine Id
OHT074
Component
Diesel Engine
Fluid
MOBIL DELVAC 1300 SUPER15W40 (--- GAL)

DIAGNOSIS

▲ Recommendation

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. (Customer Sample Comment: PM2)

Wear

All component wear rates are normal.

▲ Contamination

There is a high amount of fuel present in the oil.

▲ Fluid Condition

Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PCA0085816**	PCA0037159	PCA0037191
Sample Date		Client Info		**24 May 2023**	09 Feb 2023	02 Dec 2022
Machine Age	hrs	Client Info		**31005**	30589	30315
Oil Age	hrs	Client Info		**416**	274	389
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**SEVERE**	SEVERE	SEVERE

CONTAMINATION		method	limit/base	current	history1	history2
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**	7	4
Chromium	ppm	ASTM D5185m	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>2	**<1**	0	0
Titanium	ppm	ASTM D5185m	>2	**1**	<1	<1
Silver	ppm	ASTM D5185m	>2	**<1**	0	0
Aluminum	ppm	ASTM D5185m	>25	**1**	<1	1
Lead	ppm	ASTM D5185m	>40	**2**	<1	<1
Copper	ppm	ASTM D5185m	>330	**1**	<1	<1
Tin	ppm	ASTM D5185m	>15	**<1**	<1	0
Vanadium	ppm	ASTM D5185m		**<1**	0	0
Cadmium	ppm	ASTM D5185m		**<1**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**4**	2	0
Barium	ppm	ASTM D5185m	0	**0**	0	1
Molybdenum	ppm	ASTM D5185m	0	**47**	47	48
Manganese	ppm	ASTM D5185m		**1**	<1	<1
Magnesium	ppm	ASTM D5185m	0	**803**	718	735
Calcium	ppm	ASTM D5185m		**934**	889	925
Phosphorus	ppm	ASTM D5185m		**868**	811	842
Zinc	ppm	ASTM D5185m		**1059**	980	1003
Sulfur	ppm	ASTM D5185m		**3204**	2442	2939

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**4**	4	2
Sodium	ppm	ASTM D5185m		**1**	<1	0
Potassium	ppm	ASTM D5185m	>20	**4**	<1	0
Fuel	%	ASTM D3524	>5	▲ **15.0**	▲ 19.7	▲ 15.8

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.1**	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	**6.3**	9.7	6.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	**16.5**	23.7	18.1

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**11.8**	20.4	12.8
Base Number (BN)	mg KOH/g	ASTM D2896	9.4	**8.4**	6.3	8.9

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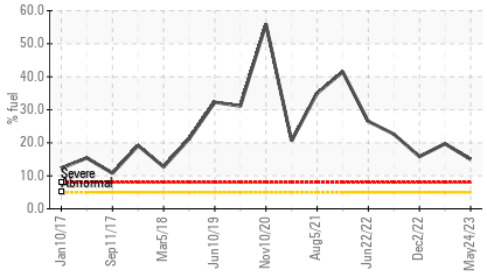
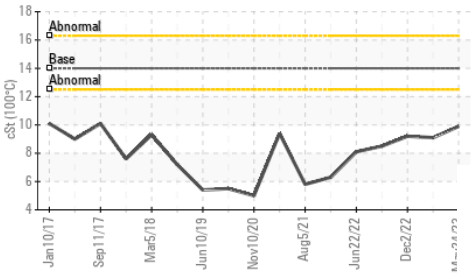
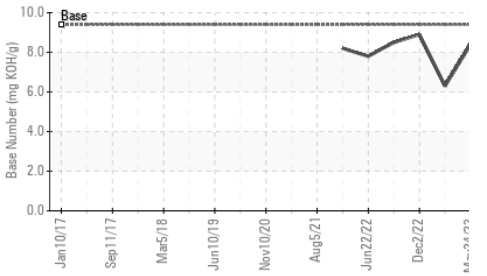
Fuel Dilution



Viscosity @ 100°C



Base Number

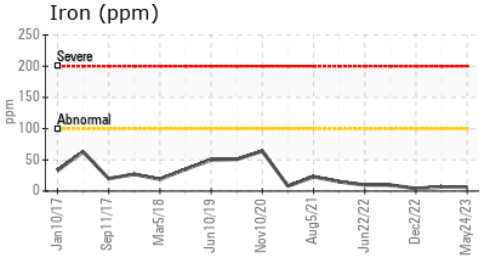


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

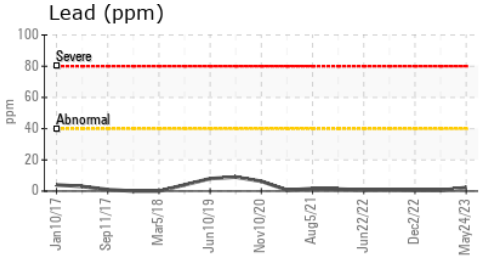
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14	▲ **9.9**	▲ 9.1	▲ 9.2

GRAPHS

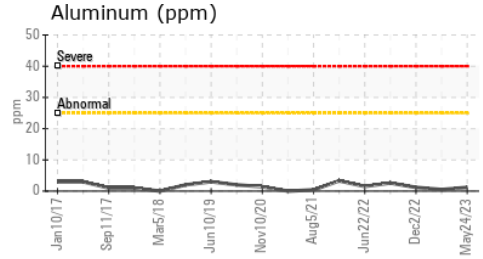
Iron (ppm)



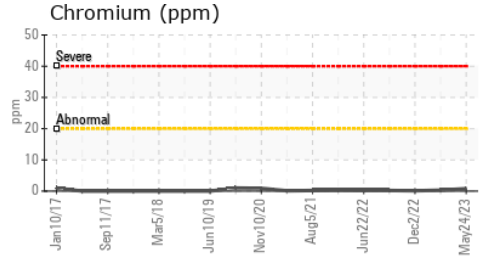
Lead (ppm)



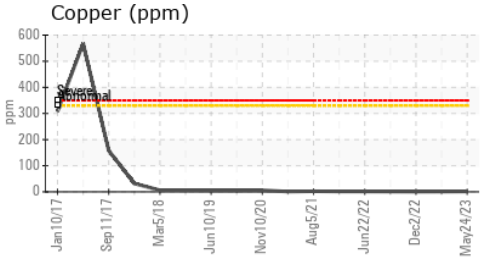
Aluminum (ppm)



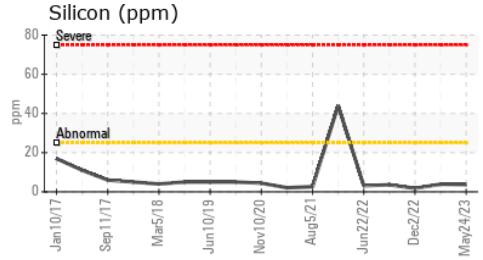
Chromium (ppm)



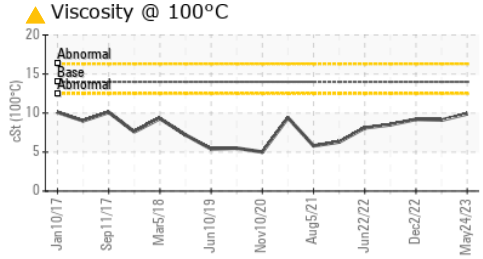
Copper (ppm)



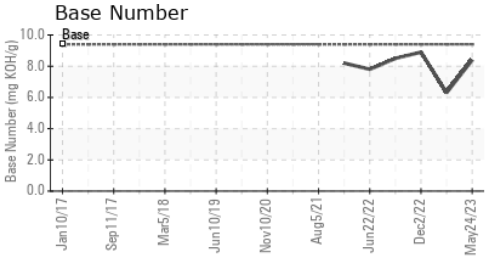
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0085816
Lab Number : 05859840
Unique Number : 10494305
Test Package : MOB 1 (Additional Tests: PercentFuel, TBN)

Received : 30 May 2023
Tested : 31 May 2023
Diagnosed : 01 Jun 2023 - Don Baldridge

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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Report Id: KEMHUN [WUSCAR] 05859840 (Generated: 03/08/2024 14:47:12) Rev: 1

Submitted By: ? ?