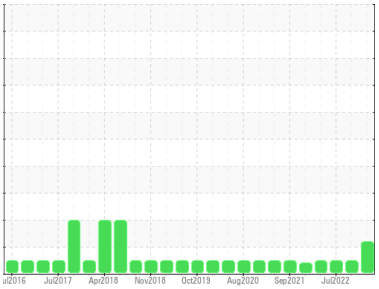
OIL ANALYSIS REPORT

Sample Rating Trend



FUEL

Area
KEMP QUARRIES / NEOSHO
Machine Id
WL111
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. Resample at the next service interval to monitor. (Customer Sample Comment: PM-3 changed filters and fluid)

Wear

All component wear rates are normal.

▲ Contamination

There is a moderate amount of fuel 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.

SAMPLE INFORMATION		method	limit/base	current	history 1	history 2
Sample Number		Client Info		**PCA0086325**	PCA0086037	PCA0037721
Sample Date		Client Info		**19 Jun 2023**	21 Mar 2023	01 Jul 2022
Machine Age	hrs	Client Info		**29243**	28833	28351
Oil Age	hrs	Client Info		**29243**	28833	28351
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**ABNORMAL**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history 1	history 2
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m	>100	**18**	37	31
Chromium	ppm	ASTM D5185m	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>2	**0**	<1	0
Titanium	ppm	ASTM D5185m	>2	**0**	0	0
Silver	ppm	ASTM D5185m	>2	**0**	0	1
Aluminum	ppm	ASTM D5185m	>25	**0**	2	2
Lead	ppm	ASTM D5185m	>40	**2**	2	2
Copper	ppm	ASTM D5185m	>330	**9**	14	16
Tin	ppm	ASTM D5185m	>15	**1**	2	2
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	<1

ADDITIVES		method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185m	0	**0**	0	5
Barium	ppm	ASTM D5185m	0	**0**	<1	0
Molybdenum	ppm	ASTM D5185m	0	**56**	62	62
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	0	**868**	912	981
Calcium	ppm	ASTM D5185m		**998**	1101	1118
Phosphorus	ppm	ASTM D5185m		**940**	1033	1050
Zinc	ppm	ASTM D5185m		**1122**	1240	1296
Sulfur	ppm	ASTM D5185m		**2863**	3270	3720

CONTAMINANTS		method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m	>25	**7**	5	5
Sodium	ppm	ASTM D5185m		**<1**	0	2
Potassium	ppm	ASTM D5185m	>20	**<1**	2	<1
Fuel	%	ASTM D3524	>5	▲ **6.0**	<1.0	<1.0

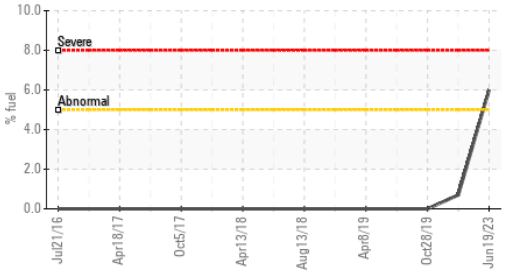
INFRA-RED		method	limit/base	current	history 1	history 2
Soot %	%	*ASTM D7844	>3	**0.3**	0.5	0.5
Nitration	Abs/cm	*ASTM D7624	>20	**17.5**	7.0	7.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	**23.8**	19.0	20.0

FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**16.4**	14.3	15.6
Base Number (BN)	mg KOH/g	ASTM D2896	9.4	**12.0**	8.9	9.1

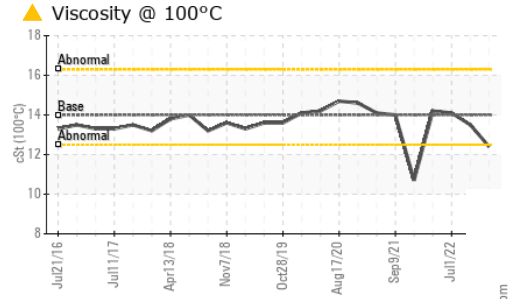
OIL ANALYSIS REPORT

OIL DIAGNOSTICS

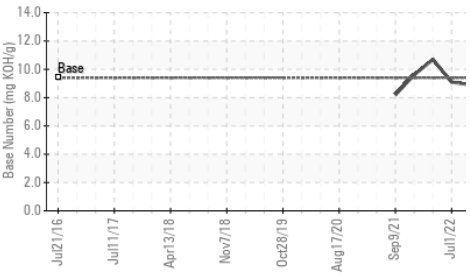
Fuel Dilution



Viscosity @ 100°C



Base Number

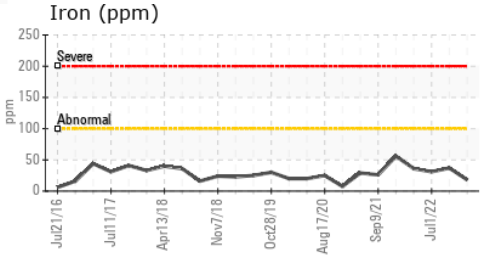


VISUAL		method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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

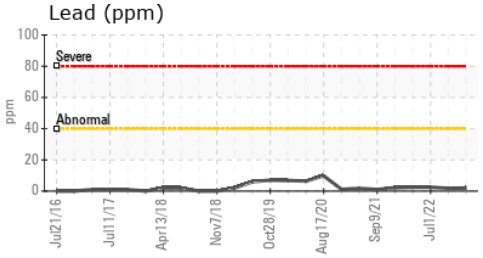
FLUID PROPERTIES		method	limit/base	current	history 1	history 2
Visc @ 100°C	cSt	ASTM D445	14	▲ **12.4**	13.5	14.1

GRAPHS

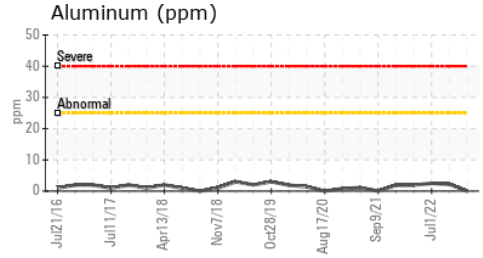
Iron (ppm)



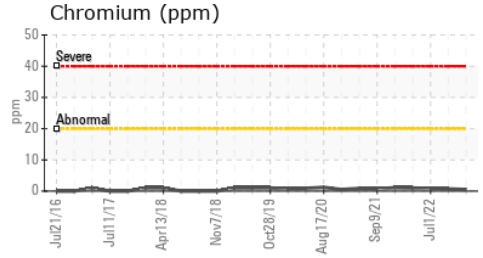
Lead (ppm)



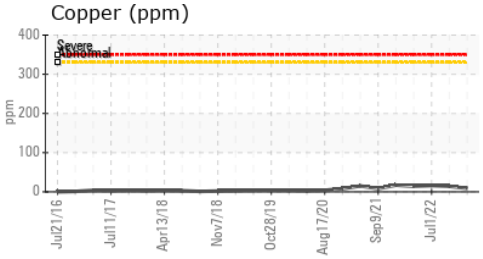
Aluminum (ppm)



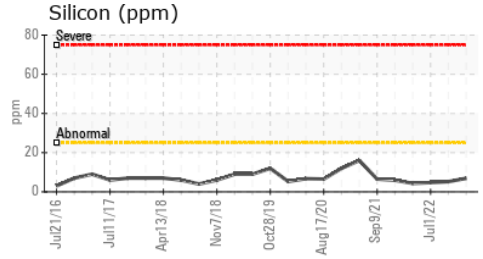
Chromium (ppm)



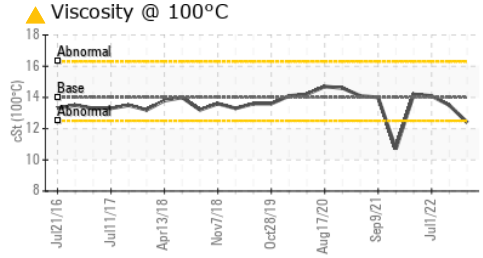
Copper (ppm)



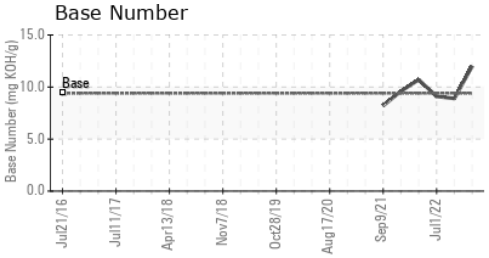
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0086325 **Received** : 30 Jun 2023
Lab Number : 05888185 **Diagnosed** : 06 Jul 2023
Unique Number : 10538668 **Diagnostician** : Jonathan Hester
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel, TBN)

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: KEMNEO [WUSCAR] 05888185 (Generated: 07/06/2023 13:36:47) Rev: 1

Submitted By: