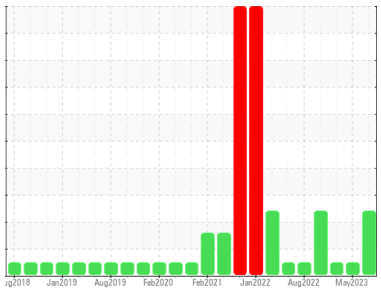
OIL ANALYSIS REPORT

Sample Rating Trend



DIRT

Area
KEMP QUARRIES / KEMP STONE - FAIRLAND
Machine Id
WL119
Component
Diesel Engine
Fluid
PETRO CANADA DURON HP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. (Customer Sample Comment: PM-4 changed fluid and filters)

Wear

All component wear rates are normal.

Contamination

Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

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		**PCA0086458**	PCA0085740	PCA0086761
Sample Date		Client Info		**09 Aug 2023**	16 May 2023	06 Mar 2023
Machine Age	hrs	Client Info		**6527**	6375	6238
Oil Age	hrs	Client Info		**6527**	6375	6238
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**ABNORMAL**	NORMAL	NORMAL

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

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	**62**	54	44
Chromium	ppm	ASTM D5185m	>20	**2**	2	1
Nickel	ppm	ASTM D5185m	>4	**0**	0	0
Titanium	ppm	ASTM D5185m		**<1**	<1	<1
Silver	ppm	ASTM D5185m	>3	**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	▲ **13**	11	10
Lead	ppm	ASTM D5185m	>40	**0**	<1	0
Copper	ppm	ASTM D5185m	>330	**1**	2	<1
Tin	ppm	ASTM D5185m	>15	**0**	<1	0
Vanadium	ppm	ASTM D5185m		**0**	0	<1
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**18**	8	2
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**76**	80	71
Manganese	ppm	ASTM D5185m		**<1**	<1	1
Magnesium	ppm	ASTM D5185m		**1250**	1191	1136
Calcium	ppm	ASTM D5185m		**1800**	1564	1414
Phosphorus	ppm	ASTM D5185m		**1285**	1170	1062
Zinc	ppm	ASTM D5185m		**1594**	1481	1364
Sulfur	ppm	ASTM D5185m		**4186**	3772	3316

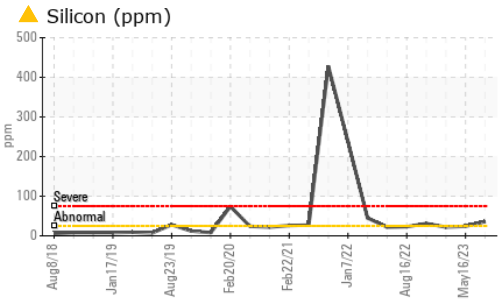
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	▲ **36**	24	22
Sodium	ppm	ASTM D5185m		**4**	2	3
Potassium	ppm	ASTM D5185m	>20	**2**	3	<1

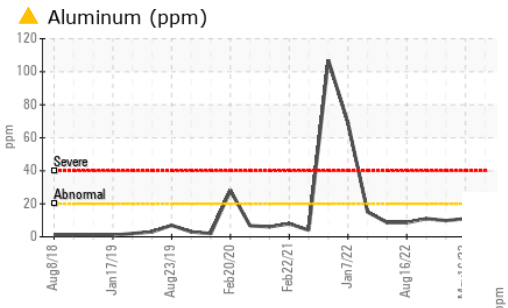
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.4**	0.4	0.3
Nitration	Abs/cm	*ASTM D7624	>20	**8.4**	9.3	7.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	**20.8**	20.0	20.1

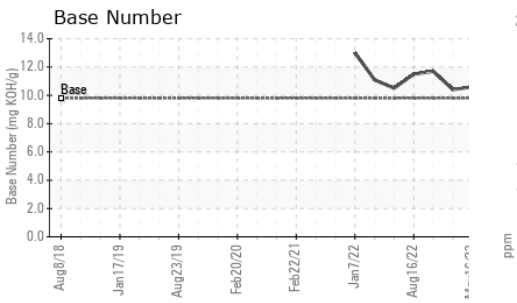
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**16.9**	15.7	16.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**10.3**	10.6	10.4

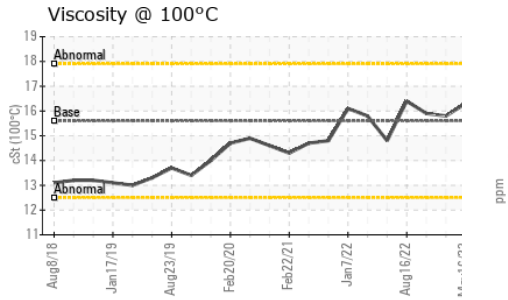
OIL DIAGNOSTICS

OIL ANALYSIS REPORT





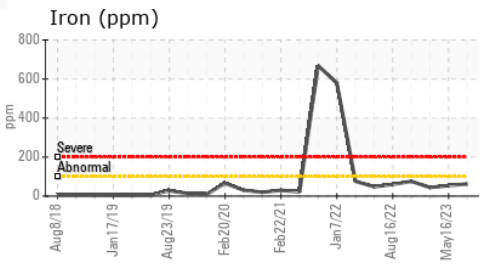


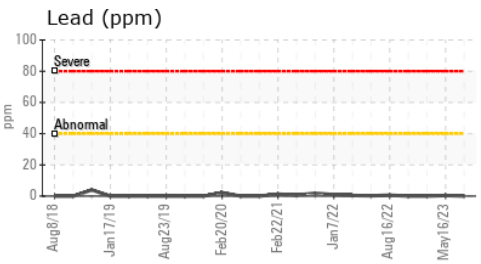


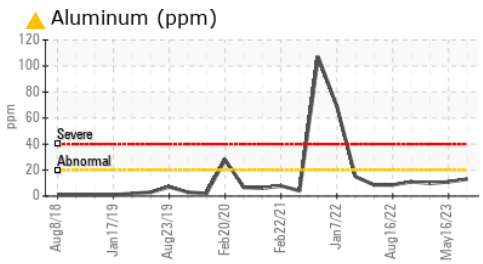
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

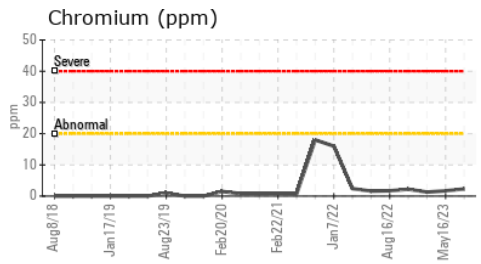
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.6	**16.2**	16.3	15.8

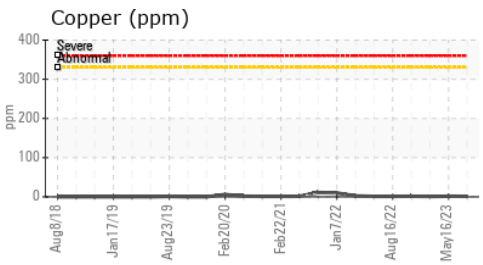
GRAPHS

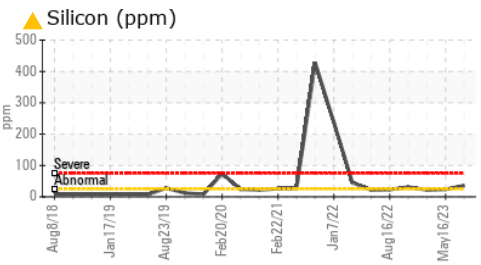


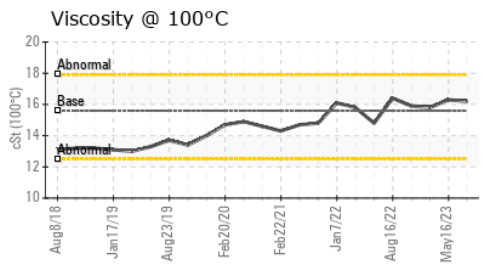


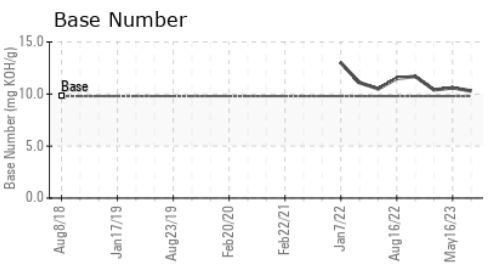












Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0086458 **Received** : 28 Aug 2023
Lab Number : 05935949 **Diagnosed** : 29 Aug 2023
Unique Number : 10621220 **Diagnostician** : Sean Felton
Test Package : MOB 1 (Additional Tests: TBN)

Certificate L2367

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)

Kemp Quarries - Kemp Stone - Fairland
18350 S 590 Rd
Fairland, OK
US 74343
Contact:
fairland@kempstone.com
T:
F:

Report Id: KEMFAI [WUSCAR] 05935949 (Generated: 08/29/2023 11:22:50) Rev: 1

Submitted By: