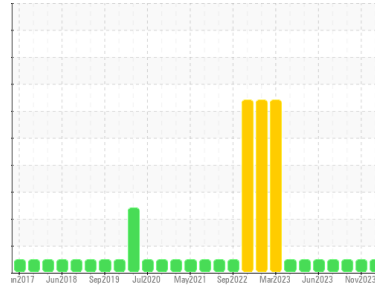


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
KEMP QUARRIES / BCS - GRAVETTE [68277]
Machine Id
WL117
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample. (Customer Sample Comment: Pm3)

Wear

All component wear rates are normal.

Contamination

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	PCA0069794	PCA06033099	PCA0086538
Sample Date	Client Info	06 Feb 2024	14 Nov 2023	14 Sep 2023
Machine Age	hrs	20058	5854	5691
Oil Age	hrs	5691	0	5691
Oil Changed	Client Info	Changed	N/A	Changed
Sample Status		NORMAL	NORMAL	NORMAL

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	16	18	15
Chromium	ppm ASTM D5185m >20	<1	<1	0
Nickel	ppm ASTM D5185m >4	0	<1	0
Titanium	ppm ASTM D5185m	0	<1	0
Silver	ppm ASTM D5185m >3	0	0	0
Aluminum	ppm ASTM D5185m >20	4	3	1
Lead	ppm ASTM D5185m >40	1	<1	0
Copper	ppm ASTM D5185m >330	0	<1	<1
Tin	ppm ASTM D5185m >15	0	<1	0
Vanadium	ppm ASTM D5185m	<1	0	0
Cadmium	ppm ASTM D5185m	0	<1	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	<1	3	0
Barium	ppm ASTM D5185m 0	0	11	12
Molybdenum	ppm ASTM D5185m 60	68	63	65
Manganese	ppm ASTM D5185m 0	<1	<1	0
Magnesium	ppm ASTM D5185m 1010	1137	982	1049
Calcium	ppm ASTM D5185m 1070	1343	1120	1201
Phosphorus	ppm ASTM D5185m 1150	1186	974	1076
Zinc	ppm ASTM D5185m 1270	1416	1217	1273
Sulfur	ppm ASTM D5185m 2060	3210	3319	3523

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	11	8	9
Sodium	ppm ASTM D5185m	2	<1	9
Potassium	ppm ASTM D5185m >20	2	2	11

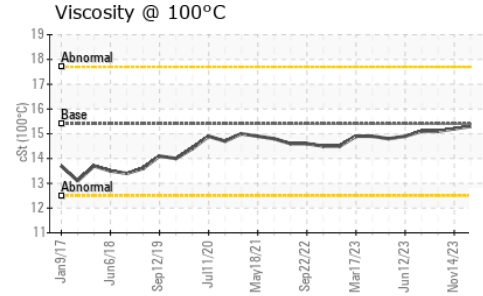
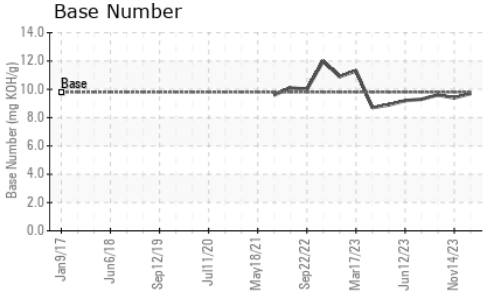
INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	0.9	0.8	0.6
Nitration	Abs/cm *ASTM D7624 >20	7.5	7.2	6.7
Sulfation	Abs/.1mm *ASTM D7415 >30	20.0	19.8	19.2

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	15.2	15.1	14.7
Base Number (BN)	mg KOH/g ASTM D2896 9.8	9.7	9.4	9.6

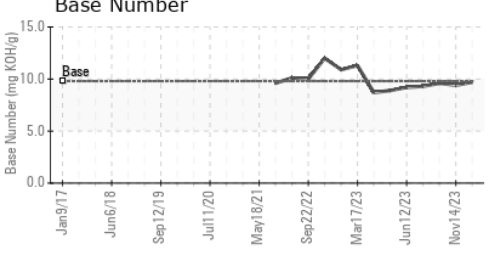
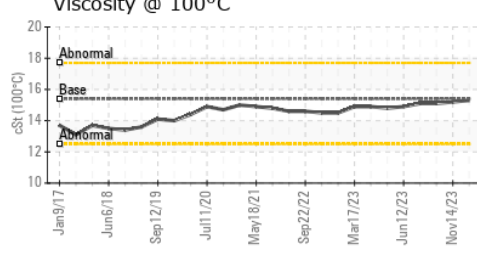
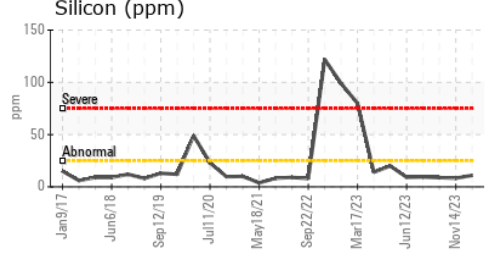
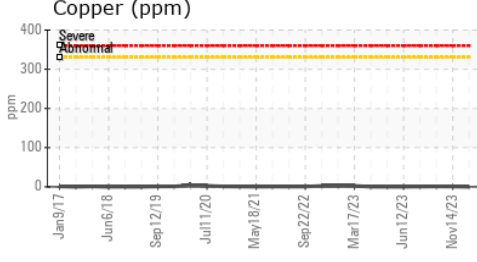
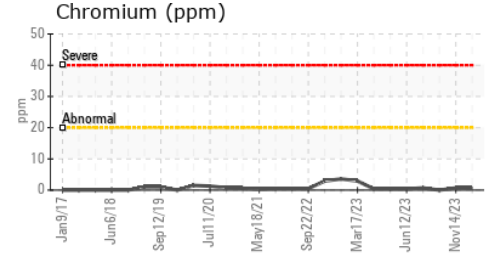
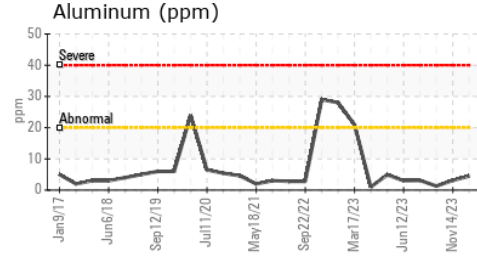
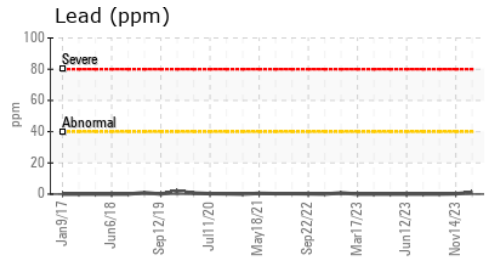
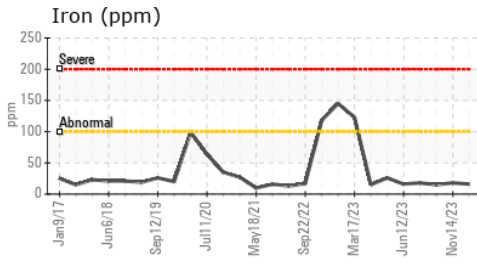
OIL ANALYSIS REPORT



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

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.4	15.3	15.2	15.1

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0069794 **Received** : 26 Feb 2024
Lab Number : **06100654** **Tested** : 27 Feb 2024
Unique Number : 10898884 **Diagnosed** : 28 Feb 2024 - Sean Felton
Test Package : MOB 1 (Additional Tests: TBN)

Kemp Quarries - Benton County Stone - Gravette
 15100 N Hwy 59
 Sulphur Springs, AR
 US 72768
 Contact:

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)

gravette@bentoncountystone.com

T:

F: