



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
KEMP QUARRIES / BCS - GRAVETTE [68022]
Machine Id
WL110
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. (Customer Sample Comment: Pm2)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PCA0108904	PCA0085715	PCA0062404
Sample Date		Client Info		13 Feb 2024	10 May 2023	29 Aug 2022
Machine Age	hrs	Client Info		28314	27770	27477
Oil Age	hrs	Client Info		544	27770	27477
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	18	65	56
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m	>2	0	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>25	3	3	5
Lead	ppm	ASTM D5185m	>40	2	2	3
Copper	ppm	ASTM D5185m	>330	2	12	19
Tin	ppm	ASTM D5185m	>15	0	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

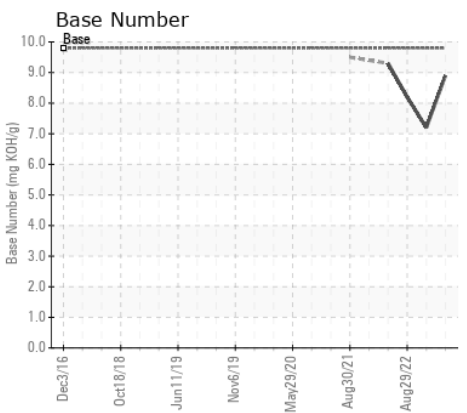
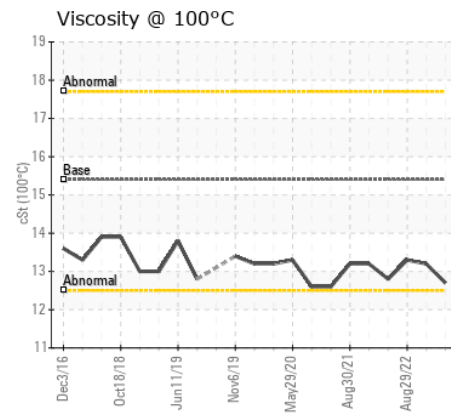
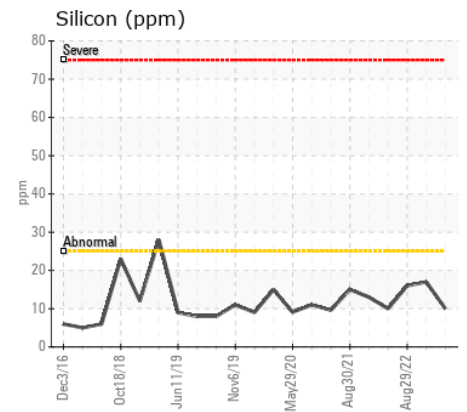
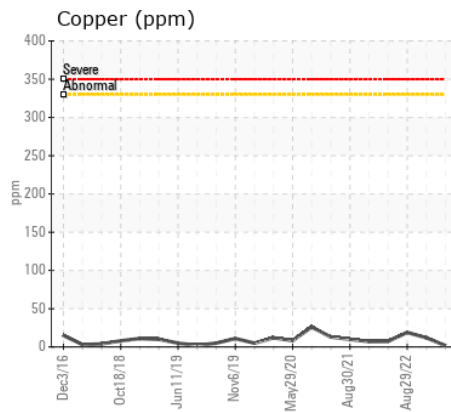
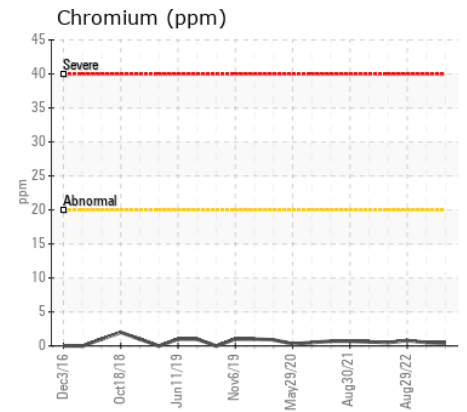
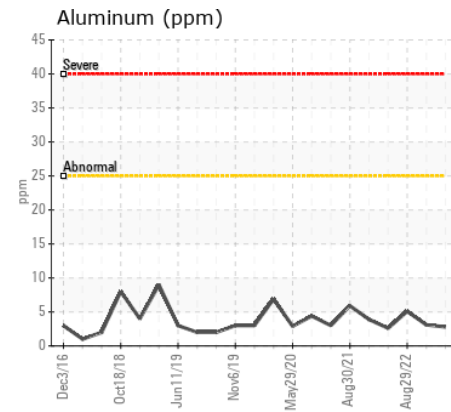
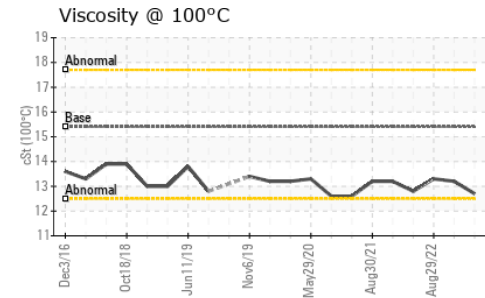
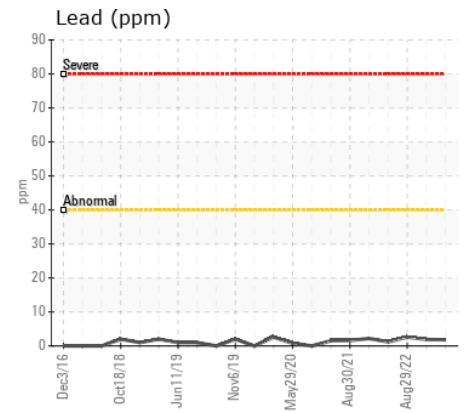
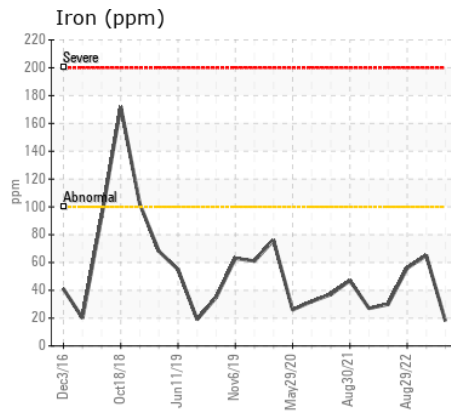
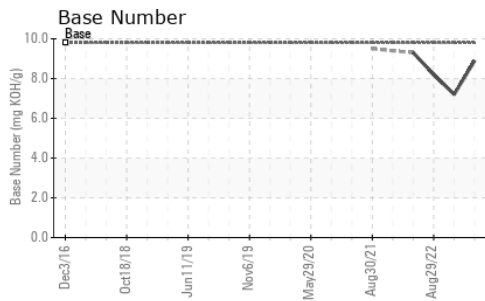
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	10	17	16
Potassium	ppm	ASTM D5185m	>20	1	5	4
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0.8	0.8
Nitration	Abs/cm	*ASTM D7624	>20	6.6	8.7	8.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.1	19.3	20.0
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

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.

Sodium	ppm	ASTM D5185m		5	13	10
Boron	ppm	ASTM D5185m	0	0	1	3
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	64	65	63
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	1027	1013	916
Calcium	ppm	ASTM D5185m	1070	1223	1251	1147
Phosphorus	ppm	ASTM D5185m	1150	1147	1065	1094
Zinc	ppm	ASTM D5185m	1270	1341	1318	1269
Sulfur	ppm	ASTM D5185m	2060	3288	3732	3147
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.9	14.2	15.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.9	7.2	8.2
Visc @ 100°C	cSt	ASTM D445	15.4	12.7	13.2	13.3



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0108904 **Received** : 26 Feb 2024
Lab Number : 06100656 **Tested** : 27 Feb 2024
Unique Number : 10898886 **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:
 gravette@bentoncountystone.com

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)

T:
F: