



Area
KEMP QUARRIES / BCS - GRAVETTE [66776]
Machine Id
WL125
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

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. We recommend an early resample to monitor this condition. (Customer Sample Comment: Pm4)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PCA0069835	PCA0086355	PCA0086738
Sample Date		Client Info		02 Jan 2024	16 Jun 2023	12 Jan 2023
Machine Age	hrs	Client Info		39902	39423	38868
Oil Age	hrs	Client Info		0	39423	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				SEVERE	NORMAL	NORMAL

WEAR

Cylinder, crank, or cam shaft wear is indicated.

Iron	ppm	ASTM D5185m	>100	▲ 105	19	15
Chromium	ppm	ASTM D5185m	>20	5	<1	<1
Nickel	ppm	ASTM D5185m	>2	2	0	<1
Titanium	ppm	ASTM D5185m	>2	3	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	▲ 82	1	0
Lead	ppm	ASTM D5185m	>40	10	3	1
Copper	ppm	ASTM D5185m	>330	20	3	2
Tin	ppm	ASTM D5185m	>15	2	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

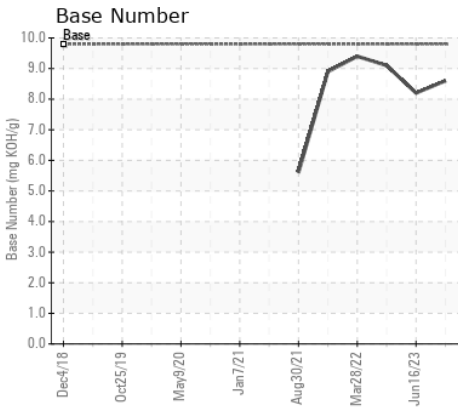
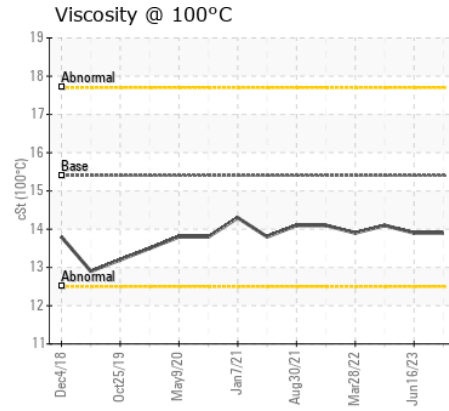
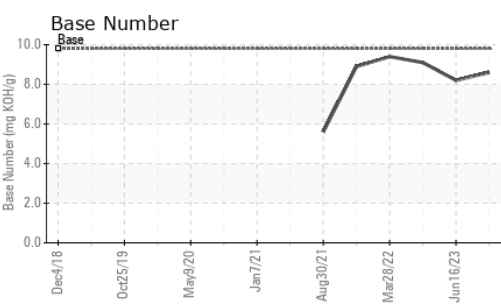
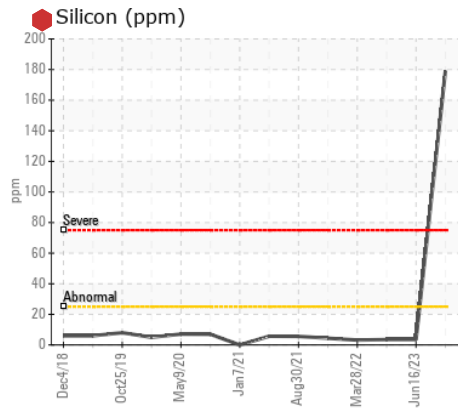
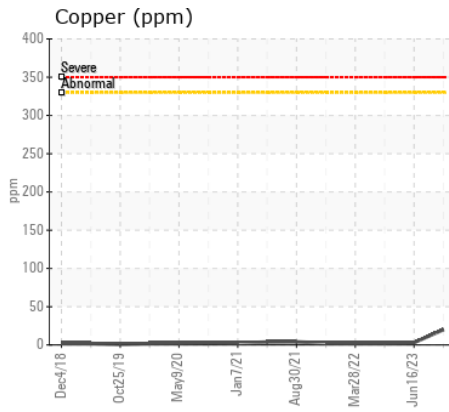
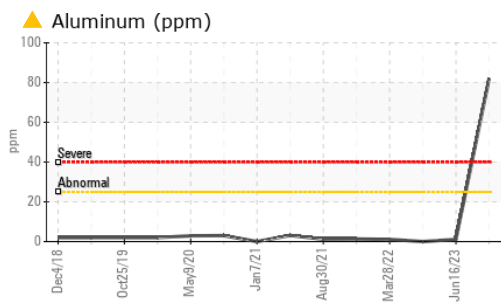
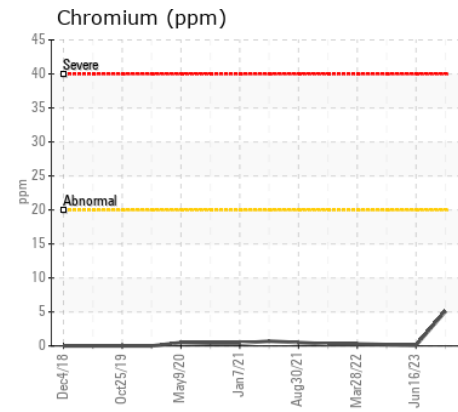
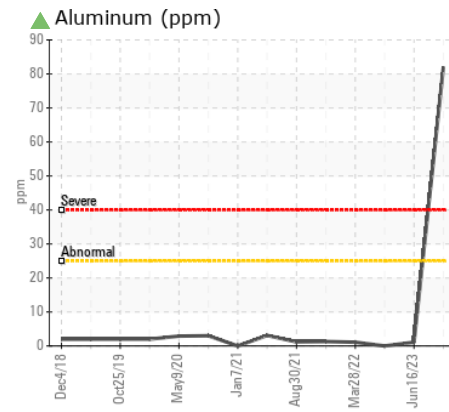
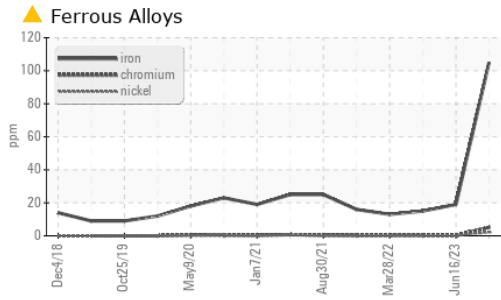
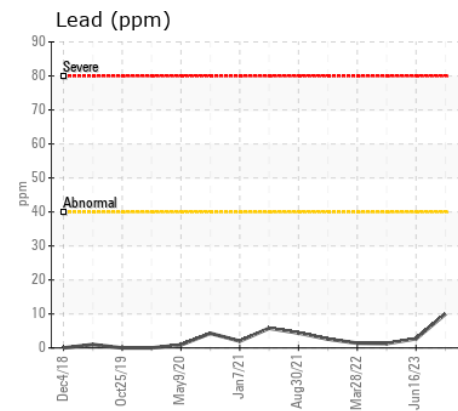
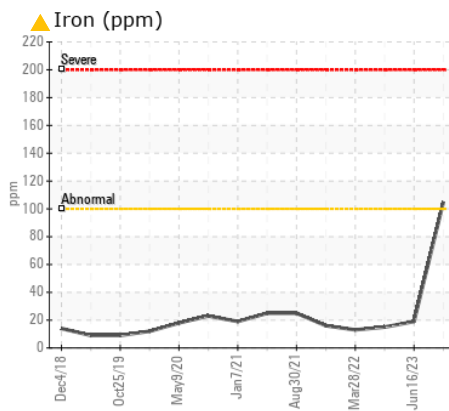
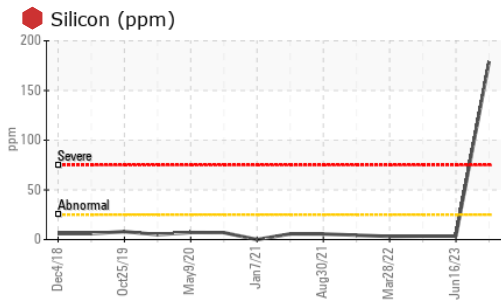
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

Silicon	ppm	ASTM D5185m	>25	◆ 179	4	4
Potassium	ppm	ASTM D5185m	>20	24	1	1
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	1	1.1	0.6
Nitration	Abs/cm	*ASTM D7624	>20	6.8	7.2	7.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.0	20.3	18.3
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 oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m		18	0	1
Boron	ppm	ASTM D5185m	0	0	2	1
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	69	63	59
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	1001	928	896
Calcium	ppm	ASTM D5185m	1070	1130	1118	1062
Phosphorus	ppm	ASTM D5185m	1150	1019	1016	997
Zinc	ppm	ASTM D5185m	1270	1249	1257	1203
Sulfur	ppm	ASTM D5185m	2060	3207	3408	2961
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.8	15.5	13.3
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.6	8.2	9.1
Visc @ 100°C	cSt	ASTM D445	15.4	13.9	13.9	14.1



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0069835 **Received** : 10 Jan 2024
Lab Number : 06057298 **Diagnosed** : 12 Jan 2024
Unique Number : 10823247 **Diagnostician** : 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)