



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
KEMP QUARRIES / BCS - STILWELL [71670]
Machine Id
LFT013
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. (Customer Sample Comment: Changed fluid and filters)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PCA0126254	PCA0086453	PCA0062422
Sample Date		Client Info		17 Jun 2024	21 Aug 2023	04 Aug 2022
Machine Age	hrs	Client Info		4046	3832	2970
Oil Age	hrs	Client Info		4046	3832	3520
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	>250	17	16	21
Chromium	ppm	ASTM D5185m	>10	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	1	<1	<1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>35	5	6	4
Lead	ppm	ASTM D5185m	>100	<1	0	<1
Copper	ppm	ASTM D5185m	>60	3	3	4
Tin	ppm	ASTM D5185m	>5	<1	<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

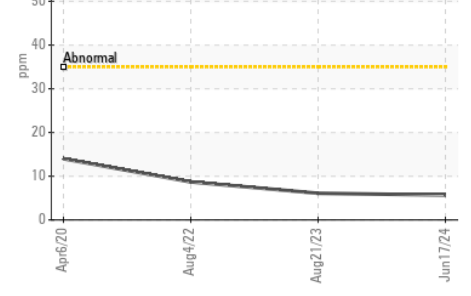
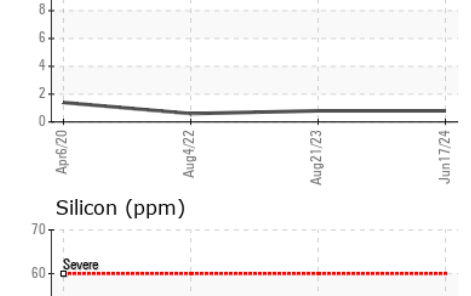
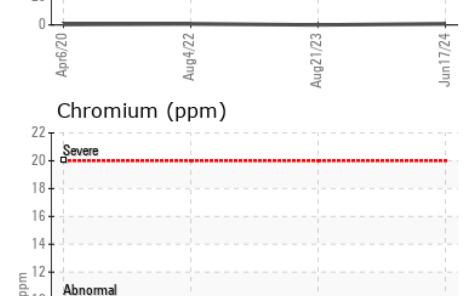
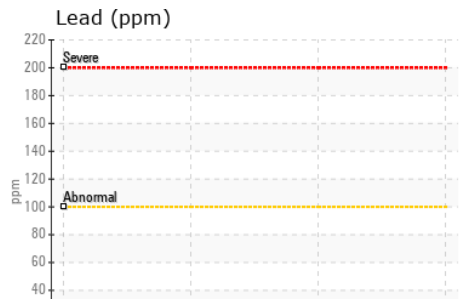
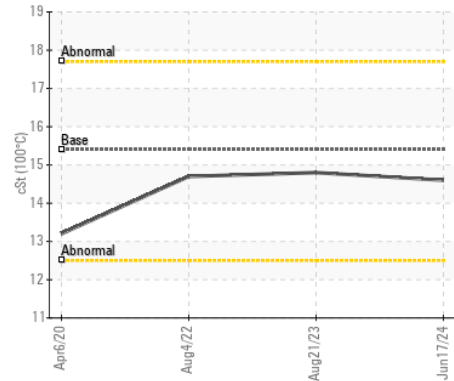
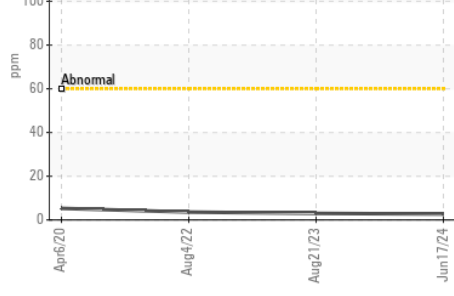
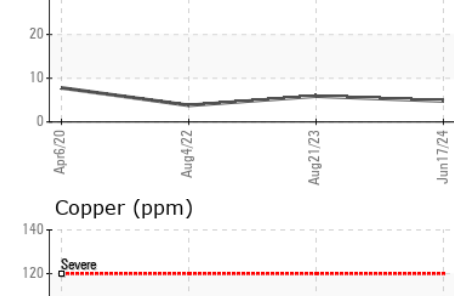
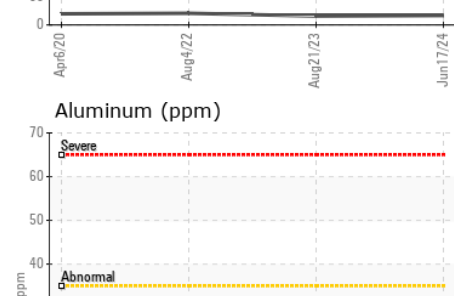
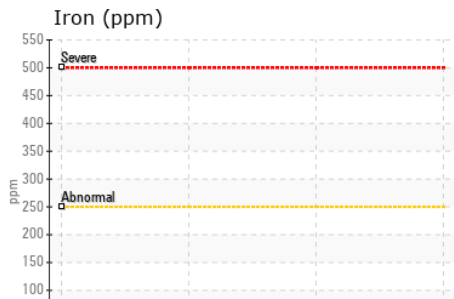
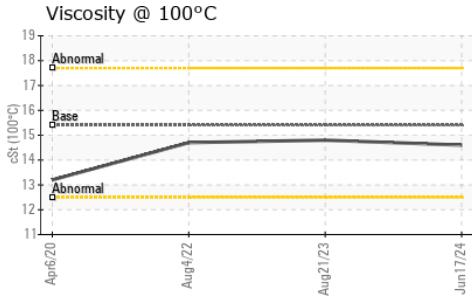
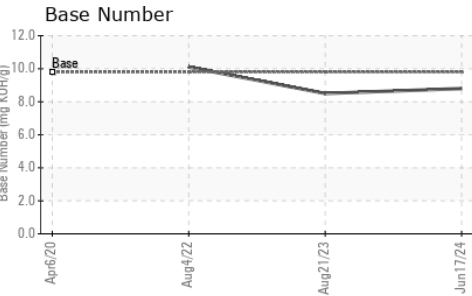
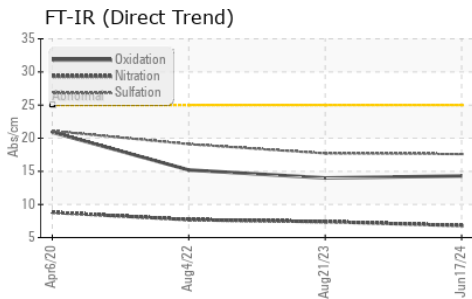
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>35	6	6	9
Potassium	ppm	ASTM D5185m	>20	2	0	<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	0.2	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	6.8	7.4	7.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.6	17.7	19.1
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		2	1	4
Boron	ppm	ASTM D5185m	0	2	2	9
Barium	ppm	ASTM D5185m	0	<1	0	0
Molybdenum	ppm	ASTM D5185m	60	75	68	63
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	1069	1062	983
Calcium	ppm	ASTM D5185m	1070	1210	1184	1109
Phosphorus	ppm	ASTM D5185m	1150	1063	1154	1102
Zinc	ppm	ASTM D5185m	1270	1351	1411	1289
Sulfur	ppm	ASTM D5185m	2060	3017	4099	3457
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.3	14.0	15.2
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.8	8.5	10.1
Visc @ 100°C	cSt	ASTM D445	15.4	14.6	14.8	14.7



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0126254 **Received** : 02 Jul 2024
Lab Number : 06225782 **Tested** : 03 Jul 2024
Unique Number : 11109275 **Diagnosed** : 03 Jul 2024 - Don Baldrige
Test Package : MOB 1 (Additional Tests: TBN)

Kemp Quarries - Benton County Stone - Stillwell
 463917 Highway 100
 Bunch, OK
 US 74931
 Contact:

To discuss this sample report, contact Customer Service at 1-800-237-1369.

stilwell@bentoncountystone.com

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

T:

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

F: