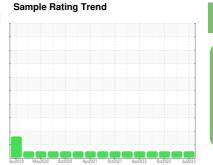


OIL ANALYSIS REPORT





NORMAL

Area **KEMP QUARRIES / PRYOR STONE [64200]** Machine Id **WL133** Component **Diesel Engine** Fluid

PETRO CANADA DURON SHP 15W40 (--- GAL)

N SHP 15W40 (-	GAL)	vov2019 Ma	y2020 Oct2020 Apr202	1 Oct2021 Apr2022 Oct20	ZZ Jul2023	
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0084032	PCA0083912	PCA004898
Sample Date		Client Info		03 Jul 2023	27 Mar 2023	07 Oct 2022
Machine Age	hrs	Client Info		34308	35969	35349
Oil Age	hrs	Client Info		563	620	522
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	.S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	20	32	32
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m	>2	0	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	1	1	1
Lead	ppm	ASTM D5185m	>40	2	0	4
Copper	ppm	ASTM D5185m	>330	4	5	8
Tin	ppm	ASTM D5185m	>15	<1	0	<1
Vanadium	ppm	ASTM D5185m		0	<1	<1
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	<1	0	1
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	60	64	60
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	910	1010	952
Calcium	ppm	ASTM D5185m	1070	1047	1113	1143
Phosphorus	ppm	ASTM D5185m	1150	975	1019	1037
Zinc	ppm	ASTM D5185m	1270	1163	1318	1256
Sulfur	ppm	ASTM D5185m	2060	2942	3295	3261
CONTAMINAN	ITS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	5	7	15
Sodium	ppm	ASTM D5185m		0	<1	0
Potassium	nnm	ASTM D5185m	<u>>20</u>	1	<1	2
Folassium	ppm	AGTIM DOTOSIII	220	•		
INFRA-RED	ррпп	method	limit/base	current	history1	
INFRA-RED	%					
INFRA-RED Soot %		method	limit/base	current	history1	history2
INFRA-RED Soot % Nitration	%	method *ASTM D7844	limit/base >3	current 1.7	history1 1.9	history2 2.2
INFRA-RED Soot % Nitration	% Abs/cm Abs/.1mm	method *ASTM D7844 *ASTM D7624 *ASTM D7415	limit/base >3 >20	current 1.7 7.3	history1 1.9 8.2	history2 2.2 8.6 23.4
INFRA-RED Soot % Nitration Sulfation	% Abs/cm Abs/.1mm	method *ASTM D7844 *ASTM D7624 *ASTM D7415	limit/base >3 >20 >30	current 1.7 7.3 20.3	history1 1.9 8.2 20.6	history2 2.2 8.6

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. (Customer Sample Comment: Pm2 performed. All oil samples taken. Engine oil, transmission oil, and all filters changed.)

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.

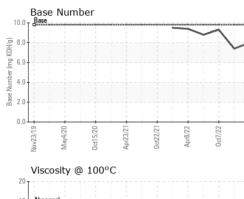


cSt (100°C)

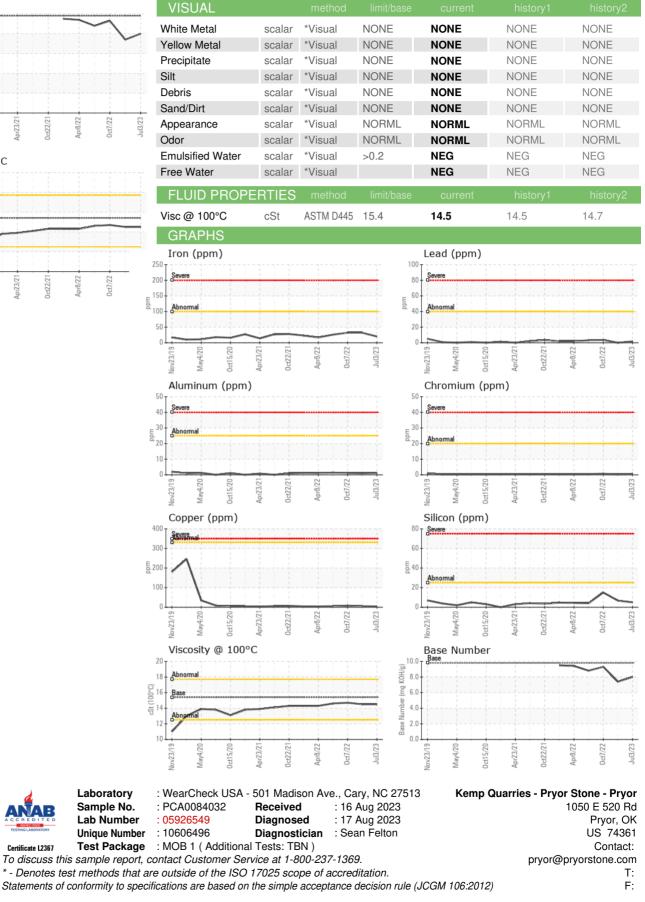
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OIL ANALYSIS REPORT



Apr8/22



Certificate L2367