

NORMAL WEAR NORMAL CONTAMINATION FLUID CONDITION NORMAL



KEMP QUARRIES / PRYOR STONE [68434]

Component Diesel Engine

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

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Resample at the next service interval to monitor. (Customer Sample Comment: Pm1 performed. All oil samples taken. Engine oil, engine oil filters, fuel, air, and cabin air filters changed)	Sample Number		Client Info		PCA0086331	PCA0084308	PCA0084551
	Sample Date		Client Info		19 Feb 2024	03 Nov 2023	24 Jul 2023
	Machine Age	hrs	Client Info		14934	14433	13895
	Oil Age	hrs	Client Info		501	538	13895
	Filter Age	hrs	Client Info		501	538	0
	Oil Changed		Client Info		Changed	Changed	Changed
	Filter Changed		Client Info		Changed	Changed	Changed
	Sample Status				NORMAL	NORMAL	NORMAL
						47	4.0
WEAR All component wear rates are normal.	Iron	ppm	ASTM D5185m		22	17	16
	Chromium	ppm	ASTM D5185m		<1	<1	<1
	Nickel	ppm	ASTM D5185m		<1	0	0
	Titanium	ppm	ASTM D5185m		0	<1	0
	Silver	ppm	ASTM D5185m		0	0	0
	Aluminum	ppm	ASTM D5185m		2	1	1
	Lead	ppm	ASTM D5185m		1	1	0
	Copper	ppm	ASTM D5185m		<1	<1	0
	Tin	ppm	ASTM D5185m	>15	<1	<1	0
	Vanadium	ppm	ASTM D5185m	NONE	0	0	0
	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
CONTAMINATION	Silicon	ppm	ASTM D5185m	>25	5	5	5
CONTRAINTATION	Potassium	ppm	ASTM D5185m		<1	1	<1
There is no indication of any contamination in the oil.	Fuel	le le	WC Method	>5	<1.0	<1.0	<1.0
	Water		WC Method		NEG	NEG	NEG
	Glycol		WC Method		NEG	NEG	NEG
	Soot %	%	*ASTM D7844	>3	0.6	0.6	0.6
	Nitration	Abs/cm	*ASTM D7624	>20	7.2	7.2	7.0
	Sulfation	Abs/.1mm	*ASTM D7415	>30	19.2	19.7	19.0
	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	Sodium	ppm	ASTM D5185m		2	2	1
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.	Boron	ppm	ASTM D5185m		1	0	2
	Barium	ppm	ASTM D5185m		0	0	0
	Molybdenum	ppm	ASTM D5185m		66	62	61
	Manganese	ppm	ASTM D5185m		<1	<1	<1
	Magnesium	ppm	ASTM D5185m		1047	982	1009
	Calcium	ppm	ASTM D5185m		1180	1074	1137
	Phosphorus	ppm	ASTM D5185m		1173	1066	1102
	Zinc	ppm	ASTM D5185m	1270	1332	1303	1337
	Sulfur	ppm	ASTM D5185m		3641	3150	3936

Oxidation

Visc @ 100°C cSt

Abs/.1mm *ASTM D7414 >25

ASTM D445 15.4

Base Number (BN) mg KOH/g ASTM D2896 9.8

14.9

8.6

13.1

14.4

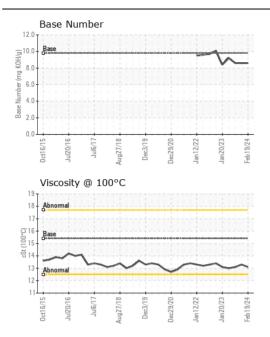
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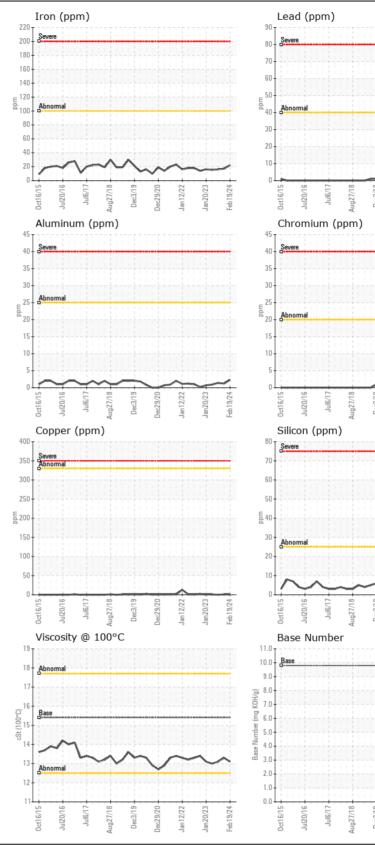
13.1

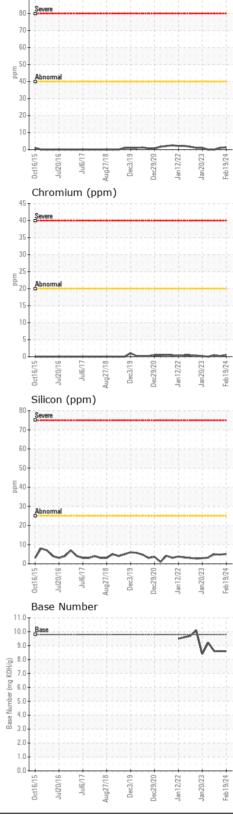
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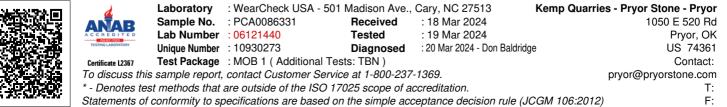
8.6

13.3









\$5