

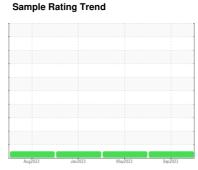
OIL ANALYSIS REPORT



KEMP QUARRIES / BCS - GRAVETTE [66575] **GEN026**

Component **Diesel Engine**

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





DIAGNOSIS

Recommendation

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

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

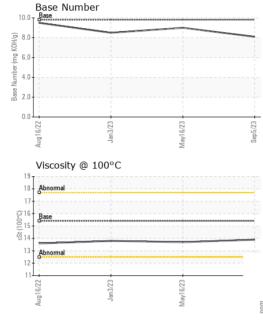
Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

	•	Aug202	2 Jan2023	May2023 Se	p2023	
SAMPLE INFOR	RMATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0037710	PCA0085738	PCA008670
Sample Date		Client Info		05 Sep 2023	16 May 2023	03 Jan 2023
Machine Age	hrs	Client Info		6014	5492	4847
Oil Age	hrs	Client Info		5369	5492	4847
Oil Changed		Client Info		Changed	N/A	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINA	ΓΙΟΝ	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METAI	_S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	15	11	11
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm		>25	3	0	0
Lead	ppm	ASTM D5185m	>40	2	2	2
Copper	ppm	ASTM D5185m	>330	4	4	3
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m	7.0	0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	0	2	0
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	62	65	61
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	1039	960	925
Calcium	ppm	ASTM D5185m	1070	1155	1123	1076
Phosphorus	ppm	ASTM D5185m	1150	1056	1074	1016
Zinc	ppm	ASTM D5185m	1270	1294	1313	1240
Sulfur	ppm	ASTM D5185m	2060	3559	3474	2896
CONTAMINA	NTS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	4	2	3
Sodium	ppm	ASTM D5185m		3	<1	3
Potassium	ppm	ASTM D5185m	>20	0	1	1
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.5	0.4	0.3
Nitration	Abs/cm	*ASTM D7624	>20	9.4	9.5	9.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.8	20.4	20.0
FLUID DEGRA	DATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.0	18.0	18.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.1	9.0	8.5



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VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
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
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPE	RTIFS	method	limit/base	current	historv1	historv2

	I LOID I HOI L		motriod	111111111111111111111111111111111111111	.000	Current	History	Historyz
	isc @ 100°C	cSt	ASTM D445	15.4		13.9	13.7	13.8
	GRAPHS							
250 -	Iron (ppm)				100 T -	.ead (ppm)		
200 -	Severe				1	Severe		
					E 60-			
돌 ¹⁵⁰ -	Abnormal				40-	Abnormal		
50-					20 -			
0 L	Jan3/23 +		3/23	Sep5/23	07	4	Jan3/23 -	lay16/23 -
	Aug16/22 Jan3/23		May16/23	Sept	Aug16/22	2 20 20	Jan	May16/23 Sep5/23
50 -	Aluminum (ppm)				50 T -	Chromium (p	pm)	
40 -	Severe				1	Severe		
_∈ 30 -	Abnormal				E 30 -			
돌 ³⁰ -					E 30 - 20 - 6	Abnormal		
10-					10-			
0.1	ug16/22 +		6/23	Sep5/23	0 1	1	Jan3/23 J	lay16/23 -
	Aug16/22 Jan3/23		May16/23	Sep	Aua16/27		Jan	May16/23 Sep5/23
400 T	Copper (ppm)				80 T 3	Silicon (ppm) Severe		
300 -	Severenal				60 -	1		
틆 200 -					E 40 -			
100					20	Abnormal		
					0			
	Aug16/22 4		May16,23 -	Sep5/23	Aug16/22	4 4 5 5	Jan3/23 -	May16/23 -
	A		May1	Sep			Jan	May1
20 -	Viscosity @ 100°C	: 			10.0	Base Number		
18-	Abnormal				Base Number (mg KOH/g)			
() ₀ 16-	Base				E 6.0			
	Abnormal				qun 4.0			
12 - 10					2.0 - 0.0			
	Aug16/22 - Jan3/23 -		May16,23 -	Sep5/23	Aug16/22		Jan3/23 -	May16/23 -
	Aug		Мау	Sei	Aug	2	\ ∃	May





Report Id: KEMFAI [WUSCAR] 05952075 (Generated: 09/20/2023 06:35:59) Rev: 1

Laboratory Sample No. Lab Number Unique Number : 10648034

: PCA0037710 : 05952075

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 14 Sep 2023 Diagnosed

: 19 Sep 2023 Diagnostician : Jonathan Hester

Test Package : MOB 1 (Additional Tests: TBN)

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)

Kemp Quarries - Kemp Stone - Fairland

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Contact: FAIRLAND NOTIFICATIONS

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