

## **OIL ANALYSIS REPORT**

#### Area KEMP QUARRIES / NEOSHO [67516] Machine Id WL132

Component Hydraulic System Fluid PETRO CANADA DURATRAN (--- GAL)

### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor. ( Customer Sample Comment:  $\mathsf{PM-4}$  changed fluid and filters )

#### Wear

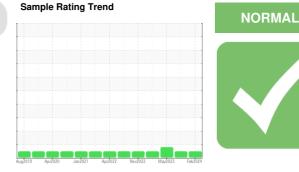
All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the component.

#### Fluid Condition

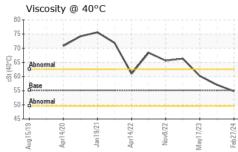
The condition of the fluid is acceptable for the time in service.



SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0086542	PCA0086539	PCA0085699
Sample Date		Client Info		27 Feb 2024	14 Sep 2023	17 May 2023
Machine Age	hrs	Client Info		3743	3524	3354
Oil Age	hrs	Client Info		3743	3524	3354
Oil Changed		Client Info		Changed	N/A	N/A
Sample Status				NORMAL	NORMAL	ATTENTION
CONTAMINAT	ION	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	2	1	<1
Chromium	ppm	ASTM D5185m	>10	0	0	0
Nickel	ppm	ASTM D5185m	>10	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>10	<1	3	<1
Lead	ppm	ASTM D5185m	>10	0	0	<1
Copper	ppm	ASTM D5185m	>75	<1	<1	<1
Tin	ppm	ASTM D5185m	>10	<1	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	110	83	97	59
Barium	ppm	ASTM D5185m	0.0	0	0	0
Molybdenum	ppm	ASTM D5185m	0.0	<1	<1	<1
Manganese	ppm	ASTM D5185m	1	0	0	0
Magnesium	ppm	ASTM D5185m	13	0	20	15
Calcium	ppm	ASTM D5185m	3610	2548	2934	2069
Phosphorus	ppm	ASTM D5185m	1192	846	979	794
Zinc	ppm	ASTM D5185m	1455	948	1239	1029
Sulfur	ppm	ASTM D5185m	2641	2478	3290	2691
CONTAMINAN	ITS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	8	9	6
Sodium	ppm	ASTM D5185m		4	<1	0
Potassium	ppm	ASTM D5185m	>20	0	2	1
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	>0.1	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG



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	FLUID PROP	ERTIES	method	limit/base	current	history1	history2
	Visc @ 40°C	cSt	ASTM D445	55.14	54.8	57.1	60.2
$\sim$	SAMPLE IMA	GES	method	limit/base	current	history1	history2
22	Color				no image	no image	no image
Apri 7.42 Nov6/22 May/1/23 Feb27/24	Bottom				no image	no image	no image
	GRAPHS						1
	Iron (ppm)				Lead (ppm)		
	30 -				25 - Severe		
	a 20 - Abnormal			mdd	20-		
					10 - Abnormal		
					5		
	Aug15/19 Apr14/20	Apr14/22 -	Nov8/22 -	Feb27/24 -	Aug15/19-	Jan 19/21	May17/23 -
	aluminum (ppm)		M ar	Fel	ک¶ Chromium (		Mar Mar
	<sup>30</sup>				<sup>30</sup> I		
	25				25 - Sevele 20 -		
	E 15- 10- Abnormal			Шdd	Abserval		
	10				5		
	321 20 12 12	122	122	724	/19	/22	/23
	Aug15/19 Apr14/20 Jan19/21	Apr14/22	Nov8/22 May17/23	Feb27/24	Aug15/19 Apr14/20	Jan 19/21 Apr14/22	May17/23
	Copper (ppm)				Silicon (ppm	)	
	200 - Severe	_			50 - Severe		
	150 -			udd	40 - 30 -		
	Abnormal				20 - Abnormal		
	Aug15/19 Apr14/20	Apr14/22	Nov8/22 May17/23	Feb27/24	Aug15/19 Apr14/20	Jan 19/21 Apr14/22	May17/23
	ع ح ج Viscosity @ 40°C		2 ž	£	a a Additives	Ϋ́ Ϋ́	ž
	<sup>80</sup> 75			30	00 calcium		$\wedge$
	70	$\sum$		20	zinc	us	/
	G 65 Abnormal 5 60 55 Base	$\sim$	/	톨 15 10	and the second se		10
	55 - Abnormal			and a second period of the second period of the second period of the second period per	00-		Jan
	45 6 1/2	1/22	3/22	1/24	0	9/21	1/23 -
	Aug15/19 Apr14/20 Jan19/21	Apr14/22	Nov8/22 May17/23	Feb27/24	Aug15/19 Apr14/20	Jan 19/21 Apr14/22	May17/23
Laboratory Sample No. Lab Number		Rece Teste	eived :1 ed :1	1 Mar 2024 2 Mar 2024	-	Quarries - Kemp 1914	8 Ingersol La Neosho, M
Unique Number 12367 Test Package		Diagr	nosed :1	3 Mar 2024 - Do	n Baldridge		US 648 Contac
	, contact Customer Ser					neosho@	