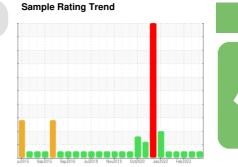


## **OIL ANALYSIS REPORT**





NORMAL

KEMP QUARRIES / PRYOR STONE [65253]

Component **Diesel Engine** Fluid

**OHT078** 

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

		no ette entre	line it /lease		India to serve of a	
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0084242	PCA0084000	PCA0070556
Sample Date		Client Info		11 Aug 2023	22 May 2023	17 Feb 2023
Machine Age	hrs	Client Info		34182	33716	33140
Oil Age	hrs	Client Info		466	576	687
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	34	34	53
Chromium	ppm	ASTM D5185m	>20	<1	0	2
Nickel	ppm	ASTM D5185m	>2	1	0	2
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	3	7	1
Lead	ppm	ASTM D5185m	>40	0	0	2
Copper	ppm	ASTM D5185m	>330	3	4	57
Tin	ppm	ASTM D5185m	>15	<1	0	1
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	0	6	2	3
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	69	68	58
Manganese	ppm	ASTM D5185m	0	<1	0	1
Magnesium	ppm	ASTM D5185m	1010	1057	1117	902
Calcium	ppm	ASTM D5185m	1070	1200	1283	1083
Phosphorus	ppm	ASTM D5185m	1150	1147	1154	891
Zinc	ppm	ASTM D5185m	1270	1406	1494	1227
Sulfur	ppm	ASTM D5185m	2060	3929	3984	2682
CONTAMINAN	ITS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	4	4	6
Sodium	ppm	ASTM D5185m		3	7	23
Potassium	ppm	ASTM D5185m	>20	0	0	2
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	1.4	1.2	1.2
Nitration	Abs/cm	*ASTM D7624	>20	10.3	11.4	11.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.3	23.1	24.3
FLUID DEGRAI	DATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.2	20.7	23.3
	mg KOH/g	ASTM D2896	9.8	9.1	9.6	7.2
Base Number (BN)	IIIQ NOTI/U	AGTIVI D2030	0.0	3.1	0.0	1.6

### 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

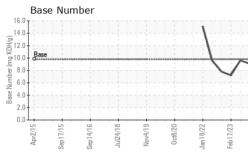
There is no indication of any contamination in the oil.

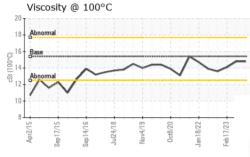
#### Fluid Condition

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



# **OIL ANALYSIS REPORT**





	VISUAL		method	limit/base				istory <sup>-</sup>			story2
1	White Metal	scalar	*Visual	NONE	NONE		NO			NO	
1	Yellow Metal	scalar	*Visual	NONE	NONE		NO			NOI	
17	Precipitate	scalar	*Visual	NONE	NONE		NO			NON	
$\checkmark$	Silt	scalar	*Visual	NONE	NONE					NOI	
	Debris	scalar	*Visual	NONE	NONE		NONE			NONE	
	_ Sand/Dirt	scalar	*Visual	NONE	NONE		NONE		NONE		
22 -	Appearance	scalar	*Visual	NORML	NORML		NORML		NORML		
Jan 18/22 Feb 17/23	Odor	scalar	*Visual	NORML	NORML			RML		NOF	
	Emulsified Water	scalar	*Visual	>0.2	NEG	•	NE			NEC	
	Free Water	scalar	*Visual	20.L	NEG		NE			NEC	
	FLUID PROPE	_	method	limit/base	currei	nt		istory <sup>-</sup>			story2
	Visc @ 100°C	cSt	ASTM D445	15.4	14.8		14.			14.1	
$\sim$	GRAPHS				-						
	Iron (ppm)				Lead (pp	m)					
3 12	250 Severe				Severe						
Jan 18/22 Feb 17/23	200			60							
Ξ, Ξ	B 150 100 - Abnormal		٨	4	Aburnet						
		~	14-	20							
		~~	~			~	-	$\sim$	$\sim$		
	Apr2/15 - Sep17/15 - Sep14/16 -	Nov4/19	0ct8/20 - Jan 18/22 -	Feb17/23	Apr2/15 -	Sep 14/16 -	Jul24/18 -	Nov4/19	0ct8/20 -	Jan 18/22 -	Feb17/23 -
	Ap Sep1 Sep1 Jul2	Nov	0c Jan1	Feb	Ap Sep1	Sep 1	Jul	Nov	00	Jan1	Feb 1
	Aluminum (ppm)				Chromiu	n (ppn	ר)				
	<sup>50</sup> 40 Severe			50	Severe			131			
				40							
	E 30 Abnormal			20	Abnormal						
	10		~~								
	Apr2/15 0 ep 17/15 ep	Nov4/19	0ct8/20 +		Apr2/15	4/16	4/18	4/19	0ct8/20	3/22	7/23
	Apr2/15 Sep17/15 Sep14/16	Nov4	0ct8/20 Jan 18/22	Feb17/23	Apr2/15	Sep14/16	Jul24/18	Nov4/19	Octĺ	Jan 18/22	Feb17/23
	Copper (ppm)				Silicon (p	pm)					
	1000		100100	80							
	800 -		A	60	0						
1	600		Α.	E 40	0						
	400 - Antestinal				Abnormal						
	200		1 V '	20					A	2	
		61	20-			16 -	18	19-	20	22	23 -
	Apr2/15 Sep17/15 Sep14/16	Nov4/19	0ct8/20 Jan 18/22	Feb17/23	Apr2/15 -	Sep 14/16	Jul24/18	Nov4/19	0ct8/20	Jan 18/22	Feb 17/23
	Viscosity @ 100°C		~		Base Numb					7	ш.
	20 18 Abnormal			20.0 (6)(HO) 15.0 Base Mumber 9.0 5.0							
			~	¥ 15.0	Deve					1	
	(5.00) 14 <del>3</del> 12 <del>Abnormal</del>	$\sim$	くく	ਸ਼ 10.0 ਸੂ	0 - Base				+		5
	<sup>83</sup> 12 10			N 5.0	0-						
	8			0.0	0					1	
	Apr2/15 Sep17/15 Sep14/16	Nov4/19	0ct8/20 Jan 18/22	Feb17/23	Apr2/15.	Sep14/16	Jul24/18	Nov4/19	0ct8/20	Jan 18/22	Feb17/23
	Sep Sep Jul2	No	Jan	Feb	Sep	Sep	Jul	No	00	Jan	Feb
	: WearCheck USA - : PCA0084242	Received	d : 25 .	nry, NC 27513 Aug 2023 Aug 2023	3 <b>Ke</b>	mp Qu	arrie	es - P		)50 E	<b>- Pryc</b> 520 R yor, O
aboratory ample No. ab Number aique Number	: <mark>05935207</mark> r : 10620478	Diagnos Diagnos	t <b>ician</b> : Dor	n Baldridge							
ample No. ab Number hique Number est Package	: 05935207 r : 10620478 e : MOB 1 ( Additional	Diagnos Tests: TE	t <b>ician</b> : Dor 3N)	n Baldridge						US C	7436 ontact
ample No. ab Number ique Number est Package mple report,	: <mark>05935207</mark> r : 10620478	Diagnost Tests: TE rice at 1-8	t <b>ician</b> : Dor 3N) 8 <i>00-237-136</i> 9	n Baldridge 9.				pryo	r@pr	US C	7436 ontact ne.cor T

