

# **OIL ANALYSIS REPORT**

Sample Rating Trend



# Machine Id 303463

#### Component Diesel Engine

Fluid PETRO CANADA DURON SHP 10W30 (--- QTS)

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

#### 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.

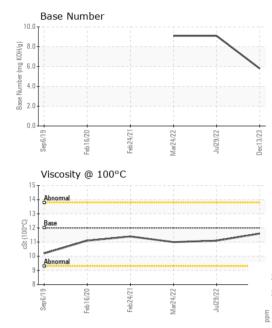
SAMPLE INFORM	<b>MATION</b>	method	limit/base	current	history1	history2	
Sample Number		Client Info		PCA0097344	PCA0071776	PCA0061050	
Sample Date		Client Info		13 Dec 2023	29 Jul 2022	24 Mar 2022	
Machine Age	mls	Client Info		194160	138211	120577	
Oil Age	mls	Client Info		37070	18593	9959	
Oil Changed		Client Info		Changed	Changed	Not Changd	
Sample Status				NORMAL	NORMAL	NORMAL	
CONTAMINATI	ON	method	limit/base	current	history1	history2	
Fuel		WC Method	>5	<1.0	<1.0	<1.0	
Water		WC Method	>0.2	NEG	NEG	NEG	
Glycol		WC Method	NEG		NEG	NEG	
WEAR METALS	S	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>100	65	24	14	
Chromium	ppm	ASTM D5185m	>20	2	<1	<1	
Nickel	ppm	ASTM D5185m	>4	2	0	<1	
Titanium	ppm	ASTM D5185m		24	<1	<1	
Silver	ppm	ASTM D5185m	>3	0	0	<1	
Aluminum	ppm	ASTM D5185m	>20	20	8	5	
Lead	ppm	ASTM D5185m	>40	0	0	<1	
Copper	ppm	ASTM D5185m	>330	2	3	4	
Tin	ppm	ASTM D5185m	>15	2	1	<1	
Antimony	ppm	ASTM D5185m					
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	2	7	8	11	
Barium	ppm	ASTM D5185m	0	0	0	0	
Molybdenum	ppm	ASTM D5185m	50	52	58	58	
Manganese	ppm	ASTM D5185m	0	1	<1	<1	
Magnesium	ppm	ASTM D5185m	950	939	887	964	
Calcium	ppm	ASTM D5185m	1050	1439	1118	1208	
Phosphorus	ppm	ASTM D5185m	995	1125	969	1064	
Zinc	ppm	ASTM D5185m	1180	1310	1157	1233	
Sulfur	ppm	ASTM D5185m	2600	3571	2809	2837	
CONTAMINAN	TS	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>25	7	9	9	
Sodium	ppm	ASTM D5185m		4	2	2	
Potassium	ppm	ASTM D5185m	>20	11	3	2	
INFRA-RED		method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	>3	1.2	0.6	0.3	
Nitration	Abs/cm	*ASTM D7624	>20	13.5	11.3	7.6	
Sulfation	Abs/.1mm	*ASTM D7415	>30	27.3	22.3	18.7	
FLUID DEGRAD	ATION	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	24.3	18.5	14.5	
Base Number (BN)	mg KOH/g	ASTM D2896		5.8	9.1	9.1	
2:08:22) Rev: 1	0 0				tion: BON BOB		

Report Id: MILLAN [WUSCAR] 06047618 (Generated: 01/02/2024 12:08:22) Rev: 1

Contact/Location: RON ROBERTS - MILLAN



# **OIL ANALYSIS REPORT**



		VISUAL		method	limit/base	current	history1	hist	ory2
	White Metal	scalar	*Visual	NONE	NONE	NONE	NON	E	
		Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NON	E
	Precipitate	scalar	*Visual	NONE	NONE	NONE	NON	E	
	Silt	scalar	*Visual	NONE	NONE	NONE	NON	E	
	Debris	scalar	*Visual	NONE	NONE	NONE	NON		
5	3	_ Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NON	
Feb24/21 Mar24/22 Jul29/22		Appearance	scalar	*Visual	NORML	NORML	NORML	NOR	
W	n De	0001	scalar	*Visual	NORML	NORML	NORML	NORI	ML
		Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG	
		Free Water	scalar	*Visual		NEG	NEG	NEG	
		FLUID PROPE	RTIES	method	limit/base	current	history1	hist	ory2
		Visc @ 100°C	cSt	ASTM D445	12.00	11.6	11.1	11.0	
		GRAPHS							
		Iron (ppm)			10	Lead (ppm)			
22	/22	200 Severe			8	Severe			
Mar24/22	Jul29/22	e <sup>150</sup>			e 6	0-			
		E 150 - Abnormal			4	0 - Abnormal			
		50-			2	0			
		20-10-10-10-10-10-10-10-10-10-10-10-10-10	22	22 -	/23	719	22	22	23
		Sep 6/19 Feb 16/20	Mar24/22	Jul29/22	Dec13/23	Sep 6/19 Feb 16/20	Feb24/21 Mar24/22	Jul29/22	Dec13/23
		Aluminum (ppm)	~			Chromium (p			
		50 Severe		· · · · · · · · · · · · · · · · · · ·	5	Savara			
		10 T 4	1	1	4		1	1	
		Abnormal			und 2	Abnormal			
		10			1	1.1			
		0							
		Sep 6/19	Mar24/22	Jul29/22	Dec13/23	Sep 6/19 Feb 16/20	Feb24/21 Mar24/22	Jul29/22	Dec13/23
			a N	Ju	De	LL.	Ma Ma	٦°	Der
		Copper (ppm)			8	Silicon (ppm)			
		300 - Severe			6			1	
		<u> </u> 200-			E 4				
		100-			2	Abnormal			
					Z				
		Sep 6/19 +	4/22 ·	9/22 -	3/23	Sep 6/19	121-	9/22	3/23 +
		Sep6/19 Feb16/20	Mar24/22	Jul29/22	Dec13/23	Sep6/19 Feb16/20	Feb24/21	Jul29/22	Dec13/23
		Viscosity @ 100°C	2			Base Number			
		16 Abnormal		   	(B/HO 8.				
		14 Abnormal			(0)/HOX 6. 0, 100 0, 10				
		(D=001) 12 #3							
		10 - Abnormal	1		N age 2.	D -			
		8	2	2			2	2	
		Sep 6/19	Mar24/22	Jul29/22	Dec13/23	Sep 6/19 Feb 16/20	Feb24/21	Jul29/22	Dec13/23
entelizate L2367	Laboratory Sample No. Lab Number Unique Number Test Package	: PCA0097344 : 06047618 r : 10808226	501 Madia <b>Recieved</b> <b>Diagnos</b> <b>Diagnos</b> Tests: TE	sed : 02 Jan 2024 stician : Don Baldridge BN )			MILLER TRUCK LEASING #12 66 KELLER AVENUE LANCASTER, P/ US 1760 Contact: RON ROBERTS rroberts@millertransgroup.com		

50

Contact/Location: RON ROBERTS - MILLAN