

## **OIL ANALYSIS REPORT**

## (38440Z) Walgreens - Tractor [Walgreens - Tractor] 136A62551 omponen

**Diesel Engine** 

PETRO CANADA DURON SHP 10W30 (11 GAL)

#### SAMPLE INFORMATION method limit/base current history1 PCA0103630 PCA0093626 Sample Number **Client Info** 15 Jan 2024 17 Aug 2023 27 Apr 2023 Sample Date Client Info Machine Age mls **Client Info** 224704 202829 Oil Age mls Client Info 21875 26358 Oil Changed **Client Info** Changed Changed ABNORMAL Sample Status NORMAL CONTAMINATION method limit/base current history1 Fuel >2.0 WC Method <1.0 <1.0 Water WC Method >0.2 NEG NEG Glycol WC Method NEG NEG W

Sample Rating Trend

WEAR

history2

PCA0093649

176471

Changed

NORMAL

<1.0

NEG

NEG

history2

0

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	11	12	15
Chromium	ppm	ASTM D5185m	>20	<1	<1	1
Nickel	ppm	ASTM D5185m	>4	<u> </u>	0	<1
Titanium	ppm	ASTM D5185m		2	2	2
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	4	6	3
Lead	ppm	ASTM D5185m	>40	1	1	2
Copper	ppm	ASTM D5185m	>330	11	0	<1
Tin	ppm	ASTM D5185m	>15	<1	<1	1
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	9	5	5
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	50	51	52	47
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	950	767	868	743
Calcium	ppm	ASTM D5185m	1050	1163	1108	977
Phosphorus	ppm	ASTM D5185m	995	896	982	886
Zinc	ppm	ASTM D5185m	1180	1205	1229	1102
Sulfur	ppm	ASTM D5185m	2600	2713	3631	3143
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	6	5	4

Silicon	ppm	ASTM D5185m	>25	6	5	4
Sodium	ppm	ASTM D5185m		3	<1	2
Potassium	ppm	ASTM D5185m	>20	12	9	8
INFRA-RED		method	limit/base	current	history1	history2

		mounou	initia buoc	ourrent	motory	motory
Soot %	%	*ASTM D7844	>3	0.3	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	7.4	8.0	8.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.1	18.2	18.7
FLUID DEGRAD		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.5	13.9	13.9
Base Number (BN)	mg KOH/g	ASTM D2896		7.8	7.3	6.2

DIAGNOSIS

#### Recommendation

No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

### A Wear

Exhaust valve wear is indicated.

#### Contamination

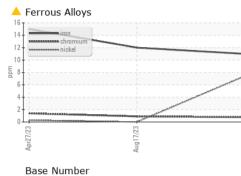
There is no indication of any contamination in the oil.

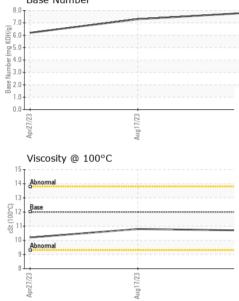
#### Fluid Condition

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



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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
APPROXIMATION	Silt	scalar	*Visual	NONE	NONE	NONE	NONE
And a state of the	Debris	scalar	*Visual	NONE	NONE	NONE	NONE
*******	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
/24	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Jan 15/24	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
	Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
	Free Water	scalar	*Visual		NEG	NEG	NEG
1	FLUID PROPE	RTIES	method	limit/base	current	history1	history2
	Visc @ 100°C	cSt	ASTM D445	12.00	10.7	10.8	10.2
	GRAPHS						
	Ferrous Alloys						
	16 14						
	12						
	10						
	§ 8-						
	6-			and the second second			
	4						
	2-						
	0						
	Apr27/23	Aug 17/23		Jan 15/24			
	Apr	Bng		Jan			
	Non-ferrous Meta	s					
	copper			1			
	10 - management lead						
	8-		/				
	Ed. 6 -						
	*						
		i .	/				
	2-	/					
	2	/					
	2 0 E2/12	E2/11		15/24			
	2 0 Viacocity @ 10000	Aug17/23		Jan 15/24			
	Viscosity @ 100°C			autota	Base Number		
	Viscosity @ 100°C				Base Number		
	Viscosity @ 100°C			8.0	Base Number		
	Viscosity @ 100°C			8.0	Base Number		
	Viscosity @ 100°C			8.0	Base Number		
	Viscosity @ 100°C			8.0 7.0 (b)HOX Du) Jaquina 4.0 3.0			
	Viscosity @ 100°C			8.0			
	Viscosity @ 100°C			8.0 7.0 (b)HOX Du) Jaquina 4.0 3.0			
	Viscosity @ 100°C			8.0 7.0 (MHO) buil 4.0 4.0 9 4.0 9 9 8 8 2.0 1.0 0.0			
	Viscosity @ 100°C			8.0 7.0 (MHO) buil 4.0 4.0 9 4.0 9 9 8 8 2.0 1.0 0.0			
	Viscosity @ 100°C			8.0 7.0 (0)(10)(0)(0)(0)(0)(0)(0)(0)(0)(0)(0)(0)(0)(0		Aug17/23	
	Viscosity @ 100°C	Aug17/23	son Ave. Ca	8.0 7.0 (0)HOX bbu) 14.0 9000 Bbu) 1	Apt27/23	Aug 17/23	Rerkolov-Nazar
Laboratory	Viscosity @ 100°C	Aug17/23		8.0 7.0 (0)HOX bbu) 14.0 9000 Bbu) 1	Apt27/23	EZZLI <sup>DINY</sup> rice - Shop 1365 - E	
	Viscosity @ 100°C	501 Madia	<b>d</b> : 26 .	8.0 7.0 (0)(10)(0)(0)(0)(0)(0)(0)(0)(0)(0)(0)(0)(0)(0	Apt27/23	EZ/LI <sup>Dhy</sup> rice - Shop 1365 - E 6813 C	Berkeley-Nazar Chrisphalt Dri th Borough, I
Laboratory Sample No. Lab Number Unique Number	Viscosity @ 100°C	501 Madia Recieved	d : 26 . ed : 30 .	8.0 7.0 (0)(0)(0)(0)(0)(0)(0)(0)(0)(0)(0)(0)(0)(	Apt27/23	rice - Shop 1365 - E 6813 C Bai	Chrisphalt Dr th Borough, US 180
Laboratory Sample No. Lab Number Unique Number Test Package	Viscosity @ 100°C	501 Madia Recieved Diagnost	d : 26 . ed : 30 . tician : Sea	8.0 7.0 (0)(0)(0)(0)(0)(0)(0)(0)(0)(0)(0)(0)(0)(	Apt27/23	rice - Shop 1365 - E 6813 C Bai	Chrisphalt Dr th Borough, US 180 tephen Mack



Contact/Location: Stephen Mackes - TSV1365