

## **OIL ANALYSIS REPORT**

# (P1184787) Preferred Service-Tractor [Preferred Service-Tractor] 192A32033B

**Diesel Engine** 

Fluid PETRO CANADA DURON UHP 5W30 (36 QTS)

### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

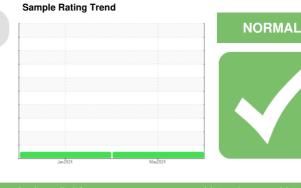
All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

### Fluid Condition

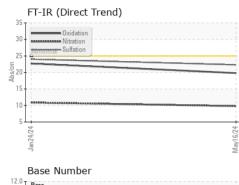
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

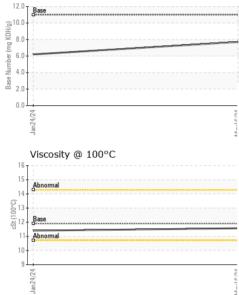


SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0123681	PCA0115796	
Sample Date		Client Info		16 May 2024	24 Jan 2024	
Machine Age	mls	Client Info		71059	574586	
Oil Age	mls	Client Info		13603	18016	
Oil Changed		Client Info		Not Changd	Oil Added	
Sample Status				NORMAL	NORMAL	
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>6.0	<1.0	<1.0	
Water		WC Method	>0.2	NEG	NEG	
Glycol		WC Method		NEG	NEG	
WEAR METAL	S	method	limit/base	current	history1	history2
Iron		ASTM D5185m	>100	25	51	
Chromium	ppm			0	<1	
Nickel	ppm	ASTM D5185m	>20 >2	ں <1	5	
Titanium	ppm	ASTM D5185m	>८	< 1	0	
Silver	ppm	ASTM D5185m ASTM D5185m	>2		0	
	ppm	ASTM D5185m ASTM D5185m		<1 5	11	
Aluminum	ppm		>25			
Lead	ppm	ASTM D5185m	>40	0	0	
Copper	ppm	ASTM D5185m	>330	49	167	
Tin	ppm	ASTM D5185m	>15	2	3	
Vanadium	ppm	ASTM D5185m		0	0	
Cadmium	ppm	ASTM D5185m		0	0	
ADDITIVES		method				biotory ()
ADDITICO		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	current 24	history1 13	nistoryz
	ppm ppm	ASTM D5185m				
Boron		ASTM D5185m	0	24	13	
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0 0 64	24 0	13 2	
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 64	24 0 60	13 2 64	
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 64 0	24 0 60 <1	13 2 64 <1	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 64 0 1160	24 0 60 <1 1129	13 2 64 <1 1084	
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 64 0 1160 820	24 0 60 <1 1129 839	13 2 64 <1 1084 835	   
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 64 0 1160 820 1160	24 0 60 <1 1129 839 1032	13 2 64 <1 1084 835 895	   
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 64 0 1160 820 1160 1260	24 0 60 <1 1129 839 1032 1321	13 2 64 <1 1084 835 895 1206	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 64 0 1160 820 1160 1260 3000	24 0 60 <1 1129 839 1032 1321 3530	13 2 64 <1 1084 835 895 1206 2676	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 64 0 1160 820 1160 1260 3000	24 0 60 <1 1129 839 1032 1321 3530 current	13 2 64 <1 1084 835 895 1206 2676 history1	     history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 64 0 1160 820 1160 1260 3000 <b>limit/base</b> >25	24 0 60 <1 1129 839 1032 1321 3530 current 7	13 2 64 <1 1084 835 895 1206 2676 history1 11	     history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 64 0 1160 820 1160 1260 3000 <b>limit/base</b> >25	24 0 60 <1 1129 839 1032 1321 3530 current 7 4	13 2 64 <1 1084 835 895 1206 2676 history1 11 3	     history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	0 0 64 0 1160 820 1160 1260 3000 <b>limit/base</b> >25 >20	24 0 60 <1 1129 839 1032 1321 3530 current 7 4 13	13 2 64 <1 1084 835 895 1206 2676 history1 11 3 40	     history2  
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	0 0 64 0 1160 820 1160 1260 3000 <b>limit/base</b> >25 -20	24 0 60 <1 1129 839 1032 1321 3530 current 7 4 13 13	13 2 64 <1 1084 835 895 1206 2676 history1 11 3 40 history1	     history2   history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	0 0 64 0 1160 820 1160 1260 3000 <b>limit/base</b> >25 >20 <b>limit/base</b>	24 0 60 <1 1129 839 1032 1321 3530 current 7 4 13 13 2 0.6	13 2 64 <1 1084 835 895 1206 2676 history1 11 3 40 history1 0.7	     history2   history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 64 0 1160 820 1160 1260 3000 <b>imit/base</b> >25 >20 <b>imit/base</b> >3 >20	24 0 60 <1 1129 839 1032 1321 3530 current 7 4 13 current 0.6 9.8	13 2 64 <1 1084 835 895 1206 2676 history1 11 3 40 history1 0.7 10.9	     history2   history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 64 0 1160 820 1160 1260 3000 <b>1imit/base</b> >25 20 <b>1imit/base</b> >3 >20 >30	24 0 60 <1 1129 839 1032 1321 3530 current 7 4 13 13 0.6 9.8 22.3	13 2 64 <1 1084 835 895 1206 2676 history1 11 3 40 history1 0.7 10.9 24.0	     history2  history2  history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7844	0 0 64 0 1160 820 1160 1260 3000 20 3000 25 20 20 20 30 20 20 30 30 20 30 30	24 0 60 <1 1129 839 1032 1321 3530 current 7 4 13 current 0.6 9.8 22.3 current	13 2 64 <1 1084 835 895 1206 2676 history1 11 3 40 history1 0.7 10.9 24.0 history1	    history2  history2  history2  history2

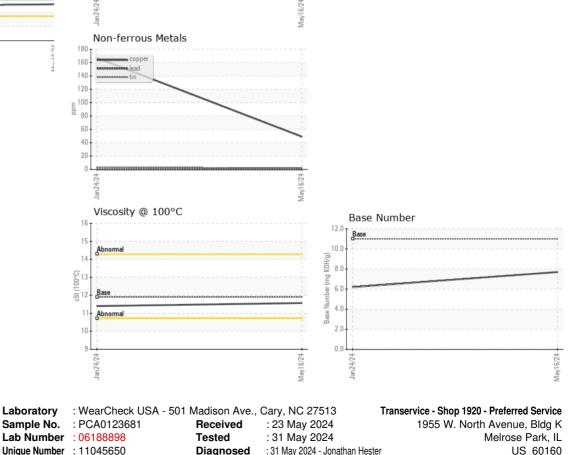


# **OIL ANALYSIS REPORT**





VISUAL NONE White Metal \*Visual NONE NONE scalar Yellow Metal \*Visual NONE NONE NONE scalar NONE Precipitate scalar \*Visual NONE NONE Silt scalar \*Visual NONE NONE NONE Debris \*Visual NONE scalar NONE NONE Sand/Dirt NONE NONE NONE scalar \*Visual NORML NORML Appearance scalar \*Visual NORML Odor \*Visual NORML NORML scalar NORML **Emulsified Water** scalar \*Visual >0.2 NEG NEG Free Water scalar \*Visual NEG NEG **FLUID PROPERTIES** Visc @ 100°C cSt ASTM D445 11.9 11.57 11.4 GRAPHS Ferrous Alloys 60 40 E 30 20 10



Unique Number : 11045650 Diagnosed : 31 May 2024 - Jonathan Hester Test Package : FLEET Contact: Tom Lindeman Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. tlindemann@transervice.com \* - 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)

Report Id: TSV1920 [WUSCAR] 06188898 (Generated: 05/31/2024 20:13:42) Rev: 1

Submitted By: Tom Lindeman Page 2 of 2

T: (630)376-8946

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