

OIL ANALYSIS REPORT

(P1127077) Preferred Service-Tractor [Preferred Service-Tractor] 192A32013B

Diesel Engine

Fluid PETRO CANADA DURON UHP 5W30 (36 QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

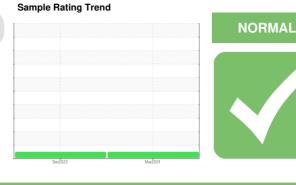
All component wear rates are normal.

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.



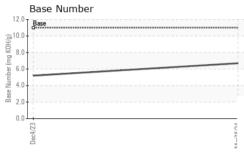
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0120224	PCA0114383	
Sample Date		Client Info		28 Mar 2024	04 Dec 2023	
Machine Age	mls	Client Info		112465	97969	
Oil Age	mls	Client Info		14496	47871	
Oil Changed		Client Info		Not Changd	Changed	
Sample 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	ppm	ASTM D5185m	>100	30	54	
Chromium	ppm	ASTM D5185m	>20	1	1	
Nickel	ppm	ASTM D5185m	>2	1	1	
Titanium	ppm	ASTM D5185m		<1	1	
Silver	ppm	ASTM D5185m	>2	0	0	
Aluminum	ppm	ASTM D5185m	>25	4	6	
Lead	ppm	ASTM D5185m	>40	2	3	
Copper	ppm	ASTM D5185m	>330	10	13	
Tin	ppm	ASTM D5185m	>15	2	3	
Vanadium	ppm	ASTM D5185m		<1	0	
Cadmium	ppm	ASTM D5185m		<1	<1	
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base 0	current 19	history1 7	history2
	ppm ppm					
Boron		ASTM D5185m	0	19	7	
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0	19 0	7 13	
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 64	19 0 62	7 13 59	
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 64 0	19 0 62 1	7 13 59 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	19 0 62 1 1071	7 13 59 1 1100 914 1017	
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	19 0 62 1 1071 847	7 13 59 1 1100 914	
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	0 0 64 0 1160 820 1160	19 0 62 1 1071 847 987	7 13 59 1 1100 914 1017	
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	19 0 62 1 1071 847 987 1242	7 13 59 1 1100 914 1017 1310	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm	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	19 0 62 1 1071 847 987 1242 3220	7 13 59 1 1100 914 1017 1310 3342 history1 13	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	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 limit/base >25	19 0 62 1 1071 847 987 1242 3220 current 8 4	7 13 59 1 1100 914 1017 1310 3342 history1 13 2	 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	19 0 62 1 1071 847 987 1242 3220 current 8	7 13 59 1 1100 914 1017 1310 3342 history1 13	 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	0 0 64 0 1160 820 1160 1260 3000 limit/base >25	19 0 62 1 1071 847 987 1242 3220 current 8 4	7 13 59 1 1100 914 1017 1310 3342 history1 13 2	 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 limit/base >25 >20	19 0 62 1 1071 847 987 1242 3220 current 8 4 8	7 13 59 1 1100 914 1017 1310 3342 history1 13 2 18	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	0 0 64 0 1160 820 1160 1260 3000 limit/base >25 -20 limit/base	19 0 62 1 1071 847 987 1242 3220 current 8 4 8 4 8	7 13 59 1 1100 914 1017 1310 3342 history1 13 2 18 18 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 limit/base >25 >20 limit/base >3	19 0 62 1 1071 847 987 1242 3220 current 8 4 8 4 8 <i>current</i> 0.6	7 13 59 1 1100 914 1017 1310 3342 history1 13 2 18 history1 0.9	 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 <i>limit/base</i> >25 >20 <i>limit/base</i> >3 >20	19 0 62 1 1071 847 987 1242 3220 current 8 4 8 4 8 4 0.6 10.7	7 13 59 1 1100 914 1017 1310 3342 history1 13 2 18 18 history1 0.9 11.6	 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 Imit/base >25 -20 Imit/base >3 >20 >30	19 0 62 1 1071 847 987 1242 3220 current 8 4 8 4 8 4 8 current 0.6 10.7 21.9	7 13 59 1 1100 914 1017 1310 3342 history1 13 2 18 history1 0.9 11.6 26.1	 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	0 0 64 0 1160 820 1160 1260 3000 imit/base >25 >20 >20 >30 >30 >30 >30	19 0 62 1 1071 847 987 1242 3220 current 8 4 8 4 8 current 0.6 10.7 21.9	7 13 59 1 1100 914 1017 1310 3342 history1 13 2 18 history1 0.9 11.6 26.1 history1	 history2 history2 history2 history2

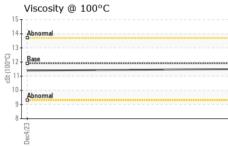


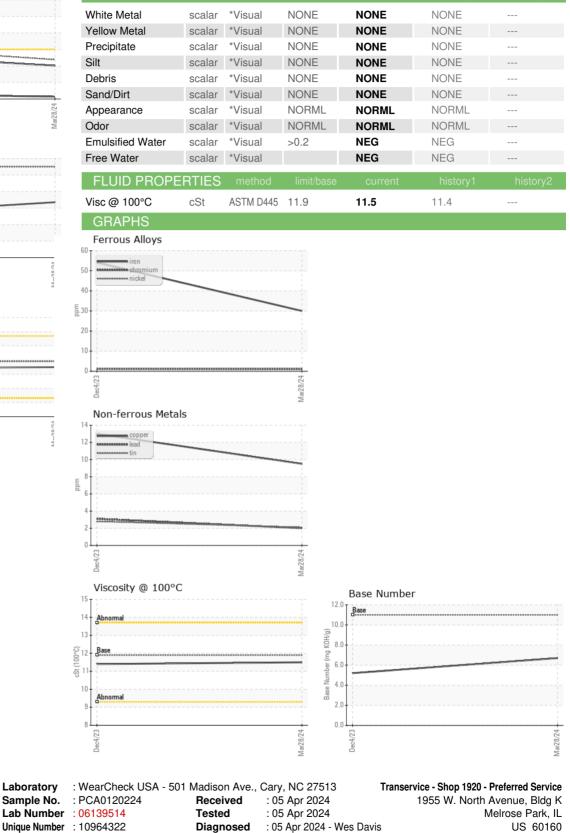
OIL ANALYSIS REPORT

VISUAL











Test Package : FLEET Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. * - 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)

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Laboratory

Sample No.