

OIL ANALYSIS REPORT

(609027) Walgreens - Tractor [Walgreens - Tractor] 136A63296

Diesel Engine

Fluid PETRO CANADA DURON SHP 10W30 (11 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

Area

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 Rating Trend



SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0119363	PCA0107379	
Sample Date		Client Info		18 Mar 2024	12 Oct 2023	
Machine Age	mls	Client Info		98905	47419	
Oil Age	mls	Client Info		50000	47419	
Oil Changed		Client Info		Changed	Changed	
Sample Status				NORMAL	NORMAL	
CONTAMINATI	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>2.0	<1.0	<1.0	
Water		WC Method	>0.2	NEG	NEG	
Glycol		WC Method		NEG	NEG	
WEAR METALS	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	45	54	
Chromium	ppm	ASTM D5185m	>20	3	2	
Nickel	ppm	ASTM D5185m	>4	2	<1	
Titanium	ppm	ASTM D5185m	~	2 <1	0	
Silver	ppm	ASTM D5185m	>3	<1	<1	
Aluminum	ppm	ASTM D5185m	>20	12	25	
Lead	ppm	ASTM D5185m	>40	7	6	
Copper	ppm	ASTM D5185m	>330	8	21	
Tin	ppm	ASTM D5185m	>15	3	4	
Vanadium	ppm	ASTM D5185m	210	۲ ۲	0	
Cadmium	ppm	ASTM D5185m		<1	0	
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ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES	ppm	method		current	history1	history2
Boron	ppm	ASTM D5185m	2	4	25	
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2 0	4 0	25 4	
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	4 0 64	25 4 61	
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	4 0 64 2	25 4 61 5	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	4 0 64 2 912	25 4 61 5 458	
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	4 0 64 2 912 1227	25 4 61 5 458 1732	
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	2 0 50 0 950 1050 995	4 0 64 2 912 1227 1123	25 4 61 5 458 1732 1003	
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	4 0 64 2 912 1227	25 4 61 5 458 1732	
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	2 0 50 950 1050 995 1180	4 0 64 2 912 1227 1123 1300	25 4 61 5 458 1732 1003 1246	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600	4 0 64 2 912 1227 1123 1300 2936	25 4 61 5 458 1732 1003 1246 2646	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600	4 0 64 2 912 1227 1123 1300 2936 current	25 4 61 5 458 1732 1003 1246 2646 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	2 0 50 950 1050 995 1180 2600 limit/base >25	4 0 64 2 912 1227 1123 1300 2936 current 14	25 4 61 5 458 1732 1003 1246 2646 history1 40	 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 method ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >25	4 0 64 2 912 1227 1123 1300 2936 <u>current</u> 14 3	25 4 61 5 458 1732 1003 1246 2646 history1 40 5	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 Imit/base >25 -20 Imit/base	4 0 64 2 912 1227 1123 1300 2936 current 14 3 26 current	25 4 61 5 458 1732 1003 1246 2646 history1 40 5 67 history1	 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 ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 Imit/base >25 >20 Imit/base >3	4 0 64 2 912 1227 1123 1300 2936 current 14 3 26 current 0.6	25 4 61 5 458 1732 1003 1246 2646 history1 40 5 67 history1 0.5	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 Imit/base >25 >20 Imit/base >3	4 0 64 2 912 1227 1123 1300 2936 current 14 3 26 current	25 4 61 5 458 1732 1003 1246 2646 history1 40 5 67 history1	 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 TS ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <i>imit/base</i> >25 >20 <i>imit/base</i> >3 >20	4 0 64 2 912 1227 1123 1300 2936 <u>current</u> 14 3 26 <u>current</u> 0.6 9.7	25 4 61 5 458 1732 1003 1246 2646 history1 40 5 67 67 history1 0.5 9.8	 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 TS ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 imit/base >25 imit/base >3 >20 >30	4 0 64 2 912 1227 1123 1300 2936 current 14 3 26 current 0.6 9.7 22.7	25 4 61 5 458 1732 1003 1246 2646 history1 40 5 67 history1 0.5 9.8 23.3	 history2 history2 history2



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30

2!

Abs/cm

10

6. €^{5.0}

KOH/ 4 0 DU

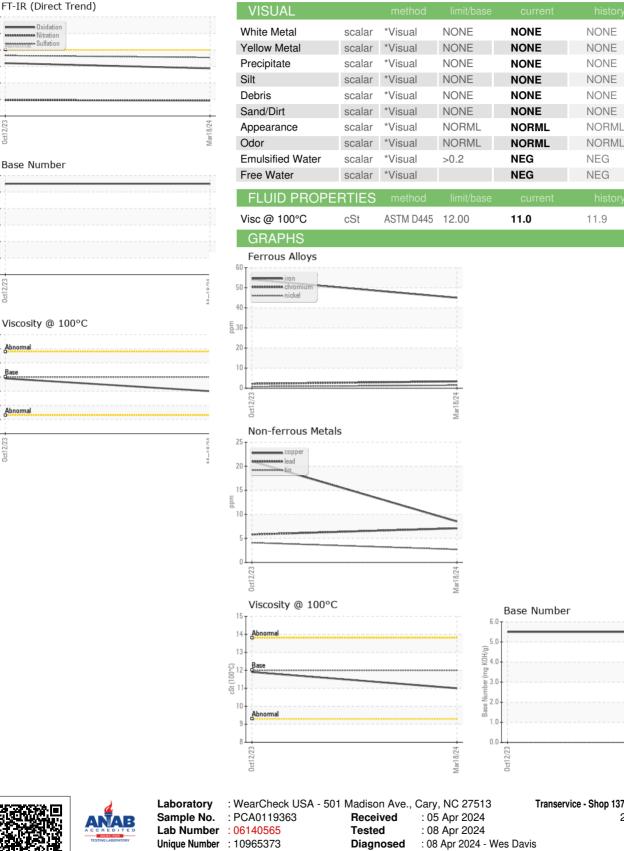
Base

0.0

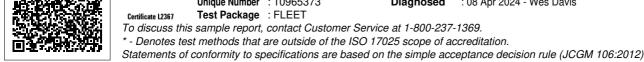
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cSt (100°C)

OIL ANALYSIS REPORT



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Test Package : FLEET

Submitted By: Curtis Hart

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