

OIL ANALYSIS REPORT

Sample Rating Trend



FREIGHTLINER 529093-SW7917

Diesel Engine

PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Fuel content negligible. There is no indication of any contamination in the oil.

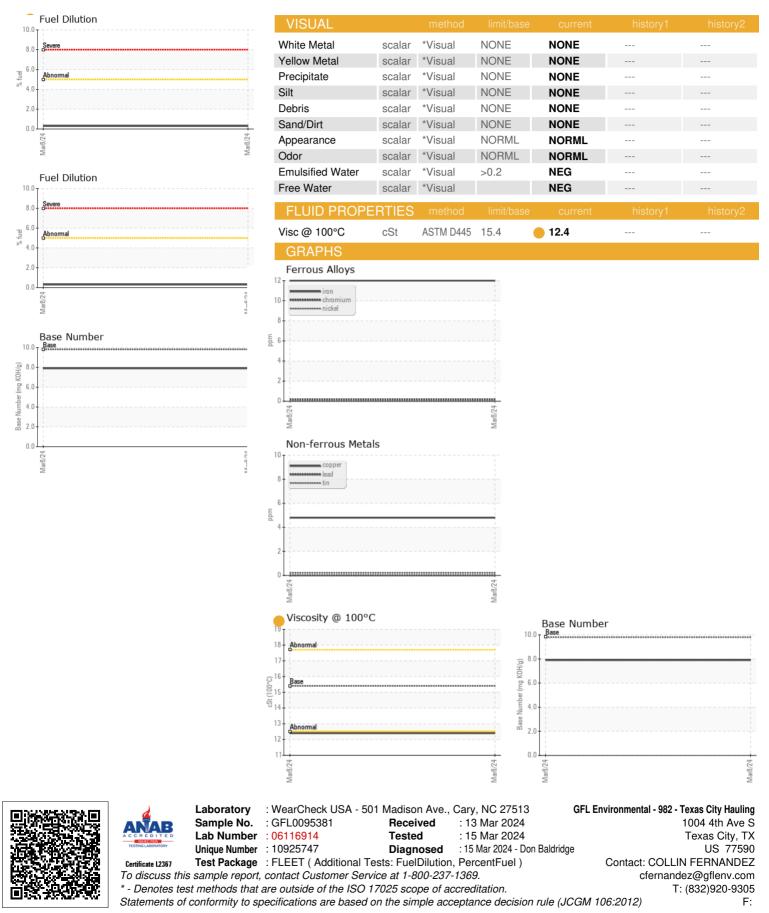
Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0095381		
Sample Date		Client Info		08 Mar 2024		
Machine Age	hrs	Client Info		8555		
Oil Age	hrs	Client Info		600		
Oil Changed		Client Info		Changed		
Sample Status				ATTENTION		
CONTAMINAT		us at la sal	line it //s s s s		late to must	la la tamu O
	IUN	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG NEG		
Glycol		WC Welliou		NEG		
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>80	12		
Chromium	ppm	ASTM D5185m	>5	<1		
Nickel	ppm	ASTM D5185m	>2	0		
Titanium	ppm	ASTM D5185m		0		
Silver	ppm	ASTM D5185m	>3	0		
Aluminum	ppm	ASTM D5185m	>30	3		
Lead	ppm	ASTM D5185m	>30	0		
Copper	ppm	ASTM D5185m	>150	5		
Tin	ppm	ASTM D5185m	>5	<1		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	47		
Barium	ppm	ASTM D5185m	0	0		
Molybdenum	ppm	ASTM D5185m	60	19		
Manganese	ppm	ASTM D5185m	0	<1		
Magnesium	ppm	ASTM D5185m	1010	857		
Calcium	1-1-					
	ppm	ASTM D5185m	1070	1288		
Phosphorus				1288 864		
Phosphorus Zinc	ppm	ASTM D5185m	1070			
Phosphorus	ppm ppm	ASTM D5185m ASTM D5185m	1070 1150	864		
Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	1070 1150 1270	864 1008		
Phosphorus Zinc Sulfur	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1070 1150 1270 2060 limit/base	864 1008 3541		
Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	1070 1150 1270 2060 limit/base	864 1008 3541 current		
Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	1070 1150 1270 2060 limit/base	864 1008 3541 current 4	 history1 	 history2
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1070 1150 1270 2060 limit/base >20	864 1008 3541 current 4 2	 history1 	 history2
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1070 1150 1270 2060 limit/base >20 >20	864 1008 3541 current 4 2 5	 history1 	 history2
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel	ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D3524	1070 1150 1270 2060 limit/base >20 >20 >20 >5	864 1008 3541 current 4 2 5 0.3 current	 history1 	 history2
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm ppm TS ppm ppm ppm %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D3524 method *ASTM D7844	1070 1150 1270 2060 limit/base >20 >20 >5 limit/base	864 1008 3541 4 2 5 0.3 current 0.2	 history1 history1	 history2 history2
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D3524	1070 1150 1270 2060 limit/base >20 >20 >5 limit/base >3	864 1008 3541 current 4 2 5 0.3 current	 history1 history1 	 history2 history2
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm TS ppm ppm ppm %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D3524 Method *ASTM D7844 *ASTM D7624	1070 1150 1270 2060 <i>limit/base</i> >20 >20 >5 <i>limit/base</i> >3 >20	864 1008 3541 <u>current</u> 4 2 5 0.3 <u>current</u> 0.2 8.9	 history1 history1 	 history2 history2 history2
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD	ppm ppm ppm ppm TS ppm ppm ppm % % Abs/cm Abs/cm Abs/1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5844 *ASTM D7624 *ASTM D7624 *ASTM D7624	1070 1150 1270 2060 limit/base >20 >20 >5 limit/base >3 >20 >3 >30 limit/base	864 1008 3541 current 4 2 5 0.3 current 0.2 8.9 18.9 current	 history1 history1 history1 	 history2 history2
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm TS ppm ppm ppm %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D3524 *ASTM D7844 *ASTM D7824	1070 1150 1270 2060 limit/base >20 >20 >5 limit/base >3 >20 >3 >20 >3	864 1008 3541 current 4 2 5 0.3 current 0.2 8.9 18.9	 history1 history1 history1 history1	 history2 history2 history2



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Contact/Location: COLLIN FERNANDEZ - GFL982