

OIL ANALYSIS REPORT

Sample Rating Trend

Area (AU758S) Supermarket - Tractor **FREIGHTLINER 107A8816**

Diesel Engine

Fluid PETRO CANADA DURON SHP 10W30 (11 GAL)

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	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0116953	PCA0110997	PCA0099834
Sample Date		Client Info		30 Mar 2024	14 Nov 2023	26 Jul 2023
Machine Age	mls	Client Info		198179	184785	172776
Oil Age	mls	Client Info		13394	12009	10763
Oil Changed		Client Info		Changed	Changed	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATI	ON	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS	6	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>80	10	17	8
Chromium	ppm	ASTM D5185m	>5	<1	2	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>30	5	8	4
_ead	ppm	ASTM D5185m	>30	0	0	0
Copper	ppm	ASTM D5185m	>150	6	10	6
Tin	ppm	ASTM D5185m	>5	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	7	3	8
Barium	ppm	ASTM D5185m	0	0	0	2
Molybdenum	ppm	ASTM D5185m	50	68	62	67
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	950	1002	0.0.1	
Calcium			000	1002	891	990
Calcium	ppm	ASTM D5185m	1050	1181	891 1052	990 1148
	ppm ppm	ASTM D5185m ASTM D5185m				
Phosphorus			1050	1181	1052	1148
Phosphorus Zinc	ppm	ASTM D5185m	1050 995	1181 1149	1052 945	1148 1075
Phosphorus Zinc	ppm ppm ppm	ASTM D5185m ASTM D5185m	1050 995 1180	1181 1149 1338	1052 945 1231	1148 1075 1312
Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	1050 995 1180 2600	1181 1149 1338 3650	1052 945 1231 2394	1148 1075 1312 3760
Phosphorus Zinc Sulfur CONTAMINAN ^T Silicon	ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m method	1050 995 1180 2600 limit/base	1181 1149 1338 3650 current	1052 945 1231 2394 history1	1148 1075 1312 3760 history2
Phosphorus Zinc Sulfur CONTAMINAN [®] Silicon Sodium	ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	1050 995 1180 2600 limit/base	1181 1149 1338 3650 current 4	1052 945 1231 2394 history1 6	1148 1075 1312 3760 history2 4
Phosphorus Zinc Sulfur CONTAMINAN [®] Silicon Sodium	ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m	1050 995 1180 2600 limit/base >20	1181 1149 1338 3650 current 4 <1	1052 945 1231 2394 history1 6 2	1148 1075 1312 3760 history2 4 2
Phosphorus Zinc Sulfur CONTAMINAN ^T Silicon Sodium Potassium INFRA-RED	ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	1050 995 1180 2600 <i>limit/base</i> >20 >20	1181 1149 1338 3650 current 4 <1 2	1052 945 1231 2394 history1 6 2 7	1148 1075 1312 3760 history2 4 2 2
Phosphorus Zinc Sulfur CONTAMINAN ^T Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m	1050 995 1180 2600 limit/base >20 >20 limit/base	1181 1149 1338 3650 current 4 <1 2 current	1052 945 1231 2394 history1 6 2 7 7 history1	1148 1075 1312 3760 history2 4 2 2 history2
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844	1050 995 1180 2600 limit/base >20 >20 limit/base >3	1181 1149 1338 3650 current 4 <1 2 current 0.5	1052 945 1231 2394 history1 6 2 7 7 history1 0.8	1148 1075 1312 3760 history2 4 2 2 history2 0.4
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm TS ppm ppm ppm ppm % Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844	1050 995 1180 2600 imit/base >20 >20 imit/base >3 >20	1181 1149 1338 3650 current 4 <1 2 current 0.5 7.2	1052 945 1231 2394 history1 6 2 7 7 history1 0.8 8.4	1148 1075 1312 3760 history2 4 2 2 history2 0.4 6.9
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm TS ppm ppm ppm ppm % Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7844 *ASTM D7844	1050 995 1180 2600 limit/base >20 limit/base >3 >20 >3 >20	1181 1149 1338 3650 current 4 <1 2 current 0.5 7.2 18.8	1052 945 1231 2394 history1 6 2 7 history1 0.8 8.4 20.6	1148 1075 1312 3760 history2 4 2 2 history2 0.4 6.9 18.6

NORMAL

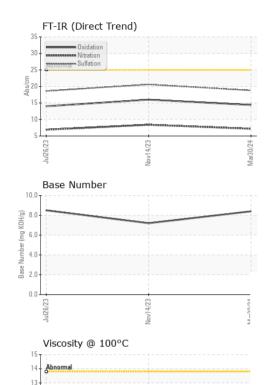


()_12 tsj

Jul26/23

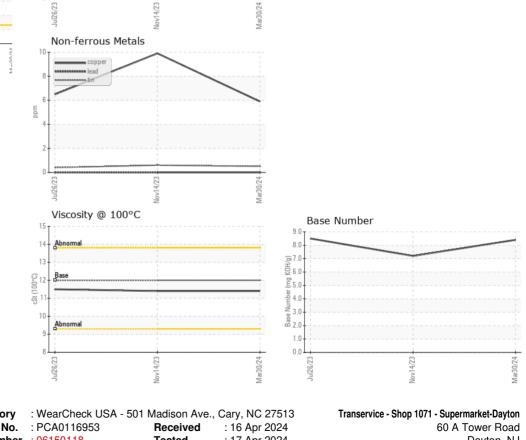
Abnorma

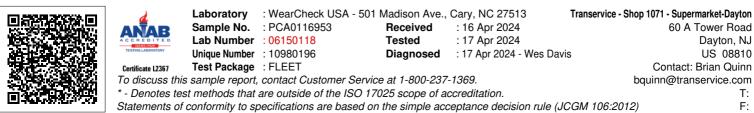
OIL ANALYSIS REPORT



Nov14/23

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
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPE	RTIES	method	limit/base	current	history1	history2
	RTIES cSt	method ASTM D445	limit/base 12.00	current 11.4	history1 11.4	history2 11.5
Visc @ 100°C						
Visc @ 100°C GRAPHS Ferrous Alloys						
Visc @ 100°C GRAPHS Ferrous Alloys						
Visc @ 100°C GRAPHS Ferrous Alloys						
Visc @ 100°C GRAPHS Ferrous Alloys						
Visc @ 100°C GRAPHS Ferrous Alloys						
Visc @ 100°C GRAPHS Ferrous Alloys						
Visc @ 100°C GRAPHS Ferrous Alloys						





Submitted By: Brian Quinn Page 2 of 2