

OIL ANALYSIS REPORT

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Sample Rating Trend

NORMAL





Machine Id FREIGHTLINER 484149

Component
Diesel Engine

PETRO CANADA DURON SHP 10W30 (20 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

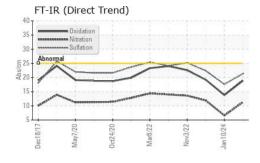
Fluid Condition

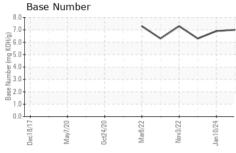
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

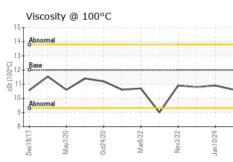
SAMPLE INFORM	AOLTAN	method	limit/base	current	history1	history2
Sample Number	111011	Client Info	mm bacc	PCA0125222	PCA0112222	PCA0114544
Sample Date		Client Info		13 May 2024	10 Jan 2024	27 Dec 2023
Machine Age	mls	Client Info		414450	402123	401775
Oil Age	mls	Client Info		414450	400	0
Oil Changed	11110	Client Info		Changed	Not Changd	Changed
Sample Status				NORMAL	MARGINAL	ABNORMAL
CONTAMINATI	ON	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0	<u>1.8</u>	4.8
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>90	23	7	20
Chromium	ppm	ASTM D5185m	>20	1	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	0	<1
Titanium	ppm	ASTM D5185m	>2	5	4	1
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	3	<1	3
Lead	ppm	ASTM D5185m	>40	<1	<1	<1
Copper	ppm	ASTM D5185m	>330	2	2	4
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	<1
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	7	14	5
Barium	ppm	ASTM D5185m	0	1	0	0
Molybdenum	ppm	ASTM D5185m	50	55	54	54
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	950	812	837	828
Calcium	ppm	ASTM D5185m	1050	1067	1124	1044
Dia a a sa la a su						1077
Phosphorus	ppm	ASTM D5185m	995	1010	983	950
Phosphorus Zinc	ppm		995 1180			
·				1010	983	950
Zinc	ppm ppm	ASTM D5185m	1180	1010 1146	983 1177	950 1197
Zinc Sulfur	ppm ppm	ASTM D5185m ASTM D5185m	1180 2600 limit/base	1010 1146 2895	983 1177 2928	950 1197 2913
Zinc Sulfur CONTAMINAN	ppm ppm	ASTM D5185m ASTM D5185m method	1180 2600 limit/base	1010 1146 2895 current	983 1177 2928 history1	950 1197 2913 history2
Zinc Sulfur CONTAMINAN ^T Silicon	ppm ppm TS	ASTM D5185m ASTM D5185m method ASTM D5185m	1180 2600 limit/base	1010 1146 2895 current	983 1177 2928 history1	950 1197 2913 history2
Zinc Sulfur CONTAMINAN ^T Silicon Sodium	ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	1180 2600 limit/base >25	1010 1146 2895 current 6 11	983 1177 2928 history1 3 6	950 1197 2913 history2 5 23
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m	1180 2600 limit/base >25 >20	1010 1146 2895 current 6 11	983 1177 2928 history1 3 6 3	950 1197 2913 history2 5 23 13
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	1180 2600 limit/base >25 >20 limit/base	1010 1146 2895 current 6 11 8	983 1177 2928 history1 3 6 3 history1	950 1197 2913 history2 5 23 13
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m method *ASTM D7844	1180 2600 limit/base >25 >20 limit/base >6	1010 1146 2895 current 6 11 8 current 0.6	983 1177 2928 history1 3 6 3 history1 0.3	950 1197 2913 history2 5 23 13 history2 0.8
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm TS ppm ppm ppm ppm Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method *ASTM D7844 *ASTM D7624	1180 2600 limit/base >25 >20 limit/base >6 >20	1010 1146 2895 current 6 11 8 current 0.6 11.3	983 1177 2928 history1 3 6 3 history1 0.3 6.6	950 1197 2913 history2 5 23 13 history2 0.8 11.9
Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm TS ppm ppm ppm ppm Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method *ASTM D7844 *ASTM D7624 *ASTM D7415	1180 2600 limit/base >25 >20 limit/base >6 >20 >30	1010 1146 2895 current 6 11 8 current 0.6 11.3 21.3	983 1177 2928 history1 3 6 3 history1 0.3 6.6 17.6	950 1197 2913 history2 5 23 13 history2 0.8 11.9 22.4



OIL ANALYSIS REPORT





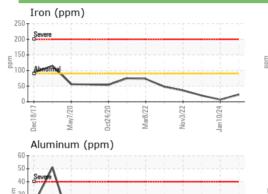


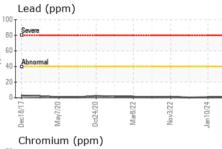
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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

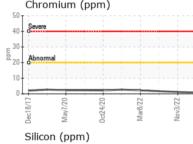
	LLUID PROPE	ENTIES	method			flistory i	History∠
١	/isc @ 100°C	cSt	ASTM D445	12.00	10.6	10.9	10.8

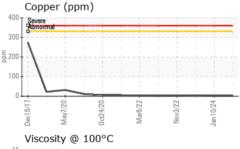
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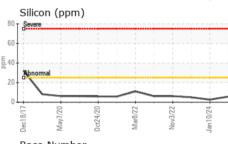
GRAPHS

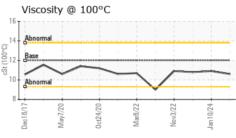


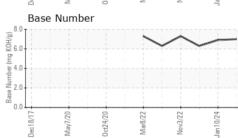
















Certificate 12367

Laboratory Sample No.

: PCA0125222 Lab Number : 06194986 Unique Number : 11057109

: WearCheck USA - 501 Madison Ave., Cary, NC 27513

Received **Tested** Diagnosed

: 30 May 2024 : 31 May 2024

: 31 May 2024 - Wes Davis

2196 BENNETT ROAD PHILADELPHIA, PA US 19116

MILLER TRUCK LEASING #118

Contact: ROSTY VITER rviter@millertransgroup.com T: (215)552-9832

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)

Test Package : MOB 1 (Additional Tests: TBN)

F: (215)552-9892 Contact/Location: ROSTY VITER - MILPHINE