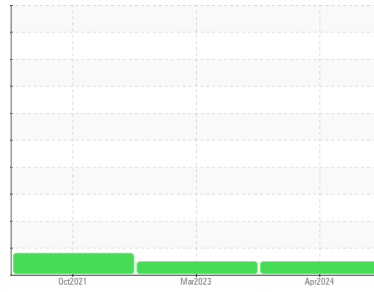


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
FREIGHTLINER 511973
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 10W30 (--- 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 INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		PCA0121724	PCA0093179	PCA0058696
Sample Date	Client Info		12 Apr 2024	17 Mar 2023	02 Oct 2021
Machine Age	mls	Client Info	99114	86204	52321
Oil Age	mls	Client Info	0	0	52000
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			NORMAL	NORMAL	ABNORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<1.0	<1.0	<1.0
Water	WC Method	>0.2	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >65	30	38	63
Chromium	ppm	ASTM D5185m >5	3	5	9
Nickel	ppm	ASTM D5185m >3	<1	0	<1
Titanium	ppm	ASTM D5185m >5	<1	<1	<1
Silver	ppm	ASTM D5185m >2	<1	0	<1
Aluminum	ppm	ASTM D5185m >35	16	33	86
Lead	ppm	ASTM D5185m >10	<1	0	7
Copper	ppm	ASTM D5185m >180	24	64	▲ 669
Tin	ppm	ASTM D5185m >8	2	2	6
Antimony	ppm	ASTM D5185m >35	---	---	0
Vanadium	ppm	ASTM D5185m	<1	0	0
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 2	17	4	15
Barium	ppm	ASTM D5185m 0	2	0	0
Molybdenum	ppm	ASTM D5185m 50	64	53	8
Manganese	ppm	ASTM D5185m 0	1	2	5
Magnesium	ppm	ASTM D5185m 950	853	890	793
Calcium	ppm	ASTM D5185m 1050	1133	1194	1364
Phosphorus	ppm	ASTM D5185m 995	968	821	759
Zinc	ppm	ASTM D5185m 1180	1187	1125	869
Sulfur	ppm	ASTM D5185m 2600	3030	2461	2494

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >15	4	4	6
Sodium	ppm	ASTM D5185m	2	3	8
Potassium	ppm	ASTM D5185m >20	32	68	206

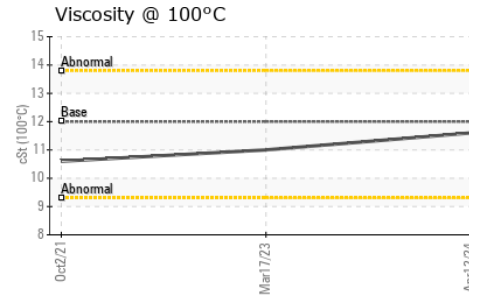
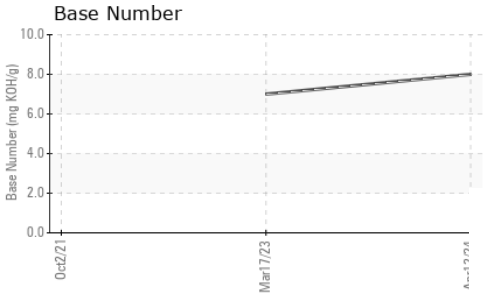
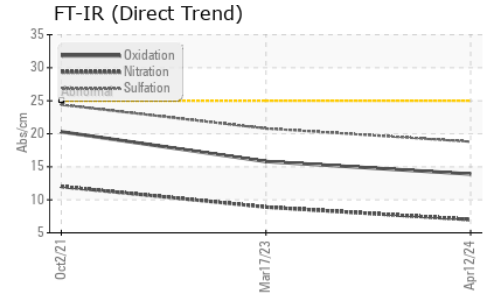
INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.4	0.7	1
Nitration	Abs/cm	*ASTM D7624 >20	7.0	8.9	12
Sulfation	Abs/.1mm	*ASTM D7415 >30	18.8	20.8	24.4

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	13.9	15.8	20.3
Base Number (BN)	mg KOH/g	ASTM D2896	8.0	7.0	---

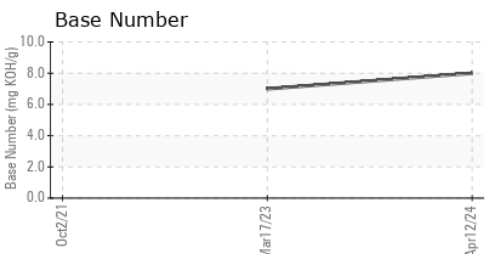
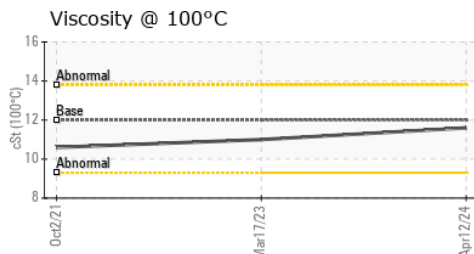
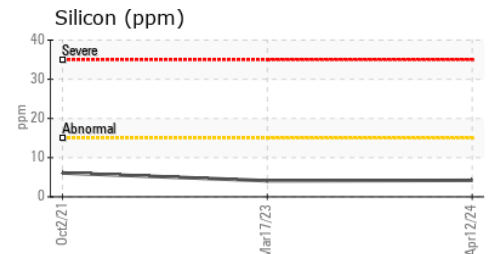
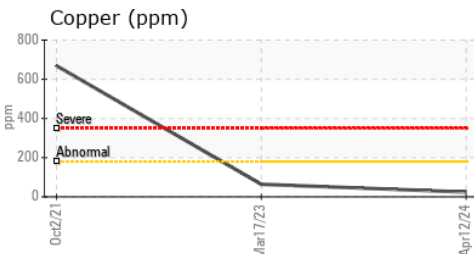
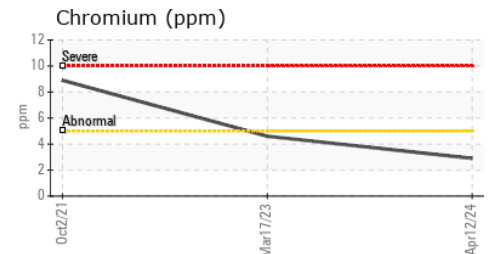
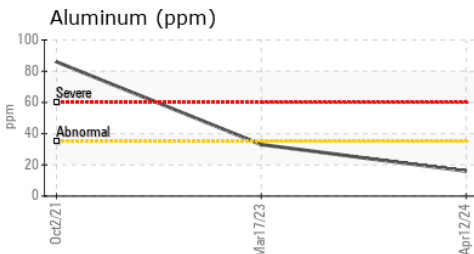
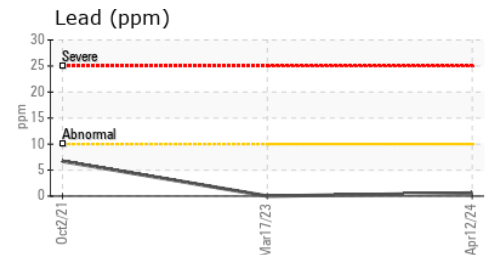
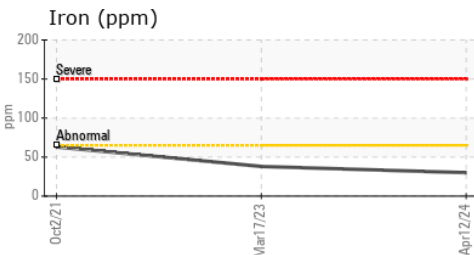
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	11.6	11.0

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0121724 **Received** : 26 Apr 2024
Lab Number : 06161242 **Tested** : 27 Apr 2024
Unique Number : 10996665 **Diagnosed** : 27 Apr 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: TBN)

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 1504 MAINLINE DR
 CINNAMINSON, NJ
 US 08077
 Contact: MIKE BOYER
 mboyer@millertransgroup.com
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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)