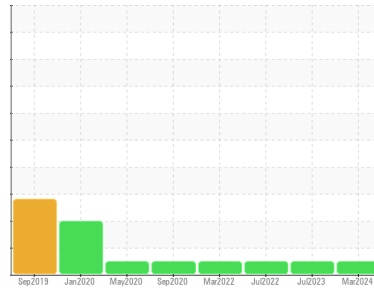


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
406356
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 10W30 (--- QTS)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Wear

All component wear rates are normal.

Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. 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		PCA0110698	PCA0083827	PCA0071750
Sample Date	Client Info		22 Mar 2024	16 Jul 2023	26 Jul 2022
Machine Age	mls	Client Info	272201	225528	169113
Oil Age	mls	Client Info	46673	56415	51058
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	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

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	46	68	70
Chromium	ppm	ASTM D5185m >20	3	4	7
Nickel	ppm	ASTM D5185m >4	0	<1	0
Titanium	ppm	ASTM D5185m	9	48	<1
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >20	21	29	43
Lead	ppm	ASTM D5185m >40	0	<1	<1
Copper	ppm	ASTM D5185m >330	9	16	38
Tin	ppm	ASTM D5185m >15	<1	2	2
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	<1	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 2	2	10	4
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 50	57	30	59
Manganese	ppm	ASTM D5185m 0	<1	1	2
Magnesium	ppm	ASTM D5185m 950	948	616	917
Calcium	ppm	ASTM D5185m 1050	1250	1482	1101
Phosphorus	ppm	ASTM D5185m 995	1055	960	912
Zinc	ppm	ASTM D5185m 1180	1270	1209	1200
Sulfur	ppm	ASTM D5185m 2600	3347	2978	2205

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	5	8	7
Sodium	ppm	ASTM D5185m	4	6	6
Potassium	ppm	ASTM D5185m >20	15	33	60

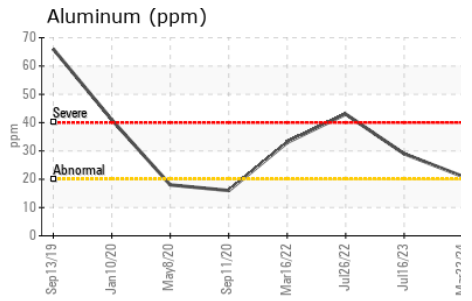
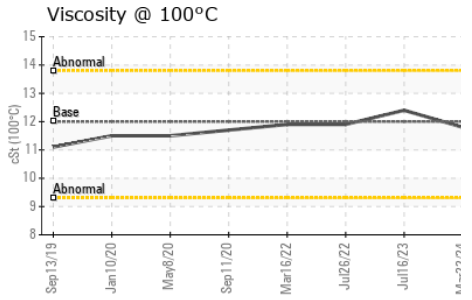
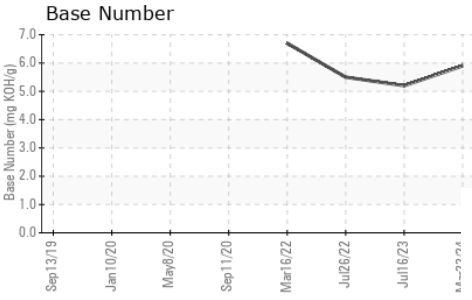
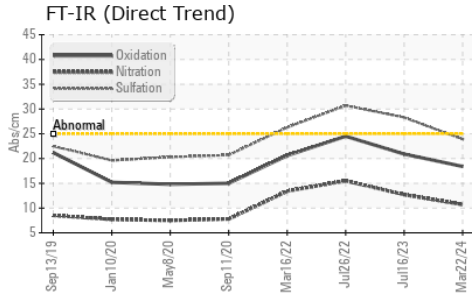
INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	1.8	2.2	2.4
Nitration	Abs/cm	*ASTM D7624 >20	10.7	12.7	15.5
Sulfation	Abs/.1mm	*ASTM D7415 >30	23.9	28.3	30.7

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	18.4	20.9	24.5
Base Number (BN)	mg KOH/g	ASTM D2896	5.9	5.2	5.5

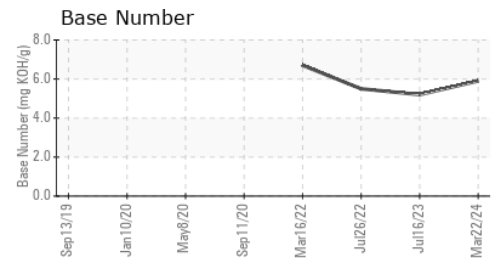
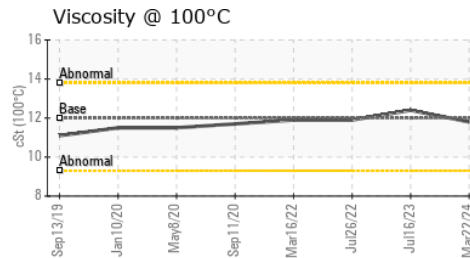
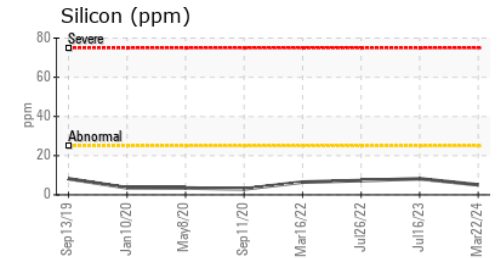
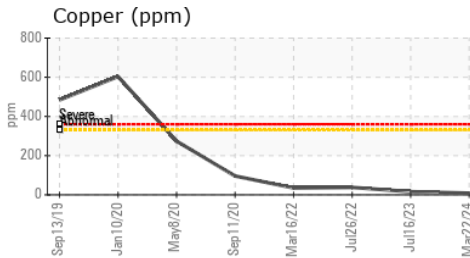
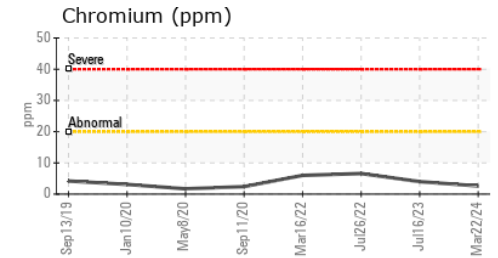
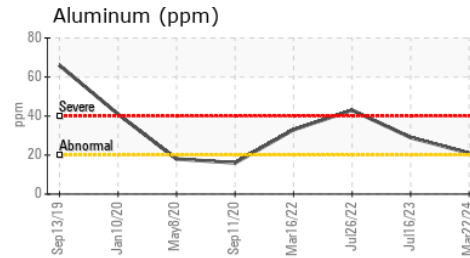
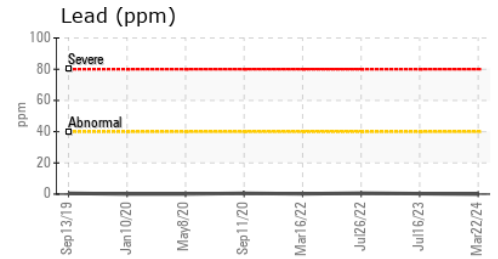
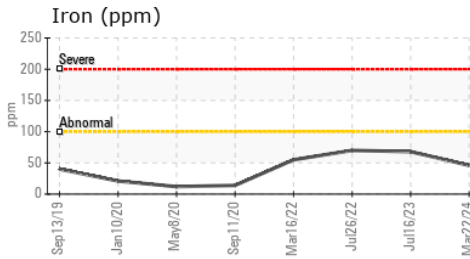
OIL ANALYSIS REPORT



PARAMETER	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	11.8	12.4

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0110698 **Received** : 08 Apr 2024
Lab Number : 06140807 **Tested** : 08 Apr 2024
Unique Number : 10965615 **Diagnosed** : 10 Apr 2024 - Sean Felton
Test Package : MOB 1 (Additional Tests: TBN)

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 LANCASTER, PA
 US 17601
 Contact: RON ROBERTS
 roberts@millertransgroup.com
 T: (717)945-6205
 F: (717)945-5818

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)