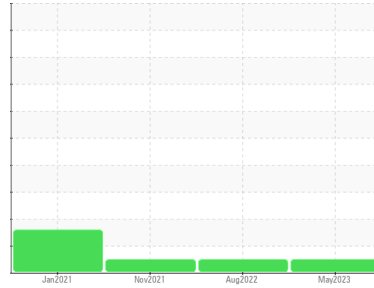


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
302150
 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	history 1	history 2
Sample Number	Client Info			PCA0083812	PCA0071774	PCA0053368
Sample Date	Client Info			18 May 2023	21 Aug 2022	16 Nov 2021
Machine Age	mls	Client Info		162942	116675	69928
Oil Age	mls	Client Info		46267	46747	37441
Oil Changed	Client Info			Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history 1	history 2
Fuel	WC Method	>5		<1.0	<1.0	<1.0
Glycol	WC Method			NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m	>100	35	48	64
Chromium	ppm	ASTM D5185m	>20	3	2	2
Nickel	ppm	ASTM D5185m	>4	2	2	0
Titanium	ppm	ASTM D5185m		48	11	<1
Silver	ppm	ASTM D5185m	>3	2	<1	0
Aluminum	ppm	ASTM D5185m	>20	14	15	20
Lead	ppm	ASTM D5185m	>40	4	0	<1
Copper	ppm	ASTM D5185m	>330	4	5	9
Tin	ppm	ASTM D5185m	>15	2	2	2
Antimony	ppm	ASTM D5185m		---	---	0
Vanadium	ppm	ASTM D5185m		2	2	0
Cadmium	ppm	ASTM D5185m		2	<1	0

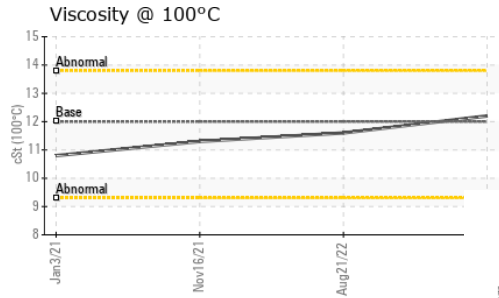
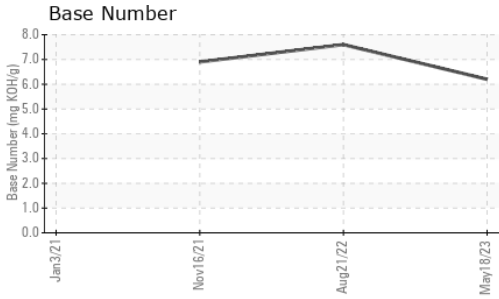
ADDITIVES		method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185m	2	15	8	5
Barium	ppm	ASTM D5185m	0	19	<1	0
Molybdenum	ppm	ASTM D5185m	50	21	57	56
Manganese	ppm	ASTM D5185m	0	3	2	2
Magnesium	ppm	ASTM D5185m	950	470	924	987
Calcium	ppm	ASTM D5185m	1050	1227	1222	1198
Phosphorus	ppm	ASTM D5185m	995	761	1010	999
Zinc	ppm	ASTM D5185m	1180	936	1265	1199
Sulfur	ppm	ASTM D5185m	2600	2987	3309	2578

CONTAMINANTS		method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m	>25	6	8	6
Sodium	ppm	ASTM D5185m		6	4	3
Potassium	ppm	ASTM D5185m	>20	12	10	19

INFRA-RED		method	limit/base	current	history 1	history 2
Soot %	%	*ASTM D7844	>3	1.4	1.1	0.9
Nitration	Abs/cm	*ASTM D7624	>20	14.4	14.4	10.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	31.3	27.9	24.4

FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	*ASTM D7414	>25	27.2	24.0	21.7
Base Number (BN)	mg KOH/g	ASTM D2896		6.2	7.6	6.9

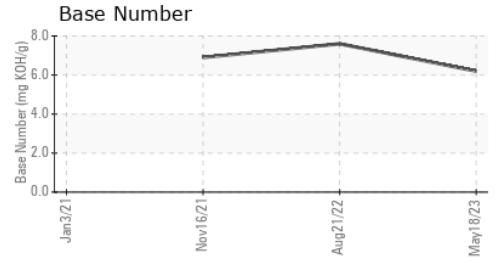
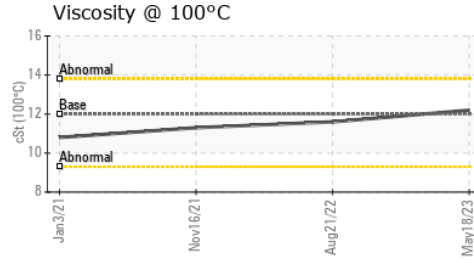
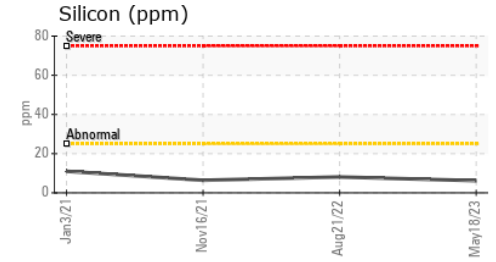
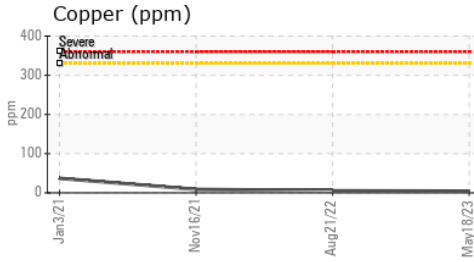
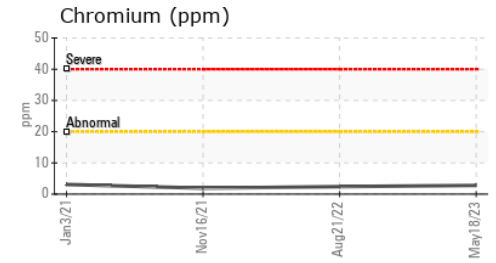
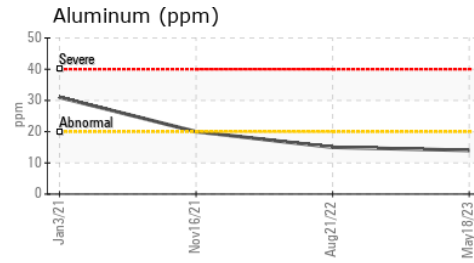
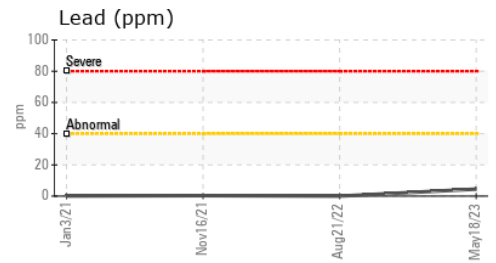
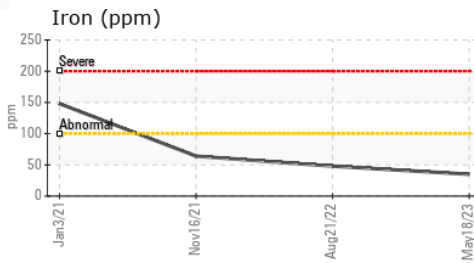
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history 1	history 2
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	history 1	history 2	
Visc @ 100°C	cSt	ASTM D445	12.00	12.2	11.6	11.3

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0083812 **Received** : 03 Jul 2023
Lab Number : 05888791 **Diagnosed** : 05 Jul 2023
Unique Number : 10539274 **Diagnostician** : Don Baldrige
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)