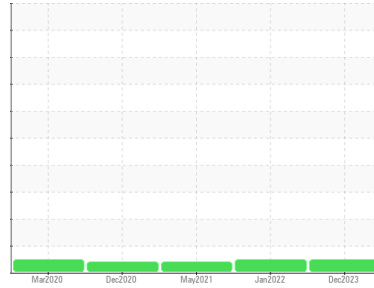


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
Thomas 3608

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		PCA0091616	PCA0045375	PCA0013108
Sample Date	Client Info		07 Dec 2023	10 Jan 2022	12 May 2021
Machine Age	mls	Client Info	111643	102088	201910
Oil Age	mls	Client Info	111643	3409	62
Oil Changed	Client Info		Changed	Changed	Not Chngd
Sample Status			NORMAL	NORMAL	ATTENTION

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 >130	33	38	9
Chromium	ppm	ASTM D5185m >10	1	2	<1
Nickel	ppm	ASTM D5185m >4	0	1	0
Titanium	ppm	ASTM D5185m >2	0	<1	0
Silver	ppm	ASTM D5185m >2	0	0	<1
Aluminum	ppm	ASTM D5185m >20	6	16	4
Lead	ppm	ASTM D5185m >20	2	<1	<1
Copper	ppm	ASTM D5185m >125	1	1	<1
Tin	ppm	ASTM D5185m >4	0	<1	<1
Antimony	ppm	ASTM D5185m	---	---	0
Vanadium	ppm	ASTM D5185m	0	0	<1
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 2	2	42	98
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 50	57	22	25
Manganese	ppm	ASTM D5185m 0	0	<1	<1
Magnesium	ppm	ASTM D5185m 950	861	625	676
Calcium	ppm	ASTM D5185m 1050	992	1415	1491
Phosphorus	ppm	ASTM D5185m 995	775	681	795
Zinc	ppm	ASTM D5185m 1180	1103	836	901
Sulfur	ppm	ASTM D5185m 2600	2609	2315	2498

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	4	4	5
Sodium	ppm	ASTM D5185m	0	3	2
Potassium	ppm	ASTM D5185m >20	3	5	2

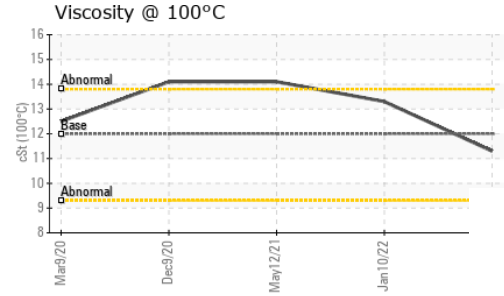
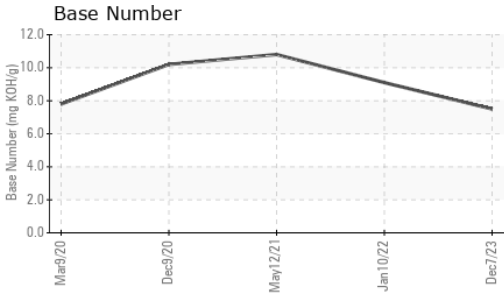
INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >6	1.4	1.2	0.4
Nitration	Abs/cm	*ASTM D7624 >20	13.7	14.6	7.4
Sulfation	Abs/.1mm	*ASTM D7415 >30	25.0	25.8	21.9

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	24.5	24.9	17.3
Base Number (BN)	mg KOH/g	ASTM D2896	7.5	9.1	10.8

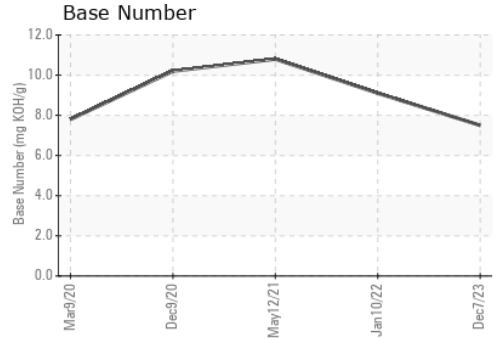
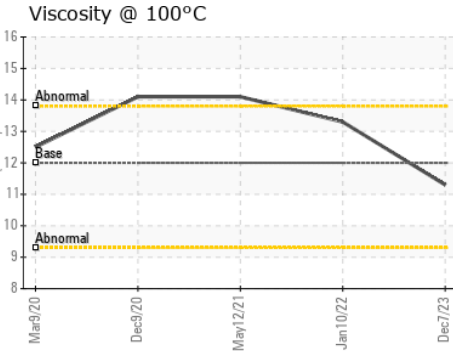
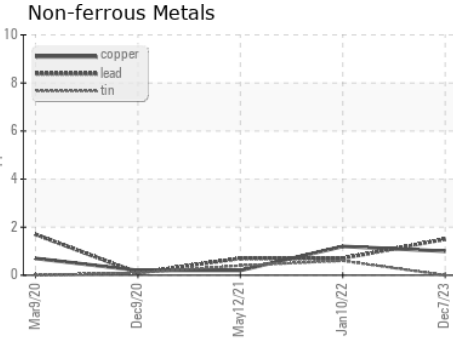
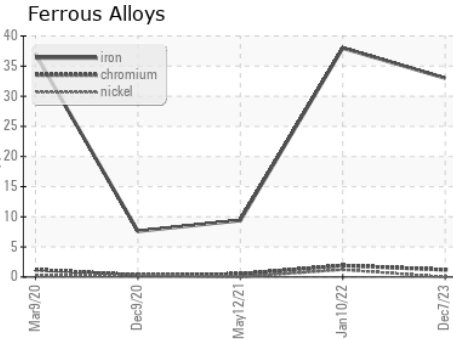
OIL ANALYSIS REPORT



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	11.3	13.3 ▲ 14.1

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0091616 **Received** : 20 Dec 2023
Lab Number : **06040268** **Diagnosed** : 21 Dec 2023
Unique Number : 10795497 **Diagnostician** : Sean Felton
Test Package : FLEET (Additional Tests: FT-IR(Diff))

ICSB370 - Alton
 4525 North Alby Road
 Godfrey, IL
 US 62035
 Contact: Chad Ingold
 c.ingold@illinois-central.com
 T: (618)466-5400
 F:

Certificate L2367
 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)