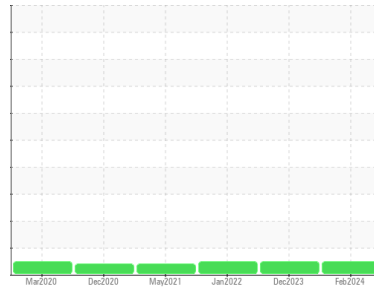


OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

 Machine Id
Thomas 3608

 Component
Diesel Engine

 Fluid
PETRO CANADA DURON SHP 10W30 (18 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 INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			PCA0091591	PCA0091616	PCA0045375
Sample Date	Client Info			05 Feb 2024	07 Dec 2023	10 Jan 2022
Machine Age	mls	Client Info		117888	111643	102088
Oil Age	mls	Client Info		27621	111643	3409
Oil Changed	Client Info			Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

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	42	33	38
Chromium	ppm	ASTM D5185m	>10	2	1	2
Nickel	ppm	ASTM D5185m	>4	0	0	1
Titanium	ppm	ASTM D5185m	>2	<1	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	6	6	16
Lead	ppm	ASTM D5185m	>20	2	2	<1
Copper	ppm	ASTM D5185m	>125	1	1	1
Tin	ppm	ASTM D5185m	>4	0	0	<1
Antimony	ppm	ASTM D5185m		---	---	---
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	<1	2	42
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	50	57	57	22
Manganese	ppm	ASTM D5185m	0	<1	0	<1
Magnesium	ppm	ASTM D5185m	950	910	861	625
Calcium	ppm	ASTM D5185m	1050	1089	992	1415
Phosphorus	ppm	ASTM D5185m	995	960	775	681
Zinc	ppm	ASTM D5185m	1180	1216	1103	836
Sulfur	ppm	ASTM D5185m	2600	3252	2609	2315

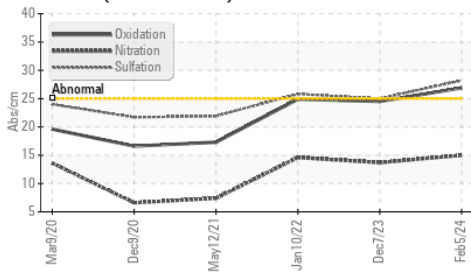
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	4	4	4
Sodium	ppm	ASTM D5185m		4	0	3
Potassium	ppm	ASTM D5185m	>20	6	3	5

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>6	2	1.4	1.2
Nitration	Abs/cm	*ASTM D7624	>20	15.0	13.7	14.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	28.2	25.0	25.8

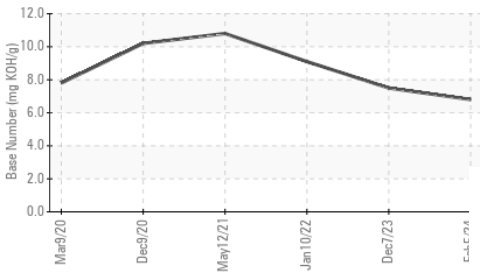
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	26.9	24.5	24.9
Base Number (BN)	mg KOH/g	ASTM D2896		6.8	7.5	9.1

OIL ANALYSIS REPORT

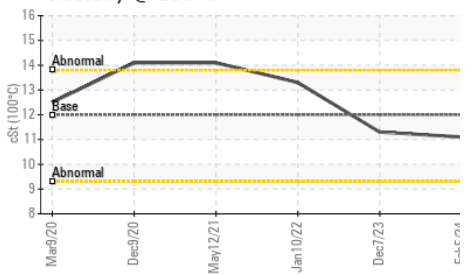
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

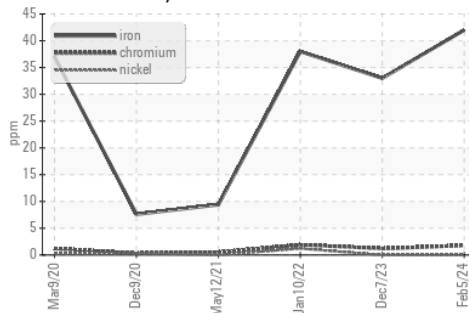


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

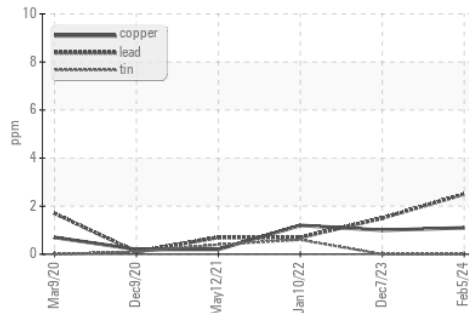
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	11.1	11.3

GRAPHS

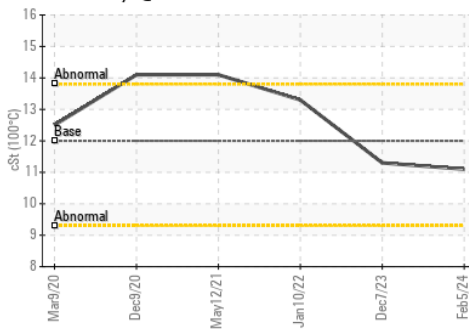
Ferrous Alloys



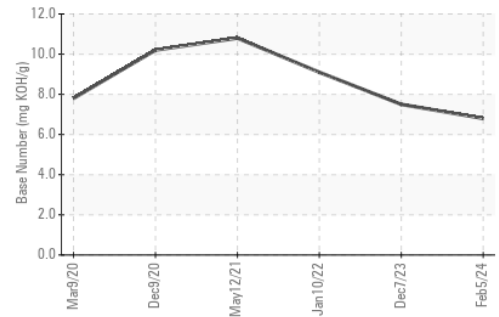
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0091591 **Received** : 20 Jun 2024
Lab Number : 06215293 **Tested** : 21 Jun 2024
Unique Number : 11088157 **Diagnosed** : 21 Jun 2024 - Sean Felton
Test Package : FLEET

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

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)