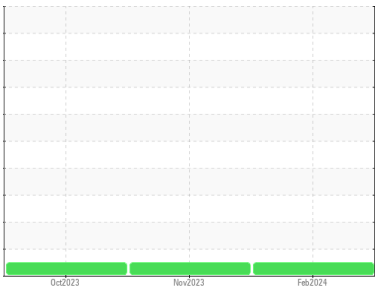
OIL DIAGNOSTICS

OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Area
(AY401B) Supermarket - Tractor
Machine Id
FREIGHTLINER 107A1834
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 10W30 (11 GAL)

DIAGNOSIS

Recommendation
Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

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. No other contaminants were detected in the oil.

Fluid Condition
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PCA0116476**	PCA0111538	PCA0104800
Sample Date		Client Info		**02 Feb 2024**	27 Nov 2023	02 Oct 2023
Machine Age	mls	Client Info		**77011**	85566	57803
Oil Age	mls	Client Info		**19208**	27763	13667
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	>80	**32**	32	39
Chromium	ppm	ASTM D5185m	>5	**2**	2	3
Nickel	ppm	ASTM D5185m	>2	**0**	<1	1
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m	>3	**0**	0	<1
Aluminum	ppm	ASTM D5185m	>30	**31**	40	31
Lead	ppm	ASTM D5185m	>30	**0**	0	1
Copper	ppm	ASTM D5185m	>150	**54**	58	137
Tin	ppm	ASTM D5185m	>5	**0**	<1	2
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	**5**	10	7
Barium	ppm	ASTM D5185m	0	**5**	2	0
Molybdenum	ppm	ASTM D5185m	50	**83**	22	57
Manganese	ppm	ASTM D5185m	0	**0**	<1	2
Magnesium	ppm	ASTM D5185m	950	**1285**	212	884
Calcium	ppm	ASTM D5185m	1050	**1500**	2109	1210
Phosphorus	ppm	ASTM D5185m	995	**1422**	818	1012
Zinc	ppm	ASTM D5185m	1180	**1679**	1059	1231
Sulfur	ppm	ASTM D5185m	2600	**4073**	3419	2585

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	**6**	5	5
Sodium	ppm	ASTM D5185m		**<1**	0	4
Potassium	ppm	ASTM D5185m	>20	**73**	97	79

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.7**	0.9	0.7
Nitration	Abs/cm	*ASTM D7624	>20	**8.0**	8.2	8.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	**20.3**	21.5	21.2

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**16.2**	14.6	18.1
Base Number (BN)	mg KOH/g	ASTM D2896		**7.8**	6.2	8.1

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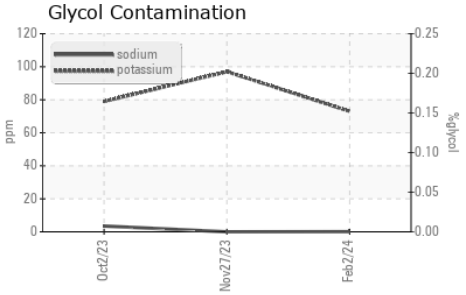
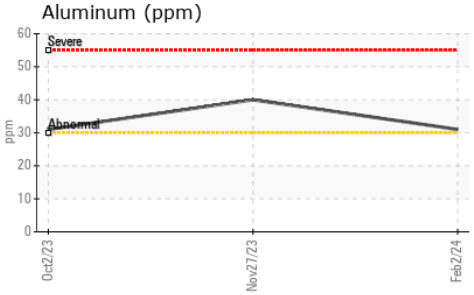
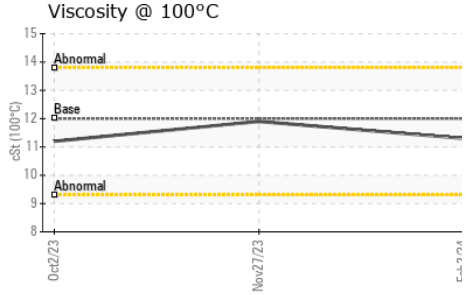
Glycol Contamination



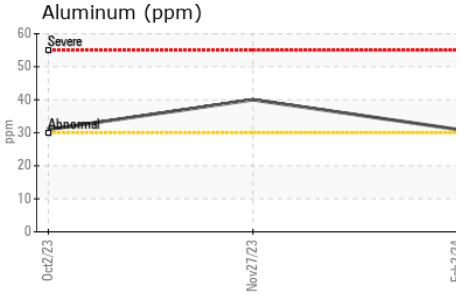
Aluminum (ppm)



Viscosity @ 100°C



Aluminum (ppm)

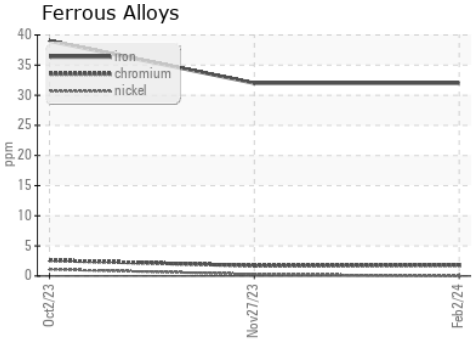


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

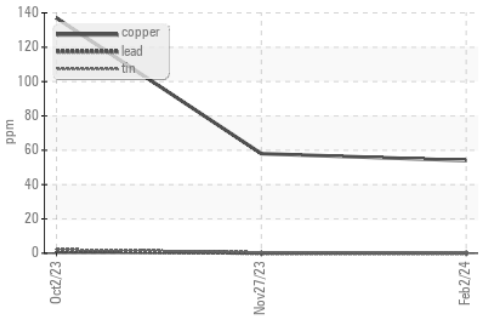
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	**11.3**	11.9	11.2

GRAPHS

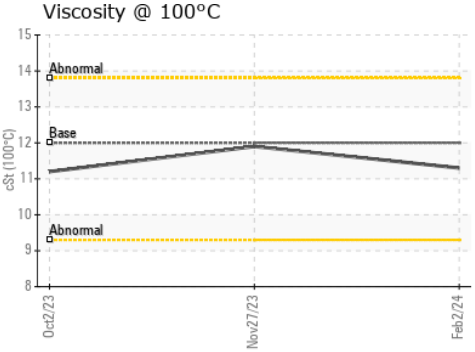
Ferrous Alloys



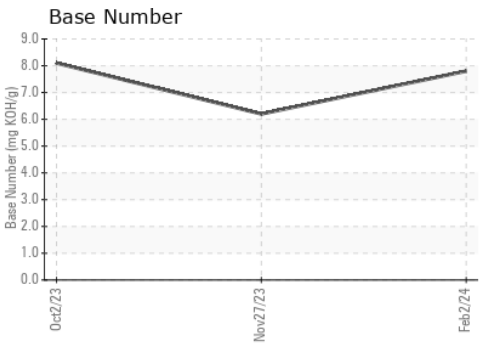
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0116476
Lab Number : 06080602
Unique Number : 10862693
Test Package : FLEET

Received : 05 Feb 2024
Tested : 06 Feb 2024
Diagnosed : 07 Feb 2024 - Don Baldridge

Transervice - Shop 1072 - Supermarket-Elizabeth
505 Division Street
Elizabeth, NJ
US 07207
Contact: Normand Brizak
nbrizak@transervice.com
T:
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)