OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
PETERBILT 453773
Component
Diesel Engine
Fluid
CITGO CITGUARD 600 15W40 (46 QTS)

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

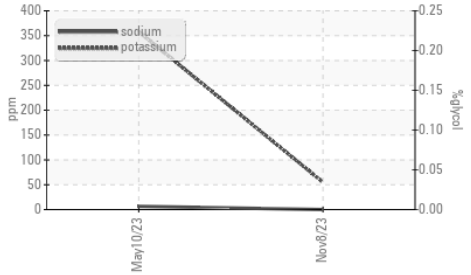
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. No other contaminants were detected in the oil.

FLUID CONDITION

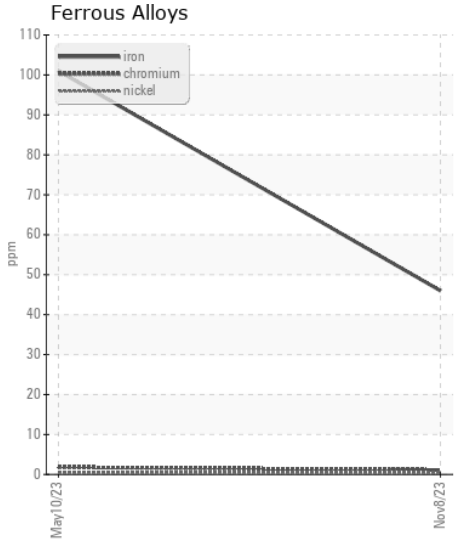
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		RPL0012769	RPL0004546	---
Sample Date		Client Info		08 Nov 2023	10 May 2023	---
Machine Age	hrs	Client Info		3196	1094	---
Oil Age	hrs	Client Info		1014	1094	---
Filter Age	hrs	Client Info		1014	1094	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				NORMAL	ABNORMAL	---
Iron	ppm	ASTM D5185m	>100	46	▲ 101	---
Chromium	ppm	ASTM D5185m	>20	1	2	---
Nickel	ppm	ASTM D5185m	>4	<1	<1	---
Titanium	ppm	ASTM D5185m		<1	<1	---
Silver	ppm	ASTM D5185m	>3	0	<1	---
Aluminum	ppm	ASTM D5185m	>20	23	156	---
Lead	ppm	ASTM D5185m	>40	2	<1	---
Copper	ppm	ASTM D5185m	>330	5	14	---
Tin	ppm	ASTM D5185m	>15	<1	2	---
Vanadium	ppm	ASTM D5185m		0	<1	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---
Silicon	ppm	ASTM D5185m	>25	13	18	---
Potassium	ppm	ASTM D5185m	>20	55	358	---
Fuel		WC Method	>5	<1.0	<1.0	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.7	1	---
Nitration	Abs/cm	*ASTM D7624	>20	12.8	8.1	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	28.1	20.6	---
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	---
Sodium	ppm	ASTM D5185m		0	7	---
Boron	ppm	ASTM D5185m	13	0	19	---
Barium	ppm	ASTM D5185m	0	9	0	---
Molybdenum	ppm	ASTM D5185m	57	69	14	---
Manganese	ppm	ASTM D5185m		<1	3	---
Magnesium	ppm	ASTM D5185m	825	418	771	---
Calcium	ppm	ASTM D5185m	1100	1896	1551	---
Phosphorus	ppm	ASTM D5185m	933	1058	838	---
Zinc	ppm	ASTM D5185m	1089	1343	1014	---
Sulfur	ppm	ASTM D5185m	2769	3512	3838	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	25.5	15.5	---
Base Number (BN)	mg KOH/g	ASTM D2896	11.0	4.6	10.0	---
Visc @ 100°C	cSt	ASTM D445	15.4	14.1	12.6	---

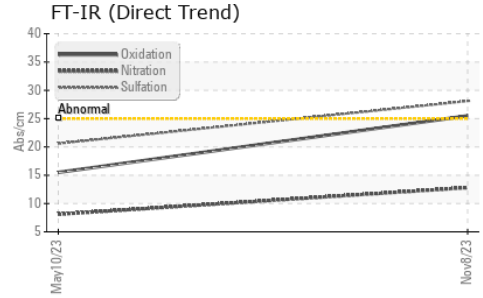
Glycol Contamination



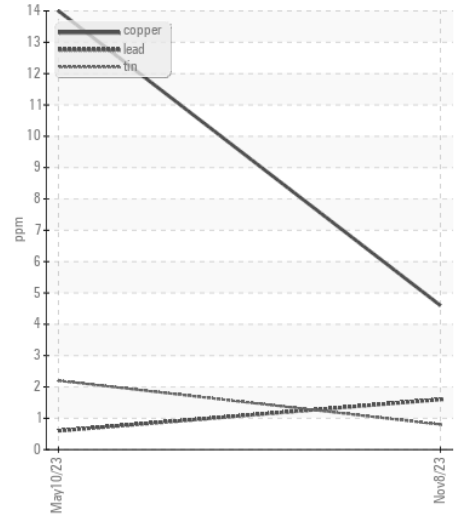
Ferrous Alloys



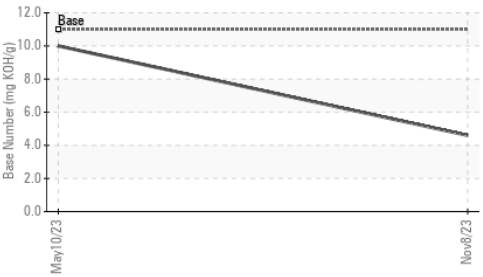
FT-IR (Direct Trend)



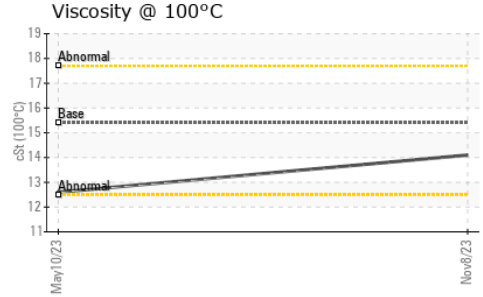
Non-ferrous Metals



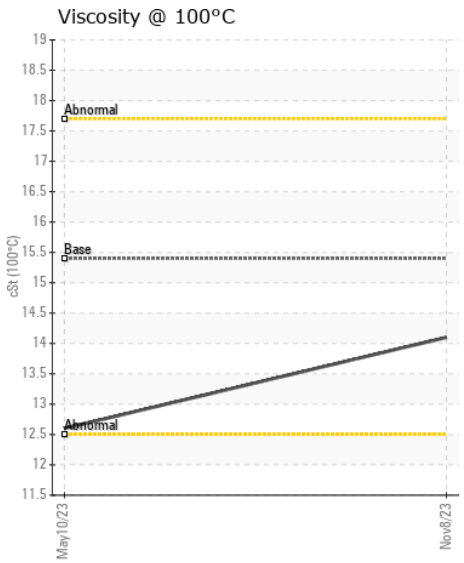
Base Number



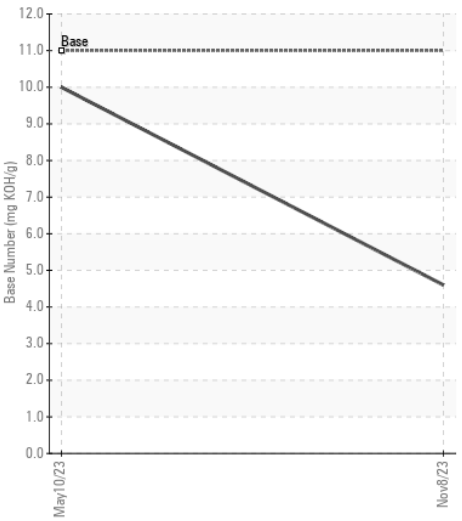
Viscosity @ 100°C



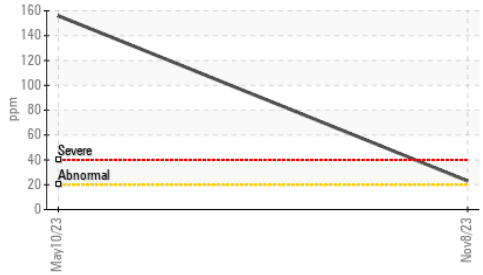
Viscosity @ 100°C



Base Number



Aluminum (ppm)



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RPL0012769
Lab Number : 06013655
Unique Number : 10752799
Test Package : FLEET

Received : 21 Nov 2023
Tested : 21 Nov 2023
Diagnosed : 23 Nov 2023 - Don Baldridge

Certificate L2367

RTL PACLEASE - 7010 - Florida
9407 Bachman Road
Orlando, FL
US 32824
Contact: John Churchwell
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T: (407)240-7511
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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)