OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
INTERNATIONAL 1564
Component
Diesel Engine
Fluid
SAFETY-KLEEN PERFORMANCE PLUS 10W30 (48 QTS)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

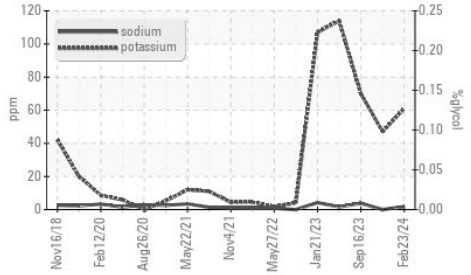
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. No other contaminants were detected in the oil.

FLUID CONDITION

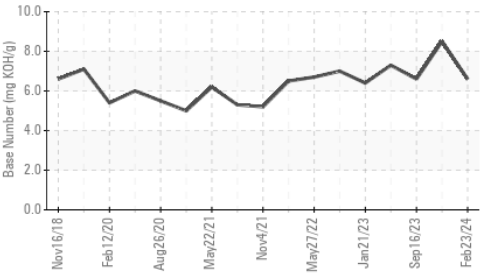
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**WC0886825**	WC0852689	WC0802066
Sample Date		Client Info		**23 Feb 2024**	25 Nov 2023	16 Sep 2023
Machine Age	mls	Client Info		**630695**	618245	601697
Oil Age	mls	Client Info		**0**	16440	31839
Filter Age	mls	Client Info		**0**	16440	4058
Oil Changed		Client Info		**N/A**	Not Changd	Changed
Filter Changed		Client Info		**N/A**	Changed	Changed
Sample Status				**NORMAL**	NORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>165	**35**	23	43
Chromium	ppm	ASTM D5185m	>5	**2**	1	3
Nickel	ppm	ASTM D5185m	>4	**0**	<1	0
Titanium	ppm	ASTM D5185m	>2	**0**	0	0
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**25**	18	30
Lead	ppm	ASTM D5185m	>150	**2**	<1	4
Copper	ppm	ASTM D5185m	>90	**<1**	<1	2
Tin	ppm	ASTM D5185m	>5	**<1**	0	<1
Vanadium	ppm	ASTM D5185m		**0**	0	0
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silicon	ppm	ASTM D5185m	>35	**4**	3	5
Potassium	ppm	ASTM D5185m	>20	**61**	47	70
Fuel		WC Method	>3.0	**<1.0**	<1.0	▲ 1.5
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	NEG
Soot %	%	*ASTM D7844	>7.5	**0.3**	0.2	0
Nitration	Abs/cm	*ASTM D7624	>20	**9.9**	8.2	10.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	**20.9**	19.5	24.1
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
Sodium	ppm	ASTM D5185m		**2**	0	4
Boron	ppm	ASTM D5185m		**7**	8	8
Barium	ppm	ASTM D5185m		**0**	2	0
Molybdenum	ppm	ASTM D5185m		**55**	58	50
Manganese	ppm	ASTM D5185m		**<1**	0	1
Magnesium	ppm	ASTM D5185m		**839**	850	735
Calcium	ppm	ASTM D5185m		**1008**	1095	1485
Phosphorus	ppm	ASTM D5185m		**918**	935	986
Zinc	ppm	ASTM D5185m		**1179**	1167	1227
Sulfur	ppm	ASTM D5185m		**2713**	4370	3617
Oxidation	Abs/.1mm	*ASTM D7414	>25	**16.6**	14.9	17.4
Base Number (BN)	mg KOH/g	ASTM D2896		**6.6**	8.5	6.6
Visc @ 100°C	cSt	ASTM D445		**11.0**	10.9	▲ 11.7

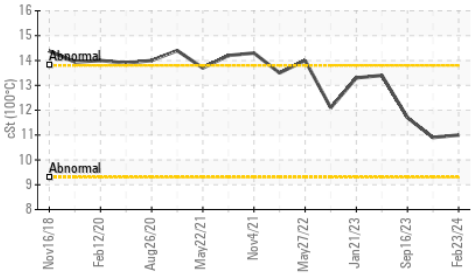
Glycol Contamination



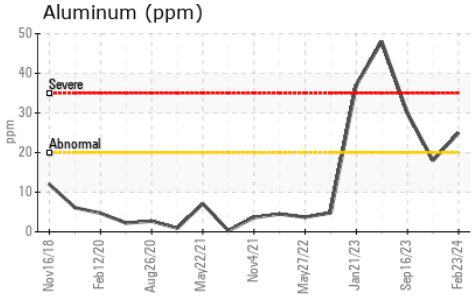
Base Number



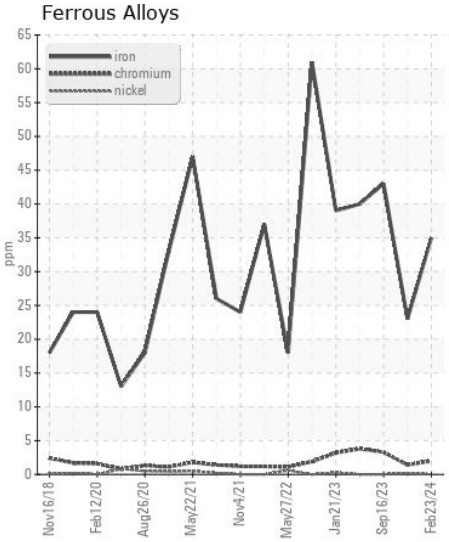
Viscosity @ 100°C



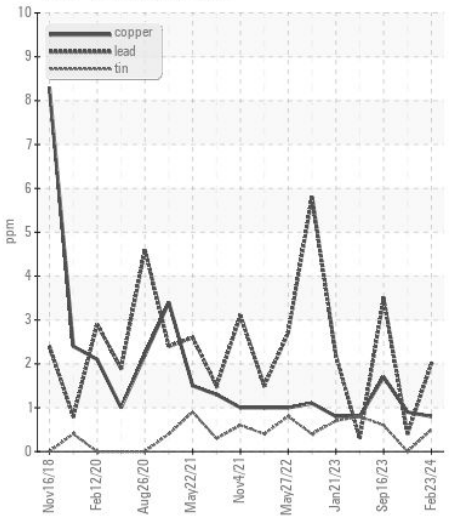
Aluminum (ppm)



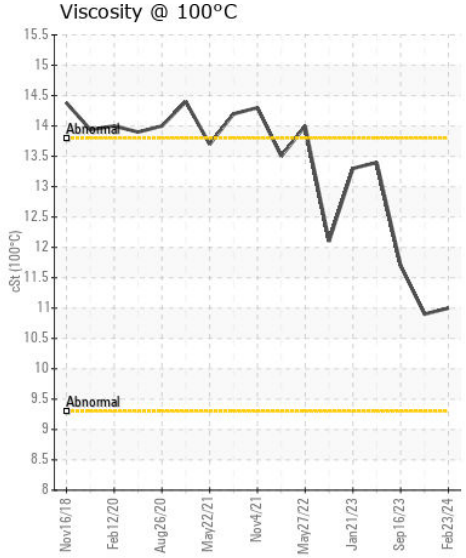
Ferrous Alloys



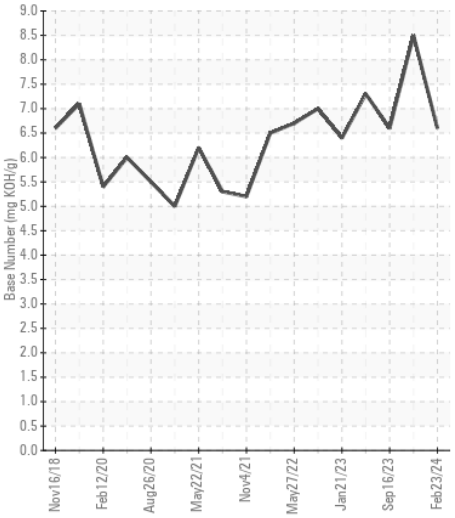
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0886825
Lab Number : 06105832
Unique Number : 10909329
Test Package : FLEET

Received : 01 Mar 2024
Tested : 02 Mar 2024
Diagnosed : 04 Mar 2024 - Don Baldridge

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)

CARCO TRANSPORTATION
2801 MIDLAND BLVD.
FORT SMITH, AR
US 72904
Contact: RON BALL
rball@carcotrans.com
T: (479)441-3228
F: