FLEET WEAR CHECK

OIL ANALYSIS REPORT

WEAR	ATTENTION
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
CUMMINS ART VSI
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 40 (--- GAL)

RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

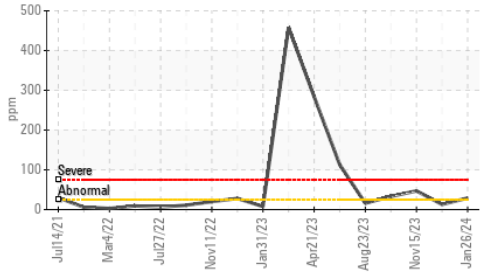
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

FLUID CONDITION

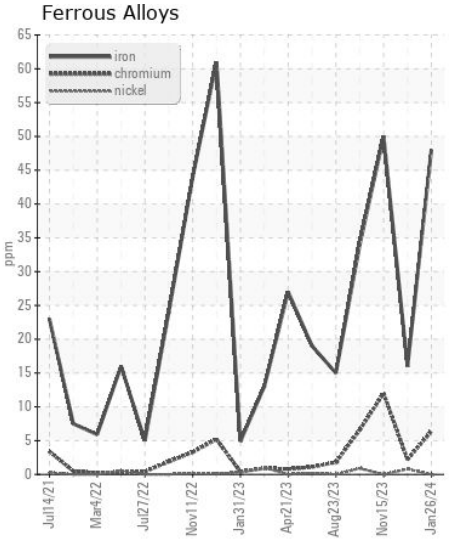
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		KL0013284	KL0013145	KL0013260
Sample Date		Client Info		26 Jan 2024	27 Dec 2023	15 Nov 2023
Machine Age	hrs	Client Info		0	45272	0
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	NORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>90	48	16	50
Chromium	ppm	ASTM D5185m	>20	6	2	12
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m	>2	<1	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	▲ 8	2	▲ 11
Lead	ppm	ASTM D5185m	>40	2	1	3
Copper	ppm	ASTM D5185m	>330	<1	2	5
Tin	ppm	ASTM D5185m	>15	1	1	2
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	>25	▲ 29	13	▲ 47
Potassium	ppm	ASTM D5185m	>20	<1	2	3
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
Soot %	%	*ASTM D7844	>6	0.1	0.1	0.2
Nitration	Abs/cm	*ASTM D7624	>20	6.0	5.5	6.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.5	19.9	20.9
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	>216	2	0	0
Boron	ppm	ASTM D5185m	250	393	425	300
Barium	ppm	ASTM D5185m	10	0	0	4
Molybdenum	ppm	ASTM D5185m	100	84	87	95
Manganese	ppm	ASTM D5185m		<1	1	4
Magnesium	ppm	ASTM D5185m	450	434	420	465
Calcium	ppm	ASTM D5185m	3000	1355	1397	1848
Phosphorus	ppm	ASTM D5185m	1150	912	867	867
Zinc	ppm	ASTM D5185m	1350	1076	1090	1052
Sulfur	ppm	ASTM D5185m	4250	3027	3600	2892
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.6	14.2	15.2
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	7.9	8.57	8.4
Visc @ 100°C	cSt	ASTM D445	14.4	13.3	13.3	12.7

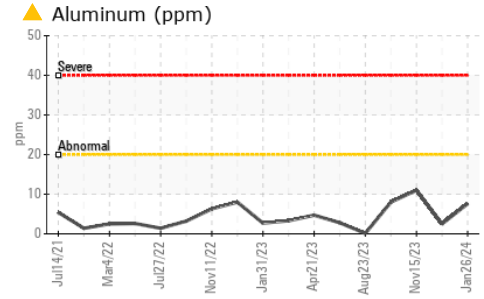
Silicon (ppm)



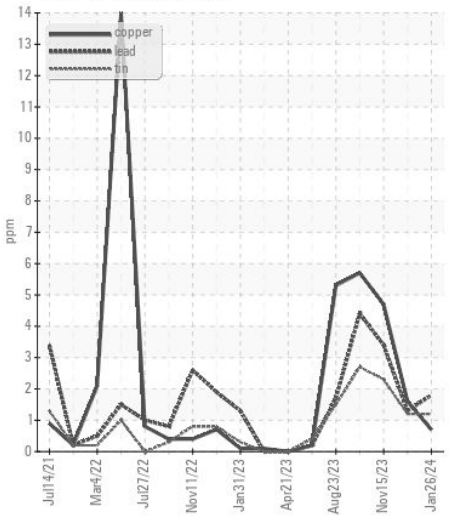
Ferrous Alloys



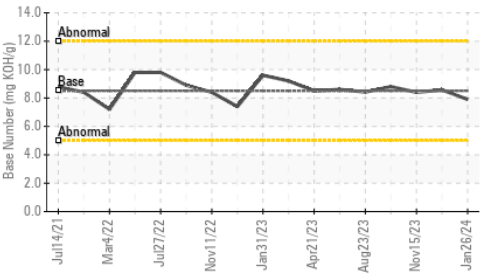
Aluminum (ppm)



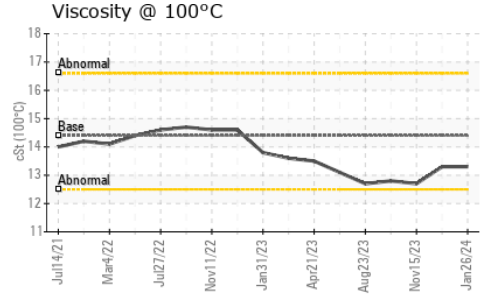
Non-ferrous Metals



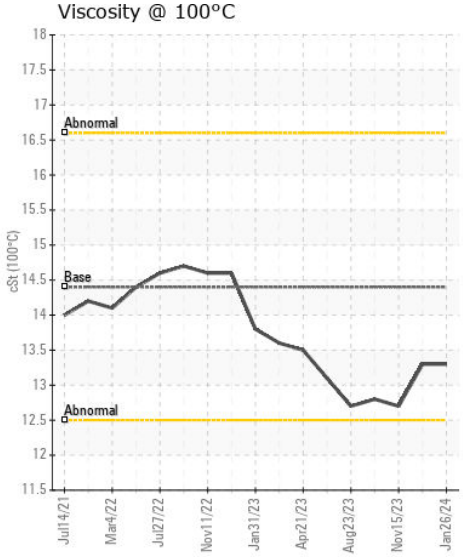
Base Number



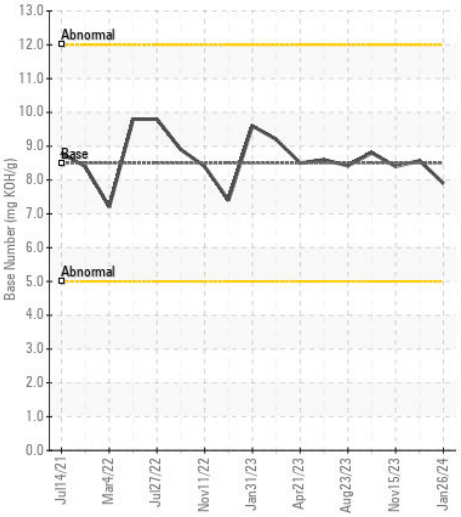
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0013284
Lab Number : 06082936
Unique Number : 10870381
Test Package : FLEET

Received : 07 Feb 2024
Tested : 08 Feb 2024
Diagnosed : 09 Feb 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)

RAMIREZ & SONS
3404 N ENTERPRISE DR
HOBBS, NM
US 88240
Contact: Rick Davidson
rickdavidson.rsi@gmail.com
T:
F: