OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
857-4898
Component
Diesel Engine
Fluid
CHEVRON DELO 400 SAE 10W30 (--- GAL)

RECOMMENDATION

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

WEAR

Cylinder, crank, or cam shaft wear is indicated.

CONTAMINATION

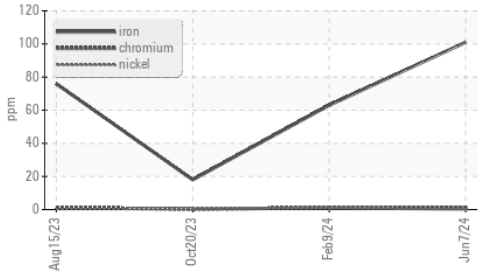
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. No other contaminants were detected in the oil.

FLUID CONDITION

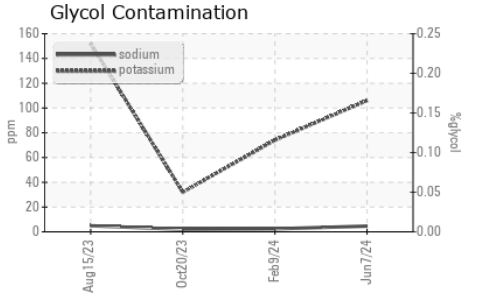
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		RPL0018904	RPL0014202	RPL0014712
Sample Date		Client Info		07 Jun 2024	09 Feb 2024	20 Oct 2023
Machine Age	hrs	Client Info		2841	2153	27122
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	Not Changd	Not Changd
Filter Changed		Client Info		N/A	Not Changd	Not Changd
Sample Status				ABNORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>100	▲ 101	63	18
Chromium	ppm	ASTM D5185m	>20	1	1	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	<1
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	<1	<1	<1
Aluminum	ppm	ASTM D5185m	>20	42	29	13
Lead	ppm	ASTM D5185m	>40	0	<1	0
Copper	ppm	ASTM D5185m	>330	6	6	2
Tin	ppm	ASTM D5185m	>15	1	1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	20	17	9
Potassium	ppm	ASTM D5185m	>20	106	74	32
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.8	0.4	0.1
Nitration	Abs/cm	*ASTM D7624	>20	15.8	12.2	7.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	28.4	23.5	21.9
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		5	2	2
Boron	ppm	ASTM D5185m		15	20	45
Barium	ppm	ASTM D5185m		0	1	<1
Molybdenum	ppm	ASTM D5185m		45	48	41
Manganese	ppm	ASTM D5185m		2	2	<1
Magnesium	ppm	ASTM D5185m		587	522	543
Calcium	ppm	ASTM D5185m		1814	1687	1593
Phosphorus	ppm	ASTM D5185m	1260	815	786	785
Zinc	ppm	ASTM D5185m	1400	1000	909	907
Sulfur	ppm	ASTM D5185m		2682	2444	2529
Oxidation	Abs/.1mm	*ASTM D7414	>25	31.7	24.6	19.8
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	5.6	7.2	9.9
Visc @ 100°C	cSt	ASTM D445	11.1	12.4	11.6	11.1

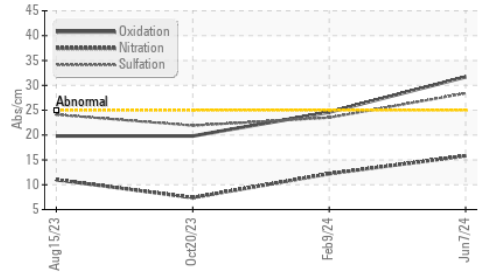
Ferrous Alloys



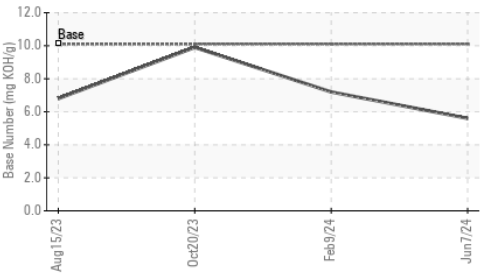
Glycol Contamination



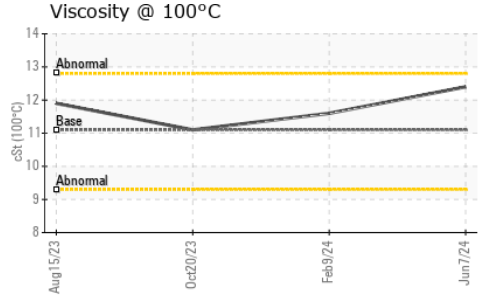
FT-IR (Direct Trend)



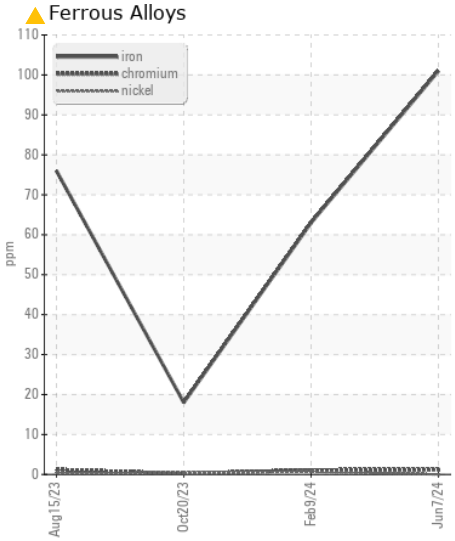
Base Number



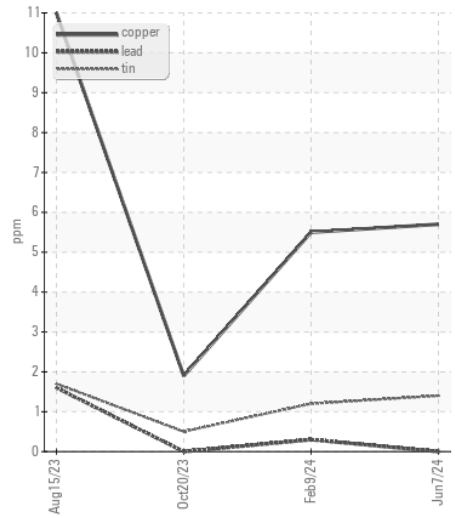
Viscosity @ 100°C



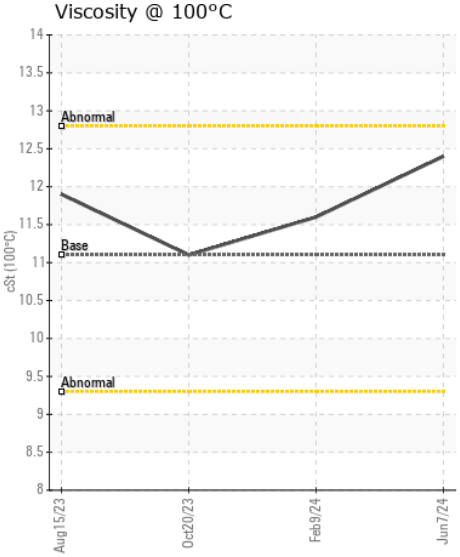
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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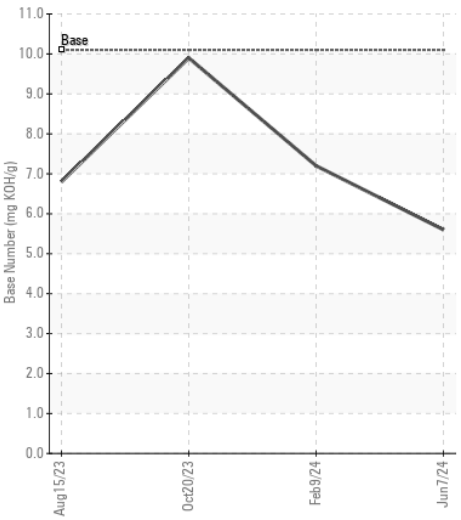

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RPL0018904
Lab Number : 06225536
Unique Number : 11103733
Test Package : FLEET (Additional Tests: KV40)

Received : 01 Jul 2024
Tested : 03 Jul 2024
Diagnosed : 03 Jul 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)

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