



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
TODD BROWN
Machine Id
[TODD BROWN] 001 587214-1
Component
Port Main Engine
Fluid
CHEVRON DELO 400 LE 15W40 (52 GAL)

RECOMMENDATION

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0042516	MW0042985	MW0042982
Sample Date		Client Info		01 Nov 2023	01 May 2023	31 Mar 2023
Machine Age	hrs	Client Info		47333	44253	43691
Oil Age	hrs	Client Info		1428	2513	1953
Filter Age	hrs	Client Info		1428	92	1031
Oil Changed		Client Info		Not Changd	N/A	Not Changd
Filter Changed		Client Info		Not Changd	N/A	Not Changd
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

The lead level is abnormal. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	8	11	10
Chromium	ppm	ASTM D5185m	>8	0	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>3	<1	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>15	3	2	2
Lead	ppm	ASTM D5185m	>18	▲ 22	▲ 33	▲ 27
Copper	ppm	ASTM D5185m	>80	9	11	8
Tin	ppm	ASTM D5185m	>14	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

There is no indication of any contamination in the oil.

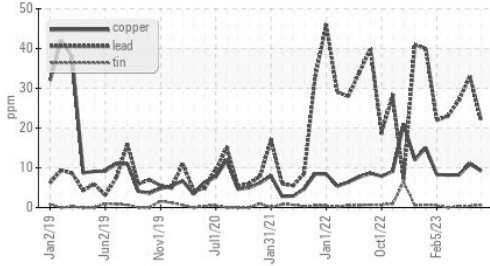
Silicon	ppm	ASTM D5185m	>20	7	7	7
Potassium	ppm	ASTM D5185m	>20	<1	<1	<1
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.4	0.5	0.5
Nitration	Abs/cm	*ASTM D7624	>20	7.8	8.9	8.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.6	25.3	25.1
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	>0.1	NEG	NEG	NEG

FLUID CONDITION

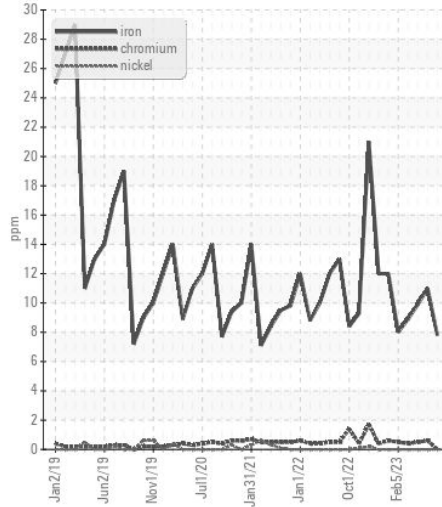
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>75	<1	1	<1
Boron	ppm	ASTM D5185m		262	228	233
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		117	114	110
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		614	656	631
Calcium	ppm	ASTM D5185m		1596	1670	1624
Phosphorus	ppm	ASTM D5185m	1200	779	693	680
Zinc	ppm	ASTM D5185m	1300	892	871	864
Sulfur	ppm	ASTM D5185m	3200	2673	3097	3012
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.9	19.1	18.8
Base Number (BN)	mg KOH/g	ASTM D2896	9.6	7.98	8.39	9.81
Visc @ 100°C	cSt	ASTM D445	15.7	13.5	13.6	13.5

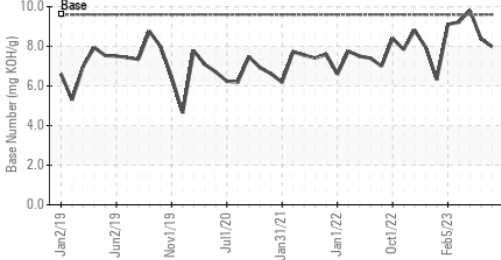
▲ Non-ferrous Metals



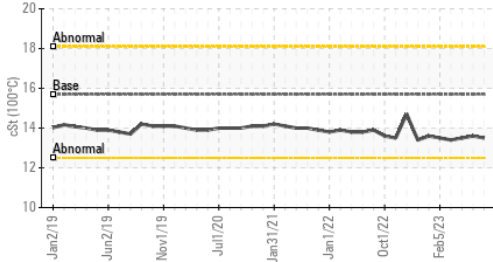
Ferrous Alloys



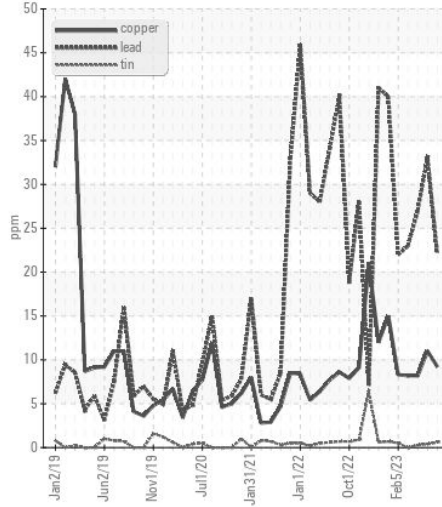
Base Number



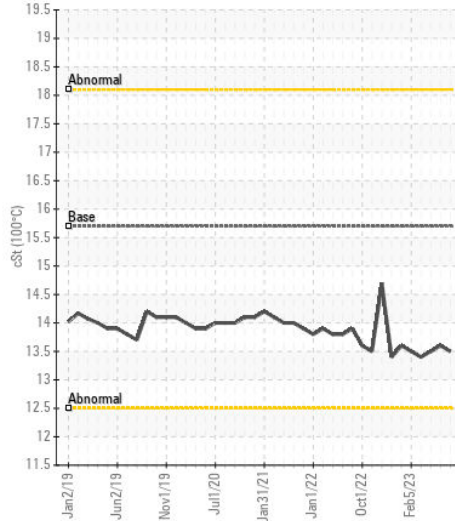
Viscosity @ 100°C



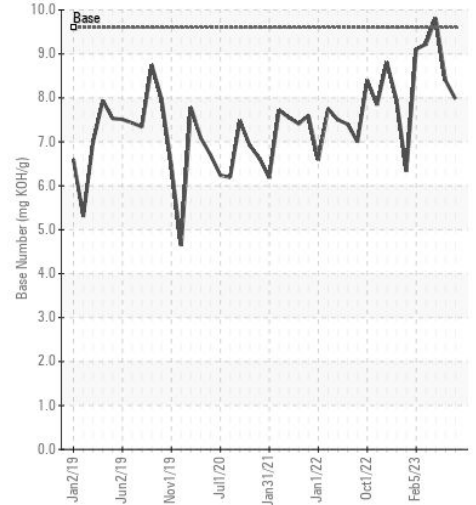
▲ Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0042516 **Received** : 12 Jan 2024
Lab Number : 06060420 **Diagnosed** : 16 Jan 2024
Unique Number : 10831802 **Diagnostician** : Don Baldrige
Test Package : MAR 2

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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