



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		MW0055676	MW0042516	MW0042985
Sample Date		Client Info		01 Dec 2023	01 Nov 2023	01 May 2023
Machine Age	hrs	Client Info		48053	47333	44253
Oil Age	hrs	Client Info		2158	1428	2513
Filter Age	hrs	Client Info		629	1428	92
Oil Changed		Client Info		N/A	Not Changd	N/A
Filter Changed		Client Info		N/A	Not Changd	N/A
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

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

Iron	ppm	ASTM D5185m	>75	6	8	11
Chromium	ppm	ASTM D5185m	>8	<1	0	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>3	0	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>15	3	3	2
Lead	ppm	ASTM D5185m	>18	▲ 25	▲ 22	▲ 33
Copper	ppm	ASTM D5185m	>80	13	9	11
Tin	ppm	ASTM D5185m	>14	0	<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.

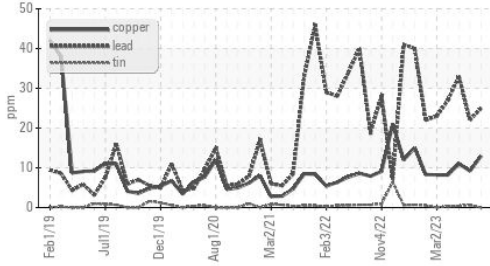
Silicon	ppm	ASTM D5185m	>20	6	7	7
Potassium	ppm	ASTM D5185m	>20	0	<1	<1
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.4	0.4	0.5
Nitration	Abs/cm	*ASTM D7624	>20	8.4	7.8	8.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.9	23.6	25.3
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

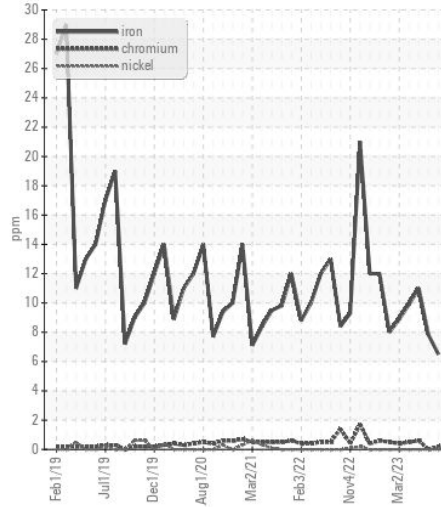
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>75	0	<1	1
Boron	ppm	ASTM D5185m		254	262	228
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		117	117	114
Manganese	ppm	ASTM D5185m		1	<1	<1
Magnesium	ppm	ASTM D5185m		592	614	656
Calcium	ppm	ASTM D5185m		1619	1596	1670
Phosphorus	ppm	ASTM D5185m	1200	717	779	693
Zinc	ppm	ASTM D5185m	1300	875	892	871
Sulfur	ppm	ASTM D5185m	3200	2525	2673	3097
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.7	16.9	19.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.6	7.59	7.98	8.39
Visc @ 100°C	cSt	ASTM D445	15.7	13.5	13.5	13.6

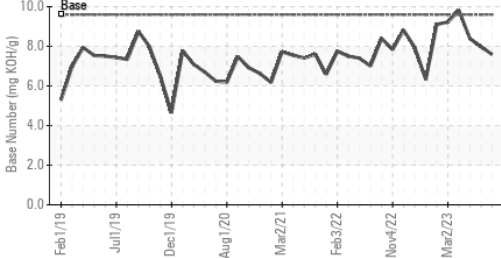
▲ Non-ferrous Metals



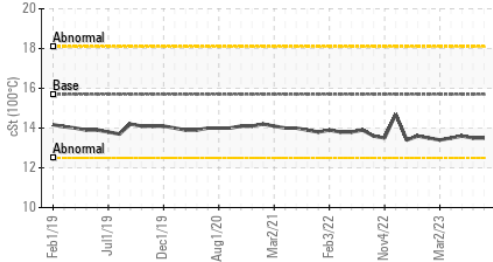
Ferrous Alloys



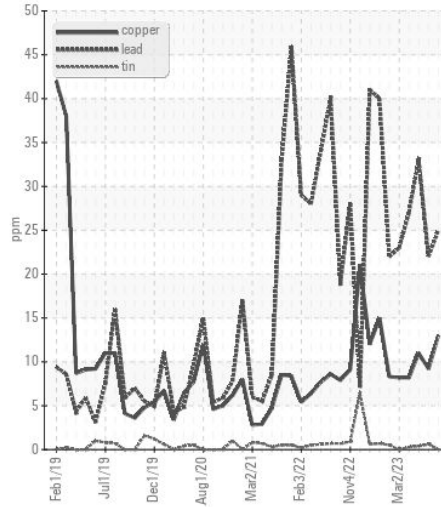
Base Number



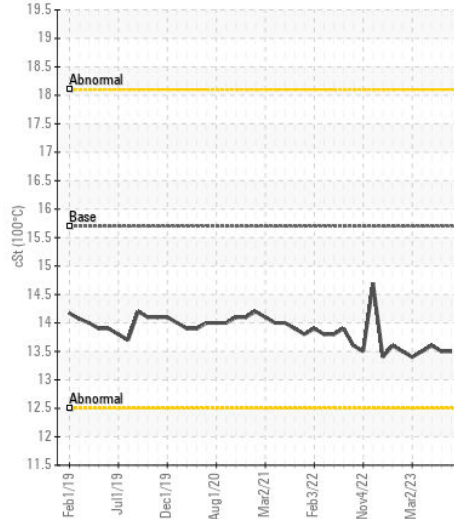
Viscosity @ 100°C



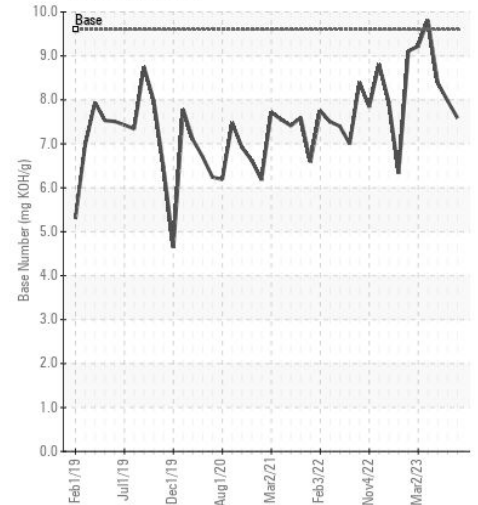
▲ Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0055676 **Received** : 16 Jan 2024
Lab Number : 06062174 **Diagnosed** : 18 Jan 2024
Unique Number : 10833556 **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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