



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
ELEANOR G MCDONALD
Machine Id
[ELEANOR G MCDONALD] 001 552824-1
Component
Port Main Engine
Fluid
CHEVRON DELO 710 LS (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0065839	MW0065699	MW0065705
Sample Date		Client Info		01 May 2024	01 Apr 2024	05 Mar 2024
Machine Age	hrs	Client Info		14035	94890	12723
Oil Age	hrs	Client Info		14035	13333	12723
Filter Age	hrs	Client Info		307	318	466
Oil Changed		Client Info		N/A	Not Changed	N/A
Filter Changed		Client Info		Changed	Changed	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	19	20	35
Chromium	ppm	ASTM D5185m	>8	1	2	3
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	2	1	4
Lead	ppm	ASTM D5185m	>18	5	4	8
Copper	ppm	ASTM D5185m	>80	18	20	30
Tin	ppm	ASTM D5185m	>14	6	6	10
Vanadium	ppm	ASTM D5185m		0	0	<1
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.

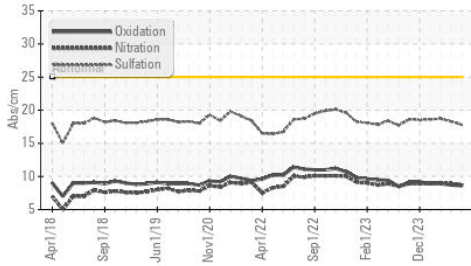
Silicon	ppm	ASTM D5185m	>20	4	4	8
Potassium	ppm	ASTM D5185m	>20	1	0	3
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		1.4	1.6	1.7
Nitration	Abs/cm	*ASTM D7624	>20	8.7	8.9	9.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.8	18.3	18.7
Silt	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

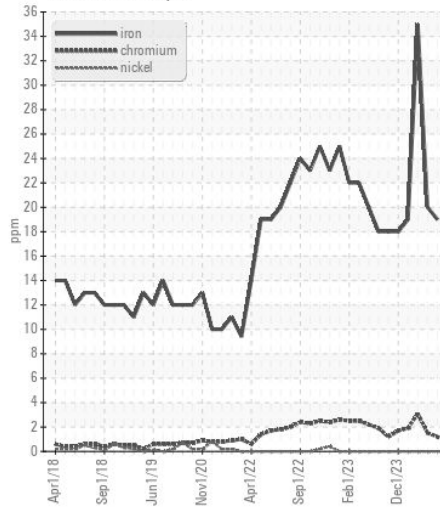
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>75	2	0	2
Boron	ppm	ASTM D5185m		52	44	68
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		46	47	74
Manganese	ppm	ASTM D5185m		2	2	2
Magnesium	ppm	ASTM D5185m		24	27	44
Calcium	ppm	ASTM D5185m		3684	3605	5485
Phosphorus	ppm	ASTM D5185m		22	19	44
Zinc	ppm	ASTM D5185m		16	20	41
Sulfur	ppm	ASTM D5185m		3074	2626	4218
Oxidation	Abs/.1mm	*ASTM D7414	>25	8.6	8.7	8.9
Base Number (BN)	mg KOH/g	ASTM D2896	10.5	8.99	9.24	9.20
Visc @ 100°C	cSt	ASTM D445	15.5	15.3	15.3	15.5

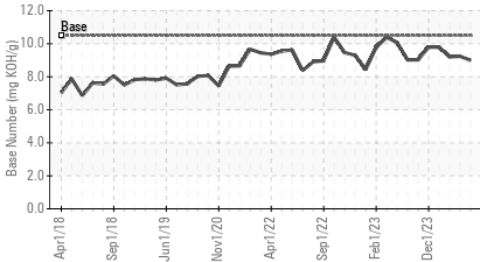
FT-IR (Direct Trend)



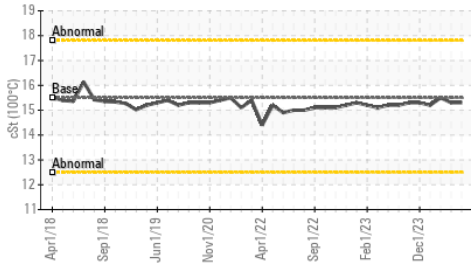
Ferrous Alloys



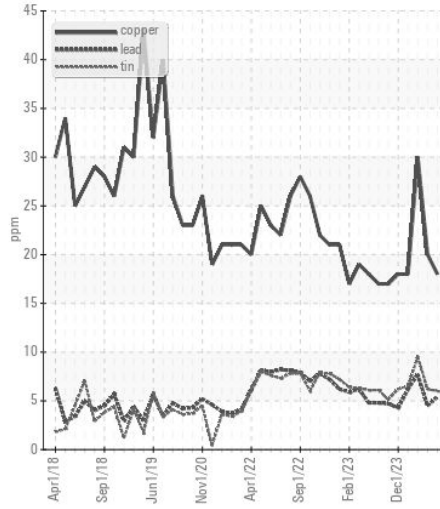
Base Number



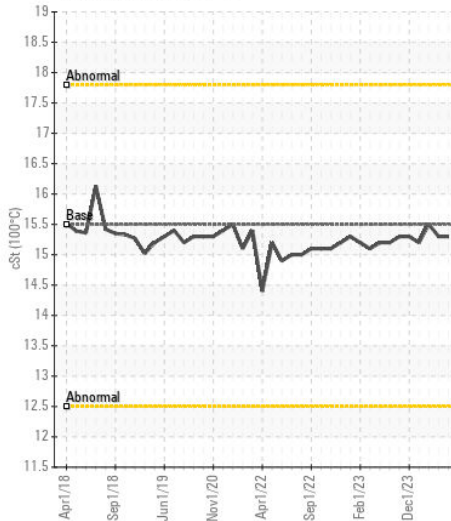
Viscosity @ 100°C



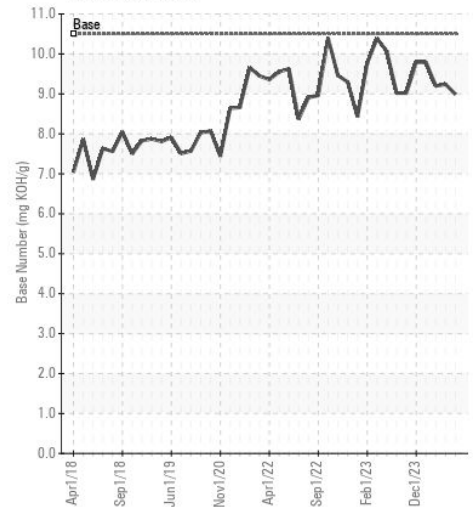
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : MW0065839

Lab Number : 06174723

Unique Number : 11020776

Test Package : MAR 2

Received : 09 May 2024

Tested : 10 May 2024

Diagnosed : 13 May 2024 - Sean Felton

INGRAM BARGE

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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)