



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area

DANIEL P MECKLENBORG

Machine Id

[DANIEL P MECKLENBORG] 001 608409-1

Component

Port Main Engine

Fluid

CHEVRON DELO 710 LE (350 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW06148177	MW0058566	MW06017551
Sample Date		Client Info		01 Apr 2024	01 Dec 2023	01 Nov 2023
Machine Age	hrs	Client Info		63017	62562	61860
Oil Age	hrs	Client Info		63017	0	61860
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				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	13	15	13
Chromium	ppm	ASTM D5185m	>8	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	<1	<1
Titanium	ppm	ASTM D5185m	>3	<1	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>15	2	2	2
Lead	ppm	ASTM D5185m	>18	6	6	5
Copper	ppm	ASTM D5185m	>80	19	19	17
Tin	ppm	ASTM D5185m	>14	4	3	3
Vanadium	ppm	ASTM D5185m		<1	<1	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.

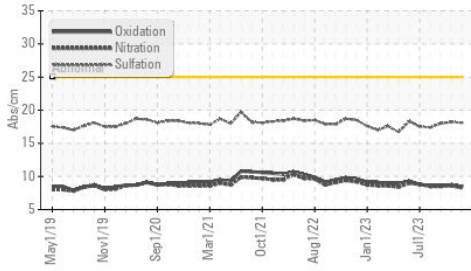
Silicon	ppm	ASTM D5185m	>20	7	5	5
Potassium	ppm	ASTM D5185m	>20	2	2	2
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		1.4	1.5	1.1
Nitration	Abs/cm	*ASTM D7624	>20	8.5	8.7	8.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.1	18.2	18.0
Silt	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

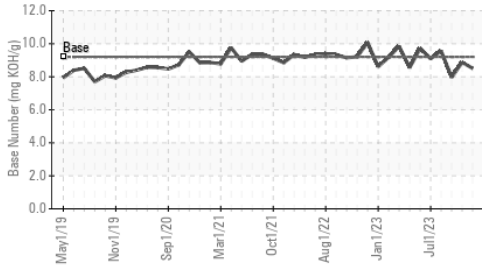
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>75	21	12	12
Boron	ppm	ASTM D5185m		46	45	38
Barium	ppm	ASTM D5185m		0	2	0
Molybdenum	ppm	ASTM D5185m		49	44	42
Manganese	ppm	ASTM D5185m		1	<1	<1
Magnesium	ppm	ASTM D5185m		24	12	13
Calcium	ppm	ASTM D5185m		3693	3469	3171
Phosphorus	ppm	ASTM D5185m		23	17	0
Zinc	ppm	ASTM D5185m	10	17	0	0
Sulfur	ppm	ASTM D5185m		2804	2730	2706
Oxidation	Abs/.1mm	*ASTM D7414	>25	8.3	8.6	8.7
Base Number (BN)	mg KOH/g	ASTM D2896	9.2	8.51	8.87	7.96
Visc @ 100°C	cSt	ASTM D445	15.5	14.8	14.8	14.8

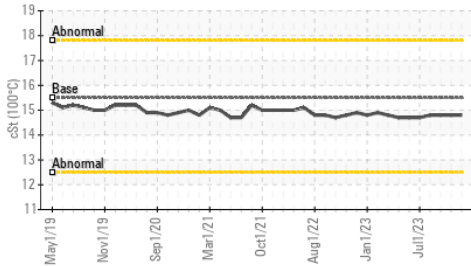
FT-IR (Direct Trend)



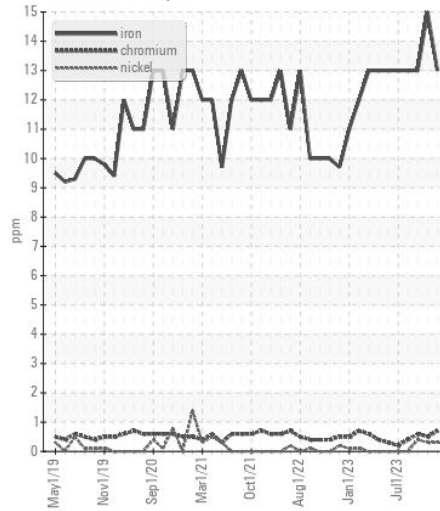
Base Number



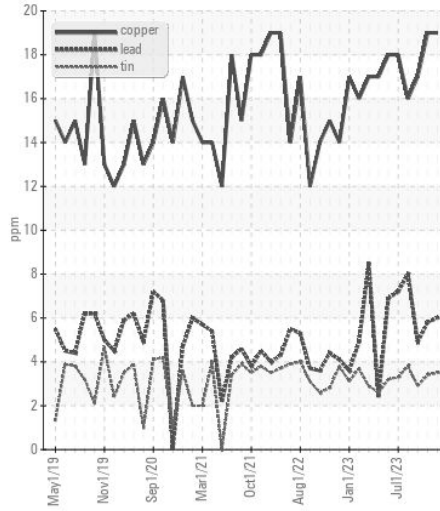
Viscosity @ 100°C



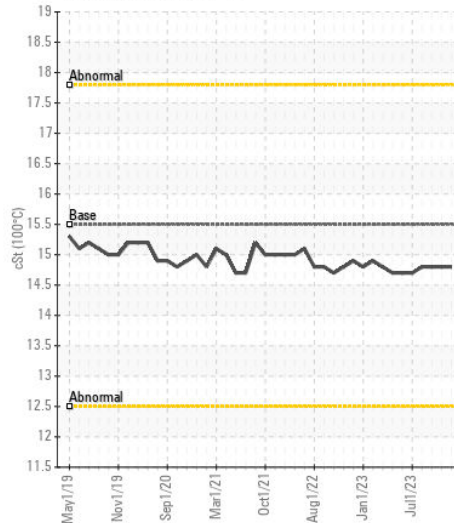
Ferrous Alloys



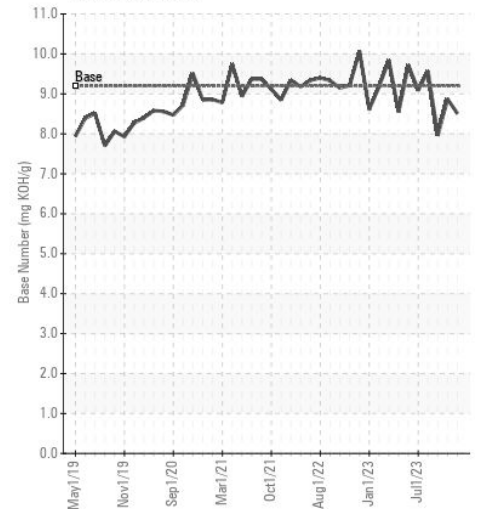
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : MW06148177

Lab Number : 06148177

Unique Number : 10978255

Test Package : MAR 2

Received : 12 Apr 2024

Tested : 15 Apr 2024

Diagnosed : 15 Apr 2024 - Wes Davis

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)