



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
CAIRO (S/N 73280868)
Component
Port Genset
Fluid
CHEVRON DELO 400 MULTIGRADE 15W40 (6 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0062417	MW0062590	MW0062580
Sample Date		Client Info		19 May 2024	15 May 2024	11 Apr 2024
Machine Age	hrs	Client Info		19341	0	18756
Oil Age	hrs	Client Info		91	0	133
Filter Age	hrs	Client Info		91	0	133
Oil Changed		Client Info		Changed	N/A	Not Changd
Filter Changed		Client Info		Changed	N/A	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	2	4	2
Chromium	ppm	ASTM D5185m	>4	0	<1	0
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m		16	15	14
Silver	ppm	ASTM D5185m	>5	0	<1	0
Aluminum	ppm	ASTM D5185m	>12	1	2	0
Lead	ppm	ASTM D5185m	>17	0	<1	0
Copper	ppm	ASTM D5185m	>70	0	<1	0
Tin	ppm	ASTM D5185m	>15	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	<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.

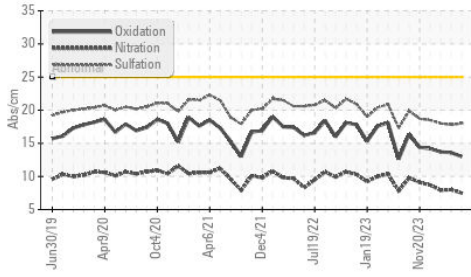
Silicon	ppm	ASTM D5185m	>25	4	4	2
Potassium	ppm	ASTM D5185m	>20	2	4	2
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.2	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	7.5	8.0	7.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.0	17.8	18.0
Silt	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

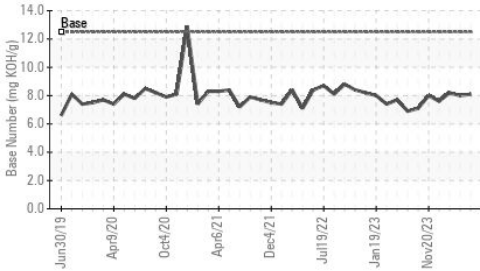
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		2	2	1
Boron	ppm	ASTM D5185m	151	104	89	92
Barium	ppm	ASTM D5185m	0.4	0	0	0
Molybdenum	ppm	ASTM D5185m	250	28	27	28
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m	0	745	675	764
Calcium	ppm	ASTM D5185m	2046	1451	1422	1699
Phosphorus	ppm	ASTM D5185m	1043	707	721	777
Zinc	ppm	ASTM D5185m	943	797	807	911
Sulfur	ppm	ASTM D5185m	5012	3466	3536	3876
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.0	13.6	13.7
Base Number (BN)	mg KOH/g	ASTM D2896	12.5	8.1	8.0	8.2
Visc @ 100°C	cSt	ASTM D445	14.4	13.2	12.9	13.0

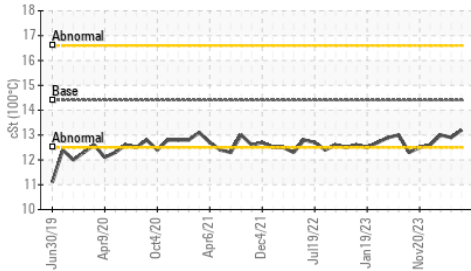
FT-IR (Direct Trend)



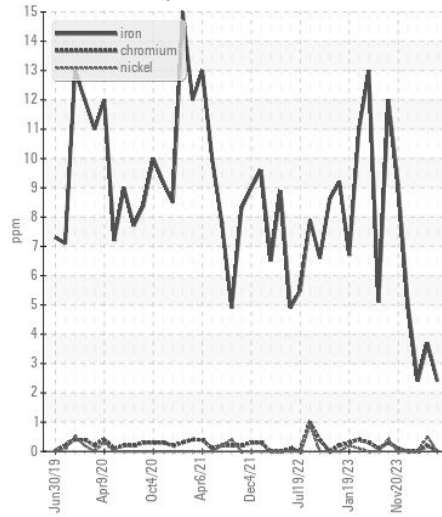
Base Number



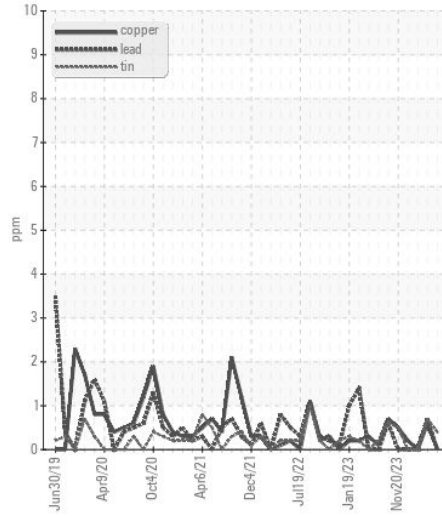
Viscosity @ 100°C



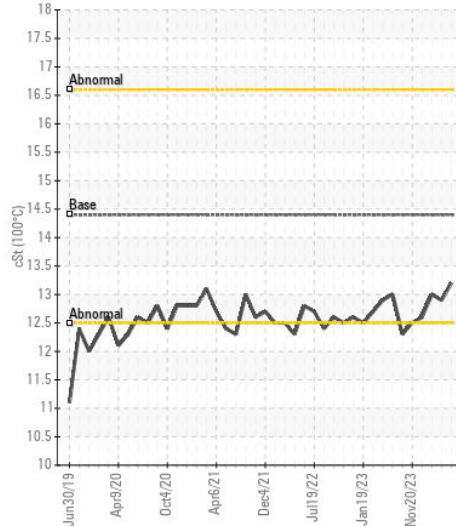
Ferrous Alloys



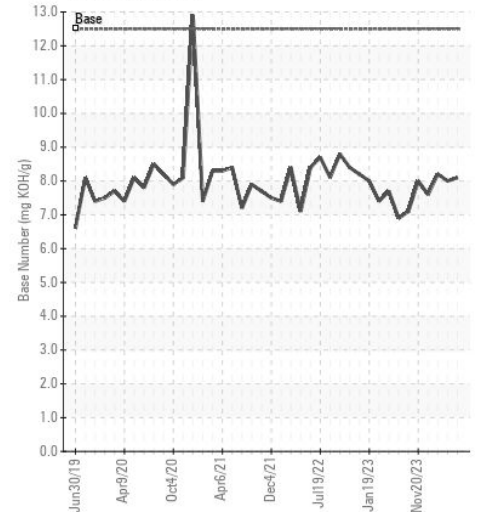
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : MW0062417

Lab Number : 06188884

Unique Number : 11045636

Test Package : MAR 2

Received : 23 May 2024

Tested : 24 May 2024

Diagnosed : 24 May 2024 - Wes Davis

AMERICAN COMMERCIAL LINES

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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)