



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
RICK HARNACK
Machine Id
[RICK HARNACK] 001 685578-1
Component
Port Main Engine
Fluid
CHEVRON DELO 400 XLE 15W40 (220 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW06176275	MW0068288	MW0068287
Sample Date		Client Info		01 May 2024	01 Apr 2024	01 Mar 2024
Machine Age	hrs	Client Info		22444	31780	31043
Oil Age	hrs	Client Info		1519	805	118
Filter Age	hrs	Client Info		0	38	118
Oil Changed		Client Info		N/A	Changed	Changed
Filter Changed		Client Info		N/A	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	12	6	2
Chromium	ppm	ASTM D5185m	>8	0	0	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>3	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>15	2	3	3
Lead	ppm	ASTM D5185m	>18	1	<1	0
Copper	ppm	ASTM D5185m	>80	4	4	1
Tin	ppm	ASTM D5185m	>14	0	<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.

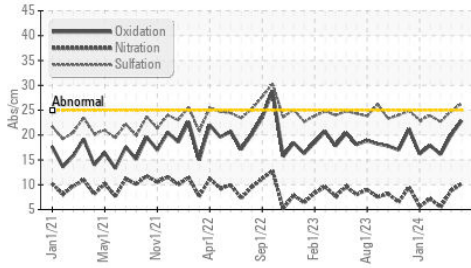
Silicon	ppm	ASTM D5185m	>20	5	4	5
Potassium	ppm	ASTM D5185m	>20	<1	0	<1
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.5	0.3	0.1
Nitration	Abs/cm	*ASTM D7624	>20	10.2	8.8	5.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	26.3	24.8	22.7
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

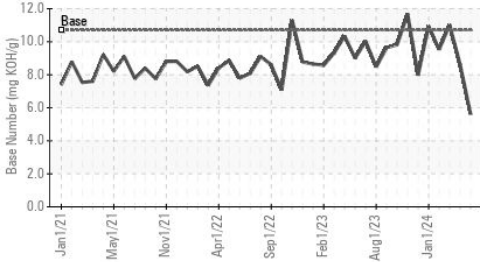
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>75	2	0	<1
Boron	ppm	ASTM D5185m		354	330	357
Barium	ppm	ASTM D5185m		<1	0	0
Molybdenum	ppm	ASTM D5185m		137	139	118
Manganese	ppm	ASTM D5185m		2	1	<1
Magnesium	ppm	ASTM D5185m		701	740	647
Calcium	ppm	ASTM D5185m		1786	2005	1408
Phosphorus	ppm	ASTM D5185m	760	737	821	635
Zinc	ppm	ASTM D5185m	830	896	1006	767
Sulfur	ppm	ASTM D5185m	2770	2989	3481	2187
Oxidation	Abs/.1mm	*ASTM D7414	>25	22.9	20.0	16.1
Base Number (BN)	mg KOH/g	ASTM D2896	10.7	5.60	8.62	11.01
Visc @ 100°C	cSt	ASTM D445	14.9	14.1	13.9	13.8

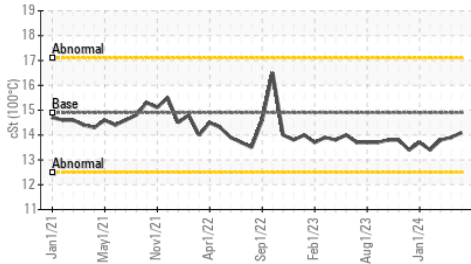
FT-IR (Direct Trend)



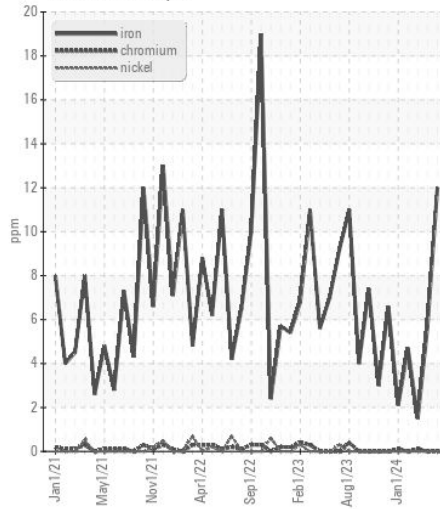
Base Number



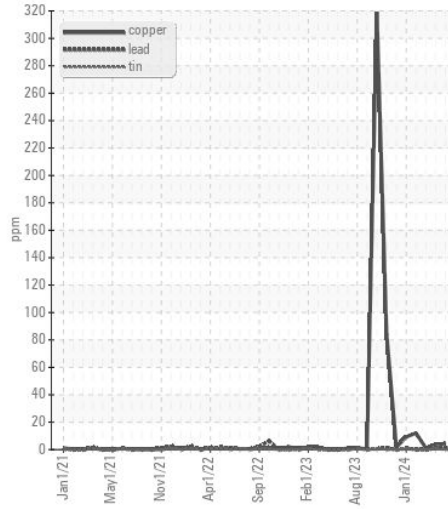
Viscosity @ 100°C



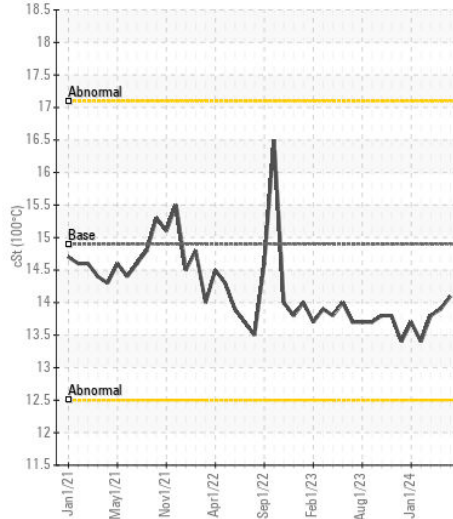
Ferrous Alloys



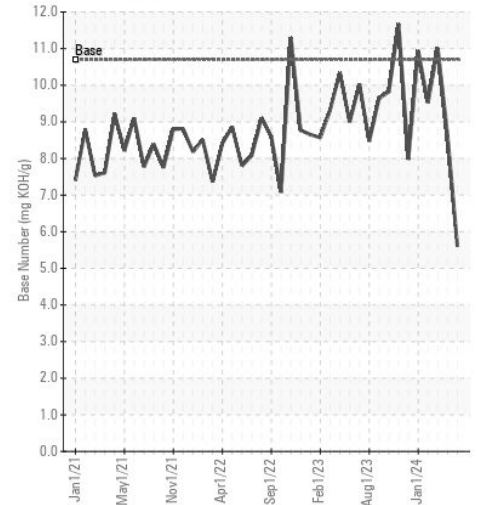
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : MW06176275

Lab Number : 06176275

Unique Number : 11022328

Test Package : MAR 2

Received : 10 May 2024

Tested : 13 May 2024

Diagnosed : 13 May 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)