



Machine Id
EIC
Component
Port Main Engine
Fluid
CHEVRON DELO 400 XLE 15W40 (--- GAL)

RECOMMENDATION

We advise that you check the cylinder liner seals for deterioration to ensure that cooling water is not entering the sump. No corrective action is recommended at this time. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW06151662	MW06101488	MW06071445
Sample Date		Client Info		16 Apr 2024	26 Feb 2024	25 Jan 2024
Machine Age	hrs	Client Info		26033	25144	24229
Oil Age	hrs	Client Info		889	915	724
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				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	6	10	8
Chromium	ppm	ASTM D5185m	>8	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m	>3	<1	1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>15	<1	<1	<1
Lead	ppm	ASTM D5185m	>18	6	8	9
Copper	ppm	ASTM D5185m	>80	0	2	3
Tin	ppm	ASTM D5185m	>14	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

Elemental level of sodium (Na) and/or boron (B) indicates a possible cooling water leak. Light fuel dilution occurring. No other contaminants were detected in the oil.

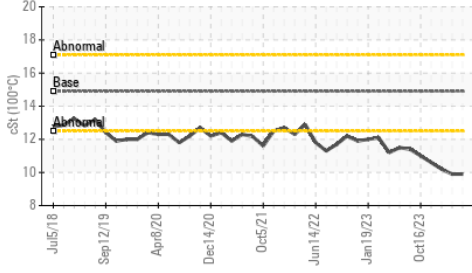
Silicon	ppm	ASTM D5185m	>20	3	5	4
Potassium	ppm	ASTM D5185m	>20	0	3	0
Fuel	%	ASTM D3524	>4.0	▲ 3.5	▲ 6.5	▲ 4.7
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.2	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	7.7	7.8	7.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.6	21.1	20.6
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

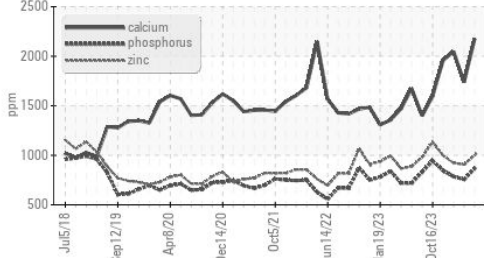
The BN result indicates that there is suitable alkalinity remaining in the oil. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>75	0	<1	1
Boron	ppm	ASTM D5185m		● 57	69	92
Barium	ppm	ASTM D5185m		0	1	0
Molybdenum	ppm	ASTM D5185m		● 15	28	31
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m		● 92	151	116
Calcium	ppm	ASTM D5185m		● 2174	1738	2047
Phosphorus	ppm	ASTM D5185m	760	866	756	785
Zinc	ppm	ASTM D5185m	830	1001	907	921
Sulfur	ppm	ASTM D5185m	2770	3718	3330	2724
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.9	19.3	18.2
Base Number (BN)	mg KOH/g	ASTM D2896	10.7	5.6	5.7	5.1
Visc @ 100°C	cSt	ASTM D445	14.9	▲ 9.9	▲ 9.9	▲ 10.2

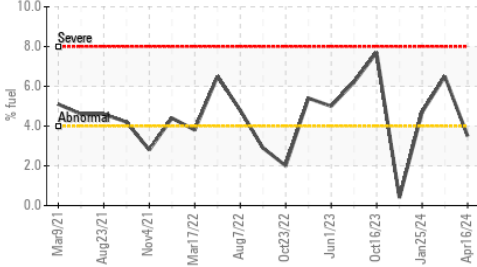
▲ Viscosity @ 100°C



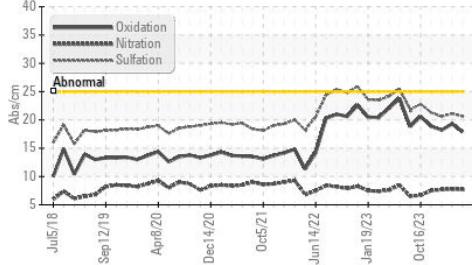
● Additives



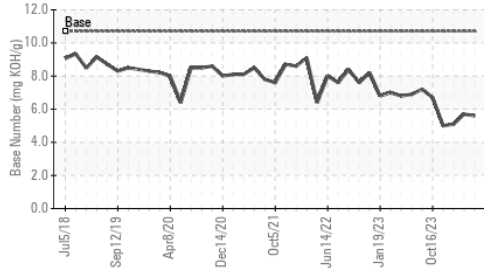
▲ Fuel Dilution



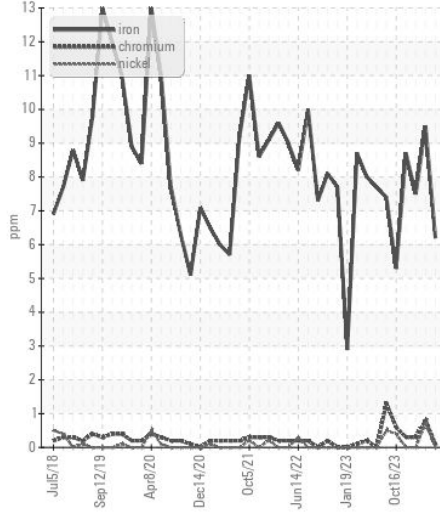
FT-IR (Direct Trend)



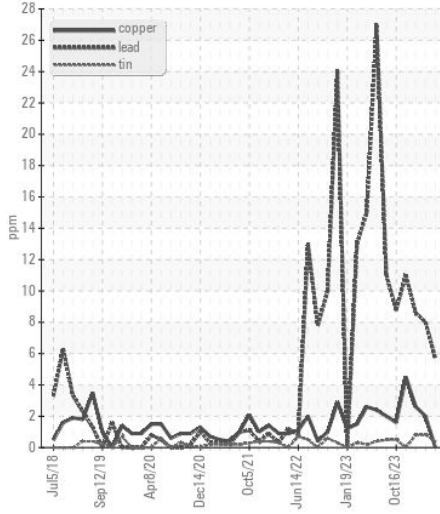
Base Number



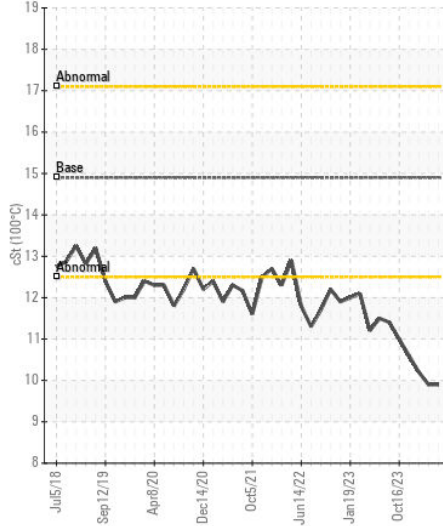
Ferrous Alloys



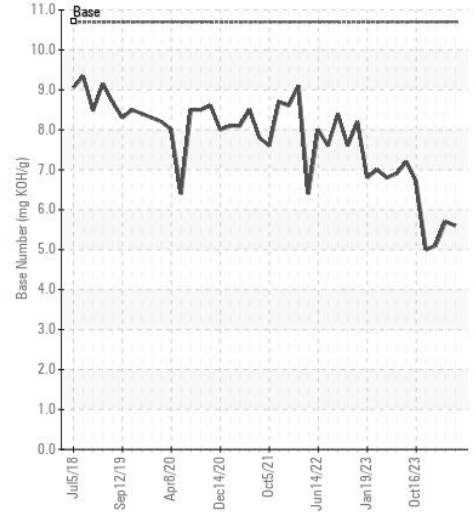
Non-ferrous Metals



▲ Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW06151662 **Received** : 17 Apr 2024
Lab Number : 06151662 **Tested** : 22 Apr 2024
Unique Number : 10981740 **Diagnosed** : 22 Apr 2024 - Wes Davis
Test Package : MAR 2 (Additional Tests: PercentFuel)

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 LEMONT, IL
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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)