



Machine Id
PRS
Component
Port Main Engine
Fluid
CHEVRON DELO 400 XLE 15W40 (28 GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW06101484	MW06048284	MW06017188
Sample Date		Client Info		26 Feb 2024	01 Jan 2024	23 Nov 2023
Machine Age	hrs	Client Info		31947	31116	30314
Oil Age	hrs	Client Info		831	802	508
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	NORMAL

WEAR

The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core).

Iron	ppm	ASTM D5185m	>75	5	3	2
Chromium	ppm	ASTM D5185m	>8	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	1	<1	<1
Titanium	ppm	ASTM D5185m	>3	<1	<1	2
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>15	1	<1	2
Lead	ppm	ASTM D5185m	>18	<1	0	0
Copper	ppm	ASTM D5185m	>80	▲ 369	2	<1
Tin	ppm	ASTM D5185m	>14	<1	<1	0
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

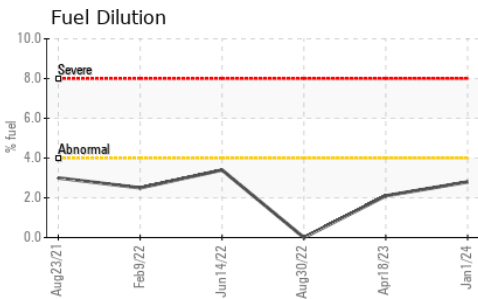
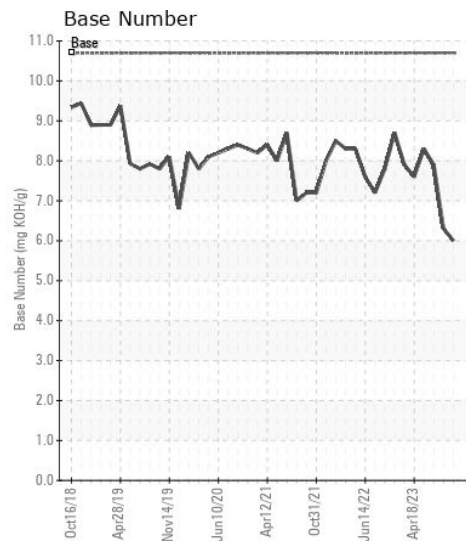
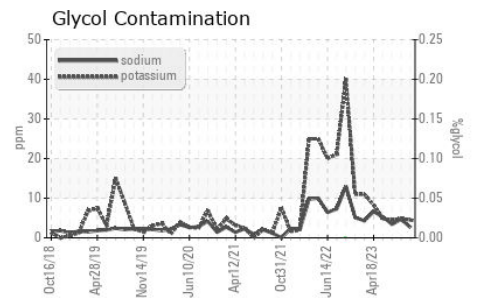
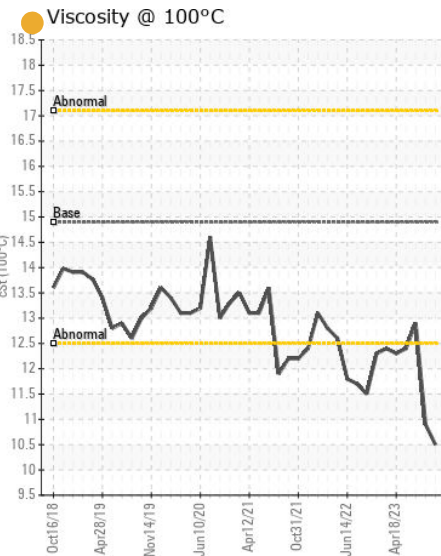
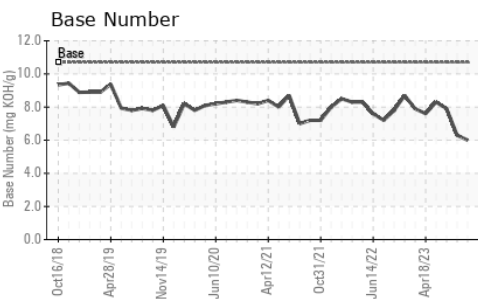
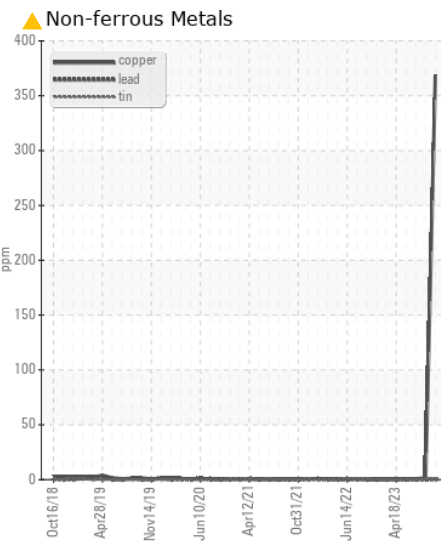
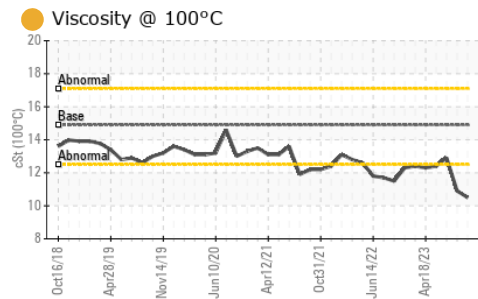
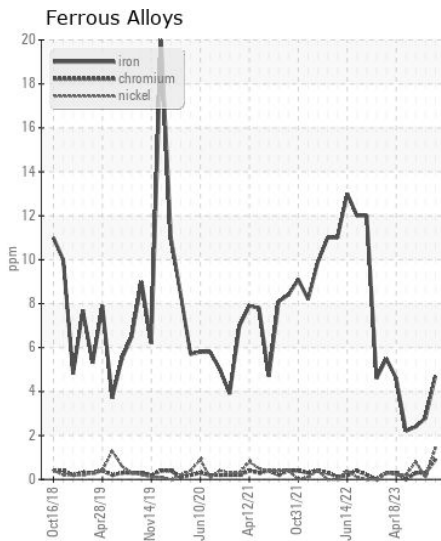
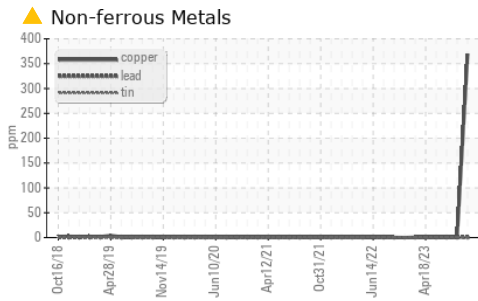
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	4	4	4
Potassium	ppm	ASTM D5185m	>20	4	5	4
Fuel	%	ASTM D3524	>4.0	<1.0	▲ 2.8	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	6.3	6.3	5.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.5	18.4	20.2
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 oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m	>75	3	5	3
Boron	ppm	ASTM D5185m		59	● 77	212
Barium	ppm	ASTM D5185m		1	0	0
Molybdenum	ppm	ASTM D5185m		25	● 34	81
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		112	● 204	605
Calcium	ppm	ASTM D5185m		1803	1968	1240
Phosphorus	ppm	ASTM D5185m	760	767	794	708
Zinc	ppm	ASTM D5185m	830	928	1103	931
Sulfur	ppm	ASTM D5185m	2770	3416	3357	3188
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.6	13.6	15.2
Base Number (BN)	mg KOH/g	ASTM D2896	10.7	6.0	6.3	7.9
Visc @ 100°C	cSt	ASTM D445	14.9	● 10.5	▲ 10.9	12.9



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW06101484 **Received** : 27 Feb 2024
Lab Number : 06101484 **Tested** : 29 Feb 2024
Unique Number : 10899714 **Diagnosed** : 29 Feb 2024 - Jonathan Hester
Test Package : MAR 2 (Additional Tests: FuelDilution, Glycol, PercentFuel)

ILLINOIS MARINE TOWING
 PO BOX 391
 LEMONT, IL
 US 60439
 Contact: RHETT DANIEL
 rdaniel@imtowing.com
 T: (630)280-4926
 F: (630)739-2041

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)