



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
SIGNET RELIANCE

Component
Port Main Engine

Fluid
CHEVRON DELO 400 MULTIGRADE 15W40 (212 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0052093	MW0052106	MW0034673
Sample Date		Client Info		10 Jul 2024	11 Apr 2024	24 Jan 2024
Machine Age	hrs	Client Info		26733	26509	26260
Oil Age	hrs	Client Info		1063	841	595
Filter Age	hrs	Client Info		1063	841	595
Oil Changed		Client Info		Not Changd	N/A	Changed
Filter Changed		Client Info		Not Changd	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

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

CONTAMINATION

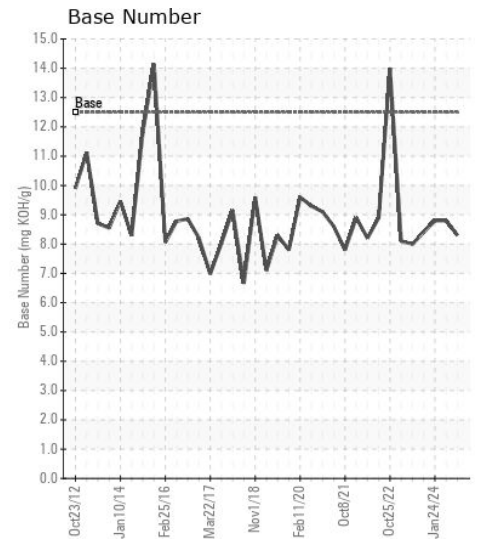
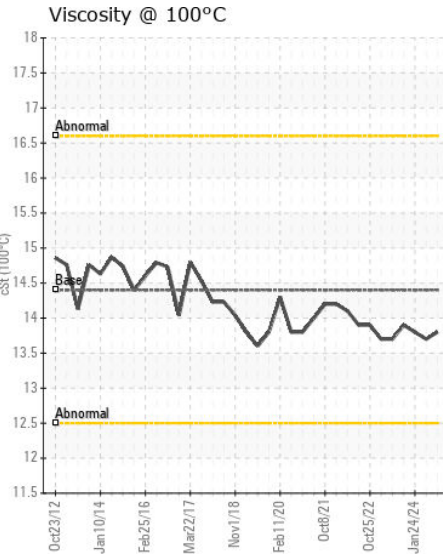
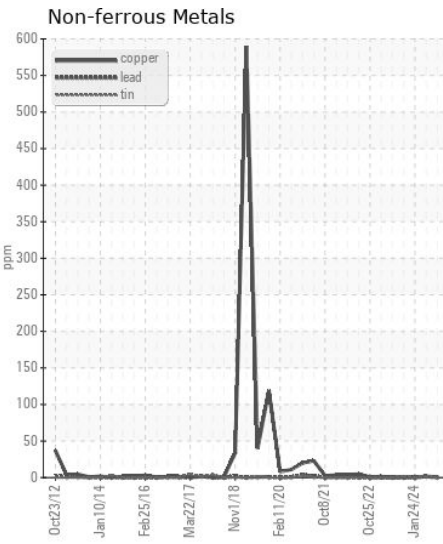
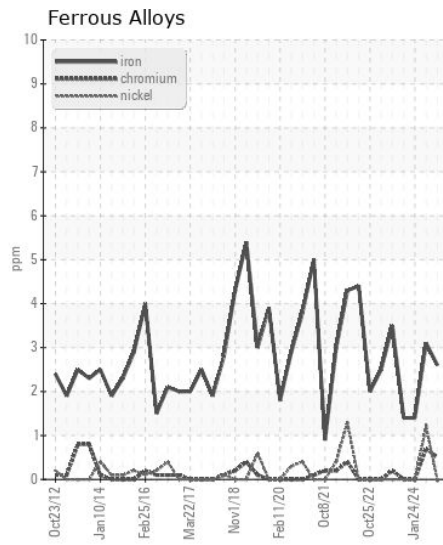
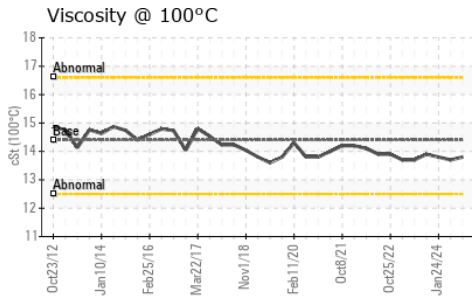
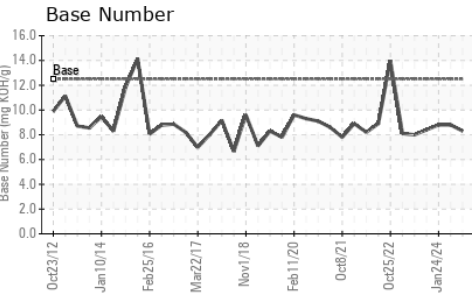
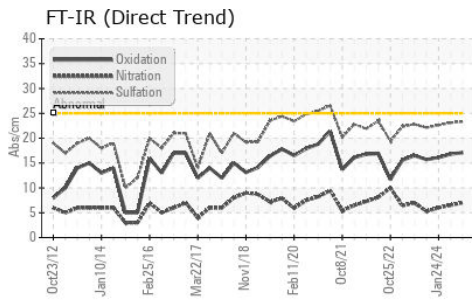
There is no indication of any contamination in the component.

Silicon	ppm	ASTM D5185m	>20	4	6	6
Potassium	ppm	ASTM D5185m	>20	2	2	<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		0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	7.0	6.5	6.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.3	23.1	22.6
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. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>75	<1	1	<1
Boron	ppm	ASTM D5185m	151	387	422	358
Barium	ppm	ASTM D5185m	0.4	0	<1	0
Molybdenum	ppm	ASTM D5185m	250	125	125	127
Manganese	ppm	ASTM D5185m		0	1	0
Magnesium	ppm	ASTM D5185m	0	617	591	709
Calcium	ppm	ASTM D5185m	2046	1560	1559	1560
Phosphorus	ppm	ASTM D5185m	1043	634	751	803
Zinc	ppm	ASTM D5185m	943	846	830	921
Sulfur	ppm	ASTM D5185m	5012	2286	2786	2710
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.1	16.8	16.1
Base Number (BN)	mg KOH/g	ASTM D2896	12.5	8.3	8.8	8.8
Visc @ 100°C	cSt	ASTM D445	14.4	13.8	13.7	13.8



Certificate L2367

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

Sample No. : MW0052093

Lab Number : 06237604

Unique Number : 11126438

Test Package : MAR 2

Received : 16 Jul 2024

Tested : 17 Jul 2024

Diagnosed : 18 Jul 2024 - Don Baldridge

MARITIME COMPANY

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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)