



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
KATHERINE BERRY
Component
Port Main Engine
Fluid
CHEVRON DELO 400 LE 15W40 (111 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0044107	MW0044145	MW0044140
Sample Date		Client Info		20 Jun 2024	01 Jan 2024	07 Aug 2023
Machine Age	hrs	Client Info		0	102777	0
Oil Age	hrs	Client Info		355	500	601
Filter Age	hrs	Client Info		355	0	601
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	1	4	3
Chromium	ppm	ASTM D5185m	>8	0	<1	0
Nickel	ppm	ASTM D5185m	>2	1	0	0
Titanium	ppm	ASTM D5185m	>3	13	13	12
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>15	2	1	<1
Lead	ppm	ASTM D5185m	>18	0	0	<1
Copper	ppm	ASTM D5185m	>80	4	2	2
Tin	ppm	ASTM D5185m	>14	0	0	<1
Vanadium	ppm	ASTM D5185m		<1	<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 oil.

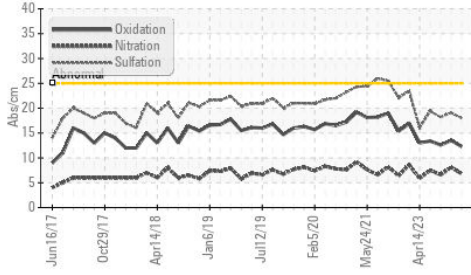
Silicon	ppm	ASTM D5185m	>20	4	7	6
Potassium	ppm	ASTM D5185m	>20	5	3	3
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.1	0.2	0.1
Nitration	Abs/cm	*ASTM D7624	>20	6.8	8.1	6.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.0	19.1	18.2
Silt	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

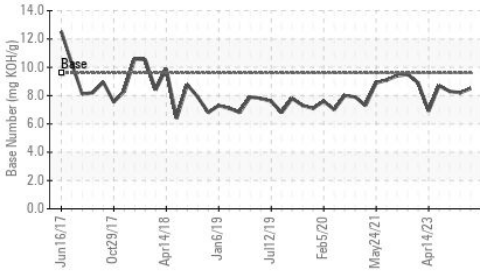
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>75	5	31	4
Boron	ppm	ASTM D5185m		107	110	172
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		33	41	52
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		747	723	771
Calcium	ppm	ASTM D5185m		1586	1554	1682
Phosphorus	ppm	ASTM D5185m	1200	731	698	729
Zinc	ppm	ASTM D5185m	1300	865	824	883
Sulfur	ppm	ASTM D5185m	3200	3783	3046	3825
Oxidation	Abs/.1mm	*ASTM D7414	>25	12.3	13.5	12.6
Base Number (BN)	mg KOH/g	ASTM D2896	9.6	8.5	8.2	8.3
Visc @ 100°C	cSt	ASTM D445	15.7	13.8	14.0	13.9

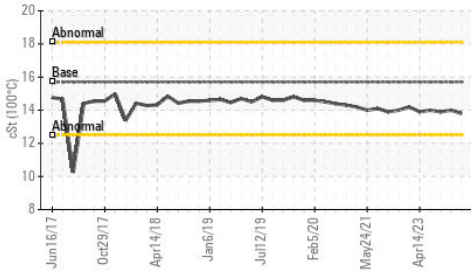
FT-IR (Direct Trend)



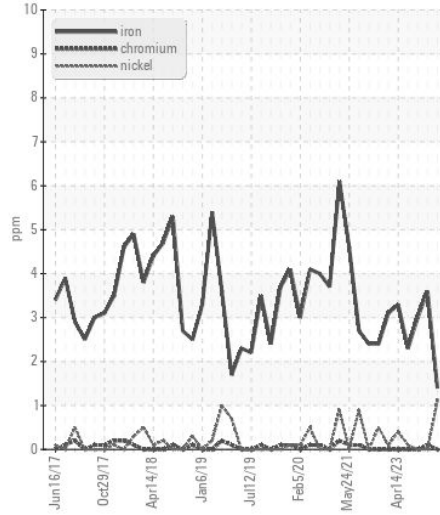
Base Number



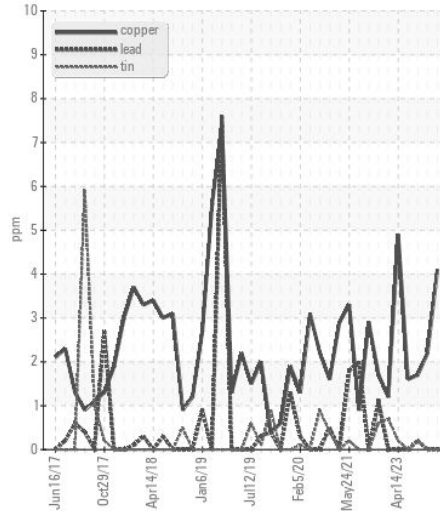
Viscosity @ 100°C



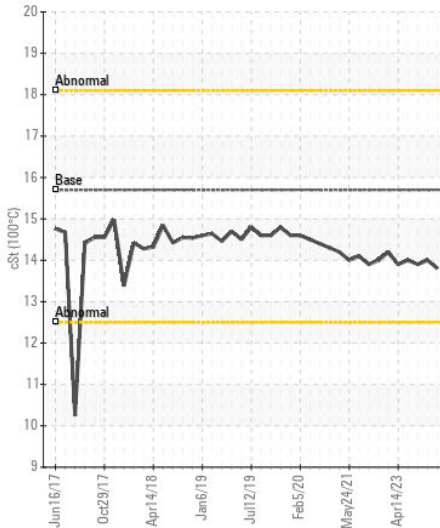
Ferrous Alloys



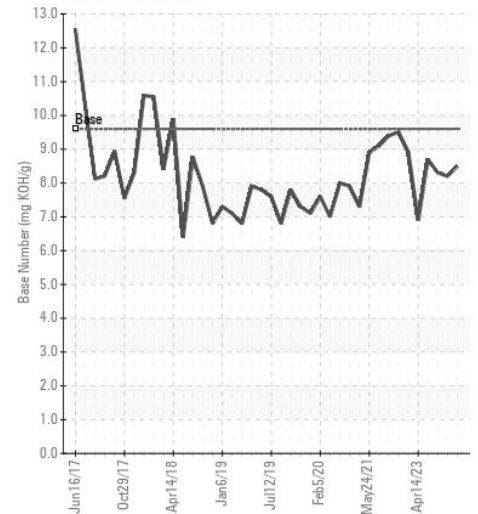
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : MW0044107

Lab Number : 06223051

Unique Number : 11101248

Test Package : MAR 2

Received : 27 Jun 2024

Tested : 28 Jun 2024

Diagnosed : 30 Jun 2024 - Don Baldrige

MAGNOLIA MARINE TRANSPORT

697 HAINING ROAD

VICKSBURG, MS

US 39183

Contact: MMT MAINTENANCE PLANNERS

mmtmaintenanceplanners@ergon.com

T: x:

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)

F: (601)638-8028