



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area

RIVER EAGLE

Machine Id

REA

Component

Starboard Genset

Fluid

CHEVRON DELO 400 MULTIGRADE 15W40 (4 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0063944	MW0063864	MW0054609
Sample Date		Client Info		18 Jun 2024	02 May 2024	15 Mar 2024
Machine Age	hrs	Client Info		3610	3043	2481
Oil Age	hrs	Client Info		567	562	515
Filter Age	hrs	Client Info		567	562	515
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	6	8	7
Chromium	ppm	ASTM D5185m	>4	0	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	<1	<1
Titanium	ppm	ASTM D5185m		14	15	15
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>12	3	1	2
Lead	ppm	ASTM D5185m	>17	0	1	0
Copper	ppm	ASTM D5185m	>70	1	1	0
Tin	ppm	ASTM D5185m	>15	0	1	<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

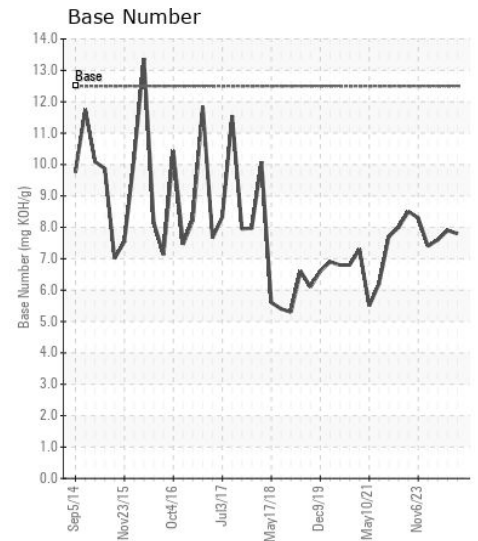
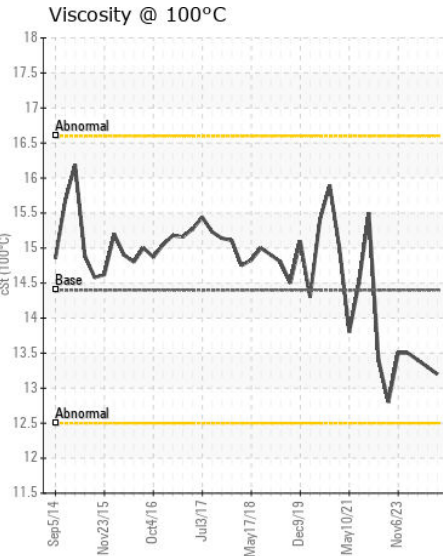
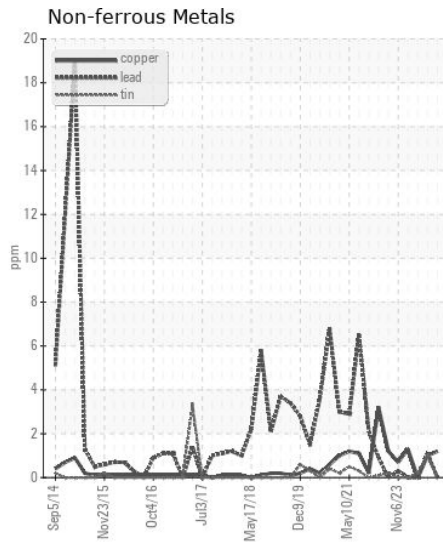
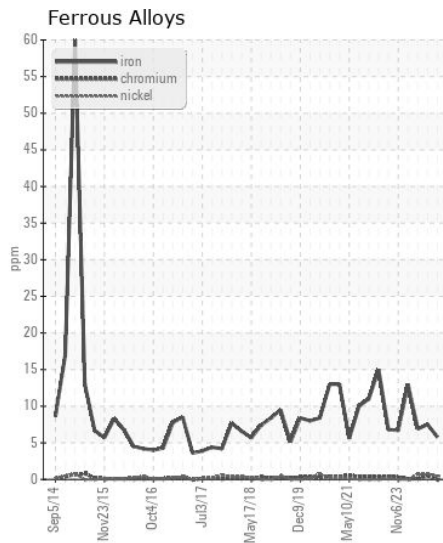
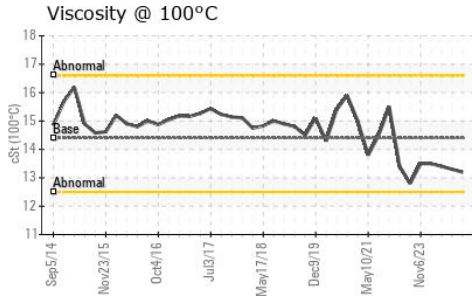
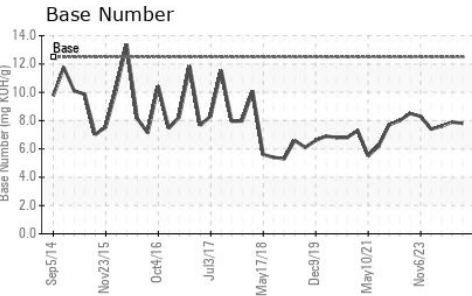
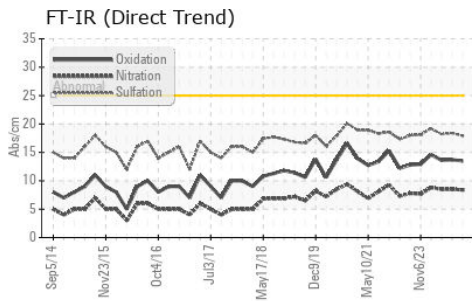
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	5	6	4
Potassium	ppm	ASTM D5185m	>20	4	4	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	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	8.4	8.5	8.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.9	18.4	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		3	0	2
Boron	ppm	ASTM D5185m	151	84	92	88
Barium	ppm	ASTM D5185m	0.4	0	0	0
Molybdenum	ppm	ASTM D5185m	250	43	37	28
Manganese	ppm	ASTM D5185m		1	1	<1
Magnesium	ppm	ASTM D5185m	0	819	711	785
Calcium	ppm	ASTM D5185m	2046	1569	1423	1515
Phosphorus	ppm	ASTM D5185m	1043	774	677	724
Zinc	ppm	ASTM D5185m	943	889	808	837
Sulfur	ppm	ASTM D5185m	5012	3799	3312	3577
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.5	13.7	13.6
Base Number (BN)	mg KOH/g	ASTM D2896	12.5	7.8	7.9	7.6
Visc @ 100°C	cSt	ASTM D445	14.4	13.2	13.3	13.4



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0063944
Lab Number : 06219432
Unique Number : 11097629
Test Package : MAR 2

Received : 25 Jun 2024
Tested : 25 Jun 2024
Diagnosed : 25 Jun 2024 - Wes Davis

AMERICAN RIVER TRANSPORTATION CO.
 P.O. BOX 2889
 ST. LOUIS, MO
 US 63111
 Contact: BRIAN GRIEWING
 brian.griewing@adm.com

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)

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