



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
JEFF KINDL
Component
Starboard Reduction Gear
Fluid
CHEVRON URSA SUPER PLUS 40 (24 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MWM672089	MW0019799	MW0019820
Sample Date		Client Info		23 Apr 2024	28 Dec 2021	17 Sep 2021
Machine Age	hrs	Client Info		936	40557	38954
Oil Age	hrs	Client Info		936	2713	1117
Filter Age	hrs	Client Info		0	2713	1117
Oil Changed		Client Info		Not Changed	Changed	Not Changed
Filter Changed		Client Info		Changed	Changed	Not Changed
Sample Status				NORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>150	15	5	6
Chromium	ppm	ASTM D5185m	>10	<1	<1	<1
Nickel	ppm	ASTM D5185m	>10	<1	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m		<1	1	1
Aluminum	ppm	ASTM D5185m	>25	2	<1	0
Lead	ppm	ASTM D5185m	>100	1	1	<1
Copper	ppm	ASTM D5185m	>50	30	▲ 67	48
Tin	ppm	ASTM D5185m	>10	1	<1	0
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	VLITE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

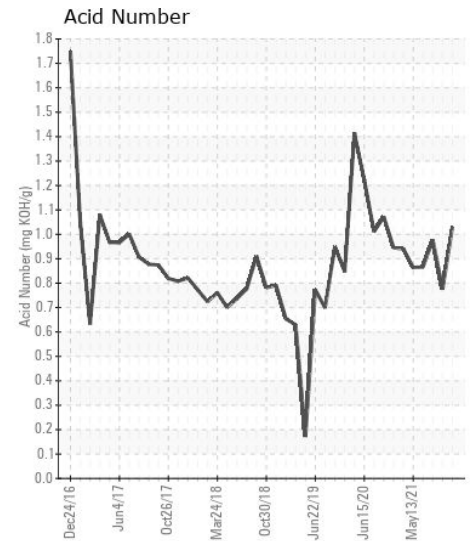
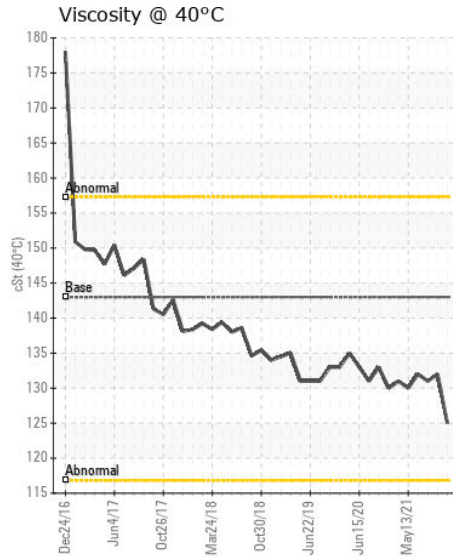
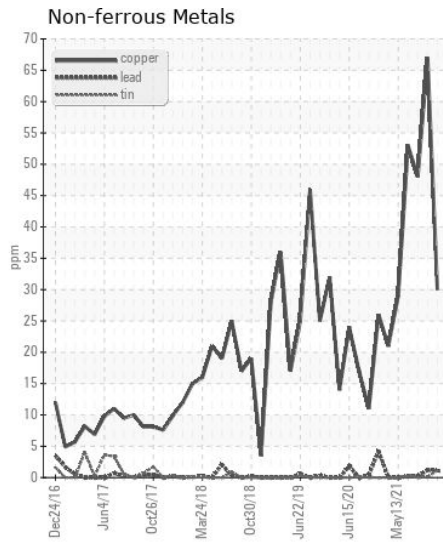
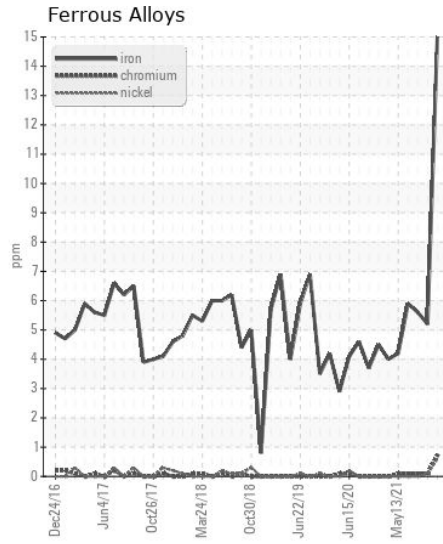
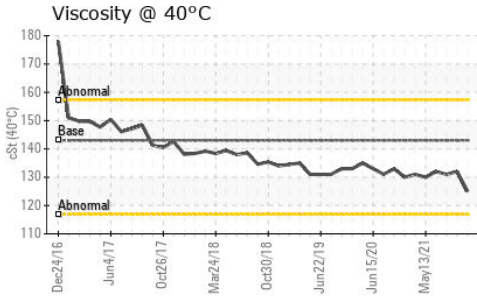
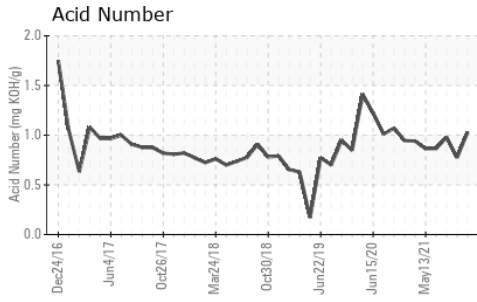
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>50	4	4	3
Potassium	ppm	ASTM D5185m	>20	6	0	0
Water		WC Method	>0.1	NEG	NEG	NEG
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	LIGHT	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 AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		5	2	0
Boron	ppm	ASTM D5185m		156	354	311
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		22	33	35
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		27	27	22
Calcium	ppm	ASTM D5185m		1191	2504	2496
Phosphorus	ppm	ASTM D5185m	1000	381	713	700
Zinc	ppm	ASTM D5185m	1090	408	778	802
Sulfur	ppm	ASTM D5185m		2254	2519	2453
Acid Number (AN)	mg KOH/g	ASTM D8045		1.03	0.775	0.977
Visc @ 40°C	cSt	ASTM D445	143	125	132	131



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MWM672089
Lab Number : 06186369
Unique Number : 11043121
Test Package : MAR 2

Received : 21 May 2024
Tested : 22 May 2024
Diagnosed : 23 May 2024 - Sean Felton

AMERICAN COMMERCIAL LINES
 PO BOX 610, 1701 E. MARKET STREET
 JEFFERSONVILLE, IN
 US 47130

Contact: RONALD SCHNEIDER
 ronald.schneider@bargeacbl.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)

T:
 F: (812)288-1644