



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
HB STEWART
Machine Id
[HB STEWART] 006 629508-6
Component
Starboard Reduction Gear
Fluid
CHEVRON URSA SUPER PLUS 40 (17 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0061462	MW0058932	MW0058843
Sample Date		Client Info		01 Jan 2024	01 Dec 2023	07 Nov 2023
Machine Age	hrs	Client Info		88404	87641	86949
Oil Age	hrs	Client Info		1646	0	168
Filter Age	hrs	Client Info		0	0	168
Oil Changed		Client Info		N/A	Not Changd	Changed
Filter Changed		Client Info		N/A	Not Changd	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

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

CONTAMINATION

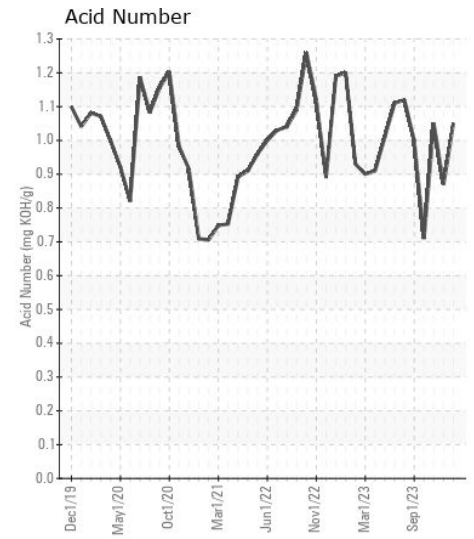
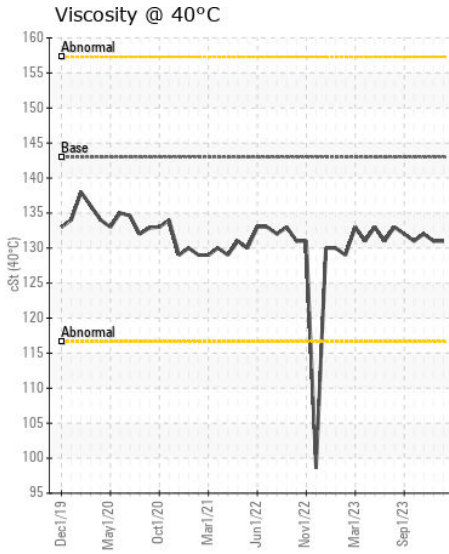
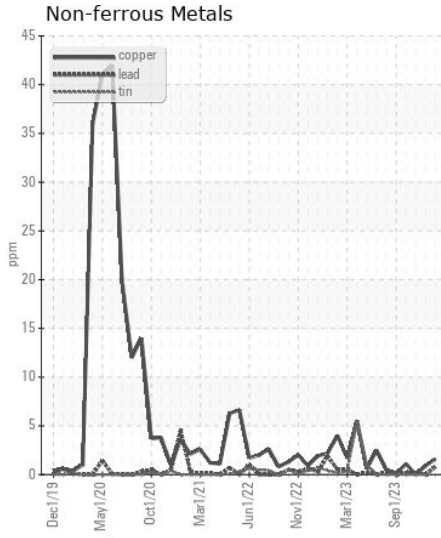
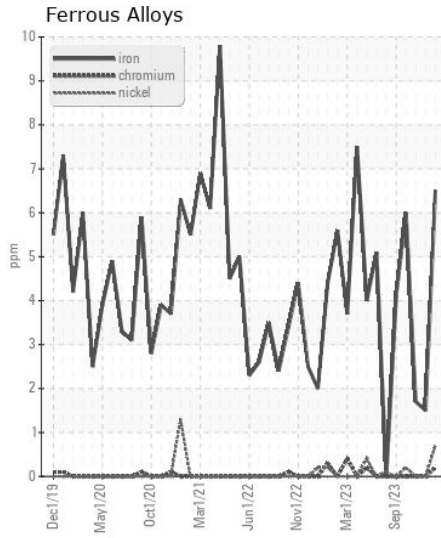
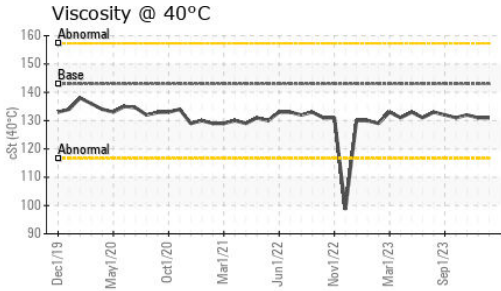
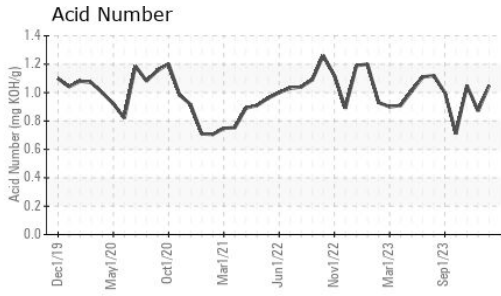
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>50	5	4	3
Potassium	ppm	ASTM D5185m	>20	2	<1	0
Water		WC Method	>0.1	NEG	NEG	NEG
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 AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		0	2	3
Boron	ppm	ASTM D5185m		304	277	348
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		32	30	29
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m		17	19	18
Calcium	ppm	ASTM D5185m		2432	2283	2219
Phosphorus	ppm	ASTM D5185m	1000	666	677	637
Zinc	ppm	ASTM D5185m	1090	789	765	746
Sulfur	ppm	ASTM D5185m		3159	2926	2895
Acid Number (AN)	mg KOH/g	ASTM D8045		1.05	0.87	1.05
Visc @ 40°C	cSt	ASTM D445	143	131	131	132



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0061462 **Received** : 08 Jan 2024
Lab Number : 06054992 **Diagnosed** : 10 Jan 2024
Unique Number : 10820941 **Diagnostician** : Wes Davis
Test Package : MAR 2

INGRAM BARGE
 900 S 3RD ST
 PADUCAH, KY
 US 42003
 Contact: JAMES ADAIR
 james.adair@ingrambarge.com
 T: (270)415-4467
 F: (615)695-3697

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)