



OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
SEAWARD EXPLORER
Machine Id
Explorer
Component
Port Reduction Gear
Fluid
MOBIL DELVAC 1640 (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

WEAR

The copper level is abnormal. All other component wear rates are normal.

CONTAMINATION

There is no indication of any contamination in the oil.

FLUID CONDITION

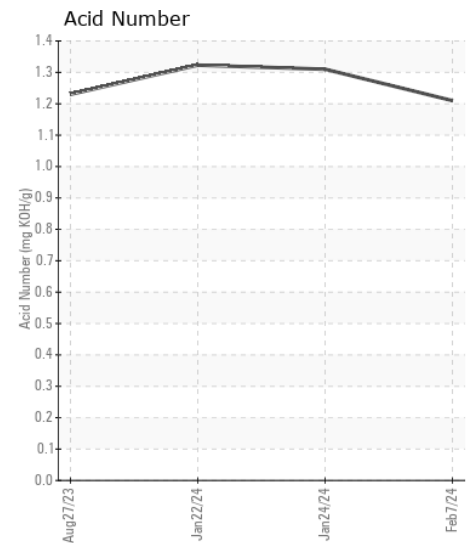
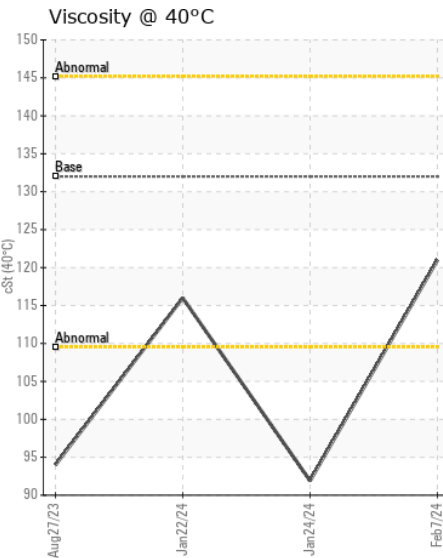
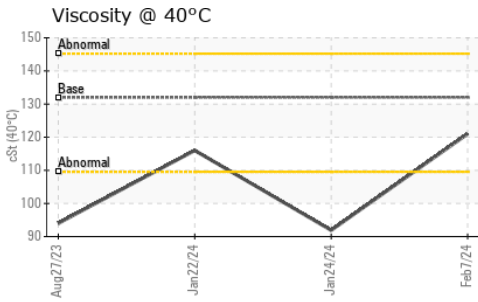
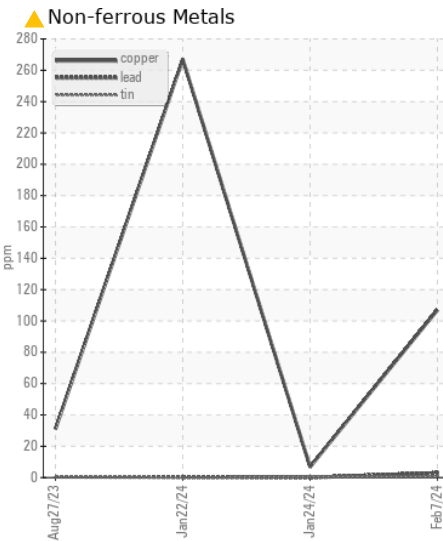
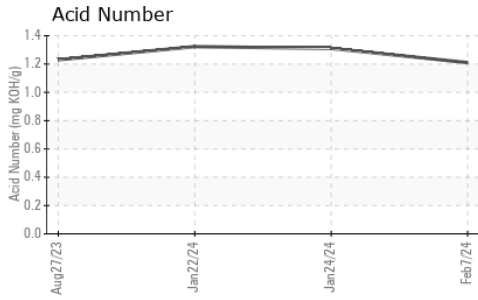
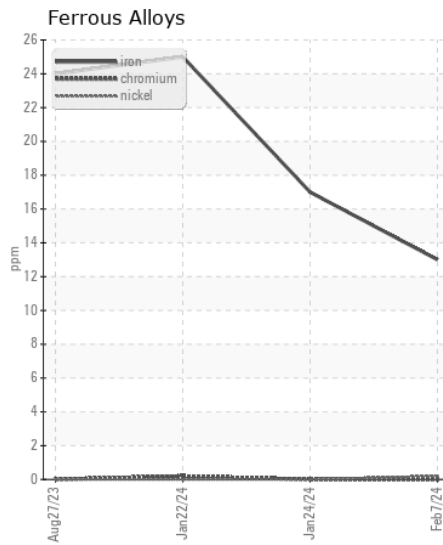
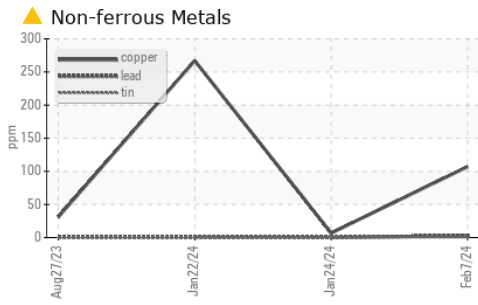
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0859379	WC0891230	WC0886555
Sample Date		Client Info		07 Feb 2024	24 Jan 2024	22 Jan 2024
Machine Age	hrs	Client Info		16717	14487	16713
Oil Age	hrs	Client Info		4	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changed	Not Changed	Changed
Filter Changed		Client Info		Not Changed	Not Changed	Changed
Sample Status				ABNORMAL	NORMAL	ABNORMAL

Iron	ppm	ASTM D5185m	>150	13	17	25
Chromium	ppm	ASTM D5185m	>10	0	0	<1
Nickel	ppm	ASTM D5185m	>10	<1	0	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	<1	1	2
Lead	ppm	ASTM D5185m	>100	3	0	<1
Copper	ppm	ASTM D5185m	>50	▲ 107	7	▲ 267
Tin	ppm	ASTM D5185m	>10	<1	<1	0
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

Silicon	ppm	ASTM D5185m	>50	12	16	8
Potassium	ppm	ASTM D5185m	>20	<1	0	4
Water		WC Method	>0.1	NEG	NEG	NEG
Silt	scalar	*Visual	NONE	NONE	NONE	MODER
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

Sodium	ppm	ASTM D5185m		22	9	48
Boron	ppm	ASTM D5185m		2	300	4
Barium	ppm	ASTM D5185m		0	<1	6
Molybdenum	ppm	ASTM D5185m		2	37	3
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m		295	36	312
Calcium	ppm	ASTM D5185m		3869	3000	3479
Phosphorus	ppm	ASTM D5185m		939	770	816
Zinc	ppm	ASTM D5185m		1096	818	1027
Sulfur	ppm	ASTM D5185m		4061	3796	3541
Acid Number (AN)	mg KOH/g	ASTM D8045		1.21	1.31	1.323
Visc @ 40°C	cSt	ASTM D445	132	121	91.9	116



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0859379
Lab Number : 06104498
Unique Number : 10902728
Test Package : MAR 2

Received : 29 Feb 2024
Tested : 01 Mar 2024
Diagnosed : 03 Mar 2024 - Doug Bogart

SEAWARD SERVICES
 222 PEARL ST
 NEW ALBANY, IN
 US 47150

Contact: PETER CHARBONNET
 PCHARBONNET@HMS-SEAWARD.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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