



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ATTENTION
FLUID CONDITION	NORMAL

Machine Id
M/V COHO FERRY
 Component
Starboard Reduction Gear
 Fluid
SHELL MORLINA S3 BA 150 (110 GAL)

RECOMMENDATION

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

WEAR

All component wear rates are normal.

CONTAMINATION

There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

FLUID CONDITION

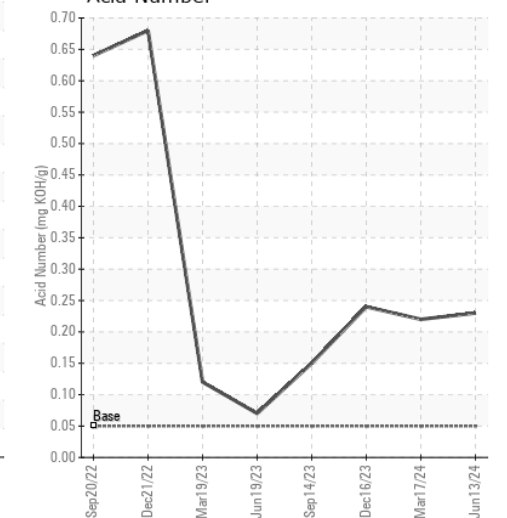
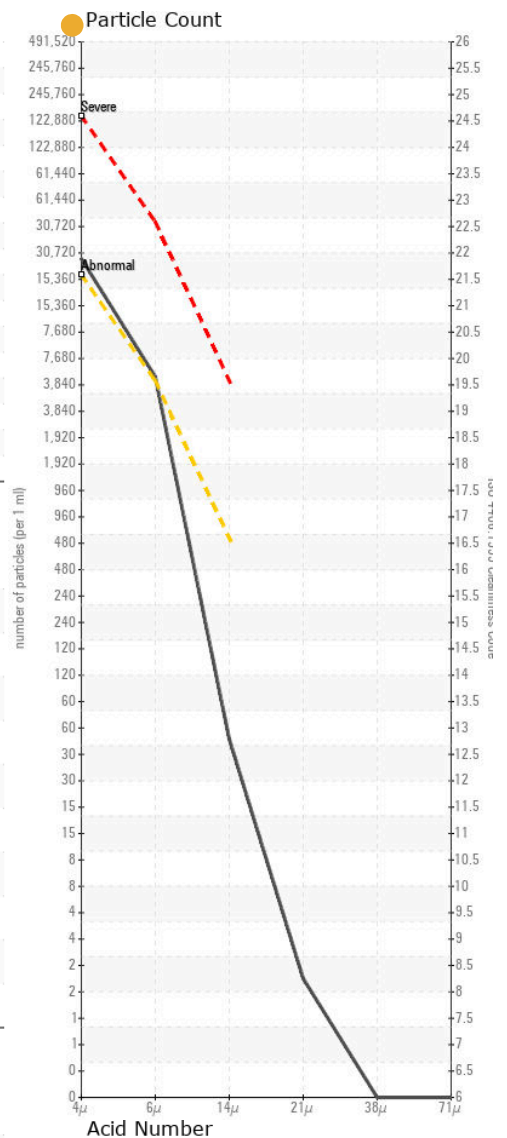
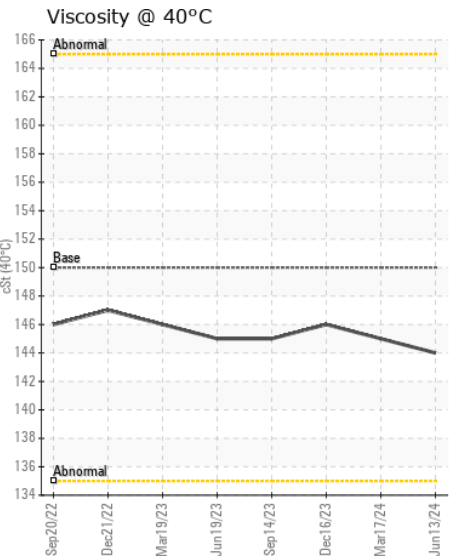
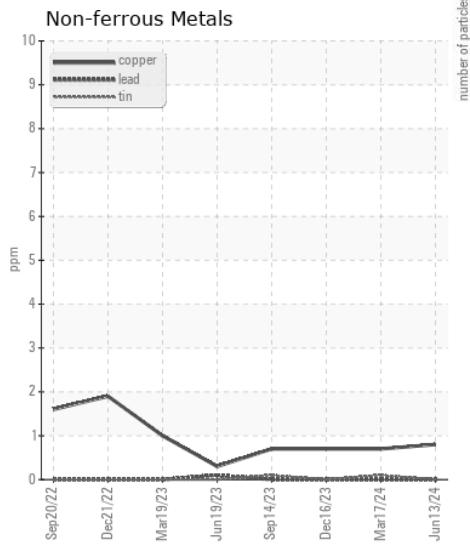
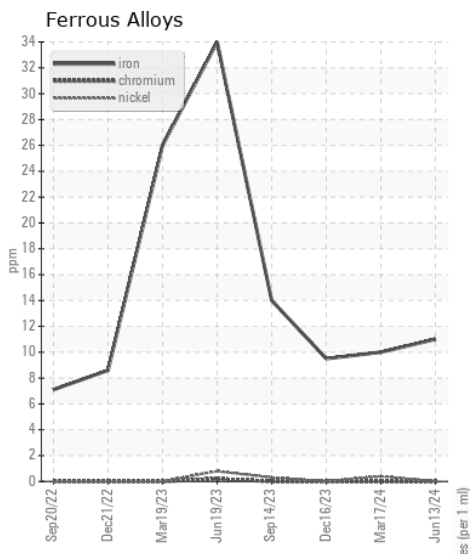
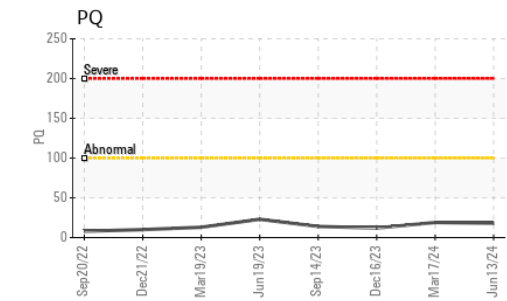
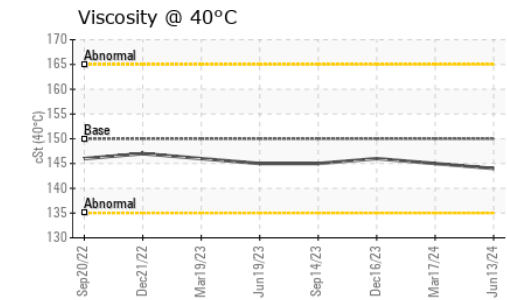
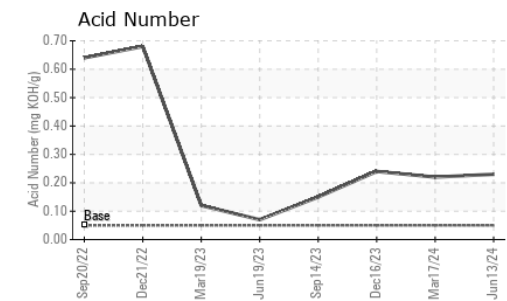
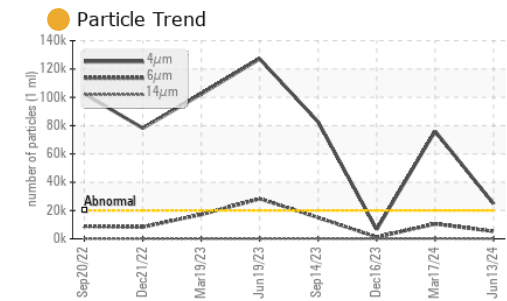
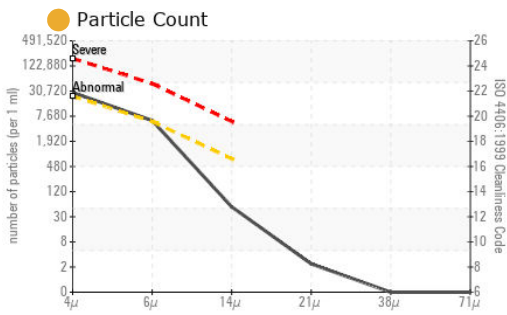
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PE0001591	PE0001491	PE0001457
Sample Date		Client Info		13 Jun 2024	17 Mar 2024	16 Dec 2023
Machine Age	hrs	Client Info		56188	55469	55070
Oil Age	hrs	Client Info		967	3357	2966
Filter Age	hrs	Client Info		967	250	2966
Oil Changed		Client Info		Filtered	Filtered	Filtered
Filter Changed		Client Info		Not Chngd	Changed	Changed
Sample Status				ATTENTION	ABNORMAL	NORMAL

PQ		ASTM D8184		18	19	12
Iron	ppm	ASTM D5185m	>150	11	10	10
Chromium	ppm	ASTM D5185m	>10	0	0	0
Nickel	ppm	ASTM D5185m	>10	0	<1	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		<1	0	0
Aluminum	ppm	ASTM D5185m	>25	0	0	0
Lead	ppm	ASTM D5185m	>100	0	0	0
Copper	ppm	ASTM D5185m	>50	<1	<1	<1
Tin	ppm	ASTM D5185m	>10	0	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

Silicon	ppm	ASTM D5185m	>50	2	2	<1
Potassium	ppm	ASTM D5185m	>20	<1	<1	0
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>20000	24691	76071	6636
Particles >6µm		ASTM D7647	>5000	5273	10580	1172
Particles >14µm		ASTM D7647	>640	46	180	32
Particles >21µm		ASTM D7647	>160	2	46	9
Particles >38µm		ASTM D7647	>40	0	1	3
Particles >71µm		ASTM D7647	>10	0	0	3
Oil Cleanliness		ISO 4406 (c)	>21/19/16	22/20/13	23/21/15	20/17/12
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

Sodium	ppm	ASTM D5185m		<1	1	<1
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		9	8	9
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m		0	<1	0
Calcium	ppm	ASTM D5185m		37	37	36
Phosphorus	ppm	ASTM D5185m		122	110	109
Zinc	ppm	ASTM D5185m		156	136	144
Sulfur	ppm	ASTM D5185m		3239	3090	2735
Acid Number (AN)	mg KOH/g	ASTM D8045	0.05	0.23	0.22	0.24
Visc @ 40°C	cSt	ASTM D445	150	144	145	146



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PE0001591 **Received** : 27 Jun 2024
Lab Number : 06222817 **Tested** : 01 Jul 2024
Unique Number : 11101014 **Diagnosed** : 01 Jul 2024 - Jonathan Hester
Test Package : PLANT (Additional Tests: ICP, KV40, PQ, PrtCount, SCREEN)

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)

BLACK BALL TRANSPORT INC
 4209 21ST AVE W, SUITE 307
 SEATTLE, WA
 US 98199
 Contact: REBECCA CHERRIER
 RCHERRIER@COHOFERRY.COM
 T: (360)989-4364
 F: