



WEAR	<b>ABNORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Area

**HOWIE**

Machine Id

**ZF 20058811 - INBOARD**

Component

**Starboard Gearbox**

Fluid

**{not provided} (1 GAL)**

### RECOMMENDATION

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

### WEAR

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

### CONTAMINATION

There is no indication of any contamination in the oil.

### FLUID CONDITION

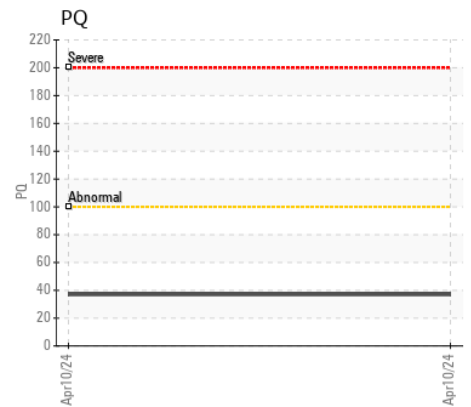
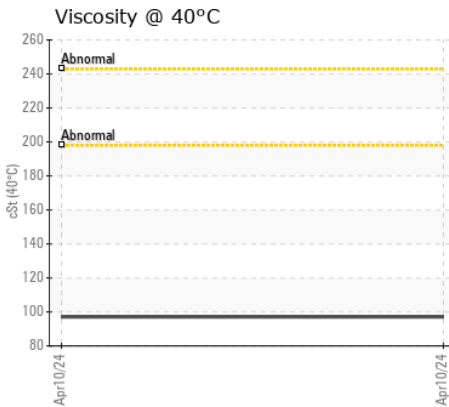
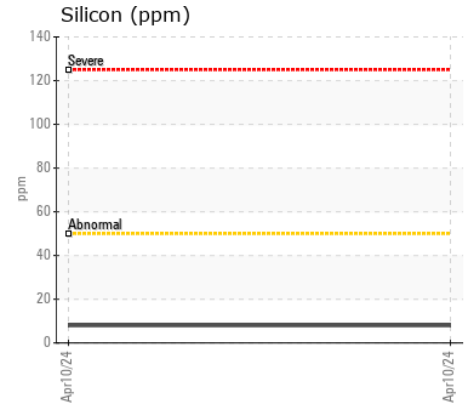
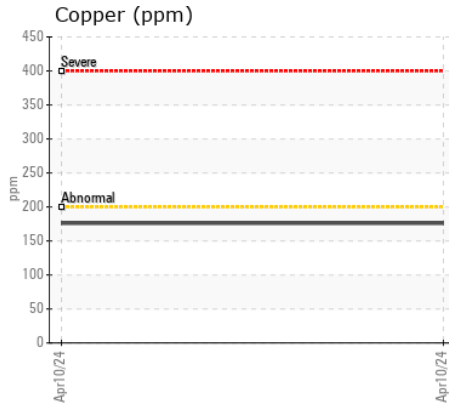
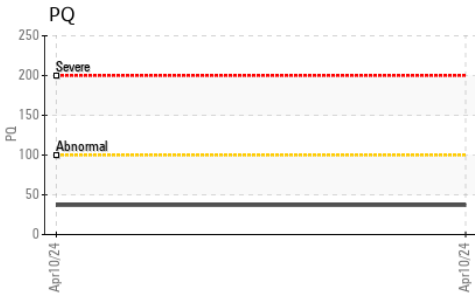
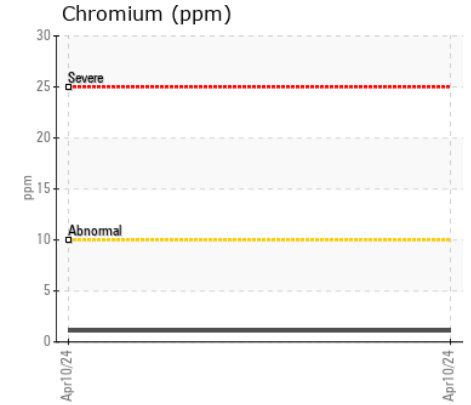
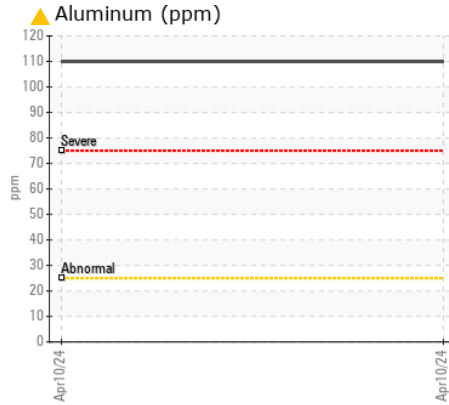
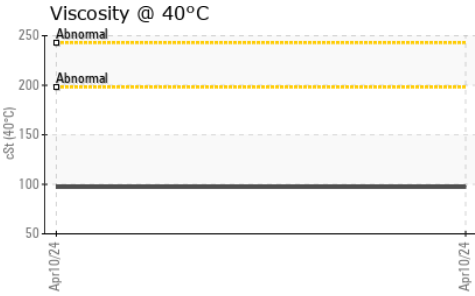
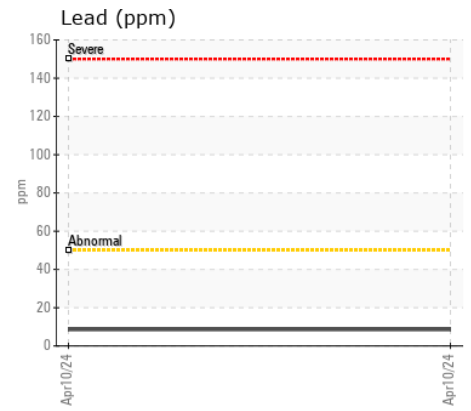
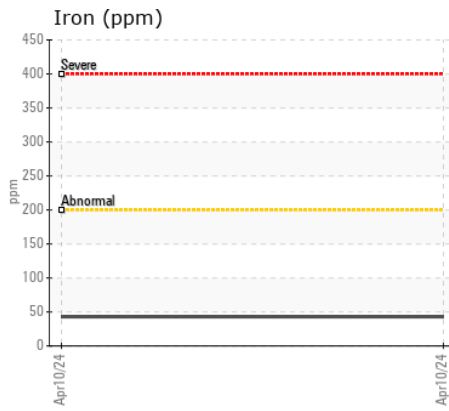
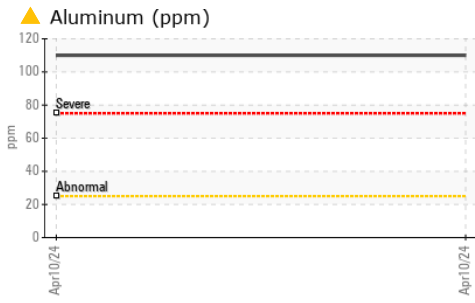
The condition of the oil is acceptable for the time in service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VPA057039	---	---
Sample Date		Client Info		10 Apr 2024	---	---
Machine Age	hrs	Client Info		1211	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		N/A	---	---
Filter Changed		Client Info		N/A	---	---
Sample Status				ABNORMAL	---	---

PQ		ASTM D8184		37	---	---
Iron	ppm	ASTM D5185m	>200	43	---	---
Chromium	ppm	ASTM D5185m	>10	1	---	---
Nickel	ppm	ASTM D5185m	>10	2	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m		<1	---	---
Aluminum	ppm	ASTM D5185m	>25	▲ 110	---	---
Lead	ppm	ASTM D5185m	>50	9	---	---
Copper	ppm	ASTM D5185m	>200	176	---	---
Tin	ppm	ASTM D5185m	>10	2	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

Silicon	ppm	ASTM D5185m	>50	8	---	---
Potassium	ppm	ASTM D5185m	>20	4	---	---
Water		WC Method	>0.2	NEG	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---	---

Sodium	ppm	ASTM D5185m		7	---	---
Boron	ppm	ASTM D5185m		29	---	---
Barium	ppm	ASTM D5185m		<1	---	---
Molybdenum	ppm	ASTM D5185m		64	---	---
Manganese	ppm	ASTM D5185m		2	---	---
Magnesium	ppm	ASTM D5185m		197	---	---
Calcium	ppm	ASTM D5185m		2201	---	---
Phosphorus	ppm	ASTM D5185m		995	---	---
Zinc	ppm	ASTM D5185m		1055	---	---
Sulfur	ppm	ASTM D5185m		5661	---	---
Visc @ 40°C	cSt	ASTM D445		97.1	---	---



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : VPA057039 **Received** : 17 Apr 2024  
**Lab Number** : 06152317 **Tested** : 18 Apr 2024  
**Unique Number** : 10982395 **Diagnosed** : 19 Apr 2024 - Doug Bogart  
**Test Package** : MOB 1 ( Additional Tests: PQ )

**Outstanding Marine**  
 PO Box 274  
 GALENA, MD  
 US 21635  
 Contact: Ronda Bolinger  
 rlwb@verizon.net

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: