



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

Machine Id  
**ZF ZF GEARS (S/N NOT GIVEN)**  
 Component  
**Starboard Gearbox**  
 Fluid  
**SAE 30W (--- QTS)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VPA053361	---	---
Sample Date		Client Info		10 Jul 2024	---	---
Machine Age	hrs	Client Info		0	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				<b>NORMAL</b>	---	---

### WEAR

All component wear rates are normal.

PQ		ASTM D8184		29	---	---
Iron	ppm	ASTM D5185m	>200	24	---	---
Chromium	ppm	ASTM D5185m	>10	<1	---	---
Nickel	ppm	ASTM D5185m	>10	0	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m		<1	---	---
Aluminum	ppm	ASTM D5185m	>25	4	---	---
Lead	ppm	ASTM D5185m	>50	<1	---	---
Copper	ppm	ASTM D5185m	>200	24	---	---
Tin	ppm	ASTM D5185m	>10	<1	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

### CONTAMINATION

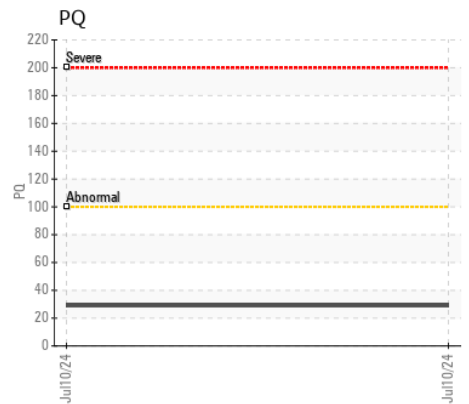
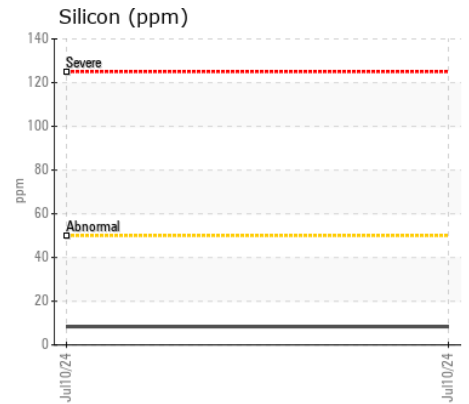
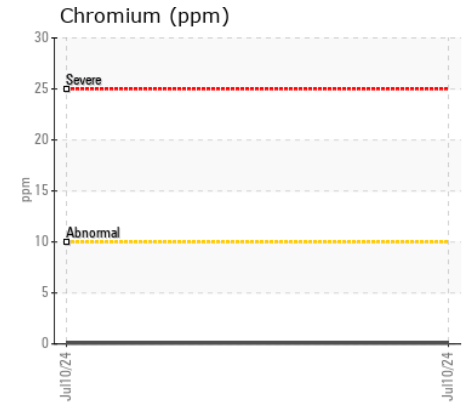
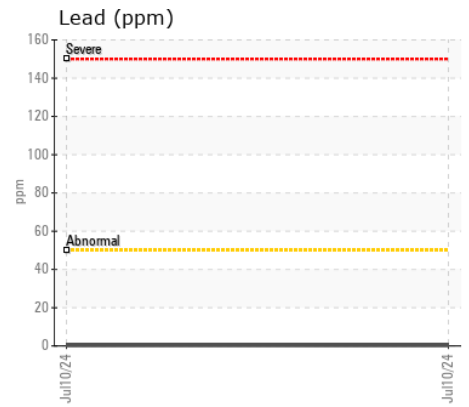
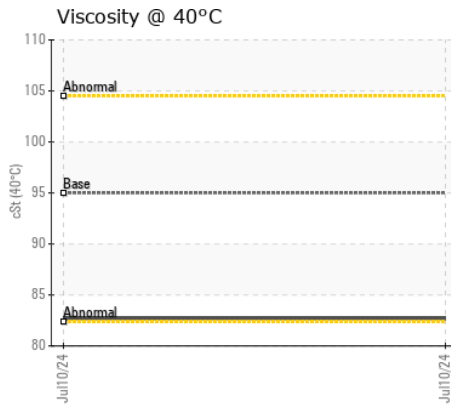
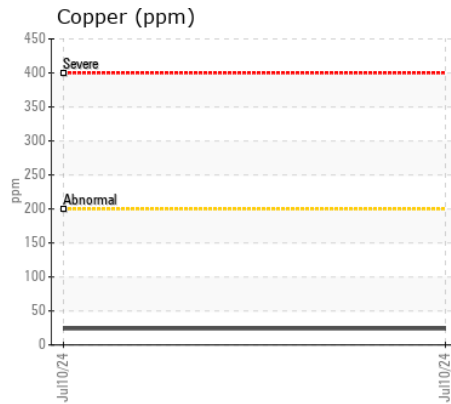
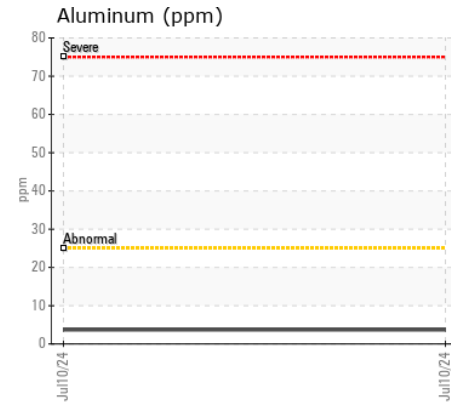
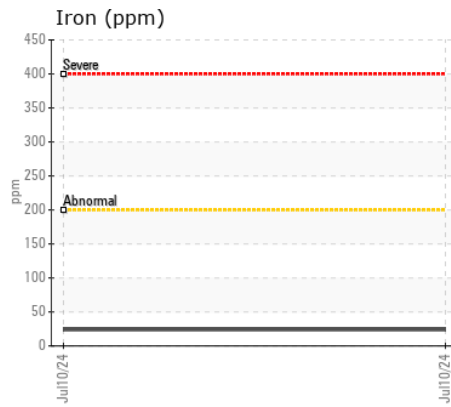
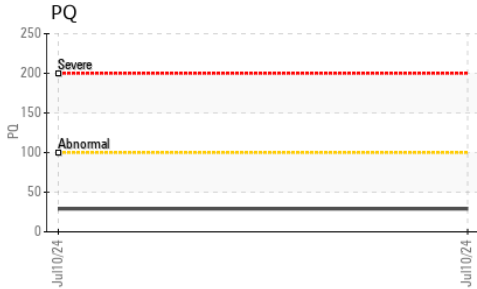
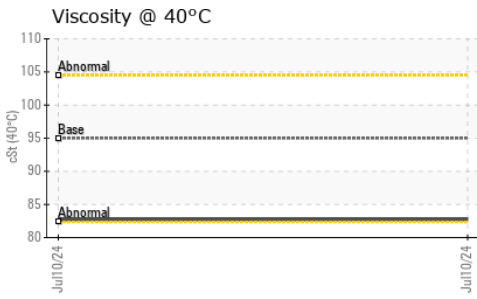
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>50	8	---	---
Potassium	ppm	ASTM D5185m	>20	3	---	---
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	---	---

### FLUID CONDITION

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

Sodium	ppm	ASTM D5185m		0	---	---
Boron	ppm	ASTM D5185m		12	---	---
Barium	ppm	ASTM D5185m		0	---	---
Molybdenum	ppm	ASTM D5185m		13	---	---
Manganese	ppm	ASTM D5185m		<1	---	---
Magnesium	ppm	ASTM D5185m		180	---	---
Calcium	ppm	ASTM D5185m		3145	---	---
Phosphorus	ppm	ASTM D5185m		869	---	---
Zinc	ppm	ASTM D5185m		1030	---	---
Sulfur	ppm	ASTM D5185m		6704	---	---
Visc @ 40°C	cSt	ASTM D445	95.0	82.7	---	---



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : VPA053361 **Received** : 11 Jul 2024  
**Lab Number** : 06233547 **Tested** : 12 Jul 2024  
**Unique Number** : 11117040 **Diagnosed** : 13 Jul 2024 - Don Baldrige  
**Test Package** : MOB 1 ( Additional Tests: PQ )

**Edward's Marine and Sons**  
 12741 Sunset Ave  
 OCEAN CITY, MD  
 US 21842

Contact: Edward Bartholme  
 edwardsmarine@comcast.net; canastasio@wearcheckusa.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: