



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

Area  
**DARYL PERFEERST [SAM]**  
Machine Id  
**ZF 20052583 - INBOARD**  
Component  
**Starboard Gearbox**  
Fluid  
**CHEVRON DELO 400 SAE 30 (4 QTS)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>VPA062853</b>	VPA035146	VPA025671
Sample Date		Client Info		<b>19 Apr 2024</b>	13 Jan 2022	04 Sep 2020
Machine Age	hrs	Client Info		<b>645</b>	531	0
Oil Age	hrs	Client Info		<b>114</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Not Changd
Filter Changed		Client Info		<b>N/A</b>	N/A	Not Changd
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

PQ		ASTM D8184		<b>45</b>	83	80
Iron	ppm	ASTM D5185m	>150	<b>44</b>	90	89
Chromium	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>10	<b>0</b>	1	2
Titanium	ppm	ASTM D5185m		<b>0</b>	1	2
Silver	ppm	ASTM D5185m		<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>5	<b>34</b>	96	124
Lead	ppm	ASTM D5185m	>65	<b>1</b>	14	11
Copper	ppm	ASTM D5185m	>80	<b>140</b>	437	469
Tin	ppm	ASTM D5185m	>8	<b>&lt;1</b>	2	2
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

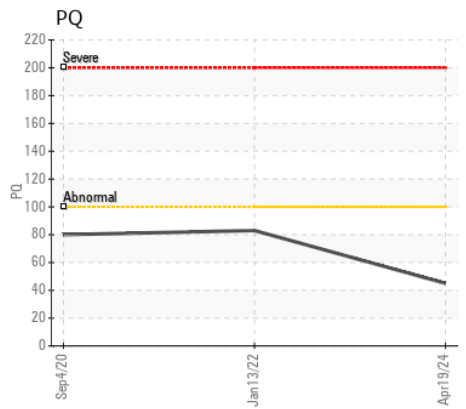
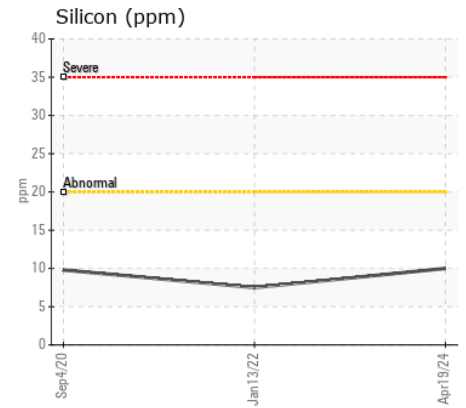
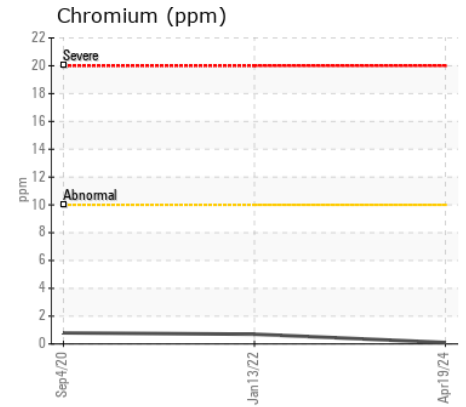
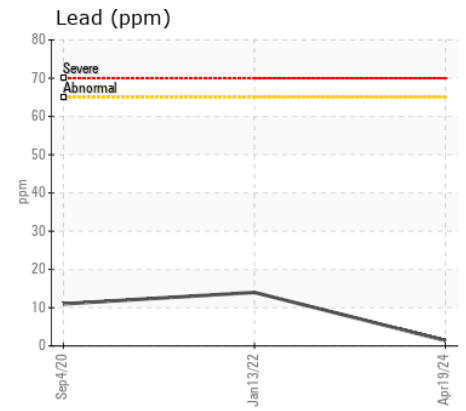
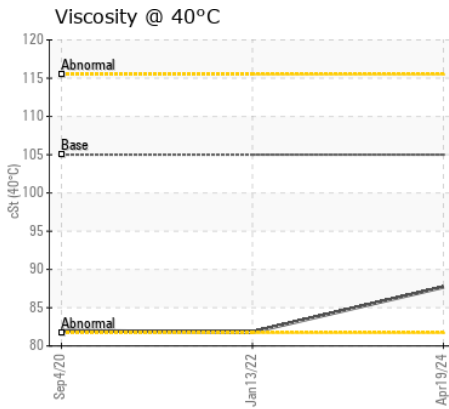
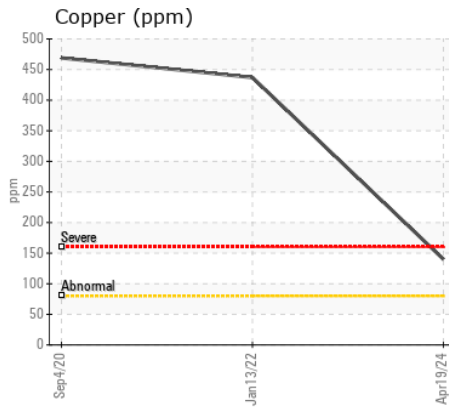
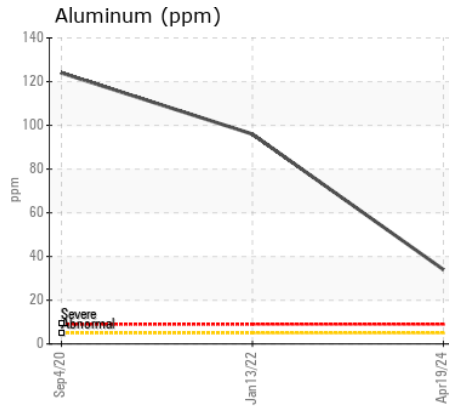
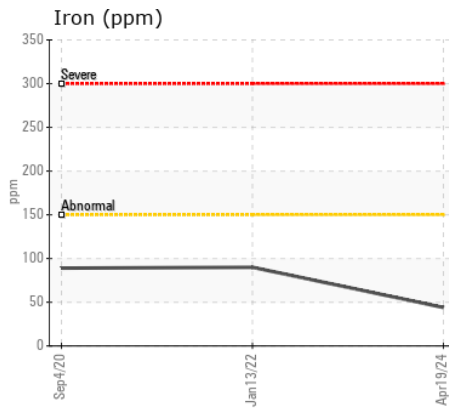
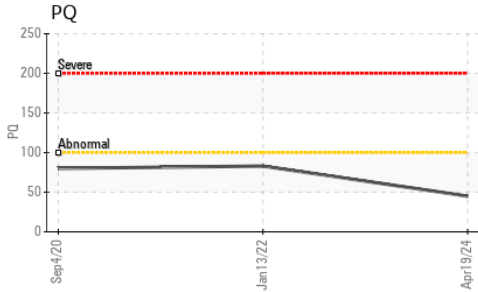
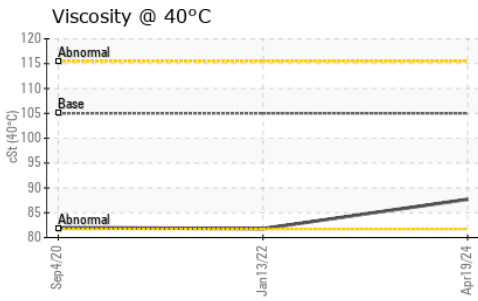
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>10</b>	8	10
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	<1
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

### FLUID CONDITION

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

Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	1	<1
Boron	ppm	ASTM D5185m		<b>380</b>	8	14
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>37</b>	3	4
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	1	1
Magnesium	ppm	ASTM D5185m		<b>19</b>	23	27
Calcium	ppm	ASTM D5185m		<b>3577</b>	2165	2446
Phosphorus	ppm	ASTM D5185m	1160	<b>1072</b>	833	920
Zinc	ppm	ASTM D5185m	1270	<b>1222</b>	984	1097
Sulfur	ppm	ASTM D5185m		<b>4960</b>	4262	4739
Visc @ 40°C	cSt	ASTM D445	105	<b>87.7</b>	81.8	82.0



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : VPA062853 **Received** : 24 Apr 2024  
**Lab Number** : 06159415 **Tested** : 25 Apr 2024  
**Unique Number** : 10994838 **Diagnosed** : 26 Apr 2024 - Jonathan Hester  
**Test Package** : MOB 1 ( Additional Tests: PQ )

**Endor Marine LLC - Coastal Marine - 152124**  
 4300 11th Ave. NW  
 SEATTLE, WA  
 US 98107  
 Contact: WILLOW YANARELLA  
 service@coastalmarineengine.com  
 T: (206)784-3703  
 F: (206)784-8823

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)