



RYAN KELLY SAM ZF 20006121 INBOARD - STARBOARD GEARBOX

Sample No: VPA060505

Oil Type: DIESEL ENGINE OIL SAE 30

CAMPLE INCOPM	ATION				
SAMPLE INFORM	ATIUN				
Sample Number		VPA060505	VPA047680	VPA002422	
Sample Date		14 Feb 2024	16 Jan 2023	13 May 2015	
Machine Hours		980	828	0	
Oil Hours		0	133	4	
Oil Changed		Changed	Not Changd	Changed	
Sample Status		SEVERE	SEVERE	NORMAL	
OIL CONDITION					
Visc @ 40°C	cSt	■87.8	■89.9	■ 97.88	
CONTAMINATION					
Water	%	NEG	NEG	NEG	
Silicon	ppm	7	7	5	
Sodium	ppm	-<1	1	3	
Potassium	ppm	■0	0	2	
WEAR METALS					
PQ		■13	7	■25.0	
Iron	ppm	11	1 1	1 4	
Copper	ppm	243	256	1 9	
Lead	ppm	254	255	244	
Tin	ppm	4	■3	0	
Aluminum	ppm	1	1	3	
Chromium	ppm	0	- <1		
Molybdenum	ppm	46	4 5	70	
Nickel	ppm	■0	- <1		
Titanium	ppm	■0	<1	<1	
Silver	ppm	0	<1	0	
Manganese	ppm	■<1	- <1	<1	
Vanadium	ppm	<1	0	0	
ADDITIVES					
Calcium	ppm	■3498	■3287	1371	
Magnesium	ppm	15	2 9	677	
Zinc	ppm	1123	□1046	1189	
Phosphorus	ppm	1040	922	1089	
Barium	ppm	■0	5	0	
Boron	ppm	444	436	138	

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

Diagnosis

F: (206)784-8823

Oil and filter change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. Clutch wear is indicated. There is no indication of any contamination in the oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

 Depot:
 VP794951

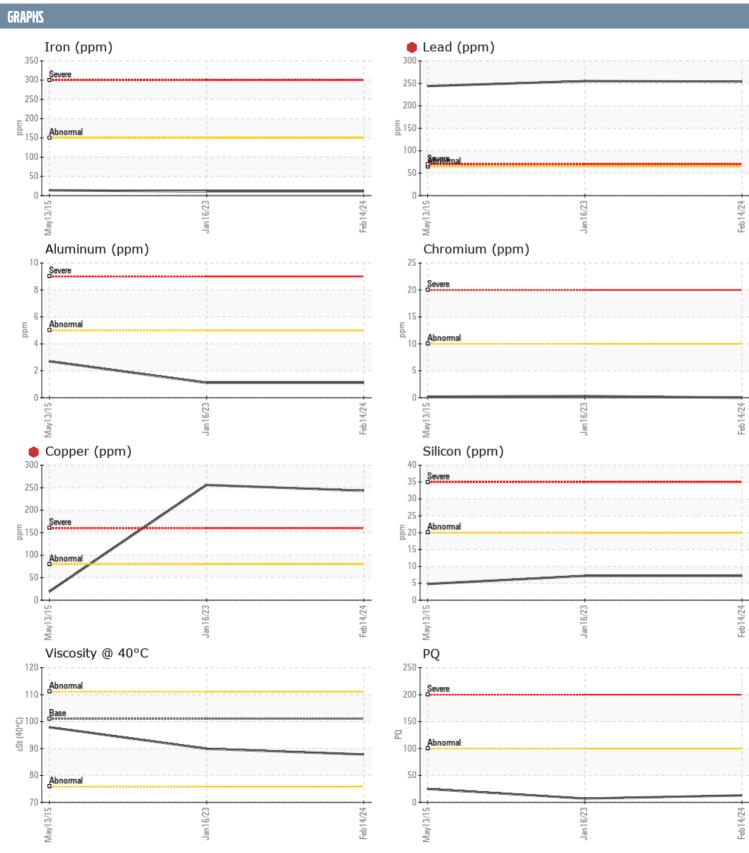
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 Signed:
 Sean Felton

 Report Date:
 26 Feb 2024

OIL ANALYSIS REPORT





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