WEAR CONTAMINATION **FLUID CONDITION** **ATTENTION NORMAL NORMAL**

MATT GRAF

3200000646

Starboard IPS

{not provided} (GAL)							
RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
No corrective action is recommended at this time. Resample at the next service interval to monitor.	Sample Number		Client Info		VPA051624		
	Sample Date		Client Info		05 Jun 2024		
	Machine Age	hrs	Client Info		376		
	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				ATTENTION		
WEAR	PQ		ASTM D8184		32		
The copper level is abnormal. All other component wear rates are normal.	Iron	ppm	ASTM D5185m	>275	74		
	Chromium	ppm	ASTM D5185m	>4	<1		
	Nickel	ppm	ASTM D5185m	>4	2		
	Titanium	ppm	ASTM D5185m	>3	<1		
	Silver	ppm	ASTM D5185m		0		
	Aluminum	ppm	ASTM D5185m	>10	4		
	Lead	ppm	ASTM D5185m	>4	<1		
	Copper	ppm	ASTM D5185m	>30	3 5		
	Tin	ppm	ASTM D5185m	>3	<1		
	Vanadium	ppm	ASTM D5185m		0		
	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	>35	2		
	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	Sodium	ppm	ASTM D5185m		2		
The condition of the oil is acceptable for the time in service.	Boron	ppm	ASTM D5185m		329		
	Barium	ppm	ASTM D5185m		0		
	Molybdenum	ppm	ASTM D5185m		<1		
	Manganese	ppm	ASTM D5185m		3		
	Magnesium	ppm	ASTM D5185m		123		
	Calcium	ppm	ASTM D5185m		31		
	Phosphorus	ppm	ASTM D5185m		1250		
	Zinc	ppm	ASTM D5185m		37		
	Sulfur	ppm	ASTM D5185m		22582		
	Visc @ 40°C	cSt	ASTM D445		104		





Certificate L2367

Laboratory Sample No.

: VPA051624 Lab Number : 06212096 Unique Number : 11084960

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received

: 17 Jun 2024 **Tested** : 18 Jun 2024 Diagnosed

: 19 Jun 2024 - Don Baldridge

MMRS - MOBILE MARINE KEY WEST 5680 1ST AVE, UNIT 4 KEY WEST, FL US 33040

Contact: Matt Graf

Test Package : MOB 1 (Additional Tests: PQ) 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: