WEAR CONTAMINATION FLUID CONDITION

NORMAL ABNORMAL NORMAL

NADINE URCIUOLI [SCOTT CAPUT]

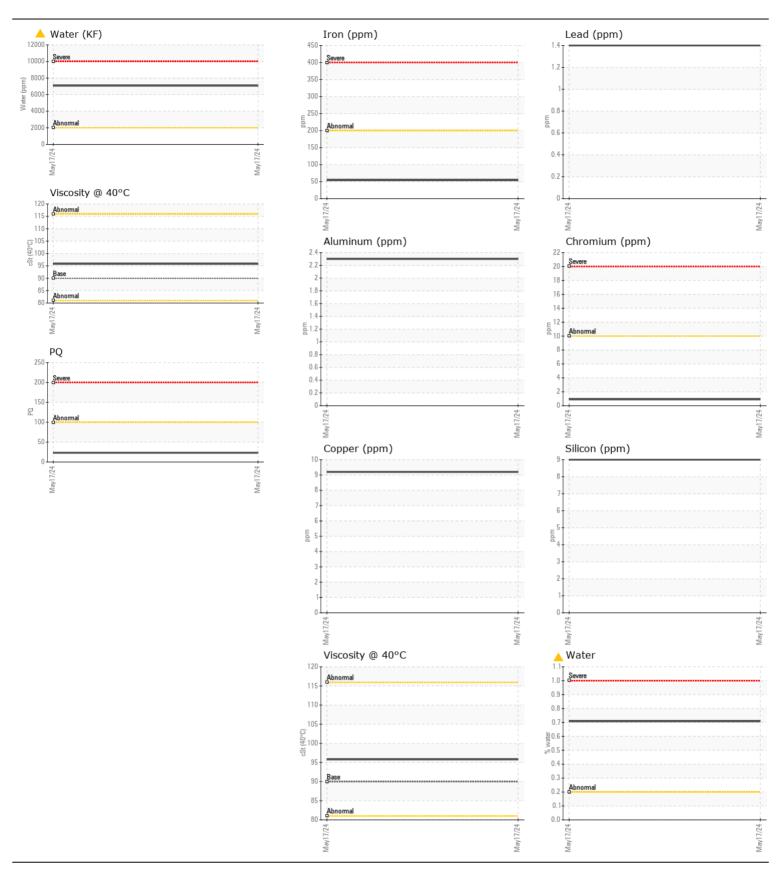
VOLVO PENTA 3950010205

Starboard IPS

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
We advise that you check for the source of water entry. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.	Sample Number		Client Info		VPA058475		
	Sample Date		Client Info		17 May 2024		
	Machine Age	hrs	Client Info		140		
	Oil Age	hrs	Client Info		140		
	Filter Age	hrs	Client Info		0		
	Oil Changed		Client Info		Changed		
	Filter Changed		Client Info		Changed		
	Sample Status				ABNORMAL		
WEAR	PQ		ASTM D8184		23		
All component wear rates are normal.	Iron	ppm	ASTM D5185m	>200	54		
	Chromium	ppm	ASTM D5185m		<1		
	Nickel	ppm	ASTM D5185m	>10	1		
	Titanium	ppm	ASTM D5185m		<1		
	Silver	ppm	ASTM D5185m		<1		
	Aluminum	ppm	ASTM D5185m		2		
	Lead	ppm	ASTM D5185m		1		
	Copper	ppm	ASTM D5185m		9		
	Tin	ppm	ASTM D5185m		1		
	Vanadium	ppm	ASTM D5185m		<1		
	White Metal	scalar	*Visual	NONE	NONE		
	Yellow Metal	scalar	*Visual	NONE	NONE		
CONTAMINATION Appearance is milky. There is a moderate concentration of water present in the oil.	Silicon	ppm	ASTM D5185m		9		
	Potassium	ppm	ASTM D5185m	>20	12		
	Water	%	ASTM D6304	>0.2	△ 0.708		
	ppm Water	ppm	ASTM D6304	>2000	^ 7080		
	Silt	scalar	*Visual	NONE	NONE		
	Debris	scalar	*Visual	NONE	NONE		
	Sand/Dirt	scalar	*Visual	NONE	NONE		
	Appearance	scalar	*Visual	NORML	MILKY		
	Odor	scalar	*Visual	NORML	NORML		
	Emulsified Water	scalar	*Visual	>0.2	<u> </u>		
FLUID CONDITION	Sodium	ppm	ASTM D5185m		51		
The condition of the oil is acceptable for the time in service.	Boron	ppm	ASTM D5185m		128		
	Barium	ppm	ASTM D5185m		0		
	Molybdenum	ppm	ASTM D5185m		<1		
	Manganese	ppm	ASTM D5185m		5		
	Magnesium	ppm	ASTM D5185m		645		
	-						
	Calcium	ppm	ASTM D5185m		134		
	Calcium Phosphorus	ppm	ASTM D5185m		1433		
	Calcium						

Visc @ 40°C

95.8





Laboratory Sample No.

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

: VPA058475 Lab Number : 06189536 Unique Number : 11046288

Received **Tested** Test Package : MOB 1 (Additional Tests: KF, PQ)

: 23 May 2024 Diagnosed

: 28 May 2024 : 28 May 2024 - Sean Felton **Helmuts Marine Service** 619 Canal Street SAN RAFAEL, CA US 94901-3545

Contact: NADINE URCIUOLI SERVICE@HELMUTSMARINE.COM T: x:

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) F: x:

Contact/Location: NADINE URCIUOLI - VP152741