WEAR CONTAMINATION FLUID CONDITION

NORMAL

ABNORMAL

NORMAL

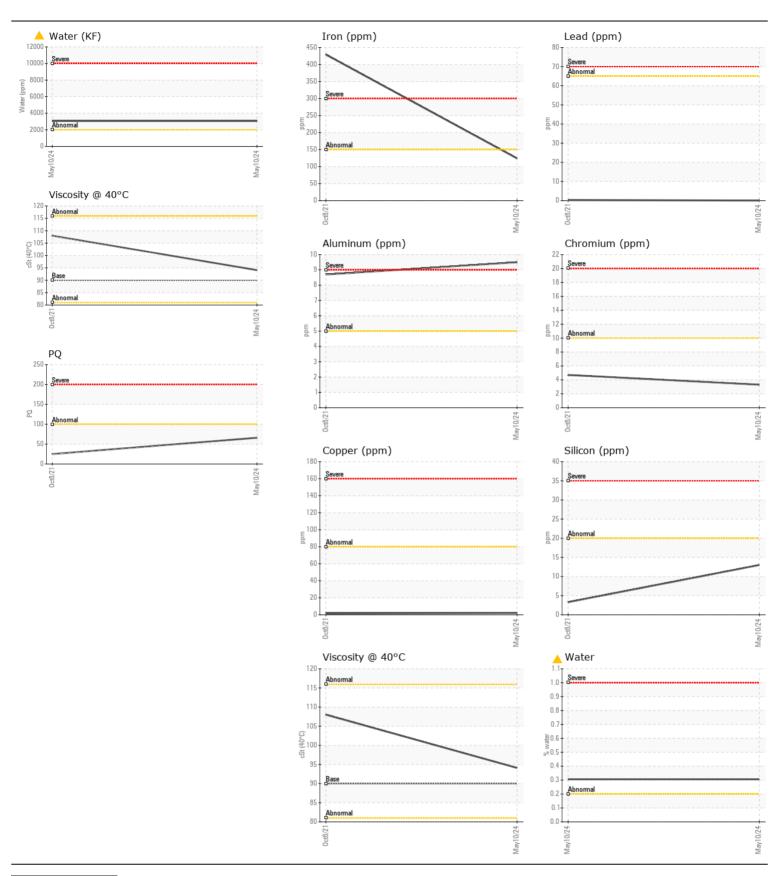
RAFFY LORENTZIAN [205581]

## **VOLVO PENTA A218121 - STERNDRIVE**

**Starboard Gearbox** 

VOLVO PENTA GL-5 SAE 75W90 (2 QTS)

VOLVO PENTA GL-5 SAE 75W90 (2 QTS)							
RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
We advise that you check for the source of water entry. The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.	Sample Number		Client Info		VPA062005	VPA023716	
	Sample Date		Client Info		10 May 2024	08 Oct 2021	
	Machine Age	hrs	Client Info		452	450	
	Oil Age	hrs	Client Info		0	15	
	Filter Age	hrs	Client Info		0	0	
	Oil Changed		Client Info		Changed	Changed	
	Filter Changed		Client Info		N/A	N/A	
	Sample Status				ABNORMAL	SEVERE	
WEAR	PQ		ASTM D8184		66	25	
All component wear rates are normal.	Iron	ppm	ASTM D5185m	>150	124	<b>429</b>	
	Chromium	ppm	ASTM D5185m		3	5	
	Nickel	ppm	ASTM D5185m	>10	9	6	
	Titanium	ppm	ASTM D5185m		<1	0	
	Silver	ppm	ASTM D5185m		0	0	
	Aluminum	ppm	ASTM D5185m	>5	10	<b>4</b> 9	
	Lead	ppm	ASTM D5185m	>65	0	<1	
	Copper	ppm	ASTM D5185m	>80	2	2	
	Tin	ppm	ASTM D5185m	>8	<1	0	
	Vanadium	ppm	ASTM D5185m		0	0	
	White Metal	scalar	*Visual	NONE	NONE	VLITE	
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
CONTAMINATION	Silicon	ppm	ASTM D5185m	>20	13	3	
Appearance is hazy. There is a light concentration of water present in the oil.	Potassium	ppm	ASTM D5185m		1	0	
	Water	%	ASTM D6304	>0.2	0.306		
	ppm Water	ppm	ASTM D6304		△ 3060		
	Silt	scalar	*Visual	NONE	MODER	NONE	
	Debris	scalar	*Visual	NONE	NONE	VLITE	
	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
	Appearance	scalar	*Visual	NORML	HAZY	NORML	
	Odor	scalar	*Visual	NORML	NORML	NORML	
	<b>Emulsified Water</b>	scalar	*Visual	>0.2	0.2%	NEG	
FLUID CONDITION	Sodium	ppm	ASTM D5185m		18	24	
The condition of the oil is acceptable for the time in service.	Boron	ppm	ASTM D5185m		390	198	
	Barium	ppm	ASTM D5185m		3	0	
	Molybdenum	ppm	ASTM D5185m		135	0	
	Manganese	ppm	ASTM D5185m		14	4	
	Magnesium	ppm	ASTM D5185m		51	3	
	Calcium	ppm	ASTM D5185m		264	31	
	Phosphorus	ppm	ASTM D5185m		1575	1177	
	Zinc	ppm	ASTM D5185m		235	47	
	Sulfur	ppm	ASTM D5185m		21690	35354	
	Visc @ 40°C	cSt	ASTM D445	90.0	94.1	108	
Papart Id: \/P152122 [WLISCAPI 06177010 /Gaparatad: 05/17/202/ 10:00:06\ Pay: 1			Cor	tact/Loc	otion Miliono	II Cogewall	V/D150100







Certificate L2367

Report Id: VP152133 [WUSCAR] 06177910 (Generated: 05/17/2024 10:00:09) Rev: 1

Laboratory Sample No.

: VPA062005 Lab Number : 06177910

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

Unique Number : 11029236 Diagnosed Test Package : MOB 1 ( Additional Tests: KF, PQ ) To discuss this sample report, contact Customer Service at 1-800-237-1369.

: 13 May 2024 : 17 May 2024 : 17 May 2024 - Jonathan Hester

Cogswell Marine & Motorsports, Inc 865 Stella Street

CHULA VISTA, CA US 91911

Contact: Mitchell Cogswell Cogswellmarinemotorsports@gmail.com T:

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

F: