

# **FUEL REPORT**

# YANMAR 6LYP - T-DIESEL WANDEREF

Diesel Fuel Fluid NOT GIVEN (--- GAL)

## DIAGNOSIS

### A Recommendation

We advise that you filter this fluid before use. All laboratory tests indicate that this sample meets specifications for No.2 ultra-low-sulfur diesel fuel.

#### Corrosion

All metal levels are normal indicating no corrosion in the system.

# Contaminants

There is a high amount of particulates present in the fuel. There is no bacteria or fungus (yeast and/or mold) indicated in the sample. The water content is negligible.

## **Fuel Condition**

Sulfur value derived by ASTM D5453 method for ULSD validation. Sulfur level is acceptable for ULSD specification.

WANDER	ER					
		-		0ct2023		
SAMPLE INFORM		method	limit/base	current	history1	history2
Sample Number		Client Info		AOL05999832		
Sample Date		Client Info		27 Oct 2023		
Machine Age	hrs	Client Info		650		
Sample Status				ATTENTION		
PHYSICAL PROP	ERTIES	method	limit/base	current	history1	history2
ASTM Color	scalar	*ASTM D1500		L5.0		
Visc @ 40°C	cSt	ASTM D445		2.46		
SULFUR CONTER	NT	method	limit/base	current	history1	history2
Sulfur	ppm	ASTM D5185m		9		
Sulfur (UVF)	ppm	ASTM D5453		12		
CONTAMINANTS		method	limit/base	ourropt	biotonut	history2
				current	history1	history2
Silicon	ppm	ASTM D5185m	<1.0	<1		
Sodium Potassium	ppm	ASTM D5185m	<0.1	<1		
Water	ppm %	ASTM D5185m ASTM D6304	<0.1 <0.05	0 0.005		
ppm Water	ppm	ASTM D6304	<500	54.9		
% Gasoline	%	*In-House	<0.50	0.0		
% Biodiesel	%	*In-House	<20.0	0.0		
FLUID CLEANLIN	FSS	method	limit/base	current	history1	history2
	200	ASTM D7647	>2500	▲ 102199		
Particles >4µm Particles >6µm		ASTM D7647 ASTM D7647	>640	102199 27876		
Particles >14µm		ASTM D7647	>80	▲ 1828		
Particles >21µm		ASTM D7647	>20	▲ 541		
Particles >38µm		ASTM D7647	>4	▲ 31		
Particles >71µm		ASTM D7647	>3	3		
Oil Cleanliness		ISO 4406 (c)	>18/16/13	<b>4/22/18</b>		
HEAVY METALS						
Aluminum		method	limit/base	current	history1	history2
	ppm	ASTM D5185m	limit/base	current 0	history1	history2
Nickel	ppm ppm					
Nickel Lead		ASTM D5185m	<0.1	0		
	ppm	ASTM D5185m ASTM D5185m	<0.1 <0.1	0 0		
Lead	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	<0.1 <0.1 <0.1	0 0 0		
Lead Vanadium Iron Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	<0.1 <0.1 <0.1 <0.1	0 0 0		
Lead Vanadium Iron Calcium Magnesium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	<0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	0 0 0 0 2 0		
Lead Vanadium Iron Calcium Magnesium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	<0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	0 0 0 0 2 0 4	   	
Lead Vanadium Iron Calcium Magnesium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	<0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	0 0 0 0 2 0	  	  
Lead Vanadium Iron Calcium Magnesium Phosphorus	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	<0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	0 0 0 0 2 0 4	   	
Lead Vanadium Iron Calcium Magnesium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	<0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	0 0 0 0 2 0 4 0		

Sample Rating Trend

ISO

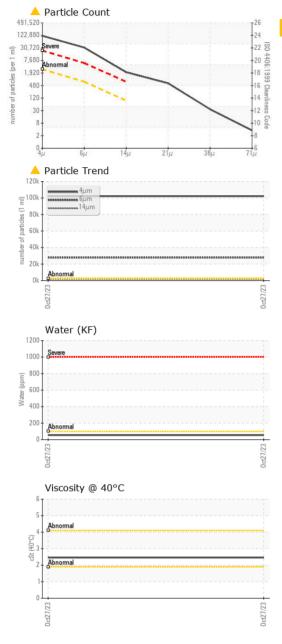
Report Id: APEGRA [WUSCAR] 05998327 (Generated: 11/08/2023 01:18:13) Rev: 1

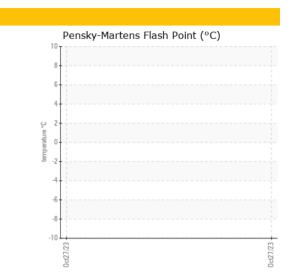
Contact/Location: JASON RAINEY - APEGRA



# **FUEL REPORT**

GRAPHS





: WearCheck USA - 501 Madison Ave., Cary, NC 27513 APEX OIL LAB Laboratory : 03 Nov 2023 Sample No. : AOL05999832 Received 3956 44th STREET SE Lab Number : 05998327 Diagnosed : 07 Nov 2023 GRAND RAPIDS, MI Unique Number : 10726687 Diagnostician : Doug Bogart US 49512 Test Package : DF-5 (Additional Tests: Screen) Contact: JASON RAINEY Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. jrainey@apexoillab.com \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (616)328-6672 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: (616)828-1791

Contact/Location: JASON RAINEY - APEGRA

Page 2 of 2