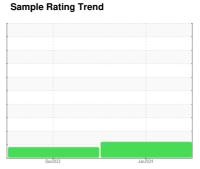


# **OIL ANALYSIS REPORT**







8784 Component

**Diesel Engine** 

**DIESEL ENGINE OIL SAE 10W30 (--- GAL)** 

## **DIAGNOSIS**

### Recommendation

The oil is near the end of it's useful service life. recommend schedule an oil change. No corrective action is recommended at this time. Resample at the next service interval to monitor. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

All component wear rates are normal.

### Contamination

Light fuel dilution occurring. No other contaminants were detected in the oil.

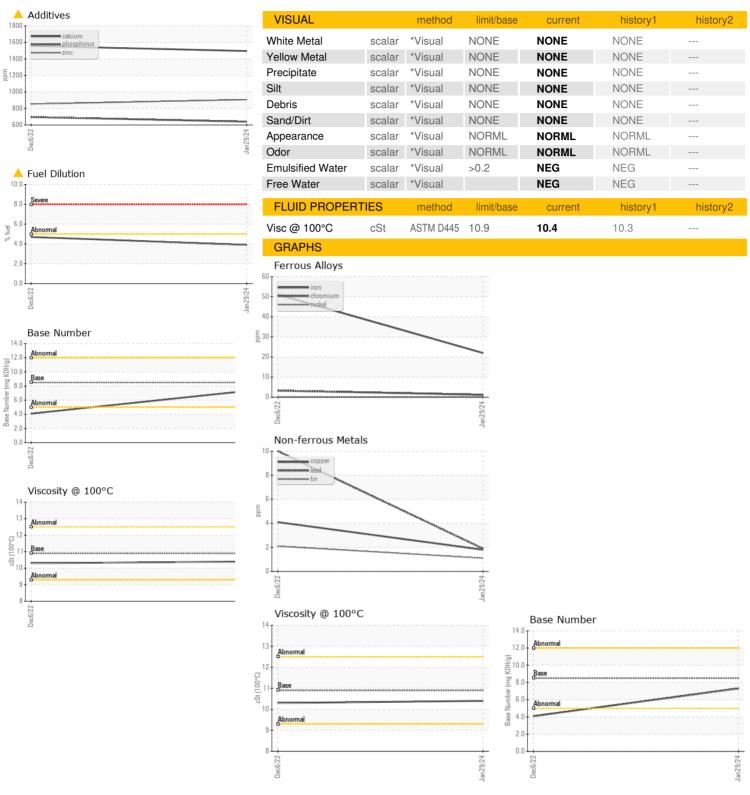
### Fluid Condition

Phosphorus ppm levels are abnormally low. The BN result indicates that there is suitable alkalinity remaining in the oil.

		-	Dec2022	Jan2024		
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		IL06073753	IL05731434	
Sample Date		Client Info		29 Jan 2024	06 Dec 2022	
Machine Age	mls	Client Info		0	0	
Oil Age	mls	Client Info		0	0	
Oil Changed		Client Info		N/A	N/A	
Sample Status				ABNORMAL	ABNORMAL	
CONTAMINATION	J	method	limit/base	current	history1	history2
Water	•	WC Method			NEG	motory
			>0.2	NEG NEG		
Glycol		WC Method		NEG	NEG	
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	22	51	
Chromium	ppm	ASTM D5185m	>20	1	3	
Nickel	ppm	ASTM D5185m	>4	0	0	
Titanium	ppm	ASTM D5185m		<1	<1	
Silver	ppm	ASTM D5185m	>3	0	0	
Aluminum	ppm	ASTM D5185m	>20	3	7	
Lead	ppm	ASTM D5185m	>40	2	10	
Copper	ppm	ASTM D5185m	>330	2	4	
Tin	ppm	ASTM D5185m	>15	1	2	
Vanadium	ppm	ASTM D5185m		0	0	
Cadmium	ppm	ASTM D5185m		0	0	
ADDITIVES		method	limit/base	current	history1	historv2
ADDITIVES	nnm	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	26	22	
Boron Barium	ppm	ASTM D5185m ASTM D5185m	250 10	26 0	22 1	
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	250	26 0 47	22 1 36	
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100	26 0 47 <1	22 1 36 1	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450	26 0 47 <1 503	22 1 36 1 499	  
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000	26 0 47 <1 503 1496	22 1 36 1 499 1557	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150	26 0 47 <1 503 1496 ▲ 640	22 1 36 1 499 1557 696	  
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350	26 0 47 <1 503 1496 ▲ 640 907	22 1 36 1 499 1557 696 854	   
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250	26 0 47 <1 503 1496 ▲ 640	22 1 36 1 499 1557 696 854 2229	   
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350	26 0 47 <1 503 1496 ▲ 640 907	22 1 36 1 499 1557 696 854	   
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250	26 0 47 <1 503 1496 ▲ 640 907 2242	22 1 36 1 499 1557 696 854 2229	   
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base	26 0 47 <1 503 1496 ▲ 640 907 2242 current	22 1 36 1 499 1557 696 854 2229	   
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base	26 0 47 <1 503 1496 ▲ 640 907 2242 current 6	22 1 36 1 499 1557 696 854 2229 history1	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 Iimit/base >25	26 0 47 <1 503 1496 ▲ 640 907 2242 current 6 0	22 1 36 1 499 1557 696 854 2229 history1 8	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >20	26 0 47 <1 503 1496 ▲ 640 907 2242 current 6 0 5	22 1 36 1 499 1557 696 854 2229 history1 8 1	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250  limit/base >25 >20 >5	26 0 47 <1 503 1496 ▲ 640 907 2242 current 6 0 5 ▲ 3.9	22 1 36 1 499 1557 696 854 2229 history1 8 1 10 4.7	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250  limit/base >25 >20 >5  limit/base	26 0 47 <1 503 1496 ▲ 640 907 2242 current 6 0 5 ▲ 3.9	22 1 36 1 499 1557 696 854 2229 history1 8 1 10  4.7 history1 0.6	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250  limit/base >25 >20 >5  limit/base	26 0 47 <1 503 1496 ▲ 640 907 2242  current 6 0 5 ▲ 3.9  current 0.4	22 1 36 1 499 1557 696 854 2229 history1 8 1 10  4.7 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844	250 10 100 450 3000 1150 1350 4250 limit/base >25 >20 >5 limit/base >3 >20	26 0 47 <1 503 1496 ▲ 640 907 2242	22 1 36 1 499 1557 696 854 2229 history1 8 1 10 4.7 history1 0.6 14.2	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D78185m ASTM D7844 *ASTM D7624 *ASTM D7624 *ASTM D7415 method	250 10 100 450 3000 1150 1350 4250 limit/base >25 >20 >5 limit/base >3 >20 >30 limit/base	26 0 47 <1 503 1496 ▲ 640 907 2242 current 6 0 5 ▲ 3.9 current 0.4 12.0 22.6 current	22 1 36 1 499 1557 696 854 2229 history1 8 1 10 4.7 history1 0.6 14.2 27.5 history1	history2 history2 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	250 10 100 450 3000 1150 1350 4250 limit/base >25 >20 >5 limit/base >3 >20 >30	26 0 47 <1 503 1496 ▲ 640 907 2242  current 6 0 5 ▲ 3.9  current 0.4 12.0 22.6	22 1 36 1 499 1557 696 854 2229 history1 8 1 10  4.7 history1 0.6 14.2 27.5	history2 history2



## **OIL ANALYSIS REPORT**







Certificate L2367

Laboratory Sample No. Lab Number **Unique Number** 

: IL06073753 : 06073753

: 10855844

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Recieved : 30 Jan 2024 Diagnosed

: 31 Jan 2024 Diagnostician : Wes Davis

Test Package : FLEET ( Additional Tests: PercentFuel ) 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.

**IDEALEASE-NORCROSS** 4571 NORTH BUFORD HWY NORCROSS, GA US 30071-2808 Contact: RICK MARKS

> T: F: (770)300-0614