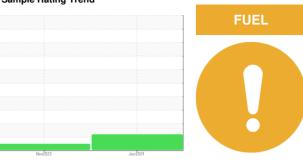


OIL ANALYSIS REPORT

Sample Rating Trend





Machine Id

\$7
Component
Diesel Engine
Fluid

DIESEL ENGINE OIL SAE 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

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

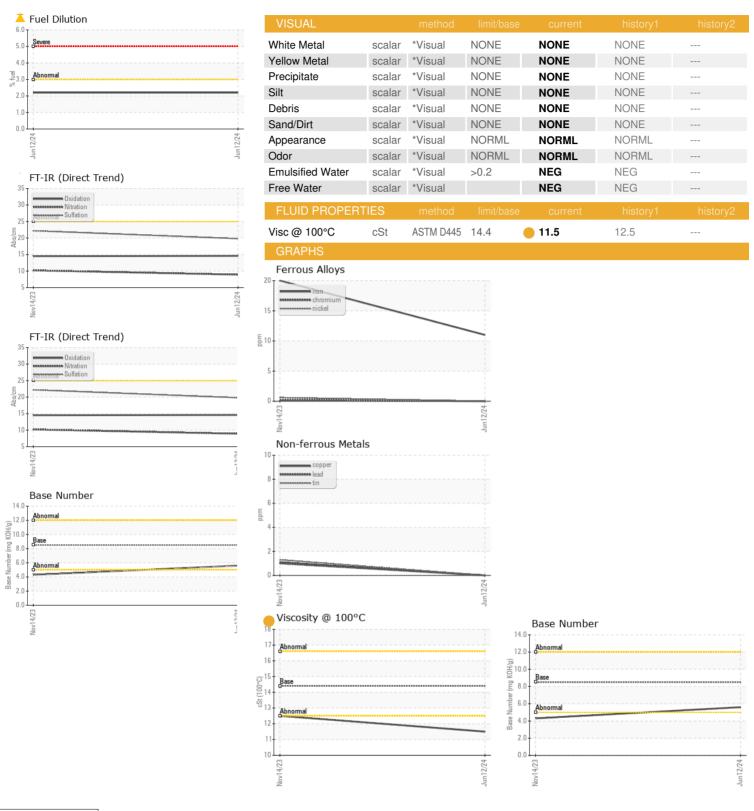
Fluid Condition

Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

AE 15W40 (G	AL)		NovŽ023	Jun2024		
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0841441	WC0841456	
Sample Date		Client Info		12 Jun 2024	14 Nov 2023	
Machine Age	hrs	Client Info		15048	0	
Oil Age	hrs	Client Info		1515	489	
Oil Changed		Client Info		Changed	Changed	
Sample Status				ATTENTION	NORMAL	
CONTAMINATION	١	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG	NEG	
Glycol		WC Method		NEG	NEG	
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>120	11	20	
Chromium	ppm	ASTM D5185m	>20	0	<1	
Nickel	ppm	ASTM D5185m	>5	0	<1	
Titanium	ppm	ASTM D5185m	>2	0	<1	
Silver	ppm	ASTM D5185m	>2	0	0	
Aluminum	ppm	ASTM D5185m	>20	2	5	
Lead	ppm	ASTM D5185m	>40	0	1	
Copper	ppm	ASTM D5185m	>330	0	1	
Tin	ppm	ASTM D5185m	>15	0	1	
Vanadium	ppm	ASTM D5185m		0	0	
Cadmium	ppm	ASTM D5185m		0	0	
ADDITIVES		method	limit/base	current	history1	history2
Boron	nnm	ASTM D5185m	250	6	21	
	ppm	ASTIVI DSTOSIII		-	۷ ا	
Barium	ppm	ASTM D5185m	10	0	<1	
Barium Molybdenum						
	ppm	ASTM D5185m	10	0	<1	
Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	10	0 63	<1 65	
Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	100	0 63 0 729 1206	<1 65 <1 143 2084	
Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 100 450	0 63 0 729	<1 65 <1 143	
Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 100 450 3000	0 63 0 729 1206	<1 65 <1 143 2084	
Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 100 450 3000 1150	0 63 0 729 1206 938	<1 65 <1 143 2084 962	
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	10 100 450 3000 1150 1350	0 63 0 729 1206 938 1109	<1 65 <1 143 2084 962 1154	
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	10 100 450 3000 1150 1350 4250	0 63 0 729 1206 938 1109 3265	<1 65 <1 143 2084 962 1154 3491	
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	10 100 450 3000 1150 1350 4250	0 63 0 729 1206 938 1109 3265	<1 65 <1 143 2084 962 1154 3491 history1	 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	10 100 450 3000 1150 1350 4250 limit/base >25	0 63 0 729 1206 938 1109 3265 current	<1 65 <1 143 2084 962 1154 3491 history1 4	 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	10 100 450 3000 1150 1350 4250 limit/base >25 >158	0 63 0 729 1206 938 1109 3265 current 3	<1 65 <1 143 2084 962 1154 3491 history1 4	history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20	0 63 0 729 1206 938 1109 3265 current 3 3	<1 65 <1 143 2084 962 1154 3491 history1 4 2 <1	
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 >3.0	0 63 0 729 1206 938 1109 3265 current 3 3 <1	<1 65 <1 143 2084 962 1154 3491 history1 4 2 <1 <1.0	history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 >3.0	0 63 0 729 1206 938 1109 3265 current 3 3 <1 △ 2.2	<1 65 <1 143 2084 962 1154 3491 history1 4 2 <1 <1.0 history1	history2
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 ASTM D7844	10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 >3.0 limit/base	0 63 0 729 1206 938 1109 3265 current 3 3 <1 ▲ 2.2	<1 65 <1 143 2084 962 1154 3491 history1 4 2 <1 <1.0 history1 0.3	history2 history2
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	10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 >3.0 limit/base >4 >20	0 63 0 729 1206 938 1109 3265 current 3 3 <1 ▲ 2.2 current 0.3 8.9	<1 65 <1 143 2084 962 1154 3491 history1 4 2 <1 <1.0 history1 0.3 10.2	history2 history2
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	10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 >3.0 limit/base >4 >20 >30	0 63 0 729 1206 938 1109 3265 current 3 3 <1 ▲ 2.2 current 0.3 8.9 19.8	<1 65 <1 143 2084 962 1154 3491 history1 4 2 <1 <1.0 history1 0.3 10.2 22.2	history2 history2
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 D7624 *ASTM D7624 *ASTM D7624 *ASTM D7415 method	10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 >3.0 limit/base >4 >20 >30 limit/base	0 63 0 729 1206 938 1109 3265 current 3 3 <1 ▲ 2.2 current 0.3 8.9 19.8 current	<1 65 <1 143 2084 962 1154 3491 history1 4 2 <1 <1.0 history1 0.3 10.2 22.2 history1	history2 history2 history2



OIL ANALYSIS REPORT







Certificate 12367

Laboratory Sample No.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : WC0841441 Lab Number : 06214304

Received **Tested** Diagnosed

: 19 Jun 2024 : 21 Jun 2024 : 21 Jun 2024 - Don Baldridge

Apple Valley Waste - SEW Location 309 Salina Road Sewell, NJ US 08080

Contact: Service Manager

Unique Number : 11087168 Test Package : CONST (Additional Tests: FuelDilution, PercentFuel, TBN)

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)

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