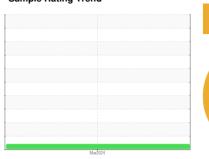


OIL ANALYSIS REPORT

Sample Rating Trend







Machine Id SZLG233019

Diesel Engine

CHEVRON 15W40 (--- QTS)

Recommendation

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Tests indicate that there is no fuel present in the oil. There is no indication of any contamination in the

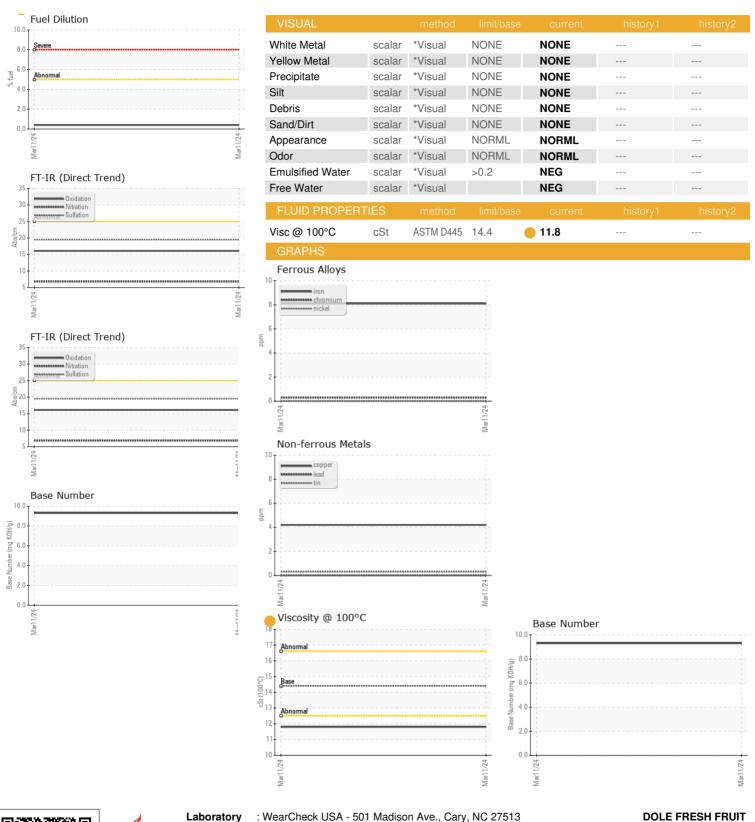
Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sample Number Client Info WC0905071 Sample Date Client Info 11 Mar 2024 Machine Age hrs Client Info 1268 Oil Age hrs Client Info 1500 Oil Changed Client Info Changed Sample Status ATTENTION CONTAMINATION method limit/base current history1 history2 Water WC Method NEG Glycol WC Method NEG					Mar2024		
Sample Number Client Info WC0905071							
Sample Date Client Info 11 Mar 2024	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age	Sample Number		Client Info		WC0905071		
Oil Age hrs Client Info 1500 Oil Changed Client Info Changed Sample Status ATTENTION CONTAMINATION method limit/base current history1 history2 Water WC Method NEG Glycol WC Method NEG WEAR METALS method Imit/base current history1 history2 Iron ppm ASTM D5185m >100 8 Chromium ppm ASTM D5185m >20 <1	Sample Date		Client Info		11 Mar 2024		
Cilipho Cilipho Cilipho Changed Cilipho Changed ATTENTION CONTAMINATION method limit/base current history1 history2 Mater WC Method NEG Contamination Color Colo	Machine Age	hrs	Client Info		1268		
ATTENTION CONTAMINATION method imit/base current history1 history2	Oil Age	hrs	Client Info		1500		
CONTAMINATION method limit/base current history1 history2 Water WC Method NEG Glycol WC Method NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 8 Chromium ppm ASTM D5185m >20 <1	Oil Changed		Client Info		Changed		
Water	Sample Status				ATTENTION		
WEAR METALS	CONTAMINATION	٧	method	limit/base	current	history1	history2
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >100 8 Chromium ppm ASTM D5185m >20 <1	Water		WC Method	>0.2	NEG		
Iron	Glycol		WC Method		NEG		
Chromium ppm ASTM D5185m >20 <1 Nickel ppm ASTM D5185m >4 0 Titanium ppm ASTM D5185m >3 0 Lead ppm ASTM D5185m >3 0 Lead ppm ASTM D5185m >30 4 Lead ppm ASTM D5185m >40 0 Lead ppm ASTM D5185m >40 0 Lead ppm ASTM D5185m >40 0 Copper ppm ASTM D5185m >40 0 Tin ppm ASTM D5185m >40 0 Tin ppm ASTM D5185m >15 <1 Vanadium ppm ASTM D5185m 0 Cadmium ppm ASTM D5185m 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 120 ADDITIVES method limit/base current history1 history2 Barium ppm ASTM D5185m 64 Manganese ppm ASTM D5185m 64 Manganesium ppm ASTM D5185m 414 Calcium ppm ASTM D5185m 1788 Phosphorus ppm ASTM D5185m 1180 Phosphorus ppm ASTM D5185m 1180 Sulfur ppm ASTM D5185m 3750 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 <1 NFRA-RED method limit/base current history1 history2 Nitration Abs/m ASTM D7844 >3 0.1 FLUID DEGRADATION method limit/base current history1 history2 FUID DEGRADATION method limit/ba	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>100	8		
Nickel	Chromium		ASTM D5185m	>20	<1		
Description	Nickel		ASTM D5185m	>4	0		
Silver	Titanium		ASTM D5185m		0		
Aluminum				>3	0		
Lead	Aluminum		ASTM D5185m	>20	4		
Copper ppm ASTM D5185m >330 4 Tin ppm ASTM D5185m 0 Vanadium ppm ASTM D5185m 0 Cadmium ppm ASTM D5185m 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 Barium ppm ASTM D5185m 0 Molybdenum ppm ASTM D5185m 0 Manganese ppm ASTM D5185m 1 Manganese ppm ASTM D5185m 1788 Calcium ppm ASTM D5185m 992 Phosphorus ppm ASTM D5185m 3750 Sulfur ppm ASTM D5185m 25 4 <	Lead			>40	0		
Tin							
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ADDITIVES				710			
ADDITIVES							
Boron	ADDITIVES		method	limit/base	current	historv1	historv2
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Calcium ppm ASTM D5185m 1788 Phosphorus ppm ASTM D5185m 992 Zinc ppm ASTM D5185m 1180 Sulfur ppm ASTM D5185m 3750 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 Sodium ppm ASTM D5185m >50 15 Potassium ppm ASTM D5185m >20 <1	Molybdenum	ppm	ASTM D5185m		64		
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Table Tabl	Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m		64 1 414		
Sulfur ppm ASTM D5185m 3750 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 Sodium ppm ASTM D5185m >50 15 Potassium ppm ASTM D5185m >20 <1	Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		64 1 414 1788		
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 Sodium ppm ASTM D5185m >50 15 Potassium ppm ASTM D5185m >20 <1	Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		64 1 414 1788 992		
Silicon ppm ASTM D5185m >25 4 Sodium ppm ASTM D5185m >50 15 Potassium ppm ASTM D5185m >20 <1 Fuel % ASTM D3524 >5 0.4 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.1 Nitration Abs/cm *ASTM D7624 >20 6.8 Sulfation Abs/.1mm *ASTM D7415 >30 19.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.1	Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		64 1 414 1788 992 1180		
Sodium	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		64 1 414 1788 992 1180		
Potassium ppm ASTM D5185m >20 <1 Fuel % ASTM D3524 >5 0.4 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.1 Nitration Abs/cm *ASTM D7624 >20 6.8 Sulfation Abs/.1mm *ASTM D7415 >30 19.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.1	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		64 1 414 1788 992 1180 3750		
Fuel % ASTM D3524 >5 0.4 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.1 Nitration Abs/cm *ASTM D7624 >20 6.8 Sulfation Abs/.1mm *ASTM D7415 >30 19.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.1	Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m	>25	64 1 414 1788 992 1180 3750 current	 history1	 history2
INFRA-RED	Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm	ASTM D5185m	>25 >50	64 1 414 1788 992 1180 3750 current 4 15	 history1	 history2
Soot % % *ASTM D7844 >3 0.1 Nitration Abs/cm *ASTM D7624 >20 6.8 Sulfation Abs/.1mm *ASTM D7415 >30 19.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.1	Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	>25 >50 >20	64 1 414 1788 992 1180 3750 current 4 15 <1	 history1	 history2
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Nitration Abs/cm *ASTM D7624 >20 6.8 Sulfation Abs/.1mm *ASTM D7415 >30 19.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.1	Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	>25 >50 >20 >5	64 1 414 1788 992 1180 3750 current 4 15 <1	history1	
Sulfation Abs/.1mm *ASTM D7415 >30 19.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.1	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 ASTM D3524	>25 >50 >20 >5 limit/base	64 1 414 1788 992 1180 3750 current 4 15 <1 0.4		
Oxidation	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 Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844	>25 >50 >20 >5 limit/base >3	64 1 414 1788 992 1180 3750 current 4 15 <1 0.4 current 0.1	history1 history1	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 Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7844	>25 >50 >20 >5 limit/base >3 >20	64 1 414 1788 992 1180 3750 current 4 15 <1 0.4 current 0.1 6.8	history1 history1	
	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	>25 >50 >20 >5 limit/base >3 >20 >30	64 1 414 1788 992 1180 3750 current 4 15 <1 0.4 current 0.1 6.8 19.5	history1 history1	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 D7844 *ASTM D7844 *ASTM D7844	>25 >50 >20 >5 limit/base >3 >20 >3 limit/base	64 1 414 1788 992 1180 3750 current 4 15 <1 0.4 current 0.1 6.8 19.5 current	history1 history1 history1	history2 history2 history2



OIL ANALYSIS REPORT







Certificate 12367

Laboratory Sample No.

Lab Number : 06137941

: WC0905071 Unique Number : 10962749

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

: 03 Apr 2024 : 08 Apr 2024 Diagnosed Test Package: FLEET (Additional Tests: FuelDilution, PercentFuel)

: 08 Apr 2024 - Sean Felton

US 39502 Contact: JORDAN JOHNSTON jordan.johnston@dole.com T:

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: (228)867-2970

PO BOX 1689

GULFPORT, MS