

# **OIL ANALYSIS REPORT**

Sample Rating Trend







SZLG232339
Component
Diesel Engine

**CHEVRON 15W40 (--- QTS)** 

Machine Id

### Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

#### Wear

All component wear rates are normal.

## Contamination

There is no indication of any contamination in the oil.

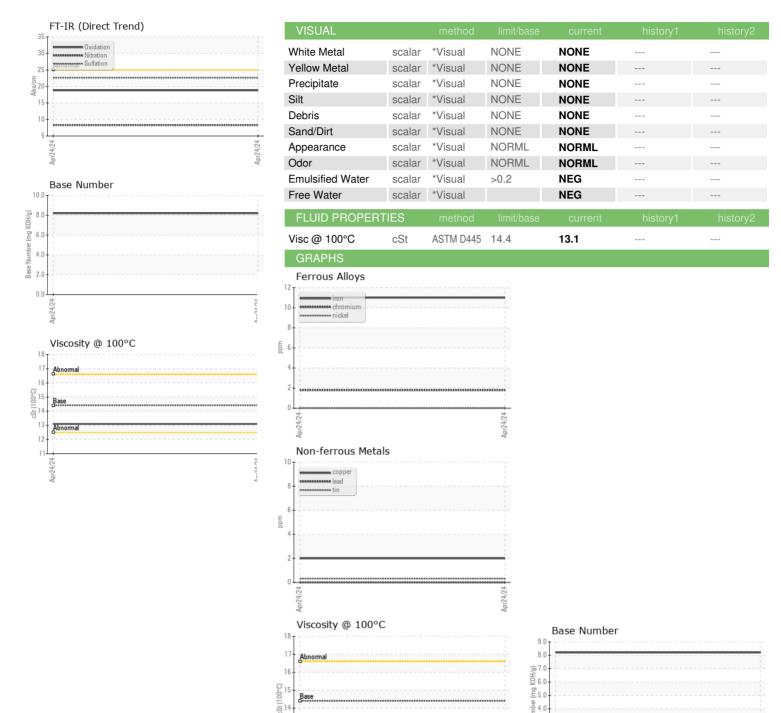
### Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION   method   limit/base   current   history1   history2					Apr2024		
Sample Number   Client Info   WC0905059       Sample Date   Client Info   24 Apr 2024       Machine Age   hrs   Client Info   0							
Sample Date   Client Info   24 Apr 2024	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age         hrs         Client Info         3894	Sample Number		Client Info		WC0905059		
Oil Age         hrs         Client Info         Changed	Sample Date		Client Info		24 Apr 2024		
Client Info   NORMAL	Machine Age	hrs	Client Info		3894		
CONTAMINATION	Oil Age	hrs	Client Info		0		
CONTAMINATION         method         limit/base         current         history1         history2           Fuel         WC Method         >5         <1.0	Oil Changed		Client Info		Changed		
Fuel   WC Method   S5   <1.0	Sample Status				NORMAL		
Water         WC Method         >0.2         NEG             Glycol         WC Method         Imit/base         current         history1         history2           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >100         11             Chromium         ppm         ASTM D5185m         >20         2             Nickel         ppm         ASTM D5185m         >4         0             Silver         ppm         ASTM D5185m         >4         0             Silver         ppm         ASTM D5185m         >40         0             Aluminum         ppm         ASTM D5185m         >40         0             Lead         ppm         ASTM D5185m         >15         <1	CONTAMINATION	٧	method	limit/base	current	history1	history2
WEAR METALS	Fuel		WC Method	>5	<1.0		
WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >100         11             Chromium         ppm         ASTM D5185m         >20         2             Nickel         ppm         ASTM D5185m         >4         0             Titanium         ppm         ASTM D5185m         >3         0             Silver         ppm         ASTM D5185m         >20         4             Aluminum         ppm         ASTM D5185m         >20         4             Lead         ppm         ASTM D5185m         >20         4             Copper         ppm         ASTM D5185m         >230         2             Copper         ppm         ASTM D5185m         0              Vanadium         ppm         ASTM D5185m         0              Cadmium         ppm         ASTM D5185m         396	Water		WC Method	>0.2	NEG		
Iron	Glycol		WC Method		NEG		
Chromium         ppm         ASTM D5185m         >20         2             Nickel         ppm         ASTM D5185m         >4         0             Titanium         ppm         ASTM D5185m         >3         0             Aluminum         ppm         ASTM D5185m         >3         0             Aluminum         ppm         ASTM D5185m         >40         0             Lead         ppm         ASTM D5185m         >40         0             Copper         ppm         ASTM D5185m         >330         2             Tin         ppm         ASTM D5185m         >15         <1	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>100	11		
Titanium	Chromium	ppm	ASTM D5185m	>20	2		
Silver	Nickel	ppm	ASTM D5185m	>4	0		
Aluminum         ppm         ASTM D5185m         >20         4             Lead         ppm         ASTM D5185m         >40         0             Copper         ppm         ASTM D5185m         >330         2             Tin         ppm         ASTM D5185m         >15         <1	Titanium	ppm	ASTM D5185m		<1		
Lead	Silver	ppm	ASTM D5185m	>3	0		
Copper         ppm         ASTM D5185m         >330         2             Tin         ppm         ASTM D5185m         >15         <1	Aluminum	ppm	ASTM D5185m	>20	4		
Tin	Lead	ppm	ASTM D5185m	>40	0		
Vanadium         ppm         ASTM D5185m         0             Cadmium         ppm         ASTM D5185m         <1             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         396             Barium         ppm         ASTM D5185m         1             Molybdenum         ppm         ASTM D5185m         136             Manganese         ppm         ASTM D5185m         <1             Magnesium         ppm         ASTM D5185m         646             Calcium         ppm         ASTM D5185m         739             Phosphorus         ppm         ASTM D5185m         877             Sulfur         ppm         ASTM D5185m         2561             Sulfur         ppm         ASTM D5185m         >25         6             Sodium         ppm         ASTM D5185m         >20         7	Copper	ppm	ASTM D5185m	>330	2		
Cadmium         ppm         ASTM D5185m         <1             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         396             Barium         ppm         ASTM D5185m         1             Molybdenum         ppm         ASTM D5185m         136              Manganese         ppm         ASTM D5185m         <1	Tin	ppm	ASTM D5185m	>15	<1		
ADDITIVES	Vanadium	ppm	ASTM D5185m		0		
Boron	Cadmium	ppm	ASTM D5185m		<1		
Barium         ppm         ASTM D5185m         1             Molybdenum         ppm         ASTM D5185m         136             Manganese         ppm         ASTM D5185m         <1             Magnesium         ppm         ASTM D5185m         646             Calcium         ppm         ASTM D5185m         1497             Phosphorus         ppm         ASTM D5185m         739             Zinc         ppm         ASTM D5185m         877             Sulfur         ppm         ASTM D5185m         2561             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >50         22             Potassium         ppm         ASTM D5185m         >20         7             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         "ASTM D7624<	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         136             Magnese         ppm         ASTM D5185m         <1             Magnesium         ppm         ASTM D5185m         646             Calcium         ppm         ASTM D5185m         1497             Phosphorus         ppm         ASTM D5185m         739             Zinc         ppm         ASTM D5185m         877             Sulfur         ppm         ASTM D5185m         2561             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         6             Sodium         ppm         ASTM D5185m         >50         22             Potassium         ppm         ASTM D5185m         >20         7             INFRA-RED         method         limit/base         current         history1         history2           Soot %         *ASTM D7844<	Boron	ppm	ASTM D5185m		396		
Manganese         ppm         ASTM D5185m         <1             Magnesium         ppm         ASTM D5185m         646             Calcium         ppm         ASTM D5185m         739             Phosphorus         ppm         ASTM D5185m         877             Zinc         ppm         ASTM D5185m         2561             Sulfur         ppm         ASTM D5185m         >25         6             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >50         22             Sodium         ppm         ASTM D5185m         >50         22             Potassium         ppm         ASTM D5185m         >20         7             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.2             S	Barium	ppm	ASTM D5185m		1		
Magnesium         ppm         ASTM D5185m         646             Calcium         ppm         ASTM D5185m         1497             Phosphorus         ppm         ASTM D5185m         739             Zinc         ppm         ASTM D5185m         877             Sulfur         ppm         ASTM D5185m         2561             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         6             Sodium         ppm         ASTM D5185m         >50         22             Potassium         ppm         ASTM D5185m         >20         7             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.2             Nitration         Abs/cm         *ASTM D7415         >30         22.6	Molybdenum	ppm	ASTM D5185m		136		
Calcium         ppm         ASTM D5185m         1497             Phosphorus         ppm         ASTM D5185m         739             Zinc         ppm         ASTM D5185m         877             Sulfur         ppm         ASTM D5185m         2561             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         6             Sodium         ppm         ASTM D5185m         >50         22             Potassium         ppm         ASTM D5185m         >20         7             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.2             Nitration         Abs/:nm         *ASTM D7415         >30         22.6             FLUID DEGRADATION         method         limit/base         current         history1         history2	Manganese	ppm	ASTM D5185m		<1		
Phosphorus         ppm         ASTM D5185m         739             Zinc         ppm         ASTM D5185m         877             Sulfur         ppm         ASTM D5185m         2561             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         6             Sodium         ppm         ASTM D5185m         >50         22             Potassium         ppm         ASTM D5185m         >20         7             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.2             Nitration         Abs/:mm         *ASTM D7624         >20         8.3             Sulfation         Abs/:nm         *ASTM D7415         >30         22.6             FLUID DEGRADATION         method         limit/base         current         history1	Magnesium	ppm	ASTM D5185m		646		
Zinc         ppm         ASTM D5185m         877             Sulfur         ppm         ASTM D5185m         2561             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         6             Sodium         ppm         ASTM D5185m         >50         22             Potassium         ppm         ASTM D5185m         >20         7             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.2             Nitration         Abs/.mm         *ASTM D7624         >20         8.3             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         18.8	Calcium	ppm	ASTM D5185m		1497		
Sulfur         ppm         ASTM D5185m         2561             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         6             Sodium         ppm         ASTM D5185m         >50         22             Potassium         ppm         ASTM D5185m         >20         7             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.2             Nitration         Abs/.mm         *ASTM D7624         >20         8.3             Sulfation         Abs/.1mm         *ASTM D7415         >30         22.6             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         18.8	Phosphorus	ppm	ASTM D5185m		739		
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         6             Sodium         ppm         ASTM D5185m         >50         22             Potassium         ppm         ASTM D5185m         >20         7             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.2             Nitration         Abs/cm         *ASTM D7624         >20         8.3             Sulfation         Abs/.1mm         *ASTM D7415         >30         22.6             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         18.8	Zinc	ppm	ASTM D5185m		877		
Silicon         ppm         ASTM D5185m         >25         6             Sodium         ppm         ASTM D5185m         >50         22             Potassium         ppm         ASTM D5185m         >20         7             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.2             Nitration         Abs/cm         *ASTM D7624         >20         8.3             Sulfation         Abs/.1mm         *ASTM D7415         >30         22.6             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         18.8	Sulfur	ppm	ASTM D5185m		2561		
Sodium         ppm         ASTM D5185m         >50         22             Potassium         ppm         ASTM D5185m         >20         7             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.2             Nitration         Abs/cm         *ASTM D7624         >20         8.3             Sulfation         Abs/.1mm         *ASTM D7415         >30         22.6             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         18.8	CONTAMINANTS		method	limit/base	current	history1	history2
Potassium         ppm         ASTM D5185m         >20         7             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.2             Nitration         Abs/cm         *ASTM D7624         >20         8.3             Sulfation         Abs/.1mm         *ASTM D7415         >30         22.6             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         18.8	Silicon	ppm	ASTM D5185m	>25	6		
INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.2             Nitration         Abs/cm         *ASTM D7624         >20         8.3             Sulfation         Abs/.1mm         *ASTM D7415         >30         22.6             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         18.8	Sodium	ppm	ASTM D5185m	>50	22		
Soot %         %         *ASTM D7844 >3         0.2             Nitration         Abs/cm         *ASTM D7624 >20         8.3             Sulfation         Abs/.1mm         *ASTM D7415 >30         22.6             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414 >25         18.8	Potassium	ppm	ASTM D5185m	>20	7		
Nitration         Abs/cm         *ASTM D7624         >20         8.3             Sulfation         Abs/.1mm         *ASTM D7415         >30         22.6             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         18.8	INFRA-RED		method	limit/base	current	history1	history2
Sulfation         Abs/.1mm         *ASTM D7415         >30         22.6             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         18.8	Soot %	%	*ASTM D7844	>3	0.2		
FLUID DEGRADATION method limit/base current history1 history2  Oxidation Abs/.1mm *ASTM D7414 >25 18.8	Nitration	Abs/cm	*ASTM D7624	>20	8.3		
Oxidation	Sulfation	Abs/.1mm	*ASTM D7415	>30	22.6		
	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
	Oxidation	Abs/.1mm	*ASTM D7414	>25	18.8		
	Base Number (BN)	mg KOH/g	ASTM D2896				



# **OIL ANALYSIS REPORT**







Certificate 12367

Laboratory Sample No.

: WC0905059 Lab Number : 06204158 Unique Number : 11071619 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 10 Jun 2024 **Tested** : 11 Jun 2024

Diagnosed : 11 Jun 2024 - Wes Davis

2.0 1.0 0.0

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

**DOLE FRESH FRUIT** 

PO BOX 1689

GULFPORT, MS

F: (228)867-2970

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)