

# **OIL ANALYSIS REPORT**

Sample Rating Trend



# Machine Id SZLG232248 Component

Diesel Engine Fluid CHEVRON 15W40 (--- QTS)

#### DIAGNOSIS

## 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 INFORM	<b>IATION</b>	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0905015		
Sample Date		Client Info		17 Apr 2024		
Machine Age	hrs	Client Info		2811		
Oil Age	hrs	Client Info		0		
Oil Changed		Client Info		Changed		
Sample Status				NORMAL		
CONTAMINATION	N	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0		
Water		WC Method	>0.2	NEG		
Glycol		WC Method	20.L	NEG		
-				-		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	8		
Chromium	ppm	ASTM D5185m	>20	1		
Nickel	ppm	ASTM D5185m	>4	0		
Titanium	ppm	ASTM D5185m		<1		
Silver	ppm	ASTM D5185m	>3	0		
Aluminum	ppm	ASTM D5185m	>20	4		
Lead	ppm	ASTM D5185m	>40	0		
Copper	ppm	ASTM D5185m	>330	1		
Tin	ppm	ASTM D5185m	>15	<1		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		<1		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		429		
Barium	ppm	ASTM D5185m		1		
Barium Molybdenum		ASTM D5185m ASTM D5185m		1 136		
	ppm			-		
Molybdenum	ppm ppm	ASTM D5185m		136		
Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m		136 <1		
Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m		136 <1 671		
Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		136 <1 671 1556		
Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		136 <1 671 1556 788	  	
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	limit/base	136 <1 671 1556 788 911	  	  
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	limit/base >25	136 <1 671 1556 788 911 2788	   	  
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	>25	136 <1 671 1556 788 911 2788 current	    history1	     history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>Method</b> ASTM D5185m	>25	136 <1 671 1556 788 911 2788 current 7	    history1	    history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	>25 >50	136 <1 671 1556 788 911 2788 current 7 52	    history1 	    history2 
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm 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	>25 >50 >20	136 <1 671 1556 788 911 2788 current 7 52 4	    history1  	     history2  
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	>25 >50 >20 limit/base	136 <1 671 1556 788 911 2788 current 7 52 4 current	    history1   history1	    history2   history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m ASTM D5185m	>25 >50 >20 limit/base >3	136 <1 671 1556 788 911 2788 current 7 52 4 current 0.1	    history1   history1  history1	    history2   history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	>25 >50 >20 limit/base >3 >20	136 <1 671 1556 788 911 2788 <u>current</u> 7 52 4 <u>current</u> 0.1 6.7	     history1   history1  history1	     history2   history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D51854 *ASTM D7844 *ASTM D7844	>25 >50 >20 limit/base >3 >20 >30 >30	136 <1 671 1556 788 911 2788 <u>current</u> 7 52 4 <u>current</u> 0.1 6.7 21.8	     history1  history1  history1	    history2   history2  history2



Base Number (mg KOH/g) 0.5 0.6 0.6 0.8

0.0 Apr17/24

18 <del>т</del> 17-Abnorm 16 (0-001) 14 Base

13

12 11 Apr17/24

Base 10.0

# **OIL ANALYSIS REPORT**

FT-IR (Direct Trend)	VISUAL		method	limit/base	current	history1	history2
Oxidation	White Metal	scalar	*Visual	NONE	NONE		
20	Yellow Metal		*Visual	NONE	NONE		
	Precipitate		*Visual	NONE	NONE		
20	Silt		*Visual	NONE	NONE		
15 -	Debris		*Visual	NONE	NONE		
10 -	Sand/Dirt		*Visual	NONE	NONE		
	Appearance		*Visual	NORML	NORML		
Apr17/24	Odor		*Visual	NORML			
4 4	Emulsified Water				NORML		
Base Number			*Visual	>0.2	NEG		
	Free Water		*Visual	1	NEG		
.0 -	FLUID PROPERTI			limit/base	current	history1	history2
	Visc @ 100°C	cSt	ASTM D445	14.4	13.1		
.0+	GRAPHS						
.0-	Ferrous Alloys						
	10 iron						
Apr17/24	8 -						
Apr	HICKEI						
Viscosity @ 100°C	6						
18 <sub>7</sub>	E dd 4						
Abnormal							
16-	2 -						
Base	0						
12	Apr17/24 -			7/24 -			
12 + -	Aprl			Apr17/24			
11	Non-ferrous Metals	5					
Apr17/24	10 copper						
Apr	second lead						
	ennesses tin						
	6						
	ш ц ц						
	2-						
	4pr17/24			4pr17/24			
	Aprl			Apr1			
	Viscosity @ 100°C Base Numb				Paco Number		
	18						
	17- Abnormal						
	16			(B)H	1		
	2015			9 g 6.0			
	0 15 Base 5 14			ber (n			
				(0, 8.0 (0, HOX) (0, HOX) (0, HOX) (0, 10 (0, 10) (0,			
	Abnormal			2.0·			
	12						
	114			-0.0	24		24 +
	Apr17/24			Apr17/24	Apr17/24		Apr17/24
	~4			4	-		4
	: WearCheck USA - 501	Madison	n Ave., Cary	, NC 27513		DOLE F	RESH FRUIT
ANAR Sample No.	: WC0905015	Receiv	<b>red</b> : 10	) Jun 2024		F	PO BOX 1689
Lab Number		Tested		Jun 2024		GU	LFPORT, MS
TESTING LABORATORY Unique Number		Diagno	osed :11	Jun 2024 - We			US 39502
Certificate L2367 Test Package To discuss this sample report,		ce at 1-80	0-237-1360	9	C	iordan iohnst	on@dole.com
* - Denotes test methods that a						jordan.jorinst	T:
Statements of conformity to specific terms of the sector o					ule (JCGM 106	<i>:2012)</i> F: (2	228)867-2970
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