

### **OIL ANALYSIS REPORT**

Sample Rating Trend



# Machine Id DFGS273193

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	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0905037		
Sample Date		Client Info		26 Mar 2024		
Machine Age	hrs	Client Info		10764		
Oil Age	hrs	Client Info		1500		
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		NEG		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	3		
Chromium	ppm	ASTM D5185m	>20	<1		
Nickel	ppm	ASTM D5185m ASTM D5185m	>4	0		
Titanium Silver	ppm		2	0		
	ppm	ASTM D5185m	>3 >20	0 4		
Aluminum Lead	ppm	ASTM D5185m ASTM D5185m	>20	4		
	ppm	ASTM D5185m	>330	0		
Copper Tin	ppm	ASTM D5185m	>330	۰ <1		
Vanadium	ppm ppm	ASTM D5185m	>15	0		
Vallaululli	ppm	ASTIVI DJIOJIII		U		
Cadmium	nnm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
Cadmium ADDITIVES	ppm	ASTM D5185m method	limit/base	0 current	 history1	 history2
	ppm ppm		limit/base			
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 411	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm	method ASTM D5185m ASTM D5185m	limit/base	current 411 0	history1 	history2 
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 411 0 135 <1 762	history1  	history2  
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	Current 411 0 135 <1 762 1650	history1   	history2   
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current           411           0           135           <1           762           1650           801	history1   	history2   
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current           411           0           135           <1           762           1650           801           933	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		current           411           0           135           <1           762           1650           801	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current         411         0         135         <1         762         1650         801         933         3078         current	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current         411         0         135         <1         762         1650         801         933         3078         current         5	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	limit/base >25 >50	current         411         0         135         <1         762         1650         801         933         3078         current         5         6	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	limit/base >25 >50 >20	current         411         0         135         <1         762         1650         801         933         3078         current         5         6         <1	history1 history1 history1	history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	limit/base >25 >50 >20 limit/base	current         411         0         135         <1         762         1650         801         933         3078         current         5         6         <1         current	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm	method           ASTM D5185m	limit/base >25 >50 >20 limit/base >3	current         411         0         135         <1         762         1650         801         933         3078         current         5         6         <1         current         0         0.1	history1 history1 history1	history2 history2 history2
ADDITIVES Boron Barium 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	method           ASTM D5185m	limit/base >25 >50 >20 limit/base >3 >20	current         411         0         135         <1         762         1650         801         933         3078         current         5         6         <1         current         0         0.1         6.2	history1 history1 history1 history1	history2 history2 history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm	method           ASTM D5185m	limit/base >25 >50 >20 limit/base >3	current         411         0         135         <1         762         1650         801         933         3078         current         5         6         <1         current         0         0.1	history1 history1 history1 history1	history2 history2 history2 history2
ADDITIVES Boron Barium 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	method           ASTM D5185m	limit/base >25 >50 >20 limit/base >3 >20	current         411         0         135         <1         762         1650         801         933         3078         current         5         6         <1         current         0         0.1         6.2	history1                              history1               history1            history1	history2   history2               history2
ADDITIVES Boron Barium 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	method           ASTM D5185m           ASTM D5185m	limit/base >25 >50 >20 limit/base >3 >20 >30 limit/base	current         411         0         135         <1         762         1650         801         933         3078         current         5         6         <1         current         0.1         6.2         23.0	history1  history1            history1	history2                              history2            history2               history2



10.0

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

0.0 Mar26/24

18 T 17-Abnor 16 (0-015 14 14 Base

13 Abnor 12

## **OIL ANALYSIS REPORT**

FT-IR (Direct Trend)	VISUAL		method	limit/base	current	history1	history2			
O Dividation	White Metal	scalar	*Visual	NONE	NONE					
annonnan Sulfation	Yellow Metal		*Visual	NONE	NONE					
3	Precipitate		*Visual	NONE	NONE					
	Silt		*Visual	NONE	NONE					
5										
0	Debris		*Visual	NONE	NONE					
5	Sand/Dirt		*Visual	NONE	NONE					
Mar26/24 Mar26/24	Appearance		*Visual	NORML	NORML					
Ma	Odor		*Visual	NORML	NORML					
Base Number	Emulsified Water	scalar	*Visual	>0.2	NEG					
0	Free Water	scalar	*Visual		NEG					
0	FLUID PROPERT	IES	method	limit/base	current	history1	history2			
0	Visc @ 100°C	cSt	ASTM D445	14.4	13.7					
0	GRAPHS									
0	Ferrous Alloys									
ol	10iron									
Mar26/24	8									
Ma	and nickel									
Viscosity @ 100°C	6- E									
<sup>8</sup> I	E 4									
7- Abnormal		_								
6	2									
Base										
4	3/24			3/24 -						
Abnormal	Mar26/24			Mar26/24						
	 Non-ferrous Metals	5								
6/24	<sup>10</sup> T									
Mar26/24	copper									
	° torsesses tin									
	6									
	b									
	4									
	2									
	04			24						
	iar26/24			lar26/24						
	≥ Missasih: @ 10000			M						
	Viscosity @ 100°C				Base Number	ımber				
	17		10.0							
	Abhomai			<u>,</u> 8.0 €						
	16-			KOH/{						
	0015 Base 5314			(0) HOX BUL DHOX BUL Jaquum N asse 888 2.0.0						
	ਲ੍ਹੋ 14-				1					
	13 Abnormal			ase N						
	12-			<u>2.0</u>						
	11			0.0-						
	: Mar26/24				Mar26/24 -		6/24 .			
	Marź			Mar26/24	Marú		Mar26/24			
Sample No. Lab Number Unique Number Certificate 12367 To discuss this sample report, * - Denotes test methods that d	: 10979491 : FLEET contact Customer Servid are outside of the ISO 17	Receiv Tested Diagno ce at 1-80 7025 scop	red : 15 I : 16 Dised : 16 D0-237-1369 Die of accred	5 Apr 2024 5 Apr 2024 Apr 2024 - We 9. iitation.	Co	F GU ontact: JORDAN jordan.johnsto	on@dole.com T:			
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