

OIL ANALYSIS REPORT

Sample Rating Trend







Machine Id 2312 Component Diesel Engine

CHEVRON 15W40 (--- GAL)

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Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

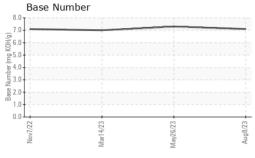
Fluid Condition

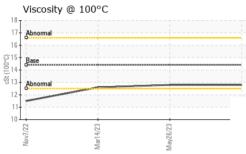
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION method limit/base current history1 history2		Nov2022 Mar2023 May2023 Aug2023					
Sample Date	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age mls Client Info 75143 56354 38499 Oil Age mls Client Info 0 0 0 Oil Changed Client Info Changed Changed Changed Sample Status Image: Control of Changed NoRMAL NORMAL NORMAL CONTAMINATION method limit/base current history1 history2 Fuel WC Method >3.0 <1.0 <1.0 <1.0 Glycol WC Method NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >90 13 15 22 Chromium ppm ASTM D5185m >90 13 15 22 Chromium ppm ASTM D5185m >20 2 2 3 Silver ppm ASTM D5185m >22 1 <1 <1 <1 Lead ppm <th>Sample Number</th> <th></th> <th>Client Info</th> <th></th> <th>WC0829020</th> <th>PCA0085449</th> <th>PCA0085467</th>	Sample Number		Client Info		WC0829020	PCA0085449	PCA0085467
Oil Age	Sample Date		Client Info		08 Aug 2023	26 May 2023	14 Mar 2023
Oil Changed Sample Status Client Info Changed NORMAL Changed NEG Change Ander NEG Change Ander NEG Change Ander NEG	Machine Age	mls	Client Info		75143	56354	38499
Sample Status	Oil Age	mls	Client Info		0	0	0
CONTAMINATION method limit/base current history1 history2 Fuel WC Method >3.0 <1.0 <1.0 <1.0 <1.0 Glycol WC Method NEG NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >90 13 15 22 Chromium ppm ASTM D5185m >20 2 2 3 Nickel ppm ASTM D5185m >2 <1 <1 0 <1 Siiver ppm ASTM D5185m >2 <1 <1 0 <1 <1 0 <1 <1 0 <1 <1 0 <1 <1 0 <1 <1 0 <1 <1 0 <1 <1 0 <1 <1 0 <1 <1 1 <1 <1 <1 <1 <1 <1	Oil Changed		Client Info		Changed	Changed	Changed
Fuel	Sample Status				NORMAL	NORMAL	NORMAL
WEAR METALS	CONTAMINATION	V	method	limit/base	current	history1	history2
WEAR METALS method limit/base current history2 Iron ppm ASTM D5185m >90 13 15 22 Nickel ppm ASTM D5185m >20 2 2 3 Nickel ppm ASTM D5185m >2 <1 <1 0 Titanium ppm ASTM D5185m >2 <1 <1 0 Aluminum ppm ASTM D5185m >2 <1 <1 0 Aluminum ppm ASTM D5185m >20 18 16 24 Lead ppm ASTM D5185m >20 1 1 1 Copper ppm ASTM D5185m 0 0 <1 1 <	Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Iron	Glycol		WC Method		NEG	NEG	NEG
Chromium ppm ASTM D5185m >20 2 2 3 Nickel ppm ASTM D5185m >2 <1 <1 0 Titanium ppm ASTM D5185m >2 0 0 <1 Silver ppm ASTM D5185m >2 <1 <1 0 Aluminum ppm ASTM D5185m >2 <1 <1 0 Aluminum ppm ASTM D5185m >40 2 3 2 Copper ppm ASTM D5185m >330 1 2 8 Tin ppm ASTM D5185m >15 1 <1 1 Vanadium ppm ASTM D5185m 0 <1 <1 <1 Cadmium ppm ASTM D5185m 183 212 181 Boron ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 120 121 106 <th>WEAR METALS</th> <th></th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>90	13	15	22
Titanium ppm ASTM D5185m >2 0 0 -1 Silver ppm ASTM D5185m >2 <1	Chromium	ppm	ASTM D5185m	>20	2	2	3
Silver	Nickel	ppm	ASTM D5185m	>2	<1	<1	0
Aluminum ppm ASTM D5185m >20 18 16 24 Lead ppm ASTM D5185m >40 2 3 2 Copper ppm ASTM D5185m >330 1 2 8 Tin ppm ASTM D5185m >15 1 <1 1 Vanadium ppm ASTM D5185m 0 <1 <1 <1 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 120 121 106 106 Manganese ppm ASTM D5185m 1531 1477 1477 Phosphorus ppm ASTM D5185m 1531 1477 1477 Phosphorus ppm ASTM D5185m 866 854 791 <	Titanium	ppm	ASTM D5185m	>2	0	0	<1
Lead ppm ASTM D5185m >40 2 3 2 Copper ppm ASTM D5185m >330 1 2 8 Tin ppm ASTM D5185m >15 1 <1	Silver	ppm	ASTM D5185m	>2	<1	<1	0
Copper ppm ASTM D5185m >330 1 2 8 Tin ppm ASTM D5185m >15 1 <1 1 Vanadium ppm ASTM D5185m 0 <1 <1 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 120 121 106 Manganese ppm ASTM D5185m 1 1 2 Magnesium ppm ASTM D5185m 663 657 624 Calcium ppm ASTM D5185m 708 725 653 Zinc ppm ASTM D5185m 3024 2954 2421 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25	Aluminum	ppm	ASTM D5185m	>20	18	16	24
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Vanadium ppm ASTM D5185m 0 <1	Copper	ppm	ASTM D5185m	>330	1	2	8
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Boron ppm ASTM D5185m 183 212 181 Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 120 121 106 Manganese ppm ASTM D5185m 1 1 2 Magnesium ppm ASTM D5185m 663 657 624 Calcium ppm ASTM D5185m 1531 1477 1477 Phosphorus ppm ASTM D5185m 708 725 653 Zinc ppm ASTM D5185m 866 854 791 Sulfur ppm ASTM D5185m 3024 2954 2421 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 9 10 14 Sodium ppm ASTM D5185m >20 2 2 2 2 Potassium ppm ASTM D5185m	Cadmium	ppm	ASTM D5185m		0	0	0
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Manganese ppm ASTM D5185m 1 1 2 Magnesium ppm ASTM D5185m 663 657 624 Calcium ppm ASTM D5185m 1531 1477 1477 Phosphorus ppm ASTM D5185m 708 725 653 Zinc ppm ASTM D5185m 866 854 791 Sulfur ppm ASTM D5185m 3024 2954 2421 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 9 10 14 Sodium ppm ASTM D5185m >50 2 2 2 Potassium ppm ASTM D5185m >20 35 39 67 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.2 0.2 0.3 Nitration	Barium	ppm	ASTM D5185m		0	0	0
Magnesium ppm ASTM D5185m 663 657 624 Calcium ppm ASTM D5185m 1531 1477 1477 Phosphorus ppm ASTM D5185m 708 725 653 Zinc ppm ASTM D5185m 866 854 791 Sulfur ppm ASTM D5185m 3024 2954 2421 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 9 10 14 Sodium ppm ASTM D5185m >50 2 2 2 Potassium ppm ASTM D5185m >20 35 39 67 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.2 0.2 0.3 Nitration Abs/cm *ASTM D7415 >30 24.2 24.7 24.0	Molybdenum	ppm	ASTM D5185m		120	121	106
Calcium ppm ASTM D5185m 1531 1477 1477 Phosphorus ppm ASTM D5185m 708 725 653 Zinc ppm ASTM D5185m 866 854 791 Sulfur ppm ASTM D5185m 3024 2954 2421 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 9 10 14 Sodium ppm ASTM D5185m >50 2 2 2 Potassium ppm ASTM D5185m >20 35 39 67 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.2 0.2 0.3 Nitration Abs/cm *ASTM D7415 >30 24.2 24.7 24.0 FLUID DEGRADATION method limit/base current history1 history2	Manganese	ppm	ASTM D5185m		1	1	_
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Sodium ppm ASTM D5185m >50 2 2 2 Potassium ppm ASTM D5185m >20 35 39 67 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.2 0.2 0.3 Nitration Abs/cm *ASTM D7624 >20 9.0 8.7 9.3 Sulfation Abs/.1mm *ASTM D7415 >30 24.2 24.7 24.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.4 19.8 19.5				limit/base	current	· ·	
Potassium ppm ASTM D5185m >20 35 39 67 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.2 0.2 0.3 Nitration Abs/cm *ASTM D7624 >20 9.0 8.7 9.3 Sulfation Abs/.1mm *ASTM D7415 >30 24.2 24.7 24.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.4 19.8 19.5							
INFRA-RED							
Soot % % *ASTM D7844 >6 0.2 0.2 0.3 Nitration Abs/cm *ASTM D7624 >20 9.0 8.7 9.3 Sulfation Abs/.1mm *ASTM D7415 >30 24.2 24.7 24.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.4 19.8 19.5		ppm	ASTM D5185m	>20	35	39	67
Nitration Abs/cm *ASTM D7624 >20 9.0 8.7 9.3 Sulfation Abs/.1mm *ASTM D7415 >30 24.2 24.7 24.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.4 19.8 19.5	INFRA-RED			limit/base		history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 24.2 24.7 24.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 19.4 19.8 19.5							
FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.1mm*ASTM D7414>2519.419.819.5							
Oxidation Abs/.1mm *ASTM D7414 >25 19.4 19.8 19.5	Sulfation	Abs/.1mm	*ASTM D7415	>30	24.2	24.7	24.0
	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 7.1 7.3 7.0	Oxidation	Abs/.1mm	*ASTM D7414	>25	19.4	19.8	19.5
	Base Number (BN)	mg KOH/g	ASTM D2896		7.1	7.3	7.0



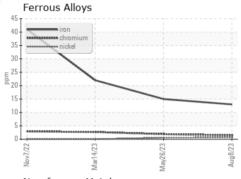
OIL ANALYSIS REPORT

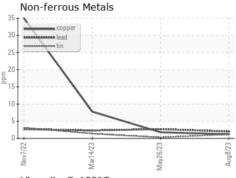


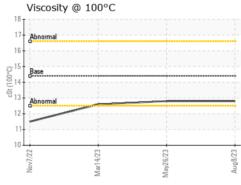


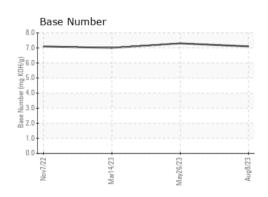
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

FLUID PROPER	IIIES	metnoa	ilmit/base	current	nistory i	nistory2
Visc @ 100°C	cSt	ASTM D445	14.4	12.8	12.8	12.6













Certificate L2367

Laboratory Sample No.

Lab Number Unique Number : 10602664 Test Package : FLEET

: WC0829020 : 05922717

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 11 Aug 2023 Diagnosed

: 13 Aug 2023 Diagnostician : Wes Davis

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)

Ergon Trucking Inc. - MAG601

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F: