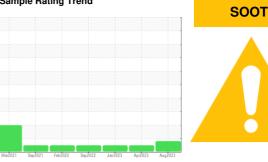


OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id 0-4

Component **Diesel Engine**

CHEVRON DELO 400 MULTIGRADE 15W40 (--- GAL)

DIAGNOSIS

Recommendation

We recommend that you drain the oil from the component if this has not already been done. Please specify the component make and model with your next sample.

Wear

All component wear rates are normal.

Contamination

Light concentration of carbon/soot present in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

Sample Number Client Info WC0819759 WC0756106 WC0756076 Sample Date Client Info 02 Aug 2023 25 Apr 2023 05 Jan 2023 05 J	(GAL)		Mar2021	Sep2021 Feb2022	Sep2022 Jan2023 Apr2023	Aug2023	
Client Info	SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Machine Age mls Client Info 111825 102085 97181 Dil Age mls Client Info 7500 5000 7500 Dil Changed Client Info N/A N/A N/A N/A Sample Status Nethod Nethod Nethod Nethod Nethod Nethod Nethod 1.0 <1.0	Sample Number		Client Info		WC0819759	WC0756106	WC0756076
Dil Age	Sample Date		Client Info		02 Aug 2023	25 Apr 2023	05 Jan 2023
Client Info	Machine Age	mls	Client Info		_		97181
Client Info	Oil Age	mls	Client Info		7500	5000	7500
CONTAMINATION method limit/base current history1 history2	-		Client Info		N/A	N/A	N/A
Well WC Method S5 C1.0 C1.	Sample Status				ABNORMAL	NORMAL	NORMAL
WEAR METALS	CONTAMINATION	l	method	limit/base	current	history1	history2
WEAR METALS method limit/base current history1 history2 ron ppm ASTM D5185m >100 84 25 62 Chromium ppm ASTM D5185m >20 3 1 2 Nickel ppm ASTM D5185m >20 3 1 2 Silver ppm ASTM D5185m >3 <1	-uel		WC Method	>5	<1.0	<1.0	<1.0
Pron	Glycol		WC Method		NEG	NEG	NEG
Chromium	WEAR METALS		method	limit/base	current	history1	history2
Strickel	ron	ppm	ASTM D5185m	>100	84	25	62
Silver	Chromium	ppm	ASTM D5185m	>20	3	1	2
Silver	Nickel	ppm	ASTM D5185m	>4	<1	0	0
Aluminum ppm ASTM D5185m >20 5 4 5 Lead ppm ASTM D5185m >40 10 0 5 Copper ppm ASTM D5185m >330 2 0 3 Tin ppm ASTM D5185m >15 <1 0 <1 Ocadmium ppm ASTM D5185m >15 <1 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 151 234 314 254 Barium ppm ASTM D5185m 0.4 0 0 0 0 Molybdenum ppm ASTM D5185m 151 234 117 128 Manganese ppm ASTM D5185m 1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <	Titanium	ppm	ASTM D5185m		<1	0	0
Lead ppm ASTM D5185m >40 10 0 5 Copper ppm ASTM D5185m >330 2 0 3 Fin ppm ASTM D5185m >15 <1 0 <1 Alamadium ppm ASTM D5185m <1 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0.4 0 0 0 ABarium ppm ASTM D5185m 0.4 0 0 0 Adanganese ppm ASTM D5185m 0 662 640 655 Calcium ppm ASTM D5185m 0 662 640 655 Calcium ppm ASTM D5185m 0 697 737 710 Zinc ppm ASTM D5185m 943 853 864 </td <td>Silver</td> <td>ppm</td> <td>ASTM D5185m</td> <td>>3</td> <td><1</td> <td><1</td> <td><1</td>	Silver	ppm	ASTM D5185m	>3	<1	<1	<1
Description	Aluminum	ppm	ASTM D5185m	>20	5	4	5
Act	_ead	ppm	ASTM D5185m	>40	10	0	5
Ast	Copper	ppm	ASTM D5185m	>330	2	0	3
Anadium ppm ASTM D5185m <1 0 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 151 234 314 254 Barium ppm ASTM D5185m 0.4 0 0 0 Molybdenum ppm ASTM D5185m 250 124 117 128 Manganese ppm ASTM D5185m 0 662 640 655 Calcium ppm ASTM D5185m 0 662 640 655 Calcium ppm ASTM D5185m 1043 697 737 710 Zinc ppm ASTM D5185m 943 853 864 880 Sulfur ppm ASTM D5185m >012 2842 2890 2978 CONTAMINANTS method limit/base current history1		ppm	ASTM D5185m	>15	<1	0	<1
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 151 234 314 254 Barium ppm ASTM D5185m 0.4 0 0 0 Molybdenum ppm ASTM D5185m 250 124 117 128 Manganese ppm ASTM D5185m 0 662 640 655 Calcium ppm ASTM D5185m 2046 1635 1492 1636 Phosphorus ppm ASTM D5185m 943 853 864 880 Potasium ppm ASTM D5185m 943 853 864 880 Sulfur ppm ASTM D5185m >212 2842 2890 2978 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20	/anadium		ASTM D5185m		<1	0	0
Soron ppm ASTM D5185m 151 234 314 254	Cadmium		ASTM D5185m			0	0
Barium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 250 124 117 128 Manganese ppm ASTM D5185m 0 662 640 655 Calcium ppm ASTM D5185m 0 662 640 655 Calcium ppm ASTM D5185m 2046 1635 1492 1636 Phosphorus ppm ASTM D5185m 1043 697 737 710 Zinc ppm ASTM D5185m 943 853 864 880 Sulfur ppm ASTM D5185m 5012 2842 2890 2978 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 10 7 13 Godium ppm ASTM D5185m 3 <1 <1 Potassium ppm ASTM D5185m 3 1 <1 Goot % *ASTM D7844 >3 3 1 <t< td=""><td>Boron</td><td>ppm</td><td>ASTM D5185m</td><td>151</td><td>234</td><td>314</td><td>254</td></t<>	Boron	ppm	ASTM D5185m	151	234	314	254
Manganese ppm ASTM D5185m 1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <td>Barium</td> <td>ppm</td> <td>ASTM D5185m</td> <td>0.4</td> <td>0</td> <td>0</td> <td>0</td>	Barium	ppm	ASTM D5185m	0.4	0	0	0
Magnesium ppm ASTM D5185m 0 662 640 655 Calcium ppm ASTM D5185m 2046 1635 1492 1636 Phosphorus ppm ASTM D5185m 1043 697 737 710 Zinc ppm ASTM D5185m 943 853 864 880 Sulfur ppm ASTM D5185m 5012 2842 2890 2978 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 10 7 13 Sodium ppm ASTM D5185m >20 2 0 0 INFRA-RED method limit/base current history1 history2 Sout % *ASTM D7844 >3 3 1 1.6 Witration Abs/cm *ASTM D70415 >30 27.1 21.8 24.8 FLUID DEGRADATION method limit/base </td <td>Molybdenum</td> <td>ppm</td> <td>ASTM D5185m</td> <td>250</td> <td>124</td> <td>117</td> <td>128</td>	Molybdenum	ppm	ASTM D5185m	250	124	117	128
Magnesium ppm ASTM D5185m 0 662 640 655 Calcium ppm ASTM D5185m 2046 1635 1492 1636 Phosphorus ppm ASTM D5185m 1043 697 737 710 Zinc ppm ASTM D5185m 943 853 864 880 Sulfur ppm ASTM D5185m 5012 2842 2890 2978 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 10 7 13 Sodium ppm ASTM D5185m >20 2 0 0 INFRA-RED method limit/base current history1 history2 Sout % *ASTM D7844 >3 3 1 1.6 Witration Abs/cm *ASTM D70415 >30 27.1 21.8 24.8 FLUID DEGRADATION method limit/base </td <td>Manganese</td> <td>ppm</td> <td>ASTM D5185m</td> <td></td> <td>1</td> <td><1</td> <td><1</td>	Manganese	ppm	ASTM D5185m		1	<1	<1
Calcium ppm ASTM D5185m 2046 1635 1492 1636 Phosphorus ppm ASTM D5185m 1043 697 737 710 Zinc ppm ASTM D5185m 943 853 864 880 Sulfur ppm ASTM D5185m 5012 2842 2890 2978 CONTAMINANTS method limit/base current history1 history2 Solicon ppm ASTM D5185m >25 10 7 13 Solium ppm ASTM D5185m 3 <1 <1 <1 Potassium ppm ASTM D5185m >20 2 0 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 3 1 1.6 Witration Abs/cm *ASTM D7845 >30 27.1 21.8 24.8 FLUID DEGRADATION method limit/base <td>-</td> <td></td> <td></td> <td>0</td> <td>662</td> <td>640</td> <td>655</td>	-			0	662	640	655
Phosphorus ppm ASTM D5185m 1043 697 737 710 Zinc ppm ASTM D5185m 943 853 864 880 Sulfur ppm ASTM D5185m 5012 2842 2890 2978 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 10 7 13 Sodium ppm ASTM D5185m >25 10 7 13 Potassium ppm ASTM D5185m >20 2 0 0 INFRA-RED method limit/base current history1 history2 Goot % *ASTM D7844 >3 3 1 1.6 Julfation Abs/cm *ASTM D7415 >30 27.1 21.8 24.8 FLUID DEGRADATION method limit/base current history1 history2 Dxidation Abs/:1mm *ASTM D7414 >25			ASTM D5185m	2046	1635	1492	1636
Zinc ppm ASTM D5185m 943 853 864 880 Sulfur ppm ASTM D5185m 5012 2842 2890 2978 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 10 7 13 Sodium ppm ASTM D5185m 3 <1 <1 <1 Potassium ppm ASTM D5185m >20 2 0 0 INFRA-RED method limit/base current history1 history2 Goot % % *ASTM D7844 >3 3 1 1.6 Nitration Abs/cm *ASTM D7624 >20 10.1 7.2 9.2 Sulfation Abs/.1mm *ASTM D7415 >30 27.1 21.8 24.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
Sulfur ppm ASTM D5185m 5012 2842 2890 2978 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 10 7 13 Sodium ppm ASTM D5185m 3 <1							
Solition ppm ASTM D5185m >25 10 7 13							
Sodium ppm ASTM D5185m 3 <1 <1 Potassium ppm ASTM D5185m >20 2 0 0 INFRA-RED method limit/base current history1 history2 Soot % *ASTM D7844 >3 3 1 1.6 Nitration Abs/cm *ASTM D7624 >20 10.1 7.2 9.2 Sulfation Abs/.1mm *ASTM D7415 >30 27.1 21.8 24.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.3 15.1 16.9	CONTAMINANTS		method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 2 0 0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 3 1 1.6 Nitration Abs/cm *ASTM D7624 >20 10.1 7.2 9.2 Sulfation Abs/.1mm *ASTM D7415 >30 27.1 21.8 24.8 FLUID DEGRADATION method limit/base current history1 history2 Dxidation Abs/.1mm *ASTM D7414 >25 17.3 15.1 16.9	Silicon	ppm	ASTM D5185m	>25	10	7	13
INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 ▲ 3 1 1.6 Nitration Abs/cm *ASTM D7624 >20 10.1 7.2 9.2 Sulfation Abs/.1mm *ASTM D7415 >30 27.1 21.8 24.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.3 15.1 16.9	Sodium	ppm	ASTM D5185m		3	<1	<1
Soot % % *ASTM D7844 >3 3 1 1.6 Nitration Abs/cm *ASTM D7624 >20 10.1 7.2 9.2 Sulfation Abs/.1mm *ASTM D7415 >30 27.1 21.8 24.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.3 15.1 16.9	Potassium	ppm	ASTM D5185m	>20	2	0	0
Nitration Abs/cm *ASTM D7624 >20 10.1 7.2 9.2 Sulfation Abs/.1mm *ASTM D7415 >30 27.1 21.8 24.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.3 15.1 16.9	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 27.1 21.8 24.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.3 15.1 16.9	Soot %	%	*ASTM D7844	>3	△ 3	1	1.6
FLUID DEGRADATION method limit/base current history1 history2 Dxidation Abs/.1mm *ASTM D7414 >25 17.3 15.1 16.9	Nitration	Abs/cm	*ASTM D7624	>20	10.1	7.2	9.2
Dxidation Abs/.1mm *ASTM D7414 >25 17.3 15.1 16.9	Sulfation	Abs/.1mm					24.8
	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
	Oxidation	Abs/.1mm	*ASTM D7414	>25	17.3	15.1	16.9
	Base Number (BN)	mg KOH/a	ASTM D2896	12.5			8.46



OIL ANALYSIS REPORT







Certificate L2367

Laboratory Sample No. Lab Number

Unique Number

Test Package

: WC0819759 : 05926839 : 10606786 : MOB 2

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 16 Aug 2023

Diagnosed : 18 Aug 2023 : Wes Davis Diagnostician

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)

ALLEGHENY DISPOSAL LLC

PO BOX 4 GREEN BANK, WV

US 24944 Contact: SERVICE MANAGER

meckmechanic@frontier.com

T: (304)456-4541 F: (304)456-4540

Contact/Location: SERVICE MANAGER - ALLGRELF