



# OIL ANALYSIS REPORT

WEAR	<b>ABNORMAL</b>
CONTAMINATION	<b>ABNORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**JLG8042 F9681 (S/N 0160049681)**

Component  
**Diesel Engine**

Fluid  
**CHEVRON DELO 400 MULTIGRADE 15W40 (8 QTS)**

## RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. ( Customer Sample Comment: CUSTOMER REQUESTS ID CHANGE TO. F 9681 )

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0857794</b>	WC0705474	WC0610201
Sample Date		Client Info		<b>19 Apr 2024</b>	25 Jun 2022	13 Sep 2021
Machine Age	hrs	Client Info		<b>0</b>	4139	3692
Oil Age	hrs	Client Info		<b>0</b>	1249	802
Filter Age	hrs	Client Info		<b>0</b>	447	522
Oil Changed		Client Info		<b>Changed</b>	Not Changd	Not Changd
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

## WEAR

Cylinder, crank, or cam shaft wear is indicated.

Iron	ppm	ASTM D5185m	>100	<b>▲ 234</b>	▲ 154	▲ 106
Chromium	ppm	ASTM D5185m	>20	<b>13</b>	6	4
Nickel	ppm	ASTM D5185m	>4	<b>2</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m	>20	<b>● 6</b>	3	3
Lead	ppm	ASTM D5185m	>40	<b>23</b>	14	10
Copper	ppm	ASTM D5185m	>330	<b>38</b>	25	15
Tin	ppm	ASTM D5185m	>15	<b>2</b>	2	1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

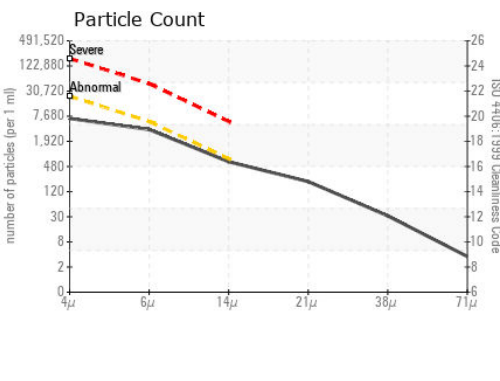
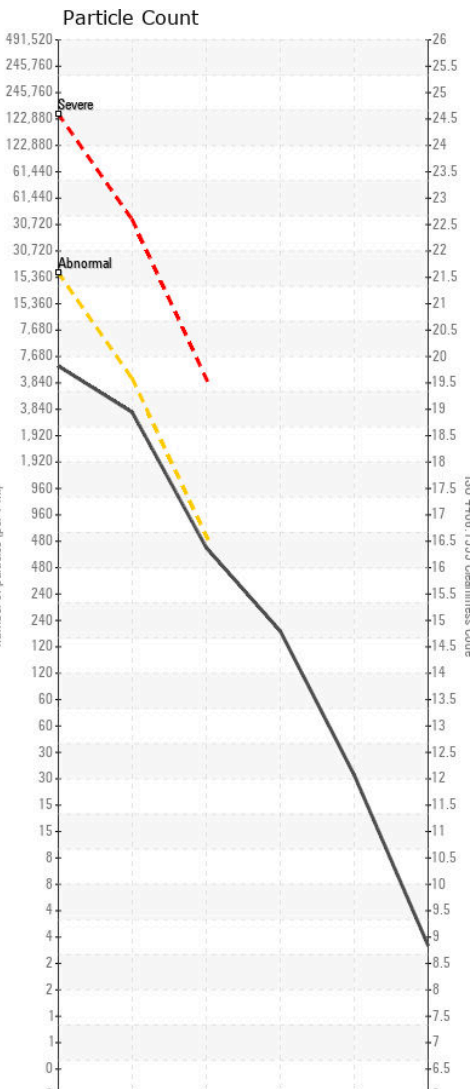
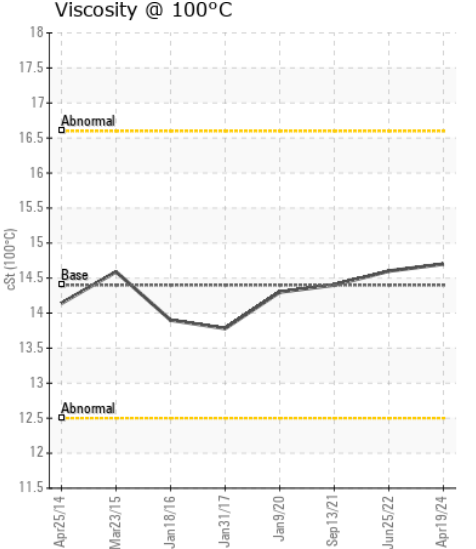
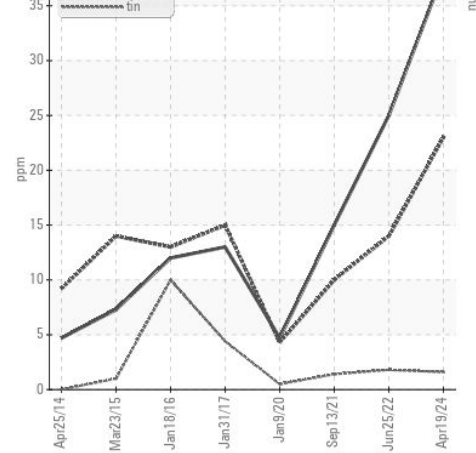
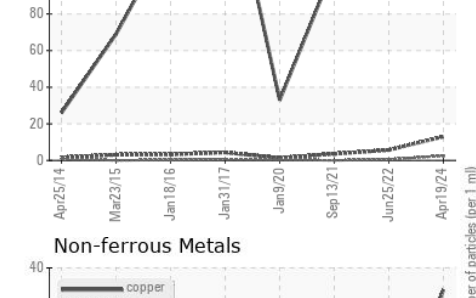
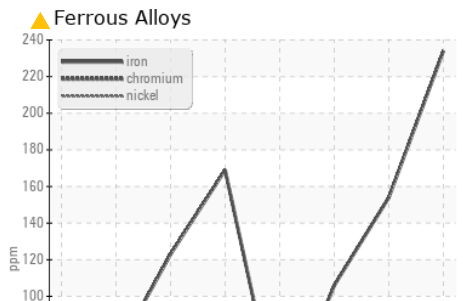
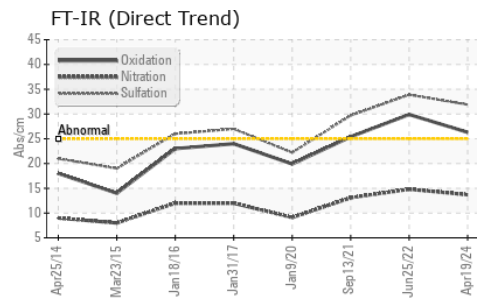
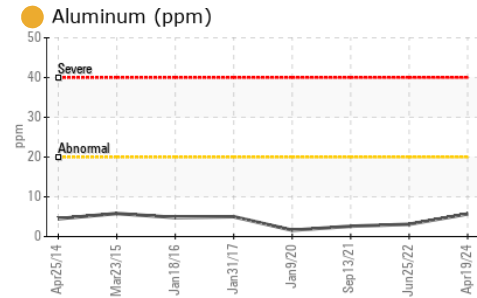
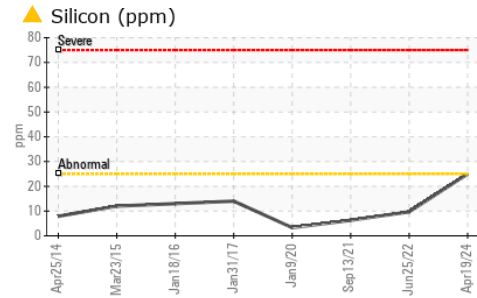
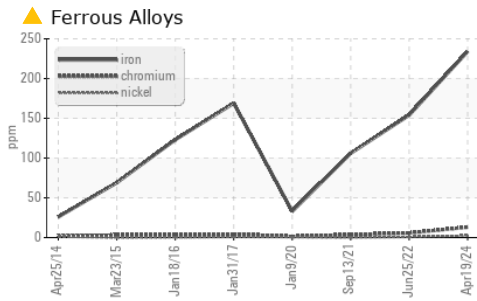
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>25	<b>▲ 25</b>	10	6
Potassium	ppm	ASTM D5185m	>20	<b>6</b>	4	3
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>1.1</b>	1.1	0.9
Nitration	Abs/cm	*ASTM D7624	>20	<b>13.7</b>	14.8	13.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>31.9</b>	33.9	29.7
Particles >4µm		ASTM D7647	>20000	<b>5907</b>	5311	2275
Particles >6µm		ASTM D7647	>5000	<b>3218</b>	2893	1239
Particles >14µm		ASTM D7647	>640	<b>548</b>	492	211
Particles >21µm		ASTM D7647	>160	<b>184</b>	166	71
Particles >38µm		ASTM D7647	>40	<b>28</b>	26	11
Particles >71µm		ASTM D7647	>10	<b>3</b>	3	1
Oil Cleanliness		ISO 4406 (c)	>21/19/16	<b>20/19/16</b>	20/19/16	18/17/15
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

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

Sodium	ppm	ASTM D5185m		<b>6</b>	5	3
Boron	ppm	ASTM D5185m	151	<b>16</b>	22	17
Barium	ppm	ASTM D5185m	0.4	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m	250	<b>7</b>	2	2
Manganese	ppm	ASTM D5185m		<b>3</b>	2	1
Magnesium	ppm	ASTM D5185m	0	<b>101</b>	19	17
Calcium	ppm	ASTM D5185m	2046	<b>2038</b>	2134	2235
Phosphorus	ppm	ASTM D5185m	1043	<b>1035</b>	908	989
Zinc	ppm	ASTM D5185m	943	<b>1174</b>	1156	1184
Sulfur	ppm	ASTM D5185m	5012	<b>4561</b>	4899	3694
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>26.3</b>	29.9	25.4
Base Number (BN)	mg KOH/g	ASTM D2896	12.5	<b>4.57</b>	▲ 3.25	4.37
Visc @ 100°C	cSt	ASTM D445	14.4	<b>14.7</b>	14.6	14.4



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0857794 **Received** : 23 Apr 2024  
**Lab Number** : 06158483 **Tested** : 25 Apr 2024  
**Unique Number** : 10993906 **Diagnosed** : 25 Apr 2024 - Jonathan Hester  
**Test Package** : MOB 2 ( Additional Tests: PrtCount )

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Certificate L2367  
 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)