



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Area  
**QC Engine**  
 Machine Id  
**QC230725MOB2**  
 Component  
**Diesel Engine**  
 Fluid  
**DIESEL ENGINE OIL SAE 40 (--- GAL)**

## RECOMMENDATION

We advise that you check for the source of the coolant leak. We recommend that you drain the oil from the component if this has not already been done. We advise that you flush the component thoroughly before re-filling with oil. We recommend you service the filters on this component. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0902247</b>	WC0902246	WC0902245
Sample Date		Client Info		<b>22 Feb 2024</b>	21 Feb 2024	20 Feb 2024
Machine Age	hrs	Client Info		<b>0</b>	0	0
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>SEVERE</b>	ABNORMAL	ABNORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	<b>20</b>	19	20
Chromium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m)		<b>2</b>	2	2
Silver	ppm	ASTM D5185(m)	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>4</b>	5	5
Lead	ppm	ASTM D5185(m)	>40	<b>2</b>	2	2
Copper	ppm	ASTM D5185(m)	>330	<b>9</b>	9	9
Tin	ppm	ASTM D5185(m)	>15	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

## CONTAMINATION

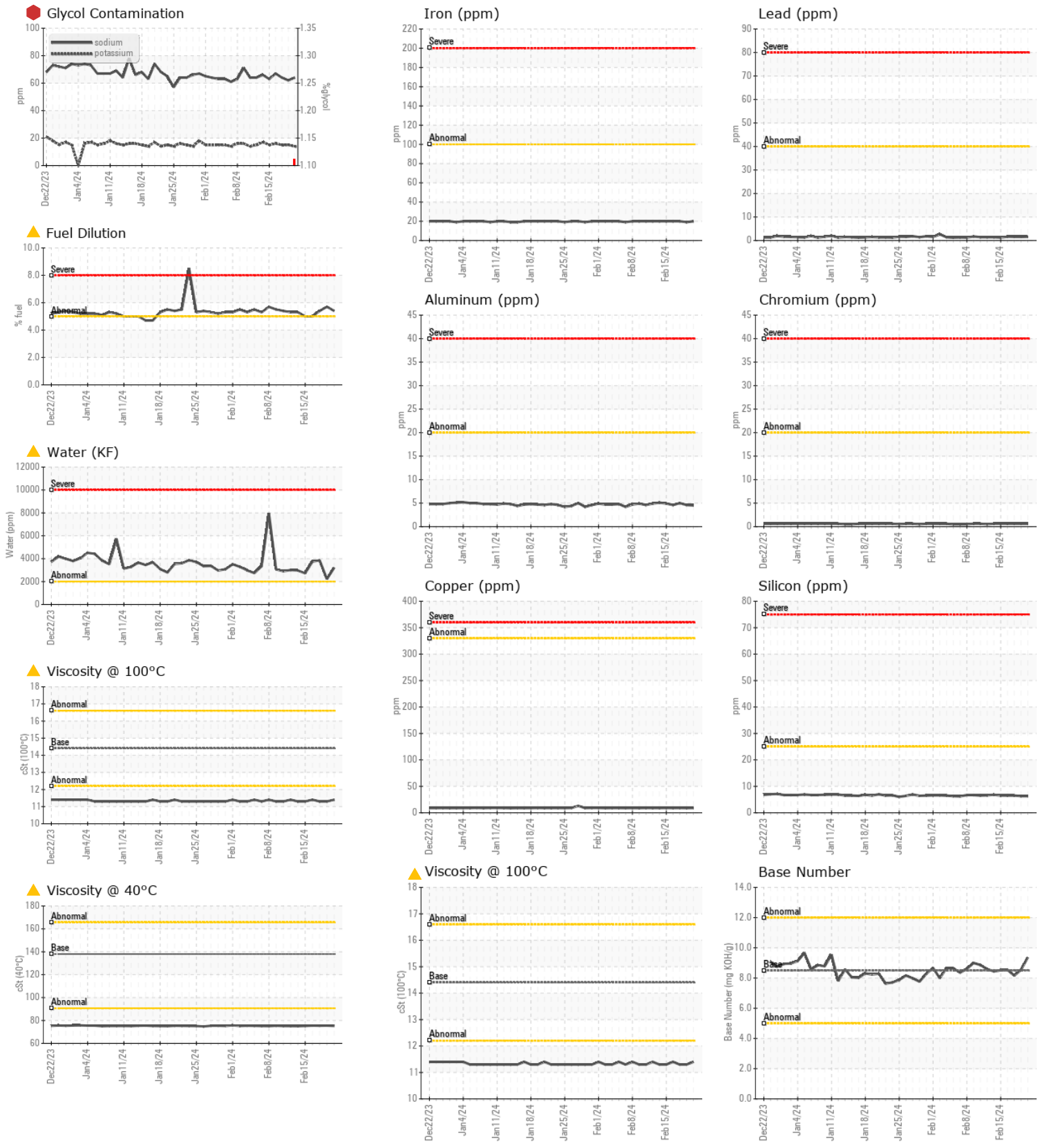
Test for glycol is positive. There is a moderate amount of fuel present in the oil. There is a high concentration of glycol present in the oil. There is a light concentration of water present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185(m)	>25	<b>6</b>	6	6
Potassium	ppm	ASTM D5185(m)	>20	<b>▲ 14</b>	▲ 15	▲ 15
Fuel	%	ASTM D7593*	>5	<b>▲ 5.4</b>	▲ 5.7	▲ 5.4
Water	%	ASTM D6304*	>0.2	<b>▲ 0.320</b>	▲ 0.221	▲ 0.385
ppm Water	ppm	ASTM D6304*	>2000	<b>▲ 3208</b>	▲ 2219	▲ 3854
Glycol	%	ASTM D7922*		<b>◆ 1.111</b>	NEG	NEG
Soot %	%	ASTM D7844*	>3	<b>0.3</b>	0.3	0.3
Nitration	Abs/cm	ASTM D7624*	>20	<b>10.1</b>	10.0	10.1
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>20.6</b>	20.5	21.1
Emulsified Water	scalar	Visual*	>0.2	<b>▲ .5%</b>	▲ .5%	▲ .2%

## 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.

Sodium	ppm	ASTM D5185(m)	>216	<b>▲ 64</b>	▲ 62	▲ 64
Boron	ppm	ASTM D5185(m)	250	<b>29</b>	29	30
Barium	ppm	ASTM D5185(m)	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	100	<b>47</b>	46	47
Manganese	ppm	ASTM D5185(m)		<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m)	450	<b>617</b>	605	614
Calcium	ppm	ASTM D5185(m)	3000	<b>1502</b>	1469	1503
Phosphorus	ppm	ASTM D5185(m)	1150	<b>874</b>	869	880
Zinc	ppm	ASTM D5185(m)	1350	<b>1012</b>	995	1008
Sulfur	ppm	ASTM D5185(m)	4250	<b>2772</b>	2734	2803
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>16.4</b>	16.2	16.5
Base Number (BN)	mg KOH/g	ASTM D2896*	8.5	<b>9.36</b>	8.54	8.16
Visc @ 40°C	cSt	ASTM D7279(m)	138	<b>▲ 75.2</b>	▲ 75.5	▲ 75.4
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	<b>▲ 11.4</b>	▲ 11.3	▲ 11.3
Viscosity Index (VI)	Scale	ASTM D2270*	102	<b>143</b>	140	141



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0902247  
**Lab Number** : 02617392  
**Unique Number** : 5734502  
**Test Package** : MOB 2 ( Additional Tests: Glycol, KF, KV40, PercentFuel, VI )

**Received** : 22 Feb 2024  
**Tested** : 26 Feb 2024  
**Diagnosed** : 26 Feb 2024 - Kevin Marson

**WearCheck Quality Control Sample Results**

Burlington, ON  
CA

Contact: Dorian Anderson  
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To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.