# **PROBLEM SUMMARY**

### Machine Id TLLG 100172 Component

Diesel Engine Fluid NOT GIVEN (--- GAL)

### COMPONENT CONDITION SUMMARY







### RECOMMENDATION

We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

PROBLEMATIC TEST RESULTS								
Sample Status				SEVERE	ABNORMAL	NORMAL		
Fuel	%	ASTM D3524	>5	<b>e</b> 27.9	<b>3</b> .4	<1.0		
Visc @ 100°C	cSt	ASTM D445		<b>•</b> 7.6	12.4	13.17		

Customer Id: DOLWIL Sample No.: WC0814788 Lab Number: 05880145 Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data: Wes Davis +1 905-569-8600 x223 wesd@wearcheck.ca

*To change component or sample information:* Customer Service +1 1-800-237-1369 <u>customerservice@wearcheck.com</u>

RECOMMENDED ACTIONS							
Action	Status	Date	Done By	Description			
Resample			?	We recommend an early resample to monitor this condition.			
Information Required			?	Please specify the brand, type, and viscosity of the oil on your next sample. Please specify the component make and model with your next sample.			
Check Fuel/injector System			?	We advise that you check the fuel injection system.			

### HISTORICAL DIAGNOSIS



09 Mar 2022 Diag: Don Baldridge

No corrective action is recommended at this time. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.All component wear rates are normal. Light fuel dilution occurring. 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.



### 11 Mar 2019 Diag: Wes Davis



Resample at the next service interval to monitor. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.





## **OIL ANALYSIS REPORT**

Sample Rating Trend



Machine Id **TLLG 100172** Component **Diesel Engine** Fluid

### NOT GIVEN (--- GAL)

### DIAGNOSIS

### Recommendation

We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

#### Wear

All component wear rates are normal.

#### Contamination

There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

### Fluid Condition

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

SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0814788	WC0668824	WC0313311
Sample Date		Client Info		20 Jun 2023	09 Mar 2022	11 Mar 2019
Machine Age	hrs	Client Info		5852	4338	5182
Oil Age	hrs	Client Info		5852	0	0
Oil Changed		Client Info		Changed	N/A	N/A
Sample Status				SEVERE	ABNORMAL	NORMAL
CONTAMINATION	N	method	limit/base	current	history1	history2
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	12	9	10
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	0	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	4	3	4
Lead	ppm	ASTM D5185m	>40	<1	<1	0
Copper	ppm	ASTM D5185m	>330	<1	6	5
Tin	ppm	ASTM D5185m	>15	<1	<1	0
Antimony	ppm	ASTM D5185m				0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	Method ASTM D5185m	limit/base	current 218	history1 301	history2 71
ADDITIVES Boron Barium	ppm ppm	Method ASTM D5185m ASTM D5185m	limit/base	current 218 0	history1 301 0	history2 71 0
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	Method ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 218 0 61	history1 301 0 84	71 0 27
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	218 0 61 <1	history1 301 0 84 <1	71 71 0 27 1
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 218 0 61 <1 412	history1 301 0 84 <1 426	history2 71 0 27 1 129
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	Current 218 0 61 <1 412 1004	history1 301 0 84 <1 426 1618	history2 71 0 27 1 129 2160
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 218 0 61 <1 412 1004 763	history1 301 0 84 <1 426 1618 873	history2 71 0 27 1 129 2160 758
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	Current 218 0 61 <1 412 1004 763 939	history1 301 0 84 <1 426 1618 873 1076	history2 71 0 27 1 129 2160 758 987
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           218           0           61           <1           412           1004           763           939           2892	history1 301 0 84 <1 426 1618 873 1076 2741	history2 71 0 27 1 129 2160 758 987 2762
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	limit/base	Current 218 0 61 <1 412 1004 763 939 2892 Current	history1 301 0 84 <1 426 1618 873 1076 2741 history1	history2 71 0 27 1 129 2160 758 987 2762 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	limit/base	current           218           0           61           <1           412           1004           763           939           2892           current           5	history1         301         0         84         <1         426         1618         873         1076         2741         history1         4	history2 71 0 27 1 129 2160 758 987 2762 history2 4
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 ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current           218           0           61           <1           412           1004           763           939           2892           current           5           3	history1         301         0         84         <1         426         1618         873         1076         2741         history1         4         7	history2 71 0 27 1 129 2160 758 987 2762 history2 4 0
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 ASTM D5185m	limit/base	current           218           0           61           <1           412           1004           763           939           2892           current           5           3           5	history1         301         0         84         <1         426         1618         873         1076         2741         history1         4         7         0	history2         71         0         27         1         129         2160         758         987         2762         history2         4         0         0         0         0         0         0
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	limit/base >25 >20 >5	Current 218 0 61 <1 412 1004 763 939 2892 Current 5 3 5 5 27.9	history1 301 0 84 <1 426 1618 873 1076 2741 history1 4 7 0 ▲ 3.4	history2         71         0         27         1         129         2160         758         987         2762         history2         4         0         0         0         0         0         0         <1.0
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	limit/base	current         218         0         61         <1         412         1004         763         939         2892         current         5         3         5         3         5         3         5         27.9	history1         301         0         84         <1         426         1618         873         1076         2741         history1         4         7         0         ▲ 3.4	history2         71         0         27         1         129         2160         758         987         2762         history2         4         0         0         <<1.0         history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm 1 ppm 2 ppm 2 ppm 2 ppm 2 ppm 2 ppm 2 ppm 2 ppm 2 ppm 2 ppm 3 ppm 3 ppm 3 ppm 3 ppm 4 ppm 4 ppm 3 ppm 4 ppm 4	method           ASTM D5185m	limit/base >25 >20 >5 limit/base >3	Current 218 0 61 <1 412 1004 763 939 2892 Current 5 3 5 27.9 Current 0.1	history1 301 0 84 <1 426 1618 873 1076 2741 history1 4 7 0 ▲ 3.4 history1 0.2	history2         71         0         27         1         129         2160         758         987         2762         history2         4         0         0         <1.0         history2         0.1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	limit/base >25 >20 >5 limit/base >3 >20	Current 218 0 61 <1 412 1004 763 939 2892 Current 5 3 5 27.9 Current 0.1 7.0	history1 301 0 84 <1 426 1618 873 1076 2741 history1 4 7 0 ▲ 3.4 history1 0.2 8.0	history2         71         0         27         1         129         2160         758         987         2762         history2         4         0         0         0         0         0.1         6.4
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	Imit/base Imit/base Imit/base Selection Imit/base Selection Imit/base Selection Imit/base Selection Select	Current 218 0 61 <1 412 1004 763 939 2892 Current 5 3 5 27.9 Current 0.1 7.0 18.6	history1 301 0 84 <1 426 1618 873 1076 2741 <b>history1</b> 4 7 0 ▲ 3.4 <b>history1</b> 0.2 8.0 27.7	history2         71         0         27         1         129         2160         758         987         2762         history2         4         0         0         <         1.0         history2         0.1         6.4         17
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	limit/base >25 >20 >5 limit/base >3 >20 >30 limit/base	current         218         0         61         <1         412         1004         763         939         2892         current         5         3         5         27.9         current         0.1         7.0         18.6	history1 301 0 84 <1 426 1618 873 1076 2741 <b>history1</b> 4 7 0 ▲ 3.4 <b>history1</b> 0.2 8.0 27.7 <b>history1</b>	history2         71         0         27         1         129         2160         758         987         2762         history2         4         0         0            4         0         0            history2         0         0.1         6.4         17         history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA Oxidation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m           *ASTM D7844           *ASTM D7415           method           *ASTM D7414	limit/base >25 >20 >5 limit/base >3 >20 >30 limit/base >25	Current         218         0         61         <1         412         1004         763         939         2892         current         5         3         5         27.9         current         0.1         7.0         18.6         current         13.8	history1 301 0 84 <1 426 1618 873 1076 2741 <b>history1</b> 4 7 0 ▲ 3.4 <b>history1</b> 0.2 8.0 27.7 <b>history1</b>	history2         71         0         27         1         129         2160         758         987         2762         history2         4         0         0            4         0         0            history2         4         0         0.1         6.4         17         history2         11.9



# **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
	20/23	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
	Jun	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
C		Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
	1	Free Water	scalar	*Visual		NEG	NEG	NEG
		FLUID PROPERT	IES	method	limit/base	current	history1	history2
		Visc @ 100°C	cSt	ASTM D445	I	7.6	12.4	13.17
		GRAPHS						
		Ferrous Alloys						
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		16			7.0	0-		
		14			( <sup>B</sup> / <sub>H</sub> 6.0	D <b>-</b>		
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		Mari	Ma		Juní	Mari	Ma	Jun2
	Laboratorv	: WearCheck USA - 5	i01 Madi	son Ave Ca	ry, NC 2751:	3	DOLE	FRESH FRUIT
	Sample No.	: WC0814788	Receive	d :21.	Jun 2023	PO BOX 725	5, ATTN: MAINTEN	ANCE AND REPAIR
	Lab Number	: 05880145	Diagnos	ed : 23	Jun 2023		NEV	V CASTLE, DE
	Unique Number	: 10525248		tician : We	s Davis		Contact	
To discuss this	sample report	contact Customer Servi	ce at 1-8	300-237-1369	ercentruer) ).		uis.lanie	erre@dole.com
* - Denotes tes	st methods that a	are outside of the ISO 1	7025 scc	pe of accred	litation.		T:	(302)652-6344
Statements of c	conformity to spec	cifications are based on th	ne simple	acceptance of	decision rule (	(JCGM 106:2012)	F:	(302)652-6061

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Contact/Location: LUIS LAPIERRE - DOLWIL