

Component Diesel Engine Fluid DIESEL ENGINE OIL SAE 30 (--- GAL)

COMPONENT CONDITION SUMMARY

FUEL

Sample Rating Trend

Fuel Dilution 9.0 Severe 8.0 7.0 6.0 Abnormal ja 5.0 <sup>2</sup>4.0 3.0 2.0 1.0 0.0 Jun29/23 Mar14/20 Aug6/21

### RECOMMENDATION

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) DIESEL ENGINE OIL SAE 30. Please confirm.

PROBLEMATIC TEST RESULTS								
Sample Status				ABNORMAL	NORMAL	NORMAL		
Fuel	%	ASTM D3524	>5	<b>A</b> 7.6	<1.0	<1.0		

Customer Id: IDETAMFL Sample No.: IL05900949 Lab Number: 05900949 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 customerservice@wearcheck.com

RECOMMENDED ACTIONS							
Action	Status	Date	Done By	Description			
Change Fluid			?	We recommend that you drain the oil from the component if this has not already been done.			
Resample			?	We recommend an early resample to monitor this condition.			
Alert			?	The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) DIESEL ENGINE OIL SAE 30. Please confirm.			
Information Required			?	The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) DIESEL ENGINE OIL SAE 30. Please confirm.			

## HISTORICAL DIAGNOSIS



23 Jul 2022 Diag: Don Baldridge

Resample at the next service interval to monitor.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.





01 Feb 2022 Diag: Doug Bogart



Resample at the next service interval to monitor.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.

## 06 Aug 2021 Diag: Jonathan Hester

### NORMAL



Resample at the next service interval to monitor.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

FUEL

SAMPLE INFORM	<b>IATION</b>	method	limit/base	current	history1	history2
Sample Number		Client Info		IL05900949	IL05609992	IL05465813
Sample Date		Client Info		29 Jun 2023	23 Jul 2022	01 Feb 2022
Machine Age	mls	Client Info		307090	219530	182918
Oil Age	mls	Client Info		40000	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	NORMAL	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	23	25	33
Chromium	ppm	ASTM D5185m	>20	2	2	2
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	6	5	5
Lead	ppm	ASTM D5185m	>40	0	13	12
Copper	ppm	ASTM D5185m	>330	2	1	2
Tin	ppm	ASTM D5185m	>15	<1	2	1
Antimony	ppm	ASTM D5185m				<1
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	116	18	18
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum		ASTM D5185m	100	75		
	ppm	ASTIVI DOTODIII	100	75	65	78
Manganese	ppm ppm	ASTM D5185m	100	75 <1	65 <1	78 <1
0			450			
Manganese Magnesium Calcium	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm ppm	ASTM D5185m ASTM D5185m	450	<1 499	<1 767	<1 827
Magnesium Calcium Phosphorus	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	450 3000	<1 499 1325	<1 767 1270	<1 827 1330
Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	450 3000 1150	<1 499 1325 866	<1 767 1270 688	<1 827 1330 764
Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	450 3000 1150 1350	<1 499 1325 866 1074	<1 767 1270 688 895	<1 827 1330 764 991 2262
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	450 3000 1150 1350 4250 limit/base	<1 499 1325 866 1074 3261	<1 767 1270 688 895 2423	<1 827 1330 764 991 2262
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	450 3000 1150 1350 4250 limit/base >25	<1 499 1325 866 1074 3261 current	<1 767 1270 688 895 2423 history1	<1 827 1330 764 991 2262 history2
Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	450 3000 1150 1350 4250 limit/base >25	<1 499 1325 866 1074 3261 current 7	<1 767 1270 688 895 2423 history1 6	<1 827 1330 764 991 2262 history2 6
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	450 3000 1150 1350 4250 limit/base >25 >75 >20	<1 499 1325 866 1074 3261 current 7 3	<1 767 1270 688 895 2423 history1 6 3	<1 827 1330 764 991 2262 history2 6 3
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	450 3000 1150 1350 4250 limit/base >25 >75 >20	<1 499 1325 866 1074 3261 <u>current</u> 7 3 8	<1 767 1270 688 895 2423 history1 6 3 0	<1 827 1330 764 991 2262 history2 6 3 7 <1.0
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D3524	450 3000 1150 1350 4250 limit/base >25 >75 >20 >5	<1 499 1325 866 1074 3261  current 7 3 8  ∧ 7.6	<1 767 1270 688 895 2423 history1 6 3 0 <1.0	<1 827 1330 764 991 2262 history2 6 3 7 <1.0
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm %	ASTM D5185m ASTM D3524	450 3000 1150 1350 4250 <b>limit/base</b> >25 >75 >20 >5 <b>limit/base</b>	<1 499 1325 866 1074 3261 current 7 3 8 ₹ 7.6 current	<1 767 1270 688 895 2423 history1 6 3 0 <1.0 history1	<1 827 1330 764 991 2262 6 3 7 <1.0 history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm %	ASTM D5185m ASTM D51854	450 3000 1150 1350 4250 imit/base >25 >75 >20 >5 imit/base >3	<1 499 1325 866 1074 3261 current 7 3 8 ▲ 7.6 current 0.3	<1 767 1270 688 895 2423 history1 6 3 0 <1.0 history1 0.6	<1 827 1330 764 991 2262 history2 6 3 7 <1.0 history2 0.6
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D3524 <b>method</b> *ASTM D7844 *ASTM D7624	450 3000 1150 1350 4250 ilmit/base >25 >75 >20 >5 limit/base >3 >20	<1 499 1325 866 1074 3261 Current 7 3 8  7 3 8  7.6 Current 0.3 9.1	<1 767 1270 688 895 2423 history1 6 3 0 <1.0 kistory1 0.6 14.1	<1 827 1330 764 991 2262 6 3 7 <1.0 history2 0.6 13.9 28.2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm %	ASTM D5185m ASTM D3524 *ASTM D7844 *ASTM D7624	450 3000 1150 1350 4250 <b>limit/base</b> >25 >75 >20 >5 <b>limit/base</b> >3 >20 >30	<1 499 1325 866 1074 3261 current 7 3 8 7 7 3 8 7.6 current 0.3 9.1 22.2	<1 767 1270 688 895 2423 history1 6 3 0 <1.0 <1.0 history1 0.6 14.1 28.2	<1 <ul> <li>&lt;1</li> <li>827</li> <li>1330</li> <li>764</li> <li>991</li> <li>2262</li> <li>history2</li> <li>6</li> <li>3</li> <li>7</li> <li>&lt;1.0</li> <li>history2</li> <li>0.6</li> <li>13.9</li> </ul>

# INTERNATIONAL 8016780

Diesel Engine Fluid DIESEL ENGINE OIL SAE 30 (--- GAL)

### DIAGNOSIS

### Recommendation

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) DIESEL ENGINE OIL SAE 30. Please confirm.

### Wear

All component wear rates are normal.

### Contamination

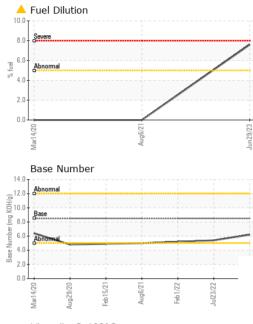
There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

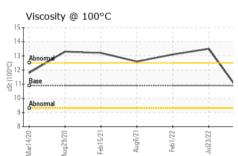
### Fluid Condition

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

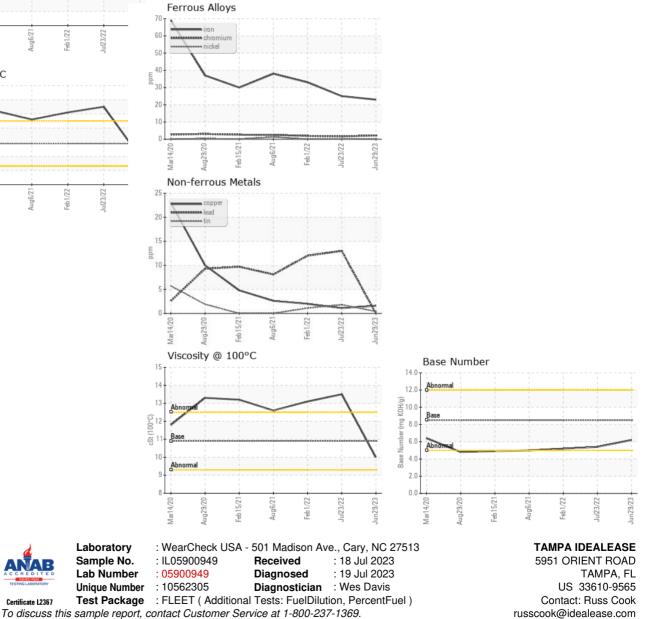


# **OIL ANALYSIS REPORT**





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 PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	10.9	10.0	13.5	13.1
GRAPHS						



\* - 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)

Certificate L2367

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