

## **OIL ANALYSIS REPORT**

#### Sample Rating Trend





### DIESEL ENGINE OIL SAE 15W40 (--- GAL)

#### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

#### Wear

All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

#### Fluid Condition

The condition of the oil is acceptable for the time in service.

			Mar2023	Dec2023		
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PC0078488	PC0071775	
Sample Date		Client Info		27 Dec 2023	03 Mar 2023	
Machine Age	hrs	Client Info		96456	93314	
Oil Age	hrs	Client Info		5000	2000	
Oil Changed		Client Info		Not Changd	Not Changd	
Sample Status				NORMAL	NORMAL	
CONTAMINATI	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	
Water		WC Method	>0.2	NEG	NEG	
Glycol		WC Method		NEG	NEG	
WEAR METALS	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	20	6	
Chromium	ppm	ASTM D5185(m)	>20	<1	<1	
Nickel	ppm	ASTM D5185(m)	>4	<1	<1	
Titanium	ppm	ASTM D5185(m)		0	<1	
Silver	ppm	ASTM D5185(m)	>3	0	0	
Aluminum	ppm	ASTM D5185(m)	>20	4	2	
Lead	ppm	ASTM D5185(m)	>40	1	<1	
Copper	ppm	ASTM D5185(m)	>330	1	<1	
Tin	ppm	ASTM D5185(m)	>15	0	0	
Antimony	ppm	ASTM D5185(m)		0	0	
Vanadium	ppm	ASTM D5185(m)		0	0	
Beryllium	ppm	ASTM D5185(m)		0	0	
Cadmium	ppm	ASTM D5185(m)		0	0	
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	250	<1	1	
Barium	ppm	ASTM D5185(m)	10	0	0	
Molybdenum	ppm	ASTM D5185(m)	100	56	57	
Manganese	ppm	ASTM D5185(m)		0	<1	
Magnesium	ppm	ASTM D5185(m)	450	937	968	
Calcium	ppm	ASTM D5185(m)	3000	1017	1074	
Phosphorus	ppm	ASTM D5185(m)	1150	984	1076	
Zinc	ppm	ASTM D5185(m)	1350	1144	1180	
Sulfur	ppm	ASTM D5185(m)	4250	2662	2699	
Lithium	ppm	ASTM D5185(m)		<1	<1	
CONTAMINAN	TS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	3	3	
Sodium	ppm	ASTM D5185(m)	>158	2	2	
Potassium	ppm	ASTM D5185(m)	>20	2	0	
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	0.1	0	
Nitration	Abs/cm	ASTM D7624*	>20	5.9	5.0	
Sulfation	Abs/.1mm	ASTM D7415*	>30	19.0	18.9	



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7414* >25 hod limit/ * >0.2 * hod limit/ 279(m) 115 279(m) 14.4 2270* 126 	NE NE base c 101 13. 135	G NEG G NEG urrent history 1 104 9 14.1 9 137	
* >0.2 * limit/ 279(m) 115 279(m) 14.4 2270* 126	NE base c 101 13. 135 60 60 60 60 60 60 80 80 80 80 80 80 80 80 80 80 80 80 80	G NEG G NEG urrent history 1 104 9 14.1 9 137	 1 history2 
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2270* 126	138	9 137 I (ppm)	
	Leac 80 60 40 20	l (ppm)	
Dec21/23	80 - Severe 60 - Abnor 20 - 0		
Dec27/23 -	80 - Severe 60 - Abnor 20 - 0		
Dec21723	60 40 20		
Dec27/23	40 - Abnon 20 -	mal	
Dec21/23	20	mai	
Dec27/23	0		
Dec27/23 +	0 Var3/23		
Dec2	Jai		- 17/23
	~		Dec27/23
	50 T	omium (ppm)	
-	40 - Severe		
	= <sup>30</sup>		
-	a. 20 - Abnon	mal	
	10		
23	3		
Dec27/	Mar3,		Dec27/23
	80 Severe		
	60 -		
	8 40 - Abnor		
	20-		
	ol		
ec21/2:	Mar3/2		Dec27/23
Ω		%	
	6.0 Severe		
	4.0		
	53.0 - Abnon	mal	
	2.0-		
	0.0		
27/23	ar3/23		Dec27/23
	: 18 Jan 202 : 18 Jan 202	Burlington, ON L7L 5H : 18 Jan 2024 : Wes Davis	Burlington, ON L7L 5H9 Burlington, ON L7L 5H9 HAM Solution HAM MECHANICAL DIV., 17 Kessel Mechanical Div., 17 Kessel Kessel Mechanical Div., 17 Kessel Ke

Contact/Location: Jenny-Lynn Pellegrino - HAMCENHAM