

## **OIL ANALYSIS REPORT**

Sample Rating Trend



### Machine Id HINO 367293

Diesel Engine Fluid DIESEL ENGINE OIL SAE 15W40 (--- GAL)

#### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) DIESEL ENGINE OIL SAE 15W40. Please confirm.

#### 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.

SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0683835		
Sample Date		Client Info		29 May 2024		
	kms	Client Info		289203		
0	kms	Client Info		0		
Oil Changed		Client Info		N/A		
Sample Status				NORMAL		
CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0		
Water		WC Method	>0.2	NEG		
Glycol		WC Method		NEG		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	22		
Chromium	ppm	ASTM D5185(m)	>20	<1		
Nickel	ppm	ASTM D5185(m)	>4	<1		
Titanium	ppm	ASTM D5185(m)		0		
Silver	ppm	ASTM D5185(m)	>3	0		
Aluminum	ppm	ASTM D5185(m)	>20	4		
Lead	ppm	ASTM D5185(m)	>40	3		
Copper	ppm	ASTM D5185(m)	>330	3		
Tin	ppm	ASTM D5185(m)	>15	0		
Antimony	ppm	ASTM D5185(m)		0		
Vanadium	ppm	ASTM D5185(m)		0		
Beryllium	ppm	ASTM D5185(m)		0		
Cadmium	ppm	ASTM D5185(m)		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	250	30		
Barium	ppm	ASTM D5185(m)	10	0		
Molybdenum	ppm	ASTM D5185(m)	100	88		
Manganese	ppm	ASTM D5185(m)		<1		
Magnesium	ppm	ASTM D5185(m)	450	200		
Calcium	ppm	ASTM D5185(m)	3000	2016		
Phosphorus	ppm	ASTM D5185(m)	1150	990		
Zinc	ppm	ASTM D5185(m)	1350	1201		
	ppm	ASTM D5185(m)	4250	3040		
Lithium	ppm	ASTM D5185(m)		<1		
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	5		
Sodium	ppm	ASTM D5185(m)	>158	3		
Potassium	ppm	ASTM D5185(m)	>20	3		
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	1.1		
Nitration	Abs/cm	ASTM D7624*	>20	13.5		
Sulfation	Abs/.1mm	ASTM D7415*	>30	24.1		



Abnormal

35

31

25/cm 20/20

15 10 \$C/6C/20W

140 Abnormal

130 -120 - B (0-0+) 110 - -

> 90 Abnorma 80 +7/62/keV

90 Abnorm 80 +72/62/kel/

140 Abnormal 130 -120 Base 0 110 -

FT-IR (Direct Trend)

Oxidation

Nitration Sulfation

Viscosity @ 40°C

Viscosity @ 40°C

# **OIL ANALYSIS REPORT**

11 A	FLUID DEGRADA	TION	method	limit/bas	е	current	history1	history
	Oxidation	Abs/.1mm	ASTM D7414*	>25		21.7		
	VISUAL		method	limit/bas	е	current	history1	history
	White Metal	scalar	Visual*	NONE		VLITE		
	Yellow Metal	scalar	Visual*	NONE		NONE		
	Precipitate	scalar	Visual*	NONE		NONE		
	Silt	scalar	Visual*	NONE		NONE		
	Debris	scalar	Visual*	NONE		NONE		
	Sand/Dirt	scalar	Visual*	NONE		NONE		
	Appearance	scalar	Visual*	NORML		NORML		
	Odor	scalar	Visual*	NORML		NORML		
	Emulsified Water	scalar	Visual*	>0.2		NEG		
	Free Water	scalar	Visual*			NEG		
	FLUID PROPERT	IES	method	limit/bas	е	current	history1	history
	Visc @ 40°C	cSt	ASTM D7279(m)	115		111		
	Visc @ 100°C	cSt	ASTM D7279(m)			14.6		
	Viscosity Index (VI)	Scale	ASTM D2270*	126		134		
	GRAPHS							
	Iron (ppm)					Lead (ppm)		
30	°⊤,				<sup>100</sup> T	Severe		
20 ۲	0 - Severe			E	50			
ud 10	0 - Abnormal			đ	50-	Abnormal		
				_	٥L			
	May29/24			9/24	100	.9/24		
	May2			May29/24	1	May 29/24		
	Aluminum (ppm)				(	Chromium (pj	pm)	
6	°T :				<sup>60</sup> T			
4 ج	0 - Severe				40-	Severe		
udd 2	Abnormal				20	Abnormal		
	-			9/24 -	~	9/24		
	May29/24			May29/24	0.00	May29/24		
	Copper (ppm)			_		Silicon (ppm)		
40						Severe		
30 E	0 - 7				60-			
법 20					튭 40 -	Abnormal		
10					20-			
				9/24	LO Ž	9/24		
	May29/24			May29/24	00.00	May 29/24		
	– Viscosity @ 100°C			8		 Soot %		
1					6.0-	Severe		
(j)	6 - Base		· · · · · · · · · · · · · ·			Abnormal		
cSt (100°C)	4 Abnormal			Soot	e4.0 -			
°31	2							
-	044			- 724 -	<u>ل</u> 0.0	/24		
1	/24			6	00	May 29/24		
1	May29/24			May29/24	_	Jay		

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.

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CALA

ISO 17025:2017 Accredited Laboratory

Contact/Location: Tania Henriques - BRI183MIS

tania.henriques@britanniafleet.ca

T: (905)670-4545

F: (905)670-9036