

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id **I4590** Component **Diesel Engine** Fluid **{not provided} (--- QTS)**

DIAGNOSIS

Recommendation

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.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		IL0035561	IL0012564	
Sample Date		Client Info		15 May 2024	04 Mar 2020	
Machine Age	mls	Client Info		0	8597	
Oil Age	mls	Client Info		0	8597	
Oil Changed		Client Info		N/A	Changed	
Sample Status				NORMAL	ABNORMAL	
CONTAMINATION	۷	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		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	19	45	
Chromium	ppm	ASTM D5185m	>20	<1	1	
Nickel	ppm	ASTM D5185m	>4	0	<1	
Titanium	ppm	ASTM D5185m		0	<1	
Silver	ppm	ASTM D5185m	>3	<1	0	
Aluminum	ppm	ASTM D5185m	>20	17	17	
Lead	ppm	ASTM D5185m	>40	0	0	
Copper	ppm	ASTM D5185m	>330	1	14	
Tin	ppm	ASTM D5185m	>15	0	0	
Antimony	ppm	ASTM D5185m			0	
Vanadium	ppm	ASTM D5185m		<1	0	
Cadmium	ppm	ASTM D5185m		0	0	
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		100	54	
Barium	ppm	ASTM D5185m		0	6	
Molybdenum	ppm	ASTM D5185m		117	46	
Manganese	ppm	ASTM D5185m		0	7	
Magnesium	ppm	ASTM D5185m		692	719	
Calcium	ppm	ASTM D5185m		1223	1718	
Phosphorus	ppm	ASTM D5185m		771	1091	
Zinc	ppm	ASTM D5185m		905	1218	
Sulfur	ppm	ASTM D5185m		3610	2530	
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	6	29	
Sodium	ppm	ASTM D5185m		3	6	
Potassium	ppm	ASTM D5185m	>20	19	60	
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.3	0.3	
Nitration	Abs/cm	*ASTM D7624	>20	9.4	8.4	
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.6	20.6	
FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.4	16.8	
Base Number (BN)	mg KOH/g	ASTM D2896		6.7	9.7	
2:43:15) Bev: 1			Co	ntact/Location: I		PON LAKEAL

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30

25 4ps/cm 20

10

10.0

(mg KOH/g)

Base Number 5.0

> > 12

Mar4/20 -

Abnormal

Mar4/20

Base Number

Viscosity @ 100°C

FT-IR (Direct Trend)

Oxidation

Nitration

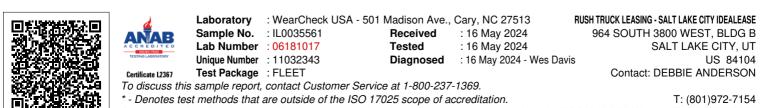
OIL ANALYSIS REPORT

White Metal scalar *Visual NONE NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE NONE Precipitate 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
Debris scalar *Visual NONE NONE NONE
Sand/Dirt scalar "Visual NONE NONE NONE
Appearance scalar *Visual NORML NORML NORML Odor scalar *Visual NORML NORML NORML Emulsified Water scalar *Visual >0.2 NEG NEG Free Water scalar *Visual NORML NEG NEG Free Water scalar *Visual NEG NEG Visc @ 100°C cst ASTM D445 12.9 13.4 GRAPHS Ferrous Alloys
Odor scalar 'Visual NORML NORML NORML Emulsified Water scalar 'Visual >0.2 NEG NEG Free Water scalar 'Visual NEG NEG Visc @ 100°C cSt ASTM D445 12.9 13.4 GRAPHS Ferrous Alloys
Emulsified Water scalar *Visual >0.2 NEG NEG Free Water scalar *Visual NEG NEG Free Water scalar *Visual NEG NEG Fee Water scalar *Visual NEG NEG Visc @ 100°C cSt ASTM D445 12.9 13.4 CRAPHS Ferrous Alloys Non-ferrous Metals Viscosity @ 100°C Base Number
Free Water scalar *Visual NEG NEG
FLUID PROPERTIES method limit/base current history1 Visc @ 100°C cSt ASTM D445 12.9 13.4
Visc @ 100°C cSt ASTM D445 12.9 13.4
Ferrous Alloys
Ferrous Alloys
Non-ferrous Metals Viscosity @ 100°C Base Number
Non-ferrous Metals Viscosity @ 100°C Noscilla (100°C) Market Market M
Non-ferrous Metals Viscosity @ 100°C Base Number
Non-ferrous Metals Viscosity @ 100°C Market Market M
Non-ferrous Metals Viscosity @ 100°C Base Number
Non-ferrous Metals Viscosity @ 100°C Base Number
Non-ferrous Metals Viscosity @ 100°C Base Number
Non-ferrous Metals
Viscosity @ 100°C Base Number
Viscosity @ 100°C Base Number
Viscosity @ 100°C Base Number
Viscosity @ 100°C Base Number
17 Abnormal
Q 15- 00- 00- 00- 00- 00- 00- 00- 00- 00- 0

0.0

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Mar4/20

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

6:2012) F: (801)977-9381

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Contact/Location: DEBBIE ANDERSON - LAKSAL

May15/24