

OIL ANALYSIS REPORT

Sample Rating Trend





Machine Id **Rent513** Component

Diesel Engine

DIESEL ENGINE OIL SAE 40 (--- GAL)

DIAGNOSIS Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Fluid

Wear

All component wear rates are normal.

Contamination

Test for glycol is negative. There is no indication of any contamination in the oil.

Fluid Condition

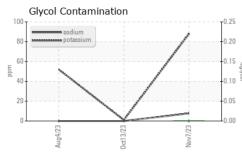
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

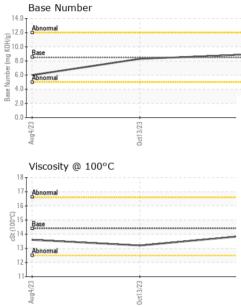
· · ·			22023	Oct2023 Nov20		
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0089974	GFL0080514	GFL0080583
Sample Date		Client Info		07 Nov 2023	13 Oct 2023	04 Aug 2023
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	ABNORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
WEAR METAL	.S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>80	6	4	9 8
Chromium	ppm	ASTM D5185m	>5	<1	0	2
Nickel	ppm	ASTM D5185m	>2	0	<1	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>30	4	0	25
Lead	ppm	ASTM D5185m	>30	0	<1	0
Copper	ppm	ASTM D5185m	>150	1	<1	16
Tin	ppm	ASTM D5185m	>5	0	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	5	25	1
Barium	ppm	ASTM D5185m	10	0	2	0
Molybdenum	ppm	ASTM D5185m	100	57	57	62
Manganese	ppm	ASTM D5185m		0	<1	1
Magnesium	ppm	ASTM D5185m	450	981	763	904
Calcium	ppm	ASTM D5185m	3000	1090	967	1118
Phosphorus	ppm	ASTM D5185m	1150	1027	882	986
Zinc	ppm	ASTM D5185m	1350	1298	1002	1212
Sulfur	ppm	ASTM D5185m	4250	3150	2686	2570
CONTAMINAN	ITS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	3	3	11
Sodium	ppm	ASTM D5185m		8	0	0
Potassium	ppm	ASTM D5185m	>20	88	1	52
Glycol	%	*ASTM D2982		0.0	NEG	NEG
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.2	0.4	1.2
Nitration	Abs/cm	*ASTM D7624		5.4	4.7	12.8
Sulfation	Abs/.1mm	*ASTM D7024		5.4 17.8	16.4	25.0
FLUID DEGRA	DAT <u>ION</u>		limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.7	11.1	24.1
Base Number (BN)		ASTM D7414 ASTM D2896			8.3	6.0
Dase Number (DN)	mg KOH/g	ASTIVI D2090	0.0	8.9	0.0	0.0



OIL ANALYSIS REPORT

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0.20			method	limit/base	current	history1	history2
	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
0.15	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
0.15 °gyco 0.10	Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
0.10 8	Silt	scalar	*Visual	NONE	NONE	NONE	NONE
0.05	Debris	scalar	*Visual	NONE	NONE	NONE	NONE
0.00	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
0.00	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 PROPI		method	limit/base	current	history1	history2
	Visc @ 100°C	cSt	ASTM D445		13.9	13.2	13.6
	GRAPHS	COL	A011010443	17.7	10.5	10.2	10.0
	Ferrous Alloys						
	100						
	80 - iron						
	nickel						
-	60						
	40						
	20						
	3	/23		/23			
	Aug4/23	0ct13/23		Nov7/23			
		_					
	Non-ferrous Meta	115					
	14- copper						
	12-						
	10						
	<u>ة</u> 8-						
	6 -						
	6 4 2	\backslash					
	0						
	0	13/23		E2/Loc			
		Oct13/23		Nov7/23			
	Uiscosity @ 100°	_			Base Number		
	Aug4/23	_			Base Number		
	Uiscosity @ 100°	_		14.0	Base Number		
	Viscosity @ 100°	_		14.0			
	0 Viscosity @ 100°	_		14.0			
	0 Viscosity @ 100°	_		14.0	Abnormal Base		
	0 EZ2+Hany Viscosity @ 100° 18 17 Abnormal 16 19 15 Base	_		14.0	Abnormal 9		
	0 EZ2+han Viscosity @ 100° 18 17 Abnormal 13 Abnormal 13 Abnormal	_		14.0 12.0 (0)HOX But 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	Abnormal Base		
	0 EZ2+Hany Viscosity @ 100° 18 17 Abnormal 16 19 15 Base	_		14.0	Abnormal Base		
	0 EZ7+hiny Viscosity @ 100° Abnormal Base Base Abnormal	C		14.0- 12.0- (b) HDX 10.0- Bull 10.0- a quinty 6.0- a quinty 6.0- 2.0- 2.0- 0.0	Abnormal Base Abnormal		
	Viscosity @ 100° ¹⁸ ¹⁷ ¹⁸ ¹⁷ ¹⁸ ¹⁰ ¹⁸ ¹⁷ ¹⁸ ¹⁷ ¹⁸ ¹⁰ ¹⁸ ¹⁷ ¹⁸ ¹⁰	C		14.0- 12.0- (b) HDX 10.0- Bull 10.0- a quinty 6.0- a quinty 6.0- 2.0- 2.0- 0.0	Abnormal Base Abnormal	bet13/23	
poratory mple No. o Number que Number	Viscosity @ 100° Viscosity @ 100° Abnomal Abnomal Base Exercheck USA - : GFL0089974 : 06002779 : 10736541	501 Madia Received Diagnos	d : 09 ed : 22 iician : Dou	14.0 12.0 (B)HOX B0.0 Juny agent 4.0 2.0 EZ/L/volv	Abnormal Base Abnormal	-	I 8 - Fayettevil Marracco Driv Hope Mills, N US 2834
ooratory nple No.) Number que Number st Package	Viscosity @ 100° Viscosity @ 100° ¹⁸ ¹⁰ ¹¹	501 Madia Received Diagnos Diagnost Tests: Gl	1 : 09 ed : 22 iician : Dou ycol)	ry, NC 27513 Nov 2023 Ig Bogart	Abnormal Base Abnormal	vironmental - 01 4621 Contact	18 - Fayettevil Marracco Driv Hope Mills, N

* - 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 Test I To discuss this sample

Submitted By: Robert Carter Page 2 of 2

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