

### **OIL ANALYSIS REPORT**

#### Sample Rating Trend

### NORMAL

# GREATER SHEDIAC SEWERAGE [180532] KOHLER 4732002440

Component Diesel Engine

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

#### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

Metal levels are typical for a new component breaking in.

#### Contamination

There is no indication of any contamination in the oil.

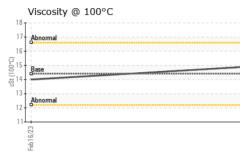
#### **Fluid Condition**

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

			Feb 2023	Jan 2024		
SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WA0020820	WA0019332	
Sample Date		Client Info		04 Jan 2024	16 Feb 2023	
Machine Age	hrs	Client Info		257	228	
Oil Age	hrs	Client Info		29	68	
Oil Changed		Client Info		Changed	Changed	
Sample Status				NORMAL	NORMAL	
CONTAMINATION	I	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 D5185(m)	>100	1	2	
Chromium	ppm	. ,	>20	0	0	
Nickel	ppm	ASTM D5185(m)	>4	<1	0	
Titanium	ppm	ASTM D5185(m)		0	<1	
Silver	ppm	ASTM D5185(m)	>3	0	0	
Aluminum	ppm	ASTM D5185(m)	>20	1	3	
Lead	ppm	ASTM D5185(m)	>40	0	0	
Copper	ppm	ASTM D5185(m)	>330	<1	<1	
Tin	ppm	ASTM D5185(m)	>15	0	0	
Antimony	ppm	ASTM D5185(m)		0	<1	
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	8	65	
Barium	ppm	ASTM D5185(m)	10	0	0	
Molybdenum	ppm	ASTM D5185(m)	100	58	78	
Manganese	ppm	ASTM D5185(m)		0	<1	
Magnesium	ppm	ASTM D5185(m)	450	864	25	
Calcium	ppm	ASTM D5185(m)	3000	1093	2227	
Phosphorus	ppm	ASTM D5185(m)	1150	993	1093	
Zinc	ppm	ASTM D5185(m)	1350	1113	1139	
Sulfur	ppm	ASTM D5185(m)	4250	2696	3318	
Lithium	ppm	ASTM D5185(m)		<1	<1	
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	3	5	
Sodium	ppm	ASTM D5185(m)	>158	1	2	
Potassium	ppm	ASTM D5185(m)	>20	0	0	
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	0	0	
Nitration	Abs/cm	ASTM D7624*	>20	4.7	7.4	
Sulfation	Abs/.1mm	ASTM D7415*	>30	18.1	17.7	



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۱°C	FLUID DEGRADA	TION	method		current	history1	history2
	Oxidation	Abs/.1mm	ASTM D7414*	>25	12.9	12.2	
	VISUAL		method	limit/base	current	history1	history2
	White Metal	scalar	Visual*	NONE	NONE		
	Yellow Metal	scalar	Visual*	NONE	NONE		
	Precipitate	scalar	Visual*	NONE	NONE		
Jan 4/24	Silt	scalar	Visual*	NONE	NONE		
Jan	Debris	scalar	Visual*	NONE	VLITE		
	Sand/Dirt	scalar	Visual*	NONE	NONE		
	Appearance	scalar	Visual*	NORML	NORML		
	Odor	scalar	Visual*	NORML	NORML	NORML	
	Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	
	Free Water	scalar	Visual*		NEG	NEG	
	FLUID PROPERT	IES	method	limit/base	current	history1	history2
	Visc @ 100°C	cSt	ASTM D7279(m)	14.4	14.9	14.0	
	GRAPHS						
2	Iron (ppm)			100	Lead (ppm)		
	00 - Severe			80	Severe		
۳ 1 1	50			60	Abnormal		
	00 - Abnormal			<sup></sup> 40 20			-
	0			0			
	Feb 16/23			Jan4/24	Feb 16/23		Jan4/24
				2P	_		٦ د د
	Aluminum (ppm)			50	Chromium (pp	om)	
	40 - Severe			40	Severe		
E	30 20 Abnormal			트 <sup>30</sup> 문 <sub>20</sub>	Abnormal		
	10			10			-
	0	_		0			
	Feb 16/23			Jan4/24	Feb 16/23		Jan4/24
				7			
4	Copper (ppm)			80	Silicon (ppm)		
3	Abitornal			60			
틆 2	00			۾ 40			
1	00 -			20	Abnormal		
	0			0			*
	eb 16/23			Jan4/24	Feb 16/23		Jan4/24
	⊥ Viscosity @ 100°C			,	soot %		
	18			6.0	r		
ç	Abnormal			.40	Severe		
cst (100°C)	14 Dase			2.0	Abnormal		
8	12 - Abnormal			2.0			
	10				53		24
	Feb 16/23			Jan4/24	Feb 16/23		Jan4/24
Sample No. Laboratory Test Package	: 02608936 : 5710022 : MOB 1 ( Additional ontact Customer Servi f accreditation, (m) m	Recieved Diagnose Diagnose Tests: Vis ice at 1-8 ethod mo	d : 16 . ed : 16 . ician : We sual ) 200-268-213 : odified, (e) te	Jan 2024 Jan 2024 s Davis	al lab.	485 M Conta dbals T:	ower Systems VENTURE DR MONCTON, NB CA E1H 2P4 ct: Doug Balser er@wajax.com (506)855-5371 (506)870-4448