

OIL ANALYSIS REPORT

Sample Rating Trend



Area MIDLAND 112 Component **Diesel Engine** NOT GIVEN (--- GAL)

DIAGNOSIS

A Recommendation

We advise that you check for possible coolant leak. Check for low coolant level. We recommend an early resample to monitor this condition.

A Wear

The lead level is abnormal. All other component wear rates are normal.

Contamination

Sodium and/or potassium levels are high. There is a moderate amount of particulates present in the oil.

Fluid Condition

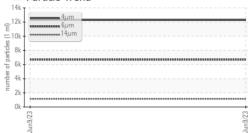
The BN result indicates that there is suitable alkalinity remaining in the oil.

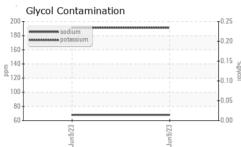
SAMPLE INFORM	ATION	method	limit/base	current	history1	history2	
Sample Number		Client Info		KL0012447			
Sample Date		Client Info		09 Jun 2023			
Machine Age	hrs	Client Info		2242			
Oil Age	hrs	Client Info		0			
Oil Changed		Client Info		N/A			
Sample Status				ABNORMAL			
CONTAMINATION		method	limit/base	current	history1	history2	
Fuel		WC Method	>5	<1.0			
WEAR METALS		method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>100	35			
Chromium	ppm	ASTM D5185m	>20	<1			
Nickel	ppm	ASTM D5185m	>4	0			
Titanium	ppm	ASTM D5185m		0			
Silver	ppm	ASTM D5185m	>3	0			
Aluminum	ppm	ASTM D5185m	>20	<1			
Lead	ppm	ASTM D5185m	>40	<mark>/</mark> 78			
Copper	ppm	ASTM D5185m	>330	2			
Tin	ppm	ASTM D5185m	>15	<1			
Vanadium	ppm	ASTM D5185m		<1			
Cadmium	ppm	ASTM D5185m		0			
ADDITIVES		method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m		75			
Barium	ppm	ASTM D5185m		0			
Molybdenum	ppm	ASTM D5185m		118			
Manganese	ppm	ASTM D5185m		<1			
Magnesium	ppm	ASTM D5185m		540			
Calcium	ppm	ASTM D5185m		1758			
Phosphorus	ppm	ASTM D5185m		1069			
Zinc	ppm	ASTM D5185m		1376			
Sulfur	ppm	ASTM D5185m		3805			
CONTAMINANTS		method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>25	9			
Sodium	ppm	ASTM D5185m		<mark>/</mark> 68			
Potassium	ppm	ASTM D5185m	>20	A 191			
Glycol	%	*ASTM D2982		NEG			
INFRA-RED		method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	>3	0.4			
Nitration	Abs/cm	*ASTM D7624	>20	10.5			
Sulfation	Abs/.1mm	*ASTM D7415	>30	28.7			



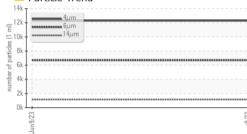
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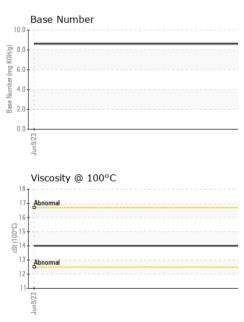






🔺 Particle Trend





FLUID CLEANLINI	ESS	method	limit/base		current	history1	his	tory
Particles >4µm		ASTM D7647			12275			
Particles >6µm		ASTM D7647	>5000		6687			
Particles >14µm		ASTM D7647	>640		1138			
Particles >21µm		ASTM D7647	>160		383			
Particles >38µm		ASTM D7647	>40		59			
Particles >71µm		ASTM D7647	>10	(6			
Oil Cleanliness		ISO 4406 (c)	>19/16		20/17			
FLUID DEGRADA	TION	method	limit/base		current	history1	his	tory
Oxidation	Abs/.1mm	*ASTM D7414	>25	:	24.6			
Base Number (BN)	mg KOH/g	ASTM D2896		1	8.62			
VISUAL		method	limit/base		current	history1	his	tory
White Metal	scalar	*Visual	NONE	I	NONE			
Yellow Metal	scalar	*Visual	NONE		NONE			
Precipitate	scalar	*Visual	NONE	I	NONE			
Silt	scalar	*Visual	NONE		NONE			
Debris	scalar	*Visual	NONE		NONE			
Sand/Dirt	scalar	*Visual	NONE	l	NONE			
Appearance	scalar	*Visual	NORML		NORML			
Odor	scalar	*Visual	NORML		NORML			
Emulsified Water	scalar	*Visual	>0.2		NEG			
Free Water	scalar	*Visual			NEG			
FLUID PROPERTI	ES	method	limit/base		current	history1	his	tor
Visc @ 100°C	cSt	ASTM D445			14.0			
GRAPHS								
Ferrous Alloys					article Cour	nt		
40 30			491,5					
20 - nickel			122,8	80-				
10			30,7	20	1			
			= 7.6	80		· ·		
Jun9/23			Jun9/23 (per 1 ml	20				
			cles (i					
Non-ferrous Metals 80 T			nono- t	80-				
60 - copper			in a second	20-				
40 - tin			E	30 -				
20 -				8 Sien	evernal			1
			23	2				
Jun9/23			Jun9/23	-				
			-	0 4µ	6µ	14µ 21µ	38µ	7
-			(^B /10	Ва 0.0 т п. п	ase Numbe	r		
Viscosity @ 100°C				- 1				_
Viscosity @ 100°C			loy B					
Viscosity @ 100°C			ber (mg KO	5.0				
Viscosity @ 100°C			Number (mg KO	5.0-				
Viscosity @ 100°C			(mg KO					

Laboratory Sample No. : KL0012447 Received : 15 Jun 2023 4500 E TX 158 Lab Number : 05875051 Diagnosed : 19 Jun 2023 MIDLAND, TX Unique Number : 10520154 Diagnostician : Jonathan Hester US 76706 Test Package : MOB 2 (Additional Tests: Glycol, PrtCount) Contact: ABEL SALAZAR Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. abel@salazarservice.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (432)699-3500 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Report Id: SALMID [WUSCAR] 05875051 (Generated: 09/25/2023 16:44:57) Rev: 1

Contact/Location: ABEL SALAZAR - SALMID

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