

### **OIL ANALYSIS REPORT**

Sample Rating Trend



# NOT GIVEN IL0034834

Diesel Engine

{not provided} (--- GAL)

#### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

#### Fluid Condition

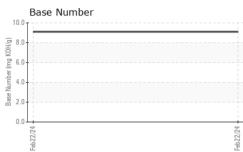
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	1ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		IL0034834		
Sample Date		Client Info		22 Feb 2024		
Machine Age	mls	Client Info		0		
Oil Age	mls	Client Info		0		
Oil Changed		Client Info		N/A		
Sample Status				NORMAL		
CONTAMINATION	J	method	limit/base	current	history1	history2
Water	•	WC Method	>0.2	NEG		
Glycol		WC Method	20.L	NEG		
,	_					
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	38		
Chromium	ppm	ASTM D5185m	>20	1		
Nickel	ppm	ASTM D5185m	>4	<1		
Titanium	ppm	ASTM D5185m		0		
Silver	ppm	ASTM D5185m	>3	0		
Aluminum	ppm	ASTM D5185m	>20	14		
Lead	ppm	ASTM D5185m	>40	0		
Copper	ppm	ASTM D5185m	>330	3		
Tin	ppm	ASTM D5185m	>15	<1		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
				•		
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	-	history1	history2
	ppm ppm		limit/base	current		
Boron		ASTM D5185m	limit/base	current 41		
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	current 41 0		
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 41 0 41		
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 41 0 41 <1		
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 41 0 41 <1 496		
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	Current 41 0 41 <1 496 1573	  	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	Current 41 0 41 <1 496 1573 732	   	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	Current 41 0 41 <1 496 1573 732 875	    	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	Current 41 0 41 <1 496 1573 732 875 2277		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	Current 41 0 41 <1 496 1573 732 875 2277 Current	     history1	     history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b>	limit/base >25	Current 41 0 41 <1 496 1573 732 875 2277 Current 8	     history1	     history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	limit/base >25 >20	current           41           0           41           <1           496           1573           732           875           2277           current           8           4	     history1 	     history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20	current           41           0           41           <1           496           1573           732           875           2277           current           8           4           24	     history1	     history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel	ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 >5	Current 41 0 41 <1 496 1573 732 875 2277 Current 8 4 24 24 <1.0	     history1   	     history2  
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 >5	current           41           0           41           <1           496           1573           732           875           2277           current           8           4           24           <1.0           current           0.8	     history1    history1	     history2    history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm   %	ASTM D5185m ASTM D5185m	limit/base >25 >20 >5 limit/base >3 >20	current         41         0         41         <1         496         1573         732         875         2277         current         8         4         24         <1.0         current	      history1    history1  	     history2     history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D3524 <b>method</b> *ASTM D7844	limit/base >25 >20 >5 limit/base >3 >20	current         41         0         41         <1         496         1573         732         875         2277         current         8         4         24         <1.0         current         0.8         10.2	     history1    history1    history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 >20 >5 limit/base >3 >20 >30 >30	current         41         0         41         <1         496         1573         732         875         2277         current         8         4         24         <1.0         current         0.8         10.2         22.1	       history1   history1  history1	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 >20 >5 limit/base >3 >20 >30 >30	current         41         0         41         <1         496         1573         732         875         2277         current         8         4         24         <1.0         current         0.8         10.2         22.1		history2 history2 history2



## **OIL ANALYSIS REPORT**

VISUAL



	VISUAL		method			history1	history2
	White Metal	scalar	*Visual	NONE	NONE		
	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		
- 24				NORML	NORML		
Feb 22/24	Appearance	scalar	*Visual				
LL.	Odor	scalar	*Visual	NORML	NORML		
	Emulsified Water	scalar	*Visual	>0.2	NEG		
	Free Water	scalar	*Visual		NEG		
	FLUID PROPERT	IES	method	limit/base	current	history1	history
	Visc @ 100°C	cSt	ASTM D445		10.7		
	GRAPHS						
	Ferrous Alloys						
	40 26 iron						
	35 - chromium						
	30						
	25 - E 20						
	톱 20 -						
	15-						
	10+						
	5						
	24 L 0	******	*****	24			
	Feb 22/24			Feb 22/24			
	<sup>™</sup> Non-ferrous Metals	_		LL.			
¥ C		5					
C T	copper						
L.	8 - Internet lead						
	c						
	m dd						
	4						
	2						
	0						
	2/24			2/24			
	Feb22/24			Feb22/24			
	Viscosity @ 100°C				Dags Number		
	<sup>18</sup>			10.0	Base Number		
	17- Abnormal						
	16-			.8.0	D +		
	-15- 			(B)(HO) Buy back (M) Base Mumber Base 2.0			
	0014 8 13 8 Abnormal			<u>B</u> 6.0			
				 g 4.(	J.		
	12-			ase N			
	11-			2.0	D		
	10			0.0			
	0						
	Feb22/24			Feb22/24	Feb 22/24		
Laboratory	: WearCheck USA - 501 : IL0034834	I Madiso <b>Rece</b> i		, NC 27513 8 Feb 2024		<b>ASE OF ATLAI</b> 4675 BAKERS	

18 Abnorma 16 (100°C) 12 cSt Abnormal 10 8 Feb22/24

Viscosity @ 100°C



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Contact/Location: DAVID JOHNS - IDEATLGA