

# **OIL ANALYSIS REPORT**

Sample Rating Trend







Machine Id **140142** Component **Diesel Engine** Fluid **NOT GIVEN (--- GAL)** 

#### DIAGNOSIS

# Recommendation

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.

# Wear

All component wear rates are normal.

## Contamination

Elevated aluminum (AI) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components.

## Fluid Condition

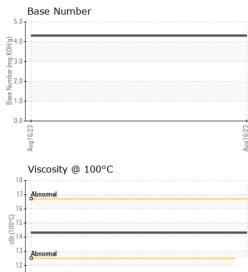
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	<b>NATION</b>	method	limit/base	current	history1	history2
Sample Number		Client Info		IL0032291		
Sample Date		Client Info		16 Aug 2023		
Machine Age	mls	Client Info		185076		
Oil Age	mls	Client Info		0		
Oil Changed		Client Info		Changed		
Sample Status				NORMAL		
CONTAMINATIO	N	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0		
Glycol		WC Method		NEG		
,			11 11 11			
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	59		
Chromium	ppm	ASTM D5185m	>20	3		
Nickel	ppm	ASTM D5185m	>4	0		
Titanium	ppm	ASTM D5185m		0		
Silver	ppm	ASTM D5185m	>3	0		
Aluminum	ppm	ASTM D5185m	>20	24		
Lead	ppm	ASTM D5185m	>40	12		
Copper	ppm	ASTM D5185m	>330	<1		
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	current 22	history1	history2
	ppm ppm		limit/base			
Boron		ASTM D5185m	limit/base	22		
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	22 0		
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	22 0 63		
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	22 0 63 <1		
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	22 0 63 <1 912		
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	22 0 63 <1 912 1335	  	  
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	22 0 63 <1 912 1335 998	   	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	22 0 63 <1 912 1335 998 1262	    	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	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	22 0 63 <1 912 1335 998 1262 3244		
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	22 0 63 <1 912 1335 998 1262 3244 current	     history1	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm 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	22 0 63 <1 912 1335 998 1262 3244 <i>current</i> 6	     history1 	     history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm 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	22 0 63 <1 912 1335 998 1262 3244 current 6 2	      history1	     history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base	22 0 63 <1 912 1335 998 1262 3244 current 6 2 2 46	      history1  	     history2  
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >3	22 0 63 <1 912 1335 998 1262 3244 current 6 2 2 46 current	     history1   history1	     history2   history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >3	22 0 63 <1 912 1335 998 1262 3244 <u>current</u> 6 2 46 <u>current</u> 0.7	     history1   history1  history1	     history2  history2  history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >3 >20	22 0 63 <1 912 1335 998 1262 3244 <i>current</i> 6 2 46 <i>current</i> 0.7 14.3	      history1   history1  	     history2   history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	limit/base >25 >20 limit/base >3 >20 >30 >30	22 0 63 <1 912 1335 998 1262 3244 <i>current</i> 6 2 46 <i>current</i> 0.7 14.3 31.9 <i>current</i>	      history1  history1  history1  history1	    history2  history2  history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	Imit/base >25 >20 Imit/base >20 >3 >20 >30	22 0 63 <1 912 1335 998 1262 3244 <u>current</u> 6 2 46 <u>current</u> 0.7 14.3 31.9	       history1  history1  history1	    history2  history2  history2  history2  history2



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# **OIL ANALYSIS REPORT**



	VISUAL		method				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		
Aud 16/23	Appearance	scalar	*Visual	NORML	NORML		
Aug	Odor	scalar	*Visual	NORML	NORML		
	Emulsified Water	scalar	*Visual	>0.2	NEG		
	Free Water	scalar	*Visual		NEG		
	FLUID PROPER	TIES	method	limit/base	current	history1	history2
	Visc @ 100°C	cSt	ASTM D445		14.3		
	GRAPHS						
	Ferrous Alloys						
	60 iron						
	50 - chromium						
	40 -						
	Ē_30 -						
	20 -						
	10						
	0						
	Aug16/23			Aug16/23			
	Aug			Bud			
	Non-ferrous Meta	ls					
	12 copper						
	10 - measurement lead						
	8						
	E 6						
	ظ 6						
	Ę. 6- 4-						
	E 6 4 2						
	4 2 0						
	4 2 0			16/23			
	4 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			Aug16/23 +			
	Viscosity @ 100°				Base Number		
	Viscosity @ 100°0	c		4.1	5 T		
	Viscosity @ 100°0	c		4.1	5		
	Viscosity @ 100°0	c		4.1	5		
	Viscosity @ 100°0	C		4. 4. (53.) YOX 3. WX 3. WX 3.	5		
	Viscosity @ 100°0	C		4. 4. (53.) YOX 3. WX 3. WX 3.	5		
	Viscosity @ 100°C	c		4. 4. (53.) YOX 3. WX 3. WX 3.	5		
	4 2 0 Viscosity @ 100°0 8 17 4 4 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	c		4.1 4.1 (6)(0)(0)(3.1) (0)(0)(3.1) (0)(0)(3.1) (	5		
	Viscosity @ 100°0	C		4.1 (i) (i) (i) (i) (i) (i) (i) (i) (i) (i)	5		
	Viscosity @ 100°0	C		4.1 (i) (i) (i) (i) (i) (i) (i) (i) (i) (i)	5		
	Viscosity @ 100°C	C		4.1 4.1 (a) 3.1 (b) 3.1 (b) 3.1 (c) 4.1 (c) 4.	5		
Laboratory	4 2 0 10 10 10 10 10 10 10 10 10 10 10 10 1			4.1 4.1 (3.3. 3.1 (0.10) 9.1 9.1 9.1 9.1 9.1 9.1 9.1 9.1 9.1 9.1	Aug18/23	JCK CENTER - CH	
Laboratory Sample No.	Viscosity @ 100°0			4.3 (%) (%) (%) (%) (%) (%) (%) (%) (%) (%)	EZIGIONY BUSH TRI	JCK CENTER - CHI 5 SOUTH CENT	CAGO IDEALEAS
Sample No. Lab Number	Viscosity @ 100°0 Viscosity @ 100°0	501 Madis	d : 24 /	4.1 (h) (h) (h) (h) (h) (h) (h) (h) (h) (h)	EZIGIONY BUSH TRI		<b>CAGO IDEALEAS</b> IRAL AVENU CHICAGO,
Sample No. Lab Number Unique Numbe	Viscosity @ 100°0 Viscosity @ 100°0	501 Madia	d : 24 /	4.3 4.1 (0.3 (0.3 (0.1) (	EZIGIONY BUSH TRI	5 SOUTH CEN	CAGO IDEALEAS FRAL AVENU CHICAGO, I US 6063
Sample No. Lab Number Unique Number Test Package	Viscosity @ 100°0 Viscosity @ 100°0	501 Madia Received Diagnost	d : 24 / ed : 25 / tician : Dor	4.3 (a) (b) (c) (c) (c) (c) (c) (c) (c) (c) (c) (c	EZIGI DINY 3 RUSH TRI 4655	5 SOUTH CEN	CAGO IDEALEAS IRAL AVENU CHICAGO, US 6063 : MIKE LINLE
Sample No. Lab Number Unique Numbe	Viscosity @ 100° Viscosity @ 100° Abnomal Abnomal : WearCheck USA - : IL0032291 : 05933155 r : 10618426 = : FLEET , contact Customer Serv	501 Madia Received Diagnose Diagnost	d : 24 / ed : 25 / tician : Dor	4.1 (h) (h) (h) (h) (h) (h) (h) (h) (h) (h)	EZIGI DINY 3 RUSH TRI 4655	5 SOUTH CEN Contact inleym@rushtru	CAGO IDEALEAS FRAL AVENU CHICAGO, US 6063 : MIKE LINLE

Contact/Location: MIKE LINLEY - IDECHIIL