

# **OIL ANALYSIS REPORT**

### Area SHARP BUS LINES Machine Id INTERNATIONAL 1212

Component Diesel Engine Fluid

DIESEL ENGINE OIL SAE 15W40 (--- 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 condition of the oil is acceptable for the time in service.

56/2/1

Sample Rating Trend



NORMAL

SAMPLE INFORM	/ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PC0081381		
Sample Date		Client Info		19 Sep 2023		
Machine Age	kms	Client Info		262315		
Oil Age	kms	Client Info		3500		
Oil Changed		Client Info		Changed		
Sample Status				NORMAL		
CONTAMINATI	ON	method	limit/base	current	history1	history2
Fuel		WC Method	>2.0	<1.0		
Glycol		WC Method		NEG		
WEAR METALS	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	16		
Chromium	ppm	ASTM D5185(m)	>20	<1		
Nickel	ppm	ASTM D5185(m)	>4	0		
Titanium	ppm	ASTM D5185(m)		0		
Silver	ppm	ASTM D5185(m)	>3	0		
Aluminum	ppm	ASTM D5185(m)	>20	6		
Lead	ppm	ASTM D5185(m)	>40	1		
Copper	ppm	ASTM D5185(m)	>330	<1		
Tin	ppm	ASTM D5185(m)	>15	<1		
Antimony	ppm	ASTM D5185(m)		0		
Vanadium	ppm	ASTM D5185(m)		0		
Beryllium	ppm	ASTM D5185(m)		0		
Cadmium	ppm	ASTM D5185(m)		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	250	4		
			10			
Barium	ppm	ASTM D5185(m)	10	<1		
Barium Molybdenum	ppm ppm	ASTM D5185(m) ASTM D5185(m)	100	<1 57		
Molybdenum	ppm	ASTM D5185(m)		57		
Molybdenum Manganese	ppm ppm	ASTM D5185(m) ASTM D5185(m)	100	57 0		
Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	100 450	57 0 890		
Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	100 450 3000	57 0 890 960		
Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	100 450 3000 1150	57 0 890 960 908	  	
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	100 450 3000 1150 1350	57 0 890 960 908 1087	   	   
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	100 450 3000 1150 1350	57 0 890 960 908 1087 2316	   	   
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	100 450 3000 1150 1350 4250	57 0 890 960 908 1087 2316 <1		
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN	ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	100 450 3000 1150 1350 4250 imit/base >25	57 0 890 960 908 1087 2316 <1 current	     history1	     history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon	ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	100 450 3000 1150 1350 4250 imit/base >25	57 0 890 960 908 1087 2316 <1 current 4	     history1	     history2 
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium	ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	100 450 3000 1150 1350 4250 imit/base >25 >158	57 0 890 960 908 1087 2316 <1 current 4 19	     history1 	     history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium	ppm	ASTM D5185(m) ASTM D5185(m)	100 450 3000 1150 1350 4250 <b>imit/base</b> >25 >158 >20	57 0 890 960 908 1087 2316 <1 current 4 19 <1	     history1  	     history2  
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	100 450 3000 1150 1350 4250 imit/base >25 >158 >20 imit/base	57 0 890 960 908 1087 2316 <1 current 4 19 <1 current	     history1   history1	     history2   history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185(m) ASTM D5185(m)	100 450 3000 1150 1350 4250 <b>limit/base</b> >25 >158 >20 <b>limit/base</b> >3	57 0 890 960 908 1087 2316 <1 current 4 19 <1 current 0.7	     history1   history1  history1	     history2   history2  history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm t t t t t t	ASTM D5185(m) ASTM D7844* ASTM D7624* ASTM D7624*	100 450 3000 1150 4250 <b>imit/base</b> >25 >158 >20 <b>imit/base</b> >3 >20	57 0 890 960 908 1087 2316 <1 current 4 19 <1 current 0.7 8.6	      history1   history1  	history2 history2 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm t t t t t t	ASTM D5185(m) ASTM D7844* ASTM D7844* ASTM D7844* ASTM D7844*	100 450 3000 1150 1350 4250 <b>imit/base</b> >25 >158 >20 <b>imit/base</b> >3 >20 >30	57 0 890 960 908 1087 2316 <1 current 4 19 <1 current 0.7 8.6 21.3	     history1   history1  history1	     history2  history2  history2

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Contact/Location: Doug Hall - ICSB902



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