

# **OIL ANALYSIS REPORT**

Sample Rating Trend







Machine Id **223050** [] Component **Diesel Engine** Fluid **PFJ 10W30 (--- QTS)** 

## DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

#### Wear

Metal levels are typical for a new component breaking in.

#### Contamination

Elevated aluminum (Al) 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. 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	ΛΑΤΙΟΝ	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0101182		
Sample Date		Client Info		24 Jul 2023		
Machine Age	mls	Client Info		28561		
Oil Age	mls	Client Info		28000		
Oil Changed		Client Info		N/A		
Sample Status				NORMAL		
CONTAMINAT	ON	method	limit/base	current	historv1	historv2
Fuel		WC Method	>5	-10		
Glycol		WC Method	20	NEG		
				NEG		
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	35		
Chromium	ppm	ASTM D5185m	>20	<1		
Nickel	ppm	ASTM D5185m	>4	<1		
Titanium	ppm	ASTM D5185m		<1		
Silver	ppm	ASTM D5185m	>3	<1		
Aluminum	ppm	ASTM D5185m	>20	16		
Lead	ppm	ASTM D5185m	>40	2		
Copper	ppm	ASTM D5185m	>330	234		
Tin	ppm	ASTM D5185m	>15	5		
Vanadium	ppm	ASTM D5185m		<1		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method				history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 138	history1	history2
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	limit/base	current 138 0	history1 	history2  
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 138 0 111	history1  	history2  
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 138 0 111 3	history1  	history2   
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 138 0 111 3 703	history 1   	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 138 0 111 3 703 1523	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current           138           0           111           3           703           1523           692	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current           138           0           111           3           703           1523           692           863	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current           138           0           111           3           703           1523           692           863           2609	history 1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current           138           0           111           3           703           1523           692           863           2609           current	history1 history1	history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current           138           0           111           3           703           1523           692           863           2609           current           64	history1 history1	history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base limit/base >25	current           138           0           111           3           703           1523           692           863           2609           current           64           5	history1 history1	history2 history2 history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm	method ASTM D5185m ASTM D5185m	limit/base limit/base >25 >20	current           138           0           111           3           703           1523           692           863           2609           current           64           5           46	history1	history2 history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm <b>TS</b> ppm	method ASTM D5185m ASTM D5185m	limit/base limit/base >25 >20	current           138           0           111           3           703           1523           692           863           2609           current           64           5           46	history1 history1 history1 history1	history2 history2 history2 history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm	method           ASTM D5185m	limit/base limit/base limit/base >25 >20 limit/base	current         138         0         111         3         703         1523         692         863         2609         current         64         5         46         current	history1 history1 history1 history1	history2 history2 history2 history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	limit/base >25 >20 limit/base >3 >20	current           138           0           111           3           703           1523           692           863           2609           current           64           5           46           current           0.3           9.7	history1 history1 history1	history2 history2 history2 history2 history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m           ASTM D7844           *ASTM D7624	limit/base >25 >20 limit/base >3 >20	current           138           0           111           3           703           1523           692           863           2609           current           64           5           46           current           0.3           9.7           22.0	history1	history2 history2 history2 history2 history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm t ppm ppm	method           ASTM D5185m	limit/base   	current           138           0           111           3           703           1523           692           863           2609           current           64           5           46           current           0.3           9.7           22.9	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD	ppm ppm ppm ppm ppm ppm ppm ppm ppm <b>TS</b> ppm ppm ppm ppm	method           ASTM D5185m           ASTM D7844           *ASTM D7624           *ASTM D7415           Method	limit/base 	current         138         0         111         3         703         1523         692         863         2609         current         64         5         46         current         0.3         9.7         22.9         current	history1 history1 history1 history1 history1 history1 history1 history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE Oxidation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m           ASTM D76241           *ASTM D7414	limit/base           imit/base           imit/base           >25           >20           imit/base           >3           >20           imit/base           >30           imit/base           >25	current           138           0           111           3           703           1523           692           863           2609           current           64           5           46           current           0.3           9.7           22.9           current           21.7	history1	history2  history2               history2            history2



# **OIL ANALYSIS REPORT**

VISUAL







Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Certificate L2367

F: