

OIL ANALYSIS REPORT

Sample Rating Trend





DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

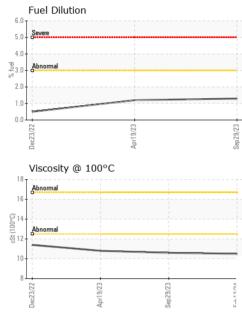
Fluid Condition

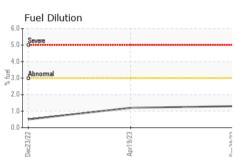
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

		Dec202	2 Apr2023	Sep2023 Fe	b2024	
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0111600	PCA0101899	PCA0095289
Sample Date		Client Info		13 Feb 2024	29 Sep 2023	19 Apr 2023
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>120	11	16	15
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	<1	0	<1
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	3	3	3
Lead	ppm	ASTM D5185m	>40	<1	0	0
Copper	ppm	ASTM D5185m	>330	<1	1	3
Tin	ppm	ASTM D5185m	>15	1	1	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 4	history1 <1	history2 9
	ppm ppm		limit/base			
Boron		ASTM D5185m	limit/base	4	<1	9
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	4 0	<1 0	9 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	4 0 66	<1 0 61	9 0 64
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	4 0 66 <1	<1 0 61 0	9 0 64 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	4 0 66 <1 806	<1 0 61 0 869	9 0 64 <1 926
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	4 0 66 <1 806 969	<1 0 61 0 869 1031	9 0 64 <1 926 1109
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	4 0 66 <1 806 969 878	<1 0 61 0 869 1031 904	9 0 64 <1 926 1109 994
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	4 0 66 <1 806 969 878 1107	<1 0 61 0 869 1031 904 1135	9 0 64 <1 926 1109 994 1245
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		4 0 66 <1 806 969 878 1107 2405	<1 0 61 0 869 1031 904 1135 2453	9 0 64 <1 926 1109 994 1245 3225
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm 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	4 0 66 <1 806 969 878 1107 2405 current	<1 0 61 0 869 1031 904 1135 2453 history1	9 0 64 <1 926 1109 994 1245 3225 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN 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 method	limit/base >25	4 0 66 <1 806 969 878 1107 2405 current 4	<1 0 61 0 869 1031 904 1135 2453 history1 5	9 0 64 <1 926 1109 994 1245 3225 history2 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	limit/base >25 >20	4 0 66 <1 806 969 878 1107 2405 current 4 3	<1 0 61 0 869 1031 904 1135 2453 history1 5 6	9 0 64 <1 926 1109 994 1245 3225 history2 4 3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20	4 0 66 <1 806 969 878 1107 2405 <u>current</u> 4 3 1 1 <1.0	<1 0 61 0 869 1031 904 1135 2453 history1 5 6 5	9 0 64 <1 926 1109 994 1245 3225 history2 4 3 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 >3.0	4 0 66 <1 806 969 878 1107 2405 current 4 3 1 1 <1.0	<1 0 61 0 869 1031 904 1135 2453 history1 5 6 5 5 1.3	9 0 64 <1 926 1109 994 1245 3225 history2 4 3 2 2 1.2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	limit/base >25 >20 >3.0 limit/base >4	4 0 66 <1 806 969 878 1107 2405 <i>current</i> 4 3 1 <1.0 <i>current</i>	<1 0 61 0 869 1031 904 1135 2453 history1 5 6 5 1.3 history1	9 0 64 <1 926 1109 994 1245 3225 history2 4 3 2 1.2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN 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 >3.0 limit/base >4 >20	4 0 66 <1 806 969 878 1107 2405 <i>current</i> 4 3 1 <1.0 <i>current</i> 0.6	<1 0 61 0 869 1031 904 1135 2453 history1 5 6 5 1.3 history1 0.6	9 0 64 <1 926 1109 994 1245 3225 history2 4 3 2 1.2 history2 0.5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 >3.0 limit/base >4 >20	4 0 66 <1 806 969 878 1107 2405 current 4 3 1 <1.0 current 0.6 8.5 20.1	<1 0 61 0 869 1031 904 1135 2453 history1 5 6 5 1.3 history1 0.6 8.5	9 0 64 <1 926 1109 994 1245 3225 history2 4 3 2 1.2 history2 0.5 8.0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRAI	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 >3.0 limit/base >4 >20 >30 limit/base	4 0 66 <1 806 969 878 1107 2405 Current 4 3 1 <1.0 current 0.6 8.5 20.1 current	<1 0 61 0 869 1031 904 1135 2453 history1 5 6 5 1.3 history1 0.6 8.5 20.5 history1	9 0 64 <1 926 1109 994 1245 3225 history2 4 3 2 1.2 history2 0.5 8.0 18.3 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN 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 >3.0 limit/base >4 >20 >3.0	4 0 66 <1 806 969 878 1107 2405 current 4 3 1 <1.0 current 0.6 8.5 20.1	<1 0 61 0 869 1031 904 1135 2453 history1 5 6 5 5 1.3 history1 0.6 8.5 20.5	9 0 64 <1 926 1109 994 1245 3225 history2 4 3 2 1.2 1.2 0.5 8.0 18.3



OIL ANALYSIS REPORT





VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPE	RTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445		10.5	10.6	10.8
GRAPHS						
Ferrous Alloys						
'I						
iron chromium						
nickel						
5-						
5-						
Dec23/22 1						
19,		Sep 29/23	Feb13/24			
pec.		0				
	le.	Se	Ξ.			
Non-ferrous Meta	s	ŝ	<u> </u>			

