

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



SAMPLE INFORM	NATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0802306	WC0721149	WC0721489
Sample Date		Client Info		15 Apr 2023	15 Dec 2022	01 Sep 202
Machine Age	hrs	Client Info		40000	40000	40000
Oil Age	hrs	Client Info		500	500	500
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATIO	N .	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	52	20	36
Chromium	ppm	ASTM D5185m	>20	4	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	<1	0
Titanium	ppm	ASTM D5185m	>2	0	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	3	<1	<1
Lead	ppm	ASTM D5185m	>40	0	<1	<1
Copper	ppm	ASTM D5185m	>330	6	3	4
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
Boron	ppm	ASTM D5185m	250	14	9	8
Barium	ppm	ASTM D5185m	10	0	12	0
Molybdenum	ppm	ASTM D5185m	100	67	57	62
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	AOTH DELOS				
Onlation		ASTM D5185m	450	885	840	904
Calcium	ppm	ASTM D5185m ASTM D5185m	450 3000	885 1283	840 1032	904 1132
Calcium Phosphorus						
	ppm	ASTM D5185m	3000	1283	1032	1132
Phosphorus	ppm ppm	ASTM D5185m ASTM D5185m	3000 1150	1283 1101	1032 937	1132 1031
Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	3000 1150 1350	1283 1101 1406	1032 937 1130	1132 1031 1227 3589
Phosphorus Zinc Sulfur	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	3000 1150 1350 4250 limit/base	1283 1101 1406 4493	1032 937 1130 3063	1132 1031 1227 3589
Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	3000 1150 1350 4250 limit/base >25	1283 1101 1406 4493 current	1032 937 1130 3063 history1	1132 1031 1227 3589 history2
Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	3000 1150 1350 4250 limit/base >25 >158	1283 1101 1406 4493 current 5	1032 937 1130 3063 history1 3	1132 1031 1227 3589 history2 2
Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	3000 1150 1350 4250 limit/base >25 >158	1283 1101 1406 4493 <u>current</u> 5 3	1032 937 1130 3063 history1 3 2	1132 1031 1227 3589 history2 2 0 <1
Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	3000 1150 1350 4250 limit/base >25 >158 >20 limit/base	1283 1101 1406 4493 current 5 3 2	1032 937 1130 3063 history1 3 2 0	1132 1031 1227 3589 history2 2 0 <1
Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	3000 1150 1350 4250 limit/base >25 >158 >20 limit/base >3	1283 1101 1406 4493 current 5 3 2 2 current	1032 937 1130 3063 history1 3 2 0 history1	1132 1031 1227 3589 history2 2 0 <1 history2
Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	3000 1150 1350 4250 limit/base >25 >158 >20 limit/base >3 >20	1283 1101 1406 4493 <u>current</u> 5 3 2 2 <u>current</u> 0.6	1032 937 1130 3063 history1 3 2 0 0 history1 0.3	1132 1031 1227 3589 history2 2 0 <1 history2 0.4
Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7844	3000 1150 1350 4250 limit/base >25 >158 >20 limit/base >3 >20	1283 1101 1406 4493 current 5 3 2 2 current 0.6 8.7	1032 937 1130 3063 history1 3 2 0 history1 0.3 6.6	1132 1031 1227 3589 history2 2 0 <1 history2 0.4 8.9 21.5
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 ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7415	3000 1150 1350 4250 >25 >158 >20 imit/base >3 >20 >30 imit/base	1283 1101 1406 4493 <u>current</u> 5 3 2 <u>current</u> 0.6 8.7 19.4	1032 937 1130 3063 history1 3 2 0 history1 0.3 6.6 18.3	1132 1031 1227 3589 history2 2 0 <1 history2 0.4 8.9

ADVANCE MIXER 185 Component

Diesel Engine

DIESEL ENGINE OIL SAE 15W40 (10 GAL)

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

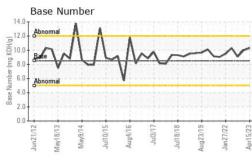
There is no indication of any contamination in the oil.

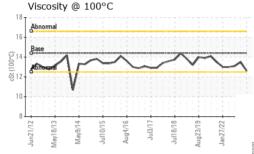
Fluid Condition

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



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Certificate L2367

Submitted By: MARVIN IBARRA