

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id LW-205 Component Diesel Engine Fluid MOBIL 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.

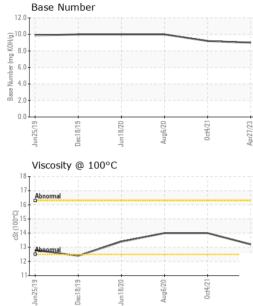
Fluid Condition

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

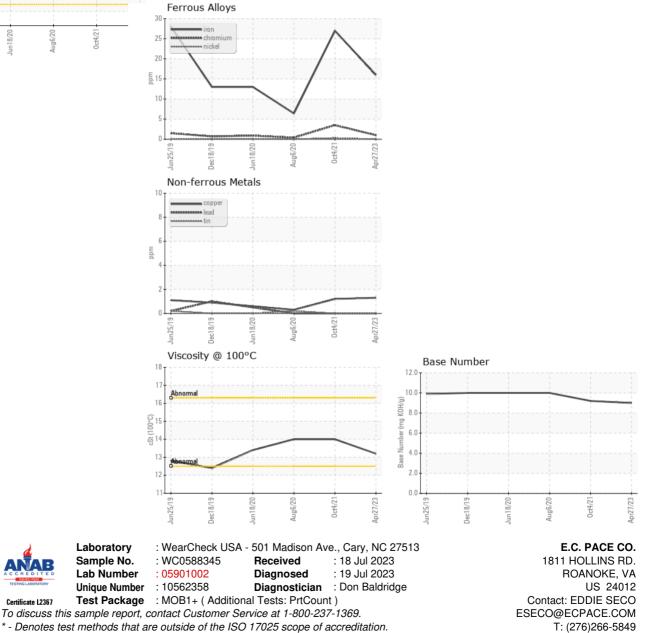
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0588345	WC0355545	WC0475647
Sample Date		Client Info		27 Apr 2023	04 Oct 2021	06 Aug 2020
Machine Age	hrs	Client Info		4270	3315	3067
Oil Age	hrs	Client Info		500	250	250
Oil Changed		Client Info		Not Changd	Changed	Changed
Sample Status				NORMAL	ABNORMAL	NORMAL
CONTAMINATION	٧	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	16	27	6
Chromium	ppm	ASTM D5185m	>20	1	4	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	18	6 7	<1
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	1	1	<1
Tin	ppm	ASTM D5185m	>15	0	0	<1
Antimony	ppm	ASTM D5185m			0	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 0	history1 14	history2 39
	ppm ppm		limit/base			
Boron		ASTM D5185m	limit/base	0	14	39
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	0 0	14 0	39 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 60	14 0 54	39 0 43
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 60 <1	14 0 54 <1	39 0 43 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 60 <1 897	14 0 54 <1 957 1218 1042	39 0 43 <1 733
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 60 <1 897 1240	14 0 54 <1 957 1218	39 0 43 <1 733 1233
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	0 0 60 <1 897 1240 1056	14 0 54 <1 957 1218 1042	39 0 43 <1 733 1233 884
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	0 0 60 <1 897 1240 1056 1292	14 0 54 <1 957 1218 1042 1152	39 0 43 <1 733 1233 884 996
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		0 0 60 <1 897 1240 1056 1292 4001	14 0 54 <1 957 1218 1042 1152 4807	39 0 43 <1 733 1233 884 996 2709
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	limit/base	0 0 60 <1 897 1240 1056 1292 4001 current	14 0 54 <1 957 1218 1042 1152 4807 history1	39 0 43 <1 733 1233 884 996 2709 history2
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 ASTM D5185m	limit/base	0 0 60 <1 897 1240 1056 1292 4001 current 4	14 0 54 <1 957 1218 1042 1152 4807 history1 5	39 0 43 <1 733 1233 884 996 2709 history2 2
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 ASTM D5185m ASTM D5185m	limit/base >25 >118	0 0 60 <1 897 1240 1056 1292 4001 current 4 <1 1	14 0 54 <1 957 1218 1042 1152 4807 history1 5 2	39 0 43 <1 733 1233 884 996 2709 history2 2 3
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 >118 >20	0 0 60 <1 897 1240 1056 1292 4001 current 4 <1 1	14 0 54 <1 957 1218 1042 1152 4807 history1 5 2 5 5 history1 0.2	39 0 43 <1 733 1233 884 996 2709 history2 2 3 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >118 >20 limit/base >3	0 0 60 <1 897 1240 1056 1292 4001 <i>current</i> 4 <1 1	14 0 54 <1 957 1218 1042 1152 4807 history1 5 2 5 5 history1	39 0 43 <1 733 1233 884 996 2709 history2 2 3 <1 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 >118 >20 limit/base >3	0 0 60 <1 897 1240 1056 1292 4001 <i>current</i> 4 <1 1 <i>current</i> 0.2	14 0 54 <1 957 1218 1042 1152 4807 history1 5 2 5 5 history1 0.2	39 0 43 <1 733 1233 884 996 2709 history2 2 3 <1 history2 0.1
Boron Barium Molybdenum Manganese Magnesium Calcium 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	limit/base >25 >118 >20 limit/base >3 >20	0 0 60 <1 897 1240 1056 1292 4001 <i>current</i> 4 <1 1 <i>current</i> 0.2 6.7	14 0 54 <1 957 1218 1042 1152 4807 history1 5 2 5 2 5 history1 0.2 6.1	39 0 43 <1 733 1233 884 996 2709 history2 2 2 3 <1 history2 0.1 5.3
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 >118 >20 Imit/base >3 >20 >30	0 0 60 <1 897 1240 1056 1292 4001 <i>current</i> 4 <1 1 1 <i>current</i> 0.2 6.7 17.4	14 0 54 <1 957 1218 1042 1152 4807 history1 5 2 5 5 history1 0.2 6.1 17.4	39 0 43 <1 733 1233 884 996 2709 history2 2 3 <1 2 3 <1 history2 0.1 5.3 19
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	limit/base >25 >118 >20 limit/base >3 >20 >30 >30	0 0 60 <1 897 1240 1056 1292 4001 <i>current</i> 4 <1 1 <i>current</i> 0.2 6.7 17.4	14 0 54 <1 957 1218 1042 1152 4807 history1 5 2 5 5 history1 0.2 6.1 17.4 history1	39 0 43 <1 733 1233 884 996 2709 history2 2 3 <1 2 3 <1 history2 0.1 5.3 19 history2



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	LIGHT	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 PROPER		method	limit/base	current	history1	history2
TLOIDTHOFLH		methou	IIIIII/Dase	Current	nistory i	Thistory2
Visc @ 100°C	cSt	ASTM D445		13.2	14.0	14.0
GRAPHS						



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