

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id 422042-24

Component Diesel Engine

MOBIL DELVAC 1300 SUPER15W40 (--- 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.

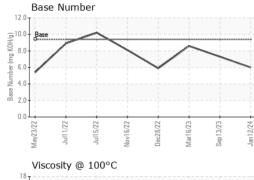
Fluid Condition

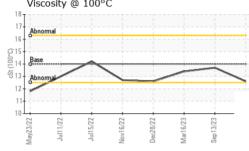
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0088462	GFL0088472	GFL0074892
Sample Date		Client Info		12 Jan 2024	13 Sep 2023	16 Mar 2023
Machine Age	hrs	Client Info		24154	23634	22802
Oil Age	hrs	Client Info		600	600	150
Oil Changed		Client Info		Changed	Changed	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method		NEG	NEG	NEG
Glycol		WC Method	20.L	NEG	NEG	NEG
	0		1	-		
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	8	4	3
Chromium	ppm	ASTM D5185m	>20	0	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m		0	<1	2
Aluminum	ppm	ASTM D5185m	>20	3	2	1
Lead	ppm	ASTM D5185m		0	1	0
Copper	ppm	ASTM D5185m	>330	<1	<1	<1
Tin	ppm	ASTM D5185m	>15	0	1	0
Vanadium	ppm	ASTM D5185m		<1	<1	0
Cadmium	ppm	ASTM D5185m		0	<1	0
				Ū		
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base			history2 226
				current	history1	
Boron	ppm	ASTM D5185m ASTM D5185m	0	current 214	history1 327	226
Boron Barium	ppm ppm	ASTM D5185m ASTM D5185m	0	current 214 0	history1 327 44	226 0
Boron Barium Molybdenum	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0	current 214 0 84	history1 327 44 74	226 0 69
Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	current 214 0 84 0	history1 327 44 74 1	226 0 69 1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	Current 214 0 84 0 355	history1 327 44 74 1 363	226 0 69 1 626
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	current 214 0 84 0 355 1322	history1 327 44 74 1 363 1242	226 0 69 1 626 1263
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	Current 214 0 84 0 355 1322 1065	history1 327 44 74 1 363 1242 927	226 0 69 1 626 1263 972
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	current 214 0 84 0 355 1322 1065 1225	history1 327 44 74 1 363 1242 927 1162	226 0 69 1 626 1263 972 1188
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm 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 0 0 0	Current 214 0 84 0 355 1322 1065 1225 3122	history1 327 44 74 1 363 1242 927 1162 3456	226 0 69 1 626 1263 972 1188 3399
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	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	0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Current 214 0 84 0 355 1322 1065 1225 3122 Current	history1 327 44 74 1 363 1242 927 1162 3456 history1	226 0 69 1 626 1263 972 1188 3399 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	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 D5185m	0 0 0 0 	current 214 0 84 0 355 1322 1065 1225 3122 current 6	history1 327 44 74 1 363 1242 927 1162 3456 history1 6	226 0 69 1 626 1263 972 1188 3399 history2 5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	0 0 0 0 	current 214 0 84 0 355 1322 1065 1225 3122 ocurrent 6 17	history1 327 44 74 1 363 1242 927 1162 3456 history1 6 3	226 0 69 1 626 1263 972 1188 3399 history2 5 4
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	0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	current 214 0 84 0 355 1322 1065 1225 3122 current 6 17 1	history1 327 44 74 1 363 1242 927 1162 3456 history1 6 3 4	226 0 69 1 626 1263 972 1188 3399 history2 5 4 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 0 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1	current 214 0 84 0 355 1322 1065 1225 3122 current 6 17 1 current 0.3	history1 327 44 74 1 363 1242 927 1162 3456 history1 6 3 4 history1	226 0 69 1 626 1263 972 1188 3399 history2 5 4 2 2 history2
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	ASTM D5185m ASTM D5185m	0 0 0 0 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1	current 214 0 84 0 355 1322 1065 1225 3122 current 6 17 1 current	history1 327 44 74 1 363 1242 927 1162 3456 history1 6 3 4 history1 0.2	226 0 69 1 626 1263 972 1188 3399 history2 5 4 2 2 history2 0.1
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	ASTM D5185m ASTM D5185m	0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	current 214 0 84 0 355 1322 1065 1225 3122 current 6 17 1 current 0.3 8.8	history1 327 44 74 1 363 1242 927 1162 3456 history1 6 3 4 0.2 7.0	226 0 69 1 626 1263 972 1188 3399 history2 5 4 2 5 4 2 2 history2 0.1 5.6
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 TS ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7844	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	current 214 0 84 0 355 1322 1065 1225 3122 current 6 17 1 current 0.3 8.8 22.3 current	history1 327 44 74 1 363 1242 927 1162 3456 history1 6 3 4 0.2 7.0 18.9 history1	226 0 69 1 626 1263 972 1188 3399 history2 5 4 2 5 4 2 2 history2 0.1 5.6 19.5 history2
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 ppm	ASTM D5185m ASTM D5185m	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	current 214 0 84 0 355 1322 1065 1225 3122 current 6 17 1 current 0.3 8.8 22.3	history1 327 44 74 1 363 1242 927 1162 3456 history1 6 3 4 history1 0.2 7.0 18.9	226 0 69 1 626 1263 972 1188 3399 history2 5 4 2 2 history2 0.1 5.6 19.5

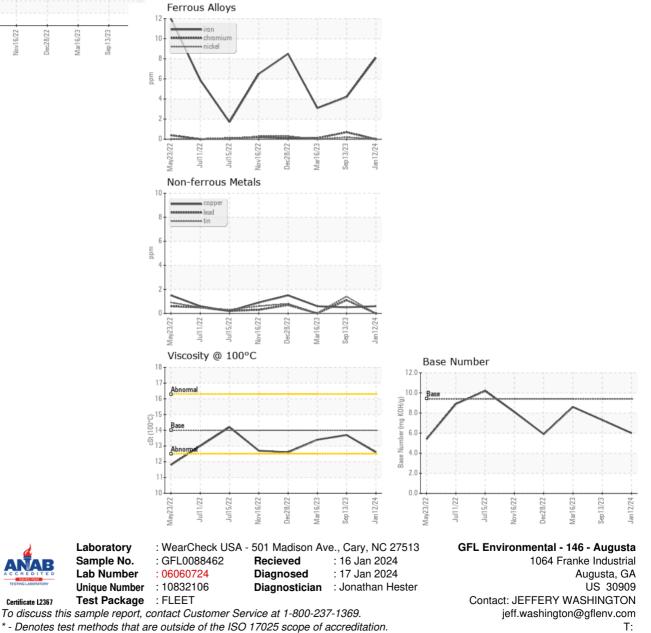


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VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*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	14	12.6	13.7	13.4
GRAPHS						



* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Submitted By: CHRISTOPHER FARRER

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