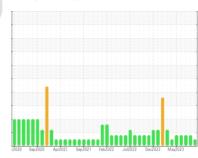


OIL ANALYSIS REPORT

GEORGIA 7326

Component **Diesel Engine**

DIESEL ENGINE OIL SAE 15W40 (--- QTS)



Sample Rating Trend



Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

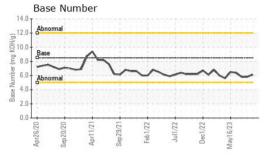
Fluid Condition

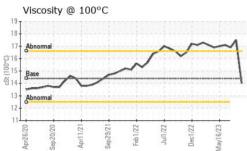
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

		12020 Sep20.	20 Apr2021 Sep2021	Feb2022 Jul2022 Dec2022 F	May2023	
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0857175	WC0754720	WC0754703
Sample Date		Client Info		18 Sep 2023	01 Aug 2023	06 Jun 2023
Machine Age	mls	Client Info		107680	101877	98961
Oil Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				NORMAL	ABNORMAL	ABNORMAL
CONTAMINATION	N	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	0.0	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	18	<u> </u>	▲ 123
Chromium	ppm	ASTM D5185m	>20	<1	5	4
Nickel	ppm	ASTM D5185m	>4	0	1	1
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	19	19
Lead	ppm	ASTM D5185m	>40	<1	1	<1
Copper	ppm	ASTM D5185m	>330	3	16	16
Tin	ppm	ASTM D5185m	>15	<1	1	1
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 7	history1 51	history2 52
	ppm					
Boron		ASTM D5185m	250	7	51	52
Boron Barium	ppm	ASTM D5185m ASTM D5185m	250 10	7 0	51 <1	52 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	250 10	7 0 78	51 <1 30	52 0 33
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100	7 0 78 1	51 <1 30 2	52 0 33 2
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450	7 0 78 1 1248	51 <1 30 2 360	52 0 33 2 375
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150	7 0 78 1 1248 1377	51 <1 30 2 360 2026	52 0 33 2 375 2029
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350	7 0 78 1 1248 1377 1281	51 <1 30 2 360 2026 975	52 0 33 2 375 2029 1015
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 ASTM D5185m	250 10 100 450 3000 1150 1350	7 0 78 1 1248 1377 1281	51 <1 30 2 360 2026 975 1303	52 0 33 2 375 2029 1015 1306
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 ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250	7 0 78 1 1248 1377 1281 1595 3536	51 <1 30 2 360 2026 975 1303 3315	52 0 33 2 375 2029 1015 1306 3343
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base	7 0 78 1 1248 1377 1281 1595 3536	51 <1 30 2 360 2026 975 1303 3315 history1	52 0 33 2 375 2029 1015 1306 3343 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25	7 0 78 1 1248 1377 1281 1595 3536 current	51 <1 30 2 360 2026 975 1303 3315 history1 21	52 0 33 2 375 2029 1015 1306 3343 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158	7 0 78 1 1248 1377 1281 1595 3536 current 5	51 <1 30 2 360 2026 975 1303 3315 history1 21 13	52 0 33 2 375 2029 1015 1306 3343 history2 22 8
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20	7 0 78 1 1248 1377 1281 1595 3536 current 5 5	51	52 0 33 2 375 2029 1015 1306 3343 history2 22 8 35
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 limit/base >3	7 0 78 1 1248 1377 1281 1595 3536 current 5 3	51 <1 30 2 360 2026 975 1303 3315 history1 21 13 33 history1	52 0 33 2 375 2029 1015 1306 3343 history2 22 8 35
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 Method *ASTM D5185m ASTM D5185m Method *ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 limit/base >3	7 0 78 1 1248 1377 1281 1595 3536 current 5 5 3 current	51 <1 30 2 360 2026 975 1303 3315 history1 21 13 33 history1 1.6	52 0 33 2 375 2029 1015 1306 3343 history2 22 8 35 history2
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 method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 limit/base	7 0 78 1 1248 1377 1281 1595 3536 current 5 5 1 1.5 17.5	51 <1 30 2 360 2026 975 1303 3315 history1 21 13 33 history1 1.6 18.3	52 0 33 2 375 2029 1015 1306 3343 history2 22 8 35 history2 1.5 16.9
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 method *ASTM D7844 *ASTM D7624 *ASTM D76145	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 limit/base >3 >20 >30	7 0 78 1 1248 1377 1281 1595 3536 current 5 5 17.5 33.9	51 <1 30 2 360 2026 975 1303 3315 history1 21 13 33 history1 1.6 18.3 35.7	52 0 33 2 375 2029 1015 1306 3343 history2 22 8 35 history2 1.5 16.9 34.6
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method *ASTM D7844 *ASTM D7624 *ASTM D7415 method	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 limit/base >3 >20 >30 limit/base	7 0 78 1 1248 1377 1281 1595 3536 current 5 5 17.5 33.9 current	51 <1 30 2 360 2026 975 1303 3315 history1 21 13 33 history1 1.6 18.3 35.7 history1	52 0 33 2 375 2029 1015 1306 3343 history2 22 8 35 history2 1.5 16.9 34.6 history2



OIL ANALYSIS REPORT

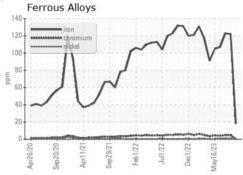


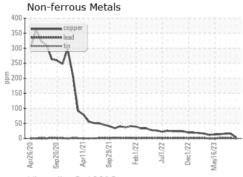


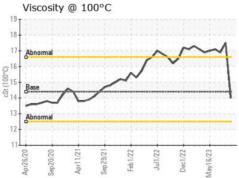
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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

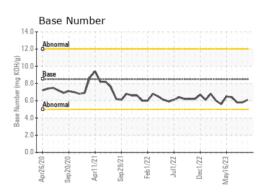
FLUID PROPERTIES		method				history2
Visc @ 100°C	cSt	ASTM D445	14.4	14.0	17.5	16.9

GRAPHS













Certificate L2367

Laboratory Sample No.

Lab Number Unique Number : 10670619 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : 05964068

: WC0857175

Received : 28 Sep 2023 Diagnosed

: 01 Oct 2023 Diagnostician : Don Baldridge

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - 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)

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OKLAHOMA CITY, OK US 73149

Contact: Loran Cottle l.cottle@ldi89.com T: (910)970-0291

F: x: