

OIL ANALYSIS REPORT

GEORGIA 7317

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

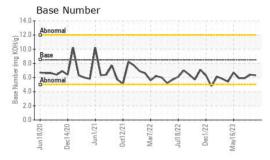
Fluid Condition

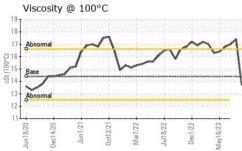
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0857173	WC0754725	WC0754704
Sample Date		Client Info		22 Sep 2023	01 Aug 2023	06 Jun 2023
Machine Age	mls	Client Info		157075	149808	146201
Oil Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	V	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	27	68	69
Chromium	ppm	ASTM D5185m	>20	2	2	2
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	12	12	12
Lead	ppm	ASTM D5185m	>40	<1	3	4
Copper	ppm	ASTM D5185m	>330	4	14	15
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
0 1 1	nnm	ASTM D5185m		^	0	0
Cadmium	ppm	ASTIVI DOTOSIII		0	0	U
ADDITIVES	ррпп	method	limit/base	current	history1	history2
	ppm		limit/base			-
ADDITIVES		method		current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	250	current	history1 42	history2 49
ADDITIVES Boron Barium	ppm	method ASTM D5185m ASTM D5185m	250 10	current <1	history1 42 <1	history2 49
ADDITIVES Boron Barium Molybdenum	ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	250 10	current <1 0 67	history1 42 <1 28	history2 49 0 27
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100	current <1 0 67 2	history1 42 <1 28 1	history2 49 0 27
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450	current <1 0 67 2 1103	history1 42 <1 28 1 100	history2 49 0 27 1 52
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000	current <1 0 67 2 1103 1151	history1 42 <1 28 1 100 2218	history2 49 0 27 1 52 2434
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	method ASTM D5185m	250 10 100 450 3000 1150	current <1 0 67 2 1103 1151 1086	history1 42 <1 28 1 100 2218 949	history2 49 0 27 1 52 2434 1009
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	250 10 100 450 3000 1150 1350	current <1 0 67 2 1103 1151 1086 1364	history1 42 <1 28 1 100 2218 949 1253	history2 49 0 27 1 52 2434 1009 1284
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base	current <1 0 67 2 1103 1151 1086 1364 3118	history1 42 <1 28 1 100 2218 949 1253 3268	history2 49 0 27 1 52 2434 1009 1284 3110
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base	current <1 0 67 2 1103 1151 1086 1364 3118 current	history1 42 <1 28 1 100 2218 949 1253 3268 history1	history2 49 0 27 1 52 2434 1009 1284 3110 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base	current <1 0 67 2 1103 1151 1086 1364 3118 current	history1 42 <1 28 1 100 2218 949 1253 3268 history1	history2 49 0 27 1 52 2434 1009 1284 3110 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158	current <1 0 67 2 1103 1151 1086 1364 3118 current 7	history1 42 <1 28 1 100 2218 949 1253 3268 history1 14	history2 49 0 27 1 52 2434 1009 1284 3110 history2 15 5
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20	current <1 0 67 2 1103 1151 1086 1364 3118 current 7 5	history1 42 <1 28 1 100 2218 949 1253 3268 history1 14 8 17	history2 49 0 27 1 52 2434 1009 1284 3110 history2 15 5 19
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 limit/base >3	current <1 0 67 2 1103 1151 1086 1364 3118 current 7 5 16 current	history1 42 <1 28 1 100 2218 949 1253 3268 history1 14 8 17 history1	history2 49 0 27 1 52 2434 1009 1284 3110 history2 15 5 19 history2
ADDITIVES 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	method ASTM D5185m method 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 >3	current <1 0 67 2 1103 1151 1086 1364 3118 current 7 5 16 current	history1 42 <1 28 1 100 2218 949 1253 3268 history1 14 8 17 history1 1.5	history2 49 0 27 1 52 2434 1009 1284 3110 history2 15 5 19 history2 1.5
ADDITIVES 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	method 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	current <1 0 67 2 1103 1151 1086 1364 3118 current 7 5 16 current 1.5	history1 42 <1 28 1 100 2218 949 1253 3268 history1 14 8 17 history1 1.5 16.2	history2 49 0 27 1 52 2434 1009 1284 3110 history2 15 5 19 history2 1.5
ADDITIVES 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	method ASTM D5185m method *ASTM D5185m ASTM D5185m *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7415	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 limit/base >3 >20 >30	current <1 0 67 2 1103 1151 1086 1364 3118 current 7 5 16 current 1.5 15.4 31.3	history1 42 <1 28 1 100 2218 949 1253 3268 history1 14 8 17 history1 1.5 16.2 32.2	history2 49 0 27 1 52 2434 1009 1284 3110 history2 15 5 19 history2 1.5 15.9 33.1



OIL ANALYSIS REPORT

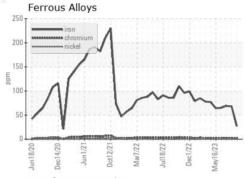


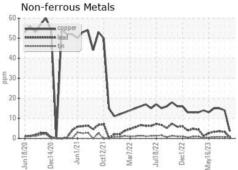


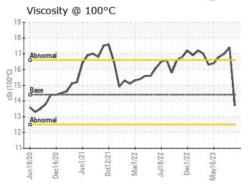
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

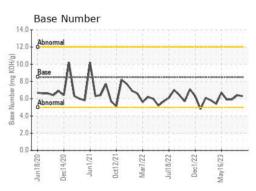
FLUID PROPERTIES		method			history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	13.7	17.4	17.0

GRAPHS













Certificate L2367

Laboratory Sample No. Lab Number Test Package : FLEET

Unique Number : 10670630

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : WC0857173 : 05964079

Received Diagnosed Diagnostician : Don Baldridge

: 28 Sep 2023 : 01 Oct 2023

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)

LIBERTY DISPOSAL

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US 73149 Contact: Loran Cottle l.cottle@ldi89.com T: (910)970-0291

F: x: