

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id 812033

Component Diesel Engine Fluid DIESEL ENGINE OIL SAE 15W40 (--- Shots)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

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.

		Jan2022	Apr2022 Oct2022 I	Dec2022 Jan2023 Apr2023	Jul2023	
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0080392	GFL0066734	GFL0058674
Sample Date		Client Info		17 Jul 2023	18 Apr 2023	23 Jan 2023
Machine Age	hrs	Client Info		4039	3435	2971
Oil Age	hrs	Client Info		600	600	600
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATI	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	13	5	8
Chromium	ppm	ASTM D5185m	>20	<1	0	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	6	4	5
Lead	ppm	ASTM D5185m	>40	0	0	<1
Copper	ppm	ASTM D5185m	>330	<1	<1	1
Tin	ppm	ASTM D5185m	>15	0	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
Cadmium ADDITIVES	ppm	ASTM D5185m method	limit/base	0 current	0 history1	0 history2
ADDITIVES	ppm ppm		limit/base 250	-	-	-
ADDITIVES Boron		method		current	history1	history2
ADDITIVES Boron Barium	ppm	method ASTM D5185m	250	current 0	history1 2	history2 4
ADDITIVES Boron Barium Molybdenum	ppm ppm	method ASTM D5185m ASTM D5185m	250 10	current 0 0	history1 2 1	history2 4 2
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	250 10	current 0 0 63	history1 2 1 56	history2 4 2 59
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100	current 0 0 63 <1	history1 2 1 56 <1	history2 4 2 59 <1
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450	Current 0 0 63 <1 1036	history1 2 1 56 <1 946	history2 4 2 59 <1 891
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	methodASTM D5185mASTM D5185mASTM D5185mASTM D5185mASTM D5185mASTM D5185m	250 10 100 450 3000	current 0 63 <1 1036 1163	history1 2 1 56 <1 946 1043	history2 4 2 59 <1 891 1033
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150	current 0 0 63 <1 1036 1163 1065	history1 2 1 56 <1 946 1043 884	history2 4 2 59 <1 891 1033 934
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350	current 0 0 63 <1 1036 1163 1065 1374	history1 2 1 56 <1 946 1043 884 1120	history2 4 2 59 <1 891 1033 934 1185
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250	current 0 0 63 <1 1036 1163 1065 1374 3630	history1 2 1 56 <1 946 1043 884 1120 2937	history2 4 2 59 <1 891 1033 934 1185 3168
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m 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	current 0 0 63 <1 1036 1163 1065 1374 3630 current	history1 2 1 56 <1	history2 4 2 59 <1 891 1033 934 1185 3168 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method 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 limit/base >25 >158	current 0 0 63 <1 1036 1163 1065 1374 3630 current 4	history1 2 1 56 <1	history2 4 2 59 <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS	method ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158	current 0 0 63 <1 1036 1163 1065 1374 3630 current 4 <1	history1 2 1 56 <1	history2 4 2 59 <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS	method ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20	current 0 0 63 <1 1036 1163 1065 1374 3630 current 4 <1 <1	history1 2 1 56 <1	history2 4 2 59 <1
ADDITIVES 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	method ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 limit/base >3	current 0 0 63 <1 1036 1163 1065 1374 3630 current 4 <1 <1 <1 current	history1 2 1 56 <1	history2 4 2 59 <1
ADDITIVES 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	method ASTM D5185m	250 10 100 450 3000 1150 1350 4250 iimit/base >25 >158 >20 iimit/base >3 >20	current 0 0 63 <1 1036 1163 1065 1374 3630 current 4 <1 <1 <1 0.4	history1 2 1 56 <1	history2 4 2 59 <1
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ADDITIVES 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 ppm	method ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 imit/base >25 >158 >20 imit/base >3 >20	current 0 63 <1 1036 1163 1065 1374 3630 current 4 <1 <1 ourrent 0.4 8.1 20.3	history1 2 1 56 <1	history2 4 2 59 <1



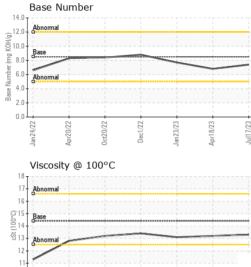
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Jan24/22

Apr20/22

OIL ANALYSIS REPORT

VISUAL



0ct20/22

Certificate L2367	Labora Sample Lab Nu Unique Test Pa	No. : mber : Number :	WearChecl GFL008039 05903079 10564435 FLEET		501 Madison Ave., Cary, NC 2751 Received : 20 Jul 2023 Diagnosed : 20 Jul 2023 Diagnostician : Wes Davis vice at 1-800-237-1369. 17025 scope of accreditation.			7513	 I3 GFL Environmental - 892 - Pauls Valley Hauling 405 East Airport Industrial Road Pauls Valley, OK US 73075 Contact: Tony Graham tgraham2@wcamerica.com T: 						
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	:	Debris Sand/Dirt		scalar scalar		NONE NONE		ONE ONE		NONE NONE		NONE NONE			
		Precipitate Silt		scalar scalar		NONE NONE		ONE ONE		NONE NONE		NONE NONE			
			White Meta Yellow Meta		scalar scalar		NONE NONE		ONE ONE		NONE NONE		NONE NONE		

Contact/Location: Tony Graham - GFL892