

OIL ANALYSIS REPORT

Sample Rating Trend







Machine Id **223086** Component Discosed Engline

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

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

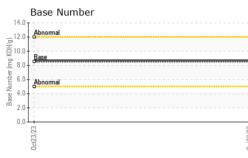
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

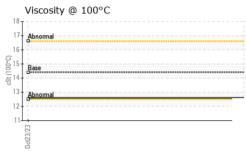
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0095280		
Sample Date		Client Info		23 Oct 2023		
Machine Age	mls	Client Info		203114		
Oil Age	mls	Client Info		0		
Oil Changed		Client Info		Changed		
Sample Status				NORMAL		
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0		
Glycol		WC Method		NEG		
WEAR METAL	0	mathad	limit/booo	ourroat	biotomut	history ()
	5	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	19		
Chromium	ppm	ASTM D5185m		<1		
Nickel	ppm	ASTM D5185m	>2	<1		
Titanium	ppm	ASTM D5185m	>2	0		
Silver	ppm	ASTM D5185m	>2	0		
Aluminum	ppm	ASTM D5185m	>25	1		
Lead	ppm	ASTM D5185m	>40	1		
Copper	ppm	ASTM D5185m	>330	2		
Tin	ppm	ASTM D5185m	>15	<1		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	ASTM D5185m	limit/base 250	current 12	history1	history2
	ppm ppm		250 10	12 0		
Boron		ASTM D5185m	250	12 0 52		
Boron Barium Molybdenum Manganese	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100	12 0 52 0		
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10	12 0 52 0 725		
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000	12 0 52 0 725 1405		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150	12 0 52 0 725 1405 1039		
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	250 10 100 450 3000 1150 1350	12 0 52 0 725 1405 1039 1112	 	
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	250 10 100 450 3000 1150	12 0 52 0 725 1405 1039	 	
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	250 10 100 450 3000 1150 1350	12 0 52 0 725 1405 1039 1112	 	
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	250 10 100 450 3000 1150 1350 4250	12 0 52 0 725 1405 1039 1112 3044		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	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	250 10 100 450 3000 1150 1350 4250	12 0 52 0 725 1405 1039 1112 3044 current	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm TS	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	12 0 52 0 725 1405 1039 1112 3044 current	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158	12 0 52 0 725 1405 1039 1112 3044 <u>current</u> 4 7	 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20	12 0 52 0 725 1405 1039 1112 3044 current 4 7 3	 history1 	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 limit/base >3	12 0 52 0 725 1405 1039 1112 3044 <i>current</i> 4 7 3 <i>current</i>	 history1 history1	 history2 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 TS ppm ppm	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 limit/base >3	12 0 52 0 725 1405 1039 1112 3044 <i>current</i> 4 7 3 <i>current</i> 0.2	 history1 history1 history1	 history2 history2 history2
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	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 limit/base >3 >20	12 0 52 0 725 1405 1039 1112 3044 <i>current</i> 4 7 3 <i>current</i> 0.2 6.4	 history1 history1 history1	 history2 history2 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	250 10 100 450 3000 1150 1350 4250 imit/base >25 >158 >20 imit/base >3 >20	12 0 52 0 725 1405 1039 1112 3044 <i>current</i> 4 7 3 <i>current</i> 0.2 6.4 18.0	 history1 history1 history1	 history2 history2 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 D7844 *ASTM D7624	250 10 100 450 3000 1150 1350 4250 limit/base >25 >158 >20 limit/base >3 >20	12 0 52 0 725 1405 1039 1112 3044 <i>current</i> 4 7 3 <i>current</i> 0.2 6.4 18.0	 history1 history1 history1 history1	 history2 history2 history2 history2



OIL ANALYSIS REPORT

VISUAL





	White Metal	scalar	*Visual	NONE	NONE		
	Yellow Metal	scalar	*Visual	NONE	NONE		
	Precipitate	scalar	*Visual	NONE	NONE		
	Silt	scalar	*Visual	NONE	NONE		
	Debris	scalar	*Visual	NONE	NONE		
	Sand/Dirt	scalar	*Visual	NONE	NONE		
	Appearance	scalar	*Visual	NORML	NORML		
	Odor	scalar	*Visual	NORML	NORML		
	Emulsified Water	scalar	*Visual		NORML		
				>0.2			
	Free Water	scalar	*Visual		NEG		
	FLUID PROPE	RTIES	method	limit/base	current	history1	history
١.	Visc @ 100°C	cSt	ASTM D445	14.4	12.6		
	GRAPHS						
2	Ferrous Alloys						
2	iron						
1	5+ mickel						
Ed 1	0						
д.							
	5						
	-						
1	0						
				3/23			
	0ct23/23			0ct23/23			
	Non-ferrous Metal	s					
1	⁰ T:						
	copper						
	8 accesses lead						
	8 accesses lead						
	8 - tin						
	8 - tin						
bpm	8 - tin						
bpm	8 +						
mqq	8 +			33			
mqq	8 +			ct23/23			
mqq	8 +			0:c23/23			
mqq	Viscosity @ 100°C				Base Number		
udd	Viscosity @ 100°C			14	.0 T		
udd 1 1	Viscosity @ 100°C			14	.0 T		
udd .	Viscosity @ 100°C			14	.0 - Abnormal		
udd .	Viscosity @ 100°C			14	.0 .0 .0 Base		
uudd	Viscosity @ 100°C			14	Abnormal		
udd .	Viscosity @ 100°C			14	0 0 0 0 0 0 0 0 0 0 0 0 0 0		
cSt (100°C)	8 Image: search of the search of			14 12 (6)HOX 00) 00) 00) 00) 00 00 00 00 00 00 00 00	0 Abnomal 0 Base 0 Abnomal 0 Abnomal		
mqq 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Viscosity @ 100°C			14 12 (0)HOX 00 BW) 4 4 4 2	.0 .0 .0 .0 .0 .0 .0 .0 .0 .0		
cSt (100°C)	8 Image: second sec			14 12 (5)H00 MW argumun 88 89 2 0	Abnomal Base Abnomal Abnomal Abnomal		
mdd 1 100.cC)	8 Image: second sec			14 12 (5)H00 MW argumun 88 89 2 0	Abnomal Base Abnomal Abnomal Abnomal		
mdd 1 100.cC)	Viscosity @ 100°C			14 12 (0)HOX 00 BW) 4 4 4 2	.0 .0 .0 .0 .0 .0 .0 .0 .0 .0		
udd 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	8 Image: search of the search of		son Ave Ca	14 12 (0)HOX 00 00 120 120 120 120 120 120 120 120 12	Abnomal Base Abnomal Abnomal CENTRA	onmental - 421 - Hur	ntington Road H
bbm 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Viscosity @ 100°C			14 12 (0)HOX 00 00 120 120 120 120 120 120 120 120 12	Abnomal Base Abnomal Abnomal CENTRA	onmental - 421 - Hur 3204 Lowe	
udd 1 1 1 (0.001) 15 1 1 1 1	Viscosity @ 100°C	01 Madia Received Diagnoso	ad :31 ad :31	14 19 19 10 10 10 10 10 10 10 10 10 10	Abnomal Base Abnomal Abnomal CENTRA	3204 Lowe	er Huntingtor ORT WAYNE
udd 1 1 (0-001) 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Viscosity @ 100°C	01 Madia	ad :31 ad :31	14 19 10 10 10 10 10 10 10 10 10 10	Abnomal Base Abnomal Abnomal CENTRA	3204 Lowe FC	er Huntingtor

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)

Certificate L2367

Contact/Location: See also GFL401,402,421,421A - Stephanie Burton - GFL421