

OIL ANALYSIS REPORT

CONSTRUCTORS, INC **CHEVROLET GASOLINE 03-0332** Component

Gasoline Engine

MOBIL CLEAN 5W30 5000 (--- GAL)

Recommendation

Resample at the next service interval to monitor.

Wear

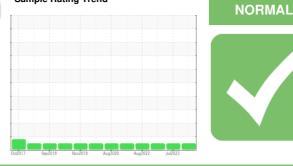
All component wear rates are normal.

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.



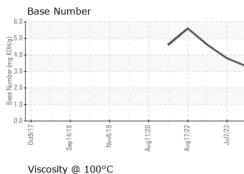
Sample Rating Trend

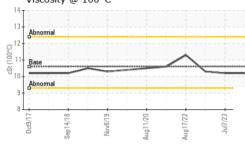


SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		SBP0004566	SBP0004524	SBP0002261
Sample Date		Client Info		22 Sep 2023	07 Jul 2023	20 Jan 2023
Machine Age	hrs	Client Info		8780	8498	8187
Oil Age	hrs	Client Info		282	311	378
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	٧	method	limit/base	current	history1	history2
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>150	27	34	36
Chromium	ppm	ASTM D5185m	>20	2	2	2
Nickel	ppm	ASTM D5185m	>5	0	<1	2
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>40	1	5	4
Lead	ppm	ASTM D5185m	>50	<1	<1	0
Copper	ppm	ASTM D5185m	>155	11	16	24
Tin	ppm	ASTM D5185m	>10	0	<1	0
Vanadium	ppm	ASTM D5185m		<1	<1	<1
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 17	history1 33	history2 28
	ppm ppm		limit/base			
Boron		ASTM D5185m	limit/base	17	33	28
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	17 0	33 1	28 1
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	17 0 69	33 1 72	28 1 66
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	17 0 69 <1	33 1 72 <1	28 1 66 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	17 0 69 <1 542 1301 692	33 1 72 <1 533 1286 674	28 1 66 <1 446
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	limit/base	17 0 69 <1 542 1301 692 835	33 1 72 <1 533 1286 674 828	28 1 66 <1 446 1108 601 717
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	17 0 69 <1 542 1301 692	33 1 72 <1 533 1286 674	28 1 66 <1 446 1108 601
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	limit/base	17 0 69 <1 542 1301 692 835	33 1 72 <1 533 1286 674 828	28 1 66 <1 446 1108 601 717
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		17 0 69 <1 542 1301 692 835 3445	33 1 72 <1 533 1286 674 828 3296	28 1 66 <1 446 1108 601 717 2407
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	17 0 69 <1 542 1301 692 835 3445 current	33 1 72 <1 533 1286 674 828 3296 history1	28 1 66 <1 446 1108 601 717 2407 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	limit/base	17 0 69 <1 542 1301 692 835 3445 <u>current</u> 14	33 1 72 <1 533 1286 674 828 3296 history1 15	28 1 66 <1 446 1108 601 717 2407 history2 13
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	limit/base >30 >400	17 0 69 <1 542 1301 692 835 3445 <u>current</u> 14 4	33 1 72 <1 533 1286 674 828 3296 history1 15 3	28 1 66 <1 446 1108 601 717 2407 history2 13 5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >30 >400 >20	17 0 69 <1 542 1301 692 835 3445 <u>current</u> 14 4 6	33 1 72 <1 533 1286 674 828 3296 history1 15 3 4	28 1 66 <1 446 1108 601 717 2407 history2 13 5 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >30 >400 >20 limit/base	17 0 69 <1 542 1301 692 835 3445 <u>current</u> 14 4 6 <u>current</u>	33 1 72 <1 533 1286 674 828 3296 history1 15 3 4 history1	28 1 66 <1 446 1108 601 717 2407 history2 13 5 2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m ASTM D5185m	limit/base >30 >400 >20 limit/base	17 0 69 <1 542 1301 692 835 3445 current 14 4 6 current 0	33 1 72 <1 533 1286 674 828 3296 history1 15 3 4 history1 0	28 1 66 <1 446 1108 601 717 2407 history2 13 5 2 history2 0.1
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 ASTM D5185m	limit/base >30 >400 >20 limit/base >20	17 0 69 <1 542 1301 692 835 3445 <u>current</u> 14 4 6 <u>current</u> 0 10.3	33 1 72 <1 533 1286 674 828 3296 history1 15 3 4 history1 0 10.7	28 1 66 <1 446 1108 601 717 2407 history2 13 5 2 history2 0.1 11.2
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 ASTM D5185m	Imit/base >30 >400 >20 Imit/base >20 ≥20 ≥20 ≥20 ≥20 ≥20	17 0 69 <1 542 1301 692 835 3445 current 14 4 6 current 0 10.3 22.7	33 1 72 <1 533 1286 674 828 3296 history1 15 3 4 history1 0 10.7 23.0	28 1 66 <1 446 1108 601 717 2407 history2 13 5 2 history2 0.1 11.2 22.5

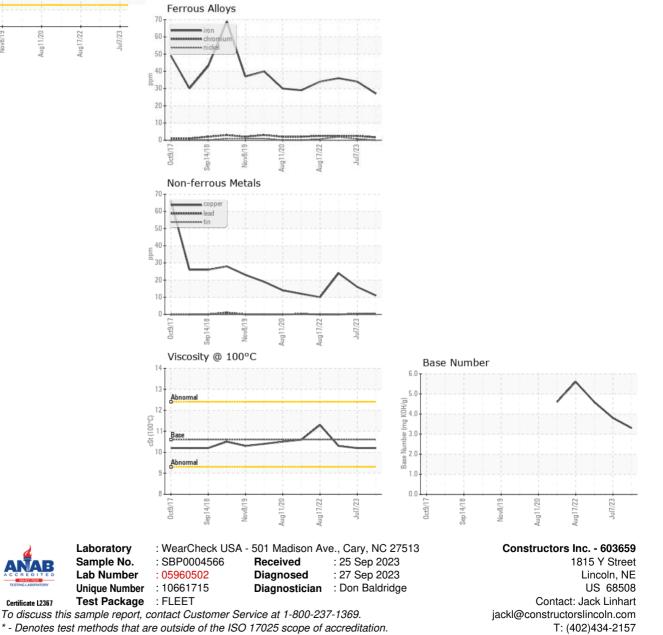


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VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*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 PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	10.6	10.2	10.2	10.3
GRAPHS						



Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Certificate L2367

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