

OIL ANALYSIS REPORT

Area CONSTRUCTORS, INC 04-0628

Component Gasoline Engine Fluid MOBIL 1 5W30 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

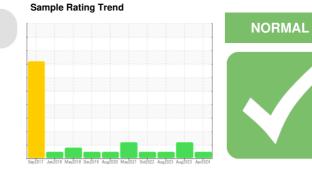
All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

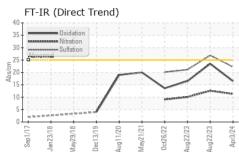
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

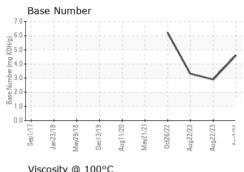


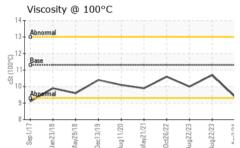
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		SBP0006397	SBP0004633	SBP0004637
Sample Date		Client Info		03 Apr 2024	22 Aug 2023	22 Aug 2023
Machine Age	hrs	Client Info		7209	7000	7365
Oil Age	hrs	Client Info		209	379	365
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	ABNORMAL	NORMAL
CONTAMINATION	N	method	limit/base	current	history1	history2
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>150	21	36	31
Chromium	ppm	ASTM D5185m	>20	2	2	2
Nickel	ppm	ASTM D5185m	>5	1	<1	<1
Titanium	ppm	ASTM D5185m	-	<1	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>40	5	6	6
Lead	ppm	ASTM D5185m	>50	<1	0	0
Copper	ppm	ASTM D5185m		7	10	14
Tin	ppm	ASTM D5185m	>10	1	0	0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base 94	current 24	history1 31	history2 45
	ppm ppm		94		· · · · ·	
Boron		ASTM D5185m	94	24	31	45
Boron Barium	ppm	ASTM D5185m ASTM D5185m	94 0.0	24 <1	31 0	45 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	94 0.0	24 <1 68	31 0 76	45 0 77
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	94 0.0 0.0	24 <1 68 1	31 0 76 <1	45 0 77 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	94 0.0 0.0 1388	24 <1 68 1 496	31 0 76 <1 525	45 0 77 <1 567
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	94 0.0 0.0 1388 820	24 <1 68 1 496 1179	31 0 76 <1 525 1302	45 0 77 <1 567 1343
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	94 0.0 0.0 1388 820 720	24 <1 68 1 496 1179 684	31 0 76 <1 525 1302 692	45 0 77 <1 567 1343 716
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	94 0.0 0.0 1388 820 720 780	24 <1 68 1 496 1179 684 746	31 0 76 <1 525 1302 692 851	45 0 77 <1 567 1343 716 843
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	94 0.0 0.0 1388 820 720 780 2240	24 <1 68 1 496 1179 684 746 2976	31 0 76 <1 525 1302 692 851 3244	45 0 77 <1 567 1343 716 843 3437
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	94 0.0 0.0 1388 820 720 780 2240	24 <1 68 1 496 1179 684 746 2976 current	31 0 76 <1 525 1302 692 851 3244 history1	45 0 77 <1 567 1343 716 843 3437 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	94 0.0 0.0 1388 820 720 780 2240 limit/base >30	24 <1 68 1 496 1179 684 746 2976 current 13	31 0 76 <1 525 1302 692 851 3244 history1 23	45 0 77 <1 567 1343 716 843 3437 history2 16
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 ASTM D5185m ASTM D5185m	94 0.0 0.0 1388 820 720 780 2240 limit/base >30 >400	24 <1 68 1 496 1179 684 746 2976 current 13 4	31 0 76 <1 525 1302 692 851 3244 history1 23 4	45 0 77 <1 567 1343 716 843 3437 history2 16 3
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	94 0.0 0.0 1388 820 720 780 2240 2240 limit/base >30 >400 >20	24 <1 68 1 496 1179 684 746 2976 current 13 4 2	31 0 76 <1 525 1302 692 851 3244 history1 23 4 <1	45 0 77 <1 567 1343 716 843 3437 history2 16 3 <1
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	94 0.0 0.0 1388 820 720 780 2240 2240 2240 230 >30 >400 >20	24 <1 68 1 496 1179 684 746 2976 current 13 4 2 2	31 0 76 <1 525 1302 692 851 3244 history1 23 4 <1 23 4 <1	45 0 77 <1 567 1343 716 843 3437 history2 16 3 <1 history2
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 ASTM D5185m	94 0.0 0.0 1388 820 720 780 2240 2240 2240 230 >30 >400 >20	24 <1 68 1 496 1179 684 746 2976 current 13 4 2 current 0.1	31 0 76 <1 525 1302 692 851 3244 history1 23 4 <1 history1 0.1	45 0 77 <1 567 1343 716 843 3437 history2 16 3 <1 history2 0
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	94 0.0 0.0 1388 820 720 780 2240 2240 <i>limit/base</i> >30 >400 >20	24 <1 68 1 496 1179 684 746 2976 current 13 4 2 current 0.1 11.3	31 0 76 <1 525 1302 692 851 3244 history1 23 4 <1 history1 0.1 12.6	45 0 77 <1 567 1343 716 843 3437 history2 16 3 <1 16 3 <1 history2 0 0 10.1
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	94 0.0 0.0 1388 820 720 780 2240 imit/base >30 >400 >20 imit/base	24 <1 68 1 496 1179 684 746 2976 current 13 4 2 current 0.1 11.3 22.2	31 0 76 <1 525 1302 692 851 3244 history1 23 4 <1 history1 0.1 12.6 26.9	45 0 77 <1 567 1343 716 843 3437 history2 16 3 <1 history2 0 10.1 21.1
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 D7844 *ASTM D7624 *ASTM D7415	94 0.0 1.0 1388 820 720 780 2240 Iimit/base >30 >400 >20 Iimit/base >20 >30 >30 >20	24 <1 68 1 496 1179 684 746 2976 <i>current</i> 13 4 2 <i>current</i> 0.1 11.3 22.2	31 0 76 <1 525 1302 692 851 3244 history1 23 4 <1 history1 0.1 12.6 26.9 history1	45 0 77 <1 567 1343 716 843 3437 history2 16 3 <1 history2 0 10.1 21.1 history2



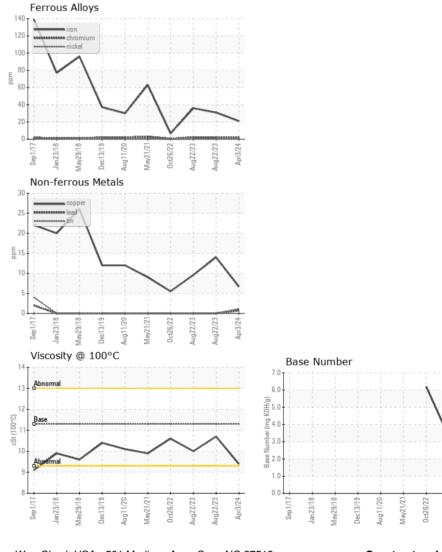
OIL ANALYSIS REPORT







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 PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	11.3	9.4	10.7	10.0
GRAPHS						



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Constructors Inc. - 603659 Sample No. : SBP0006397 Received : 09 Apr 2024 1815 Y Street Lab Number : 06143525 Tested : 10 Apr 2024 Lincoln, NE US 68508 Unique Number : 10968333 Diagnosed : 10 Apr 2024 - Wes Davis Test Package : FLEET Contact: Loren Michael Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. LorenM@constructorslincoln.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (402)434-2157 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F:

Report Id: CONLINNE [WUSCAR] 06143525 (Generated: 04/10/2024 13:41:38) Rev: 1

Submitted By: Loren Michael

ug22/23 ug22/23 Apr3/24

Page 2 of 2