

OIL ANALYSIS REPORT

Pillen Family Farms LSTK49

Component **Diesel Engine**

DIESEL ENGINE OIL SAE 40 (--- GAL)

Sample Rating Trend



Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample. 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

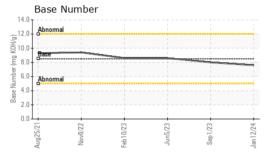
Fluid Condition

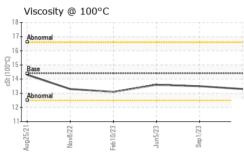
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		SBP0006238	SBP0002417	SBP0002425
Sample Date		Client Info		12 Jan 2024	01 Sep 2023	05 Jun 2023
Machine Age	mls	Client Info		12000	0	0
Oil Age	mls	Client Info		12000	0	0
Oil Changed		Client Info		Not Changd	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	1	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<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	>100	42	45	29
Chromium	ppm	ASTM D5185m	>20	2	2	2
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	<1	<1	1
Lead	ppm	ASTM D5185m	>40	4	2	2
Copper	ppm	ASTM D5185m	>330	<1	<1	<1
Tin	ppm	ASTM D5185m	>15	3	2	2
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 0	history1	history2
	ppm ppm					
Boron		ASTM D5185m	250	0	1	2
Boron Barium	ppm	ASTM D5185m ASTM D5185m	250 10	0	1	2
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450	0 0 59 <1 878	1 0 60	2 0 59
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100	0 0 59 <1	1 0 60 <1	2 0 59 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150	0 0 59 <1 878 974 1001	1 0 60 <1 987 1068 1129	2 0 59 <1 995 1109
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150	0 0 59 <1 878 974	1 0 60 <1 987 1068 1129 1338	2 0 59 <1 995 1109
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 ASTM D5185m	250 10 100 450 3000 1150 1350 4250	0 0 59 <1 878 974 1001	1 0 60 <1 987 1068 1129	2 0 59 <1 995 1109
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base	0 0 59 <1 878 974 1001 1147 2837	1 0 60 <1 987 1068 1129 1338 3241 history1	2 0 59 <1 995 1109 1091 1343 3938 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25	0 0 59 <1 878 974 1001 1147 2837 current	1 0 60 <1 987 1068 1129 1338 3241 history1	2 0 59 <1 995 1109 1091 1343 3938 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >216	0 0 59 <1 878 974 1001 1147 2837 current 2	1 0 60 <1 987 1068 1129 1338 3241 history1	2 0 59 <1 995 1109 1091 1343 3938 history2 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >216 >20	0 0 59 <1 878 974 1001 1147 2837 current	1 0 60 <1 987 1068 1129 1338 3241 history1 3 1	2 0 59 <1 995 1109 1091 1343 3938 history2 4 1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >216 >20 limit/base	0 0 59 <1 878 974 1001 1147 2837 current 2 1 0	1 0 60 <1 987 1068 1129 1338 3241 history1 3 1 2	2 0 59 <1 995 1109 1091 1343 3938 history2 4 1 2
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 Method *ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >216 >20 limit/base	0 0 59 <1 878 974 1001 1147 2837 current 2 1 0	1 0 60 <1 987 1068 1129 1338 3241 history1 3 1 2	2 0 59 <1 995 1109 1091 1343 3938 history2 4 1 2 history2
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 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 >216 >20 limit/base	0 0 59 <1 878 974 1001 1147 2837 current 2 1 0 current 2 9.4	1 0 60 <1 987 1068 1129 1338 3241 history1 3 1 2 history1 2.1 8.7	2 0 59 <1 995 1109 1091 1343 3938 history2 4 1 2 history2 1.5 8.0
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 Method *ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >216 >20 limit/base	0 0 59 <1 878 974 1001 1147 2837 current 2 1 0	1 0 60 <1 987 1068 1129 1338 3241 history1 3 1 2	2 0 59 <1 995 1109 1091 1343 3938 history2 4 1 2 history2
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 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 >216 >20 limit/base	0 0 59 <1 878 974 1001 1147 2837 current 2 1 0 current 2 9.4	1 0 60 <1 987 1068 1129 1338 3241 history1 3 1 2 history1 2.1 8.7	2 0 59 <1 995 1109 1091 1343 3938 history2 4 1 2 history2 1.5 8.0
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 Method *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 >216 >20 limit/base >3 >20 >30	0 0 59 <1 878 974 1001 1147 2837 current 2 1 0 current 2 9.4 22.2	1 0 60 <1 987 1068 1129 1338 3241 history1 3 1 2 history1 2.1 8.7 22.0	2 0 59 <1 995 1109 1091 1343 3938 history2 4 1 2 history2 1.5 8.0 21.2



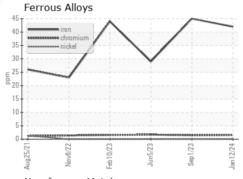
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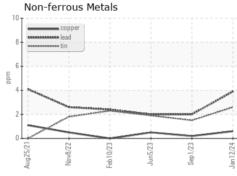


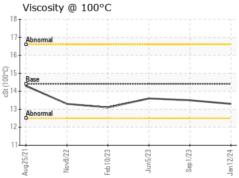


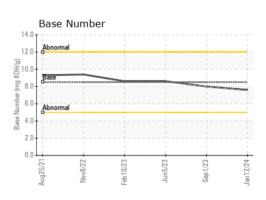
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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 PROPERTIES		method	ilmii/base		nistory i	nistory2
Visc @ 100°C	cSt	ASTM D445	14.4	13.3	13.5	13.6













Certificate L2367

Laboratory Sample No.

Lab Number **Unique Number** Test Package : FLEET

: SBP0006238 : 06077403 : 10859494

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Recieved Diagnosed

: 01 Feb 2024 : 02 Feb 2024 Diagnostician : Wes Davis

Humphrey, NE US 61357 Contact: Troy Runge

Pillen Family Farms - 722828

troyfr@pillenfamilyfarms.com T: (308)390-6733

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)

Report Id: PILHUM [WUSCAR] 06077403 (Generated: 02/02/2024 14:35:41) Rev: 1

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