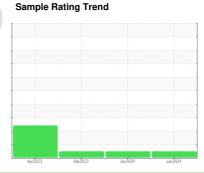


OIL ANALYSIS REPORT

Pillen Family Farms LSTK 69

Component **Diesel Engine**

DIESEL ENGINE OIL SAE 40 (--- GAL)





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

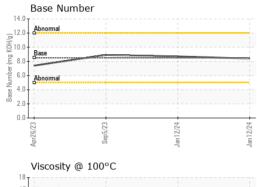
Fluid Condition

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		SBP0006178	SBP0006173	SBP0002418
Sample Date		Client Info		12 Jan 2024	12 Jan 2024	05 Sep 2023
Machine Age	mls	Client Info		12000	12000	0
Oil Age	mls	Client Info		12000	0	0
Oil Changed		Client Info		Not Changd	Not Changd	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	V	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	4	5	7
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	2	3	14
Lead	ppm	ASTM D5185m	>40	1	1	0
Copper	ppm	ASTM D5185m	>330	<1	1	2
Tin	ppm	ASTM D5185m	>15	1	1	<1
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 <1	history2
	ppm					•
Boron		ASTM D5185m	250	0	<1	2
Boron Barium	ppm	ASTM D5185m ASTM D5185m	250 10	0 0	<1	2
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	250 10	0 0 60	<1 0 60	2 0 65
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100	0 0 60 <1	<1 0 60 <1	2 0 65 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450	0 0 60 <1 918	<1 0 60 <1 905	2 0 65 <1 1069
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	0 0 60 <1 918 992	<1 0 60 <1 905 1000	2 0 65 <1 1069 1152
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 ASTM D5185m	250 10 100 450 3000 1150	0 0 60 <1 918 992 1016	<1 0 60 <1 905 1000 1021	2 0 65 <1 1069 1152 1209
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm 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	0 0 60 <1 918 992 1016 1178	<1 0 60 <1 905 1000 1021 1164	2 0 65 <1 1069 1152 1209 1454
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	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	0 0 60 <1 918 992 1016 1178 2957	<1 0 60 <1 905 1000 1021 1164 2965	2 0 65 <1 1069 1152 1209 1454 3568
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 ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base	0 0 60 <1 918 992 1016 1178 2957	<1 0 60 <1 905 1000 1021 1164 2965 history1	2 0 65 <1 1069 1152 1209 1454 3568 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 60 <1 918 992 1016 1178 2957 current	<1 0 60 <1 905 1000 1021 1164 2965 history1	2 0 65 <1 1069 1152 1209 1454 3568 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	250 10 100 450 3000 1150 1350 4250 limit/base >25 >216	0 0 60 <1 918 992 1016 1178 2957 current 4	<1 0 60 <1 905 1000 1021 1164 2965 history1 4	2 0 65 <1 1069 1152 1209 1454 3568 history2 7 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm 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 60 <1 918 992 1016 1178 2957 current 4 2	<1 0 60 <1 905 1000 1021 1164 2965 history1 4 2 13	2 0 65 <1 1069 1152 1209 1454 3568 history2 7 2 43
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm 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 60 <1 918 992 1016 1178 2957 current 4 2 4	<1 0 60 <1 905 1000 1021 1164 2965 history1 4 2 13	2 0 65 <1 1069 1152 1209 1454 3568 history2 7 2 43
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 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 60 <1 918 992 1016 1178 2957 current 4 2 4	<1 0 60 <1 905 1000 1021 1164 2965 history1 4 2 13 history1 0.2	2 0 65 <1 1069 1152 1209 1454 3568 history2 7 2 43 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 60 <1 918 992 1016 1178 2957 current 4 2 4 current 0.2 6.1	<1 0 60 <1 905 1000 1021 1164 2965 history1 4 2 13 history1 0.2 6.2	2 0 65 <1 1069 1152 1209 1454 3568 history2 7 2 43 history2 0.2 6.2
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 Method *ASTM D5185m *ASTM D5185m ASTM D5185m *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	250 10 100 450 3000 1150 1350 4250 limit/base >25 >216 >20 limit/base >3 >20 >30	0 0 60 <1 918 992 1016 1178 2957 current 4 2 4 current 0.2 6.1 18.1	<1 0 60 <1 905 1000 1021 1164 2965 history1 4 2 13 history1 0.2 6.2 18.3	2 0 65 <1 1069 1152 1209 1454 3568 history2 7 2 43 history2 0.2 6.2 18.4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	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 METHOD *ASTM D7844 *ASTM D7624 *ASTM D7415 METHOD	250 10 100 450 3000 1150 1350 4250 limit/base >25 >216 >20 limit/base >3 >20 >30 limit/base >25	0 0 60 <1 918 992 1016 1178 2957 current 4 2 4 current 0.2 6.1 18.1	<1 0 60 <1 905 1000 1021 1164 2965 history1 4 2 13 history1 0.2 6.2 18.3 history1	2 0 65 <1 1069 1152 1209 1454 3568 history2 7 2 43 history2 0.2 6.2 18.4 history2

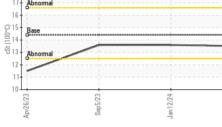


OIL ANALYSIS REPORT

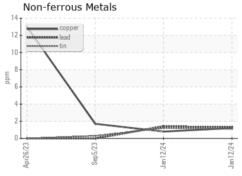


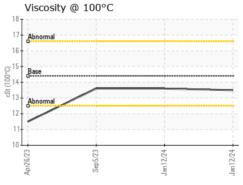
VISUAL		method				history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	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 DDODEDT	150	l	Pare 24 /lean and		In the Landson	h'ataw 0

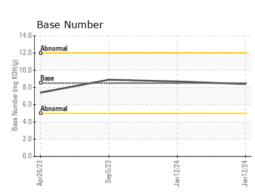
	FLUID PROPE	RTIES	method				history
ase	Visc @ 100°C	cSt	ASTM D445	14.4	13.5	13.6	13.6



Ferrous Alloys









Certificate L2367

Laboratory Sample No. Lab Number Test Package : FLEET

Unique Number : 10859493

: SBP0006178 : 06077402

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Recieved : 01 Feb 2024 Diagnosed : 02 Feb 2024

Diagnostician : Wes Davis

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)

Pillen Family Farms - 722828

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