

# **OIL ANALYSIS REPORT**

# Pillen Family Farms LSTK 68

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

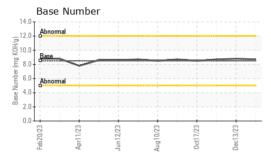
### **Fluid Condition**

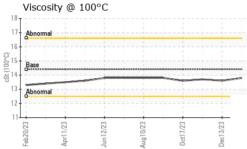
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		SBP0006168	SBP0006163	SBP0006183
Sample Date		Client Info		12 Jan 2024	13 Dec 2023	09 Nov 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	4	5	4
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	0
Aluminum	ppm	ASTM D5185m	>20	1	1	2
Lead	ppm	ASTM D5185m	>40	<1	0	<1
Copper	ppm	ASTM D5185m	>330	<1	<1	<1
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	<1
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	0	2	2
Boron Barium	ppm ppm	ASTM D5185m ASTM D5185m	250 10	0	2	2
Barium	ppm	ASTM D5185m	10	0	0	0
Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	10	0	0 59	0 51
Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	100	0 60 <1	0 59 <1	0 51 0
Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 100 450	0 60 <1 929	0 59 <1 983	0 51 0 954
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 100 450 3000	0 60 <1 929 1008	0 59 <1 983 1117	0 51 0 954 1042
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 100 450 3000 1150	0 60 <1 929 1008 1031	0 59 <1 983 1117 1029	0 51 0 954 1042 969
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	10 100 450 3000 1150 1350	0 60 <1 929 1008 1031 1193	0 59 <1 983 1117 1029 1281	0 51 0 954 1042 969 1227
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	10 100 450 3000 1150 1350 4250	0 60 <1 929 1008 1031 1193 2998	0 59 <1 983 1117 1029 1281 3211	0 51 0 954 1042 969 1227 2600
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	10 100 450 3000 1150 1350 4250 limit/base >25	0 60 <1 929 1008 1031 1193 2998	0 59 <1 983 1117 1029 1281 3211 history1	0 51 0 954 1042 969 1227 2600 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	10 100 450 3000 1150 1350 4250 limit/base >25 >216	0 60 <1 929 1008 1031 1193 2998 current	0 59 <1 983 1117 1029 1281 3211 history1	0 51 0 954 1042 969 1227 2600 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	10 100 450 3000 1150 1350 4250 limit/base >25 >216	0 60 <1 929 1008 1031 1193 2998 current 2	0 59 <1 983 1117 1029 1281 3211 history1 3	0 51 0 954 1042 969 1227 2600 history2 4
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	10 100 450 3000 1150 1350 4250 limit/base >25 >216 >20	0 60 <1 929 1008 1031 1193 2998 current 2 2	0 59 <1 983 1117 1029 1281 3211 history1 3 2	0 51 0 954 1042 969 1227 2600 history2 4 2
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	10 100 450 3000 1150 1350 4250 limit/base >25 >216 >20	0 60 <1 929 1008 1031 1193 2998 current 2 2 1	0 59 <1 983 1117 1029 1281 3211 history1 3 2 2 history1	0 51 0 954 1042 969 1227 2600 history2 4 2 3
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	10 100 450 3000 1150 1350 4250 limit/base >25 >216 >20 limit/base >3 >20	0 60 <1 929 1008 1031 1193 2998 current 2 2 1 current 0.3	0 59 <1 983 1117 1029 1281 3211 history1 3 2 2 history1 0.3	0 51 0 954 1042 969 1227 2600 history2 4 2 3 history2
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  ASTM D5185m	10 100 450 3000 1150 1350 4250 limit/base >25 >216 >20 limit/base >3 >20	0 60 <1 929 1008 1031 1193 2998 current 2 2 1 current 0.3 5.9	0 59 <1 983 1117 1029 1281 3211 history1 3 2 2 history1 0.3 5.7	0 51 0 954 1042 969 1227 2600 history2 4 2 3 history2 0.2 5.7
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 D5185m  ASTM D5185m  ASTM D7844  *ASTM D7624  *ASTM D76145	10 100 450 3000 1150 1350 4250 limit/base >25 >216 >20 limit/base >3 >20 >30 limit/base	0 60 <1 929 1008 1031 1193 2998 current 2 2 1 current 0.3 5.9 18.3	0 59 <1 983 1117 1029 1281 3211 history1 3 2 2 history1 0.3 5.7 18.4	0 51 0 954 1042 969 1227 2600 history2 4 2 3 history2 0.2 5.7 18.2
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  Method  *ASTM D5185m  *ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m  *ASTM D5185m  Method  *ASTM D7844  *ASTM D7624  *ASTM D7415  Method	10 100 450 3000 1150 1350 4250 limit/base >25 >216 >20 limit/base >3 >20 >30 limit/base >25	0 60 <1 929 1008 1031 1193 2998 current 2 2 1 current 0.3 5.9 18.3	0 59 <1 983 1117 1029 1281 3211 history1 3 2 2 history1 0.3 5.7 18.4 history1	0 51 0 954 1042 969 1227 2600 history2 4 2 3 history2 0.2 5.7 18.2 history2



# **OIL ANALYSIS REPORT**

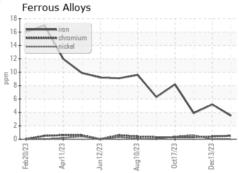


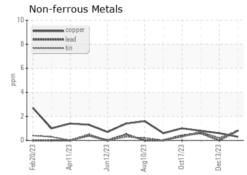


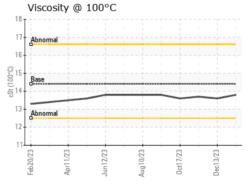
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
<b>Emulsified Water</b>	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

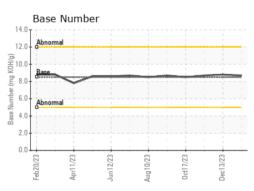
FLUID PROPERTIES		metnoa	ilmit/base	current	nistory i	nistory2
Visc @ 100°C	cSt	ASTM D445	14.4	13.8	13.6	13.7

### **GRAPHS**













Certificate L2367

Laboratory Sample No. Lab Number Test Package : FLEET

**Unique Number** 

: SBP0006168 : 06077379

: 10859470

: 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

26741 NE-91 Humphrey, NE US 61357

Contact: Troy Runge troyfr@pillenfamilyfarms.com

T: (308)390-6733