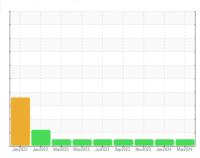


OIL ANALYSIS REPORT

Pillen Family Farms LSTK65

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

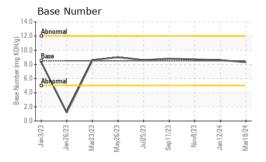
Fluid Condition

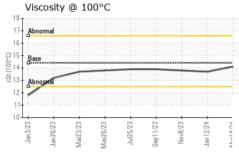
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		SBP0006819	SBP0006241	SBP0006215
Sample Date		Client Info		18 Mar 2024	12 Jan 2024	08 Nov 2023
Machine Age	mls	Client Info		12000	12000	0
Oil Age	mls	Client Info		0	12000	0
Oil Changed		Client Info		Not Changd	Not Changd	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	١	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	9	4	6
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	1
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	2	3
Lead	ppm	ASTM D5185m	>40	0	<1	<1
Copper	ppm	ASTM D5185m	>330	<1	<1	<1
Tin	ppm	ASTM D5185m	>15	0	1	<1
Vanadium	ppm	ASTM D5185m		0	0	<1
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
D						
Boron	ppm	ASTM D5185m	250	<1	0	<1
Barium	ppm ppm	ASTM D5185m ASTM D5185m	250 10	<1 0	0	<1 0
Barium	ppm	ASTM D5185m	10	0	0	0
Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	10	0 56	0 60	0 50
Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	100	0 56 0	0 60 <1	0 50 0
Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 100 450	0 56 0 968	0 60 <1 918	0 50 0 1008
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 100 450 3000	0 56 0 968 1085	0 60 <1 918 1014	0 50 0 1008 786
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 56 0 968 1085 1080	0 60 <1 918 1014 1031	0 50 0 1008 786 859
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 56 0 968 1085 1080	0 60 <1 918 1014 1031 1184	0 50 0 1008 786 859 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 56 0 968 1085 1080 1222 3393	0 60 <1 918 1014 1031 1184 2989	0 50 0 1008 786 859 1227 2848
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 56 0 968 1085 1080 1222 3393	0 60 <1 918 1014 1031 1184 2989	0 50 0 1008 786 859 1227 2848
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 56 0 968 1085 1080 1222 3393 current	0 60 <1 918 1014 1031 1184 2989 history1	0 50 0 1008 786 859 1227 2848 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 56 0 968 1085 1080 1222 3393 current	0 60 <1 918 1014 1031 1184 2989 history1	0 50 0 1008 786 859 1227 2848 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 56 0 968 1085 1080 1222 3393 current 3 2 <1	0 60 <1 918 1014 1031 1184 2989 history1 3 2	0 50 0 1008 786 859 1227 2848 history2 4 <1
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 56 0 968 1085 1080 1222 3393 current 3 2 <1	0 60 <1 918 1014 1031 1184 2989 history1 3 2 3	0 50 0 1008 786 859 1227 2848 history2 4 <1 21
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 56 0 968 1085 1080 1222 3393 current 3 2 <1	0 60 <1 918 1014 1031 1184 2989 history1 3 2 3 history1	0 50 0 1008 786 859 1227 2848 history2 4 <1 21 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 56 0 968 1085 1080 1222 3393 current 3 2 <1 current 0.4 7.4	0 60 <1 918 1014 1031 1184 2989 history1 3 2 3 history1 0.3 6.3	0 50 0 1008 786 859 1227 2848 history2 4 <1 21 history2 0.3 6.4
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	0 56 0 968 1085 1080 1222 3393 current 3 2 <1 current 0.4 7.4 19.0 current	0 60 <1 918 1014 1031 1184 2989 history1 3 2 3 history1 0.3 6.3 18.4 history1	0 50 0 1008 786 859 1227 2848 history2 4 <1 21 history2 0.3 6.4 18.3 history2
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 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 >25	0 56 0 968 1085 1080 1222 3393 current 3 2 <1 current 0.4 7.4 19.0	0 60 <1 918 1014 1031 1184 2989 history1 3 2 3 history1 0.3 6.3 18.4	0 50 0 1008 786 859 1227 2848 history2 4 <1 21 history2 0.3 6.4 18.3



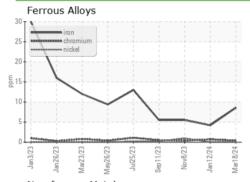
OIL ANALYSIS REPORT

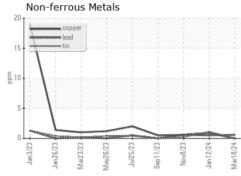


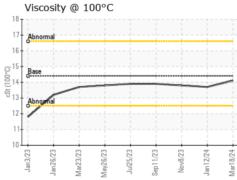


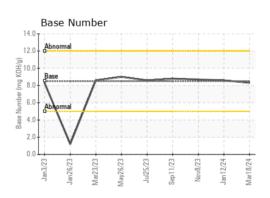
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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 PROPER	RTIES	method				history2
Visc @ 100°C	cSt	ASTM D445	14.4	14.1	13.7	13.8













Certificate L2367

Laboratory Sample No.

: SBP0006819 Lab Number : 06132709 Unique Number: 10952174 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 28 Mar 2024 **Tested** : 30 Mar 2024

Diagnosed : 30 Mar 2024 - Wes Davis

US 61357 Contact: Troy Runge troyfr@pillenfamilyfarms.com T: (308)390-6733

Pillen Family Farms - 722828

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)

26741 NE-91

Humphrey, NE