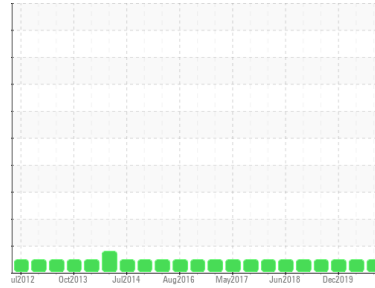




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
PETERBILT 99

Component
Front Diesel Engine

Fluid
CHEVRON URSA SUPER PLUS EC 15W40 (40 QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

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 INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		KLM2339097	KLM2339669	KLM2339901
Sample Date	Client Info		09 Jul 2021	09 Feb 2021	04 Dec 2019
Machine Age	mls	Client Info	1073617	1057186	1025178
Oil Age	mls	Client Info	10000	10000	20000
Oil Changed	Client Info		Not Chngd	Not Chngd	Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	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	18	21	24
Chromium	ppm	ASTM D5185m >20	1	<1	<1
Nickel	ppm	ASTM D5185m >2	0	0	<1
Titanium	ppm	ASTM D5185m >2	0	<1	0
Silver	ppm	ASTM D5185m >2	<1	<1	0
Aluminum	ppm	ASTM D5185m >25	2	1	3
Lead	ppm	ASTM D5185m >40	1	1	<1
Copper	ppm	ASTM D5185m >330	4	6	4
Tin	ppm	ASTM D5185m >15	<1	<1	<1
Antimony	ppm	ASTM D5185m	0	0	0
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	378	335	198
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	126	131	115
Manganese	ppm	ASTM D5185m	<1	<1	2
Magnesium	ppm	ASTM D5185m	546	517	478
Calcium	ppm	ASTM D5185m	1520	1537	1327
Phosphorus	ppm	ASTM D5185m 1200	692	718	615
Zinc	ppm	ASTM D5185m 1300	808	787	710
Sulfur	ppm	ASTM D5185m	2820	2587	556

CONTAMINANTS

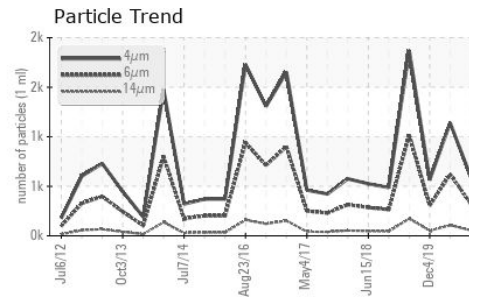
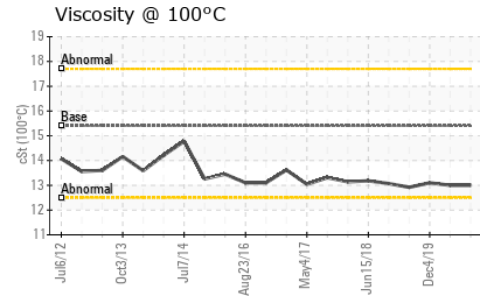
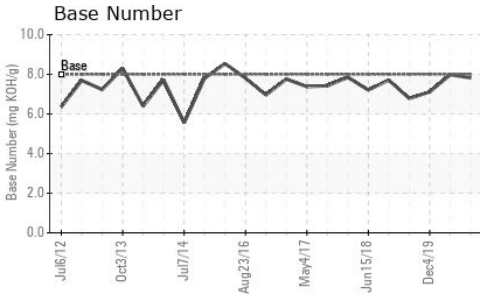
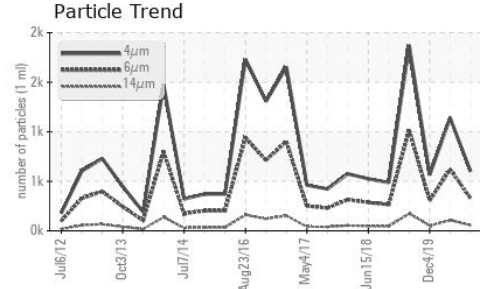
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	7	21	3
Sodium	ppm	ASTM D5185m	<1	0	1
Potassium	ppm	ASTM D5185m >20	0	<1	<1

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.2	0.2	0.4
Nitration	Abs/cm	*ASTM D7624 >20	7.1	7	7.9
Sulfation	Abs/.1mm	*ASTM D7415 >30	22.2	21.8	21.5



OIL ANALYSIS REPORT



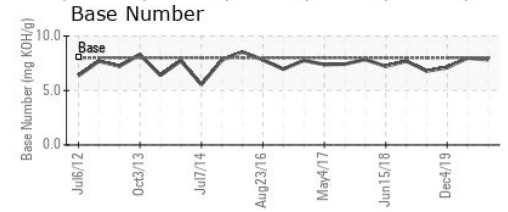
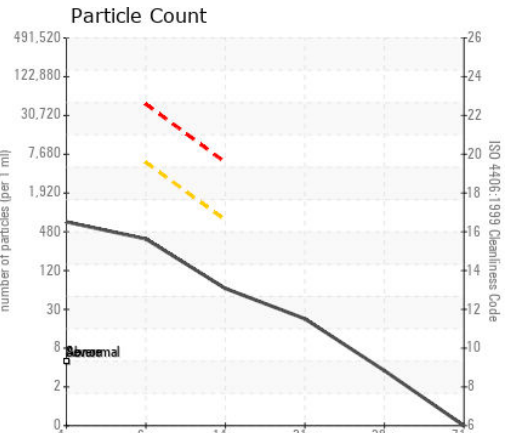
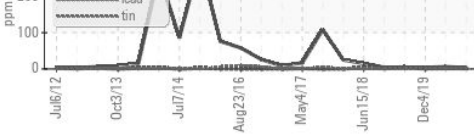
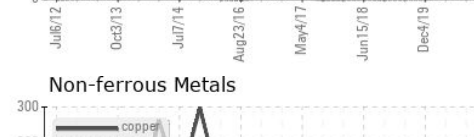
FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		600	1140	564
Particles >6µm	ASTM D7647	>5000	327	621	307
Particles >14µm	ASTM D7647	>640	56	106	52
Particles >21µm	ASTM D7647	>160	19	36	17
Particles >38µm	ASTM D7647	>40	3	5	2
Particles >71µm	ASTM D7647	>10	0	1	0
Oil Cleanliness	ISO 4406 (c)	>19/16	16/13	16/14	15/13

FLUID DEGRADATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414	>25	17.9	17.6	18.3
Base Number (BN)	mg KOH/g ASTM D2896	8.0	7.82	7.98	7.11

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	limit/base	current	history1	history2
Visc @ 100°C	cSt ASTM D445	15.4	13.0	13.0	13.1

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KLM2339097 **Received** : 22 Jul 2021
Lab Number : **05309711** **Tested** : 28 Jul 2021
Unique Number : 9593680 **Diagnosed** : 28 Jul 2021 - Wes Davis
Test Package : MOB 2 (Additional Tests: PrtCount)

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Certificate L2367
 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)