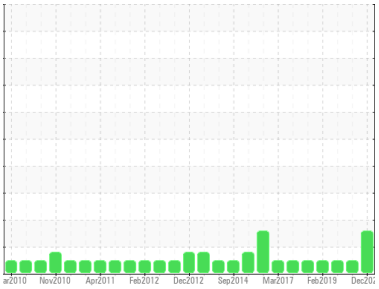
OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Machine Id
PETERBILT 202
Component
Diesel Engine
Fluid
CHEVRON URSA SUPER PLUS EC 15W40 (36 QTS)

DIAGNOSIS

Recommendation
No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
There is a moderate amount of particulates present in the oil.

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		**KL0006546**	KLM2339685	KLM2339112
Sample Date		Client Info		**07 Dec 2022**	04 Nov 2020	16 Nov 2019
Machine Age	mls	Client Info		**1037319**	996824	974592
Oil Age	mls	Client Info		**49000**	20000	10000
Oil Changed		Client Info		**Not Changd**	Not Changd	Not Changd
Sample Status				**ATTENTION**	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	**13**	23	18
Chromium	ppm	ASTM D5185m	>6	**1**	<1	<1
Nickel	ppm	ASTM D5185m	>4	**0**	0	0
Titanium	ppm	ASTM D5185m	>2	**0**	<1	<1
Silver	ppm	ASTM D5185m	>2	**0**	<1	0
Aluminum	ppm	ASTM D5185m	>30	**<1**	0	4
Lead	ppm	ASTM D5185m	>10	**3**	3	0
Copper	ppm	ASTM D5185m	>150	**25**	15	11
Tin	ppm	ASTM D5185m	>4	**2**	<1	0
Antimony	ppm	ASTM D5185m		**---**	0	8
Vanadium	ppm	ASTM D5185m		**0**	<1	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**8**	315	267
Barium	ppm	ASTM D5185m		**0**	<1	0
Molybdenum	ppm	ASTM D5185m		**60**	122	108
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m		**930**	501	504
Calcium	ppm	ASTM D5185m		**1244**	1413	1460
Phosphorus	ppm	ASTM D5185m	1200	**1040**	669	647
Zinc	ppm	ASTM D5185m	1300	**1195**	788	730
Sulfur	ppm	ASTM D5185m		**4416**	2501	2379

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	**19**	5	6
Sodium	ppm	ASTM D5185m		**2**	<1	<1
Potassium	ppm	ASTM D5185m	>20	**4**	<1	2

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.2**	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	**6.5**	7.2	6.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	**20.7**	21.7	20.5

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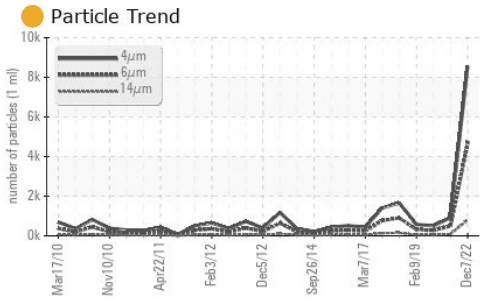
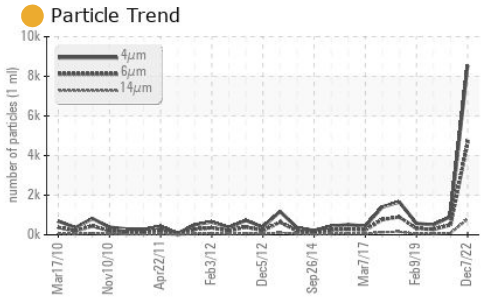
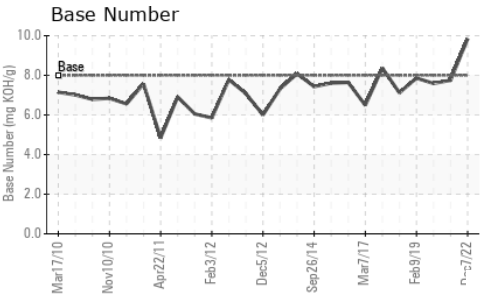
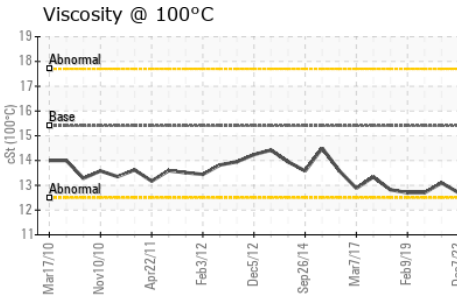








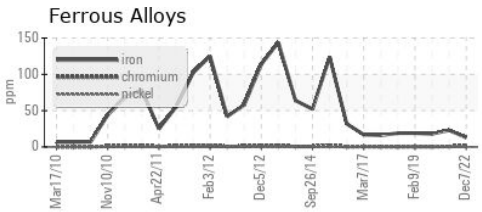
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		**8554**	924	500
Particles >6µm		ASTM D7647	>5000	**4660**	503	272
Particles >14µm		ASTM D7647	>640	**793**	86	46
Particles >21µm		ASTM D7647	>160	**267**	29	15
Particles >38µm		ASTM D7647	>40	**41**	4	2
Particles >71µm		ASTM D7647	>10	**4**	0	0
Oil Cleanliness		ISO 4406 (c)	>19/16	**19/17**	16/14	15/13

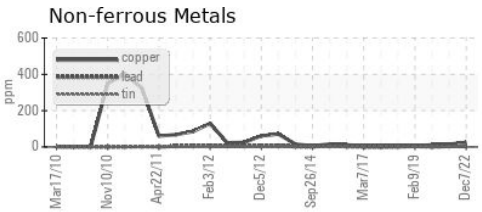
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**15.9**	18	16.8
Base Number (BN)	mg KOH/g	ASTM D2896	8.0	**9.84**	7.75	7.59

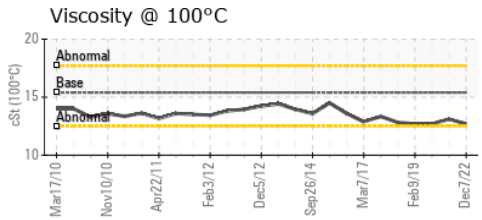
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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

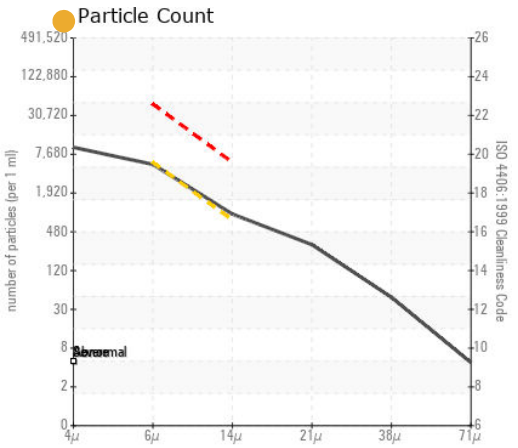
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	**12.7**	13.1	12.7

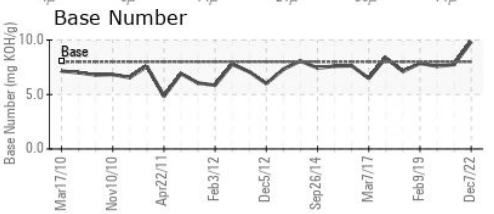
GRAPHS











Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0006546 **Received** : 29 Dec 2022
Lab Number : 05727457 **Tested** : 03 Jan 2023
Unique Number : 10272038 **Diagnosed** : 03 Jan 2023 - Jonathan Hester
Test Package : MOB 2 (Additional Tests: PrtCount)

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)

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