

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL





SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PTK0005125	PTK0004924	PTK0004806
Sample Date		Client Info		03 Nov 2023	17 Oct 2023	04 Oct 2023
Machine Age	hrs	Client Info		13528	13257	13023
Oil Age	hrs	Client Info		9832	9561	9327
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				NORMAL	ABNORMAL	ABNORMAL
CONTAMINATION	٧	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	20	18	21
Chromium	ppm	ASTM D5185m	>10	0	<1	0
Nickel	ppm	ASTM D5185m	>10	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>10	<1	2	0
Lead	ppm	ASTM D5185m	>10	0	<1	0
Copper	ppm	ASTM D5185m	>75	<1	<1	0
Tin	ppm	ASTM D5185m	>10	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	<1	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 0	history1 0	history2 0
	ppm ppm		limit/base			
Boron		ASTM D5185m	limit/base	0 6 0	0	0
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	0 6	0 9 <1 0	0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 6 0 0 <1	0 9 <1 0 <1	0 0 0
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 6 0 0	0 9 <1 0	0 0 0 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 6 0 <1 2 39	0 9 <1 0 <1 2 46	0 0 0 <1 0
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 6 0 <1 2	0 9 <1 0 <1 2	0 0 <1 0 2
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	limit/base	0 6 0 <1 2 39	0 9 <1 0 <1 2 46	0 0 0 <1 0 2 13
Boron 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	limit/base	0 6 0 <1 2 39 0	0 9 <1 0 <1 2 46 7	0 0 0 <1 0 2 13 0
Boron 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		0 6 0 <1 2 39 0 0	0 9 <1 0 <1 2 46 7 11	0 0 <1 0 2 13 0 69
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	limit/base	0 6 0 <1 2 39 0 0 0 0	0 9 <1 0 <1 2 46 7 11 11 history1	0 0 0 <1 0 2 13 0 69 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	limit/base	0 6 0 2 39 0 0 0 <i>current</i>	0 9 <1 0 <1 2 46 7 11 11 history1 5	0 0 2 13 0 69 history2 5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base	0 6 0 2 39 0 0 0 0 <i>current</i> 4 0 <1	0 9 <1 0 <1 2 46 7 11 11 history1 5 0	0 0 0 <1 0 2 13 0 69 history2 5 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >20 >20	0 6 0 2 39 0 0 0 0 <i>current</i> 4 0 <1	0 9 <1 0 <1 2 46 7 11 11 history1 5 0 1	0 0 0 <1 0 2 13 0 69 history2 5 0 0 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >20 >20 limit/base >5000	0 6 0 2 1 2 39 0 0 0 0 <i>current</i> 4 0 <1 <i>current</i>	0 9 <1 0 <1 2 46 7 11 11 history1 5 0 1 history1	0 0 0 <1 0 2 13 0 69 history2 5 0 0 0 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >20 >20 limit/base >5000	0 6 0 2 1 2 39 0 0 0 0 <i>current</i> 4 0 <1 <i>current</i> 1751	0 9 <1 0 <1 2 46 7 11 history1 5 0 1 5 0 1 history1 471 123 11	0 0 0 2 13 0 69 history2 5 0 0 0 history2 597
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >20 >20 limit/base >5000 >1300 >160	0 6 0 0 1 2 39 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 9 <1 0 <1 2 46 7 11 history1 5 0 1 5 0 1 history1 471 123	0 0 0 2 13 0 69 history2 5 0 0 0 history2 5 97 149
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >6µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7647 ASTM D7647	limit/base >20 >20 limit/base >5000 >1300 >160	0 6 0 10 2 39 0 0 0 0 0 0 0 0 0 0 1 1 1751 1751 373 35 12 2	0 9 <1 0 <1 2 46 7 11 history1 5 0 1 5 0 1 history1 471 123 11	0 0 0 2 13 0 69 history2 5 0 0 0 history2 5 97 149 9
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	limit/base >20 >20 >20 limit/base >5000 >1300 >160 >40 >40 >10	0 6 0 10 2 39 0 0 0 0 0 0 0 0 0 0 1 1 1751 1751 373 35 12	0 9 <1 0 <1 2 46 7 11 history1 5 0 1 5 0 1 471 123 11 2 2	0 0 0 2 13 0 69 history2 5 0 0 0 history2 5 97 149 9 2

Machine Id Press #7 Press #7 Component

Hydraulic System

KLUBER KLUBEROIL 4 UH1-46 N (220 GAL)

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

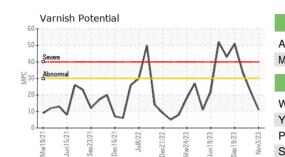
MPC (Membrane Patch Colorimetry) test indicates acceptable levels of varnish present. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

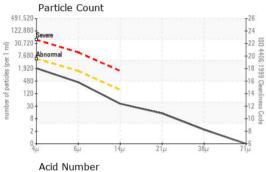
Fluid Condition

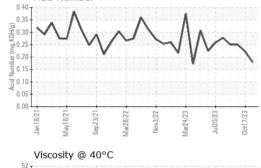
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

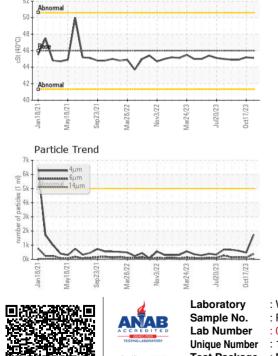


OIL ANALYSIS REPORT







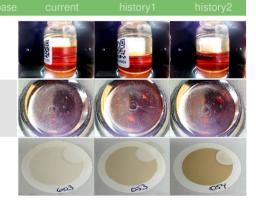


FLUID DEGRADA	NON	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		0.179	0.222	0.25
MPC Varnish Potential	Scale	ASTM D7843	>15	11	<u> </u>	▲ 34
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	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	>0.1	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	46	45.1	45.2	44.9

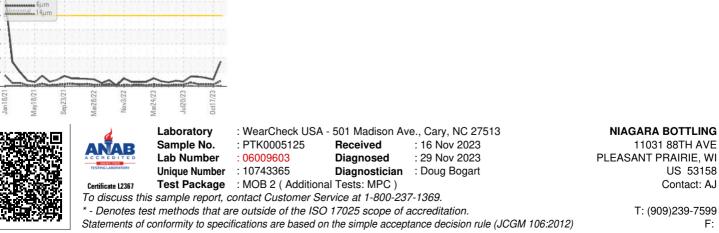
Color

SAMPLE IMAGES

Bottom



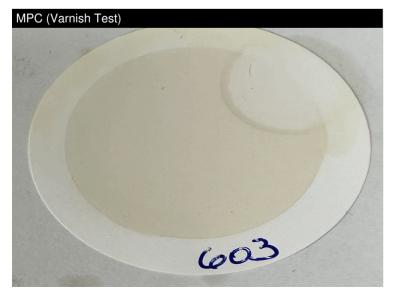
MPC

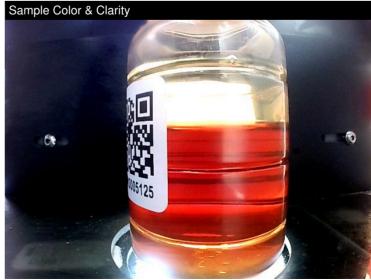


Contact/Location: AJ ? - NIAPLE

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Report Id: NIAPLE [WUSCAR] 06009603 (Generated: 11/29/2023 11:10:05) Rev: 1

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