

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id 531512 [] Component Diesel Engine Fluid PFJ 10W30 (--- QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

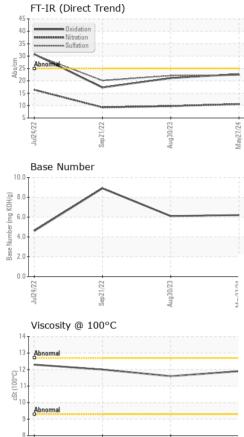
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0101200	PCA0101253	PCA0067730
Sample Date		Client Info		27 May 2024	30 Aug 2023	21 Sep 2022
Machine Age	hrs	Client Info		0	7541	4320
Oil Age	hrs	Client Info		0	3000	4320
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	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	. 0.1	NEG	NEG	NEG
WEAR METAL	\$	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	13	12	7
Chromium	ppm	ASTM D5185m	>20	<1	0	<1
Nickel	ppm	ASTM D5185m	>4	<1	0	0
Titanium	ppm	ASTM D5185m	0	<1	0	<1
Silver	ppm	ASTM D5185m	>3	<1	0	<1
Aluminum	ppm	ASTM D5185m	>20	3	3	2
Lead	ppm	ASTM D5185m	>40	0	0	<1
Copper	ppm	ASTM D5185m		2	<1	4
Tin	ppm	ASTM D5185m	>15	0	0	<1
Vanadium	ppm	ASTM D5185m		<1 0	0	1
Cadmium	ppm	ASTM D5185m				0
	PPIII			U	0	0
ADDITIVES	PPIII	method	limit/base	current	history1	history2
	ppm		limit/base	current 4	-	history2 2
ADDITIVES		method	limit/base	current	history1	history2 2 0
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 4 0 67	history1 <1 0 71	history2 2 0 60
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm	method ASTM D5185m ASTM D5185m	limit/base	current 4 0	history1 <1 0 71 0	history2 2 0 60 1
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 4 0 67 <1 1141	history1 <1 0 71 0 1232	history2 2 0 60 1 905
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 4 0 67 <1 1141 1257	history1 <1 0 71 0 1232 1436	history2 2 0 60 1 905 1182
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 4 0 67 <1 1141 1257 1182	history1 <1 0 71 0 1232 1436 1236	history2 2 0 60 1 905 1182 1043
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 4 0 67 <1 1141 1257 1182 1529	history1 <1 0 71 0 1232 1436 1236 1553	history2 2 0 60 1 905 1182 1043 1240
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 4 0 67 <1 1141 1257 1182	history1 <1 0 71 0 1232 1436 1236	history2 2 0 60 1 905 1182 1043
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 4 0 67 <1 1141 1257 1182 1529	history1 <1 0 71 0 1232 1436 1236 1553	history2 2 0 60 1 905 1182 1043 1240 3509 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base	current 4 0 67 <1 1141 1257 1182 1529 3676 current 4	history1 <1 0 71 0 1232 1436 1236 1553 3777 history1 6	history2 2 0 60 1 905 1182 1043 1240 3509 history2 6
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 4 0 67 <1 1141 1257 1182 1529 3676 current	history1 <1 0 71 0 1232 1436 1236 1553 3777 history1	history2 2 0 60 1 905 1182 1043 1240 3509 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base	current 4 0 67 <1 1141 1257 1182 1529 3676 current 4	history1 <1 0 71 0 1232 1436 1236 1553 3777 history1 6	history2 2 0 60 1 905 1182 1043 1240 3509 history2 6
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base	current 4 0 67 <1 1141 1257 1182 1529 3676 current 4 9	history1 <1 0 71 0 1232 1436 1236 1553 3777 history1 6 9	history2 2 0 60 1 905 1182 1043 1240 3509 history2 6 7
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base >25 >20 limit/base >3	current 4 0 67 <1 1141 1257 1182 1529 3676 current 4 9 4 0 current 0.1	history1 <1 0 71 0 1232 1436 1236 1553 3777 history1 6 9 0 history1 0 history1 0.1	history2 2 0 60 1 905 1182 1043 1240 3509 history2 6 7 <1 history2 0.1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm TS	method ASTM D5185m	limit/base >25 >20 limit/base >3	current 4 0 67 <1 1141 1257 1182 1529 3676 current 4 9 4 current 4 9 4	history1 <1 0 71 0 1232 1436 1236 1553 3777 history1 6 9 0 history1	history2 2 0 60 1 905 1182 1043 1240 3509 history2 6 7 <1 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	method ASTM D5185m	limit/base >25 >20 limit/base >3	current 4 0 67 <1 1141 1257 1182 1529 3676 current 4 9 4 0 current 0.1	history1 <1 0 71 0 1232 1436 1236 1553 3777 history1 6 9 0 history1 0 history1 0.1	history2 2 0 60 1 905 1182 1043 1240 3509 history2 6 7 <1 history2 0.1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base >25 >20 limit/base >3 >20	current 4 0 67 <1 1141 1257 1182 1529 3676 current 4 9 4 9 4 0.1 10.6	history1 <1 0 71 0 1232 1436 1235 3777 history1 6 9 0 history1 0 0 0 0 9 0.1 9.8	history2 2 0 60 1 905 1182 1043 1240 3509 history2 6 7 <1 history2 0.1 9.3
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >3 >20 >30	current 4 0 67 <1 1141 1257 1182 1529 3676 current 4 9 4 0.1 10.6 22.3	history1 <1 0 71 0 1232 1436 1236 1553 3777 history1 6 9 0 history1 0.1 9.8 22.1	history2 2 0 60 1 905 1182 1043 1240 3509 history2 6 7 <1 history2 0.1 9.3 20.1



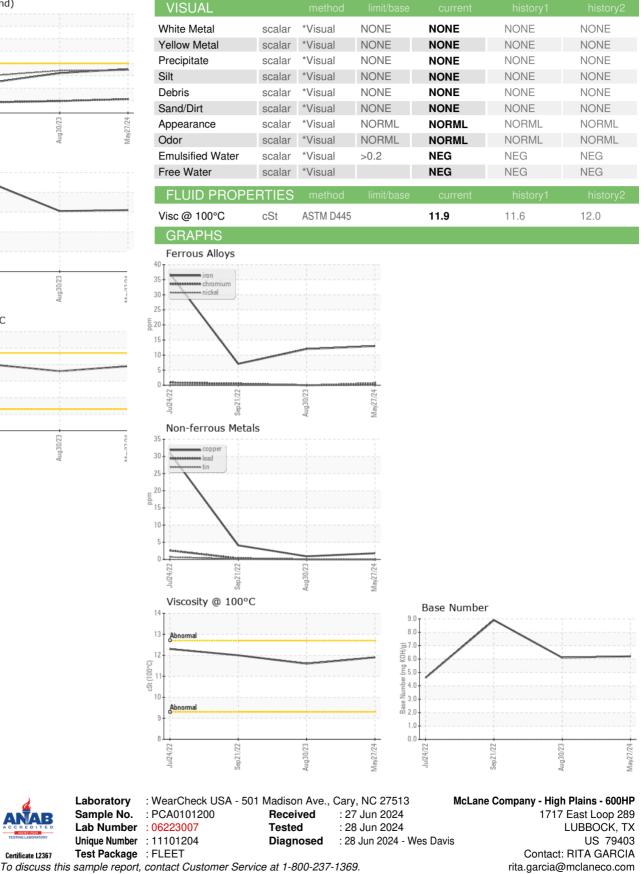
Jul24/22

OIL ANALYSIS REPORT



Sep21/22

ug30/23



* - 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)

Report Id: MCLLUB [WUSCAR] 06223007 (Generated: 06/28/2024 15:40:19) Rev: 1

Certificate 12367

Contact/Location: RITA GARCIA - MCLLUB

E:

T: (806)766-2902