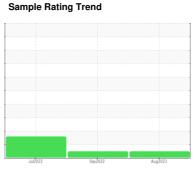


OIL ANALYSIS REPORT

sa Sa



NORMAL



Machine Id **531512** [] Component

Diesel Engine

DIESEL ENGINE OIL SAE 10W30 (--- QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil

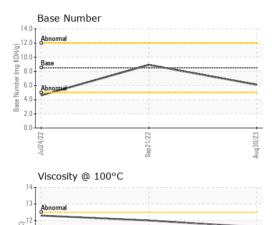
Fluid Condition

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

	Jul2022 Sup2022 Aug2023					
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0101253	PCA0067730	PCA0067692
Sample Date		Client Info		30 Aug 2023	21 Sep 2022	24 Jul 2022
Machine Age	hrs	Client Info		7541	4320	3661
Oil Age	hrs	Client Info		3000	4320	3661
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	ABNORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	12	7	37
Chromium	ppm	ASTM D5185m	>20	0	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	0	<1	<1
Aluminum	ppm	ASTM D5185m	>20	3	2	5
Lead	ppm	ASTM D5185m	>40	0	<1	3
Copper	ppm	ASTM D5185m	>330	<1	4	31
Tin	ppm	ASTM D5185m	>15	0	<1	<1
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	250	<1	2	16
Barium	ppm	ASTM D5185m	10	0	0	4
Molybdenum	ppm	ASTM D5185m	100	71	60	22
Manganese	ppm	ASTM D5185m		0	1	1
Magnesium	ppm			-		
Calcium	le le	ASTM D5185m	450	1232	905	628
Calcium	ppm	ASTM D5185m ASTM D5185m	450 3000			
Phosphorus				1232 1436 1236	905 1182 1043	628 1778 754
Phosphorus Zinc	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	3000 1150 1350	1232 1436	905 1182 1043 1240	628 1778 754 924
Phosphorus	ppm ppm	ASTM D5185m ASTM D5185m	3000 1150	1232 1436 1236	905 1182 1043	628 1778 754
Phosphorus Zinc	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	3000 1150 1350	1232 1436 1236 1553	905 1182 1043 1240	628 1778 754 924
Phosphorus Zinc Sulfur	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	3000 1150 1350 4250	1232 1436 1236 1553 3777	905 1182 1043 1240 3509	628 1778 754 924 3267
Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	3000 1150 1350 4250 limit/base	1232 1436 1236 1553 3777 current	905 1182 1043 1240 3509 history1	628 1778 754 924 3267 history2
Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	3000 1150 1350 4250 limit/base	1232 1436 1236 1553 3777 current	905 1182 1043 1240 3509 history1	628 1778 754 924 3267 history2
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm TS ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m	3000 1150 1350 4250 limit/base >25	1232 1436 1236 1553 3777 current 6	905 1182 1043 1240 3509 history1 6	628 1778 754 924 3267 history2 24
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm TS ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m	3000 1150 1350 4250 limit/base >25 >20	1232 1436 1236 1553 3777 current 6 9	905 1182 1043 1240 3509 history1 6 7 <1	628 1778 754 924 3267 history2 24 17
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	3000 1150 1350 4250 limit/base >25 >20 limit/base >3	1232 1436 1236 1553 3777 current 6 9 0	905 1182 1043 1240 3509 history1 6 7 <1	628 1778 754 924 3267 history2 24 17 <1
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	3000 1150 1350 4250 limit/base >25 >20 limit/base >3	1232 1436 1236 1553 3777 current 6 9 0 current	905 1182 1043 1240 3509 history1 6 7 <1 history1	628 1778 754 924 3267 history2 24 17 <1 history2
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm TS ppm ppm ppm Abs/cm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method *ASTM D7844 *ASTM D7624	3000 1150 1350 4250 limit/base >25 >20 limit/base >3 >20	1232 1436 1236 1553 3777 current 6 9 0 current 0.1 9.8	905 1182 1043 1240 3509 history1 6 7 <1 history1 0.1 9.3	628 1778 754 924 3267 history2 24 17 <1 history2 0.1 16.4
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm TS ppm ppm ppm Abs/cm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	3000 1150 1350 4250 limit/base >25 >20 limit/base >3 >20 >30	1232 1436 1236 1553 3777 current 6 9 0 current 0.1 9.8 22.1	905 1182 1043 1240 3509 history1 6 7 <1 history1 0.1 9.3 20.1	628 1778 754 924 3267 history2 24 17 <1 history2 0.1 16.4 30.6



OIL ANALYSIS REPORT

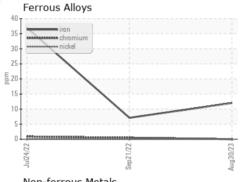


Sep21/22

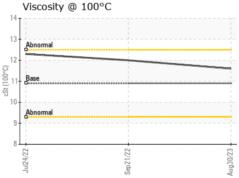
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

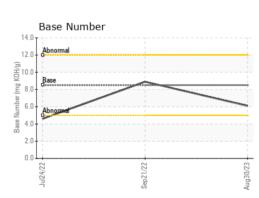
FLUID PROPE	RHES	method				history2
Visc @ 100°C	cSt	ASTM D445	10.9	11.6	12.0	12.3

GRAPHS



Non-ferrous Metals		
35 T		
copper		
30 - necessarian lead		
TIT management		
25		
20		
_ 20		
E 20		
15		
13		
10		
5+	1	
Shandard		
0		
.2	22	2
24,	21	30
Jui24/22	Sep21/22	Aug30/23
¬	Š	Æ
Viscosity @ 100°C		









Certificate L2367

Laboratory Sample No. Lab Number Unique Number : 10642277 Test Package : FLEET

: PCA0101253 : 05946318

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 08 Sep 2023 Diagnosed : 12 Sep 2023 Diagnostician : Don Baldridge

McLane Company - High Plains - 600HP 1717 East Loop 289

US 79403 Contact: RITA GARCIA rita.garcia@mclaneco.com

T: (806)766-2902

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) LUBBOCK, TX