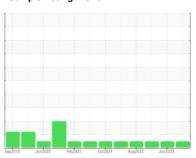


OIL ANALYSIS REPORT

Sample Rating Trend







INTERNATIONAL 107586

Component Discol Engine

Diesel Engine

SHELL ROTELLA T 15W40 (--- 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

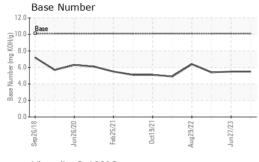
Fluid Condition

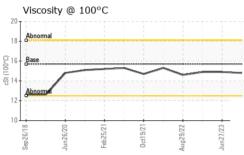
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

		Sep2018	Jun2020 Feb2021	Oct2021 Aug2022 J	un2023	
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		IL0032744	IL0027492	IL0027664
Sample Date		Client Info		11 Oct 2023	27 Jun 2023	04 Jan 2023
Machine Age	mls	Client Info		452373	420246	385876
Oil Age	mls	Client Info		32127	34370	32914
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	V	method	limit/base	current	history1	history2
Fuel		WC Method	>2.0	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	16	26	21
Chromium	ppm	ASTM D5185m	>20	1	1	1
Nickel	ppm	ASTM D5185m	>4	<1	0	<1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	4	2	4
Lead	ppm	ASTM D5185m	>40	<1	2	2
Copper	ppm	ASTM D5185m	>330	2	3	4
Tin	ppm	ASTM D5185m	>15	0	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
				_	-	
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 20		history2
	ppm		316		history1	
Boron		ASTM D5185m	316	20	history1	16
Boron Barium	ppm	ASTM D5185m ASTM D5185m	316 0.0	20 0	history1 16 12	16 0
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	316 0.0	20 0 30	history1 16 12 85	16 0 93
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	316 0.0 1.2	20 0 30 0	history1 16 12 85 <1	16 0 93 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	316 0.0 1.2	20 0 30 0 190	history1 16 12 85 <1 48	16 0 93 <1 50
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	316 0.0 1.2 24 2292 1064	20 0 30 0 190 1809	history1 16 12 85 <1 48 1931	16 0 93 <1 50 2165
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 ASTM D5185m	316 0.0 1.2 24 2292 1064 1160	20 0 30 0 190 1809 869	history1 16 12 85 <1 48 1931 886	16 0 93 <1 50 2165 852
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 ASTM D5185m	316 0.0 1.2 24 2292 1064 1160	20 0 30 0 190 1809 869 1057	history1 16 12 85 <1 48 1931 886 1103	16 0 93 <1 50 2165 852 1076
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	316 0.0 1.2 24 2292 1064 1160 4996	20 0 30 0 190 1809 869 1057 3097	history1 16 12 85 <1 48 1931 886 1103 3790	16 0 93 <1 50 2165 852 1076 3538
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	316 0.0 1.2 24 2292 1064 1160 4996	20 0 30 0 190 1809 869 1057 3097	history1 16 12 85 <1 48 1931 886 1103 3790 history1	16 0 93 <1 50 2165 852 1076 3538
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	316 0.0 1.2 24 2292 1064 1160 4996	20 0 30 0 190 1809 869 1057 3097 current	history1 16 12 85 <1 48 1931 886 1103 3790 history1	16 0 93 <1 50 2165 852 1076 3538 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	316 0.0 1.2 24 2292 1064 1160 4996 limit/base >25	20 0 30 0 190 1809 869 1057 3097 current 9	history1 16 12 85 <1 48 1931 886 1103 3790 history1 9 5 history1	16 0 93 <1 50 2165 852 1076 3538 history2 7 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	316 0.0 1.2 24 2292 1064 1160 4996 limit/base >25	20 0 30 0 190 1809 869 1057 3097 current 9 <1	history1 16 12 85 <1 48 1931 886 1103 3790 history1 9 5	16 0 93 <1 50 2165 852 1076 3538 history2 7 4 6
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	316 0.0 1.2 24 2292 1064 1160 4996 limit/base >25 >20 limit/base	20 0 30 0 190 1809 869 1057 3097 current 9 <1 10	history1 16 12 85 <1 48 1931 886 1103 3790 history1 9 5 history1	16 0 93 <1 50 2165 852 1076 3538 history2 7 4 6
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	316 0.0 1.2 24 2292 1064 1160 4996 limit/base >25 >20 limit/base	20 0 30 0 190 1809 869 1057 3097 current 9 <1 10 current	history1 16 12 85 <1 48 1931 886 1103 3790 history1 9 5 history1 1.5	16 0 93 <1 50 2165 852 1076 3538 history2 7 4 6 history2 1.6
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	316 0.0 1.2 24 2292 1064 1160 4996 limit/base >25 >20 limit/base	20 0 30 0 190 1809 869 1057 3097 current 9 <1 10 current 1	history1 16 12 85 <1 48 1931 886 1103 3790 history1 9 5 history1 1.5 12.0	16 0 93 <1 50 2165 852 1076 3538 history2 7 4 6 history2 1.6 11.2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D76145	316 0.0 1.2 24 2292 1064 1160 4996 limit/base >25 >20 limit/base >3 >20 >30	20 0 30 0 190 1809 869 1057 3097 current 9 <1 10 current 1 10.0 24.1	history1 16 12 85 <1 48 1931 886 1103 3790 history1 9 5 history1 1.5 12.0 26.3	16 0 93 <1 50 2165 852 1076 3538 history2 7 4 6 history2 1.6 11.2 25.1



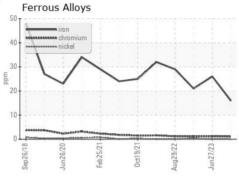
OIL ANALYSIS REPORT

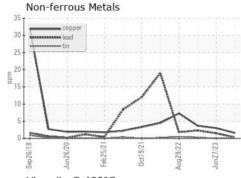


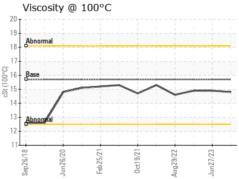


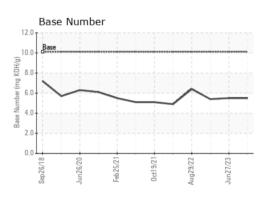
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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		metnoa	ilmit/base	current	nistory i	nistory2
Visc @ 100°C	cSt	ASTM D445	15.7	14.8	14.9	14.9













Certificate L2367

Laboratory Sample No. Lab Number

: IL0032744 : 05981022 Unique Number : 10698317 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513

Received : 17 Oct 2023 Diagnosed Diagnostician : Don Baldridge

: 18 Oct 2023

GREEN BAY, WI US 54304 Contact: GARY KOLTZ gkoltz@pcitrucks.com

IDEALEASE OF NORTHWEST WI

T: (920)499-6200 F: (920)499-5332

611 HANSEN ROAD

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)