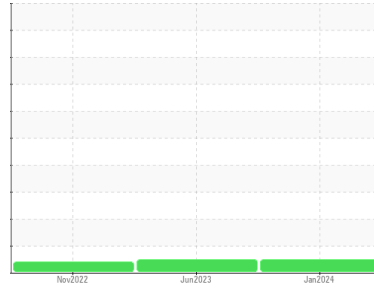




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
114555
 Component
Diesel Engine
 Fluid
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 suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			IL0033068	IL0027486	IL0027715
Sample Date	Client Info			23 Jan 2024	28 Jun 2023	09 Nov 2022
Machine Age	mls	Client Info		104775	71960	29909
Oil Age	mls	Client Info		32815	42051	29909
Oil Changed	Client Info			Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	ATTENTION

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>3.0		<1.0	<1.0	0.6
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	>90	16	22	35
Chromium	ppm	ASTM D5185m	>20	2	1	1
Nickel	ppm	ASTM D5185m	>2	<1	0	<1
Titanium	ppm	ASTM D5185m	>2	<1	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	1
Aluminum	ppm	ASTM D5185m	>20	7	4	13
Lead	ppm	ASTM D5185m	>40	2	4	4
Copper	ppm	ASTM D5185m	>330	2	4	23
Tin	ppm	ASTM D5185m	>15	<1	1	3
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	316	37	12	49
Barium	ppm	ASTM D5185m	0.0	<1	12	0
Molybdenum	ppm	ASTM D5185m	1.2	31	58	60
Manganese	ppm	ASTM D5185m		<1	<1	5
Magnesium	ppm	ASTM D5185m	24	197	58	427
Calcium	ppm	ASTM D5185m	2292	1862	1465	1627
Phosphorus	ppm	ASTM D5185m	1064	956	637	891
Zinc	ppm	ASTM D5185m	1160	1115	819	1165
Sulfur	ppm	ASTM D5185m	4996	3206	2552	3192

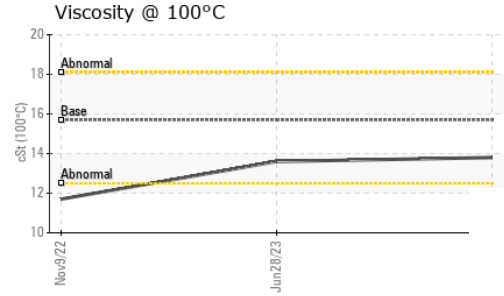
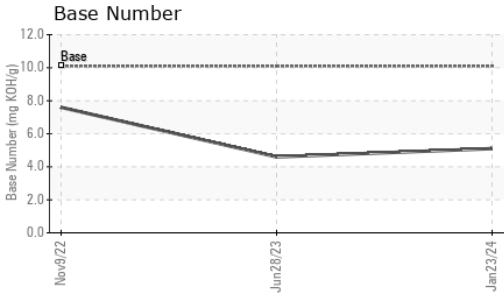
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	8	9	36
Sodium	ppm	ASTM D5185m		0	2	3
Potassium	ppm	ASTM D5185m	>20	25	16	30

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>6	0.3	0.4	0.3
Nitration	Abs/cm	*ASTM D7624	>20	9.9	10.8	9.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.6	25.3	22.8

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.7	21.5	19.4
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	5.1	4.6	7.6



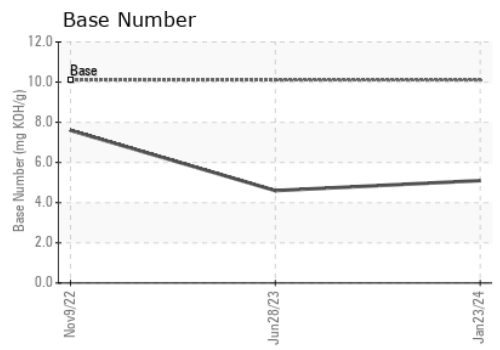
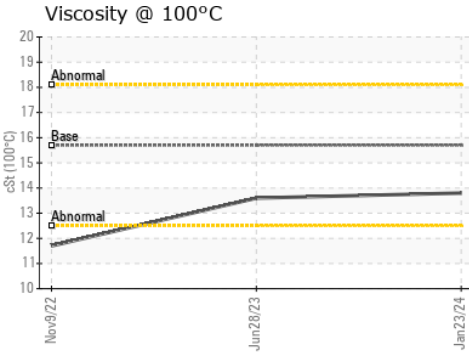
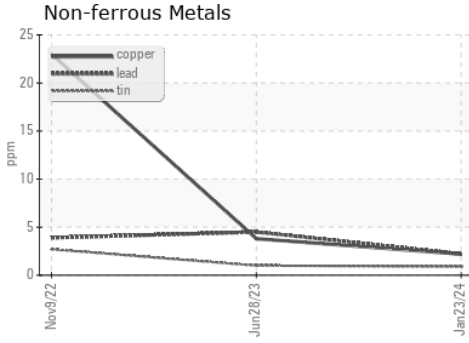
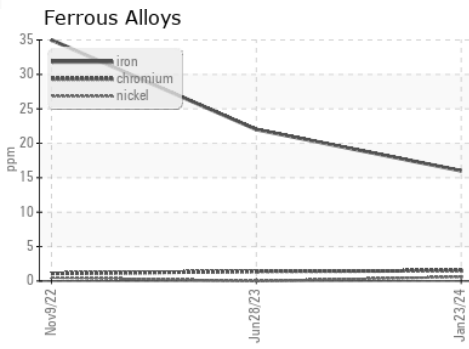
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.7	13.8	13.6 ▲ 11.7

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : IL0033068 **Received** : 01 Feb 2024
Lab Number : **06076701** **Diagnosed** : 02 Feb 2024
Unique Number : 10858792 **Diagnostician** : Don Baldrige
Test Package : FLEET

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 611 HANSEN ROAD
 GREEN BAY, WI
 US 54304
 Contact: GARY KOLTZ
 gkoltz@pcitrucks.com
 T: (920)499-6200
 F: (920)499-5332

Certificate L2367
 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)