



# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**INGERSOLL RAND DD34HF ROLLER RA236 (S/N 191743)**

Component  
**Diesel Engine**

Fluid  
**CASTROL HYPURON ADVANCED FORMULA (3 GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0675102</b>	WC0314390	WCMCF26494
Sample Date		Client Info		<b>08 Dec 2023</b>	04 Mar 2019	27 Sep 2018
Machine Age	hrs	Client Info		<b>5772</b>	4812	4807
Oil Age	hrs	Client Info		<b>146</b>	300	380
Filter Age	hrs	Client Info		<b>146</b>	300	380
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>4</b>	3	9
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m	>20	<b>&lt;1</b>	2	2
Lead	ppm	ASTM D5185m	>40	<b>0</b>	1	<1
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185m	>15	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

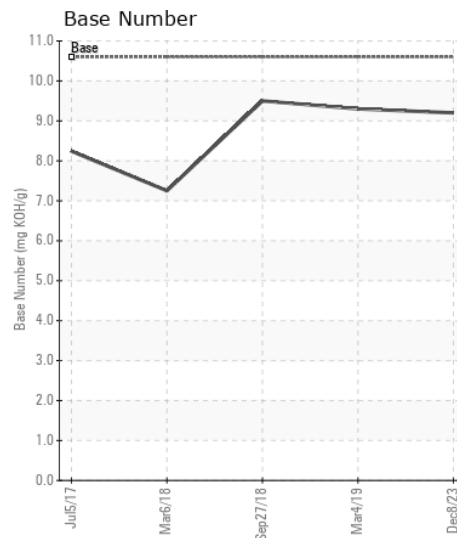
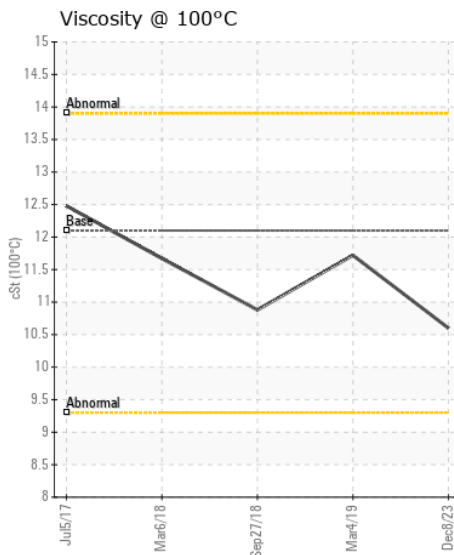
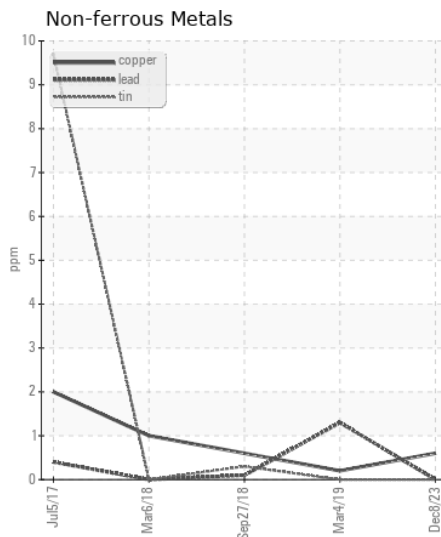
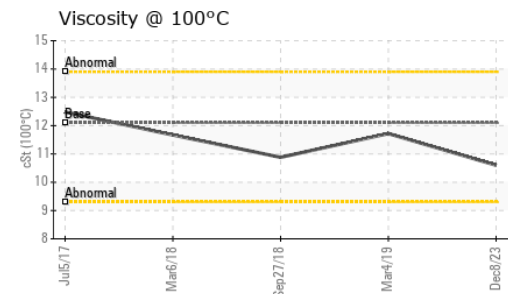
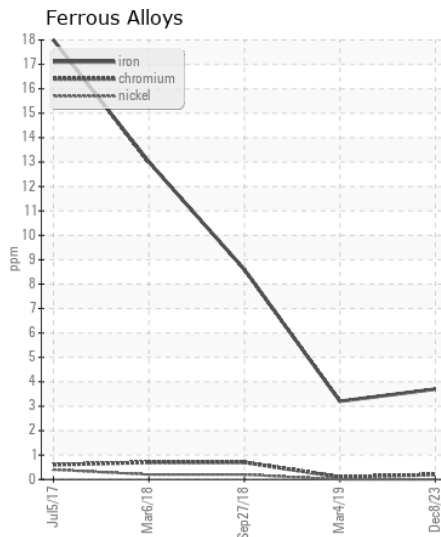
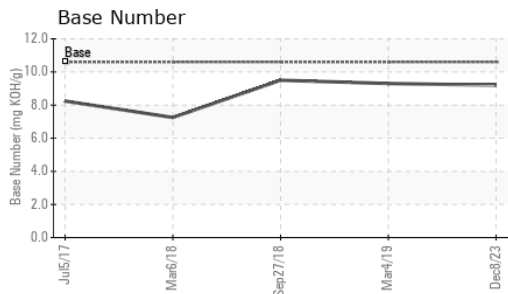
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>8</b>	8	4
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	2	<1
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.1</b>	0.1	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>5.8</b>	5.7	8
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>17.4</b>	18	18.8
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

## 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.

Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	4	8
Boron	ppm	ASTM D5185m		<b>7</b>	100	48
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>54</b>	57	46
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>909</b>	1046	921
Calcium	ppm	ASTM D5185m		<b>1172</b>	1170	1169
Phosphorus	ppm	ASTM D5185m		<b>1003</b>	994	988
Zinc	ppm	ASTM D5185m		<b>1238</b>	1235	1081
Sulfur	ppm	ASTM D5185m		<b>3261</b>	3066	2699
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.2</b>	13.8	15.3
Base Number (BN)	mg KOH/g	ASTM D2896	10.6	<b>9.2</b>	9.3	9.5
Visc @ 100°C	cSt	ASTM D445	12.1	<b>10.6</b>	11.72	10.88



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0675102 **Received** : 17 Jan 2024  
**Lab Number** : 06062435 **Diagnosed** : 18 Jan 2024  
**Unique Number** : 10833817 **Diagnostician** : Wes Davis  
**Test Package** : CONST ( Additional Tests: TBN )

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)

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