



# OIL ANALYSIS REPORT

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

Machine Id  
**INGERSOLL RAND DD34HF ROLLER RA235 (S/N 173166)**

Component  
**Diesel Engine**

Fluid  
**CASTROL HYPURON ADVANCED FORMULA (4 GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0674861</b>	WCMCF49297	WCMCF31859
Sample Date		Client Info		<b>07 Dec 2023</b>	06 Mar 2018	29 Jul 2017
Machine Age	hrs	Client Info		<b>6848</b>	5950	5747
Oil Age	hrs	Client Info		<b>107</b>	200	723
Filter Age	hrs	Client Info		<b>107</b>	200	723
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	MARGINAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>7</b>	11	19
Chromium	ppm	ASTM D5185m	>20	<b>1</b>	1	2
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>1</b>	2	4
Lead	ppm	ASTM D5185m	>40	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	0
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

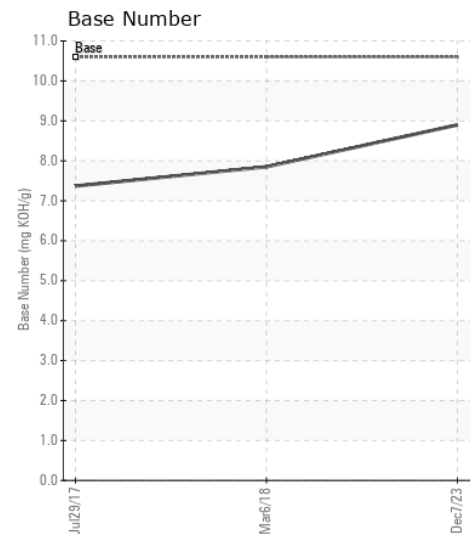
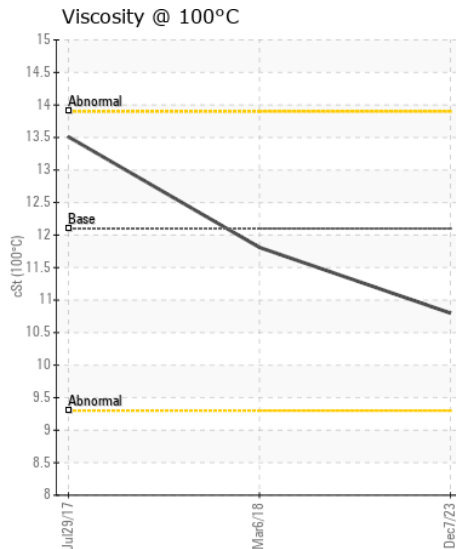
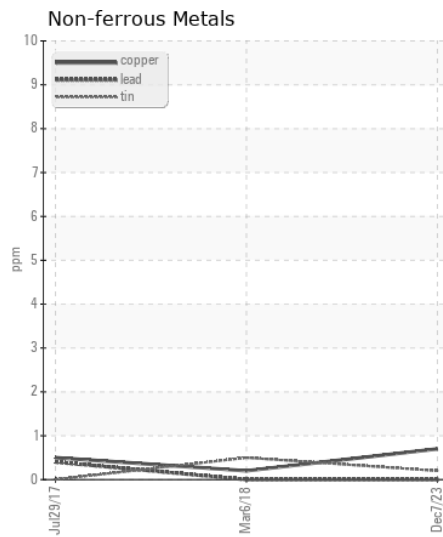
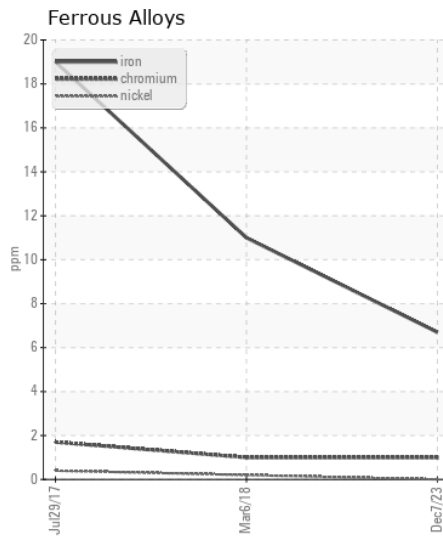
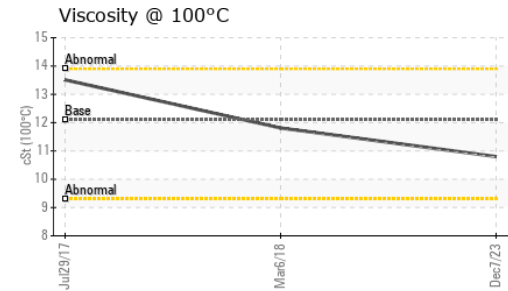
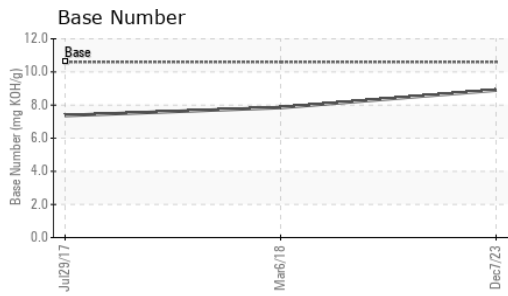
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>7</b>	9	6
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	11
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	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>5.7</b>	7.	7.
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>17.3</b>	17.	19.
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>	10	8
Boron	ppm	ASTM D5185m		<b>7</b>	54	48
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>53</b>	40	11
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>902</b>	820	248
Calcium	ppm	ASTM D5185m		<b>1165</b>	1395	2025
Phosphorus	ppm	ASTM D5185m		<b>968</b>	1006	888
Zinc	ppm	ASTM D5185m		<b>1227</b>	1051	1094
Sulfur	ppm	ASTM D5185m		<b>3205</b>	3386	3199
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>12.9</b>	15.	13.
Base Number (BN)	mg KOH/g	ASTM D2896	10.6	<b>8.9</b>	7.85	7.37
Visc @ 100°C	cSt	ASTM D445	12.1	<b>10.8</b>	11.81	13.51



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0674861 **Received** : 17 Jan 2024  
**Lab Number** : 06062434 **Diagnosed** : 18 Jan 2024  
**Unique Number** : 10833816 **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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