



# OIL ANALYSIS REPORT

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

Machine Id  
**HAMM HD14VV ROLLER RA250 (S/N H2310185)**

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>WC0675012</b>	WCMCF33468	WCMCF64491
Sample Date		Client Info		<b>21 Dec 2023</b>	07 Nov 2018	23 Jul 2018
Machine Age	hrs	Client Info		<b>3829</b>	1097	759
Oil Age	hrs	Client Info		<b>238</b>	338	440
Filter Age	hrs	Client Info		<b>238</b>	338	440
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>8</b>	12	21
Chromium	ppm	ASTM D5185m	>20	<b>0</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>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>1</b>	2	2
Lead	ppm	ASTM D5185m	>40	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	1	3
Tin	ppm	ASTM D5185m	>15	<b>0</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

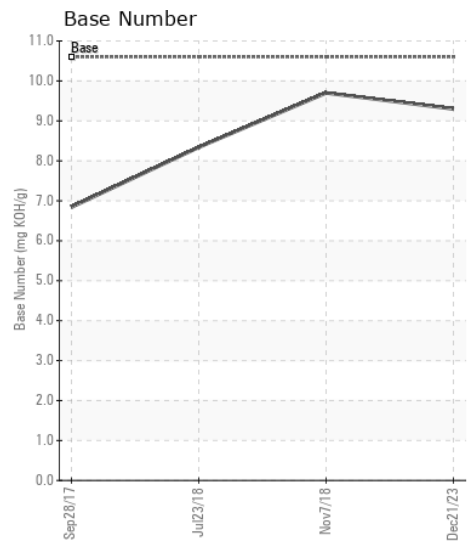
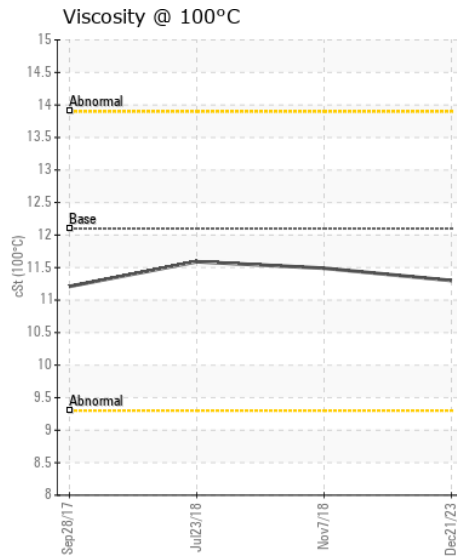
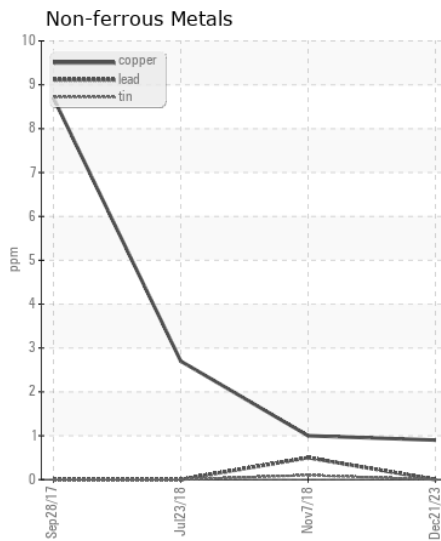
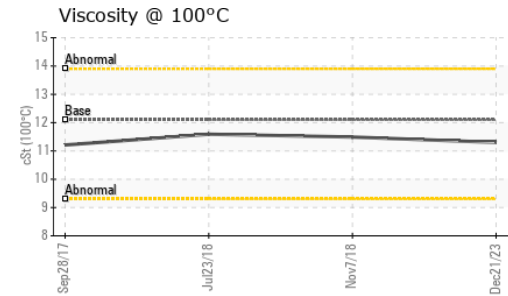
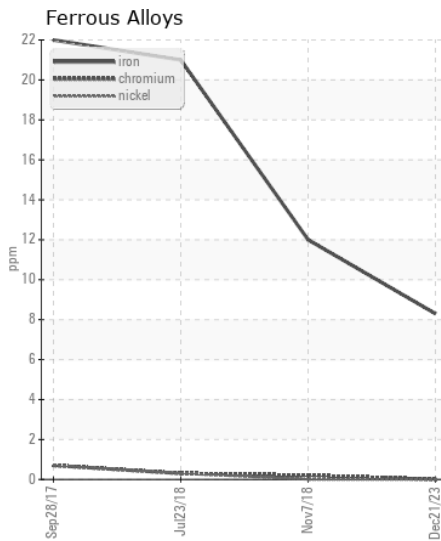
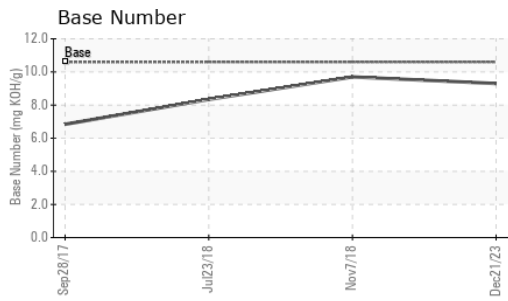
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>8</b>	6	7
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	1	4
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>	0.4	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.5</b>	7.6	8.
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>17.9</b>	19.8	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>	3	8
Boron	ppm	ASTM D5185m		<b>4</b>	79	50
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>54</b>	59	48
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	2
Magnesium	ppm	ASTM D5185m		<b>911</b>	943	962
Calcium	ppm	ASTM D5185m		<b>1221</b>	1014	1297
Phosphorus	ppm	ASTM D5185m		<b>1014</b>	868	1032
Zinc	ppm	ASTM D5185m		<b>1269</b>	1094	1260
Sulfur	ppm	ASTM D5185m		<b>3433</b>	2858	3316
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.0</b>	15.2	16.
Base Number (BN)	mg KOH/g	ASTM D2896	10.6	<b>9.3</b>	9.7	8.34
Visc @ 100°C	cSt	ASTM D445	12.1	<b>11.3</b>	11.49	11.59



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0675012 **Received** : 17 Jan 2024  
**Lab Number** : 06062432 **Diagnosed** : 18 Jan 2024  
**Unique Number** : 10833814 **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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