



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**INGERSOLL RAND TC13 001304 (S/N 192217)**  
 Component  
**Diesel Engine**  
 Fluid  
**CASTROL VECTON 15W40 CK4 (2 GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0856289</b>	WC0604595	WC0418384
Sample Date		Client Info		<b>28 Mar 2024</b>	06 Dec 2021	11 Sep 2020
Machine Age	hrs	Client Info		<b>1293</b>	1133	1021
Oil Age	hrs	Client Info		<b>160</b>	100	100
Filter Age	hrs	Client Info		<b>160</b>	100	100
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	>80	<b>16</b>	11	12
Chromium	ppm	ASTM D5185m	>6	<b>2</b>	1	1
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>9</b>	6	0
Lead	ppm	ASTM D5185m	>95	<b>2</b>	<1	0
Copper	ppm	ASTM D5185m	>85	<b>1</b>	<1	1
Tin	ppm	ASTM D5185m	>9	<b>2</b>	<1	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.

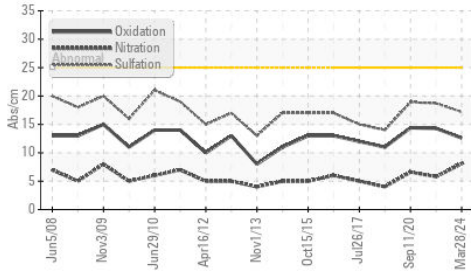
Silicon	ppm	ASTM D5185m	>25	<b>23</b>	14	14
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	<1	<1
Fuel		WC Method	>4.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0.2</b>	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.1</b>	5.8	6.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>17.2</b>	18.7	18.9
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	>0.1	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

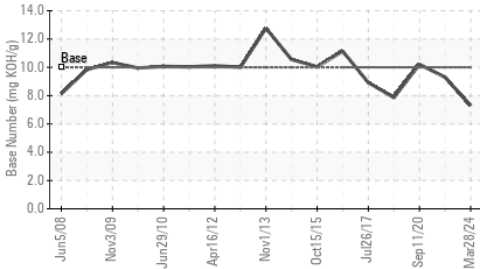
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>3</b>	5	9
Boron	ppm	ASTM D5185m		<b>70</b>	112	12
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>82</b>	63	63
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>154</b>	482	894
Calcium	ppm	ASTM D5185m		<b>2120</b>	1775	1096
Phosphorus	ppm	ASTM D5185m		<b>1019</b>	1023	951
Zinc	ppm	ASTM D5185m		<b>1157</b>	1178	1139
Sulfur	ppm	ASTM D5185m		<b>3832</b>	2650	2640
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>12.6</b>	14.3	14.4
Base Number (BN)	mg KOH/g	ASTM D2896	10	<b>7.3</b>	9.3	10.2
Visc @ 100°C	cSt	ASTM D445	15.5	<b>12.7</b>	13.2	13.7

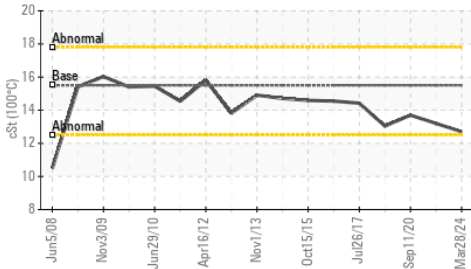
**FT-IR (Direct Trend)**



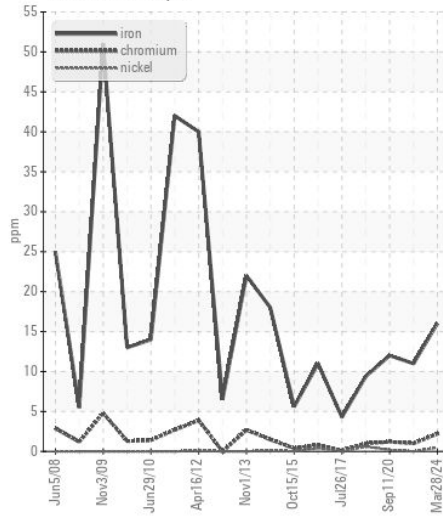
**Base Number**



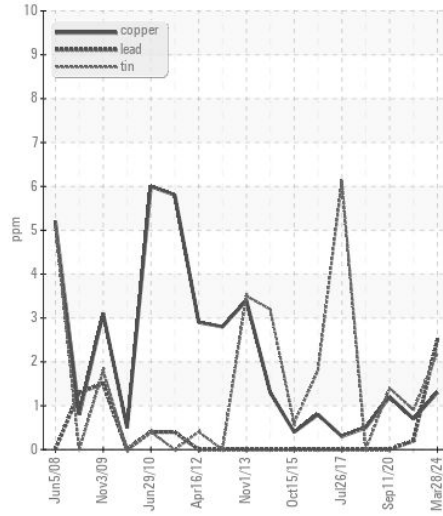
**Viscosity @ 100°C**



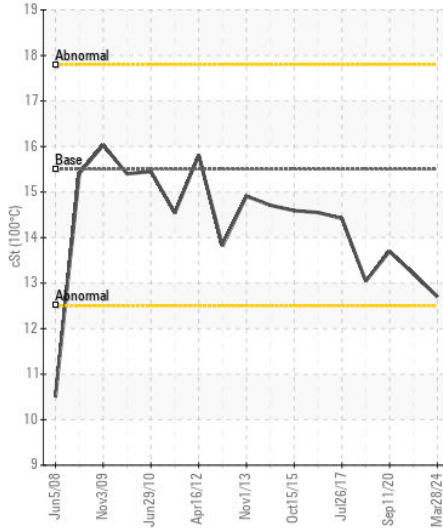
**Ferrous Alloys**



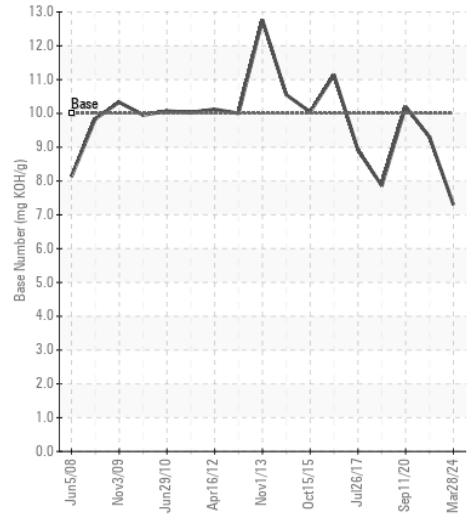
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0856289 **Received** : 12 Apr 2024  
**Lab Number** : 06147939 **Tested** : 15 Apr 2024  
**Unique Number** : 10978017 **Diagnosed** : 15 Apr 2024 - 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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