



Machine Id  
**BIG EASY**  
Component  
**1 Main Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 15W40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0064923</b>	MW0057184	MW0057157
Sample Date		Client Info		<b>24 Jan 2024</b>	18 Sep 2023	16 Aug 2023
Machine Age	hrs	Client Info		<b>18008</b>	16743	16490
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Not Changd</b>	Not Changd	N/A
Filter Changed		Client Info		<b>Not Changd</b>	N/A	N/A
Sample Status				<b>ABNORMAL</b>	NORMAL	ABNORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	<b>0</b>	4	10
Chromium	ppm	ASTM D5185m	>8	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	>3	<b>13</b>	13	15
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>15	<b>1</b>	<1	1
Lead	ppm	ASTM D5185m	>18	<b>1</b>	<1	<1
Copper	ppm	ASTM D5185m	>80	<b>&lt;1</b>	<1	2
Tin	ppm	ASTM D5185m	>14	<b>&lt;1</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

Light fuel dilution occurring.

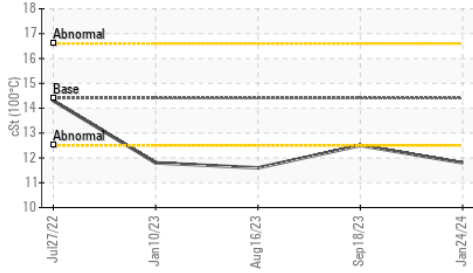
Silicon	ppm	ASTM D5185m	>20	<b>0</b>	3	4
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	4	4
Fuel	%	ASTM D3524	>4.0	<b>▲ 2.6</b>	1.4	▲ 4.4
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0.3</b>	0.2	0.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.5</b>	8.0	10.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.8</b>	18.4	18.6
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**

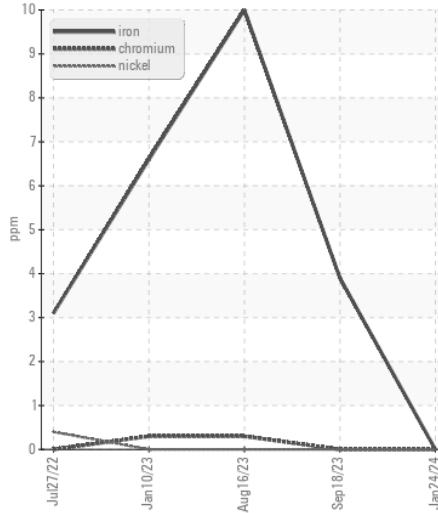
The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>158	<b>4</b>	6	2
Boron	ppm	ASTM D5185m	250	<b>78</b>	93	79
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>26</b>	28	32
Manganese	ppm	ASTM D5185m		<b>1</b>	0	<1
Magnesium	ppm	ASTM D5185m	450	<b>637</b>	718	678
Calcium	ppm	ASTM D5185m	3000	<b>1462</b>	1731	1578
Phosphorus	ppm	ASTM D5185m	1150	<b>681</b>	788	731
Zinc	ppm	ASTM D5185m	1350	<b>798</b>	917	841
Sulfur	ppm	ASTM D5185m	4250	<b>2881</b>	4171	2897
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.5</b>	13.5	13.8
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>7.7</b>	8.7	7.5
Visc @ 100°C	cSt	ASTM D445	14.4	<b>▲ 11.8</b>	12.5	▲ 11.6

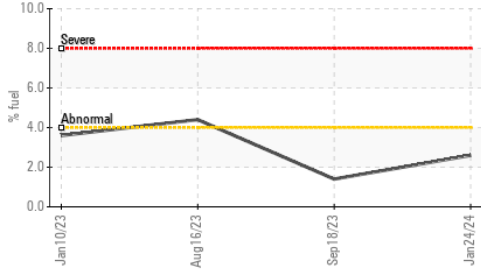
▲ Viscosity @ 100°C



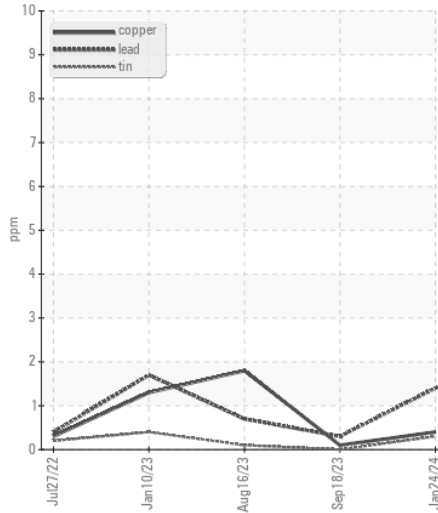
Ferrous Alloys



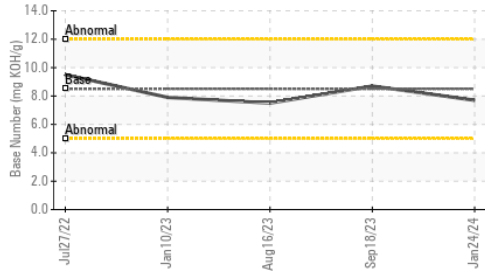
▲ Fuel Dilution



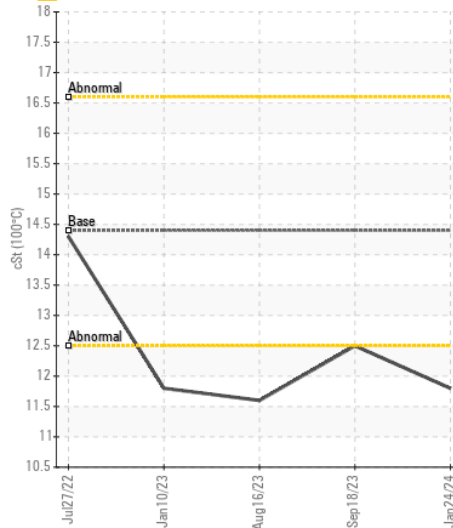
Non-ferrous Metals



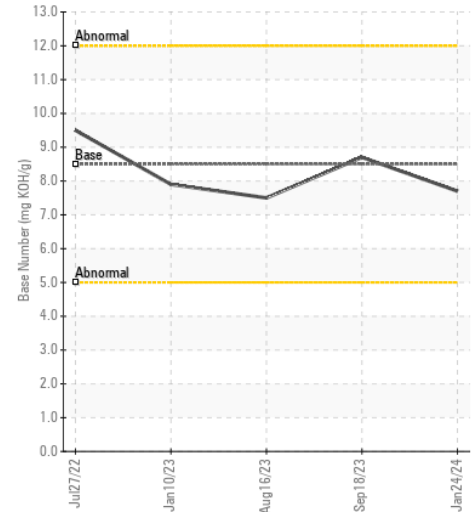
Base Number



▲ Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : MW0064923

Lab Number : 06084626

Unique Number : 10872071

Test Package : MAR 2 ( Additional Tests: FuelDilution, PercentFuel )

Received : 09 Feb 2024

Tested : 13 Feb 2024

Diagnosed : 13 Feb 2024 - Wes Davis

AMERICAN RIVER TRANSPORTATION CO.

P.O. BOX 2889

ST. LOUIS, MO

US 63111

Contact: BRIAN GRIEWING

brian.griewing@adm.com

T:

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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