



# OIL ANALYSIS REPORT

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

Area

**AMR-Cheyenne**

Machine Id

**471151 SENNEBOGEN 840E 840.0.2180**

Component

**Diesel Engine**

Fluid

**CHEVRON DELO 400 LE 15W40 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>DJJ0019093</b>	DJJ0012178	DJJ0015301
Sample Date		Client Info		<b>12 Jul 2024</b>	05 Dec 2023	31 May 2023
Machine Age	hrs	Client Info		<b>10640</b>	9891	3116
Oil Age	hrs	Client Info		<b>250</b>	250	250
Filter Age	hrs	Client Info		<b>250</b>	250	250
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	4
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	0
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>3</b>	3	0
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m	>330	<b>2</b>	<1	<1
Tin	ppm	ASTM D5185m	>15	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>0</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.

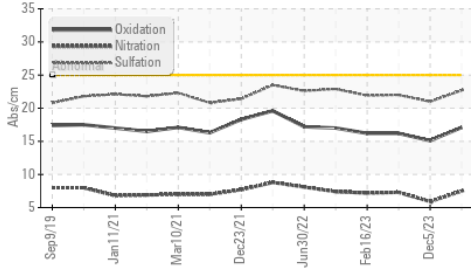
Silicon	ppm	ASTM D5185m	>25	<b>5</b>	4	5
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	1	<1
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.5</b>	5.9	7.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.7</b>	21.0	22.0
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

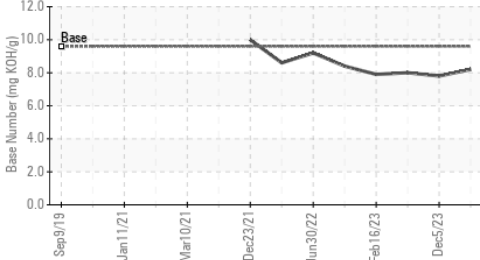
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>3</b>	2	<1
Boron	ppm	ASTM D5185m		<b>288</b>	408	440
Barium	ppm	ASTM D5185m		<b>&lt;1</b>	0	13
Molybdenum	ppm	ASTM D5185m		<b>113</b>	95	114
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m		<b>532</b>	425	519
Calcium	ppm	ASTM D5185m		<b>1425</b>	1237	1559
Phosphorus	ppm	ASTM D5185m	1200	<b>677</b>	798	943
Zinc	ppm	ASTM D5185m	1300	<b>723</b>	989	1178
Sulfur	ppm	ASTM D5185m	3200	<b>2391</b>	2877	3773
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>17.1</b>	15.1	16.2
Base Number (BN)	mg KOH/g	ASTM D2896	9.6	<b>8.2</b>	7.8	8.0
Visc @ 100°C	cSt	ASTM D445	15.7	<b>12.8</b>	13.1	13.0

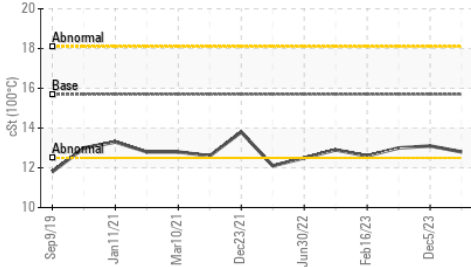
FT-IR (Direct Trend)



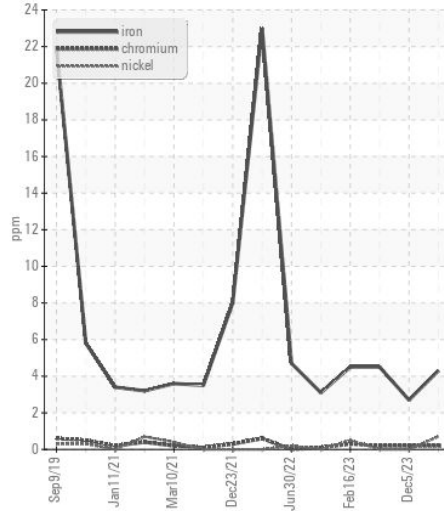
Base Number



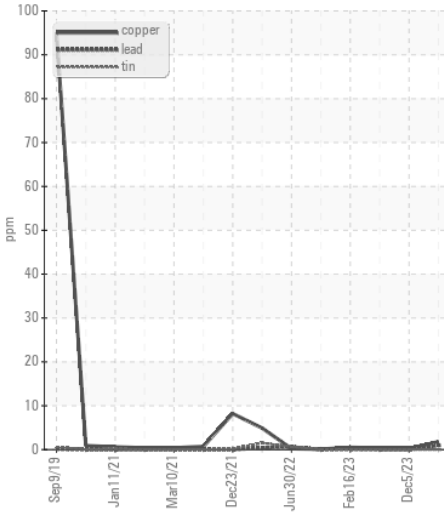
Viscosity @ 100°C



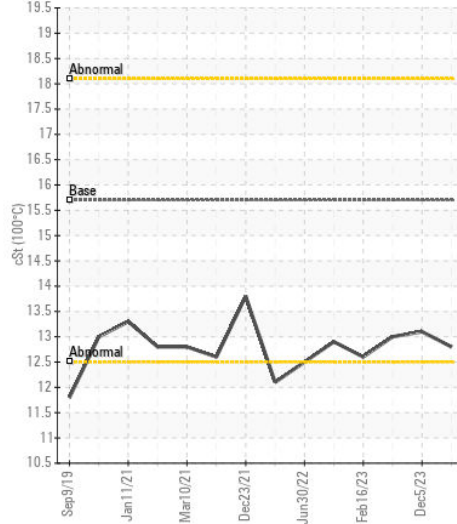
Ferrous Alloys



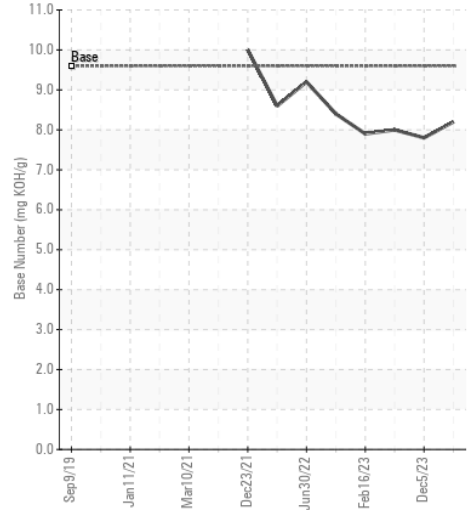
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : DJJ0019093  
 Lab Number : 06239993  
 Unique Number : 11128827  
 Test Package : CONST ( Additional Tests: TBN )

ADVANTAGE METALS RECYCLING - CHEYENNE  
 1015 S. PACKARD ST  
 KANSAS CITY, KS  
 US 66105  
 Contact: BRIAN JACOBS  
 BRIAN.JACOBS@ADVANTAGERECYCLING.COM  
 T: (816)808-4711  
 F:

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)