



WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
3233
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 10W30 (--- 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		WC0878557	WC0878584	WC0854038
Sample Date		Client Info		09 Mar 2024	02 Dec 2023	16 Sep 2023
Machine Age	mls	Client Info		408542	0	364864
Oil Age	mls	Client Info		23416	20265	21424
Filter Age	mls	Client Info		23416	20265	21424
Oil Changed		Client Info		Changed	N/A	Changed
Filter Changed		Client Info		Changed	N/A	Changed
Sample Status				NORMAL	ATTENTION	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	14	16	18
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	3	3	<1
Lead	ppm	ASTM D5185m	>40	3	3	5
Copper	ppm	ASTM D5185m	>330	0	<1	<1
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

There is no indication of any contamination in the oil.

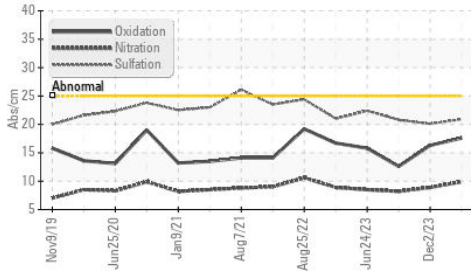
Silicon	ppm	ASTM D5185m	>25	4	5	6
Potassium	ppm	ASTM D5185m	>20	<1	3	5
Fuel		WC Method	>5	<1.0	1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.4	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	9.9	8.9	8.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.9	20.1	20.8
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG

FLUID CONDITION

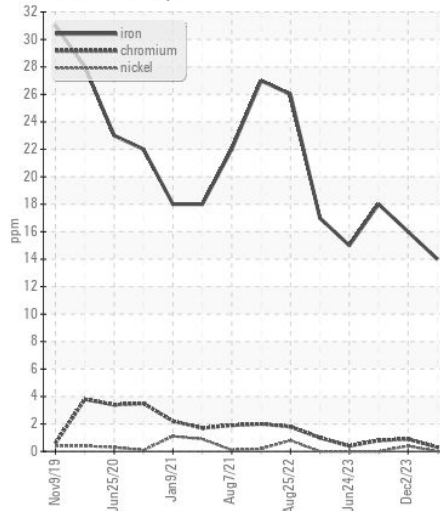
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		0	<1	<1
Boron	ppm	ASTM D5185m	250	2	<1	2
Barium	ppm	ASTM D5185m	10	0	3	0
Molybdenum	ppm	ASTM D5185m	100	58	57	12
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m	450	940	911	63
Calcium	ppm	ASTM D5185m	3000	1050	1178	2184
Phosphorus	ppm	ASTM D5185m	1150	1015	1036	870
Zinc	ppm	ASTM D5185m	1350	1210	1259	1160
Sulfur	ppm	ASTM D5185m	4250	3177	3155	3592
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.6	16.3	12.6
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	7.3	7.4	5.2
Visc @ 100°C	cSt	ASTM D445	10.9	11.2	11.3	11.9

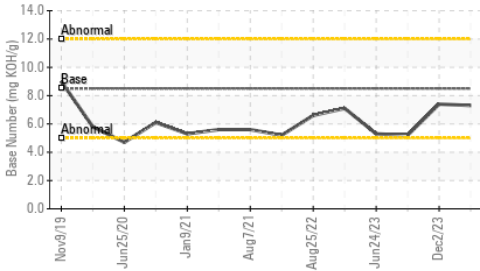
FT-IR (Direct Trend)



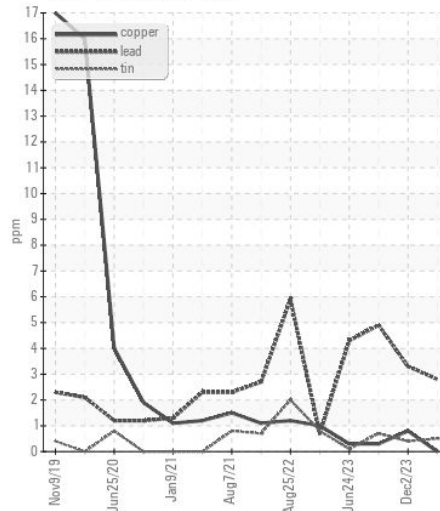
Ferrous Alloys



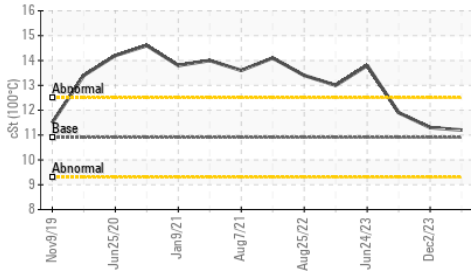
Base Number



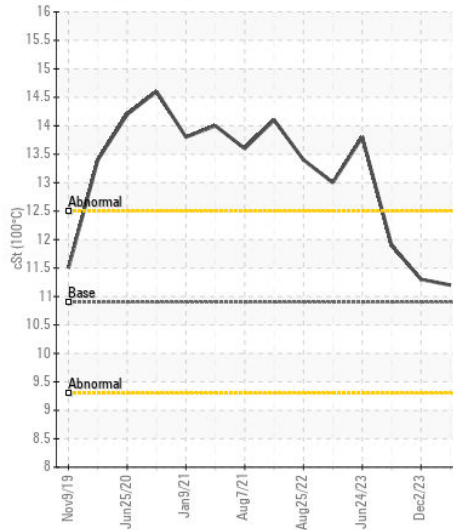
Non-ferrous Metals



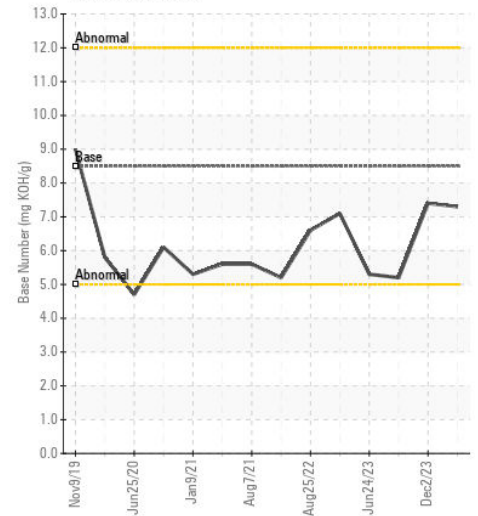
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0878557 **Received** : 17 Apr 2024
Lab Number : 06151513 **Tested** : 18 Apr 2024
Unique Number : 10981591 **Diagnosed** : 18 Apr 2024 - Wes Davis
Test Package : FLEET

CARCO TRANSPORTATION
 3403 EAST ROOSEVELT ROAD
 LITTLE ROCK, AR
 US 72206
 Contact: DENNIS CATES
 denniscales@carcotrans.com
 T: (800)967-0777
 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)