



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id  
**1791**  
 Component  
**Diesel Engine**  
 Fluid  
**DIESEL ENGINE OIL SAE 15W40 (--- QTS)**

## RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

## WEAR

All component wear rates are normal.

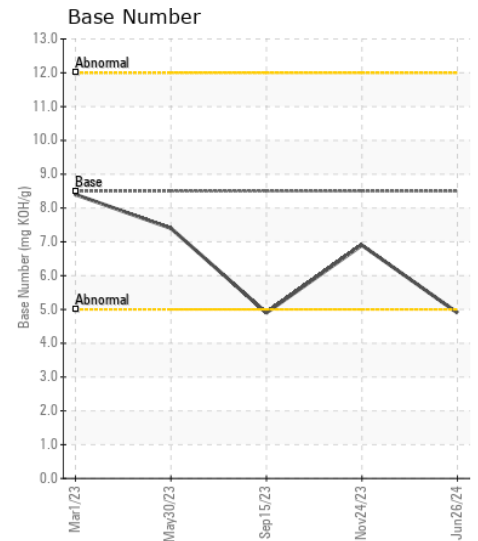
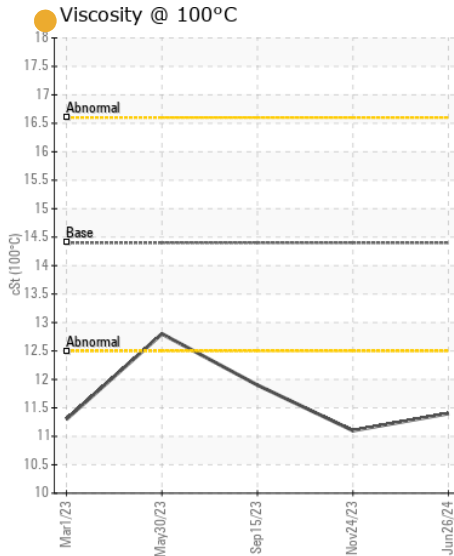
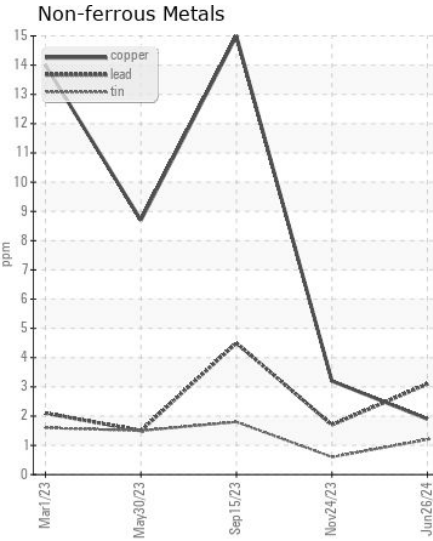
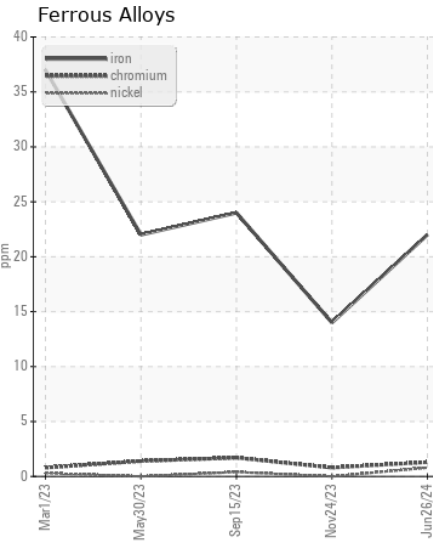
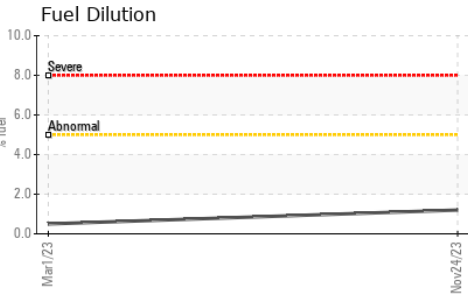
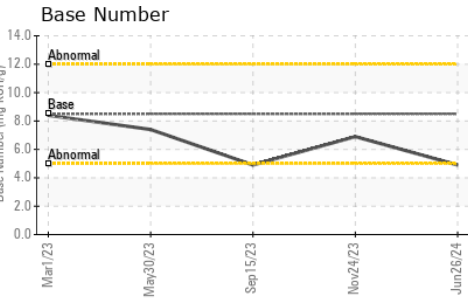
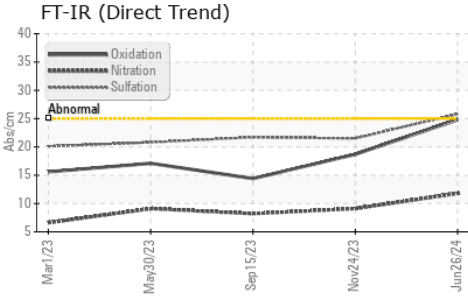
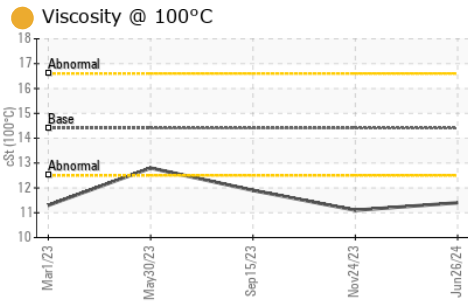
## CONTAMINATION

There is no indication of any contamination in the oil.

## FLUID CONDITION

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0926065</b>	WC0854056	WC0854039
Sample Date		Client Info		<b>26 Jun 2024</b>	24 Nov 2023	15 Sep 2023
Machine Age	hrs	Client Info		<b>4297</b>	105025	77298
Oil Age	hrs	Client Info		<b>4297</b>	27727	34937
Filter Age	hrs	Client Info		<b>4297</b>	27727	34937
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ATTENTION</b>	ATTENTION	NORMAL
Iron	ppm	ASTM D5185m	>100	<b>22</b>	14	24
Chromium	ppm	ASTM D5185m	>20	<b>1</b>	<1	2
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m	>3	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>3</b>	4	5
Lead	ppm	ASTM D5185m	>40	<b>3</b>	2	4
Copper	ppm	ASTM D5185m	>330	<b>2</b>	3	15
Tin	ppm	ASTM D5185m	>15	<b>1</b>	<1	2
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
Silicon	ppm	ASTM D5185m	>25	<b>6</b>	6	12
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	9	29
Fuel	%	ASTM D3524	>5	<b>&lt;1.0</b>	1.2	<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>0.3</b>	0.3	0.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>11.8</b>	9.1	8.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>25.8</b>	21.5	21.7
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
Sodium	ppm	ASTM D5185m	>158	<b>3</b>	1	1
Boron	ppm	ASTM D5185m	250	<b>4</b>	<1	3
Barium	ppm	ASTM D5185m	10	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>68</b>	54	18
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m	450	<b>1040</b>	870	97
Calcium	ppm	ASTM D5185m	3000	<b>1146</b>	1091	2305
Phosphorus	ppm	ASTM D5185m	1150	<b>1066</b>	993	910
Zinc	ppm	ASTM D5185m	1350	<b>1310</b>	1218	1216
Sulfur	ppm	ASTM D5185m	4250	<b>2840</b>	3227	3465
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>24.8</b>	18.7	14.4
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>4.9</b>	6.9	4.9
Visc @ 100°C	cSt	ASTM D445	14.4	<b>11.4</b>	11.1	11.9



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0926065 **Received** : 02 Jul 2024  
**Lab Number** : 06225944 **Tested** : 03 Jul 2024  
**Unique Number** : 11109437 **Diagnosed** : 03 Jul 2024 - Jonathan Hester  
**Test Package** : FLEET ( Additional Tests: FuelDilution )

**CARCO TRANSPORTATION**  
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 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)