



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area

[16W15457]

Machine Id

CUMMINS QSB7-DM NC State Port Authority Left Propeller Engine (S/N 22420646)

Component

Rear Left Diesel Engine

Fluid

DIESEL ENGINE OIL SAE 15W40 (16 QTS)

RECOMMENDATION

Resample at the next service interval to monitor. (Customer Sample Comment: 16W15457)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0196413	---	---
Sample Date		Client Info		28 Feb 2024	---	---
Machine Age	hrs	Client Info		131153	---	---
Oil Age	hrs	Client Info		460	---	---
Filter Age	hrs	Client Info		460	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				NORMAL	---	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>90	12	---	---
Chromium	ppm	ASTM D5185m	>20	<1	---	---
Nickel	ppm	ASTM D5185m	>2	<1	---	---
Titanium	ppm	ASTM D5185m	>2	0	---	---
Silver	ppm	ASTM D5185m	>2	0	---	---
Aluminum	ppm	ASTM D5185m	>20	1	---	---
Lead	ppm	ASTM D5185m	>40	<1	---	---
Copper	ppm	ASTM D5185m	>330	2	---	---
Tin	ppm	ASTM D5185m	>15	<1	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

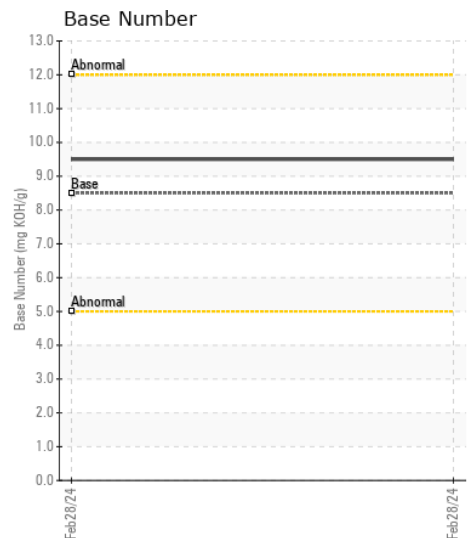
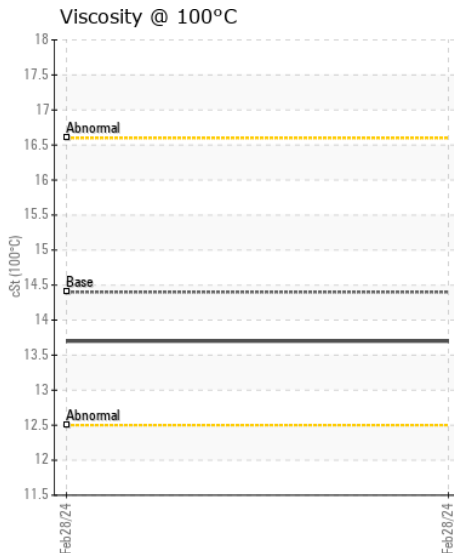
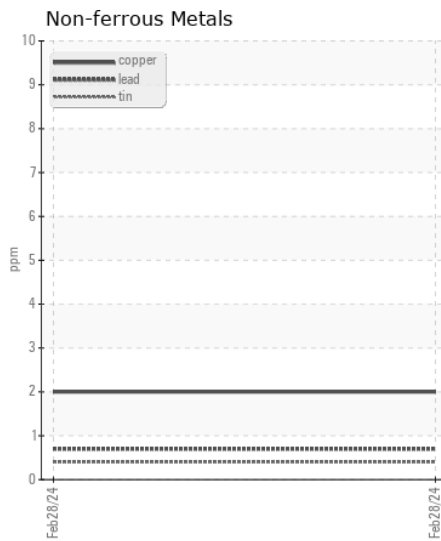
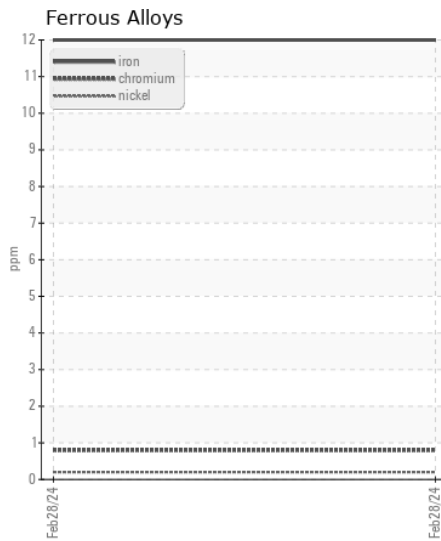
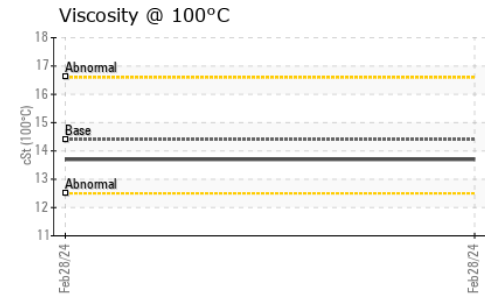
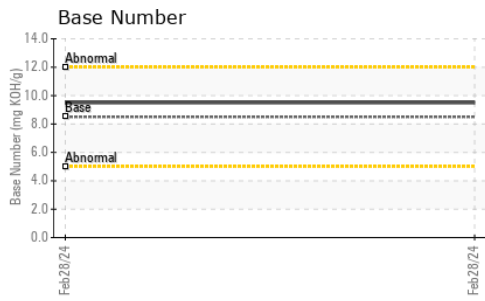
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	4	---	---
Potassium	ppm	ASTM D5185m	>20	<1	---	---
Fuel		WC Method	>3.0	<1.0	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844	>6	0.2	---	---
Nitration	Abs/cm	*ASTM D7624	>20	5.6	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.4	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	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	>158	1	---	---
Boron	ppm	ASTM D5185m	250	18	---	---
Barium	ppm	ASTM D5185m	10	0	---	---
Molybdenum	ppm	ASTM D5185m	100	63	---	---
Manganese	ppm	ASTM D5185m		<1	---	---
Magnesium	ppm	ASTM D5185m	450	1156	---	---
Calcium	ppm	ASTM D5185m	3000	1319	---	---
Phosphorus	ppm	ASTM D5185m	1150	1123	---	---
Zinc	ppm	ASTM D5185m	1350	1551	---	---
Sulfur	ppm	ASTM D5185m	4250	3775	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.5	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	9.5	---	---
Visc @ 100°C	cSt	ASTM D445	14.4	13.7	---	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0196413 **Received** : 29 Feb 2024
Lab Number : 06104152 **Tested** : 29 Feb 2024
Unique Number : 10902382 **Diagnosed** : 02 Mar 2024 - Don Baldrige
Test Package : CONST (Additional Tests: TBN)

JRE - CASTLE HAYNE
 113 CROWATAN ROAD
 CASTLE HAYNE, NC
 US 28429-5819

Contact: WILMINGTON SHOP

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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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