

Machine Id **1601** Component **Diesel Engine** Fluid **DIESEL ENGINE OIL SAE 15W40 (--- QTS)**

RECOMMENDATION

We advise that you check the fuel injection system. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample.

WEAR

All component wear rates are normal.

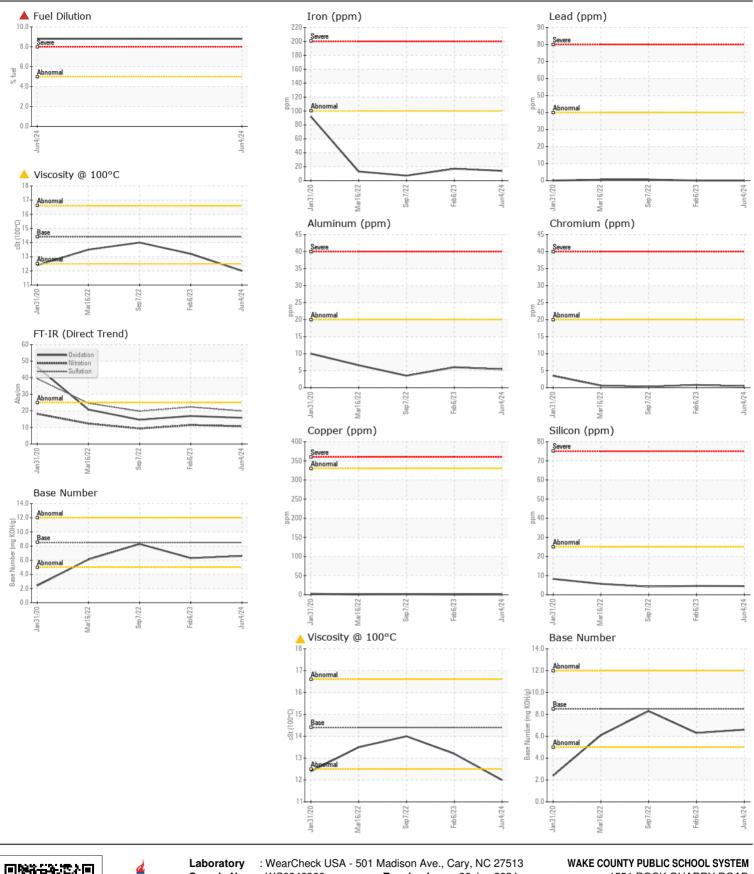
CONTAMINATION

There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

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 oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0948966	WC0772974	WC0729867
Sample Date		Client Info		04 Jun 2024	06 Feb 2023	07 Sep 2022
Machine Age	mls	Client Info		214169	190256	184015
Oil Age	mls	Client Info		0	0	0
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Change
Filter Changed		Client Info		Not Changd	Not Changd	Not Change
Sample Status				SEVERE	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>100	14	17	7
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	5	6	4
Lead	ppm	ASTM D5185m	>40	0	0	<1
Copper	ppm	ASTM D5185m	>330	<1	<1	2
Tin	ppm	ASTM D5185m	>15	0	<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
					_	
Silicon	ppm	ASTM D5185m	>25	4	5	4
Potassium	ppm	ASTM D5185m	>20	5	15	2
Fuel	%	ASTM D3524	>5	8.8	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method	0	NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.9	0.7	0.4
Nitration	Abs/cm	*ASTM D7624	>20	10.7	11.4	9.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.9	22.3	19.8
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
Sodium	ppm	ASTM D5185m	>158	2	16	2
Boron	ppm	ASTM D5185m	250	29	20	58
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	77	73	70
Manganese	ppm	ASTM D5185m		<1	1	<1
Magnesium	ppm	ASTM D5185m	450	96	36	62
Calcium	ppm	ASTM D5185m	3000	1909	1943	1770
Phosphorus	ppm	ASTM D5185m	1150	969	872	873
Zinc	ppm	ASTM D5185m	1350	1119	1094	1057
Sulfur	ppm	ASTM D5185m	4250	3778	3492	3122
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.8	16.9	14.6
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	6.6	6.3	8.3
Visc @ 100°C	cSt	ASTM D2000	14.4	▲ 12.0	13.2	14.0
	001	A0 I W D440	14.4	- 12.0	10.4	14.0



Sample No. : WC0948966 Received 1551 ROCK QUARRY ROAD : 26 Jun 2024 Lab Number : 06220879 Tested RALEIGH, NC : 01 Jul 2024 : 01 Jul 2024 - Wes Davis US 27610 Unique Number : 11099076 Diagnosed Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel, TBN) Contact: DEVIN WEBER Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. dweber@wcpss.net * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (919)856-8076 F: x: Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Contact/Location: DEVIN WEBER - WCPRAL Page 2 of 2