

Machine Id **A-422** Component **Diesel Engine** Fluid **DURAMAX 15W40 (--- QTS)**

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
	Sample Number		Client Info		DC0029818	DC0025550	DC0020525
Resample at the next service interval to monitor. Please specify the component make and model with your next sample.	Sample Date		Client Info		02 Dec 2023	29 Jul 2023	07 Sep 2022
	Machine Age	hrs	Client Info		3004	2326	784
	Oil Age	hrs	Client Info		678	1442	408
	Filter Age	hrs	Client Info		678	1442	408
	Oil Changed		Client Info		Changed	Changed	Changed
	Filter Changed		Client Info		Changed	Changed	Changed
	Sample Status				NORMAL	NORMAL	ATTENTION
WEAR	Iron	ppm	ASTM D5185m	>100	11	17	52
TEAT	Chromium	ppm	ASTM D5185m		0	<1	2
All component wear rates are normal.	Nickel	ppm	ASTM D5185m		<1	0	0
	Titanium	ppm	ASTM D5185m	- 1	0	<1	0
	Silver	ppm	ASTM D5185m	>3	0	0	0
	Aluminum	ppm	ASTM D5185m		2	2	12
	Lead	ppm	ASTM D5185m		_ <1	<1	2
	Copper	ppm	ASTM D5185m		0	3	27
	Tin	ppm	ASTM D5185m		<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
	Silicon		ASTM D5185m	. 05	6	6	40
CONTAMINATION		ppm			6 6	6	13 51
There is no indication of any contamination in the oil.	Potassium Fuel	ppm	ASTM D5185m			6	
			WC Method		<1.0 NEG	<1.0 NEG	0.0
	Water Glycol		WC Method WC Method	>0.2	NEG	NEG	NEG NEG
	Soot %	%	*ASTM D7844	. 0	0.6	0.6	0.7
	Nitration	Abs/cm	*ASTM D7644	>3 >20	7.9	7.9	9.9
	Sulfation	Abs/.1mm	*ASTM D7024		19.0	19.1	23.2
	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		*Visual	>0.2	NEG	NEG	NEG
FLUID CONDITION	Sodium	ppm	ASTM D5185m		3	2	3
	Boron	ppm	ASTM D5185m		1	<1	46
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.	Barium	ppm	ASTM D5185m		0	0	<1
	Molybdenum	ppm	ASTM D5185m		3	4	62
	Manganese	ppm	ASTM D5185m		<1	<1	4
	Magnesium	ppm	ASTM D5185m		70	58	369
	Calcium	ppm	ASTM D5185m		2459	2631	2015
	Phosphorus	ppm	ASTM D5185m		961	982	1087
	Zinc	ppm	ASTM D5185m		1152	1247	1323
	Sulfur	ppm	ASTM D5185m		4599	4731	3852
	Oxidation	Abs/.1mm	*ASTM D7414	>25	10.7	10.7	18.4
	Dese Mansher (DM)		AOTH DOCCO		<u> </u>	0.0	0.0

Base Number (BN) mg KOH/g ASTM D2896

ASTM D445

Visc @ 100°C cSt

6.2

13.1

8.6

11.6

6.2

13.5

NORMAL

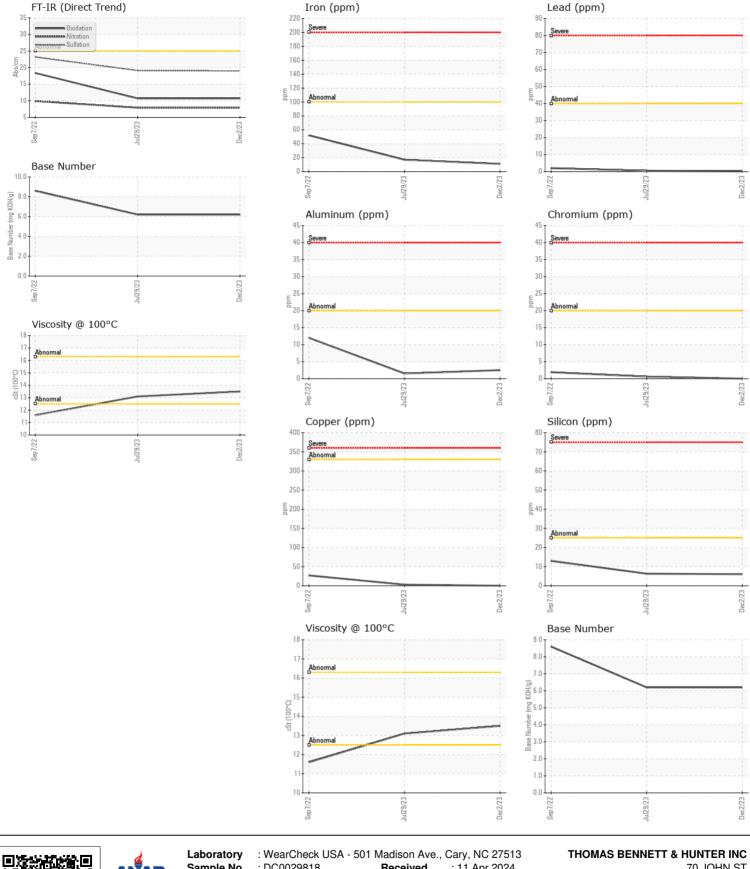
NORMAL

NORMAL

WEAR

CONTAMINATION

FLUID CONDITION



Sample No. : DC0029818 Received 70 JOHN ST : 11 Apr 2024 ĊZ Lab Number : 06146439 Tested WESTMINSTER, MD : 12 Apr 2024 : 12 Apr 2024 - Wes Davis US 21157 Unique Number : 10976517 Diagnosed Test Package : MOB 1 (Additional Tests: TBN) Contact: JOE STEPHAN Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. jstephan@tbhconcrete.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (410)848-9030 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: (410)848-9032

Contact/Location: JOE STEPHAN - THOWESMD Page 2 of 2