

## Machine Id **INTERNATIONAL 7600 A-366** Compone **Diesel Engine DURAMAX 15W40 (40 QTS)**

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.	Sample Number		Client Info		DC0030806	DC0022575	DC0024208
	Sample Date		Client Info		21 Oct 2023	19 Aug 2023	14 Jun 2023
	Machine Age	hrs	Client Info		19380	19098	18749
	Oil Age	hrs	Client Info		631	348	800
	Filter Age	hrs	Client Info		631	348	800
	Oil Changed		Client Info		Changed	Changed	Changed
	Filter Changed		Client Info		Changed	Changed	Changed
	Sample Status				SEVERE	ABNORMAL	ABNORMAL
WEAR All component wear rates are normal.	Iron	ppm	ASTM D5185m	>100	55	22	44
	Chromium	ppm	ASTM D5185m		2	1	2
	Nickel	ppm	ASTM D5185m		_ <1	1	2
	Titanium	ppm	ASTM D5185m	- 1	0	<1	0
	Silver	ppm	ASTM D5185m	>3	0	0	0
	Aluminum	ppm	ASTM D5185m		9	5	5
	Lead	ppm	ASTM D5185m		28	17	▲ 55
	Copper	ppm	ASTM D5185m		10	4	11
	Tin	ppm	ASTM D5185m		2	<1	2
	Vanadium	ppm	ASTM D5185m		0	<1	<1
	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
	Silicon		ASTM D5185m	. 05	16		10
CONTAMINATION	Potassium	ppm	ASTM D5185m		16 <b>298</b>	11 18	13 10
Sodium and/or potassium levels are high. Test for glycol is positive.	Fuel	ppm	WC Method		<1.0	<1.0	<1.0
	Water		WC Method		×1.0 NEG	NEG	NEG
	Glycol	%	*ASTM D2982	20.2	▲ 0.10	NEG	NEG
	Soot %	%	*ASTM D7844	~3	1.1	0.6	1.4
	Nitration	Abs/cm	*ASTM D7624	>20	15.5	10.8	14.3
	Sulfation	Abs/.1mm	*ASTM D7415		32.6	21.5	28.6
	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	Codium				A 1100	<b>5</b> 00	4 100
	Sodium	ppm	ASTM D5185m ASTM D5185m		▲ 1190 9	▲ 533 <1	▲ 183 -1
The BN result indicates that there is suitable alkalinity remaining in the oil.	Boron Barium		ASTM D5185m			<1 12	<1
	Molybdenum	ppm			<1 149	46	0
	Manganese	ppm	ASTM D5185m ASTM D5185m		149	40 <1	1
	Magnesium	ppm	ASTM D5185m		104	50	66
	Calcium	ppm	ASTM D5185m		2757	2317	2924
	Phosphorus	ppm ppm	ASTM D5185m		1061	931	1082
	Zinc		ASTM D5185m		1249	1120	1380
	Sulfur	ppm ppm	ASTM D5185m		4952	3741	5050
	Oxidation	Abs/.1mm	*ASTM D3183111	>25	24.9 24.9	13.9	21.3
				>LJ	24.3	10.0	21.0

Base Number (BN) mg KOH/g ASTM D2896

ASTM D445

Visc @ 100°C cSt

7.5

14.6

7.48

15.2

8.1

15.3

NORMAL

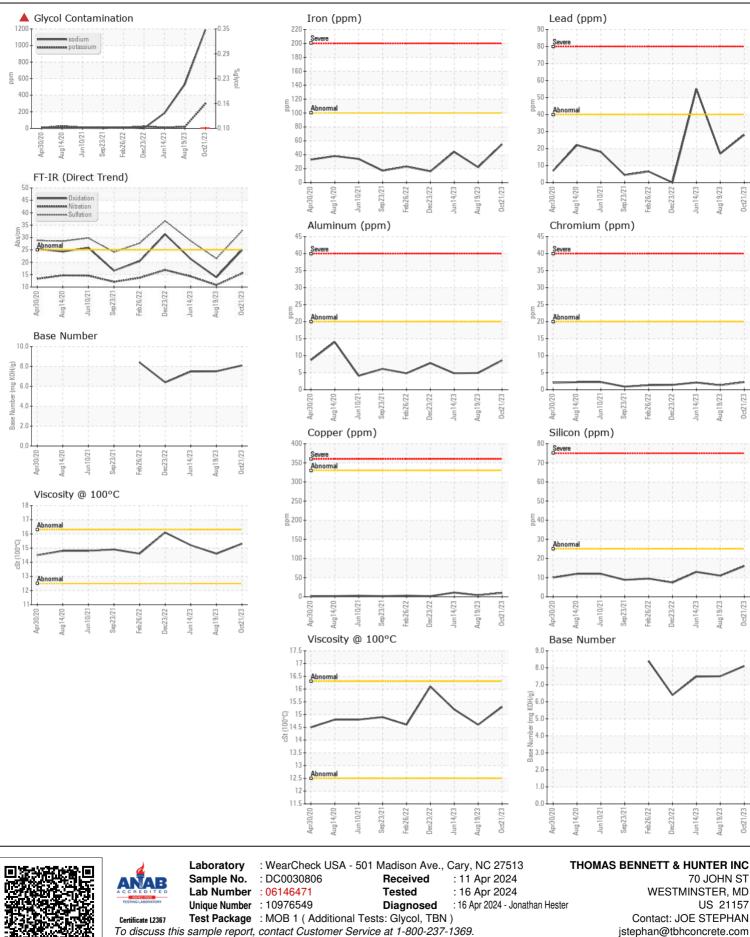
**SEVERE** 

**ABNORMAL** 

WEAR

CONTAMINATION

**FLUID CONDITION** 



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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