



# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>ABNORMAL</b>
FLUID CONDITION	<b>ABNORMAL</b>

Machine Id  
**A-353**  
 Component  
**Diesel Engine**  
 Fluid  
**DURAMAX 15W40 (--- QTS)**

## RECOMMENDATION

We advise that you check for faulty combustion, plugged air filters, or aftercoolers. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. NOTE: High solids (carbon/soot) in the sample have limited the accuracy of Infra-Red data including Total Base Number (TBN) value.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>DC0030799</b>	DC0022403	DC0020589
Sample Date		Client Info		<b>13 Nov 2023</b>	22 Dec 2022	23 Jul 2022
Machine Age	hrs	Client Info		<b>26554</b>	25013	24281
Oil Age	hrs	Client Info		<b>519</b>	732	667
Filter Age	hrs	Client Info		<b>519</b>	732	667
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	SEVERE	SEVERE

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>41</b>	11	50
Chromium	ppm	ASTM D5185m	>20	<b>1</b>	<1	2
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	<1	1
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	<1	1
Copper	ppm	ASTM D5185m	>330	<b>8</b>	<1	5
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

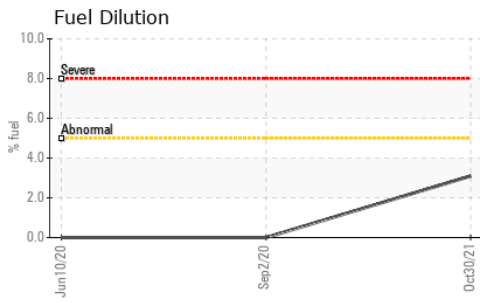
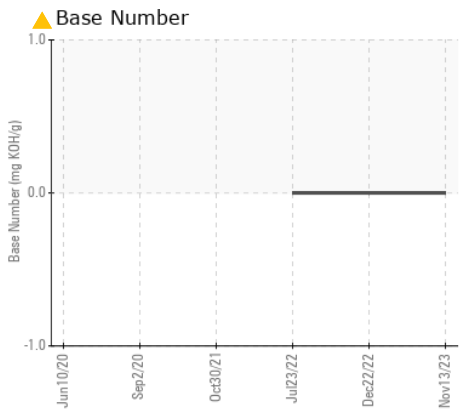
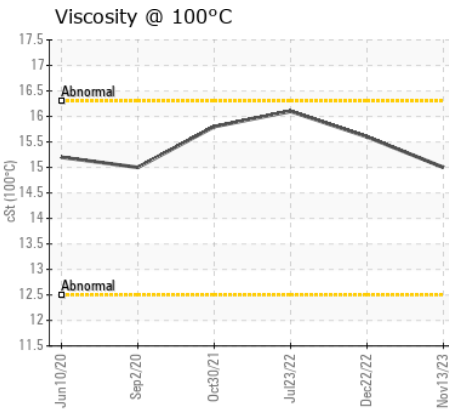
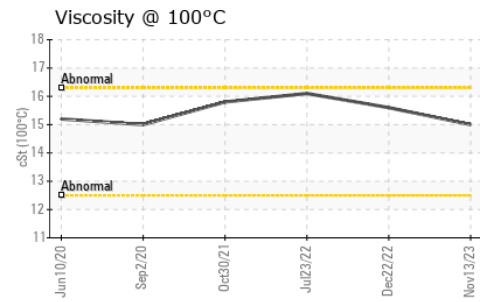
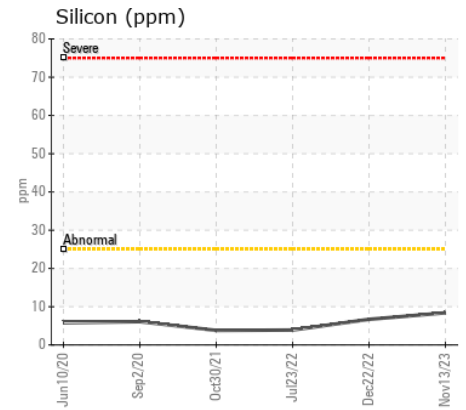
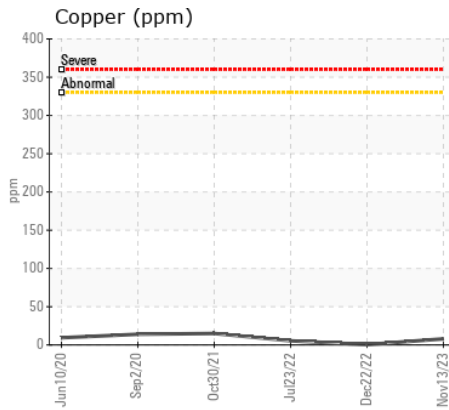
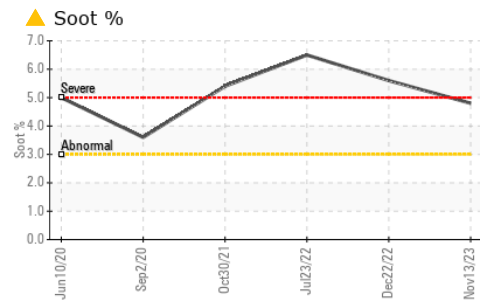
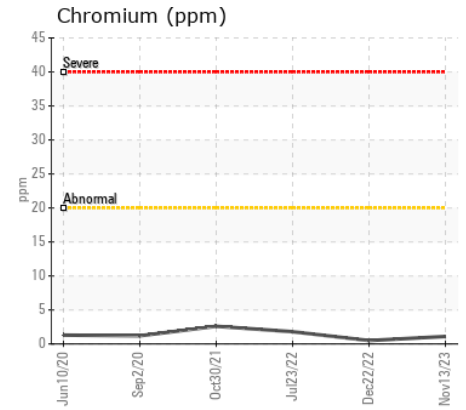
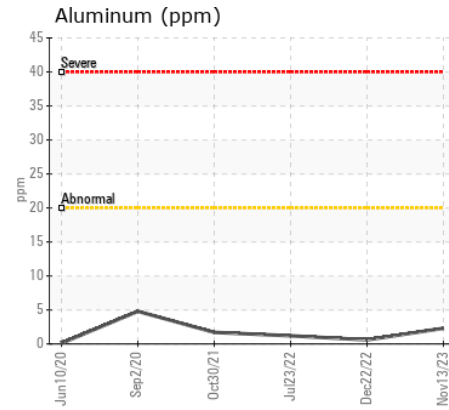
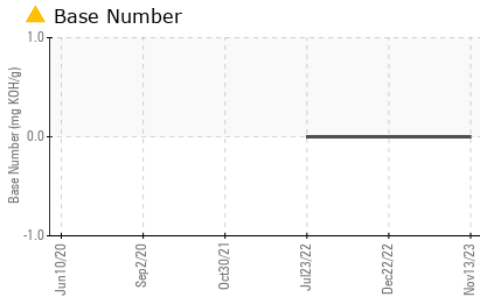
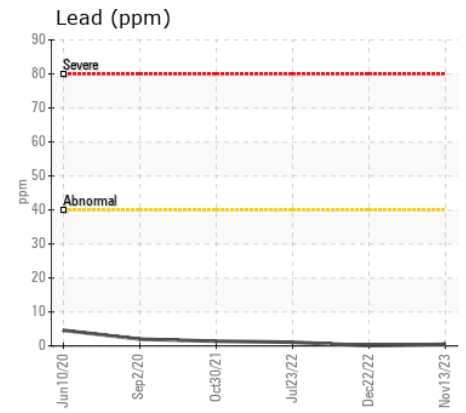
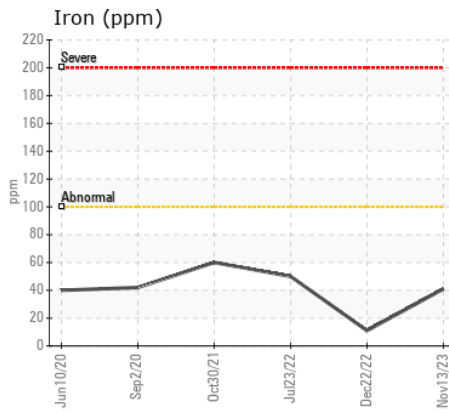
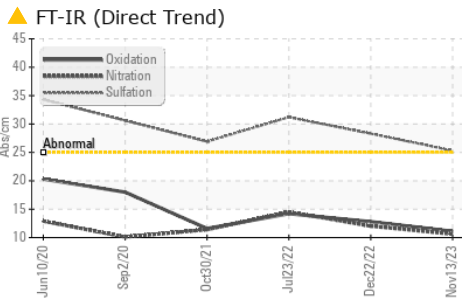
There is an abnormal amount of solids and carbon present in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>8</b>	7	4
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	6	0
Fuel	%	ASTM D3524	>5	<b>&lt;1.0</b>	<1.0	<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>4.8</b>	5.6	6.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.6</b>	12.0	14.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>25.3</b>	28.3	31.2
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

## FLUID CONDITION

The BN level is low.

Sodium	ppm	ASTM D5185m		<b>2</b>	3	1
Boron	ppm	ASTM D5185m		<b>6</b>	0	6
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>3</b>	2	4
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m		<b>38</b>	33	54
Calcium	ppm	ASTM D5185m		<b>2373</b>	2354	2133
Phosphorus	ppm	ASTM D5185m		<b>923</b>	879	789
Zinc	ppm	ASTM D5185m		<b>1079</b>	1035	984
Sulfur	ppm	ASTM D5185m		<b>4235</b>	3269	3143
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>11.1</b>	12.8	14.2
Base Number (BN)	mg KOH/g	ASTM D2896		<b>0.0</b>	0.0	0.0
Visc @ 100°C	cSt	ASTM D445		<b>15.0</b>	15.6	16.1



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : DC0030799  
**Lab Number** : 06146475  
**Unique Number** : 10976553  
**Test Package** : MOB 1 ( Additional Tests: FuelDilution, TBN )

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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)