



# OIL ANALYSIS REPORT

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

Machine Id  
**A-381**  
 Component  
**Diesel Engine**  
 Fluid  
**DURAMAX 15W40 (--- QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>DC0032167</b>	DC0025549	DC0021360
Sample Date		Client Info		<b>24 Jan 2024</b>	24 Mar 2023	05 Nov 2022
Machine Age	hrs	Client Info		<b>770</b>	14366	13541
Oil Age	hrs	Client Info		<b>770</b>	825	456
Filter Age	hrs	Client Info		<b>770</b>	825	456
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>100	<b>57</b>	16	22
Chromium	ppm	ASTM D5185m	>20	<b>3</b>	<1	2
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>3</b>	3	6
Lead	ppm	ASTM D5185m	>40	<b>5</b>	0	2
Copper	ppm	ASTM D5185m	>330	<b>241</b>	2	3
Tin	ppm	ASTM D5185m	>15	<b>2</b>	<1	<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

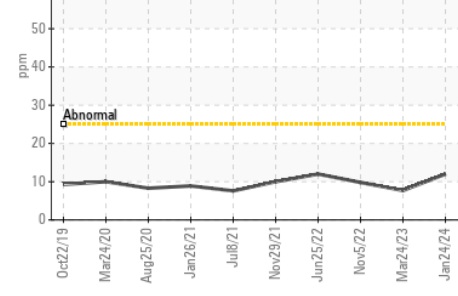
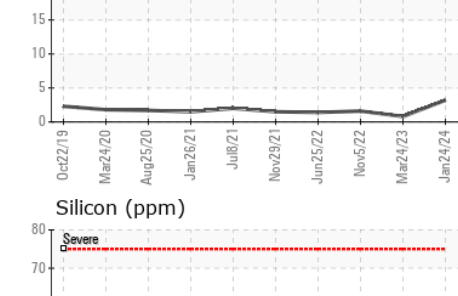
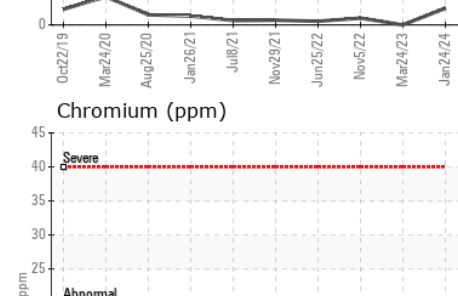
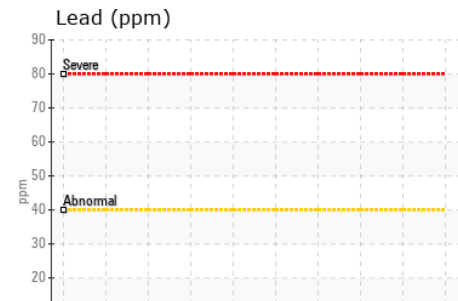
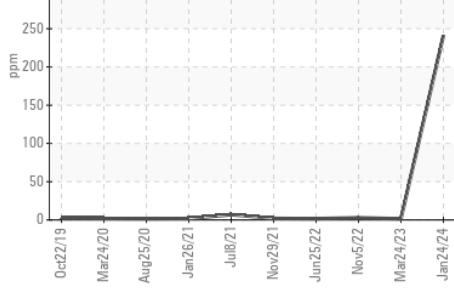
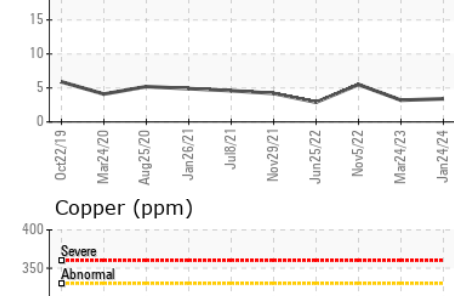
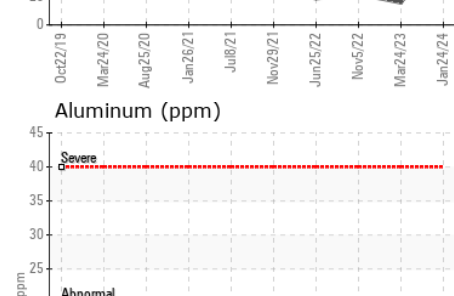
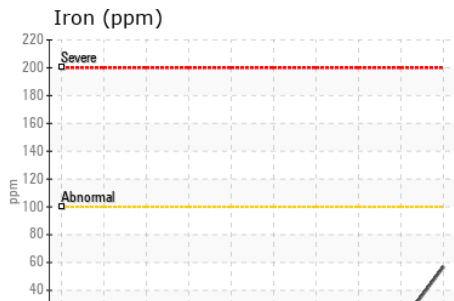
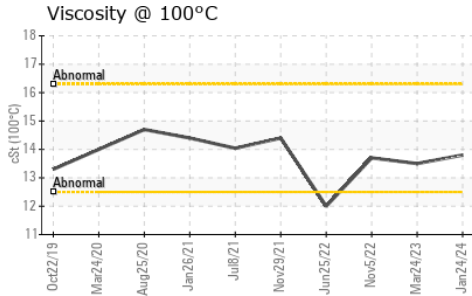
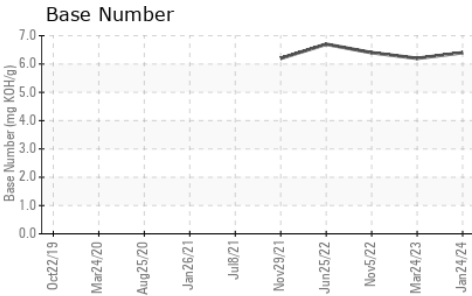
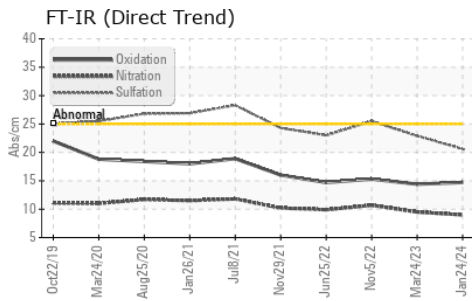
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>12</b>	8	10
Potassium	ppm	ASTM D5185m	>20	<b>8</b>	3	10
Fuel		WC Method	>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>0.5</b>	0.5	0.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.0</b>	9.5	10.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.6</b>	22.9	25.5
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 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		<b>10</b>	3	4
Boron	ppm	ASTM D5185m		<b>2</b>	0	4
Barium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>15</b>	2	5
Manganese	ppm	ASTM D5185m		<b>3</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>208</b>	41	63
Calcium	ppm	ASTM D5185m		<b>2215</b>	2438	2513
Phosphorus	ppm	ASTM D5185m		<b>947</b>	924	904
Zinc	ppm	ASTM D5185m		<b>1142</b>	1123	1164
Sulfur	ppm	ASTM D5185m		<b>3622</b>	4484	4279
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.7</b>	14.4	15.3
Base Number (BN)	mg KOH/g	ASTM D2896		<b>6.4</b>	6.2	6.4
Visc @ 100°C	cSt	ASTM D445		<b>13.8</b>	13.5	13.7



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : DC0032167  
**Lab Number** : 06146454  
**Unique Number** : 10976532  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**THOMAS BENNETT & HUNTER INC**  
 70 JOHN ST  
 WESTMINSTER, MD  
 US 21157  
 Contact: JOE STEPHAN  
 jstephan@tbhconcrete.com  
 T: (410)848-9030  
 F: (410)848-9032

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)