

## **OIL ANALYSIS REPORT**

Sample Rating Trend

NORMAL

#### Machine Id

# Westchester des fleet# 07599 10022485

**Diesel Engine** 

Fluid DIESEL ENGINE OIL SAE 15W40 (--- GAL)

#### DIAGNOSIS

### Recommendation

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

## Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil.

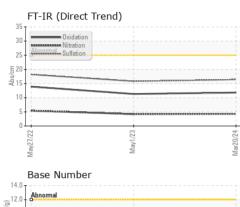
#### Fluid Condition

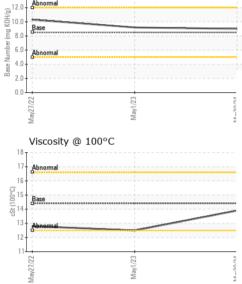
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0878265	WC0799799	WC0651468
Sample Date		Client Info		20 Mar 2024	01 May 2023	27 May 2022
Machine Age	hrs	Client Info		1664	1661	0
Oil Age	hrs	Client Info		0	86	0
Oil Changed		Client Info		Changed	N/A	N/A
Sample Status				NORMAL	ABNORMAL	NORMAL
CONTAMINATION	I	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	<1	1	3
Chromium	ppm	ASTM D5185m	>20	<1	<1	0
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	<1	1	<1
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	0	0	<1
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	11	14	0
Boron Barium	ppm ppm	ASTM D5185m ASTM D5185m	250 10	11 0	14 0	0
Barium	ppm	ASTM D5185m	10	0	0	0
Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	10	0 46	0 44	0 61
Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	10 100	0 46 0	0 44 <1	0 61 <1
Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 100 450	0 46 0 742	0 44 <1 626	0 61 <1 906
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 100 450 3000	0 46 0 742 1088	0 44 <1 626 1465	0 61 <1 906 1060
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 100 450 3000 1150	0 46 0 742 1088 910	0 44 <1 626 1465 1014	0 61 <1 906 1060 1032
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 100 450 3000 1150 1350	0 46 0 742 1088 910 1092	0 44 <1 626 1465 1014 1318	0 61 <1 906 1060 1032 1238
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 100 450 3000 1150 1350 4250	0 46 0 742 1088 910 1092 3257	0 44 <1 626 1465 1014 1318 4190	0 61 <1 906 1060 1032 1238 3291
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 100 450 3000 1150 1350 4250 <b>limit/base</b>	0 46 0 742 1088 910 1092 3257 current	0 44 <1 626 1465 1014 1318 4190 history1	0 61 <1 906 1060 1032 1238 3291 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 100 450 3000 1150 1350 4250 <b>limit/base</b> >25	0 46 0 742 1088 910 1092 3257 current 4	0 44 <1 626 1465 1014 1318 4190 history1 4	0 61 <1 906 1060 1032 1238 3291 history2 4
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	10 100 450 3000 1150 1350 4250 <b>limit/base</b> >25 >158	0 46 0 742 1088 910 1092 3257 current 4 0	0 44 <1 626 1465 1014 1318 4190 history1 4 <1	0 61 <1 906 1060 1032 1238 3291 history2 4 1
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm	ASTM D5185m ASTM D5185m	10 100 450 3000 1150 1350 4250 <b>limit/base</b> >25 >158 >20	0 46 0 742 1088 910 1092 3257 current 4 0 <1	0 44 <1 626 1465 1014 1318 4190 history1 4 <1 2	0 61 <1 906 1060 1032 1238 3291 history2 4 1 0
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm	ASTM D5185m ASTM D5185m	10 100 450 3000 1150 1350 4250 imit/base >25 >158 >20 imit/base	0 46 0 742 1088 910 1092 3257 current 4 0 <1 current	0 44 <1 626 1465 1014 1318 4190 history1 4 <1 2 history1	0 61 <1 906 1060 1032 1238 3291 history2 4 1 0 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm	ASTM D5185m ASTM D5185m	10 100 450 3000 1150 1350 4250 <b>limit/base</b> >25 >158 >20 <b>limit/base</b> >3	0 46 0 742 1088 910 1092 3257 current 4 0 <1 current 0	0 44 <1 626 1465 1014 1318 4190 history1 4 <1 2 history1 0	0 61 <1 906 1060 1032 1238 3291 history2 4 1 0 bistory2 0.1
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	10 100 450 3000 1150 1350 4250 <b>imit/base</b> >25 >158 >20 <b>imit/base</b> >3 >20	0 46 0 742 1088 910 1092 3257 current 4 0 <1 current 0 4.3	0 44 <1 626 1465 1014 1318 4190 history1 4 <1 2 history1 0 4.2	0 61 <1 906 1060 1032 1238 3291 history2 4 1 0 history2 0.1 5.4
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	10 100 450 3000 1150 1350 4250 imit/base >25 >158 >20 imit/base >3 >20 >30	0 46 0 742 1088 910 1092 3257 current 4 0 <1 current 0 4.3 16.4	0 44 <1 626 1465 1014 1318 4190 history1 4 <1 2 history1 0 4.2 15.8	0 61 <1 906 1060 1032 1238 3291 history2 4 1 0 history2 0.1 5.4 18.2



## **OIL ANALYSIS REPORT**





Viscosity @ 100°C	VISUAL		method	limit/base	current	history1	history2
Precipitate scalar 'Visual NONE NONE NONE NONE NONE NONE Sitt scalar 'Visual NONE NONE NONE NONE NONE NONE Sand/Dirt scalar 'Visual NONE NONE NONE NONE NONE NONE Appearance scalar 'Visual NORML N	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silt scalar 'Visual NONE NONE NONE NONE NONE NONE NONE Scalar 'Visual NONE NONE NONE NONE NONE NONE Scalar 'Visual NORML	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Debris scalar 'Visual NONE NONE NONE NONE NONE NONE NONE NON	Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt scalar 'Visual NONE NONE NONE NONE NONE NONE NONE NON	Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance scalar *Visual NORML NORM	Debris	scalar	*Visual	NONE	NONE	A MODER	NONE
Odor   scalar   Visual   NORML   Normality   Normality   Normality   Normality   Nor	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Odor   scalar   Visual   NORML   Normality of the set of th	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water scalar Visual >0.2 NEG		scalar	*Visual	NORML	NORML	NORML	NORML
Free Water scalar Visual NEG NEG NEG NEG   FLUID PROPERTIES method limit/base current history1 history2   Visc @ 100°C cSt ASTM D445 14.4 13.9 12.5 12.8   GRAPHS Iron (ppm) Iron (ppm) Iron (ppm) Iron (ppm) Iron (ppm)   Image: State of the state of		scalar	*Visual		NEG	NEG	NEG
Visc @ 100°C cSt ASTM D445 14.4 13.9 12.5 12.8 GRAPHS Tron (ppm)	Free Water	scalar	*Visual		NEG	NEG	NEG
GRAPHS Iron (ppm)	FLUID PROPER	TIES	method	limit/base	current	history1	history2
Tron (ppm) Lead (ppm) Lead (ppm) Lead (ppm) Lead (ppm) Lead (ppm) Lead (ppm) Lead (ppm) Lead (ppm) Lead (ppm) Chromium (ppm) Chromium (ppm) Copper (ppm) Copp	Visc @ 100°C	cSt	ASTM D445	14.4	13.9	12.5	12.8
250 250 250 2010 40 40 40 40 40 40 40 40 40 4	GRAPHS						
2010 2010				100			
Aluminum (ppm)	Severe				Severe		
Aluminum (ppm)	= 150 -			_ 60			
Aluminum (ppm) - CIDIAW Aluminum (ppm) - CIDIAW Aluminum (ppm) - CIDIAW Aluminum (ppm) - CIDIAW Aluminum (ppm) - CIDIAW Copper (ppm) - CIDIAW -	and Abnormal				Abnormal		
E21/Jew Aluminum (ppm) Aluminum (ppm	50-			20	)		
Aluminum (ppm) Aluminum (ppm) Aluminum (ppm) Aluminum (ppm) Coronium (ppm) Coronium (ppm) Copper (ppm) Copper (ppm) Viscosity @ 100°C Aluminum (ppm) Copper (ppm							
Aluminum (ppm) Aluminum (ppm) Aluminum (ppm) Aluminum (ppm) Coronium (ppm) Coronium (ppm) Copper (ppm) Copper (ppm) Viscosity @ 100°C Aluminum (ppm) Copper (ppm	27/22	ay1/23		20/24	22/122	ay1/23	20/24
50 40 40 40 40 40 40 40 40 40 4		Ma		Mai			Mai
A Degree A D				5	Chromium (p	opm)	
<sup>1</sup>	Severe				Severe		
Copper (ppm) Copper (ppm) Co	20						
Copper (ppm) Copper (ppm) Co	Abnormal				Abnormal		-
Copper (ppm) Copper (ppm) Co							
Copper (ppm)							
Copper (ppm)	22/12	y1/23		20/24	22/12	y1/23	20/24
400 400 400 400 400 400 400 400	May	Ma		Mar	May	Ma	Mar
300 200 200 00 00 00 00 00 00 00						)	
300 200 200 200 200 200 200 200	400 Severe			80	Severe		1
100 0 0 0 0 0 0 0 0 0 0 0 0	300 -			60	)		
Viscosity @ 100°C	200			틆 40			
FC/L/NeW Viscosity @ 100°C Base Number CZ/LZ/NeW Viscosity @ 100°C CZ/LZ/NeW Viscosity @ 100°C CZ/LZ/NeW CZ/L/NeW CZ/L/NeW CZ/L/NeW CZ/L/NeW CZ/L/NeW CZ/L/NeW CZ/LZ/NeW	100 -				Abnormal		1 
FC/L/NeW Viscosity @ 100°C Base Number CZ/LZ/NeW Viscosity @ 100°C CZ/LZ/NeW Viscosity @ 100°C CZ/LZ/NeW CZ/L/NeW CZ/L/NeW CZ/L/NeW CZ/L/NeW CZ/L/NeW CZ/L/NeW CZ/LZ/NeW	0						
Viscosity @ 100°C Abnomal Ab	1/22	1/23.				1/23 -	)/24 -
Viscosity @ 100°C Base Number	May2	May		Mar2	May2	May	Mar2(
Abnormal Base Base 10 10 12 10 10 10 10 10 10 10 10 10 10 10 10 10	Viscosity @ 100°	C			Base Numbe	r	
May1/23 +	Abnormal						1
May1/23 +	16			문 말10.0			
May1/23 +	0014 Base			ber (n			
May1/23 +	12 Abnormal				) - Q		
May(2)/22 May(1/23 May(2)/22 May(1/23 May(1/23	10			Base			
		1/23 -				1/23 -	)/24
	May2	May		Mar2(	May2	May	Mar20
WearCheck USA - 501 Madison Ave Carv NC 27513 GEN TECH LT	_				_		_
	: WearCheck USA - 50	)1 Madiso	n Ave Carv	, NC 27513		G	EN TECH LTD

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 GEN TECH LTD Sample No. : WC0878265 Received : 17 Apr 2024 3017 RT 9W Lab Number : 06151472 Tested : 18 Apr 2024 NEW WINDSOR, NY Unique Number : 10981550 Diagnosed : 18 Apr 2024 - Wes Davis US 12553 Test Package : MOB 1 (Additional Tests: TBN) Contact: JOE SAYEGH Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. joe@gentechltd.com \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (845)568-0500 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: (845)568-3073

Report Id: GENNEW [WUSCAR] 06151472 (Generated: 04/18/2024 04:49:57) Rev: 1

Contact/Location: JOE SAYEGH - GENNEW