

## **OIL ANALYSIS REPORT**

Sample Rating Trend



G3 Component Diesel Engine Fluid

Machine Id

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

### Recommendation

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

#### Wear

All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

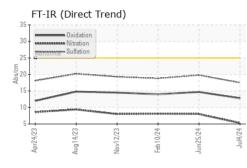
#### Fluid Condition

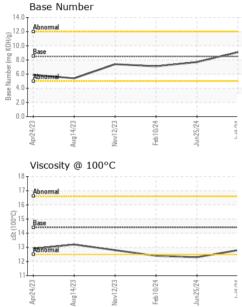
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0874322	WC0874323	WC0874287
Sample Date		Client Info		04 Jul 2024	25 Jun 2024	10 Feb 2024
Machine Age	mls	Client Info		0	688929	9766
Oil Age	mls	Client Info		0	0	541
Oil Changed		Client Info		Changed	N/A	Changed
Sample Status				NORMAL	ATTENTION	NORMAL
CONTAMINATION	N	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0	<1.0	0.5
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	>120	3	8	3
Chromium	ppm	ASTM D5185m	>20	<1	0	0
Nickel	ppm	ASTM D5185m	>5	<1	0	0
Titanium	ppm	ASTM D5185m	>2	<1	0	0
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	2	2	1
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	<1	0	0
Tin	ppm	ASTM D5185m	>15	0	0	0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0
					0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base 250			-
				current	history1	history2
Boron	ppm	ASTM D5185m	250	current 19	history1 11	history2 12
Boron Barium	ppm ppm	ASTM D5185m ASTM D5185m	250 10	current 19 0	history1 11 0	history2 12 1
Boron Barium Molybdenum	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	250 10	current 19 0 64	history1 11 0 66	history2 12 1 61
Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100	current 19 0 64 0	history1 11 0 66 <1	history2 12 1 61 0
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450	current 19 0 64 0 816	history1 11 0 66 <1 864	history2 12 1 61 0 858
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000	Current 19 0 64 0 816 1056	history1 11 0 66 <1 864 1168	history2 12 1 61 0 858 1097
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150	Current 19 0 64 0 816 1056 901	history1 11 0 66 <1 864 1168 975	history2 12 1 61 0 858 1097 963
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350	Current 19 0 64 0 816 1056 901 1073	history1 11 0 66 <1 864 1168 975 1202	history2 12 1 61 0 858 1097 963 1152
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	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	250 10 100 450 3000 1150 1350 4250 <b>limit/base</b> >25	Current 19 0 64 0 816 1056 901 1073 2634	history1 11 0 66 <1 864 1168 975 1202 3509	history2 12 1 61 0 858 1097 963 1152 2654
Boron 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 ASTM D5185m	250 10 100 450 3000 1150 1350 4250	Current 19 0 64 0 816 1056 901 1073 2634 Current	history1         11         0         66         <1         864         1168         975         1202         3509         history1	history2 12 1 61 0 858 1097 963 1152 2654 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm 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	250 10 100 450 3000 1150 1350 4250 <b>limit/base</b> >25	Current 19 0 64 0 816 1056 901 1073 2634 Current 3	history1         11         0         66         <1         864         1168         975         1202         3509         history1         6	history2           12           1           61           0           858           1097           963           1152           2654           history2           4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 <b>limit/base</b> >25 >158	Current 19 0 64 0 816 1056 901 1073 2634 Current 3 2 2 2 Current	history1         11         0         66         <1         864         1168         975         1202         3509         history1         6         3         4	history2         12         1         61         0         858         1097         963         1152         2654         history2         4         2         4         2         41         history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 <b>limit/base</b> >25 >158 >20	Current         19         0         64         0         816         1056         901         1073         2634         current         3         2         2         current         0.1	history1         11         0         66         <1         864         1168         975         1202         3509         history1         6         3         4         history1         0.3	history2         12         1         61         0         858         1097         963         1152         2654         history2         4         2         -1         history2         0         0.3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 <b>Imit/base</b> >25 >158 >20 <b>Imit/base</b>	Current         19         0         64         0         816         1056         901         1073         2634         current         3         2         2         current         0.1         5.3	history1         11         0         66         <1         864         1168         975         1202         3509         history1         6         3         4         history1         0.3         8.0	history2         12         1         61         0         858         1097         963         1152         2654         history2         4         2         <1         history2         0         .3         8.1
Boron 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	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 <b>limit/base</b> >25 >158 >20 <b>limit/base</b> >21	Current         19         0         64         0         816         1056         901         1073         2634         current         3         2         2         current         0.1	history1         11         0         66         <1         864         1168         975         1202         3509         history1         6         3         4         history1         0.3	history2         12         1         61         0         858         1097         963         1152         2654         history2         4         2         4         2         4         2         41         2         0.3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	250 10 100 450 3000 1150 1350 4250 <b>i</b> mit/base >25 >158 >20 <b>i</b> mit/base >25	Current         19         0         64         0         816         1056         901         1073         2634         current         3         2         2         current         0.1         5.3	history1         11         0         66         <1         864         1168         975         1202         3509         history1         6         3         4         history1         0.3         8.0	history2         12         1         61         0         858         1097         963         1152         2654         history2         4         2         <1         history2         0         .3         8.1
Boron 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	250 10 100 450 3000 1150 1350 4250 <b>Imit/base</b> >25 >158 >20 <b>Imit/base</b> >4 >20	Current         19         0         64         0         816         1056         901         1073         2634         current         3         2         current         0.1         5.3         17.5	history1         11         0         66         <1         864         1168         975         1202         3509         history1         6         3         4         history1         0.3         8.0         19.8	history2         12         1         61         0         858         1097         963         1152         2654         history2         4         2         <1         history2         0.3         8.1         18.8

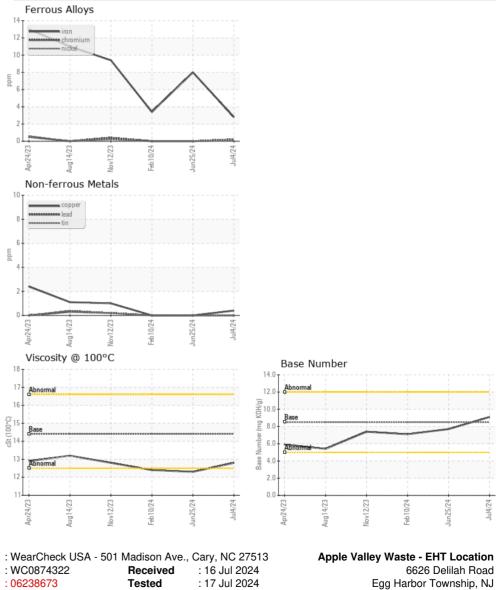


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VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*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
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	12.8	12.3	12.4
GRAPHS						





Lab Number : 06238673 Tested : 17 Jul 2024 Unique Number : 11127507 Diagnosed : 17 Jul 2024 - Wes Davis Test Package : CONST (Additional Tests: TBN) Contact: Service Manager Certificate 12367 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)

Report Id: AVWEHT [WUSCAR] 06238673 (Generated: 07/17/2024 13:41:35) Rev: 1

Laboratory

Sample No.

Contact/Location: Service Manager - AVWEHT Page 2 of 2

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