

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id **1005** Component **Diesel Engine** Fluid

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

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

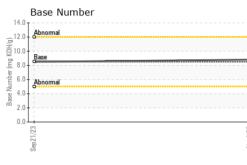
Fluid Condition

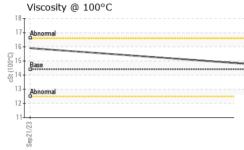
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

			Sep2023	Nov2023		
SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0855852	WC0855863	
Sample Date		Client Info		01 Nov 2023	21 Sep 2023	
Machine Age	mls	Client Info		0	0	
Oil Age	mls	Client Info		0	6000	
Oil Changed		Client Info		N/A	Changed	
Sample Status				NORMAL	NORMAL	
CONTAMINATION	۷	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	
Glycol		WC Method		NEG	NEG	
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	22	43	
Chromium	ppm	ASTM D5185m	>20	1	1	
Nickel	ppm	ASTM D5185m	>4	<1	0	
Titanium	ppm	ASTM D5185m		0	0	
Silver	ppm	ASTM D5185m	>3	0	0	
Aluminum	ppm	ASTM D5185m	>20	4	6	
Lead	ppm	ASTM D5185m	>40	0	0	
Copper	ppm	ASTM D5185m	>330	<1	2	
Tin	ppm	ASTM D5185m	>15	<1	<1	
Vanadium	ppm	ASTM D5185m		0	<1	
Cadmium	ppm	ASTM D5185m		0	0	
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	2	0	
Barium	ppm	ASTM D5185m	10	0	0	
Molybdenum						
	ppm	ASTM D5185m	100	60	67	
Manganese	ppm ppm	ASTM D5185m ASTM D5185m	100	60 <1	67 <1	
Manganese			100 450			
Manganese Magnesium	ppm	ASTM D5185m		<1	<1	
Manganese Magnesium Calcium	ppm ppm	ASTM D5185m ASTM D5185m	450	<1 976	<1 1068	
Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	450 3000	<1 976 1087	<1 1068 1179	
Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	450 3000 1150	<1 976 1087 1068	<1 1068 1179 1028	
Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	450 3000 1150 1350	<1 976 1087 1068 1316	<1 1068 1179 1028 1336	
Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	450 3000 1150 1350 4250	<1 976 1087 1068 1316 2998	<1 1068 1179 1028 1336 2977	
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	450 3000 1150 1350 4250 limit/base >25	<1 976 1087 1068 1316 2998 current	<1 1068 1179 1028 1336 2977 history1	
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	450 3000 1150 1350 4250 limit/base >25	<1 976 1087 1068 1316 2998 current 8	<1 1068 1179 1028 1336 2977 history1 6	 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	450 3000 1150 1350 4250 Limit/base >25 >158	<1 976 1087 1068 1316 2998 current 8 <1	<1 1068 1179 1028 1336 2977 history1 6 3	 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	450 3000 1150 1350 4250 limit/base >25 >158 >20	<1 976 1087 1068 1316 2998 current 8 <1 3	<1 1068 1179 1028 1336 2977 history1 6 3 3 3	 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	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 ASTM D5185m	450 3000 1150 1350 4250 limit/base >25 >158 >20	<1 976 1087 1068 1316 2998 current 8 <1 3 current	<1 1068 1179 1028 1336 2977 history1 6 3 3 3 history1	 history2 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	450 3000 1150 1350 4250 limit/base >25 >158 >20 limit/base >3	<1 976 1087 1068 1316 2998 current 8 <1 3 current 1.1	<1 1068 1179 1028 1336 2977 history1 6 3 3 3 history1 2.7	 history2 history2
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 *ASTM D7844	450 3000 1150 1350 4250 limit/base >25 >158 >20 limit/base >3 >20	<1 976 1087 1068 1316 2998 <u>current</u> 8 <1 3 <u>current</u> 1.1 8.7	<1 1068 1179 1028 1336 2977 history1 6 3 3 history1 2.7 9.8	 history2 history2
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 D7844 *ASTM D7624	450 3000 1150 1350 4250 limit/base >25 >158 >20 limit/base >3 >20 >3 >20	<1 976 1087 1068 1316 2998 <u>current</u> 8 <1 3 <u>current</u> 1.1 8.7 20.0	<1 1068 1179 1028 1336 2977 history1 6 3 3 3 history1 2.7 9.8 22.8	 history2 history2 history2



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* - 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)

Certificate L2367

Laboratory

Sample No.

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