

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id **1014** Component **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.

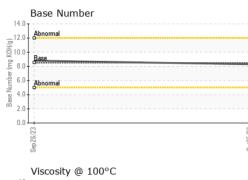
Fluid Condition

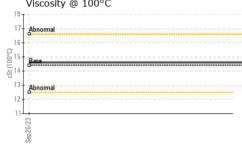
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

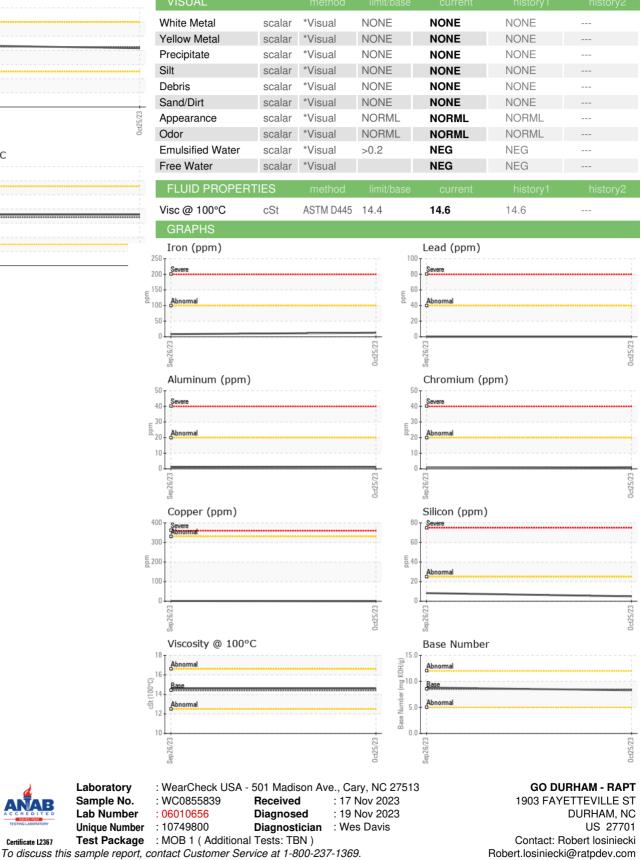
			Sep2023	0ct2023		
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0855839	WC0855857	
Sample Date		Client Info		25 Oct 2023	26 Sep 2023	
Machine Age	mls	Client Info		0	0	
Oil Age	mls	Client Info		0	0	
Oil Changed	11110	Client Info		N/A	N/A	
Sample Status				NORMAL	NORMAL	
CONTAMINATION	٧	method	limit/base	current	history1	history2
Fuel		WC Method	\ 5	<1.0	<1.0	
Glycol		WC Method	20	NEG	NEG	
-			1			
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	13	8	
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	1	1	
Lead	ppm	ASTM D5185m	>40	0	0	
Copper	ppm		>330	0	1	
Tin	ppm		>15	<1	0	
Vanadium	ppm	ASTM D5185m		0	0	
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			100	C 4		
	ppm	ASTM D5185m	100	61	60	
,	ppm ppm	ASTM D5185m ASTM D5185m	100	61 <1	60 <1	
Manganese			450	-		
Manganese Magnesium	ppm	ASTM D5185m		<1	<1	
Manganese Magnesium Calcium	ppm ppm	ASTM D5185m ASTM D5185m	450	<1 991	<1 986	
Manganese Magnesium Calcium Phosphorus	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	450 3000	<1 991 1114	<1 986 1137	
Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	450 3000 1150	<1 991 1114 1069	<1 986 1137 1095	
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	<1 991 1114 1069 1342	<1 986 1137 1095 1350	
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	<1 991 1114 1069 1342 3009	<1 986 1137 1095 1350 3265	
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	<1 991 1114 1069 1342 3009 current	<1 986 1137 1095 1350 3265 history1	 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	450 3000 1150 1350 4250 limit/base >25	<1 991 1114 1069 1342 3009 current 5	<1 986 1137 1095 1350 3265 history1 8	 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	<1 991 1114 1069 1342 3009 current 5 4	<1 986 1137 1095 1350 3265 history1 8 4	 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	<1 991 1114 1069 1342 3009 <u>current</u> 5 4 2	<1 986 1137 1095 1350 3265 <u>history1</u> 8 4 2	 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	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 limit/base	<1 991 1114 1069 1342 3009 current 5 4 2 2 current	<1 986 1137 1095 1350 3265 history1 8 4 2 2 history1	 history2 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm	ASTM D5185m ASTM D5185m	450 3000 1150 1350 4250 limit/base >25 >158 >20 limit/base >3	<1 991 1114 1069 1342 3009 <u>current</u> 5 4 2 2 <u>current</u> 0.7	<1 986 1137 1095 1350 3265 history1 8 4 2 2 history1 0.4	 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	450 3000 1150 1350 4250 imit/base >25 >158 >20 imit/base >3 >20	<1 991 1114 1069 1342 3009 <u>current</u> 5 4 2 2 <u>current</u> 0.7 7.8	<1 986 1137 1095 1350 3265 history1 8 4 2 <u>history1</u> 0.4 6.3	 history2 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 D51854 *ASTM D7844 *ASTM D7624	450 3000 1150 1350 4250 imit/base >25 >158 >20 imit/base >3 >20 >30	<1 991 1114 1069 1342 3009 <u>current</u> 5 4 2 <u>current</u> 0.7 7.8 19.6	<1 986 1137 1095 1350 3265 history1 8 4 2 <u>history1</u> 0.4 6.3 18.6	 history2 history2 history2



OIL ANALYSIS REPORT







* - 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.

Lab Number

T:

F: