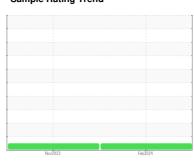


OIL ANALYSIS REPORT

Sample Rating Trend







Machine Id **8417998**

Component

Diesel Engine

{not provided} (--- QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

Metal levels are typical for a new component breaking in.

Contamination

There is no indication of any contamination in the oil.

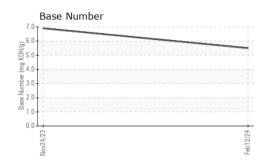
Fluid Condition

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

			Nov2023	Feb 2024		
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		IL06099973	IL06024996	
Sample Date		Client Info		12 Feb 2024	24 Nov 2023	
Machine Age	mls	Client Info		35929	21935	
Oil Age	mls	Client Info		35929	21935	
Oil Changed	0	Client Info		N/A	N/A	
Sample Status				NORMAL	NORMAL	
CONTAMINATION	٧	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG	NEG	
Glycol		WC Method	70.L	NEG	NEG	
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	38	30	
Chromium	ppm	ASTM D5185m	>20	1	1	
Nickel	ppm	ASTM D5185m	>4	0	0	
Titanium	ppm	ASTM D5185m	0	0	<1	
Silver	ppm	ASTM D5185m	>3	<1	<1	
Aluminum	ppm	ASTM D5185m		20	17	
Lead	ppm	ASTM D5185m	>40	5	2	
Copper	ppm	ASTM D5185m		21	23	
Tin	ppm	ASTM D5185m	>15	3	3	
Vanadium	ppm	ASTM D5185m		0	0	
Cadmium	ppm	ASTM D5185m		0	0	
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 31	history1 48	history2
	ppm		limit/base			history2
Boron	• •	ASTM D5185m	limit/base	31	48	
Boron Barium Molybdenum Manganese	ppm	ASTM D5185m ASTM D5185m	limit/base	31 12	48 0 64 4	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	31 12 57 4 386	48 0 64 4 452	
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	31 12 57 4 386 1441	48 0 64 4 452 1751	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	31 12 57 4 386 1441 859	48 0 64 4 452 1751 989	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	31 12 57 4 386 1441 859 1034	48 0 64 4 452 1751 989 1196	
Boron 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 ASTM D5185m		31 12 57 4 386 1441 859	48 0 64 4 452 1751 989 1196 2609	
Boron 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 ASTM D5185m ASTM D5185m	limit/base	31 12 57 4 386 1441 859 1034	48 0 64 4 452 1751 989 1196	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	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	limit/base	31 12 57 4 386 1441 859 1034 2406	48 0 64 4 452 1751 989 1196 2609 history1	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base	31 12 57 4 386 1441 859 1034 2406	48 0 64 4 452 1751 989 1196 2609 history1	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >25 >20	31 12 57 4 386 1441 859 1034 2406 current 36 1	48 0 64 4 452 1751 989 1196 2609 history1	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >25 >20	31 12 57 4 386 1441 859 1034 2406 current 36	48 0 64 4 452 1751 989 1196 2609 history1 37 <1	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	limit/base >25 >20	31 12 57 4 386 1441 859 1034 2406 current 36 1	48 0 64 4 452 1751 989 1196 2609 history1 37 <1 58	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >25 >20 >5	31 12 57 4 386 1441 859 1034 2406 current 36 1 63 <1.0	48 0 64 4 452 1751 989 1196 2609 history1 37 <1 58 <1.0	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >25 >20 >5 limit/base	31 12 57 4 386 1441 859 1034 2406 current 36 1 63 <1.0 current	48 0 64 4 452 1751 989 1196 2609 history1 37 <1 58 <1.0 history1	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >25 >20 >5 limit/base >3 >20	31 12 57 4 386 1441 859 1034 2406 current 36 1 63 <1.0 current	48 0 64 4 452 1751 989 1196 2609 history1 37 <1 58 <1.0 history1 0.2	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844	limit/base >25 >20 >5 limit/base >3 >20	31 12 57 4 386 1441 859 1034 2406 current 36 1 63 <1.0 current 0.3 9.4	48 0 64 4 452 1751 989 1196 2609 history1 37 <1 58 <1.0 history1 0.2 8.1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7624 *ASTM D7844	limit/base >25 >20 >5 limit/base >3 >20 >30 limit/base	31 12 57 4 386 1441 859 1034 2406 current 36 1 63 <1.0 current 0.3 9.4 22.5 current	48 0 64 4 452 1751 989 1196 2609 history1 37 <1 58 <1.0 history1 0.2 8.1 20.7 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7624 *ASTM D7624	limit/base >25 >20 >5 limit/base >3 >20 >30 limit/base	31 12 57 4 386 1441 859 1034 2406	48 0 64 4 452 1751 989 1196 2609 history1 37 <1 58 <1.0 history1 0.2 8.1 20.7	history2 history2



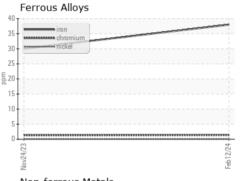
OIL ANALYSIS REPORT

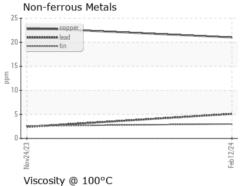


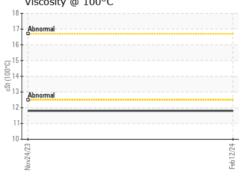
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
Precipitate	scalar	*Visual	NONE	NONE	NONE	
Silt	scalar	*Visual	NONE	NONE	NONE	
Debris	scalar	*Visual	NONE	NONE	NONE	
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
Appearance	scalar	*Visual	NORML	NORML	NORML	
Odor	scalar	*Visual	NORML	NORML	NORML	
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	
Free Water	scalar	*Visual		NEG	NEG	

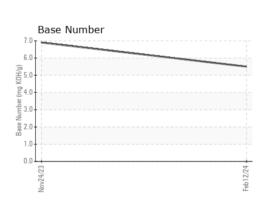
FLUID PHOPENTIES		method		riistory i	riistoryz
Visc @ 100°C	cSt	ASTM D445	11.8	11.8	

Viscosity @ 100°C 16 () 15 () 14 13 13











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Laboratory Sample No. Lab Number : 06099973 Unique Number : 10898203

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : IL06099973

Received **Tested** Diagnosed

: 26 Feb 2024 : 27 Feb 2024

: 27 Feb 2024 - Sean Felton

4675 BAKERS FERRY ROAD ATLANTA, GA US 30331 Contact: DAVID JOHNS

davidjohns@idealease.com

IDEALEASE OF ATLANTA - FULTON

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.

Test Package: FLEET (Additional Tests: FuelDilution)

T: (404)699-5571 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: (404)699-7420

Contact/Location: DAVID JOHNS - IDEATLGA