

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id 6011328 Component Diesel Engine

NOT GIVEN (--- GAL)

DIAGNOSIS

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.

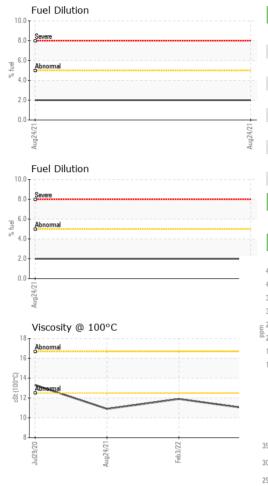
Fluid Condition

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

		Jul2020) Aug2021	Feb2022		
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		IL06009312	IL05463483	IL05336929
Sample Date		Client Info		20 Oct 2023	03 Feb 2022	24 Aug 2021
Machine Age	mls	Client Info		113133	69975	54690
Oil Age	mls	Client Info		20000	20000	20000
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	MARGINAL
CONTAMINATION	N	method	limit/base	current	history1	history2
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	41	17	20
Chromium	ppm	ASTM D5185m	>20	1	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	<1	<1
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	<1	0	<1
Aluminum	ppm	ASTM D5185m	>20	10	7	17
Lead	ppm	ASTM D5185m	>40	<1	<1	<1
Copper	ppm	ASTM D5185m	>330	3	2	12
Tin	ppm	ASTM D5185m	>15	- <1	<1	<1
Antimony	ppm	ASTM D5185m			0	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
			11 1. 11			
ADDITIVES		method				history2
Boron	ppm	ASTM D5185m		21	30	33
Boron Barium	ppm ppm			21 0	30 0	
Boron		ASTM D5185m ASTM D5185m ASTM D5185m		21 0 41	30 0 14	33 0 15
Boron Barium Molybdenum Manganese	ppm	ASTM D5185m ASTM D5185m		21 0	30 0	33 0 15 <1
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m		21 0 41	30 0 14	33 0 15
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		21 0 41 <1	30 0 14 <1	33 0 15 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		21 0 41 <1 465	30 0 14 <1 697	33 0 15 <1 634
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		21 0 41 <1 465 1565	30 0 14 <1 697 1437	33 0 15 <1 634 1320
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		21 0 41 <1 465 1565 678	30 0 14 <1 697 1437 776	33 0 15 <1 634 1320 696
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	limit/base	21 0 41 <1 465 1565 678 872 2282 current	30 0 14 <1 697 1437 776 854	33 0 15 <1 634 1320 696 784
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	limit/base	21 0 41 <1 465 1565 678 872 2282	30 0 14 <1 697 1437 776 854 2681	33 0 15 <1 634 1320 696 784 2451
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	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		21 0 41 <1 465 1565 678 872 2282 current	30 0 14 <1 697 1437 776 854 2681 history1	33 0 15 <1 634 1320 696 784 2451 history2
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 method	>25	21 0 41 <1 465 1565 678 872 2282 2282 current 18	30 0 14 <1 697 1437 776 854 2681 history1 7	33 0 15 <1 634 1320 696 784 2451 history2 8
Boron 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 ASTM D5185m	>25 >20	21 0 41 <1 465 1565 678 872 2282 2282 current 18 2	30 0 14 <1 697 1437 776 854 2681 <u>history1</u> 7 3	33 0 15 <1 634 1320 696 784 2451 history2 8 3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	>25 >20	21 0 41 <1 465 1565 678 872 2282 2282 current 18 2 13	30 0 14 <1 697 1437 776 854 2681 bistory1 7 3 3 3	33 0 15 <1 634 1320 696 784 2451 history2 8 3 39
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	>25 >20 >5	21 0 41 <1 465 1565 678 872 2282 2282 current 18 2 13 <1.0	30 0 14 <1 697 1437 776 854 2681 history1 7 3 3 3 < <1.0	33 0 15 <1 634 1320 696 784 2451 history2 8 3 39 2.0
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 ASTM D5185m	>25 >20 >5 limit/base	21 0 41 <1 465 1565 678 872 2282 current 18 2 13 <1.0 current	30 0 14 697 1437 776 854 2681 history1 7 3 3 3	33 0 15 <1 634 1320 696 784 2451 history2 8 3 39 ▲ 2.0 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 ASTM D5185m	>25 >20 >5 limit/base >3 >20	21 0 41 <1 465 1565 678 872 2282 <u>current</u> 18 2 13 <1.0 <u>current</u> 0.8	30 0 14 <97 1437 776 854 2681 history1 7 3 3 3 <<1.0 history1 0.5	33 0 15 <1 634 1320 696 784 2451 history2 8 3 39 ▲ 2.0 history2 0.5
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 D3524 method *ASTM D7844	>25 >20 >5 limit/base >3 >20	21 0 41 <1 465 1565 678 872 2282 Current 18 2 13 <1.0 Current 0.8 12.4	30 0 14 <1 697 1437 776 854 2681 history1 7 3 3 3 <1.0 history1 0.5 11.3	33 0 15 <1 634 1320 696 784 2451 history2 8 3 39 ≥ 2.0 history2 0.5 9.5
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 D5185m	>25 >20 >5 limit/base >3 >20 >30 limit/base	21 0 41 <1 465 1565 678 872 2282 current 18 2 13 <1.0 current 0.8 12.4 23.1	30 0 14 697 1437 776 854 2681 history1 7 3 3 3	33 0 15 <1 634 1320 696 784 2451 history2 8 3 39 ▲ 2.0 history2 0.5 9.5 20.4
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 D5185m	>25 >20 >5 limit/base >3 >20 >30 limit/base	21 0 41 <1 465 1565 678 872 2282 Current 18 2 13 <1.0 Current 0.8 12.4 23.1 Current	30 0 14 <1 697 1437 776 854 2681 history1 7 3 3 3 //>	33 0 15 <1 634 1320 696 784 2451 history2 8 3 39 ▲ 2.0 history2 0.5 9.5 20.4 history2



OIL ANALYSIS REPORT



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	ΓIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445		10.9	11.9	10.9
Jul2920		Feb3/22	0450/C3			
No. Company Make			-			
0 - copper	ls					
copper	ls					

Base Number

9.0

8.0

(67.0 6.0 0 Bull 5.0

unper () 3.0 Base 2.0

> 1.0 0.0

> > ul29/

0ct20/23 .



Sample No. : IL06009312 Received : 16 Nov 2023 4675 BAKERS FERRY ROAD Lab Number :06009312 Diagnosed : 19 Nov 2023 Unique Number : 10743074 Diagnostician : Don Baldridge Test Package : FLEET (Additional Tests: FuelDilution) Contact: DAVID JOHNS Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. davidjohns@idealease.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (404)699-5571 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: (404)699-7420

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

Aug24/21

Feb3/22.

Viscosity @ 100°C

18

17

16

15 St (100°C)

10

9

Laboratory

ul29/20

Contact/Location: DAVID JOHNS - IDEATLGA

Aug24/21

Feb3/22

IDEALEASE OF ATLANTA - FULTON

ATLANTA, GA

US 30331

0ct20/23