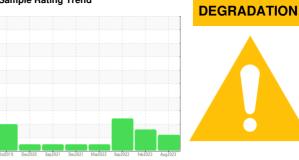


PROBLEM SUMMARY

Sample Rating Trend



Machine Id
3152L
Component
Diesel Engine

MOBIL 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY

No relevant graphs to display

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS								
Sample Status		ABNORMAL	ABNORMAL	ABNORMAL				
Base Number (BN)	ma KOH/a ASTM D2896	△ 3.2	△ 3.4	△ 3.9				

Customer Id: IDECHIIL Sample No.: IL0032342 Lab Number: 05933198 Test Package: FLEET

To manage this report scan the QR code

To discuss the diagnosis or test data:

Don Baldridge +1 don.b505@comcast.net

To change component or sample information: Customer Service +1 1-800-237-1369 customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Fluid			?	Oil and filter change at the time of sampling has been noted.
Change Filter			?	Oil and filter change at the time of sampling has been noted.

HISTORICAL DIAGNOSIS

20 Feb 2023 Diag: Jonathan Hester

DEGRADATION



Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The oil viscosity is higher than normal. The BN level is low.



10 Sep 2022 Diag: Jonathan Hester

DEGRADATION



Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.Cylinder, crank, or cam shaft wear is indicated. There is no indication of any contamination in the oil. The oil viscosity is higher than normal. The BN level is low.

view report

26 Mar 2022 Diag: Don Baldridge

NORMAL



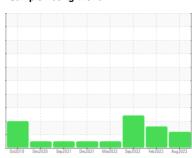
Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.





OIL ANALYSIS REPORT

Sample Rating Trend







Machine Id 3152L Component

Diesel Engine

MOBIL 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. 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.

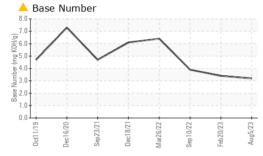
Fluid Condition

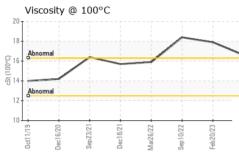
The BN level is low.

Oct2019 Dec2020 Sep2021 Dec2021 Med2022 Sep2022 Feb2023 Aug/2023						
SAMPLE INFORM	1ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		IL0032342	IL0028962	IL0025836
Sample Date		Client Info		05 Aug 2023	20 Feb 2023	10 Sep 2022
Machine Age	mls	Client Info		223985	209723	191677
Oil Age	mls	Client Info		14262	15000	16333
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
CONTAMINATION	J	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	0.0
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	66	72	△ 104
Chromium	ppm	ASTM D5185m	>20	2	2	4
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	0	<1	<1
Aluminum	ppm	ASTM D5185m	>20	5	9	17
Lead	ppm	ASTM D5185m	>40	0	0	<1
Copper	ppm	ASTM D5185m	>330	<1	2	3
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	<1
Cadmium	ppm	ASTM D5185m		0	0	<1
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 6	history1 7	history2 44
	ppm		limit/base			
Boron		ASTM D5185m	limit/base	6	7	44
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	6 0	7	44
Boron Barium Molybdenum Manganese Magnesium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	6 0 77	7 0 71 1 1150	44 2 43 2 771
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	6 0 77 <1	7 0 71 1	44 2 43 2 771 2121
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	6 0 77 <1 1307 1451 1318	7 0 71 1 1150 1516 1154	44 2 43 2 771 2121 982
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	6 0 77 <1 1307 1451 1318	7 0 71 1 1150 1516 1154 1531	44 2 43 2 771 2121 982 1208
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	6 0 77 <1 1307 1451 1318	7 0 71 1 1150 1516 1154	44 2 43 2 771 2121 982 1208 3392
Boron Barium Molybdenum 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 ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	6 0 77 <1 1307 1451 1318 1674 4323	7 0 71 1 1150 1516 1154 1531 3449 history1	44 2 43 2 771 2121 982 1208 3392 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >25	6 0 77 <1 1307 1451 1318 1674 4323 current	7 0 71 1 1150 1516 1154 1531 3449 history1	44 2 43 2 771 2121 982 1208 3392 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 >118	6 0 77 <1 1307 1451 1318 1674 4323 current 7	7 0 71 1 1150 1516 1154 1531 3449 history1 8	44 2 43 2 771 2121 982 1208 3392 history2 11
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >25	6 0 77 <1 1307 1451 1318 1674 4323 current	7 0 71 1 1150 1516 1154 1531 3449 history1	44 2 43 2 771 2121 982 1208 3392 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 >118	6 0 77 <1 1307 1451 1318 1674 4323 current 7	7 0 71 1 1150 1516 1154 1531 3449 history1 8	44 2 43 2 771 2121 982 1208 3392 history2 11
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >25 >118 >20	6 0 77 <1 1307 1451 1318 1674 4323 current 7 2	7 0 71 1 1150 1516 1154 1531 3449 history1 8 2 4	44 2 43 2 771 2121 982 1208 3392 history2 11 3 15
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	limit/base >25 >118 >20 limit/base	6 0 77 <1 1307 1451 1318 1674 4323 current 7 2	7 0 71 1 1150 1516 1154 1531 3449 history1 8 2 4 history1	44 2 43 2 771 2121 982 1208 3392 history2 11 3 15
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 method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >25 >118 >20 limit/base >3	6 0 77 <1 1307 1451 1318 1674 4323 current 7 2 2 current 0.7	7 0 71 1 1150 1516 1154 1531 3449 history1 8 2 4 history1 0.9	44 2 43 2 771 2121 982 1208 3392 history2 11 3 15 history2 1.1
Boron Barium Molybdenum 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 method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >25 >118 >20 limit/base >3 >20	6 0 77 <1 1307 1451 1318 1674 4323 current 7 2 2 current 0.7 18.8	7 0 71 1 1150 1516 1154 1531 3449 history1 8 2 4 history1 0.9 20.1	44 2 43 2 771 2121 982 1208 3392 history2 11 3 15 history2 1.1 22.2
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 Method ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	limit/base >25 >118 >20 limit/base >3 >20 >30 limit/base	6 0 77 <1 1307 1451 1318 1674 4323	7 0 71 1 1150 1516 1154 1531 3449 history1 8 2 4 history1 0.9 20.1 38.8	44 2 43 2 771 2121 982 1208 3392 history2 11 3 15 history2 1.1 22.2 44.3



OIL ANALYSIS REPORT

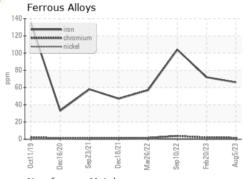


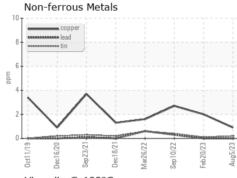


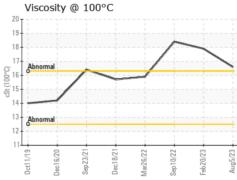
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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

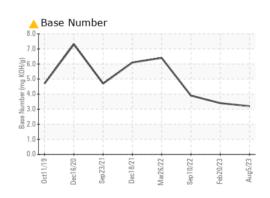
FLUID FNOFENTIES		memou	IIIIII/Dase	Current	HISTORY	HISTORY	
Visc @ 100°C	cSt	ASTM D445		16.6	▲ 17.9	▲ 18.4	

GRAPHS













Certificate L2367

Laboratory Sample No. Lab Number Unique Number : 10618469 Test Package : FLEET

: IL0032342 : 05933198

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 24 Aug 2023

Diagnosed : 25 Aug 2023 Diagnostician : Don Baldridge **RUSH TRUCK CENTER - CHICAGO IDEALEASE** 4655 SOUTH CENTRAL AVENUE

CHICAGO, IL US 60638

F: (708)496-8818

Contact: MIKE LINLEY

linleym@rushtruckcenters.com T: (708)496-7500

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)