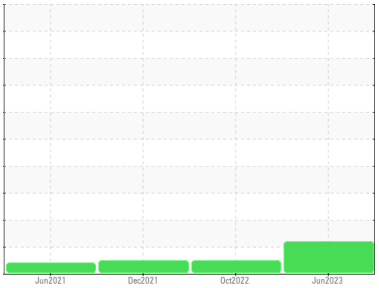
PROBLEM SUMMARY

Machine Id
472203
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- QTS)

Sample Rating Trend



DEGRADATION

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**	NORMAL	NORMAL
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	▲ **1.3**	5.8	5.6

Customer Id: IDECLE
Sample No.: IL0031160
Lab Number: 05900573
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

04 Oct 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.

view report

17 Dec 2021 Diag: Jonathan Hester

NORMAL

Resample at the next service interval to monitor.All component wear rates are normal. Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. 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.

view report

15 Jun 2021 Diag: Jonathan Hester

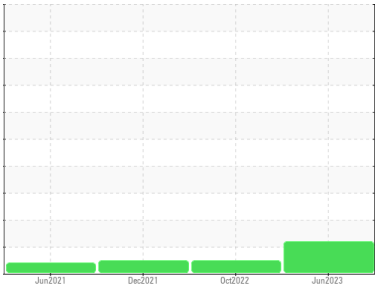
VISCOSITY

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.Metal levels are typical for a new component breaking in. Tests indicate that there is no fuel present in the oil. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



DEGRADATION

Machine Id
472203
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- QTS)

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.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**IL0031160**	IL0026955	IL0021333
Sample Date		Client Info		**15 Jun 2023**	04 Oct 2022	17 Dec 2021
Machine Age	mls	Client Info		**236335**	172100	87109
Oil Age	mls	Client Info		**64235**	42995	53400
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**ABNORMAL**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>5	**<1.0**	<1.0	<1.0
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	**83**	31	39
Chromium	ppm	ASTM D5185m	>20	**4**	2	3
Nickel	ppm	ASTM D5185m	>4	**2**	0	0
Titanium	ppm	ASTM D5185m		**0**	0	<1
Silver	ppm	ASTM D5185m	>3	**<1**	<1	<1
Aluminum	ppm	ASTM D5185m	>20	**6**	11	27
Lead	ppm	ASTM D5185m	>40	**7**	5	6
Copper	ppm	ASTM D5185m	>330	**2**	3	11
Tin	ppm	ASTM D5185m	>15	**2**	1	2
Antimony	ppm	ASTM D5185m		**---**	---	0
Vanadium	ppm	ASTM D5185m		**<1**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

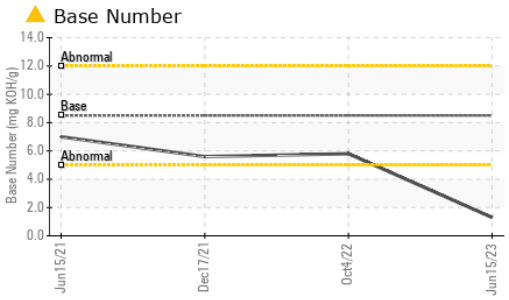
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	**4**	9	20
Barium	ppm	ASTM D5185m	10	**0**	0	2
Molybdenum	ppm	ASTM D5185m	100	**68**	56	45
Manganese	ppm	ASTM D5185m		**2**	<1	2
Magnesium	ppm	ASTM D5185m	450	**1024**	638	481
Calcium	ppm	ASTM D5185m	3000	**1233**	1360	1583
Phosphorus	ppm	ASTM D5185m	1150	**1106**	823	702
Zinc	ppm	ASTM D5185m	1350	**1364**	1015	892
Sulfur	ppm	ASTM D5185m	4250	**3262**	2700	1985

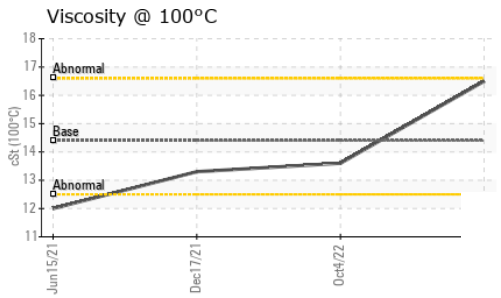
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**7**	7	15
Sodium	ppm	ASTM D5185m	>158	**3**	0	2
Potassium	ppm	ASTM D5185m	>20	**12**	21	75

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.8**	0.7	0.6
Nitration	Abs/cm	*ASTM D7624	>20	**21.8**	14.1	12.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	**37.9**	27.3	25.9

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**54.7**	28.6	27.6
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	**1.3**	5.8	5.6

OIL ANALYSIS REPORT

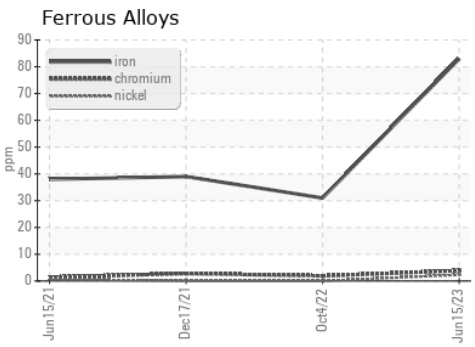


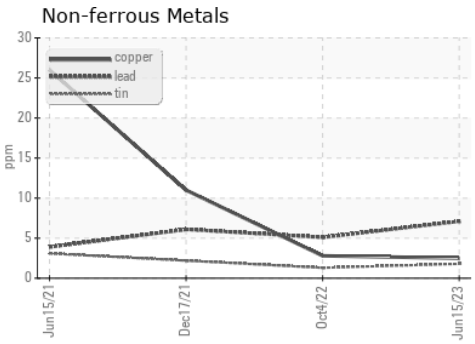


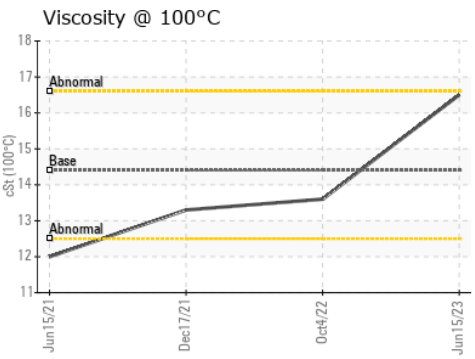
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

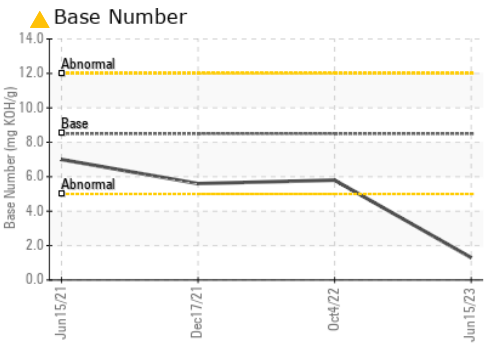
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	**16.5**	13.6	13.3

GRAPHS









Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : IL0031160
Lab Number : 05900573
Unique Number : 10561929
Test Package : FLEET

Received : 17 Jul 2023
Diagnosed : 19 Jul 2023
Diagnostician : Don Baldridge

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)

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