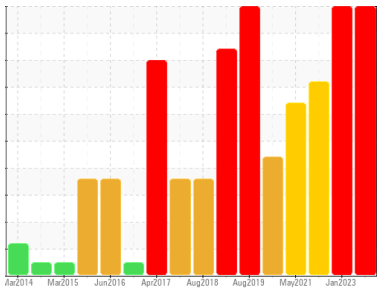
PROBLEM SUMMARY

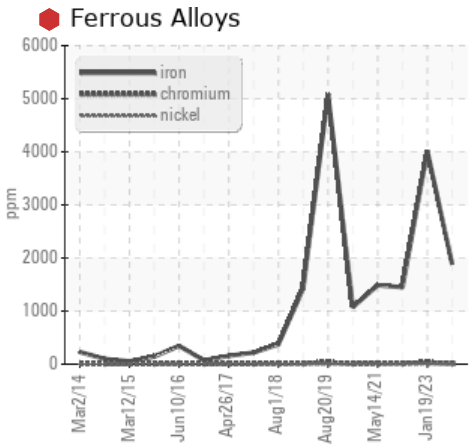
Machine Id
VOLVO EC340 3016 (S/N 210291)
Component
Right Final Drive
Fluid
GEAR OIL SAE 80W90 (--- QTS)

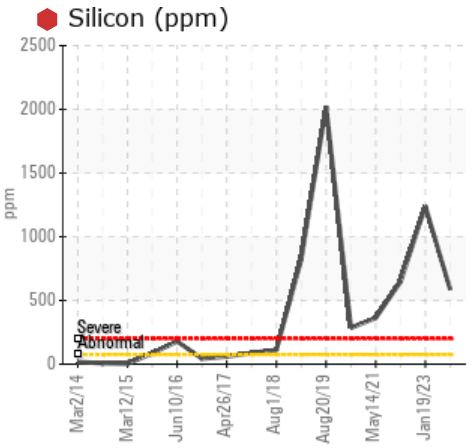
Sample Rating Trend

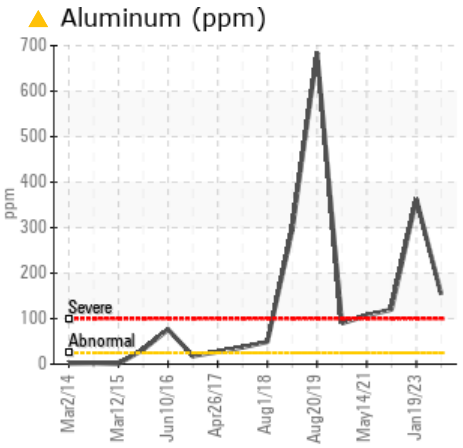


WEAR

COMPONENT CONDITION SUMMARY







RECOMMENDATION

We advise that you check all areas where dirt can enter the system. We recommend that you drain the oil from the component if this has not already been done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				**SEVERE**	SEVERE	SEVERE
Iron	ppm	ASTM D5185m	>500	**1884**	4015	1448
Chromium	ppm	ASTM D5185m	>10	**16**	34	17
Aluminum	ppm	ASTM D5185m	>25	**154**	363	120
Silicon	ppm	ASTM D5185m	>75	**587**	1239	648

Customer Id: PURCHA
Sample No.: CL0004564
Lab Number: 05923813
Test Package: CONST

To manage this report scan the QR code

To discuss the diagnosis or test data:
Jonathan Hester +1 919-379-4092 x4092
jhester@wearcheckusa.com

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

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Inspect Wear Source	---	---	?	We advise that you inspect for the source(s) of wear.
Change Fluid	---	---	?	We recommend that you drain the oil from the component if this has not already been done.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Dirt Access	---	---	?	We advise that you check all areas where dirt can enter the system.

HISTORICAL DIAGNOSIS

19 Jan 2023 Diag: Don Baldridge

WEAR

We advise that you check all areas where dirt can enter the system. The oil change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.Moderate concentration of visible metal present. Gear wear is indicated. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The oil is no longer serviceable due to the presence of contaminants.

view report

28 Apr 2022 Diag: Jonathan Hester

DIRT

We advise that you check all areas where dirt can enter the system. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.Gear wear is indicated. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The oil is no longer serviceable due to the presence of contaminants.

view report

14 May 2021 Diag: Don Baldridge

DIRT

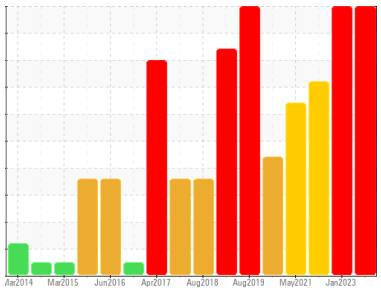
We advise that you check all areas where dirt can enter the system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.Gear wear is indicated. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The condition of the oil is acceptable for the time in service.

view report

OIL ANALYSIS REPORT

Machine Id
VOLVO EC340 3016 (S/N 210291)
Component
Right Final Drive
Fluid
GEAR OIL SAE 80W90 (--- QTS)

Sample Rating Trend



WEAR

DIAGNOSIS

Recommendation
We advise that you check all areas where dirt can enter the system. We recommend that you drain the oil from the component if this has not already been done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

Wear
Gear wear is indicated.

Contamination
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

Fluid Condition
The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**CL0004564**	CL0003931	CL0003153
Sample Date		Client Info		**08 Aug 2023**	19 Jan 2023	28 Apr 2022
Machine Age	hrs	Client Info		**10521**	9850	9165
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**Not Changd**	Changed	Not Changd
Sample Status				**SEVERE**	SEVERE	SEVERE

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>500	**1884**	4015	1448
Chromium	ppm	ASTM D5185m	>10	**16**	34	17
Nickel	ppm	ASTM D5185m	>10	**2**	6	1
Titanium	ppm	ASTM D5185m		**8**	16	9
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>25	**154**	363	120
Lead	ppm	ASTM D5185m	>25	**<1**	1	<1
Copper	ppm	ASTM D5185m	>50	**3**	8	3
Tin	ppm	ASTM D5185m	>10	**<1**	<1	<1
Antimony	ppm	ASTM D5185m	>5	**---**	---	---
Vanadium	ppm	ASTM D5185m		**<1**	<1	<1
Cadmium	ppm	ASTM D5185m		**<1**	<1	<1

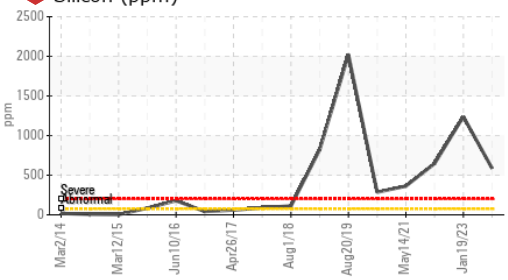
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	400	**187**	140	133
Barium	ppm	ASTM D5185m	200	**0**	0	0
Molybdenum	ppm	ASTM D5185m	12	**2**	7	4
Manganese	ppm	ASTM D5185m		**11**	20	9
Magnesium	ppm	ASTM D5185m	12	**21**	49	34
Calcium	ppm	ASTM D5185m	150	**66**	138	107
Phosphorus	ppm	ASTM D5185m	1650	**984**	740	752
Zinc	ppm	ASTM D5185m	125	**20**	37	52
Sulfur	ppm	ASTM D5185m	22500	**24784**	25056	18430

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>75	**587**	1239	648
Sodium	ppm	ASTM D5185m	>170	**29**	62	30
Potassium	ppm	ASTM D5185m	>20	**20**	48	26

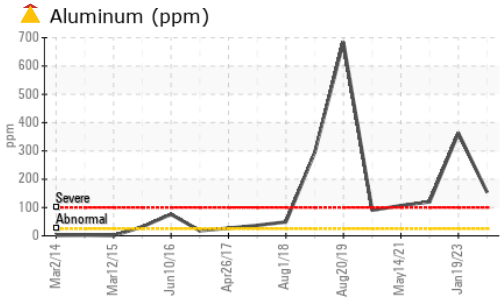
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	MODER	MODER
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

OIL ANALYSIS REPORT

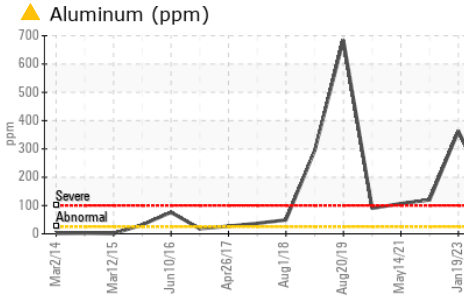
Silicon (ppm)



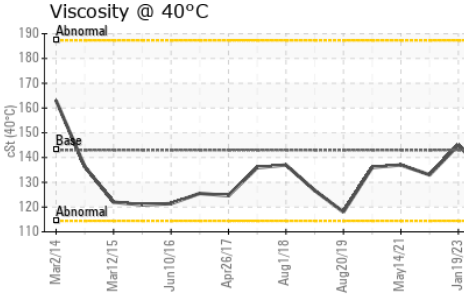
Aluminum (ppm)



Aluminum (ppm)



Viscosity @ 40°C

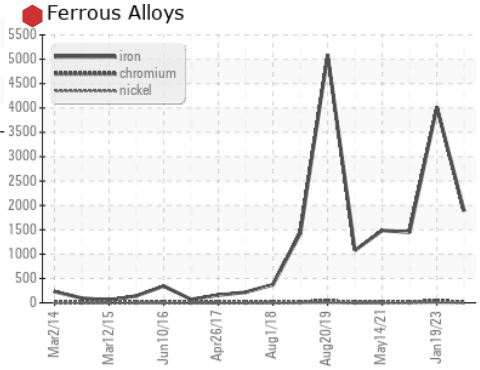


FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	143	**133**	145	133

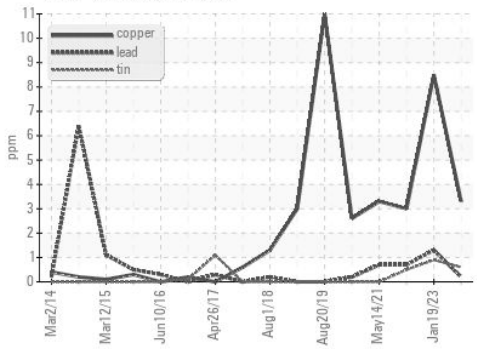
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color			*no image*	*no image*	*no image*
Bottom			*no image*	*no image*	*no image*

GRAPHS

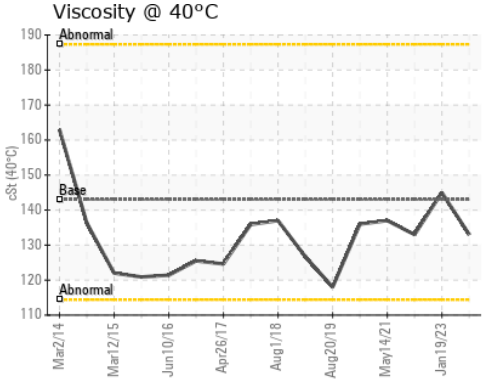
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 40°C



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : CL0004564
Lab Number : 05923813
Unique Number : 10603760
Test Package : CONST

Received : 14 Aug 2023
Diagnosed : 16 Aug 2023
Diagnostician : Jonathan Hester

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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CHARLOTTE, NC
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Report Id: PURCHA [WUSCAR] 05923813 (Generated: 08/16/2023 17:58:53) Rev: 1

Submitted By: JEFF CHALMERS