



OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
050-0025
 Component
Diesel Engine
 Fluid
SCHAEFFER SUPREME 7000 (--- GAL)

RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0814965	WC0698037	WC0548291
Sample Date		Client Info		29 Aug 2023	04 Oct 2022	22 Mar 2021
Machine Age	hrs	Client Info		9071	803	607
Oil Age	hrs	Client Info		0	0	250
Filter Age	hrs	Client Info		0	0	250
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

Cylinder, crank, or cam shaft wear is indicated.

Iron	ppm	ASTM D5185m	>100	▲ 115	78	34
Chromium	ppm	ASTM D5185m	>20	9	11	5
Nickel	ppm	ASTM D5185m	>4	0	<1	<1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	<1	3
Aluminum	ppm	ASTM D5185m	>20	● 16	14	7
Lead	ppm	ASTM D5185m	>40	4	2	1
Copper	ppm	ASTM D5185m	>330	5	4	1
Tin	ppm	ASTM D5185m	>15	1	1	<1
Vanadium	ppm	ASTM D5185m		<1	1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

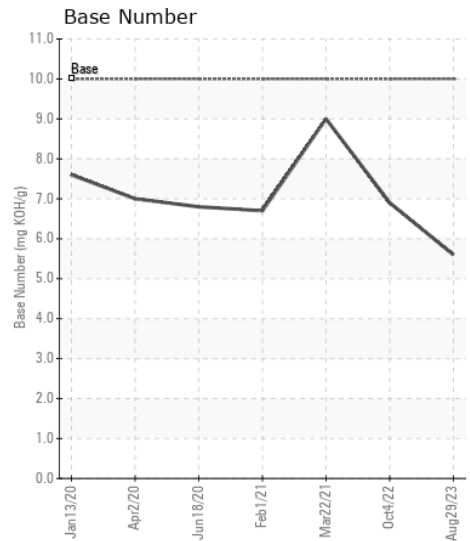
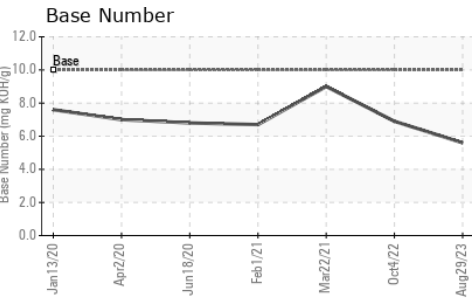
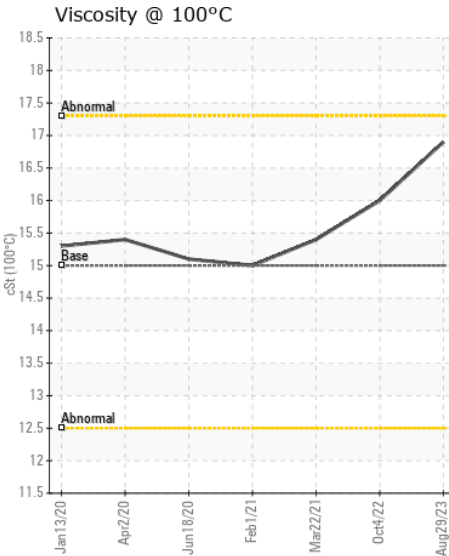
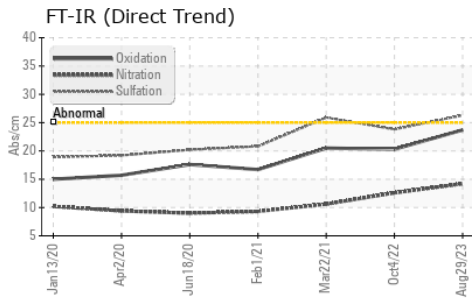
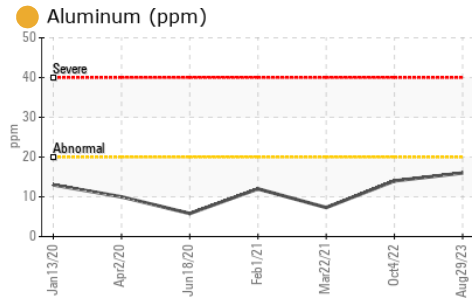
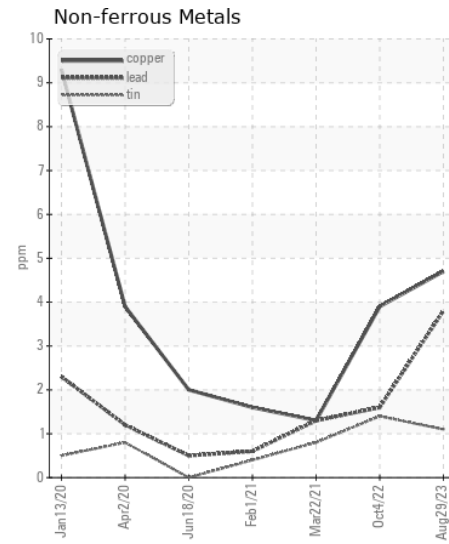
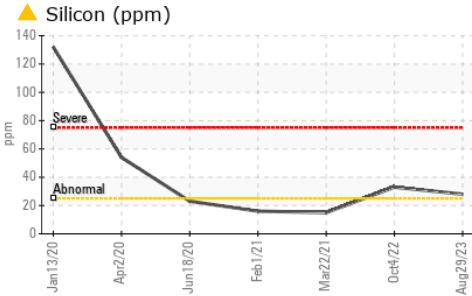
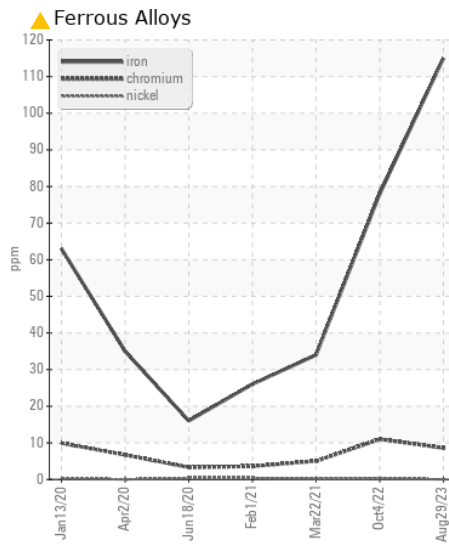
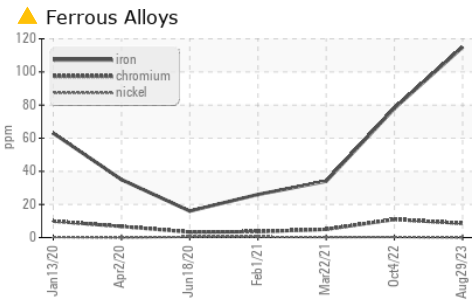
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

Silicon	ppm	ASTM D5185m	>25	▲ 28	33	15
Potassium	ppm	ASTM D5185m	>20	1	<1	<1
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	1	0.5	0.6
Nitration	Abs/cm	*ASTM D7624	>20	14.2	12.6	10.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	26.3	23.8	25.9
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

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.

Sodium	ppm	ASTM D5185m		5	6	3
Boron	ppm	ASTM D5185m		70	81	89
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m	50	87	89	78
Manganese	ppm	ASTM D5185m		1	2	<1
Magnesium	ppm	ASTM D5185m	1000	16	21	27
Calcium	ppm	ASTM D5185m	1400	2598	2512	2365
Phosphorus	ppm	ASTM D5185m	985	1060	1073	1013
Zinc	ppm	ASTM D5185m	1060	1401	1330	1247
Sulfur	ppm	ASTM D5185m	4000	5404	5703	4450
Oxidation	Abs/.1mm	*ASTM D7414	>25	23.7	20.3	20.5
Base Number (BN)	mg KOH/g	ASTM D2896	10	5.6	6.9	9
Visc @ 100°C	cSt	ASTM D445	15	16.9	16.0	15.4



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0814965 **Received** : 06 Sep 2023
Lab Number : 05944073 **Tested** : 07 Sep 2023
Unique Number : 10634685 **Diagnosed** : 08 Sep 2023 - Doug Bogart
Test Package : CONST (Additional Tests: TBN)

SHIMMICK CONSTRUCTION
 5535 TRAILHEAD DRIVE
 CHATTANOOGA, TN
 US 37415
 Contact: DANIEL LISELLA
 daniel.lisella@shimmick.com
 T:
 F:

Certificate L2367
 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)