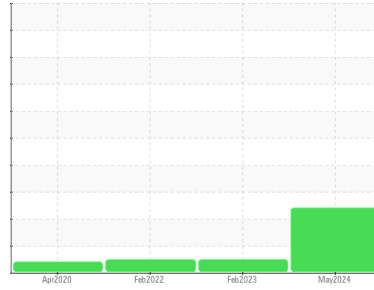




OIL ANALYSIS REPORT

Sample Rating Trend



DIRT



Machine Id

057-0051

Component

Diesel Engine

Fluid

SCHAEFFER SUPREME 7000 (1 GAL)

DIAGNOSIS

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. We recommend an early resample to monitor this condition. (Customer Sample Comment: Engine Oil Sample)

Wear

All component wear rates are normal.

Contamination

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

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			WC0868289	WC0750748	WC0590819
Sample Date	Client Info			30 May 2024	01 Feb 2023	08 Feb 2022
Machine Age	hrs	Client Info		384	299	198
Oil Age	hrs	Client Info		384	0	0
Oil Changed	Client Info			Changed	Changed	N/A
Sample Status				ABNORMAL	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>5		<1.0	<1.0	<1.0
Water	WC Method	>0.2		NEG	NEG	NEG
Glycol	WC Method			NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	114	6	9
Chromium	ppm	ASTM D5185m	>20	12	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	0	0
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	19	3	3
Lead	ppm	ASTM D5185m	>40	4	0	2
Copper	ppm	ASTM D5185m	>330	15	2	6
Tin	ppm	ASTM D5185m	>15	2	0	<1
Antimony	ppm	ASTM D5185m		---	---	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		33	105	82
Barium	ppm	ASTM D5185m		3	0	0
Molybdenum	ppm	ASTM D5185m	50	77	75	64
Manganese	ppm	ASTM D5185m		4	<1	<1
Magnesium	ppm	ASTM D5185m	1000	511	13	27
Calcium	ppm	ASTM D5185m	1400	1890	2154	2227
Phosphorus	ppm	ASTM D5185m	985	933	1021	1085
Zinc	ppm	ASTM D5185m	1060	1233	1172	1140
Sulfur	ppm	ASTM D5185m	4000	3404	5017	4446

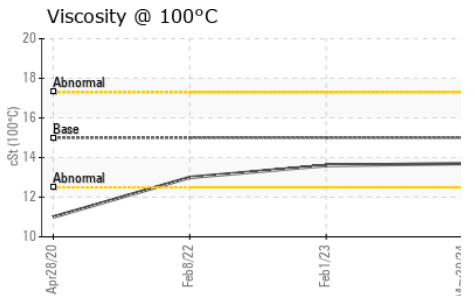
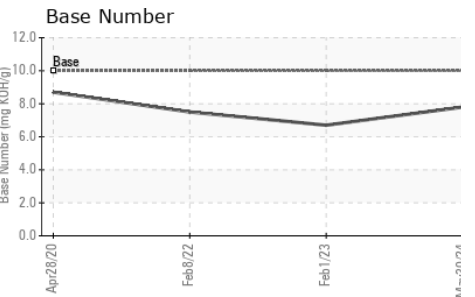
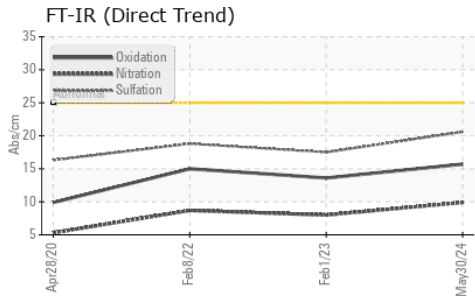
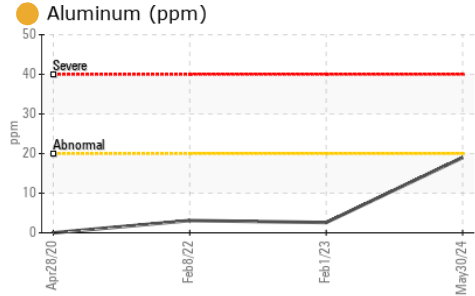
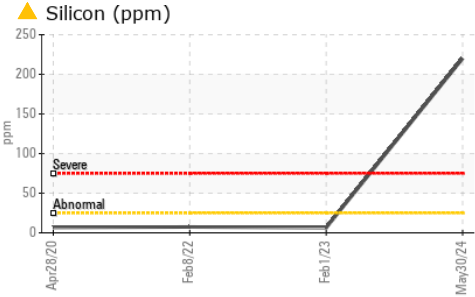
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	▲ 220	6	7
Sodium	ppm	ASTM D5185m		3	1	2
Potassium	ppm	ASTM D5185m	>20	3	1	0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	9.9	8.0	8.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.6	17.5	18.8

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.7	13.6	15.0
Base Number (BN)	mg KOH/g	ASTM D2896	10	7.8	6.7	7.5



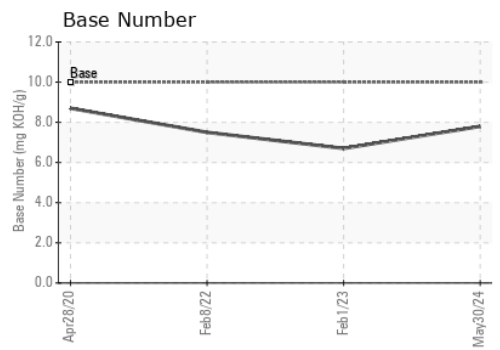
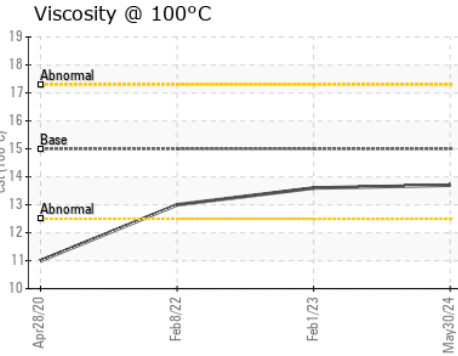
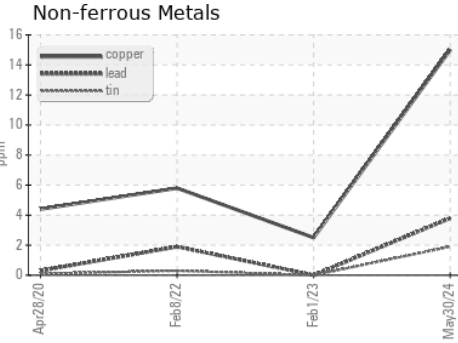
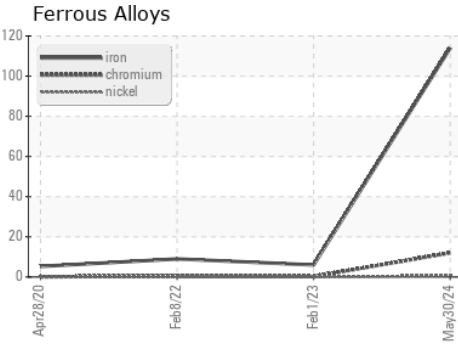
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15	13.7	13.6

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0868289 **Received** : 05 Jun 2024
Lab Number : **06201010** **Tested** : 07 Jun 2024
Unique Number : 11063133 **Diagnosed** : 08 Jun 2024 - Don Baldrige
Test Package : CONST (Additional Tests: TBN)

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

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)