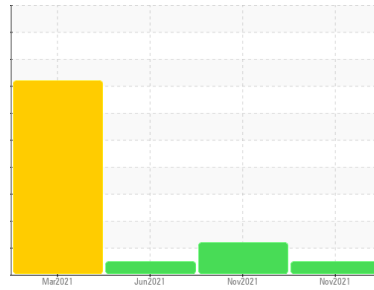




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
GP-300
 Component
Diesel Engine
 Fluid
SUPERFLEET 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. Note that there appears to be a discrepancy in the total time on this component, when compared to the historical data.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

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.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			WC0570564	WC0542450	WC0570356
Sample Date	Client Info			16 Nov 2021	06 Nov 2021	30 Jun 2021
Machine Age	hrs	Client Info		1381	1765	828
Oil Age	hrs	Client Info		300	310	0
Oil Changed	Client Info			Changed	Changed	N/A
Sample Status				NORMAL	ATTENTION	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method		>5	<1.0	▲ 2.0	<1.0

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	18	9	22
Chromium	ppm	ASTM D5185m	>20	<1	<1	1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		<1	<1	1
Silver	ppm	ASTM D5185m	>3	<1	0	<1
Aluminum	ppm	ASTM D5185m	>20	4	<1	7
Lead	ppm	ASTM D5185m	>40	2	<1	3
Copper	ppm	ASTM D5185m	>330	410	4	568
Tin	ppm	ASTM D5185m	>15	1	<1	1
Antimony	ppm	ASTM D5185m		<1	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		12	5	8
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		58	58	60
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		980	1055	973
Calcium	ppm	ASTM D5185m		1106	1143	1126
Phosphorus	ppm	ASTM D5185m		1065	1065	1055
Zinc	ppm	ASTM D5185m		1259	1277	1242
Sulfur	ppm	ASTM D5185m		2540	2852	2817

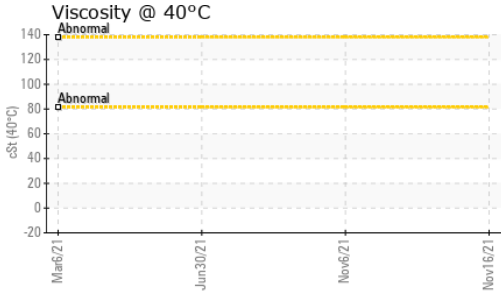
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	16	4	26
Sodium	ppm	ASTM D5185m		5	2	4
Potassium	ppm	ASTM D5185m	>20	<1	0	2
Glycol	%	*ASTM D2982		NEG	NEG	NEG

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.2	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	8	7.1	9
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.6	19.5	20.9

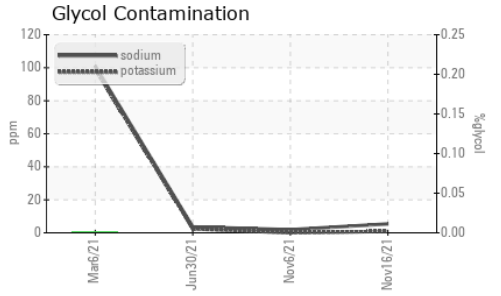
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.6	17.4	17.9
Base Number (BN)	mg KOH/g	ASTM D2896		9.70	10.3	9.53



OIL ANALYSIS REPORT

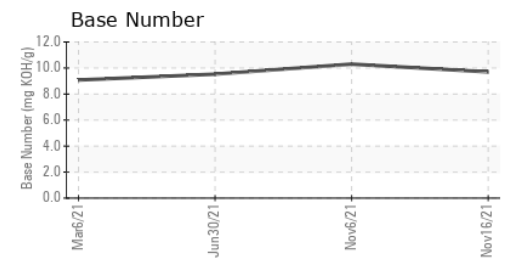
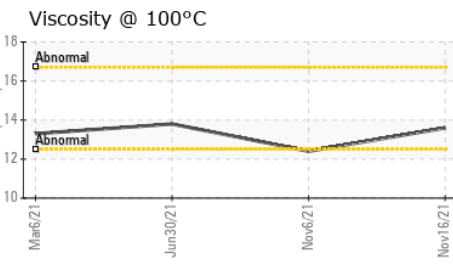
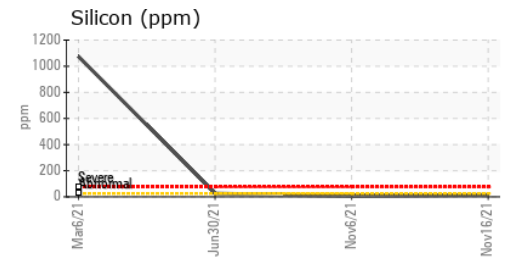
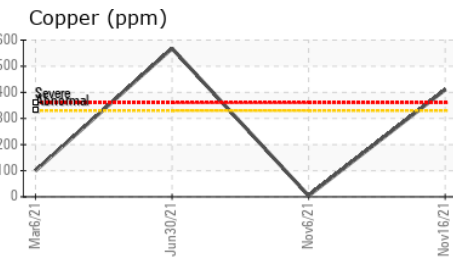
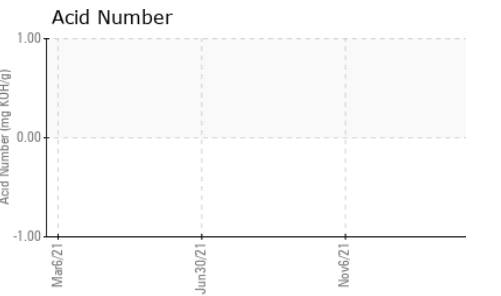
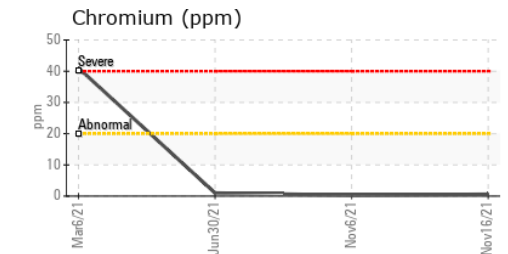
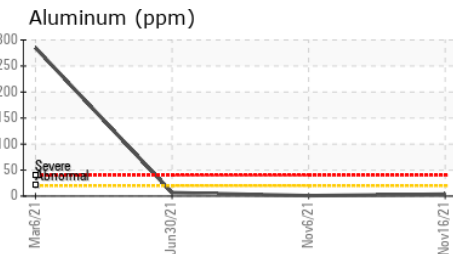
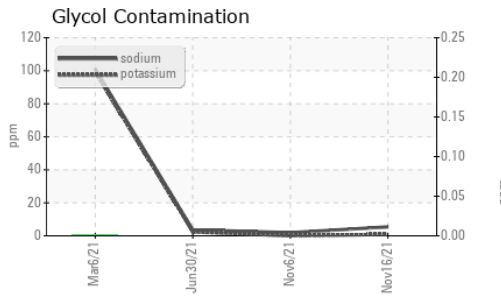
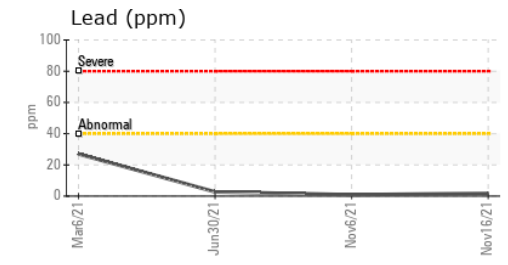
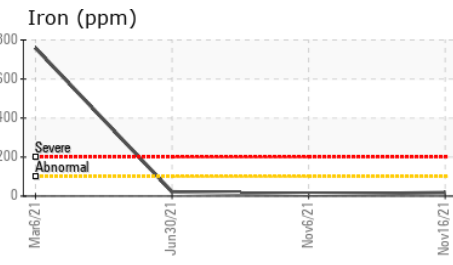
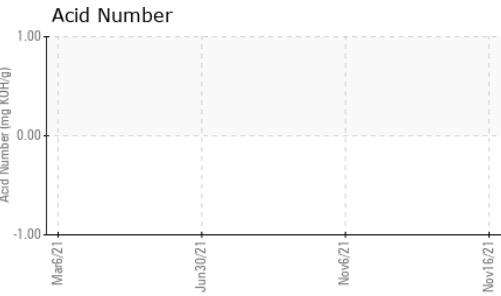


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	13.6	▲ 12.4	13.8

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0570564 **Received** : 14 Dec 2021
Lab Number : 05422306 **Diagnosed** : 16 Dec 2021
Unique Number : 9776497 **Diagnostician** : Doug Bogart
Test Package : MOB 2 (Additional Tests: Glycol, KV40, TAN Man)

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 10 GROVE ST
 WEST ROXBURY, MA
 US 02132
 Contact: MARK ERWIN
 merwin@smlorusso.com

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)