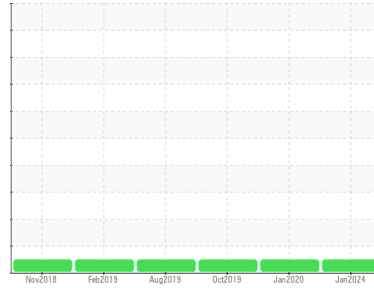




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
FSP89178 (S/N CHBK9058)

Component
Diesel Engine

Fluid
DIESEL ENGINE OIL SAE 15W40 (30 QTS)

DIAGNOSIS

Recommendation

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 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			WC0875831	WC0432848	WC0349955
Sample Date	Client Info			03 Jan 2024	29 Jan 2020	30 Oct 2019
Machine Age	mls	Client Info		299476	12630	16226
Oil Age	mls	Client Info		0	0	0
Oil Changed	Client Info			Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>3.0		<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	>90	48	69	38
Chromium	ppm	ASTM D5185m	>20	3	4	4
Nickel	ppm	ASTM D5185m	>2	4	1	<1
Titanium	ppm	ASTM D5185m	>2	0	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	7	7	15
Lead	ppm	ASTM D5185m	>40	2	2	1
Copper	ppm	ASTM D5185m	>330	1	4	2
Tin	ppm	ASTM D5185m	>15	<1	0	<1
Antimony	ppm	ASTM D5185m		---	4	0
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	250	4	16	23
Barium	ppm	ASTM D5185m	10	0	<1	<1
Molybdenum	ppm	ASTM D5185m	100	62	21	18
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	937	179	152
Calcium	ppm	ASTM D5185m	3000	1028	2314	2212
Phosphorus	ppm	ASTM D5185m	1150	1108	935	930
Zinc	ppm	ASTM D5185m	1350	1268	1151	1071
Sulfur	ppm	ASTM D5185m	4250	3179	2632	1558

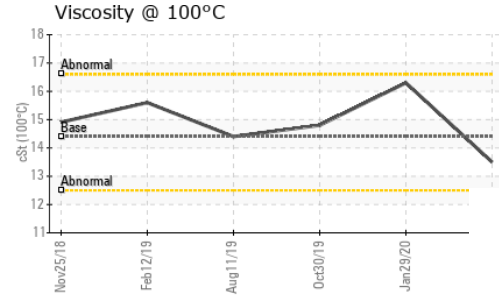
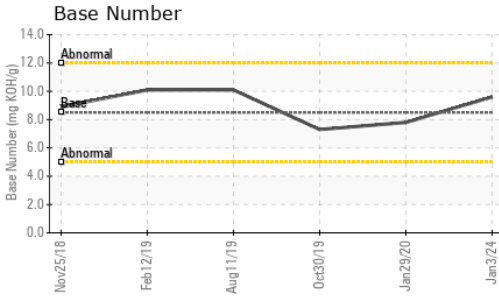
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	6	8	8
Sodium	ppm	ASTM D5185m	>158	7	3	2
Potassium	ppm	ASTM D5185m	>20	6	9	2

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>6	1.7	2.5	1.4
Nitration	Abs/cm	*ASTM D7624	>20	10.5	12	10.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.1	25.3	22.5

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.2	16	14.9
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	9.6	7.8	7.3



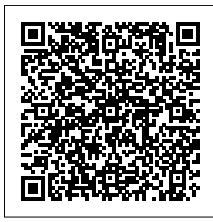
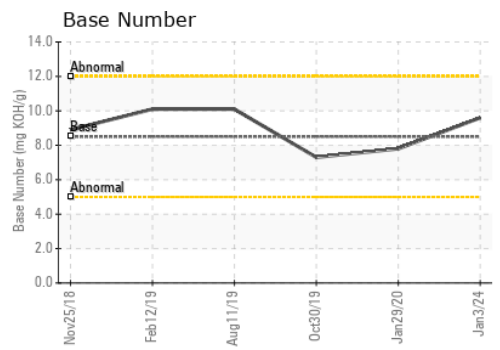
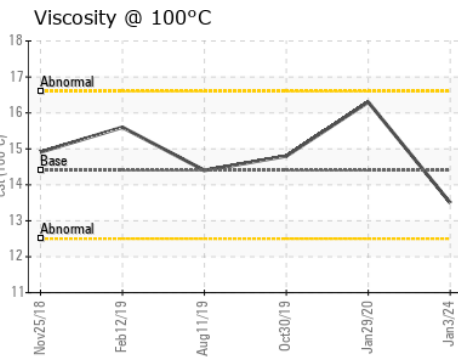
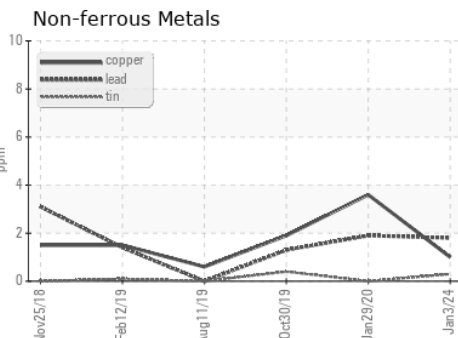
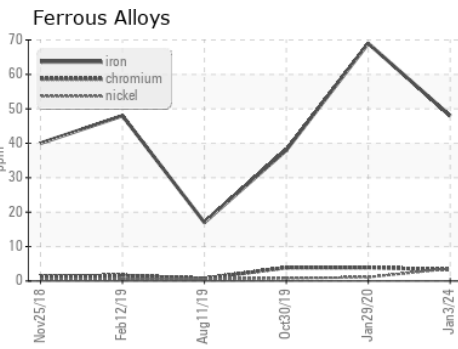
OIL ANALYSIS REPORT



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	14.4	13.5	16.3	14.8

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0875831 **Recieved** : 17 Jan 2024
Lab Number : **06063397** **Diagnosed** : 19 Jan 2024
Unique Number : 10834779 **Diagnostician** : Don Baldrige
Test Package : FLEET

FRESHPOINT
 8801 EXCHANGE DRIVE
 ORLANDO, FL
 US 32809
 Contact: CRAIG EVANS
 evans_craig@sbcglobal.net
 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)