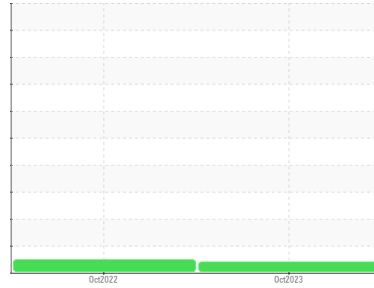


OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Machine Id
2202
Component
Diesel Engine
Fluid
MOBIL DELVAC 1300 SUPER 10W30 (--- QTS)

DIAGNOSIS

▲ Recommendation

Oil and filter change at the time of sampling has been noted. 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 oil viscosity is higher than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		PCA0088635	PCA0051780	---
Sample Date	Client Info		23 Oct 2023	17 Oct 2022	---
Machine Age	mls	Client Info	187490	0	---
Oil Age	mls	Client Info	187490	0	---
Oil Changed	Client Info		Changed	Changed	---
Sample Status			ATTENTION	NORMAL	---

CONTAMINATION

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

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	59	74	---
Chromium	ppm	ASTM D5185m >20	2	3	---
Nickel	ppm	ASTM D5185m >4	0	0	---
Titanium	ppm	ASTM D5185m	0	<1	---
Silver	ppm	ASTM D5185m >3	0	0	---
Aluminum	ppm	ASTM D5185m >20	21	17	---
Lead	ppm	ASTM D5185m >40	3	13	---
Copper	ppm	ASTM D5185m >330	13	107	---
Tin	ppm	ASTM D5185m >15	0	1	---
Vanadium	ppm	ASTM D5185m	0	0	---
Cadmium	ppm	ASTM D5185m	0	0	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	9	15	---
Barium	ppm	ASTM D5185m	0	0	---
Molybdenum	ppm	ASTM D5185m	48	71	---
Manganese	ppm	ASTM D5185m	<1	4	---
Magnesium	ppm	ASTM D5185m	644	603	---
Calcium	ppm	ASTM D5185m	1680	1824	---
Phosphorus	ppm	ASTM D5185m	983	1107	---
Zinc	ppm	ASTM D5185m	1266	1482	---
Sulfur	ppm	ASTM D5185m	3057	2588	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	10	11	---
Sodium	ppm	ASTM D5185m	3	4	---
Potassium	ppm	ASTM D5185m >20	65	52	---

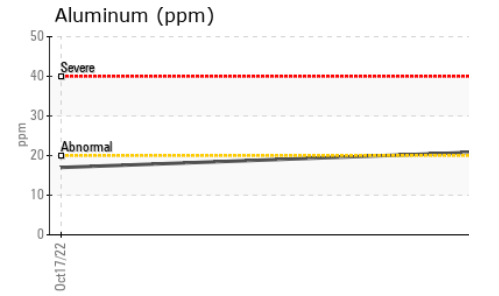
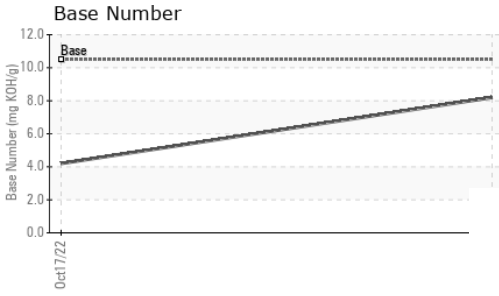
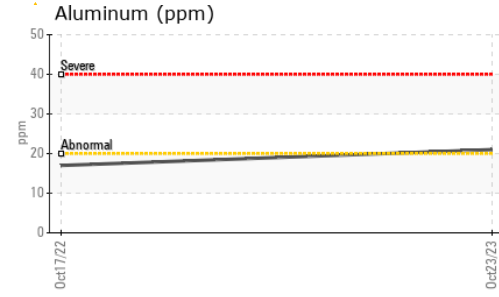
INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.8	0.6	---
Nitration	Abs/cm	*ASTM D7624 >20	8.5	16.7	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	20.3	31.0	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	16.4	34.0	---
Base Number (BN)	mg KOH/g	ASTM D2896 10.5	8.2	4.2	---

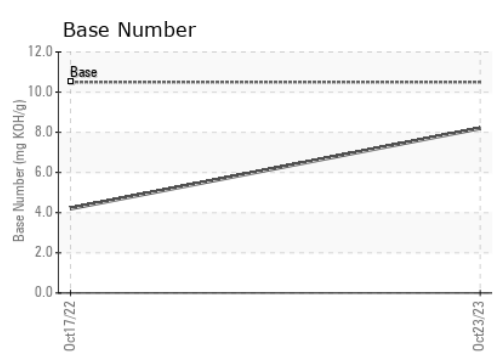
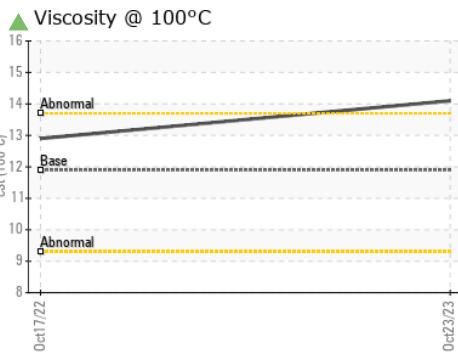
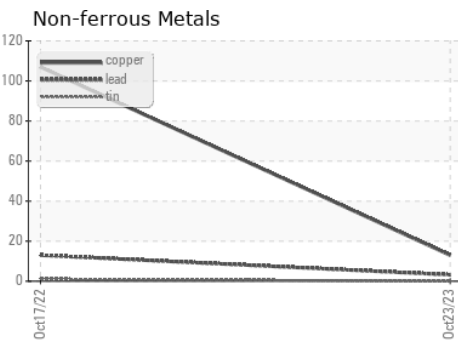
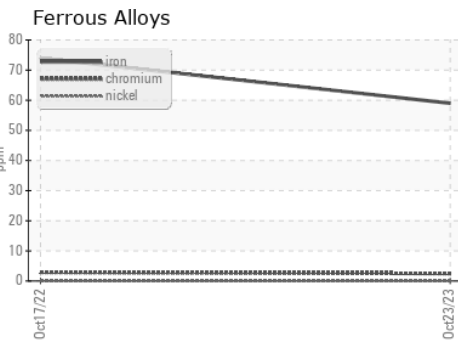
OIL ANALYSIS REPORT



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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	11.9 ▲ 14.1	12.9	---

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0088635 **Received** : 10 Jan 2024
Lab Number : **06056287** **Diagnosed** : 11 Jan 2024
Unique Number : 10822236 **Diagnostician** : Jonathan Hester
Test Package : FLEET

MIDWEST MOTOR EXPRESS
 2169 MUSTANG DR
 MOUNDS VIEW, MN
 US 55112
 Contact: FRANK DIETZ
 frank.dietz@mmeinc.com
 T: (763)225-6382
 F: x:

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)