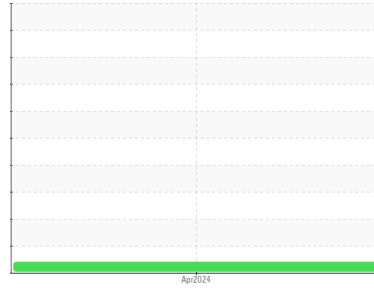


OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Machine Id
HSBC UNWIND CONE DRIVE
 Component
Gearbox
 Fluid
GEAR OIL ISO 220 (4 GAL)

DIAGNOSIS

- Recommendation**
 No corrective action is recommended at this time. 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. Confirm oil type.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		TO60001951	---	---
Sample Date	Client Info		05 Apr 2024	---	---
Machine Age	yrs	Client Info	20	---	---
Oil Age	yrs	Client Info	0	---	---
Oil Changed	Client Info		Not Changed	---	---
Sample Status			ATTENTION	---	---

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	NEG	---	---

WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184		16	---	---
Iron	ppm	ASTM D5185m >200	4	---	---
Chromium	ppm	ASTM D5185m >10	0	---	---
Nickel	ppm	ASTM D5185m >10	0	---	---
Titanium	ppm	ASTM D5185m	0	---	---
Silver	ppm	ASTM D5185m	0	---	---
Aluminum	ppm	ASTM D5185m >25	0	---	---
Lead	ppm	ASTM D5185m >50	0	---	---
Copper	ppm	ASTM D5185m >200	10	---	---
Tin	ppm	ASTM D5185m >10	0	---	---
Vanadium	ppm	ASTM D5185m	0	---	---
Cadmium	ppm	ASTM D5185m	0	---	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 50	37	---	---
Barium	ppm	ASTM D5185m 15	0	---	---
Molybdenum	ppm	ASTM D5185m 15	0	---	---
Manganese	ppm	ASTM D5185m	0	---	---
Magnesium	ppm	ASTM D5185m 50	17	---	---
Calcium	ppm	ASTM D5185m 50	59	---	---
Phosphorus	ppm	ASTM D5185m 350	219	---	---
Zinc	ppm	ASTM D5185m 100	43	---	---
Sulfur	ppm	ASTM D5185m 12500	7319	---	---

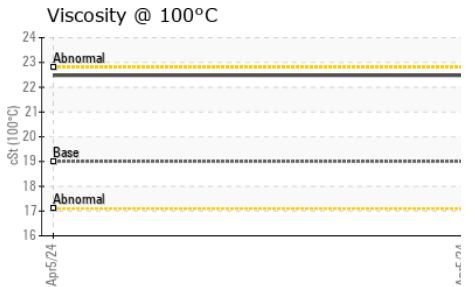
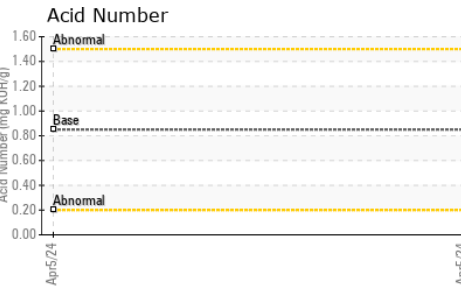
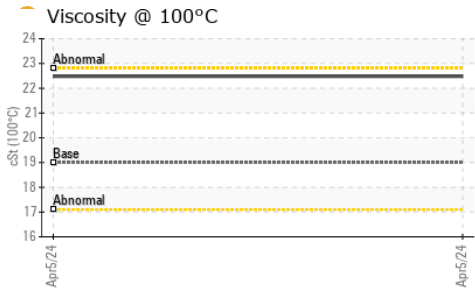
CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	1	---	---
Sodium	ppm	ASTM D5185m	0	---	---
Potassium	ppm	ASTM D5185m >20	0	---	---



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	---	---

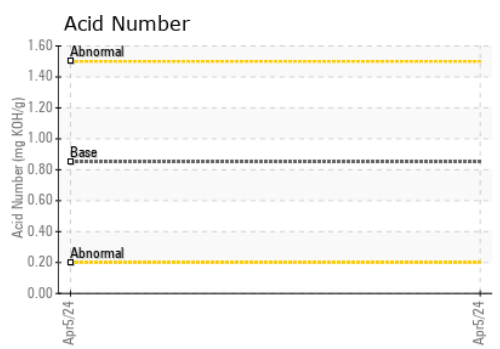
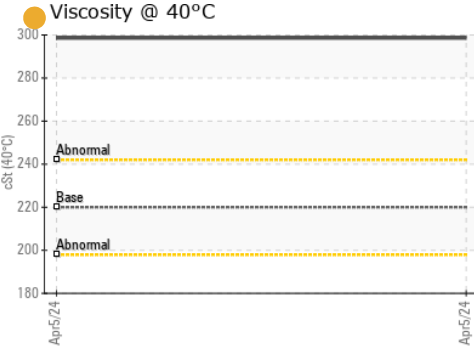
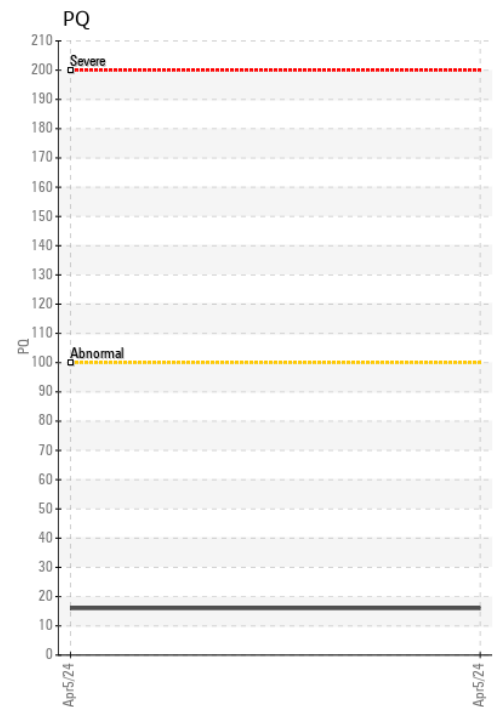
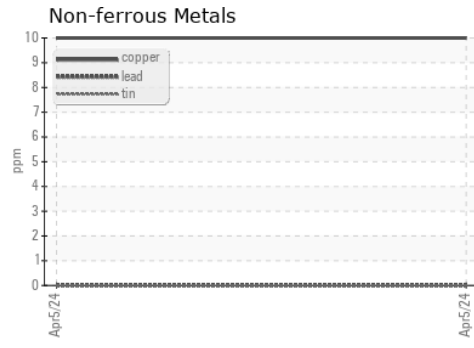
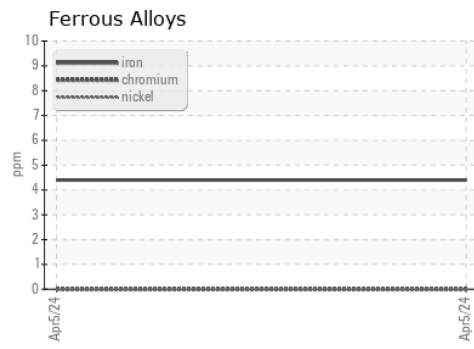
OIL ANALYSIS REPORT



FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D445	220	● 298.6	---	---
Visc @ 100°C	cSt	ASTM D445	19.0	● 22.48	---	---
Viscosity Index (VI)	Scale	ASTM D2270	96	● 92	---	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color				no image	no image
Bottom				no image	no image

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO60001951 **Received** : 11 Apr 2024
Lab Number : 06146179 **Tested** : 18 Apr 2024
Unique Number : 10976257 **Diagnosed** : 18 Apr 2024 - Jonathan Hester
Test Package : IND 2 (Additional Tests: KV100, PQ, VI)

3M BROWNWOOD
 4501 US 377 SOUTH
 BROWNWOOD, TX
 US 76801
 Contact: RICKY GOTCHER
 rgotcherjr@mmm.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)