



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
MORBARK 6600 TG-5 - CLUTCH (S/N 186-1132)

Component
Hydraulic System

Fluid
CAT TDTO 10W (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0196381	JR0160812	JR0153898
Sample Date		Client Info		14 Apr 2024	23 Jun 2023	20 Jan 2023
Machine Age	hrs	Client Info		10172	9515	9023
Oil Age	hrs	Client Info		675	492	623
Filter Age	hrs	Client Info		675	492	623
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

The iron level is abnormal. All other component wear rates are normal.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
Iron	ppm	ASTM D5185m	>20	72	56	60
Chromium	ppm	ASTM D5185m	>10	<1	<1	<1
Nickel	ppm	ASTM D5185m	>10	0	<1	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>10	0	0	<1
Lead	ppm	ASTM D5185m	>10	0	0	0
Copper	ppm	ASTM D5185m	>75	0	0	0
Tin	ppm	ASTM D5185m	>10	<1	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

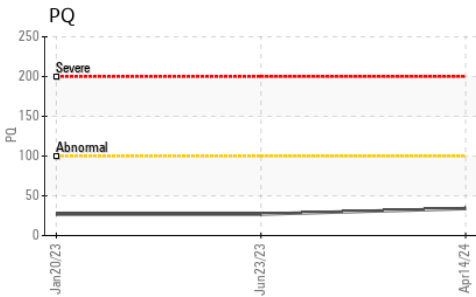
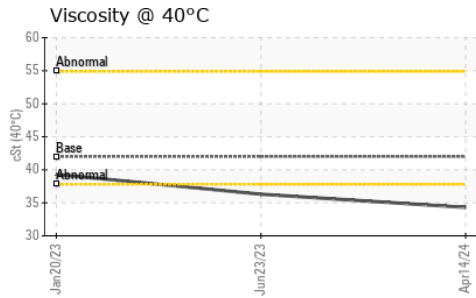
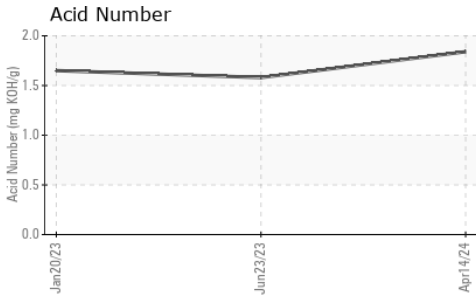
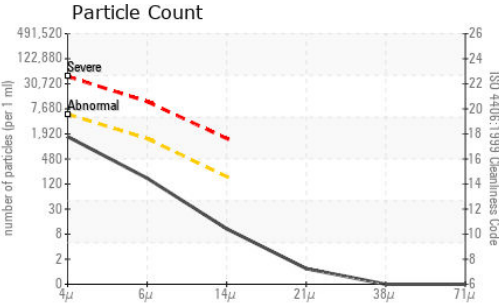
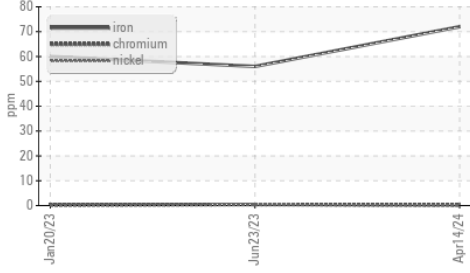
Silicon	ppm	ASTM D5185m	>20	7	6	4
Potassium	ppm	ASTM D5185m	>20	0	<1	1
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	1445	6828	54553
Particles >6µm		ASTM D7647	>1300	146	480	1000
Particles >14µm		ASTM D7647	>160	9	24	52
Particles >21µm		ASTM D7647	>40	1	4	17
Particles >38µm		ASTM D7647	>10	0	1	3
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	18/14/10	20/16/12	23/17/13
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG

FLUID CONDITION

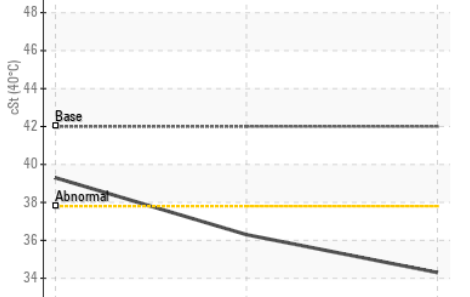
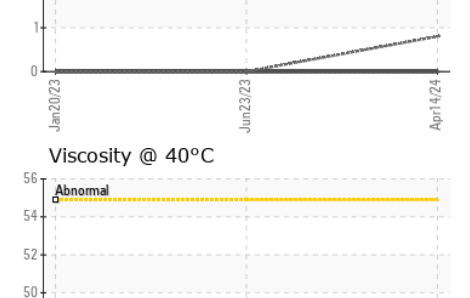
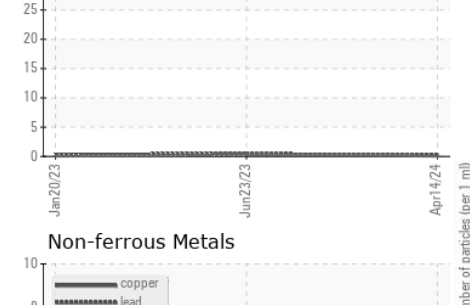
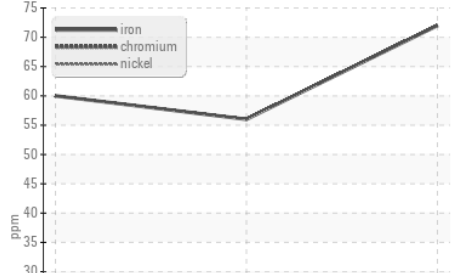
The AN level is acceptable for this fluid. The condition of the oils additive package is suitable for further service.

Sodium	ppm	ASTM D5185m		2	0	0
Boron	ppm	ASTM D5185m		1	0	0
Barium	ppm	ASTM D5185m		0	0	1
Molybdenum	ppm	ASTM D5185m		1	<1	<1
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		12	8	11
Calcium	ppm	ASTM D5185m	2980	1165	2328	2907
Phosphorus	ppm	ASTM D5185m	1100	856	1010	1041
Zinc	ppm	ASTM D5185m	1270	998	1215	1241
Sulfur	ppm	ASTM D5185m		4496	4610	4959
Acid Number (AN)	mg KOH/g	ASTM D8045		1.84	1.58	1.65
Visc @ 40°C	cSt	ASTM D445	42.0	34.3	36.3	39.3

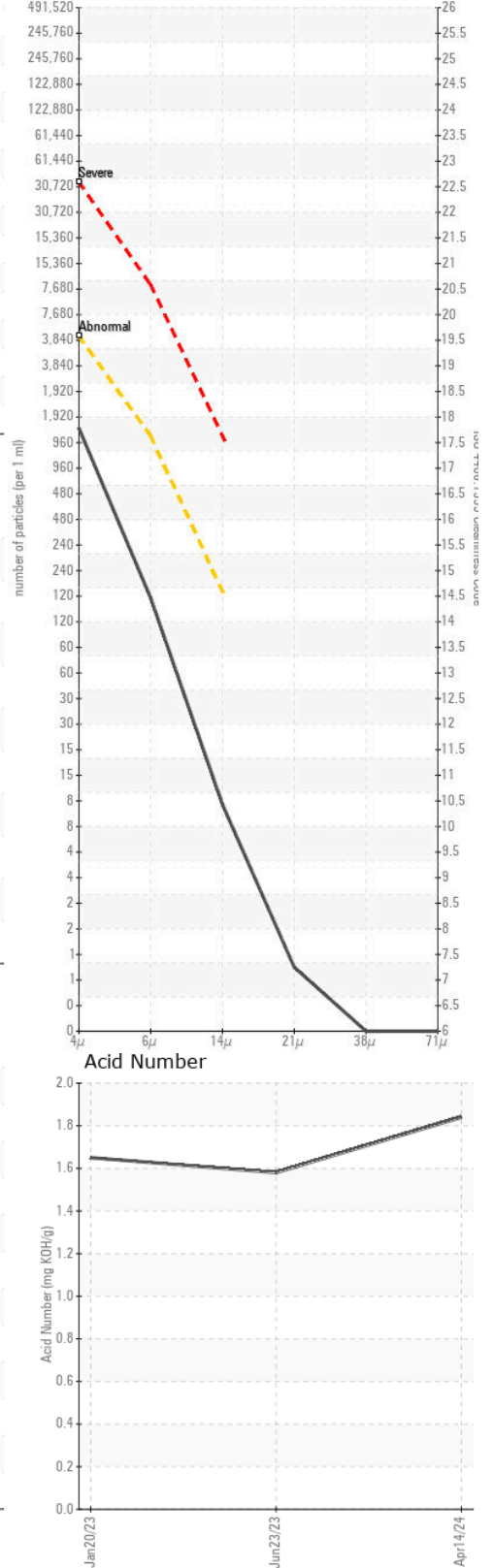
▲ Ferrous Alloys



▲ Ferrous Alloys



Particle Count



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0196381 **Received** : 16 Apr 2024
Lab Number : 06150212 **Tested** : 17 Apr 2024
Unique Number : 10980290 **Diagnosed** : 18 Apr 2024 - Don Baldrige
Test Package : CONST (Additional Tests: PQ)

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)

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