



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
SMART ROCK D60 TMG175KD0257

Component
Hydraulic System

Fluid
{not provided} (9 QTS)

RECOMMENDATION

We recommend you service the filters on this component. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		JR0204953	JR0194432	JR0182918
Sample Date		Client Info		19 Mar 2024	31 Jan 2024	09 Aug 2023
Machine Age	hrs	Client Info		12389	12141	11146
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
Iron	ppm	ASTM D5185m	>20	3	0	1
Chromium	ppm	ASTM D5185m	>10	0	0	<1
Nickel	ppm	ASTM D5185m	>10	0	0	<1
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>10	0	0	0
Lead	ppm	ASTM D5185m	>10	0	<1	2
Copper	ppm	ASTM D5185m	>75	2	<1	4
Tin	ppm	ASTM D5185m	>10	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

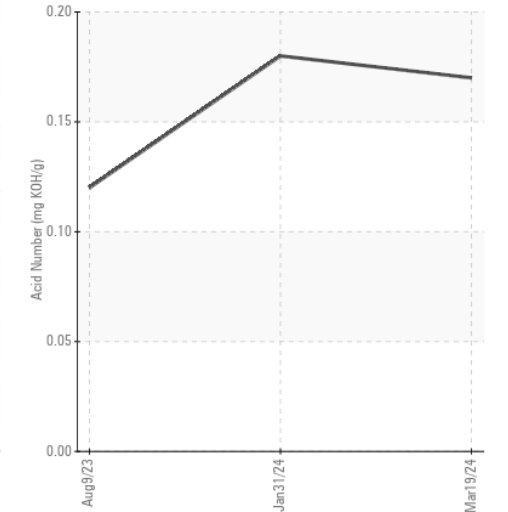
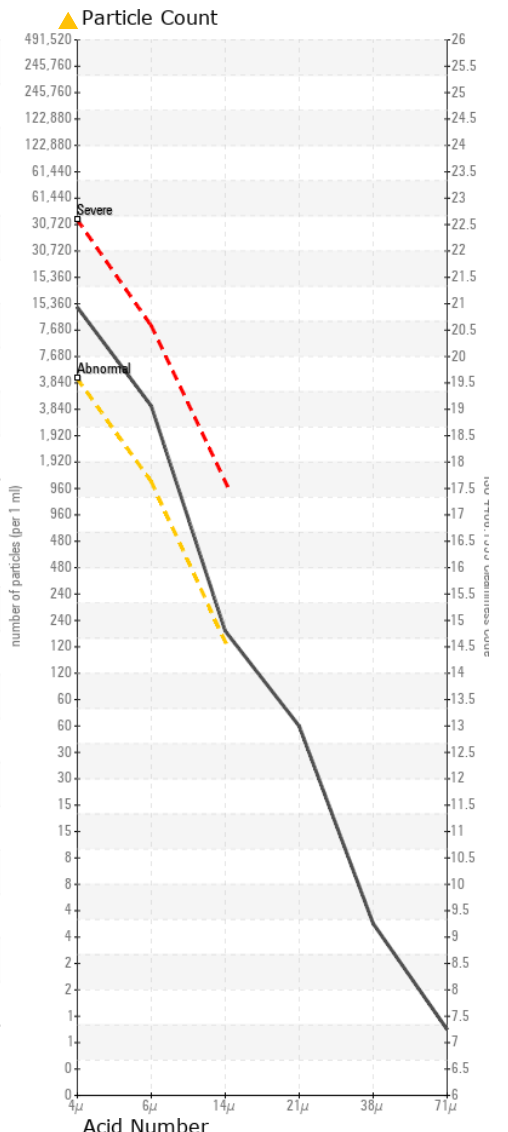
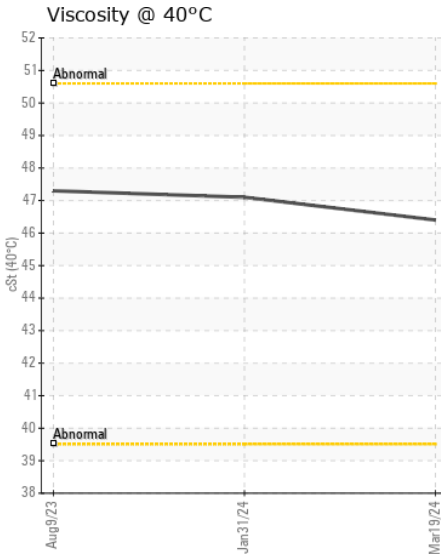
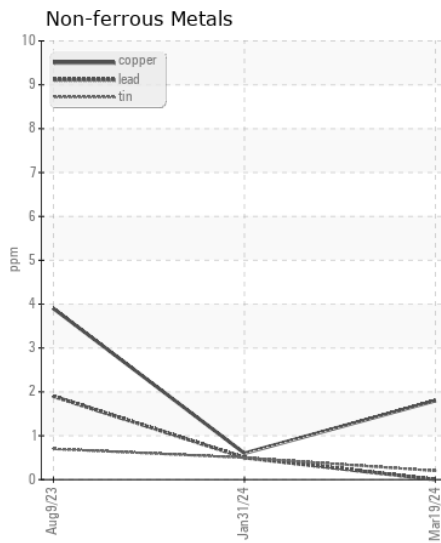
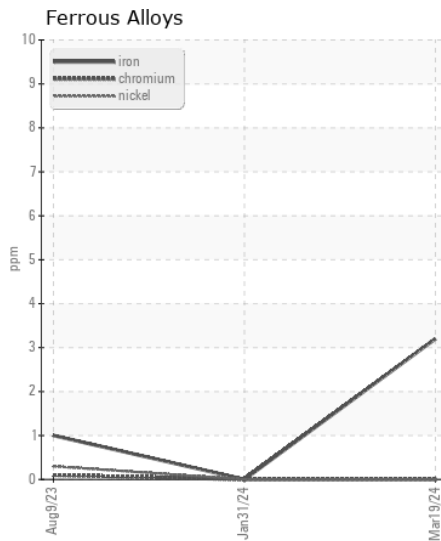
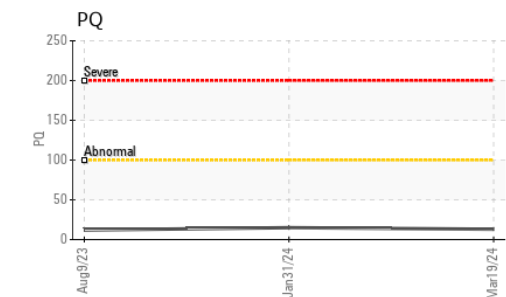
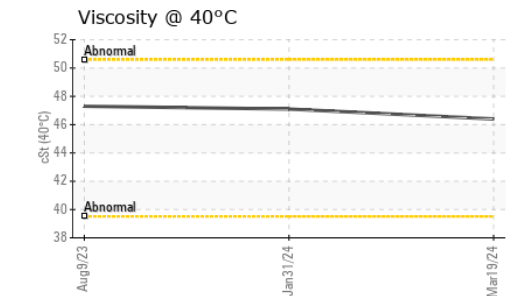
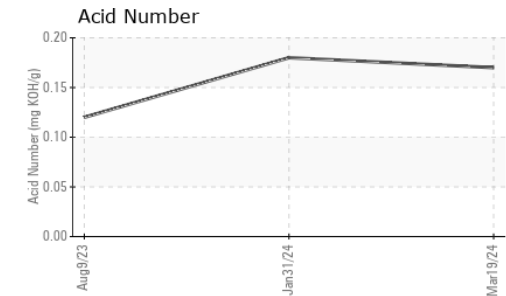
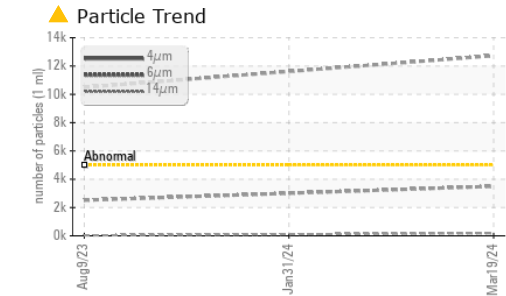
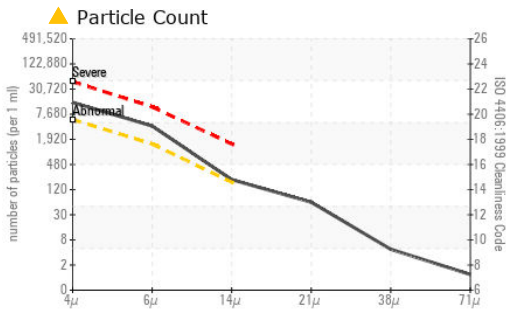
There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>20	1	<1	2
Potassium	ppm	ASTM D5185m	>20	<1	0	3
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	▲ 12731	---	▲ 10494
Particles >6µm		ASTM D7647	>1300	▲ 3499	---	▲ 2516
Particles >14µm		ASTM D7647	>160	● 184	---	30
Particles >21µm		ASTM D7647	>40	53	---	2
Particles >38µm		ASTM D7647	>10	4	---	0
Particles >71µm		ASTM D7647	>3	1	---	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 21/19/15	---	▲ 21/19/12
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	▲ MODER	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	0.2%	NEG

FLUID CONDITION

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Sodium	ppm	ASTM D5185m		<1	<1	5
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		<1	0	0
Molybdenum	ppm	ASTM D5185m		0	0	2
Manganese	ppm	ASTM D5185m		<1	0	2
Magnesium	ppm	ASTM D5185m		0	5	1
Calcium	ppm	ASTM D5185m		3	0	2
Phosphorus	ppm	ASTM D5185m		497	540	567
Zinc	ppm	ASTM D5185m		37	56	0
Sulfur	ppm	ASTM D5185m		181	145	87
Acid Number (AN)	mg KOH/g	ASTM D8045		0.17	0.18	0.12
Visc @ 40°C	cSt	ASTM D445		46.4	47.1	47.3



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0204953 **Received** : 20 Mar 2024
Lab Number : 06123544 **Tested** : 21 Mar 2024
Unique Number : 10937695 **Diagnosed** : 21 Mar 2024 - Wes Davis
Test Package : CONST (Additional Tests: PQ)

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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)