



WEAR	NORMAL
CONTAMINATION	ATTENTION
FLUID CONDITION	NORMAL

Area
[W046075]
 Machine Id
EPIROC D65-10F TMG20SED0067
 Component
Hydraulic System
 Fluid
HITACHI HYDRAULIC SUPER EX 46HN (--- GAL)

RECOMMENDATION

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		JR0197391	JR0181206	JR0181538
Sample Date		Client Info		22 Dec 2023	18 Oct 2023	17 Aug 2023
Machine Age	hrs	Client Info		4587	4415	4126
Oil Age	hrs	Client Info		0	500	4126
Filter Age	hrs	Client Info		0	500	0
Oil Changed		Client Info		Not Chngd	Not Chngd	Not Chngd
Filter Changed		Client Info		Not Chngd	Not Chngd	Not Chngd
Sample Status				ATTENTION	NORMAL	NORMAL

WEAR

All component wear rates are normal.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
PQ		ASTM D8184		13	11	12
Iron	ppm	ASTM D5185m	>20	0	<1	0
Chromium	ppm	ASTM D5185m	>10	0	<1	0
Nickel	ppm	ASTM D5185m	>10	0	0	0
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>10	0	<1	0
Lead	ppm	ASTM D5185m	>10	0	0	0
Copper	ppm	ASTM D5185m	>75	0	<1	<1
Tin	ppm	ASTM D5185m	>10	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

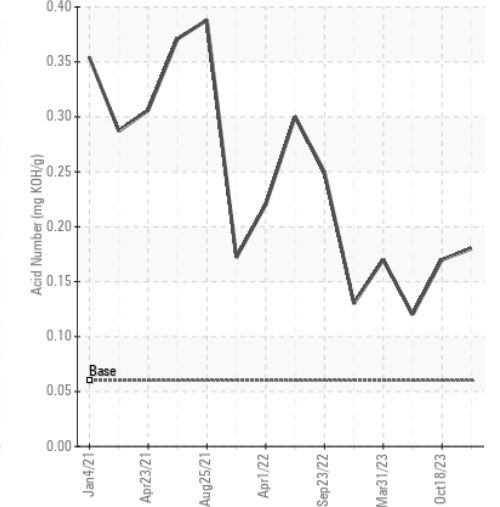
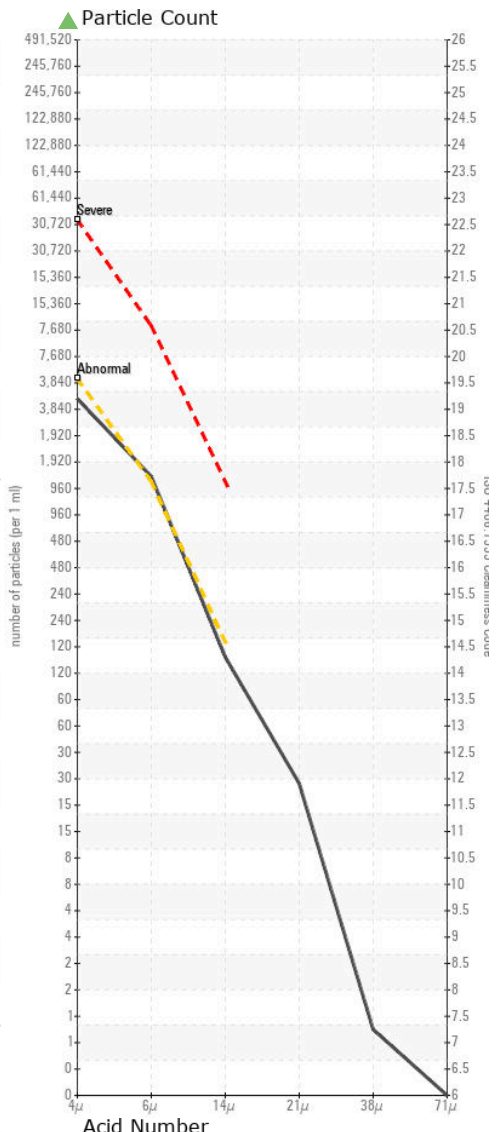
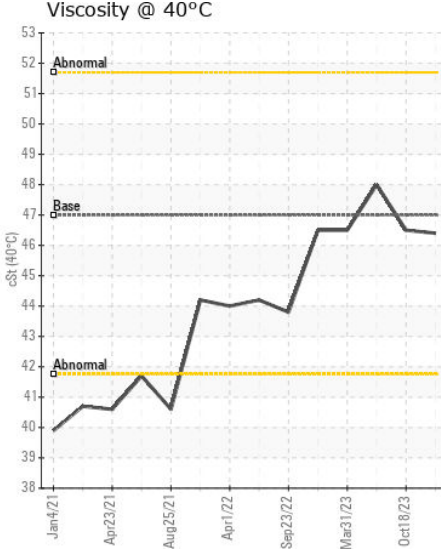
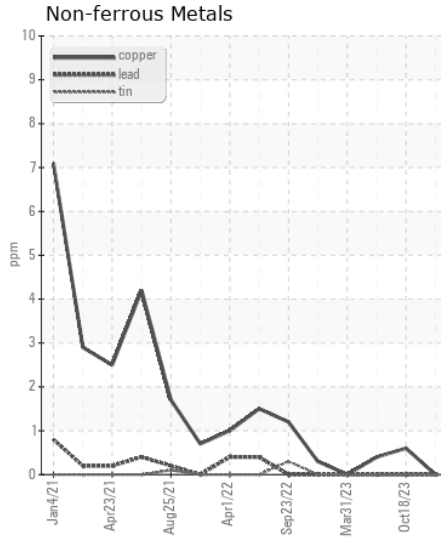
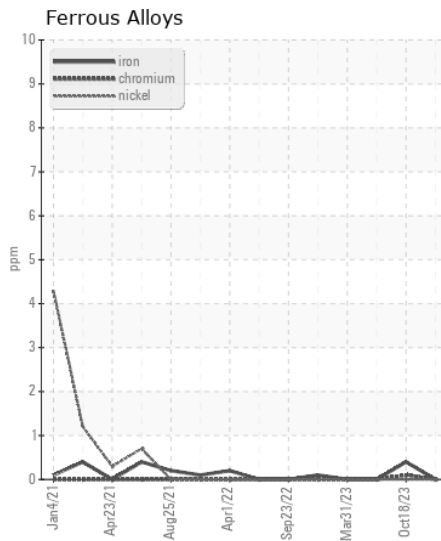
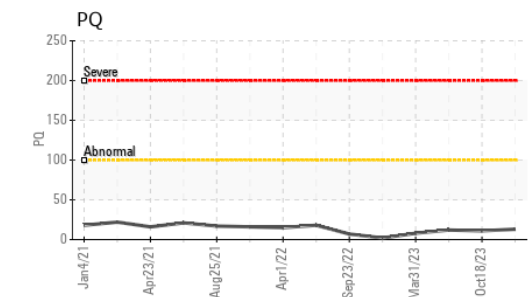
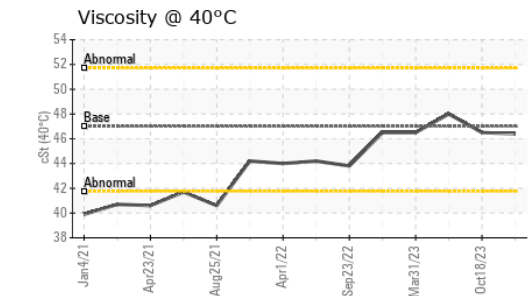
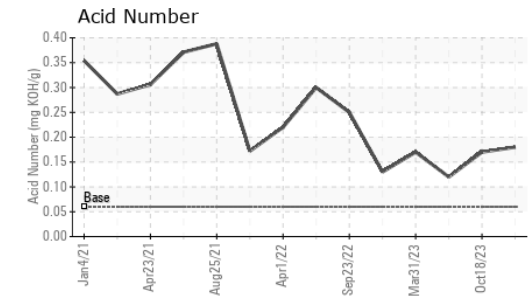
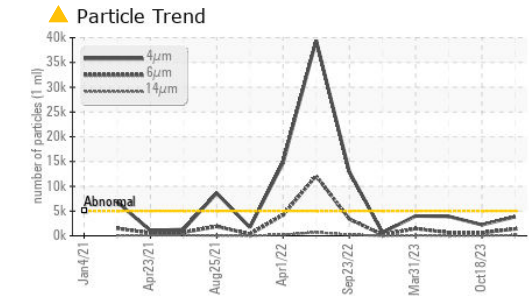
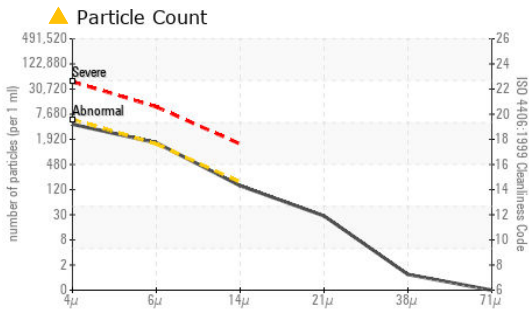
There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>20	0	<1	1
Potassium	ppm	ASTM D5185m	>20	0	1	0
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	3849	2223	3909
Particles >6µm		ASTM D7647	>1300	▲ 1391	634	637
Particles >14µm		ASTM D7647	>160	131	39	29
Particles >21µm		ASTM D7647	>40	25	9	7
Particles >38µm		ASTM D7647	>10	1	1	0
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 19/18/14	18/16/12	19/16/12
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 oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<1	0	<1
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		0	0	0
Magnesium	ppm	ASTM D5185m		0	3	<1
Calcium	ppm	ASTM D5185m		9	10	84
Phosphorus	ppm	ASTM D5185m	827	478	459	626
Zinc	ppm	ASTM D5185m	0	66	67	38
Sulfur	ppm	ASTM D5185m	13	166	100	221
Acid Number (AN)	mg KOH/g	ASTM D8045	0.06	0.18	0.17	0.12
Visc @ 40°C	cSt	ASTM D445	47	46.4	46.5	48.0



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : JR0197391 **Received** : 12 Jan 2024
Lab Number : 06059224 **Diagnosed** : 15 Jan 2024
Unique Number : 10830606 **Diagnostician** : Don Baldrige
Test Package : CONST (Additional Tests: PQ)

WAKE STONE CORP
 6811 HWY 64 EAST
 KNIGHTDALE, NC
 US 27545
 Contact: PAUL SPRUILL
 paulspruill@wakestonecorp.com
 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)