



Machine Id
PAUL F BROTZGE FLANKING PUMP SYSTEM

Component
Hydraulic System

Fluid
CHEVRON RANDO HD 68 (240 GAL)

RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0066427	MW0046357	MW0032567
Sample Date		Client Info		26 Jan 2024	13 May 2023	04 Dec 2022
Machine Age	mths	Client Info		0	0	51350
Oil Age	mths	Client Info		0	0	1009
Filter Age	mths	Client Info		6	0	1009
Oil Changed		Client Info		Not Changed	Not Changed	Changed
Filter Changed		Client Info		Not Changed	Changed	Changed
Sample Status				ATTENTION	NORMAL	ATTENTION

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>20	0	0	0
Chromium	ppm	ASTM D5185m	>10	0	0	0
Nickel	ppm	ASTM D5185m	>10	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>10	0	<1	4
Lead	ppm	ASTM D5185m	>20	0	0	0
Copper	ppm	ASTM D5185m	>20	6	3	1
Tin	ppm	ASTM D5185m	>10	0	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

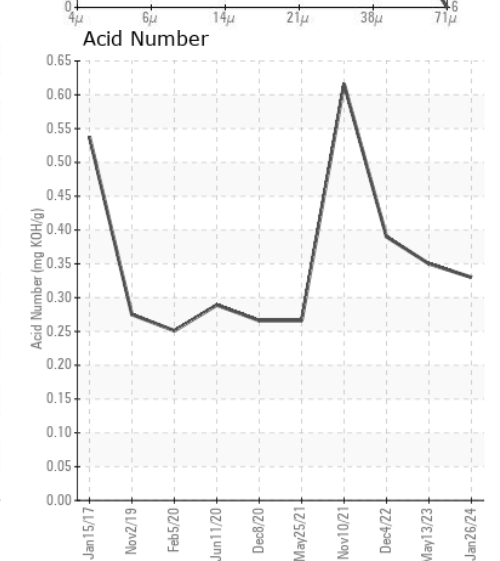
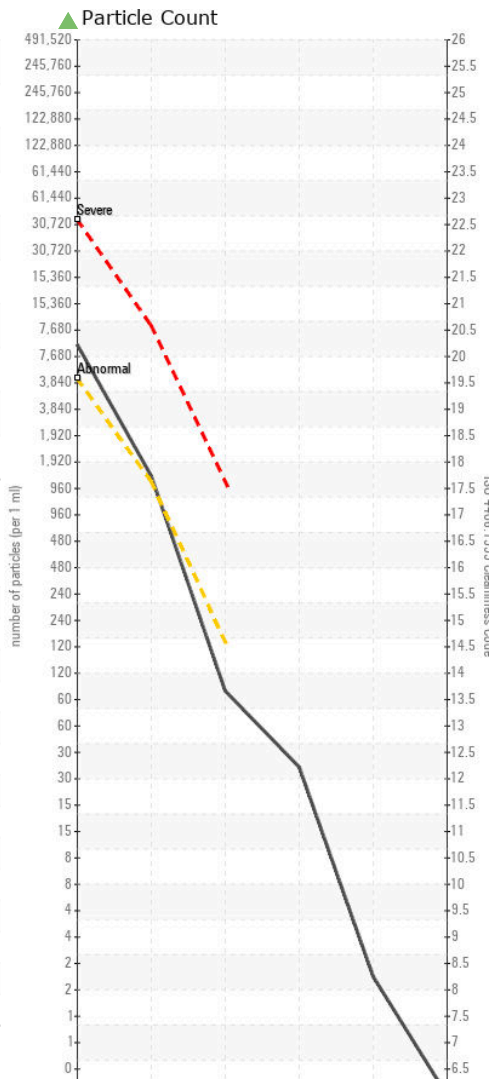
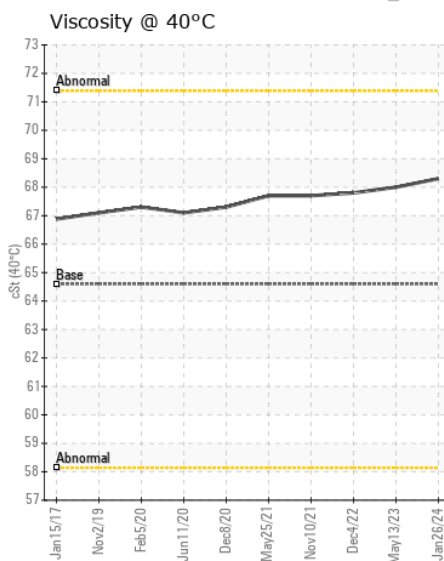
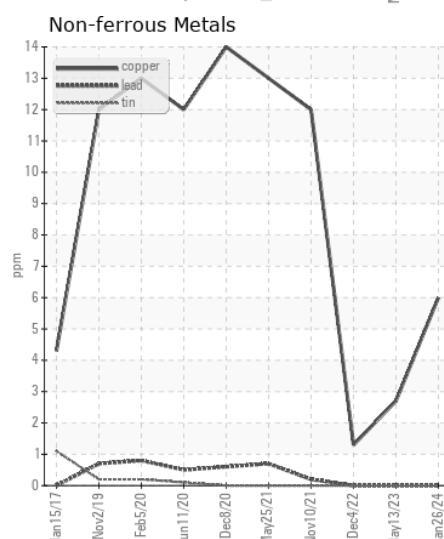
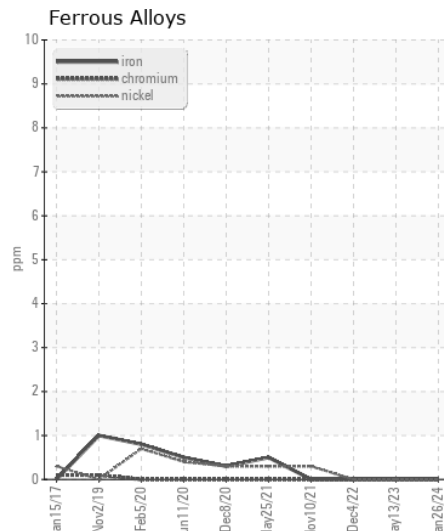
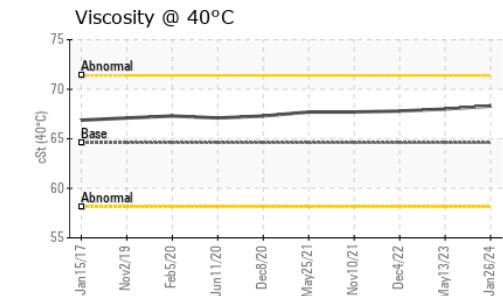
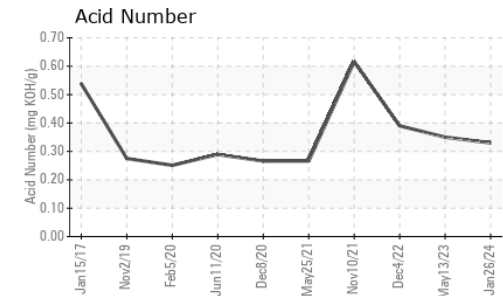
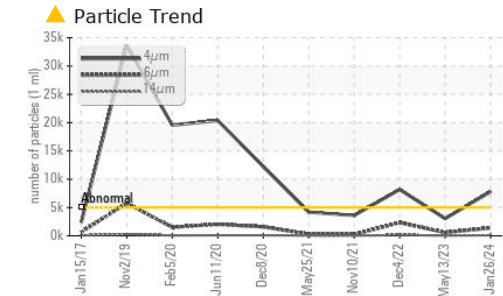
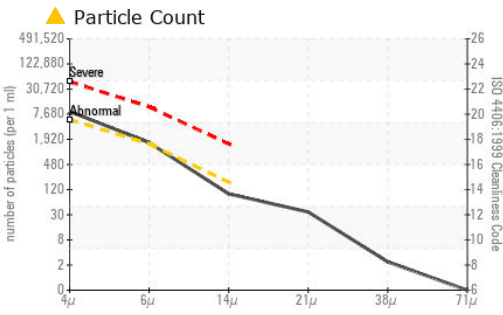
There is a light amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>15	3	<1	0
Potassium	ppm	ASTM D5185m	>20	0	0	0
Water		WC Method	>0.05	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	▲ 7798	3043	▲ 8189
Particles >6µm		ASTM D7647	>1300	▲ 1398	594	▲ 2327
Particles >14µm		ASTM D7647	>160	84	41	150
Particles >21µm		ASTM D7647	>40	31	11	24
Particles >38µm		ASTM D7647	>10	2	1	1
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 20/18/14	19/16/13	▲ 20/18/14
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	LIGHT	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	>0.05	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	0
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	4
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		0	0	0
Magnesium	ppm	ASTM D5185m		0	0	0
Calcium	ppm	ASTM D5185m		32	43	41
Phosphorus	ppm	ASTM D5185m		302	339	329
Zinc	ppm	ASTM D5185m		364	416	414
Sulfur	ppm	ASTM D5185m		650	847	578
Acid Number (AN)	mg KOH/g	ASTM D8045		0.33	0.35	0.39
Visc @ 40°C	cSt	ASTM D445	64.6	68.3	68.0	67.8



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0066427
Lab Number : 06100074
Unique Number : 10898304
Test Package : MAR 2
Received : 26 Feb 2024
Tested : 27 Feb 2024
Diagnosed : 27 Feb 2024 - Wes Davis

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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)