

Machine Id
MACRODYNE MCD001 MACRODYNE 400T STAMPING PRESS

Component
Hydraulic System

Fluid
PETRO CANADA HYDREX AW 46 (250 GAL)

RECOMMENDATION

We advise that you check for visible metal particles in the oil. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PC0076508	PC0022843	PC412926
Sample Date		Client Info		04 Jan 2024	27 Dec 2021	27 Dec 2019
Machine Age	hrs	Client Info		0	0	0
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	NORMAL	NORMAL

WEAR

Light concentration of visible metal present.

Iron	ppm	ASTM D5185(m)	>20	<1	<1	0
Chromium	ppm	ASTM D5185(m)	>10	<1	<1	<1
Nickel	ppm	ASTM D5185(m)	>10	<1	<1	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>10	<1	0	0
Lead	ppm	ASTM D5185(m)	>10	<1	0	<1
Copper	ppm	ASTM D5185(m)	>75	2	<1	1
Tin	ppm	ASTM D5185(m)	>10	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	▲ VLITE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE

CONTAMINATION

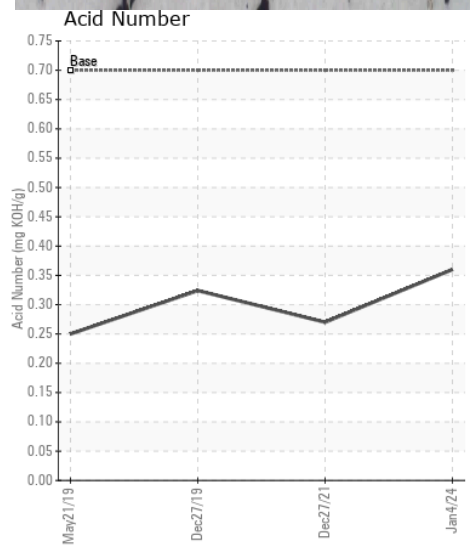
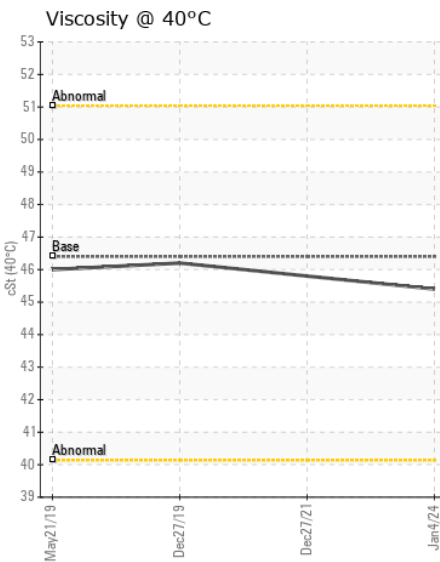
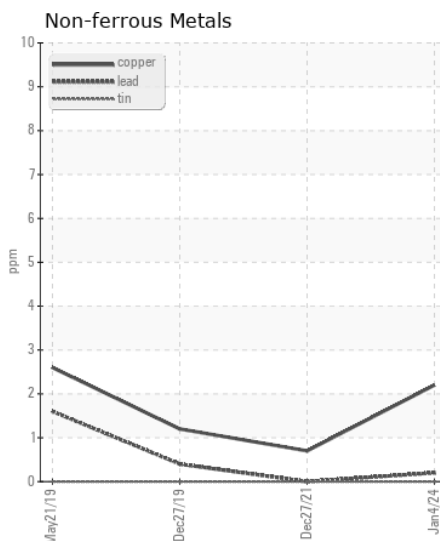
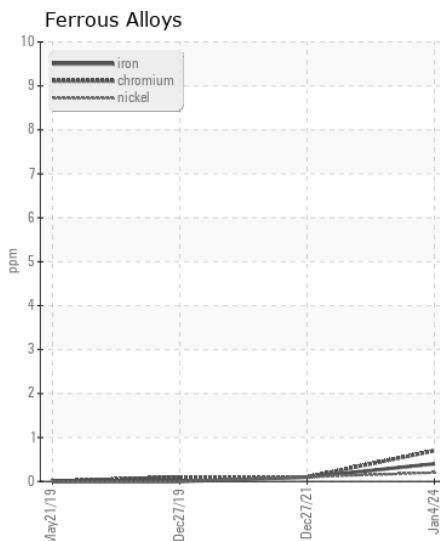
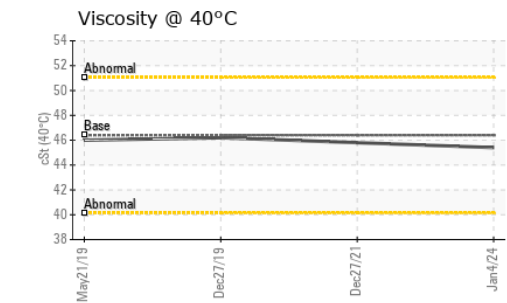
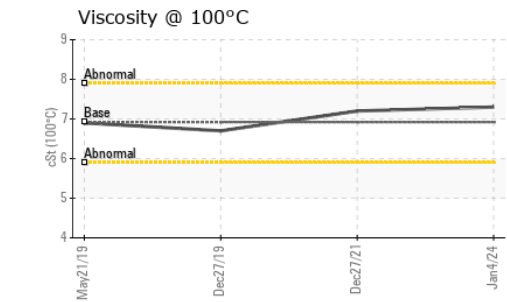
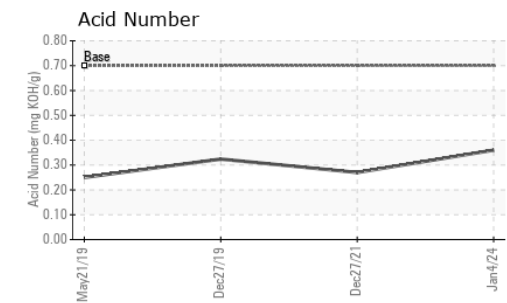
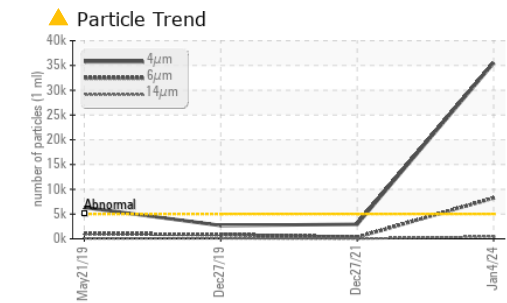
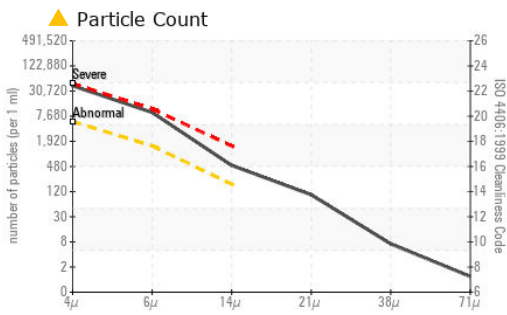
There is a moderate amount of particulates (2 to 100 microns in size) present in the oil.

Silicon	ppm	ASTM D5185(m)	>20	0	0	0
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	<1
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	▲ 35494	2933	2687
Particles >6µm		ASTM D7647	>1300	▲ 8235	311	854
Particles >14µm		ASTM D7647	>160	▲ 448	23	99
Particles >21µm		ASTM D7647	>40	▲ 89	8	34
Particles >38µm		ASTM D7647	>10	6	0	0
Particles >71µm		ASTM D7647	>3	1	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 22/20/16	19/15/12	19/17/14
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 oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Sodium	ppm	ASTM D5185(m)		0	0	0
Boron	ppm	ASTM D5185(m)	0	<1	<1	<1
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	0	0	0	0
Manganese	ppm	ASTM D5185(m)	0	0	0	0
Magnesium	ppm	ASTM D5185(m)	0	<1	0	<1
Calcium	ppm	ASTM D5185(m)	50	49	50	51
Phosphorus	ppm	ASTM D5185(m)	330	326	321	330
Zinc	ppm	ASTM D5185(m)	430	399	415	433
Sulfur	ppm	ASTM D5185(m)	760	740	715	732
Acid Number (AN)	mg KOH/g	ASTM D974*	0.70	0.36	0.27	0.324
Visc @ 40°C	cSt	ASTM D7279(m)	46.4	45.4	45.8	46.2
Visc @ 100°C	cSt	ASTM D7279(m)	6.92	7.3	7.2	6.7
Viscosity Index (VI)	Scale	ASTM D2270*	104	122	117	96



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **CAMTAC MFG (division of Linamar)**
Sample No. : PC0076508 **Received** : 09 Jan 2024 148 ARROW RD
Lab Number : 02607495 **Tested** : 11 Jan 2024 GUELPH, ON
Unique Number : 5708581 **Diagnosed** : 11 Jan 2024 - Kevin Marson CA N1K 1T4
Test Package : IND 2 (Additional Tests: Bottom, BottomAnalysis, FilterPatch, KV100, PrtFilter, TAN Man, Contact: Stu Burbidge
 stu.burbidge@linamar.com
 T: (519)780-2270
 F: (519)780-2274

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.