WEAR CONTAMINATION FLUID CONDITION

Limit/Abn Current

UOM Method

NORMAL SEVERE NORMAL

History2

History1

Machine Id

27P310A - PUMP BEARING

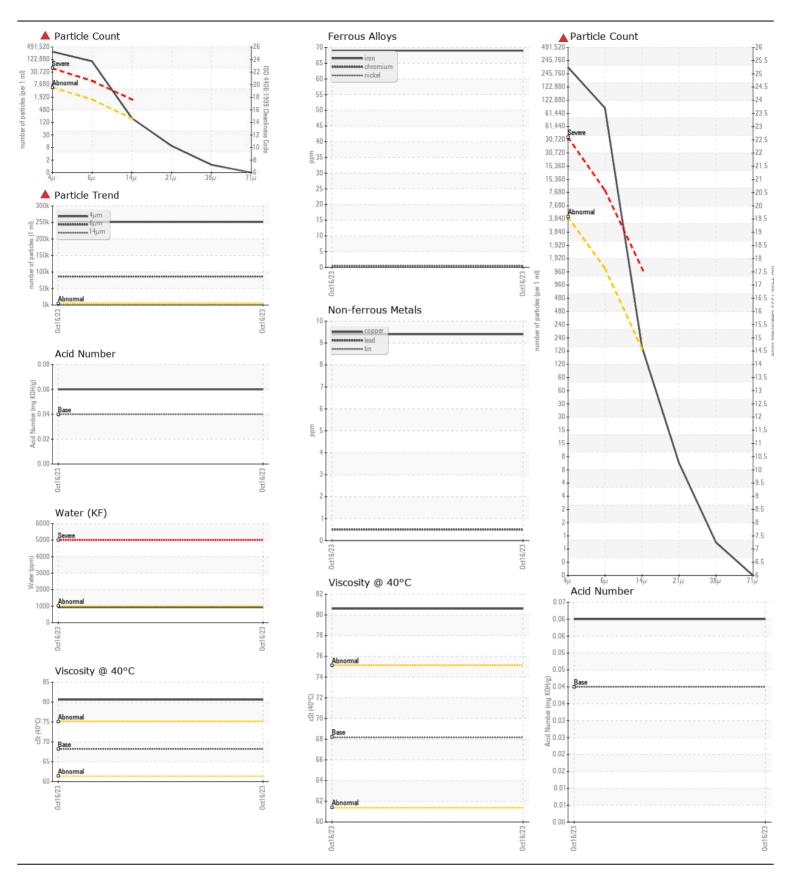
RECOMMENDATION

Pump

PETRO CANADA TURBOFLO XL68 (--- GAL)

RECOMMENDATION	1631	OOIVI	IVICTIOG	LIIIIII/AUII	Current	i iistory i	I IIStOT y Z
We advise that you check for the source of water entry. Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We advise that you use off-line filtration with water adsorbent filters to attempt to remove the water from this oil. We advise that you follow the water drain-off procedure for this component. We recommend you service the filters on this component. Resample in	Sample Number		Client Info		WC0301709		
	Sample Date		Client Info		16 Oct 2023		
	Machine Age	hrs	Client Info		0		
	Oil Age	hrs	Client Info		0		
	Filter Age	hrs	Client Info		0		
	Oil Changed		Client Info		N/A		
30-45 days to monitor this situation. NOTE: Please provide information regarding	Filter Changed		Client Info		N/A		
reservoir capacity, filter type and micron rating with next sample.	Sample Status				SEVERE		
WEAR All component wear rates are normal.	Iron	ppm	ASTM D5185(m)	>90	69		
	Chromium	ppm	ASTM D5185(m)	>5	<1		
	Nickel	ppm	ASTM D5185(m)	>5	<1		
	Titanium	ppm	ASTM D5185(m)	>3	0		
	Silver	ppm	ASTM D5185(m)	>3	<1		
	Aluminum	ppm	ASTM D5185(m)	>7	<1		
	Lead	ppm	ASTM D5185(m)	>12	<1		
	Copper	ppm	ASTM D5185(m)	>30	9		
	Tin	ppm	ASTM D5185(m)	>9	0		
	Vanadium	ppm	ASTM D5185(m)		0		
	White Metal	scalar	Visual*	NONE	NONE		
	Yellow Metal	scalar	Visual*	NONE	NONE		
CONTAMINATION There is a high amount of silt (particulates < 14 microns in size) present in the oil. Free water present.	Silicon	ppm	ASTM D5185(m)	>60	18		
	Potassium	ppm	ASTM D5185(m)	>20	0		
	Water	%	ASTM D6304*	>.1	0.093		
	ppm Water	ppm	ASTM D6304*	>1000	935.9		
	Particles >4µm		ASTM D7647	>5000	251237		
	Particles >6µm		ASTM D7647		A 86284		
	Particles >14µm		ASTM D7647		166		
	Particles >21µm		ASTM D7647		8		
	Particles >38µm		ASTM D7647		1		
	Particles >71µm		ASTM D7647		0		
	Oil Cleanliness		ISO 4406 (c)	>19/17/14	25/24/15		
	Silt	scalar	Visual*	NONE	VLITE		
	Debris	scalar	Visual*	NONE	NONE		
	Sand/Dirt	scalar	Visual*	NONE	NONE		
	Appearance	scalar	Visual*	NORML	▲ WGOIL		
	Odor	scalar	Visual*	NORML	NORML		
	Emulsified Water	scalar	Visual*	>.1	.5%		
FLUID CONDITION	Sodium	ppm	ASTM D5185(m)		<1		
	Boron	ppm	ASTM D5185(m)		<1		
The oil viscosity is higher than typical. The AN level is acceptable for	Barium	ppm	ASTM D5185(m)		<1		
this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.	Molybdenum	ppm	ASTM D5185(m)		0		
	Manganese	ppm	ASTM D5185(m)		0		
	Magnesium	ppm	ASTM D5185(m)		<1		
	Calcium	ppm	ASTM D5185(m)		4		
	Phosphorus	ppm	ASTM D5185(m)		6		
	Zinc	ppm	ASTM D5185(m)	0	5		
	Sulfur	ppm	ASTM D5185(m)		623		
	Acid Number (AN)	mg KOH/g	ASTM D3103(III)	0.04	0.06		
	Visc @ 40°C	cSt	ASTM D7279(m)		80.6		
	V130 @ 40 0	COL	HOTINI DIZIB(III)	00.17	00.0		

Test





CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No. Lab Number

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 : WC0301709

: 02590291

Unique Number : 5659357 Diagnosed Test Package: IND 2 (Additional Tests: KF, TAN Man)

Received

Tested

: 19 Oct 2023

: 20 Oct 2023

: 20 Oct 2023 - Kevin Marson

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.

Petro Canada Lubricants Inc.

385 Southdown Road Mississauga, ON CA L5J 2Y3

Contact: Mark Greenwood mark.greenwood@HFSinclair.com T: (905)403-5159

F: (905)822-6025