

OIL ANALYSIS REPORT

Sample Rating Trend







OIL Machine Id P-3160A (S/N WATER INJECTION PUMP) Pump

Area

CASTROL PERFECTO XPG 32 (35 GAL)

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the fluid. The amount and size of particulates present in the system are acceptable.

Fluid Condition

The AN level is acceptable for this fluid. The condition of the fluid is suitable for further service.

		12020 Jul203	20 Aug2021 Feb2022	Jul2022 Jan2023 May2023 N	lov2023	
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		HLC0003133	HLC0003012	HLC0003179
Sample Date		Client Info		01 Apr 2024	07 Feb 2024	07 Jan 2024
Machine Age	hrs	Client Info		0	0	51841
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	1	method	limit/base	current	history1	history2
Water		WC Method	>.1	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>90	<1	0	0
Chromium	ppm	ASTM D5185m	>5	<1	0	0
Nickel	ppm	ASTM D5185m	>5	<1	0	0
Titanium	ppm	ASTM D5185m	>3	<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>7	1	0	0
Lead	ppm	ASTM D5185m	>12	2	0	0
Copper	ppm	ASTM D5185m	>30	<1	0	0
Tin	ppm	ASTM D5185m	>9	1	1	0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	0	0	0
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	0	<1	0	0
Manganese	ppm	ASTM D5185m	0	<1	0	0
Magnesium	ppm	ASTM D5185m	0	<1	0	0
Calcium	ppm	ASTM D5185m	0	4	0	0
Phosphorus	ppm	ASTM D5185m	25	25	12	14
Zinc	ppm	ASTM D5185m	0	2	0	0
Sulfur	ppm	ASTM D5185m	1500	1502	1239	1358
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>60	<1	0	<1
Sodium	ppm	ASTM D5185m		0	0	<1
Potassium	ppm	ASTM D5185m	>20	1	0	0
FLUID CLEANLIN	ESS	method	limit/base	current	history1	history2
Particles >4μm		ASTM D7647		102	112	156
Particles >6µm		ASTM D7647	>2500	42	39	44
Particles >14μm		ASTM D7647	>320	11	8	8
Particles >21µm		ASTM D7647	>80	4	2	3
Particles >38μm		ASTM D7647	>20	1	0	0
Particles >71μm		ASTM D7647		0	0	0
Oil Cleanliness		ISO 4406 (c)	>/18/15	14/13/11	14/12/10	14/13/10
FLUID DEGRADA	TION	method				history2

Acid Number (AN)

mg KOH/g ASTM D8045 0.05

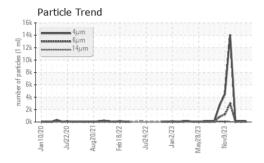
0.08

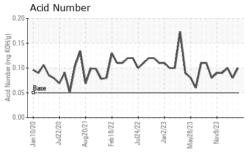
0.10

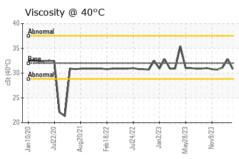
Contact/Location: PERRY NEEL - BPENOR

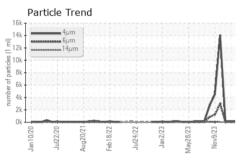


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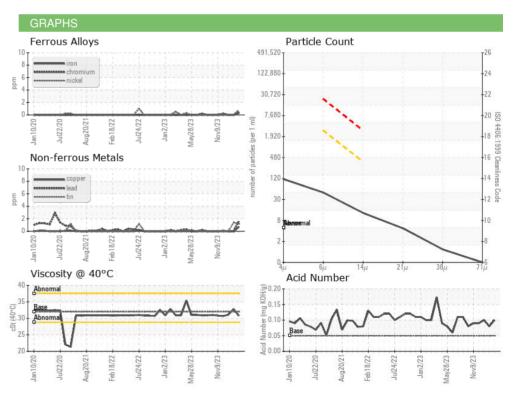


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>.1	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
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. 20.2						
Visc @ 40°C	cSt	ASTM D445	32.0	30.8	32.8	31.1

SAMPLE IMAGES	method		history2
Color			

С **Bottom**







Certificate 12367

Laboratory

Sample No.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : HLC0003133 Lab Number : 06146559

Unique Number : 10976637

Received **Tested**

: 11 Apr 2024 : 12 Apr 2024

Diagnosed : 15 Apr 2024 - Angela Borella Test Package : IND 2 (Additional Tests: PrtCount)

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.

PRUDHOE BAY, AK US 99734 Contact: PERRY NEEL pneel@hilcorp.com T: (907)670-3514

HILCORP NORTHSTAR FACILITY

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: (907)659-5377