

OIL ANALYSIS REPORT

Area OIL Machine Id

P-3160B (S/N WATER INJECTION PUMP) Pump

CASTROL PERFECTO XPG 32 (35 GAL)

Sample Rating Trend



Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

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

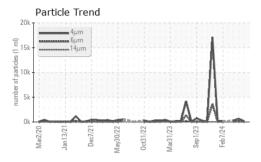
Fluid Condition

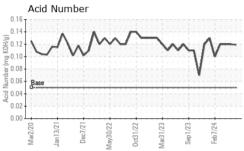
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

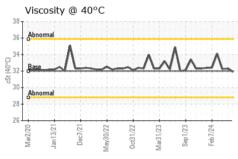
SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		HLC0003289	HLC0003304	HLC0003131
Sample Date		Client Info		01 Jun 2024	02 May 2024	01 Apr 2024
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION		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	0	0	<1
Chromium	ppm	ASTM D5185m	>5	0	0	<1
Nickel	ppm	ASTM D5185m	>5	0	0	<1
Titanium	ppm	ASTM D5185m	>3	<1	0	<1
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>7	0	0	1
Lead	ppm	ASTM D5185m	>12	0	<1	1
Copper	ppm	ASTM D5185m	>30	<1	0	<1
Tin	ppm	ASTM D5185m	>9	0	0	1
Vanadium	ppm	ASTM D5185m		<1	<1	<1
Cadmium	ppm	ASTM D5185m		0	0	<1
ADDITIVES	1-1-		12 24 0		12.4	1: 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	0	0	<1
Manganese	ppm	ASTM D5185m	0	0	0	<1
Magnesium	ppm	ASTM D5185m	0	0	0	<1
Calcium	ppm	ASTM D5185m	0	0	0	3
Phosphorus	ppm	ASTM D5185m	25	22	14	27
Zinc	ppm	ASTM D5185m	0	0	0	0
Sulfur	ppm	ASTM D5185m	1500	2099	2282	1933
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>60	2	2	2
Sodium	ppm	ASTM D5185m		2	2	0
Potassium	ppm	ASTM D5185m	>20	0	<1	<1
FLUID CLEANLINE	ESS	method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		186	677	302
Particles >6µm		ASTM D7647	>2500	53	180	75
Particles >14µm		ASTM D7647	>320	5	10	5
Particles >21µm		ASTM D7647	>80	1	2	2
Particles >38µm		ASTM D7647	>20	0	1	0
Particles >71μm		ASTM D7647	>4	0	1	0
Oil Cleanliness		ISO 4406 (c)	>/18/15	15/13/10	17/15/10	15/13/10
FLUID DEGRADA	TION	method	limit/base	current	history1	history2

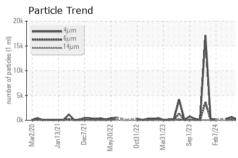


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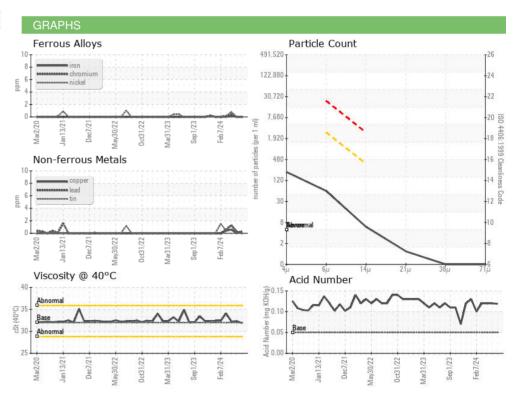


VISUAL		method				history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	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
FILLID DDODED						

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	Visc @ 40°C	cSt	ASTM D445	32.0	31.9	32.3	32.23

SAMPLE IMAGES	method		history2
Color			









Certificate 12367

Sample No.

Laboratory

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : HLC0003289 Lab Number : 06205334

Unique Number : 11072795

Received **Tested** Diagnosed

: 10 Jun 2024 : 12 Jun 2024

: 12 Jun 2024 - Don Baldridge Test Package : IND 2 (Additional Tests: PrtCount)

To discuss this sample report, contact Customer Service at 1-800-237-1369.

US 99734 Contact: PERRY NEEL pneel@hilcorp.com T: (907)670-3514 F: (907)659-5377

PRUDHOE BAY, AK

HILCORP NORTHSTAR FACILITY

* - 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)