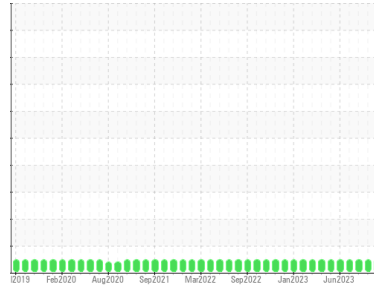




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Area  
**OIL**  
 Machine Id  
**P-3160A (S/N WATER INJECTION PUMP)**  
 Component  
**Pump**  
 Fluid  
**CASTROL PERFECTO XPG 32 (35 GAL)**

## DIAGNOSIS

**Recommendation**  
 Resample at the next service interval to monitor.

**Wear**  
 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.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>HLC0002850</b>	HLC0002840	HLC0002328
Sample Date	Client Info			<b>09 Nov 2023</b>	10 Oct 2023	01 Sep 2023
Machine Age	hrs Client Info			<b>50872</b>	0	0
Oil Age	hrs Client Info			<b>0</b>	0	0
Oil Changed	Client Info			<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water	WC Method		>.1	<b>NEG</b>	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>90	<b>0</b>	0	0
Chromium	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	>3	<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>7	<b>0</b>	0	0
Lead	ppm	ASTM D5185m	>12	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>30	<b>0</b>	0	0
Tin	ppm	ASTM D5185m	>9	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

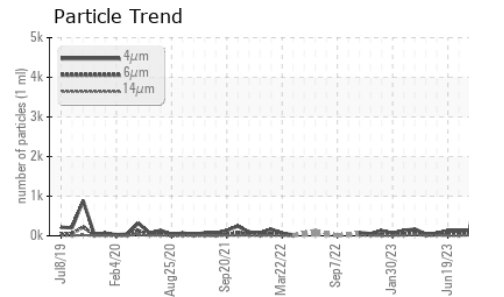
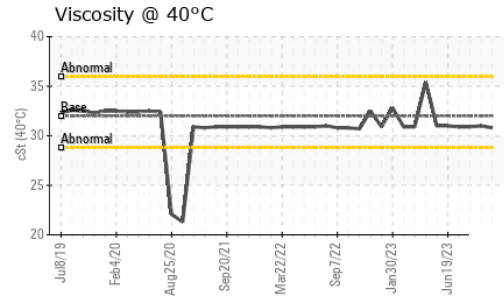
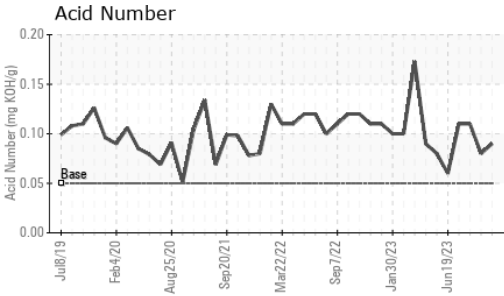
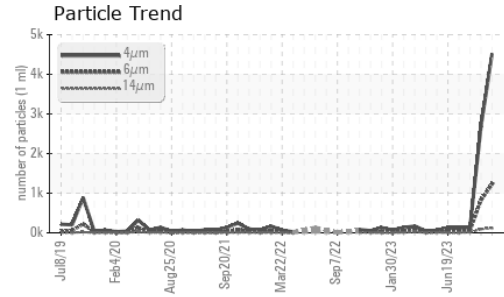
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	<b>0</b>	0	4
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	0	<b>0</b>	0	0
Manganese	ppm	ASTM D5185m	0	<b>0</b>	<1	0
Magnesium	ppm	ASTM D5185m	0	<b>0</b>	0	6
Calcium	ppm	ASTM D5185m	0	<b>0</b>	0	19
Phosphorus	ppm	ASTM D5185m	25	<b>1</b>	20	30
Zinc	ppm	ASTM D5185m	0	<b>0</b>	2	17
Sulfur	ppm	ASTM D5185m	1500	<b>1281</b>	1315	1741

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>60	<b>&lt;1</b>	<1	<1
Sodium	ppm	ASTM D5185m		<b>0</b>	2	<1
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	<1	<1

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		<b>4518</b>	2688	141
Particles >6µm		ASTM D7647	>2500	<b>1233</b>	830	52
Particles >14µm		ASTM D7647	>320	<b>121</b>	94	11
Particles >21µm		ASTM D7647	>80	<b>38</b>	19	3
Particles >38µm		ASTM D7647	>20	<b>2</b>	1	0
Particles >71µm		ASTM D7647	>4	<b>1</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>--/18/15	<b>19/17/14</b>	19/17/14	14/13/11

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.05	<b>0.09</b>	0.08	0.11

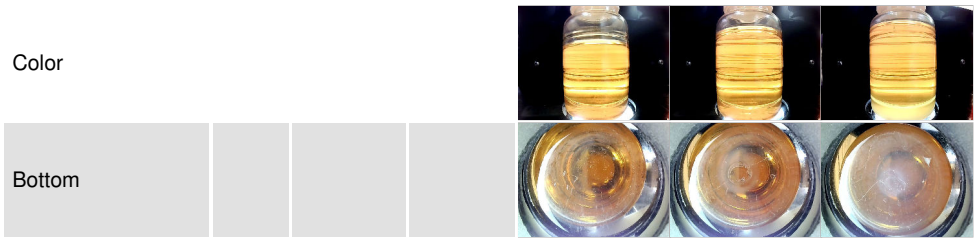
# OIL ANALYSIS REPORT



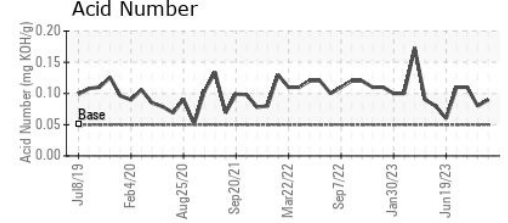
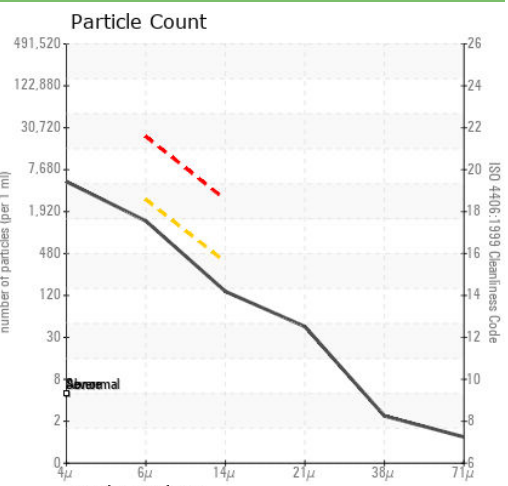
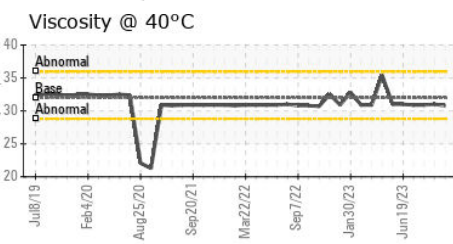
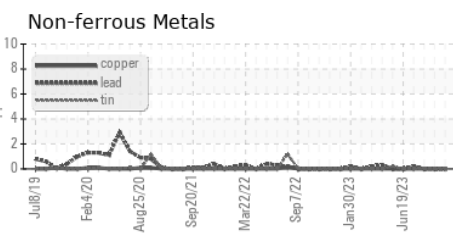
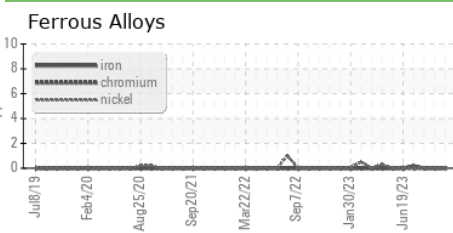
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	32.0	30.8	31.0

SAMPLE IMAGES	method	limit/base	current	history1	history2
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## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : HLC0002850 **Received** : 17 Nov 2023  
**Lab Number** : 06011463 **Diagnosed** : 21 Nov 2023  
**Unique Number** : 10750607 **Diagnostician** : Don Baldrige  
**Test Package** : IND 2 ( Additional Tests: PrtCount )

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 pneel@hilcorp.com  
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 F: (907)659-5377

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)