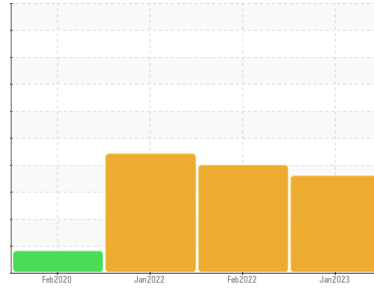




# OIL ANALYSIS REPORT

Sample Rating Trend



**WATER**



Machine Id  
**PALFINGER US328 - UNIVERSAL SUPPLY**

Component  
**Hydraulic System**

Fluid  
**AW HYDRAULIC OIL ISO 32 (--- GAL)**

## DIAGNOSIS

### ▲ Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### ▲ Contamination

There is a high amount of silt (particulates < 14 microns in size) present in the oil. There is a light concentration of water present in the oil.

### Fluid Condition

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

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0695533</b>	WC0554901	WC0598019
Sample Date	Client Info		<b>31 Jan 2023</b>	10 Feb 2022	03 Jan 2022
Machine Age	hrs	Client Info	<b>1335</b>	1335	0
Oil Age	hrs	Client Info	<b>1335</b>	1335	0
Oil Changed	Client Info		<b>N/A</b>	Not Changd	N/A
Sample Status			<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >20	<b>2</b>	0	4
Chromium	ppm	ASTM D5185m >10	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m >10	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	<b>0</b>	<1	1
Aluminum	ppm	ASTM D5185m >10	<b>0</b>	0	<1
Lead	ppm	ASTM D5185m >10	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m >75	<b>0</b>	<1	1
Tin	ppm	ASTM D5185m >10	<b>0</b>	<1	<1
Antimony	ppm	ASTM D5185m	<b>---</b>	<1	0
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	<1

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 5	<b>2</b>	0	6
Barium	ppm	ASTM D5185m 5	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 5	<b>2</b>	0	<1
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m 25	<b>22</b>	3	2
Calcium	ppm	ASTM D5185m 200	<b>149</b>	176	177
Phosphorus	ppm	ASTM D5185m 300	<b>348</b>	319	314
Zinc	ppm	ASTM D5185m 370	<b>442</b>	381	370
Sulfur	ppm	ASTM D5185m 2500	<b>1120</b>	907	1028

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	<1
Sodium	ppm	ASTM D5185m	<b>0</b>	<1	1
Potassium	ppm	ASTM D5185m >20	<b>0</b>	<1	0
Water	%	ASTM D6304 >0.1	<b>▲ 0.148</b>	▲ 0.427	▲ 0.526
ppm Water	ppm	ASTM D6304 >1000	<b>▲ 1480</b>	▲ 4270	▲ 5260

## FLUID CLEANLINESS

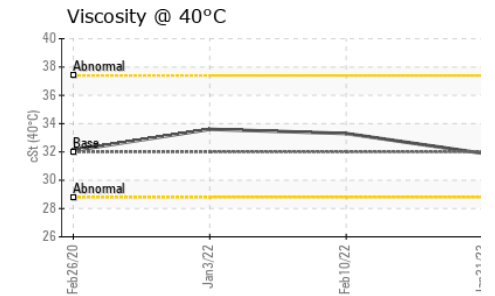
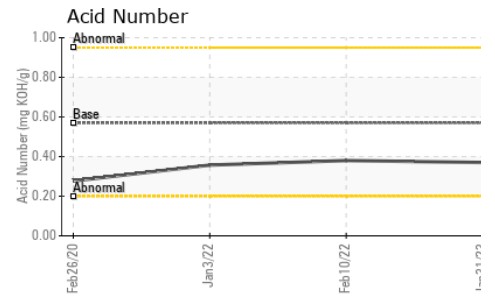
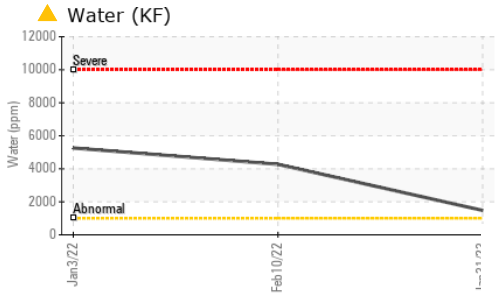
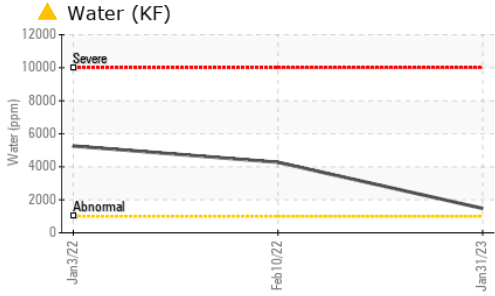
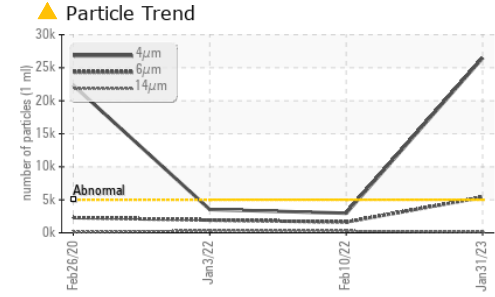
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	<b>▲ 26476</b>	2966	3530
Particles >6µm	ASTM D7647	>1300	<b>▲ 5392</b>	▲ 1616	▲ 1923
Particles >14µm	ASTM D7647	>160	<b>131</b>	▲ 275	▲ 327
Particles >21µm	ASTM D7647	>40	<b>14</b>	▲ 93	▲ 110
Particles >38µm	ASTM D7647	>10	<b>0</b>	▲ 14	▲ 17
Particles >71µm	ASTM D7647	>3	<b>0</b>	1	▲ 2
Oil Cleanliness	ISO 4406 (c)	>19/17/14	<b>▲ 22/20/14</b>	▲ 19/18/15	▲ 19/18/16

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 0.57	<b>0.37</b>	0.38	0.357



# OIL ANALYSIS REPORT



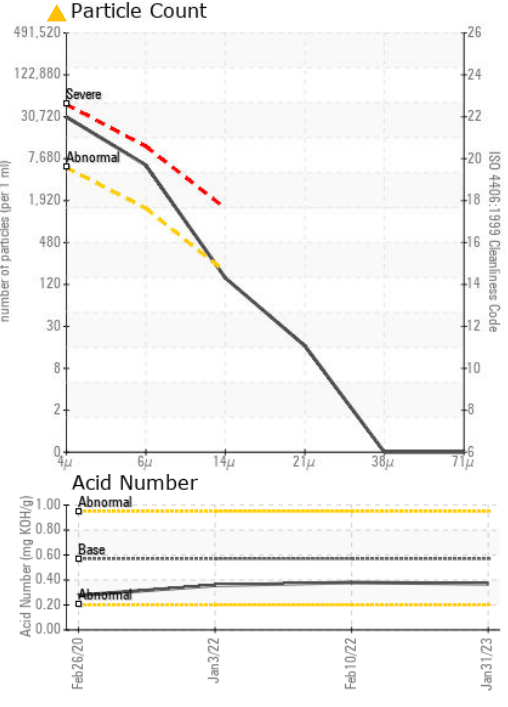
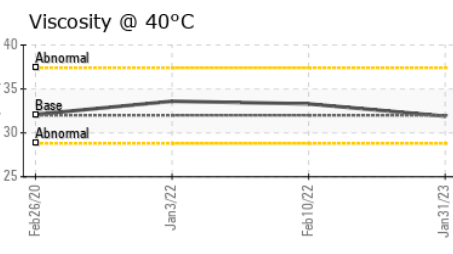
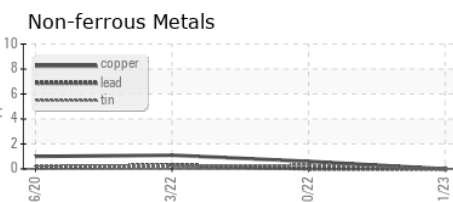
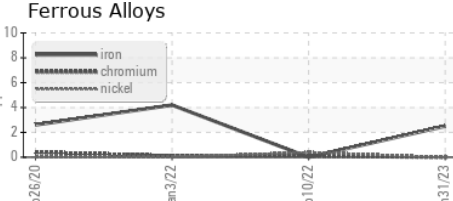
PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	LIGHT	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	▲ HAZY	▲ MILKY	▲ MILKY
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	0.2%	0.2%
Free Water	scalar	*Visual	NEG	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 32	31.9	33.3	33.6

### SAMPLE IMAGES

method	limit/base	current	history1	history2
Color				
Bottom				

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0695533 **Received** : 05 Apr 2023  
**Lab Number** : 05812117 **Tested** : 07 Apr 2023  
**Unique Number** : 10414909 **Diagnosed** : 10 Apr 2023 - Don Baldrige  
**Test Package** : CONST ( Additional Tests: KF )

**PALFINGER - BRANCH 410**  
 632 CEDAR SWAMP RD  
 JACKSON, NJ  
 US 08527  
 Contact: ANTHONY HARTIGAN  
 a.hartigan@palfinger.com

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)