

# Machine Id HPU-4 Component Hydraulic System DURALENE ZD AW 100 (--- LTR)

## RECOMMENDATION

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. The filter change at the time of sampling has been noted. Resample in 30-45 days to monitor this situation. Please specify the component make and model with your next sample.

### WEAR

All component wear rates are normal.

## CONTAMINATION

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

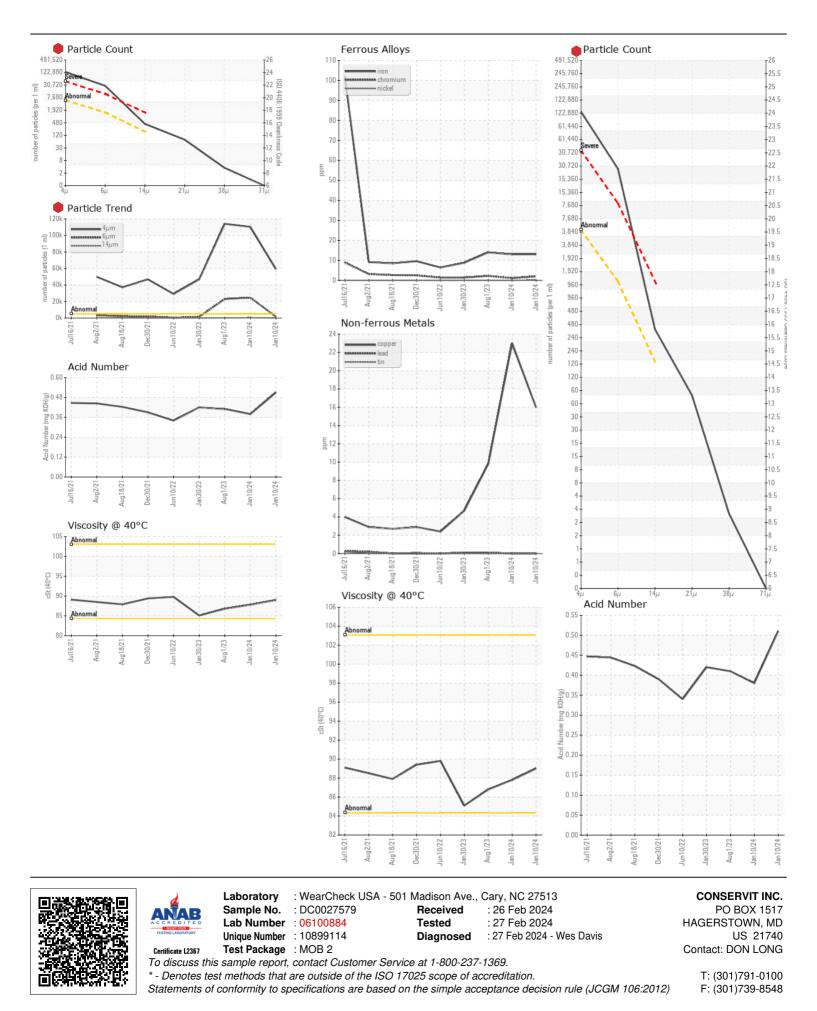
## **FLUID CONDITION**

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		DC0027579	DC0027575	DC0024538
Sample Date		Client Info		10 Jan 2024	10 Jan 2024	01 Aug 2023
Machine Age	yrs	Client Info		0	15	192
Oil Age	yrs	Client Info		0	0	0
Filter Age	yrs	Client Info		1	1	6
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				SEVERE	ABNORMAL	SEVERE
Iron	ppm	ASTM D5185m	>20	13	13	14
Chromium	ppm	ASTM D5185m	>10	1	2	2
Nickel	ppm	ASTM D5185m	>10	0	<1	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>10	2	2	0
Lead	ppm	ASTM D5185m	>10	0	0	<1
Copper	ppm	ASTM D5185m	>75	23	16	10
Tin	ppm	ASTM D5185m	>10	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Ciliaan				•	~	
Silicon	ppm	ASTM D5185m	>20	3	5	5
Potassium	ppm	ASTM D5185m	>20	1		<1
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	110424	▲ 59044	113993
Particles >6µm		ASTM D7647	>1300	24682	▲ 1615 40	23100
Particles >14µm		ASTM D7647	>160	▲ 372	46	▲ 175
Particles >21µm		ASTM D7647	>40	▲ 66 2	19	18
Particles >38µm		ASTM D7647 ASTM D7647	>10 >3	3	1	1
Particles >71µm			>19/17/14	0	▲ 23/18/13	<b>a</b> 24/22/15
Oil Cleanliness Silt	agalar	ISO 4406 (c)				•
	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	
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG
Sodium	ppm	ASTM D5185m		0	<1	3
Boron	ppm	ASTM D5185m		2	2	<1
Barium	ppm	ASTM D5185m		8	0	0
Molybdenum	ppm	ASTM D5185m		0	1	1
Manganese	ppm	ASTM D5185m		0	0	<1
Magnesium	ppm	ASTM D5185m		72	112	98
Calcium	ppm	ASTM D5185m		169	240	179
Phosphorus	ppm	ASTM D5185m		325	475	353
Zinc	ppm	ASTM D5185m		366	521	460
Sulfur	ppm	ASTM D5185m		7275	11080	9392
Acid Number (AN)	mg KOH/g	ASTM D3103III ASTM D8045		0.51	0.38	0.41
Visc @ 40°C	cSt	ASTM D0045 ASTM D445			87.8	86.8
150 @ 40 0	COL	ASTIVI D445		89.0	07.0	0.00

#### NORMAL CONTAMINATION **SEVERE** FLUID CONDITION NORMAL

WEAR



Contact/Location: DON LONG - CONHAGMD