

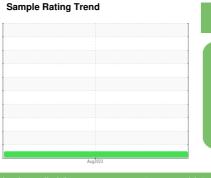
# **OIL ANALYSIS REPORT**

# PLUS 10 [114106]

**EATON EC00002425-H - CASSANOS** 

Component

Compressor





#### 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 oil

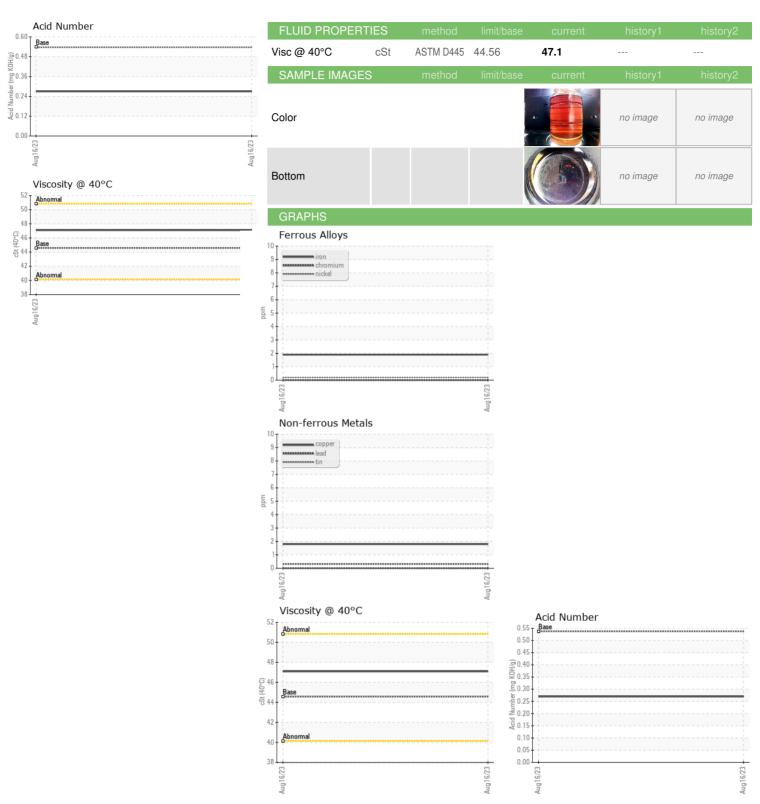
## **Fluid Condition**

The oil viscosity is higher than normal. The AN level is acceptable for this fluid.

SAMPLE INFORMATION					Aug2023		
Sample Number   Client Info   UCH05931632	04451511505						
Client Info	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Machine Age   hrs   Client Info   9489	Sample Number		Client Info		UCH05931632		
Oil Age	Sample Date		Client Info		16 Aug 2023		
Oil Changed   Client Info   Not Changd   NORMAL   Sample Status   Sample St	Machine Age	hrs	Client Info		9489		
NORMAL   Sample Status   WEAR METALS   method   limit/base   current   history1   history2	Oil Age	hrs	Client Info		•		
WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >50         2	Oil Changed		Client Info				
Chromium	Sample Status				NORMAL		
Chromium	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>50	2		
Titanium	Chromium	ppm	ASTM D5185m	>10	0		
Silver	Nickel	ppm	ASTM D5185m		<1		
Aluminum	Titanium	ppm	ASTM D5185m		0		
Lead	Silver	ppm	ASTM D5185m		0		
Copper	Aluminum	ppm	ASTM D5185m	>25	0		
Name	Lead	ppm	ASTM D5185m	>25	0		
Name	Copper	ppm	ASTM D5185m	>50	2		
Vanadium         ppm         ASTM D5185m         0             Cadmium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0.1         0             Barium         ppm         ASTM D5185m         0.8         0             Molybdenum         ppm         ASTM D5185m         0.9         <1             Magnesium         ppm         ASTM D5185m         0.9         <1             Magnesium         ppm         ASTM D5185m         0         21             Magnesium         ppm         ASTM D5185m         0         21             Phosphorus         ppm         ASTM D5185m         0         11             Zinc         ppm         ASTM D5185m         0         11             Sulfur         ppm         ASTM D5185m         225         4	Tin		ASTM D5185m	>15	<1		
ADDITIVES	Vanadium	ppm	ASTM D5185m		0		
ADDITIVES	Cadmium		ASTM D5185m		0		
Boron   ppm   ASTM D5185m   0.1   0	ADDITIVES		mothod	limit/base	current	history1	history?
Barium							
Molybdenum         ppm         ASTM D5185m         0         0             Manganese         ppm         ASTM D5185m         0.9         <1							
Manganese         ppm         ASTM D5185m         0.9         <1             Magnesium         ppm         ASTM D5185m         0         2             Calcium         ppm         ASTM D5185m         0         21             Phosphorus         ppm         ASTM D5185m         409         239             Zinc         ppm         ASTM D5185m         0         11             Sulfur         ppm         ASTM D5185m         1290         1261             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         4             Sodium         ppm         ASTM D5185m         31             Potassium         ppm         ASTM D5185m         >20         1             FLUID DEGRADATION         method         limit/base         current         history1         history2           Acid Number (AN)         mg K0Hg         ASTM D8045         0.53					_		
Magnesium         ppm         ASTM D5185m         0         2             Calcium         ppm         ASTM D5185m         0         21             Phosphorus         ppm         ASTM D5185m         409         239             Zinc         ppm         ASTM D5185m         0         11             Sulfur         ppm         ASTM D5185m         1290         1261             Sulfur         ppm         ASTM D5185m         1290         1261             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         4             Sodium         ppm         ASTM D5185m         >20         1             Potassium         ppm         ASTM D5185m         >20         1             FLUID DEGRADATION         method         limit/base         current         history1         history2           Acid Number (AN)         mg KOHg         ASTM D8045 </td <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	-						
Calcium         ppm         ASTM D5185m         0         21             Phosphorus         ppm         ASTM D5185m         409         239             Zinc         ppm         ASTM D5185m         0         11             Sulfur         ppm         ASTM D5185m         1290         1261             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         4             Sodium         ppm         ASTM D5185m         >20         1             Potassium         ppm         ASTM D5185m         >20         1             FLUID DEGRADATION         method         limit/base         current         history1         history2           Acid Number (AN)         mg KOHlg         ASTM D8045         0.537         0.27             VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual	-	ppm					
Phosphorus         ppm         ASTM D5185m         409         239             Zinc         ppm         ASTM D5185m         0         11             Sulfur         ppm         ASTM D5185m         1290         1261             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         4             Sodium         ppm         ASTM D5185m         >20         1             Potassium         ppm         ASTM D5185m         >20         1             FLUID DEGRADATION         method         limit/base         current         history1         history2           Acid Number (AN)         mg K0H/g         ASTM D8045         0.537         0.27             VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE         NONE             Yellow Metal         scalar <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>							
Zinc		ppm					
Sulfur         ppm         ASTM D5185m         1290         1261             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         4             Sodium         ppm         ASTM D5185m         >20         1             FLUID DEGRADATION         method         limit/base         current         history1         history2           FLUID DEGRADATION         method         limit/base         current         history1         history2           Acid Number (AN)         mg KOH/g         ASTM D8045         0.537         0.27             VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE             Yellow Metal         scalar         *Visual         NONE         NONE            Precipitate         scalar         *Visual         NONE         NONE             Silt         scalar         *Visua							
CONTAMINANTS		ppm					
Silicon	Sulfur	ppm	ASTM D5185m	1290	1261		
Sodium	CONTAMINANTS	8	method	limit/base	current	history1	history2
Potassium         ppm         ASTM D5185m         >20         1             FLUID DEGRADATION         method         limit/base         current         history1         history2           Acid Number (AN)         mg KOH/g         ASTM D8045         0.537         0.27             VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE         NONE            Yellow Metal         scalar         *Visual         NONE         NONE            Precipitate         scalar         *Visual         NONE         NONE            Silt         scalar         *Visual         NONE         NONE            Debris         scalar         *Visual         NONE             Sand/Dirt         scalar         *Visual         NORML         NORML            Appearance         scalar         *Visual         NORML         NORML            Odor         scalar         *Visual         NORML         NORML            Emul	Silicon	ppm	ASTM D5185m	>25	4		
FLUID DEGRADATION         method         limit/base         current         history1         history2           Acid Number (AN)         mg KOH/g         ASTM D8045         0.537         0.27             VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE         NONE            Yellow Metal         scalar         *Visual         NONE         NONE            Precipitate         scalar         *Visual         NONE         NONE            Silt         scalar         *Visual         NONE         NONE            Debris         scalar         *Visual         NONE         NONE            Sand/Dirt         scalar         *Visual         NORML         NORML            Appearance         scalar         *Visual         NORML         NORML            Odor         scalar         *Visual         NORML         NORML            Emulsified Water         scalar         *Visual         >0.1         NEG	Sodium	ppm	ASTM D5185m		31		
Acid Number (AN)         mg KOH/g         ASTM D8045         0.537         0.27             VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE         NONE             Yellow Metal         scalar         *Visual         NONE         NONE             Precipitate         scalar         *Visual         NONE         NONE             Silt         scalar         *Visual         NONE         NONE             Debris         scalar         *Visual         NONE         NONE             Sand/Dirt         scalar         *Visual         NONE         NONE             Appearance         scalar         *Visual         NORML         NORML             Odor         scalar         *Visual         NORML         NORML             Emulsified Water         scalar         *Visual         >0.1         NEG	Potassium	ppm	ASTM D5185m	>20	1		
VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE         NONE             Yellow Metal         scalar         *Visual         NONE         NONE             Precipitate         scalar         *Visual         NONE         NONE             Silt         scalar         *Visual         NONE         NONE             Debris         scalar         *Visual         NONE         NONE             Sand/Dirt         scalar         *Visual         NORML         NORML             Appearance         scalar         *Visual         NORML         NORML             Odor         scalar         *Visual         >0.1         NEG	FLUID DEGRADA	ATION	method	limit/base	current	history1	history2
White Metal         scalar         *Visual         NONE         NONE             Yellow Metal         scalar         *Visual         NONE         NONE             Precipitate         scalar         *Visual         NONE         NONE             Silt         scalar         *Visual         NONE         NONE             Debris         scalar         *Visual         NONE         NONE             Sand/Dirt         scalar         *Visual         NORML         NORML             Appearance         scalar         *Visual         NORML         NORML             Codor         scalar         *Visual         NORML         NORML             Emulsified Water         scalar         *Visual         >0.1         NEG	Acid Number (AN)	mg KOH/g	ASTM D8045	0.537	0.27		
Yellow Metal         scalar         *Visual         NONE         NONE             Precipitate         scalar         *Visual         NONE         NONE             Silt         scalar         *Visual         NONE         NONE             Debris         scalar         *Visual         NONE         NONE             Sand/Dirt         scalar         *Visual         NORML         NORML             Appearance         scalar         *Visual         NORML         NORML             Odor         scalar         *Visual         >0.1         NEG             Emulsified Water         scalar         *Visual         >0.1         NEG	VISUAL		method	limit/base	current	history1	history2
Precipitate         scalar         *Visual         NONE         NONE             Silt         scalar         *Visual         NONE         NONE             Debris         scalar         *Visual         NONE         NONE             Sand/Dirt         scalar         *Visual         NONE         NONE             Appearance         scalar         *Visual         NORML         NORML             Odor         scalar         *Visual         NORML         NORML             Emulsified Water         scalar         *Visual         >0.1         NEG	White Metal	scalar	*Visual	NONE	NONE		
Silt         scalar         *Visual         NONE         NONE             Debris         scalar         *Visual         NONE         NONE             Sand/Dirt         scalar         *Visual         NONE         NONE             Appearance         scalar         *Visual         NORML         NORML             Odor         scalar         *Visual         NORML         NORML             Emulsified Water         scalar         *Visual         >0.1         NEG	Yellow Metal	scalar	*Visual	NONE	NONE		
Debris         scalar         *Visual         NONE         NONE             Sand/Dirt         scalar         *Visual         NONE         NONE             Appearance         scalar         *Visual         NORML         NORML             Odor         scalar         *Visual         NORML         NORML             Emulsified Water         scalar         *Visual         >0.1         NEG	Precipitate	scalar	*Visual	NONE	NONE		
Debris         scalar         *Visual         NONE         NONE             Sand/Dirt         scalar         *Visual         NONE         NONE             Appearance         scalar         *Visual         NORML         NORML             Odor         scalar         *Visual         NORML         NORML             Emulsified Water         scalar         *Visual         >0.1         NEG	Silt	scalar	*Visual	NONE	NONE		
Appearancescalar*VisualNORMLNORMLOdorscalar*VisualNORMLNORMLEmulsified Waterscalar*Visual>0.1NEG	Debris			NONE			
Appearancescalar*VisualNORMLNORMLOdorscalar*VisualNORMLNORMLEmulsified Waterscalar*Visual>0.1NEG	Sand/Dirt	scalar	*Visual	NONE	NONE		
Odor scalar *Visual NORML NORML Emulsified Water scalar *Visual >0.1 NEG	Appearance						
Emulsified Water scalar *Visual >0.1 NEG	Odor						
	Emulsified Water						
	Free Water	scalar	*Visual		NEG		



# **OIL ANALYSIS REPORT**







Certificate L2367

Laboratory Sample No. Lab Number Test Package : IND 2

Unique Number : 10616903

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : UCH05931632 : 05931632

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

Received Diagnosed Diagnostician : Don Baldridge

: 22 Aug 2023 : 24 Aug 2023 AIR HANDLING EQUIPMENT INC

1389 RIVERSIDE DR SIDNEY, OH US 45365 Contact: CRISTI CURL

cristi@ahequip.net F: (937)492-3147

\* - 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)

Contact/Location: CRISTI CURL - UCAIRSID