

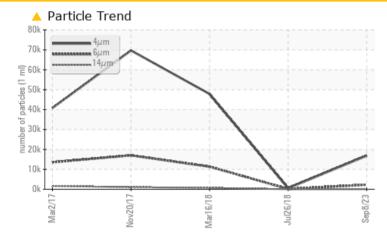
### **PROBLEM SUMMARY**

# KAESER DS 140 1427571 (S/N 142865)

Compressor

### KAESER SIGMA (OEM) S-460 (--- QTS)

#### COMPONENT CONDITION SUMMARY



#### RECOMMENDATION

No corrective action is recommended at this time. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS						
Sample Status			ATTENTION	NORMAL	ABNORMAL	
Particles >6µm	ASTM D7647	>1300	<u> </u>	143	<b>11363</b>	
Oil Cleanliness	ISO 4406 (c)	>/17/13	<b>A</b> 21/18/12	14/11	<b>2</b> 1/17	

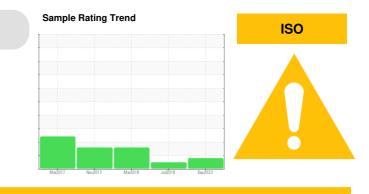
Customer Id: INTCON Sample No.: KCPA006268 Lab Number: 05962236 Test Package: IND 2



To manage this report scan the QR code

*To discuss the diagnosis or test data:* Don Baldridge +1 <u>don.b505@comcast.net</u>

*To change component or sample information:* Customer Service +1 1-800-237-1369 <u>customerservice@wearcheck.com</u>



#### **RECOMMENDED ACTIONS**

There are no recommended actions for this sample.

#### **HISTORICAL DIAGNOSIS**

#### 26 Jul 2018 Diag: Jonathan Hester



Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

#### 16 Mar 2018 Diag: Angela Borella



No corrective action is recommended at this time. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor. Please note that this is a corrected copy.All component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



#### 20 Nov 2017 Diag: Don Baldridge

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.All component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.





view report



## **OIL ANALYSIS REPORT**

## KAESER DS 140 1427571 (S/N 142865)

**Compressor** Fluid

KAESER SIGMA (OEM) S-460 (--- QTS)

#### DIAGNOSIS

#### Recommendation

No corrective action is recommended at this time. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

#### Wear

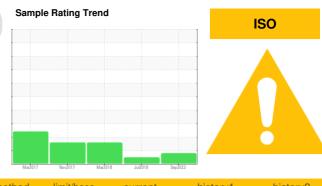
All component wear rates are normal.

#### Contamination

There is a moderate amount of silt (particulates < 14 microns in size) 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 Number       Client Info       KCPA006268       KCP06368       KCP09262         Sample Date       Client Info       08 Sep 2023       26 Jul 2018       16 Mar 2018         Machine Age       hrs       Client Info       76076       62868       62087         Oil Age       hrs       Client Info       0       781       49         Oil Changed       Client Info       N/A       Not Changd       Not Changd         Sample Status       Imethod       Imit/base       current       history1       ABNORMAL         WEAR METALS       method       Imit/base       current       history1       o         Iron       ppm       ASTM D5185m       >50       0       <1       0         Nickel       ppm       ASTM D5185m       >10       0       0       0         Silver       ppm       ASTM D5185m       >2       0       0       0       0         Aluminum       ppm       ASTM D5185m       >10       0       0       0       0         Aluminum       ppm       ASTM D5185m       >10       0       0       0       0	SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Date       Client Info       08 Sep 2023       26 Jul 2018       16 Mar 2018         Machine Age       hrs       Client Info       76076       62868       62087         Oil Age       hrs       Client Info       0       781       49         Oil Changed       Client Info       N/A       Not Changd       ABNORMAL         WEAR METALS       method       Imit/base       current       history1       ABNORMAL         WEAR METALS       method       Imit/base       current       history1       ABNORMAL         Nickel       ppm       ASTM 05165       >30       0       <1       0         Nickel       ppm       ASTM 05165       >30       0       0       0         Aluminum       ppm       ASTM 05165       >10       0       0       0         Autinum       ppm       ASTM 051655       >10       0       0       0       0         Autinum       ppm       ASTM 051655       >10       0       0       0         Autinum       ppm       ASTM 051655       >10       0       0       0 <t< th=""><th>Sample Number</th><th></th><th>Client Info</th><th></th><th></th><th></th><th></th></t<>	Sample Number		Client Info				
Machine Age   hrs   Client Info   76076   62868   62087     Oil Age   hrs   Client Info   N/A   Not Changd   Not Changd     Sample Status   Client Info   N/A   Not Changd   ABNORMAL     WEAR METALS   method   limik/base   current   history1   ABNORMAL     WEAR METALS   method   limik/base   current   history1   ABNORMAL     Tron   ppm   ASTM D5185m   >50   0   <1							
Oil Age   hrs   Client Info   N/A   781   49     Oil Changed   Client Info   N/A   Not Changd   Not Changd   ABN/RMAL     WEAR METALS   method   limit/base   current   history1   istory2     Iron   ppm   ASTM D5185m   >50   0   <1		hre			-		
Oli Changed Sample Status       Client Info       N/A       Not Changd ATTENTION       Not Changd NORMAL       ABNORMAL         WEAR METALS       method       limit/base       current       history1       chistory2         Iron       ppm       ASTM D5185m       >50       0       <1	-						
Sample Status       method       Imit/base       current       history1       ABNORMAL         WEAR METALS       method       Imit/base       current       history1       history2         Iron       ppm       ASTM D5185m       >50       0       <1	-	1113			-		
WEAR METALS       method       limit/base       current       history1       history2         Iron       ppm       ASTM D5185m       >50       0       <1						0	0
Iron       ppm       ASTM D5185m       >50       0       <1	÷		method	limit/base			
Chromium       ppm       ASTM D5185m       >10       0       0       0         Nickel       ppm       ASTM D5185m       >3       0       0       0         Silver       ppm       ASTM D5185m       >2       0       0       0         Silver       ppm       ASTM D5185m       >2       0       0       0         Aluminum       ppm       ASTM D5185m       >10       <1       <1       <1         Lead       ppm       ASTM D5185m       >10       0       0       <1         Antimony       ppm       ASTM D5185m       >10       0       0       <1         Antimony       ppm       ASTM D5185m       0       0       0       0         Vanadium       ppm       ASTM D5185m       0       0       0       0         Antimony       ppm       ASTM D5185m       0       <1       <1       <1         Vanadium       ppm       ASTM D5185m       0       <1       <1       <1       <1         Barium       ppm       ASTM D5185m       0       47							
Nickel       ppm       ASTM D5185m       >3       0       <1       0         Titanium       ppm       ASTM D5185m       >3       0       0       0         Silver       ppm       ASTM D5185m       >2       0       0       0         Aluminum       ppm       ASTM D5185m       >10       <1							
Titanium       ppm       ASTM D5185m       >3       0       0       0         Silver       ppm       ASTM D5185m       >2       0       0       0         Aluminum       ppm       ASTM D5185m       >10       <1							
Silver       ppm       ASTM D5185m       >2       0       0       0         Aluminum       ppm       ASTM D5185m       >10       <1							
Aluminum       ppm       ASTM D5185m       >10       <1       <1       <1         Lead       ppm       ASTM D5185m       >10       0       0       0         Copper       ppm       ASTM D5185m       >50       <1							
Lead       ppm       ASTM D5185m       >10       0       0       0         Copper       ppm       ASTM D5185m       >50       <1							
Copper       ppm       ASTM D5185m       >50       <1       <1       <1         Tin       ppm       ASTM D5185m       >10       0       0       <1							
Tin     ppm     ASTM D5185m     >10     0     0     <1       Antimony     ppm     ASTM D5185m     0     0     0     0       Vanadium     ppm     ASTM D5185m     0     0     0     0       Cadmium     ppm     ASTM D5185m     0     0     0     0       ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185m     0     <1     <1       Barium     ppm     ASTM D5185m     0     <1     0       Magnaese     ppm     ASTM D5185m     0     <1     <1     <1       Magnaesum     ppm     ASTM D5185m     0     <1     <1     <1     <1       Phosphorus     ppm     ASTM D5185m     0     <1     0     <1     <1       Sulfur     ppm     ASTM D5185m     22     3     11     <1     <1       Sulfur     ppm     ASTM D5185m     22     <1     <1     0       Sulfur     ppm     ASTM D5185m     >22     <1							
Antimony       ppm       ASTM D5185m        2       0         Vanadium       ppm       ASTM D5185m       0       0       0         Cadmium       ppm       ASTM D5185m       0       0       0       0         ADDITIVES       method       limit/base       current       history1       history2         Boron       ppm       ASTM D5185m       0       <1							
Vanadium       ppm       ASTM D5185m       0       0       0         Cadmium       ppm       ASTM D5185m       0       0       0         ADDITIVES       method       limit/base       current       history1       history2         Boron       ppm       ASTM D5185m       0       29       29       24         Molybdenum       ppm       ASTM D5185m       0       41       0         Marganese       ppm       ASTM D5185m       0       41       41         Magnesium       ppm       ASTM D5185m       90       47       74       65         Calcium       ppm       ASTM D5185m       90       47       74       65         Calcium       ppm       ASTM D5185m       2       3       1       <1       1         Sulfur       ppm       ASTM D5185m       2       3       1       <1       0         Sulfur       ppm       ASTM D5185m       2       3       16625         CONTAMINANTS       method       limit/base       current       history1       history2         Si				>10			
Cadmium       ppm       ASTM D5185m       0       0       0         ADDITIVES       method       limit/base       current       history1       history2         Boron       ppm       ASTM D5185m       0       <1       <1         Barium       ppm       ASTM D5185m       90       29       29       24         Molybdenum       ppm       ASTM D5185m       90       21       <1       <1         Magnese       ppm       ASTM D5185m       90       47       <1       <1       <1         Magnesium       ppm       ASTM D5185m       90       47       74       65         Calcium       ppm       ASTM D5185m       90       47       74       65         Calcium       ppm       ASTM D5185m       90       47       74       65         Sulfur       ppm       ASTM D5185m       90       47       74       65         Sulfur       ppm       ASTM D5185m       2       3       1       1         Sulfur       ppm       ASTM D5185m       25       <1       3       2<	•	ppm					
ADDITIVES       method       limit/base       current       history1       history2         Boron       ppm       ASTM D5185m       0       <1	Vanadium	ppm			0	0	
Boron       ppm       ASTM D5185m       0       <1       <1         Barium       ppm       ASTM D5185m       90       29       29       24         Molybdenum       ppm       ASTM D5185m       0       <1	Cadmium	ppm	ASTM D5185m		0	0	0
Barium       ppm       ASTM D5185m       90       29       29       24         Molybdenum       ppm       ASTM D5185m       0       <1       0         Manganese       ppm       ASTM D5185m       90       47       74       65         Calcium       ppm       ASTM D5185m       90       47       74       65         Calcium       ppm       ASTM D5185m       2       3       1       <1         Phosphorus       ppm       ASTM D5185m       2       3       1       <1         Sulfur       ppm       ASTM D5185m       2       9       11         Sulfur       ppm       ASTM D5185m       >20       0       0       <1         Sulfur       ppm       ASTM D5185m <t< th=""><th>ADDITIVES</th><th></th><th>method</th><th>limit/base</th><th>current</th><th>history1</th><th>history2</th></t<>	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum       ppm       ASTM D5185m       0       <1       0         Manganese       ppm       ASTM D5185m       90       47       74       65         Calcium       ppm       ASTM D5185m       90       47       74       65         Calcium       ppm       ASTM D5185m       2       3       1       <1	Boron	ppm	ASTM D5185m		0	<1	<1
Magnesse     ppm     ASTM D5185m     <	Barium	ppm	ASTM D5185m	90	29	29	24
Magnesium     ppm     ASTM D5185m     90     47     74     65       Calcium     ppm     ASTM D5185m     2     3     1     <1	Molybdenum	ppm	ASTM D5185m		0	<1	0
Calcium     ppm     ASTM D5185m     2     3     1     <1       Phosphorus     ppm     ASTM D5185m     0     <1	Manganese	ppm	ASTM D5185m		<1	<1	<1
Phosphorus       ppm       ASTM D5185m       0       <1       0         Zinc       ppm       ASTM D5185m       2       9       11         Sulfur       ppm       ASTM D5185m       17997       18088       16625         CONTAMINANTS       method       limit/base       current       history1       history2         Silicon       ppm       ASTM D5185m       >25       <1       <1       0         Sodium       ppm       ASTM D5185m       >25       <1       <1       0         Sodium       ppm       ASTM D5185m       >20       0       0       <1       0         Sodium       ppm       ASTM D5185m       >20       0       0       <1         Vater       %       ASTM D6185m       >20       0.020       0.025       0.016         ppm Water       ppm       ASTM D6304       >0.05       0.020       0.025       0.016         FLUID CLEANLINESS       method       limit/base       current       history1       history2         Particles >4µm       ASTM D7647       >1300       2318       143	Magnesium	ppm	ASTM D5185m	90	47	74	65
Zinc     ppm     ASTM D5185m     2     9     11       Sulfur     ppm     ASTM D5185m     17997     18088     16625       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >25     <1     <1     0       Sodium     ppm     ASTM D5185m     >25     <1     <1     0       Sodium     ppm     ASTM D5185m     >25     <1     <1     0       Sodium     ppm     ASTM D5185m     >20     0     0     <1       Vater     %     ASTM D6304     >0.05     0.020     0.025     0.016       ppm Water     ppm     ASTM D6304     >500     203.3     250     160       FLUID CLEANLINESS     method     limit/base     current     history1     history2       Particles >4µm     ASTM D7647     >1300     2318     143     11363       Particles >6µm     ASTM D7647     >20     4     8     153       Particles >1µm     ASTM D7647     >20     4     8     153 <th>Calcium</th> <td>ppm</td> <td>ASTM D5185m</td> <td>2</td> <th>3</th> <td>1</td> <td>&lt;1</td>	Calcium	ppm	ASTM D5185m	2	3	1	<1
Sulfur       ppm       ASTM D5185m       17997       18088       16625         CONTAMINANTS       method       limit/base       current       history1       history2         Silicon       ppm       ASTM D5185m       >25       <1       <1       0         Sodium       ppm       ASTM D5185m       >25       <1       <1       0         Sodium       ppm       ASTM D5185m       >20       0       0       <1         Potassium       ppm       ASTM D5185m       >20       0       0       <1         Water       %       ASTM D6304       >0.05       0.020       0.025       0.016         ppm Water       ppm       ASTM D6304       >500       203.3       250       160         FLUID CLEANLINESS       method       limit/base       current       history1       history2         Particles >4µm       ASTM D7647       >1300       2318       143       11363         Particles >6µm       ASTM D7647       >80       33       19       703         Particles >1µm       ASTM D7647       20       4       8	Phosphorus	ppm	ASTM D5185m		0	<1	0
CONTAMINANTS       method       limit/base       current       history1       history2         Silicon       ppm       ASTM D5185m       >25       <1	Zinc	ppm	ASTM D5185m		2	9	11
Silicon     ppm     ASTM D5185m     >25     <1     <1     0       Sodium     ppm     ASTM D5185m     >20     0     0     <13     2       Potassium     ppm     ASTM D5185m     >20     0     0     <1       Water     %     ASTM D6304     >0.05     0.020     0.025     0.016       ppm Water     ppm     ASTM D6304     >500     203.3     250     160       FLUID CLEANLINESS     method     limit/base     current     history1     history2       Particles >4µm     ASTM D7647     16853     537     47849       Particles >6µm     ASTM D7647     >1300     2318     143     11363       Particles >14µm     ASTM D7647     >20     4     8     153       Particles >21µm     ASTM D7647     >20     4     8     153       Particles >38µm     ASTM D7647     >3     0     0     2       Oil Cleanliness     ISO 4406 (c)    /17/13     21/18/12     14/11     21/17	Sulfur	ppm	ASTM D5185m		17997	18088	16625
Sodium       ppm       ASTM D5185m       5       13       2         Potassium       ppm       ASTM D5185m<>20       0       0       <1         Water       %       ASTM D5185m<>20       0       0.020       0.025       0.016         ppm Water       ppm       ASTM D6304       >500       203.3       250       160         FLUID CLEANLINESS       method       limit/base       current       history1       history2         Particles >4µm       ASTM D7647       16853       537       47849         Particles >6µm       ASTM D7647       >1300       ▲ 2318       143       ▲ 11363         Particles >6µm       ASTM D7647       >20       4       8       ▲ 153         Particles >21µm       ASTM D7647       >20       4       8       ▲ 153         Particles >38µm       ASTM D7647       >4       0       2       ▲ 15         Particles >71µm       ASTM D7647       >3       0       0       2         Oil Cleanliness       ISO 4406 (c)       >/17/13       21/18/12       14/11       21/17	CONTAMINANTS		method	limit/base	current	history1	history2
Potassium       ppm       ASTM D5185m       >20       0       0       <1         Water       %       ASTM D6304       >0.05       0.020       0.025       0.016         ppm       ASTM D6304       >500       203.3       250       160         FLUID CLEANLINESS       method       limit/base       current       history1       history2         Particles >4µm       ASTM D7647       16853       537       47849         Particles >6µm       ASTM D7647       >1300       2318       143       11363         Particles >6µm       ASTM D7647       >20       4       8       153         Particles >21µm       ASTM D7647       >20       4       8       153         Particles >38µm       ASTM D7647       >3       0       2       15         Particles >71µm       ASTM D7647       >3       0       2       15         Oil Cleanliness       ISO 4406 (c)       >/17/13       21/18/12       14/11       21/17	Silicon	ppm	ASTM D5185m	>25	<1	<1	0
Water       %       ASTM D6304       >0.05       0.020       0.025       0.016         ppm Water       ppm       ASTM D6304       >500       203.3       250       160         FLUID CLEANLINESS       method       limit/base       current       history1       history2         Particles >4µm       ASTM D7647       16853       537       47849         Particles >6µm       ASTM D7647       >1300       2318       143       11363         Particles >6µm       ASTM D7647       >20       4       8       153         Particles >21µm       ASTM D7647       >20       4       8       153         Particles >38µm       ASTM D7647       >4       0       2       15         Particles >71µm       ASTM D7647       >3       0       0       2         Oil Cleanliness       ISO 4406 (c)       >/17/13       21/18/12       14/11       21/17	Sodium	ppm	ASTM D5185m		5	13	2
ppm Water       ppm       ASTM D6304       >500       203.3       250       160         FLUID CLEANLINESS       method       limit/base       current       history1       history2         Particles >4µm       ASTM D7647       16853       537       47849         Particles >6µm       ASTM D7647       >1300       2318       143       11363         Particles >6µm       ASTM D7647       >80       33       19       703         Particles >14µm       ASTM D7647       >20       4       8       153         Particles >21µm       ASTM D7647       >4       0       2       15         Particles >38µm       ASTM D7647       >3       0       0       2         Oil Cleanliness       ISO 4406 (c)       >/17/13       21/18/12       14/11       21/17	Potassium	ppm	ASTM D5185m	>20	0	0	<1
FLUID CLEANLINESS     method     limit/base     current     history1     history2       Particles >4µm     ASTM D7647     16853     537     47849       Particles >6µm     ASTM D7647     >1300     2318     143     11363       Particles >14µm     ASTM D7647     >80     33     19     703       Particles >21µm     ASTM D7647     >20     4     8     153       Particles >38µm     ASTM D7647     >4     0     2     15       Particles >71µm     ASTM D7647     >3     0     0     2       Oil Cleanliness     ISO 4406 (c)     >/17/13     21/18/12     14/11     21/17	Water	%	ASTM D6304	>0.05	0.020	0.025	0.016
Particles >4 $\mu$ mASTM D76471685353747849Particles >6 $\mu$ mASTM D7647>1300231814311363Particles >14 $\mu$ mASTM D7647>803319703Particles >21 $\mu$ mASTM D7647>2048153Particles >38 $\mu$ mASTM D7647>40215Particles >71 $\mu$ mASTM D7647>3002Oil CleanlinessISO 4406 (c)>/17/1321/18/1214/1121/17	ppm Water	ppm	ASTM D6304	>500	203.3	250	160
Particles >6µm     ASTM D7647     >1300     ▲ 2318     143     ▲ 11363       Particles >14µm     ASTM D7647     >80     33     19     ▲ 703       Particles >21µm     ASTM D7647     >20     4     8     ▲ 153       Particles >38µm     ASTM D7647     >4     0     2     ▲ 15       Particles >71µm     ASTM D7647     >3     0     0     2       Oil Cleanliness     ISO 4406 (c)     >/17/13     ▲ 21/18/12     14/11     ▲ 21/17	FLUID CLEANLINI	ESS	method	limit/base	current	history1	history2
Particles >14µm     ASTM D7647     >80     33     19     ▲ 703       Particles >21µm     ASTM D7647     >20     4     8     ▲ 153       Particles >38µm     ASTM D7647     >4     0     2     ▲ 15       Particles >71µm     ASTM D7647     >3     0     0     2       Oil Cleanliness     ISO 4406 (c)     >/17/13     ▲ 21/18/12     14/11     ▲ 21/17	Particles >4µm					537	47849
Particles >21μm       ASTM D7647       >20       4       8       ▲ 153         Particles >38μm       ASTM D7647       >4       0       2       ▲ 15         Particles >71μm       ASTM D7647       >3       0       0       2         Oil Cleanliness       ISO 4406 (c)       >/17/13       ▲ 21/18/12       14/11       ▲ 21/17			ASTM D7647	>1300	<u> </u>	143	
Particles >38μm       ASTM D7647       >4       0       2       15         Particles >71μm       ASTM D7647       >3       0       0       2         Oil Cleanliness       ISO 4406 (c)       >/17/13       ▲ 21/18/12       14/11       ▲ 21/17	Particles >14µm		ASTM D7647	>80	33	19	<b>A</b> 703
Particles >71μm       ASTM D7647       >3       0       0       2         Oil Cleanliness       ISO 4406 (c)       >/17/13       ▲ 21/18/12       14/11       ▲ 21/17	Particles >21µm		ASTM D7647	>20	4	8	🔺 153
Oil Cleanliness       ISO 4406 (c)       >/17/13       ▲ 21/18/12       14/11       ▲ 21/17	Particles >38µm		ASTM D7647	>4	0	2	<b>1</b> 5
	Particles >71µm		ASTM D7647	>3	0	0	2
FLUID DEGRADATION method limit/base current history1 history2	Oil Cleanliness		ISO 4406 (c)	>/17/13	<b>1</b> 21/18/12	14/11	<b>1</b> /17
	FLUID DEGRADA	TION	method	limit/base	current	history1	history2

Acid Number (AN) m

mg KOH/g ASTM D8045 0.4

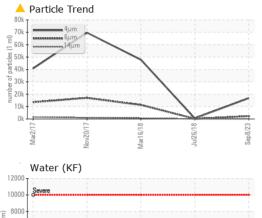
0.41 0.350 0.427

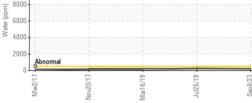
Report Id: INTCON [WUSCAR] 05962236 (Generated: 09/28/2023 14:19:59) Rev: 1

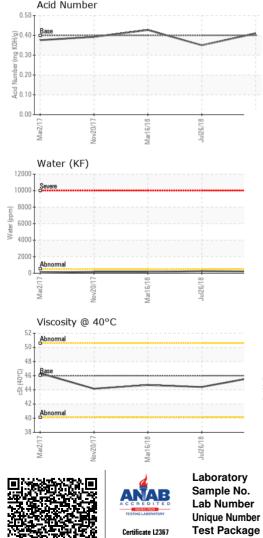
Contact/Location: SERVICE MANAGER ? - INTCON



## **OIL ANALYSIS REPORT**

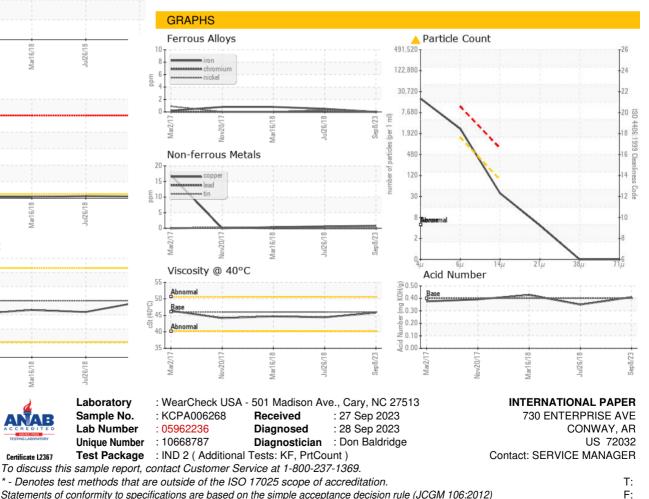






			11 11 11			
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	VLITE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	46	45.8	44.4	44.68
SAMPLE IMAGES	S	method	limit/base	current	history1	history2
Color						

Bottom



Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Contact/Location: SERVICE MANAGER ? - INTCON