

## **OIL ANALYSIS REPORT**

ISO

Machine Id 801B Component Refrigeration Compressor Fluid TULCO LUBSOIL SYN RL WI 100 (--- 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 moderate amount of silt (particulates < 14 microns in size) present in the oil.

#### Fluid Condition

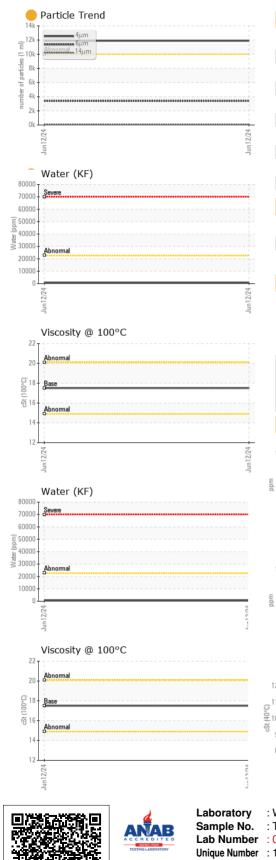
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sample Number   Client Info   TO 20000341       Sample Date   Client Info   12 Jun 2024       Machine Age   hrs   Client Info   0       Oil Age   hrs   Client Info   N/A       Sample Status   Client Info   N/A        WEAR METALS   method   ImiXes   Carent   Nickor      Nickel   ppm   ASTM 05558   -0       Chromium   ppm   ASTM 05558   0       Silver   ppm   ASTM 05558   -0       Copper   ppm   ASTM 05558   -3   0       Copper   ppm   ASTM 05558   -3   0       Cadmium   ppm   ASTM 05558   -3   0       Cadmium   ppm   ASTM 05558   -4   1       Cadmium   ppm   ASTM 05558   -4	SAMPLE INFORM	NATION	method	limit/base	current	history1	history2
Machine Age     hrs     Client Info     0         Oil Age     irrs     Client Info     0         Sample Status     Imit/base     Current     history1     history2       Iron     ppm     ASTM D5185m     >8     1         Nickel     ppm     ASTM D5185m     >2     0         Nickel     ppm     ASTM D5185m     >2     0         Silver     ppm     ASTM D5185m     >2     0         Copper     ppm     ASTM D5185m     >2     0         Copper     ppm     ASTM D5185m     >2     0         Cadmium     ppm     ASTM D5185m     >4     <1         ADDITIVES     method     Imit/base     current     history1     history2       Barium     ppm     ASTM D5185m     0         Molybde	Sample Number		Client Info		TO20000341		
Oil Age     hrs     Client Info     N/A         Sample Status     I     Imit/base     current     history1     history2       WEAR METALS     method     Imit/base     current     history1     history2       Iron     ppm     ASTM D5185m< >8     1         Nickel     ppm     ASTM D5185m     2     0        Nickel     ppm     ASTM D5185m     2     0        Aluminum     ppm     ASTM D5185m     2     0        Aluminum     ppm     ASTM D5185m     2     0        Aged     ppm     ASTM D5185m     2     0        Copper     ppm     ASTM D5185m     0         Yanadium     ppm     ASTM D5185m     0         ASTM D5185m     0           ASTM D5185m     0 <tr< th=""><th>Sample Date</th><th></th><th>Client Info</th><th></th><th>12 Jun 2024</th><th></th><th></th></tr<>	Sample Date		Client Info		12 Jun 2024		
Oil Changed Sample Status     Client Info     N/A         WEAR METALS     method     imit/base     current     history1     history2       Iron     ppm     ASTM D5185m     >8     1         Chromium     ppm     ASTM D5185m     >2     0         Titanium     ppm     ASTM D5185m     >2     0         Aluminum     ppm     ASTM D5185m     >2     0         Aduminum     ppm     ASTM D5185m     >2     0         Lead     ppm     ASTM D5185m     >2     0         Aduminum     ppm     ASTM D5185m     >4     <1         Cadmium     ppm     ASTM D5185m     0	Machine Age	hrs	Client Info		0		
Sample Status     Image: method     ATTENTION         WEAR METALS     method     imil/base     current     history1     history2       Iron     ppm     ASTM D5185m     >8     1         Nickel     ppm     ASTM D5185m     >2     0         Nickel     ppm     ASTM D5185m     >2     0         Silver     ppm     ASTM D5185m     >2     0         Aluminum     ppm     ASTM D5185m     >2     0         Copper     ppm     ASTM D5185m     >2     0         Cadmium     ppm     ASTM D5185m     >4     <1         ADDITIVES     method     imit/base     current     history1     history2       Boron     ppm     ASTM D5185m     0          Magnaese     ppm     ASTM D5185m     1	Oil Age	hrs	Client Info		0		
WEAR METALS     method     limit/base     current     history1     history2       Iron     ppm     ASTM 05185m     >2     0         Nickel     ppm     ASTM 05185m     >2     0         Nickel     ppm     ASTM 05185m     >2     0         Aluminum     ppm     ASTM 05185m     >2     0         Aluminum     ppm     ASTM 05185m     >2     0         Lead     ppm     ASTM 05185m     >2     0         Vanadium     ppm     ASTM 05185m     0          ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM 05185m     0         Molybdenum     ppm     ASTM 05185m     0         Magnesium     ppm     ASTM 05185m     1500     17789	Oil Changed		Client Info		N/A		
Iron     ppm     ASTM D5185m     >8     1         Nickel     ppm     ASTM D5185m     0         Nickel     ppm     ASTM D5185m     0         Nickel     ppm     ASTM D5185m     2     0         Aluminum     ppm     ASTM D5185m     >2     0         Lead     ppm     ASTM D5185m     >2     0         Copper     ppm     ASTM D5185m     >2     0         Yanadium     ppm     ASTM D5185m     2     0         ADDITIVES     method     Imit/base     current     history1     history2       Boron     ppm     ASTM D5185m     0          Magnese     ppm     ASTM D5185m     0          Magnesium     ppm     ASTM D5185m     1500     1789 </th <th>Sample Status</th> <th></th> <th></th> <th></th> <th>ATTENTION</th> <th></th> <th></th>	Sample Status				ATTENTION		
Promium     Promi Nickel     ASTM D5185m     >2     0         Nickel     ppm     ASTM D5185m     0         Silver     ppm     ASTM D5185m     >2     0         Silver     ppm     ASTM D5185m     >2     0         Aluminum     ppm     ASTM D5185m     >2     0         Lead     ppm     ASTM D5185m     >2     0         Vanadium     ppm     ASTM D5185m     >4     <1         Vanadium     ppm     ASTM D5185m     0          Vanadium     ppm     ASTM D5185m     0          ADDITIVES     method     Imit/base     current     History1     history2       Boron     ppm     ASTM D5185m     0          Magneseum     ppm     ASTM D5185m     0	WEAR METALS		method	limit/base	current	history1	history2
Nickel     ppm     ASTM D5185m     0         Titanium     ppm     ASTM D5185m     >2     0         Silver     ppm     ASTM D5185m     >2     0         Lead     ppm     ASTM D5185m     >2     0         Copper     ppm     ASTM D5185m     >8     0         Vanadium     ppm     ASTM D5185m     >4     <1	Iron	ppm	ASTM D5185m	>8	1		
Titanium     ppm     ASTM D5185m     0         Silver     ppm     ASTM D5185m     >2     0         Aluminum     ppm     ASTM D5185m     >3     0         Lead     ppm     ASTM D5185m     >2     0         Copper     ppm     ASTM D5185m     >2     0         Vanadium     ppm     ASTM D5185m     >4     <1	Chromium	ppm	ASTM D5185m	>2	0		
Silver     ppm     ASTM D5185m     >2     0         Aluminum     ppm     ASTM D5185m     >3     0         Lead     ppm     ASTM D5185m     >2     0         Copper     ppm     ASTM D5185m     >2     0         Vanadium     ppm     ASTM D5185m     >4     <1	Nickel	ppm	ASTM D5185m		0		
Aluminum     ppm     ASTM D5185m     >3     0         Lead     ppm     ASTM D5185m     >2     0         Copper     ppm     ASTM D5185m     >8     0         Vanadium     ppm     ASTM D5185m     >4     <1	Titanium	ppm	ASTM D5185m		0		
Lead     ppm     ASTM D5185m     >2     0         Copper     ppm     ASTM D5185m     >8     0         Vanadium     ppm     ASTM D5185m     >4     <1	Silver	ppm	ASTM D5185m	>2	0		
Copper     ppm     ASTM D5185m     >8     0         Tin     ppm     ASTM D5185m     >4     <1	Aluminum	ppm	ASTM D5185m	>3	0		
Copper     ppm     ASTM D5185m     >8     0         Tin     ppm     ASTM D5185m     >4     <1	Lead	ppm	ASTM D5185m	>2	0		
Vanadium     ppm     ASTM D5185m     0         Cadmium     ppm     ASTM D5185m     0         ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185m     0         Barium     ppm     ASTM D5185m     0         Magnese     ppm     ASTM D5185m     0         Magnesium     ppm     ASTM D5185m     0         Magnesium     ppm     ASTM D5185m     12         Calcium     ppm     ASTM D5185m     1500     1789         Zinc     ppm     ASTM D5185m     5          Solium     ppm     ASTM D5185m     0          Solium     ppm     ASTM D5185m     0          Sodium     ppm     ASTM D518	Copper	ppm	ASTM D5185m	>8	0		
Cadmium     ppm     ASTM D5185m     0         ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185m     0         Barium     ppm     ASTM D5185m     0         Molybdenum     ppm     ASTM D5185m     0         Magnesse     ppm     ASTM D5185m     0         Magnessium     ppm     ASTM D5185m     <1		ppm	ASTM D5185m	>4	<1		
ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185m     0         Barium     ppm     ASTM D5185m     0         Molybdenum     ppm     ASTM D5185m     0         Magnese     ppm     ASTM D5185m     0         Magnesium     ppm     ASTM D5185m     <1	Vanadium	ppm	ASTM D5185m		0		
Boron     ppm     ASTM D5185m     0         Barium     ppm     ASTM D5185m     0         Molybdenum     ppm     ASTM D5185m     0         Manganese     ppm     ASTM D5185m     0         Magnesium     ppm     ASTM D5185m     <1	Cadmium	ppm	ASTM D5185m		0		
Barium     ppm     ASTM D5185m     0         Molybdenum     ppm     ASTM D5185m     0         Manganese     ppm     ASTM D5185m     0         Magnesium     ppm     ASTM D5185m     <1         Calcium     ppm     ASTM D5185m     <12         Calcium     ppm     ASTM D5185m     150     1789         Zinc     ppm     ASTM D5185m     1500     1789         Sulfur     ppm     ASTM D5185m     1500     7         Sulfur     ppm     ASTM D5185m     >15     2         Sodium     ppm     ASTM D5185m     >20     <1         Vater     %     ASTM D6304     >2.2.6     0.0566         pm Water     ppm     ASTM D6304     >2.2.60     5688	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum     ppm     ASTM D5185m     0         Manganese     ppm     ASTM D5185m     <1	Boron	ppm	ASTM D5185m		0		
Manganese     ppm     ASTM D5185m     0         Magnesium     ppm     ASTM D5185m     <1	Barium	ppm	ASTM D5185m		0		
Magnesium     ppm     ASTW D5185m     <1         Calcium     ppm     ASTW D5185m     12         Phosphorus     ppm     ASTW D5185m     1500     1789         Zinc     ppm     ASTW D5185m     5          Sulfur     ppm     ASTM D5185m     7          CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >15     2         Sodium     ppm     ASTM D5185m     >20     <1	Molybdenum	ppm	ASTM D5185m		0		
Calcium     ppm     ASTM D5185m     12         Phosphorus     ppm     ASTM D5185m     1500     1789         Zinc     ppm     ASTM D5185m     5         Sulfur     ppm     ASTM D5185m     7         CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >15     2         Sodium     ppm     ASTM D5185m     >15     2         Sodium     ppm     ASTM D5185m     >20     <1	Manganese	ppm	ASTM D5185m		0		
Phosphorus     ppm     ASTM D5185m     1500     1789         Zinc     ppm     ASTM D5185m     5         Sulfur     ppm     ASTM D5185m     7         CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >15     2         Sodium     ppm     ASTM D5185m     >15     2         Potassium     ppm     ASTM D5185m     >20     <1	Magnesium	ppm	ASTM D5185m		<1		
Zinc     ppm     ASTM D5185m     5         Sulfur     ppm     ASTM D5185m     7         CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >15     2         Sodium     ppm     ASTM D5185m     >15     2         Potassium     ppm     ASTM D5185m     >20     <1	Calcium	ppm	ASTM D5185m		12		
SulfurppmASTM D5185m7CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>152SodiumppmASTM D5185m>20<1	Phosphorus	ppm	ASTM D5185m	1500	1789		
CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>152SodiumppmASTM D5185m0PotassiumppmASTM D5185m>20<1Water%ASTM D6304>2.260.056ppm WaterppmASTM D6304>22600568FLUID CLEANLINESSmethodlimit/basecurrenthistory1history2Particles >4µmASTM D7647>1000011889Particles >6µmASTM D7647>25003390Particles >14µmASTM D7647>32072Particles >21µmASTM D7647>201Particles >38µmASTM D7647>201Particles >71µmASTM D7647>41Oil CleanlinessISO 4406 (c)>20/18/1521/19/13FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2	Zinc	ppm	ASTM D5185m		5		
Silicon   ppm   ASTM D5185m   >15   2       Sodium   ppm   ASTM D5185m   0       Potassium   ppm   ASTM D5185m   >20   <1       Water   %   ASTM D6304   >2.26   0.056       pm Water   pm   ASTM D6304   >2.260   568       FLUID CLEANLINESS   method   limit/base   current   history1   history2     Particles >4µm   ASTM D7647   >10000   11889       Particles >6µm   ASTM D7647   >2500   3390       Particles >6µm   ASTM D7647   >320   72       Particles >14µm   ASTM D7647   >80   7       Particles >21µm   ASTM D7647   >20   1       Particles >38µm   ASTM D7647   >20   1       Particles >71µm   ASTM D7647   20   1	Sulfur	ppm	ASTM D5185m		7		
Sodium     ppm     ASTM D5185m     0         Potassium     ppm     ASTM D5185m     >20     <1         Water     %     ASTM D6304     >2.26     0.056         ppm Water     ppm     ASTM D6304     >22600     568         FLUID CLEANLINESS     method     limit/base     current     history1     history2       Particles >4µm     ASTM D7647     >10000     11889         Particles >6µm     ASTM D7647     >2500     3390         Particles >6µm     ASTM D7647     >320     72         Particles >14µm     ASTM D7647     >80     7         Particles >38µm     ASTM D7647     >20     1         Particles >71µm     ASTM D7647     >4     1         Oil Cleanliness     ISO 4406 (c)     >20/18/15     21/19/13	CONTAMINANTS	5	method	limit/base	current	history1	history2
Potassium     ppm     ASTM D5185m     >20     <1         Water     %     ASTM D6304     >2.26     0.056         ppm Water     ppm     ASTM D6304     >22600     568         FLUID CLEANLINESS     method     limit/base     current     history1     history2       Particles >4µm     ASTM D7647     >10000     11889         Particles >6µm     ASTM D7647     >2500     3390         Particles >6µm     ASTM D7647     >320     72         Particles >14µm     ASTM D7647     >80     7         Particles >21µm     ASTM D7647     >20     1         Particles >71µm     ASTM D7647     >4     1          Oil Cleanliness     ISO 4406 (c)     >20/18/15     21/19/13         FLUID DEGRADATION     method     limit/base     current     history1<	Silicon	ppm	ASTM D5185m	>15	2		
Water     %     ASTM D6304     >2.26     0.056         ppm Water     ppm     ASTM D6304     >22600     568         FLUID CLEANLINESS     method     limit/base     current     history1     history2       Particles >4µm     ASTM D7647     >10000     11889         Particles >6µm     ASTM D7647     >2500     3390         Particles >6µm     ASTM D7647     >2500     3390         Particles >14µm     ASTM D7647     >320     72         Particles >21µm     ASTM D7647     >80     7         Particles >38µm     ASTM D7647     >20     1         Particles >71µm     ASTM D7647     >4     1         Oil Cleanliness     ISO 4406 (c)     >20/18/15     21/19/13         FLUID DEGRADATION     method     limit/base     current     history1     history2	Sodium	ppm	ASTM D5185m		-		
ppm Water     ppm     ASTM D6304     >22600     568         FLUID CLEANLINESS     method     limit/base     current     history1     history2       Particles >4µm     ASTM D7647     >10000     11889         Particles >6µm     ASTM D7647     >2500     3390         Particles >6µm     ASTM D7647     >2500     3390         Particles >14µm     ASTM D7647     >320     72         Particles >21µm     ASTM D7647     >80     7         Particles >38µm     ASTM D7647     >20     1         Particles >71µm     ASTM D7647     >4     1         Oil Cleanliness     ISO 4406 (c)     >20/18/15     21/19/13         FLUID DEGRADATION     method     limit/base     current     history1     history2	Potassium	ppm	ASTM D5185m	>20	<1		
FLUID CLEANLINESS   method   limit/base   current   history1   history2     Particles >4µm   ASTM D7647   >10000   11889       Particles >6µm   ASTM D7647   >2500   3390       Particles >6µm   ASTM D7647   >320   72       Particles >14µm   ASTM D7647   >80   7       Particles >21µm   ASTM D7647   >80   7       Particles >38µm   ASTM D7647   >20   1       Particles >71µm   ASTM D7647   >4   1       Oil Cleanliness   ISO 4406 (c)   >20/18/15   21/19/13       FLUID DEGRADATION   method   limit/base   current   history1   history2	Water	%	ASTM D6304	>2.26	0.056		
Particles >4μm   ASTM D7647   >10000   11889       Particles >6μm   ASTM D7647   >2500   3390       Particles >14μm   ASTM D7647   >320   72       Particles >21μm   ASTM D7647   >80   7       Particles >21μm   ASTM D7647   >80   7       Particles >38μm   ASTM D7647   >20   1       Particles >71μm   ASTM D7647   >4   1       Oil Cleanliness   ISO 4406 (c)   >20/18/15   21/19/13       FLUID DEGRADATION   method   limit/base   current   history1   history2	ppm Water	ppm	ASTM D6304	>22600	568		
Particles >6μm   ASTM D7647   >2500   3390       Particles >14μm   ASTM D7647   >320   72       Particles >21μm   ASTM D7647   >80   7       Particles >21μm   ASTM D7647   >80   7       Particles >38μm   ASTM D7647   >20   1       Particles >71μm   ASTM D7647   >4   1       Oil Cleanliness   ISO 4406 (c)   >20/18/15   21/19/13       FLUID DEGRADATION   method   limit/base   current   history1   history2	FLUID CLEANLIN	IESS	method	limit/base	current	history1	history2
Particles >14μm   ASTM D7647   >320   72       Particles >21μm   ASTM D7647   >80   7       Particles >21μm   ASTM D7647   >20   1       Particles >38μm   ASTM D7647   >20   1       Particles >71μm   ASTM D7647   >4   1       Oil Cleanliness   ISO 4406 (c)   >20/18/15   21/19/13       FLUID DEGRADATION   method   limit/base   current   history1   history2	Particles >4µm		ASTM D7647	>10000	<mark>)</mark> 11889		
Particles >21 μm     ASTM D7647     >80     7         Particles >38μm     ASTM D7647     >20     1         Particles >371μm     ASTM D7647     >4     1         Oil Cleanliness     ISO 4406 (c)     >20/18/15     21/19/13         FLUID DEGRADATION     method     limit/base     current     history1     history2	Particles >6µm		ASTM D7647	>2500	<u> </u>		
Particles >38μm     ASTM D7647     >20     1         Particles >71μm     ASTM D7647     >4     1         Oil Cleanliness     ISO 4406 (c)     >20/18/15     21/19/13         FLUID DEGRADATION     method     limit/base     current     history1     history2			ASTM D7647	>320	72		
Particles >71μm     ASTM D7647     >4     1         Oil Cleanliness     ISO 4406 (c)     >20/18/15     21/19/13         FLUID DEGRADATION     method     limit/base     current     history1     history2	Particles >21µm		ASTM D7647	>80	7		
Oil Cleanliness   ISO 4406 (c) >20/18/15 • 21/19/13       FLUID DEGRADATION   method   limit/base   current   history1   history2			ASTM D7647	>20	1		
FLUID DEGRADATION method limit/base current history1 history2	Particles >71µm		ASTM D7647	>4	1		
	Oil Cleanliness		ISO 4406 (c)	>20/18/15	<b>e</b> 21/19/13		
Acid Number (AN) mg KOH/g ASTM D974 0.04 0.014	FLUID DEGRADA		method	limit/base	current	history1	history2
	Acid Number (AN)	mg KOH/g	ASTM D974	0.04	0.014		

Contact/Location: TYLER FINCH - ENLCUS Page 1 of 2



# **OIL ANALYSIS REPORT**



	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		
Jun 12/24	Appearance	scalar	*Visual	NORML	NORML		
Jul	Odor	scalar	*Visual	NORML	NORML		
	Emulsified Water	scalar	*Visual	>2.26	NEG		
	Free Water	scalar	*Visual		NEG		
	FLUID PROPERT	IES	method	limit/base	current	history1	history2
1	Visc @ 40°C	cSt	ASTM D445	97	107		
	Visc @ 100°C	cSt	ASTM D445	17.5	17.5		
	Viscosity Index (VI)	Scale	ASTM D2270	198	180		
	SAMPLE IMAGES	S	method	limit/base	current	history1	history2
Jun 12/24							
	Color				•	no image	no image
	Bottom				()	no image	no image
	Non-ferrous Metal	S		Jun 12/24	Acid Number	14μ 21μ	-22 -20 -18 -16 -14 -12 -10 -8 $-38\mu$ $-71\mu$
Acct	est 100 - Base Abnormal 00 - Base 00 - Abnormal 00			Jun12/24 0.0 Acid Number fing KOH(4) 0.0 Acid Number fing KOH(4)	3 4		400 C F
Laboratory Sample No. Lab Number	: WearCheck USA - 50 : TO20000341 : 06218316	Recei Teste	ived : 22 d : 25	l Jun 2024 5 Jun 2024	ENLINK I	MIDSTREAM - CI 3000 \	HISHOLM PLAN N TEXACO RI CUSHING, OF US 7402;

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