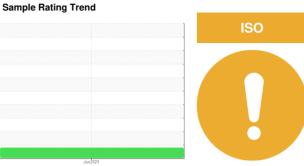


# **OIL ANALYSIS REPORT**

T 1



Machine Id

Component Compressor

TULCO LUBSOIL SYNTHETIC COMPRESSOR 68 (--- GAI

#### 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.

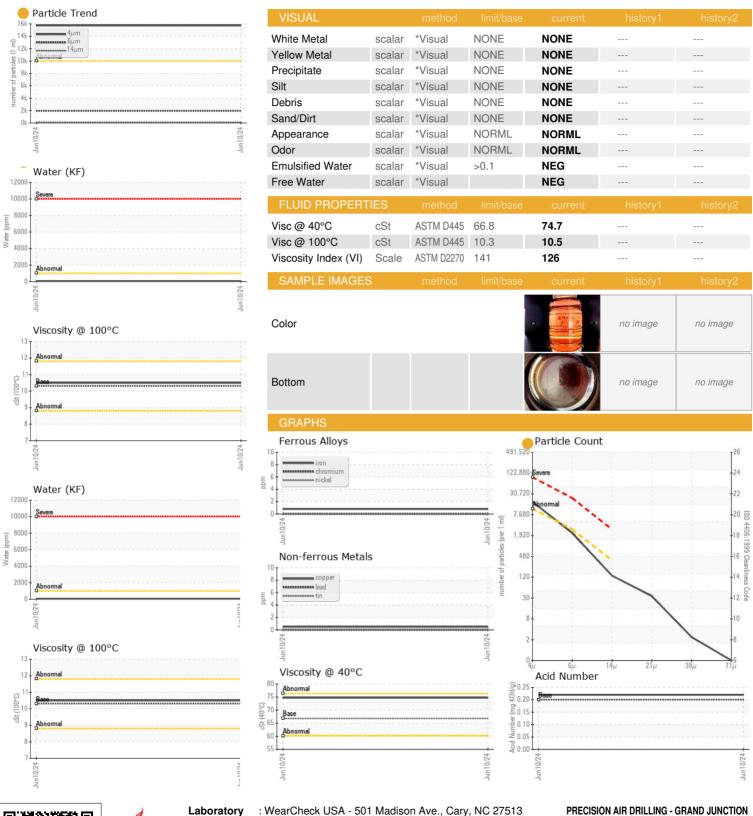
## **Fluid Condition**

The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

Client Info   TO206207085	OR 68 ( GAL)				Jun2024		
Sample Date	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age   hrs   Client Info   0	Sample Number		Client Info		TO206207085		
Oil Age         hrs         Client Info         0	Sample Date		Client Info		10 Jun 2024		
Cilichanged Sample Status	Machine Age	hrs	Client Info		0		
MEAR METALS   method   limit/base   current   history1   history2	Oil Age	hrs	Client Info		0		
WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >50         <1	Oil Changed		Client Info		N/A		
Chromium	-				ATTENTION		
Chromium         ppm         ASTM D5185m         >10         0             Titanium         ppm         ASTM D5185m         0             Silver         ppm         ASTM D5185m         0             Aluminum         ppm         ASTM D5185m         >25         5             Aluminum         ppm         ASTM D5185m         >25         0             Aluminum         ppm         ASTM D5185m         >50         -1             Lead         ppm         ASTM D5185m         >50         -1             Vanadium         ppm         ASTM D5185m         0              Vanadium         ppm         ASTM D5185m         0              Cadmium         ppm         ASTM D5185m         0              Boron         ppm         ASTM D5185m         0              Malydenum         ppm         ASTM D5185m         0 <td>WEAR METALS</td> <td></td> <td>method</td> <td>limit/base</td> <td>current</td> <td>history1</td> <td>history2</td>	WEAR METALS		method	limit/base	current	history1	history2
Nickel ppm ASTM D5185m 0	Iron	ppm	ASTM D5185m	>50	<1		
Description	Chromium	ppm	ASTM D5185m	>10	0		
Titanium         ppm         ASTM D5185m         0             Silver         ppm         ASTM D5185m         0             Aluminum         ppm         ASTM D5185m         ≥25         5             Lead         ppm         ASTM D5185m         >50         <1	Nickel	ppm	ASTM D5185m		0		
Silver	Titanium		ASTM D5185m		0		
Aluminum	Silver		ASTM D5185m		0		
Lead         ppm         ASTM D5185m         >25         0             Copper         ppm         ASTM D5185m         >50         <1				>25			
Copper         ppm         ASTM D5185m         >50         <1             Tin         ppm         ASTM D5185m         >15         0             Vanadium         ppm         ASTM D5185m         0             Cadmium         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         0             Magnesium         ppm         ASTM D5185m         0             Phosphorus         ppm         ASTM D5185m         0             Zinc         ppm         ASTM D5185m         0             Zinc         ppm         ASTM D5185m         >2         1 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
Tin					_		
Vanadium         ppm         ASTM D5185m         0             Cadmium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0             Molybdenum         ppm         ASTM D5185m         0             Manganese         ppm         ASTM D5185m         0             Magnesium         ppm         ASTM D5185m         0             Calcium         ppm         ASTM D5185m         0             Phosphorus         ppm         ASTM D5185m         0             Phosphorus         ppm         ASTM D5185m         0             Sulfur         ppm         ASTM D5185m         0             Sulfur         ppm         ASTM D5185m         0             Silicon         ppm         ASTM D5185m         >25         <1							
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             Manganese         ppm         ASTM D5185m         0             Magnesium         ppm         ASTM D5185m         0             Calcium         ppm         ASTM D5185m         0             Phosphorus         ppm         ASTM D5185m         0             Zinc         ppm         ASTM D5185m         0             Zinc         ppm         ASTM D5185m         0             Sulfur         ppm         ASTM D5185m         >2.5         <1             Sodium         ppm         ASTM D5185m         >2.5         <1				710			
ADDITIVES   method   limit/base   current   history1   history2					-		
Boron   ppm   ASTM D5185m   0		ρμπ		11 1- 2			
Barium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         0             Manganese         ppm         ASTM D5185m         0             Magnesium         ppm         ASTM D5185m         0             Calcium         ppm         ASTM D5185m         0             Phosphorus         ppm         ASTM D5185m         0             Zinc         ppm         ASTM D5185m         0             Sulfur         ppm         ASTM D5185m         0             Sulfur         ppm         ASTM D5185m         1070         719             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         <1	Boron	ppm					
Manganese         ppm         ASTM D5185m         0             Magnesium         ppm         ASTM D5185m         0             Calcium         ppm         ASTM D5185m         0             Phosphorus         ppm         ASTM D5185m         0             Zinc         ppm         ASTM D5185m         0             Sulfur         ppm         ASTM D5185m         0             Sulfur         ppm         ASTM D5185m         0             Sulfur         ppm         ASTM D5185m         >25         <1	Barium	ppm	ASTM D5185m				
Magnesium         ppm         ASTM D5185m         0             Calcium         ppm         ASTM D5185m         0             Phosphorus         ppm         ASTM D5185m         0             Zinc         ppm         ASTM D5185m         0             Sulfur         ppm         ASTM D5185m         0             Sulfur         ppm         ASTM D5185m         25         <1	Molybdenum	ppm	ASTM D5185m		0		
Calcium         ppm         ASTM D5185m         0             Phosphorus         ppm         ASTM D5185m         0             Zinc         ppm         ASTM D5185m         0             Sulfur         ppm         ASTM D5185m         1070         719             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         <1	Manganese	ppm	ASTM D5185m		0		
Phosphorus         ppm         ASTM D5185m         80         43             Zinc         ppm         ASTM D5185m         1070         719             Sulfur         ppm         ASTM D5185m         1070         719             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         <1             Sodium         ppm         ASTM D5185m         >20         0             Potassium         ppm         ASTM D5185m         >20         0             Water         %         ASTM D5185m         >20         0             Water         %         ASTM D5185m         >20         0             Water         %         ASTM D6304         >0.1         0.005             Particles >4µm         ASTM D7647         >10000         15736             Particles >24µm         ASTM D7647         >2500         1973	Magnesium	ppm	ASTM D5185m		0		
Zinc   ppm   ASTM D5185m   0       Sulfur   ppm   ASTM D5185m   1070   719       Sulfur   ppm   ASTM D5185m   1070   719       Sulfur   ppm   ASTM D5185m   >25   <1       Sodium   ppm   ASTM D5185m   >25   <1         Sodium   ppm   ASTM D5185m   >20   0         Potassium   ppm   ASTM D6304   >0.1   0.005       Ppm   ASTM D6304   >0.1   0.005       Ppm   ASTM D6304   >1000   55       Ppm   ASTM D6304   >1000   15736       Particles >4μm   ASTM D7647   >2500   1973       Particles >21μm   ASTM D7647   >320   117       Particles >21μm   ASTM D7647   >80   30       Particles >71μm   ASTM D7647   >4   0       Particles   ISO 4406 (c)   >20/18/15   21/18/14       Particles   ISO 4406 (c)   20/18/15   21/18/14       Particles   ISO 4406 (c)   20/18/15   21/18/14       Initialization   Iso 4406 (c)   20/18/15   21/18/14       Initialization   Iso 4406 (c)   20/18/15   21/18/14           Particles   Iso 4406 (c)   20/18/15   21/18/14	Calcium	ppm	ASTM D5185m		0		
Sulfur         ppm         ASTM D5185m         1070         719             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         <1	Phosphorus	ppm	ASTM D5185m	80	43		
CONTAMINANTS method limit/base current history1 history2  Silicon ppm ASTM D5185m >25 <1  Sodium ppm ASTM D5185m >20 0  Potassium ppm ASTM D5185m >20 0  Water % ASTM D6304 >0.1 0.005  ppm Water ppm ASTM D6304 >1000 55  FLUID CLEANLINESS method limit/base current history1 history2  Particles >4μm ASTM D7647 >10000 15736  Particles >6μm ASTM D7647 >2500 1973  Particles >14μm ASTM D7647 >320 117  Particles >21μm ASTM D7647 >80 30  Particles >38μm ASTM D7647 >4 0  Particles >71μm ASTM D7647 >4  ISO 4406 (c) >20/18/15 21/18/14  FLUID DEGRADATION method limit/base current history1 history2  FLUID DEGRADATION method limit/base current history1 history2  Particles >150 4406 (c) >20/18/15 21/18/14	Zinc	ppm	ASTM D5185m		0		
Silicon   ppm   ASTM D5185m   >25   <1           Sodium   ppm   ASTM D5185m   <1         Potassium   ppm   ASTM D5185m   >20   0         Water   %   ASTM D6304   >0.1   0.005         ppm Water   ppm   ASTM D6304   >1000   55         ppm Water   ppm   ASTM D6304   >1000   55         Particles >4µm   ASTM D7647   >10000   15736         Particles >6µm   ASTM D7647   >2500   1973         Particles >14µm   ASTM D7647   >320   117         Particles >21µm   ASTM D7647   >80   30         Particles >38µm   ASTM D7647   >4   0         Particles >71µm   ASTM D7647   >4   0         Oil Cleanliness   ISO 4406 (c)   >20/18/15   21/18/14         FLUID DEGRADATION   method   limit/base   current   history1   history2	Sulfur	ppm	ASTM D5185m	1070	719		
Sodium   ppm   ASTM D5185m   <1         Potassium   ppm   ASTM D5185m   >20   0       Water   %   ASTM D6304   >0.1   0.005       ppm Water   ppm   ASTM D6304   >1000   55       ppm Water   ppm   ASTM D6304   >1000   55       FLUID CLEANLINESS   method   limit/base   current   history1   history2     Particles >4μm   ASTM D7647   >10000   15736       Particles >6μm   ASTM D7647   >2500   1973       Particles >14μm   ASTM D7647   >320   117       Particles >21μm   ASTM D7647   >80   30       Particles >38μm   ASTM D7647   >4   0       Particles >71μm   ASTM D7647   >4   0       Oil Cleanliness   ISO 4406 (c)   >20/18/15   21/18/14       FLUID DEGRADATION   method   limit/base   current   history1   history2     ASTM D7647   ASTM D7647   ASTM D7647       FLUID DEGRADATION   method   limit/base   current   history1   history2     ASTM D7647   ASTM D7647   ASTM D7647       FLUID DEGRADATION   method   limit/base   current   history1   history2     ASTM D7647           FLUID DEGRADATION   method   limit/base   current   history1   history2     ASTM D7647           FLUID DEGRADATION   method   limit/base   current   history1   history2     ASTM D7647           ASTM D7647         ASTM D7647           ASTM D7647           ASTM D7647           ASTM D7647           ASTM D7647         ASTM D7647           ASTM D7647           ASTM D7647         ASTM D7647         ASTM D7647         ASTM D7647	CONTAMINANTS		method	limit/base	current	history1	history2
Sodium   ppm   ASTM D5185m   <1         Potassium   ppm   ASTM D5185m   >20   0       Water   %   ASTM D6304   >0.1   0.005       ppm Water   ppm   ASTM D6304   >1000   55       FLUID CLEANLINESS   method   limit/base   current   history1   history2     Particles >4μm   ASTM D7647   >10000   15736       Particles >6μm   ASTM D7647   >2500   1973       Particles >14μm   ASTM D7647   >320   117       Particles >21μm   ASTM D7647   >80   30       Particles >38μm   ASTM D7647   >4   0       Particles >71μm   ASTM D7647   >4   0       Oil Cleanliness   ISO 4406 (c)   >20/18/15   21/18/14       FLUID DEGRADATION   method   limit/base   current   history1   history2     Particles   ASTM D7647   >4   0       FLUID DEGRADATION   method   limit/base   current   history1   history2     Particles   ASTM D7647   >4   0       FLUID DEGRADATION   method   limit/base   current   history1   history2     Particles   ASTM D7647   ASTM D7647   ASTM D7647       Particles   ASTM D7647   ASTM D7647   ASTM D7647   ASTM D7647       Particles   ASTM D7647   ASTM D7647   ASTM D7647   ASTM D7647       Particles   ASTM D7647   ASTM D7647   ASTM D7647       Particles   ASTM D7647   ASTM D7647   ASTM D7647   ASTM D7647       Particles   ASTM D7647   ASTM D7647   ASTM D7647   ASTM D7647       Particles   ASTM D7647   ASTM D7647   ASTM D7647   ASTM D7647       Particles   ASTM D7647   ASTM D7647   ASTM D7647   ASTM D7647       Particles   ASTM D7647   ASTM	Silicon	ppm	ASTM D5185m	>25	<1		
Potassium         ppm         ASTM D5185m         >20         0             Water         %         ASTM D6304         >0.1         0.005             ppm Water         ppm         ASTM D6304         >1000         55             FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4μm         ASTM D7647         >10000         15736             Particles >6μm         ASTM D7647         >2500         1973             Particles >14μm         ASTM D7647         >320         117             Particles >21μm         ASTM D7647         >80         30             Particles >38μm         ASTM D7647         >4         0             Particles >71μm         ASTM D7647         >4         0             Oil Cleanliness         ISO 4406 (c)         >20/18/15         21/18/14             FLUID DEGRADATION         method         limit/base         current         history1         histor	Sodium		ASTM D5185m		<1		
Water         %         ASTM D6304         >0.1         0.005             ppm Water         ppm         ASTM D6304         >1000         55             FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4μm         ASTM D7647         >10000         15736             Particles >6μm         ASTM D7647         >2500         1973             Particles >14μm         ASTM D7647         >320         117             Particles >21μm         ASTM D7647         >80         30             Particles >38μm         ASTM D7647         >20         2             Particles >71μm         ASTM D7647         >4         0             Oil Cleanliness         ISO 4406 (c)         >20/18/15         21/18/14             FLUID DEGRADATION         method         limit/base         current         history1         history2	Potassium		ASTM D5185m	>20	0		
ppm Water         ppm ASTM D6304         >1000         55             FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4μm         ASTM D7647         >10000         15736             Particles >6μm         ASTM D7647         >2500         1973             Particles >14μm         ASTM D7647         >320         117             Particles >21μm         ASTM D7647         >80         30             Particles >38μm         ASTM D7647         >20         2             Particles >71μm         ASTM D7647         >4         0             Oil Cleanliness         ISO 4406 (c)         >20/18/15         21/18/14             FLUID DEGRADATION         method         limit/base         current         history1         history2	Water		ASTM D6304	>0.1	_		
Particles >4μm       ASTM D7647       >10000       15736           Particles >6μm       ASTM D7647       >2500       1973           Particles >14μm       ASTM D7647       >320       117           Particles >21μm       ASTM D7647       >80       30           Particles >38μm       ASTM D7647       >20       2           Particles >71μm       ASTM D7647       >4       0           Oil Cleanliness       ISO 4406 (c)       >20/18/15       21/18/14           FLUID DEGRADATION       method       limit/base       current       history1       history2							
Particles >6μm         ASTM D7647         >2500         1973             Particles >14μm         ASTM D7647         >320         117             Particles >21μm         ASTM D7647         >80         30             Particles >38μm         ASTM D7647         >20         2             Particles >71μm         ASTM D7647         >4         0             Oil Cleanliness         ISO 4406 (c)         >20/18/15         21/18/14             FLUID DEGRADATION         method         limit/base         current         history1         history2	FLUID CLEANLIN	ESS	method	limit/base	current	history1	history2
Particles >14μm         ASTM D7647         >320         117             Particles >21μm         ASTM D7647         >80         30             Particles >38μm         ASTM D7647         >20         2             Particles >71μm         ASTM D7647         >4         0             Oil Cleanliness         ISO 4406 (c)         >20/18/15         21/18/14             FLUID DEGRADATION         method         limit/base         current         history1         history2	Particles >4µm		ASTM D7647	>10000	<b>15736</b>		
Particles >21μm         ASTM D7647         >80         30             Particles >38μm         ASTM D7647         >20         2             Particles >71μm         ASTM D7647         >4         0             Oil Cleanliness         ISO 4406 (c)         >20/18/15         21/18/14             FLUID DEGRADATION         method         limit/base         current         history1         history2	Particles >6µm		ASTM D7647	>2500	1973		
Particles >21μm         ASTM D7647         >80         30             Particles >38μm         ASTM D7647         >20         2             Particles >71μm         ASTM D7647         >4         0             Oil Cleanliness         ISO 4406 (c)         >20/18/15         21/18/14             FLUID DEGRADATION         method         limit/base         current         history1         history2	Particles >14µm		ASTM D7647	>320	117		
Particles >38μm         ASTM D7647         >20         2             Particles >71μm         ASTM D7647         >4         0             Oil Cleanliness         ISO 4406 (c)         >20/18/15         21/18/14             FLUID DEGRADATION         method         limit/base         current         history1         history2	Particles >21µm		ASTM D7647	>80			
Particles >71μm         ASTM D7647         >4         0             Oil Cleanliness         ISO 4406 (c)         >20/18/15         21/18/14             FLUID DEGRADATION         method         limit/base         current         history1         history2	•						
Oil Cleanliness ISO 4406 (c) >20/18/15 21/18/14 FLUID DEGRADATION method limit/base current history1 history2							
	·				_		
Acid Number (AN) mg KOH/g ASTM D8045 0.2 0.22	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
	Acid Number (AN)	mg KOH/g	ASTM D8045	0.2	0.22		



## **OIL ANALYSIS REPORT**





Certificate 12367

Lab Number

Laboratory Sample No.

: TO206207085 : 06207085 Unique Number : 11074546

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

: 11 Jun 2024 **Tested** : 13 Jun 2024 Diagnosed Test Package : IND 2 (Additional Tests: KF, KV100, PrtCount, VI)

: 13 Jun 2024 - Angela Borella

US 81521 Contact: SCOTT RICHMOND scottrichmond@precisionairdrilling.com

2010 HWY 6 & 50

FRUITA, CO

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

Report Id: PREFRU [WUSCAR] 06207085 (Generated: 06/13/2024 16:49:13) Rev: 1

Contact/Location: SCOTT RICHMOND - PREFRU

T:

F: