

#### SULLUBE [8018316] Machine Id SULLAIR 200701190020 - ESCO Component Compressor

# RECOMMENDATION

We advise that you check for a possible overheat condition. Oil and 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.

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### CONTAMINATION

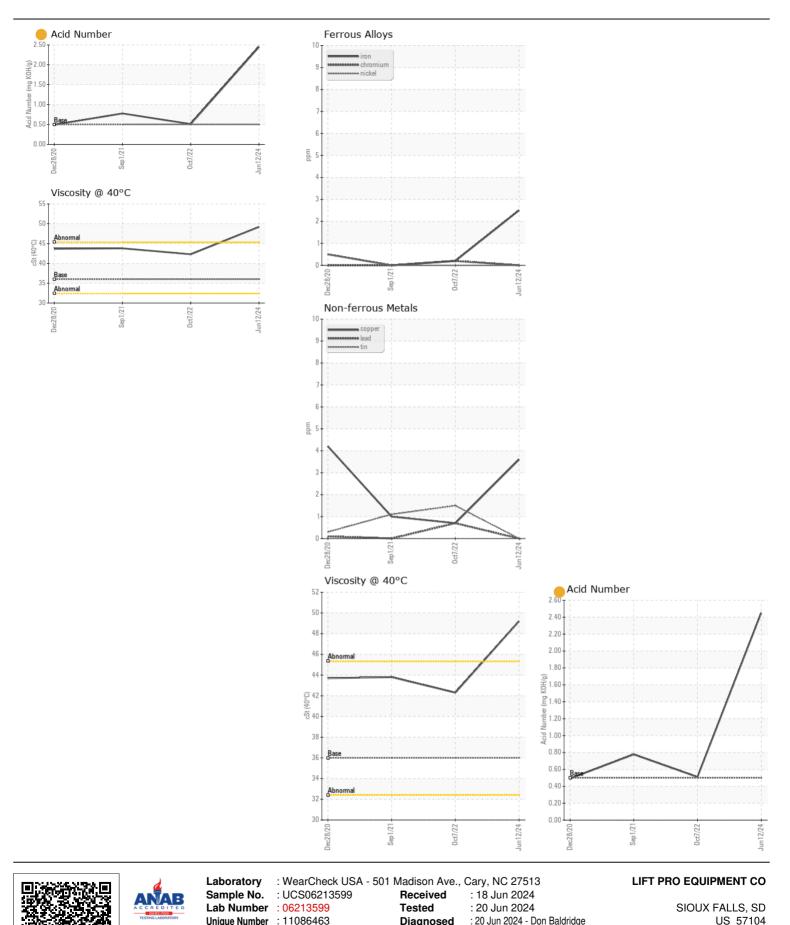
There is no indication of any contamination in the oil.

## **FLUID CONDITION**

The AN level is above the recommended limit. TAN level indicates possible presence of varnish.

Sample Date   Client Info   12 Jun 2024   07 Oct 2022   01 Sep 2021     Machine Age   hrs   Client Info   65427   57473   52311     Oil Age   hrs   Client Info   13116   5162   9976     Filter Age   hrs   Client Info   4216   5162   2122     Oil Changed   Client Info   4216   S162   2122     Oil Changed   Client Info   4216   S162   2122     Oil Changed   Client Info   4216   S162   2122     Oil Changed   Client Info   Changed   Changed   Changed     Sample Status   Client Info   Part   ASTM D5185m   S0   2   <1							
Sample DateClient Info12 Jun 202407 Oct 202201 Sep 2021Machine AgehrsClient Info654275747352311Oil AgehrsClient Info131165162976Filter AgehrsClient Info421651622122Oil ChangedClient InfoChangedNot ChangedChangedFilter ChangedClient InfoChangedNot ChangedChangedSample StatusClient InfoATTENTIONNORMALNORMALIronppmASTM D5185m502<10NickelppmASTM D5185m0000SilverppmASTM D5185m0000AuminumppmASTM D5185m25C100LeadppmASTM D5185m>504<11TinppmASTM D5185m>50410VanadiumppmASTM D5185m>50410VanadiumppmASTM D5185m>50411TinppmASTM D5185m>50411VanadiumppmASTM D5185m>50411VanadiumppmASTM D5185m>50411VanadiumppmASTM D5185m>50411VanadiumppmASTM D5185m>20411VanadiumppmASTM D5185m	Test	UOM	Method	Limit/Abn	Current	History1	History2
Machine AgehrsClient Into654275747352311Oil AgehrsClient Info1311651629976Filter AgehrsClient Info421651622122Oil ChangedClient InfoChangedNot ChangedChangedFilter ChangedClient InfoChangedChangedChangedSample StatusClient InfoChangedNorRMALNORMALIronppmASTM D5185n5002<10NickelppmASTM D5185n0000SilverppmASTM D5185n502<10AuminumppmASTM D5185n2000AuminumppmASTM D5185n2100AuminumppmASTM D5185n2100AuminumppmASTM D5185n2100AuminumppmASTM D5185n2100QuandiumppmASTM D5185n25101Yellow Metalscalar'VisualNONENONENONENONESiliconppmASTM D5185n2121PotassiumppmASTM D5185n2121Sad/D1tiscalar'VisualNONENONENONESiliconppmASTM D5185n20111PotassiumppmASTM D5185n20<	Sample Number		Client Info		UCS06213599	UCS05665755	UCS05345064
Oil Age Filter Age Filter Age (Client Info1311651629976Filter Age (Client Info421651622122Oil ChangedClient InfoChangedChanged (ChangedChanged (ChangedFilter ChangedClient InfoChanged (Client InfoChanged (ChangedChanged (ChangedSample StatusClient InfoChanged (ChromiumNORMALNORMALIronppmASTM D5185n>5002<10ChromiumppmASTM D5185n0000NickelppmASTM D5185n0000SilverppmASTM D5185n25<100AgeppmASTM D5185n>504<11TinppmASTM D5185n>504<10VanadiumppmASTM D5185n504<10VanadiumppmASTM D5185n504<10VanadiumppmASTM D5185n25121VanadiumppmASTM D5185n25121VanadiumppmASTM D5185n20434VanadiumppmASTM D5185n2044VanadiumppmASTM D5185n22121VanadiumppmASTM D5185n22121VanadiumppmASTM D5185n2044V	Sample Date		Client Info		12 Jun 2024	07 Oct 2022	01 Sep 2021
Filter Age Oil ChangedInsClient Info421651622122Oil ChangedClient InfoChangedNot ChangedChangedChangedFilter ChangedClient InfoChangedChangedChangedChangedSample StatusTASTM D5185n>5002<1	Machine Age	hrs	Client Info		65427	57473	52311
Oil Changed Client Info Changed Not Changed Changed   Filter Changed Client Info Changed Changed Changed   Sample Status Time P ATTENTION NORMAL NORMAL   Iron ppm ASTM D5185m >500 2 <1 0   Nickel ppm ASTM D5185m 0 0 0 0   Nickel ppm ASTM D5185m 0 0 0 0   Silver ppm ASTM D5185m 25 <1 0 0   Auminum ppm ASTM D5185m >50 4 <1 1   Tin ppm ASTM D5185m >50 4 <1 1   Tin ppm ASTM D5185m >50 4 <1 1   Vanadium ppm ASTM D5185m >50 4 <1 1   Vanadium ppm ASTM D5185m >50 4 <1 1   Vanadium ppm ASTM D5185m >20 A NONE NONE	Oil Age	hrs	Client Info		13116	5162	9976
Filter Changed Sample StatusClient InfoChanged Changed ATTENTIONChanged Changed Changed ATTENTIONChanged Changed NORMALChanged NORMALIronppmASTM D5185m>502<10ChromiumppmASTM D5185m>100<10NickelppmASTM D5185m0000TitaniumppmASTM D5185m0000SilverppmASTM D5185m>504<11LeadppmASTM D5185m>504<11TinppmASTM D5185m>504<11TinppmASTM D5185m>504<11TinppmASTM D5185m>504<11TinppmASTM D5185m>504<11VanadiumppmASTM D5185m>504<11Yellow Metalscalar"VisualNONENONENONEMODEFSiliconppmASTM D5185m>204544ValadiNONENONENONENONENONENONESiliconppmASTM D5185m>20454ValadiNORENONENONENONENONESoliconppmASTM D5185m>204NORMOdorscalar"VisualNONENONENONENORMAppearance	Filter Age	hrs	Client Info		4216	5162	2122
Sample Status   ATTENTON   NORMAL   NORMAL     Iron   ppm   ASTM D5185m   >50   2   <1   0     Chromium   ppm   ASTM D5185m   >10   0   <1   0     Nickel   ppm   ASTM D5185m   0   0   0   0     Silver   ppm   ASTM D5185m   0   0   0   0     Aluminum   ppm   ASTM D5185m   >25   <1   0   0     Lead   ppm   ASTM D5185m   >25   <1   0   0     Vanadium   ppm   ASTM D5185m   >55   4   <1   1     Tin   ppm   ASTM D5185m   >15   0   2   1     Vanadium   ppm   ASTM D5185m   >25   1   2   1     Vanadium   ppm   ASTM D5185m   >25   1   2   <1     Vanadium   ppm   ASTM D5185m   >25   1   2   <1     Vellow Met	Oil Changed		Client Info		Changed	Not Changd	Changed
Iron   ppm   ASTM D5185m   >50   2   <1	Filter Changed		Client Info		Changed	Changed	Changed
Chromium   ppm   ASTM D5185m   >10   0   <1	Sample Status				ATTENTION	NORMAL	NORMAL
Chromium   ppm   ASTM D5185m   >10   0   <1	Iron	nnm	ΔSTM D5185m	< <u></u> 50	 2	~1	0
Nickel   ppm   ASTM D5185m   0   0   0     Titanium   ppm   ASTM D5185m   0   0   0     Silver   ppm   ASTM D5185m   >25   <1   0   0     Aluminum   ppm   ASTM D5185m   >25   0   <1   0     Lead   ppm   ASTM D5185m   >25   0   <1   0     Copper   ppm   ASTM D5185m   >50   4   <1   1     Tin   ppm   ASTM D5185m   >50   4   <1   0     Vanadium   ppm   ASTM D5185m   >50   4   <1   0     Vanadium   ppm   ASTM D5185m   >25   0   <1   0     Vanadum   ppm   ASTM D5185m   >25   1   2   <1     Vanadum   ppm   ASTM D5185m   >25   1   2   <1     Vallow   MoNE   NONE   NONE   NONE   NONE     Silicon	-						
Titanium   ppm   ASTM D5185m   0   0   0     Silver   ppm   ASTM D5185m   >25   <1   0   0     Aluminum   ppm   ASTM D5185m   >25   0   <1   0     Lead   ppm   ASTM D5185m   >25   0   <1   0     Copper   ppm   ASTM D5185m   >50   4   <1   1     Tin   ppm   ASTM D5185m   >50   4   <1   1     Vanadium   ppm   ASTM D5185m   >50   4   <1   0     Vanadium   ppm   ASTM D5185m   >25   1   0   <1   0     Vanadium   ppm   ASTM D5185m   >25   1   2   <1   0     Valow Metal   scalar   *Visual   NONE   NONE   NONE   MODE     Silicon   ppm   ASTM D5185m   >20   4   5   4     Water   wC Method   >0.1   NORE   NON				>10	-		
Silver   ppm   ASTM D5185m   0   0   0     Aluminum   ppm   ASTM D5185m   >25   <1   0   0     Lead   ppm   ASTM D5185m   >25   0   <1   0     Copper   ppm   ASTM D5185m   >50   4   <1   1     Tin   ppm   ASTM D5185m   >15   0   2   1     Vanadium   ppm   ASTM D5185m   >15   0   <1   0     White Metal   scalar   *Visual   NONE   NONE   LIGHT   NONE     Yellow Metal   scalar   *Visual   NONE   NONE   NONE   MODE     Silicon   ppm   ASTM D5185m   >20   4   5   4     Water   WC Method   >0.1   NEG   NONE   NONE   NONE     Debris   scalar   *Visual   NONE   NONE   NONE   NORML   NORML   NORML     Appearance   scalar   *Visual					-		
Aluminum   ppm   ASTM D5185m   >25   <1							
Lead   ppm   ASTM D5185m   >25   0   <1				>25	-	-	
Copper   ppm   ASTM D5185m   >50   4   <1						-	
TinppmASTM D5185m>15021VanadiumppmASTM D5185m00<10White Metalscalar*VisualNONENONELIGHTNONEYellow Metalscalar*VisualNONENONENONEMODEFSiliconppmASTM D5185m>2512<1PotassiumppmASTM D5185m>20454WaterWC Method>0.1NEGNEGNEGSilitscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNORNORENONENOREAppearancescalar*VisualNORMNORMLNORMLNORMLOdorscalar*VisualNORNORMLNORMLNORMLOdorscalar*Visual>0.1NEGNEGNEGSodiumppmASTM D5185m50042997710MolybdenumppmASTM D5185m50042997710MagnesiumppmASTM D5185m0<11<11CalciumppmASTM D5185m<10<11<11CalciumppmASTM D5185m<2100PhosphorusppmASTM D5185m<2100PhosphorusppmASTM D5185m<2100Phos					-		
Vanadium   ppm   ASTM D5185m   0   <1					-		
White Metalscalar*VisualNONENONELIGHTNONEYellow Metalscalar*VisualNONENONENONENONEMODESiliconppmASTM D5185m>2512<1PotassiumppmASTM D5185m>20454WaterWC Method>0.1NEGNEGNEGSilitscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMNORMLNORMLNORMLOdorscalar*VisualNORNEGNEGNEGSodiumppmASTM D5185m0004BariumppmASTM D5185m5004299710MolybdenumppmASTM D5185m0<1<1<1MagnesiumppmASTM D5185m0<11<1MagnesiumppmASTM D5185m<1000PhosphorusppmASTM D5185m<2000PhosphorusppmASTM D5185m<2000SulfurppmASTM D5185m<2000SulfurppmASTM D5185m15043273188Acid Number (AN)mgKMgASTM D8045				<1	-		
Yellow Metalscalar*VisualNONENONENONENONEMODESiliconppmASTM D5185m>2512<1PotassiumppmASTM D5185m>20454WaterWC Method>0.1NEGNEGNEGSiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMNORMLNORMLNORMLOdorscalar*VisualNORNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEGSodiumppmASTM D5185m50042997710MolybdenumppmASTM D5185m50042997710ManganeseppmASTM D5185m0<11<11<1CalciumppmASTM D5185m101255ZincppmASTM D5185m1001255ZincppmASTM D5185m15043273188Acid Number (AN)mg K0HgASTM D5185m1502.450.510.777					-		
SiliconppmASTM D5185m>2512<1					-		
Potassium   ppm   ASTM D5185m   >20   4   5   4     Water   WC Method   >0.1   NEG   NEG   NEG     Silt   scalar   *Visual   NONE   NONE   NONE   NONE     Debris   scalar   *Visual   NONE   NONE   LIGHT   NONE     Sand/Dirt   scalar   *Visual   NONE   NONE   NONE   NONE     Appearance   scalar   *Visual   NORM   NORML   NORML   NORML   NORML     Odor   scalar   *Visual   NORM   NORML   NORML   NORML     Emulsified Water   scalar   *Visual   NOR   NORM   NORML   NORML     Sodium   ppm   ASTM D5185m   0   0   4     Barium   ppm   ASTM D5185m   50   429   97   10     Magnesium   ppm   ASTM D5185m   0   <1   0   0     Magnesium   ppm   ASTM D5185m   <	reliow Metal	scalar	visual	NONE	NONE	NONE	MODER
WaterWC Method >0.1NEGNEGNEGSiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONELIGHTNONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEGNEGSodiumppmASTM D5185m5042997710MolybdenumppmASTM D5185m50042997710ManganeseppmASTM D5185m504111<1CalciumppmASTM D5185m1011<11PhosphorusppmASTM D5185m101255ZincppmASTM D5185m15043273188Acid Number (AN)mg KOHgASTM D80450.50.510.777	Silicon	ppm	ASTM D5185m	>25	1	2	<1
Siltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONELIGHTNONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEGNEGNEGSodiumppmASTM D5185m5004299771010BariumppmASTM D5185m50042997710MolybdenumppmASTM D5185m0<11<11<1MagnesiumppmASTM D5185m10<11<1<1CalciumppmASTM D5185m10125<1PhosphorusppmASTM D5185m10125<1ZincppmASTM D5185m15043273188Acid Number (AN)mg KOH/gASTM D80450.5<130.777<17	Potassium	ppm	ASTM D5185m	>20	4	5	4
Debrisscalar*VisualNONENONELIGHTNONESand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEGNEGNEGSodiumppmASTM D5185m>0.1Sas56NEGNEGBoronppmASTM D5185m5004299771010MalganeseppmASTM D5185m5004299771011MagnesiumppmASTM D5185m500410<11<111111PhosphorusppmASTM D5185m5041011<11 <th>Water</th> <th></th> <th>WC Method</th> <th>&gt;0.1</th> <th>NEG</th> <th>NEG</th> <th>NEG</th>	Water		WC Method	>0.1	NEG	NEG	NEG
Sand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEGNEGSodiumppmASTM D5185m385856BoronppmASTM D5185m004BariumppmASTM D5185m50042997710MolybdenumppmASTM D5185m0<101ManganeseppmASTM D5185m0<11<1CalciumppmASTM D5185m1011<1<1CalciumppmASTM D5185m2000PhosphorusppmASTM D5185m10125ZincppmASTM D5185m15043273188Acid Number (AN)ng KOHgASTM D80450.5<2450.510.777	Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearancescalar*VisualNORML	Debris	scalar	*Visual	NONE	NONE	LIGHT	NONE
Odorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEGNEGSodiumppmASTM D5185m385856BoronppmASTM D5185m0044BariumppmASTM D5185m50042997710MolybdenumppmASTM D5185m50042997710ManganeseppmASTM D5185m0<1<11MagnesiumppmASTM D5185m10<100PhosphorusppmASTM D5185m101255ZincppmASTM D5185m15043273188Acid Number (AN)ng KOH2ASTM D80450.5 $\mathbf{C}$ 0.510.777	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Emulsified Waterscalar*Visual>0.1NEGNEGNEGSodiumppmASTM D5185m385856BoronppmASTM D5185m004BariumppmASTM D5185m50042997710MolybdenumppmASTM D5185m50042997710ManganeseppmASTM D5185m0<1<1<1CalciumppmASTM D5185m10<1<1<1CalciumppmASTM D5185m<10125ZincppmASTM D5185m15043273188Acid Number (AN)ng KOH2ASTM D80450.5<2450.510.777	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Sodium   ppm   ASTM D5185m   38   58   56     Boron   ppm   ASTM D5185m   0   0   4     Barium   ppm   ASTM D5185m   500   429   97   10     Molybdenum   ppm   ASTM D5185m   0   429   97   10     Manganese   ppm   ASTM D5185m   0   <1	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Boron   ppm   ASTM D5185m   O   O   4     Barium   ppm   ASTM D5185m   500   429   97   10     Molybdenum   ppm   ASTM D5185m   500   429   97   10     Manganese   ppm   ASTM D5185m   0   <1   0     Magnesium   ppm   ASTM D5185m   0   <1   <1     Calcium   ppm   ASTM D5185m   <1   1   <1     Phosphorus   ppm   ASTM D5185m   <10   0   0     Phosphorus   ppm   ASTM D5185m   10   12   5     Zinc   ppm   ASTM D5185m   2   0   0     Sulfur   ppm   ASTM D5185m   150   432   73   188     Acid Number (AN)   mg KOH/g   ASTM D8045   0.5   0.51   0.777	Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG
Barium   ppm   ASTM D5185m   500   429   97   10     Molybdenum   ppm   ASTM D5185m   500   429   97   10     Manganese   ppm   ASTM D5185m   0   <1	Sodium	ppm	ASTM D5185m		38	58	56
Molybdenum   ppm   ASTM D5185m   O   <1	Boron	ppm	ASTM D5185m		0	0	4
Manganese   ppm   ASTM D5185m   0   <1	Barium	ppm	ASTM D5185m	500	429	97	10
Magnesium   ppm   ASTM D5185m   <1	Molybdenum	ppm	ASTM D5185m		0	<1	0
Calcium   ppm   ASTM D5185m   <1	Manganese	ppm	ASTM D5185m		0	<1	<1
Phosphorus   ppm   ASTM D5185m   10   12   5     Zinc   ppm   ASTM D5185m   2   0   0     Sulfur   ppm   ASTM D5185m   150   432   73   188     Acid Number (AN)   mg KOH/g   ASTM D8045   0.5   2.45   0.511   0.777	Magnesium	ppm	ASTM D5185m		<1	1	<1
Zinc   ppm   ASTM D5185m   2   0   0     Sulfur   ppm   ASTM D5185m   150   432   73   188     Acid Number (AN)   mg KOH/g   ASTM D8045   0.5 <b>2.45</b> 0.51   0.777	Calcium	ppm	ASTM D5185m		<1	0	0
Sulfur   ppm   ASTM D5185m   150   432   73   188     Acid Number (AN)   mg KOH/g   ASTM D8045   0.5 <b>2.45</b> 0.51   0.777	Phosphorus	ppm	ASTM D5185m		10	12	5
Acid Number (AN) mg KOH/g ASTM D8045 0.5 <b>2.45</b> 0.51 0.777	Zinc	ppm	ASTM D5185m		2	0	0
	Sulfur	ppm	ASTM D5185m	150	432	73	188
Visc @ 40°C cSt ASTM D445 36 49.2 42.3 43.8	Acid Number (AN)	mg KOH/g	ASTM D8045	0.5	2.45	0.51	0.777
	Visc @ 40°C	cSt	ASTM D445	36	49.2	42.3	43.8

Contact/Location: REUBEN - UCLIFSIO



Unique Number : 11086463 Diagnosed : 20 Jun 2024 - Don Baldridge Test Package : IND 2 Contact: REUBEN Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. tim@liftproequipment.com \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (605)339-6494 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Contact/Location: REUBEN - UCLIFSIO Page 2 of 2

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