

## Machine Id SULLAIR 3129 - FORDERRA omponent Compressor QUINCY QUINSYN (--- GAL)

## RECOMMENDATION



## **CONTAMINATION**

Test         UOM         Mathod         United         United         United         United         United         United         Halbort         Halbor         Halbor         Halbor						~~~~		
No corrective action is recommended at this time. The filter changed the time of sampling has been noted. Beasingbe at the next service in indexine Age Insi.         Client Info         17 Mergadis         0000000050	RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Interval to motion         Gession         Value to particular particular cound use to partite cound use tote particular cound use to partite cound use to pa		Sample Number		Client Info		QUC0000839	QUC0000655	
Interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.         Oil Age bits for appendix to a sample be performed a particle count due to a Filter Granged         Oil Charged Client Info         Oil Charged High Charged         Oil C	0	Sample Date		Client Info		17 May 2024	16 Feb 2024	
high concentration of particles present in this sample.         Filter Changed OI Changed DI Change DI Change		Machine Age	hrs	Client Info		69596	67421	
Ori Changed Filter Changed Sample Status         Olicit hito Changed Changed Sample Status         No. Changed Change		Oil Age	hrs	Client Info		0	0	
Filter Changed Sample Status         Clean Line         Changed Changed Note         Changed Changed Note         Changed Changed Note         Changed Note         Note         N	high concentration of particles present in this sample.	Filter Age	hrs	Client Info		0	0	
Sample Status         ABNORMA		Oil Changed				Not Changd	N/A	
Iron Chromium pom         ppm ASTM 0516s         >50 ASTM 0516s         0 0         <1 0            All component wear rates are normal.         Nickel pom         ASTM 0516s         0         0            Silver pom         ASTM 0516s         0         0          0            Aluminum         pom         ASTM 0516s         20         0             Aluminum         ppm         ASTM 0516s         25         0         0            Aluminum         ppm         ASTM 0516s         25         0         0            Variadium         ppm         ASTM 0516s         20         0             Variadium         ppm         ASTM 0524         -10		Filter Changed		Client Info		Changed	Changed	
All component wear rates are normal.         Chromium         ppm         ASIM D518m         10         0         0						ABNORMAL	ABNORMAL	
All component wear rates are normal.         Chromium         ppm         ASIM DSISM         10         0         0								
All component wear rates are normal.         Chromium         ppm         ASIM DSISM         10         0         0	WEAR		ppm	ASTM D5185m	>50	0	<1	
Titanium         pm         AS1M DS185         0         0            Silver         ppm         AS1M DS185         C         0            Silver         ppm         AS1M DS185         C         0            AUM         ppm         AS1M DS185         SC         0         0            Lead         ppm         AS1M DS185         SC         0         0            Copper         ppm         AS1M DS185         SC         0         0            Variadium         ppm         AS1M DS185         SC         0             White Metal         scalar         Visual         NONE         NONE         NONE            Moderate concentration of visible diri/debris present in the oil.         Silcon         ppm         AS1M DS185         -2C         0          A 1988            Particles -S4µm         AS1M DS74         1000         B0         84          A 1988            Particles -S4µm         AS1M D747         3000          A 1986          A 1966          A 1966		Chromium	ppm	ASTM D5185m	>10	0	0	
Silver         ppm         ASTM Disism         Q         0	All component wear rates are normal.		ppm	ASTM D5185m		0	0	
Aluminum         ppm         ASTM D518m         >25         0         0			ppm	ASTM D5185m		0	0	
Lead         pp         ASTM 05158         >.50         0         .1           Copper         ppm         ASTM 05168         >.50         0         .1            Vanadium         ppm         ASTM 05168         >.50         0         .1            White Metal         scalar         Visual         NONE         NONE         NONE            Moderate concentration of visible dir/debris present in the oil.         Silicon         pm         ASTM 05168         >.00             Particles -Agim         ASTM 05185         >.20               Moderate concentration of visible dir/debris present in the oil.         Silicon         pm         ASTM 05185		Silver	ppm	ASTM D5185m		0	0	
Copper Tin         ppm         ASTM D5156m         >50         0         <1		Aluminum	ppm	ASTM D5185m	>25	0	0	
Tin         ppm         ASTM 0518m         -15         0         0            Vanadium         ppm         ASTM 0518m         -10             White Metal         scalar         Visual         NONE         NONE         NONE            CONTAMINATION         Silicon         pm         ASTM 05185m         -20         -1            Moderate concentration of visible ditr/debris present in the oit.         pm         ASTM 05185m         -20         0             Particles -4µm         ASTM 05184         -10         0.007         0.008             Ppm Water         ppm         ASTM 05144         -10		Lead	ppm	ASTM D5185m	>25	0	0	
Name adium         ppm         ASTM D5185m         0              White Metal         scalar         'Visual         NONE         NONE         NONE         NONE           CONTAMINATION         Silicon         pm         ASTM D5165m         >25         <1         <1            Moderate concentration of visible dirt/debris present in the oil.         Potassium         pm         ASTM D5165m         >20         0         <1            Particles s-4jum         ASTM D6304         >1000         80         84            Particles s-4jum         ASTM D7647         >200          4         168            Particles s-4jum         ASTM D7647         >200          4         70            Particles s-4jum         ASTM D7647         >20          77             Particles s-4jum         ASTM D7647         >20          7             Particles s-4jum         ASTM D7647         >4          0             Silt         scalar         Visual         NONE         MODE         NON		Copper	ppm	ASTM D5185m	>50	0	<1	
White Metal Yellow Metal         scalar         'Visual         NONE		Tin	ppm	ASTM D5185m	>15	0	0	
Yellow Metal         scalar         Yisual         NONE         NONE         NONE		Vanadium	ppm	ASTM D5185m		0	<1	
Silicon         ppm         ASTM D5185m         >25         <1		White Metal	scalar	*Visual	NONE	NONE	NONE	
Potassium         ppm         ASTM D6804         ><0		Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
Potassium         ppm         ASTM 0585m         >20         0         <1								
Moderate concentration of visible dirt/debris present in the oil.         Water         %         ASTM D6304         >0.1         0.007         0.008	CONTAMINATION	Silicon	ppm					
ppm Water         ppm         ASTM D6304         >1000         80         84            Particles >4µm         ASTM D747         >10000          A 5703            Particles >6µm         ASTM D747         >3200          A 770            Particles >14µm         ASTM D747         >320          A 770            Particles >21µm         ASTM D747         >300          A 770            Particles >21µm         ASTM D747         >30          A 770            Particles >71µm         ASTM D747         >40          7            Particles >71µm         ASTM D747         >4          0            OII Cleanliness         IS0 4406 (c)         >201875          A 212017            Sand/Dirt         scalar         Visual         NONE         NONE         NONE         NONE            Sand/Dirt         scalar         Visual         NORH         NORML             Sodium         ppm         ASTM D5185m         0         0		Potassium				0		
Particles >4µm         ASTM D7647         >10000          A 19888            Particles >14µm         ASTM D7647         >22500          A 670.03            Particles >21µm         ASTM D7647         >200          A 70            Particles >21µm         ASTM D7647         >200          A 1968            Particles >21µm         ASTM D7647         >20          7            Of Cleantiness         ISO 4406 (c)         501755          4         21/20/17            Sitt         scalar         Visual         NONE         NONE         NONE         NONE            Appearance         scalar         Visual         NORM         NORML         NORML            The oil viscosity is higher than normal. The AN level is acceptable or this fluid.         Sofium <td< th=""><th>Moderate concentration of visible dirt/debris present in the oil.</th><th>Water</th><th>%</th><th></th><th></th><th></th><th></th><th></th></td<>	Moderate concentration of visible dirt/debris present in the oil.	Water	%					
Particles >6µm         ASTM D7647         >2500          ▲ 6703            Particles >14µm         ASTM D7647         >320          ▲ 770            Particles >14µm         ASTM D7647         >20          ▲ 700            Particles >14µm         ASTM D7647         >20          ₹ 70            Particles >160         ASTM D7647         >20          ₹            Particles >160         Sitt         Scalar         *Visual         NONE          7            Particles >71µm         ASTM D7647         >20          7          7            Particles >100         Scalar         *Visual         NONE         NONE          0            Sitt         scalar         *Visual         NONE         NONE         NONE            Appearance         scalar         *Visual         NORML         NORML         NORML            FUDD CONDITION         Socium         ppm         ASTM D518m         0         0            Boron		ppm Water	ppm	ASTM D6304	>1000	80		
Particles >14µm       ASTM D7647       >320        ▲ 770          Particles >27µm       ASTM D7647       >80        7          Particles >38µm       ASTM D7647       >40        7          Particles >37µm       ASTM D7647       >40        7          Oil Cleanliness       ISO 4406 (c)       >20185        0          Oil Cleanliness       ISO 4406 (c)       >20185        0          Silt       scalar       *Visual       NONE       NONE       NONE          Sand/Dirt       scalar       *Visual       NONE       NONE       NONE          Sand/Dirt       scalar       *Visual       NOR       NORE       NORE          Odor       scalar       *Visual       NOR       NORE       NOR          The oil viscosity is higher than normal. The AN level is acceptable for this fluid.       po       ASTM D5185       0       0          Marganese       pom       ASTM D5185       0       0           Marganese       pom       ASTM D5		Particles >4µm		ASTM D7647	>10000			
Particles >21µm       ASTM D7647       >80        A 196          Particles >38µm       ASTM D7647       >20        7          Particles >71µm       ASTM D7647       >20        0          Particles >71µm       ASTM D7647       >20        21/20/17          OII Cleanliness       Sol 406 (c)       201875        21/20/17          Silt       scalar       *Visual       NONE       NONE       NONE          Sand/Dirt       scalar       *Visual       NONE       NONE       NONE          Appearance       scalar       *Visual       NORM       NORML       NORML          Odor       scalar       *Visual       NORM       NORML       NORML          FLUID CONDITION       Sodium       pp       ASTM D5185m       0       0          Boron       pp       ASTM D5185m       0       0           Magnesium       pp       ASTM D5185m       0       0          Magnesium       pp       ASTM D5185m       0       0		Particles >6µm		ASTM D7647	>2500		6703	
Particles >38µm         ASTM D764         >.20		Particles >14µm		ASTM D7647	>320		🔺 770	
Particles >71µm         ASTM D7647         >4          0            Oil Cleanliness         ISO 4406 (c)         >2018/15          ▲ 21/20/17            Silt         scalar         *Visual         NONE         ▲ MODER         NONE         ▲ NONE            Debris         scalar         *Visual         NONE         ▲ MODER         NONE            Sand/Dirt         scalar         *Visual         NOR         MORML         NORE            Appearance         scalar         *Visual         NORML         NORML         NORML            Odor         scalar         *Visual         NORML         NORML         NORML            Appearance         scalar         *Visual         NORML         NORML         NORML            Modor         scalar         *Visual         NORML         NORML         NORML            Barium         pm         ASTM D5185m         0         0             Molybdenum         pm         ASTM D5185m         0         0            Maganesium         pm         ASTM D5		Particles >21µm		ASTM D7647	>80		🔺 196	
Oil Cleanliness       ISO 4406 (c) 201815        A 21/20/17          Silt       scalar       *Visual       NONE       NONE       NONE       NONE          Debris       scalar       *Visual       NONE       NONE       NONE       NONE          Sand/Dirt       scalar       *Visual       NORE       NONE       NONE          Appearance       scalar       *Visual       NORE       NORML       NORML          Odor       scalar       *Visual       NORE       NORML       NORML       NORML          Odor       scalar       *Visual       NORM       NORML       NORML          EmulsifiedWater       scalar       *Visual       NORM       NORML          Boron       ppm       ASTM D5185m       0       0          Molybdenum       pm       ASTM D5185m       0       0          Magnesium       ppm       ASTM D5185m       0       0          Col       calar       ppm       ASTM D5185m       0       0          Molybdenum       ppm       ASTM D5185m <t< th=""><th></th><th>Particles &gt;38µm</th><th></th><th>ASTM D7647</th><th>&gt;20</th><th></th><th>7</th><th></th></t<>		Particles >38µm		ASTM D7647	>20		7	
Silt       scalar       *Visual       NONE       NONE       NONE          Debris       scalar       *Visual       NONE       MODER       NONE          Sand/Dirt       scalar       *Visual       NONE       NONE       NONE          Appearance       scalar       *Visual       NORM       NORME       NORME       NORME          Odor       scalar       *Visual       NORM       NORME       NORME       NORME          Odor       scalar       *Visual       NORM       NORME       NORME          The oil viscosity is higher than normal. The AN level is acceptable for this fluid.       Sodium       ppm       ASTM D5185m       0       0          Molybdenum       ppm       ASTM D5185m       0       0           Manganese       ppm       ASTM D5185m       0       0           Manganese       ppm       ASTM D5185m       0       0          Calcium       ppm       ASTM D5185m       0       0          Nagnesium       ppm       ASTM D5185m       10       0.0 </th <th></th> <th>Particles &gt;71µm</th> <th></th> <th>ASTM D7647</th> <th>&gt;4</th> <th></th> <th>0</th> <th></th>		Particles >71µm		ASTM D7647	>4		0	
Debris       scalar       *Visual       NONE       MODER       NONE          Sand/Dirt       scalar       *Visual       NONE       NONE       MODE          Appearance       scalar       *Visual       NORM       NORM       NORML          Odor       scalar       *Visual       NORM       NORML       NORML          Odor       scalar       *Visual       NORM       NORML       NORML          Odor       scalar       *Visual       NORM       NORML       NORML          FLUID CONDITION       Sodium       ppm       ASTM D5185m       IO       0       0          Boron       ppm       ASTM D5185m       IO       0       0          Molybdenum       ppm       ASTM D5185m       IO       0          Maganese       ppm       ASTM D5185m       IO       0          Magnesium       ppm       ASTM D5185m       IO       0          Magnesium       ppm       ASTM D5185m       IO       0          Magnesium       ppm       ASTM D5185m       IO		Oil Cleanliness			>20/18/15			
Sand/Dirtscalar*VisualNONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*VisualNORMLNORMLNORMLFLUID CONDITIONSodiumppmASTM D5185m712BoronppmASTM D5185m00BariumppmASTM D5185m00MolybdenumppmASTM D5185m00MaganeseppmASTM D5185m00MagnesiumppmASTM D5185m00MagnesiumppmASTM D5185m1000MagnesiumppmASTM D5185m110105MagnesiumppmASTM D5185m110105MagnesiumppmASTM D5185m100.330.40SulfurppmASTM D5185m100.330.40SulfurppmASTM D44544.659.28.9SulfurppmASTM D4457.89.28.9		Silt	scalar	*Visual	NONE	NONE	NONE	
Appearance Odorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEGNEGSodiumppmASTM D5185m00BoronppmASTM D5185m00BariumppmASTM D5185m00MolybdenumppmASTM D5185m00MaganeseppmASTM D5185m00MagnesiumppmASTM D5185m00PhosphorusppmASTM D5185m1000ZincppmASTM D5185m1000NagnesiumppmASTM D5185m100.0PhosphorusppmASTM D5185m1010.0ZincppmASTM D5185m1010.03SulfurppmASTM D5185m100.330.40Xic @ 40°CcStASTM D4457.89.28.9		Debris	scalar	*Visual	NONE	A MODER	NONE	
Odor Emulsified Waterscalar*VisualNORML *VisualNORML NEGNORML NEGFLUID CONDITIONSodiumppmASTM D5185m712The oil viscosity is higher than normal. The AN level is acceptable for this fluid.SodiumppmASTM D5185m00BoronppmASTM D5185m00MarganeseppmASTM D5185m00MagnesiumppmASTM D5185m00MagnesiumppmASTM D5185m00CalciumppmASTM D5185m32PhosphorusppmASTM D5185m32ZincppmASTM D5185m10105SulfurppmASTM D5185m100.40Acid Number (AN)mgr(H0H)ASTM D4451.00.40Visc @ 100°CcStASTM D4457.89.28.9		Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
Emulsified Waterscalar*Visual>0.1NEGNEGFLUID CONDITIONSodiumppmASTM D5185m712BoronppmASTM D5185m00BariumppmASTM D5185m00BariumppmASTM D5185m00ManganeseppmASTM D5185m00MagnesiumppmASTM D5185m00CalciumppmASTM D5185m<00PhosphorusppmASTM D5185m<32ZincppmASTM D5185m<100105SulfurppmASTM D5185m170105SulfurppmASTM D5185m1.00.330.40Visc @ 40°CCStASTM D44544.659.356.3Visc @ 100°CcStASTM D4457.89.28.9		Appearance	scalar	*Visual	NORML	NORML	NORML	
Sodium         ppm         ASTM D5185m         7         12            Boron         ppm         ASTM D5185m         0         0            Barium         ppm         ASTM D5185m         0         0            Barium         ppm         ASTM D5185m         0         0            Molybdenum         ppm         ASTM D5185m         0         0            Maganese         ppm         ASTM D5185m         0         0            Magnesium         ppm         ASTM D5185m         0         0            Magnesium         ppm         ASTM D5185m         0         0            Calcium         ppm         ASTM D5185m         3         2            Phosphorus         ppm         ASTM D5185m         3         2            Zinc         ppm         ASTM D5185m         3         2            Sulfur         ppm         ASTM D5185m         435         739            Visc @ 40°C         cSt         ASTM D445         44.6         59.3         56.3       <		Odor	scalar	*Visual	NORML	NORML	NORML	
BoronppmASTM D5185m00The oil viscosity is higher than normal. The AN level is acceptable for this fluid.ppmASTM D5185m00MolybdenumppmASTM D5185m000ManganeseppmASTM D5185m00MagnesiumppmASTM D5185m00MagnesiumppmASTM D5185m00MagnesiumppmASTM D5185m00MagnesiumppmASTM D5185m00CalciumppmASTM D5185m0100PhosphorusppmASTM D5185m0105ZincppmASTM D5185m04355739SulfurppmASTM D5185m00.3330.400Visc @ 40°CcStASTM D44544.659.356.3Visc @ 100°CcStASTM D4457.89.28.9		Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	
BoronppmASTM D5185m00The oil viscosity is higher than normal. The AN level is acceptable for this fluid.ppmASTM D5185m00MolybdenumppmASTM D5185m000ManganeseppmASTM D5185m00MagnesiumppmASTM D5185m00MagnesiumppmASTM D5185m00MagnesiumppmASTM D5185m00MagnesiumppmASTM D5185m00CalciumppmASTM D5185m0100PhosphorusppmASTM D5185m0105ZincppmASTM D5185m04355739SulfurppmASTM D5185m00.3330.400Visc @ 40°CcStASTM D44544.659.356.3Visc @ 100°CcStASTM D4457.89.28.9								
The oil viscosity is higher than normal. The AN level is acceptable for this fluid.       ppm       ASTM D5185m       0       0          Molybdenum       ppm       ASTM D5185m       Image: Comparison of the comparis	FLUID CONDITION							
this fluid.       Darkin ppm       ASTM D5185m       0       0          Molybdenum       ppm       ASTM D5185m       0       0          Manganese       ppm       ASTM D5185m       0       0          Magnesium       ppm       ASTM D5185m       0       0          Magnesium       ppm       ASTM D5185m       0       0          Calcium       ppm       ASTM D5185m       3       2          Phosphorus       ppm       ASTM D5185m       3       2          Zinc       ppm       ASTM D5185m       10       105          Sulfur       ppm       ASTM D5185m       435       739          Kick Number (AN)       mg KOHg       ASTM D5185m       0.33       0.40          Visc @ 40°C       cSt       ASTM D445       44.6       56.3          Visc @ 100°C       cSt       ASTM D445       7.8       9.2       8.9	The silving situate has the second The AN level is acceptable for		ppm				-	
Micry Scientinin       pprin       Actimization       C       C         Manganese       ppm       ASTM D5185m       O       0          Magnesium       ppm       ASTM D5185m       O       0          Calcium       ppm       ASTM D5185m       Image: Constraint of the second of the s	, , , , , , , , , , , , , , , , , , , ,							
Magnesium       ppm       ASTM D5185m        <1	this huid.							
Calcium       ppm       ASTM D5185m       3       2          Phosphorus       ppm       ASTM D5185m       I70       105          Zinc       ppm       ASTM D5185m       272       246          Sulfur       ppm       ASTM D5185m       I0       435       739          Acid Number (AN)       mg KOHg       ASTM D8045       .10       0.33       0.40          Visc @ 40°C       cSt       ASTM D445       44.6       59.3       56.3          Visc @ 100°C       cSt       ASTM D445       7.8       9.2       8.9		-	ppm					
Phosphorus       ppm       ASTM D5185m       170       105          Zinc       ppm       ASTM D5185m       272       246          Sulfur       ppm       ASTM D5185m       435       739          Sulfur       pgm       ASTM D5185m       10       0.33       0.40          Acid Number (AN)       mg KOH'g       ASTM D445       1.0       0.33       0.40          Visc @ 40°C       cSt       ASTM D445       44.6       59.3       56.3          Visc @ 100°C       cSt       ASTM D445       7.8       9.2       8.9		U U	ppm			<1		
Zinc       ppm       ASTM D5185m       272       246          Sulfur       ppm       ASTM D5185m       435       739          Acid Number (AN)       mg KOHg       ASTM D8045       .10       0.33       0.40          Visc @ 40°C       cSt       ASTM D445       44.6       ● 59.3       ● 56.3          Visc @ 100°C       cSt       ASTM D445       7.8       9.2       8.9			ppm					
Sulfur       ppm       ASTM D5185m       435       739          Acid Number (AN)       mg KOH/g       ASTM D8045       .10       0.33       0.40          Visc @ 40°C       cSt       ASTM D445       44.6 <b>59.3 5</b> 6.3          Visc @ 100°C       cSt       ASTM D445       7.8 <b>9.2</b> 8.9			ppm	ASTM D5185m				
Acid Number (AN)       mg KOH/g       ASTM D8045       .10       0.33       0.40          Visc @ 40°C       cSt       ASTM D445       44.6       59.3       56.3          Visc @ 100°C       cSt       ASTM D445       7.8       9.2       8.9			ppm					
Visc @ 40°C       cSt       ASTM D445       44.6       59.3       56.3          Visc @ 100°C       cSt       ASTM D445       7.8       9.2       8.9			ppm	ASTM D5185m				
Visc @ 100°C cSt ASTM D445 7.8 9.2 8.9			mg KOH/g					
		-		ASTM D445	44.6	6 59.3	<b>56.3</b>	
Viscosity Index (VI) Scale ASTM D2270 132 134 135		Visc @ 100°C	cSt	ASTM D445	7.8	9.2	8.9	
		Viscosity Index (VI)	Scale	ASTM D2270	132	134 /	135	



