

**Module Setup 4042 - Sunchild 11-29 (Wauk)**

Detection Number	4042	Compressor Name	Sunchild 11-29 (Wauk)
Client Compressor #	4042	Compressor Location	11-29-43-11-W5M
Latitude	52.7360802	Elevation - fasl	3451
Longitude	-115.5641403	Time Zone	America/Edmonton
Area	Central	Field	Sunchild (Nuvista Acq)
Foreman	Tim Woitas		
Operator		Province/State	Alberta
Packager Name	Enerflex	Package Serial #	040682
EUB License #		Cost Center Code	1700240
Compressor Sound Level (dB)	0	Environmental Registration #	
Gas Working Interest %	100	Gas Pricing - \$/mscf	2
Skid Type	Housed	Electricity Pricing - \$/kWh	0.1
Field Limitation	Yes	Sour Service	No
Ownership Status	Not Set	Compressor Application	Gathering
		Vibration Planes	1
Setup Date	10/26/2012	Setup Fee	Setup Fee # 2
		Enalysis Fee	Enalysis Fee # 1
Active Status	Active	Using Maintenance	Yes
Stand-by	No	Using SCADA	No
Remote Compressor ID	4042		

**Gas Analysis 4042 - Sunchild 11-29 (Wauk)**

Stream Name	Inlet Stream	Fuel Gas	
Stream Type	Inlet Stream	Fuel Gas	
Sample Date	01/23/2014	01/23/2014	
Hydrogen	0.0000	0.0000	
Helium	0.0001	0.0001	
Nitrogen	0.0039	0.0039	
Carbon Dioxide	0.0153	0.0153	
Hydrogen Sulfide	0.0000	0.0000	
Methane	0.8841	0.8841	
Ethane	0.0675	0.0675	
Propane	0.0174	0.0174	
ISO Butane	0.0038	0.0038	
Normal Butane	0.0031	0.0031	
ISO Pentane	0.0021	0.0021	
Normal Pentane	0.0010	0.0010	
Hexane	0.0009	0.0009	
Heptane	0.0008	0.0008	
Octane	0.0000	0.0000	
Oxygen	0.0000	0.0000	
Ammonia	0.0000	0.0000	
Water	0.0000	0.0000	
Pseudo Critical Temperature Adjustment	2.64	2.64	
Specific Gravity	0.64	0.64	
Dehydrated Gas	Yes	Yes	
Temperature Base - °F	60	60	

Pressure Base - psia		14.696	14.696
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Driver Setup 4042 - Sunchild 11-29 (Wauk)			
Manufacturer	Waukesha	Model	F18GL LCR
Serial Number	C-15309/1	Asset Tracking Number	
Driver Type	Turbo		
Engine Configuration	Inline	Number of Cylinders	6
Compression Ratio	8.7	Catalytic Converter Installed	N/A
Rated rpm	1800	Min rpm	1200
Max Horsepower @Sea Level	400	Max Derated Horsepower	400
Min Horsepower @Sea Level	266	Min Derated Horsepower	266
Fuel Requirements - Btu/HPhr	7524	Fuel Gas LHV - Btu/cft	993.8
Engine Timing - BTDC °	24	Air / Fuel Ratio	14.7
Max Boost - psig	15.33	Max Engine Exhaust Temp - °F	874
Exhaust Flow - cfm	2196	Exhaust O2 %	7.8
Max Engine NOx - g/bhp-hr	2	Max Engine CO - g/bhp-hr	1.7
Max Engine CO2 - g/bhp-hr	427.5	Overall Exhaust dB @ 1.5m	106
Water Pump - HP	8	Other Auxiliary Draw - HP	0
Max Top End Overhaul Hours	8000	Max BTTM End Overhaul Hours	17000
Max Oil Change Hours	2000	Ambient Operating Temp - °F	60
Gear Ratio	1	Compressor rpm @ Rated Driver rpm	1800
Intake Valve Recession Limit	0	Exhaust Valve Recession Limit	0

Engine Flags Setup 4042 - Sunchild 11-29 (Wauk)									
Pressure - psig	High	High	Low	Low	Temperature - °F	High	High	Low	Low
Oil Header	75	63	35	30	Oil Header	205	200	160	140
Jacket	21.7	18	7	2.5	Jacket	200	190	170	150
Fuel Gas	65	60	1	0	Fuel Gas	140	130	-10	-20
Intercooler	21.7	18	7	2.5	Intercooler	150	137	124	110
Intake Manifold	18	16	-2	-3	Intake Manifold	155	145	130	110
					Exhaust Manifold	1375	1310	625	565
					Aux. Water	140	130	120	100
					Cylinder Deviation	75			

Frame Setup 4042 - Sunchild 11-29 (Wauk)			
Manufacturer	Ariel	Model	JGJ/2
Serial Number	F-19877	Asset Tracking Number	
		Stroke - inches	3.5
Number of Throws	2	Number of Stages	2
Unloader Type	None		
Rod Load Type	Internal		
Max Compression - lbs	23000	Max Tension - lbs	21000
Total Max Rod Load - lbs	42000		
Dynamic Max Compression - lbs	36000	Dynamic Max Tension - lbs	36000
Max Overhaul Hours	35000	Max Horsepower	620
Rated rpm	1800	Min rpm	900

Cylinder Setup 4042 - Sunchild 11-29 (Wauk)			
Stage	1	2	

Throw	2	1			
Cylinder Model	9-3/4RJ	5-1/2RJ			
Dummy Cylinder	No	No			
Cylinder Serial #	C-66953	C-54592			
Cylinder MAWP - psig	635	1725			
Lube Status	Lube	Lube			
Cylinder Action	DA	DA			
Cylinder Diameter - inches	9.75	5.5			
Rod Diameter - inches	1.5	1.5			
Tail Rod Diameter - inches	0	0			
Associated Gas Stream	Inlet St...	Inlet St...			
Orifice Data					
Suct. Internal Pipe Diam. - inches	4.897	2.728			
Suct. Orifice Diam. - inches	2.75	1.625			
Disc. Internal Pipe Diam. - inches	4.897	2.728			
Disc. Orifice Diam. - inches	1.875	1.5			
<b>Cylinder Blowby Thresholds 4042 - Sunchild 11-29 (Wauk)</b>					
SA Severe Threshold - %	20	20			
SA Warning Threshold - %	12	12			
DA Severe Threshold - %	15	15			
DA Warning Threshold - %	7	7			

<b>Valve Setup 4042 - Sunchild 11-29 (Wauk)</b>					
Stage	1	2			
Throw	2	1			
HE Suction Valve Resist VHDS	4.44	4.44			
HE Suction Valve Quantity	2	2			
HE Suction Valve Lift - inches	0.079	0.063			
HE Suction Valve Area - sq. in .	5.688	1.902			
HE Discharge Valve Resist VHDS	4.44	4.44			
HE Discharge Valve Quantity	2	2			
HE Discharge Valve Lift - inches	0.063	0.063			
HE Discharge Valve Area - sq. in .	4.54	1.902			
CE Suction Valve Resist VHDS	4.44	4.44			
CE Suction Valve Quantity	2	2			
CE Suction Valve Lift - inches	0.079	0.063			
CE Suction Valve Area - sq. in.	5.688	1.902			
CE Discharge Valve Resist VHDS	4.44	4.44			
CE Discharge Valve Quantity	2	2			
CE Discharge Valve Lift - inches	0.063	0.063			
CE Discharge Valve Area - sq. in .	4.54	1.902			

<b>Clearance Setup 4042 - Sunchild 11-29 (Wauk)</b>					
Stage	1	2			
Throw	2	1			
HE Clearance Min - %	16.51	15.57			
HE Clearance Max - %	68.28	68.46			
Max Pocket Travel - inches	3	3.5			
HE Spacers Max Quantity	2	2			
HE Clearance per Spacer - %	6.08	6.06			
CE Clearance Min - %	16.1	16.1			
CE Clearance Max - %	16.1	16.1			

CE Spacers Max Quantity	2	2		
CE Clearance per Spacer - %	6.23	6.55		

**Reciprocating Setup 4042 - Sunchild 11-29 (Wauk)**

Stage	1	2		
Throw	2	1		
Con. Rod Length - inches	10.25	10.25		
1/3 Con Rod Weights - lbs.	13.17	13.17		
Crosshead Pin Weight - lbs.	0	0		
Piston Weight - lbs.	85.9	41.4		
Rod Weight - lbs.	0	0		
Crosshead Weight - lbs.	32.8	54		
Balance Weight Added - lbs.	2.4	26.5		
Total Weight - lbs.	134.27	135.07		

**Aerial Cooler Setup 4042 - Sunchild 11-29 (Wauk)**

Manufacturer	Air-X-Changer	Model	93AVI
Serial Number	045572	Horsepower Draw	16
		Rated RPM	

Stage	1	2		
Design Pressure MAWP - psig	1292	1292		
Required Temperature Out - °F	120	120		
Estimated Pressure Drop - psig	5	5		
Max Design Temperature - °F	350	350		
# of Passes/Section				
# of Tubes/Section				
# of Rows				
Tube O.D. - inches				
Tube Gauge				
Tube I.D. - inches				
Length of Tubes - feet				
Tube Material - feet				
Corrosion Allowance - inches				
Fouling Factor				
Ambient Air Design Temp - °F				

**Design Conditions Setup 4042 - Sunchild 11-29 (Wauk)**

Stage	1	2		
PSV Setting - psig	635	1292		
Max Discharge Valve Temp - °F	300.99	300.99		
Piping/Bottles Max Temp - °F	300.99	350		
Discharge Piping/Bottles MAWP - psig				

**Reporting Compliance 4042 - Sunchild 11-29 (Wauk)**

Set Expected Interval	No
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**Linked Modules 4042 - Sunchild 11-29 (Wauk)**

Links to related compressor modules.