



1. Fill out Compressor Check Worksheet as much as possible for one compressor.
 - a. Use test gauges and amp clamp If you can.
 - b. Check slide valve calibration, current limiting settings, etc.
2. Fill in section 1 for the remaining compressors to help you fill out the Compressor sheet in the Tool.
3. Fill in the Compressor sheet In the Tool.
 - a. Enter all compressors
 - b. Estimate annual average operation. Suction, head, slide valve position, duty (% run time)

**Email the detailed Compressor Check Worksheet from item 1 and the Tool:
steve.koski@cascadeenergy.com and guow@ornl.gov.**

Compressor Check Worksheet

Site Information:

Date:	Site:
Completed By:	Engine Room:

1) Basic Compressor Information:

Compressor Name or Number:		Motor hp:	
Manufacturer:		Model:	
Sales Order Number:		Serial Number:	
Type:	Screw	Recip	Rotary Vane
Primary Application:	Booster	High Stage	Single Stage
Secondary Application:	Booster	High Stage	Single Stage

2) Calibrate Pressures:

	Control System Reading	Microprocessor Control Panel Reading	Calibrated Digital Gauge Reading
Suction Pressure:			
Discharge Pressure:			

3) Check Compressor Volume Ratio:

	Volume Ratio Control Method:	Fixed	Manual
	Current Volume Ratio: <input style="width: 50px;" type="text"/>	Auto-cont.	Auto-step
	Now	Typical Summer	Typical Winter
Suction Pressure (psig):			
Discharge Pressure (psig):			
Optimum Volume Ratio (from table):			

Simplest Vi calibration check is to read compressor amps at each Vi setting for a given suction and discharge pressure

4) Check Compressor Slide Valve Calibration:

	Suction Pressure	Discharge Pressure	Control Panel Amps	Control Panel SV % Reading	SV Indicator Dial % Reading
Manually Load the Compressor to Full Loading:					
Manually Unload the Compressor to Minimum Loading:					

Does slide valve indicator gauge differ from control panel reading? yes / no

Do amps increase after slide valve already shows 100% SV? yes / no

Does the control panel fail to reach 100% SV reading? yes / no

Does the control panel ever show below 0% or above 100% SV reading? yes / no

5) Check Compressor Current Limiting:

Motor Nameplate Information

Motor hp: <input style="width: 80px;" type="text"/>	Nominal Power Factor: <input style="width: 80px;" type="text"/>
Rated Voltage: <input style="width: 80px;" type="text"/>	Full Load Amps (FLA): <input style="width: 80px;" type="text"/>
Nominal Motor Efficiency: <input style="width: 80px;" type="text"/>	Service Factor: <input style="width: 80px;" type="text"/>

Compressor Control Panel Settings

Set Point for Motor Amps at which Compressor will Unload:

Set Point for Motor Amps at which Compressor will Load no Further*:

*Frick recommends 100% of FLA if motor has 1.15 service factor

Amp Clamp Reading

Control Panel Amp Reading:

Amp Reading from Handheld Amp Clamp to Check Control Panel Reading:

6) Check Compressor Oil Cooling:

	Oil Cooling Method:	Liquid Injection	Thermosiphon
Mfg. Rec. Oil Temperature Set Point: <input style="width: 80px;" type="text"/>		Water/Glycol	Other: _____
Oil Temperature Set Point: <input style="width: 80px;" type="text"/>			
Actual Oil Temperature: <input style="width: 80px;" type="text"/>			

7) Check Economizer Operation:

Confirm Economizer is enabled, does piping to economizer feel cold? yes / no

Economizer BPR setting*:

*Typically the most efficient mode of operation is to leave the back pressure regulator full open and let economizer suction pressure float

Is Economizer port programmed to close when slide valve < 75%? ** yes / no

**Typically below ~75% slide valve the economizer bypasses to low suction unless restricted by an outlet pressure regulator or solenoid valve