

PORT ST. LUCIE UTILITY SYSTEM DEPARTMENT PUMP STATION START UP TEST REPORT

Project Name
 PSLUSD Project Number
 Engineer of Record
 Project Contractor
 Diameter
 Depth
 Voltage
 Phasing
 Full Load Amps
 Pump HP
 FPL Meter
 Design GPM
 Design TDH

PUMP # 1

PUMP # 2

Actual GPM

Actual TDH

Pump Manf/Model

Generator on site YES NO

Repair Kit turned over YES NO Start Up Fails until Kit turned over

Plant able to communicate YES NO

Plant can read guages YES NO

Attendees:

Deficiencies:

Passed

Failed

Inspector

Signature

Date

PUMP STATION START-UP WORKSHEET

A = The measurement from the top of the water to the rim of the station after ending the pump draw down test.

B = The measurement from the top of the water to the rim of the station before starting the pump draw down test.

C = The measurement from the rim of the station to the center of the pressure gauge.

D = The diameter of the station.

PSI = Reading of pressure gauge.

- Formula:
1. $(A \text{ ft} - B \text{ ft}) \times (D \text{ ft} \times D \text{ ft}) \times 7.481 \times 0.7854 = \text{Volume Displaced in gallons}$
 2. $A \text{ ft} - C \text{ ft} = \text{Total Static Lift (TSL)}$
 3. $\text{PSI} \times 2.31 = \text{Dynamic Head Pressure (DHP)}$
 4. $\text{TSL} + \text{DHP} = \text{Total Dynamic Head Pressure (TDHP)}$

<u>Pump #1</u>	<u>Pump #2</u>
A = inches feet	A = inches feet
B = inches feet	B = inches feet
C = inches feet	C = inches feet
D = inches feet	D = inches feet
PSI =	PSI =

PUMP #1

1. $((A \text{ ft}) - (B \text{ ft})) \times (D \text{ ft}) \times (D \text{ ft}) \times 7.481 \times 0.7854 = \text{Volume Displaced}$
 $(A-B \text{ ft}) \times (D \times D \text{ ft}) \times 7.481 \times 0.7854 = \text{Volume Displaced}$
2. $(A \text{ ft}) -/+ (C \text{ ft}) = \text{Total Static Lift}$ (A-C if pressure gauge is below rim, A+C if pressure gauge above rim.)
3. $(\text{PSI}) \times 2.31 = \text{Dynamic Head Pressure}$
4. $(\text{TSL}) + (\text{DHP}) = \text{Total Dynamic Head Pressure}$
5. $(\text{PSI}) \times 2.31 = \text{Static Lift} = \text{Shutoff Head}$ (Not for low pressure)
 (after start up, close valves in valve pit and pump against them for PSI)

PUMP #2

1. $((A \text{ ft}) - (B \text{ ft})) \times (D \text{ ft}) \times (D \text{ ft}) \times 7.481 \times 0.7854 = \text{Volume Displaced}$
 $(A-B \text{ ft}) \times (D \times D \text{ ft}) \times 7.481 \times 0.7854 = \text{Volume Displaced}$
2. $(A \text{ ft}) -/+ (C \text{ ft}) = \text{Total Static Lift}$ (A-C if pressure gauge is below rim, A+C if pressure gauge above rim.)
3. $(\text{PSI}) \times 2.31 = \text{Dynamic Head Pressure}$
4. $(\text{TSL}) + (\text{DHP}) = \text{Total Dynamic Head Pressure}$
5. $(\text{PSI}) \times 2.31 = \text{Static Lift} = \text{Shutoff Head}$ (Not for low pressure)
 (after start up, close valves in valve pit and pump against them for PSI)