Bell & Gossett a xylem brand	**Little Red Schoolhouse** **Gauge Reading Problem**	Rev. 01/12

Problem 1

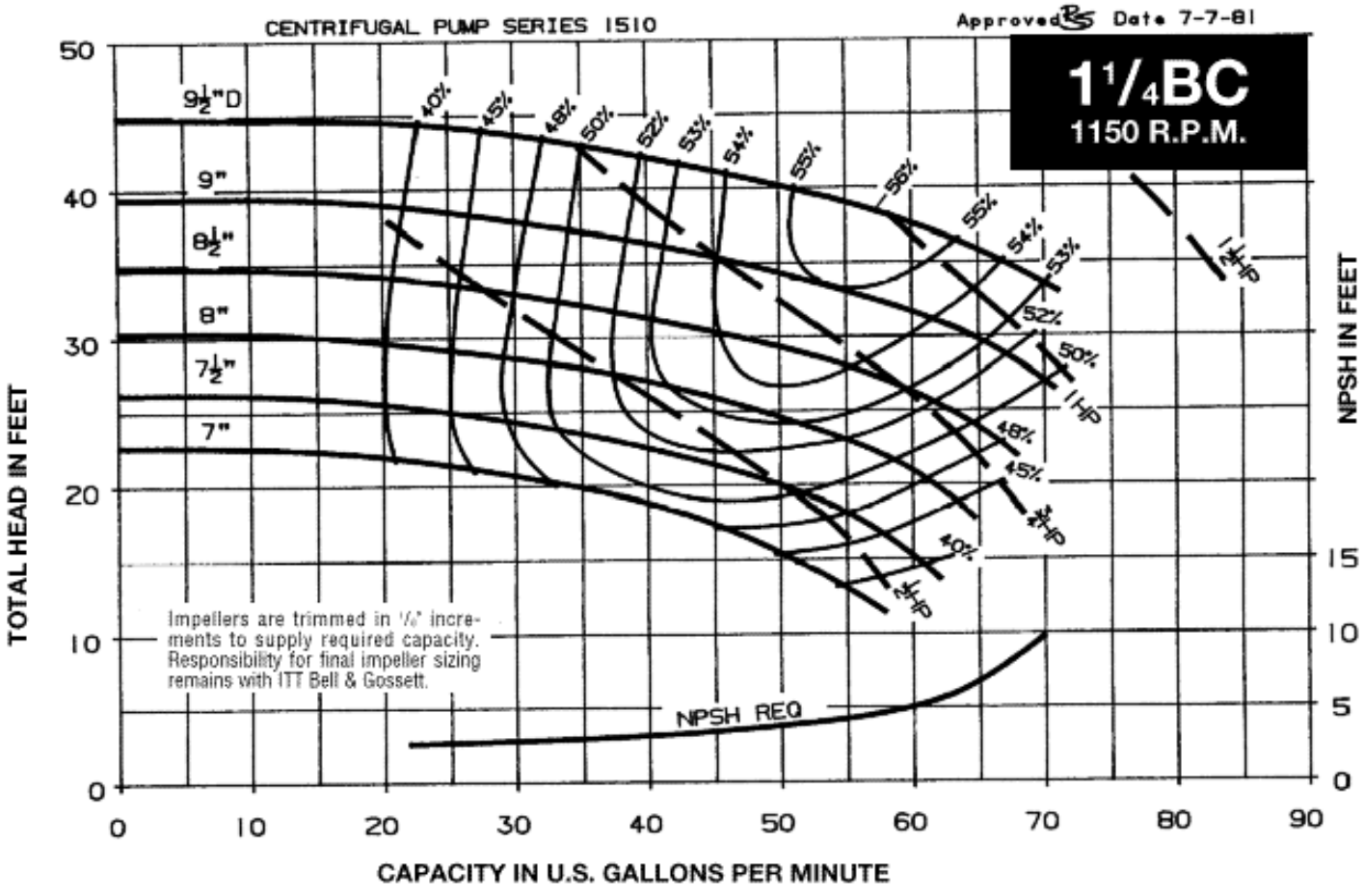
Your system is in operation, but you don't know the flow. From the nameplate you determine your pump is a Series 1510 1-1/4"BC with a 8" diameter impeller operating at 1150 RPM (6 pole motor).

Using a Pressure Gauge you measure the pressure across the pump of your system. You get the following information:

Suction Pressure = 12psi

Discharge pressure = 22.5psi

Determine the flow. _____



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Problem 2

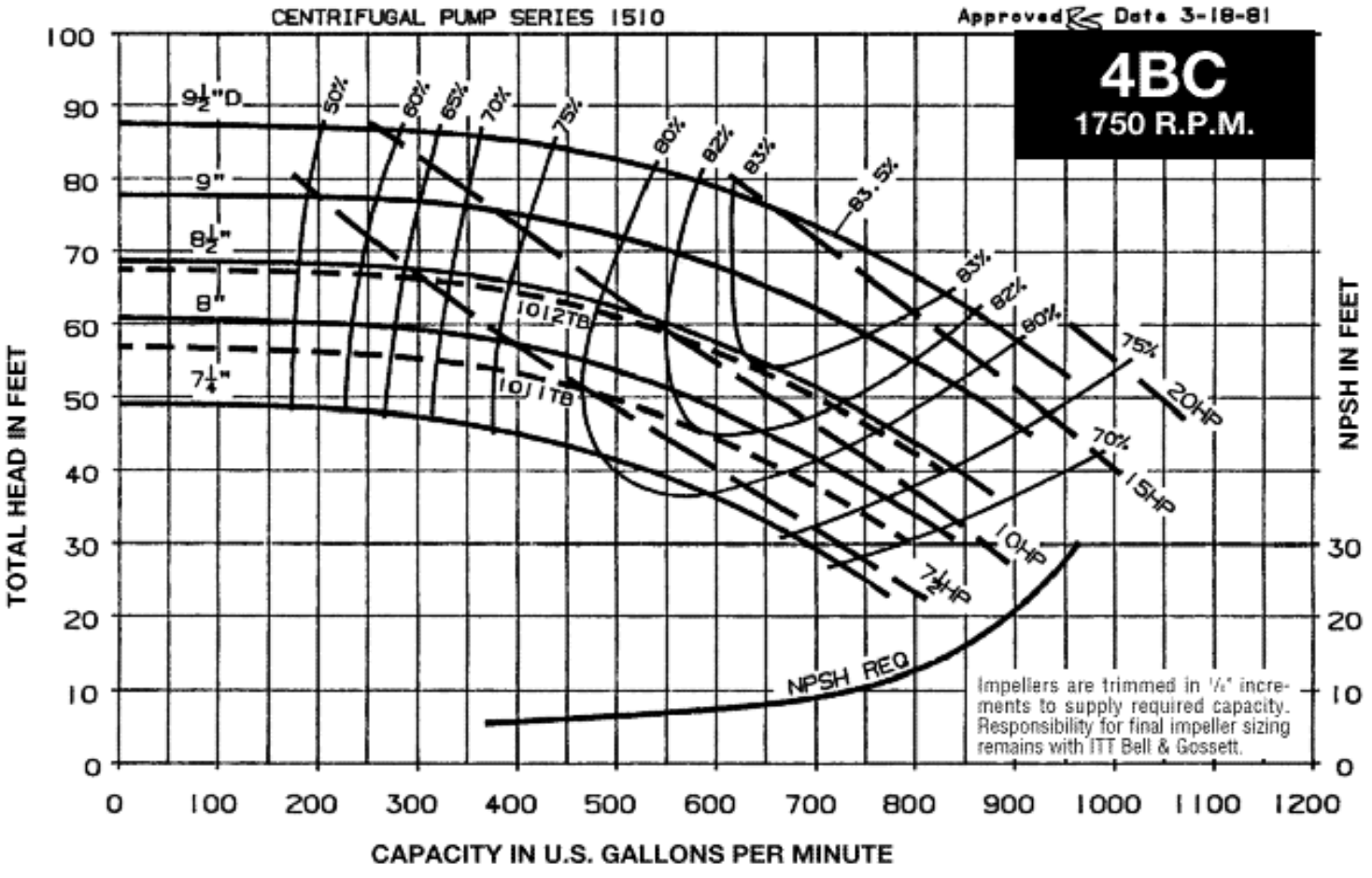
Using a Pressure Gauge you measure the pressure across the pump of your chilled water system. You get the following information:

Suction Pressure = 12psi

Discharge pressure = 38psi

You look at the nameplate on the pump. All you can read is it's a Series 1510 Model 4BC and the motor operates at 1750 RPM.

Determine the flow. _____



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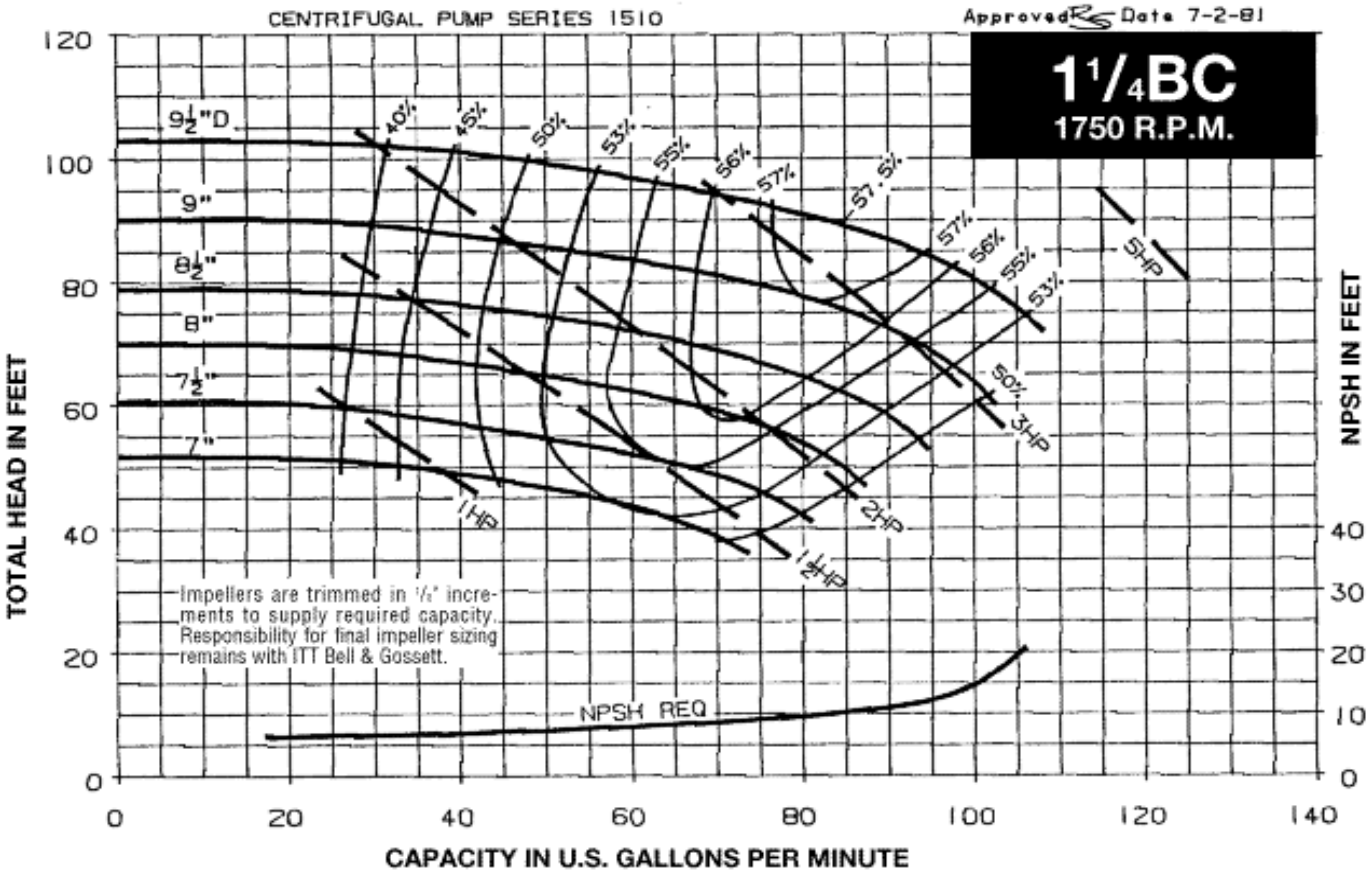
Problem 3

Your 2 HP, Series 1510 1-1/4BC regularly trips its circuit breaker. From the name plate you know you have an 8-1/2" impeller.

When the 3-way valve is fully open to the coil, the PD across the suction and discharge of the pump is 32 psi. When the 3-way valve is open to bypass, the PD is 28 psi.

What's the flow through the coil? Bypass? What is the cause of the problem?



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Problem 4

You are called back from vacation early for a problem.
There is a high pitched noise throughout the building.
You find the pump running smoothly.

Voltage at the pump is normal. Ammeter shows the motor pulling over its nameplate. Wiring isn't loose. Pump rotates freely, no binding. The "new guy" also reported that the motor cuts out at times.

You consult with the Design Engineer. The pump was originally selected for 1300 GPM @ 179'. A 13-1/2" diameter impeller was required. The motor selected was 75 Hp.