Volume Test

This test is to determine if the water heater is supplying the correct amount of hot water.

The test is based on 120 degree F. storage temperature and these amounts are approximate.

Test Procedure:
Do not use any hot water for two hours to ensure the accuracy of this test. Turn on the cold water at full flow using a double handle faucet and time how long it takes to fill a one-gallon jug. Calculate the flow rate as follows.

One-gallon Jug filled in:

5 seconds = 12 gallons per minute
10 seconds = 6 gallons per minute
15 seconds = 4 gallons per minute
20 seconds = 3 gallons per minute
30 seconds = 2 gallons per minute

Using a thermometer, turn on the hot water and time how long it takes for the water temperature to drop 30 degrees.

	Gallons Per Minute Flow Rate							
	1.5	**2**	**2.5**	**3**	**3.5**	**4**	**5**	**6**
30 Gallon Tank	14 min.	10 min.	8 min.	7 min.	6 min.	5 min.	4 min.	3 min.
40 Gallon Tank	18 min.	14 min.	11 min.	9 min.	8 min.	7 min.	5 min.	4 min.
50 Gallon Tank	23 min.	17 min.	14 min.	12 min.	10 min.	9 min.	8 min.	6 min.
65 Gallon Tank	30 min.	22 min.	18 min.	15 min.	13 min.	11 min.	9 min.	8 min.
75 Gallon Tank	35 min.	26 min.	21 min.	17 min.	15 min.	13 min.	10 min.	8 min.
100 Gallon Tank	47 min.	35 min.	28 min.	23 min.	20 min.	17 min.	14 min.	11 min.
119 Gallon Tank	56 min.	42 min.	33 min.	28 min.	24 min.	21 min.	17 min.	14 min.
	Minutes to Drop 30 Degrees F							

Example:
10 seconds to fill the one-gallon jug equals 6 gallons per minute flow rate. If the temperature drops 30 degrees in 6 minutes that equals 36 gallons of hot water. This is normal for a 50 gallon water heater. The amount will be about 70% of the capacity of the heater.

Results: If the test performed above results in a 70% (+ /- 10 %) capacity, then the heater is performing per specifications and a larger water heater should be considered in order to meet the demand.