

Instructions for Installing the Simplex Tank Gauge

Necessary equipment, materials, etc.;

- Ladder tall enough to reach top of tank
- 1/2" pipe long enough for horizontal pipe "B", plus 3'
- 3/4" pipe the height of tank plus 6"
- Pipe cutter or hacksaw
- 1/2" and 3/4" pipe die
- 2 Pipe wrenches
- Small screw driver and pliers
- Tape or stick for measuring liquid in tank (if these are not available measure liquid with tape sent with gauge)
- Cement blocks, bricks, or wooden blocks about 6" to 8" high

1. Take the cement block, bricks or wooden block about 6" to 8" high, and set it on ground at bottom of tank. Set the gauge box on the block. It is preferable if possible to set the gauge on the side of tank nearest the manhole on top so that a support can be fastened to manhole bolts for the long vertical pipe "A". After setting box in place, run wire around base of tank then through eyes on turn buckles and tighten just enough to hold box in place. Final tightening is to be done after gauge is installed.

2. Cut the 3/4" pipe the height of the tank plus 6" and thread both ends.

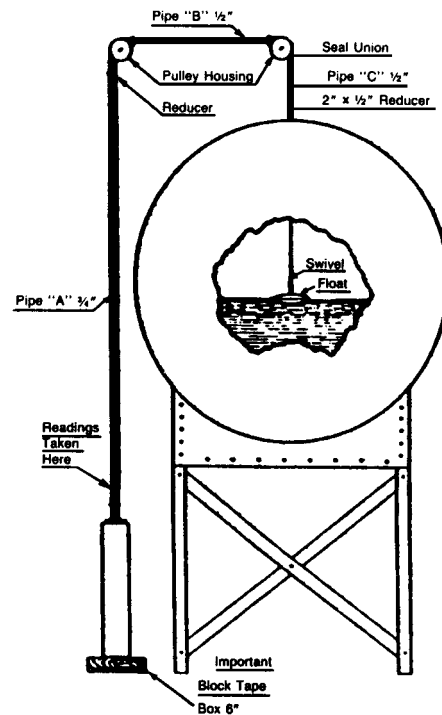
3. On one end of the pipe put 3/4" to 1/2" reducer, 1/2" close nipple and lower half of union. On the other end put on the window opening assembly. Put cover on box and screw window end into place on cover making certain that the window opening is to the left of box as you face the tank.

4. Put on the 2" to 1/2" reducer and measure distance from the center of 2" to 1/2" reducer to center of vertical pipe "A" and then cut the horizontal pipe "B" 7" less then the distance. This pipe is then to be threaded on both ends.

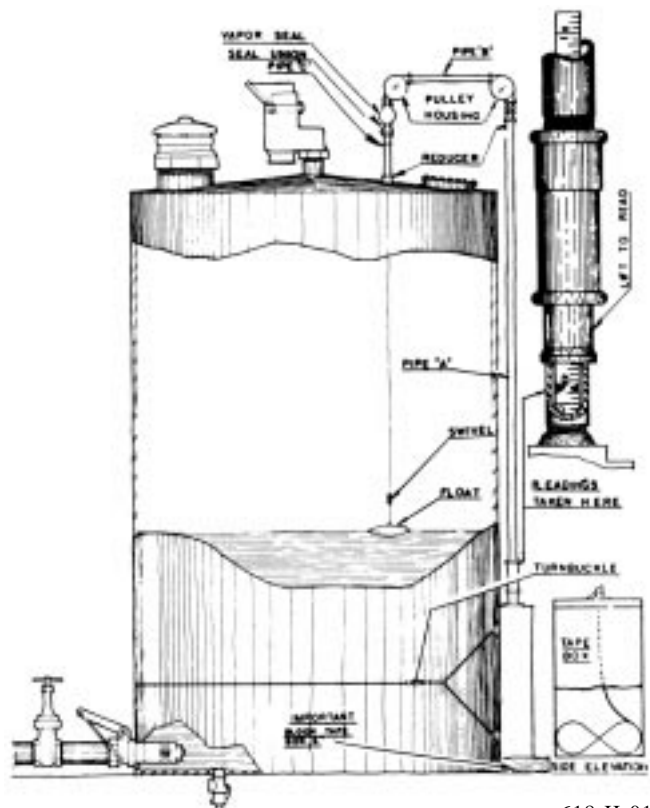
5. Put pulley housings in place on ends of horizontal pipe and on the lower halves of housings screw a 1/2" close nipple and on to this screw the upper halves of the unions.

6. Fasten pulley housing loosely into place on pipe "A" and for the purpose of measuring distance for cutting pipe "C" screw lower half of remaining union into place and then with pipe "B" horizontal measure for length of pipe "C" and be certain to allow enough extra for threading.

Typical Horizontal Installation



Typical Vertical Installation



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7. Put pipe "C" in place and fasten lower half of union to top of pipe and connect union LOOSELY.
8. Remove covers and pulleys from pulley housings and we are now ready to install the tape.
9. Cut the tape the height of the tank plus 4". Fasten the tape to the weight by putting the end with large figures in the slot in the weight. Tighten down set screw so that it punches hole in the tape and you will find that the tape is held firmly in place.
10. Disconnect union on top of 3/4" pipe "A" and swing horizontal pipe assembly to one side. Feed the loose end of the tape through pipe "A" threading it through the guide in reading window (one person should be on ground at this time to make certain that the tape is properly placed through window guide with the figures readable).
11. Next fasten the float wire on to the other end of the weight and let weight down through pipe as far as it will go. BE SURE THAT YOU DO NOT LET THE WIRE KINK. Run off approximately 15 more feet of wire and cut and then run loose end of wire through pulleys and through horizontal pipe.
12. Connect union on top of pipe "A" and disconnect union on top of pipe "C". Put wire through small hole in seal disc and put remaining wire through pipe "C" and down into tank. Put seal disc in place between the two halves of union on pipe "C" and tighten union.
13. Remove manhole cover and with a long stick, or hook, reach through manhole and fish out the remaining length of wire and attach float to wire at a point approximately where you think it will reach the surface of the liquid. DO NOT CUT OFF EXTRA WIRE YET. Put wire on pulleys, put pulleys in place and place covers on pulley housings.
14. Let float into tank gradually and then gauge the liquid with stick or tape measure. Then take the reading at the gauge window and compare the measured depth with the reading at the gauge window. Small figures are feet, large figures are inches. It will no doubt be necessary to adjust the float, for instance: if your tank shows 8' of liquid and the reading at the gauge window shows 10' remove the float and take up the difference of 2' of wire. Place the float back in the liquid and if the window reading is not more than 1/4" off the remaining adjustment can be made by loosening the small set screw in the rear of the window and moving the tape guide (the piece with the pointers on it) up or down, to correct measurement.
15. If everything seems to be satisfactory, remove float and cut off the extra wire.
16. See that the 3/4" pipe "A" is plumb and tighten up the wire around the tank that holds the gauge box. Although the 3/4" pipe will stand erect itself when tightened a means of support must be used as a precaution against winds. A piece of strap iron placed around the pipe and secured to the manhole cover bolts is very inexpensive and very satisfactory. If new tanks are ordered then a spud of some type can be welded onto the tank for this purpose.

Mechanical Diagram

