

Installation Instructions for Fig. 542

The Morrison Figure 542 Air Transfer Valve is intended to prevent air trapped in the fill piping from vaporizing tank liquids. It is to be mounted on the inside wall of a drop tube. The valve position and location are very important to its proper function.

Tools/Materials Required

- 1/4" Diameter Rod (12" longer than the location of the Air Transfer Valve from the bottom end of the drop tube)
- Drill
- 1/2" Diameter Drill Bit
- 5/16" Diameter Drill Bit
- 4 mm Allen Wrench
- Morrison Fig. 542T Air Transfer Valve Installation Tool

Instructions

For installation without an overfill valve go to Step 1. For installation with an overfill valve go to Step 2.

1. For applications without an Overfill Valve, determine the volume of the tank for proper positioning of the Air Transfer Valve (hereafter referred to as ATV). The ATV is best installed in the top 5% of the tank volume space. **IT IS VERY IMPORTANT THAT THE ATV IS BELOW THE RISER PIPE AND IS IN THE TANK SO THE AIR EXIT PORT IS UNOBSTRUCTED.** Measure from the top of the tank (bottom of the riser pipe) to the top of the riser pipe (A). Measure this same distance (A) from the top of the drop tube down. Mark the tube at this point. Rotate the tube 180 degrees, measure this same distance and mark the tube. Proceed to Step #3.
2. If an overfill valve is being used the Air Transfer Valve (hereafter referred to as ATV) must be installed directly below the overfill valve. Determine whether the bottom of the overfill valve is on the inside or the outside of the drop tube. If the bottom of the valve is on the inside, measure from the bottom of the drop tube to the bottom of the overfill valve, translate this location by marking this measurement on the outside of the drop tube. The location of the ATV must be opposite the open section in which the gauging stick must pass through. (For most models this is the side with the float arm). Failure to locate the ATV in this manner will inhibit manual gauging of the tank level. Measure from the top of the drop tube to the transferred mark. Rotate the tube 180 degrees, measure this same distance and mark the tube. If the bottom of the overfill valve is on the outside of the drop tube, markings are only necessary to ensure the template is aligned properly around the drop tube.
3. Place the drill template on the outside and around the diameter of the drop tube. Align the template arrows with these marks. Remove the adhesive backing from the template and stick the template to the drop tube.
4. Lightly punch the center of each hole to reduce the drill from wandering. Use a 1/2" diameter drill bit to drill the middle hole through the template and the drop tube. Use a 5/16" diameter drill bit to drill the other holes.
5. Remove the template from the drop tube.
6. Remove any burrs on the inside of the drop tube that may be left from the drilling. This needs to be done to prevent cutting the O-Ring on the ATV as it is tightened against the drop tube wall.
7. Use a 1/4" diameter steel rod approximately 12 inches longer than the location of the ATV from the bottom end of the drop tube. Make a 90 degree bend on one end of the rod that will have one leg no more than 2 1/2" long.
8. Remove the two drop tube screws from the ATV and set them aside. These screws will be used later to attach the ATV to the drop tube. **DO NOT LOSE THESE SCREWS AS THEY ARE METRIC THREADS AND REPLACEMENTS MAY NOT BE READILY AVAILABLE.** Put the ATV into the pocket of the tool with the O-Ring and the tapped holes of the ATV facing up. The screen end of the ATV must face the bottom of the tube when installed.

9. Put the bent end of the 1/4" rod through the hole at the end of the tool from the bottom up. (Opposite the Air Transfer Valve pocket.)

10. Put the tool, valve and the rod into the bottom end of the drop tube. Slowly push the tool up into the drop tube until the tool and valve reach the area where the holes are drilled. **MAKE SURE THE SCREEN END FACES THE BOTTOM OF THE TUBE. FAILURE TO HAVE THE ATV IN THE PROPER POSITION WILL NOT LET IT FUNCTION.**

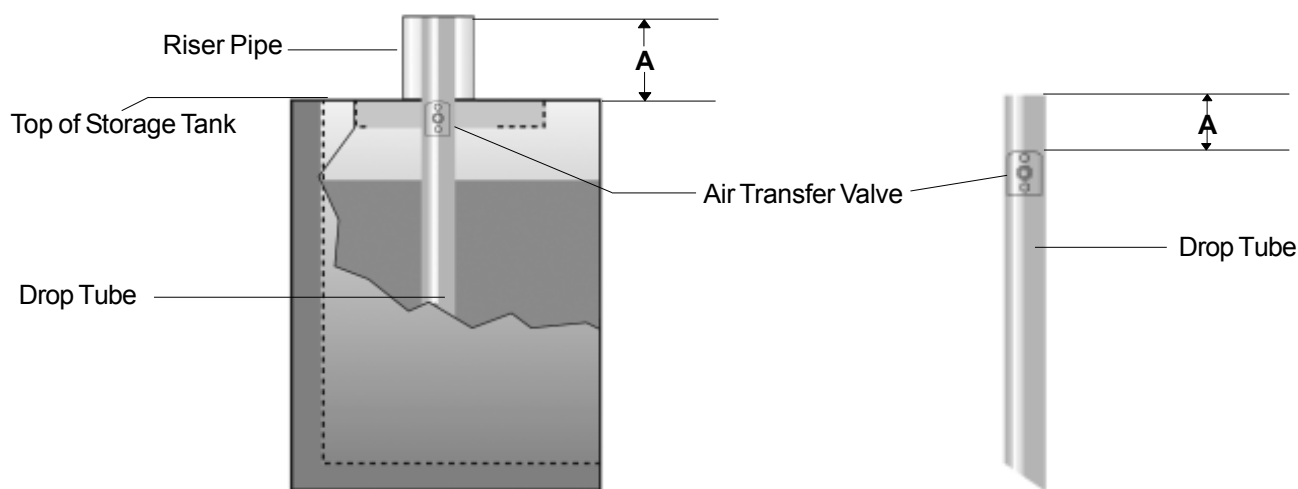
11. Line up the tapped holes in the valve with the two smaller holes that were drilled in the drop tube.

12. Fit the two drop tube screws through the drop tube wall and screw them into the tapped holes in the ATV. Tighten them down. This should suck the wall of the drop tube in enough so the heads of the screws will pass through the riser pipe. If they do not go through the pipe you will need to tighten the screws a little more until they do fit.

13. Pull the tool and rod out of the drop tube.

14. Install the drop tube per the manufacturer's instructions.

Without An Overfill Valve:



With An Overfill Valve:

