

The Schwaben Coolant Refill/Air Purge Tool is a universal tool which uses the Venturi method to draw a vacuum on the entire cooling system, ensuring that no air pockets are left in the cooling system while refilling. This tool comes complete with all of the fittings and adapters you will need, and it comes in a custom molded case for easy storage. This tool requires access to a standard air compressor with a minimum rating of 90 PSI (6.2 bar). A convenient, though not required part to complete the job is a container large enough to hold the entire coolant mixture capacity for your vehicle. This will dramatically reduce the risk of any unwanted air being drawn into the system.

NOTE: This tool is designed to refill the cooling system **AFTER** it has been drained.

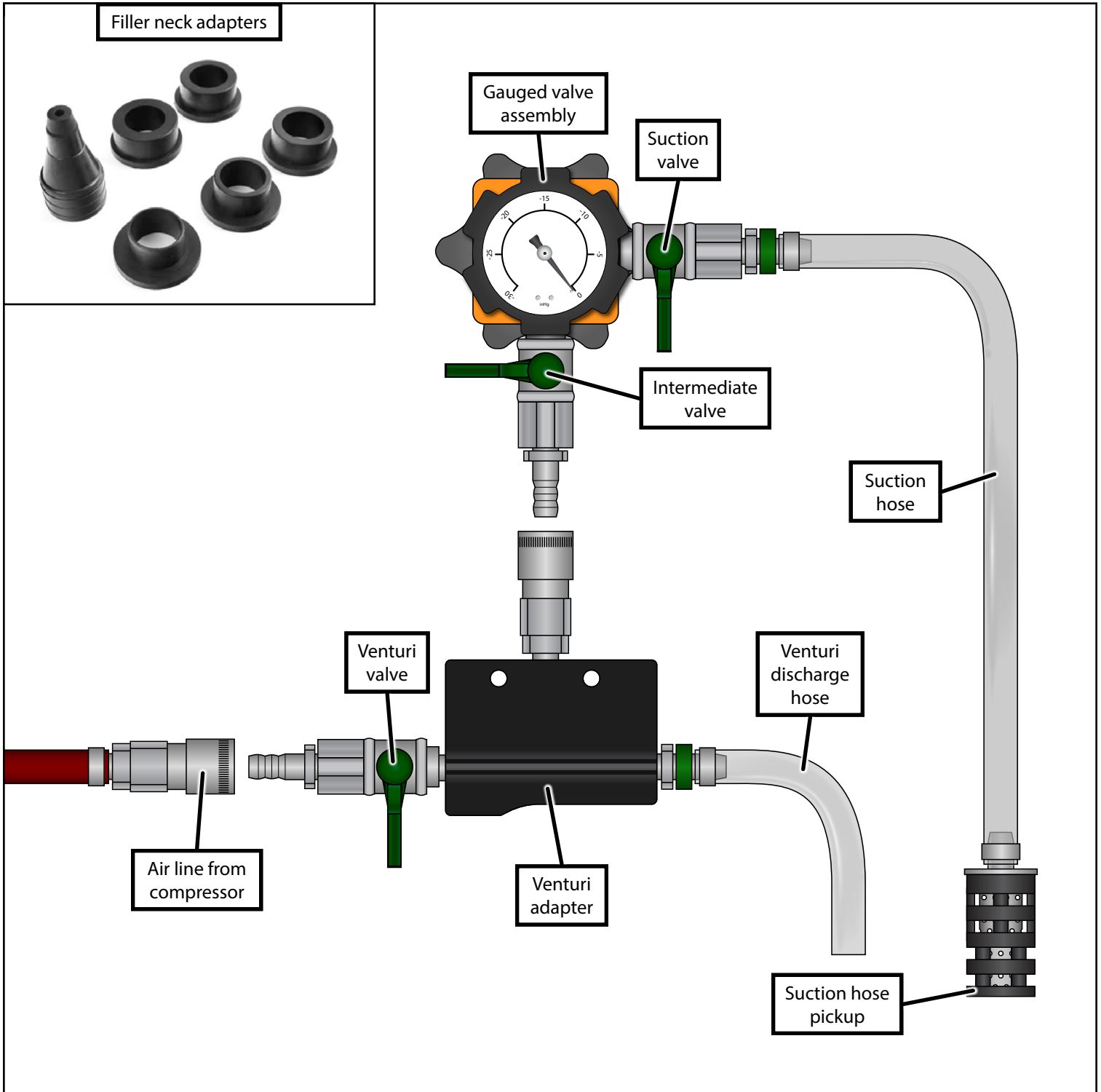


Proper service and repair procedures are vital to the safe, reliable operation of all motor vehicles as well as the personal safety of those performing the repairs. Standard safety procedures and precautions (including use of safety goggles and proper tools and equipment) should be followed at all times to eliminate the possibility of personal injury or improper service which could damage the vehicle or compromise its safety.

Section 1: Introduction

Take a moment to familiarize yourself with the components which make up the Schwaben Air Purge Tool. We will be referring to each of these components by name during these instructions.

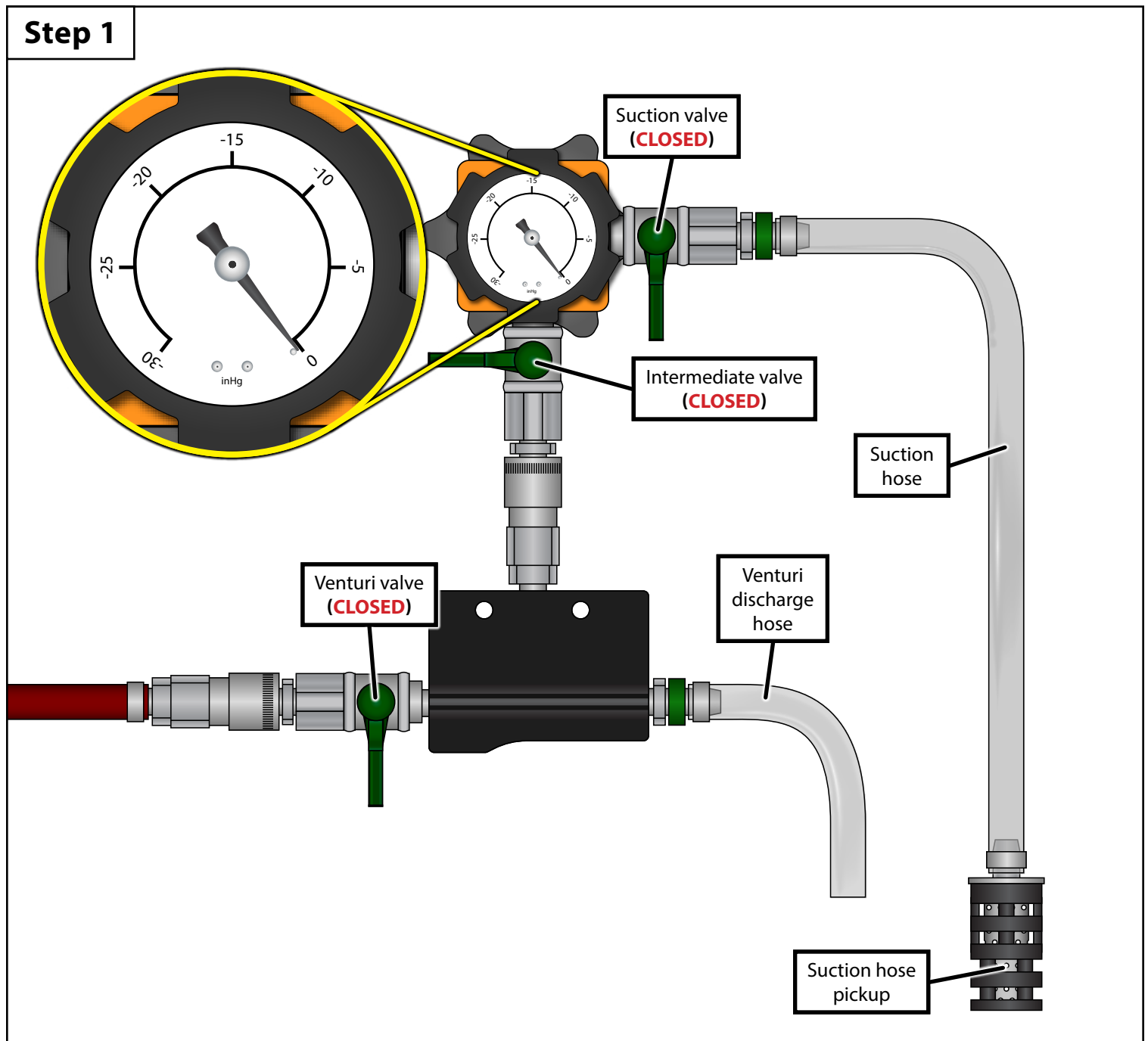
To begin, select the correct size rubber filler neck adapter to fit into your coolant reservoir, install the gauged valve assembly into the coolant reservoir and hold the entire assembly stationary while you turn the knob clockwise until it is snug. Attach the venturi adapter to the gauged valve assembly via the built in quick connector.



Section 2: Bleeding the Cooling System

Step 1

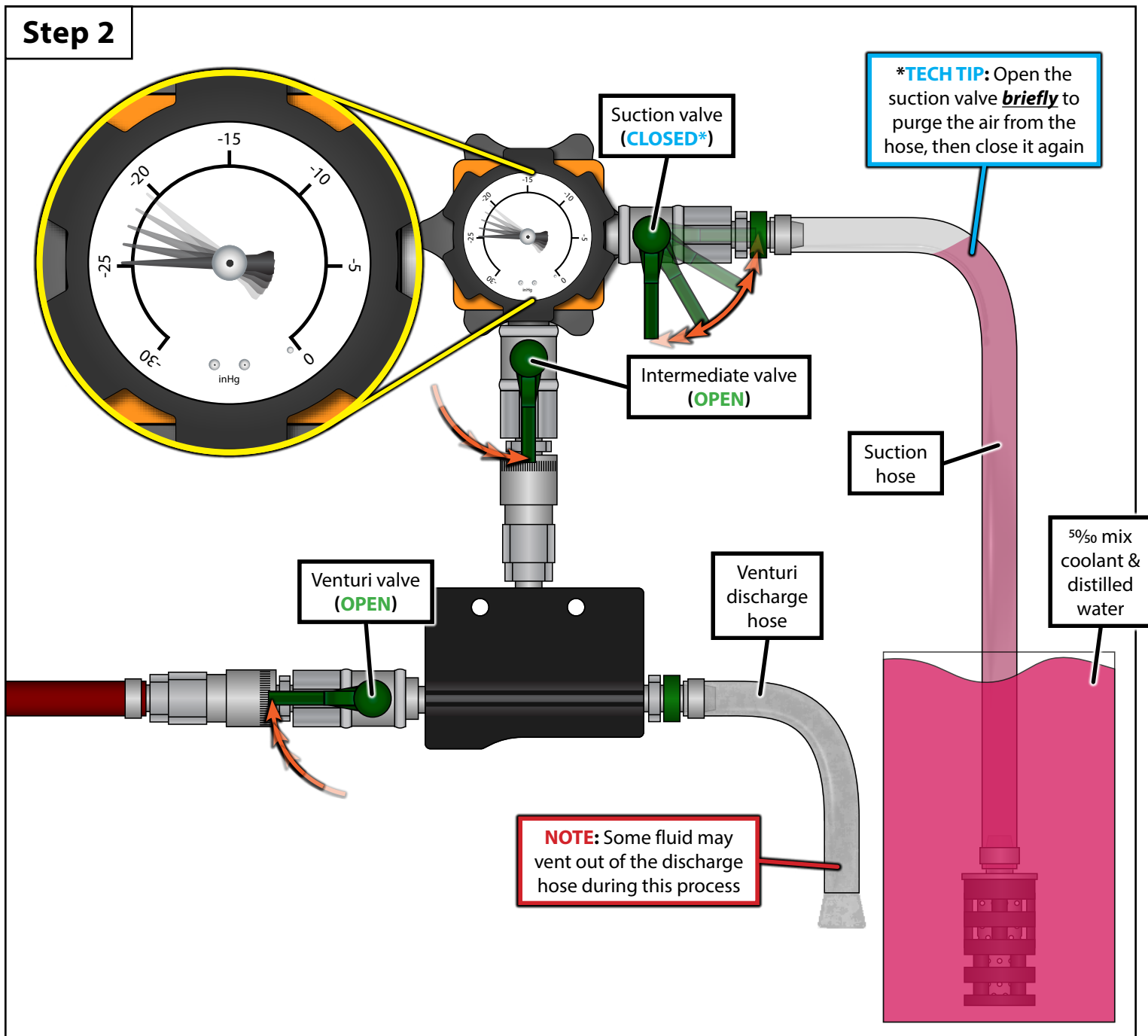
- Ensure that all of the valves are **CLOSED** on both the venturi adapter and the gauged valve assembly.
- Attach the air line from the air compressor to the ¼" air fitting on the venturi adapter.
- Point the venturi discharge hose downward and away from any electrical components
 - Some fluid may vent out of this hose during the process of drawing a vacuum on the system.
- Leave all of the valves closed, the gauge should read "0".



Section 2: Bleeding the Cooling System

Step 2

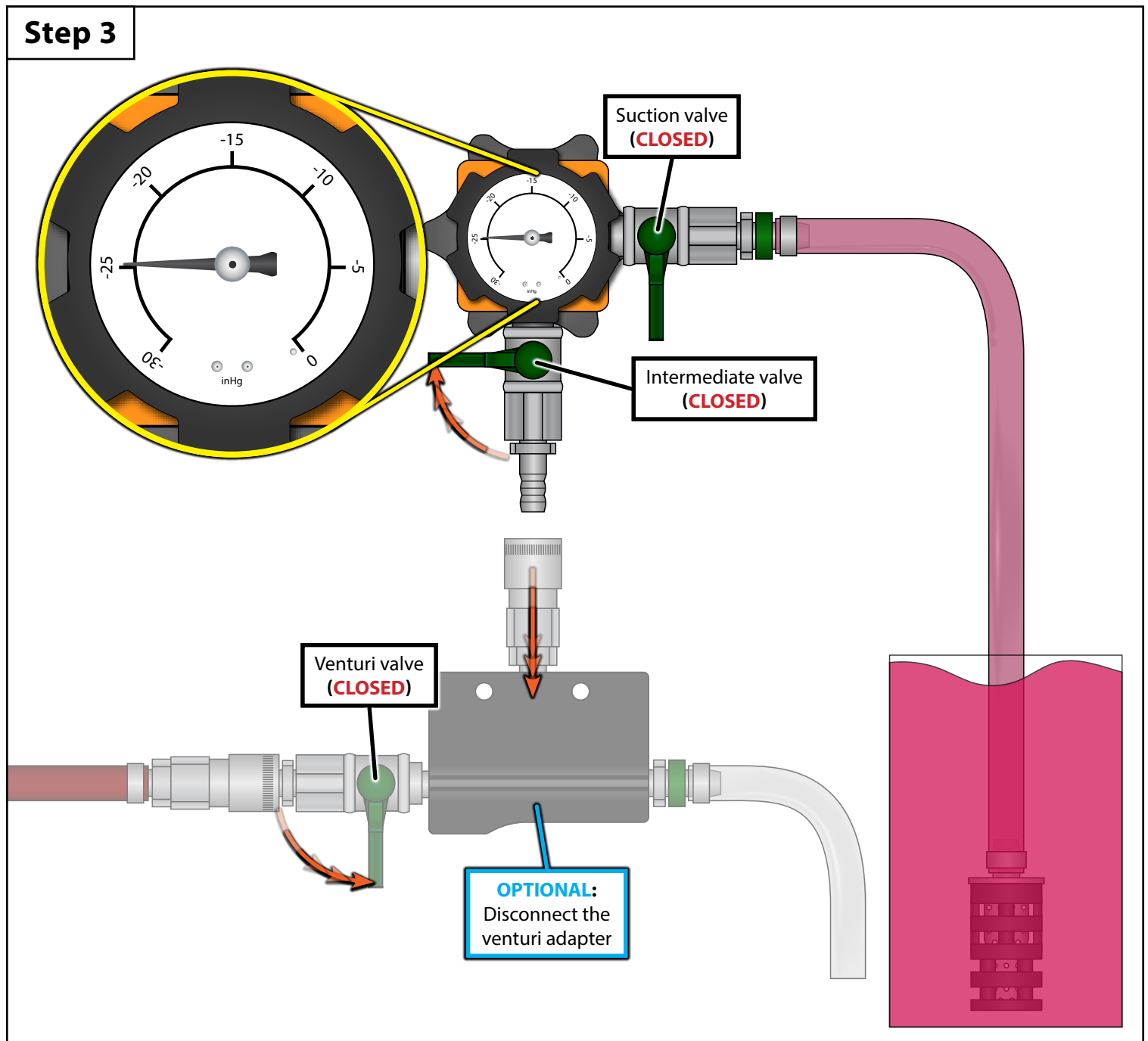
- Place the suction hose into your 50% mixture of coolant and distilled water.
- Open the venturi valve and the intermediate valve, this will cause air to rush out of the open ended hose, the gauge reading should begin to climb, and the radiator hoses should collapse inward, this is all normal.
 - **TECH TIP:** Open the suction valve **briefly** to purge the air from the suction hose, then close it again.
 - **NOTE:** Some fluid may vent out of the discharge hose during this process.
- Wait until the gauge reading stabilizes, then continue to draw vacuum for another 20-30 seconds to be sure you have the maximum vacuum you can achieve.
 - This can be as low as -15 in-Hg, and as high as -27 in-Hg, you will NOT be able to reach -30 in-Hg.



Section 2: Bleeding the Cooling System

Step 3

- Close the intermediate valve **FIRST**, then close the venturi valve.
 - **OPTIONAL:** Disconnect the venturi adapter from the gauged valve assembly.
- Watch the gauge for 2-5 minutes, if the gauge reading begins to drop this indicates that you either have a leak in the system or the gauged valve assembly may not have a sufficient seal to the filler neck (using an incorrect adapter can cause this).
- If the gauge reading does not fluctuate, you can proceed with filling the system on the next page.



Section 2: Bleeding the Cooling System

- Step 4**
- Open the suction valve and monitor the coolant mixture level inside the container.
 - **NOTE:** Keep the pickup submerged at all times, **DO NOT** allow the suction hose to draw in air.
 - If the level in the container is getting low but the gauge has not dropped to zero (0), close the suction valve, refill the container, then reopen the suction valve again.
 - The system is full once the gauge reads zero (0).
 - Open the intermediate valve and remove the tool from the engine bay. Double check the coolant level in your system, top off the mixture if it is low, or use a turkey baster to remove any excess coolant if it is high.
 - Reinstall the coolant reservoir cap, start the engine and run it up to operating temperature.
 - Confirm temperature gauge and cooling fan operation.
 - We recommend flushing the tool after each use with water, then allow the tool to air dry before storing it.

