

Some key notes to keep in mind when qualifying your Height Control Valve:

Immediate vs. Delayed Response: Most valves respond immediately to changes in ride height by introducing air to – or releasing air from – the air springs. Some older valve designs with non-proportional output incorporated a **“delayed response”** feature to slow down the air input/output, preventing constant air input/output. The delay feature often uses a viscous liquid to slow down valve components and response time.

Arm Length: To ensure optimal function, the arm length of a valve should match that of the OE application. Some valves have multiple holes in the arm for attaching the linkage, which provides flexibility and opportunities to match the OE design. Some valves have replaceable arms, but in the case of **Barksdale valves**, the arms should **not** be removed or replaced, as doing so may alter the valve’s performance.

Fittings: Various types of fittings, including ¼" NPT compression fittings and Push to Connect (PTC), are commonly used to establish secure and proper connections to air line tubing. If there is a need for a different fitting type or size, a fitting **adapter** can be used to ensure the correct connection.

Mounting Brackets: Mounting brackets are necessary for almost every application, as they allow the valve to be positioned correctly for optimal performance. If the brackets are undamaged, they can usually be reused with the new HCV. Most valves use ¼" **diameter bolts or studs spaced 1½" apart** to attach to the bracket. Many universal HCVs come with one or more brackets and offer various mounting options.

Mounting Orientation: While some valves can be mounted either horizontally or vertically, others **must** be mounted in a specific orientation to function properly. Horizontal mounting is more common than vertical mounting.

Dump Feature: Height control valves (HCVs) may have a built-in **dump function**, which enables the release of air from the suspension airbags and results in a complete lowering or deflation of the air suspension. This function is typically employed when the vehicle is parked and can be utilized through **two methods**:

1) Normally Open (N/O) - The dump valve opens when air pressure is **introduced to the dump port** through an air line, which is connected to a button or switch on the dashboard. By activating this switch, air pressure flows into the dump port, releasing air from the air springs.

2) Normally Closed (N/C) - The dump valve opens when air pressure is **removed from the dump port**. This occurs when the brake system has completely released its air and the parking spring brakes have been engaged, which activates the dump function in the height control valve.