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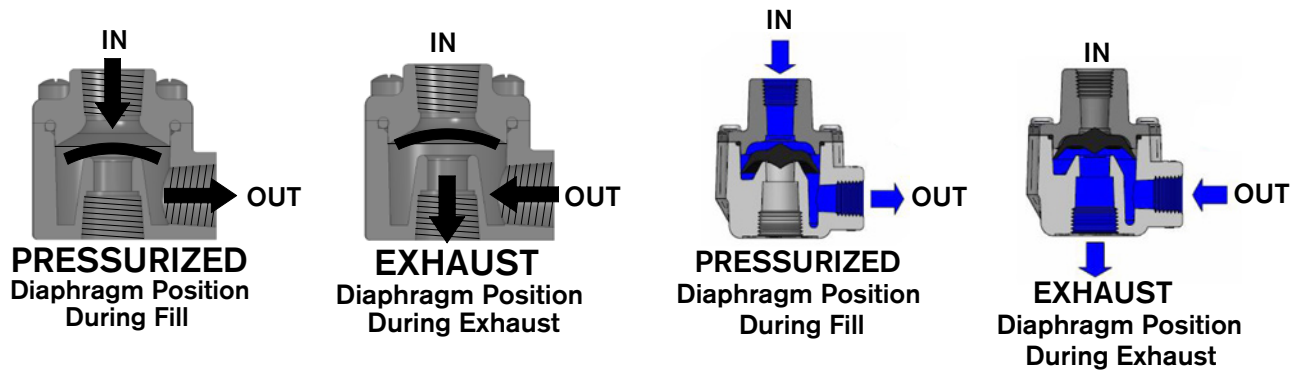
AIR CHAMP® PRODUCTS

Product Information Bulletin

Quick Exhaust Valve



The Quick Exhaust Valve provides four functions: Fast Air Exhaust, Contamination Expulsion, Dual Pressure Shuttle Valve and Check Valve.

Quick Exhaust Valve Benefits:

- Speeds clutch and brake response times by allowing air to exhaust at the air inlet port instead of traveling back through the control valve.
- Minimizes "overlap" when using a clutch and brake with independent actuating pistons, ensuring brake torque fully decays before clutch torque rises and vice versa.
- Reduces motor current spike at start-up by increasing the rate of brake torque decay.
- Increases friction facing life by minimizing overlap between clutch-brakes, and motors and brakes.
- Generally allows higher cyclic rates if the clutches or brakes thermal limit allows it.

Condensation/Contamination Expulsion Aid Benefits:

- Allows condensation and other contaminates to be expelled when the control valve is at a higher elevation than the clutch or bakes air inlet.
- Reduces the possibility of the clutch or brake air chamber developing rust that could interfere with operation or degrade seals.

Shuttle Valve Benefits:

- If a clutch or brake needs to operate at two air pressures the quick exhaust valve can isolate the two circuits allowing a high pressure/torque start and a lower running pressure/torque as in a torque limiting application or spring engaged brakes to operate at less than full torque yet fully release.

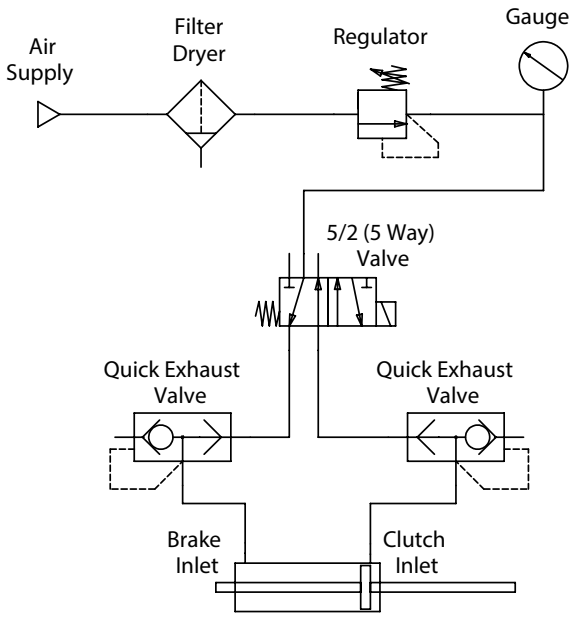
Check Valve Benefits:

- If a clutch or brake needs a local reserve air supply in case of a primary air system failure a reservoir with a check valve on its inlet can isolate it from the primary system allowing time for a controlled shut down.

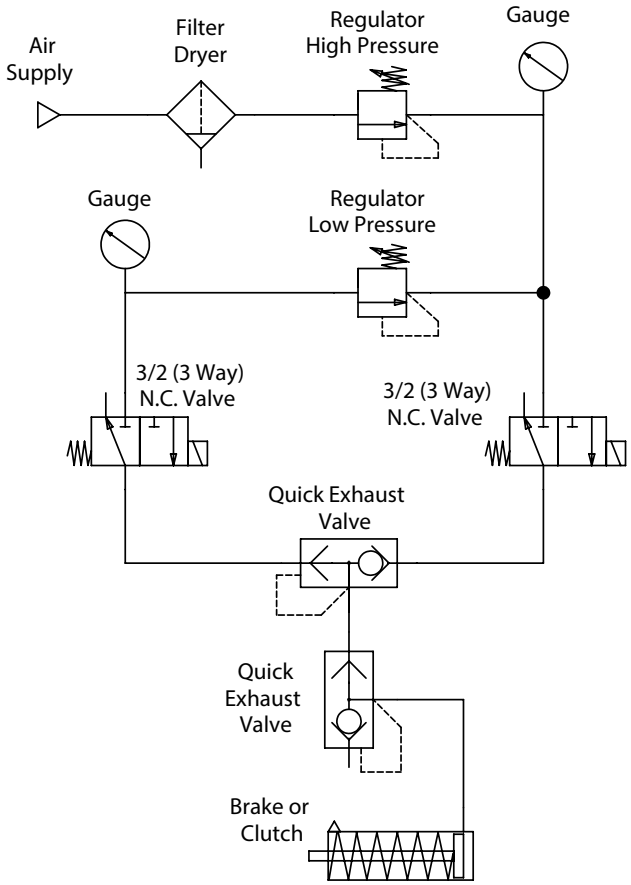
Installation Instructions:

- For quick exhaust or contaminate expulsion usage ensure the clutch or brake air inlet is located as close to the six-o-clock (bottom) position as possible so any liquids or contaminates flow towards it. Mount the Quick Exhaust Valve to the clutch or brake air inlet. The quick exhaust valve will open when a 3 to 4 psi drop occurs. For other uses see pneumatic circuit diagrams below.

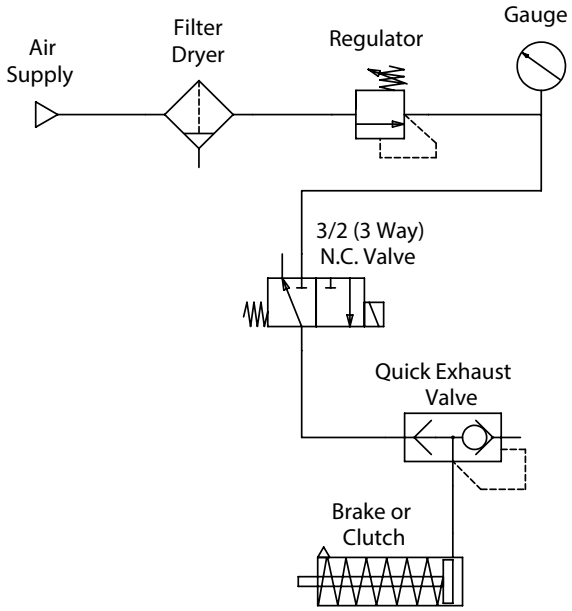
Typical Clutch-Brake Control Circuit



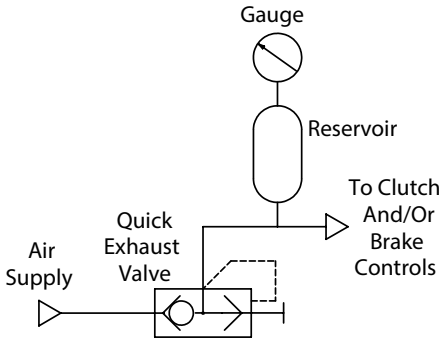
Typical Two Pressure Clutch or Brake Control Circuit



Typical Clutch or Brake Control Circuit



Quick Exhaust Valve as Check Valve for Remote Air Pressure Reservoir



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