

PCV (Proportional Control Valve)

The PCV (Proportional Control Valve) controls three distinct steps in the braking curve.

Figure 1

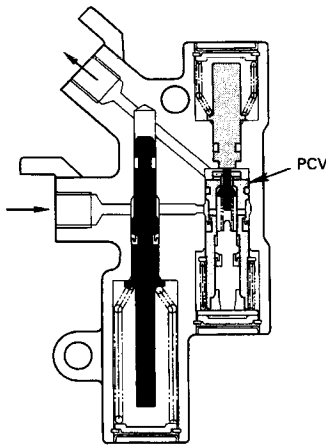


Figure 2

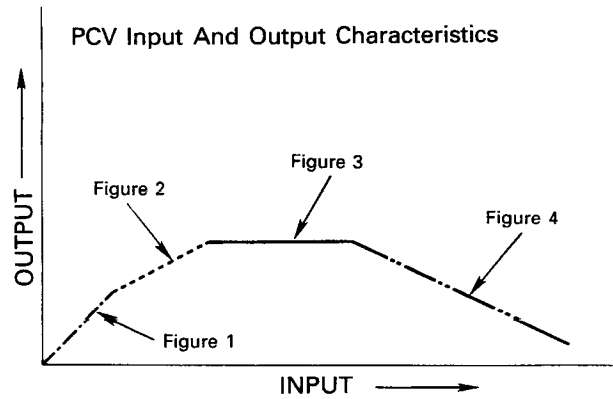
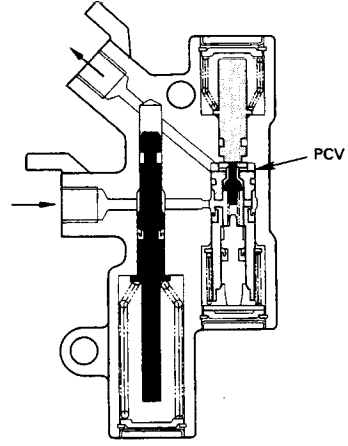


Figure 1: Without PCV
 Figure 2: Conventional PCV
 Figure 3: Effect of cut piston
 Figure 4: Effect of decompression piston

Figure 3

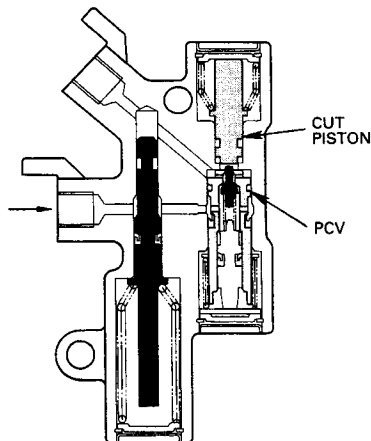
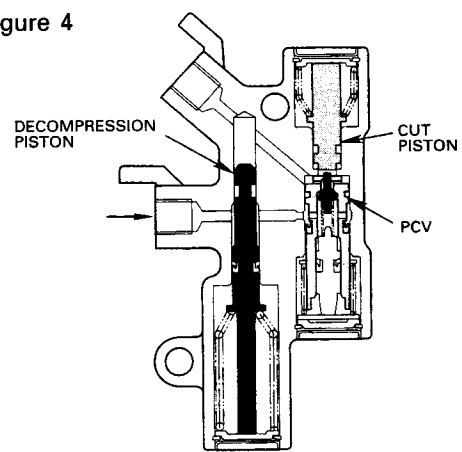


Figure 4



Initially, the PCV's output pressure increases in direct proportion to the increasing input pressure originating from the secondary master cylinder (Fig. 1). Following this, the automobile-type PCV causes the output pressure to increase at a slower rate than the input pressure, resulting in the first change in the pressure curve (Fig. 2).

As input pressure continues to increase, the cut piston activates, closing the valve and causing the output pressure to hold at a constant value (Fig. 3).

A further increase in input pressure forces the decompression piston down, which expands a sub-camber that draws pressure off the output side of the PCV (Fig. 4).