The MGM Magnum Spring Brake release bolt operates differently than the double diaphragm release bolt. As shown in Figure 1 below, when the release bolt is installed and tightened down, spring force is transmitted through the spring piston, to the release bolt, to the pushrod, and on to the service piston rod to provide parking brake force.

When the release bolt is backed off, the piston is “disconnected” from the pushrod and the spring is allowed to expand without transmitting any force to the service piston rod. This is why in normal operation it is important to have the release bolt properly installed and torqued to 35-40 lbs-ft.