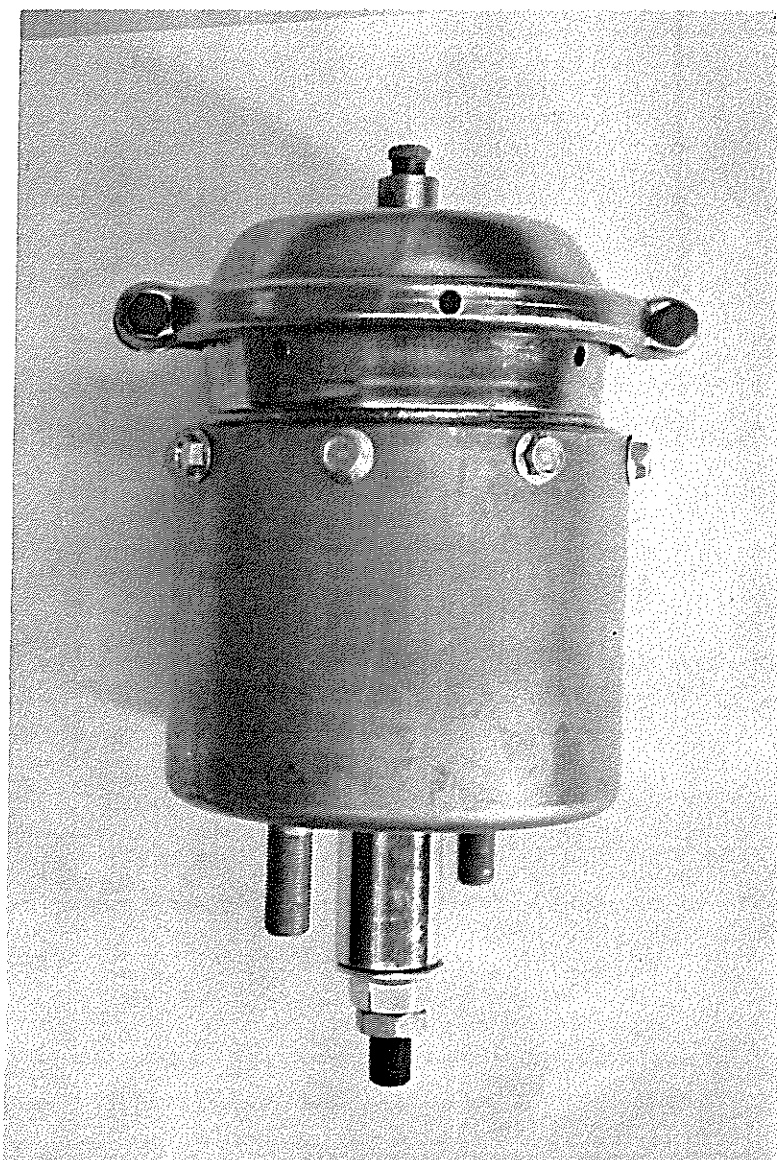


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## MAXI-SAFETY BRAKE ACTUATOR OPERATION



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The Maxi-Safety Brake Actuator is a brake actuator utilizing air pressure and coil spring tension. FIGURE 1 illustrates a typical cross-section view to show operation. In heavy lift application the Maxi-Actuator performs two functions.

The first function is: With the vehicle air system (pressure) at normal the service cavity is pressurized, the park spring is compressed as the piston is retracted and the emergency brake is released. Located on the instrument panel is a "Parking Brake Release" button. When the button is depressed the service cavity is exhausted and the spring tension sets the brake.

The second function is: With the brake set, pull out on the "Parking Brake Release" button to disengage the brake. Air from an independent air receiver now pressurizes the service cavity, the park spring is compressed as the piston retracts and the brake is released. The reserve air pressure is sufficient to release the brakes three times without engine operation, and rebuilds automatically with engine operation.

The above operation is a "push" action on the push rod to actuate the brake. By reversing the push rod in the air can assembly and the air can mounting, the push rod will have a "pull" action to actuate the brake. NOTE: In heavy lift Maxi-Safety Brake operation the drive wheel brakes are actuated with the driveline brake, however, the drive wheel brakes operated by the floor treadle are independent.

On articulated design units the Maxi-Safety Brake System can perform three functions. Two of these functions are performed when the air system is charged. Refer to FIGURE 2.

The first function is: "System Charged Brake Release". This takes place when the hold-off pressure builds to a minimum in the hold-off cavity. This forces the piston to retract, which in turn compresses the park and service spring, thus, disengaging the brake.

The brake treadle valve allows the actuator to perform the second function: "System Charged Service Application". This takes place when service air is applied to the service cavity, which forces the diaphragm against the push rod, thereby applying the brake. When the service cavity pressure is released the service spring returns the push rod and diaphragm, disengaging the brake.

The third function is: "System Not Charged", for "emergency" application. When the air system pressure drops below minimum in the hold-off cavity the compressed park spring tension forces the hold-off piston to activate the brake automatically.

For a normal "Park" application, the above action can be duplicated by releasing the hold-off cavity pressure through the instrument panel parking brake release valve.

On units without an Auxiliary Air Tank or Parking Brake Release, the unit air system must be recharged to the "first function" condition to release the brakes.

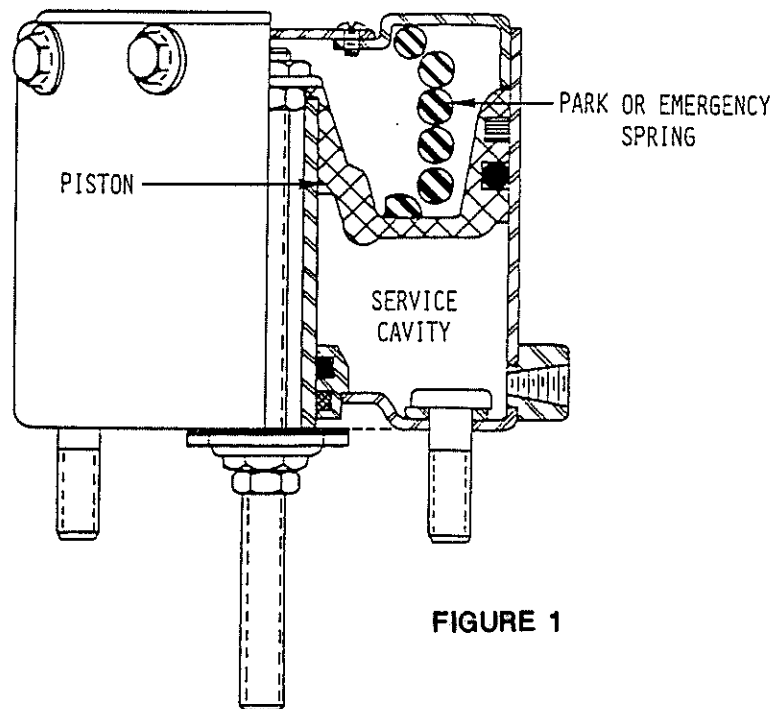


FIGURE 1

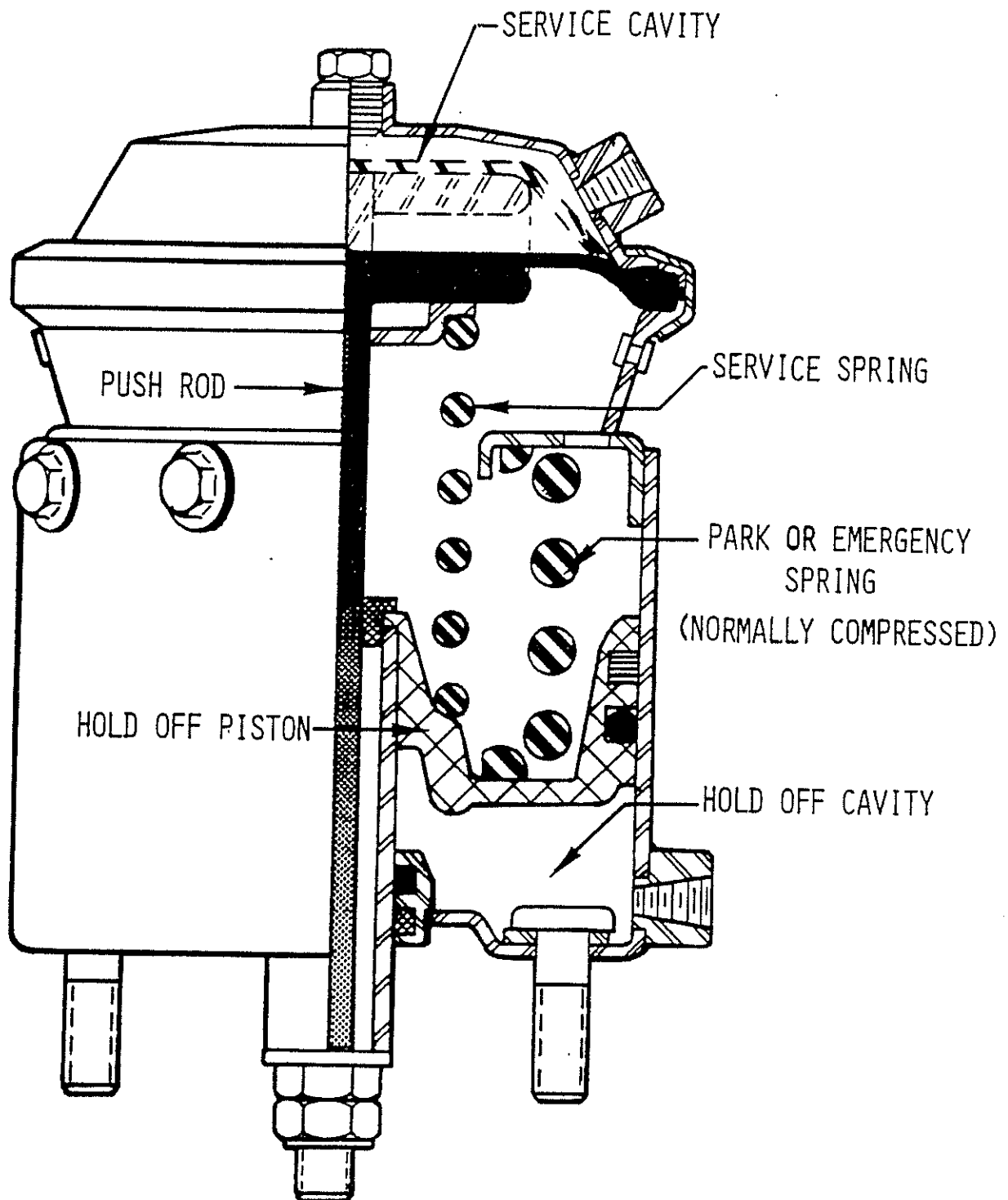


FIGURE 2