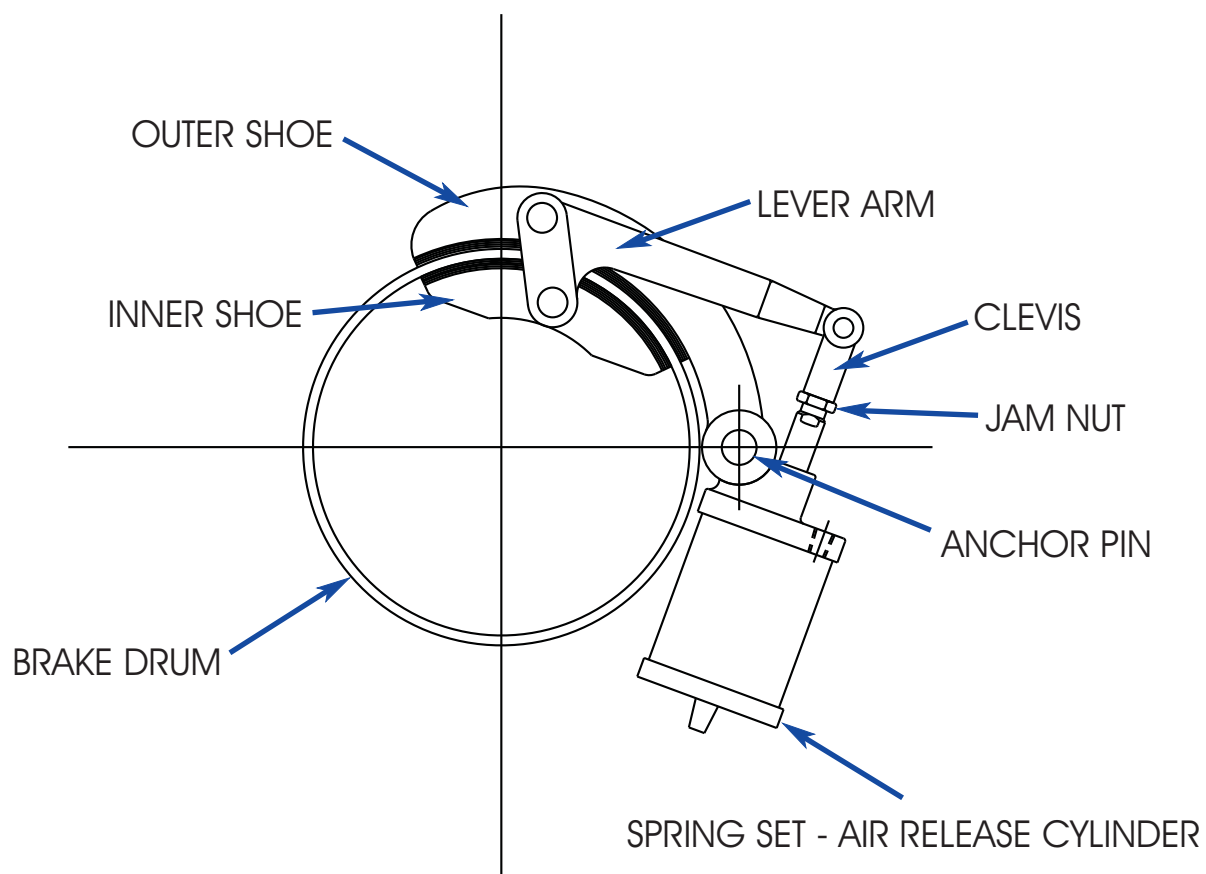




BRAKE SELECTION

RIGHT AND LEFT HAND BRAKES:

All Brake Parts except the lever assembly are interchangeable on both right and left hand brakes.

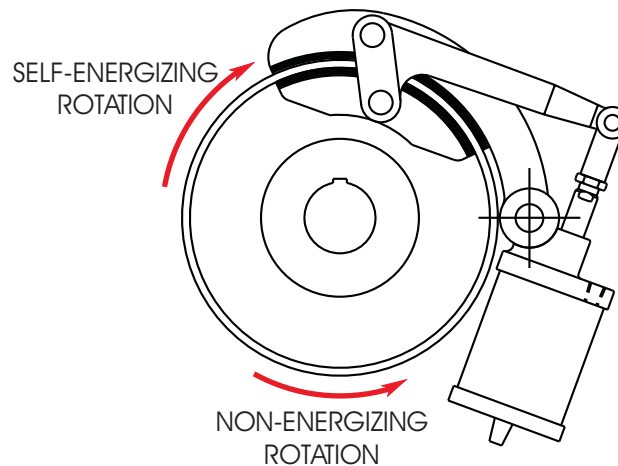


Most illustrations and drawings show right hand mounted brakes. The determining factor for right or left hand brakes is the direction of the outer shoe from the anchor pin. Looking at the open end of the brake drum, the outer shoe of a right hand mounted brake wraps around the drum in a counter-clockwise direction from the anchor pin to the toe of the shoe. Left hand brakes are symmetrically opposite



BRAKE SELECTION

SELF-ENERGIZING AND NON-ENERGIZING BRAKING:



A self-energizing brake is determined by the servo rotation of the brake drum with respect to the brake assembly mounted to that drum. When the brake is applied while the drum rotates in the opposite direction of the wrap of the outer brake shoe (the servo direction) a vast increase in braking effect is generated over that which can be expected from the normal brake actuating forces. The brake is then self-energizing. If the drum is rotating in the same direction of the wrap of the outer shoe, the drum is in anti-servo rotation and the brake is non-energizing. The same rationale applies to linear brakes where the braking surface travels through the brake in linear directions.

CHOOSING SELF-ENERGIZING OR NON-ENERGIZING:

For emergency braking or when a brake is required to stop a load as fast as possible, a brake configured as self-energizing may be used. For more controlled braking where maximum consistency and smoother stopping is desired, a non-energizing brake should be used. After concluding which configuration is most appropriate for the particular application requiring braking, a determination can be made whether a left or right hand brake should be used based upon the direction of rotating or moving members of the application.

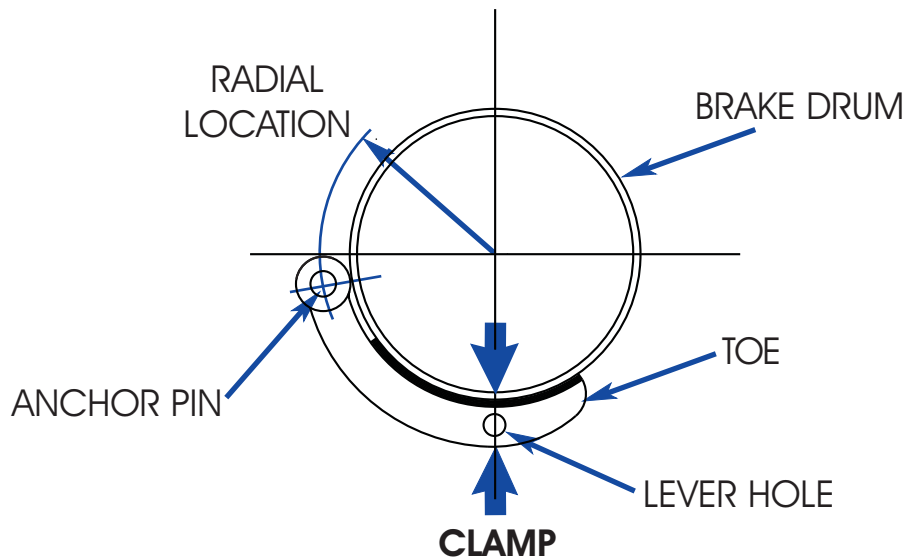


INSTALLATION & OPERATION

MOUNTING THE BRAKE ASSEMBLY:

ANCHORING THE BRAKE:

The entire brake assembly is mounted by a single anchor pin. Typically, the anchor pin is cantilever mounted to the machine providing the attachment and support be sufficiently rigid to bear the braking load. If this is not feasible, an outboard support may be added. There are two factors to locating the anchor pin: The radial location and the clockwise location (for drum brakes).



RADIAL LOCATION OF THE ANCHOR PIN:

The radial location of the anchor pin is very important to proper and consistent braking. The centerline of the anchor pin must be located parallel and at the proper radial distance from the centerline of the brake drum (or braking bar for linear brakes). When the anchor pin has been rigidly and accurately located, the lining of the outer brake shoe should fit tightly from heel to toe along the outside braking surface of the drum or braking bar. The outer shoe may be used as a fixture for the anchor pin by clamping the shoe to the drum near the lever pin bore as shown above.



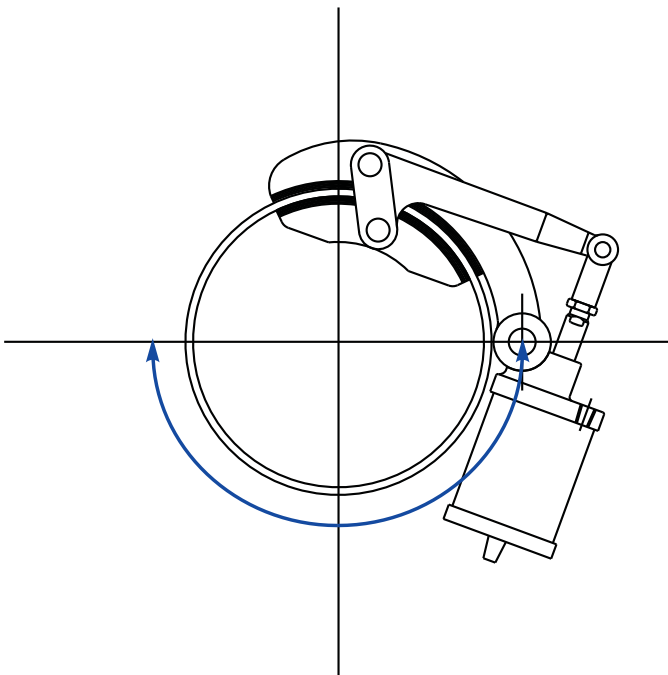
MOUNTING THE BRAKE ASSEMBLY (Cont.):

CLOCKWISE LOCATION OF ANCHOR PIN:

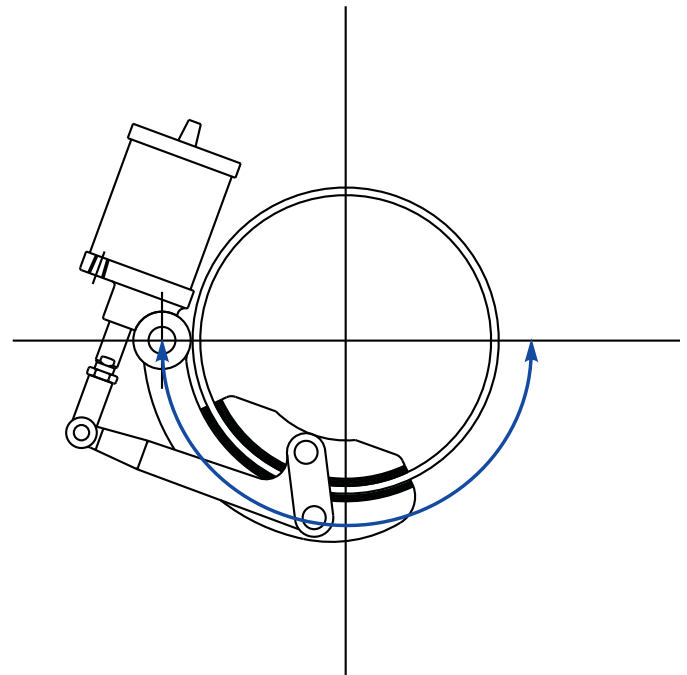
The anchor pin may be located at any point around the circumference of the brake drum but the following points should be considered.

FOR CONTINUOUS DRAG BRAKING - The clockwise location of the anchor pin is not an important factor.

FOR INTERMITTENT BRAKING - The location of the anchor pin is optimal that the center of gravity of the complete brake assembly about the anchor pin will tend to keep the outer shoe in contact with the drum. Approximately any position from 3 o'clock through 9 o'clock will accomplish this as shown below.



3 O'CLOCK LOCATION

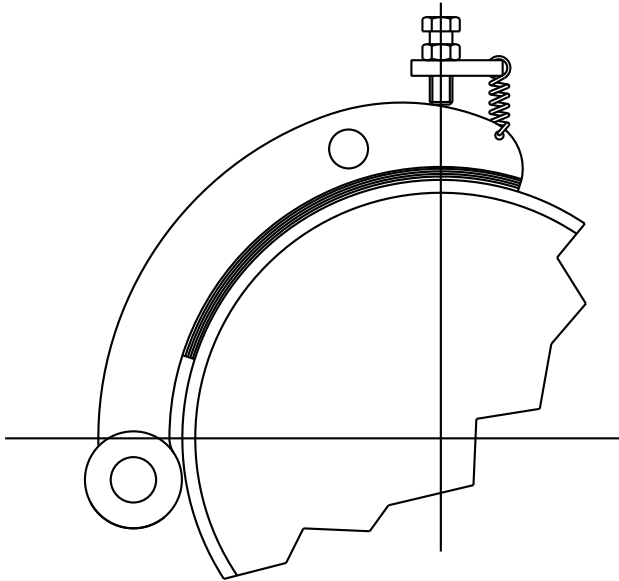


9 O'CLOCK LOCATION



INSTALLATION & OPERATION

MOUNTING THE BRAKE ASSEMBLY (Cont.):



LEFT HAND SHOWN

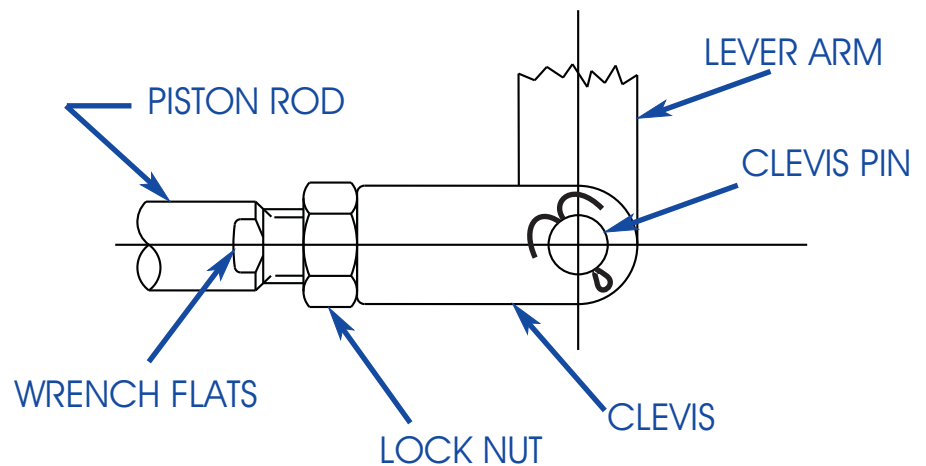
FOR SAFETY BRAKING (Long term Release):

In applications where the brake is released most of the time or it is undesirable to allow either of the shoes to contact the drum while the brake is released, an adjustable stop may be used. This can be accomplished by using a screw against which the outer shoe can stop when the brake is released. If the weight of the brake assembly does not cause the outer shoe to bear against the stop when released, then a tension spring may be required as shown at left.

BRAKE ADJUSTMENT:

BRAKE ACTUATING SPRING:

Spring pressure is adjustable by turning the clevis on the piston rod. The spring pressure should be adjusted and set after the brake has been installed in place. The first step is to loosen the lock nut and apply air pressure to release the brake actuating spring. This allows the clevis and piston rod to be turned easily in relation to one another. Wrench flats are provided on the piston rod of the 7-10 series cylinder. The 14-20 series cylinder does not have wrench flats, so the clevis pin must be removed and the clevis moved free of the brake lever arm in order to adjust the spring. The clevis then can be turned about the piston rod.





BRAKE ADJUSTMENT (Cont.):

SPRING PRESSURE SETTING:

To realize the maximum brake actuating force from the spring at any given air release pressure setting, as air is applied to the brake, adjust the clevis out toward the end of the piston rod as far as possible while keeping the smallest clearance between the brake drum surfaces and both inner and outer shoe linings. Any movement of the shoes that can be detected away from the drum surfaces will normally be sufficient clearance. At this point, the complete brake assembly would be allowed to be removed from the anchor pin (provided the clevis pin is in place connecting the lever arm with the clevis and the rotor clip is removed from the anchor pin).

CAUTION:

A drop in air pressure after the brake assembly has been adjusted for the proper spring pressure could prevent the brake from releasing completely and cause continuous drag braking and possible overheating. Air pressure settings between 75 psi and 100 psi will provide the best brake performance along with good spring life.

Part Numbers:

