



FAQs for Bear-Loc®

1. What kind of service life can I expect from a Bear-Loc®?

Answer: The Bear-Loc® provides exceptional Return on Investment. The Bear-Loc® design has proven itself through decades of continuous use through harsh sub-sea and above-sea environments such as oil-rig and US NAVY applications. It can serve in any environment where hydraulics are used. When used according to its design specifications, it will provide the user many years of service.



2. What kind of maintenance does Bear-Loc® require?

Answer: We recommend periodic flushing of the lock with hydraulic fluid to remove any contaminants that have been deposited by hydraulic fluid flow during operation. Flushing fluid through the two Bear-Loc® ports is adequate to provide this flushing maintenance and keep the lock functioning properly. Seal “lives” can vary so if your Bear-Loc® is older than 5 years, be sure to call us for guidance regarding maintenance to the seals.

3. Does Bear-Loc® damage the actuator rod and its chrome plating due to its interference fit and metal on metal interference locking design?

Answer: No, The Bear-Loc® moves freely when hydraulic pressure is applied. The design provides the proper level of clearance during stroke to prevent contact damage to the rod and its finish. The interior liners are a different material than the steel sleeve and provide the necessary locking force yet provide protection of the rod plating when the lock is engaged. The essence of Bear-Loc’s proven technology is its failsafe capability to lock instantly anywhere on the rod when pressure is removed (whether accidental or on purpose), and move freely when pressure is applied (no wear or friction during motion). Physical stops do not have those properties.

Bear-Locs® typically provide continuous service in the field for decades. We recently refurbished a Bear-Loc® and cylinder after 50 years of service in a harsh NAVY environment.

4. Is the Bear-Loc® a brake? What is the difference between a hydraulic lock and a brake?

Answer: No, Bear-Loc® is a positive locking device, it is not a brake. It locks a load in position when desired motion stops or locks instantly when undesired power loss could cause motion. This provides safety and serves as an emergency stop.

Brakes are used intentionally to slow down motion and to stop motion. The Bear-Loc® is not intended to be used as a braking device to slow down motion. It provides instant stopping for safety purposes and such occasional stops do not harm the rod. The lock is not intended to be used for repetitive braking action.

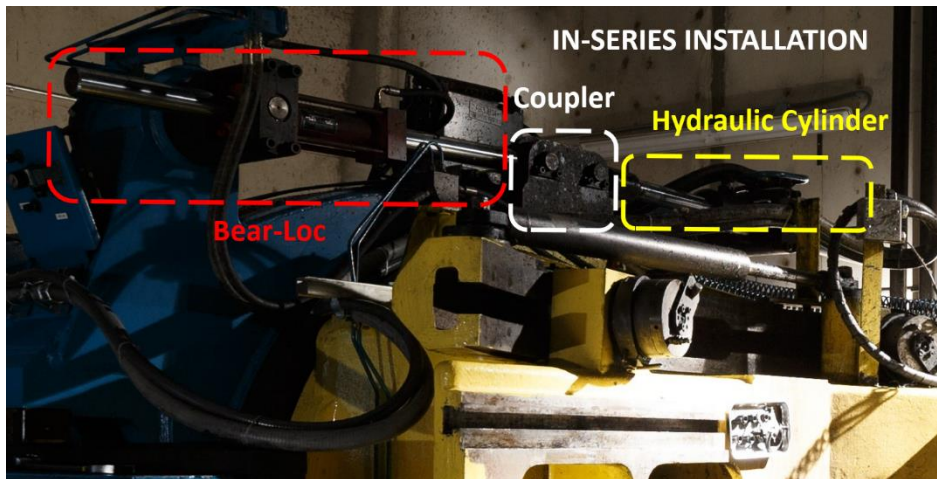
5. Can the Bear-Loc® be disassembled in the field to service it or refurbish the lock?

Answer: The interference fit requires special equipment that the factory uses to fit the rod initially into the lock. Because of this, the rod cannot be removed and reinstalled from the lock in the field. Other parts and seals of the cylinder can be serviced in the field, but the lock itself must be factory refurbished. Therefore in critical applications, purchase of a spare Bear-Loc® is strongly encouraged.

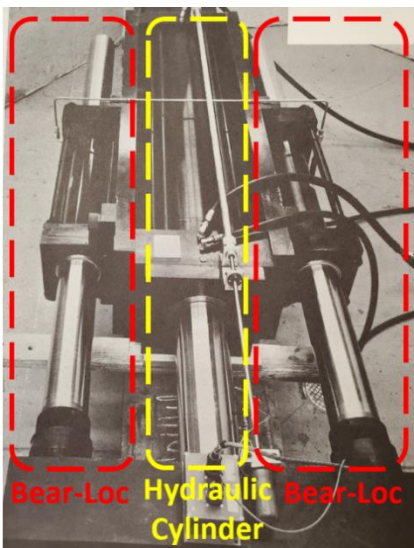
6. Please explain the Bear-Loc® mounting options, and specifically, what is in series, as compared to parallel mounting?

Answer: Below is a picture of an *in-series* installation of a Bear-Loc® on a testing machine. The Bear-Loc® is on the left and the hydraulic cylinder are attached to a coupler on opposite sides of the coupler. The Cylinder actuates and moves the coupler. When power is removed, the Bear-Loc® locks the coupler position.

There are many practical mountings and coupling methods that a customer can consider for their design. This shows an application where there was not space to add the lock onto the cylinder, but there was space to add the lock on the opposite side of the item being put into motion. The installation shows the cylinder and lock in alignment or in a row and thus in series. This can be applied either horizontally, vertically or any angle associated with stroke axis.



An *in parallel* installation has the lock and the hydraulic cylinder side by side or in parallel and connected to the same item and they both stroke next to each other.



For example, customers with manufacturing presses needed Bear-Locs® but could not have the lock attached to the cylinder due to space limitations, or it is not desirable to replace the current cylinder. In these cases, the cylinders on the press could remain in place and the Bear-Loc® is installed in a parallel location to provide the locking power. There is scalability in this option. A press may have one cylinder or more and a stand-alone Bear-Loc® could be provided as one or more locks. Essentially, 4 cylinders does not mean it has to be 4 locks. If one lock provides enough locking power where 4 cylinders are used, then one lock could be mounted in a centralized point on the machinery rather than 4. There is flexibility to the customer to choose the manner of locking and how many they desire based on space claims and their design. The concept is the same and can be applied either horizontally, vertically or any angle associated with stroke axis.



7. Are Bear-Locs® available “off the shelf”? How much do they typically cost?

“Off the shelf” is not possible because Bear-Loc® is a custom product designed specifically for each customer’s requirements. Bear-Loc® owes failsafe reliability to this custom, precision engineering process. Its durability is also made possible by the selection of high-quality materials. As the best locking solution for your application, it has longevity, often working for decades without needing repair. We encourage you to factor the annual safety and operational costs of not having a failsafe, long-lived locking solution. While there is no “typical” price, expect a single system to be a four to five-figure investment. Quantity matters: the per unit pricing does go down with higher quantities. We can also achieve a better price point for some of the more frequently ordered rod sizes. Whether you are in the design phase of a project or are looking to upgrade existing hydraulic equipment, we encourage you to contact us to discuss your needs and the most cost-effective approach to incorporate Bear-Loc®.