

The Humphrey SAH-15 centrifugal-force operated “Saf-T-Stop” Brake is designed to provide a safe stop in the event of shaft or coupling failure. A description of the operation of this brake, as well as a parts drawing and parts list, are attached.

Some important instructions regarding the operation and maintenance of this safety feature are as follows:

1. Be sure that the Item 2 Pawls are in normal operating position before starting the manlift. This means that they will not engage on the Item 11 Stop Blocks.
2. Be sure that the micro switch lever arms are adjusted so that the switches are activated if the Item 2 Pawls swing out and engage the Item 11 Stop Blocks. When the switch is activated, it shuts off the current to the drive motor.
3. The micro switches that are attached to the Item 11 Stop Blocks must be wired in series with the micro switches on the other safety stop devices of the manlift. After they have been activated, the Item 2 Pawl must be returned to its normal position and the reset pushbutton pushed, before the manlift can be restarted.
4. If the Item 2 Pawls should swing out and engage the Item 11 Stop Blocks on start-up of the manlift, this can be corrected by turning the Item 5 Set Screws down one turn. However, if this occurs after the manlift has been in service for a period of time, we would suggest you contact the factory for instructions.
5. To reset the Item 2 Pawls after they have engaged the Item 11 Stop Blocks, rotate the Item 19 Cam Lock, which holds the Item 2 Pawls out, and push the Item 2 Pawls back down to their normal operating position. Then push the reset pushbutton to restart the manlift.
6. If the micro switch lever arms are not adjusted properly, it is possible for the Item 2 Pawls to engage the Item 11 Stop Blocks, and not shut off the current to the drive motor. If this occurs, the motor will continue to drive through the “Saf-T-Stop” Brake, wearing out the Item 13 Friction Discs. If the Item 13 Friction Discs have been badly worn, they should be replaced. In any event, the three (3) Item 10 Hex Head Cap Screws, which hold the Item 9 Ring Clamp against the end of the Item 1 Brake Clamp, must be re-torqued to the original torque specifications. The torque setting for the replacement “Saf-T-Stop” Brake for Humphrey Serial No. Unknown is 46 In. Lbs. The serial number of the brake is No. 1444235-09. We recommend you check the torque setting every time you do your monthly inspection of the manlift.
7. Should you experience any problems with your “Saf-T-Stop” Brake that you feel you need assistance with, we would suggest you contact the factory for instructions.

TO REPLACE FRICTION DISCS AND/OR METAL INNER AND OUTER BRAKE DISCS:

1. Loosen Item 15 Set Screws. If the holes in Item 1 Brake Clamp do not line up with the set screws, loosen the Item 10 Hex Head Cap Screws so you can rotate the Brake Clamp until they are lined up.
2. Remove the "Saf-T-Stop" Brake assembly from the head shaft and place it on a work surface with the back of the item 17 Brake Plate down.
3. Remove the Item 10 Hex Head Cap Screws and the Item 9 Ring Clamp.
4. Lift Item 1 Brake Clamp complete with pawls, etc. off of the brake assembly.
5. Remove the disc pack consisting of five (5) Item 13 Friction Discs, two (2) Item 12 Outer Brake Discs and two (2) Item 14 Inner Brake Discs.
6. Insert any discs being replaced, starting with an Item 13 Friction Disc, an Item 14 Inner Brake Disc, and item 13 Friction Disc, and Item 12 Outer Brake Disc, etc. until all of the discs are used, ending with an Item 13 Friction Disc.
7. Re-install the Item 1 Brake Clamp and the Item 9 Ring Clamp. Being sure the holes in the Item 1 Brake Clamp line up with the set screws in Item 17 Brake Plate, tighten the three (3) Item 10 Hex Head Cap Screws enough so the assembly does not move while installing on the head shaft.
8. Install the entire brake assembly back on the head shaft, making sure that the Item 2 Pawls line up with the Item 11 Stop Blocks. Tighten the Item 15 Set Screws.
9. Torque the three (3) Item 10 Hex Head Cap Screws to the specified torque setting. Insert a wire through the holes in the cap screws and attach a lead seal.

TO REPLACE THE LINKAGE ON THE PAWLS:

1. Each set of two (2) Item 2 Pawls has the following linkage:
 - a. 1 ea. Item 19 Cam Lock
 - b. 1 ea. Item 18 Torsion Spring
 - c. 2 ea. Item 7 Links
 - d. 1 ea. Item 8 TW2 Lock Screw
 - e. 3 ea. Item 20 Stripper Bolts
2. Remove any items to be replaced.
3. Place a new Item 18 Torsion Spring on an Item 19 Cam Lock. The coil portion of the spring goes over the hub portion of the cam lock. One end of the spring goes into the small hole in the cam lock.
4. Insert an Item 20 Stripper Bolt through the Item 9 Cam Lock from the back side.
5. Insert the round hole of an Item 7 Link over the Item 20 Stripper Bolt.
6. Hook the other end of the Item 18 Torsion Spring over the Item 7 Link.
7. Screw the Item 20 Stripper Bolt, with the Item 19 Cam Lock, the Item 18 Torsion Spring and the Item 7 Link, into the wide end of the Item 2 Pawl.
8. Attach the other end of the Item 7 Link (slotted end) to the narrow end of the other Item 2 Pawl, using an Item 20 Stripper Bolt.
9. Attach the other two ends of the Item 2 Pawls together using another Item 7 Link. Use an Item 8 TW2 Lock Screw inserted through the slotted end of the Item 7 Link on the Item 2 Pawl that has the Item 19 Cam Lock assembly attached to it. Use an Item 20 Stripper Bolt inserted through the round hole of the Item 7 Link on the Item 2 Pawl that does not have the Item 19 Cam Lock assembly attached to it.
10. Repeat the above step for the other set of two (2) Item 2 Pawls.
11. Please remember that each set of two (2) Item 2 Pawls has only one (1) Cam Lock assembly.
12. If the Cam Lock assemblies are properly installed, the Item 18 Torsion Spring will keep it forced down against the Item 1 Brake Clamp. If you pull up on the Cam Lock and when it is released it snaps back down, it is correct.

TO REPLACE THE ITEM 2 PAWLS:

Note: When replacing Item 2 Pawls, you must install new Item 4 Spring Pins, and we recommend you install new Item 6 Compression Springs.

1. Remove the linkage on the set of item 2 Pawls to be replaced, or both sets if necessary.
2. Wrap a piece of wire around the slot on the end of the two (2) Item 3 Pivot Pins.
3. Drive the Item 4 Spring Pins down into the Item 3 Pivot Pins.
4. Pull the item 3 Pivot Pins out. When doing this be careful not to lose the shim washers on each side of each item 2 Pawl. Drive the Item 4 Spring Pin out of the Item 3 Pivot Pin.
5. Remove the item 2 Pawl or pawls to be replaced.
6. Remove the item 5 Half Dog Point Set Screws from each Item 2 Pawl. Also remove the Item 6 Compression Springs.
7. Screw the Item 5 Half Dog Point Set Screws into the new Item 2 Pawl or Pawls until the top of it is flush with the surface of the item 2 Pawl.
8. With a pair of pliers, bend the end of the Item 6 Compression Spring in a little so it won't bind when inserted in the holes of the Item 1 Brake Clamp. Insert the other end of the Item 5 Half Dog Point Set Screw.
9. Install the new Item 2 Pawl or Pawls, along with the Item 3 Pivot Pins, making sure you install the shim washers on each side of each Item 2 pawl. Make sure that the ends of the Item 6 Compression Springs go into the holes provided for them in the Item 1 Brake Clamp. Install a new Item 4 Spring Pin in each Item 3 Pivot Pin.
10. Install the linkage as previously explained.
11. Test run the brake to make sure the pawls don't fly out at normal speed. If they do, turn the Item 5 Half Dog Point Set Screws in each pawl down one turn. Test again and repeat if necessary, until they stay in.