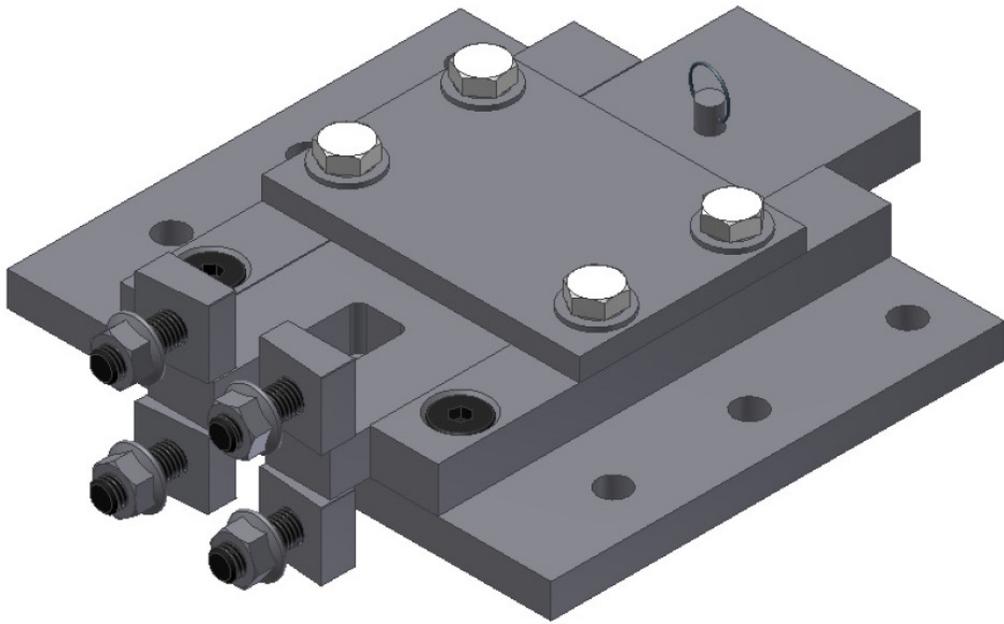


# **Hollister-Whitney Elevator Corporation**

## **Installation Manual for the #390 Rail Lock**





# Hollister-Whitney Elevator Corporation

#1 Hollister-Whitney Parkway  
Quincy, IL 62305  
Phone: 217-222-0466

Fax: 217-222-0493  
e-mail: [info@hollisterwhitney.com](mailto:info@hollisterwhitney.com)  
[www.hollisterwhitney.com](http://www.hollisterwhitney.com)

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## I. #390 rail lock features and specifications

### a. Features

- The #390 rail lock from Hollister-Whitney has been designed to adhere to the ASME A17.1-2007, section 2.7.5 and CSA B44-07 code requirements.
- It has been designed and fabricated using a combination of Hot-Rolled Steel and Cold-Rolled Steel for strength and durability.
- The rail lock is also supplied with a G.A.L. gate switch that can be used to remove power from the machine to prevent unintended movement.

### b. Requirements

- The #390 rail lock must **NOT** be field modified in any fashion. Modification of the rail lock will void the warranty, and weaken the rail lock. A weakened rail lock may not prevent movement of the car as originally designed.
- The rail lock is designed for use on 15# rails and Hollister-Whitney designed car slings, **ONLY**.
- The #390 rail lock is also designed for use with Hollister-Whitney guide shoes. Other shoes may require an adapter to mount to the rail lock. The adapter must be designed and supplied by the customer, and must not weaken the rail lock system.

### c. Maximum System Loads



***THE ELEVATOR SUSPENSION MEANS MUST BE IN PLACE DURING USE! THE RAIL LOCK IS NOT DESIGNED TO HOLD THE FULL CAR WEIGHT OR FULL RATED CAPACITY WITHOUT THE COUNTERWEIGHT! FAILURE TO RETAIN THE SUSPENSION MEANS WILL RESULT IN RAIL LOCK FAILURE, WHICH WILL RESULT IN INJURY OR DEATH!***

- The maximum rated car capacity for the #390 rail lock is 5,000#.
- The 5,000# maximum capacity is based on a fully loaded car, 2:1 roped with a 50% counterbalance. The suspension means must be in place for the #390 rail lock to function properly. The car may be fully loaded or empty.

### d. Assembly print and parts list

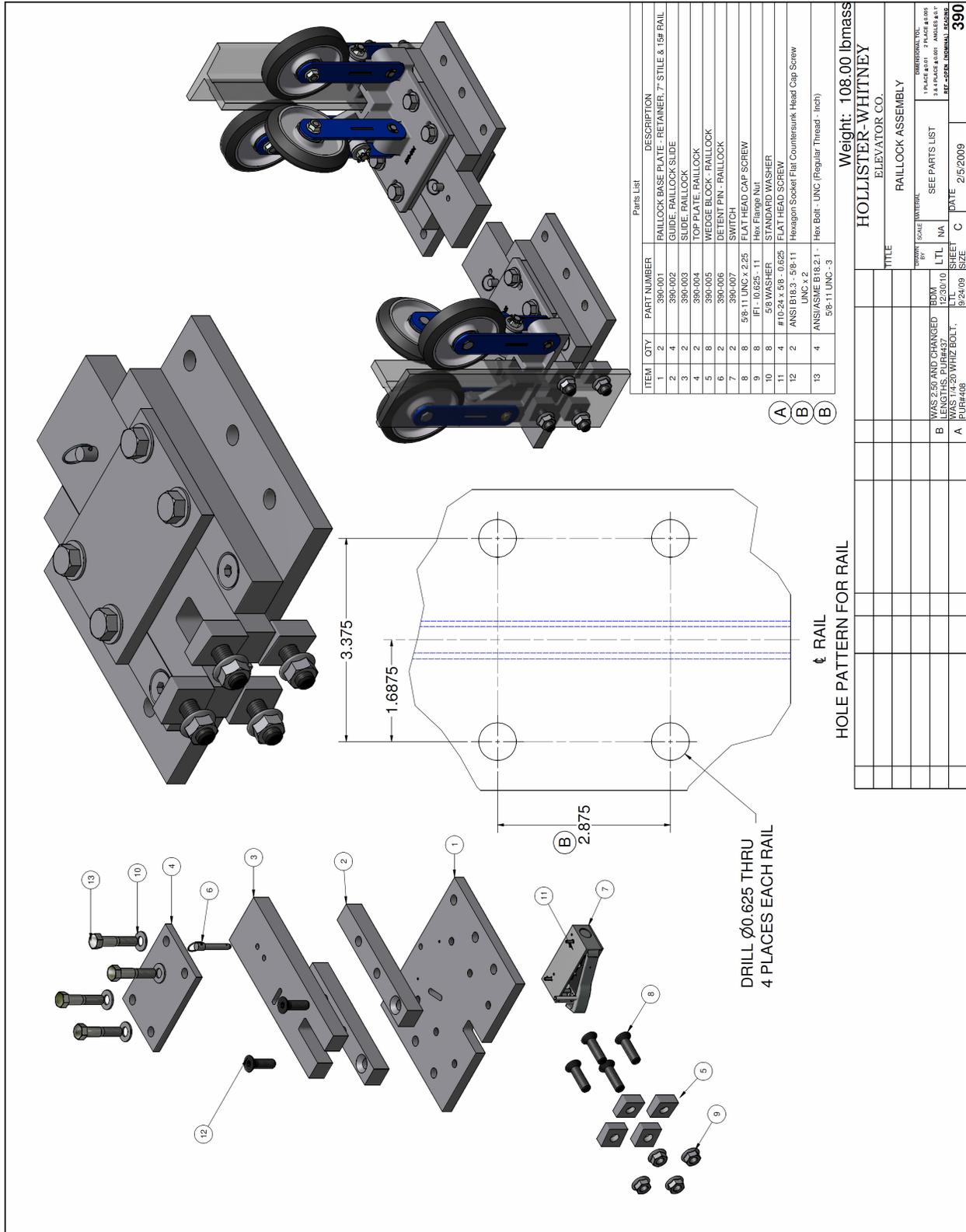
- Refer to Figure 1 for the assembly print and parts list.



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## II. Installation and use

### a. Installing the #390 rail lock

- The first step to install the #390 rail lock is to connect the wiring in the gate switch, item "A", located on the bottom of the rail lock. Refer to Figure 2.

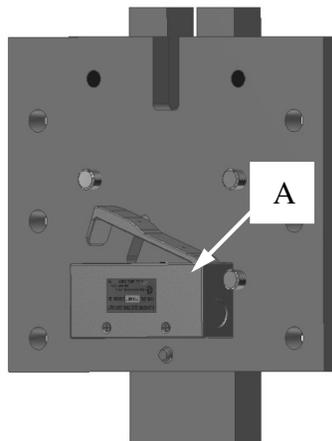


Figure 2

- To wire the rail lock switches, place the rail locks at their mounting locations at the ends of the car sling crosshead, but do not mount the rail locks to the crosshead at this time.
- With the rail locks at their mounting locations, route the 2 wires (per switch) that will be used to connect the gate switches to the elevator safety string wiring.
- Remove the cover from the switch, item "A", and remove the conduit plug at the rear of the gate switch from the switch enclosure. (The rear of the switch will be the side AWAY from the "forked" lock blade.) Install a conduit fitting in the switch enclosure, and route the wires through the conduit fitting and into the switch. Connect one wire to each of the screw terminals, items "B" and "C" within the switch, and re-install the switch cover. Refer to Figure 3.

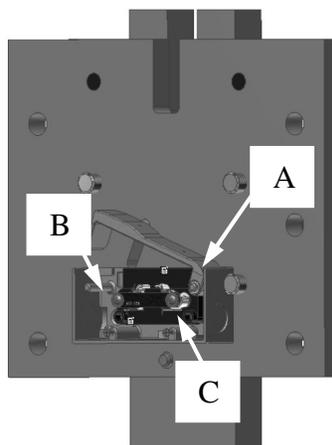


Figure 3



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- Repeat the steps above for the rail lock on the other side of the crosshead.
- After the switches have been wired, install the rail locks on the car sling crosshead. The hardware to mount the rail lock to the car sling will be provided with the car sling. The bolts supplied to mount the rail lock to the car sling are 5/8" diameter, grade 5 (minimum), with heavy duty nuts and tapered washers. (Bolts adhering to ASTM A325 are also suitable.) Refer to Figure 4.

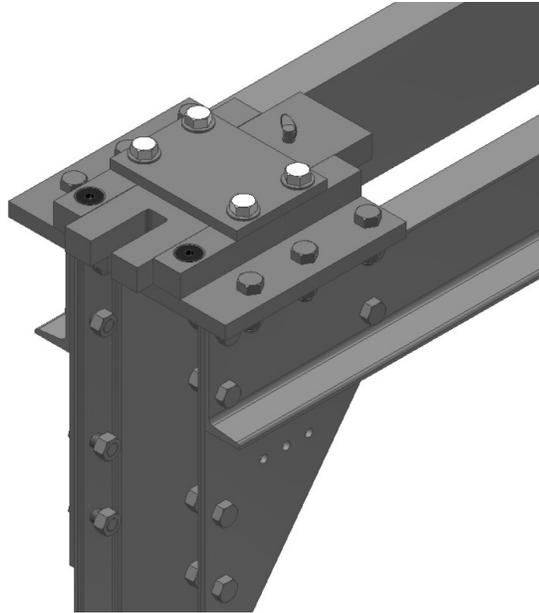


Figure 4

- After the rail lock is mounted to the car sling, mount the guide shoes to the rail lock. To mount the guide shoes, remove the bolts and washers, items "A" and "B", from the top plate of the rail lock and place the shoe on the top plate. Re-install the bolts and washers, items "A" and "B", through the guide shoes and secure them. Refer to Figure 5.

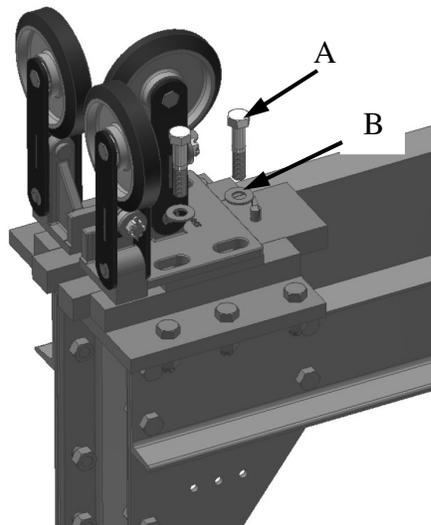


Figure 5



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- Once the shoes are installed, continue installing the car sling, platform, cab and other components within the hoistway as necessary.
- After the car has been assembled and placed in the hoistway, finish wiring the rail lock safety string wiring into the elevator control system.
- Once the car is mobile and moving throughout the hoistway, it is time to place the rail lock support blocks.
- To place the support blocks, first, run the car into the overhead area and place it at the proper elevation for service and maintenance. The actual elevation will vary per installation, so the customer must determine the best maintenance location for access to all the components that may need service.
- After the proper elevation has been noted, mark each rail, ensuring the marks are parallel to each other, and run the car down until the marks on the rail are in a good location for the installer to drill through the rail and install the support blocks.
- Once the car is in position, use the hole pattern noted in Figure 1 for the rail, and drill the holes in one rail.
- Before drilling the holes in the other rail, re-confirm the mounting location is level to ensure the car will be held by the rail locks as designed. Once the level has been re-confirmed, drill the holes in the other rail using the same hole pattern from Figure 1.
- Install the rail lock support blocks, item "A", using the supplied hardware. Use a small amount of Loctite on the threads of the mounting bolts to ensure the support block hardware does not become loose over time. Refer to Figure 6.

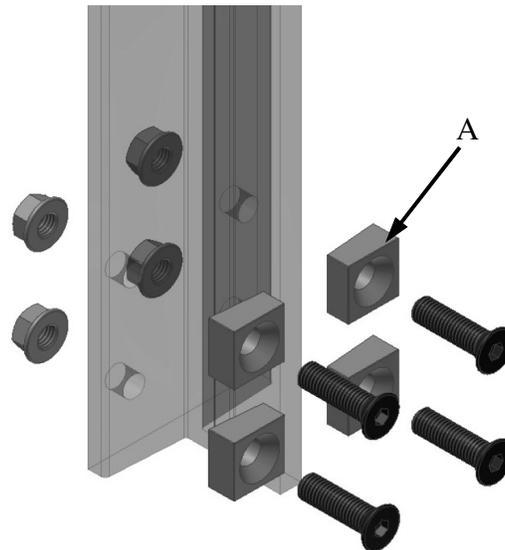


Figure 6

- After everything has been installed, run the car up to the maintenance elevation and activate one of the rail locks to ensure the gate switch opens properly, and cuts power to the elevator safety string, and to ensure the "forked" lock blade engages the support blocks properly. Return the rail lock to the original position, and test the other rail lock for the same functionality. Once both rail locks are functioning properly, continue installing any other components of the elevator system.
- If the rail locks do **NOT** function as indicated, confirm all the steps above were followed. If the installation has been verified, but the rail locks still do not function as noted, contact Hollister-Whitney.



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## b. Using the #390 rail lock



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- Refer to the original control documentation for instructions on placing the elevator in service/maintenance mode.
- Place barricades and signage as required by code to prevent unauthorized personnel from accessing the elevator.
- Access the car top station and move the elevator to the pre-determined location for overhead maintenance.
- Once the car is in position, locate one of the rail locks. (There will be a rail lock under each upper car guide shoe.) Refer to Figure 5.
- Remove the locking detent pin and slide the "forked" lock blade into position between the support blocks and re-insert the locking detent pin. Repeat this step for the rail lock on the opposite side of the car.
- When the first rail lock was engaged, it will have broken the elevator safety string, which will remove power to the machine and activate the machine brake to prevent accidental movement of the elevator. Each rail lock contains a gate switch to break the safety string, so until both rail locks are returned to their original positions, the power will be removed from the machine.
- Perform the necessary maintenance.
- Reverse the steps outlined above to return the rail locks to their original positions, and to return the car back to use by the general public.

## III. Warranty Information

- All parts and equipment manufactured by Hollister-Whitney Elevator Corporation are guaranteed against defects in material and workmanship for a period of one (1) year from the date of shipment. Warranty covers only the repair or replacement of parts, F.O.B. our factory, upon determination by inspection at our factory that warranty is applicable. Equipment and components not of our manufacture are warranted only to the extent of the original manufacturer's warranty. Our warranty specifically does not include any other incidental liability or expense such as transportation, labor, and unauthorized repairs.
- For free technical support, contact Hollister-Whitney at 217-222-0466 or send an e-mail to [info@hollisterwhitney.com](mailto:info@hollisterwhitney.com).