

HOLLISTER-WHITNEY “ROPE GRIPPER™”

Instructions for Model #620, 622, 624, 625, and 626

(Patented)

WARNING: WHENEVER WORKING ON THE “ROPE GRIPPER™” KEEP HANDS CLEAR. FORCES CREATED CAN CRUSH FINGERS.

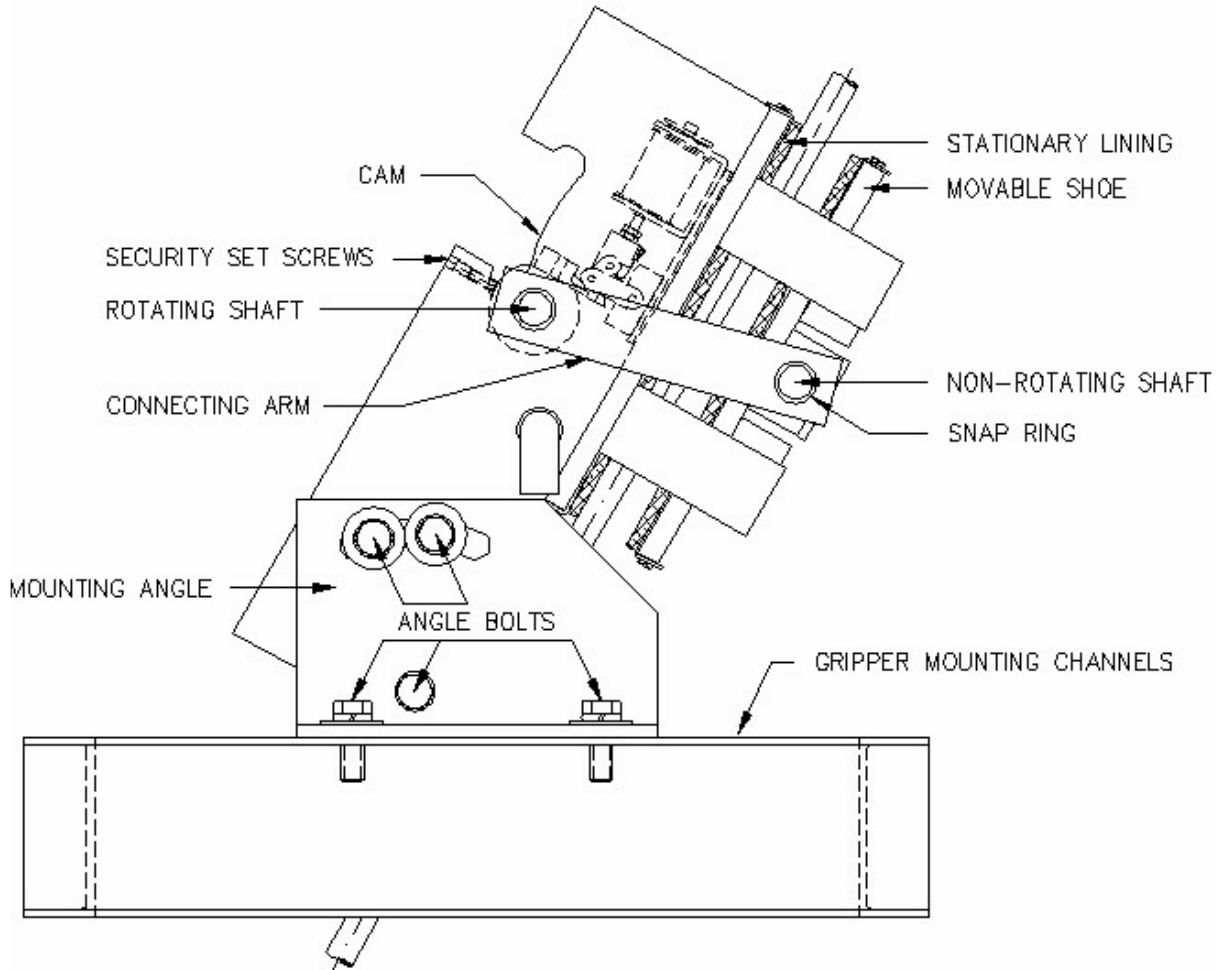


FIGURE 1

GRIPPER MOUNTING CHANNELS

- The Mounting Channel Framework supporting the “ROPE GRIPPER™” must withstand upward and downward forces according to **Chart 1** below.
- The Mounting Channel Framework must also be prevented from sliding and be securely fastened to the Machine Beams. The Traction Machine must also be prevented from sliding. See **Figures 2 and 3** for suggested mountings.
- When adding a “ROPE GRIPPER™” to an existing installation, it may not be possible to mount the gripper in the machine room. It is acceptable to mount the gripper horizontal or even upside down, so long as proper consideration is given to future gripper maintenance and Pumping Unit location. Note: The Pumping Unit must be mounted right side up and hydraulic hose standard length is 27 inches. Hose lengths of up to 8 feet are available, with longer lengths available by special order.

Typical Mounting Arrangements for Overhead Machines New Installations

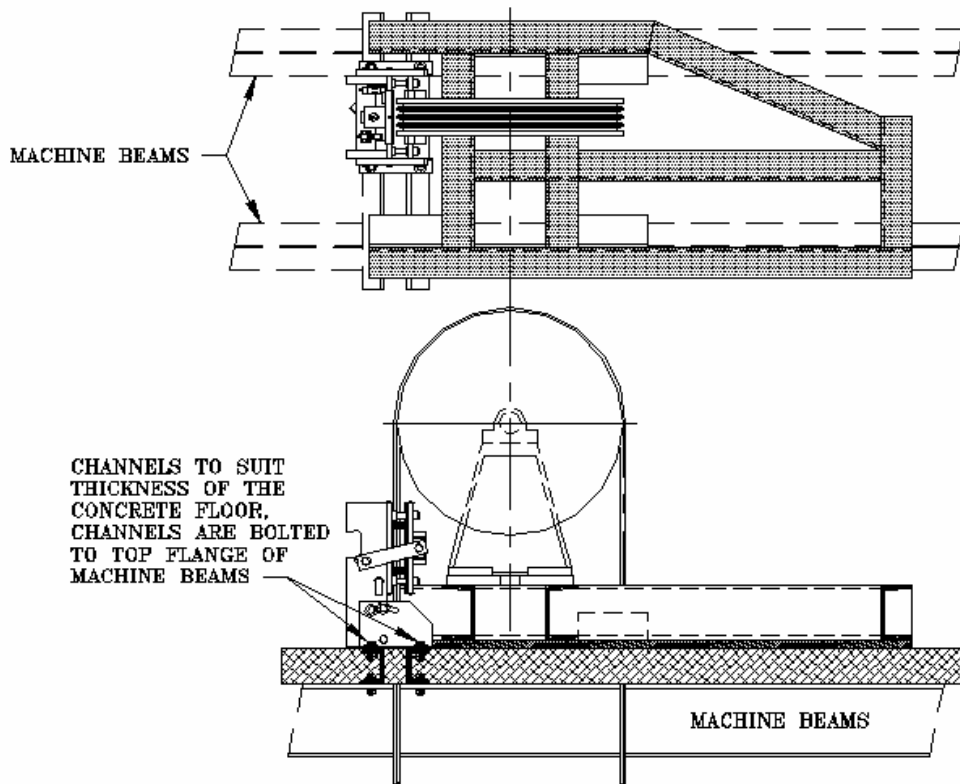
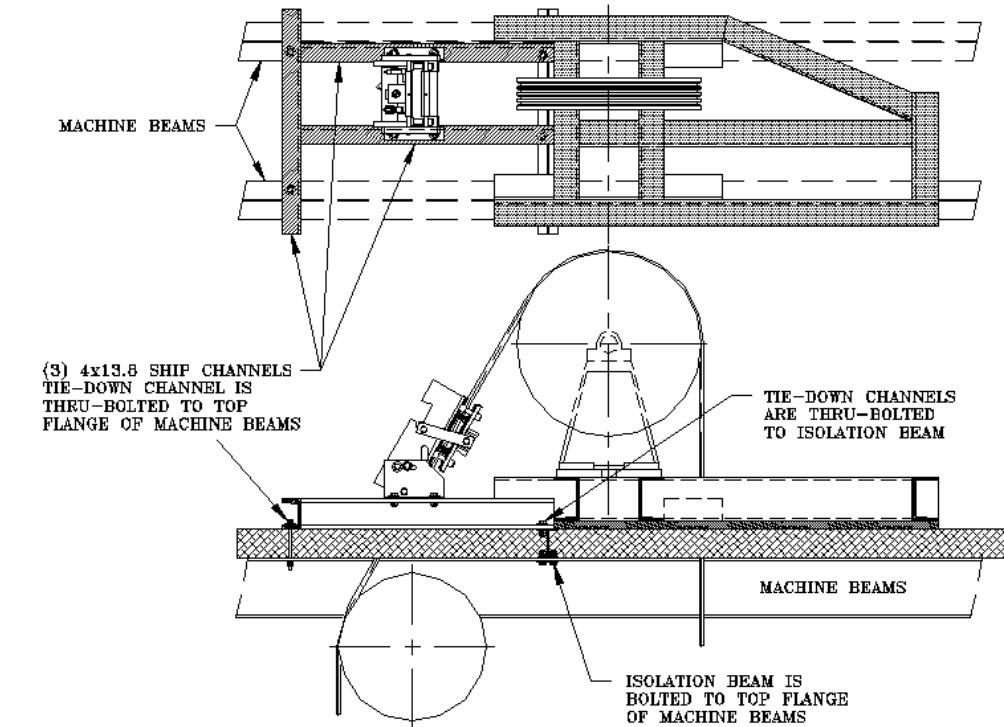


FIGURE 2

Typical Mounting Arrangements for Overhead Machines Existing Installations

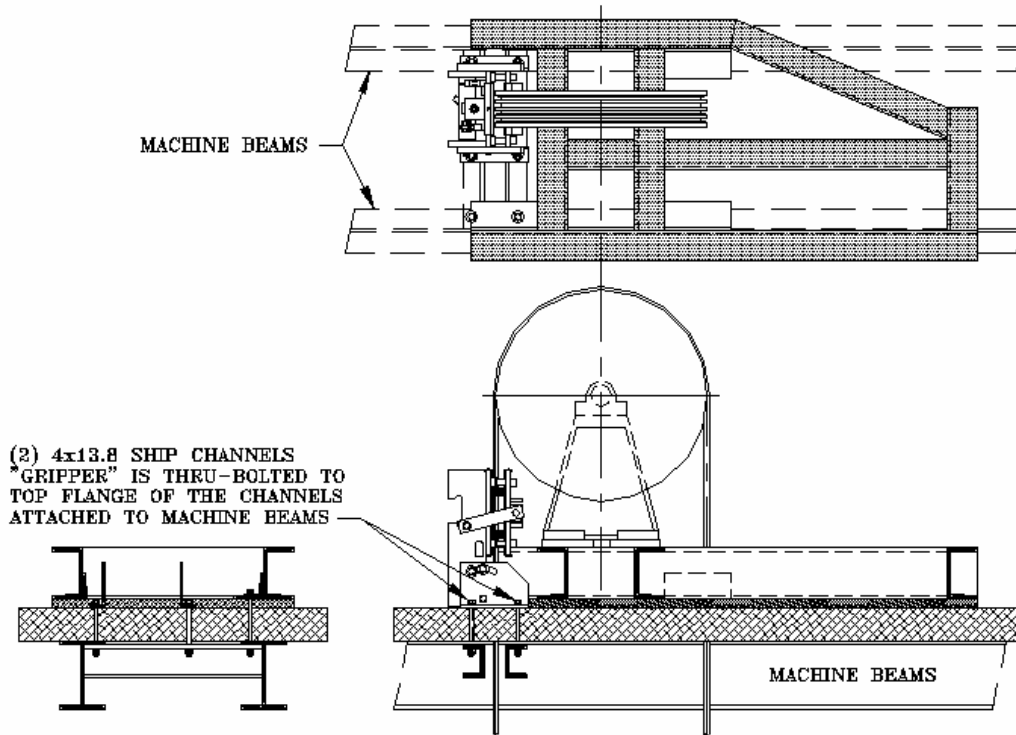
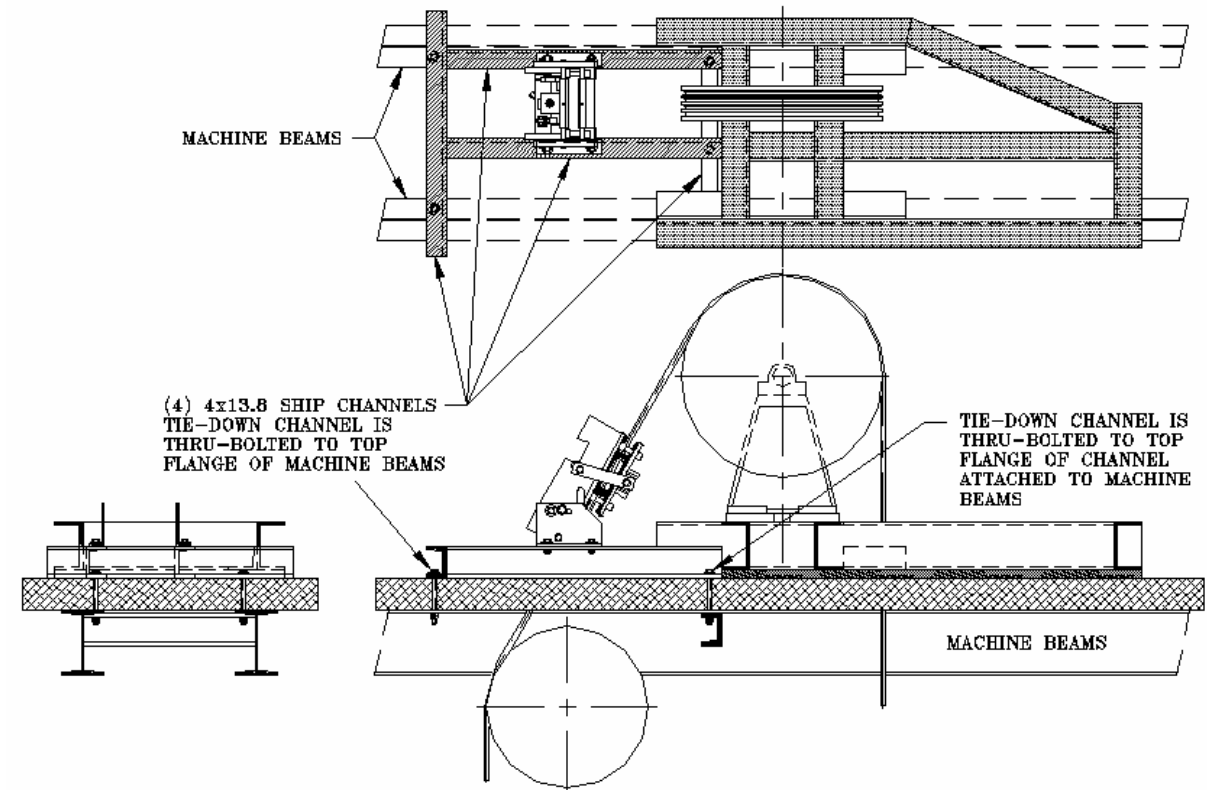


FIGURE 3

INSTALLATION OF “ROPE GRIPPER™”

- Be sure security set screws are touching and holding the rotating shaft in the LOADED position as shown in **Figure 1** above.
- Remove both connecting arms by removing the four snap rings.
- Remove movable shoe assembly.
- Mount “ROPE GRIPPER™” to mounting channels with appropriate bolts through the mounting angles as shown per **Chart 1** below. Do not fully tighten bolts.

MODEL #	APPROXIMATE UP & DOWN FORCE	GRADE 5 MOUNTING BOLTS (Approximate Torques)	REFERENCE DRAWINGS
620	2000 lbs	1/2" UNC @ 74 ft-lbs	620-DIM
622	4000 lbs	1/2" UNC @ 74 ft-lbs	622-DIM
624	4000 lbs	5/8" UNC @ 143 ft-lbs	624-DIM
625	4000 lbs	5/8" UNC @ 143 ft-lbs	625-DIM
626	8000 lbs	5/8" UNC @ 143 ft-lbs	626-DIM

Note: Mounting must conform to applicable codes.

CHART 1

- Position the “ROPE GRIPPER™” so that the stationary shoe lining barely touches the ropes from top to bottom. Make sure “ROPE GRIPPER™” is squarely aligned, and centered side to side as much as possible, with the ropes. Misalignment may cause uneven and/or excessive lining wear.
- Securely fasten “ROPE GRIPPER™” angle bolts (5 bolts per side). Make sure they are torqued correctly.
- Double check rope alignment. Make sure the ropes touch the stationary shoe lining evenly.
- Reinstall movable shoe assembly.
- Reinstall connecting arms with chamfered edges facing inside and secure the four snap rings.
- Find best location for pumping unit. Unit must be upright, but can face forward or backward and can be placed on either side of “ROPE GRIPPER™”.

CAUTION: At this time, REMOVE shipping cap on the Pumping Unit reservoir and install Dipstick provided or Pumping Unit may be damaged. PLEASE NOTE: THE DIPSTICK IS SHIPPED STRAPPED TO INSIDE OF PUMPING UNIT!

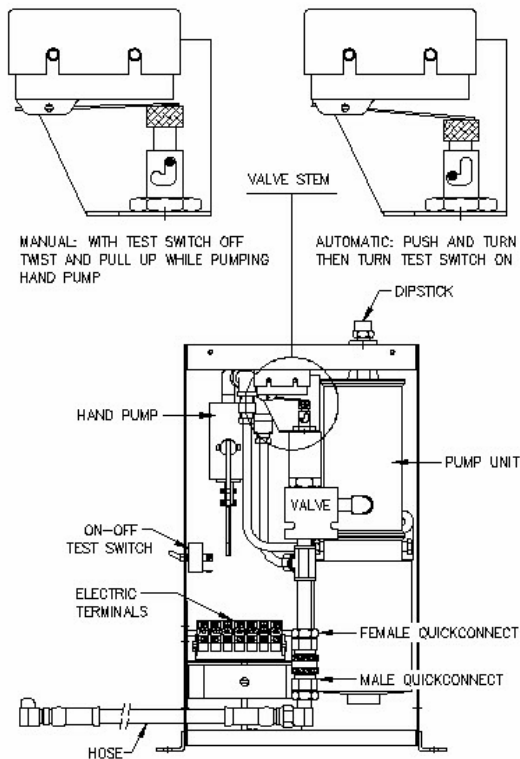
- Route male hydraulic fitting through knockout hole on side of pumping unit. Inside pumping unit, push male Quick-Connect fitting into female fitting while lifting ring on female fitting. Release ring to secure the fittings together.
- Wiring on “ROPE GRIPPER™” can be rerouted to opposite side of assembly by removing the 90° box connector and pulling wire through “ROPE GRIPPER™” and out opposite side.
- Wiring from “ROPE GRIPPER™” to pump unit is color coded per **Chart 2**.
- Connect terminals RG1, RG2, RG5 and RG7 to elevator control. Check control diagram for proper connection.

White	RG2
Black	RG3
Red	RG4
Orange	RG5
Blue	RG6
Green	Ground

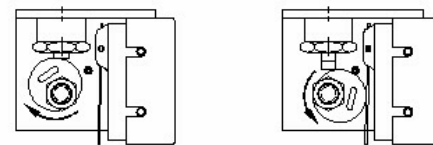
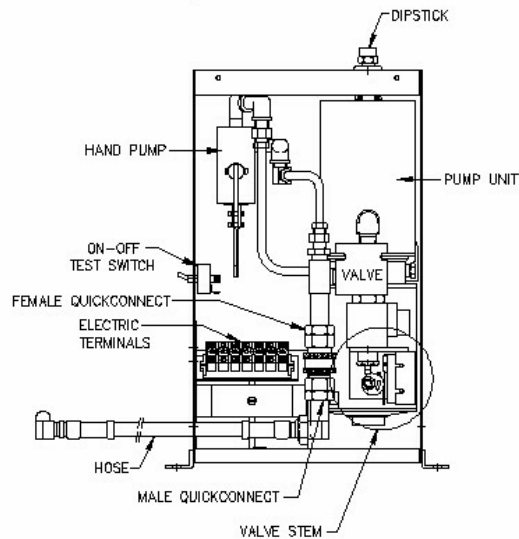
CHART 2

- When wiring and hydraulic connections are complete, make sure valve stem (dump valve) in pumping unit is set to AUTOMATIC. Turn pumping unit test switch ON (see **Figure 4**). Latch solenoid on “ROPE GRIPPER™” should energize and push down trigger onto latch. If it does not, check control wiring.

#622-100 PUMPING UNIT FOR
#620, #622, #624, & #625 GRIPPERS



#626-100 PUMPING UNIT
FOR #626 GRIPPER



FOR ROTATING CAM, INSERT SCREW DRIVER IN CAM SLOT

MANUAL: WITH TEST SWITCH OFF, ROTATE CAM CLOCKWISE WHILE PUMPING HAND PUMP.

AUTOMATIC: ROTATE CAM COUNTER CLOCKWISE, THEN TURN TEST SWITCH ON.

FIGURE 4

- When solenoid energizes, begin to loosen security set screws. If rotating shaft moves, turn valve stem to MANUAL and use hand pump to move shaft back, or jump terminal RG3 to RG4 to temporarily operate electric pump, to make sure the trigger has properly engaged the latch.
- Remove security set screws. *Once removed, store set screws in bottom of pump unit.*
NOTE: Security set screws must be completely removed or damage may result when activating “ROPE GRIPPER™”.
- Unit is now ready for testing and lining wear-in.

TESTING OF “ROPE GRIPPER™”

- Make sure pumping unit valve stem is in AUTOMATIC and turn test switch ON. The “ROPE GRIPPER™” should be in the ready (LOADED) position NOT clamping the ropes.
- Turn test switch to OFF. This will activate the “ROPE GRIPPER™” and clamp the ropes. Be sure when clamping the ropes the microswitch contacts on the “ROPE GRIPPER™” stop or prevent power from being applied to the motor and machine brake.
- Turn the valve stem in the pumping unit to MANUAL. This will open the manual microswitch contact and prevent the elevator from running.
- Use hand pump to return the “ROPE GRIPPER™” to the ready or loaded position.
- Turn the valve stem back to AUTOMATIC and the manual contact will close allowing the elevator to run.
- Turn test switch ON.

“ROPE GRIPPER™” LINING WEAR-IN

- A line has been marked on the side wall of the gripper to aid in the Wear-In process. *Note that at this point in the procedure, this line is well above the Connecting Arm and will be met or covered by the Connecting Arm during the Wear-In process (see **Figure 1** for location of Connecting Arm).*
- Make sure pumping unit valve stem is in AUTOMATIC and test switch is ON.
- Run the car at the slow or inspect speed from top to bottom and wipe down the ropes to remove any dirt and/or excess oil and grease. After cleaning the ropes in this manner, return car to top floor.

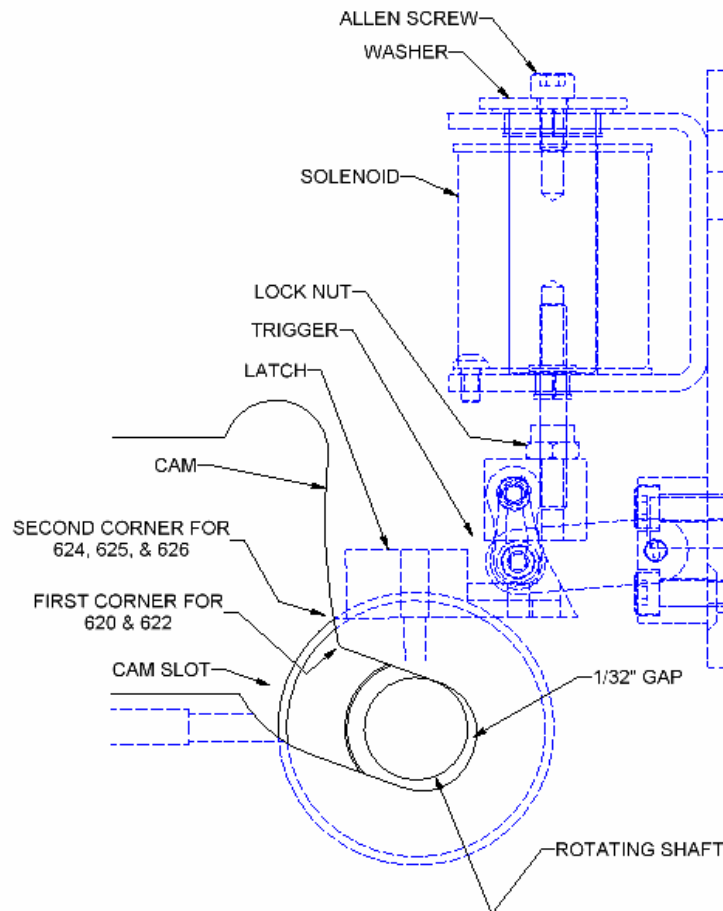


FIGURE 5

- Jump terminals RG5 to RG6 and run the empty car DOWN in slow speed. When the car is up to speed, turn the test switch OFF. The “ROPE GRIPPER™” will clamp the ropes with a light pressure and ropes will begin to wear grooves in the linings.
- As the linings wear-in, the rotating shaft will move up the cam slot and around the corner(s) of the cam noted above (**Figure 5**), and the connecting arms (see **Figure 1**) will move up the side wall and begin to match or line up with the wear-in line marked on the side wall.

Note: #624, #625, and #626 have **two** corners. These grippers are **not** worn-in until the rotating shaft goes past the **second** corner of the cam as noted above (see **Figure 5**) and the connecting arm meets or covers the line marked on the side wall.

- **Note that it may take several car runs to complete lining wear-in.**
- Once the rotating shaft has turned the corner(s) and the wear-in line is matched or covered, stop the car and remove the jumper from RG5 to RG6.

- If the lining wear-in is not completed after the grooves in the linings have reached approximately 1/16" deep, spacer shims (Figure 6) can be moved from between the shaft support blocks and moveable shoe to the back of the support block to allow the rotating shaft to completely turn the corner and move up the cam. Refer to Chart 3 for initial spacer and shim set-up. **Note:** Before changing spacers, first install security set screws to prevent unintended "ROPE GRIPPER™" activation.

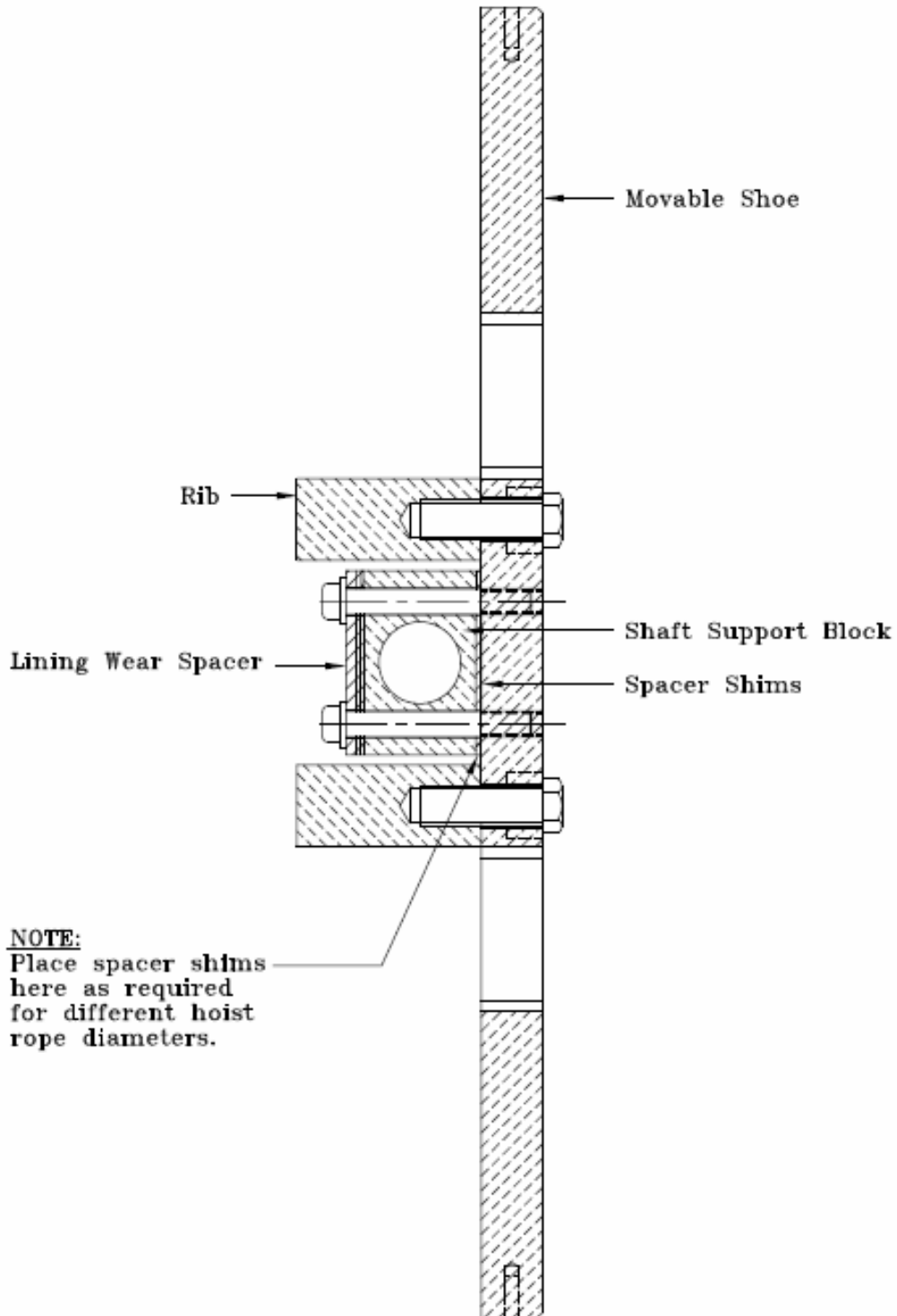


FIGURE 6

ROPE SIZE			620 or 622		624, 625, or 626	
MM	Decimal	Nominal	TOP	BOTTOM	TOP	BOTTOM
			Lining Wear Spacer	Spacer Shims	Lining Wear Spacer	Spacer Shims
9	0.354	3/8"	1/8	1/32 + 2 x 1/8	1/32+1/8	1/16 + 2 x 1/8
10	0.394					
11	0.433	7/16"	1/8	1/32+1/16+1/8	1/32+1/8	2 x 1/16 +1/8
12	0.472	1/2"	1/8	1/32+1/8	1/32+1/8	1/16+1/8
13	0.512				1/32+1/8	
14	0.551	9/16"	1/8	1/32+1/16	1/32+1/16+1/8	1/8
15	0.591	5/8"	1/8	1/32	1/32+1/8	1/16
16	0.63					
17	0.669	11/16"	1/8	1/32+SPL. BLOCK which is 1/16 thinner	1/32+1/8	1/16+SPL. BLOCK which is 1/16 thinner
18	0.709					
19	0.748	3/4"			1/32+1/16+1/8	SPL. Block which is 1/16 thinner
20	0.787					

CHART 3

LINING REPLACEMENT

- If there are multiple high speed stops, linings will wear. As the linings wear, the rotating shaft will move towards the upper end of the cam. Near the end of the cam, the excessive wear microswitch will open and the “ROPE GRIPPER™” will not automatically reload.
- To inspect linings for wear, first reload the “ROPE GRIPPER™” using manual operation. Once in the loaded position install the security set screws so they touch the rotating shaft. If the grooves in the linings have worn to approximately 3/16” or greater, new linings should be installed as soon as possible. **Note:** Before changing shoes or spacers, first install security set screws to prevent unintended “ROPE GRIPPER™” activation.
 1. If installing new linings, remove both connecting arms by removing 4 snap rings. Remove moveable shoe assembly. Remove screws from each lining assembly and remove linings. Refer to **Chart 3** for initial spacer and shim set-up. **NOTE:** It may be necessary to loosen mounting bolts to tip “ROPE GRIPPER™” in order to allow access to stationary shoe. When linings have been replaced, follow the INSTALLATION OF “ROPE GRIPPER™” procedure and the LINING WEAR-IN procedure.
 2. If lining wear is not excessive (less than 3/16”), spacer shims (**Figure 6**) can be added between the shaft support blocks and the moveable shoe. Remove the bolts that hold the blocks to the movable shoe, place the lining wear spacer shims under the blocks and reinstall and tighten bolts. Addition of shims will move the rotating shaft toward the bottom end of the cam.
- When inspection/replacement is complete, turn the valve stem to AUTOMATIC and the pumping unit ON. Carefully remove the security set screws. Use hand pump, if necessary, so that rotating shaft does not move when removing the security set screws. The “ROPE GRIPPER™” is now ready for operation. Check to ensure that the connecting arm position matches or covers the wear-in line marked on the side wall (the rotating shaft will be around the corner(s) at the bottom of the cam) when gripping the ropes.

TESTING ALL CIRCUITS

- During each test the “ROPE GRIPPER™” should:
 - A. Grab the Ropes,
 - B. Stop the car, and
 - C. Open the control safety circuits disconnecting power to the motor and machine brake.

- The following three tests should be made in both the up and down directions while the car is running in slow speed.
 - 1) Turn the pump test switch OFF. Observe A, B, and C above.
 - 2) With the car outside of the door zone, open the door or open the door lock circuit and observe A, B, and C above. **NOTE:** The control circuits may require a manual reset before the “ROPE GRIPPER™” reloads.
 - 3) Manually open the governor overspeed switch and observe A, B, and C above. **NOTE:** The control circuits may require a manual reset before the “ROPE GRIPPER™” reloads.
- The “ROPE GRIPPER™” is now ready for operation.

SUGGESTED CONTROLLER CIRCUITS

- Both the B44 and A17.1-2000 Codes require new circuitry for activation of the “ROPE GRIPPER™”. It is the responsibility of the controller manufacturer to provide the proper circuitry to operate this device in a manner that meets all local, city, state, province, and federal codes.
- The function of the “ROPE GRIPPER™” is to clamp the ropes and stop the car. We recommend that the “ROPE GRIPPER™” is activated when an overspeed occurs or when the car leaves the floor (door zone) with the doors open (hoistway door unlocked and the car gate switch opened). If the doors happen to open when the car is between floors, the “ROPE GRIPPER™” should not be activated.
- In addition, the “ROPE GRIPPER™” is always activated when there is a loss of power. When power is returned, if the car is in the door zone, we recommend resetting the “ROPE GRIPPER™”. If the car is between floors when power returns, or if changing from “Inspection” to “Automatic” operation, we suggest a time interval to signal door closure, and when the car gate switch or door interlock makes contact, then reset the “ROPE GRIPPER™”.
- The suggested circuits shown in **Diagrams 1 & 2** below activate the “ROPE GRIPPER™” by opening contacts RG1, RG2, DZ1, and DZ2. Relay coils RG1, RG2, DZ1 and DZ2 are controlled by the Governor overspeed switch (GOS) and function blocks GRC1, GRC2, DZC1, and DZC2, respectively.

GRC1 DESCRIPTION

- If the car is not in the door zone when main line power turns “ON”, or when switching from “Inspection” to “Normal Operation”, or when resetting the Governor overspeed switch; allow a time interval, signal the door closure, and when the car gate or door interlock contact makes, energize RG1.
- Anytime the car is in the door zone (“Inspection” or “Normal Operation”), RG1 is de-energized when both the car gate contact and door interlock contact are opened. Should the car now leave the door zone (unintended motion), power to the “ROPE GRIPPER™” is removed and the “ROPE GRIPPER™” is activated. In the door zone, when the car gate contact or door interlock contact make, energize RG1. If the car should leave the door zone with RG1 energized then “ROPE GRIPPER™” activation is prevented. RG1 should remain energized even if both the car and hoistway doors are opened between floors. When the car is in the door zone again, RG1 should function as above.

GRC2 DESCRIPTION

- Redundant circuits are required by the 2000 A17.1 and B44 Codes. Circuits for RG2 function identical to RG1 except separate logic for the timing function, door locks, gate switch and door zone should be used. DZC1 logic could be used for circuits of RG1 and DZC2 for circuits of RG2. (See **Diagram 3** NOTE)

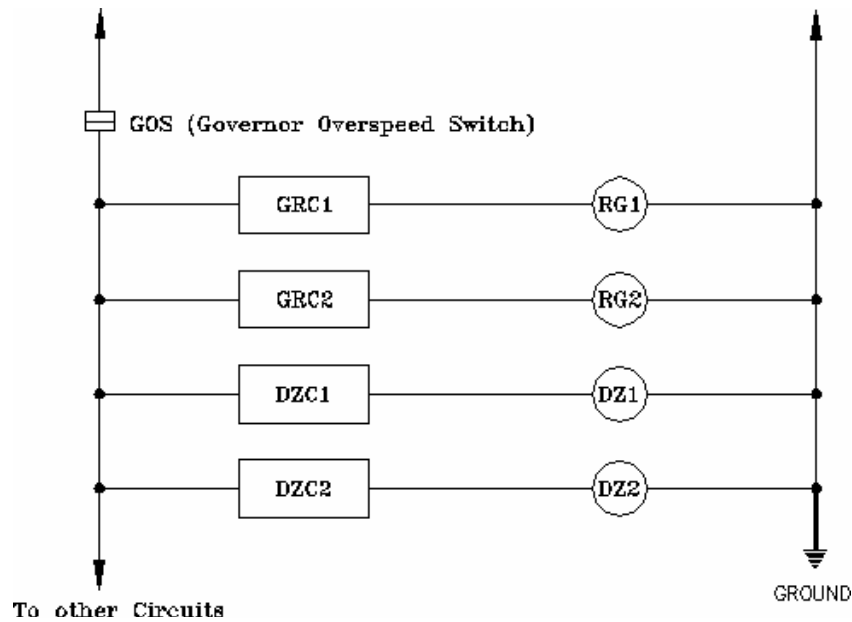


DIAGRAM 1

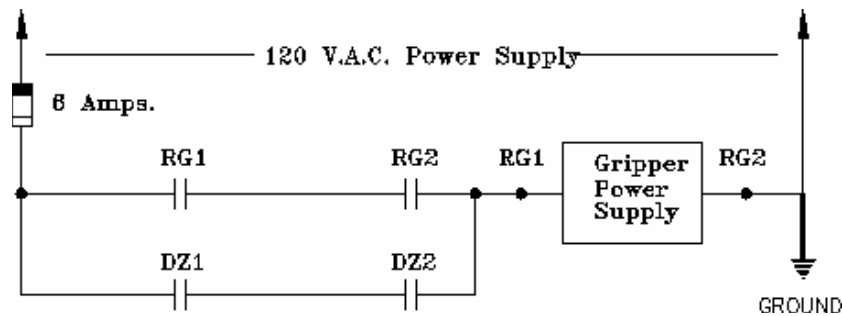
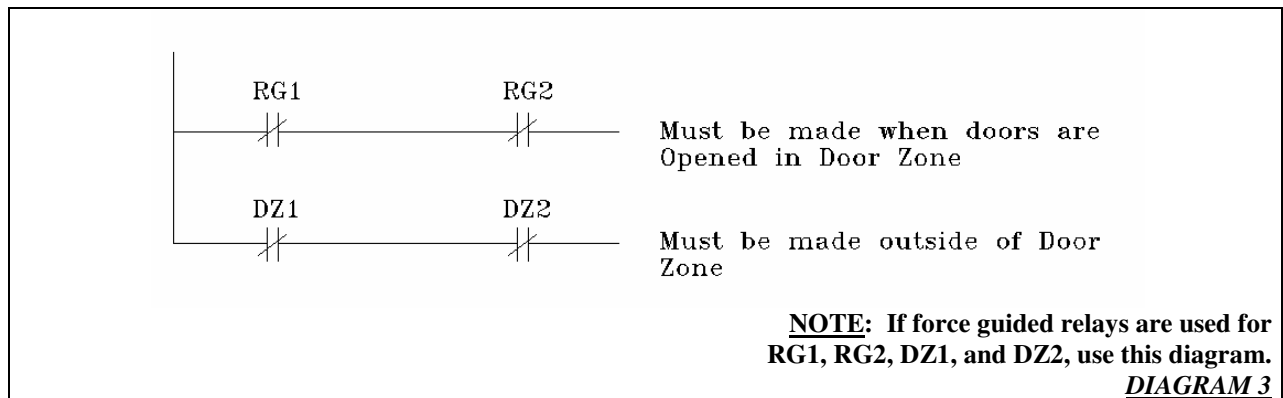


DIAGRAM 2



DZC1 DESCRIPTION

- DZ1 is energized in the first door zone and de-energized outside of the first door zone (See **Diagram 3** NOTE). Maximum door zone is 10"

DZC2 DESCRIPTION

- Circuits for DZ2 function are identical to DZ1 except a second door zone signal is utilized.
- If the above circuits (**Diagram 3**) do not make contact when required, the elevator must be prevented from running. If other types of relays are used, circuits must prove that contacts from RG1, RG2, DZ1 and DZ2 are functioning properly and when failures are detected the elevator is prevented from running.

HOLLISTER-WHITNEY “ROPE GRIPPER™” OPERATION

NORMAL OPERATION

- Power to the “ROPE GRIPPER™” is constantly maintained. When in the door zone DZ1 and DZ2 provide power to the “ROPE GRIPPER™”; when the doors close, RG1 and RG2 energize. As the car leaves the floor DZ1 and DZ2 de-energize, power to the “ROPE GRIPPER™” is maintained through RG1 and RG2. When approaching a new floor DZ1 and DZ2 again energize, when the doors open RG1 and RG2 de-energize.

OVERSPEED

- When overspeed is detected, the Governor overspeed switch opens. An additional overspeed can be detected by an encoder or tachometer that detects the speed of the elevator. (Not the motor or worm shaft of a geared elevator.) When detected, relays RG1, RG2, DZ1 and DZ2 de-energize. This removes power from the “ROPE GRIPPER™”, clamping the ropes and stopping the car.

OVERSPEED RESET

- Overspeed reset is accomplished by resetting the Governor overspeed switch and possibly the elevator control circuits. Refer to and follow the control manufacturer’s instructions for “ROPE GRIPPER™” reset.

IMPORTANT: The code requires that the “ROPE GRIPPER™” be manually reset if it is triggered by fault. It is intended that a qualified technician inspect for and correct any malfunction before the car is placed back into service. A dangerous situation can be produced if a “ROPE GRIPPER™” is manually reset without first correcting the cause of the fault. eg: If there has been a brake failure that has not been corrected, when the “ROPE GRIPPER™” is reset, it is very likely that the car will fall either up or down.

UNINTENDED MOTION

- When at the floor with the doors open, relays RG1 and RG2 are de-energized and relays DZ1 and DZ2 are energized. If the car leaves the floor, DZ1 and DZ2 de-energize, removing power from the “ROPE GRIPPER™”, clamping the ropes and stopping the car.

UNINTENDED MOTION RESET

- Unintended motion reset is accomplished through elevator control circuits. Refer to and follow the control manufacturer’s instructions for “ROPE GRIPPER™” reset.

IMPORTANT: The code requires that the “ROPE GRIPPER™” be manually reset if it is triggered by fault. It is intended that a qualified technician inspect for and correct any malfunction before the car is placed back into service. A dangerous situation can be produced if a “ROPE GRIPPER™” is manually reset without first correcting the cause of the fault. eg: If there has been a brake failure that has not been corrected, when the “ROPE GRIPPER™” is reset, it is very likely that the car will fall either up or down.

MANUAL OPENING

- During a power failure the “ROPE GRIPPER™” will activate. When power is restored the “ROPE GRIPPER™” will automatically reload and put the elevator back into service. If the car is to be moved during a power outage, a manual pump is provided to open the “ROPE GRIPPER™”.
- Turn the valve stem (**Figure 4**) in the pumping unit to MANUAL. Use the hand pump to move the “ROPE GRIPPER™” towards the loaded position releasing the ropes. If the hydraulic valve is left in the manually closed position, when power is restored a microswitch contact will prevent the elevator from running.

**TEST PROCEDURE FOR COMPLIANCE WITH
CANADIAN CAN/CSA B44 AND ASME A17.1-2000, & EN81
SAFETY CODE FOR ELEVATORS**

1) POWER INTERRUPTION TEST

Run the car in slow speed and turn the toggle switch on the side of the pump unit to OFF. This will activate the “ROPE GRIPPER™” causing it to clamp the ropes and stop the car. When the “ROPE GRIPPER™” is activated, the “ELEVATOR CAN RUN” microswitch will open and signal the controls to interrupt power to the driving motor and machine brake.

2) ASCENDING CAR OVERSPEED TEST

With an empty car, overspeed the car in the “UP” direction while keeping the machine brake open. The Governor overspeed switch will activate the “ROPE GRIPPER™”. The “ROPE GRIPPER™” will stop the car before the counterweight strikes the buffer or, at least, reduce the car speed to the speed for which the buffer is designed. If it is impractical to overspeed the car, run the empty car up at high speed with the machine brake held open and manually trip the Governor overspeed switch. The “ROPE GRIPPER™” will cause the car to slow down and stop. The Governor can then be tested to make sure the Governor switch opens at the correct overspeed setting.

3) UNCONTROLLED LOW SPEED TEST

**CAUTION: DO NOT ALLOW ANYONE TO ENTER
THE ELEVATOR DURING THIS TEST!!!**

With the car level at any floor and the door open, open the machine brake. (With empty car the elevator moves up, with full load the elevator moves down.) The “ROPE GRIPPER™” should apply and stop the car within 1220 mm (48”). If the car does not move when the machine brake is opened, the brake drum or disc can be turned to start the car.

ROPE GRIPPER™ TROUBLE SHOOTING GUIDE

**WARNING! WHENEVER WORKING ON THE ROPE GRIPPER KEEP HANDS
CLEAR. FORCES CREATED CAN CRUSH FINGERS.**

BLOWING FUSES AT THE CONTROLLER – Read and understand this section completely prior to performing any checks.

- Check type of fuse being used. Note that Hollister-Whitney specifies a 3 amp Fusetron fuse, which is a dual element time delay fuse. (see **Diagram 4**). Many controller manufacturers have not supplied this fuse. If the fuse is not correct, consult with your controller manufacturer. A 4 Amp MDL or 5 Amp MDL fuse may be substituted but only with the approval of your controller manufacturer. If the fuse is correct, see **CHECKING PUMP UNIT AMP DRAW** below.
- Electric Pump Functions, but Gripper will not pump open. First check hydraulic oil level. Refer to **FLUID LEVEL LOW** line item below. If the pump runs too long at low fluid levels, the fuse may blow, and in some cases, the motor and/or motor capacitors may fail.
- Check resistance of the Dump Valve Coil. Resistance should not be “open” and can be as high as approximately 3.5 Mega Ohms. If you obtain an “open” reading, replace the Dump Valve Coil.

to get the latch hook past the trigger, and then shut off. The hydraulic pressure will slowly bleed off until trigger and latch are resting together. At this point, the trigger and latch should be engaged as shown in **Figure 5**.

- Many problems can be traced back to the “ROPE GRIPPER™” not latching properly. Latch engagement problems are typically a result of:
 - 1) the Brake-Ready microswitch out of adjustment, causing mis-engagement of the trigger and latch,
 - 2) a malfunctioning latch coil, or less commonly,
 - 3) mis-alignment of the latch.

Any of the above will be indicated by the Pumping Unit cycling on and off. This cycling could be as quick as every 15 seconds or so, to as long as every couple of minutes. Repeated cycling may cause unnecessary wear on the cylinder and pump unit, requiring premature maintenance, fluid loss (cylinder leaks), and can cause motor and/or capacitor failure.

- The Brake-Ready microswitch (**Figure 7**) should be adjusted to allow proper engagement of the trigger and latch and to prevent the rotating shaft from bottoming out in the cam slot. There should be approximately 1/32" clearance between the rotating shaft and the bottom of the cam slot when the trigger and latch are engaged. In other words, the pump must run long enough to allow the trigger and latch to properly engage, yet not so long as to push the rotating shaft into the back of the cam slot.

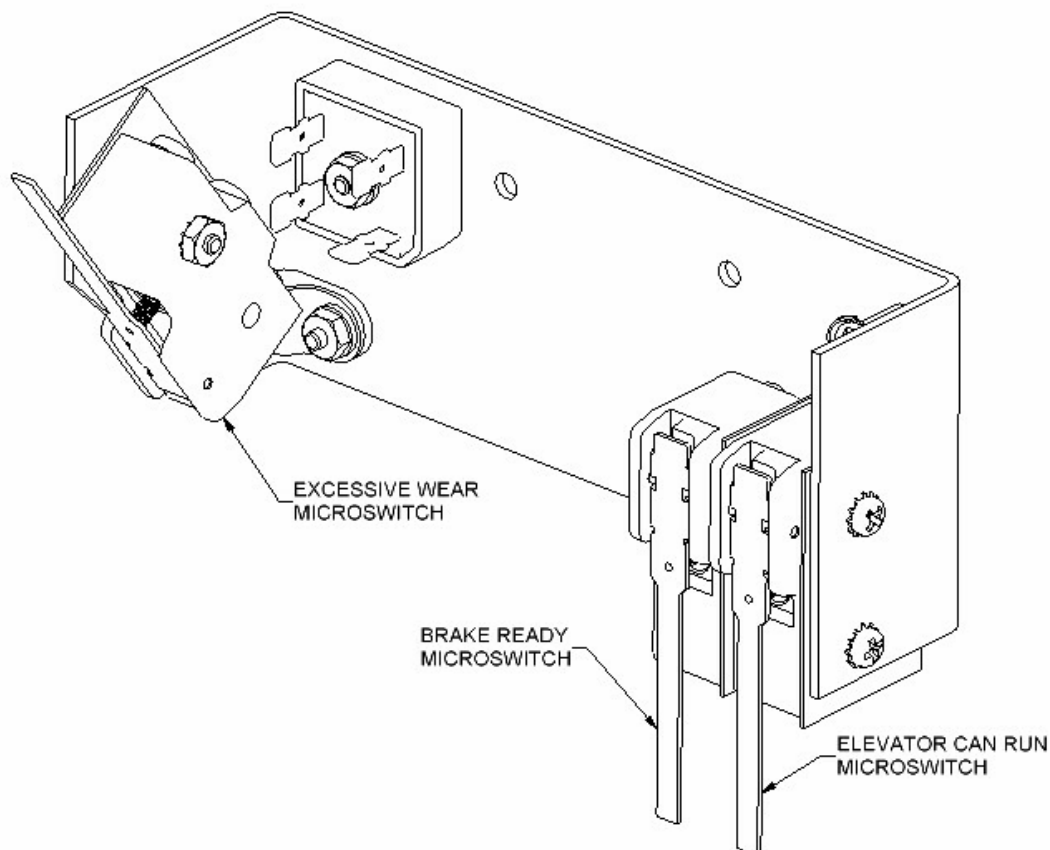


FIGURE 7

- After “ROPE GRIPPER™” installation or after any maintenance check, it is suggested that the in-service “ROPE GRIPPER™” be observed for 15 minutes or so to assure proper operation.

MICROSWITCH ADJUSTMENT PROCEDURE

1. To check adjustment, first switch pumping unit OFF. This will activate the “ROPE GRIPPER™” and clamp the ropes. Note the position of the large washer and Allen Screw on top of the latch coil (see **Figure 5**).
2. Switch pumping unit ON. This will return “ROPE GRIPPER™” to the “READY” position. While returning to the ready position, watch the large washer at the top of the latch coil. The washer (and Allen Screw) should rise with the passing of the latch under the trigger, then lower and return to its original position. If it does, move on to Step 5.
3. If the washer did not return to the fully seated position, either a.) the pump is not running long enough indicating microswitch out of adjustment, or b.) as has happened on *very* rare occasions, the latch is slightly out of adjustment causing the trigger to bind on one edge of the latch. Visually, when the trigger and latch engage, you should see run-by clearance between the sides of the latch and the trigger, and the latch should be fairly well centered on the trigger. Run Steps 1 & 2 again to check your results. If the latch is centered, move on to Step 5.
4. *If the latch is not centered, you should consider calling Hollister-Whitney Technical support.* To center the latch, first switch pumping unit OFF. This will activate the “ROPE GRIPPER™” and clamp the ropes. Slightly loosen screws holding latch, and tap latch into a more centered location, making sure the latch remains square. Retighten screws and repeat Steps 1 & 2.
5. Re-install the security screws so that they just touch the rotating shaft.
6. At this point, the coil should be activated. If the large washer and Allen Screw are seated properly, it should not be possible to raise the washer and Allen Screw with thumbnail pressure. If you can raise the washer, check all power to and across the coil. If there is a problem with the power or the coil, repair it now and move on to Step 9.

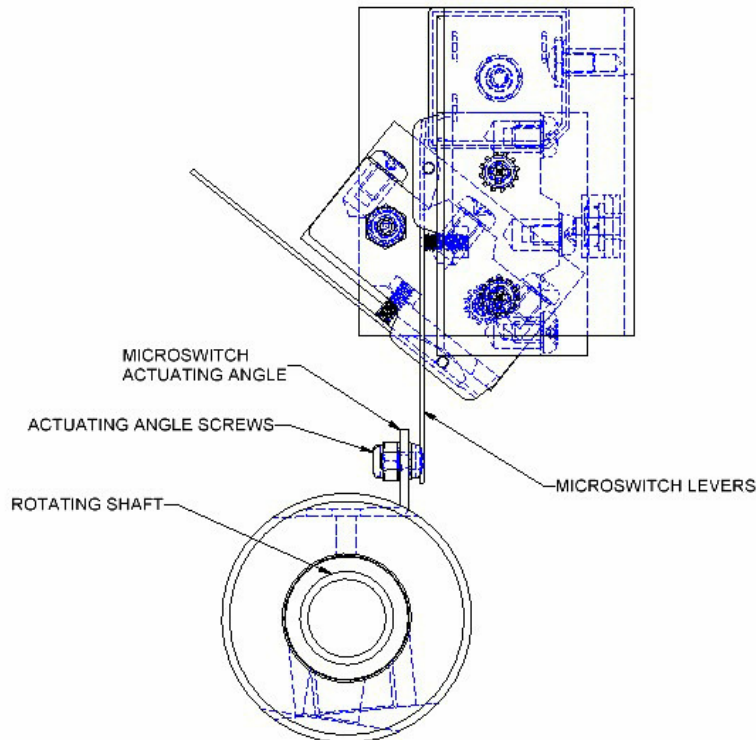


FIGURE 8

7. Remove one or both of the connecting arms from the “ROPE GRIPPER™”. Check the clearance between the rotating shaft and the cam slot (approximately 1/32”, see **Figure 5**), and reinstall the connecting arm(s). Note: If clearance approaches zero, contact Hollister-Whitney Technical support.
8. There are two screws in the Actuating Angle (**Figure 8**). Facing the unit, the left screw adjusts the Brake-Ready microswitch. To make the pump run longer, adjust the screw outwards in ¼ turn increments. **WARNING: It is advised that you check the rotating shaft/cam slot clearance after each adjustment by repeating this procedure.**
9. Remove the security screws and retest the “ROPE GRIPPER™” to check adjustment.

HYDRAULIC CYLINDER REPLACEMENT INSTRUCTIONS

NOTE: Read and understand instructions prior to cylinder replacement!!! It is highly recommended that the mechanic have a long handled (7” long) 5/32” Ball End Allen wrench or driver in his kit, in addition to the normal mechanics tools including wrenches, screw drivers and Allen wrenches.

Situation 1: Leaking Cylinder

1. Pump “ROPE GRIPPER™” into the LOADED or Ready position and install security screws to hold “ROPE GRIPPER™” shoes open.
2. Remove 4 snap rings, both connecting arms and movable shoe.
3. Turn pumping unit OFF and place valve stem in the MANUAL position. Using hand pump, pump cylinder down to relieve pressure on security screw. Remove security screws.
4. Return valve stem to the AUTOMATIC position. The rotating shaft will go entirely up the cam. At this time, with the rotating shaft at the top of the cam, remove the hydraulic hose from the cylinder.
5. Remove 3 angle bolts from both sides of mounting angle, leaving mounting angles attached to floor (Gripper Mounting Channels).
6. Place “ROPE GRIPPER™” on a suitable work surface. Locate the shaft holding the cylinder and remove shaft from “ROPE GRIPPER™”.
7. Locate the block holding the cylinder stem to the rotating shaft tube. Using a long 5/32" Ball Nose Allen Wrench, remove (4) 10-32 screws from block. Remove block from cylinder.
8. Put block on new cylinder. Re-install cylinder by installing shaft first, then block and screws. Install hose on cylinder. Restore “ROPE GRIPPER™” to mounting angles.
9. With valve stem at MANUAL, bleed air out of system by loosening hose at cylinder. Pump hand pump until oil comes out of hose at cylinder and no air is evident, then re-attach the hose.
10. Turn pumping unit ON. Hand pump cylinder down until pump motor takes over pumping. With rotating shaft down and trigger latched, install security set screws.
11. Re-assemble moveable shoe, arms, and snap rings to “ROPE GRIPPER™”. When complete, remove security set screws, turn valve to AUTOMATIC and place “ROPE GRIPPER™” back into operation.

Situation 2: Cylinder will not pump down (or hold pressure)

1. Make sure “ROPE GRIPPER™” is gripping ropes, the pumping unit is OFF and machine brake is set.
2. Remove 5 angle bolts from both mounting angles and set mounting angles aside.
3. Locate the shaft holding the cylinder and remove shaft from “ROPE GRIPPER™”.
4. With valve stem on MANUAL, follow instructions 7., 8. and 9. above.

5. Return valve stem to AUTOMATIC and turn pumping unit ON. "ROPE GRIPPER™" will return to loaded or open position.

AIR IN LINE (CHANGING OUT HOSES OR CYLINDERS)

- To bleed air, first loosen the hose at cylinder, then use hand pump until no air is evident.

FLUID LEVEL LOW – Gripper pumps partially down, pump continues to run

- With the "ROPE GRIPPER™" in the loaded position, the level should be approximately 1" up the dipstick. Use SHC524 Mobil Synthetic Hydraulic Oil or Mobil 1 Fully Synthetic ATF (Automatic Transmission Fluid).

HAND PUMP DOES NOT FUNCTION – AIR LOCK – GRIPPER WILL NOT PUMP OPEN

- Disconnect the Hydraulic hose from the gripper at the Quick-connect coupling.
- Put Dump Valve in manual position and lower the hand pump handle.
- Run pumping unit electrically. The hand pump handle should rise. This should prime the hand pump and force fluid into the system, allowing proper use of the hand pump.
- This procedure may need to be repeated a few times to effectively remove the air from the system.

"ROPE GRIPPER™" LUBRICATION

- Apply a thin layer of a general purpose grease lubricant to the cam surface, the trigger and latch mechanism, and the four movable shoe guides.

WIRE ROPE LUBRICATION

- Use a high friction lubrication such as: NYLUBE CABLE CARE #65, or AMERICAN OIL VITALIFE #600. Care should be taken to not over lubricate ropes.

For further technical assistance, please contact HOLLISTER-WHITNEY directly.

Hollister-Whitney Elevator Corp.
#1 Hollister-Whitney Parkway
Quincy, Illinois 62305
Phone: 217-222-0466
Fax: 217-222-0493
www.hollisterwhitney.com