ATTENTION!!!
The overspeed braking device and controller are paired and tested in house. Everything that is in the shipping box is for that unit. Do not swap the overspeed braking device and/or controller with any other job. If issues arise, contact Waupaca Elevator Technical Support at 855-805-5774.
Waupaca Elevator’s Mission Statement

Our mission is to deliver and support an enhanced quality of life for people with a need, or want, for vertical transportation. We are dedicated to our relationships, products, and industry through teamwork and education.

STANDARD FEATURES

• Fits Waupaca Elevator Winding Drum Custom Lift Series up to 500# capacity elevator’s.
• Battery Backed Up
• Retro fittable onto older Winding Drum units.
• Compact Design

Waupaca Elevator Company, Inc., reserves the right to modify the design, technical specifications and dimensions of the products shown in this document.

YOU TUBE UNLISTED INSTRUCTIONAL VIDEO LINKS

For the Small Perfection, Large Perfection, and Grove Gearboxes:

Video Title: Installing the Winding Drum Overspeed Elevator Braking Device
Video Link: https://youtu.be/kZ2dogvWpAE (The address is case sensitive)

For the Dresser Gearbox:

Video Title: Installing the Winding Drum Overspeed Elevator Braking Device on a Dresser Gear Box
Video Link: https://youtu.be/i_PZdM3B09E (The address is case sensitive)

Note: The Dresser Gearbox video is to show the Mechanical Installation portion steps of the Winding Drum Overspeed Braking Device on a Dresser Gearbox. Enter the address above or click on the link at the end of the video and fast-forward to ~17:30 to watch the Electrical portion of the install of the Winding Drum Overspeed Braking Device.

FLANGE CUTTING TOOL UNLISTED VIDEO LINKS

For the Small Perfection, Large Perfection, and Grove Gearboxes:

Video Title: How to Cut the Flange off an Existing Drum with the Flange Cutting Tool
Video Link: https://youtu.be/7chhdbNkCIA (The address is case sensitive)

Video Title: How to Adjust the Height of the Cutter on the Flange Cutting Tool
Video Link: https://youtu.be/fUYvO5Azl14 (The address is case sensitive)
# TABLE OF CONTENTS

Table of Contents .............................................................................................................................................................3
General Information ............................................................................................................................................................4
Gearbox Identification ..........................................................................................................................................................5
Tool List & Field Installed Labels ......................................................................................................................................7
Proper Handling of Wire Rope ..........................................................................................................................................8
Preparing the Machine Room & Removing the Cover ......................................................................................................9
Grove & Perfection Adapter Plate Installation ................................................................................................................11
Grove & Perfection Drum Centering ................................................................................................................................12
Preparing for the Flange Cutting Tool ............................................................................................................................13
Installing the Flange Cutting Tool .....................................................................................................................................14
Cutting the Flange .............................................................................................................................................................15
Cleaning Up After Flange Cutting ....................................................................................................................................16
Handing the Flange Cutting Tool .........................................................................................................................................17
Perfection & Grove Gearbox Spacer Installation ................................................................................................................18
Brake Disk Installation ........................................................................................................................................................19
Small Perfection Gearbox Shim & Brake Installation ..........................................................................................................20
Large Perfection Gearbox Shim and Brake Installation ....................................................................................................21
Brake Installation for a Perfection & Grove Gearbox .........................................................................................................22
Controller Installation & Wiring ...........................................................................................................................................24
Testing the Overspeed Safety Device ..............................................................................................................................25
Standard Handing the Resetting Tool ...............................................................................................................................26
Adjustable Resetting Tool ..................................................................................................................................................27
Resetting the Overspeed Brake .......................................................................................................................................28
Final installation Steps .........................................................................................................................................................29
Troubleshooting .................................................................................................................................................................30
Removing the Pillow block on a Dresser Gearbox ............................................................................................................32
Removing the Taper Locks and Drum on the Dresser Gearbox..........................................................................................33
Replacing the Taper Locks and Drum on the Dresser Gearbox ..........................................................................................34
Dresser Gearbox Spacer Installation ...................................................................................................................................35
Dresser Brake Disk Installation ...........................................................................................................................................36
Dresser Adapter Plate & Pillow Block Installation ................................................................................................................38
Replacement Part list ............................................................................................................................................................40
Cutting Tool Parts List .........................................................................................................................................................41
Notes ....................................................................................................................................................................................42

**Homeowners Information** .............................................................................................................................................43
Verify that you have the proper hand Overspeed Braking Device prior to installation.

**Series:** 10-, 010, 110

**Warning!** Motor and gearbox are no longer available for direct replacement. Handle with care.

Depending on the machine room layout, the powerhead may need to be removed for the overspeed brake installation.

**Standard Overspeed Elevator Braking Device (A4-003205)**

**Reverse Overspeed Elevator Braking Device (A4-003203)**

*Cover not pictured for clarity

**Note:** To identify if you have a standard or reverse powerhead assembly; stand on the side with the slack cable arms facing the powerhead. If the motor/gearbox is on the left then you have the Standard powerhead assembly. If the motor/gearbox is on the right then you have the Reverse powerhead assembly.

**Example Standard Powerhead**

**Required Taper Lock Style**
GEARBOX IDENTIFICATION

Series: 10-, 010, 110

**Perfection (Small)**
- Oil Type: Mobil SHC 630
- ISO Equivalent: 220

**Perfection (Large)**
- Oil Type: Mobil SHC 630
- ISO Equivalent: 220

**Grove**
- Oil Type: Mobil SHC 634/Mobil 600w Super Cylinder
- ISO Equivalent: 460

**Dresser**
- Oil Type: Mobil SHC 629/630
- ISO Equivalent: 150/220

- Perfection Gearbox
- Perfection Gearbox: Waupaca Elevator Branded

- Perfection Gearbox
- Perfection Gearbox: Waupaca Elevator Branded

- Grove Gearbox: Flexaline
- Grove Gearbox: Ironman

- Dresser Gearbox
Attention!

If the Dresser Gearbox was identified, **DO NOT** continue with the Overspeed Braking Device Installation until you are provided with an Adjustable Resetting Tool.

If you were provided with an Adjustable Resetting Tool. Continue with the installation.

Note: Longer the handle Better the Leverage.

You can **NOT** use the Standard Resetting Tool on a Dresser Gearbox.

**DO NOT** modify the Standard Resetting Tool.

Call Waupaca Elevator Technical Support to get a Adjustable Resetting Tool 855-804-5774
## TOOL LIST & FIELD INSTALLED LABELS

**Series:** 10-, 010, 110

- Overspeed Device Resetting Tool
- Manual Hand Crank
- SAE Combination Wrenches (Non-Ratcheting) up to 3/4"
- SAE Hex Wrenches (Individual)
- Hex Wrenches (Allen Wrenches)
- Hex Bit Socket Set
- SAE Socket Set
- Phillips and Flat Head Screwdrivers
- Hammer
- Pry Bar
- Putty Knife and Double Sided Tape
- Drill and Bits
- Wire Stripper
- General Purpose Wire Crimper and ends
- Conduit, Fittings, and Wire (10, 12 and 18 AWG)
- Side Cutter
- Needle Nose and Standard Pliers
- Flashlight
- Multi-Meter
- Writing Utensil
- Thread Locker
- Nitrite Gloves
- Non-Chlorinated Brake Cleaner
- Grease Gun
- Rags
- Electrical Tape
- Cable Ties
- Cable Cutter
- Grinder
- File
- Rags
- Flat Head & Phillips Screwdriver
- Aerosol Cutting Fluid
- Tape Measure
- Allen Wrenches
- Shop Vac
- Cable Cutter
- Cable Ties
- Piliars
- Gloves
- Hack saw

---

**Field Installed Labels**

- **WARNING**
  
  PARTS OF THE CONTROLLER ARE NOT DE-ENERGIZED BY THIS SWITCH.

  Place label on the disconnect.

- **NOTICE**
  
  This unit is equipped with an overspeed braking device. If this unit stops unexpectedly during normal operation; contact your local elevator servicing company immediately.

  Place label inside elevator car to notify riders.
USE PROPER CARE WHEN HANDLING WIRE ROPES!

**WIRE ROPE REPLACEMENT**
A kink (or any other damage) in the rope is permanent, a kinked rope must be replaced!

If swedge is not provided with your unit use the wire rope ends.

**CUTTING THE ROPE**
Determine where the wire rope needs to be cut. Properly seize wire rope on both sides of where the cut is to be made. Cut perpendicular to the wire rope between seized sections.
**Preparing the Machine Room**

1. Clear the work area around the powerhead.
2. Verify that elevator is functioning properly.
3. Call unit to floor landing closest to where the unit will be posted or resting.
4. Turn “OFF” all elevator power.
5. Manually lower the elevator car onto post, buffer spring, or the pit floor depending on the location of the powerhead. Continue manually lowering the unit until the slack cable switch is tripped and slack cable arms are slacked.

   *Note: You may have to remove wire rope from drum to work on powerhead. Secure the wire rope to prevent unintended movement or damage.*

6. Verify you have access to remove all hardware attaching the gearbox and pillow block to powerhead base. If not remove the entire powerhead from floor to gain access to hardware.

**How to Remove the Cover**

1. Loosen the (2) screws on the cover. One is located behind the brake and the second one is located on the opposite side of the brake.
2. Remove the nut from the cover and set aside.
3. Carefully lift the cover off and set the cover aside.

**Warning!** Motor and gearbox are no longer available for direct replacement. Handle with care.
Attention!

• If you are working on a Dresser gearbox, go to page 31 and follow the Dresser installation instructions.

• If you are working on a Perfection or Grove installation continue to the next page.

• If the rotary limit switch interferes with the overspeed braking device installation. Remove it and replace it with hoistway mounted final limits switches. (The kit number is A0-002818) Call Waupaca Elevator Tech Support for parts 855-804-5774.

• Verify that the disconnect is wired properly.

• Check the condition of the wire rope. It may need to be replaced. (NOT COVERED IN RECALL)

• Based on the oil sample; the oil may need to be replaced. (NOT COVERED IN RECALL)

Verify the cable retaining flange on the drum is no greater than 3/4”. If the flange is greater than 3/4” the flange will need to be cut off by using the Flange Cutting Tool or replacing the drum.

You will not be able to finish your installation until the flange is cut to the proper size or if the drum has been replaced.
GROVE & PERFECTION
ADAPTER PLATE
INSTALLATION

Warning! Gearbox and motor may become unbalanced after removing mounting hardware. Stabilize the gearbox and motor. Motor and gearbox are no longer available for direct replacement. Handle with care.

1. Remove the data tag from the powerhead base if the data tag will be covered by the adapter plate and set aside.

2. Remove or loosen the hardware connecting the (2) pillow block mounting angle brackets together under the pillow block.

3. Remove the hardware mounting the gearbox to the powerhead base. Wipe all the debris off the powerhead base.

4. Lift the gearbox up and slide the adapter plate between the gearbox and the powerhead base with tapped hole array opposite the slack cable arms. Verify the adapter plate edge is flush with the edge of the powerhead base on the gearbox side and hole pattern of plate matches base and gearbox. Secure the gearbox and adapter plate back onto base with longer provided hardware.

5. Insert the previously removed mounting hardware back into the pillow block mounting angle brackets. If you can not insert the previously removed hardware, add the provided shim under the lower mounting angle brackets and insert the longer provided hardware. Tighten all the hardware on the pillow block end and verify the shaft is parallel to base.

6. Clean and grease the pillow block bearing.
1. If needed, center the drum with the following instructions. If the drum does not need to be centered, continue to spacer installation.

2. On each end of the drum is a Taper Lock. Loosen and remove all mounting bolts from the installation holes in the Taper Locks.

3. Insert (2) of the previously removed 5/16”-18 mounting bolts into the removal holes and finger tighten them.

4. Slowly tighten the bolts in small increments alternating between them until the Taper Lock becomes loose.

5. Repeat steps 2-4 with the Taper Lock on the other side of the drum.

Note: The Taper Lock may break. Replace any broken Taper Locks by calling parts:
Waupaca Elevator’s Tech Support 855-804-5774.
Taper Lock Part Number is PA-002319.

6. Once both Taper Locks are loosened, center the drum between slack cable arms as best as possible. Try not to affect how the wire rope is routed.

Note: Pay attention that the key is protruding from each side of the drum enough to engage all parts of the Taper Lock assembly.

7. On both sides of the drum, remove the bolts from the Taper Lock removal holes. Replace all the previously removed hardware back into the installation holes. Secure the Taper Lock by tightening the bolts in small increments by alternating between the bolts and sides of drum until the Taper Locks are securely fastened and drum remained centered.

Note: Only tightening one side of the drum at a time could make the drum move.
1. After the adapter plate is installed, verify the cable retaining flange on the drum is no greater than 3/4”. If the flange is greater than 3/4”, the flange will need to be cut off by using the Flange Cutting Tool or replacing drum.

2. If the cable retaining flange on the drum is 3/4” or less proceed with the installation of the overspeed elevator braking device as normal.

3. If you haven’t already pitted or supported the elevator car, do so. Remove the wire rope from the drum and secure the wire rope to prevent unintended movement, injury or damage.

4. If the rotary limit switch is to remain present after the installation of the Overspeed Braking Device; you will need to disconnect the rotary limit switch. Either remove the belt from the pulleys or disengage the gears.

5. Remove the cutting tool holder by removing the (2) shoulder bolts on the back of the flange cutting tool and set the cutting tool holder and bolts aside.

6. Verify cutter is in the proper orientation to cut the cable retaining flange closest to the gearbox. If not correct go to page 17 to re-hand the tool.

**Tools Required for Flange Cutting Tool**

- Grinder
- File
- Rags
- Flat Head & Phillips Screwdriver
- Tape Measure
- Allen Wrenches
- Shop Vac
- Cable Cutter
- Cable Ties
- Piliars
- Gloves
1. Line up the mounting slots of the flange cutting base to the previously installed adapter plate. The side of the flange cutting base should be approximately 1/2” from the drum flange. Use the provided hardware to mount the flange cutting tool base to the adapter plate.

2. Tighten set screws on to cutter. The cutter must be tight but still can advance using a flat head screw driver.

3. To adjust the height of the cutter, use the (2) screws on the top of the cutting tool holder by equally turning them, moving the cutting holder up and down. Verify that the cutter is aligned to the center line of the gearbox output shaft.

4. Slide the cutter holder onto the previously installed flange cutting tool base with the cutter in the fully retracted position.

**Note:** Depending on the gearbox, the height will change.

5. After aligning, verify height adjustment using provided shim at each side of the tool holder and tighten the (2) shoulder bolts on the back of the cutter base. Snug the adjustment screws to top of the cutter base.

**Note:** Cutter tip should be clear of the drum flange or just touching.

### Gearbox Approximate Cutter Height

<table>
<thead>
<tr>
<th>Gearbox</th>
<th>Approximate Cutter Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grove</td>
<td>Bottom of the Slots</td>
</tr>
<tr>
<td>Small Perfection</td>
<td>1/4” up</td>
</tr>
<tr>
<td>Large Perfection</td>
<td>15/16” up</td>
</tr>
<tr>
<td>Dresser</td>
<td>Replace Drum</td>
</tr>
</tbody>
</table>

**CUTTING HAZARD**

**CRUSH HAZARD**

**ELECTRIC HAZARD**

**FALLING HAZARD**

**PUNCTURE HAZARD**

**PINCH HAZARD**
1. Waupaca Elevator recommends that proper eye protection should be worn when cutting the flange.

2. Mark the drum flange, with marker or paint pen, to make it easier to track the rotations of the drum during cutting.

3. Put paper towel/rag under the drum where it will be cut to help collect metal chips and help with clean up.

4. Turn “ON” the power to the elevator.

5. Spray the cutter tip or flange with aerosol cutting oil.

6. Run the elevator in the down direction. Advance cutter so it is barely touching the flange. Slowly advance cutter until it is making a continuous cut through 360° of rotation.

   **Note:** The cutter on the Flange Cutting Tool only cuts when the drum is rotating in the down direction. This tool may make loud noises during the cutting process.

7. With a flat head screwdriver; slowly turn in the knurled screw an 1/8” turn smoothly to advance the cutter into the flange.

   **Note:** Frequently spray cutting oil during the cutting process. Advancing the cutter too quickly will damage the cutter, yourself, and may damage the equipment.

8. Continue advancing the cutter slowly at 1/8 turn smooth increments for every 3-5 turns of the drum. When you have the cut approximately 2/3 of the way through the flange slow down cutter advance to 1/16 turn increments.

   **Note:** Frequently spray aerosol cutting oil during the cutting process.

**ATTENTION:** As the cut is nearing completion, the cutter will start to deform the back side of the flange before cutting through.

9. Keep steadily advancing the cutting tool until you cut completely through flange and have advance the knurled screw as far as it will go. Ensure all 360° of rotation is cut.
CLEANING UP AFTER FLANGE CUTTING

Series: 10-, 010, 110

1. After the cut is complete. Turn the elevator power “OFF”. The flange and cutter will be hot and sharp. Waupaca Elevator recommends that proper gloves and eye protection should be worn when doing the final steps of the flange cutting process.

2. Remove metal chips and oil soaked rag. Remove previously installed cutting assembly and set aside.

3. With an angle grinder; radially grind the previously cut flange ring. Twist ring to slide it off of the shaft. (It will look like a giant lock washer)

4. Turn the elevator power back “ON”. Run the unit in the down direction. De-burr the sharp edge of the remaining drum flange until smooth.

   **Hint:** Using a grinder and having the drum rotating will speed up the process.

5. Turn the elevator power “OFF”. Remove manual operation means (jumpers in controller). Clean up the metal shavings and cutting oil. Verify that all mounting holes are clean of debris.

   **Hint:** Use Shop Vac, compressed air or magnet to get the mounting holes clear.

6. Reinstall the wire rope. Verify equal tension and proper number of cable wraps on the drum.

   Waupaca Elevator, Co., requires a minimum of (2) wraps of rope under tension to remain on the drum when the elevator car is sitting on the pit floor. The wire rope must not wrap over the first row of rope to make a second layer when the unit is at the top floor. The cable clamps must be pulled up tight inside of the drum. Verify no wire rope is extended outside of the drum or 1” beyond cable clamp.

7. Continue the Winding Drum Overspeed installation.

   Note: This picture is just to clarify on how the wire rope is feed on to the drum.
1. Verify the orientation of the powerhead and flange cutting.
2. Remove the (2) bolts and remove the cutter holder from the flange cutter base.
3. Remove the 4 screws on the back to get access to the cutting block with the cutting tool.
4. Loosen the set screw on the cutting tool end.
5. Spin the cutting tool 180°. Be sure the cutting edge is up,
6. Secure the cutter with the set screws and continue to the Installing the Flange Cutting Tool page.
1. If the Taper Lock is recessed behind the edge of the drum, the spacer and longer provided 5/16"-18 bolts will be needed for installation. If the Taper Lock is not recessed, continue to brake disk installation page.

2. Remove (3) mounting bolts from the Taper Lock between the drum and the gearbox.

3. Disassemble the spacer by removing the two screws. Take the halves and place them around the shaft. Reinstall the (2) screws. (Do not tighten)

4. Align the mounting holes with Taper Lock bolt and key on the shaft with features in the spacer. Slide the spacer tight to the Taper Lock and tighten the (2) screws.

**Note:** Spacer must be flush on all sides.

**Attention!**
The disk should not touch the flange! If (1) spacer is not enough, use (2) spacers with longer hardware.

If a 2nd spacer is needed contact Waupaca Elevator tech support 855-804-5774

Kit Number is A0-003299

**Note:** Installation will be easier if the key is positioned on the bottom side of the shaft.

**Note:** Spacer(s) may not always engage the key.
ATTENTION: If you cut the flange off your drum, reinstall the wire ropes before install brake disk. Verify the proper number of cable wraps on the drum.

Waupaca Elevator, Co., requires a minimum of (2) wraps of rope under tension to remain on the drum when the elevator car is sitting on the pit floor. The wire rope must not wrap over the first row of rope to make a second layer when the unit is at the top floor. The cable clamps must be pulled up tight inside of the drum. Verify no wire rope is extended outside of the drum or 1” beyond cable clamp.

1. Remove (3) mounting bolts from the Taper Lock between the drum and the gearbox if present.

2. Disassemble the disk by removing (6) #10-24 button head screws and loosen one button head screw on each half of the disk allowing the (2) straps to pivot.

3. Separate the disk in halves and place the halves around the shaft interlocking the dove tails with the straps facing the gearbox, then pivot the straps around the shaft.

4. Align key on the shaft with the keyway in the disk. Finger tighten the 5/16” -18 bolts through the installation holes into the Taper Lock to hold the disk in place. (If spacer was used, use the longer provided bolts).

5. Apply thread locker on the previously removed #10-24 button head screws and replace them in the straps and securely tighten.

6. Securely fasten the bolts in the installation holes.
If the elevator that your working on is equipped with a Grove Gearbox, proceed to the page 22 and continue with the overspeed safety device installation.

If the elevator is equipped with a small Perfection gearbox, a 1/4" shim is required between the adapter plate and the overspeed brake assembly.

Note: Standard Overspeed Safety Device is Depicted.
If the elevator that your working on is equipped with a Grove Gearbox, proceed to the next page and continue with the overspeed safety device installation.

If the elevator is equipped with a large Perfection gearbox, a 15/16” shim is required between the adapter plate and the overspeed brake assembly.

Note: Standard Overspeed Safety Device is Depicted.
### BRAKE INSTALLATION FOR A PERFECTION & GROVE GEARBOX

#### Note: If you are working on a unit with a Perfection gear box and did not install the shim. Return to the previous page(s).

1. Remove the rubber band and cardboard and place the brake assembly onto the adapter plate/shim so the brake disk is in-between the brake pads and pushed up to the rubber spacer belt.

2. Remove the rubber spacer belt from between the brake pads and push the brake the rest of the way on.

3. Line up the mounting holes of the brake assembly and shim (if used) with the tapped hole array in the adapter plate and securely fasten with (3) 5/16”-18 socket head cap screws and lock washers. Verify disk is not rubbing on any part of this assembly.

#### Note: If the brake pads come out of the brake assembly, reference the brake pad assembly process instructions.

4. Remove the fork sensor from the bracket by removing the (2) #8-32 screws. Set aside during the cleaning process.

5. Clean the brake disk with non-chlorinated brake cleaner to remove any grease or oil residue on the brake, disk, and pads. Once the brake is clean, remount the fork sensor with the previously removed screws.

#### Note: Once the brake cleaner is applied. Do not wipe clean, let it dry. The brake cleaner may remove the paint.

6. Verify all hardware is fully secure. Manually rotate the drum one complete revolution to verify that no part of this new assembly rubs or interferes with any part of powerhead.

7. **Verify that the fork is retaining the metal balls inside the inner clasp.**

8. Remove the (2) shipping bolts by slowly loosening the bolts in small increments; alternating between them until head of the bolt is no longer compressing the springs. Then remove them completely.

#### Note: Standard Overspeed Safety Device is Depicted.
Brake Pad Assembly Process

**Warning:** Use Extreme Caution if Shipping Screws are Removed. Brake can Actuate.

**Example Key**

(A) Carrier Plate
(B) Brake Pad
(C) Backer Plate
(D) Stationary Brake Pad

**Reassembling the Brake**

1. Insert the Carrier Plate (A-Red) with slot facing brake arm through the brake body until snug against the brake handle.

2. Insert the brake pad (B-Blue) through the brake body until its snug against the Carrier Plate.

3. Insert the Backer Plate (C-Purple) through the disk opening; blocking the opening opposite of the brake arm. The Backer Plate (C-Purple) must fit in a snug keyed position flat against the brake body across from the Brake Pad (B-Blue).

4. Insert the Stationary Brake Pad (D-Green) through the disk opening. The Stationary Brake Pad (D-Green) must fit in a keyed position flat against the Backer Plate (C-Purple). Insert the rubber spacer belt in between the brake pads to hold in place.
Important!
Reinstall all the components that were removed during the installation of the elevator overspeed braking device. Verify that they are all secure and installed properly prior to moving to the next step of the elevator overspeed braking device installation process.

1. Verify the power is “OFF” at the disconnect and circuit breaker.
2. Remove the wiring from the elevator disconnect to original controller terminal (L)1 and (L)2.
3. The overspeed controller must be wired between the elevator disconnect and elevator controller.
   Note: If there is a battery back up it should be wired: disconnect, battery backup, overspeed controller, winding drum controller.

4. Locate suitable location to mount the overspeed controller to the wall near the elevator controller.
5. Wire from disconnect to terminals L1 and L2 in overspeed controller.
6. Wire from terminals T1 & T2 in the overspeed controller to terminals (L)1 and (L)2 of the original elevator controller.

7. Run the solenoid and actuator wires through conduit. Route the conduit per NEC and local codes from the Overspeed controller to the 4x4 junction box. Then route the conduit to the winding drum overspeed braking device cover knockout(s). Verify all wires are clear of the brake, solenoid armature, or any other moving components.
8. Route cable for fork sensor separately to the overspeed controller using supplied electrical fitting.
9. Wire the fork sensor cable brown, blue, and black to the overspeed controller terminals labeled Brn, Blu, and Blk.
10. Wire the solenoid wires to terminals labeled SOL1 to SOL2.
11. Wire the actuator switch wires to terminals labeled AS1 and AS2.
12. Install UPS in overspeed controller.

Note: This UPS is only for the overspeed controller. It does not provide emergency decent.
**TESTING THE OVERSPEED SAFETY DEVICE**

### Testing Notes:
- Testing may be done with an empty elevator car or testing may be done with weight up to rated load.
- Do not test in the UP direction. Damage to the powerhead and/or overspeed device will occur.

1. Turn power “ON” and power up the UPS.
2. Verify that the overspeed brake assembly is not rubbing on the brake disk or fork sensor. A small bit of rubbing may be experienced between the disk and the brake pads.
3. Verify that the fork sensor is seeing the holes on the disk. As the disk rotates, the edge of the fork sensor will light up when the sensor beam is broken.
4. With everything wired and installed, test run the unit. The overspeed brake should not trip through the full range of travel in the “UP” or “DOWN” direction. Verify that the display is reading 9-12 pulses/second at normal running speed. The trip speed is 13. Run the unit to an upper floor landing that is about 8’ from the pit.
5. Locate CR2 relay in the overspeed controller.
6. Call the unit to the lower floor landing.
7. While running at full speed in the down direction. Press the CR2 relay flag in the overspeed controller to manually trigger the overspeed device. The unit should stop when CR2 is pressed.
8. Use a voltage meter in the primary elevator controller at terminals (L)1 and (L)2 to verify that there is no power in the primary elevator controller after overspeed controls are triggered.
9. After the overspeed device is triggered, turn power “OFF” at disconnect and power down the UPS before mechanically resetting.

**Verifying the Integrity of the Gearbox after Testing**

1. Manually open the powerhead brake and hand crank in the “DOWN” direction.
2. If you can turn the hand crank and drum does not rotate. The gear box “MUST BE REPLACED”. Contact Waupaca Elevator Technical Support 855.804.577
3. If the drum does turn, stop hand cranking and release brake handle to allow the gearbox brake to return to normal position. Continue with the resetting instructions.
STANDARD HANDING THE
RESETTING TOOL

Attention!
All power must be disconnected prior to resetting.

1. To reset the safety device, you must use only the Waupaca Elevator resetting tool.
2. Determine if the resetting tool orientation needs to be standard or reverse. For a standard powerhead bolts are on the left-hand side of the lever with point curving up and for the reverse powerhead bolts are on the right with the point curving up. If re-handing is necessary, continue with the steps 3 through 5.
3. Remove the 3/8" hex nuts from the resetting tool.
4. Move the shoulder bolts to the other side of the resetting tool.
5. Replace the hex nuts on the shoulder bolts and tighten until secure.
**ADJUSTABLE RESETTING TOOL**

**Attention!**
All power must be disconnected prior to resetting.

**Series:** 10-, 010, 110

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1. To reset the safety device, you must use only the Waupaca Elevator resetting tool.

2. Determine if the resetting tool orientation needs to be standard or reverse. For a standard powerhead bolts are on the left-hand side of the lever head with point curving up and for the reverse powerhead bolts are on the right with the point curving up. If re-handing is necessary, continue with the steps 3 through 5.

3. Remove the 3/8" hex nuts from the resetting tool.

4. Move the shoulder bolts to the other side of the resetting tool.

5. Replace the hex nuts on the shoulder bolts and tighten until secure.

6. Choose the length of handle needed for your resetting needs. The longer the handle the better the leverage.

7. Loosen the set screw on the handle to remove the handle from the lever head and remove the handle.

8. Slide the selected handle on to the lever head. Verify that the flat and alignment mark lined up on the lever head then tighten the set screw.

**Note:** Longer the handle. Better the Leverage.
RESETTING THE OVERSPEED BRAKE

Series: 10-, 010, 110

DANGER!!!
Resetting should be done after testing ONLY!. Do not reset if triggered during normal operation. The elevator WILL free fall!!

Attention: All power to the unit NEEDS to be turned OFF.

1. Place the bolt shoulders around the brake arm. Verify that the shoulders of the bolts are planted on the brake arm. The bolt furthest away from you should be under the brake arm and the one closet to you should be on the top of the brake arm.

2. Push down on resetting tool. Aligning the brake arm between the latch mechanism.

3. While pushing the brake arm down, push the fork forward into its locking position.

Caution: Pushing down with too much force can damage the resetting tool or the braking system.

Note: Resetting the overspeed device can be done with the cover “ON”.

Note: If struggling to get the brake arm set. Add or reduce the pressure on the resetting arm. A little shimmy on either the resetting tool or latch mechanism may help. Forcing it may damage the latch mechanism.

4. Once the brake arm is set in place. Carefully remove the resetting tool.

5. After resetting, turn “ON” all power. The original elevator system should be powered. If not, verify micro switch under overspeed spring perch is actuated by perch, if not adjust the micro switch.

6. The elevator is back to normal operation.
1. Replace the cover.
   a. Carefully replace the cover back on the overspeed brake device.

   b. Tighten the (2) screws. One is located behind the brake and the second one is located on the opposite side of the brake.

   c. Replace the nut and tighten.

2. Locate new supplied data tag in install packet and transfer information from old tag to new tag. Find new location for data tag and secure. Fill out the label on the cover of the overspeed controller box.

3. Don’t forget to place the “Notice” label in the elevator car and the “Warning” label on the disconnect.

4. Fill out the Homeowner Information page in the back of this installation manual and give to homeowner.

5. The resetting tool will be used for future installs, DO NOT leave behind.

6. You will have left over hardware and parts.
<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible Solution</th>
</tr>
</thead>
</table>
| Overspeed does not trigger. | Ensure actuator arm moves freely.  
Ensure the nylock nut holding the pivot arm is not over tightened.  
Remove shipping bolts.  
Wiring for solenoid is not correct  
Adjust stop bolt on the fork so pivot actuator arm is square to the base. |
| Overspeed makes a buzzing sound. | The solenoid needs to be adjusted, by reducing plunger throw/fork is bound. |
| Overspeed trips at normal running speed. | Check the display of the Cub5 to see what it reads while running. Call Waupaca Elevator’s Tech Support 855-804-5774. For further information. *Overspeed trips when Cub5 displays 13* |
| The taper lock is recessed more than 3/8”. | Another Spacer is required. Call Waupaca Elevator’s Tech Support 855-804-5774. (A0-003299) |
| Flange on the drum is larger than 3/4”. | Waupaca Elevator offers a flange cutter for Perfection and Grove Gear Boxes. If you have access to a Flange Cutter go to the table of contents page to find the instructions in this manual.  
The drum may need to be replaced.  
If you are working on a Dresser powerhead. The drum needs to be replaced. |
| Overspeed device triggers without the coil firing. | Mechanical vibrations or accidental trip.  
Verify that there is a 1/8” gap or less is between the inner clasp and fork, also the balls are sitting on the flat of the fork. |
| Adapter plate does not fit. | Take pictures and call Waupaca Elevator’s Tech Support 855-804-5774.  
Use both removal holes & tighten evenly clean shaft before attempting to remove.  
If your taper lock breaks, try removing the other taper lock carefully and replace broken part. If both break, removal is impossible. |
| The Taper Lock breaks. |  |
| If rotary limit switch interferes with installation of overspeed device. | Remove Rotary limit switch and replace with final limit switches . Call Waupaca Elevator’s Tech Support for parts 855-804-5774. (A0-002818) |
| If the faces of the (2) halves of the 3/8 spacer are not flush. | Adjust the spacer flush.  
Verify the Taper Lock is installed properly and clean/ debris free. |
| If the disk is touching the base plate | Shim under gearbox to alleviate the rubbing. Normally you will have a 1/8” or less of clearance between disk and base plate. |
| Lights on fork sensor not lit or Cub5 is not reading properly. | Check cord for fork sensor and verify wiring for cord.  
Verify the fork sensor is inline with windows in disk and sensor is not obstructed.  
Fork sensor needs to be replaced. Call Waupaca Elevator’s Tech Support for parts 855-804-5774.  |
| Power to controls removed by overspeed | Overspeed has fired, Verify if Overspeed has fired. Use Caution.  
Micro switch under actuator is no longer depressed by actuator.  
UPS in overspeed controller is off or no longer working. If not working, replace, do not remove/bypass UPS from system and leave running!  
Circuit breaker tripped, reset the circuit breaker. |
You Tube Unlinked Instructional Video Links

For the Dresser gearbox:

https://youtu.be/i_PZdM3B09E
(The address is case sensitive)

Note: The Dresser gearbox video is to show the mechanical installation portion of the Winding Drum Overspeed Braking Device on a Dresser gearbox. Enter the address below or click on the link at the end of the Dresser gearbox video and fast-forward to ~17:30 to watch the electrical portion of the install of the Winding Drum Overspeed Braking Device.

For the Small Perfection, Large Perfection, and Grove gearboxes:

https://youtu.be/kZ2dogvWpAE
(The address is case sensitive)
1. Only remove the data tag from the powerhead base if needed and set aside.

2. Remove the hardware from the slack cable bracket assembly, set the slack cable bracket and hardware aside.

3. Loosen the (2) set screws holding the pillow block in place to the shaft of the gearbox.

4. Remove the remaining hardware from the pillow block angle brackets.

   **Note:** Keep all removed hardware together.

5. Carefully remove the pillow block from the shaft and set aside.

6. Remove the hardware mounting the pillow block mounting angle brackets to the base.

7. Remove the hardware from the pillow block mounting angle brackets and set the separated brackets and hardware aside.
1. Clean any rust, grease, etc. off of the shaft between the drum and the pillow block.

2. On both sides of the drum is a 1610 series Taper Lock. Loosen and remove all of the 3/8-16 set screws with a 3/16” Allen wrench from the installation holes in the Taper Locks.

3. Insert (1) of the previously removed set screws into the removal hole.

4. Slowly tighten the set screw in small increments until the Taper Lock becomes loose.

5. Repeat steps 2-4 with the Taper Lock on the other side of the drum.

6. Once both Taper Locks are loosened, remove the Taper Lock from pillow block side. Then slide drum off of the shaft. Then remove remaining Taper Lock from the shaft.

Note: Removing key may make it easier to remove the last Taper Lock.

7. Remove key from keyway if you have not done so already.

8. Clean the shaft if needed by polishing the shaft/ keyway using a scouring pad, and/or using Emery cloth until the shaft is clean and smooth.

Note: Verify the keyway is clean of debris.
9. Line up the keyway of the P1 Split Taper Lock bushing to the key on the shaft. Then, slide the P1 Split Taper Lock bushing on to the shaft.

10. Install provided taller new key. Center the provided key in between the slack cable arms and secure the key in the keyway with a mallet.

**Note:** The provided new key is taller than the previously removed key.

11. Verify the proper orientation of the drum to have the cable spool properly. Line up the keyway on the drum to the key on the shaft. Then, slide the drum on to the shaft. Center the drum on the key and between slack cable arms.

12. Slide the second provided Taper Lock bushing on to the shaft.

13. Secure the Taper Lock by tightening the bolts in small increments into the mounting holes by alternating between the bolts and sides of the drum until the Taper Locks are securely fastened and drum has remained centered between the slack cable arms.

**Notes:**
- Pay attention that the key is protruding from each side of the drum enough to engage all parts of the Taper Lock assembly.
- Only tightening one side of the drum at a time may cause the drum to move.
1. If the Taper Lock is recessed behind the edge of the drum, the spacer and longer provided 5/16"-18 bolts will be needed for installation. If the Taper Lock is not recessed, continue to Dresser brake disk installation page.

2. Remove the (3) previously installed mounting bolts from the Taper Lock between the drum and the pillow block side of powerhead.

3. Align the key on the shaft with keyway in the spacer. Slide the spacer tight to the Taper Lock.

   **Note:** Some units may require 2 spacers.
1. If you have not already, remove (3) mounting bolts from the Taper Lock between the drum and
   the pillow block.

2. Align key on the shaft with the keyway in the disk. Then, slide the disk on to the shaft.

3. Securely fasten with the longer provided 5/16-18 bolts in the installation holes.
1. Attach the slack cable bracket by finger tightening to the gearbox with the previously removed hardware.

2. Slide the adapter plate on to the powerhead base and line up the holes on the adapter plate to the holes on the powerhead base.

3. Line up the holes through the adapter plate with the lower pillow block mounting angle bracket.

4. Bring in the upper pillow block mounting angle bracket, “eyeballing” the hole in upper pillow block mounting angle bracket to the hole in the slack cable bracket. If needed adjust orientation of the upper pillow block mounting angle bracket.

   **Note:** Holes in the upper and lower pillow block mounting angle bracket may not have the same spacing.

5. Hold the pillow block mounting angle bracket together in verified “C” shape orientation and mount them together with the previously removed hardware allowing them to be able to be adjusted.

6. Insert provided hardware into slots of the adapter plate through the holes of the lower pillow block mounting angle bracket. Lightly tighten the provided hardware.

7. Align the bolt heads equally in the 2 slots on the bottom of the adapter plate. Secure the pillow block mounting angle bracket to the adapter plate.
8. Slide the adapter plate with brackets mounted back on to the powerhead base. Line up the slot of the adapter plate to the hole in the powerhead base.

9. Carefully slide the pillow block back onto the shaft. Line up the mounting holes of the pillow block to the upper pillow block mounting angle bracket holes and slack cable bracket hole and attach with previously removed hardware.

10. Insert the provided 1/2” bolt through the adapter plate and powerhead base hole and finger tighten. Verifying all edges are flush.

11. With a center punch, mark the powerhead base through the slot of the adapter plate by the gearbox. Drill 17/32” hole in the powerhead base through the slot of the adapter plate at the previously marked location. After the hole is drilled, install the 1/2” hardware and secure. Re-verify all edges have remained flush and fully secure all remaining hardware on base plate and gearbox.

12. Tighten the pillow block set screws on to the shaft. Clean and grease the pillow block.
Attention!

Go to page 22 to complete the installation.
REPLACEMENT PART LIST

Series: 10-, 010, 110

Battery Back Up (PA-002684)
The battery back up (UPS) located in the Overspeed Braking Device Controller MUST be replaced EVERY 2-3 YEARS. If the battery fails or becomes to weak, the Overspeed Device may not function as designed causing injury or elevator may stop working.

Fork Optical Sensor (E-008152)
The fork optical sensor located on the Overspeed Braking Device MUST be replaced EVERY 5 YEARS or the Overspeed Device may fail and injury may occur.

Call Waupaca Elevator Technical Support to obtain the replacement parts at 855-804-5774
# CUTTING TOOL PARTS LIST

**Series:** 10-, 010, 110

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>QTY.</th>
<th>PART NUMBER</th>
<th>DESCRIPTION</th>
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<tr>
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<td>2</td>
<td>M-003430</td>
<td>SCREW #10-24 X 1-3/4</td>
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<td>2</td>
<td>M-004024</td>
<td>SCREW, SET, SCKT SHOULDER, 3/8 X 3/8</td>
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<tr>
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<td>1</td>
<td>M-004077</td>
<td>SCREW, SET, 1/4-20 X 3/8</td>
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<td>1</td>
<td>M-008359</td>
<td>SCREW, THUMB, KNURLED, 1/4&quot;-20 X 1&quot;</td>
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<td>M-008385</td>
<td>HOLDER, TOOL, CUTTER, FLANGE, DRUM</td>
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<td>4</td>
<td>M-008386</td>
<td>SCREW, MACH, FH HD, 1/4-20 X3/4</td>
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<tr>
<td>7</td>
<td>1</td>
<td>M-008387</td>
<td>TOOL, CUTTER, FLANGE, DRUM</td>
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<tr>
<td>9</td>
<td>1</td>
<td>W-003307</td>
<td>MOUNT, HOLDER, CUTTER, FLANGE, DRUM</td>
</tr>
</tbody>
</table>

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![Diagram of cutting tool](image-url)
Dear Homeowner,

Your Waupaca Elevator Company Inc., Custom Lift Elevator is now equipped with an Overspeed Braking Device to satisfy the CPSC safety recall. *(Recall Number is 19-022)*

**If the Overspeed Braking Device is activated:**
- **Elevator will not respond to calls!** Remain calm and call for emergency assistance.
- Do not attempt to move the elevator from its current location.
- Do not attempt to release the brake.
- Do not fix the elevator yourself. Injury/Death may occur.

**You’re Dealer’s Information:**

Company:__________________________
Address:___________________________
Contact Name:______________________
Telephone No.:______________________
Elevator Serial Number:______________

If you have questions concerning the operation or maintenance requirements of your elevator, please contact the local elevator dealer listed above. Waupaca Elevator Company Inc., suggests that you develop an ongoing relationship with your dealer for routine servicing and periodic maintenance. Do not try to service or repair the elevator yourself.

**Maintenance and Important Labels**

See depicted labels below for additional maintenance and operational requirements.

**WARNING**

The Elevator Overspeed Braking Device **MUST** be annually inspected and the UPS Battery **MUST** be replaced **EVERY 2-3 YEARS** or the Overspeed Device may fail and injury may occur.

**NOTICE**

This unit is equipped with an overspeed braking device. If this unit stops unexpectedly during normal operation; contact your local elevator servicing company immediately.

*Note: Carefully remove this informational page for the homeowner.*