

# ***OPERATOR'S GUIDE SUPPLEMENT***

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## ***Adaptive Force Control***

***Manual Number 6012809 R-7***

**cascade<sup>®</sup>  
corporation**

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**WARNING:** Rated capacity of the truck/attachment combination is a responsibility of the original truck manufacturer and may be less than shown on the attachment nameplate. Consult the truck nameplate.

**WARNING:** Do not operate an attachment equipped with Adaptive Force Control (AFC) unless you have been trained in it's use.

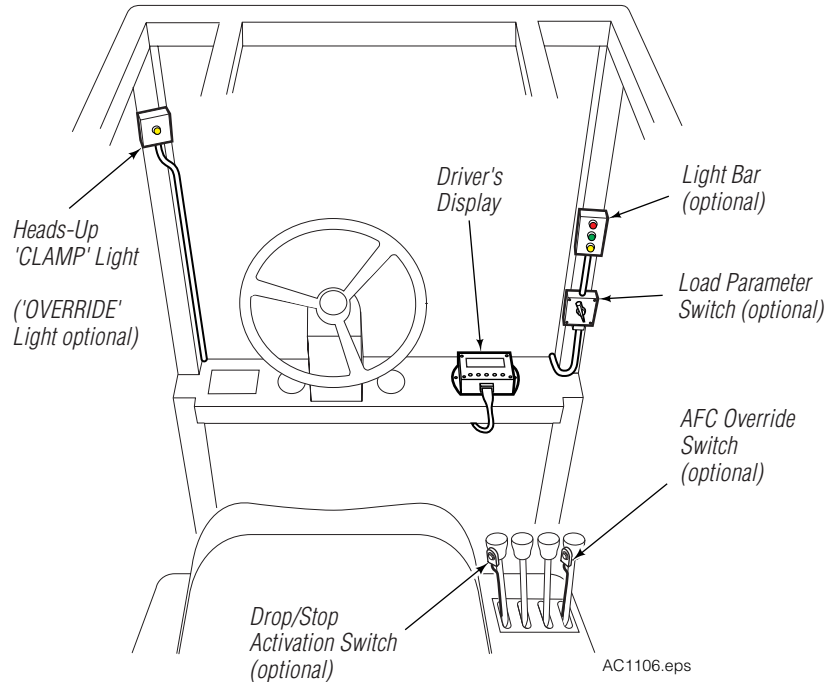
# INTRODUCTION

**Adaptive Force Control** – Adaptive Force Control (AFC) equipped Paper Roll Clamps ("Smart Clamp" technology) are operated in a similar manner as a standard Paper Roll Clamp, with the exception of the actions and indications shown in this Guide.

**IMPORTANT:** Refer to Cascade Paper Roll Clamp Operator's Guide 210135 for complete suggested load-handling procedures, and any other company specific load handling guidelines for your loads.

**About this Guide** – The information in this Guide is intended to provide operator understanding about using Paper Roll Clamps equipped with Adaptive Force Control. Read this Guide thoroughly before operating an Attachment equipped with Adaptive Force Control. If you have any questions, or don't understand a procedure or indication, ask your supervisor.

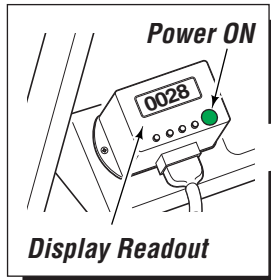
**Emphasize Safety!** Most accidents are caused by operator carelessness or misjudgment. You must watch for hazardous situations and correct them.



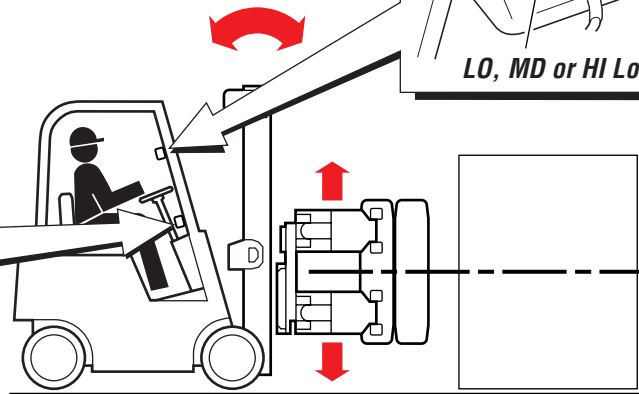
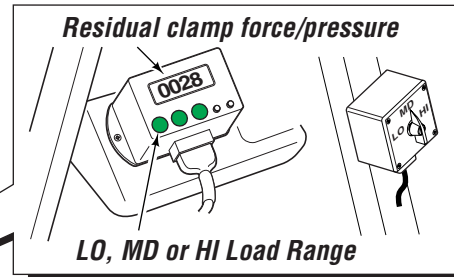
# S

## TART-UP, TRAVELING EMPTY, ADDRESSING LOAD

**1** Look for Power 'ON' LED, display readout illumination.



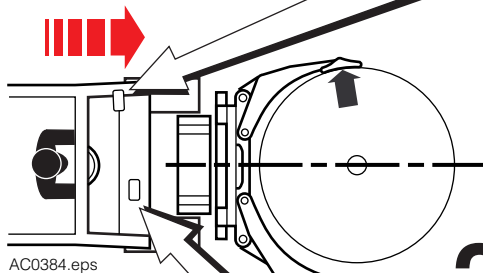
**2** Look for LO, MD or HI load range LED, automatically set by Auto Switch, manually set by Rotary Switch, or if no switch LO always ON.



**3** Position Clamp parallel to and centered vertically on load.

# G RABBING LOADS

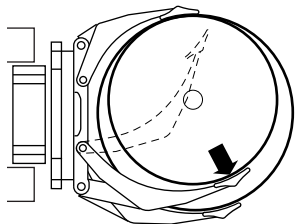
**1** Drive slowly forward, touch short arm to roll.



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**2** Clamp with long arm until pads are secure on roll and 'CLAMP' lights are ON.

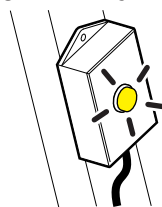
**Split Arm Clamp**



Ensure upper arm is clamped on roll or closed completely before hoisting.

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'CLAMP' LIGHT ON



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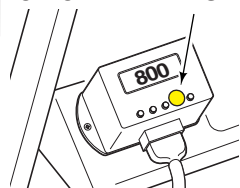


**WARNING:** 'CLAMP' heads-up light must be ON after grabbing load.



**WARNING:** "CLAMP" lights not illuminated at maximum lift: AFC in override mode. Driver controls clamp force/pressure.

CL 'CLAMP' LED ON



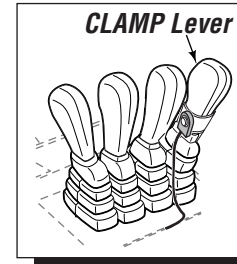
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Display shows threshold clamp force/pressure before hoisting. Value should approximate setup value.

# **G** RABBING LOADS IN OVERRIDE (or at maximum lift)

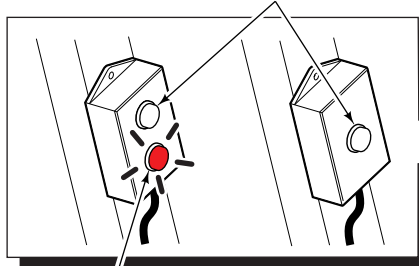
**CAUTION:** Use optional override pushbutton if required for trailer and railcar breakout or when maximum pressure is required. OVERRIDE 'heads-up' light (red) illuminated. CLAMP 'heads-up' light (amber) not illuminated. Driver controls clamp force/pressure.

**1** Press AFC system override pushbutton.



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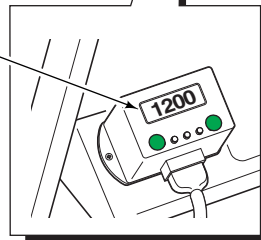
**CLAMP 'heads-up' light OFF**



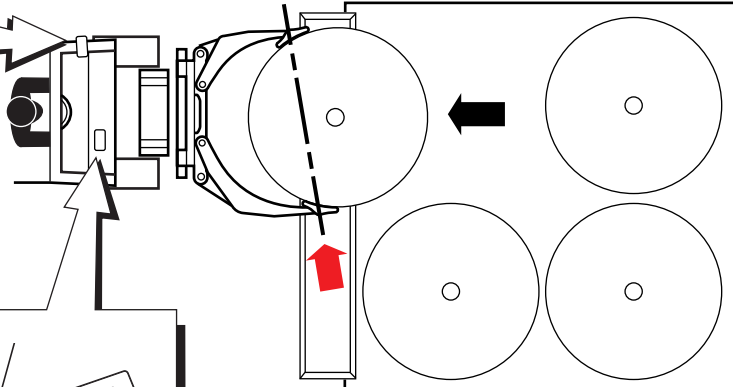
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**2** **OVERRIDE 'heads-up' light ON.**

*Driver controls clamp force/pressure.*



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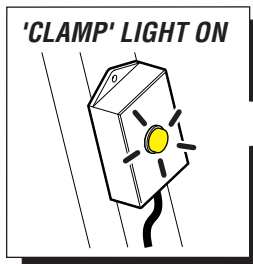


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**3** **Clamp roll, withdraw, release override pushbutton and reclamp.**

# H OISTING LOAD, TRAVELING

**1** Assure pads are secure on roll and 'CLAMP' heads-up light is ON before hoisting.

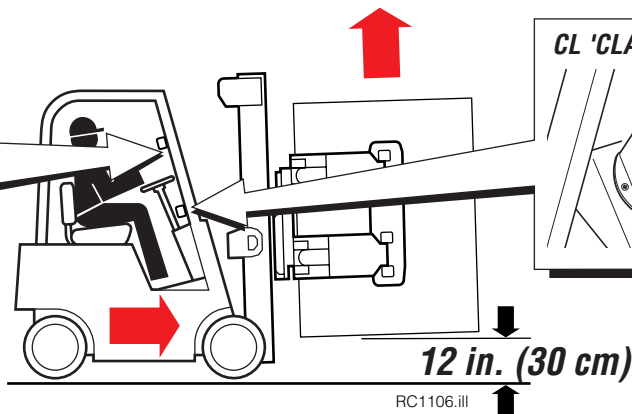
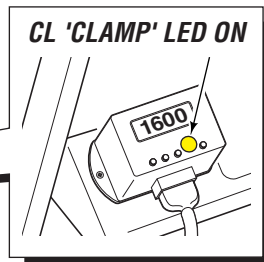


**2** Hoist load, display shows:

A) real time clamp force/pressure, OR

B) maximum clamp force/pressure achieved during last hoist/clamp cycle.

**NOTE:** Value may fluctuate as truck travels over rough terrain.



**WARNING:** 'CLAMP' heads-up light must be ON before hoisting and during traveling.



**WARNING:** "CLAMP" lights not illuminated at maximum lift: AFC in override mode. Driver controls clamp force/pressure.

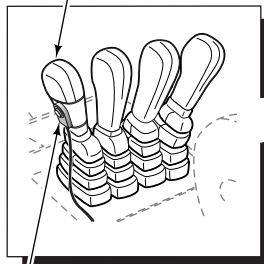
# **S**ETTING LOAD DOWN, UNCLAMPING

**1** Tilt to vertical, (back-tilt required if angled clamp mount used).



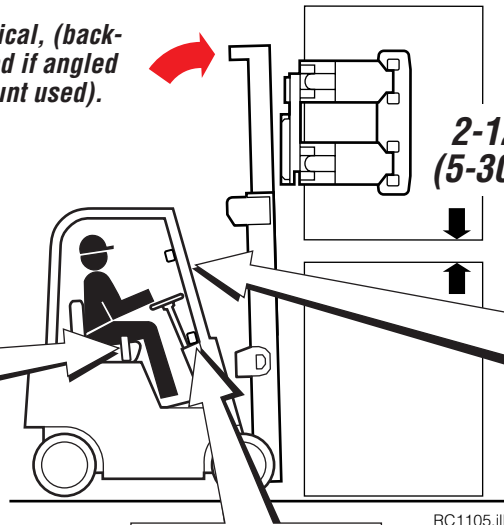
**2** Lower load. At 2-12 in. (5-30 cm) above floor or load press Drop/Stop Activation Switch (if equipped).

HOIST lever



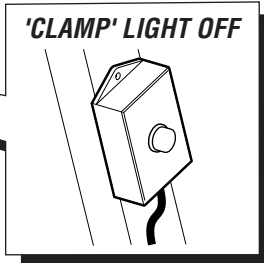
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Drop/Stop  
Activation Switch



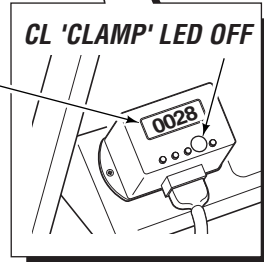
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2-12 in.  
(5-30 cm)



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Residual clamp  
force/pressure



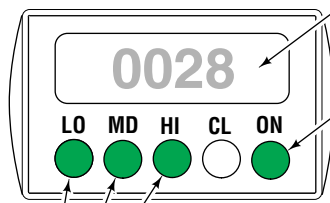
AC1080.eps

**3** Unclamp. 'CLAMP' heads-up light OFF.

# D ISPLAY INDICATIONS WHEN OPERATING CLAMP



## STARTUP, TRAVELING EMPTY



HI = High load range  
 MD = Medium load range  
 LO = Low load range

Residual clamp force/pressure.

AFC power ON (Green).  
 (Remains illuminated during system operation).

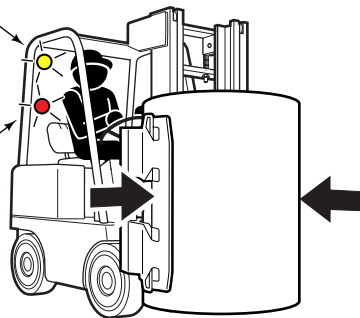
Load parameter setting.  
 Automatically set by Auto Switch or manually selected by Rotary Switch. (Remains illuminated during system operation).

If no Auto Switch or Rotary Switch, LO always ON.

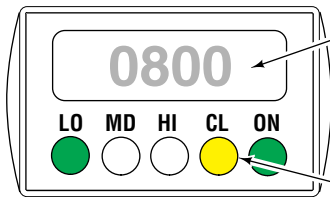
'CLAMP' heads-up light ON

OR

'OVERRIDE' heads-up light ON



## GRABBING LOAD



AFC threshold clamp force/pressure before hoisting,

- OR -

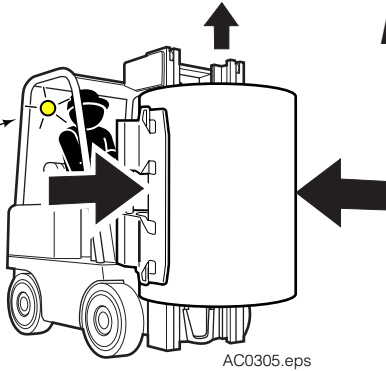
If override engaged or Clamp at maximum lift, driver controls clamp force/pressure.

CLAMP' light illuminates (amber) showing load is clamped at threshold force/pressure, OK to hoist,

- OR -

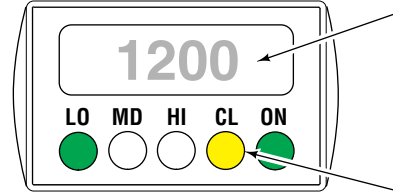
If override engaged or at maximum lift, no 'CLAMP' lights, AFC in override mode.

**'CLAMP'  
heads-up  
light ON  
(No light at  
max. lift)**



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## **HOISTING LOAD, TRAVELING**



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Real time clamp force/pressure.

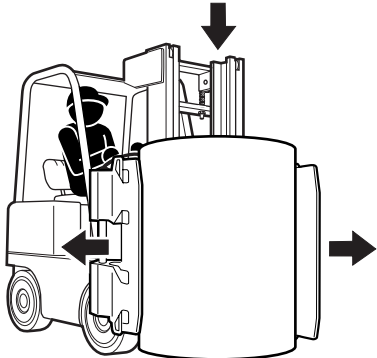
**- OR -**

Maximum clamp force/pressure  
achieved during hoist/clamp cycle.

'CLAMP' light remains illuminated, AFC  
has weighed load and applied final  
clamp force.

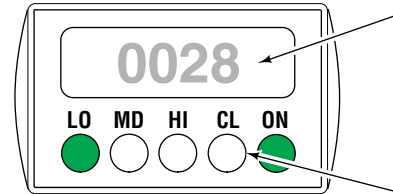
**- OR -**

No 'CLAMP' lights if override engaged  
or Clamp at maximum lift. Driver  
controls clamp force/pressure.



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## **SETTING LOAD DOWN, UNCLAMPING**

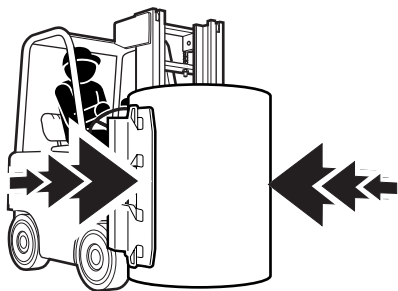


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Residual clamp force/pressure.

'CLAMP' light OFF when load safely set  
down, system resets for next cycle.

# USE OF OPTIONAL DAMAGE-REDUCTION FEATURES

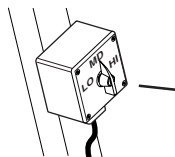


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## AUTO SWITCH or ROTARY SWITCH

**Auto Switch** – Automatically sets pre-programmed clamp-force-to-weight ratios and threshold pressures. Light bar and driver's display LEDs show LO, MD or HI selection.

**Rotary Switch** – Manually sets pre-programmed clamp-force-to-weight ratios and threshold pressures. Light bar and driver's display LEDs show LO, MD or HI selection.



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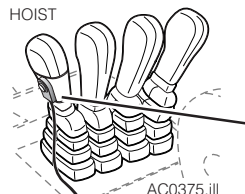
Set rotary switch to select LO, MD, or HI load parameter.



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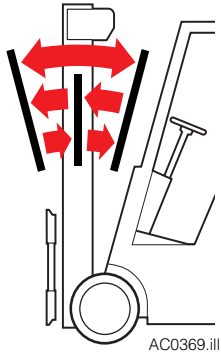
## DROP/STOP ACTIVATION SWITCH

**Drop/Stop Activation Switch** – Provides extremely accurate control over unwanted Clamp movement due to slack chains or accumulator 'jump' when load is being set down.



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Press activation button on HOIST control lever as load reaches 2-12 in. (5-30 cm) above set-down. ('CLAMP' light goes off once load is safely set down).



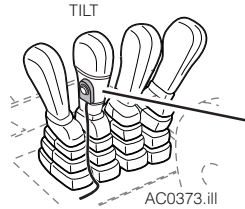
## TILT CONTROL

Mast automatically stops at vertical position when tilting forward or backward.

To continue tilting, wait 3 seconds for reset,

OR

**Press override button on TILT control lever to tilt without stopping.**



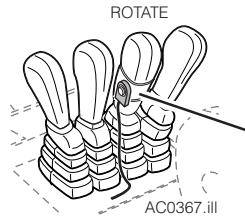
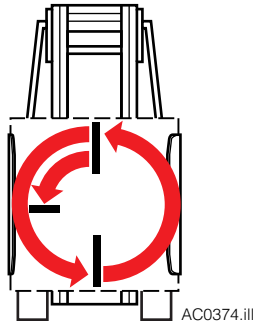
## ROTATIONAL CONTROL

Clamp automatically stops at both vertical positions, and at horizontal (bilge) position when rotating.

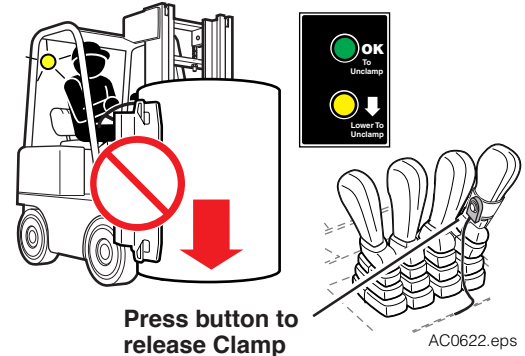
To continue rotating from vertical or horizontal position, wait 3 seconds for reset,

OR

**Press override button on ROTATE control lever to rotate continuously without stopping.**



## CLAMP OPEN GUARD



**Press button to release Clamp**







**Do you have questions  
you need answered right now?**

Toll Free Directline  
800-CASCADE (227-2233)