



Operator's Guide

Clamp Force Indicators for Carton Clamps

This sheet provides operating instructions for Cascade Clamp Force Indicators used with Carton Clamps. Cascade recommends that clamp force be checked, and adjusted if necessary, at each 500-hour preventative maintenance interval for the attachment.

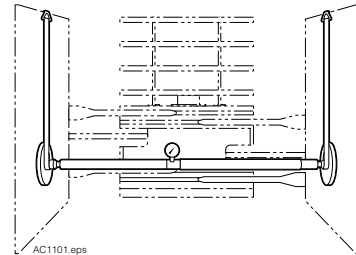
NOTE: Test the clamp force of a clamp attachment and then calibrate other clamp attachments to be within the same clamp force. Clamp arm wear, oil temperature, bearing condition and lubrication interval can affect clamp force readings.

Measure Clamp Force

- 1 Position the clamp arms inside of the fully open position.
- 2 Position the Clamp Force Indicator between the contact pads in the location shown below.
- 3 Clamp the indicator for several seconds, release and record the display value. The reading is in pounds (Lbs.) force or kilo-newtons (KN) force. Determine if the value is correct for the loads you are handling.
- 4 If clamp force needs to be adjusted, see Adjust Clamp Force in the following section.

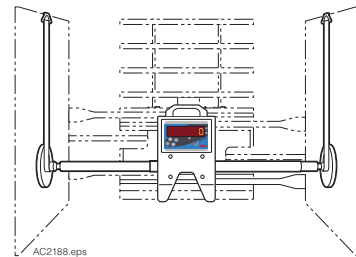
Clamp Force Indicator—Analog

35G-CFI-8RF – Precision Calibrated for 3500 lbs or less

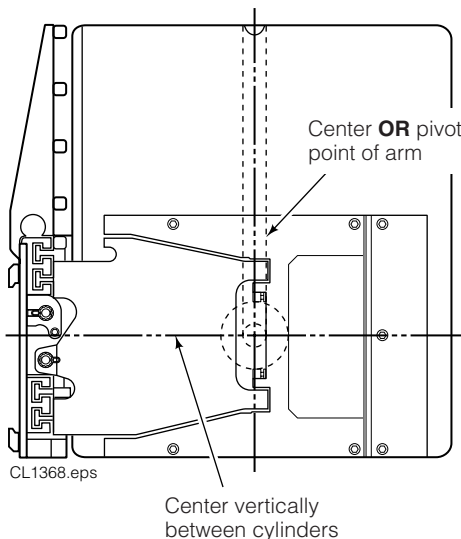


Clamp Force Indicator—Digital

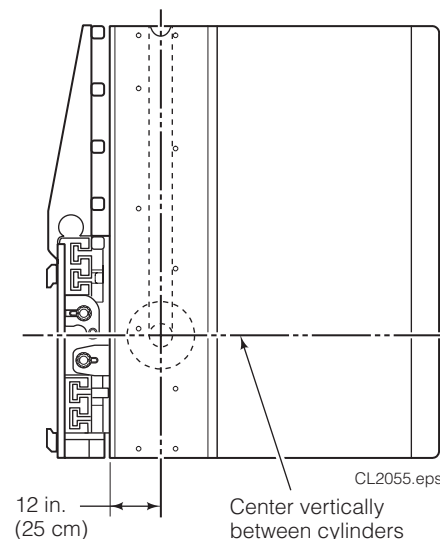
35G-DFI-8RF – Precision Calibrated for 3500 lbs or less



ARTICULATING CONTACT PAD



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For Technical Support . . .

Call: 1-800-227-2233 Fax: 1-888-329-8207

Internet: www.cascorp.com

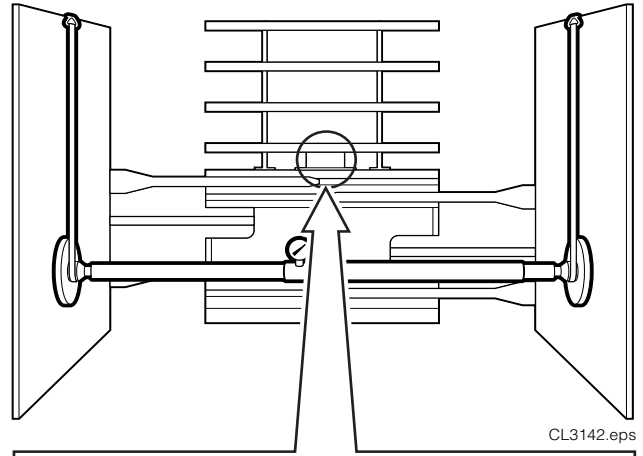
Write: Cascade Corporation, PO Box 20187, Portland, OR 97294

To Order Parts . . .

Call: 1-888-227-2233 Fax: 1-888-329-0234

Internet: www.cascorp.com

Write: Cascade Corporation, 2501 Sheridan Ave., Springfield, OH 45505

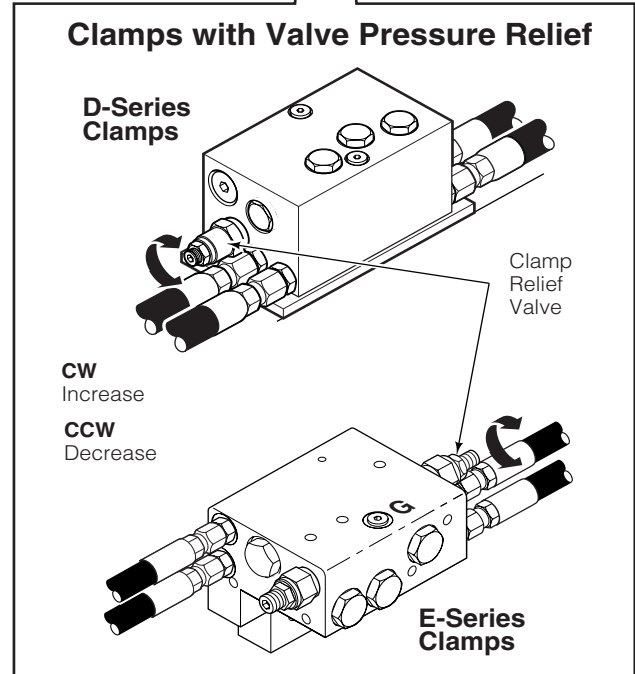


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Adjust Clamp Force

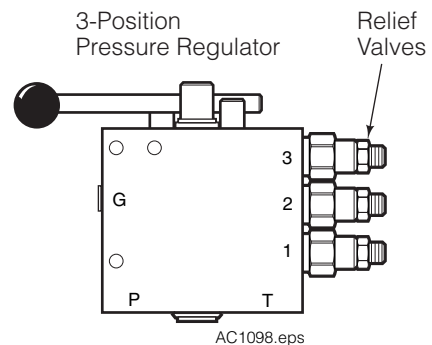
Clamps with Valve Pressure Relief

- 1 Clamp the arms on the clamp force indicator.
- 2 Adjust the clamp relief valve pressure until the correct force is indicated on the clamp force indicator.



Clamps with Accessory Pressure Regulator

- 1 Clamp the arms on the clamp force indicator.
- 2 Adjust the accessory relief valve(s) until the correct force is indicated on the clamp force indicator.



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Clamps without Pressure Relief

- 1 Clamp the arms on the clamp force indicator.
- 2 Adjust truck auxiliary valve clamp relief pressure until the correct force is indicated on the clamp force indicator.

Check Clamp Force Retention

- 1 Clamp on the clamp force indicator. Record the display value. Wait 2 minutes and record display value. Wait 5 more minutes and record display value. Use these readings to determine if clamp force is within tolerance as follows:
- 2 Divide 2-minute value by initial value:
 - If value is **greater than** or equal to .95 (95%), clamp force is within specification. Note value for future reference.
 - If value is **less than** .95 (95%), the clamp hydraulic system requires troubleshooting (see Clamp Service Manual).
- 3 Divide 7-minute value by 2-minute value:
 - If value is **greater than** or equal to .95 (95%), clamp force is within specification.
 - If value is **less than** .95 (95%), the clamp hydraulic system requires troubleshooting (see Clamp Service Manual).

Example: Clamp force within tolerance

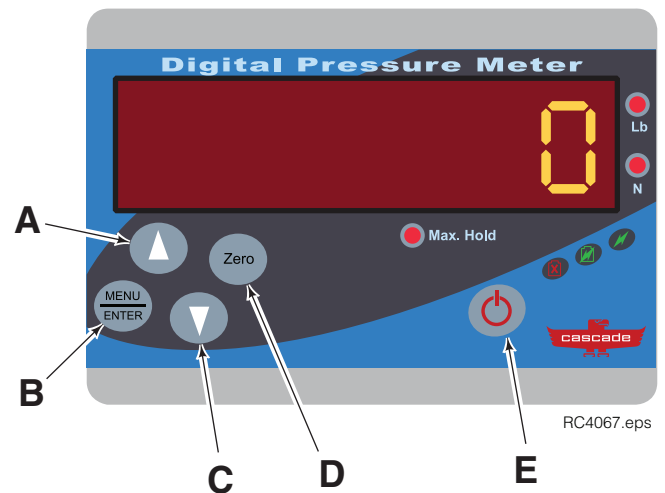
$$\frac{7800 \text{ lbs. force (2-minute value)}}{8000 \text{ lbs. force (initial value)}} = .97 \text{ (97\%)}$$

$$\frac{7500 \text{ lbs. force (7-minute value)}}{7800 \text{ lbs. force (2-minute value)}} = .96 \text{ (96\%)}$$

Digital Clamp Force Indicator Operation

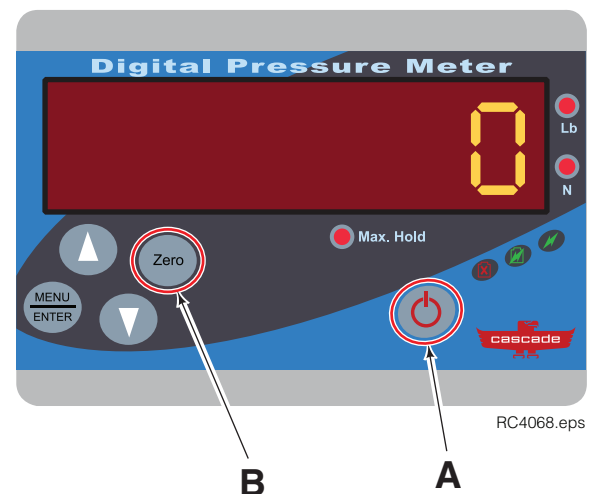
Digital Display Key Function

- A** – Up Arrow Button
- B** – Menu & Enter Button: For changing settings (Menu) and accepting an action or value (Enter).
- C** – Down Arrow Button
- D** – Zero Button: Zero's the display readout.
- E** – On/Off Button: Turns the display on or off. Hold the button until the screen changes.



Weight Mode

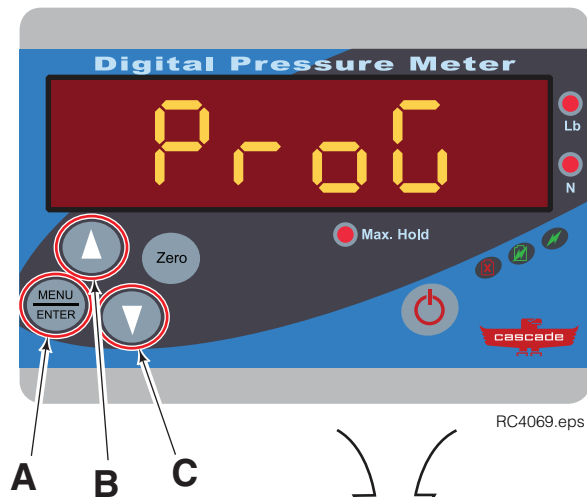
- A** Press the power button if the device is not on.
- B** Press the zero button to zero out any residual weight.
- C** Proceed with clamping instructions, as necessary.



User Settings Mode

To change settings for the indicator/display functions, use the diagram below.

To enter User Settings Mode, press the MENU/ENTER button (A). The display will show "ProG". To exit, hold the MENU/ENTER button (A) when "ProG" or "return" is displayed.



While in User Settings mode:

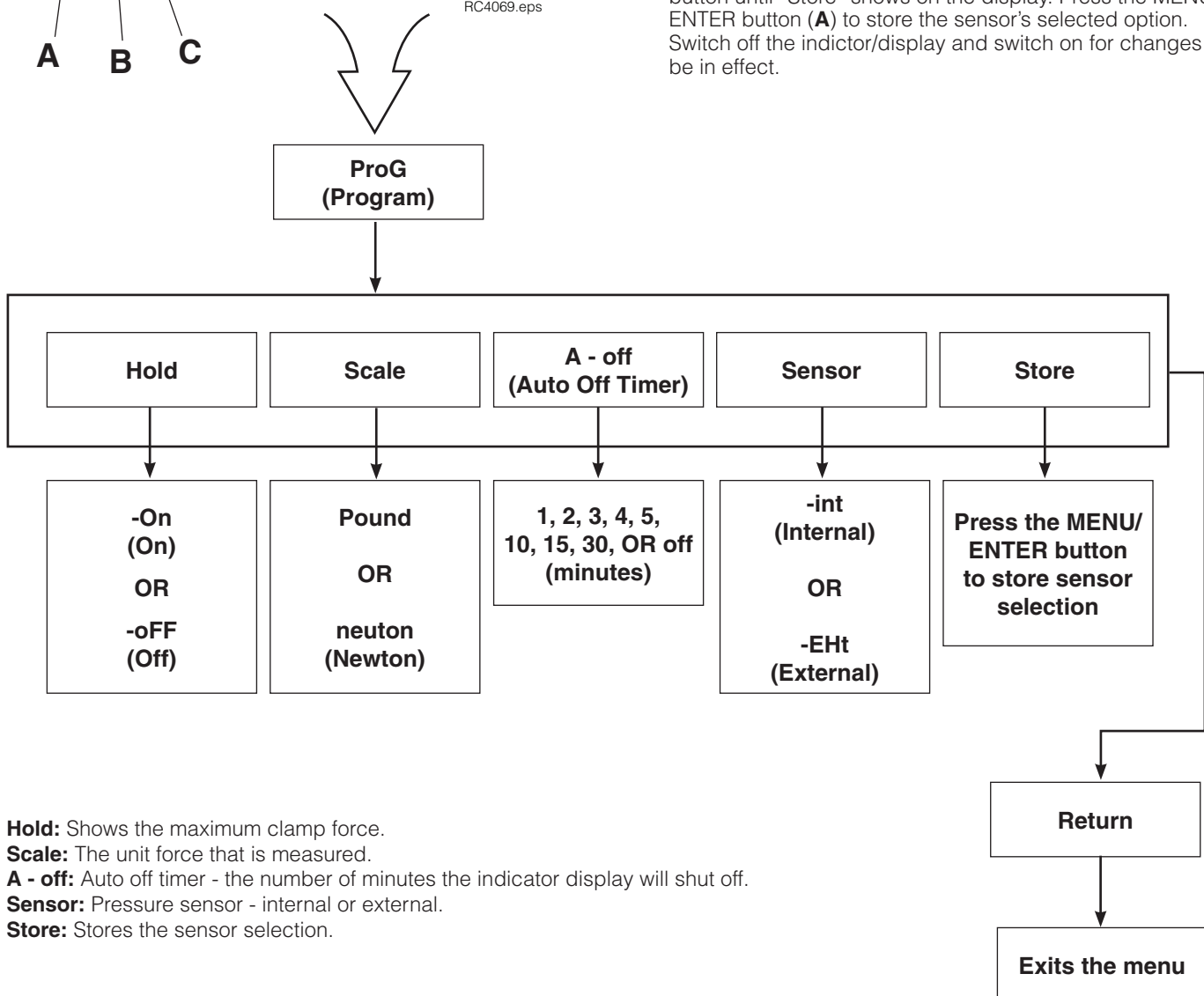
Main Menu -

- Press the Up (B) or Down (C) button to scroll through the setting title names.
- Press the MENU/ENTER button (A) to make a change to the displayed setting title by entering a submenu.

Submenu -

- Use the Up (B) and Down (C) buttons to scroll through the options.
- Press the MENU/ENTER Button (A) to accept.

NOTE: When in the "Sensor" submenu, once the option is selected with the MENU/ENTER button (A), then press Up button until "Store" shows on the display. Press the MENU/ENTER button (A) to store the sensor's selected option. Switch off the indicator/display and switch on for changes to be in effect.



Hold: Shows the maximum clamp force.

Scale: The unit force that is measured.

A - off: Auto off timer - the number of minutes the indicator display will shut off.

Sensor: Pressure sensor - internal or external.

Store: Stores the sensor selection.