This manual provides installation instructions for Cascade Clamp Open Guard. The kit prevents the accidental opening of the roll clamp when the paper roll is in the lifted position. The kit is designed for use with Cascade F and G-Series Paper Roll Clamps and D-Series Sliding Arm Clamps.

**WARNING:** Do not use the Clamp Open Guard with any product other than a Pivot Arm Paper Roll Clamp and D-Series Sliding Arm Clamp.

This product is no longer in production under its current configuration and is subject to a product improvement field campaign.
Installation

1. Disconnect the cable from the positive battery terminal.

2. Locate and install the hoist pressure switch assembly on the truck cowl or under the floorboard. Watch for clearance when the mast is tilted back if mounting on the cowl. The pressure switch assembly has adjustment screws under the white caps that need easy access for final adjustment. Install a tee fitting in the mast hoist circuit between the mast lowering control valve or drop stop valve (if equipped with AFC) and truck hoist control valve. Install a No. 6 hose between the tee fitting and the hoist pressure switch assembly end port.

**IMPORTANT:** When installing the Clamp Open Guard with Cascade’s Adaptive Force Control (AFC), the tee fitting must be installed between the drop stop valve and truck hoist control valve.

**NOTE:** If an accumulator is installed in the mast hoist circuit, it provides a convenient location to tap into the hoist circuit.
3 Locate and install the solenoid valve on the truck cowl. Watch for clearance when the mast is tilt all the way back. The valve is being installed in the clamp OPEN line from the auxiliary valve to the attachment. Connect control valve port 1 to the supply hose going to the attachment.

**IMPORTANT:** When installing the Clamp Open Guard with Cascade’s Adaptive Force Control (AFC), the solenoid valve must be installed between the truck auxiliary valve and the AFC valve.

4 Connect solenoid valve port 2 to the supply hose from the truck auxiliary valve clamp OPEN line.

5 Install the display on the truck dashboard, overhead guard, or any other easy-to-see location.
Mount the freelift limit switch to the mast outer upright top crossmember using a fabricated bracket. The roller end of the limit switch must contact the inner or intermediate upright top crossmember to determine when the mast carriage is above freelift.

**CAUTION:** Consult the Lift Truck OEM for proper + power source connection.

7 Connect cable ends to the components as shown.

**12V Systems** – Connect the fused positive wire from the cable harness to a 12V switched power source, and the ground wire to a chassis ground.

**24V–48V Systems** – Connect the fused positive wire from the cable harness to the DC-to-DC converter positive output wire and the ground wire to the converter negative output wire. Connect a 24V–48V switched power source to the converter fused positive input wire and connect the converter input ground wire to a chassis ground.

Check the cable routing for pinch points and clearance. Use cable ties as needed.

8 Reconnect the positive battery terminal to the battery.
Adjustment

The following adjustments must be done with the attachment that will be used with this specific lift truck.

1 Test the installation before putting the truck in service. Initially when the truck key is ON, one of the lights on the display should be on. Check the wiring if the display is not lit.

2 Locate the white plastic cover on the hoist pressure switches. Remove the screw on the cover and pry off the cover. The hexscrew allows adjustment in step 3.

3 Raise the mast into freelift (the carriage raised with the mast uprights not extended). Unplug the pressure switch cable connector for the freelift switch.
   - If the light on the display goes off, reattach the connector and adjust the freelift switch. Turn the hexscrew in the pressure switch CCW until the amber light goes on, then turn back CW to just when the green light goes on and an additional 1/4 turn. Go to step 4.
   - If the light on the display stays on, swap the freelift and mainlift cable connectors and repeat step 3.
   - If the light on the display stays on after swapping cables, troubleshoot the wiring connections.

4 Raise the mast carriage above freelift (the inner mast upright extending above the top of the outer upright). Unplug the pressure switch cable connector for the main lift switch.
   - If the light on the display goes off, reattach the connector and adjust the main lift switch. Turn the hexscrew in the switch CCW until the amber light goes on, then turn back CW to just when the green light goes on and an additional 1/4 turn.
   - If the light on the display stays on, troubleshoot the wiring connections.
   - If both lights on the display stay on, troubleshoot the solenoid wiring connections.

Operation

- When the green light is on, the clamp will open and close normally. When the amber light is on, the clamp will not open.
- During fast lowering of the attachment, the lights may flicker between amber and green, this is normal.
- In mast freelift or mainlift, lighter loads may not activate the pressure switch and the green light will remain on.

**NOTE:** The system does not work like a drop stop valve that prevents load drop or jump when the clamp is opened. The green light does not indicate that the load has been lowered to its optimal position.

Disabling System

The Clamp Open Guard can be disabled by performing the following Steps:

- Disconnect the two hoses to the normally-closed solenoid valve and connect together with a union.
- Remove the main power fuse in the cable harness.

The truck and attachment will now operate normally. To enable the Clamp Open Guard, reverse the above procedure.
### Clamp Open Guard

#### Parts List

<table>
<thead>
<tr>
<th>REF</th>
<th>QTY</th>
<th>PART NO.</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>1</td>
<td>6008230</td>
<td>12V Clamp Open Guard</td>
</tr>
<tr>
<td>21</td>
<td>1</td>
<td>6018016</td>
<td>24V Clamp Open Guard</td>
</tr>
<tr>
<td>22</td>
<td>1</td>
<td>6018017</td>
<td>36V Clamp Open Guard</td>
</tr>
<tr>
<td>23</td>
<td>1</td>
<td>6018012</td>
<td>48V Clamp Open Guard</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>6008231</td>
<td>Display</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>6008297</td>
<td>Wire Harness – Power</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>6008301</td>
<td>Wire Harness – Solenoid</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>6008304</td>
<td>Pressure Switch</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>6020882</td>
<td>Solenoid Valve</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>6019797</td>
<td>Limit Switch</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td>6019833</td>
<td>Junction Block</td>
</tr>
<tr>
<td>8</td>
<td>2</td>
<td>6019836</td>
<td>Wire Harness</td>
</tr>
<tr>
<td>9</td>
<td>2</td>
<td>6013999</td>
<td>Fitting</td>
</tr>
<tr>
<td>10</td>
<td>1</td>
<td>6021069</td>
<td>DC-to-DC Converter</td>
</tr>
<tr>
<td>11</td>
<td>1</td>
<td>6004133</td>
<td>Lamp-Amber</td>
</tr>
<tr>
<td>12</td>
<td>1</td>
<td>6004132</td>
<td>Lamp-Green</td>
</tr>
</tbody>
</table>

▲ Converter not required for 12V system.
Do you have questions you need
answered right now? Call your
nearest Cascade Service Department.
Visit us online at www.cascorp.com

AMERICAS
Cascade Corporation
Parts Sales
2501 Sheridan Ave.
Springfield, OH 45505
Tel: 888-CASCADE (227-2233)
Fax: 888-329-0234

Cascade Canada Inc.
5570 Timberlea Blvd.
Mississauga, Ontario
Canada L4W-4M6
Tel: 905-629-7777
Fax: 905-629-7785

Cascade do Brasil
Rua João Guerra, 134
Macuco, Santos - SP
Brasil 11015-130
Tel: 55-13-2105-8800
Fax: 55-13-2105-8899

EUROPE-AFRICA
Cascade Italia S.R.L.
European Headquarters
Via Dell’Artigianato 1
37050 Vago di Lavagno (VR)
Italy
Tel: 39-045-8989111
Fax: 39-045-8989160

Cascade (Africa) Pty. Ltd.
PO Box 625, Isando 1600
60A Steel Road
Sparton, Kempton Park
South Africa
Tel: 27-11-975-9240
Fax: 27-11-394-1147

ASIA-PACIFIC
Cascade Japan Ltd.
2-23, 2-Chome,
Kukuchi Nishimachi
Amagasaki, Hyogo
Japan, 661-0978
Tel: 81-6-6420-9771
Fax: 81-6-6420-9777

Cascade Korea
121B 9L Namdong Ind.
Complex, 691-8 Gojan-Dong
Namdong-Ku
Inchon, Korea
Tel: +82-32-821-2051
Fax: +82-32-821-2055

Cascade do Brasil
Rua João Guerra, 134
Macuco, Santos - SP
Brasil 11015-130
Tel: 55-13-2105-8800
Fax: 55-13-2105-8899

Cascade do Brasil
Rua João Guerra, 134
Macuco, Santos - SP
Brasil 11015-130
Tel: 55-13-2105-8800
Fax: 55-13-2105-8899

Cascade Australia Pty. Ltd.
1445 Ipswich Road
Rocklea, QLD 4107
Australia
Tel: 1-800-227-223
Fax: +61 7 3373-7333

Cascade New Zealand
15 Ra Ora Drive
East Tamaki, Auckland
New Zealand
Tel: +64-9-273-9136
Fax: +64-9-273-9137

Sunstream Industries
Pte. Ltd.
18 Tuas South Street 5
Singapore 637796
Tel: +65-6795-7555
Fax: +65-6863-1368

© Cascade Corporation 2012