



# Installation Instructions

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## F-Series Auto Clamp™

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Manual Number 210082

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# Truck Requirements

## Truck Relief Setting

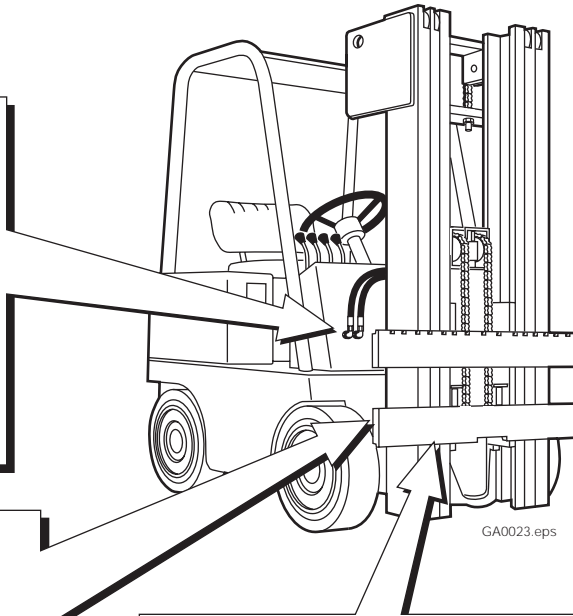
Minimum (at idle) – 500 psi (35) bar  
 Minimum – 2300 psi (160) bar  
 Maximum – 2600 psi (180) bar

## Truck Flow Volume

Minimum (at idle)      2 GPM (7 L/min.)  
 Minimum                    3 GPM (11 L/min.)  
 Recommended            4 GPM (15 L/min.)  
 Maximum                  5 GPM (19 L/min.)



| Mounting         | Dimension A—ITA (ISO) |                     |
|------------------|-----------------------|---------------------|
|                  | Minimum               | Maximum             |
| <b>Class II</b>  | 14.96 in. (380.0mm)   | 15.00 in. (381.0mm) |
| <b>Class III</b> | 18.68 in. (474.5mm)   | 18.74 in. (476.0mm) |

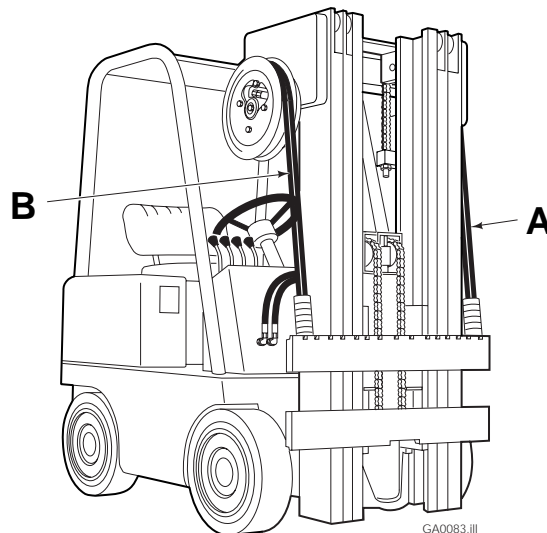


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Clean carriage bars and inspect for damaged notches.

# Hydraulic Supply

- A** LH 9-N-1 NO. 6 Cable-Hose Reel Group
- B** RH THINLINE™ NO. 8 2-Port Hose Reel Group



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# Installation

- ❶ Install the Auto Clamp on the truck carriage as described in Installation Instructions 674510 except for the following items:
    - Hydraulic hoses
    - Electrical wiring
  - ❷ Install the LH 9-N-1 Cable-Hose Reel as described in Installation Instruction 211996.
  - ❸ Install the RH Hose Reel as described in Installation Instruction 680110.
  - ❹ Install the Priority Flow Control Valve.
    - Trucks with Power Steering—Install the valve between the power steering flow control and auxiliary valve.
    - Trucks without Power Steering—Install the valve between the truck hydraulic pump and auxiliary valve.
- See the attached hydraulic schematic for hookup.
- ❺ Install the Cowl Valve (part no. 377445) on the front of the truck cowl in a suitable location to provide easy hose routing. Check for clearance problems when the mast is tilted backwards.

**NOTE:** Although not required, installing the accumulator in the hoist circuit will reduce shock loading and clamp force required to hold the load. It is recommended that the accumulator be installed.
  - ❻ Install the Hoist Accumulator on the truck cowl, overhead guard or under the truck floor. Tee the accumulator hose in between the hoist auxiliary valve and hoist cylinder. See the attached hydraulic schematic for hookup.
  - ❼ Install the Display to the truck dashboard or overhead guard.
  - ❽ Install the short arm solenoid Control Knob to the clamp auxiliary valve control handle.
  - ❾ Connect hydraulic hoses between the truck, valves and attachment as shown on the attached hydraulic schematic.
  - ❿ Connect the wiring harness to the electrical components as shown on the attached electrical schematic.

# Cylinder Bleeding

- ❶ Rotate the Auto Clamp to the horizontal (bilge) position with the long arm closed, then open the arm slightly.
- ❷ Turn off the truck and move the clamp auxiliary control knob back and forth to relieve system pressure.
- ❸ Connect one end of the bleed hose to the QD fitting in the base of the long arm cylinder and the other end to the QD fitting in the Cowl Valve.
- ❹ Turn the truck on and actuate the clamp control handle to circulate oil through the cylinder for 1 to 2 minutes to remove air from the circuit.
- ❺ Turn off the truck and move the clamp auxiliary control knob back and forth to relieve system pressure. Disconnect the bleed hose end from the cylinder QD fitting.
- ❻ Connect the bleed hose to the other long arm cylinder QD fitting. Repeat steps ❹ and ❺ for the cylinder.
- ❼ Close the short arm again with the clamp in the bilge position and then open slightly to relieve pressure.
- ❽ Bleed air from both short arm cylinders with the cylinder extended and arm closed in the same manner as the long arm cylinders.

# Hydraulic Adjustment

**Threshold Relief Adjustment** – The threshold relief valve is located on the top of the baseplate valve. The valve body is stamped ROEB at its location. The valve is factory set at 600 psi at idle. One flat of rotation equals approximately 100 psi.

- If initial clamping pressure needs to be increased when handling slick paper or the roll is telescoping – turn the valve adjusting screw CW.
- If initial clamping pressure needs to be decreased due to excessive clamp pressure – turn the valve adjusting screw CCW.

**Bilge Relief Adjustment** – The bilge relief valve is located on the top of the baseplate valve. The baseplate valve is stamped RPEC at its location. The valve is factory set at 1200 psi. One flat of rotation equals approximately 100 psi.

- If clamp pressure needs to be increased due to rolls slipping in the bilge position – turn the valve adjusting screw CW.
- If clamp pressure needs to be decreased – turn the valve adjusting screw CCW.

## Overrides

**Electrical** – The Auto Clamp display is equipped with an override button on the bottom face. This button allows the operator to override the Auto Clamp reliefs and clamp rolls with full system clamp force. To override, the button must be held pressed while operating the clamp control handle.

### Hydraulic

**Baseplate Valve** – The baseplate valve is equipped with a disabling port. When the port is plugged it eliminates the Auto Clamp threshold relief functions and the clamp operates with full system relief pressure. The computer will be active but due to the higher pressure, will not be required. Remove the plug fitting from the OVERRIDE port on the back of the baseplate valve. A 7/16 NF x .50 in. setscrew is located in port 'S' that must be removed and installed into port 'X'. Screw the setscrew into the port until it bottoms. Install the plug fitting to the port.

## Replacing the Auto Clamp with a Standard Clamp

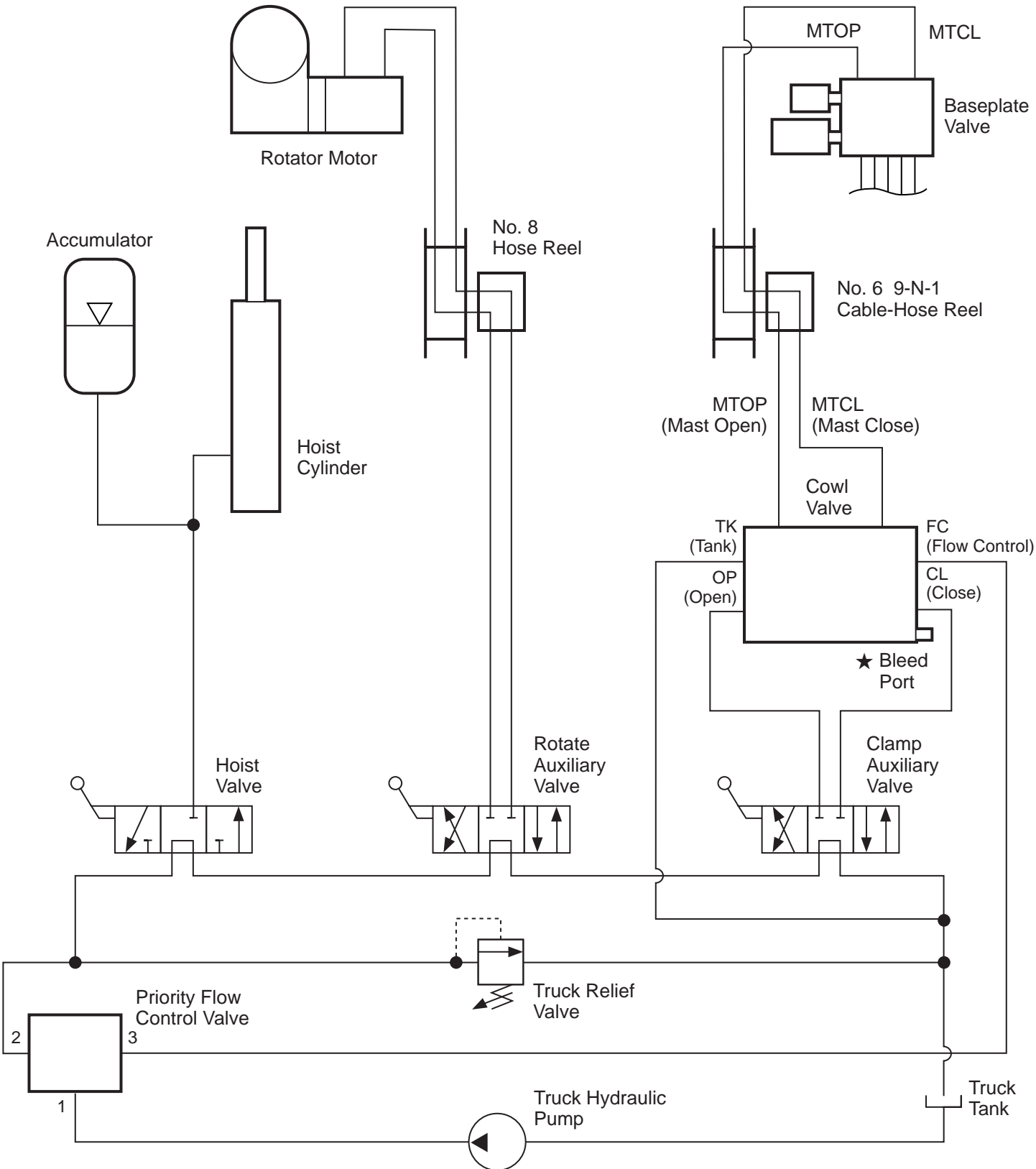
If the Auto Clamp is removed from the truck and replaced by a standard clamp, a pipe plug in the cowl valve must be moved.

- Remove the pipe plug in the cowl valve F/C TK port and install it in the F/C MT port. This sends priority flow to tank.

If the standard clamp is to be used in the bilge position unclamped, the long arm will drift downward.

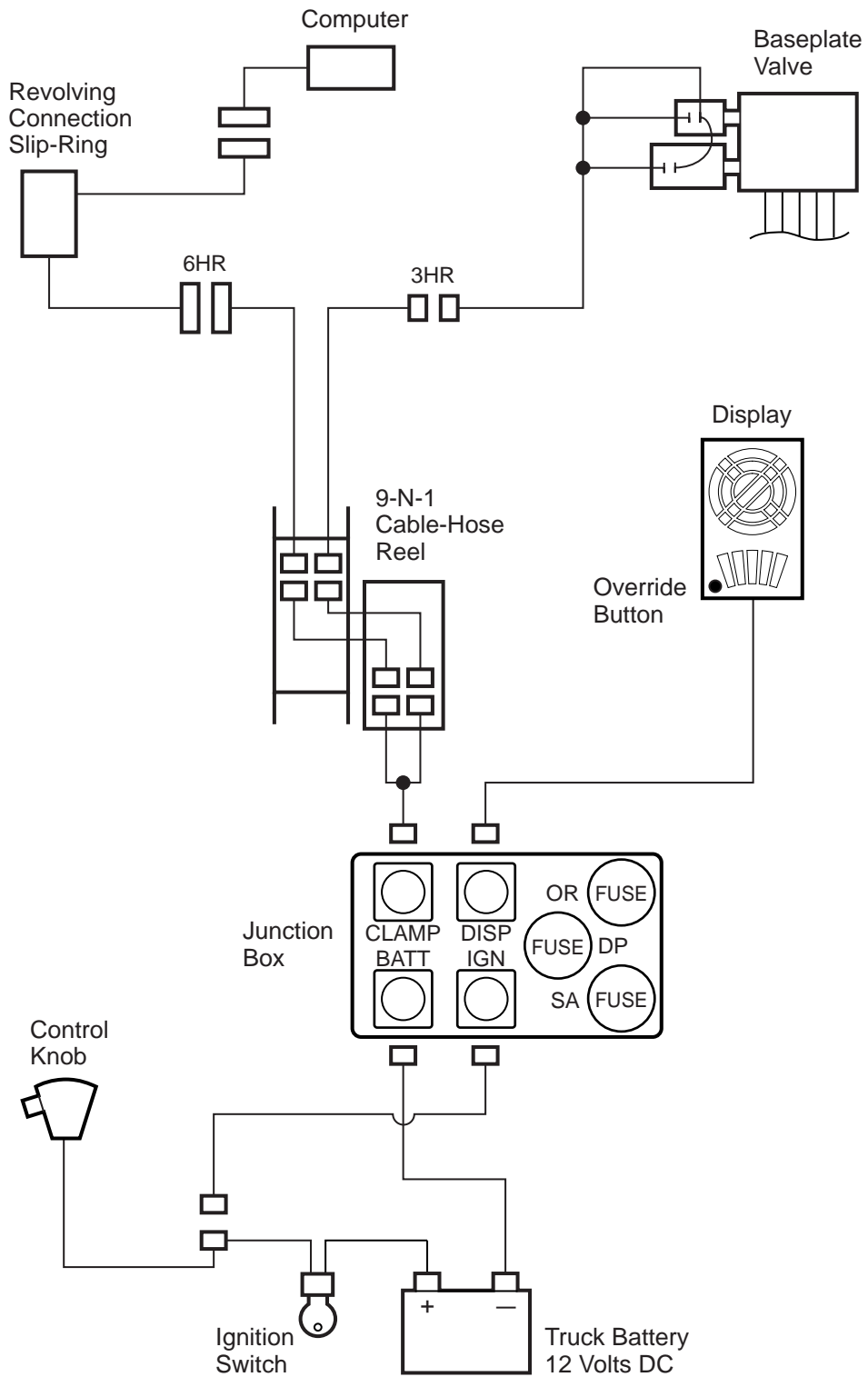
- To fix this condition, disconnect the hoses from the cowl valve OP and MTOP ports and connect them together with a union fitting. Cap the OP and MTOP ports on the cowl valve.

# Hydraulic Schematic



★ Use for bleeding cylinders only.

# Electrical Schematic



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**Do you have questions you need answered right now?** Call your nearest Cascade Service Department.

### **AMERICAS**

**Cascade Corporation  
U.S. Headquarters**  
2201 NE 201st  
Fairview, OR 97024-9718  
Tel: 800-CASCADE (227-2233)  
Fax: 888-329-8207

**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  
37030 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-Xiamen**  
No. 668 Yangguang Rd.  
Xinyang Industrial Zone  
Haicang, Xiamen City  
Fujian Province  
P.R. China 361026  
Tel: 86-592-651-2500  
Fax: 86-592-651-2571

**Cascade India Material  
Handling Private Limited**  
No 34, Global Trade Centre  
1/1 Rambaugh Colony  
Lal Bahadur Shastri Road,  
Navi Peth, Pune 411 030  
(Maharashtra) India  
Phone: +91 020 2432 5490  
Fax: +91 020 2433 0881

**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

