**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 this attachment unless you are a trained and authorized lift truck driver.

**CAUTION:** This guide shows load handling procedures for most products. Ask your company or organization about any special procedures for the loads you may be handling.

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**INTRODUCTION**

**Fixed Frame Paper Roll Clamp** – Cascade Fixed Frame Paper Roll Clamps, Models D, F, G & H-Series are multiple-function attachments for handling all types of paper roll products. Clamps are designed for both bilge and vertical roll handling for transport, stacking, breakout, van trailer, boxcar and ship loading and unloading. Clamps can rotate through 360 degrees and can have a fixed short arm for full rolls or adjustable short arm for butt rolls, and a single or split long arm. Tower clamp versions provide bulk roll handling in many configurations.

**About this Guide** – The information in this Guide is intended to simplify operator understanding about effective and safe Clamp use and operation. Read this guide thoroughly before operating the attachment. Be sure you know and understand all operating procedures and safety precautions. If you have any questions, or don’t understand a procedure, ask your supervisor.

**Emphasize Safety!** Most accidents are caused by operator carelessness or misjudgment. You must watch for poorly maintained equipment and hazardous situations and correct them.
Industrial Lift Trucks

**SAFETY RULES**

- **No riders**
- **No reaching through mast**
- **No standing under load**

**Motor off, park, lower load**

- **Tilt**
- **Raise**
  - **3 in. (8 cm)**

**Traveling empty**

**RAMP**

- **No parking on ramp**
- **No turning on ramp**
- **Watch clearances**

**TRAFFIC**

- **Observe**
- **Workers**
- **Stops**

- **Wet floors**
- **Bumps**
- **Dips**

- **Slow for two-way traffic**
- **Sound horn, slow at intersection**
- **Sound horn, slow at corner**
Handling Loads: Rolls must be secure prior to lifting and transporting.

- **Limit swinging clamp with raised load.**
- **Limit truck movement with raised load.**
- **Load weight must not exceed combined truck/attachment capacity (see truck nameplate).**
- **Check for load slippage (see Load Troubleshooting).**
- **Use caution when handling unitized (wrapped) multiple stacked rolls with Single-Arm Clamp.**
- **Make sure bottom roll is secure.**

*Split-Arm Clamp is recommended to handle two rolls (see Roll Handling Basics). Handling two rolls with Single-Arm Clamp may be dangerous and lead to serious injury.*

- **Position the paper roll center of gravity as close as possible to the center of rotation to minimize lateral offset.**

**Center of Rotation**

**Paper Roll Center of Gravity**

**Lateral Offset**
Check items each day. Report problems to your supervisor. Check clamp force prior to each operational shift. See Service Manual for troubleshooting, maintenance and repair procedures.

Pad edges

Safety decals & nameplate

Cylinders and hoses for leaks

Lower hook engagement

Upper hook engagement

Fasteners
**AUXILIARY VALVE FUNCTIONS**

**LONG ARM**  
(Vert. & horiz. positions only)  
- **C** Release  
- **D** Clamp

**ROTATE**  
(Driver’s view)  
- **A** Counterclockwise (CCW)  
- **B** Clockwise (CW)

**SHORT ARM**  
(45-degree position only)  
- **C** Open  
- **D** Close

**UPENDING TILT**  
(Non-Solenoid)  
- **A** Tilt Forward  
- **B** Tilt Backward

**UPENDING TILT**  
(Solenoid Equipped)  
- **A** Rotate Counterclockwise  
- **B** Rotate Clockwise  
- **A** Tilt Forward (Press Button)  
- **B** Tilt Backward (Press Button)

**WARNING:** Truck control handle and attachment function activation shown here conforms to ASME/ANSI B56.1 recommended practices. Failure to follow these practices may lead to serious bodily injury or property damage. End user, dealer and OEMs should review any deviation from the practices for safe operation.

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**The following identification decal** (located on the baseplate), shows how the split-arm roll clamp functions:

- **TYPE O**
  - Clamp force is developed without the need for the top arm to fully close.

- **TYPE 1**
  - The top arm must fully close before clamp pressure is developed.
Use proper clamping force for load being handled

Also, see the following:
- Clamp Force Indicator Operator Guide 214750
- Establishing Clamp Force TB 284
Handling two rolls using split-arm clamp

Center Clamp pads between rolls

CAUTION: Clamp multiple rolls securely and properly prior to lifting or traveling.

WARNING: Engine speed MUST be increased when clamping or releasing rolls with Split-Arm Clamps.

Recommended roll width 2X pad height ‘A’ if rotating, 3X maximum

Position the paper roll center of gravity as close as possible to the center of rotation to minimize lateral offset. This will reduce torque requirements and increase truck stability.

Maximum roll width 3X pad height ‘A’ if not rotating

Position short arm on rolls before clamping

Center of Rotation

Paper Roll Center of Gravity

Lateral Offset
OLL-HANDLING BASICS

Upending

Center clamp pads vertically on roll, if possible

CAUTION: Verify the clearance between the bottom of the roll and mast prior to tilting the roll forward.

Clamp through roll centerline

CAUTION: Verify the center of gravity for the load does not exceed the capacity of the truck. Consult OEM as required.

Raise roll to clear ground when tilted

Tilt roll forward

CAUTION: Transporting in any position other than vertical is not acceptable unless attachment is specifically designed for that application.

Vertical transport position
1. Position Clamp parallel to and centered on roll

2. A) Adjust short arm for roll diameter  
   B) Drive forward, touch short arm to roll  
   C) Clamp with long arm  
   2-4 in. (5-10 cm)

3. Raise, tilt back for transport  
   3-4°  
   12 in. (30 cm)

4. Tilt vertical before lowering to floor
B) Rotate to vertical for transport

Position the paper roll center of gravity as close as possible to the center of rotation to minimize lateral offset. This will reduce torque requirements and increase truck stability.

Center of Rotation

Paper Roll Center of Gravity

Lateral Offset

A) Drive forward, touch short arm to roll

B) Clamp with long arm

2-4 in. (5-10 cm)

A) Tilt, raise roll

3-4°

B) Square truck to roll, position Clamp parallel to roll

3-4°

Tilt, lower Clamp to ground

3-4°

Short arm down
1. A) Drive slowly forward, touch short arm to roll
   B) Clamp with long arm

2. A) Raise roll for clearance
   B) Tilt back for transport

3. A) Slowly approach stack
   B) Tilt roll to vertical, raise for clearance

   NOTE: Back tilt required if angled clamp mount used

4. A) Square truck to stack, drive slowly forward, stop
   B) Set roll down squarely

5. HIGH STACKING ABOVE TWO ROLLS:
   A) Square truck to stack, drive slowly forward, stop

   Roll Vertical
   B) Set roll down squarely

   CAUTION: 0° Clamp mount (shown) may be required above 130 in. (330 cm) – check Clamp model

6. PADS AT BOTTOM OF ROLL:
   A) Contact truck OEM to check truck stability
   B) Perform rotation drift test per Cascade TB258

   NOTE: Back tilt required if angled clamp mount (shown) is used
1. **Tilt, center Clamp to 1st roll**

   - **CAUTION:** Block trailer wheels

2. **Position arms to roll diameter, short arm toward wall**

   - **Dockplate required**

3. **Drive forward, angle truck to grip 1st roll behind centerline**

4. **Clamp 1st roll, move back for clearance to re-clamp**

5. **Re-clamp through roll centerline with long arm, withdraw roll**

6. **Raise, tilt back for transport**

   - **3-4°**

   - **12 in. (30 cm)**

   - **CAUTION:** Trailer must be inspected for damage before unloading.
**Fixed-Frame Clamp**

1. **Tilt, center Clamp to 1st roll**

2. **Position arms to roll diameter**

3. **Drive forward, angle truck to grip roll behind centerline**
   - Dockplate required
   - Arms not wedged

4. **Clamp 1st roll, move back for clearance to re-clamp**

5. **Re-clamp through roll centerline with long arm, withdraw roll**

6. **Raise, tilt back for transport**
   - 3-4°
   - 12 in. (30 cm)
1 Rotate roll to position short arm toward wall

CAUTION: Trailer must be inspected for damage before loading

Dockplate required

CAUTION: Block trailer wheels

2 Drive down center of trailer, tilt vertical, brake slowly

12 in. (30 cm)

3 A) Reposition truck to place rolls against wall

B) Release long arm

4 Position rolls together / use spacers to prevent load shifting
1. Reposition truck to place rolls against wall.
   A) Rotate roll to position short arm toward wall.
   B) Tilt to vertical.
   Dockplate required.

2. A) Reposition truck to place rolls against wall.
   B) Lower to floor, release long arm.

3. Position arms to roll diameter, grip last rolls behind centerline.

4. Angle truck to place interior and last rolls.
   Arms not wedged.
1. **A) Align truck with rolls**
   **B) Fully open arms**

2. **A) Approach rolls slowly**
   **B) Touch center pads to rolls**

3. **B) Adjust telescoping upper clamp arms to center on upper rolls**
   **A) Center lower clamp arms on lower rolls**

4. **Clamp through roll centerlines**

   (shown: non-powered center arms)
5 Lift load, proceed slowly

CAUTION: Truck balance may be critical when turning with full loads

12 in. (30 cm)

6 A) Check Clamp Pads are vertical

4 in. (10 cm)

B) Check clearances –
  • Roll-to-roll
  • Truck-to-stack

Shut Off Unused Arms

No L-shaped loads
LOADING WITH ADJUSTABLE BUMPER OPTION

VERTICAL PICKUP
A) Close arms to approximate roll diameter

B) Drive forward touching bumper to roll

C) Clamp with long arm

2-4 in. (5-10 cm)

BILGE PICKUP
A) Close arms to approximate roll diameter

C) Clamp with long arm

B) Tilt, drive forward touching bumper to roll

D) When clamping with the long arm, allow the truck to move in neutral or with clutch disengaged. The bumper may have a tendency to move the truck forward or backward when adjusting to the roll size.

LOAD TROUBLESHOOTING

IF LOAD IS SLIPPING:

1. Check weight of roll is within capacity range of Clamp (See nameplate)

2. Re-clamp load, contact pads centered on and parallel to roll, roll against bumper (if equipped)

3. Check hydraulic supply pressure and clamp force, see following:
   - Appropriate Clamp Service Manual
   - Clamp Force Indicator
   - Operator Guide 214750
   - Establish Clamp Force TB 284

4. Check condition and type of contact pad surface, change or replace if necessary
AFE OPERATION AND MAINTENANCE

OSHA Regulations – Industrial Trucks and Attachments

WARNING: The safe operation and maintenance of industrial trucks is regulated by Occupational Safety and Health (OSHA) regulations 1910.178 and American National Standards Institute (ANSI) Safety Standard for Powered Industrial Trucks, ANSI B56.1. When operating and maintaining industrial trucks equipped with attachments you should pay particular attention to the following sections of these regulations. You should be familiar with all sections of these regulations. Ask your employer for the complete regulations.

(a) General Requirement

(4) Modifications and additions which affect capacity and safe operation shall not be performed by the customer or user without manufacturers prior written approval. Capacity, operation and maintenance instruction plates, tags or decals shall be changed accordingly.

(5) If the truck is equipped with front-end attachments other than factory installed attachments, the user shall request that the truck be marked to identify the attachments and show the appropriate weight of the truck and attachment combination at maximum elevation with load laterally centered.

(6) The user shall see that all nameplates and markings are in place and maintained in a legible condition.

(e) Safety Guards

(2) If the type of load presents a hazard, the user shall equip fork trucks with a vertical load backrest extension in accordance with (a)(2) following.

(a)(2) All new powered industrial trucks acquired and used by an employer after February 15, 1972 shall meet the design and construction requirements for powered industrial trucks established in the "American National Standard for Powered Industrial Trucks, Part II, ANSI B56.1", except for vehicles intended primarily for earth moving or over-the-road hauling.

(l) Operator Training

Only trained and authorized operators shall be permitted to operate a powered industrial truck. Methods shall be devised to train operators in the safe operation of powered industrial trucks.

(m) Truck Operations

(1) Trucks shall not be driven up to anyone standing in front of a bench or other fixed object.

(2) No person shall be allowed to stand or pass under the elevated portion of any truck, whether loaded or empty.

(3) Unauthorized personnel shall not be permitted to ride on powered industrial trucks. A safe place to ride shall be provided where riding of trucks is authorized.

(4) The employer shall prohibit arms or legs from being placed between the uprights of the mast or outside the running lines of the truck.

(5i) When a powered industrial truck is left unattended, load engaging means shall be fully lowered, controls shall be neutralized, power shall be shut off and brakes set. Wheels shall be blocked if the truck is parked on an incline.

(5ii) A powered industrial truck is unattended when the operator is 25 feet or more away from the vehicle which remains in his view, or whenever the operator leaves the vehicle and it is not in his view.

(5iii) When the operator of an industrial truck is dismounted and within 25 feet of the truck still in his view, the load engaging means shall be fully lowered, controls neutralized and the brakes set to prevent movement.

(6) A safe distance shall be maintained from the edge of ramps or platforms while on any elevated dock or platform or freight car. Trucks shall not be used for opening or closing freight doors.

(10) A load backrest extension shall be used whenever necessary to minimize the possibility of the load or part of it from falling rearward.

(n) Traveling

(4) The driver shall be required to slow down and sound the horn at cross isles and other locations where vision is obstructed. If the load being carried obstructs forward view, the driver shall be required to travel with the load trailing.

(7i) When ascending or descending grades in excess of 10 percent, loaded trucks shall be driven with the load upgrade.

(7ii) On all grades the load and load engaging means shall be tilted back if applicable, and raised only as far as necessary to clear the road surface.

(o) Loading

(1) Only stable or safely arranged loads shall be handled. Caution shall be exercised when handling off-center loads which cannot be centered.

(2) Only loads within the rated capacity of the truck shall be handled.

(3) The long or high (including multiple-tiered) loads which may affect capacity shall be adjusted.

(4) Trucks equipped with attachments shall be operated as partially loaded trucks when not handling a load.

(5) A load engaging means shall be placed under the load as far as possible; the mast shall be carefully tilted backward to stabilize the load.

(6) Extreme care shall be used when tilting the load forward or backward, particularly when high tiering. Tilting forward with load engaging means elevated shall be prohibited except to pick up a load. An elevated load shall not be tilted forward except when the load is in a deposit position over a rack or stack. When stacking or tiering, only enough backward tilt to stabilize the load shall be used.

(p) Operation of the Truck

(1) If at any time a powered industrial truck is found to be in need of repair, defective, or in any way unsafe, the truck shall be taken out of service until it has been restored to safe operating condition.

(q) Maintenance of Industrial Trucks

(1) Any power-operated industrial truck not in safe operating condition shall be removed from service. All repairs shall be made by authorized personnel.

(5) All parts of any such industrial truck requiring replacement shall be replaced only by parts equivalent as to safety with those used in the original design.

(6) Industrial trucks shall not be altered so that the relative positions of the various parts are different from what they were when originally received from the manufacturer, nor shall they be altered either by the addition of extra parts not provided by the manufacturer or by the elimination of any parts. Additional counter-weighting of fork trucks shall not be done unless approved by the truck manufacturer.

(7) Industrial trucks shall be examined before being placed in service and shall not be placed in service if the examination shows any condition adversely affecting the safety of the vehicle. Such examinations shall be made at least daily. When industrial trucks are used on a round-the-clock basis, they shall be examined after each shift. Defects when found shall be immediately reported and corrected.
Do you have questions you need answered right now?
Call your nearest Cascade Service Department.
Visit us online at www.cascorp.com

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