



# Technical Bulletin

Number 141

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## D-Series Carton Clamp Camber Adjustment

MODELS: 20D, 35D, and 60D Carton Clamps

This bulletin describes the principles, applications and adjustment of Contact Pad Camber for handling carton packaged goods.

Contact pad camber is the amount of contact pad tilt as viewed from the front of the attachment. Positive camber means the bottom of the contact pads are closer together than the top. Negative camber means the top of the contact pads are closer together than the bottom. Neutral camber means the bottom and top of the contact pads are at equal distances apart.

General carton load applications and typical camber settings are as follows:

### CANNED GOODS

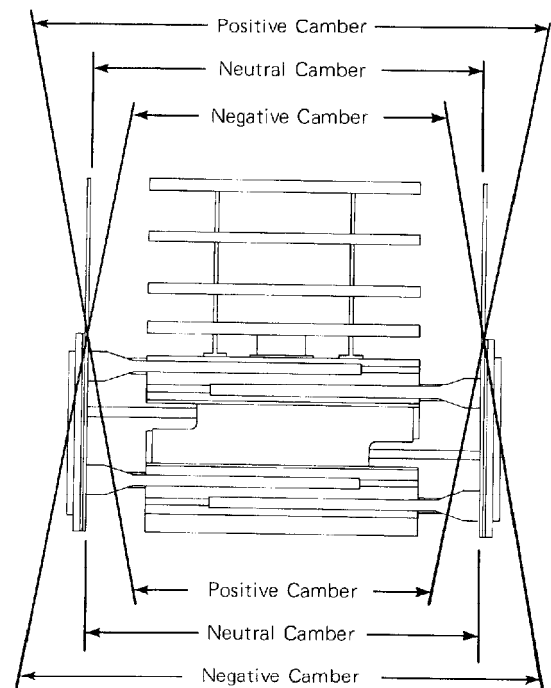
These loads are handled best with positive camber because it generates more force at the bottom of the load. Canned goods have the tendency to bridge at the bottom row which is prevented by a higher clamp force.

### SOFT CASE GOODS

Because of the tendency of cases to crush and their usually lighter density, soft case goods generally need less positive camber. Setting the contact pads in the maximum negative camber setting provides the best handling of soft case goods.

### APPLIANCE CASE GOODS

Handling appliance goods depends on the strength of the box and the location of reinforcement in the product being handled. Generally appliances are best handled with the contact pads adjusted to provide negative camber.



The initial camber setting should follow the recommendations above for the load being handled. If in doubt, set the camber in the neutral position. Clamp the load and inspect for damage or handling problems. Note the camber setting and clamp pressure (port G in the check valve). Refer to the troubleshooting section if problems are occurring.

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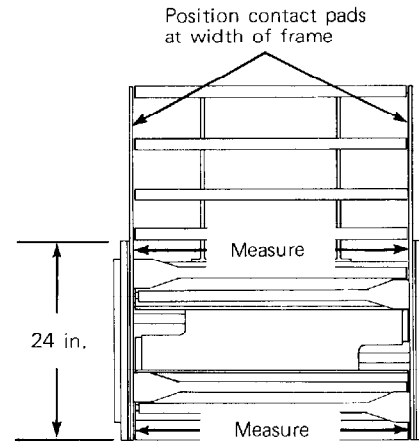
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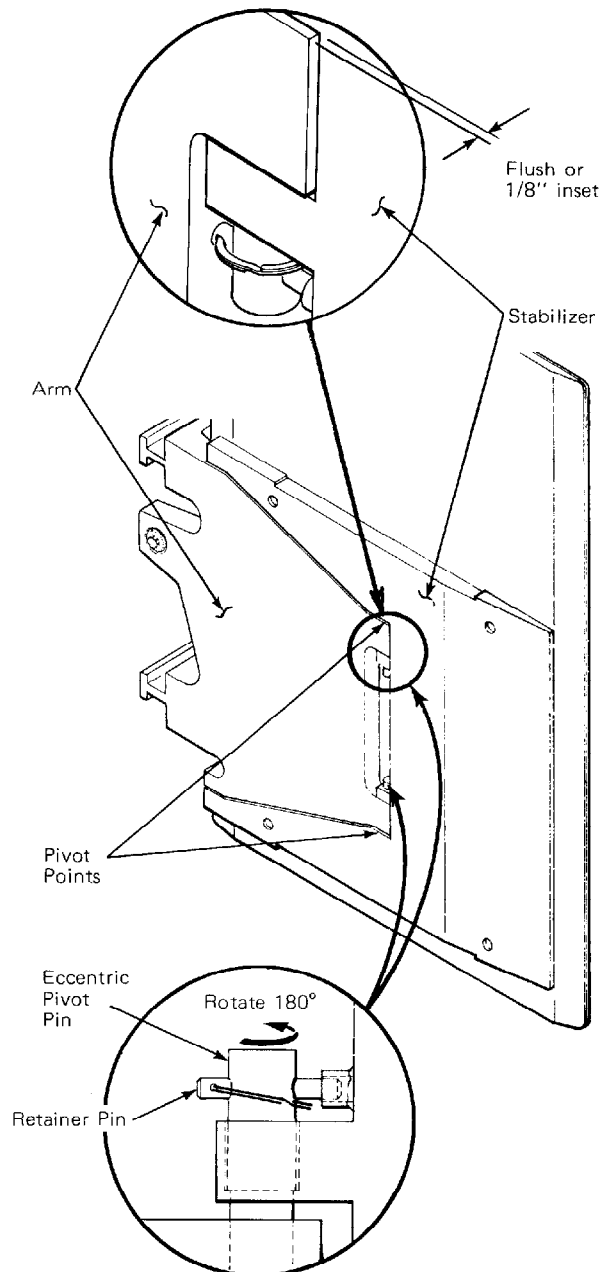
## MEASURING CAMBER

Position the contact pads at the width of the attachment frame. This will give a true reading and not be affected by arm sag. Camber is measured at the inside bottom center of the contact pad and 24 in. above the bottom of the pad inline with the arm eccentric pivot pins. The difference in the measurements between the two pads is the camber setting.



## ADJUSTING CAMBER

Remove the retaining pins from the arm eccentric pivot pins. Rotate the eccentric pins 180° to adjust the camber as needed. The easiest way to tell camber adjustment is to look at the relative position of the stabilizer and arm at the pivot points. The stabilizer will either be flush or inset approximately 1/8 in. with the arm. If the arms and stabilizer are flush at the top and the stabilizer is inset at the bottom on both sides, maximum positive camber is indicated.



## TROUBLESHOOTING

Load damage/handling problems due possibly to camber adjustment.

### LOAD CRUSHING AT BOTTOM OF LOAD

- Excessive clamp pressure
- Excessive positive camber
- Product improperly supported for clamp handling

### LOAD SLIPS DOWN

- Insufficient clamp force
- Worn contact pad surfaces
- Insufficient positive camber

### LOWER ROWS OF CASES BRIDGE OR FALL OUT

- Insufficient clamp force
- Insufficient positive camber