Model GX

VERTICAL LIFT
VERTICAL TURN/LIFT
HORIZONTAL LIFT

SPRING-LOADED CAM

Figure 15

APPLICATION

The standard GX clamp (Fig. 15) is a versatile clamp used mostly for steel warehousing and benchwork. The GX clamp can be used for vertical, vertical/turn or horizontal lifts. The GX clamp is recommended for turning a single sheet or fabricated structure. Due to its swiveling pad and **spring-loaded cam**, the clamp always stays in contact with the work face of the load, even when the load is turning through 180 degrees. The most exclusive feature of the GX clamp is its **wear indicator system.** When any of the cam's teeth are flattened, chipped or dulled between the unique wear indicator grooves (Fig. 16), it's time to change the cam. (Always replace the pad at the same time as the cam.) In addition, due to their forged components, **GX clamps have one of the lowest weight-to-Working Load Limit ratio of any clamps sold in the world.** This means they are easy to use and less tiring for the user. The GX design has also been used in several specialized applications, such as:

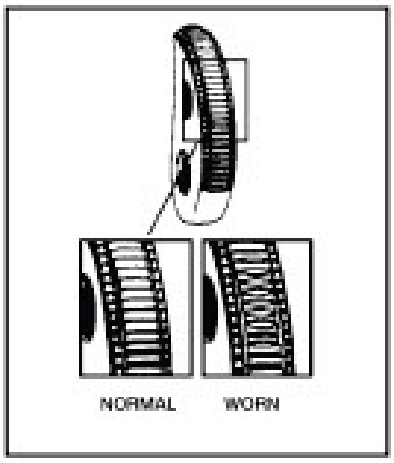

Figure 16

- **GX Structural Clamp** is a variation of the GX body shape and is designed for a secure bite on small or odd-shaped, wide flange beams.

- **GX Chain Connector Clamp** is a standard GX clamp fitted with a chain connector instead of a shackle. Using this clamp increases the flexibility of a multiple leg chain sling.

- **GX Sharp Leg Clamp** is a variation of the standard GX clamp designed to lift stacked plates from horizontal to vertical position. The long sharp leg can be driven between the top two plates to fully engage the clamp. This clamp is not equipped with a swiveling pad and it should not be used for turning a load.

OPERATION

Step 1

Before using any Campbell clamp, read the Applications section at the beginning of this manual to be sure the lift is appropriate for the size and style of clamp. Know the type of material to be moved before making a lift. Some exotic steels are too hard to allow the teeth of the cam to sink in. This may be true of structural members and fabricated sections.

⚠ WARNING!: Do not lift a plate or member with a hardness greater than 400 Brinell (43 Rockwell C)

Step 2

Choose a clamp with the right capacity and grip range. The model type, capacity and grip range are shown on the face of the clamp (Fig. 17).

Figure 17

⚠ WARNING!: Never lift a weight greater than the Working Load Limit shown on the clamp.

Step 3

Inspect the clamp before each lift (Fig. 18).

Figure 18

A. Inspect the cam and pad for wear and defects. Gripping surfaces must be free off foreign matter. If either the cam or pad are worn or defective, replace both cam and pad at the same time.

B. Inspect the shackle and visible linkage for elongation, distortion, wear or damage.

C. Inspect the clamp body for wear, damage or distortion.

D. Do not use any clamp that needs repair.

If in doubt, refer to the Maintenance and Inspection section of this manual for detailed instructions.

Step 4

Determine if more than one sling is required to balance the load (Fig. 19). When the size or shape of a plate or fabricated section is too large for one clamp to properly balance the load, the use of a multiple sling or spreader bar is required.

A. All clamps used in a multiple sling or spreader bar assembly must be rated at the same capacity.

B. The lifting angle (Fig. 19) between the sling legs on opposite sides of the load should be less or equal to 60 degrees.The lifting angle (Fig. 20) between the sling legs on same side of the load should be less or equal to 20 degrees.

C. The Working Load Limit of any multiple sling assembly or spreader bar assembly must not be more than the combined Working Load Limit of two clamps, no matter how many clamps are in the assembly.

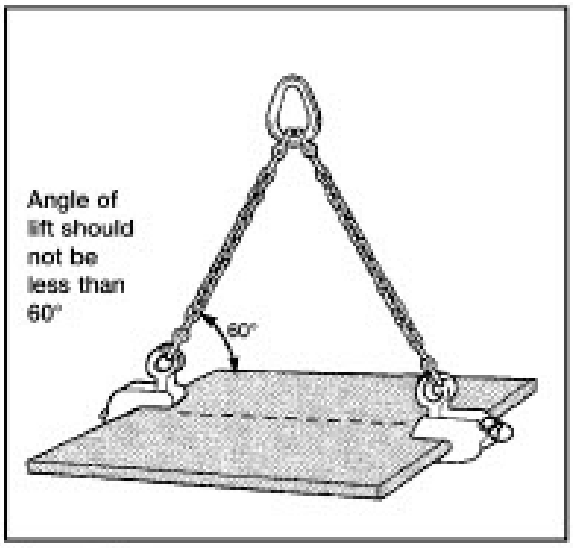

Figure 19

Step 5

Position the clamp(s) to balance the load. Position the clamp(s) so the lifting force of the crane is directly in line with each clamp's lifting shackle, and the load is evenly distributed (Fig. 20).

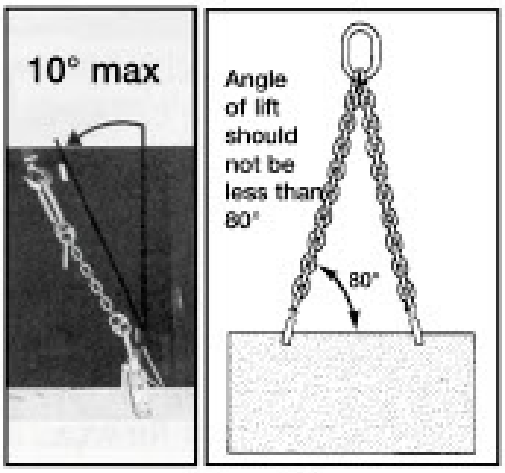

Figure 20

⚠ WARNING!: Never attach a clamp directly to the crane hook. Use a sling between the crane hook and clamp to minimize interference in the clamp operation.

⚠ WARNING!: Do not side load. Never exceed an angle of 10° from vertical.

Step 6

Engaging the clamp:

A. Press down on the lifting shackle until the cam retracts. Occasionally, a cam may jam against a pad. To release, either tap the heel of the shackle, or grasp clamp by the shackle and tap bottom of clamp sharply against floor or other solid surface.

B. Install the clamp over the plate to the full depth of the throat opening.

C. Release the shackle so the cam engages the plate.

Step 7

Lift slowly and smoothly. The operator should stand clear of the load and never lift over people or machinery.

⚠ **WARNING!: Do not begin to lift until all personnel are clear of the lift area. Never stand under or near a member being lifted.**

⚠ **WARNING!: Do not jerk or bump load while lifting.**

Step 8

After the plate is in place and at rest, the GX clamp can be removed by retracting the cam away from the plate. To do this, press down on the lifting shackle while at the same time lifting the clamp from the plate. If the cam is difficult to retract, a slight tap on the heel of the shackle or the clamp's body should release it.

Step 9

Campbell® recommends inspection of each lifting clamp before and after each lift.Refer to the Maintenance and Inspection section of this manual for detailed instructions.

⚠ **WARNING!: Do not use a clamp that needs repair.**