

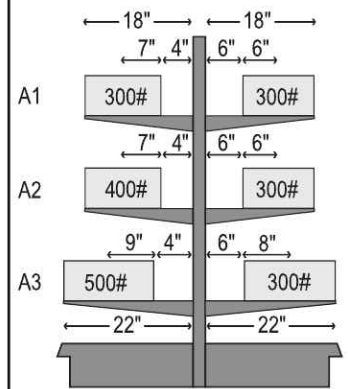
FIXTURE LOADING - PRODUCT SAFETY

! WARNING! DO NOT EXCEED ANY OF THE MAXIMUM LOAD LIMITS IN THE FOLLOWING SECTIONS!

FRONT LOADED SHELVES

IMPORTANT! Front loaded shelves create the most likely situation for exceeding the fixture loading capacities. Compare the increases in inch/lb. loadings of front loaded shelves over evenly loaded shelves, PARTICULARLY ON WALL SECTIONS!

A front loaded shelf has a void between the back panel and the merchandise. Take one half the loaded area dimension plus the gap dimension at back and multiply times the weight on the shelf in order to determine individual inch/lb. load.



FRONT LOADED SHELVES ON GONDOLAS
A1 7" + 4" = 11" x 300 lbs. or 3,300 inch/lbs.
A2 7" + 4" = 11" x 400 lbs. or 4,400 inch/lbs.
A3 9" + 4" = 13" x 500 lbs. or 6,500 inch/lbs.
SIDE A TOTAL = 14,200 inch/lbs.
B1 6" + 6" = 12" x 300 lbs. or 3,600 inch/lbs.
B2 6" + 6" = 12" x 300 lbs. or 3,600 inch/lbs.
B3 8" + 6" = 14" x 300 lbs. or 4,200 inch/lbs.
SIDE B TOTAL = 11,400 inch/lbs.

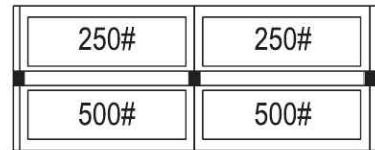
SUBTRACT B FROM A:
14,200 inch/lbs
-11,400 inch/lbs

2,800 inch/lbs

SAFE - 2,800 INCH/LBS
DOES NOT EXCEED
15,000 INCH/LBS
MAXIMUM

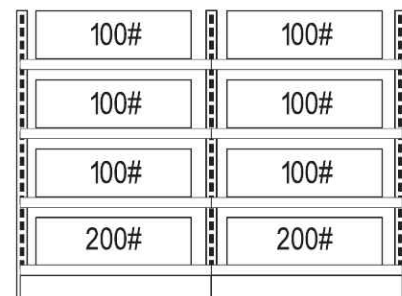
COLUMN LOADING

Column loading is the vertical load, measured in pounds, that can be applied on any upright. Each upright bears ONE HALF OF THE LOAD OF EACH SHELF THAT IT SUPPORTS. MAXIMUM COLUMN LOAD IS 4,500 POUNDS, DO NOT EXCEED!



750 lbs. plus 750 lbs. = 1500 lbs.

1500 lbs. divided by 2 =
750 lb. column load on the center upright



WALL SECTIONS - TOP VIEW

WALL SECTIONS - FRONT VIEW
500 lbs. plus 500 lbs. = 1000 lbs.

1000 lbs. divided by 2 =
500 lb. column load on the center upright



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FIXTURE LOADING - PRODUCT SAFETY

! WARNING! DO NOT EXCEED ANY OF THE MAXIMUM LOAD LIMITS IN THE FOLLOWING SECTIONS!

OFFSET LOADING

Offset loading is measured in inch/pounds and represents the bending load at the base shoe connection and the upright. To determine if you exceed the load limit of the fixture, take the difference between the larger inch/lb. calculations on one side of the fixture and the inch /lb. calculations on the other. THIS DIFFERENCE CANNOT EXCEED 15,000 INCH/LBS. In the case of wall sections, the calculation for the one side CANNOT EXCEED 15,000 INCH/LBS.

EVENLY LOADED SHELVES ON GONDOLAS

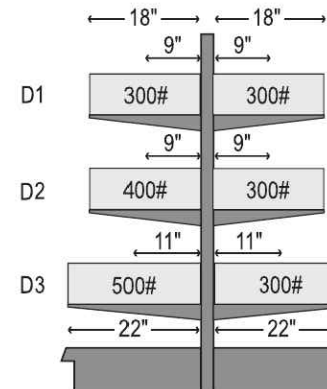
Divide each shelf depth by 2...multiply times the weight on shelf to determine individual shelf load.

D1 18" / 2 = 9" x 300 lbs. or 2,700 inch/lbs.
D2 18" / 2 = 9" x 400 lbs. or 3,600 inch/lbs.
D3 22" / 2 = 11" x 500 lbs. or 5,500 inch/lbs.

SIDE D TOTAL = 11,800 inch/lbs.

E1 18" / 2 = 9" x 300 lbs. or 2,700 inch/lbs.
E2 18" / 2 = 9" x 300 lbs. or 2,700 inch/lbs.
E3 18" / 2 = 11" x 300 lbs. or 3,300 inch/lbs.

SIDE E TOTAL = 8,700 inch/lbs.



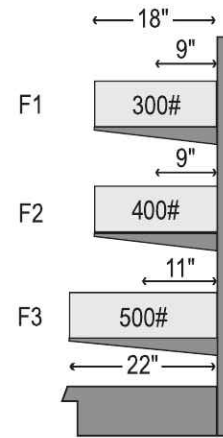
SUBTRACT E FROM D 11,800 inch/lbs.
- 8,700 inch/lbs.
3,100 inch/lbs.

SAFE! 3,100 INCH/LBS. DOES NOT
EXCEED 15,000 INCH/LBS. MAXIMUM

EVENLY LOADED SHELVES ON WALL SECTIONS
Divide each shelf depth by 2...multiply times the weight on shelf to determine individual shelf load.

F1 18" / 2 = 9" x 300 lbs. or 2,700 inch/lbs.
F2 18" / 2 = 9" x 400 lbs. or 3,600 inch/lbs.
F3 22" / 2 = 11" x 500 lbs. or 5,500 inch/lbs.

SIDE F TOTAL = 11,800 inch/lbs.



SAFE! 11,800 INCH/LBS. DOES NOT EXCEED
5,000 INCH/LBS. MAXIMUM



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POST THIS ENTIRE PAGE IN A CONSPICUOUS PLACE, CLEARLY VISIBLE TO ALL STORE PERSONNEL

RE-LEVELING OF OFFSET LOADED FIXTURES

AFTER THE FIXTURE IS LOADED, IF A GAPPING OF THE SHELVES APPEARS ON THE HEAVILY LOADED SIDE, IT IS POSSIBLE THE ORIGINAL INSTALLATION IS THE CAUSE. CHECK THESE TWO CONDITIONS BEFORE PROCEEDING!
CAUTION! BEFORE MAKING ANY ADJUSTMENTS TO ANY COMPONENTS BE SURE THAT ALL MERCHANDISE HAS BEEN REMOVED.

1. ALL UPRIGHTS MUST BE AT THE SAME HEIGHT!

A. Visually sight across the top of the fixture to check for high or low uprights.
B. If a row of shelves at a particular upright appear to rise or sag at this indicates an unlevel section TO CORRECT: Pull a string across the top of the uprights from end to end.

IF THE UPRIGHT IS TOO LOW on lightly loaded section...

a. Raise base shoe levelers on each side equally until upright touches stringline.

IF UPRIGHT IS TOO HIGH on lightly loaded section...

a. Remove kickplates on both sides of the low upright.

b. Screw upright leveler out, or down, raising the top upright until it touches stringline.

c. Screw base shoe levelers down an equal number of turns until base shoes lock up against the upright.

IF UPRIGHT IS TOO HIGH on lightly or heavily loaded section...

a. Remove kickplates on both sides of the high upright.

b. Screw upright leveler up into upright, this may solve the "too high" problem, if not...

c. Screw loose shoe levelers up into shoe an equal number of turns until top of upright touches stringline.

2. NONE OF THE SECTIONS IN THE RUN HAVE BEEN MOVED OUT OF ALIGNMENT

A. Visually sight along the front of the base shelves.

B. Compare the front of the base shelves to a tile line.

TO CORRECT: Facing the wedge shaped gap areas, physically push the section back into line, closing the gaps. Depending on the merchandise, it may be necessary to unload or partially unload the section before moving. Attempt to move the section by applying foot pressure at the kickplate joint only... if not possible,

a. Place a 2 x 4 block against the kickplate joint and tap back into alignment...or...

b. Use a jack and 2 x 4 block against kickplate joint...jack should be braced across the aisle against a long

2 x 4 spanning several kickplate joints.

IF THE ABOVE CONDITIONS ARE NOW CORRECT, look for shelf gaps on the heavily loaded side...the base shelf joint will be tight, but the upper shelves will have increasingly larger wedge shape gaps at the top, REMOVE KICKPLATES ON BOTH SIDES FOR AT LEAST ONE SECTION ON EITHER SIDE OF THE HEAVILY LOADED SECTION.

ON THE LIGHTLY LOADED SIDE,

a. Run upright levelers down to the floor.

b. Run base shoe leveler up into shoe until the pressure is off of it...1/4" free movement.

THEN...ON THE HEAVILY LOADED SIDE,

c. Begin at the first heavily loaded upright TO YOUR RIGHT, facing the heavily loaded side...run the base shoe leveler down until all the shelf gaps at that upright close tightly.

d. Repeat c. with remaining heavily loaded uprights, WORKING TO YOUR LEFT.

THEN...ON THE LIGHTLY LOADED SIDE,

e. Run loose levelers down until shoe locks up against the upright.

f. Replace kickplates on both sides.



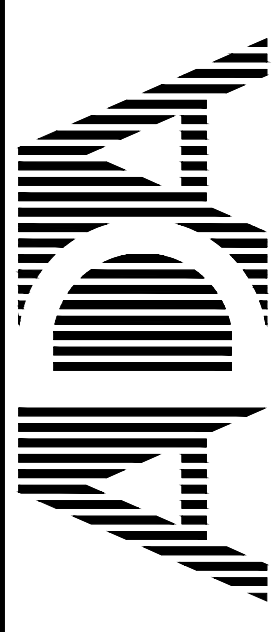
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HARBOR FREIGHT TOOLS

NYACK, NY 10960

314 NY ROUTE 59

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DO NOT SCALE THESE DRAWINGS

REVISIONS

#	DATE	TYPE
1		
2		
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FIXTURE
SPECIFICATIONS
AND DETAILS

DATE 9/22/21

JOB NO. 20420

A1.7

SHEET NO.