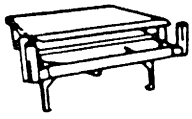
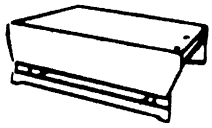
Automatic Dockleveler Adjusting and Maintenance Instructions

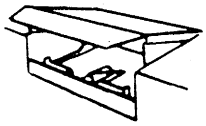


Truck Actuated
Dock Leveler

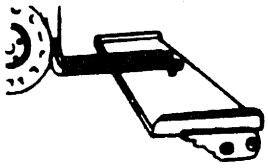
Aluminum or Steel
Truck Dock Boards



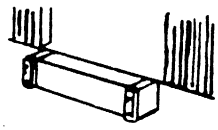
Manually Operated
"Dockmate"



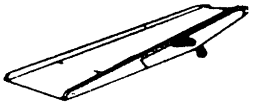
Electric Hydraulic Dock
Leveler



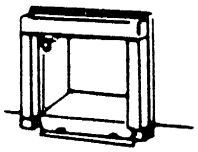
Rail Dock Boards
Aluminum or Steel



Face Mounted Dock Ramp



Yard Ramps
Magnesium, Aluminum or
Steel



Dock Seats, Lights and
Bumpers

Wheel Chocks
and Stabilizing Jacks

T & S EQUIPMENT COMPANY

201 GROWTH PARKWAY, P.O. BOX 496
ANGOLA, INDIANA 46703
PHONE 219-665-9521

AUTOMATIC DOCKLEVELER

Safety Precautions

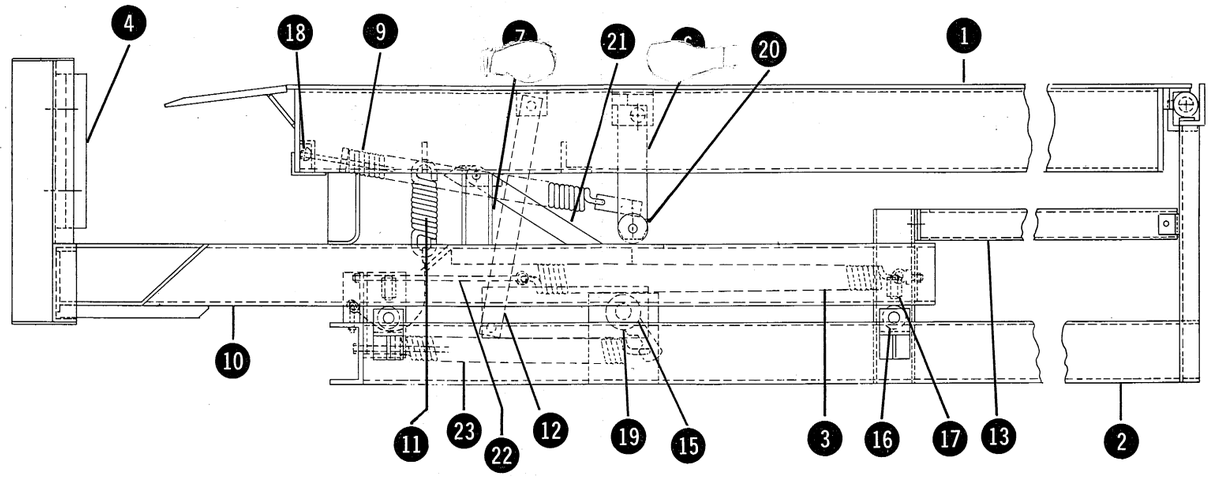
1. Always barricade dockleveler off to any form of traffic on the dock and on the approach.
2. Always chain or brace leveler securely and safely when maintenance is required.
3. If carriage has remained against the dock or close to dock and not returned to the out position do not stand in front of leveler as carriage may snap free without warning.
4. Do not get under deck to work on leveler if carriage isn't out fully (approx. 28 inches).
5. Do not use pry bar or other means to raise deck when truck backs into dockleveler. STAY CLEAR!
6. Check toe guards to ensure they are still functional.

Malfunctions Causes & Corrections

It is imperative when checking a dockleveler for malfunction that the installation is correct. It should be determined that the frame ❷ is level. An indication that the dockleveler is not level is that cam follower ❻ and the cam roller ⓴ attached to the bottom of the cam follower post are not in correct relation to the cam ramp. Namely, not sufficient clearance to bypass the cam post or too much clearance and the roller missing the cam.

Deck Not Raising

1. Check cam follower spring ❾ for proper tension. If leveler is installed under an overhead door tension on the spring should be sufficient to hold the cam follower arm ❻ in a position 90° to the deck until a load of approximately 150 lb. is placed on the deck at a position approximately 1" from the edge of the lip. Then, a vehicle pushing against pusher arm ❹ causes the cam to contact the roller and the cam follower ❻ should start to pivot. With the 150 lb. weight removed the cam follower should not move from its position 90° relative to the deck. It should require the weight of 150 lbs. to cause the cam follower to pivot.



If the leveler is not installed under an overhead door the spring tension adjustment for cam follower spring ❾ should be tightened until the head of the plug in the spring is approximately 2" from the plate retainer.

In either case the spring should be visually inspected for excessive openings between coils and if it is apparent the spring has lost its tension or will not adjust to enough tension to hold the cam follower in the correct position, the spring ❾ should be replaced. You must specify the length of the dockleveler when ordering (6', 8', and 10'). Also, check to see if you should order the adjusting assembly ⓲.

2. Check cam follower ❻ to determine if it is at a position 90° to the deck. If the cam follower is at a position toward the front of the leveler more than ¼" forward from 90° the arm will have to be removed and the stop block on the upper rear edge of the arm built up on the stop surface so that it will maintain a nearly 90° position to the deck with the proper amount of spring tension imposed on the arm.

3. A problem exists if the cam roller ⓴ doesn't roll up the cam ramp ㉑. There are two possible causes. First, the cam ramp is sticking in the up position. This is usually caused by a paint or oil buildup. The remedy is a little housekeeping and hitting the side of the cam ramp a couple times with a hammer to loosen it up. A paint buildup can be reduced with the use of lacquer thinner.

Second, the deck may not be raising because the carriage ❿ is not going all the way out. The cam ramp should go at least ¾" past the cam roller when the carriage is fully extended. The carriage may not be coming out fully because the frame is not level causing binding.

If the leveler deck does not raise when the carriage is retracted and checks No. 1; No. 2; and No. 3 have been made, the balance of the leveler should be checked. The net weight of the deck should be 40 to 60 pounds.

On the spring counterbalanced dockleveler the deck can be made lighter by tightening the deck counterbalance springs. Tighten all springs approximately the same.

On the weight counterbalanced dockleveler the concrete weight needs to be moved back. Probably one notch will suffice in most cases.

5. Earlier models of levelers did not have a steel case surrounding the counterweight. If your leveler is one of these models the problem may stem from the fact that the counterweight had been broken and part of the counterweight missing. This would effect the balance of the leveler deck and might require replacement of the counterweight to properly balance the leveler deck.

6. If carriage rollers don't rotate they are being restricted by paint. To make them free use lacquer thinner. Do not use torch to burn off paint as you destroy the brass oilite bearing.

Carriage Not Returning To A Full Extended Position

1. Check balance of leveler as described in Item 4 of previous section. If the deck is to heavy it may not allow carriage to return to out position.

2. Check tension on spring ❸ if it has been determined the carriage is not binding on the vertical bearings and has no other obstruction to stop its forward travel, the tension on spring ❸ should be adjusted until the spring will return the carriage to a fully extended position. If it is not possible to obtain enough tension on the spring and it is certain the carriage is operating freely, then spring ❸ should be replaced.

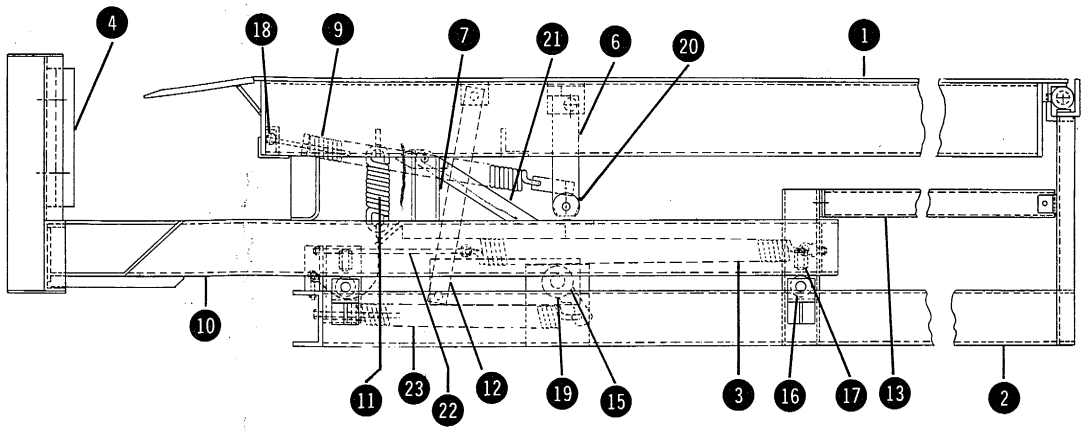
3. If you have the cable type return before adjusting spring tension or replacing spring ❸ check condition of sheaves. Make certain the cable clamps have not allowed the cable to slip by making it impossible to impose enough tension on spring ❸ to return carriage to a fully extended position.

Deck Sticking In Up Position

If a truck hits the bumpers too hard the counterweight may go too far and stick causing the deck to stay in the up position. To alleviate this do not drive a fork truck on the deck. You must pull the deck linkage ⓬ back across center by pulling it toward the front of the leveler. Possibly a link or two should be taken up in the hold down spring ⓫ chain. The chain should be taut when the cam roller ⓴ is at the top of the cam ramp ㉑.

Maintenance Instructions

1. Zerk grease fittings on cam follower roller should be filled every six months.
2. Ways of carriage guides should be greased every six months.
3. Safety cam spring can be restored, if necessary, by adjusting take-up bolt.
4. Concurrent adjustment of carriage return spring may be necessary to return carriage to full "out" position.
5. Spring counterbalanced unit has a bearing at each end of trunion. These have zerk fittings to be greased every six months.
6. Applying a small amount of oil where the spring hooks will assist in minimizing wear.
7. Oil deck hinge at pivot points.



AUTOMATIC DOCKLEVELER PARTS LIST

ITEM NUMBER	DESCRIPTION	PART NUMBER
1	Deck for 6′ Dockleveler	D-600
	Deck for 8′ Dockleveler	D-800
	Deck for 10′ Dockleveler	D-1000
2	Frame for 6′ Dockleveler	F-600
	Frame for 8′ Dockleveler	F-800
	Frame for 10′ Dockleveler	F-1000
3	Carriage Return Spring	CAR-S-2.25 OR CAR-S-3.75
4	Dock Bumper 8″ x 18″	B-818
2	Dock Bumper 5″ x 16″ include wood spacer	B-516
5	Counter Weight (Not Shown)	CW
6	Cam Follower ~~Post Arm~~	CFP
7	Cam Post	CP
8	Safety Skirt (Toe Guard) (Not Shown)	SS
9	Cam Spring 6′ Dockleveler	Cam-S-600
1	Cam Spring 8′ Dockleveler	Cam-S-800
	Cam Spring 10′ Dockleveler	Cam-S-1000
10	Carriage 6′ Dockleveler	C-600
	Carriage 8′ Dockleveler	C-800
	Carriage 10′ Dockleveler	C-1000
11	Hold Down Spring	HD-S
12	Deck Linkage	DL
13	Hold Down Bar	HDB
14	Sheave Assembly (Not Shown)	SA
15	Trunion Retainer Plate	TRP
16 4	Horizontal Bearing	HB
17 4	Vertical Bearing	VB
18	Cam Adjusting Assembly	CAA
19	Trunion Assembly	TA
20 1 x 2″	Cam Roller	CR
21	Cam Ramp	Cam-R
600=short 800=long 22	Carriage Return Eyebolt 800	CR-EB (Models after 1977)
Std 800 = 6′00 -8′00 23	Deck Counter Balance Spring	Cam-S-800

When ordering parts specify the following:

1. Length of leveler from rear of pit to tip of lip.
2. Length of lip.
3. When ordering a bumper, specify the height.
4. When ordering a carriage return spring specify outside diameter.

Bulletin No. PT-285
Supersedes P-579-PL