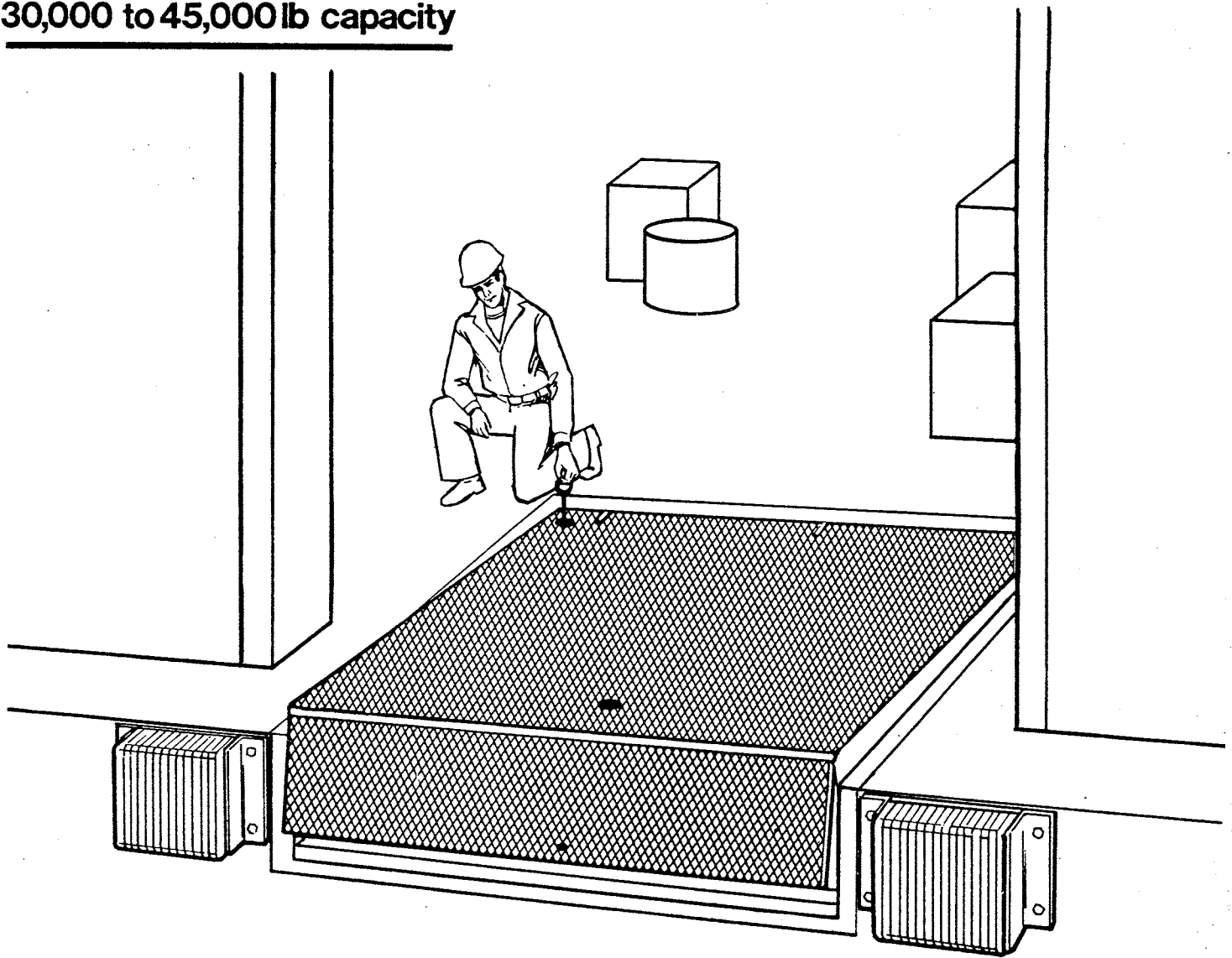




MECHANICAL DOCK LEVELER

Model: W-M series
30,000 to 45,000 lb capacity

Owners Manual



OPERATION - SERVICE - PARTS

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CAUTIONS

WHEN OPERATING THE LEVELER

- ALWAYS BLOCK THE WHEELS OF THE TRUCK WITH WHEEL CHOCKS OR ENGAGE A VEHICLE RESTRAINT BEFORE USING THE LEVELER.
- DO NOT OPERATE THE LEVELER WITH ANYONE STANDING IN FRONT OF THE LIP PLATE.
- ALWAYS RESTORE THE LEVELER TO ITS SAFE CROSS TRAFFIC POSITION AFTER SERVICING THE TRUCK.

BEFORE WORKING ON THE LEVELER

- POSITION TRAFFIC CONES OR A BARRICADE IN THE DOCK DRIVEWAY TO GUARD AGAINST TRUCK TRAFFIC.
- A SIMILAR BARRICADE SHOULD BE PLACED IN FRONT OF THE REAR CURB ANGLE AT DOCK LEVEL TO WARD OFF LIFT TRUCKS OR FOOT TRAFFIC.
- DO NOT WORK INSIDE THE LEVELER WITHOUT FIRST NOTIFYING A FOREMAN OR SUPERVISOR THAT YOU ARE WORKING INSIDE THE EQUIPMENT.
- ALWAYS MAKE SURE ANY OVERHEAD DOOR IS FIRMLY HELD IN ITS RAISED POSITION.
- ALWAYS MAKE SURE THE MAINTENANCE PROP IS SECURELY POSITIONED UNDER THE LIP PLATE BEFORE WORKING INSIDE THE LEVELER.

WARRANTY

Serco warrants to and for the sole benefit of the original purchaser of docklevelers and vehicle restraints manufactured by Serco (the "Products") that the Products shall be free from defects in material and workmanship, subject to the following express provisions:

Base Warranty — All Products are warranted for a one year base period ("Base Warranty Period") commencing on the earlier of the date of Serco approved installation or the sixtieth (60th) day after the date of shipment. This warranty covers the repair or replacement of the defective Product units or components at Serco's sole election and expense, including reasonable labor, travel and freight. If the Product is sold to the original purchaser through a Serco dealer or distributor, applicable charges for labor, travel and freight shall not exceed those set forth in Serco's dealer reimbursement policy.

Main Spring Warranty — All main spring assemblies are warranted to cover the cost of replacement parts only for an extended period of four (4) years after the initial Base Warranty Period.

Structural Warranty — All Products have a ten (10) year prorated structural warranty in accordance with ANSI MH.14.1 1984 standards. Such warranty shall commence on the first day of the Base Warranty Period. This warranty covers structural repairs to or replacement of such Products at Serco's sole election and expense, including reasonable labor, materials, freight and travel. If the Product is sold to the original purchaser through a Serco dealer or distributor, applicable charges for labor, travel and freight shall not exceed those set forth in Serco's dealer reimbursement policy. If Serco deems replacement necessary, it will provide the original purchaser with credit toward the purchase of the new replacement Product in an amount equal to the original purchase price of the warranted Product F.O.B. point of manufacture, discounted on a ten year straight line basis by the number of years of use prior to replacement, but not greater than ten (10) years.

Parts and Assembly Warranty — All spare or replacement parts are warranted to cover the cost of replacement parts and freight only for ninety (90) days from the date of shipment.

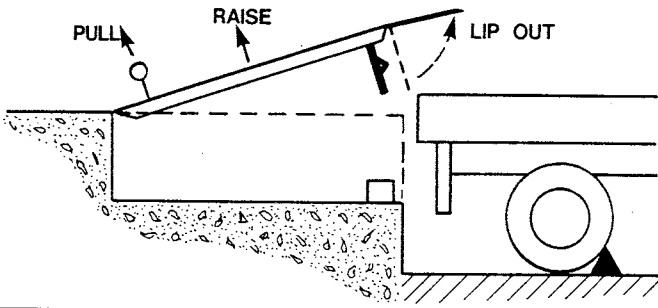
THE ABOVE WARRANTIES ARE IN LIEU OF ANY OTHER WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

In no event shall Serco or any of its subsidiaries be responsible for or liable to anyone, including third parties, for special, indirect, collateral, punitive, incidental or consequential damages, even if Serco or any subsidiary has been advised of the possibility of such damages. Such excluded damages include, but are not limited to, loss of goodwill, loss of profits, loss of use, interruption of business, or other similar indirect financial loss.

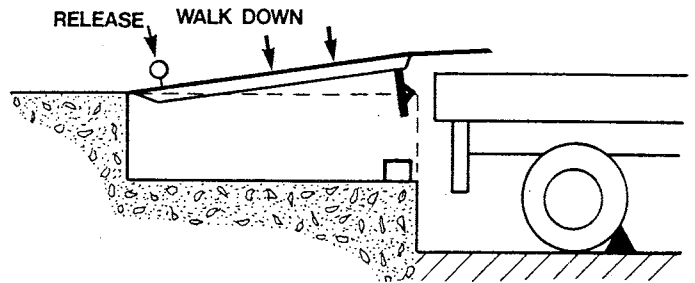
This limited Warranty shall be void and of no effect (i) if a Product is altered or modified from its original condition as installed or as delivered at or from the factory, (ii) to the extent that the Product defect is the direct result of improper installation, operation beyond capacity or other than in accordance with Serco instructions, abuse, careless or negligent use, or failure to maintain the Product as recommended by Serco or (iii) if the original purchaser does not notify Serco's Warranty Department of the defect within ninety (90) days after the Product defect is discovered.

OPERATING INSTRUCTIONS

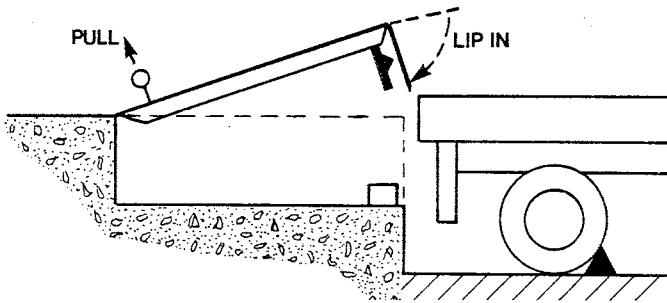
1 To raise the leveler, **pull** the release ring at the **back** of the top plate. When the leveler raises the lip will automatically extend.



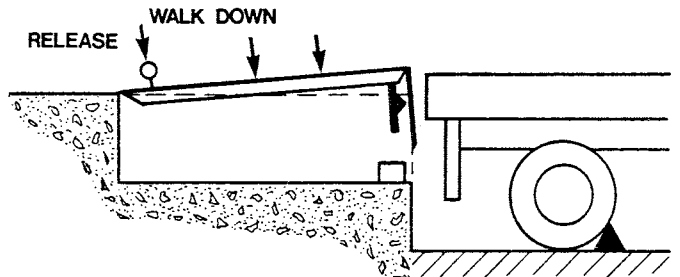
2 When the lip is fully extended **release** the ring. **Walk down** the leveler to the truck bed.



3 To return the leveler to stored position, **pull** the **back** release ring. **Release** the ring as soon as the lip is fully retracted.

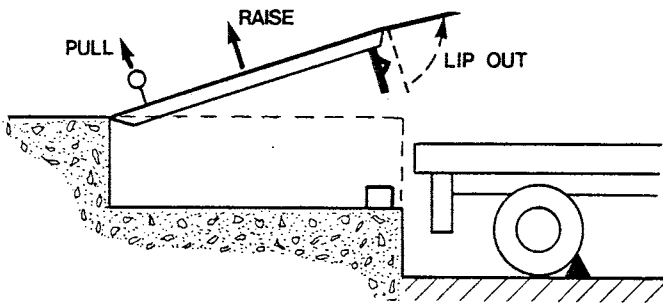


4 With the lip fully retracted and clear of the truck, **walk down** the leveler to the stored position.

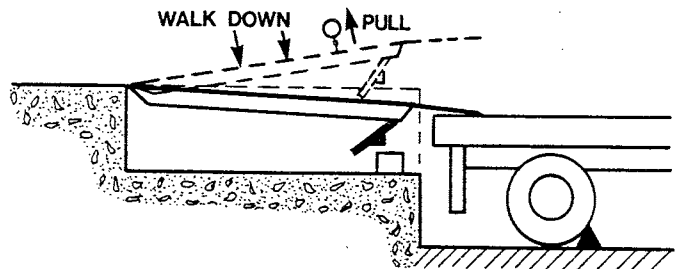


BELOW DOCK LEVEL OPERATION

1 **Pull** the **back** release ring to raise leveler. When the lip is fully extended, **release** the ring.

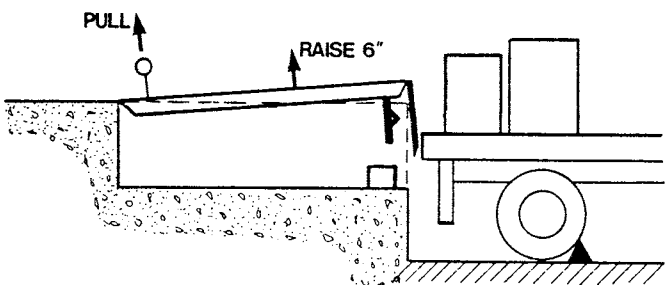


2 With the lip fully extended, **pull** the **front** release ring to retract the safety legs as the leveler is walked down.

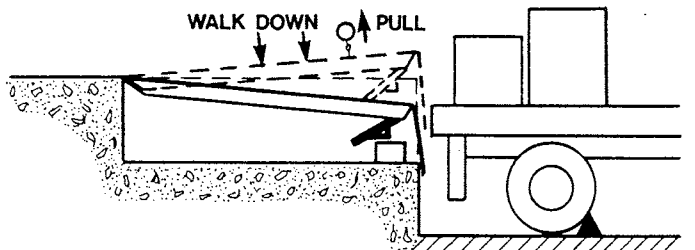


BELOW DOCK LEVEL - END LOADING OPERATION

1 **Pull** the **back** release ring to raise leveler. **Release** the ring when the leveler is about 6" above dock level.



2 With the leveler above dock, **pull** the **front** release ring to retract the safety legs as the leveler is walked down.



MAINTENANCE

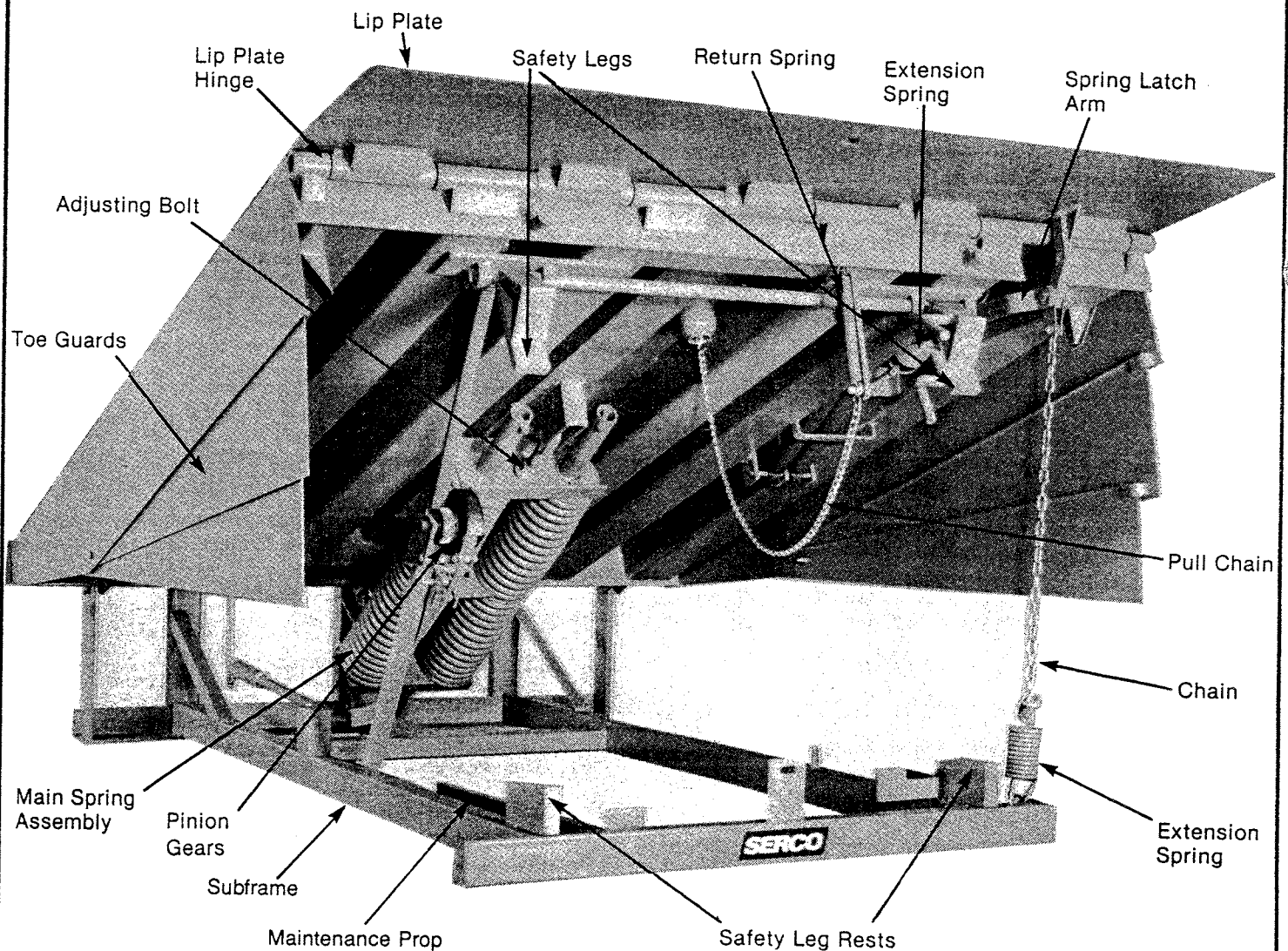
WEEKLY

- Clean the upper portion of the lip plate hinge with a brush and blow away all dirt and debris to ensure proper lip plate operation.
- Inspect the safety leg system for free operation, structural defects, pull chain and return spring operation.
- Inspect the operation of the telescopic toe guards to ensure they are not distorted or binding when operating the leveler.
- Clean away any debris from the rear hinge area of the leveler and between the sides and curb angles to ensure smooth operation.

QUARTERLY

- Clean out the inside of the pit area. Washing out with spray water is effective providing all water is drained out.
- Inspect and lubricate all mechanical pivot points on the leveler with a light S.A.E. 30 oil. Cycle the leveler when lubricating.
- Clean the hold down rack and gears and apply a light automotive grease. Do not lubricate between the hold down brake band and brake drum.
- Inspect the counterbalance main spring for any broken coils. Adjust the tension if necessary.
- Inspect the lip push out arm and spring latch arm assemblies for damage and check the chain and springs for elongation.
- Inspect all welds under the leveler for fatigue or failure, particularly the lip plate hinge and top plate under structure.

LEVELER COMPONENTS



ADJUSTMENTS

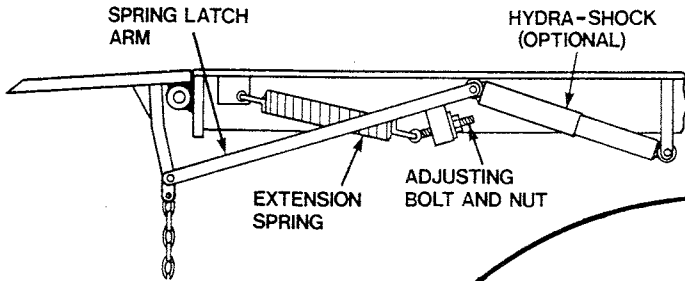
SPRING LATCH ARM ASSEMBLY

The spring latch arm assembly provides a counterbalance for extending the lip plate when the leveler is raised.

Before making any adjustment to the spring latch arm, check the operation of the lip push out arm assembly.

ADJUSTMENT

Extend the lip plate manually. (If the dock leveler has lip keepers, pull the release ring to allow the leveler to raise slightly.) When the lip is released, it should fall gently yet completely to the stored position. If the lip plate falls rapidly, increase the tension on the extension spring with the adjustment bolt.



MAIN SPRING COUNTERBALANCE

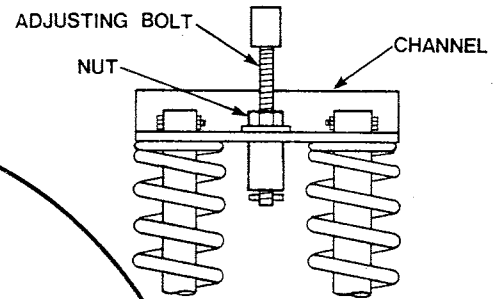
The main spring should be adjusted so that the leveler raises fast enough to completely extend the lip, yet still be easy to walk down.

ADJUSTMENT

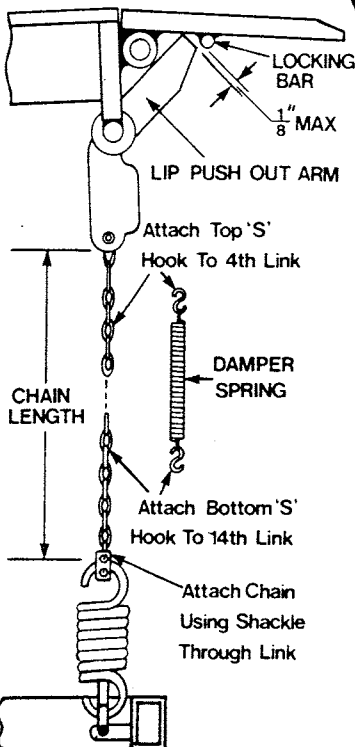
The spring compression can be adjusted by turning the nut with a 1 1/2 inch open end wrench. If the lip does not fully extend, increase the spring compression by extending the adjusting bolt. If the lip is extending briskly and the leveler is too hard to walk down, reduce the spring compression by shortening the adjusting bolt.

CAUTION

Never attempt to remove the main spring without completely relieving its tension. Never attempt to dismantle the main spring — the assembly is a complete unit replacement only.



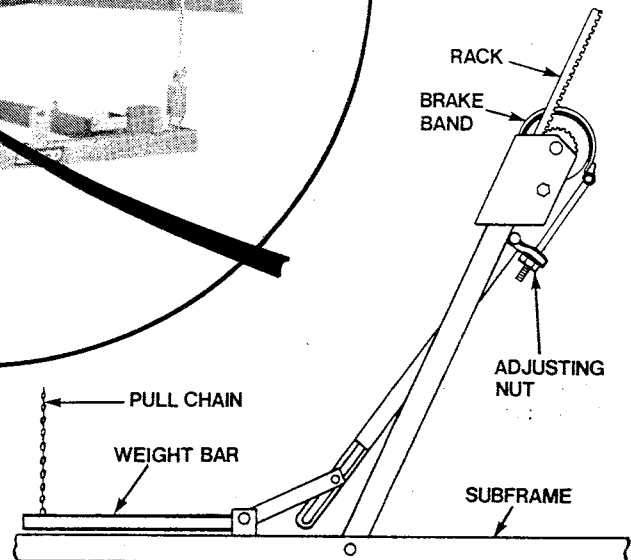
LIP PUSH OUT ARM ASSEMBLY



When carrying out repairs maintain the chain length as below. If chain length dimension cuts into link go to next link.

Model	Chain Length
W500	26"
W600, W800	29"
W1000	34"

HOLD DOWN ASSEMBLY



If the leveler will not stay down or raises by itself adjust the hold down assembly.

ADJUSTMENT

Open the leveler and check the operation of the release mechanism. Adjust the brake band with the adjusting nut so that the weight bar is horizontal or parallel to the subframe.

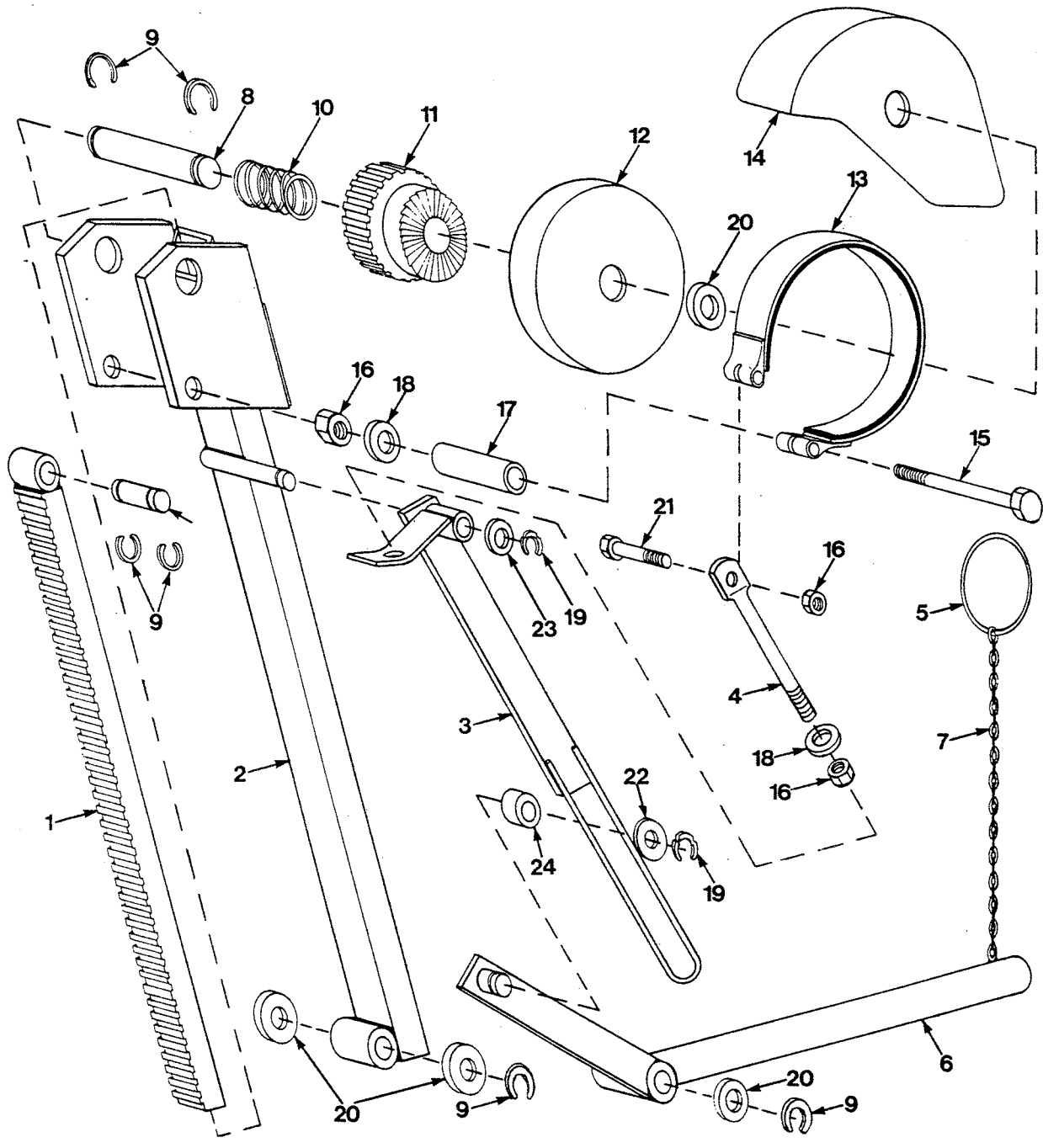
CAUTION

Do not lubricate between the brake band and the brake drum.

TROUBLESHOOTING GUIDE

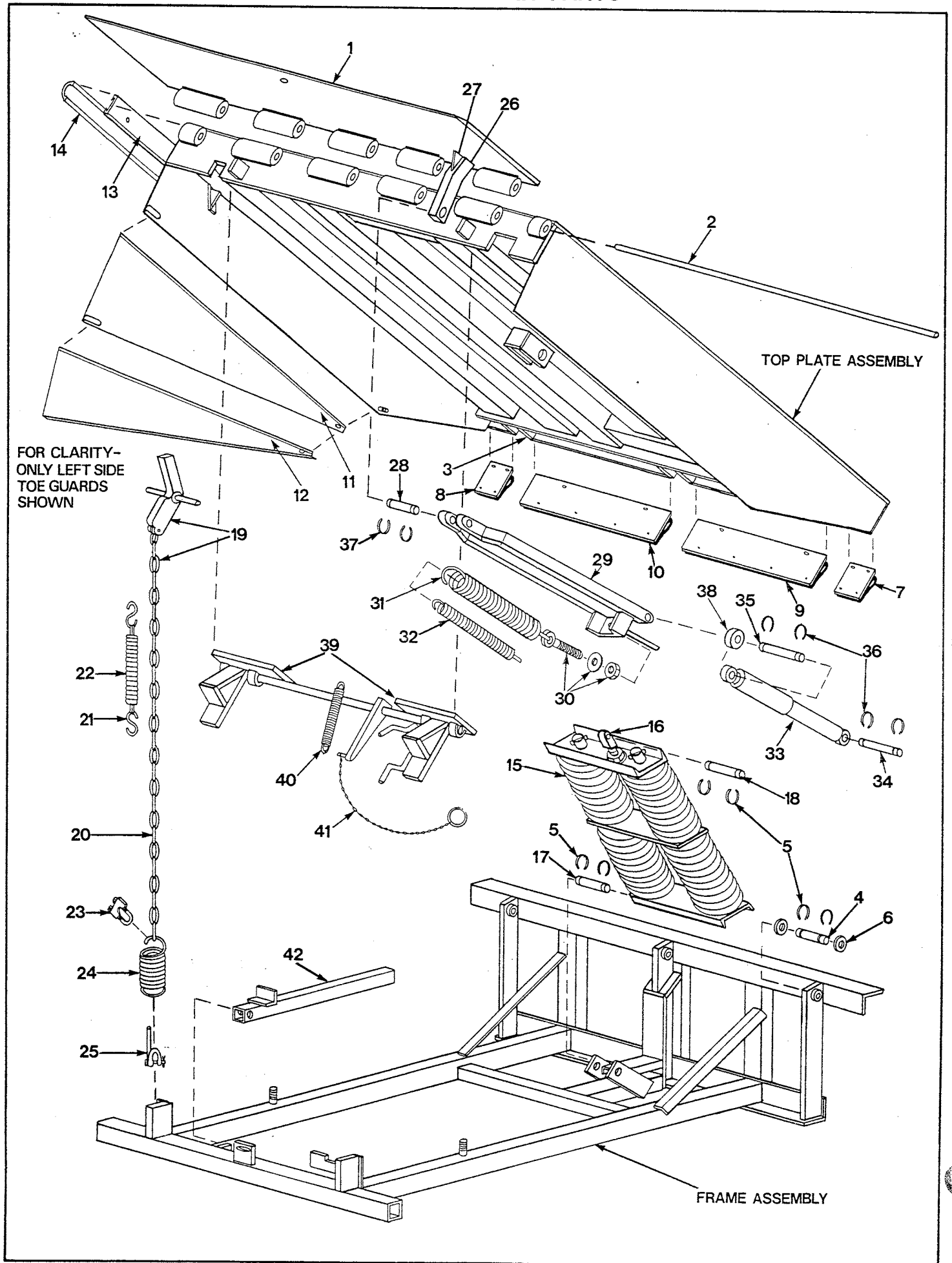
PROBLEM	POSSIBLE CAUSE	SOLUTION
1. Leveler will not raise when release ring is pulled.	Broken or bent release lever mechanism.	Inspect and repair any damage in lever mechanism and adjust if needed.
	Hold down assembly rack or gears binding.	Inspect for any damage to the assembly and lubricate.
	Main spring pivot pins broken.	Replace as needed.
2. Leveler cannot be walked down.	Hold down gears stuck or rack binding.	Inspect hold down gears and rack and replace if needed.
	Main spring adjustment incorrect.	Adjust main spring to decrease tension.
3. Leveler will not stay on the truck or raises by itself.	Hold down assembly out of adjustment.	Adjust hold down brake band so the release weight bar is horizontal and clear of the subframe. DO NOT lubricate between the brake band and the brake drum.
4. Lip plate will not fully extend when the leveler is raised.	Lip push out arm, chain or springs broken or stretched.	Inspect lip push out arm assembly. Check chain and springs for damage.
	Spring latch arm assembly not working or out of adjustment.	Inspect operation of latch arm assembly or increase spring tension.
	Main spring adjustment incorrect.	Increase main spring adjustment to make the leveler raise faster.
5. For levelers not fitted with hydra-shocks. Lip Plate will not positively lock in extended position when the leveler is raised.	Leveler raises too fast causing the lip to bounce in and out of locked position.	Adjust main spring to decrease tension.
	Leveler raises too slowly and not fully extending lip.	Adjust main spring to increase tension.
	Spring latch arm assembly not working or out of adjustment.	Inspect operation of latch arm assembly or adjust spring tension.
	Debris caught in lip plate hinge.	Clean and lubricate hinge.
6. For levelers fitted with hydra-shocks. Lip plate folds in before the leveler can be walked down to the truck.	Hydra-shocks not working.	Replace hydra-shocks.
	Spring latch arm assembly not working or out of adjustment.	Inspect operation of latch arm assembly or increase spring tension.
7. Leveler will not travel below dock level.	Safety legs stuck or binding.	Inspect safety leg system and repair as needed.
	Main spring adjustment incorrect.	Adjust main spring to decrease tension.
	Hold down rack binding.	Inspect rack and replace if needed.
8. Leveler travels below dock level when restored.	Safety legs stuck in retracted position.	Inspect safety leg system for any binding and check return spring.

HOLD DOWN AND FLOAT ASSEMBLY PARTS



ITEM NUMBER	QTY	DESCRIPTION	PART NUMBER	ITEM NUMBER	QTY	DESCRIPTION	PART NUMBER
1	1	Rack Assembly.	8-8786	13	1	Brake Band	341-011
2	1	Hold Down Tube Assembly.	8-8787	14	1	Drum Cover.	341-012
3	1	Hold Down Activating Arm.	8-8685	15	1	Hex Head Bolt.	212-119
4	1	Link Rod.	216-257	16	3	Lock Nut.	212-204
5	1	Harness Ring.	238-253	17	1	Pipe Spacer, 3/8".	586-1099
6	1	Crank Assembly, W600M.	8-8683	18	2	Plain Washer.	234-101
		W800M.	8-8684	19	2	Retaining Ring, (5304-50).	236-106
7	1	Pull Chain Assembly.	586-0965	20	4	Plain Washer.	234-121
8	1	Gear Pin.	586-1095	21	1	Hex Head Bolt.	212-109
9	6	Retaining Ring, (5304-75).	236-110	22	1	Plain Washer.	234-131
10	1	Compression Spring.	333-037				
11	1	Spur Gear.	328-789	23	1	Plain Washer.	234-121
12	1	Drum Assembly.	8-8785	24	1	Hold Down Roller.	586-0964

DOCK LEVELER PARTS



DOCK LEVELER PARTS

ITEM NUMBER	QTY	DESCRIPTION	PART NUMBER
1	1	Lip Plate Assembly. (Includes Hinge Tubes). 16" Long. Model: W630M, W830M & W1030M. W6730M, W8730M & W10730M.	8-8997 8-9018
		W635M, W835M & W1035M. W6735M, W8735M & W10735M. W640M, W840M & W1040M.	9-8740 9-8782 8-8539
		W6740M, W8740M & W10740M. W645M, W845M & W1045M. W6745M, W8745M & W10745M.	8-8541 9-8730 9-8731
1	1	Lip Plate Assembly. (Includes Hinge Tubes). 18" Long. Model: W630M, W830M & W1030M. W6730M, W8730M & W10730M.	8-8998 8-9019
		W635M, W835M & W1035M. W6735M, W8735M & W10735M. W640M, W840M & W1040M.	9-8741 9-8783 8-8342
		W6740M, W8740M & W10740M. W645M, W845M & W1045M. W6745M, W8745M & W10745M.	8-8740 9-8734 9-8735
1	1	Lip Plate Assembly. (Includes Hinge Tubes). 20" Long. Model: W630M, W830M & W1030M. W6730M, W8730M & W10730M.	8-8999 8-9020
		W635M, W835M & W1035M. W6735M, W8735M & W10735M. W640M, W840M & W1040M.	9-8781 9-8784 8-8739
		W6740M, W8740M & W10740M. W645M, W845M & W1045M. W6745M, W8745M & W10745M.	8-8346 9-8738 9-8739
2	1	Hinge Pin. All 6' Wide 30,000 lb & 35,000 lb Levelers. All 7' Wide 30,000 lb & 35,000 lb Levelers. All 6' Wide 40,000 lb & 45,000 lb Levelers. All 7' Wide 40,000 lb & 45,000 lb Levelers.	586-0017 586-0201 586-0287 586-0392
3	12	Slotted Hinge Plate.	328-877
4	3	Rear Hinge Pin.	586-1066
5	10	Retaining Ring (5304-100).	236-114
6	6	Rear Hinge Washer.	234-164
7	1	Rear Weatherseal Assembly. Left Outer. All 6' Wide Levelers. All 7' Wide Levelers.	8-8645 8-8646
8	1	Rear Weatherseal Assembly. Right Outer. All 6' Wide Levelers. All 7' Wide Levelers.	8-8640 8-8641
9	1	Rear Weatherseal Assembly. Left Inner.	8-8647
10	1	Rear Weatherseal Assembly. Right Inner.	8-8642
11	1	Toe Guard, Hinged Section, First Stage, Left Side. All 6' Long Levelers. All 8' Long Levelers. All 10' Long Levelers.	586-0433 586-0438 586-1043
11	1	Toe Guard, Hinged Section, First Stage, Right Side. All 6' Long Levelers. All 8' Long Levelers. All 10' Long Levelers.	586-0434 586-0439 586-1042
12	1	Toe Guard, Hinged Section, Second Stage, Left Side. All 6' Long Levelers. All 8' Long Levelers. All 10' Long Levelers.	586-0435 586-0440 586-1045

DOCK LEVELER PARTS

ITEM NUMBER	QTY	DESCRIPTION	PART NUMBER
12	1	Toe Guard, Hinged Section, Second Stage, Right Side. All 6' Long Levelers. All 8' Long Levelers. All 10' Long Levelers.	586-0436 586-0441 586-1044
13	2	Weatherseal Mounting Strip. All 6' Long Levelers. All 8' Long Levelers. All 10' Long Levelers.	328-862 328-863 328-864
14	10' 14' 18'	Weatherseal Rubber (ft). All 6' Long Levelers. All 8' Long Levelers. All 10' Long Levelers.	152-319 152-319 152-319
15	1	Main Spring Assembly. Model: W630M & W635M W830M, W835M, W840M & W845M.	8-8001 8-8131
		W1030M & W1035M. W6730M, W6735M, W640M & W6740M, W645M & W6745M.	8-8552 8-8694 8-8694
		W8730M, W8735M, W8740M & W8745M. W10730M, W10735M. W1040M, W10740M, W1045M & W10745M.	8-8551 8-8553 8-8553
16	1	Adjusting Bolt Assembly.	8-8818
17	1	Spring Lower Pivot Pin.	586-1068
18	1	Spring Top Pivot Pin.	586-1064
19	1	Lip Push Out Arm and Chain. Model: All 6' & 8' Long 30,000 lb & 35,000 lb Levelers. All 6' & 8' Long 40,000 lb & 45,000 lb Levelers. All 10' Long Levelers.	8-8009 8-8490 8-8782
20	1	Chain. All 6' & 8' Long Levelers. All 10' Long Levelers.	586-0052 586-1052
21	2	"S" Hook.	238-202
22	1	Damper Spring.	333-035
23	1	Clamp.	441-103
24	1	Extension Spring (D84).	333-029
25	1	Spring Guide Assembly.	8-8516
26	1	Latch Assist Arm. All 30,000 lb & 35,000 lb Levelers. All 40,000 lb & 45,000 lb Levelers.	586-0984 586-0985
27	1	Gusset.	586-0043
28	1	Lip Arm Pivot Pin.	583-0003
29	1	Spring Latch Arm Assembly	8-8517
30	1	Spring Tension Bolt Assembly.	8-8010
31	1	Extension Spring (HS8).	333-028
32	1	Booster Spring (18" & 20" Lip Only).	333-030
33	1	Hydra-Shock (Optional).	328-729
34	1	Hydra-Shock Rear Pin (Optional).	586-0868
35	1	Hydra-Shock Front Pin (Optional).	586-0867
36	4	Retaining Ring (5304-50).	236-106
37	2	Retaining Ring (5304-75).	236-110
38	1	Hydra-Shock Roller (Optional).	586-0966
39	1	Safety Legs, Complete Upper Leg Assembly. All 6' & 8' Long Levelers. All 10' Long Levelers.	8-8706 8-8760
40	1	Extension Spring.	333-021
41	1	Chain Assembly.	8-8707
42	1	Maintenance Prop Arm.	8-8708