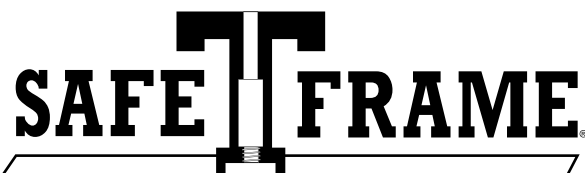


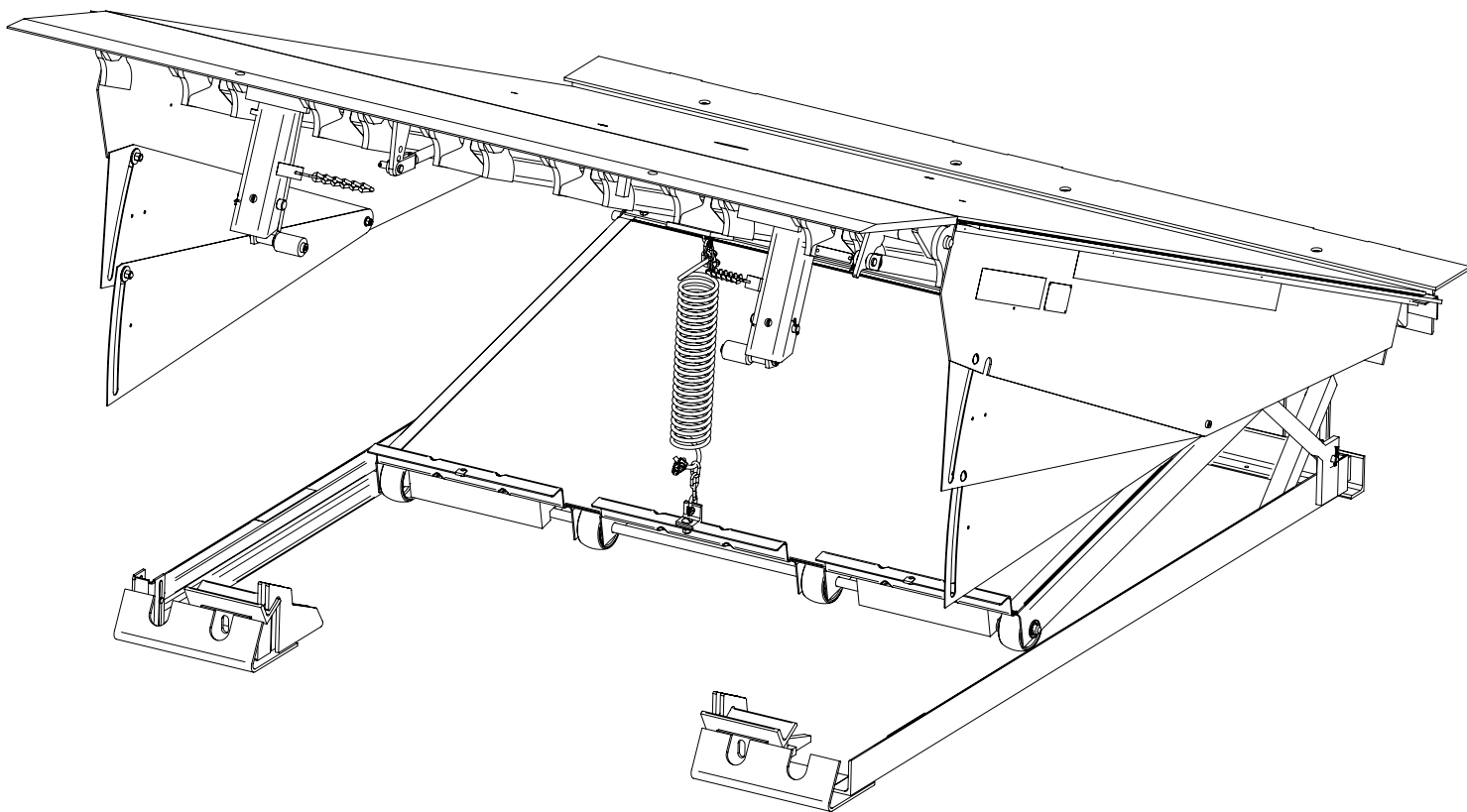


KELLEY[®]

aFX[®]/aFX-S Dock Leveler



SAFE | FRAME[®]



aFX[®]
AIR SUPERIORITY. ONLY FROM KELLEY.

This User's Manual applies to aFX dock levelers manufactured beginning March 2014 with the serial numbers 61106268 and higher.

▲ WARNING

Do not install, operate or service this product unless you have read and understand the Safety Practices, Warnings, Installation and Operating Instructions contained in this User's Manual. Failure to do so could result in death or serious injury.

User's Manual

Installation, Operations,
Maintenance and Parts

Part No. 6004751M

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INTRODUCTION

Welcome and thank you for choosing this dock leveler from Kelley®. This dock leveler may be equipped with the optional ENERGY GUARD® dock leveler sealing system.

This User’s Manual contains information that you need to safely install, operate and maintain the dock leveler. It also contains a complete parts list and information about ordering replacement parts. Please keep and read this User’s Manual before using your new dock leveler.

SAFETY SIGNAL WORDS

You may find safety signal words such as DANGER, WARNING, or CAUTION throughout this User’s Manual. Their use is explained below:



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible death or injury.

▲ DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

▲ WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

▲ CAUTION

Indicates a potentially hazardous situation which, if not avoided may result in minor or moderate injury.

NOTICE

Notice is used to address practices not related to personal injury.

SAFETY PRACTICES

⚠ WARNING

Read these Safety Practices before installing, operating or servicing the dock leveler. Failure to follow the safety practices could result in death or serious injury.

If you do not understand the instructions, ask your supervisor to explain them to you or call your local Kelley distributor.

OPERATION

Use restricted to trained operators.

Follow procedures on placard posted near dock leveler.

Do not use this unit to service vehicles outside its intended working range which is 12 inches above and 12 inches below dock. The working range of 10' dock levelers is 18 inches above dock and 12 inches below dock.

Do not operate the dock leveler with equipment, material or people on the ramp or lip.

Do not operate the dock leveler when anyone is in front of it unless they are securing the maintenance strut.

Stay clear of the dock leveler when it is moving.

KEEP HANDS CLEAR OF HINGES AT ALL TIMES. Do not use hands to position dock leveler ramp or lip in vehicle or to store dock leveler.

Stay clear of leveler unless lip supported by the vehicle bed or the ramp is supported by both front dock level supports; unsupported leveler can lower unexpectedly.

Do not use the dock leveler if it looks broken or does not seem to work right. Tell your supervisor it needs repair right away.

Do not stand in the driveway between the dock leveler and a backing vehicle.

Before chocking wheels or engaging vehicle restraint, dump air from air ride suspensions and set parking brakes.

Chock vehicle wheels or lock vehicle in place with a vehicle restraining device and set brakes before loading or unloading.

Visually check that lip is supported by the vehicle platform or the ramp is supported by both dock level supports before driving on the ramp.

Store dock leveler at dock level after below dock end loading.

Ensure lip avoids contact with vehicle sides and cargo. If lip does not lower to vehicle bed, reposition vehicle.

Do not use a fork truck or other material handling equipment to lower the ramp.

Move all equipment, material or people off dock leveler and store dock leveler at dock level before allowing the vehicle to leave.

INSTALLATION, MAINTENANCE AND SERVICE

Place barricades on the dock floor around the dock leveler pit and in the driveway in front of the pit while installing, maintaining or repairing the dock leveler.

Do not operate the dock leveler when anyone is in front of it unless they are securing the maintenance strut.

Prior to placing in the pit, 8' and longer levelers require 6' long forks if handled with a fork lift.

PUT AND PIN MAINTENANCE STRUT IN PLACE AND MAKE SURE LIP LOCK IS IN PLACE AND SUPPORTING THE LIP before climbing into the dock leveler pit or doing any maintenance or repair under the dock leveler.

Disconnect the power and properly tag or lock off before climbing into the dock leveler pit or doing any maintenance or repair under the dock leveler.

All electrical troubleshooting or repair must be done by a qualified technician and must meet applicable codes.

Disconnect the power and properly tag or lock off before doing any electrical work.

If it is necessary to make troubleshooting checks inside the control box with the power on, **USE EXTREME CAUTION!** Do not place fingers or uninsulated tools inside the control box. Touching wires or other parts inside the control box could result in electrical shock, death or serious injury.

OWNER'S RESPONSIBILITIES

The owner's responsibilities include the following:

The owner should recognize the inherent danger of the interface between dock and transport vehicle. The owner should, therefore, train and instruct operators in the safe use of dock leveling devices.

When a transport vehicle is positioned as closely as practical to a dock leveling device, there shall be at least 4" of overlap between the front edge of the lip and the edge of the floor or sill of the transport vehicle.

Nameplates, cautions, instructions and posted warnings shall not be obscured from the view of operating or maintenance personnel for whom such warnings are intended.

Manufacturer's recommended periodic maintenance and inspection procedures in effect at date of shipment shall be followed and written records of the performance of these procedures should be kept.

Dock leveling devices that are structurally damaged or have experienced a sudden loss of support while under load, such as might occur when a transport vehicle is pulled out from under the dock leveling device, shall be removed from service, inspected by the manufacturer's authorized representative, and repaired as needed before being placed back in service.

The owner shall see that all nameplates, caution and instruction markings or labels are in place and legible and that the appropriate operating and maintenance manuals are provided to users.

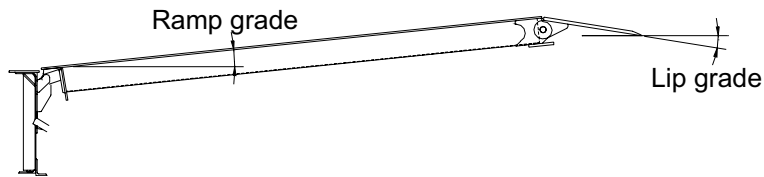
Modifications or alterations of dock leveling devices shall be made only with written permission of the original manufacturer.

When industrial vehicles are driven on and off transport vehicles during the loading and unloading operation, the brakes on the transport vehicle shall be applied and wheel chocks or positive restraints that provide the equivalent protection of wheel chocks engaged.

The dock leveler should never be used outside its vertical working range or vertical lifting range or outside the manufacturer's labelled rated capacity. It must also be compatible with the loading equipment and other conditions relating to the dock.

RAMP AND LIP GRADES

Fig. 1



VEHICLE PLATFORM POSITION from DOCK, (in.)		RAMP and LIP grades, % for each dock leveler length					
		6' Leveler		8' Leveler		10' Leveler	
		RAMP	LIP	RAMP	LIP	RAMP	LIP
A B O V E D O C K	18.0	--	--	--	--	16.7	8.8
	16.0	--	--	--	--	15.0	7.1
	14.0	--	--	--	--	13.2	5.4
	12.0	19.4	11.6	14.5	6.6	11.5	3.7
	10.0	16.5	8.7	12.3	4.5	9.8	2.0
	8.0	13.7	5.8	10.2	2.4	8.2	0.3
	6.0	10.8	3.0	8.1	0.2	6.5	-1.4
	4.0	8.0	0.2	6.0	-1.8	4.8	-3.1
2.0	5.2	-2.6	3.9	-3.9	3.1	-4.7	
	0.0	2.4	-5.4	1.8	-6.0	1.5	-6.4
B E L O W	-2.0	-0.3	-8.2	-0.3	-8.1	-0.2	-8.1
	-4.0	-3.1	-11.0	-2.3	-10.2	-1.9	-9.7
	-6.0	-5.9	-13.8	-4.4	-12.3	-3.5	-11.4
D O C K	-8.0	-8.7	-16.6	-6.5	-14.4	-5.2	-13.1
	-10.0	-11.5	-19.4	-8.6	-16.5	-6.9	-14.7
	-12.0	-14.4	-22.2	-10.7	-18.6	-7.5	-15.3

4° lip bend, 16" lip

VEHICLE PLATFORM POSITION from DOCK, (in.)		RAMP and LIP grades, % for each dock leveler length					
		6' Leveler		8' Leveler		10' Leveler	
		RAMP	LIP	RAMP	LIP	RAMP	LIP
A B O V E D O C K	18.0	--	--	--	--	17.3	4.8
	16.0	--	--	--	--	15.6	3.0
	14.0	--	--	--	--	13.9	1.3
	12.0	20.5	8.0	15.3	2.7	12.2	-0.4
	10.0	17.6	5.0	13.1	0.6	10.5	-2.1
	8.0	14.7	2.2	11.0	-1.6	8.8	-3.8
	6.0	11.9	-0.7	8.9	-3.7	7.1	-5.5
	4.0	9.1	-3.5	6.8	-5.8	5.4	-7.1
2.0	6.3	-6.3	4.7	-7.9	3.8	-8.8	
	0.0	3.5	-9.1	2.6	-10.0	2.1	-10.5
B E L O W	-2.0	0.7	-11.9	0.5	-12.0	0.4	-12.1
	-4.0	-2.1	-14.6	-1.6	-14.1	-1.2	-13.8
	-6.0	-4.9	-17.4	-3.6	-16.2	-2.9	-15.5
D O C K	-8.0	-7.7	-20.2	-5.7	-18.3	-4.6	-17.1
	-10.0	-10.5	-23.0	-7.8	-20.4	-6.3	-18.8
	-12.0	-13.3	-25.9	-9.9	-22.5	-7.9	-20.5

Optional 7° lip bend, 16" lip

INSTALLATION

PIT CHECK

1. Check entire dock leveler pit for proper construction according to certified pit drawings (publication 5563 or 5566). Check to be sure that the pit walls are square and plumb. Check electrical service running to the pit to assure it conforms with the correct location and voltage for the junction box. Inspect the pit and remove all loose trash and construction debris. See the installation troubleshooting on page 14 if the pit varies from the specification.

LEVELER CHECK PRIOR TO INSTALLATION

1. Visually check that the length of exposed thread on all clamp bar bolts on the airbag are equal to ensure they are properly tightened.
2. Visually check that the 4 rear hinge pins and retaining clips are in place.
3. Visually check that the lip shaft collars or shaft retainers are in place on both lip rods.
4. Visually check that cotter pins are in place on pins on the connecting rod, push bar, and the lip lifter assembly.
5. Verify that gas spring retaining pins have cotter pins installed.
6. Verify that both the lip lock and the maintenance strut are undamaged and have safety hitch pins on chains.
7. Visually check that the foot assemblies at the rear of the leveler are in place and undamaged.

PREPARE SITE

▲ WARNING

Place barricades around pit on dock floor and drive while installing, maintaining or repairing dock leveler.

1. The control station, User's Manual and dock bumpers are attached to the sub frame of the dock leveler. The maintenance strut has a plastic tie wrap holding them to the subframe. Remove these items before placing the leveler into the pit. Make sure the customer gets the user's manual and is properly trained.

2. Mount and wire push-button control station. See Fig. 2. See wiring diagram on page 15 of this User's Manual for wiring information. Wires shown in dashed lines are field connections.
3. Mount and wire a conduit box with a 120V grounded 5-15R receptacle on the pit wall as shown in Fig. 3. Wire receptacle per diagram on page 15.
4. If conduit must be installed (replacing an existing mechanical dock leveler) do so at this time. Refer to the conduit requirements on the pit detail publications 5563 and 5566 and powered dock leveler wiring diagrams and typical installation drawings, Fig. 3 and powered dock leveler wiring diagram on page 15 for electrical requirements. Follow all applicable electrical codes and standards.

▲ WARNING

Before installing the dock leveler, read and follow the Safety Practices on page 3. Failure to follow the Safety Practices could result in death or serious injury.

Fig. 2

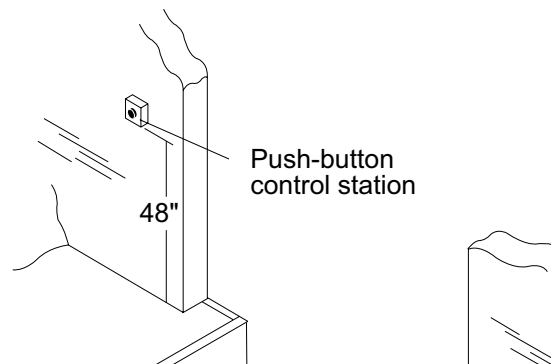
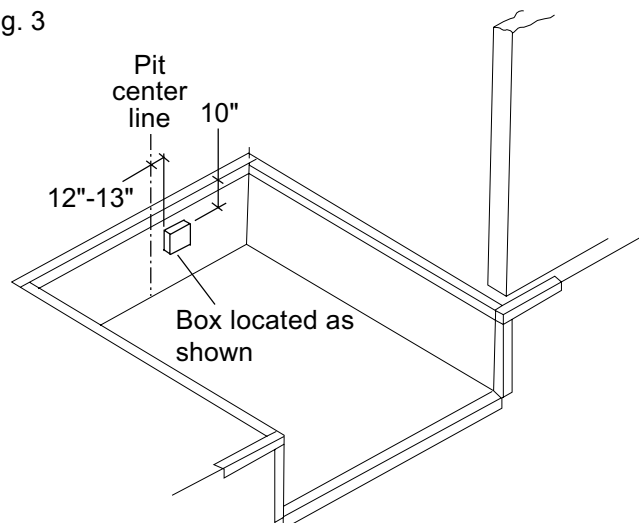


Fig. 3



INSTALLATION, continued

INSTALLATION OF DOCK LEVELER

6' and 8' long levelers using a standard 19" subframe can be field converted to allow installation in a 24" pit by adding a 4" riser kit, Kelley Part No. 6004652. Install the new riser leveling feet. The riser blocks should be welded to the front subframe supports and secondary stops prior to placing in the pit. See publication #6003727 and page 35 in this manual.

1. Prior to lifting leveler make sure the shipping tie down bolts seen in Fig. 13 are in place. Install two 3/4"-10UNC load centering eye bolts into the front and rear of the top plate and hoist leveler into pit. The dock leveler should not be lifted in any other manner when placed into the pit. See Fig. 4.

▲ WARNING

Inadequate lifting equipment or practices can cause a load to fall unexpectedly. Make sure the lifting chain or other lifting devices are in good condition and have a rated capacity of at least 3,500 lbs for the lifting angle used. Never allow anyone to stand on or near the dock leveler when it is lifted or placed into the pit. Stand clear of the dock leveler when it is placed into the pit. Failure to follow this warning can allow the dock leveler to fall, tip, or swing into people, resulting in death or serious injury.

NOTICE

Route power cord clear of edges and resting surfaces so that it is not damaged during lifting and placement. Plug end may be routed up through the rear hinge until needed.

INSERTING THE LEVELER INTO THE PIT

2. Position dock leveler in pit about 7" away from the rear pit wall. Connect plug to receptacle on the rear pit wall. Cut tie wrap on cord to allow bag pan removal for service. Place the free length of cord inside of frame area, free of interference as the leveler is moved into the final position. See Fig. 5 and wiring diagram on page 15.

NOTE:

Check the pit floor for uneven or excess concrete in the area around the leveling feet 1"-6" from the rear wall. Use chisel to level out area if necessary.

Fig. 4

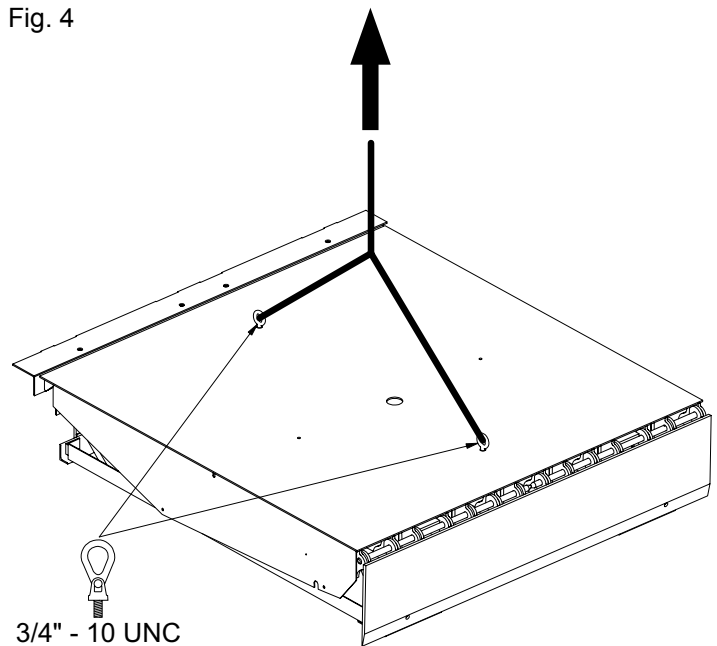
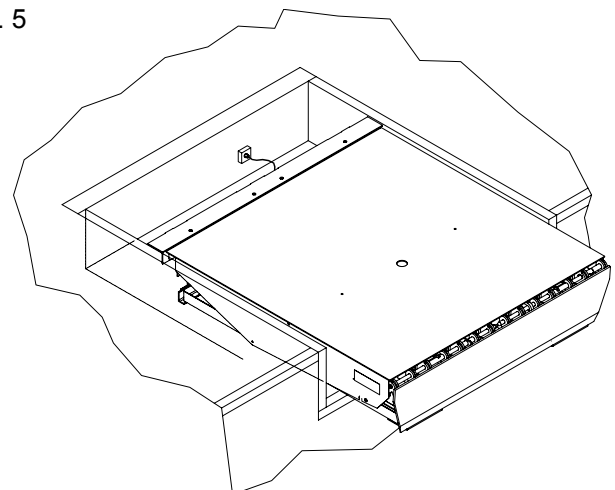


Fig. 5



INSTALLATION, continued

3. Move the dock leveler back to the rear pit curb angle. See Fig. 6. With the rear leveler angle touching the rear pit angle, square up the sides of the pit to the sides of the leveler. The gap should be even on both sides.

NOTE:

The rear frame angle should be about 1/2" lower than the pit curb angle before leveling. This is normal. See Fig. 7.

LEVELING THE REAR FRAME

4. Using a 1/2" square drive (1/2" ratchet or impact tool) work from one side to the other, turn each of the leveling screws on the rear angle, counter-clockwise until the transition angle of the rear angle is level with the rear pit curb angle and the leveling screws are 1/4" from the top transition angle which indicates that legs are in contact with pit floor. Repeat on each leg until the transition angle is flush with the rear curb angle. See Fig 8.

NOTICE

The rear edge of the dock leveler should be level or slightly (1/16" maximum) below dock level.

The top surface of the dock leveler should be level and a smooth transition with the dock floor curb steel. The front end should be level and parallel with the rear frame angle for proper operation. Unequal adjustment of the front supports may be required to obtain a level front edge.

NOTICE

Turn off all electrical power to the leveler if it has been previously connected. Welding with dock levelers power connected can damage the electrical components. A ground must be attached to the leveler frame.

5. Check and adjust the leveler for square, shim the rear as required, see Fig. 20. The sides of the leveler deck should be centered in the pit opening. Tack weld the rear angle to rear curb angle in 4 places min 3/8", one at or near each leveling screw.

NOTE:

Do not weld out the rear angle until after setting the front supports.

Fig. 6

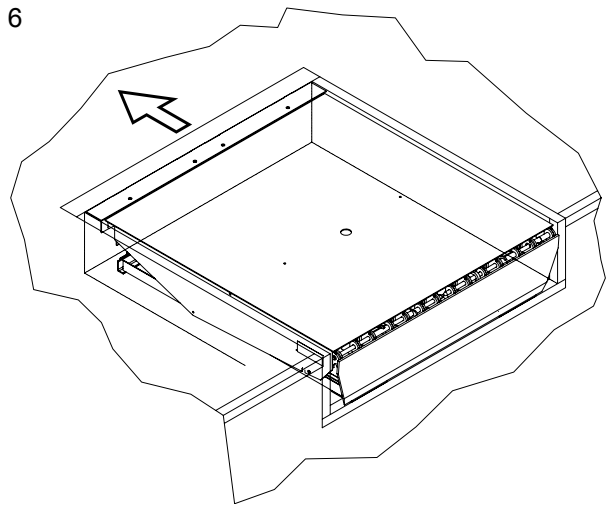
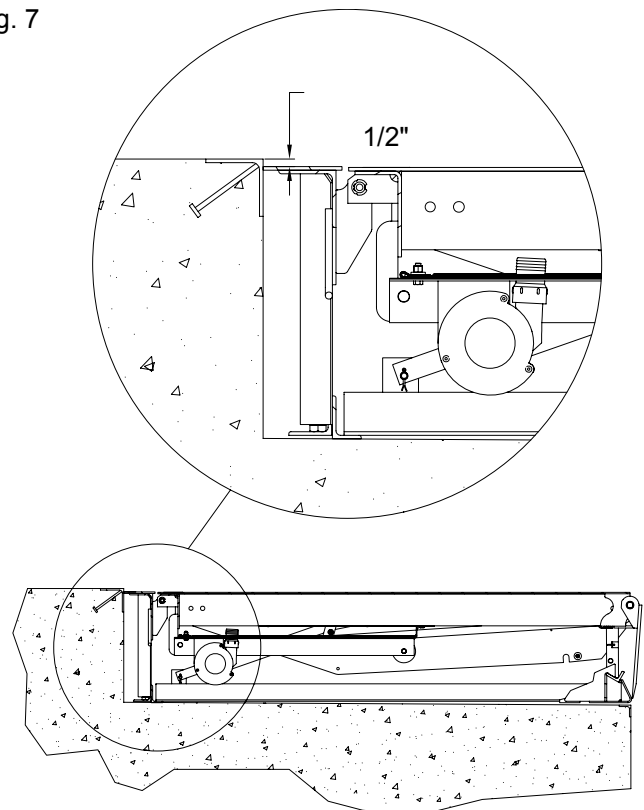


Fig. 7



INSTALLATION, continued

LEVELING THE FRONT FRAME

- Remove and discard the shipping tie down bolts located at the lower end of the hinged lip assembly. See Fig. 13.

⚠ WARNING

Before welding the dock leveler supports to the front curb angle make sure that the dock leveler support legs line up with the "V" pocket in the dock leveler support angle and that the leg roller is centered over the its roller track. Move dock levelers support right or left for the necessary alignment.

- Tack weld the front dock leveler supports to the front curb angle. See Fig. 12.
- With the lip pendant insert 24" long 1/2" extensions between lip and lip rod onto dock leveler support leveling screw. See Fig. 12. Using a 1/2" drive (1/2" ratchet or impact tool) turn each leveling screw **counter-clockwise** until the top of the leveler is flush with the finished floor/pit curb steel where the overhead door meets the floor. See Fig. 11.

FINISH WELDING REAR FRAME

- Weld the rear frame angle to the rear curb angle using 1/4" bevel joints in the transition angle as your guide. See Fig. 10.
- After the rear hinge is welded check that all rear leveling legs are in contact with the floor of the pit by visually inspecting that the leveling screws are 1/4" from the top of the transition angle. Once all legs are in contact with floor, tighten each leg leveling screw **counter-clockwise** to 25-40 ft. lbs.

Fig. 8

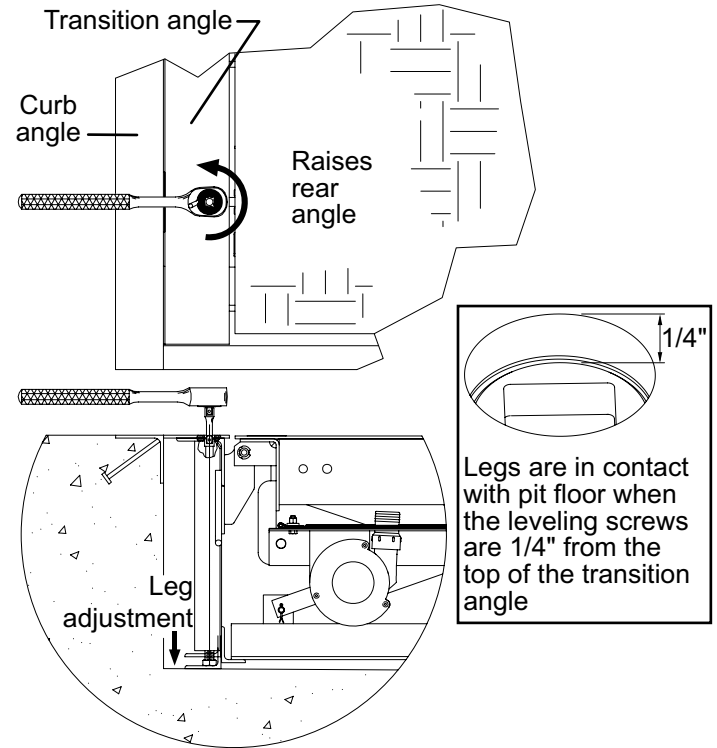


Fig. 9

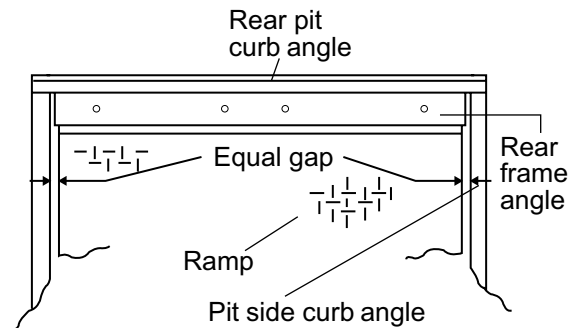
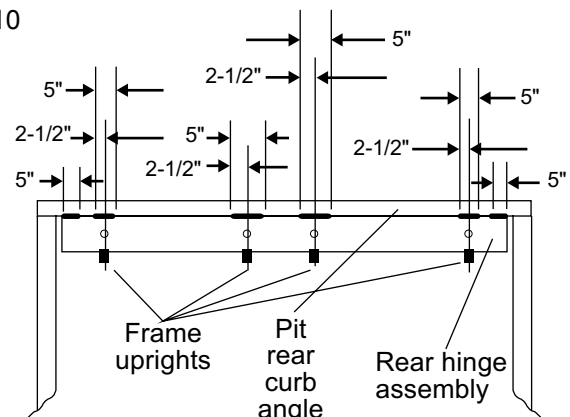


Fig. 10



INSTALLATION, continued

11. Lower the air bag lifting support frame by removing the retainer bolts on top of deck area. See Fig. 14. Bolts should be discarded.

⚠ WARNING

The lifting support frame will drop rapidly to the pit floor when the retainer bolts are removed. Keep your hands and feet out from under the dock leveler when releasing the frame. Failure to do so could result in death or serious injury.

⚠ DANGER

Air pressure or mechanical support must be maintained under the ramp to hold it in the raised position until the maintenance strut is in place. DO NOT WORK UNDER THE DOCK LEVELER RAMP OR LIP UNLESS THE MAINTENANCE STRUT IS IN PLACE AND PINNED, AND LIP LOCK IS IN PLACE AND SUPPORTING THE LIP.

NOTE:

The following procedure requires two persons to lockout and secure the leveler for maintenance.

12. Return power to the leveler control. Using the aFX push-button control or mechanical support, raise the deck and secure.
- One person pushes and holds the RAISE button to inflate the air bag until the dock leveler reaches its highest position. Hold dock leveler in its highest position.
 - The second person positions the maintenance strut into the bracket located on the underside of the ramp assembly and pins it in place with hairpin clip. See Fig. 15 and the instruction label on maintenance strut.
 - Air pressure or mechanical support may now be removed.

Fig. 11

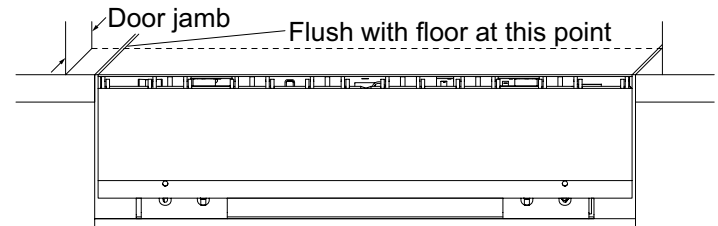


Fig. 12

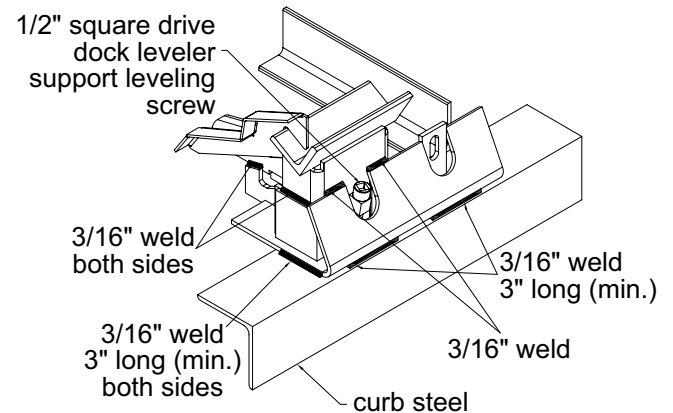
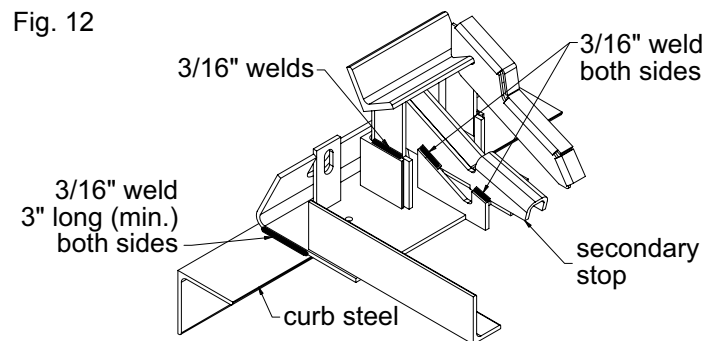
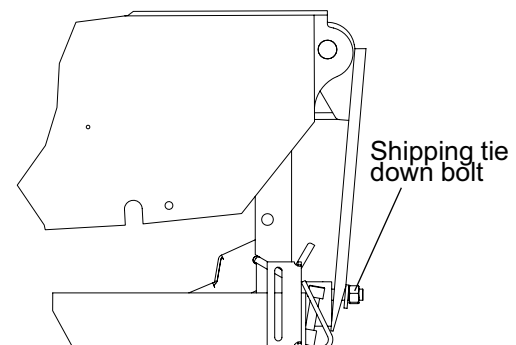


Fig. 13



INSTALLATION, continued

▲ DANGER

Manual support of the lip must be maintained until the lip lock is in place. The lip is free to move downward when it is released unless the lip lock is in position supporting the lip. DO NOT WORK UNDER THE DOCK LEVELER RAMP OR LIP UNLESS THE MAINTENANCE STRUT IS IN PLACE AND PINNED AND LIP LOCK IS IN PLACE AND SUPPORTING THE LIP.

13. To engage lip lock, manually lift lip to fully raised position. Pull lip lock outward as far as it will go. Release lip lock. Slowly lower lip onto lip lock. (See instruction label on dock leveler beam near lip lock.)
14. **Disconnect power.**
15. Finish welding both of the adjusted front dock leveler supports in all locations shown in Fig. 12.
16. Remove and discard shipping cotter pins from toe guards on both sides of dock leveler. See Fig. 16.

NOTE:

6' and 8' long levelers in a 24" pit require the installation of a pan riser kit, part #184389. Install the pan risers. See publication #6013529 or #6003727.

17. Remove lifting chain or other lifting devices. Remove lifting hooks from the sides of the ramp.
18. Read the Safety Practices on page 3, and the Operation Instructions on pages 16 through 18 before operating the dock leveler.

Fig. 14 Retaining bolts

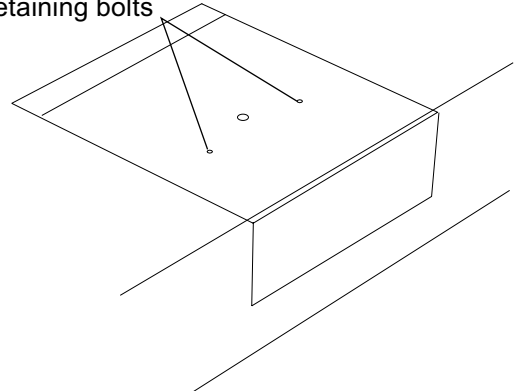


Fig. 15

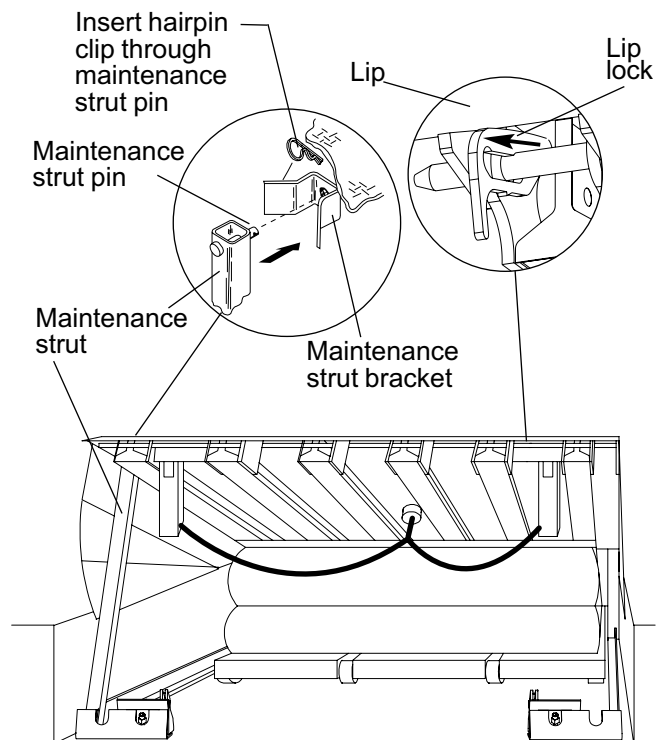
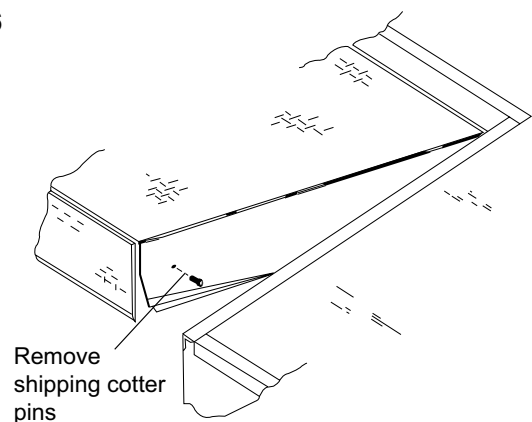


Fig. 16



INSTALLATION, continued

⚠ WARNING

Improper installation of anchoring devices or installation into aged or unsound concrete could result in death or serious injury.

NOTICE

The dock face must be flush with curb angle to assure proper bumper mounting.

19. Mount dock bumpers to face of dock. Downhill welds are unacceptable. See Fig. 17 or 18.
20. Reconnect power. Store maintenance strut and lip lock. Store dock leveler at dock level.

⚠ DANGER

Manually support the lip when storing the lip lock. Stand clear of the lip when removing support. The lip is free to move downward when support is removed. Anyone in the path of the lip when it moves downward can be struck.

Keep your hands, fingers and head away from the lip when it is released. They could be struck by the lip or caught between the lip and other parts of the dock leveler resulting in death or serious injury.

DO NOT MOVE THE MAINTENANCE STRUT WITHOUT AIR PRESSURE IN THE BAG OR A MECHANICAL LIFTING DEVICE SUPPORTING RAMP. Raise the ramp using air pressure or a mechanical device before storing the maintenance strut. Stand clear of the ramp and lip when air pressure or the mechanical lift is applied or removed. The ramp and lip are free to move downward when the support is removed. Removing the support without air pressure will allow the ramp and lip to drop RAPIDLY. If the dock leveler was raised using a mechanical device, lower it using the same device.

21. Lift lip completely. Push lip lock inward as far as it will go. Slowly lower lip. (See instruction label on dock leveler beam near lip lock.)

22. Two people are needed to store the maintenance strut.
 - a) One person must push and hold the raise button until dock leveler reaches its highest position and hold dock leveler in its highest position.
 - b) The second person unpins the maintenance strut from the bracket on the ramp and stores it on the subframe. See Fig. 15 and the instruction label on maintenance strut
 - c) The raise button may now be released. The ramp will lower and the lip will extend when the button is released.

Fig. 17

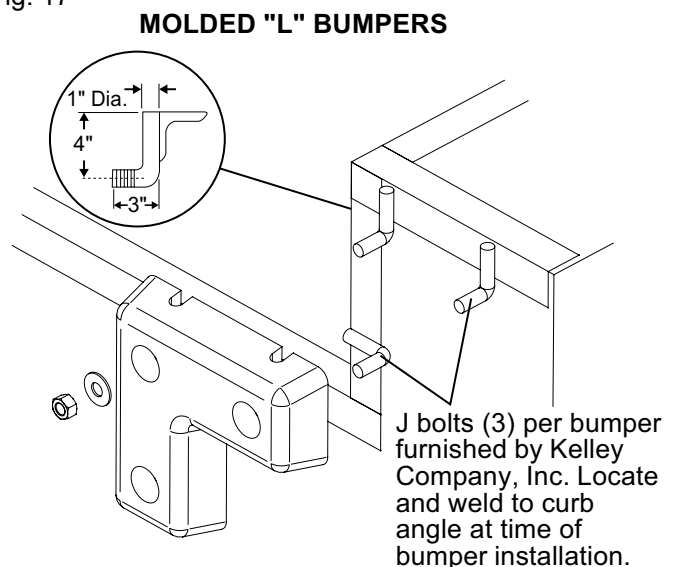
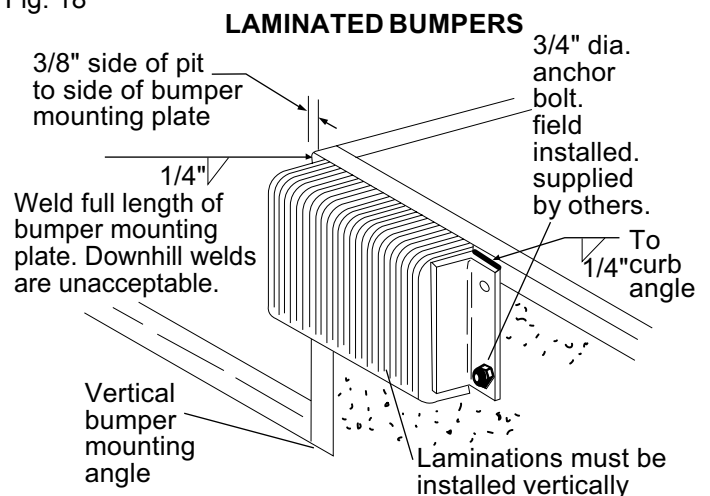


Fig. 18



INSTALLATION, continued

⚠ CAUTION

The hinged lip will extend as the ramp moves down.

23. Place the dock leveler in both dock leveler storage position and full below dock end load position. If lip is being supported by the curb steel in either position, a deflector plate must be created to allow leveler to store and reach its full below dock position without getting hung up on the pit floor.

⚠ WARNING

Improper installation that allows the pendant dock leveler lip to support the weight of the dock leveler could result in death or serious injury. It is sometimes necessary to install lip deflector plates to avoid any chance of the pendant lip supporting the weight of the dock leveler either near dock level or during a below dock end load.

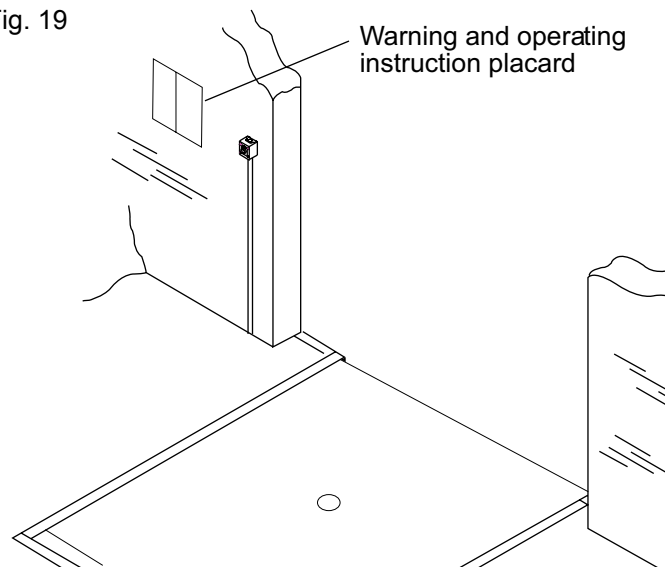
24. Permanently mount the laminated dock leveler placard on the wall near the dock leveler control. See Fig. 19. Make sure the customer gets the User's Manual and is properly trained.
25. Operate the dock leveler four times through the complete cycle to check operation. (See Operation section, page 16.)

NOTE:

If you have any problems or questions using or operating the dock leveler, contact your supervisor or local Kelley® distributor for assistance.

26. Optional (where applicable), install rear angle cap plugs (part number 6004488) into adjustment socket holes. Press cap flush with top surface of rear curb angle.

Fig. 19



INSTALLATION, continued

INSTALLATION TROUBLESHOOTING

The following procedures apply after the leveler is level in the pit.

PROBLEM	POSSIBLE CAUSE	SOLUTION
1) Leveler will not fit properly in pit.	<p>a) Pit is out of square with the sides.</p> <p>b) One side and rear angle is out of square.</p> <p>c) Pit floor irregular in rear.</p> <p>d) Pit is too deep.</p>	<p>a1) Align the sides parallel and equally spaced with the rear frame angle touching the rear curb angle in one place. Fill the gap between the rear curb angle and rear frame angle using shims in weld noted in Fig. 10. See Fig 20.</p> <p>b) Align the leveler with the two square edges. The gap on the sides should be even in the most narrow section (1/2" Max. per side). See Fig. 21.</p> <p>c) If large deformations exist in the concrete work, attempt to flatten out the rough surface using a chisel or grinder to take out the large obstructions. The rear leveling legs can be installed on out of plane surfaces up to 1/8" at each leg. See Fig. 22.</p> <p>d) Weld 4" x 4" shims to the bottom of the adjustable legs.</p>

Fig. 20

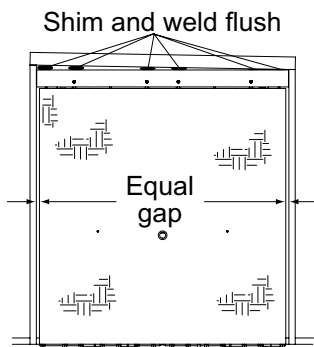


Fig. 21

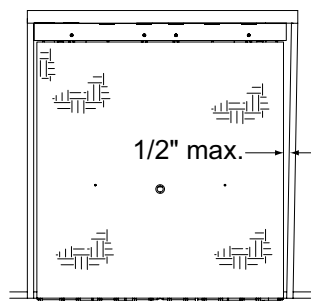
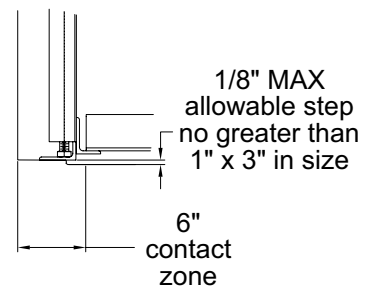


Fig. 22



WIRING DIAGRAM

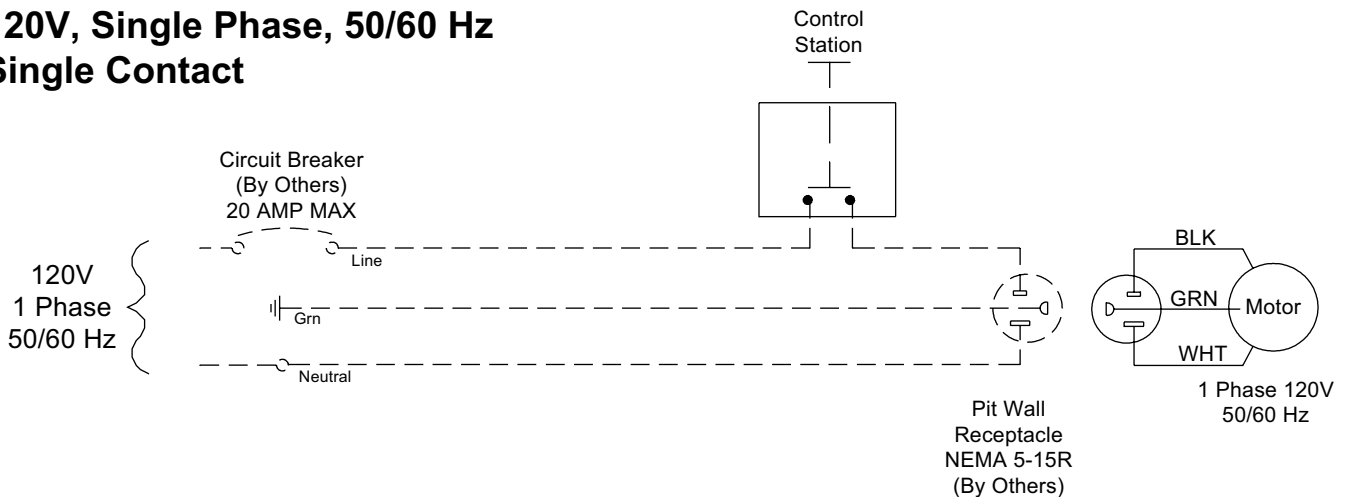
▲ DANGER

Before doing any electrical work, make certain the power is disconnected and properly tagged or locked off. All electrical work must be done by a qualified technician and meet all applicable codes. If it is necessary to make troubleshooting checks inside the control box with the power on, USE EXTREME CAUTION. Do not place your fingers or non insulated tools inside the control box. Touching wires or other parts inside the control box could result in electrical shock, death or serious injury.

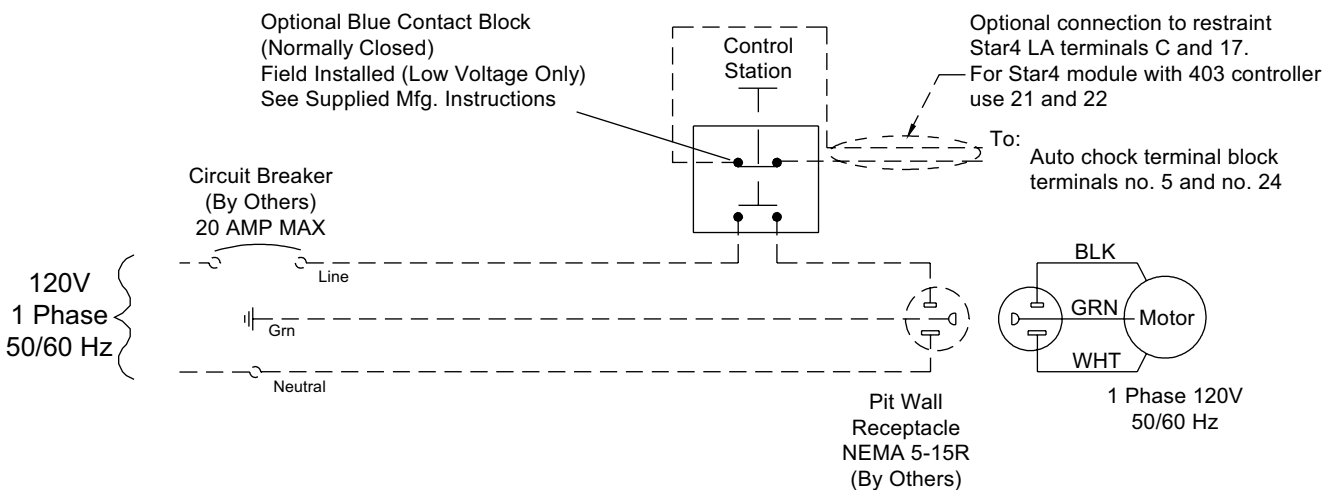
Never allow more than 130 volts to be connected to the 120 volt motor circuit. Damage to motor, push-button, air bag, and serious personal injury or death may result.

Fig. 23

120V, Single Phase, 50/60 Hz Single Contact



120V, Single Phase, 50/60 Hz Optional Dual Contact



OPERATION

⚠ WARNING

Before operating the dock leveler, read and follow the Safety Practices on page 3.

Use of dock leveler restricted to trained operators. Follow procedures on placard posted near dock leveler.

DO NOT USE THE DOCK LEVELER IF IT LOOKS BROKEN, OR DOES NOT SEEM TO WORK RIGHT. Tell your supervisor it needs repair right away, or contact your local Kelley® distributor.

Before pressing button, ensure lip avoids contact with vehicle platform sides and cargo. If lip does not lower to vehicle platform, reposition vehicle platform.

Stay clear of leveler unless lip is supported by vehicle platform or the leveler is stored at dock level. Visually check that the lip is supported by the vehicle platform or the ramp is supported by both front dock level supports before driving or walking on the ramp. Unsupported dock levelers can lower unexpectedly.

Before chocking wheels or engaging vehicle restraint, dump air from air ride suspensions and set parking brakes.

Always be certain that the vehicle wheels are chocked, or that the vehicle is locked in place by a vehicle restraining device and the brakes are set before loading or unloading. Vehicles pulling away from the dock unexpectedly can cause uncontrolled drop of the dock leveler which can result in death or serious injury.

The maximum uncontrolled drop of a dock leveler, if 3-1/2" or more above dock level, is to dock level. If leveler is 3-1/2" above dock level to 1" below dock level, it will drop to 4" below dock level. If lower than 1" below dock level, it will drop to full below dock or 8" below dock level.

Always return the dock leveler to its dock level (stored) position before allowing the vehicle to leave the dock. If the vehicle pulls away from the dock before the dock leveler is stored, the lip will fall to its pendant position and the ramp will drop. In addition, failure to properly store the leveler may leave the leveler in a position below the level of the dock floor. This condition may result in unexpected drop of personnel or material handling equipment and result in death or serious injury.

Failure to follow these instructions could result in death or serious injury to operators and/or bystanders.

INTRODUCTION

This dock leveler is designed to span and compensate for space and height differences between a loading dock and freight carrier to allow safe, efficient freight transfers.

This dock leveler uses a push-button control to position the dock leveler. Pushing and holding the push-button operates a fan which inflates an air bag to raise the ramp. Releasing the push-button allows the ramp to lower.

A mechanical linkage extends the dock leveler lip as the ramp lowers from its full raised position, and the leveler with its lip extended, settles onto the vehicle platform forming a bridge. Patented airDefense® sensors glide along reinforced cams purging stump-out and providing fluid, free-float motion along with free fall protection in the event of premature vehicle platform separation.

After loading, pushing and holding the push-button raises the ramp, and the extended lip lowers to its stored position. Releasing the push-button (before the dock leveler reaches its highest position) allows the dock leveler to lower to its level, stored position.

With the dock leveler in its stored position, dock level support legs support the dock leveler ramp at a position level with the dock floor.

OPERATION, continued

1. Wait until a vehicle is in position against the dock bumpers.
2. Tell vehicle driver "Your vehicle must stay at the dock."
3. Chock or hitch vehicle.
4. If necessary, remove end loads with the ramp in the dock level (stored) position. See Fig. 24.

NOTE:

If the vehicle is to be serviced for a below dock end load, see operation instructions for Below Dock Control on page 18.

5. To extend the dock leveler lip into the vehicle:
 - 5.1 Push and hold the control button. The ramp will rise until it stops at its highest position. See Fig. 25.
 - 5.2 Release the control button when the ramp reaches its highest position.
 - 5.3 Ramp will lower and lip will extend until the lip rests on the vehicle platform. See Fig. 26.

▲ WARNING

Do not drive on dock leveler or lip until it is fully extended and supported by the vehicle platform.

Never use a fork truck or other material handling equipment to lower the ramp and lip sections.

- 5.4 Proceed with loading or unloading.
6. To return the dock leveler to the stored position when loading or unloading is complete, or to load end loads:
 - 6.1 Push and hold the control button. The ramp will rise and the lip will lower.
 - 6.2 Release the control button when the lip clears the vehicle platform (before reaching its highest position). The ramp will lower to the dock level (stored) position.
 - 6.3 Visually check that lip is not extended or hung up on vehicle. Ramp should be level with dock floor.
7. Remove wheel chocks or release vehicle.
8. Tell vehicle driver "Your vehicle may now leave the dock."

Fig. 24

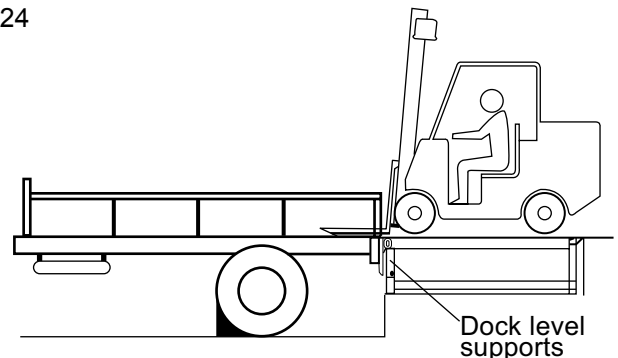


Fig. 25

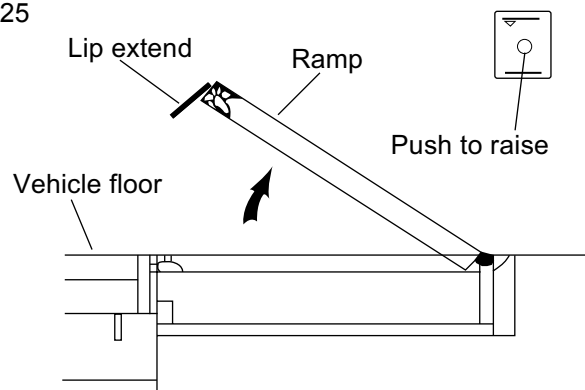


Fig. 26

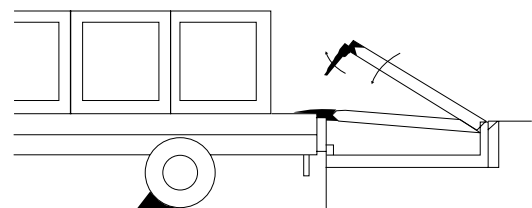
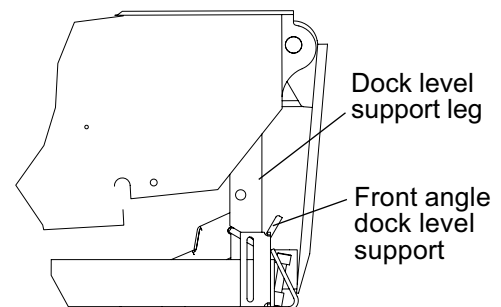


Fig. 27



▲ WARNING

Before allowing vehicle to leave always return the dock leveler to its dock level (stored) position with the dock level support legs supported by the front dock level supports and the lip hanging pendant. See Fig. 27. Failure to do so may leave the leveler in a position below the level of the dock floor. This condition may result in unexpected drop of personnel or material handling equipment and result in death or serious injury.

OPERATION, continued

BELOW DOCK CONTROL (BDC):

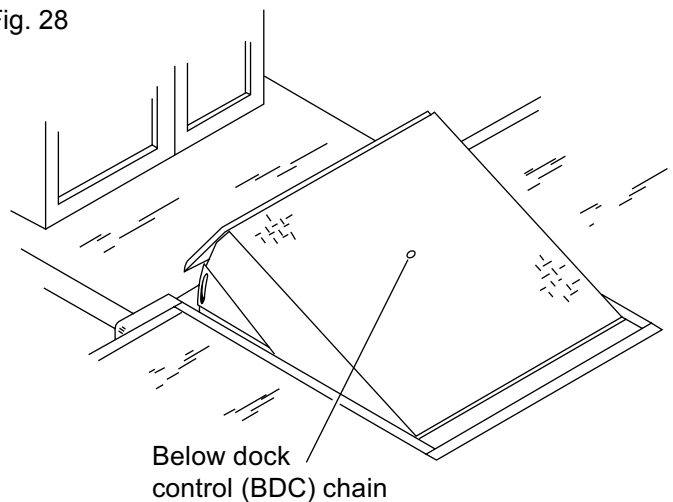
To lower the ramp without extending the lip for end loading below dock level:

1. Press the control button and hold it until the ramp is 6" to 12" above dock level. Release the button before the ramp reaches its highest position.
2. As ramp is lowering, walk onto the ramp and pull the BDC chain located in the middle of the ramp until it is fully extended. Hold the chain until the ramp passes below dock level. See Fig. 28.
3. Release the BDC chain.
4. Load or unload end loads.
5. When loading or unloading is complete, return the dock leveler to the stored position.
 - 5.1 Push and hold the control button until the ramp raises above dock level.
 - 5.2 Release the control button before the ramp reaches its highest position. The ramp will lower to its stored position.
 - 5.3 Be certain that the lip is not extended and that dock level support legs are in position on their supports before releasing vehicle. Ramp should be level with dock floor.
6. Remove wheel chocks or release vehicle.
7. Tell vehicle driver "Your vehicle may now leave the dock."

▲ WARNING

Before allowing vehicle to leave always return the dock leveler to its dock level (stored) position with the dock level support legs supported by the front dock level supports. See Fig. 27. Failure to do so may leave the dock leveler in a position below the level of the dock floor. This condition may result in unexpected drop of personnel or material handling equipment and result in death or serious injury.

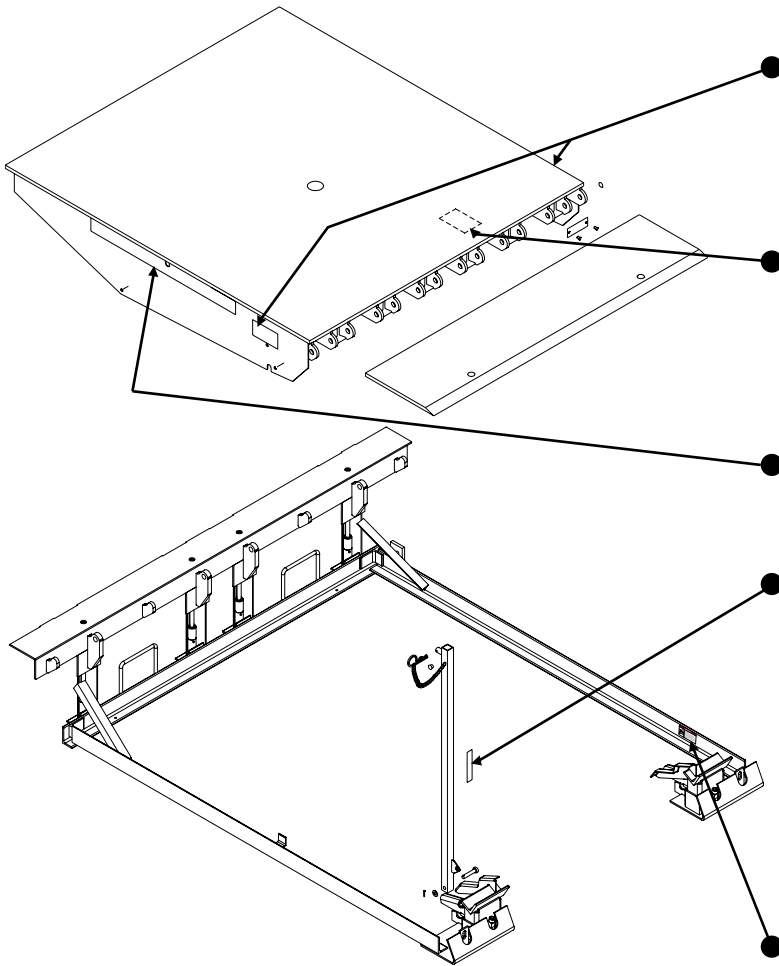
Fig. 28



PLANNED MAINTENANCE

Every 90 days (quarterly) inspect all safety labels and tags to ensure they are on the dock leveler and are easily legible. If any are missing or require replacement, please call your local Kelley distributor.

Fig. 29



<p>⚠ DANGER</p> <p>Unsupported dock leveler ramps can lower unexpectedly.</p> <p>Before allowing vehicles to leave the dock, always:</p> <ul style="list-style-type: none"> • Ensure no equipment, material or people are on dock leveler. • Return dock leveler to its stored position at dock level. <p>Failure to follow posted instructions will result in death or serious injury.</p>	<p>SAFETY INSTRUCTIONS</p> <p>OPERATION</p> <ol style="list-style-type: none"> 1. Read and follow all instructions and warnings in user's manual. 2. Use of dock leveler restricted to trained operators. 3. Always check trailer lockup or engage trailer restraint before operating dock leveler or engaging to haul or unload. 4. Never use ladders or equipment in excess range of lift. <p>BEFORE MAINTENANCE:</p> <ul style="list-style-type: none"> • Ensure trailer is locked in against barriers, extension tray and backstop required. • Check trailer alignment to avoid damage to maintenance. Do not rest a knee on dock leveler reception wheels. • Ensure back stop support receives full weight from supports when vehicle driving on ramp. • Check clear of ramps and feet and sides of moving dock leveler. <p>MAINTENANCE/SERVICE</p> <ol style="list-style-type: none"> 1. Read and follow all instructions, warnings and maintenance instructions in user manual. 2. Perform all services at dock leveler whenever it is raised. 3. Check barriers on driveway and dock floor to show service work is being performed. 4. ALWAYS LOCK OFF unless dock leveler is securely supported by maintenance strut. 5. If electrically powered turn off and use OSHA lockout/tagout procedures. <p>Call 282-518-009 for replacement placards, warning labels, or user's manual.</p>
<p>6008485 (x2)</p>	
<p>6015283</p>	<p>"LIP-UP" LOCK</p>
<p>138-837 (x2)</p>	
<p>⚠ DANGER</p> <p>CRUSH HAZARD Do not work under dock leveler unless this maintenance strut has been secured in the upright position. See user's manual for proper procedures.</p>	<p>921-074</p>
<p>6008554</p>	<p>aFX-S only (4 Places)</p>
<p>921-070</p>	<p>⚠ DANGER</p> <p>CRUSH HAZARD DO NOT ENTER PIT unless dock leveler is securely supported by the maintenance strut. Place barriers on driveway and dock floor to indicate service work being performed. Failure to comply will result in death or serious injury. Refer to user's manual for proper maintenance procedures.</p>
<p>6001952</p>	<p>⚠ DANGER</p> <p>OPERATIONS</p> <p>Danger and operation placard (mounted on wall near leveler)</p>

PLANNED MAINTENANCE, continued

⚠ WARNING

Before servicing the dock leveler, read and follow the Safety Practices on page 3, and the Operations Instruction section on pages 16 through 18 of this User's Manual.

Place barricades on the dock floor around the dock leveler pit and in the driveway in front of the pit while installing, maintaining or repairing the dock leveler.

⚠ DANGER

Be certain, before climbing into the dock leveler pit or doing any maintenance or repair under the dock leveler, that: 1) THE MAINTENANCE STRUT IS IN POSITION AND PINNED, LIP LOCK IS IN PLACE AND SUPPORTING THE LIP [see Fig. 31 on page 22] and 2) the power is disconnected and properly tagged or locked off.

MAINTENANCE AND LUBRICATION CHART

	Lip Extension Mechanism	Lip Extension Spring Assist	Dock Level Support Leg and Roller Arm Pivot Pins	Lip Hinge Assembly Hinges	Ramp Hinge Pins	Dock Leveler Pit	Rear Support Legs
Lubrication	Every 90 Days SAE 30 Grease Front Push Bar	Every 90 Days Lubricate Gas Spring & Clevis Pins; SAE 30	Every 90 Days SAE 30	Every 90 Days SAE 30	Every 90 Days SAE 30	Not Required	Not Required
Cleaning	As Required to Remove Debris	As Required to Remove Debris	As Required to Remove Debris	As Required to Remove Debris	As Required to Remove Debris	Every 90 Days or as Required to Remove Debris**	As Required to Remove Debris

BAG CLAMP BAR BOLTS

Whenever bag or clamp bar attaching hardware is replaced or reassembled perform the following torque procedure:

- Starting in the center of clamp bar and working outwards, torque all 9 nuts to within 29-31 Ft-Lbs.
- Visually check that each of the 9 torqued nuts has the same amount of bolt protruding through it and that the round bar inside the bag is not physically underneath the clamp bar.

** See Service Tool Section, beginning on page 22.

**Check all labels every 90 days. Replace if required.
See page 19 for location and part numbers.**

Every 90 days, visually inspect all welds under the leveler for fatigue or failure. Particularly, the lip plate hinge and top plate beams and front hinge lugs.

Every 90 days visually inspect dock bumpers. Four inches (4") of bumper protection is required. Worn, torn, loose or missing bumpers must be replaced.

PLANNED MAINTENANCE, continued

NOTE:

Use only lubricants shown. Improper lubrication or adjustments may cause operational problems.

NOTE:

Ramp hinge pins may be oiled from top of dock by placing dock leveler full below dock.





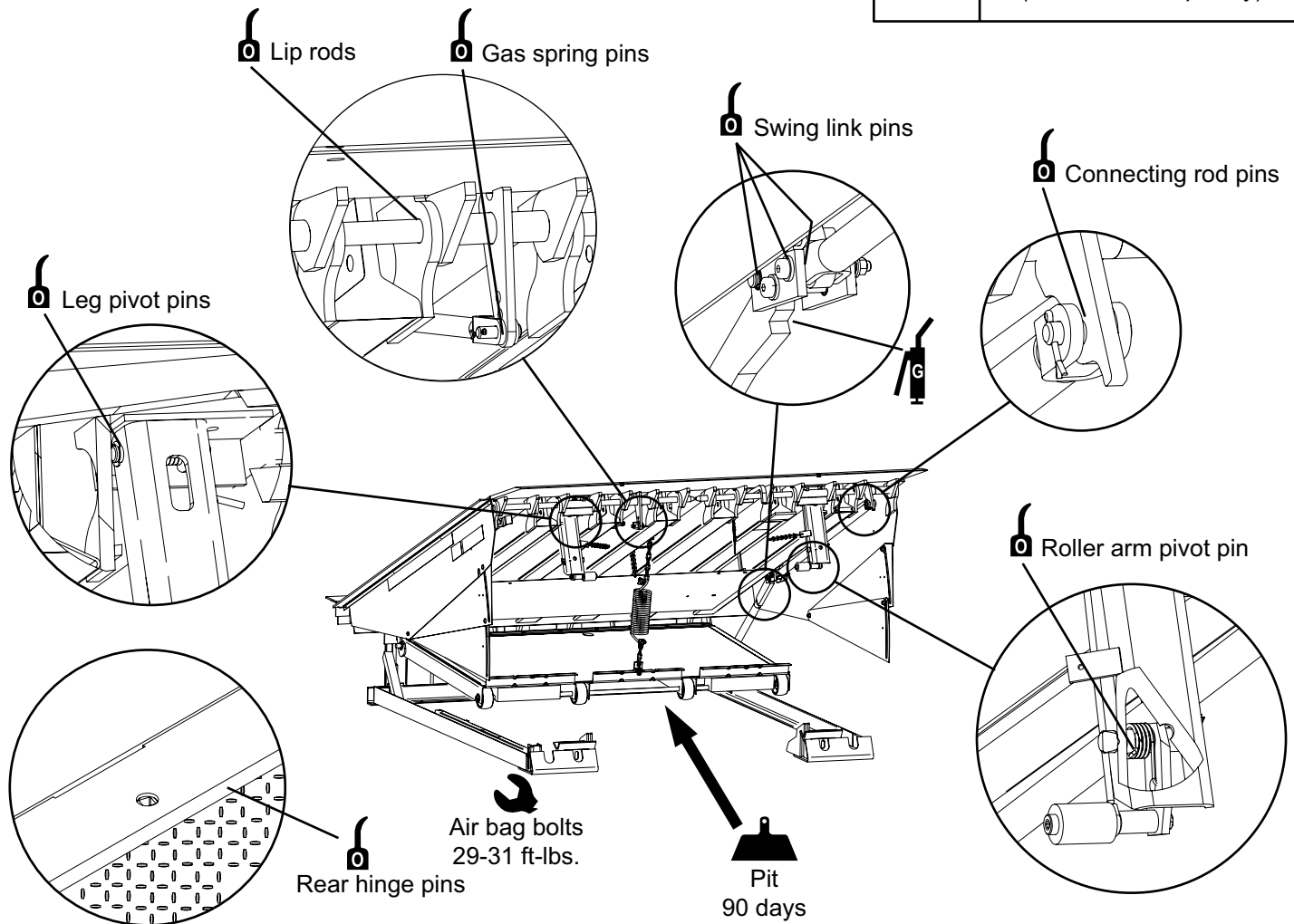
Legend	
Symbol	Description
	Lubricate - Oil Light Oil - SAE 30
	Lubricate - Grease Molybdenum Disulfide NLGI #2
	Check Fasteners or Adjust Torque (Torque Noted)
	Cleaning (Location - Frequency)

Fig. 30



SERVICE TOOLS

⚠ WARNING

Before servicing the dock leveler, read and follow the Safety Practices on page 3, and the Operations Instruction section on pages 16 through 18 of this User's Manual.

⚠ DANGER

Be certain, before climbing into the dock leveler pit or doing any maintenance or repair under the dock leveler, that: 1) THE MAINTENANCE STRUT IS IN POSITION AND PINNED, LIP LOCK IS IN PLACE AND SUPPORTING THE LIP [see Fig. 31] and 2) the power is disconnected and properly tagged or locked off.

Air pressure or mechanical support must be maintained on the ramp to hold it in the raised position until the maintenance strut is in place. DO NOT WORK UNDER THE DOCK LEVELER RAMP OR LIP UNLESS THE MAINTENANCE STRUT IS IN PLACE AND PINNED, AND LIP LOCK IS IN PLACE AND SUPPORTING THE LIP.

MAINTENANCE STRUT

1. Two people are needed to place the dock leveler on the maintenance strut.
 - a. One person must push and hold the raise button until dock leveler reaches its highest position and hold dock leveler in its highest position.
 - b. The second person positions the maintenance strut into the bracket located on the underside of the ramp assembly and pins it in place with hairpin clip. See Fig. 31 and the instruction label on maintenance strut.
 - c. The raise button may now be released.

LIP LOCK

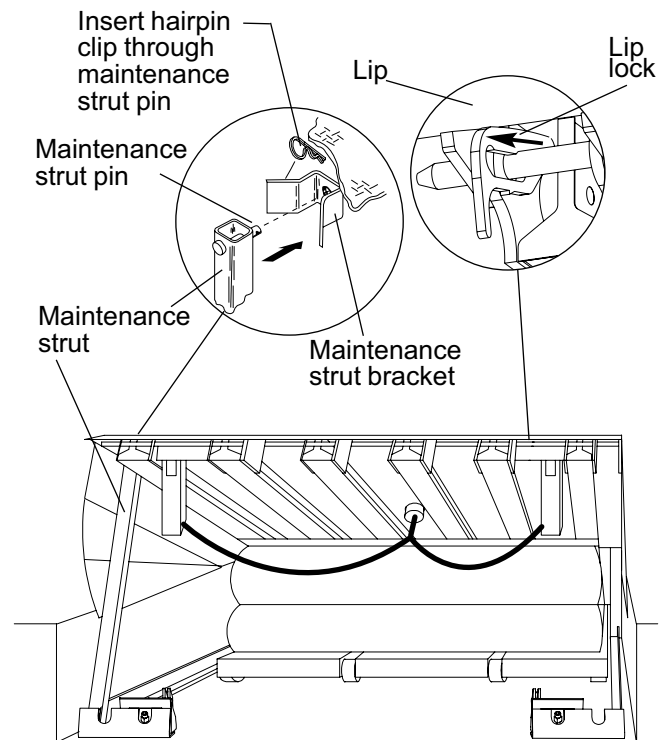
⚠ DANGER

The lip is free to move downward when it is released unless lip lock is in its support position.

DO NOT WORK UNDER THE DOCK LEVELER RAMP OR LIP UNLESS THE MAINTENANCE STRUT IS IN PLACE AND PINNED, AND LIP LOCK IS IN PLACE AND SUPPORTING THE LIP.

1. To engage lip lock, manually lift lip to fully raised position. Pull lip lock outward as far as it will go. Release lip lock. Slowly lower lip onto lip lock. See instruction label on dock leveler beam near lip lock.
2. To disengage lip lock, lift lip completely. Push lip lock inward as far as it will go. Slowly lower lip. See instruction label on dock leveler beam near lip lock.

Fig. 31



CLEAN PIT KIT

The clean pit kit is used to raise the front end of the bag support pan assembly. This allows for easy access to the pit for cleaning of the pit area.

▲ DANGER

Be certain, before climbing into the dock leveler pit or doing any maintenance or repair under the dock leveler, that: 1) THE MAINTENANCE STRUT IS IN POSITION AND PINNED, LIP LOCK IS IN PLACE AND SUPPORTING THE LIP [see Fig. 31] and 2) the power is disconnected and properly tagged or locked off.

The clean pit kit as shown will automatically raise the bag support pan assembly when the dock leveler it rested on the maintenance post. Reference the chart on page 34 for the upper shackle location on the chain to determine the proper link for connecting the kit to the ring on the deck.

During normal operation, the spring extends as the bag inflates. See Fig. 32

When pinned on the maintenance strut, the spring will raise the bag support pan assembly as the bag deflates. Once the bag pan support assembly stops moving, there is then easy access for cleaning the pit or installing the bag removal tools for removing the bag. See Fig. 33

Fig. 32

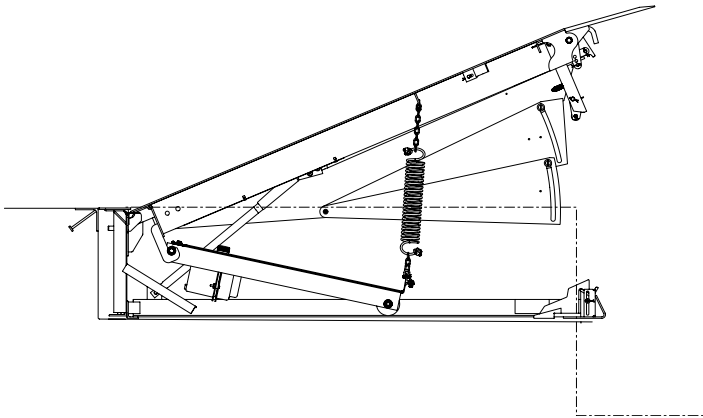
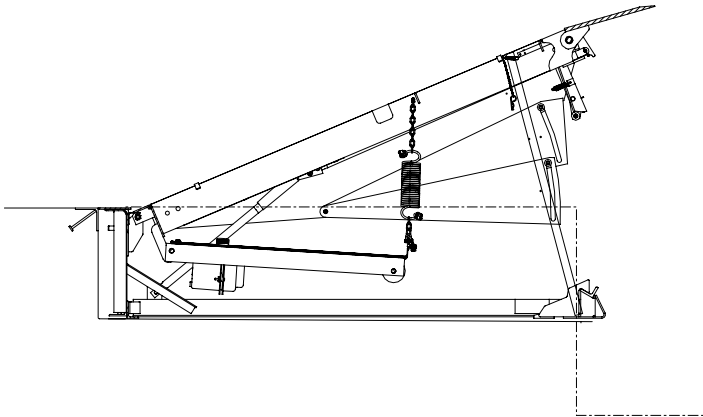


Fig. 33



SERVICE TOOLS, continued

PAN REMOVAL ROLLERS

The pan removal rollers are used to remove the bag support pan assembly. This allows for easy access to service the lifting fan and bag assembly.

▲ DANGER

Be certain, before climbing into the dock leveler pit or doing any maintenance or repair under the dock leveler, that: 1) THE MAINTENANCE STRUT IS IN POSITION AND PINNED, LIP LOCK IS IN PLACE AND SUPPORTING THE LIP [see Fig. 31] and 2) the power is disconnected and properly tagged or locked off.

1. To remove bag support pan assembly:
 - 1.1 Allow the lifting spring to deflate the air bag and raise the bag support pan assembly.
 - 1.2 Attach pan rollers (kit part #184376 for 19" subframes and 6013799 for 23" subframes) to both sides of the pan assembly, either 16" or 19" back from the front edge as shown in Fig. 34.

NOTE:

For 8' long 50K capacity and 10' long dock levelers attach pan rollers 19" from front edge as shown in Fig. 34.

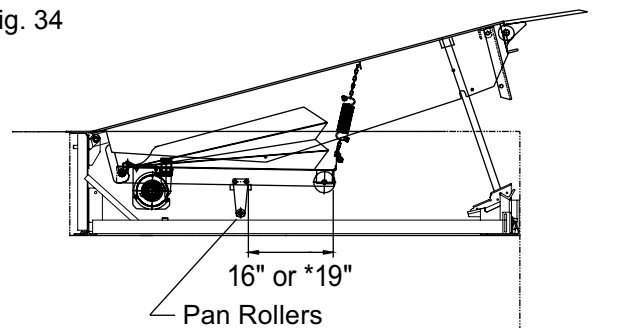
- 1.3 After installing the rollers, press down on the front of the bag assembly, extending the spring, to unhook the rear axle from the back of the leveler and pull forward.
 - 1.4 Disconnect the bolt from the center pan and remove the lifting kit from the bag support pan assembly.
 - 1.5 Balancing the bag support pan assembly on the rollers roll it to the front of the pit. The rollers will roll on the frame rails.
2. To install the bag pan assembly:
 - 2.1 Roll the bag support pan assembly to the back of the pit and align it with the hooks on the back of the ramp.
 - 2.2 Tilt the front of the assembly up and attach the support angle that is connected to the bottom of the lifting kit to the hole in the center pan.
 - 2.3 Press the front of the bag down and hook the rear axle into the hooks on the back of the ramp.

- 2.4 Allow the spring to raise the bag, then remove the pan rollers.
- 2.5 Re-connect the bolt from the lifting kit to the center pan.

NOTE:

See page 34 for clean pit kit parts list and installation instructions.

Fig. 34



NOTE:

For 8' long 50K capacity and 10' long dock levelers attach pan rollers 19" from front edge.

TROUBLESHOOTING

⚠ WARNING

Before troubleshooting the dock leveler, read and follow the Safety Practices on page 3 and the Operations Instruction section on pages 16 through 18 of this User's Manual.

⚠ DANGER

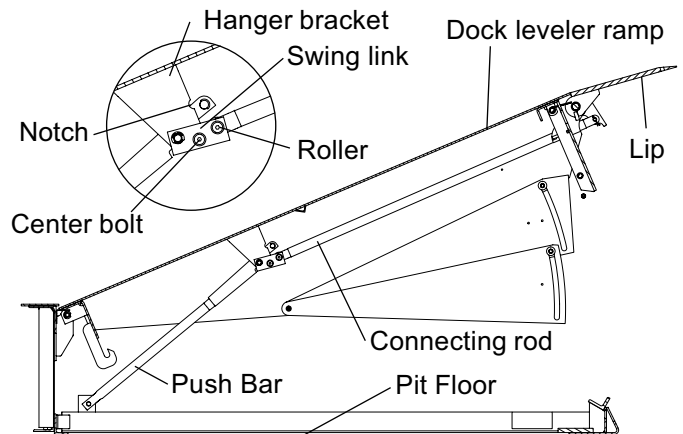
Be certain, before climbing into the dock leveler pit or doing any maintenance or repair under the dock leveler, that: 1) THE MAINTENANCE STRUT IS IN POSITION AND PINNED, LIP LOCK IS IN PLACE AND SUPPORTING THE LIP [see Fig. 31 on page 22] and 2) the power is disconnected and properly tagged or locked off.

Before doing any electrical work, make certain the power is disconnected and properly tagged or locked off.

NOTE:

Follow Service Tools use instructions on pages 22 through 24.

Fig. 35

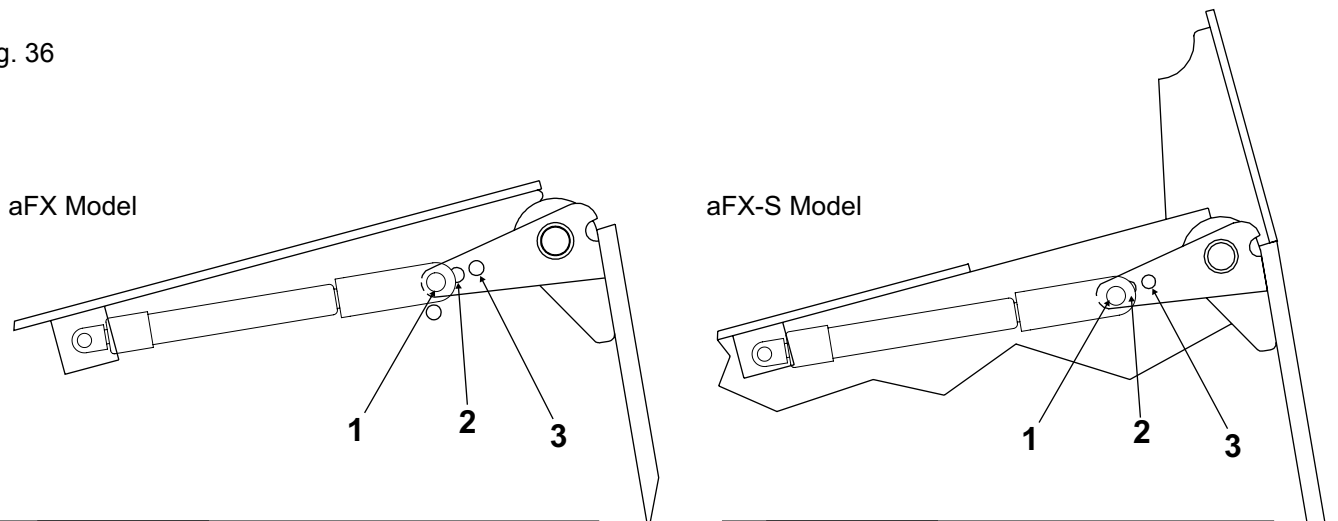


PROBLEM	POSSIBLE CAUSE	SOLUTION
1) Leveler does not raise. Motor fails to run.	<ul style="list-style-type: none"> a) Fuse blown or breaker tripped. b) No electrical power to push-button. c) Push-button is broken. d) Fan plug loose or unplugged in receptacle. e) Loose wires in control panel or junction box. f) Fan assembly damaged/broken. 	<ul style="list-style-type: none"> a) Replace fuse or reset breaker. b) Check all power supplies to control panel and make sure connections are tight. c) Replace push-button. d) Check and tighten connection to receptacle. e) Repair or replace wires. f) Replace fan assembly.
2) Leveler does not raise or does not raise completely. Motor runs.	<ul style="list-style-type: none"> a) Obstruction(s) preventing the leveler from raising. b) Holes or leaks in the lifting bag. c) Loose or misaligned bag fittings or loose bag clamps. d) Motor voltage too low. 	<ul style="list-style-type: none"> a) If an obstruction is found, turn off power before attempting to clear the obstruction. b) Order the patch kit from your dealer or Kelley® to repair holes. If holes are too large, replace bag assembly. c) Repair or replace as required. See parts list on page 38 and 39. d) Verify motor voltage is between 110-129 volts AC while motor is running at full load.

TROUBLESHOOTING, continued

PROBLEM	POSSIBLE CAUSE	SOLUTION
3) Lip fails to lower to the stored position when the dock leveler is raised from vehicle	a) Lip extension mechanism is bent or binding. b) Lip assist gas spring pin is in incorrect position.	a) Check to make sure that the lip extension mechanism is not bent or binding. Be sure all parts are lubricated properly. Lubricate as required. See Fig. 30. b) Make sure pin is in correct position and both pins are in good condition. See Fig. 36
4) Dock level support legs will not retract for below dock operation	a) Chain not connected b) Chain binding. c) Legs binding. d) Chain pulling one leg.	a) Check connection of dock level control chain to the dock level support legs. See Fig. 37. b) Check for binding of dock level control chain. c) Check for binding in dock level support legs. d) Check length of below dock control chain. Adjust chain so dock level support legs are retracted the same distance.
5) Air bag is not lifting when the ramp is on the maintenance post.	a) The link selected for attachment to the deck is incorrect.	a) Connect the lifting kit chain using a link closer to the spring. See chart on page 34.

Fig. 36

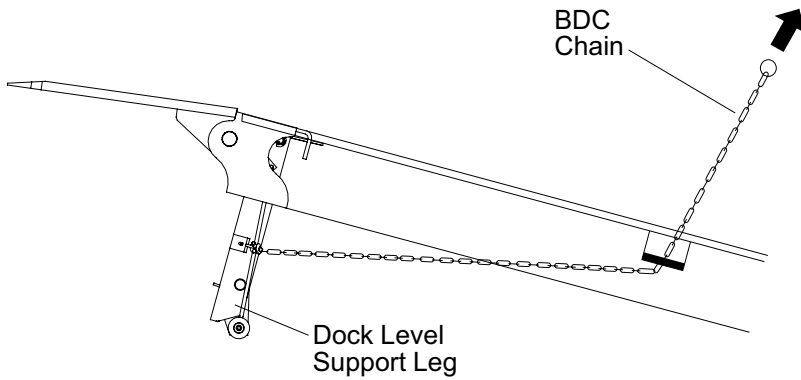


Lip Size	Lip Capacity		
	25K	30K & 35K	40K, 45K, & 50K
6'-16"	Hole 3	Hole 2	Hole 1
6'-18"	Hole 2	Hole 1	Hole 1
6'-20"	Hole 1	Hole 1	Hole 1
6-1/2'-16"	Hole 2	Hole 1	Hole 1
6-1/2'-18"	Hole 1	Hole 1	Hole 1
6-1/2'-20"	Hole 1	Hole 1	Hole 1
7'-16"	Hole 2	Hole 1	Hole 1
7'-18"	Hole 1	Hole 1	Hole 1
7'-20"	Hole 1	Hole 1	Hole 1

Lip Size	Hole
	ALL CAPACITY
6'-16"	Hole 3
6'-18"	Hole 2
6'-20"	Hole 1
6-1/2'-16"	Hole 3
6-1/2'-18"	Hole 2
6-1/2'-20"	Hole 1
7'-16"	Hole 3
7'-18"	Hole 2
7'-20"	Hole 1

TROUBLESHOOTING, continued

Fig. 37



PROBLEM	POSSIBLE CAUSE	SOLUTION
6) Dock level support legs will not swing fully forward	<ul style="list-style-type: none"> a) Leg is binding. b) Chain does not allow enough slack. 	<ul style="list-style-type: none"> a) Check for binding or debris which may be restricting leg. b) Check below dock control chains to assure chain has enough slack to allow leg to swing forward. Adjust as required. See Fig. 37.
7) Lip fails to extend	<ul style="list-style-type: none"> a) Lip extension mechanism is bent or binding. b) Pins are in incorrect position. 	<ul style="list-style-type: none"> a) Check to make sure that the lip extension mechanism is not bent or binding. Be sure all parts are lubricated properly. Lubricate as required. See Fig. 30. b) Make sure all pins and pin retainers are in place and in good condition.
8) Lip extends but fails to stay in extended position	<ul style="list-style-type: none"> a) Lip extension mechanism center bolt is bent or binding. b) Links and connecting rod are not aligned. 	<ul style="list-style-type: none"> a) Check to see that the lip extension mechanism center bolt is straight and free to rotate. See Fig. 35. b) Check to see that the lip extends far enough to allow the links and connecting rod to align and then reach an "over center" position.

PARTS LIST

- To determine the correct replacement parts to order for your adjustable dock leveler, you will need to know its model number, serial number and capacity.
- The model number and capacity can be found on the dock leveler product label located on the frame leg. See Fig. 40 and 41. The meaning of each digit in the model number is shown in Fig. 38.

Example:

aFX 6' x 8'	aFX-S 6' x 8'
- 6' wide	- Safety Lip
- 8' long	- 6' wide
	- 8' long

- To determine the nominal size of your dock leveler, see Fig. 39.

▲ WARNING

To ensure proper function, durability and safety of the product, only replacement parts that do not interfere with the safe, normal operation of the product must be used. Incorporation of replacement parts or modifications that weaken the structural integrity of the product, or in any way alter the product from its normal working condition at the time of purchase from Kelley® could result in product malfunction, breakdown, premature wear, death or serious injury.

Fig. 38

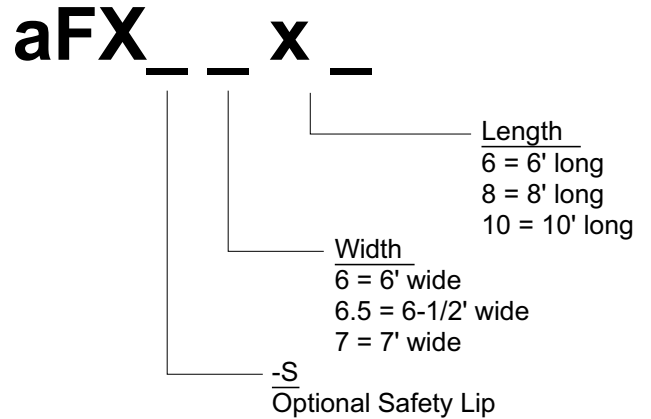
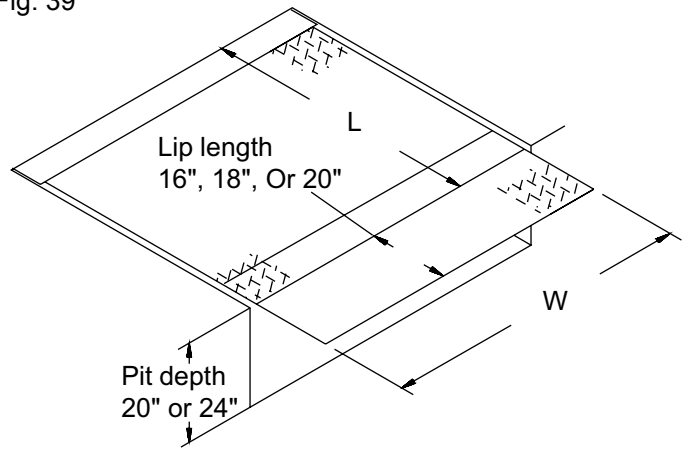


Fig. 39

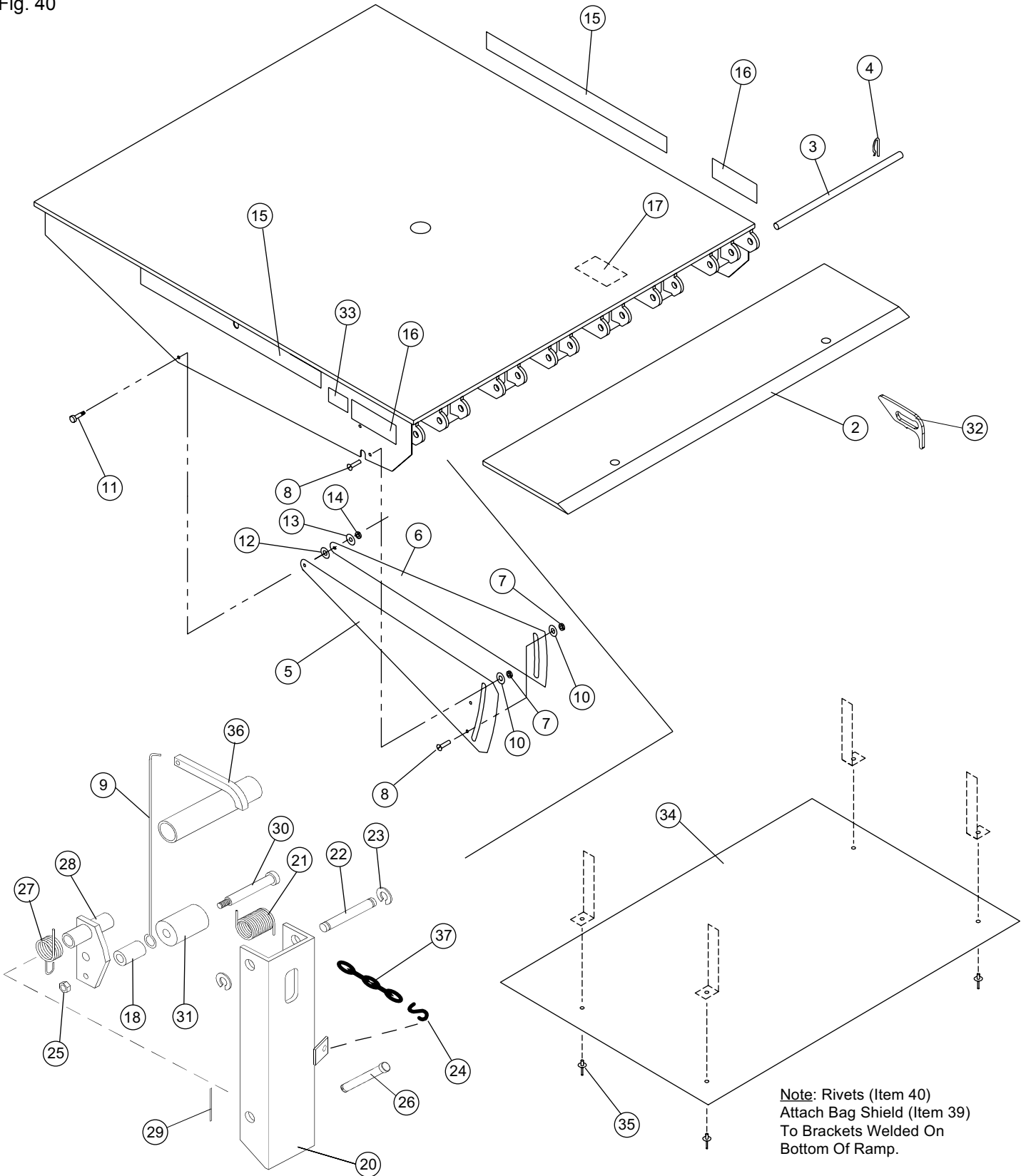


Nominal Size W x L (ft.)	W (in.)	L (in.)
6 x 6	72	63
6 x 8	72	87
6 x 10	72	111
6.5 x 6	78	63
6.5 x 8	78	87
6.5 x 10	78	111
7 x 6	83	63
7 x 8	83	87
7 x 10	83	111

PARTS LIST – aFX DOCK LEVELER

Ramp, Lip, Toe Guards and Lip Lock Assemblies

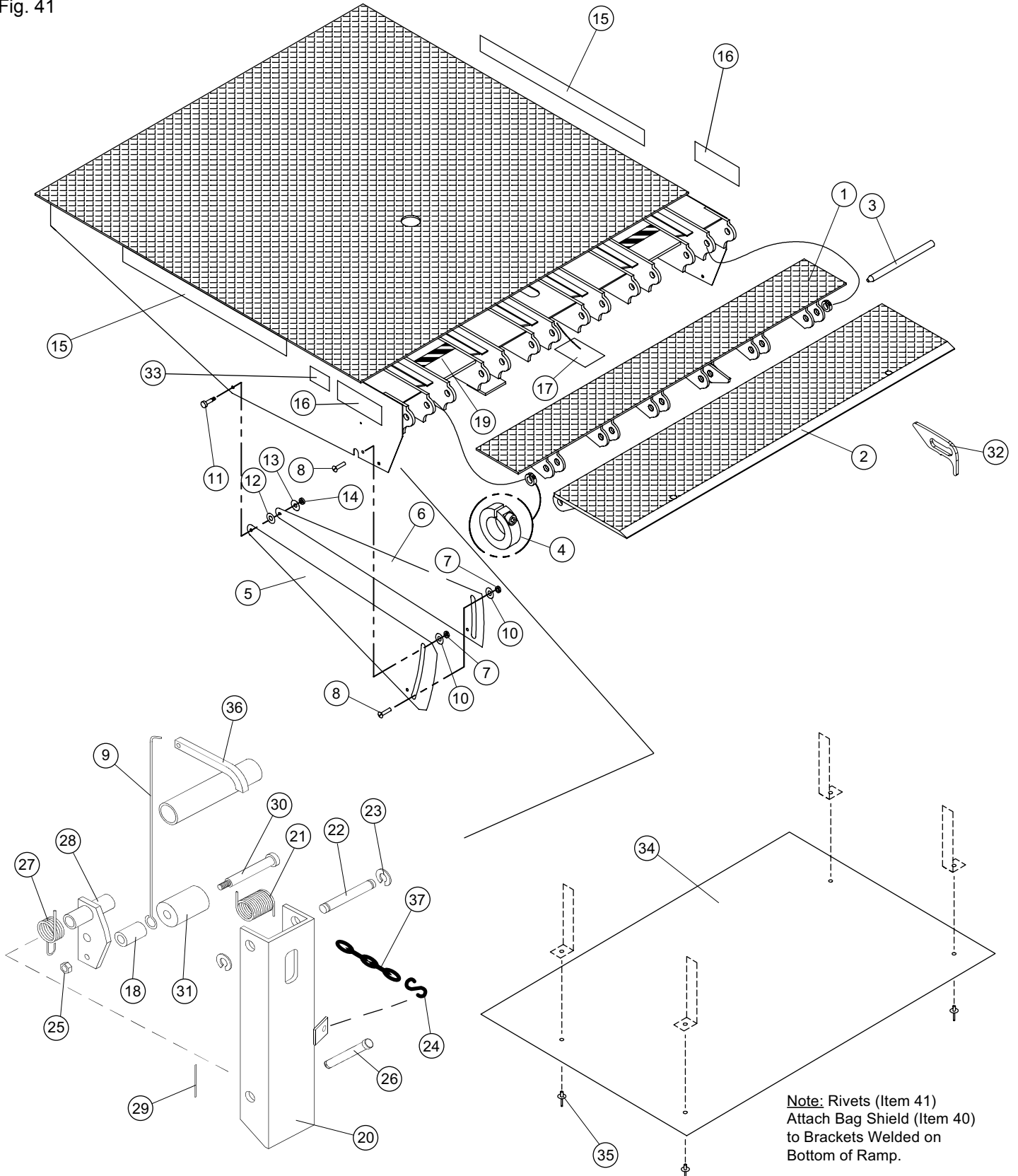
Fig. 40



PARTS LIST – aFX-S DOCK LEVELER

Ramp, Lip, Toe Guards and Lip Lock Assemblies

Fig. 41



PARTS LIST, continued

Ramp, Lip, Toe Guards and Lip Lock Assemblies

ITEM	QTY	PART DESCRIPTION	aFX	aFX-S
1	1	GUARD, SAFETY LIP 6' W. DOCK LEVELER 6-1/2' W. DOCK LEVELER 7' W. DOCK LEVELER	- - -	714-220 714-219 714-218
2	1	LIP, 6FT WIDE, 30K AND 35K CAPACITY 16" X 6' W. 4° BEND 16" X 6' W. 7° BEND 18" X 6' W. 4° BEND 18" X 6' W. 7° BEND 20" X 6' W. 4° BEND 20" X 6' W. 7° BEND	711-858 711-857 711-860 711-859 711-862 711-861	- - - - - -
		LIP, 6-1/2' WIDE, 30K AND 35K CAPACITY 16" X 6.5' W. 4° BEND 16" X 6.5' W. 7° BEND 18" X 6.5' W. 4° BEND 18" X 6.5' W. 7° BEND 20" X 6.5' W. 4° BEND 20" X 6.5' W. 7° BEND	711-876 711-875 711-878 711-877 711-880 711-879	- - - - - -
		LIP, 7' WIDE, 30K AND 35K CAPACITY 16" X 7' W. 4° BEND 16" X 7' W. 7° BEND 18" X 7' W. 4° BEND 18" X 7' W. 7° BEND 20" X 7' W. 4° BEND 20" X 7' W. 7° BEND	711-894 711-893 711-896 711-895 711-898 711-897	- - - - - -
		LIP, 6FT WIDE, 40K, 45K AND 50K CAPACITY 16" X 6' W. 4° BEND 16" X 6' W. 7° BEND 18" X 6' W. 4° BEND 18" X 6' W. 7° BEND 20" X 6' W. 4° BEND 20" X 6' W. 7° BEND	711-864 711-863 711-866 711-865 711-868 711-867	711-864 711-863 711-866 711-865 711-868 711-867
		LIP, 6-1/2' WIDE, 40K, 45K AND 50K CAPACITY 16" X 6.5' W. 4° BEND 16" X 6.5' W. 7° BEND 18" X 6.5' W. 4° BEND 18" X 6.5' W. 7° BEND 20" X 6.5' W. 4° BEND 20" X 6.5' W. 7° BEND	711-882 711-881 711-884 711-883 711-886 711-885	711-882 711-881 711-884 711-883 711-886 711-885
		LIP, 7' WIDE, 40K, 45K AND 50K CAPACITY 16" X 7' W. 4° BEND 16" X 7' W. 7° BEND 18" X 7' W. 4° BEND 18" X 7' W. 7° BEND 20" X 7' W. 4° BEND 20" X 7' W. 7° BEND	711-900 711-899 711-902 711-901 711-904 711-903	711-900 711-899 711-902 711-901 711-904 711-903
		3	2	LIP SHAFT 6' W. DOCK LEVELER 6.5' W. DOCK LEVELER 7' W. DOCK LEVELER
4	2 2	RETAINER, SHAFT - HINGE PIN COLLAR, SHAFT - HINGE PIN	035-451 -	- 131-542
5	2	TOE GUARD, MIDDLE SLIDING 6' LG. DOCK LEVELER 8' LG. DOCK LEVELER 10' LG. DOCK LEVELER	155-554 155-555 155-557	155-554 155-555 155-557

PARTS LIST, continued

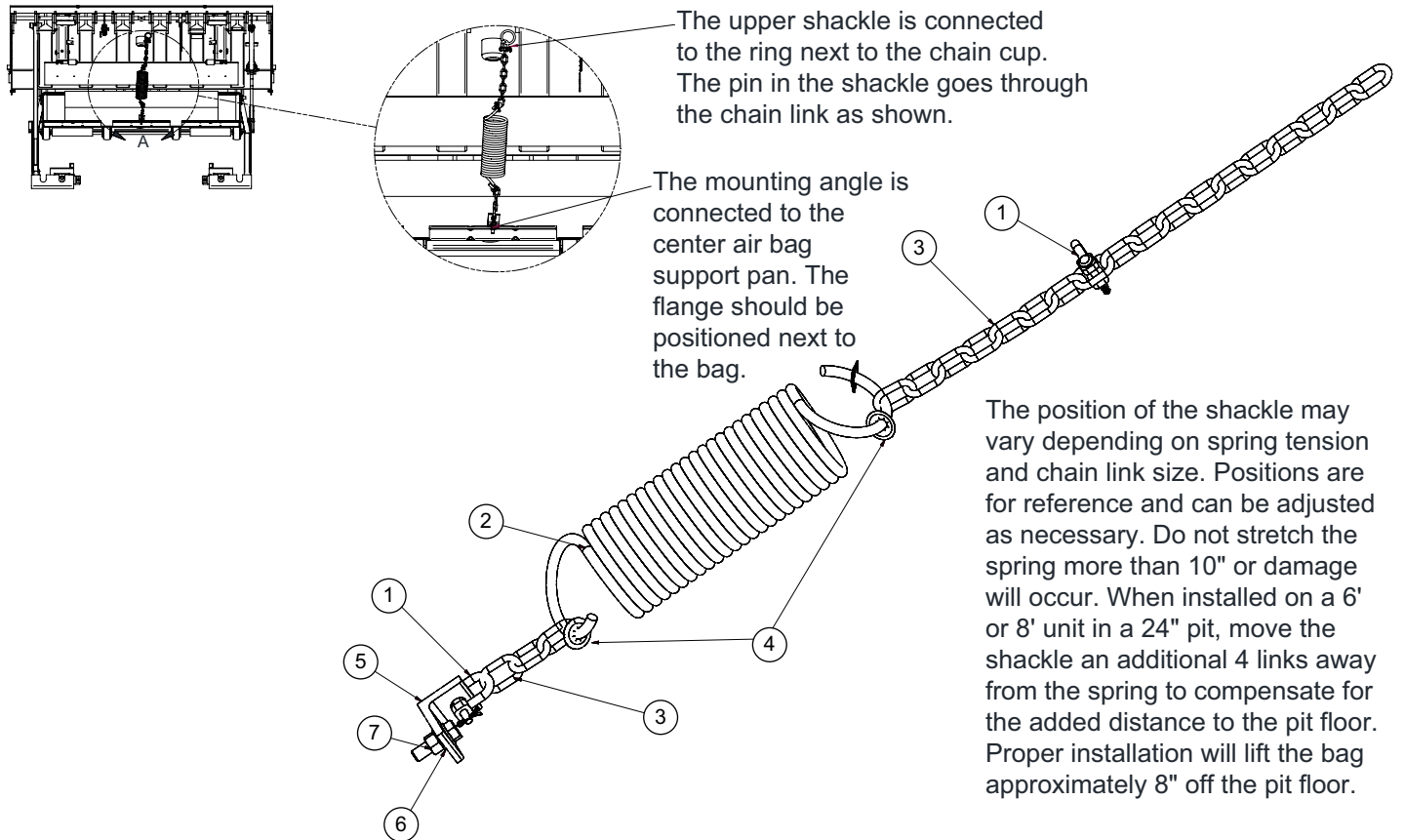
Ramp, Lip, Toe Guards and Lip Lock Assemblies

ITEM	QTY	PART DESCRIPTION	aFX	aFX-S
6	2	TOE GUARD, BOTTOM SLIDING 6' LG. DOCK LEVELER 8' LG. DOCK LEVELER 10' LG. DOCK LEVELER	155-554 155-556 155-557	155-554 155-556 155-557
7	4	NUT, LOCK, 3/8-16	000-253	000-253
8	4	SCREW, TRUSS HEAD 3/8-16 X 1	131-477	131-477
9	2	ROLLER LIFTER, WIRE FORM	101-100	101-100
10	4	SPACER, TOE GUARD	152-878	152-878
11	2	SCREW, SHOULDER	131-455	131-455
12	2	WASHER, 3/8" FLAT	000-214	000-214
13	2	WASHER, 5/16" FLAT	000-055	000-055
14	2	NUT, 5/16-18 NYLOC	131-456	131-456
15	2	LABEL, HAZARD	138-837	138-837
16	2	LABEL, WARNING	6008485	6008485
17	1	LABEL, LIP LOCK	6015283	6015283
18	2	SPACER, PLASTIC PIPE	6001402	6001402
19	4	LABEL, SAFETY STRIPE	-	6008554
20	1 1	SUPPORT, DOCK LEVEL LEFT SIDE (SHOWN) RIGHT SIDE (NOT SHOWN)	714-126 714-125	714-126 714-125
21	2	SPRING, TORSION	030-195	030-195
22	2	PIN, GROOVED	035-338	035-338
23	4	KLIPRING	049-060	049-060
24	3	"S" - HOOK	000-181	000-181
25	2	NUT, LOCK 3/8-16	000-030	000-030
26	2	PIN, CLEVIS 5/8" X 3-1/2" LG.	6001348	6001348
27	2	SPRING, TORSION	101-091	101-091
28	2	WELDMENT, ROLLER ARM	714-070	714-070
29	2	PIN, COTTER 1/8" X 1-1/4"	035-036	035-036
30	2	SHOULDER SCREW 1/2 X 4	6001340	6001340
31	2	ROLLER, CAM FOLLOWER	6001341	6001341
32	1	LEVER, LIP LOCK	6015269	6015269
33	1	DECAL, AFX	138-871	138-871
34	1	BAG SHIELD 6' LG. DOCK LEVELER - ALL CAPACITY 8' LG. DOCK LEVELER - 30K - 45K CAPACITY 8' LG. DOCK LEVELER - 50K CAPACITY 10' LG. DOCK LEVELER - ALL CAPACITY	155-295 155-295 155-400 155-400	155-295 155-400 155-400 155-400
35	4	RIVET, POP 3/16 DIA.	131-271	131-271
36	1 1	LIFTER, ROLLER ARM LEFT HAND RIGHT HAND	714-084 714-083	714-084 714-083
37	1	BELOW DOCK CONTROL ASSEMBLY - 6' BELOW DOCK CONTROL ASSEMBLY - 8' & 10' BELOW DOCK CONTROL ASSEMBLY - 8' (50K ONLY) & AFX-S	6015740 6015741 6015417	6015417 6015417 6015417

PARTS LIST

Clean pit kit

Fig. 42

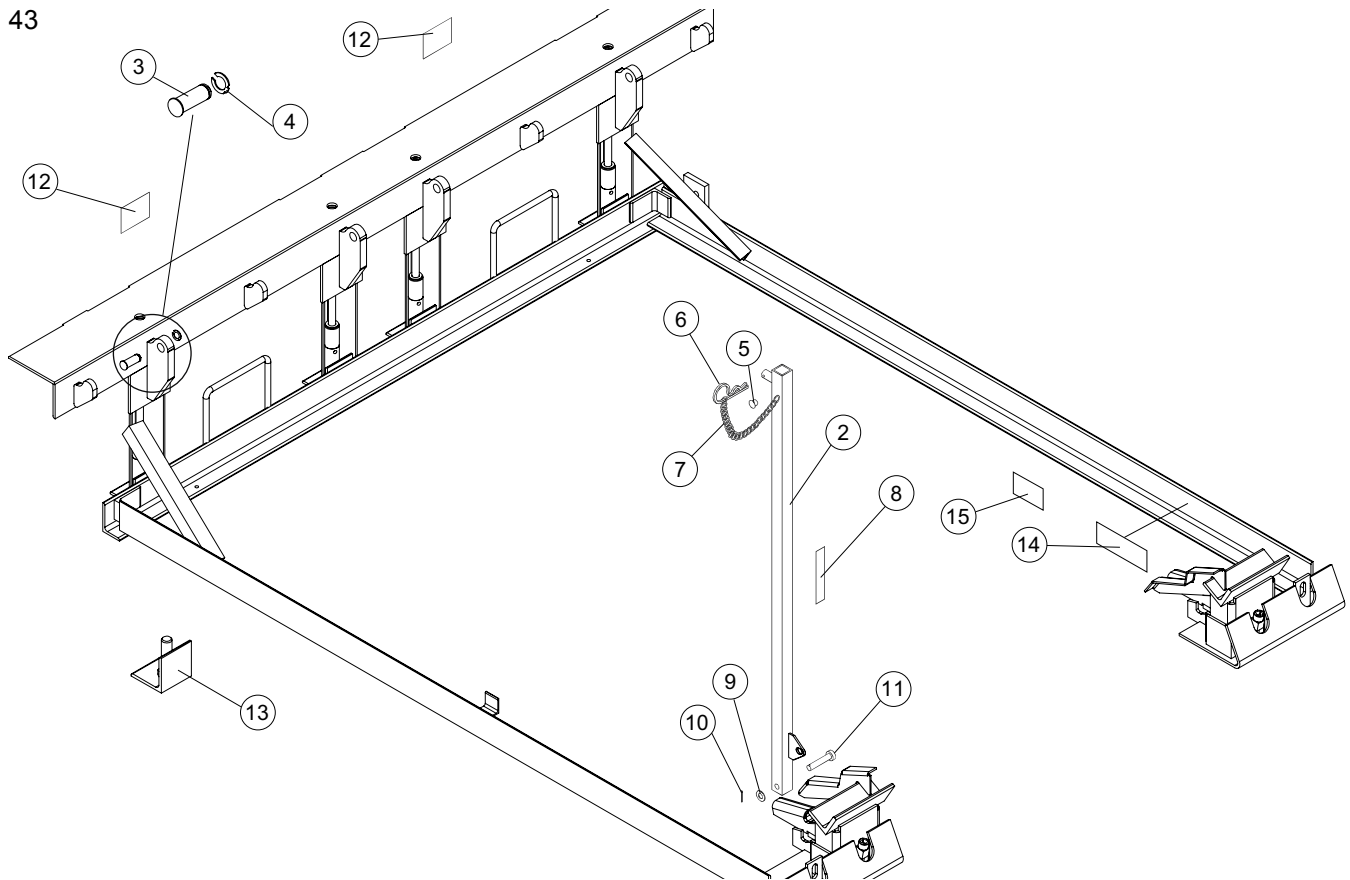


Item	Quantity	Description	Part Number
1	1	CHAIN SHACKLE - 1/4"	442800
2	1	LIP ASSIST SPRING	333043
3	1	6' LEVELER, AFX & AFXS 8' AFX, 25-45K 8' 50K AFX, 8' AFX-S 10' AFX & AFXS	6012574 6012575 6012577 6012578
4	4	PUSH NUT	6014003
5	1	AIR BAG LIFTING KIT ANGLE	6008139
6	2	FLAT WASHER	234091
7	1	UPSET THREAD NUT	000030
8	1	BOLT HX HEAD 3/8-16 X 1-1/4 GR-5	000357
9	2	SPRING CAP	6015415

PARTS LIST, continued

Subframe and Maintenance Strut Assemblies

Fig. 43



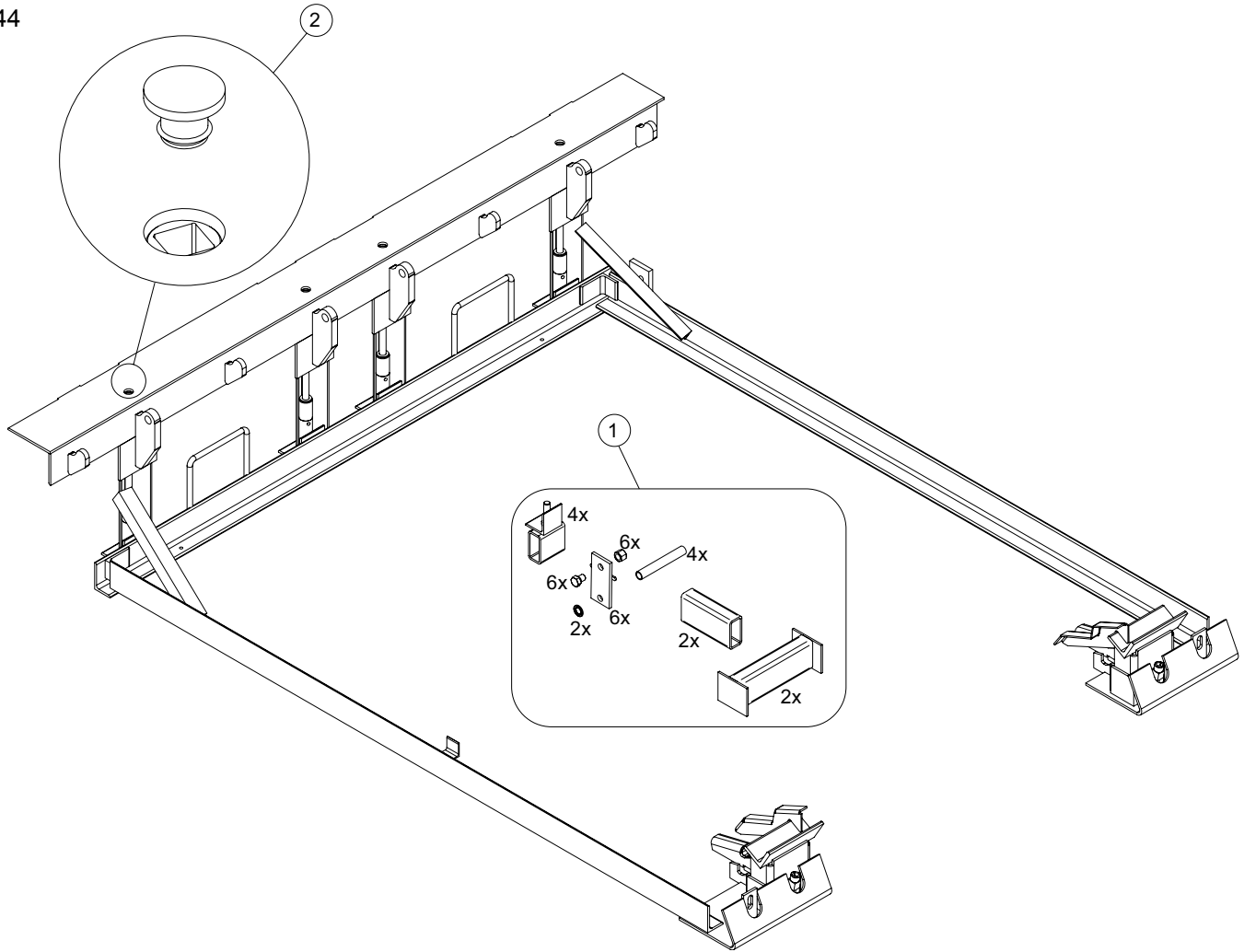
ITEM	QTY	PART DESCRIPTION	aFX	aFX-S
1	1	DOCUMENTATION KIT (NOT SHOWN) MANUAL PLACARD, WARNING AND INSTRUCTIONS	6001953 6004751 6001952	6001953 6004751 6001952
2	1	MAINTENANCE STRUT ASSEMBLY 6' LG. DECK IN 20" PIT 6' LG. DECK IN 24" PIT 8' LG. DECK IN 20" PIT 8' LG. DECK IN 24" PIT 10' LG. DECK IN 24" PIT	710-042 6013620 708-883 6013621 712-537	710-042 6013620 708-883 6013621 712-537
3	4	PIN, HINGE	6004128	6004128
4	4	CLIP RING - 3/4"	236-110	236-110
*5	1	SCREW, DRIVE	000-518	000-518
*6	1	PIN, COTTER - HAIR	035-200	035-200
*7	1	CHAIN, SASH	032-195	032-195
*8	1	DECAL, MAINT. STRUT	921-074	921-074
9	1	WASHER, FLAT 3/8	000-214	000-214
10	1	PIN, COTTER	035-036	035-036
11	1	PIN, CLEVIS	035-051	035-051
12	2	DECAL, FORK LOCATION	921146	921146
13	4	FOOT ASSEMBLY	6002915	6002915
14	1	DANGER LABEL - ENTERING PIT	921-070	921-070
15	1	SERIAL TAG	6009761	6009761

Note: Items 5 - 8 included in item 2.

PARTS LIST, continued

Optional Subframe Riser Kit and Cap Plug

Fig. 44

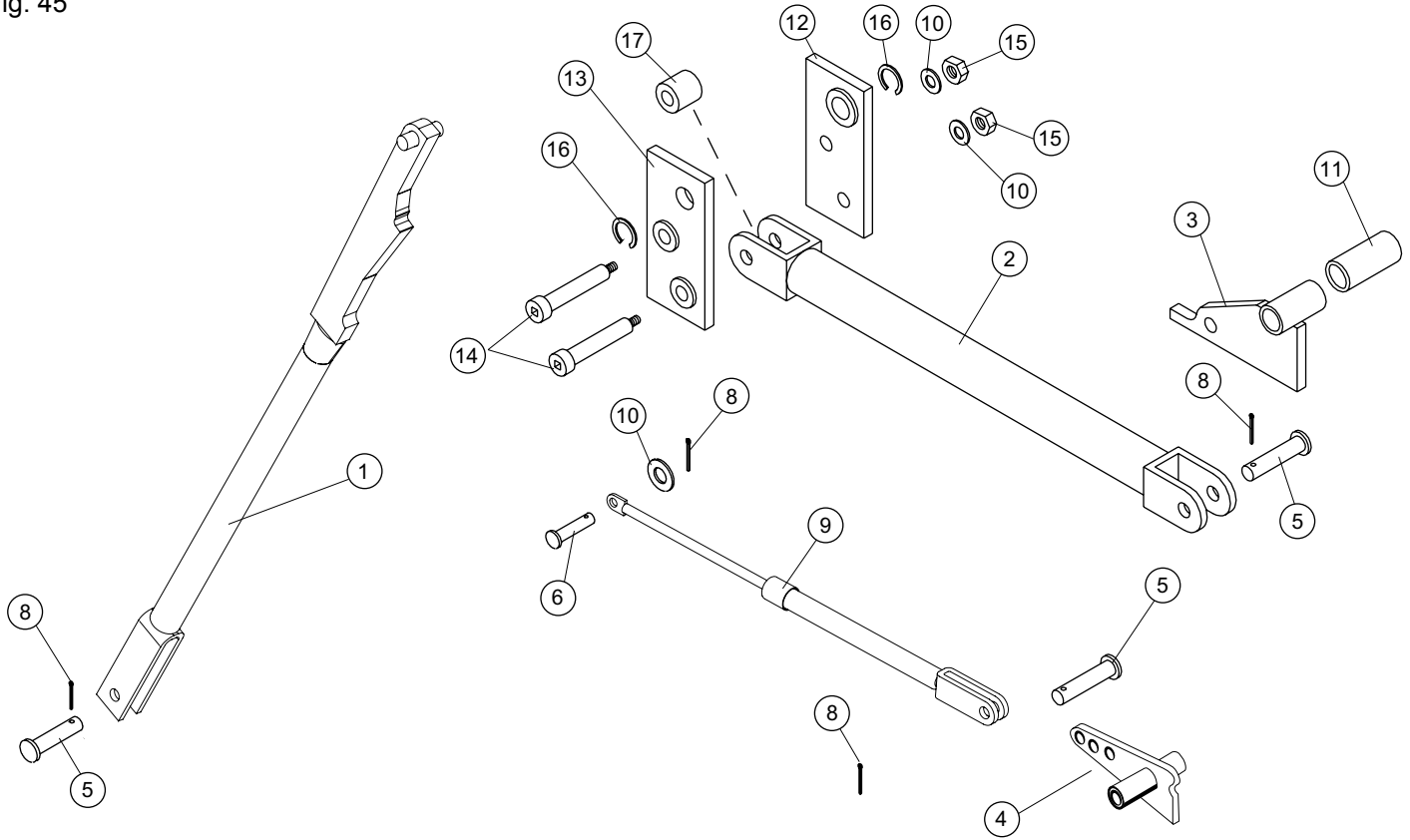


ITEM	QTY	PART DESCRIPTION	aFX	aFX-S
1	1	RISER KIT (FIELD INSTALLED)	6004652	6004652
2	1	REAR ANGLE CAP PLUG	6004487	6004487

PARTS LIST, continued

Connecting Rod, Push Bar and Lip Assist Assemblies

Fig. 45

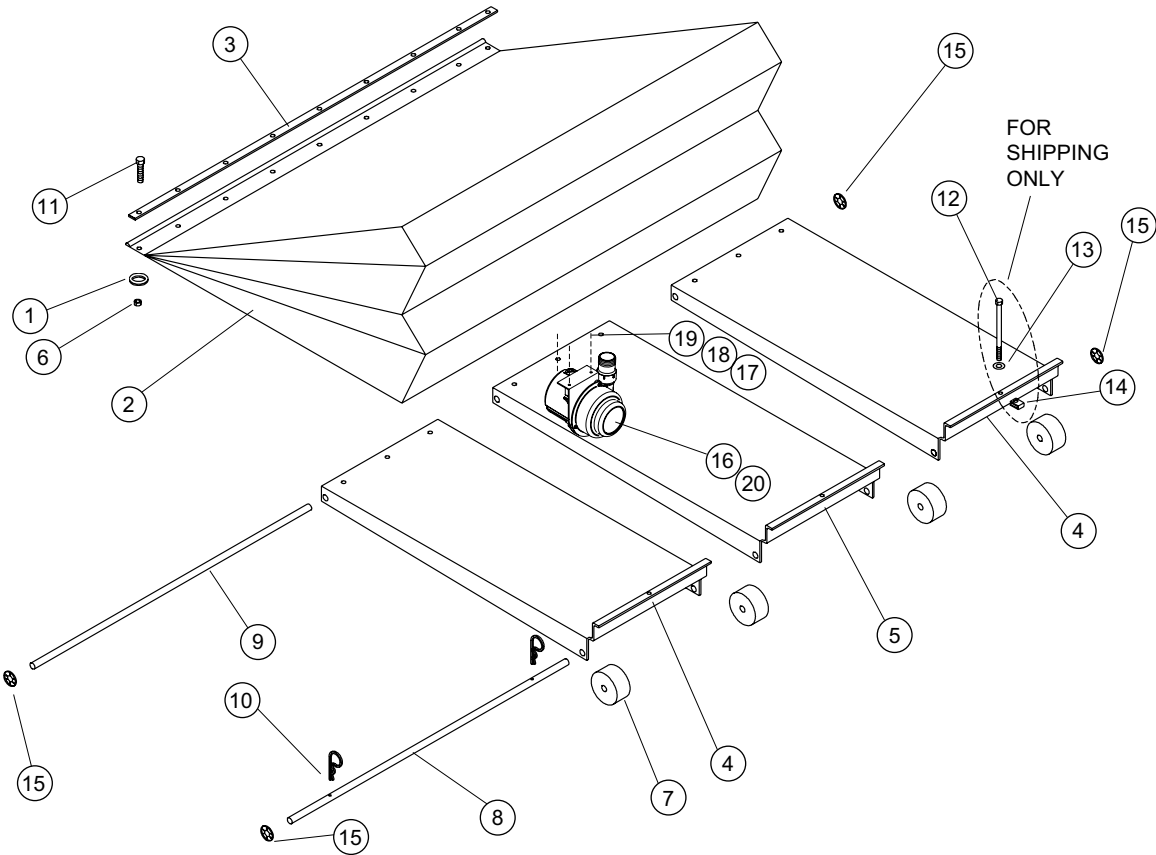


ITEM	QTY	PART DESCRIPTION	aFX	aFX-S
1	1	PUSH BAR	6011490	6011490
2	1	ROD, CONNECTING 6' LG. DOCK LEVELER 8' LG. DOCK LEVELER 10' LG. DOCK LEVELER	711-848 711-849 712-462	711-848 711-849 712-462
3	1	LEVER, LIP LIFTER 6' LG. DOCK LEVELER 8' AND 10' LG. DOCK LEVELER	711-998 711-999	711-998 711-999
4	1	LEVER, LIP ASSIST	155-811	155-811
5	3	PIN, CLEVIS 1/2" DIA. X 1-3/4"	035-010	035-010
6	1	PIN, CLEVIS 3/8" DIA. X 2"	035-150	035-150
8	4	PIN, COTTER 1/8" DIA. X 1-1/4"	035-036	035-036
9	1	GAS SPRING (25K LEVELERS)	6002469	6002469
	1	GAS SPRING (30-45K LEVELERS)	709-437	709-437
10	3	WASHER, 3/8"	000-214	000-214
11	1	SPACER, LIP 6-1/2" WIDE DOCK LEVELER 7" WIDE DOCK LEVELER	287-606 287-607	287-606 287-607
12	1	LINK, RH	712-001	712-001
13	1	LINK, LH	712-002	712-002
14	2	BOLT, SOC. HD. SHLD.	712-061	712-061
15	2	NUT, HEX 3/8-16	000-030	000-030
16	2	KLIPRING 5/8"	049-060	049-060
17	1	ROLLER	700-045	700-045

PARTS LIST, continued

Air Bag/Pan Assembly

Fig. 46



6' LG DOCK LEVELERS – ALL CAPACITY

ITEM	QTY	PART DESCRIPTION	aFX	aFX-S
	1	BAG/PAN/FAN ASSEMBLY (INCLUDES ITEMS 1-20)	714-129	714-129
1	9	WASHER, 3/8" FLAT	000-051	000-051
2	1	LIFTING BAG	714-128	714-128
3	1	CLAMP BAR	157-747	157-747
4	2	PAN, OUTER	156-352	156-352
5	1	PAN, INNER	156-350	156-350
6	9	NUT, NYLOK, 3/8-16	000-253	000-253
7	4	WHEEL	711-846	711-846
8	1	AXLE, FRONT	712-745	712-745
9	1	AXLE, REAR	712-812	712-812
10	2	PIN, COTTER, HAIR	035-200	035-200
11	9	BOLT, HEX HD. 3/8-16 X 1-1/4"	000-357	000-357
12	2	BOLT, 3/8-16 X 7"	131-434	131-434
13	2	WASHER, FLAT 3/8	000-214	000-214
14	2	NUT, RETAINER	131-432	131-432
15	4	RING, RETAINING	131-457	131-457
16	1	FAN MOTOR ASSY – 120V	6008662	6008662
17	2	NUT, HEX LOCK 1/4-20	000-315	000-315
18	2	WASHER, FLAT, 1/4"	131-485	131-485
19	2	SCREW, BUTTON FLG. HD 1/4-20 X 3/4"	131-483	131-483
20	1	NIPPLE	155-578	155-578
N/S	A/R	PATCH KIT, BAG (NOT SHOWN)	184-379	184-379

PARTS LIST, continued

Air Bag/Pan Assembly

8' LG DOCK LEVELERS – 30K, 35K, 40K, and 45K CAPACITY (aFX MODEL only)

8' LG DOCK LEVELERS – 40K, and 45K CAPACITY (aFX-S MODEL only)

ITEM	QTY	PART DESCRIPTION	aFX	aFX-S
	1	BAG/PAN/FAN ASSEMBLY (INCLUDES ITEMS 1-20)	712-805	712-807
	1	LIFTING BAG ASSEMBLY (INCLUDES ITEMS 2,3,6 AND 11)	184-442	184-441
1	9	WASHER, 3/8" FLAT	000-051	000-051
2	1	LIFTING BAG	713-150	713-151
3	1	CLAMP BAR	157-747	157-747
4	2	PAN, OUTER	155-579	155-649
5	1	PAN, INNER	155-580	155-650
6	9	NUT, NYLOK, 3/8-16	000-253	000-253
7	4	WHEEL	711-846	711-846
8	1	AXLE, FRONT	712-745	711-845
9	1	AXLE, REAR	712-812	712-812
10	2	PIN, COTTER, HAIR	035-200	035-200
11	9	BOLT, HEX HD. 3/8-16 X 1-1/4"	000-357	000-357
12	2	BOLT, 3/8-16 X 7"	131-434	131-434
13	2	WASHER, FLAT 3/8	000-214	000-214
14	2	NUT, RETAINER	131-432	131-432
15	4	RING, RETAINING	131-457	131-457
16	1	FAN MOTOR ASSY – 115V	6008662	6008662
17	2	NUT, HEX LOCK 1/4-20	000-315	000-315
18	2	WASHER, FLAT, 1/4"	131-485	131-485
19	2	SCREW, BUTTON FLG. HD 1/4-20 X 3/4"	131-483	131-483
20	1	NIPPLE	155-578	155-578
	A/R	PATCH KIT, BAG (NOT SHOWN)	184-379	184-379

8' LG DOCK LEVELERS – 50K CAPACITY

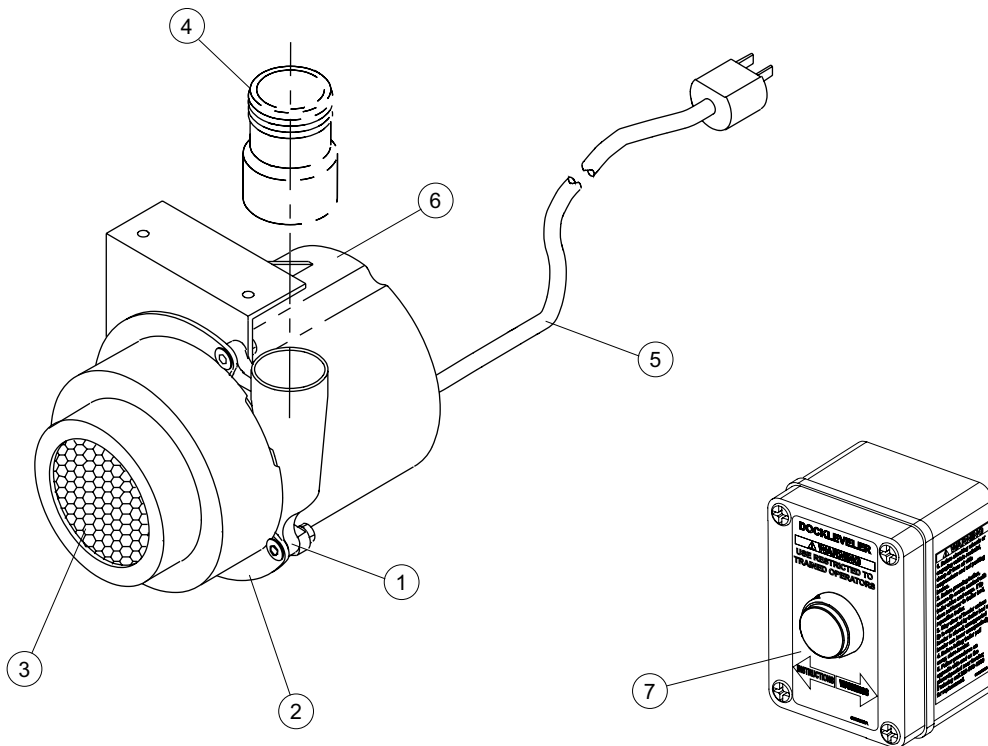
10' LG DOCK LEVELERS – ALL CAPACITY

ITEM	QTY	PART DESCRIPTION	aFX	aFX-S
	1	BAG/PAN/FAN ASSEMBLY (INCLUDES ITEMS 1-20)	712-807	712-807
	1	LIFTING BAG ASSEMBLY (INCLUDES ITEMS 2,3,6 AND 11)	184-441	184-441
1	9	WASHER, 3/8" FLAT	000-051	000-051
2	1	LIFTING BAG	713-151	713-151
3	1	CLAMP BAR	157-747	157-747
4	2	PAN, OUTER	155-649	155-649
5	1	PAN, INNER	155-650	155-650
6	9	NUT, NYLOK, 3/8-16	000-253	000-253
7	6	WHEEL	711-846	711-846
8	1	AXLE, FRONT	711-845	711-845
9	1	AXLE, REAR	712-812	712-812
10	4	PIN, COTTER, HAIR	035-200	035-200
11	9	BOLT, HEX HD. 3/8-16 X 1-1/4"	000-357	000-357
12	2	BOLT, 3/8-16 X 7"	131-434	131-434
13	2	WASHER, FLAT 3/8	000-214	000-214
14	2	NUT, RETAINER	131-432	131-432
15	4	RING, RETAINING	131-457	131-457
16	1	FAN MOTOR ASSY – 115V	6008662	6008662
17	2	NUT, HEX LOCK 1/4-20	000-315	000-315
18	2	WASHER, FLAT, 1/4"	131-485	131-485
19	2	SCREW, BUTTON FLG. HD 1/4-20 X 3/4"	131-483	131-483
20	1	NIPPLE	155-578	155-578
	A/R	PATCH KIT, BAG (NOT SHOWN)	184-379	184-379

PARTS LIST, continued

Fan/Piping Assembly

Fig. 47



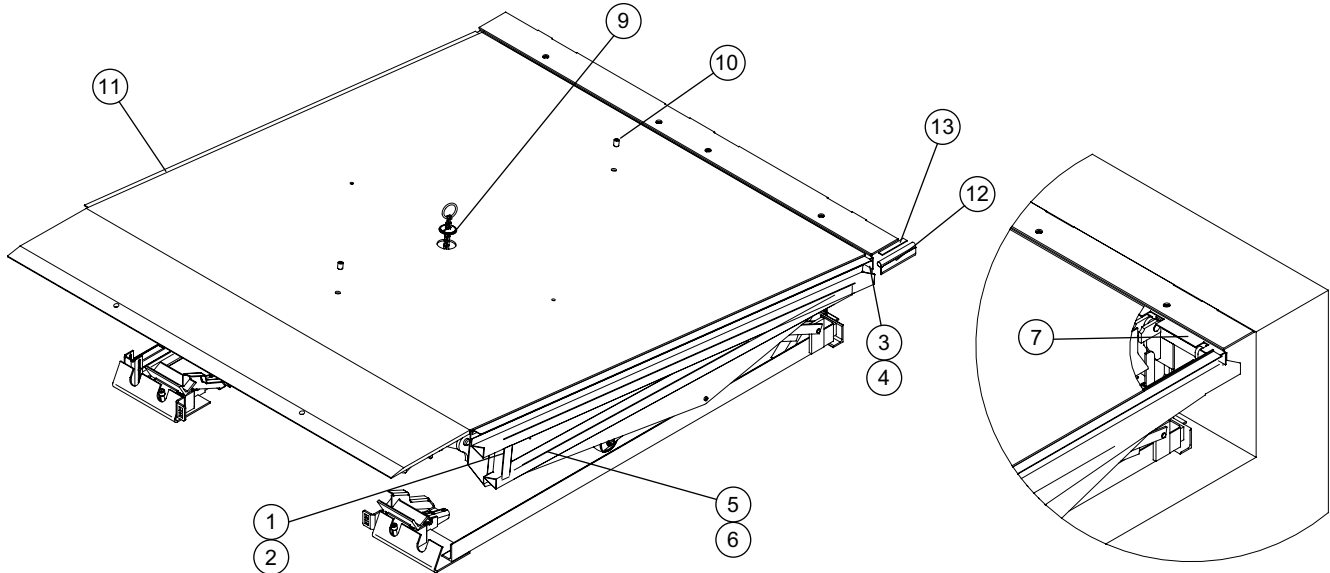
Item	Quantity	Description	Part Number
1	1	MOTOR, AIR 2 STAGE 120V	6008185
2	1	FILTER HOUSING	712-748
3	1	FILTER, FAN	712-196
4	1	NIPPLE	155-578
5	1	CORD W/PLUG	712-027
6	1	HOUSING, FAN	712-813
7	1	115V CONTROL STATION CONTROL STATION (OPTIONAL DUAL CONTACT)*	908-753 909-052

*For use with interlock applications on STAR® 4 and AUTO CHOCK® vehicle restraints.

PARTS LIST, continued

OPTIONAL ENERGY GUARD® DOCK LEVELLER SEALING SYSTEM

Fig. 48



Item	Description	Quantity									Part Number
		6x6 6008228	6.5x6 6008229	6x7 6008230	6x8 6008231	6.5x8 6008232	7x8 6008233	6x10 6008234	6.5x10 6008235	7x10 6008236	
1	5-1/2" front seal	2	2	2	2	2	2	2	2	2	6008166
2	Vertical seal	2	2	2	2	2	2	2	2	2	6008173
3	6' upper seal 8' upper seal 10' upper seal	2	2	2	2	2	2	2	2	2	6008167 6008169 6008171
4	Aluminum strip 53-1/2" Aluminum strip 77-1/2" Aluminum strip 101-1/2"	2	2	2	2	2	2	2	2	2	6008175 6008177 6008179
5	6' Lower seal 8' Lower seal 10' Lower seal.	2	2	2	2	2	2	2	2	2	6008168 6008170 6008172
6	Aluminum strip 6' upper Aluminum strip 8' upper Aluminum strip 10' upper	2	2	2	2	2	2	2	2	2	6008174 6008176 6008178
7	6' Kelley rear seal 6.5' Kelley rear seal 7' Kelley rear seal	1	1	1	1	1	1	1	1	1	6007671 6007672 6007673
8	TEK screws (not shown)	26	26	26	26	26	26	28	28	28	215702
9	Chain cup seal	2	2	2	2	2	2	2	2	2	0392
10	3/4-10 Set screw	2	2	2	2	2	2	2	2	2	6008249
11	W/seal 600 W brush W/seal 800 W brush W/seal 600 W brush cut	2	2	2	2	2	2	2	2	2	328907 328908 328910
12	Corner bulb seal	2	2	2	2	2	2	2	2	2	6009507
13	Transition angle seal (optional)	2	2	2	2	2	2	2	2	2	6008247

aFX LIMITED WARRANTY

THIS LIMITED WARRANTY IS KELLEY'S SOLE AND EXCLUSIVE WARRANTY WITH RESPECT TO THE DOCK LEVELER AND IS IN LIEU OF ANY OTHER GUARANTEES OR WARRANTIES, EXPRESS OR IMPLIED

Kelley warrants that this DOCK LEVELER will be free from flaws in material and workmanship under normal use for a period of one (1) year from the earlier of 1) 60 days after the date of initial shipment by Kelley, or 2) the date of installation of the DOCK LEVELER by the original purchaser, provided that the owner maintains and operates the DOCK LEVELER in accordance with this User's Manual.

Kelley expressly warrants that the BAG, MOTOR, GASKETS, FITTINGS and SEALS will be free from flaws in material and workmanship under normal use for a period of five (5) years from the earlier of 1) 60 days after date of shipment, or 2) the date of installation of the DOCK LEVELER by the original purchaser, provided the purchaser maintains and operates the DOCK LEVELER in accordance with the User's Manual.

The LIP HINGE for this DOCK LEVELER is warranted for the rated lifetime of the DOCK LEVELER provided that the LIP HINGE is maintained per this User's Manual. The rated lifetime of the DOCK LEVELER shall be determined by the KELLEY DOCK LEVELER LIFE RATING SYSTEM, publication number 10-768, available from Kelley upon request.

In the event that this DOCK LEVELER proves deficient in material or workmanship within the applicable Limited Warranty period, owner shall so notify Kelley, and Kelley will, at its option:

1. Replace the DOCK LEVELER, or LIP HINGE, or the deficient portion(s) thereof, without charge to the owner; or
2. Alter or repair the DOCK LEVELER, or LIP HINGE, on site or elsewhere, without charge to the owner.

This Limited Warranty does not cover any failure caused by improper installation, abuse, improper operation, negligence, or failure to maintain and adjust the DOCK LEVELER properly. Parts requiring replacement due to damage resulting from vehicle impact, abuse, or improper operation are not covered by this warranty. KELLEY DISCLAIMS ANY RESPONSIBILITY OR LIABILITY FOR ANY LOSS OR DAMAGE OF ANY KIND (INCLUDING WITHOUT LIMITATION, DIRECT, INDIRECT, CONSEQUENTIAL OR PUNITIVE DAMAGES, OR LOST PROFITS OR LOST PRODUCTION) arising out of or related to the use, installation or maintenance of the DOCK LEVELER (including premature product wear, product failure, property damage or bodily injury resulting from use of unauthorized replacement parts or modification of the DOCK LEVELER). Kelley's sole obligation with regard to a DOCK LEVELER that is claimed to be deficient in material or workmanship shall be as set forth in this Limited Warranty. This Limited Warranty will be null and void if the original purchaser does not notify Kelley's warranty department within ninety (90) days after the product deficiency is discovered. .

THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF, INCLUDING, BUT NOT LIMITED TO, A WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, ALL OF WHICH KELLEY HEREBY DISCLAIMS.

aFX-S LIMITED WARRANTY

THIS LIMITED WARRANTY IS KELLEY'S SOLE AND EXCLUSIVE WARRANTY WITH RESPECT TO THE DOCK LEVELER AND IS IN LIEU OF ANY OTHER GUARANTEES OR WARRANTIES, EXPRESS OR IMPLIED

Kelley warrants that this DOCK LEVELER will be free from flaws in material and workmanship under normal use for a period of one (1) year from the earlier of 1) 60 days after the date of initial shipment by Kelley, or 2) the date of installation of the DOCK LEVELER by the original purchaser, provided that the owner maintains and operates the DOCK LEVELER in accordance with this User's Manual.

Kelley expressly warrants that the BAG, MOTOR, GASKETS, FITTINGS and SEALS will be free from flaws in material and workmanship under normal use for a period of five (5) years from the earlier of 1) 60 days after date of shipment, or 2) the date of installation of the DOCK LEVELER by the original purchaser, provided the purchaser maintains and operates the DOCK LEVELER in accordance with the User's Manual.

In the event that this DOCK LEVELER proves deficient in material or workmanship within the applicable Limited Warranty period, owner shall so notify Kelley, and Kelley will, at its option:

1. Replace the DOCK LEVELER or the deficient portion(s) thereof, without charge to the owner; or
2. Alter or repair the DOCK LEVELER on site or elsewhere, without charge to the owner.

This Limited Warranty does not cover any failure caused by improper installation, abuse, improper operation, negligence, or failure to maintain and adjust the DOCK LEVELER properly. Parts requiring replacement due to damage resulting from vehicle impact, abuse, or improper operation are not covered by this warranty. KELLEY DISCLAIMS ANY RESPONSIBILITY OR LIABILITY FOR ANY LOSS OR DAMAGE OF ANY KIND (INCLUDING WITHOUT LIMITATION, DIRECT, INDIRECT, CONSEQUENTIAL OR PUNITIVE DAMAGES, OR LOST PROFITS OR LOST PRODUCTION) arising out of or related to the use, installation or maintenance of the DOCK LEVELER (including premature product wear, product failure, property damage or bodily injury resulting from use of unauthorized replacement parts or modification of the DOCK LEVELER). Kelley's sole obligation with regard to a DOCK LEVELER that is claimed to be deficient in material or workmanship shall be as set forth in this Limited Warranty. This Limited Warranty will be null and void if the original purchaser does not notify Kelley's warranty department within ninety (90) days after the product deficiency is discovered. .

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Please direct questions about your dock leveler to your local distributor or to 4Front Engineered Solutions, Inc.

Your local Kelley® distributor is:

Corporate Head Office:

1612 Hutton Dr. Suite 140
Carrollton, TX. 75006
Tel. (972) 466-0707
Fax (972) 323-2661

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