MAT JACK /IIPI
Landing Cushions

# P r o d u c t M a n u a l

MAT JACK®

## Please read manual in its entirety before operating Equipment!

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Thank You for your purchase of the MatJack / IIPI Landing Bags. The following manual has been provided to you as a guide to assist you in operating your new Landing Bags. This manual is in no way a complete or comprehensive manual of all of the aspects of the use, maintenance or repair of your MatJack / IIPI Landing Bags. Once you have taken delivery of your MatJack / IIPI Landing Bags compare what you have received with the invoice. Refer to Section 1- Landing Bag features to identify all items. If you notice any discrepancies or breakages you must report it to IIPI or the carrier within 7 days of delivery. Do not sign for damaged products. By doing so you carry all responsibility and will not be compensated for any discrepancies or damages.We appreciate your business. If you have any comments, doubts or concerns about the use and maintenance of your MatJack / IIPI Landing Bags or the information outlined in this manual please contact your factory representative. Please note that this manual will only provide an overview of the equipment, by generally explaining how to operate and service your MatJack / IIPI Control Cushions. It is suggested that all Air Cushion and Landing Bag Operators should attend factory training prior to operating any air cushion equipment.

Further the information, pictures and diagrams, provided in this manual may differ slightly from the actual products, as more improvements are made to our products.

MatJack /IIPI and Jumbo Safety Lift Systems reserve the right to make changes at anytime without notice and without incurring any obligation.

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# Section 1

## Landing Bag Features

Upon receiving your delivery begin by checking the number of packages against the packaging slip to ensure you have received all of the boxes from the delivery company. The number of packages will vary depending on whether you purchased a two or three bag set. Open all of the packages to ensure you have received your full order and nothing has been damaged during delivery.

**Contents--**

**2 Bag Landing Bag Set-**

This set is used in areas where the majority of your work is dealing with single units such as straight trucks, mixers, dump trucks and cranes, or tractor trailer combinations using short wheel based power units.

The contents will include:

1. Two landing cushions identified. Photo 1-1
2. One hand held blower motor. Photo 1-2
3. One multi bag connection pipe. Photo 1-3
4. Three supply hoses. Photo 1-4

**3 Bag Landing Bag Set-**

This set is used in area's where the majority of your work is dealing with tractor trailer combinations with long wheel base power units (two hundred thirty inch plus).

The contents will include:

1. Three landing cushions. Photo 1-1
2. One hand held blower motor. Photo 1-2
3. Two multi bag connection pipes. Photo 1-3
4. Five supply hoses. Photo 1-4

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Photo 1-1


Photo 1-2

Photo 1-3

Photo 1-4

# Landing Bag Applications

This product is designed to be used either on their own or in conjunction with your Jumbo Safe Lift Cushions. Their sole purpose is to control a casualty during an upright and lower it back onto its wheels/tracks/ etc.

# How the system works

The bags work on many of the same principles as the stunt bags used in movies, with a few subtle differences. As a load is placed on the bag, the baffles will open, air will be exhausted and the bag will deflate lowering the load to the ground. The shape has a specific purpose. When the wreck reaches its balance point all of the weight is placed on the portion of the casualty in contact with the ground. In most cases this will be the casualty's tires. As the unit comes through the arc, weight begins to transfer off the tires in contact with the ground and onto the tires touching the landing bags. The bags are narrower at the top, limiting the amount of surface contact with the load and having a greater effect on the baffles. The bags then taper out the bottom becoming much larger. The deeper the truck sinks into the bags, the more surface contact is gained, thus the more powerful the bag will become. This will in turn reduce the psi and begin to have a lesser effect on the baffles. Therefore the lower the truck drops, the more the weight is transferred, the stronger the bags become. This formula ensures the speed the unit is lowered at will remain constant throughout the entire process, bringing the unit to the ground smoothly and effortlessly. Photo 1-5

# Section 2
## Operational Guidelines

The following is a step by step guide to using your control bag on a mock scenario. For the purposes of these instructions we are going to control a tractor trailer with a long wheel based power unit:

1. Decide on the number of bags you wish to deploy. You will need a minimum of two bags to control the trailer and further may wish to add a third bag to control the power unit, minimizing the chances of a tank fairing contacting the sleeper (causing additional damage) when the nose drops through the arc. For the purposes of this demo we are going to use a total of three bags.
2. Unload the bags from the vehicle you use to transport them.
3. Begin to set up bags, by placing the bag on the bottom or, wheel side of the casualty, with the air inlet hose facing away from the unit your uprighting. Place the first bag inline with one of the axles located on the trailers bogies (trailer wheels). Try to choose the axle with the least amount of damage or furthest from damage in order to minimize the chance of a sharp piece of metal contacting the bag. Place the second bag inline with one of the drive wheels on the power unit. The same rules apply to this bag when choosing which axle to control. Place the third bag (optional) inline with the tractors steer axle. **NOTE* the brakes must be locked on any wheel which will contact a control bag. If locking a brake on an axle is not an option, choose another axle or lock the wheel in place by other means (chains, straps or apply the brakes manually at the push rod and lock it in place with vice grips).**
4. With the bags in place, the next step is to setup the blower motor. Start by ensuring there is a sufficient amount of fuel (two stroke mix) in the blower tank (reservoir) to complete the job. Start the motor and place it in either the front of the wreck or the rear depending on which location is closest to the vehicle you transported the bags in.
5. Retrieve your supply hoses and multi bag connection pipe(s) (Y-pipe). Check all of the female ends of the cam locks located on the Y-pipes and hoses. You should find a flat O-ring in each of them. This should take just a few minutes. Now shut down your blower motor as it has had sufficient time to warm up. Next, attach a hose to it making sure cam locks are fully engaged and pinned with the clips supplied. Attach a Y-pipe with the bottom of the “Y” facing the blower motor. On the top side of the “Y”, attach the first bag to the side closest to the casualty; attach another hose to the other side. If the last hose reaches the next bag go ahead and place your next Y-pipe on it the same way you did the last one. If it will not reach, attach another hose to it then add the Y-pipe.

Repeat this step for the final bag. Before going any further, decide where the wreck will sit when the job is completed and ensure you have run all of your hoses in a manner in which they will not become trapped by the casualty.
6. Once the uprighting begins, restart the blower motor, lock the throttle on full and make sure the bags fully inflate.
7. Place the bottom of the bags where the upper tires will land. Tip the bags towards the casualty and allow the tires to touch the tops of the bags. Hold them in place until there is enough pressure on them to keep them from moving. This can be done one bag at a time with just one person.
8. When the casualty approaches the balance point, return to the blower motor and release the throttle, returning the motor to an idle.
9. When gravity takes over, the baffles will begin to open, lowering the casualty to the ground in a controlled manner. The back pressure may shut the motor down, do not panic, this is a normal occurrence if there is a lot of weight shifting over.
10. Congratulations, the upright has successfully been lowered to the ground. Disconnect the hoses, blower motor and Y-pipes then stow them back on your vehicle.
11. Lift the front axle up while hooking the unit to tow it. At this point remove the front bag. Once hooked slowly move the unit either forward or rear ward and pull the unit off the remaining bags **(with the brakes released) or rig to lift the casualty up prior to moving and remove the cushion**. Straighten out the bags and put them away.
12. Lastly, don't forget to re-inflate the bags (once back at your shop), clean them, check for damage and return them to services for the next job.

If you followed these steps, you will be successful. With practice you should be set and ready to control the casualty in less than 10 minutes. The big advantage this system has over using the traditional methods is it will lower the casualty evenly, without any twisting on the frame, floor,etc. As well, there will be no added stress to the truck / trailers walls and the bags can be used regardless of the space available around the casualty.

# Positioning and Placement


Photo 2-1


Photo 2-2


Photo 2-3


Photo 2-4


Photo 2-5 (T&T Upright)


Photo 2-6


Photo 2-7


Photo 2-8

# Section 3

## Care, Maintenance & Storage

When bags become soiled wash with Matjack Cushion Cleaner and treat with Matjack Dressing or use a mild soap and warm water. Leave bags inflated and air dry completely. Use a carpet blower or a vacuum. Landing Bags must be completely dry before storing to avoid potential contamination and deterioration of construction material. If possible avoid storing cushion(s) in high heat or extreme cold folded up, this can make them difficult to deploy in colder climates.

# Contact Information

Mat Jack/ Indianapolis Industrial Products, Inc. 2320 Duke St.
Indianapolis, Indiana 46205/// T- 317.359.3078/ FX 317.359.3079
matjack@sprynet.com ***Or Call 1-800-827-3755 for more information***