

# **FLIPPER** OWNER'S MANUAL



**Models TS-03 and TS-04**



**Please review this Owner's Manual for assembly instructions, product registration and information on accessory products.**



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Please review this Owner's manual for care, warnings  
and product registration.  
For use and training programs refer to the FLIPPER Training Manual

Patents Pending



Developed by:  
Milo Fitness, LLC  
Fort Collins, CO 80525

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## WARRANTY AND PRODUCT REGISTRATION

### LIMITED WARRANTY for FLIPPER™

Subject to the exclusions and other terms and conditions set forth below, Milo Fitness, LLC (“MILO”) warrants the following components to be free from defects in materials and workmanship under normal usage as specified below. This limited warranty is your exclusive remedy and applies to new products which are accompanied by this written warranty. MILO, at its option, will repair, replace or refund the purchase price of any product that does not conform to this warranty. Repairs or replacement will be made at no charge to the customer for parts or labor, provided that the customer shall be responsible for any transportation and shipping costs. MILO may use functionally equivalent reconditioned/refurbished/pre-owned or new products, accessories and parts.

This warranty is valid only for the original purchaser. Registration by serial number for each unit is made to the purchaser by MILO at the date of purchase by the customer. This warranty extends only to the first purchaser, and is not transferable.

### Exclusions from Coverage

**Normal Wear and Tear.** Periodic maintenance, repair and replacement of parts due to normal wear and tear are excluded from coverage.

**Abuse and Misuse.** Defects or damage that result from improper operation, storage, misuse or abuse, accident or neglect, subjecting the product to abnormal usage or conditions or other acts which are not the fault of MILO are excluded from coverage. Use of the product in any manner that is inconsistent with the instructions provided by MILO is considered misuse and any defects or damage that result from such misuse are excluded from coverage.

**Use of Non-MILO Accessories.** Defects or damage that result from the use of Non-MILO branded or certified accessories are excluded from coverage.

**Unauthorized Service or Modification.** Defects or damages that result from service, maintenance, repairs, adjustment, installation or alteration conducted by anyone other than MILO or its authorized representatives are excluded from coverage.

### Limitation of Liability

THE WARRANTIES AND REMEDIES CONTAINED HEREIN ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING ANY LIABILITY ARISING UNDER ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, STATUTORY OR OTHERWISE. IN NO EVENT SHALL MILO BE LIABLE FOR ANY INCIDENTAL, SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, WHETHER RESULTING FROM THE USE, MISUSE OR INABILITY TO USE THE PRODUCT OR FROM DEFECTS IN THE PRODUCT. MILO retains the exclusive right to repair or replace the product or offer a full refund of the purchase price at its sole discretion. SUCH REMEDY SHALL BE YOUR SOLE AND EXCLUSIVE REMEDY FOR ANY BREACH OF WARRANTY.

### COMMERCIAL WARRANTY:

Frame: 4 years (excluding coatings)

Wear items: 2 years

For warranty questions or claims, please contact your distributor or Milo Fitness, LLC at [FLIPPER@MiloFit.com](mailto:FLIPPER@MiloFit.com)



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## IMPORTANT SAFETY INFORMATION



1. The FLIPPER™ is intended to be used under professional supervision. As with any exercise device, some equipment and certain exercises are not appropriate for some people, especially if you are over the age of 35 years, pregnant women, and those with health problems.
2. Do not overexert the user with any exercise program. Follow the strength and conditioning coach or other fitness professional for training intensity, frequency and duration of exercise sessions. If the user experiences any pain, tightness in their chest, and irregular heartbeat, dizziness, nausea or shortness of breath, stop exercising and consult a healthcare professional immediately.
3. Ensure the user is properly warmed up before engaging in any form of strenuous activity. A mild cardiovascular activity, such as walking, stepping or cycling at a mild rate is recommended as a warm up. After exercising, ensure the user is properly cooled down.
4. Before EACH use of the FLIPPER™ inspect the equipment, paying particular attention to any worn parts, bumpers or frame structure that is bent or broken. If a bolt or other fastener comes loose or is missing, or any action of the machine seems improper, do NOT use the product. Contact the distributor or manufacturer to obtain replacement parts.
5. ALWAYS have at least one spotter on the outside of the device and to the side of the lifter when using the FLIPPER™. It is preferable to have two spotters, one to the lifter's right and one to the lifter's left. If the lifter cannot finish a lift, the spotters step in and help support the weight of the FLIPPER™ while the lifter moves out of the path of the FLIPPER™ as it is lowered to the ground or lifting platform.
6. Do NOT modify or otherwise alter any element of this product. Do NOT use this equipment for anything other than its intended use as an exercise device. Do NOT use items or attachments with the FLIPPER™ other than those available for use with this device.

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7. Place the FLIPPER™ on a solid level surface with plenty of room away from other objects, people and walls. It is recommended that the FLIPPER™ be used outside or in an indoor turf or track training facility. The FLIPPER™ is not recommended to be used on a wooden court or similar floor as the bumpers may damage the floor. The FLIPPER™ Docking Station is recommended to use in a weight room.
  8. Ensure the users are properly dressed before using the FLIPPER™. Clothing should be comfortable and allow for freedom of movement. Users may use lifting gloves with the FLIPPER™, especially when used for endurance training (lighter weight and high repetitions) or used in hot environments.
  9. In a traditional life, the FLIPPER™ is designed for use by only one person at a time. In a side lift (see FLIPPER Training Manual) two lifters may simultaneously lift the FLIPPER.
  10. At NO time should anyone put their hands or feet under the machine, or in the path of the FLIPPER™ while it is being flipped.
  11. Use caution when changing weights. ALWAYS position the Spring Locking Collars (Item #9 in Exploded View) on the weight pins securely against the outside of the weight plates. If a Spring Locking Collar is broken or missing, do NOT use this machine.

For information, replacement parts, labels and manuals contact:

Your Distributor, or:  
MILO Fitness, LLC  
Fort Collins, CO 80525  
970-689-3636  
FLIPPER@MiloFit.com  
www.MiloFit.com





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## EQUIPMENT WARNING LABELS

The Warning and Maximum Load labels are shown below. The locations of these labels are shown in the drawing on the PRODUCTS SPECIFICATION pages (11-12). The serial number label is on the inside of the frame weldment.

**Warning Label 1**



**Warning Label 2**



**Maximum Load Label (TS-03):**

**MAX LOAD: 90 LBS (Each Pin)**

Each of the four weight pins on the TS-03 may be loaded to up to 90 pounds each, or a total added weight of 360 pounds. Do NOT under any circumstances overload any pin beyond this limit. Doing so will void the warranty and may result in injury to the machine, lifter or spotter.

**Maximum Load Label (TS-04):**

**MAX LOAD: 135 LBS (Each Pin)**

Each of the four weight pins on the TS-04 may be loaded to up to 135 pounds each, or a total added weight of 540 pounds. Do NOT under any circumstances overload any pin beyond this limit. Doing so will void the warranty and may result in injury to the machine, lifter or spotter.



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## CARE AND MAINTENANCE

Always check each machine before use to ensure:

1. No bolts or nuts are missing or loose.
2. The FLIPPER should be solid and secure.
3. The Bumper Extrusions (item #9, qty: 4) should be firm and have a substantially rectangular internal cavity (not oblong or flat). Normal wear is expected, especially if used on a hard surface.
4. The Bumper Chest Supports (item #11, qty: 4) should be free from any significant wear, tears or missing material. Normal wear is also expected, especially if used on a hard surface.
5. The Spring Locking Collars (item #8, qty: 4) should ALWAYS be used. To release the Collars, squeeze the handle portions together and slide on or off of the weight pin. Upon release of the handle portions of the Spring Locking Collars, the Collars should lock securely on the weight pin. If a Spring Locking Collar is lost or comes loose during use, contact your distributor or Milo Fitness for a replacement part.
6. The Spring Locking Collars should be firmly against the outside of the weight plates and the weight plates should be firmly against the Rubber Plate Bumpers (item #5, qty: 4). This helps prevent the weight plates from causing damage to the device or others during use.
7. Inspect the frame for any damage. If any element becomes damaged, bent or broken, contact your Distributor or Milo Fitness before using the device.

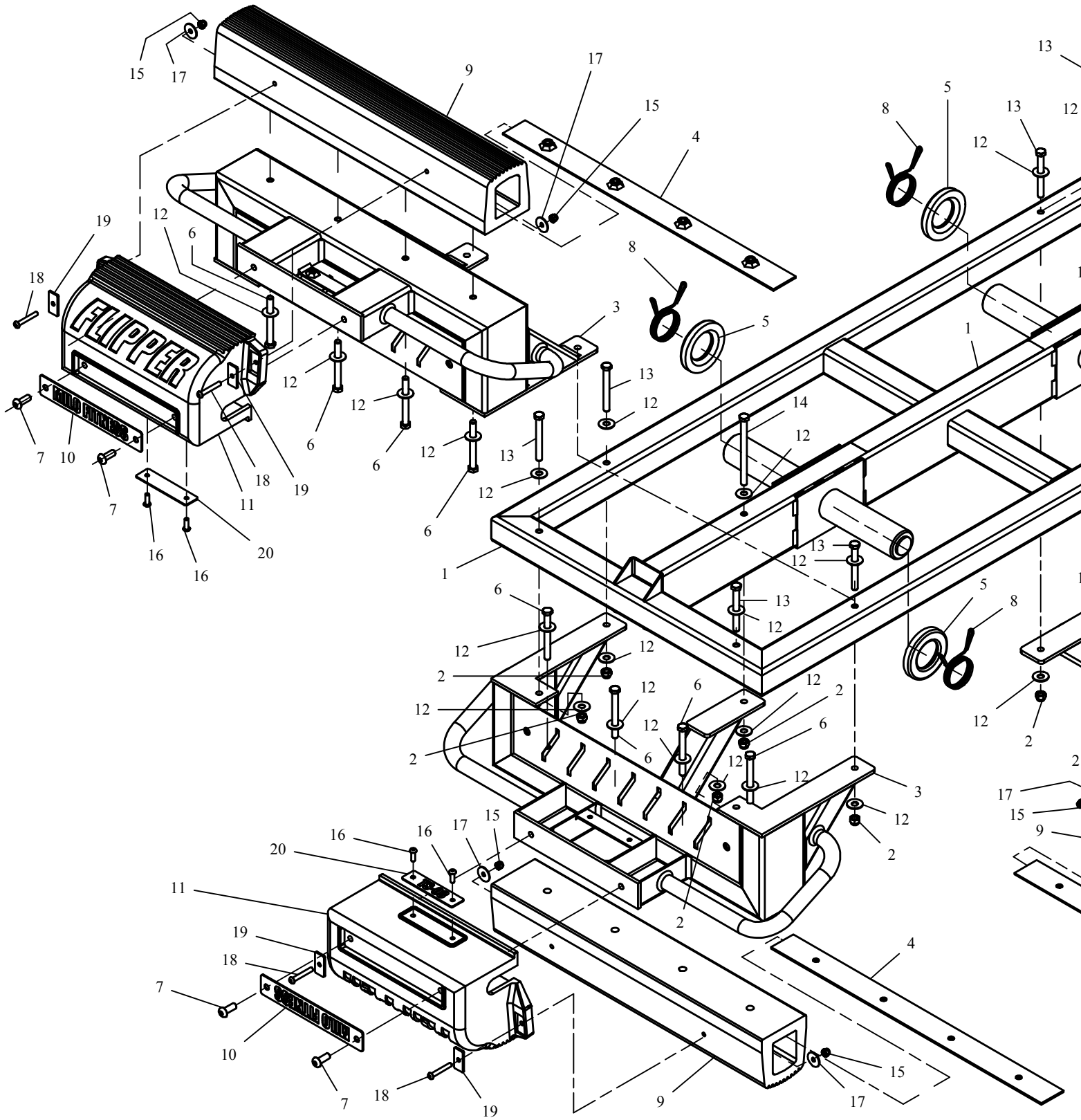
## PARTS LISTS TS-03

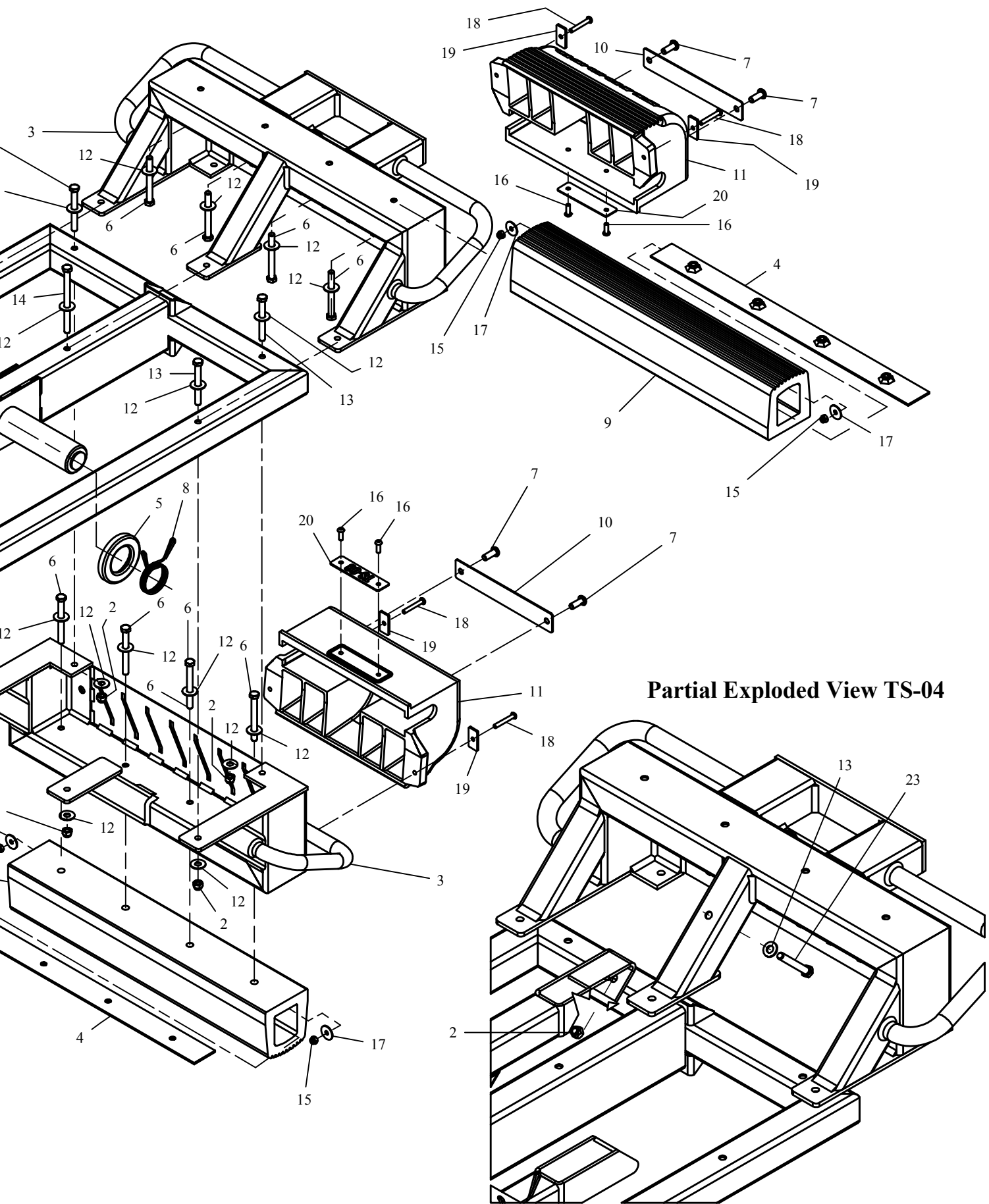
<b>Parts List TS-03</b>		
Item	Part No/Description	Qty
1	TS-BW-01 / Frame Weldment TS-03	1
2	3/8-16 UNC Elastic Lock Nut	10
3	TS-AW-01 / Handle Weldment	4
4	TS-AW-02 / Bumper Plate Weldment	4
5	TS-B-08 / Rubber Plate Bumper	4
6	3/8-16 UNC - 3.5 Hex Head Cap Screw	16
7	3/8-16 x 1 Hex Socket Button Head Cap Screw	8
8	TS-B-10 / Spring Locking Collar	4
9	TS-A-12 / Bumper Extrusion	4
10	TS-A-16 / Milo Washer Plate	4
11	TS-A-13 / Bumper Chest Support	4
12	3/8 - Regular - Type B Plain Flat Washer, Steel	36
13	3/8-16 UNC - 3.25 Hex Head Cap Screw	8
14	3/8-16 UNC - 5 Hex Head Cap Screw	2
15	1/4-20 UNC Elastic Lock Nut	8
16	1/4-20 x 3/4 Hex Socket Button Head Cap Screw	8
17	1/4 - wide - Type B Plain Flat Washer, Steel	8
18	1/4-20 x 1 3/4 Hex Socket Button Head Cap Screw	8
19	TS-A-15 / Chest Support Washer Plate	8
20	TS-A-17 / Model Number Washer Plate (TS-03)	4
21	TS-B-09 / Load Decal (TS-03)	2

## PARTS LISTS TS-04

Parts List TS-04		
Item	Part No/Description	Qty
1	TS-CW-01 / Frame Weldment (TS-04)	1
2	3/8-16 UNC Elastic Lock Nut	14
3	TS-AW-01 / Handle Weldment	4
4	TS-AW-02 / Bumper Plate Weldment	4
5	TS-B-08 / Rubber Plate Bumper	4
6	3/8-16 UNC - 3.5 Hex Head Cap Screw	16
7	3/8-16 x 1 Hex Socket Button Head Cap Screw	8
8	TS-B-10 / Spring Locking Collar	4
9	TS-A-12 / Bumper Extrusion	4
10	TS-A-16 / Milo Washer Plate	4
11	TS-A-13 / Bumper Chest Support	4
12	3/8 - Regular - Type B Plain Flat Washer, Steel	40
13	3/8-16 UNC - 3.25 Hex Head Cap Screw	8
14	3/8-16 UNC - 5 Hex Head Cap Screw	2
15	1/4-20 UNC Elastic Lock Nut	8
16	1/4-20 x 3/4 Hex Socket Button Head Cap Screw	8
17	1/4 - wide - Type B Plain Flat Washer, Steel	8
18	1/4-20 x 1 3/4 Hex Socket Button Head Cap Screw	8
19	TS-A-15 / Chest Support Washer Plate	8
20	TS-A-19 / Model Number Washer Plate (TS-04)	4
22	TS-C-09 / Load Decal (TS-04)	2
23	3/8-16 UNC - 2.75 Hex Head Cap Screw	4

# Exploded View TS-03 & TS-04





**Partial Exploded View TS-04**

## PRODUCT SPECIFICATIONS:

### TS-03:

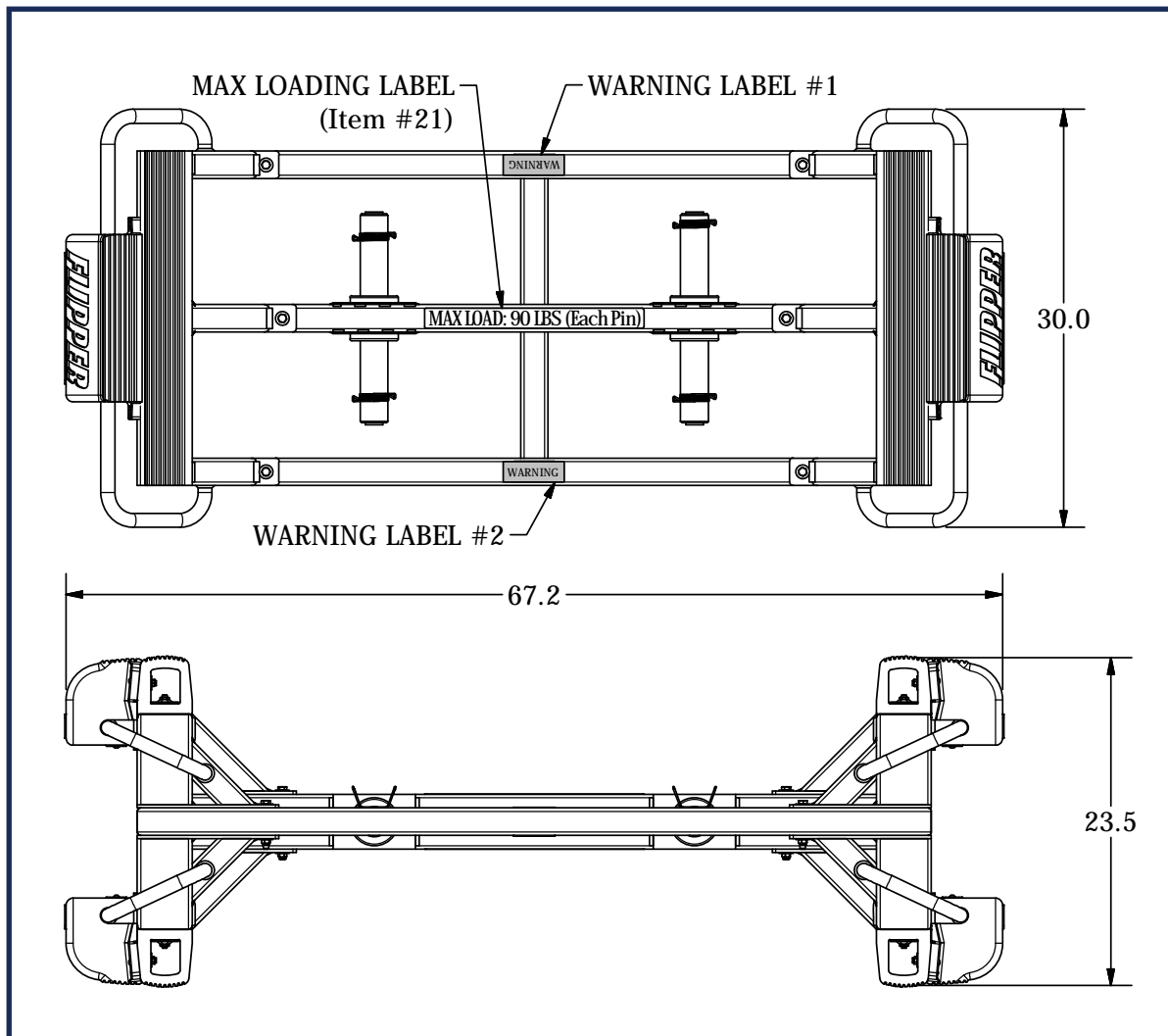
Length: 67.2 in (1707 mm)

Height: 23.5 in (597 mm)

Width: 30 in (762 mm)

Weight (Unloaded): 260 Lbs (118 Kg)

Maximum Loaded Weight 620 lbs (282 Kg)



### TS-03 Dimensions

## PRODUCT SPECIFICATIONS:

### TS-04:

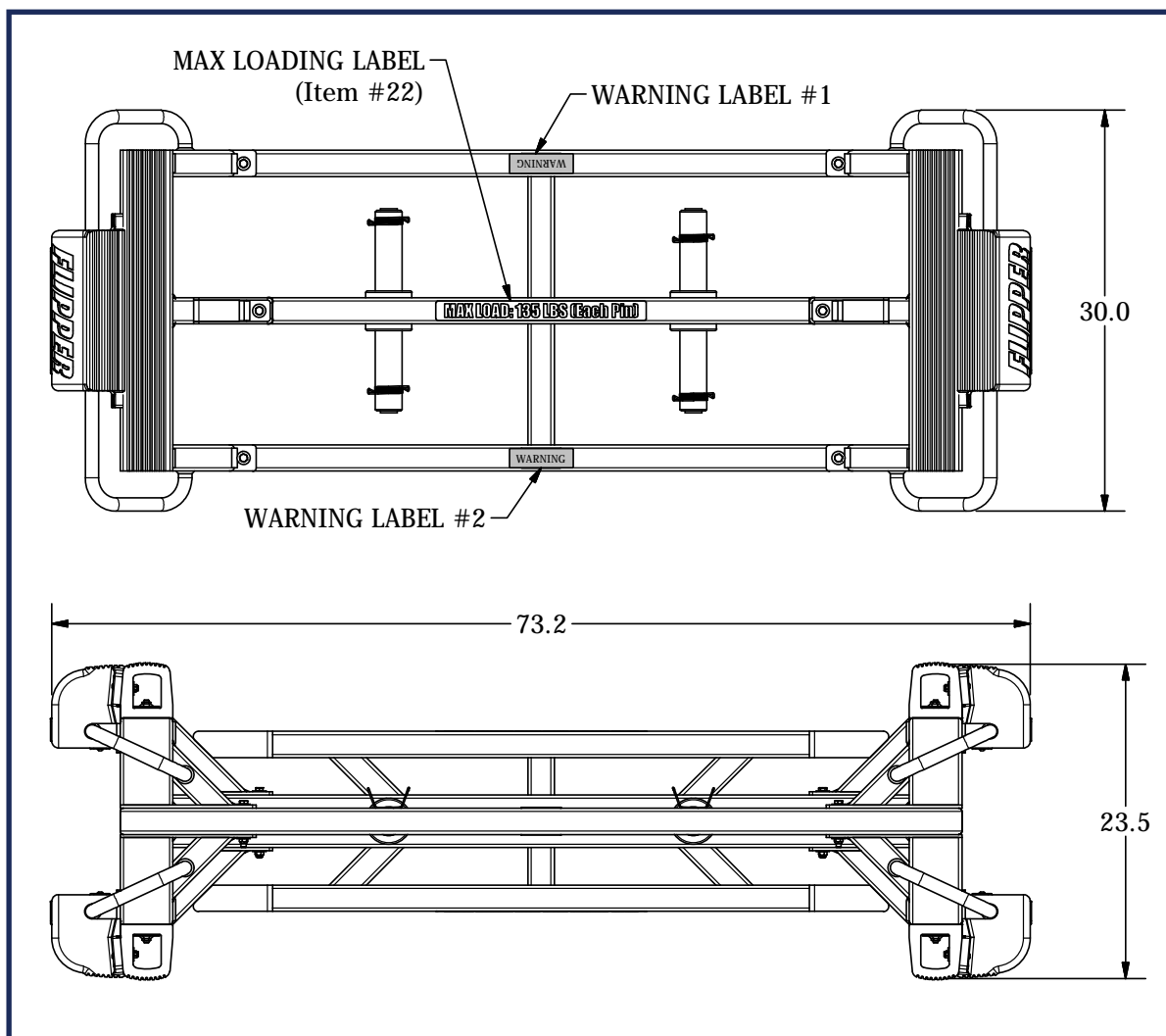
Length: 73.2 in (1859 mm)

Height: 23.5 in (597 mm)

Width: 30 in (762 mm)

Weight (Unloaded): 295 Lbs (134 Kg)

Maximum Loaded Weight: 835 lbs (380 Kg)



### TS-04 Dimensions



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## PRODUCT USE

To use the FLIPPER, squat down on one side of the device as shown in Figure 1. Grasp the handles with each hand. The feet should be behind the hands. How far behind may vary. This issue of foot placement is discussed in detail in the Training Manual. The lifter's chest should be against the Bumper Chest Support (item #11).



Fig. 1 Prior to first pull

The lifter will extend their hips, knees and ankles (triple extension) to drive one end of the FLIPPER up. During this “First Pull” phase of the lift, the arms should remain substantially straight and the hips and knees should extend at a relatively equal manner. This “simultaneous” extension is similar to a squat, as opposed to a deadlift, which is a “sequential” deadlift lower body extension, as the bar has to be manipulated around the knee (knee pass). In lifting the FLIPPER, the device acts as a large “hinge” to provide stability to the lifter not evident in a deadlift. The spotter is positioned to the side of the lifter to assist the lifter if necessary.

As the hands of the lifter pass the knee, the “Second Pull” phase of the lift takes place (Figure 2). This is the highest power production phase of the lift. The lifter rapidly extends the hips, knees and ankles and shrugs the shoulders to drive the end of the FLIPPER as high onto the torso of the body as possible. During this phase the lifter may come off the ground. Some lifters prefer to “kip” or kick the implement up with the thigh of one leg contacting the bottom Bumper Extrusion (item #10). This is not necessary and may not be desirable as the training goal is to build explosive

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## PRODUCT USE - CONT'D

power and strength. This is best attained by centering the body on the device and generating as much power as possible by rapid simultaneous extension of the legs and hips. That will not happen if one leg is in the air. In some instances during a “kip” the lifter’s knee may hit a weight plate loaded on the FLIPPER. Use caution if a lifter uses this lifting style.



Fig. 2 End of first pull,  
beginning of second pull

At the peak height of the FLIPPER due to the second pull, the athlete flexes their arms, and rotates their grasp from a pull grip (underhand grip) to the push grip (overhand grip). This is referred to as the transition phase.

Lifting heavier weights, nearing the athlete’s 1RM, there may be multiple “second pulls”. The tire flip has many similarities to an Olympic clean and jerk. Though many of the lifting phases are similar, one of the differences is after the second pull of a clean, the athlete must catch the bar in a balanced stance, with the bar on shoulders of the lifter. In a tire flip, there is a “catch” of sorts, but with the FLIPPER, the cushioned rubber bumpers can contact the torso of the lifter, even resting against the body of the lifter. In doing so, the lifter may perform several sequential “supplementary second pulls” to work the implement up their torso until they can rotate their grip,

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## PRODUCT USE - CONT'D

thereby reaching a modified “transition phase”. This may be the most challenging phase for the lifter. If the lifter cannot complete the lift to the transition phase, the spotter may step in and assist the lifter, or the lifter may step back out of the path of the FLIPPER and let it fall to the starting position.

The final phase of the flip is the push phase. The end of the transition phase and the beginning of the push phase is shown in Figure 3. As the name implies, the lifter extends their arms, keeping their torso upright. The lifter pushes the FLIPPER to the vertical position and then over. The bumpers of the FLIPPER cushion the impact with the ground. The same lifter or another lifter may approach the close end and repeat the process or they may go to the other end and flip the FLIPPER back to the starting position.



Fig. 3 End of Transition phase and beginning of Push Phase

For more detail of the mechanics and forces involved in the lift, please consult the Training Manual. When used inside, it is suggested to use the FLIPPER Docking Station or a large open space, such as a practice field. For outdoor training, any large open space with an appropriately stable and durable surface may be used. The resistance to the lifter may be altered by adding or removing weight plates from the weight pins as described in the Loading Section.

When not in use, it is suggested that the FLIPPER be kept indoors and out of weather extremes and moisture. Though all parts of the FLIPPER are equipped to withstand normal weather conditions, any rubber and painted steel will have a longer life when kept away from long exposures to



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## PRODUCT USE - CONT'D

excessive heat, cold, moisture and sunlight. Regardless of the environment, the FLIPPER should never be stored vertically (Figure 4), unless supported in a rack. In this vertical unsupported position, the FLIPPER could become unstable and fall, causing injury or damage. The FLIPPERS of a same model (TS-03 or TS-04) may be stacked one on top of the other as shown in Fig. 5. Ensure the Bumper Extrusions (Item #9) are squarely placed on one another to provide a stable platform.



Fig. 4 Improper Storage



Fig. 5 Correct FLIPPER Storage

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## LOADING

The FLIPPER may be used as an endurance training device or to develop strength and power. Just as a barbell can be used with lighter weights and high repetitions, or at 1 repetition maximum (1RM) levels. The FLIPPER is infinitely variable within the boundaries of the unloaded weight and maximum loading weight of each machine. This ability to vary the resistance is one of the most important features of the FLIPPER compared to a tire from the junk yard. This ability to vary the resistance not only allows athletes of a wide range of abilities to use the same device, but enables progressive training. Periodization programs requiring variable resistance may be extended to functional tire training, as well as traditional weight training with barbells and dumbbells.

Another unique feature of the FLIPPER is the ability to vary the load on the same unit without changing weights. This can be done by what is called “Uneven Loading”. The Loading Charts for each model are specific to that model, so the TS-03 Loading Chart is only for the TS-03, not the TS-04. The same is true for the TS-04. The Loading Charts tell the athlete or coach what the equivalent “Even Loading” would be for each end of the FLIPPER.

To use the Loading Charts, identify which FLIPPER (TS-03 or TS-04) you wish to use. Then use the Loading Chart for that model FLIPPER. An example of a portion of a Loading Chart is shown in Figure 6 on the facing page. The Top Row (“A” end of the FLIPPER) lists one set of Desired FLIPPER Weights from minimum to maximum (left to right) for that model. The same weights are listed from top to bottom on the Left Column (“B” end of the FLIPPER) of the chart. If a coach wants to train two different strength level athletes together, the coach may load one FLIPPER to be a 380 lb FLIPPER (shown in yellow) and a 480 pound FLIPPER (shown in green) at the same time. The desired loading is listed in the block where the 380 pound column and the 480 pound row intersect. The FLIPPER would have the lighter 380 pound end loaded with one 10 pound plate on each of the two weight pins on the “A” end of the FLIPPER. On the other end, each of the two weight pins on the “B” end would have 75 pounds each. This is illustrated in Figure 7. The result is the lighter end (“A” end) offers the same load to the lifter as if it were evenly loaded to be a 380 pound FLIPPER. The heavier (“B”) end is equivalent to an evenly loaded 480 pound FLIPPER. After each flip, the athletes change from lifter to spotter or spotter to lifter.

In some cases, a Heavy-Light-Heavy-Light training for the same athlete may be desired. In this case the FLIPPER may have “Uneven Loading” but all lifts may be performed by the same athlete. In other cases teamwork may be developed by teaming a larger and smaller athlete together and racing another similarly matched team. The “Uneven Loading” allows each athlete to work to their potential while competing against the other groups. For more details on different training programs, consult the Training Manual.

Desired FLIPPER  
"weight" on end B  
(Left Column)

Desired FLIPPER  
"weight" on end  
A (Top Row)

FLIPPER Weight	End	260	280	300	320	340	360	380
260	A	0						
	B	0						
280	A		5	15				
	B		5	0				
300	A		0	10	20	30		
	B		15	10	5	0		
320	A			5	15	25	35	40
	B			20	15	10	5	5
340	A			0	10	20	30	40
	B			30	25	20	15	10
360	A				5	15	25	35
	B				35	30	25	20
380	A				5	10	20	30
	B				40	40	35	30
400	A					10	15	25
	B					45	45	40
420	A					5	15	20
	B					55	50	50
440	A						10	20
	B						60	55
460	A						5	15
	B						70	65
480	A						0	10
	B						80	75

Load each  
pin on end B  
to 75 lbs

Load each  
pin on end  
A to 10 lbs

Fig. 6

LOADING - CONT'D

A End

B End

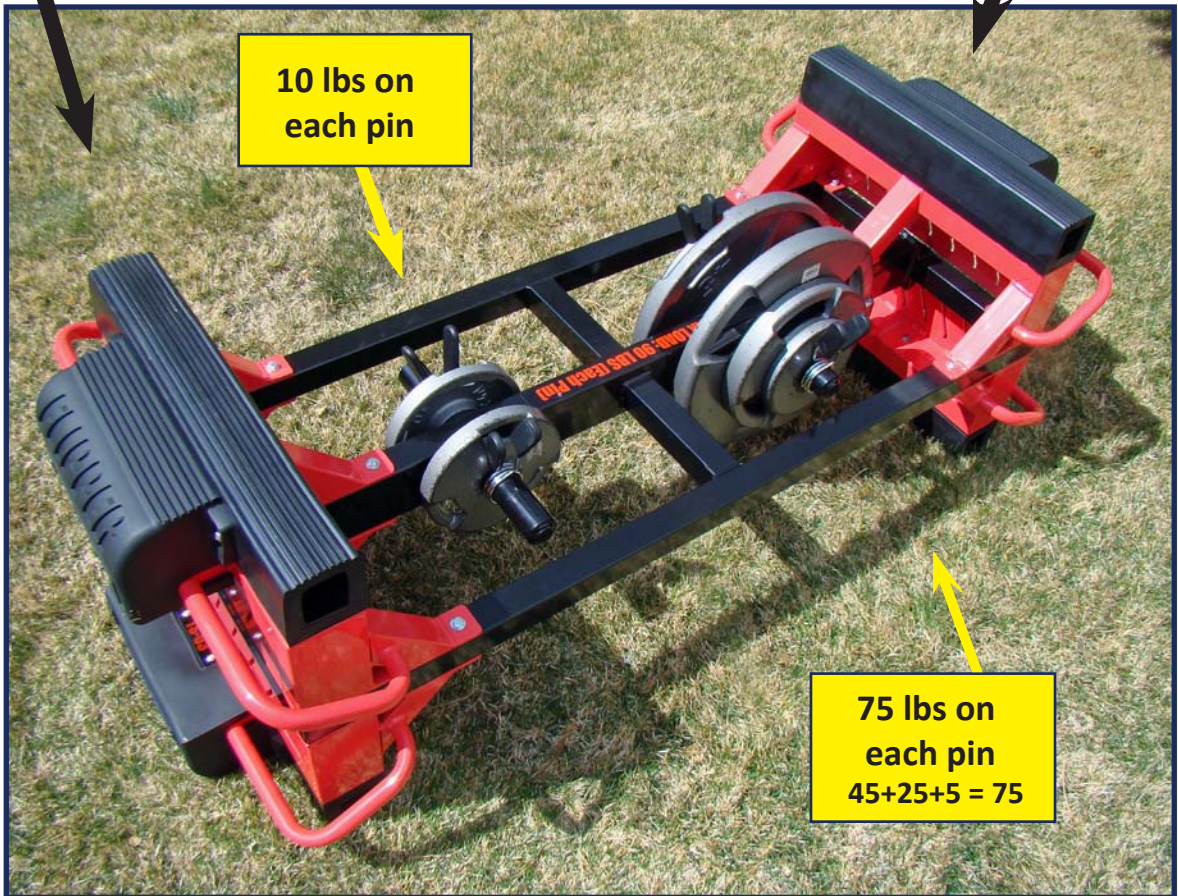


Fig. 7





# FLIPPER



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