



Setup, Operation, and Maintenance Manual for Inflatable Amusement Device

This document and any other supplementary documents that are provided for this inflatable amusement device must be made available to each Installer, operator, attendant and city or state Inspector

Inflatable Amusement Device

All inflatables shown below are Inflatable Amusement Devices that are made of flexible fabric, inflated by one or more blowers, and rely upon air pressure to maintain their shape. They are designed for activities such as bounce, climb, slide, or interactive play to be used primarily in amusement, entertainment or recreational applications. Inflatable Amusement Devices Design, Manufacture, Operation, and Maintenance requirements are covered by ASTM F2374, standard, utilizing referenced documents from ASTM Standards of D3787, D3787, D6951, F355, F747, F770, F1159, F1193, F1292, F1772, F2291, F2375, F2397, F2729 and ASCE Standards of ASCE 7 National Electric Code NFPA 70, NFPA 701. This standard owner's manual references many of the standards referenced above.

Standard Owners Manual / Supplementary Manual Instructions

Information contained in this standard manual apply to all inflatable units sold by us the manufacturer Requirements indicated below are the minimum applicable requirements. *Many* inflatable products are also issued a supplementary manual that provide specific guidelines / requirements for that specific model of the inflatable The requirements in the supplementary manual **always supersedes** the minimum requirements provided in the standard manual. Supplementary and the standard manual must be used in conjunction when operating any inflatable, as supplementary manual only **supersedes** a specific section of the standard manual

Inflatables Types Overview



Bounce Houses

A bounce house, also known as a bouncer, moonwalk, moon bounce, and jumper. An inflatable structure comprised of a flexible layer of vinyl that is filled with air.

Intended use : Jumping inside of the Bounce house structure



Combos Dry Combos Wet / Dry

The combo refers to a combination bounce house and slide. This is ultimately the best of both worlds. Jumpers have all of the features of a bounce house with the additional fun of being able to slide out.

Intended use :1) Jumping inside of the Bounce house structure 2)Climbing steps to reach the slide portion 3) Sliding down feet first in a seated / lying down position



Slides Dry Slides Wet / Dry

Contain an inclined surface that one can use to slide in a downward direction Slides can be dry, or wet and dry , or wet only slides. Some Wet Slide have pools and other have a splash pool, (Splash pools is an inflated bed that water collects in)Slides come in a wide variety of shapes and styles. Slide heights start from 12 feet high to as high as 24 feet.

Intended use 1)Climbing steps to reach the slide portion 3) Sliding down feet first in a seated / lying down position



Games

These products come in variety of lengths, from the most challenging to basic courses.

Intended use :every interactive and game has different intent use, these uses will be noted in supplementary manuals



Interactive courses

Inflatable obstacle courses are inflatable structures containing elements and challenges that participants must overcome. Examples include small walls to climb, small pillars to push through, or slides to go down. It is common for two or more participants to race each other through an obstacle course, often in different lanes. These products come in variety of lengths, from the most challenging to basic courses.

Intended use :every interactive and game has different intent use, these uses will be noted in supplementary manuals

Minimum Accessory Required to operate all inflatables



Blower is the fan that keeps the unit inflated continuously
Sandbags, to anchor the inflatable on a hard surface
Water bags to anchor the inflatable on a hard surface
Tie down straps are required to ties down anchor inflatables with top tether location
Tarps used ground cover to protect your inflatables from damage.
Stakes to anchor the inflatable on a grass surface

Required Accessories to operate specific types of inflatables



Attenuation Mats Specific type of attenuation mats are required for every Ingress/Egress points of the inflatable. attenuation mats are not required for games that patrons are standing outside the inflatable (games that patrons don't climb on the inflated surface)
Deflation Alert System are required for all Inflatable devices with platforms or play areas higher than 8 ft (2.4 m) off the ground
Whistle are required to direct patrons in an inflatable device, Whistle is not required for games that patrons are standing outside the inflatable (games that patrons don't climb on the inflated surface)

Minimum Required Tools / Supplies



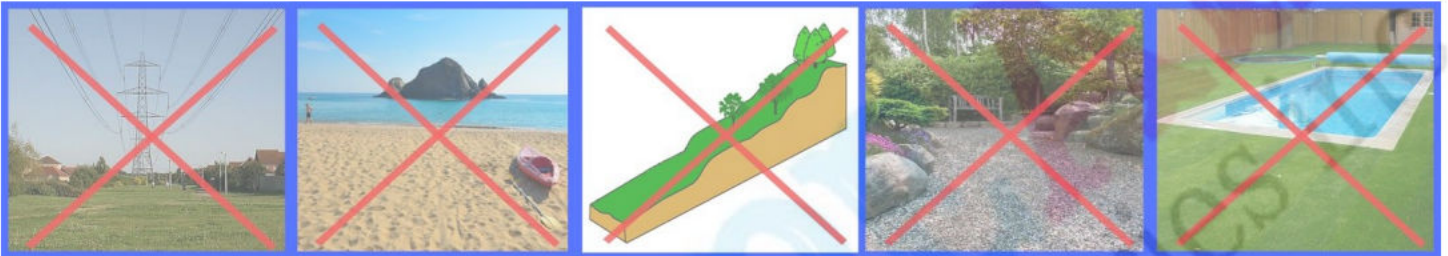
Anemometer: to detect wind speed
Cones : To cover stakes for safety
Duct Tape: To tape down extension cords to prevent tripping
Extension cords: 25 to 50 feet long Heavy Duty 3 Prong 12/3 Extension Cord for Commercial Use
GFI Plug: to detects ground fault from damaged cords or exposure to water and shuts off power to avoid electrocution.
Hammer : 16 lb sledge hammer in the stake
Hand Truck : To transport inflatables from your vehicle to the install site.
Manometer: To check inflatable static pressure

Setting up an inflatables Amusement device

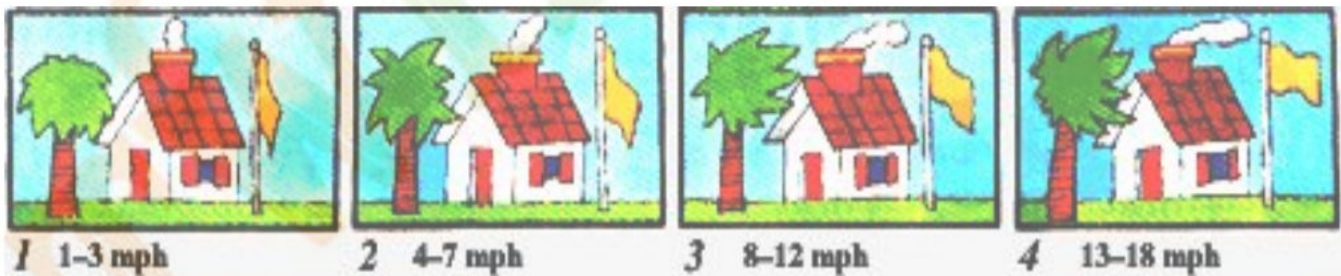
Site Assessment

Before the inflatable is set up, assess its location and the weather conditions, surface material, topography, and possible hazards of the location, wherever possible mitigating risk to the patrons overheating setup in a shaded area if possible.

Hazard locations. Do not setup inflatables under power lines , do not setup inflatables in a public right of ways, do not setup inflatables on an incline greater than 5%, do not setup inflatables within 25 feet of a pool, do not setup inflatables in an area with sharp objects such as gravel stones, sticks or wood debris, do not setup inflatables cliffs, do not setup inflatable in a sandy area, as the blower may suck in the sand and become inoperable, do not setup inflatables in an area that has less than 5 feet clear space from a hard object such as walls and unprotected columns or posts

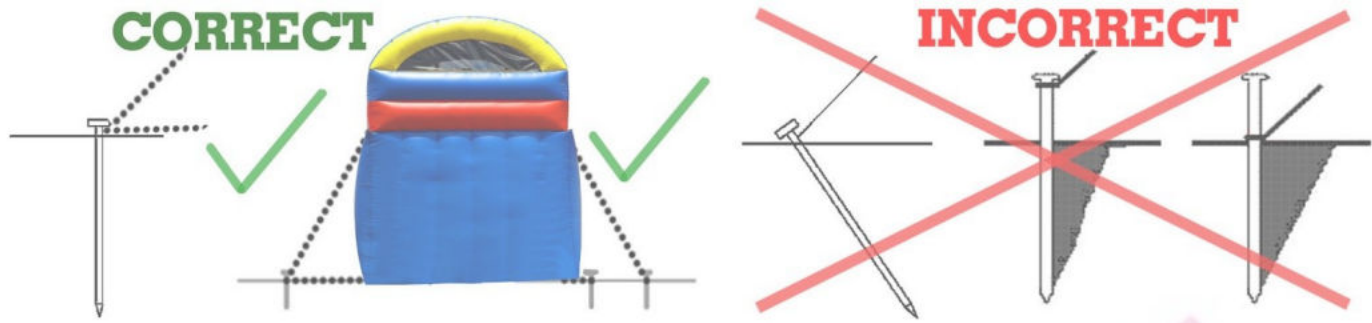


Wind Speed Assessment. Inflatables can not be setup if the wind speed is greater than 15 MPH. it is recommended that an Anemometer, is provided by the owner/ operator to the installer and attendant, if an anemometer is not available there are many inexpensive methods that can be used to monitor wind speed. The Beaufort Wind Scale is one of them. Though it requires more experience and is less precise than other methods, it has been used for about 200 years to estimate wind speed and is reliable. It is also critical that, when the wind speed becomes dangerously high, the operator/attendant(s) will evacuate all the patrons safely and quickly.



Minimum Anchoring Requirements Before deciding on location, verify that driving stakes into the ground won't create a shock hazard by violating gas or power utility lines and create damage by striking sprinkler lines.. Contact your local utility company for more information if you aren't sure. It is crucial that the inflatable device is properly anchored because if not, the patrons inside the device may be in immediate danger, as the wind speed may tip the inflatable over or blow the inflatable away and the patrons inside may be seriously injured. Minimum of 150 Lbs is required per anchor point for any inflatable. Many inflatables may require greater Lbs per anchor point, please refer to Supplementary Manual for this informations.

Information plate on every inflatables indicates the minimum weight requirements per anchor point, when using weights to anchor the inflatable, then proper amount of weight must be used per anchor point. When anchoring an inflatable by stake, the following table must be used to calculate the pullout capacity of the stake in various types of soil consistency.



The strength of various types of soil is an important detail for estimating pullout capacity of an anchor (stake). Stake penetration resistance offered by a stake during installation provides a rough estimate as to ground conditions being dry or saturated.

Determine the Soil Consistency	
USING A 16 LBS SLEDGE HAMMER DETERMINE THE STAKE PENETRATION IN INCHES PER BLOW (APPROXIMATELY 170 LBF OF FORCE PER BLOW)	
Stake Penetration	Soil Consistency
Less than .2 Inches	Hard
.2 to .5 Inches	Very Stiff
.5 to 1.5 Inches	Stiff
1.5 to 3 Inches	Medium
Greater than 3 inches	Soft (DO NOT STAKE)

Pullout Capacity for 1 Inch Diameter Stake		
STAKE MUST BE INSTALLED VERTICALLY WITH NO MORE THAN 2 INCH ABOVE GROUND WITH LOAD ANGLE OF ABOUT 45 DEGREES		
Soil Consistency	18 inch Stake	24 Inch Stake
Medium	125 Lbs	215 Lbs
Stiff	255 Lbs	430 Lbs
Very Stiff	510 Lbs	865 Lbs
Hard	800 Lbs	1350 Lbs

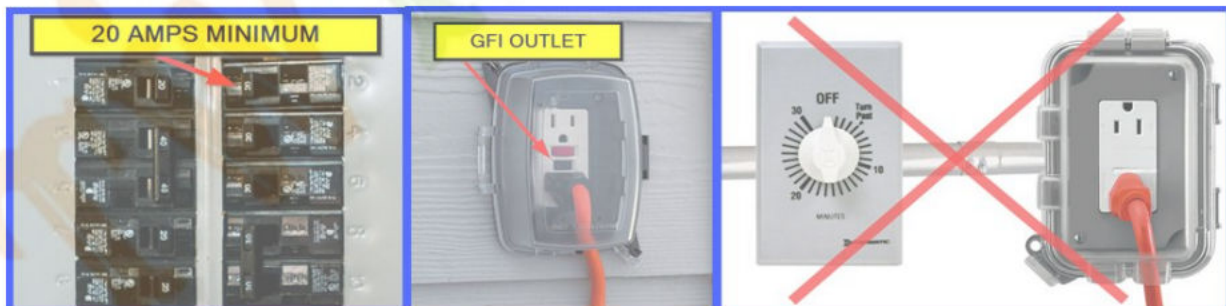
TABLE ABOVE IS PER ASTM 2347-17 TABLE X2.1

Installation and Set-up

It is the Owners / Operators responsibility to ensure that the inflatable is installer is a trained person, someone who has been instructed in the setup and installation operation of an inflatable device. Supplementary and the standard manual must be made available to each inflatable amusement device installer and operator/attendant. **Under no circumstances an inflatable is allowed to be setup if there is rain, lightning or sustained wind speed exceed 15 MPH.**

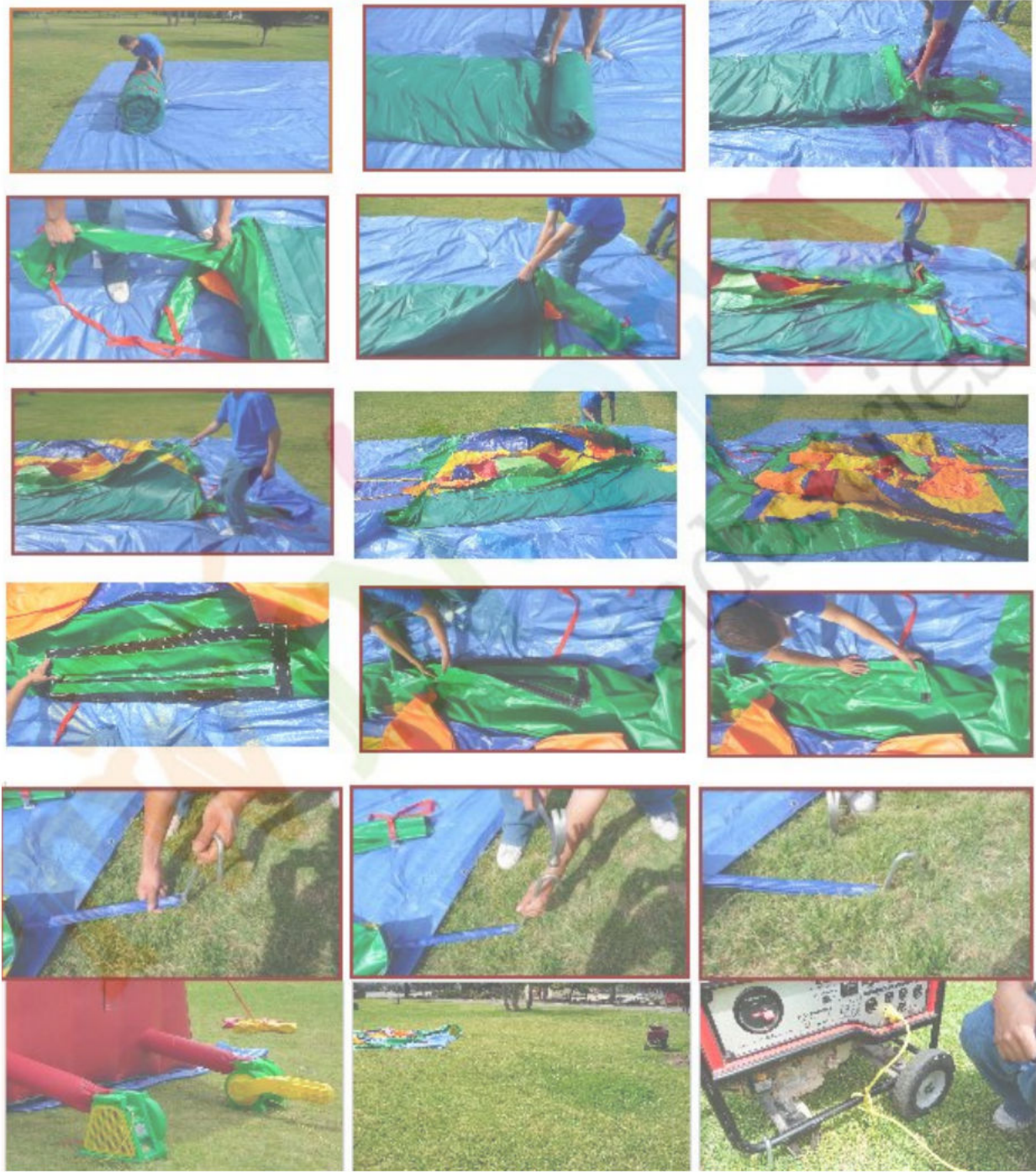
- Lay out a ground tarp in the area you have chosen for installation, anchor down the tarp to reduce trip hazard
- Roll the inflatable onto the tarp, and decide the direction of the entrance of the inflatable. Face an inflatable with a slide away from direct sunlight . Keeping it north or northeast will keep it cooler.
- Unfold the inflatable, locate all its zippers, and close them. Completely seal the flap over the zippers to make sure air is sealed.

- Once the anchoring method has been chosen, lay out the inflatable device and attach the anchoring.
- Anchor the device using the manufacturer's instructions.
 - Staked anchoring:
 - Ground stakes/anchors of sufficient depth must be used to prevent movement of the device at the maximum allowed operational wind speed, follow Minimum Anchoring Requirements section of this manual.
 - Non-staked anchoring:
 - The inflatable may also be secured using ways other than ground anchor stakes (sandbags, water anchor weights, indoor floor anchors)
 - Determine the type and location of the inflatable(s) blower power (electrical circuit assessment, generator positioning). Make sure the power supply meets its requirements.
 - Connect the blower to the device, and check the blower's front fin and tube. Each blower should be of the correct horsepower to maintain inflation of the device. (Minimum blower requirements signs are attached to each inflatable)
 - Pull the blower tube over the neck of the blower.
 - Pull the webbing around the blower and pass it through the buckle.
 - Make sure the webbing is tight around the blower.
 - Do not turn on the blower yet.
 - Ensure that the other blower tube is securely fastened.
 - Fold it about 18 inches down and fold it once more in half.
 - Pull the webbing through the buckle as tightly as possible.
 - Do not turn on the blower yet.
 - Locate and connect to a power source.
 - If you are connecting to a provided power, make sure it GFI power outlet is a 20 amp 120v circuit breaker that cannot be turned off by a switch or timer. The GFCI device must conform to NFPA Article 70, National Electrical Code (NEC) Articles 210, 250 and 525, or applicable local code. If not able to locate and outlet with GFCI device , a portable GFCI device should be placed and maintained within 12 in. (30 cm) of the receptacle and provides GFI protection for the length of supply conductors to any electrical devices, including motors, used for the operation of the inflatable amusement device
 - Electrical supply or electrical device is within 6 ft (1.8 m) of a wet location



- If electric power is not available, we recommend using a minimum of 2000W for every 1 HP blower blower requirement. If you need to connect more than one unit, then use this formula to calculate running watts from the labeled amps on the blowers.
 - $(\text{amps}) \times (\text{volts}) = \text{watts}$ required to run continuously with back pressure (connected to an inflatable)
 - For startup of a blower the wattage requirements are higher. Typical blower will draw 2.5 time operating (amp) on startup so calculate $(\text{amps}) \times (\text{volts}) \times 2.5 = \text{Watts}$ required to startup a blower
- If it is necessary to use an extension cord, use a 12/3 cord for each blower.
- Ensure the blower cord is away from foot traffic as much as possible. Arrange the cord so that it is always away from the entrance of the unit.

- If any lighting, cables and any portable electrical support equipment is used it shall conform to the applicable requirements set forth in NFPA Part 70 Article 525 or applicable local code.
- At this point, you should have the inflatable laid out before you with the tethers pulled straight out.
- Place barriers around the device to manage crowds, if applicable.
- Place impact attenuation mats/mattresses in ingress and egress point of the inflatable.
- Set up lighting and signage, if applicable.
- Perform the pre-opening inspection checklist.





Pre-opening inspection

1. Before allowing patrons onto the inflatable device, the owner/operator should conduct a pre-opening inspection of the following and the inspection must be recorded:
 - When unrolling the unit check the bottom for rips and holes in fabric or seams, and view surface for foreign objects such as twigs or stones and other material that may become lodged in the vinyl.
 - Ensure the blower tubes are in good condition, with all portions of the retaining strap functioning properly the cinch straps and buckle mechanisms. The straps and buckles should remain tight at all times. If they continually slip or loosen, they should be replaced
 - Check all surfaces of the mattress for debris, rips, holes, and seams that may be stressed and pay close attention to the areas where the support columns join the mattress and roof, as well as the safety ramp entrance.

- When operating any inflatable with slide major points of inspection are The stairs/steps, the actual slide surface portion and the end wall or stop.
 - When checking the stairs, make sure all webbing used as a handrail or hand holds is solid, fully connected to the slide
 - the slide portion is usually a blanket that applies with Velcro. checking the Velcro and both the top and bottom surfaces of the slide for proper connection
 - .Slippery material shows signs of cracking, peeling or other damage it must be replaced before use.
 - Slide material should have sufficient coating to all users to easily glide down, To rejuvenate the sliding area use products such as Slide Slick or chemical free Wax.
- The netting and wall areas should all be intact along with the roof cover. Make sure the emergency exits function properly.
- Check deflation ports or zippers, check the integrity of the hook and loop flaps and zippers to ensure proper function.
- The correct blower for the device is being used, and the air pressure is within the manufacturer's specifications.
- The bolts and screws of the blower are properly secured and guards are secured over the inlet and outlet.
- The blower inflation tube is firmly secured to the blower and is in good condition.
- The blower is positioned correctly and is out of the way of patrons to prevent being a tripping hazard.
- Blower intake grates are free of debris and blower tubes have no crinkles.
- For inflatables with a platform height of 8 feet or higher , the deflation alert system is installed and ready and operational.
- There are no exposed plugs, outlets, or electrical contacts.
- All plugs, sockets and switches are secured and grounded.
- Make sure each anchor point is snug, check again for frayed straps, missing D rings or O rings if equipped, and make sure it is securely attached to the unit.
- All anchoring ropes, tethers, or tie-downs are properly connected to the anchor points.
- Anchoring ropes are not worn or chafed..
- Do a functional test of all the communication equipment necessary for the operation of the inflatable device.
- All automatic and manual safety devices are inspected and tested..
- All fencing, guarding, and barricades are inspected to verify that appropriate crowd control measures and barriers are in place.
- For Inflatable devices with platforms or play areas higher than 8 ft (2.4 m) off the ground a deflation alert system is required. Ensure deflation alert systems incorporate one of the following:
 - (1) An automated means to monitor the onset of deflation and alert the operator/attendant, **or**
 - (2) An automated means to monitor the loss of blower function and a supplemental means to allow operator/attendants to monitor other failure modes that cause rapid deflation which can result in a loss of adequate air support to maintain the structure of the inflatable device
- No patrons are allowed on the inflatable device while it is being inflated or deflated.
- Check connection points between sections of a multi-piece inflatable device are properly attached allowing a smooth transition for patrons. There must be no gaps where a patron could become entrapped, ensure that there is no exposed hook from a hook-and-loop connections system in areas where patrons play / slide
- Using a manometer check the static pressure of the inflatable. Minimum of 4.0 static pressure is required to operate an inflatable in a safe manner.
- If an inflatable game or other device has a play area where the patron is elevated on an object above the mattress surface an impact attenuation (mats) must be installed in all the

ingress/egress areas. Labeling on the mats must indicate that it conforms to g-max (peak acceleration) to less than an average of 100 when a representative sample is tested in accordance with Test Method F355 using a 20 lb (9.09 kg) flathead (Missile A)

- Attach impact attenuation materials to the inflatable and ensure connections are secure at every ingress/egress point

Owner Duties

In many cases an inflatable is hired / rented from an Owner (Owner = Individual or company renting out the inflatable for use, Renter= Person 18 years of age or older renting and taking responsibility for the inflatable upon delivery). The Owner will deliver the inflatable and setup it up. In some cases owner may provide attendant(s) to ensure safe operation and use of the inflatable. However, in some cases attendant (s) are not provided by the owner and the renter is the one responsible to perform the tasks of an attendant / operator while the inflatable is in use. In many section is this manual, guidelines are specified for attendant(s) /operator(s) and all processes and procedures apply to renter acting as attendants and operators. It is the owner's responsibility to develop a program with necessary tasks and training for attendant / operator.

Operating Document :Operating Document and supplementary manual (if applicable) must be provided to assigned operator/ attendant(s) position(s) of the inflatable amusement device

Specific duties that owner operator is required to overview with attendants on every event

- Description of the intended use of the inflatable amusement device.
- Review of the hazardous conditions policy, which shall include, monitoring weather when inflatables are operated outdoors; procedures on evacuation of the device in an event of deflation, and guidelines on resuming operation after the hazardous conditions have passed
- Evacuation plan for each inflatable amusement device
- All locations that require monitoring when the device is in use
- Rules, restrictions, and posted warning signs for intended use of the device, and requirements to enforce those rules while patrons are using the device.

Attendant(s) minimum responsibilities

- Attendant(s) must utilize a whistle or audio device to obtain attention, and take action at the first sight of rule infraction
- An inflatable amusement device should always be supervised by an operator/attendant while it is inflated unless it's secured from unauthorized access,
- Be aware that emergencies can arise for various reasons, such as loss of electrical power . This situation tends to cause panic unless the Attendant / operator stays calm and relaxed. Do not leave the ride to check on any problems, emptying the ride is the first priority and then address the issue. Talk calmly to those inside telling them not to panic while you are helping them walk out, the inflatable will slowly start to deflate but you will have sufficient time to help the riders to quickly and safely exit the ride. On units with a sealed roof an emergency exit is always available, if all patrons don't make it out on time, pull off the cover and have the patrons exit through it. This strictly a guide, use common sense when an emergency occurs, and think about patron safety first.

Know the ride

- Review Operating manual
- Review Supplementary manual
- Read and understand the safety signs on the inflatable



Sample of signs attached to the inflatable

- **Denying Entry**—The Attendant may deny entry to the inflatable device to any person, if in the opinion of the Attendant the entry may cause above normal exposure to risk of discomfort or injury to the person who desires to enter, or if in the opinion of the Attendant the entry may jeopardize the safety of other patrons or employees

Communicating to Patron Parents and Chaperon

It is the attendant's responsibility to communicate to Patrons Parents and Chaperones that there are inherent risks in participating in any air inflatable device.

Attendants, Patrons, Parents and Chaperon must be aware

- Before granting a minor entry to Inflatable Amusement Device, it is required to read and understand all of the operation and safety instructions for this device.
- By allowing a minor to participate, in a Inflatable Amusement Device you are accepting all the risks that are associated with participation.
- You have the responsibility to exercise good judgement and act in a responsible manner while minors are playing in or around this inflatable device and ensure participants are obeying all written and oral instructions & warnings.
- You have a duty to prohibit anyone with pre-existing medical conditions, such as circulatory conditions, heart or lung conditions, recent surgeries, back or neck conditions, high blood pressure, any history of spine injury, or musculoskeletal or head injury from entering or participating in activities in a Inflatable Amusement Device.
- You have a duty to consider the suitability of the inflatable activity for the minor that desires to participate in the inflatable ride. The consideration should include factors such as expressing fear, being over-tired, or being too rebellious to follow rules & instructions.
- It is your responsibility to remove participants that engage in an aggressive bodily contact with other patrons.
- Anyone under the influence of drugs or alcohol must be prohibited to supervise the participants of Inflatable Amusement Device and is also prohibited entry to the Inflatable Amusement Device.

Patron Preparation

- In order to participate, all patrons must meet the height, weight, and age guidelines specified for the inflatable (you may use the table below for reference)

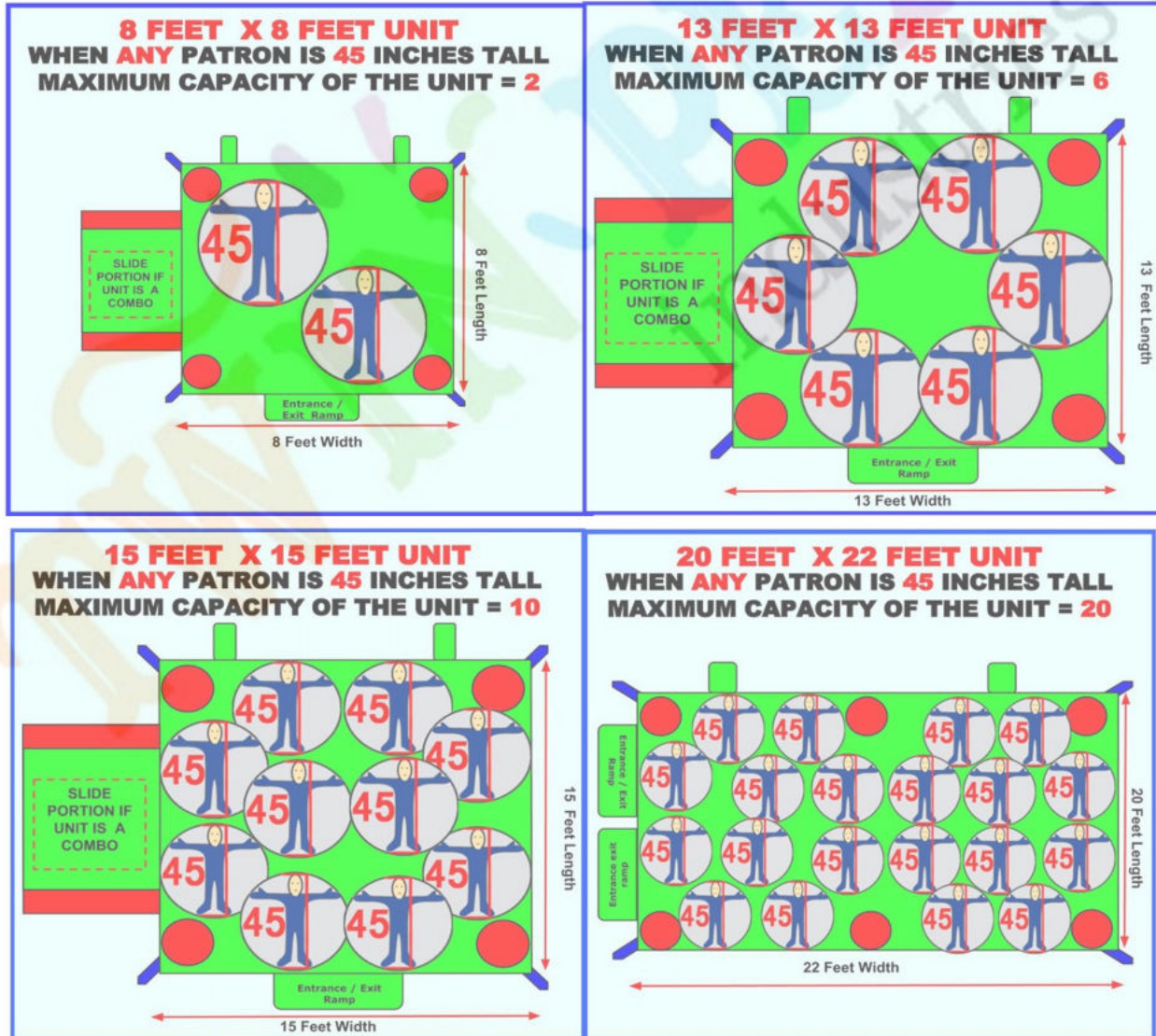
HEIGHT AVERAGES IN INCHES																
AGE	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Female	33	37	39	42	45	47	50	52	54	56	59	61	62	62	64	64
Male	34	37	40	43	45	48	50	52	54	56.5	58	61	64	67	68	69

WEIGHT AVERAGES IN LB																
AGE	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Female	26	31	34	39	44	49	57	62	70	81	91	101	105	115	118	120
Male	27	31	36	40	45	50	56	63	70	78	88	100	112	123	134	142

Table 1X

BOUNCE HOUSE / COMBO PATRON CAPACITY					
MAX. HEIGHT OF ANY PATRON	JUMP AREA OUTSIDE DIMENSIONS				
	8 X 8	10 X 10	13 X 13	15 X 15	20 X 22
38 Inches	3	5	8	13	24
41 Inches	3	4	7	12	22
45 Inches	2	4	6	10	20
50 Inches	2	3	5	8	18
56 Inches	1	2	4	7	16
72 Inches	X	X	2	4	10

Guide 2A



Guide 2A Sample illustration

- Group the participants by size to avoid injury, ensure inflatable does not exceed the maximum capacity for bounce houses and combos you may use the reference guide 2A.
- Patrons attire must follow all rules indicated on the safety sign (i.e., removing shoes, sharp objects, etc.).
- Invoke the device's capacity limits and patron rules.
- Instruct all the patrons on proper use of the device and enforce pre-play rules prior to their participation in the inflatable.
- Ensure that all users remove their footwear (except socks) and any other hard, sharp or dangerous objects from their person, such as buckles, pens, purses etc. It is advised that spectacles be best removed
- Ensure that users are not consuming food/drink or chew gum in the inflatable

Patron Supervision

- The operator/attendant(s) should remain in their assigned positions to observe the patrons and ensure they are following all safety rules inside the inflatable.
- Ensure food, drinks, and gum are not being consumed while on or near the device
- Supervise each patron's ingress and egress of the inflatable. keep the device's entrance and exit clear from onlookers to have a clear view
- Actively monitor patron play and continually enforce safety rules. Removes those who do not follow the safety rules.
- Ensure no one bounces on the step (entry ramp). The step is only to be used to assist the users on or off
- Ensure patrons are not to climbing or hanging from the outside walls, on top of mesh / covers or any area not intended for play.
- Ensure patrons are not flipping, diving, and using aggressive physical contact on the device. Failure to follow through with this rule can lead to serious harm or death.
- Inflatables with slides ensure patrons slide down slide feet first only, and only open person is sliding down at a time. It is **strictly prohibited** for chaperos / parents to place kids in between their legs and slide down together. Failure to follow through with this rule can lead to broken legs and severed limbs.
- Inflatables with slides ensure patrons sliding down their arms are not extended to the sides
- Inflatables with slides ensure the patrons are wearing sock (shoes or bare feet not allowed)
- Inflatables with slides ensure there is jumping or diving off the slide platform or any part of the slide.
- Inflatables with slides ensure only one user at a time is climbing up the climber / steps
- Inflatables with slides ensure landing area is completely clear before next patron slides down the slide



Monitor the device

- Keep the entrance and exit, along with the blower area and overall perimeter of the device, clear from onlookers.
- If the inflatable is not setup indoors, monitor the weather and wind speeds.
- Observe device inflation.
- Keep public at least 5 feet from the doors, blower, electrical cords and any external power supply that may be used in the operation inflatables.
- Regularly check the anchoring to make sure it stays secure.

Handle emergency situations

- if someone is bleeding, or gets sick and vomits, or secretes any noticeable body fluid while using inflatable instruct all patrons to immediately exit inflatable. Inflatables should not be used until surfaces are cleaned with a non-corrosive antibacterial cleaning solution
- If the weather becomes severe and could pose a threat to the patrons, be prepared with an evacuation plan and the factors that could possibly disrupt it.
- Deflate the inflatable device if wind speed reach maximum allowed wind speed for the inflatable. (see determining wind speed)
 - Once the adverse situation has been taken care of, the device may be reinflated.
 - Keep patrons off the device when it is being deflated/inflated.
 - Before allowing patrons back on the device, inspect it thoroughly.
- Be prepared in case of patron injury. The device may have to be evacuated if another adult isn't around to watch the patrons.

Inflatable Take Down.

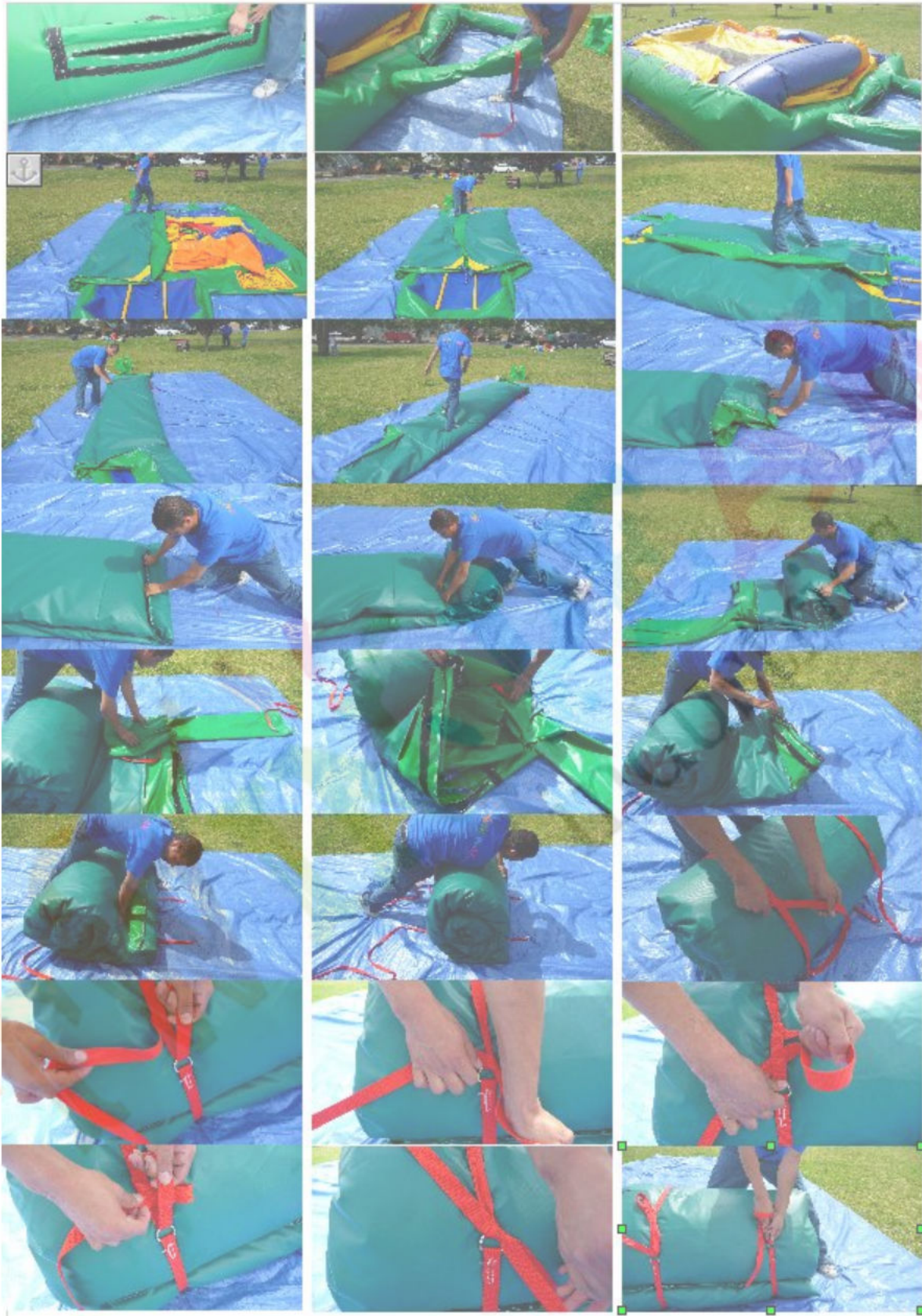
- Inspecting the unit for structural damage and inspect the unit for silly string, If the unit is sprayed, with silly string, the vinyl's protective fire retardant coating is ruined and the vinyl loses strength as well as resulting many times in permanent discoloration of the fabric
- Using a mini vac vacuum up all debris, if vac not available using a soft bristle broom, sweep everything to the outside walls and then to the corners or exit where you can sweep it to the outside•
- After removing the large debris, dirt, etc. use a spray bottle that contains 1:1 ratio of Simple Green or any chemical free cleaner of your choice and water. Spray onto the towel not the inflatable to wipe down all areas that customers meet for example, the mattress floor, the exit, and the supporting columns. Move to the outside and wipe down the entrance, the mattress, and the base of the unit and columns. Note : There are many different cleaning products and some can be harmful to your unit or more importantly can be harmful to the occupants of the inflatable. Make sure that any cleaner you use is free of bleach or chlorine, which will weaken the threads, Methyl Ethyl Ketone (MEK) will break down the vinyl and weaken its integrity. Do not use any cleaner, which states its use, is not intended for soft or pliable vinyl. Avoid any cleaner with caustic agents in them, like degreaser
- If the product appears to have a scum line, to reduce any risk arising from the development of bio-films on the surface of the product which may harbour Pseudomonas organisms, the inflatable must be washed down with fresh water. If the dirt/slime remains, you can clean with a disinfectant solution and then follow by hosing down with fresh water. Wearing appropriate personal protective equipment is paramount. DO NOT use pool water to clean the structure. The structure must be inflated if hosing down with water is taking place, if the unit is deflated, water will seep through the seams and this will cause the unit to rot from the inside. Once the cleaning has taken place, the unit must be dried. Drying: It is important that the product is dried after use. Failure to follow this instruction will cause mildew to form on the product, which causes staining and will speed up the process of delamination.
- For Odor control spray Odoban inside the inflatable around the seam line and surfaces to disinfect the unit and wipe off rapidly. Never soak the inflatable as mildew may form and therefore voiding the warranty.
- Do not pack up your inflatable when wet. Each unit should be completely dry inside and out before you place inflatable in storage. Webbing, straps, threads and netting all tend to stay wet or damp and do not dry as fast as the vinyl itself. The damp/wet material can bleed and discolor the vinyl, cause mold/ and mildew is another major threat to your units.
- When deflating the ride, keep the ride anchored and other people away from the ride
- Locate the deflation zipper and open
- Locate the blower switch and turn off the blower, and remove blower from tube.
- Open the strap on the second blower tube and allow the inflatable to deflate. Rolling up the Inflatable
- Remove anchor / stakes and inspect stakes for damage.
- Fold inflatable (follow pictures left to right, row by row) its always preferred to roll toward the direction of the blower tubs, in some cases that might not be possible due to the location of the inflation tubes

and at that time roll toward the deflation zippers



Additional takedown steps for wet units with slides

- Detach the water from the unit and remove the misting fan. Removing the misting helps prevent any parts from rubbing or puncturing the unit during the rolling process. It also helps the misting hose or bar from getting weak from being repeatedly folded, and eventually broken.
- Using the hose rinse off any large amounts of grass, sand or mud from the slide.
- Do not turn off the blower
- Open the deflation zipper and flap drain located closest to the pool under the slide portion of the inflatable. There will be a minimum of 1 drain for all inflatable that is designed to be used wet. With blower working and the zippers and drains open, the inflatable will be soft and mushy.
- Push down on the pool wall to drain the water
- Lift back side of the slide to direct the water flow toward the front zippers and drains
- If the slide has to be moved from location, Turn off the blower and roll up the slide.
- Within 24 hours inflate the slide once again
- Team up with another person and open access zipper of the inflatable to go in the unit, have your team member close the access zipper, so the unit does not deflate
- Mop up any puddles inside the unit. Have your team member stay by the inflatable and not move away, the sole duty is to watch over the inflatable and zipper entrance while you mop up inside the unit.
- Be sure there isn't any water left inside the unit before you exit the unit. Water can lead to mold or mildew odors, and can and will destroy your inflatable in time.
- Towel dry any area such as webbing, hook and loop that has water residue.
- Remove the slide cover / step liner from the slide to allow the hook & loop that is sewn on the inflatable to dry
- Lay out the slide cover / step liner on the ground with hook and loop facing up
- Let the inflatable sit out under sun to air dry for as long as possible up to 12 hours. Make sure the slide is in a safe and secure location away from public access. Ensure the slide has sufficient anchoring so it does not fly away in a high wind condition.
- As the water evaporates within the unit the humidity will rise, to help the air circulate it is often recommended that you leave the zipper open several inches to remove the humid air.
- When the unit is completely dry install the slide cover / step liner and pool liner back together, deflate, fold, and roll up to put in storage.



Storage

Store the inflatable units and accessories indoors in a clean dry environment to ensure long life. Keeping them off the cold concrete is better for the material, but the most obvious reason is to keep them off the ground in order to avoid moisture or water should the storage location leak, flood, etc.

If you prefer to use storage bags make sure the bag can "breathe" so that moisture cannot form and be trapped inside the unit. This same reasoning applies with wrapping the units in tarps, plastic sheeting, etc. If moisture forms, it will likely persist and again you end up with an undesirable result.

There are a number of sprays, tins, pellets and other products designed to keep rodents and small animals away and if you use anything, make sure it is not exposed to any of the equipment so damage from chemicals contained in those products can be prevented.

You will also want to avoid anything that emits an aroma, so the unit is not permeated with that smell. Temperature range does not really affect the storage properties other than extreme heat can cause excess moisture, and extreme cold will make a unit very hard to handle should you need to use it for an indoor event. In that case allowing it to warm for about half an hour to an hour would decrease the unlikely chance of the unit becoming too brittle and cracking from its cold storage.

Operating Document Guidelines

Documentation should be given to the operational personnel should target their specific job with the device (installer, operator/attendant, maintenance worker).

- The guidelines should simplify each person's work, as it is specified for them, and increases the probability that they will follow through with their job.
- The guidelines should specify person assigned to a specific job so there will be no mix-up where an assigned person accidentally does the work for someone else.
- If the owner/operator makes a custom Operating Manual, it should include all important details and facts from the manufacturer's Operating Manual.

Training Program

We recommend every Owner / Operator to enroll in an official training courses.

SIOTO Safe Inflatable Operators Training Organization offers you 2 levels of training, basic and advanced, covering common moonwalks to high level slides and interactives. Their training programs should provide you with the knowledge and skills to successfully operate your equipment in the safe standard our industry now demands. We do not have any affiliation to SIOTO, and you should do your on due diligence before enroll with any company that provides training.

- The owner/operator of the inflatable should be responsible of assigning training for operating and maintenance tasks.
- Under the supervision of a trainer, the owner/operator of the inflatable should train all installers, operators/attendants, and maintenance personnel. Their training should be specific to their task and should include the following:
 - Instruction on inspection and preventive maintenance procedures
 - Instruction on the inflatable operating procedures.
 - Instructions on specific duties of the assigned positions of each person.
 - Instructions on general safety procedures of the inflatable.
 - Instructions on specific procedure in the case of unusual conditions or an interruption of operation
 - Demonstration by the trainer of the operation and maintenance of the inflatable amusement device.
 - Demonstration of the trainee, under the supervision of the trainer, of the operation and maintenance of the inflatable amusement device.
 - Additional instructions/training under the supervision of the trainer deemed necessary by the owner/operator

Owner / Operator Maintenance Program Requirements

As an owner/operator of an inflatable amusement device you are required to read and become familiar with the contents of the Owner manuals / supplementary manuals maintenance instructions and specifications. Owner/operator is required to implement a program of maintenance, testing, and inspection and perform and provide duties and responsibilities necessary in the care of each Inflatable Amusement Device. This program of maintenance shall include a checklist to be made available to each person performing the regularly scheduled maintenance on each Inflatable amusement device. The checklist shall include but not be limited to preventive maintenance assignments to be performed —Replacement parts for inflatable amusement device

Maintenance

Inspections / maintenance of your units are critical to the safe operation of your inflatable and must be conducted in a timely manner, A basic inspection / maintenance at this point can prevent a possible injury or upset customer due to equipment failure. Equipment checklists and logs must be completed to track all work performed allows your insurance company or state inspection agency to check for consistency in your operation, and will be required if an unfortunate situation of litigation should arise from an injury or equipment failure.

Each inflatable should be thoroughly examined at least once in every 6 months or / and 30 uses by an appointed person. The maintenance / inspection must be recorded. Inspection should include the following:

- **Blower** (a) inspect guarding for the air inlet and outlet; (b) security of the impeller fixing and examination for cracks; (c) integrity of electrical wiring.
- **Anchorage system** checks bottom anchors and top tether locations for wear, rips or chafing.
- **Inflatable outside Structure.** checks of the or rips in the fabric, particularly on the main bouncing surface, between the walls and towers, walls and the bouncing surface, and the surface of the step (b) checks that the walls and uprights when fitted are firm and upright when inflated, and that the pressure in the bouncing area and step is sufficient to give a reliable and firm footing. Inspect window / cover mesh for damage, any small cut must be repaired immediately since mesh tears easily and once cut it cannot withstand any pressure. check thread for wear (see section below for thread wear)
- **Inflatable inside Structure** Inspect the of baffles of the inflatable, this should be performed from inside the structure. checked for wear or tears, particularly for loose or exposed ends. checks of the security of seams, and wall to bed seams, check the internal blower flaps, check thread for wear (see section below for thread wear)
- **Inflatable connection points** inspect webbing, buckles and D-rings that are used to connect 2 different pieces of inflatable together, inspect hook and loop functionality of the transition flap. Check the blower connection tubs and shear strength of the velcro at the connection point. Check Attenuation Mats the hook and loop connection points for wear.
- **Inflatable hardware / components**
 - **(Air Tube)** check the buckle to ensure open and close correctly and buckle has enough tension to grip the webbing. Check the webbing for damage or excessive wear
 - **(Zipper)** check the zipper chain teeth for damage. Watch for misaligned zipper teeth. Occasionally, the zippers will misalign when forcing the slider to close the zipper too fast and/or when zipping around a bend in the zipper. This can become a serious problem since this part of the zipper closure is weaker and can easily come apart later. Missing or visibly damaged teeth on zippers cannot be repaired, Zipper chain must be replaced. Inspect your zipper sliders. Dirt should be removed and you may want to coat your zipper with silicone waterproofing, Teflon spray or candle wax will add some protection to sliders and help lubricate them
 - **(Hook & loop components)** The strength of the bond of hook and loop depends on how well the hooks are embedded in the loops, how much surface area is in contact with the hooks, and the nature of the force pulling it apart, so it is critical to keep the hook debris free, Cleaning debris out of the hooks is similar to cleaning hairbrushes , using a stiff

brush or dog flea comb / brush is best method to clean the hook this can take some effort, but it will achieve best results. For cleaning loop Duct tape is the best option duct tape is far stickier than other types of tape and can be used to pull off debris from the loop.

- **(Printed safety Sign)** check to make sure the signs are easily readable. If signs are not readable ask us the manufacturers for replacement signs. Ink will fade about the same as any other ink when exposed to direct sunlight, and this is true for every sign and every sign maker. The more sun and weather exposure a sign gets, the more it fades. Exactly what fades varies Do not use harsh chemicals or abrasive cleaners, as this will damage your vinyl banner. Solvents such as paint thinner, acetone, alcohol, gasoline are also a big no-no.
 - **(climbing rope / climbing handles)** Defects in the rope must be found manually, using both tactile and visual examination methods while pulling the rope through one hand while scanning the length as it passes Look for - Rope /webbing with sheath fuzz, -Rope /webbing with tufted strands,“burrs,” - Rope / webbing burned by chemical contact or heat exposure
 - **(Thread)** Light can cause thread to fade It can also weaken the fibers so that it's not as strong . Humidity is also a factor in the life of the thread. In a very dry atmosphere, your thread can become quite brittle. If the inflatable has any thread that resembles the image on the right, the inflatable should be taken out of service and until it is inspected by a professional repair company
- 
- **(Sliding surfaces)** Ensure all climbing and sliding surfaces are free of rips, and major wear. Sliding surfaces must always have sufficient coating on them to ensure patrons can slide with little friction.To rejuvenate the slide liner you may use Turtle Wax, Armor All, and more. The stop-end wall is the part that takes heavy use. The back wall should always stand up tall, fully inflated at all times

The above list is minimal maintenance requirements, and is not, including, or considering of all elements or aspects of inspection and maintenance. The 6 month inspection should include any part which may affect the safe operation of the device.

Modifications / Repairs

A Major modification, is any change in either the structural or operational characteristics of the ride or device which will alter its performance from that specified in the manufacturer's design criteria.

An inflatable amusement device shall not be altered in a way that constitutes a major modification without written approval from the us the manufacturer.

- In the event that written approval cannot be obtained from us the device manufacturer, the owner/operator may retain a designer/engineer to design or approve the major modification.
- The entity that designs modification(s) major modifications or repairs to an inflatable amusement device is responsible for the safety of the changes they make,and shall be responsible for updating operational procedures, drawings and calculations for that portion of the device affected by the modification, if necessary.
- The entity that designs modification(s) major modifications or repairs must adhere to same construction methods and comparable materials as in the original device design, unless alternate methods or materials are approved in writing by us the original device manufacturer.
 - Holes, abrasions, and open seams can be patched properly using manufacturer approved patching process.
 - Patches over open seams should not be considered a permanent repair.

- Open seams or holes on slide covers or climb covers **are not permitted to be patched**, these slide covers **must be replaced**, climb covers can be resewn.

Owner / Operator notification and recording requirements

Manufacturer notification

- The owner/operator of an inflatable amusement device shall promptly notify the manufacturer of an incident, failure, or malfunction which, in owner/operator's judgment, may affect the continued proper operation of the inflatable amusement device and is information of which the manufacturer should be aware.
- The owner/operator should notify the manufacturers of an inflatable about the incident that happened involving the inflatable within seven days of the occurrence of the incident.
- An inflatable device cannot be given any major modifications without written approval from us the manufacturer of the device

Minimum Recording Requirements

Per ASTM 2374-17 7.10.1.3

- All injuries and illnesses, including minor injuries and illnesses, that occur while a patron is in or on an inflatable must be recorded in a first aid log.

First-aid incident report

- A first aid incident report is mandatory for major injuries and illnesses that occur while a patron is in or on an inflatable and are so severe that a patron must be taken to the hospital. All injuries or illnesses that are reported, other than minor injuries or illnesses
- The first aid incident report should include, but not be limited to, the following information:
 - Date the incident occurred
 - Name, address, and phone number of the person to receive emergency medical care or treatment.
 - Age of the person to receive emergency health care or treatment
 - Name of the inflatable on which the incident happened
 - Description of the events causing or relating to the accident
 - Physical description of the injury or illness itself
 - Description of the first-aid treatment given to the injured patron, including the medications given
 - Classification of the illness
 - Additional information deemed necessary by the owner/operator
- When recording a first-aid incident, the owner/operator should classify the injury/illness with each of the following classifications based on the reported or observed information about the injury/illness
 - Serious or minor injuries/illnesses should be determined by the owner/operator to describe the circumstances of the injury/illness.
 - Inflatable Amusement Device Incidents Classified in Accordance with Facility Location:
- Inflatable amusement device on device incident
 - Injuries or illnesses that occur to a person while on the device during authorized use of the inflatable, including the startup and shutdown procedures, are known as "on device incidents."
- Loading and unloading incidents
 - Injuries or illnesses that occur to a person while s/he is in the area specified for loading and unloading devices that is under the direct control of an operator/attendant are known as "loading and unloading incidents."
- Queue line incident

- Injuries or illnesses that occur to a person while waiting in line for an inflatable are known as “queue line incidents.”
- Other illnesses
 - Injuries or illnesses other than those that are described should be classified as other than the preceding classifications and should be categorized in accordance with predetermined classifications that can be clarified with the owner/operator.

Information transferred with used inflatable devices

Per ASTM 2374-17 7.11.1

Seller’s requirements

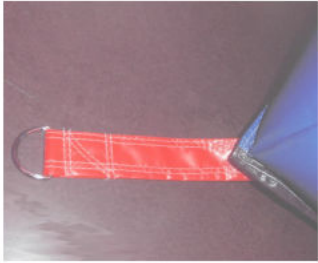
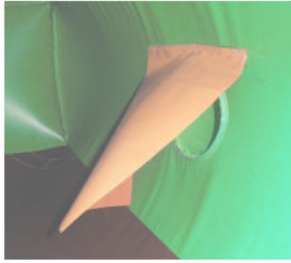


1. The seller of a used inflatable should give the new owner a copy of all the manufacturer’s existing documentation including the current operational and maintenance manuals, service bulletins, schematics, drawings, component identification information, and purchased equipment manuals in the seller’s possession.
2. The seller of a used inflatable amusement device should also provide the buyer with a written notice of the major modifications she/he has made during his/her time with the inflatable.
3. Before being able to operate a used inflatable device, the purchaser of a used inflatable must inform us the manufacturer about the change in ownership of the inflatable.




Reference images:





			
Blower:	Blower flap	Blower switch	Buckle

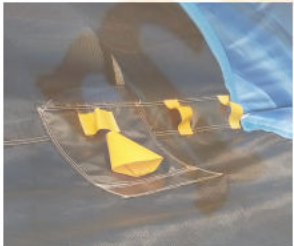
			
D-ring	Generator	Hook & Loop	Safety Sign

			
Webbing	Water Fan Mister	Zipper Chain	Zipper Head

			
Anchor Point	Air tube Flap	Cross over Connection	Deflation Zipper

			
Mat Connection	Pool Air Connection	Pool Webbing Connection	Pool Liner

			
Ramp	Slide Cover	Step liner	Top Tether Point

			
Water Fan Mist Location			

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