

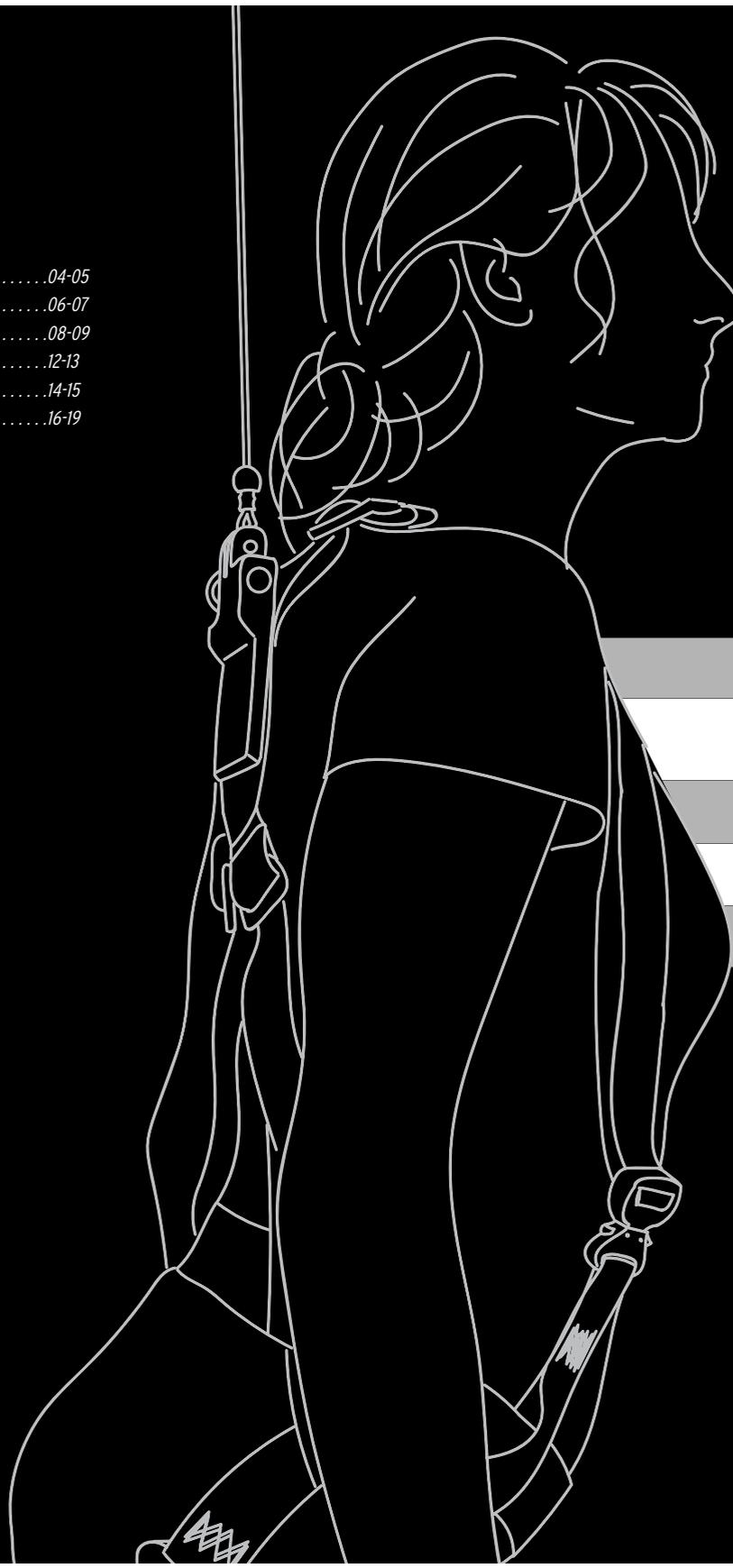
USER / OPERATOR GUIDE & WARRANTY INFORMATION

Single-Point Harness **SP-01**

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ZFX flying harnesses meet the needs of flying performers with lightweight and innovative products. They are designed, tested and manufactured using a strict quality control system, ensuring reliable and safe products. These instructions cover the correct use of the harness throughout the life of the product. If lost, you can download the instructions from the website at www.zfxflying.com/harnesses.



Treat this harness with respect; someone's life depends on it	YES
Periodically check the fit of all performers' harnesses to ensure correct and consistent fit	YES
Identification marks, tape, make up or paint on any ZFX harness	NO
Alterations or modifications to any ZFX harness	NO
Enjoy your flying experience	YES

GENERAL INFORMATION: PERFORMER FLYING HARNESS

USE: This Harness is for professional theatrical performer flying use and shall only be used for that applications. This harness shall not be used for activities typically requiring a jerk harness or jerk vest. Improper use, incorrect selection, misuse or poor maintenance can lead to serious injury or death. User is responsible for adhering to the manufacturer's safety and inspection instructions. It is the responsibility of the user to obtain qualified instruction in the proper use of harnesses prior to usage. This equipment should be used only by trained and competent persons. This harness must be considered as part of the "machinery intended to move performers during artistic performances," hereinafter referred to in this document as "machinery." Therefore, all safety precautions and inspection instructions concerning or regarding the "machinery" must be obeyed. This is not a fall protection harness. Therefore, the flying system, suspension device and choreography should be designed and utilized in such a way as to minimize potential falls or falling distance. The user must be healthy enough to engage in the activities they will attempt.

The user agrees to comply with all relevant published industry standards. The user understands that it is beyond the scope of this manual to train the user in the safe use of this harness given all possible performer flying scenarios. The user also understands that following these instructions alone does not qualify someone to perform, rig or choreograph theatrical flying effects.

The product should only be used as instructed and no alterations may be made to its original design. It may be used in conjunction with appropriate hardware of suitable specification and according to the applicable EN (European) and/or ANSI (American) standards, with due consideration to the limitations of each individual piece of equipment.

These instructions demonstrate some examples of improper utilizations of this product. Note that it is not possible to show or imagine all improper utilizations of this product, and it should only be used in the way specified by the manufacturer in these instructions.

The harness shall only be used in situations that have a rescue plan and/or rescue facilities in case the "machinery" stops working and the performer is stranded and/or suspended in the air. The rescue plan and/or facilities must ensure that the person in harness can be rescued within 15 minutes. The rescue needs to be rehearsed regularly by all users.

The purchaser agrees to check the manufacturer's website on a monthly basis for instruction revisions, updates and/or recall notices and to immediately inform the manufacturer of any defects or issues with the harness: www.zxflying.com/harnesses or harnesses@zxflying.com.

MAINTENANCE:

- Cleaning of textile and plastic parts: Rinse in clean water and neutral soap (max temperature 50°C/122°F) and air dry away from direct heat.
- Cleaning of the metallic parts: Rinse in clean water and then dry well, checking that no moisture remains.
- Temperature: Always keep this product below 50°C/122°F so as not to affect the performance of the product.
- Chemicals: Withdraw the product from service if it comes into contact with chemical reagents, solvents or fuels, all of which could affect the performance of the product.

STORAGE: Store unpacked in a cool, ventilated, dry place away from UV light, heat sources, high humidity, sharp objects, corrosives or other possible causes of damage.

RESPONSIBILITY: ZFX Inc., or the distributor, will not accept any responsibility for damage, injury or death resulting from misuse of or from modifications to the original product. It is the User's responsibility at all times to ensure that he/she understands the correct and safe use of any equipment supplied by or from ZFX or the distributor, that he/she uses it only for the purposes for which it is designed and that he/she practices all proper safety procedures. Before using the equipment, the user agrees to take all necessary steps to become familiar with rescue techniques should an emergency occur. The user agrees to comply

with all relevant published industry standards. The user personally assumes all the risks and responsibilities for his/her actions and decisions; if he/she is unable or not in a position to assume these risks and responsibilities, he/she should not use this equipment.

2 YEAR LIMITED WARRANTY: This product is guaranteed for 2 years against any faults in materials or manufacture. The limitations of guarantee are the following: modifications or alterations, incorrect storage, corrosion, damage due to accidents and negligence, overloading or other uses for which this product is not designed.

SPECIFIC INFORMATION: For a correct fit, choose harness size according to the sizing table on pages 8/9. When fitting the harness, the user must carry out a suspension test in a safe place at ground level to ensure that the harness is fitted properly. All the different positions expected in the intended use should be tested. Check all mechanical aspects of the harness to ensure that the harness is secure. Check all adjustable components before the use of the product to ensure that all parts of the harness are secure.

INSPECTIONS: Each harness must be inspected after each use. When in use, the harness shall be inspected weekly. Inspections shall be documented. Completed inspection forms should be kept in a Maintenance Log. A sample inspection form is included on pages 16/17 and downloadable forms are available at www.zxflying.com/harnesses.

- Check the legibility of the identification markings on the harness
- Check all webbing for fraying, cuts, tears or punctures
- Check for snags or loose threads on all stitching
- Check for cuts, burns or stretched joints on all stitching
- Examine the backplate - verify that the pin moves smoothly and closes completely
- Examine the backplate - verify that the spring plug is properly inserted in the side of the backplate
- Examine the buckles for proper attachment, ease of connection/disconnection and complete closure

RE-CERTIFICATION: In addition to the user implemented inspections, this product shall be examined annually by a qualified person approved by ZFX or the distributor. Any repairs shall be done by a qualified person certified in the care of ZFX harnesses, and all adjustments shall be noted on the life sheet of the harness, along with the ZFX approved re-certification when completed. The life sheet shall be kept in the Maintenance Log. Please contact the ZFX office with any questions about conditions or repairs needed.

LIFETIME: The product lifetime is 10 years from the date of purchase unless any defect appears. Annual re-certifications must be recorded in the life sheet of the product by competent persons certified by the manufacturer (ZFX) or distributor. The following factors can reduce the lifetime of the product: intense use, damage to components of the product, contact with chemical substances, high temperatures, tears and abrasions, violent impacts, and/or failure to maintain as recommended. (Productions with an eight to ten performances per week production schedule should expect about a three year lifespan.) If it is suspected that the product is no longer safe and reliable, withdraw the harness from service immediately and contact ZFX or the distributor.

CONFORMITY WITH THE MACHINERY DIRECTIVE:

This product is designed in compliance with Directive 2006/42/EC on machinery, although flying performer harnesses which are part of "machinery intended to move performers during artistic performances" are excluded from the scope of this Directive.

HARNESS IS ALSO COMPLIANT WITH THESE STANDARDS:

Safety Guidelines for the Live Performance Industry in Ontario, Canada

NPR 8020-11, Netherlands

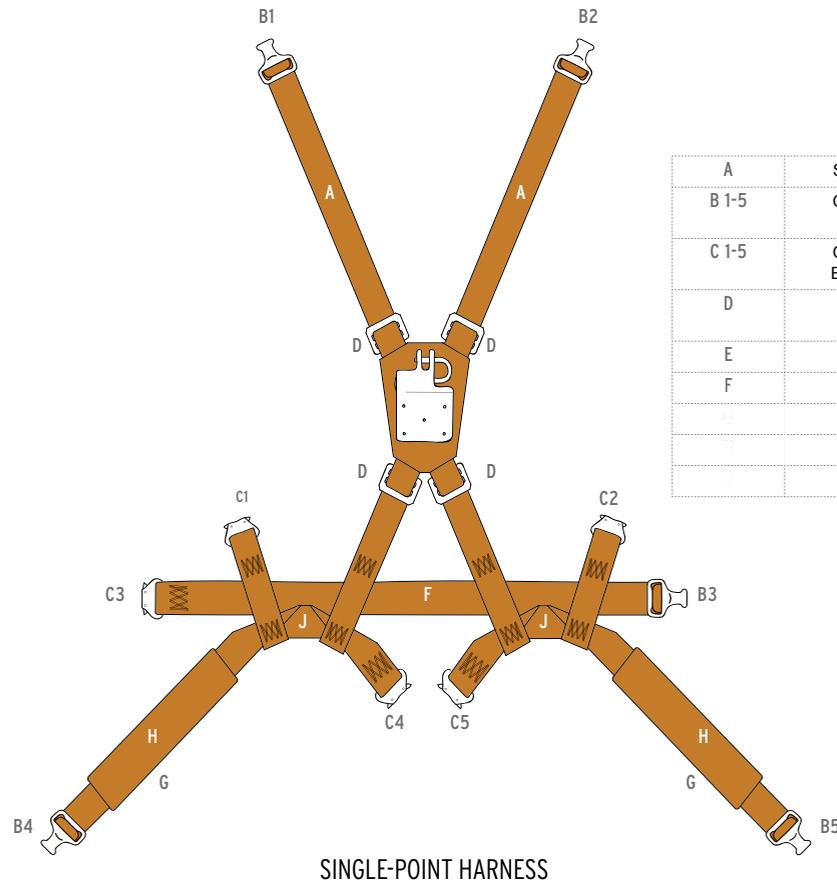
GUV-I 8636, Germany

Variance from NY State Industrial Code Rule 41

ABTT, Code of Practice for the Theatre Industry Part 2 Chapter 1 - Flying, United Kingdom

TECH SUPPORT: If at any time technical support is required, email harnesses@zxflying.com or visit our website at www.zxflying.com/harnesses.

PARTS & DETAILS: SINGLE-POINT HARNESS

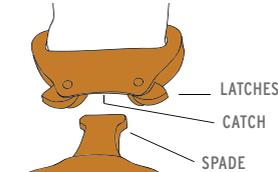


A	Shoulder Strap
B 1-5	Quick-Connect Buckle - male
C 1-5	Quick-Connect Buckle - female
D	Three-Bar Adjuster
E	Backplate
F	Belt Strap
G	Leg Strap
H	Leg Strap
I	Hip Bend
J	Padding

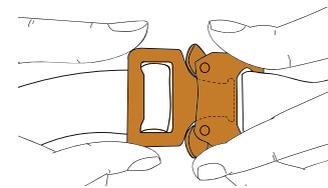
QUICK-CONNECT BUCKLE

Quick-Connect Buckles snap in place by pushing the spade end into the catch. Both latches on the female buckle body should fully engage with the male side of the buckle. To release, push the buckle together slightly while squeezing the latches together simultaneously. The buckle will release.

FEMALE BUCKLE BODY

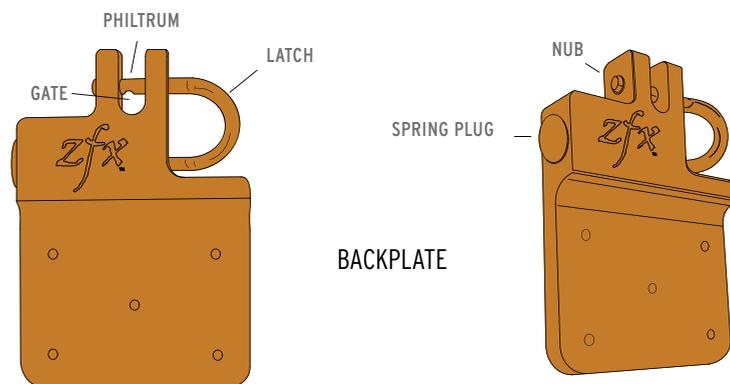
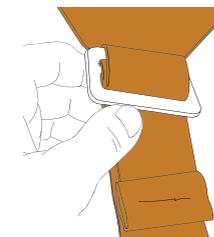


MALE BUCKLE BODY



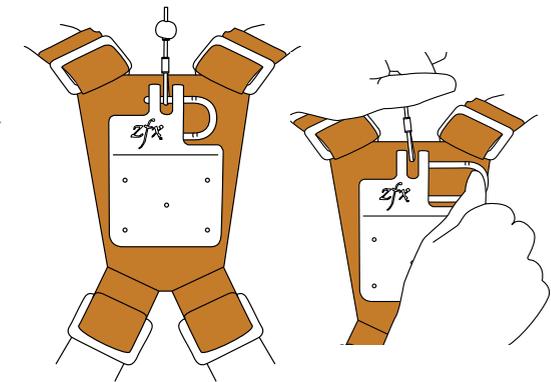
THREE-BAR ADJUSTER

Some performers will require adjustment of backplate positioning for optimal placement. To adjust the length of the straps surrounding the backplate, feed the loose end of the strap back into the buckle to create a loop of slack. Use the slack to feed the strap through the buckle to either loosen or to tighten, then pull the slack out of the buckle to lock in the correct sizing.



BACKPLATE GATE

To open the Backplate Gate for proper Flywire connection, brace four fingers of your right hand against the Backplate, and use your thumb to fully slide open the Latch. Hold the Flywire in your left hand, and insert the thimble into the Gate. Relax your thumb to release the Latch. Before releasing the Flywire from your left hand, inspect that the Gate is free of clothing and/or obstructions, and that the end of the Nub is either flush or protruding from the backplate.



SIZING: SINGLE POINT HARNESS

SIZING:

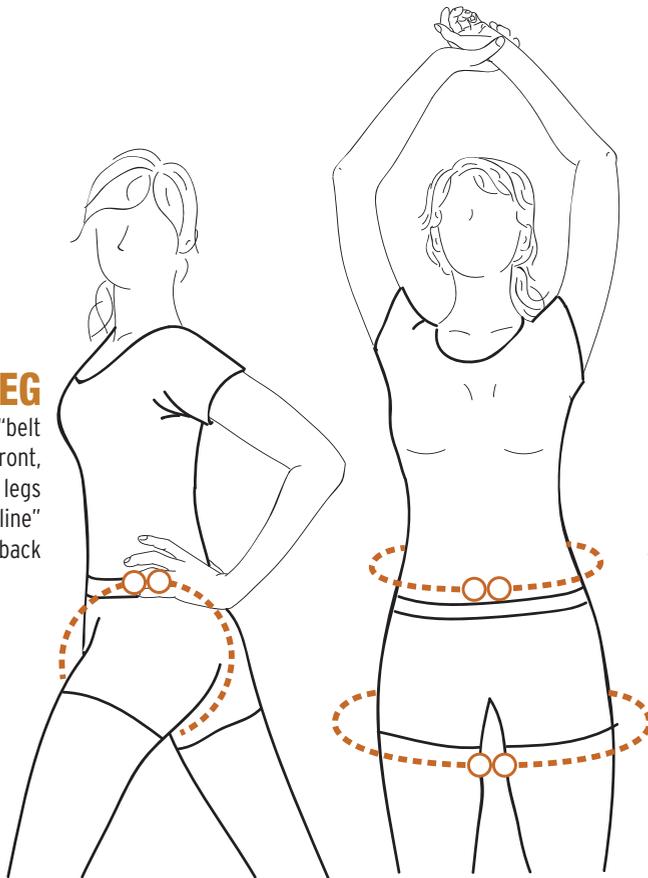
Use the following measurement chart to select the proper harness size for your performer. Measurements listed are suggested guidelines only. Every performer's body is slightly different, and borderline performers may be able to wear harnesses of multiple sizes. If you are unsure about choosing the proper size for a harness, please contact the ZFX office at harnesses@zfxflying.com for further assistance. **Maximum Weight is listed as a suggested limit for ideal performer comfort. This is not an indication of Working Load Limit for the harness itself. DO NOT EXCEED a maximum Working Load Limit of 136kg (300lbs) on any harness.**

Small and Medium Single Point harnesses are constructed with significantly smaller performers in mind, and therefore do not have three-bar Height Adjuster buckles surrounding the backplate. Three-bar Height Adjuster buckles are included on Large and X-Large Single Point harnesses, where fine adjustment of backplate positioning is often necessary.

	MIN HEIGHT	MAX HEIGHT	MAX WEIGHT	LEG	BELT	WIDEST	SHOULDER	BACK
SMALL	2'-6"	3'-6"	60 lbs	12-22 in	22-28 in	22-28 in	19-30 in	7 in
	76 cm	107 cm	27 kg	30-56 cm	56-71 cm	56-71 cm	48-76 cm	18 cm
MEDIUM	3'-6"	4'-6"	100 lbs	17-25 in	22-30 in	22-30 in	24-40 in	7-9 in
	107 cm	137 cm	45 kg	43-63 cm	56-76 cm	56-76 cm	61-101 cm	18-23 cm
LARGE	4'-0"	5'-4"	150 lbs	18-27 in	22-39 in	22-39 in	24-40 in	9-14 in
	122 cm	163 cm	68 kg	46-69 cm	55-99 cm	55-99 cm	61-101 cm	23-36 cm
X-LARGE	5'-0"	6'-7"	300 lbs	19-35 in	22-48 in	28-48 in	27-55 in	11-22 in
	152 cm	200 cm	136 kg	48-89 cm	56-122 cm	71-122 cm	68-140 cm	28-56 cm

LEG

From the "belt line" in the front, between the legs to the "belt line" on the back



BELT

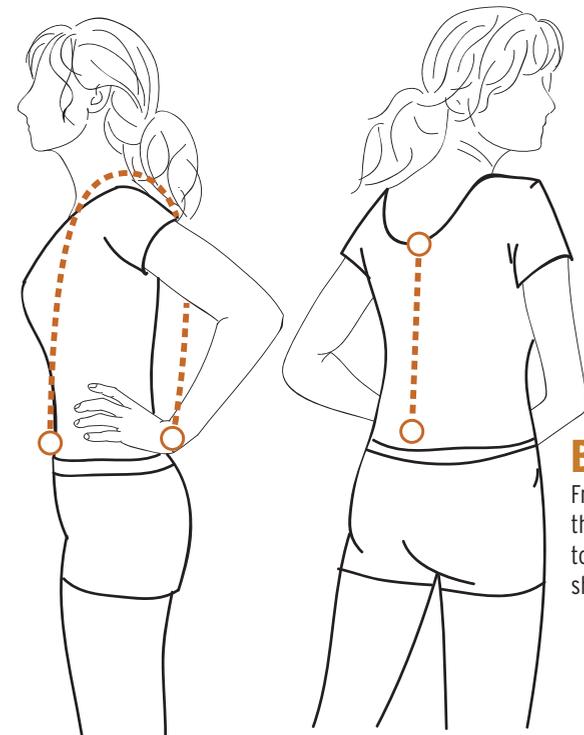
On the "belt line" on top of the hips all the way around the waist

WIDEST

Around the widest part of the lower body - including hips, waist and/or butt

SHOULDER

From the "belt line" on the hips in front, over the shoulders to the "belt line" on the back



BACK

From the "belt line" in the middle of the back to the middle of the shoulder blades



ZFX proudly employs American Craftsmen. We thank you for your support. When you see our seal, you know you have a product built with pride.

IMPORTANT:

When fitting any performer flying harness, remember that the harness should be tight but not overly uncomfortable and never painful. First do a ground fitting by fitting the harness on the performer and firmly tightening all straps and buckles.

Second, lift the performer 30-60 cm (1-2 ft) above the ground and then tighten all straps and buckles a second time while the performer is slightly lifted. The body will shift and settle into the harness once lifted. Never consider a harness

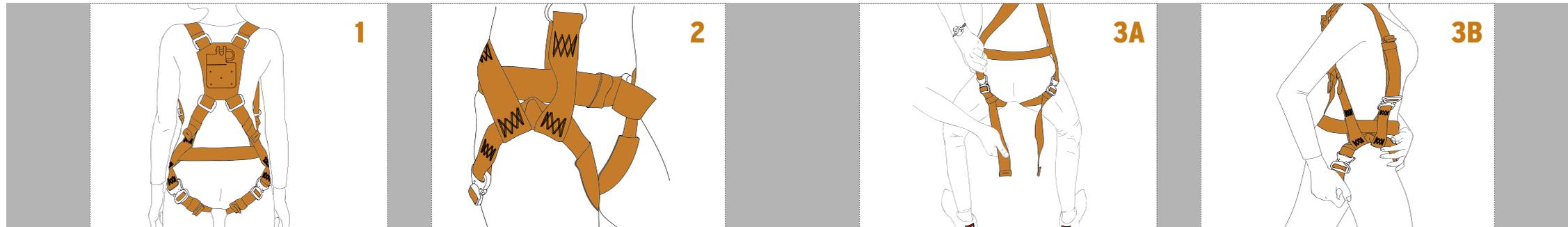
fitting complete without first lifting the performer off of the ground to confirm proper placement, comfort and tightness.

TESTING:

To test harness fitting, attach the Flywire to the Backplate (detailed on page 4) and gently lift the performer 30-60 cm (1-2 ft) above the ground. Adjust the shoulder straps once the body settles into the harness.

Lower the performer, unhook them from the system, and adjust all straps until the harness feels comfortable and the back plate remains in place between the shoulder blades and does not shift. The lift/lower procedure may be performed several times

to achieve a proper fit, but remember to always unhook the performer from the flying system before drastically adjusting the fit of the harness. There should be no pain or hot spots; however, there will be pressure, as the harness should have a tight, snug fit.



BACKPLATE PLACEMENT

Have the performer put the harness on like a backpack, with shoulder straps buckled but loose. Always be sure to loosen the shoulder straps before fitting. Loosely connect the belt, but do not tighten. Place the Backplate so the gate is positioned between the performer's shoulder blades. If necessary, use the Three-Bar Adjusters on the Backplate to position the belt and leg straps to better fit the performer. (i.e. - to move the straps closer to the Backplate for performers with short torsos.)

LEG STRAP PLACEMENT

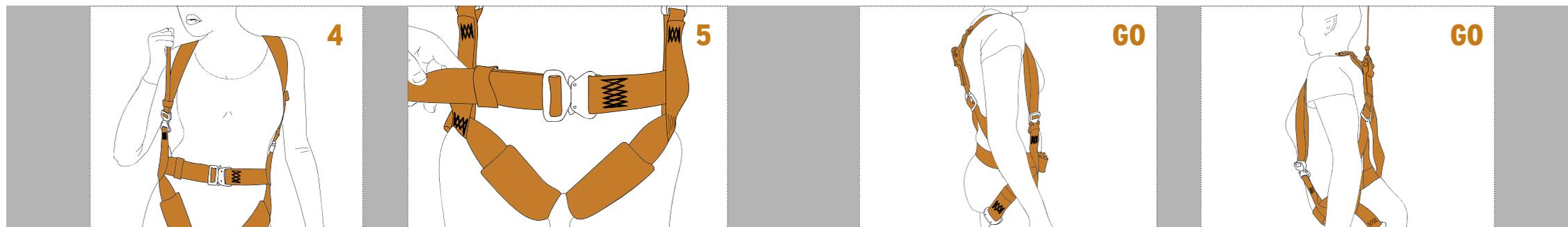
Position the leg straps so the hip bend sits near the front of their hip bones. Tighten the shoulders and waist strap just enough so the harness will stay in position. Adjust the height of the leg straps by using the Three-Bar Adjusters to remove slack below the Backplate.

TIGHTENING LEG STRAP - ASSISTED

To assist the performer in tightening the leg straps, have them assume a second position demi-plié pose. A sumo-squat works well too. Attach the Quick-Connect buckles. Hold the buckle in place with one hand and pull down on the extra part of the strap with the other hand. Tighten straps, allowing for 2 or 3 fingertips of space between the strap and the leg.

TIGHTENING LEG STRAP - SELF

The performer can self-adjust the leg straps by lunging forward and reaching around to pull down on the loose hanging strap. The front of the harness must be anchored to prevent shifting out of alignment. Tighten leg straps, allowing for 2 or 3 fingertips of space between the strap and the leg.



TIGHTENING SHOULDER STRAP

To tighten shoulder straps, dip the shoulder and pull up on the end of the strap. This can be done while on the ground or in the air, as shoulder straps may loosen when the performer is lifted.

TIGHTENING BELT

The belt should be tight but not restrictive, much like a seatbelt. Pull the end of strap through the buckle to tighten. The belt should never restrict breathing, talking or singing.

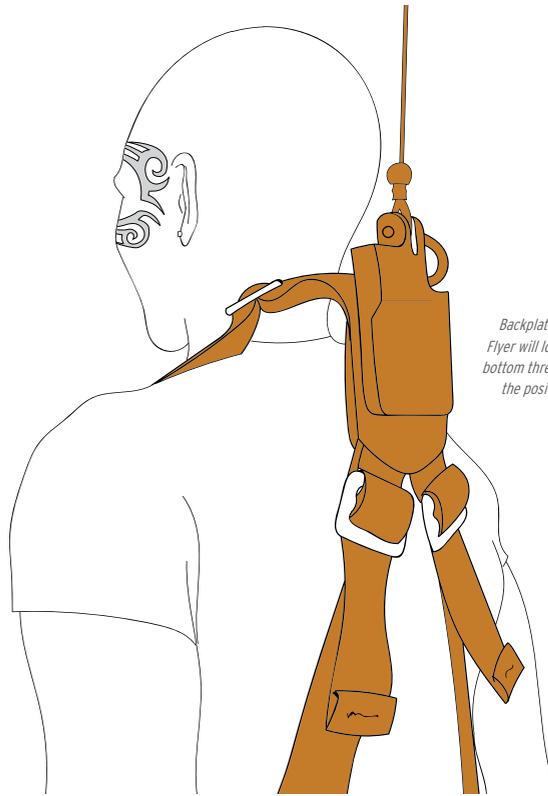
PROPER FIT - SIDE VIEW

The performer should assume proper flying posture when flown, arching their shoulders back to stand upright in the harness, and not leaning forward onto the shoulder straps for support. The shoulder straps will loosen automatically when the performer is lifted, as the Backplate will rise up a small amount. The Backplate should not rise up more than a few centimeters. If so, then the harness has not been fitted properly.

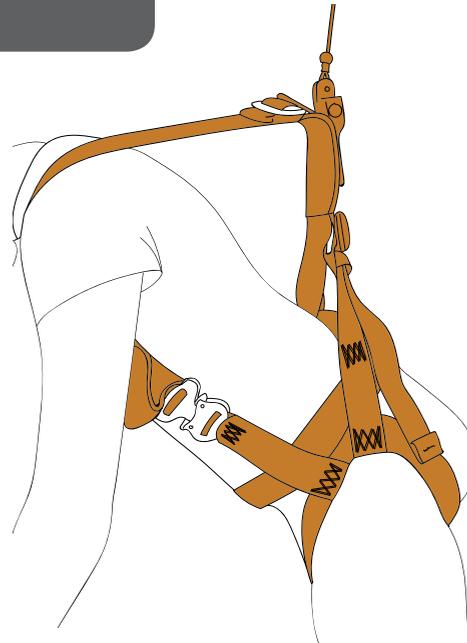
PROPER FIT - WHEN FLOWN

TROUBLESHOOTING: SINGLE-POINT HARNESS

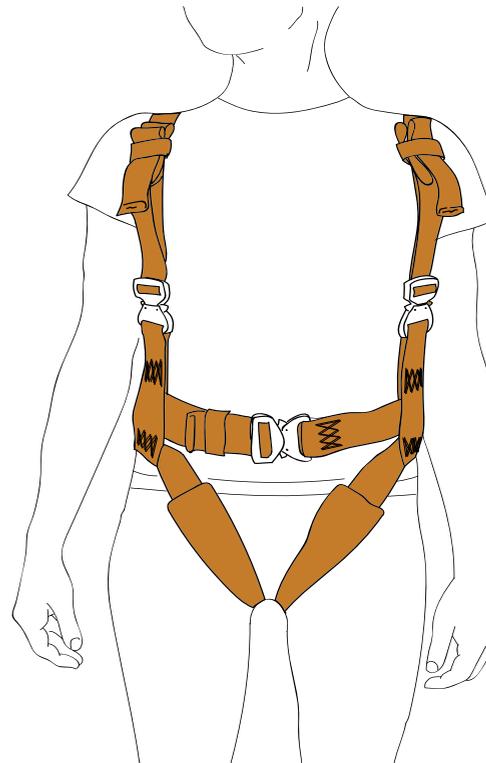
EXAMPLES OF IMPROPER FIT



Backplate is pulling away from performer's body. Shoulder straps are not tightened and performer is not using correct posture



Backplate position is too high. Flyer will look awkward. Adjust the bottom three-bar adjusters to lower the position of the backplate.



Harness is fitted too high on performer's body. Leg straps are improperly placed and not sufficiently tightened. Shoulder straps were not loosened before fitting leg straps.

WHAT DO I DO IF...	POSSIBLE SOLUTIONS
The back plate is pulling away from the performer when lifted.	<ol style="list-style-type: none"> 1. Check posture of the performer; they should have their shoulders back and be in an upright position. 2. Adjust the shoulder and leg straps to position the backplate evenly between the shoulder blades and tighten appropriately.
The performer is feeling pain or hot spots.	<ol style="list-style-type: none"> 1. Adjust all straps to reposition the harness. 2. Re-fit harness on performer, checking strap positioning. 3. Provide more padding.
The excess straps are in the way of the performer.	<ol style="list-style-type: none"> 1. Place excess straps into the provided band. 2. Check that the harness size corresponds with the performer's measurements. <p>**NEVER CUT STRAPS**</p>
The buckles will not release.	<ol style="list-style-type: none"> 1. Loosen the strap first to provide less tension. 2. Push the two parts of the buckle together slightly while pressing the latches simultaneously
The shoulder straps are extremely loose when lifted.	<ol style="list-style-type: none"> 1. Check that the leg straps are appropriately positioned and tightened. Fix and tighten all straps. 2. Check that the backplate is not rising up more than a few centimeters when the performer is lifted. If so, re-fit harness to performer.
The backplate pin will not release when pulled.	<ol style="list-style-type: none"> 1. Provide slack in the cable to release tension. 2. Be sure you are tightly holding the back plate when pulling. 3. Contact ZFX office for assistance.
The backplate gate pin will not close completely.	<ol style="list-style-type: none"> 1. Check that no costumes or hair are preventing closure of the gate. 2. Contact ZFX office for assistance.
The performer is unable to speak or breathe comfortably when lifted.	<ol style="list-style-type: none"> 1. Check all strap positioning for discomfort, loosen straps slightly and/or add padding if needed. 2. Loosen the waist band.

MAINTENANCE: HARNESS LIFE SHEET



RECERTIFICATION - REQUIRED EVERY 12 MONTHS

RE-CERTIFICATION:

Annual re-certifications must be recorded in the Life Sheet of the product by competent persons certified by the manufacturer (ZFX) or distributor. Any repairs should be done by a qualified person certified in the care of ZFX harnesses, and all adjustments should be noted on this Life Sheet, along with the ZFX approved re-certification when completed. This Life Sheet should be kept in the Maintenance Log. Please contact the ZFX office with any questions about conditions or repairs needed.

LIFETIME:

The product lifetime is 10 years from the date of purchase unless any defect appears. The following factors can reduce the lifetime of the product: intense use, damage to components of the product, contact with chemical substances, high temperatures, tears and abrasions, violent impacts, and/or failure to maintain as recommended. (Productions with an eight to ten performances per week production schedule should expect about a three year lifespan.) When it is suspected that the product is no longer safe and reliable, withdraw the harness from service immediately and contact ZFX or the distributor.

	DATE	INSPECTOR NAME/SIGNATURE	NOTES	ZFX OK
1				
2				
2 YEAR LIMITED WARRANTY EXPIRES				
3				
4				
5				
6				
7				
8				
9				
10				
END OF PRODUCT LIFETIME				

MODEL	SERIAL NUMBER	MANUFACTURE YEAR	PURCHASE DATE	DATE OF FIRST USE	USER:

MAINTENANCE: INSPECTION SHEET

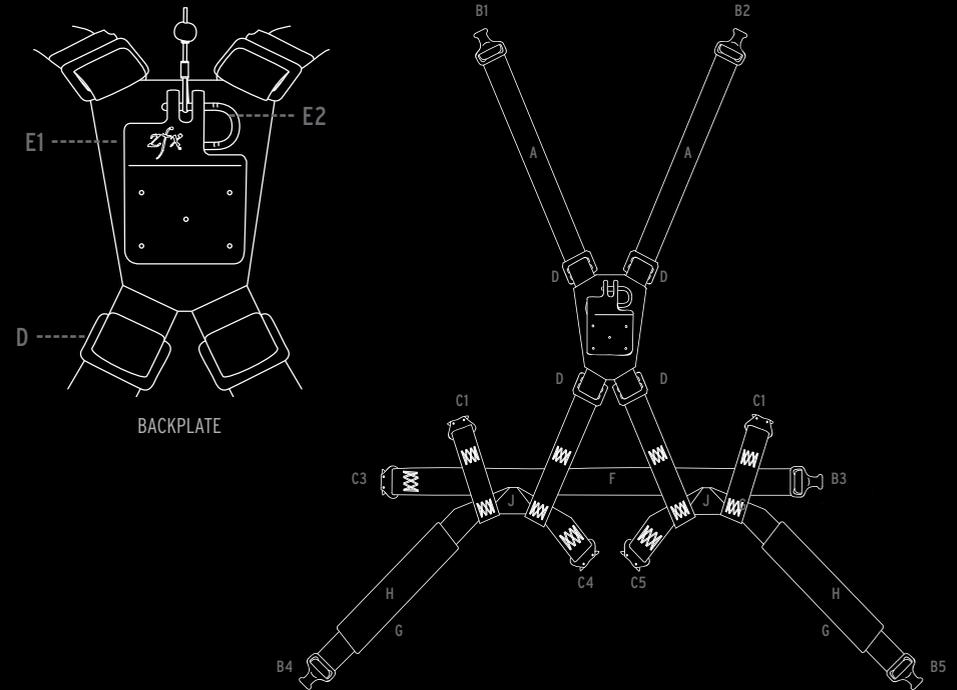
INSPECTIONS:

ZFX harnesses must be visually inspected before each use. If the harness is being used on a regular basis (i.e. 4 or more performances a week over a period of several weeks), the harness should be formally inspected after a minimum of every ten uses.

Any product or component showing any defect or wear shall be withdrawn from service immediately.

If there is any doubt about the serviceability of any of these components, remove the harness from service and contact the ZFX office. For current harness updates and notices, the User is encouraged to check www.zfxflying.com/harnesses on a monthly basis.

The chart below should be copied and kept on file by the User in a maintenance log. A downloadable version of the page is available at www.zfxflying.com/harnesses.



AREAS TO BE INSPECTED	LEGEND	BY	NOTES
Webbing - Frays, cuts, tears, and holes	ALL		
Backplate - Verify spring plug is present	E1		
Backplate - Verify smooth spring action	E2		
Leg Straps, Joints, and webbing - for wear	G, J		
Belt webbing - for wear	F		
Shoulder Strap webbing - for wear	A		
Endstop and Endstop stitches	ALL STRAPS		
Height Adjusters and webbing	D		
Padding and Overall appearance	H, ALL		
HARNESS:		DATE:	INSPECTED BY:



zfx flying effects
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