

# **Rigging Innovations**

Talon Flexon

# **MARNING**

1. Training and/or experience are required to lower the risk of serious bodily injury or death.

**NEVER** use this equipment unless you have:

A. Read the warning label and completed a "controlled program of instruction" in the use of this parachute assembly.

-or-

- B. Read the warning label and all appropriate owners/flight manuals, packing instructions and completed at least 100 ram-air parachute jumps.
- 2. Lower the risk of death, serious injury, canopy damage and hard openings by never exceeding the limits shown on the warning label.

Warning labels may be found in the following locations:

Ram-Air Parachute - center cell<sup>-</sup>top-skin at trailing edge.

Circular Reserve Canopies - next to nomenclature stamp.

Harness/Container System - Backpad.

#### **DISCLAIMER - NO WARRANTY**

Because of the unavoidable danger associated with the use of the parachute harness and container assembly, the manufacturer makes NO WARRANTY, either expressed or implied. The harness and container assembly is sold with all faults and without any warranty of fitness for any purpose. Manufacturer also disclaims any liability in tort of damages, direct or consequential, including personal injuries resulting from a defect in design, material or workmanship or manufacturing whether caused by negligence on the part of the manufacturer or otherwise. By using this harness and container assembly, or allowing it to be used by others, the buyer WAIVES any liability of or the manufacturer for personal injuries or other damages arising from such use.

If the buyer declines to waive liability on the part of the manufacturer, buyer may obtain a full refund of the purchase price by returning the parachute harness and container assembly, before it is used, to the manufacturer within 15 days of the date of the original purchase with a letter stating why it was returned.

### · · · WARNING · · ·

**DANGER** 

Each time you use this parachute system you risk serious bodily injury or death.

**DANGER** 

You can substantially reduce this risk by assuring that each component of the system has been assembled and packed in strict compliance with the manufacturer's instructions, by obtaining proper instruction in the use of this system, and by operating each component of the system in strict compliance with owner's manual.

However, parachute systems sometimes fail to operate properly even when properly assembled, packed and operated so that you risk serious injury or death each time you use the system.

#### "AM I QUALIFIED TO JUMP THIS EQUIPMENT?"

As the new owner of a *Rigging Innovations, Inc.* hamess and container, before you jump it, it is very important that you can answer yes to several questions. Only by doing so can you be assured that you have the necessary training and/or experience to safely utilize modem parachute equipment of this type.

**Question** 1: Does my experience level qualify me for using this equipment?

Advanced equipment such as the Flexon/Talon has features requiring a certain level of experience and training in order to be safely utilized.

**Question 2:** Have I been briefed or trained in the operation of this equipment by qualified personnel such as an Instructor or Licensed Rigger?

If you have progressed to the level where you are qualified to jump advanced equipment, or if you have been trained on other types, there may be certain features of this Harness and Container that you are unfamiliar with. Make sure that you have received a thorough briefing from a certified Instructor or Rigger for the type of equipment you are about to jump.

Question 3: Does the equipment fit properly?

Can you observe and/or reach the operating handles, releases, etc? The  $Flexon^{TM}$  on or Talon, on the other hand, is built in a variety of container sizes, lengths, and widths, and a custom presized harness. These configurations along with options such as pull-out main deployment, make compatible sizing of the system to the individual extremely important to the safe operation of the system. If the system does not fit properly, the handles may be either inaccessible or they may move during the jump, thereby causing problems in the air. The above questions have dealt with your ability to jump the  $Rigging\ Innovations$  product only. If you have answered "Yes" to all the questions, you should feel comfortable in jumping our equipment. However, there are additional factors that may influence your decision and ability that do not relate to our product. If you have any questions or feel uneasy about making the jump, do not hesitate to ask your Instructor or Rigger for any further information or training you feel necessary.

Flexon <sup>™</sup> P/N 6115-(1) S/N:	
Talon P/N 6111-(2) S/N:	
DATE OF MANUFACTURE:	

#### Manufactured by:

## RIGGING INNOVATIONS Inc.

27235 Watson Road Romoland, CA 92585, USA



T. 4



Telephone: (909) 928-1438

FAX: (909) 928-1538

© All Material is Copyright 1994 by Rigging Innovations Inc. All rights reserved. Reproduction in whole or in part without permission is prohibited.

This manual designed and produced by RC Graphics, Santa Barbara, California

#### RIGGING INNOVATIONS INC

#### **Customer Service Policy and Limits**

#### Harness and Containers

RI will provide no charge repair service for repairs that RIGGING INNOVATIONS INC. has determined to be the result from defects in material or workmanship for a period of SIX MONTHS from the DATE OF PURCHASE. Date of purchase and proof of purchase must be supplied to RI by the customer with the item to be repaired free of charge.

#### Safety

RI will perform all MANDATED Service Bulletins repairs or modifications due to SAFETY concerns free of charge.

#### Unauthorized Modifications/Alterations

RI will charge for repair service when the damage is determined to be caused by unauthorized modification or alteration of the product. RI reserves the right to refuse to repair any product so modified or altered.

#### Improper Use

RI will charge for repairs that results from improper use, such as fixed object jumping, or from abuse such as exposure to chemicals, saltwater, washing, improper packing, excessive exposure to sunlight, or negligence of the part of the user (i.e. jumping already damaged equipment).

#### Limits

RI reserves the right to refuse to service equipment for which material and/or manufacturing patterns and specifications no longer exist.

#### Configuration

Articles sent in for repair should be sent in with all parts. RI may request and require additional information pertaining to the product.

#### Accessory Part - Replacement

RI will recommend replacement of harness and container component parts based on inspection when safety is a factor due to normal wear and tear or maintenance of the product.

#### Product Improvement

Product improvements will be available as an option to customers. Costs of Product Improvements will be published in Service Bulletin format.

August, 1994

# TABLE OF CONTENTS

NARNINGl	I
DISCLAIMERII	I
Am 1 Qualified to Jump this Equipment?"	V
General Information	
Talon TSO Authorization 2  Flexon™ TSO Athorization 3  TSO Certification 4  Flexon™/Talon Certification 4  Rigger Qualifications 4  Parts List 4	3 1 1 1
Canopy Compatibility	
Canopy Compatibility 6 Reserve Compatibility 6 Volume 6 Deployment Type 7 Orange Warning Label Placard Data 7 Industry Speed and Weight Limitations 8	7
Jser Information	
Main Container Packing Instructions 1:   Assembly 1:   Packing 1:   Main Container Closing 1:   Folding the Pilotchute (T.O.P.) 1:   Pull-Out Pilotchute (P.O.P.) 1:   3-RingTM Release Assembly 1:   Threading the 3-Ring™ Release Soft Housing 1:   Assembling the 3-Ring™ Release 2:   Reserve Static Line Lanyard System (RSL) 2:   Flexon™ RSL Installation 2:   Talon RSL Installation 2:   Harness Adjustments and Fiting 2:   Maintenance Procedures 2:	233469903346
Rigger Information	
Recommended Tools List	2 3 6 7 9
Appendix	
Packing ToolsA Notes	



# General Information





## DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

NORTHWEST MOUNTAIN REGION Western Acft. Cert. Office P.O. Box 92007 Worldway Postal Center Los Angeles, CA 90009-2007

AUG 191985

Rigging Innovations, Inc. Attn: Sandy R. Reid President 236 East Third Street, Unit A Perris, California 92370

Gentlemen:

Rigging Innovations, Inc., Talon Dual Parachute Harness & Container Assembly Part Number 6111-(): Technical Standard Order C23c.

Your application for authorization to use the Technical Standard Order (TSO) procedures reference your letters dated June 14, 1985, and July 29, 1985, has been reviewed. The certification of conformance with the requirements of the Federal Aviation Regulations (FAR) Part 21, Subpart 0, TSO-C23c is acceptable.

The following technical data are considered to fulfill the requirements for TSO authorization and are being retained in our files:

Talon Owners' Manual, dated June 14. 1985 Rigging Innovations, Inc. Test Summary PER 4.3.2.1, TSO-C23c dated July 2, 1985

The quality control procedures contained in your quality control manual currently on file at the Manufacturing Inspection District Office in Long Beach, California, and your statement that those rocedures will be applied to the manufacture of subject article at the move address, are considered adequate in accordance with FAR 21.143.

Effective this date you are authorized to use TSO procedures for the subject dual parachute harness and container assembly and you may identify this article with the applicable TSO markings as required by TSO-C23c.

As a TSO manufacturer, you are required to report to the FAA any failure, malfunction, or defect related to your TSO in accordance with the provisions of FAR 21.3. you must also notify the FAA when you no longer manufacture a TSO approved article as required by FAR 21.613(b).

This authorization pertains only to manufacturing operations at the above address and this office must be notified in advance of any proposed relocation to preclude interruption while awaiting quality control approval of your new facility.

Sincerely,

CHARLS I. BIOMER Manager, Western Aircraft Certification Office U.S Department of Transportation Federal Aviation Administration

TRANSPORT AIRPLANE DIRECTORATE AIRCRAFT CERTIFICATION SERVICE LOS ANGELES AIRCRAFT CERTIFICATION OFFICE 3229 EAST SPRING STREET LONG BEACH, CA 90806-2425

SEP 171992

Rigging Innovations, Inc 236-A East Third Street Perris, California 92370

Gentlemen:

Rigging Innovations, Inc., Technical Standard Order C23c.

Your application of August 25, 1992, requesting the issuance of a Technical Standard Order (TSO) authorization in accordance with the procedural requirements of Federal Aviation Regulation (FAR) Part 21, Subpart 0, has been reviewed. Based upon your data and statement of conformance certifying your article has met the requirements of FAR Part 21, Subpart 0 and the minimum performance standards of TSO C23c (Ref. FAR 21.305(b)), authorization is hereby granted. For the following:

Part Number 6115-()

<u>Description</u>
Flexon Dual Parachute Harness and Container Assembly

The technial data submitted with your application have been accepted as fulfilling the requirements for your TSO authorization and will be retained in our files.

The quality control procedures contained in your quality control manual, currently on file at the Los Angeles Manufacturing Inspection District Office, and your statement that those procedures will be applied to the manufacture of the subject article at the above address, are considered adequate in accordance with FAR 21.143.

Effective this date, your authorization to use TSO procedures is extended to include this parachute. You may identify this article with the applicable TSO markings as required by TSO C23c.

As a recipient of this TSO authorization, except as provided in FAR 21.3(d), you are required to report any failure, malfunction, or defect in any product or part manufactured by you or your contracted suppliers, and which you have determined has resulted or could result in any of the occurrances listed in FAR 21.3(c).

The report should be communicated initially be telephone to the Manager, Technical and Administrative Support Staff; ANM-103L, (310) 988-5300, within 24 hours after it has been determined the failure has occurred, and followed up with a written notice. FAA Form 8010-4 (Malfunction or Defect Report) or other appropriate format is acceptable in transmitting the required details. As required by FAR 21.613(b), you must also notify the FAA when you no longer manufacture a TSO approved article.

This authorization pertains only to manufacturing operations at the above address. This office must be notified in advance of any proposed name change or facility relocation to preclude interruption while awaiting quality control approval of that facility.

Sincerely,

Frederick Lee Manager, Los Angeles Aircraft Certification Office

#### TSO Certification

Currently there are 5 different levels of TSO certification in use today. There are systems built under TSO C-23b in either Low Speed or Standard Category, and there are systems built under TSO C-23c in either Category A, B or C. The FfexonTM/Talon is built to standards prescribed under TSO C-23c Category B.

#### FlexonTM/Talon Certification

The Flexon™ and Talon harness and container assemblies is approved under FAA TSO-C23c, category B: This parachute is limited to use by persons up to 115 kg (254 lbs) fully equipped, and up to 150 knots.

#### Rigger Qualifications

In order to pack and maintain the FlexonTM/Talon reserve system, the Senior or Master Rigger must possess a BACK rating endorsement to their certificate. However, since this system is dissimilar to old-style parachutes, the rigger should be checked out for this style of parachute prior to certifying the *Flexon*<sup>TM</sup>/Talon for emergency use.

No certificated parachute rigger may -

- (e) Pack, maintain, or alter a parachute in any manner that deviates from the procedures approved by the administrator OR the manufacturer of the parachute; or
- (f) Exercise the privileges of his certificate and type rating unless he understands the current manufacturer's instructions for the operation involved.

ANYONE who circumvents *Rigging Innovations, Inc.* instructions is in violation of Part 65.129 and is therefore performing an illegal procedure.

Flexon Talon quantity description part number part number Harness/container assembly 6115-() 6111-(1) 1 Reserve pilotchute 2237-() 2237-() 1 Square reserve freebag and bridle 2115-() 2116-() 2511-(1) 1 Reserve ripcord 2511-(3) 2 Ram-air reserve toggles 2611-(1) 2611-(1) 2 Reserve closing loops 2913-(4) 2913-(4) 1 Safety stow loop 2911-(3) 2911-(3) 2 Main risers 2411-(4) 2411-() 2 Main toggles 2621-(3) 2621-(3) 1 3-Ring cutaway handle 2521-(4) 2521-() 1 Main deployment bag 2127-() 2122-() Main pilot chute 1 T.O.P. 2241-(3) 2241-() 2242-() 2242-(3) P.O.P. Main bridle 1 T.O.P. 2321-(4) 2321-(8) P.O.P 2321-(5) 2321-(7) 1 **RSL Lanyard** 2811-(3) 2811-(4) 1 Owner's Manual and Registration Card 1315-(1) 1315-()

Table I. Parts List

# **Canopy Compatibility**



#### Canopy Compatibility

This is one of the most important sections of this manual. It is imperative that the rigger and owner understand what canopies are compatible with a particular model of Rigging Innovations, Inc. harness/container assembly. IF INCOMPATIBLE CANOPIES ARE USED WITH THIS SYSTEM, IT COULD VERY WELL FAIL TO OPERATE AS DESIGNED RESULTING IN SERIOUS INJURY OR EVEN DEATH TO THE USER.

#### Reserve Compatibility

In order to determine whether a particular reserve canopy is compatible with a Rigging Innovations, Inc. harness/container assembly, there are several requirements that have to be met. They are volume, deployment type, TSO certification, and placard limitations.

#### **Volume**

The volume of the canopy is determined using the standard Parachute Industry Association (PIA) volume measurement as determined by PIA Technical Standard 104 in its most current edition. By cross referencing this measurement to the Rigging Innovations, Inc. Main/Reserve Container Volume, Table I or Table II the volume compatibility may be determined.

**Table I. Reserve/Main Container Volumes**All numbers refer to the cubic inch volume of the containers.

container size		volume	
F1	Reserve/Main	250/275	
F2	Reserve/Main	300/300	
F3	Reserve/Main	335/325	
F4	Reserve/Main	375/400	
F5	Reserve/Main	470450	
F6	Reserve/Main	500/500	

**Table II. Main/Reserve Container Volume**All numbers refer to the cubic inch volume of the containers.

Talon		Flexon		
container size	volumne	container size	ideal	
TO Reserve/Main	250/275	F1 Reserve/Main	250/275	
T1 Reserve/Main	275/300	F2 Reserve/Main	300/300	
T2 Reserve/Main	300/300	F3 Reserve/Main	335/325	
T3 Reserve/Main	275/350	F4 Reserve/Main	375/400	
T4 Reserve/Main	375/420	F5 Reserve/Main	470/450	
T5 Reserve/Main	415/475	F6 Reserve/Main	500/500	
T6 Reserve/Main	475/550	Classic Pro		
T7 Reserve/Main	540/650	CP2 Reserve/Main	400/600	
T8 Reserve/Main	TBA	CP3 Reserve/Main	400/700	
T9 Reserve/Main	<u>TBA</u>	CP4 Reserve/Main	<u>550/800</u>	

#### **Deployment Type**

There are currently 5 different canopy deployment methods in common use. Of these, only TYPE 5 is approved for use in the Rigging Innovations, Inc., FlexonTM/Talon harness/container assembly. The description and example is as follows:

type 5: Free Bag: Canopy stowed in bag and lines stowed on/in bag.

Example: Swift, Raven, Firelite

#### Orange Warning Label Placard Data

As part of the manufacturers requirements, the ORANGE WARNING! LABEL located on the lower, external back pad must be filled in by the Rigger assembling and packing the *Flexon*<sup>TM</sup>/Talon. FAILURE TO DO SO WILL RESULT IN THE TSO BEING NULL AND VOID!

		MAIN	RESERVE
MAXIMUM DEPLOYMENT SPEED		KTS.	KTS.
MAXIMUM GROSS WEIGHT CLOTHINIG + EQUIPMENT)	(JUMPER+	LBS.	LBS.
MANUFACTURER:			
MODEL:			
ATTENTION RIGGERS:	REFER TO OWNERS MANUAL FOR PLACARD INFORMATION AND COMPATIBILITY LIMITATIONS.     FILL IN DATA WITH WATERPROOF PEN.     CHANGE DATA ON LABEL IF A DIFFERENT CANOPY IS INSTALLED.		

The following data, Table III, Industry Weight/Deployment Speed Limitations, covers only current production parachutes and only those manufacturers who placard their products. For those canopies not listed, it is suggested that you contact the canopy manufacturer directly or Rigging Innovations, Inc. for a current update to this list. This information will enable the Rigger to comply with these requirements. We find that a PILOT ultra fine point permanent marker MODEL SC-UF or equivalent works best.

Please note that there may be instances where one model canopy may have TWO DIFFERENT placard limitations; one as a reserve and one as a main. An example of this is the Precision Super Raven 4 canopy. As a reserve it is limited to 254 lbs maximum gross weight. However as a main it is placarded at 288 lbs. Make sure that you, the Rigger, mark the correct space with the right category information.

**Table III. Industry Weight / Deployment Speed** 

		max deploy	Max gross
manufacturer	model	speed (kts)	weight (lbs)
Advanced Para Systems	Laser 250R	150	252
Free Flight Enterprise	Amigo 134	150	145
	Amigo 152	150	164
	Amigo 172	150	185
	Amigo 206	150	225
Glide Path International/	Clipper	130	195
Flight Concepts International	Cricket	130	160
	Cricket Reserve	130	160
	Firelite Firelite Reserve	130 150	180 190
	Fury	130	200
	Fury Reserve	150	200
	Hummingbird	130	150
	Manta	130	275
	Man-O-War	130	300
	Maverick	150	195
	Maverick Reserve	150	195
	Raider	130	235
	Sharpchuter	130	220
	Sharpchuter Reserve	150	235
	Startrac 1	130	250
	Startrac 11	130	275
	Wildfire	130	170
	Maverone	130	250
National Parachute Industries	Avenger	130	220
	Hercules	130	340
	Marauder	130	265
	Phantom 145	150	155
	Phantom 180	150	188
	Phantom 220	150	220
	Phantom 265 Renegade	150 130	254 232
	Scorpion	130	185
	Spitfire	130	180
	Stingray	130	145
	Vulcan	130	282
North American Aerodynamics	Parafoil 232	130	145
	Parafoil 252	130	225
	Parafoil 272	130	240
	Parafoil 282 Parafoil 302	130 130	275 240
	NAA 22	130	240 190
	NAA 22 NAA 26	130	250
Para Flite	Astrobe	130	215
, ara i iito	Cirrus Reserve	130	220
	Cruislite	130	215
	Cruislite Beta	130	150
	Cruislite XL	130	230
	DC-5	130	250
	Evolution 140	130	180
	Evolution 160	130	200
	Evolution 200	130	240
	Evolution 240	130	270

Table III. Industry Weight / Deployment Speed Limitations (cont'd)

manufacturer	model	max deploy speed (kts)	max gross weight (Ibs)
Para Flite (cont'd)	Nimbus	130	215
Tara Tine (cont a)	Nimbus Beta	130	165
	Nimbus XL	130	250
	Orion	150	215
	Pursuit 215	130	215
	Pursuit 230	130	225
	Robo	130	200
	Strato Cloud Delta	130	220
	Swift Main	130	180
	Swift Reserve	130	180
	Swift Plus Reserve	150	200
	Safety Flyer	130	160
	Safety Star	130	180
	XL Cloud	130	250
Performance Designs	Excalibur 120	130	144
	Excalibur 135	130	162
	Excalibur 150	130	180
	Excalibur 170	130	204
	Excalibur 190	130	228
	Excalibur 210	130	252
	Excalibur 230	130	276
	Excalibur 260	130	276
	PD-150	130	150
	PD-170	130	170
	PD-190	130	190
	PD-210	130	210
	PD-230	130	230
	PD-260	130	260
	PD-300	130	300
	PD-340	130	340
	PD-143	130	143
	PD-160	130	160
	PD-176	130	176
	PD-193	130	193
	PD-218	130	218
	PD-235	130	235
	PD-253	130	253
	PD-280	130	280
	PD-126R Reserve	150	151
	PD-143R Reserve	150	171
	PD-160R Reserve	150	192
	PD-176R Reserve	150	211
	PD-193R Reserve	150	232
	PD-218R Reserve	150	254
	PD-253R Reserve	150	254
	Sabre 97	130	107
	Sabre 107	130	118
	Sabre 120	130	132
	Sabre 135	130	149
	Sabre 150	130	165
	Sabre 170	130	187
	Sabre 190	130	209
	Sabre 210	130	231
	Sabre 230	130	253

Table III. Industry Weight / Deployment Speed Limitations (cont'd)

		max deploy	max gross
manufacturer	model	speed (kts)	weight (lbs)
Performance Designs (cont'd)	Stiletto 97	130	126
-	Stiletto 107	130	139
	Stiletto 120	130	156
	Stiletto 135	130	176
	Stiletto 150	130	195
	Stiletto 170	130	221
Precision Aerodynamics	Falcon 150	130	153
	Falcon 175	130	179
	Falcon 195	130	199
	Falcon 215	130	219
	Falcon 235	130	240
	Falcon 265	130	254
	Falcon 300	130	254
	Interceptor 180	130	177
	Interceptor 200	130	197
	Interceptor 225	130	221
	Interceptor 250	130	246
	Microraven 120	130	131
	Microraven 135	150	137
	Microraven 150	130	153
	Monarch 135	130	162
	Monarch 155	130	186
	Monarch 175	130	210
	Monarch 195	130	234
	Monarch 215	130	258
	Polaris	130	215
	Super Raven 1	130	185
	Super Raven 2	130	222
	Super Raven 3	130	254
	Super Raven 4	130	254
	Super Raven 4 Main	130	288
Strong Enterprises	G2R	130	175
-	G3R	130	225
	Hobbit 162 Reserve & Main	130	150
	KT-7	130	200
	KT-9	130	300
	Mighty Mak 335 Reserve & Main	130	325
	Spirit 212	130	175
	Spirit 272	130	225
	Wizard 272	130	225

# User Information



# Main Container Packing Instructions

#### **Assembly**

**Step 1** Lay out main parachute, flake canopy, and check lines for straightness and continuity.

**Step 2** With the line check complete, attach the connector links to risers in the correct manner (nose of canopy on front riser, tail on rear riser). Note that the risers are marked on the back with an L or R to designate left and right. Make sure that you have the proper riser on the appropriate side of the canopy.

**Step 3** Route the steering lines through the guide ring on the rear riser.

**Step 4** Route the steering line through the grommet in the main steering toggle from the bottom out the top and align the mark on the line with the grommet. Fasten the line to the toggle with what is commonly called a Figure 8 knot and secure the running end with an overhand locking knot. Make sure the toggle is secure and the knot will not slip.

**Step 5** Attach the risers to the harness making sure you have left on left and right on right.

**Step 6** Next attach the main bag to the canopy as follows (*Figure 1*):

- a. Route the end of the main bridle down through the grommet in the top of the bag, through the canopy attachment point (ring or loop), then back up through the grommet.
- b. With the loop end through the grommet, pass the pilotchute through the loop and then pull the knot down through the grommet and tighten the knot around the canopy attachment point.

**Step 7** Install the rubber bands provided on the bag.

**Step 8** The main parachute is now ready to pack according to the manufacturer's instructions. The main toggles stow into the pocket with the excess hidden by the velcro covers as shown in *Figure 2*.

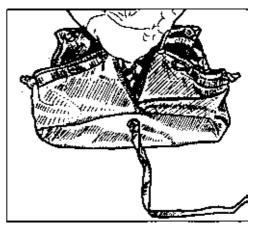


Figure 1

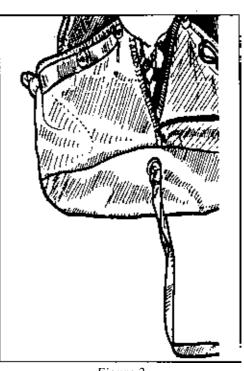


Figure 2

#### **Packing**

- **Step 9** When packing the main canopy, pack it approximately 4" wider than the bag. This will allow the canopy to fill out the sides of the bag and not have all the bulk in the center. In order to make the container look as good as possible, the bulk must be distributed evenly in the bag.
- **Step 10** Bring the lines out the center and lock the two center locking stows. Lock the two outer locking stows and finish stowing the remainder of the lines.
- **Step 11** Work the air out of the bag at this time to flatten the bag prior to placing it in the container. Step 12 Pick up the bag and place it at the bottom of the main container.
- **Step 13** Route the main risers over the shoulders so all the slack is taken up and the main toggle assembly faces outboard.
- **Step 14** Place the bag into the main container with the lines to the BOTTOM of the container. FAILURE TO PLACE THE LINES TO THE BOTTOM OF THE CONTAINER COULD RESULT IN A PILOTCHUTE IN TOW.
- **Step 15** Kneeling on the bag, work it into the comers of the container while pulling up the side flaps.

#### Main Container Closing

- **Step 1** Route the main bridle across the top of the bag and out the upper right corner of the container with the stiffener out.
- **Step 2** Place a pull-up cord in the main closing loop. The main flaps close in the order that is stamped on each flap. that is, as follows:
  - #1 Top flap
  - #2 Bottom flap
  - #3 Right side flap
  - #4 Left side flap
- **Step 3** Thread the pull-up cord throught the #2 flap and pull the bottom flap up until the grommets touch.
- **Step 4** Hold the loop in place and thread the pull-up cord throught he #3 flap and pull it into place.
- **Step 5** Again, hold the loop in place and thread the pull-up cord through the #4 flap. Pull the flap into place and lock with the curved pin. Mate the yellow velcro on the bridle onto the velcro on the #1 flap. *Figure 1*

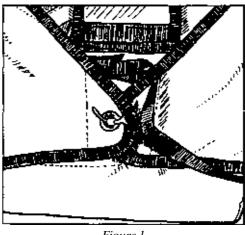


Figure 1

**Step 6** Next mate the velcro on the right hand side of the bottom flap.

#### Folding the Pilotchute (T.O.P)

**Step 1** Place the pilotchute on a flat surface with the handle down and spread to its fullsize. *Figure 1* 

**Step 2** Fold the pilotcute in half and stow the excess bridle near the outer edge of the pilotchute. *Figure 2* 

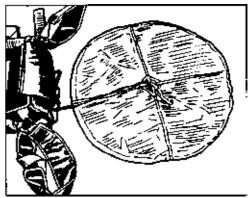


Figure 1

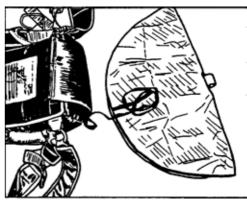


Figure 2

- **Step 3** Fold the outside edge with the bridle inside back towards the handle. *Figure 3*
- **Step 4** Now fold the pilotchute into thirds as shown in *Figure 4 & Figure 5*.
- **Step 5** Fold the pilotchute into thirds again so that the result is a flat package approximately the length and width of the spandex pocket. *Figure 6*

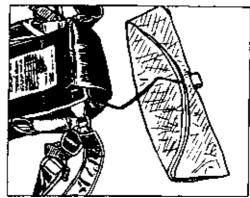


Figure 3

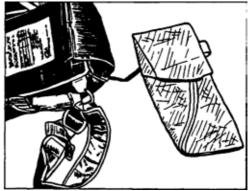


Figure 4

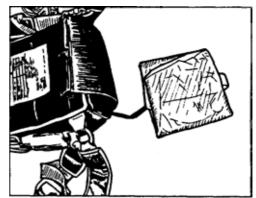


Figure 5

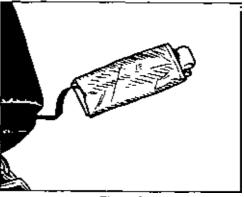


Figure 6

**Step 6** Slide the pioltchute into the pocket so that only the handle protrudes. *Figure 7* 

**Step 7** Close the outside tongue of the T.O.P. cover first. *Figure* 8

**Step 8** Close the inside tongue of the T.O.P. cover and check the pilotchute handle position. *Figure 9* 



Figure 7

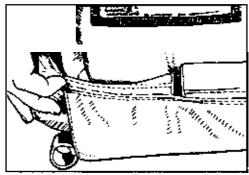


Figure 8

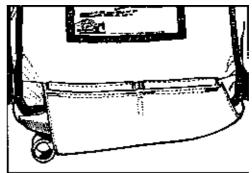


Figure 9

#### Pull-Out Pilotchute (P.O.P)

**Step 1** Lay the pilotchute out with the mesh facing up. Pull the center of the pilotchute where the handle and bridle are attached outward to the edge of the pilotchute. *Figure 1* Fold the fabric over the mesh so it is covered.

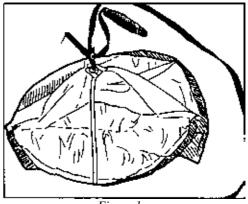


Figure 1

**Step 2** Fold the pilotchute in an organized manner so that the mesh is protected by the canopy fabric and the bridle and handle is exposed. *Figure 2* 

**Step 3** Place the pilotchute under the bottom main closing flap so that handle and lanyard are at the bottom right of the container. *Figure 3* "S" fold the bridle and place under the pilotchute. Make sure that the lanyard is clear and free to move through the grommet on the bridle. Insert the tab below the grommet on the bridle into the elastic keeper built into the handle stow pocket. *Figure 4* 

**Step 4** Close the container in the numbered sequence (top, bottom, right, left) making sure the handle and tab exit the lower right hand corner. Secure the locking loop with the pin on the end of the pull-out lanyard. *Figure 5* 

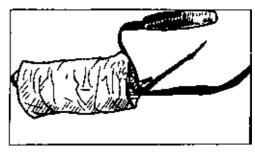


Figure 2

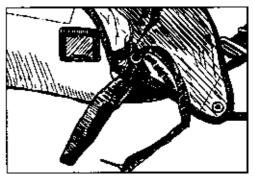


Figure 3

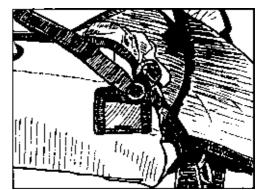


Figure 4

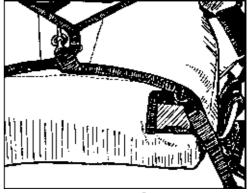


Figure 5

**Step 5** Secure the handle in place in the pockets. Insert the lanyard end first in the plastic pocket and then the bottom in the web pocket. Make sure that the lanyard is free to slide through the grommet tab at the base of the pilotchute. DO NOT TRAP THE TAB AND LANYARD UNDER THE MAIN BOTTOM FLAP. DOING SO WILL RESULT IN A PACK CLOSURE. *Figures 6* 

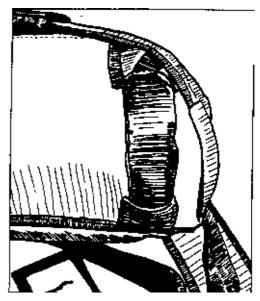


Figure 6

# 3-Ring<sup>TM</sup> Release Assembly

#### Threading the 3-Ring™ Release Soft Housing:

The *Flexon*<sup>TM</sup>/Talon 3-Ring<sup>TM</sup> system utilizes a non-metallic fabric channel system in place of the conventional metallic housings. In addition, special Teflon fabric is used as a liner in the channels to ensure smooth, consistent release forces. Because of the nature of the soft housing system, threading the release cables is different than the metal housings. However, no special tools are required to accomplish this.

**Step 1** Thread the cables on the release handle through the fabric channel formed by the chest strap and then through the channel located under the 3-Ring<sup>TM</sup> cover on the right side of the harness. Both ends should then protrude out the top of the cover next to the 3-Ring<sup>TM</sup> hardware. Fasten the release handle to the harness to hold it in place. *Figure 1* 

**Step 2** Next thread the short cable into the right side release housing and out the top of the housing. Take the long cable and thread it into the channel on the right side and out the top just short of the reserve top flap. *Figure 2* 



Figure 1

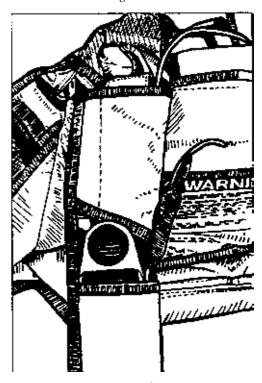


Figure 2

**Step 3** Next take the cable end and insert it into the Teflon tube in the channel at the top of the reserve. *Figure 3* It should now protrude from the channel at the left side of the reserve top flap.

**Step 4** Now take cable end and insert it into the left channel and out the bottom.

**Step 5** Lastly, insert the cable end into the bottom of the left side soft housing and out the top near the grommet. Make sure that the soft housing is routed UNDER the left harness back strap above the 3-Ring<sup>TM</sup> hardware. *Figure 4* 

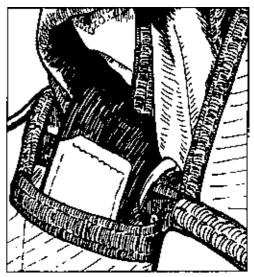


Figure 3

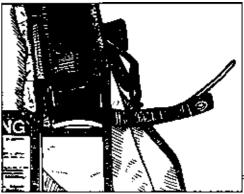


Figure 4

#### Assembling the 3-Ring™ Release

TY-17 Mini

TY-8 Standard

**Step 1** With the side of the riser bearing the rings and loop facing the front of the harness, pass the larger ring on the riser through the ring on the harness from the rear and fold it upward. *Figure 1* 

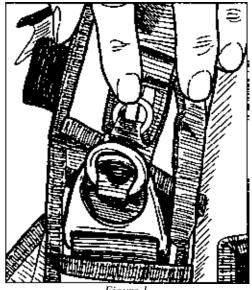


Figure 1

- **Step 2** Pass the smaller ring on the riser through the second ring, and fold it upward. *Figure 2*
- **Step 3** Pass the loop from top to bottom around the small ring, and through the grommet in the riser. Make sure the loop goes only around the small ring, and not the second ring also. Do not twist the loop. *Figure 3*
- **Step 4** Place the grommet on the end of the housing over the loop, and hold it in place while pushing the end of the cable through the loop. Stow the loose end of the cable under the cover on the back of the riser. *Figure 4*
- **Step 5** Repeat Steps 1 through 4 with the other riser.
- **Step 6** Check the riser assemblies to make sure they are correct.

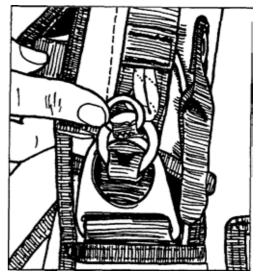


Figure 2

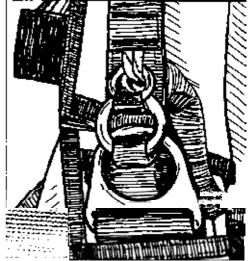


Figure 3

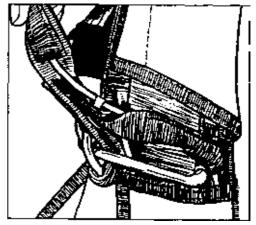


Figure 4

#### Assembling the 3-Ring<sup>TM</sup> Release

**TY-17 Integrity Risers** 

**Step 1** With the side of the riser bearing the rings and loop facing the rig, pass the larger ring on the riser through the ring on the harness from the FRONT and fold it upward. *Figure 1* 

**Step 2** Pass the smallest ring on the riser upward through the middle ring. *Figure 2* 

**Step 3** Thread the locking loop upward through the smallest ring, then through the grommet located on the tab that is sewn to the riser. *Figure 3* 

**Step 4** Continue by threading the locking loop through the grommet on the soft housing and locking in place with the break away cable. *Figure 4* 

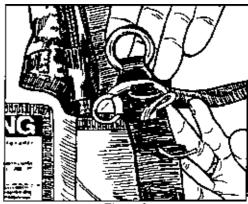


Figure .

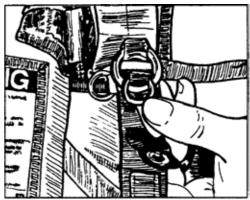


Figure 2

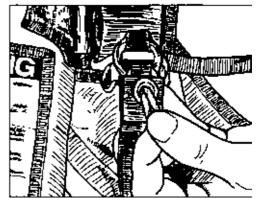


Figure 3

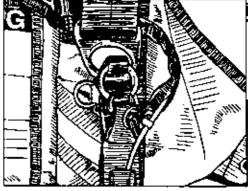


Figure 4

# Reserve Static Line Lanyard System (RSL)

#### The Concept:

The basic concept of the Reserve Staticline Lanyard or RSL system is that a lanyard is attached from the left main riser to a pin with a ring through which the reserve ripcord is routed. Upon jettisoning a malfunctioned main canopy, the lanyard automatically pulls the cable which pulls the pin of the reserve ripcord. This results in activation of the reserve with a minimum loss of altitude. Through the use of the RSL system, a greater degree of safety is realized. IT MUST BE STRESSED HOWEVER, THAT THE RSL IS SIMPLY A BACKUP TO MANUAL ACTIVATION OF THE RESERVE DEPLOYMENT.

In the event of a malfunction, the jumper must still manually pull the ripcord even though the RSL may activate the reserve faster. There have been instances where the RSL has been disconnected and the jumper relied on the RSL for activation. They relied on it all the way to impact.

#### Installation - Flexon<sup>TM</sup>

The *Flexon* RSL System must be installed by a Rigger during the packing of the reserve since the reserve ripcord MUST pass through the pin on the end of the lanyard prior to closing and sealing the reserve. The following steps MUST be followed to install the *Flexon* RSL System.

**Step 1** The pin end of the lanyard is installed first. Route the ripcord cable/pin assembly through the eye of the pin. Place the pin on the end of the lanyard between the shoulder and the reserve top flap. Insert the pin into the same fabric channel that the breakaway cable uses. Now the reserve may be closed in the nor mal manner using the ripcord pin. Figure 1 & 2

**Step 2** Once the reserve is assembled and packed with the lanyard installed, the main risers must be installed on the main canopy. Make sure that they are installed correctly with the left and right marked risers on their respective line groups. Attach the risers to the harness and container.



Figure 1

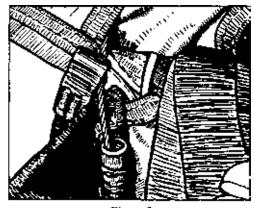


Figure 2

Step 3 Insert the long stiffener of the lanyard into its upper and lower pockets without twisting the lanyard. Figure 3 Next install the snap shackle of the lanyard to the attachment ring on the left riser. IT IS IMPERATIVE THAT THE LANYARD IS ROUTED DIRECTLY FROM THE PIN TO THE RING ON THE LEFT RISER WITHOUT BEING ROUTED AROUND OR THROUGH **HOUSINGS OTHER** ATTACHMENTS. OR FAILURE TO DO SO WILL RESULT IN FATAL **CONSEQUENCES!** 

If you should have any doubt or questions as to the routing or installation of the harness/container Reserve Staticline Lanyard System, the Rig should not be jumped until inspected by a competent Rigger familiar with the system or the manufacturer.

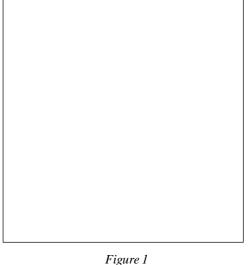


Figure 3

#### Installation - Talon

The Rigging Innovations RSL System must be installed by a rigger during the packing of the reserve since the reserve ripcord MUST pass through the ring on the end of the lanyard prior to closing and sealing the reserve. The following steps MUST be followed to install the Talon RSL System.

**Step 1** The ring end of the lanyard is installed first. Mate the velcro end of the lanyard with the ring to the velcro pathway on the inside left of the reserve top flap. Route the ripcord cable/pin assembly through the housing and then through the ring on the lanyard. Now route the ripcord cable/pin assembly through the opening in the underside of the top reserve flap and out between the inner and outer top reserve flaps. Figure 1 Now the reserve may be closed in the normal manner using the ripcord pin.



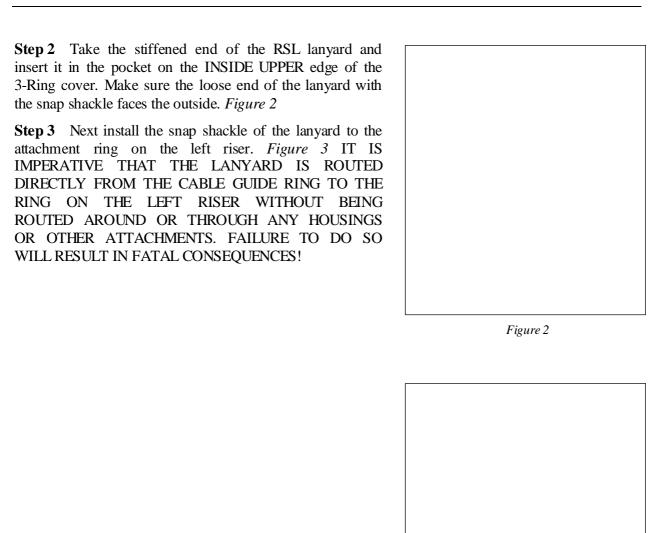


Figure 3

## Harness Adjustments and Fitting

The  $Flexon^{TM}$ /Talon is designed to have only three points of adjustment. That is, the chest strap and the two leg straps. All other harness dimensions are fixed.

- 1. Put the rig on and tighten all the straps to fit properly. Stow any loose ends so they do not flap in freefall and not mistaken for handles.
- 2. Locate the following to familiarize yourself as to their visual and physical locations: Cutaway handle, reserve ripcord, main pilotchute handle (TOP or POP).
- 3. For the TOP, practice pulling the main pilotchute while lying on your stomach to ensure that you can pull it. Make sure that you are satisfied with the force necessary to extract the pilotchute from the pocket. It may be necessary to fold the pilotchute in another configuration to achieve an easy pull.
- 4. For pull-out, you should again practice pulling the pilotchute while lying on your stomach. Make sure handle is accessible and that the pull force is not too great.

#### Note

If you should have any questions about these instructions, you should seek the help of a certified Rigger or contact Rigging Innovations, Inc.

## Maintenance Procedures

The  $Flexon^{TM}$ /Talon begins its life as one of the finest pieces of equipment you can buy. It is up to you to maintain it in top condition. Below are certain areas that you as the owner and your rigger should check on a regular basis to ensure proper operation and long life of your  $Flexon^{TM}$ .

#### Before Jumping You Should Check:

- 1. All ripcord and 3-Ring<sup>TM</sup> housings for tackings, damage or obstructions.
- 2. Reserve ripcord pins, cables, handles and pockets for proper seating, wear and damage.
- 3. Main deployment activation devices (pull-out or throw-out) for wear and placement. Also check the routing of throw-out bridles for twists, etc.
- 4. Main risers routed smoothly over the shoulder and the main riser covers closed properly.
- 5. 3-Ring<sup>TM</sup> release mechanism assembled properly and excess cable stowed properly.
- 6. All flaps tucked in.

#### After Putting Your Rig On, Check.

- 1. Reserve ripcord handle secure in its pocket.
- 2. Chest strap is properly threaded and running end secured.
- 3. Leg straps are properly threaded and loose ends are stowed.

#### 3-RingTM Release Maintenance

The following procedure should be done at the beginning of each weekend or every 25 jumps, whichever comes first. If the rig is subjected to unusual abuse, such as exposure to excessive dust or sand, or if it is dragged, it should be inspected immediately.

- **Step 1** OPERATE THE RELEASE SYSTEM ON THE GROUND. Pull the release cable completely free of the housing and disconnect the risers.
- **Step 2** While the system is disassembled, closely inspect it for wear.
  - a. Check the nylon loops on the risers to be sure they are not frayed.
  - b. Check the velcro on the release handle and harness to insure that it will adequately hold the handle.
  - c. Check the stitching, including that which holds the harness hardware to the main lift web and the hand tackings that hold the cable housings in place.
- **Step 3** VIGOROUSLY TWIST AND FLEX the webbing on each side where it passes through the release hardware. The idea is to remove any set or deformation in the webbing. Failure to do this might result in a hesitation when the release is activated with a low-drag malfunction such as a streamer or baglock.
- **Step 4** Check the inside of the fabric release housing for gravel or other obstructions. Use the cable to do this. Inspect the housing for cuts or other damage. (This is very unlikely unless the rig was smashed in a car door or suffered similar abuse).
- **Step 5** Clean and lubricate the release cable with a silicone spray. Spray on a paper towel and firmly wipe the cable a few times. A THIN invisible film should remain too much will attract grit or dirt. Failure to do this could result in a higher-than-normal activation force on the release handle during breakaway.
- **Step 6** Reassemble the system properly, in accordance with the instructions given in this manual. Double check it and do a continuity check to make sure the canopy is straight and the risers are not reversed.
- Step 7 IF ANY WEAR OR UNUSUAL CONDITION IS FOUND, CONSULT THE MANUFACTURER OR QUALIFIED PERSONNEL IMMEDIATELY!
- **Step 8** Regular, careful and thorough compliance with this maintenance procedure will prolong the life of the 3-Ring<sup>TM</sup> release system, and help to insure its proper operation during breakaways.

#### 120 Day Maintenance

Your rigger should thoroughly inspect your  $Flexon^{TM}$ /Talon at every repack cycle to insure that all components are in airworthy condition. These areas should include:

- 1. Reserve pilotchute and bridle and square deployment bag.
- 2. Reserve canopy and lines.
- 3. Reserve connector links tight.
- 4. Ripcord pockets secure.
- 5. Main bridle.
- 6. Harness and container in good airworthy condition.
- 7. Flex-ring buffers. Inspect the inside of the buffers for excessive wear. Figure 1 The buffers are designed to absorb wear before the harness webbing. The inside should look shiny and smooth and may be discolored from the hardware finish. If the buffers are cut or frayed, it may be as a result of damage to the hardware or foreign matter (dirt) imbedded in the material. If excessive, the rig should be grounded and returned to Rigging Innovations for inspection.

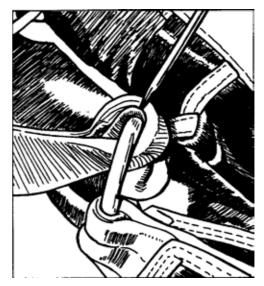


Figure 2

#### **Major Alterations**

**Rigging Innovations, Inc.** does NOT authorize major alterations to the *Flexon<sup>TM</sup>* or Talon. Any major alterations such as harness size changes must be made by the manufacturer or a designated representative. Contact **Rigging Innovations, Inc.** for the name of a designated representative in your area.

## Rig Cleaning - CORDLIRA®

#### **Recommended Stain Removal Methods\***

STAIN	REMOVAL METHOD		
Coffee, Fruit Juice, Milk, Soft Drinks, Tea, Tabasco Sauce, Wine, Urine	Detergent1/blot/water/blot		
Catsup, Chocolate, Blood	Detergent/blot/ammonia2//blot/water/blot		
Mustard	Detergent/blot/vinegar3/blot/water/blot		
Spicy mustard (turmeric), Kool-Aid®	Solvent4/blot/detergent/blot/vinegar/blot/water/blot		
Cooking Oil, Crayon, Lipstick, Mayonnaise, Motor Oil, Show Polish	Solvent/blot/detergent/blot/water/blot		
Chewing Gum	Freeze with ice cube/scrape/solvent/blot/ detergent/blot/water/blot		
Furniture Polish, Ink (Permanent)	Paint remover5/blot/solvent/blot/detergent/blot/ ammonia/blot/vinegar/blot/water/blot		
Furniture Polish, Shoe Polish	Seek the help of a professional upholstery cleaner		
Notes on Cleaning Agents			
The following procedure should be used with all cleaning agents. A clean, white cloth dampened with the recommended cleaning agent should be used in an inconspicuous place to test for colorfastness. Optimum cleaning will be achieved by not overwetting the cloth and by turning it frequently to keep it clean. Rings can be avoided by working from the outer edge of the spot toward the center. This process should be repeated until the spot is removed or there is no further transfer to the cloth.			
1 Detergent One teas	One teaspoon neutral powder detergent		
(e.g., ˈrid	s" or "All") in 1 pint warm water.		
2 Ammonia A 3% sol	A 3% solution.		
3 Vinegar White vin	White vinegar or 10% acetic acid.		
4 Solvent Dry clean	Dry cleaning fluid-preferably 1.1.1 trichloroethane.		
5 Paint remover Paint rem	over with no oil in it.		
NOTE: Oily and greasy stains - In addition to the recommended method, some stains (e.g., perspiration/body cils) respond well to dry cleaners such as "HOST' (Racine Industries), "CAPTURE" (Milliken) and "K2R" (Texize). Carefully follow directions on the label.			

<sup>\*</sup> Recommendations based on fabrics finished with Du Pont TEFLON WBC Soil and Stain Repellent for CORDURA. The methods were effective on stains that were allowed to sit untreated overnight. Removal is usually eaiser when stains are cleaned immediately.



# Rigger Information



Table 1. Recommended Tools List

quantity	description	
1	Temporary in w/fla	
1	60• pull-up cord	
1	Closing plate*	
1	Pilotchute threading tool	
1	Packing paddle	
2	Velcro line protectors*	
1	Canopy Compression Strap*	
	* See tool drawings in appendix.	

#### Note:

Under no circumstances is a T-Ear or "Positive Leverage Closing Device" to be used in conjunction with packing this sytem. To do so can result in higher than allowable pull forces and also damage to the container system.

### Orange Warning Label Placard Data

As part of the manufacturers requirements, the ORANGE WARNING! LABEL located on the lower, external back pad must be filled in by the Rigger assembling and packing the  $Flexon^{TM}$  or Talon. FAILURE TO DO SO WILL RESULT IN THE TSO BEING NULL AND VOID!

		MAIN	RESERVE
MAXIMUM DEPLOYMENT SPEED		ктѕ.	ктѕ.
MAXIMUM GROSS WEIGHT (JUMPER +CLOTHING + EQUIPMENT)		LBS.	LBS.
MANUFACTURER:			
MODEL:			
ATTENTION RIGGERS:	TTENTION RIGGERS: *REFER TO OWNERS MANUAL FOR PLACARD INFORMATION AND COMPATIBILITY LIMITATIONS		
* FILL IN DATA WITH WATER PROOF PEN. * CHANGE DATA ON LABEL IF ADIFFERENT CANOPY IS INSTALLED.			

The data, Table IV, Industry Weight/Deployment Speed Limitations, found in Section 2, covers only current production parachutes and only those who manufacturers placard their products. For those canopies not listed, it is suggested that you contact the canopy manufacturer directly or *Rigging Innovations, Inc.* for a current update to this list. This information will enable the Rigger to comply with these requirements. We find that a PILOT ultra fine point permanent marker MODEL SC-UF or equivalent works best.

Please note that there may be instances where one model canopy may have TWO DIFFERENT placard limitations; one as a reserve and one as a main. An example of this is the Precision Super Raven 4 canopy. As a reserve it is limited to 254 lbs maximum gross weight. However as a main it is placarded at 288 lbs. Make sure that you, the Rigger, mark the correct space with the right category information.

	Parachute Assembly Inspection Form			
	Note: Count All Tools Before Starting Assembly Qty			
		manufacturer		
Harness		model		
	∐\ And	date of manufacture		
	□ Container	serial no.		
Initia	al After Each Item If No Descrep	pancies are Found.	Initials	
1.	Main Lift Web			
2.	Chest and Leg Straps			
3.	Harness Hardware and Conne	ctors		
4.	3-Ring Release			
5.	Pilotchute Pocket			
6.	Reserve Ripcord, Handle Pock	ket, Cable Housing		
7.	Cutaway Handle, Attachment F	Point, Cable Housing		
8.	Container Flaps and Grommet	s		
9.	Closing Loop Length (Main & F	Reserve)		
10.	Comments			
		manufacturer		
	Main Canopy	model		
	And			
	Pilotchute	date of manufacture		
	Filotoliute	serial no.		
Initia	al After Each Item If No Descrep	pancies are Found.	Initials	
1.	Risers & 3-Ring			
2.	Connector Links and Slider Bu	mpers		
3.	Slider Grommets			
4.	A-Lines and Attachment Points	8		
5.	B-Lines and Attachment Points	5		
6.	C-Lines and Attachment Points			
7.	D-Lines and Attachment Points			
8.	Steering Lines and Toggles			
9.	Canopy Cells and Cross-Ports			
10.	Slider Stops (on canopy)			
11.	Bridle Line, D-Bag Stop, Pin			
12.	Pilotchute and Handle or Pud			
13.	Deployment Bag			
14.	Comments			



## Square Reserve Canopy and Pilotchute

manufacturer
111311311313131
model
date of manufacture
date of manadare
serial no.
Senaino.

Initia	Initial After Each Item If No Descrepancies are Found.	
1.	Risers	
2.	Connector Links	
3.	Slider & Grommets	
4.	A-Lines and Attachment Points	
5.	B-Lines and Attachment Points	
6.	C-Lines and Attachment Points	
7.	D-Lines and Attachment Points	
8.	Steering Lines and Toggles	
9.	Canopy Cells and Cross-Ports	
10.	Slider Stops (on canopy)	
11.	Deployment Bag and Safety Stow	
12.	Bridle Line	
13.	Pilotchute	
14.	Packing Card & Information	
15.	Comments	



# Assembly of Square Reserve Canopy

Initial After Each Item If No Descrepancies are Found.		
1.	Inspection of Canopy & Container Completed (parts A & C)	_
2.	Continuity of All Lines Note: On Swift Reserves, check line continuity of the trailing steering lines	
3.	Slider on Correctly	
4.	Rapide Link Barrels Tightened Properly	
5.	Steering Lines Tied to Toggles on the Mark	
6.	Steering Line Length Equal to Each Other	
7.	Safety Stow on Deployment Bag Installed	
8.	Packing Card Filled Out	
9.	Packed According to Manufacturer's Instructions	
10.	Reserve Pin Sealed	
11.	Fill Out Warning Label	
12.	Comments	·

Assembly of Main Canopy to Container			
Initia	Il After Each Item If No Descrepancies are Found.		Initials
1.	Inspection of Canopy & Container Completed (parts A & B)		
2.	Continuity of All Lines		
3.	Slider on Correctly		
4.	Cutaway Handle Cables are Proper Lengths		
5.	Rapide Link Barrels Tight		
6.	Steering Lines Tied to Toggles on the Mark		
7.	Steering Line Length Equal to Each Other		
8.	D-Bag, Bridle Line & Pilotchute Attached Correctly		
9.	Fill Out Waring Label		
10.	Comments		
	Note: Get a count of all tools used after assembly and pa completed to assure that none were left in the cand		er.
	Signature of Rigger(s) Inspection		
Signati	ure	Date	
Print N	ame and Seal Symbol		
Signati	ure	Date	
Print Name and Seal Symbol			

# Ram-Air Reserve Packing Instructions

Prior to installing and packing a square reserve into the  $Flexon^{TM}$  or Talon, the rigger must thoroughly read and understand these instructions. The rigger must also make the determination of proper compatibility regarding volume, deployment type and placard information. Only those reserves that have been assigned a weight and speed limitation by the manufacturer are approved for use in the  $Flexon^{TM}$  or Talon. It is the responsibility of the rigger installing the reserve to fill out the Orange Warning Label correctly. Refer to the Rigging Innovations Warning Label Placard Data Sheet for proper information.

If you should have any questions as to compatibility or Placard labeling information, call *Rigging Innovations*, *Inc.* at (909) 928-1438 or FAX (909) 928-1538.

#### Assembly and Folding the Canopy

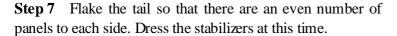
Rigging Innovations authorizes two different types of canopy folding methods for ram-air canopies according to the method approved for that particular canopy. They are the side pack or Para Flite method, and the PRO pack or hang pack method. To configure the canopy for placement in the bag, the molar method must be used.

In the following instructions, the Para Flite method for folding the canopy and the Molar method for placing it in the bag are illustrated. However, it is up to the rigger to make the determination as to the combination of canopy folding and installation of canopy into the bag based on the canopy manufacturer's instructions.

- **Step 1** Assemble the canopy to the harness and container making sure of the following:
  - a. Line continuity is correct.
  - b. The connector links are tightened properly according to the canopy manufacturer's instructions. Mark with a telltale.
  - c. The control lines are routed properly through the slider and then the guide rings on the rear of the rear riser.
  - d. Attach the ram-air reserve toggles with an overhand knot with the knot on the side facing the velcro keeper.
- **Step 2** Orient the canopy on its side with the nose facing either right or left. Flake the canopy until all line groups are taut and stacked on one another.
- **Step 3** Fold the nose under, grasp the canopy above the "B" lines and stack "B" lines on top of the "A" lines.
- **Step 4** Grasp the "C" lines and stack them on top of the A-B stack.
- **Step 5** Stack the "D" lines on top of the A-B-C stack.

#### **Step 6** Set the brakes as follows:

- a. Pull the control line down until the brake loop is through the guide ring.
- b. Insert the steering toggle through the brake loop.
- c. Insert the toggle into the toggle keeper. It is not cecessary to tack toggle ends.
- d. Stow the excess steering line vertically in the velcro keeper, wrapping the loop velcro around the line and locking it over approximately one-third of the hook velcro. *Figure 1*



**Step 8** Wrap the tail around the canopy stack making sure that you do not enclose the nose in the wrap. To get a good distribution within the deployment bag, make the width of the canopy 2.- 4 inches wider than the bag.

**Step 9** Pull the slider up to the base of the canopy to the slider stops. Fold the stabilizers over the slider at 45 degrees. *Figure 2* 

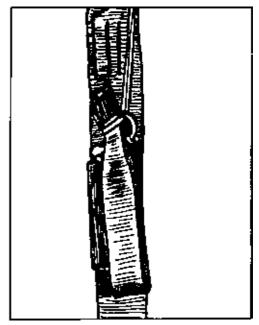


Figure 1

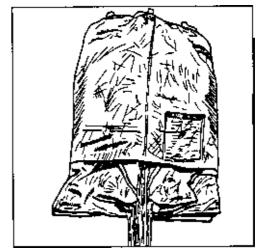


Figure 2

### Putting the Canopy into the Bag

**Step 10** Fold the tail surface back towards the top of the canopy and "S" fold the slider so that the grommets are even with the bottom of the stack. Now fold the tail fabric back towards the lines so that it covers the slider stack. *Figure 3* 

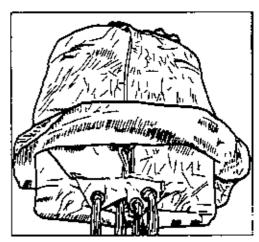


Figure 3

**Step 11** "S" fold the canopy into a stack on itself to the length approximately the distance from the mouth of the bag to the grommets in the center of the bag. *Figure 4* 

**Step 12** Locate the center seam of the upper surface of the canopy. Take the fabric to the left of the seam and pull it to the left. Take the fabric to the right and pull it to the right. *Figure 5* When the bulk of the fabric has been distributed into the narrow stack, fold each side 90 degrees towards the top of canopy so that the whole package is in a "U" shaped configuration. This will be known as the "Molar". The use of the canopy compression strap at this time will hold the canopy securely. *Figure 6* 

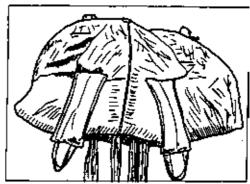


Figure 4

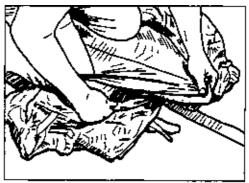


Figure 5

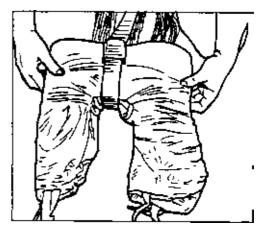


Figure 6

**Step 13** Take the molar and insert it directly into the deployment bag so that the ears are on each side of the molar depression. *Figure 7* **Remove the compression strap at this time**. Lock the mouth of the bag with the two locking stows. *Figure 8* 

**Step 14** Make sure the canopy is evenly distributed side to side and tapered top to bottom.

**Step 15** Tilt the bag up on its bridle end so that the mouth of the line stow pocket is exposed. Open the line stow pocket and install the velcro line protectors. Stow the lines in the pocket, distributing the bulk evenly. Leave about 8-10" of line exposed to the connector links. Remove the velcro line protectors and close the mouth of the line stow pocket securely.

**Step 16** At this time you should kneel on the bag and squeeze as much air out as possible. The more air you remove at this time, the easier it will be to get it in the container.

### Placing the Bag Into the Container

**Step 17** Make sure the reserve closing loop is an appropriate length for the canopy/container combination.

**Step 18** Flip the deployment bag over the container so that it lays upside down on the main container. Thread the pull-up cord through the reserve closing loop.

**Step 19** Place the reserve risers under the reserve riser covers so that the rear risers are located to the outside. Mate the tab for the riser covers.

**Step 20** Making sure the lines exit the bottom of the riser covers, set the bag on its end at the bottom of the reserve container. Thread the 60 inch pull-up cord through the molar bag grommet from the bottom to the top.

**Step 21** Rotate the bag downward aligning the grommet in the bag and the grommet in the bag and the backpad *Figure 9* 

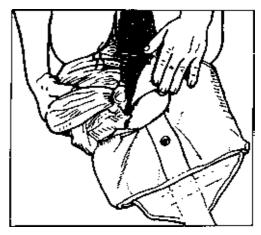


Figure 7

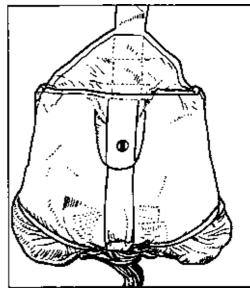


Figure 8

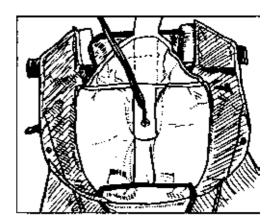


Figure 9

**Step 22** Work the bottom corners of the bag into the bottom corners of the container to fill them out. Make the S folds approximately 3" (75 mm) long so that it fills the top of the Molar indent at the top of the bag. Place the inside top flap over the bridle. *Figure 10 & 11* 

**Step 23** Thread the pilotchute threading tool through he pilotchute and insert the ends of the pull-up cord in the pilotchute. Pull the pull-up cord through the pilotchute.

**Step 24** Collapse the pilotchute while stuffing the fabric INSIDE the coils. **IMPORTANT!** Do not leave the fabric outside coils as a coil lock could occur and the launch of the pilotchute may be inhibited. Place the arrow located on the top of the pilotchute towards the top of the container. Lock with a temporary pin. *Figure 12* 

**Step 25** Close flaps #1 and #2 in sequence and lock with the temp pin. Use the closing plate to apply pressure on the flaps as you pull the loop through. You should be able to pull approximately 1/2" - 3/4" of the loop through the fist two flaps. If you can pull more, the loop is too long. Open the container and adjust the loop. *Figure 13* 

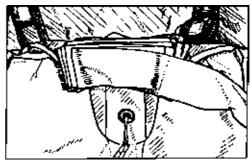


Figure 10

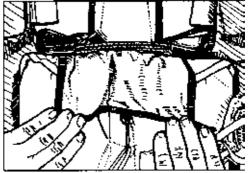


Figure 11

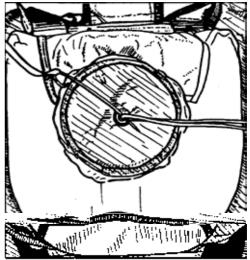


Figure 12

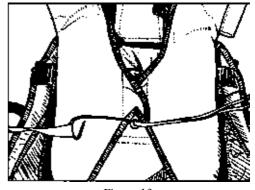


Figure 13

**Step 26** Close flap #3 and lock with temp pin. *Figure 14* Close the #4 flap and lock with the ripcord. At this time, the rigger should make the determination as to how tight the closing loop is and whether to perform a pull test to determine whether it is within the 22-lb limit. Once that determination has been made, seal the ripcord and log the pack job. *Figure 15* 

### **Step 27 COUNT YOUR TOOLS!**

**Step 28** FILL IN THE PLACARD DATA ON THE ORANGE WARNING LABEL. FAILURE TO DO SO WILL VOID THE TSO!

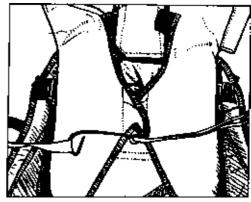


Figure 14

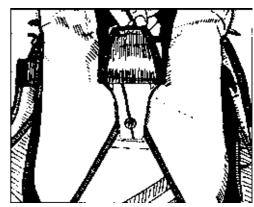


Figure 15

# Cypres AAD Reserve Installation

The CYPRES AAD system is the only AAD system that has been tested in and approved for use with the  $Flexon^{TM}$ /Talon. The  $Flexon^{TM}$ /Talon was designed from the beginning to utilize a loop cutter concept. In addition, the very small volumes of the  $Flexon^{TM}$  containers and the reserve closing configuration preclude the use of any of the other AADs currently on the market.

The  $Flexon^{TM}$  includes all the necessary pockets, channels, and other parts necessary for direct installation of the CYPRES without further modification. The following instructions will enable the rigger to install the CYPRES into the  $Flexon^{TM}$ . However, it is imperative that the rigger also possess a current copy of the CYPRES Rigger's Guide to familiarize and assist him/her with the total CYPRES concept. In addition, it is advisable that the Rigger also possess a CYPRES Rigger's Kit containing several tools useful when installing the CYPRES.

#### Installation

**Step 1** The reserve locking loop supplied with the CYPRES MUST be used. The special discs supplied with the CYPRES must also be used to make the knots for the locking loop.

**Step 2** Adjust the locking loop to the appropriate length for the container size and canopy volume. Install the locking loop into the container.

**Step 3** Install the CYPRES processing unit into the pocket provided on the divider wall at the bottom of the reserve container. *Figure 1* 

**Step 4** Thread the cutter unit up through the grommet and then through the channel provided on the inside of the right reserve side flap. *Figure 2* 

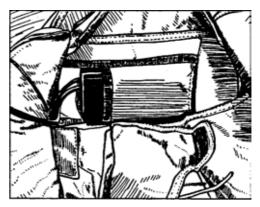


Figure 1



Figure 2

**Step 5** Push the cutter through the elastic keeper next to the grommet and align the hole in the cutter with the grommet. *Figure 3* 

**Step 6** Carefully stow the excess cable from the cutter in the pocket of the mounting pocket. Do this by coiling the excess. DO NOT bend or kink the excess cable.

**Step 7** Taking the control unit, carefully push it through the elastic channel on the bottom of the reserve container from bottom to top. *Figure 4* 

**Step 8** Next thread the control unit through the elastic channel located under the right reserve riser cover at the right shoulder area. *Figure 5* 

**Step 9** Open the right 3-Ring<sup>TM</sup> cover at the top inside.



Figure 3



Figure 4

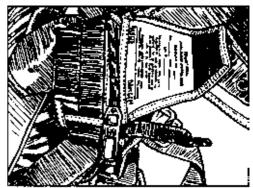


Figure 5

**Step 10** Position the control unit with the cable end even with and next to the 3-Ring confluence wrap. Using the tacking strings provided, tacks only the bottom of the control unit to the backpad. Run the strings down and then up and tie the knot on the inside. Make sure that you run the strings to the inside of the 3-Ring housing channel and not through it. *Figure 6* Now close the 3-Ring cover using the tables on the outside of the cover. *Figure 7* 

**Step 11** The CYPRES is now installed. Follow the instructions in the CYPRES Rigger's Guide or Owner's Manual for the proper closing of the reserve container using the CYPRES closing loops and pull-up cords.

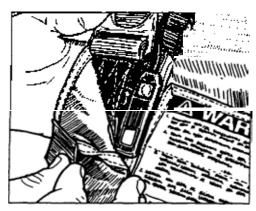


Figure 6

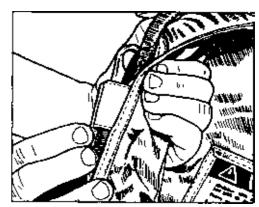


Figure 7