Section 4.0

Rigger Information

4.1 Parachute Assembly Inspection Form

! Note: Count all Tools Before Starting Assembly	Qty:

A Harness and Container	
	manufacturer:
	model:
	date of manufacture:
	serial no:

Initial After Each Item If No Discrepancies Are Found		Initials
1.	Main lift web	
2.	Chest and leg straps	
3.	Harness hardware and connectors	
4.	3-ring release	
5.	Pilotchute pocket	
6.	Reserve ripcord, handle pocket, cable housing	
7.	Cutaway handle, attachment point, cable housing and channels	
8.	Container flaps and grommets	
9.	Closing loop length (main and reserve)	
10.	Comments:	

B Main Canopy and Pilotchute	
	manufacturer:
	model:
	date of manufacture:
	serial no.:

Initial After Each Item If No Discrepancies Are Found		Initials
1.	Risers and 3-Ring	
2.	Connector links and slider bumpers	
3.	Slider grommets, tapes, fabric	
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.	Bridle line, d-bag stop, pin	
12.	Pilotchute and handle or	
13.	Deployment bag	
14.	Comments:	

C	manufacturer:
	model:
Square Reserve Canopy	date of manufacture:
and Pilotchute	serial no:

Initial After Each Item If No Discrepancies Are Found		**Initials**
1.	Risers	
2.	Connector links	
3.	Sliders & 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 and information	
15.	Comments:	

D

Assembly of

Square Reserve Canopy

Initial After Each Item If No Discrepancies Are Found		**Initials**
1.	Inspection of canopy and Container completed (parts A & C)	
2.	Continuity of all lines	
3.	Slider on correctly	
4.	Rapide link barrels tightened properly	
5.	Steering lines tied to toggles on 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 manufacturers instructions	
10.	Fill out warning label	
11.	Comments:	

E

Assembly of
Main Canopy to Container

Initial After Each Item If No Discrepancies Are Found		Initials
1.	Inspection of canopy and Container completed (parts A & B)	
2.	Continuity of all lines	
3.	Slider on correctly	
4.	Release handle cables are proper lengths	
5.	Rapide link barrels tightened properly	
6.	Steering lines tied to toggles on mark	
7.	Steering line length equal to each other	
8.	D-bag, bridle and pilotchute are attached properly	
9.	Packing card filled out Fill out warning label	
10.	Comments:	

! Note: Count all tools after assembly and packing is completed to ensure that none were left in the canopy or container.	**Qty:**

Signature of Rigger(s) Inspection

Signature:	Date:
Print Name and Seal Symbol:	
Signature:	Date:
Print name and Seal Symbol:	

General Comments:

4.2 Ram-Air Reserve Packing Instructions

Prior to assembling and packing a square reserve into a TALON 2, the rigger must thoroughly read and understand these instructions. The rigger must determine reserve and container compatibility based upon volume, deployment type and placard information. Only reserve canopies that have been assigned weight and speed limits by the canopy manufacturer are approved for use in the TALON 2.

NOTE: Minimum qualification; FAA Senior or Master Parachute Rigger or foreign equivalent.

4.2.1 Assembling Reserve System

Step 1 Assemble an appropriate size parachute to the TALON 2 harness and container system ensuring the following:

a. Line continuity is correct.
b. Connector link bumpers installed and tied per canopy manufacturer's instructions.
c. Connector links are tightened finger tight plus one quarter turn of the barrel.
   WARNING: If Mallion Rapide links are too tight, barrels will crack.
d. Steering lines are routed through rear grommets on slider.
e. Steering lines are routed through guide rings on rear risers.
f. Steering toggles are securely attached.
g. Automatic Activation Device correctly installed.
h. Closing loop length is checked. (See Table IV for approximate length).

4.2.2 Table IV -Approximate Closing Loop Lengths

NOTE: The loop length recommended in this chart is an **approximation** based on packing experience in our facility. Variables such as canopy size, temperature, humidity, and packing technique will affect the optimum loop length.

IT IS THE RIGGER'S RESPONSIBILITY TO ENSURE THE RIPCORD PULL FORCE DOES NOT EXCEED 22 Lb. (10 Kg.).

A = Loop length from knot to end.
B = Loop length installed (grommet to end).

CONTAINER SIZE	A	B
T0	4.5"	3.0"
T1	4.5"	3.0"
T2	4.5"	3.0"
T3	4.0"	2.5"
T4	4.0"	2.5"
T5	4.5"	3.0"
T6	4.0"	2.5"
T7	4.0"	2.5"
T8	4.5"	3.0"

NOTE: Only Cypres brand closing loops are approved for use with "loop-cutter" Automatic Activation Devices. Thicker loops made from other materials are dangerous because they may slow pack opening and reserve deployment.

4.2.3 Cypres AAD Reserve Installation

Only modern, electronic "loop cutter" type AADs have been tested and approved for use with the TALON 2 system. The most popular brand of loop cutter AAD is the Cypres manufactured by Airtec GmbH, in Germany. The very small container volumes and closing configuration of TALON 2's prevent the use of older pin puller AADs.

The TALON 2 comes "Cypres-ready" from the factory with all the pockets, channels and other parts necessary for direct installation of the AAD without further modification. The following instructions tell the rigger how to install a CYPRES in the TALON 2. However, it is important that the rigger also have a current copy of the CYPRES Rigger's Guide to familiarise him or her with the total CYPRES concept. Also, the rigger should have a CYPRES Rigger's Kit containing several useful tools when installing a CYPRES.

Step 1 Reserve locking loop supplied with CYPRES MUST be used. Special discs supplied with CYPRES must also be used to make knots for locking loop.

Step 2 Adjust locking loop to appropriate length in accordance with Table IV. Install locking loop into container.

Step 3 Install CYPRES processing unit into Spandex pocket on divider wall at bottom of reserve container. *(Figure 30).*

Step 4 Thread cutter unit up through grommet and then through Spandax channel on inside of right reserve side flap. Push cutter through elastic keeper next to grommet and align hole in cutter with grommet. (*Figure 31).*

Step 6 Carefully coil excess cutter cable under Velcro closure flap located on right end of Cypres installation pocket. DO NOT bend or kink excess cable.

Step 7 Carefully push control unit through channel on bottom of reserve container from bottom to top. *Note: channel begins at lower extreme of reserve riser cover flap and is between riser cover flap and pack tray.*

Step 8 Gently slide control unit through slit in upper right corner of reserve pack tray and into clear pocket. Double check that control button, display and red light are visible in pocket window. (Figure 32)

Step 9 Pull slack in control cable back down into pack tray leaving about 1/2" (1 cm) slack where cable curves into slit. Coil excess cable neatly without kinks or sharp bends into pocket on pack tray at bottom of stiffener. (*Figure 33)*

Figure 30

Figure 31

Figure 32

Figure 33

4.2.4 FOLDING RESERVE PARACHUTE

Recommended Tools List:

1- 1- Tie cord - red or brightly coloured (30" recommended.)
2- 1-packing weight, 22 Lb. (10 Kg.)
3- 1-Packing Paddle 18" or longer (50 Cm.)
4- 1-Pull-up cord, 72" (1.82 M)
5- Gun Cleaning Rod, .22 CALIBER (5.56 MM)
6- 1-Knee-board Closing Plate
7- 1-Temporary pin

Parachute Packing Instructions

NOTE: Minimum qualification; FAA Senior or Master Parachute Rigger or foreign equivalent.

Step 1 Set deployment brakes. Pull toggles down until brake loop is through guide ring on riser. Insert steering toggle tip through brake loop and into keeper above guide ring. (*Figure 34)* Stow excess steering line in Velcro keeper. (*Figure 35*).

Figure 34

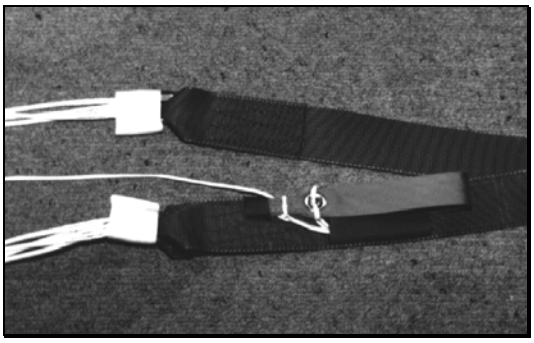

Figure 35

Please consult the manufacturers reserve manual for the connection of the Ram Air Reserve canopy to reserve risers and reserve folding to the stage indicated in figure 36.

Step 2 Make appropriate stacking folds in one of the following manners:

a. Canopies 170 square feet and smaller - lay a cleaning rod across stabilisers just above slider bumpers. Grab all lines below canopy and make a short fold. (*Figure 37)*
b. Canopies larger than 170 square feet - pull centre tail towards top of canopy.
c. Make two folds to put slider in middle of stacked canopy.

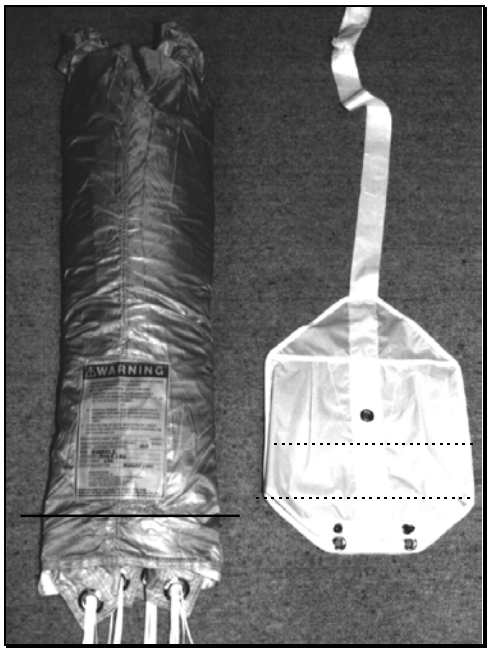

Figure 36

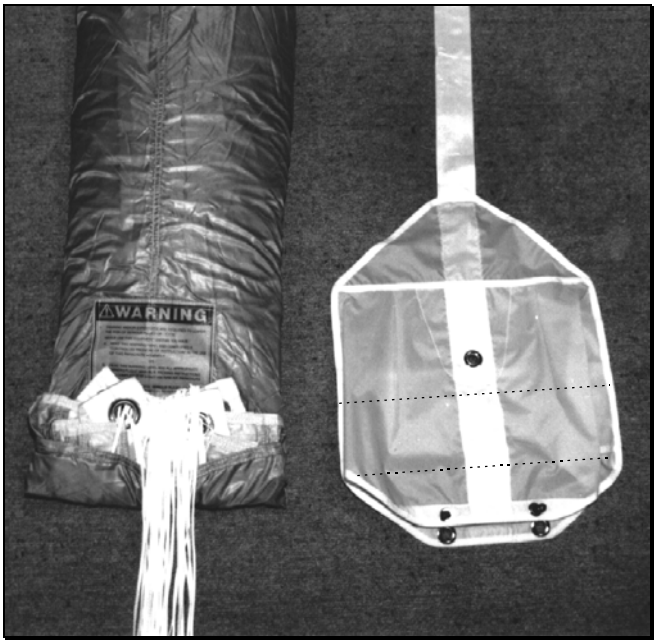

Figure 37

Putting Parachute in Deployment Bag

Step 2 Lay deployment bag beside canopy with line stow pocket underneath. Align bottom edges of deployment bag and canopy. Fold top of canopy towards container. (Figure 38)

Figure 38

Step 3 Fold canopy towards top. Following centre seam, spread top of canopy to create Molar shape. (Figure 39). Ideally only the centre cell remains in centre, leaving plenty of room for AAD and pilotchute. Roll the centre cell fabric towards the 'S' folds. (Figure 40)

Figure 39

Figure 40

Step 4 Wrap a molar strap around centre cell. Pull molar strap tight and lock.

Step 5 Shape the upper part of the canopy into two cylindrical shapes. Each of these two sections will have to be wide enough to fit into the upper section of the freebag. (Figure 41)

Step 6 Using the freebag as a guide, fold each top section of the canopy approx. in half and place under
the top 's' fold at the lower half of the canopy. (Figure 42)

Figure 41

Figure 42

Step 7 Gently reach under parachute. Raise parachute 4 inches and slide d-bag under parachute until bottom edge of closing flap lays under lower edge of canopy ensuring that the line pocket on the freebag is facing down. (Figure 43)

Step 8 Kneel on closing flap of d-bag between suspension lines to prevent shifting. Fold or roll right "ear" until it is same width as "ear" in deployment bag. Fold ear to same length as deployment bag. Push ear into top of deployment bag. (*Figure 44)*

Figure 43

Figure 44

Step 9 Repeat Step 8 on left "ear".

Step 10 Fold deployment bag top flap over canopy and one side at a time push the canopy to within the freebag. (Figure 45) Insert temporary pin into one loop of safety stow. Pull other end of safety stow through grommet on deployment bag lip. Insert 3 inch bite of suspension lines into loop of safety stow. (Figure 46)

ATTENTION:- Remove the molar packing assist strap Now!

Step 11 Remove temporary pin. Make second locking stow with a 3 inch bite of suspension lines. Adjust safety stow until sewn portion is concealed in channel. (Figure 47)

Figure 45

Figure 46

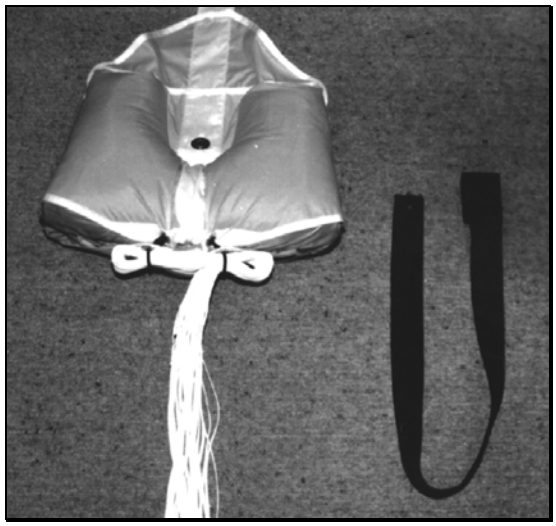

Figure 47

Step 12 Sit on bridle. Gently pull lines and rotate d-bag until it lays in your lap. (Figure 48) Open line stow pocket and Stow suspension lines in pocket in a "Figure 8" pattern. Leave last 8 to 10 inches of suspension lines exposed. Distribute line bulk evenly to minimise lumps. Close line stow pocket. Do not allow hook Velcro to contact lines. (*Figure 49)*

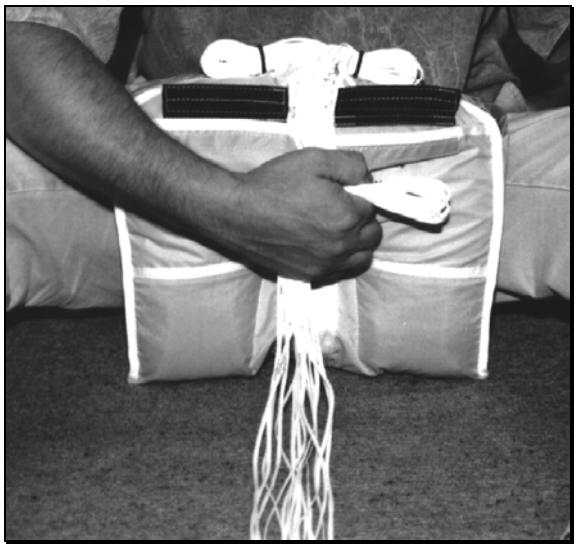

Figure 48

Figure 49

Placing Deployment Bag in Container

Step 13 Grab all 4 connector links with one hand. Grab bridle with other hand. Rotate deployment bag to bottom end of reserve container so that deployment bag lays upside down on main container.

Step 14 Lay risers along outboard edge of reserve container with front risers just inboard of rear risers. (*Figure 50)*

Step 15 Close internal riser covers and insert tabs into pockets on pack tray. Thread pull-up cord through closing loop and pass both ends through grommet in centre of deployment bag.

Step 16 Pivot deployment bag on its closing flap to lay right side up on reserve container, centred on closing loop. Reserve d-bag opening is towards main container with line stow pocket on reserve pack tray.

Step 17 S-fold bridle to slightly narrower than top internal flap. (*Figure 51)*

Figure 50

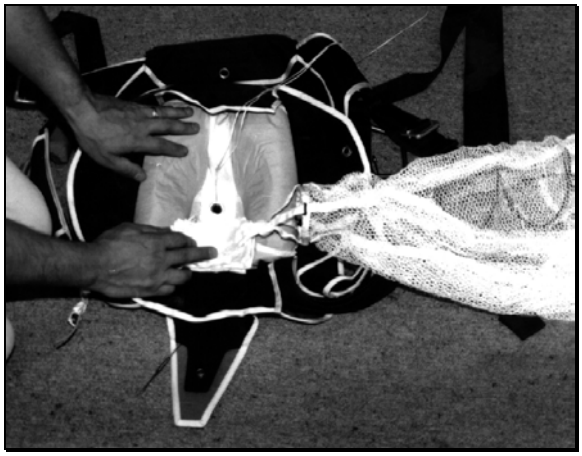

Figure 51

Closing the Container

Step 18 Close inner top flap (rectangular flap with no grommet) so lower edge touches d-bag grommet .

Step 19 Use .22 caliber (5.56 mm) gun cleaning rod to thread pull-up cord through Stealth pilotchute from bottom to top.

Step 20 Centre base of pilotchute on centre grommet of freebag. Compress pilotchute while stuffing fabric and mesh inside spring coils. Place most of fabric and mesh under lower edge of pilotchute cap. Point arrow on top of pilotchute toward top of container. Secure with temporary pin. **(***Figure 52)*

WARNING! Do not leave fabric outside of spring coils as a coil lock could occur and pilotchute launch may be inhibited.

Step 21 Double check reserve riser and AAD cable routing. Gently push lower corners of d-bag into container. HINT: Pushing lower corners into reserve container is a 6 or 8 step process: a little left, ... a little right ... a little left, etc.

Step 22 Thread cord through AAD cutter and grommet on right side flap #1. (*Figure 53)* Pull #1 flap almost closed. Insert packing paddle from right shoulder between bag and #1 flap and twist clockwise until deployment bag is clear of pilotchute cap. Secure #1 flap with temporary pin.

Figure 52

Figure 53

Step 23 Thread pull-up cord through grommet on left side flap #2. Pull #2 flap almost closed. Insert packing paddle from left shoulder and twist counter-clockwise until deployment bag is clear of pilotchute cap. Secure #2 flap with temporary pin. (Figure 54)

Step 24 Pull inside bottom flap up over safety stow and lines. Close bottom flap #3. Secure with temporary pin. Double check that d-bag is clear of pilotchute cap. At this point, you should only be able to pull 1/2" - 3/4" of loop through the first two flaps. If you can pull more, the loop is too long. Open container and shorten loop.

Double check that reserve ripcord passes through RSL ring before step 25!

Step 25 Close top flap #4 and secure with ripcord. (*Figure 55)*

Figure 54

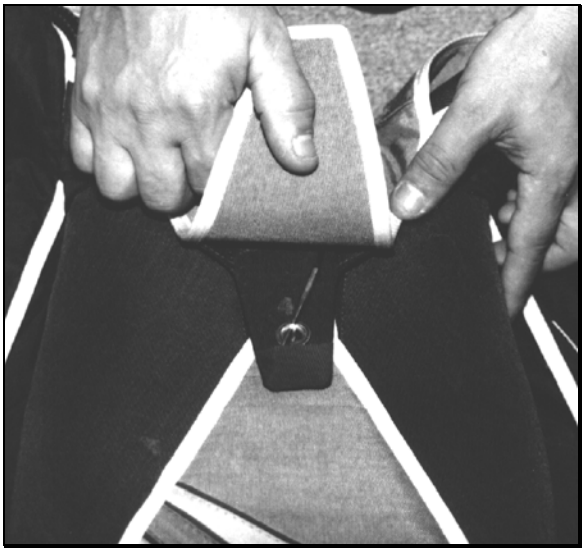

Figure 55

CAUTION: Place closing plate on bottom edge of top flap. Placing closing plate or kneeling on pin protector flap will kink or break the flap. Rigger should determine how tight closing loop is and decide whether to perform a pull test.

WARNING: MAXIMUM ALLOWABLE PULL FORCE ON RESERVE RIPCORD 22 POUNDS (10 KILOGRAMS).

Once rigger is satisfied that pull force is less than 22 pounds (10 kilograms) then log pack job.

Step 26 COUNT YOUR TOOLS!