

Owner's Manual



WARNING



Every time you use this parachute system you risk serious injury or death. Sport parachuting is a hazardous activity that can result in injury or death. Parachute systems sometimes fail to operate properly, even when they are properly designed, built, assembled, packed, maintained and used. Such malfunctions may result in serious injury or death, so you risk serious injury or death every time you use the system.

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 the owner's manual for that component.

Reduce the risk of serious bodily injury or death by assuring the assembly and packing of each component is in strict compliance with manufacturer's instructions. The manufacturer of each component of the system provides instructions for assembly and packing as appropriate for that component. ALWAYS follow these instructions.

Reduce the risk of serious bodily injury or death by obtaining proper training and experience.

NEVER use this equipment unless you have done the following:

- 1) Completed a "controlled program of instruction" in the use of this parachute assembly.
or
- 2) Read all appropriate parachute warning labels, owner's manuals, flight manuals, and packing instructions and have completed at least 100 ram-air parachute jumps.

Reduce the risk of death, serious injury, canopy damage, and hard openings by operating in strict compliance with this owner's manual; and by never exceeding the limits shown on the parachute warning labels.

Parachute warning labels may be found in the following locations:

Ram-air parachutes: Center cell top-skin at trailing edge
Circular reserve canopies: Next to nomenclature stamp

The Eclipse™ harness and container system has several warning labels.



DISCLAIMER - NO WARRANTY

Because of the unavoidable danger associated with the use of this harness and container system, the manufacturer makes NO WARRANTY, either expressed or implied. This harness and container system is sold with all faults and without any warranty of fitness for any purpose. The manufacturer also disclaims any liability in tort of damages, direct or consequential, including personal injuries resulting from a malfunction or from a defect in design, material, workmanship, or manufacturing whether caused by negligence on the part of the manufacturer or otherwise.

By using this harness and container system, or allowing it to be used by others, the buyer acknowledges the risk of sport parachuting, and the buyer waives any liability for personal injuries or damages arising from such use.

If the buyer is unwilling to accept the risk of sport parachuting, then the buyer may decline to waive liability on the part of the manufacturer. If the buyer declines to waive liability on the part of the manufacturer, the buyer may obtain a full refund of the purchase price by returning this harness and container system, before it is used, to the manufacturer within 15 days from the original purchase date, accompanied by a letter stating the reason for returning the system.

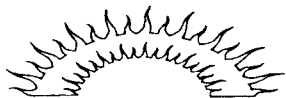
Neon and fluorescent colored fabrics and tapes fade rapidly, resulting in a noticeable loss in color brilliance. STUNTS Adventure Equipment, Inc. assumes no responsibility for this condition.



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SECTION 1

General Information

Eclipse™ FAA Certification

The Eclipse™ harness and container systems are approved under FAA TSO C-23c/Category B. Parachutes in this category are limited to use by persons up to 115 kg (254 lb.) fully equipped, and up to 150 knots at opening.

Rigger Qualifications

In order to pack and maintain the Eclipse™ reserve system, the rigger must be a certified Senior or Master rigger and must possess a BACK rating endorsement to his/her certificate.

A certified rigger is not allowed to do any of the following:

- Pack, maintain, or alter a parachute in any manner that deviates from the procedures approved by the administrator or the manufacturer of the parachute.
- Exercise the privileges of one's certificate and type rating unless one understands the manufacturer's current instructions for the operations involved.

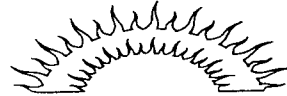
Anyone who circumvents these instructions as stated by STUNTS Adventure Equipment, Inc is in violation of Part 65.129, and is therefore performing an illegal procedure.

Eclipse™ Components

Table 1 lists the components included with the Eclipse™ harness and container system. All components listed in Table 1 are manufactured by STUNTS Adventure Equipment, Inc..

Table 1: Parts List- Eclipse™ Harness and Container System (P/N E1000)

<i>Quantity</i>	<i>Description</i>	<i>Part Number</i>
1	Eclipse™ harness and container assembly	E1000
1	Eclipse™ reserve deployment bag	E1000-1
1	Eclipse™ reserve pilot chute	E1000-2
1	Eclipse™ main deployment bag	E1000-3
1	Eclipse™ main pilot chute	E1000-4
1	Eclipse™ reserve ripcord	E1000-5
1	Eclipse™ release handle	E1000-6
4	Eclipse™ control handles	E1000-7
2	Eclipse™ main risers	E1000-8
1	Eclipse™ main bridle	E1000-9
1	Eclipse™ collapsible pilot chute	E1000-10
1	Eclipse™ reserve static lanyard	E1000-11



SECTION 2 Introduction

Before You Jump Your Eclipse™

Please read this manual thoroughly before assembling or using your Eclipse™.

If you still have questions after reading this manual, please contact us. We'll be happy to serve you.

The information and specifications in this manual were in effect at the time of publication. STUNTS Adventure Equipment, Inc., however, reserves the right to change the Eclipse™ at any time without notice and without incurring any obligation.

If you have any questions or concerns, you may call or write to:

STUNTS Adventure Equipment, Inc.

304 Playa Blvd.

La Selva Beach, California 95076

(408) 662-9299 phone

831 384-2001

(408) 662-9499 fax

e-mail: stunts@got.net

We're open Monday through Friday, 9:00am to 5:00pm Pacific time.

Qualifications and Training of Jumper

Before you jump an Eclipse™, it is very important that you have the necessary training and experience to safely utilize modern parachute equipment of this type.

Advanced equipment, such as the Eclipse™, has features that require a certain level of experience and training in order to be safely utilized. Before you jump an Eclipse™, be sure to receive instruction on its use from a knowledgeable instructor. This instruction should include practicing both routine procedures and emergency procedures in a suspended harness or on the ground. It is the responsibility of the jumper to seek out and obtain proper training before jumping an Eclipse™. It is the responsibility of the owner to ensure that the Eclipse™ is properly assembled, maintained, packed, worn, and used.

Only a FAA certified Senior or Master Rigger is qualified to inspect and pack a reserve parachute into the Eclipse™.

The person who inspects and packs the main must be qualified to do so.

The owner of an Eclipse™ should loan it to another person only if that person is fully capable of using it properly and safely.

This manual does not provide instruction on how to make a parachute jump; nor does it contain the regulations that govern sport parachuting and related activities.



SECTION 3

Canopy Compatibility

Main Compatibility

The Eclipse™ is compatible with any canopy on the market that will fit into the container. Refer to canopy manufacturer volume specifications for correct container sizing.

Reserve Compatibility

In order to determine whether a particular reserve canopy is compatible with your Eclipse™ harness and container assembly, the following must meet certain criteria:

- *Volume*
- *Deployment Type*
- *TSO Certification of the Reserve*

Packing Volume

The volume of the canopy is determined using the standard Parachute Industry Association (PIA) volume measurements, as determined by the most current edition of the PIA Technical Standard 104. Contact PIA for this document.

Deployment Types:

The Eclipse™ harness and container assembly is approved to use four different canopy deployment types. These deployment methods are as follows:

Diaper - 2 bite diaper, or half diaper.

Split line groups - one or two stows lock diaper, compensated by off-setting stows of other line group in container with remainder of lines stowed in the container.

Diaper - Full diaper.

All lines stowed left to right or perpendicular to radial seam.

Diaper - Handbury, Preserve, Full Strong.

Choker type with all lines stowed on the diaper parallel to the radial seam.

Free Bag - Canopy stowed in bag and lines stowed on/in bag.



SECTION 4

Using the Eclipse™

Adjusting & Fitting the Eclipse™

The Eclipse™ is custom built in a variety of container sizes, lengths, and widths. These configurations along with options make sizing of the harness and container system to the individual jumper vital to the safe operation of the system. If the system does not fit properly, the handles may be either inaccessible or may shift in freefall or under canopy, therefore causing problems that may result in injury or death.

The Eclipse™ is designed to fit snugly, yet comfortably, when properly adjusted. The Eclipse™ has three points of adjustment: the chest strap and the two leg straps. All other harness adjustments are fixed.

To Adjust the Eclipse™

1. Put the rig on and loosely thread the chest strap and leg straps.
Check the leg straps for twists before threading them.
2. Tighten the leg straps so they are snug, but not so tight that they would restrict mobility in a relaxed arch or turning motion, or would make it difficult to extract a throw out pilot chute.
3. Make sure the left and right straps are evenly adjusted. Slide the excess strap through the elastic keepers and stow the excess in the pockets on the leg pads so they won't flop around in the air.
4. Thread the chest strap. If you use a chest mounted altimeter, thread it on now. Thread the chest strap as follows: enter the adjuster from behind (next to the jumper's chest), go around the sliding bar, go back through between the bar and the end of the adjuster. Make sure that the folded edge of the chest strap is completely threaded so that it can not unthread itself.
5. Adjust the chest strap so the main lift webs are parallel when the chest strap is tightened as desired. The chest strap should not restrict mobility in a relaxed arch.

CAUTION: An improperly threaded chest strap will not hold the jumper in the harness.

Checking the Equipment Prior to Jumping

Every jumper should do a thorough equipment check before every skydive, no matter how experienced the jumper is. Your pre-jump equipment check should follow a logical order so you do not forget a check item; for example, top to bottom, front to back.

A thorough pre-jump equipment check includes the following checks (starting at the front):

1. Make sure the 3-Ring™ release system is assembled properly and is free of dirt or other foreign matter.
 - Inspect for foreign matter in the 3-Ring™ assembly.
 - Because a small force of approximately only one pound on the top ring keeps the release together, it is important to keep foreign matter, such as grass and sticks, out of the 3-Ring™ assembly. For example: A small twig in the white loop could prevent a riser from releasing.
 - Check for ease of mobility of the rings.
 - When nylon stays in the same position for a long time, it begins to conform to that position. If the 3-Ring™ release system stays assembled for too long, the nylon can become so stiff that low drag from a malfunction, such as from a streamer, will not pull the riser off the ring.
2. Check the position of cutaway and reserve ripcord handles. Do not remove them from their pockets unless you suspect a problem, because the Velcro will wear out quickly. Make sure that these handles are securely velcroed in their pockets to minimize the chance of them floating or dangling during freefall.
3. Check the 3-Ring release (cutaway) handle. It should be mated to the Velcro on the harness, and no more than 1/2 inch of yellow cable should be visible between the cutaway handle and the cable housing.
4. Ensure that the chest strap is threaded properly, and that it is not threaded through the reserve ripcord handle.
5. Ensure that the leg straps are threaded properly, that they are not wrapped around the main lift web. The free ends should be tucked in the leg pads.
6. Check the reserve pin and cable.

Open the reserve container pin-protector flap by grasping the sides of the flap and lifting straight up.

The reserve pin should be straight and seated deep into the locking loop with the end of the pin covered by the pin protection pocket.

Slide the reserve ripcord cable back and forth in its housing to ensure that it moves freely. This is especially important in sub-freezing temperatures.

7. Lift the main container pin-protector flap and check the curved locking pin. It must be at least halfway through the locking loop. Ensure that the Velcro patches on the bridle and container flap are mated.
8. Ensure that the bridle is routed correctly, from the locking pin, under the right flap, along the main lift web, and into the pilot chute pouch. Routing the bridle around the leg strap will cause a pilot chute-in-tow malfunction.
9. Make sure both the reserve and main closing flaps are tucked in.
10. If your Eclipse™ has a Cypres™ installed, calibrate it according to the manufacturer's instructions.
11. If your Eclipse™ has a RSL System, ask a qualified instructor or rigger to check the system.

Deploying the Main Parachute

The Eclipse™ container and harness system utilizes a hand deploy system for the main parachute. Before a jumper uses a hand deploy system for the first time, he should practice the procedures on the ground under supervision of a currently rated instructor.

To deploy the main parachute:

1. While falling in a stable position, if possible, look at the hand deploy pilot chute handle.
2. Firmly grasp the handle with your right hand, while compensating for stability with your left.
3. Pull the pilot chute from its pouch and throw it into the air stream away from your body.

It is not enough to simply release the pilot chute into the air stream; you must throw it out and away from your body. Otherwise, it may blow back into the turbulent air behind you (your burble) and cause a malfunction.

The motion of your arm should run parallel to the ground. Otherwise, the pilot chute and bridle may pass under your arm, and possibly cause a malfunction.

You should complete your wave-off before you pull the hand deploy pilot chute.

Waving off with the pilot chute in hand could cause a premature container opening and possibly a malfunction.

Deploying the Reserve

This section discusses the causes of some total and partial malfunctions and how a jumper wearing an Eclipse™ might react to them. This section does not provide detailed instructions on coping with emergencies. Training for any and all emergencies must be provided by a currently rated instructor.

NOTE: The following procedures for dealing with malfunctions do not consider the dependency on an AAD or RSL. Since these are backup systems, the jumper should react as if these were not there.

Total Malfunctions

A total malfunction exists when the main canopy is still in its container after some effort has been made to deploy the main pilot chute. The pilot chute may or may not be trailing behind you.

A total malfunction may result from a variety of factors, most of which can be prevented by proper packing, maintenance, and use of the Eclipse™.

Because you are descending at a high rate of speed, you have little time to attempt to correct a total malfunction. You should pull the reserve ripcord using a "look, reach, pull" procedure, grasping the reserve ripcord with both hands and pulling until your arms are completely extended. Because the main canopy is not out of the bag, it is not normally necessary to cutaway the main risers before pulling your reserve. Doing so wastes the limited time and altitude.

Typical total malfunctions and an experienced jumper's response include:

Pilot Chute-In-Tow:

The pilot chute is out behind the jumper, but does not extract the main canopy from the container.

Typical causes: Misrouting the hand deploy bridle during packing, not mating Velcro patches on the bridle and flap.

RESPONSE: Assume a flat and stable position and immediately pull the reserve ripcord. It is highly unlikely that you will be able to identify or correct the cause of a pilot chute-in-tow before impact.

Pilot Chute Hesitation:

The pilot chute may become trapped in the turbulent air over your back and simply hover in the burble.

Typical causes: Not throwing a hand deploy pilot chute vigorously to the side, poor body position.

RESPONSE: Roll over on your side momentarily. This should blow the pilot chute off your back or out of the turbulent air. While maintaining altitude awareness, you should try all possible methods of getting the pilot chute into 'clean' air, because simultaneous deployment of the main and reserve canopies can occur in this situation. If the pilot chute doesn't get 'clean' air and pull the main within a safe opening altitude, you should assume a flat and stable position and pull the reserve ripcord.

Lost or Stuck Deployment Handle:

You may not be able to locate the deployment handle on the pilot chute; or if you do locate it, you may not be able to extract the pilot chute.

Typical causes: improper packing of pilot chute.

RESPONSE: You should look at the deployment handle. If you cannot see it or feel it, you should assume a flat and stable position and pull the reserve. If you can locate it, but two hard pulls will not extract the pilot chute from its pouch, you should assume a flat and stable position and pull the reserve.

Partial Malfunctions

A partial malfunction results when the main canopy comes out of the container and extends above your head, but does not open correctly. Most partial malfunctions result from incorrect packing, poor body position upon deployment, or problems with the main canopy itself.

Some partial malfunctions can be corrected in the air, may not require pulling the reserve, and can be landed safely. Identifying and dealing with such situations is your responsibility.

It is important to clear your air before pulling your reserve. However, in some situations waiting too long between cutting away and pulling your reserve can result in serious injury or death, and cutting away and pulling your reserve simultaneously or in rapid succession may result in an entanglement and may result in serious injury or death.

Experience thus far has shown that a “two-step” method is most effective. When presented with a partial malfunction that requires the use of your reserve, you should arch your back and tuck your legs behind you as best you can given the malfunction. You should look down at the cutaway and reserve handles. Grasp the cutaway handle and peel it away from the main lift web. Look at the reserve ripcord handle, pull the cutaway handle to full arm extension and throw it away, and immediately grasp the reserve ripcord handle with both hands and pull to full arm extension.

Cypres™ Deployment

You will find yourself under your reserve if you descend below the preset altitude at a high rate of speed, or if your Cypres was improperly calibrated.

If the main container is still closed, you should land under the reserve canopy. If the main container is open but the main is not inflated, you should cutaway the main. If both the reserve and main canopy are inflated, you should respond as you were trained by your instructor for your particular canopy.

Other Emergencies

You may be faced with any number of emergencies not discussed here, including those in the aircraft, during climbout or exit, in freefall, under canopy, and during landing. As stated previously, training for any and all emergencies must be provided by a currently rated instructor.

Using a Reserve Static Line Lanyard

(RSL) System

The main concept of the Reserve Static Line Lanyard (RSL) system is that a lanyard is attached from the left main riser by a stainless steel snap shackle, to a Rapide Link through which the reserve ripcord is routed. Upon cutting away a malfunction, the lanyard automatically pulls the pin of the reserve ripcord, which results in a minimum loss of altitude before the reserve is deployed. The RSL system is used primarily during the student and post-student phase, particularly during the transition to more advanced equipment.

NOTE: The RSL is only a backup to manually pull the reserve after a cut away. As with any AAD, do not rely on an RSL to pull the reserve. There have been instances where an RSL has been disconnected and the jumper relied on it for activation all the way to impact.



SECTION 5

The Main Canopy

Assembling the Main Canopy

To assemble the main canopy, follow these steps in order:

1. Carefully inspect the main parachute for manufacturing defects, wear, and continuity.
2. Do a line check in accordance with the manufacturer's instructions.
3. Once the line check is complete, attach the connector links to the main risers. The main risers must be compatible with the Eclipse™ container and harness system. Be sure that the canopy is facing forward, so that the nose of the canopy is connected to the front risers and the tail of the canopy is connected to the rear risers. Make sure that the lines extend from the connector links to the canopy without crossing over each other.
4. If your main canopy uses Rapide links, make sure that the barrel nuts completely cover the threads.
5. Pull the slider bumpers over the top of the connector links. If slider bumpers were not supplied with your main canopy, it is suggested that you install them. Slider bumpers protect the slider grommets on ram-air canopies, and keep the barrel nuts on the connector links from working loose. You can make slider bumpers from almost any 3/4-inch inside diameter flexible tubing. Ask your rigger how to make and install them.
6. Check that the ram-air canopy control lines cannot get jammed between the slider bumper and slider grommets. If the control lines jam, the main canopy will be difficult or impossible to control.

Installing the Pilot Chute and Deployment Bag

To install the pilot chute and deployment bag:

1. Put the bridle through the grommet at the center of the base of the deployment bag. Make sure you keep the bag right-side out.
2. Attach the deployment bag and pilot chute to the top of the canopy so that the stop ring on the bridle lies between the grommet in the deployment bag and the pilot chute.

Attaching the Main

Canopy Control Handles

STUNTS Adventure Equipment, Inc. supplies control handles for the main canopy that are compatible with the Eclipse™ risers. Incompatibility between the control handles and risers may be a contributing factor in a malfunction. Ask your rigger about the compatibility if you are using control handles other than those supplied by STUNTS Adventure Equipment, Inc. In attaching the control handles for both ram-air canopies and round canopies, especially when hastily switching a main canopy from one set of risers to another, you should note the following:

- The control handles should be located along the control lines so that the canopy is in "no-brakes" when the control handles are resting against the guide ring on the riser. If not, the canopy may not glide or land properly.
- If the control handles are attached too far down the control lines, the canopy will be less responsive and the jumper might not be able to apply full brakes or stall the canopy, which may make it difficult to properly flare the canopy for landing.

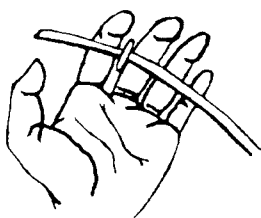
- It is very important to securely attach the control handles to the control lines. A lost control handle may be hazardous. Although most canopies can be controlled by the rear risers adequately for flight, they may not be controlled adequately for a safe landing.

Attach the main control handles after the main canopy has been properly attached to the risers and while it is still laying on its side.

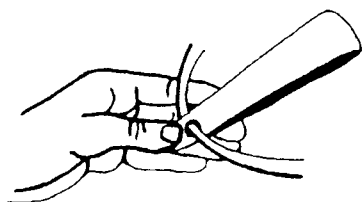
To attach the main control handles:

1. Starting at the tail of the canopy, trace the upper control lines down to the lower control lines to make sure the control lines are routed correctly. The control lines should not wrap around any suspension lines. The right-hand control line must pass through the right-hand rear slider grommet; and the left-hand control line must pass through the left-hand rear slider grommet.

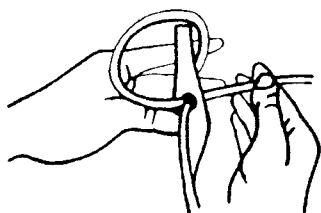
2. If the main canopy already has control handles, mark each control line where it is knotted to the control handle. The purpose of this is to install the new control handle at the same point as the old control handle, so only minor settings, if any, will need to be made. Remove the control handles.



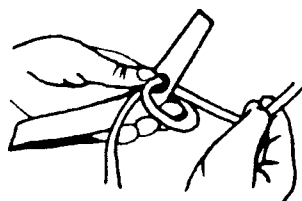
3. Pass the control line through the keeper ring on the riser.



4. Pass the end of the control line through the small hole in the Eclipse™ control handle. If the main canopy had control handles and you marked each control line, adjust the control handle so the mark on the control line is approximately the same distance from the Eclipse™ control handle as it was from the old control handle.



5. Loop the end of the control line around one side of the control handle, thread it through the grommet again, and pull it snug.

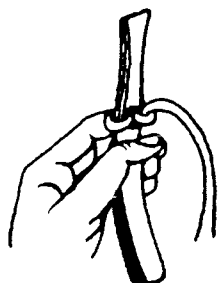


6. Loop the end of the control line around the other side of the control handle, and pass it through the grommet again.

7. Grasp both ends of the control line and pull it tight. NOTE: The control line originates on the Velcro side of the control handle, does a figure-8 through the grommet, and exits on the smooth side of the control handle.

8. If you marked your control lines, make sure the mark on the line is still in the proper position.

9. Tie an overhand knot on the free end of the line, and tighten it down to the control handle.



10. Repeat steps 3 through 9 for the other control handle.

11. Check the canopy with the deployment brakes with them not set to make sure the control lines are of proper length. There are no standardized measurements; proper brake settings and control line lengths are specific to the canopy. The owner's manual of the canopy provides the proper measurements for that canopy. To decide the final location of your control handles, you need to jump the canopy.

To attach the main control handles: (cont.)

12. Once you have verified the measurements, tighten the overhand knot at the control handle. NOTE: This knot holds the control handle onto the control line, so make sure it is secure.

Do not cut off the excess control line until you have jumped the canopy and made final adjustments.

13. Inspect the installation. Make sure the control lines are routed correctly.

Setting the Deployment Brakes

Every ram-air canopy on the market today is equipped with deployment brakes to make the opening more gentle and reliable. The brakes are intended to keep the tail of the canopy pulled down several inches during deployment, which prevents the canopy from surging forward as it inflates and begins flying.

A malfunction or poor deployment may result if the brakes are not set during packing, or if they are set incorrectly, or if one or both release before the canopy is completely inflated and stabilized.

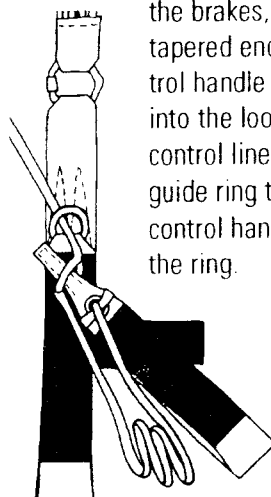
Incompatibility of control handles and risers can cause these same problems. Consult a certified FAA Rigger regarding compatibility of control handles and risers before using a combination other than those supplied with the Eclipse™.

Ram-air Canopies

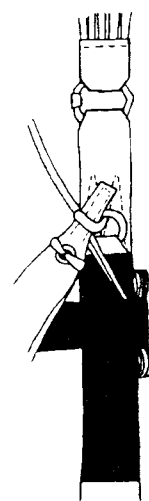
To set the deployment brakes:



1. After inspecting the canopy, use the control handle to pull one of the control lines down until the brake loop just passes through the guide ring.



2. Stow the brakes. To stow the brakes, insert the tapered end of the control handle all the way into the loop. Pull on the control line above the guide ring to seat the control handle against the ring.



3. Mate the control handle Velcro with that on the riser. Make sure that the tapered end of the control handle is completely seated in the loop, but not past the end of the taper. If it is inserted too far, it may be difficult to extract from the loop under canopy.

4. Fold the excess stowed brake line with 3-inch folds, and stow it in the Velcro tab next to the control handle.
5. Repeat steps 2 through 4 for the other control handle.

Round Canopies

The control handles supplied with the Eclipse™ may or may not be suitable for use with a particular round canopy.

ALWAYS consult a certified Rigger before putting a round canopy in an Eclipse™.

Packing the Main Canopy

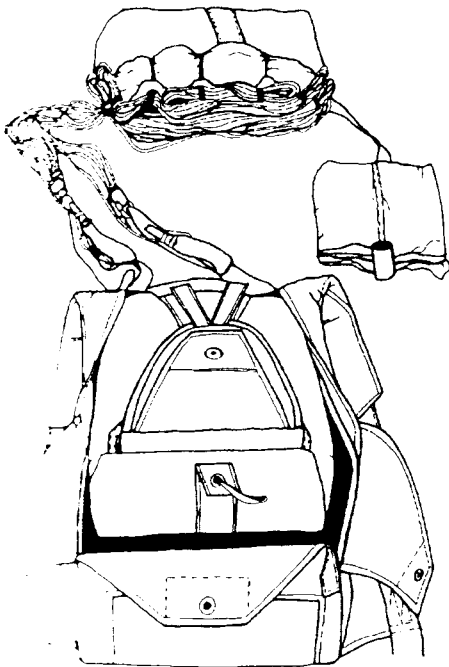
Packing the main canopy requires flaking the canopy, folding the canopy, and putting the canopy in the bag. This manual does not provide specific instructions for folding all of the various canopies; those instructions are provided in the owner's manual for each canopy. To pack the main canopy:

1. Flake the canopy.

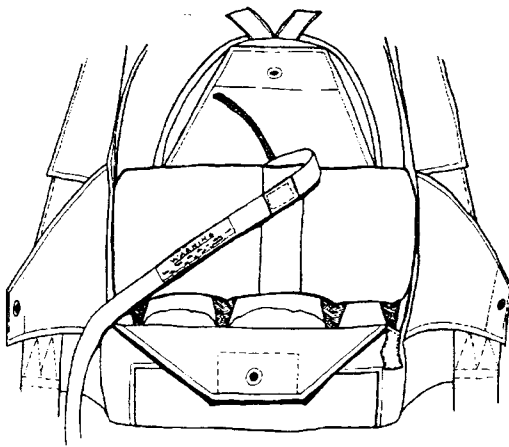
You can flake the canopy either by laying it out on the floor, or by laying the lines over your shoulder and flaking it in front of you, as is done with a pro pack.

2. Fold the canopy according to the manufacturer's instructions. Fold the canopy narrow enough so that it fits in the bag and wide enough to completely fill the corners of the bag.
3. Stack the canopy on itself so that it is about the same depth as the bag.
4. Slide the canopy into the deployment bag, being sure to fill the corners completely.
5. Close the bag.

The bag is held shut by 2-4 rubber stow bands located across the mouth of the bag; the first two of which pass through grommets located on the edge of the locking flap. To close the bag, put one of center two rubber stow bands through its corresponding grommet, and insert a 2-inch bight of lines through the stow band. Repeat this step with the other center stow band and grommet.



6. Stow the remaining lengths of line along the bottom of the bag in the rubber stow bands at each corner and on each side of the bag. Keep the bights of lines 1 1/2 to 2 inches long. Leave no more than 15 inches of lines unstowed between the bag and the connector links.
7. Pull the pilot chute bridle out of the top of the bag until you seat the canopy's metal ring against the grommet in the bag. To prevent damage to the canopy fabric, push any canopy fabric caught between the ring and grommet back into the bag.
8. Pick the bag up by its sides and set it into the container on its line stows.
9. Gently roll the bag out of the container. Route the main risers over the shoulders of the rig and down along the sides of the main container so all slack is taken up and the main control handle assembly lays against the reserve container. Lay the connector links into the container neatly against the sides, making sure that no lines will wrap around them during canopy deployment.

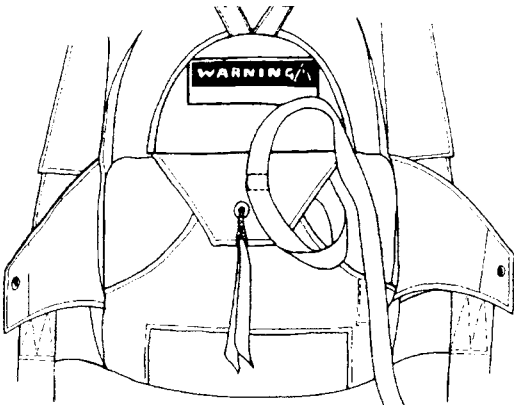


10. Lay the bag in the container with the line stows against the bottom flap of the container. Failure to place the lines to the bottom of the container could result in a pilot chute-in-tow. Push the top corners of the bag into the top of the main container so that the connector links are kept in place between the bag and the sides of the container. Make sure that none of the closing flaps are under the bag. Pull the bridle to its full length.
11. Kneel on the center of the bag and pull up on the main container flaps to squeeze air out of the bag and distribute the bulk so the middle thickness equals the thickness of the sides.
12. Close the riser covers using the tuck flaps.

Closing the Container

To close the Eclipse™ container, follow these steps in the exact order stated:

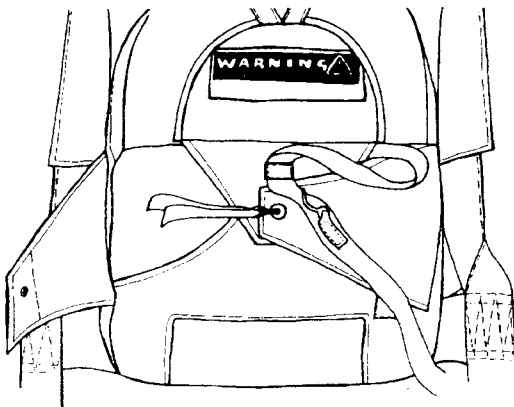
1. Insert a pull-up cord through the locking loop at the top of the main container. Route the bridle to the right of the pull-up cord and out the top of the container. Thread the pull-up cord through the grommet of the #1 bottom container flap. Pull the pull-up cord upwards towards the top of the container. Pat the bottom of the container until the locking loop comes through the grommet. Hold the locking loop in place with your knee to avoid over stressing the grommet.



2. Thread the pull-up cord through the grommet of the #2 top container flap and pull upwards until the locking loop comes through the grommet. Then pull downwards and hold the locking loop in place with your knee.

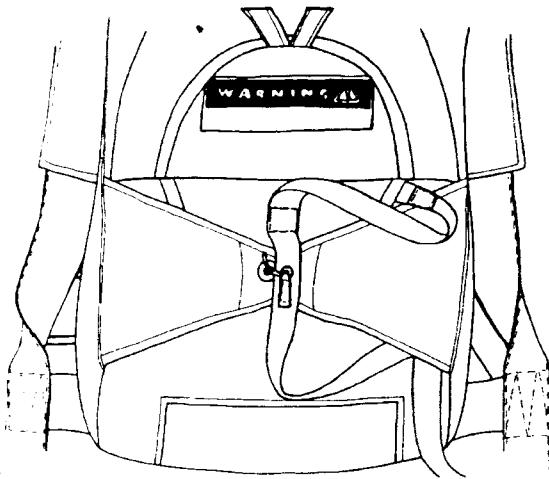
3. Place the bridle over the #2 top flap from right to left, and attach the small piece of Velcro on the bridle to the Velcro on the #2 top flap.

CAUTION: Correct bridle-routing is critical for the Eclipse™ system to function properly.



4. Thread the pull-up cord through the #3 right side flap and the #4 left side flap using the same technique as before. The flaps must be closed in this order.
5. Insert the bridle's curved pin through the locking loop from the bottom of the container and from right to left.

NOTE: The end of the curved pin must be pointed towards the reserve. Failure to do this may cause premature main container opening.

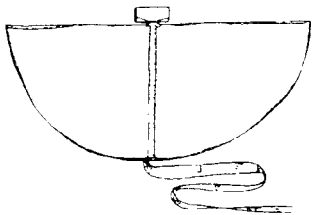


6. Slowly remove the pull-up cord to prevent excess friction from damaging the locking loop. It's best to pass the pull-up cord under the curved pin while extracting it so as to reduce friction.
7. Double check the Velcro patches to make sure they are mated properly. If there isn't enough slack in the bridle to allow this, gently pull some of the bridle out of the main container.
8. Check that the bridle extends from the locking pin to the pilot chute without passing through the harness. Mate the Velcro on the bridle to the Velcro on the #1 bottom flap; you'll have to tuck the bridle under the #3 right side flap to do this. Close the main pin cover flap and be sure it completely covers the pin and bridle.

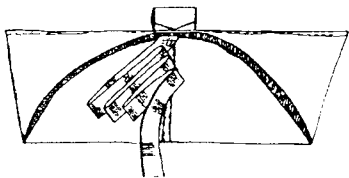
9. Tuck the excess bridle under the bottom edge of the right side flap. Mate the Velcro on the bridle to the Velcro located on the bottom flap under the right flap.

10. Tuck the 'V-walrus teeth' tabs under the main side flaps.

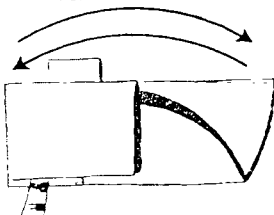
Folding the Throw-out Pilot Chute



1. Lay the pilot chute on a flat surface with the handle down and spread it to its full size. Fold the pilot chute in half from bottom to top.



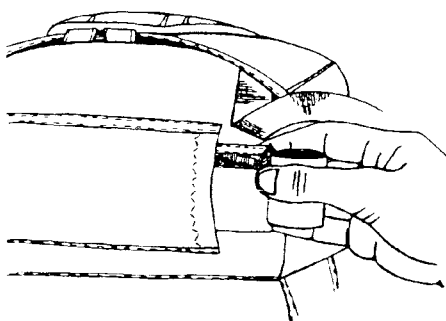
2. Refold the pilot chute in half again from top to bottom. S-fold the bridle over the middle of the folded pilot chute.



3. Flat fold (do not roll) the outer third of the pilot chute past the middle towards the handle. Fold the inner third, which includes the handle, over this fold.



4. Flat fold a third of the length past the middle. Flat fold the other third.



5. Roll the pilot chute in a tight "hot dog" roll.

6. Slide the pilot chute into the pocket at the bottom of the container. Tuck any loose bridle into the pocket on the side closest to the container.



SECTION 6

The 3-Ring™ Release System

Functional Description

The Eclipse™ harness and container system is designed with the 3-Ring Release System.

The 3-Ring™ Release System was invented by the Relative Workshop in 1976. It was the first practical release that allowed jumpers to cutaway their main canopy in one motion by simply pulling a single handle. Not only is the 3-Ring™ easier to operate than earlier canopy release systems, it is also more reliable.

Once the main canopy is cut away, the only things left on the harness are two smooth rings, which cannot snag a deploying reserve. Some other release systems can - and have - interfered with reserve deployment.

The 3-Ring™ design comprises three rings in graduated diameters, and a white loop through which the cutaway cable passes. Each ring forms a lever with a ten-to-one mechanical advantage as it passes through the other. A force of 1,000 pounds on the large harness ring exerts a force of only 10 pounds on the white loop. Opening shock usually totals about 1,000 pounds, or 500 pounds on each riser. Because of the mechanical advantage provided by the 3-Ring™ design, a force of approximately one pound on the top ring keeps the release together.

Get to Know the 3-Ring™

Knowing how the 3-Ring™ works will help you assemble and inspect it properly.

Begin by peeling the cutaway handle from the Velcro on the harness. Peeling, rather than pulling, makes it easier to separate the handle from the webbing. Look behind the risers near the harness and observe the movement of the yellow cable as you pull the cutaway handle from the webbing.

Now slowly pull one of the risers off the harness. As you pull, you'll notice that the white loop gets pulled through the grommet by the action of the smallest ring.

Study the mechanics of the three graduating rings. Study how the nylon components of the system fold and conform to the rings. Because of how nylon conforms and takes set, you must inspect the nylon prior to every jump and flex it periodically. These procedures are covered in the Pre-jump Inspection and in the Care and Maintenance sections of this manual.

Proper Functioning Excludes Modifications

The great reliability of the 3-Ring™ results from proper functioning of every individual component of the system. Therefore, if the system is modified in any way, or if genuine parts are replaced with other parts, the system may not function as designed and may result in serious injury or death.

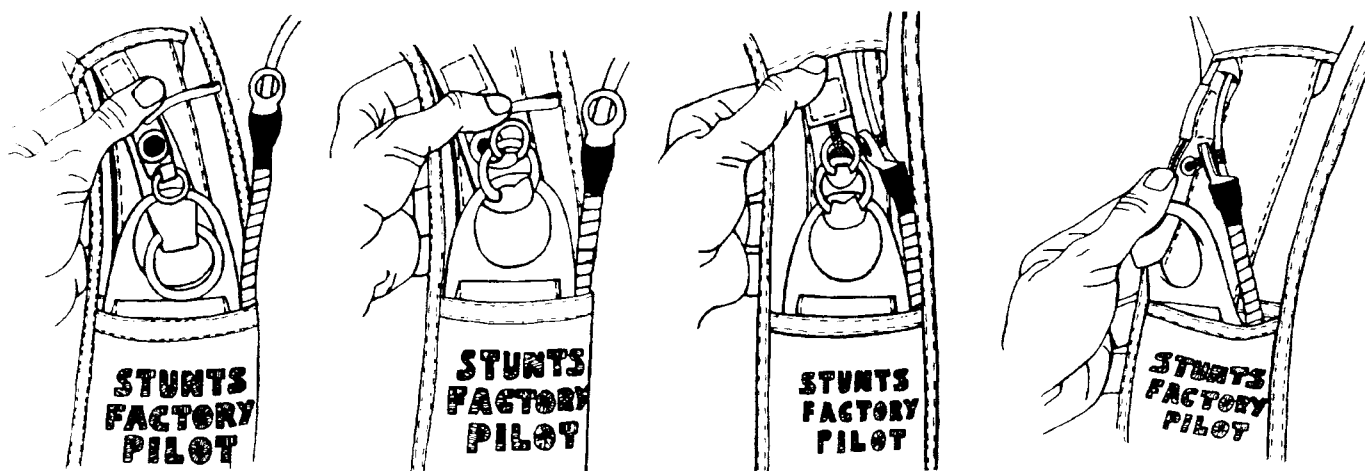
Modifications that may cause the 3-Ring™ system not to function properly include:

- Don't use risers that have locking loops made of Kevlar or solid cord. Use only risers that have only Type 2 sheathing for the locking loop.
- Don't use a cutaway handle with a plastic coating other than the special yellow coating which is Teflon-impregnated. Plastic coatings other than this Teflon-impregnated coating may cause the cables to bind in the housing or loops, making it difficult or impossible to cutaway the risers.
- Don't use a cutaway handle with cables of the wrong length.
The length of the cables is critical to ensure that each riser releases in the proper sequence.

Assembling the 3-Ring™

Before assembling the 3-Ring™ release, make sure the risers are free of twists and are on the proper side. Lay the Eclipse™ face down, as you would to pack it.

To Assemble the 3-Ring™:



1. Thread the longer cable on the release handle through the long housing until the end of the cable is visible at the grommet end of the housing.
2. Thread the shorter cable on the release handle through the short housing until the end of the cable is visible at the grommet end of the housing.

The instructions below assume you are sitting at the top end of the container, with your back to your canopy.

3. With the rings of the riser and the white loop facing towards you, pass the middle-sized ring, which is on the end of the riser, through the large harness ring from the rear. Fold the middle ring upward towards the riser.
4. Pass the smaller ring on the riser through the second ring, and fold it upward toward the riser.
5. Pass the loop from top to bottom around the small ring, then through the grommet in the riser. Make sure the loop goes around only the small ring, and not the middle ring. Do not let the loop twist.

Assembling the 3-Ring™ (cont.)

6. Place the grommet that is on the end of the housing over the white loop, and hold it in place while pushing the end of the cable through the loop. Push the cable into the housing until the cutaway handle is at the chest strap. Stow the loose end of the cable under the cover on the back of the riser.
7. Check the riser assembly to make sure it is correct.
8. Repeat steps 3 through 7 with the other riser.
9. Mate the Velcro on the cutaway handle with the Velcro on the harness, which is just below the chest strap

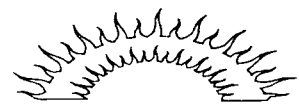
Pre-jump Inspection

Inspect for foreign matter in the 3-Ring™ assembly

Because a small force of approximately only one pound on the top ring keeps the release together, it is important to keep foreign matter, such as grass and sticks, out of the 3-Ring™ assembly. A small twig in the white loop could prevent a riser from releasing.

Check for Ease of Mobility of the Rings

When nylon stays in the same position for a long time, it begins to conform to that position. If the 3-Ring™ release system stays assembled for too long, the nylon can become so stiff that low drag from a malfunction, such as from a streamer, will not pull the riser off the ring.



SECTION 7

Care and Maintenance

Introduction

Your Eclipse™ will function correctly, last longer, and look better if it is maintained. An Eclipse™ requires very little maintenance unless it is subjected to unusual conditions such as a jump into salt water or a muddy landing.

Inspection

The best approach in maintaining your rig is to spend a few minutes examining every detail, at least once a month. If you find any wear or damage, have it fixed immediately. Putting off repairs, even minor ones, may ultimately result in a malfunction.

In addition to inspecting the rig yourself, ask your rigger to inspect the entire assembly every time the reserve is repacked.

Particular attention should be given to the following areas:

Breakaway System

Refer to the 3-Ring™ Release System section of this manual for detailed information on inspecting the canopy cutaway system.

Reserve System

The reserve system includes: reserve ripcord, locking loop, reserve pin, handle, cable housing, reserve container, and all associated sewing. Do not attempt any repairs or modifications to any part of the reserve system unless you are a certified rigger. You can, however, spot problems and inform your rigger.

Harness

Inspect the harness periodically for broken stitching or frayed webbing.

Main container

Inspect the plastic stiffeners in the container flaps and the grommets. If any need to be replaced, send the rig to the manufacturer.

Main Pilot Chute

Check the center line of the main pilot chute. The center line is the nylon tape inside the pilot chute that extends from the handle to the base. The center line must be firmly sewn at each end, and there must be no broken stitches or torn fabric. Inspect the seam that joins the pilot chute mesh to the pilot chute fabric. Replace the pilot chute if the mesh is torn or badly frayed.

Closing Loop

The closing loop is made of nylon suspension line sheathing, and is subject to wear. The main container is held shut by the closing loop, so if the loop wears out and breaks, the main canopy may release prematurely and a malfunction may result.

CAUTION: Never jump an Eclipse™ with a worn closing loop. Replace it immediately.

Velcro

Hook Velcro often attracts dirt, bits of grass, carpet fuzz, and other debris. You can clean the hook with a fine tooth comb. The pile section generally remains clean, but the nylon fibers tend to get pulled out of place. You should have Velcro replaced when it loses its adhesive qualities.

The Eclipse™ has Velcro only on the cutaway handle, ripcord pocket, main p/c bridle, control handles, and RSL.

If your rig is subjected to unusual abuse such as a drag across the runway, a water landing, or exposure to excessive dust or sand, it should be inspected immediately.

Care and Cleaning

Your Eclipse™ is manufactured mostly from nylon.

Nylon is very durable, but is susceptible to damage from several sources:

Sunlight: The ultraviolet rays in sunlight quickly and permanently weaken nylon. Keep your Eclipse™ out of direct sunlight as much as possible.

Acids: Keep your Eclipse™ away from hanger floors, dirty car trunks, and similar areas where acids may be found. If you get acid on your rig, immediately and thoroughly wash the rig with plenty of warm, soapy water. Also, baking soda neutralizes most acids. If you suspect acid damage, ask your rigger to thoroughly check your rig before jumping it.

Oils and Grease: Most petroleum compounds do not weaken nylon; they simply stain it. Such stains should be promptly removed by a rigger using mineral spirits.

Water: Salt water may damage nylon and rust hardware if not promptly and thoroughly washed off with plenty of fresh water. Fresh water will not structurally damage your Eclipse™, but prolonged agitation in clear water weakens webbing or may cause some fabric and tape colors to run. Your rig will maintain its new appearance longer if it is kept dry.

Soil: Soil may damage your Eclipse™. Brush off the soil after it has dried and gently wash with warm soapy water. Make sure that there is no soil in the housings, snaps, 3-Ring™ release, or reserve ripcord pins or loops. Consult a Rigger if your rig is heavily soiled or extremely dirty.

Sand: Fine sand will weaken and cut webbing and fabrics of all kinds. Prolonged exposure to sand will shorten the life of the entire parachute assembly.

Abrasion: Nylon quickly frays if dragged over concrete or other rough surfaces. Do not drag your rig on the concrete while packing.

3-Ring™ Release

Periodic Maintenance

Like all skydiving gear, the 3-Ring™ release requires periodic maintenance and inspection to ensure proper operation. The 3-Ring™ release system should be disassembled, flexed, and inspected every month.

It is especially important to inspect the 3-Ring™ if the rig has been used infrequently, or if it's used in humid, muddy, or freezing conditions. If the Eclipse™ becomes immersed in mud or muddy water, clean the 3-Ring™ release system with mild soap and water, and ask your rigger to inspect it and replace any rusted components. Immediate inspection is required if the 3-Ring™ has been subjected to unusual abuse such as a drag across the runway, a water landing, or exposure to excessive dust or sand.

The following procedures should be done at the beginning of each weekend or every 25 jumps, whichever comes first.

1. Operate the 3-Ring™ release system on the ground. Extract the cable completely from the housing and disconnect the risers.
2. While the system is disassembled, closely inspect for wear.
 - Check the nylon loops on the risers to ensure they are not frayed.
 - Check the Velcro on the cutaway handle and harness to ensure it is clean and will adequately hold the handle.
 - Check the stitching, including that which holds the large rings to the harness.
 - Check the white locking loops to ensure they are not frayed. Twist and flex the loops to remove any set or deformation.
 - Check the cable ends for a smooth finish. The ends are finished at the factory to have a smooth, tapered surface. This prevents the cable from getting hung up in the loop. Consult the manufacturer if the cable end has a burr or 'hook'.
 - Check the 3-Ring™ release housing for solid hand-tacking and proper stretch. The housing end is the area where the rings are tacked onto the riser. Pull the housing ends and check that they do not lengthen more than 1/2 inch. Next, pull the entire length of the risers and check that they lengthen 1-2 inches.
 - Use the cable to check the housing for dents, gravel, or other obstructions. (This is very unlikely unless the rig was smashed.)
 - Inspect the fittings at each end of the housing. If one of these fittings were to come off the housing, a riser might release prematurely.
3. Take each riser and vigorously twist and flex the webbing near where it passes through each ring. The purpose 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 bag lock.
4. If you find any wear in the 3-Ring™ system, consult STUNTS Adventure Equipment, Inc. before jumping the Eclipse™.
5. Reassemble the system properly, in accordance with the instructions given in this manual. Do a continuity check to make sure the canopy is straight and the risers are not reversed.

120-day Maintenance

FAA regulations require that reserves worn in the USA be inspected and repacked every 120 days by a certified Rigger. This thorough inspection ensures that all components are in air-worthy condition. The areas of inspection include the following:

- Reserve pilot chute and bridle and square deployment bag if applicable.
- Reserve canopy and lines.
- Reserve connector links tight.
- Ripcord pockets secure.
- Main bridle Velcro in good shape.
- Harness and container in good air worthy condition.

Major Alterations

STUNTS Adventure Equipment, Inc. does not authorize major alterations to the Eclipse™. Any major alteration such as harness size changes must be done by the manufacturer.

Replacement Parts

STUNTS Adventure Equipment, Inc. supplies replacement parts at a reasonable cost. When ordering parts for your rig, include the serial number, type, and date of manufacture of your Eclipse™ so we can quickly supply the proper items. This information is written on the label tucked under the collar between the reserve top cover flap and the reserve #6 flap.

Prior to installing and packing a square reserve into the Eclipse™, the Rigger must thoroughly read and understand the instructions in this section. The Rigger must also make the final determination of proper compatibility regarding volume and deployment type. Only those reserves that have received a weight and speed limitation by the manufacturer are approved for use in the Eclipse™.

If you have any questions, please contact STUNTS Adventure Equipment, Inc.

IMPORTANT

Prior to installing and packing a square reserve into the Eclipse™, the rigger must thoroughly read and understand the instructions in this section. The rigger must also make the final determination of proper compatibility regarding volume and deployment type. Only those reserves that have received a weight and speed limitation by the manufacturer are approved for use in the Eclipse™.

If you have any questions, please contact STUNTS Adventure Equipment, Inc.,
phone: 408-662-9299, FAX: 408-62-9499, e-mail: stunts@got.net, Web: <http://www.stuntsae.com>



SECTION 8

Assembling the Reserve, Rigger Information

Recommended Tools

Quantity Description

- 1 Temporary pin with flag
- 1 60" pull-up cord
- 1 Pilot chute threading tool
- 1 Packing paddle
- 1 Locking pull-up cord
- 1 Needle and safety tie
- 1 Molar strap

Attaching the Reserve Canopy to the Risers

Instructions for attaching the reserve canopy to the reserve risers are provided in the owner's manual for the reserve canopy.

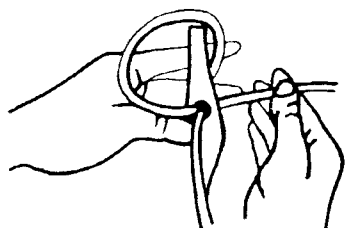
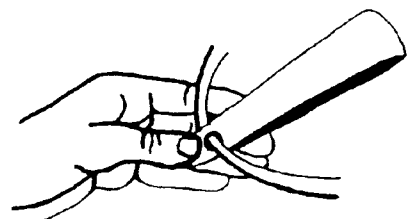
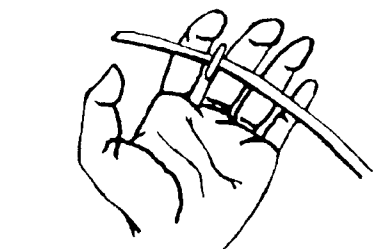
Attaching Ram-air Reserve Control Handles

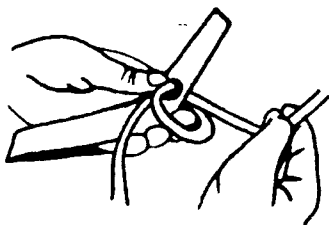
Study the owner's manual for the reserve canopy before attaching the control handles to the steering lines.

The Eclipse™ is supplied with control toggles for the reserve canopy that are compatible with the Eclipse™ risers. Do not use any other risers than those supplied by the manufacturer. The control handles and the risers must be compatible.

To Attach the Reserve Control Handles:

1. Do a line check.
2. Locate the mark on the steering line that indicates the correct control handle location.
3. Pass the control line through the keeper ring on the riser.
4. Pass the end of the control line through the grommet in the Eclipse™ control handle, starting from the Velcro side of the handle. Adjust it so the mark on the steering line is close to the grommet, but has not yet passed through it.
5. Loop the end of the control line around one side of the control handle, thread it through the grommet again, and pull it snug. Be sure the mark remains in the correct place.
6. Loop the end of the control line around the other side of the control handle, and pass it through the grommet again.
7. Grasp the control line on the sides of the control handle and pull it tight.
NOTE: The control line originates on the Velcro side of the control handle, does a figure-8 through the grommet, and exits on the smooth side of the control handle. Again, make sure the mark is in the right place.





8. Tie an overhand knot on the free end of the line, and tighten it down to the control handle.

9. Repeat steps 2 through 8 for the other control handle.

10. Check the canopy with the deployment brakes setting with them not set to make sure the control lines are of proper length. There are no standardized measurements; proper brake settings and control line lengths are specific to the canopy. The owner's manual of the canopy provides the proper measurements for that canopy.

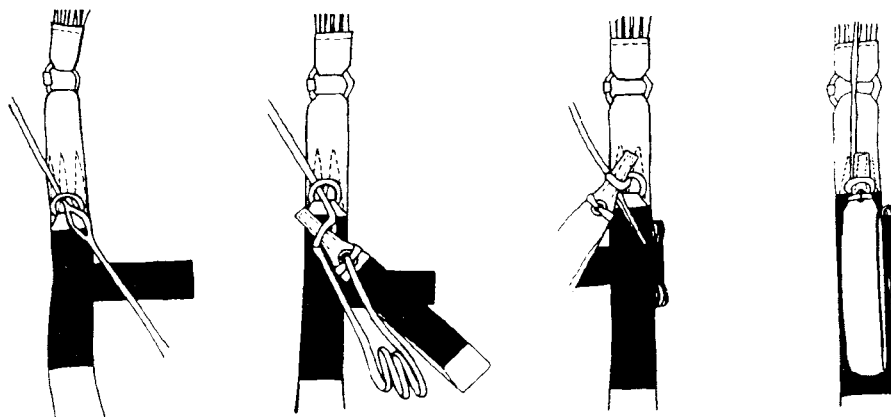
11. Once you have verified the measurements, tighten the overhand knot at the control handle. **NOTE:** This knot holds the control handle onto the control line, so make sure it is secure.

12. Do not cut off the excess control line until you have jumped the canopy and made final adjustments.

13. Inspect the installation. Make sure the control lines are routed correctly.

Packing the Reserve

Setting the Brakes



1. Open the Velcro cover on the riser. Use the control handle to pull one of the control lines down until the brake loop just passes through the guide ring.

2. Stow the brakes. To stow the brakes, insert the tapered end of the control handle all the way through the loop and under the elastic keeper. Pull on the control line above the guide ring to seat the control handle against the ring.

3. Mate the control handle Velcro with that on the riser. Make sure that the tapered end of the control handle is completely seated in the loop, but not past the end of the taper. If it is inserted too far, it may be difficult to extract from the loop under canopy.

4. Fold the excess stowed brake line with 3-inch folds, and stow it neatly next to the control handle.

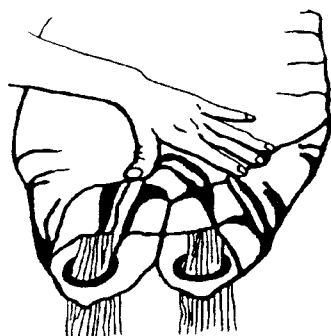
5. Carefully close the Velcro cover to encase the stowed control handle and the folded control line. Make sure none of the control line is caught between the layers of Velcro.

6. Repeat steps 1 through 5 for the other control handle.

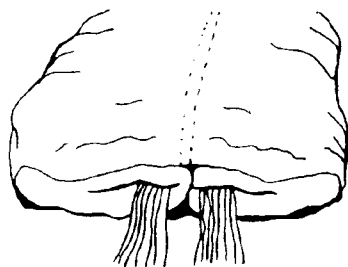
Folding the Canopy

Fold the reserve canopy according to the manufacturer's instructions.

Putting the Canopy into the Bag



1. Prepare the free bag so it is ready for the canopy. Take a locking pull-up cord and thread it through the deployment bag from the top. Make a figure-8 slip knot on the underside to keep it from pulling through.



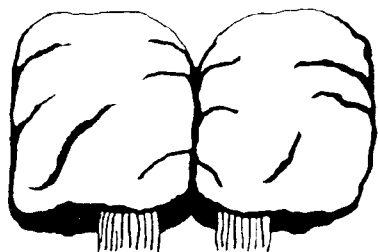
2. Wrap the tail around the canopy stake making sure that you do not enclose the nose in the wrap. To achieve a good distribution in the bag, make the width of the canopy 2-4 inches wider than the bag.

3. Pull the slider up to the base of the canopy to the slider stops. Fold the stabilizers over the slider at 45 degrees.

4. S-fold the canopy into a stack on itself, making each fold approximately the distance from the mouth of the bag to the grommets in the center of the bag.

5. 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 of the seam and pull it to the right.

6. When the bulk of the fabric has been distributed into the narrow stack, fold each side 90 degrees towards the top of the canopy so the entire package is in a U-shaped configuration. This is referred to as the "molar".

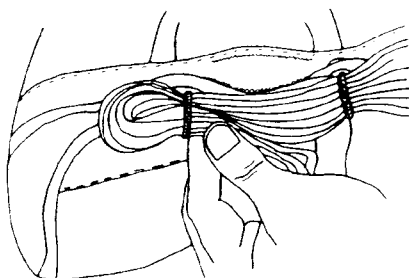


7. Carefully slide the bag over the canopy, pushing each "ear" of the molar into the corners of the bag, filling the corners evenly. Make sure that the center of the bag is clear of any material.

8. **Remove the molar strap (failure to do so may cause serious injury or death).**

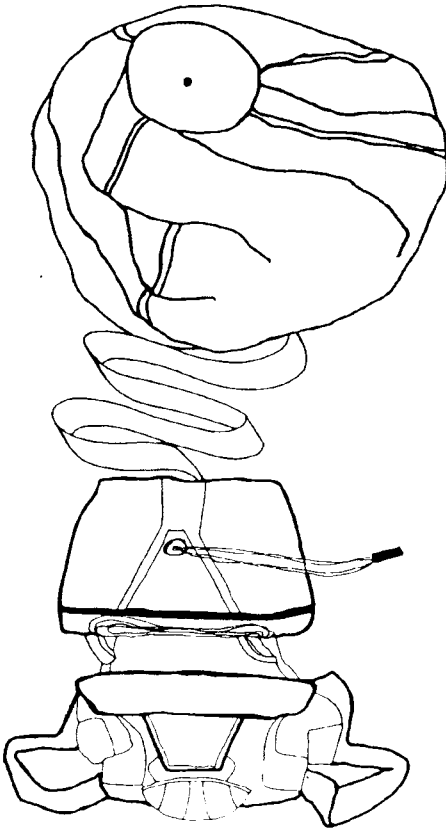
9. Lock the bag closed with two bights of suspension line. Use a shock cord to make these stows.

10. Make sure the canopy is evenly distributed in the bag. Cinch the locking pull-up cord down tightly so that there is minimum distance between the center of the upper and lower grommets.



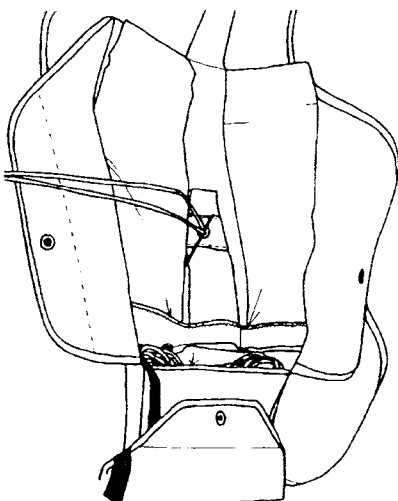
11. Tilt the bag on its bridle end so that the mouth of the line stow pocket is exposed. Open the line stow pocket and stow the lines in the pocket, distributing the bulk evenly. Leave about 8-10 inches of line exposed to the connector links. Close the mouth of the line stow pocket securely.

Placing the Bag into the Container

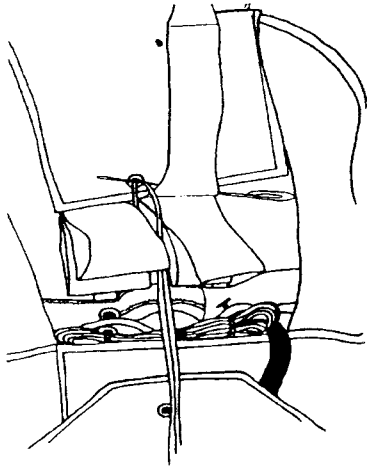


1. Flip the deployment bag over the container so it lays upside down on the main container.
2. Position the reserve risers in the reserve pack tray. Fan the links rather than stacking them on each other, placing the rear links to the outside. Be sure to place the reserve risers far enough in the pack tray so they will lie flat over the shoulders.
3. Making sure the lines exit the bottom of the riser covers, set the bag on its end at the bottom of the reserve container.
4. Thread a 60" pull-up cord through the closing loop. Release the figure-8 knot of the locking pull-up cord, and thread the 60" pull-up cord through the loop.
5. Place the bagged canopy in the pack tray, taking extra care to fill the lower corners.
6. Using the locking pull-up cord, draw the 60" pull-up cord through the bag. Secure it with a temporary pin.

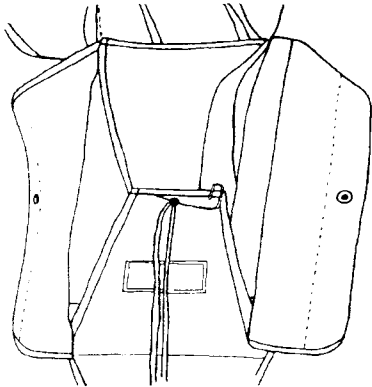
Closing the Reserve Container



1. Pack the first 2/3 of the reserve bridle in the container by making long S-folds in the bridle from the top of the freebag to the bottom corners of the reserve container. These folds should be equally dispersed to both the left and right corners of the bottom of the reserve tray.
2. Close reserve flap #1 and secure it with a temporary pin.

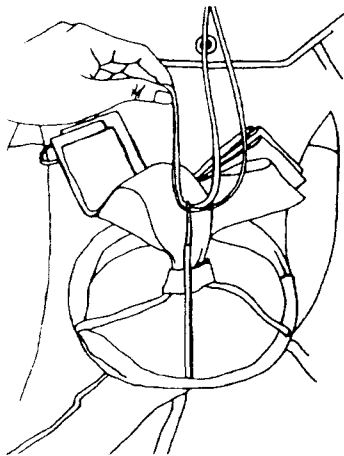


3. Close reserve flap #2 and secure it with a temporary pin. The bridle should come out between reserve flaps #1 and #2. Make sure there is 5-6 feet of free bridle extending from the closed flaps to the base of the pilot chute. If there is less than 5 feet or more than 6 feet, reopen the flaps and restow the S-folded bridle to make the length of the free bag bridle between 5 and 6 inches.



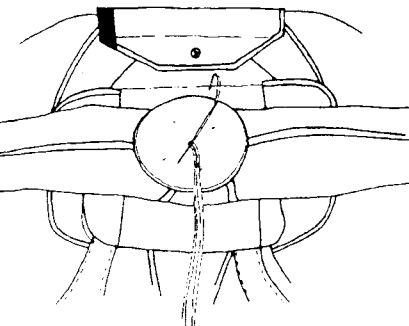
5. S-fold the length of free bridle on the top of reserve flap #1 and #2, folding from right to left up to the base of the pilot chute. These folds should be not more than 5-6 feet.

6. Thread the pull-up cord up through the bottom of the pilot chute and out the top.



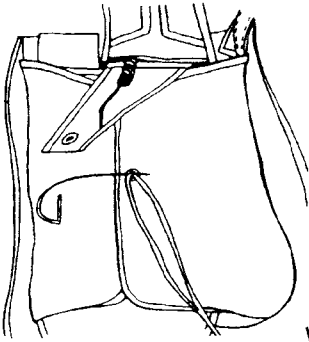
7. Make sure the pilot chute is centered over the loop, then compress it straight down and lock with a temporary pin.

8. Pull all the pilot chute fabric out, away from the spring. Make sure the pilot chute base is centered under the crown.



9. Fully compress the spring to see how much loop can be pulled through the top of the pilot chute. If you can pull more than 1/2 to 3/4 inches through, the loop is too long. Now would be the best time to open the container and shorten the loop.

10. Lay the fabric flat around the pilot chute and fold the fabric in wide folds 1 inch into the outside edge of the compressed spring. Fold the top and bottom first, then the sides. Keep the fabric folds of the pilot chute out from under the open flaps and from under the spring. Folding the fabric rather than stuffing it increases pilot chute performance and reduces the bulk of the packed container.



Closing the Reserve Container (cont.)

11. Close the reserve side flaps #3 and #4 and secure with a temporary pin.
Make sure that the folds in the pilot chute stay flat and neat.

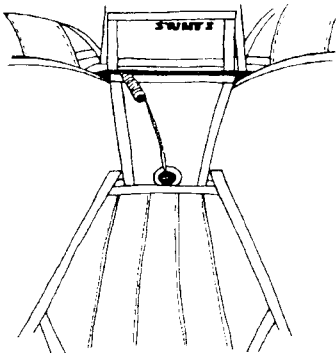
12. Close the bottom center flap #5 and secure with a temporary pin.

13. Close the reserve top flap #6 and secure with a temporary pin.

14. Replace the temporary pin with the reserve pin. The end of the pin slides into the pin protector flap.

15. Count Your Tools!

16. Dress the container, seal, sign, and log the reserve repack.

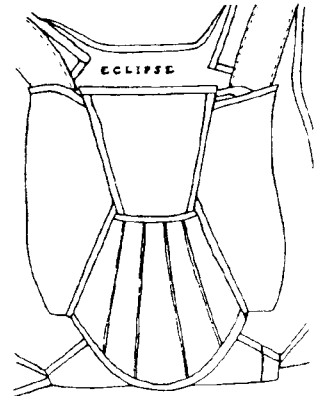
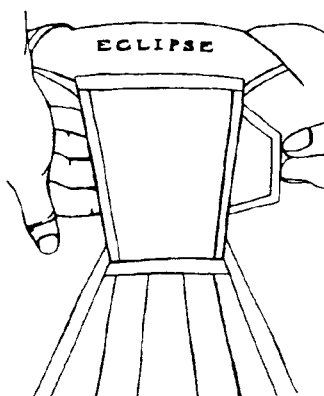
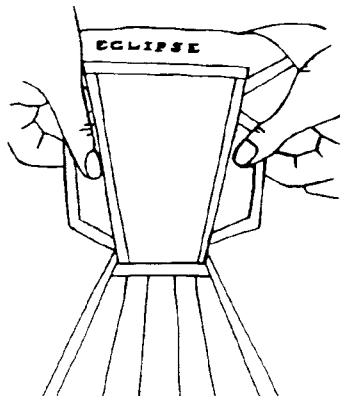
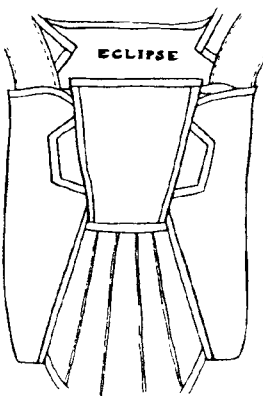


17. Close the reserve cover flap by tucking the bottom of the cover flap under the mid flap and the edge flaps under reserve flap #6. Then, set tuck tabs on either side.

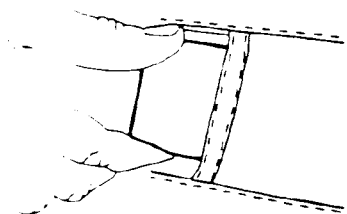
18. Count Your Tools Again!

** either #5 or #6 flap can be the last flap to see conversation with Dave Dause May/01*

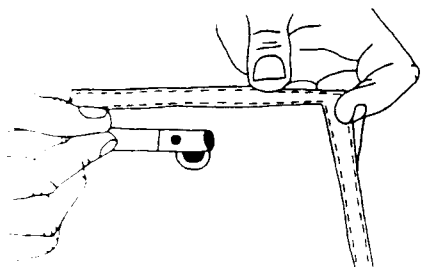
Top cover flap closure sequence.



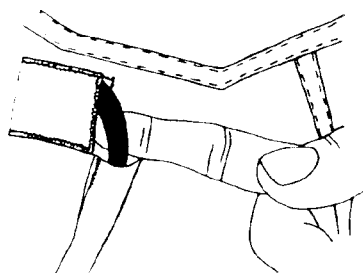
Installing a Cypres™ AAD



1. Place the sensor unit in the Cypres™ pocket on the Eclipse™.



2. Route the cutter cable through the nylon channel. Put the cutter through the elastic keeper sewn on the #2 reserve flap, with the grommet and cutter hole aligned.

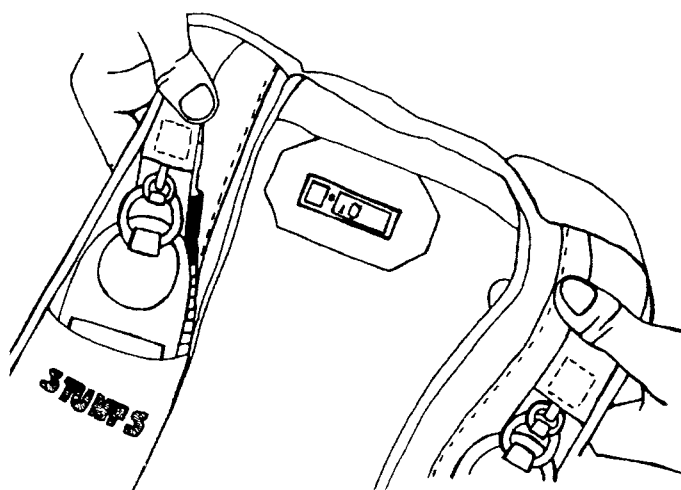
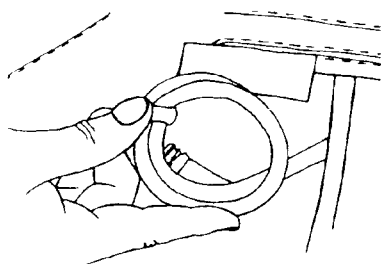


3. Route the display unit in the channel in the bottom of the reserve tray. With the sensor unit facing towards the back pad, place the display unit in the elastic keepers.

4. Coil excess cable, and stow it in the Cypres™ pocket on the Eclipse™.

5. Replace the reserve locking loop with the Cypres™ locking loop. Refer to the Cypres™ owner's manual for loop and washer knot instructions.

NOTE: Only a Cypres™ provided pull-up cord can be used to close the reserve container.



Installing a RSL

A RSL system must be installed by a certified Rigger. The RSL must be installed during the packing of the reserve, since the reserve ripcord must pass through the Rapide Link on the end of the lanyard prior to closing and sealing the reserve.

To install a RSL in the Eclipse™ harness and container system, the following steps must be performed exactly as stated. Steps 1 and 2 must be performed by a certified Rigger. Steps 3 and 4 must be performed by a certified Rigger or by a qualified instructor.

1. Install the Rapide Link end of the lanyard.

Route the ripcord cable and pin assembly through the cable housing. Place the Rapide Link on the end of the lanyard between the housing and the guide ring located on the #6 reserve flap, approximately 1.5 inches below the housing end. Route the ripcord pin first through the lanyard Rapide Link, then through the guide ring. Now the reserve may be closed in the normal manner.

2. Close the reserve in the normal manner
3. Once the reserve is assembled and packed with lanyard installed, properly and completely attach the main risers to the main canopy, then attach the risers to the harness and container.
4. Install the stainless steel snap shackle of the lanyard to the attachment ring on the left riser.

The lanyard must be routed directly from the Rapide Link to the ring on the left riser without being routed around or through any housings or other attachments. FAILURE TO ROUTE THE LANYARD CORRECTLY COULD result IN A FATALITY.

Important:

Under no circumstances is the Eclipse™ approved for training use with the RSL disconnected.



Federal Aviation
Administration

**TRANSPORT AIRPLANE DIRECTORATE
AIRCRAFT CERTIFICATION SERVICE
LOS ANGELES AIRCRAFT CERTIFICATION OFFICE
3960 PARAMOUNT BOULEVARD
LAKEWOOD, CALIFORNIA 90712-4137**

January 17, 1996

STUNTS Adventure Equipment
Mark Knutson, President
4 Playa Boulevard
Seaside Beach, California 95076

Mr. Knutson:

STUNTS Adventure Equipment, Personnel Parachute Assemblies;
Technical Standard Order C23c

Your application dated January 17, 1996, requesting the issuance of a Technical Standard Order (TSO) authorization in accordance with the procedural requirements of Federal Aviation Regulation (FAR) Part 21, Subpart O, has been reviewed. Based upon your data and statement of conformance certifying your article(s) has met the requirements of FAR Part 21, Subpart O, and the minimum performance standards of TSO C23c (Ref. FAR 21.305(b)), authorization is hereby granted for the following:

<u>Model</u>	<u>Part Number</u>	<u>Description</u>
Eclipse	E-1000-()	Parachute Assemblies
Eclipse	E-1000-1	Reserve Deployment Bag, Catagory B
Eclipse	E-1000-2	Pilot Chute, Catagory B

The technical data submitted with your application has been reviewed and accepted as fulfilling the requirements for a TSO authorization and will be retained in our files. For your information, the conditions and tests required for TSO approval are minimum performance standards. The article(s) may be installed on or within a specific type or class of aircraft only if further evaluation by the user/installer documents an acceptable installation that is approved by the Administrator.


The quality control procedures contained in your quality control manual, currently on file at the Van Nuys 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, you are authorized to use TSO procedures for the subject article(s). You may identify the article(s) with the applicable TSO markings as required by TSO C23c.

As 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 occurrences listed in FAR 21.3(c). The report should be communicated initially by telephone to the Manager, Technical and Administrative Branch, ANM-103L, (310) 627-5300, 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(s).

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

Sincerely,


Michael A. Murphy, Manager,
Technical and Administrative
Support Staff, ANM-103L