



OWNERS  
MANUAL

MIRAGE G4

M I R A G E   S Y S T E M S

# TABLE OF CONTENTS

Introduction .....	1
User Warning .....	2
Packing Instructions for Ram Air Reserve with Freebag .....	3
Assembly of RSL (optional).....	15
Assembly of Optional "Fancypants" .....	17
Assembly of Lumbar Support .....	18
Assembly of the 3-Ring System .....	19
Assembly of Centerline Collapsible Pilot Chute.....	22
Assembly of Standard Pilot Chute .....	25
Packing Instructions for Main Container.....	26
Proper Routing of Main Pilot Chute Bridle .....	29
Packing Instructions for Main Pilot Chute .....	30
User Instructions .....	31
Replacement Parts.....	33
Maintaining Your Mirage .....	34
Notes .....	37

# INTRODUCTION

Congratulations on your purchase of a Mirage harness/container system.

The Mirage is the finest harness/container system available anywhere, and with proper care and use it will last for many years. It is the purpose of this manual to provide you with the information necessary to enable you to care for and use your Mirage properly. It is our hope you will enjoy your Mirage as much as we enjoyed building it for you. Should any aspect of the information contained in this manual be unclear to you, or should you have questions or concerns about your Mirage which are not addressed by this manual, you are encouraged to contact Mirage Systems Inc. at the address below or on the back cover of this manual prior to jumping the Mirage.

The purpose of this manual is to familiarize the Mirage owner with the function and packing procedures of the Mirage system. It is not a substitute for a course of instruction, nor does it release the user from responsibility for the use and maintenance of the system. Although packing instructions are included for the reserve parachute, note that this operation is governed by applicable laws, and may not be legally conducted by anyone other than a certificated rigger.

Mirage Systems Inc. is not responsible for use of the Mirage with any parts not specifically supplied by Mirage Systems Inc. for your Mirage, nor for the use of the Mirage with any other canopies than those specifically mentioned as compatible on the system information panel inside the main pack tray. If there are any questions about equipment compatibility, please contact Mirage Systems Inc.

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# WARNING

## Low Speed Parachute Limited to use from Airplane under 150 mph

**Skydiving is a hazardous activity that can result in injury or death.**

Parachutes sometimes malfunction even though they are properly designed, built, assembled, packed, maintained and used. The results of such malfunctions are sometimes serious injury or death.

If you use your Mirage, or allow someone else to use it, you are acknowledging sport parachuting's risks and accepting the fact that the Mirage and/or its components may malfunction.

If you are not willing to accept the risks of sport parachuting, or if you are not willing to accept the possibility that your Mirage or its components may malfunction and perhaps cause you to be injured or killed, then you should reconsider your involvement in sport parachuting.

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

Never use the Mirage unless you have read and understand this warning, and

- A. you have completed a "Controlled Program of Instruction" in the use of this equipment or
- B. you have read and understand all appropriate flight manuals and packing instructions.

To lower the risk of death, serious bodily injury, canopy damage, container damage and hard openings, never exceed 130 kts. deployment speed.

# PACKING THE RESERVE CONTAINER



Fig. 1

## TOOL LIST

1. Complete Mirage packing data card
2. Lead seal, press, and thread
3. Cypres loop, washer, and silicone
4. Long pull up cord
5. Temporary pin
6. Temporary pile velcro tabs
7. Leverage Bar or Packing Paddle [Fig. 1]

*Helpful Hint: Count and keep track of your tools!*



Fig. 2

## Installing the Cypres processing unit

(Also see the Cypres installation manual)

For installation, the processing unit is placed into a specially bolstered and labeled nylon pocket which is pre-installed in every Mirage reserve container.

Excess cable is stowed in the flat part of the pocket underneath the velcro-adjustable flap. If you have to stow both the thinner EOS cable and the thicker cable to the control unit, be sure to place the thicker cable so that it lies on top of the thinner one. [Fig. 2]



Fig. 3

## Installing the EOS and Cypres Control Unit

Feed the EOS and control unit through the opening and up the built in channel in the reserve pack tray.

The EOS cable is routed through the small slit on the #1 closing flap and into the Cypres channel. Secure the EOS using the elastic keeper. Insert the control unit into the control unit transparent pouch in the backpad. [Fig. 3]

# PACKING THE RESERVE CONTAINER



Fig. 4

Attach the square reserve to the container system. Attach the steering toggles and set the deployment brake length according to canopy manufacturers instructions. [Fig. 4]



Fig. 5

Stow excess reserve canopy steering line in velcro keeper. Mate toggle to velcro on reserve riser. Repeat on opposite riser. [Fig. 5 & 6]



Fig. 6



Fig. 7

Attach temporary pile velcro tabs to the hook side of velcro on the line stow pocket of reserve freebag. [Fig. 7]

**WARNING:** Be careful: hook velcro may damage suspension lines.



Fig. 8

Thread looped end of bridle through pilot chute loops, then pass freebag through looped end of bridle to form a larks head knot. Center bridle on pilot chute loops and cinch **very tight**. [Fig. 8]

# PACKING THE RESERVE CONTAINER

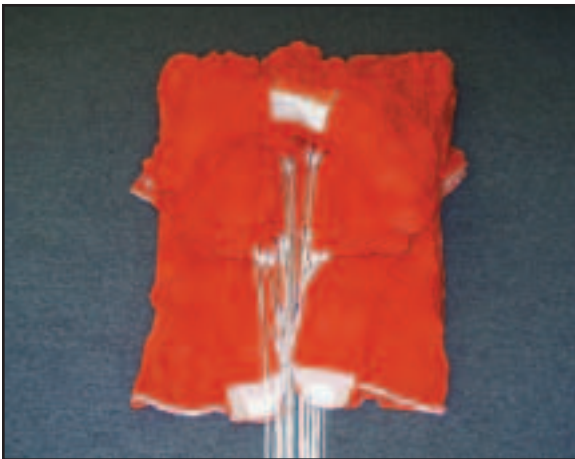


Fig. 9

Fold canopy in accordance with canopy manufacturers instructions. Mirage Systems recommends the P.R.O. pack style. After flaking and laying the canopy down, ensure that all suspension lines are placed into the center of the canopy. Centering the suspension lines improves deployment. All suspension lines should be centered the entire length of the cocoon. [Fig. 9]



Fig. 10

Cocoon the canopy to the width of the reserve freebag mouth lock. Canopies cocooned wider may increase bulk. [Fig. 10]



Fig. 11

The first fold places the slider grommet on the edge of the canopy. [Fig. 11]

*Helpful Hint: This fold is usually 3-6 inches, depending on the canopy size.*

# PACKING THE RESERVE CONTAINER



Fig. 12

The second S fold is placed over the first fold. This begins to create the desired wedge shape of the reserve container. [Fig. 12]

*Helpful Hint: The second fold should be 4-6 inches overall. The majority of the bulk should be towards the bottom of the reserve container.*



Fig. 13

Pull remaining center cell back creating the MOLAR shape [Fig. 13]

*Helpful Hint: Rolling what is left of the center cell back, along with distributing this fabric left and right makes a good MOLAR shape.*



Fig. 14

Unlike the G<sub>3</sub>, the G<sub>4</sub> requires **thick** MOLAR "ears" in order to fill the top of the reserve container, which is thicker than that of the G<sub>3</sub>. This may be accomplished by folding the long MOLAR ears under. The normal range is 5-8 inches. [Fig. 14]



# PACKING THE RESERVE CONTAINER



Fig. 15

Place canopy onto the freebag.

After placing canopy on the bag work one side at a time into the freebag. [Fig. 15]

**Important:** Fill the top of the bag as full as possible. This is critical to the appearance of the packjob



Fig. 16

Close the freebag mouth lock using the safety stow. [Fig. 16]

*Helpful Hint: Microlite lock stows should be 2 inches (5 cm), Dacron line lock stows may require up to 3 inches (8 cm).*



Fig. 17

Insert all but 4 inches (10 cm) of the remaining lines into the line stow pocket in a S fold manner, starting at the very bottom of the pocket after stowing the lines. [Fig. 17]

*Helpful Hint: Remember to remove the pile velcro tabs and mate the velcro in the pocket. Make sure not to trap any lines in between the velcro halves. To reduce line bulk, distribute the lines evenly throughout the line pocket.*

*Reach inside mouth lock with hands and separate reserve fabric to make room for Cyprus.*

# PACKING THE RESERVE CONTAINER

Reserve Closing Loop	
Canopy Size	Loop Length
PD-113	3.75" +/- 1/4"
PD-126	4.00" +/- 1/4"
PD-143	4.25" +/- 1/4"
PD-160	4.50" +/- 1/4"
PD-176	4.75" +/- 1/4"
PD-193	5.25" +/- 1/4"
PD-218	6.00" +/- 1/4"
PD-253	6.00" +/- 1/4"

Fig. 18

Here is a suggested reserve closing loop length chart. Prestretched loops are measured from the washer to the end of the closing loop. [Fig. 18]

**IMPORTANT:** Reserve ripcord pull force must remain under 22 lbs.

*Helpful Hint:* A label in the main packing tray lists the canopies that are compatible with the container. Also included are more recommendations on closing loop length.



Fig. 19

Thread pull up cord through closing loop and tie off with bowline knot about 6 inches up. [Fig. 19]

*Helpful Hint:* Treat pull up cord and top 1/2 inch of the closing loop with Airtec approved silicone. Airtec recommends the use of silicone to protect the Cypres loop. It also helps with reserve pin insertion.



Fig. 20

Place the reserve freebag into the reserve pack tray and align risers. Then thread pull up cord through the freebag. [Fig. 20]

*Helpful Hint:* Ensure that the reserve risers are correctly routed and pushed all the way into the container.

# PACKING THE RESERVE CONTAINER



Fig. 21

Push freebag into the reserve container, filling the corners. [Fig. 21]

*Helpful Hint: This is a good time to reach around the back and work the Cypres into the canopy, and work the canopy around the Cypres.*



Fig. 22

Starting at bridle line attachment point on freebag, fold bridle in a "V" shape as shown in Fig. 22. While folding, remove any twists in the bridle. Fold all but 3-4 ft of the bridle under the #1 closing flap.



Fig. 23

Thread closing loop and pull up cord through Cypres cutter and #1 closing flap. Use temporary pin to pin closing loop in place. At this point, no more than 1/2" to 3/4" of loop should be able to be pulled up with maximum effort. [Fig. 23]

*Helpful Hint: Placing your foot on the #1 closing flap while pulling up on the #4 and #5 side flaps, work the canopy into the corners and away from the closing loop. This is important for bulk distribution and proper pilot chute seating and should be repeated often. Main riser covers may be used after reserve side flaps are closed.*

# PACKING THE RESERVE CONTAINER



Fig. 24

Distribute the remaining 3-4 ft of bridle on top of the #1 closing flap.[Fig. 24]



Fig. 25

Thread pull up cord through the spring pilot chute. Center the pilot chute base over the #1 closing flap grommet. [Fig. 25]



Fig. 26

While keeping all pilot chute fabric out of the spring, compress the pilot chute. [Fig. 26]

*Helpful Hint: Holding the pull up cord in your mouth will help control the spring. The pull up cord helps guide the pilot chute while you compress it with your hands.*

# PACKING THE RESERVE CONTAINER



Fig. 27

Using a leverage bar with the pull up cord for leverage, pull the closing loop up through the #2 pilot chute cap. Pin using the temporary closing pin. [Fig. 27]  
Remember, there is no #2 flap, the reserve pilot chute is #2 in the closing sequence.

**IMPORTANT:** There should not be pilot chute fabric inside of the compressed coils of the spring.

*Helpful Hint: If an actual leverage bar is not available, a wrench or packing paddle can be used.*



Fig. 28

After pilot chute is pinned, force the pilot chute down into the reserve freebag. [Fig. 28]

*Helpful Hint: Placing your foot on the #2 reserve pilot chute while pulling up on the #4 and #5 side flaps, work the canopy into the corners and away from the closing loop. This is important for bulk distribution and proper pilot chute seating and should be repeated often. Main riser covers may be used after reserve side flaps are closed.*

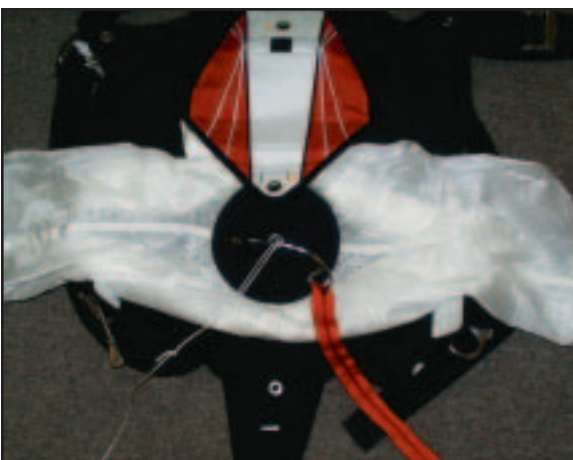


Fig. 29

Accordion fold both top and bottom halves of the pilot chute canopy as shown, making one long tube. Thread pull up cord through flap #3 [Fig. 29]

# PACKING THE RESERVE CONTAINER



Fig. 30

Fold reserve canopy fabric around the back and under flap #3 as shown. Draw #3 closing flap to #2 reserve pilot chute. Remove and replace temporary pin. [Fig. 30]

*Helpful Hint: Remember to remove the temporary pin once the grommets are touching. With adequate pressure to contain the pilot chute, the temporary pin can be removed and repositioned to the #3 closing flap.*



Fig. 31

Once #3 flap is pinned, force the pilot chute down into the freebag. Ensure that the reserve pilot chute coils are all in line. [Fig. 31]

*Helpful Hint: Placing your foot on the #3 closing flap while pulling up on the #4 and #5 side flaps works the canopy into the corners and away from the closing loop. This is important for bulk distribution and proper pilot chute seating and should be repeated often. Main riser covers may be used after reserve side flaps are closed.*



Fig. 32

Thread the pull up cord through both #4 and #5 closing flaps. While using the leverage bar draw #4 and #5 grommets towards the center. Do not remove temporary pin yet. [Fig. 32]

**Important:** Do not force grommets into center. Work gradually using the helpful hint technique

*Helpful Hint: While pulling both side flaps toward the center, firmly slap the #5 reserve side wall seam. This method will gradually move the grommet closer to the center without damaging the container. Working both side flaps together will also help keep the reserve container symmetrical.*

# PACKING THE RESERVE CONTAINER



Fig. 33

Once the #4 and #5 side flap grommets are drawn towards the center over the closing loop, unthread the #5 flap. Keep pressure on the #4 flap and once again reposition the temporary pin onto the #4 closing flap. After closing flap #4, close flap #5. Remove and reposition the temporary pin. [Fig. 33]

Note: At this point, very little loop should be able to be pulled up with maximum effort.

If you are installing an RSL, see the RSL assembly section in this manual at this time.

Check to ensure that the #6 flap passes under the Type 4 retaining strap on the reserve pin cover flap before proceeding.

Stow the yoke assembly side tucktabs.

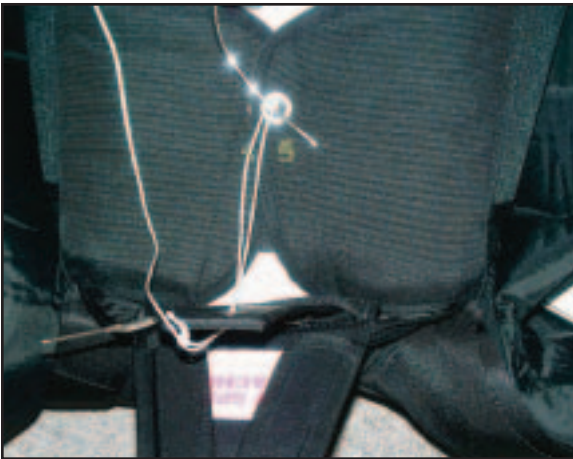


Fig. 34

Once #5 flap is pinned, work the pilot chute down into the freebag. Thread the pull up cord through the #6 closing flap. [Fig. 34]

*Helpful Hint: Placing your foot on the #4 and #5 closing flaps while pulling up on the main riser covers, works the canopy into the corners and away from the closing loop. These repeated procedures will help make the reserve pin cover have a smoother, flatter look. Any bowing could allow air to untuck the flap, exposing the reserve pin.*



Fig. 35

While pulling the closing loop up through the #6 closing flap remove the temporary pin. Pin the closing loop with the reserve ripcord pin. [Fig. 35]

*Helpful Hint: If you are having difficulty getting the reserve ripcord pin through the closing loop, re-temporary pin flap #5, then work the container more. Waiting 15+ minutes and repeating past helpful hints will make inserting the reserve ripcord pin easier on the second try.*

# PACKING THE RESERVE CONTAINER



Fig. 36

Before sealing the container, count and inspect ALL tools that were used. [See Fig.1]

Seal reserve pin with 5 lb seal thread. [Fig. 36]

Refer to Poynters Manual for additional information on sealing reserve.

**IMPORTANT:** Do not forget to replace the completed packing data card in the proper pocket, inside the right front shoulder pad.



Fig. 37

Close the reserve pin cover using all three tuck tabs. [Fig.37]





# THE RSL SYSTEM

The Reserve Static Line System (RSL) is optional equipment on the Mirage harness/container. If it is not installed on your Mirage, you do not need to read this section. If you would like to have the RSL installed on your Mirage, you may contact Mirage Systems at the address on the back of this manual. To properly use a system equipped with an RSL, you must be familiar with its assembly, operation and function. You must also receive training from competent instructors prior to using such a system. It is not the intention of this manual to provide such training.

## FUNCTION

The RSL system consists of a lanyard between the left main riser and the reserve ripcord. It is designed to use the mechanical force of the released main risers after a cutaway to pull the reserve ripcord pin. It is not guaranteed to function properly and should not be relied on to activate your reserve.

## OPERATION

The RSL is essentially a passive system. A release lanyard is provided to disconnect the system. Use and operation of the system should be explained by competent instructors.

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## ASSEMBLY OF THE RSL



Fig. 1

Mate 5/8" hook Velcro on the RSL lanyard to the 1" pile Velcro on the back of the left rear reserve riser. [Fig. 1]



Fig. 2

Mate 1/2" x 1 1/2" hook and pile Velcro on the RSL lanyard, forming a fold. [Fig.2]

# ASSEMBLY OF THE RSL

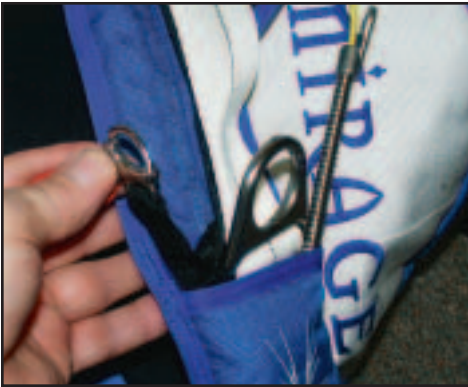


Fig. 3

Insert excess RSL lanyard fold into the space behind the ring cover below the left main harness ring. [Fig. 3]

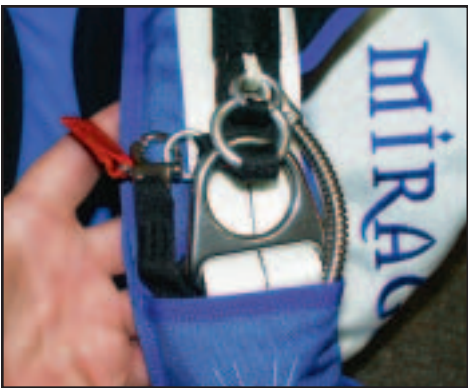


Fig. 4

Attach the snap shackle to the main riser RSL ring and inspect routing. The RSL shackle must not interfere with the operation of the 3-Ring System. [Fig. 4]

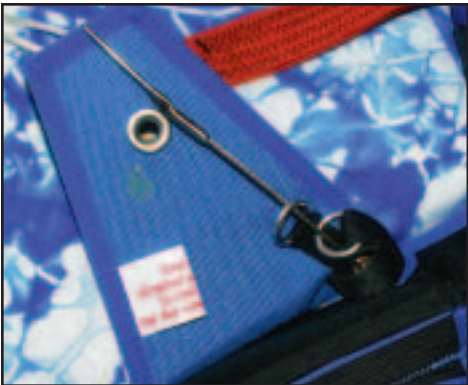


Fig. 5

Prior to closing flap #6, thread reserve ripcord through the RSL rings with the ring on the RSL lanyard between the housing keeper and the RSL retainer ring. [Fig.5],

**IMPORTANT:** Proper configuration of the reserve ripcord through the RSL rings is critical to the proper function of the RSL system!



Fig. 6

After closing flap #6, neatly tuck the excess lanyard under the reserve riser. [Fig. 6]

# OPTIONAL "ΓΑΠΣΥΡΑΠΤΣ"



Fig. 1

Thread elastic through RIGHT legstrap first, leaving no extra webbing past the buckle. [Fig. 1]



Fig. 2

Pass elastic through buckle on center bottom of rig. [Fig. 2]



Fig. 3

Thread elastic through LEFT legstrap buckle, then stow excess inside left legpad. [Fig. 3]

# LUMBAR SUPPORT



Fig. 1

Elastic lumbar support is threaded as shown, starting with the buckle on the right of the bottom backpad channel. [Fig. 1]



Fig. 2

To adjust, snug or loosen at the buckle. [Fig. 2]



Fig. 3

When adjusted, tuck buckle and excess strap into channel. [Fig. 3]

# ASSEMBLY OF THE 3-RING RELEASE SYSTEM



Photo by Steve Utter

Before assembling the 3-Ring release, make sure the risers aren't twisted or reversed. Thread each cable into its housing and mate the handle to the harness. The handle should be positioned as close to the ends of the housings as possible so that little or no cable is exposed.



Fig. 1

With the rings of the riser facing forward, pass the large ring on the end of the riser through the large harness ring from above. Fold it back toward the canopy and risers. [Fig.1]



Fig. 2

Thread the smallest ring through the middle ring in the same way, but make sure it doesn't pass through the large ring. [Fig. 2]

# ASSEMBLY OF THE 3-RING RELEASE SYSTEM



Fig. 3

Bring the white loop over the small ring only and then through the riser grommet so it pokes out the back of the riser. [Fig. 3]

**IMPORTANT:** For the proper leverage reduction, the white loop must only travel over the smallest ring. If the loop passes through the middle ring also, the system may fail.



Fig. 4

Continue threading the white loop through the end fitting on the cable housing. The flat side of the end fitting should be against the riser. [Fig. 4]

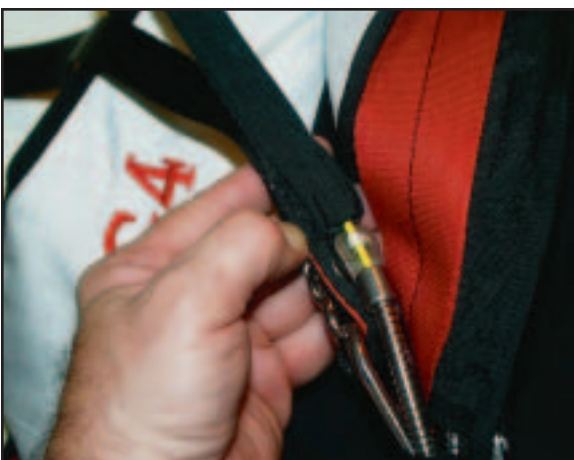


Fig. 5

Thread the yellow cable through the white loop, making sure the loop isn't twisted. Be careful with the cable so you don't bend it too sharply or kink it. Insert the free end in the channel on the back of the riser. There should be plenty of excess cable with the cutaway handle securely mated to the harness. [Fig.5]

Repeat the above steps with the other riser.

# THE 3-RING RELEASE SYSTEM

## PRE-JUMP INSPECTION FOR THE 3-RING RELEASE

Before jumping the Mirage, check the 3-Ring release system for the following:

- 1) Each ring passes through only one other ring.
- 2) The white locking loop is made of flat 2A sheathing and passes through only the small ring.
- 3) The white loop passes through the end fitting on the cable housing without twisting.
- 4) Nothing passes through the white loop except the yellow release cable.
- 5) The release handle is securely mated to the harness, and little or no cable is visible between the handle and the cable housings.
- 6) There should be a minimum of 5.5" up to a maximum of 7" of cable past the cable housing end.



The 3 views at right show a correctly built 3-Ring riser attached to the harness ring and put under moderate tension. Note the following:

- 1) The rings overlap each other and maintain metal-to-metal contact between each other.
- 2) The rings are aligned in parallel planes.
- 3) The smallest ring is not pulled snug against the grommet and the white loop is long enough to give it some play.
- 4) The white locking loop goes straight down through the center of the riser grommet on its way to the cable housing end fitting; it does not extend past the edge of the grommet hole and then turn back upwards towards the hole.



**IMPORTANT:** If your riser configuration does not match these illustrations, the 3-Ring release might not function correctly. You should contact a rigger or Mirage Systems before jumping.

# ASSEMBLY OF CENTERLINE COLLAPSIBLE PILOT CHUTE



Fig. 1

Set out your main canopy, main bag and new pilot chute. Find the bridle attachment point on your main canopy [Fig. 1].

Remove the #4 Rapid link from the bridle. Be sure to unscrew the barrel fully, that will help you installing it later.



Fig. 2

Feed the end of the bridle through the grommet in the top of the main bag from the outside in. Fold the bridle if necessary and push the two short loops of fabric (one covered in yellow Kevlar tape) through the grommet as well. About 1" (2.5 cm) should protrude through to the inside of the main bag [Fig. 2]

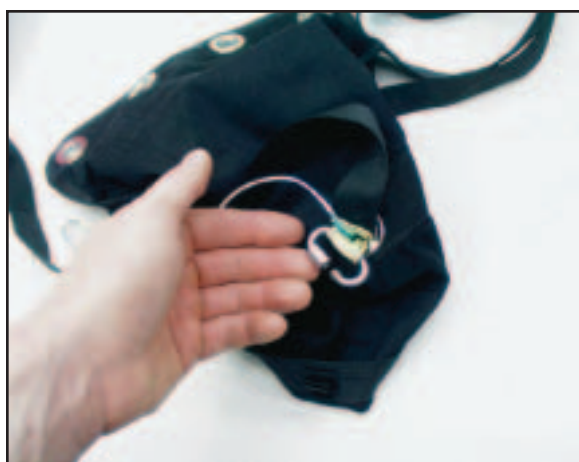


Fig. 3

Guide the open #4 Rapid link through the fabric loop which is backed with yellow Kevlar tape [Fig. 3]



# ASSEMBLY OF CENTERLINE COLLAPSIBLE PILOT CHUTE

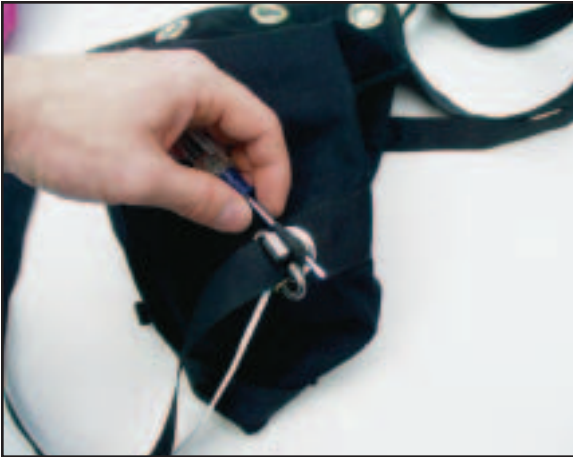


Fig. 4

Pass the white collapse line and the bridle through the Rapid link by passing them through the open gate of the link. At this point, a small screwdriver or other similar tool can be used to straighten out the second fabric loop [Fig. 4]

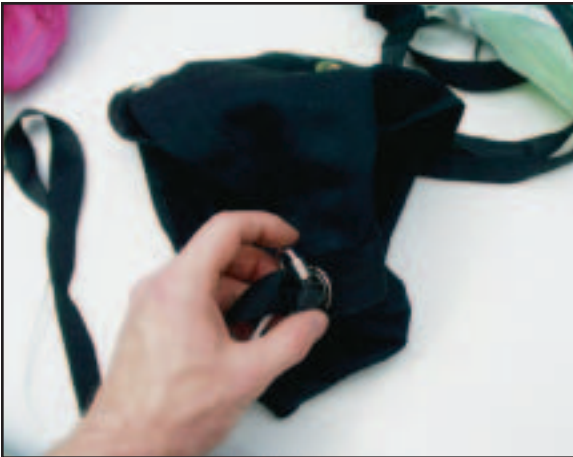


Fig. 5

Feed the male end of the connector link through the gap in the second loop until it protrudes through the loop, then thread the barrel over the male end, closing the link. Tighten lightly with a wrench [Fig. 5]



Fig. 6

Now pull the loop material over the barrel so the barrel is covered by the black loop. The collapse line should exit the bridle between Kevlar and the link should lie as shown [Fig. 6]

# ASSEMBLY OF CENTERLINE COLLAPSIBLE PILOT CHUTE



Fig. 7

Pass the large loop at the end of the bridle through the canopy bridle attachment loop, then pass the entire assembly, starting with the pilot chute handle through the loop in the bridle. [Fig. 7]

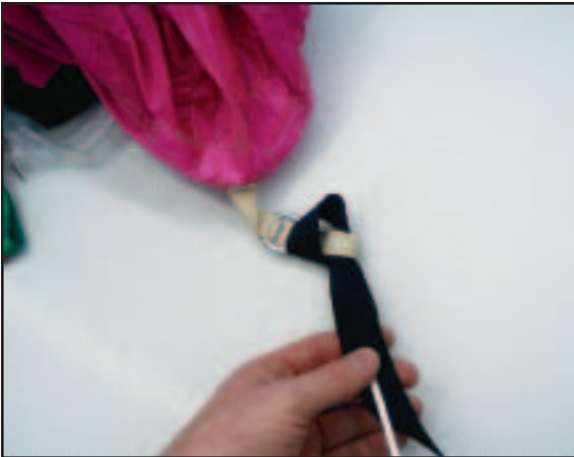


Fig. 8

Cinch tight [Fig. 8]

If these instructions are at all unclear or you have any questions, CONSULT A RIGGER.



Fig. 9

**IMPORTANT:** In order for the collapsing pilot chute to work properly, it must be cocked before every jump. Failure to cock the pilot chute may result in a major malfunction. To cock the pilot chute, pull the pilot chute handle while holding the bridle or stepping on the packed main bag, in order to extract the collapse line from the bridle. When it is safe to use, the bridle will be colored in the window near the pin, not white. Check that the collapse line shows color during a pin check prior to every jump. If in doubt ASK A RIGGER.

# ASSEMBLY OF STANDARD PILOT CHUTE



Fig. 1

Feed the large loop of the bridle through the grommet in the top of the main bag from the outside in. [Fig. 1]



Fig. 2

Pass the large loop at the end of the bridle through the canopy bridle attachment loop, then pass the entire assembly, starting with the pilot chute handle through the large loop in the bridle. [Fig. 2]

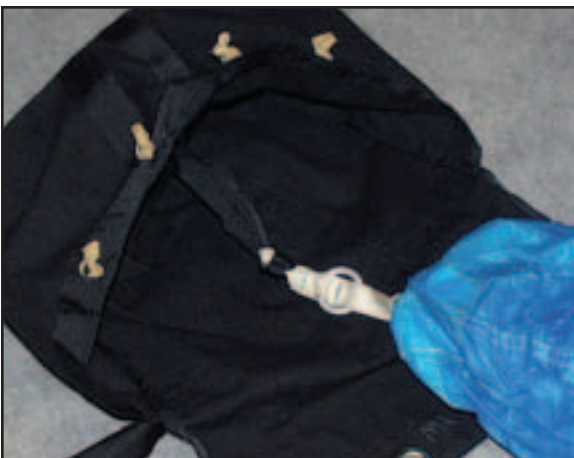


Fig. 3

Cinch tight. [Fig. 3]

# PACKING THE MAIN CONTAINER



Fig. 1

The Mirage container system is compatible with practically any ram-air main parachute that will fit into the container. Instructions for folding the main canopy must be obtained from the manufacturer's instruction manual for each canopy. Fold the canopy and pack it into the Mirage deployment bag according to those instructions. Once you have placed the canopy into the main deployment bag, begin stowing the suspension lines. Start with the center split locking stow and work towards the outside. Stows should not exceed 2" (5 cm). [Fig. 1]



Fig. 2

After making the five locking stows, begin stowing the lines on the center stows. [Fig. 2] Leave approximately 12-15 inches of suspension line unstowed. This will help with straighter openings. [Fig. 3]



Fig. 3

*Helpful Hint: Start your lines stows about 2.5 inches long and gradually make them smaller after each row. This helps prevent each line stow from looping over the row before it and causing a malfunction during deployment.*



Fig. 4

Lift the bag over the container, making sure that the bag remains straight. Stow the risers alongside the reserve container. Toggles should lie against the reserve container. [Fig. 4]

*Helpful Hint: Offsetting the risers side-by-side will reduce bulk in the riser tray and will give the container side a smoother look.*

# PACKING THE MAIN CONTAINER



Fig. 5

Lay the secondary riser covers over the risers. Make sure that they are tucked into the slot in the riser channel between the backpad and the reserve container. [Fig. 5]

*Helpful Hint: The secondary riser covers are made of a material that will take a shape after use. For the rig to look its best, ensure proper packing of these covers. A little extra effort will insure the proper shaping of the secondary riser covers, which should not be visible once the main riser covers are packed.*



Fig. 6

Fold back the main container flaps. Place the main bag into the main pack tray. Make sure the line stows go to the bottom of the container.

*Helpful Hint: To get the best fit into the main container insert the main bag with lines down first. Then lift up on the centerflap with one hand to open the container and push the top of the bag into place. [Fig 6] Make sure the bag fills the bottom corners. With the bulk evenly distributed the main container will have a smooth appearance.*

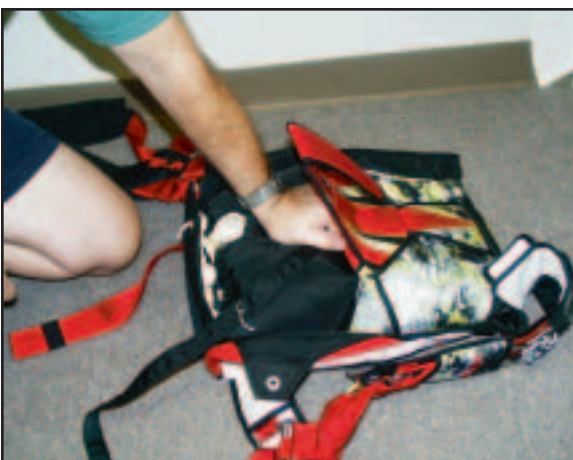


Fig. 7

Push the top of the bag down into place and lay the main bridle out to the right side of the container. [Fig. 7]

Thread the pull-up cord through the closing loop in the #1 flap.

# PACKING THE MAIN CONTAINER



Fig. 8

Close flap #2, being sure the main bridle is routed out from under the right side of the #2 flap. Mate the 1" velcro on the bridle line to the 1" velcro on the main center flap. Lay excess bridle line to the right. [Fig. 8]

*Helpful Hint: Kneel on flap #1 section of pack job to push air out and work bag into corners. Pushing on the bottom #1 flap while pulling on the pull up cord makes this task easier.*



Fig. 9

Close flap #3. [Fig. 9]

*Helpful Hint: Closing one side flap at a time may push the bag and canopy out the other side. To help with main container symmetry, keep the main deployment bag centered or a little to the left, inside the main pack tray.*

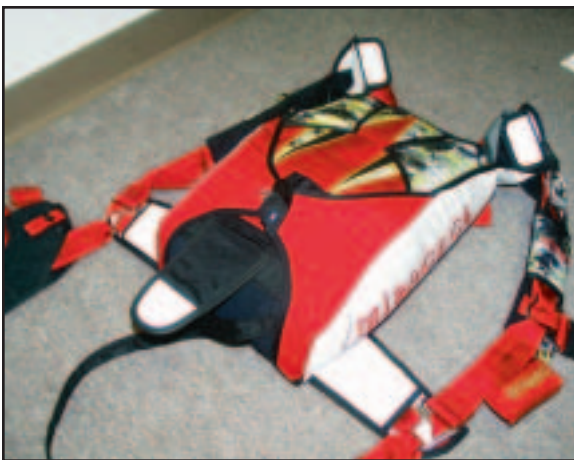


Fig. 10

Close Flap #4, and insert closing pin into loop. Check centerline collapsible bridle window to insure that the main pilot chute is cocked. The centerline should show a colored mark, not solid white. Stow the bridle under the right main side (#4) flap from near the closing pin down to bottom of the container. [Fig. 10]

# PROPER BRIDLE ROUTING FOR MAIN CONTAINER

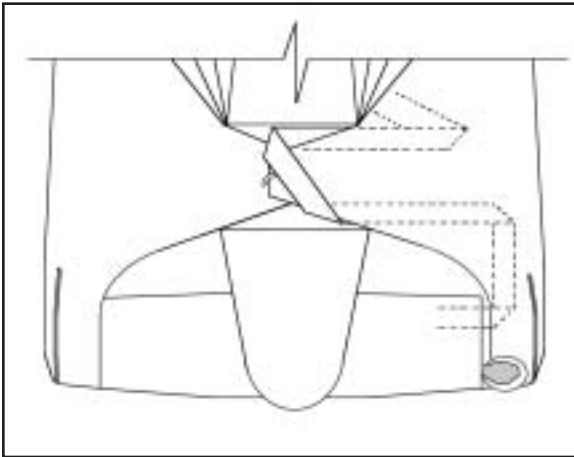
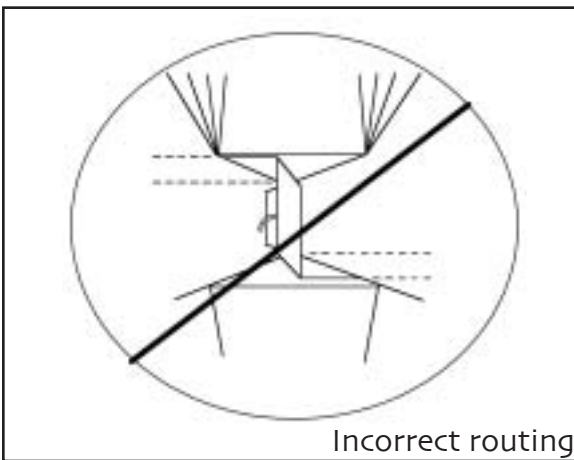


Fig. 1

Proper routing of the main bridle for standard right-handed main deployment [Fig. 1]. Note that the bridle passes from the right of the container, to the pin, and back out to the right. It does not cross over the #2 flap.



Incorrect routing

Fig. 2

**IMPORTANT:** Do not cross the main bridle from left side to right side of the main pin cover flap, as this may cause a slow deployment or a main pilot chute in tow [Fig. 2]. The bridle must be routed on the same side of the main pin cover as the bridle is routed into the main pilot chute pouch.



# PACKING THE MAIN PILOT CHUTE



Fig. 1

There are many ways to fold a main pilot chute. Mirage Systems provides these illustrations to demonstrate one method.



Fig. 2

If using ROL deployment, mate the bridle velcro to the harness velcro to the mouth of the ROL pouch on the back of the leg pad.



Fig. 3

Store excess bridle line on the hand deploy pilot chute and leave approximately 8" (20 cm) of bridle out. Fold the pilot chute in half and proceed to fold as in illustrations. [Fig. 1-5]



Fig. 4



Fig. 5

Insert folded main pilot chute in the spandex pouch. [Fig. 6]

*Helpful Hint: No bridle or main pilot chute material should be exposed. Exposed bridle may result in a premature main container opening and horseshoe malfunction.*



Fig. 6



# USER INSTRUCTIONS



Fig 1

HOW TO PUT THE HARNESS/CONTAINER ON.

When putting on your Mirage, first place your arms through the main lift web. The container should be resting on your shoulders. Next, slip the legstraps on.

Thread the chest strap through the adapter. [Fig.1]

**IMPORTANT:** Make sure the leg straps and chest strap are threaded properly through the friction adapters. If you have any question consult your rigger or instructor.



Fig 2

Next, tighten the chest strap until the harness yoke is parallel over your shoulders. Stow excess webbing in elastic keeper. [Fig. 2]



Fig 3

Next, tighten the legstraps until they are comfortable.

*Helpful Hint: Leaning forward slightly while tightening will provide an even tighter fit. The container tends to slide down the back before the leg straps are tightened. Leaning forward while cinching the leg straps allows the user to move the container further up their back. [Fig. 3]*

# USER INSTRUCTIONS



Fig 4

Stow the excess webbing under the keepers and into the pockets in the legpads. [Fig. 4]



Fig 5

Once you have the leg and chest strap tightened, stow all excess webbing away. Excess webbing can cause an entanglement during deployment or could be grabbed inadvertently. [Fig.5]

Remove the harness/container by reversing this process.

**IMPORTANT:** This manual does not replace proper training and equipment orientation.

# REPLACEMENT PARTS

Components on any device tend to wear out with repeated use. Risers and pilot chutes are limited lifetime components. With repeated use the materials break down, losing their structural integrity. Other parts such as breakaway handles, reserve ripcords, reserve pilot chutes and reserve freebags at times are lost after an emergency procedure. Container size and serial numbers are necessary to ensure that the proper replacement part is ordered. Please check with your dealer on the current replacement part prices.

Fig. 1



If you are ordering replacement risers that are different from what you currently have please give the length (20", 22", 24"), color, webbing type (mini or large), toggle type (Velcro, Velcroless), and hardware type (standard or Stainless steel) [Fig. 1]



Fig. 2

When ordering a main pilot chute different from the original, please provide the following information: What type (standard or centerline collapsible), and what type of handle (several are available). Centerline pilot chutes, freely handles and hackys require color choices. [Fig. 2]

Fig. 3



The standard color for breakaway handles is red. Other colors are available. Embroidery is also available on the handle. Mirage replacement breakaway handles are stock lengths, they must be cut to proper length upon delivery. [Fig. 3]



Fig. 4

Reserve ripcords come in different cable lengths. Rig size and serial numbers are very important when ordering replacement ripcords. Please specify type of handle (standard metal Mirage handle or the soft reserve ripcord handle.) [Fig. 4]



Fig. 5

Reserve freebag and reserve pilot chutes are sometimes lost after the deployment of the reserve container. When replacing these parts, the container size and serial number are critical. [Fig. 5]

# MAINTAINING YOUR MIRAGE

## INTRODUCTION

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

## INSPECTING YOUR MIRAGE

The best approach to maintaining your rig is to periodically spend a few minutes examining every detail on it. This inspection should be done at least every month. If any wear or damage is found, have it repaired immediately by a qualified rigger. Delaying repairs may result in a malfunction.

### PARTICULAR ATTENTION SHOULD BE GIVEN TO THESE AREAS:

**1 Breakaway System.** Refer to the 3-Ring maintenance section (pg.36) in this manual for detailed information on inspecting the canopy releases.

**2 Reserve System.** This includes the reserve ripcord, locking loop, pins, handle, housing, container and associated stitching. You should not attempt any repairs or modifications to any of these items unless you are a master rigger. You can, however, spot little problems before they become major.

**3 Harness.** The harness should be inspected periodically for broken stitching or frayed webbing. Main risers, in particular, are subject to wear. See the 3-Ring maintenance section of this manual. Type 17 mini risers should be replaced every 200-400 jumps depending on wing loading.

**4 Main Container.** Inspect the plastic stiffeners in the container flaps and replace any that are broken. Immediately replace any grommets that are badly deformed or are pulling out of their setting. Replace a worn out spandex pilot chute pouch, which could result in a premature deployment.

**5 Main Pilot Chute.** Check the center line (the length of nylon tape inside the pilot chute that extends from the handle to the base) of the main pilot chute. It must be firmly sewn at each end; there must be no broken stitches or torn fabric. Inspect the seam that joins the pilot chute mesh to the pilot chute fabric. If the mesh is torn or badly frayed, replace the pilot chute. If your Mirage is equipped with a collapsing main pilot chute, refer to the instructions that came with it for maintenance procedures. Pay particular attention to stitching holding the curved main pin to the bridle.

**6 Closing Loop.** The main and reserve containers are held shut with closing loops that are subject to wear. If the main loop wears out and breaks, the main container may open prematurely and a serious malfunction may result. If the reserve loop breaks the reserve will open without further ado. Replace worn loops with a duplicate if wear is noticed.

**CAUTION: Never jump a Mirage with a frayed main or reserve closing loop.**

# MAINTAINING YOUR MIRAGE

YOUR MIRAGE IS MANUFACTURED MOSTLY FROM NYLON. NYLON IS VERY DURABLE, BUT IS SUSCEPTIBLE TO DAMAGE FROM SEVERAL SOURCES:

**1 Sunlight.** The ultraviolet rays in sunlight quickly and permanently weaken nylon. Keep your Mirage out of direct sunlight as much as possible.

**2 Acids.** Nylon is also damaged by acids. Keep your Mirage away from hangar floors, dirty car trunks and similar areas where acids may be found. If such contamination does occur, immediately and thoroughly wash the rig with plenty of warm soapy water. Until a rig can be washed, baking soda will quickly neutralize most acids. If acid damage occurs or is suspected, a rigger should thoroughly inspect your Mirage. When not in use, your Mirage should be stored in an appropriate storage bag.

**3 Oils and Grease.** Most petroleum compounds do not weaken nylon; they simply stain it. Such stains should be promptly removed by a rigger using the proper petroleum solvent. Dry cleaning fluid works well.

**4 Water.** Water will not structurally damage your Mirage, but prolonged agitation in clear water weakens webbing or may cause some fabric and tape colors to run. Salt water may damage nylon and rust hardware if not promptly and thoroughly washed off with plenty of fresh water. Your rig will maintain its new appearance longer if it is kept dry. When washing your rig, be gentle with it. Use Woolite or similar mild soap and warm water.

**5 Soil.** Soil may damage your Mirage. Brush off the soil after it has dried and gently wash with warm soapy water. Be sure that the soil is not in the housings, snaps, 3-Ring release or reserve ripcord pins or loops. Consult a rigger if your rig is heavily soiled.

**6 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.

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

Mirage Systems suggests having the container washed every 500 jumps to remove any sand particles. Sand has sharp edges and accelerates wear.

**Remember:** A well maintained container is a safer container.

# REQUIRED PERIODIC MAINTENANCE FOR THE 3-RING RELEASE

The 3-ring release has been in use for many years with excellent results. However, it requires periodic maintenance and inspection to ensure proper operation. Generally, it is NOT recommended that the risers be attached to the harness when new and “forgotten”. Like all skydiving gear, the 3-ring release should be carefully inspected and operated on a regular basis.

**The following procedures should be done at least every month**, and especially when returning the rig to service after a layoff, such as off-season. Immediate inspection is required if it has been subjected to some abuse such as a drag across the runway, a water landing or exposure to a lot of dirt or sand. It is important to maintain the system even more frequently in humid, muddy or freezing conditions. If the Mirage becomes immersed in mud or muddy water clean the release system with a mild solution of soap and water. Dry all components thoroughly. Any rusted components must be replaced.

- 1. Every month operate the 3-ring release system on the ground.** Extract the cable completely from the housings and disconnect the risers.
- 2. Inspect For Wear.** While the system is disassembled, closely inspect it for wear. Check the white locking loops (the ones that pass over the smallest ring and through the grommet) to be sure they are not frayed.
- 3. Check.** Check the touch-fastener fabric on the cutaway handle and main lift web to be sure it is clean and adequately holds the handle.
- 4. Cable ends.** 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 hanging up in the loop. Check the entire cable on both sides for burrs, nicks or any irregularities, paying particular attention to the portions of the cables that actually pass through the locking loops. Consult a rigger if any problems are found.
- 5. Cables.** Clean and lubricate the release cables with silicone spray. Spray some silicone on a paper towel and firmly wipe the cables a few times. A thin, invisible film of lubricant should remain.
- 6. Stitching.** Check the stitching on the risers, and the stitching holding the large rings to the harness.
- 7. Cable Housing Stretch.** Check the cable housings for solid hand-tacking and proper stretch. Pull the housings from the free end and expect 1-2 inches of movement. The bottom ends of the housings, under the right chest strap, should be secure in their pockets and not able to be pulled down more than a half inch.
- 8. Risers.** Take each riser and vigorously twist and flex the webbing at the bottom of the risers, where the two release rings are attached. This is to remove any set or deformation of the webbing. Flex the white locking loop. Check the back of the risers where the webbing meets the grommet to be sure the webbing is not pulling out from the grommet. Replace risers if this is occurring. Inspect the hard housing channel entrance hole. If the housing can be pulled through the opening, the riser should be replaced.
- 9. Cable Housings.** Check the cable housings for dents or obstructions using the release cables as probes.
- 10. End Fittings.** Inspect the end fittings on the cable housings. Look for nicks or sharp edges on the top surface. Ensure the fittings are attached firmly to the housings.



# MIRAGE G4 HARNESS/CONTAINER SYSTEM

# G4



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