

PREPARING THE PLATFORM

5-17. Prepare the Combat Expendable Platform as shown in Figure 5-16.

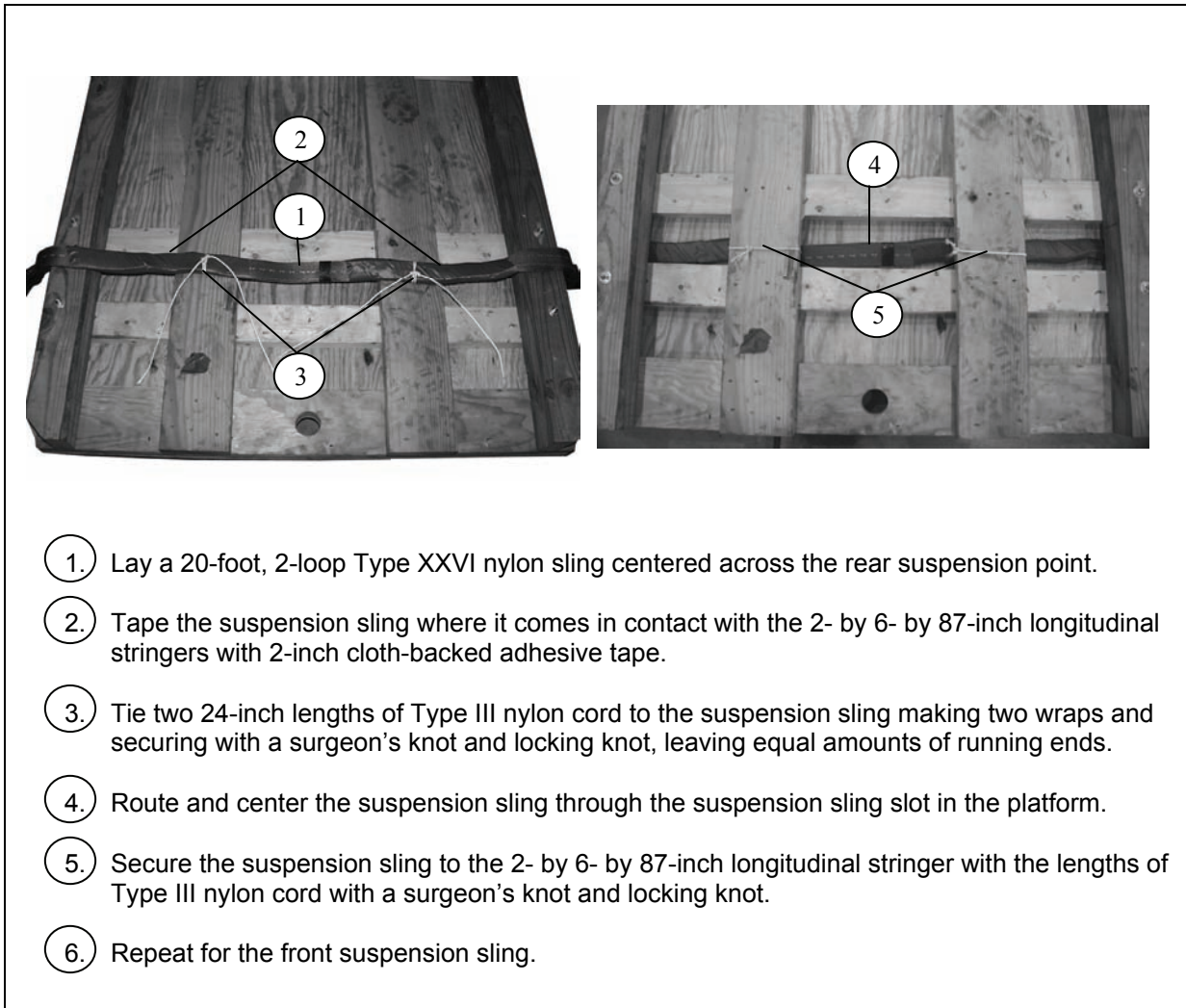
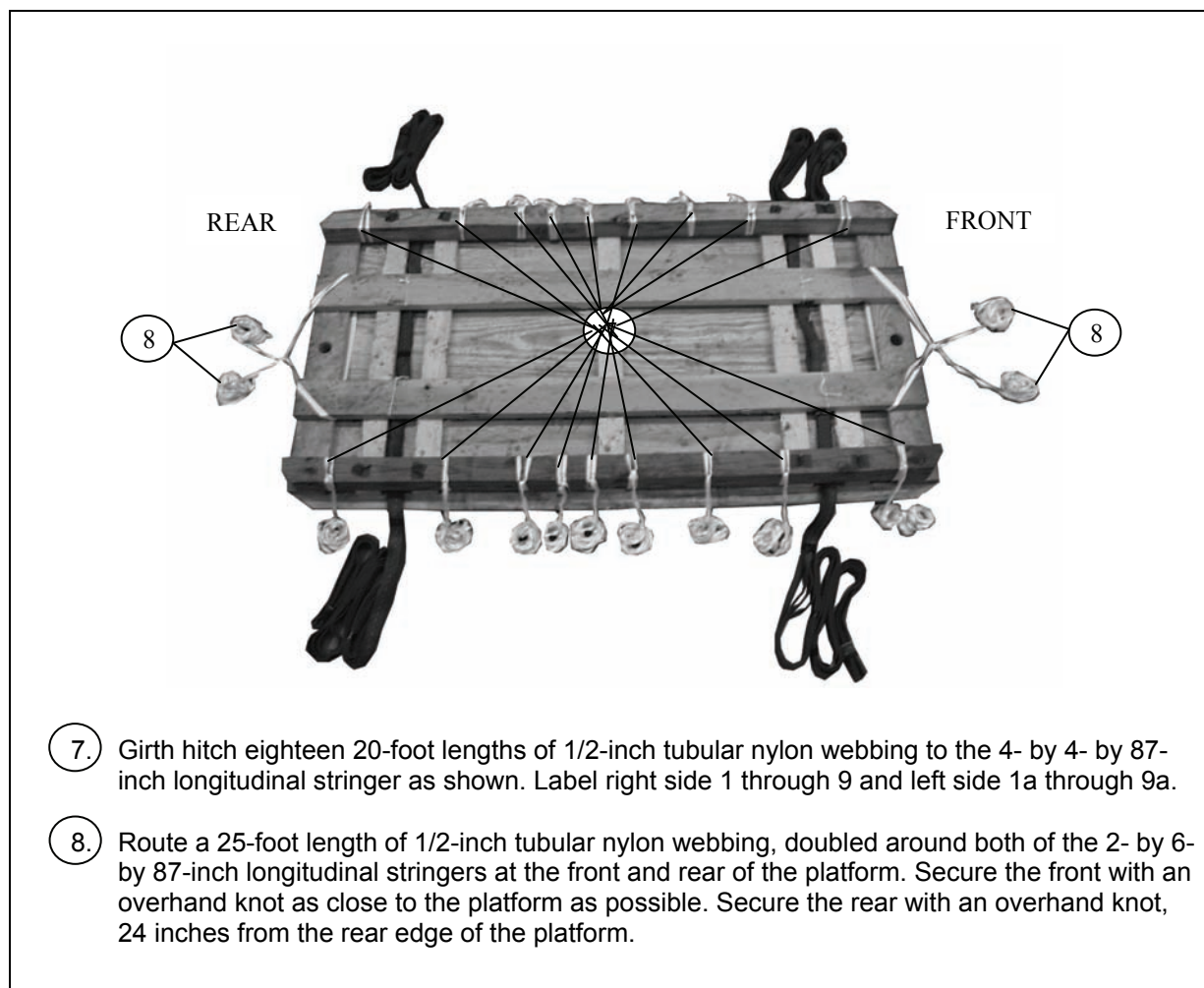


Figure 5-16. Platform Prepared



- 7. Girth hitch eighteen 20-foot lengths of 1/2-inch tubular nylon webbing to the 4- by 4- by 87-inch longitudinal stringer as shown. Label right side 1 through 9 and left side 1a through 9a.
- 8. Route a 25-foot length of 1/2-inch tubular nylon webbing, doubled around both of the 2- by 6- by 87-inch longitudinal stringers at the front and rear of the platform. Secure the front with an overhand knot as close to the platform as possible. Secure the rear with an overhand knot, 24 inches from the rear edge of the platform.

Figure 5-16. Platform Prepared (continued)

PREPARING AND POSITIONING HONEYCOMB

5-18. Prepare and position the honeycomb as shown in Figure 5-17.

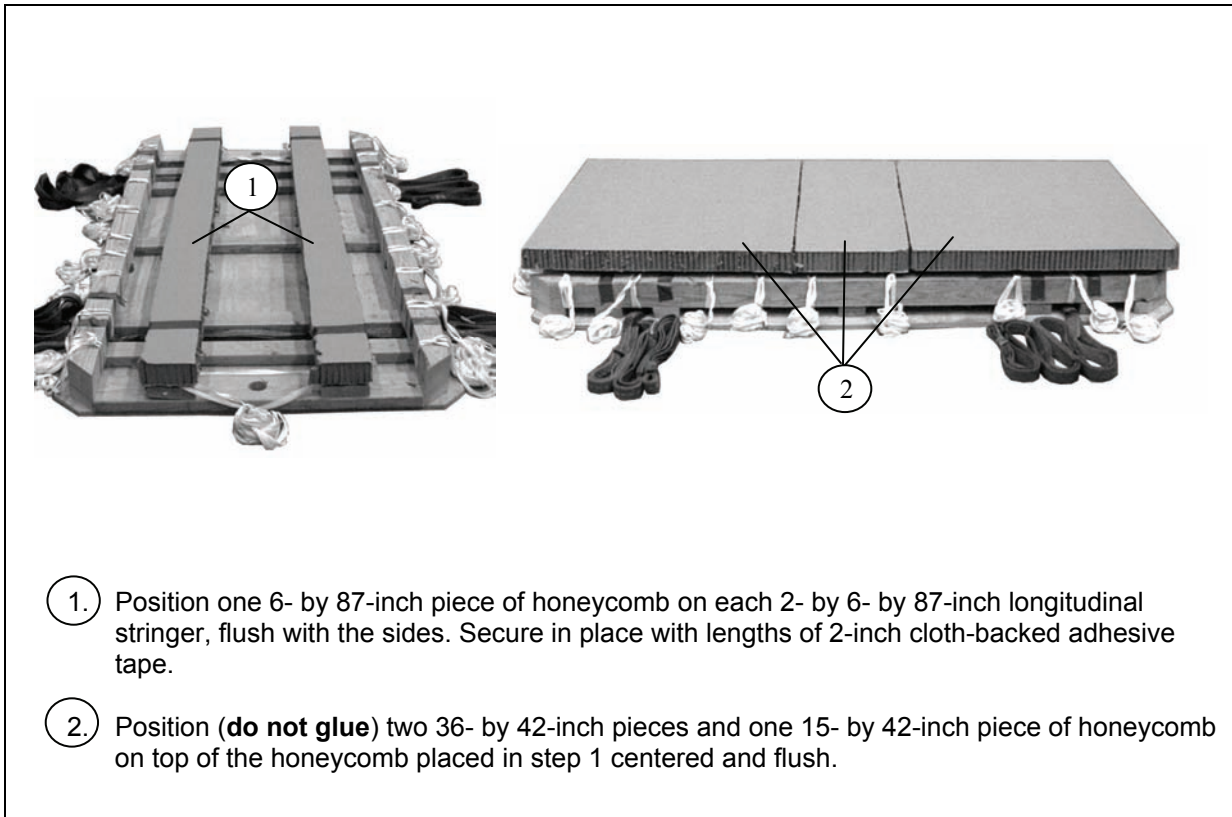
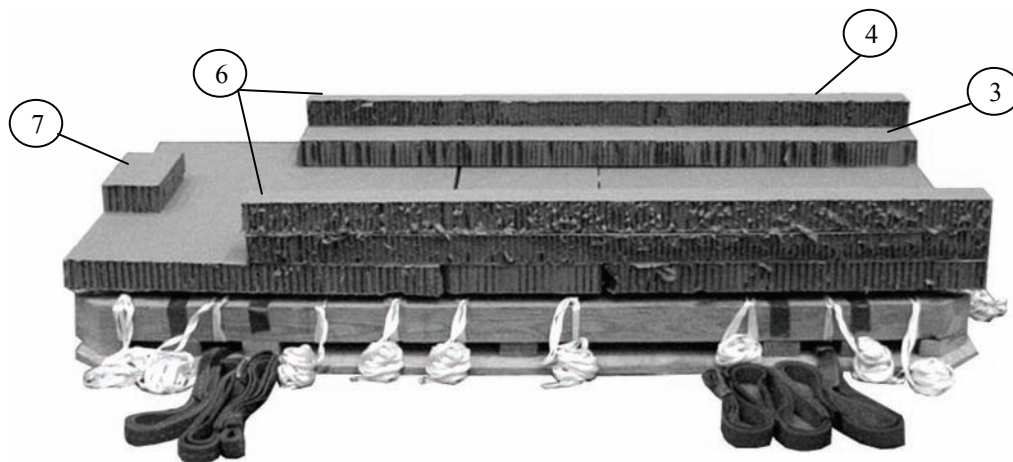


Figure 5-17. Honeycomb Positioned



3. Cut a 10- by 70-inch piece of honeycomb for a base.
4. Glue a 40- by 70-inch piece of honeycomb on top of the honeycomb in step 3 flush with one side.
5. Repeat steps 3 and 4 (not shown).
6. Position (**do not glue**) stacks 1 and 2 flush with the front and sides of the honeycomb in Figure 5-16.
7. Cut a 4- by 12 -inch piece of honeycomb. Position (**do not glue**) stack 3 centered and flush with the rear of the honeycomb in Figure 5-16.

Note. Stacks 1, 2, and 3 will have to be adjusted to the hull of the ARC.

Figure 5-17. Honeycomb Positioned (continued)

POSITIONING THE ARC

5-19. Position the ARC as shown in Figure 5-18.

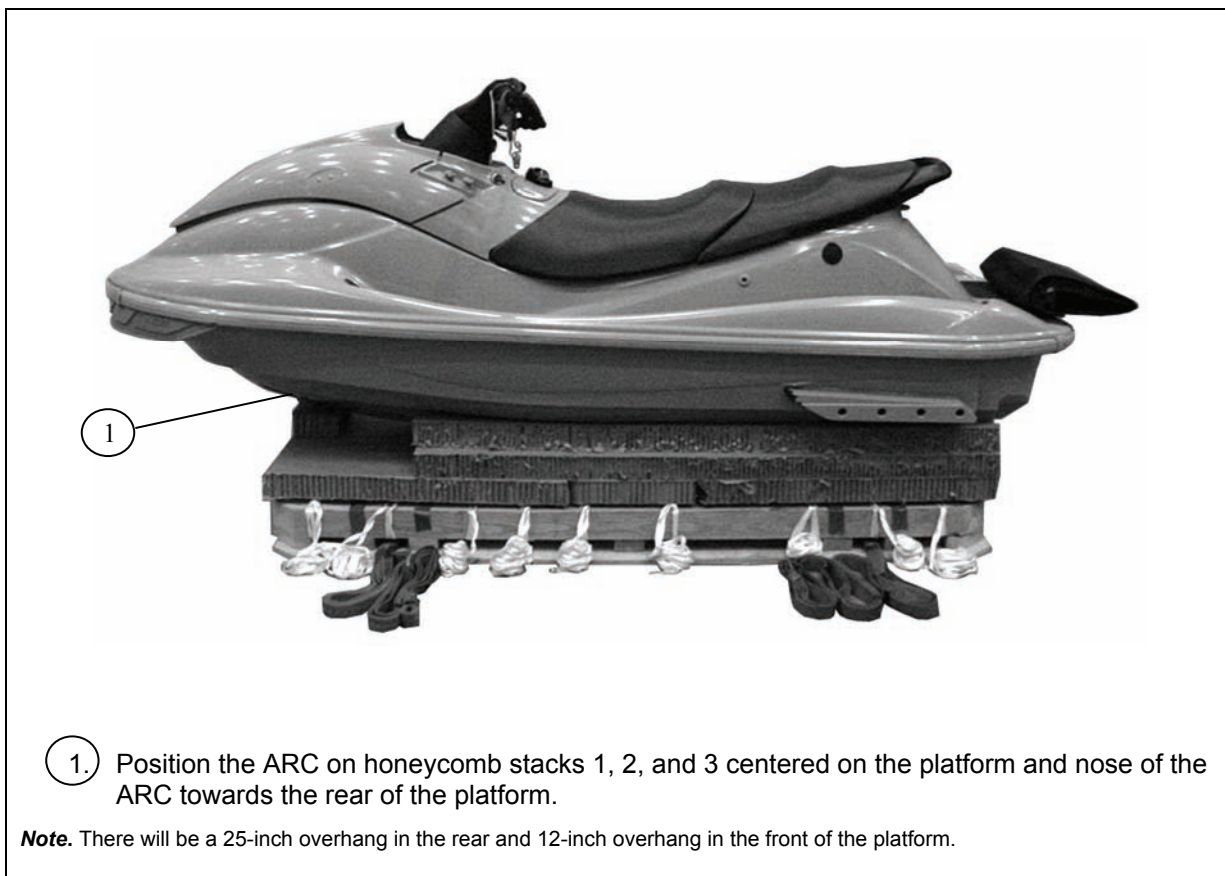


Figure 5-18. ARC Positioned

PREPARING THE ARC

5-20. Ensure the fuel tank is no more than $\frac{3}{4}$ full. Prepare as shown in Figures 5-19 through 5-22.

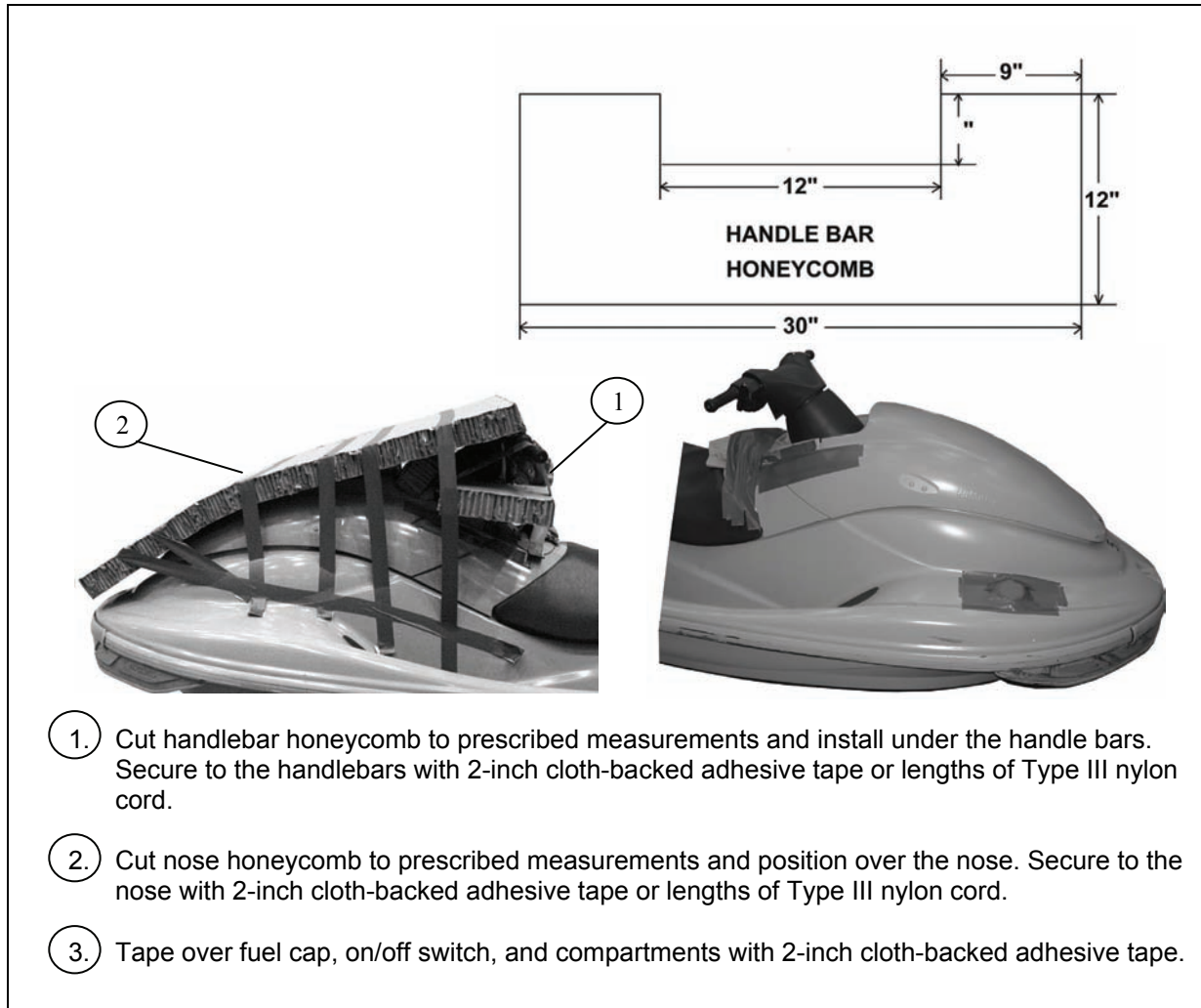
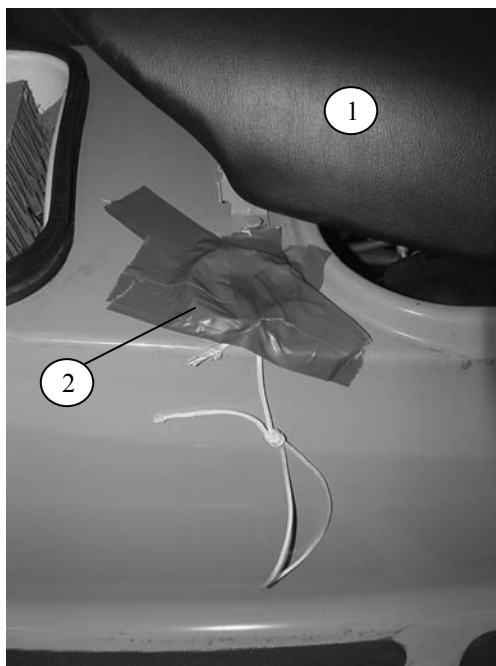


Figure 5-19. Nose and Handlebar Honeycomb Prepared

CAUTION

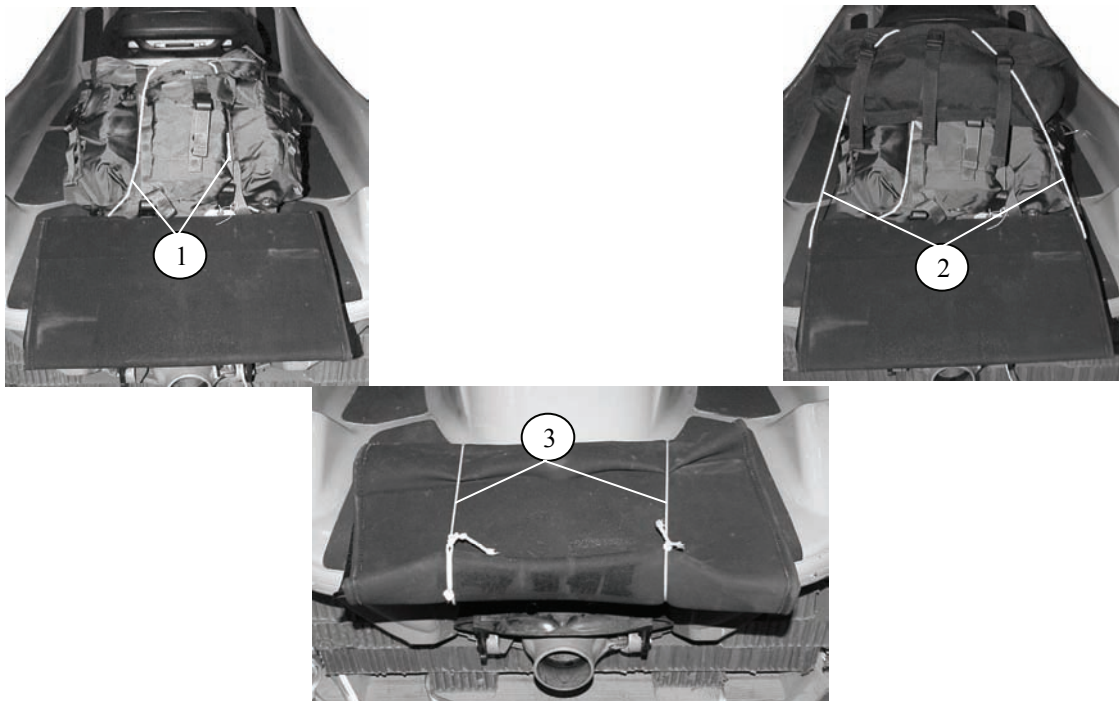
Ensure the drain plugs are securely tightened at the rear of the ARC.



1. Remove the rear section of the ARC seat to expose the intake port.
2. Plug the intake port by taping over the opening with lengths of 2-inch cloth-backed adhesive tape. Secure the tape in place with a retainer band. Attach a 12-inch Type III nylon cord lanyard to the tape. Route the lanyard to the outside of the ARC and tape in place with 2-inch cloth-backed adhesive tape.

Figure 5-20. Intake Port Plugged

Note. If the rucksack and the first aid pack are to be rigged on the ARC use the steps below.



1. Position the rucksack on the ARC behind the seat. Secure the rucksack to tow ring and around the rescue board quick attach assembly with a length of 1/2-inch tubular nylon webbing.
2. Position the first aid pack on top of the rucksack and secure to the same locations with a length of 1/2-inch tubular nylon webbing
3. Secure the protector flap around the rescue board quick attach link with two lengths of Type III nylon cord.

Figure 5-21. Rescue Board Quick Attach Link Installed



Figure 5-22. Rescue Board Installed

LASHING THE ARC

5-21. Lash the ARC to the platform with two 6-foot, eighteen 20-foot and two 25-foot (doubled) lengths of ½-inch tubular nylon webbing as shown in Figure 5-23.

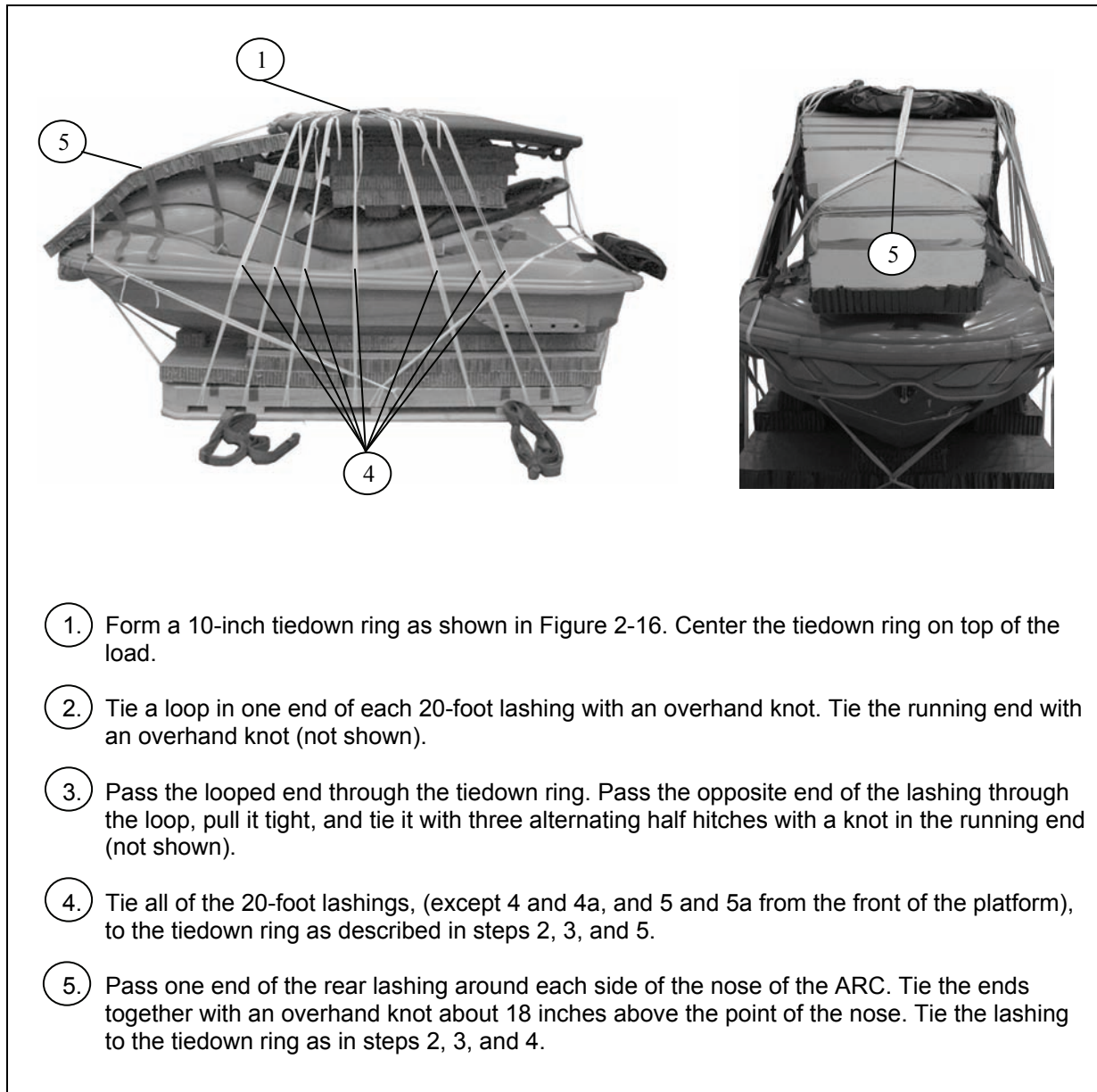
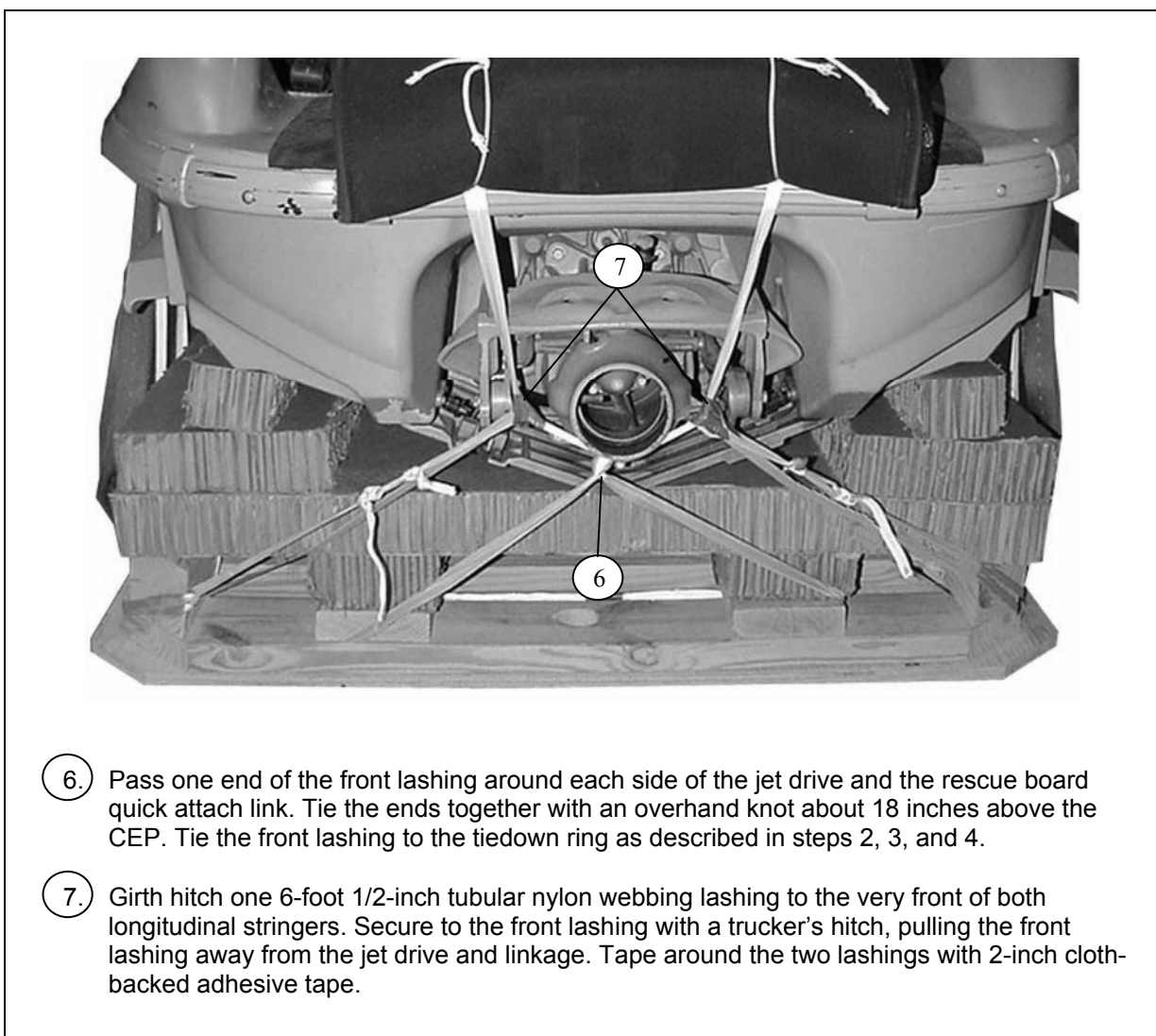


Figure 5-23. ARC Lashed to Platform



6. Pass one end of the front lashing around each side of the jet drive and the rescue board quick attach link. Tie the ends together with an overhand knot about 18 inches above the CEP. Tie the front lashing to the tiedown ring as described in steps 2, 3, and 4.
7. Girth hitch one 6-foot 1/2-inch tubular nylon webbing lashing to the very front of both longitudinal stringers. Secure to the front lashing with a trucker's hitch, pulling the front lashing away from the jet drive and linkage. Tape around the two lashings with 2-inch cloth-backed adhesive tape.

Figure 5-23. ARC Lashed to Platform (continued)

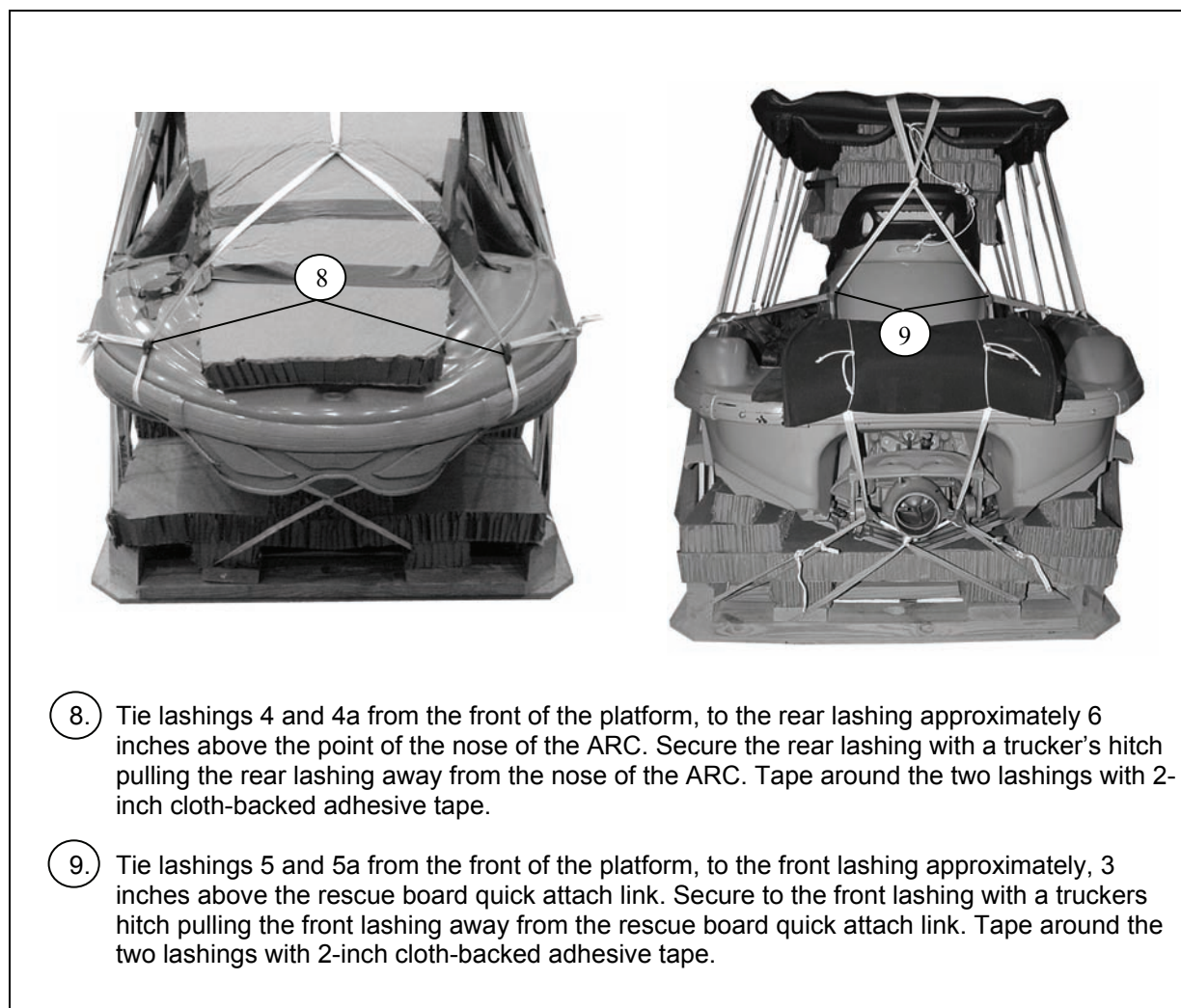


Figure 5-23. ARC Lashed to Platform (continued)

SAFETY TIEING SUSPENSION SLINGS

5-22. Safety tie the suspension slings as shown in Figure 5-24.

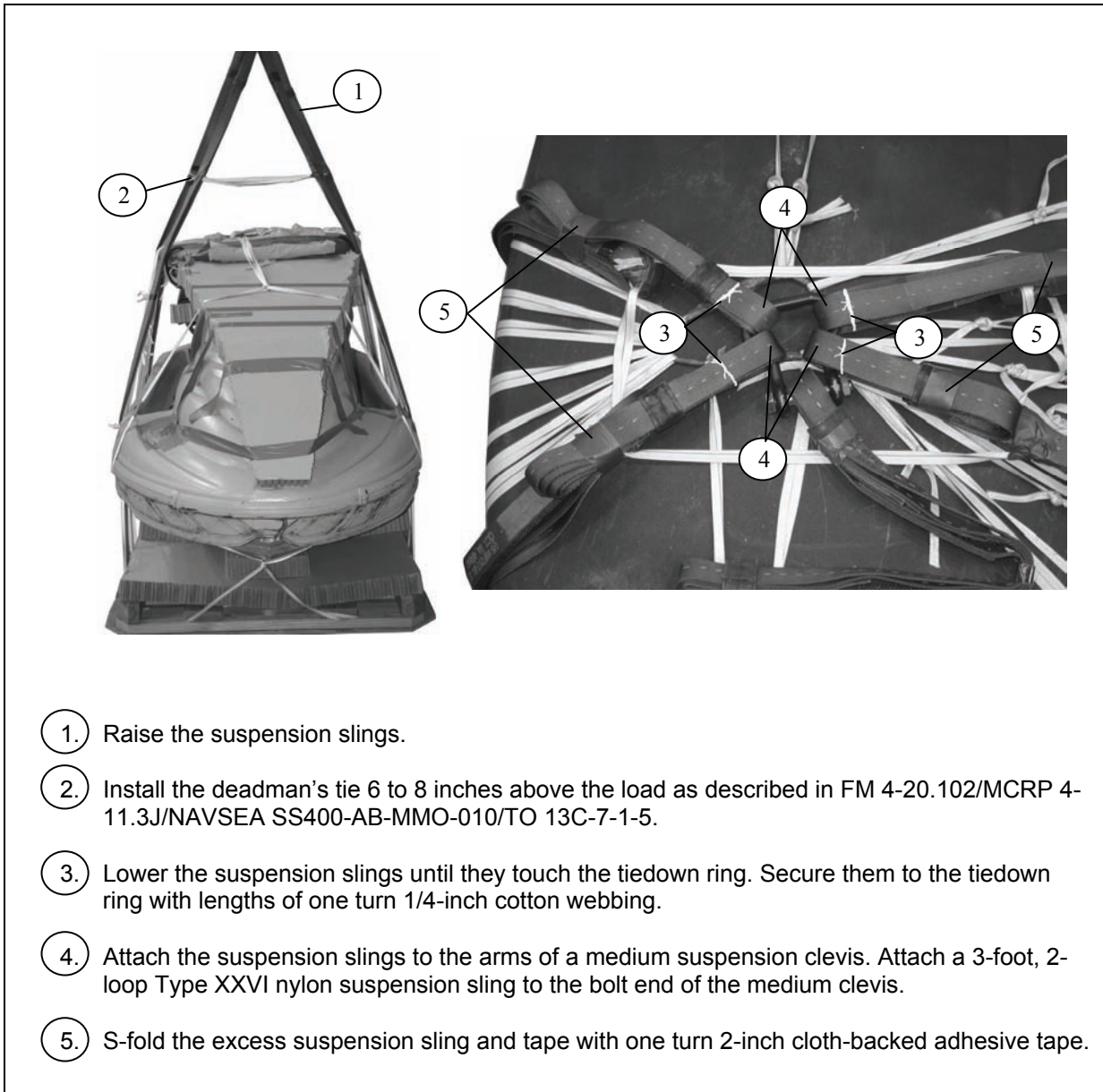


Figure 5-24. Suspension Slings Safety Tied

STOWING CARGO PARACHUTE

5-23. Stow the G-12E cargo parachute as shown in Figure 5-25.

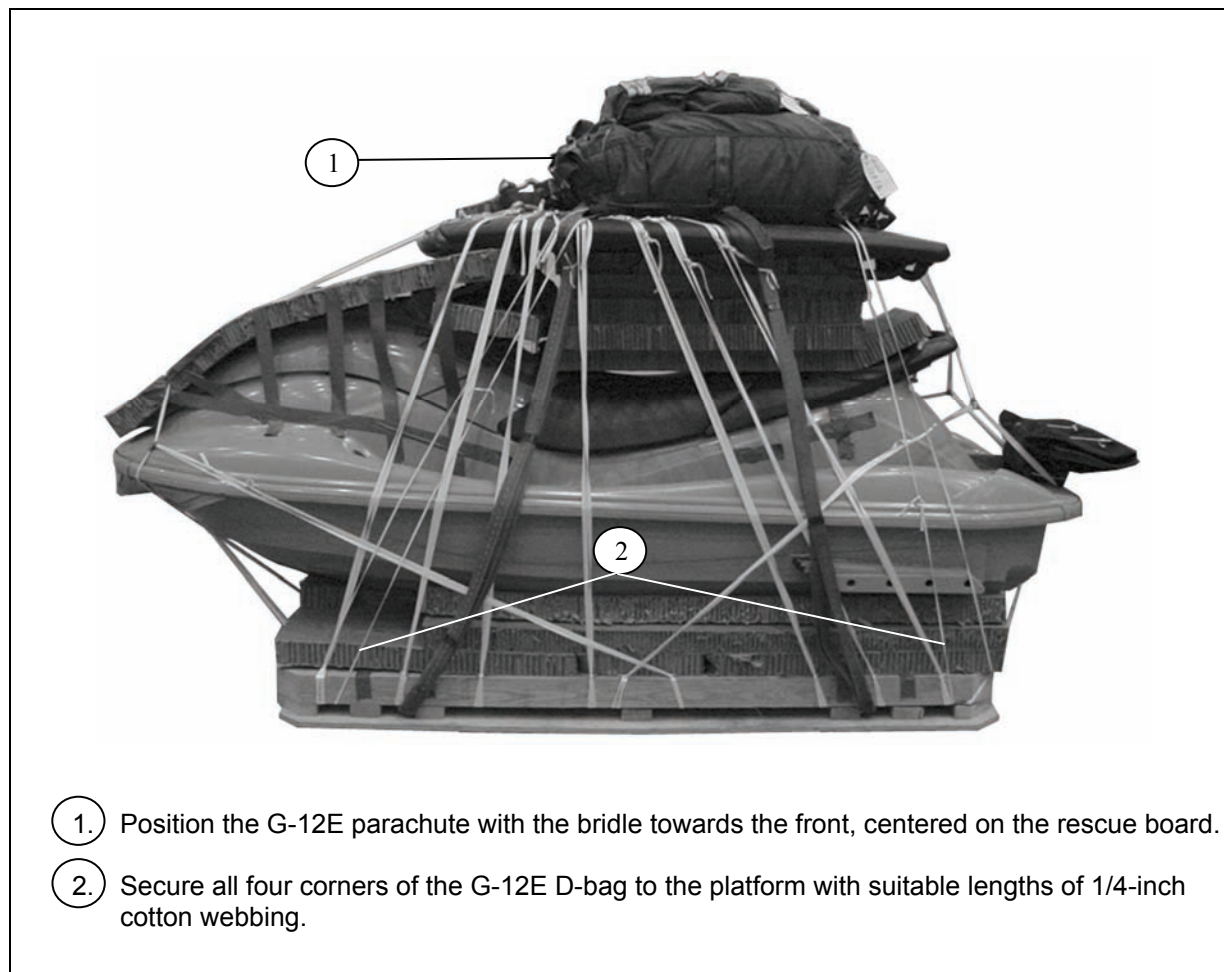


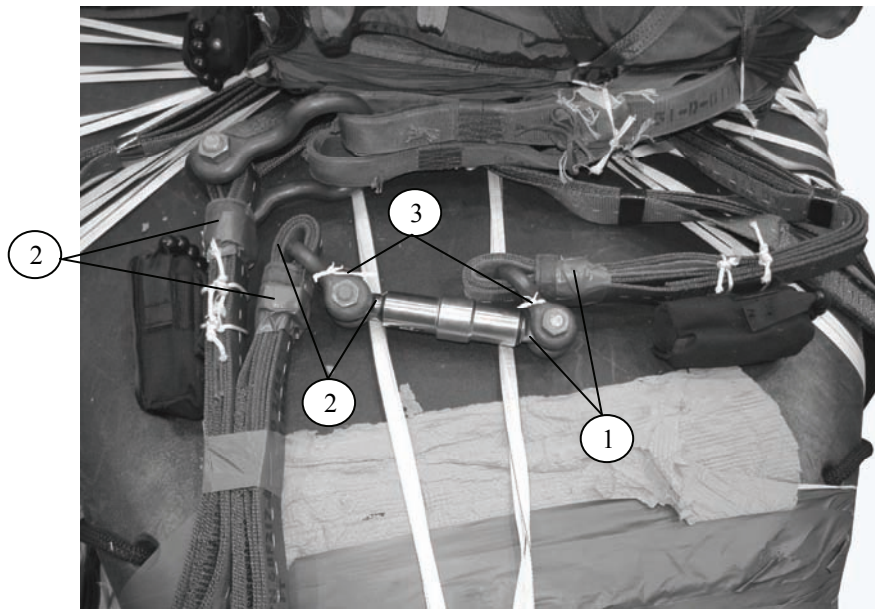
Figure 5-25. Cargo Parachute Stowed

INSTALLING THE AUTOMATIC CARGO PARACHUTE RELEASE

5-24. Install the cargo parachute hydraulic release as shown in Figure 5-26.

WARNING

The automatic cargo parachute release must be pre-drop tested according to the manufacturer's instructions prior to installation on the airdrop load.



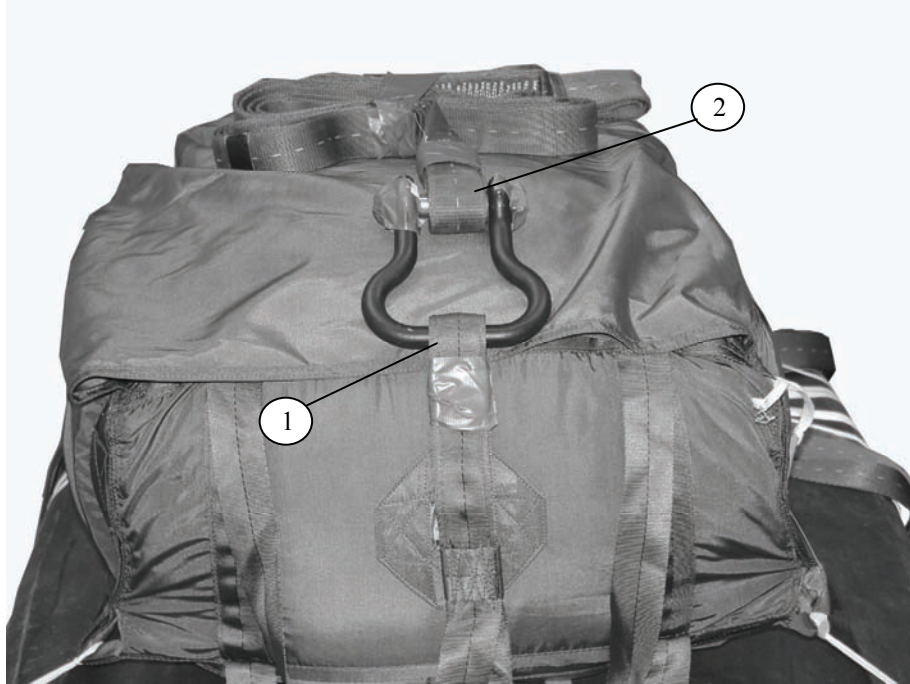
1. Attach the running end of the 3-foot, 2-loop Type XXVI nylon suspension sling to the bottom release fitting shackle (small portion) with a suspension clevis. Tape the buffer with one turn 2-inch cloth-backed adhesive tape.
2. Attach one end of a 3-foot, 2-loop Type XXVI nylon webbing riser extension to the main body of the release with a suspension clevis. Attach the running end of the riser extension to the cargo parachute clevis. Tape the buffers with 2-inch cloth-backed adhesive tape.
3. Secure the suspension clevises of the release to a convenient point on the top of the load with suitable lengths of 1/4-inch cotton webbing.
4. Cut and remove the triple transportation tie on the cargo parachute clevis (not shown).

Figure 5-26. Automatic Cargo Parachute Release Installed

STOWING THE EXTRACTION PARACHUTE

5-25. Stow the 15-foot extraction parachute packed in a T-10 deployment bag as shown in Figure 5-27.

Note. For the 15-foot extraction parachute packing procedures, see FM 10-500-77, Chapter 3.



1. Attach a 9-foot, 2-loop Type XXVI nylon webbing extraction line to the bell portion of a medium suspension clevis. Attach the bridle of the G-12E cargo parachute to the bolted end of the medium clevis. Secure the clevis to the riser extension stow bar of the cargo parachute with a length of one turn single $\frac{1}{4}$ -inch cotton webbing.
2. Attach a 36-inch adapter web of a 15-foot extraction parachute packed in a T-10 deployment bag to the bell portion of a medium suspension clevis (not shown). Attach the running end of the 9-foot, 2-loop Type XXVI nylon webbing extraction line to the bolt end of the medium clevis. S-fold and tape the excess extraction line with one turn 2-inch cloth-backed adhesive tape.

Figure 5-27. Extraction Parachute Installed

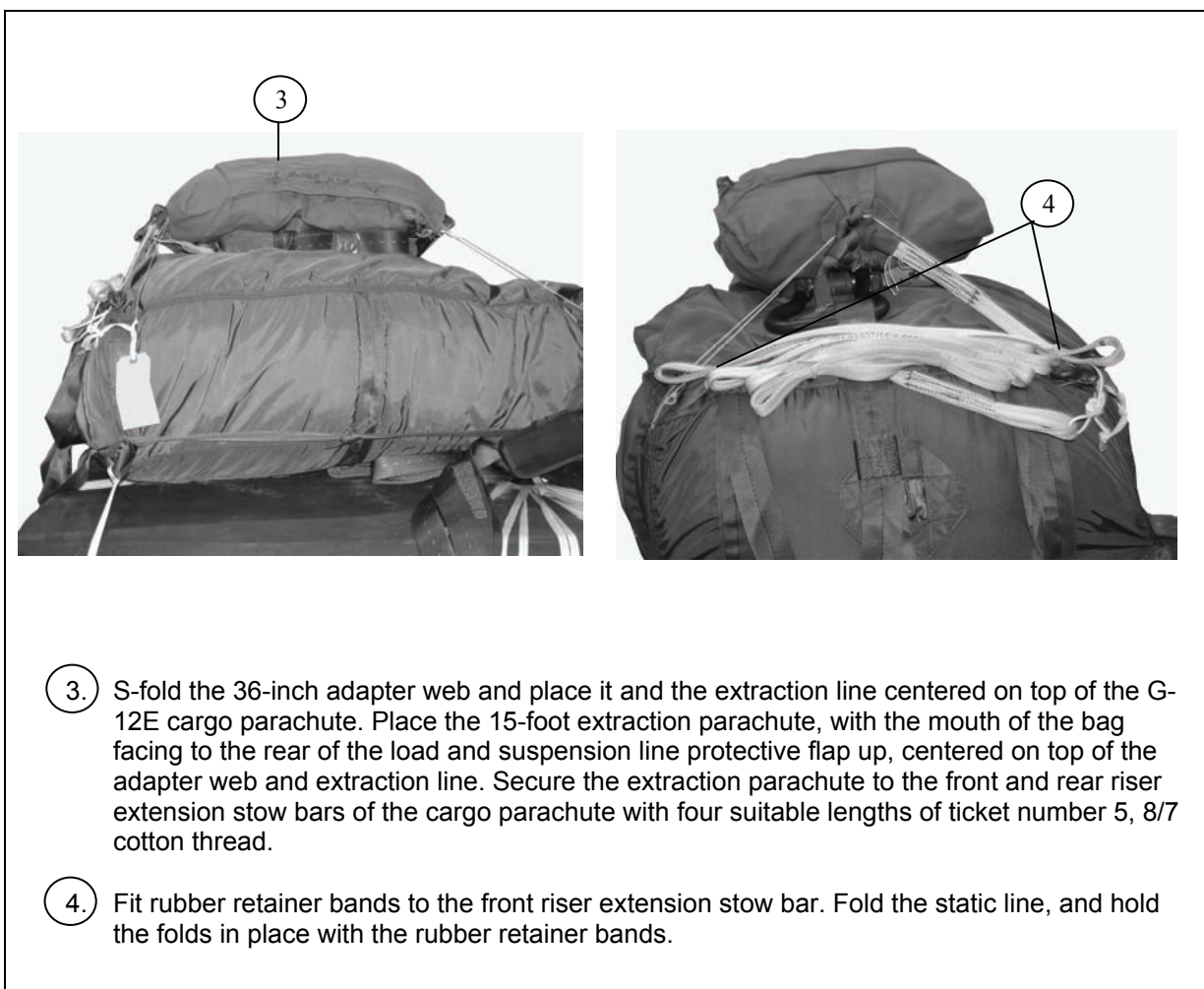


Figure 5-27. Extraction Parachute Installed (continued)

ATTACHING FLOTATION DEVICES FOR TRAINING

5-26. Use flotation devices on training loads to help recover equipment. Install flotation devices as shown in Figure 5-28.

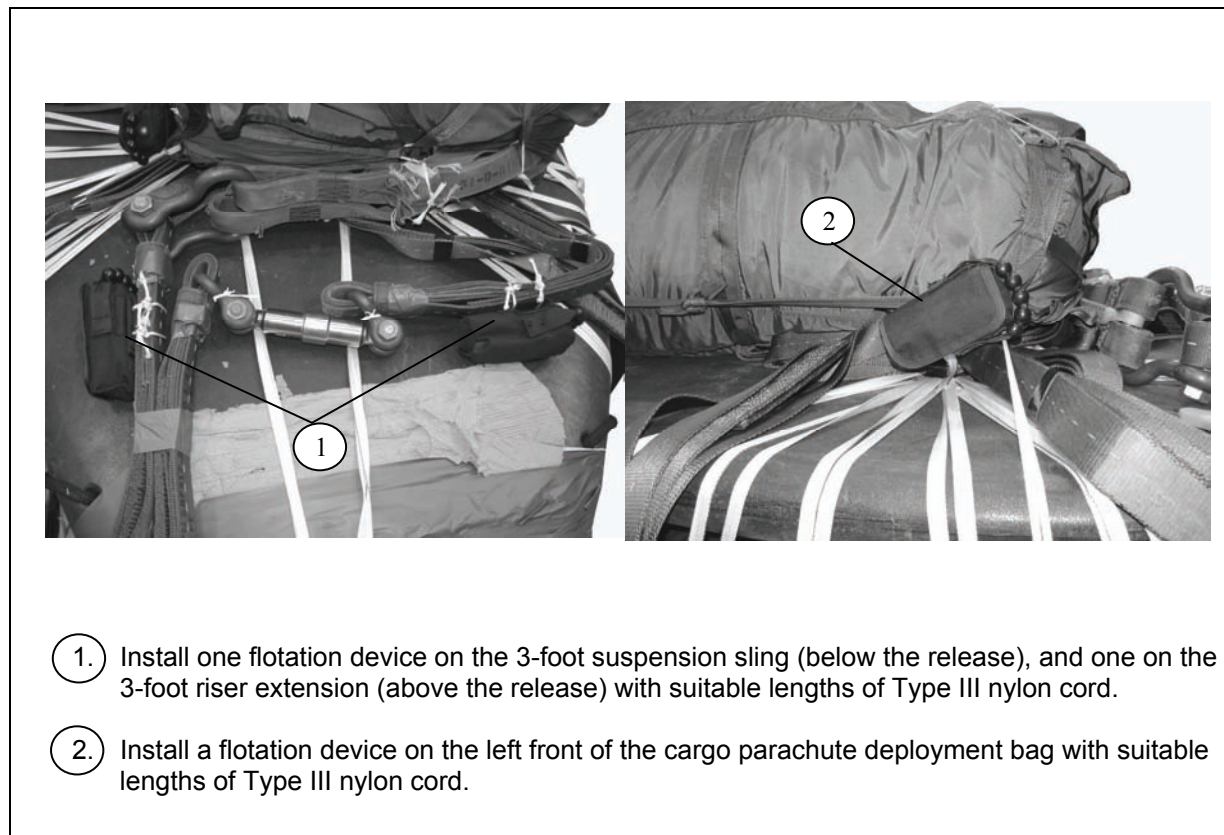


Figure 5-28. Flotation Devices Installed

EQUIPMENT REQUIRED

5-28. Equipment required to rig the ARC on the 48- by 87-inch combat expendable platform for low-velocity airdrop is listed in Table 5-2.

Table 5-2. Equipment Required for Rigging the XL 1200 Advanced Rescue Craft

<i>National Stock Number</i>	<i>Item</i>	<i>Quantity</i>
5530-00-128-4981	3/4- by 48- by 96-inch Plywood	1 Sheet
5510-00-220-6146	2- by 4- by 44-inch Lumber	5
5510-00-220-6148	2- by 6- by 44-inch Lumber	2
	2-by 6- by 87-inch Lumber	2
5510-00-220-6274	4-by 4- by 87-inch Lumber	2
5315-00-010-4659	Nail, steel, wire, common, 8d	As Required
	(or)	
Local Purchase	1 1/2-inch Wood screw	As Required
Local Purchase	Bolt, Carriage, 3/8-inch Dia. 7 inches long w/ washer and nut	8
	Air Items:	
1670-01-062-6302	Line, 20-foot, 2-loop Type XXVI	2
1670-01-062-6304	Line 9-foot, 2-loop Type XXVI	1
1670-01-062-6301	Line 3-foot, 2-loop Type XXVI	2
4030-00-678-8562	Clevis, Medium Suspension	3
4030-00-360-0304	Clevis, Suspension, air delivery	2
4030-00-678-8560	Clevis, G-13	1
1670-01-065-3755	Parachute, Cargo G-12E	1
1670-01-063-3715	Parachute, Cargo 15-foot extraction	1
1670-00-590-9909	D-bag, T-10 Personnel Parachute	1
1670-01-310-2875	Release, Automatic Cargo Parachute	1
4220-00-059-6061	Flotation Device, LPU-3/P	3
	Expendables:	
1670-00-753-3928	Pad, Energy Dissipating	4 Sheets
8305-00-082-5752	Webbing, 1/2-inch Tubular Nylon	As Required
4020-00-240-2146	Cord, Type III Nylon	As Required
8305-00-268-2411	Webbing, 1/4-inch Cotton (80 lb.)	As Required
8310-00-917-3945	Thread, Ticket #5 Cotton	As Required
7510-00-266-5016	Tape, 2-inch Cloth-backed adhesive	As Required
7510-00-297-6655	Tape, 2-inch Masking	As Required
1670-00-568-0323	Band, Rubber Retainer	As Required

Chapter 6

Wind Supported Aerial Delivery System (WSADS) Snow Goose

DESCRIPTION OF LOAD

6-1. The Wind Supported Aerial Delivery System (WSADS) Snow Goose is a low-cost, reusable, fully autonomous, unmanned aerial vehicle (UAV) that can be used to carry out a variety of missions at otherwise inaccessible locations. It is quickly configurable for air or ground launch deployable missions.

Note. Before rigging the WSADS by this chapter, refer to the manufacturer's Pre-Flight Procedures to ensure all steps are adhered to. Mission requirements dictate the amount of fuel that is used, but each fuel cell will be full. Strict adherence to proper procedures is crucial to the survivability of this piece of equipment.



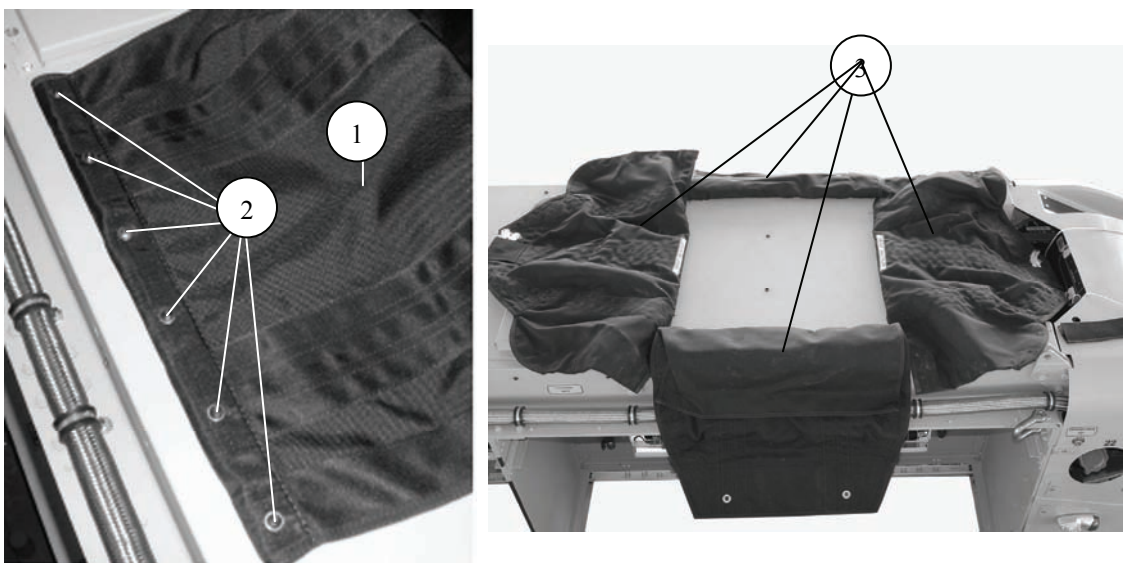
Figure 6-1. The Wind Supported Aerial Delivery System (Snow Goose)

INSTALLING AIR LAUNCH PARACHUTE

6-2. Install the Air Launch Parachute as described and shown in Figure 6-2.

CAUTION

It is a mandatory requirement that only qualified riggers who have successfully completed the Mist Mobility Integrated Systems Technology (MMIST) Air Parachute training course are certified to pack both the air launch and drogue parachutes. Packing both parachutes requires following precise, detailed procedures to ensure the successful and timely deployment of both parachutes. The Air Launch Parachute will be packed prior to rigging the WSADS and according to the manufacturer's rigging procedures.



1. Install the Air Launch Parachute Container to the Snow Goose top panel.
2. Secure both side flaps with the hardware provided.
3. Unfold the parachute container rear flap, outer side flaps and inner side flaps leaving the front flap towards the front of the vehicle. The front flap has a channel guide for the locking pin bridle for easy identification.

Note. Ensure side flap with hook pile tape is installed on the right side.

Figure 6-2. Air Launch Parachute Installed

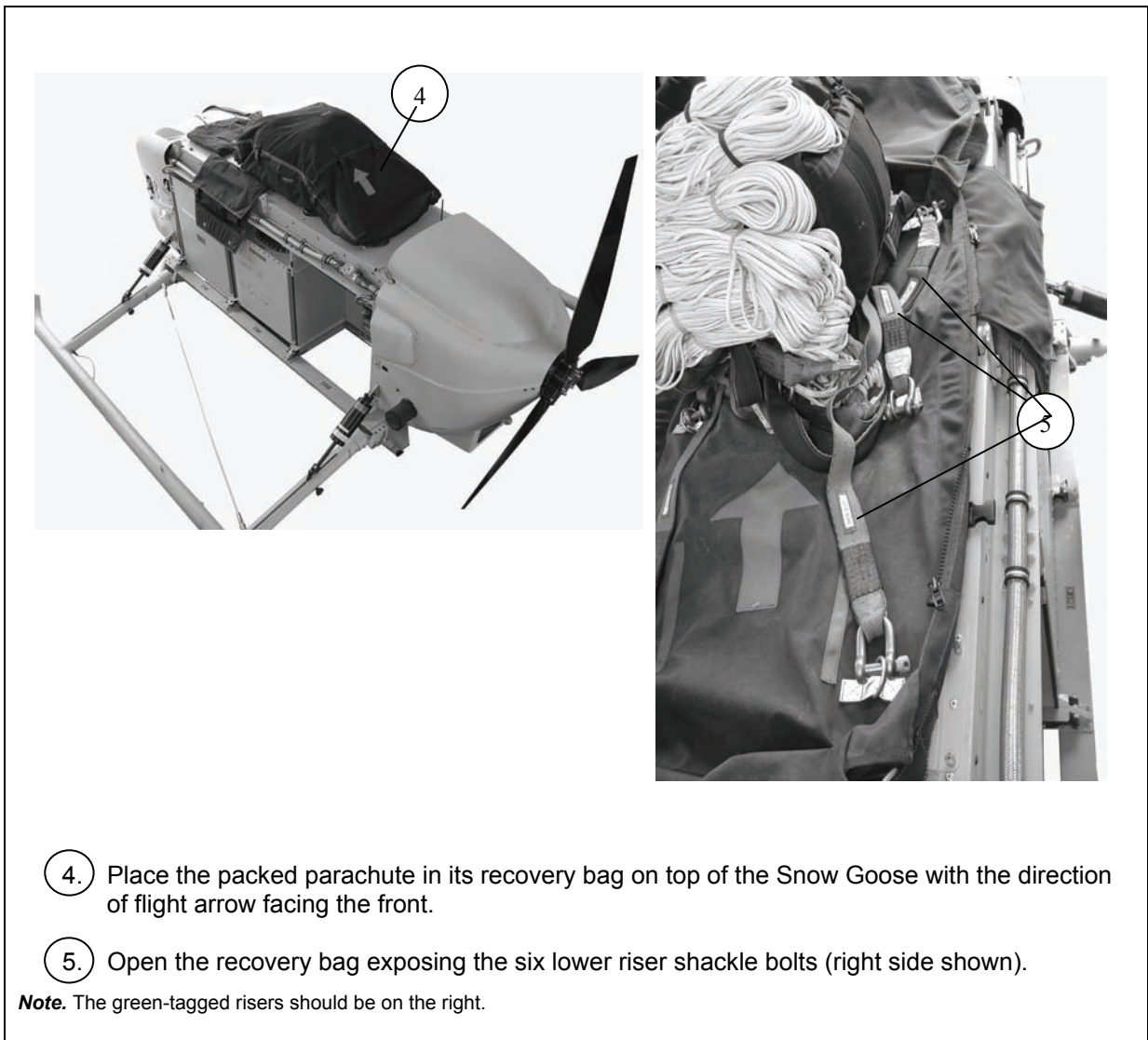


Figure 6-2. Air Launch Parachute Installed (Continued)

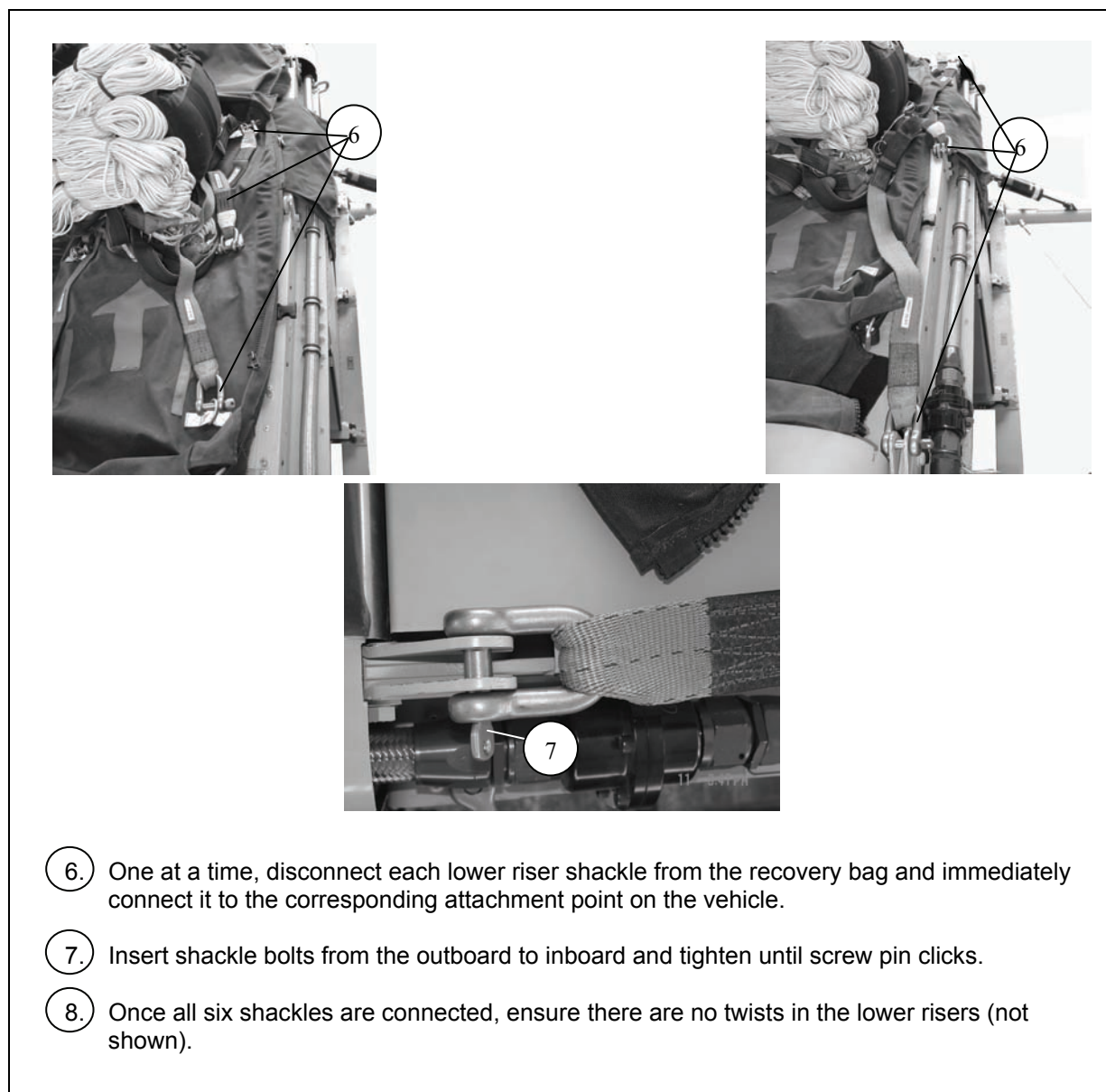


Figure 6-2. Installing Air Launch Parachute (Continued)

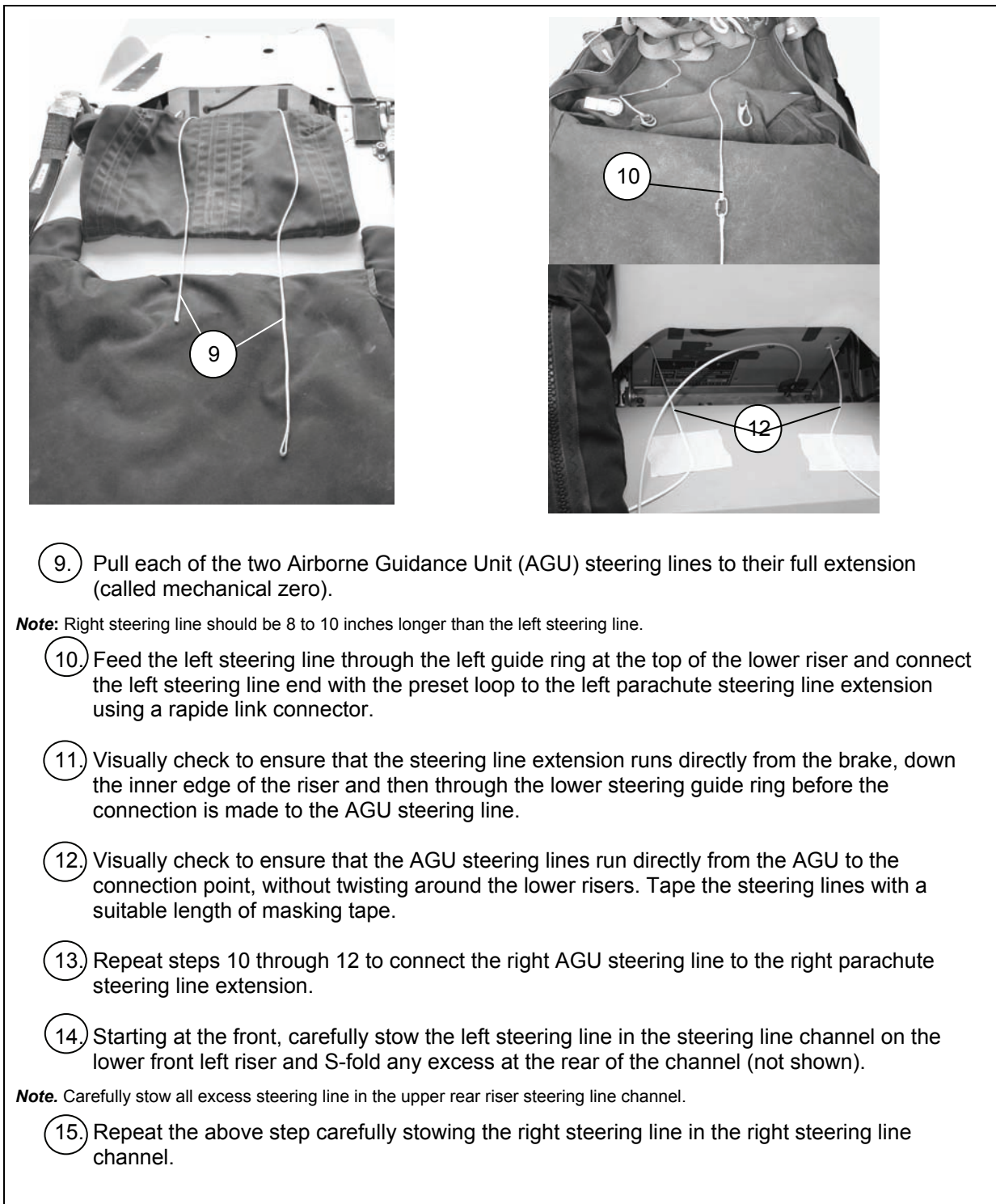
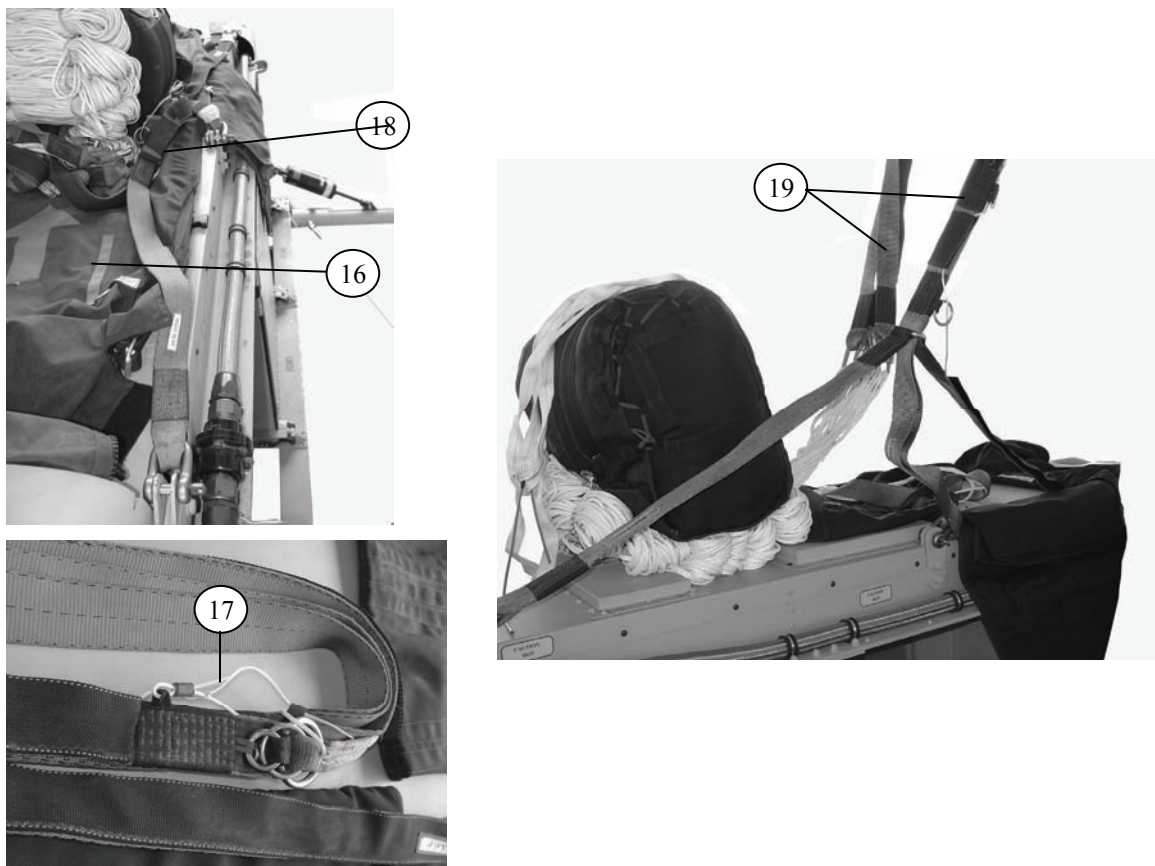


Figure 6-2. Air Launch Parachute Installed (Continued)



Note. This step requires a second individual to remove the recovery bag.

- 16 Remove the recovery bag, and place the packed parachute immediately in front of the engine intake, with the lines in front of the parachute.
- 17 Ensure the steering line or the brake setting does not get dislodged during the removal of the recovery bag.
- 18 Place the left set of lower risers over the left edge of the vehicle on top of the side flaps and repeat for the right set of lower risers.
- 19 Straighten the upper risers.

Figure 6-2. Air Launch Parachute Installed (Continued)



Figure 6-2. Air Launch Parachute Installed (Continued)

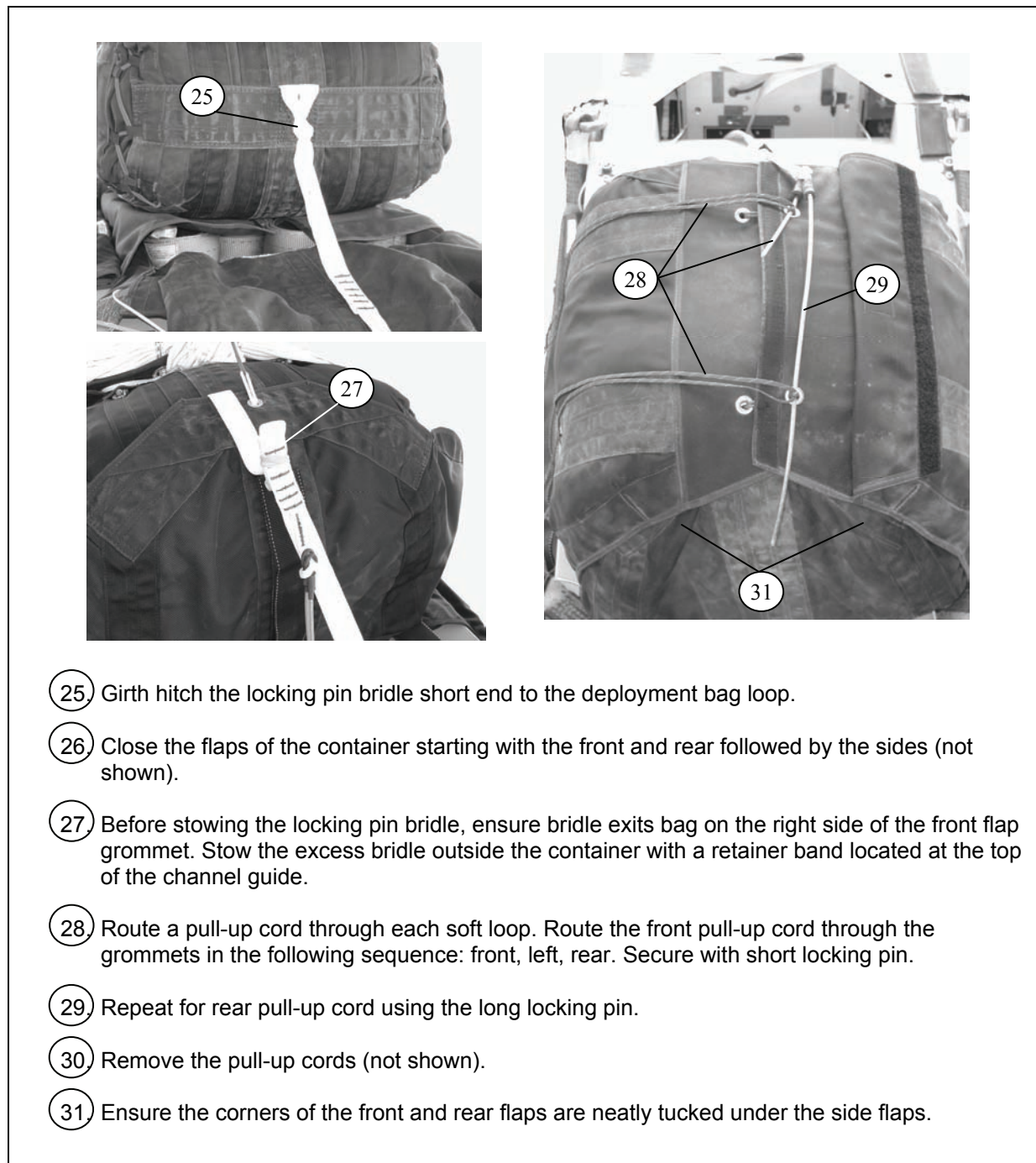


Figure 6-2. Air Launch Parachute Installed (Continued)

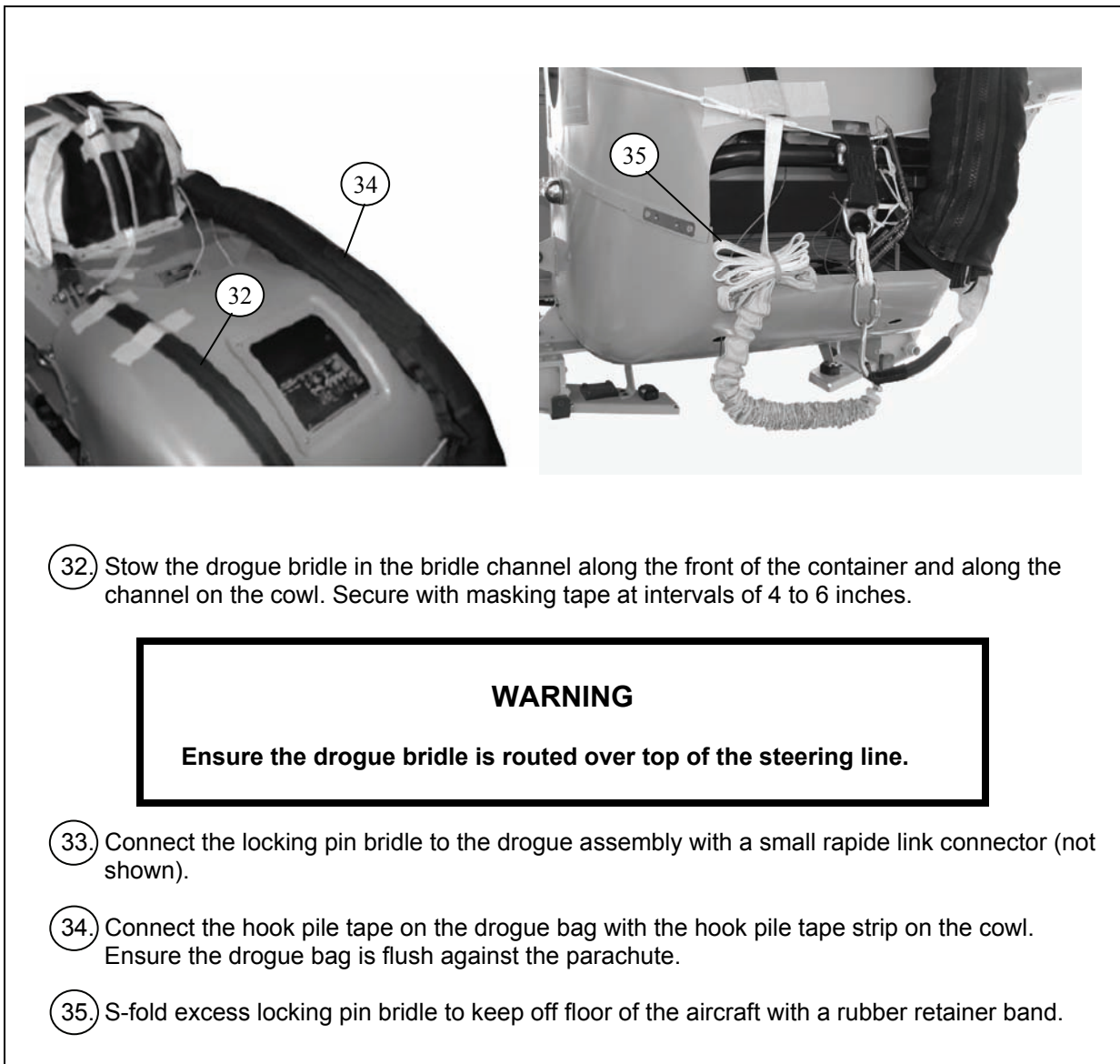


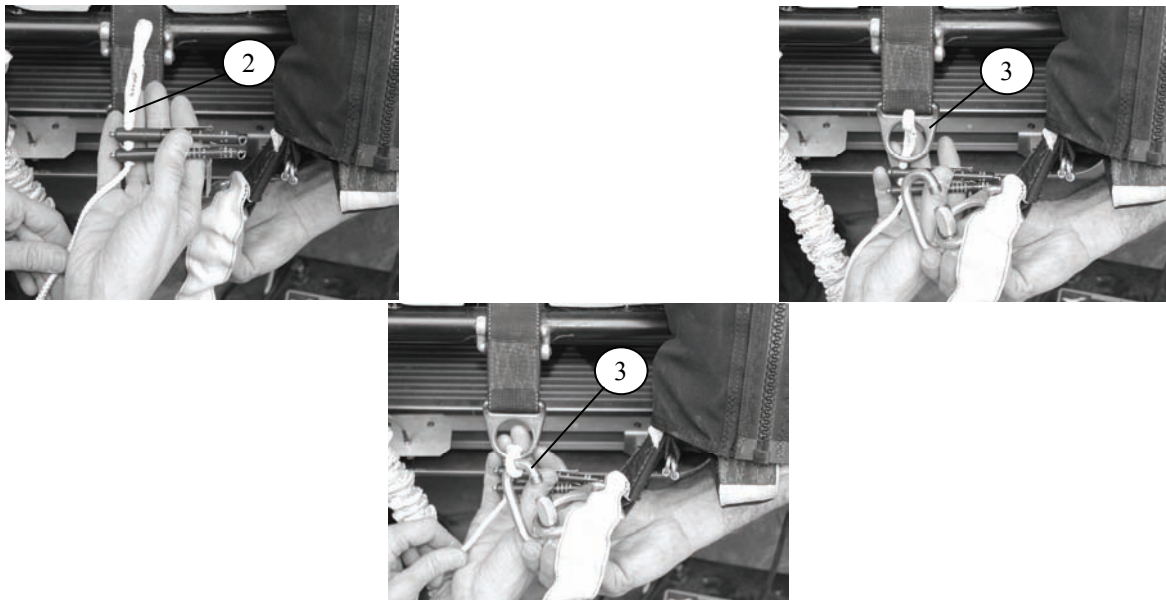
Figure 6-2. Air Launch Parachute Installed (Continued)

INSTALLING PYROTECHNIC CUTTERS

6-3. Install pyrotechnic cutters as shown in Figure 6-3.

WARNING

Never connect the drogue bridle ring directly to the Snow Goose drogue attachment point using the rapide link connector. A direct connection will prevent the pyrotechnic cutters from deploying the main canopy, causing critical failure of the system.



1. Install the pyrotechnic cutters between the Snow Goose drogue attachment point and the medium rapide link connector on the drogue bridle ring (not shown).
2. Route a 14-inch piece of braided dacron (1575 pound breaking strength) through two 6 second (E-3) pyrotechnic cutters approximately 3 inches from the looped end.
3. Route looped end up through the drogue attachment ring and attach it to the rapide link.

Note. Ensure that only the cutter loop connects the drogue bridle to the Snow Goose drogue attachment point.

Figure 6-3. Pyrotechnic Cutters Installed

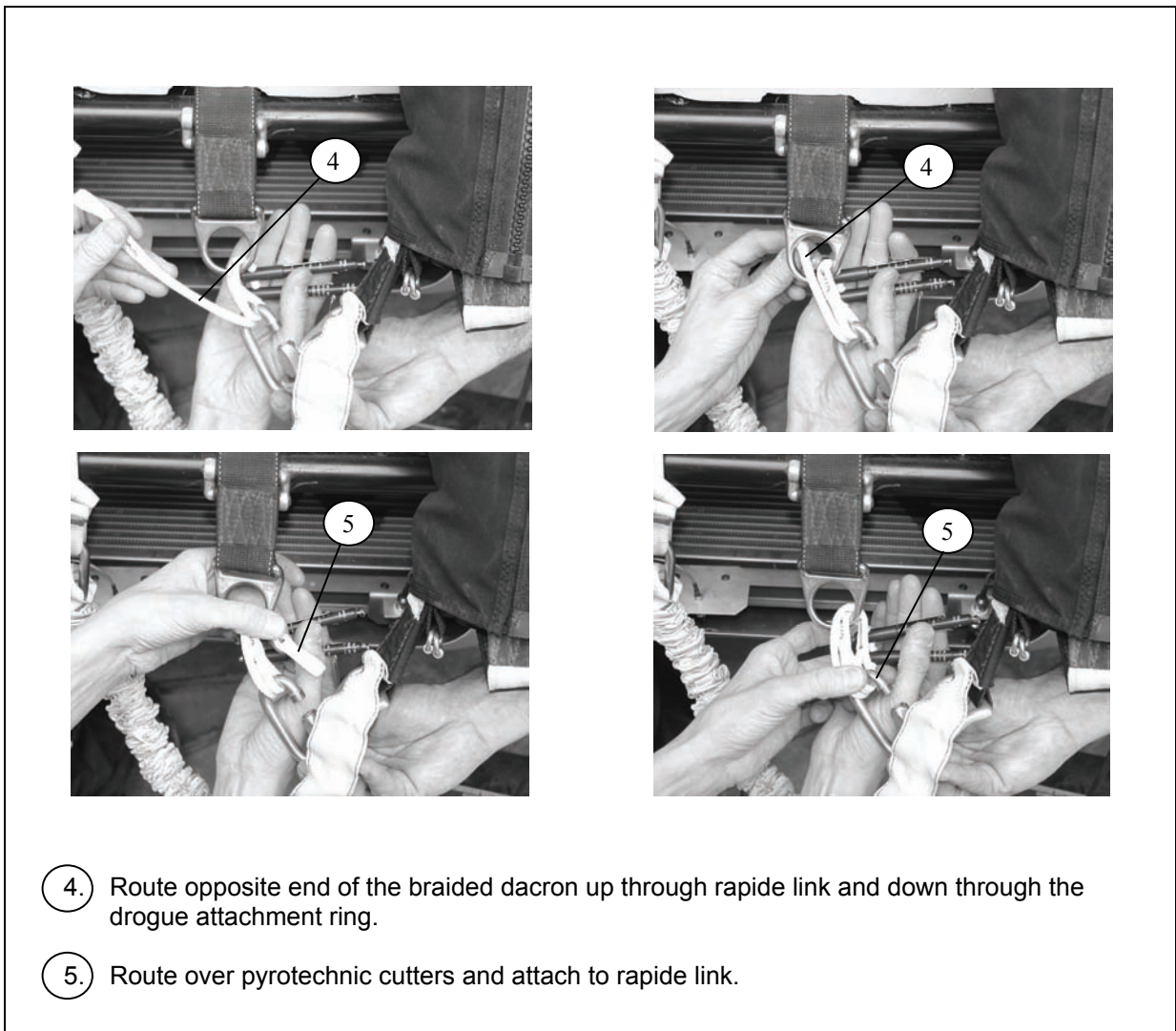
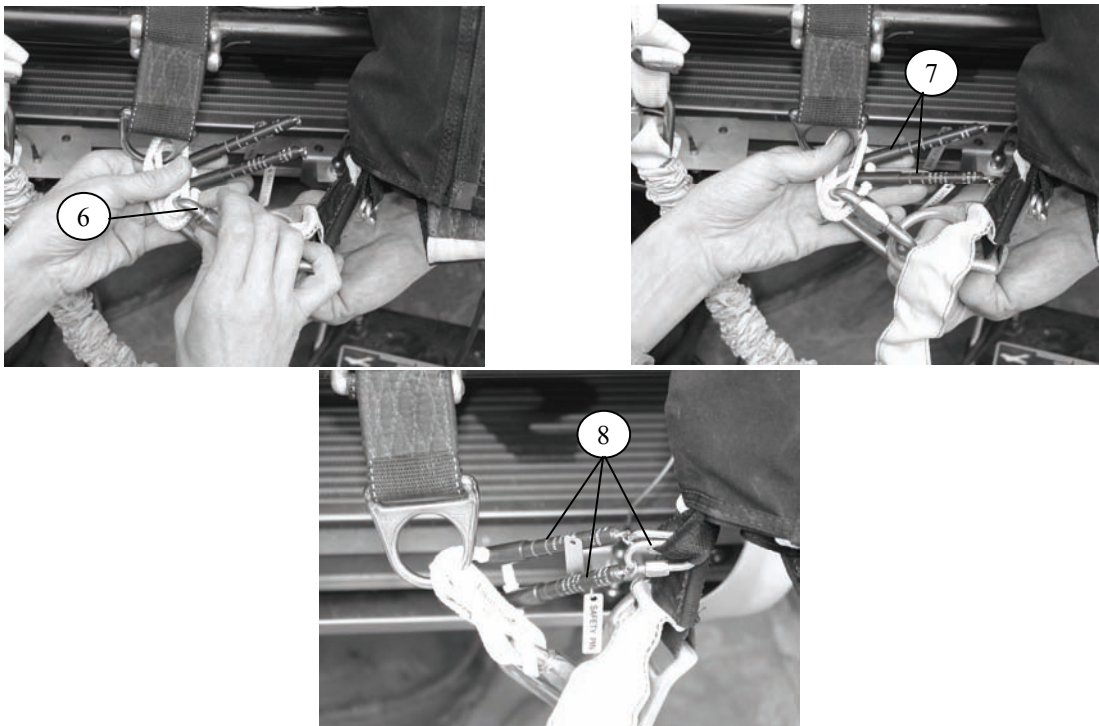


Figure 6-3. Pyrotechnic Cutters Installed (Continued)



- 6. Close rapide link finger tight.
- 7. Once cutters are in place, ensure they are clear of the braided dacron cutter loop
- 8. Connect two small rapide links to the sewn loop on the drogue bag, then connect a pyrotechnic cutter to each rapide link.

WARNING

Failure to connect the pyrotechnic cutters to the drogue attachment bag will prevent the parachute from being deployed.

Figure 6-3. Pyrotechnic Cutters Installed (Continued)

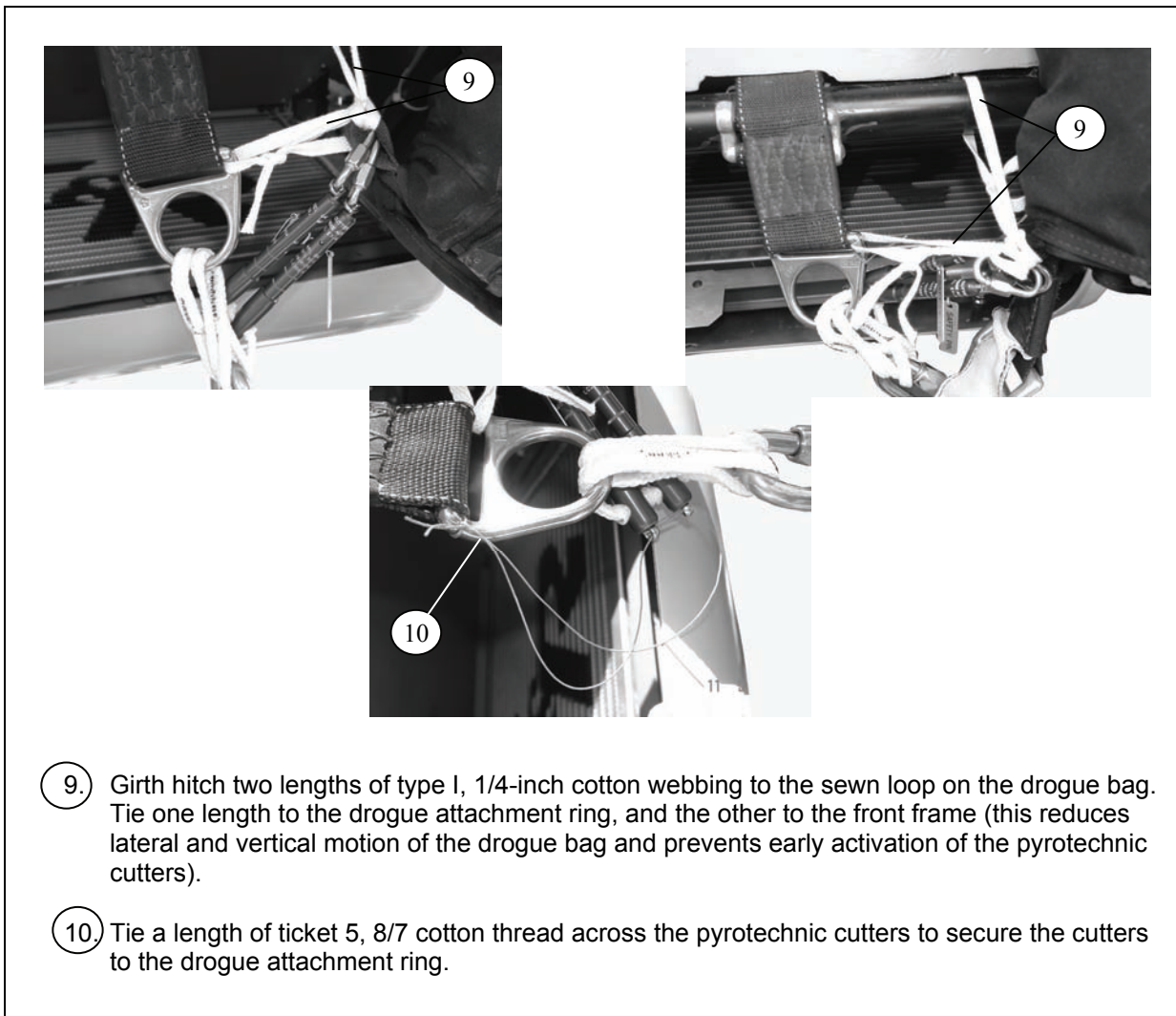


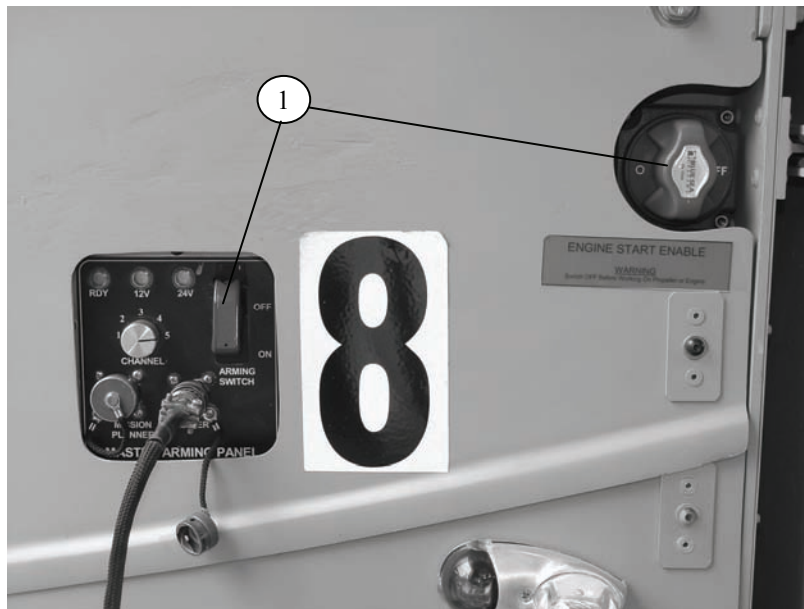
Figure 6-3. Pyrotechnic Cutters Installed (Continued)

RECOVERY DISPATCH PIN PLACEMENT

6-4. Install recovery dispatch pin as shown in Figure 6-4.

WARNING

Failure to ensure the master-panel arming switch and the engine start enable switch are both in the off position could result in a premature engine start.



1. Ensure that both the Master Panel-Arming Switch and the Engine Start Enable Switch are both in the off position.

Figure 6-4. Recovery Dispatch Pin Installed

WARNING

Failure to replace the recovery dispatch pin will prevent the AGU from starting the engine after it leaves the aircraft resulting in the possible loss of the Snow Goose and a failed mission.

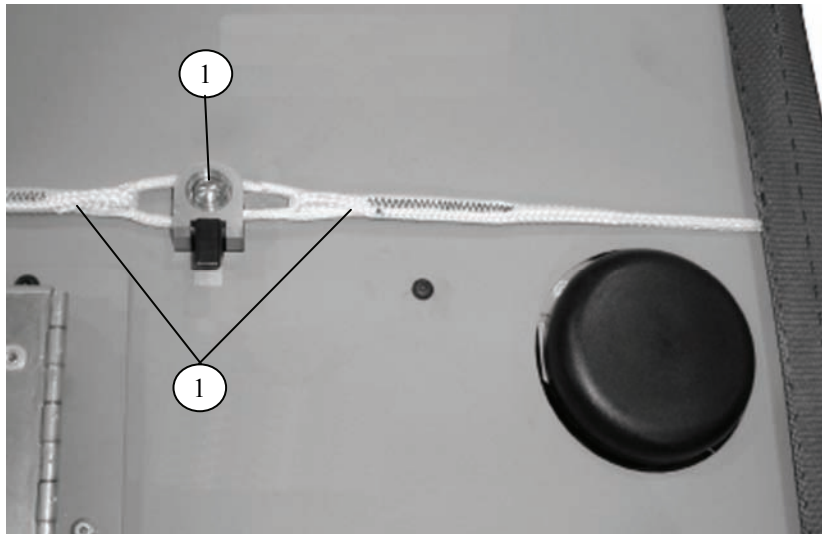


2. Remove the recovery dispatch pin and immediately insert the drogue bag dispatch pin line.
3. Push the dispatch pin line through the dispatch switch cover as far as possible to prevent accidental removal.

Figure 6-4. Recovery Dispatch Pin Installed (Continued)

SECURING LANDING GEAR

6-5. Secure landing gear as shown in Figure 6-5.



1. Depress the leg release pin and insert two leg support lanyards over the top of the pin and under the guard.

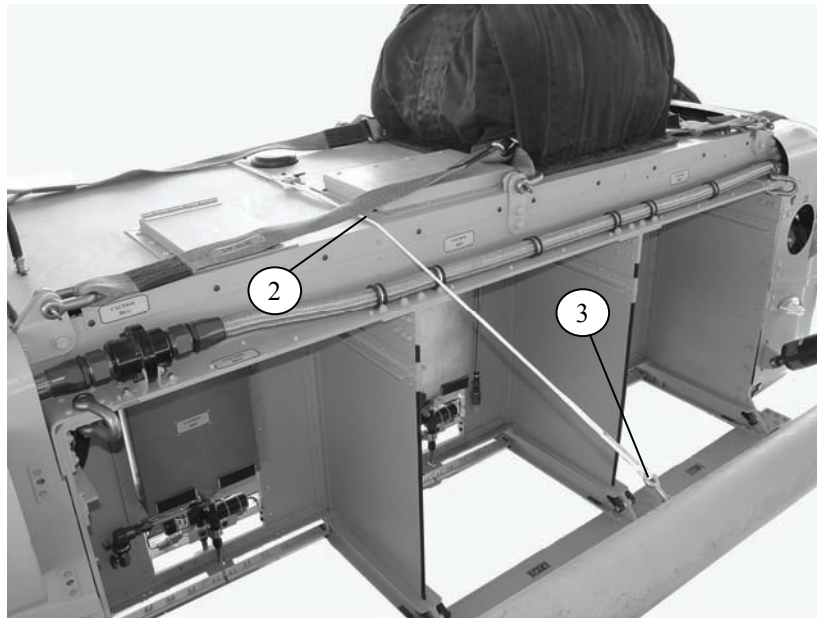
CAUTION

Ensure only the leg release pin and not the guard holds each lanyard.

WARNING

The landing gear support lanyards must pass underneath the parachute risers when securing the landing legs. Passing a lanyard over the top of the riser will result in damage to the Snow Goose, including the landing gear.

Figure 6-5. Landing Gear Secured



2. Raise the left side of the vehicle skid and pass the other side of the left landing gear support lanyard underneath the parachute riser.
3. Pass the unfinished end of the 53-inch braided dacron through the eyebolt and secure with three half hitches and a knot in the running end.

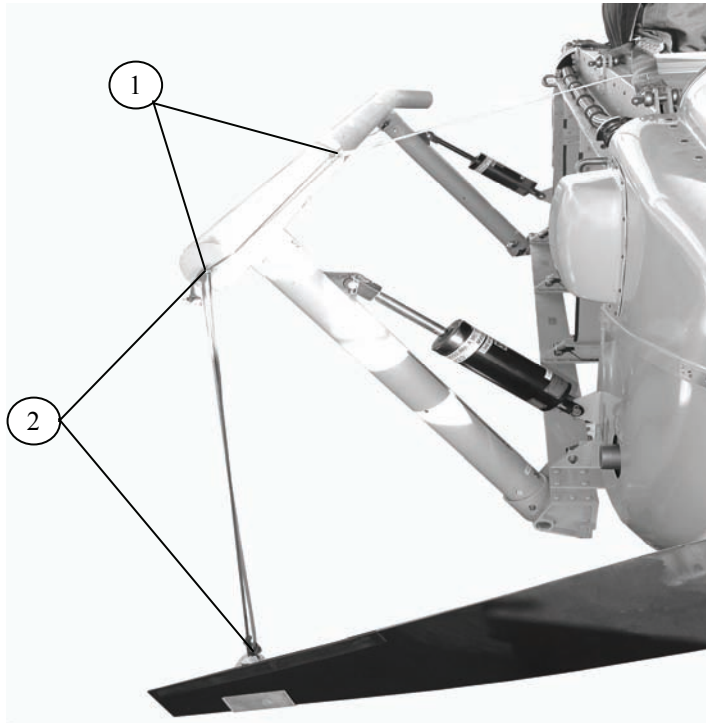
Note. The landing gear support lanyard will come from the manufacturer with one end finger trapped and 53 inches long.

4. Repeat steps 2 and 3 for the right side landing gear support lanyard (not shown).

Figure 6-5. Landing Gear Secured (Continued)

INSTALLING PROPELLER BRAKE

6-6. Install propeller brake as shown in Figure 6-6.



1. Install left propeller brake by passing the elastic lanyard end through the eyebolt on the rear end of the skid. Secure the free end of the brake release lanyard to the vehicles left skid center eyebolt with three half hitches and a knot in the running end.
2. Install the propeller brake 4 to 6 inches from the tip of the propeller. Route a suitable length of type III nylon cord through the left skid rear end eyebolt and tie it tight to the eyebolt using half hitches and a knot in the running end.

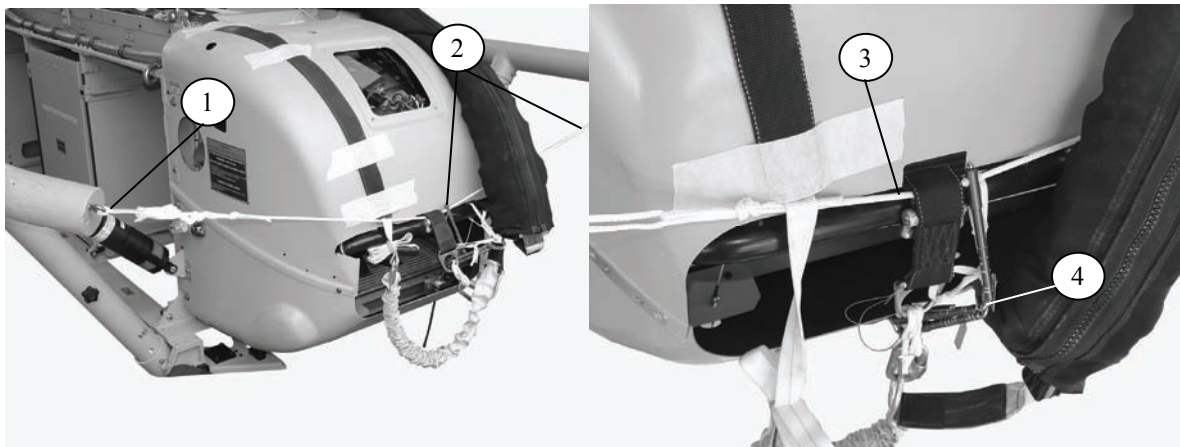
Note. Do not overcome the tension of the elastic lanyard with type III nylon cord.

3. Repeat steps 1 and 2 for the right side brake release making sure the propeller blades are evenly positioned and secured.

Figure 6-6. Propeller Brake Installed

INSTALLING DEFLECTOR LANYARDS

6-7. Install deflector lanyards as shown in Figure 6-7.



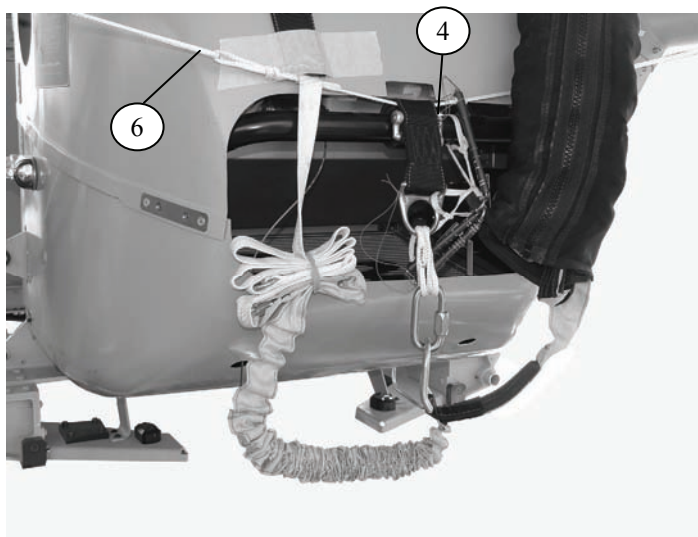
1. Secure the end of a riser deflector lanyard to the left skid front padeye or eyebolt with three alternating half hitches and a knot in the running end.
2. Route the deflector lanyard behind the drogue tube, through the 24 second (E-3) pyrotechnic cutter, between the drogue attachment strap, and behind the locking pin bridle.
3. Attach the opposite end of the deflector lanyard to the right skid front padeye or eyebolt and secure with three alternating half hitches with a knot in the running end.
4. Attach the cutter to a small rapide link, and safety with ticket 5, 8/7 cotton thread to the L-link above the drogue ring. Shown above and on the next page.
5. Route the riser deflector unfinished end through the right deflector overhand loop and secure through the eyebolt using three alternating half hitches with a knot in the running end (not shown).

Figure 6-7. Deflector Lanyard Installed

Note. Tension of the deflector lanyards must not overcome tension supplied by the leg support lanyards.

CAUTION

The deflector must be routed under the drogue tube and the locking pin bridle.



6. Secure all lanyard loose ends with suitable lengths of masking tape (not shown).

Figure 6-7. Deflector Lanyard Installed (Continued)

EQUIPMENT REQUIRED

6-8. Use the equipment listed below in Table 6-1 to rig this load.

Note. Along with the equipment list, it is recommended that an air drop kit with the following contents be added: (Braided Dacron lanyards, pyrotechnic cutters, propeller brakes, masking tape, cotton wadding and ticket 5).

Table 6-1. Equipment Required for Rigging the WSADS Snow Goose.

<i>Item</i>	<i>Quantity</i>
WSADS Battery Charger	1
Mission Planner (MP) file created with the MP software	1
Suitable computer with MP software installed	1
Flight Termination Device (FTD)	1
MP cable	1
WSADS Tool Kit	1
High Mobility Multipurpose Wheeled Vehicle (HMMWV), fitted with Launch Control Box (LCB) and a mounted Ground Launch Bracket (GLB)	1
Hand Held Remote Control Unit (HRCU)	1
Yellow Dispatch Pin	1
Link, Rapide, medium	1
Link, Rapide, small	3

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Glossary

AC	Aircraft
AFB	Air Force Base
AFMAN (I)	Air Force Manual Interservice
AFSOC	Air Force Special Operations Command
AFTO	Air Force technical order
AMC	Air Mobility Command
ARC	advanced rescue craft
ARNG	Army National Guard
attn	attention
AGU	Airborne Guidance Unit
C	change
CB	center of balance
CEP	combat expendable platform
CRRC	combat rubber raiding craft
d	penny
DA	Department of the Army
DC	District of Columbia
DD	Department of Defense
diam	diameter
DP	Dispatch Point
EFTC	extraction force transfer coupling
EMM	Engine Management Module
EZ	Electrical Zero
FAA	Federal Aviation Administration
FM	Field Manual
FOD	Foreign Object Debris
ft	foot/feet
FTD	Flight Termination Device
Gal	gallon
GLB	Ground Launch Bracket
GPS	global positioning system
HQ	headquarters
HSELLADS	high-speed, low-level, aerial delivery system
HMMWV	High Mobility Multipurpose Wheeled Vehicle

Glossary

Hp	Horse Power
HRCU	Hand Held Remote Control Unit
in	inch
JAI	joint airdrop inspector
LAW	light anti-tank weapon
lb	Pound
LCB	Launch Control Box
LPU	life preserver, underarm
LCSM	Life Cycle Sustainment Manager
LOS	Line of Sight
LV	low-velocity
LVAD	low-velocity airdrop
MADS	maritime aerial delivery system
MARS	marine amphibious reconnaissance submersible
MCRP	Marine Corps Reference Publication
mm	millimeter
MMIST	Mist Mobility Integrated Systems Technologies Inc.
MP	Mission Planner
NAVSEA	Naval Sea Systems Command
no	number
NSN	national stock number
NSW RIB	Naval Special Warfare Rigid Inflatable Boat
psi	pounds per square inch
qty	quantity
RAMZ	rigging alternate method zodiac
rqr	requirement
SCUBA	self contained breathing apparatus
sec	second
SOP	standing operating procedure
STS	special tactics squadron
TM	technical manual
TO	technical order
TRADOC	US Army Training and Doctrine Command

UAV	Unmanned Aerial Vehicle
US	United States
USAR	US Army Reserve
w	with
WAPR	water-activated parachute release
WSADS	Wind Supported Aerial Delivery System

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References

- AR 59-4/OPNAVINST 4630. 24C/AFJ 13-210(I)/MCO 13480.1B. *Joint Airdrop Inspection Records, Malfunction Investigations and Activity Reporting*. 1 May 1998.
- AFMAN 24-204 (I)/TM 38-250/NAVSUP PUB 505/MCO P4030.19I/DLAI 4145.3. *Preparing Hazardous Materials for Military Air Shipments*. 15 April 2007.
- FM 4-20.102/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5. *Airdrop of Supplies and Equipment: Rigging Airdrop Platforms*. 8 June 2006.
- FM 4-20.103/MCRP 4-11.3C/TO 13C7-1-11. *Airdrop of Supplies and Equipment: Rigging Containers*. 2 September 2005.
- FM 4-20.108/TO 13C7-2-491. *Airdrop of Supplies and Equipment: Rigging Military Utility Vehicles*. 10 September 2007.
- FM 4-20.153/MCRP 4-11.3B/TO 13C7-18-41. *Airdrop of Supplies and Equipment: Rigging Ammunition*. 23 October 2006.
- Snow Goose Operator Manuel LOS Flight Termination Device (04133 OPM)*.
- Snow Goose Post Flight Procedure (035429 URG)*.
- Snow Goose Ground Launch Procedure with the Flight Termination Device (41052 URG)*.
- TM 10-1670-286-20/TO 13C5-2-41. *Unit Maintenance Manual for Extraction Line Panel (Including Stowing Procedures) (NSN 1670-01-183-2678)*. 15 March 2001.
- TM 10-1670-268-20&P/TO 13C7-52-22. *Organizational Maintenance Manual (Including Repair Parts and Special Tools List) for the Type V Airdrop Platform and Dual Row Airdrop Platform*. 15 September 2002.
- TM 10-1670-277-23&P/TO 13C5-28-2/NAVAIR 13-1-30. *Unit and Direct Support Maintenance Manual (Including Repair Parts and Special Tools List) for Parachute, Cargo Type: 28-Foot Diameter, Cargo Extraction Parachute Assembly (NSN 1670-00-040-8135)*. 30 April 2002.
- TM 10-1670-278-23&P/TO 13C5-26-2/NAVAIR 13-1-27/TM 01109C-23&P/1. *Unit and Intermediate Direct Support (DS) Maintenance Manual (Including Repair Parts and Special Tools List) for Parachute, Cargo Type: 15-Foot Diameter, Cargo Extraction Parachute (NSN 1670-01-063-3715 and 1670-00-052-1548)*. 31 December 2004.

References

- TM 10-1670-279-23&P/TO 13C5-27-2/NAVAIR 13-1-28. *Unit and Intermediate Direct Support (DS) Maintenance Manual (Including Repair Parts and Special Tools List) for Parachute, Cargo Type: 22-Foot Diameter, Cargo Extraction Parachute (NSN 1670-01-063-3716 and 1670-00-687-5458)*. 30 August 1989.
- TM 10-1670-281-23&P/TO 13C5-32-2/NAVAIR 13-1-32. *Unit and Intermediate Direct Support (DS) Maintenance Manual (Including Repair Parts and Special Tools List) for Parachute, Cargo Type: 64-Foot Diameter, Model G-12D, (NSN 1670-00-893-2371) and Model G-12E, (1670-01-065-3755)*. 1 October 1990.
- TM 10-1670-293-23&P/TO 14D1-2-467-2/TM 01136C 23&P/2. *Unit and Intermediate Direct Support (DS) Maintenance Manual (Including Repair Parts and Special Tools List) for Parachute, Personnel Type: 35-Foot Diameter, T-10C Troop Back Parachute Assembly (NSN 1670-01-248-9502); 35-Foot Diameter, T-10D Troop Back Parachute Assembly (1670-01-484-2234)*. 30 August 2001.
- TM 10-1670-296-20&P/TO 13C7-49-2. *Unit Maintenance Manual (including repair parts and special tools list) for Ancillary Equipment for Low-Velocity Air Drop System (LVADS) Line, Multi-Loop (Extraction Lines, Deployment Lines, Bag Clustering Lines, Riser Extension, Suspension Slings) (NSN 1670-01-062-6301) (1670-01-062-6306) (1670-01-062-6304) (1670-01-062-6305) (1670-01-062-6311) (1670-01-063-7760) (1670-01-062-6310) (1670-01-062-6303) (1670-01-062-6307) (1670-01-062-6312) (1670-01-063-7761) (1670-01-062-6308) (1670-01-062-6302) (1670-01-064-4453) (1670-01-107-7651) (1670-01-062-6309) (1670-01-064-4451) (1670-01-064-4452) (1670-01-107-7652) Coupling, Extraction Force Transfer: (1670-00-434-5783) (1670-00-434-5785) (1670-00-434-5787) (1670-00-434-5782) (1670-01-326-7309) Release, Cargo Parachute, M-1: (1670-01-097-8816) Release, Cargo Parachute, M-2: (1670-01-097-8817) Link Assembly, Single Suspension, Type IV: (1670-00-783-5988) Assembly, Heavy Duty: Link, 4-Point: (1670-00-006-2752) Cover, Link, Type IV: (1670-01-360-0329) Clevis, Aerial Delivery: (4030-00-360-0304) (4030-00-678-8562) (4030-00-090-5354) (4030-00-432-2516) Cover, Clevis: (1670-00-360-0328) Strap, Parachute Release, Single Knife (1670-00-998-0116) Strap, Parachute Release, Multi-Knife: (4340-00-040-8219) Link Assembly, Coupling, 3-Point: (1670-01-307-0155) Bracket, Suspension: (1670-01-207-7223) Bracket, Suspension: (1670-00-078-4319) Plate, Suspension: (1670-01-141-1522) Tiedown, Cargo, 10k: (1670-00-937-0271) Tiedown, Cargo, Quick-Release: (1670-01-333-6082) Tiedown, Cargo, Aircraft: (1670-00-545-9063) Drive Off Aid, Type IV: (1670-01-344-0825) Link, 2-Point, 3 3/4-In: (1670-01-493-6418) Link, 2-Point, 5 1/2-In: (1670-01-493-6420) Break Away Static Line, Main: (1670-01-487-5461) Jettison System, Parachute, Extraction: (1670-01-475-1990) {TO 13C7-49-2}*. 30 October 2002.
- AFTO Form 22, *Technical Order Publication Improvement Report*.
- DA Form 2028, *Recommended Changes to Publication and Blank Forms*.

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