

### PRODUCT INFORMATION BULLETIN Jan. 29, 2004

#### PRODUCT: TRIPLINES APPLICATION: ALL STANDARD VALVE BAMBI BUCKET MODELS PURPOSE: PRODUCT INFORMATION REGARDING NEW TRIPLINE DESIGN Applicable Tripline Part Numbers: Models 6072, 8096, 9011, 1012, 1214, 1518, 1821 - BB380 Models 2024, 2732, 3542, 4453 - BB386 Models 5566, 5870, 6578, 7590 - BB387 Models HL5000, HL7600, HL9800 - BB390

#### Important: Tripline Part no. BB385 is now obsolete and inactive, use BB386 or BB387

**OVERVIEW:** As of January 2004, SEI industries will supply Triplines that conform to a new improved design specification. The new Triplines are fully retrofittable replacements for the old design, and do not require any additional parts for installation. The improvements are focused on improving the durability of the catch bullet stack and cable immediately below the lower swage.



TRIPLINE



New tripline installed in Control Head. Lug Plates installed. **Note:** Control Heads built after January 2004 will not require Lug Plates.

Page 1 of 1



### Technical Bulletin Bambi Bucket 2024 Short Line Conversion Kit Instructions May 12, 2005

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ì	Product:	Bambi Bucket	I
i	Applicability:	Model BB2024	I
i	Operation:	Bambi Bucket model 2024 short line conversion kit instructions	I
	Overview:	When using a Bambi model 2024 with an Aerospatiale AS 350, B, B2, B3, AS355, AS365 ensure that the fully extended overall length of your Bambi Bucket is 199" [505.5cm] or less. This dimension MUST include the Firesock and the Dump Valve in the stretched position. If your length exceeds 199"[505.5cm], Bambi Bucket model 2024 MUST be converted to a Bambi Bucket 2024 S [Short] BEFORE it can be operated with any Aerospatiale AS 350, B, B2, B3, AS355, AS365 aircraft.	
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#### RISER



- 1. Insert the other end of the new deployment cable on the appropriate sleeve (ear) of the control head casting. Cut existing riser cable off the riser ring by cutting through the cable/thimble loop.
- 2. At the riser's opposite end, remove the chain portion from the shackle attached to the trip line.
- 3. Attach shackle end of the new deployment cable to the hub ring.

## DEPLOYMENT CABLE



- 1. Cut existing deployment cable off the hub by cutting through the cable/thimble loop swaged to the hub.
- 2. At the existing cable's opposite end, remove the suspension nut and bolt from the appropriate sleeve (ear) on the control head casting; you can now completely remove the cable.
- 3. Attach shackle end of the new deployment cable to the hub ring.
- 4. Insert the other end of the new deployment cable on the appropriate sleeve (ear) of the control head casting.

Note: Replacing the deployment cable should be done in conjunction with installing new suspension lines.

### SUSPENSION LINE SET



- 1. Remove the shackle pins from the shackles on the M-straps.
- 2. Remove the suspension lines, but be sure to note the order in which they were connected.
- 3. Remove the suspension nut and bolt from both sleeves (ears) on the control head casting.
- 4. Remove the suspension lines, again noting the order in which they were positioned.
- 5. Insert the new suspension lines into the control head sleeves (ears), making sure they are installed in the correct order.
- 6. Attach the opposite ends of the new lines to the M-strap shackles, again making sure they are fastened in the correct order.

#### **Conversion is done!**



March 3, 2009

## **Bambi Bucket HL Series Model Cinch Strap Replacement Instructions**

Product: Bambi Bucket

Applicability: Model HL4000, HL5000, HL7600, HL9800 prior to October 31, 2008

**Operation:** Bambi Bucket Cinch Strap replacement instructions

**Overview:** The triangle rings of the cinch strap are susceptible to deformation over time at 70% cinch setting. The triangle ring size has been changed from 1/4" to 5/16" for all heavy lift series Bambi Bucket models described above to rectify this potential deformation. The depth of the existing cinch strap brackets on models made privor to October 31, 2008 is too small for 5/16" triangle rings. To accommodate the larger (5/16") triangle rings, 1/8" thick washers are required to raise the brackets and create more space between the brackets and the buckets exterior. With this adjustment, the 5/16" triangle rings can pass through the brackets readily and provide for cinch strap adjustment when is required.

#### Procedure for modifications:

- 1. Disassemble the cinch strap bracket across from the ballast and insert the existing cinch strap bracket through the webbing loop on the hook end of the new cinch strap. Reattach it to the bucket. No washer is required to be inserted between the bracket and the bucket. The existing bolts and nuts can be reused for this bracket.
- 2. Disassemble all other cinch strap brackets from the bucket and replace <sup>1</sup>/<sub>4</sub>"-20 x <sup>3</sup>/<sub>4</sub>" LG bolts with <sup>1</sup>/<sub>4</sub>"-20 x 1" LG bolts (SEI p/n:FBSC010410). Put 1/8" thick washers (SEI p/n:FWS0104H or FWS0304) between the brackets and the bucket exterior. Reattach the existing cinch strap brackets back to the bucket.
- 3. Feed the new cinch strap through all of the cinch strap brackets and attach the 5/16" triangle ring to the hook.



## Technical Bulletin Custom 1821 Bucket with 2024 Suspension Lines (p/n: BBF09-1821/2024) June 29, 2009

BBF09-1821/2024 is a custom bucket. It is a model 1821 bucket with 2024 suspension lines. Some components of two models are different. The part numbers of these components are listed on the following table:

Table of the Part numbers for the Custom Components

	1821 standard bucket	1821 bucket with 2024	
		suspension lines	
Completed Bucket	BBF09-1821	BBF09-1821/2024	
IDS deployment	<del>BB353</del>	BB353-1821/2024	
Cable			
Tripline (No pulley)	<del>BB380</del>	BB380-1821/2024	
Suspension Lines	<del>BB830</del>	BB835	

Please use the part numbers on the custom bucket column on this table to order these components instead of the one on the standard bucket column.



August 27, 2009

## **Standard Bucket Control Head Cover Alignment Instructions**

Product: Bambi Bucket

Applicability: All models of standard buckets

**Operation:** Control head cover alignment

**Overview:** The hex head of the bolt used to attach the trip block to the control head can obstruct or impede the closure of the cover on the control head. When a washer is added to the trip block bolt or when the bolt is in a certain orientation, the washer or the hex head of the bolt sticks out (see photo #1 and #2), and can make contact with the cover, forcing the cover to move toward the left hand side of the head. The movement of the cover causes a misalignment of the bolt holes on the cover and the bolt holes on the control head. This misalignment prevents the bolts from entering the holes.

#### **Procedure for alignment:**

- 1. If there are any washers remove them.
- 2. Rotate the trip block bolt until its hex head does not stick out (see photo #3), or change the hex head bolt to a socket head bolt. With the socket head bolt, it will not stick out in any orientation (see photo #4).



Photo #1

- The Hex head sticks out







Photo #3

- The socket head does not stick out



Photo #4



## Technical Bulletin Long-line Selection December 16, 2009

### Problems caused by improper long-line:

Bambi bucket should not spin when it uses a proper long-line and connected to a fixed hook. If an improper long-line is used, a bucket may start spinning at the moment when the bucket is pulled out of the water with full load of water, and continues to spin backward and forward. When a swivel hook is also used, the bucket does not spin when it has a full water load, but it starts spinning again at the moment when it dumps water.

#### Causes:

The root cause of this problem can be traced to the long-line being made from a regular cable, instead of a non-rotating cable. Regular cable has a tendency to rotate itself forward or backward when a tensile load is added to the cable or is released from the cable, due to the nature of the manufacturing method of the cable. The rotating torque it creates will make the bucket spin if the long-line is mounted to a fixed hook. The reacted torque on the fixed hook is significant and may even damage the hook. After changing fixed hook to swivel hook, it seems that the bucket with a full water load stops spinning, but it is the swivel hook that will spin instead of the bucket. The torque required to make the bucket with full water load spin is much higher than the torque required for the swivel hook to spin. However, the bucket spin may be similar or less than the torque required for the swivel hook to spin.

### Solutions:

Change the long-line to a non-rotating long-line and mount the long-line to a fixed hook. The non-rotating long-line is made from non-rotating cable, which will not create a torque when a tensile load is added to the cable or released from the cable. Attached information sheets provide more detail of the non-rotating cable.

#### Notes:

The suspension lines of the bucket may need to be changed if they have been twisted, as the damage will be permanent and the suspension lines will continue to cause spinning even after the long-line has been changed from rotating type to non-rotating type.

#### **Recommendation:**

If the bucket has been spinning, we recommend that when the long-line is changed, the suspension lines are also changed.





## Technical Bulletin Bambi Aqualanche Bucket Sealing Improvement February 8, 2010

#### Problem:

The operating amperage of the Bambi Aqualanche bucket is set to be under 10A. After a continuous period of operation, the operating amperage on some bucket models can increase. The higher current draw can result in tripping the circuit breaker. Other symptoms include an audible sound from valve that indicates friction on the incorporated parts within the valve.

#### Cause:

The supplier of the actuator for the Bambi Aqualanche bucket claims that the actuators are waterproof product. However, it is only suitable for the rain or wet environment, this being water resistant, not truly waterproof. The requirement for this product is to be completely submerged under water through its intended application. During the activation of the valve under water and through its cycles, a vacuum is created inside the actuator. The resulting pressure difference caused by the vacuum allows water to overcome the seal and into the body of the actuator. This water ingress creates extra load on the actuator and causes an increase in operating current, which eventually trips the breaker. The water inside the actuator is also attributing to noise due to water breakdown on the lubricant of adjacent parts.

#### Solution:

- 1) Eliminate the vacuum affect by drilling ventilation holes into the tube of the actuator.
- 2) Replace the original seal on the actuator with a waterproof and water tight seal.
- 3) Add a drainage valve on the bottom of the actuator box to drain any water accumulation

#### **Recommendation:**

Retrofit the existing Bambi Aqualanche valve with modified valves. .



## Technical Bulletin Bambi Bucket<sup>®</sup> - All Standard Valve Models June 24, 2010

## Head Lead Wire Connection

Ongoing product improvement has resulted in a change to the actuator head lead wire. To eliminate the potential for premature switch contact degradation, SEI has begun to equip its Bambi control heads with a suppressor diode (a.k.a. "flyback diode").

The new head lead wire design is identifiable by the addition of polarity markers on the white (+) and black (-) wires. Note that these polarities must be observed in order for the bucket to function.



Field replacement of an unpolarized head lead wire with a new-design head lead wire is accomplished by removing the existing wire and its 2-position wiring terminal from the head cavity and installing the new-design head lead wire in its place. The new-design head lead wire integrates a mounting bracket and a strain relief provision. Polarities are of no concern when connecting the solenoid wires, and no modifications to the head are necessary.

In the unlikely case of diode failure, a *temporary* workaround is possible by removing both diodes from the circuit and connecting the head lead wires directly to the release solenoid.



June 22, 2010

## **Aqualanche Valve Replacement Instructions**

Product:	Aqualanche Bucket
Applicabilit	ty: All models prior to April 12, 2010
Operation:	Modified Aqualanche valve replacement instructions
Overview:	The operating amperage of the Bambi Aqualanche bucket was designed to be under 10A. After a period of operation, the operating amperage on some bucket models increased. The higher current draw resulted in tripping the circuit breaker. One other symptom included an audible sound from the valve. The root cause for the above observations is that a leak developed through the actuator shaft seal. A modification has been designed to eliminate the leak. The modified design has been tested extensively and proved to eliminate the leak. This bulletin provides a simple step by step work instruction for replacing the existing valve with the modified valve.

#### Procedure for modifications:

- 1. Disconnect the wire from the existing Aqualanche valve to the power source.
- 2. Loosen 4 bolts which connect the base ring and the support rods.
- 3. Take out the existing valve assembly (everything above the support rods, including the support rods).
- 4. Put the modified valve assembly back on the base ring.
- 5. Use the bolts and the spring washers from step #1 to re-assembly the modified valve to the base ring. Tighten the bolts connecting the two support rods with the lift bar first. Tighten the remaining of bolts.
- 6. Connect the wire from the modified valve to the power source. Measure the amperage of the actuator under different conditions, such as opening, closing, idle at the valve open and closed positions. The amperage readings shall be less than 12A. Contact SEI engineering for further instructions if the amperage reading is more than 12A.



July 12, 2010

## **Bambi Bucket Collapsing Instruction**

Product: All Bambi Buckets (Standard, Torrentula, Aqualanche)

**Applicability:** Models from 5566 and up (The IDS of the smaller model buckets can be collapsed readily by hand)

**Operation:** Collapsing Instant Deployment System (IDS)

**Overview:** The IDS uses a hub and spoke mechanism to expand the mouth of the bucket as soon as the bucket is pulled by the suspension lines. After use, the spokes need to be pushed back inside the bucket (collapsing the IDS) when the bucket is packed for storage. The purpose of this bulletin is to provide a step by step instruction to safely collapse the IDS.

### **IDS Collapsing Instructions:**

Step #1: Lay the bucket on its side with the ballast on the bottom.



**Step #2:** Place a wooden block (i.e. 4" x 4") on a spot so that the IDS Hub will be on the top of the block when the bucket is upside down.



**Step #3:** Lift the bottom of the bucket and raise the bucket into a vertical position. If the bucket is a Torrentula or Torrentula with Powerfill, two (2) people may be required to lift the bucket.



**Step #4:** Check the block location to make sure it is in the correct position when the bucket is upside down.



**Step #5:** Go to other side and pull the bucket to a vertical upside down position.



**Step #6:** If the IDS does not collapse by its own weight, give a slight pull on the bucket shell by using the cinch strap. The bucket will collapse.



**Step #7:** Push the bucket to one side and prepare for storage as per the manual instructions.



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September 2, 2010

## **Standard Valve Replacement Instructions**

Product: Bambi Bucket Dump Valve Replacement Kit

Applicability: All models prior to August 31, 2010

**Operation:** Modified valve replacement instructions

**Overview:** Bambi Bucket fabric dump valves (udders) need to be replaced if damaged during operations. The installation instructions have been modified to correct the previous installation instructions.

Apply a 3/16" thick x 5/8" wide bead of butyl rubber sealant in a circle around the inside the bottom of the bucket shell, orientated above the valve grommets. This creates a seal between the shell and the dump valve fabric.

Position the bucket with the ballast pouch laying on the ground (6 o'clock position), place the new valve into the bucket with the valve mouth (when closed) parallel to the ground. When the two halves of the valve mouth are closed together, the corners are in the 3 o'clock and 9 o'clock positions.

#### Summary of modifications:

- 1) Change the nuts from stainless steel nylock nuts to plated nylock nuts so that the nuts will not gall to the bolts.
- Change the butyl tape from 1/8" thick x 3/8" wide to 3/16" thick x 5/8" wide. The thicker butyl tape (Image A) improves the seal between the valve and the bucket shell.
- Standardize the butyl tape location. All butyl tape must be placed above the grommet circle – new location (Image A). This change improves the seal between the valve and the bucket shell.





February 11, 2011

## Storage / Operating Temperature Range for Bambi Bucket

Bambi Bucket can operate in any atmospheric condition where icing conditions are not present. If icing conditions are encountered during operations, in flight, or on the ground, SEI cannot guarantee the reliable operation of the valve actuating mechanisms nor related components. Operating the Bambi Bucket at 0°C or below may have adverse reaction to the operation of the bucket and to the fabrics used in Bambi Buckets. Please refer to Bambi Bucket Operations Manual (page 17) for information related to proper storage procedures.

This technical bulletin will be included as a supplement to the next Bambi Bucket operations manual publication.

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## Protection Diodes Incorporated Into The Head Lead Wires Of Bambi Bucket Control Heads

April 1, 2011

In response to customer feedback expressing concern with the potential for premature switch contact degradation of the dump release switch, on June 24, 2010 SEI incorporated a suppressor diode ("flyback diode") and a polarity protection diode into our head lead wires. For some customers this change resulted in operational complications, as the head lead wire polarity must be strictly observed. In the absence of hard evidence that dump switches are being impacted negatively, SEI has reverted to the original head lead wire design (no diodes) for all new buckets.

If you are concerned about the inductive load presented by the head solenoid, and you wish to continue using your Bambi bucket with the diode configuration to protect your dump switch, SEI will continue to support this, and all parts will be available upon request.

If your Bambi bucket is equipped with protection diodes and you wish to remove them, please follow the two-step process outlined here:

a. loosen the terminal screws and remove the diodes

or

- b. cut their legs near the terminal body
- 1. Remove diodes
- 2. Relocate the white wire to the center terminal position, as shown in the illustration



Bambi Bucket Bulletins April 1, 2011

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Source URL: <u>http://www.sei-ind.com/news-events/safety-bulletins/protection-diodes-incorporated-head-lead-wires-bambi-bucket-control-heads</u>



June 28, 2011

## Working instruction for the retrofit of standard valve

Product:	Product: Standard Bambi Bucket				
Applicability:	2024, 2732, 3542				
<b>Operation:</b> Working Instruction for the retrofit of the standard valves					
Overview: de no ab	A motion study of the valve movement during a dump cycle monstrated that the end of the valve seal did not always "flip" back to the rmal closed position consistently. This characteristic may impact the ility for the valve to achieve a tight seal after each dump cycle. The modification outlined herein significantly improves the motion to hieve a tight seal on the medium series valve after each cycle.				

#### Procedure for modifications:

- 1. Remove the last purse strings on both ends of the valve opening.
- 2. Bolt the end of the valve opening together through the grommets used for the last purse string, with one of ¼"-20 x 1"LG S.S. bolts (p/n: FBSC01410), one of ¼"-20 S.S. Nylock nut (p/n: FNSC0204), two of ¼" S.S. washers (p/n: FWS0104H), as shown on the photos below. Bolt both ends of the opening. This will ensure that the corners of valve opening can be flipped back properly.





- 3. Tie the purse strings with green marks on the first set of the grommets from each end. The purse strings with green marks are marked at factory with the length of 3" shorter than regular length. This is an extra step to ensure the corner of the opening flips back properly.
- 4. Tie the purse strings with red marks on the second set of the grommets from each end. The purse strings with red mark are marked at factory with the length of 1" longer than the regular length.
- 5. Tie the purse strings with the black marks on the rest of the grommets. The purse strings with black mark are marked at factory with the regular length.

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## Proper Set of the Screw Height in the Control head

#### August 16, 2011

One of our customers had a problem in releasing a load in a standard valve Bambi Bucket. The valve did not operate in a consistent and regular manner. As part of SEI's ISO Quality Assurance program and following an internal engineering investigation, our senior production assembler identified that the screw shown on the attached photo was set too low.

The customer was informed to reset the screw height and has since solved the problem. Bambi engineering and firefighting division have created a customized gauge to allow Bambi Bucket production assembly staff to standardize the depth of the screw set. We are sharing this information with our sales representatives and service centers worldwide so that this problem can be both recognized with our customers and mitigated through troubleshooting in the event this is required.



Bambi Bucket Bulletins August 16, 2011

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Source URL: http://www.sei-ind.com/news-events/news/proper-set-screw-height-control-head



June 8, 2012

Working instruction for the retrofit of standard small valve

Product:	Standard Bambi Bucket
Applicability:	6072, 8096, 1012, 1214, 1518, 1821
Operation:	Working Instruction for the retrofit of the standard small valves
Overview: A tha po to T a t	motion study of the valve movement during a dump cycle demonstrated at the end of the valve seal did not always "flip" back to the normal closed sition consistently. This characteristic may impact the ability for the valve achieve a tight seal after each dump cycle. he modification outlined here significantly improves the motion to achieve ight seal on the medium series valve after each cycle.

#### Procedure for modifications:

- 1. Remove the last purse strings on both ends of the valve opening.
- 2. Bolt the end of the valve opening together through the grommets used for the last purse string, with one of <sup>1</sup>/<sub>4</sub>"-20 x 1"LG S.S. bolts (NAV#:000370, SBT#: FBSC010410), one of <sup>1</sup>/<sub>4</sub>"-20 S.S. Nylock nut (NAV#: 001662, SBT#: FNSC0204), two of <sup>1</sup>/<sub>4</sub>" S.S. washers (NAV#: 001834, SBT#: FWS0104H), as shown on the photos below. Bolt both ends of the opening. This will ensure that the corners of valve opening can be flipped back properly.





- 3. Tie the purse strings with green marks on the first set of the grommets from each end. The purse strings with green marks are marked at factory with the length of 3" shorter than regular length. This is an extra step to ensure the corner of the opening flips back properly.
- 4. Tie the purse strings with the black marks on the rest of the grommets. The purse strings with black mark are marked at factory with the regular length.



Cinch straps no longer provided with Torrentula buckets

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Date:	July 11, 2013	I
Product Line:	Bambi Bucket	I
Models:	Torrentula Bucket (all sizes)	ļ
Subject:	Cinch straps no longer provided with Torrentula buckets	ļ
Reference:	http://www.sei-ind.com/products/torrentula-bucket	ļ
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## Details

SEI Industries will no longer install cinch straps on new Torrentula Valve Bambi Buckets.

The cinch straps on standard Bambi Buckets function to reduce the water load in the bucket by restricting the expanded volume of the bucket. Torrentula equipped buckets are able to shed extra load by opening the valve, making the cinch straps obsolete.

Removing the cinch straps will reduce weight and eliminate a possible catch point.



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Date: 30 July 2013 Product Line: Bambi Models: BB5566 – HL9800, BBT5566 – BBTHL9800 Subject: Suspension line link connectors Reference: <u>Bambi Bucket (5566 – HL9800 Models) Service Manual (p.46)</u>

## Background

New suspension lines for 5566 buckets and larger will come with link connectors to allow for easy replacement of single suspension lines and pairs without replacing an entire half-set. The change also reduces the likelihood of the thimbles jamming on the lower control head shackles.

The new links allow customers to quickly replace a line with the same hammer and punch already required to remove the lower links. Replacement instructions can be found in the 5566-HL9800 manual.

Customers without the new suspension lines will likely need to purchase a new half-set if they have a line fail, but subsequent failures may be resolved by purchasing a single line or pair.

All updated suspension lines for 5566 and larger buckets are 3 inches shorter to accommodate the link.

## Recommendations

If a suspension line on your Bambi Bucket is damaged or fails, it must be replaced. A suspension line displaying any noticeable kinking or fraying should be replaced. If your suspension lines are new models with links included, you should replace the damaged line individually. Individual lines come in singles and pairs depending on their position on the bucket. If your suspension lines have not been updated with links, replacement lines should still be ordered as a half-set. Refer to Figure and Figure for clarification.







Figure 1 – Old Style (Order Half-Set Replacement)



Figure 2 - New Style with Connecting Links (Order Single or Pair)

This Technical Bulletin is available on the SEI website. http://www.sei-ind.com/resources/manuals

For further details, please contact the following SEI representatives.

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#### Date: January 13, 2014

Product Line: Bambi

Models: Bambi Max 16" Valves

#### Subject: New Seal Kit for 16" Valve Actuators

Reference: <u>http://www.sei-ind.com/sites/default/files/pdf/2013\_Bambi\_Max\_1518-</u> <u>3542\_Service\_Manual\_vB.pdf</u>

#### Background

There have been several occurrences of valve failures due to water ingress on the motor assembly housing. The cause of this problem has been determined to be caused by faulty gaskets.

The original motor gaskets were made by hand. When SEI went into production, it switched to a gasket which was punched on a machine. The holes for the bolts were subsequently made oversized due to the punch design. During installation, if the gasket was misaligned, the water could get through the bolt holes and into the motor chamber.

#### Solution

SEI took two steps to resolve this issue:

1. The motor gasket now features smaller holes punched by hand. This prevents any water from getting through the holes in the gasket.

2. The screws which secure the motor cover now have a built-in sealing ring for additional protection against water ingress.

SEI is providing customers with the affected valves upgrade kits (part number 010755) containing the new bolts and gaskets. These can be easily installed by the customer.

#### Tools Required

- 1x 7/64 Allen Key
- 1x 5/16 Hex Head Wrench
- Loctite 242 or equivalent thread locker

#### Instructions

- 1. Remove the bolts fastening the IVC to the top plate in order to access the front motor plate screws
- Remove the 6 small cap screws fastening the actuator enclosure to the front motor plate using a 7/64 Allen Key

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- 3. Remove the actuator enclosure and gasket
- 4. Dispose of the old gasket and cap screws
- 5. Clean the top of the enclosure and the inside of the front motor plate to ensure a proper seal
- 6. Install the new gasket and cap screws
  - a. Ensure that the enclosure sits evenly on the gasket
  - b. Either Torque all screws to 20 in-lbs using a torque wrench, or apply Loctite 242 or an equivalent product to the threads and torque by hand.
  - c. Torque screws in a crossing pattern to ensure even tension on the enclosure
- 7. Fasten the IVC to the top plate
- 8. Test the valve and refer to the service manual if any calibration is required







Date: January 17, 2014

Product Line: Bambi

Models: Standard Bambi Buckets

#### Subject: Purse String and Valve Update

## Details

Most customers find that changing purse strings is a frustrating exercise and can be an expensive one if it is required to get a bucket flying. To reduce the frequency of purse string replacement on a bucket, SEI has decided to increase the size of the purse strings on medium and small valve buckets and to change the stainless steel grommets used on all the valves to lower friction brass grommets.

Small buckets (6072-1821) using #4 nylon cord will now use #5 nylon cord and similarly medium buckets (2024-3542) using #5 nylon cord will now use #6 nylon cord. The purse strings on the large buckets will not be affected by this change, but the grommets will be changed on all valves.

This change has been informed by recent testing that has shown that the new strings and grommets will have a significantly longer service life. This testing took into account salt water operating conditions and looked at numerous potential purse string materials.

Purse strings will be sized up immediately, while current stock of valves with stainless grommets will be used to depletion before the new valves are installed in any buckets. This change is considered a quality improvement only. There are no functional concerns with buckets using the stainless grommets or smaller purse strings. Part numbers for valves and purse string assemblies will remain the same, since they are interchangeable.





#### Date: April 7, 2014

Product Line: Bambi

Models: Torrentula Remote Power Supply

#### Subject: New Grounding Cable and Kit for Torrentula Remote Power Supplies

Reference: http://www.sei-ind.com/sites/default/files/pdf/RPS%20Ops%20Manual%20RevO.pdf

## Background

It has been reported that some customers have experienced electrical shocks when operating Torrentula Remote Power Supplies. This is a result of static build up in the modular case.

### Solution

All new Torrentula Remote Power Supplies will now be provided with a ground cable that connects to the charging receptacle on the power supply and has an alligator type clip on the other end for the operator to attach to a grounding point in the aircraft.

Additionally, grounding cable kits will be provided to all operators currently using the Torrentula Remote Power Supplies.



Date: August 20, 2014 Product Line: Bambi Models: BBX4453, BBX5566, BBX6578, BBX7590 Subject: Actuator Cable Guard Reference: DC2014.09

## Background

There have been multiple failures of Bambi MAX IVC's and actuators on the 25" valve. Investigation into the failures has identified the problem as damage to the electrical cable at the point it enters into the actuator. Water then enters the cable and migrates into the actuator and IVC causing a failure. The damage to the electrical cable is being caused by the IDS restrainer cable during deployment. In one case, the cable gland was torn off.

### Recommendations

A cable guard has been added to protect the electrical cable and gland from damage. The guard mounts to the top plate of the valve using an existing bolt hole. The guard can be retrofitted in the field.





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Date: November 21, 2014

Product Line: Bambi

Models: All Bambi Max Models

Subject: New Bottom Seal Clamps

### Background

Bambi Max bottom seals are held to the valve tube using hose clamps. SEI has recognized that the clamps specified in the original design may come apart if the bottom seal is pulled off the valve tube.

### Solution

SEI will now use two gear clamps to hold the bottom seal to the valve tube. These gear clamps will not come apart if the bottom seal is forced off the valve tube.

16" Max valves (1518-3542) will use 2x **011522** (CLAMP,GEAR,8",SS) per valve. 25" Max valves (4453-7590) will use 2x **011527** (CLAMP,GEAR,12-1/2",SS) per valve.

Please note that the original clamps do not have any detrimental impact on bucket performance.



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Date: February 19, 2015

Product Line: Bambi

Models: Sacksafoam I

Subject: New Sacksafoam Controller

Reference: The new Sacksafoam I manual will be released soon. http://www.sei-ind.com/sites/default/files/pdf/2008%20Sacksafoam%20II%20Model%205598%20Manual.pdf http://www.sei-ind.com/sites/default/files/pdf/2008%20Sacksafoam%20III%20Operations%20Manual.pdf

### Details

SEI is introducing a new Sacksafoam Controller (SFC). This SFC will supersede the original controller for customers with bladder style Sacksafoam I systems. Currently, the new SFC is not directly compatible with Sacksafoam II or Sacksafoam III systems. SEI will continue to provide

the original controller to service Sacksafoam II's and Sacksafoam III's while stock exists.



Figure 1 - SFC with DZUS mounts and Adapter

The SFC is operated with a glove compatible touch screen. The SFC includes an adapter that connects to the existing Sacksafoam wiring harness and includes a D-sub connector that can be used to connect with a remote injection switch. See Figure 2 for details.





DZUS rail adapters are available for the SFC. Please note that the product dimensions have changed and the new SFC will not fit in the same location on a DZUS rail system as the original Sacksafoam controller.



Figure 2- Recommended wiring

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Date: May 11, 2015 Product Line: Bambi Models: Bambi Power Pack Subject: Power Pack Grounding Harness Reference: http://www.sei-ind.com/sites/default/files/pdf/2013\_Bambi\_Power\_Pack\_Manual\_vB.pdf

## Background

It has recently come to the attention of SEI that under certain conditions, static charge can build up in the Bambi Power Pack and shock operators. So far, this problem has only been observed in large helicopters using synthetic longlines.

## Recommendations

To eliminate this issue, SEI has introduced a new grounding harness (part number 011890). The grounding harness interfaces with the Power Pack and the existing Power Pack bucket harness (008902). To install the grounding harness, plug in the 3-pin connectors to the Power Pack and bucket harness, then secure the alligator clip to any exposed metal on the airframe.

If you have experienced static discharge while operating your Power Pack, please contact SEI to order a grounding harness. Harnesses will be provided under warranty.







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Date: June 1, 2015 Product Line: Bambi Models: Bambi Max Subject: IVC cable installation

## Background

Older Bambi Max manuals instruct operators to fasten the IVC power cable to the IDS hub and deployment cable using zip-ties. Operators are instructed to provide some slack during installation. Despite this, SEI has observed incidences of the power cable being pulled from the strain relief on the IVC, resulting in water ingress. The zip-tie may gradually work along the power cable over time and eliminate slack.

## Recommendations

SEI recommends that operators avoid fastening the power cable to the IDS or IDS deployment cable all together. Instead the operators should fasten the cable directly to the bucket head with 4 zip-ties as illustrated in Figure 1. Operators must ensure that there is at least 6" of slack in the line. It is recommended that operators quickly check that there is adequate slack in the line before flight.

New buckets will already have the installation shown in Figure 1.





Figure 1 - Recommended Layout

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Date: September 16<sup>th</sup>, 2015 (revised May 19<sup>th</sup>, 2016)

**Product Line: Bambi** 

Models: Bambi Max

Subject: Bambi Max Guide Rod & Bolt Changed

### Background

SEI has been made aware of two incidences of guide rods failing on 25" Bambi Max valves. In both cases the failure occurred at the interface between the guide rod and the sheave bar. Both failures are considered to be the result of impact, but the exact details are still unknown.

### **Recommendations**

SEI is revising the guide rods used on 16" and 25" Bambi Max valves. The new guide rods will feature shorter threaded holes to improve strength at the location of stress concentrations. The new 16" guide rods will require shorter bolts on the top and bottom plates to be properly installed in the valve. The new bolts will replace 000391 (3/8-16 x 1" bolt).

000231 (16" Valve Guide Rod) will use 012339 (3/8-16 x 7/8" bolt).

000232 (25" Valve Guide Rod) will continue to use 000391 (3/8-16 x 1" bolt).

The smaller bolts can be used with the older guide rods as well as the new ones. Existing guide rods are not considered to have a high risk of failure and do not need to be replaced on existing buckets.

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Date: August 19<sup>th</sup>, 2016

Product Line: Bambi

Models: All model with Powerfill Snorkel

Subject: Introduction of Powerfill Quick Connect

## Background

SEI has developed a new style of Powerfill Snorkel that will supersede the standard bolt-on Powerfill Snorkels that many of our customers are familiar with. The new product has a new elbow and flange that couple together with Cam-Lock fittings. This allows customers to quickly and easily remove their Powerfill Snorkel from their bucket for storage, maintenance and also to interchange the system with other buckets that have the flange assembly.

This upgrade only affects the elbow and flange of the snorkel. An existing Snorkel can be upgraded to a Cam-Lock equipped snorkel by simply replacing these components. Upgrading to a new Cam-Lock equipped Snorkel or switching between the bolt-on and Cam-Lock style snorkels requires only basic hand tools and can be done in the field.

The bolt-on style Powerfill Snorkel will continue to be supported by SEI, but will no longer be sold as new.

### **Recommendations**

Customers interested in purchasing a new Powerfill Snorkel or upgrading their existing snorkels should review the following table to see what they will need to order:





PARTS FOR CUSTOMERS WITH OLD SNORKEL SYSTEM							
012829	SNORKEL,CAMLOCK,RETROFIT,KIT	<ul> <li>Pump elbow, camlock flange, and hardware</li> <li>Upgrade existing pump and flange assembly</li> </ul>					
011197	FLANGE,4",CAMLOCK,FABN	<ul> <li>Camlock flange only (no flapper valve)</li> <li>Upgrade the flange assembly on a second bucket</li> <li>Needs additional mounting hardware</li> </ul>					
011196	ELBOW,4",CAMLOCK,FABN	<ul> <li>Camlock elbow only</li> <li>Upgrade a second pump</li> </ul>					

## PARTS FOR CUSTOMERS WITH NO SNORKEL SYSTEM



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012830	POWERFILL,SNORKEL,CAMLOCK,KIT 2024,w/FLANGE				
012831	POWERFILL,SNORKEL,CAMLOCK,KIT 2226,w/FLANGE	<ul> <li>Pump and flange assembly with flapper</li> </ul>			
012832	POWERFILL,SNORKEL,CAMLOCK,KIT 2732,w/FLANGE	<ul> <li>New bucket installation</li> <li>Old bucket that does</li> </ul>			
012833	POWERFILL,SNORKEL,CAMLOCK,KIT 3542,w/FLANGE	not have a snorkel			
012834	POWERFILL,SNORKEL,CAMLOCK,KIT 4453,w/FLANGE		Googooot		
013019	INSTALL,POWERFILL,KIT,2024-2226	<ul> <li>Shortened battens,</li> </ul>			
013020	INSTALL, POWERFILL, KIT, 2732	fabric and tools required for installation			
013023	INSTALL,POWERFILL,KIT,3542	<ul> <li>Customer installation on bucket that does</li> </ul>			
013024	INSTALL,POWERFILL,KIT,4453	not have a snorkel			
012835	PUMP,POWERFILL,SNORKEL,CAMLOCK 2024,NO FLANGE		-		
012836	PUMP,POWERFILL,SNORKEL,CAMLOCK 2226,NO FLANGE	• Dump unit only			
012837	PUMP,POWERFILL,SNORKEL,CAMLOCK 2732,NO FLANGE	<ul><li>Spare pump</li></ul>			
012838	PUMP,POWERFILL,SNORKEL,CAMLOCK 3542,NO FLANGE				
012839	PUMP,POWERFILL,SNORKEL,CAMLOCK 4453,NO FLANGE		doccool		
012840	FLANGE,SNORKEL,CAMLOCK,ASSY	<ul> <li>Flange assembly with flapper valve</li> <li>Extra flange assembly for a second bucket</li> </ul>			





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Date: September 28<sup>th</sup>, 2016

Product Line: Bambi

Models: Medium Bambi Max Buckets (4453-7590)

Subject: Bracket added to 25" Bambi Max Valves

### Background

SEI will now include a new bracket with all 25" Bambi Max Valves (002299). The bracket is designed to restrain the cable sheathing used for the Bambi Max Powerfill system. Customers that do not have a Powerfill system may also find the bracket useful when removing and installing the valve in the bucket.

### Recommendations

Customers with Bambi Max valves with Powerfill who do not already have this bracket, should contact SEI to receive the bracket and hardware. The bracket is not a required part for Bambi Max customers that do not have a Powerfill system.

TIEM	PARTNUMBER	DESC RIPTIO N	QTY
1	013295	BRACKET,SLEEVE	1
2	011530	SCREW, SC, 1/4-20 x 1, SS	2
3	001852	WASHER, LOCK, SPLIT, 1/4, SS	2
4	001662	NUT, HX, NYL, 1/4-20, SS	2







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Date: September 28<sup>th</sup>, 2016

Product Line: Bambi

Models: Sacksafoam Controller

Subject: Standard Sacksafoam Controller Harness Changed

## Background

SEI is changing the harness that comes standard with the new Sacksafoam Controller (SFC). The new harness is designed to allow customers who have previously installed the older Sacksafoam controllers (non-touch screen versions) to continue to use their existing wiring configuration.

This new harness is designed to allow an operator installed switch to provide a sinking signal to the controller. One end of the switch must connect to aircraft ground while the other connects to the new harness. The new harness is described as "CABLE, ADAPTER, SINKING, SFC" and listed by part number 012913.

The superseded harness requires a sourced signal from an operator installed switch. The recommended installation uses two wires connected to the switch and the D-Sub connector on the superseded harness. The superseded harness is described as "CABLE, ADAPTER, SOURCING, SFC" and listed by part number **010603**.

## Recommendations

Customers who want to upgrade to the new SFC and have their helicopters wired for the older controller can simply order the standard SFC and will receive the sinking harness 012913. Customers installing the SFC for the first time can also order the standard SFC and receive 012913.

Customers who have already installed a new SFC with the sourcing harness will need to ask for the sourcing harness 010603 when they order a new SFC assembly.

Please see the wiring diagrams below for reference.











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Date: October 6<sup>th</sup>, 2016

Product Line: Bambi

Models: Bambi Mobility Sled

Subject: Introduction of the 4-Wheel Mobility Sled

## Background

SEI has provided the Mobility Sled to help transport large Bambi Buckets since 2012. The original product had three wheels and featured a brake that applied automatically when the handle was lowered. The cart was designed to roll into a CH-47 helicopter. This system works well for operators using all three ramps, but is not effective if the customer is only using two ramps. Because many customers do not regularly use three ramps, SEI has introduced a four wheeled version of the mobility sled. The new mobility sled uses a different braking system from the previous version. There is a brake on each front wheel and they must be engaged and released manually. The new design is shown in the images below.

## Recommendations

The new Mobility Sled can be ordered under part number 012770. The three wheeled Mobility Sled will still be available as part number 009383.

Customers with three wheeled Mobility sleds that would like to convert them to the four wheeled version can do so by purchasing 2x 012861 (wheel and brake assembly) and 1x 012779 (winch mount assembly) to replace the front wheel and brake assembly on the three wheeled cart.







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Date: November 30<sup>th</sup>, 2016

Product Line: Bambi

Models: Bambi Torrentula

Subject: 5 Pin Cannon plugs replaced with Sure-Seal® Connectors

## Background

The Torrentula buckets have historically had problems related to dipping control heads in water. The 5 pin connectors used to send the control signals to the control box from the head, have been identified as the root of many of these problems. The mil-spec connectors are not watertight, allowing the low current signals to short when the connector gets wet.

## Recommendations

To resolve this problem SEI is replacing the 5 pin mil-spec connector with 5 pin Sure-Seal<sup>®</sup> connectors. These new connectors are fully waterproof, very robust and will break apart if the bucket is released from the hook.

SEI recommends installing the new connectors at the control head, longline, and at the bucket end of harness H2.

All the materials listed in the following instructions are included in the conversion kit 013563.

## Installation Instructions

Tools Required

- Crimping Tool (SEI No. 013399 or equivalent)
- Sure Seal<sup>®</sup> insertion tool 070306-0000 or an equivalent
- Wire Stripping Tool
- Knife





#### Materials Required

SEI Item No.	Description	Quantity Without Longline	Add for Longline	
013394	5 Conductor Plug	1	1	
013395	5 Conductor Receptacle	1	1	
013396	14-18 AWG Pin crimp contact	10	10	
013398	14-18 AWG Socket crimp contact	10	10	
001471	Heatshrink, Tube, 3/4, 3:1, BLK	6"	6″	

#### Procedure

- 1. Cut the cable as close as possible to the Amphenol connector
- 2. Strip the cable jacket 2 inches
- 3. Remove the fibre insulation



4. Strip conductor insulation 5mm. Stripping more than this may reduce the effective grip of the crimped contact



5. Refer to the schematic at the end of these instructions and install the crimped contacts using Crimping tool 013399 or an equivalent. Note that the longer wings are designed to grip the conductor insulation







- 6. Slide a 3" section of heat shrink over the cable
- 7. Refer to the schematic at the end of these instructions and insert the pins and sockets into the connector. Push the contacts into the connector by applying pressure to the rear flange of the contact. Use the Sure-Seal<sup>®</sup> insertion tool 070306-0000 or an equivalent. The contacts should finish flush with the front face, as shown in the images below



Plug (Left) and Receptacle (Right)

8. Slide the heat shrink over the back of the shell and apply heat to fit it to the connector.







9. Repeat this process on the mating end.

#### Aircraft (Top) Side of Harness

Obsolete Connector	Pin	18/3 Shielded Cable	16/5 SOW Cable	Heat Shrink	Sure Seal Pin	Crimp	Sure-Seal <sup>®</sup> Connector
Amphenol	Α	White/Blue	Red		1	Pin	Plug
97-3101A-	В	White/Orange	White	jų m	2	Socket	
14S-05S	С	White	Green	3:1 ngt	3	Socket	
(socket)	D	Shield	Black	le %	4	Socket	
	E	Shield	Orange	, m r	5	Pin	

#### Bucket (Lower) Side of Harness

Obsolete Connector	Pin	18/3 Shielded Cable	16/5 SOW Cable	Heat Shrink	Sure Seal Pin	Crimp	Sure-Seal® Connector
Amphenol	А	White/Blue	Red		1	Socket	Receptacle
97-3106A-	В	White/Orange	White	р м́	2	Pin	
14S-05P	С	White	Green	3:1 ngt	3	Pin	
(Plug)	D	Shield	Black	le "	4	Pin	
	Е	Shield	Orange	m >	5	Socket	











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Date: January 20, 2017

Product Line: Bambi

Models: Bambi Bucket 5566-HL9800

Subject: Large Tripline Design Change

## Background

Since changing to stainless steel Triplines for the large Bambi buckets in 2015, multiple cases have been reported of the top stop swage on the bullet assembly failing. In all cases the swage slipped, and cause the bullet assembly to separate. This prevents the valve from resetting and allowing the bucket to hold water.

SEI is updating the design of the large Triplines (005333 & 005336) to eliminate this issue. The new design will feature a stainless steel ball swage and a spacer instead of the single copper swage at the top of the bullet assembly.



## Recommendations

New Triplines from SEI will feature the new design. Due to the small number of reported incidents, SEI recommends that customers continue to use their Triplines with the old design if they are not experiencing issues with them.





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Bambi Bucket 8096 Feb 2 2017 Product: Bambi Bucket Models: Bambi Bucket 8096

Subject: 8096 Spoke Length Short

Background:

Recent 8096 buckets have met weight requirements but IDS spokes consistently need to be shortened for the IDS to collapse properly. Shortening the spokes by 1/2" creates IDS geometry that matches the geometries of other models more closely and will allow the IDS to collapse properly.

A new part number will not be created for the shorter spokes. The new spokes should fit as replacements to the longer versions without having a noticeable effect on bucket function. The part description will change to reflect the new design

Recommendations:

No action required.



Date: January 26, 2017

Product Line: Bambi

Models: Bambi Bucket 6072-1821

Subject: Small Tripline Design Change

## Background

Triplines failing immediately below the bullet assembly has been a recurring issue on small Bambi Buckets. Several design changes have reduced the number of occurrences, but the issue has persisted on small buckets. The root cause on small buckets is believed to be the cable flexing as the bullet hits the pulley. A new design allows the cable to pivot freely immediately after the bullet in order to eliminate this issue. It has the additional benefit of allowing customers to replace only the exposed part of the tripline. This allows customers to avoid removing the tripline from the spring reel if damage is isolated to the lower half of the tripline.

The new designs 013055 and 013056 will replace 005335 and 005332 respectively. The new design is a direct replacement, and does not require any additional modification.



## Recommendations

New triplines made by SEI will use the new design. Customers with the old design should continue to use those triplines if they have not encountered problems with them.





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Date: February 17, 2017

Product Line: Bambi

Models: All Bambi Buckets

Subject: Preventing Aquatic Invasive Species Transport

## Background

Preventing the transport of harmful invasive species between bodies of water is important in order to protect vulnerable marine habitats. Invasive organisms can be transported between bodies of water by Bambi Buckets, so buckets should be properly decontaminated when changing between untreated water sources in sensitive areas.

Different forestry services and government agencies may already have guidelines or regulations in place to address this issue. Customers should always adhere to local regulations and guidelines where they exist. This document is only intended to provide supplemental information.

## Recommendations

In many instances thorough drying is considered an acceptable method of decontamination. Clean the bucket of any debris and allow the bucket to dry in the sun until it is completely dry to the touch

When there is not adequate time to thoroughly dry the bucket, alternative decontamination methods include power washing using hot water and chemical decontamination.

#### Power Washing

Power washing is an acceptable method of decontamination. Water temperature should not exceed 150° F and extra caution should be taken when washing around the bottom of valves to avoid damaging the butyl tape seal.

#### **Chemical Decontamination**

The Bambi Bucket fabrics can tolerate exposure to diluted bleach and quaternary ammonium compounds, but extra caution should be taken to thoroughly rinse the bucket with fresh water after treatment, as the chemicals used accelerate corrosion of the metal components of the buckets. Decontamination should be performed a safe distance away from the helicopter.





The National Wildfire Coordinating Group has published the following recommendations for decontaminating **general equipment** with quaternary ammonium compounds and bleach solutions (published in "Guide to Preventing Aquatic Invasive Species Transported by Wildland Fire Operations"). Please note that the National Wildfire Coordinating Group does not recommend chemical decontamination for helicopter buckets.

### To Decontaminate Gear with Quat Disinfectants

The quaternary ammonium formulations *Super HDQ*<sup>®</sup> and *Green Solutions High Dilution256*<sup>®</sup> (which replaces the discontinued *Sparquat* 256<sup>®</sup>) were recently found to be most effective against a variety of AIS. *Green Solutions Neutral Disinfectant*<sup>®</sup> is a less concentrated version of *Green Solutions 256*<sup>®</sup>. These formulations can be used at concentrations according to their labels (see below). Soak gear in a bucket for 10 minutes. Alternatively, gear may be disinfected by spraying with quat from a backpack weed sprayer or spray bottle. Afterwards, **rinse gear thoroughly in clean water**. Quat compounds are highly toxic to aquatic organisms but are immobile in soil. Keep effluent, containing this product, at least 100 feet from lakes, ponds, streams or other waters. Do NOT allow product to enter storm drains, lakes, streams, or other waterbodies.

Volume of Tap Water	Super HDQ®	Green Solutions Neutral Disinfectant High Dilution 256®	Green Solutions Neutral Disinfectant® (this product is a lower concentration)	Soak Time	Spray Time
1 gallon water	½ oz	½ oz	2 oz	10 min	5 sec spray; let stand 10 minutes; rinse

### To Decontaminate Gear with Chlorine Bleach

Bleaches are corrosive to canvas, gaskets, and metal and have limited effectiveness against snails. However, bleaches are extremely effective against other invasive organisms, especially pathogens, and the bleach concentration below has been found to be effective for chytrid fungus and other AIS. Soak gear in a bucket for 10 minutes. Afterwards, **rinse gear thoroughly in clean water**.

Volume of Tap Water	" <i>Regular Clorox®</i> <i>Bleach</i> " (6% sodium hypochlorite)	Soak Time
1 gallon water	9 oz	10 min





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#### June 6, 2017

#### Standard Bambi Bucket Valve Gasket

Product:	Bambi Bucket
Models:	Bambi Bucket 6072 – 3542
Subject:	Standard Bambi Bucket Valve Gasket

Background:

Bambi Bucket valves have been installed using butyl tape to seal the valve and prevent excessive

leaking. While effective, the butyl can be messy to work with and creates extra work when replacing a valve.

#### **Recommendations:**

To improve the process of changing a valve, SEI will begin using gaskets in place of the butyl tape on small and medium sized valves.

Part Number	Description	Model	Range
004356	GASKET,SHELL	,SM	6072BB-1821BB
004357	GASKET,SHELL	,MD	2024BB-3542BB

When installing the valve with the new gasket, do not use any butyl tape, and put the gasket in place after inserting the bolts through the bottom of the shell.

This Technical Bulletin is available on the SEI website. /resources/manuals

For further details, please contact the following SEI representatives.

Contact Robert Button, P.Eng Product Engineer, Firefighting Division 604-946-3131 ext. 423 robert@sei-ind.com



Date: December 28, 2017

Product Line: Bambi

Models: All Standard Bambi Buckets

Subject: Data Tag Relocation

## Details

In order to protect the serial and data tags on the buckets from wear, they have been relocated from the control head to the bucket shell on new standard Bambi Buckets. The instructions found on the head will remain, but all model specific information will be found on the data tags located inside the shell near the top webbing. This change has been implemented for all standard Bambi Bucket models. See the images below for reference.







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Date: January 26, 2018

Product Line: Bambi

Models: All Sacksafoam Bladders

Subject: Sacksafoam Bladder Flange Change

## Details

The electrical connection on the Sacksafoam bladder will change to improve the robustness of the electrical connection in the bladder, and to improve the containment of the concentrate.

The new design uses a waterproof flange mounted circular connector at the outer flange. New Sacksafoam bladder kits will also include a new electrical harness design. The new design separates the old design, 004317, into two harnesses. One for the Bladder connection (014635, HARNESS, LOWER, SACKSAFOAM) and one for the controller connection (014636, HARNESS, UPPER, SACKSAFOAM). The bladder harness is now made with heavier cable, and will include a waterproof NEMA 6-15 connector for the break-away connection.

Sacksafoam longline plug sets (001119) will also change to include waterproof NEMA 6-15 plugs.



Figure 1- New Flange Design







Figure 2- Lower Wire Harness (014635)

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Date: March 27, 2018

Product Line: Bambi

Models: Bambi Bucket 2024-4453

Subject: Medium Tripline Design Change

### Background

Triplines failing immediately below the bullet assembly has been a recurring issue on medium Bambi Buckets. The root cause on medium buckets is believed to be the cable flexing during take-off and landing. A new design allows the cable to pivot freely immediately after the bullet to eliminate this issue.

The new design, 013057, will replace 005334. The new design is a direct replacement, and does not require any additional modification.



## Recommendations

New triplines made by SEI will use the new design. Customers with the old design should continue to use those triplines if they have not encountered problems with them.





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