

# Interchangeable BTI Seating™

by **SafeGuard** 

## School Bus Seating Usage and Care Manual



FlexSeat®  
with Integrated  
Child Seat (ICS)



ICS  
(Shown with optional  
lap-shoulder belts)



FlexSeat  
(Shown without ICS)

### Lap Shoulder Belts

For all occupants greater than 40 lbs (18 kg) and 40 in. (102 cm) tall

### Integrated Child Seat

For all occupants at least 2 years of age, between 22 - 85 lbs. (10 - 39 kg) and 49 in. (124 cm) or less tall

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**Store this instruction manual behind the ICS removable seat pad (if equipped) or with the vehicle for future reference.**

## General Information

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The SafeGuard team truly cares about child passenger safety and are committed to providing innovative restraints that offer the utmost in safety and ease of use. While no restraint can prevent injury in every situation, proper installation and use of a restraint can substantially reduce a child's risk of serious injury or death.

Follow all the instructions of this manual and the instructions of the vehicle manufacturer. Failure to properly use this restraint may result in serious injury or death of the child being transported. If you have any questions after reviewing the instructions, please contact us at:

**SafeGuard Customer Service:** [www.safeguardseat.com](http://www.safeguardseat.com) or 1-877-447-2305.

**This restraint system conforms to all applicable Federal Motor Vehicle Safety Standards.**

## Registration Information - For Aftermarket Seats

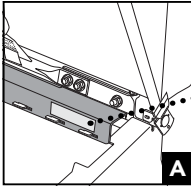
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Please fill out the prepaid registration card attached to the bus seat and mail it today or register online at the website listed below.

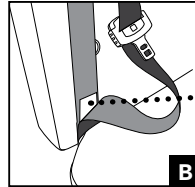
Restraints could be recalled for safety reasons. You must register this restraint to be reached in a recall. Send your name, address, and the restraint's model number, manufacturing date, and serial number to IMMI, 18881 IMMI Way, Westfield, IN 46074 or call 1-877-447-2305 or register online at [www.safeguardseat.com/register](http://www.safeguardseat.com/register).

For recall information, call the U.S. Government's Vehicle Safety Hotline at 1-888-327-4236 (TTY: 1-800-424-9153), or go to <http://www.NHTSA.gov>.

The seat model number and manufacture date are located on a label that is on the lower seat frame. Lift open seat cushion to view label (see illustration "A" ). The lap-shoulder belt restraint system part number is located on a label sewn to the end of the web at the belt anchorage (see illustration "B").



• Seat model number and manufacture date



• Lap-shoulder belt restraint system part number

## General Warnings

### **⚠ WARNING! DEATH or SERIOUS INJURY can occur:**

Failure to follow these warnings can result in serious injury or death. Please read and follow all instructions carefully.

- Follow all instructions on the bus seat and in this manual.
- Do not modify this seat and restraint or use any accessories or parts supplied by other manufacturers. Use only SafeGuard replacement parts.
- Never use the restraint system if it is damaged or missing parts. Do not use a cut, frayed, or damaged harness or seat belt. Replace harness or seat belt immediately.
- Do not use bleach or harsh cleansers on seat cushions, webbing, or buckles. Never lubricate the seat belt buckles.

## Seat Features and Options

### Base Seat

Standard FMVSS 222 Seat Back (readily converts to other seat versions)

FMVSS 210 Lap Belt/ Lap-Shoulder Belt Ready Frame



### FlexSeat®

Shoulder Height Adjuster

Locking Latch Plate

Lap-Shoulder Belt Restraint

Seat Belt Buckles



### Two-Belt Seat/ Integrated Child Seat

Shoulder Height Adjuster

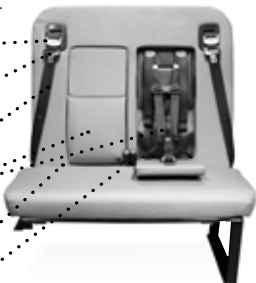
Locking Latch Plate

Lap-Shoulder Seat Belt (optional)

Integrated Child Seat (2)

Lower LATCH Anchors (optional)

Seat Belt Buckles



### FlexSeat with Integrated Child Seat

Shoulder Height Adjuster

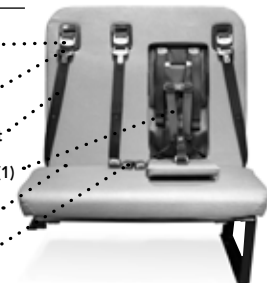
Locking Latch Plate

Lap-Shoulder Seat Belt

Integrated Child Seat (1)

Lower LATCH Anchors (optional)

Seat Belt Buckles



# FlexSeat with Lap-Shoulder Seat Belt Restraints

## Use for 2 or 3 occupants

This seat with lap-shoulder belt restraint system conforms to all applicable Federal Motor Vehicle Safety Standards.

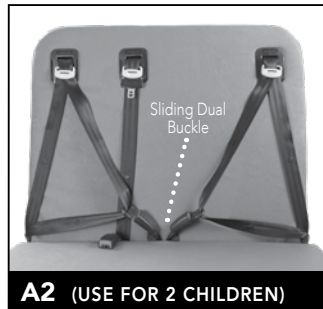
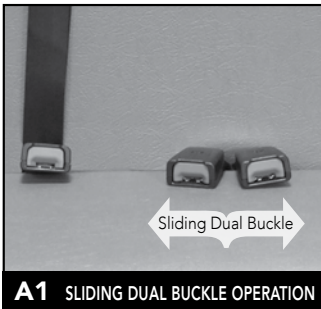
### **⚠ WARNING! DEATH or SERIOUS INJURY can occur:**

- Follow all instructions on the restraints and in this manual. Failure to follow the manufacturer's warnings for proper use of this restraint system can result in serious injury or death.
- Use all seating positions only with occupants who are at least 4 years old and weigh 40 pounds (18 kg) or more and whose height is 40 inches (102 cm) or more.
- Shoulder height adjuster must be at or above the top of occupant's shoulder.
- The hip of the child in the aisle seat must not extend beyond the edge of the seat cushion.
- Backpacks and coats must be removed before using the lap-shoulder seat belt restraints.
- Adjust the lap-shoulder belts snugly around the occupant.

The SafeGuard FlexSeat accommodates two or three children on a 39" school bus seat.

**USE FOR 2 CHILDREN:** Slide two buckles on right side **A1** all the way left to create two seating positions. **A2**

**USE FOR 3 CHILDREN:** Slide two buckles located on right side **A1** all the way right to create three seating positions. **A3**



# Using Lap-Shoulder Belts on a School Bus Seat



**click  
tug &  
snug**  
SEAT BELT EDUCATION

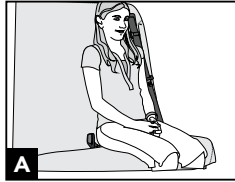
## When to Wear the Lap-Shoulder Belt:

1. When the school bus is ready to begin or continue its trip.
2. Anytime the school bus is moving or on the roadway.

SafeGuard recommends use of an FMVSS 213 child restraint system for children under five (5) years of age.

## BUCKLING UP

1. The passenger should sit as flat against the seat back as possible to achieve the best possible fit of the lap-shoulder belt on the passenger's upper and lower torso. **A**



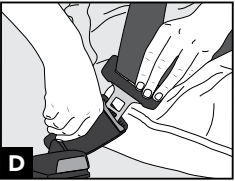
2. Pull out shoulder belt webbing from the upper seat back. Do not let the belt get twisted. (The shoulder belt could possibly lock if pulled across the body too quickly. If this happens, let the belt retract slightly to unlock it. Then pull the belt across you more slowly.) **B**



3. Place the lap-shoulder belt over the shoulder and around the passenger's upper body. **C**



4. Insert the latch plate into the matching seat belt buckle on the lower seat cushion. **D**

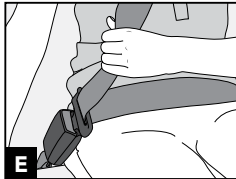


### CLICK

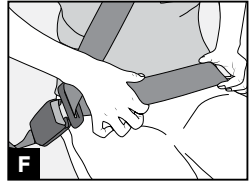
5. Listen for an audible click when the latch plate is fastened. **D**

### TUG

6. Check that the buckle connection is secure by pulling on the shoulder portion of the lap-shoulder belt. **E**

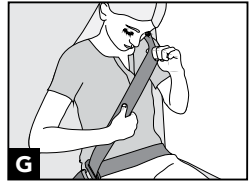


7. Position the lap portion of the belt so that the webbing is below the passenger's waist, not over the stomach or abdomen area. The lap portion of the belt must be low and snug over the bony structure of the passenger's hips. **F**



### SNUG

8. Pull up on the shoulder portion of the lap-shoulder belt to tighten the lap portion. **G**



**IMPORTANT! This step must be done to assure proper fit of lap-shoulder belt to passenger!**

The shoulder portion of the belt must be snug across the chest and in the center of the passenger's shoulder. **H**



9. Position the shoulder height adjuster at or just above the passenger's shoulder. The shoulder belt should not cross the passenger's face or neck. **I**

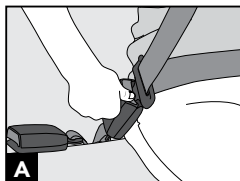


10. Make sure the lap-shoulder belt is snug and lies flat against the passenger. There should be no twisting of the webbing. **J**



## UNBUCKLING

1. Push the red buckle release button and remove the latch plate from the buckle. The buckle has a release mechanism that separates the latch plate from the buckle. **A**
2. Allow the shoulder belt to retract and stow in the upper seat back.
3. As a courtesy to the next passenger, move the shoulder height adjuster up to its highest position. **B**



# Using Lap-Shoulder Belts on a School Bus Seat

## Examples of Improper Usage



1. Do not sit in front of the buckled lap-shoulder belt.



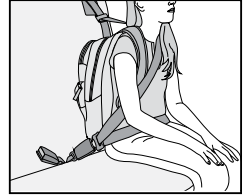
5. Do not allow the webbing to get twisted as it goes across your body. It should lie flat against your body.



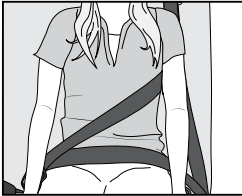
2. Do not place shoulder belt behind your back and wear only the lap belt.



6. Do not wear your backpack when you buckle up.



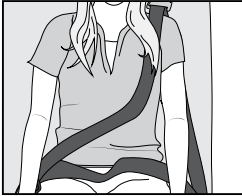
3. Do not place the shoulder belt under your arm.



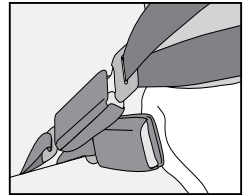
7. Do not sit outside the edge of your seat compartment.



4. Do not wear the shoulder belt or the lap belt too loosely.



8. NEVER insert the latch plate of your shoulder belt into the buckle for the seat beside you.



# Integrated Child Seat Option

This child restraint system conforms to all applicable Federal Motor Vehicle Safety Standards.

## **⚠ WARNING! DEATH or SERIOUS INJURY can occur:**

- Follow all instructions on the child restraint and in this manual. Failure to follow the manufacturer's warnings for proper use of this child restraint system can result in serious injury or death.
- Use only with children who weigh between 22 and 85 pounds (10 and 39 kg) and whose height is 49 inches (124 cm) or less and who are at least 2 years of age.
- Top portion of the seat cushion must be folded under lower portion of seat cushion to form seating surface for child.
- Adjust the belts provided with this child restraint snugly around your child.

**ICS RESTRAINT REPLACEMENT:** The ICS restraint system does not have a designated service that requires replacement. However, the ICS and its components must be inspected frequently (per instructions on Page 10) and replaced as needed. If you have any doubts about the condition or function of the restraint, REPLACE IT. If any component of the ICS restraint requires replacement, the entire restraint system must be replaced. If the vehicle is involved in a significant accident, the entire ICS must be replaced.

1. Activate the restraint system by lowering the two-piece seat cushion. **Fold the top portion of the cushion under the bottom portion to form a seating surface for the child.** **A** Be sure seat belt buckles (if equipped) are NOT beneath the two-piece cushion. Failure to fold the seat cushion under can result in damage to the restraint and thus improper restraint of the child.

Open chest clip by squeezing middle tabs and pulling chest clip apart.

Unbuckle harness buckle by pressing down on red release button.

To loosen harness, lift metal tab at top of seat **1** and pull down on shoulder strap **2** to loosen strap.

Repeat with second shoulder strap.

2. Place the child in the restraint with the child's back flat against the back of the bus seat cushion. Position shoulder straps over the child's shoulders.

Buckle harness **B** by inserting buckle tongues into harness buckle **3**.

Listen for an audible click when each buckle tongue is fastened.

Check the buckle connection is secure by pulling on the shoulder straps.

3. To tighten harness, pull down equally on top straps **4** on both sides until the harness is snug around the child. **C**

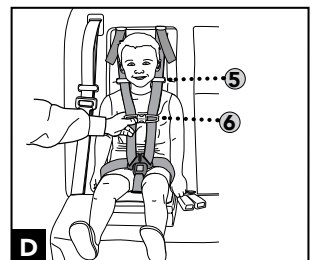
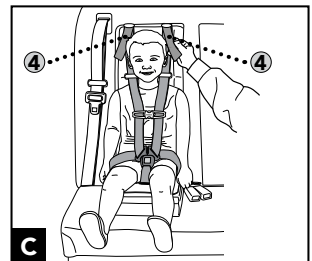
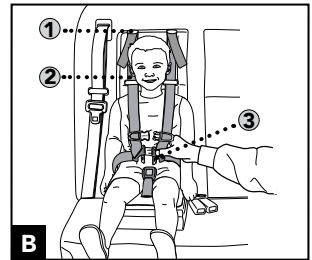
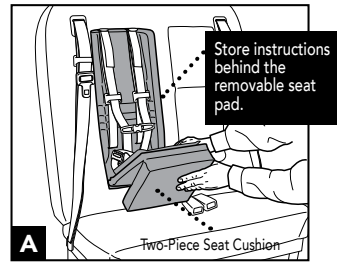
A snug strap should not allow any slack. It lies in a relatively straight line without sagging. It does not press on the child's flesh or push the child's body into an unnatural position.

4. Position each shoulder height adjuster **5** at or just above the child's shoulder. **D**

Fasten chest clip **6** by pushing both sides together.

Position chest clip at middle of the child's chest, at armpit level.

Be sure harness is snug and tight on child's thighs and chest.



# Installation of Add-On Child Seats

## **⚠ WARNING! DEATH or SERIOUS INJURY can occur:**

- Follow all manufacturer's instructions found in the child restraint user's manual and in this manual. Failure to follow the manufacturer's warnings for proper use of the child restraint system can result in serious injury or death.
- NHTSA seating space guidelines should be followed when a child seat is installed.

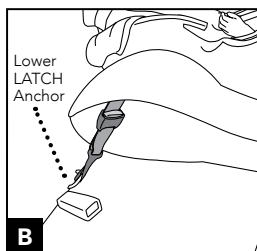
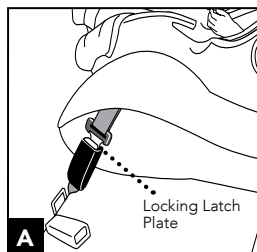
**Important:** The SafeGuard BTI School Bus seat with lap-shoulder belts utilizes an Emergency Locking Retractor (ELR) with a locking latch plate on the belt. This system does not require the use of the child seat manufacturer's supplied locking clip.

### Rear facing Infant or Convertible Child Seats

The rear facing infant or convertible child seat may be installed with either the lap shoulder belt restraint system **A** or with the LATCH system **B** (if BTI seat and add-on child seat are equipped with LATCH hardware and components).

For attachment of the add-on child seat with the BTI seat lap-shoulder belt restraint system, carefully read and follow the add-on child seat manufacturer's installation instructions for the correct belt path on the child seat and how to tighten the seat down.

For attachment of the add-on child seat using the LATCH system, carefully read and follow the add-on child seat manufacturer's installation instructions for the correct LATCH attachment procedure and how to tighten the seat down.

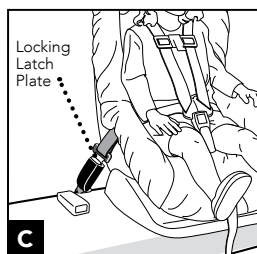


### Forward Facing Child Seats

Forward facing child seats may be installed with either the lap shoulder belt restraint system **C** or with the LATCH system (if BTI seat and add-on child seat are equipped with LATCH hardware and components).

For attachment of the add-on child seat with the BTI seat lap-shoulder belt restraint system, carefully read and follow the add-on child seat manufacturer's installation instructions for the correct belt path on the child seat and how to tighten the seat down.

For attachment of the add-on child seat using the LATCH system, carefully read and follow the add-on child seat manufacturer's installation instructions for the correct LATCH attachment procedure and how to tighten the seat down.



The forward facing add-on child seat tether strap may be used to provide additional securement for the child seat. Carefully read and follow the add-on child seat manufacturer's installation instructions for the correct use of the tether strap and see page 8 of this manual for instructions regarding tether attachment.

### Booster Seats

**DO NOT USE add-on booster seats on lap-shoulder belt school bus seats! **D****  
The lap-shoulder belt is adjustable to fit a child and meets FMVSS 213 built-in booster seat requirements.





# LATCH (Lower Anchors & Tether) Option

For Use with Add-On Child Seats

## ⚠ WARNING! DEATH or SERIOUS INJURY can occur:

- Follow all instructions on the child restraint and in this manual. Failure to follow the manufacturer's warnings for proper use of the child restraint system and LATCH attachments can result in serious injury or death.

### Location and Use of Lower LATCH Anchors

Some BTI Seats are equipped with lower LATCH anchors for the attachment of add-on child seats. The lower LATCH anchors (if available) are located in the seat gap between the lower portion of the back seat and cushion.

### Adding LATCH Anchors

Base BTI Seats may be fitted with LATCH anchors if not originally equipped. Contact your OEM Bus Dealer or SafeGuard for further information on ordering LATCH anchors.

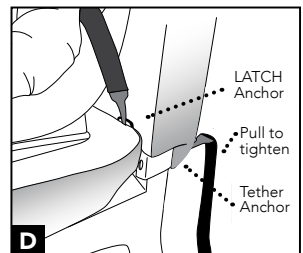
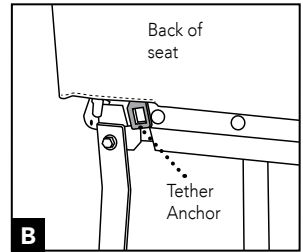
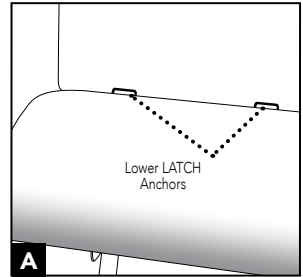
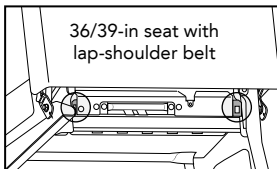
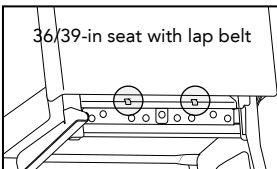
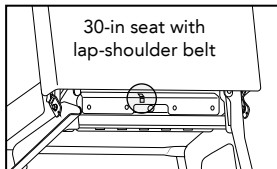
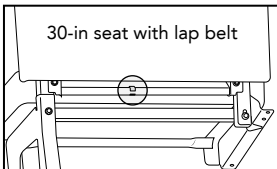
### Location and Use of Tether Anchors

All SafeGuard BTI Bus Seats are equipped with tether anchors for add-on child seats. **B**

### Installing Tether

To attach an add-on child seat tether, route the tether on the child seat over the top of the BTI Seats. **C** Extend the tether and connect the snap hook to the nearest tether anchor provision at the lower rear of the seat. **D** Adjust the tether to a snug and tight fit by pulling on the free end of the strap at the adjuster. **D**

Tether anchor positions will vary dependent upon the seat type. See below for examples.



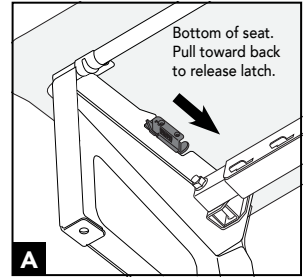
# Seat Cushion Release

## **⚠ WARNING! DEATH or SERIOUS INJURY can occur:**

- Follow all instructions on the child restraint and in this manual. Failure to follow the manufacturer's warnings for proper use of the child restraint system and LATCH attachments can result in serious injury or death.

### Locating Seat Cushion Release Latch

Your BTI Seats are equipped with a cushion that flips up for access underneath the seat. The cushion is held in place by a latch underneath the seat as shown in **Figure A**. While pulling the release latch back, lift up on the back of the cushion to flip it up toward the front of the seat.

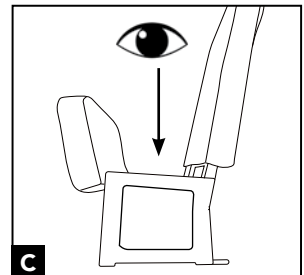


### Post-Crash Inspection

Following any crash, you should have the bus structure, seat and restraint systems inspected by a qualified technician.

To know if the SmartFrame Plus™ has been deployed you should:

- Find the label on the top of the lower seat frame (**Fig. B**).
- Stand directly over the seat and look straight down to determine if the green colored portion on the label is covered by the frame section. (**Fig. C**)
- If it is covered you should replace the entire seat.
- The SmartFrame Plus™ inspection is independent of the inspection performed on the rest of the seat or restraint system. Separate assessment for all seat components required.



Refer to website [safeguardseat.com/post-crash](http://safeguardseat.com/post-crash) for further inspection guidance.

# IC Bus BTI Seat Conversion Procedure

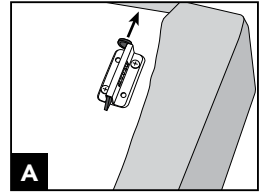
## FlexSeat® with and without ICS

### IMPORTANT NOTICE

It is the responsibility of the installer to verify prior to actual installation that (the) installation of any seat will permit seat to: 1) Retain minimum knee room and/or seat spacing requirements as specified by local, state, and/or federal requirements.  
2) Not impact GVWR so that vehicle exceeds maximum rating for chassis.

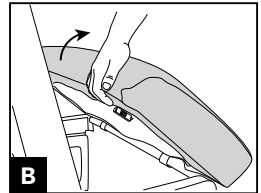
#### STEP 1

Reach under the aisle side of the seat cushion; release the latch by sliding the locking plate tab as shown. **(FIG. A)**



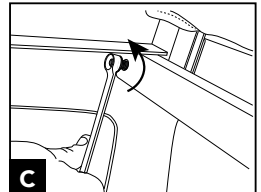
#### STEP 2

Lift up and pivot forward the rear of the seat cushion for access to the seat frame. **(FIG. B)**



#### STEP 3

With 9/16" wrenches, remove the aisle side lower bolt nut from the front side of the seat frame. **(FIG. C)** Remove the bolt from the back side of the seat. Discard bolts and nuts.

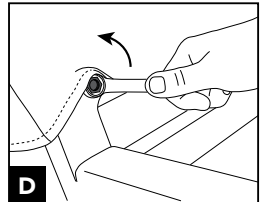


#### STEP 4

Repeat step (3) for the wall side lower nut and bolt.

#### STEP 5

With 9/16" wrenches, remove the aisle side upper bolt nut from the front side of the seat frame. **(FIG D)** Remove the bolt from the back side of the seat. Discard bolts and nuts.



#### STEP 6

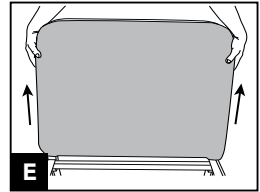
Repeat step (5) for the wall side upper nut and bolt.

# IC Bus BTI Seat Conversion Procedure

## FlexSeat® with and without ICS

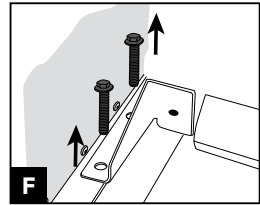
### STEP 7

Carefully lift the base seat back straight up off the seat frame without any twisting that could cause the seat back frame to bind on the lower seat frame. **(FIG. E)**



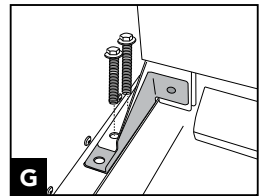
### STEP 8

On seat base wall mount bracket, remove two (2) rear wall attachment bolts that attach seat bracket to bus wall flange. **(FIG. F)**



### STEP 9

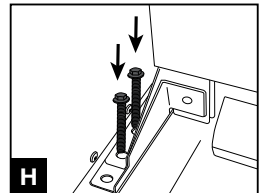
Raise seat wall mount bracket from bus wall flange sufficiently to insert wall reinforcement **(FIG. G)** bracket under seat wall mount bracket. Align the front two holes of the reinforcement with the rear two holes of the seat wall mount bracket.



**NOTE: If bracket extends beyond the end of the wall rail, contact SafeGuard for additional information. 877.447.2305.**

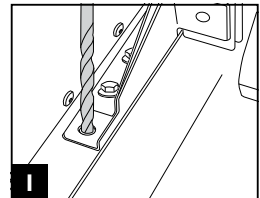
### STEP 10

Reinstall the two rear wall attachment bolts through the seat mount bracket/reinforcement/wall flange and secure tight with the nuts. **(FIG. H)** Torque nuts to 16 ft.-lbs.



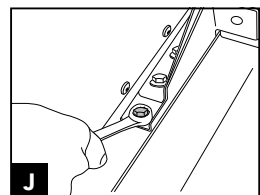
### STEP 11

Drill a 3/8" diameter hole through the exposed rear hole on the reinforcement in the wall mount flange. **(FIG. I)**



### STEP 12

Install a supplied 3/8" bolt through the drilled hole to attach the reinforcement to the wall flange. Secure bolt with a flange nut and tighten to 16 ft.-lbs torque. **(FIG. J)**

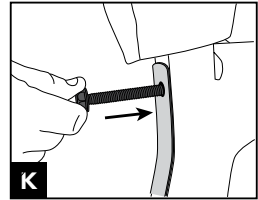


# IC Bus BTI Seat Conversion Procedure

## FlexSeat® with and without ICS

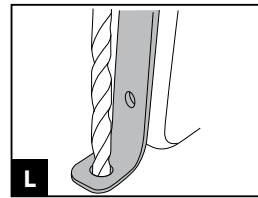
### STEP 13

Locate the aisle side pedestal to floor rear reinforcement and insert the lower seat back attachment bolt to position the reinforcement for STEP 14. **(FIG. K)**



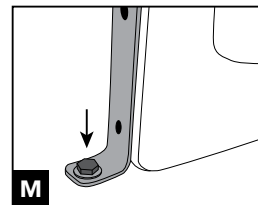
### STEP 14

Hold reinforcement bracket flush against the back of the pedestal. Drill a 1/2" diameter hole through the lower hole on the reinforcement in the floor. Before drilling hole, verify that area below the floor is clear of bus components that could accidentally be drilled. **(FIG. L)**



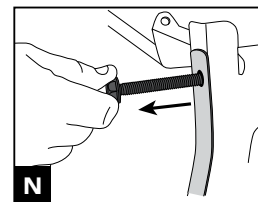
### STEP 15

Install 7/16" bolt through reinforcement and floor. Secure tight with a nut and washer from under the bus floor. **(FIG. M)** Use longer grade 8 bolt and underbody reinforcement bracket if necessary to clear under floor structure. Tighten bolt and nut to 16 ft-lbs. torque.



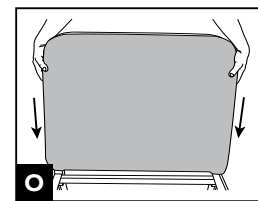
### STEP 16

Remove locating bolt used in Step 13. **(FIG. N)**

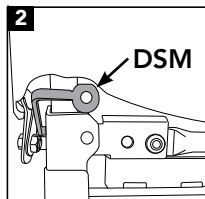
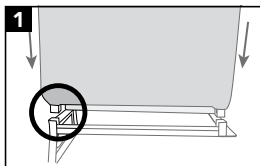


### STEP 17

Lower new seat back module down into seat base rear channels. **(FIG. O)** Continue until seat back module lower posts are fully seated into base seat channels.

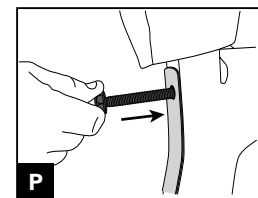


**NOTE: If interference occurs while lowering the seat back on the seat back frame (see illustrations 1 & 2 below), locate the DSM under the cover and pull the DSM rearward away from the seat back frame until there is enough clearance to lower the seat back completely. DO NOT BEND THE DSM.**



### STEP 18

On aisle side, from seat rear, install lower (longer) bolt through seat back module lower attachment hole and seat base structure to position frame. **(FIG. P)**

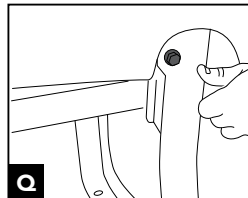


# IC Bus BTI Seat Conversion Procedure

## FlexSeat® with and without ICS

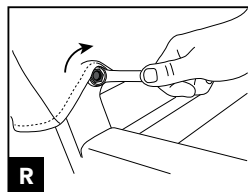
### STEP 19

From seat back side, install upper (shorter) bolt through seat back module upper attachment hole and seat base structure. **(FIG. Q)** Add nut to front side but do not tighten. Repeat for wall side.



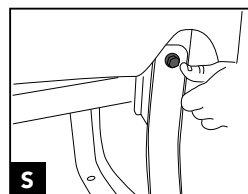
### STEP 20

On wall side, from seat rear, install lower (longer) bolt through seat back module lower attachment hole and seat base structure to position frame.



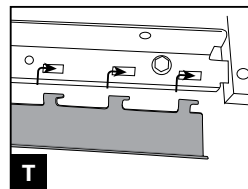
### STEP 21

Tighten the four (4) nuts/bolts to the upper and lower post attachment bolts installed in Steps 18 - 20 to 16 ft-lbs. torque. **(FIG. R, S)**



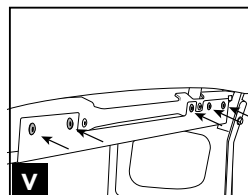
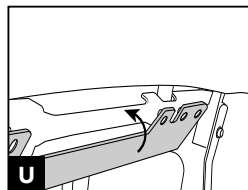
### STEP 22

Insert tabs of the clamshell bracket into the slots of the seat back, then swing clamshell bracket into place. **(FIG. T,U)**



### STEP 23

Install hex lobular drive bolts in all open locations shared between the seat back bracket and clamshell bracket. Torque nuts to 35 - 45 FT LBS. **(FIG. V)**

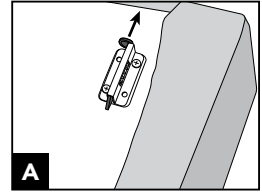


# IC Bus BTI Seat Conversion Procedure

## 26", 30", and 36" 3-pt with and without ICS

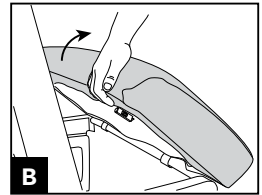
### STEP 1

Reach under the aisle side of the seat cushion; release the latch by sliding the locking plate tab as shown. (FIG. A)



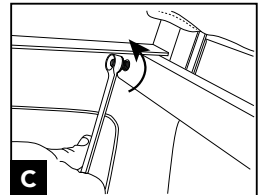
### STEP 2

Lift up and pivot forward the rear of the seat cushion for access to the seat frame. (FIG. B)



### STEP 3

With 9/16" wrenches, remove the aisle side lower bolt nut from the front side of the seat frame. (FIG. C) Remove the bolt from the back side of the seat. Discard bolts and nuts.

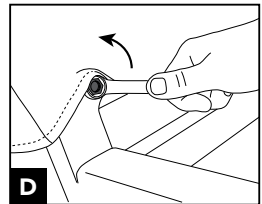


### STEP 4

Repeat step (3) for the wall side lower nut and bolt.

### STEP 5

With 9/16" wrenches, remove the aisle side upper bolt nut from the front side of the seat frame. (FIG. D) Remove the bolt from the back side of the seat. Discard bolts and nuts.

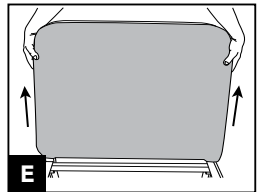


### STEP 6

Repeat step (5) for the wall side upper nut and bolt.

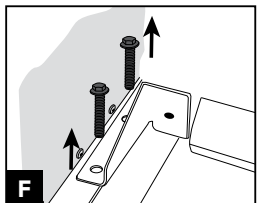
### STEP 7

Carefully lift the base seat back straight up off the seat frame without any twisting that could cause the seat back frame to bind on the lower seat frame. (FIG. E)



### STEP 8

On seat base wall mount bracket, remove two (2) rear wall attachment bolts that attach seat bracket to bus wall flange. (FIG. F)



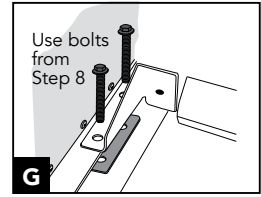
26", 30", and 36" 3-pt

# IC Bus BTI Seat Conversion Procedure

## 26", 30", and 36" 3-pt with and without ICS

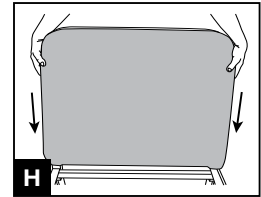
### STEP 9

Place included reinforcement plate below the mounting bracket. Reinstall the two wall attachment bolts through the bus wall flange, mounting bracket, and reinforcement plate, then secure tightly **with nuts from Step 8**. Torque nuts to 16 ft-lbs. **(FIG. G)**

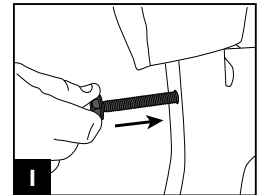
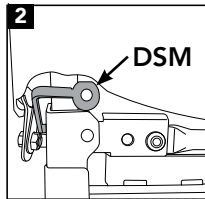
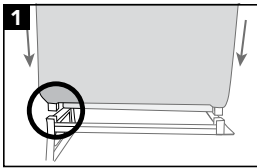


### STEP 10

Lower new seat back module down into seat base rear channels. **(FIG. H)** Continue until seat back module lower posts are fully seated into base seat channels.

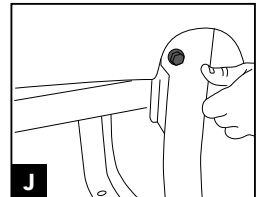


**NOTE: If interference occurs while lowering the seat back on the seat back frame (see illustrations 1 & 2 below), locate the DSM under the cover and pull the DSM rearward away from the seat back frame until there is enough clearance to lower the seat back completely. DO NOT BEND THE DSM.**



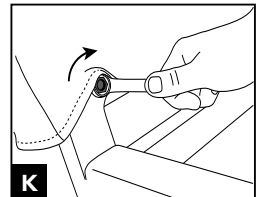
### STEP 11

On aisle side, from seat rear, install lower (longer) bolt through seat back module lower attachment hole and seat base structure to position frame. **(FIG. I)** Add nut to front side but do not tighten.



### STEP 12

From seat back side, install upper (shorter) bolt through seat back module upper attachment hole and seat base structure. **(FIG. J)** Add nut to front side but do not tighten. Repeat for wall side.



### STEP 13

On wall side, from seat rear, install lower (longer) bolt through seat back module lower attachment hole and seat base structure to position frame.



### STEP 14

Tighten the four (4) nuts/bolts to the upper and lower post attachment bolts installed in steps (11) through (13) to 16 ft-lbs. torque. **(FIG. K, L)**



# IC Bus BTI Seat Conversion Procedure

## 26", 30", and 36" 3-pt with and without ICS

### STEP 15

Insert tabs of the clamshell bracket into the slots of the seat back, then swing clamshell bracket into place. (FIG. M, N)

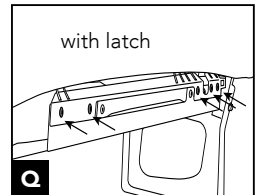
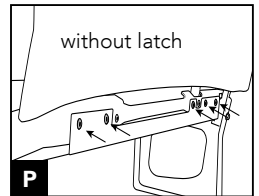
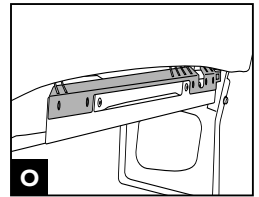
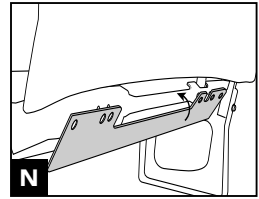
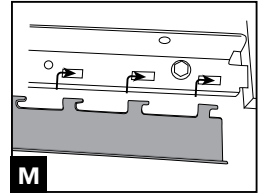
### SEE STEP 16 FOR LATCH UPGRADES ONLY

### STEP 16

Position latch bracket as shown. (FIG. O)

### STEP 17

Install hex lobular drive bolts in all open locations shared between the seat back bracket and clamshell bracket. Torque nuts to 35 - 45 ft-lbs. (FIG. P, Q)



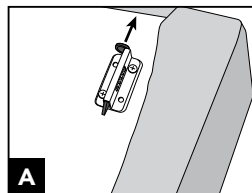
26", 30", and 36" 3-pt

# IC Bus BTI Seat Conversion Procedure

## ICS Upgrade - No Belts

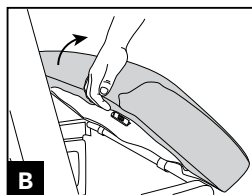
### STEP 1

Reach under the aisle side of the seat cushion; release the latch by sliding the locking plate tab as shown. **(FIG. A)**



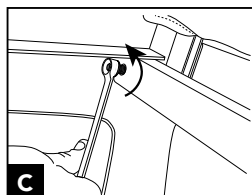
### STEP 2

Lift up and pivot forward the rear of the seat cushion for access to the seat frame. **(FIG. B)**



### STEP 3

With 9/16" wrenches, remove the aisle side lower bolt nut from the front side of the seat frame. **(FIG. C)** Remove the bolt from the back side of the seat. Discard bolts and nuts.

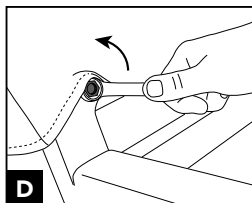


### STEP 4

Repeat step (3) for the wall side lower nut and bolt.

### STEP 5

With 9/16" wrenches, remove the aisle side upper bolt nut from the front side of the seat frame. **(FIG D)** Remove the bolt from the back side of the seat. Discard bolts and nuts.

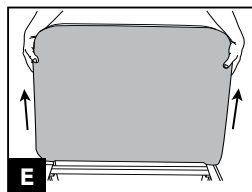


### STEP 6

Repeat step (5) for the wall side upper nut and bolt.

### STEP 7

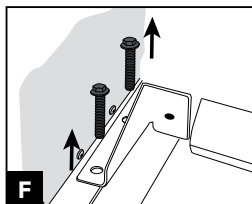
Carefully lift the base seat back straight up off the seat frame without any twisting that could cause the seat back frame to bind on the lower seat frame. **(FIG. E)**



### SEE STEPS 8 AND 9 FOR 30" UPGRADES ONLY

### STEP 8

On seat base wall mount bracket, remove two (2) rear wall attachment bolts that attach seat bracket to bus wall flange. **(FIG. F)**

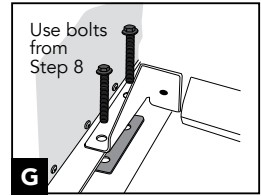


# IC Bus BTI Seat Conversion Procedure

## ICS Upgrade - No Belts

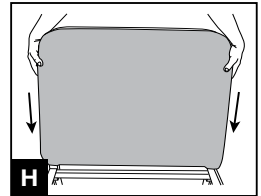
### STEP 9

Place included reinforcement plate below the mounting bracket. Reinstall the two wall attachment bolts through the bus wall flange, mounting bracket, and reinforcement plate, then secure tightly **with nuts from Step 8**. Torque nuts to 16 ft-lbs. **(FIG. G)**



### STEP 10

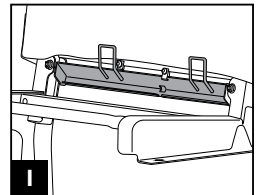
Lower new seat back module down into seat base rear channels. **(FIG. H)** Continue until seat back module lower posts are fully seated into base seat channels.



### SEE STEP 11 FOR LATCH BRACKET UPGRADES ONLY

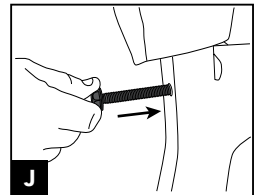
### STEP 11

Position LATCH bracket as shown. **(FIG. I)** Align bolt holes and hold bracket in place while continuing to Step 12.



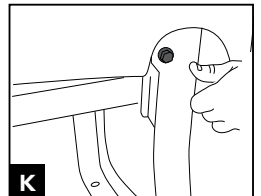
### STEP 12

On aisle side, from seat rear, install lower (longer) bolt through seat back module lower attachment hole and seat base structure to position frame. **(FIG. J)** Add nut to front side but do not tighten.



### STEP 13

From seat back side, install upper (shorter) bolt through seat back module upper attachment hole and seat base structure. **(FIG. K)** Add nut to front side but do not tighten. Repeat for wall side.



### STEP 14

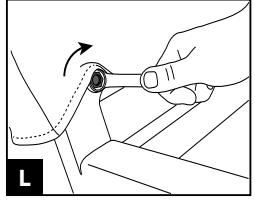
On wall side, from seat rear, install lower (longer) bolt through seat back module lower attachment hole and seat base structure to position frame.

# IC Bus BTI Seat Conversion Procedure

## ICS Upgrade - No Belts

### STEP 15

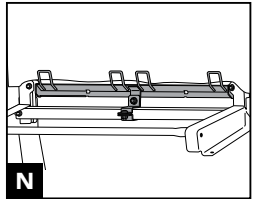
Tighten the four (4) nuts/bolts to the upper and lower post attachment bolts installed in steps (12) through (14) to 16 ft-lbs. torque. (FIG. L, M)



**IF UPGRADING A 39" SEAT BACK, COMPLETE INSTALLATION PROCEDURE WITH STEP 16.**

### STEP 16

Sandwich rear tube with top clamp and latch mounting bracket as shown (FIG. N), then install hex lobular drive bolts. Torque nuts to 35 - 45 ft-lbs.



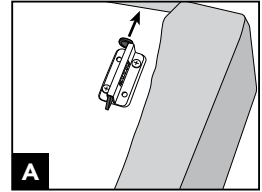
ICS (No Belts)

# IC Bus BTI Seat Conversion Procedure

## Lap Belts with and without ICS

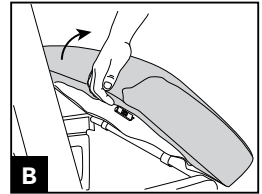
### STEP 1

Reach under the aisle side of the seat cushion; release the latch by sliding the locking plate tab as shown. (FIG. A)



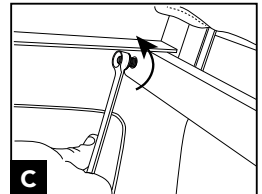
### STEP 2

Lift up and pivot forward the rear of the seat cushion for access to the seat frame. (FIG. B)



### STEP 3

With 9/16" wrenches, remove the aisle side lower bolt nut from the front side of the seat frame. (FIG. C) Remove the bolt from the back side of the seat. Discard bolts and nuts.

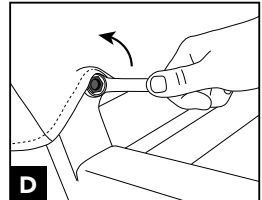


### STEP 4

Repeat step (3) for the wall side lower nut and bolt.

### STEP 5

With 9/16" wrenches, remove the aisle side upper bolt nut from the front side of the seat frame. (FIG. D) Remove the bolt from the back side of the seat. Discard bolts and nuts.

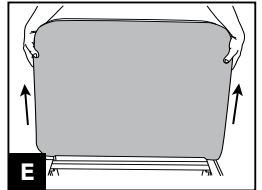


### STEP 6

Repeat step (5) for the wall side upper nut and bolt.

### STEP 7

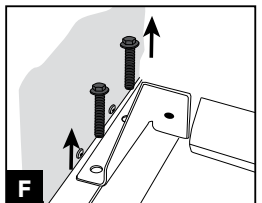
Carefully lift the base seat back straight up off the seat frame without any twisting that could cause the seat back frame to bind on the lower seat frame. (FIG. E)



### SEE STEPS 8 AND 9 FOR 30" UPGRADES ONLY

### STEP 8

On seat base wall mount bracket, remove two (2) rear wall attachment bolts that attach seat bracket to bus wall flange. (FIG. F)

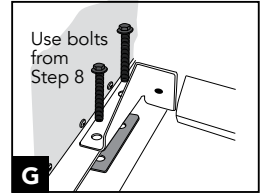


# IC Bus BTI Seat Conversion Procedure

## Lap Belts with and without ICS

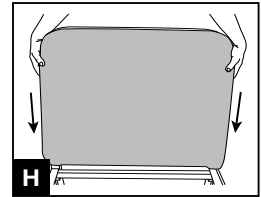
### STEP 9

Place included reinforcement plate below the mounting bracket. Reinstall the two wall attachment bolts through the bus wall flange, mounting bracket, and reinforcement plate, then secure tightly **with nuts from Step 8**. Torque nuts to 16 ft-lbs. (**FIG. G**)



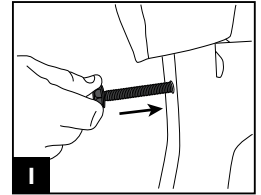
### STEP 10

Lower new seat back module down into seat base rear channels. (**FIG. H**) Continue until seat back module lower posts are fully seated into base seat channels.



### STEP 11

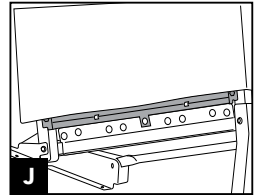
On aisle side, from seat rear, install lower (longer) bolt through seat back module lower attachment hole and seat base structure to position frame. (**FIG. I**) Add nut to front side but do not tighten.



### SEE STEP 12 IF UPGRADE INCLUDES LATCH BRACKET

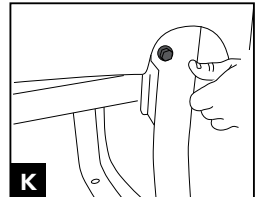
### STEP 12

Position latch behind seat as shown. (**FIG. J**)



### STEP 13

From seat back side, install upper (shorter) bolt through seat back module upper attachment hole and seat base structure. (**FIG. K**) Add nut to front side but do not tighten. Repeat for wall side.



### STEP 14

On wall side, from seat rear, install lower (longer) bolt through seat back module lower attachment hole and seat base structure to position frame.

# IC Bus BTI Seat Conversion Procedure

## Lap Belts with and without ICS

### STEP 15

Tighten the four (4) nuts to the upper and lower post attachment bolts installed in steps (11) through (14) to 16 ft-lbs. torque. **(FIG. L, M)**

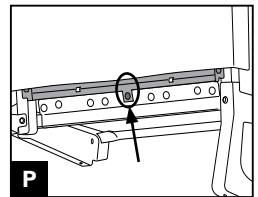
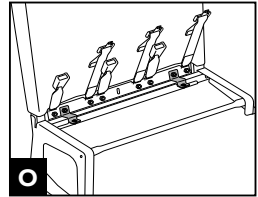
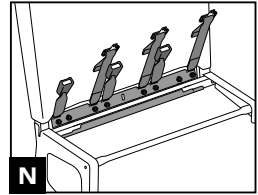
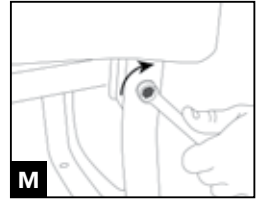
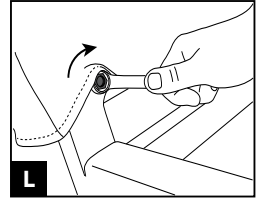
### STEP 16

Position belt system bracket as shown. Secure belt system bracket by installing hex lobular drive bolts through top clamp brackets, then torque nuts to 35 - 45 ft-lbs. **(FIG. N, O)**

**SEE STEP 17 FOR 39" UPGRADE ONLY**

### STEP 17

Install hex lobular drive bolt then tighten to 35 - 45 ft-lbs. **(FIG. P)**



Lap Belts

# Care and Maintenance

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- Care and maintenance of the Interchangeable BTI Seat is the responsibility of the owner of the Interchangeable BTI Seat.
- Clean seat cushions, webbing and buckle with a damp sponge using mild soap solution and lukewarm water. **Never use bleach or cleansers.**
- Never lubricate the seat belt buckle.

## Seat Belt Inspection

Seats should be regularly inspected and after a crash:

- Inspect frame members and welds for damage, signs of failure or corrosion.
- Inspect that all attachment fasteners are present and secure.
- Inspect vinyl covering for cuts, tears or punctures that expose seat cushion or seat back foam.
- Inspect foam for cuts or missing sections. Verify that no portion of seat frame can be felt through foam.
- Inspect for tight fit of seat cover over all foam. Replace foam if covering is loose or bagging.
- Replace foam if any localized collapse of foam exists.

If any of these conditions develop or exist on the Interchangeable BTI Seat, it will require repair or replacement of the affected parts immediately, regardless the age of the seat. See your OEM School Bus dealer or authorized SafeGuard Bus Seat dealer for replacement parts.

Lap-shoulder seat belt restraints and integrated child seat restraints on the SafeGuard BTI Bus Seat should be regularly inspected and after a crash as follows:

- Inspect belt on entire system for cuts, fraying, abrasion, and extreme or unusual wear.
- Inspect buckle for proper operation by inserting latch plate and listening for an audible click. Verify the buckle is not damaged cracked or broken.
- Inspect latch plate for proper operation by inserting into buckle. Latch plate must insert smoothly and produce an audible click. Verify proper latching by tugging on the belt. Latch plate must not be worn, deformed, or corroded.
- Inspect chest clips for damage and operation. Chest clip halves should not be damaged, cracked or broken. Clips should engage and disengage smoothly with each other. Move clip halves up and down. They must move freely.
- Inspect seat belt height adjuster for damage. Move adjuster up and down. It must move freely.
- Inspect retractor operation. When pulled and released slowly, webbing must spool out and retract without locking.
- Inspect mounting hardware at each restraint attachment point. Hardware should be tight. Hardware must not be missing, rusted, corroded, or damaged.

If any of these conditions develop or exist on the Interchangeable BTI Seat belt system, it will require replacement of the seat belt(s) immediately, regardless the age of the seat. See your OEM School Bus dealer or authorized SafeGuard Bus Seat dealer for seat belt replacement.

## Seat Belt Reverse Lock-Up Correction

If during the seat installation process the lap-shoulder seat belt restraint becomes locked-up and cannot be pulled out, perform the following steps.

1. Move the shoulder height adjuster down.
2. Grasp the top of the shoulder belt webbing close to where it exits the top of the seat and above the shoulder height adjuster.
3. Pull the web with a constant even force, tight enough to allow web to retract back into the retractor in the seat.
4. Slowly release the web. This should unlock the retractor.



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## User Assistance

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For assistance using the Interchangeable BTI Seat, contact the OEM Bus dealer or IMMI/  
SafeGuard Customer Service at 1-877-447-2305.

SafeGuard Bus lap-shoulder seat belt restraints and child restraints are certified to applicable U.S. Federal Motor Vehicle Safety Standards FMVSS 209, 213, and 302. The SafeGuard Bus Seat, when properly installed per the instructions and with applicable hardware, allows the bus to meet U.S. Federal Motor Vehicle Safety Standards FMVSS 210, 222, and 225.

**safeguardseat.com**

**SafeGuard** ®  
School Bus Seating

Westfield, IN 46074-3001

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