

Owner's/Installation Manual for:

Companion Seat™

Assistive Power Seat Base
for GM Mini-Vans



Note to Dealer:
Provide this manual
to the consumer.

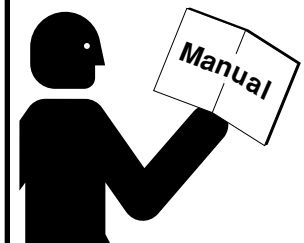
See inside cover
for warranty and
registration information.

 **THE BRAUN
CORPORATION**
"Providing Access to the World"®

International Corporate Hdqrs: P.O. Box 310 Winamac, IN 46996 USA
1-800-THE LIFT (574) 946-6153 FAX: (574) 946-4670



⚠ WARNING




Read manual
before operating
or installing seat.
Failure to do so
may result in
serious bodily
injury and/or
property damage.
Keep manual in
seat vehicle.

Companion Seat™
for GM Mini-Vans

Congratulations

We at The Braun Corporation wish to express our fullest appreciation on your new purchase. With you in mind, our skilled craftsmen have designed and assembled the finest assistive power seat base available. Your Companion Seat™ is built for dependability, and will bring you years of pleasure and independence, as long as the Companion Seat™ is installed properly and operated by an instructed person.

Sincerely,
THE BRAUN CORPORATION



Ralph W. Braun
Chief Executive Officer

Warranty and Registration Instructions

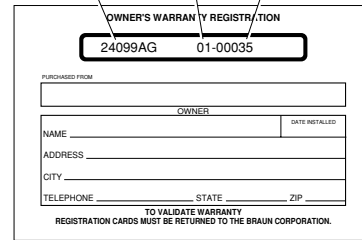
Immediately upon receiving the Companion Seat™, examine the unit for any damage. Notify the carrier at once with any claims.

Two warranty/registration cards (shown right) are located in the shipping carton (in envelope). The sales representative must process one of the cards. The consumer must fill out the other card and mail it to The Braun Corporation. The warranty is provided on the back cover of this manual. The **warranty cards must be processed to activate the warranty.**

One Braun Serial No./Series No. identification tag (sample shown below) is posted on the seat base. A second I.D. tag is posted at right.

Both I.D. tags provide the same product identification information provided on the Warranty/Registration card (shown above).

Model No. Series No. Serial No.



OWNER'S WARRANTY REGISTRATION

24099AG 01-00035

PURCHASED FROM _____

OWNER _____ DATE INSTALLED _____

NAME _____

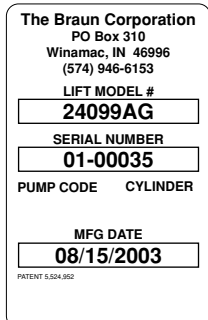
ADDRESS _____

CITY _____

TELEPHONE _____ STATE _____ ZIP _____

TO VALIDATE WARRANTY
REGISTRATION CARDS MUST BE RETURNED TO THE BRAUN CORPORATION.

Sample Warranty/Registration Card



The Braun Corporation
PO Box 310
Winamac, IN 46996
(574) 946-6153

LIFT MODEL #
24099AG

SERIAL NUMBER
01-00035

PUMP CODE CYLINDER

MFG DATE
08/15/2003

PATENT 5,524,952

Product identification information must be provided when filing a warranty claim or ordering parts.

Sample Identification Tag



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Companion Seat Operation Safety

Safety Symbols

SAFETY FIRST! Know That...

A All information contained in this manual is provided for your safety. Familiarity with proper operation instructions as well as proper installation and maintenance procedures are necessary to ensure safe, trouble-free operation. Safety precautions are provided to identify potentially hazardous situations and provide instruction on how to avoid them.

B

⚠WARNING

This symbol indicates important safety information regarding a potentially hazardous situation that could result in serious bodily injury and/or property damage.

C

⚠CAUTION

This symbol indicates important information regarding how to avoid a hazardous situation that could result in minor personal injury or property damage.

D **Note:** Additional information provided to help clarify or detail a specific subject.

These symbols will appear throughout this manual as well as on the labels posted on your Companion Seat™. **Recognize the seriousness of this information.**

Companion Seat Operation Safety

⚠ WARNING

If the seat operating instructions, manual operating instructions and/or seat operation safety precautions are not fully understood, contact The Braun Corporation immediately. Failure to do so may result in serious bodily injury and/or property damage.

Companion Seat Operation Safety Precautions

- ⚠ WARNING** Read manual before operating seat. Read and become familiar with all seat safety precautions, seat pre-operation notes, seat operating instructions and manual operating instructions before operating seat.
- ⚠ WARNING** Engage vehicle parking brake before operating seat.
- ⚠ WARNING** Engage vehicle transmission in park before operating seat.
- ⚠ WARNING** Do not operate seat if you suspect seat damage, wear or any abnormal condition.
- ⚠ WARNING** Keep hands, arms, fingers and all other body parts clear of moving seat parts.

- ⚠ WARNING** Extend seat fully and recline to safe position before using seat. **Note:** Details on page 4.
- ⚠ WARNING** Lower head to clear vehicle door header. **Note:** Details on page 5.
- ⚠ WARNING** Rotate and lock seat in forward position before operating vehicle. **Note:** Details on page 3.
- ⚠ WARNING** Provide adequate clearance outside vehicle to accommodate fully-open door before operating seat.
- ⚠ WARNING** Open passenger door fully before operating seat.
- ⚠ WARNING** Do not overload or abuse seat. The load rating applies to both extending and retracting functions - **continuous operating capacity is 300 lbs.**
- ⚠ WARNING** Never modify (alter) a Braun Corporation Companion Seat™.
- ⚠ WARNING** Keep Owner's/Installation manual in Companion Seat-equipped vehicle at all times.
- ⚠ WARNING** Do not use accessory devices not authorized by The Braun Corporation.
- ⚠ WARNING** Do not remove any guards or covers.
- ⚠ WARNING** Accidental activation of STOW/DEPLOY switch on the control pendant may cause unintended seat operation.
- ⚠ WARNING** Disengage vehicle passenger's seat belt before rotating seat outward and extending seat.
- ⚠ WARNING** Position and engage vehicle passenger's seat belt as instructed in vehicle owner's manual before operating vehicle.
- ⚠ WARNING** Lift feet when rotating seat.
- ⚠ WARNING** Release the hand pendant toggle switch from the **DEPLOY** position once the seat is fully extended.
- ⚠ WARNING** Release the hand pendant toggle switch from the **STOW** position once the seat is fully retracted.
- ⚠ WARNING** Failure to follow these safety precautions may result in serious bodily injury and/or property damage.

Companion Seat Pre-Operation Notes

The Companion Seat provides aid for those who have difficulty entering or exiting General Motors Mini-vans using the OEM (original) passenger's seat. The Companion Seat utilizes your van's original passenger seat mounted on an electric actuator-powered seat base.

The seat base conveniently extends the seat automatically out of the vehicle and lowers the seat cushion to an easy load and unload position. The seat base then raises and retracts the seat and occupant automatically into the vehicle.

The seat-equipped **STOW/DEPLOY** switch controls seat extending and retracting functions. The seat passenger and/or assistant must manually open and close the vehicle door and manually rotate the seat. It is the responsibility of the passenger to

engage and disengage the vehicle-equipped passenger's seat belt **as instructed by the vehicle manufacturer.**

Always engage the vehicle parking brake and engage the vehicle transmission in "Park" **before** operating the Companion Seat. Be certain the passenger door is fully open **before** operating the seat. Visually inspect the seat **before** operation. **Do not operate the seat if you suspect damage, wear or any abnormal condition.**

Read and become familiar with all seat operation safety precautions, seat pre-operation notes, seat operating instructions and manual operating instructions **before** attempting seat operation procedures. Contact The Braun Corporation immediately if any of this information is not understood. Call 1-800-THE LIFT.

⚠ WARNING

Read and become familiar with all seat operation safety precautions, seat pre-operation notes, seat operating instructions and manual operating instructions before attempting seat operation procedures. Contact The Braun Corporation immediately if any of this information is not understood. Failure to do so may result in serious bodily injury and/or property damage.

Seat Rotation

A yellow-handled lever is located on the driver's side of the Companion Seat base. Simply lift the lever to disengage the seat from the locked (engaged) position and manually rotate the seat. The spring-loaded seat rotation lever engages (locks) when the seat is rotated fully outward (seat faces doorway) or rotated fully inward (seat faces forward).

Rotate and lock seat in forward position before operating vehicle. Push the yellow-handled lever down to ensure the lever is engaged (seat is locked). Always test the seat to be certain the seat rotation lever is in the engaged position.

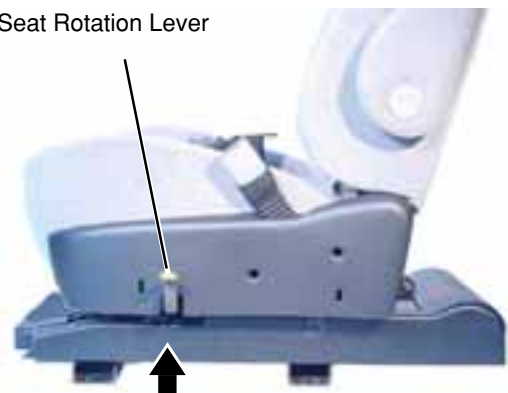
Note: The passenger must lift and rotate his or her feet when rotating the seat.

Note: The seat **must** be manually rotated fully-outward to the locked position before the **STOW/DEPLOY** control switch can be activated.

⚠ WARNING

Rotate and lock seat in forward position before operating vehicle. Failure to do so may result in serious bodily injury and/or property damage.

Seat Rotation Lever



Lift lever to disengage seat from the locked (engaged) position.

Companion Seat Pre-Operation Notes

STOW/DEPLOY Control Switch

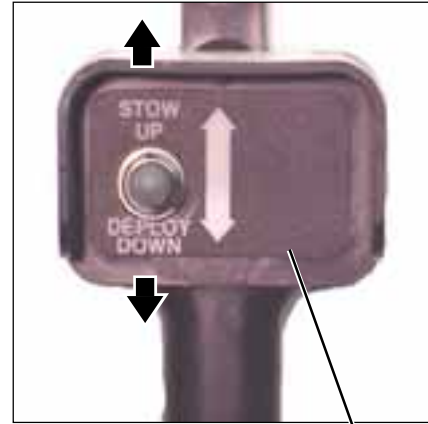
A single hand pendant style STOW/DEPLOY switch controls the seat base extending and retracting functions. Press the switch to DEPLOY DOWN to extend the seat base. Press the switch to STOW UP to retract the seat.

⚠ WARNING

Keep hands, arms, fingers and all other body parts clear of moving seat parts. Failure to do so may result in serious bodily injury and/or property damage.

Note: The seat must be manually rotated fully-outward to the locked position before the switch becomes active. If the switch is nonfunctional, the seat has not been rotated fully-outward to the locked position. Release the STOW/DEPLOY switch when the seat is fully extended or fully retracted.

Keep your hands, arms, fingers, all other body parts and any foreign objects clear of moving seat parts and vehicle parts when the seat is being extended or retracted. The seat will continue to move as long as the STOW/DEPLOY switch is activated. Explain to children and other vehicle passengers that this potential hazard exists and the



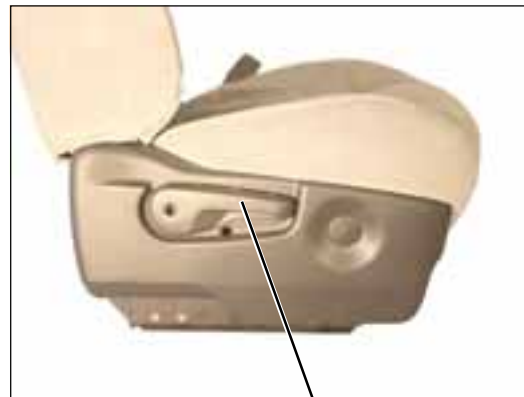
Hand Pendant Switch

seat should only be operated by the Companion Seat occupant or the occupant's attendant.

Seat Recliner

Due to the variety of physical capabilities among passengers using the Companion Seat, it is extremely important for the seat back to be reclined to a safe position. **Extend the seat fully and recline the seat back to a safe position for the intended passenger before the passenger uses the seat.**

When the Companion Seat is extended fully, individuals with limited upper body strength could possibly fall out of the seat if the seat back is angled forward too much. A passenger with limited upper body strength may not be able to prevent his or her torso from going over the center of gravity as the seat base extends fully. Have an assistant on hand to adjust the seat back according to your physical limitations. The passenger should load onto the seat and operate the seat through all functions **with an assistant on hand to determine a safe seat**



Seat Recliner Handle

back recliner position and to ensure that the seat occupant operates the seat safely through all functions. **Establish the seat back recliner position with the seat fully extended.**

Recliner Adjustment: A seat recliner (control lever) is located on the side of the seat to operate the seat recliner. Lean forward slightly before lifting the handle, then lean back to the desired position and release the handle. Releasing the handle engages (locks) the seat back in the desired position.



⚠ WARNING

Extend seat fully and recline to safe position before using seat.

21418
Patent Pending

Companion Seat Pre-Operation Notes

Door Clearance

The seat passenger **must lower his or her head when retracting and extending the seat** to clear the vehicle door header.

Failure of the seat passenger to lower his or her head during the extending cycle could result in the passenger's head being trapped between the door header and the seat as well as simply contacting (bumping) the door header with his or her head.

Failure of the seat passenger to lower his or her head during the retracting cycle could result in the passenger's head contacting (bumping) the door header or the passenger possibly being knocked out of the seat.



Note: It is not necessary for passengers whose head clears the door header when sitting straight up to lower their head during the extending and retracting cycles.

Companion Seat Operating Instructions

⚠ WARNING

Read and become familiar with all seat operation safety precautions, seat pre-operation notes, seat operating instructions and manual operating instructions before attempting seat operation procedures. Contact The Braun Corporation immediately if any of this information is not understood. Failure to do so may result in serious bodily injury and/or property damage.

⚠ WARNING

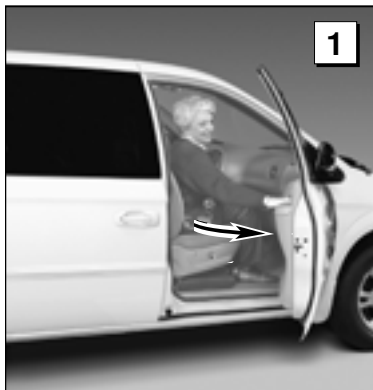
- Keep hands, arms, fingers and all other body parts clear of moving seat parts.
 - Extend seat fully and recline to safe position before using seat.
 - Lower head to clear vehicle door header.
 - Rotate and lock seat in forward position before operating vehicle.
- Failure to follow these rules may result in serious bodily injury and/or property damage.

Notes:

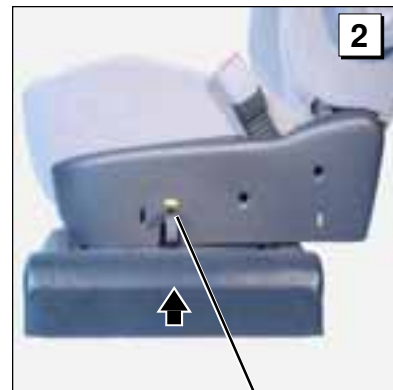
- Read and become familiar with all Seat Operation Safety Precautions and Seat Pre-Operation Notes **before** attempting seat operation. Contact The Braun Corporation immediately if not understood. Call 1-800-THE LIFT.
- Vehicle posted warnings and seat operating instructions decal 22616 provides seat operating instruction. **Replace any missing, worn or illegible decals.**
- Follow the Manual Operation Instructions provided on page 8 in the event of power or equipment failure.

Companion Seat Operating Instructions

To Extend Seat:



1 Open door **fully**.



2 Lift yellow handled lever.

Yellow Handled Lever



3 Manually rotate seat **fully outward until seat locks**.



4 Push the yellow handled lever down to **ensure** the lever is engaged (**seat is locked**).

5 **Lower head** and press switch to **DEPLOY DOWN** until the seat stops (Photos 5a - 5c).



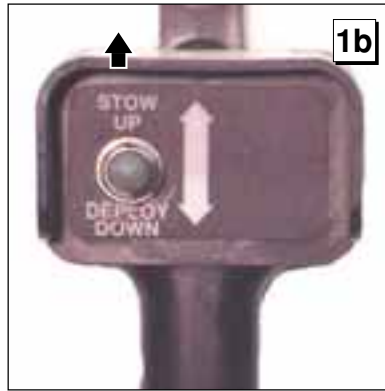
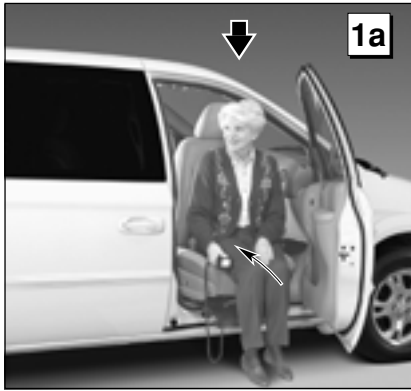
Lower Head



Companion Seat Operating Instructions

To Retract Seat

Lower Head

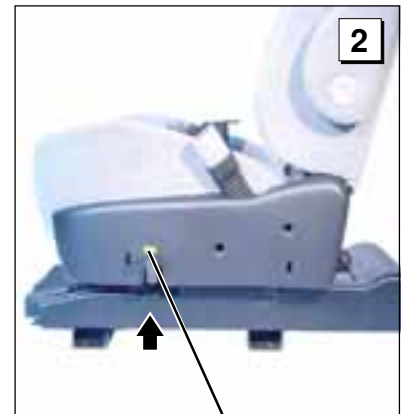


1 Lower head and press switch to **STOW UP** until the seat stops (Photos 1a - 1d).

2 Lift yellow handled lever.

3 Manually rotate seat **fully inward until seat locks** (Photo 3a). Push the yellow handled lever down to ensure the lever is engaged (**seat is locked**) (Photo 3b).

4 Close door (Photo 4).



Yellow handled Lever

Yellow handled Lever



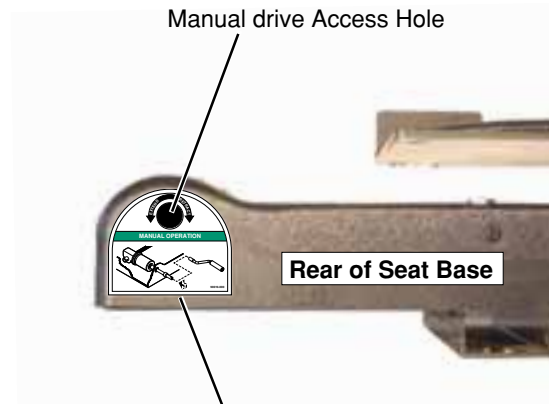
Manual Operating Instructions

An electric actuator powers the Companion Seat base to extend and retract the seat. If you experience power or equipment failure, follow the Manual Operating Instructions provided below to manually extend and retract the Companion Seat.

A slotted shaft (stud) is located at the motor end of the electric actuator. An access hole is located at the rear of the Companion Seat base to allow one of two provided manual actuation devices to be inserted and manually drive the actuator. Turning the actuator motor shaft with the provided hand crank or the drill adaptor extends and retracts the seat. Turn the stud counterclockwise to extend the seat. Turn the stud clockwise to retract the seat. Further details are provided below and on decal affixed to Companion Seat (see picture and graphic on this page).

Note: Manual operation procedures **cannot be accomplished rapidly**. If you experience power or equipment failure, load and unload the passenger **without** manually extending or retracting the seat. **Manual operation procedures are not intended to be used to load and unload passengers**. This procedure is available to retract the seat fully, in order to allow the vehicle door to be closed.

If a problem occurs with your Companion Seat, contact your Braun dealer or call The Braun Corporation at 1-800-THE LIFT. One of our national Product Support representatives will direct you to an authorized service repairman.

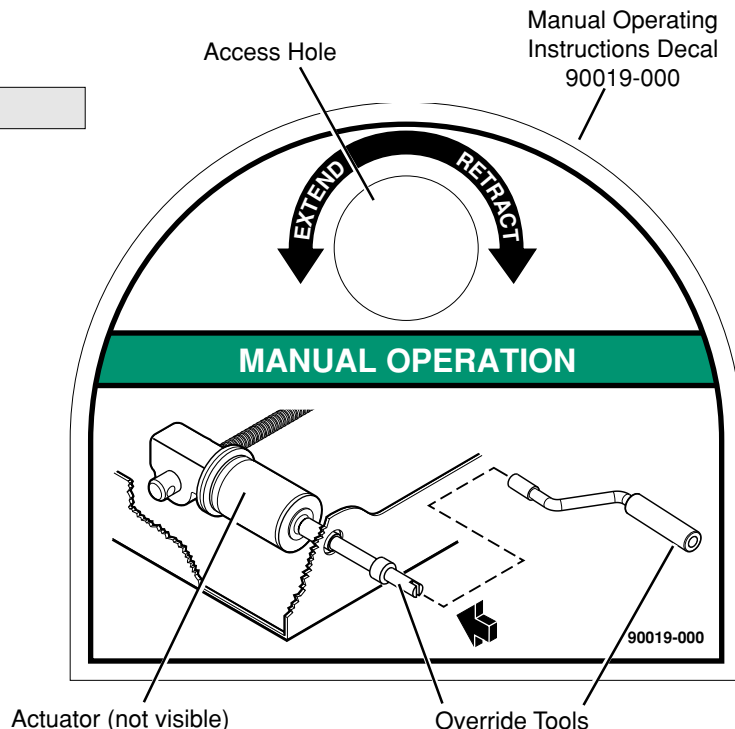


Manual Operating Instructions Decal 90019-000

Manual Operation decal 90019-000 depicts the hand crank and the drill adaptor being used to manually extend and retract the seat base. The hand crank and drill adaptor are both shown in order to depict both manual operation procedures. A drill can be fitted with the provided drill adapter and used for manual operation (drilling device must have a 3/8" chuck). These options will allow you to perform manual extending and retracting procedures at a substantially higher rate of speed. Carry the manual operation tools in your Companion Seat-equipped vehicle at all times.

Manual Operating Instructions

- 1** Use a provided manual override tool (hand crank or drill adaptor).
- 2** Insert the tool through the access hole.
- 3** Turn slotted stud counterclockwise to extend the seat.
- 4** Turn slotted stud clockwise to retract the seat.



Installation/Service Safety Precautions

⚠WARNING

If installation procedures cannot be completed exactly as provided in this manual or if the instructions are not fully understood, contact The Braun Corporation immediately. Failure to do so may result in serious bodily injury and/or property damage.

⚠WARNING Read this manual and become familiar with all safety precautions, seat pre-operation notes, seat operating instructions, and installation instructions before performing installation procedures.

⚠WARNING Remove any obstructions within the seat mounting/operating area prior to beginning installation procedures.

⚠WARNING A minimum of two people are required to place the seat in the vehicle if a hoist is not available.

⚠WARNING Route all cables clear of exhaust system, other hot areas moving parts, wet areas, etc.

⚠WARNING Coil and secure excess power cable under Companion seat, under carpet, inside wall panel or other protected area — clear of hot areas, moving parts or other potential hazards.

⚠WARNING Risk of electrical shock or fire! Use extra care when making electrical connections. Connect and secure as outlined in Installation Instructions and Wiring Diagrams.

⚠WARNING Maintenance and repairs must be performed only by authorized service personnel.

⚠WARNING Never modify (alter) a Braun Corporation Companion Seat™.

⚠WARNING Replacement parts must be direct Braun replacements.

⚠WARNING Disconnect the power cable at the battery prior to servicing.

⚠WARNING Never install screws or fasteners (other than factory installed).

⚠WARNING The Companion Seat Owners / Installation manual must be in the Companion Seat-equipped vehicle when the consumer receives the Companion Seat.

⚠WARNING Failure to follow these safety precautions may result in serious bodily injury and/or property damage.

Installation Instructions

Installation Parts Package 05786-000

- Please check the Installation Parts List to see that you have everything needed to begin. Report any missing items.
- Installation Parts Package 05786-000 includes **items 1-23**. Identification tag (item 24) is affixed to the inside front cover of this manual.

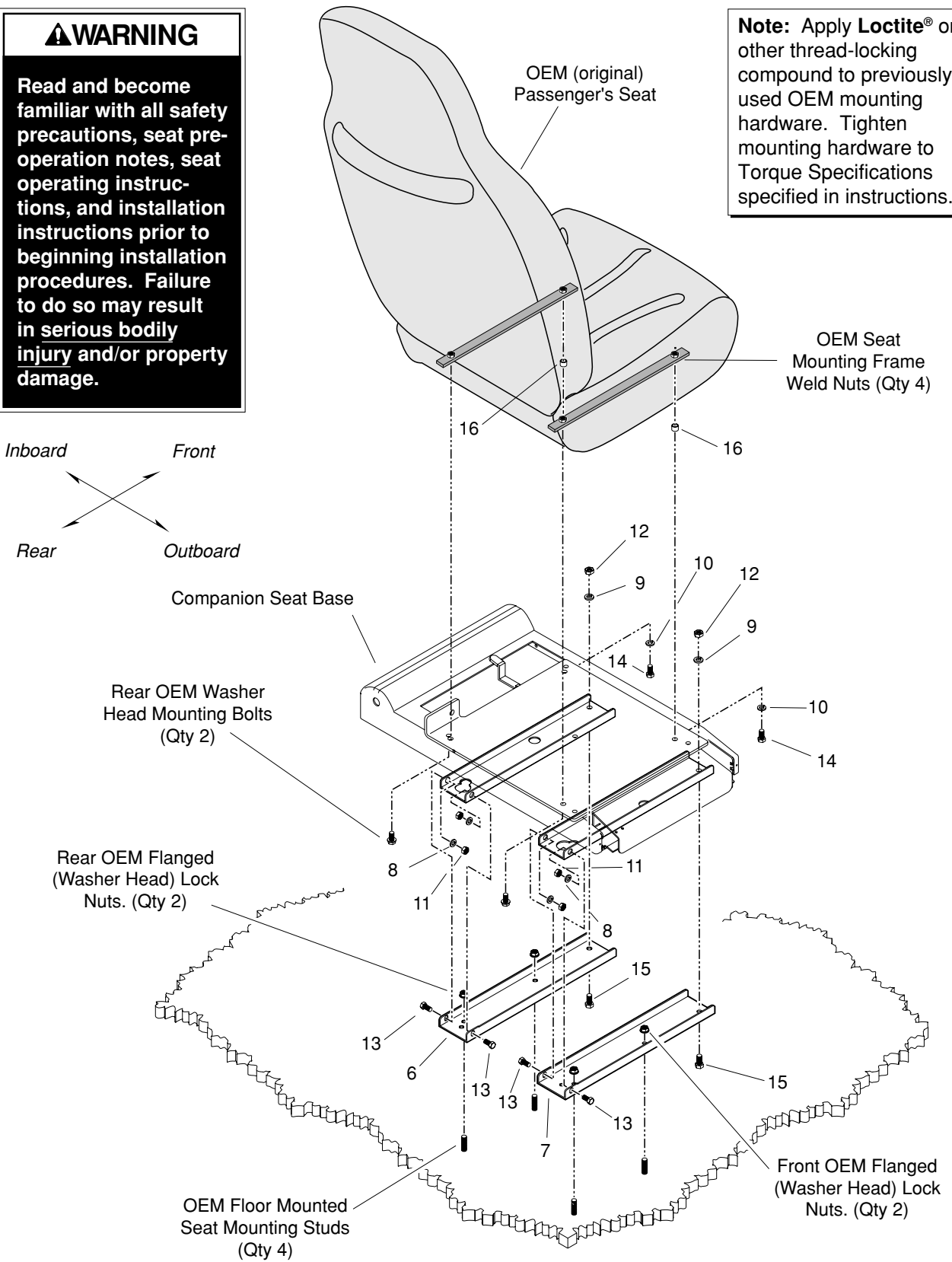
Item	Qty.	Description	Part No.
1	1	Harness, Air Bag / Pre-tensioner Extension	25523A
2	4	Cable Tie, 3 3/4" Black Plastic	91010-000
3	1	Clip, 3/8" Plastic, Cable	11092
4	1	Assembly, Override Hand Crank	05882-000
5	1	Adaptor, Override Drill	05799-000
6	1	Channel, Outer Base Mount - Driver	24077D
7	1	Channel, Outer Base Mount - Passenger	24077P
8	4	Washer, 3/8" Lock, Auto Black	10069BK
9	3	Washer, 7/16" Lock	13843
10	2	Washer, #8MM Split Lock	24155
11	4	Nut, 3/8 - 16 Hex	10059
12	3	Nut, 7/16 - 20 Hex	10457
13	4	Bolt, 3/8 - 16 x 3/4" Grade 5 Hex, Auto Black	12463
14	2	Bolt, M8 x 30M HH FT	51403
15	2	Bolt, 7/16 - 20 x 1" Hex, Auto Black	15746
16	1	Bolt, 7/16 - NF x 1-1/4 HHCS	80042-000
17	1	Rivet, Pop 3/16 - 0.13 / 0.25, Auto Black	11513
18	1	Washer, #10 Flat, Auto Black	11541
19	1	Decal, Warning, Lower Head	21419
20	1	Decal, Warning, Extend and Recline Seat	21418
21	1	Decal, Warnings/Seat Operating Instructions	22616
22	1	Tag, Serial No. / Series No. - Plastic	18548P
23	1	Card, Business Reply - Warranty	11673
24	1	Manual, General Motors Companion Seat	24154G

Installation Instructions

Overall Installation View

⚠ WARNING
 Read and become familiar with all safety precautions, seat pre-operation notes, seat operating instructions, and installation instructions prior to beginning installation procedures. Failure to do so may result in **serious bodily injury and/or property damage.**

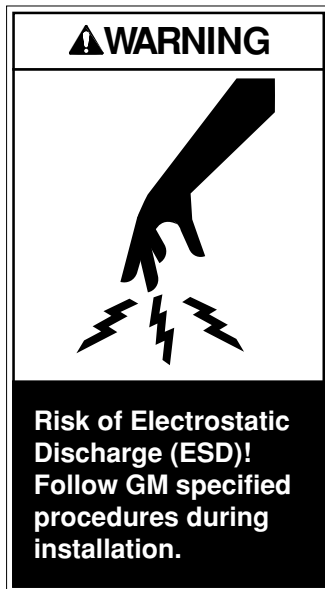
Note: Apply **Loctite®** or other thread-locking compound to previously used OEM mounting hardware. Tighten mounting hardware to Torque Specifications specified in instructions.



Installation Instructions

1

Disable Vehicle SIR System



Before beginning installation procedures, review the following recommendations from General Motors regarding the front passenger seat belt pre-tensioner and side air bag. Although it is unlikely, **Electrostatic Discharge (ESD) may cause inadvertent deployment of the seat belt pre-tensioner or seat side air bags.**

General Motors U-Vans
(Chevy Venture, Pontiac
Transport and Oldsmobile

Silhouette) have two electrically controlled devices in the front passenger seat (a seat belt pre-tensioner and a side air bag deployment unit). These two devices receive signals from the Sensing and Diagnostics Module (SDM) located under the right front passenger seat.

When the OEM seat assembly is removed from the OEM seat base, the following steps **must** be taken to assure the OEM systems are fully restored and operational as designed, tested and manufactured.

1a Disable the SIR System: (Reference: GM U-Van Service Manual)

Turn the ignition to the OFF position. Remove the fuse that provides power to the SDM. Disconnect the vehicle battery from the vehicle electrical system.

1b Wait ten minutes before proceeding. (Deployment power is available for as much as ten minutes after disconnecting the vehicle power by any of the above methods).

1c Disconnect the two yellow connectors located under the passenger seat. This eliminates the power source to the seat

belt pre-tensioner and the seat side air bag deployment devices.

1d The two yellow connector terminal ends still attached to the seat should be wrapped with electrical tape to reduce the possibility of Electrostatic Discharge (ESD). Although it is unlikely, **ESD may cause inadvertent deployment of the seat belt pre-tensioner or seat side air bags.** Other precautions regarding ESD are listed in The U-Van Service manual.

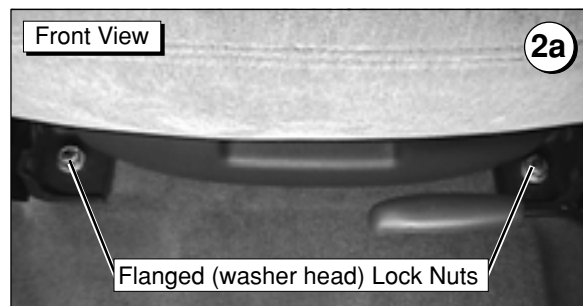
Note: Photos and details are provided in the following step-by-step installation instructions.

2

Remove Passenger's Seat

2a Remove OEM Passenger's Seat Pedestal Mounting Hardware. Four flanged (washer head) lock nuts secure the seat to four floor-mounted threaded mounting studs.

Front Flanged Nuts: Use a 15 MM wrench to remove the two front lock nuts.

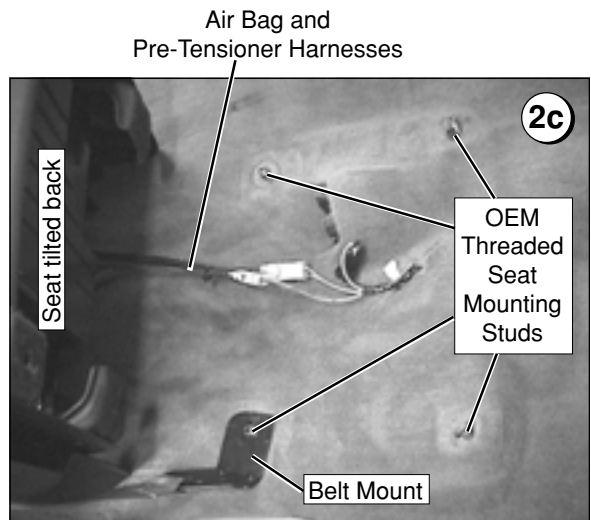
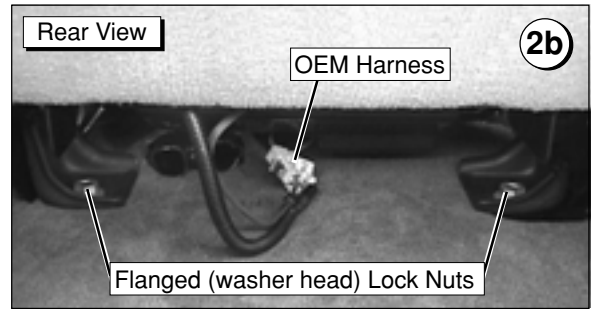


Installation Instructions

- 2b) Rear Flanged Nuts:** Use an 18 MM wrench to remove the two rear lock nuts. Keep all hardware.

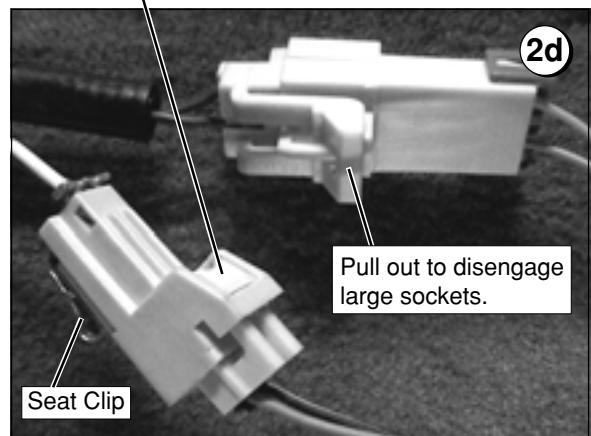
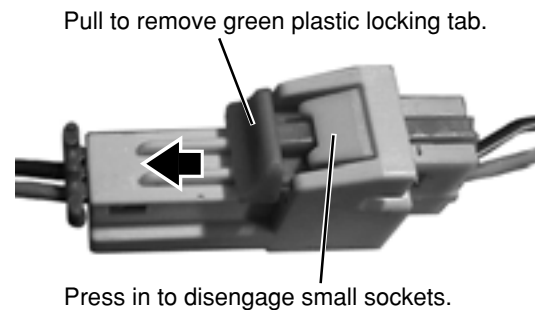
⚠ CAUTION

Unclip the two wiring harnesses (with yellow connectors) clipped to the bottom of the OEM seat base before moving seat.



- 2c) Disconnect Air Bag and Pre-Tensioner Harnesses:** Carefully lean seat and pedestal assembly back to expose the two wiring harnesses (with yellow connectors). **Do not strain wiring harnesses and/or sockets.**

Carefully disconnect the two yellow connectors. Pull to remove the green plastic locking tab in the smaller connectors. Keep this lock. Press in to disengage small sockets. Pull out to disengage large sockets.

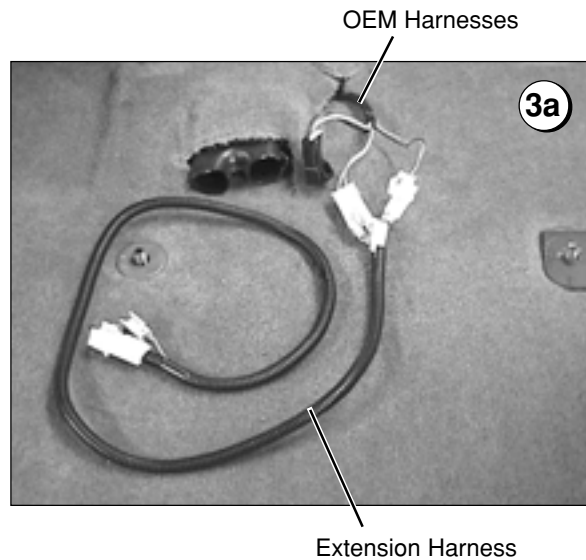


Installation Instructions

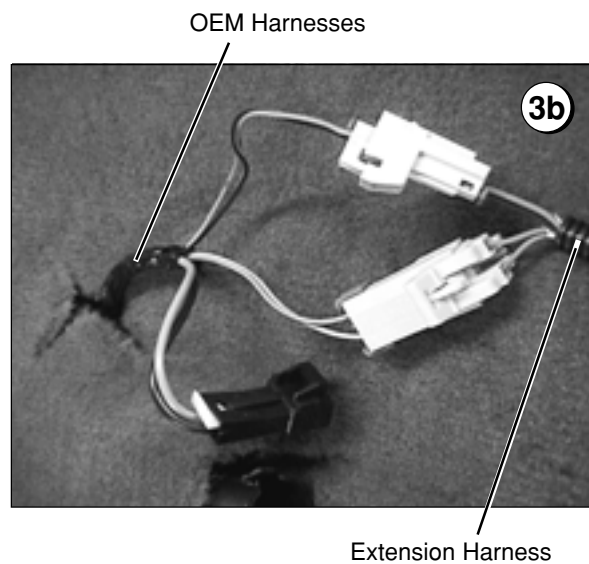
3

Install Pre-Tensioner and Air Bag Extension Harness

3a An extension harness is supplied to accommodate the Companion Seat base travel (provides adequate wiring harness cable to allow seat travel).

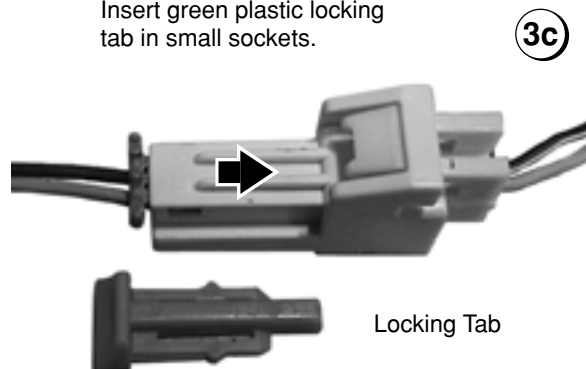


3b Connect the two yellow female connectors on the extension harness to the male connectors on the OEM harnesses located in the passenger seat position (previously disconnected during seat removal). Match sockets (two sizes - sockets will only connect one way).



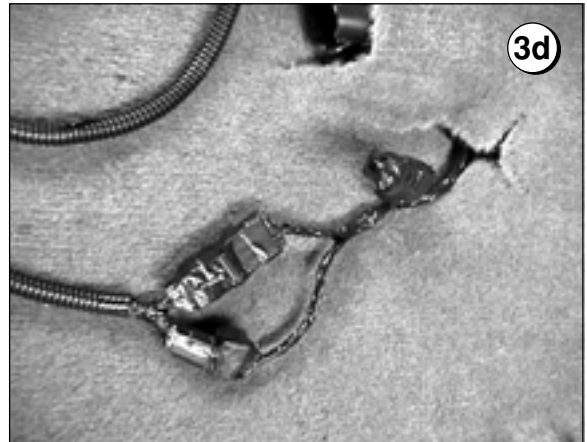
3c Insert the green plastic locking tab in the small sockets to secure the harness connectors.

Insert green plastic locking tab in small sockets.

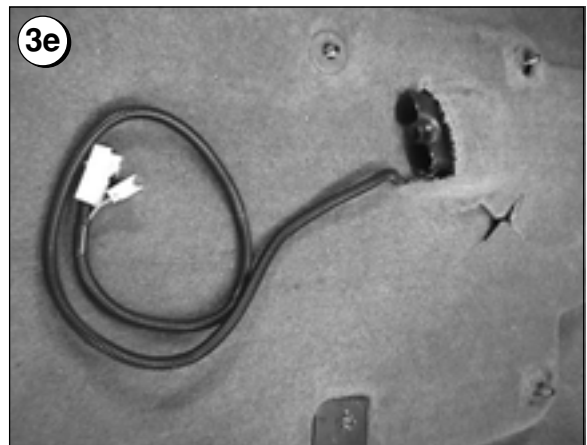


Installation Instructions

- 3d** Wrap the yellow connectors and harness ends with electrical tape to reduce potential of separation.



- 3e** Carefully position the harness connectors under the carpet and feed the extension harness out the carpet access hole next to the air duct (position sockets flat on floor clear of seat base damage). Route the harness toward the rear as shown.



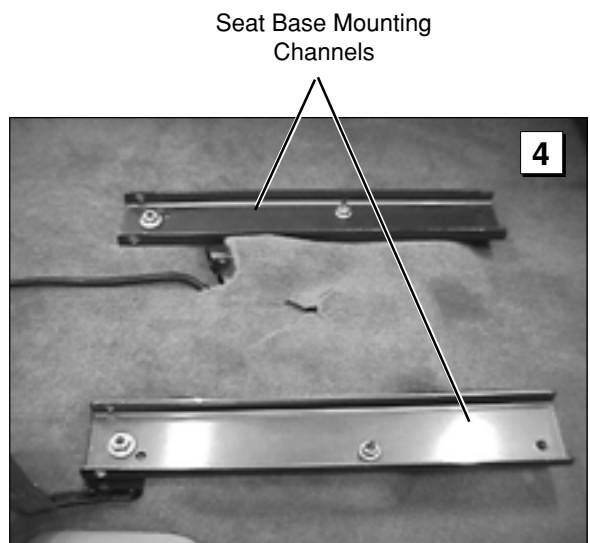
4 Mount Base Mounting Channels

Two seat base floor mounting channels (brackets) are supplied to provide a level surface to mount the Companion Seat base. Two mounting holes are provided at the rear end of each channel. Use the rear most holes for mounting. Secure the channels using the four OEM flanged (washer head) lock nuts previously securing the OEM seat.

Note: Apply **Loctite®** or other thread-locking compound to the OEM threaded mounting studs.

Front Flanged Nuts: Use a 15 MM wrench. Tighten nuts securely. **Torque Specifications:** 30 foot pounds.

Rear Flanged Nuts: Use an 18 MM wrench. Tighten nuts securely. **Torque Specifications:** 30 foot pounds.



Installation Instructions

5 Mount Companion Seat Base

Two floor mounting cross members are located on the bottom of the Companion Seat base. **Carefully** position the seat base by placing the seat base cross members into the floor-mounted channels. Align the ends of cross members and channels. **Do not damage wiring harnesses!**

5a) Front Mounting Bolts: Install the two front mounting bolts (one per mounting channel). From below the seat, insert a 7/16"-20 x 1" hex bolt through the floor-mounted channel and the Companion Seat support rail. Now place a 7/16" lock washer and a 7/16-20 hex nut on to the bolt. Repeat procedure on opposite side. Hand tighten bolts **temporarily**.

5b) Rear Mounting Bolts: Insert 3/8"-16 x 3/4" hex bolts through the matching sets of mounting holes in the seat base cross members and the floor-mounted channels. Secure each bolt with one 3/8" lock washer and one 3/8"-16 hex nut.

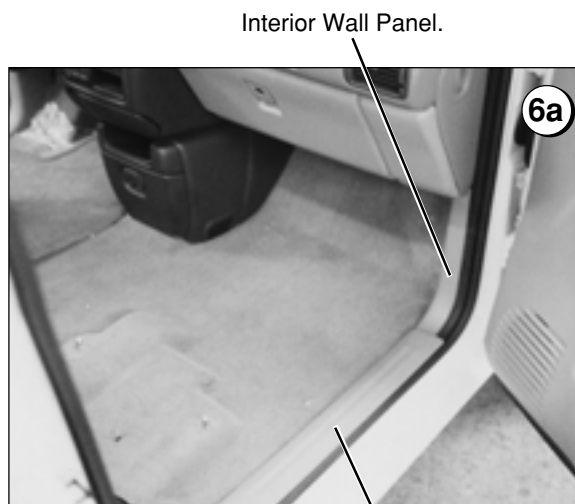
Tighten all seat base mounting hardware securely. **Torque Specifications:**
Front Mounting Bolts: 60 foot pounds.
Rear Mounting Bolts: 38 foot pounds.



6 Route Wiring Harness through Floorboard

6a) Remove Door Sill: Temporarily remove the door sill plastic molding (threshold). The plastic threshold is snapped in place.

6b) Remove Interior Wall Panel: Temporarily remove the lower plastic interior wall panel. The wall panel is snapped in place.



Door Sill Plastic Molding (Threshold).

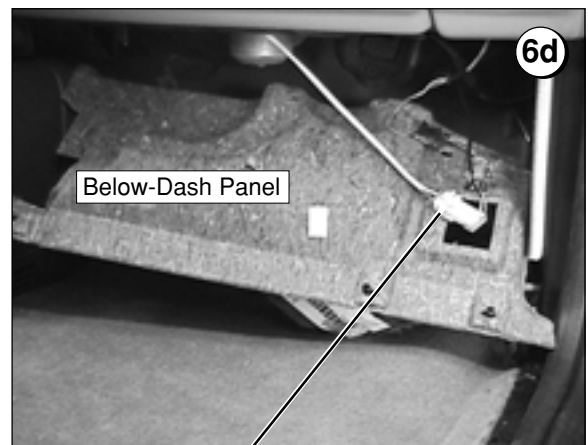
Installation Instructions

- 6c) Remove below Dash Panel:** Temporarily remove the panel positioned below the dash. The panel is snapped in place (three snap fasteners).

Panel below Dash (three snap fasteners).



- 6d) Disconnect the OEM light assembly and harness that are attached to the dash panel.** Carefully position the panel below the dash or disconnect harnesses and remove panel. **Do not damage wiring harnesses and/or sockets.**

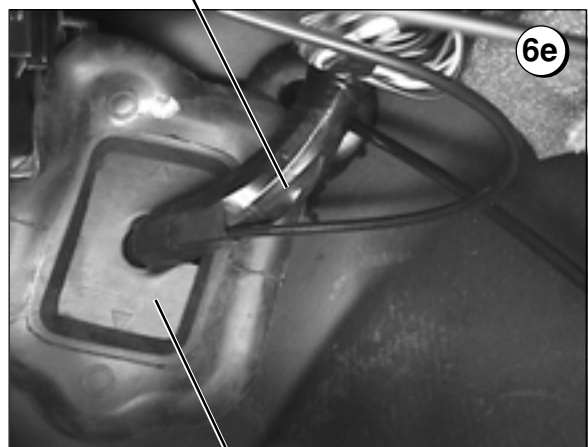


OEM Light Assembly and Harness Assembly

- 6e) Pull away OEM Carpet:** Temporarily pull the floor-mounted carpet rearward to expose the vehicle floorboard. Locate the rubber grommet (boot) positioned in the floorboard just below the dash (an OEM cable is routed through grommet to the engine compartment).

Carefully cut an access hole (slit) in the rubber grommet for Companion Seat wiring harness to access the engine compartment. **Do not damage wiring harness and/or connectors.**

OEM Cable

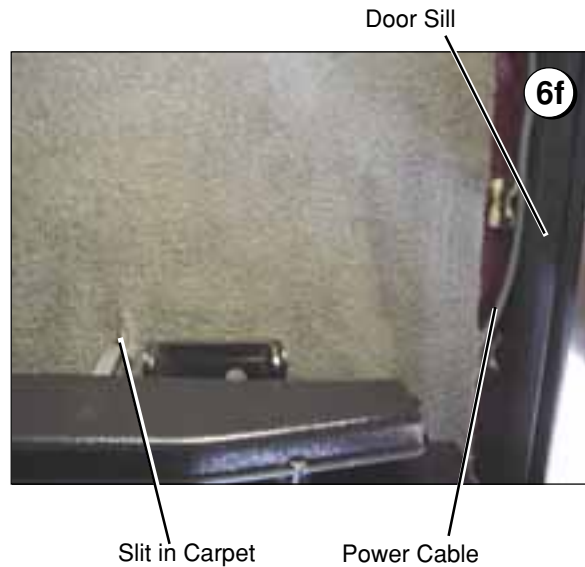


Rubber Grommet (Boot)

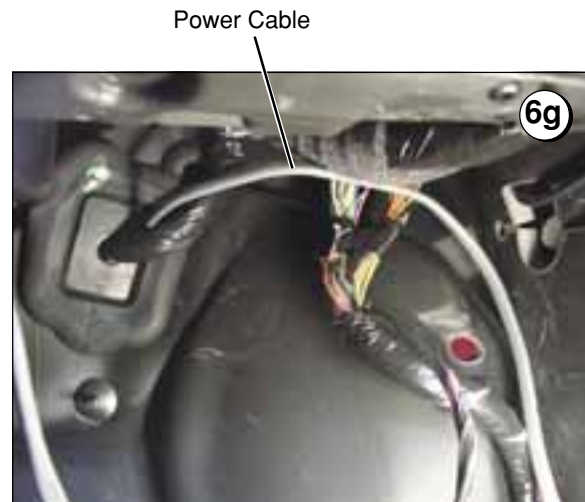
Installation Instructions

6f Now you are prepared to route the power cable. The power cable is permanently connected to the Companion seat. It comes out of the bottom of the seat base, on the front side, and just inside the right mounting channel. With a utility knife make a small slit in the carpet as shown. Route the power cable through this slit to the passenger's door sill.

Note: The cable will be routed below the door sill plate, up the lower interior panel, and finally through the slit in the rubber boot to the engine compartment.



6g Route the cable from the sill up the interior panel. Route (feed) the cable through the slit in the rubber boot and into the vehicle's engine compartment.

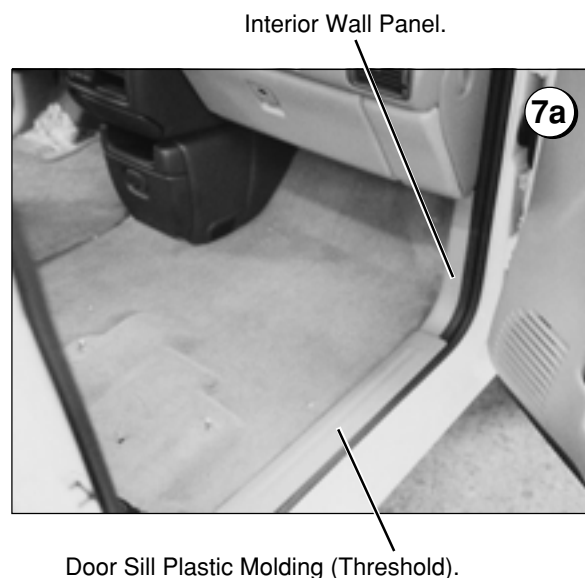


7 Replace interior Panels and Covers.

7a Replace the OEM carpet into its original position covering the passenger foot well and the rubber harness boot below the dash. Reconnect the OEM light assembly and harness to the below dash panel. Reposition the below dash panel and snap it into place (see Photos 6c & 6d).

7b Reposition the lower interior wall panel to cover the power cable routed to the engine compartment. Snap the panel into place.

7c Reposition the plastic sill plate to cover the power cable and snap it into place.

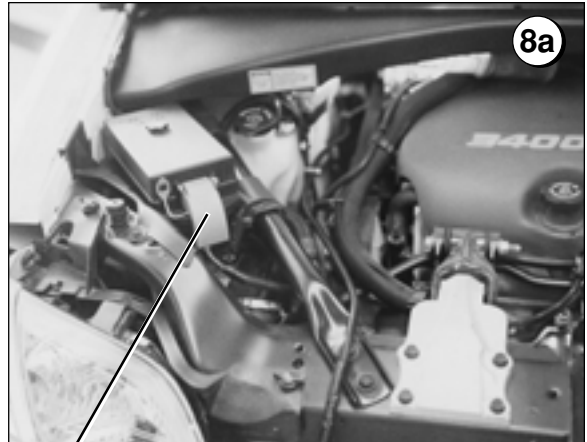


Installation Instructions

8

Connect Power Harness to Battery

- 8a) Temporarily remove the red plastic cover on the fuse relay center to access the **Positive (+)** battery feed cable post (lift to remove).
- 8b) **Carefully** remove the flanged (washer head) nut securing the battery feed cable terminal (13MM wrench). See Photo 8d.

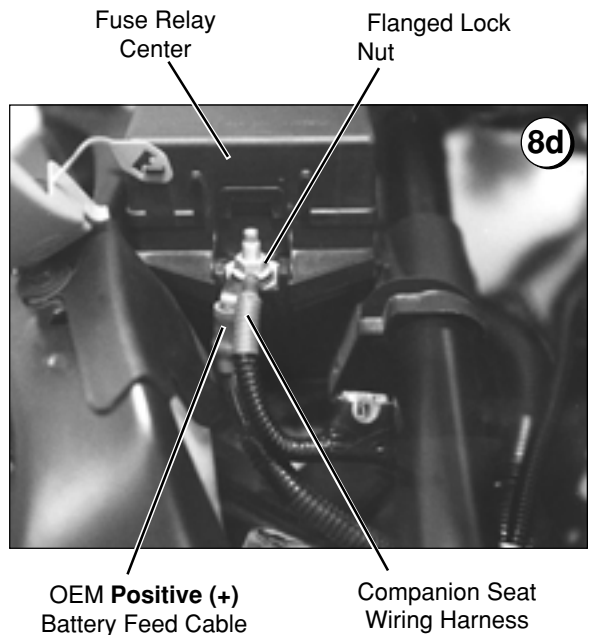


Red Cover



- 8c) **Carefully** connect the fuse end of the Companion Seat wiring harness to the fuse relay center **Positive (+)** battery post (position the 1/4" eyelet terminal on the battery feed cable post). Reposition the flanged (washer head) nut. **Tighten securely** (13MM wrench).

- 8d) Reposition the red plastic cover (slide down into engagement slots).



Installation Instructions

8e Using a 10MM wrench remove the flanged (washer head) nut secured to the vehicle ground stud.

8f **Carefully** connect the Companion Seat ground wire ring terminal to the vehicle ground stud. Reposition the flanged nut. **Tighten securely.**



8g **Test the seat base operation** before mounting the passenger's seat to the Companion Seat base. The seat should now be operational, complete a few cycle's to assure proper electrical connections have been made.



Installation Instructions

9 Remove Plastic Side Guards from OEM Seat.

9a Passenger Side Guard:

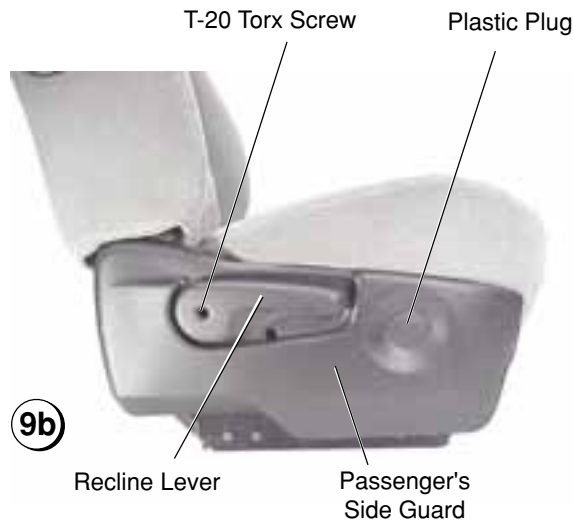
A T-20 Torx screw secures the recliner handle to the seat base. Remove handle (keep screw). Remove the 1-13/16" diameter plastic plug (snap-in). One Phillips screw secures the guard on the side (see photo 9b). The guard is also secured by two Phillips screws under the seat (see photo 9a). Remove these screws to complete the removal of the passenger side guard.



9b Driver Side Guard:

The driver side plastic guard is secured with two Phillips screws on the side of the seat (see photo 9c). The guard also has two Phillips screws under the seat (see photo 9a). Remove these screws to complete the removal of the passenger side guard.

Passenger's Side Guard



Driver's Side Guard



Installation Instructions

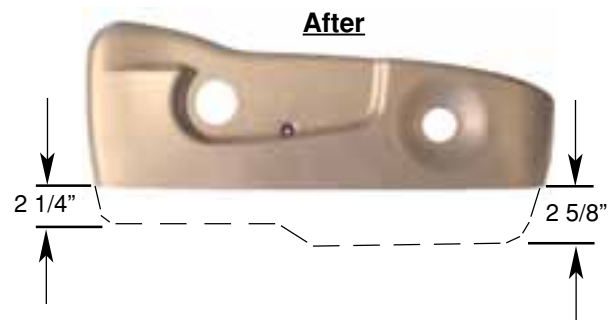
10

Trim Seat Side Panels

10a The passenger's side panel must be trimmed as shown to provide the proper fit of the passenger seat to the Companion Seat base. Use the dimensions, a straight edge and a wax pencil to guide you in the modification of the panel.



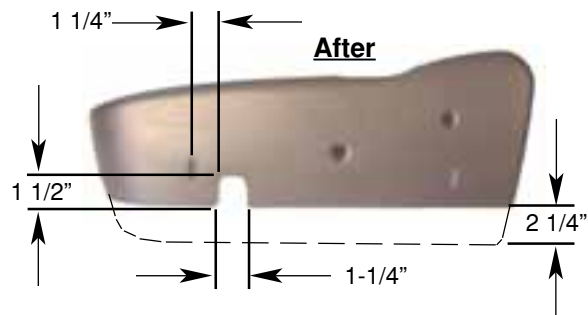
10a



10b The driver side panel must also be modified to fit the Companion Seat and provide clearance for the swivel latch. Use the dimensions, a straight edge and a wax pencil to guide you in the modification of the panel.



10b



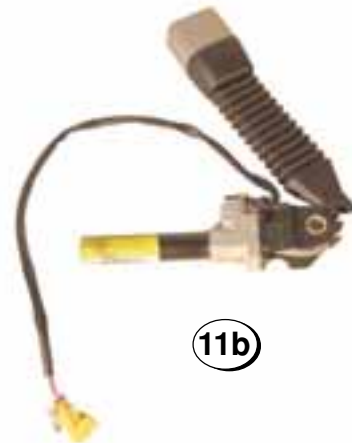
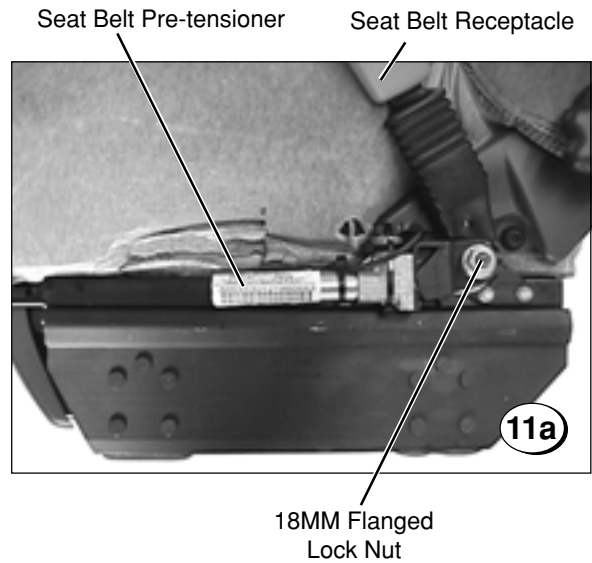
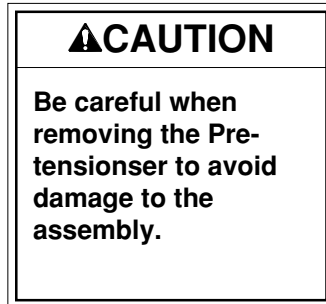
Installation Instructions

11 Remove Seat Belt Pre-tensioner & Receptacle

11a Using an 18 MM wrench or socket, remove the flanged (washer head) lock nut securing the seat belt pre-tensioner and receptacle assembly. **Carefully** turn the seat assembly over, remove seat belt pre-tensioner and receptacle assembly from the mounting stud and **carefully** position off to side of seat. **Do not** strain or otherwise damage harnesses or connectors.

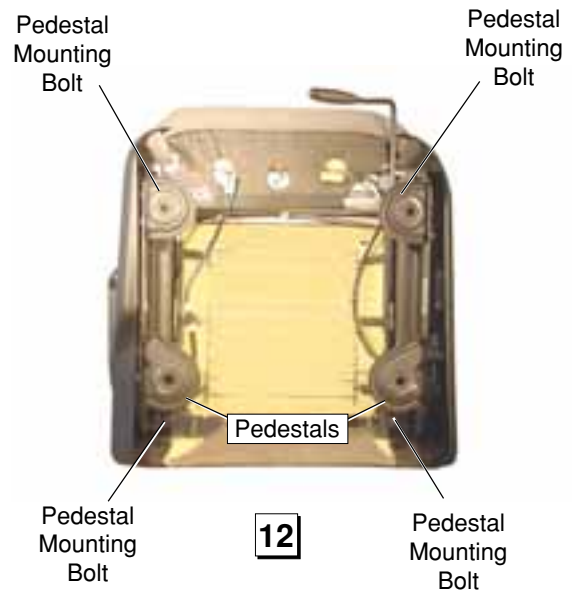
11b To remove the Pre-tensioner/ Receptacle assembly from the seat, you must Un-clip the harness connector under the seat before removing the assembly.

Caution: Be careful when removing the Pre-tensioner/Receptacle assembly to avoid damage to the assemblies harness, connector or Pre-tensioner.



12 Remove OEM Seat Pedestals.

Remove the two metal seat pedestals. Using a 10MM wrench remove the four washer head bolts securing the pedestals to the seat bottom. Keep all hardware.



Installation Instructions

13 Mount Pre-tensioner/Receptacle assembly to Companion Seat Base.

Position the Pre-tensioner assembly as shown. Align the Pre-tensioner assembly with the rotational platform on the top of the Companion Seat Base. Use a 7/16" x 1 1/4" bolt to secure the assembly. The bolt should be routed through the Pre-tensioner assembly, then through the rotational platform. Use a 7/16" lock washer and a 7/16" hex nut to secure the assembly to the platform.

Note: Apply **Loctite®** or other thread-locking compound to the mounting bolt. **Tighten securely. Torque Specifications:** 60 foot pounds.



14 Secure the Modified Side Panels to the Seat.

The OEM side panels need to be re-attached to the seat before installing the seat on the Companion Seat Base. The modifications to the side panels do not effect the OEM mounting hardware or positioning. Reference Step 9 for detailed securement points and tools required. **Tighten all hardware securely.**

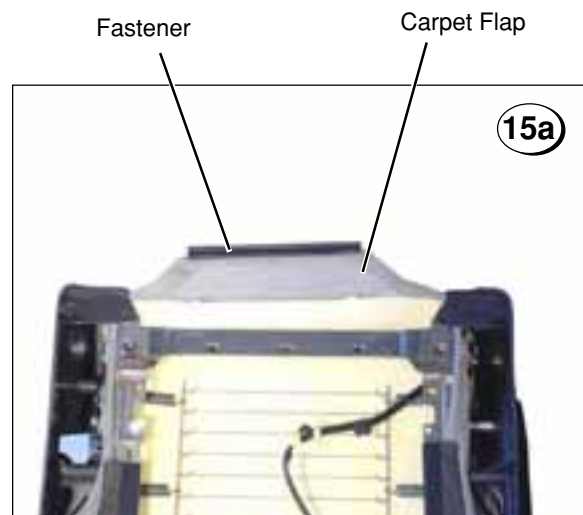


Driver's Side Panel

15 Route the Pre-tensioner Harness

15a Release the carpet flap at the bottom/rear of the OEM Seat. To release the carpet flap pull the plastic track fastener securing the flap on the bottom of the OEM seat.

15b **Carefully** place the OEM seat in the vehicle on its back directly behind the Companion Seat base (**do not damage extension harness**). This location will allow you to reconnect the Pre-tensioner and the side air bag harness the extension harness connected to the vehicle floor.



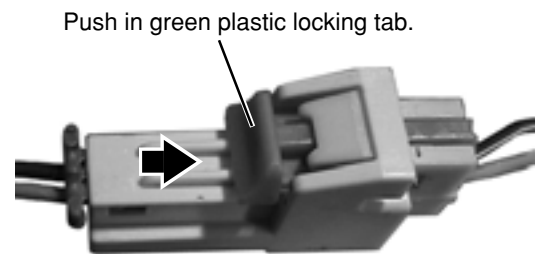
Installation Instructions

- 15c** Connect the floor-mounted extension harness connectors to the mating Pre-tensioner harness connectors. The Pre-tensioner assembly harness is secured to the rotational base of the Companion Seat and the side air bag connector is connected to the OEM seat.



Connectors

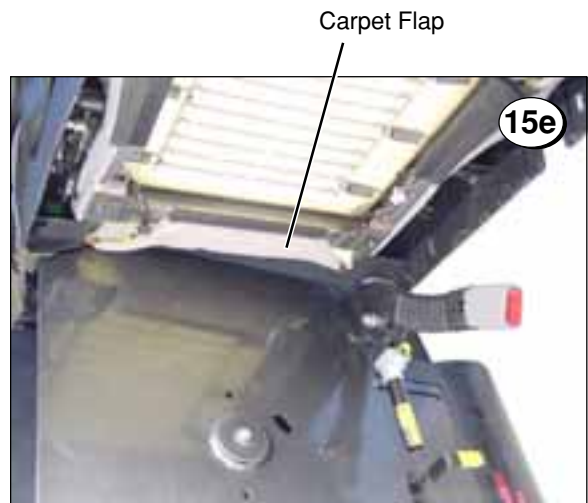
- 15d** Insert the green plastic locking tab into the small sockets to secure the harness connectors.



Push in green plastic locking tab.

15d

- 15e** Route the harness wires as shown (See Photo 15c). Tuck the harness and connectors into the carpet flap and re-secure the flap to the seat as shown in Photo 15e.



Carpet Flap

Installation Instructions

16

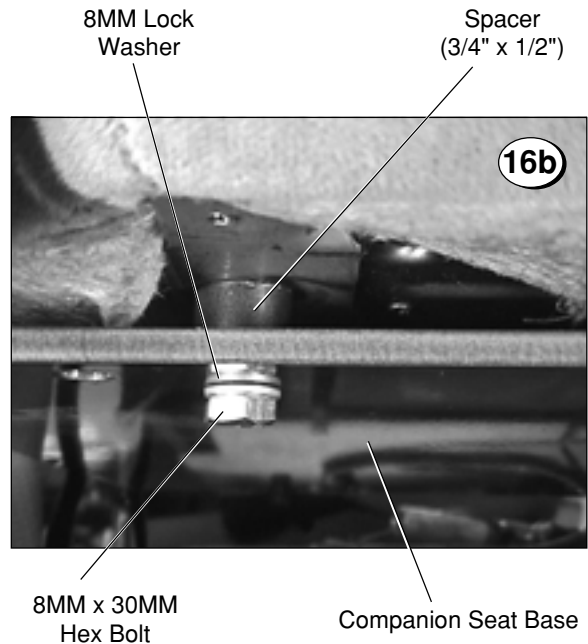
Mount Passenger Seat to Base

16a) Rear Mounting Bolts: From below the seat base, insert one OEM washer head bolt in each rear mounting hole (see Page 11). Thread the mounting bolts into the seat frame weld nuts. **Note:** These bolts previously secured the OEM seat pedestals to the seat frame.

Note: Apply **Loctite®** or other thread-locking compound to the mounting bolts. Use a 10MM wrench to **tighten the bolts securely**. **Torque Specifications:** 24 foot pounds.

16b) Front Mounting Bolts: Place one #8MM lock washer onto each of the two #8MM x 30MM hex bolts. From below the seat base, insert one bolt through each front Companion Seat base mounting hole. Place one 3/4" x 1/2" tubing spacer onto the bolts (sandwich spacer between the Companion Seat base and the seat). Thread the mounting bolts into the seat frame weld nuts (see Page 11).

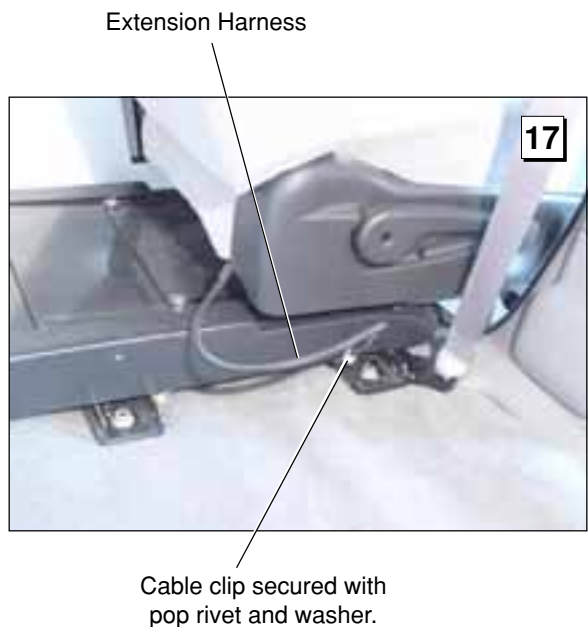
Note: Apply **Loctite®** or other thread-locking compound to the mounting bolts. Use a 13MM wrench to **tighten the bolts securely**. **Torque Specifications:** 24 foot pounds.



17

Secure Extension Harness

The extension harness must be secured to the Companion Seat as shown. Cycle the Companion Seat through the seat rotation and the stow/deploy cycles to determine the proper length of the harness. The cable should not be strained during any operation of the Companion Seat. Use a plastic clip for securement. Drill a mounting hole in the Companion Seat's plastic shroud for the clip. Use the provided pop rivet with a backing washer to secure the clip and harness to the shroud.



Installation Instructions

18

Post Decals

⚠ WARNING

Affix decals as specified. Failure to do so may result in serious bodily injury and/or property damage.

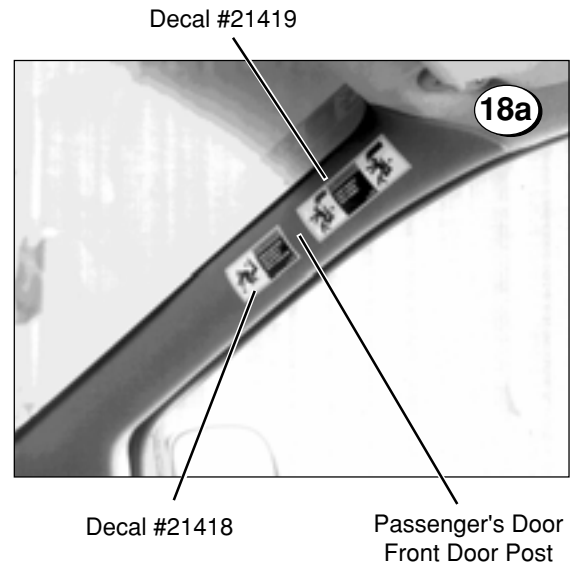
Post (affix) the safety instructions decals supplied with the Companion Seat at the locations specified here.

The decals **must** be visible to the Companion Seat occupant. **Important!** Prepare the decal posting surfaces as detailed.

Decal Application Procedure (Surface Preparation): Clean decal posting surfaces with isopropyl alcohol before decal application. Use a clean cloth or paper towels. **Do not** use oily shop rags. Wipe surface free of residue with dry portion of cleaning cloth.

18a Post Extend and Recline Warning Decal 21418 and Head Clearance Warning Decal 21419 as shown. Post decals on front door post (plastic molding) at edge of windshield.

18b Post Warnings/Seat Operating Instructions Decal 22616 on the vehicle dash as shown.



19

Companion Seat Manual:

Provide this manual to the consumer. **The manual must be stored in the Companion Seat-equipped vehicle at all times.**

⚠ WARNING

Companion Seat owner's manual must be stored in seat-equipped vehicle at all times. Failure to do so may result in serious bodily injury and/or property damage.

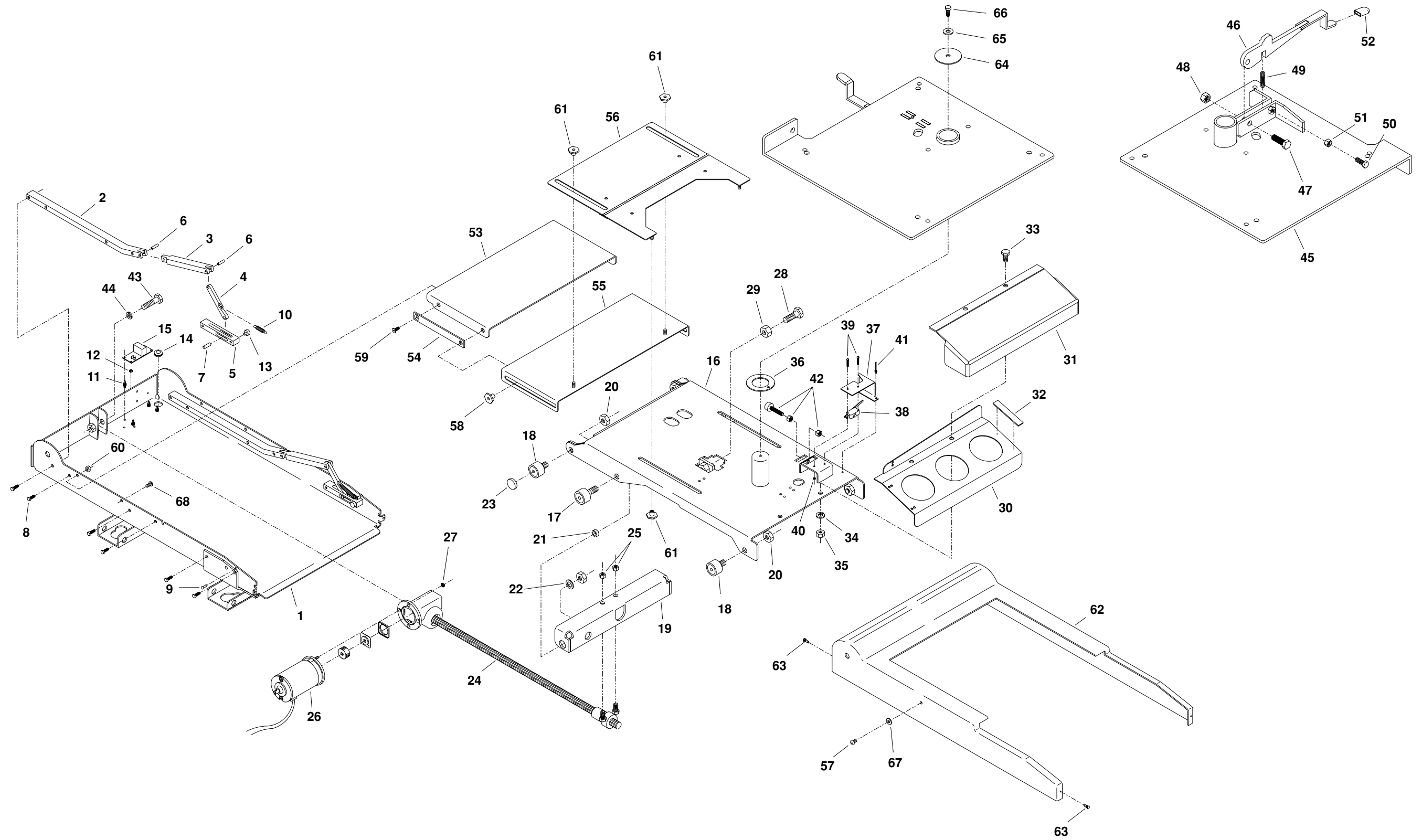
Companion Seat Parts List

Companion Seat Parts List

This part list and the exploded view is provided to identify a specific part if a replacement is required. To order a replacement part please call the Braun Product Support Department at 1-800-THE LIFT.

Item	Qty.	Description	Part No.
1	1	Weldment, Lower Carriage - Venture	05777-000
2	2	Guide, Roller Fixed	05715-000
3	2	Linkage, Roller Guide - Pivot	05716-000
4	2	Linkage, Roller Guide	05717-000
5	2	Guide, Roller - Fixed/Slotted	05718-000
6	4	Pin, Spring 3/16" x 3/4"	86058-000
7	2	Pin, Dowel 1/4" x 3/4"	86062-000
8	12	Bolt, 1/4-20 x 3/4" - Grade 5 - Hex - Auto Black	10970
9	2	Pin, Clevis 3/16" x 1/2"	86046-000
10	2	Spring, Extension 0.3" OD x 1.25" L x 0.037" W	98038-000
11	4	Standoff, Nylon	91247-000
12	4	Nut, #8-32 Hex - Auto Black	10777
13	2	Spacer, Side Rail	05762-000
14	2	Grommet, Rubber 3/4" OD x 1/2 ID	91016-000
15	1	Assembly, Companion Seat Board	05723-000
16	1	Weldment, Upper Carriage	05791-000
17	2	Bearing, 1 1/4" OD Cam Follower	13040
18	4	Bearing, 1 1/4" Cam Follower - SHT	20716
19	1	Bracket, Actuator	05704-000
20	6	Nut, 1/2-20 Hex Jam - Auto Black	83022
21	2	Tubing, 3/4" OD x 0.510" ID x 0.3"	13135R000.3
22	2	Washer, 0.519" ID x 0.876" OD x 0.074"	12621
23	2	Roller, Side Spacer	05763-000
24	1	Weldment, Actuator - Companion Seat	05789-000
25	2	Nut, 3/16-16 UNC Hex Lock - Auto Black	13617
26	1	Motor, Actuator Wired (13072)	12852
27	2	Nut, #10-32 W - Lock Washer - Auto Black	18349
28	1	Bolt, 1/2-13 x 1 3/4" Grade 5 Zinc	29672
29	1	Nut, 1/2-13 Hex	10060
30	1	Support, Outer Cover - Seat Base	29307
31	1	Cover, Plastic Outer - Companion Seat	29316
32	1	Tape, Double Face - 1/16" x 3/4" x 108"	82033R004
33	2	Bolt, 3/8-16 x 3/4" Grade 5 - Hex - Auto Black	12463
34	2	Washer, 3/8" Lock - Auto Black	10069BK
35	2	Nut, 3/8-16 Hex - Auto Black	10059BK
36	1	Bearing, 1 1/2" ID Peer Thrust	99236-000
37	1	Bracket, Switch	05732-000
38	1	Switch, Micro - SPDT C-H	14218
39	2	RMS, #4-40 x 3/4"	85007-000
40	2	Nut, #4-40 Hex	10976
41	2	Rivet, Pop - SD45BS - 1/8" - 0.25" / 0.31"	13906
42	1	Assembly, Cap & Bolt - 1.5" - Whale	18078A-1.5
43	1	Bolt, 7/16-20 x 2" Hex	77106
44	1	Washer, 7/16" Lock	13843
45	1	Weldment, Seat Pan - Venture	05792-000
46	1	Weldment, Latch Swivel - Seat Plate	05787-000
47	1	Bolt, 1/2-13 x 1 1/2" Hex	10038
48	1	Nut, 1/2-13 Hex Lock	13157
49	1	Spring, WD Companion 0.36" OD x 1.5" L x 0.055"	98041-000
50	1	Bolt, 3/8-16 x 1" Hex - Auto Black	10025
51	1	Nut, 3/8-16 Hex	10059
52	1	Cap, Vinyl 5/8" x 3/16" x 1 1/4"	18238
53	1	Cover, Motor - Companion Seat	05714-000
54	2	Guide, Side - UHMW - 1/8" x 3/4" x 6 1/4"	05742-000
55	1	Cover, Lower - Companion Seat	05721-000
56	1	Weldment, Cover In / Out - Companion Seat	05788-000
57	2	Bolt, 1/4-20 x 3/8" FLBHSCS - Grade 8	28252
58	2	Nut, Barrier Pivot	04082-000
59	2	Bolt, 1/4-20 x 3/4" Flat Socket Button Head - Auto Black	18708
60	2	Nut, 1/4-20 Hex	10057
61	4	Nut, Barrier Stainless Steel	04395-000
62	1	Cover, Companion Seat	05768-000
63	4	Rivet, Snap - 0.201" x 0.256" / 0.295" - Black	26362
64	1	Washer, Floor - 2 3/8" OD x 3/8" ID	82023-000
65	1	Washer, Flat - 5/16" - Auto Black	10063
66	1	Bolt, 5/16-18 x 3/4" Hex	13890
67	2	Washer, 1/4" Flat - Auto Black	10062
68	2	Bolt, 1/4-20 x 1/2" Socket Button Head - Auto Black	15733

Companion Seat™ Exploded View



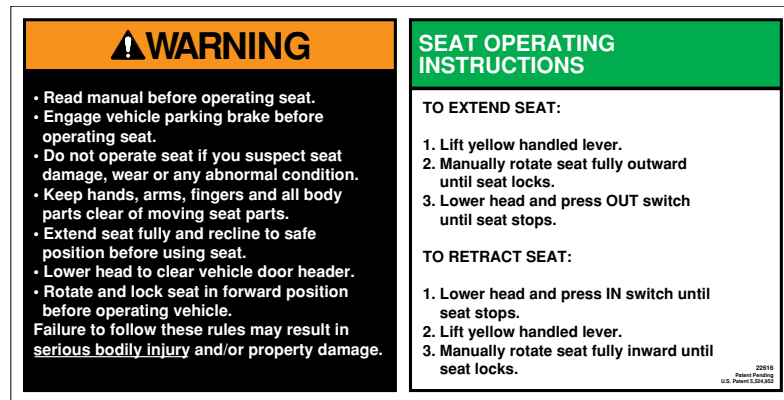
Unfold for:
Companion Seat™
Exploded View

Safety Instructions Decals



Inspect your Companion Seat regularly for any missing, worn or illegible decals. Part numbers are provided for all decals. Be certain decals 21418, 21419 and 22616 have been posted in the locations specified in Step 18 of the Installation Instructions (page 27). These decals **must** be visible to the Companion Seat occupant. **Important!** Prepare the decal posting surfaces as detailed.

Decal Application Procedure (Surface Preparation): Clean decal posting surfaces with isopropyl alcohol **before** decal application. Use a clean cloth or paper towels. **Do not** use oily shop rags. Wipe surface free of residue with dry portion of cleaning cloth.



Decal 22616
Actual Size:
8-1/8" Wide x 4-1/8" Tall



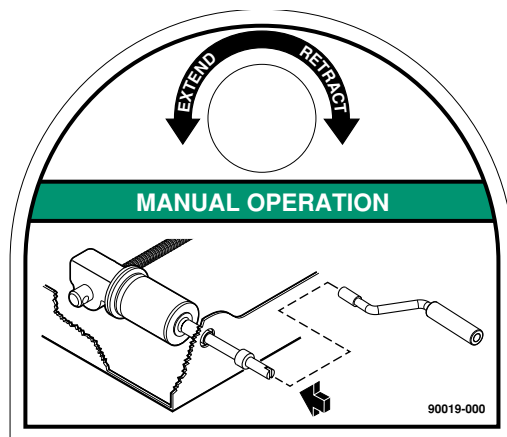
Decal 21417
Actual Size:
2-15/32" Wide x 1-5/16" Tall



Decal 21599
Actual Size:
2-15/31" Wide x 1-5/16" Tall



Decal 21418
Actual Size:
3-3/8" Wide x 1-3/4" Tall



Decal 90019-000
Actual Size:
3-1/2" Wide x 3" Tall

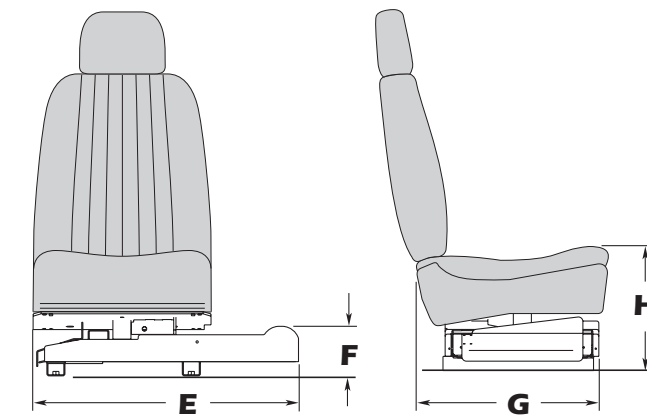
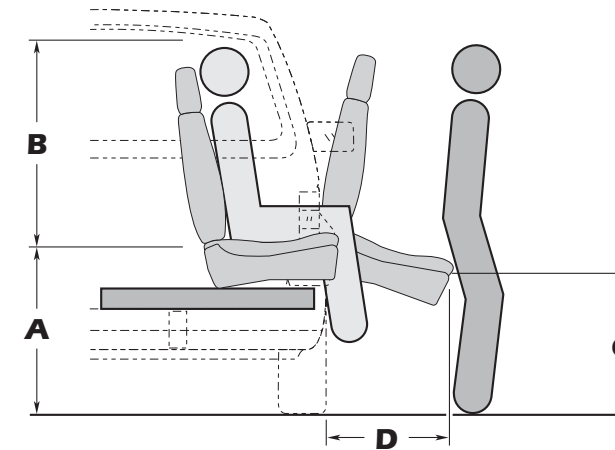


Decal 21419
Actual Size:
5" Wide x 1-3/4" Tall

Dimensions and Specifications

Dimensions		
Seating Surface to Ground (Retracted Position)	A	30 1/2"
Head Clearance (Seating Surface to Door Header)	B	30"
Seating Surface to Ground (Extended Position)	C	22"
Side of Van to Front Edge of Seat	D	14"
Overall Width (Side to Side)	E	29 3/8"
Overall Height of Seat Base	F	5 1/4"
Overall Depth (Front to Rear)	G	24"
Seating Surface to Vehicle Floor	H	13"

* All dimensions are approximate



Specifications	
Frame Construction ..Mist Grey Powder Coated Steel	ControlsToggle Switch Hand Pendant
Seat Capacity 300 lbs.	In-Line Fuse 20 amp.
Shipping Weight 130 lbs.	Cycle Time (each way)18 seconds (approximate)
Power Supply 12 Volt DC	Swivel 90° (Manual Operation)
* Motor12 Volt DC Reversible Automotive Type	Auxiliary Operating SystemManual Type

* with thermal overload protection

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International Corporate Hdqrs: P.O. Box 310 Winamac, IN 46996 USA
1-800-THE LIFT (574) 946-6153 FAX: (574) 946-4670

Braun "Worry-Free" Three-Year Limited Warranty

The Braun Corporation of Winamac, Indiana, warrants its wheelchair lift against defects in material and workmanship for three years, providing the lift is operated and maintained properly and in conformity with this manual. This warranty is limited to the original purchaser and does not cover defects in the motor vehicle on which it is installed, or defects in the lift caused by a defect in any part of the motor vehicle.

This warranty commences on the date the lift is put in service, providing the warranty registration card is completed and received by The Braun Corporation within 20 days of purchase.

This warranty also covers the cost of labor for the repair or replacement of most parts for one year when performed by an authorized Braun Representative. (A Braun labor schedule determines cost allowance for repairs.)

This warranty does not cover normal maintenance, service, or periodic adjustments necessitated by use or wear. The Braun Corporation will not, under any circumstances, pay for loss of use of lift or vehicle in which it is installed or loss of time.

This warranty will become null and void if the lift has been damaged through accident, misuse, or neglect, or if the lift has been altered in any respect.

Return Authorization Procedure

When processing any warranty claims (parts, repairs, etc.), all requests must be processed through The Braun Corporation Product Support Department. Call 1-800-THE LIFT (extension 3009) during normal working hours. Product Support will issue a Return Material Authorization (RMA) number and detail the procedures required for processing returns and/or authorizing credit.

The lift identification information is provided on the Braun Serial No./Series No. identification tag and the two warranty cards (shown on inside front cover). The lift identification information must be provided when filing a warranty claim or ordering parts.

Assistive Power Seat Base for GM Mini-Vans



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1-800-THE LIFT (574) 946-6153 FAX: (574) 946-4670



24154G August 2003



Companion Seat™
for GM Mini-Vans

All illustrations, descriptions and specifications in this manual are based on the latest product information available at the time of publication. The Braun Corporation reserves the right to make changes at any time without notice.