



Capital Special Vehicles Owner Manual Supplement









Ownership Pro-former		SALEAL VEHICLES
Owner's Name:		
Address:		
		_ Post Code:
Phone No#:	VIN Number:	
Date of Ownership Changed:	Signature:	Date:
Send to Capital Special Vehicles		
 12 Capital Drive, Dandenong South, Victoria 3175 csv@csv.com.au 03 9794-8888 		

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The Capital Special Vehicle adaptions must be serviced only by authorized Capital Special Vehicle dealers. The owner must refer to this manual for operating instructions, then retain it for future reference by authorized Capital Special Vehicle dealers who perform service and repairs.

This manual contains information about the CSV adaptive features. It is not intended to replace, but rather to supplement, the vehicle manufacturers Owners Manual.

For information or instructions regarding non-CSV features, refer to the manufacturers Owner's Manual.

1-A: INTRODUCTION

The CSV conversion is a customised, lowered-floor vehicle designed especially for transporting mobility-challenged individuals. With features such as a manually operated or power folding ramp, removable seats, and power door operators. The CSV converted vehicle brings accessibility and style together into one package.

All CSV vehicles have been built to the highest standards of quality, complying with all current applicable federal motor vehicle safety standards (ADR Compliance). CSV recommends that all vehicle conversion components be inspected and serviced at least every six months.

This manual contains operation, maintenance instructions and emergency operation information for the conversion. It is intended to supplement but not replace the Original Equipment Manufacturers (OEM) Owner's Manual. It is important to be completely familiar with the Warranty and Operating instruction for user safety. This manual should be stored together with the OEM owners manual in the vehicle for reference by all operators. For information or instructions regarding non-Capital features, refer to the OEM Owners Manual.

If there are questions about this manual or additional copies are needed, please contact Capital Special Vehicles via the information on the back cover.



1-B: LIMITED WARRANTY

- Capital Special Vehicles Pty Ltd provides a 3 year, 100,000km limited warranty on the conversion against unexpected defects and other failures including material and manufacturing defects. Any defects on the vehicle that are not related to the conversion are covered by the vehicles manufacturer's Statutory Warranty.
- Capital Special Vehicles Pty Ltd provides warranties on the third-party parts and accessories fitted to your vehicle at the time of conversion for a period of 1 year, or the products original warranty period, whichever is greater.
- As the owner of the vehicle, you are solely responsible for correctly operating and maintaining your vehicle in accordance with the instructions described in your owner's manual.
- The owner of the vehicle is required to contact Capital Special Vehicles to arrange a warranty claim, to present the vehicle to an authorised agent of Capital Special Vehicles and to arrange their own vehicle transportation in the event of any warranty claims. Any replacements or repairs are to be carried out by Capital Special Vehicles or an authorised dealer at its place of business and specifically does not include any expenses, consequential loss, indirect loss, economic loss and loss of revenue or special loss which may arise from any defect of a vehicle.
- In an emergency and if service from a Capital Special Vehicles dealer is not readily available, it is the owner's responsibility to contact Capital Special Vehicles for authorization prior to commencement of any repairs in which Capital Special Vehicles reserves the right to limit the extent of those repairs. Unauthorized repairs or parts replacement by someone other than an authorized Capital Special Vehicles dealer is not covered by this warranty. Capital Special Vehicles also reserves the right to acquire and inspect the defective part or parts prior to paying warranty claims. Diagnostic work or troubleshooting is not covered by this warranty.

- The warranty is fully transferable to the new owner whenever the vehicle is sold. The new owner must complete the Change of Ownership Advice Form which is supplied on (page 60) of this manual and forward it to Capital Special Vehicles Pty Ltd.
- The warranty will be voided in the event of a vehicle being "written off" or disposed of by an insurer.
- Damage to the vehicle, or failure caused by lack of proper maintenance as directed in the Vehicle Maintenance Schedule are not covered under warranty. Expected levels of wear and tear, any defect caused by or attributable to modifications not carried out or authorised by Capital Special Vehicles Pty Ltd, any defects caused by lack of proper maintenance and any noise or vibrations that are considered to be characteristics of the vehicle are also not covered by our warranty.
- Capital Special Vehicles Pty Ltd reserves the right to discontinue models or options, change specifications, materials, equipment or design at any time without notice and without incurring obligation.
- Damage caused by accident, road hazard, misuse, and lack of proper maintenance, failure to follow towing, hoisting and other operating instructions are not covered under warranty.

WARNING! THIS PRODUCT HAS BEEN DESIGNED AND MANUFACTURED TO EXACT SPECIFICATIONS. MODIFICATION OF THIS PRODUCT IN ANY RESPECT CAN BE DANGEROUS.



GENERAL SAFETY PRECAUTIONS

The following safety precautions should always be followed during operation and maintenance of the CSV Vehicle.

- 1. Under no circumstances should maintenance, repair, or adjustment of the CSV ramp or other components be attempted without immediate presence of an individual capable of rendering aid.
- 2. An injury, no matter how slight, should always be attended. Always administer first aid or seek medical attention immediately.
- **3.** Protective eye shields and appropriate clothing should be worn during maintenance, repair and adjustment of the CSV vehicle.
- 4. To avoid injury, the user must always exercise caution when operating the ramp and be certain that hands, feet, legs, and clothing are not in path of its movement.
- 5. Batteries contain acid that can burn. Wear protective clothing and eye protection at all times when working around batteries. If acid comes into contact with skin, flush affected area with water and wash with soap immediately.
- 6. Always work in a properly ventilated area. Do not smoke or use an open flame near a battery.
- 7. Do not lie anything on top of battery.
- 8. Read and understand all instructions before attempting to operate the CSV Vehicles ramp or other components.
- 9. Inspect ramp prior to each use. If an unsafe condition exists, do not use it. Return vehicle to an authorized CSV dealer for repair.
- 10. A CSV dealer should immediately inspect unusual noises or movements.
- 11. Keep others clear of ramp when it is being operated.
- **12.** Always operate the ramp with the vehicle parked on level ground. A dangerous situation exists and CSV does not recommend use of the ramp if vehicle is parked on a slope.

13. The CSV ramp and other system components require regular periodic maintenance. CSV recommends a thorough vehicle inspection by an authorized CSV dealer at least once every six months. Like any product, the ramp and other components should always be maintained at the highest level of performance.

OPERATING INSTRUCTIONS

This chapter contains safety precautions, daily safety check instructions, control and indicator descriptions, and operating instructions for the CSV vehicle. This chapter must be read and thoroughly understood by all operators before attempting to use vehicle.

This chapter is not intended to replace, but rather to supplement the appropriate section of the vehicle manufacturers' Owner's Manual. For information or instructions regarding non-CSV features, refer to the manufacturers' Owner's Manual.

WARNING!

THE WHEELCHAIR RAMP IS DESIGNED TO BE OPERATED BY THE VEHICLE OPERATOR. IT IS THEIR RESPONSIBILITY TO CAREFULLY FOLLOW SAFETY PRECAUTIONS WHEN OPERATING THE RAMP OR OTHER COMPONENTS.

SAFETY PRECAUTIONS

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The following safety precautions must be observed at all times:

- Vehicle must be safely parked with engine turned off and parking brake set before using wheelchair ramp.
- Ramp users must always face outward when exiting the vehicle and look to be certain that the ramp is completely lowered.
- Persons using mobility equipment (e.g. wheelchairs, scooters, etc) should always enter or exit the vehicle slowly and carefully.
- Unusual noises or movements should be inspected immediately by an authorized CSV dealer.
- Inspect ramp prior to each use. Check for loose nuts and bolts. If any unsafe condition exists or unusual noises or movements are noticed, DO NOT use ramp. Return vehicle to an authorized dealer for repair.
- Wheelchair and scooter brakes are less effective if the ramp or mobility equipment wheels are wet. Use extreme care in wet conditions.
- Keep others clear while operating ramp.
- The ramp is designed for one user at a time. Do not overload ramp. Be certain mobility aid equipment fits safely on ramp before entering or exiting vehicle.
- Never leave ramp outside of vehicle. Always return the ramp to its stowed position after use.
- Do not allow children or others to play with ramp or other components, as this may be dangerous. Close supervision is necessary if the ramp is used by or near children.
- Do not place your arms or legs in or near any folding parts of the ramp or other components.
- Avoid operating ramp while vehicle is parked on a slope, since ramp will also slope creating an unsafe condition.
- Secure wheelchair and passenger with the electric or manual restraint system by following provided instructions.

Be sure you have read and understand each of these safety precautions. Review them periodically and ask any attendants or other users operating your ramp to read them as well. If you have any questions, contact your CSV dealer.

DAILY SAFETY CHECK

Inspect vehicle and adaptions prior to each use and check that the following conditions are met before operating:

- All functions operate properly. If unusual noises or movements exist, DO NOT use and contact an authorized CSV Dealer for repair.
- General appearance and lubrication are proper.
- All fasteners are tight.

2-A: CSV REMOVABLE FRONT AND MIDDLE SEAT OPERATING INSTRUCTIONS.

The front seats can be unlocked and removed from the vehicle as needed to create areas to secure wheelchairs. A release handle on the front and middle removable seats unlocks them. Located at rear-center of the seat base is a handle used to lock or unlock the seat. **[FIGURE 2-10]** shows the seat release handle in a LOCKED position, handle is INWARD. **[FIGURE 2-11]** shows the handle in an UNLOCKED position, handle is OUTWARD (the Yellow coating on handle is visible) and a captive notch is engaged in the frame of the seat base.



Figure 2-10 Removable Seat Locked



Figure 2-10 Removable Seat Unlocked

A. Front Seat Removal

- 1. At front of seat, remove footrest plate.
- **2.** Disconnect SRS Airbag plug from the wall socket and insert into SRS Airbag socket on the front of the seat base (If applicable). See Section 2-B (A. SRS side airbag disconnection).
- **3.** From rear of seat, pull seat release handle OUTWARD. Make sure the notch at the bottom edge of handle is engaged into the base frame.
- 4. Slide the seat rearward to free the seat base anchor bolts from the floor locking plates.
- 5. Tilt seat rearward onto its support wheels and remove seat from the vehicle.

B. Front Seat Installation

WARNING!

BE CERTAIN THAT SEAT IS PROPERLY SECURED INTO ITS LOCKED POSITION AND THE SRS AIRBAG SYSTEM IS CONNECTED (IF APPLICABLE) BEFORE ATTEMPTING TO OPERATE THE VEHICLE. UNDER NO CIRCUMSTANCES SHOULD THE VEHICLE BE PUT IN MOTION WITHOUT THE SEAT LOCKED. MAKE SURE THAT THE SEAT LOCKING HANDLE IS IN THE INWARD POSITION BEFORE OPERATING THE VEHICLE.

- 1. Place seat into the vehicle
- 2. From rear of seat, make sure seat release handle is in the unlocked (OUTWARD) position.
- **3**. Tilt seat rearward onto support wheels and roll seat into position. Be certain seat base anchor bolts are aligned with holes in floor locking plates.
- 4. At rear of seat, push seat base as far forward as possible into floor locking plates.
- 5. Raise the release handle and allow return spring to position handle in (INWARD) position.



- 6. Disconnect SRS Airbag plug from front of seat base and insert into SRS Airbag wall socket (If applicable) See Section 2-C (B. SRS Side airbag connection).
- 7. At front of seat, install footrest plate.

B. Middle Seat Removal (If applicable)

- 1. From rear of seat, pull release handle OUTWARD. Make sure notch at bottom edge of handle is engaged into base frame.
- 2. Slide seat toward REAR to free seat base anchor bolts from floor locking plates.
- 3. Tilt seat rearward onto its support wheels and remove seat from vehicle.

A. Middle Seat Installation. (If applicable)

- 1. Place seat into vehicle.
- 2. From rear of seat, make sure seat release handle is in unlocked OUTWARD position.
- **3**. Tilt seat rearward onto its support wheels and roll seat into position. Be certain seat base anchor bolts are aligned with holes in floor locking plates.
- 4. At rear of seat, push seat base as far FORWARD as possible into floor locking plates.
- 5. Raise release handle and allow return spring to position handle INWARD position.

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2-B. REMOVABLE SEAT SRS SIDE AIRBAG OPERATION

WARNING!

IGNITION KEY MUST BE REMOVED FROM IGNITION SWITCH BEFORE CONNECTING OR DISCONNECTING SRS SIDE AIRBAG PLUG. FAILURE TO IMPLEMENT THE FOLLOWING PROCEDURES MAY RESULT IN SERIOUS INJURY IN THE EVENT OF A COLLISION.

A. SRS Side Airbag Disconnection.

1. Disconnect the SRS Airbag plug from the wall socket by depressing the release button and then gently pull outwards. [FIGURE 2-12]



Figure 2-12 SRS side airbag plug & wall socket

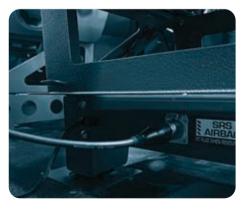


Figure 2-13 SRS side airbag plug & seat socket



2. Insert the SRS Airbag Plug into the socket on front of the seat base. A "click" will occur, ensuring a correct and secure connection. [FIGURE 2-13]

B. SRS Side Airbag Connection

- 1. After installation of the seat, disconnect the SRS Airbag plug from the front of the seat base by depressing the release button and then, gently pull outwards. [FIGURE 2-14]
- 2. Insert the SRS Airbag plug into the wall socket. A "click" will occur, ensuring a correct and secure connection. [FIGURE 2-15]



Figure 2-14 SRS side airbag plug & socket



Figure 2-15 SRS side airbag plug & wall socket

CONTROLS AND INDICATORS



Product Description

VB-FullAir is a fully automatic, electronically-controlled air suspension system for light commercial vehicles, motor homes and special vehicles. The electronic control system ensures that the vehicle maintains the same ride-height in any load situation. The ride height is controlled by height sensors mounted between the chassis and the axle. Height control is always active after switching on the ignition or during the extra time.

Manual operation for raising or lowering the vehicle can be activated in two ways. This depends on the option supplied to you.

Depending on the available spring travel, the vehicle can be leveled when at a standstill using the AutoLevel function.

IMPORTANT!

- The automatic level control on the VB-Airsuspension system cannot prevent damage to the vehicle or superstructure caused by overloading. Always make sure the vehicle is not overloaded. When using the air suspension system, overloading is not visible. If in doubt, VB-Airsuspension recommends checking the axle load before driving the vehicle.
- Always make sure the vehicle is not overloaded.
- When using the air suspension system, overloading is not visible.



System Overview

Your system is equipped with the fully automatic air suspension systems shown below.



In view of the many features and options, the design of your system may differ from that described here and certain options may not be included.

Use

The VB-Airsuspension system is used to improve the suspension and to automatically control the height of the front and/or rear axle in relation to the chassis.

Improper use can have undesirable consequences. VB-Airsuspension or Capital Special Vehicles is not liable for any resulting damage.

MPORTANT!

- To be able to use the vehicle functions effectively, the various vehicle components need to be run in for several kilometers. Minor side effects may be experienced when the vehicle is first driven.
- For example, the expected levels of comfort may not be immediately apparent or noises may be heard.

Safety Rules

- Never drive the vehicle with a setting other than ride-height or SPORT, except with caution and at a speed not exceeding approximately 30 km/h. Otherwise, the chassis or air suspension system will become damaged.
- Before raising or lowering the vehicle when standing still:
 - Secure the vehicle to prevent it rolling off.
 - Make sure there is no risk of injury or damage to people and property.
- Do not depress the brake pedal (if possible) while raising or lowering the vehicle. This is advisable to relieve the brake and avoid tension in the chassis.



- Always use a jack or hydraulic ramp to change a wheel or carry out servicing work.
- The air suspension system must not be used to lift wheels off the ground during servicing work (to change a wheel for example).
- Errors and / or faults in the air suspension system can have an undesirable effect on driving stability. This may cause the vehicle to sway and / or swing.
- When using snow chains, do not allow the vehicle to fall below the ride-height.

MPORTANT!

- In the event of faults that cannot be rectified, press the *system* button to deactivate the system. Contact an approved VB-partner immediately.
- The <u>A</u> check light comes on to indicate a fault. If this happens, drive extra carefully and at much lower speed.
- Removing the fuses deactivates the system.

2C A 4C

Operation

Commercial Vehicle (A)

Function



			_	
1	Check light			\bigcirc
2	Sport	> 0 km/h	••••••	
3	Car Park	$< \pm 30$ km/h	••••••	
4	Raise vehicle height	$< \pm 5$ km/h	•••••	\bigcirc
5	Lower vehicle height	$< \pm 5$ km/h	••••••	\bigcirc
6	Selected axle display	$< \pm 5$ km/h	•••••	\bigcirc
7	Front - Rear	$< \pm 5$ km/h	•••••	\bigcirc
8	AutoLevel		•••••	
9	Off-road	$< \pm 30$ km/h	••••••	
10	Vehicle height 1	$< \pm 5$ km/h	•••••	\bigcirc
(1)	Vehicle height 2	< ±5 km/h	•••••	\bigcirc
12	Service	< ±5 km/h	•••••	\bigcirc
13	Jack socket			\bigcirc
-				-

Speed

IMPORTANT!

The jack socket ⁽¹⁾ may only be used to load software using the (optional) SMT cable provided by VB-Airsuspension. It must not be used to connect other accessories.



- The air suspension system is ready for use when you switch on the ignition.
- While driving, the control functions are limited or unavailable. In such situations, the safe ride-height is controlled automatically.
- When raising or lowering with the handbrake on, tension or noises may occur in the vehicle. If you then release the handbrake, there may be unexpected, slight up-and-down movements.

MPORTANT!

When raising or lowering, make sure there is enough space above, below and along the sides of the vehicle.

Starting the Air Suspension System 1

- 1. Switch on the air suspension system
- The <u>A</u> LED lights up for one second:
 - The system has started correctly.
- The front and / or rear of the $\triangleleft \Box$ LED lights up:
 - The vehicle is at the ride height.
 - The height of the selected axle(s) can be adjusted.
- The front and / or rear of the $\triangleleft\Box$ LED's and a function button light-up:
 - The selected level has been reached.

Selected Axle Display (6)

One or both LED's in the vehicle shown indicate the axle(s) for which manual adjustment is enabled.



Vehicle Ride Height / Axle Selection O

- **1**. Switch on ignition, apply handbrake.
- 2. Vehicle standing still or driving at $<\pm 5$ km/h.
- 3. Button ► 🖓 🖓 long press:
 - at vehicle height, one or both LED's light up.
- - axle selection enabled.

Raising the Vehicle ④

- 1. Switch on ignition, apply handbrake.
- 2. Vehicle standing still or driving at <±5 km/h
- 3. Keep button \triangle pressed until the required level is reached.
- The button flashes during raising.
- The button is lit continuously when the level is reached.

Alternatively

- \bullet Button \triangle short press. The vehicle is raised to the highest position.
- The button flashes during raising.

The button is lit continuously when the highest level is reached.

Ending the Function

- Button abla short press.
 - Button ► 🔂 🗔 - long press.

Lowering the Vehicle (5)

- 1. Switch on ignition, apply handbrake.
- 2. Vehicle standing still or driving at $<\pm$ 5 km/h
- 3. Keep button \bigtriangledown pressed until the required level is reached.
- The button flashes during lowering.
- The button is lit continuously when the level is reached.

Alternatively

- Button $\ensuremath{m{Q}}$ short press. The vehicle is lowered to the lowest position.
- The button flashes during lowering.
- The button is lit continuously when the lowest level is reached.

Ending the Function

- Button☆- short press.

Resetting the Vehicle to Ride Height O

- Vehicle is brought to ride-height

Storing the Set Level 🔞 🗊

- 1. Switch on ignition.
- 2. Vehicle standing still or driving at < \pm 5 km/h.
- 4. Press button \triangle or $\overline{\bigcirc}$ to set the desired level.
- 5. Keep button (pressed until you hear a signal.

Activating the Stored Level 10

- 1. Switch on ignition.
- 2. Vehicle standing still or driving at $< \pm 5$ km/h.
- 3. Button (or (short press.
- 4. The button flashes while the level is being activated.
- 5. The button is lit continuously when the level is reached.

Auto level ®

With the AutoLevel option, the vehicle is set to a horizontal position (leveled) automatically. This is only possible if the vehicle is standing still and adequate suspension travel is available.

- 1. Switch on ignition.
- 2. Switch off the ignition and within 6 minutes briefly press button
- The button flashes during adjustment.
- The button is lit continuously for 10 seconds once the vehicle is in the ideal position.
- The system then switches off.

End Function and Reset Vehicle to Ride-height

- 1. Switch on the ignition and press the *button briefly*.
- When the \triangle or $\overline{\mathbb{Q}}$ buttons are no longer lit, the vehicle has returned to ride height.

Alternatively

After you drive away, the AutoLevel function automatically switches off. The vehicle is reset to the ride height.

INSTRUCTIONS

VB-Airsuspension recommends that you reset the vehicle to the ride height before driving off. If you omit to do so, the system automatically resets to ride-height to minimise possible damage.

Off-road Setting (High Driving Position) (9)

Press button for to raise the whole vehicle. This increases the ground clearance.

- 1. Switch on ignition.
- 2. Vehicle standing still or driving at < \pm 30 km/h.
- 3. Button short press.
- The button flashes during adjustment.
- The button is lit continuously when the level is reached.

End Function and Reset Vehicle to Ride-Height

Button for ▶ I or ▶ I ong press.

Car Park (Low Driving Position) ③

Press the \overline{GP} button to lower the whole vehicle. To remind you, a bleeping sound can be heard while the vehicle remains in the low driving position.



- 1. Switch on ignition.
- 2. Vehicle standing still or driving at $< \pm 30$ km/h.
- **3.** Button $\overline{\textcircled{CP}}$ short press.
- The button flashes during adjustment.
- The button is lit continuously when the level is reached.

End Function and Reset Vehicle to Ride-Height

• Button 🛵 or ►⊲ 🖓 - long press.

Sport 2

Press button 😴 to lower the whole vehicle while driving. This provides greater stability at higher speeds.

- 1. Switch on ignition.
- 2. Button 3 short press.
- The button flashes during adjustment.
- The button is lit continuously when the level is reached.

End Function and Reset Vehicle to Ride-Height

Button ⅔ or ►⊲ □
 Iong press.

Service

The souther that the function only has one function:

• Switch service mode on and off.



Switch Service Mode on and off

- 1. Press the *state* button once.
- The button is lit continuously.

IMPORTANT!

Does the vehicle have jacks that are not connected to the air suspension system? Remember: if the jacks are active at the same time as the air suspension system, the air suspension system must be switched off using the *formation* button.

Adjusting the Button Brightness

The remote control buttons are LED-illuminated and are lit constantly. You can adjust the brightness of the LEDs or, if preferred, switch off the illumination completely.

- 1. Button short press.
- 2. Use the \triangle or \bigtriangledown button to set the preferred brightness.

Basic Remote Control

On some vehicles the air suspension system has a "basic remote control". This remote control has three fixed modes: highest position, ride height and lowest position.

Check Light

- The check light comes on for one second: The system has started correctly.
- The check light remains lit: The vehicle is not at ride height.
- The check light keeps flashing: The system is detecting a fault (see error code for solution).

Switch

• From the highest position, briefly press the switch downwards: Vehicle sets itself to ride-height automatically.

- From the lowest position, briefly press the switch upwards: Vehicle sets itself to ride-height automatically.
- From the ride height, briefly press the switch downwards: Vehicle sets itself to the lowest position.
- From the ride-height., briefly press the switch upwards: Vehicle sets itself to the highest position.

Resetting the System

1. Switch the ignition off and on again.

Alternatively

• Remove the fuse (7.5A) from the fuse box. The is located under the bonnet.

INSTRUCTIONS

7.5A fuse - for the control unit / 40A fuse - for the compressor



7.5A & 40A fuses in engine bay near battery



7.5A & 40A fuses

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Changing a Wheel

- The VB-Airsuspension system must not be used to lift wheels off the ground during servicing work.
- Always use a jack or hydraulic ramp to change a wheel or carry out other servicing work. Remove the 7.5A fuse and replace it afterwards.

Troubleshooting

Functional faults can be diagnosed using the fault tables on the following pages. If you cannot correct the fault, contact Capital Special Vehicles your trained VB-Airsuspension partner.

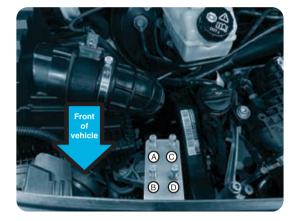
- In the event of air loss, contact CSV workshop immediately and drive extra carefully at much lower speed (max ±30 km/h).
- For Information on spare parts or any other VB related issue, please contact Capital Special Vehicles on Ph: +61 3 9794 8888.

Emergency Inflation

The inflation valves may optionally be located on a mounting plate in the engine compartment or near the tow hitch. These are used to top up the system in case of emergency. If the electrical system fails, the air spring can be inflated manually so that the vehicle can be driven to a repairer. Take care not to exceed maximum air pressure.

The valves are arranged so that they can easily be matched to the correct side.







- A Rear drivers side VB-Airsuspension
- B Front drivers side VB-Airsuspension
- © Rear passenger side VB-Airsuspension
- D Front passenger side VB-Airsuspension

Tracing Faults

Fault	Possible Cause	Remedy
Vehicle is tilted.	Load was moved after the air suspension was switched off.	Switch on the air suspen- sion, lower the vehicle and reset the vehicle height.
The remote control does not respond.	Ignition switched off. 7.5A fuse faulty. Battery voltage too low.	Switch on ignition. Replace the 7.5A fuse. Charge the battery.
Compressor not working.	Ignition switched off. 40A fuse faulty. Battery voltage too low.	Switch on ignition. Replace the 40A fuse. Charge the battery.
Compressor does not switch off.	Compressor relay faulty. Air loss.	Remove the 40A fuse. Consult workshop.
Air suspension does not lower.	Driving speed too high. 7.5A fuse faulty.	Stick to speed limit. Replace the 7.5A fuse.
Air suspension does not raise.	Vehicle too heavily laden. Driving speed too high. 7.5A fuse faulty.	Reduce load. Stick to speed limit. Replace the 7.5A fuse.



Error Code

If the system detects a fault, the \bigwedge LED on the remote control flashes. If you then press the \checkmark button, a combination of lit and flashing LEDs on the various buttons indicates the error code.



Button LEDs are flashing.



Button LEDs are lit.

The table below lists the possible error codes and the faults they refer to.

In view of many features and options, your remote control may differ from the example shown. However, the error codes are the same in all cases.

To clear a fault, turn the ignition on and off again. The fault is now cleared. Contact Capital Special Vehicles if the fault keeps coming back.

Error Codes

VB-FullAir 2C / VB-FullAir 4C	Basic	Description of fault	Remedy
	II II II (2)	Compressor used too intensively. Thermal cutout.	Allow compressor to cool down. Contact CSV if the fault keeps coming back.
	 (2)	Valve block used too intensively. Thermal cutout.	Allow valve block to cool down. Contact CSV if the fault keeps coming back.
	_ _ (4)	Maximum permitted load exceeded.	Reduce load.
	_ _ (4)	Compressor's maximum working pressure reached.	Reduce load.

Maintenance

VB-Airsuspension system are low maintenance. However, regular cleaning and visual inspections will help to reduce natural wear.

It is recommended that the following components are checked for wear, leaks and damage during servicing:

- Air springs
- Air tubes
- Shock absorbers

The level of the vehicle may drop gradually if it is not used for long periods. To avoid permanent deformation and damage to the air springs:

- The vehicle should be supported with jacks (accessories).
- The air springs should be re-inflated with compressed air once a week using an inflation valve (optional)

Permitted cleaning agents:

- Soap solution
- Ethanol
- Methanol
- Isopropyl alcohol

Not permitted:

- Organic solvents
- Abrasives
- Steam and high-pressure cleaners
- Naked flames

Controls and Indicators - Overhead Console Keypad

Product Description

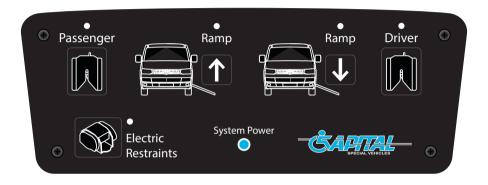
Depending on the supplied adaptions on your vehicle you may have or may not have a overhead console keypad. The overhead keypad is designed to give the driver and front passenger the capability to perform certain critical functions. It has been designed to be in-keeping with the current interior design of the vehicle, it illuminates when the vehicles lights are switched on and is soft to the touch.





System Overview

If your vehicle has the following overhead keypad your vehicle is equipped with the following systems

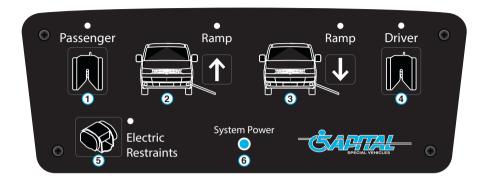


Use

The overhead console keypad has been designed to provide the driver and passenger with easy access to the functionality of the following adaption systems.

- The ability for the driver and front passenger to lower or raise the side entry ramp.
- The ability to lock or unlock passenger and driver docking devices.
- The ability to activate / deactivate electric restraints.





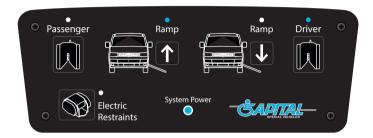
Function

- ① Lock / unlock front passenger docking device
- Raise side entry ramp
- ③ Lower side entry ramp
- ④ Lock / unlock front driver docking device
- Activate / Deactivate electric restraints
- 6 System power indicator

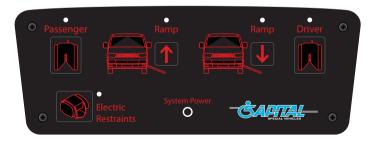


Illumination Function

Illumination of the buttons and LEDs indicate different states of function.



• When the small LED above the device icon is blue, that device has been activated.



• When the parkers or lights are turned on, the Icons and text are lit up in a red hue.

System Power Illumination Status



When the vehicle is unlock the (blue) System Power LED flashes slowly for 15min unless the vehicle is started.



When the ignition is turned ON or started the (blue) System Power LED is turned off.



When the ignition is turned OFF the (blue) System Power LED flashes quickly for 15min

Controls and Indicators - Remote Control

Product Description

The remote control system provides handheld, wireless control of certain programed functions, e.g.. wheelchair ramps and passenger powered sliding door operations. It can be operated by either a person in the wheelchair or by an attendant. The system consists of a transmitter and receiver, which are securely linked reducing the possibility of signals from other units in the vicinity affecting your system.

MPORTANT!

Always be within 8 meters and in direct view of vehicle when operating the remote so as to ascertain any issues and make sure there are no obstructions surrounding the vehicle.



Function - Remote Control Fob

All remote control functions are controlled by push-button switches on the remote control unit. The CSV vehicles will most likely come with a basic 2 x button remote for both side and rear entry functions for e.g.. opening and closing rear or side doors and lowering and stowing the ramp. The (optional 4 x button) remote is used under circumstances where extra custom functions are required.

- Sporadic operation of electric ramp, due to electrical interference, may occur if user is beyond the recommended 8 meters. When operating the remote with the 8 meter perimeter, a smooth operation can be expected.
- Always engage the vehicles parking brake before using the remote control system as a safety precaution.



2 Button Remote Fob.



4 Button Remote Fob (optional).



2 button Remote Fob in operation.

Controls and Indicators - B-Pillar Key Pad for Side Entry Vehicles

The vehicle contains control switches for power ramp and electric restraints located on the B-Pillar between passenger door and sliding door. Once the side sliding door opens the B-Pillar switch will then allow you to lower and raise the ramp. By pressing the down arrow and holding it down until the ramp is fully deployed. To stow the ramp hold down the up arrow until the ramp is fully stowed, then close the door. Locking and unlocking of the electric restraints is also possible via the B-Pillar switch.





B-Pillar Key Pad

The B-Pillar Key Pad is a soft to touch key pad with back-lit buttons and text.

Function

The B-Pillar Key Pad is a soft to touch key pad with back-lit buttons, indicator lights and text. When the indicator light above the relevant button is illuminated in blue this indicates the chosen system is in use. With the electric restraints the button is either on or off indicating the restraints are locked or unlocked. The ramp buttons need to be pressed until the ramp has fully lowered or has fully been stowed.



Key Pad

When the vehicle has been turned off the key pad illumination will remain on for (15min) then all buttons and text will present as shown.



Illuminated Key Pad

When the vehicle is running the buttons and text are illuminated in red regardless if the lights are on or not. When a chosen system is in operation the indicator light is illuminated in blue.

Controls and Indicators - Park Brake Key Pad

The converted vehicle may contain a Park Brake key pad. This key pad activates the electric park brake and can be positioned to better suit the driver.





Park Brake Key Pad

The Park Brake Key Pad is a soft to touch key pad with a back-lit button and text.



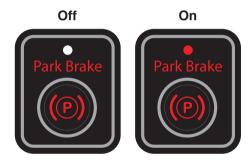
Function

When the indicator light above the center "P" button is illuminated the park brake is engaged. When the indicator light is off the Park Brake is then not engaged.



Park Brake Key Pad

When the vehicle has been turned off the key pad illumination will remain on for (15min) then the button and text will present as shown.



Illuminated Park Brake Key Pad

When the vehicle is running the button and text are illuminated in red regardless if the lights are on or not. When the electric park brake is in operation the indicator light is illuminated in red. The park brake is disengaged when the indicator light is off.



Capital Special Vehicle Operation

WARNING!

- 1. IMPROPER USE OF THE CSV CONVERSION CAN RESULT IN PERSONAL INJURY. USERS MUST READ AND FOLLOW OPERATING INSTRUCTIONS IN THIS OWNERS MANUAL.
- 2. PRIOR TO USE, INSPECT RAMP AND OTHER COMPONENTS FOR PROPER FUNCTION, REQUIRED MAINTENANCE, OR DAMAGE. IF A PROBLEM EXISTS, DO NOT USE AND RETURN VEHICLE TO AN AUTHORIZED CSV DEALER FOR REPAIR.
- 3. DO NOT EXCEED RAMP RATED LOAD CAPACITY OF 360KG.
- 4. THE RAMP IS DESIGNED FOR USE ONLY BY PERSONS ON MOBILITY AID EQUIPMENT (I.E., WHEEL-CHAIRS, SCOOTERS, WALKERS, ETC). CAPITAL SPECIAL VEHICLES WILL NOT BE HELD LIABLE FOR ANY DAMAGES OR PERSONAL INJURY RESULTING FROM MODIFICATIONS TO THE RAMP OR OTHER COMPONENTS, LACK OF MAINTENANCE OR REPAIR, NEGLIGENCE, ABUSE, OR FAILURE TO FOLLOW OPERATING INSTRUCTIONS.
- Before operating the ramp, be certain the vehicle is safely parked on level ground away from traffic. Allow enough space for the ramps operation, passenger entering and exiting. Be certain there are no obstructions within 1.2 meters of the ramp that may interfere with its area of motion.
- Be certain, the parking brake is properly set before operating the ramp.
- Be certain to fully open or close the vehicles door.



Load Leveling Air Suspension

The load leveling air suspension system automatically adjusts to any change in vehicle load. Air is either added too or released from the suspension system as needed. It is normal for the air compressor to operate intermittently to accomplish the desired height.

MPORTANT!

Inflation and deflation of the air suspension system is automatic. Make sure that the compressor is allowed enough time (roughly one minute) to inflate the entire system to normal operating pressure and vehicle ride height. Driving the vehicle without waiting for the controller indicator to turn off and system to inflate, may cause serious damage to the air suspension system or body of the vehicle.

The system consists of two or four suspension air bags, a compressor assembly, height sensor, pressure switch and an electronic leveling controller. To inflate suspension, start the vehicle and wait until the system reaches operating pressure. DO NOT DRIVE VEHICLE DURING THIS TIME. When system is ready, the low pressure indicator turns off. If vehicle has an unusually heavy load, wait an extra 10 seconds before proceeding to drive.

Manual Folding Ramp

A. To deploy manual folding ramp.

- 1. From outside of the vehicle, stand facing the ramp.
- 2. Gently pull the top of the ramp outward until the ramp begins to deploy by itself.
- 3. Stand clear and allow the ramp to fully deploy.
- 4. Make sure the ramp user, slowly and carefully enters or exits the vehicle.

B. To stow the manual folding ramp.

1. Make sure the ramp user slowly and carefully enters or exits the vehicle.

- 2. From the right side of the ramp, bend knees slightly and position right hand on the non-folding section of the platform.
- 3. Carefully lift the ramp up while folding flap down.
- 4. Push ramp to its completely stowed position.

MPORTANT!

To prevent damage to the ramp or vehicle door, be certain the ramp is stowed completely before attempting to close the door.

Optional Power Folding Ramp (with or without power door operator)

- A. To deploy power ramp (without power door operator).
 - **1**. Fully open vehicle door.
 - 2. If using passenger side B-Pillar key pad press and hold the down arrow button until ramp is fully deployed / unfolded.
 - 3. If using overhead console key pad press and hold the down arrow ramp button until ramp is fully deployed / unfolded.
 - 4. Make sure ramp user slowly and carefully enters or exits the vehicle.

WARNING!

- THE RAMP IS DESIGNED TO BE OPERATED BY AN ATTENDANT. IT IS THIS PERSON'S RESPONSIBILITY TO CAREFULLY FOLLOW SAFETY PRECAUTIONS WHEN OPERATING THE RAMP.
- IF THE RAMP IS A MANUAL VARIANT, USE EXTREME CAUTION AND PROPER LIFTING TECHNIQUES WHILE LOWERING OR RAISING.
- DO NOT APPLY A LOAD TO THE RAMP UNLESS IT IS COMPLETELY DEPLOYED AT GROUND LEVEL.

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B. To stow power ramp (without power door operator).

- 1. Make sure ramp user slowly and carefully enters or exits the vehicle.
- 2. If using passenger side B-Pillar key pad press and hold the up arrow button until ramp is fully stowed / folded.
- 3. If using overhead console key pad press and hold the up arrow ramp button until ramp is fully stowed/ folded.
- 4. Fully close vehicle door.

C. To deploy power ramp (with power door operator).

- 1. If using passenger side **B-Pillar key pad** press and hold the down arrow button. The door will fully open and after a few second delay the ramp will deploy fully open / folded. Only when the ramp has fully opened can you take your finger off the button.
- 2. If using overhead console key pad press and hold the down arrow button. The door will fully open and after a few second delay the ramp will deploy fully open / folded. Only when the ramp has fully opened can you take your finger off the button.
- **3.** If using the **CSV Remote Fob** press top button once to activate the opening of the door. The door will open all the way automatically. Press and hold down the top button on the CSV Remote, which lowers the ramp. Keep pressing the button until the ramp touches the ground.
- 4. Make sure ramp user slowly and carefully enters or exits the vehicle.

D. To stow power ramp (with power door operator).

- 1. Make sure ramp user slowly and carefully enters or exits the vehicle.
- 2. If using passenger side B-Pillar key pad press and hold the up arrow button until ramp is fully stowed / folded. After a few second delay the door will start to close. Only when the door has fully closed can you take your finger off the button.

- **3**. If using **overhead console key pad** press and hold the up arrow button until ramp is fully stowed / folded. After a few seconds delay the door will start to close. Only when the door has fully closed can you take your finger off the button.
- 4. If using the CSV Remote Fob press and hold bottom button on the CSV Remote until ramp is fully stowed / folded. After a few seconds delay the door will start to close. Only when the door has fully closed can you take your finger off the button.

MIMPORTANT!

All operators of the vehicle should carefully read and thoroughly understand the following information before attempting to operate the vehicle. This information is not intended to replace, but rather to supplement the appropriate sections of the vehicle manufacturers' owner's manual. For information or instructions regarding non Capital Special Vehicles features, refer to the manufacturers' owner's manual.

Manual Operation of Power Door

In the event of the door operator becoming inoperable under it's own power, the sliding door can be opened or closed manually.

- To prevent damage to vehicle sliding door or ramp, be certain the door is fully open before attempting to deploy the ramp.
- If closing the door manually, be certain that the door is fully closed and latched before driving the vehicle.

Spare Tire (if supplied)

The spare tire is located inside the back of the vehicle cargo area or in a secure locked storage bin between the rear seats.

CAUTION!

- Capital Special Vehicles will not be liable for any personal injury or property damage caused by the use of an inappropriate tire size which varies from that specified by the vehicle manufacturer.
- Under no circumstances should the vehicle be put in motion without properly securing the spare tire.

Spare Tire Removal.

- 1. Lift storage bin cover.
- 2. Remove spare tire retaining bolts by turning counterclockwise.
- 3. Remove spare tire from vehicle.
- 4. Store spare tire hold-down plate and retaining screws.

Spare Tire Installation

- 1. Position spare tire in storage bin.
- 2. Position hold-down plate on the front of spare tire, with two bolts locating in wheel lug holes.
- 3. Insert spare tire retaining bolts through spare tire and into hold-down plate. Turn clock-wise until tight.
- 4. Close storage bin cover.

Towing Precautions

- This vehicle must be transported on a flat-bed tow truck or towed using a rear dolly. Towing by any other means will result in damage to rear suspension which will void warranty.
- Tow with extreme care if rear suspension appears damaged.
- Ground clearance on the vehicle is low. Use caution when towing to avoid damage.
- Consult owners manual for further information.

Towing Capacity

• The towing capacity has been upgraded to 2500kg with tow ball load of 250kg via structural reinforcement of two bar attachment points allowing for greater flexibility when towing.

Maintenance

Maintenance must be performed only by an authorized Capital Special Vehicles dealer using only CSV parts. This information is not intended to replace, but rather to supplement the appropriate sections of the vehicle manufacturers' owner's manual. For information or instructions regarding non Capital Special Vehicles features, refer to the manufacturers' owner's manual.

Floor Panel Precaution

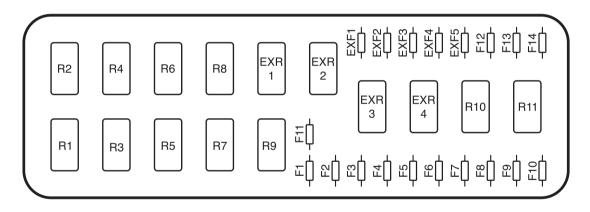
Beneath central portion of interior floor is a cavity containing electrical harnesses, etc. Do not cut or drill into this area.

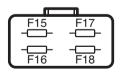
Maintenance Schedule

Routine maintenance of the CSV vehicle is required to ensure its optimum performance and reduce need for repairs. During the warranty period, maintenance inspections listed on the following pages must be performed by an authorized CSV dealer at least once every **6 months** or sooner, depending on usage. After the warranty period, maintenance inspections are recommended for the same time intervals. Service should be increased under conditions of excessive use (more than 10 cycles per day).

Electrical - Fuse Boxes Volkswagen T6/T6.1

For any electrical issues that may arise from a CSV adaption, CSV has provided separate fuse boxes both located under the dashboard at the front on the passenger side. The smaller fuse box is located at the rear of the main larger fuse box. As a precaution, switch the ignition off before handling any electrical components.





Fuse Box Diagram



Fuse Box Key

Relays

Fuen

R1	Ramp, T/G (tailgate), B/R (Backrest), HTT	UP
R2	Ramp, T/G (tailgate), B/R (Backrest), HTT	DOWN
R3	• P/B (Park Brake)	IN
R 4	• P/B (Park Brake)	OUT
R5		RAMP 1 2
R6		T/G (Tailgate)
R7		НТТ
R8		B/R (Backrest)
R9		B/R SOLENOID
R10		S/T
R11		IGNITION
EXR	1,2,3,4	EXTERIOR RELAYS
		(15 MINUTES TIME OFF)
		Max 15 AMP

F1		R1
F2		R2
F3		R3
F4		R4
F5		R5, R6, R7, R8
F6		R9

F7 ·		SERVO LOCKS
F8 ·		HAND CONTROL
F9 ·		CPU
F10		REMOTE, CONTROLS,
		EX.POWER
F11		BRAKE SIGNAL
F12		D/D 1
F13		D/D 2
F14		S/T R10
F15		R11 IGNITION
F16		CPC IGNITION
F17		ACC
F18		HAND CONTROL IGNITION
EXF	1,2,3,4	EX. POWER OUT
-///	•,=,~, •	(15 MINUTES TIME OFF)
		Max 15 AMP





6 Months or 10,000km Dealer Stamp Date / / Kms Signature	24 Months or 40,000km Dealer Stamp Date / Signature
12 Months or 20,000km Dealer Stamp Date / Signature	30 Months or 50,000km Dealer Stamp Date / Signature
18 Months or 30,000km Dealer Stamp Date / Signature	36 Months or 60,000km Dealer Stamp Date / Signature



3.5 Years or 70,000km Dealer Stamp Date / /	5 Years or 100,000km Dealer Stamp Date / / Kms	
Signature	Signature	
4 Years or 80,000km Dealer Stamp	5.5 Years or 110,000km Dealer Stamp	
Date / / Kms	Date / / Kms	
Signature	Signature	
4.5 Years or 90,000km Dealer Stamp	6 Years or 120,000km Dealer Stamp	
Date / / Kms	Date / / Kms	
Signature	Signature	





6.5 Years or 130,000km Dealer Stamp	8 Years or 160,000km Dealer Stamp	
Date / / Kms	Date / / Kms	
Signature	Signature	
7 Years or 140,000km Dealer Stamp	8.5 Years or 170,000km Dealer Stamp	
Date / / Kms	Date / / Kms	
Signature	Signature	
7.5 Years or 150,000km Dealer Stamp	9 Years or 180,000km Dealer Stamp	
Date / / Kms	Date / / Kms	
Signature	Signature	



9.5 Years or 190,000km Dealer Stamp Date / / Kms Signature	11 Years or 220,000km Dealer Stamp Date / Signature	
10 Years or 200,000km Dealer Stamp Date / Kms Signature	11.5 Years or 230,000km Dealer Stamp Date / Signature	
10.5 Years or 210,000km Dealer Stamp Date / Signature	12 Years or 240,000km Dealer Stamp Date / Signature	





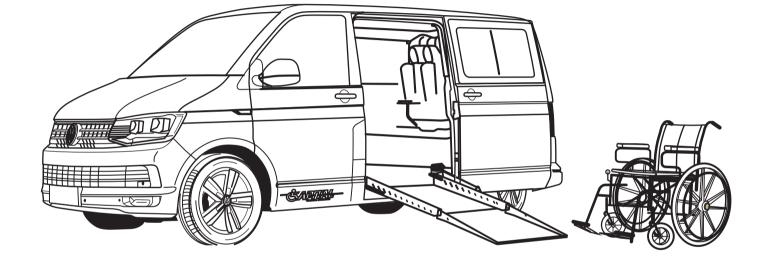
12.5 Years or 250,000km Dealer Stamp Date / Signature	14 Years or 280,000km Dealer Stamp Date / Signature	
13 Years or 260,000km Dealer Stamp Date / Signature	14.5 Years or 290,000km Dealer Stamp Date / Signature	
13.5 Years or 270,000km Dealer Stamp Date / Signature	15 Years or 300,000km Dealer Stamp Date / Signature	



Change of Ownership Advice Form			
Owner's Name:			
Address:			
		Post Code:	
Phone No#:	VIN Number:		
Date of Ownership Changed:	Signature:	Date:	
Send to Capital Special Vehicles			
 12 Capital Drive, Dandenong South, Victoria 3175 csv@csv.com.au 03 9794-8888 		, in the second s	

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