



Adventure Unlimited



*This manual provides information regarding the use and operation of your caravan air suspension system. Following the guidelines in this manual will help provide you with many years of trouble-free service.*

# **AIR SUSPENSION SYSTEM GUIDE**

## **CONTENTS**

***IMPORTANT INFORMATION***

***OPERATION***

***MAINTENANCE***

***TROUBLE SHOOTING***

***AFTER SALES SERVICE***



## **IMPORTANT INFORMATION**



### **DOCUMENTATION TO BE KEPT WITH THE CARAVAN**

It is very important that the caravan owner and operator is advised on how to use the system and that this System Guide is kept with the caravan. Read this System Guide carefully before using the system or towing the caravan.



It is recommended that only a properly trained person services the product and carries out maintenance.



Never exceed the caravans weight ratings for the overall caravan (ATM) or suspension group (GTM). The manufacturer's weight ratings are stated on the VIN plate on the caravan. It is recommended to weigh your vehicle and caravan combination on an authorised weighbridge when it is fully loaded and in a level condition to determine if you are exceeding weight ratings.



Ensure you are fully conversant with how to position load on your caravan. A caravan loaded in an improper manner can greatly affect safety & stability and may result in twisting and stress on the chassis and overloading of axles resulting in injury and / or damage.



When operating your air suspension ensure there is no one close to or under the caravan as they may be trapped or injured.



Before towing the caravan ensure that you are familiar with the operation of the caravan.



The Remote Lowered and Raised positions are to be used when stationary or for slow towing only.



The Compressor must be 'On' when the control system is adjusting. Turn the Compressor Off when setup on site.



Incorrect use of this air suspension product can result in damage to the airbag, associated parts and / or the vehicle which is not covered under warranty.

# OPERATION

## HOW TO USE YOUR SUSPENSION CONTROL

The air suspension and control system on this caravan allows manual height adjustment as well as automatic adjustment to return to the correct towing position no matter the load. This ensures the caravan is constantly maintained at the correct suspension height ensuring optimum stability, road handling, isolation and drive comfort.

The system offers Remote, and Auto Modes selected by the Toggle valves. The Automatic Mode is used momentarily to return the caravan to the correct position for towing before reverting to Remote Mode for all travel. Adjusting to a Lowered or Raised position is suitable for stationary or slow towing only, to allow for improved occupant access and caravan clearance.

- ⚠ **When operating your air suspension ensure there is no one close to or under the caravan as they may become trapped or injured.**
- ⚠ **Before towing the caravan ensure that you are familiar with the operation of the caravan.**
- ⚠ **When operating your air suspension uncoupled with the park brake on ensure the jockey wheel is forward facing to prevent possible damage.**

## COMPRESSOR ON/OFF

Use the Compressor switch to turn the Compressor On when using the controls for Remote or Automatic adjustment. Once setup on site in Remote Mode the Compressor can be turned Off to eliminate compressor activation.

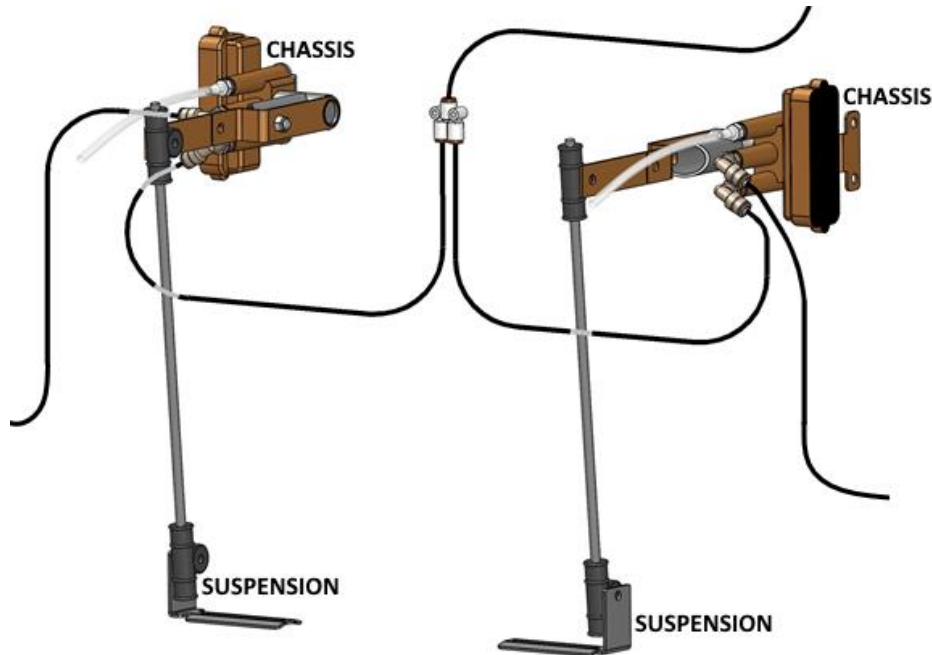


**COMPRESSOR ON** – When using the control system.

**COMPRESSOR OFF** – When setup on site.

## AUTOMATIC MODE SELECTION

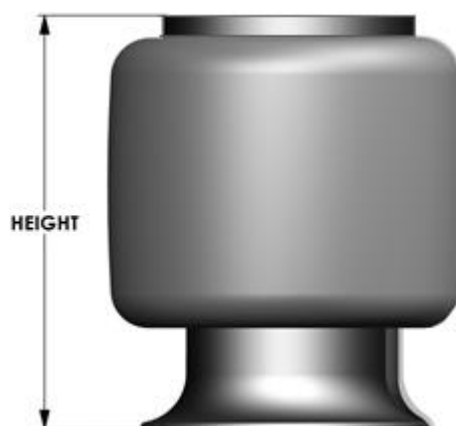
Automatic Mode allows a convenient return to the correct towing height for the suspension. With the van on level ground and the Compressor On, select the Automatic Mode and allow the suspension to return to the correct towing height, which may take up to 20 seconds. The control uses levelling valves mounted under the caravan and attached to the suspension to return to the set towing height for the suspension. If the system is not able to reach the selected mode, check for obstructions and safely remove these before attempting the change.



## REMOTE MODE OPERATION

Remote mode can be utilised to adjust the suspension heights for Site Levelling and for Lowered or Raised positions when stationary or slow towing. With the Compressor On, use the key fob to adjust the required side as needed. If lowering or raising together, adjust each side gradually to maintain a level position. If adjusting to level the van adjust the required side gradually.

When towing the AB0016 airbag within this kit must be maintained between **[225mm - 275mm]**  
This Airbag Operating Height will be achieved when Auto height is selected.



Do not Inflate the airbags above **[100PSI MAXIMUM]**

Do not Deflate the airbags below **[20PSI MINIMUM]**

**NOTE** – For new applications it is important to ensure the airbag is not deflated to allow crumpling of the rubber. Some applications may require the pressure to be kept above 30PSI in initial use to ensure no crumpling.

**⚠ Adjusting the suspension away from the correct towing height is suitable for stationary or slow towing only.**

## **HIGH POSITION**

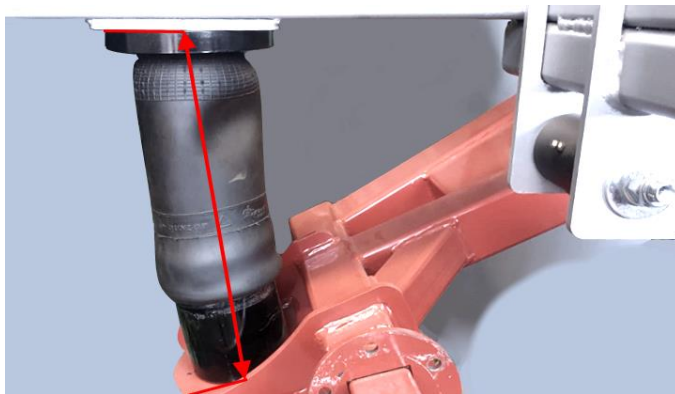
Raise the suspension for improved ground clearance. To be used when the caravan is stationary or for slow towing only. Towing position must be achieved before travelling.

## **TOWING POSITION**

Towing Mode is the primary operating position of the caravan and is to be used for all travel. This mode ensures best performance and reliability of the suspension.

## **LOW POSITION**

Lower the suspension for improved occupant access and roof clearance. To be used when the caravan is stationary or for slow towing only. Towing Mode must be selected before travelling.



**TOWING POSITION = [225mm-275mm]**

## **SITE LEVELLING**

When site levelling, from the Towing position it is recommended to deflate the high side first within the 20psi Minimum pressure. If needed, the low side can then be inflated for further adjustment within the 100psi Maximum pressure. When the site levelled position is achieved the Compressor can be turned Off to eliminate any compressor running whilst setup.

## **CHANGING A FLAT TYRE**

Stop the tow vehicle and caravan in a safe location, ensure park brake(s) are applied and that the control is in the Remote Mode. Follow the recommended tyre change process outlined by the caravan manufacturer. Once the tyre has been changed and the tow vehicle and caravan are safe to move, ensure the system is in the Towing position before travelling.

## **LONG TERM STORAGE**

Select Remote Mode and move to a Low position and turn the Compressor Off when the caravan is being stored for a long period of time. The system will retain a low level of air pressure in the airbags, and it is normal for this pressure to be lost during long term storage.



**The control system must be in Remote Mode for servicing. This includes if the caravan is completely jacked, hoisted, raised off the ground, or transported. This is to avoid unnecessary adjustment by the system and / or possible damage to individual components and / or persons.**

# **MAINTENANCE**

- ⚠ It is recommended that only a properly qualified person installs the product and carries out removal and refitting of any components.**
- ⚠ If removed, never inflate an airbag assembly unrestricted. Improper use or over inflation may cause property damage or severe personal injury.**

## **GENERAL SYSTEM CARE**

It is recommended to periodically inspect your air suspension for operation, security, possible damage and component integrity. As with your vehicle's tyres, an airbag is a pneumatic device that supports the vehicle's weight. Air leaks may develop in the system and these are generally not covered under Warranty. If you encounter an air leak, contact the caravan manufacturer or their nearest service representative for assistance. Though unlikely, it is possible that the airbag may be punctured because of impact damage, improper inflation, improper installation, or improper usage. To reduce the risk of puncture, we strongly recommend inspecting and wash any accumulated sand, gravel or other road debris from the airbags and surrounding components.

## **SYSTEM SUPPLY VOLTAGE**

It is recommended to always maintain system voltage above 12.0volts. System operation will be adversely effected by low voltage, causing the compressor to run longer and increase the time for each height adjustment.

## **PRESSURE RETENTION CHECK**

It is normal for air pressure to be lost during long term storage of your caravan causing the suspension height to lower. Due to the nature of the airbag material, the rate of loss can vary across the group of airbags. During regular operation, a system air leak could occur even after many years of leak free service. A system air leak will cause increased frequency and / or run time of the air compressor. Any system leak must be rectified as the life of the compressor will be adversely affected, contact the caravan manufacturer or their service representative. If an airbag has been punctured while you are travelling, as indicated by a loss of height, park in a safe place and contact the caravan manufacturer or their service representative.

- ⚠ Never cut, weld or modify the airbag or associated parts without approval from the caravan manufacturer.**
- ⚠ Do not use aerosol tyre repair products in airbags. If there is a hole, the airbag must be replaced.**
- ⚠ Do not use a tyre patch of any kind on an airbag. If there is a hole, the airbag must be replaced.**
- ⚠ Never weld within sight of an un-protected airbag; they are severely affected by weld UV & heat.**



## TROUBLE SHOOTING GUIDE

### Airbags will not inflate

Check battery voltage and connections.  
Check the system power supply and compressor fuse is fitted and intact.  
Check that the Compressor On/ Off switch is turned ON.  
Select Auto Mode and wait 2 minutes, if the system is still not lifting then check that you are not exceeding Manufacturer's weight ratings.

### Airbags deflate on their own

If Auto Mode is selected when the suspension is in a 'High position', the airbags will deflate automatically.  
If the caravan is losing height from Towing position when stationary, park in a safe place and contact the caravan manufacturer or their service representative.

### The compressor is running continuously

With the Compressor is ON do not select any buttons on the control interface to eliminate air usage.  
With no system adjustment, if the compressor is running continuously for more than 5 minutes park in a safe place and contact the caravan manufacturer or their service representative.

### The caravan is not level for towing

Confirm that the tow vehicle and caravan are on level ground, and that the tow coupling height is correct.  
Check for obstruction or components that may be restricting the suspension. Ensure Towing position is achieved before travelling.

### The caravan is not levelling on site

Ensure Remote Mode is selected.  
Select the higher ground side and deflate while maintaining pressure above 30psi  
If needed, select the lower ground side, and inflate while maintaining pressure below 100psi  
Following the above steps, if the available adjustment is not adequate for the site variation use traditional levelling methods to achieve the difference. Remote Mode can then be used to complete the levelling process.

## AFTER SALES SERVICE

### GENERAL ADVICE & ASSISTANCE

Tuffride are proud to offer the best quality products and customer service. If you have any concern with this system, please contact the caravan manufacturer or their service representative.

### SPARE PARTS

Spare parts are available for all components in this system from the caravan manufacturer. The airbag assemblies feature a modular design allowing replacement of the rubber bellows only. Contact Tuffride for further information on the airbag replacement and installation process. Should you require spare parts please contact the caravan manufacturer or their nearest service representative for assistance.

### WARRANTY

The system Warranty period is for 12 months from the initial new sale and is transferable through this period. Our Warranty operates in addition to (and does not exclude, restrict, or modify) any rights or remedies to which you may already be entitled under the Australian Consumer Law or any other relevant law relating to this product. Our Goods come with guarantees that cannot be excluded under the Australian Consumer Law.

If the product supplied has not performed as expected and you suspect it may fall into the consumer protection category, please contact the caravan manufacturer for assistance.

**FOR SUSPECTED WARRANTY CLAIMS - PLEASE CONTACT THE  
CARAVAN MANUFACTURER BEFORE REPAIRS ARE CARRIED OUT.**

