

Murvi instruction manual

(This manual omits potentially important information relating to trouble shooting and warnings which relate to product liability and statements of the obvious! It also omits other information not needed for day to day and normal maintenance procedures. Complete product information can be found in the blue Murvi bag behind the driver's seat.)

Checklist before travelling

Gas:

- Hob and fridge (if running on gas) should be switched off at control to the left of the book shelf.
- Switch off gas on isolation taps on the gas manifolds under sink and at control panel to left of book case.

Electrical:

- ***Disconnect hook-up lead. Always do this before starting engine!***
- Switch off all 12v appliances (except radio if desired).

Lockers etc:

- Ensure all lockers closed and latched.
- Stow all loose items including tables.
- Ensure rear seat is locked into position

Mechanical:

- Check tyre pressure: front- 55 psi; rear- 50 psi (n.b. this is lower than recommended by Fiat, but is safe and gives a much better ride).
- Check levels of diesel, oil, screen wash and brake fluid.

Electric outside step (Omnistore 700):

- Make sure it is retracted. The switch is on the passenger side pillar behind door. If left out the alarm will sound as soon as the ignition key is turned.

Windows and rooflights:

- Ensure they are closed.

Handbrake:

- Ensure that this is fully released with lever down or alarm will sound.

Seatbelts

- Alarm will sound if not fastened.

VB Air suspension:

- If self levelling activated, push the 'van' icon and wait for auto levelling to be switched off.

Log:

- Make note of mileage etc.

Safety

Equipment:

- Honeywell XC70 carbon monoxide detector over the sliding side door. Push test button to see if alarm is working. Green power light and reduced sound alarm activated. Red **alarm** indicates dangerous CO level. Blue 'ventilate' alarm gives early indication of build up. Yellow 'fault' light indicates unit not working.
- Smoke detector under the locker behind drivers seat. Periodically check and replace 9V battery if need be.
- Warning triangle in store under rear sofa element.

- Fire blanket in wardrobe.
- First aid kit in wardrobe.
- Vehicle bulb kit in wardrobe.

Procedures:

In case of fire:

- Get everyone out, then switch of engine, gas and electricity. Raise the alarm and call the fire brigade and tackle the fire if with the powder fire extinguisher if safe to do so.

Fire precautions:

- Be familiar with exits.
- Keep combustible materials away from heating and cooking appliances.
- Check local fire precautions.

Operations while parked up:

Cabin

Front seats:

- To swivel, pull up levers on the door side of the seat. (Put in gear and release hand break on right hand of driver' s seat before rotating.
- To recline seat back, rotate knob on outside of either seat.
- Adjust arms with roller under front of arm.
- Horizontal bar under front of seat slides it forward and back .
- Seat heater button at front of seat base.

Rear sofa bed:

To make bed:

1. Lift the seat of sofa bed.
2. Prop up with aluminium pole in storage area under.
3. Remove any bedding.
4. Lift the latch to the bolt mechanism at front right of the storage area.
5. Pull the seat bottom forward. The seat back will fall into horizontal position.
6. Rotate the long bolster at the rear of the seat so that it is flat with the bed and adjust position of the bed. (this widens the bed).
7. Remove the two backrests to the rear section. (I store them between the front two seats of the cabin.) Leave the top section in place.
8. Pull out the rear section if desired to maximise this portion of the bed. Rotate the bolster behind smaller of two back rests. These elements can also be moved forward leaving a gap between them and the side of the van. This is the best way to form a large bed.

To put seat back

1. Pull seat bottom out a bit.
2. Rotate the back bolster into vertical position.
3. Lift seat bottom to near vertical position, listening for a click.
4. Kneeling on the rear sofa extension lift the seat back into upright position.
5. Wedge pole to keep seat bottom up.
6. Push seat bottom back to about one centimetre beyond edge of black trough containing seat belt fixing.
7. When seat is in the right position you will be able to lower the bolt mechanism so that it fixes the seat into position.
8. Store bedding and lower seat bottom.

- **Warning:** treat the seat mechanism with respect. It can break!

Maintenance:

- Brush or vacuum upholstery regularly.

Removing store under seat extension:

- To remove the rear section seat bottom altogether for servicing, disconnect heater hose from wardrobe and remove screws from under material covering.

Rotating seat to accommodate passengers:

1. To achieve the alternative seating layout with the moveable seat facing forward, rotate so that the two ratchet bolts located towards the rear of the seat are positioned directly over the two steel rings in the floor. The bolts pass through the rings and thread into a reinforced section of the floor. (NB Not the large fixings in the black troughs but the smaller steel rings further forward)
2. Wind the ratchet handles until the seat is secured. Both ratchet bolts must be fastened.
3. Fix the lap belt and three point seatbelt to the floor bolts in the black troughs and thread through the seat. (The lap belt and three point buckle are in the store under the L section.) *NB. I have never done this.*

Tables (stored in wardrobe):

- Large free standing table.
- Small cantilevered table with leg. Fixing position is to rear of passenger seat.
- **Warning:** do not use tables while van is in motion.

Bathroom

Shower

1. Pull out nozzle and fix to wall bracket.
2. Remove carpet and pull out shower tray plug.
3. Fix shower curtain to protect toilet roll holder and toilet.
4. Rotate tap end to adjust to shower flow.

External shower:

- Hose is in top left locker under kitchen worksurface. Bayonet fixing to supply above offside rear wheel arch. Hot and cold.

Cassette toilet Dometic CT 4050:

To use:

1. First push flush button.
 2. Next pull out slider under front of loo seat and leave open during use.
 3. Use cheap toilet paper, *not* three ply.
 4. After use, push flush button again and close slider.
 5. Check level indicator to right of flush button. If bottom, half full indicator is showing, it's time to empty the cassette as only a few more uses possible. (NB, to the left of the flush are two indicators. The top illuminates when the cassette is removed. The bottom, a fill tank indicator, is not connected as water comes directly from main tank.)
- This panel is connected to the 12V Auxiliary switch (see below).

Emptying cassette:

1. Open back door and lift green latch at bottom of cassette. Pull out a few inches.
2. Carefully pull out black SOG hose and insert plug on end of string.

3. Pull out cassette. Place upright on ground and pull out long handle by pushing button in the middle of the handle grip.
4. Rotate drain pipe to vertical (but *not* more than 90 degrees).
5. Push round green vent button on top of cassette when drain pipe is open and facing downwards to empty into appropriate receptacle.
6. Rinse out cassette thoroughly.
7. Make sure cassette trolley wheels are clean and mud free before re-inserting.

Maintenance

After trip and over winter:

1. Drain toilet over winter. Flush several times to make sure.
2. Clean using soap and warm water.

2/3 times a year:

1. After the last action above, add 300mg of Thetford Cassette toilet cleaner to cassette. Add 5/6 litres of lukewarm water. Agitate (nb you can do this by driving). After 16 hours, drain and rinse. Leave to dry and do not close the drain pipe.
 2. Spray the rods of the slider with silicone spray OKS 1111 by removing the cassette, releasing slider mechanism using green latch to its left, pulling the slider handle and turning the slider anticlockwise to release from cassette.
 3. Grease with OKS 1110 the bayonet fitting of the slider. Ensure proper seating when re-fixing.
 4. Grease with OKS 1110 the black seals to the cassette opening. Ensure proper seating when re-fixing.
- (NB the SOG system pipe replaces the cassette vent. The SOG system is maintenance free. If concerned that it is not working light an incense stick next to the exit (near off side wheel arch and smoke should be sucked in.)
 - NB the control unit contains a 7.5A automotive fuse. To replace, **switch off supply**, and carefully lever out unit.

Model information (Also inside cassette housing):

- Model designation: CT 4050
- Production number: 936 002 187
- Serial number: 90920951

Kitchen

Fridge Dometic RM8401 (90 litre) Gas/12V/230V:

- (**Warning:** Switch off and ventilate if you smell ammonia. Leave area and inform Dometic.)

Operating with gas:

- Switch on (left hand button) and select the gas icon. Ensure gas is on at manifold under sink and control panel next to book shelf. Do not use in this mode while either at petrol station, on ferry or when vehicle is being transported. If you smell gas ensure no naked flame, ventilate and leave space and contact Dometic. Gas ignition faults can occur over 1000m.
- Gas ignition failure indicator and reset button (ie if you try to switch it on when there is no supply) is on the far right of the panel.
- Dometic require half yearly inspection of gas burner. ?

Operating on 12V:

- Switch on (left hand button) and select the battery icon.
- Only use when engine is running.

Operating on 230V:

- Only use where 230/240V available.

Temperature level:

- Select the thermometer button to select temperature shown on graded level display to its right.

Door operation:

- Open by pressing the two buttons on the top right of door. If parked push up the lock bar under the catch to allow opening without pushing locking button.
- To fix the door part open push in button on panel in front of LED and then slide forward. This brings the latch forward.

Freezer compartment:

- Compartment can be removed to increase size of fridge.
- Do not forcibly remove ice from freezer.

Winter covers:

- When ambient temperature less than 16 deg. C or when travelling fix covers to rear door (covers in store under rear section of sofa).

Maintenance:

- Clean with warm water and detergent.
- Do not place hot pots directly onto worksurface.

Hob Thetford:

- Electronic ignition.
- Do not lower cover until burners have cooled.
- Ensure a 10mm gap between pan and edge of hob.
- Use non-abrasive cleaners. Wipe with the grain of the steel.
- Model number: SHB33094-SP; Serial number: E100W6000025.

Oven Dometic:

- Oven and grill burners should only be ignited with door open.
- The wire shelf, drip tray and oven tray should not come into contact with the flame.
- If flame goes out accidentally, wait one minute before re-igniting.
- When using the grill the door must be kept open and the heat guard in the oven compartment.
- Do not use the grill for more than 25 minutes or as an oven.
- Only clean oven cool with non abrasive cleaner.
- Always use Maxxfan roof extractor when oven or grill in use.
- Model: FO/FO211FGT.

Extractor Maxxfan:

- Remote in drawer below hob with on off button. (Also shows room temperatures.)
- Vent lid icon to open fan without fan operation.
- Auto button to operate automatically when temperature reaches set figure (presently 27 deg.). Adjust temperature with + and - icon buttons. Green LID light will indicate fan in Auto Mode.
- Air exhaust icon to reverse flow of air.
- Fan icons to adjust fan speed.
- These controls are also on the panel by fan. (+ and - icons to control fan speed in manual and temperature in auto. Push both to open or close the vent.)

Electrical systems

12V dc system

- Switches in front of wardrobe over the rear sofa section. **These switches should be off if system not plugged into mains and not going to be used on a daily basis.**
- The switches are: Radio, Pump, Auxiliary, Lights and TV. The Auxiliary switch controls the SOG system for the cassette toilet and the water level indicator panels.
- System powered by two Haze 105 AH Gel batteries in lockers behind sofa bed. This is a separate system to the van motor battery. **(NB switch everything off** and disconnect hook-up cable before disconnecting batteries). No maintenance required.

Victron Energy Blue Smart IP22 Charger (back of wardrobe):

- mode should be 'normal'.
Victron BMV battery monitor: To the left of the bookcase. Scroll through using + and - buttons to show the following:
- main V: main battery voltage.
- aux V: auxiliary battery voltage.
- A: actual current flowing out (-) or into the battery (no sign).
- W: The power drawn from the battery (-) or into the battery (no sign).
- Ah: The amount of Ah consumed from the battery (amps x hours).
- %: percentage of charge.
- h: estimate of time battery can support present load before recharging.
- Pressing 'set up' and 'select' simultaneously for 3s restores factory settings.
- An alarm is acknowledged when any button is pressed.
- The monitor synchronises to a full battery automatically but can also be done manually by pushing the + and - buttons.

Battery charger isolation switch:

- At the rear of the wardrobe is a switched fused illuminated control switch to the Victron battery charger. **Switch off charger if you wish to leave a heater or dehumidifier in the van for long periods.**

Fuses (blade fuses in 12 way fuse holder at back of wardrobe):

1. 10 A: Radio and solar panel
2. 15 A: Fridge and water pump
3. 15 A: Webasto heater
4. 5 A: BMV 700, hob, aux relay, Gi, Fi & TV
5. 10 A: Webasto heater
6. 5A Lights
7. 5 A: Webasto heater
8. Spare
9. 25 A: Extractor fan and step
10. 30 A: Auxiliary power
11. 30 A: Inverter
12. Spare

also in wardrobe:

- 50A Maxi blade fuse for battery charger.
- 100 A strip fuse for the split charge feed to the vehicle battery.
- 2 x 100 A Maxi blade fuses in the locker holding the auxiliary batteries

behind the removable cover to the right of the steering wheel:

- 3 x red wire 1mm 3A for step warning buzzer, reversing camera and tow bar warning light. Also one of the VB suspension fuses. See below.

behind the passenger side wheel arch trim:

- 100A strip fuse for the split feed charge to the auxiliary batteries and one 30A Maxi blade fuse for the tow bar feed.
- **Fuses for VB air suspension:** one down in the floor by starter battery is and one behind the fuse panel to the right of steering column.

USB sockets:

- There are three double USB socket outlets each with 1x(5v x 1a) and 1x(5v x2.1a) outlets, two on the passenger and driver side pillars and one on back wall of wardrobe. (The 12v outlet on the dash only functions when the ignition is engaged.)

Solar panel:

- The roof of the van is fitted with at 160W solar panel which requires no operation and is maintenance free.

The 230 V system:

- Control system at back of wardrobe. The RCCB (residual current circuit breaker) is to the left of the control box and monitors the 230v supply. It is up to be ON. Test periodically by pressing test button.
- Right of the RCCB is the MCB (Miniature circuit breaker) protecting the 230 circuits. *Seek professional advice if it trips.*
- The 25 metre electrical cable with continental and UK plug adaptors and reverse polarity adaptor(possibly needed on some continental sites) is in a round blue bag in the wardrobe.
- A light illuminates next to double socket outlet over hob when 230 V power connected.
- ***Always disconnect mains power before starting engine!***

Gas

- Gas appliances are fed from a 25 litre underfloor gas tank with an approx. 10kg capacity. The filling point is located on the nearside of the van and can be filled from stations that sell LPG.
- There is an adaptor for filling in the continent in the blue bag containing the 25m electrical cable.
- There is a gas supply to the hob, oven and fridge. The individual circuits are controlled from a gas manifold housed in the locker under the sink. Yellow is the hob and oven, green the fridge.
- When not in use, turn these off. When driving, travelling on ferries or at a petrol station turn gas off at 12v solenoid valve control panel next to book shelf (with on/off and display dimmer buttons).
- **Control panel error codes:**
- Red LED and nearest green flashing: wiring problem. Check wiring.

- Red LED and second nearest green flashing: battery voltage problem. Solenoid turned off. Turn off and recharge battery.
- Red LED and second nearest and last green flashing: battery voltage problem now resolved but solenoid still off. Turn gas control off and on.
- Red LED and third nearest green flashing: gas control valve internal problem. Return for repair.

Gas control valve (Type 424 RV double stage low pressure regulator):

- **Warning:** If you smell gas, switch off all naked flame and do not use telephone or electronic devices.

Space heating and hot water:

- **Webasto Dual top Evo 8** Material number: 4110446E, Serial number: 1917454774

Warnings:

- To avoid micro-organisms water should not stay in the boiler for longer than two weeks.
- Descale regularly (see below).
- Only guaranteed to function correctly up to 2200m. Contact Webasto dealer if it needs to be operated above this level
- Switch heater off at filling and fuel storage stations. *Always* switch off before refuelling. Do not use bio-diesel.
- Do **not** operate in enclosed spaces.
- Service every two years and if heavy smoke, persistent fuel smell, unusual combustion noises or continuous cut outs occur.
- Do not place items in front of hot air ducts.
- Empty the boiler and water lines if unused and there is a danger of frost.

Control panel (to left of book shelf):

- To the left of the screen is illuminated on off button and above the power/fault indicator (green/red).
- Below the screen are two buttons. In home position the left hand one shows 'menu' above and the right hand shows 'stop'. The Image displayed shows Wattage (1000 or 2000), desired cabin temperature (if cabin heating on) and 'shower icon if the hot water is on. Above the motorhome image is displayed the power source (diesel or 230W) and whether the heater is on.
- When in home mode you can adjust the cabin temperature up or down using the buttons to the right of the screen.

To select function push 'menu' button.

- Using the buttons to the right of the screen scroll through the options:
- 'Heating cabin'. Selecting this prompts power source: diesel, 230v/1000W, 230V/2000W.
- 'Hot water'. Selecting this prompts choice of temperature: Comfort 70 or Economy 40C.
- 'Heating cabin and hot water'. Selecting this prompts power source as above.
- Heating by timer prompts two timer programmes. Choosing one of these prompts: cabin or cabin and hot water. Selecting one of these prompts power source as above. (See programming timer below).

- Frost protection Selecting this prompts power source as above. *Do not use this for extended periods as when leaving vehicle over winter as the constant running of the fan may wear it out.*
- 'Draining boiler (see below).
- Setting/Thermocall/Telestart (not available).
- 'Programming timer' (there are two timer programmes). Selecting this prompts setting the cabin temperature and then scrolling down to set times for each day. Selecting a day prompts the option to modify the 24h programme and an option to copy programme for the next day.
- 'Setup'. Selecting this prompts setting: day, hour, language, temperature unit, hour format and contrast.
- When you have got to the end of the selection process the screen shows 'selection completed, press 'OK' to change operation mode'. (One can always go back by pressing left hand button.)

Maintenance:

Draining the boiler

- Drain the boiler when there is a risk of frost, when the vehicle is stored for long periods *and at regular intervals* to ensure that the solenoid valve does not seize up with limescale if water used from area of hard water. The blown air heating is safe to use when the boiler is drained, but only powered by diesel (see below).
1. **Warning:** Make sure the 230V power is switched off. The 230V heating element should never be switched on when the heater is empty.
 2. Turn off the pump at the 12V control panel. Make sure that the shower trigger is open and that any water in the head and hose are emptied.
 3. Select 'Draining Boiler" (see above). The boiler will drain from under the centre of the van approximately between the two rear wheels. It will drain around 10 litres over a period of 90 minutes after which "Drainage Completed' will appear on the screen. 'Press STOP to abort drainage can be selected at any time. (NB under certain circumstances, cold, low battery power and when a fault, the boiler can drain automatically. Selecting 'Frost Protection' can guard against this. This cannot be aborted, but by selecting 'Draining Boiler' this can then be stopped.) (NB can only drain when there is a 12V supply.)
 4. Empty the fresh water tank (see 'Tank System' below)
 5. When the system has been drained, switch the pump on and run for 20 seconds to allow the pump and in line filters to empty. Move the taps from the hot to cold positions to allow all the water to come out. Turn off the pump and leave the taps in centre and open position.

Refilling boiler

- Refill water in usual way but make sure that hot taps are open until water flows freely to allow water into boiler.

If the valve has seized up and no longer functions, descale:

- Murvi recommend a 5% solution of citric acid in 20 litres of water (Webasto recommend "Kettle Klear" or wine vinegar at a ratio of 1:2. This seems wasteful!)
1. Drain tank and when empty close the fresh water drain valve.
 2. Pour the 20 litres into the water inlet,

3. Select "summer mode 40 deg.C to make sure the electrical safety drainage valve does not open.
4. Open water taps to hot and leave open while water flows out. Then close.
5. Leave in system for 4 hours.
6. Flush with drinking water and then refill.

Heater isolation valves

- There are two valves situated at the back of the wardrobe under a white removable panel. These valves are for isolating the cold water 'in' and the hot water 'out' of the heater. Isolate these valves to continue to use cold water when the Webasto is empty.

Disinfection

- Webasto recommend disinfection whenever water has been left in the system for more than a fortnight. Clean and disinfect with a mild disinfected solution at least once a year.
- Webasto also recommend before winter storage it is advisable to complete drain the water system with compressed air of 2 bar. To do this open all the taps, connect the compressed air to the hot water line and wait until the water has completely drained off.
- Webasto recommend every four weeks running the system on diesel for 20 minutes in Winter mode (only cabin heating) and 30 minutes in Summer mode (only water heating) to prevent mechanical parts from seizing up.
- **Warning: do not use any form of external heating other than non radiant electric as they are a fire asphyxiation hazard.**

Water System

Tanks

- The van has a 16 gallon (73 litre) in-board water tank at the rear of the vehicle and an additional 10 gallon (45 litre) underfloor tank. The two are connected with by a pipe with a blue manifold on the offside in front of the rear wheel arch.
- The tanks are filled by a single locking filler on the offside rear panel.
- Both tanks are drained by a single 25mm drain tap and blue manifold located just in front of the manifold that controls the connection between the two tanks (above). The onboard tank has a large red access hatch sealed with silicon sealer. If the hatch is removed the seal will require removing and re-sealing. The underfloor hatch is accessed by...
- When refilling the *empty* tanks, run both taps on hot until water comes out.

Gauges

- The water level check gauge for the onboard 16 gallon tank together with the waste tank level check gauge is located just under the 12V Radio and Auxiliary switches in front of the wardrobe.
- The water level check gauge for the underfloor 10 gallon tank is located just under the 12V TV switch below, in front of the wardrobe.
- These panels are connected to the 12V Auxiliary switch above.

Maintenance

- The waste tank should be flushed through on a regular basis with water and a mild solution of disinfectant.
- SHURflo recommend adding bleach to water at a ratio of 1 millilitre per litre of tank capacity. Mix the correct amount of bleach with water.
- Open all the taps until the water flows out with the odour of chlorine.
- Leave for four hours.
- Drain, refill the tank and purge the plumbing of the solution.
- Solids can build up over a longer period of time. The tank can be removed and cleaned through an inspection hatch in the top.

Winterising:

- Drain tanks. When empty, switch on pump, open taps until water purged and switch off pump.

Pump SHURflo RV Fresh Water Pump and Whale Surge Damper:

- The van has a pressurised water system. The pump is situated at the rear of the fridge. There is a pump isolator switch with the other 12V switches in front of the wardrobe. Switch the pump off when travelling, overnight or during periods of lay-up.

Winterising:

- Place pan under pump. Remove piping from inlet and outlet. Turn pump on to purge pump of water. Switch pump off. Leave disconnected. Leave note by filler inlet to remind that plumbing disconnected. Leave all taps open. ?.

Interior Lights

- All lighting is 12V and powered from the auxiliary batteries, except for the courtesy light over the windscreen which is powered from the vehicle battery. All the spot and strip lights are LED. The strip lights have a blue low level night lights.
- There are two switched spots over passenger and driver side pillars and one switched spot next to the television. Two spots over the sliding door are switched from the panel with the 230V and 12V socket to left of sliding door. There are four touch activated spots, two over the driver and passenger seats and two over the kitchen worksurface. There are six strip lights, three in the living area, two in the kitchen and one in the bathroom.

Communication and Entertainment

Screen and DVD player Artex Pro.

- Behind fabric cover on wardrobe wall. There is no aerial or satellite connection. An ethernet cable is plugged into one of the HDMI sockets for connecting to a laptop.
- The DVD slot is behind the screen on the right hand side.
- Behind the screen at the rear lower right hand corner is an on/off switch and control toggle. A remote is in the drawer below the hob.

WiFi:

- The router and antenna connection in inside the wardrobe : Huawei-E703; password:
- *dongle*: sim card number:; phone number:

- *spare*: sim card number:; phone number: ... (in Murvi bag behind driver's seat).
- three.co.uk http://mbbinfo.three.co.uk/payg_mbb_data_usage2.html

Kenwood DNX451RVS radio/cd/satnav /rear camera/blue tooth and Apple media.

- Radio and rear view camera only function when 12V switch in front of wardrobe is on.
- The rear view camera is activated when in reverse.
- Touch screen. Follow prompts. Very irritating and I would never specify this again. You cannot turn the satnav sound prompts off without temporarily muting the radio at the same time. You can plug in external media or connect via blue tooth. To plug in use the USB charger socket in the central glove compartment. There is also a remote in drawer below hob. Full instructions found in the Murvi bag.
- Screen difficult to see and I use the satnav in the locker under the radio. this also briefly mutes the sound of the radio when muted instructions are given, but less irritatingly.

Windows and Rooflights

There are two Heki rooflights and seven Heki windows, all with blackout and fly screens.

- **Warning:** All should be closed before driving.

Main cabin rooflight:

- To open turn crank in direction of arrow to maximum opening of 70 deg.
- To close, turn crank in opposite direction. Once rooflight is closed give crank another couple of turns to lock the rooflight into position.
- **Warning:** In strong sunlight do not shut blackout screen more than two thirds as this will cause a damaging build up of heat between roller and light.

Small windows:

- Squeeze catches at top and bottom to raise or lower light screen and fly screen. Be gentle. To open top hung lights, push little black button on centre of latches and rotate latch.

Long top hung Heki windows:

- To lower screen, squeeze catch mechanism top central and lower fly screen a couple of inches. Gently pull apart the two screen catches to either side and allow fly screen to roll up. Lower screen. To open light, push little black button on centre of latches and rotate latch.

Shower room rooflight:

- To open and close rooflight pull down gently on cream plastic bar and slide.
- **Warning:** In strong sunlight do not shut blackout screen more than two thirds as this will cause a damaging build up of heat between roller and light.
- **Warning:**
- Plastic double glazed units scratch easily. Clean with Farecla Boatpride Acrylic window polish. (telephone 01920 465041)
-

Ventilation

- **Do not obstruct** the ventilation, either at low level under the heating outlets under the wardrobe or the high level roof ventilation.

Fly screen Horrex SL flyscreen

- The sliding door is fitted with a full size fly screen which pulls across from the left (looking out). The screen is very sensitive and these instructions need to be followed carefully!
1. From the inside gently grip the leading vertical bar with both hands about 18 inches from the top and bottom.
 2. Do this by placing your thumbs on the grey bar to the left of the black strip of brush and your fingers outside on the bar. Rotate the bar *very* slightly inwards and gently pull across. To open, do the same, again rotating the bar inwards. If you are not gentle with it the bar can come adrift from the cables that keep it in position. To repair you need to unscrew the plastic element on the bottom of the bar fixed with two phillips screws and re-thread. This is very fiddly. Download the Horrex SL flyscreen installation pdf which may help.

Secure locker

- This is key operated and is found under the passenger seat behind the folding down footrest flap. NB. additional discrete locker space can be found under the narrow cushion below the larger off-side window.

External:

Tow bar and electric hook-up.

- To which can be attached our Atera Strada DL treble bike rack. If the rack is attached please consult and follow the instructions contained on colour A4 instruction sheet in the Murvi bag. Note the maximum load is 45kg (less than the combined weight of our two electric bikes by 1.2 kg.)

Awning (Fiamma F80S awning)

- **Warning:** do not use in windy or very wet conditions. **Do not force anything.**
 - The awning is best deployed with two people.
1. In calm conditions unwind the awning to a maximum of circa 100cms using the winder found in the wardrobe. After this the awning leading edge will need to be supported by the upright supports or a person. (Ensure the foam rubber sleeve is near the top of the winder to protect the roof of the van from damage.)
 2. The upright supports are connected to the leading edge of the awning by means of a hinged connector which sits with a steel rotating dowel in a plastic sleeve attached to the edge. Carefully *lift out and towards you* the upright supports from their housing in the awning cartridge keeping them parallel to the leading edge. This is to avoid breaking the plastic sleeve. Adjust their height and, ensuring that the supports (or person) are taking the weight of the awning, extend as desired. (NB if one support is kept a bit shorter than the other this assists with any rain run off.)
 3. Fix the support to the ground with the pegs found in the compartment above the front seats. Brace the supports with guy ropes and pegs also in compartment.

- If it is not possible to fix the supports to the ground (ie on hard standing) the poles can be adjusted to fit into the brackets found on the side of the van. Pull up catch on top of bracket, insert foot and push catch down. Adjust awning depth to suit.

Phantom tracker

- The van is fixed with a tracker which is linked to my mobile phone.

VB Air suspension

- VB identification number: ...
- See manual in Murvi bag for full instructions:
Short instructions:
Warnings:
 - Never drive in setting other than ride height or Sport at speed exceeding 30km/h to avoid damaging suspension.
 - Never depress brake pedal while raising or lowering vehicle.
- **To auto level:**
 - Within 6 minutes of switching off ignition push top right button with icon of van on balance. The button will flash while adjusting and then light continuously when level set. To end select again or the large van icon (row 5). The arrow up and arrow down buttons will light until vehicle is returned to ride height. It will automatically reset if you drive off, but this is not advisable.
- **Other functions:**
 - **Off road:** Select the second row, right hand button which flashes during adjustment. Select again or Select the large van icon to end.
 - **Low driving:** Select the second row, left hand button which flashes during adjustment. Select again or the large van icon to end.
 - **Sport** (increases stability at speed): Top left button which flashes during adjustment. Select again or the large van icon to end.
 - If the controls do not work, the service (spanner) button may have been accidentally pushed.
 - Consult the VB manual for other functions including emergency inflation.

Vehicle information

- Length: 5998mm
- Height: 2540mm
- Internal height: 1910mm
- Width excluding mirrors: 2050mm
- Width with mirrors folded: 2265mm
- Width mirrors extended: 2475mm
- Registration number: ...
- Registration date: ...
- Ignition key number: ...
- Water filler key number: ...
- Locker key: ...
- Chassis number: ...
- Paint colour: Imperial blue 455

Weight data:

- Gross Vehicle Weight: 3500kgs

• Mass in running order:	3000kgs
• Mass user payload:	500kgs
Of which (approximate weights):	
• passengers	150kgs
• essential habitation equipment	11kg
• Maxi chassis option	50kgs
• air con	22kgs
• mud flaps	5kgs
• 160w solar panel	10kgs
• tow bar and electrics	60kgs
• awning	31kgs
• bike rack	15kgs
• television	8kgs
• oven	10kgs
• VB air suspension approx.	50kgs

That means only about 75kgs left for luggage including bikes! However, a 5% overload is generally tolerated which would add 175kgs. Also, though not legally valid, there is no reason functionally why the with the VB air suspension the vehicle should not be uprated to 4200kgs.

Base vehicle

The vehicle is fitted with the following options in addition to basic functions.

- Traction and Hill Descent Control. Hill descent helps keep the vehicle at a constant speed during a descent. Traction control is for use in icy, snowy or loose surface road conditions. It brakes the wheel which is losing traction. These control buttons are under the radio.
- Cruise control, Parking sensors, Air conditioners and alarm.
- Electric folding mirrors.
- Manual and registration documents are in the blue Murvi bag behind the driver's seat.

Maintenance and servicing

- The van should be serviced every year or 12000 miles, whichever comes first. (See Ducato service booklet.)
- The conversion should have an annual habitation check. Gas and electrical systems should be checked. See above for information about maintenance of other systems.

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