



Bodybuilder's Bulletin

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Auxiliary electrical connections

Recently we have seen some electrical installations on TG product which have been of an unacceptable standard, and have been in some cases, the cause of major fires. We would like to remind our partners of the key guidelines offered by MAN, and where they can be found.

Up to date bulletins, including technical information 71302 referred to in this document, and links to additional documentation can be found on the MAN Bodybuilder website which can be found here:

<http://www.man-bodybuilder.co.uk/bulletins/technical-information/>

Full model specific electrical installation guidelines can be found in section 6 of the Guidelines to Fitting Bodies, which is available here:

https://www.manted.de/manted/aufbaurichtlinien/gb_all.html

Other technical information bulletins, chassis specific electrical drawings, and workshop manuals can be found in the aftersales portal

www.asp.mantruckandbus.com

Generally we are reliant on installers following good working practices, but as we have seen recently, this is not always enough. All necessary information is available through the links shown above, but we would like to draw attention to a few key points;

- Wiring must always be routed efficiently and wherever possible following existing wiring runs. Preferably in conduit whenever possible.
- MAN offer many designated interfaces for signals commonly required by body installers, such as a reverse signal or a speed signal. These are all covered in the Guidelines to Fitting Bodies.
- +ve and -ve connections for low power equipment should only be made using the designated studs on the back of the CE panel. The connections at the back of the CE panel can only be used for consumers up to a maximum of 10A. For devices requiring more than 10A, such as tail lifts, please refer to the Guideline to Fitting Bodies and BB103.

- Factory wiring should never be ‘tapped’ into by cutting along its length and adding a joiner (**fig 1.**) or soldered joint. Additional wiring should always be linked into existing circuits at the plug connections by fitting the correct Pin. (**fig 2.**). Some circuits on MAN vehicles are current monitored. Care should be taken to avoid modifying the wiring in these circuits.

Fig 1.



Fig 2



- Vehicles built after Jan 2012 will have a KSM and bodybuilder interface connection installed. This means there will be a connection under the front panel (X1997), Left hand side as you look from the front, where a bodybuilder can connect to 3 low-side signals and 5 high side signals. These signals are freely configurable via MANcats with no software charge. This can be carried out at any MAN dealer. Full details are listed in Technical Information 71302, or the Bodybuilder Bulletin BB100. Below are just some of the standard outputs available on X1997;

1. Parkbrake signal
2. Neutral signal
3. Reverse signal
4. Clutch signal
5. Hi/Lo speed threshold
6. PTO engaged
7. Set +/Set -

Many more functions are available, please consult your dealer, or contact product marketing for more details.

- MAN electrical training courses are available to book online via the aftersales portal, just follow the links *repair and maintenance > training > service academy* from the home page
- Current ratings of circuits are detailed in the Guideline to Fitting Bodies and MUST be adhered too. It is not allowed to connect multiple pieces of equipment to the same circuit without first checking the current rating of the circuit and installing a fuse of the correct rating. Additional fuses can be fitted in a plastic holder located in front of the central electrics box (BB103). Do not tap into existing vehicle circuits or connect additional electric consumers to fuses that are already occupied.

- Shown below is a selection of commonly used ‘Crimp’ connections. In some situations it is not possible to connect into an existing OE plug connector, for example when connecting to 3rd party equipment such as a buzzer, or a camera. In these cases it is permissible to use spade terminals (Fig3. left), or the heat shrink type straight connectors (Fig 3. Right). Insulated or non-insulated Ring terminals may be used when connecting to the stud connections to the rear of the CE panel.



Fig 3.

It is strictly forbidden to use separable connectors (Fig 4.) to connect circuits. Wire to wire connections must only be made with a fully insulated connection of a suitable current rating. Soldered joints are not permitted.



Fig 4.

- For any information not shown here or on any of the links shown on page 1, or for copies of the documentation referred to in this bulletin, please contact your local MAN dealer.
- **MAN truck and bus UK ltd will not be held responsible for any damages caused as a result of third parties failing to follow the Guidelines which have been made freely available**

Should you have any queries on the above, please contact Product Engineering on 01793 448338 or email bodybuilder@man.co.uk.

Please circulate and then retain in the Bodybuilder’s Manual