

## Machine weights and permissible loads

### Permissible loads

**MAM (Maximum Allowable Mass)** – also known as the gross weight or permissible maximum weight, is the maximum weight of the vehicle that may be used on the road including the maximum load the vehicle may safely carry. This is usually shown on a plate fitted to the vehicle, normally inside the driver's door.

**MTW (Maximum Train Weight)** – this is the maximum permitted weight of the vehicle plus any trailer being towed (plus any load being carried in the vehicle and the trailer).

It should also be noted that vehicle mounted MEWPs with a MAM under 3500kg are taxed as a Private Light Goods vehicle, whereas those over 3500kg are taxed as a tower wagon. A tower wagon and any trailer it is towing is only permitted to carry goods required for use in connection with the work for which the tower wagon is normally used. The reasons for hire companies wanting to know MAM or MTW may stem from the local DVLA and subsequent taxation requirements.

Attached are two extracts from the **The Road Vehicles (Authorisation of Special Types) (General) Order 2003**, specifically Schedule 3 and Article 49 relating to this subject. Schedule 3 which covers Engineering Plant specifically prevents the carrying of goods or burden unless it is 'its own necessary gear and equipment'.

GVW or MAM is always a problem for vehicle mounted MEWPs, especially those mounted onto a small chassis where ballast is required for stability. Many vehicle mounted machines are imported from Italy, where a tolerance is allowed over the stated MAM. Italian manufacturers usually take advantage of this permitted tolerance, but since a similar tolerance is not permitted in the UK imported vehicles in this criteria are immediately illegal as they exceed the specified MAM.

### Ground loading

The European standard for MEWPs, EN280:2001, requires manufacturers to clearly mark each stabiliser/wheel with the **maximum load** on the ground it may be required to support during operation of the MEWP. This is usually stated in kg or pounds (lbs), sometimes Newtons, by a decal near the stabiliser/wheel.

To specify a **ground bearing pressure** of a stabiliser/wheel acting on the ground, the size of the stabiliser/wheel 'footprint area' must be known. The normal units used here would be kg per square metre, Newtons per square metre or pounds per square inch.

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