

Overturning of MEWPS

Mark Pilfold and Brian Parker discuss the points to consider to prevent a MEWP from tipping over.

There have been a number of incidents around the world which have resulted in MEWPs tipping over, sometimes with fatal consequences.

In most cases, proper training, planning, organising and demarking of both dangerous and safe areas could have prevented these incidents.

The message here is a simple one, MEWPs, by design, are generally very heavy, some deceptively so, yet some operators or supervisors still do not appear to be concerned about using them over manhole covers, drains or unsuitable ground.

The weight of the MEWP is concentrated at the points of contact with the ground, which is generally the wheels, stabilisers or outriggers. Where the surface conditions are unsuitable and unable to support the weight of the MEWP the potential exists for the MEWP to tip over.

It is imperative that supervisors/managers check wheel loadings, stabilisers and outrigger point loads before MEWPs are used in a work area. Once confirmed these should be compared against available or existing plans and ground conditions to ensure they are capable of supporting the MEWP. Information should then be relayed to the operators and supervisors to allow the machines to be set up safely.

If there are several manhole covers / drains in the vicinity then consider that they may be linked – this could open up a whole warren of underground services which previously weren't considered

Slopes

Solid, flat level ground is the ideal surface to work on, however most MEWPs are designed to work on gentle slopes up to a maximum angle, which will be indicated on the chassis of the machine. Modern MEWPs have angle sensors installed that prevent them working on slopes steeper than the machine is designed for, however some older machines just have audible alarms to indicate that the machine is not level. Working or attempting to work on slopes which exceed the stated maximum can result in a tip over. Always check the manufacturer's slope rating and ensure the machine is designed to work within it. Be aware of drop offs leading to changes in floor levels, embankments, kerbs etc.



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Wind

MEWPs can also tip over if the maximum wind speed is exceeded. Wind speed should always be checked with an anemometer as this is the only way of recording it accurately. Being sheltered behind a building can sometimes be misleading as the actual wind speed may be much higher than anticipated. Moving from a sheltered to an exposed area may potentially create risk. The terms 'zero rated' or '0 MPH' mean that the MEWP is not rated for working outdoors and as such should not be elevated externally.

Overloading

Another potential cause of tip over is that of overloading. MEWPs are designed to lift people, equipment and materials up to the maximum load permitted by the manufacturer. Safe Working Loads differ in MEWPs and remember so does the weight of materials and the operator(s). Our experience, many users fail to consider this important factor. Certain materials can be much heavier than first estimated. This can lead to certain situations where a tip over may be possible especially if ground or wind speed conditions are also unfavourable.

Snagged or caught MEWP platforms

Consider an operator getting a MEWP boom snagged or caught on some type of structure – the operator in his attempt to free the MEWP creates pressure and inertia in the boom sections, effectively bowing the boom section(s) which, once freed, may result in a whiplash effect. This can potentially cause the tip over of a MEWP.

Side loading

Side loading of the MEWP is the lateral or sideways force exerted by people or loads in the platform when they are pushing or pulling something whilst stood in the platform. If the force is too great then this could result in the tip over of the MEWP.

In Summary

Using a MEWP is one of the safest ways of working at height. Nevertheless you must always consider the surrounding environment and conditions to ensure your safety.

To find out more about how we can help you with all your Work at Height needs; hiring, training or buying powered access visit our website www.accessrental-gulf.com