

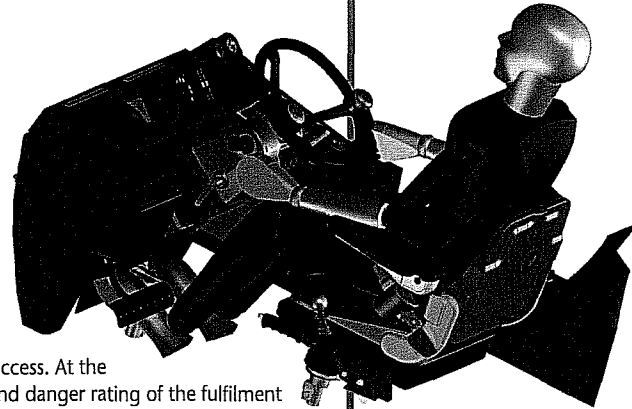
Safe and sound – in comfort

AMA's desire to become a full-service partner led the group to produce off-highway cabins, an activity that synthesises design, project and assembly. The result is a cab in which the operator benefits from a roomy environment that is insulated from noise, and is dust- and vibration-free.

Partnership with a manufacturer of soundproofing systems has led to the use of self-extinguishing and sound-absorbing materials – features that have resulted in its 'comfort and safety' concept. ISO 3471 and 3449 (ROPS and FOPS) are kept to the forefront, along with the deflection limit volume (DLV), which is regulated by the ISO 3164 norm. As for glass, only homologated varieties that meet EU standards are used, hardened or stratified as per customer request.

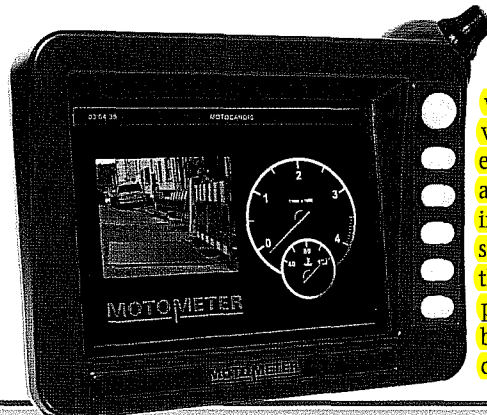
ISO norms in terms of ergonomic size, minimum mass space of the operator, comfort areas and access to command devices are painstakingly followed, and simulations on the distribution areas of the command devices are regularly

carried out. More precisely, the regularity of every single command is indexed, and on that basis, the corresponding button or handle is located in the area of the dashboard where it is easier to access. At the same time, the risk and danger rating of the fulfilment of commands is evaluated, leading them to be located in positions that prevent unintentional use. In this way, every control will be simple to use, efficient, safe and up to the operator's requirements, responding to any demand on the machine.



applications can introduce too much light and inevitable glare from the sun, even when rotated all the way down. A quadraspherical (BB052 and SC010) lens, however, resists glare by way of its unique geometric shape.

Ergonomics and safety were in focus when Motometer developed the MotoCANDis display unit. Able to analyse and show the digital data of a modern engine management system, it also allows up to two cameras to be directly connected to



its high-definition display. These can be positioned and configured to accurately see to within a centimetre behind the vehicle, providing high-quality extensive panoramic vision, although the user can zoom into certain areas or objects to see them more clearly. Using these high-definition camera pictures means that tasks can be filled precisely, and possible damage to individuals and

LEFT: MotoCANDis provides a variety of visual information to enhance safety

objects can be prevented. Typical tasks for the camera system are reversal and workspace observation.

MotoCANDis provides other functions to increase safety – for example, an incident-controlled display can be programmed. When, for example, a defined temperature-, speed-, or pressure range is exceeded, the unit brings this incident to the driver's attention.

Visionary products

With a reputation as an innovator, Webasto's Special Products & Markets business unit dedicates its activities to create ergonomic solutions for industrial vehicles. Some of these products focus on making the most of the visibility created by others – such as a kinematic monitor-retaining fixture in the cabin roof, where the monitor can be restored after use. The same kinematic system can be applied to touch-screen displays and similar devices in front of the operator.

Sophisticated sunshades with remote operation make it easy for the operator to reduce the impact of sunlight and manage the visibility right from his seat. High-tech glazing solutions can filter solar

effects, reducing heat load on the cabin and eliminating glare from sunlight, while opening roof solutions ensure thorough ventilation and emergency escape facilities.

A Webasto air-conditioning system or heater also ensures efficient and concentrated work in any environment. Silent outlets efficiently deliver cold air into the cabin and create a comfortable climate, while the heating system can maintain optimum operator conditions, as well as keeping critical vehicle systems at the correct temperature for efficient operation.

Southco's position- and motion-control devices also provide great solutions for creating a safe working environment. Headrests, for example, are an important factor in both driver comfort and safety. The integration of Southco's constant-torque position-control mechanisms into these components not only enable the side wings to be fully adjustable to suit the operator's desired position and reduce neck strain, but their precise factory pre-set torque values offer lifetime performance without any need for adjustment or routine maintenance. From a design perspective, their

compact size increases flexibility by helping to optimise the space available within the headrest for the integration of additional crash restraint systems.

With the increase of in-cab LCD screens, effective positioning control is essential for optimum viewing. Here, tilt and swivel mechanisms are commonly used to provide multi-axis control for raising, rotating and positioning the display screens for optimum user convenience. The excellent consistency of torque throughout the life of the product also ensures the touch-screen display is easy to position, but firm enough once positioned so that it does not move when touched or when encountering forces such as shock and vibration loads, thereby saving the operator from having to over-stretch to change the settings or viewing angle.

Bauser instrument clusters are trendsetters not just because of their attractive and ergonomically adaptable 'outfits' – the combination of several single indication instruments provides improved vehicle supervision and control.

The standard instrument clusters are available in fixed or custom