PRESS RELEASE

Non-disclosure notice: to be published only after November 13th, 2017, 3 pm

serial-tested modularity, x2x-usability and smart farming ready: The agricultural machine of the future as modular system

(Agritechnica, November 13th 2017) Based on a multifunctional cab for self-propelled vehicles such as harvesters and field sprayers, the CAB Concept Cluster at Agritechnica demonstrates what is possible today and in the future. "On the one hand, the cluster partners want to present innovations that meet future demands and expectations of the market and generate high levels of customer benefit," says Mathias Berger, Sales Director Agriculture of Robert Bosch GmbH. "On the other hand, users are able to choose precisely those elements that are suited to their needs."

serial-tested modularity: from steel to light

The key aspect of numerous cab projects is decreasing time and cost expenditure of development. For this reason, Smart CAB was designed as highly innovative modular system offering complete flexibility regarding the combination of individual modules. Consistent **serial-tested modularity** renders fundamental redevelopments redundant, regardless whether they concern the matrix light, the operator system or the steel structure. For realizing all new functions at limited space requirements, the Smart CAB is consequently pursuing a high level of system integration. The cab roof for example combines air conditioning, all electronic components and bird's eye view camera. The integrative, adaptable design concept is another aspect aiming at modularity. Its appearance can at all times be adjusted to

individual preferences, such as lighting features using styling lights.

x2x-usability: from networking to user interface

Another crucial issue in the agricultural engineering industry is future reliability regarding the integration of new components. Owing to its high-performance body computer that includes CAN, LIN, analogous and digital interfaces, the **x2x-usability** of the Smart CAB allows for flexible expansion. Differently distributed and linked functions will be illustratively presented at Agritechnica, including the integration of a smartphone as well as applications in combination with a drone. For facilitating driver communication with the machine and other components in this complex environment, the user interface plays an important role.

In addition to the right multi-function armrest with its user elements and the left multi-function armrest with integrated mini wheel, the clearly arranged Smart CAB HMI system comprises two touch displays combining all key parameters. The operator system therefore enables safe navigation in any work situation.

smart farming-ready: from functional extensions to data sharing

For applications in the field of **smart farming** the focus is on profitability. The Smart CAB is prepared for various applications throughout: via a Feature Store, OEMs and vehicle operators can enter and directly upload personalized smart farming functions. This can lead to significantly added values for existing systems or significantly increase their functions, in combination with new accessory equipment. With regards to data-sharing, the presentation

at Agritechnica will show how farmers can upload their vehicle settings set to certain terrain, field and/or environmental conditions as well as accessory equipment, and provide these to other farmers against commission. To increase productivity and reduce error sources, smart operating elements were built in to allow easy handling of all available functions.

On board, of course: safety

The Smart CAB safety concept also employs the latest technologies. For reducing the glaring effect for other vehicles and drivers themselves, the Smart CAB uses object recognition, Smart Matrix Worklights and light reference sensors. For 100% line-of sight illumination, HELLA's roof-integrated eye-tracking camera follows the driver's line of sight and dims the non-observed surrounding. Lighting elements in the cabin can be employed for collision prevention. A tinting foil integrated into the laminated glass (in German: VSG)provides perfect safety conditions at all weather conditions. Windscreens can thus "react" to solar radiation intensity through easy dimming.

Add to this a functionally safe inclination sensor for actively controlling booms, auxiliary equipment and the entire machine as well as comprehensive environment visualization via a mirror-replacement system, ultrasound sensors and a surround view system. Furthermore, it is also possible to project images on the ground and use as communication with the surroundings, to alert other vehicles and/or pedestrians or delineate the working area.

The driver in focus: comfort and ergonomics

The operator system providing an all-round care package of user

ergonomics addresses the major topic of driving comfort. All comfort features of the air-conditioned vehicle are electronically adjustable and can be saved via the memory function. The newly developed joystick appeals through its horizontal hand position and ergonomically positioned control panels.
Other highlights regarding comfort: adaptive cab suspension reducing full body-vibration strains, a fueling camera and display for easy monitoring of gas level and state-of-the-art air conditioning. It provides a performative blower for ventilation, fine adjustment of heating output, temperature sensors for automatic climate control and multi-zone air conditioning. The great efficiency of the installed components minimizes air conditioning servicing cycles while reducing gas consumption and toxic emissions.

The **Smart CAB will be showcased at Agritechnica in Hanover from 12th to 18th November 2017 in hall 17/booth D53.**

The Smart CAB

photos are available in print resolution at:
http://www.cabconceptcluster.com/presse/

PRESS RELEASE

CAB Concept Cluster: Short profile

The CAB Concept Cluster is a platform founded in 2014 by experienced OEM suppliers, TU Dresden University of Technology and various global innovators and associations. Focus of the cluster is on manufacturers of construction equipment, agricultural vehicles and industrial forklift trucks with the objective to bundle innovations close-to-production in joint projects to showcase the potential of efficient systems integration. For the Genius CAB presented at the bauma 2016, the cluster has received several awards and showed how innovation and customer value can be bundled in a customer-neutral platform using a wheel loader cab. At Agritechnica 2017, the cluster is going to present its latest project, the Smart CAB.

The members of the CAB Concept Cluster are:

AURORA, Robert Bosch GmbH, Fritzmeier CABS, GRAMMER, HELLA, HYDAC, MEKRA Lang, S.M.A., Lumod, TU Dresden University of Technology, AEF (Agricultural Industry Electronics Foundation), DEULA (Federal Association of German Training Centers for Agricultural Engineering) and DLG with the supplier platform Systems & Components as hosting Partner.
Visit http://www.cabconceptcluster.com/ to find out more.

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