

Utility Vehicle Industry: Holes at High Speed

Rexroth technology is making the production of perforated carrier profiles for utility vehicle chassis distinctly more efficient, faster and more flexible.



▲ In this machine holes are drilled in the carrier profiles for utility vehicle chassis.

A sector on the up: growth in the utility vehicle industry continues to be sustained. No wonder: companies appreciate just-in-time deliveries. What we order today on the Internet is delivered to the door by road tomorrow. With ever-larger vehicles it is possible to transport an increasing quantity of goods by road. In many international markets the manufacturers of heavy and medium-weight HGVs are, for this reason, achieving new sales records.

In order to be able to benefit from the current up-turn, manufacturers of utility vehicles need to ensure uncompromising

quality at the same time as high productivity and flexibility in order to win over their customers. "The production of chassis and carrier components in particular plays a decisive role here. These carriers form the structural basis for each utility vehicle. Tanks, emission systems and batteries are mounted on them. A facility for the rapid punching of intelligently arranged drilling and screwing holes also creates enormous advantages in production," reports Luc De Sutter of the Belgian engineering company Soenen Werkhuisen N.V. And it is precisely here that technology from Rexroth can be

found taking care of safety and efficiency.

Single source

Soenen Werkhuisen N.V. develops large stamping machines which are used for machining carrier profiles in U-form for utility vehicle chassis. The machines punch all the required holes in the already geometrically machined carrier crosspieces. The Soenen punching machines are used at the HGV manufacturers' premises, which is where their major advantage – flexibility – is brought into play. This is because each vehicle model needs a different profile and different holes



▲ In spite of its colossal size, the plant manufactured by Soenen Werkhuizen N.V. in Belgium remains flexible.

punched. The Soenen punching machines are capable of providing each of the carriers, depending on the requirement, with individual punched holes so that these can be fed to the production process on a just-in-sequence basis. Especially amazing is the average cycle time: the system does not even need one second per hole.

For its impressive system Soenen obtains components from various fields of technology from a single source. Rexroth, for example, has supplied hydraulic components for the drive units on the machine. Rexroth hydraulic components such as pumps and valves feature in the power units. In addition, the Rexroth servo motors, which are required for the transport of material and for positioning the various hydraulically driven punching devices, are driven by the Soenen 3D CNC punching systems. The IndraDrive-

M and IndraDyn-S motors help to ensure the perfect interplay of drive and control. They guarantee a particularly economical, intelligent and future-proof solution. The compact design of the IndraDyn-S motor, with its increased torque density, enables individual gradations of size and performance to be used in a future-oriented technological and production concept.

“With this system we are offering manufacturers maximum flexibility,” explains Hans Bangert, Managing Director of Rexroth in Belgium, “because, thanks to the 3D CNC punching system, manufacturers of HGVs no longer need to maintain a stock of semi-finished goods.” In addition, both the left and the right hand carriers can be produced on this flexible system so that any kind of HGV can be manufactured on the production line within the desired flow of production.

Maximum flexibility

Rexroth technology can also be found in the periphery of the system: the modular control cabinet concept is made up of a supply module with energy recovery and coupled servo axis drives. Depending on the number of servo drives, a number of control cabinets may be lined up in series. Furthermore, with the Indraworks commissioning tool, the axes can be adjusted and optimized in a very short time. “We sized the drive beforehand in collaboration with the customer and assisted the customer during commissioning,” explains Rudi Sys, Rexroth Sales Engineer, adding: “We

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A further advantage: Starting up after an unexpected power failure presents no problems thanks to the use of absolute measured value systems in the servo motors. After a very short time this colossus among machines starts punching away again. This is a technology that is also used on the production lines for transformer plates and in the perforating presses at Soenen. Also used here are the Rexroth ball screw assemblies for linear motion along the various adjusting axes. Flexibility as regards the installation and commissioning of the machine is also guaranteed. The whole punching plant can be completely assembled in only a few weeks. Following commissioning and acceptance by the customer it can be dismantled again for transport. Flexibility for the utility vehicle industry – for a sector on the up. ■



▲ Hydraulics, servo motors, controls and commissioning tools: Soenen obtained Rexroth know-how from different fields of technology from a single source.



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