BMW at INTERSCHUTZ 2015
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1. BMW at INTERSCHUTZ 2015
Powerful partners for rescue and fire prevention professionals

Professionals from the fields of rescue, fire prevention, civil protection and safety come together at INTERSCHUTZ in Hanover from 8th to 13th June 2015. BMW is represented by a broad range of vehicles, perfectly matched to the specific requirements of the services at this industry event, the most important of its kind for fire services and auxiliary services, which takes place every five years.

INTERSCHUTZ has evolved from an exhibition aimed exclusively at fire services into the world's leading trade fair for the rescue and fire prevention industry. Some 1,400 companies from 49 countries will be presenting the latest technologies and applications in the six exhibition halls and on the open-air site in Hanover. The wealth of experience and expertise BMW has acquired over many decades in the development and manufacture of special vehicles will be presented in this demanding environment of rescue professionals and specialists. In Hanover, as the leading manufacturer of premium automobiles and motorcycles, BMW will show a wide range of customised solutions for functional emergency vehicles, both on two wheels and four, meeting the highest demands placed not only on functionality, performance and security, but also with regard to sustainability and cost-effectiveness.

BMW emergency vehicles: capable and powerful
At INTERSCHUTZ 2015 BMW will present a total of four vehicles – including two motorcycles – to professionals from all over the world. The visionary BMW i3 will celebrate its world premiere as a fire service command vehicle, the first time that a BMW i model has been deployed in this field. On the BMW Group exhibition stand in hall 25 the fire service version of the BMW X3 xDrive20d further highlights the multifunctional capabilities of the BMW X Series. For the delivery of a high-speed, first response to fires, the BMW R 1200 RT Firexpress emergency motorcycle excels. Along with the BMW F 800 GS as an emergency motorcycle, it demonstrates the benefits associated with the professional deployment of motorcycles.

Further information on BMW emergency vehicles can be found on the Internet at www.bmw-behoerden.de

BMW i3: locally emission-free and perfectly networked

For the first time, BMW presents a version of the BMW i models as a fire service command vehicle. The BMW i3 was the first premium electric vehicle in the world and like every BMW i model it is the manifestation of sustainable, locally emission-free mobility. The BMW i3 can travel up to 170 kilometres driven purely by electricity. By virtue of its permanently installed SIM card, the BMW i3 is also perfectly networked with the driver and the environment.

From the outside, the specially-designed foiling identifies the BMW i3 as fire service command vehicle, even from a distance. The Hella RTK 7 special signalling system underlines the specific deployment as an emergency vehicle. Pressure chamber loudspeakers as well as front and rear flashing lights alert other road users as necessary to the fire service vehicle when in action. For communication with the control centre and other rescue services, the BMW i3 also has provision for the digital Sepura radio system.

When configured as a fire service command vehicle, the BMW i3 comes equipped with BMW eDrive technology, developed by BMW, including a hybrid synchronous electric motor and high-capacity lithium ion battery. It delivers 125 kW/170 hp, accelerates from a standing start to 100 km/h in 7.9 seconds and has a top speed of 150 km/h (combined fuel consumption: 0.0 l/100 km; combined CO_2 emissions: 0 g/km)**.

Compact, spacious and agile: optimised for the urban environment

The BMW i3 is the world's first production automobile which has a body structure made of carbon fibre reinforced plastic (CFRP) and which was specifically developed for use as an electric vehicle. Because all of the drive components are located under the passenger compartment, the interior is of extremely generous dimensions. With an external length of four meters, this four-door car with direct steering, a small turning circle, an elevated seating position, and excellent all-round visibility is most impressive; all characteristics which distinguish the BMW i3 in its role as a fire service command vehicle, particularly in the urban environment. Also on board is BMW's ConnectedDrive, which includes the **ConnectedRescue** application, unique throughout the world. This enables the driver, vehicle, and the environment to be even more closely networked and for the first time, important operational information can be transmitted directly to the vehicle, where it can be immediately used, for example for routing (please also see page 7).

** In accordance with the EU test cycle.

BMW X3 xDrive20d: the all-round command vehicle

The BMW X3 presented at INTERSCHUTZ is functional, comfortable, safe and fast – a tailor-made, modern emergency vehicle. From the outside, the specially designed foiling identifying the fire service command vehicle and the DBS 4000 roof bar signalling system with alley lights, spot lights, power flash, auxiliary flash, full matrix stop signal generator front and rear, as well as pressure chamber loudspeakers unmistakably confirm the field of application of this BMW X3. The roof bar is complemented by two blue LED front flashers fitted behind the radiator grille and a further two blue LED flashers supplied by Hella on the tailgate. The system is operated by the new user-friendly HBE 300 hand control unit, in which the microphone is integrated. To ensure optimal communication with the control centre and other emergency teams, the BMW X3 on show is pre-fitted to support analogue and digital radios in combination with a "Mobile Radio Switch" combination antenna (2 m/4 m) of 600 mm antenna length, suitable for GPS, GSM, as well as for TETRA, the digital trunked radio system. Inside, the fitted steel partition grille guarantees that equipment is always separated from the passengers. However, to ensure that the vehicle's crew still have quick, convenient access to all the equipment they need, the BMW X3 is fitted with a pull-out rear extension, complete with locking bracket and warning markings, as well as additional LED luggage compartment lighting. The powerful two-litre, four-cylinder turbo diesel delivering 140 kW/190 hp at a maximum torque of 400 Nm ensures that this vehicle is propelled by a dynamic but efficient driving force. The consumption of the BMW X3 xDrive20d with optional 8-speed Steptronic transmission is a combined 5.3 – 4.9 litres* per 100 kilometres, while the corresponding CO_2 emissions of 139 – 129 g/km* are the very best found in this vehicle segment. From a standing start, the 100 km/h mark is passed in 8.1 seconds, the top speed is 210 km/h. The 8-speed Steptronic transmission operates either automatically or manually via shift paddles mounted on the steering wheel. Power distribution is managed by BMW xDrive, the intelligent four-wheel drive system which distributes power variably to the wheels individually, by taking into account the respective current traction of each wheel.

In addition to the models fitted with the BMW xDrive intelligent four-wheel drive system, the BMW X3 sDrive20i and BMW sDrive18d are available with rear-wheel drive typical of BMW vehicles. A selection of seven power units is available – three petrol and four diesel engines – with outputs ranging from 110 kW/150 hp up to 230 kW/313 hp (combined fuel consumption: 8.3 – 4.7 l/100 km; combined CO_2 emissions: 193 – 123 g/km)*.

ConnectedRescue can also be ordered for this model, thus propelling the

* Consumption figures were determined on the basis of the ECE test cycle, dependent on the tyre format.

vehicle into the modern era of emergency team communications.

The BMW R 1200 RT Firexpress: the fast fire fighter
In urban and regional areas in particular, motorcycles are often able to reach the scene of an emergency faster than other vehicles. An advantage that the BMW R1200 RT Firexpress possesses particularly when fighting fires. A swift, early response can effectively prevent fires from spreading. The BMW R 1200 RT Firexpress can spray an effective mixture of water and foam from its two tanks of 25 litres each. A 30 metre hose ensures freedom of movement at the scene of the fire in addition to the lance, which produces a powerful jet or a fine and highly efficient mist allowing the fireman to fight the fire from up to 15 metres away. The BMW R 1200 RT Firexpress is thus the perfect tool for the fire service. Blue lights, emergency lights and the radio system round off the equipment fitted to the BMW R 1200 RT Firexpress.

BMW has a long heritage of using motorcycles as emergency vehicles and a wealth of associated expertise, accumulated over many years. The BMW R 1200 RT (fuel consumption at a constant 90/120 km/h: 3.9/5.3 l/100 km) can be flexibly configured to address specific tasks, provides a high level of driving dynamics under all conditions, and is fitted with an exemplary set of safety equipment. Using the “Rain” and “Road” riding modes, the R 1200 RT adapts to suit different road conditions; ABS and ASC Automatic Stability Control are also on board as standard equipment. If desired, features such as the Hill Start Control or the Pro gear change assistant relieve and support the driver when dealing with demanding conditions. A newly designed cockpit fitted with a large TFT colour display enables important information to be optimally presented. In addition, the rider benefits from the excellent wind and weather protection, exemplary ergonomics, as well as other individually configurable options, all of which make the BMW R 1200 RT the ideal emergency bike. The powerful, water-cooled, two-cylinder boxer engine delivers 92 kW/125 hp at 7,750 rpm and achieves its maximum torque of 125 Nm at 6,500 rpm.

The BMW F 800 GS: the all-rounder for service in the line of duty
At INTERSCHUTZ 2015 in Hanover, BMW will present the BMW F 800 GS, an agile, robust all-rounder, predestined to serve particularly in urban and rural areas. With its six-speed gearbox excelling through crisp shift action and with its long suspension travel, the BMW F 800 GS is a functional Enduro with exemplary safety features and ergonomic long-haul comfort for daily service. Fitted with perfectly tailored special equipment, the BMW F 800 GS allows its rider to focus his full attention on the events unfolding at the scene of the emergency. For management of the full functionality, the easy to operate controls have been arranged systematically. Highly visible LEDs reliably inform the rider at all times on the status of the currently activated signal functions

and beacons. In order to customise the motorcycle precisely to the ergonomics of the rider, the seat of the F 800 GS is available in a number of different heights. A convenient radio case mounted on the rear of the motorcycle ensures the secure transportation and storage of all mobile devices so that they are immediately at hand at the scene of the emergency. Furthermore, optional panniers mounted on both sides of the motorcycle provide the opportunity for the creation of additional storage space and the ability to carry extra equipment. To quickly get to the scene of the emergency, the BMW F 800 GS, which weighs in empty at a mere 214 kg, is fitted with a powerful two-cylinder four-stroke engine. It has a displacement of 800 cubic centimetres, delivers 63 kW/85 hp and accelerates the motorcycle and rider from a standing start to 100 km/h in under five seconds. This dynamic performance is paired with its exceptionally economic average consumption figures of four litres of fuel per 100 km at 90 km/h and 5.3 l/100 km at 120 km/h (according ISO 7118).

Please see the "Guide on Fuel Consumption, CO_2 Emissions and the Electrical Energy Consumption of New Passenger Cars" for further information on the official fuel consumption, the official specific CO_2 emissions and the electrical energy consumption of new passenger cars which is available at all points of sale, at the Deutsche Automobil Treuhand GmbH (DAT), Hellmuth-Hirth-Str.1, 73760 Ostfildern-Scharnhausen and at http://www.dat.de/angebote/verlagsprodukte/leitfaden-kraftstoffverbrauch.html. Guide to CO_2 (PDF – 2.7 MB)

2. Networked rescuers
With ConnectedRescue even faster and safer to the scene of the fire

The BMW Group leads the field in networking the driver, vehicle and the environment with its BMW ConnectedDrive. BMW underlines its leadership claim with the ConnectedRescue application, unique throughout the world, which is now also available for fire services, emergency response doctors and police vehicles. Important operational information can be provided to the emergency teams directly in the vehicle using ConnectedRescue. This BMW system supports the helpers and enables them to get to the scene of the emergency faster, safer and comprehensively informed.

Navigation system using transmitted geodata

BMW ConnectedDrive provides a unique combination of driver assistance systems and mobility services. An important feature for communication to the vehicle is My Info / Send to Car. It allows information – such as destinations planned at home on a computer – to be directly transmitted to the vehicle and used for routing. The only requirements are the installation of ConnectedDrive services and a navigation system. Now, ConnectedRescue uses this connection to transfer data from a control centre to emergency vehicles equipped with BMW ConnectedDrive. Using this system, which is not only clearly structured but also intuitive to read and operate, all the important information is delivered to the vehicle – including address, reason for callout and contact person. Depending on the software used in the control centre, the precise geodata of the scene of the emergency can also be transmitted. Up to 100 vehicles can be selected at the control centre and provided with information either individually or simultaneously in groups. The transmitted destination coordinates or addresses can be used directly for guidance by the navigation system, manual input of the destination is no longer required. Using this system, transcription errors are eliminated. Incorrect routing and delays caused by the usual verbal submission of information via the radio are thus a thing of the past. The driver can fully concentrate on the traffic from the very beginning and the team can prepare for action without further delay. This increases not only the safety of the rescue workers but also raises their level of efficiency. In the case of BMW emergency vehicles, the connection between the emergency vehicle and the control centre is realised via the permanently installed vehicle-mounted SIM card and BMW servers, analogous to series models fitted with ConnectedDrive services.

Field test with the German Red Cross

A field test conducted with the German Red Cross in Warendorf confirmed the benefits of ConnectedRescue as a further means of communication – in addition to radio, mobile phones etc. The system has proved its value in daily, faultless operation since mid 2014. BMW ConnectedDrive thus demonstrates once again that even data derived from a highly specialised application, such as the existing control centre software, can be integrated perfectly into the vehicle and used via the iDrive Controller and Control Display, with the help of the Novato company's ConnectedRescue adapter software. ConnectedRescue will initially be offered in Germany.

3. Reliability with a long tradition
Know-how, experience and customised development

For almost 60 years, BMW has been developing state-of-the-art emergency vehicles in collaboration with both national and international authorities. Adapted to the meet the respective local rules and regulations, these models provide the maximum level of safety and cost-effectiveness, in addition to innovative technology. The special equipment fitted to BMW emergency vehicles meets the same high standards of the base vehicle itself in terms of quality, functionality and safety. The outstanding quality of BMW emergency vehicles is based on decades of experience with special vehicles for fire services, rescue services and the police in Germany and abroad, as well as on the innovative drive from within the leading manufacturer of premium automobiles and motorcycles.

Highest degree of functionality, quality and durability
The use of any special equipment is taken into account early on, during the development of the base model. BMW took the decision to integrate the installation of measuring, radio and signal control technology into the series production process. For example, BMW 3 Series and 5 Series emergency vehicles are made on the same production lines as those for the corresponding series models for private customers. In this way, BMW ensures the maximum level of functionality, quality and durability not only for the special equipment itself, but also for the overall system.

During the development of emergency vehicles, BMW engineers cooperate closely with future users. Representatives from the fire services, rescue services and other institutions contribute their practical experience to define the requirements for a new vehicle. BMW matches these with the technical requirements of the base model, while taking into account the latest technical developments made by reputable, experienced suppliers of special equipment. The result is a concept that meets both the needs of the clients and the high quality standards at BMW.

During the subsequent integrated production process, BMW attains levels of quality, functionality and safety that cannot be achieved with the more usual retrofit of individual components. In order to guarantee these high standards, BMW emergency vehicles, together with all of the special equipment fitted, are required to undergo a series of gruelling tests, which go far beyond the requirements defined in existing test standards. The customer thus takes

delivery of a tailor-made emergency vehicle, all components of which are perfectly matched and work safely and reliably as integral parts of an overall concept. It is therefore not surprising that BMW grants the original BMW warranty, which covers all special equipment components installed at the factory.

The history of BMW emergency vehicles dates back to the 1950s. At that time, the Munich police put new BMW 501 and BMW 502 patrol cars into service. These models, fitted with powerful six-cylinder and eight-cylinder engines became known throughout the country thanks to the German TV series “Funkstreife Isar 12” and even then the “Baroque Angels” as the sedans were affectionately nicknamed set standards in terms of reliability and serviceability.

Solutions meeting national and international requirements

Since then, BMW has systematically been driving the development of emergency vehicles forward and has been able to permanently extend the technical lead achieved. Today, the range of vehicles available includes the BMW 2 Series, the BMW 3 Series and 4 Series, the BMW 5 Series and 7 Series, the BMW X1, X3, X4, X5 and X6 models and BMW motorcycles. Also future series are tested for emergency vehicle use and developed as appropriate if they prove to be suitable. The BMW i is no exception, as the fire service command vehicle presented at INTERSCHUTZ 2015 demonstrates. In addition, the extraordinary dynamism, the highest level of reliability, maximum functionality and exemplary degree of safety are the qualities synonymous with the brand with which BMW emergency vehicles have repeatedly proven themselves, even in extreme situations. In addition, the advanced BMW EfficientDynamics technology makes a significant contribution to cost-effectiveness and to the environmentally-friendly operation of the emergency vehicles, resulting in a responsible use of public resources.

Thus the almost 60 years of experience in the construction of special vehicles for the police, fire and rescue services have laid a solid foundation of expertise, innovation and quality empowering the further development of BMW emergency vehicles. The concept is always formulated in close cooperation with specialists and users from the respective institutions, both at home and abroad. The demands placed upon the emergency teams differ, sometimes considerably, both in the national and international arenas. By working closely with international authorities, BMW ensures that the scope, complexity and the ever-increasing demands placed upon modern emergency vehicles can be met in a professional manner, even with specific customer requirements. Individual equipment options also make it possible to precisely configure a

BMW emergency vehicle as it is required, for anywhere in the world. This is the only way that emergency teams will be able to take delivery of exactly the vehicle that optimally supports them in their important and challenging work in the field – driving in the daily line of duty, as well as dealing with extreme situations.