



## ZF Centrifugal Clutch Helps Race Car Legend Alex Zanardi Engage in Rolex24 at Daytona

- **ZF provides support for legendary race car driver who lost both legs in a tragic accident**
- **ZF outfits BMW M8 GTE with centrifugal clutch**
- **Centrifugal mechanism activates clutch**
- **Proven friction package guarantees power transmission**

**Friedrichshafen / Daytona. Since the tragic accident nearly 18 years ago that claimed both of race-car driver Alex Zanardi's legs, he has participated in numerous races in different race classes wearing his prosthetic legs to operate the vehicle's gas, brakes and clutch. However, to participate in the Rolex24 at Daytona, Zanardi embraced a new system, which includes ZF's centrifugal clutch, allowing him to operate the vehicle completely by hand and enabling him to drive without the challenges presented by his artificial limbs.**

Zanardi had difficulty driving comfortably in a race vehicle for extended periods of time. Without his legs, he lacked the blood flow that naturally helps cool the body. In addition, the close-fitting shafts of Zanardi's prosthetic limbs did not allow perspiration, which contributed greatly to his discomfort. To drive in the Rolex24 at Daytona, Zanardi met with the BMW M Motorsports engineers in Munich to develop a new system that would help him operate everything on the vehicle with his arms and hands, while the clutch actuator was replaced by a fully-automatic centrifugal clutch, which was developed by ZF, a partner of BMW M Motorsport.

### **ZF Race Engineering centrifugal clutch provides innovative solution**

The BMW Team RLL BMW M8 GTE was outfitted with ZF's centrifugal clutch, which enables the placement of high-precision controls within reach of Zanardi's hands and forearms. To engage the brake, Zanardi



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pushes forward with his right arm on a lever mounted on the transmission tunnel and connected to the brake. The brake lever replaces the brake pedal. To accelerate, Zanardi uses a throttle ring on the steering wheel that he operates predominantly with his left hand. A shift paddle on the steering wheel enables him to change gears. And, a switch is attached to the brake lever that he can use to down-shift when braking into corners.

Zanardi is impressed with ZF's centrifugal clutch because, in addition to the fact that he no longer has to operate a clutch lever with one of his hands, he finds the centrifugal clutch to be extremely reliable. He stated: the wear is minimal, which means fewer challenges with this solution than with a standard clutch. Zanardi also said that, when he sets off after a pit stop, it is impossible to stall the engine. In addition, the clutch can compensate for tire temperature – whether they are cold or warm – and manage the tire grip better than a standard system.

"If the regulations allowed it, I could do a 24-hour race on my own now," Zanardi quipped. "I am really comfortable in the car without my artificial legs"

Images available

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**ZF Friedrichshafen AG**

ZF is a global leader in driveline and chassis technology as well as active and passive safety technology. The company has a global workforce of 146,000 with approximately 230 locations in some 40 countries. In 2017, ZF achieved sales of €36.4 billion and as such, is one of the largest automotive suppliers worldwide.



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ZF enables vehicles to see, think and act. The company invests more than six percent of its sales in research and development annually – in particular for the development of efficient and electric drivelines and also in striving for a world without accidents. With its broad portfolio, ZF is advancing mobility and services for passenger cars, commercial vehicles and industrial technology applications.

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