

# Application Profile



# Model FSO-500 Overrunning Clutch

### **World's Longest Wooden Roller Coaster**

#### Highlights

- Grease-lubricated
- 1,175 lb.ft. (1,598 Nm) torque capacity
- Requires no adjustments or controls

An overrunning clutch was needed for use on the world's longest wooden roller coaster located at a major amusement park in Ohio. The four minute long ride reaches speeds of 65 mph and features a steep 137 ft. vertical drop, three tunnels and multiple banked turns. An extensive upgrade of the coaster was recently completed.

A motorized drive tire brake system is installed at the end of the ride that slows down the train before it enters the passenger off-boarding/on-boarding station and comes to a complete stop. The backstopping clutch is mounted to the drive to prevent reverse rotation of the tire. This stops unwanted backward movement of the train cars.

As part of the coaster refurbishment, an upgraded Formsprag FSO clutch, popular for use on roller coasters, was supplied to provide increased reliability and extended life.

The new, replacement FSO-500 model features improved seals that allow for low-maintenance grease lubrication. The previous model had oil lubrication that could leak out and allow the clutch to become dry.

The FSO-500 model supplied features a torque capacity of 1,175 lb.ft. (1,598 Nm) to meet the ride's requirements. All FSO automatic backstopping clutches feature a high torque density and require no adjustments or controls.

US (Application Assistance)

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