Progressive Torque Differential

The Progressive Torque Differential (**PTD**) is Eaton's revolutionary new limited slip differential. Eaton has a 60 year proven track record of producing the most effective and dependable traction modifying devices. They can be found in virtually every vehicle application including construction, agriculture and aftermarket applications.

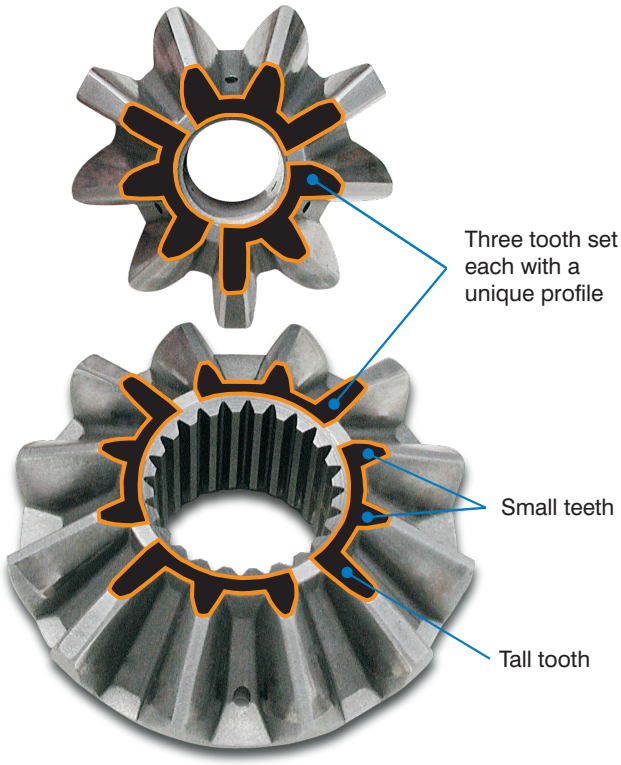
PTD is part of the next generation of torque proportioning differentials - precision forged, no wearable parts and an exclusive "three pitch" design. It uses unbalanced gear meshing to reach a torque bias of 3.5:1. The unique "three pitch" gear design increases strength and torque bias over standard "single pitch" bevel gear designs.

Under normal road conditions, the PTD performs like an open differential. On wet, muddy, icy or loose terrain, torque is transferred to the wheel with the highest traction. This allows the vehicle to maintain control and continue operating in the most challenging terrain. The PTD responds immediately to varying surface conditions.

Applications

The PTD is suitable for both original equipment and replacement applications. Engineered to work effectively in front axle, rear axle and inter-axle applications. PTD technology is scalable, works efficiently in both large industrial and small light duty applications.

- **Construction**
- **Agriculture**
- **Mining**
- **Forestry**
- **Utilities**
- **Off-road Trucks**

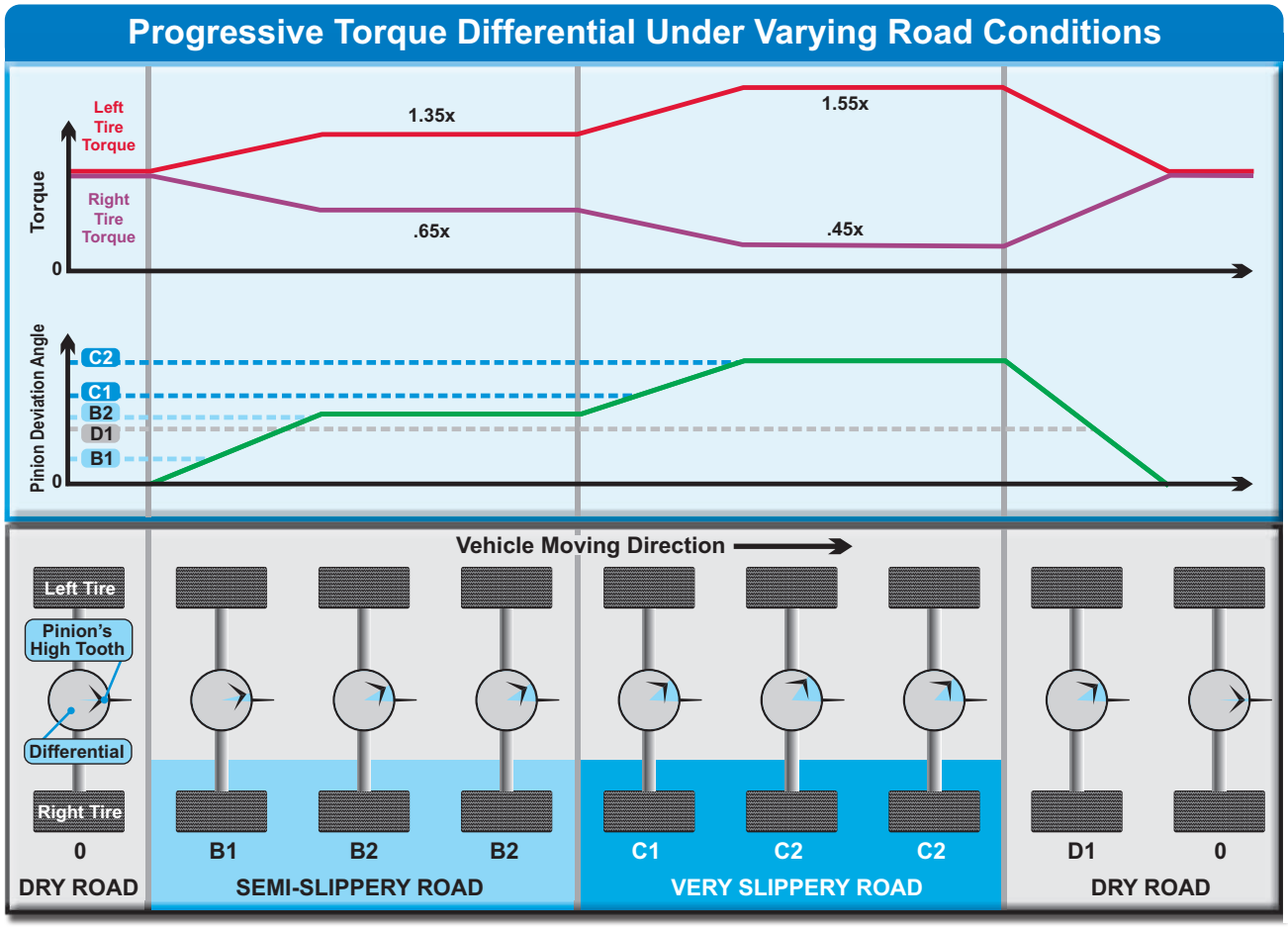


EATON
Powering Business Worldwide

Progressive Torque Differential

The Progressive Torque Differential (**PTD**) is a torque sensitive “progressive“ limited slip differential. It powers both drive wheels, yet permits differential action to compensate for wheel speed differences.

The PTD is made up of two side gears and four pinion gears (units with two pinions are also available). A series of unique gear teeth are repeated about the gear face. The typical configuration has an even number of teeth on the side gear and an odd number of teeth on the pinion gear. Each unique gear tooth profile defines a different line of action and torque lever position. The unique tooth profiles of the side gear and pinion gear can only mate together in a specific way. This synchronized arrangement of the profiles creates the “progressive” torque biasing operation of the PTD. When traction is needed the pinions begin to rotate. The amount of rotation is the deviation angle, which progressively increases the torque biasing action through the gear set. The torque bias increases until the required bias is delivered up to 3.5:1 bias ratio.



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