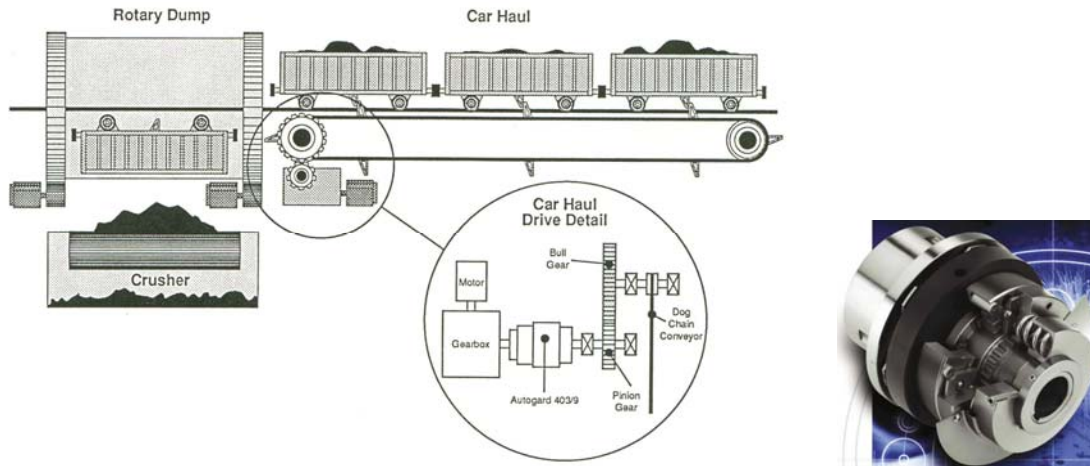




Autogard Torque Limiters

Product: Series 400 Torque Limiter



Application: Car Haul Drive – Mining & Quarrying

Function:

Coal cars are moved into a rotary dump by means of a dog chain conveyor. Periodically, loaded cars are pushed from the underground mine by a locomotive at the tail of the train. The underground train is then coupled to the stationary cars which are waiting to move through the rotary dump. During this coupling process, large forces are generated on the car haul drive train, shown above. The customer originally used a shear pin coupling to protect the gears, gearbox and motor. It was found that the shear pin coupling was not very accurate and required extensive time to replace once broken.

Drive Specification:

Electric motor coupled to a right angle gearbox. The gearbox is then coupled using the Autogard torque limiter to a pinion gear which drives a bull gear and conveyor.

Torque Limiters:

Model 403 size 9 with a flexible coupling between the gearbox and the pinion gear.

Benefits:

The torque limiter prevented damage caused by the shock loads. This prevented failure of the major drive components in the conveyor system.

The shear pin was found to be unreliable and tended to cause excess damage to the coupling when it failed. The price of the replacement shear pins was also found to be high. The Autogard torque limiter is very accurate, free wheels on overload and is easy to reset by reversing the conveyor drive.