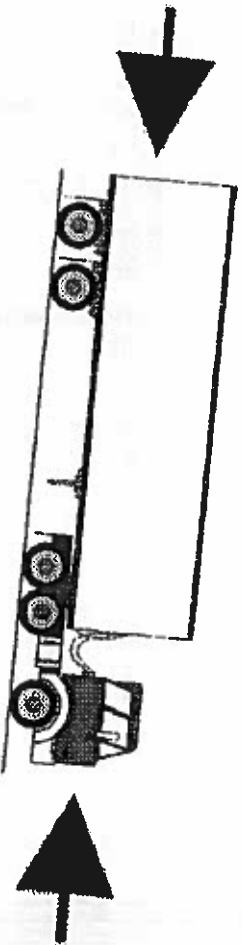
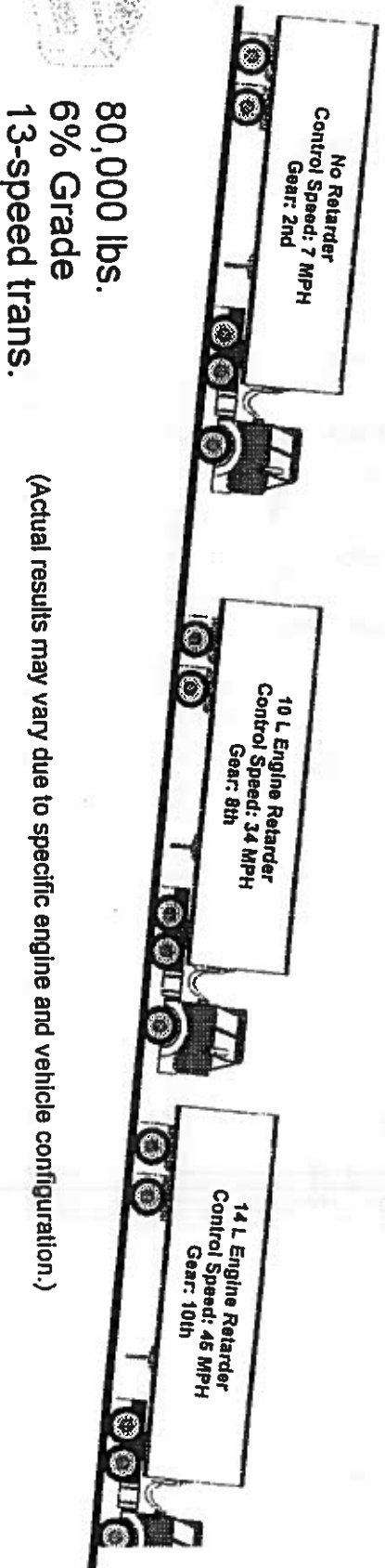


# What an Engine Brake does:

*Enables faster downhill control speed*



**Control Speed:** The constant speed at which a vehicle can descend a given grade without the use of the vehicle foundation brakes.

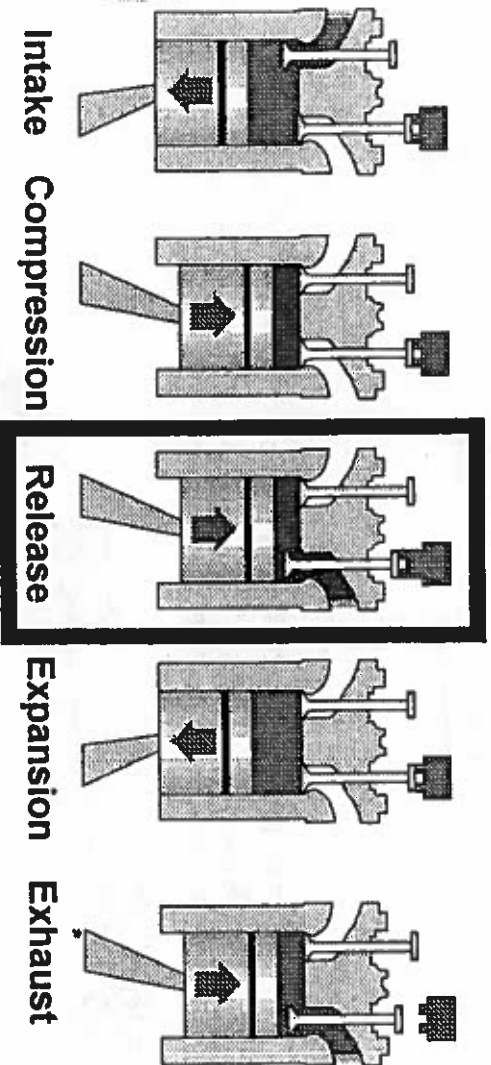


80,000 lbs.  
6% Grade  
13-speed trans.

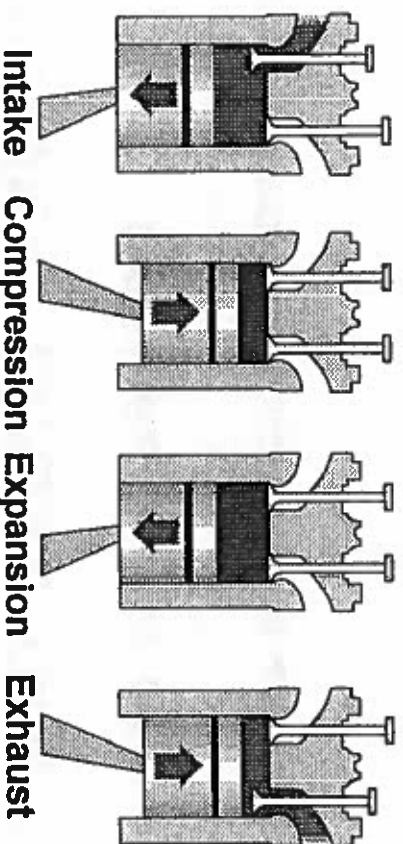
(Actual results may vary due to specific engine and vehicle configuration.)

# How, An Engine Brake Works:

*Creating a power absorbing air compressor*



**4-stroke with engine brake:**  
As the piston approaches top dead center (TDC) on the compression stroke, the exhaust valve is opened, exhausting high pressure air. Therefore, no energy is returned to the piston in the expansion stroke. This net loss of energy is called 'engine retarding,' made possible by a compression-release brake (or engine brake).



**4-stroke motoring sequence  
without engine brake**