

USE OF RETARDERS OR JAKE BRAKE



Some vehicles have what's called a retarder or Jake brake. The Jake brake in diesel engines is a compression release brake that works by opening the exhaust valves at the top of the compression stroke, resulting in an expansion of the compressed air, so the amount of energy stored in that compressed air is not returned to the crankshaft, but is released into the atmosphere. Retarders help you slow your vehicle reducing the need to use your pedal brakes. They reduce brake wear and give you another way to slow down.

The Jake brake is turned on or off by the driver. When it's being used it applies braking power to the drive wheels whenever you let up on the accelerator pedal completely. Since braking causes friction your brakes can overheat and fail if you maintain your speed on steep downhill grades. Downshifting the transmission to a lower gear on steep grades helps you avoid this problem. You can also use your Jake brake to increase the effectiveness of braking, save money by reducing wear and tear on the tires and brake system and increase safety.

Because these devices can be noisy, be sure you know where their use is permitted. In Montana, Colorado, Arizona, Idaho, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming by law you must have a muffler or you will be fined \$500 dollars. Also, you must use Caution and understand when the Jake brake shouldn't be used. If your drive wheels have poor traction the retarder may cause them to skid therefore you shouldn't turn the Jake brake on if the road is wet, icy, or snow covered.

