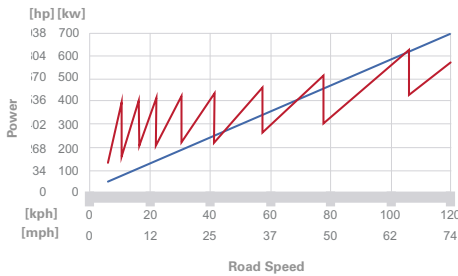




# JAKE BRAKE® RETARDER



The effectiveness of a Jake Brake® retarder is shown in the calculation below. In the example below, the vehicle is equipped with a Jake Brake retarder and is loaded to 34 metric tonnes (~75,000 lbs). This vehicle will produce sufficient engine retarding horsepower to allow the vehicle to maintain a constant downhill control speed on a 6% slope — *without* use of the service brakes.



Gear	Control Speed
6th	46 kph (28 mph)
7th	70 kph (43 mph)
8th	107 kph (66 mph)

Control Speed Calculations based on typical drivetrain configuration and vehicle weight on a 6% grade. Specifications will vary with vehicle configuration.

## What is a Jake Brake® Retarder?

Jake Brake retarders are an integral part of today's diesel engines, and are used to slow vehicles. Retarders from Jacobs work to provide speed control while descending long steep hills, as well as providing slowing power on flatland areas or in 'stop & go' driving.

### Why do I need one?

#### Roads & Loads

No one can afford to run an empty truck. However, by maximizing your truck's load, you're minimizing your control of your vehicle.

#### Productivity

A retarder allows for faster safe descents, reducing trip times, thus increasing productivity.

#### Lowers Costs

Supplementing the vehicle's braking system drastically extends the service brakes and wheel-end life, and keeps brake temperatures cool and in reserve for stopping needs, when you need your brakes the most. Therefore, associated downtime and costs of wheel-end repairs and brake maintenance are significantly reduced. Further, the cost to purchase a vehicle with an engine retarder is lower than if the same vehicle were equipped with a hydraulic or electric retarder.

#### Compatible with Vehicle Systems

Jacobs Engine Retarders are compatible with vehicle systems such as ABS, cruise control, autoshift transmissions, and collision warning systems.

#### Driver Satisfaction

Drivers all over the world request Jake Brake retarders because of the enhanced control of the vehicle and reduced driving fatigue benefits.



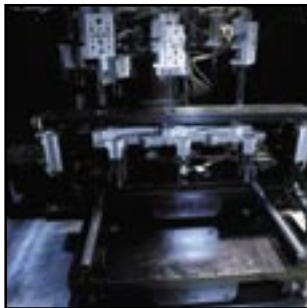


### Heritage

It's good to be the first and best. For over four decades, Jake Brake® retarders have been the #1 choice of owner-operators and fleet owners in the U.S., Europe, and more recently, Asia.

### Innovation

Jacobs Vehicle Systems is committed to the success and adaptation of its recent integrated engine braking designs that provide significant increases in horsepower while reducing engine weight.



### Design

The design spirit of our engineering staff is that of undying pursuit for optimum performance, reliability and durability. To ensure the value Jacobs Vehicle Systems brings to its customers, we operate the most extensive retarder development laboratory and testing facility in the world.

### Manufacture

Certified to ISO 9001 & QS9000 standards, our products are produced and tested under the most stringent quality control. We utilize just in time manufacturing methods to increase our productivity, meet customer delivery schedules and reduce cost and waste significantly. In fact, our manufacturing methods have made Jacobs a model for other manufacturing companies.



### Partnership

Our cooperative development relationships with the world's premiere diesel engine manufacturers ensures a partnership that yields the best product possible. Here is an overview of just some of the partners we are proud to be collaborating with.

