



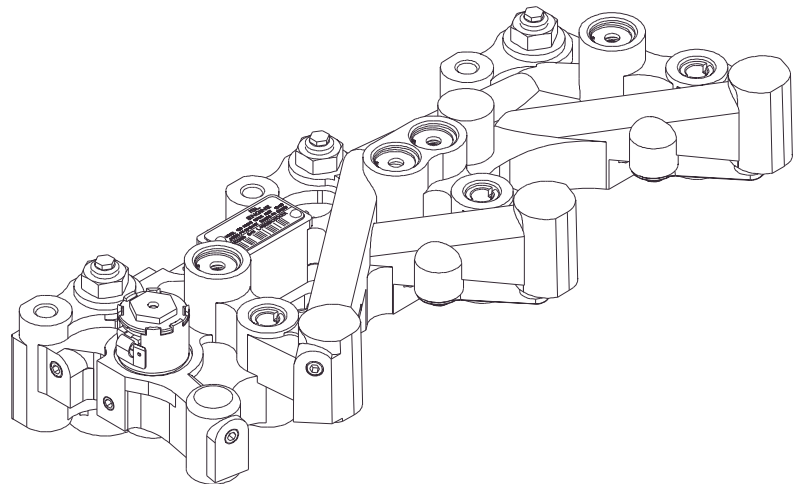
**Jacobs Vehicle Systems™**

# JAKE BRAKE® MODELS 490/490A

For Cummins ISL and ISC07 Engines

## Features and Benefits

- Compression-Release Brake is Now Available on the ISC07 with 270 Retarding HP at Rated Speed
- ISL and ISC are Two Mid-Range Engines in North America Available with Full Compression-Release Jake Brake® Engine Brake Technology, Providing Enhanced Vehicle Control
- Solid Performance at Mid-Range RPMs
- Fully Integrated with Cummins Engine Controls
- Compact Housing Size and Low Weight
- Two-Year/250,000-Mile Standard Warranty
- Backed by the Cummins Worldwide Network of Distributors and Dealers



**CBRAKE**  
By *Jacobs*™



**Jacobs Vehicle Systems™**

**ENGINEERED**  
FOR THE *ROAD AHEAD*

## Technical Specifications

|                     |          |        |
|---------------------|----------|--------|
| Height              | 4"       | 102 mm |
| Length              | 14"      | 356 mm |
| Width               | 6"       | 152 mm |
| Kit Added Weight*   | 49 lbs.* | 22 kg. |
| Housings Per Engine | 2        |        |

\*weight w/o spacer (10lbs.)

## Application Information

For the most accurate application information, refer to the Cummins Application Guide (Jacobs P/N 20994 Bulletin 3401804), available from your Cummins Distributor or online at [www.jakebrake.com](http://www.jakebrake.com).

## Cummins Application Guide

| RPM  | ISL Retarding Performance |            |
|------|---------------------------|------------|
|      | 490A w/VGT                | 490A w/VGT |
|      | ISL07                     | ISC07      |
| 1100 | 75                        | 75         |
| 1300 | 115                       | 105        |
| 1500 | 150                       | 135        |
| 1700 | 210                       | 200        |
| 1900 | 245                       | 230        |
| 2100 | 275                       | 260        |

*Important Note:* The performance data shown is measured in accordance with SAE J1621 power measurement standard, up to engine manufacturer's rated engine speed of 2200 RPM.

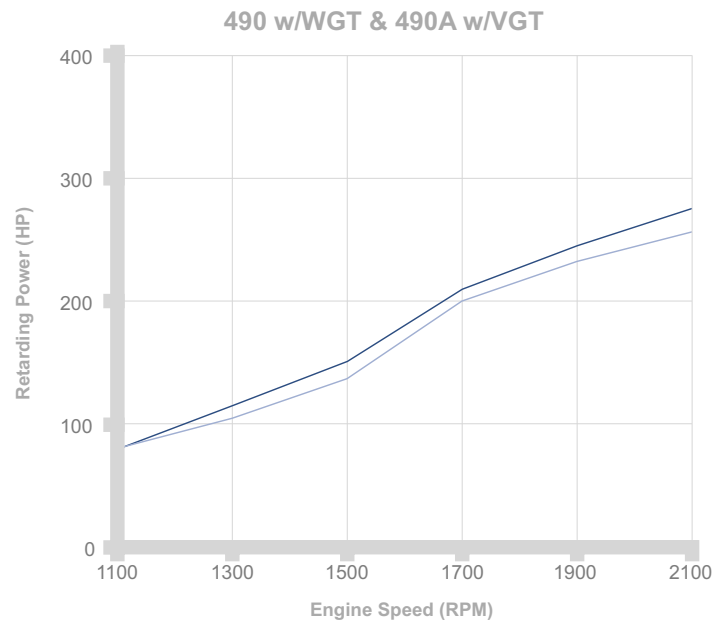
Others may claim higher retarding performance. Only the Jacobs Engine Brake® is designed and tested in cooperation with Cummins to provide the highest performance available while maintaining or improving engine brake system reliability and durability.

## How The Jake Brake® Works:

Energizing the engine brake effectively converts a power-producing diesel engine into a power-absorbing air compressor. This is accomplished through motion transfer using a master/slave piston arrangement which opens cylinder exhaust valves near the top of the normal compression stroke, releasing the compressed cylinder charge to exhaust.

The blow down of compressed air to atmospheric pressure prevents the return of energy to the engine piston on the expansion stroke, the effect being a net energy loss since the work done in compressing the cylinder charge is not returned during the expansion process.

## Retarding Performance



### Legend

- ISL - 490 w/WGT RPM
- ISC07 - 490 w/WGT RPM