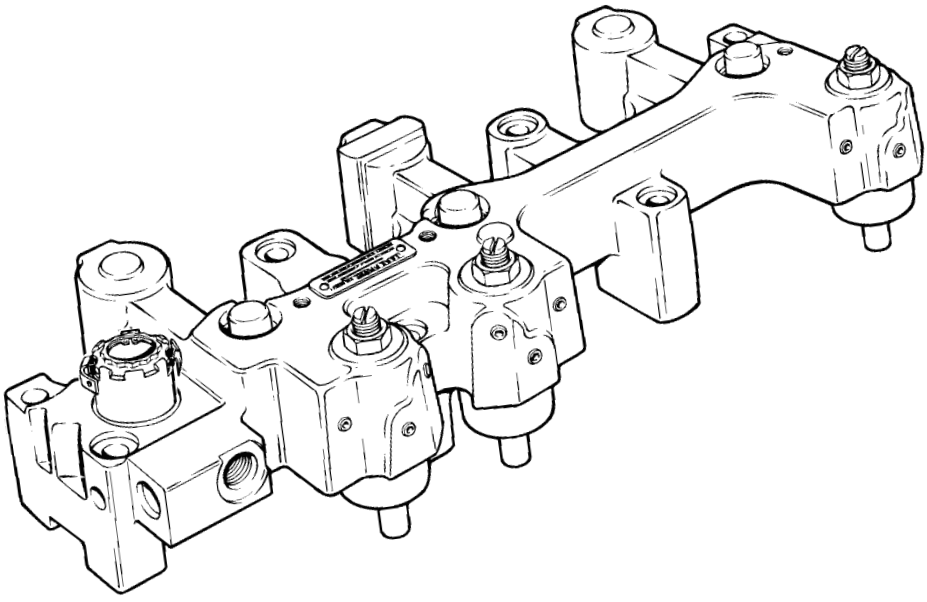
Jacobs Vehicle Systems™

JAKE BRAKE® 411 SERIES

For Cummins M11 and ISM Engines

Features and Benefits

- Available for All Cummins M11, ISM Engines
- Fully Integrated with Cummins Engine Controls
- Proven Jake Brake® Technology
- Common Components with Other Jake Brake Models Providing for Easy Serviceability and Part Availability
- Joint Design and Development Between Cummins and Jacobs®
- Stronger Housing for Increased Durability
- Improved Design for Easier Serviceability of Engine
- Significant Retarding Horsepower
- Two-Year/250,000-Mile Standard Warranty
- Backed by the Cummins Worldwide Network of Distributors and Dealers



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Technical Specifications

Height	3.5"	90 mm
Length	17.7"	450 mm
Width	7.1"	181 mm
Kit Added Weight	79 lbs.	36 kg.
Housings Per Engine	2	

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.

How The Jake Brake®

411 Series 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.

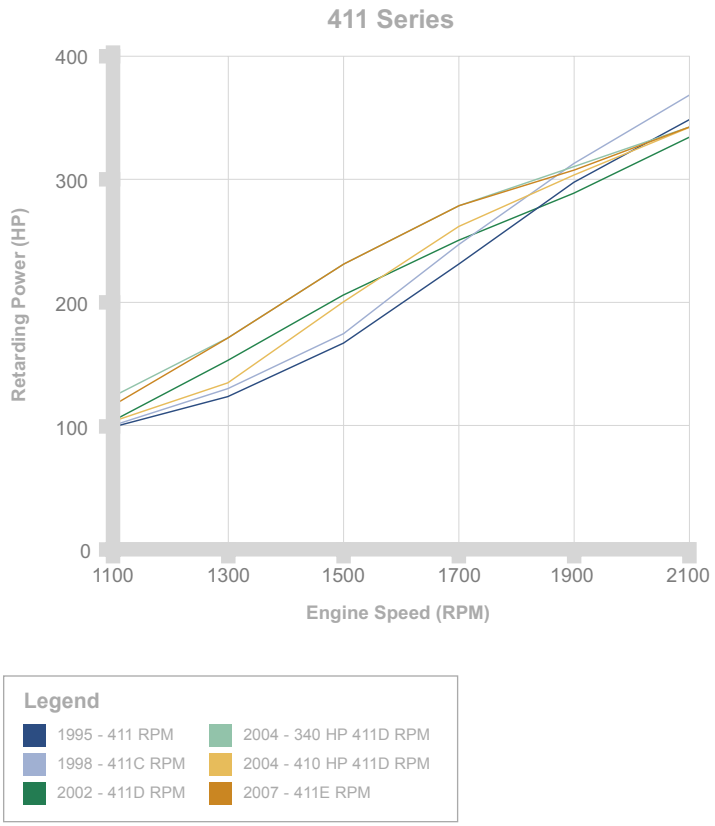
Cummins Application Guide

RPM	1995	1998	2002	2004-2006		2007
	411	411C	411D	340 HP 411D	410 HP 411D	411E
1100	100	100	105	125	100	115
1300	125	130	155	170	135	170
1500	165	175	215	230	200	230
1700	230	245	250	280	260	280
1900	295	315	280	315	305	310
2100	350	365	335	340	340	340

Important Note: Horsepower values in table are raw horsepower numbers.

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.

Retarding Performance



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ENGINEERED FOR THE ROAD AHEAD