



Cummins

1994 N14 Engines

Features and Benefits

- Applicable to Cummins 1994 N14 Engines
- Three Braking Levels for Operating Flexibility
- Superior Grade Cast Iron for Increased Strength and Reliability
- Joint Design and Development Between Cummins and Jacobs®
- Common Components with other Jake Brake Models for Easy Serviceability
- Fully Integrated with Cummins Engine Controls
- Single Housing Design for Simplicity and Interchangeability
- Three-year/300,000-mile Warranty
- Backed by Jacobs' Worldwide Network of Distributors and Dealers

SPECIFICATIONS

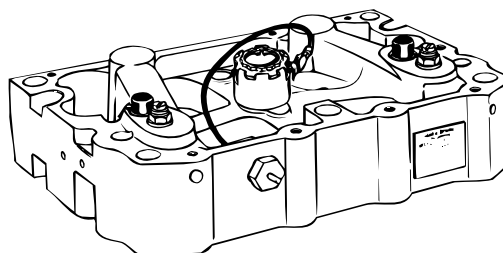
Jake Brake® Models 450A/450B

for

Cummins 1994 N14 Engines

Technical Specifications

Height	3.0"	76 mm
Length	13.8"	350 mm
Width	8.5"	215 mm
Added Engine Weight	99 lbs	45 Kg
Housings Per Engine	3	

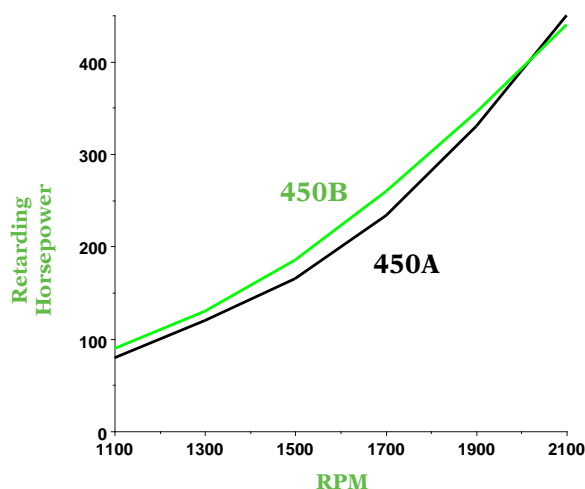


How Jake Brake Models 450A/450B Work

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 blowdown 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



Retarding Horsepower by Engine Brake Model		
RPM	450A 310E - 370E ESP I - II	450B 410E - 500E ESP III
1100	80	90
1300	120	130
1500	165	185
1700	235	260
1900	330	345
2100	450	440

All horsepowers listed corrected to proposed SAE Standard J1621 (draft rev. 9/15/93).

Jacobs®

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 Jacobs Vehicle Equipment Company
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