



Jacobs Vehicle Systems™

DIAMOND LOGIC™ ENGINE BRAKE



Introducing the latest in engine braking technology designed to International Truck & Engine® standards – the Diamond Logic™ engine brake used in the new DT 466 & DT/HT 570 engines.



How The Diamond Logic Engine Brake Works:

The Diamond Logic Engine Brake is a bleeder brake – it holds the exhaust valve off of its seat to bleed off compression while overcoming backpressure produced by the turbocharger vane turn-down system. While bleeding the compression against the backpressure, a pumping loss is created, converting the vehicle's rolling momentum into retarding power.



During deceleration, with the Diamond Logic engine brake switched on, the EVRT Vane Turn-Down provides the optimum exhaust plenum backpressure high intake boost allowable at any engine speed. Simultaneously, the Diamond Logic engine brake deploys actuator pistons onto the exhaust valve bridges to hold open one exhaust valve per cylinder. Once fully-deployed, the actuator pistons will hold open the exhaust valves through all four engine cycles until the driver steps back on the accelerator, or the engine reaches idle speed. Once deactivated for acceleration or idling, the bleeder brake pistons retract and allow the exhaust valves to function normally for combustion cycles.

Features & Benefits

Most Powerful Retarder on the Market

Highest performance retarder in its class

Controls integrated with EVRT® to provide the highest possible braking power across the engine speed range

Impressive **mid-range performance** — providing power where you need it

Designed with International® for Optimum Power

Integrated Design Allows for Jake Brake® Technology without Added Weight or Height

Bleeder brake function integrated into high pressure fuel rail

No engine height increase

90% reduction in weight (from conventional engine brake)

Environmentally Friendly

Low noise retarding

Diamond Logic Engine Brake Retarding Performance. [Using Jacobs Bleeder Brake Technology]

Engine Model	Engine Retarding Power	RPM
DT 466	275 hp	2500
DT/HT 570	325 hp	2200

Databook Option Code:

Engine	DT 466	DT/HT 570
Code	07SCB	07SCC

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ENGINEERED
FOR THE **ROAD AHEAD**

PRESS RELEASE

Jacobs Vehicle Systems™ Launches Bleeder Brake Technology for the new International I-6 engine family

Heavy Duty braking performance with a mid-range engine: Jake Brake® Model 5313

BLOOMFIELD, CT — Jacobs Vehicle Systems™ (www.jakebrake.com—a wholly-owned subsidiary of Danaher Corporation – NYSE: DHR) known for its famous Jake Brake® engine retarders and valve actuation systems announces the delivery of its first bleeder brake product to International Truck & Engine Corporation. Sold as the International Diamond Logic™ Engine Brake, the retarder is available on both the new DT 466 and DT/HT 570 engines.

“Our patented Jacobs Bleeder Brake™ design provides the highest amount of retarding horsepower per liter of any mid-range diesel engine retarder we know of,” states Vice President of Marketing & Business Development, Bob Perkins. The Jacobs Bleeder Brake boasts performance that rivals that of many heavy-duty engines, and is now available in the North American market on International’s new engines used in Class 4-8 commercial vehicles.

Innovation & Integration

David Smith, Vice President of Engineering states, “By utilizing the existing high-pressure fuel rail in conjunction with our innovative bleeder brake components we are able to control the hydraulics so as to optimize exhaust valve motion. When paired with a backpressure-controllable turbocharger (EVRT™), the

performance is truly outstanding.” The integration of this patented valve actuation retarder mechanism into the fuel rail enables impressive bleeder cycle braking performance—delivering world-class retarding levels while adding no engine height, and adding very little weight.

About Jacobs

Jacobs Vehicle Systems is a wholly-owned subsidiary of Danaher Corporation (NYSE: DHR). The Jake Brake® product line is used by all North American heavy-duty diesel engine manufacturers as well as Hino, Hyundai and Mitsubishi in Asia, and Renault V.I. and DAF in Europe. Jacobs Vehicle Systems is headquartered in Bloomfield, CT, where it has a 260,000 square foot design, testing and manufacturing facility. Registered to both the ISO 9001:2000 and QS9000:1998 standards, Jacobs Vehicle Systems is the world’s leading producer of vehicle retarding and valve actuation technologies, and can be found on the Internet at www.jakebrake.com.

