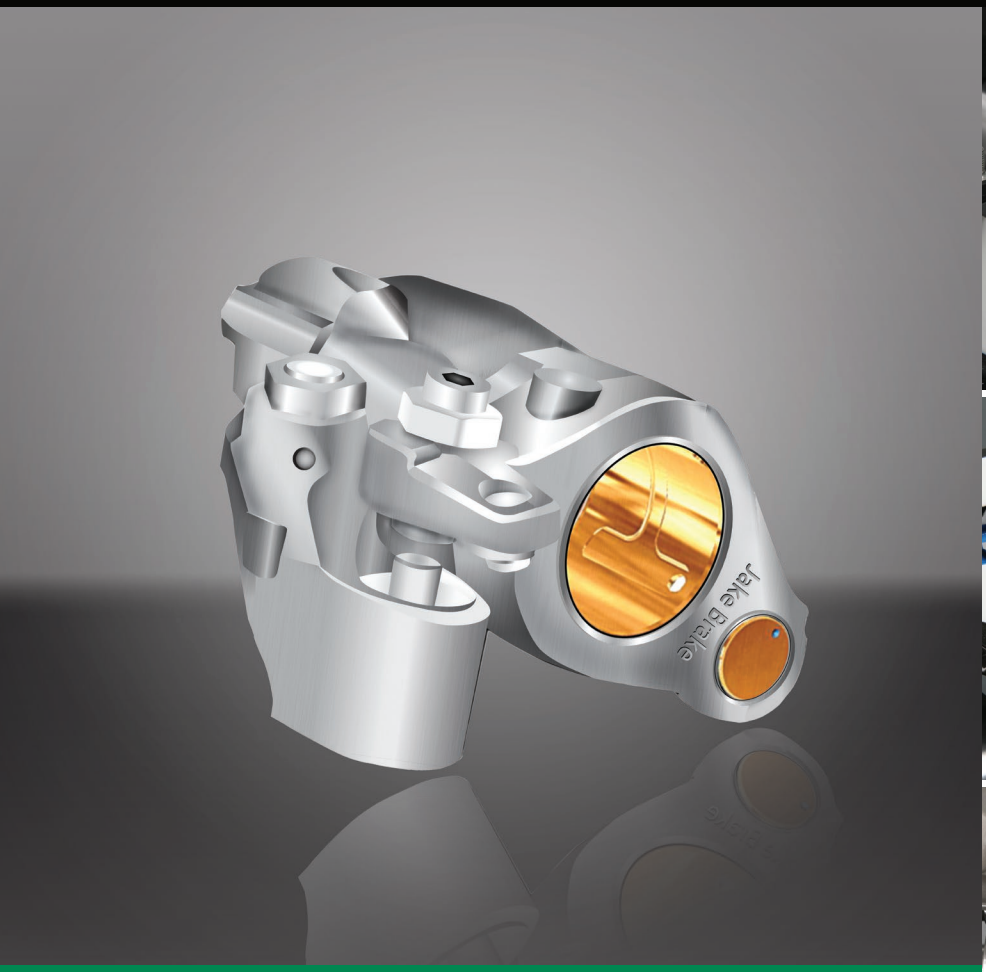
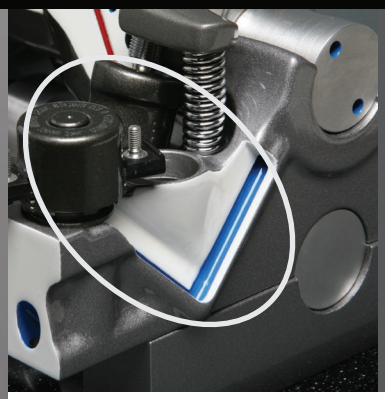
Jacobs Vehicle Systems®



Jacobs Engine Brake Model 720 / 721



With the solenoid activated, engine oil passes through the Rocker Shaft, and then to the bottom of the Control Valve moving the control valve to index with the high pressure passage in the Exhaust Rocker.

The oil passes through the Control Valve and extends the Actuator Piston to its pre-determined length. The control valve ball check prevents the oil from escaping, locking the actuator piston.

Braking Cam motion is transferred to the Exhaust Valve via the Brake Rocker to the Exhaust Rocker, by interfacing with the extended Actuator Piston.

For the DD Platform of Engines

The DD13, DD15 and DD16 engines feature Jacobs' trademark Jake Brake as standard equipment on this global engine platform. Certified and approved by the engine manufacturer, the engine brake model is a quieter performing brake with a dedicated cam lobe designed for optimum power. The brake is integrated with vehicle ABS for greater driver control and fully integrated with engine electronic controls.

FEATURES

- Jacobs Engine Brake components are common to all engine models
- Compression Release Integrated Dual Rocker Arm System
- Dedicated Cam Lobe design for optimum power
- Three-stage engine brake operation, low/med/high
- Certified and approved by the engine manufacturer
- Fully integrated with vehicle ABS for greater driver control
- Quiet performing brake
- Factory installed

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Jacobs Engine Brake Model 720 / 721

Technical Specifications

The 721 model Engine Brake is designed for use with the EPA10 engine family, the brake rocker arm is not backward compatable. The 720 model is designed for the EPA07 engine family.

ENGINE MODEL	MODEL 720	MODEL 721
DD15 / DD16	Before Engine HDE0077481	Starting at Engine HDE0077481
DD13	Before Engine HDE0079072	Starting at Engine HDE0079072

	MODEL 720	MODEL 721
Kit Added Weight*	26.4 lbs (12kg)	26.4 lbs (12kg)
Rocker Units Per Engine	6	6
Lash Setting **	0.1614" (4.1mm)	0.1811" (4.6mm)

** Include solenoid and attaching hardware*

*** Feeler gage p/n W470589042300 for model 721 and W470589022300 for model 720*

Note: Aftermarket kits are not available

How The Model 720 / 721 Brake Works

The Jacobs Engine Brake on the DD Platform of Engines works on the Compression Release principle acting on a single exhaust valve and is a Dedicated Cam operated, Dual Rocker system.

Dedicated Cam refers to actuation of the "Braking Valve" event being driven by a specially designed cam lobe. The result is precise timing of the valve opening, unleashing higher retarding performance and minimum loading on the engine.

Engine Brake Warranty

Will match the warranty mutually agreed by Jacobs and the engine manufacturer up to the maximum of 5 years or 500,000 miles (800,000 km), whichever comes first.

Performance Specifications

DD13 RETARDING PERFORMANCE		
RPM	KW	HP
1100	80	107
1500	186	249
1900	275	369
2100	305	409
2300	350	469

DD15 RETARDING PERFORMANCE		
RPM	KW	HP
1100	108	145
1500	239	321
1900	327	439
2100	366	491
2300	401	538

Serviceable Part Numbers

PARTS	MODEL 720	MODEL 721
Actuator Arm	A4720501434	A4720501334
Brake Rocker Arm	A4720501634	A4720501634
Bias Spring	A4720530120	A4721530620
Solenoid 12 vdc*	A4721530159	A4721530159
Solenoid Screen	A4721540136	A4721540136
Seal Ring Upper	A4729971745	A4729971745
Seal Ring Lower	A4729971845	A4729971845
Solenoid Cover	A4721530475	A4721530475

** New Type 2 push-in style solenoid*