

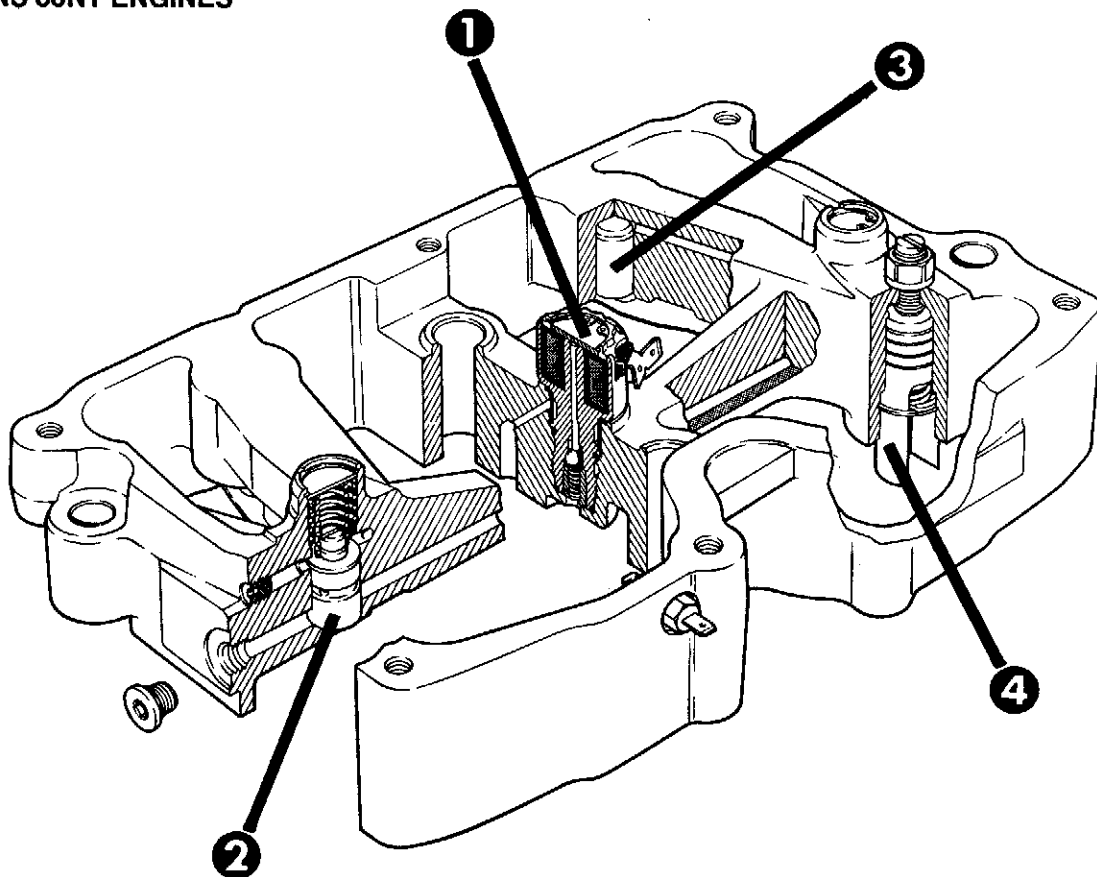
BASIC OPERATION

Jacobs Model 430 is designed specifically for use on Cummins diesel engines. The standard kit for the Model 430 Jake Brake® includes all attaching components and in-cab controls needed for installation. Certain vehicle configurations and vehicles equipped with automatic transmissions require special adapter kits. Your authorized Jacobs representative should be contacted to determine the proper Engine Brake model and, if needed, adapter kit for your vehicle.

All Jacobs Engine Brakes contain four primary components: the Solenoid Valve (1), the Control Valve (2) the Master Piston (3), and the Slave Piston (4). When activated, the Solenoid Valve introduces engine oil (low pressure) to the brake housing. The Control Valve is unseated and allows oil to flow to the Master Piston which is then moved down against the injector rocker adjusting screw.

Normal injector rocker motion causes the master piston to move up, creating high oil pressure. The high pressure, which is maintained by the control valve, forces down the slave piston, which opens the exhaust valve. It is this precisely timed opening of the engine exhaust valve that develops Jake Brake retarding power.

MODEL 430 FOR CUMMINS 88NT ENGINES



ENGINE BRAKE APPLICATIONS GUIDE FOR NH/NT CUMMINS ENGINES

ENGINE TYPE	CURRENT BRAKE MODELS			EARLY BRAKE MODELS									
	425	430 FT	430 STC	20	25B	30	30E	400	400H	401A	401B	401C	420
NH Series 5 1/8 Bore				•									
Small Cam NH Single Entry Turbo	•				•								
Small Cam III Single Entry Turbo	•				•								
Small Cam III Divided Entry Turbo	•				•								
Big Cam I Single Entry Turbo	•					•	•	•					•
Big Cam I Divided Entry Turbo	•								•		•		
Big Cam II Single Entry Turbo	•						•	•					•
Big Cam II Divided Entry Turbo	•								•		•		
NTC 475 Twin Turbo(MVT)									•	•	•		
Big Cam III * (Some B.C. III are MVT) Single Entry Turbo	•							•					•
Big Cam III * (Some B.C. III are MVT) Divided Entry Turbo	•								•		•		
Big Cam IV Single Entry Turbo	•												•
Big Cam IV Divided Entry Turbo CPL 0794 (MVT)											•		
Big Cam IV Divided Entry Turbo CPL 0795 (MVT)											•		
New Big Cam IV Fixed Timing CPL 0832	•												•
New Big Cam IV Fixed Timing CPL 0796	•												•
New Big Cam IV Fixed Timing CPL 0797	•												•
New Big Cam IV Step Timing Control CPL 0806	•												•
New Big Cam IV Step Timing Control CPL 0821	•												•
New Big Cam IV Step Timing Control CPL 0833	•												•
88NT Fixed Timing - CPL 0838 } CPL 0840 } 430 FT		•											
Step Timing - CPL 0827 } CPL 0910 } 430 STC		•	•										
			•										
			•										

NOTE: THE MODEL 44B HAS BEEN UPGRADED TO THE MODEL 400H. SEE SERVICE LETTER NUMBER 237.

- THE JACOBS MODEL 425 ENGINE BRAKE **IS NOT APPROVED** FOR ENGINES WITH MVT (MECHANICAL VARIABLE TIMING) OR 88NT ENGINES.
- THE MODEL 430 **CAN ONLY** BE USED ON 88NT ENGINES
- SLAVE PISTON SETTINGS FOR THE VARIOUS JAKE BRAKE MODELS AND ENGINE BRAKE APPLICATIONS WILL VARY AND ARE DEPENDANT ON:
 1. CPL NUMBER
 2. INJECTOR TIMING
 3. TURBOCHARGER CONFIGURATION
 4. BIG CAM IDENTIFICATION
- REFER TO THE JAKE BRAKE INSTALLATION MANUAL FOR THE SPECIFIC ENGINE BRAKE MODEL FOR SLAVE PISTON ADJUSTMENT INFORMATION