



## Installation Addendum: Jacobs Engine Brake <sup>TM</sup>Model 770

Model 770 Jacobs Engine Brake has been designed and approved for 1999 Detroit Diesel Series 60 12.7L engines. The installation procedures for Model 770 differ slightly from the procedures for the model 765. The installation instructions are detailed in the Models 760/760A/765 Installation Manual (P/N 014328C). The changes in procedure required for Model 770 are covered in this Installation Addendum. Please read this addendum in its entirety and note the changes to the installation manual where required before beginning installation.

### Section 1: Introduction

Note the following additional application and adjustment data:

The approved applications for Model 770 are:

Engine Model Number	Model Year/Size in Liters	Slave Piston Lash Adjustment	Gage P/N
6067BK60	1999 / 12.7	0.023" (0.584 mm)	25397
6067BK28	1999 / 12.7	0.023" (0.584 mm)	25397
6067BK45	1999 / 12.7	0.023" (0.584 mm)	25397
6067BK57	1999 / 12.7	0.023" (0.584 mm)	25397
6067MK60	1999 / 12.7	0.023" (0.584 mm)	25397
6067MK28	1999 / 12.7	0.023" (0.584 mm)	25397
6067MK45	1999 / 12.7	0.023" (0.584 mm)	25397
6067MK57	1999 / 12.7	0.023" (0.584 mm)	25397

### Section 2B: Engine Preparation

The instructions for DDEC III should be followed for 1999 DDEC IV electrical systems.

### Section 3: Brake Housing Installation

Follow the housing installation instructions beginning on page 9. A change to these procedures is required for Model 770 at step 5 on page 10. The new instruction should read:

5. Before tightening the engine brake hold-down bolts, move the housing from side to side and locate as far towards the camshaft side of the engine as possible (see Fig. 20 in the installation manual).

Continue with the brake housing installation instructions, steps 6 and 7.

(continued)

### **Slave Piston Adjustment:**

Follow the instructions beginning in the second column of page 10, up through step 1. Note the correct slave piston adjustment in the table on page 1 of this addendum. A change is required for steps 2 through 4 as follows:

**NOTE:** MODEL 770 UTILIZES A NEW J-LASH<sup>®</sup> ADJUSTING SCREW TO SET THE SLAVE PISTON LASH. THE J-LASH ADJUSTING SCREW RETAINS OIL, WHICH CAN CAUSE AN INCORRECT LASH SETTING IF THE CORRECT SETTING PROCEDURE IS NOT FOLLOWED DURING ADJUSTMENT.

2. Turn in the J-Lash adjusting screw until the solid side of the slave piston bridge assembly contacts the exhaust valve and the valve springs begin to compress. Turn in one (1) additional turn. Wait at least 30 seconds for oil to be purged from the J-Lash adjusting screw.

**NOTE:** ALL OIL MUST BE PURGED FROM THE J-LASH ADJUSTING SCREW. OIL REMAINING IN THE J-LASH ADJUSTING SCREW WILL CAUSE INACCURATE CLEARANCE ADJUSTMENT, POSSIBLY LEADING TO DAMAGE TO THE ENGINE OR ENGINE BRAKE. IF OIL IS BELOW ROOM TEMPERATURE (BELOW 60° F, 16 C), WAIT AT LEAST TWO MINUTES FOR OIL TO BE PURGED FROM THE J-LASH ADJUSTING SCREW.

3. After the time interval specified in step 2, back out the adjusting screw **ONLY** until the correct size feeler gage can be inserted between the solid side of the slave piston bridge assembly and the exhaust valve (see Fig. 22 in the installation manual). Adjust the J -Lash so that a light drag is felt on the feeler gage. Do not back out the J-Lash adjusting screw more than required to obtain a light drag on the feeler gage. Use a screwdriver to hold the J-Lash in place and torque the lock nut to 25 lb–ft (35 N•m).

**NOTE:** IF THE J-LASH SCREW IS BACKED OUT UNTIL IT NO LONGER COMPRESSES THE SLAVE PISTON SPRING, OIL WILL ENTER THE SCREW AND THE ADJUSTMENT WILL BE INCORRECT. IF THIS OCCURS, REPEAT STEPS 2 AND 3 ABOVE.

4. Recheck lash settings. If clearance setting is incorrect, repeat steps 2 and 3 above.

**NOTE:** ONCE THE ENGINE BRAKE HAS BEEN RUN YOU WILL NOT BE ABLE TO CHECK THE ENGINE BRAKE ADJUSTMENT. THIS IS BECAUSE OF OIL IN THE J-LASH SCREW. IF UNSURE OF THE ADJUSTMENT, YOU MUST REPEAT STEPS 2 THROUGH 4 ABOVE.

Continue with step 5. The procedure in the installation manual on page 11 for steps 2 through 4 should be used for adjusting the clearance between the slave piston leveling screw and the rocker arm adjusting screw (see Fig. 23 in the installation manual).

### **Section 4B: Control System Installation**

The instructions for DDEC III should be followed for 1999 DDEC IV electrical systems.

The remaining instructions in the installation manual apply to Model 770.