

# Installation Addendum: TecBrake Engine Brake Model T425A-SCT

## TecBrake Engine Brake Model T425A-STC

### For Cummins 855 STC Series Engines

The TecBrake T425A-STC engine brake may be installed on Step Timing Control (STC) versions of the Cummins 855 series engine. It **can not** be installed on the Cummins 86NT MVT, 88NT, or 89NT model engines. It should only be installed on engines whose CPL numbers are included in the Application Chart.

**Installation instructions are detailed in the model T425A Installation Manual (TB990105). The changes in procedures required for model 425A-STC is covered in this installation addendum. Please read this addendum and note the changes on the Installation Manual before beginning installation.**

### Special Tools

The following special tools are required for installation:

1. Crowfoot wrench- 9/16"
2. Crowfoot wrench- 5/8"
3. Socket, extra deep- 5/8"
4. Feeler gauge- 0.018"
5. STC Tappet setting tool- Cummins Part No.3822648

### SECTION 3A -VALVE AND INJECTOR ADJUSTMENT

Different procedures are used in setting injectors on STC versus fixed timed engines. Refer to the Injector and Valve Setting Chart (Figure 3A-1) to determine the crankshaft position when adjusting injectors and exhaust valves.

#### Injector/ Valve Setting- Crankshaft Position Chart

Bar in Direction of Rotation	Pulley Position	Set Injector	Set Valve
START	A	3	5
ADVANCE TO	B	6	3
ADVANCE TO	C	2	6
ADVANCE TO	A	4	2
ADVANCE TO	B	1	4
ADVANCE TO	C	5	1

Figure 3A-1

1. If you did not previously position the crankshaft for the valve and injector adjustments, turn the crankshaft clockwise until the "A" mark on the accessory drive pulley is aligned with pointer on the gear case cover.

2. At this point, the intake and exhaust valves should be closed for cylinder No. 5 and the rocker levers should be "loose". The injector plunger for cylinder No. 3 must also be at the top of its travel. If it is not, turn the crankshaft another 360 degrees and realign the mark "A" with the pointer.

### Setting Injectors Step Timing Control (STC)

A special tappet tool (Cummins No. ST-3822648) must be used to set the STC style injectors. This tool has a small locating pin that locates the tool in one of the four holes in the tappet.

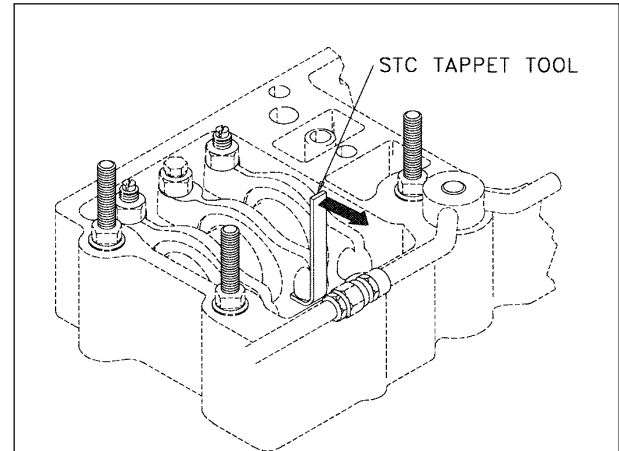


Figure 3A-2

1. Place the tool on top of the tappet then rotate it until the pin is inserted into one of the holes in the tappet. Apply thumb pressure to the tool handle in order to hold the tappet at the maximum extended position.

2. Set the injector rocker arm adjusting screw to 5-6 lbin. Cummins injector torque wrench (P/N 3376592) may be used to set the torque. Remove tool before barring the engine to the next position as indicated in the setting chart (Figure 3A-1).

3. Tighten adjusting screw locknut to 45 lbft (60 N\*m).

### SECTION 4A -BRAKE HOUSING INSTALLATION

#### Slave Piston Adjusting Screw:

The T425A-STC engine brake kit has adjusting screw Part No. TB924917, color-coded "green" already installed in the brake housings. This configuration is the only one required for all possible Cummins 86 NT STC applications regardless of turbocharger type.

**Slave piston lash setting for TecBrake T425A-STC is always 0.018" for all applications.**

#### Engines with Step Timing Control (STC)

1. An oil connection is required from the **rear engine brake housing** to the STC valve (Figure 4A-1). The oil connection allows operation of engine brake without overloading the engine's valve train.

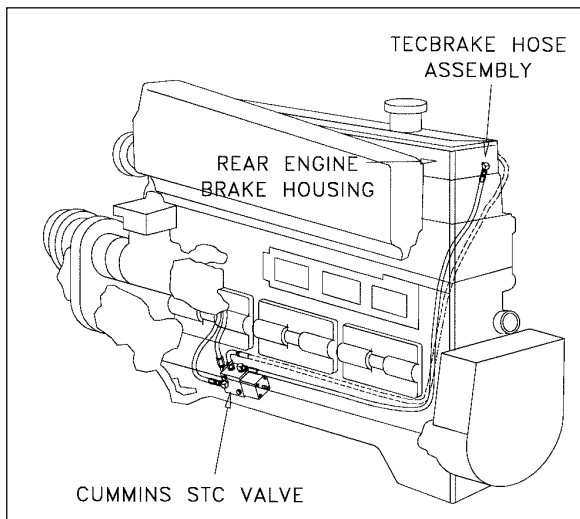


Figure 4A-1

2. Remove the oil drain line from the STC valve and engine block.
3. Cap off fitting in the block with cap supplied on STC Interface Group.

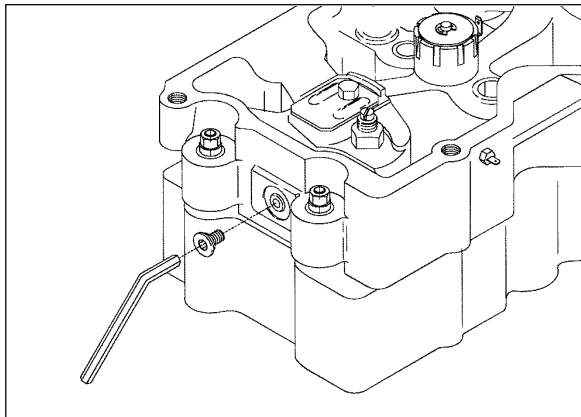


Figure 4A-2

4. Remove the plug from the rear engine brake housing as shown on figure 4A-2.
5. Install the TecBrake elbow fitting into the rear of brake housing. Be sure that O-ring is fully seated against housing. Elbow fitting must be pointed downward.
6. Install one end of TecBrake hose assembly to the fitting. Tighten the fitting securely.
7. Install the other end of sensing line on the STC valve as shown on figure 4A-3. Tighten fitting securely.
8. Secure the hose to the engine using hose clamps.

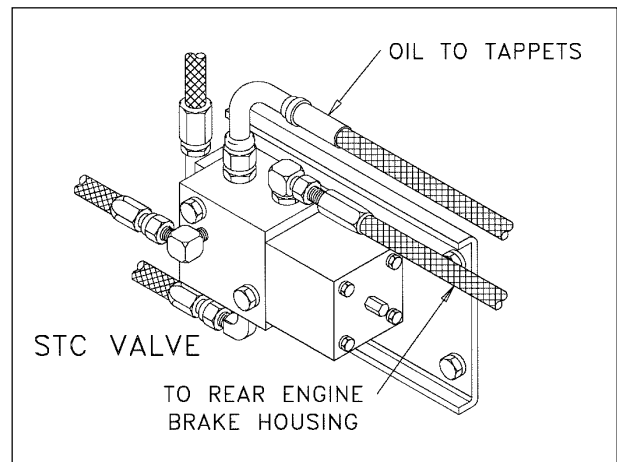


Figure 4A-3

### CAUTION

*Failure to use this sensing line on these engines can cause major engine damage.*

### APPLICATION CHART

ADJUSTING SCREW			
CPL NO.	ENGINE MODEL	PART NO.	COLOR
806	NTCC365/400 STC	TB924917	GREEN
821	NTC444 BCIV STC	TB924917	GREEN
833	NTC365/400 NBCIV	TB924917	GREEN
903	NTC444 NBCIV	TB924917	GREEN
904	NTC365/400 NBCIV	TB924917	GREEN
1215	NTC444 NBCIV	TB924917	GREEN