

# Service

**BULLETIN #124**

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MODELS AFFECTED

**PACBRAKE EXHAUST BRAKES**

SUBJECT

**PACBRAKE EXHAUST BRAKE USE ON  
VEHICLES EQUIPPED WITH ALLISON  
AT540/542/545 TRANSMISSIONS.**

**Most engine retarding devices when mounted on vehicles with an automatic transmission will have converter lockup available for the retarding mode. This ensures a positive link between the engine and rear wheels without torque converter slippage. Allison AT540/542/545 do not have lockup.**

Retarding is permissible on the above mentioned Allison transmission models but may require downshifting to maintain adequate engine RPM for effective braking.

During retarding with these non-lockup models, transmission oil temperature must be monitored to ensure acceptable temperature levels are maintained.

Allison transmission model AT542 has no lockup clutch. Retarding benefits are marginal at highway speeds in 3rd or 4th gear. Down shifting does not help because at approx. 35 mph and above the transmission will upshift or stay in 3rd or 4th gear.

The real benefit to the user is in slow, (under approx. 35 mph), second gear, steep mountain pass descents. The transmission must stay in the lower gear as selected and 2200 to 2300 RPM must be maintained to provide adequate retarding performance.

NOTE: If the transmission upshifts prematurely at low RPM there is a possibility of a weak modulator spring. Contact your Allison distributor to verify shift points.

The installation of heavy duty exhaust valve springs for Cummins B and C Series engines are highly recommended for this application.

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ENGINE & EXHAUST BRAKES