

# VOLVO

## Service Manager Bulletin

Service Personnel: read and initial.	SERVICE MANAGER	SERVICE WRITER	WARRANTY ADMINISTRATOR

TITLE	GROUP	NUMBER
High Idle Emission, Check preconditioning test procedure for ZF automatic transmission (Calif. SMOG check-BAR90)	25	25
1985-88 Volvo 740	ISSUING DEPARTMENT Product Evaluation	
REFERENCE BULLETINS:	CAR MARKET US	
	DATE September, 1991	
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All models equipped with the ZF automatic transmission and gasoline engine (1985-88 740, except turbo-charged models), which will undergo a High Idle Emission check such as the California SMOG check, must first be tested and (catalyst) preconditioned according to the following procedure.

Please ensure that the following testing and (catalyst) preconditioning test instructions are distributed to the dealership emission and SMOG inspectors.

### A) HIGH IDLE EMISSION TEST SEQUENCE

- 1) Before beginning the emission test, ensure the engine is at normal operating temperature. If not, the vehicle should be driven until it is. **Do not warm the engine by raising the RPM above idle while the transmission is in park or neutral.**
- 2) After engine reaches normal operating temperature, place the transmission into park and switch the ignition off for 30 seconds. Restart engine. After the engine is started, do not move the gear selector through the forward or reverse gears before or during the test sequence. **DO NOT EXCEED 2000 RPM.**

First stage: High Idle 1850 (+/- 150rpm) for 30 seconds.

Second stage: Idle RPM (see standards for max.) for 30 seconds.

### B) IF A "SECOND CHANCE" EMISSION TEST IS REQUIRED THE FOLLOWING PRECONDITIONING INSTRUCTIONS MUST BE FOLLOWED:

- 1) Confirm installation of the ZF 4-speed automatic transmission in the vehicle. Only ZF equipped Volvo's have a shift quadrant with the gear shift positions "P-R-N-D-3-2-1." There is no separate "overdrive" engagement switch on the selector lever itself.
- 2) Perform ZF specific emission test as outlined above. If vehicle fails, do not proceed with the programmed preconditioning sequence. You must abort the test.
- 3) Ensure gear shift selector lever is in P (Park) position.
- 4) **Precondition at 1850 RPM (+/- 150 RPM) for 4 minutes.**
- 5) Allow engine to return to idle speed.
- 6) Check tailpipe emissions with BAR-90 in Manual mode. If emissions are not within limits, diagnose the problem, make repairs, and recheck again in the manual mode. If emissions are within limits, rerun the initial test as soon as possible.

**NOTE: Engine speed must not exceed 2000 RPM or serious transmission damage could result.**

